Department of Veterans Affairs Salt Lake City Health Care System

Final

700 South 1600 East PCE Plume
AOU-1: East Side Springs
Remedial Investigation Report

Appendix H-2

FEBRUARY 2019

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H-2
2016 Surface Water and Stormwater Data Validation Report

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FINAL

Salt Lake City VA Medical Center
CERCLA Environmental Assessment and Clean-Up

700 South 1600 East PCE Plume AOU-1: East Side Springs 2016 Surface Water and Stormwater Data Validation Report

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2 Laboratory Analytical Data Reports

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Acronyms and Abbreviations

AOU-1	Accelerated Operable Unit 1
Bonner	Bonner Analytical Testing Company
Chemtech	Chemtech Consulting Group
CLP	Contract Laboratory Program
CRQL	Contract required quantitation limit
DQO	Data quality objective
EA	EA Engineering, Science, and Technology, Inc., PBC
EPA	U.S. Environmental Protection Agency
FE	First Environment, Inc.
ICP	Inductively-coupled plasma
LCS	Laboratory control sample
LCSD	Laboratory control sample duplicate
MCL	Maximum contaminant level
MDL	Method detection limit
MS	Matrix spike
MSD	Matrix spike duplicate
PCE	Tetrachloroethene
QA	Quality assurance
QAPP	Quality Assurance Project Plan
QC	Quality control
RI	Remedial investigation
RPD	Relative percent difference
RSL	Regional screening level
SDG	Sample delivery group
Shealy	Shealy Environmental Services, Inc.
SOW	Statement of Work
SVOC	Semivolatile organic compound
TAL	Target Analyte List
TDS	Total dissolved solids
VISL	Vapor intrusion screening level
VOC	Volatile organic compound

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1.0 Analytical Data Quality Summary

This Data Validation Report documents the sample collection and data validation results for the surface water and stormwater samples collected in support of the ongoing Remedial Investigation (RI) for Accelerated Operable Unit 1 (AOU-1) at the 700 South 1600 East Tetrachloroethene (PCE) Plume Site, Salt Lake City, Utah. This work was performed by EA Engineering, Science, and Technology, Inc, PBC (EA) for the Department of Veterans Affairs (VA). Sampling procedures and overall quality assurance (QA) and quality control (QC) protocols associated with the sampling and analyses are presented in the RI Work Plan (First Environment, Inc. [FE] 2015) and Quality Assurance Project Plan (QAPP) Update Revision 1 (EA Engineering, Science, and Technology, Inc., PBC [EA] 2016).

1.1 Sample Collection and Analytical Protocol

Collection of surface water samples from identified and accessible seeps, springs, sumps, and Red Butte Creek within AOU-1 was performed to assess the lateral extent of PCE contamination. Several of the springs discharge to the municipal stormwater conveyance system. Therefore, water samples were collected from selected Salt Lake City stormwater sewer manholes, located in and downgradient of AOU-1, to determine if groundwater seepage and discharge from foundation drains is impacting stormwater lines. Stormwater sample locations consisted of mitigated spring water storm drains, stormwater lines, and the Jordan and Salt Lake City Canal. Surface water and stormwater were collected from 26 February to 11 May 2016.

Surface water samples were collected in accordance with the QAPP Update Revision 1, Attachment 2 Standard Operating Procedures (SOP) Compendium, using a peristaltic pump with three-eighths inch diameter polyethylene tubing, or as a grab sample by filling containers directly, or, if seep discharge was low, with a decontaminated stainless steel sampling syringe. Stormwater samples were collected at least 24 hours after any precipitation. Stormwater samples were also collected using a peristaltic pump with three-eighths inch diameter polyethylene tubing.

Surface water and stormwater samples for laboratory analysis were collected in certified clean containers in accordance with U.S. Environmental Protection Agency (EPA) specifications with appropriate preservative and stored on ice for transport to the laboratory. Sample chain-of-custody was recorded using the EPA SCRIBE® system for sample management and tracking. Surface water and stormwater samples were sent to EPA designated Contract Laboratory Program (CLP) laboratory (Chemtech Consulting Group [Chemtech]) for analysis of volatile organic compounds (VOCs) in accordance with CLP method protocol. Samples from a random subset (20 percent) of these locations were analyzed for semivolatile organic compounds (SVOCs), target analyte list metals (TAL) total metals, total dissolved solids (TDS), and anions at the EPA CLP laboratory and the EPA Region 8 laboratory. Ten percent confirmation splits of the surface water and stormwater samples were collected and shipped to two different CLP laboratories (Shealy Environmental Services [Shealy] and Bonner Analytical Testing Company [Bonner]) to be analyzed for VOCs, SVOCs, and TAL total metals for independent QA. In addition, two surface water samples were collected for hydrogen and oxygen isotope ratio analysis at the Stable Isotope Ratio Facility for Environmental Research located at University of Utah. Due to malfunction of the storage refrigerator it was determined the remainder of the surface water samples pending isotope analysis should be disposed of and not analyzed. Isotope sample data were verified by the University of Utah lab prior to finalizing the data and not identified for third party data validation based on the unique type of data set. Isotope data will be evaluated as part of OU-2 groundwater investigation and is not included in this report.

Samples were analyzed in accordance with the CLP Statement of Work (SOW) for organic and inorganic methods (EPA 2015a,b) and EPA analytical methods as indicated below.

- *VOCs*—EPA CLP SOM02.3 (EPA 2015a)
- *SVOCs*—EPA CLP SOM02.3 (EPA 2015a)
- *TAL Metals*—EPA CLP ISM02.3 (EPA 2015b)
- *Anions (chloride, sulfate, nitrate/nitrite nitrogen)*—EPA 300.0 (EPA 1993)
- *TDS*—EPA 160.1 (EPA 1983)

A summary of the surface water and stormwater sampling and associated analyses is included in Table 1-1. Sample results are contained in 11 sample delivery groups (SDGs) as noted below.

- Chemtech (VOCs, SVOCs, TAL metals)—SDGs H0001, H4002, H4010, H4023, H4104, MH4002, MH4005
- EPA Region 8 laboratory (anions and TDS)—SDGs C160505, C160506
- Shealy (VOCs, SVOCs)—SDG H4001
- Bonner (TAL metals)—SDG MH4213

1.2 Data Validation Protocol

A Tier 2B data validation was performed on 100 percent and Tier 4 data validation was performed on 10 percent of the VOC, SVOC and metals analytical data. Validation was performed by a third-party subcontractor, Environmental Data Services, Newport News, Virginia, in accordance with the guidelines and control criteria specified in the following documents. The analytical data provided by the EPA Region 8 lab (anions and TDS) underwent a quality assessment by the EPA lab prior to submission to VA. Surface water quality data collected during the 2016 investigation may be used in conjunction with the OU-2 groundwater investigation (which also includes AOU-1 groundwater). Validated sample data are presented in Tables 1-2 and 1-3. Data validation was performed based on the following documents:

- RI Work Plan/ Sampling and Analysis Plan (FE 2015)
- QAPP (EA 2016)
- EPA National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2014a)
- EPA National Functional Guidelines for Inorganic Superfund Data Review (EPA 2014b).

The validation included review of the following data quality indicator criteria:

- Chain of custody documentation
- Sample extraction and analysis holding time compliance
- Collection of required field QC samples
- Review of QC summaries and case narrative regarding sample analysis and control criteria
- Review of method blank and field QC blank samples
- Review of instrument calibration performance and other method-specific criteria as defined in the QAPP (EA 2016)

- Laboratory control sample (LCS) and LCS duplicate (LCSD) samples and other method-specific analytical spike data (applicable to metals only)
- Surrogate spike recoveries for organic analyses
- Matrix spike (MS) and matrix spike duplicate (MSD) sample recoveries
- Field duplicate sample relative percent difference (RPD)
- For Tier 4 validation, system performance and analyte quantitation
- Review of laboratory detection limits to verify conformance with project data objectives and screening criteria
- Review of the data and deliverables for completeness.

Analytical data were reviewed to evaluate precision, accuracy, representativeness, comparability, completeness, and sensitivity as defined below. Acceptance criteria for evaluation of precision and accuracy are compared with the acceptance criteria defined in the QAPP EA (2016) and EPA validation guidelines (EPA 2014a,b).

- *Accuracy* is demonstrated by percent recovery of target analytes from fortified blank and sample matrices, LCS/LCSD, and MS/MSD, respectively. For organic methods, bias is also demonstrated through recovery of surrogates from each field and QC sample. A comparison was made from the recovery of target analytes from fortified samples to the acceptance criteria defined in the QAPP (EA (2016). When these criteria are not met, the data are qualified accordingly.

- *Precision* is expressed as the RPD between the results of replicate sample analyses: sample duplicates, LCSDs, and MSDs. When analyte RPDs exceed the acceptance criteria, the data are qualified accordingly.

- *Representativeness* of the samples submitted for analysis is ensured by adherence to standard sampling techniques and standard analytical method protocols.

- *Comparability* of sample results is ensured through the use of approved sampling and analysis methods and protocols, and reporting of standard units of measure.

- *Completeness* is expressed as a percentage of the ratio of the number of usable data results to the total number of analytical data results. Only rejected data (R-qualified) are considered not usable to achieve project objectives. The completeness goal for the surface water and stormwater sampling is 90 percent data completeness.

- *Sensitivity* is determined by the ability to achieve the established method-specific reporting limits in accordance with the QAPP (EA 2016). For this project, the laboratory reported positive results to the method detection limit (MDL), and results between the MDL and the contract required quantitation limit (CRQL) were flagged with a J-qualifier and reported as estimated data.

Data flags were assigned according to the QC acceptance limits defined in the QAPP (EA 2016). The data validation flags for each SDG are summarized in each individual data validation report (Attachment 1). These flags, and the reason for each flag, are maintained in the project database. Multiple flags may be applied to a specific sample method/matrix/analyte; however, the final flag presented with the data values is based on the most conservative of the validation flags.

The data flags are defined in the QAPP (EA 2016) as follows:

J = Analyte was present but the reported value is estimated.

UJ = Analyte was not detected above the MDL. However, the reported detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R = Result has been rejected and data do not meet the project objectives.

U = Analyte was analyzed for but not detected above the MDL.

1.3 Accuracy, Precision and Representativeness of Data

Data validation results are presented in the data validation summary reports in Attachment 1 and summarized below. The surface water and stormwater sample analytical data reports are included in Attachment 2.

1.3.1 Chain-of-Custody and Sample Receipt

Fifty water samples and associated field QC samples were received at Chemtech, EPA laboratory, Shealy and Bonner during the period of 27 February through 12 May 2016 (Table 1-1). The samples were received in appropriate containers, properly preserved, and sample cooler temperatures were within the EPA guideline of 4 degrees Celsius (ºC), (± 2°C). Appropriate signatures were included on the chain-of-custody documentation. Sample receipt condition is documented in the analytical data reports. Any sample receipt clarifications were provided to the laboratories by the EPA sample coordinator.

1.3.2 Sample Extraction and Analysis Holding Times

Sample holding times were evaluated by comparing the sample collection dates to the sample extraction and analysis dates. Extraction and analysis holding times were reviewed for the water samples to determine compliance with EPA recommended holding times. Holding time requirements were met for method-specific extraction and analysis for all project samples.

1.3.3 Blank Data Results

Blank sample data were evaluated in accordance with the criteria established in the QAPP (EA 2016) and National Functional Guidelines (EPA 2014b,c). Detections of target analytes greater than one-half the CRQL and greater than the CRQL for common lab contaminants (i.e., methylene chloride, toluene, and acetone) resulted in data qualification depending on the analyte concentration in the associated samples. Associated samples are those samples contained in the same batch or sample group as the method blank, calibration blank or field QC blank sample.

- Low-level detections of the laboratory contaminant methylene chloride in method blank samples resulted in U-qualification (non-detect result) of low-level methylene chloride detections in the samples associated with the method blank sample.

- Low-level detections of chloroform in trip blanks and chloroform, bromodichloromethane and dibromochloromethane in field blank samples resulted in U-qualification (non-detect result) of the same analyte detections reported in samples associated with the trip and field blanks.

- Low-level detections of chromium in method blank samples and aluminum, antimony, silver, nickel and copper in continuing calibration blanks for metals analysis resulted in U-qualification (non-detect results) of the same analyte detections reported in samples associated with the method blank and calibration blanks.

1.3.4 Surrogate and Internal Standard Recoveries

Surrogate and internal standards are organic compounds added to field and laboratory QC samples for organic analysis to evaluate matrix effect and method performance on an individual sample basis. Exceedance of QC limits for surrogate and internal standard recoveries result in data qualification of various VOC and SVOC analytes that are associated with the specific surrogate or internal standard compound based on similarity in chemical composition. Analytes can be either J- or UJ-qualified based on whether they are detected results or non-detect results. Non-detect results will be UJ-qualified, signifying estimated non-detect values; detections will be J-qualified, signifying estimated values.

- VOC surrogate recovery for 1,1-dichloroethene-d2 was below the control limit for samples SW-008-D, SW-018-D, SW-050 and TB-010. Associated compounds were J- and UJ-qualified signifying estimated detect and non-detect data.

- SVOC surrogate recovery for 1,4-dioxane-d8 was below the control limit for samples SW-007, SW-007-D, SW-012, SW-021, SW-023, SW-026, SW-027, and SW-028. Associated compounds were UJ-qualified signifying estimated non-detect data.

- SVOC surrogate recovery for 4-nitrophenol-d4 was below 10 percent for samples SW-012, SW-026, SW-027 and SW-028. Associated non-detect compounds were R-qualified signifying rejected data.

All other sample surrogate and internal standard recoveries were within the method control criteria.

1.3.5 Laboratory Control Sample Recoveries and Precision Results

The LCS is an aliquot of analyte-free matrix, spiked with target analytes that is prepared with each analytical batch for the inorganic analytical methods. The recovery of target analytes from the LCS analysis is a measurement of sample preparation and method performance in an interference-free sample matrix. LCS sample recoveries and precision were within the method control criteria for the ISM02.2 metals analysis. LCS is not included with the CLP VOC and SVOC analysis methods.

1.3.6 Matrix Spike Sample Recoveries and Precision Results

The MS and MSD samples are a portion of a field sample spiked with target analytes and prepared with each analytical method for soil and water methods. The MS and MSD results are used to evaluate potential bias introduced to the method due to matrix interference and to measure bias and precision for each analytical batch. MS/MSD samples were analyzed with the project samples per the QAPP requirement (MS/MSD per 20 field samples) (EA 2016). MS/MSD spike recoveries were within control limits for VOCs, SVOCs and metals.

1.3.7 Field Duplicate Samples

Five field duplicate samples were collected and analyzed with the project samples per the QAPP requirement (1 per 10 field samples) (EA 2016). Field duplicate results were evaluated based on the RPD of 40 percent for VOCs and SVOCs and 30 percent for TAL metals and other inorganics as specified in the QAPP (EA 2016), for detected concentrations greater than the reporting limit. Field duplicate results were within the acceptable criteria for all analytes.

1.3.8 Instrument Calibration Performance

Instrument calibration and continuing calibration performance are reviewed to ensure that the calibration of target analytes meets the method-specific and project-established percent recovery and relative standard deviation criteria. Instrument calibration performance was met for all analyses with the following continuing calibration verification exceptions:

- The percent difference for the relative response factor for benzylbutylphthalate exceeded the control limit. Non-detect sample results for benzylbutylphthalate associated with this analytical run and calibration were UJ-qualified.
- The percent difference for the relative response factor for hexachlorocyclopentadiene exceeded the control limit. Non-detect sample results for hexachlorocyclopentadiene associated with this analytical run and calibration were UJ-qualified.

1.3.9 Inductively-Coupled Plasma Serial Dilution

Inductively-coupled plasma (ICP) serial dilution criteria for metals analysis were met for all analytes with the exception of aluminum, copper, iron, vanadium and zinc. Associated sample detections in the same analytical batch with the serial dilution that exceeded the criteria were J-qualified, as estimated data values.

1.3.10 System Performance and Analyte Quantitation

The system performance and analyte quantitation were reviewed for the Tier 4 validation. Instrument sensitivity, performance, instrument output and response data were reviewed and deemed acceptable for all methods. In addition, target compound identification and sample quantitation were reviewed for all methods and determined to be accurate.

1.4 Data Representativeness

Surface water and stormwater sample collection was conducted in accordance with the sampling and analysis protocols and SOP 019 documented in the QAPP Update Revision 1. Approved procedures were used to collect, preserve, document, and ship samples to the CLP and EPA Region 8 laboratories for analysis, thus ensuring the samples were representative of the project site and conditions. Samples were analyzed using EPA CLP and EPA standard methodologies to ensure representativeness of the data results.

1.5 Data Comparability

Comparability of data is achieved through the use of industry standard analytical method protocols, approved sampling and analysis protocols, use of standard units of measure, and conformance to project-required reporting limits to achieve data quality objectives. Data verification indicates that project-specific methods and reporting limits were used for analysis of the AOU-1 project samples in accordance with the QAPP (EA 2016) with exception of the CLP SOW organic and inorganic methods. The more current version of this CLP SOW methods SOM02.3 and ISM02.3 were used for the VOC, SVOC and metals analyses with no impact to data usability.

1.6 Data Sensitivity

Appropriate EPA CLP analytical methods were used for the sample analyses to achieve the required reporting limits and project-specific screening criteria per the QAPP (EA 2016) for VOCs, SVOCs, metals and general chemistry parameters with exceptions as previously noted in the QAPP – Tables 9, 10, 11 and 12 – Project Laboratory – Target Analytes and Quantitation Limits for VOCs, SVOCs, metals and general chemistry parameters in water, respectively. Reporting limits for the site-specific preliminary contaminants of potential concern were below the project screening levels.

- Project screening level—Screening levels taken from tables 9, 10, 11 and 12 of the QAPP (EA 2016); derived from the groundwater screening values that have been increased by a factor of ten to account for reduced exposures to surface water.

1.7 Independent Laboratory Quality Assurance Assessment

Five surface water/ stormwater samples were analyzed at Shealy for VOCs and/or SVOCs and at Bonner for TAL metals. Data results were compared to the results generated by Chemtech in support of an independent CLP laboratory QA assessment for the sampling event. For comparison purposes, the same RPD criteria for organics and metals used for assessing field duplicate sample precision was used for the independent QA sample precision assessment since no criteria was specified in the QAPP Update Revision 1. No data were qualified based on the evaluation of the independent QA laboratory analyses. In summary, the RPDs for all detected VOCs were within the 40 percent criteria. No SVOC detections were reported in the sample data. The RPDs for TAL metals that exceed the 30 percent criteria include aluminum, cadmium, cobalt, iron, lead, manganese, nickel, selenium, and zinc. The RPD exceedances for metals may be attributed to the sample matrix and suspended particulate matter in the samples. Analytical results and RPDs are presented on table 1-4.

1.8 Data Completeness

Project deliverables were reviewed for accuracy and completeness and compared to the QAPP requirements (EA 2016). The laboratory data deliverables were verified to ensure the required elements were included the data package. The following discrepancies were noted between the project plans, the samples submitted to the CLP laboratory and the data reporting.

- The CLP laboratories ran the most current CLP SOW SOM02.3 and ISM02.3 for the organic analyses (VOCs and SVOCs) and metals analysis rather than the ISM02.2 stated in the QAPP (EA 2016). This had no impact to data usability.

- The data validation was conducted using the 2014 National Functional Guidelines (EPA 2014b,c rather than the 2013 guidelines as indicted in the QAPP (EA 2016). The third-party validation subcontractor used the most current version to validate the data since the more current CLP SOW methods were used for analysis. This had no impact to assessing data quality indicator criteria and documenting the data usability.Five SVOC analytes (2,4-dninitrophenol, 2-nitroaniline, 3-nitroaniline, 4-nitroaniline and 4-nitrophenol) in four samples were R-qualified signifying rejected and not usable data. A data completeness for the SVOC analysis was still greater than the 90 percent completeness goal at 97.3 percent.
- Due to malfunction of refrigerator where the surface water samples were being stored pending future isotope analysis, additional surface water samples could not be analyzed for isotopes. Additional isotope sampling is planned as part of the OU-2 groundwater investigation.

Aside from these noted discrepancies, all data are usable to achieve project data quality objectives (DQOs). The data completeness for the surface water and stormwater sample data is 99.5 percent.

1.9 Conclusions

The analytical data reported for this project have been reviewed for accuracy, precision, representativeness, comparability, sensitivity and completeness. QC criteria exceedances for the AOU-1 project analytical data resulting in data qualification include 1) low-level detections of VOCs and metals in method, trip, field and calibration blank samples, 2) VOC and SVOC surrogate spike recoveries outside of limits, 3) SVOC analysis instrument calibration relative response factor exceedance of criteria, and 4) exceedance of the ICP serial dilution criterion for metals.

The affected sample data were J- and UJ-qualified as estimated detect or non-detect concentrations, R-qualified signifying rejected data and U-qualified as non-detect concentrations. Estimated data are still usable to achieve project DQOs. The analytical data generated in support of the AOU-1 RI meet project DQOs as qualified and are usable for the intended purpose.

TABLE 1-1
Surface Water and Stormwater Sample Summary
2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

Location ID	Date Sampled	Time Sampled	Sample ID	CLP Sample ID	Analyses									Quality Control	
					CLP Lab			EPA Region 8 Lab		CLP Confirmation Labs			SIRFER	Duplicate	MS/MSD
					VOCs	SVOCs	Total Metals	TDS	Anions	VOCs	SVOCs	Total Metals	Isotopes[1]		
Surface Water															
SW-01	05/04/16	1400	A-SW-001	H4091	X										
				-									X		
			A-SW-001-D	H4019	X									X	
SW-04	05/02/16	1340	A-SW-004	H4094	X										
				-									X		
SW-06	05/04/16	1700	A-SW-006	H4096	X										
				-									X		
			A-SW-006-D	H4018	X									X	
SW-07	05/04/16	1100	A-SW-007	H4097	X	X									
				MH4097			X								
				-				X	X				X		
			A-SW-007-D	H4013	X	X								X	
				MH4005			X							X	
				-				X	X					X	
SW-08	05/04/16	1010	A-SW-008	H4098	X										
				-									X		
			A-SW-008-D	H4016	X									X	
SW-09	05/03/16	0855	A-SW-009	H4099	X										
				-									X		
SW-11	05/03/16	1230	A-SW-011	H4101	X										
				-									X		
SW-12	05/03/16	1030	A-SW-012	H4102	X	X									
				H4202						X					
				MH4202			X								
				-				X	X				X		
SW-13	05/03/16	1430	A-SW-013	H4103	X										
				-									X		
SW-14	05/04/16	0900	A-SW-014	H4104	X										
				-									X		
SW-15	05/04/16	1130	A-SW-015	H4105	X	X									
				MH4107			X								
				-				X	X				X		

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Location ID	Date Sampled	Time Sampled	Sample ID	CLP Sample ID	Analyses									Quality Control	
					CLP Lab			EPA Region 8 Lab		CLP Confirmation Labs			SIRFER	Duplicate	MS/MSD
					VOCs	SVOCs	Total Metals	TDS	Anions	VOCs	SVOCs	Total Metals	Isotopes[1]		
SW-16	05/04/16	1320	A-SW-016	H4106	X	X									
				MH4106			X								
	05/04/16	1320	A-SW-016	-				X	X				X		
SW-19	05/04/16	0820	A-SW-019	H4109	X										
				-									X		
SW-21	05/03/16	1320	A-SW-021	H4111	X	X									
				H4211						X					
				MH4211			X								
				-				X	X				X		
SW-22	05/03/16	1550	A-SW-022	H4112	X										
				-									X		
SW-23	05/03/16	0930	A-SW-023	H4113	X	X									
				H4213						X	X				
				MH4213								X			
				MH4113			X								
				-				X	X				X		
			A-SW-023-MS	H4113MS	X	X									X
				H4213MS						X	X				X
				MH4113S			X								X
				MH4213S								X			X
				-				X	X						X
			A-SW-023-MSD	H4113MSD	X	X									X
				H4213MSD						X	X				X
				MH4113D			X								X
				MH4213D								X			X
				-				X	X						X
SW-26	05/03/16	1345	A-SW-026	H4116	X	X									
				MH4116			X								
				-				X	X				X		
SW-27	05/03/16	1120	A-SW-027	H4117	X	X									
				H4217						X					
				MH4217			X								
				-				X	X				X		
SW-29	05/11/16	0935	A-SW-029	H4119	X										
				-									X		

TABLE 1-1
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2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

Location ID	Date Sampled	Time Sampled	Sample ID	CLP Sample ID	Analyses									Quality Control	
					CLP Lab			EPA Region 8 Lab		CLP Confirmation Labs			SIRFER	Duplicate	MS/MSD
					VOCs	SVOCs	Total Metals	TDS	Anions	VOCs	SVOCs	Total Metals	Isotopes[(1)]		
SW-30	05/03/16	1630	A-SW-030	H4120	X										
	05/03/16	1630	A-SW-030	-									X		
SW-31	05/02/16	1510	A-SW-031	H4121	X										
				-									X		
SW-33	05/02/16	1400	A-SW-033	H4123	X										
				-									X		
SW-34	05/02/16	1430	A-SW-034	H4124	X										
				-									X		
SW-35	05/04/16	0930	A-SW-035	H4125	X										
				-									X		
SW-36	05/03/16	1730	A-SW-036	H4126	X										
				-									X		
SW-40	05/05/16	1745	A-SW-040	H4130	X										
				-									X		
SW-42	05/02/16	1420	A-SW-042	H4132	X										
				-									X		
SW-43	05/02/16	1315	A-SW-043	H4133	X										
				-									X		
SW-44	05/04/16	1430	A-SW-044	H4134	X										
				-									X		
			A-SW-044-MS	H4134MS	X										X
			A-SW-044-MSD	H4134MSD	X										X
SW-46	05/05/16	1730	A-SW-046	H4136	X										
				-									X		
SW-47	05/04/16	0840	A-SW-047	H4137	X	X									
				MH4137			X								
				-				X	X				X		
SW-48	05/04/16	0950	A-SW-048	H4138	X										
				-									X		
			A-SW-048-MS	H4138MS	X										X
			A-SW-048-MSD	H4138MSD	X										X
SW-50	02/26/16	1515	A-SW-001	H0901	X										
				-									X		

TABLE 1-1
Surface Water and Stormwater Sample Summary
2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

Location ID	Date Sampled	Time Sampled	Sample ID	CLP Sample ID	Analyses									Quality Control	
					CLP Lab			EPA Region 8 Lab		CLP Confirmation Labs			SIRFER	Duplicate	MS/MSD
					VOCs	SVOCs	Total Metals	TDS	Anions	VOCs	SVOCs	Total Metals	Isotopes[1]		
Stormwater															
SW-02	05/11/16	0910	A-SW-002	H4092	X										
				-									X		
SW-03	05/11/16	0920	A-SW-003	H4093	X										
				-									X		
SW-05	05/11/16	0757	A-SW-005	H4095	X										
				-									X		
SW-10	05/11/16	0840	A-SW-010	H4100	X										
				-									X		
SW-17	05/11/16	1018	A-SW-017	H4107	X										
				-									X		
			A-SW-017-MS	H4107MS	X										X
			A-SW-017-MSD	H4107MSD	X										X
SW-18	05/05/16	0910	A-SW-018	H4108	X										
				-									X		
			A-SW-018-D	H4021	X									X	
SW-20	05/05/16	1030	A-SW-020	H4110	X										
				-									X		
SW-24	05/11/16	0925	A-SW-024	H4114	X										
				-									X		
SW-25	05/05/16	1800	A-SW-025	H4115	X										
				-									X		
SW-28	05/03/16	1200	A-SW-028	H4118	X	X									
				H4218						X					
				MH4218			X								
				-				X	X				X		
SW-32	05/05/16	1120	A-SW-032	H4122	X										
				-									X		
SW-37	05/05/16	1815	A-SW-037	H4127	X										
				-									X		
SW-38	05/11/16	0810	A-SW-038	H4128	X										
				-									X		
SW-39	05/03/16	1700	A-SW-039	H4129	X										
				-									X		

TABLE 1-1
Surface Water and Stormwater Sample Summary
2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

Location ID	Date Sampled	Time Sampled	Sample ID	CLP Sample ID	Analyses									Quality Control	
					CLP Lab			EPA Region 8 Lab		CLP Confirmation Labs			SIRFER	Duplicate	MS/MSD
					VOCs	SVOCs	Total Metals	TDS	Anions	VOCs	SVOCs	Total Metals	Isotopes(1)		
SW-41	05/05/15	1100	A-SW-041	H4131	X										
				-									X		
SW-45	05/05/16	1000	A-SW-045	H4135	X										
				-									X		
SW-49	05/05/16	1040	A-SW-049	H4139	X										
				-									X		

NOTES:
(1) Samples for isotope analysis were collected for future analysis; however, these have since been disposed of due to refrigerator storage malfunction.
- = Not applicable.
CLP = EPA Contract Laboratory Program.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
MS/MSD = Matrix spike/matrix spike duplicate.
SIRFER = University of Utah Stable Isotope Ratio Facility for Environmental Research.
SVOC = Semi-volatile organic compound.
TDS = Total dissolved solids.
VOC = Volatile organic compound.

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TABLE 1-2

Surface Water and Stormwater Sample Volatile and Semivolatile Organic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

			Location ID	**SW-01**			**SW-01**			**SW-02**			**SW-03**			**SW-04**			**SW-05**			**SW-06**			**SW-06**		
			Field Sample ID	**A-SW-01**			**A-SW-01-D**			**A-SW-02**			**A-SW-03**			**A-SW-004**			**A-SW-05**			**A-SW-06**			**A-SW-06-D**		
			Sample Date	**5/4/2016**			**5/4/2016**			**5/11/2016**			**5/11/2016**			**5/2/2016**			**5/11/2016**			**5/4/2016**			**5/4/2016**		
			Parent Sample																								
Parameter/ Analytical Method	**Analyte**	**Residential Surface Water SL** [1]	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**
CLP VOCs (CLP Method SOM02.3) [2]	1,1,1-trichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.34	J	0.50	< 0.50	U	0.50	0.95		0.50	0.95		0.50
	1,1,2,2-tetrachloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2-Trichloro-1,2,2-trifluoroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2-trichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1-dichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1-dichloroethene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2,3-trichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2,4-trichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-Dibromo-3-chloropropane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dibromoethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichloropropane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,3-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,4-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	2-butanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	2-hexanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	4-methyl-2-pentanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	Acetone	NS	µg/L	5.8		5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	Benzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.13	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromochloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromodichloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.24	J	0.50	< 0.50	U	0.50	0.29	J	0.50	0.28	J	0.50
	Bromoform	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromomethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Carbon disulfide	NS	µg/L	0.070	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Carbon tetrachloride	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloroform	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	2.2		0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	cis-1,2-dichloroethene	1,860	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.19	J	0.50	< 0.50	U	0.50	0.58		0.50	0.55		0.50
	cis-1,3-dichloropropene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Cyclohexane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Dibromochloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Dichlorodifluoromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Ethylbenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.15	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Isopropylbenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	m,p-Xylene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.74		0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methyl acetate	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methyl tert-butyl ether	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methylcyclohexane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methylene Chloride	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	o-Xylene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.24	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Styrene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Tetrachloroethene	986	µg/L	0.13	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	27		2.5	0.38	J	0.50	74		5.0	80		5.0
	Toluene	NS	µg/L	0.10	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	1.7		0.50	< 0.50	U	0.50	< 0.50	U	0.50
	trans-1,2-dichloroethene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	trans-1,3-dichloropropene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Trichloroethene	75.1	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.34	J	0.50	< 0.50	U	0.50	0.96		0.50	0.96		0.50
	Trichlorofluoromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Vinyl chloride	0.425	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
SVOCs (CLP Method SOM02.3) [2]	1,1-biphenyl	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,2,4,5-tetrachlorobenzene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,4-dioxane	157	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,2-oxybis(1-chloropropane)	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,3,4,6-tetrachlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4,5-trichlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4,6-trichlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dichlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dimethylphenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dinitrophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dinitrotoluene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,6-dinitrotoluene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-chloronaphthalene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-chlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-Methyl-4,6-dinitrophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-methylnaphthalene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-methylphenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-nitroaniline	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-nitrophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3,3-dichlorobenzidine	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 1-2

Surface Water and Stormwater Sample Volatile and Semivolatile Organic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

			Location ID	SW-01			SW-01			SW-02			SW-03			SW-04			SW-05			SW-06			SW-06		
			Field Sample ID	A-SW-01			A-SW-01-D			A-SW-02			A-SW-03			A-SW-004			A-SW-05			A-SW-06			A-SW-06-D		
			Sample Date	5/4/2016			5/4/2016			5/11/2016			5/11/2016			5/2/2016			5/11/2016			5/4/2016			5/4/2016		
			Parent Sample																								
Parameter/ Analytical Method	**Analyte**	**Residential Surface Water SL[a]**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**
SVOCs (CLP Method SOM02.3) [2] (cont'd.)	3-nitroaniline	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-bromophenyl phenyl ether	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-chloro-3-methylphenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-chloroaniline	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-chlorophenyl phenyl ether	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-methylphenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-nitroaniline	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-nitrophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acenaphthene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acetophenone	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Anthracene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Atrazine	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzaldehyde	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[a]anthracene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[a]pyrene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[b]fluoranthene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[g,h,i]perylene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[k]fluoranthene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzyl butyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-chloroethoxy) methane	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-chloroethyl) ether	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Caprolactam	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Carbazole	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chrysene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dibenz[a,h]anthracene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dibenzofuran	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Diethyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dimethyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Di-n-butyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Di-n-octyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluorene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachloro-1,3-butadiene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachlorobenzene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachloroethane	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Indeno[1,2,3-c,d]pyrene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Isophorone	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Naphthalene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nitrobenzene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	N-nitrosodi-n-propylamine	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	N-nitrosodiphenylamine	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Pentachlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Phenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Pyrene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 1-2

Surface Water and Stormwater Sample Volatile and Semivolatile Organic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

		Location ID		SW-07			SW-07			SW-08			SW-08			SW-09			SW-10			SW-11			SW-12		
		Field Sample ID		A-SW-07			A-SW-07-D			A-SW-08			A-SW-08-D			A-SW-09			A-SW-10			A-SW-11			A-SW-12		
		Sample Date		5/4/2016			5/4/2016			5/4/2016			5/4/2016			5/3/2016			5/11/2016			5/3/2016			5/3/2016		
		Parent Sample					A-SW-07																				
Parameter/ Analytical Method	**Analyte**	**Residential Surface Water SL[a]**	**Unit**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**
CLP VOCs (CLP Method SOM02.3) [2]	1,1,1-trichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	0.21	J	0.50	0.19	J	0.50	0.29	J	0.50	< 0.50	U	0.50	0.34	J	0.50	0.40	J	0.50
	1,1,2,2-tetrachloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2-Trichloro-1,2,2-trifluoroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2-trichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1-dichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1-dichloroethene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	UJ	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2,3-trichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2,4-trichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-Dibromo-3-chloropropane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dibromoethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichloropropane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,3-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,4-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	2-butanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	2-hexanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	4-methyl-2-pentanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	Acetone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	Benzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromochloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromodichloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromoform	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromomethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Carbon disulfide	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Carbon tetrachloride	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloroform	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	1.5		0.50
	Chloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	cis-1,2-dichloroethene	1,860	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	UJ	0.50	0.11	J	0.50	< 0.50	U	0.50	0.60		0.50	0.12	J	0.50
	cis-1,3-dichloropropene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Cyclohexane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.11	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Dibromochloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Dichlorodifluoromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Ethylbenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Isopropylbenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	m,p-Xylene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methyl acetate	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methyl tert-butyl ether	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methylcyclohexane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methylene Chloride	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	o-Xylene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Styrene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Tetrachloroethene	986	µg/L	2.9		0.50	2.8		0.50	7.5		0.50	6.7		0.50	19		0.50	< 0.50	U	0.50	20		0.50	23		2.5
	Toluene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.11	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	trans-1,2-dichloroethene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	UJ	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	trans-1,3-dichloropropene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Trichloroethene	75.1	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	0.13	J	0.50	0.13	J	0.50	0.88		0.50	< 0.50	U	0.50	0.61		0.50	0.39	J	0.50
	Trichlorofluoromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Vinyl chloride	0.425	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
SVOCs (CLP Method SOM02.3) [2]	1,1-biphenyl	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	1,2,4,5-tetrachlorobenzene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	1,4-dioxane	157	µg/L	< 2.0	UJ	2.0	< 2.0	UJ	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0	UJ	2.0
	2,2-oxybis(1-chloropropane)	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10
	2,3,4,6-tetrachlorophenol	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	2,4,5-trichlorophenol	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	2,4,6-trichlorophenol	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	2,4-dichlorophenol	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	2,4-dimethylphenol	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	2,4-dinitrophenol	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	R	10
	2,4-dinitrotoluene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	2,6-dinitrotoluene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	2-chloronaphthalene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	2-chlorophenol	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	2-Methyl-4,6-dinitrophenol	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10

TABLE 1-2

Surface Water and Stormwater Sample Volatile and Semivolatile Organic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

				Location ID	SW-07			SW-07			SW-08			SW-08			SW-09			SW-10			SW-11			SW-12		
				Field Sample ID	A-SW-07			A-SW-07-D			A-SW-08			A-SW-08-D			A-SW-09			A-SW-10			A-SW-11			A-SW-12		
				Sample Date	5/4/2016			5/4/2016			5/4/2016			5/4/2016			5/3/2016			5/11/2016			5/3/2016			5/3/2016		
				Parent Sample				A-SW-07																				
Parameter/ Analytical Method	**Analyte**	**Residential Surface Water SL[a]**	**Unit**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**
SVOCs (CLP Method SOM02.3) [2] (cont'd.)	2-methylnaphthalene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	2-methylphenol	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10
	2-nitroaniline	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	R	5.0
	2-nitrophenol	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	3,3-dichlorobenzidine	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10
	3-nitroaniline	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	R	10
	4-bromophenyl phenyl ether	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	4-chloro-3-methylphenol	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	4-chloroaniline	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10
	4-chlorophenyl phenyl ether	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	4-methylphenol	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10
	4-nitroaniline	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	R	10
	4-nitrophenol	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	R	10
	Acenaphthene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Acenaphthylene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Acetophenone	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10
	Anthracene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Atrazine	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10
	Benzaldehyde	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10
	Benzo[a]anthracene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Benzo[a]pyrene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Benzo[b]fluoranthene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Benzo[g,h,i]perylene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Benzo[k]fluoranthene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Benzyl butyl phthalate	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Bis(2-chloroethoxy) methane	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Bis(2-chloroethyl) ether	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10
	Bis(2-ethylhexyl) phthalate	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Caprolactam	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10
	Carbazole	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10
	Chrysene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Dibenz[a,h]anthracene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Dibenzofuran	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Diethyl phthalate	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Dimethyl phthalate	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Di-n-butyl phthalate	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Di-n-octyl phthalate	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10
	Fluoranthene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Fluorene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Hexachloro-1,3-butadiene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Hexachlorobenzene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Hexachlorocyclopentadiene	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	UJ	10
	Hexachloroethane	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Indeno[1,2,3-c,d]pyrene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Isophorone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Naphthalene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Nitrobenzene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	N-nitrosodi-n-propylamine	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	N-nitrosodiphenylamine	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Pentachlorophenol	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10
	Phenanthrene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0
	Phenol	NS	µg/L	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 10	U	10
	Pyrene	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0

TABLE 1-2

Surface Water and Stormwater Sample Volatile and Semivolatile Organic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

		Location ID		**SW-13**			**SW-14**			**SW-15**			**SW-16**			**SW-17**			**SW-18**			**SW-18**			**SW-19**		
		Field Sample ID		**A-SW-13**			**A-SW-14**			**A-SW-15**			**A-SW-16**			**A-SW-17**			**A-SW-18**			**A-SW-18-D**			**A-SW-19**		
		Sample Date		**5/3/2016**			**5/4/2016**			**5/4/2016**			**5/4/2016**			**5/11/2016**			**5/5/2016**			**5/5/2016**			**5/4/2016**		
		Parent Sample																					**A-SW-18**					
Parameter/ Analytical Method	**Analyte**	**Residential Surface Water SL[a]**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**
CLP VOCs (CLP Method SOM02.3) [(2)]	1,1,1-trichloroethane	NS	µg/L	< 0.50	U	0.50	0.23	J	0.50	0.18	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.30	J	0.50	0.25	J	0.50	< 0.50	U	0.50
	1,1,2,2-tetrachloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2-Trichloro-1,2,2-trifluoroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2-trichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1-dichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1-dichloroethene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	UJ	0.50	< 0.50	U	0.50
	1,2,3-trichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2,4-trichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-Dibromo-3-chloropropane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dibromoethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichloropropane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,3-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,4-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	2-butanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	2-hexanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	4-methyl-2-pentanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	Acetone	NS	µg/L	9.8		5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	Benzene	NS	µg/L	0.50		0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromochloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromodichloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.68		0.50	< 0.50	U	0.50	0.090	J	0.50	0.10	J	0.50	< 0.50	U	0.50
	Bromoform	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromomethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Carbon disulfide	NS	µg/L	0.19	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Carbon tetrachloride	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloroform	NS	µg/L	< 0.50	U	0.50	1.9		0.50	< 0.50	U	0.50	6.3		0.50	< 0.50	U	0.50	1.8		0.50	1.5		0.50	3.0		0.50
	Chloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	cis-1,2-dichloroethene	1,860	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.35	J	0.50	0.31	J+	0.50	< 0.50	U	0.50
	cis-1,3-dichloropropene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Cyclohexane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Dibromochloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Dichlorodifluoromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Ethylbenzene	NS	µg/L	0.15	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Isopropylbenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	m,p-Xylene	NS	µg/L	0.22	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methyl acetate	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methyl tert-butyl ether	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methylcyclohexane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methylene Chloride	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	o-Xylene	NS	µg/L	0.10	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Styrene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Tetrachloroethene	986	µg/L	1.8		0.50	18		0.50	14		0.50	< 0.50	U	0.50	< 0.50	U	0.50	17		0.50	15		0.50	0.18	J	0.50
	Toluene	NS	µg/L	0.71		0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	trans-1,2-dichloroethene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	UJ	0.50	< 0.50	U	0.50
	trans-1,3-dichloropropene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Trichloroethene	75.1	µg/L	0.37	J	0.50	0.53		0.50	0.32	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.43	J	0.50	0.41	J	0.50	< 0.50	U	0.50
	Trichlorofluoromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Vinyl chloride	0.425	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
SVOCs (CLP Method SOM02.3) [(2)]	1,1-biphenyl	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	1,2,4,5-tetrachlorobenzene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	1,4-dioxane	157	µg/L	--	--	--	--	--	--	< 2.0	UJ	2.0	< 2.0	UJ	2.0	--	--	--	--	--	--	--	--	--	--	--	--
	2,2-oxybis(1-chloropropane)	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	2,3,4,6-tetrachlorophenol	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	2,4,5-trichlorophenol	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	2,4,6-trichlorophenol	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dichlorophenol	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dimethylphenol	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dinitrophenol	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dinitrotoluene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	2,6-dinitrotoluene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	2-chloronaphthalene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	2-chlorophenol	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	2-Methyl-4,6-dinitrophenol	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 1-2

Surface Water and Stormwater Sample Volatile and Semivolatile Organic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

		Location ID		SW-13			SW-14			SW-15			SW-16			SW-17			SW-18			SW-18			SW-19		
		Field Sample ID		A-SW-13			A-SW-14			A-SW-15			A-SW-16			A-SW-17			A-SW-18			A-SW-18-D			A-SW-19		
		Sample Date		5/3/2016			5/4/2016			5/4/2016			5/4/2016			5/11/2016			5/5/2016			5/5/2016			5/4/2016		
		Parent Sample																				A-SW-18					
Parameter/ Analytical Method	**Analyte**	**Residential Surface Water SL[a]**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**
SVOCs (CLP Method SOM02.3) (2) (cont'd.)	2-methylnaphthalene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	2-methylphenol	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	2-nitroaniline	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	2-nitrophenol	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	3,3-dichlorobenzidine	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	3-nitroaniline	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	4-bromophenyl phenyl ether	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	4-chloro-3-methylphenol	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	4-chloroaniline	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	4-chlorophenyl phenyl ether	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	4-methylphenol	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	4-nitroaniline	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	4-nitrophenol	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	Acenaphthene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Acetophenone	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	Anthracene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Atrazine	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	Benzaldehyde	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[a]anthracene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[a]pyrene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[b]fluoranthene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[g,h,i]perylene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[k]fluoranthene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Benzyl butyl phthalate	NS	µg/L	--	--	--	--	--	--	< 5.0	UJ	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-chloroethoxy) methane	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-chloroethyl) ether	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Caprolactam	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	Carbazole	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	Chrysene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Dibenz[a,h]anthracene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Dibenzofuran	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Diethyl phthalate	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Dimethyl phthalate	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Di-n-butyl phthalate	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Di-n-octyl phthalate	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Fluorene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachloro-1,3-butadiene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachlorobenzene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachloroethane	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Indeno[1,2,3-c,d]pyrene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Isophorone	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Naphthalene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Nitrobenzene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	N-nitrosodi-n-propylamine	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	N-nitrosodiphenylamine	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Pentachlorophenol	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	Phenol	NS	µg/L	--	--	--	--	--	--	< 10	U	10	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--
	Pyrene	NS	µg/L	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 1-2

Surface Water and Stormwater Sample Volatile and Semivolatile Organic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

				Location ID			SW-20			SW-21			SW-22			SW-23			SW-24			SW-25			SW-26			SW-27		
				Field Sample ID			A-SW-20			A-SW-21			A-SW-22			A-SW-23			A-SW-24			A-SW-25			A-SW-26			A-SW-27		
				Sample Date			5/5/2016			5/3/2016			5/3/2016			5/3/2016			5/11/2016			5/5/2016			5/3/2016			5/3/2016		
				Parent Sample																										
Parameter/ Analytical Method	Analyte	Residential Surface Water SL[a]	Unit	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL
CLP VOCs (CLP Method SOM02.3) [2]	1,1,1-trichloroethane	NS	µg/L	< 0.50	U	0.50	0.090	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.55		0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.57		0.50	0.37	J	0.50
	1,1,2,2-tetrachloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2-Trichloro-1,2,2-trifluoroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2-trichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1-dichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1-dichloroethene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2,3-trichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2,4-trichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-Dibromo-3-chloropropane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dibromoethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichloropropane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,3-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,4-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	2-butanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	2-hexanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	4-methyl-2-pentanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	Acetone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	5.2		5.0	< 5.0	U	5.0	2.8	J	5.0	4.8	J	5.0
	Benzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromochloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromodichloromethane	NS	µg/L	0.11	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromoform	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromomethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Carbon disulfide	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Carbon tetrachloride	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloroform	NS	µg/L	0.60		0.50	< 0.50	U	0.50	< 0.50	U	0.50	2.8		0.50	< 0.50	U	0.50	< 0.50	U	0.50	3.3		0.50	1.6		0.50	1.8		0.50
	Chloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	cis-1,2-dichloroethene	1,860	µg/L	< 0.50	U	0.50	0.44	J	0.50	0.13	J	0.50	0.15	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.57		0.50
	cis-1,3-dichloropropene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Cyclohexane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Dibromochloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Dichlorodifluoromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Ethylbenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Isopropylbenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	m,p-Xylene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.21	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methyl acetate	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methyl tert-butyl ether	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methylcyclohexane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methylene Chloride	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	o-Xylene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Styrene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Tetrachloroethene	986	µg/L	0.23	J	0.50	6.5		0.50	2.9		0.50	25		2.5	< 0.50	U	0.50	1.4		0.50	23		2.5	19		0.50
	Toluene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.38	J	0.50	< 0.50	U	0.50	0.12	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	trans-1,2-dichloroethene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	trans-1,3-dichloropropene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Trichloroethene	75.1	µg/L	< 0.50	U	0.50	0.62		0.50	0.47	J	0.50	0.46	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.30	J	0.50	0.61		0.50
	Trichlorofluoromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Vinyl chloride	0.425	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
SVOCs (CLP Method SOM02.3) [2]	1,1-biphenyl	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	1,2,4,5-tetrachlorobenzene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	1,4-dioxane	157	µg/L	--	--	--	< 2.0	UJ	2.0	--	--	--	< 2.0	UJ	2.0	--	--	--	--	--	--	--	--	--	< 2.0	UJ	2.0	< 2.0	UJ	2.0
	2,2-oxybis(1-chloropropane)	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--	< 10	U	10	< 10	U	10
	2,3,4,6-tetrachlorophenol	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	2,4,5-trichlorophenol	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	2,4,6-trichlorophenol	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	2,4-dichlorophenol	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	2,4-dimethylphenol	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	2,4-dinitrophenol	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--	< 10	R	10	< 10	R	10
	2,4-dinitrotoluene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	2,6-dinitrotoluene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	2-chloronaphthalene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	2-chlorophenol	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	2-Methyl-4,6-dinitrophenol	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--	< 10	U	10	< 10	U	10

TABLE 1-2

Surface Water and Stormwater Sample Volatile and Semivolatile Organic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

				Location ID	SW-20			SW-21			SW-22			SW-23			SW-24			SW-25			SW-26			SW-27		
				Field Sample ID	A-SW-20			A-SW-21			A-SW-22			A-SW-23			A-SW-24			A-SW-25			A-SW-26			A-SW-27		
				Sample Date	5/5/2016			5/3/2016			5/3/2016			5/3/2016			5/11/2016			5/5/2016			5/3/2016			5/3/2016		
				Parent Sample																								
Parameter/ Analytical Method	**Analyte**	**Residential Surface Water SL[a]**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**
SVOCs (CLP Method SOM02.3) [2] (cont'd.)	2-methylnaphthalene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	2-methylphenol	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	U	10	< 10	U	10
	2-nitroaniline	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	R	5.0	< 5.0	R	5.0
	2-nitrophenol	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	3,3-dichlorobenzidine	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	U	10	< 10	U	10
	3-nitroaniline	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	R	10	< 10	R	10
	4-bromophenyl phenyl ether	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	4-chloro-3-methylphenol	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	4-chloroaniline	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	U	10	< 10	U	10
	4-chlorophenyl phenyl ether	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	4-methylphenol	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	U	10	< 10	U	10
	4-nitroaniline	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	R	10	< 10	R	10
	4-nitrophenol	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	R	10	< 10	R	10
	Acenaphthene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Acenaphthylene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Acetophenone	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	U	10	< 10	U	10
	Anthracene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Atrazine	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	U	10	< 10	U	10
	Benzaldehyde	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	U	10	< 10	U	10
	Benzo[a]anthracene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Benzo[a]pyrene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Benzo[b]fluoranthene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Benzo[g,h,i]perylene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Benzo[k]fluoranthene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Benzyl butyl phthalate	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Bis(2-chloroethoxy) methane	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Bis(2-chloroethyl) ether	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	U	10	< 10	U	10
	Bis(2-ethylhexyl) phthalate	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Caprolactam	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	U	10	< 10	U	10
	Carbazole	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	U	10	< 10	U	10
	Chrysene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Dibenz[a,h]anthracene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Dibenzofuran	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Diethyl phthalate	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	43		5.0	< 5.0	U	5.0
	Dimethyl phthalate	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Di-n-butyl phthalate	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Di-n-octyl phthalate	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	U	10	< 10	U	10
	Fluoranthene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Fluorene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Hexachloro-1,3-butadiene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Hexachlorobenzene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Hexachlorocyclopentadiene	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	UJ	10	< 10	UJ	10
	Hexachloroethane	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Indeno[1,2,3-c,d]pyrene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Isophorone	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Naphthalene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Nitrobenzene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	N-nitrosodi-n-propylamine	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	N-nitrosodiphenylamine	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Pentachlorophenol	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	U	10	< 10	U	10
	Phenanthrene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0
	Phenol	NS	µg/L	--	--	--	< 10	U	10	--	--	--	< 10	U	10	--	--	--	--	--	--	< 10	U	10	< 10	U	10
	Pyrene	NS	µg/L	--	--	--	< 5.0	U	5.0	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0

TABLE 1-2

Surface Water and Stormwater Sample Volatile and Semivolatile Organic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

				SW-28			SW-29			SW-30			SW-31			SW-32			SW-33			SW-34			SW-35		
Location ID				A-SW-28			A-SW-29			A-SW-30			A-SW-31			A-SW-32			A-SW-33			A-SW-34			A-SW-35		
Field Sample ID																											
Sample Date	**Sample Date**		**Sample Date**	5/3/2016			5/11/2016			5/3/2016			5/2/2016			5/5/2016			5/2/2016			5/2/2016			5/4/2016		
Parent Sample	**Parent Sample**		**Parent Sample**																								
Parameter/ Analytical Method	**Analyte**	**Residential Surface Water SL[a]**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**
CLP VOCs (CLP Method SOM02.3) [(2)]	1,1,1-trichloroethane	NS	µg/L	0.29	J	0.50	0.34	J	0.50	< 0.50	U	0.50	0.31	J	0.50	< 0.50	U	0.50	0.61		0.50	0.20	J	0.50	1.1		0.50
	1,1,2,2-tetrachloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2-Trichloro-1,2,2-trifluoroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2-trichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1-dichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1-dichloroethene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2,3-trichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2,4-trichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-Dibromo-3-chloropropane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dibromoethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichloropropane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,3-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,4-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	2-butanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	2-hexanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	4-methyl-2-pentanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	Acetone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	Benzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.20	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.23	J	0.50
	Bromochloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromodichloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.36	J	0.50	0.11	J	0.50	0.22	J	0.50	0.27	J	0.50
	Bromoform	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromomethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Carbon disulfide	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Carbon tetrachloride	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloroform	NS	µg/L	1.3		0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.97		0.50	2.2		0.50	2.1		0.50	1.9		0.50	3.3		0.50
	Chloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	cis-1,2-dichloroethene	1,860	µg/L	0.56		0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.27	J	0.50	< 0.50	U	0.50	0.15	J	0.50	0.13	J	0.50	0.54		0.50
	cis-1,3-dichloropropene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Cyclohexane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Dibromochloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Dichlorodifluoromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Ethylbenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.080	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Isopropylbenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	m,p-Xylene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.12	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.10	J	0.50
	Methyl acetate	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methyl tert-butyl ether	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methylcyclohexane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methylene Chloride	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	o-Xylene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Styrene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Tetrachloroethene	986	µg/L	16		0.50	26		2.5	0.50		0.50	20		1.0	0.46	J	0.50	35		2.5	13		0.50	82		5.0
	Toluene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.34	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.29	J	0.50
	trans-1,2-dichloroethene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	trans-1,3-dichloropropene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Trichloroethene	75.1	µg/L	0.66		0.50	0.28	J	0.50	0.090	J	0.50	0.48	J	0.50	< 0.50	U	0.50	0.78		0.50	0.27	J	0.50	0.67		0.50
	Trichlorofluoromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Vinyl chloride	0.425	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
SVOCs (CLP Method SOM02.3) [(2)]	1,1-biphenyl	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,2,4,5-tetrachlorobenzene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,4-dioxane	157	µg/L	< 2.0	UJ	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,2-oxybis(1-chloropropane)	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,3,4,6-tetrachlorophenol	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4,5-trichlorophenol	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4,6-trichlorophenol	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dichlorophenol	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dimethylphenol	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dinitrophenol	NS	µg/L	< 10	R	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dinitrotoluene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,6-dinitrotoluene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-chloronaphthalene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-chlorophenol	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-Methyl-4,6-dinitrophenol	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 1-2

Surface Water and Stormwater Sample Volatile and Semivolatile Organic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

Location ID	Location ID		Location ID	SW-28			SW-29			SW-30			SW-31			SW-32			SW-33			SW-34			SW-35		
			Field Sample ID	A-SW-28			A-SW-29			A-SW-30			A-SW-31			A-SW-32			A-SW-33			A-SW-34			A-SW-35		
Sample Date	Sample Date		Sample Date	5/3/2016			5/11/2016			5/3/2016			5/2/2016			5/5/2016			5/2/2016			5/2/2016			5/4/2016		
Parent Sample	Parent Sample		Parent Sample																								
Parameter/ Analytical Method	Analyte	Residential Surface Water SL[a]	Unit	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL
SVOCs (CLP Method SOM02.3) [2] (cont'd.)	2-methylnaphthalene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-methylphenol	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-nitroaniline	NS	µg/L	< 5.0	R	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-nitrophenol	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3,3-dichlorobenzidine	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3-nitroaniline	NS	µg/L	< 10	R	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-bromophenyl phenyl ether	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-chloro-3-methylphenol	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-chloroaniline	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-chlorophenyl phenyl ether	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-methylphenol	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-nitroaniline	NS	µg/L	< 10	R	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-nitrophenol	NS	µg/L	< 10	R	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acenaphthene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acetophenone	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Anthracene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Atrazine	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzaldehyde	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[a]anthracene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[a]pyrene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[b]fluoranthene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[g,h,i]perylene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[k]fluoranthene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzyl butyl phthalate	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-chloroethoxy) methane	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-chloroethyl) ether	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Caprolactam	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Carbazole	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chrysene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dibenz[a,h]anthracene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dibenzofuran	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Diethyl phthalate	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dimethyl phthalate	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Di-n-butyl phthalate	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Di-n-octyl phthalate	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluorene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachloro-1,3-butadiene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachlorobenzene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	NS	µg/L	< 10	UJ	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachloroethane	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Indeno[1,2,3-c,d]pyrene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Isophorone	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Naphthalene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nitrobenzene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	N-nitrosodi-n-propylamine	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	N-nitrosodiphenylamine	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Pentachlorophenol	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Phenol	NS	µg/L	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Pyrene	NS	µg/L	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 1-2

Surface Water and Stormwater Sample Volatile and Semivolatile Organic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

			Location ID	**SW-36**			**SW-37**			**SW-38**			**SW-39**			**SW-40**			**SW-41**			**SW-42**			**SW-43**		
			Field Sample ID	**A-SW-36**			**A-SW-37**			**A-SW-38**			**A-SW-39**			**A-SW-40**			**A-SW-41**			**A-SW-42**			**A-SW-43**		
			Sample Date	**5/3/2016**			**5/5/2016**			**5/11/2016**			**5/3/2016**			**5/5/2016**			**5/5/2016**			**5/2/2016**			**5/2/2016**		
			Parent Sample																										
Parameter/ Analytical Method	**Analyte**	**Residential Surface Water SL[a]**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**
CLP VOCs (CLP Method SOM02.3) [(2)]	1,1,1-trichloroethane	NS	µg/L	< 0.50	U	0.50	0.22	J	0.50	< 0.50	U	0.50	0.39	J	0.50	0.39	J	0.50	< 0.50	U	0.50	0.19	J	0.50	< 0.50	U	0.50
	1,1,2,2-tetrachloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2-Trichloro-1,2,2-trifluoroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2-trichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1-dichloroethane	NS	µg/L	0.13	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1-dichloroethene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2,3-trichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2,4-trichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-Dibromo-3-chloropropane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dibromoethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichloropropane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,3-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,4-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	2-butanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	2-hexanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	4-methyl-2-pentanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	Acetone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	4.2	J	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	Benzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromochloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromodichloromethane	NS	µg/L	< 0.50	U	0.50	0.25	J	0.50	< 0.50	U	0.50	0.17	J	0.50	0.18	J	0.50	0.55		0.50	0.10	J	0.50	0.10	J	0.50
	Bromoform	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromomethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Carbon disulfide	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Carbon tetrachloride	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloroform	NS	µg/L	< 0.50	U	0.50	1.6		0.50	< 0.50	U	0.50	< 0.50	U	0.50	2.0		0.50	3.1		0.50	1.0		0.50	0.89		0.50
	Chloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	cis-1,2-dichloroethene	1,860	µg/L	0.69		0.50	0.24	J	0.50	< 0.50	U	0.50	0.31	J	0.50	0.18	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	cis-1,3-dichloropropene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Cyclohexane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Dibromochloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Dichlorodifluoromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Ethylbenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Isopropylbenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	m,p-Xylene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	0.10	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methyl acetate	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methyl tert-butyl ether	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methylcyclohexane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methylene Chloride	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	o-Xylene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Styrene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Tetrachloroethene	986	µg/L	1.2		0.50	15		0.50	6.0		0.50	31		2.5	28		2.5	0.49	J	0.50	16		0.50	4.1		0.50
	Toluene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	0.22	J	0.50	< 0.50	U	0.50	0.14	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	trans-1,2-dichloroethene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	trans-1,3-dichloropropene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Trichloroethene	75.1	µg/L	2.3		0.50	0.39	J	0.50	0.22	J	0.50	0.50		0.50	0.38	J	0.50	< 0.50	U	0.50	0.19	J	0.50	0.10	J	0.50
	Trichlorofluoromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Vinyl chloride	0.425	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
SVOCs (CLP Method SOM02.3) [(2)]	1,1-biphenyl	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,2,4,5-tetrachlorobenzene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,4-dioxane	157	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,2-oxybis(1-chloropropane)	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,3,4,6-tetrachlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4,5-trichlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4,6-trichlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dichlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dimethylphenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dinitrophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-dinitrotoluene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,6-dinitrotoluene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-chloronaphthalene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-chlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-Methyl-4,6-dinitrophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 1-2

Surface Water and Stormwater Sample Volatile and Semivolatile Organic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

				Location ID	SW-36			SW-37			SW-38			SW-39			SW-40			SW-41			SW-42			SW-43		
				Field Sample ID	A-SW-36			A-SW-37			A-SW-38			A-SW-39			A-SW-40			A-SW-41			A-SW-42			A-SW-43		
				Sample Date	5/3/2016			5/5/2016			5/11/2016			5/3/2016			5/5/2016			5/5/2016			5/2/2016			5/2/2016		
				Parent Sample																								
Parameter/ Analytical Method	**Analyte**	**Residential Surface Water SL[a]**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**
SVOCs (CLP Method SOM02.3) [2] (cont'd.)	2-methylnaphthalene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-methylphenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-nitroaniline	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-nitrophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3,3-dichlorobenzidine	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3-nitroaniline	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-bromophenyl phenyl ether	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-chloro-3-methylphenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-chloroaniline	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-chlorophenyl phenyl ether	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-methylphenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-nitroaniline	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-nitrophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acenaphthene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acetophenone	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Anthracene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Atrazine	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzaldehyde	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[a]anthracene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[a]pyrene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[b]fluoranthene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[g,h,i]perylene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[k]fluoranthene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzyl butyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-chloroethoxy) methane	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-chloroethyl) ether	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Caprolactam	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Carbazole	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chrysene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dibenz[a,h]anthracene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dibenzofuran	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Diethyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dimethyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Di-n-butyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Di-n-octyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluorene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachloro-1,3-butadiene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachlorobenzene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachloroethane	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Indeno[1,2,3-c,d]pyrene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Isophorone	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Naphthalene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nitrobenzene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	N-nitrosodi-n-propylamine	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	N-nitrosodiphenylamine	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Pentachlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Phenol	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Pyrene	NS	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 1-2

Surface Water and Stormwater Sample Volatile and Semivolatile Organic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

				Location ID			SW-44			SW-45			SW-46			SW-47			SW-48			SW-49			SW-50		
				Field Sample ID			A-SW-44			A-SW-45			A-SW-46			A-SW-47			A-SW-48			A-SW-49			A-SW-001		
				Sample Date			5/4/2016			5/5/2016			5/5/2016			5/4/2016			5/4/2016			5/5/2016			2/26/2016		
				Parent Sample																							
Parameter/ Analytical Method	**Analyte**	**Residential Surface Water SL[a]**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**
CLP VOCs (CLP Method SOM02.3) [(2)]	1,1,1-trichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2,2-tetrachloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2-Trichloro-1,2,2-trifluoroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1,2-trichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1-dichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,1-dichloroethene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	UJ	0.50
	1,2,3-trichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2,4-trichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-Dibromo-3-chloropropane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dibromoethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,2-dichloropropane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,3-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	1,4-dichlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	2-butanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	2-hexanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	4-methyl-2-pentanone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	Acetone	NS	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0	< 5.0	U	5.0
	Benzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromochloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromodichloromethane	NS	µg/L	< 0.50	U	0.50	0.10	J	0.50	0.090	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.11	J	0.50	< 0.50	U	0.50	0.10	J	0.50
	Bromoform	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Bromomethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Carbon disulfide	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Carbon tetrachloride	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chlorobenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloroethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Chloroform	NS	µg/L	< 0.50	U	0.50	0.94		0.50	0.67		0.50	< 0.50	U	0.50	< 0.50	U	0.50	2.3		0.50	< 0.50	U	0.50	1.1		0.50
	Chloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	cis-1,2-dichloroethene	1,860	µg/L	< 0.50	U	0.50	0.11	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	UJ	0.50
	cis-1,3-dichloropropene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Cyclohexane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Dibromochloromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Dichlorodifluoromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Ethylbenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Isopropylbenzene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	m,p-Xylene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methyl acetate	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methyl tert-butyl ether	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methylcyclohexane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Methylene Chloride	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	o-Xylene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Styrene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Tetrachloroethene	986	µg/L	2.2		0.50	3.1		0.50	2.4		0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.21	J	0.50	6.3		0.50
	Toluene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	trans-1,2-dichloroethene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	UJ	0.50
	trans-1,3-dichloropropene	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Trichloroethene	75.1	µg/L	< 0.50	U	0.50	0.11	J	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	0.13	J	0.50
	Trichlorofluoromethane	NS	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
	Vinyl chloride	0.425	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50	< 0.50	U	0.50
SVOCs (CLP Method SOM02.3) [(2)]	1,1-biphenyl	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--
	1,2,4,5-tetrachlorobenzene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--
	1,4-dioxane	157	µg/L	--	--	--	--	--	--	--	--	--	< 2.0	UJ	2.0	--	--	--	--	--	--	--	--	--	--	--
	2,2-oxybis(1-chloropropane)	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--
	2,3,4,6-tetrachlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--
	2,4,5-trichlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--
	2,4,6-trichlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--
	2,4-dichlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--
	2,4-dimethylphenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--
	2,4-dinitrophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--
	2,4-dinitrotoluene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--
	2,6-dinitrotoluene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--
	2-chloronaphthalene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--
	2-chlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--	--	--
	2-Methyl-4,6-dinitrophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--	--	--

TABLE 1-2

Surface Water and Stormwater Sample Volatile and Semivolatile Organic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

				Location ID	SW-44			SW-45			SW-46			SW-47			SW-48			SW-49			SW-50		
				Field Sample ID	A-SW-44			A-SW-45			A-SW-46			A-SW-47			A-SW-48			A-SW-49			A-SW-001		
				Sample Date	5/4/2016			5/5/2016			5/5/2016			5/4/2016			5/4/2016			5/5/2016			2/26/2016		
				Parent Sample																					
Parameter/ Analytical Method	**Analyte**	**Residential Surface Water SL[a]**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**
SVOCs (CLP Method SOM02.3) [2] (cont'd.)	2-methylnaphthalene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	2-methylphenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	2-nitroaniline	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	2-nitrophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	3,3-dichlorobenzidine	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	3-nitroaniline	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	4-bromophenyl phenyl ether	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	4-chloro-3-methylphenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	4-chloroaniline	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	4-chlorophenyl phenyl ether	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	4-methylphenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	4-nitroaniline	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	4-nitrophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	Acenaphthene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Acenaphthylene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Acetophenone	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	Anthracene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Atrazine	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	Benzaldehyde	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	Benzo[a]anthracene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Benzo[a]pyrene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Benzo[b]fluoranthene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Benzo[g,h,i]perylene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Benzo[k]fluoranthene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Benzyl butyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Bis(2-chloroethoxy) methane	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Bis(2-chloroethyl) ether	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Caprolactam	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	Carbazole	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	Chrysene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Dibenz[a,h]anthracene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Dibenzofuran	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Diethyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Dimethyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Di-n-butyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Di-n-octyl phthalate	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	Fluoranthene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Fluorene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Hexachloro-1,3-butadiene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Hexachlorobenzene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	Hexachloroethane	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Indeno[1,2,3-c,d]pyrene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Isophorone	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Naphthalene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Nitrobenzene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	N-nitrosodi-n-propylamine	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	N-nitrosodiphenylamine	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Pentachlorophenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	Phenanthrene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--
	Phenol	NS	µg/L	--	--	--	--	--	--	--	--	--	< 10	U	10	--	--	--	--	--	--	--	--	--
	Pyrene	NS	µg/L	--	--	--	--	--	--	--	--	--	< 5.0	U	5.0	--	--	--	--	--	--	--	--	--

NOTES:

(1) Residential Surface Water Screening Level - Remedial Investigation Work Plan, Appendix E - Risk Assessment Work Plan, Attachment 2, 700 South 1600 East PCE Plume AOU-1: East Side Springs Salt Lake City, Utah (July 2015).

(2) Laboratory data reported by Chemtech Consulting Group, Mountainside, New Jersey.

Values exceeding the Residential Surface Water Screening Level are shaded.

-- = Not analyzed.
µg/L = Micrograms per liter.
CLP = EPA Contract Laboratory Program.
CRQL = Contract Required Quantitation Limit.
EPA = U.S. Environmentla Protection Agency.
ID = Identification.
J = Estimated value.
NS = No Screening Criteria.
R = Rejected value.
SVOC = Semivolatile Organic Compound.
U = Non-detect value.
UJ = Estimated non-detect value.
VOC = Volatile Organic Compound.

TABLE 1-3

Surface Water and Stormwater Sample Metals and Inorganic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

			Location ID	SW-07			SW-07			SW-12			SW-15			SW-16			SW-21		
			Field Sample ID	A-SW-07			A-SW-07-D			A-SW-12			A-SW-15			A-SW-16			A-SW-21		
			Sample Date	5/4/2016			5/4/2016			5/3/2016			5/4/2016			5/4/2016			5/3/2016		
			Parent Sample				A-SW-07														
Parameter/ Analytical Method	**Analyte**	**Project Screening Level Surface Water[1]**	**Unit**	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL
Total Metals (Method CLP ISM02.3) [2]	Aluminum	20000	µg/L	36.8	J	20.0	23.2	J	20.0	30.8		20.0	8230	J	20.0	38.7	J	20.0	64.2		20.0
	Antimony	7.8	µg/L	< 2.0	U	2.0	< 2.0	U	2.0	< 2.0	U	2.0	3.0		2.0	< 2.0	U	2.0	< 2.0	U	2.0
	Arsenic	0.52	µg/L	0.91	J	1.0	0.90	J	1.0	1.4		1.0	66.2		1.0	0.68	J	1.0	3.5		1.0
	Barium	3800	µg/L	61.4		10.0	58.8		10.0	72.6		10.0	206		10.0	64.7		10.0	59.3		10.0
	Beryllium	25	µg/L	< 1.0	U	1.0	< 1.0	U	1.0	< 1.0	U	1.0	1.9		1.0	< 1.0	U	1.0	< 1.0	U	1.0
	Cadmium	9.2	µg/L	< 1.0	U	1.0	< 1.0	U	1.0	0.060	J	1.0	2.5		1.0	< 1.0	U	1.0	< 1.0	U	1.0
	Calcium	NS	µg/L	139000		500	133000		500	148000		500	179000		500	134000		500	139000		500
	Chromium	22000	µg/L	0.94	J	2.0	0.80	J	2.0	< 2.0	U	2.0	54.5		2.0	1.3	J	2.0	< 2.0	U	2.0
	Cobalt	6	µg/L	0.060	J	1.0	< 1.0	U	1.0	0.060	J	1.0	15.7		1.0	< 1.0	U	1.0	0.070	J	1.0
	Copper	800	µg/L	4.8		2.0	2.6		2.0	1.5	J	2.0	102		2.0	1.4	J	2.0	1.6	J	2.0
	Iron	14000	µg/L	140	J	200	89.1	J	200	75.0	J	200	13200	J	200	77.2	J	200	140	J	200
	Lead	150	µg/L	2.0		1.0	0.80	J	1.0	0.40	J	1.0	127		1.0	0.60	J	1.0	1.3		1.0
	Magnesium	NS	µg/L	54900		500	53800		500	57600		500	40800		500	50800		500	49900		500
	Manganese	430	µg/L	4.8		1.0	2.4		1.0	1.7		1.0	351		1.0	3.1		1.0	16.6		1.0
	Mercury	NS	µg/L	< 0.20	U	0.20	< 0.20	U	0.20	< 0.20	U	0.20	0.86		0.20	< 0.20	U	0.20	< 0.20	U	0.20
	Nickel	390	µg/L	< 1.0	U	1.0	< 1.0	U	1.0	0.57	J	1.0	25.9		1.0	< 1.0	U	1.0	0.35	J	1.0
	Potassium	NS	µg/L	4100		500	3890		500	2110		500	2560		500	2300		500	1750		500
	Selenium	100	µg/L	1.6	J	5.0	< 5.0	U	5.0	4.2	J	5.0	3.3	J	5.0	2.0	J	5.0	1.9	J	5.0
	Silver	94	µg/L	0.14	J	1.0	0.15	J	1.0	0.090	J	1.0	3.0		1.0	0.12	J	1.0	0.090	J	1.0
	Sodium	NS	µg/L	60900		500	59200		500	64200		500	33400		500	68800		500	51000		500
	Thallium	0.2	µg/L	< 1.0	U	1.0	< 1.0	U	1.0	< 1.0	U	1.0	1.5		1.0	< 1.0	U	1.0	< 1.0	U	1.0
	Vanadium	86	µg/L	2.5	J	5.0	2.0	J	5.0	5.9		5.0	32.4	J	5.0	2.4	J	5.0	2.2	J	5.0
	Zinc	6000	µg/L	21.7	J	2.0	12.2	J	2.0	6.0	J	2.0	757		2.0	5.7		2.0	8.0	J	2.0
EPA 160.1 [3]	Total Dissolved Solids (TDS)	NS	mg/L	786		10	814		10	898		10	948		10	780		10	802		10
EPA 300.0 [3]	Chloride	NS	mg/L	184		2	183		2	246		1.6	242		2	190		2	208		1.6
	Nitrate/Nitrite as N	32	mg/L	2.7		0.2	2.7		0.2	3.2		0.2	0.3		0.2	3.3		0.2	2.3		0.2
	Sulfate	NS	mg/L	124		5	123		5	95.2		4	122		5	150		5	93.4		4

TABLE 1-3

Surface Water and Stormwater Sample Metals and Inorganic Analytical Results

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

		Location ID		SW-23			SW-26			SW-27			SW-28			SW-47		
		Field Sample ID		A-SW-23			A-SW-26			A-SW-27			A-SW-28			A-SW-47		
		Sample Date		5/3/2016			5/3/2016			5/3/2016			5/3/2016			5/4/2016		
		Parent Sample																
Method	**Analyte**	**Surface Water[1]**	**Unit**	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL	Result	Val Qual	CRQL
Total Metals (Method CLP ISM02.3) [2]	Aluminum	20000	µg/L	33.2		20.0	164		20.0	< 20.0	U	20.0	< 20.0	U	20.0	509	J	20.0
	Antimony	7.8	µg/L	< 2.0	U	2.0	< 2.0	U	2.0	< 2.0	U	2.0	< 2.0	U	2.0	< 2.0	U	2.0
	Arsenic	0.52	µg/L	1.8		1.0	1.2		1.0	2.0		1.0	2.5		1.0	1.0		1.0
	Barium	3800	µg/L	73.3		10.0	106		10.0	71.8		10.0	70.7		10.0	58.1		10.0
	Beryllium	25	µg/L	< 1.0	U	1.0	< 1.0	U	1.0	< 1.0	U	1.0	< 1.0	U	1.0	< 1.0	U	1.0
	Cadmium	9.2	µg/L	0.080	J	1.0	0.13	J	1.0	< 1.0	U	1.0	< 1.0	U	1.0	< 1.0	U	1.0
	Calcium	NS	µg/L	148000		500	159000		500	145000		500	151000		500	85200		500
	Chromium	22000	µg/L	< 2.0	U	2.0	< 2.0	U	2.0	< 2.0	U	2.0	< 2.0	U	2.0	0.86	J	2.0
	Cobalt	6	µg/L	0.10	J	1.0	0.20	J	1.0	< 1.0	U	1.0	0.060	J	1.0	0.31	J	1.0
	Copper	800	µg/L	1.6	J	2.0	3.2	J	2.0	1.2	J	2.0	1.4	J	2.0	3.7		2.0
	Iron	14000	µg/L	70.6	J	200	314		200	38.7	J	200	40.0	J	200	506	J	200
	Lead	150	µg/L	0.31	J	1.0	7.4		1.0	< 1.0	U	1.0	0.11	J	1.0	0.99	J	1.0
	Magnesium	NS	µg/L	60900		500	61100		500	58300		500	58400		500	25200		500
	Manganese	430	µg/L	11.5		1.0	9.4		1.0	6.4		1.0	6.0		1.0	32.6		1.0
	Mercury	NS	µg/L	< 0.20	U	0.20	< 0.20	U	0.20	< 0.20	U	0.20	< 0.20	U	0.20	< 0.20	U	0.20
	Nickel	390	µg/L	0.68	J	1.0	0.72	J	1.0	0.44	J	1.0	0.49	J	1.0	< 1.0	U	1.0
	Potassium	NS	µg/L	2630		500	2120		500	2320		500	2290		500	1290		500
	Selenium	100	µg/L	1.8	J	5.0	2.2	J	5.0	2.6	J	5.0	3.0	J	5.0	< 5.0	U	5.0
	Silver	94	µg/L	0.14	J	1.0	0.13	J	1.0	0.080	J	1.0	0.080	J	1.0	< 1.0	U	1.0
	Sodium	NS	µg/L	67700		500	71200		500	63800		500	64600		500	23600		500
	Thallium	0.2	µg/L	< 1.0	U	1.0	< 1.0	U	1.0	< 1.0	U	1.0	< 1.0	U	1.0	< 1.0	U	1.0
	Vanadium	86	µg/L	5.1		5.0	5.6		5.0	5.1		5.0	5.2		5.0	2.3	J	5.0
	Zinc	6000	µg/L	8.8	J	2.0	15.1	J	2.0	4.3	J	2.0	5.6	J	2.0	7.9		2.0
EPA 160.1 [3]	Total Dissolved Solids (TDS)	NS	mg/L	984		10	1030		10	940		10	860		10	414		10
EPA 300.0 [3]	Chloride	NS	mg/L	259		1.6	272		1.6	246		1.6	237		1.6	35.2		2
	Nitrate/Nitrite as N	32	mg/L	2.8		0.2	3.5		0.2	2.8		0.2	2.3		0.2	0.3		0.2
	Sulfate	NS	mg/L	92.1		4	91.5		4	93.7		4	95.5		4	85.7		5

NOTES:

(1) Project Screening Level - Screening Levels taken from tables 9, 10, 11 and 12 of the Quality Assurance Project Plan Update Revision 1, 700 South 1600 East PCE Plume AOU-1: East Side Springs Salt Lake City, Utah (February 2016); increased by a factor of ten to account for reduced exposures to surface water.

(2) Laboratory data reported by Chemtech Consulting Group, Mountainside, New Jersey.

(3) Laboratory data reported by U.S. Environmental Protection Agency Region 8 laboratory.

Values exceeding the Project Screening Level are shaded.

µg/L = microgram per liter.

CLP = EPA Contract Laboratory Program.

CRQL = Contract Required Quantitation Limit. For TDS and anions this value is the method detecion limit.

EPA = U.S. Environmental Protection Agency.

ID = Identification.

J = Estimated value.

mg/L = Milligram per liter.

NA = Not analyzed.

NS = No Screening Criteria.

U = Non-detect value.

TABLE 1-4

Surface Water and Stormwater Sample Independent Laboratory Quality Assurance Sample Data Assessment

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

		Location ID	SW-12			SW-12				SW-21			SW-21			
		Sample Name	A-SW-12			A-SW-12				A-SW-21			A-SW-21			
		Lab Name	CHEMTECH			SHEALY				CHEMTECH			SHEALY			
		Sample Date	5/3/2016			5/3/2016				5/3/2016			5/3/2016			
Analytic Method	**Analyte**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**RPD (%)**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**RPD (%)**
Total Metals (Method CLP ISM02.3)	Aluminum	µg/L	30.8		20.0	--	--	--	--	64.2		20.0	--	--	--	--
	Antimony	µg/L	< 2.0	U	2.0	--	--	--	--	< 2.0	U	2.0	--	--	--	--
	Arsenic	µg/L	1.4		1.0	--	--	--	--	3.5		1.0	--	--	--	--
	Barium	µg/L	72.6		10.0	--	--	--	--	59.3		10.0	--	--	--	--
	Beryllium	µg/L	< 1.0	U	1.0	--	--	--	--	< 1.0	U	1.0	--	--	--	--
	Cadmium	µg/L	0.060	J	1.0	--	--	--	--	< 1.0	U	1.0	--	--	--	--
	Calcium	µg/L	148000		500	--	--	--	--	139000		500	--	--	--	--
	Chromium	µg/L	< 2.0	U	2.0	--	--	--	--	< 2.0	U	2.0	--	--	--	--
	Cobalt	µg/L	0.060	J	1.0	--	--	--	--	0.070	J	1.0	--	--	--	--
	Copper	µg/L	1.5	J	2.0	--	--	--	--	1.6	J	2.0	--	--	--	--
	Iron	µg/L	75.0	J	200	--	--	--	--	140	J	200	--	--	--	--
	Lead	µg/L	0.40	J	1.0	--	--	--	--	1.3		1.0	--	--	--	--
	Magnesium	µg/L	57600		500	--	--	--	--	49900		500	--	--	--	--
	Manganese	µg/L	1.7		1.0	--	--	--	--	16.6		1.0	--	--	--	--
	Mercury	µg/L	< 0.20	U	0.20	--	--	--	--	< 0.20	U	0.20	--	--	--	--
	Nickel	µg/L	0.57	J	1.0	--	--	--	--	0.35	J	1.0	--	--	--	--
	Potassium	µg/L	2110		500	--	--	--	--	1750		500	--	--	--	--
	Selenium	µg/L	4.2	J	5.0	--	--	--	--	1.9	J	5.0	--	--	--	--
	Silver	µg/L	0.090	J	1.0	--	--	--	--	0.090	J	1.0	--	--	--	--
	Sodium	µg/L	64200		500	--	--	--	--	51000		500	--	--	--	--
	Thallium	µg/L	< 1.0	U	1.0	--	--	--	--	< 1.0	U	1.0	--	--	--	--
	Vanadium	µg/L	5.9		5.0	--	--	--	--	2.2	J	5.0	--	--	--	--
	Zinc	µg/L	6.0	J	2.0	--	--	--	--	8.0	J	2.0	--	--	--	--
CLP VOCs Method SOM02.3	1,1,1-trichloroethane	µg/L	0.40	J	0.50	0.38	J	0.50	5.1	0.090	J	0.50	< 0.50	U	0.50	NC
	1,1,2,2-tetrachloroethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,1,2-trichloroethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,1-dichloroethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,1-dichloroethene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2,3-trichlorobenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2,4-trichlorobenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2-Dibromo-3-chloropropane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2-dibromoethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2-dichlorobenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2-dichloroethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2-dichloropropane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,3-dichlorobenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,4-dichlorobenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	2-butanone	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	NC	< 5.0	U	5.0	< 5.0	U	5.0	NC
	2-hexanone	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	NC	< 5.0	U	5.0	< 5.0	U	5.0	NC
	4-methyl-2-pentanone	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	NC	< 5.0	U	5.0	< 5.0	U	5.0	NC
	Acetone	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	NC	< 5.0	U	5.0	< 5.0	U	5.0	NC
	Benzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Bromochloromethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Bromodichloromethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Bromoform	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Bromomethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Carbon disulfide	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Carbon tetrachloride	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Chlorobenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC

TABLE 1-4

Surface Water and Stormwater Sample Independent Laboratory Quality Assurance Sample Data Assessment

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

		Location ID	SW-12			SW-12				SW-21			SW-21			
		Sample Name	A-SW-12			A-SW-12				A-SW-21			A-SW-21			
		Lab Name	CHEMTECH			SHEALY				CHEMTECH			SHEALY			
		Sample Date	5/3/2016			5/3/2016				5/3/2016			5/3/2016			
Analytic Method	**Analyte**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**RPD (%)**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**RPD (%)**
CLP VOCs Method SOM02.3 (cont'd.)	Chloroethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Chloroform	µg/L	1.5		0.50	1.5		0.50	0	< 0.50	U	0.50	0.53		0.50	NC
	Chloromethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	cis-1,2-dichloroethene	µg/L	0.12	J	0.50	< 0.50	U	0.50	NC	0.44	J	0.50	0.41	J	0.50	7.1
	cis-1,3-dichloropropene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Cyclohexane	µg/L	< 0.50	U	0.50	< 0.50	UJ	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Dibromochloromethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Dichlorodifluoromethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Ethylbenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Isopropylbenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	m,p-Xylene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Methyl acetate	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Methyl tert-butyl ether	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Methylcyclohexane	µg/L	< 0.50	U	0.50	< 0.50	UJ	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Methylene Chloride	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	o-Xylene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Styrene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Tetrachloroethene	µg/L	23		2.5	17		2.5	30	6.5		0.50	5.2		0.50	22.2
	Toluene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	trans-1,2-dichloroethene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	trans-1,3-dichloropropene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Trichloroethene	µg/L	0.39	J	0.50	0.36	J	0.50	8	0.62		0.50	0.49	J	0.50	23.4
	Trichlorofluoromethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Vinyl chloride	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC

TABLE 1-4

Surface Water and Stormwater Sample Independent Laboratory Quality Assurance Sample Data Assessment

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

		Location ID	SW-23			SW-23			SW-23			
		Sample Name	A-SW-23			A-SW-23			A-SW-23			
		Lab Name	BONNER			CHEMTECH			SHEALY			
		Sample Date	5/3/2016			5/3/2016			5/3/2016			
Analytic Method	**Analyte**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**RPD (%)**
Total Metals (Method CLP ISM02.3)	Aluminum	µg/L	99.1	J	20.0	33.2		20.0	--	--	--	99.6
	Antimony	µg/L	< 2.0	U	2.0	< 2.0	U	2.0	--	--	--	NC
	Arsenic	µg/L	1.9		1.0	1.8		1.0	--	--	--	5.4
	Barium	µg/L	76.1		10.0	73.3		10.0	--	--	--	3.7
	Beryllium	µg/L	< 1.0	U	1.0	< 1.0	U	1.0	--	--	--	NC
	Cadmium	µg/L	0.12	J	1.0	0.080	J	1.0	--	--	--	40
	Calcium	µg/L	148000	D	1000	148000		500	--	--	--	0
	Chromium	µg/L	< 2.0	U	2.0	< 2.0	U	2.0	--	--	--	NC
	Cobalt	µg/L	0.37	J	1.0	0.10	J	1.0	--	--	--	114.9
	Copper	µg/L	< 2.0	U	2.0	1.6	J	2.0	--	--	--	NC
	Iron	µg/L	110	J	200	70.6	J	200	--	--	--	43.6
	Lead	µg/L	0.60	J	1.0	0.31	J	1.0	--	--	--	63.7
	Magnesium	µg/L	56100		500	60900		500	--	--	--	8.2
	Manganese	µg/L	18.4	J	1.0	11.5		1.0	--	--	--	46.2
	Mercury	µg/L	< 0.20	U	0.20	< 0.20	U	0.20	--	--	--	NC
	Nickel	µg/L	2.1		1.0	0.68	J	1.0	--	--	--	102.2
	Potassium	µg/L	2800		500	2630		500	--	--	--	6.3
	Selenium	µg/L	0.99	J	5.0	1.8	J	5.0	--	--	--	58.1
	Silver	µg/L	< 1.0	U	1.0	0.14	J	1.0	--	--	--	NC
	Sodium	µg/L	67900		500	67700		500	--	--	--	0.3
	Thallium	µg/L	< 1.0	U	1.0	< 1.0	U	1.0	--	--	--	NC
	Vanadium	µg/L	5.1		5.0	5.1		5.0	--	--	--	0
	Zinc	µg/L	4.1		2.0	8.8	J	2.0	--	--	--	72.9
CLP VOCs Method SOM02.3	1,1,1-trichloroethane	µg/L	--	--	--	0.55		0.50	0.51		0.50	7.5
	1,1,2,2-tetrachloroethane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,1,2-trichloroethane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,1-dichloroethane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,1-dichloroethene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2,3-trichlorobenzene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2,4-trichlorobenzene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2-Dibromo-3-chloropropane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2-dibromoethane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2-dichlorobenzene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2-dichloroethane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2-dichloropropane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,3-dichlorobenzene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,4-dichlorobenzene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	2-butanone	µg/L	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	NC
	2-hexanone	µg/L	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	NC
	4-methyl-2-pentanone	µg/L	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	NC
	Acetone	µg/L	--	--	--	< 5.0	U	5.0	< 5.0	U	5.0	NC
	Benzene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Bromochloromethane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Bromodichloromethane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Bromoform	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Bromomethane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Carbon disulfide	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Carbon tetrachloride	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Chlorobenzene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC

TABLE 1-4

Surface Water and Stormwater Sample Independent Laboratory Quality Assurance Sample Data Assessment

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

		Location ID	SW-23			SW-23			SW-23			
		Sample Name	A-SW-23			A-SW-23			A-SW-23			
		Lab Name	BONNER			CHEMTECH			SHEALY			
		Sample Date	5/3/2016			5/3/2016			5/3/2016			
Analytic Method	**Analyte**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**RPD (%)**
CLP VOCs Method SOM02.3 (cont'd.)	Chloroethane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Chloroform	µg/L	--	--	--	2.8		0.50	2.6		0.50	7.4
	Chloromethane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	cis-1,2-dichloroethene	µg/L	--	--	--	0.15	J	0.50	< 0.50	U	0.50	NC
	cis-1,3-dichloropropene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Cyclohexane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Dibromochloromethane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Dichlorodifluoromethane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Ethylbenzene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Isopropylbenzene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	m,p-Xylene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Methyl acetate	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Methyl tert-butyl ether	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Methylcyclohexane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Methylene Chloride	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	o-Xylene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Styrene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Tetrachloroethene	µg/L	--	--	--	25		2.5	22		2.5	12.8
	Toluene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	trans-1,2-dichloroethene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	trans-1,3-dichloropropene	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Trichloroethene	µg/L	--	--	--	0.46	J	0.50	0.47	J	0.50	2.2
	Trichlorofluoromethane	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Vinyl chloride	µg/L	--	--	--	< 0.50	U	0.50	< 0.50	U	0.50	NC
SVOCs (CLP Method SOM02.3)	1,1-biphenyl	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	1,2,4,5-tetrachlorobenzene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	1,4-dioxane	µg/L	--	--	--	< 2.0	UJ	2.0	< 1.9	U	1.9	NC
	2,2-oxybis(1-chloropropane)	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	2,3,4,6-tetrachlorophenol	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	2,4,5-trichlorophenol	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	2,4,6-trichlorophenol	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	UJ	4.8	NC
	2,4-dichlorophenol	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	2,4-dimethylphenol	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	2,4-dinitrophenol	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	2,4-dinitrotoluene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	2,6-dinitrotoluene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	2-chloronaphthalene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	2-chlorophenol	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	2-Methyl-4,6-dinitrophenol	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	2-methylnaphthalene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	2-methylphenol	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	2-nitroaniline	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	2-nitrophenol	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	3,3-dichlorobenzidine	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	3-nitroaniline	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	4-bromophenyl phenyl ether	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	4-chloro-3-methylphenol	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	4-chloroaniline	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC

TABLE 1-4

Surface Water and Stormwater Sample Independent Laboratory Quality Assurance Sample Data Assessment

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

		Location ID	SW-23			SW-23			SW-23			
		Sample Name	A-SW-23			A-SW-23			A-SW-23			
		Lab Name	BONNER			CHEMTECH			SHEALY			
		Sample Date	5/3/2016			5/3/2016			5/3/2016			
Analytic Method	**Analyte**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**RPD (%)**
SVOCs (CLP Method SOM02.3) (cont'd.)	4-chlorophenyl phenyl ether	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	4-methylphenol	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	4-nitroaniline	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	4-nitrophenol	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	Acenaphthene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Acenaphthylene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Acetophenone	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	Anthracene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Atrazine	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	Benzaldehyde	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	Benzo[a]anthracene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Benzo[a]pyrene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Benzo[b]fluoranthene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Benzo[g,h,i]perylene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Benzo[k]fluoranthene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Benzyl butyl phthalate	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Bis(2-chloroethoxy) methane	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Bis(2-chloroethyl) ether	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	Bis(2-ethylhexyl) phthalate	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Caprolactam	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	Carbazole	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	Chrysene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Dibenz[a,h]anthracene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Dibenzofuran	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Diethyl phthalate	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Dimethyl phthalate	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Di-n-butyl phthalate	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Di-n-octyl phthalate	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	Fluoranthene	µg/L	--	--	--	< 5.0	U	5.0	< 9.6	U	9.6	NC
	Fluorene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Hexachloro-1,3-butadiene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Hexachlorobenzene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Hexachlorocyclopentadiene	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	Hexachloroethane	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Indeno[1,2,3-c,d]pyrene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Isophorone	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Naphthalene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Nitrobenzene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	N-nitrosodi-n-propylamine	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	N-nitrosodiphenylamine	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Pentachlorophenol	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	Phenanthrene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC
	Phenol	µg/L	--	--	--	< 10	U	10	< 9.6	U	9.6	NC
	Pyrene	µg/L	--	--	--	< 5.0	U	5.0	< 4.8	U	4.8	NC

TABLE 1-4

Surface Water and Stormwater Sample Independent Laboratory Quality Assurance Sample Data Assessment

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

		Location ID	SW-27			SW-27				SW-28			SW-28			
		Sample Name	A-SW-27			A-SW-27				A-SW-28			A-SW-28			
		Lab Name	CHEMTECH			SHEALY				CHEMTECH			SHEALY			
		Sample Date	5/3/2016			5/3/2016				5/3/2016			5/3/2016			
Analytic Method	**Analyte**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**RPD (%)**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**RPD (%)**
Total Metals (Method CLP ISM02.3)	Aluminum	µg/L	< 20.0	U	20.0	--	--	--	--	< 20.0	U	20.0	--	--	--	--
	Antimony	µg/L	< 2.0	U	2.0	--	--	--	--	< 2.0	U	2.0	--	--	--	--
	Arsenic	µg/L	2.0		1.0	--	--	--	--	2.5		1.0	--	--	--	--
	Barium	µg/L	71.8		10.0	--	--	--	--	70.7		10.0	--	--	--	--
	Beryllium	µg/L	< 1.0	U	1.0	--	--	--	--	< 1.0	U	1.0	--	--	--	--
	Cadmium	µg/L	< 1.0	U	1.0	--	--	--	--	< 1.0	U	1.0	--	--	--	--
	Calcium	µg/L	145000		500	--	--	--	--	151000		500	--	--	--	--
	Chromium	µg/L	< 2.0	U	2.0	--	--	--	--	< 2.0	U	2.0	--	--	--	--
	Cobalt	µg/L	< 1.0	U	1.0	--	--	--	--	0.060	J	1.0	--	--	--	--
	Copper	µg/L	1.2	J	2.0	--	--	--	--	1.4	J	2.0	--	--	--	--
	Iron	µg/L	38.7	J	200	--	--	--	--	40.0	J	200	--	--	--	--
	Lead	µg/L	< 1.0	U	1.0	--	--	--	--	0.11	J	1.0	--	--	--	--
	Magnesium	µg/L	58300		500	--	--	--	--	58400		500	--	--	--	--
	Manganese	µg/L	6.4		1.0	--	--	--	--	6.0		1.0	--	--	--	--
	Mercury	µg/L	< 0.20	U	0.20	--	--	--	--	< 0.20	U	0.20	--	--	--	--
	Nickel	µg/L	0.44	J	1.0	--	--	--	--	0.49	J	1.0	--	--	--	--
	Potassium	µg/L	2320		500	--	--	--	--	2290		500	--	--	--	--
	Selenium	µg/L	2.6	J	5.0	--	--	--	--	3.0	J	5.0	--	--	--	--
	Silver	µg/L	0.080	J	1.0	--	--	--	--	0.080	J	1.0	--	--	--	--
	Sodium	µg/L	63800		500	--	--	--	--	64600		500	--	--	--	--
	Thallium	µg/L	< 1.0	U	1.0	--	--	--	--	< 1.0	U	1.0	--	--	--	--
	Vanadium	µg/L	5.1		5.0	--	--	--	--	5.2		5.0	--	--	--	--
	Zinc	µg/L	4.3	J	2.0	--	--	--	--	5.6	J	2.0	--	--	--	--
CLP VOCs Method SOM02.3	1,1,1-trichloroethane	µg/L	0.37	J	0.50	0.29	J	0.50	24.2	0.29	J	0.50	0.21	J	0.50	32
	1,1,2,2-tetrachloroethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,1,2-trichloroethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,1-dichloroethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,1-dichloroethene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2,3-trichlorobenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	UJ	0.50	NC
	1,2,4-trichlorobenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	UJ	0.50	NC
	1,2-Dibromo-3-chloropropane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2-dibromoethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2-dichlorobenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	UJ	0.50	NC
	1,2-dichloroethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,2-dichloropropane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	1,3-dichlorobenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	UJ	0.50	NC
	1,4-dichlorobenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	UJ	0.50	NC
	2-butanone	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	NC	< 5.0	U	5.0	< 5.0	U	5.0	NC
	2-hexanone	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	NC	< 5.0	U	5.0	< 5.0	U	5.0	NC
	4-methyl-2-pentanone	µg/L	< 5.0	U	5.0	< 5.0	U	5.0	NC	< 5.0	U	5.0	< 5.0	U	5.0	NC
	Acetone	µg/L	4.8	J	5.0	< 5.0	U	5.0	NC	< 5.0	U	5.0	< 5.0	U	5.0	NC
	Benzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Bromochloromethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Bromodichloromethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Bromoform	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Bromomethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Carbon disulfide	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Carbon tetrachloride	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Chlorobenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	UJ	0.50	NC

TABLE 1-4

Surface Water and Stormwater Sample Independent Laboratory Quality Assurance Sample Data Assessment

2016 Surface Water and Stormwater Data Validation Report, 700 South 1600 East PCE Plume, AOU-1: East Side Springs

		Location ID	SW-27			SW-27				SW-28			SW-28			
		Sample Name	A-SW-27			A-SW-27				A-SW-28			A-SW-28			
		Lab Name	CHEMTECH			SHEALY				CHEMTECH			SHEALY			
		Sample Date	5/3/2016			5/3/2016				5/3/2016			5/3/2016			
Analytic Method	**Analyte**	**Unit**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**RPD (%)**	**Result**	**Val Qual**	**CRQL**	**Result**	**Val Qual**	**CRQL**	**RPD (%)**
CLP VOCs Method SOM02.3 (cont'd.)	Chloroethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Chloroform	µg/L	1.8		0.50	1.6		0.50	11.8	1.3		0.50	1.1		0.50	16.7
	Chloromethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	cis-1,2-dichloroethene	µg/L	0.57		0.50	0.46	J	0.50	21.4	0.56		0.50	0.50		0.50	11.3
	cis-1,3-dichloropropene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Cyclohexane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Dibromochloromethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Dichlorodifluoromethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Ethylbenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Isopropylbenzene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	m,p-Xylene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Methyl acetate	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Methyl tert-butyl ether	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Methylcyclohexane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Methylene Chloride	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	o-Xylene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Styrene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Tetrachloroethene	µg/L	19		0.50	13		0.50	37.5	16		0.50	12		0.50	28.6
	Toluene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	trans-1,2-dichloroethene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	trans-1,3-dichloropropene	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Trichloroethene	µg/L	0.61		0.50	0.46	J	0.50	28	0.66		0.50	0.56		0.50	16.4
	Trichlorofluoromethane	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC
	Vinyl chloride	µg/L	< 0.50	U	0.50	< 0.50	U	0.50	NC	< 0.50	U	0.50	< 0.50	U	0.50	NC

NOTES:

-- = Not analyzed.
µg/L = Micrograms per liter.
CLP = Contract Laboratory Program.
CRQL = Contract Required Quantitation Limit.
EPA = U.S. Environmental Protection Agency
ID = Identification.
J = Estimated value.
MDL = Method detection limit.
NC = Not calculated (non-detect values).
RPD = Relative percent difference.
SVOC = Semivolatile Organic Compound.
U = Non-detect value.
UJ = Estimated non-detect value.
VOC = Volatile Organic Compound.

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2.0 References

EA Engineering Science, and Technology, Inc., PBC. 2016. *Final Quality Assurance Project Plan Update Revision 1, 700 South 1600 East PCE Plume, AOU-1: East Side Springs, Salt Lake City, Utah*. February.

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U.S. Environmental Protection Agency (EPA). 2015a. *Contract Laboratory Program Statement of Work for Organic Superfund Methods, Multi-Media, Multi-Concentration (SOM02.3).* September.

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EPA. 2009. *National Primary Drinking Water Regulations Maximum Contaminant Levels.* May.

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EPA. 1983. *Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020.* Office of Research and Development. March.

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Attachment 1
Data Validation Reports

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ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
700 SOUTH 1600 EAST PCE PLUME, AOU-1: EAST SIDE SPRINGS, SALT LAKE CITY, UTAH

Client: EA Engineering, Science & Technology, Inc., Greenwood Village, Colorado
SDG: H0001
Laboratory: Chemtech Consulting Group, Mountainside, New Jersey
Site: 700 South 1600 East PCE Plume, AOU-1: East Side Springs, Salt Lake City, Utah
Date: June 4, 2016

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1*	A-GW-023	H1584-01	Water
2MS*	A-GW-023MS	H1584-02	Water
3MSD*	A-GW-023MSD	H1584-03	Water
4*	A-GW-039	H1584-04	Water
5*	A-TB-001	H1584-05	Water
7*	A-GW-024	H1584-07	Water
8*	A-GW-046	H1584-08	Water
9*	A-GW-049	H1584-09	Water
10*	A-GW-049-D	H1584-10	Water
11*	A-TB-002	H1584-11	Water
12	A-GW-049	H1584-12	Water
13MS†	A-GW-049MS	H1584-13MS	Water
14MSD†	A-GW-049MSD	H1584-14MSD	Water
15*	A-GW-003	H1584-15	Water
16*	A-GW-005	H1584-16	Water
17*	A-GW-006	H1584-17	Water
18*	A-GW-004	H1584-18	Water
19*	A-GW-009	H1584-19	Water
20*	A-TB-003	H1584-20	Water
21*	A-SW-001	H1584-21	Water

* - VOC only † - SVOC only

A Stage 2B/4 validation was performed on the analytical data for thirteen water samples and three aqueous trip blank samples collected February 22-26, 2016 by EA Engineering at the Veterans Administration site in Salt Lake City, Utah. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organic Analysis SOM02.3.

Specific method references are as follows:

Analysis	*Method References*
Trace VOCs	USEPA CLP SOM02.3
SVOCs	USEPA CLP SOM02.3

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Quality Assurance Project Plan (QAPP) 700 South 1600 East PCE Plume AOU-1: East Side Springs, Salt Lake City, Rev. 1, February 2016 and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Superfund Organic Methods Data Review," August 2014;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectrometry (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision
- System Performance
- Regional Quality Assurance and Quality Control
- Overall Assessment of Data

Data Usability Assessment

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Ten SVOC compounds were rejected in one sample due to severely low surrogate recoveries.

Overall the remaining data are acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Volatile Organic Compounds (VOC)

Holding Times

- All samples were analyzed within 14 days for preserved water samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All percent relative standard deviation (%RSD) and mean relative response factor (RRF) criteria were met.

Continuing Calibration

- All percent difference (%D) and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC results are summarized below.

Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
A-TB-001	None - ND	-	-	-
A-TB-002	None - ND	-	-	-
A-TB-003	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except for the following.

Sample ID	Surrogate	%R	Qualifier
7	2-Butanone-d5	148%	J+ - Associated Compounds
	1,1,2,2-Tetrachloroethane-d2	123%	None - Associated Compounds ND
8	2-Butanone-d5	139%	None - Associated Compounds ND
	2-Hexanone-d5	133%	

Sample ID	Surrogate	%R	Qualifier
8 (cont.)	1,1,2,2-Tetrachloroethane-d2	125%	None - Associated Compounds ND
11	1,1,2,2-Tetrachloroethane-d2	125%	None - Associated Compounds ND
16	1,1-Dichloroethene-d2	57%	J-/UJ - Associated Compounds
18	1,1-Dichloroethene-d2	57%	J-/UJ - Associated Compounds
21	1,1-Dichloroethene-d2	58%	J-/UJ - Associated Compounds

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- LCS samples were not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- All criteria were met.

Tentatively Identified Compounds (TICs)

- All TICs were qualified estimated (J) for unknown compounds and (NJ) for tentatively identified compounds.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Compound	A-GW-049 ug/L	A-GW-049-D ug/L	RPD	Qualifier
Chloroform	4.1	4.0	2%	
Tetrachloroethene	1.2	1.2	0%	

System Performance

- Instrument sensitivity and chromatographic performance were acceptable. Degradation of the system performance was not found. Instrument output and response data were reviewed and found to be acceptable.

Regional Quality Assurance and Quality Control

- All criteria were met. PE samples were not included with this project. Field duplicate sample results are summarized above.

Overall Assessment of Data

- Compound identification and quantitation criteria were met. Calculations and transcription data were verified. No action was required.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 7 days for water samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC samples were not collected.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except for the following.

Sample ID	Surrogate	%R	Qualifier
12	1,4-Dioxane-d8	0%	J-/R - Associated Compounds
	4-Chloroaniline-d4	0%	
	4-Nitrophenol-d4	5%	

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values except for the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
12 (13MS/14MSD)	4-Nitrophenol	7%/6%/OK	None - See Surrogates

Laboratory Control Samples

- LCS samples were not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- All criteria were met.

Tentatively Identified Compounds (TICs)

- All TICs were qualified estimated (J) for unknown compounds and (NJ) for tentatively identified compounds.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

System Performance

- Instrument sensitivity and chromatographic performance were acceptable. Degradation of the system performance was not found. Instrument output and response data were reviewed and found to be acceptable.

Regional Quality Assurance and Quality Control

- All criteria were met. PE samples were not included with this project. Field duplicate sample results are summarized above.

Overall Assessment of Data

- Compound identification and quantitation criteria were met. Calculations and transcription data were verified. No action was required.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 6/4/16

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limits is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

Reason Code	Definition
HT	Holding Time
MB	Method Blank
SURR	Surrogate
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
RPD	Relative Percent Difference
CB/CCB	Calibration Blank or Continuing Calibration Blank
CCV	Calibration Verification
SD	ICP Serial Dilution
TB	Trip Blank
EB	Equipment Blank
FB	Field Blank
FD	Field Duplicate

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0001

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018166.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.9	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.2	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

NW 4130116

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. H0001

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : HI584-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018166.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

MW413116

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0001

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018166.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

MW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H0003

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018149.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	3.4	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

MW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H0003

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-04
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VR018149.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.21	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H0003

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018149.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H0060

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018148.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H0060

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018148.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H0060

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018148.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 4/30/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 5

H0060

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018148.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 02/25/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.91	0.51	~~JN~~ NJ
2	E966796	Total Alkanes	N/A	0	

EPA-designated Registry Number.

MW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7
H0002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047400.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	20	J+ SURR
75-15-0	Carbon disulfide	0.28	J
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.5	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7
H0002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047400.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.12	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7
H0002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047400.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

MW 4/30/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 7
H0002

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46018
Analytical Method : Trace VOA
Matrix : Water
Sample wt/vol : 25.0 (g/mL) : mL
% Solids :
GC Column : RXI-624 ID : 0.25 (mm)
Extract Concentrated : (Y / N)
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N) N
Purge Volume : 25 (mL)
Cleanup Types :
Concentration Units (µg/L,mg/L,µg/kg) : µg/L

Contract : EPW14030
MA No. : SDG No.: H0001
Level :
Lab Sample ID : H1584-07
Lab File ID : VI047400.D
Date Received : 02/26/2016
Date Extracted :
Date Analyzed : 02/29/2016
Extract Volume : (µL)
Extraction Type : PT
Injection Volume : (µL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	253664-95-8	Bis(3-methylbutyl) fluorene-2,7-di	1.41	2.9	JN NJ
2	000420-56-4	Trimethylsilyl fluoride	1.86	0.59	JN
3	000627-27-0	3-Buten-1-ol	2.47	0.36	JN
4		unknown-01	13.26	0.44	J J
5	000535-77-3	Benzene, 1-methyl-3-(1-methylethyl	13.36	0.49	JN NJ
6	000470-82-6	Eucalyptol	13.49	0.34	JN
7	000104-76-7	1-Hexanol, 2-ethyl-	13.54	0.8	JN
8		unknown-02	14.3	0.59	J J
9	001195-79-5	Bicyclo[2.2.1]heptan-2-one, 1,3,3-	14.41	0.28	JN NJ
10		unknown-03	14.56	0.99	J J
11		unknown-04	14.64	0.68	J J
12	001632-73-1	Bicyclo[2.2.1]heptan-2-ol, 1,3,3-t	14.7	1.3	JN NJ
13		unknown-05	14.87	0.78	J J
14	000076-22-2	Camphor	15.11	0.99	JN NJ
15	000124-76-5	Isoborneol	15.17	0.35	JN NJ
16	E966796	Total Alkanes	N/A	0.41	NJ

EPA-designated Registry Number.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 8
H0007

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047401.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 7.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.6	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

MW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 8
H0007

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047401.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 7.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.27	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.2	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.1	J
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.16	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

MW 4/13/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 8
H0007

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047401.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 7.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

MW 4/30/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 8

H0007

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047401.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 02/29/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 7.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	318259-17-5	Imidazol-5(2H)-one, 4-amino-2-(2-f	1.4	3.1	JN NJ
2	000075-44-5	Phosgene	3.17	0.27	JN
3	000372-18-9	Benzene, 1,3-difluoro-	8.02	0.73	JN
4		unknown-01	8.5	0.73	J
5	000066-25-1	Hexanal	10.59	0.52	JN NJ
6	000124-13-0	Octanal	13.25	0.96	JN
7	000104-76-7	1-Hexanol, 2-ethyl-	13.54	0.45	JN
8	000124-19-6	Nonanal	14.29	4.3	JN
9	001632-73-1	Bicyclo[2.2.1]heptan-2-ol, 1,3,3-t	14.7	0.38	JN
10	000143-08-8	1-Nonanol	14.9	0.27	JN
11	000464-49-3	Bicyclo[2.2.1]heptan-2-one, 1,7,7-	15.11	0.49	JN
12	000507-70-0	Borneol	15.17	0.3	JN
13	E966796	Total Alkanes	N/A	1.39	NJ

EPA-designated Registry Number.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9
H0013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047412.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	4.1	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

MW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9
H0013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047412.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.2	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

MW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9
H0013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047412.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 10
H0051

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047413.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	4.0	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

MW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 10
H0051

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047413.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.2	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

MW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 10
H0051

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047413.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 4/30/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 10

H0051

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047413.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/01/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	16.39	0.47	~~JB~~ J
2	E966796	Total Alkanes	N/A	0	

EPA-designated Registry Number.

MW 413016

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047414.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

MW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. H0061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047414.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. H0061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047414.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 4/30/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 11

H0061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047414.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/01/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.17	0.78	JN NJ
2	E966796	Total Alkanes	N/A	0	

EPA-designated Registry Number.

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 15
H0011

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018185.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.5	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 15
H0011

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018185.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.31	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.48	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 15

H0011

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018185.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 16
H0012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-16
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VR018186.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q	
75-71-8	Dichlorodifluoromethane	0.50	U	
74-87-3	Chloromethane	0.50	U	
75-01-4	Vinyl chloride	0.50	U	
74-83-9	Bromomethane	0.50	U	
75-00-3	Chloroethane	0.50	U	
75-69-4	Trichlorofluoromethane	0.50	U	
75-35-4	1,1-Dichloroethene	0.50	~~U~~ UJ	SURR
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	0.50	U	
79-20-9	Methyl Acetate	0.50	U	
75-09-2	Methylene chloride	0.50	U	
156-60-5	trans-1,2-Dichloroethene	0.50	~~U~~ UJ	SURR
1634-04-4	Methyl tert-butyl Ether	0.50	U	
75-34-3	1,1-Dichloroethane	0.50	U	
156-59-2	cis-1,2-Dichloroethene	0.50	~~U~~ UJ	SURR
78-93-3	2-Butanone	5.0	U	
74-97-5	Bromochloromethane	0.50	U	
67-66-3	Chloroform	3.9		
71-55-6	1,1,1-Trichloroethane	0.50	U	
110-82-7	Cyclohexane	0.50	U	
56-23-5	Carbon tetrachloride	0.50	U	
71-43-2	Benzene	0.50	U	
107-06-2	1,2-Dichloroethane	0.50	U	
79-01-6	Trichloroethene	0.50	U	

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 16
H0012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018186.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.12	J
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.29	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.4	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 16
H0012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018186.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 17
H0014

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018187.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.45	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	1.0	

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 17
H0014

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-17
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VR018187.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	3.1	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 17

H0014

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018187.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18
H0015

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018188.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q	
75-71-8	Dichlorodifluoromethane	0.50	U	
74-87-3	Chloromethane	0.50	U	
75-01-4	Vinyl chloride	0.50	U	
74-83-9	Bromomethane	0.50	U	
75-00-3	Chloroethane	0.50	U	
75-69-4	Trichlorofluoromethane	0.50	U	
75-35-4	1,1-Dichloroethene	0.50	~~U~~ UJ	SURR
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	0.50	U	
79-20-9	Methyl Acetate	0.50	U	
75-09-2	Methylene chloride	0.50	U	
156-60-5	trans-1,2-Dichloroethene	0.50	~~U~~ UJ	SURR
1634-04-4	Methyl tert-butyl Ether	0.50	U	
75-34-3	1,1-Dichloroethane	0.50	U	
156-59-2	cis-1,2-Dichloroethene	0.50	~~U~~ UJ	SURR
78-93-3	2-Butanone	5.0	U	
74-97-5	Bromochloromethane	0.50	U	
67-66-3	Chloroform	1.2		
71-55-6	1,1,1-Trichloroethane	0.19	J	
110-82-7	Cyclohexane	0.50	U	
56-23-5	Carbon tetrachloride	0.50	U	
71-43-2	Benzene	0.50	U	
107-06-2	1,2-Dichloroethane	0.50	U	
79-01-6	Trichloroethene	0.34	J	

MW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18
H0015

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018188.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	12	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

MW4130VR

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18

H0015

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-18
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VR018188.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

MW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19
H0019

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018189.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.68	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	2.4	

pw 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19
H0019

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-19
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VR018189.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.7	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

MW 413011b

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19

H0019

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018189.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 4/13/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20
H0062

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : HI584-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018190.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

MW 4/3/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20
H0062

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-20
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VR018190.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

MW 4/13/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20
H0062

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018190.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21

H0901

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018191.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q	
75-71-8	Dichlorodifluoromethane	0.50	U	
74-87-3	Chloromethane	0.50	U	
75-01-4	Vinyl chloride	0.50	U	
74-83-9	Bromomethane	0.50	U	
75-00-3	Chloroethane	0.50	U	
75-69-4	Trichlorofluoromethane	0.50	U	
75-35-4	1,1-Dichloroethene	0.50	UJ	SURR
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	0.50	U	
79-20-9	Methyl Acetate	0.50	U	
75-09-2	Methylene chloride	0.50	U	
156-60-5	trans-1,2-Dichloroethene	0.50	UJ	SURR
1634-04-4	Methyl tert-butyl Ether	0.50	U	
75-34-3	1,1-Dichloroethane	0.50	U	
156-59-2	cis-1,2-Dichloroethene	0.50	UJ	SURR
78-93-3	2-Butanone	5.0	U	
74-97-5	Bromochloromethane	0.50	U	
67-66-3	Chloroform	1.1		
71-55-6	1,1,1-Trichloroethane	0.50	U	
110-82-7	Cyclohexane	0.50	U	
56-23-5	Carbon tetrachloride	0.50	U	
71-43-2	Benzene	0.50	U	
107-06-2	1,2-Dichloroethane	0.50	U	
79-01-6	Trichloroethene	0.13	J	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21

H0901

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018191.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.1	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	6.3	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

MW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21

H0901

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018191.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 12

H0075

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H1584-12
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004536.D
% Solids :
Date Received : 02/26/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q	
123-91-1	1,4-Dioxane	2.0	~~U~~ R	SURR
100-52-7	Benzaldehyde	10	U	
108-95-2	Phenol	10	U	
111-44-4	Bis(2-Chloroethyl)ether	10	U	
95-57-8	2-Chlorophenol	5.0	U	
95-48-7	2-Methylphenol	10	U	
108-60-1	2,2-oxybis(1-Chloropropane)	10	U	
98-86-2	Acetophenone	10	U	
106-44-5	4-Methylphenol	10	~~U~~ R	SURR
621-64-7	N-Nitroso-di-n-propylamine	5.0	U	
67-72-1	Hexachloroethane	5.0	U	
98-95-3	Nitrobenzene	5.0	U	
78-59-1	Isophorone	5.0	U	
88-75-5	2-Nitrophenol	5.0	U	
105-67-9	2,4-Dimethylphenol	5.0	U	
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U	
120-83-2	2,4-Dichlorophenol	5.0	U	
91-20-3	Naphthalene	5.0	U	
106-47-8	4-Chloroaniline	10	~~U~~ R	SURR
87-68-3	Hexachlorobutadiene	5.0	U	
105-60-2	Caprolactam	10	U	
59-50-7	4-Chloro-3-methylphenol	5.0	U	
91-57-6	2-Methylnaphthalene	5.0	U	
77-47-4	Hexachlorocyclopentadiene	10	~~U~~ R	SURR
88-06-2	2,4,6-Trichlorophenol	5.0	U	

MW 4/30/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 12
H0075

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H1584-12
Sample wt/vol : 1000 (g/mL) : mL
Lab File ID : BM004536.D
% Solids :
Date Received : 02/26/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q	
95-95-4	2,4,5-Trichlorophenol	5.0	U	
92-52-4	1,1-Biphenyl	5.0	U	
91-58-7	2-Chloronaphthalene	5.0	U	
88-74-4	2-Nitroaniline	5.0	~~U~~ R	SURR
131-11-3	Dimethylphthalate	5.0	U	
606-20-2	2,6-Dinitrotoluene	5.0	U	
208-96-8	Acenaphthylene	5.0	U	
99-09-2	3-Nitroaniline	10	~~U~~ R	SURR
83-32-9	Acenaphthene	5.0	U	
51-28-5	2,4-Dinitrophenol	10	~~U~~ R	SURR
100-02-7	4-Nitrophenol	10	~~U~~ R	SURR
132-64-9	Dibenzofuran	5.0	U	
121-14-2	2,4-Dinitrotoluene	5.0	U	
84-66-2	Diethylphthalate	5.0	U	
86-73-7	Fluorene	5.0	U	
7005-72-3	4-Chlorophenyl-phenylether	5.0	U	
100-01-6	4-Nitroaniline	10	~~U~~ R	SURR
534-52-1	4,6-Dinitro-2-methylphenol	10	U	
86-30-6	N-Nitrosodiphenylamine	5.0	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U	
101-55-3	4-Bromophenyl-phenylether	5.0	U	
118-74-1	Hexachlorobenzene	5.0	U	
1912-24-9	Atrazine	10	U	
87-86-5	Pentachlorophenol	10	U	
85-01-8	Phenanthrene	5.0	U	

MW 4/3/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 12

H0075

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H1584-12
Sample wt/vol : 1000 (g/mL) : mL
Lab File ID : BM004536.D
% Solids :
Date Received : 02/26/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L, mg/L, µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	~~U~~ R SURR
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

MW 4/30/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 12

H0075

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H1584-12
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004536.D
% Solids :
Date Received : 02/26/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 03/03/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : 6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000994-05-8	Butane, 2-methoxy-2-methyl-	2.79	4.5	~~JN~~ NJ
2	004606-07-9	Ethyl cyclopropanecarboxylate	12.11	53	~~JN~~ NJ
3	E966796	Total Alkanes	N/A	0	

EPA-designated Registry Number.

MW 4/30/16

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
700 SOUTH 1600 EAST PCE PLUME, AOU-1: EAST SIDE SPRINGS, SALT LAKE CITY, UTAH

Client: EA Engineering, Science & Technology, Inc., Greenwood Village, Colorado
SDG: H4001
Laboratory: Shealy Environmental Services, Inc., West Columbia, South Carolina
Site: 700 South 1600 East PCE Plume, AOU-1: East Side Springs, Salt Lake City, Utah
Date: August 2, 2016

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1*	A-FB-002	RE05033-001	Water
2*	A-TB-007	RE05033-002	Water
3*	A-SW-012	RE05033-003	Water
3DL*	A-SW-012DL	RE05033-003DL	Water
4*	A-SW-021	RE05033-004	Water
5	A-SW-023	RE05033-005	Water
5MS	A-SW-023MS	RE05033-005MS	Water
5MSD	A-SW-023MSD	RE05033-005MSD	Water
5DL*	A-SW-023DL	RE05033-005DL	Water
6*	A-SW-027	RE05033-006	Water
7*	A-SW-028	RE05033-007	Water

* - VOC only

A Stage 2B/4 validation was performed on the analytical data for five water samples, one aqueous field blank sample, and one aqueous trip blank sample collected May 3-4, 2016 by EA Engineering at the Veterans Administration site in Salt Lake City, Utah. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organic Analysis SOM02.3.

Specific method references are as follows:

Analysis	*Method References*
Trace VOCs	USEPA CLP SOM02.3
SVOCs	USEPA CLP SOM02.3

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Quality Assurance Project Plan (QAPP) 700 South 1600 East PCE Plume AOU-1: East Side Springs, Salt Lake City, Rev. 1, February 2016 and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Superfund Organic Methods Data Review," August 2014;

- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectrometry (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision
- System Performance
- Regional Quality Assurance and Quality Control
- Overall Assessment of Data

Data Usability Assessment

There were no rejections of data.

Overall the data are acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Volatile Organic Compounds (VOC)

Holding Times

- All samples were analyzed within 14 days for preserved water samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All percent relative standard deviation (%RSD) and mean relative response factor (RRF) criteria were met.

Continuing Calibration

- All percent difference (%D) and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC results are summarized below.

Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
A-FB-002	None - ND	-	-	-
A-TB-007	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except for the following.

Sample ID	Surrogate	%R	Qualifier
7	1,2-Dichlorobenzene-d4	79%	UJ - Associated Compounds

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- LCS samples were not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #s 3 and 5 exhibited high concentrations of tetrachloroethene and were flagged (E) by the laboratory. The samples were reanalyzed at a 5X dilution and the dilution results for tetrachloroethene should be used for reporting purposes.

Tentatively Identified Compounds (TICs)

- All TICs were qualified estimated (J) for unknown compounds and (NJ) for tentatively identified compounds.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

System Performance

- Instrument sensitivity and chromatographic performance were acceptable. Degradation of the system performance was not found. Instrument output and response data were reviewed and found to be acceptable.

Regional Quality Assurance and Quality Control

- All criteria were met. PE samples were not included with this project.

Overall Assessment of Data

- Compound identification and quantitation criteria were met. Calculations and transcription data were verified. No action was required.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 7 days for water samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except for the following.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
05/16/16	2,2'-Oxybis(1-chloropropane)	21.7%	None	Sample ND
	n-Nitroso-di-n-propylamine	22.6%	None	
	Acenaphthene	22.4%	None	
	Benzo(g,h,i)perylene	22.3%	None	

Continuing Calibration

- All %D and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC samples were not collected.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- LCS samples were not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- All criteria were met.

Tentatively Identified Compounds (TICs)

- All TICs were qualified estimated (J) for unknown compounds and (NJ) for tentatively identified compounds.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

System Performance

- Instrument sensitivity and chromatographic performance were acceptable. Degradation of the system performance was not found. Instrument output and response data were reviewed and found to be acceptable.

Regional Quality Assurance and Quality Control

- All criteria were met. PE samples were not included with this project.

Overall Assessment of Data

- Compound identification and quantitation criteria were met. Calculations and transcription data were verified. No action was required.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/8/16

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limits is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

Reason Code	Definition
HT	Holding Time
MB	Method Blank
SURR	Surrogate
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
RPD	Relative Percent Difference
CB/CCB	Calibration Blank or Continuing Calibration Blank
CCV	Calibration Verification
SD	ICP Serial Dilution
TB	Trip Blank
EB	Equipment Blank
FB	Field Blank
FD	Field Duplicate

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4001

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B04

% Solids: Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted:

GC Column: ID: (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) Extract Volume: (uL)

Soil Aliquot (VOA): (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: Cleanup Factor:

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. H4001

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B04

% Solids: Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted:

GC Column: ID: (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) Extract Volume: (uL)

Soil Aliquot (VOA): (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: Cleanup Factor:

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 2
H4008

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-002

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B05

% Solids: Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted:

GC Column: ID: (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) Extract Volume: (uL)

Soil Aliquot (VOA): (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: Cleanup Factor:

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

MW 8/24/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 2
H4008

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-002

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B05

% Solids: Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted:

GC Column: ID: (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) Extract Volume: (uL)

Soil Aliquot (VOA): (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: Cleanup Factor:

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 812116

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 3
H4202

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-003

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A11

% Solids: Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted:

GC Column: ID: (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) Extract Volume: (uL)

Soil Aliquot (VOA): (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: Cleanup Factor:

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.5	
71-55-6	1,1,1-Trichloroethane	0.38	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.36	J
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 3
H4202

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-003

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A11

% Solids: Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted:

GC Column: ID: (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) Extract Volume: (uL)

Soil Aliquot (VOA): (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: Cleanup Factor:

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	17 ~~21~~	~~E~~
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 3DL
H4202DL

Lab Name: Shealy Environmental Services, Inc
Contract: EP-W-14035
Lab Code: EQI Case No.: 46115
MA No.: SDG No.: H4001
Analytical Method: Trace VOA
Level: TRACE
Matrix: Water
Lab Sample ID: RE05033-003
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: 50510A18
% Solids:
Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 05/10/2016
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
use orig. val. results
Heated Purge: (Y/N) N
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 2 Dilution Factor: 5.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	1.3	J D
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 3DL
H4202DL

Lab Name: Shealy Environmental Services, Inc
Contract: EP-W-14035
Lab Code: EQI Case No.: 46115
MA No.: SDG No.: H4001
Analytical Method: Trace VOA
Level: TRACE
Matrix: Water
Lab Sample ID: RE05033-003
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: 50510A18
% Solids:
Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 05/10/2016
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) N
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 2 Dilution Factor: 5.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/Kg): ug/L

use orig results

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	17	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m, p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-Trichlorobenzene	2.5	U
87-61-6	1,2,3-Trichlorobenzene	2.5	U

MW 8/2/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 3DL
H4202DL

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RE05033-003
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50510A18
% Solids: Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 05/10/2016
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) N Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume:
Cleanup Types: pH: 2 Dilution Factor: 5.0
Concentration Units (ug/L, ug/Kg): ug/L Cleanup Factor:

Use original results

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	13.26	3.1	J D
02	138-87-4	Cyclohexanol, 1-methyl-4-(1-	13.97	13	NJ D
03		Unknown-02	14.31	2.9	J D
04	586-81-2	Cyclohexanol, 1-methyl-4-(1-	14.36	5.2	NJ D
05		Unknown-03	14.57	3.1	J D
06		Unknown-04	17.24	6.9	J D
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

J NJ J NJ J J

[2]EPA-designated Registry Number.

MW 8/21/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H4211

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RE05033-004
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B21
% Solids: Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 05/10/2016
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) N Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.41	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.53	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.49	J
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H4211

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-004

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B21

% Solids: Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted:

GC Column: ID: (mm) Date Analyzed: 05/10/2016

Extract Concentrated: (Y/N) Extract Volume: (uL)

Soil Aliquot (VOA): (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: Cleanup Factor:

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	5.2	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H4213

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RE05033-005
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A14
% Solids: Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 05/09/2016
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) N Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.6	
71-55-6	1,1,1-Trichloroethane	0.51	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.47	J
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H4213

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-005

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A14

% Solids: Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted:

GC Column: ID: (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) Extract Volume: (uL)

Soil Aliquot (VOA): (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: Cleanup Factor:

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	22 ~~23~~	~~B~~
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5DL
H4213DL

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RE05033-005
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A13
% Solids: Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 05/09/2016
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) N Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 5.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/Kg): ug/L

Use orig. IAL results

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.6	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	0.46	J
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U

NW 812116

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5DL
H4213DL

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RE05033-005
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A13
% Solids: Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm) Date Extracted: Use original results
GC Column: ID: (mm) Date Analyzed: 05/09/2016
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) N Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 5.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	22	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m, p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-Trichlorobenzene	2.5	U
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 5DL
H4213DL

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RE05033-005
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A13
% Solids: Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 05/09/2016
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) N Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume:
Cleanup Types: pH: 2 Dilution Factor: 5.0
Concentration Units (ug/L, ug/Kg): ug/L Cleanup Factor:

use original results

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	15.85	3.1	~~J~~ J
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. b
H4217

Lab Name: Shealy Environmental Services, Inc
Contract: EP-W-14035
Lab Code: EQI Case No.: 46115
MA No.: SDG No.: H4001
Analytical Method: Trace VOA
Level: TRACE
Matrix: Water
Lab Sample ID: RE05033-006
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: 50509B22
% Solids:
Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 05/10/2016
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) N
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 2 Dilution Factor: 1.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.46	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.6	
71-55-6	1,1,1-Trichloroethane	0.29	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.46	J
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

mw 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 6
H4217

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RE05033-006
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B22
% Solids: Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 05/10/2016
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) N Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	13	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7
H4218

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RE05033-007
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B23
% Solids: Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 05/10/2016
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) N Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.1	
71-55-6	1,1,1-Trichloroethane	0.21	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.56	
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

NW 8/2116

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7
H4218

Lab Name: Shealy Environmental Services, Inc | Contract: EP-W-14035
Lab Code: EQI | Case No.: 46115 | MA No.: | SDG No.: H4001
Analytical Method: Trace VOA | Level: TRACE
Matrix: Water | Lab Sample ID: RE05033-007
Sample wt/vol: 25.0 (g/mL) mL | Lab File ID: 50509B23
% Solids: | Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm) | Date Extracted:
GC Column: ID: (mm) | Date Analyzed: 05/10/2016
Extract Concentrated: (Y/N) | Extract Volume: (uL)
Soil Aliquot (VOA): (uL) | Extraction Type: PT
Heated Purge: (Y/N) N | Injection Volume: (uL)
Purge Volume: 25.0 (mL) | pH: 2 Dilution Factor: 1.0
Cleanup Types: | Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q	
75-27-4	Bromodichloromethane	0.50	U	
10061-01-5	cis-1,3-Dichloropropene	0.50	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	0.50	U	
10061-02-6	trans-1,3-Dichloropropene	0.50	U	
79-00-5	1,1,2-Trichloroethane	0.50	U	
127-18-4	Tetrachloroethene	12		
591-78-6	2-Hexanone	5.0	U	
124-48-1	Dibromochloromethane	0.50	U	
106-93-4	1,2-Dibromoethane	0.50	U	
108-90-7	Chlorobenzene	0.50	~~U~~	UJ Surr
100-41-4	Ethylbenzene	0.50	U	
95-47-6	o-Xylene	0.50	U	
179601-23-1	m, p-Xylene	0.50	U	
100-42-5	Styrene	0.50	U	
75-25-2	Bromoform	0.50	U	
98-82-8	Isopropylbenzene	0.50	U	
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	
541-73-1	1,3-Dichlorobenzene	0.50	U	UJ Surr
106-46-7	1,4-Dichlorobenzene	0.50	U	
95-50-1	1,2-Dichlorobenzene	0.50	U	
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U	
120-82-1	1,2,4-Trichlorobenzene	0.50	~~U~~	UJ Surr
87-61-6	1,2,3-Trichlorobenzene	0.50	~~U~~	UJ Surr

MW 8/22/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H4213

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: SVOA Level: LOW

Matrix: Water Lab Sample ID: RE05033-005

Sample wt/vol: 1040 (g/mL) mL Lab File ID: 40517B20

% Solids: Date Received: 05/05/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016

GC Column: ID: (mm) Date Analyzed: 05/17/2016

Extract Concentrated: (Y/N) Extract Volume: 1000 (uL)

Soil Aliquot (VOA): (uL) Extraction Type: CLLE

Heated Purge: (Y/N) Injection Volume: 1.0 (uL)

Purge Volume: (mL) pH: 7 Dilution Factor: 1.0

Cleanup Types: Cleanup Factor:

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
123-91-1	1,4-Dioxane	1.9	U
100-52-7	Benzaldehyde	9.6	U
108-95-2	Phenol	9.6	U
111-44-4	Bis(2-Chloroethyl) ether	9.6	U
95-57-8	2-Chlorophenol	4.8	U
95-48-7	2-Methylphenol	9.6	U
108-60-1	2,2'-Oxybis(1-chloropropane)	9.6	U
98-86-2	Acetophenone	9.6	U
106-44-5	3-Methylphenol + 4-Methylphenol	9.6	U
621-64-7	N-Nitroso-di-n propylamine	4.8	U
67-72-1	Hexachloroethane	4.8	U
98-95-3	Nitrobenzene	4.8	U
78-59-1	Isophorone	4.8	U
88-75-5	2-Nitrophenol	4.8	U
105-67-9	2,4-Dimethylphenol	4.8	U
111-91-1	Bis(2-chloroethoxy)methane	4.8	U
120-83-2	2,4-Dichlorophenol	4.8	U
91-20-3	Naphthalene	4.8	U
106-47-8	4-Chloroaniline	9.6	U
87-68-3	Hexachlorobutadiene	4.8	U
105-60-2	Caprolactam	9.6	U
59-50-7	4-Chloro-3-methylphenol	4.8	U
91-57-6	2-Methylnaphthalene	4.8	U
77-47-4	Hexachlorocyclo-pentadiene	9.6	U
88-06-2	2,4,6-Trichlorophenol	4.8	U
95-95-4	2,4,5-Trichlorophenol	4.8	U
92-52-4	1,1'-Biphenyl	4.8	U

MJ 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H4213

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: SVOA Level: LOW
Matrix: Water Lab Sample ID: RE05033-005
Sample wt/vol: 1040 (g/mL) mL Lab File ID: 40517B20
% Solids: Date Received: 05/05/2016
GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016
GC Column: ID: (mm) Date Analyzed: 05/17/2016
Extract Concentrated: (Y/N) Extract Volume: 1000 (uL)
Soil Aliquot (VOA): (uL) Extraction Type: CLLE
Heated Purge: (Y/N) Injection Volume: 1.0 (uL)
Purge Volume: (mL) pH: 7 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
91-58-7	2-Chloronaphthalene	4.8	U
88-74-4	2-Nitroaniline	4.8	U
131-11-3	Dimethylphthalate	4.8	U
606-20-2	2,6-Dinitrotoluene	4.8	U
208-96-8	Acenaphthylene	4.8	U
99-09-2	3-Nitroaniline	9.6	U
83-32-9	Acenaphthene	4.8	U
51-28-5	2,4-Dinitrophenol	9.6	U
100-02-7	4-Nitrophenol	9.6	U
132-64-9	Dibenzofuran	4.8	U
121-14-2	2,4-Dinitrotoluene	4.8	U
84-66-2	Diethylphthalate	4.8	U
95-94-3	1,2,4,5-Tetrachlorobenzene	4.8	U
7005-72-3	4-Chlorophenyl-phenyl ether	4.8	U
86-73-7	Fluorene	4.8	U
100-01-6	4-Nitroaniline	9.6	U
534-52-1	4,6-Dinitro-2-methylphenol	9.6	U
101-55-3	4-Bromophenyl-phenylether	4.8	U
86-30-6	N-Nitrosodiphenylamine	4.8	U
118-74-1	Hexachlorobenzene	4.8	U
1912-24-9	Atrazine	9.6	U
87-86-5	Pentachlorophenol	9.6	U
85-01-8	Phenanthrene	4.8	U
120-12-7	Anthracene	4.8	U
86-74-8	Carbazole	9.6	U
84-74-2	Di-n-butylphthalate	4.8	U
206-44-0	Fluoranthene	9.6	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H4213

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: SVOA Level: LOW
Matrix: Water Lab Sample ID: RE05033-005
Sample wt/vol: 1040 (g/mL) mL Lab File ID: 40517B20
% Solids: Date Received: 05/05/2016
GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016
GC Column: ID: (mm) Date Analyzed: 05/17/2016
Extract Concentrated: (Y/N) Extract Volume: 1000 (uL)
Soil Aliquot (VOA): (uL) Extraction Type: CLLE
Heated Purge: (Y/N) Injection Volume: 1.0 (uL)
Purge Volume: (mL) pH: 7 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
129-00-0	Pyrene	4.8	U
85-68-7	Butylbenzylphthalate	4.8	U
91-94-1	3,3'-Dichlorobenzidine	9.6	U
56-55-3	Benzo(a)anthracene	4.8	U
218-01-9	Chrysene	4.8	U
117-81-7	Bis(2-ethylhexyl)phthalate	4.8	U
117-84-0	Di-n-octylphthalate	9.6	U
205-99-2	Benzo(b)fluoranthene	4.8	U
207-08-9	Benzo(k)fluoranthene	4.8	U
50-32-8	Benzo(a)pyrene	4.8	U
193-39-5	Indeno(1,2,3-cd)pyrene	4.8	U
53-70-3	Dibenzo(a,h)anthracene	4.8	U
191-24-2	Benzo(g,h,i)perylene	4.8	U
58-90-2	2,3,4,6-Tetrachlorophenol	4.8	U

MW 8/2/16

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
700 SOUTH 1600 EAST PCE PLUME, AOU-1: EAST SIDE SPRINGS, SALT LAKE CITY, UTAH

Client: EA Engineering, Science & Technology, Inc., Greenwood Village, Colorado
SDG: H4002
Laboratory: Chemtech Consulting Group, Mountainside, New Jersey
Site: 700 South 1600 East PCE Plume, AOU-1: East Side Springs, Salt Lake City, Utah
Date: August 2, 2016

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	A-GW-MTO	H2834-01	Water
1DL*	A-GW-MTODL	H2834-01DL	Water
2MS	A-GW-MTOMS	H2834-02MS	Water
3MSD	A-GW-MTOMSD	H2834-03MSD	Water
4*	A-TB-005	H2834-04	Water
5*	A-SW-004	H2834-05	Water
5DL*	A-SW-004DL	H2834-05DL	Water
6*	A-SW-031	H2834-06	Water
6DL*	A-SW-031DL	H2834-06DL	Water
7*	A-SW-033	H2834-07	Water
7DL*	A-SW-033DL	H2834-07DL	Water
8*	A-SW-034	H2834-08	Water
8RE*	A-SW-034RE	H2834-08RE	Water
9*	A-SW-042	H2834-09	Water
10*	A-SW-043	H2834-10	Water
12*	A-GW-MTO	H2834-12	Water
13	A-SS-09	H1584-13	Soil
14MS	A-SS-09MS	H2834-14MS	Soil
15MSD	A-SS-09MSD	H2834-15MSD	Soil
16	A-SS-26	H2834-16	Soil
18	A-SW-012	H2834-18	Water
18DL*	A-SW-012DL	H2834-18DL	Water
19	A-SW-026	H2834-19	Water
19DL*	A-SW-026DL	H2834-19DL	Water
20	A-SW-027	H2834-20	Water
21	A-SW-028	H2834-21	Water

* - VOC only

A Stage 2B/4 validation was performed on the analytical data for twelve water samples, two soil samples, and one aqueous trip blank sample collected May 2-3, 2016 by EA Engineering at the Veterans Administration site in Salt Lake City, Utah. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organic Analysis SOM02.3.

Specific method references are as follows:

Analysis	*Method References*
Trace VOCs/ Low Level VOCs	USEPA CLP SOM02.3
SVOCs	USEPA CLP SOM02.3

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Quality Assurance Project Plan (QAPP) 700 South 1600 East PCE Plume AOU-1: East Side Springs, Salt Lake City, Rev. 1, February 2016 and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Superfund Organic Methods Data Review," August 2014;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectrometry (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision
- System Performance
- Regional Quality Assurance and Quality Control
- Overall Assessment of Data

Data Usability Assessment

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Five SVOC compounds were rejected in four samples due to severely low surrogate recoveries.

Overall the remaining data are acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Volatile Organic Compounds (VOC)

Holding Times

- All samples were analyzed within 14 days for preserved water samples and soil samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All percent relative standard deviation (%RSD) and mean relative response factor (RRF) criteria were met.

Continuing Calibration

- All percent difference (%D) and RRF criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
VBLK98	Methylene chloride	1.6	U	13
VBLK79	Methylene chloride	1.1	None	All Associated ND

Field QC Blank

- Field QC results are summarized below.

Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
A-TB-005	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except for the following.

Sample ID	Surrogate	%R	Qualifier
5DL	Chloroethane-d5	49%	None - 5X Dilution
6DL	Chloroethane-d5	40%	None - 2X Dilution
7DL	Chloroethane-d5	44%	None - 5X Dilution

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- LCS samples were not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #s 1, 5, 6, 7, 18, and 19 exhibited high concentrations of tetrachloroethene and were flagged (E) by the laboratory. The samples were reanalyzed at a 5X dilution and the dilution results for tetrachloroethene should be used for reporting purposes.
- EDS Sample ID #8 was reanalyzed due to carryover and the reanalysis results should be used for reporting purposes.

Tentatively Identified Compounds (TICs)

- All TICs were qualified estimated (J) for unknown compounds and (NJ) for tentatively identified compounds.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

System Performance

- Instrument sensitivity and chromatographic performance were acceptable. Degradation of the system performance was not found. Instrument output and response data were reviewed and found to be acceptable.

Regional Quality Assurance and Quality Control

- All criteria were met. PE samples were not included with this project.

Overall Assessment of Data

- Compound identification and quantitation criteria were met. Calculations and transcription data were verified. No action was required.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 7 days for water samples and 14 days for soil samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met except for the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
05/14/16 (1309)	Hexachlorocyclopentadiene	67.5%	UJ	1, 18, 19, 20, 21

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC samples were not collected.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except for the following.

Sample ID	Surrogate	%R	Qualifier
1	1,4-Dioxane-d8	19%	UJ - Associated Compounds
16	1,4-Dioxane-d8	37%	UJ - Associated Compounds
18	1,4-Dioxane-d8	18%	UJ - Associated Compounds
	4-Nitrophenol-d4	9%	R - Associated Compounds
19	1,4-Dioxane-d8	15%	UJ - Associated Compounds
	4-Nitrophenol-d4	7%	R - Associated Compounds
20	1,4-Dioxane-d8	17%	UJ - Associated Compounds

Sample ID	Surrogate	%R	Qualifier
20 (cont.)	4-Nitrophenol-d4	8%	R - Associated Compounds
21	1,4-Dioxane-d8	20%	UJ - Associated Compounds
	4-Nitrophenol-d4	9%	R - Associated Compounds

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- LCS samples were not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- All criteria were met.

Tentatively Identified Compounds (TICs)

- All TICs were qualified estimated (J) for unknown compounds and (NJ) for tentatively identified compounds.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

System Performance

- Instrument sensitivity and chromatographic performance were acceptable. Degradation of the system performance was not found. Instrument output and response data were reviewed and found to be acceptable.

Regional Quality Assurance and Quality Control

- All criteria were met. PE samples were not included with this project.

Overall Assessment of Data

- Compound identification and quantitation criteria were met. Calculations and transcription data were verified. No action was required.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/8/16

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limits is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

Reason Code	Definition
HT	Holding Time
MB	Method Blank
SURR	Surrogate
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
RPD	Relative Percent Difference
CB/CCB	Calibration Blank or Continuing Calibration Blank
CCV	Calibration Verification
SD	ICP Serial Dilution
TB	Trip Blank
EB	Equipment Blank
FB	Field Blank
FD	Field Duplicate

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. H4002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049234.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.070	J
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.26	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.0	
71-55-6	1,1,1-Trichloroethane	0.66	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.56	

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 1
H4002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049234.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.24	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	~~46~~ 40	~~B~~
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

NW 8/12/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 1
H4002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049234.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 1DL
H4002DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-01DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049252.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Use orig. NAC results
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 1DL
H4002DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-01DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049252.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Use original results
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	40	B
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

NW 8/12/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 1DL

H4002DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030

Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002

Analytical Method : Trace VOA
Level :

Matrix : Water
Lab Sample ID : H2834-01DL

Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049252.D

% Solids :
Date Received : 05/03/2016

GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :

GC Column : ID : (mm)
Date Analyzed : 05/05/2016

Extract Concentrated : (Y / N)
Extract Volume : (µL)

Soil Aliquot (VOA) : (µL)
Extraction Type : PT

Heated Purge : (Y / N) N
Injection Volume : (µL)

Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0

Cleanup Types :
Cleanup Factor :

Concentration Units (µg/L,mg/L,µg/kg) : µg/L

use original results

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H4006

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049233.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H4006

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049233.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

mw 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4

H4006

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049233.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4006

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049233.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/04/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.23	0.39	~~JN~~ NJ
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H4094

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049237.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.19	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.2	
71-55-6	1,1,1-Trichloroethane	0.34	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.34	J

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H4094

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049237.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.24	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	~~20~~ 27	~~B~~
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5

H4094

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049237.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5DL
H4094DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-05DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049258.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Use original results
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5DL
H4094DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-05DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049258.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Use original results
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	27	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5DL

H4094DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030

Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002

Analytical Method : Trace VOA
Level :

Matrix : Water
Lab Sample ID : H2834-05DL

Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049258.D

% Solids :
Date Received : 05/03/2016

GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :

GC Column : ID : (mm)
Date Analyzed : 05/05/2016

Use orig. MDL results

Extract Concentrated : (Y / N)
Extract Volume : (µL)

Soil Aliquot (VOA) : (µL)
Extraction Type : PT

Heated Purge : (Y / N) N
Injection Volume : (µL)

Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0

Cleanup Types :
Cleanup Factor :

Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 6
H4121

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049238.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.27	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.97	
71-55-6	1,1,1-Trichloroethane	0.31	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.20	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.48	J

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 6
H4121

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049238.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.34	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	~~21~~ 20	~~E~~
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.080	J
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.12	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. b
H4121

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049238.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

lew 8/2/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 6

H4121

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049238.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/04/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000067-63-0	Isopropyl Alcohol	3.21	0.35	~~JN~~ NJ
2	E966796	Total Alkanes	N/A	0.28	NJ

EPA-designated Registry Number.

rev 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 60L
H4121DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049257.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Use original results
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 2.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	1.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	1.0	U
79-20-9	Methyl Acetate	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
1634-04-4	Methyl tert-butyl Ether	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	1.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	0.34	J
110-82-7	Cyclohexane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	0.48	J

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 60L
H4121DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049257.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 2.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

use original results

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	20	D
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
95-47-6	o-Xylene	1.0	U
179601-23-1	m,p-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-trichlorobenzene	1.0	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 6DL
H4121DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049257.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 2.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

use original results

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	1.0	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7

H4123

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049239.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.15	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.1	
71-55-6	1,1,1-Trichloroethane	0.61	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.78	

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7
H4123

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049239.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.11	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	~~42~~ 35	~~E~~
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

lw 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7

H4123

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049239.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

MW 9/12/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 7

H4123

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049239.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/04/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000066-25-1	Hexanal	10.6	0.85	~~JN~~ NJ
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 70L
H4123DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049259.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016 use original results
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	0.55	J
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	0.75	J

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7DL
H4123DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049259.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
use original results
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	35	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

New 8/2016

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7DL

H4123DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030

Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002

Analytical Method : Trace VOA
Level :

Matrix : Water
Lab Sample ID : H2834-07DL

Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049259.D

% Solids :
Date Received : 05/03/2016

GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :

GC Column : ID : (mm)
Date Analyzed : 05/05/2016

Extract Concentrated : (Y / N)
Extract Volume : (µL)

Soil Aliquot (VOA) : (µL)
Extraction Type : PT

Heated Purge : (Y / N) N
Injection Volume : (µL)

Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0

Cleanup Types :
Cleanup Factor :

Concentration Units (µg/L,mg/L,µg/kg): µg/L

use original results

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

8/2/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 7DL

H4123DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049259.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Use original results
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 5.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	1.55	8.7	J J
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 8
H4124

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049240.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Use reanalysis results

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.13	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.9	
71-55-6	1,1,1-Trichloroethane	0.20	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.26	J

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 8
H4124

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049240.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Use reanalysis results

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.22	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	13	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

MW 8/12/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 8
H4124

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049240.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Use reanalysis results

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 8RE
H4124RE

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-08RE
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049251.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	3.9	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.13	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.9	
71-55-6	1,1,1-Trichloroethane	0.20	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.27	J

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 8RE
H4124RE

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-08RE
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049251.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.22	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	13	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 8RE
H4124RE

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-08RE
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049251.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 8/2/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 8RE

H4124RE

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46114
Analytical Method : Trace VOA
Matrix : Water
Sample wt/vol : 25.0 (g/mL): mL
% Solids :
GC Column : RXI-624 ID : 0.25 (mm)
Extract Concentrated : (Y / N)
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N) N
Purge Volume : 25 (mL)
Cleanup Types :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Contract : EPW14030
MA No. : SDG No.: H4002
Level :
Lab Sample ID : H2834-08RE
Lab File ID : VI049251.D
Date Received : 05/03/2016
Date Extracted :
Date Analyzed : 05/05/2016
Extract Volume : (µL)
Extraction Type : PT
Injection Volume : (µL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	14.04	0.30	J
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

New 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9
H4132

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049241.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.0	
71-55-6	1,1,1-Trichloroethane	0.19	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.19	J

New 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9
H4132

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049241.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.10	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	16	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9
H4132

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049241.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

8/2/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 9

H4132

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46114
Analytical Method : Trace VOA
Matrix : Water
Sample wt/vol : 25.0 (g/mL): mL
% Solids :
GC Column : RXI-624 ID : 0.25 (mm)
Extract Concentrated : (Y / N)
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N) N
Purge Volume : 25 (mL)
Cleanup Types :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Contract : EPW14030
MA No. : SDG No.: H4002
Level :
Lab Sample ID : H2834-09
Lab File ID : VI049241.D
Date Received : 05/03/2016
Date Extracted :
Date Analyzed : 05/04/2016
Extract Volume : (µL)
Extraction Type : PT
Injection Volume : (µL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	9.37	1.7	8 J
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 10
H4133

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049242.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.89	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.10	J

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 10
H4133

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049242.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.10	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	4.1	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 10
H4133

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049242.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 10
H4133

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46114
Analytical Method : Trace VOA
Matrix : Water
Sample wt/vol : 25.0 (g/mL) : mL
% Solids :
GC Column : RXI-624 ID : 0.25 (mm)
Extract Concentrated : (Y / N)
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N) N
Purge Volume : 25 (mL)
Cleanup Types :
Concentration Units (µg/L,mg/L,µg/kg) : µg/L

Contract : EPW14030
MA No. : SDG No.: H4002
Level :
Lab Sample ID : H2834-10
Lab File ID : VI049242.D
Date Received : 05/03/2016
Date Extracted :
Date Analyzed : 05/04/2016
Extract Volume : (µL)
Extraction Type : PT
Injection Volume : (µL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	9.36	1.8	~~J~~ J
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 12
H4004

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049249.D
% Solids :
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 12
H4004

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049249.D
% Solids :
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 12

H4004

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049249.D
% Solids :
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 12

H4004

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46114
Analytical Method : Trace VOA
Matrix : Water
Sample wt/vol : 25.0 (g/mL): mL
% Solids :
GC Column : RXI-624 ID : 0.25 (mm)
Extract Concentrated : (Y / N)
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N) N
Purge Volume : 25 (mL)
Cleanup Types :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Contract : EPW14030
MA No. : SDG No.: H4002
Level :
Lab Sample ID : H2834-12
Lab File ID : VI049249.D
Date Received : 05/04/2016
Date Extracted :
Date Analyzed : 05/05/2016
Extract Volume : (µL)
Extraction Type : PT
Injection Volume : (µL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.24	0.41	~~JN~~ NJ
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 13
H4061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-13
Sample wt/vol : 3.75 (g/mL): g
Lab File ID : VT013913.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	51	
75-15-0	Carbon disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene chloride	10	B U MB
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	21	U
74-97-5	Bromochloromethane	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 13

H4061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-13
Sample wt/vol : 3.75 (g/mL): g
Lab File ID : VT013913.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	21	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	21	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
95-47-6	o-xylene	10	U
179601-23-1	m,p-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-trichlorobenzene	10	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 13

H4061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-13
Sample wt/vol : 3.75 (g/mL): g
Lab File ID : VT013913.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	10	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 16
H4076

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-16
Sample wt/vol : 4.45 (g/mL): g
Lab File ID : VT013989.D
% Solids : 56.3
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	20	U
75-15-0	Carbon disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	20	U
74-97-5	Bromochloromethane	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 16
H4076

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-16
Sample wt/vol : 4.45 (g/mL): g
Lab File ID : VT013989.D
% Solids : 56.3
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	20	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	22	
591-78-6	2-Hexanone	20	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
95-47-6	o-xylene	10	U
179601-23-1	m,p-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-trichlorobenzene	10	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 16

H4076

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-16
Sample wt/vol : 4.45 (g/mL): g
Lab File ID : VT013989.D
% Solids : 56.3
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	10	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19

H4102

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049270.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.12	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.5	
71-55-6	1,1,1-Trichloroethane	0.40	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.39	J

nw 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18

H4102

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049270.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	~~28~~ 23	~~B~~
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18

H4102

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049270.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18DL

H4102DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-18DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049281.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
use original results
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18DL

H4102DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-18DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049281.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

use original results

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	23	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18DL

H4102DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030

Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002

Analytical Method : Trace VOA
Level :

Matrix : Water
Lab Sample ID : H2834-18DL

Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049281.D

% Solids :
Date Received : 05/05/2016

GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :

GC Column : ID : (mm)
Date Analyzed : 05/06/2016

Extract Concentrated : (Y / N)
Extract Volume : (µL)

Soil Aliquot (VOA) : (µL)
Extraction Type : PT

Heated Purge : (Y / N) N
Injection Volume : (µL)

Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0

Cleanup Types :
Cleanup Factor :

Concentration Units (µg/L,mg/L,µg/kg): µg/L

use original results

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19

H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049271.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	2.8	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.6	
71-55-6	1,1,1-Trichloroethane	0.57	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.30	J

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19
H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049271.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.12	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	~~34~~ 23	~~E~~
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19

H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049271.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 19

H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049271.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	5.79	0.31	J J
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

mw 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19DL
H4116DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049286.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Use original results
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19DL
H4116DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049286.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
use orig. DL results
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	23	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19DL

H4116DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030

Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002

Analytical Method : Trace VOA
Level :

Matrix : Water
Lab Sample ID : H2834-19DL

Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049286.D

% Solids :
Date Received : 05/05/2016

GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :

GC Column : ID : (mm)
Date Analyzed : 05/06/2016

Extract Concentrated : (Y / N)
Extract Volume : (µL)

Soil Aliquot (VOA) : (µL)
Extraction Type : PT

Heated Purge : (Y / N) N
Injection Volume : (µL)

Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0

Cleanup Types :
Cleanup Factor :

Concentration Units (µg/L, mg/L, µg/kg): µg/L

Use original results

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

MS 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20

H4117

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049280.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	4.8	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.57	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.8	
71-55-6	1,1,1-Trichloroethane	0.37	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.61	

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20

H4117

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049280.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	19	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20

H4117

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049280.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

Nov 8 | 2016

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 20

H4117

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46114
Analytical Method : Trace VOA
Matrix : Water
Sample wt/vol : 25.0 (g/mL): mL
% Solids :
GC Column : RXI-624 ID : 0.25 (mm)
Extract Concentrated : (Y / N)
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N) N
Purge Volume : 25 (mL)
Cleanup Types :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Contract : EPW14030
MA No. : SDG No.: H4002
Level :
Lab Sample ID : H2834-20
Lab File ID : VI049280.D
Date Received : 05/05/2016
Date Extracted :
Date Analyzed : 05/06/2016
Extract Volume : (µL)
Extraction Type : PT
Injection Volume : (µL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000067-63-0	Isopropyl Alcohol	3.22	0.26	~~JN~~ NJ
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21

H4118

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049278.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.56	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.3	
71-55-6	1,1,1-Trichloroethane	0.29	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.66	

New 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21

H4118

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049278.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	16	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

New 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21

H4118

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049278.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

8/24/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 1
H4002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-01
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005451.D
% Solids :
Date Received : 05/03/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	~~Y~~ UJ Surr
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	~~U~~ UJ CCV
88-06-2	2,4,6-Trichlorophenol	5.0	U

NM 8/21/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 1
H4002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-01
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005451.D
% Solids :
Date Received : 05/03/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 1
H4002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-01
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005451.D
% Solids :
Date Received : 05/03/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

New 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 13

H4061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-13
Sample wt/vol : 30.1 (g/mL): g
Lab File ID : BM005389.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	100	U
100-52-7	Benzaldehyde	520	U
108-95-2	Phenol	520	U
111-44-4	Bis(2-Chloroethyl)ether	520	U
95-57-8	2-Chlorophenol	270	U
95-48-7	2-Methylphenol	520	U
108-60-1	2,2-oxybis(1-Chloropropane)	520	U
98-86-2	Acetophenone	520	U
106-44-5	4-Methylphenol	520	U
621-64-7	N-Nitroso-di-n-propylamine	270	U
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-Chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	270	U
106-47-8	4-Chloroaniline	520	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	520	U
59-50-7	4-Chloro-3-methylphenol	270	U
91-57-6	2-Methylnaphthalene	270	U
77-47-4	Hexachlorocyclopentadiene	520	U
88-06-2	2,4,6-Trichlorophenol	270	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 13
H4061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-13
Sample wt/vol : 30.1 (g/mL): g
Lab File ID : BM005389.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1-Biphenyl	270	U
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	270	U
131-11-3	Dimethylphthalate	370	
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	270	U
99-09-2	3-Nitroaniline	520	U
83-32-9	Acenaphthene	270	U
51-28-5	2,4-Dinitrophenol	520	U
100-02-7	4-Nitrophenol	520	U
132-64-9	Dibenzofuran	270	U
121-14-2	2,4-Dinitrotoluene	270	U
84-66-2	Diethylphthalate	270	U
86-73-7	Fluorene	270	U
7005-72-3	4-Chlorophenyl-phenylether	270	U
100-01-6	4-Nitroaniline	520	U
534-52-1	4,6-Dinitro-2-methylphenol	520	U
86-30-6	N-Nitrosodiphenylamine	270	U
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U
101-55-3	4-Bromophenyl-phenylether	270	U
118-74-1	Hexachlorobenzene	270	U
1912-24-9	Atrazine	520	U
87-86-5	Pentachlorophenol	520	U
85-01-8	Phenanthrene	270	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 13

H4061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-13
Sample wt/vol : 30.1 (g/mL): g
Lab File ID : BM005389.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L, mg/L, µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	270	U
86-74-8	Carbazole	520	U
84-74-2	Di-n-butylphthalate	270	U
206-44-0	Fluoranthene	270	U
129-00-0	Pyrene	270	U
85-68-7	Butylbenzylphthalate	270	U
91-94-1	3,3-Dichlorobenzidine	520	U
56-55-3	Benzo(a)anthracene	270	U
218-01-9	Chrysene	270	U
117-81-7	Bis(2-ethylhexyl)phthalate	270	U
117-84-0	Di-n-octyl phthalate	520	U
205-99-2	Benzo(b)fluoranthene	270	U
207-08-9	Benzo(k)fluoranthene	270	U
50-32-8	Benzo(a)pyrene	270	U
193-39-5	Indeno(1,2,3-cd)pyrene	270	U
53-70-3	Dibenzo(a,h)anthracene	270	U
191-24-2	Benzo(g,h,i)perylene	270	U
58-90-2	2,3,4,6-Tetrachlorophenol	270	U

mes 8/2/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 13

H4061

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46114
Analytical Method : SVOA
Matrix : Soil
Sample wt/vol : 30.1 (g/mL): g
% Solids : 63.8
GC Column : ZB-GR ID : 0.25 (mm)
Extract Concentrated : (Y / N) Y
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N)
Purge Volume : (mL)
Cleanup Types : GPC
Concentration Units (µg/L, mg/L, µg/kg): µg/kg

Contract : EPW14030
MA No. : SDG No.: H4002
Level : LOW
Lab Sample ID : H2834-13
Lab File ID : BM005389.D
Date Received : 05/04/2016
Date Extracted : 05/05/2016
Date Analyzed : 05/11/2016
Extract Volume : 500 (µL)
Extraction Type : SOXH
Injection Volume : 1.0 (µL)
pH : Dilution Factor : 1.0
Cleanup Factor : 2.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	002136-71-2	Ethanol, 2-(hexadecyloxy)-	21.04	120	~~JN~~ NJ
2	000083-47-6	.gamma.-Sitosterol	26.67	130	~~JN~~ NJ
3	E966796	Total Alkanes	N/A	1000	NJ

EPA-designated Registry Number.

Lew 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 16
H4076

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-16
Sample wt/vol : 30.1 (g/mL): g
Lab File ID : BM005392.D
% Solids : 56.3
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	120	~~Y~~ UJ Surr
100-52-7	Benzaldehyde	580	U
108-95-2	Phenol	580	U
111-44-4	Bis(2-Chloroethyl)ether	580	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	580	U
108-60-1	2,2-oxybis(1-Chloropropane)	580	U
98-86-2	Acetophenone	580	U
106-44-5	4-Methylphenol	580	U
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-Chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	300	U
106-47-8	4-Chloroaniline	580	U
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	580	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	300	U
77-47-4	Hexachlorocyclopentadiene	580	U
88-06-2	2,4,6-Trichlorophenol	300	U

New 8/24/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 16
H4076

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-16
Sample wt/vol : 30.1 (g/mL): g
Lab File ID : BM005392.D
% Solids : 56.3
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1-Biphenyl	300	U
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	300	U
131-11-3	Dimethylphthalate	400	
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	300	U
99-09-2	3-Nitroaniline	580	U
83-32-9	Acenaphthene	300	U
51-28-5	2,4-Dinitrophenol	580	U
100-02-7	4-Nitrophenol	580	U
132-64-9	Dibenzofuran	300	U
121-14-2	2,4-Dinitrotoluene	300	U
84-66-2	Diethylphthalate	300	U
86-73-7	Fluorene	300	U
7005-72-3	4-Chlorophenyl-phenylether	300	U
100-01-6	4-Nitroaniline	580	U
534-52-1	4,6-Dinitro-2-methylphenol	580	U
86-30-6	N-Nitrosodiphenylamine	300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	300	U
101-55-3	4-Bromophenyl-phenylether	300	U
118-74-1	Hexachlorobenzene	300	U
1912-24-9	Atrazine	580	U
87-86-5	Pentachlorophenol	580	U
85-01-8	Phenanthrene	300	U

nw 8/21/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 16
H4076

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-16
Sample wt/vol : 30.1 (g/mL): g
Lab File ID : BM005392.D
% Solids : 56.3
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	300	U
86-74-8	Carbazole	580	U
84-74-2	Di-n-butylphthalate	300	U
206-44-0	Fluoranthene	78	J
129-00-0	Pyrene	93	J
85-68-7	Butylbenzylphthalate	300	U
91-94-1	3,3-Dichlorobenzidine	580	U
56-55-3	Benzo(a)anthracene	300	U
218-01-9	Chrysene	120	J
117-81-7	Bis(2-ethylhexyl)phthalate	300	U
117-84-0	Di-n-octyl phthalate	580	U
205-99-2	Benzo(b)fluoranthene	210	J
207-08-9	Benzo(k)fluoranthene	300	U
50-32-8	Benzo(a)pyrene	85	J
193-39-5	Indeno(1,2,3-cd)pyrene	62	J
53-70-3	Dibenzo(a,h)anthracene	300	U
191-24-2	Benzo(g,h,i)perylene	64	J
58-90-2	2,3,4,6-Tetrachlorophenol	300	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 16
H4076

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46114
Analytical Method : SVOA
Matrix : Soil
Sample wt/vol : 30.1 (g/mL): g
% Solids : 56.3
GC Column : ZB-GR ID : 0.25 (mm)
Extract Concentrated : (Y / N) Y
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N)
Purge Volume : (mL)
Cleanup Types : GPC
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

Contract : EPW14030
MA No. : SDG No.: H4002
Level : LOW
Lab Sample ID : H2834-16
Lab File ID : BM005392.D
Date Received : 05/04/2016
Date Extracted : 05/05/2016
Date Analyzed : 05/11/2016
Extract Volume : 500 (µL)
Extraction Type : SOXH
Injection Volume : 1.0 (µL)
pH : Dilution Factor : 1.0
Cleanup Factor : 2.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000057-10-3	n-Hexadecanoic acid	18.04	170	JN NJ
2	007390-81-0	Oxirane, hexadecyl-	20.76	150	JN
3	000638-66-4	Octadecanal	21.66	240	JN
4	000520-28-5	4H-1-Benzopyran-4-one, 5-hydroxy-7	21.8	130	JN
5	067860-04-2	Oxirane, heptadecyl-	23.79	430	JN
6	081803-09-0	Thieno[2,3-d]-1,3-thiaselenol-2-th	25.67	120	JN
7	086917-79-5	6-Isopropenyl-4,8a-dimethyl-4a,5,6	26.34	130	JN
8	023707-65-5	Anthracene, 9-(2-propenyl)-	27.45	490	JN
9	000116-04-1	.beta.-Humulene	27.98	590	JN
10	E966796	Total Alkanes	N/A	3800	

EPA-designated Registry Number.

jw 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18
H4102

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-18
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005454.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	~~U~~ UJ surr
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	~~U~~ UJ ccv
88-06-2	2,4,6-Trichlorophenol	5.0	U

MW 8/24/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18
H4102

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-18
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005454.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q	
95-95-4	2,4,5-Trichlorophenol	5.0	U	
92-52-4	1,1-Biphenyl	5.0	U	
91-58-7	2-Chloronaphthalene	5.0	U	
88-74-4	2-Nitroaniline	5.0	~~U~~ R	Surr
131-11-3	Dimethylphthalate	5.0	U	
606-20-2	2,6-Dinitrotoluene	5.0	U	
208-96-8	Acenaphthylene	5.0	U	
99-09-2	3-Nitroaniline	10	~~U~~ R	Surr
83-32-9	Acenaphthene	5.0	U	
51-28-5	2,4-Dinitrophenol	10	~~U~~ R	Surr
100-02-7	4-Nitrophenol	10	~~U~~ R	Surr
132-64-9	Dibenzofuran	5.0	U	
121-14-2	2,4-Dinitrotoluene	5.0	U	
84-66-2	Diethylphthalate	5.0	U	
86-73-7	Fluorene	5.0	U	
7005-72-3	4-Chlorophenyl-phenylether	5.0	U	
100-01-6	4-Nitroaniline	10	~~U~~ R	Surr
534-52-1	4,6-Dinitro-2-methylphenol	10	U	
86-30-6	N-Nitrosodiphenylamine	5.0	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U	
101-55-3	4-Bromophenyl-phenylether	5.0	U	
118-74-1	Hexachlorobenzene	5.0	U	
1912-24-9	Atrazine	10	U	
87-86-5	Pentachlorophenol	10	U	
85-01-8	Phenanthrene	5.0	U	

Lew 8/24/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18

H4102

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-18
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005454.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

NW 8/24/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19
H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 1000 (g/mL) : mL
Lab File ID : BM005455.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L, mg/L, µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	~~U~~ UJ Surr
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	~~U~~ UJ CCV
88-06-2	2,4,6-Trichlorophenol	5.0	U

NW 8/22/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19
H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 1000 (g/mL) : mL
Lab File ID : BM005455.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q	
95-95-4	2,4,5-Trichlorophenol	5.0	U	
92-52-4	1,1-Biphenyl	5.0	U	
91-58-7	2-Chloronaphthalene	5.0	U	
88-74-4	2-Nitroaniline	5.0	~~U~~ R	Surr
131-11-3	Dimethylphthalate	5.0	U	
606-20-2	2,6-Dinitrotoluene	5.0	U	
208-96-8	Acenaphthylene	5.0	U	
99-09-2	3-Nitroaniline	10	~~U~~ R	Surr
83-32-9	Acenaphthene	5.0	U	
51-28-5	2,4-Dinitrophenol	10	~~U~~ R	Surr
100-02-7	4-Nitrophenol	10	~~U~~ R	Surr
132-64-9	Dibenzofuran	5.0	U	
121-14-2	2,4-Dinitrotoluene	5.0	U	
84-66-2	Diethylphthalate	43		
86-73-7	Fluorene	5.0	U	
7005-72-3	4-Chlorophenyl-phenylether	5.0	U	
100-01-6	4-Nitroaniline	10	~~U~~ R	Surr
534-52-1	4,6-Dinitro-2-methylphenol	10	U	
86-30-6	N-Nitrosodiphenylamine	5.0	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U	
101-55-3	4-Bromophenyl-phenylether	5.0	U	
118-74-1	Hexachlorobenzene	5.0	U	
1912-24-9	Atrazine	10	U	
87-86-5	Pentachlorophenol	10	U	
85-01-8	Phenanthrene	5.0	U	

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19

H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005455.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20

H4117

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-20
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005456.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	Y UJ Surr
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	Y UJ CCV
88-06-2	2,4,6-Trichlorophenol	5.0	U

new 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20
H4117

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-20
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005456.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q	
95-95-4	2,4,5-Trichlorophenol	5.0	U	
92-52-4	1,1-Biphenyl	5.0	U	
91-58-7	2-Chloronaphthalene	5.0	U	
88-74-4	2-Nitroaniline	5.0	~~U~~ R	Surr
131-11-3	Dimethylphthalate	5.0	U	
606-20-2	2,6-Dinitrotoluene	5.0	U	
208-96-8	Acenaphthylene	5.0	U	
99-09-2	3-Nitroaniline	10	~~U~~ R	Surr
83-32-9	Acenaphthene	5.0	U	
51-28-5	2,4-Dinitrophenol	10	~~U~~ R	Surr
100-02-7	4-Nitrophenol	10	~~U~~ R	Surr
132-64-9	Dibenzofuran	5.0	U	
121-14-2	2,4-Dinitrotoluene	5.0	U	
84-66-2	Diethylphthalate	5.0	U	
86-73-7	Fluorene	5.0	U	
7005-72-3	4-Chlorophenyl-phenylether	5.0	U	
100-01-6	4-Nitroaniline	10	~~U~~ R	Surr
534-52-1	4,6-Dinitro-2-methylphenol	10	U	
86-30-6	N-Nitrosodiphenylamine	5.0	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U	
101-55-3	4-Bromophenyl-phenylether	5.0	U	
118-74-1	Hexachlorobenzene	5.0	U	
1912-24-9	Atrazine	10	U	
87-86-5	Pentachlorophenol	10	U	
85-01-8	Phenanthrene	5.0	U	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20
H4117

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-20
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005456.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21

H4118

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-21
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005457.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	~~U~~ UJ Surr
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	~~U~~ UJ CCV
88-06-2	2,4,6-Trichlorophenol	5.0	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21

H4118

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-21
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005457.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q	
95-95-4	2,4,5-Trichlorophenol	5.0	U	
92-52-4	1,1-Biphenyl	5.0	U	
91-58-7	2-Chloronaphthalene	5.0	U	
88-74-4	2-Nitroaniline	5.0	~~U~~ R	Sun
131-11-3	Dimethylphthalate	5.0	U	
606-20-2	2,6-Dinitrotoluene	5.0	U	
208-96-8	Acenaphthylene	5.0	U	
99-09-2	3-Nitroaniline	10	~~U~~ R	Sun
83-32-9	Acenaphthene	5.0	U	
51-28-5	2,4-Dinitrophenol	10	~~U~~ R	Sun
100-02-7	4-Nitrophenol	10	~~U~~ R	Sun
132-64-9	Dibenzofuran	5.0	U	
121-14-2	2,4-Dinitrotoluene	5.0	U	
84-66-2	Diethylphthalate	5.0	U	
86-73-7	Fluorene	5.0	U	
7005-72-3	4-Chlorophenyl-phenylether	5.0	U	
100-01-6	4-Nitroaniline	10	~~U~~ R	Sun
534-52-1	4,6-Dinitro-2-methylphenol	10	U	
86-30-6	N-Nitrosodiphenylamine	5.0	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U	
101-55-3	4-Bromophenyl-phenylether	5.0	U	
118-74-1	Hexachlorobenzene	5.0	U	
1912-24-9	Atrazine	10	U	
87-86-5	Pentachlorophenol	10	U	
85-01-8	Phenanthrene	5.0	U	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21

H4118

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-21
Sample wt/vol : 1000 (g/mL) : mL
Lab File ID : BM005457.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L, mg/L, µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

New 8/2/16

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
700 SOUTH 1600 EAST PCE PLUME, AOU-1: EAST SIDE SPRINGS, SALT LAKE CITY, UTAH

Client: EA Engineering, Science & Technology, Inc., Greenwood Village, Colorado
SDG: H4010
Laboratory: Chemtech Consulting Group, Mountainside, New Jersey
Site: 700 South 1600 East PCE Plume, AOU-1: East Side Springs, Salt Lake City, Utah
Date: August 7, 2016

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1*	A-TB-008	H4010-01	Water
2MS*	A-TB-008MS	H4010-02	Water
3MSD*	A-TB-008MSD	H4010-03	Water
4*	A-SW-009	H4010-04	Water
5*	A-SW-011	H4010-05	Water
6*	A-SW-013	H4010-06	Water
7	A-SW-021	H4010-07	Water
8*	A-SW-022	H4010-08	Water
9	A-SW-023	H4010-09	Water
9DL*	A-SW-023DL	H4010-09DL	Water
10MS	A-SW-023MS	H4010-10MS	Water
11MSD	A-SW-023MSD	H4010-11MSD	Water
12*	A-SW-030	H4010-12	Water
13*	A-SW-036	H4010-13	Water
14*	A-SW-039	H4010-14	Water
14DL*	A-SW-039DL	H4010-14DL	Water
16*	A-FB-003	H4010-16	Water
17	A-SW-007-D	H4010-17	Water
18*	A-SW-008-D	H4010-18	Water
19*	A-SW-006-D	H4010-19	Water
19DL*	A-SW-006-DDL	H4010-19DL	Water
20*	A-SW-001-D	H4010-20	Water
21*	A-TB-009	H4010-21	Water
22*	A-SW-001	H4010-22	Water
23*	A-SW-006	H4010-23	Water
23DL*	A-SW-006DL	H4010-23DL	Water
24	A-SW-007	H4010-24	Water
24RE*	A-SW-007RE	H4010-24RE	Water
25*	A-SW-008	H4010-25	Water

* - VOC only

A Stage 2B/4 validation was performed on the analytical data for seventeen water samples, one aqueous field blank sample and two aqueous trip blank samples collected February 22-26, 2016 by EA Engineering at the Veterans Administration site in Salt Lake City, Utah. The samples were

analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organic Analysis SOM02.3.

Specific method references are as follows:

Analysis	*Method References*
Trace VOCs	USEPA CLP SOM02.3
SVOCs	USEPA CLP SOM02.3

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Quality Assurance Project Plan (QAPP) 700 South 1600 East PCE Plume AOU-1: East Side Springs, Salt Lake City, Rev. 1, February 2016 and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Superfund Organic Methods Data Review," August 2014;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectrometry (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision
- System Performance
- Regional Quality Assurance and Quality Control
- Overall Assessment of Data

Data Usability Assessment

There were no rejections of data.

Overall the data are acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Volatile Organic Compounds (VOC)

Holding Times

- All samples were analyzed within 14 days for preserved water samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All percent relative standard deviation (%RSD) and mean relative response factor (RRF) criteria were met.

Continuing Calibration

- All percent difference (%D) and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC results are summarized below.

Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
A-TB-008	Chloroform	0.52	U	4, 5, 7, 14, 17, 18, 19, 23, 24, 24RE, 25
A-TB-009	None - ND	-	-	-
A-FB-003	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except for the following.

Sample ID	Surrogate	%R	Qualifier
18	1,1-Dichloroethene-d2	59%	UJ - Associated Compounds

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- LCS samples were not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #s 9, 14, 19 and 23 exhibited high concentrations of tetrachloroethene and were flagged (E) by the laboratory. The samples were reanalyzed at a 5X or 10X dilution and the dilution results for tetrachloroethene should be used for reporting purposes.
- EDS Sample ID #24 was reanalyzed due to carryover and the reanalysis results should be used for reporting purposes.

Tentatively Identified Compounds (TICs)

- All TICs were qualified estimated (J) for unknown compounds and (NJ) for tentatively identified compounds.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Compound	A-SW-001 ug/L	A-SW-001-D ug/L	RPD	Qualifier
Acetone	5.8	5.0U	NC	None - All <5X RL
Carbon Disulfide	0.070	0.50U	NC	
Toluene	0.10	0.50U	NC	
Tetrachloroethene	0.13	0.50U	NC	

Compound	A-SW-006 ug/L	A-SW-006-D ug/L	RPD	Qualifier
cis-1,2-Dichloroethene	0.58	0.55	5%	None
1,1,1-Trichloroethane	0.95	0.95	0%	
Trichloroethene	0.96	0.96	0%	
Bromodichloromethane	0.29	0.28	4%	
Tetrachloroethene	74	80	8%	

Compound	A-SW-007 ug/L	A-SW-007-D ug/L	RPD	Qualifier
Tetrachloroethene	2.9	2.8	4%	None

Compound	A-SW-008 ug/L	A-SW-008-D ug/L	RPD	Qualifier
1,1,1-Trichloroethane	0.21	0.19	10%	None
Trichloroethene	0.13	0.13	0%	
Tetrachloroethene	7.5	6.7	11%	

System Performance

- Instrument sensitivity and chromatographic performance were acceptable. Degradation of the system performance was not found. Instrument output and response data were reviewed and found to be acceptable.

Regional Quality Assurance and Quality Control

- All criteria were met. PE samples were not included with this project. Field duplicate sample results are summarized above.

Overall Assessment of Data

- Compound identification and quantitation criteria were met. Calculations and transcription data were verified. No action was required.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 7 days for water samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC samples were not collected.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except for the following.

Sample ID	Surrogate	%R	Qualifier
7	1,4-Dioxane-d8	15%	UJ - Associated Compounds
9	1,4-Dioxane-d8	16%	UJ - Associated Compounds
17	1,4-Dioxane-d8	14%	UJ - Associated Compounds
24	1,4-Dioxane-d8	15%	UJ - Associated Compounds

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- LCS samples were not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- All criteria were met.

Tentatively Identified Compounds (TICs)

- All TICs were qualified estimated (J) for unknown compounds and (NJ) for tentatively identified compounds.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

System Performance

- Instrument sensitivity and chromatographic performance were acceptable. Degradation of the system performance was not found. Instrument output and response data were reviewed and found to be acceptable.

Regional Quality Assurance and Quality Control

- All criteria were met. PE samples were not included with this project. Field duplicate sample results are summarized above.

Overall Assessment of Data

- Compound identification and quantitation criteria were met. Calculations and transcription data were verified. No action was required.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/8/16

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limits is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

Reason Code	Definition
HT	Holding Time
MB	Method Blank
SURR	Surrogate
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
RPD	Relative Percent Difference
CB/CCB	Calibration Blank or Continuing Calibration Blank
CCV	Calibration Verification
SD	ICP Serial Dilution
TB	Trip Blank
EB	Equipment Blank
FB	Field Blank
FD	Field Duplicate

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4010

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049260.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.52	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 1
H4010

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049260.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. H4010

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049260.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

Rev 8/2016

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4010

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46114
Analytical Method : Trace VOA
Matrix : Water
Sample wt/vol : 25.0 (g/mL): mL
% Solids :
GC Column : RXI-624 ID : 0.25 (mm)
Extract Concentrated : (Y / N)
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N) N
Purge Volume : 25 (mL)
Cleanup Types :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Contract : EPW14030
MA No. : SDG No.: H4010
Level :
Lab Sample ID : H2874-01
Lab File ID : VI049260.D
Date Received : 05/05/2016
Date Extracted :
Date Analyzed : 05/05/2016
Extract Volume : (µL)
Extraction Type : PT
Injection Volume : (µL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.23	1.2	JN NJ
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H4099

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049279.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.11	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.74	4 TB
71-55-6	1,1,1-Trichloroethane	0.29	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.88	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H4099

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049279.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.11	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	19	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H4099

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049279.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H4101

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049265.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.60	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.4	4 TB
71-55-6	1,1,1-Trichloroethane	0.34	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.61	

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H4101

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049265.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	20	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5

H4101

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049265.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

lcw 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 6
H4103

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049266.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	9.8	
75-15-0	Carbon disulfide	0.19	J
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.37	J

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 6
H4103

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049266.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.71	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.8	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.15	J
95-47-6	o-Xylene	0.10	J
179601-23-1	m,p-Xylene	0.22	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 6

H4103

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049266.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 6

H4103

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049266.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	2.57	0.57	~~J~~ J
2	E966796	Total Alkanes	N/A	0.72	J

EPA-designated Registry Number.

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7

H4111

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049267.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.44	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.55	u TB
71-55-6	1,1,1-Trichloroethane	0.090	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.62	

NJ 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7

H4111

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049267.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	6.5	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7

H4111

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049267.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 8
H4112

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049268.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.13	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.47	J

NW 8/12/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 8
H4112

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049268.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.9	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 8

H4112

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-08
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049268.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9
H4113

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049261.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.15	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.8	
71-55-6	1,1,1-Trichloroethane	0.55	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.46	J

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9
H4113

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049261.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	22 25	B
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

NW 8/12/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9
H4113

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049261.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9DL
H4113DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-09DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049285.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Use orig. results
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	3.0	D
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 90L
H4113DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-09DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049285.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Vol original reruns

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	25	~~U~~
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9DL
H4113DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-09DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049285.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Use original results

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 12
H4120

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049269.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.090	J

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 12

H4120

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049269.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 12

H4120

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049269.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 13
H4126

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049282.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.13	J
156-59-2	cis-1,2-Dichloroethene	0.69	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	2.3	

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 13

H4126

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049282.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.2	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 13

H4126

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049282.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

8/12/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 14
H4129

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-14
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049283.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.31	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.2	U TB
71-55-6	1,1,1-Trichloroethane	0.39	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 14
H4129

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-14
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049283.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.17	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	~~22~~ 31	~~E~~
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

dw 8/12/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 14
H4129

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-14
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049283.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 140L

H4129DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-14DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049284.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

use original results

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 14DL

H4129DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-14DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049284.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Use original results
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	31	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 14DL

H4129DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-14DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049284.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Use original results

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

new 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 16
H4012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049295.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 16

H4012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049295.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 16

H4012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049295.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

MW 8/2/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 16

H4012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049295.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.21	0.45	JN NJ
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 17
H4013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049296.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.3	U TB
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 17
H4013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049296.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.8	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

Nov 8 2016

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 17

H4013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049296.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

New 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18

H4016

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049297.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q	
75-71-8	Dichlorodifluoromethane	0.50	U	
74-87-3	Chloromethane	0.50	U	
75-01-4	Vinyl chloride	0.50	U	
74-83-9	Bromomethane	0.50	U	
75-00-3	Chloroethane	0.50	U	
75-69-4	Trichlorofluoromethane	0.50	U	
75-35-4	1,1-Dichloroethene	0.50	~~U~~ UJ	Sum
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	0.50	U	
79-20-9	Methyl Acetate	0.50	U	
75-09-2	Methylene chloride	0.50	U	
156-60-5	trans-1,2-Dichloroethene	0.50	~~U~~ UJ	Sum
1634-04-4	Methyl tert-butyl Ether	0.50	U	
75-34-3	1,1-Dichloroethane	0.50	U	
156-59-2	cis-1,2-Dichloroethene	0.50	~~U~~ UJ	Sum
78-93-3	2-Butanone	5.0	U	
74-97-5	Bromochloromethane	0.50	U	
67-66-3	Chloroform	1.7	U	TB
71-55-6	1,1,1-Trichloroethane	0.19	J	
110-82-7	Cyclohexane	0.50	U	
56-23-5	Carbon tetrachloride	0.50	U	
71-43-2	Benzene	0.50	U	
107-06-2	1,2-Dichloroethane	0.50	U	
79-01-6	Trichloroethene	0.13	J	

New 8/26/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18

H4016

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049297.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	6.7	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

8/12/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18

H4016

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049297.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19
H4018

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049298.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.55	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.6	U TB
71-55-6	1,1,1-Trichloroethane	0.95	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.96	

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19
H4018

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049298.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.28	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	~~66~~ 80	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19

H4018

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049298.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19DL
H4018DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049343.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

use original percents

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	50	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U

MW 8/21/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19DL
H4018DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049343.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

use original results

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	80	B
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-trichlorobenzene	5.0	U

8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19DL

H4018DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049343.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

use original results

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	5.0	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20
H4019

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049294.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20
H4019

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049294.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20

H4019

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049294.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21
H4020

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049293.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21
H4020

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049293.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21

H4020

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049293.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

MW 8/2/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 4

H4020

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049293.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.21	0.41	~~JN~~ NJ
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

Jen 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 22

H4091

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-22
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049299.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.8	
75-15-0	Carbon disulfide	0.070	J
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 22
H4091

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-22
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049299.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.10	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.13	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 22

H4091

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-22
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049299.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 8/2/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 22
H4091

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46114
Analytical Method : Trace VOA
Matrix : Water
Sample wt/vol : 25.0 (g/mL): mL
% Solids :
GC Column : RXI-624 ID : 0.25 (mm)
Extract Concentrated : (Y / N)
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N) N
Purge Volume : 25 (mL)
Cleanup Types :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Contract : EPW14030
MA No. : SDG No.: H4010
Level :
Lab Sample ID : H2874-22
Lab File ID : VI049299.D
Date Received : 05/06/2016
Date Extracted :
Date Analyzed : 05/09/2016
Extract Volume : (µL)
Extraction Type : PT
Injection Volume : (µL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000066-25-1	Hexanal	10.59	1.5	~~JN~~ NJ
2	E966796	Total Alkanes	N/A	0.38	NJ

EPA-designated Registry Number.

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 23
H4096

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049300.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.58	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.3	U TB
71-55-6	1,1,1-Trichloroethane	0.95	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.96	

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 23
H4096

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049300.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.29	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	~~66~~ 74	~~E~~
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 23

H4096

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049300.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 8/24/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 24

H4096

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46114
Analytical Method : Trace VOA
Matrix : Water
Sample wt/vol : 25.0 (g/mL): mL
% Solids :
GC Column : RXI-624 ID : 0.25 (mm)
Extract Concentrated : (Y / N)
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N) N
Purge Volume : 25 (mL)
Cleanup Types :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Contract : EPW14030
MA No. : SDG No.: H4010
Level :
Lab Sample ID : H2874-23
Lab File ID : VI049300.D
Date Received : 05/06/2016
Date Extracted :
Date Analyzed : 05/09/2016
Extract Volume : (µL)
Extraction Type : PT
Injection Volume : (µL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	9.35	1.7	J
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 230L
H4096DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049342.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

use original results

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	50	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 23DL

H4096DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23DL
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049342.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	74	D
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-trichlorobenzene	5.0	U

Use soil 0.1% results

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 230L

H4096DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049342.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
use original results
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	5.0	U

MW 8/21/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4096DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049342.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 10.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

Use 0.5 mL results

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	5.74	4.1	J
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 24
H4097

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-24
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049301.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

use reanalysis results

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.0	U TB
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 24
H4097

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-24
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049301.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Use reanalysis results
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.7	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 24

H4097

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-24
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049301.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

use reanalysis results

MS 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 24RE

H4097RE

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-24RE
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049335.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.3	U TB
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 24RE

H4097RE

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-24RE
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049335.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.9	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

MS 8/21/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 24RE

H4097RE

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-24RE
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049335.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

JW 8/21/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 25
H4098

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-25
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049302.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.9	4 TB
71-55-6	1,1,1-Trichloroethane	0.21	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.13	J

MS 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 25

H4098

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-25
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049302.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	7.5	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 25

H4098

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-25
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049302.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7

H4111

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-07
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005429.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	~~U~~ UJ
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

Sum

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7
H4111

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-07
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005429.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7

H4111

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-07
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005429.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

8/12/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9
H4113

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-09
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005430.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	~~U~~ UJ
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

Sum

MW 8/22/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9
H4113

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-09
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005430.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9
H4113

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-09
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005430.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

8/24/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 17

H4013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-17
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005433.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	~~U~~ UJ
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

Sum

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 17
H4013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-17
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005433.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 17

H4013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-17
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005433.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

MW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 24
H4097

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-24
Sample wt/vol : 1000 (g/mL) : mL
Lab File ID : BM005434.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	~~J~~ UJ
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

Sum

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 24
H4097

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-24
Sample wt/vol : 1000 (g/mL) : mL
Lab File ID : BM005434.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

NW 8/2/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 24
H4097

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-24
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005434.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
700 SOUTH 1600 EAST PCE PLUME, AOU-1: EAST SIDE SPRINGS, SALT LAKE CITY, UTAH

Client: EA Engineering, Science & Technology, Inc., Greenwood Village, Colorado
SDG: H4023
Laboratory: Chemtech Consulting Group, Mountainside, New Jersey
Site: 700 South 1600 East PCE Plume, AOU-1: East Side Springs, Salt Lake City, Utah
Date: July 31, 2016

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	A-TB-011	H3056-01	Water
2	A-FB-004	H3056-02	Water
2DL	A-FB-004DL	H3056-02DL	Water
3	A-SW-002	H3056-03	Water
4	A-SW-003	H3056-04	Water
5	A-SW-005	H3056-05	Water
6	A-SW-010	H3056-06	Water
7	A-SW-017	H3056-07	Water
8MS	A-SW-017MS	H3056-08MS	Water
9MSD	A-SW-017MSD	H3056-09MSD	Water
10	A-SW-024	H3056-10	Water
11	A-SW-029	H3056-11	Water
11DL	A-SW-029DL	H3056-11DL	Water
12	A-SW-038	H3056-12	Water

A Stage 2B/4 validation was performed on the analytical data for eight water, one aqueous field blank sample, and one aqueous trip blank sample collected May 9-11, 2016 by EA Engineering at the Veterans Administration site in Salt Lake City, Utah. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organic Analysis SOM02.3.

Specific method references are as follows:

Analysis	*Method References*
Trace VOCs	USEPA CLP SOM02.3

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Quality Assurance Project Plan (QAPP) 700 South 1600 East PCE Plume AOU-1: East Side Springs, Salt Lake City, Rev. 1, February 2016 and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Superfund Organic Methods Data Review," August 2014;

- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectrometry (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision
- System Performance
- Regional Quality Assurance and Quality Control
- Overall Assessment of Data

Data Usability Assessment

There were no rejections of data.

Overall the data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Volatile Organic Compounds (VOC)

Holding Times

- All samples were analyzed within 14 days for preserved water samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All percent relative standard deviation (%RSD) and mean relative response factor (RRF) criteria were met.

Continuing Calibration

- All percent difference (%D) and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC results are summarized below.

Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
A-TB-011	Chloroform	0.93	None	See FB
A-FB-004	Chloroform	21	U	10, 11, 12
	Bromodichloromethane	3.8	U	10
	Dibromochloromethane	0.75	U	10

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except for the following.

Sample ID	Surrogate	%R	Qualifier
2	2-Butanone-d5	133%	None - All Associated ND
	Chloroform-d	131%	J+ - Positive Results
3	2-Butanone-d5	131%	None - All ND
4	2-Butanone-d5	131%	None - All ND

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- LCS samples were not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #2 exhibited a high concentration of chloroform and was flagged (E) by the laboratory. The sample was reanalyzed at a 5X dilution and the dilution result for chloroform should be used for reporting purposes.
- EDS Sample ID #11 exhibited a high concentration of tetrachloroethene and was flagged (E) by the laboratoty. The sample was reanalyzed at a 5X dilution and the dilution result for tetrachloroethene should be used for reporting purposes.

Tentatively Identified Compounds (TICs)

- All TICs were qualified estimated (J) for unknown compounds and (NJ) for tentatively identified compounds.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

System Performance

- Instrument sensitivity and chromatographic performance were acceptable. Degradation of the system performance was not found. Instrument output and response data were reviewed and found to be acceptable.

Regional Quality Assurance and Quality Control

- All criteria were met. PE samples were not included with this project.

Overall Assessment of Data

- Compound identification and quantitation criteria were met. Calculations and transcription data were verified. No action was required.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/1/16

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limits is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

Reason Code	Definition
HT	Holding Time
MB	Method Blank
SURR	Surrogate
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
RPD	Relative Percent Difference
CB/CCB	Calibration Blank or Continuing Calibration Blank
CCV	Calibration Verification
SD	ICP Serial Dilution
TB	Trip Blank
EB	Equipment Blank
FB	Field Blank
FD	Field Duplicate

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4023

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049354.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.93	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

MW 7/31/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 1
H4023

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-01
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049354.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

NW 7/3/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 1
H4023

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049354.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 7/31/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 1

H4023

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-01
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049354.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.2	0.45	JN NJ
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

MW 7/31/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 2
H4024

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049355.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	~~24~~ 21	~~B~~
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 2
H4024

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049355.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q	
108-87-2	Methylcyclohexane	0.50	U	
78-87-5	1,2-Dichloropropane	0.50	U	
75-27-4	Bromodichloromethane	3.8	J+	surr
10061-01-5	cis-1,3-Dichloropropene	0.50	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	0.50	U	
10061-02-6	trans-1,3-Dichloropropene	0.50	U	
79-00-5	1,1,2-Trichloroethane	0.50	U	
127-18-4	Tetrachloroethene	0.50	U	
591-78-6	2-Hexanone	5.0	U	
124-48-1	Dibromochloromethane	0.75	J+	surr
106-93-4	1,2-Dibromoethane	0.50	U	
108-90-7	Chlorobenzene	0.50	U	
100-41-4	Ethylbenzene	0.50	U	
95-47-6	o-Xylene	0.50	U	
179601-23-1	m,p-Xylene	0.50	U	
100-42-5	Styrene	0.50	U	
75-25-2	Bromoform	0.50	U	
98-82-8	Isopropylbenzene	0.50	U	
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	
541-73-1	1,3-Dichlorobenzene	0.50	U	
106-46-7	1,4-Dichlorobenzene	0.50	U	
95-50-1	1,2-Dichlorobenzene	0.50	U	
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U	
120-82-1	1,2,4-trichlorobenzene	0.50	U	

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 2
H4024

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049355.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 2

H4024

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46114
Analytical Method : Trace VOA
Matrix : Water
Sample wt/vol : 25.0 (g/mL): mL
% Solids :
GC Column : RXI-624 ID : 0.25 (mm)
Extract Concentrated : (Y / N)
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N) N
Purge Volume : 25 (mL)
Cleanup Types :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Contract : EPW14030
MA No. : SDG No.: H4023
Level :
Lab Sample ID : H3056-02
Lab File ID : VI049355.D
Date Received : 05/12/2016
Date Extracted :
Date Analyzed : 05/12/2016
Extract Volume : (µL)
Extraction Type : PT
Injection Volume : (µL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	018952-41-5	Formamide, N-methylthio	5.78	0.34	~~JN~~ NJ
2	000109-99-9	Furan, tetrahydro-	6.22	0.35	~~JN~~ NJ
3	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 2DL
H4024DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019153.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016 use original
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	21	D
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 2DL
H4024DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019153.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016 use original
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	3.1	D
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	2.5	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	0.55	J
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 2DL

H4024DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019153.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Use original
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

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FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 20L

H4024DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019153.D
% Solids :
Date Received : 05/12/2016 use original
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/13/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 5.0
Concentration Units (µg/L, mg/L, µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

lew 7/3/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 3
H4092

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-03
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049356.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 3
H4092

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-03
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049356.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 3

H4092

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-03
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049356.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 7/31/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 3

H4092

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-03
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049356.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	010032-05-0	Heptane, 1,1-dimethoxy-	5.77	1.1	~~JN~~ NJ
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H4093

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-04
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049357.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H4093

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-04
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049357.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4

H4093

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049357.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 4

H4093

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46114
Analytical Method : Trace VOA
Matrix : Water
Sample wt/vol : 25.0 (g/mL) : mL
% Solids :
GC Column : RXI-624 ID : 0.25 (mm)
Extract Concentrated : (Y / N)
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N) N
Purge Volume : 25 (mL)
Cleanup Types :
Concentration Units (µg/L,mg/L,µg/kg) : µg/L

Contract : EPW14030
MA No. : SDG No.: H4023
Level :
Lab Sample ID : H3056-04
Lab File ID : VI049357.D
Date Received : 05/12/2016
Date Extracted :
Date Analyzed : 05/12/2016
Extract Volume : (µL)
Extraction Type : PT
Injection Volume : (µL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H4095

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049358.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.13	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H4095

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049358.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.7	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.38	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.15	J
95-47-6	o-Xylene	0.24	J
179601-23-1	m,p-Xylene	0.74	
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5

H4095

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049358.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 5

H4095

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46114
Analytical Method : Trace VOA
Matrix : Water
Sample wt/vol : 25.0 (g/mL) : mL
% Solids :
GC Column : RXI-624 ID : 0.25 (mm)
Extract Concentrated : (Y / N)
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N) N
Purge Volume : 25 (mL)
Cleanup Types :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Contract : EPW14030
MA No. : SDG No.: H4023
Level :
Lab Sample ID : H3056-05
Lab File ID : VI049358.D
Date Received : 05/12/2016
Date Extracted :
Date Analyzed : 05/12/2016
Extract Volume : (µL)
Extraction Type : PT
Injection Volume : (µL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

MW 7/31/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 6
H4100

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049359.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.11	J
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 6
H4100

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049359.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

dlw 7/13/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 6
H4100

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-06
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049359.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

MW 7/31/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 6

H4100

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049359.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	018952-41-5	Formamide, N-methylthio	5.75	0.55	~~JN~~ NJ
2	100025-44-3	5H-Naphtho[2,3-c]carbazole, 5-meth	12.38	5.6	~~JN~~ NJ
3	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

NJ 7/31/17

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7

H4107

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114 MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019143.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7
H4107

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019143.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

NW 7/3/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 7

H4107

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019143.D
% Solids :
Date Received : 05/12/2016
GC Column : RX1-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

AW 7/3/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 7

H4107

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019143.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

7/31/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 10
H4114

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019140.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.2	
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	16	U FB
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 10
H4114

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019140.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	2.6	U FB
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.38	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.52	U FB
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.21	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

MW 7/31/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 10
H4114

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019140.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

NW 7/31/16

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FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4114

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019140.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

New 713114

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 11
H4119

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019141.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.88	U FB
71-55-6	1,1,1-Trichloroethane	0.34	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.28	J

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 11
H4119

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019141.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	28 26	B
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4119

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019141.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

JW 7/31/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 11

H4119

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019141.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

NW 7/31/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 110L
H4119DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11DL
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VR019154.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016 use original results
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

MW 7/31/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 11DL

H4119DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019154.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

use org. val results

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	26	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

NW 7/31/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 11DL

H4119DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030

Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023

Analytical Method : Trace VOA
Level :

Matrix : Water
Lab Sample ID : H3056-11DL

Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VR019154.D

% Solids :
Date Received : 05/12/2016

GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :

GC Column : ID : (mm)
Date Analyzed : 05/13/2016

Extract Concentrated : (Y / N)
Extract Volume : (µL)

Soil Aliquot (VOA) : (µL)
Extraction Type : PT

Heated Purge : (Y / N) N
Injection Volume : (µL)

Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0

Cleanup Types :
Cleanup Factor :

Concentration Units (µg/L, mg/L, µg/kg) : µg/L

use original results

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

pw 7/31/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 11DL

H4119DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019154.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/13/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 5.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

Use original results

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

NW 7/31/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 12
H4128

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019150.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.79	U FB
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.22	J

New 7/31/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 12
H4128

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019150.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.22	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	6.0	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.10	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

NW 7/31/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 12

H4128

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-12
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VR019150.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

lw 7/3.11p

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 12

H4128

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019150.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/13/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

MW 713,116

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
700 SOUTH 1600 EAST PCE PLUME, AOU-1: EAST SIDE SPRINGS, SALT LAKE CITY, UTAH

Client: EA Engineering, Science & Technology, Inc., Greenwood Village, Colorado
SDG: H4104
Laboratory: Chemtech Consulting Group, Mountainside, New Jersey
Site: 700 South 1600 East PCE Plume, AOU-1: East Side Springs, Salt Lake City, Utah
Date: August 8, 2016

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1*	A-SW-014	H2943-01	Water
2	A-SW-015	H2943-02	Water
3	A-SW-016	H2943-03	Water
4*	A-SW-019	H2943-04	Water
5*	A-SW-035	H2943-05	Water
5DL*	A-SW-035DL	H2943-05DL	Water
6*	A-SW-044	H2943-06	Water
7MS*	A-SW-044MS	H2943-07	Water
8MSD*	A-SW-044MSD	H2943-08	Water
9	A-SW-047	H2943-09	Water
10*	A-SW-048	H2943-10	Water
12*	A-SW-018-D	H2943-12	Water
13*	A-TB-010	H2943-13	Water
14*	A-SW-018	H2943-14	Water
15*	A-SW-020	H2943-15	Water
16*	A-SW-025	H2943-16	Water
17*	A-SW-032	H2943-17	Water
18*	A-SW-037	H2943-18	Water
19*	A-SW-040	H2943-19	Water
19DL*	A-SW-040DL	H2943-19DL	Water
20*	A-SW-041	H2943-20	Water
21*	A-SW-045	H2943-21	Water
22*	A-SW-046	H2943-22	Water
23*	A-SW-049	H2943-23	Water

* - VOC only

A Stage 2B/4 validation was performed on the analytical data for nineteen water samples and one aqueous trip blank sample collected May 4-6, 2016 by EA Engineering at the Veterans Administration site in Salt Lake City, Utah. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organic Analysis SOM02.3.

Specific method references are as follows:

Analysis	*Method References*
Trace VOCs	USEPA CLP SOM02.3
SVOCs	USEPA CLP SOM02.3

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Quality Assurance Project Plan (QAPP) 700 South 1600 East PCE Plume AOU-1: East Side Springs, Salt Lake City, Rev. 1, February 2016 and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Superfund Organic Methods Data Review," August 2014;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectrometry (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision
- System Performance
- Regional Quality Assurance and Quality Control
- Overall Assessment of Data

Data Usability Assessment

There were no rejections of data.

Overall the data are acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Volatile Organic Compounds (VOC)

Holding Times

- All samples were analyzed within 14 days for preserved water samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All percent relative standard deviation (%RSD) and mean relative response factor (RRF) criteria were met.

Continuing Calibration

- All percent difference (%D) and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC results are summarized below.

Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
A-TB-010	None - ND	-	-	

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except for the following.

Sample ID	Surrogate	%R	Qualifier
12	1,1-Dichloroethene-d2	58%	J+/UJ - Associated Compounds
13	1,1-Dichloroethene-d2	59%	UJ - Associated Compounds
19DL	1,1-Dichloroethene-d2	54%	None - 5X Dilution

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- LCS samples were not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #s 5 and 9 exhibited high concentrations of tetrachloroethene and were flagged (E) by the laboratory. The samples were reanalyzed at a 10X and 5X dilution respectively, and the dilution results for tetrachloroethene should be used for reporting purposes.

Tentatively Identified Compounds (TICs)

- All TICs were qualified estimated (J) for unknown compounds and (NJ) for tentatively identified compounds.

Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision was acceptable.

Compound	A-SW-018-D ug/L	A-SW-018 ug/L	RPD	Qualifier
cis-,2-Dichloroethene	0.31	0.35	12%	None
Chloroform	1.5	1.8	18%	
1,1,1-Trichloroetane	0.25	0.30	18%	
Trichloroethene	0.41	0.43	5%	
Bromodichloromethane	0.10	0.090	11%	
Tetrachloroethene	15	17	13%	

System Performance

- Instrument sensitivity and chromatographic performance were acceptable. Degradation of the system performance was not found. Instrument output and response data were reviewed and found to be acceptable.

Regional Quality Assurance and Quality Control

- All criteria were met. PE samples were not included with this project. Field duplicate sample results are summarized above.

Overall Assessment of Data

- Compound identification and quantitation criteria were met. Calculations and transcription data were verified. No action was required.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 7 days for water samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met except for the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
05/11/16	Butylbenzylphthalate	30.7%	UJ	2

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC samples were not collected.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except for the following.

Sample ID	Surrogate	%R	Qualifier
2	1,4-Dioxane-d8	20%	UJ - Associated Compounds
3	1,4-Dioxane-d8	16%	UJ - Associated Compounds
9	1,4-Dioxane-d8	20%	UJ - Associated Compounds

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- LCS samples were not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- All criteria were met.

Tentatively Identified Compounds (TICs)

- All TICs were qualified estimated (J) for unknown compounds and (NJ) for tentatively identified compounds.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

System Performance

- Instrument sensitivity and chromatographic performance were acceptable. Degradation of the system performance was not found. Instrument output and response data were reviewed and found to be acceptable.

Regional Quality Assurance and Quality Control

- All criteria were met. PE samples were not included with this project.

Overall Assessment of Data

- Compound identification and quantitation criteria were met. Calculations and transcription data were verified. No action was required.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/8/16

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limits is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

Reason Code	Definition
HT	Holding Time
MB	Method Blank
SURR	Surrogate
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
RPD	Relative Percent Difference
CB/CCB	Calibration Blank or Continuing Calibration Blank
CCV	Calibration Verification
SD	ICP Serial Dilution
TB	Trip Blank
EB	Equipment Blank
FB	Field Blank
FD	Field Duplicate

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. H4104

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049346.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.9	
71-55-6	1,1,1-Trichloroethane	0.23	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.53	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 1
H4104

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049346.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	18	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

5/11 8/8114

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4104

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049346.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

8/8/16

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 1

H4104

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-01
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049346.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000067-63-0	Isopropyl Alcohol	3.17	0.30	JN NJ
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 2
H4105

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-02
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049329.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.18	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.32	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 2

H4105

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049329.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	14	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 2

H4105

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049329.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 3
H4106

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-03
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049330.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	6.3	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 3
H4106

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-03
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049330.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.68	
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 3
H4106

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-03
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049330.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

MW 8/8/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H4109

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049336.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	3.0	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H4109

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049336.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.18	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H4109

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049336.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5
H4125

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049344.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.54	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	3.3	
71-55-6	1,1,1-Trichloroethane	1.1	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.23	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.67	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. S
H4125

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049344.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.27	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.29	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	77 82	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.10	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5

H4125

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049344.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 5

H4125

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049344.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000075-68-3	Ethane, 1-chloro-1,1-difluoro-	1.57	0.27	~~JN~~ NJ
2	000066-25-1	Hexanal	10.58	0.64	~~JN~~ NJ
3	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 5DL
H4125DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049341.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Use orig. Soil results
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	50	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. SDL
H4125DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049341.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Use original results
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	82	~~U~~
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-trichlorobenzene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. SDL

H4125DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049341.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Use original results
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. b
H4134

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049326.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 6
H4134

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049326.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.2	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. b
H4134

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049326.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 4
H4137

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049337.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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TARGET ANALYTE LIST

EPA SAMPLE NO. 9

H4137

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049337.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9
H4137

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049337.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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TARGET ANALYTE LIST

EPA SAMPLE NO. 10
H4138

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049338.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.3	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 10
H4138

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049338.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.11	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 10
H4138

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049338.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO 12
H4021

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049305.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q	
75-71-8	Dichlorodifluoromethane	0.50	U	
74-87-3	Chloromethane	0.50	U	
75-01-4	Vinyl chloride	0.50	U	
74-83-9	Bromomethane	0.50	U	
75-00-3	Chloroethane	0.50	U	
75-69-4	Trichlorofluoromethane	0.50	U	
75-35-4	1,1-Dichloroethene	0.50	~~U~~ UJ	Sum
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	0.50	U	
79-20-9	Methyl Acetate	0.50	U	
75-09-2	Methylene chloride	0.50	U	
156-60-5	trans-1,2-Dichloroethene	0.50	~~U~~ UJ	Sum
1634-04-4	Methyl tert-butyl Ether	0.50	U	
75-34-3	1,1-Dichloroethane	0.50	U	
156-59-2	cis-1,2-Dichloroethene	0.31	~~J~~ J+	Sum
78-93-3	2-Butanone	5.0	U	
74-97-5	Bromochloromethane	0.50	U	
67-66-3	Chloroform	1.5		
71-55-6	1,1,1-Trichloroethane	0.25	J	
110-82-7	Cyclohexane	0.50	U	
56-23-5	Carbon tetrachloride	0.50	U	
71-43-2	Benzene	0.50	U	
107-06-2	1,2-Dichloroethane	0.50	U	
79-01-6	Trichloroethene	0.41	J	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO 12
H4021

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049305.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.10	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	15	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 12

H4021

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049305.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 12

H4021

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-12
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049305.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg) : µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	9.35	1.7	J
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 13
H4022

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049306.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q	
75-71-8	Dichlorodifluoromethane	0.50	U	
74-87-3	Chloromethane	0.50	U	
75-01-4	Vinyl chloride	0.50	U	
74-83-9	Bromomethane	0.50	U	
75-00-3	Chloroethane	0.50	U	
75-69-4	Trichlorofluoromethane	0.50	U	
75-35-4	1,1-Dichloroethene	0.50	~~U~~ UJ	Sum
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	0.50	U	
79-20-9	Methyl Acetate	0.50	U	
75-09-2	Methylene chloride	0.50	U	
156-60-5	trans-1,2-Dichloroethene	0.50	~~U~~ UJ	Sum
1634-04-4	Methyl tert-butyl Ether	0.50	U	
75-34-3	1,1-Dichloroethane	0.50	U	
156-59-2	cis-1,2-Dichloroethene	0.50	~~U~~ UJ	Sum
78-93-3	2-Butanone	5.0	U	
74-97-5	Bromochloromethane	0.50	U	
67-66-3	Chloroform	0.50	U	
71-55-6	1,1,1-Trichloroethane	0.50	U	
110-82-7	Cyclohexane	0.50	U	
56-23-5	Carbon tetrachloride	0.50	U	
71-43-2	Benzene	0.50	U	
107-06-2	1,2-Dichloroethane	0.50	U	
79-01-6	Trichloroethene	0.50	U	

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 13

H4022

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049306.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 13
H4022

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-13
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049306.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg) : µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 13
H4022

Lab Name : Chemtech Consulting Group
Lab Code: CHM Case No.: 46114
Analytical Method : Trace VOA
Matrix : Water
Sample wt/vol : 25.0 (g/mL): mL
% Solids :
GC Column : RXI-624 ID : 0.25 (mm)
Extract Concentrated : (Y / N)
Soil Aliquot (VOA) : (µL)
Heated Purge : (Y / N) N
Purge Volume : 25 (mL)
Cleanup Types :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

Contract : EPW14030
MA No. : SDG No.: H4104
Level :
Lab Sample ID : H2943-13
Lab File ID : VI049306.D
Date Received : 05/07/2016
Date Extracted :
Date Analyzed : 05/09/2016
Extract Volume : (µL)
Extraction Type : PT
Injection Volume : (µL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.2	0.43	~~JN~~ NJ
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 14
H4108

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-14
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049307.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.35	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.8	
71-55-6	1,1,1-Trichloroethane	0.30	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.43	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 14
H4108

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-14
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049307.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.090	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	17	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 14
H4108

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-14
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049307.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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TARGET ANALYTE LIST

EPA SAMPLE NO. 15
H4110

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049308.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.60	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 15
H4110

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049308.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.11	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.23	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 15

H4110

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049308.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1A-OR
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TARGET ANALYTE LIST

EPA SAMPLE NO. 1b
H4115

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049309.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	3.3	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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TARGET ANALYTE LIST

EPA SAMPLE NO. 16
H4115

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049309.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.4	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 1p
H4115

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049309.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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TARGET ANALYTE LIST

EPA SAMPLE NO. 17

H4122

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049310.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.2	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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TARGET ANALYTE LIST

EPA SAMPLE NO. 17

H4122

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049310.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.36	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.46	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
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TARGET ANALYTE LIST

EPA SAMPLE NO. 17
H4122

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049310.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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EPA SAMPLE NO. 18
H4127

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049311.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.24	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.6	
71-55-6	1,1,1-Trichloroethane	0.22	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.39	J

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FORM 1A-OR
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TARGET ANALYTE LIST

EPA SAMPLE NO. 18

H4127

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-18
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049311.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.25	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	15	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 18

H4127

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049311.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

Mw 8/8/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19
H4130

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-19
Sample wt/vol : 25.0 (g/mL) : mL
Lab File ID : VI049312.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	4.2	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.18	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.0	
71-55-6	1,1,1-Trichloroethane	0.39	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.38	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19
H4130

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049312.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.18	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.14	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	~~21~~ 28	~~E~~
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19
H4130

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049312.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 19DL
H4130DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049340.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L, mg/L, µg/kg): µg/L

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CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4130DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049340.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	28	
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 1972
H4130DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049340.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

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CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20

H4131

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049313.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	3.1	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20
H4131

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049313.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.55	
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.49	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 20

H4131

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049313.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 20
H4131

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049313.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/10/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	9.34	1.7	J
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21

H4135

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049314.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.11	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.94	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.11	J

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21

H4135

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049314.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.10	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	3.1	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 21

H4135

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049314.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 22

H4136

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-22
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049315.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.67	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 22

H4136

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-22
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049315.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.090	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.4	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 22

H4136

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-22
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049315.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 23

H4139

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-23
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049316.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 23

H4139

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-23
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049316.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.21	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 23

H4139

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-23
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049316.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated : (Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

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FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 2

H4105

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-02
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005408.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U UJ
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

Sum

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 2
H4105

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-02
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005408.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 2
H4105

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-02
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005408.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	~~U~~ UJ
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

CCV

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 3
H4106

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-03
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005419.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L, mg/L, µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	~~U~~ UJ
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

Surr

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 3
H4106

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-03
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005419.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 3
H4106

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-03
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005419.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. H4137

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-09
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005420.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	~~U~~ UJ
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

Sum

8/18/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9
H4137

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-09
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005420.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

NW 8/8/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO. 9

H4137

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-09
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005420.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated : (Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

8/18/16

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
700 SOUTH 1600 EAST PCE PLUME, AOU-1: EAST SIDE SPRINGS, SALT LAKE CITY, UTAH

Client: EA Engineering, Science & Technology, Inc., Greenwood Village, Colorado
SDG: MH4002
Laboratory: Chemtech Consulting Group, Mountainside, New Jersey
Site: 700 South 1600 East PCE Plume, AOU-1: East Side Springs, Salt Lake City, Utah
Date: July 31, 2016

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	A-GW-MTO	H2837-01	Water
2MS	A-GW-MTOMS	H2837-02MS	Water
3DUP	A-GW-MTODUP	H2837-03DUP	Water
4	A-SS-09	H2837-04	Soil
5MS	A-SS-09MS	H2837-05MS	Soil
6DUP	A-SS-09DUP	H2837-06DUP	Soil
7	A-SS-26	H2837-07	Soil
8	A-SS-01-D	H2837-08	Soil
9	A-SS-01	H2837-09	Soil
10	A-SW-023	H2837-10	Water
10MS	A-SW-023MS	H2837-10MS	Water
10DUP	A-SW-023DUP	H2837-10DUP	Water
11	A-SW-026	H2837-11	Water
12	A-SW-012	H2837-12	Water
13	A-SW-021	H2837-13	Water
14	A-SW-027	H2837-14	Water
15	A-SW-028	H2837-15	Water

A Stage 2B/4 validation was performed on the analytical data for seven water samples and four soil samples collected on May 2-4, 2016 by EA Engineering at the Veterans Administration site in Salt Lake City, Utah. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Inorganic Analysis ISM02.3.

Specific method references are as follows:

Analysis	*Method References*
Metals/Hg	USEPA CLP ISM02.3

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Quality Assurance Project Plan (QAPP) 700 South 1600 East PCE Plume AOU-1: East Side Springs, Salt Lake City, Rev. 1, February 2016 and the USEPA National Functional Guidelines for Inorganic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Inorganic Superfund Data Review," August 2014;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Inorganics

- Holding times and sample preservation
- Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) Tuning
- Initial and continuing calibration verifications
- Method blank and field QC blank contamination
- Inductively Coupled Plasma (ICP) Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision
- System Performance
- Regional Quality Assurance and Quality Control
- Overall Assessment of Data

Data Usability Assessment

There were no rejections of data.

Overall the data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Metals (ICP-MS) & Mercury (CVAA)

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- All criteria were met.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method and calibration blanks exhibited the following contamination.

ICP-MS Metals				
Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
PBW007	Chromium	0.18	U	1, 10, 11, 12, 13, 14, 15
	Sodium	10.9	None	All Water Samples >10X
CCB081	Aluminum	1.7	U	1, 14, 15
	Antimony	0.32	U	1, 10, 11, 12, 13, 14, 15
	Beryllium	0.07	None	All Water Samples ND or >10X
	Potassium	9.1	None	All Water Samples >10X
	Sodium	21.7	None	
	Thallium	0.06	U	1

ICP-MS Metals				
Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
PBS008	Antimony	0.044	None	All Soil Samples >10X
	Chromium	0.092	None	

Field QC Blank

- Field QC samples were not collected.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike/Duplicate Analysis

- The MS/DUP samples exhibited acceptable %R and RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except for the following.

ICP-MS Metals				
ICP Sample ID	Compound	%D	Qualifier	Affected Samples
1	Copper	12%	J	1, 10, 11, 12, 13, 14, 15
4	Antimony	11%	J	4, 7, 8, 9
10	Zinc	20%	J	1, 10, 11, 12, 13, 14, 15

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision was acceptable.

ICP-MS Metals				
Compound	A-SS-01-D mg/kg	A-SS-01 mg/kg	RPD	Qualifier
Antimony	1.4	1.6	13%	None
Arsenic	6.0	6.1	2%	
Barium	118	130	10%	
Beryllium	0.36	0.31	15%	
Cadmium	1.1	1.3	17%	
Chromium	10.3	13.6	28%	
Cobalt	4.0	4.5	12%	
Copper	50.1	67.8	30%	
Lead	109	132	19%	
Manganese	300	288	4%	
Nickel	9.6	11.4	17%	
Selenium	1.6	1.8	12%	
Silver	0.26	0.31	18%	
Thallium	0.15	0.18	18%	
Vanadium	11.7	14.8	23%	
Zinc	178	227	24%	

Mercury				
Compound	A-SS-01-D mg/kg	A-SS-01 mg/kg	RPD	Qualifier
Mercury	0.13	0.14	7%	None

System Performance

- Instrument sensitivity and performance were acceptable. Degradation of the system performance was not found. Instrument output and response data were reviewed and found to be acceptable.

Regional Quality Assurance and Quality Control

- All criteria were met. PE samples were not included with this project.

Overall Assessment of Data

- Compound identification and quantitation criteria were met. Calculations and transcription data were verified. No action was required.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/8/16

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limits is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

Reason Code	Definition
HT	Holding Time
MB	Method Blank
SURR	Surrogate
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
RPD	Relative Percent Difference
CB/CCB	Calibration Blank or Continuing Calibration Blank
CCV	Calibration Verification
SD	ICP Serial Dilution
TB	Trip Blank
EB	Equipment Blank
FB	Field Blank
FD	Field Duplicate

EPA SAMPLE NO.

MH4002

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-01

% Solids: Date Received: 05/03/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte		Concentration	Q	Date Analyzed	Time Analyzed	
7429-90-5	Aluminum	20.0	~~4.0~~ U	~~J~~	05/06/2016	1503	MB
7440-36-0	Antimony	2.0	~~0.68~~ U	~~J~~	05/06/2016	1503	MB
7440-38-2	Arsenic		0.59	J	05/06/2016	1503	
7440-39-3	Barium		69.0		05/06/2016	1503	
7440-41-7	Beryllium		1.0	U	05/06/2016	1503	
7440-43-9	Cadmium		1.0	U	05/06/2016	1503	
7440-70-2	Calcium		132000		05/06/2016	1503	
7440-47-3	Chromium	2.0	~~1.1~~ U	~~J~~	05/06/2016	1503	MB
7440-48-4	Cobalt		1.0	U	05/06/2016	1503	
7440-50-8	Copper		7.4 J	~~J~~	05/06/2016	1503	SD
7439-89-6	Iron		410		05/06/2016	1503	
7439-92-1	Lead		0.70	J	05/06/2016	1503	
7439-95-4	Magnesium		46400		05/06/2016	1503	
7439-96-5	Manganese		9.4		05/06/2016	1503	
7440-02-0	Nickel		0.25	J	05/06/2016	1503	
7440-09-7	Potassium		2310		05/06/2016	1503	
7782-49-2	Selenium		5.0	U	05/06/2016	1503	
7440-22-4	Silver		0.20	J	05/06/2016	1503	
7440-23-5	Sodium		122000		05/06/2016	1503	
7440-28-0	Thallium	1.0	~~0.15~~ U	~~J~~	05/06/2016	1503	MB
7440-62-2	Vanadium		1.6	J	05/06/2016	1503	
7440-66-6	Zinc		146 J	~~J~~	05/06/2016	1503	SD

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4025

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

4

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-04

% Solids: 63.6 Date Received: 05/04/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	2.7 J	*	05/06/2016	1544
7440-38-2	Arsenic	24.2		05/06/2016	1544
7440-39-3	Barium	224		05/06/2016	1544
7440-41-7	Beryllium	0.40	J	05/06/2016	1544
7440-43-9	Cadmium	1.8		05/06/2016	1544
7440-47-3	Chromium	14.0		05/06/2016	1544
7440-48-4	Cobalt	5.2		05/06/2016	1544
7440-50-8	Copper	52.0		05/06/2016	1544
7439-92-1	Lead	301		05/06/2016	1544
7439-96-5	Manganese	583		05/06/2016	1544
7440-02-0	Nickel	11.1		05/06/2016	1544
7782-49-2	Selenium	1.1	J	05/06/2016	1544
7440-22-4	Silver	0.71		05/06/2016	1544
7440-28-0	Thallium	0.28	J	05/06/2016	1544
7440-62-2	Vanadium	14.8		05/06/2016	1544
7440-66-6	Zinc	348		05/06/2016	1544

SD

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4028

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

7

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-07

% Solids: 63.5 Date Received: 05/04/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	1.2 J		05/06/2016	1608
7440-38-2	Arsenic	7.9		05/06/2016	1608
7440-39-3	Barium	122		05/06/2016	1608
7440-41-7	Beryllium	0.34	J	05/06/2016	1608
7440-43-9	Cadmium	1.1		05/06/2016	1608
7440-47-3	Chromium	9.7		05/06/2016	1608
7440-48-4	Cobalt	5.1		05/06/2016	1608
7440-50-8	Copper	36.5		05/06/2016	1608
7439-92-1	Lead	130		05/06/2016	1608
7439-96-5	Manganese	386		05/06/2016	1608
7440-02-0	Nickel	10.2		05/06/2016	1608
7782-49-2	Selenium	1.6	J	05/06/2016	1608
7440-22-4	Silver	0.39	J	05/06/2016	1608
7440-28-0	Thallium	0.22	J	05/06/2016	1608
7440-62-2	Vanadium	14.3		05/06/2016	1608
7440-66-6	Zinc	153		05/06/2016	1608

SD

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4029

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

8

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-08

% Solids: 44.7 Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	1.4 J	J	05/06/2016	1614
7440-38-2	Arsenic	6.0		05/06/2016	1614
7440-39-3	Barium	118		05/06/2016	1614
7440-41-7	Beryllium	0.36	J	05/06/2016	1614
7440-43-9	Cadmium	1.1		05/06/2016	1614
7440-47-3	Chromium	10.3		05/06/2016	1614
7440-48-4	Cobalt	4.0		05/06/2016	1614
7440-50-8	Copper	50.1		05/06/2016	1614
7439-92-1	Lead	109		05/06/2016	1614
7439-96-5	Manganese	300		05/06/2016	1614
7440-02-0	Nickel	9.6		05/06/2016	1614
7782-49-2	Selenium	1.6	J	05/06/2016	1614
7440-22-4	Silver	0.26	J	05/06/2016	1614
7440-28-0	Thallium	0.15	J	05/06/2016	1614
7440-62-2	Vanadium	11.7		05/06/2016	1614
7440-66-6	Zinc	178		05/06/2016	1614

SD

NOTE: Hardness (total) is reported in mg/L

Comments:

MW 7/31/16

EPA SAMPLE NO.

MH4030

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

9

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-09

% Solids: 39 Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	1.6 J	~~J~~	05/06/2016	1620
7440-38-2	Arsenic	6.1		05/06/2016	1620
7440-39-3	Barium	130		05/06/2016	1620
7440-41-7	Beryllium	0.31	J	05/06/2016	1620
7440-43-9	Cadmium	1.3		05/06/2016	1620
7440-47-3	Chromium	13.6		05/06/2016	1620
7440-48-4	Cobalt	4.5		05/06/2016	1620
7440-50-8	Copper	67.8		05/06/2016	1620
7439-92-1	Lead	132		05/06/2016	1620
7439-96-5	Manganese	288		05/06/2016	1620
7440-02-0	Nickel	11.4		05/06/2016	1620
7782-49-2	Selenium	1.8	J	05/06/2016	1620
7440-22-4	Silver	0.31	J	05/06/2016	1620
7440-28-0	Thallium	0.18	J	05/06/2016	1620
7440-62-2	Vanadium	14.8		05/06/2016	1620
7440-66-6	Zinc	227		05/06/2016	1620

SD

NOTE: Hardness (total) is reported in mg/L

Comments:

NW 7/31/16

EPA SAMPLE NO.

MH4113

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

10

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-10

% Solids: Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed	
7429-90-5	Aluminum	33.2		05/06/2016	1515	
7440-36-0	Antimony 2.0	~~0.50~~ u	~~J~~	05/06/2016	1515	MB
7440-38-2	Arsenic	1.8		05/06/2016	1515	
7440-39-3	Barium	73.3		05/06/2016	1515	
7440-41-7	Beryllium	1.0	U	05/06/2016	1515	
7440-43-9	Cadmium	0.080	J	05/06/2016	1515	
7440-70-2	Calcium	148000		05/06/2016	1515	
7440-47-3	Chromium 2.0	~~0.64~~ u	~~J~~	05/06/2016	1515	MB
7440-48-4	Cobalt	0.10	J	05/06/2016	1515	
7440-50-8	Copper	1.6 J	~~J+~~	05/06/2016	1515	SD
7439-89-6	Iron	70.6	J	05/06/2016	1515	
7439-92-1	Lead	0.31	J	05/06/2016	1515	
7439-95-4	Magnesium	60900		05/06/2016	1515	
7439-96-5	Manganese	11.5		05/06/2016	1515	
7440-02-0	Nickel	0.68	J	05/06/2016	1515	
7440-09-7	Potassium	2630		05/06/2016	1515	
7782-49-2	Selenium	1.8	J	05/06/2016	1515	
7440-22-4	Silver	0.14	J	05/06/2016	1515	
7440-23-5	Sodium	67700		05/06/2016	1515	
7440-28-0	Thallium	1.0	U	05/06/2016	1515	
7440-62-2	Vanadium	5.1		05/06/2016	1515	
7440-66-6	Zinc	8.8 J	~~J~~	05/06/2016	1515	SD

NOTE: Hardness (total) is reported in mg/L

Comments:

rev 7/31/16

EPA SAMPLE NO.

MH4116

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

11

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-11

% Solids: Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed	
7429-90-5	Aluminum	164		05/06/2016	1527	
7440-36-0	Antimony 2.0	~~0.78~~ u	~~J~~	05/06/2016	1527	MB
7440-38-2	Arsenic	1.2		05/06/2016	1527	
7440-39-3	Barium	106		05/06/2016	1527	
7440-41-7	Beryllium	1.0	U	05/06/2016	1527	
7440-43-9	Cadmium	0.13	J	05/06/2016	1527	
7440-70-2	Calcium	159000		05/06/2016	1527	
7440-47-3	Chromium 2.0	~~0.82~~ u	~~J~~	05/06/2016	1527	MB
7440-48-4	Cobalt	0.20	J	05/06/2016	1527	
7440-50-8	Copper	3.2 J	~~J~~	05/06/2016	1527	SD
7439-89-6	Iron	314		05/06/2016	1527	
7439-92-1	Lead	7.4		05/06/2016	1527	
7439-95-4	Magnesium	61100		05/06/2016	1527	
7439-96-5	Manganese	9.4		05/06/2016	1527	
7440-02-0	Nickel	0.72	J	05/06/2016	1527	
7440-09-7	Potassium	2120		05/06/2016	1527	
7782-49-2	Selenium	2.2	J	05/06/2016	1527	
7440-22-4	Silver	0.13	J	05/06/2016	1527	
7440-23-5	Sodium	71200		05/06/2016	1527	
7440-28-0	Thallium	1.0	U	05/06/2016	1527	
7440-62-2	Vanadium	5.6		05/06/2016	1527	
7440-66-6	Zinc	15.1 J	~~J~~	05/06/2016	1527	SD

NOTE: Hardness (total) is reported in mg/L

Comments:

MW 7/31/16

EPA SAMPLE NO.

MH4202

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

12

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-12

% Solids: Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed	
7429-90-5	Aluminum	30.8		05/06/2016	1530	
7440-36-0	Antimony 2.0	~~0.84~~ U	~~J~~	05/06/2016	1530	MB
7440-38-2	Arsenic	1.4		05/06/2016	1530	
7440-39-3	Barium	72.6		05/06/2016	1530	
7440-41-7	Beryllium	1.0	U	05/06/2016	1530	
7440-43-9	Cadmium	0.060	J	05/06/2016	1530	
7440-70-2	Calcium	148000		05/06/2016	1530	
7440-47-3	Chromium 2.0	~~0.39~~ U	~~J~~	05/06/2016	1530	MB
7440-48-4	Cobalt	0.060	J	05/06/2016	1530	
7440-50-8	Copper	1.5 J	~~J+~~	05/06/2016	1530	SD
7439-89-6	Iron	75.0	J	05/06/2016	1530	
7439-92-1	Lead	0.40	J	05/06/2016	1530	
7439-95-4	Magnesium	57600		05/06/2016	1530	
7439-96-5	Manganese	1.7		05/06/2016	1530	
7440-02-0	Nickel	0.57	J	05/06/2016	1530	
7440-09-7	Potassium	2110		05/06/2016	1530	
7782-49-2	Selenium	4.2	J	05/06/2016	1530	
7440-22-4	Silver	0.090	J	05/06/2016	1530	
7440-23-5	Sodium	64200		05/06/2016	1530	
7440-28-0	Thallium	1.0	U	05/06/2016	1530	
7440-62-2	Vanadium	5.9		05/06/2016	1530	
7440-66-6	Zinc	6.0 J	~~J~~	05/06/2016	1530	SD

NOTE: Hardness (total) is reported in mg/L

Comments:

MW 713114

EPA SAMPLE NO.

MH4211

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

13

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-13

% Solids: Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed	
7429-90-5	Aluminum	64.2		05/06/2016	1533	
7440-36-0	Antimony 2.0	~~0.90~~ u	~~U~~	05/06/2016	1533	MB
7440-38-2	Arsenic	3.5		05/06/2016	1533	
7440-39-3	Barium	59.3		05/06/2016	1533	
7440-41-7	Beryllium	1.0	U	05/06/2016	1533	
7440-43-9	Cadmium	1.0	U	05/06/2016	1533	
7440-70-2	Calcium	139000		05/06/2016	1533	
7440-47-3	Chromium 2.0	~~0.69~~ u	~~J~~	05/06/2016	1533	MB
7440-48-4	Cobalt	0.070	J	05/06/2016	1533	
7440-50-8	Copper	1.6 J	~~J+~~	05/06/2016	1533	SD
7439-89-6	Iron	140	J	05/06/2016	1533	
7439-92-1	Lead	1.3		05/06/2016	1533	
7439-95-4	Magnesium	49900		05/06/2016	1533	
7439-96-5	Manganese	16.6		05/06/2016	1533	
7440-02-0	Nickel	0.35	J	05/06/2016	1533	
7440-09-7	Potassium	1750		05/06/2016	1533	
7782-49-2	Selenium	1.9	J	05/06/2016	1533	
7440-22-4	Silver	0.090	J	05/06/2016	1533	
7440-23-5	Sodium	51000		05/06/2016	1533	
7440-28-0	Thallium	1.0	U	05/06/2016	1533	
7440-62-2	Vanadium	2.2	J	05/06/2016	1533	
7440-66-6	Zinc	8.0 J	~~J~~	05/06/2016	1533	SD

NOTE: Hardness (total) is reported in mg/L

Comments:

NW 7/31/16

EPA SAMPLE NO.

MH4217

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

14

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-14

% Solids: Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed	
7429-90-5	Aluminum 20.0	~~2.2~~ U	~~J~~	05/06/2016	1536	MB
7440-36-0	Antimony 2.0	~~0.81~~ U	~~J~~	05/06/2016	1536	MB
7440-38-2	Arsenic	2.0		05/06/2016	1536	
7440-39-3	Barium	71.8		05/06/2016	1536	
7440-41-7	Beryllium	1.0	U	05/06/2016	1536	
7440-43-9	Cadmium	1.0	U	05/06/2016	1536	
7440-70-2	Calcium	145000		05/06/2016	1536	
7440-47-3	Chromium 2.0	~~0.48~~ U	~~J~~	05/06/2016	1536	MB
7440-48-4	Cobalt	1.0	U	05/06/2016	1536	
7440-50-8	Copper	1.2 J	~~J+~~	05/06/2016	1536	SD
7439-89-6	Iron	38.7	J	05/06/2016	1536	
7439-92-1	Lead	1.0	U	05/06/2016	1536	
7439-95-4	Magnesium	58300		05/06/2016	1536	
7439-96-5	Manganese	6.4		05/06/2016	1536	
7440-02-0	Nickel	0.44	J	05/06/2016	1536	
7440-09-7	Potassium	2320		05/06/2016	1536	
7782-49-2	Selenium	2.6	J	05/06/2016	1536	
7440-22-4	Silver	0.080	J	05/06/2016	1536	
7440-23-5	Sodium	63800		05/06/2016	1536	
7440-28-0	Thallium	1.0	U	05/06/2016	1536	
7440-62-2	Vanadium	5.1		05/06/2016	1536	
7440-66-6	Zinc	4.3 J	~~J~~	05/06/2016	1536	SD

NOTE: Hardness (total) is reported in mg/L

Comments:

MW 7/31/16

EPA SAMPLE NO.

MH4218

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

15

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-15

% Solids: Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte		Concentration	Q	Date Analyzed	Time Analyzed	
7429-90-5	Aluminum	20.0	~~5.5~~ U	~~J~~	05/06/2016	1539	MB
7440-36-0	Antimony	2.0	~~0.94~~ U	~~J~~	05/06/2016	1539	MB
7440-38-2	Arsenic		2.5		05/06/2016	1539	
7440-39-3	Barium		70.7		05/06/2016	1539	
7440-41-7	Beryllium		1.0	U	05/06/2016	1539	
7440-43-9	Cadmium		1.0	U	05/06/2016	1539	
7440-70-2	Calcium		151000		05/06/2016	1539	
7440-47-3	Chromium	2.0	~~0.54~~ U	~~J~~	05/06/2016	1539	MB
7440-48-4	Cobalt		0.060	J	05/06/2016	1539	
7440-50-8	Copper		1.4 J	~~J~~	05/06/2016	1539	SD
7439-89-6	Iron		40.0	J	05/06/2016	1539	
7439-92-1	Lead		0.11	J	05/06/2016	1539	
7439-95-4	Magnesium		58400		05/06/2016	1539	
7439-96-5	Manganese		6.0		05/06/2016	1539	
7440-02-0	Nickel		0.49	J	05/06/2016	1539	
7440-09-7	Potassium		2290		05/06/2016	1539	
7782-49-2	Selenium		3.0	J	05/06/2016	1539	
7440-22-4	Silver		0.080	J	05/06/2016	1539	
7440-23-5	Sodium		64600		05/06/2016	1539	
7440-28-0	Thallium		1.0	U	05/06/2016	1539	
7440-62-2	Vanadium		5.2		05/06/2016	1539	
7440-66-6	Zinc		5.6 J	~~J~~	05/06/2016	1539	SD

NOTE: Hardness (total) is reported in mg/L

Comments:

MW 7/31/16

EPA SAMPLE NO.

MH4002

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

1

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-01

% Solids: Date Received: 05/03/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/06/2016	1605

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4025

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

4

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-04

% Solids: 63.6 Date Received: 05/04/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.21		05/11/2016	1258

NOTE: Hardness (total) is reported in mg/L

Comments:

MW 7/31/16

EPA SAMPLE NO.

MH4028

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

7

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-07

% Solids: 63.5 Date Received: 05/04/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.087	J	05/11/2016	1304

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4029

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

8

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-08

% Solids: 44.7 Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.13	J	05/11/2016	1306

NOTE: Hardness (total) is reported in mg/L

Comments:

MW 7/31/16

EPA SAMPLE NO.

MH4030

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

9

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-09

% Solids: 39 Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.14	J	05/11/2016	1308

NOTE: Hardness (total) is reported in mg/L

Comments:

NW 7/31/16

EPA SAMPLE NO.

MH4113

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

10

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-10

% Solids: Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/06/2016	1622

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4116

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

11

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-11

% Solids: Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/06/2016	1611

NOTE: Hardness (total) is reported in mg/L

Comments:

MW 7/31/16

EPA SAMPLE NO.

MH4202

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

12

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-12

% Solids: Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/06/2016	1613

NOTE: Hardness (total) is reported in mg/L

Comments:

MW 7/31/16

EPA SAMPLE NO.

MH4211

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

13

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-13

% Solids: Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/06/2016	1615

NOTE: Hardness (total) is reported in mg/L

Comments:

MW 7/31/16

EPA SAMPLE NO.

MH4217

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

14

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-14

% Solids: Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/06/2016	1617

NOTE: Hardness (total) is reported in mg/L

Comments:

MW 7/31/16

EPA SAMPLE NO.

MH4218

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

15

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-15

% Solids: Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/06/2016	1619

NOTE: Hardness (total) is reported in mg/L

Comments:

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
700 SOUTH 1600 EAST PCE PLUME, AOU-1: EAST SIDE SPRINGS, SALT LAKE CITY, UTAH

Client: EA Engineering, Science & Technology, Inc., Greenwood Village, Colorado
SDG: MH4005
Laboratory: Chemtech Consulting Group, Mountainside, New Jersey
Site: 700 South 1600 East PCE Plume, AOU-1: East Side Springs, Salt Lake City, Utah
Date: July 31, 2016

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	A-SW-007-D	H2948-01	Water
2	A-SW-007	H2948-02	Water
3	A-SW-016	H2948-03	Water
4	A-SW-015	H2948-04	Water
5	A-SW-047	H2948-05	Water
5MS	A-SW-047MS	H2948-06MS	Water
5DUP	A-SW-047DUP	H2948-07DUP	Water

A Stage 2B/4 validation was performed on the analytical data for five water samples collected on May 4, 2016 by EA Engineering at the Veterans Administration site in Salt Lake City, Utah. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Inorganic Analysis ISM02.3.

Specific method references are as follows:

Analysis	*Method References*
Metals/Hg	USEPA CLP ISM02.3

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Quality Assurance Project Plan (QAPP) 700 South 1600 East PCE Plume AOU-1: East Side Springs, Salt Lake City, Rev. 1, February 2016 and the USEPA National Functional Guidelines for Inorganic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Inorganic Superfund Data Review," August 2014;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Inorganics

- Holding times and sample preservation
- Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) Tuning

- Initial and continuing calibration verifications
- Method blank and field QC blank contamination
- Inductively Coupled Plasma (ICP) Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision
- System Performance
- Regional Quality Assurance and Quality Control
- Overall Assessment of Data

Data Usability Assessment

There were no rejections of data.

Overall the data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Metals (ICP-MS) & Mercury (CVAA)

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- All criteria were met.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method and calibration blanks exhibited the following contamination.

ICP-MS Metals				
Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
CCB026	Antimony	0.29	U	1, 2, 3
	Copper	0.09	None	All Associated >10X
	Potassium	8.2	None	
	Sodium	22.0	None	
	Thallium	0.07	None	All Associated ND
CCB027	Potassium	8.1	None	All Associated >10X
	Silver	0.04	U	5
	Sodium	24.2	None	All Associated >10X
CCB028	Antimony	0.26	U	5
	Nickel	0.26	U	

Field QC Blank

- Field QC samples were not collected.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike/Duplicate Analysis

- The MS/DUP samples exhibited acceptable %R and RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except for the following.

ICP-MS Metals				
ICP Sample ID	Compound	%D	Qualifier	Affected Samples
5	Aluminum	35%	J	All Samples
	Iron	15%	J	
	Vanadium	22%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below. Zinc was qualified in both samples due to the high RPD.

ICP-MS Metals				
Compound	A-SW-007 ug/L	A-SW-007-D ug/L	RPD	Qualifier
Aluminum	36.8	23.2	45%	None
Arsenic	0.91	0.90	1%	
Barium	61.4	58.8	4%	
Calcium	139000	133000	4%	
Chromium	0.94	0.80	16%	
Cobalt	0.060	1.0U	NC	
Copper	4.8	2.6	59%	None - <5X RL
Iron	140	89.1	44%	None
Lead	2.0	0.80	86%	None - <5X RL
Magnesium	54900	53800	2%	None
Manganese	4.8	2.4	6%	
Potassium	4100	3890	5%	
Selenium	1.6	5.0U	NC	
Silver	0.14	0.15	7%	
Sodium	60900	59200	3%	
Vanadium	2.5	2.0	22%	
Zinc	21.7	12.2	56%	J

Mercury				
Compound	A-SW-007 ug/L	A-SW-007-D ug/L	RPD	Qualifier
None	ND	ND	-	-

System Performance

- Instrument sensitivity and performance were acceptable. Degradation of the system performance was not found. Instrument output and response data were reviewed and found to be acceptable.

Regional Quality Assurance and Quality Control

- All criteria were met. PE samples were not included with this project.

Overall Assessment of Data

- Compound identification and quantitation criteria were met. Calculations and transcription data were verified. No action was required.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/8/16

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limits is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

Reason Code	Definition
HT	Holding Time
MB	Method Blank
SURR	Surrogate
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
RPD	Relative Percent Difference
CB/CCB	Calibration Blank or Continuing Calibration Blank
CCV	Calibration Verification
SD	ICP Serial Dilution
TB	Trip Blank
EB	Equipment Blank
FB	Field Blank
FD	Field Duplicate

EPA SAMPLE NO.

MH4005

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-01

% Solids: Date Received: 05/06/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed	
7429-90-5	Aluminum	23.2 J	~~J~~	05/23/2016	1203	SD
7440-36-0	Antimony 2.0	~~0.22~~ U	~~J~~	05/23/2016	1203	MB
7440-38-2	Arsenic	0.90	J	05/23/2016	1203	
7440-39-3	Barium	58.8		05/23/2016	1203	
7440-41-7	Beryllium	1.0	U	05/23/2016	1203	
7440-43-9	Cadmium	1.0	U	05/23/2016	1203	
7440-70-2	Calcium	133000		05/23/2016	1203	
7440-47-3	Chromium	0.80	J	05/23/2016	1203	
7440-48-4	Cobalt	1.0	U	05/23/2016	1203	
7440-50-8	Copper	2.6		05/23/2016	1203	
7439-89-6	Iron	89.1 J	~~J~~	05/23/2016	1203	SD
7439-92-1	Lead	0.80	J	05/23/2016	1203	
7439-95-4	Magnesium	53800		05/23/2016	1203	
7439-96-5	Manganese	2.4		05/23/2016	1203	
7440-02-0	Nickel	1.0	U	05/23/2016	1203	
7440-09-7	Potassium	3890		05/23/2016	1203	
7782-49-2	Selenium	5.0	U	05/23/2016	1203	
7440-22-4	Silver	0.15	J	05/23/2016	1203	
7440-23-5	Sodium	59200		05/23/2016	1203	
7440-28-0	Thallium	1.0	U	05/23/2016	1203	
7440-62-2	Vanadium	2.0 J	~~J~~	05/23/2016	1203	SD
7440-66-6	Zinc	12.2 J		05/23/2016	1203	FD

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4097

2

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-02

% Solids: Date Received: 05/06/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed	
7429-90-5	Aluminum	36.8 J	~~J~~	05/23/2016	1206	SD
7440-36-0	Antimony 2.0	~~0.22~~ U	~~J~~	05/23/2016	1206	MB
7440-38-2	Arsenic	0.91	J	05/23/2016	1206	
7440-39-3	Barium	61.4		05/23/2016	1206	
7440-41-7	Beryllium	1.0	U	05/23/2016	1206	
7440-43-9	Cadmium	1.0	U	05/23/2016	1206	
7440-70-2	Calcium	139000		05/23/2016	1206	
7440-47-3	Chromium	0.94	J	05/23/2016	1206	
7440-48-4	Cobalt	0.060	J	05/23/2016	1206	
7440-50-8	Copper	4.8		05/23/2016	1206	
7439-89-6	Iron	140 J	~~J~~	05/23/2016	1206	SD
7439-92-1	Lead	2.0		05/23/2016	1206	
7439-95-4	Magnesium	54900		05/23/2016	1206	
7439-96-5	Manganese	4.8		05/23/2016	1206	
7440-02-0	Nickel	1.0	U	05/23/2016	1206	
7440-09-7	Potassium	4100		05/23/2016	1206	
7782-49-2	Selenium	1.6	J	05/23/2016	1206	
7440-22-4	Silver	0.14	J	05/23/2016	1206	
7440-23-5	Sodium	60900		05/23/2016	1206	
7440-28-0	Thallium	1.0	U	05/23/2016	1206	
7440-62-2	Vanadium	2.5 J	~~J~~	05/23/2016	1206	SD
7440-66-6	Zinc	21.7 J		05/23/2016	1206	FD

NOTE: Hardness (total) is reported in mg/L

Comments:

MW 7/13/16

EPA SAMPLE NO.

MH4106

3

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group | Contract: EPW14030

Lab Code: CHM | Case No.: 46114 | MA No. : | SDG No.: MH4005

Matrix: WATER | Lab Sample ID: H2948-03

% Solids: | Date Received: 05/06/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed	
7429-90-5	Aluminum	38.7 J	~~J~~	05/23/2016	1209	SD
7440-36-0	Antimony 2.0	~~0.41~~ U	~~J~~	05/23/2016	1209	MB
7440-38-2	Arsenic	0.68	J	05/23/2016	1209	
7440-39-3	Barium	64.7		05/23/2016	1209	
7440-41-7	Beryllium	1.0	U	05/23/2016	1209	
7440-43-9	Cadmium	1.0	U	05/23/2016	1209	
7440-70-2	Calcium	134000		05/23/2016	1209	
7440-47-3	Chromium	1.3	J	05/23/2016	1209	
7440-48-4	Cobalt	1.0	U	05/23/2016	1209	
7440-50-8	Copper	1.4	J	05/23/2016	1209	
7439-89-6	Iron	77.2 J	~~J~~	05/23/2016	1209	SD
7439-92-1	Lead	0.60	J	05/23/2016	1209	
7439-95-4	Magnesium	50800		05/23/2016	1209	
7439-96-5	Manganese	3.1		05/23/2016	1209	
7440-02-0	Nickel	1.0	U	05/23/2016	1209	
7440-09-7	Potassium	2300		05/23/2016	1209	
7782-49-2	Selenium	2.0	J	05/23/2016	1209	
7440-22-4	Silver	0.12	J	05/23/2016	1209	
7440-23-5	Sodium	68800		05/23/2016	1209	
7440-28-0	Thallium	1.0	U	05/23/2016	1209	
7440-62-2	Vanadium	2.4 J	~~J~~	05/23/2016	1209	SD
7440-66-6	Zinc	5.7		05/23/2016	1209	

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4107

4

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-04

% Solids: Date Received: 05/06/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed	
7429-90-5	Aluminum	8230 J	✗	05/23/2016	1219	SD
7440-36-0	Antimony	3.0		05/23/2016	1219	
7440-38-2	Arsenic	66.2		05/23/2016	1219	
7440-39-3	Barium	206		05/23/2016	1219	
7440-41-7	Beryllium	1.9		05/23/2016	1219	
7440-43-9	Cadmium	2.5		05/23/2016	1219	
7440-70-2	Calcium	179000		05/23/2016	1219	
7440-47-3	Chromium	54.5		05/23/2016	1219	
7440-48-4	Cobalt	15.7		05/23/2016	1219	
7440-50-8	Copper	102		05/23/2016	1219	
7439-89-6	Iron	13200 J	✗	05/23/2016	1219	SD
7439-92-1	Lead	127		05/23/2016	1219	
7439-95-4	Magnesium	40800		05/23/2016	1219	
7439-96-5	Manganese	351		05/23/2016	1219	
7440-02-0	Nickel	25.9		05/23/2016	1219	
7440-09-7	Potassium	2560		05/23/2016	1219	
7782-49-2	Selenium	3.3	J	05/23/2016	1219	
7440-22-4	Silver	3.0		05/23/2016	1219	
7440-23-5	Sodium	33400		05/23/2016	1219	
7440-28-0	Thallium	1.5		05/23/2016	1219	
7440-62-2	Vanadium	32.4 J	✗	05/23/2016	1219	SD
7440-66-6	Zinc	757		05/23/2016	1219	

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4137 5

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-05

% Solids: Date Received: 05/06/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte		Concentration	Q	Date Analyzed	Time Analyzed	
7429-90-5	Aluminum		509 J	~~J~~	05/23/2016	1222	SD
7440-36-0	Antimony	2.0	~~0.28~~ U	~~J~~	05/23/2016	1222	MB
7440-38-2	Arsenic		1.0		05/23/2016	1222	
7440-39-3	Barium		58.1		05/23/2016	1222	
7440-41-7	Beryllium		1.0	U	05/23/2016	1222	
7440-43-9	Cadmium		1.0	U	05/23/2016	1222	
7440-70-2	Calcium		85200		05/23/2016	1222	
7440-47-3	Chromium		0.86	J	05/23/2016	1222	
7440-48-4	Cobalt		0.31	J	05/23/2016	1222	
7440-50-8	Copper		3.7		05/23/2016	1222	
7439-89-6	Iron		506 J	~~J~~	05/23/2016	1222	SD
7439-92-1	Lead		0.99	J	05/23/2016	1222	
7439-95-4	Magnesium		25200		05/23/2016	1222	
7439-96-5	Manganese		32.6		05/23/2016	1222	
7440-02-0	Nickel	1.0	~~0.44~~ U	~~J~~	05/23/2016	1222	MB
7440-09-7	Potassium		1290		05/23/2016	1222	
7782-49-2	Selenium		5.0	U	05/23/2016	1222	
7440-22-4	Silver	1.0	~~0.12~~ U	~~J~~	05/23/2016	1222	MB
7440-23-5	Sodium		23600		05/23/2016	1222	
7440-28-0	Thallium		1.0	U	05/23/2016	1222	
7440-62-2	Vanadium		2.3 J	~~J~~	05/23/2016	1222	SD
7440-66-6	Zinc		7.9		05/23/2016	1222	

NOTE: Hardness (total) is reported in mg/L

Comments:

MW 7/31/16

EPA SAMPLE NO.

MH4005

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPWI4030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-01

% Solids: Date Received: 05/06/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/17/2016	1507

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4097

2

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-02

% Solids: Date Received: 05/06/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/17/2016	1509

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4106

3

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-03

% Solids: Date Received: 05/06/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/17/2016	1511

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4107

4

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-04

% Solids: Date Received: 05/06/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.86		05/17/2016	1513

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4137

5

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-05

% Solids: Date Received: 05/06/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/17/2016	1515

NOTE: Hardness (total) is reported in mg/L

Comments:

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
700 SOUTH 1600 EAST PCE PLUME, AOU-1: EAST SIDE SPRINGS, SALT LAKE CITY, UTAH

Client: EA Engineering, Science & Technology, Inc., Greenwood Village, Colorado
SDG: MH4213
Laboratory: Bonner Analytical Testing Company, Hattiesburg, Mississippi
Site: 700 South 1600 East PCE Plume, AOU-1: East Side Springs, Salt Lake City, Utah
Date: July 31, 2016

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	A-SW-023	6050095-01	Water
1MS	A-SW-023MS	QE10001-MS1	Water
1DUP	A-SW-023DUP	QE10001-DUP1	Water

A Stage 2B/4 validation was performed on the analytical data for one water sample collected on May 3, 2016 by EA Engineering at the Veterans Administration site in Salt Lake City, Utah. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Inorganic Analysis ISM02.3.

Specific method references are as follows:

Analysis	*Method References*
Metals/Hg	USEPA CLP ISM02.3

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Quality Assurance Project Plan (QAPP) 700 South 1600 East PCE Plume AOU-1: East Side Springs, Salt Lake City, Rev. 1, February 2016 and the USEPA National Functional Guidelines for Inorganic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Inorganic Superfund Data Review," August 2014;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Inorganics

- Holding times and sample preservation
- Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) Tuning
- Initial and continuing calibration verifications
- Method blank and field QC blank contamination
- Inductively Coupled Plasma (ICP) Interference Check Sample

- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision
- System Performance
- Regional Quality Assurance and Quality Control
- Overall Assessment of Data

Data Usability Assessment

There were no rejections of data.

Overall the data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Metals (ICP-MS) & Mercury (CVAA)

Holding Times

- The sample was prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- All criteria were met.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

ICP-MS Metals				
Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
CCB02	Antimony	0.13	U	1
PBW01	Barium	0.16	None	Sample >10X
	Chromium	0.24	U	1
	Copper	0.27	U	1
	Magnesium	0.77	None	Sample >10X

Field QC Blank

- Field QC samples were not collected.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike/Duplicate Analysis

- The MS/DUP samples exhibited acceptable %R and RPD values except for the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/RPD	Qualifier	Affected Samples
1	Aluminum	OK/OK/81	J	1
	Manganese	OK/OK/51	J	

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

System Performance

- Instrument sensitivity and performance were acceptable. Degradation of the system performance was not found. Instrument output and response data were reviewed and found to be acceptable.

Regional Quality Assurance and Quality Control

- All criteria were met. PE samples were not included with this project.

Overall Assessment of Data

- Compound identification and quantitation criteria were met. Calculations and transcription data were verified. No action was required.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/8/16

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limits is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

Reason Code	Definition
HT	Holding Time
MB	Method Blank
SURR	Surrogate
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
RPD	Relative Percent Difference
CB/CCB	Calibration Blank or Continuing Calibration Blank
CCV	Calibration Verification
SD	ICP Serial Dilution
TB	Trip Blank
EB	Equipment Blank
FB	Field Blank
FD	Field Duplicate

EPA SAMPLE NO.

MH4213

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Matrix: Water Lab Sample ID: 6050095-01

% Solids: Date Received: 05/06/2016

Analytical method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg): ug/L

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed	
7429-90-5	Aluminum	99.1 J	~~J~~	05/12/2016	1314	RPD
7440-36-0	Antimony	2.0 ~~0.26~~ U	~~J~~	05/12/2016	1314	MB
7440-38-2	Arsenic	1.9		05/12/2016	1314	
7440-39-3	Barium	76.1		05/12/2016	1314	
7440-41-7	Beryllium	1.0	U	05/12/2016	1314	
7440-43-9	Cadmium	0.12	J	05/12/2016	1314	
7440-70-2	Calcium	148000	~~J~~	05/12/2016	1329	
7440-47-3	Chromium	2.0 ~~0.82~~ U	~~J~~	05/12/2016	1314	MB
7440-48-4	Cobalt	0.37	J	05/12/2016	1314	
7440-50-8	Copper	2.0 ~~1.0~~ U	~~J~~	05/12/2016	1314	MB
7439-89-6	Iron	110	J	05/12/2016	1314	
7439-92-1	Lead	0.60	J	05/12/2016	1314	
7439-95-4	Magnesium	56100		05/12/2016	1314	
7439-96-5	Manganese	18.4 J	~~J~~	05/12/2016	1314	RPD
7440-02-0	Nickel	2.1		05/12/2016	1314	
7440-09-7	Potassium	2800		05/12/2016	1314	
7782-49-2	Selenium	0.99	J	05/12/2016	1314	
7440-22-4	Silver	1.0	U	05/12/2016	1314	
7440-23-5	Sodium	67900		05/12/2016	1314	
7440-28-0	Thallium	1.0	U	05/12/2016	1314	
7440-62-2	Vanadium	5.1		05/12/2016	1314	
7440-66-6	Zinc	4.1		05/12/2016	1314	

NOTE: Hardness (total) is reported in mg/L

Comments:

MB 7131116

EPA SAMPLE NO.

MH4213

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Matrix: Water Lab Sample ID: 6050095-01

% Solids: Date Received: 05/06/2016

Analytical method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg): ug/L

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/11/2016	1505

NOTE: Hardness (total) is reported in mg/L

Comments:

NW 7/31/16

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Attachment 2
Laboratory Analytical Data Reports

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SDG COVER PAGE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

SOW No.: ISM02.3

EPA Sample No.	Lab Sample ID	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
MH4213	6050095-01			X	
MH4213D	QE10001-DUP1			X	
MH4213S	QE10001-MS1			X	

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG narrative. Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: Maxwell S. Bonner For Chris Bonr

Date: 5/15/16 Title: CEO/QAO

SDG COVER PAGE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

SOW No.: ISM02.3

EPA Sample No.	Lab Sample ID	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
MH4213	6050095-01		X		
MH4213D	QE09009-DUP1		X		
MH4213D	QE09009-DUP2		X		
MH4213S	QE09009-MS1		X		

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG narrative. Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: Lauren Meadows For Chris Bonner

Date: 5/10/16 Title: CEO/QAO

USEPA CLP COC (LAB COPY)

DateShipped: 5/4/2016
CarrierName: FedEx
AirbillNo: 776257339636

CHAIN OF CUSTODY RECORD

Case #: 46115

EPW14029
MH4213

No: 8-050316-164045-0013
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-023	MH4213	Surface Water/ Ned Lundvall	Grab	TMet(21)	1372 (HNO3 pH<2) (1)	A-SW-23	05/03/2016 09:30	
A-SW-023-MSD	MH4213D	Surface Water/ Ned Lundvall	Grab	TMet(21)	1402 (HNO3 pH<2) (1)	A-SW-23	05/03/2016 09:30	
A-SW-023-MS	MH4213S	Surface Water/ Ned Lundvall	Grab	TMet(21)	1387 (HNO3 pH<2) (1)	A-SW-23	05/03/2016 09:30	

Sample(s) to be used for Lab QC: A-SW-023-MSD Tag 1402, A-SW-023-MS Tag 1387

Shipment for Case Complete? Y

Samples Transferred From Chain of Custody #

Analysis Key: TMet=Total Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Ned Lundvall	5/4/16 1600	Fedex		
			P. Aitken Bonner	5-6-16 1027	good

3

SAMPLE DELIVERY GROUP (SDG)
COVER SHEET

SDG Number: MH4213

☐ ICP-AES ☒ Mercury ☐ Cyanide ☒ ICP-MS

☐ VOA ☐ VOA-SIM ☐ Trace-VOA ☐ Trace-VOA-SIM ☐ SVOA ☐ SVOA-SIM ☐ Aroclors ☐ Pesticides

Laboratory Name: Bonner Analytical Testing Co. **Laboratory Code:** BONNER
Contract No.: EPW14029 **Case No.:** 46115
Solicitation No.: N/A **SDG Turnaround:** 21 day
Modified Analysis No(s).: N/A

EPA Sample Nmbers in SDG (Listed in Numerical Order)

1) MH4213	7)	13)	19)
2)	8)	14)	20)
3)	9)	15)	21)
4)	10)	16)	22)
5)	11)	17)	23)
6)	12)	18)	24)

MH4213	MH4213
First Sample in SDG	Last Sample in SDG
05/06/2016	05/06/2016
First Sample Receipt Date	Last Sample Receipt Date

Note: There are a maximum of 20 samples (excluding PE Sample) in SDG. Attach TRs to this form in alphanumeric order (the order listed above on this form).

P. A. K
Signature

5-9-16
Date

FORM DC-1
SAMPLE LOG-IN SHEET

Lab Name Bonner Analytical Testing Co. Company		Page 1 of 1
Received By (Print Name) Trisha Aiken		Log-in Date 5-9-16
Received By (Signature) P. Aik		
Case Number 46115	SDG No. MH4213	MA No. N/A

Remarks:	
1. Custody Seal(s)	Present/Absent* Intact/Broken
2. Custody Seal NOs.	N/A N/A
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*
4. Airbill	Airbill/Sticker Present/Absent*
5. Airbill No.	7762 5733 9636 N/A
6. Sample Tags Sample Tag Numbers	Present/Absent* Listed/Not Listed On Traffic Report/Chain of
7. Sample Condition	Intact/Broken*/ Leaking
8. Shipping Container Temperature Indicator Bottle	Present/Absent*
9. Shipping Container Temperature	16 °C
10. Does information on Traffic Reports/Chain of Custody Records and sample tags agree?	Yes/No*
11. Date Received at Lab	5-6-16
12. Time Received	1027

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	MH4213	1	NA	6050095-01	No Dec Good
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

* Contact SMO and attach record of resolution

Reviewed By P. Aik	Logbook No.
Date 5-9-16	Logbook Page No.

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME Bonner Analytical Testing Company

LAB CODE Bonner

CONTRACT NO. EPW14029

CASE NO. 46115 SDG NO. MH4213

MA NO.

SOW NO. ISM02.3

All documents delivered in the Complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.4)

		PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
1.	SDG Cover Page	1	2	✓	
2.	Traffic Report/Chain of Custody Record(s)	3	4	✓	
3.	Sample Log-In Sheet (DC-1)	5	5	✓	
4.	CSF Inventory Sheet (DC-2)	6	9	✓	
5.	SDG Narrative	10	11	✓	
Inorganic Analysis					
ICP-AES					
6.	Inorganic Analysis Data Sheet (Form 1-IN)				
7.	Initial and Continuing Calibration Verification (Form 2-IN)				
8.	Blanks (Form 3-IN)				
9.	ICP Interference Check Sample (Form 4-IN)				
10.	Matrix Spike Sample Recovery (Form 5A-IN)				
11.	Post-Digestion/Distillation Spike Sample Recovery (Form 5B-IN)				
12.	Duplicates (Form 6-IN)				
13.	Laboratory Control Sample (Form 7-IN)				
14.	ICP-AES and ICP-MS Serial Dilutions (Form 8-IN)				
15.	Method Detection Limit (Form 9-IN)				
16.	ICP-AES Interelement Correction Factors (Form 10A-IN)				
17.	ICP-AES Interelement Correction Factors (Form 10B-IN)				
18.	Analysis Log (Form 12-IN)				
19.	Initial Calibration (Form 15-IN)				

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

		PAGE NOs.		CHECK	
		FROM	TO	LAB	REGION
20.	Initial Calibration Summary (Form 16-IN)				
21.	ICP-AES Raw Data				
22.	ICP-AES Preparation Log Books, Preparation records, Analysis records, and PE Instructions				
ICP-MS					
23.	Inorganic Analysis Data Sheet (Form 1-IN)	12	12	✓	
24.	Initial and Continuing Calibration Verification (Form 2-IN)	13	13	✓	
25.	Blanks (Form 3-IN)	14	14	✓	
26.	ICP Interference Check Sample (Form 4-IN)	15	15	✓	
27.	Matrix Spike Sample Recovery (Form 5A-IN)	16	16	✓	
28.	Post-Digestion/Distillation Spike Sample Recovery (Form 5B-IN)	N/A	N/A	✓	
29.	Duplicates (Form 6-IN)	17	17	✓	
30.	Laboratory Control Sample (Form 7-IN)	18	18	✓	
31.	ICP-AES and ICP-MS Serial Dilutions (Form 8-IN)	19	19	✓	
32.	Method Detection Limit (Form 9-IN)	20	20	✓	
33.	ICP-MS Internal Standard Association (Form 11-IN)	21	21	✓	
34.	Analysis Log (Form 12-IN)	22	22	✓	
35.	ICP-MS Tune (Form 13-IN)	23	23	✓	
36.	ICP-MS Internal Standards Relative Intensity Summary (Form 14-IN)	24	25	✓	
37.	Initial Calibration (Form 15-IN)	26	29	✓	
38.	Initial Calibration Summary (Form 16-IN)	30	30	✓	
39.	ICP-MS Raw Data	31	58	✓	
40.	ICP-MS Preparation Log Books, Preparation records, Analysis records, and PE Instructions	59	68	✓	
Mercury		N/A	N/A	✓	
41.	Inorganic Analysis Data Sheet (Form 1-IN)	69	69	✓	
42.	Initial and Continuing Calibration Verification (Form 2-IN)	70	70	✓	
43.	Blanks (Form 3-IN)	71	71	✓	
44.	Matrix Spike Sample Recovery (Form 5A-IN)	72	72	✓	
45.	Duplicates (Form 6-IN)	73	73	✓	
46.	Method Detection Limit (Form 9-IN)	74	74	✓	
47.	Analysis Log (Form 12-IN)	75	75	✓	
48.	Initial Calibration (Form 15-IN)	76	78	✓	

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

49.	Initial Calibration Summary (Form 16-IN)	79	79	✓	
50.	Mercury Raw Data	80	82	✓	
51.	Mercury Preparation Log Books, Preparation records, Analysis records, and PE Instructions	83	89	✓	
Cyanide		N/A	N/A		
52.	Inorganic Analysis Data Sheet (Form 1-IN)				
53.	Initial and Continuing Calibration Verification (Form 2-IN)				
54.	Blanks (Form 3-IN)				
55.	Matrix Spike Sample Recovery (Form 5A-IN)				
56.	Post-Digestion/Distillation Spike Sample Recovery (Form 5B-IN)				
57.	Duplicates (Form 6-IN)				
58.	Method Detection Limit (Form 9-IN)				
59.	Analysis Log (Form 12-IN)				
60.	Initial Calibration (Form 15-IN)				
61.	Initial Calibration Summary (Form 16-IN)				
62.	Cyanide Raw Data				
63.	Cyanide Preparation Log Books, Preparation records, Analysis records, and PE Instructions				
Additional		N/A	N/A		
64.	Percent Solids Determination Log	N/A	N/A	✓	
65.	EPA Shipping/Receiving Documents	N/A	N/A	✓	
	Airbill (No. of Shipments 1)	90	90	✓	
	Sample Tags	N/A	N/A	✓	
	Sample Log-In Sheet (Lab)	91	92	✓	
66.	Misc. Shipping/Receiving Records (list all individual records) Communication Logs	N/A	N/A	✓	
		N/A	N/A	✓	
67.	Internal Lab Sample Transfer Records & Tracking Sheets (describe or list) In-House Chains and Digestates	93	95	✓	
		N/A	N/A	✓	
68.	Other Records (describe or list)	N/A	N/A	✓	
	Communication Logs	96	99	✓	
	e-mails				
	Corrective Actions	N/A	N/A	✓	

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

69. Comments:

Completed by:
(CLP Lab) Patricia Aiken (Signature) | Patricia Aiken / Sample Custodian (Print Name & Title) | 5-18-16 (Date)

Audited by:
(EPA) _____ (Signature) | _____ (Print Name & Title) | _____ (Date)

BONNER Analytical
2703 Oak Grove Road
Hattiesburg, MS 39402
601-264-2854 Phone
601-268-7084 Fax

SDG NARRATIVE:

SDG Number: MH4213
Case Number: 46115
Contract Number: EPW14029
Contract SOW: ISM02.3

Sample Receipt:
On May 6, 2016 we received 1 water via FedEx air bill 7762 5733 9636. Custody seals were present and intact. The sample was in good condition except for the following discrepancies.

Samples received at an elevated temperature

Issue 1: The samples were received at an elevated temperature of 16°C.

Resolution 1: Per Region 8, the laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

pH outside of allowable limits

Issue 2: The samples had an initial pH of 7, HNO3 was added to bring the pH to below 2.

Resolution 2: Per Region 8, the laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Laboratory problems

Issue 3: This Case is scheduled for 7 waters and 7 filtered waters. The laboratory only received 1 unfiltered sample (3 bottles), however, the COC states that this Case is complete.

Resolution 3: Per Region 8, shipping for this Case is complete. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.
Target analytes: TM by ICP-MS/Hg

ICP-MS
The analytical run began 05/12/2016 @ 1149 hrs. MH4213 was over the linear range for Ca; the sample was reanalyzed at an appropriate dilution.

Mercury
No Discrepancies

BONNER Analytical
2703 Oak Grove Road
Hattiesburg, MS 39402
601-264-2854 Phone
601-268-7084 Fax

Sample Equation:

Lab ID 6050095-01 EPA Sample # MH4213

Date & Time 5/12/2016@1314

ICP-MS: 99.13 µg/L * 1 (Dilution Factor) = 99.1 ug/L
(Analyte Al)

Date & Time 5/11/2016@1505

Hg: 0.0014 µg/L * 1 (Dilution Factor) = 0.0014 ug/L (CRQL reported)

Authorized by _____
Data Package Reviewer

EPA SAMPLE NO.

MH4213

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Matrix: Water Lab Sample ID: 6050095-01

% Solids: Date Received: 05/06/2016

Analytical method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg): ug/L

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	99.1	*	05/12/2016	1314
7440-36-0	Antimony	0.26	J	05/12/2016	1314
7440-38-2	Arsenic	1.9		05/12/2016	1314
7440-39-3	Barium	76.1		05/12/2016	1314
7440-41-7	Beryllium	1.0	U	05/12/2016	1314
7440-43-9	Cadmium	0.12	J	05/12/2016	1314
7440-70-2	Calcium	148000	D	05/12/2016	1329
7440-47-3	Chromium	0.82	J	05/12/2016	1314
7440-48-4	Cobalt	0.37	J	05/12/2016	1314
7440-50-8	Copper	1.0	J	05/12/2016	1314
7439-89-6	Iron	110	J	05/12/2016	1314
7439-92-1	Lead	0.60	J	05/12/2016	1314
7439-95-4	Magnesium	56100		05/12/2016	1314
7439-96-5	Manganese	18.4	*	05/12/2016	1314
7440-02-0	Nickel	2.1		05/12/2016	1314
7440-09-7	Potassium	2800		05/12/2016	1314
7782-49-2	Selenium	0.99	J	05/12/2016	1314
7440-22-4	Silver	1.0	U	05/12/2016	1314
7440-23-5	Sodium	67900		05/12/2016	1314
7440-28-0	Thallium	1.0	U	05/12/2016	1314
7440-62-2	Vanadium	5.1		05/12/2016	1314
7440-66-6	Zinc	4.1		05/12/2016	1314

NOTE: Hardness (total) is reported in mg/L

Comments:

FORM 2-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Initial Calibration Verification Source: In-House, Lot: NA

Continuing Calibration Verification Source: In-House, Lot: B6E0033

Run Batch: BE61204M051216B Analytical method: ICP-MS

Concentration Units: ug/L

	Initial Calibration Verification				Continuing Calibration Verification						
	ID: ICV01				ID: CCV01				ID: CCV02		
Analyte	True	Found	%R	%RSD	True	Found	%R	%RSD	Found	%R	%RSD
Aluminum	504.00	500	99	1	60500	59300	98	0	58900	97	1
Antimony	199.00	201	101	1	500.00	504	101	1	505	101	0
Arsenic	200.00	210	105	1	500.00	505	101	2	522	104	1
Barium	99.000	107	108	2	2500.0	2400	96	0	2420	97	1
Beryllium	99.000	103	104	2	500.00	499	100	2	490	98	1
Cadmium	99.000	100	102	1	500.00	475	95	1	474	95	0
Calcium	2005.0	2050	102	1	60000	57200	95	1	58000	97	0
Chromium	98.000	100	102	2	500.00	514	103	2	531	106	1
Cobalt	100.00	104	104	2	500.00	458	92	1	460	92	1
Copper	98.000	99.6	102	1	500.00	466	93	1	461	92	1
Iron	1016.0	1070	105	1	60000	55200	92	1	55100	92	1
Lead	200.00	206	103	1	500.00	538	108	1	541	108	2
Magnesium	1215.0	1320	108	1	60000	55300	92	1	56400	94	2
Manganese	100.00	102	102	1	500.00	520	104	2	530	106	2
Nickel	101.00	99.9	99	2	500.00	470	94	1	469	94	0
Potassium	2004.0	1890	94	2	60000	58100	97	1	57500	96	1
Selenium	206.00	213	103	3	500.00	489	98	2	512	102	3
Silver	100.00	104	104	1	65.000	61.7	95	0	61.6	95	1
Sodium	2019.0	2090	104	2	60000	60500	101	2	59700	100	2
Thallium	206.00	217	105	1	500.00	527	105	1	533	107	1
Vanadium	100.00	101	101	2	500.00	513	103	2	534	107	2
Zinc	205.00	211	103	1	2500.0	2460	98	1	2460	98	0

FORM 3-IN
BLANKS

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Preparation Blank Matrix: Water

Preparation Blank Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg): ug/L

Analytical method: ICP-MS Preparation Batch: QE09009

Run Batch: BE61204M051216B Preparation Method: 200.8

	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank/Leachate Extraction Blank	
Analyte	ID: ICB01	Q	ID: CCB01	Q	ID: CCB02	Q	ID:	Q	ID: PBW01	Q
Aluminum	20.0	U	3.3	J	3.2	J			20.0	U
Antimony	2.0	U	2.0	U	0.13	J			2.0	U
Arsenic	1.0	U	1.0	U	0.10	J			1.0	U
Barium	10	U	0.068	J	0.077	J			0.16	J
Beryllium	1.0	U	1.0	U	1.0	U			1.0	U
Cadmium	1.0	U	1.0	U	1.0	U			1.0	U
Calcium	500	U	500	U	500	U			500	U
Chromium	2.0	U	2.0	U	2.0	U			0.24	J
Cobalt	1.0	U	0.019	J	0.024	J			1.0	U
Copper	2.0	U	2.0	U	2.0	U			0.27	J
Iron	200	U	200	U	200	U			200	U
Lead	1.0	U	1.0	U	1.0	U			1.0	U
Magnesium	500	U	2.6	J	2.8	J			0.77	J
Manganese	1.0	U	1.0	U	1.0	U			1.0	U
Nickel	1.0	U	1.0	U	1.0	U			1.0	U
Potassium	500	U	500	U	500	U			500	U
Selenium	5.0	U	5.0	U	5.0	U			5.0	U
Silver	1.0	U	1.0	U	1.0	U			1.0	U
Sodium	500	U	500	U	500	U			500	U
Thallium	1.0	U	1.0	U	0.086	J			1.0	U
Vanadium	5.0	U	5.0	U	5.0	U			5.0	U
Zinc	2.0	U	2.0	U	2.0	U			2.0	U

NOTE: Hardness (total) is reported in mg/L

FORM 4-IN
ICP INTERFERENCE CHECK SAMPLE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Analytical Method: ICP-MS ICSA Source: In-House, Lot:NA

Instrument ID: ICPMS01 ICSB Source: In-House, Lot:NA

Run Batch: BE61204M051216B

Concentration Units: ug/L

Analyte	True		Found			
	ICSA	ICSAB	ICSA	%R	ICSAB	%R
Aluminum	100000	100000	100000	100	98300	98
Antimony	1.5	22	1.1	73	20.5	93
Arsenic	0.1	19	0.33	330	20.9	110
Barium	1.2	22	1.7	142	23.1	105
Beryllium	0	19	0.27		19.8	104
Cadmium	0.7	20	-0.85	-121	17.5	88
Calcium	100000	100000	99100	99	96100	96
Chromium	21	40	20.6	98	40.6	102
Cobalt	1	20	1.3	130	21.4	107
Copper	8	25	7.9	99	26.0	104
Iron	100000	100000	92600	93	91100	91
Lead	4	25	4.4	110	25.1	100
Magnesium	100000	100000	94400	94	91400	91
Manganese	7	27	6.6	94	27.3	101
Nickel	6	24	6.1	102	24.3	101
Potassium	100000	100000	101000	101	98200	98
Selenium	0.3	19	0.058	19	18.6	98
Silver	0	18	0.0092		18.1	101
Sodium	100000	100000	104000	104	102000	102
Thallium	0	21	0.027		20.2	96
Vanadium	0.5	19	-0.39	-78	20.0	105
Zinc	11	29	11.8	107	29.6	102

EPA SAMPLE NO.

MH4213S

FORM 5A-IN
MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Matrix: Water Analytical Method: ICP-MS

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Q	Sample Result (SR)	Q	Spike Added (SA)	%R	Q
Antimony	75-125	97.2		0.26	J	100	97	
Arsenic	75-125	43.0		1.9		40.0	103	
Barium	75-125	1980		76.1		2000	95	
Beryllium	75-125	48.5		1.0	U	50.0	97	
Cadmium	75-125	46.8		0.12	J	50.0	93	
Chromium	75-125	202		0.82	J	200	101	
Cobalt	75-125	464		0.37	J	500	93	
Copper	75-125	227		1.0	J	250	90	
Lead	75-125	21.1		0.60	J	20.0	102	
Manganese	75-125	506		18.4		500	98	
Nickel	75-125	467		2.1		500	93	
Selenium	75-125	99.6		0.99	J	100	99	
Silver	75-125	47.6		1.0	U	50.0	95	
Thallium	75-125	47.9		1.0	U	50.0	96	
Vanadium	75-125	513		5.1		500	102	
Zinc	75-125	470		4.1		500	93	

EPA SAMPLE NO.

FORM 6-IN
DUPLICATES

MH4213D

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.:46115 MA No.: SDG No.: MH4213

Matrix: Water Analytical Method: ICP-MS

% Solids:

Concentration Units (µg/L, mg/L, or mg/kg dry weight): ug/L

Analyte	Control Limit	Sample (S)	Q	Duplicate (D)	Q	RPD	Q
Aluminum	20.0	99.1		41.7		81	*
Antimony		0.26	J	0.23	J	13	
Arsenic	1.0	1.9		1.9		4	
Barium		76.1		76.8		1	
Beryllium		1.0	U	1.0	U		
Cadmium		0.12	J	0.12	J	3	
Chromium		0.82	J	0.83	J	1	
Cobalt		0.37	J	0.35	J	5	
Copper		1.0	J	0.85	J	22	
Iron		110	J	45.7	J	82	
Lead		0.60	J	0.23	J	88	
Magnesium		56100		57600		3	
Manganese		18.4		10.9		51	*
Nickel	1.0	2.1		2.1		3	
Potassium		2800		2670		5	
Selenium		0.99	J	1.1	J	12	
Silver		1.0	U	1.0	U		
Sodium		67900		69200		2	
Thallium		1.0	U	0.12	J	200	
Vanadium	5.0	5.1		5.2		1	
Zinc	2.0	4.1		3.1		28	

NOTE: Hardness (total) is reported in mg/L

EPA SAMPLE NO.

LCS01

FORM 7-IN
LABORATORY CONTROL SAMPLE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Matrix: Water Preparation Method: 200.8

Analytical method: ICP-MS Preparation Batch: QE09009

Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg): ug/L

Analyte	True	Found	%R
Aluminum	40.000	43.6	109
Antimony	4.0000	4.0	100
Arsenic	2.0000	2.1	105
Barium	20.000	21.1	106
Beryllium	2.0000	2.1	105
Cadmium	2.0000	2.0	100
Calcium	1000.0	1030	103
Chromium	4.0000	4.1	103
Cobalt	2.0000	2.1	105
Copper	4.0000	4.3	108
Iron	400.00	414	104
Lead	2.0000	2.0	100
Magnesium	1000.0	1040	104
Manganese	2.0000	1.9	95
Nickel	2.0000	2.1	105
Potassium	1000.0	1000	100
Selenium	10.000	10.3	103
Silver	2.0000	2.0	100
Sodium	1000.0	972	97
Thallium	2.0000	1.9	95
Vanadium	10.000	9.8	98
Zinc	4.0000	4.9	123

EPA SAMPLE NO.

MH4213L

FORM 8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Matrix: Water Analytical method: ICP-MS

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Initial Sample Result (I)	Q	Serial Dilution Result (S)	Q	% Difference	Q
Aluminum	99.1		104		5	
Antimony	0.26	J	0.17	J	35	
Arsenic	1.9		1.8	J	5	
Barium	76.1		76.4		0	
Beryllium	1.0	U	5.0	U		
Cadmium	0.12	J	0.17	J	42	
Calcium	148000		147000		0	
Chromium	0.82	J	10	U	100	
Cobalt	0.37	J	0.35	J	5	
Copper	1.0	J	1.2	J	17	
Iron	110	J	87.7	J	20	
Lead	0.60	J	0.51	J	15	
Magnesium	56100		61600		10	
Manganese	18.4		19.6		6	
Nickel	2.1		2.5	J	19	
Potassium	2800		2700		4	
Selenium	0.99	J	1.2	J	26	
Silver	1.0	U	0.0075	J		
Sodium	67900		71600		5	
Thallium	1.0	U	0.12	J		
Vanadium	5.1		5.8	J	13	
Zinc	4.1		4.4	J	8	

NOTE: Hardness (total) is reported in mg/L

FORM 9-IN
METHOD DETECTION LIMIT

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Analytical Method: ICP-MS Instrument ID: ICPMS01

Preparation Method: 200.8

Concentration Units (µg/L, µg, or mg/kg): ug/L

Analyte	Wavelength/Mass		MDL	Date Analyzed
Aluminum	27.00	u	3.01	05/09/2016
Antimony	121.00	u	0.13	05/09/2016
Arsenic	75.00	u	0.074	05/09/2016
Barium	137.00	u	0.062	05/09/2016
Beryllium	9.00	u	0.098	05/09/2016
Cadmium	111.00	u	0.041	05/09/2016
Calcium	44.00	u	18.7	05/09/2016
Chromium	52.00	u	0.19	05/09/2016
Cobalt	59.00	u	0.015	05/09/2016
Copper	65.00	u	0.23	05/09/2016
Iron	54.00	u	5.1	05/09/2016
Lead	208.00	u	0.12	05/09/2016
Magnesium	25.00	u	0.59	05/09/2016
Manganese	55.00	u	0.11	05/09/2016
Nickel	60.00	u	0.16	05/09/2016
Potassium	39.00	u	11.8	05/09/2016
Selenium	78.00	u	0.46	05/09/2016
Silver	107.00	u	0.0061	05/09/2016
Sodium	23.00	u	12.4	05/09/2016
Thallium	205.00	u	0.057	05/09/2016
Vanadium	51.00	u	0.12	05/09/2016
Zinc	66.00	u	0.95	05/09/2016

FORM 11-IN
ICP-MS INTERNAL STANDARD ASSOCIATION

Lab Name: Bonner Analytical Testing Co Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Instrument ID: ICPMS01 Date: 05/12/2016

Run Batch: BE61204M051216B

Analyte	Assoc. Internal Standard 1	Assoc. Internal Standard 2
Aluminum	Li	Sc
Antimony	In	Tb
Arsenic	Rh	
Barium	In	Tb
Beryllium	Li	Sc
Cadmium	Y	In
Calcium	Li	Sc
Chromium	Rh	
Cobalt	Sc	Y
Copper	Sc	Y
Iron	Sc	Y
Lead	Tb	Bi
Magnesium	Li	Sc
Manganese	Rh	
Nickel	Sc	Y
Potassium	Li	Sc
Selenium	Rh	
Silver	Y	In
Sodium	Li	Sc
Thallium	Tb	
Vanadium	Rh	
Zinc	Sc	Y

FORM 12-IN
ANALYSIS LOG

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Instrument ID: ICPMS01 Analytical Method: ICP-MS

Start Date: 05/12/2016 End Date: 05/12/2016

Run Batch: BE61204M051216B

EPA Sample NO.	D/F	Time	Analytes																									
			Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	CN		
TUNE01	1.0	1149																										
S01	1.0	1200	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
S02	1.0	1204														X							X					
S03	1.0	1209																					X					
S04	1.0	1213	X	X	X		X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
S05	1.0	1217	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
S06	1.0	1221	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
S07	1.0	1225	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
S08	1.0	1229	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
S09	1.0	1233				X																			X			
S10	1.0	1237	X						X				X		X				X			X						
ICV01	1.0	1242	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICB01	1.0	1246	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICSA01	1.0	1250	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICSAB01	1.0	1254	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCV01	1.0	1259	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCB01	1.0	1304	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
PBW01	1.0	1307	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
LCS01	1.0	1311	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
MH4213	1.0	1314	X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
MH4213S	1.0	1318		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X			
MH4213D	1.0	1322	X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
MH4213L	5.0	1326	X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
MH4213	2.0	1329							X																			
MH4213D	2.0	1332							X																			
MH4213L	10.0	1336							X																			
CCV02	1.0	1340	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCB02	1.0	1344	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			

EPA SAMPLE NO.

TUNE01

FORM 13-IN
ICP-MS TUNE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

ICP-MS Instrument ID: ICPMS01 Date: 05/12/16

Run Batch: BE61204M051216B

Element - Mass	Avg. Measured Mass (u)	Average Peak Width (u)	%Height	%RSD
Be - 9	9.0	0.7	5	1.5
Mg - 24	23.9	0.7	5	1.4
Mg - 25	24.9	0.7	5	1.4
Mg - 26	25.9	0.7	5	0.7
Co - 59	58.9	0.7	5	0.7
In - 113	112.9	0.7	5	1.9
In - 115	114.9	0.7	5	0.8
Pb - 206	205.9	0.7	5	0.8
Pb - 207	206.9	0.7	5	0.7
Pb - 208	207.9	0.7	5	0.5

FORM 14-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA. No.: SDG No.: MH4213

ICP-MS Instrument ID: ICPMS01 Start Date: 05/12/2016

Run Batch: BE61204M051216B End Date: 05/12/2016

EPA Sample NO.	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Y-89	Q	Element Rh-103	Q	Element In-115	Q
S01	12:00	100		100		100		100		100	
S02	12:04	98		97		103		100		101	
S03	12:09	98		97		101		99		101	
S04	12:13	96		97		101		99		100	
S05	12:17	98		98		101		101		101	
S06	12:21	99		96		100		99		100	
S07	12:25	96		95		99		95		98	
S08	12:29	96		92		93		92		91	
S09	12:33	102		98		98		99		98	
S10	12:37	89		86		83		82		80	
ICV01	12:42	102		100		96		101		95	
ICB01	12:46	100		99		97		100		97	
ICSA01	12:50	84		85		85		82		85	
ICSAB01	12:54	84		88		88		85		87	
CCV01	12:59	91		94		93		91		91	
CCB01	13:04	102		103		102		104		101	
PBW01	13:07	101		102		105		104		105	
LCS01	13:11	99		101		106		102		104	
MH4213	13:14	89		94		99		88		95	
MH4213S	13:18	95		98		98		90		95	
MH4213D	13:22	96		100		97		88		94	
MH4213L	13:26	104		103		99		96		97	
MH4213	13:29	100		99		99		91		95	
MH4213D	13:32	97		96		98		92		96	
MH4213L	13:36	106		103		98		98		96	
CCV02	13:40	94		91		89		86		87	
CCB02	13:44	102		100		97		98		96	

FORM 14-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA. No.: SDG No.: MH4213

ICP-MS Instrument ID: ICPMS01 Start Date: 05/12/2016

Run Batch: BB61204M051216B End Date: 05/12/2016

EPA Sample NO.	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element Ho-165	Q	Element Bi-209	Q	Element	Q	Element	Q
S01	12:00	100				100					
S02	12:04	102				105					
S03	12:09	101				107					
S04	12:13	100				101					
S05	12:17	100				103					
S06	12:21	101				101					
S07	12:25	99				98					
S08	12:29	95				92					
S09	12:33	96				98					
S10	12:37	82				75					
ICV01	12:42	94				96					
ICB01	12:46	95				93					
ICSA01	12:50	88				85					
ICSAB01	12:54	90				85					
CCV01	12:59	94				87					
CCB01	13:04	99				98					
PBW01	13:07	102				102					
LCS01	13:11	102				101					
MH4213	13:14	99				91					
MH4213S	13:18	98				89					
MH4213D	13:22	97				88					
MH4213L	13:26	96				92					
MH4213	13:29	97				91					
MH4213D	13:32	98				92					
MH4213L	13:36	93				92					
CCV02	13:40	90				83					
CCB02	13:44	95				94					

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Instrument ID: ICPMS01 Start Date: 05/12/2016

Analytical method: ICP-MS Run Batch: BE61204M051216B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	0.0	-0.0047							
Antimony	0.0	0.0013							
Arsenic	0.0	-0.00060							
Barium	0.0	-0.00040							
Beryllium	0.0	0.00040							
Cadmium	0.0	-0.00060							
Calcium	0.0	-4.0							
Chromium	0.0	0.0043							
Cobalt	0.0	0.0							
Copper	0.0	-0.0065							
Iron	0.0	-0.87							
Lead	0.0	0.0							
Magnesium	0.0	-0.0014							
Manganese	0.0	-0.0083		0.20	0.20	-2			
Nickel	0.0	-0.039							
Potassium	0.0	0.0077							
Selenium	0.0	-0.010							
Silver	0.0	0.0							
Sodium	0.0	-0.048							
Thallium	0.0	-0.0044		0.20	0.22	-8	0.50	0.50	0
Vanadium	0.0	0.088							
Zinc	0.0	-0.039							

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Instrument ID: ICPMS01 Start Date: 05/12/2016

Analytical method: ICP-MS Run Batch: BE61204M051216B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	20.0	22.3	-12	260	291	-12	1300	1260	3
Antimony	2.0	2.0	2	10.0	9.9	1	50.0	48.7	3
Arsenic	1.0	1.0	-2	10.0	9.8	2	50.0	48.5	3
Barium				10.0	10.4	-4	50.0	51.6	-3
Beryllium	1.0	0.96	4	10.0	10.1	-1	50.0	49.0	2
Cadmium	1.0	1.1	-10	10.0	10	0	50.0	49.1	2
Calcium	500	515	-3	250	259	-4	1250	1300	-4
Chromium	2.0	1.9	3	10.0	9.5	5	50.0	47.8	4
Cobalt	1.0	1.0	-5	10.0	10.5	-5	50.0	52.5	-5
Copper	2.0	2.1	-4	10.0	10.0	0	50.0	49.6	1
Iron	200	206	-3	250	270	-8	1250	1340	-7
Lead	1.0	1.0	-1	10.0	9.8	2	50.0	49.6	1
Magnesium	500	522	-4	250	269	-8	1250	1340	-7
Manganese	1.0	0.99	1	10.0	9.7	3	50.0	47.4	5
Nickel	1.0	1.1	-7	10.0	10.1	-1	50.0	50.0	0
Potassium	500	497	1	250	250	0	1250	1260	-1
Selenium	5.0	4.7	6	10.0	10.6	-6	50.0	48.2	4
Silver	1.0	0.99	1	1.3	1.3	-1	6.5	6.5	0
Sodium	500	500	0	250	296	-18	1250	1240	1
Thallium	1.0	1.0	0	10.0	10.1	-1	50.0	49.9	0
Vanadium	5.0	4.8	4	10.0	9.3	7	50.0	46.7	7
Zinc	2.0	2.0	-1	10.0	10.9	-9	50.0	52.7	-5

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Instrument ID: ICPMS01 Start Date: 05/12/2016

Analytical method: ICP-MS Run Batch: BE61204M051216B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	13000	13000	0	26000	25500	2			
Antimony	500	511	-2	1000	1050	-5			
Arsenic	500	509	-2	1000	998	0			
Barium	500	532	-6	1000	1070	-7	5000	4840	3
Beryllium	500	506	-1	1000	982	2			
Cadmium	500	499	0	1000	998	0			
Calcium	12500	12200	2	25000	24400	3			
Chromium	500	495	1	1000	1010	-1			
Cobalt	500	481	4	1000	957	4			
Copper	500	495	1	1000	993	1			
Iron	12500	12200	3	25000	24000	4			
Lead	500	519	-4	1000	992	1			
Magnesium	12500	11700	7	25000	23800	5			
Manganese	500	507	-1	1000	1020	-2			
Nickel	500	496	1	1000	997	0			
Potassium	12500	12800	-3	25000	25000	0			
Selenium	500	503	-1	1000	998	0			
Silver	65.0	65.0	0	130	130	0			
Sodium	12500	12400	0	25000	24800	1			
Thallium	500	472	6	1000	924	8			
Vanadium	500	492	2	1000	1010	-1			
Zinc	500	518	-4	1000	1020	-2	5000	4560	9

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Instrument ID: ICPMS01 Start Date: 05/12/2016

Analytical method: ICP-MS Run Batch: BE61204M051216B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	125000	124000	1						
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium	125000	120000	4						
Chromium									
Cobalt									
Copper									
Iron	125000	112000	10						
Lead									
Magnesium	125000	116000	7						
Manganese									
Nickel									
Potassium	125000	122000	2						
Selenium									
Silver									
Sodium	125000	127000	-1						
Thallium									
Vanadium									
Zinc									

FORM 16-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Instrument ID: ICPMS01 Start Date: 05/12/2016

Analytical method: ICP-MS Run Batch: BE61204M051216B

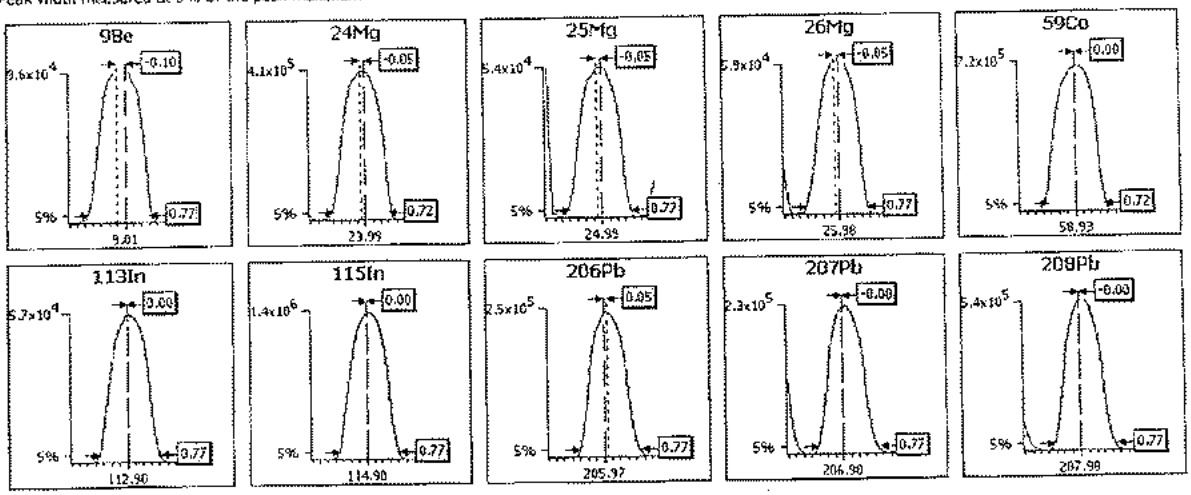
Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Aluminum	0.999995	3930.328902	0.971783	WLR	Standard Deviation
Antimony	0.999890	2474.094064	0.017865	WLR	Standard Deviation
Arsenic	0.999954	148.480015	0.037980	WLR	Standard Deviation
Barium	0.999740	950.231691	0.052931	WLR	Standard Deviation
Beryllium	0.999893	886.353677	0.009616	WLR	Standard Deviation
Cadmium	0.999999	858.816929	0.016094	WLR	Standard Deviation
Calcium	0.999997	178.330197	43.479652	WLR	Standard Deviation
Chromium	0.999949	949.219840	0.235462	WLR	Standard Deviation
Cobalt	0.999988	5705.852136	0.022626	WLR	Standard Deviation
Copper	0.999998	1509.858207	0.275807	WLR	Standard Deviation
Iron	0.999891	364.920491	66.521181	WLR	Standard Deviation
Lead	0.999760	8440.160616	0.047301	WLR	Standard Deviation
Magnesium	0.999990	446.134086	0.208155	WLR	Standard Deviation
Manganese	0.999992	907.961693	0.023556	WLR	Standard Deviation
Nickel	0.999997	1299.810677	0.233763	WLR	Standard Deviation
Potassium	0.999980	4414.795119	34.424682	WLR	Standard Deviation
Selenium	0.999991	28.071955	0.325777	WLR	Standard Deviation
Silver	1.000000	3968.927453	0.005366	WLR	Standard Deviation
Sodium	0.999990	5341.232430	8.258870	WLR	Standard Deviation
Thallium	0.999949	6402.251669	0.018701	WLR	Standard Deviation
Vanadium	0.999943	738.389787	-0.086460	WLR	Standard Deviation
Zinc	0.999676	903.483047	0.458607	WLR	Standard Deviation

Performance Report

Sample details
Sample name : SEQ-TUN1@TUNE01
Acquired at : 5/12/2016 11:49:05
Report name : 200_8 + IS TEST_NO SCREEN (7/9/2015 09:58:10)

Mass Calibration verification

Acquisition parameters
Sweeps : 10
Dwell : 10.0 mSecs
Point spacing : 0.05 amu
Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.85	0.65	0.11	0.77	-0.10
24Mg	0.85	0.65	0.11	0.72	-0.05
25Mg	0.85	0.65	0.11	0.77	-0.05
26Mg	0.85	0.65	0.11	0.77	-0.05
59Co	0.85	0.65	0.11	0.72	0.00
113In	0.85	0.65	0.11	0.77	0.00
115In	0.85	0.65	0.11	0.77	0.00
206Pb	0.85	0.65	0.11	0.77	0.05
207Pb	0.85	0.65	0.11	0.77	-0.00
208Pb	0.85	0.65	0.11	0.77	-0.00

Sample details
Sample name : SEQ-TUN1@TUNE01
Acquired at : 5/12/2016 11:49:05
Report name : 200_8 + IS TEST_NO SCREEN (7/9/2015 09:58:10)

Tune conditions

Major	
Extraction	-106
Lens 1	1.2
Focus	18.2
D1	-44.7
Pole Bias	-0.9
Hexapole Bias	1.5
Nebuliser	0.84
Sampling Depth	130

Minor	
Lens 2	-26.7
Lens 3	-189.0
Forward power	1404
Horizontal	83
Vertical	425
D2	-160
DA	-27.5
Cool	13.0
Auxiliary	0.90

Global	
Standard resolution	n/a
High resolution	n/a
Analogue Detector	n/a
PC Detector	n/a

Add. Gases	
CCT 7% h2/He	0.00
Dont touch this thing	0.00

Sensitivity and stability results

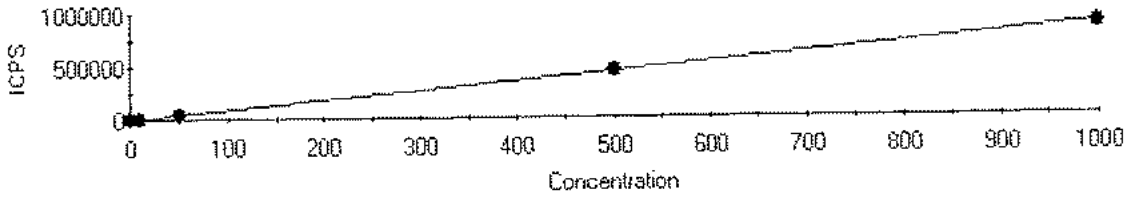
Acquisition parameters
Sweeps : 30

Run	Time	6Li	9Be	24Mg	25Mg	26Mg	45Sc	59Co	89Y	113In	115In	159Tb	206Pb	207Pb	208Pb	209Bi
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	3.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	Countrate	>4000	>4000	>4000	>4000	>4000	>5000	>4000	>5000	>10000	>20000	>20000	>20000	>20000	>20000	>20000
1	11:49:44	230550.16	99454.388	448640.38	56669.413	64598.702	1313550.5	747841.11	98673.701	55978.485	1381145.6	112201.49	252107.90	231333.01	549209.98	68416.480
2	11:49:51	235391.90	102265.32	448164.41	56146.181	65448.078	1306421.1	760191.79	92043.614	58303.027	1400196.6	111776.30	255390.99	234126.51	549570.84	68668.368
3	11:49:59	239965.84	101345.10	444042.70	55800.731	65286.926	1334378.6	757572.80	90151.462	56910.914	1399048.3	113602.06	254080.65	235966.51	554833.15	69313.234
4	11:50:07	241810.43	98494.017	437381.13	54673.915	64403.638	1306122.9	751079.08	90417.417	58507.669	1399089.7	114786.80	256481.04	234167.55	554181.84	70653.493
5	11:50:14	233952.10	99905.966	453537.98	55277.549	64635.630	1313060.0	748654.12	91343.270	58135.292	1413746.5	115039.97	257560.94	234690.78	554833.15	69870.812
x		236334.09	100292.96	446353.32	55713.558	64873.995	1314506.6	753067.78	90825.893	57567.078	1398629.3	113481.32	255238.31	234056.87	552525.79	69384.477
σ		4560.57	1507.18	6040.89	771.26	462.81	11740.25	5518.16	1280.06	1084.36	11586.50	1474.22	2068.04	1694.48	2877.36	908.55
%RSD		1.9297	1.5028	1.3534	1.3843	0.7134	0.8931	0.7328	1.4140	1.8837	0.8284	1.2991	0.8102	0.7240	0.5208	1.3094

Result : The performance report passed.

Fully Quant Calibration

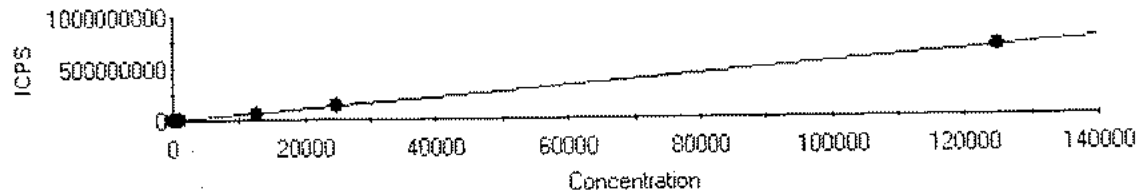
9Be FQ Block 1



Intercept CPS=8.523078 Intercept Conc=0.009616
Sensitivity=886.353677 Correlation Coeff=0.999893

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.000	0.000	8.88	0.00
SEQ-CAL4@S04	1.000	0.959	0.041	858.75	4.08
SEQ-CAL5@S05	10.000	10.145	0.145	9000.79	1.45
SEQ-CAL6@S06	50.000	48.965	1.035	43408.83	2.07
SEQ-CAL7@S07	500.000	506.196	6.196	448677.11	1.24
SEQ-CAL8@S08	1000.000	982.015	17.985	870421.53	1.80

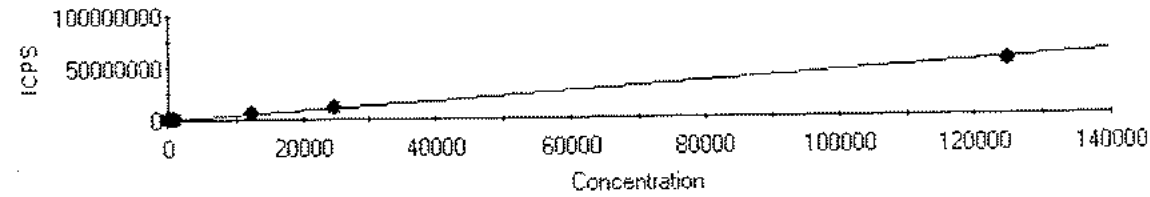
23Na FQ Block 1



Intercept CPS=44112.542826 Intercept Conc=8.258870
Sensitivity=5341.232430 Correlation Coeff=0.999990

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.049	0.049	43853.32	0.00
SEQ-CAL4@S04	500.000	499.949	0.051	2714455.31	0.01
SEQ-CAL5@S05	250.000	296.175	46.175	1626052.37	18.47
SEQ-CAL6@S06	1250.000	1237.798	12.202	6655478.45	0.98
SEQ-CAL7@S07	12500.000	12451.200	48.800	66548864.37	0.39
SEQ-CAL8@S08	25000.000	24793.176	206.824	132470226.46	0.83
SEQ-CALA@S10	125000.000	126688.995	1688.995	676719479.51	1.35

25Mg FQ Block 1

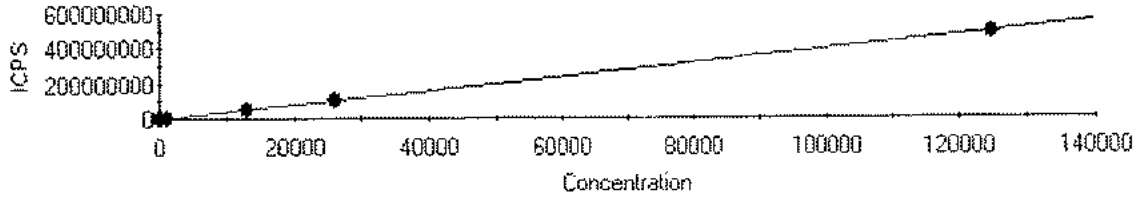


Intercept CPS=92.865237 Intercept Conc=0.208155
Sensitivity=446.134086 Correlation Coeff=0.999990

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.001	0.001	92.24	0.00
SEQ-CAL4@S04	500.000	522.481	22.481	233189.57	4.50
SEQ-CAL5@S05	250.000	269.100	19.100	120147.38	7.64
SEQ-CAL6@S06	1250.000	1341.346	91.346	598512.86	7.31
SEQ-CAL7@S07	12500.000	11675.431	824.569	5208900.75	6.60
SEQ-CAL8@S08	25000.000	23786.019	1213.981	10611846.65	4.86

SEQ-CALA@S10	125000.000	116280.633	8719.367	51876846.92	6.98

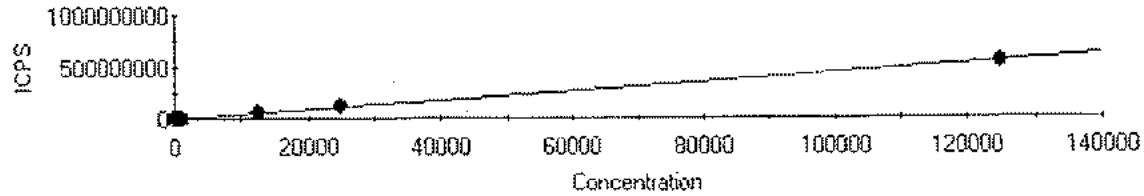
27Al FQ Block 1



Intercept CPS=3819.428267 Intercept Conc=0.971783
Sensitivity=3930.328902 Correlation Coeff=0.999995

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.005	0.005	3800.84	0.00
SEQ-CAL4@S04	20.000	22.311	2.311	91507.09	11.55
SEQ-CAL5@S05	260.000	291.108	31.108	1147967.88	11.96
SEQ-CAL6@S06	1300.000	1264.805	35.195	4974918.16	2.71
SEQ-CAL7@S07	13000.000	13011.269	11.269	51142384.81	0.09
SEQ-CAL8@S08	26000.000	25483.733	516.267	100163272.33	1.99
SEQ-CALA@S10	125000.000	124074.438	925.562	487657170.59	0.74

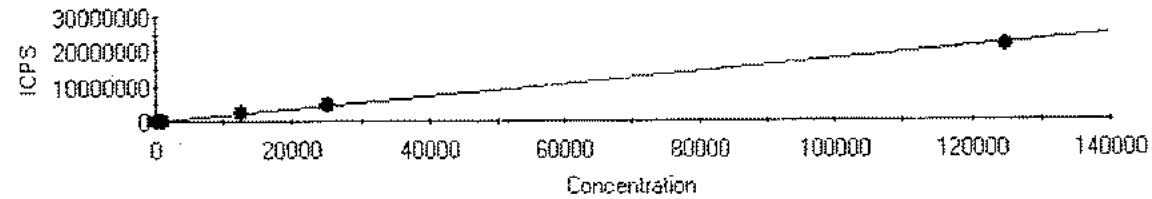
39K FQ Block 1



Intercept CPS=151977.917203 Intercept Conc=34.424682
Sensitivity=4414.795119 Correlation Coeff=0.999980

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.008	0.008	152012.08	0.00
SEQ-CAL4@S04	500.000	497.406	2.594	2347922.57	0.52
SEQ-CAL5@S05	250.000	250.261	0.261	1256828.90	0.10
SEQ-CAL6@S06	1250.000	1256.725	6.725	5700162.33	0.54
SEQ-CAL7@S07	12500.000	12824.099	324.099	56767747.99	2.59
SEQ-CAL8@S08	25000.000	25046.869	46.869	110728773.94	0.19
SEQ-CALA@S10	125000.000	122328.545	2671.455	540207439.42	2.14

44Ca FQ Block 1

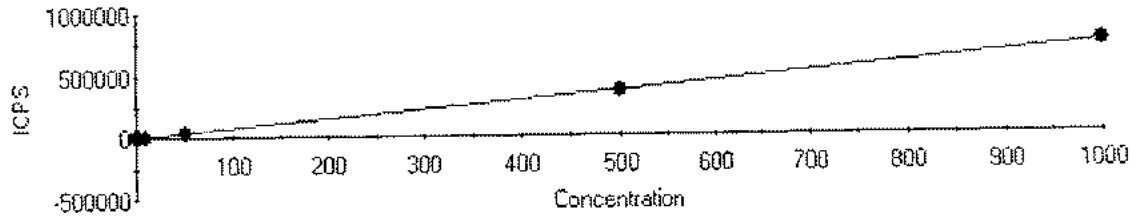


Intercept CPS=7753.734956 Intercept Conc=43.479652
Sensitivity=178.330187 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-3.979	3.979	7044.15	0.00
SEQ-CAL4@S04	500.000	515.094	15.094	99610.61	3.02
SEQ-CAL5@S05	250.000	258.844	8.844	53913.47	3.54
SEQ-CAL6@S06	1250.000	1299.240	49.240	239447.49	3.94
SEQ-CAL7@S07	12500.000	12225.609	274.391	2187949.04	2.20

SEQ-CAL8@S08	25000.000	24358.220	641.780	4351559.83	2.57
SEQ-CAL9@S10	125000.000	120461.191	4538.809	21489621.61	3.63

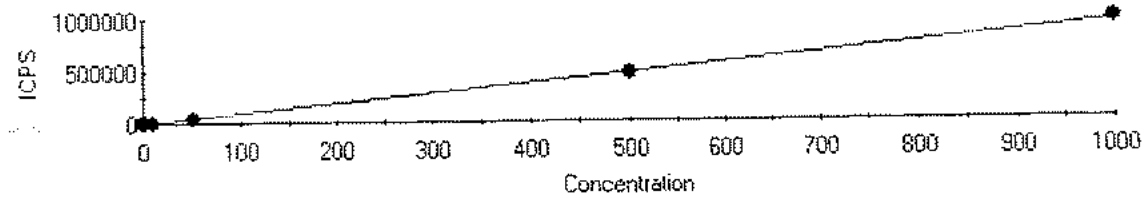
51V FQ Block 1



Intercept CPS=-63.841470 Intercept Conc=-0.086460
Sensitivity=738.399787 Correlation Coeff=0.999943

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.088	0.088	1.10	0.00
SEQ-CAL4@S04	5.000	4.802	0.198	3481.60	3.97
SEQ-CAL5@S05	10.000	9.340	0.660	6832.67	6.60
SEQ-CAL6@S06	50.000	46.658	3.342	34387.69	6.68
SEQ-CAL7@S07	500.000	491.540	8.460	362884.44	1.69
SEQ-CAL8@S08	1000.000	1005.661	5.661	742506.22	0.57

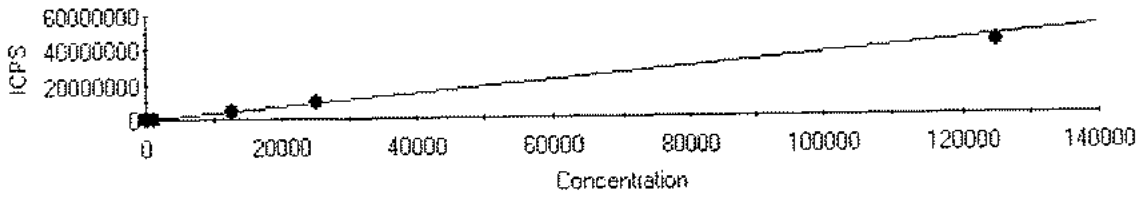
52Cr FQ Block 1



Intercept CPS=223.505293 Intercept Conc=0.235462
Sensitivity=949.219840 Correlation Coeff=0.999949

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.004	0.004	227.57	0.00
SEQ-CAL4@S04	2.000	1.930	0.070	2055.97	3.48
SEQ-CAL5@S05	10.000	9.520	0.480	9260.20	4.80
SEQ-CAL6@S06	50.000	47.813	2.187	45608.77	4.37
SEQ-CAL7@S07	500.000	495.304	4.696	470375.52	0.94
SEQ-CAL8@S08	1000.000	1012.446	12.446	961257.28	1.24

54Fe FQ Block 1

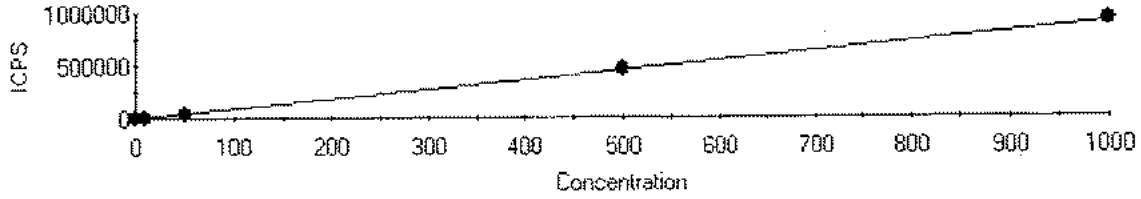


Intercept CPS=24274.941912 Intercept Conc=66.521181
Sensitivity=364.920491 Correlation Coeff=0.999891

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.873	0.873	23956.44	0.00
SEQ-CAL4@S04	200.000	206.041	6.041	99463.40	3.02
SEQ-CAL5@S05	250.000	269.756	19.756	122714.35	7.90
SEQ-CAL6@S06	1250.000	1342.476	92.476	514171.80	7.40
SEQ-CAL7@S07	12500.000	12188.067	311.933	4471950.22	2.50
SEQ-CAL8@S08	25000.000	24016.026	983.974	8788215.04	3.94

SEQ-CALA@S10 125000.000 112363.693 12636.307 41028088.99 10.11

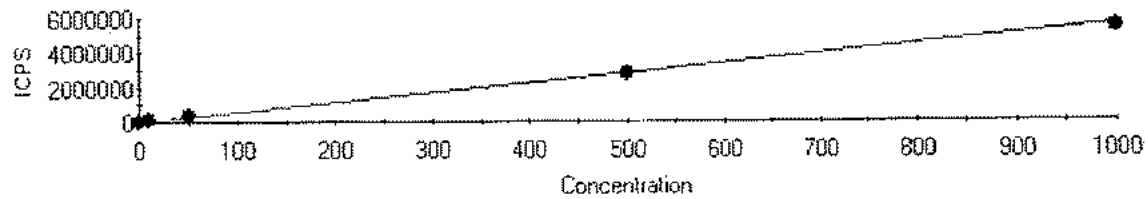
55Mn FQ Block 1



Intercept CPS=21.388099 Intercept Conc=0.023556
Sensitivity=907.961693 Correlation Coeff=0.999992

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.008	0.008	13.90	0.00
SEQ-CAL2@S02	0.200	0.204	0.004	206.82	2.12
SEQ-CAL4@S04	1.000	0.989	0.011	919.11	1.13
SEQ-CAL5@S05	10.000	9.691	0.309	8820.45	3.09
SEQ-CAL6@S06	50.000	47.376	2.624	43037.01	5.25
SEQ-CAL7@S07	500.000	507.408	7.408	460728.63	1.48
SEQ-CAL8@S08	1000.000	1020.813	20.813	926880.24	2.08

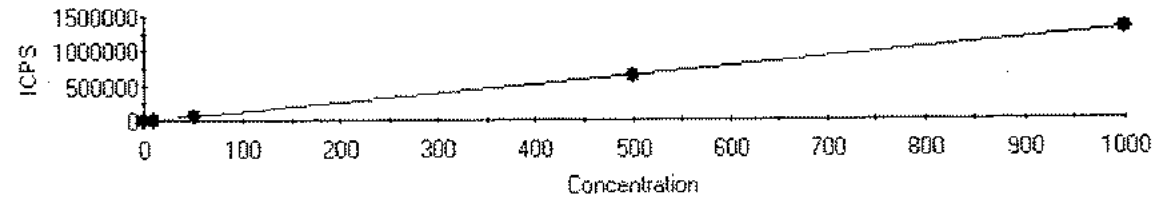
59Co FQ Block 1



Intercept CPS=129.098650 Intercept Conc=0.022626
Sensitivity=5705.852136 Correlation Coeff=0.999988

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.000	0.000	128.94	0.00
SEQ-CAL4@S04	1.000	1.047	0.047	6104.35	4.72
SEQ-CAL5@S05	10.000	10.458	0.458	59801.04	4.58
SEQ-CAL6@S06	50.000	52.539	2.539	299906.51	5.08
SEQ-CAL7@S07	500.000	481.354	18.646	2746666.27	3.73
SEQ-CAL8@S08	1000.000	956.847	43.153	5459754.22	4.32

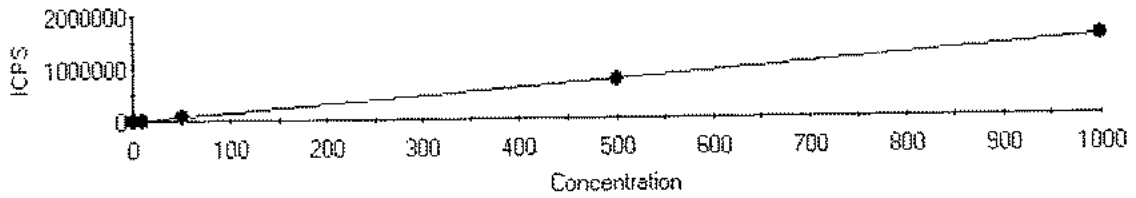
60Ni FQ Block 1



Intercept CPS=303.847313 Intercept Conc=0.233763
Sensitivity=1299.810677 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.039	0.039	253.51	0.00
SEQ-CAL4@S04	1.000	1.072	0.072	1696.98	7.18
SEQ-CAL5@S05	10.000	10.147	0.147	13492.98	1.47
SEQ-CAL6@S06	50.000	50.014	0.014	65312.81	0.03
SEQ-CAL7@S07	500.000	495.962	4.038	644960.81	0.81
SEQ-CAL8@S08	1000.000	997.211	2.789	1296489.79	0.28

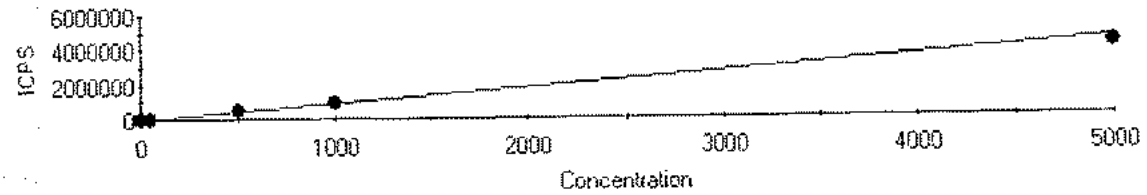
65Cu FQ Block 1



Intercept CPS=416.429461 Intercept Conc=0.275807
Sensitivity=1509.858207 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.006	0.006	406.66	0.00
SEQ-CAL4@S04	2.000	2.084	0.084	3563.59	4.22
SEQ-CAL5@S05	10.000	10.042	0.042	15578.92	0.42
SEQ-CAL6@S06	50.000	49.594	0.406	75296.76	0.81
SEQ-CAL7@S07	500.000	494.699	5.301	747342.37	1.06
SEQ-CAL8@S08	1000.000	993.329	6.671	1500202.02	0.67

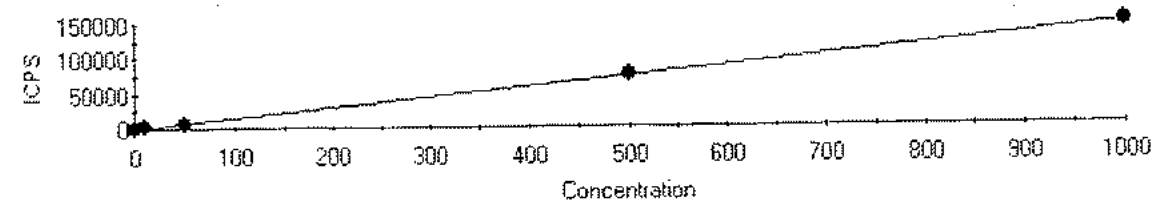
66Zn FQ Block 1



Intercept CPS=414.344079 Intercept Conc=0.458607
Sensitivity=903.483047 Correlation Coeff=0.999676

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.039	0.039	379.33	0.00
SEQ-CAL4@S04	2.000	2.013	0.013	2232.70	0.63
SEQ-CAL5@S05	10.000	10.893	0.893	10256.36	8.93
SEQ-CAL6@S06	50.000	52.729	2.729	48054.25	5.46
SEQ-CAL7@S07	500.000	517.520	17.520	467985.23	3.50
SEQ-CAL8@S08	1000.000	1019.181	19.181	921226.85	1.92
SEQ-CAL9@S09	5000.000	4559.295	440.705	4119660.44	8.81

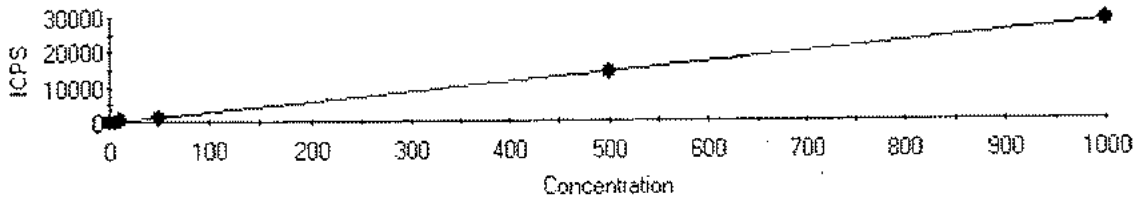
75As FQ Block 1



Intercept CPS=5.639259 Intercept Conc=0.037980
Sensitivity=148.480015 Correlation Coeff=0.999954

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.001	0.001	5.56	0.00
SEQ-CAL4@S04	1.000	1.024	0.024	157.65	2.38
SEQ-CAL5@S05	10.000	9.834	0.166	1465.72	1.66
SEQ-CAL6@S06	50.000	48.522	1.478	7210.13	2.96
SEQ-CAL7@S07	500.000	508.785	8.785	75549.99	1.76
SEQ-CAL8@S08	1000.000	998.039	1.961	148194.48	0.20

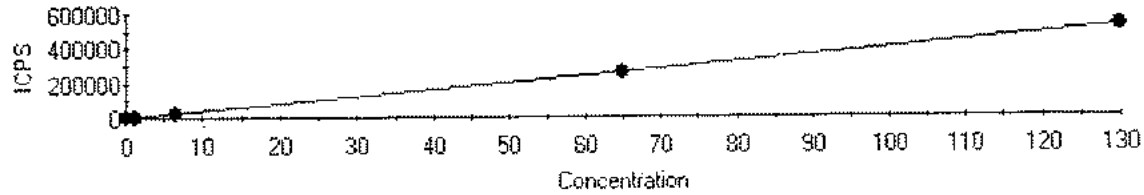
78Se FQ Block 1



Intercept CPS=9.145203 Intercept Conc=0.325777
Sensitivity=28.071955 Correlation Coeff=0.999991

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.010	0.010	8.85	0.00
SEQ-CAL4@S04	5.000	4.720	0.280	141.64	5.60
SEQ-CAL5@S05	10.000	10.563	0.563	305.66	5.63
SEQ-CAL6@S06	50.000	48.221	1.779	1362.81	3.56
SEQ-CAL7@S07	500.000	502.660	2.660	14119.81	0.53
SEQ-CAL8@S08	1000.000	997.534	2.466	28011.88	0.25

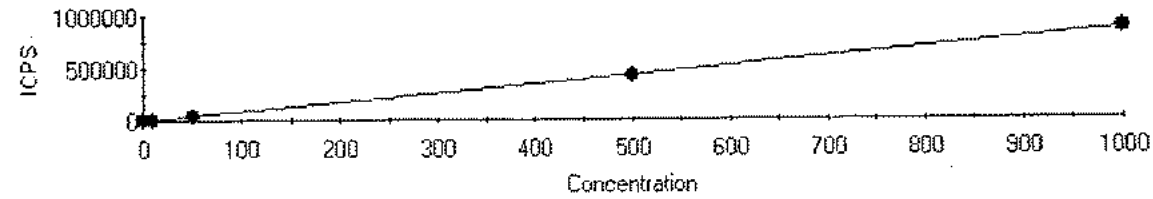
107Ag FQ Block 1



Intercept CPS=21.295619 Intercept Conc=0.005366
Sensitivity=3968.927453 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.000	0.000	21.29	0.00
SEQ-CAL4@S04	1.000	0.993	0.007	3963.16	0.68
SEQ-CAL5@S05	1.300	1.312	0.012	5229.17	0.94
SEQ-CAL6@S06	6.500	6.501	0.001	25825.13	0.02
SEQ-CAL7@S07	65.000	64.949	0.051	257799.75	0.08
SEQ-CAL8@S08	130.000	129.959	0.041	515820.45	0.03

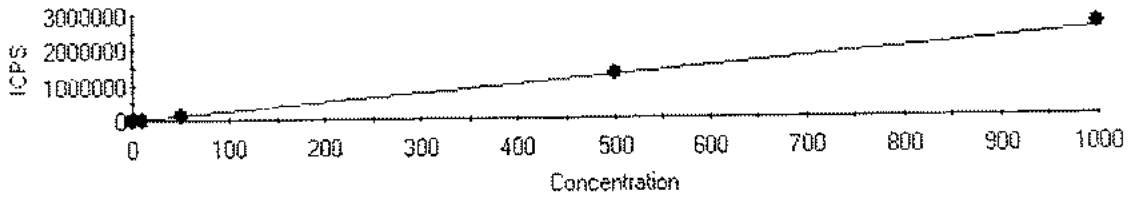
111Cd FQ Block 1



Intercept CPS=13.821846 Intercept Conc=0.016094
Sensitivity=858.816929 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.001	0.001	13.33	0.00
SEQ-CAL4@S04	1.000	1.099	0.099	957.29	9.86
SEQ-CAL5@S05	10.000	10.000	0.000	8601.74	0.00
SEQ-CAL6@S06	50.000	49.057	0.943	42145.11	1.89
SEQ-CAL7@S07	500.000	499.439	0.561	428940.51	0.11
SEQ-CAL8@S08	1000.000	997.651	2.349	856813.70	0.23

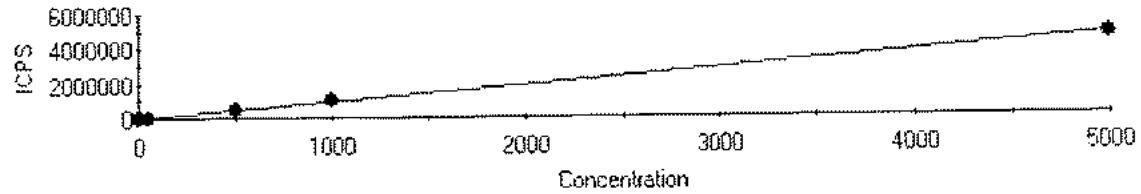
121Sb FQ Block 1



Intercept CPS=44.199313 Intercept Conc=0.017865
Sensitivity=2474.094064 Correlation Coeff=0.999890

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.001	0.001	47.45	0.00
SEQ-CAL4@S04	2.000	1.955	0.045	4880.85	2.25
SEQ-CAL5@S05	10.000	9.860	0.140	24439.72	1.40
SEQ-CAL6@S06	50.000	48.736	1.264	120621.06	2.53
SEQ-CAL7@S07	500.000	510.746	10.746	1263676.99	2.15
SEQ-CAL8@S08	1000.000	1054.657	54.657	2609365.68	5.47

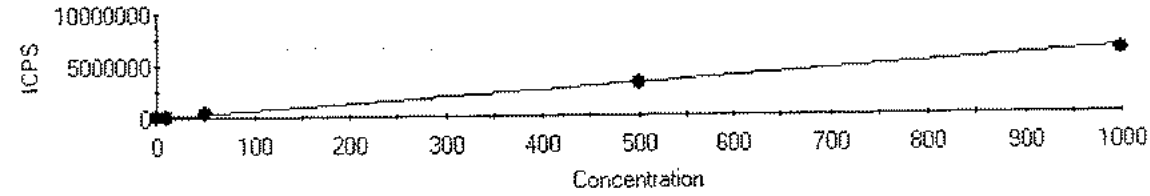
137Ba FQ Block 1



Intercept CPS=50.296703 Intercept Conc=0.052931
Sensitivity=950.231691 Correlation Coeff=0.999740

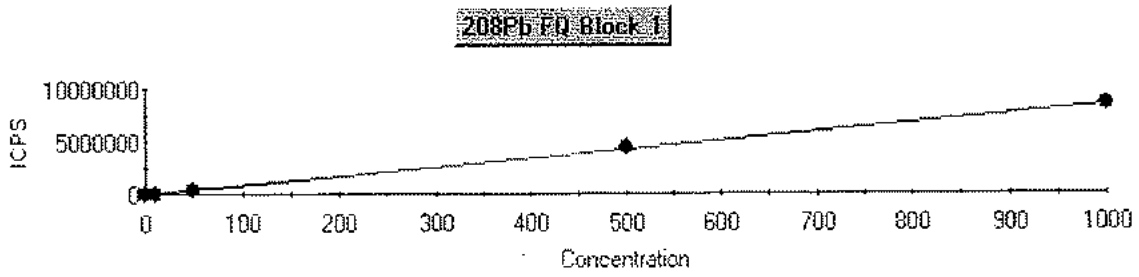
Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.000	0.000	49.93	0.00
SEQ-CAL5@S05	10.000	10.409	0.409	9941.38	4.09
SEQ-CAL6@S06	50.000	51.582	1.582	49064.74	3.16
SEQ-CAL7@S07	500.000	531.818	31.818	505400.39	6.36
SEQ-CAL8@S08	1000.000	1074.508	74.508	1021081.74	7.45
SEQ-CAL9@S09	5000.000	4842.628	157.372	4601669.15	3.15

205Tl FQ Block 1



Intercept CPS=119.727297 Intercept Conc=0.018701
Sensitivity=6402.251668 Correlation Coeff=0.999949

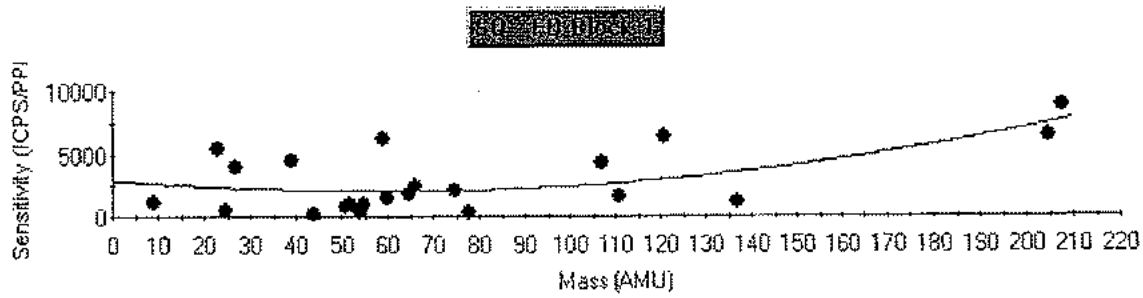
Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.004	0.004	91.49	0.00
SEQ-CAL2@S02	0.200	0.216	0.016	1503.47	8.07
SEQ-CAL3@S03	0.500	0.499	0.001	3314.94	0.18
SEQ-CAL4@S04	1.000	1.004	0.004	6544.66	0.35
SEQ-CAL5@S05	10.000	10.095	0.095	64750.00	0.95
SEQ-CAL6@S06	50.000	49.894	0.106	319550.78	0.21
SEQ-CAL7@S07	500.000	471.866	28.134	3021126.76	5.63
SEQ-CAL8@S08	1000.000	923.506	76.494	5912639.09	7.65



Intercept CPS=399.224903 Intercept Conc=0.047301
Sensitivity=8440.160616 Correlation Coeff=0.999760

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.000	0.000	398.92	0.00
SEQ-CAL4@S04	1.000	1.006	0.006	8891.54	0.62
SEQ-CAL5@S05	10.000	9.842	0.158	83464.22	1.58
SEQ-CAL6@S06	50.000	49.622	0.378	419220.61	0.76
SEQ-CAL7@S07	500.000	518.864	18.864	4379694.32	3.77
SEQ-CAL8@S08	1000.000	991.698	8.302	8370489.37	0.83

Semi Quant Calibration



Coeff 0=2923.529390 Coeff 1=-30.575529 Coeff 2=0.256035

Symbol	Mass	RSF	Available	Excluded	Sensitivity Measured	Corrected	Calculated	%Error
9Be	9.01	0.7500	1	1	886.35	1181.80	2668.77	125.8
23Na	22.99	1.0000	1	1	5341.23	5341.23	2355.93	-55.9
25Mg	24.99	0.9800	1	1	446.13	4502.86	2319.41	-48.5
27Al	26.98	0.9800	1	1	3930.33	4010.54	2284.95	-43.0
39K	38.96	1.0000	1	1	4414.80	4743.01	2120.90	-55.3
44Ca	43.96	0.9900	1	1	178.33	8456.88	2074.25	-75.5
51V	50.94	0.9900	1	1	738.39	747.64	2030.37	171.6
52Cr	51.94	0.9800	1	1	949.22	1156.39	2026.16	75.2
54Fe	53.94	0.9600	1	1	364.92	6442.81	2019.23	-68.7
55Mn	54.94	0.9500	1	1	907.96	955.75	2016.53	111.0
59Co	58.93	0.9300	1	1	5705.85	6135.32	2010.86	-67.2
60Ni	59.93	0.9100	1	1	1299.81	5460.10	2010.71	-63.2
65Cu	64.93	0.9000	1	1	1509.86	5427.44	2017.67	-62.8
66Zn	65.93	0.3750	1	1	903.48	8663.39	2020.60	-76.7
75As	74.92	0.0700	1	1	148.48	2121.14	2069.95	-2.4
78Se	77.92	0.1000	1	1	28.07	1188.99	2095.58	76.2
107Ag	106.91	0.9300	1	1	3968.93	8310.93	2580.99	-68.9
111Cd	110.90	0.5660	1	1	858.82	11798.95	2681.74	-77.3
121Sb	120.90	0.3900	1	1	2474.09	11080.93	2969.48	-73.2
137Ba	136.91	0.9100	1	1	950.23	9224.48	3536.47	-61.7
205Tl	204.97	1.0000	1	1	6402.25	9081.21	7413.33	-18.4
208Pb	207.98	0.9700	1	1	8440.16	16611.68	7639.14	-54.0

Dilution Corrected Concentrations

SEQ-CAL1@501 5/12/2016 12:00:43

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:43	101.7%	0.0052	-0.2229	0.0153	-0.0222	0.4852	-2.8160	100.3%	0.0240	0.1498	0.0195	-0.1210	0.7571	0.0303	0.0009
2	12:01:00	98.0%	0.0019	-0.0128	0.0018	0.0353	0.0444	2.7490	99.2%	-0.0079	0.0677	-0.0048	-0.1409	-1.5190	-0.0145	0.0003
3	12:01:17	100.3%	-0.0059	0.0901	-0.0223	-0.0274	-0.5064	-6.3720	100.5%	-0.0168	0.0464	-0.0018	6.5620	-1.8510	-0.0105	-0.0012
x		100.0%	0.0004	-0.0485	-0.0014	-0.0047	0.0077	-3.9790	100.0%	-0.0000	0.0880	0.0043	0.0000	-0.8728	-0.0083	-0.0000
σ		1.8%	0.0057	0.1595	0.0192	0.0348	0.4965	2.0770	0.7%	0.0219	0.0546	0.0133	6.3520	1.4178	0.0076	0.0011
%RSD		1.8	1406.0000	328.6000	1359.0000	736.1000	8420.0000	52.0800	0.7	0.0000	62.1100	309.3000	0.0000	162.3000	92.4400	3815.0000

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Sc	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:43	0.0313	0.0049	-0.0153	0.0294	-0.0105	0.0305	0.0068	0.3234	97.7%	0.0050	-0.0005	0.0015	0.0105	0.0038	100.0%
2	12:01:00	-0.0668	-0.0275	0.0031	-0.0158	0.0208	0.1036	0.1247	-2.4630	100.1%	-0.0016	0.0029	0.0096	-0.0049	-0.0037	101.4%
3	12:01:17	-0.0587	0.0032	-0.1030	-0.0152	-0.0183	-0.1652	-0.1310	2.1380	102.2%	-0.0034	-0.0020	-0.0081	-0.0055	-0.0001	98.6%
x		-0.0387	-0.0065	-0.0386	-0.0006	0.0003	-0.0104	0.0008	0.0000	100.0%	0.0000	-0.0009	0.0009	0.0000	0.0000	100.0%
σ		0.0435	0.0183	0.0620	0.0259	0.0160	0.1398	0.1278	2.3170	2.3%	0.0044	0.0026	0.0089	0.0091	0.0037	1.4%
%RSD		112.7000	282.2000	159.9000	4822.0000	0.0000	1339.8000	0.0003	0.0000	2.3	0.0000	0.0000	0.0000	0.0000	0.0000	1.4

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		
1	12:00:43	0.0049	0.0024	0.0034	-0.0001	96.7%	0.0021	-0.0035	-0.0023	97.3%	0.0000	0.0000	0.0008	96.7%		
2	12:01:00	-0.0149	-0.0003	0.0254	0.0033	99.5%	0.0054	-0.0003	-0.0037	99.7%	0.0000	-0.0067	0.0036	101.0%		
3	12:01:17	0.0184	-0.0021	-0.0287	-0.0049	103.4%	-0.0025	0.0062	0.0049	102.9%	0.0000	-0.0066	-0.0029	102.3%		
x		-0.0000	-0.0000	-0.0000	-0.0006	100.0%	0.0000	0.0013	-0.0004	100.0%	0.0000	-0.0044	-0.0000	100.0%		
σ		0.0167	0.0023	0.0272	0.0041	3.4%	0.0023	0.0062	0.0046	2.8%	0.0000	0.0028	0.0033	2.9%		
%RSD		0.0000	246200.0000	0.0000	709.0000	3.4	0.0000	475.4000	1185.0000	2.8	0.0000	47.1000	3964.0000	2.9		

SEQ-CAL2@502 5/12/2016 12:04:52

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:10	98.1%	0.2813	114.9000	113.8000	5.2930	128.6000	110.4000	97.7%	-0.0272	1.0440	0.4473	2.4200	44.5000	0.2045	0.2218
2	12:05:27	99.8%	0.2456	115.7000	114.5000	5.4710	123.8000	108.7000	95.9%	-0.0078	1.0330	0.4258	4.3680	49.2000	0.1951	0.2294
3	12:05:44	97.1%	0.2463	113.4000	112.6000	5.4190	123.0000	109.4000	96.2%	-0.0219	0.9411	0.4310	18.0000	45.7700	0.2090	0.2508
x		98.1%	0.2510	114.7000	113.6000	5.3940	125.5000	109.5000	96.6%	-0.0190	1.0060	0.4347	9.9330	46.4900	0.2042	0.2340
σ		1.0%	0.0258	1.1750	0.8327	0.0815	1.6990	0.8734	0.9%	0.0101	0.0566	0.0112	7.1550	2.4300	0.0050	0.0150
%RSD		1.0	11.1000	1.0246	0.3786	1.6960	1.3870	0.7976	1.0	53.0300	5.6280	2.5790	72.0500	5.2280	2.4300	6.4200

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:10	0.1228	0.7028	0.4183	0.2661	-0.0103	0.9206	0.0393	0.3307	100.3%	-0.0081	-0.0044	0.0009	0.0022	0.0003	98.4%
2	12:05:27	0.2325	0.7910	0.5815	0.1922	0.0211	1.0490	-0.1669	4.0370	103.8%	-0.0078	0.0021	-0.0057	0.0000	0.0103	100.8%
3	12:05:44	0.1561	0.6781	0.4674	0.2773	0.0056	1.0240	-0.1951	4.0020	103.8%	0.0027	-0.0017	-0.0032	-0.0036	-0.0039	99.7%
x		0.1705	0.7240	0.4424	0.2452	0.0055	0.9978	-0.1076	2.7910	102.7%	-0.0001	-0.0020	-0.0047	-0.0021	0.0022	99.6%
σ		0.0562	0.0593	0.0515	0.0462	0.0157	0.0680	0.1200	2.1320	2.1%	0.0078	0.0036	0.0048	0.0057	0.0073	1.2%
%RSD		32.9800	8.1950	11.6500	18.8600	286.8000	6.8115	119.8000	76.3900	2.0	8993.0000	176.8000	104.6900	272.9000	336.1000	1.2

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		
1	12:05:10	0.0065	0.2220	0.0347	0.2172	99.5%	0.0027	0.4395	2.3020	100.1%	0.0000	0.2122	0.2148	103.3%		
2	12:05:27	0.0146	0.2419	-0.0031	0.1452	100.5%	0.0074	0.4083	2.3900	102.9%	0.0000	0.1995	0.2116	105.6%		
3	12:05:44	0.0135	0.2356	-0.0096	0.1709	103.7%	0.0161	0.3952	2.2860	102.9%	0.0000	0.2367	0.2307	106.6%		
x		0.0115	0.2332	0.0073	0.1779	101.3%	0.0104	0.4159	2.3260	102.9%	0.0000	0.2161	0.2191	105.2%		
σ		0.0044	0.0101	0.0239	0.0368	2.2%	0.0049	0.0176	0.0558	1.6%	0.0000	0.0198	0.0107	1.7%		
%RSD		38.2300	4.3350	326.2000	20.6600	2.2	47.2800	5.1880	2.4000	1.6	0.0000	8.7560	4.6350	1.6		

SEQ-CAL3@503 5/12/2016 12:09:16

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:18	100.3%	0.4258	286.1000	258.8000	12.9700	248.0000	253.2000	98.7%	0.0219	2.5240	0.6984	7.1720	103.6000	0.5640	0.5237
2	12:09:35	100.0%	0.3182	285.7000	270.1000	13.5000	256.0000	262.4000	96.8%	-0.0310	2.3600	1.0340	17.6900	111.0000	0.6016	0.5369
3	12:09:52	94.7%	0.4851	286.8000	262.4000	12.4900	262.4000	267.7000	97.4%	-0.0463	2.5010	0.9571	11.1800	110.4000	0.4818	0.5475
x		98.3%	0.4767	286.2000	263.7800	13.3200	252.2000	257.3000	97.4%	-0.0181	2.4610	0.9521	12.0200	108.3000	0.5491	0.5360
σ		3.2%	0.0469	0.5820	5.8140	0.5036	4.4150	4.6670	1.1%	0.0353	0.0886	0.0663	5.3690	4.5920	0.0613	0.0119
%RSD		3.2	9.8440	0.2033	2.2040	2.2810	1.7500	1.8250	1.2	200.1000	3.6000	6.8860	44.1900	4.2400	11.1600	2.2220

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:18	0.5223	1.0190	1.2986	0.5304	0.1024	1.8690	0.1878	-0.8378	98.7%	0.0062	0.0016	-0.0076	-0.0061	-0.0028	99.2%
2	12:09:35	0.5537	1.1280	1.5110	0.3224	0.0272	2.4680	0.2268	-2.0230	100.6%	0.0027	-0.0089	-0.0064	0.0126	-0.0036	96.5%
3	12:09:52	0.5429	1.0300	1.2680	0.4267	0.0781	2.5640	0.0620	0.4463	103.6%	0.0065	-0.0078	0.0093	-0.0070	-0.0052	99.3%
x		0.5396	1.0590	1.3580	0.4332	0.0649	2.2870	0.1325	-0.8102	100.8%	0.0051	-0.0050	-0.0046	-0.0004	-0.0039	99.0%
σ		0.0159	0.0600	0.1323	0.0775	0.0404	0.3620	0.0847	1.2410	2.2%	0.0021	0.0059	0.0043	0.0107	0.0012	0.4%
%RSD		2.9540	5.6610	9.7386	17.8900	62.1900	15.8300	63.9100	153.2000	2.1	40.8200	118.7000	93.1400	2886.0000	31.9550	0.5

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		
1	12:09:18	0.0187	0.5300	0.0475	0.5238	98.7%	0.0311	0.9492	5.2300	98.5%	0.0000	0.4901	0.5297	103.2%		
2	12:09:35	0.0550	0.5291	0.0387	0.5480	101.2%	0.0192	0.9065	5.3700	100.6%	0.0000	0.4963	0.5481	106.5%		
3	12:09:52	0.0316	0.5046	0.0038	0.5436	103.4%	0.0209	0.9957	5.2530	102.6%	0.0000	0.5108	0.5369	106.2%		
x		0.0351	0.5212	0.0267	0.5551	101.1%	0.0238	0.9505	5.2840	100.6%	0.0000	0.4991	0.5379	105.6%		
σ		0.0190	0.0144	0.0231	0.0163	2.4%	0.0065	0.0346	0.0758	2.2%	0.0000	0.0106	0.0093	3.1%		
%RSD		53.9400	2.7640	86.7300	2.9400	2.3	27.4700	3.6930	1.4348	2.1	0.0000	2.1310	1.7270	2.9		

SEQ-CAL4@S04 5/12/2016 12:13:25

User Pre-Dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cr Q	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:25	98.8%	0.9850	<499.7000	523.3000	21.4100	<492.4000	516.6000	97.8%	0.0195	4.7620	1.8740	0.9470	201.8000	1.0020	0.9950
2	12:13:43	96.5%	1.0060	<504.9000	538.8000	22.6700	<494.2000	508.3000	98.1%	-0.0363	4.9550	2.0450	2.4860	204.6000	0.9598	1.0940
3	12:14:00	93.9%	0.9666	<505.7000	525.3300	22.8500	<505.1000	520.3000	95.1%	-0.0442	4.6850	1.8720	14.9700	211.7000	1.0010	1.0490
x		96.4%	0.9597	<499.9000	522.5500	22.3100	<497.4000	515.1000	96.7%	-0.0203	4.8020	1.9300	10.4700	206.0000	0.9887	1.0470
σ		2.5%	0.0510	<5.6420	3.3170	0.7854	<6.7350	6.1340	1.5%	0.0347	0.1374	0.0990	3.9690	5.0870	0.0251	0.0471
%RSD		2.6	5.3150	<1.1250	0.6349	3.5200	<1.3540	1.1910	1.5	170.9080	2.8610	5.1270	37.9100	2.4690	2.5260	4.5160

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:25	1.0010	2.0930	1.9320	1.1160	0.1015	4.3520	0.2389	-0.1675	98.1%	-0.0057	-0.0025	-0.0002	-0.0038	-0.0041	99.8%
2	12:13:43	1.1080	2.0150	2.0840	0.9758	0.2011	4.5930	0.1964	0.5041	102.2%	-0.0005	-0.0034	-0.0037	-0.0068	0.0029	98.2%
3	12:14:00	1.1060	2.1460	2.0210	0.9793	0.1344	5.2140	0.2359	0.4423	102.9%	-0.0035	-0.0007	-0.0024	0.0043	0.0007	99.3%
x		1.0720	2.0840	2.0130	1.0240	0.1457	4.7200	0.2228	0.3930	101.1%	-0.0032	-0.0022	-0.0021	-0.0018	-0.0002	99.1%
σ		0.0609	0.0668	0.0754	0.0801	0.0509	0.4448	0.0238	0.5276	2.5%	0.0025	0.0014	0.0018	0.0056	0.0036	0.9%
%RSD		5.6840	3.1650	3.7960	7.8350	34.9000	9.4250	10.6400	126.8000	2.5	81.3900	63.5700	85.3600	307.2000	1881.0000	0.9

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:25	0.0825	0.9819	0.0761	1.1010	98.0%	0.0044	1.9370	9.9050	97.5%	0.0000	1.0200	0.9757	97.6%
2	12:13:43	0.0823	1.0210	0.0652	1.0440	101.2%	0.0216	1.9090	10.4000	101.2%	0.0000	0.9950	1.0590	101.5%
3	12:14:00	0.0526	0.9770	0.0693	1.1510	102.0%	0.0048	2.0190	10.6000	101.5%	0.0000	0.9953	1.0340	103.8%
x		0.0658	0.9932	0.0674	1.0998	100.4%	0.0103	1.9550	10.3700	100.1%	0.0000	1.0048	1.0060	100.9%
σ		0.0153	0.0239	0.0081	0.0531	2.1%	0.0098	0.0576	0.4981	2.2%	0.0000	0.0145	0.0294	3.1%
%RSD		23.2300	2.4080	11.9500	4.8340	2.1	95.9100	2.9480	4.3210	2.2	0.0000	1.4470	2.9240	3.1

SEQ-CAL5@S05 5/12/2016 12:17:32

User Pre-Dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cr Q	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:32	100.4%	9.9940	<292.0000	269.4000	280.5000	<243.4000	254.3000	100.8%	-0.0122	9.1450	9.3940	49.8500	253.6000	9.7390	10.0000
2	12:17:49	99.5%	10.1000	<295.6000	272.4000	289.3000	<245.9000	259.4000	98.0%	-0.0245	9.5740	9.4310	12.8150	273.2000	9.8730	10.4500
3	12:18:06	94.4%	10.3400	<300.9000	274.4000	303.6000	<261.5000	262.9000	94.8%	-0.0451	9.3010	9.7350	45.3700	282.5000	9.4610	10.9300
x		98.1%	10.1500	<296.2000	269.1000	291.1000	<250.3000	268.8000	97.9%	-0.0274	9.3400	9.5200	35.7500	269.8000	9.6910	10.4600
σ		3.2%	0.1785	<4.4720	2.5530	11.6700	<9.8010	4.3320	3.0%	0.0169	0.2169	0.2872	19.9300	14.7700	0.2106	0.4634
%RSD		3.3	1.7590	<1.5100	0.8190	4.0080	<3.9190	1.6730	3.1	61.6400	2.3220	1.9660	55.7600	5.4750	2.1730	4.4310

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:32	9.6940	9.6430	10.7100	9.7580	0.5121	10.6280	0.5895	3.0800	98.5%	3.2150	5.6040	6.1550	3.5470	8.9380	100.9%
2	12:17:49	10.4100	10.0700	10.6500	10.1590	0.4317	11.0300	0.4225	3.7160	101.7%	3.3920	5.6760	5.8380	3.6130	9.3330	101.1%
3	12:18:06	10.3400	10.4100	11.2200	9.5970	0.3194	10.6400	0.6973	3.5080	103.2%	3.4300	5.7850	6.1720	3.6650	9.3820	101.6%
x		10.1500	10.0400	10.8900	9.8340	0.4211	10.5600	0.4564	1.0698	101.2%	3.3460	5.6860	6.0550	3.6098	9.2130	101.2%
σ		0.3938	0.3847	0.3747	0.2879	0.0968	0.4976	0.1576	3.9800	2.4%	0.1146	0.0913	0.1871	0.0591	0.2426	0.4%
%RSD		3.8810	3.8310	3.4390	2.9280	22.9800	4.7310	31.7500	372.3000	2.4	3.4270	1.5050	3.0900	1.6380	2.6420	0.4

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:32	0.5130	1.2850	0.4249	9.7690	98.9%	7.5830	9.8170	10.5200	96.0%	0.0000	10.1700	9.5990	100.3%
2	12:17:49	0.5064	1.3050	0.3724	10.0960	100.3%	9.7240	9.8070	10.2200	101.4%	0.0000	10.0500	9.9670	102.7%
3	12:18:06	0.5428	1.3470	0.3722	10.1400	103.1%	8.6630	9.9570	10.4800	103.8%	0.0000	10.0800	9.9390	105.1%
x		0.5207	1.3120	0.3898	10.0000	100.8%	8.4600	9.8600	10.4100	100.4%	0.0000	10.0900	9.8420	102.7%
σ		0.0194	0.0319	0.0304	0.2023	2.2%	0.4350	0.0842	0.1631	4.0%	0.0000	0.0196	0.2112	2.6%
%RSD		3.7320	2.4280	7.7860	2.0240	2.1	4.9060	0.8535	1.5670	4.0	0.0000	0.1936	2.1450	2.3

SEQ-CAL6@S06 5/12/2016 12:21:38

User Pre-Dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cr Q	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:38	100.9%	48.1700	<1246.0000	1333.0000	<1243.0000	<1242.0000	1274.0000	96.2%	0.0006	46.5700	47.5900	192.7000	1311.0000	46.7300	50.9400
2	12:21:56	99.0%	49.8100	<1236.0000	1343.0000	<1264.0000	<1246.0000	1298.0000	96.7%	-0.0106	45.9100	45.9700	146.1000	1352.0000	47.3300	52.6400
3	12:22:13	97.9%	48.9200	<1233.0000	1348.0000	<1287.0000	<1283.0000	1325.0000	95.8%	-0.0246	47.4800	48.4700	203.1000	1365.0000	48.6700	54.0300
x		99.2%	48.9600	<1238.0000	1341.0000	<1265.0000	<1252.0000	1299.0000	96.2%	-0.0115	46.6600	47.8100	180.0000	1342.0000	47.3800	52.5400
σ		1.5%	0.8187	<5.5260	7.4780	<22.0830	<22.5100	25.5700	0.4%	0.0126	0.7945	0.7649	31.4900	28.1600	0.6705	1.5490
%RSD		1.5	1.6720	<0.4505	0.5575	<1.7470	<1.7990	1.9680	0.5	109.6000	1.7030	1.6000	17.5000	2.0980	1.4150	2.9490

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:38	49.7300	48.4200	51.3500	49.5400	2.0160	49.6800	2.9270	1.0980	98.2%	16.1900	28.2580	29.4300	17.0800	44.0690	98.6%
2	12:21:56	49.8800	49.3500	52.7800	47.2000	2.2490	49.3200	2.7780	1.8030	100.7%	16.5100	28.3200	29.9800	17.3400	44.5900	100.4%
3	12:22:13	50.4400	51.0100	54.0600	48.8300	2.0790	48.6700	2.8690	1.3470	102.5%	16.5600	28.3200	30.2100	17.3400	46.0200	98.6%
x		50.0100	49.5900	52.7300	48.5200	2.1150	48.2200	2.8630	1.4160	100.5%	16.4200	28.3000	29.8700	17.2500	44.8900	99.2%
σ		0.3778	1.3130	1.3570	1.2010	0.1207	2.2180	0.0753	0.3578	2.2%	0.2050	0.0469	0.4015	0.1494	1.0150	1.0%
%RSD		0.7553	2.6480	2.5730	2.4750	5.7070	4.6000	2.6300	25.2700	2.2	1.2480	0.1444	1.3440	0.8660	2.2620	1.0

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:38	2.4100	6.5060	1.9070	47.4400	98.1%	40.0400	47.2400	50.5000	97.8%	0.0000	49.0000	48.6700	98.5%
2	12:21:56	2.6820	6.5890	2.0230	49.1600	101.1%	41.9300	48.9500	51.6000	100.6%	0.0000	50.5700	49.4400	101.6%
3	12:22:13	2.6260	6.4100	2.0530	50.5700	101.9%	42.6900	49.9300	52.4500	101.2%	0.0000	50.1100	50.7600	102.0%
x		2.5730	6.5010	1.9940	49.0600	100.4%	41.5500	48.7400	51.5600	100.5%	0.0000	49.8900	49.6200	100.7%
σ		0.1436	0.0895	0.0773	1.5649	2.0%	1.3670	1.2970	0.9931	2.7%	0.0000	0.8057	1.0540	1.9%
%RSD		5.5800	1.3770	3.8760	3.1880	2.0	3.2770	2.6620	1.9250	2.7	0.0000	1.6150	2.1250	1.9

SEQ-CAL7@507 5/12/2016 12:25:44

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl Q	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:36	95.4%	510.2000	<12520.0000	<11680.0000	<12940.0000	<12630.0000	<12020.0000	96.4%	0.0056	496.8000	498.0000	2127.0000	<11860.0000	505.5000	<467.3000
2	12:26:01	95.0%	508.8000	<12500.0000	<11590.0000	<12840.0000	<12560.0000	<12260.0000	95.6%	-0.0241	494.3000	496.4000	2213.0000	<12150.0000	511.4000	<482.3000
3	12:26:18	96.1%	499.6000	<12330.0000	<11760.0000	<12950.0000	<12960.0000	<12350.0000	94.0%	0.0097	483.6000	491.6000	2045.0000	<12570.0000	505.4000	<494.6000
x		95.5%	506.2000	<12458.0000	<11680.0000	<13010.0000	<12820.0000	<12230.0000	95.3%	-0.0029	491.5000	495.2000	2129.0000	<12190.0000	507.4000	<481.9000
σ		0.6%	5.7750	<101.0000	<82.0000	<57.7000	<173.4000	<149.4000	1.2%	0.0185	7.0284	3.3310	83.5950	<318.2000	3.4340	<13.6600
%RSD		0.6	1.1410	<0.8109	<0.7030	<0.4441	<1.3520	<1.1960	1.3	632.2000	1.4300	0.6726	3.9260	<2.6110	0.6767	<2.8390

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:36	486.8000	482.8000	503.9000	505.9000	19.4900	500.7000	30.9800	4.6830	95.7%	169.3000	284.8000	303.8000	178.8000	461.3000	94.1%
2	12:26:01	497.8000	493.6000	520.4000	516.7000	21.2500	509.2000	31.5400	1.2760	99.0%	169.8000	292.6000	313.1000	178.9000	472.8000	94.7%
3	12:26:18	503.3000	507.7000	528.3000	503.8000	20.6900	498.2000	30.5200	2.0359	100.8%	169.9000	295.6000	312.1000	181.0000	472.6000	96.4%
x		496.0000	494.7000	517.5000	508.8000	20.4700	502.7000	31.0100	2.0659	98.5%	168.3000	291.0000	309.7000	178.2000	468.9000	95.1%
σ		8.4170	12.4600	12.4500	6.9190	0.8505	5.7640	0.5133	1.7880	2.6%	2.8600	5.5420	5.0840	3.1640	6.5660	1.3%
%RSD		1.6970	2.5230	2.4056	1.3600	4.3492	1.1470	1.6490	87.0700	2.6	1.5800	1.9040	1.6420	1.7750	1.4000	1.2

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:36	25.1400	63.8400	18.4800	492.0000	95.7%	429.3000	500.1000	525.9000	95.6%	0.0000	<466.9000	520.8000	93.8%
2	12:26:01	26.2700	65.6400	19.0700	499.7000	98.2%	435.1000	513.4000	535.1000	98.5%	0.0000	<476.3000	527.4000	100.7%
3	12:26:18	26.0700	65.4100	19.3800	506.7000	99.0%	446.1000	518.7000	534.5000	101.6%	0.0000	<471.9000	518.9000	97.9%
x		25.8200	64.9500	18.8800	499.4000	97.6%	436.8000	510.7000	531.8000	98.7%	0.0000	<4.2490	9.6170	3.6%
σ		0.6040	0.9679	0.3421	7.3520	1.9%	8.5530	9.5890	5.1020	2.8%	0.0000	<3.0060	1.6530	3.7
%RSD		2.3390	1.4900	1.8120	1.4720	1.9	1.9580	1.8790	0.9594	2.8	0.0000			

SEQ-CAL8@508 5/12/2016 12:29:48

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl Q	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:29:48	98.1%	<1004.0000	<25159.0000	<23900.0000	<25200.0000	<24700.0000	<24010.0000	93.0%	0.0142	<1005.0000	<1018.0000	3137.0000	<23220.0000	<1025.0000	<926.3000
2	12:30:05	95.7%	975.6000	<24520.0000	<23870.0000	<25380.0000	<24830.0000	<24530.0000	92.0%	0.0141	<1003.0000	<1021.0000	3127.0000	<24120.0000	<1042.0000	<956.3000
3	12:30:22	94.6%	966.6000	<24618.0000	<23580.0000	<25970.0000	<25560.0000	<24540.0000	91.4%	-0.0043	<1005.0000	<1009.0000	2803.0000	<24700.0000	991.6000	<987.9000
x		96.1%	<982.0000	<24780.0000	<23790.0000	<25480.0000	<25050.0000	<24360.0000	92.1%	0.0030	<1006.0000	<1012.0000	3089.0000	<24070.0000	<1021.0000	<956.8000
σ		1.8%	<19.8600	<305.8500	<271.4000	<441.0000	<458.1000	<302.9000	0.8%	0.0106	<3.2280	<4.7590	205.6000	<745.3000	<25.9400	<30.8400
%RSD		1.9	<2.0220	<1.2330	<1.1200	<1.7310	<1.8130	<1.2400	0.9	357.8000	<0.3210	<0.4290	6.7660	<3.1040	<2.5410	<3.2230

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:29:48	972.1000	967.5000	983.3000	988.0000	40.9600	994.3000	59.0800	2.2770	91.9%	333.1000	583.5000	614.6000	254.2000	947.2000	91.5%
2	12:30:05	<1992.0000	<1002.0000	1028.0000	<1005.0000	40.7400	<1007.0000	59.2200	2.1250	94.1%	344.3000	595.2000	634.4000	367.3000	985.5000	91.8%
3	12:30:22	<1917.0000	<1919.0000	1047.0000	<1001.0000	39.5300	991.5000	58.4200	9.5170	93.5%	353.1000	617.2000	650.3000	375.3000	1000.0000	93.5%
x		<997.2000	<993.3000	1019.0000	<926.0000	40.4200	<997.5000	58.9100	6.3070	93.2%	343.5000	598.7000	633.1000	384.9000	977.5000	92.3%
σ		<22.9600	<22.7500	32.5000	<9.0160	0.7811	<8.0980	0.4271	3.7900	1.1%	9.5950	17.0800	17.9000	9.7850	27.3300	1.1%
%RSD		<2.3029	<2.2910	3.1890	<0.9034	1.9330	<0.8118	0.7251	60.1000	1.2	2.9100	2.8530	2.8260	2.6810	2.7960	1.2

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:29:48	50.4900	127.8000	37.4700	985.8000	88.4%	862.2000	<1016.0000	1058.0000	90.9%	0.0000	<930.8000	<977.9000	89.8%
2	12:30:05	50.1200	<130.4000	38.4600	992.6000	92.0%	908.7000	<1061.0000	1087.0000	95.7%	0.0000	<938.5000	<1000.0000	92.1%
3	12:30:22	52.1000	<131.7000	38.7600	<1011.0000	93.6%	897.5000	<1062.0000	1079.0000	98.4%	0.0000	<918.2000	<998.8000	95.3%
x		50.9000	<198.0000	38.2100	<997.7000	91.3%	889.8000	<1055.0000	1075.0000	95.0%	0.0000	<929.5000	<991.2000	92.4%
σ		1.0528	<2.0070	0.6855	<15.0100	2.7%	9.0030	<16.3830	14.5200	3.8%	0.0000	<8.1850	<12.1150	2.8%
%RSD		2.0680	<1.5440	1.7420	<1.5050	2.9	1.0010	<1.5540	1.3880	4.0	0.0000	<0.8918	<1.2210	3.0

SEQ-CAL9@509 5/12/2016 12:33:53

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl Q	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:53	102.6%	0.3213	14.7600	11.1400	11.7200	11.4400	8.7010	98.4%	-0.0081	0.4835	0.4119	-27.4200	19.0100	<4546.0000	0.3573
2	12:34:10	102.7%	0.3763	14.4500	11.2400	11.9100	13.8100	7.4210	97.9%	-0.0158	0.4489	0.4073	-22.5600	12.4900	<4527.0000	0.3803
3	12:34:27	99.2%	0.3513	14.1200	11.9200	12.0500	14.5500	4.7400	96.7%	-0.0342	0.4250	0.3599	-19.2100	13.3800	<4521.0000	0.3749
x		101.5%	0.3496	14.4400	11.4000	11.9000	13.0400	6.9540	97.7%	-0.0194	0.4525	0.3931	-23.2000	11.9700	<4531.0000	0.3749
σ		2.0%	0.0275	0.3207	0.3684	0.1661	0.5638	2.0220	0.9%	0.0134	0.0294	0.0288	4.1810	1.7390	<22.8400	0.0156
%RSD		2.0	7.8760	2.2210	3.2320	1.3970	4.0450	29.0700	0.9	69.2100	6.5020	7.3230	17.2200	14.5300	<0.2834	4.1610

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:53	0.4011	1.8300	<4443.0000	0.4239	0.6220	0.5152	-0.1586	3.4030	96.5%	0.1614	0.3018	0.3501	0.2026	0.4252	98.8%
2	12:34:10	0.3973	1.9060	<4623.0000	0.4582	0.0056	0.0718	0.0649	0.1414	99.2%	0.1443	0.2615	0.2956	0.1643	0.2814	99.5%
3	12:34:27	0.3417	1.8030	<5612.0000	0.4217	-0.0101	0.3621	0.0325	0.2297	99.4%	0.1892	0.3400	0.3628	0.2026	0.4900	97.7%
x		0.3800	1.8460	<5559.0000	0.4346	0.0858	0.3167	-0.0204	1.4250	98.4%	0.1620	0.3011	0.3362	0.1965	0.4322	98.7%
σ		0.0333	0.0530	<309.8000	0.0265	0.0161	0.2253	0.1208	1.7380	1.6%	0.0180	0.0393	0.0257	0.0186	0.0546	0.9%
%RSD		8.7500	2.8710	<7.7110	6.7050	275.5000	71.1400	593.0000	122.0000	1.7	11.0800	13.0400	10.6100	5.3720	12.6300	1.0

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:53	0.0736	0.0439	0.0359	0.3453	95.2%	0.4671	0.4222	<4822.0000	93.4%	0.0000	0.7139	0.3812	95.7%
2	12:34:10	0.0508	0.0458	0.0291	0.3737	98.3%	0.5121	0.4446	<4872.0000	96.5%	0.0000	0.6561	0.4166	98.8%
3	12:34:27	0.0867	0.0497	0.0610	0.3811	100.6%	0.4541	0.4519	<4928.0000	98.8%	0.0000	0.6584	0.3918	100.4%
x		0.0737	0.0464	0.0546	0.3667	96.6%	0.4778	0.4394	<4943.0000	96.2%	0.0000	0.6761	0.3965	98.3%
σ		0.0130	0.0028	0.0250	0.0189	2.7%	0.0304	0.0154	<25.8290	2.7%	0.0000	0.0326	0.0182	2.4%
%RSD		17.5900	6.1730	45.7600	5.1420	2.8	6.3700	3.5050	<0.5233	2.8	0.0000	4.8430	4.5890	2.4

SEQ-CALAQS10 5/12/2016 12:37:58

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:58	88.8%	0.0286	=1281500.0000	=1526200.0000	=122300.0000	=1313000.0000	=1174000.0000	85.9%	-0.0023	0.0005	0.5004	-20.3700	=1089000.0000	0.2988	0.6540
2	12:38:15	90.8%	0.0403	=1235000.0000	=1550000.0000	=122700.0000	=1215000.0000	=1205000.0000	87.3%	0.0100	0.1191	0.4880	-19.1000	=1112000.0000	0.1054	0.6319
3	12:38:32	87.3%	0.0249	=1284000.0000	=1137500.0000	=127200.0000	=1242000.0000	=1235000.0000	86.2%	0.0047	0.1284	0.4969	-20.6300	=1215000.0000	0.3303	0.6207
X		89.0%	0.0312	=1268700.0000	=1316360.0000	=124100.0000	=1272300.0000	=1204500.0000	86.5%	0.0041	0.1087	0.4951	-20.0300	=1124000.0000	0.2449	0.6355
σ		1.7%	0.0088	=26670.0000	=213700.0000	=2736.0000	=16090.0000	=30230.0000	1.1%	0.0062	0.0247	0.0064	0.8176	=45550.0000	0.1218	0.0169
%RSD		1.9	25.6700	=2.1790	=13.1750	=2.2050	=1.3150	=2.5150	1.3	149.2500	22.7100	1.2930	-4.0810	=3.0750	48.7300	2.6430

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	90Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:58	1.3950	1.6440	1.7570	0.2433	0.0123	0.2022	-0.3765	7.0880	81.5%	0.0307	0.1222	0.4537	0.1013	0.1557	82.5%
2	12:38:15	1.4350	1.8380	1.6500	0.2714	-0.0265	-0.0393	-0.4923	8.7290	83.8%	0.1087	0.1584	0.4761	0.0817	0.1627	82.2%
3	12:38:32	1.4690	1.7880	1.7760	0.2682	0.0131	-0.0604	-0.1218	8.8150	84.9%	0.0755	0.1697	0.4519	0.0853	0.1606	80.6%
X		1.4330	1.7570	1.7270	0.2616	-0.0004	0.0283	0.3302	8.2110	83.4%	0.0916	0.1501	0.4606	0.0894	0.1597	81.8%
σ		0.0371	0.1004	0.0680	0.0154	0.0226	0.1522	0.1895	0.3530	1.7%	0.0166	0.0246	0.0135	0.0105	0.0035	1.0%
%RSD		2.5900	5.7160	3.9390	5.8950	6275.0000	538.6000	57.4000	49.1600	2.0	18.1600	16.5300	2.9310	11.6600	2.2600	1.2

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:58	0.0078	0.0139	0.0672	0.0734	77.1%	0.0847	0.3620	0.2624	78.6%	0.0000	0.1243	0.1497	72.1%
2	12:38:15	0.0259	0.0143	0.0336	0.1278	80.3%	0.0752	0.3798	0.2380	81.2%	0.0000	0.1214	0.1351	76.5%
3	12:38:32	0.0025	0.0160	0.0242	0.0685	81.7%	0.0894	0.4456	0.2095	84.1%	0.0000	0.1187	0.1315	77.0%
X		0.0121	0.0147	0.0450	0.0882	79.7%	0.0844	0.3958	0.2370	82.0%	0.0000	0.1215	0.1356	75.2%
σ		0.0122	0.0011	0.0192	0.0301	2.3%	0.0051	0.0440	0.0259	2.9%	0.0000	0.0028	0.0044	2.7%
%RSD		101.4000	7.5310	42.7400	34.0700	2.9	6.0470	11.1200	11.1800	3.6	0.0000	2.3020	3.2130	3.5

SEQ-ICV1@7CV01 5/12/2016 12:42:01 QC Status: PASS (Initial: Fail.)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:21	105.3%	102.5000	=2056.0000	1311.0000	=493.4050	=1854.0000	2013.0000	101.7%	-0.0075	102.2000	101.2000	329.1000	1057.0000	101.9000	101.6000
2	12:42:37	100.2%	105.7000	=2136.0000	1326.0000	=507.2000	=1911.0000	2067.0000	99.4%	-0.0494	102.0000	101.2000	386.7000	1083.0000	103.0000	105.5000
3	12:42:54	100.3%	101.3000	=2080.0000	1313.0000	=498.8050	=1909.0000	2057.0000	100.2%	-0.0243	98.5900	98.1200	435.2000	1072.0000	102.4000	103.8000
X		102.0%	104.210%	=103.581%	108.397%	=99.162%	=94.367%	102.033%	100.3%	-0.0271	100.923%	102.210%	383.7000	1071.0000	102.448%	104.884%
σ		2.9%	n/a	=n/a	n/a	=n/a	=n/a	n/a	0.9%	0.0211	n/a	n/a	53.0900	12.6600	n/a	n/a
%RSD		2.9	2.1820	=1.9360	0.6283	=1.3950	=3.7200	1.3690	0.9	77.8800	2.0060	1.7690	13.8400	1.1820	0.5145	1.8920

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:21	97.6800	98.1400	207.9000	211.3000	9.4040	218.3000	13.2500	-1.1480	94.3%	0.0184	0.0061	0.0191	0.0056	0.0105	99.5%
2	12:42:37	101.3000	100.6000	213.6000	211.1000	8.8810	213.4000	12.5380	-0.4079	96.6%	0.0253	-0.0005	0.0169	0.0110	0.0071	99.7%
3	12:42:54	100.8000	100.1000	210.4000	206.1000	8.5060	206.6900	12.5000	-2.2330	98.3%	0.0184	0.0065	0.0206	0.0073	0.0112	103.4%
X		101.984%	101.633%	105.319%	105.279%	8.9510	105.851%	12.7960	-1.2630	96.4%	0.0207	0.0040	0.0188	0.0080	0.0096	100.9%
σ		n/a	n/a	n/a	n/a	0.4825	n/a	0.4008	0.9177	2.0%	0.0040	0.0039	0.0015	0.0028	0.0022	2.2%
%RSD		1.9800	1.2930	1.3460	1.4710	5.3950	2.7650	3.1330	72.6600	2.1	19.2400	97.8100	9.9560	34.6800	22.6800	2.1

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:21	5.2840	104.0000	3.8440	99.2900	94.2%	0.0450	109.9000	106.0000	91.4%	0.0000	218.4000	205.1000	93.4%
2	12:42:37	5.2860	104.1000	3.8519	102.0000	94.4%	0.0294	201.6000	109.4000	95.7%	0.0000	214.6000	203.7000	96.9%
3	12:42:54	5.2690	102.6000	3.9210	100.2000	96.8%	0.0420	200.7000	105.0000	96.1%	0.0000	217.8000	206.0000	96.2%
X		5.2800	104.627%	3.8690	101.526%	95.1%	0.0388	101.716%	106.803%	94.4%	0.0000	105.822%	102.788%	95.5%
σ		0.0091	n/a	0.0711	n/a	1.5%	0.0083	n/a	n/a	2.6%	0.0000	n/a	n/a	1.8%
%RSD		0.1731	0.3105	1.8300	1.3790	1.6	21.3800	0.9848	2.1440	2.8	0.0000	0.9571	1.0680	1.9

SEQ-ICB@1CB01 5/12/2016 12:46:28 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:28	102.0%	0.0199	6.1060	0.3558	0.2432	2.6910	-5.8240	98.9%	-0.0154	0.0462	0.0139	-7.4530	-1.9720	0.0112	0.0062
2	12:46:46	99.5%	0.0055	5.6850	0.4888	0.2351	1.7910	-5.6240	99.7%	-0.0357	0.0143	0.0303	-5.3180	-2.9120	0.0301	0.0010
3	12:47:03	98.6%	0.0094	4.8990	0.4050	0.2180	1.3930	-5.1450	98.7%	-0.0470	0.0651	0.0358	-9.4450	-2.3220	0.0115	0.0034
X		100.1%	0.0116	5.5630	0.4148	0.2321	2.0250	-5.5990	99.1%	-0.0332	0.0429	0.0267	-7.4650	-2.4190	0.0176	0.0035
σ		1.8%	0.0075	0.6127	0.0695	0.0128	0.7759	1.3420	0.5%	0.0161	0.0270	0.0114	2.0640	0.4717	0.0108	0.0026
%RSD		1.8	64.1800	11.0100	16.7600	5.5300	38.3200	20.3300	0.5	48.8400	63.0700	42.6400	27.6700	19.5800	61.5300	74.8400

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:28	-0.0280	0.0121	-0.0534	0.0811	-0.0106	0.0286	-0.2170	3.5770	94.4%	-0.0035	0.0171	0.0207	0.0072	0.0044	100.5%
2	12:46:46	-0.0144	-0.0123	-0.0256	0.0449	-0.0265	-0.0071	0.0004	0.1742	97.9%	-0.0056	0.0056	0.0029	0.0030	0.0102	99.4%
3	12:47:03	-0.0289	0.0143	-0.0038	0.0146	-0.0265	-0.0081	0.1408	-2.7339	99.2%	0.0075	0.0031	-0.0033	0.0039	0.0101	99.2%
X		-0.0304	0.0047	-0.0276	0.0469	-0.0212	0.0045	-0.0252	0.3391	97.0%	-0.0005	0.0069	0.0067	0.0047	0.0083	99.9%
σ		0.0055	0.0147	0.0249	0.0331	0.0092	0.0299	0.1803	3.1580	2.2%	0.0078	0.0089	0.0125	0.0022	0.0033	0.6%
%RSD		11.5400	314.4800	90.2600	71.1000	43.3100	467.0000	714.3000	931.6000	2.8	1503.0000	128.8000	185.0000	47.3200	40.3500	0.6

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:28	0.0058	0.0030	0.0660	0.0603	94.5%	0.0128	0.1755	-0.0113	91.1%	0.0000	0.0322	0.0178	99.5%
2	12:46:46	0.0195	0.0015	0.0193	0.0158	97.1%	0.0170	0.0962	0.0044	95.2%	0.0000	0.0319	0.0212	98.3%
3	12:47:03	0.0098	0.0073	0.0052	0.0150	95.9%	0.0270	0.1203	0.0077	95.7%	0.0000	0.0319	0.0203	98.3%
X		0.0117	0.0055	0.0302	0.0303	97.2%	0.0190	0.1140	0.0003	94.5%	0.0000	0.0320	0.0197	98.3%
σ		0.0068	0.0035	0.0318	0.0087	2.7%	0.0073	0.0156	0.0230	3.0%	0.0000	0.0001	0.0018	2.9%
%RSD		58.0800	63.1500	105.5900	84.5800	2.8	38.4700	13.7200	223.6000	3.2	0.0000	0.4670	8.9810	3.1

SEQ-IFA@ICSA01 5/12/2016 12:50:36 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:36	86.3%	0.2911	>1016000.0000	>94730.0000	>97080.0000	>98420.0000	>95950.0000	86.4%	476.3000	-0.5556	20.6400	73.7200	>658560.0000	6.5680	1.3040
2	12:50:53	85.5%	0.3054	>1024500.0000	>95700.0000	>101000.0000	>103100.0000	>100700.0000	84.9%	487.8000	-0.2701	20.7500	38.5530	>937700.0000	6.7380	1.3320
3	12:51:10	80.7%	0.7132	>1044000.0000	>92910.0000	>101400.0000	>102400.0000	>100600.0000	84.9%	490.5000	-8.3362	20.3300	49.8600	>946800.0000	6.5530	1.3650
x		83.5%	#DIV/0!	>1031500.0000	>94450.0000	>100100.0000	>101300.0000	>99110.0000	85.4%	485.5000	-29.461%	98.023%	54.0400	>926400.0000	94.566%	133.497%
σ		2.8%	n/a	>1644.0000	>1470.0000	>1930.0000	>2510.0000	>2736.0000	0.9%	6.3850	n/a	n/a	17.9500	>2438.0000	n/a	n/a
%RSD		3.3	18.3800	>1.5890	>1.5510	>1.9280	>2.4920	>2.7600	1.0	1.3160	38.5900	1.1450	33.2200	>2.6210	1.5528	2.4330

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:36	5.9820	8.0160	11.8300	0.3262	-0.6070	0.1557	-0.7538	12.5100	81.8%	702.0000	1237.0000	1328.0000	745.3000	>1817.0000	82.2%
2	12:50:53	6.2180	7.6540	11.9100	0.3078	-0.0265	-0.0851	-0.2125	4.6380	85.6%	720.1000	>1151.0000	>1224.0000	766.7000	>1835.0000	82.2%
3	12:51:10	6.2000	7.9730	11.6500	0.3585	-0.0072	0.1033	-0.4970	6.7970	83.5%	714.5000	>1177.0000	>1256.0000	757.9000	>1834.0000	82.5%
x		107.219%	99.347%	107.228%	338.662%	-0.013%	19.323%	-0.457%	8.649%	83.9%	712.8000	1188.667%	1269.333%	756.667%	>1828.667%	82.5%
σ		n/a	n/a	n/a	n/a	0.0112	n/a	0.2708	3.9390	3.3%	10.8500	>51.5500	>62.5400	11.1900	>17.1300	0.2%
%RSD		2.1400	1.0600	1.1500	7.7290	82.1700	218.5000	55.5100	-55.5400	3.9	1.5200	>4.3780	>4.9750	1.4770	>0.9341	0.6

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		
1	12:50:36	0.0003	0.0121	1.0030	-0.9530	81.5%	0.1192	1.1450	1.6630	83.3%	0.0000	0.0244	4.3620	81.3%		
2	12:50:53	0.0173	0.0054	0.8682	-0.7410	85.4%	0.1552	1.1270	1.6710	88.4%	0.0000	0.0214	4.4830	85.5%		
3	12:51:10	-0.0024	0.0100	0.8395	-0.6443	86.6%	0.1471	1.1469	1.6610	91.2%	0.0000	0.0344	4.3650	88.6%		
x		0.0051	#DIV/0!	0.9035	-120.872%	84.5%	0.1405	75.966%	138.770%	87.6%	0.0000	#DIV/0!	109.408%	85.1%		
σ		0.0107	n/a	0.0871	n/a	2.7%	0.0189	n/a	n/a	4.0%	0.0000	n/a	n/a	3.7%		
%RSD		210.6000	37.1700	9.6430	12.5300	3.2	12.4300	0.9673	0.5204	4.6	0.0000	25.5400	2.1600	4.3		

SEQ-IFB@ICSAB01 5/12/2016 12:54:42 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:42	87.0%	19.2700	>1030000.0000	>92020.0000	>95190.0000	>96360.0000	>95520.0000	87.9%	469.9000	20.2200	41.4700	149.7000	>59170.0000	27.9400	20.9400
2	12:54:59	82.6%	20.3100	>1028000.0000	>91210.0000	>93750.0000	>99610.0000	>96320.0000	88.7%	481.3000	19.7600	40.0600	115.1000	>91220.0000	26.9200	21.6200
3	12:55:16	83.6%	19.7900	>1015000.0000	>90920.0000	>93750.0000	>98740.0000	>96550.0000	88.7%	480.6000	19.9400	40.3800	160.3000	>92310.0000	27.1700	21.2500
x		84.4%	104.260%	>1024000.0000	>91490.0000	>94290.0000	>98580.0000	>96130.0000	88.4%	477.2000	109.116%	101.591%	141.7000	>91060.0000	101.271%	107.189%
σ		2.3%	n/a	>870.2000	>570.1000	>2512.0000	>1698.0000	>836.1000	0.4%	6.4080	n/a	n/a	23.6400	>1779.0000	n/a	n/a
%RSD		2.7	2.6350	>0.8809	>0.6239	>2.5560	>1.7200	>0.8537	0.5	1.3430	1.1510	1.8190	16.6900	>1.9540	1.9340	2.0410

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:42	23.9500	25.8800	28.9100	21.1500	0.4944	17.8900	0.8134	5.1160	86.6%	677.2000	1183.0000	1264.0000	719.8000	>1752.0000	82.8%
2	12:54:59	24.5800	26.0500	29.9900	20.9800	0.9196	19.4400	0.8388	5.1780	86.6%	697.9000	1233.0000	1324.0000	748.8000	>1783.0000	86.1%
3	12:55:16	24.1900	26.1200	29.9000	20.6000	0.7377	18.5600	1.0350	5.1660	89.5%	708.0000	1253.0000	>1183.0000	737.1000	>1781.0000	84.9%
x		101.139%	104.076%	102.967%	110.039%	0.7175	98.049%	0.8956	4.8380	88.2%	694.4000	1226.0000	>1256.0000	15.3300	>27.6500	1.8%
σ		n/a	n/a	n/a	n/a	0.2133	n/a	0.1210	1.6160	1.4%	15.7000	36.2700	>65.2700	5.1840	2.0290	2.1
%RSD		1.5400	0.4699	2.0370	1.3500	29.7400	4.1770	13.5100	33.0700	1.6	2.2620	2.9398	>5.1840	2.0290	>1.5180	2.1

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		
1	12:54:42	0.9390	17.7200	1.5510	17.8400	84.8%	0.1551	20.0200	23.0400	86.7%	0.0000	19.7100	24.6100	87.7%		
2	12:54:59	0.9731	18.5700	1.7430	17.5000	87.4%	0.1679	20.8100	22.6900	90.6%	0.0000	20.0900	24.8500	89.9%		
3	12:55:16	0.9851	17.9200	1.5840	17.0800	90.2%	0.1435	20.5900	23.3000	94.1%	0.0000	20.7200	25.8900	87.5%		
x		0.9658	100.393%	1.6260	87.361%	87.5%	0.1555	93.058%	104.891%	90.5%	0.0000	96.061%	100.465%	85.4%		
σ		0.0239	n/a	0.1028	n/a	2.7%	0.0122	n/a	n/a	3.7%	0.0000	n/a	n/a	2.5%		
%RSD		2.4740	2.4530	6.3250	2.1930	3.1	7.8570	1.9910	0.8944	4.1	0.0000	2.5300	2.7870	2.9		

SEQ-CCV@CCV01 5/12/2016 12:59:46 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:00:03	91.3%	506.7000	>61590.0000	>55590.0000	>58980.0000	>56360.0000	>57610.0000	93.4%	0.0240	504.1000	503.6000	2173.0000	>56980.0000	505.7000	>455.5000
2	13:00:20	90.7%	498.5000	>60670.0000	>54260.0000	>59160.0000	>57680.0000	>56630.0000	95.1%	0.0393	522.7000	523.1000	2089.0000	>55590.0000	525.0000	>463.7600
3	13:00:37	91.8%	491.4000	>59350.0000	>55490.0000	>59060.0000	>58690.0000	>57340.0000	93.1%	0.0208	512.7000	513.8000	2208.0000	>55590.0000	525.0000	>463.7600
x		91.2%	99.772%	>100.755%	>92.184%	>97.160%	>96.753%	>95.319%	93.9%	0.0280	102.630%	102.700%	2223.0000	>97.074%	103.904%	>91.668%
σ		0.5%	n/a	>n/a	>n/a	>n/a	>n/a	>n/a	1.1%	0.0095	n/a	n/a	165.3000	>n/a	n/a	>n/a
%RSD		0.6	1.5350	>1.8180	>0.8699	>0.4694	>0.6045	>0.8876	1.2	35.2500	1.8090	1.9020	7.4350	>0.5670	2.3130	>1.8130

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:00:03	469.0000	460.7000	2445.0000	493.3000	20.4100	479.4000	28.5900	6.8600	91.2%	169.9000	292.2000	311.2000	179.5000	471.1000	92.0%
2	13:00:20	467.8000	464.9500	2435.0000	507.3000	21.6700	492.2000	30.8000	6.7900	92.9%	169.6000	292.0000	310.9000	177.4000	473.6000	90.4%
3	13:00:37	473.7000	471.1000	2487.0000	513.9000	20.1700	494.8000	30.9500	6.7140	93.7%	171.6000	295.1000	312.1000	179.8000	475.6000	90.8%
x		94.039%	93.118%	98.219%	100.966%	20.7500	97.750%	30.1100	6.7880	92.6%	170.3000	293.1000	311.4000	178.9000	473.4000	90.8%
σ		n/a	n/a	n/a	n/a	0.8083	n/a	1.1240	2.0730	1.3%	1.0750	1.7400	0.6135	1.1060	2.2650	1.1%
%RSD		0.6555	1.1200	1.1320	2.0780	3.8950	1.6920	4.3560	43.2900	1.4	0.6312	0.5937	0.1970	0.7393	0.4781	1.2

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		
1	13:00:03	24.8400	61.9500	18.3900	472.5000	89.2%	429.9000	497.4000	>2400.0000	93.0%	0.0000	521.2000	534.9000	84.8%		
2	13:00:20	24.8600	61.5600	18.0100	477.6000	91.1%	432.6000	508.2000	>2403.0000	94.6%	0.0000	530.4000	540.5800	86.6%		
3	13:00:37	24.5800	61.6300	18.1400	475.2000	91.7%	435.2000	507.2000	>2406.0000	94.8%	0.0000	530.1000	537.8000	88.8%		
x		24.7300	94.944%	18.1800	95.021%	90.7%	432.6000	100.887%	>96.126%	94.2%	0.0000	n/a	n/a	1.9%		
σ		0.1635	n/a	0.1943	n/a	1.3%	2.6410	n/a	>n/a	1.0%	0.0000	0.9926	0.5138	2.2		
%RSD		0.6604	0.3338	1.0690	0.5331	1.5	0.6105	1.2200	>0.1208	1.0	0.0000					

SEQ-CCB@CCB01 5/12/2016 13:04:11 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl Q	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:04:11	104.6%	0.0263	7.1140	2.3910	2.5700	6.1090	-0.0480	104.6%	-0.0463	0.1091	0.0333	-19.1500	1.0630	0.0565	0.0158
2	13:04:28	100.6%	0.0352	6.4040	2.2550	3.1610	6.5780	-0.0320	103.4%	-0.0133	0.0924	0.0635	-14.4600	1.5790	0.0305	0.0182
3	13:04:45	100.1%	0.0167	6.3780	3.0520	4.2340	5.2240	-0.3520	101.1%	-0.0373	0.1078	0.0403	-17.7300	1.4480	0.0240	0.0226
X		101.8%	0.0261	6.6320	2.5660	3.3220	6.0700	-1.4770	103.1%	-0.0323	0.1031	0.0457	-17.1160	1.3640	0.0370	0.0189
σ		2.5%	0.0093	0.4177	0.4263	0.8435	0.3288	0.9747	1.8%	0.0171	0.0093	0.0158	2.4830	0.2681	0.0172	0.0034
%RSD		2.4	35.5300	6.2980	16.6100	25.3900	5.4180	28.0300	1.8	52.9200	9.0300	34.6600	14.0400	19.6600	46.4700	18.2700

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:04:11	-0.0226	0.0551	0.1351	0.0565	-0.0265	0.1739	-0.2042	3.5970	103.5%	0.0398	0.1036	0.0908	0.0742	0.1523	103.0%
2	13:04:28	-0.0472	0.0543	0.0788	0.0475	0.0039	0.0512	0.0951	-0.9824	102.5%	0.0614	0.0680	0.0685	0.0551	0.1083	103.0%
3	13:04:45	-0.0229	0.0171	0.1709	0.0556	-0.0265	-0.1353	0.0567	-0.5701	104.3%	0.0742	0.0876	0.1076	0.0413	0.1798	103.9%
X		-0.0309	0.0422	0.1292	0.0532	-0.0163	0.0299	-0.0175	0.6816	102.4%	0.0584	0.0864	0.0890	0.0569	0.1429	104.0%
σ		0.0142	0.0217	0.0467	0.0049	0.0176	0.1557	0.1628	2.5348	1.9%	0.0175	0.0178	0.0196	0.0165	0.0400	1.0%
%RSD		45.8600	51.4400	36.1100	9.2000	167.5000	520.6000	911.4000	371.7000	1.8	29.9500	20.6200	22.0000	29.0800	27.8200	1.0

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:04:11	0.0067	0.0014	0.0054	0.0087	98.7%	0.1071	0.1053	0.0368	96.9%	0.0000	0.0334	0.0179	95.7%
2	13:04:28	0.0213	0.0004	0.0143	0.0295	101.5%	0.1408	0.1324	0.0549	100.2%	0.0000	0.0369	0.0254	98.9%
3	13:04:45	-0.0041	0.0019	0.0192	0.0258	103.0%	0.1512	0.1120	0.1121	101.1%	0.0000	0.0390	0.0272	100.1%
X		0.0080	0.0010	0.0230	0.0284	101.1%	0.1357	0.1099	0.0679	99.4%	0.0000	0.0364	0.0235	98.2%
σ		0.0128	0.0012	0.0110	0.0030	2.2%	0.0248	0.0040	0.0393	2.2%	0.0000	0.0028	0.0050	2.3%
%RSD		160.6000	126.6000	48.0900	10.5100	2.2	18.2800	3.6050	57.8900	2.2	0.0000	7.6998	21.0700	2.3

QE09009-BLK1@PBW01@MH4213@46115@LEM 5/12/2016 13:07:40 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl Q	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:40	104.7%	0.0120	7.0010	0.8806	1.0720	4.1740	-1.1550	104.3%	0.0216	0.0348	0.2314	25.3300	-0.4299	0.0193	-0.0012
2	13:07:57	97.5%	0.0211	7.2620	0.6047	1.0780	5.0920	-1.3570	101.8%	-0.0286	0.0457	0.2460	31.6700	-0.3574	0.0708	0.0075
3	13:08:14	100.1%	0.0054	6.8350	0.6232	0.9893	4.6660	-2.4290	100.7%	-0.0254	0.0317	0.2347	32.6700	1.8190	0.0268	0.0075
X		100.8%	0.0128	7.0330	0.7693	1.0460	4.6428	-1.6440	102.3%	-0.0108	0.0374	0.2374	30.0300	0.3437	0.0370	0.0046
σ		3.6%	0.0079	0.2155	0.1323	0.0495	0.4595	0.6794	1.9%	0.0281	0.0074	0.0077	4.0970	1.2760	0.0293	0.0051
%RSD		3.6	61.6400	3.0640	17.1900	4.7200	9.8900	41.3100	1.8	260.3000	19.6900	3.2240	13.6500	371.7000	79.3200	109.5000

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:40	0.0062	0.2768	0.7450	0.0741	-0.0115	-0.1405	-0.1061	1.6550	102.5%	0.0095	0.0294	0.0189	0.0072	0.0136	103.8%
2	13:07:57	-0.0095	0.2843	0.7588	0.0774	-0.0110	-0.0568	-0.0849	1.8350	105.1%	0.0074	0.0239	0.0359	0.0050	0.0615	103.0%
3	13:08:14	-0.0184	0.2536	0.8329	0.0563	-0.0110	0.0577	0.0052	0.2916	106.0%	0.0209	0.0233	0.0379	0.0269	0.0490	103.2%
X		-0.0072	0.2716	0.7772	0.0526	-0.0112	-0.0465	-0.0616	1.2610	104.5%	0.0126	0.0256	0.0309	0.0137	0.0407	104.3%
σ		0.0124	0.0160	0.0491	0.0236	0.0003	0.0995	0.0597	0.8440	1.8%	0.0073	0.0034	0.0105	0.0132	0.0260	2.1%
%RSD		171.7000	5.8890	6.3220	44.8000	2.7870	213.8000	98.9300	66.9500	1.7	57.8300	13.1900	33.9100	96.7000	63.7700	2.1

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:40	-0.0105	0.0004	0.0249	0.0104	102.1%	0.0711	0.0815	0.2633	99.1%	0.0000	0.0018	0.0061	99.1%
2	13:07:57	0.0130	0.0067	0.0027	-0.0024	104.5%	0.0668	0.0946	0.1332	102.9%	0.0000	0.0036	-0.0029	102.3%
3	13:08:14	0.0120	0.0088	-0.0204	0.0055	102.8%	0.0818	0.0894	0.1916	105.3%	0.0000	0.0109	0.0124	104.5%
X		0.0048	0.0053	0.0024	0.0049	104.5%	0.0732	0.0885	0.1677	102.4%	0.0000	0.0051	0.0052	102.0%
σ		0.0132	0.0044	0.0226	0.0059	2.4%	0.0027	0.0066	0.0292	3.1%	0.0000	0.0054	0.0077	2.7%
%RSD		274.0000	82.8100	944.4000	121.3000	2.3	10.5600	7.4520	17.9600	3.1	0.0000	116.2000	147.8000	2.6

QE09009-BSI@LCS01 5/12/2016 13:11:00 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl Q	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:00	99.6%	2.0490	-1002.0000	1035.0000	42.6700	-996.7000	1008.0000	101.9%	-0.0368	9.7800	4.0810	31.4100	398.8000	1.8160	2.0250
2	13:11:18	100.4%	2.0990	-944.4000	1055.0000	42.8800	-1005.0000	1039.0000	101.8%	-0.0308	9.9120	4.0768	24.5400	419.5000	1.9568	2.1010
3	13:11:34	98.1%	2.0780	-968.8000	1039.0000	45.1800	-1003.0000	1043.0000	98.7%	-0.0306	9.8380	4.1426	27.9400	425.1000	2.0730	2.1330
X		99.3%	103.765%	-972.150%	104.292%	108.958%	-99.9643%	103.002%	100.9%	-0.0327	98.435%	102.485%	27.9600	414.5000	97.425%	104.385%
σ		1.2%	n/a	n/a	n/a	n/a	n/a	n/a	1.1%	0.0035	n/a	n/a	3.4360	13.8500	n/a	n/a
%RSD		1.2	1.2240	-2.9520	0.9944	3.1930	-0.7760	1.8210	1.1	10.6500	0.6745	0.6922	12.2900	3.3440	6.6190	2.5520

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:00	1.9330	4.0980	4.7330	2.0070	0.3961	9.6750	0.4719	2.5090	104.0%	0.0305	0.0203	0.0297	0.0082	0.0272	102.1%
2	13:11:18	2.0980	4.2900	4.5450	2.0630	0.3149	10.5200	0.3144	6.6160	106.9%	0.0139	0.0108	0.0092	0.0005	0.0130	103.0%
3	13:11:34	2.1240	4.3720	4.9160	2.1680	0.3516	10.5400	0.3465	2.1440	107.4%	0.0082	0.0217	0.0132	0.0139	0.0161	101.4%
X		102.585%	106.913%	121.656%	103.973%	0.3542	102.437%	0.3776	4.0000	106.1%	0.0175	0.0176	0.0174	0.0075	0.0188	102.1%
σ		n/a	n/a	n/a	n/a	0.0407	n/a	0.0833	2.2110	1.8%	0.0116	0.0059	0.0069	0.0067	0.0075	0.8%
%RSD		5.6420	3.3370	2.3030	3.9300	11.4800	5.7880	22.0500	54.0500	1.7	66.0000	33.5500	62.3900	89.4700	39.8300	0.8

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:00	0.1444	1.9540	0.1307	1.9640	101.8%	0.0464	3.9320	21.0500	100.7%	0.0000	1.8660	2.0280	98.2%
2	13:11:18	0.0954	2.0480	0.1262	2.1410	104.9%	0.0538	3.9920	21.3700	102.2%	0.0000	1.9580	1.9830	102.0%
3	13:11:34	0.1322	2.0980	0.0746	1.8260	105.0%	0.0502	3.9980	20.9700	104.3%	0.0000	1.8810	2.0050	103.5%
X		0.1240	101.114%	0.1105	98.852%	103.9%	0.0501	99.343%	105.654%	102.4%	0.0000	95.083%	100.272%	101.2%
σ		0.0255	n/a	0.0317	n/a	1.8%	0.0037	n/a	n/a	1.8%	0.0000	n/a	n/a	2.7%
%RSD		20.5900	2.9770	28.2290	7.9880	1.8	7.4160	0.9210	0.9830	1.8	0.0000	2.5980	1.1360	2.7

6050095-01@MH4213 5/12/2016 13:14:18

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:18	90.4%	0.0111	>67316.0000	>54840.0000	>89.6100	>2739.0000	≈139400.0000	93.1%	0.6412	5.2160	0.8490	66.2300	102.6000	19.0600	0.3580
2	13:14:35	88.8%	0.0072	>68320.0000	>56340.0000	103.3000	>2846.0000	≈144000.0000	93.6%	0.7467	5.2460	0.8306	68.6400	116.3000	17.6400	0.3757
3	13:14:52	89.0%	0.0199	>68150.0000	>55870.0000	104.7000	>2826.0000	≈146500.0000	93.6%	0.6917	5.1240	0.8202	68.1500	110.0000	18.3800	0.3670
x		89.4%	0.0128	>67958.0000	>56053.0000	>99.1300	>2801.0000	≈143450.0000	93.6%	0.0529	0.1869	0.0352	1.9020	6.8890	0.7130	0.0083
σ		0.9%	0.0065	>561.5000	>1091.0000	>8.4480	>61.9000	≈3651.0000	0.2%	0.0529	0.1869	0.0352	1.9020	6.8890	0.7130	0.0083
%RSD		1.0	58.6700	>0.8764	>1.9460	>8.5200	>2.2100	≈2.5470	0.3	7.6426	3.6420	4.2870	2.7930	6.2650	3.8800	2.1740

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:18	2.0360	0.9609	4.0270	1.8340	0.0660	1.2330	0.2624	6.9190	97.9%	0.1331	0.2190	0.1996	0.1428	0.2873	86.3%
2	13:14:35	2.0630	1.0780	3.9890	2.1150	0.0821	0.4362	-0.2712	6.0980	99.6%	0.1714	0.1883	0.2366	0.1138	0.3708	88.3%
3	13:14:52	2.1500	1.1160	4.3010	1.8836	0.0442	1.2940	-0.2440	4.9980	100.0%	0.1396	0.1698	0.2034	0.1548	0.3728	90.4%
x		2.0830	1.0500	4.1060	1.9440	0.0641	0.9879	0.2592	6.0050	99.2%	0.1480	0.1974	0.2138	0.1369	0.3436	88.1%
σ		0.0596	0.0787	0.1704	0.1498	0.0190	0.4787	0.0139	0.9639	1.1%	0.0205	0.0248	0.0205	0.0208	0.0488	2.0%
%RSD		2.8630	7.4920	4.1500	7.7050	29.6400	48.4600	5.3570	16.0500	1.1	13.8700	12.9100	9.6420	15.1700	14.2100	2.3

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:18	0.0544	0.0018	0.0456	0.1379	92.0%	0.0448	0.2589	74.8600	95.7%	0.0000	0.0335	0.0148	67.6%
2	13:14:35	0.0315	0.0033	0.0339	0.0922	95.8%	0.0462	0.2520	76.2000	100.3%	0.0000	0.0254	0.0082	92.3%
3	13:14:52	0.0336	0.0076	0.0311	0.1279	96.2%	0.0672	0.2674	77.5600	101.4%	0.0000	0.0347	0.0062	92.0%
x		0.0265	0.0042	0.0369	0.1193	94.7%	0.0528	0.2594	76.0700	99.1%	0.0000	0.0312	0.0031	90.6%
σ		0.0106	0.0030	0.0077	0.0240	2.3%	0.0125	0.0077	1.9538	3.0%	0.0000	0.0051	0.0150	2.6%
%RSD		39.9000	71.0900	20.8500	20.1500	2.4	23.7700	2.9720	2.5680	3.0	0.0000	16.1900	2.4850	2.9

QE09009-MS1@MH4213S 5/12/2016 13:18:05 QC Status: PASS (Intnl: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:05	96.3%	48.7500	>68090.0000	>54530.0000	>1870.0000	>2573.0000	≈139700.0000	101.1%	0.3259	519.5000	205.5000	749.9000	102.6000	510.2000	>444.5000
2	13:18:22	94.4%	49.2300	>68460.0000	>56810.0000	>1568.0000	>2691.0000	≈139200.0000	97.6%	0.3495	509.0000	199.6000	800.3000	112.8000	508.3000	>369.2000
3	13:18:39	94.2%	47.5600	>67690.0000	>55830.0000	>1991.0000	>2777.0000	≈145600.0000	98.0%	0.2792	511.6000	200.5000	895.5000	115.2000	501.0000	>478.0000
x		94.9%	48.9997%	>68080.0000	>56660.0000	>1943.0000	>2680.0000	≈141760.0000	98.2%	0.3152	101.650%	100.520%	815.2000	110.2000	97.624%	>92.672%
σ		1.2%	n/a	>385.3000	>2055.0000	>64.3500	>102.6000	≈5705.0000	2.6%	0.0356	n/a	n/a	73.9400	6.6670	n/a	n/a
%RSD		1.2	1.7760	>0.5671	>3.6280	>3.3140	>3.8280	≈4.0250	2.7	11.2400	1.0510	1.5670	9.0690	6.0490	0.9632	>3.7240

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:05	444.5000	217.9000	456.5000	43.0900	4.2650	98.9200	5.2250	7.9440	96.3%	0.1579	0.2031	0.2482	0.1487	0.3837	90.0%
2	13:18:22	473.0000	229.1000	475.7000	43.0600	4.0440	99.7000	6.0870	5.4060	97.8%	0.1444	0.2129	0.2437	0.1614	0.3390	91.1%
3	13:18:39	483.0000	233.6000	483.7000	42.6500	3.9710	100.3000	5.7070	5.6760	98.5%	0.1613	0.2403	0.2306	0.1515	0.3955	91.1%
x		92.951%	90.321%	93.141%	102.643%	4.0930	98.651%	5.6730	6.3420	97.6%	0.1546	0.2168	0.2408	0.1669	0.3727	90.4%
σ		n/a	n/a	n/a	n/a	0.1616	n/a	0.4317	1.3940	1.3%	0.0090	0.0193	0.0092	0.0181	0.0296	1.2%
%RSD		6.2750	3.5620	3.6490	3.8130	3.9430	0.6933	7.6100	21.9800	1.3	5.7930	8.8040	3.8040	11.2900	7.9950	1.3

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:05	2.4420	46.7800	1.8540	45.9400	93.0%	0.0482	95.5100	>1961.0000	95.2%	0.0000	47.1500	20.5800	87.5%
2	13:18:22	2.6020	48.9600	1.8750	47.7800	94.8%	0.0621	98.7300	>1941.0000	98.7%	0.0000	47.6500	21.4900	88.4%
3	13:18:39	2.3880	48.0200	1.8800	47.1000	97.9%	0.0486	97.4600	>1988.0000	100.5%	0.0000	48.7600	21.1800	92.5%
x		2.4800	95.228%	1.8730	93.273%	95.2%	0.0530	96.973%	>95.228%	98.1%	0.0000	95.641%	>92.369%	89.5%
σ		0.1100	n/a	0.0181	n/a	2.5%	0.0079	n/a	>0.0	2.7%	0.0000	n/a	n/a	2.6%
%RSD		4.4360	1.5210	0.9662	1.5190	2.6	14.9400	1.6620	>0.7671	2.7	0.0000	1.7230	>1.7370	2.9

QE09009-DUP1@MH4213D 5/12/2016 13:22:01

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:22:01	100.5%	0.0166	>66830.0000	>52110.0000	41.2500	>2603.0000	≈138500.0000	100.6%	0.3257	5.0950	0.8072	75.7100	43.4000	10.8100	0.3397
2	13:22:18	94.5%	0.0418	>71010.0000	>56940.0000	43.3800	>2660.0000	≈141700.0000	102.0%	0.3053	5.2780	0.8733	87.6300	43.5400	10.7500	0.3498
3	13:22:35	92.5%	0.0066	>69260.0000	>58650.0000	>40.6800	>2751.0000	≈145100.0000	96.2%	0.3279	5.1990	0.8039	77.5100	50.3200	11.1100	0.3601
x		95.8%	0.0217	>69200.0000	>57520.0000	>41.7300	>2675.0000	≈142100.0000	99.6%	0.3196	5.1510	0.8281	80.2900	45.7400	10.8900	0.3496
σ		4.1%	0.0182	>2143.0000	>941.8000	>1.4610	>79.8300	≈5517.0000	3.8%	0.0120	0.0915	0.0391	5.4240	3.9640	0.1946	0.0102
%RSD		4.3	83.6100	>3.0980	>1.6360	>3.5020	>2.9850	≈3.8600	3.8	3.7600	1.7640	4.7260	8.0010	8.6660	1.7870	2.9160

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:22:01	2.0950	0.8219	2.5038	2.0050	0.2645	1.1270	-0.1297	4.2480	95.8%	0.1481	0.2506	0.2191	0.1351	0.3099	89.9%
2	13:22:18	2.0150	0.8545	3.2090	1.7790	0.0297	0.8812	-0.1694	5.6990	97.3%	0.1455	0.1948	0.2380	0.1246	0.3143	85.3%
3	13:22:35	2.2990	0.8589	3.1690	1.8300	0.1010	1.3440	-0.0859	4.4820	98.7%	0.1622	0.2536	0.2321	0.1630	0.3514	87.7%
x		2.1370	0.8451	3.0940	1.8700	0.1117	1.1170	-0.1294	4.8100	97.3%	0.1519	0.2330	0.2297	0.1412	0.3252	87.6%
σ		0.1464	0.0202	0.1663	0.1244	0.0879	0.2315	0.0418	0.7788	1.4%	0.0090	0.0331	0.0097	0.0197	0.0228	2.5%
%RSD		6.8540	2.3850	5.3766	6.6510	78.6300	20.7200	32.5600	16.1900	1.5	5.9380	14.2100	4.2030	13.9500	7.0070	2.7

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:22:01	0.0221	0.0036	0.0219	0.1255	92.2%	0.0422	0.2518	75.9900	92.1%	0.0000	0.1356	0.2207	84.7%
2	13:22:18	0.0211	0.0075	0.0631	0.1357	93.7%	0.0476	0.2268	76.9300	98.0%	0.0000	0.1247	0.2581	89.3%
3	13:22:35	0.0197	0.0023	-0.0032	0.0877	96.2%	0.0409	0.2266	77.5600	100.0%	0.0000	0.0533	0.2258	90.4%
x		0.0210	0.0050	0.0256	0.1163	94.1%	0.0436	0.2351	76.8300	96.7%	0.0000	0.1179	0.2349	88.1%
σ		0.0012	0.0026	0.0258	0.0253	2.0%	0.0035	0.0251	0.7876	4.1%	0.0000	0.0220	0.0203	3.0%
%RSD		5.7580	52.1400	139.8000	21.7700	2.2	8.0870	11.6900	1.0250	4.3	0.0000	18.6700	8.6490	3.4

SEQ-SRD1@MH42I3L@SX 5/12/2016 13:26:08

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:08	105.3%	0.0011	<141700.0000	<12260.0000	20.6000	<526.8000	<28260.0000	104.5%	0.1572	1.1220	0.0065	-17.3500	14.7500	3.7800	0.0691
2	13:26:24	106.7%	0.0081	<142350.0000	<12360.0000	20.6700	<550.7000	<29760.0000	102.0%	0.1274	1.1340	0.0306	-23.0500	19.7500	3.8920	0.0689
3	13:26:41	99.6%	0.0168	<144500.0000	<12310.0000	21.0500	<562.4000	<29600.0000	102.9%	0.1317	1.1430	0.0034	-17.6500	18.1400	4.0550	0.0700
x		103.9%	0.0086	<143330.0000	<12330.0000	20.7600	<539.9000	<29210.0000	103.2%	0.1386	1.1530	0.0135	-19.3500	17.5500	3.9120	0.0693
σ		3.6%	0.0078	<1431.2000	<49.5000	0.2160	<12.1100	<625.1000	1.3%	0.0162	0.0168	0.0149	3.2050	2.5520	0.1342	0.0006
%RSD		3.6	90.7403	<0.9997	<0.4022	1.0400	<2.2440	<2.8259	1.2	11.6900	1.1940	110.1000	16.5595	14.5500	3.4320	0.8266
Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	98Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:08	0.4542	0.2429	0.8495	0.4139	0.0242	0.2599	-0.3364	6.7620	96.8%	0.0267	0.0389	0.0529	0.0348	0.0602	96.6%
2	13:26:24	0.5220	0.2561	0.9081	0.3028	-0.0265	0.2477	0.0062	6.6529	100.4%	0.0310	0.0704	0.0418	0.0212	0.0752	96.6%
3	13:26:41	0.5092	0.2397	0.9104	0.3913	0.0226	0.2419	-0.1872	6.4480	100.6%	0.0305	0.0536	0.0715	0.0250	0.0727	97.6%
x		0.4951	0.2462	0.8893	0.3690	0.0068	0.2498	-0.1725	6.9540	99.3%	0.0294	0.0543	0.0554	0.0270	0.0693	96.3%
σ		0.0360	0.0087	0.0345	0.0583	0.0288	0.0092	0.1718	3.0840	2.2%	0.0024	0.0158	0.0150	0.0070	0.0090	1.5%
%RSD		7.2690	3.5270	3.8780	15.8500	425.5000	3.6830	99.5900	78.0000	2.2	8.0690	29.1200	27.0800	26.0000	11.6000	1.6
Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		
1	13:26:08	0.0062	0.0043	0.0334	0.0368	94.9%	0.0025	0.0248	15.2900	93.1%	0.0000	0.0165	0.0978	89.4%		
2	13:26:24	0.0025	-0.0011	0.0675	0.0154	97.3%	0.0045	0.0348	15.4000	96.4%	0.0000	0.0310	0.1127	93.0%		
3	13:26:41	0.0085	0.0013	0.0499	0.0496	100.0%	0.0016	0.0415	15.1700	99.1%	0.0000	0.0213	0.0976	94.9%		
x		0.0057	0.0015	0.0469	0.0339	97.4%	0.0029	0.0337	15.2900	96.2%	0.0000	0.0229	0.1025	92.4%		
σ		0.0031	0.0027	0.0171	0.0173	2.5%	0.0015	0.0084	0.1144	3.0%	0.0000	0.0080	0.0089	2.8%		
%RSD		53.3100	178.1000	26.2300	50.9300	2.6	52.6200	24.8500	0.7479	3.1	0.0000	35.5500	8.6440	3.0		

6050005-01RE1@MH4213@2X 5/12/2016 13:29:17

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:17	101.5%	0.0015	<34770.0000	<29770.0000	50.2500	<1343.0000	<71350.0000	100.6%	0.3459	2.7220	0.3522	19.5700	49.4800	9.6830	0.2389
2	13:29:34	100.1%	0.0017	<35450.0000	<29740.0000	52.5100	<1401.0000	<74320.0000	98.4%	0.3364	2.6500	0.3279	32.7500	54.3900	9.8930	0.2337
3	13:29:51	97.7%	0.0056	<34570.0000	<31570.0000	52.5700	<1428.0000	<75770.0000	96.9%	0.3273	2.5970	0.3181	32.8700	55.9400	9.7110	0.2074
x		99.8%	0.0030	<34970.0000	<30360.0000	51.7700	<1391.0000	<73940.0000	98.6%	0.3365	2.6570	0.3327	28.4000	53.2700	9.7620	0.2034
σ		2.0%	0.0024	<424.5000	<1668.0000	1.1230	<43.5100	<2124.0000	1.8%	0.0093	0.0630	0.0176	7.6410	3.3640	0.1138	0.0129
%RSD		2.0	81.3900	<1.2140	<5.4510	2.5560	<3.1280	<2.8740	1.9	2.7620	2.3710	5.2780	26.9100	6.2140	1.1650	6.3520
Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:17	1.1920	0.6421	12.2800	0.8647	0.0082	0.1473	0.0092	0.3924	97.9%	0.0917	0.1186	0.0977	0.0618	0.1587	92.0%
2	13:29:34	1.1800	0.6581	12.3800	0.9734	0.0620	0.3758	-0.3120	7.3200	99.8%	0.0837	0.1116	0.1207	0.0615	0.1554	90.3%
3	13:29:51	1.2080	0.7006	11.7100	0.9736	0.0432	0.2961	-0.2764	4.9630	99.7%	0.0954	0.1260	0.1167	0.0670	0.1872	91.7%
x		1.1930	0.6669	12.2900	0.9372	0.0378	0.4398	-0.1764	6.2270	99.1%	0.0903	0.1187	0.1124	0.0633	0.1671	91.3%
σ		0.0143	0.0302	0.5434	0.0629	0.0273	0.3291	0.1663	3.5150	1.1%	0.0060	0.0072	0.0127	0.0031	0.0175	0.9%
%RSD		1.2010	4.5220	4.4230	6.7060	72.1600	74.8300	94.2800	83.2700	1.1	6.6330	6.0800	11.3200	4.9410	10.4800	1.0
Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		
1	13:29:17	0.0236	0.0071	0.0660	0.1490	93.1%	0.0084	0.1135	38.7400	94.9%	0.0000	0.0208	0.3905	89.1%		
2	13:29:34	0.0321	0.0016	0.0728	0.1708	94.6%	0.0046	0.1199	39.3500	96.8%	0.0000	0.0152	0.3548	90.5%		
3	13:29:51	0.0101	0.0007	0.0547	0.1604	96.0%	0.0074	0.0999	39.2500	95.8%	0.0000	0.0131	0.3433	92.9%		
x		0.0220	0.0031	0.0645	0.1601	94.6%	0.0501	0.1109	39.1200	97.2%	0.0000	0.0164	0.3629	90.9%		
σ		0.0111	0.0034	0.0091	0.0109	1.4%	0.0023	0.0105	0.3275	2.4%	0.0000	0.0040	0.0246	1.9%		
%RSD		50.5500	110.2000	14.1900	6.8230	1.5	14.6400	9.4380	0.8372	2.5	0.0000	24.2500	6.7790	2.1		

QE09005-DUP2@MH4213D@2X 5/12/2016 13:32:26

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:26	99.2%	0.0132	<32280.0000	<27210.0000	19.0800	<1259.0000	<68070.0000	95.9%	0.1518	2.3100	0.2397	15.6200	21.2200	5.1380	0.1637
2	13:32:43	97.5%	0.0058	<31980.0000	<27550.0000	19.2600	<1263.0000	<68730.0000	97.1%	0.1105	2.3570	0.2472	24.5000	18.9700	5.1310	0.1319
3	13:33:00	94.4%	0.0063	<32440.0000	<27930.0000	19.7500	<1294.0000	<69190.0000	93.9%	0.1355	2.3240	0.2103	30.2100	21.6600	5.2110	0.1767
x		97.0%	0.0084	<32220.0000	<27560.0000	19.3600	<1272.0000	<68730.0000	95.6%	0.1326	2.3300	0.2323	23.4400	20.8200	5.1600	0.1574
σ		2.4%	0.0041	<241.7000	<360.6000	0.3487	<25.0000	<657.7000	1.6%	0.0208	0.0240	0.0194	7.3520	1.4470	0.0442	0.0230
%RSD		2.5	48.7800	<1.0668	<1.3080	1.8010	<1.9630	<0.9569	1.7	15.6700	1.0300	8.3566	31.3600	7.0150	0.8568	14.6300
Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:26	0.8899	0.4190	1.6480	0.9539	-0.0090	0.2817	0.1028	-0.5972	96.0%	0.0700	0.0896	0.1230	0.0653	0.1438	91.3%
2	13:32:43	1.0300	0.4537	1.5000	0.7180	-0.0087	0.5091	-0.0615	1.9170	98.6%	0.0722	0.0986	0.1002	0.0805	0.1496	92.1%
3	13:33:00	1.0690	0.5682	1.5620	0.9023	-0.0093	0.4619	-0.0282	1.8630	99.4%	0.0853	0.0998	0.1192	0.0717	0.1565	93.1%
x		0.9963	0.4803	1.5700	0.8581	-0.0090	0.4241	0.0044	1.0610	98.0%	0.0758	0.0960	0.1141	0.0725	0.1500	91.5%
σ		0.0688	0.0450	0.0746	0.1240	0.0003	0.1245	0.0869	1.4360	1.8%	0.0083	0.0056	0.0122	0.0077	0.0064	1.5%
%RSD		6.8820	9.7670	4.7540	14.4500	3.2290	29.3500	1984.0000	135.4000	1.8	10.9300	5.8170	10.6900	10.5800	4.2370	1.7
Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		
1	13:32:26	0.0063	0.0043	0.0526	0.0489	95.0%	0.0101	0.1040	34.9600	96.0%	0.0000	0.0062	0.1010	91.0%		
2	13:32:43	0.0120	0.0024	0.0492	0.0394	97.1%	0.0120	0.1027	34.9600	98.1%	0.0000	0.0015	0.1025	91.9%		
3	13:33:00	0.0103	-0.0019	0.0577	0.0482	95.5%	0.0036	0.1153	35.3200	100.3%	0.0000	0.0042	0.0868	93.8%		
x		0.0112	0.0016	0.0532	0.0455	95.9%	0.0085	0.1073	35.0800	98.1%	0.0000	0.0041	0.0968	92.2%		
σ		0.0054	0.0032	0.0043	0.0053	1.1%	0.0044	0.0070	0.1993	2.1%	0.0000	0.0024	0.0086	1.4%		
%RSD		48.0100	158.0000	8.0650	11.6300	1.2	51.8800	6.5030	0.5683	2.1	0.0000	58.9900	8.9270	1.6		

SEQ-SRD2@MH4723L@3CX 5/12/2016 13:36:31

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:31	108.5%	0.0008	>7344.0000	>6296.0000	10.2600	>266.0000	>14350.0000	104.5%	0.0927	0.5769	-0.0952	-31.1000	3.8460	1.9720	0.0395
2	13:36:48	104.3%	0.0084	>7046.0000	>6232.0000	10.5200	>234.2000	>14780.0000	102.8%	0.0567	0.5864	-0.0789	-25.8400	4.9340	2.0970	0.0516
3	13:37:05	106.8%	<0.0061	>7263.0000	>6372.0000	10.7100	>225.6000	>15010.0000	102.6%	0.0443	0.6756	-0.1052	-26.7300	7.0890	1.9660	0.0320
x		106.3%	0.0011	>7218.0000	>6308.0000	10.5000	>220.2000	>14710.0000	103.3%	0.0645	0.6063	-0.0931	-31.2200	5.2900	2.0120	0.0410
σ		2.1%	0.0072	>154.1000	>70.5100	0.2781	>4.2280	>336.4000	1.1%	0.0252	0.0502	0.0133	5.4460	1.6519	0.0741	0.0099
%RSD		2.0	681.8000	>2.1350	>1.1160	2.1720	>1.7370	>2.2870	1.0	38.9700	9.9340	14.2600	17.4400	31.2000	3.6840	24.0400

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:31	0.2770	0.1744	0.3661	0.2061	-0.0102	-0.0031	-0.2923	4.6020	95.8%	0.0163	0.0134	0.0166	0.0058	0.0609	98.1%
2	13:36:48	0.3096	0.1978	0.4888	0.2868	-0.0095	0.0454	-0.0013	-0.3095	99.0%	0.0211	0.0285	0.0189	0.0129	0.0187	96.0%
3	13:37:05	0.2115	0.1109	0.3634	0.1896	0.0959	-0.0449	-0.1156	1.3460	99.2%	0.0316	0.0231	0.0027	0.0145	0.0369	98.6%
x		0.2642	0.1110	0.4058	0.1868	-0.0047	-0.0009	-0.1365	1.8790	98.0%	0.0230	0.0210	0.0134	0.0124	0.0388	97.6%
σ		0.0497	0.0133	0.0711	0.0646	0.0092	0.0462	0.1465	2.4990	1.9%	0.0078	0.0075	0.0092	0.0024	0.0212	1.4%
%RSD		18.8000	11.9900	17.5300	40.2000	195.3000	5170.0000	167.4000	133.0000	1.9	33.9500	35.8400	69.0200	29.4400	54.5200	1.4

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:31	-0.0031	-0.0018	0.0583	0.0290	94.7%	0.0013	0.0094	7.7700	90.9%	0.0000	0.0042	0.0523	88.8%
2	13:36:48	-0.0068	0.0023	0.0532	0.0235	92.5%	-0.0042	0.0126	7.8840	95.0%	0.0035	0.0016	0.0514	92.8%
3	13:37:05	-0.0017	0.0016	0.0524	0.0159	96.1%	0.0098	0.0060	7.8270	94.2%	0.0000	0.0034	0.0369	94.5%
x		-0.0039	0.0007	0.0546	0.0228	96.0%	0.0023	0.0091	7.8270	93.3%	0.0000	0.0031	0.0465	92.9%
σ		0.0026	0.0022	0.0032	0.0066	1.7%	0.0070	0.0033	0.0571	2.2%	0.0000	0.0015	0.0092	2.9%
%RSD		67.3800	316.4000	5.8730	28.9500	1.7	303.1000	35.2400	0.7294	2.3	0.0000	43.9700	19.8000	3.2

SEQ-CCV@CCV02 5/12/2016 13:40:11 QC Status: PASS (Invalid: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:28	94.9%	494.0000	>60950.0000	>56850.0000	>59400.0000	>57180.0000	>57960.0000	90.2%	0.0038	526.6000	525.0000	1977.0000	>54350.0000	539.6000	>450.2000
2	13:40:45	94.8%	488.0000	>59040.0000	>57280.0000	>58820.0000	>57660.0000	>58220.0000	90.6%	-0.0242	541.4000	536.0000	1972.0000	>55580.0000	536.0000	>464.4000
3	13:41:02	92.9%	487.4000	>59189.0000	>55120.0000	>58360.0000	>57660.0000	>57220.0000	91.2%	-0.0325	536.9000	530.6000	2155.0000	>55269.0000	534.8000	>457.0000
x		94.2%	97.962%	>98.536%	>93.971%	>96.582%	>85.467%	>96.643%	90.6%	-0.0176	105.728%	106.108%	2035.0000	>91.771%	105.968%	>91.978%
σ		1.1%	n/a	>n/a	>n/a	>n/a	>n/a	>n/a	0.5%	0.0190	n/a	n/a	104.0000	>n/a	n/a	>n/a
%RSD		1.2	0.7423	>1.2669	>1.9650	>0.8586	>9.5054	>0.4734	0.6	100.0000	2.1268	1.0348	5.1110	>1.1570	1.6870	>0.8622

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:28	468.3000	455.6000	2448.0000	516.4000	20.6700	496.8000	30.3600	2.9459	88.3%	167.3000	291.4000	308.9000	179.1000	474.5000	86.7%
2	13:40:45	470.7000	464.2000	2465.0000	522.0000	21.5300	518.9000	29.5300	3.1726	89.6%	169.9000	291.0000	311.4000	180.8000	479.1000	85.7%
3	13:41:02	467.5000	463.6000	2463.0000	527.0000	20.5500	519.2000	30.9900	4.4800	90.3%	169.4000	288.9000	309.0000	176.7000	475.3000	86.5%
x		93.762%	92.182%	98.357%	104.913%	20.9200	102.325%	30.2900	3.8328	89.4%	168.8000	290.4500	309.2900	179.8000	476.3000	86.3%
σ		n/a	n/a	n/a	n/a	0.5329	n/a	0.7339	0.6528	1.0%	1.4050	1.3480	1.4606	0.8758	2.4529	0.5%
%RSD		0.3590	1.0080	0.3753	1.0260	2.5480	2.5170	2.4230	19.1400	1.1	0.8322	0.4648	0.4714	0.4885	0.5149	0.6

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:28	25.0200	61.7300	18.5700	472.2000	85.2%	429.4000	593.5000	>429.0000	88.5%	0.0000	530.4000	531.4000	83.3%
2	13:40:45	24.9900	61.9500	18.6900	474.5000	86.5%	436.4000	597.9500	>421.8000	89.4%	0.0000	537.2000	545.8000	83.1%
3	13:41:02	24.2200	60.9800	18.1800	478.8000	88.9%	429.4000	594.3000	>401.0000	91.4%	0.0000	531.8000	546.4000	83.1%
x		24.7500	94.719%	18.4466	94.718%	86.9%	431.7000	195.9896	>96.678%	89.8%	0.0000	106.628%	108.246%	83.1%
σ		0.4533	n/a	0.2632	n/a	1.9%	4.0150	n/a	>n/a	1.5%	0.0000	n/a	n/a	0.0%
%RSD		1.8320	0.8469	1.4248	0.2544	2.1	0.9300	0.3641	>3.6025	1.6	0.0000	0.6740	1.5600	0.1

SEQ-CCB@CCB02 5/12/2016 13:44:35 QC Status: PASS (Invalid: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:44:35	104.7%	0.0028	2.5220	2.3130	2.0950	7.2610	-6.6670	100.5%	-0.0124	0.1086	0.0377	-10.0800	-2.7600	0.0423	0.0205
2	13:44:52	101.1%	0.0537	3.0710	2.3810	3.0330	7.5340	-4.3250	100.4%	-0.0229	0.0708	0.0416	9.0780	-1.4370	0.0459	0.0202
3	13:45:10	100.6%	0.0315	3.5240	3.7590	4.5470	6.0630	-6.1630	100.2%	-0.0455	0.1179	0.0569	-14.4300	-0.7718	0.0315	0.0315
x		102.1%	0.0360	3.0990	2.7500	3.2230	6.9530	-5.0520	100.4%	-0.0266	0.0991	0.0454	-11.1000	-1.6560	0.0332	0.0241
σ		2.2%	0.0159	0.5026	0.8757	1.2350	0.7707	0.9786	0.1%	0.0174	0.0248	0.0101	2.8650	1.0120	0.0189	0.0065
%RSD		2.2	44.1800	16.2100	31.8400	38.3100	11.0700	19.3700	0.1	65.2800	25.1600	22.3100	25.6300	61.1000	56.8700	26.8400

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:44:35	-0.0287	0.0119	0.1393	0.1152	-0.0101	0.0754	-0.2345	4.1880	95.6%	0.0520	0.0550	0.0721	0.0614	0.1153	97.7%
2	13:44:52	-0.0149	0.0131	0.1211	0.0920	0.0062	-0.1235	-0.0295	0.6973	98.1%	0.0335	0.0649	0.0771	0.0354	0.0746	97.9%
3	13:45:10	-0.0296	0.0413	0.1800	0.0974	-0.0265	0.0722	0.0479	-0.3650	97.2%	0.0277	0.0756	0.0847	0.0517	0.1184	98.5%
x		-0.0244	0.0221	0.1468	0.1016	-0.0102	0.0693	-0.0721	1.5000	97.9%	0.0377	0.0651	0.0780	0.0495	0.1028	98.3%
σ		0.0082	0.0166	0.0301	0.0121	0.0163	0.1151	0.1459	2.3700	1.2%	0.0127	0.0103	0.0063	0.0131	0.0244	1.0%
%RSD		33.6200	75.2500	20.5300	11.9300	160.9000	1234.0000	202.6000	158.0000	1.3	33.6400	15.7900	8.1150	26.5200	21.7700	1.0

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:44:35	0.0142	-0.0009	0.0591	0.0292	93.6%	0.1330	0.1749	0.0127	92.0%	0.0000	0.0854	0.0356	90.5%
2	13:44:52	-0.0017	0.0024	0.0219	0.0237	96.7%	0.1408	0.1413	0.0641	95.1%	0.0000	0.0782	0.0283	93.5%
3	13:45:10	0.0027	0.0015	0.0069	0.0628	98.3%	0.1504	0.1317	0.1444	97.2%	0.0000	0.0937	0.0445	97.3%
x		0.0050	0.0010	0.0293	0.0386	96.2%	0.1414	0.1327	0.0771	94.8%	0.0000	0.0858	0.0361	93.8%
σ		0.0082	0.0017	0.0269	0.0211	2.4%	0.0087	0.0019	0.0619	2.6%	0.0000	0.0078	0.0081	3.4%
%RSD		162.4000	171.8000	91.6009	54.8200	2.5	6.1730	6.2200	80.3100	2.8	0.0000	9.0680	22.4900	3.6

Mass Uncorrected ICPS

SEQ-CAL1@S01 5/12/2016 12:00:43

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	12:00:43	249675.4760	13.3333	43356.6190	100.0000	3767.4472	154935.7900	7269.5721	157573.8900	413.3427	326.0059	242.0032	120.6675	24499.6350	23.3334	133.3343
2	12:01:50	240698.1600	10.0000	43389.9680	93.3338	3901.1715	150624.2400	7196.1804	155752.9100	343.3398	304.0051	222.0027	131.3343	23573.8590	10.0000	130.0009
3	12:01:17	246308.8100	3.3333	44769.5680	83.3337	3727.4367	150468.3500	6642.4258	157685.9000	330.0060	322.0057	218.6693	142.0021	23807.8010	13.3333	123.3342
x		245560.6100	8.8889	43848.8520	92.2227	3799.6831	152009.4680	7036.0594	157070.9000	362.2295	317.3389	227.5584	131.3343	23960.4310	15.5556	128.8898
σ		4535.1576	5.0918	797.7122	8.3888	92.6752	2535.4758	342.8661	1152.0248	44.7646	11.7192	12.6201	10.6668	481.3913	6.9389	5.0918
%RSD		1.8469	57.2822	1.8152	9.0862	2.4390	1.6680	4.8730	0.7334	12.3581	3.6830	5.5459	8.1219	2.0091	44.6072	3.9505

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	12:00:43	316.6722	420.0097	396.6753	10.0000	3.3333	10.0000	16.6667	220.0027	80920.6300	56.6668	53.3335	40.0001	86.6671	53.3335	29474.3700
2	12:01:00	213.3358	323.3416	420.0097	3.3333	10.0000	12.2222	6.6667	186.6686	82941.6680	43.3334	63.3336	66.6669	83.3335	36.6667	29885.7100
3	12:01:17	230.0029	426.6767	520.0056	3.3333	3.3333	4.4444	10.0000	240.0032	83750.6270	40.0001	53.3335	26.6667	53.3335	50.0001	29867.0490
x		253.3370	306.6758	378.8969	5.5556	5.5556	8.8889	11.1111	215.5581	81937.7280	46.6668	56.6668	44.4446	64.4447	46.6668	29474.3760
σ		55.4794	79.0606	52.3188	3.8490	3.8490	4.0062	5.0918	26.9436	1867.1589	8.8192	5.7735	20.3671	19.2452	8.8192	411.3304
%RSD		21.8959	7.1459	13.8082	69.2821	69.2821	45.0694	45.8258	12.4995	2.2788	18.8983	10.1886	45.8759	29.8521	18.8983	1.3956

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	12:00:43	53.3335	30.0000	140.0011	13.3333	160049.9200	46.6668	33.3334	46.6668	105714.4400	104301.5900	116.6674	216.6693	62353.1040
2	12:01:00	40.0001	20.0000	176.6684	16.6667	165289.0900	43.3334	43.3334	46.6668	108355.2600	105419.3500	76.6670	216.6693	65102.2750
3	12:01:17	90.0004	13.3333	150.0016	10.0000	171149.3000	36.6667	66.6669	56.6668	111020.1700	109893.5600	60.0004	193.3356	65945.6750
x		61.1113	21.1111	138.8903	13.3333	165496.1300	42.2223	47.7779	50.0001	108629.9500	107538.1600	91.1116	208.8913	64465.6680
σ		25.8917	8.3887	18.3469	3.3333	5552.6242	5.0918	17.1054	5.7735	3062.1222	2898.2553	22.1947	13.4718	1877.0515
%RSD		42.3681	39.7360	27.6059	25.0000	3.3551	12.0594	35.8020	11.5470	2.8189	2.6951	24.3599	6.4492	2.9117

SEQ-CAL2@S02 5/12/2016 12:04:52

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	12:05:10	240941.1400	183.3352	644164.5700	49665.2960	24098.5650	668694.2800	26802.7870	153383.1300	300.0050	1052.0009	638.0224	191.3354	39798.2230	206.6690	1373.4371
2	12:05:27	243059.7600	223.3361	646569.9900	49082.1950	24640.0140	673592.4300	25043.9190	150634.4000	333.3394	1050.0606	632.6887	187.3353	41152.9360	206.6690	1413.4432
3	12:05:44	238320.0600	220.0027	628369.1500	49256.4130	24265.6750	669686.8300	25224.4270	151115.9200	306.6718	1053.3944	630.6685	213.3358	40837.9730	213.3356	1536.7966
x		240773.6500	208.8913	639707.9000	49337.9680	24324.7510	670557.8500	26357.0470	151711.8580	313.3387	1051.8386	633.7999	197.3355	40327.0440	208.8913	1441.2256
σ		2374.1876	22.1949	9875.8178	295.1260	277.2548	2419.6578	896.4331	1467.9141	17.6390	1.6779	3.7911	14.0093	725.8912	3.8491	85.1497
%RSD		0.9861	10.6251	1.5438	0.5982	1.1393	0.3608	1.5083	0.9676	5.6234	0.1595	0.5982	7.0947	1.8090	1.8426	5.9081

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	12:05:10	456.6761	1460.1172	783.3671	44.4446	3.3333	24.4445	23.3334	216.6693	82156.2270	46.6668	46.6668	46.6668	70.0003	46.6668	29016.2330
2	12:05:27	595.6862	1600.1408	863.3743	34.4445	10.0000	38.8890	26.6667	270.0040	85089.6920	30.0000	63.3336	30.0000	66.6669	73.3336	29700.4630
3	12:05:44	500.0136	1433.4463	780.0335	46.6668	6.6667	32.2779	20.0000	266.6706	85089.6920	66.6669	50.0001	26.6667	46.6668	36.6667	29394.0780
x		517.7927	1497.9015	808.9250	41.8519	6.6667	31.8373	23.3334	251.1146	84111.9710	47.7779	53.3335	34.4445	61.1113	52.2224	29369.9920
σ		72.6775	89.5405	47.1840	6.5105	3.3333	2.3130	3.3333	28.8771	1693.6369	18.3587	8.8192	10.7152	12.6199	18.9543	346.2425
%RSD		13.8429	5.9777	5.8329	15.5561	50.0000	6.2450	14.2857	11.8978	2.0136	38.4259	16.5366	31.1086	20.6506	36.2953	1.1793

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	12:05:10	70.0003	900.0445	190.0029	200.0022	164634.8300	63.3336	1126.2365	2233.6077	108770.1700	109218.8300	1480.1205	1223.4156	66509.6670
2	12:05:27	63.3337	906.7213	136.6677	140.0011	166299.0600	63.3336	1063.3955	2360.3064	111729.0600	111057.5700	1436.7802	1270.5887	68047.0560
3	12:05:44	83.3337	996.0539	130.0009	166.6682	171679.2300	90.0054	1066.7292	2296.9568	111833.6700	111667.4100	1683.4832	1273.4225	68748.9740
x		78.8892	962.2733	152.2235	168.8565	167570.0700	72.2225	1085.6204	2296.9570	110777.6300	110714.6100	1533.4633	1255.6423	67755.2290
σ		7.6981	53.9946	32.8865	30.0622	3665.8392	15.3861	35.6466	63.3493	1739.3022	1357.1905	131.7218	27.9558	1101.4651
%RSD		9.7581	5.6112	21.6041	17.7996	2.1876	21.3176	3.2835	2.7580	1.5701	1.2258	8.5898	2.2267	1.6247

SEQ-CAL3@S03 5/12/2016 12:09:16

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	12:09:18	246363.6800	386.6749	±156634.3000	114030.7100	54489.4790	±2338816.4000	52232.9590	155010.7200	403.3423	2141.5859	1067.3960	240.6699	61094.6030	533.3490	3077.1874
2	12:09:35	245803.4400	466.6785	±1547778.6000	116711.0700	55877.8690	±2229434.1000	51787.0850	151996.8000	390.0046	2070.2357	1183.4104	274.0041	63219.0540	563.3508	3127.2044
3	12:09:52	232456.8600	416.6782	±1505782.6000	113234.4800	54419.0590	±2238822.6000	52692.2650	151630.7200	360.0037	2151.5878	1124.0695	255.3369	63407.0230	460.0116	3207.2323
x		241541.6300	423.3433	±1539955.5000	114658.6500	54928.8030	±2234824.3000	52237.4170	152952.7500	317.7835	2121.1364	1124.9598	256.6923	62573.5600	518.8038	3137.2080
σ		3794.6435	40.4164	±31014.3270	1821.5184	822.6684	±4992.6923	452.6062	1801.4931	75.5992	44.3641	58.0123	16.7071	1284.2581	53.1624	65.5971
%RSD		1.5722	9.5470	±2.0150	1.5886	1.4977	±0.2607	0.8664	1.1778	23.7695	2.0915	5.1568	6.5192	2.0524	10.2451	2.0909

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	98Mo	97Mo	98Mo	103Rh
1	12:09:18	970.0518	1930.2049	1566.6017	62.2226	26.6667	61.1113	23.3334	203.3356	80898.3550	60.0002	60.0002	26.6667	50.0001	40.0001	29230.2500
2	12:09:35	1003.3887	2086.9062	1753.5024	60.0002	10.0000	77.7781	33.3334	186.6686	82428.6790	53.3335	36.6667	30.0000	93.3338	40.0001	29022.9210
3	12:09:52	956.7213	1960.2113	1553.4651	65.5556	20.0000	78.8891	30.0000	220.0027	84423.5250	63.3336	40.0001	46.6668	50.0001	33.3334	29267.0350
x		976.8539	1992.4408	1624.5903	62.7595	18.8889	72.5929	28.8889	203.3356	82583.5190	58.8891	45.5557	34.4445	64.4449	37.7779	29173.4020
σ		17.6403	83.1735	111.8403	15.5649	8.3887	9.9588	5.0918	16.6670	1767.6784	5.0918	12.6199	10.7152	25.0187	3.8490	131.6120
%RSD		1.7817	4.1745	6.8842	25.6979	44.4108	13.7138	17.6253	8.1968	2.1405	8.6454	27.7021	31.1086	38.8220	10.1895	0.4511

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	12:09:18	86.6671	2096.9085	206.6699	500.0128	163310.4800	126.6676	2360.3064	4948.0129	106948.7500	105313.1500	3207.2323	2543.6892	65525.9590
2	12:09:35	143.3345	2143.5960	186.6686	490.0132	167560.1000	96.6672	2313.6277	5201.4876	109299.7900	109566.3100	3317.2718	2793.7625	68951.4280
3	12:09:52	110.0007	2098.2403	146.6679	496.6802	171080.2400	103.3339	2590.3690	5196.8171	111634.5800	111762.8800	3484.6008	2863.7843	70105.9450
x		113.3341	2112.2449	180.0018	495.5691	167319.6100	108.8896	2421.4344	5114.7725	109294.3700	108808.7500	3336.1683	2733.7453	68861.0770
σ		28.4804	29.0881	30.5511	5.0920	3894.4558	15.7529	148.1516	144.4556	2342.9194	3279.8231	139.3485	168.2759	2023.8336
%RSD		25.1296	1.3774	16.9727	1.0275	2.3276	14.4669	6.1183	2.8243	2.1427	3.0116	4.1769	6.1555	2.9390

SEQ-CAL4@504 5/12/2016 12:13:25

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	12:13:25	242676.3980	809.0352	>2659302.5000	226503.6600	86062.1150	>2262592.7000	96923.9440	152342.5100	390.0084	3816.1341	1999.5532	351.3401	95256.4580	936.7149	5675.1042
2	12:13:43	237028.9000	878.0416	>2598366.6000	222069.8300	90440.9830	>2284823.7000	96442.1940	154013.6500	283.3378	3684.1629	2124.9150	360.6758	97877.4110	883.3763	6325.5332
3	12:14:00	230625.3700	813.3697	>2522615.2000	223042.6900	88545.2960	>2261362.3000	95603.4040	149847.9100	260.0037	3779.4521	1986.8838	361.2405	98126.7440	933.3813	5958.6186
x		236776.2200	827.8155	>2620428.1000	225535.7600	88349.6326	>2289526.3000	96323.1810	151924.6900	311.1166	3826.5831	2037.1173	357.7848	97086.6710	917.8241	5986.4187
σ		6029.4192	32.1217	>34692.4560	2176.6915	2196.0148	>32267.3020	668.2659	2326.1892	69.3113	53.1317	76.2934	5.5912	1590.0792	29.8793	326.1045
%RSD		2.5465	4.4903	1.3249	0.9851	2.4856	>0.5846	0.6939	1.5311	22.2702	1.3895	3.7454	1.5627	1.6378	3.2559	5.4474

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	12:13:25	1563.4678	3487.3354	2106.9108	171.1127	76.6667	131.1121	60.0002	213.3358	80417.4500	33.3334	50.0001	43.3334	56.6668	33.3334	29427.5520
2	12:13:43	1733.4986	3453.5894	2296.9568	147.7790	46.6668	135.5569	63.3336	223.3361	83717.0350	46.6668	50.0001	36.6667	50.0001	53.3335	28935.9780
3	12:14:00	1700.1593	3608.7129	2218.7687	158.0912	33.3334	154.4456	66.6669	220.0027	84282.2230	40.0001	56.6668	40.0001	76.6670	46.6668	29220.3790
x		1665.7084	3514.0126	2204.7121	156.2977	35.5556	140.3715	63.3336	218.8915	82805.5700	40.0001	52.2224	40.0001	61.1113	44.4446	29211.3030
σ		98.0986	76.9136	95.1440	12.6783	10.1835	12.3896	3.3334	5.0919	2087.2896	6.6667	3.8490	3.3333	13.8779	10.1636	754.0553
%RSD		5.4093	2.1888	4.3155	8.2396	28.6412	8.8263	5.2632	2.3252	2.5208	16.6667	7.3705	8.3334	22.7092	22.9129	0.9594

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	12:13:25	176.6684	3840.8117	246.9700	948.0485	162136.4100	53.3335	4734.5559	9248.0349	105913.4000	106594.6200	6485.6468	4324.3636	62903.5430
2	12:13:43	153.3346	4134.2732	240.0032	923.3802	167539.7300	103.3339	4824.5132	10052.2210	109696.9300	109910.4200	6565.7034	4737.9010	65417.8620
3	12:14:00	140.0011	3987.5410	233.3363	1023.3909	168812.9600	56.6668	5138.1283	10492.7190	110254.5300	111246.5300	6589.0537	4988.0347	66812.9110
x		156.6680	3987.5418	240.0032	962.2733	166163.0300	71.3114	4899.0991	9930.9515	108688.2930	109250.5300	6546.8010	4683.4324	65077.6056
σ		18.5595	146.7310	6.6668	53.5816	3544.7948	27.9552	211.8366	631.1353	2409.7738	2395.1337	54.2334	335.1725	2025.7545
%RSD		11.8464	3.6797	2.7779	5.5682	2.1333	39.3119	4.3240	6.3552	2.2171	2.1823	0.8284	7.1565	3.1128

SEQ-CAL5@505 5/12/2016 12:17:32

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	12:17:32	246630.7000	8907.6953	>1613469.9000	117254.6600	1213306.5000	>1235885.8000	53718.2438	158377.6800	348.0064	7364.9827	9218.8044	1257.4203	117477.5180	6947.7346	57242.9900
2	12:17:49	244227.1000	8901.6221	>1603800.3000	115172.7000	1125443.4000	>1215581.6000	53148.2430	157908.5620	306.6718	7481.7441	9278.6655	1198.7446	122658.6000	9096.5468	59218.9150
3	12:18:06	231897.1100	8667.4632	>1562219.9000	116201.2700	1137945.1000	>1239048.5000	52008.3430	148953.7100	256.6703	7513.7705	9615.7494	1296.7591	123067.4100	8757.5495	60816.0788
x		240918.3000	8825.3935	>1593162.6000	117542.8800	1123898.4000	>1223524.6000	52958.2760	153746.6500	304.1162	7453.4989	9370.6064	1248.3080	121067.8400	8933.2770	59092.6620
σ		7904.4736	136.8123	>27230.6850	1506.5353	9910.0524	>32416.5870	870.6345	4734.0681	41.9449	78.3124	214.4135	53.5915	3116.6265	168.9632	1789.8871
%RSD		3.2810	1.5502	>1.7092	1.2817	0.8518	>1.0096	1.6440	3.0661	13.9298	1.0957	2.2881	4.2931	2.5738	1.8914	3.0259

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	12:17:32	12909.1590	24942.2700	10062.2320	1465.6232	113.3340	310.0053	133.3343	256.6703	80733.5670	7222.8682	12662.1450	14000.7730	8173.6728	20646.7530	29725.1650
2	12:17:49	13723.6840	25569.9890	10005.5030	1530.1288	96.6672	322.2279	150.0012	266.6706	83340.2650	7826.7096	13186.2230	13650.2400	8547.3496	22123.5540	29802.1020
3	12:18:06	13403.2070	25887.2030	10502.7300	1453.4455	73.3338	295.5604	113.3340	273.3350	84591.2440	8063.5746	13680.2860	14691.8670	8834.2904	22671.5660	29945.9870
x		13345.3500	25466.4870	10190.1550	1483.0640	94.4449	309.2645	132.2737	272.2253	82888.5250	7707.7175	13176.2180	14114.2920	8518.4376	21813.9580	29824.3960
σ		410.3332	480.8542	272.3799	41.1979	20.0925	13.3492	18.3568	51.2450	1966.3584	434.9437	509.1438	530.0084	331.2584	1047.3092	112.0377
%RSD		3.0747	1.1093	2.6710	2.7779	21.2744	4.3164	13.8847	22.0669	2.3747	5.6430	3.8641	3.7551	3.8887	4.8011	0.3757

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	12:17:32	793.3680	5058.0234	756.6982	8317.1362	163951.8700	21809.4630	23968.2210	9791.9373	104338.6800	105468.2200	62326.2540	43115.3530	64689.3430
2	12:17:49	809.0352	5238.1753	693.3598	8734.1937	166334.5700	24265.6750	24419.4200	9845.3783	110112.8500	107329.8700	65595.8048	45982.6660	66228.3070
3	12:18:06	823.3753	5538.3532	710.0277	9014.4671	171020.3100	24740.2650	25478.5980	10362.5690	112795.4400	111975.4000	67126.9200	46977.7340	67724.6620
x		822.2595	5278.2806	720.0286	8688.5998	167102.2500	23605.1420	24622.2130	9999.9450	109082.3200	108257.8400	65016.3260	45358.5776	66211.4370
σ		44.3929	242.6287	32.8322	350.8942	3596.2118	1573.1050	775.5382	315.1745	4321.5391	3351.3486	2452.2322	2005.4052	1517.6788
%RSD		5.3989	4.5965	4.5596	4.0386	2.1521	6.6642	3.1487	3.1518	3.9617	3.0957	3.7717	4.4212	2.2922

SEQ-CAL6@506 5/12/2016 12:21:38

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	12:21:38	242428.6100	42877.5450	>6603823.6000	572386.9300	>380634.9900	>5459605.2900	227354.5100	151119.0100	350.0067	35294.3800	45219.9210	5632.4109	486849.6100	41872.8750	281605.0500
2	12:21:56	243083.9200	43631.1180	>6613205.9000	579505.6800	>385207.0000	>5463034.0000	233433.9000	151861.2200	330.8050	35560.5300	44985.6460	5527.6806	505836.7400	43195.7130	294248.1000
3	12:22:13	240383.3200	42381.8950	>6629146.8000	576061.0400	>4594661.8000	>5589385.3000	235029.3800	150471.7400	300.0050	36050.9930	45600.0790	5708.4584	508339.2600	43101.9350	301763.2600
x		240631.8900	42963.5200	>6615608.8000	575951.5200	>4653514.3000	>5510808.1000	231605.9200	151150.6600	326.6726	35501.6390	45234.9320	5622.8498	500342.5400	42723.5090	292538.1480
σ		3554.4865	629.0311	>17227.3440	3611.1726	>47042.7010	>69084.9370	3903.8432	695.2837	25.1670	479.5918	323.1766	98.7676	11751.9160	738.1584	10187.0580
%RSD		1.4590	1.4641	>1.3365	0.6270	>0.9691	>1.2536	1.6856	0.4600	7.7040	1.3509	0.7144	1.6143	2.3488	1.7778	3.4823

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	12:21:38	62916.9690	71402.6450	45476.7670	7255.1361	420.0097	1383.4386	840.0225	276.6695	80481.4340	36034.6030	61346.6040	66485.5660	38939.8860	101129.3800	29049.6730
2	12:21:56	63836.6810	73781.5260	47409.9660	7040.5030	476.6702	1398.9965	806.0218	240.0032	82516.1320	37226.2780	65186.2070	69534.9180	40587.0670	105124.3200	29588.0720
3	12:22:13	64541.6320	76463.5540	48710.1490	7156.1488	433.3437	1273.4725	836.6890	230.0029	84023.1750	38454.4930	66206.8760	71147.3220	41159.8146	110432.4500	29235.8270
x		63765.0940	73882.5750	47198.9273	7150.5893	443.3442	1251.9525	827.5778	232.2252	82340.5800	37904.6270	64913.2290	69055.9353	40242.2560	105495.4000	29235.8270
σ		814.6938	2531.9671	1626.9897	167.4145	29.6288	68.4524	18.0921	6.9391	1772.1619	1241.3025	1449.5437	2367.5938	1168.7558	4495.1803	305.2177
%RSD		1.2776	3.4270	3.4478	2.5022	6.6830	5.0637	0.8012	2.9881	2.1522	3.3186	2.2338	3.4284	2.9043	4.2535	1.0440

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	12:21:38	3484.0008	25368.6800	2897.1282	40061.4100	263788.9700	108571.1400	114931.9500	47054.7970	106233.7700	105242.3400	306911.3700	216181.5700	63524.9060
2	12:21:56	3989.8714	26428.3590	3153.8803	42733.5360	268833.3300	117129.7400	122422.1100	49698.8110	109293.0590	108891.6100	325833.0600	233743.2260	65468.2220
3	12:22:13	3944.1888	26000.4620	3233.9084	44381.4040	270225.6100	120337.9000	126112.0460	51153.5140	112069.8800	110713.4100	331125.9100	230956.9600	65753.6040
x		3803.9203	25932.5000	3094.9723	42392.1170	267615.9700	115346.2600	121155.3700	49302.3740	109198.9000	108282.4500	321290.1100	223627.9200	64915.4440
σ		276.8872	531.0965	175.9484	2180.1404	3386.5993	6082.7400	5696.6736	2077.9174	2919.1954	2785.9411	12730.4870	7387.3695	1213.0100
%RSD		7.2807	2.0557	5.6850	5.1428	2.9205	5.2735	4.7020	4.2146	2.6733	2.5728	3.9623	3.3034	1.8695

SEQ-CAL7@507 5/12/2016 12:25:44

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl Q	54Fe	55Mn	59
1	12:25:44	234318.0200	431807.2600	6210047.0000	5021679.9000	48808009.0000	53800344.8000	2091224.2600	151383.3600	360.0071	357693.4700	445171.9600	54907.9860	4217005.4000	432369.7400	2564672.30
2	12:26:01	233210.0700	428530.8900	6265115.0000	4945046.9000	48860330.0000	54455240.0000	2107115.6000	150190.4800	308.0050	358593.1600	446410.5400	55237.9760	4204956.8000	440027.7000	2658903.30
3	12:26:18	235825.4600	424742.5000	6273478.3000	4928938.6000	48692760.0000	54112081.0000	2088071.1000	147612.1000	360.0071	356377.6600	449589.3300	55397.6100	4389696.1000	442612.0700	2710229.10
x		234484.5200	428360.2700	6349686.3000	4965218.2000	48787033.0000	54122655.0000	2095470.3000	149728.6400	340.0068	357553.9000	447190.6100	55181.1910	4302297.4000	438335.5000	2644584.90
σ		1365.3343	3525.4684	69283.9800	49548.0450	85731.6630	137573.4900	10267.6180	1527.5818	34.6423	1112.8728	2501.6269	249.7024	88022.1558	5326.4861	73853.83
%RSD		0.5823	0.8253	1.0991	0.9979	0.1757	0.6053	0.4871	1.2874	10.1887	0.3112	0.5594	0.4525	2.0685	1.2152	2.73
Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	95Mo	98Mo	96Mo	97Mo	98Mo	103
1	12:25:44	608683.8600	700759.0700	437751.6700	90710.6910	3834.1417	13238.5210	6298.8481	260.9037	784315.5640	158131.2600	621973.0600	668629.7900	387781.2100	1031750.7000	27745.60
2	12:26:01	626238.0600	724186.3100	457345.1100	72658.0890	4200.9704	13544.5270	6408.9250	220.0027	811110.2310	160022.3400	659601.2600	711079.8800	409531.1700	1050744.8000	27912.78
3	12:26:18	629648.8200	743441.2800	463810.5400	72111.5410	4167.6217	13488.8890	6327.1976	233.3353	825564.4960	386275.7700	676702.1700	719692.9900	420585.0200	1106011.4000	28410.99
x		621456.9100	722808.8600	452969.1400	71826.7440	4057.5780	13473.9790	6343.3235	237.7809	807008.0870	374826.4600	652758.5400	699800.8900	405940.4700	1076109.0000	28023.12
σ		11177.6720	21354.4560	13569.4240	1004.4948	202.6482	163.0826	57.9997	20.3675	2091.8411	24787.4230	27998.8496	27336.3270	16656.7490	39217.3940	346.14
%RSD		1.7986	2.9544	2.9857	1.3985	4.9879	1.2143	0.9143	8.5657	2.5921	3.9451	4.2893	3.9063	4.1032	3.6442	1.23
Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
1	12:25:44	34873.4270	242474.4400	26217.7540	404851.7500	122871.5000	1134724.5000	1183797.5000	478075.1800	103873.3900	103313.7480	2858758.7000	2206188.6000	60492.2950		
2	12:26:01	37503.6670	256361.0600	27815.8230	422620.2800	127662.5500	1183585.6000	1249652.8000	502585.5500	108065.1700	108746.5500	3003876.9000	2332891.3000	63977.6670		
3	12:26:18	37647.7940	258493.5200	28140.1520	432712.1300	129542.2800	1222210.6000	1274458.4000	508032.8300	109701.9800	109586.5500	3081422.7000	2405711.8000	64937.7720		
x		36675.0290	252443.6100	27391.2420	426061.3900	126892.1100	1179506.9000	1239569.6000	496231.1800	107233.5100	107215.6100	2982850.4000	2316264.1000	63137.5780		
σ		1561.8919	8698.6286	1029.1299	14105.3610	3439.6408	43780.0600	46853.7550	15957.7150	1031.1044	3405.1243	111839.6000	102775.4000	2355.4012		
%RSD		4.2587	3.4458	3.7571	3.3575	1.9467	3.7117	3.7909	3.2158	0.8266	3.1760	3.8185	4.4371	3.7005		

SEQ-CAL8@508 5/12/2016 12:29:48

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl Q	54Fe	55Mn	
1	12:29:48	240937.7100	869786.6700	12872040.0000	9917522.0000	94006645.0000	102344890.0000	4011899.0000	146023.4100	363.3406	699356.7700	884221.3900	108728.9800	7907808.3000	855479.3600	
2	12:30:05	234885.7700	824124.6200	12375800.0000	9801448.0000	93656842.0000	101847430.0000	4055530.6000	144567.6800	360.0071	692537.9400	881268.1800	106479.2800	8186003.2000	869028.5000	
3	12:30:22	232191.1400	808046.9300	12248431.0000	9614199.4000	94727428.0000	103777390.0000	4027960.8000	143493.6100	323.3391	710658.0600	895850.7700	107545.7300	8321630.8000	842956.7000	
x		236094.8600	833984.8200	12429757.0000	9776056.5000	94063642.0000	102656560.0000	4032110.1000	144694.7000	348.8956	702550.9300	887113.4300	106915.0300	8138480.7000	855821.5200	
σ		4479.3949	31029.5669	330658.1000	150773.5000	637212.5800	1002022.1500	22611.6160	1269.7229	22.1953	7073.3915	7709.4829	559.3113	219464.5500	13039.2680	
%RSD		1.8980	3.8405	2.6458	1.5423	0.6774	0.9761	0.5608	0.8775	6.3616	1.0068	0.8691	0.5231	2.5822	1.5226	
Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	
1	12:29:48	1170484.3000	1351476.4000	821930.0400	134238.2800	7830.0372	25549.1850	11647.4570	283.3398	79327.4610	686073.3000	1212674.6000	1285201.6000	745467.5500	2006797.2000	
2	12:30:05	1208617.1000	1402433.5000	863997.8900	137082.4700	7810.0200	25958.1190	11659.1320	223.3361	77125.7790	730495.6900	1271756.4000	1364627.6000	795866.3600	2150762.4000	
3	12:30:22	1217716.6000	1408257.6000	874035.8500	138991.5100	7919.9431	26046.1480	11800.9830	316.6722	76648.4340	742806.6600	1317257.1000	1398808.7000	809417.8600	2186186.2000	
x		1198939.3000	1389215.9000	853301.6000	136771.7500	7786.6658	25851.1500	11708.8590	274.4487	76267.2250	722125.8600	1269229.4000	1349546.0000	783589.9300	2114581.9000	
σ		23659.2340	32689.8100	27651.1810	2393.2925	58.6448	265.2880	86.7785	47.2987	931.5555	30734.6230	52438.0150	58285.7990	33701.2770	95009.8740	
%RSD		2.0901	2.3531	3.2405	1.7498	0.7531	1.0258	0.7416	17.2341	1.2198	4.2561	4.1330	4.3189	4.3009	4.4931	
Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
1	12:29:48	65511.8680	453565.9600	49474.2580	753666.2000	174179.4500	2182075.0000	2273554.3000	900876.1900	99726.5190	98874.7940	5416788.1000	3710910.7000	57867.0480		
2	12:30:05	67351.9080	479869.4300	52568.2180	788595.8200	182014.0400	2319088.2000	2428776.5000	969066.3600	103923.9700	101864.1800	5638145.3000	3872368.7000	59365.1890		
3	12:30:22	70606.4630	489029.4800	53604.2400	816902.9600	184639.5300	2327503.6000	2480185.6000	983199.9300	106931.8800	104675.8500	5782864.2000	3895726.4000	61446.9660		
x		67823.4130	479138.3000	51862.2380	786288.0600	180277.6780	2276222.3000	2396146.6000	951047.4900	103194.1280	101804.9450	5615765.9000	3859665.3000	59565.7340		
σ		2579.8178	18389.2120	2148.7465	31332.1390	5441.9251	81642.4930	109963.0900	44020.5520	4151.6848	7900.9887	189282.9300	142855.7500	1788.9805		
%RSD		3.8037	3.8384	4.1416	3.9848	3.0188	3.5868	4.5893	4.6286	4.0226	7.8486	3.3706	3.7012	3.0027		

SEQ-CAL9@509 5/12/2016 12:33:53

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl Q	54Fe	55Mn	59Co
1	12:33:53	251958.2600	388.0050	1238054.6600	4981.3644	50054.0860	209325.8600	9167.9538	154586.5900	340.0064	436.0106	807.3536	118.6674	27397.8900	4079245.8000	2120.2472
2	12:34:10	252156.9900	358.0067	1219555.9100	5001.3754	50657.4140	210028.4500	8901.0221	153776.2500	323.3391	442.6774	807.3536	128.0069	28320.7120	4091955.4000	2260.2810
3	12:34:27	243593.7700	316.6722	1172175.2000	5158.1467	50084.2510	208857.9100	8326.4726	151844.2800	283.3378	439.3440	562.0168	128.6009	28364.1800	4086624.1000	2280.2859
x		249263.0100	322.2280	1210091.3600	5056.9621	50265.2510	209737.4100	8796.4828	153492.4100	315.5611	440.0167	588.9089	124.8898	28027.5940	4060275.1000	2220.2719
σ		4918.7086	25.4597	34183.3111	114.0489	339.9584	366.4717	433.3041	1408.0784	29.1240	2.4038	31.0488	5.3887	545.7725	44322.9560	87.1698
%RSD		1.9701	7.9011	2.8246	2.2553	0.6763	0.1747	4.9259	0.9184	9.2293	0.5463	5.4251	4.3147	1.9423	1.0916	3.9274
Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	12:33:53	806.7025	3160.5286	1911917.8000	67.7780	10.0000	23.3334	20.0000	256.6703	79062.3080	396.6753	716.5949	816.7034	513.3478	1900.0550	29129.9290
2	12:34:10	806.7025	3243.9120	2115383.0000	73.3336	6.6667	15.1111	26.6667	216.6693	81298.5690	370.0075	646.8897	716.5949	466.6797	926.7139	29340.6850
3	12:34:27	730.0293	3073.8529	1982963.5000	66.6669	3.3333	18.8889	26.6667	220.0027	81486.9100	453.3446	830.0379	876.7059	533.3490	1190.0779	28788.8450
x		781.1447	3159.4312	2003767.4000	69.2595	6.6667	17.7778	24.4445	231.1141	80615.9290	406.6758	731.1408	803.3691	511.1255	1038.9489	29086.4600
σ		44.2673	91.4908	103178.6200	3.5718	3.3333	6.1864	3.8490	22.1950	1348.7666	42.5591	92.5238	80.8351	73.4139	135.9217	278.4366
%RSD		5.6670	2.9133	5.1509	5.1571	50.0000	34.7986	15.7459	9.6035	1.6731	10.4652	12.6542	10.0621	6.8808	13.0826	0.9573
Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
1	12:33:53	160.0014	186.6686	240.0032	296.6725	157495.8900	1266.7549	1033.3921	4124587.5000	181463.0700	198189.0600	4361.0554	1923.5368	61715.4420		
2	12:34:10	146.6679	200.0022	176.6684	330.0060	162645.3800	1430.1125	1120.8690	4507813.2000	184790.5000	183131.6900	4167.6217	2006.8882	63584.9260		
3	12:34:27	186.6686	183.3352	230.0029	343.3398	166548.4300	1303.4268	1166.7415	4575563.5000	187363.5900	186935.2600	4284.7427	1963.5459	64732.9050		
x		164.4460	190.0029	215.5582	323.3391	162229.9000	1333.4314	1106.7342	4469188.1000	184539.0500	189418.6700	4271.6733	1964.6568	63344.4510		
σ		20.3674	8.8194	34.0487	24.0379	4540.5491	85.7125	67.6674	179676.5100	2958.2874	3382.2433	106.8730	41.8868	1523.0779		
%RSD		12.3855	4.6417	15.7956	7.4343	2.7988	6.4280	6.1142	4.0216	1.6028	1.7854	2.4984	2.1318	2.4044		

SEQ-CAL4@S10 5/12/2016 12:37:58

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cr O	54Fe	55Mn	59Co
1	12:37:58	215207.7508	30.0000	>60197875.0000	>45077811.0000	>22042920.0000	>467183020.0000	>18275858.0000	136558.0000	310.0033	155.3347	576.0183	138.6674	>3428377.0000	2630.3805	1287.2609
2	12:38:15	222937.1100	40.0001	>58960809.0000	>44769730.0000	>22858743.0000	>471290560.0000	>18782881.0000	137116.3100	333.3394	184.6685	564.6842	119.3341	>3548679.0000	2560.3662	1217.2258
3	12:38:32	214487.4300	26.6667	>59259079.0000	>44740462.5000	>22858743.0000	>469919780.0000	>18782881.0000	135848.1400	346.6722	178.0017	560.8840	115.3341	>3601859.6000	2780.4251	1323.8700
x		218544.1000	32.2223	>59452380.0000	>44860745.8000	>22782156.0000	>469182170.0000	>18586645.0000	135849.8250	320.0056	172.6683	567.1288	117.7785	>3521249.0000	2663.7239	1209.4556
σ		4234.8670	6.9389	>670145.4000	>182572.4900	>45061.106.3000	>2055936.3000	>322843.1100	1748.1393	12.0189	15.3770	7.9541	2.1431	>274264.4800	104.1141	81.9729
%RSD		1.9378	21.5345	>1.1272	>0.4892	>1.0277	>0.4382	>1.7360	1.2869	3.7558	8.9065	1.4025	1.8196	>7.7682	3.9586	6.5541

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	12:37:58	1800.1787	2496.9960	1686.8231	34.4445	6.6667	12.2222	16.6667	253.3369	66801.2080	203.3356	770.0040	873.3753	240.0032	333.3394	24305.7820
2	12:38:15	1866.8583	2733.7443	1630.1461	37.7779	0.0000	6.6667	13.3333	270.0040	68644.8580	243.3366	846.6733	943.3823	210.0024	366.6737	24235.5950
3	12:38:32	1883.5284	2650.3863	1716.8288	36.6667	6.6667	6.6667	16.6667	283.3356	69528.2000	183.3352	823.3410	918.0456	220.0027	360.0071	22771.0380
x		1850.1883	2610.3755	1677.5327	36.7964	4.4444	8.1481	15.5556	242.2255	68326.7530	210.0025	330.0061	908.9364	223.3361	350.0068	24104.1390
σ		44.1048	147.5019	44.0199	1.6973	3.8490	3.5717	1.9245	34.6953	1391.3958	30.5512	53.6468	36.0162	15.2756	14.5302	996.6004
%RSD		2.3838	5.6506	2.6235	4.6761	86.6025	43.8348	12.3728	14.3736	2.0364	14.5480	16.2563	3.8525	6.8398	4.1514	4.2056

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	12:37:58	56.6668	60.0002	186.6685	60.0002	127643.1200	213.3358	726.6657	233.3363	85412.7000	93066.3400	720.0285	603.3534	46501.9640
2	12:38:15	80.0004	63.3336	153.3346	96.6672	132819.6900	210.0024	793.3340	226.6695	90414.2500	89582.5466	746.6973	603.3534	49326.7940
3	12:38:32	53.3335	70.0003	156.6680	60.0002	135170.8300	236.6698	940.0446	206.6690	91356.7380	92016.6770	740.0301	633.3554	49608.3190
x		63.3336	64.4447	165.5571	72.2225	131872.9700	220.0027	820.0374	222.2250	89067.8960	58858.4550	735.5853	613.3540	48479.0259
σ		14.5298	5.6918	18.3589	21.1697	3951.2023	14.5308	109.1481	13.8781	3198.9198	3526.8702	13.8789	17.3217	1717.9622
%RSD		22.9417	7.9010	11.0892	29.3118	2.9703	6.6045	13.3101	6.2451	3.5916	3.9677	1.8868	2.8241	3.5437

SEQ-ICV1@ICV01 5/12/2016 12:42:03 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cr O	54Fe	55Mn	59Co
1	12:42:21	250688.9700	95448.4960	>11426291.0000	59211.8300	>2002522.8000	>8486544.7000	371665.2400	158940.7200	350.0067	77283.1870	95746.2290	11684.1700	411678.3000	92124.4270	93606.2100
2	12:42:37	246154.7200	93821.6520	>11470882.0000	58209.8200	>1992692.2000	>8546847.1000	374195.9400	156125.4900	262.0037	77722.1600	96046.7070	11836.3670	417118.6300	93299.6550	93255.7200
3	12:42:54	246387.5700	90867.5990	>11318737.0000	58763.8200	>1969726.1000	>8601738.0000	375629.9700	157405.0200	313.3387	78229.8190	96496.7690	12021.2760	417397.0600	96179.4330	93943.6000
x		250410.4200	93122.5690	>11388650.0000	59294.0100	>1988414.9000	>8544056.6000	373830.3800	157503.8700	307.7831	77745.0250	96096.5680	11847.2710	415397.8000	93867.8360	585601.8400
σ		7170.3786	2743.0742	>148148.6100	2499.9426	>16849.1800	>57637.5020	2007.4866	1408.3311	45.2580	473.7704	377.7461	168.8172	3224.2076	2086.3587	10549.6950
%RSD		2.8635	2.9457	>1.2345	0.4242	>0.8474	>0.6745	0.5376	0.8943	14.7045	0.6094	0.3931	1.4249	0.7762	2.2277	1.7964

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	12:42:21	125676.0700	145552.6200	164139.5400	3120.1830	1970.2135	6105.3828	2813.7687	200.0022	77277.0560	83.3337	66.6669	63.3337	73.3336	66.6669	29323.8640
2	12:42:37	129872.5100	149403.9600	169530.7100	3170.3550	1853.5223	5984.1912	2697.0667	210.0024	79163.1800	100.0008	53.3335	80.0004	86.6671	60.0002	29394.1110
3	12:42:54	130760.6500	150566.6300	169184.9600	3160.4870	1840.1862	6003.0925	2743.7473	193.3354	80565.9180	86.6671	70.0003	90.0004	80.0004	73.3336	30464.2920
x		128803.7400	148506.7400	167651.7100	3150.3750	1887.9740	6030.6868	2751.5276	201.1133	79001.8650	90.0004	63.3336	84.4448	80.0004	66.6669	29727.4290
σ		2243.7584	2623.8901	3049.7888	123.8158	71.5329	65.2022	58.7287	8.3089	1650.1043	8.8193	8.8192	5.0918	6.6667	6.6667	638.1073
%RSD		1.7421	1.7568	1.8252	0.7134	3.7899	1.0811	2.1348	4.1712	2.0887	9.7991	13.9251	6.0297	8.3334	10.0000	2.1469

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	12:42:21	7262.9001	389057.3700	5471.6461	80333.3760	155851.2400	156.6665	463796.6200	93498.3470	99235.3480	99076.4210	1277482.0000	659861.9800	60242.2760
2	12:42:37	7336.2923	392681.6400	5525.0117	82987.0560	156253.0200	116.6674	476316.3600	96807.3810	103964.4300	100866.4900	1314784.6200	683366.5900	62427.0100
3	12:42:54	7483.0705	398227.2900	5678.5345	83555.5610	160239.8900	153.3346	480280.3000	96263.6500	104345.4200	102005.7600	1339753.1000	900127.1700	61987.2820
x		7360.7570	392655.4300	5608.3975	82791.9980	157414.7200	142.2234	473464.4300	96189.7960	102515.0700	100637.6000	1310673.2000	681118.5800	61555.5230
σ		112.1095	3585.0236	194.5025	1719.8673	2451.3184	22.1948	8603.9602	2655.2933	2846.0997	1503.3424	31378.4750	20226.5050	1159.3215
%RSD		1.5231	0.9130	3.4324	2.0900	1.5572	15.6056	1.8172	2.7605	2.7765	1.4939	2.3940	2.2555	1.8834

SEQ-ICB@ICB01 5/12/2016 12:46:28 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cr O	54Fe	55Mn	59Co
1	12:46:28	250545.5900	26.6667	77228.6300	246.6799	4791.2623	163744.8500	8639.0900	155379.9400	126.6725	242.6699	238.0031	118.0008	23062.5500	33.3334	160.0014
2	12:46:46	244292.1400	13.3333	74167.9660	310.0053	4724.5607	159357.9200	6689.1767	156607.4000	286.6712	229.3362	259.6701	122.6675	23062.5500	50.0001	133.3343
3	12:47:03	242217.7300	16.6667	69343.4640	270.0049	4614.5042	156068.2500	6215.4574	155040.8900	263.3372	294.6700	256.6703	115.3341	23139.4110	33.3334	146.6679
x		245685.1500	18.8889	73579.3600	275.5599	4710.1090	159723.6700	6514.5580	155575.8800	292.2270	238.6920	248.4478	118.6674	23088.1700	38.8890	146.6679
σ		4335.1680	6.9388	3974.4106	32.0111	89.2608	3851.3485	260.2342	824.1731	32.0311	8.3258	9.5299	3.7519	44.3751	9.6225	13.3335
%RSD		1.7645	36.7353	5.4015	11.6240	1.8951	2.4113	3.9947	0.5294	10.9610	3.4863	3.8358	3.1280	0.1922	24.7436	9.0910

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	12:46:28	260.0037	420.0097	353.3402	17.7778	3.3333	10.0000	10.0000	263.3372	77004.7600	36.6667	90.0004	86.6671	76.6670	66.6668	29631.5460
2	12:46:46	256.6703	393.3418	386.6749	12.2222	0.0000	8.8889	13.3333	216.6693	80182.0510	33.3334	56.6668	50.0001	70.0063	66.6669	29283.7550
3	12:47:03	263.3372	433.3437	406.6758	7.7778	0.0000	8.8889	6.6667	180.0018	81318.7480	63.3336	63.3336	36.6667	73.3336	63.3336	29377.3900
x		260.0037	415.5651	382.2303	12.5926	1.1111	9.2593	10.0000	220.0027	79501.8530	44.4446	70.0003	57.7780	73.3336	63.3336	29430.8970
σ		3.3334	20.3679	26.9446	5.0103	1.9245	0.6415	3.3333	41.7676	2235.5842	16.4430	17.6385	25.8917	3.3334	5.7735	179.9636
%RSD		1.2821	4.9013	7.0492	39.7875	173.2051	6.9282	33.3333	18.9850	2.8125	36.9867	25.1977	44.8124	4.5455	9.1161	0.6115

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	12:46:28	66.6669	50.0001	223.3361	13.3333	156349.6900	73.3336	333.3394	36.6667	98959.0270	99248.8770	296.6715	273.3374	58309.7330
2	12:46:46	86.6671	26.6667	163.3348	26.6667	160877.5100	86.6671	273.3374	80.0004	103947.5700	101409.1400	310.0051	283.3378	60151.6290
3	12:47:03	73.3336	50.0001	146.6679	26.6667	165380.2200	116.6674	340.0044	56.6668	105040.0200	105488.5900	313.3387	293.0046	62057.7600
x		75.5559	42.2223	177.7796	22.2223	160802.6503	92.2227	315.5611	57.7780	102648.8700	102048.8290	306.6718	283.2266	60173.0393
σ		10.1836	13.4716	40.3236	7.6980	4516.8215	22.1947	36.7184	21.6682	3241.8477	3168.6394	8.8195	8.3890	1874.1031
%RSD		13.4782	31.9063	22.6818	34.6410	2.8089	24.0664	11.6358	37.5371	3.1582	3.1050	2.8759	2.9724	3.1145

SEQ-IPA@ICSA01 5/12/2016 12:50:26 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	
1	12:50:36	211983.2800	230.0029	+468531360.0000	+36529680.0000	+3323138300.0000	+325573040.0000	+14796759.0002	135759.5100	838279.0900	736.0031	16286.5760	2066.2348	+28648893.0000	6832.6064	6
2	12:50:53	205029.5500	233.3363	+469300010.0000	+36258420.0000	+3345836450.0000	+325672730.0000	+15254899.0003	133384.7400	842390.3200	736.6031	16412.8030	2027.2749	+29103628.0000	7086.0949	6
3	12:51:10	198265.7900	160.0014	+459789660.0000	+35199995.0000	+3303439540.0000	+320964580.0000	+15227436.0000	133384.7400	848096.7000	754.6202	16204.4290	2018.8503	+29590626.0000	7022.7115	6
x		205102.8909	207.7802	+465823680.0000	+35895732.0000	+3327368160.0000	+3207934500.0000	+15093031.0000	134176.3300	842655.3200	742.6921	16301.2690	2035.7835	+29888049.0000	6997.1366	6
σ		6854.6382	41.4112	-5282899.7000	+703112.9400	+29869908.2000	+3051772.2000	+256046.8100	1371.0724	4842.4798	10.2490	104.9609	26.4242	+255154.4300	104.1276	
%RSD		3.3418	19.9303	+1.1340	+1.9533	+0.8306	+1.2270	+1.7024	1.0218	0.5854	1.2156	0.6435	1.2980	+2.6145	1.4881	

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	98Mo	98Mo	107Mo	
1	12:50:36	6857.5817	20552.7890	9349.8004	44.4446	3.3333	11.1111	6.6667	310.0953	67656.4920	1299553.3000	2506949.5000	2496758.6000	1411895.9000	+3468540.9000	242
2	12:50:53	7139.4690	19459.3470	9524.9873	42.2223	0.0000	5.5556	20.0000	226.6695	70112.5630	1394568.6000	+2246858.5000	+2407098.8000	1518825.9000	+3666545.2000	241
3	12:51:10	7199.5164	19773.0468	9468.2614	48.8890	3.3333	10.0000	13.3333	273.3374	72494.5650	1439109.0000	+2298166.8000	+2480951.9000	1551968.2600	+3798228.1000	244
x		7069.8557	19995.6660	9446.0164	45.1853	2.7222	8.8889	13.3333	270.0041	69887.8783	1377743.6000	+2283991.6000	+2454931.1000	1494563.3000	+3644434.7000	24.
σ		185.4156	161.0653	92.1301	3.3545	1.9245	2.9397	6.6667	41.7678	2726.0432	71282.9080	+32466.6700	+45135.8500	73373.7608	+165556.9500	1
%RSD		2.6248	1.5202	0.9753	7.5124	86.6025	33.0719	50.0000	15.4693	3.9006	5.1739	+1.4211	+1.8386	4.9054	+4.5837	

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
1	12:50:36	59.0001	56.6668	1320.0658	1620.1109	134673.1200	303.3384	7353.6380	1343.4326	90467.9160	91100.8560	230.0029	15452.1230	52403.9390		
2	12:50:53	73.3336	36.6667	1213.4143	1490.1221	141397.8100	403.3423	2430.3248	1423.4446	96014.3680	96864.6580	226.6695	17166.1920	55083.1010		
3	12:51:10	90.0001	53.3335	1200.0792	1450.1156	143378.4800	390.0084	2510.3466	1486.7818	99023.0510	97580.7010	310.0053	17025.9290	57055.2998		
x		57.7780	48.8890	1244.5298	1453.4496	139883.1400	365.5630	2431.4364	1404.5530	95188.4450	94908.8180	255.5592	16548.4140	54854.1460		
σ		13.4716	10.7152	65.7869	35.1245	4450.3859	54.2989	78.3602	54.2027	4339.8475	3381.5365	47.1811	951.1395	2354.0954		
%RSD		23.3162	21.9174	5.2856	2.4166	3.1815	14.8535	3.2228	3.8591	4.5602	3.5629	18.4619	5.7476	4.2908		

SEQ-IFE@ICSA801 5/12/2016 12:54:42 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	
1	12:54:42	213678.2200	14875.4540	+480626746.0000	+30098332.0000	+3280018850.0000	+373512910.0000	+14481418.3000	138107.8200	639205.6700	13322.4210	32780.3770	4075.5800	+28547304.0000	23019.1078	104
2	12:54:59	202866.5800	14952.2860	+467505830.0000	+30094990.0000	+3263127570.0000	+3857460700.0000	+15212017.9000	139322.8100	657711.1400	13384.5170	31938.8990	4046.9006	+29558989.0000	23136.0700	109
3	12:55:16	205356.8600	14731.9270	+464627060.0000	+30961500.0000	+3380012480.0000	+3829288310.0000	+15245881.0000	139248.3500	866328.1100	13666.9320	33041.9580	4135.6071	+30869960.0000	23269.7430	110
x		207301.3900	14853.2360	+470919980.0000	+30051600.0000	+3340273550.0000	+3807449980.0000	+15146439.5000	138892.9900	657748.3100	13457.9550	32920.3880	4086.0292	+29391284.0000	23141.6400	108
σ		5661.3297	111.8531	+8528728.2000	+78052.2420	+53333490.9000	+6419964.2000	+193915.9100	581.0016	36073.2760	183.6228	131.7843	45.2670	+774534.1400	125.4113	3.
%RSD		2.7310	0.7531	+1.8113	+0.2165	+1.5965	+1.6848	+0.9501	0.4903	1.8939	1.3644	0.4003	1.1078	+2.6352	0.5419	

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	
1	12:54:42	27498.1920	34465.3220	23162.8040	2604.8176	90.0004	423.3432	206.6690	233.3363	78989.4780	1322675.3000	2346284.9000	2497094.9000	1436007.5000	+3520465.5000	244
2	12:54:59	28715.2600	35244.8550	24389.3390	2687.9637	170.0016	477.7903	233.3363	256.6703	72598.7290	1396257.5000	2485093.0000	2686243.7000	1531213.6000	+3662980.1000	253
3	12:55:16	28230.4310	35475.7510	24472.7620	2625.9348	136.6677	454.4558	233.3363	220.0027	73300.9970	1434650.6000	2562367.2000	+2459164.5000	1543831.6000	+3782273.0000	252
x		28147.9680	35073.9760	23991.6350	2639.2730	132.2232	451.6631	224.4472	236.6698	72296.2850	1385061.1000	2464558.4000	+2547501.0000	1503991.0000	+3692052.9000	251
σ		612.7199	512.5677	717.9831	42.2144	40.1853	27.3160	15.3964	18.5597	1185.0726	57412.3540	109492.2000	+321642.2000	58952.8260	+132429.7600	1
%RSD		2.1768	1.4615	2.9926	1.6184	30.3920	6.0452	6.8597	7.8420	1.6262	4.1451	4.4427	+4.7750	3.9205	+3.6163	

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
1	12:54:42	1213.4143	60071.1500	2070.2357	15165.9730	140409.3400	400.0008	42177.6160	18822.8000	94295.5920	95125.0930	109625.8200	89929.2780	53265.7090		
2	12:54:59	1290.0915	64696.0570	2326.9774	15409.7163	144624.6500	443.3441	45235.5980	19393.9980	98436.7350	98551.3000	116667.1800	94367.2560	55401.8340		
3	12:55:16	1336.7649	64087.8780	2226.9394	15526.5819	149245.1000	386.6753	46243.9960	20429.5960	102187.7900	102504.6600	124895.4200	99592.5550	56384.3150		
x		1280.0303	62925.0280	2224.7175	15367.4239	144759.7000	413.3428	44552.4800	19548.7980	98276.7048	98227.0160	117029.4700	94629.6960	55023.8860		
σ		62.2695	2495.3688	153.3829	183.9865	4419.4300	26.0354	2137.5249	814.5066	3593.5023	3692.9185	7691.1992	4836.9815	1582.4546		
%RSD		4.8653	3.9656	6.8945	1.1972	3.0529	6.2987	4.7529	4.1665	4.0635	3.7405	6.5726	5.1115	2.8078		

SEQ-CCV@CCV01 5/12/2016 12:59:46 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	
1	13:00:03	224139.4700	410573.3000	+303022640.0000	+22157517.0000	+2153192690.0000	+239959110.0000	+9603121.7000	146670.3700	383.3414	354916.2000	440098.3300	54321.8140	+28689380.0000	423901.2400	+741
2	13:00:20	223773.1600	402236.0600	+299049310.0000	+22336579.0000	+2163333270.0000	+240579150.0000	+9609932.3000	149421.2930	426.0097	359223.1000	447409.9100	54912.6819	+29091927.0000	432977.6700	+745
3	13:00:37	225352.2400	400115.4900	+292762860.0000	+23092788.0000	+2146786GC.0000	+2383981110.0000	+9534637.1000	146260.5199	376.0745	355814.8400	440931.2700	54781.4940	+28949590.0000	422104.2100	+744
x		224088.2900	404308.2800	+298278270.0000	+23162961.0000	+2157849970.0000	+2396411200.0000	+9582583.2000	147450.0200	383.3419	356552.0400	442813.1700	54668.3300	+28907172.0000	429661.0400	+744
σ		1290.2998	5528.2965	+5173168.7000	+730A2.2000	+958190.8700	+1127581.6000	+41645.1240	1718.8228	23.3346	2332.3552	4002.6188	308.3978	+209211.7500	5007.2177	+3
%RSD		0.5758	1.3673	+1.7343	+0.3154	+0.4449	+0.4705	+0.4346	1.1657	6.0923	0.6561	0.9039	0.5641	+1.1065	1.1659	

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	
1	13:00:03	564976.8500	643060.3600	2039704.2000	67412.3530	3924.1801	12391.7730	5711.2938	280.0043	74735.9430	349783.4700	604828.9000	648760.7100	376824.5800	996223.1800	27
2	13:00:20	574070.8700	660829.4700	2069244.5000	67844.4390	4077.5809	12454.0809	5991.9741	256.0034	76107.2498	355275.7600	619985.2200	660557.1500	379655.4500	1021688.3000	26
3	13:00:37	574939.9700	664682.1400	2099203.0000	68954.9703	3867.4538	12559.7810	6018.8583	226.0095	76792.9800	362551.3900	627846.8700	668658.4500	387989.8300	1033939.7000	26
x		571329.2300	656223.9500	2069383.5000	68670.5870	3936.4083	12468.5450	5907.4754	254.0258	75878.7240	355703.5400	616220.3300	659305.4400	381489.9600	1017083.7000	26
σ		5538.4599	11553.4700	29749.6460	795.7849	135.4731	84.9329	169.9892	26.7368	1047.3853	6644.2958	11540.7850	10037.5800	5804.2874	19174.5130	
%RSD		0.9659	1.7606	1.4376	1.1591	3.4415	0.6812	2.8775	10.6003	1.3763	1.8679	1.8680	1.5224	1.5215	1.8852	

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
1	13:00:03	32367.5190	220795.7900	24456.1850	363713.1100	161166.0590	1061980.6000	1103468.4000	+2075877.4000	101065.3400	99407.2100	3104891.1000	2859845.3000	54650.4410		
2	13:00:20	33086.7680	223975.5000	24452.8420	375945.9300	164776.5800	1091711.2000	1152563.4000	+2119786.2000	102784.4600	102558.5900	3212931.6000	2129366.7900	55804.0850		
3	13:00:37	32936.2228	225933.0600	24807.1340	376237.6700	165984.9300	1105415.0000	1156427.8000	+2132491.3000	103030.5500	104018.3700	3218831.8000	2163308.9800	57095.3990		
x		32796.8368	223568.1200	24572.0540	371798.9400	163975.8500	1085362.2000	1137486.5000	+2104666.6000	102293.4500	101994.7200	3178864.8000	2117504.3000	55849.9750		
σ		379.3431	2592.7500	203.5922	7033.6867	2507.2464	22215.5380	29523.8370	+29189.5020	1070.6665	2356.7273	64148.3110	52738.0620	1223.1247		
%RSD		1.1568	1.1597	0.8286	1.8864	1.5290	2.0449	2.5955	+1.3798	1.0467	2.3106	2.0180	2.4906	2.1900		

SEQ-CCB@CCB01 5/12/2016 13:04:11 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	13:04:13	256926.7000	33.3334	85917.4230	1213.4143	14564.9920	167248.7600	7349.6364	164355.7300	280.0043	223.3361	262.6705	98.6672	25662.6580	76.6670	226.6695
2	13:04:28	245938.8960	40.0001	79774.7220	1136.7377	15591.7940	155510.3200	7262.9001	162479.1100	346.6733	244.6700	298.0049	114.0007	25666.1803	53.3335	240.0032
3	13:04:45	245819.1500	23.3334	78594.9480	1170.1189	20569.5570	178889.6000	7406.3451	158764.3400	290.0046	233.3363	272.8041	103.3339	25234.9760	46.6668	263.3372
X		249894.9209	32.2223	81432.3650	1273.4236	17248.8140	183887.8900	7339.6265	161866.3900	305.5667	233.7898	277.5598	105.3340	25501.2750	58.8891	243.3366
σ		6115.3860	8.3887	3842.1777	174.6041	3065.7639	4419.8135	72.2463	2845.8081	35.9539	10.6739	18.3107	7.8600	232.7979	15.7528	18.5597
%RSD		2.4472	26.0340	4.8422	13.7114	17.7737	2.3687	0.9843	1.7360	11.7685	4.5958	6.5970	7.4628	0.9129	26.7500	7.6272

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	13:04:13	283.3328	513.3478	553.3502	14.4445	0.0000	26.4445	13.3333	270.0040	62378.2230	136.6677	293.3381	253.3369	235.6698	396.6753	30350.5790
2	13:04:28	250.0034	513.3478	500.0138	13.3333	6.6667	11.1111	20.0000	213.3358	83959.3470	190.0020	246.6693	206.6690	196.6688	286.6712	30949.2590
3	13:04:45	280.0043	453.3446	583.3521	14.4445	0.0000	5.5556	16.6667	226.6693	85422.8890	223.3361	266.6706	303.3384	166.6682	483.3462	30831.5190
X		271.1152	493.3468	545.5720	14.0741	2.2222	10.3704	16.6667	233.3364	83626.8200	183.3353	268.8926	254.4481	200.0023	388.8976	30643.7660
σ		18.3591	34.6429	42.2105	0.6415	3.8490	9.4905	3.3333	31.7986	1527.7720	43.7171	38.9217	48.3443	35.1196	98.5679	299.5265
%RSD		6.7717	7.0220	7.7369	4.5580	173.2051	43.1013	20.0000	13.6279	1.8264	23.8455	15.0339	18.9997	17.5596	25.3455	0.9775

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	13:04:13	70.0003	26.6667	150.0020	40.0001	163307.0800	333.3394	300.0050	83.3337	105272.6900	105006.3000	323.3391	286.6712	61695.3060
2	13:04:28	93.3338	20.0000	160.3349	40.0001	168065.9600	460.0126	326.6725	103.3339	108851.1200	107059.8100	356.6737	286.6712	63735.9760
3	13:04:45	56.6668	30.0008	173.3350	36.6667	170466.7300	473.3457	330.0060	160.0014	109856.4400	109731.6200	373.3410	326.6725	64541.6320
X		73.3336	25.5556	175.5573	38.8898	167279.6300	422.2326	318.8945	115.5564	107993.4200	107259.2400	351.1179	300.0050	63324.3050
σ		18.5594	5.0918	13.4758	1.9245	3645.9725	77.2716	16.4435	39.7684	2409.2438	2379.2892	25.4557	23.0948	1467.1398
%RSD		25.3081	19.9242	7.6737	4.9407	2.1784	16.3067	5.1584	34.4147	2.2308	2.2099	7.2510	7.6981	2.3169

QE09009-BLK1@PBW01@MH4213@4611545LEH 5/12/2016 13:07:40 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	13:07:49	256981.5500	20.0000	85187.2670	506.6808	8390.9389	177852.8900	7866.7356	163850.6600	423.3437	461.3450	473.3457	221.3368	25081.2180	43.3334	126.6676
2	13:07:57	239418.3600	26.6667	82337.8599	460.0126	8036.8843	176384.7000	7629.8671	159800.6600	310.0053	496.0134	470.6769	228.6695	24950.3130	60.0004	176.6684
3	13:08:14	245901.3300	13.3333	88915.1750	373.3410	7739.9601	173554.3300	7362.9805	159113.1300	313.3387	490.6799	460.6783	230.0029	25375.3660	43.3334	176.6684
X		247833.7500	20.0000	87813.4320	446.6778	8055.7938	175930.6400	7619.8613	160021.2800	348.6957	482.0128	468.2343	226.6695	25068.9650	58.8891	160.0014
σ		8681.3112	6.6667	2175.3914	67.6625	325.7004	2284.9544	252.0265	2935.5652	64.4949	17.9762	6.6781	4.6668	312.7066	26.9432	28.8680
%RSD		3.5294	33.3334	2.4769	15.1480	4.0431	1.2919	3.3075	1.8276	18.4854	3.7294	1.4262	2.0298	1.2474	45.7525	18.0423

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	13:07:49	323.3391	863.3743	1220.0690	17.7778	2.3333	5.5556	10.0000	253.3369	83969.3470	70.0003	126.6676	90.0084	83.3337	73.3336	31484.4260
2	13:07:57	300.0050	873.3753	1136.7377	10.0008	3.3333	7.7778	16.6667	246.6700	86122.6850	66.6669	116.6674	133.3343	80.0004	196.6688	30357.2680
3	13:08:14	286.6712	823.3706	1203.4120	14.4445	5.3333	11.1111	16.6667	226.6695	86849.5510	100.0006	116.6674	140.0011	140.0011	170.0016	30424.1580
X		303.3384	853.3734	1153.4066	14.0741	3.3333	8.1482	14.4445	242.2255	85647.1940	78.8892	120.0008	121.1115	101.1117	146.6680	30755.2840
σ		18.5598	26.4600	44.1615	3.9021	0.0000	2.7962	3.6490	13.8781	1497.8185	18.3587	5.7738	27.1488	33.7204	64.8940	632.3403
%RSD		6.1185	3.1006	3.8236	27.7254	0.0000	34.3174	25.2470	5.7294	1.7488	23.2715	4.8113	22.4163	33.3496	44.2455	2.0560

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	13:07:49	46.6668	23.3334	180.0018	23.3334	169030.2600	243.3366	250.0034	206.6698	107619.9300	105640.2500	130.0009	240.0032	63910.5300
2	13:07:57	83.3337	50.0001	150.0017	13.3333	172895.2600	236.6698	290.0046	183.3352	111732.4300	110136.4700	146.6679	196.6688	65921.4600
3	13:08:14	83.3337	60.0002	116.6674	20.0000	177047.3900	286.6712	283.3378	245.6700	114398.6200	114334.4900	253.3369	280.0043	67341.8340
X		71.1114	44.4446	148.8901	18.8885	172990.9800	255.5592	274.4485	212.2247	111250.3300	110037.0700	176.6686	238.8921	65724.6150
σ		21.1697	18.9547	31.6816	5.0918	4009.8142	27.1492	21.4310	32.0308	3414.9635	4347.9227	66.9176	41.6789	1726.1020
%RSD		29.7697	42.6469	21.2786	26.9564	2.3177	10.6235	7.8087	15.0979	3.0696	3.9514	37.8775	17.4467	2.6232

QE09009-BS1@LCS01 5/12/2016 13:11:00 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	13:11:00	244579.7200	1820.1822	-5435835.8000	470659.5200	172976.8100	-4596276.1000	191087.4000	160104.1900	293.3361	7023.3648	4182.2951	649.3565	173892.4600	1716.8288	12007.9250
2	13:11:18	246439.5100	1676.8604	-5120908.5000	475323.0100	173581.5100	-4639204.2000	194937.8700	158552.4100	303.3384	7948.1393	4212.9760	640.0225	181306.7600	1863.5243	12458.5310
3	13:11:34	240817.9400	1816.8482	-5154272.9000	462302.9500	173464.0900	-4556135.4000	192983.5000	155583.6700	300.0050	7796.0080	4213.6430	644.6895	178931.0800	1841.2980	12337.2580
X		243944.3900	1837.9636	-5231672.4000	466648.5000	173240.8000	-4593871.9000	193002.9200	158446.7600	298.8938	7855.8375	4202.9714	644.6895	178931.0800	1841.2980	12337.2580
σ		2862.1697	33.7268	-161252.4300	8664.3526	3583.6488	-36593.6970	1935.3071	1769.2509	5.0919	81.0979	17.9092	4.6670	4361.5267	114.9788	288.4924
%RSD		1.1733	1.8350	-3.1052	1.8983	2.0638	-0.7966	0.9976	1.1166	1.7036	1.0323	0.4261	0.7230	2.4375	6.2444	2.3384

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	13:11:00	2890.4594	6789.2008	4831.2834	310.0053	90.0004	286.6712	146.6679	253.3369	85214.1840	120.0008	106.6673	116.6674	86.6671	113.3340	30086.3700
2	13:11:18	3120.5355	7142.8050	5064.7438	321.1188	73.3336	313.3387	166.6662	313.0053	87626.9580	83.3337	86.6671	70.0002	76.0002	80.0004	30343.8980
3	13:11:34	3130.5389	7229.5402	5011.3809	332.2263	80.0004	317.7523	126.6676	260.0037	87970.2490	70.0003	113.3340	80.0004	103.3339	86.6671	29892.3980
X		3047.1779	7053.8487	4969.1360	321.1165	81.1115	305.9311	146.6579	274.4486	86937.1300	91.1116	102.2228	88.8893	88.6671	93.3338	30107.5530
σ		135.8143	233.2587	122.3291	11.1115	8.3886	16.8279	20.0003	30.9729	1501.9556	25.8918	13.8779	24.5706	15.6668	17.6385	226.4902
%RSD		4.4571	3.3066	2.4618	3.4603	10.3423	5.5002	13.6365	11.2855	1.7276	28.4177	13.5762	27.6418	19.2309	18.8981	0.7523

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	13:11:00	276.6709	7956.8227	240.0064	1736.8326	168466.6700	173.3350	9932.0893	20302.6460	109384.1300	108257.4300	12148.1110	8824.2807	63276.3160
2	13:11:18	219.0024	8600.7332	343.3356	1950.2092	173659.6500	200.0022	10372.5610	21081.5810	111057.7000	109249.1900	12939.2020	9344.8004	65730.1020
3	13:11:34	266.6706	8607.4825	263.3372	1666.8195	173760.4100	190.0020	10419.3010	20907.3470	113315.1800	113122.8000	12688.8450	9317.4329	66690.3920
X		254.1146	8388.3461	315.5611	1784.6204	171942.2300	187.7797	10241.3248	20763.6910	111252.6700	110209.8100	12592.0540	9160.1713	65232.2030
σ		30.9535	393.4290	45.2580	147.6150	3010.0300	13.4718	258.8217	408.6174	1972.2517	2571.0011	404.3303	291.3679	1760.7518
%RSD		14.3178	4.6735	14.3421	8.2715	1.7506	7.1742	2.6249	1.9679	1.7727	2.3328	3.2110	3.1808	2.6992

6055095-01@MH4213 5/12/2016 13:14:18

User Pre-Dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	13:14:18	226577.9600	16.6667	+329518840.0000	+22829997.0000	+326584.4000	+213330873.0000	≈2322.0038.6000	146555.2000	1556.8008	3890.1655	888.7101	308.0052	58165.4840	14965.6426	2056.8993
2	13:14:35	224815.8700	13.3333	+332109976.0000	+23574146.0000	374676.5600	+218231198.0000	≈2418688.0000	147327.5300	1653.4637	3798.7835	852.0399	315.3388	61524.1520	14958.7020	2140.2519
3	13:14:52	224928.6100	23.3334	+330980546.0000	+23701230.0000	379460.9100	+217227239.0000	≈2446216.0000	146971.8500	1763.5014	4102.9257	914.7127	324.0058	63262.6890	14501.5570	2156.9225
X		226107.4800	17.7778	+330870550.0000	+23595291.0000	+360241.2900	+216253603.0000	≈2395009.0000	146951.5300	1657.9293	3930.6182	885.1542	315.7833	60984.1080	14755.3008	2118.0246
σ		2140.2404	5.0918	+1298394.0000	+500440.9500	+29245.6300	+260138.1900	≈646216.5000	386.5677	103.4239	156.0513	31.4873	8.0095	2591.1802	235.0668	53.5882
%RSD		0.9466	28.6411	+0.3927	+2.1391	+8.1163	+2.2376	≈2.7094	0.2631	6.2381	3.9701	3.5571	2.5364	4.2489	1.5931	2.5301

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	13:14:18	2797.0965	1780.1743	1667.4892	240.0032	16.6667	37.7779	36.6667	263.3372	80219.0420	336.8739	536.6825	483.3452	380.0029	699.0262	25445.5610
2	13:14:35	2857.1156	1970.2135	3877.4934	282.2266	20.0000	18.8889	26.6667	260.0027	81534.8960	430.0102	480.0127	580.0185	323.3391	900.0466	26027.2050
3	13:14:52	2963.8164	2016.8904	4150.9475	257.7814	13.3333	41.1112	20.0000	253.3369	81930.8740	360.0071	440.0107	506.6808	436.6762	906.7119	26642.3160
X		2872.6763	1922.4260	3965.3100	260.0027	16.6667	32.5927	27.7778	258.8926	81261.6046	375.5634	485.5686	523.3485	373.3411	832.2609	26038.3610
σ		84.4420	125.3848	160.9446	21.1993	3.3333	11.9843	8.3687	5.0919	914.9320	48.5743	48.5748	59.4455	47.0244	123.2240	598.4552
%RSD		2.9395	6.5222	4.0561	8.1534	20.0000	36.7696	30.1994	1.9868	1.1259	12.9337	10.0037	9.6360	12.5955	14.8059	2.2984

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	13:14:18	76.6670	26.6667	193.3354	123.3342	152346.4000	153.3346	633.3554	66072.5710	103957.5800	104750.5000	520.0056	2623.7265	56474.8740
2	13:14:35	103.3329	33.3334	183.3357	90.0004	158469.7800	163.3348	643.3561	70586.0686	108938.8300	106618.2300	283.3376	2728.4070	59527.5920
3	13:14:52	106.6673	50.0001	160.0018	120.0008	159132.4400	220.0027	683.3590	73149.7869	110109.4800	109922.2900	346.6733	2597.6370	59296.0860
X		95.5561	36.6667	185.5575	111.1118	156650.8768	178.8667	653.3568	70069.4750	107668.6700	107142.0100	316.6722	2663.7237	58432.8510
σ		15.4431	12.0186	6.9390	18.3588	3768.1439	35.5634	26.4594	3626.5481	3266.8713	2603.7531	32.7991	62.2980	1599.6035
%RSD		17.2078	32.7778	3.7396	16.5228	2.4054	20.0980	4.0498	5.1756	3.0340	2.4309	10.0416	2.3385	2.9086

QE09009-MS1@MH42135 5/12/2016 13:18:05 QC Status: PASS (Under Fail)

User Pre-Dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	13:18:05	243333.6100	41752.3260	+352582550.0000	+24596577.0000	+3263649.8000	+215471112.0000	≈24342011.0000	158805.0400	1033.3921	3857.4100	873.7400	212.5100	66650.0970	417473.1400	+2524451.3000
2	13:18:22	238665.6100	41290.2230	+350165210.0000	+24737242.0000	+3436508.1000	+211582233.0000	≈25120734.0000	153311.9400	1046.7269	3869.1.5500	872709.1300	21262.1690	68738.8900	420275.2400	+2612060.5000
3	13:18:39	238049.7800	39760.0910	+343745030.0000	+25111065.0000	+3447069.5000	+211880198.0000	≈24997685.0000	150785.5100	893.3772	3893.81 1200	873647.4200	21545.5010	68890.0360	419488.4300	+2642372.6000
X		240016.3300	40934.2130	+350357628.0000	+24814962.0000	+3382409.1000	+211751181.0000	≈24836811.0000	154308.1600	991.1654	3873623.0300	873399.4300	21357.7270	68093.0100	415745.6000	+2552961.5900
σ		2809.3002	1042.7402	+7114084.5000	+265901.5100	+102984.0900	+167527.9100	≈390088.5500	4101.0561	84.9491	1628.8543	605.6634	162.6262	1761.8823	4050.1302	+61236.7450
%RSD		1.2038	2.5474	+2.0296	+1.0715	+1.3950	+1.4315	≈1.5706	2.6578	8.5705	0.5254	0.3493	0.7614	1.8385	0.9742	+2.3627

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	13:18:05	574730.6700	325643.1000	402333.5700	5701.7875	800.0357	2486.3383	1083.3991	283.3378	78695.8280	386.6749	496.6802	586.6856	390.0084	900.0446	26241.1520
2	13:18:22	600762.0800	338323.7900	420324.0900	5827.4227	773.3662	2557.0262	1256.7515	260.0037	80131.6090	363.3406	526.6819	586.6856	470.0122	820.0370	26839.5020
3	13:18:39	608965.1300	343461.1500	425360.4100	5801.8508	760.0318	2573.6976	1186.7441	263.3372	81005.9740	406.6758	596.6863	566.6843	410.0093	866.7181	26856.2770
X		594819.2900	335809.3500	416006.0200	5777.0203	777.8111	2537.0207	1178.9655	268.8929	80069.4710	385.5638	540.0161	580.0185	423.3433	895.5999	26645.6640
σ		17874.2038	9171.2893	12105.5820	66.3963	20.3688	49.7911	81.9545	12.6202	1062.8495	21.6889	51.3151	11.5477	41.5353	73.4415	358.4173
%RSD		3.0050	2.7311	2.9039	1.1493	2.6187	1.9626	6.9514	4.6934	1.3264	5.6253	9.5033	1.9909	9.8349	8.2003	1.3351

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	13:18:05	3390.6322	174512.4100	2697.0667	36894.7150	183867.8850	163.3348	220420.1700	+1256689.5000	103387.9100	103684.5800	287416.0700	81396.1020	56427.5180
2	13:18:22	3667.4063	182596.9300	2777.0908	38658.6890	156919.3800	203.3356	232854.4600	+1879450.1000	107164.6000	105593.7800	301829.8600	83049.2170	57814.6960
3	13:18:39	3457.3240	197201.1200	2873.7875	39686.4370	162078.7202	173.3350	236982.4300	+1873350.8600	109154.7300	108969.1900	313800.6800	88377.9510	59618.1820
X		3505.1208	181437.4800	2782.6483	38413.2010	159622.0000	180.0018	230085.6900	+1819163.5000	106559.0800	106084.5200	300752.2000	84841.1240	57686.9990
σ		144.4451	8423.5950	88.4914	1411.9477	4150.2688	20.8171	8621.2913	≈59995.2250	2929.1730	2675.4420	13194.6580	3345.7862	1698.9103
%RSD		4.1210	3.5404	3.1801	3.6757	2.6331	11.5649	3.7470	≈3.2980	2.7486	2.5220	4.3872	3.9436	2.9435

QE09009-DUP1@MH42130 5/12/2016 13:22:01

User Pre-Dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	13:22:01	253780.1400	23.3334	+358863760.0000	+25820927.0000	156816.6100	+217698345.0000	≈24879919.6000	157953.7300	1023.3969	4023.5569	890.0436	334.0061	29960.9639	8844.3001	2046.8971
2	13:22:18	239062.5100	43.3334	+370253680.0000	+25809101.0000	171472.0400	+219894967.0000	≈25661476.0000	160195.7900	1038.0550	3991.5428	897.3776	343.3398	40583.7198	8343.8273	2130.2496
3	13:22:35	234174.3900	13.3333	+350570800.0000	+25161511.0000	+154222.5900	+217946606.0000	≈25592607.0000	151044.4600	959.0539	4001.5472	865.3745	328.6726	41239.9960	8870.9928	2116.9131
X		242339.9100	26.6667	+359386080.0000	+25569680.0000	+361172.0900	+218296304.0000	≈25784667.0000	156397.9980	1004.4999	4005.5489	884.2852	335.3395	40594.8940	8686.3724	2098.0199
σ		10205.7960	15.2753	+9881960.9000	+377011.8800	+8924.2027	+141535.5800	≈433277.3600	4769.9019	17.1872	16.3779	16.7656	7.4240	639.5865	296.9537	44.7730
%RSD		4.2112	57.2823	+3.7450	+1.4748	+5.4361	+1.1955	≈1.7309	3.0498	1.7031	0.4085	1.8860	2.2139	1.5755	3.4186	2.1341

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	13:22:01	2993.8262	1630.1461	2983.8229	273.3374	43.3334	66.6667	33.3334	243.3366	76507.5310	363.3406	596.6863	520.6149	360.0071	730.0293	26505.2490
2	13:22:18	2933.8067	1703.4929	3303.9336	228.8918	10.0000	28.8889	40.0001	246.6700	79738.1730	363.3406	483.3462	570.6179	340.0064	750.0369	25131.3560
3	13:22:35	3193.8943	1686.8195	3190.5598	243.3366	23.3334	41.1112	43.3334	240.0032	80861.3628	406.6758	623.3547	566.6843	433.3437	903.3734	25853.3760
X		3040.5091	1666.8195	3159.4388	248.5219	25.5556	35.5556	38.8890	243.3366	79702.3550	377.7857	567.7957	552.2390	377.7857	794.8112	25829.9946
σ		136.1832	36.6734	162.3687	27.6728	16.7775	16.1864	5.0918	3.3334	1179.3239	25.0196	74.3411	27.9567	48.1429	86.1985	687.2452
%RSD		4.4790	2.2002	5.1373	9.1227	65.6508	17.3993	13.0931	1.3699	1.4772	6.6227	13.0929	5.0624	13.0081	8.5109	2.6606

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	13:22:01	86.6671	33.3334	160.0014	113.3340	157634.0100	146.6679	613.3540	66396.3720	100040.7700	101951.8300	910.0456	1046.7269	54637.6740
2	13:22:18	86.6671	50.0001	220.0027	123.3342	159051.0700	163.3348	573.3514	70389.1490	105503.5700	107201.7000	900.0446	1150.0766	57581.7860
3	13:22:35	86.6671	33.3334	123.3342	86.6671	159290.0800	150.0012	523.3484	72329.9320	108618.3200	108792.3000	716.6949	1046.7269	58259.4160
X		86.6671	38.8890	167.7794	107.7784	155658.3800	153.3346	570.0179	69671.8160	105054.2300	105952.0700	842.2617	1081.1768	56824.9590
σ		0.0000	9.6225	48.8014	18.9544	3369.3193	8.8193	45.0953	2889.4725	4468.6928	3544.6785	108.8589	76.9895	1927.7185
%RSD		0.0000	24.7438	29.0866	17.5864	2.1646	5.7527	7.9112	4.1473	4.2537	3.3455	12.9246	7.0556	3.3924

SEQ-SKD1@MH4213L@SX 5/12/2016 13:26:08

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	13:26:08	260125.2000	10.0000	+79491881.0000	+5716846.8000	88942.9790	+2532726.3000	+5285044.2000	164122.4800	710.0277	923.3802	217.3359	91.7336	30511.1150	3277.2573	533.3490
2	13:26:24	263552.3700	16.6667	+80240748.0000	+5625829.6000	89572.2240	+2653743.7000	+5438992.7000	160267.0200	633.3554	960.7134	244.0033	84.6671	32022.9680	3437.3164	530.0154
3	13:26:41	246038.3000	23.3334	+78014839.0000	+5660768.3000	87936.0690	+2607151.3000	+5444825.9000	161661.3900	646.6897	966.0513	221.3350	93.3338	31665.0510	3617.3862	540.0160
x		250573.2900	16.6667	+79248150.0000	+5664301.0000	88350.5970	+2612583.8000	+5389620.9000	162033.6300	663.3576	950.0497	227.5584	89.7782	31399.7120	3443.9866	534.4602
σ		9262.7306	6.6667	+1132633.6000	+47084.3220	728.2738	+116898.6210	+60612.6398	1979.1471	40.9637	23.2499	14.3814	4.5380	790.0815	178.1626	5.8921
%RSD		3.6180	40.0000	+1.4292	+0.8312	0.8254	+1.2182	+1.6813	1.2214	6.1752	2.4472	6.3199	5.0546	2.5162	4.9409	0.9527

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	13:26:08	910.0456	790.0343	1190.0779	63.3336	10.0000	15.5556	23.3334	286.6712	79311.1280	103.3339	140.0011	160.0014	140.0011	180.0018	27880.0380
2	13:26:24	996.9215	813.3697	1250.0859	48.8890	0.0000	15.5556	20.0000	216.6693	82250.4060	116.6674	216.6693	140.0011	113.3340	220.0027	28477.8680
3	13:26:41	986.7202	793.3680	1260.0873	62.2224	10.0000	15.5556	26.6667	266.6706	82556.4960	116.6674	180.0018	210.0024	123.3342	220.0027	28722.1260
x		964.4957	798.9240	1233.4171	58.1483	6.6667	15.5556	23.3334	256.6703	81372.6770	112.2229	178.8907	170.0016	125.5564	206.6690	28378.6770
σ		42.4156	12.6209	37.8645	8.0389	5.7735	0.0000	3.3333	36.0565	1791.9011	7.6981	38.3462	36.0562	13.4717	23.0945	451.2958
%RSD		4.9165	1.5797	3.0699	13.8233	86.6025	0.0000	14.2857	14.0476	2.2021	6.8596	21.4355	21.2093	10.7296	11.1746	1.5903

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	13:26:08	66.6669	36.6667	180.0018	43.3334	157085.5500	46.6668	100.0006	13760.3160	101095.6800	101152.9600	210.0024	560.0185	52642.1670
2	13:26:24	63.3336	16.6667	220.0027	26.6667	161104.9800	53.3335	126.6676	14231.1300	104766.8300	105060.2500	306.6718	733.3629	55940.2600
3	13:26:41	73.3336	26.6667	213.3358	56.6668	165438.4400	46.6668	146.6679	14401.3580	107648.3700	108817.2100	286.6705	616.6826	61205.3440
x		67.7780	26.6667	204.4468	42.2223	161209.6500	48.8890	124.4453	14110.9480	104503.9700	104443.4800	261.1150	643.3563	59595.9340
σ		5.0938	10.0000	21.4308	15.0300	4177.4279	3.8490	23.4129	365.6664	3280.3433	3899.3476	48.5716	80.0752	1806.3763
%RSD		7.5124	37.5001	10.4823	35.5994	2.5913	7.8730	18.8138	2.5914	3.1381	3.7787	18.6024	12.4465	3.0310

6OSD09S-01RE1@MH4213B2X 5/12/2016 13:29:17

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	13:29:17	253084.4800	10.0000	+78746650.0000	+13358133.0000	203366.1800	+6125806.7000	+13479432.0000	157997.0700	1370.0630	2191.5975	513.3478	192.0020	42361.8030	8113.6191	1203.4130
2	13:29:34	245606.9600	10.0000	+80258980.0000	+13051032.0000	208551.7000	+6258841.2000	+13083256.0000	154623.8800	1030.0584	2173.5932	482.6796	210.0024	43570.8300	8130.3036	1333.4311
3	13:29:51	242504.7700	13.3333	+80305410.0000	+13647720.0000	204661.4400	+6265005.7000	+13282801.0000	152213.7200	936.7213	2173.5932	482.6128	212.6692	43564.1310	8110.2828	1203.4238
x		248732.0700	11.1111	+80426980.0000	+13552699.0000	205526.4400	+6216717.9300	+13056797.0000	154945.1400	1032.2809	2189.5946	492.6809	204.8912	43166.5880	8118.0675	1273.4227
σ		4049.4126	1.9245	+48772716.3900	+293352.0700	2698.8074	+77598.9563	+135132.3300	2905.4037	66.7213	10.3948	17.5019	11.2417	696.1066	10.7247	65.5835
%RSD		1.9497	17.3205	+2.4142	+2.1965	1.3131	+1.2485	+1.0372	1.8751	3.5573	0.4769	3.6336	5.4867	1.6126	0.1321	5.1592

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	13:29:17	1846.8542	1376.7709	11874.4170	122.3342	6.6667	12.2222	16.6667	203.3356	80188.7770	246.6700	316.6722	260.0037	200.0022	403.3423	27123.7360
2	13:29:34	1816.8482	1396.7740	11497.2680	135.5566	16.6667	17.7778	33.3334	280.0043	81779.5200	233.3363	306.6718	316.6722	203.3356	403.3423	26605.5420
3	13:29:51	1833.5182	1446.7818	10763.0730	137.7788	13.3333	28.8889	23.3334	256.6703	81671.8920	260.0037	340.0064	313.3387	216.6693	476.6792	27036.8130
x		1832.4069	1406.7756	11378.2510	132.2232	12.2222	19.6297	24.4445	246.6701	81213.3970	246.6700	321.1168	296.6715	206.6690	427.7879	26922.0300
σ		15.0339	36.0511	548.8542	7.7779	5.0918	8.4863	8.3887	39.3605	885.5769	13.3337	17.1059	31.7990	8.8194	42.3411	277.5513
%RSD		0.8204	2.5634	4.8195	5.8824	41.6598	43.2319	34.3175	15.9324	1.0946	5.4055	5.3270	10.7186	4.2674	9.8927	1.0308

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	13:29:17	90.0004	46.6668	223.3361	133.3343	154122.1400	190.0020	303.3384	34659.2770	103121.5700	101277.6900	240.0032	1843.5202	57450.9620
2	13:29:34	103.3339	26.6667	236.6698	153.3346	156401.9400	156.6680	323.3391	35827.1250	105198.5000	104163.3500	210.0024	1630.1461	58370.1230
3	13:29:51	73.3336	23.3334	213.3358	146.6679	156867.7000	166.6687	280.0043	36546.6470	108399.1100	105788.6200	283.3356	1676.8213	59886.6050
x		88.8893	32.2223	224.4672	144.4456	156483.9200	171.1127	302.2273	35677.8030	105573.0600	103743.2200	244.3804	1716.8292	58569.2300
σ		15.0310	12.6238	11.7066	10.1837	2378.2893	17.1057	21.6867	952.5182	2658.6287	2284.6274	19.5326	112.1722	1229.9682
%RSD		16.9098	39.2650	5.2157	7.0502	1.5147	9.9967	7.1763	2.6698	2.5183	2.2022	8.0687	6.5357	2.1000

QE05009-OUP2@MH4213D@2X 5/12/2016 13:32:26

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co
1	13:32:26	248959.4400	20.0000	+76596442.0000	+13644737.0000	76769.4490	+5508519.5000	+11684918.0000	150697.0100	643.3561	1874.1932	431.3476	172.0016	30735.2020	4281.0277	1020.0572
2	13:32:43	242868.0200	13.3333	+76626619.0000	+13534105.0000	77347.6520	+5566489.9000	+11920674.0000	142488.2600	570.0179	1928.8713	412.6760	186.6686	30390.7130	4217.6448	860.0407
3	13:33:00	235094.3400	13.3333	+76324753.0000	+13698673.0000	76858.6030	+5512360.2000	+11649572.0000	147493.5300	600.0198	2003.5541	394.0085	200.0022	30571.3170	4427.7447	1086.7316
x		242640.6200	15.5556	+76516060.0000	+13759584.0000	76928.5680	+5529123.5000	+11754488.0000	150224.6900	604.4646	1935.5305	405.9991	186.2241	30565.7440	4308.7991	988.9432
σ		6927.0322	3.8490	+76638814.3000	+152857.2600	366.4234	+32426.0820	+152032.9100	2579.9593	36.8706	64.9377	18.4141	14.0056	172.3119	107.7718	116.5043
%RSD		2.4942	24.7436	+1.0029	+1.1064	0.4763	+0.5865	+1.2936	1.6841	6.0997	3.3558	2.5650	7.5208	0.5637	2.5012	11.7807

Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	13:32:26	1413.4432	1006.7224	1826.8502	134.4454	3.3333	15.5556	23.3334	190.0020	78662.1930	196.6668	250.0034	313.3387	206.6690	366.6741	26906.4250
2	13:32:43	1603.4747	1076.7361	1730.1646	101.2117	3.3333	21.1111	20.0000	216.6693	80267.1570	206.6690	276.6709	290.0040	246.6700	386.6749	26548.7090
3	13:33:00	1620.1444	1140.0715	1760.1704	130.0009	3.3333	21.1111	26.6667	223.3361	81443.1880	226.6698	286.0043	313.3387	226.6695	406.6088	27444.6980
x		1545.6874	1074.5081	1772.3951	121.8527	3.3333	19.2593	23.3334	210.0024	80290.8590	213.3359	268.8929	305.8938	226.6695	386.6526	26966.6110
σ		114.8298	66.7023	49.4885	18.0592	0.0000	3.2075	3.3333	17.6287	1450.3586	20.8172	16.4434	25.0193	20.0005	16.7761	451.0160
%RSD		7.4295	6.2077	2.7922	14.8533	0.0000	16.6544	14.2857	8.3993	1.8064	9.7579	6.1152	8.1706	8.8236	4.3442	1.6725

Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	13:32:26	66.6669	36.6667	206.6698	53.3335	157380.5000	66.6669	286.6712	31778.7600	104335.3100	105947.1200	193.3346	626.6683	58655.2830
2	13:32:43	83.3337	30.0000	206.6698	46.6668	160748.7500	73.3336	290.0046	32477.9110	106581.1300	107606.4400	126.6676	620.0251	59253.6250
3	13:33:00	73.3336	33.3333	216.6693	53.3335	158011.3900	50.0001	316.6722	32862.6240	108916.5900	107748.1000	150.0012	563.3508	60477.1620
x		74.4448	26.6667	210.0024	51.1113	158046.8800	63.3336	297.3827	32373.1050	106611.6800	107100.5500	143.3345	603.3534	59462.7500
σ		8.3888	12.0185	5.7736	3.8490	1867.0823	12.0186	16.4435	549.4700	2291.7966	1091.4111	14.5299	34.8033	928.3999
%RSD		11.2685	45.0694	2.7493	7.5302	1.1769	18.9766	5.5320	1.6973	2.1497	0.9350	10.1370	5.7683	1.5613

SEQ-SRD2@MH42L3L@10X 5/12/2016 13:36:31

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl Q	54Fe	55Mn	59Co
1	13:36:31	267295.9900	10.0000	+4197224.0000	+2930354.9000	46944.2260	+1399441.9000	+2689849.6000	164219.9700	523.3514	480.6794	130.6676	56.6665	26364.8420	1780.1743	360.8071
2	13:36:48	256906.1300	26.6667	+3985347.0000	+2858796.6000	46756.5980	+1404102.4000	+2722751.9000	161501.9300	490.0132	493.3467	142.6678	67.3336	26505.5420	1850.1883	430.0102
3	13:37:05	261038.0400	3.3333	+4058225.0000	+2917627.0000	47835.5210	+1411775.4000	+2761802.6000	161193.1900	463.3451	521.3483	122.0008	46.6668	27381.1730	1783.5083	316.6722
X		261746.7200	10.0000	+4051822.0000	+2904392.8000	47178.7830	+1404756.7000	+2724801.4000	162305.0300	508.9033	496.4581	131.7767	56.2224	26783.8520	1804.6236	368.8465
σ		5231.0596	6.6667	+1437005.1000	+490629.1550	576.4388	+6666.0566	+36020.2570	1665.5599	57.3844	29.8107	10.3782	11.3399	531.1103	39.4953	57.1895
%RSD		1.9985	66.6667	+35.5441	+16.7391	1.2218	+0.4765	+1.3219	1.0262	11.2761	6.1750	7.8755	20.1698	1.9829	2.1886	15.5029
Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	13:36:31	606.0911	606.6869	746.6973	36.5556	3.3333	8.8889	6.6667	270.0049	78520.9800	80.0054	83.3337	83.3337	83.3337	176.6684	28922.6020
2	13:36:48	716.6949	676.0179	803.3743	17.7778	3.3333	10.0000	6.6667	283.3356	84096.7780	93.3338	120.0008	86.6671	93.3338	90.0004	28290.6180
3	13:37:05	586.6856	590.2192	750.0309	33.3334	6.6667	7.7778	3.3333	230.0029	81315.3850	116.6674	103.3339	50.0001	96.6672	126.6676	29073.0810
X		656.6905	588.9086	786.7099	28.8889	4.4444	8.8889	5.5556	234.4475	80311.0400	96.6672	102.2228	73.3336	91.1116	131.1121	28762.5000
σ		65.5791	18.3589	66.4221	9.6865	1.9245	1.1111	1.9245	25.5557	1554.0925	18.5594	18.2598	20.2760	6.9390	43.5846	415.1899
%RSD		9.9863	3.1176	8.4431	32.5300	43.3013	12.5000	34.6410	11.1127	1.9351	19.1993	17.9596	27.6466	7.6159	33.1819	1.4435
Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
1	13:36:31	53.3335	13.3333	213.3358	36.6667	155983.1400	43.3334	63.3336	6879.2685	98736.6280	97227.1560	132.3343	420.0097	57236.2810		
2	13:36:48	50.0001	30.0006	213.3358	33.3334	161434.0700	30.0000	73.3336	7259.5641	103182.2600	103485.6800	123.3342	443.3441	59842.9860		
3	13:37:05	56.6668	26.6667	210.0024	26.6667	159069.6000	66.6669	56.6668	7122.2893	102278.8600	102546.2700	133.3343	366.6741	60903.3260		
X		53.3335	23.3334	212.2247	32.2223	158822.2700	46.6668	64.4447	7087.2073	101399.2300	101215.7000	130.0009	410.0093	59377.5310		
σ		3.3334	8.6192	1.9245	5.0918	2743.8412	18.5593	8.3888	192.6285	2349.7107	3468.1485	5.7736	39.3012	1887.0811		
%RSD		6.2500	32.7965	0.9068	15.8020	1.7276	39.7696	13.0170	2.7180	2.3173	3.4269	4.4412	9.5854	3.1808		

SEQ-CCV@CCV02 5/12/2016 13:40:21 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl Q	54Fe	55Mn	
1	13:40:28	233076.7100	413688.6800	+3026422200.0000	+2268821.0000	+215477970.0000	+229567510.0000	+9349620.9400	141631.4100	333.3394	343046.6500	432168.5000	52833.0790	+17884410.0000	410200.3500	+234707
2	13:40:45	232751.8800	408485.6800	+2936118320.0000	+2310614.0000	+213759750.0000	+232481320.0000	+9439855.9000	141264.5100	283.3378	353077.2200	436476.6100	53240.7800	+18363744.0000	418328.4600	+239227
3	13:41:02	228113.1600	400689.5800	+2912986030.0000	+2292413.0000	+211048840.0000	+233062940.0000	+9408073.9000	141236.2600	270.0040	355244.9200	435957.8100	53568.6980	+18387679.0000	420746.7900	+237054
X		231313.5200	407588.1100	+2954452180.0000	+2279483.0000	+213678190.0000	+231677619.0000	+9359186.6000	142377.3900	295.5604	350889.6000	434767.6400	53214.1860	+18192611.0000	416425.0300	+236825
σ		2776.6886	6835.3972	+57217274.7000	+346263.5700	+2234094.3000	+1852181.3000	+45764.2193	808.3529	33.3906	6243.5128	2253.5805	368.5301	+308711.2000	5524.6245	+2518
%RSD		1.2004	1.6276	+1.9535	+15.5187	+1.0466	+0.8016	+0.4889	0.5678	11.2977	1.7793	0.5183	0.6925	+1.6064	1.3267	
Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	
1	13:40:28	545184.8800	614746.9300	1975069.3000	66467.6580	3744.1042	12095.8150	5665.0979	220.0027	72353.4520	332066.6900	592193.8100	621071.0300	362478.5700	967006.7200	2554
2	13:40:45	552440.5000	632143.1400	2007438.3000	66522.5830	3654.1502	12490.7970	5451.6341	220.0027	73438.7690	342485.3500	599295.3700	635959.2900	371540.2800	991258.6200	2525
3	13:41:02	557507.7400	634941.7900	2020463.2000	67704.5138	3714.0919	12617.6358	5785.1735	233.3363	73983.1560	345160.3900	592957.1600	638701.9500	374234.1300	997413.7200	2549
X		550044.3800	627277.9500	2000989.2000	66898.2240	3770.7821	12401.4190	5633.9685	224.4472	73258.4590	339910.8100	590482.1100	631844.1200	369417.6600	985228.3500	2543
σ		4268.5797	10940.3050	23375.4540	698.8648	73.7419	272.1495	168.9346	7.6982	829.6795	6906.6353	5606.0957	9445.0716	6158.5272	16075.9928	15
%RSD		0.7651	1.7441	1.1682	1.0446	1.9556	2.1945	2.9985	3.4298	1.1325	2.0319	0.9526	1.4948	1.6671	1.6317	
Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
1	13:40:28	31297.1140	211085.8650	23684.1450	348057.7800	154000.0900	1013472.6400	3066950.6000	+2044317.4000	96186.1700	95039.3520	3006932.3000	2664565.8000	53608.8870		
2	13:40:45	31738.6410	215258.6800	24195.4830	355189.1400	156617.5800	1045537.1000	3090351.6000	+2023084.9000	97109.2390	97254.1090	3074760.9000	2059328.9000	53547.2390		
3	13:41:02	31384.0790	216198.4000	24058.4580	363238.0000	160602.8800	1056167.0000	3113051.2000	+2055725.0000	99292.6360	98204.2610	3112143.6000	2081051.9000	53564.0040		
X		31473.2780	214178.3100	23979.3640	355494.9700	157073.5100	1038392.2000	3089117.8000	+2027709.1000	97529.3480	97049.5670	3064592.6000	2041648.8000	53570.7100		
σ		233.8863	2718.3602	264.6888	7594.7293	3324.9205	22275.8540	23051.2100	+26013.9098	1595.2740	1301.5529	53329.5430	32126.3910	27.4455		
%RSD		0.7431	1.2692	1.1038	2.1364	2.1168	2.1454	2.1146	+1.2829	1.6357	1.3414	1.7407	1.5736	0.0512		

SEQ-CCB@CCB02 5/12/2016 13:44:55 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	23Na	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl Q	54Fe	55Mn	59Co
1	13:44:35	257039.8300	20.0000	59202.1440	1043.3932	12341.7050	166092.0300	6952.6577	157835.0300	340.0064	265.3372	253.3369	112.0007	23149.4370	60.0002	243.3366
2	13:44:52	248240.2900	56.6668	60987.2860	1160.0740	15853.8120	186231.5100	7009.3676	157757.0300	316.6722	249.6709	252.3378	114.6674	23744.3910	63.3336	243.3366
3	13:45:10	247144.3700	36.6667	63229.1240	1270.1723	21366.0260	179389.3000	6665.7762	157461.9500	270.0040	250.6701	276.0042	107.3340	23915.4950	33.3334	306.6716
X		250808.1600	41.1112	61142.8510	1324.5465	18653.8480	183904.2600	6875.9339	157684.6800	308.8942	253.5591	260.2260	111.3340	23601.7150	52.2224	264.4483
σ		5424.5301	13.8778	2017.4326	390.3081	4262.8245	3916.7092	184.1975	196.7685	35.6434	10.6322	12.0987	3.7118	400.4963	16.4436	36.5666
%RSD		2.1628	33.7568	3.2995	29.4673	28.5989	2.1265	2.6785	0.1248	11.5390	4.1932	4.6139	3.3348	1.6969	31.4966	13.8275
Run	Time	60Ni	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh
1	13:44:35	263.3372	426.6767	530.0154	22.2222	3.3333	11.1111	13.3333	263.3372	78349.5100	156.6680	173.3356	200.0022	196.6688	300.0050	28795.5330
2	13:44:52	283.3378	433.3437	520.0149	18.8889	6.6667	5.5556	13.3333	220.0027	80348.1040	120.0008	240.0022	216.6693	143.3345	216.6693	28842.3480
3	13:45:10	263.3372	473.3457	570.0179	20.0000	0.0000	11.1111	16.6667	210.0024	79664.3710	106.6673	223.3361	233.3363	180.0018	316.6722	29317.1960
X		270.0040	444.4553	540.0161	20.3704	3.3333	9.2593	14.4445	231.1151	79457.9950	127.7787	196.8911	216.6693	173.3350	277.7821	28985.0260
σ		11.5474	25.2408	26.4591	1.6973	3.3333	3.2075	1.9245	28.3504	1014.4213	25.8918	25.0191	16.6671	27.2850	53.5774	288.6190
%RSD		4.2757	5.6791	4.8997	8.3320	100.0000	34.6410	13.3235	12.2668	1.2767	20.2631	12.5793	7.8924	15.2412	19.2876	0.9958
Run	Time	106Cd	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi		
1	13:44:35	76.6670	16.6667	213.3358	36.6667	154976.4800	383.3414	330.0069	66.6669	99946.4070	97671.8058	613.3540	356.6737	58333.2700		
2	13:44:52	56.6668	30.0000	188.6682	33.3334	160026.1700	416.6762	380.0079	106.6673	103328.4800	101409.1400	590.0192	323.3351	60302.6750		
3	13:45:10	63.3336	26.6667	196.6679	66.6669	162233.6000	450.0111	363.3406	183.3352	105636.8700	103428.3600	700.0270	449.0109	62705.5160		
X		65.5558	24.4445	179.5573	45.5557	159245.4200	416.6763	357.7848	118.8898	102967.9200	100836.4609	634.4667	373.3411	60447.1370		
σ		10.1836	6.9389	34.2114	16.3587	3937.0598	33.3349	25.4597	59.2867	2861.5693	2920.6557	57.9632	88.0951	2189.2748		
%RSD		15.5242	28.3864	19.4873	40.2994	2.4723	8.0002	7.1159	49.8669	2.7791	2.8964	9.1357	16.0966	3.6225		

PREPARATION BENCH SHEET

QE09009

Bonner Analytical Testing Co.

Matrix: Water
Analysis: ISM023 - ICPMS (TM)
Prepared: 05/10/2016 08:30 using METALS - 200.8

Case: 46115
SDG: MH4213
Work Order: 6050095

Lab Number	Sample ID	Initial (mL)	Final (mL)	Spike ID	Spike Amount (uL)	Spike ID	Spike Amount (uL)	pH	Filtered
6050095-01	MH4213	50	50					< 2	NA
6050095-01RE1	MH4213	50	50					< 2	NA
QE09009-MS1	MH4213S	50	50	B6B0062	500			< 2	
QE09009-BS1	LCS01	50	50	B6A0009	100			< 2	
QE09009-DUP1	MH4213D	50	50					< 2	
QE09009-DUP2	MH4213D	50	50					< 2	
QE09009-BLK1	PBW01	50	50					< 2	

Table 1: Quality Controls (QC), Reagents (R) and Standards (Std)

LIMS ID	Description	Vendor	LotNum
B3E0023	R - Distilled Water	In-House	NA
B5G0112	R - Hydrochloric Acid - 1:1	In House	NA
B5I0004	R - Nitric Acid - 1:1	In House	NA
B6A0009	QC - BAT-11	Inorganic Ventures	J2-MEB613056
B6B0062	QC - CLP-MS-SPK-REV1	Inorganic Ventures	K2-MEB619110

Table 2: Metals Digestion Apparatus

Balance ID		NA					
Dig. Block ID		2					
Start Temp	Stop Temp	93.0	94.0				
Start Time	Stop Time	0830	1400				

Comments: JM 5/12

MSB2 — 05/10/2016
Perpared By — Date

Preparation Reviewed By — 5/18/2016 Date

File Name: M051216B SDG No.: MH4213 Standards Prep Date: 050416

Instrument: ICPMS01 Case No.: 46115 Standards Log Page No.: 8

Analyst: LEM

Lab ID	EPA Sample #	Date&Time	Elements circled for S0-S# were used throughout this run unless otherwised noted. Al, As, Sb, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, Tl, V, Zn
BE61204-TUN1	TUNE01	5/12/16 11:49	
BE61204-CAL1	S01	5/12/16 12:00	
BE61204-CAL2	S02	5/12/16 12:04	MN, TI
BE61204-CAL3	S03	5/12/16 12:09	TI
BE61204-CAL4	S04	5/12/16 12:13	MINUSBa
BE61204-CAL5	S05	5/12/16 12:17	
BE61204-CAL6	S06	5/12/16 12:21	
BE61204-CAL7	S07	5/12/16 12:25	
BE61204-CAL8	S08	5/12/16 12:29	
BE61204-CAL9	S09	5/12/16 12:33	~~MINUSMN~~ Ba, ZN
BE61204-CALA	S10	5/12/16 12:37	AlCaFeKMgNa
BE61204-ICV1	ICV01	5/12/16 12:42	
BE61204-ICB1	ICB01	5/12/16 12:46	
BE61204-IFA1	ICSA01	5/12/16 12:50	
BE61204-IFB1	ICSAB01	5/12/16 12:54	
BE61204-CCV1	CCV01	5/12/16 12:59	
BE61204-CCB1	CCB01	5/12/16 13:04	
QE09009-BLK1	PBW01	5/12/16 13:07	
QE09009-BS1	LCS01	5/12/16 13:11	
6050095-01	MH4213	5/12/16 13:14	MINUSCa
QE09009-MS1	MH4213S	5/12/16 13:18	
QE09009-DUP1	MH4213D	5/12/16 13:22	MINUSCa
BE61204-SRD1	MH4213L	5/12/16 13:26	↓
6050095-01RE1	MH4213	5/12/16 13:29	Ca ONLY
QE09009-DUP2	MH4213D	5/12/16 13:32	↓
BE61204-SRD2	MH4213L	5/12/16 13:36	↓
BE61204-CCV2	CCV02	5/12/16 13:40	
BE61204-CCB2	CCB02	5/12/16 13:44	

CM 5/12

Bonner Analytical Testing Company
Instrument: ICPMS01
Serial No. X0494

ISM02.3 Calibration & QC Preparation Logbook
Standards & QC for ICPMS01 analysis were prepared on: 050916

Description	EPA ID	Amount Spiked	Volume Made	Manufacturer	Lot#	Date Lot Expires**	LIMs ID
Initial Calibration High - CAL9	S10	NA	50 mL	In-House	NA	2 Weeks	B6A0037
BONNER-1		0.625 mL		Inorganic Ventures	J2-MEB613058	Feb-17	B6A0010
Initial Calibration High - CAL9	S09	NA	50 mL	In-House	NA	2 Weeks	B4J0061
BAT-15		2.5 mL		Inorganic Ventures	J2-MEB582109	Sep-16	B5I0014
Initial Calibration High - CAL8	S08	NA	100 mL	In-House	NA	2 Weeks	B6A0038
BAT-13		2.0 mL	Composite	Inorganic Ventures	J2-MEB586056	Jul-16	B5H0037
BAISM-MIX1		2.0 mL			J2-MEB613059	Feb-17	B6A0011
BONNER-1		0.25 mL			J2-MEB613058	Feb-17	B6A0010
Initial Calibration Mid - CAL7	S07	25 mL	50 mL	In-House	From S08	2 Weeks	B6A0039
Initial Calibration Mid - CAL6	S06	2.5 mL	50 mL	In-House	From S08	2 Weeks	B6A0040
Initial Calibration Mid - CAL5	S05	0.5 mL	50 mL	In-House	From S08	2 Weeks	B6A0041
Initial Calibration Low - CAL4	S04	NA	50 mL	In-House	NA	2 Weeks	B6A0042
BAT-11		0.05 mL		Inorganic Ventures	J2-MEB613056		B6A0009
Initial Calibration Low - CAL3	S03	NA	50 mL	In-House	NA	2 Weeks	B6A0043
BAT-11		0.025 mL		Inorganic Ventures	J2-MEB613056		B6A0009
Initial Calibration Low - CAL2	S02	NA	50 mL	In-House	NA	2 Weeks	B6A0044
BAT-11		0.01 mL		Inorganic Ventures	J2-MEB613056		B6A0009
Initial Calibration Low - CAL1	S01	NA	NA	In-House	NA	1 yr	B5L0036
Initial Calibration Blank	ICB						
Continuing Calibration Blank	CCB						
Initial Calibration Verification	ICV		50 mL	In-House	NA	2 Weeks	B6A0064
ICV-1		1.0 mL		EPA	ICV1-0307	NA	B6A0063
ICV-2 (used for non-TA)		1.0 mL		In-House	NA	1 yr	B6A0065
Interelement Check Standard A	ICSA		50 mL	In-House	NA	2 Weeks	B6A0093
ICS PART A		5.0 mL		EPA	ICS-MS (0803)	NA	B6A0092
Interelement Check Standard AB	ICSAB		50 mL	In-House	NA	2 Weeks	B6A0095
ICS PART A		5.0 mL	Composite	EPA	ICS-MS (0803)	NA	B6A0092
ICS PART B		5.0 mL					B6A0094
Continuing Calibration Verification	CCV		50 mL	NA	NA	2 Weeks	~~B6A0015~~ B6A0038
Initial Calibration High - CAL8		25 mL	Composite	In-House	From S08		B6A0010
BONNER-1		0.2375 mL		Inorganic Ventures	J2-MEB613058	Feb-17	B5I0014
BAT-13		1.0 mL		Inorganic Ventures	J2-MEB582109	Sep-16	B3J0005
BAT - 200.8TS	TUNE	0.5 mL	50 mL	In-House	NA	2 Weeks	B4J0064
BAT - TUNE A	TUNE A	0.05 mL	50 mL	In-House	NA	2 Weeks	B5I0011
BAT - TUNE D	TUNE D	0.5 mL	50 mL	In-House	NA	2 Weeks	
CLP-MS-SPK-REV1	Matrix Spike (Water)	0.5 mL	50 mL	Inorganic Ventures	K2-MEB619110	Sep-17	B6B0062
CLP-MS-SPK-REV1	Matrix Spike (Soil)	1.0 mL	500 mL	Inorganic Ventures	K2-MEB619110	Sep-17	B6B0062
BAT-11	LCS (Water)	0.1 mL	50 mL	Inorganic Ventures	J2-MEB613056	Feb-17	B6A0009
BAT-11	LCS (Soil)	1.0 mL	500 mL	Inorganic Ventures	J2-MEB613056	Feb-17	B6A0009

BLEDOSS 05/19/16

* Dilutions of calibration stds, CCV, & 200.8TS are made with the same acid water as the S0, ICB & CCB
* Dilutions of ICV, ICSA, ICSAB, Tune A, & Tune D are made with 1% HNO3
** Date lot expires reflects the date that the standard being described will expire

Prepared By: _____ 050116
Analyst/Date

Reviewed By: _____ 5/9/16
Name/Date

TUNE PREPARATION LOG

TUNE A

Lims ID: B510036

Preparation Date: 09-11-2015

Prepared By: LEM

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Nitric Acid	1%	46.75 mL	BATCO	N/A	N/A	N/A
Barium	1000	0.5 mL	SCP Science	S1310170004	10-2014	10-1-2015
Cobalt	1000	0.5 mL	SCP Science	S1312030009	10-2014	10-1-2015
Lithium-6	1000	0.5 mL	Inorganic Ventures	G2-LI03005	12-2-2014	01-01-16
Uranium	1000	0.5 mL	Inorganic Ventures	H2-U01116	06-01-15	06-01-16
Is_Sc_In	667	0.75 mL	BATCO	N/A	12-6-2014	12-4-2015
Cerium	1000	0.5 mL	Inorganic Ventures	G2CE01006	12-2015	01-01-2016

Balance ID: NA

Instrument: ICPMS01

Final Volume: 50 mL

Concentration: 10 mg/L

Used For: Tune A

Expiration Date: 12 months after preparation date

Comments: 0.05 mL to 50 mL for Daily Tune A

Reviewed By: 9/14/15

Supervisor/Date

TUNE PREPARATION LOG

TUNE D

Lims ID: B510011

Preparation Date: 09-02-2015

Prepared By: LEM

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Nitric Acid	1%	32.55 mL	BATCO	N/A	N/A	N/A
Aluminum	10000	0.1 mL	Inorganic Ventures	JZ-AL05000	12-15-15	8-10-16
Arsenic	1000	1 mL	SCP Science	S140326010	10-14	10-1-15
Barium	1000	1 mL	SCP Science	S131017004	10-14	10-1-15
Beryllium	1000	1 mL	SCP Science	S140414006	10-14	10-1-15
Calcium	10000	0.1 mL	SCP Science	S140331015	10-14	10-1-15
Cadmium	1000	1 mL	SCP Science	S131206019	10-14	10-1-15
Cobalt	1000	1 mL	SCP Science	S131203004	10-14	10-1-15
Chromium	1000	1 mL	SCP Science	S140414005	10-14	10-1-15
Copper	1000	1 mL	SCP Science	S140515074	10-14	10-1-15
Iron	10000	0.1 mL	Inorganic Ventures	JZ-FE04047	8-10-15	8-10-16
Indium (Is_Sc_In)	667	0.75 mL	BATCO	N/A	12-06-14	12-04-15
Potassium	10000	0.1 mL	SCP Science	S140210012	10-14	10-1-15
Lithium-6	1000	2 mL	Inorganic Ventures	GZ-LI03005	12-2-14	01-01-16
Magnesium	10000	0.1 mL	SCP Science	S140219010	10-14	10-1-15
Manganese	1000	1 mL	SCP Science	S140313015	10-14	10-1-15
Molybdenum	1000	1 mL	Inorganic Ventures	HZ-MO02002	11-14	11-1-15
Sodium	10000	0.1 mL	SCP Science	S140224032	10-14	10-1-15
Nickel	1000	1 mL	SCP Science	S140113011	10-14	10-1-15
Lead	1000	1 mL	Inorganic Ventures	JZ-PB08066	08-18-15	08-18-16
Selenium	1000	1 mL	SCP Science	S140115015	10-14	10-1-15
Thallium	1000	1 mL	SCP Science	S140116017	10-14	10-1-15
Vanadium	1000	1 mL	SCP Science	S131120006	10-14	10-1-15
Uranium	10000	0.1 mL	Inorganic Ventures	HZ-U01116	08-01-15	08-01-16
Zinc	1000	1 mL	SCP Science	S140130111	10-14	10-1-15

Instrument: ICPMS01

Final Volume: 50 mL

Concentration: Varies

Used For: Tune D

Expiration Date: 12 months after preparation date

Comments: 0.25 mL to 50 mL for Daily Tune D

Reviewed By: 9/14/15

Supervisor/Date

TUNE PREPARATION LOG

200.8TS

Lims ID: 8510045

Preparation Date: 08-01-2015 Prepared By: LEM

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Nitric Acid / HCl	1%/0.5%	47.7 mL	BATCO	N/A	N/A	N/A
Beryllium	1000	0.5 mL	SCP Science	S14041400b	10 2014	10-1-15
Cobalt	1000	0.5 mL	SCP Science	S13120300q	10 2014	10-1-15
Indium (Is_Sc_In)	667	0.75 mL	BATCO	N/A	12-6-2014	12-4-2015
Lead	1000	0.5 mL	Inorganic Ventures	JZ-PB8006	08 2015	08 2016
Magnesium	10000	0.05 mL	SCP Science	S14021901D	10/2014	10-1-15

Balance ID: NA

Instrument: ICPMS01

Final Volume: 50 mL

Concentration: 10 mg/L

Used For: 200.8TS

Expiration Date: 12 months after preparation date

Comments: 0.5 mL to 50 mL for Daily 200.8TS

Reviewed By: 9/14/15

Supervisor/Date

REAGENTS PREPARATION LOG

1% HNO3

Lims ID: B6L0078

Preparation Date: 03-29-16

Prepared By: LEM

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled H2O	Neat	19800 mL	BATCO	NA	NA	NA
Nitric Acid	Neat	200 mL	FISHER	111506O	12/2015	07/31/2017

Balance ID: NA

Instrument: ICPMS01

Final Volume : 20 Liters

Concentration: 1% HNO3

Used For: ICV, ICSA, ICSAB,TUNE, Soil Samples

Expiration Date 12 months after preparation date

Comments

Reviewed By: 3/29/16

Supervisor/Date

REAGENTS PREPARATION LOG

ICPMS01 Reference Standard

Lims ID: BbC0056

Preparation Date: 04.08.2016 Prepared By: LEM

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled Water	Neat	19780 mL	BATCO	NA	NA	NA
Nitric Acid	Neat	200 mL	FISHER	1113060	06/2015	07/18/17
6020ISS	10	20 mL	INORGANIC VENTURES	JZ-MEB562038	01/2016	03/2017
^{6}Lithium	1000	1.2 mL	INORGANIC VENTURES	JZ-LI05018	04/06/16	04/06/17
IS_Sc_In	1000/667	0.3 mL	IN HOUSE	NA	NA	NA

IS_Sc_In

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
5% Nitric Acid	Neat	100 mL	BATCO	NA	NA	NA
Scandium	Neat	100 mg	ALDRICH	751868-10	NA	NA
Indium	Neat	66.7 mg	ALDRICH	MKBK4185V	NA	NA

Balance ID METTLER IV

Instrument ICPMS01

Final Volume 20 Liters

Concentration Bi, Ho, Rh, Tb, Y 10ppb / ^{6}Li 70ppb / Sc 25ppb / In 20ppb in 1%HNO_3

Used For Internal Standard for ICP-MS

Expiration Date 05.20.2016

Comments The 5% HNO3 should be warm when adding the Scandium and Indium to help go in solution.

Reviewed By: [signature] 4/12/16

Supervisor/Date

REAGENTS PREPARATION LOG

Acidified Water

Lims ID: BWC0057

Preparation Date: 05/20/16

Prepared By: LFM

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled H2O	Neat	19700 mL	BATCO	NA	NA	NA
Nitric Acid	Neat	200 mL	FISHER	111060	12/2015	07/08/2017
Hydrochloric Acid	Neat	100 mL	FISHER	411505D	12/2015	06/26/2018

Balance ID: NA

Instrument: ICPMS01

Final Volume : 20 Liters

Concentration: 1%HNO3 / 0.5%HCl

Used For: Preparation of Standards and Controls

Expiration Date 12 months after preparation date

Comments

Reviewed By: 3/24/16

Supervisor/Date

Bonner Analytical Testing Company

ICP-MS ISM02.3 CLP Standard Concentration Page

Element	S02 1/5CRQL	S03 1/2CRQL	S04 CRQL	S05 S10	S06 S50	S07 S500	S08 S1000	S09 S5000	S10 S125000	ICV	LCS (ug/L)	LCS (mg/kg)	ICSA	ICSAB	CCV	MS (ug/L)	MS (mg/kg)	TUNE
Al	4	10	20	260	1300	13000	26000		125000	504	40		(100000)	(100000)	62500			
Ag	0.2	0.5	1	1.3	6.5	65	130			100	2	1	(0)	18	65	50	5	
As	0.2	0.5	1	10	50	500	1000			200	2	1	(0.1)	19	500	40	4	
Ba	2	5		10	50	500	1000	5000		99	20	10	(1.2)	22	2500	2000	200	
Be	0.2	0.5	1	10	50	500	1000			99	2	1	(0)	19	500	50	5	100
Ca	100	250	500	250	1250	12500	25000		125000	2005	1000		(100000)	(100000)	62500			
Cd	0.2	0.5	1	10	50	500	1000			99	2	1	(0.7)	20	500	50	5	
Co	0.2	0.5	1	10	50	500	1000			100	2	1	1	20	500	500	50	100
Cr	0.4	1	2	10	50	500	1000			98	4	2	21	40	500	200	20	
Cu	0.4	1	2	10	50	500	1000			98	4	2	8	25	500	250	25	
Fe	40	100	200	250	1250	12500	25000		125000	1016	400		(100000)	(100000)	62500			
Mg	100	250	500	250	1250	12500	25000		125000	1215	1000		(100000)	(100000)	62500			100
Mn	0.2	0.5	1	10	50	500	1000	5000		100	2	1	7	27	500	500	50	
Na	100	250	500	250	1250	12500	25000		125000	2019	1000		(100000)	(100000)	62500			
Ni	0.2	0.5	1	10	50	500	1000			101	2	1	6	24	500	500	50	
Pb	0.2	0.5	1	10	50	500	1000			200	2	1	4	25	500	20	2	100
K	100	250	500	250	1250	12500	25000		125000	2004	1000		(100000)	(100000)	62500			
Sb	0.4	1	2	10	50	500	1000			199	4	2	(1.5)	22	500	100	10	
Se	1	2.5	5	10	50	500	1000			206	10	5	(0.3)	19	500	100	10	
Tl	0.2	0.5	1	10	50	500	1000			206	2	1	(0)	21	500	50	5	
V	1	2.5	5	10	50	500	1000			100	10	5	(0.5)	19	500	500	50	
Zn	0.4	1	2	10	50	500	1000	5000		205	4	2	11	29	2500	500	50	

Units are in ug/L unless otherwise noted.

( ) Indicated analyte values that are less than the CRQL and the value is to be used as a set point for the ±2X the CRQL acceptance criteria calculations.

In is also in the TUNE at 100 ug/L.

EPA SAMPLE NO.

MH4213

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Matrix: Water Lab Sample ID: 6050095-01

% Solids: Date Received: 05/06/2016

Analytical method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg): ug/L

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/11/2016	1505

NOTE: Hardness (total) is reported in mg/L

Comments:

FORM 2-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Initial Calibration Verification Source: QATS, Lot: EPA (0508)

Continuing Calibration Verification Source: In House, Lot: B5I0093

Run Batch: BE61106H051116A Analytical method: CVAA

Concentration Units: ug/L

	Initial Calibration Verification				Continuing Calibration Verification						
	ID: ICV01				ID: CCV01				ID: CCV02		
Analyte	True	Found	%R	%RSD	True	Found	%R	%RSD	Found	%R	%RSD
Mercury	4.0000	3.6	91		3.0000	2.9	98		3.0	100	

FORM 3-IN
BLANKS

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Preparation Blank Matrix: Water

Preparation Blank Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg): ug/L

Analytical method: CVAA Preparation Batch: QE10001

Run Batch: BE61106H051116A Preparation Method: 7470A

	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank/Leachate Extraction Blank	
Analyte	ID: ICB01	Q	ID: CCB01	Q	ID: CCB02	Q	ID:	Q	ID: PBW01	Q
Mercury	0.20	U	0.20	U	0.20	U			0.20	U

NOTE: Hardness (total) is reported in mg/L

EPA SAMPLE NO.

MH4213S

FORM 5A-IN
MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Matrix: Water Analytical Method: CVAA

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Q	Sample Result (SR)	Q	Spike Added (SA)	%R	Q
Mercury	75-125	0.94		0.20	U	1.00	94	

EPA SAMPLE NO.

MH4213D

FORM 6-IN
DUPLICATES

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.:46115 MA No.: SDG No.: MH4213

Matrix: Water Analytical Method: CVAA

% Solids:

Concentration Units (µg/L, mg/L, or mg/kg dry weight): ug/L

Analyte	Control Limit	Sample (S)	Q	Duplicate (D)	Q	RPD	Q
Mercury		0.20	U	0.20	U		

NOTE: Hardness (total) is reported in mg/L

FORM 9-IN
METHOD DETECTION LIMIT

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Analytical Method: CVAA Instrument ID: CETAC01

Preparation Method: 7470A

Concentration Units (µg/L, µg, or mg/kg): ug/L

Analyte	Wavelength/Mass	MDL	Date Analyzed
Mercury	257.00 nm	0.036	01/14/2016

FORM 12-IN
ANALYSIS LOG

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Instrument ID: CETAC01 Analytical Method: CVAA

Start Date: 05/11/2016 End Date: 05/11/2016

Run Batch: BE61106H051116A

EPA Sample NO.	D/F	Time	Analytes																											
			Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	CN		
S01	1.0	1430															X											
S02	1.0	1433															X											
S03	1.0	1435															X											
S04	1.0	1438															X											
S05	1.0	1441															X											
S06	1.0	1443															X											
S07	1.0	1450															X											
ICV01	1.0	1453															X											
ICB01	1.0	1455															X											
CCV01	1.0	1458															X											
CCB01	1.0	1500															X											
PBW01	1.0	1503															X											
MH4213	1.0	1505															X											
MH4213S	1.0	1508															X											
MH4213D	1.0	1510															X											
CCV02	1.0	1513															X											
CCB02	1.0	1515															X											

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Instrument ID: CETAC01 Start Date: 05/11/2016

Analytical method: CVAA Run Batch: BE61106H051116A

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Mercury	0.0	0.011		0.10	0.088	12	0.20	0.19	7

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Instrument ID: CETAC01 Start Date: 05/11/2016

Analytical method: CVAA Run Batch: BE61106H051116A

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Mercury	0.50	0.47	6	1.0	1.0	-2	3.0	3.1	-2

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

Instrument ID: CETAC01 Start Date: 05/11/2016

Analytical method: CVAA Run Batch: BE61106H051116A

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Mercury	6.0	6.0	0						

FORM 16-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 46115 MA No.: SDG No.: MH4213

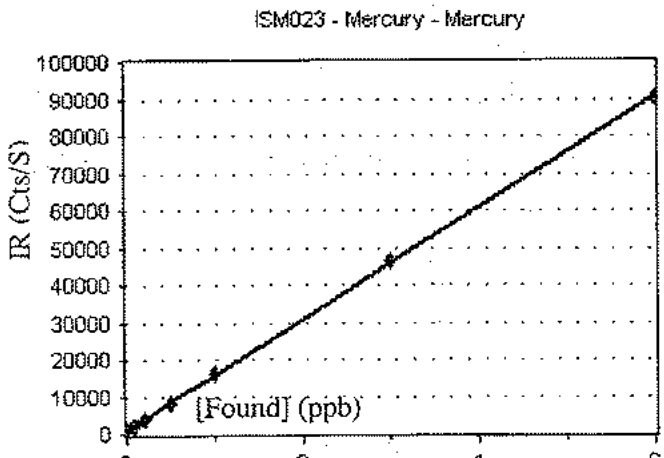
Instrument ID: CETAC01 Start Date: 05/11/2016

Analytical method: CVAA Run Batch: BE61106H051116A

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Mercury	0.9998188	14983.69	0.0596759	Lin. Reg	None

Bonner Analytical Testing Company

Instrument ID: CETAC01 Calibration ID: B620010 Calibration Date: 05/11/2016 by NDP



Calibration Plot: Mercury
Calibration Type: Linear Regression
Corr. Coeff.: 0.9998188
Fit: [Y] = 14983.69 * [X] + 894.1649

Sequence	Std. Name	LIMS ID	True Conc. (ppb)	Found Conc. (ppb)	IR (Cts/S)	Difference (%)
BE61106-CAL1		B5I0098	0	0.01	1052	0
BE61106-CAL2		B5I0097	0.1	0.09	2214	12
BE61106-CAL3		B5I0096	0.2	0.19	3677	7
BE61106-CAL4		B5I0095	0.5	0.47	7910	6
BE61106-CAL5		B5I0094	1	1.02	16200	-2
BE61106-CAL6		B5I0093	3	3.05	46630	-2
BE61106-CAL7		B5I0092	6	5.97	90400	0

Bonner Analytical Testing Company

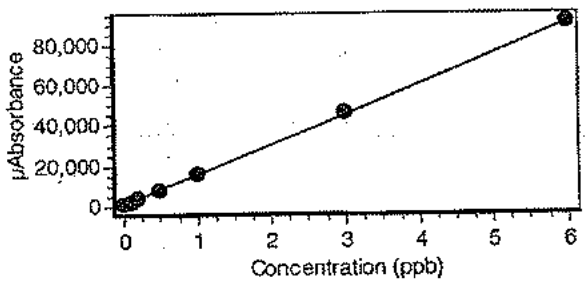
Report Generated By Teledyne Leeman QuickTrace

Analyst: nprice
Worksheet file: \\BATCO-SERVER\Share Folders\InstData\Cetac01\2016\H051116A.wszf
Creation Date: 10/9/2015 4:23:52 PM
Comment:

Results

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags	% Recovery
SEQ-CAL1@S01	STD	05/11/16 02:30:55 pm	0.0000	1052	0.00	10.55		N/A
Replicates 1051.7								
SEQ-CAL2@S02	STD	05/11/16 02:33:26 pm	0.1000	2214	0.00	-11.86		N/A
Replicates 2214.3								
SEQ-CAL3@S03	STD	05/11/16 02:35:58 pm	0.2000	3677	0.00	-14.25		N/A
Replicates 3676.9								
SEQ-CAL4@S04	STD	05/11/16 02:38:30 pm	0.5000	7910	0.00	-31.76		N/A
Replicates 7909.8								
SEQ-CAL5@S05	STD	05/11/16 02:41:02 pm	1.0000	16198	0.00	21.34		N/A
Replicates 16197.5								
SEQ-CAL6@S06	STD	05/11/16 02:43:35 pm	3.0000	46632	0.00	52.44		N/A
Replicates 46631.5								
SEQ-CAL7@S07	STD	05/11/16 02:50:42 pm	6.0000	90401	0.00	-26.46		N/A
Replicates 90401.4								

Calibration
Equation: Abs = 14984.038x + 893.650
R2: 0.99982
SEE: 491.0103
Flags:



SEQ-ICV@ICV01	ICV	05/11/16 02:53:16 pm	3.6410	55445	0.00			91.02
Replicates 55444.7								
SEQ-ICB@ICB01	ICB	05/11/16 02:55:47 pm	-0.0093	754	0.00			N/A
Replicates 753.6								
SEQ-CCV@CCV01	CCV	05/11/16 02:58:19 pm	2.9410	44960	0.00			98.03
Replicates 44960.3								
SEQ-CCB@CCB01	CCB	05/11/16 03:00:50 pm	-0.0105	736	0.00			N/A
Replicates 736.1								
QE10001-BLK1@PBW01	UNK	05/11/16 03:03:21 pm	-0.0075	781	0.00			N/A
Replicates 781.2								

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual Flags	% Recovery
6050095-01@MH4213	UNK	05/11/16 03:05:52 pm	0.0014	915	0.00		N/A
Replicates 914.5							
QE10001-MS1@MH4213S	UNK	05/11/16 03:08:24 pm	0.9375	14941	0.00		N/A
Replicates 14941.1							
QE10001-DUP1@MH4213D	UNK	05/11/16 03:10:55 pm	0.0007	904	0.00		N/A
Replicates 903.9							
SEQ-CCV@CCV102	CCV	05/11/16 03:13:28 pm	2.9960	45792	0.00		99.88
Replicates 45791.5							
SEQ-CCB@CCB102	CCB	05/11/16 03:15:59 pm	-0.0062	801	0.00		N/A
Replicates 801.0							

dcc 5/18/2016

PREPARATION BENCH SHEET

QE10001

Bonner Analytical Testing Co.

Matrix: Water
Analysis: ISM023 - Mercury
Prepared: 05/11/2016 09:50 using METALS - 7470A

Case: 46115
SDG: MH4213
Work Order: 6050095

Lab Number	Sample ID	Initial (mL)	Final (mL)	Spike ID	Spike Amount (uL)	Spike ID	Spike Amount (uL)	pH
6050095-01	MH4213	50	50					< 2
QE10001-MS1	MH4213S	50	50	B5F0118	500			< 2
QE10001-DUP1	MH4213D	50	50					< 2
QE10001-BLK1	PBW01	50	50					< 2

Table 1: Quality Controls (QC), Reagents (R) and Standards (Std)

LIMS ID	Description	Vendor	LotNum
B5F0118	HG - MATRIX SPIKE 0.1 ppm	In-House	S-WS
B6D0042	R - Potassium Permanganate	In House	NA
B6D0043	R - Potassium Persulfate	Fisher	1
B6E0001	R - Sodium Chloride Hydroxylam	In-House	NA
B6E0031	R - Stannous Chloride	In House	NA
B6E0054	R - Hydrogen Peroxide 30%	Fisher	143279

Table 2: Hg Digestion Apparatus

Balance ID		NA					
Dig. Block ID		1					
Start Temp	Stop Temp	94.5	95				
Start Time	Stop Time	93	1150				

NDP 05/11/2016
Perpared By Date

Table 3: Hg Calibration Curve Procedure

EPA ID	Std. Discription	WATER		SOIL	
		Spike V. (uL)	F.V. (mL)	Spike V. (uL)	F.V. (mL)
S01/ICB/CCB	Cal Blank/ICB/CCB	0	50	0	100
S02	Cal Std 0.1 ppb	50	50	100	100
S03	Cal Std 0.2 ppb	100	50	200	100
S04	Cal Std 0.5ppb	250	50	500	100
S05	Cal Std 1 ppb	500	50	1000	100
S06/CCV	Cal Std/CCV 3 ppb	1500	50	3000	100
S07	Cal Std 6 ppb	3000	50	6000	100
ICV	ICV 4.0 ppb	500	50	1000	100

These are the spike values used for Water and Soil calibration curves. These standards are associated to this batch only and were digested under the same conditions as the samples. See Matrix type to determine which spike volume (Spike V.) and final volume (F.V.) were used.

Comments:

5/18/2016
Preparation Reviewed By Date

File Name: H051116A SDG No.: MH4213 Standards Prep Date: 5/11/16

Instrument: CETAC01 Case No.: 46115 Standards Log Page No.: 6

Analyst: NDP

Lab ID	EPA Sample #	Date&Time	Elements circled for S0-S# were used throughout this run unless otherwised noted. Hg
BE61106-CAL1	S01	5/11/16 14:30	
BE61106-CAL2	S02	5/11/16 14:33	
BE61106-CAL3	S03	5/11/16 14:35	
BE61106-CAL4	S04	5/11/16 14:38	
BE61106-CAL5	S05	5/11/16 14:41	
BE61106-CAL6	S06	5/11/16 14:43	
BE61106-CAL7	S07	5/11/16 14:50	
BE61106-ICV1	ICV01	5/11/16 14:53	
BE61106-ICB1	ICB01	5/11/16 14:55	
BE61106-CCV1	CCV01	5/11/16 14:58	
BE61106-CCB1	CCB01	5/11/16 15:00	
QE10001-BLK1	PBW01	5/11/16 15:03	
6050095-01	MH4213	5/11/16 15:05	
QE10001-MS1	MH4213S	5/11/16 15:08	
QE10001-DUP1	MH4213D	5/11/16 15:10	
BE61106-CCV2	CCV02	5/11/16 15:13	
BE61106-CCB2	CCB02	5/11/16 15:15	

Bonner Analytical Testing Company

ISM02.3 Hg STANDARD & QC LOG

Analyst: NDP Date: 05/11/16

Description	EPA ID	Amount Spiked	Volume Made	Manufacturer	Lot#	Date Lot Expires	Final Conc. (ug/L)	LIMS ID
Initial Calibration Working Standard	S-WS		50 mL	Inorganic Ventures	NA	1 month	100 ppb	B5I0091
Hg @ 10 ppm		0.5 mL	Composite		H2-HC02129	Sep-16		B5I0086
Initial Calibration High	S07		100 mL (SOIL) 50 mL (WATER)	Inorganic Ventures	NA	1 Day	6.0 ppb	B5I0092
Initial Calibration Working Standard	S-WS	6.0 mL (SOIL) 3.0 mL (WATER)	Composite		From S-WS	1 month		B5I0091
Initial Calibration Mid/ Continuing Calibration Verification	S06/CCV		100 mL (SOIL) 50 mL (WATER)	Inorganic Ventures	NA	1 Day	3.0 ppb	B5I0093
Initial Calibration Working Standard	S-WS	3.0 mL (SOIL) 1.5 mL (WATER)	Composite		From S-WS	1 month		B5I0091
Initial Calibration Mid	S05		100 mL (SOIL) 50 mL (WATER)	Inorganic Ventures	NA	1 Day	1.0 ppb	B5I0094
Initial Calibration Working Standard	S-WS	1.0 mL (SOIL) 0.5 mL (WATER)	Composite		From S-WS	1 month		B5I0091
Initial Calibration Low	S04		100 mL (SOIL) 50 mL (WATER)	Inorganic Ventures,	NA	1 Day	0.5 ppb	B5I0095
Initial Calibration Working Standard	S-WS	0.5 mL (SOIL) 0.25 mL (WATER)	Composite		From S-WS	1 month		B5I0091
Initial Calibration Low	S03		100 mL (SOIL) 50 mL (WATER)	Inorganic Ventures	NA	1 Day	0.2 ppb	B5I0096
Initial Calibration Working Standard	S-WS	0.2mL (SOIL) 0.1mL (WATER)	Composite		From S-WS	1 month		B5I0091
Initial Calibration Low	S02		100 mL (SOIL) 50 mL (WATER)	Inorganic Ventures	NA	1 Day	0.1 ppb	B5I0097
Initial Calibration Working Standard	S-WS	0.1mL (SOIL) 0.05 (WATER)	Composite		From S-WS	1 month		B5I0092
Initial Calibration Blank	S01		100 mL (SOIL) 50 mL (WATER)	In-house	NA	1 Day	NA	B5I0098
Initial Calibration Blank	ICB							
Continuing Calibration Blank	CCB							
Initial Calibration Verification	ICV		100 mL (SOIL) 50 mL (WATER)	EPA Reference Material	NA	1 Day	4.0 ppb	B5I0101
ICV-5		1.0 mL (SOIL) 0.5 mL (WATER)	Composite		0508	NA		B5I0100
Matrix Spike	MS		100 mL (SOIL) 50 mL (WATER)	Inorganic Ventures	NA	1 Day	1.0 ppb	B5I0091
Initial Calibration Working Standard	S-WS	1.0 mL (SOIL) 0.5 mL (WATER)	Composite		From S-WS	1 month		B5I0091

Note[1]: All standards and QC are brought to final volume with the same water source that is used for S0, CCB & ICB

Reviewed By: [signature] Date: 5/17/16

REAGENTS PREPARATION LOG

Sodium Chloride Hydroxylamine Sulfate Solution

LIMS ID: B6E0001

Preparation Date: 9/29/16 Prepared By: NP

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled H2O	Neat	1500 mL ~~1000~~ mL	BATCO	NA	NA	NA
Hydroxylamine Sulfate	Neat	180	Alfa Aesar	Z16A019	04/26/16	NA
Sodium Chloride	Neat	180	Fisher	148298	9/22/15	NA

Balance ID Mettler IV

Instrument Cetac M-7600

Final Volume 1.5 ~~1~~ Liter

Concentration 24%

Used For Mercury Digestion

Expiration Date 6 months after preparation date

Comments: 120 g Hydroxylamine Sulfate and 120 g NaCl to 1 L of Distilled Water

Reviewed By: [signature] 9/29/16

Supervisor/Date

REAGENTS PREPARATION LOG

Potassium Permanganate Solution

Lims ID: B600047

Preparation Date: 04/5/16

Prepared By: LEM

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration I
Distilled H2O	Neat	3500 ~~1000~~ mL	BATCO	NA	NA	NA
Potassium Permanganate	Neat	175 ~~50~~ g	FISHER	096009	05.13.10	NA

Balance ID _____

Instrument Cetac M-7600

Final Volume 3.5 + Liters

Concentration 5%

Used For Mercury Digestion

Expiration Date 6 months after preparation date

Comments: 50 grams to 1000 mL of Distilled Water

Reviewed By: [signature] 4/20/16

Supervisor/Date

REAGENTS PREPARATION LOG

Potassium Persulfate Solution

Lims ID: BKXXXM

Preparation Date: 04.15.16

Prepared By: LEM

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled H2O	Neat	3500 ~~1000 mL~~	BATCO	NA	NA	NA
Potassium Persulfate	Neat	175 ~~50 g~~	ACROS ORGANICS	A0367996	04.12.16	NA

Balance ID: MIV

Instrument: Cetac M-7600

Final Volume: 3.5 +Liters

Concentration: 5%

Used For: Mercury Digestion

Expiration Date: 6 months after preparation date

Comments: 50 grams to 1000 mL of Distilled Water

Reviewed By: [signature] 4/20/16

Supervisor/Date

REAGENTS PREPARATION LOG

Stannous Chloride

LIMS ID: ~~B6E0037~~ B6E0032

Preparation Date: 05/11/16 Prepared By: MP

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled H2O	Neat	900 mL	BATCO	NA	NA	NA
Stannous Chloride	Neat	100 g	BDH	0105C505	4/7/16	11/18
Hydrochloric Acid	Neat	1000 mL	Fisher	4115100	02/08/16	11/18

Balance ID: NA

Instrument: Cetac M-7600

Final Volume: 1 Liter

Concentration: 10%

Used For: Solution for Cetac M-7600

Expiration Date: 6 months after preparation date

Comments:

Reviewed By: [signature] 5/11/16

Supervisor/Date

ORIGIN ID:APAA (303) 590-9145
EDWARD LUNDVALL
EA ENGINEERING, SCIENCE & TECH
7995 EAST PRENTICE AVENUE
SUITE 206E
GREENWOOD VILLAGE, CO 80111
UNITED STATES US

SHIP DATE: 04MAY16
ACTWGT: 20.00 LB
CAD: 5873190/INET3730

BILL SENDER

TO CHRIS BONNER
BONNER ANALYTICAL TESTING COMPANY
2703 OAK GROVE ROAD
HATTIESBURG MS 39402
(601) 264-2854
REF: 6202399.5SWFE
INV:
PO:
DEPT:

540J1/6323/727F

FedEx Express

THU - 05 MAY 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7762 5733 9636

XH HBGA

MS-US MSY 39402

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in s... and affix it to your shipment so that the barcode portion of the label can be read and scann

Warning: Use o...
in additional billi...
Use of this syst...
will not be respo...
misinformation, ...
found in the cur...
of sales, income ...
limited to the greate...
extraordinary valu...
claims must be file...

CUSTODY SEAL
EA Engineering, Science, and Technology, Inc.
405 S. Highway 121, Suite C-100
Lewisville, TX 75067
Telephone: 972-315-3922
Date 5/4/16
Sample No. Coder
Signature

CUSTODY SEAL
EA Engineering, Science, and Technology, Inc.
405 S. Highway 121, Suite C-100
Lewisville, TX 75067
Telephone: 972-315-3922
Date 5/4/16
Sample No. Coder
Signature

P. Ark
5-6-16
102.5
16.0°C

Bonner Analytical Testing Company

279

SAMPLE RECEIPT FORM

Client: CLP Date: 5-6-16

Sample Type: Grab Composite SDG#: MH4213 Case#: 46115

Matrix: SW (stormwater) GW (groundwater) WW (wastewater) DW (drinkingwater) SL (sludge)

SO (soil) AS (asbestos) PE (petroleum) other Surface Water

1) Does this project fall under NPDES, RCRA, (CLP) Litigation or other EPA guidelines?	NA	(YES)	NO
2) Did Cooler come with airbill/sticker? Circle carrier: UPS, (FedEx) other:_____	NA	(YES)	NO
If YES, enter airbill number here: 7762 5733 9636			
3) Are custody seals intact? Custody Seal#: N/A Custody Seal#: N/A	NA	(YES)	NO
4) Are all bottles sealed in separate plastic bags?	NA	(YES)	NO
5) Are samples requiring no headspace, headspace free?	(NA)	YES	NO
6) Packing Material: Bubblewrap, peanuts, vermiculite, (ice, other: Ice melted		(YES)	NO
7) Are chains of custody filled out properly? (ink, signed, dates, QC listed, etc.)		(YES)	NO
8) Are all bottle labels complete and agree with COC? (ID, time, date, preservation)		(YES)	NO
9) Were all bottles received intact?		(YES)	NO
10) Were correct containers used for the tests indicated? Who's: BATCO/(Client)		(YES)	NO
11) Was a sufficient aliquot of sample sent for tests indicated?		(YES)	NO
12) Are samples within holding times for requested analysis?		(YES)	NO
13) Sample Preservation?			
A) If samples were collected within 6 hours of receipt, has chilling begun?	(NA)	YES	NO
B) If samples were received beyond 6 hours of collection:			
1) Is there a temperature blank?	NA	(YES)	NO
2) Temperature 16 °C			
C) Were correct preservatives added to sample/s?	NA	(YES)	NO

14) Describe "NO" items for the above if # 1) response is NA or YES

pH 7 / Ice melted

15) Is there a Corrective Action and/or Client Contact form attached? YES (NO)

Signature: P. Ark

WORK ORDER

Printed: 5/9/2016 8:42:04 AM

6050095

Bonner Analytical Testing Co.

Client: Environmental Protection Agency, Region 8
Project: 46115

Project Manager: Chris Bonner
Project Number: 46115

Report To:
Environmental Protection Agency, Region 8
Carol Beard
1595 Wynkoop Street
Denver, CO 80202-1129
Phone: (303) 312-6687
Fax: (303) 312-7517

Invoice To:
Environmental Protection Agency, Region 8
Carol Beard
1595 Wynkoop Street
Denver, CO 80202-1129
Phone :(303) 312-6687
Fax: (303) 312-7517

Date Due: 05/27/2016 15:00 (15 day TAT)

Cooler ID: Cooler-636 **Temp Received: 16.0°C** **Airbill No.: 776257339636** **TR/COC No.: 8-050316164045-0013**

Date Received : 05/06/2016 10:27

Custody seals present Yes Custody seals intact - Yes COC present - CLP Yes Airbill present - CLP Yes Sample tags present - No

LAB ID	EPA ID	Matrix	Sampled Date/Time	Cooler ID	Comments
6050095-01	MH4213	[Water]	05/03/2016 09:30	Cooler-636	QC

Analysis: ISM023 - ICPMS (TM)
Analysis: ISM023 - Mercury

P. Adk
Reviewed By

5-9-16
Date

Bonner Analytical Testing Co.
Inhouse Chain of Custody
for Samples

SDG Number: MH4213 Case No.: 46115

Work Order Number: 6050095

1) MH4213	7)	13)	19)
2)	8)	14)	20)
3)	9)	15)	21)
4)	10)	16)	22)
5)	11)	17)	23)
6)	12)	18)	24)

Sample to be used for QC: MH4213

Name: P. Ash	Signature: P. Ash	Date &Time 5-6-16 1150	Purpose: S D
Name: M. Bo	Signature:	Date &Time 5-9-16 1052	Purpose:
Name: M. Bo	Signature:	Date &Time 5-9-16 1100	Purpose: S
Name: Nathan Price	Signature: Nathan Price	Date &Time 5-11-16 830	Purpose: P/S
Name:	Signature:	Date &Time	Purpose:
Name:	Signature:	Date &Time	Purpose:
Name:	Signature:	Date &Time	Purpose:
Name:	Signature:	Date &Time	Purpose:
Name:	Signature:	Date &Time	Purpose:
Name:	Signature:	Date &Time	Purpose:
Name:	Signature:	Date &Time	Purpose:
Name:	Signature:	Date &Time	Purpose:
Name:	Signature:	Date &Time	Purpose:
Name:	Signature:	Date &Time	Purpose:
Name:	Signature:	Date &Time	Purpose:

Purpose: S - Storage; W - Weigh; P - Pour; DP - Disposal; TS - Total Solids

Bonner Analytical Testing Co.
Digestate Chain of Custody
for Samples

SDG Number: MH4213 Case No.: 46115

Work Order Number: 6050095 Fraction: MS (TM)

1) MH4213	7)	13)	19)
2)	8)	14)	20)
3)	9)	15)	21)
4)	10)	16)	22)
5)	11)	17)	23)
6)	12)	18)	24)

Sample to be used for QC: MH4213

Name:	[signature]	Signature:	[signature]	Date &Time:	5.9.16 1050	Purpose:	P
Name:	[signature]	Signature:	[signature]	Date &Time:	5-9-16 1100	Purpose:	S
Name:	[signature]	Signature:	[signature]	Date &Time:	5-10-16 0830	Purpose:	D
Name:	L MEADOWS	Signature:	[signature]	Date &Time:	5.10.16 1420	Purpose:	S
Name:	L MEADOWS	Signature:	[signature]	Date &Time:	05.12.16 1230	Purpose:	A
Name:	L MEADOWS	Signature:	[signature]	Date &Time:	051216 1430	Purpose:	S
Name:		Signature:		Date &Time:		Purpose:	
Name:		Signature:		Date &Time:		Purpose:	
Name:		Signature:		Date &Time:		Purpose:	
Name:		Signature:		Date &Time:		Purpose:	
Name:		Signature:		Date &Time:		Purpose:	
Name:		Signature:		Date &Time:		Purpose:	
Name:		Signature:		Date &Time:		Purpose:	
Name:		Signature:		Date &Time:		Purpose:	
Name:		Signature:		Date &Time:		Purpose:	

Purpose: S - Storage; A - Analyze; DP - Disposal; D - Digest; W - Weigh; P-Pour; T-TCLP; F-Filter

Bonner Analytical Testing Co.
Digestate Chain of Custody
for Samples

SDG Number: MH4213 Case No.: 46115

Work Order Number: 6050095 Fraction: Hg

1) MH4213	7)	13)	19)
2)	8)	14)	20)
3)	9)	15)	21)
4)	10)	16)	22)
5)	11)	17)	23)
6)	12)	18)	24)

Sample to be used for QC: MH4213

Name	Signature	Date &Time	Purpose
Name: Nathan Price	Signature: Nathan Price	Date &Time: 5/11/16 830	Purpose: P/S
Name: Nathan Price	Signature: Nathan Price	Date &Time: 5/11/16 950	Purpose: D;g
Name: Nathan Price	Signature: Nathan Price	Date &Time: 5/11/16 1430	Purpose: A
Name:	Signature:	Date &Time: 5/11/16 1000	Purpose: S DP
Name:	Signature:	Date &Time:	Purpose:
Name:	Signature:	Date &Time:	Purpose:
Name:	Signature:	Date &Time:	Purpose:
Name:	Signature:	Date &Time:	Purpose:
Name:	Signature:	Date &Time:	Purpose:
Name:	Signature:	Date &Time:	Purpose:
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Name:	Signature:	Date &Time:	Purpose:
Name:	Signature:	Date &Time:	Purpose:
Name:	Signature:	Date &Time:	Purpose:
Name:	Signature:	Date &Time:	Purpose:

Purpose: S - Storage; A - Analyze; DP - Disposal; D - Digest; W - Weigh; P-Pour; T-TCLP; F-Filter

Tricia Aiken

From: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Sent: Friday, May 06, 2016 2:34 PM
To: 'Chris Bonner'; 'Max Bonner'; Tricia Aiken
Cc: "Goodrich, Donald"; Moss, Pamela
Subject: Region 08 | Case 46115 | Lab BON | Issue Multiple | FINAL

Good afternoon,

Samples received at an elevated temperature
Issue 1: The samples were received at an elevated temperature of 16°C.
Resolution 1: Per Region 8, the laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

pH outside of allowable limits
Issue 2: The samples had an initial pH of 7, HNO3 was added to bring the pH to below 2.
Resolution 2: Per Region 8, the laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Laboratory problems
Issue 3: This Case is scheduled for 7 waters and 7 filtered waters. The laboratory only received 1 unfiltered sample (3 bottles), however, the COC states that this Case is complete.
Resolution 3: Per Region 8, shipping for this Case is complete. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Please let me know if you have any questions. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
www.csra.com

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From: Moss, Pamela [mailto:pmoss@eaest.com]
Sent: Friday, May 06, 2016 3:27 PM
To: Goodrich, Donald
Cc: Vanaman, Alexandra
Subject: Re: Region 08 | Case 46115 | Lab BON | Issue Multiple

Yes it is

Pam Moss
EA Engineering, Science, and Technology, Inc.
303.810.6903

On May 6, 2016, at 12:58 PM, Goodrich, Donald <Goodrich.Donald@epa.gov> wrote:

> I believe so, Pam?
>
> Don Goodrich
> US EPA Region 8
> office: 303-312-6687
> cell: 303-905-4024
>
> **From:** Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
> **Sent:** Friday, May 06, 2016 12:33 PM
> **To:** Goodrich, Donald <Goodrich.Donald@epa.gov>
> **Cc:** Moss, Pamela <pmoss@eaest.com>
> **Subject:** RE: Region 08 | Case 46115 | Lab BON | Issue Multiple
>
> Hi Don,
>
> Regarding issue 3 below, is shipping for this Case complete to BON?
>
> Thanks,
>
> ALEXANDRA VANAMAN
> Environmental Coordinator - Regions 2 and 8
> CSC Government Solutions LLC, A CSRA Company
> 6361 Walker Lane, Alexandria, VA 22310
> t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
> www.csra.com
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>
> **From:** Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
> **Sent:** Friday, May 06, 2016 2:15 PM
> **To:** Vanaman, Alexandra
> **Cc:** Moss, Pamela
> **Subject:** RE: Region 08 | Case 46115 | Lab BON | Issue Multiple

Ali, make note of all three issues in the case narrative and continue with sample analyses.
Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Friday, May 06, 2016 10:53 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Cc: Moss, Pamela <pmoss@eaest.com>
Subject: Region 08 | Case 46115 | Lab BON | Issue Multiple

Good afternoon,

BON is reporting the following issues regarding Case 46115. Please advise.

Samples received at an elevated temperature
Issue 1: The samples were received at an elevated temperature of 16°C.

pH outside of allowable limits
Issue 2: The samples had an initial pH of 7, HNO3 was added to bring the pH to below 2.

Laboratory problems
Issue 3: This Case is scheduled for 7 waters and 7 filtered waters. The laboratory only received 1 unfiltered sample (3 bottles), however, the COC states that this Case is complete.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
www.csra.com

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From: Tricia Aiken [mailto:taiken@batco.com]
Sent: Friday, May 06, 2016 12:18 PM
To: Vanaman, Alexandra

Cc: 'Chris Bonner'; 'Max Bonner'
Subject: Region 8 | Case 46115 | Sample Receipt

Alexandra;

On May 6, 2016 we received 1 water via FedEx air bill 7762 5733 9636. Custody seals were present and intact. The sample was in good condition except for the following discrepancies.

1. Samples were received at an elevated temperature of 16°C.
2. Samples had an initial pH of 7, HNO3 was added to bring the pH to below 2.
3. The lab was scheduled for 7 waters and 7 filtered waters, we received 1 unfiltered sample (3 bottles) and the TR/COC states the case is complete. Please advise.

Thanks;
Tricia Aiken
Bonner Analytical
(601)264-2854

SHEALY ENVIRONMENTAL SERVICES

SOM02.3 SUMMARY DATA PACKAGE

LAB CODE: EQI
CONTRACT: EPW-14-035

This Sample Data Package includes data of all analysis requested For each particular Case/SDG.

The Sample Data Package will include:

- SDG Cover Page
- Traffic Report/Chain of Custody
- Sample Log-In Sheet (DC-1)
- CSF Inventory Sheet (DC-2)
- SDG Narrative

The following analysis are included in this package, if applicable:

- Trace Volatile Data
- Volatile Data
- Semivolatile Data
- Semivolatile-sim Data
- Pesticide Data
- Aroclors (PCB) Data
- Herbicide Data
- Miscellaneous Data

SDG Cover Sheet, TR/COC, DC-1, DC-2

SDG COVER PAGE

Lab Name: Shealy Environmental Services Contract: EPW14035

Lab Code: EQI Case No.: 46115 MA No.: N/A SDG No.: H4001

SOW No.: SOM02.3

EPA Sample No.	Lab Sample ID	Analysis Method: Trace VOA	Low Med VOA	SVOA	SVOA SIM	PEST	ARO
H4001	RE05033-001	X					
H4008	RE05033-002	X					
H4202	RE05033-003	X					
H4211	RE05033-004	X					
H4213	RE05033-005	X		X			
H4217	RE05033-006	X					
H4218	RE05033-007	X					

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative. Release of the data contained in this hardcopy Complete SDG File and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Robert Zhu

Date: 05/23/2016 Title: Technical Director

Contract Laboratory Program

Sample Delivery Group (SDG) Definition Sheet

SDG Number	H4001	Case Number	46115	Contract Number	EPW14035
Lab Code	EQI	SDG Turnaround	21 days	Delivery CLIN(s)	n/a

First Sample Received in SDG	H4001	Last Sample Received in SDG	H4218
First Sample Receipt Date	05/05/2016	Last Sample Receipt Date	05/05/2016

USEPA Sample Numbers in SDG (Listed in Numerical Order)

	CLP Sample ID	Sample Type	Requested Analytical CLIN(s)/SubCLIN(s)	Solicitation Number	MA Number(s)
1	H4001	Water	TVOA	N/A	N/A
2	H4008	Water	TVOA	N/A	N/A
3	H4202	Water	TVOA	N/A	N/A
4	H4211	Water	TVOA	N/A	N/A
5	H4213	Water	TVOA, SVOA	N/A	N/A
6	H4217	Water	TVOA	N/A	N/A
7	H4218	Water	TVOA	N/A	N/A
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature _____ Date 5/11/16

H4001

USEPA CLP COC (LAB COPY)

DateShipped: 5/4/2016
CarrierName: FedEx
AirbillNo: 776257332609

CHAIN OF CUSTODY RECORD

Case #: 46115

No: 8-050316-164525-0014

Lab: Shealy Environmental Services
Lab Contact: Robert Zhu
Lab Phone: 803-791-9700

EPW14035

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-FB-002	H4001	Water/ Ned Lundvall		VOC(21)	1434 (HCL), 1435 (HCL), 1436 (HCL) (3)	A-FB-002	05/03/2016 07:00	
A-TB-007	H4008	Water/ Ned Lundvall		VOC(21)	1467 (HCL), 1468 (HCL), 1469 (HCL) (3)	A-TB-007	05/04/2016 07:30	
A-SW-012	H4202	Surface Water/ Ned Lundvall	Grab	VOC(21)	1409 (HCL), 1410 (HCL), 1411 (HCL) (3)	A-SW-12	05/03/2016 10:30	
A-SW-021	H4211	Surface Water/ Ned Lundvall	Grab	VOC(21)	1439 (HCL), 1440 (HCL), 1441 (HCL) (3)	A-SW-21	05/03/2016 13:20	
A-SW-023	H4213	Surface Water/ Ned Lundvall	Grab	VOC(21), SVOC(21)	1367 (HCL), 1368 (HCL), 1369 (HCL), 1370 (6 C), 1371 (6 C) (5)	A-SW-23	05/03/2016 09:30	
A-SW-023-MS	H4213MS	Surface Water/ Ned Lundvall	Grab	VOC(21), SVOC(21)	1382 (HCL), 1383 (HCL), 1384 (HCL), 1385 (6 C), 1386 (6 C) (5)	A-SW-23	05/03/2016 09:30	
A-SW-023-MSD	H4213MSD	Surface Water/ Ned Lundvall	Grab	VOC(21), SVOC(21)	1397 (HCL), 1398 (HCL), 1399 (HCL), 1400 (6 C), 1401 (6 C) (5)	A-SW-23	05/03/2016 09:30	
A-SW-027	H4217	Surface Water/ Ned Lundvall	Grab	VOC(21)	1420 (HCL), 1421 (HCL), 1422 (HCL) (3)	A-SW-27	05/03/2016 11:20	
A-SW-028	H4218	Surface Water/ Ned Lundvall	Grab	VOC(21)	1429 (HCL), 1430 (HCL), 1431 (HCL) (3)	A-SW-28	05/03/2016 12:00	

Sample(s) to be used for Lab QC: A-SW-023-MS Tag 1382, A-SW-023-MS Tag 1383, A-SW-023-MS Tag 1384, A-SW-023-MS Tag 1385, A-SW-023-MS Tag 1386, A-SW-023-MSD Tag 1397, A-SW-023-MSD Tag 1398, A-SW-023-MSD Tag 1399, A-SW-023-MSD Tag 1400, A-SW-023-MSD Tag 1401

Shipment for Case Complete? Y

Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP, SVOC=TCL SVOCs by CLP

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Edward Lovell	5/4/16 1600	Fedex		
			Tracy Doulin	5/5/16 1037	one vial for H4202 received Broken @ 5/5/16

T = 0.9 °C

FORM DC-1
SAMPLE LOG-IN SHEET

Lab Name	Shealy Environmental		Page 1 of 1
Received By (Print Name)	Lacey Goulding		Log-in Date 5/5/16
Received By (Signature)	Lacey Goulding		
Case Number	SDG No.		MA No.
46115	H4001		NA

Remarks:	
1. Custody Seal(s)	Present/Absent* Intact/Broken
2. Custody Seal Nos.	NA
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*
4. Airbill	Airbill/Sticker Present/Absent*
5. Airbill No.	7762 5733 2609
6. Sample Tags Sample Tag Numbers	Present/Absent* Listed/Not Listed on Traffic Report/Chain of Custody Record
7. Sample Condition	Intact/Broken/Leaking
8. Shipping Container Temperature Indicator Bottle	Present/Absent*
9. Shipping Container Temperature	0.9°C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree?	Yes/No*
11. Date Received at Lab	5/5/16
12. Time Received	1037

	EPA Sample #	Corresponding: Sample Tag #	Corresponding: Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	H4001	NA	RE05033-001	OK
2	H4008		-002	1
3	H4202		-003	1 Vial broken
4	H4211		-004	OK
5	H4213		-005	
6	H4217		-006	
7	H4218		-007	
8				
9				
10				
11				
12				
13				
14			JGG	
15			5/5/16	
16				
17				
18				
19				
20				
21				
22				

* Contact SMO and attach record of resolution

Reviewed By JGG	Logbook No. NA
Date 5/16/16	Logbook Page No. NA

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME: Shealy Environmental Services

LAB CODE: EQI

CONTRACT NO.: EPW-14-035

CASE NO.: 46115 SDG NO.: H4001

MA NO.: N/A

SOW NO.: SOM02.3

All documents delivered in the Complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.4)

		PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
1.	SDG Cover Page	1	4		
2.	Traffic Report/Chain of Custody Record(s)	5	5		
3.	Sample Log-In Sheet (DC-1)	6	6		
4.	CSF Inventory Sheet (DC-2)	7	13		
5.	SDG Narrative	14	20		
Organic Analysis					
Trace Volatiles					
	Quality Control Summary	21	43	X	
6.	Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	23	25	X	
7.	Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by the EPA Region)	26	27	X	
8.	Method Blank Summary (Form 4-OR)	28	32	X	
9.	GC/MS Instrument Performance Check (Form 5-OR)	33	38	X	
10.	Internal Standard Area and Retention Summary (Form 8A-OR)	39	43	X	
	Sample Data	44	141	X	
11.	TAL Results – Organic Analysis Data Sheet (Form 1A-OR)	X	X		
12.	Tentatively Identified Compounds (Form 1B-OR)	X	X		
13.	Raw Data for Each Sample:	X	X		
	Reconstructed total ion chromatograms (RICs) for each sample	X	X		
	Raw Spectra and background-subtracted mass spectra of target analytes identified	X	X		
	Quantitation Reports	X	X		

FORM DC-2
ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

		PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
	Mass Spectra of all reported TICs with three best library matches	X	X		
	Standards Data (All Instruments)	142	262	X	
14.	GC/MS Initial Calibration Data (Form 6A-OR)	X	X		
15.	RICs and Quantitation Reports for all Standards	X	X		
16.	Continuing Calibration Verification for GC/MS (Form 7A-OR)	X	X		
17.	RICs and Quantitation Reports for all Standards	X	X		
	Quality Control Data	263	381	X	
18.	Performance Check	264	281	X	
19.	Blank Data	282	346	X	
20.	Matrix Spike/Matrix Spike Duplicate Data (Form 3A-OR) (if requested by the EPA Region)	347	358	X	
21.	Original preparation and analysis forms or copies of preparation and analysis logbook pages (including screening records if applicable)	359	381	X	
Low-Medium Volatiles					
	Quality Control Summary	N/A	N/A	X	
22.	Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	N/A	N/A	X	
23.	Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by the EPA Region)	N/A	N/A	X	
24.	Method Blank Summary (Form 4-OR)	N/A	N/A	X	
25.	GC/MS Instrument Performance Check (Form 5-OR)	N/A	N/A	X	
26.	Internal Standard Area and Retention Time Summary (Form 8A-OR)	N/A	N/A	X	
	Sample Data	N/A	N/A	X	
27.	TAL Results – Organic Analysis Data Sheet (Form 1A-OR)	X	X		
28.	Tentatively Identified Compounds (Form 1B-OR)	X	X		
29.	Raw Data for Each Sample:	X	X		
	Reconstructed total ion chromatograms (RICs) for each sample	X	X		
	Raw Spectra and background-subtracted mass spectra of target analytes identified	X	X		
	Quantitation Reports	X	X		
	Mass Spectra of all reported TICs with three best library matches	X	X		

FORM DC-2
ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

		PAGE NOs.		CHECK	
		FROM	TO	LAB	REGION
	Standards Data (All Instruments)	N/A	N/A	X	
30.	GC/MS Initial Calibration Data (Form 6A-OR)	X	X		
31.	RICs and Quantitation Reports for all Standards	X	X		
32.	Continuing Calibration Verification for GC/MS (Form 7A-OR)	X	X		
33.	RICs and Quantitation Reports for all Standards	X	X		
	Quality Control Data	N/A	N/A	X	
34.	Performance Check	N/A	N/A	X	
35.	Blank Data	N/A	N/A	X	
36.	Matrix Spike/Matrix Spike Duplicate Data (if requested by the EPA Region)	N/A	N/A	X	
37.	Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	N/A	N/A	X	
Semivolatiles					
	Quality Control Summary	382	543	X	
38.	Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	384	386	X	
39.	Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by the EPA Region)	387	388	X	
40.	Method Blank Summary (Form 4-OR)	389	390	X	
41.	GC/MS Instrument Performance Check (Form 5-OR)	391	393	X	
42.	Internal Standard Area and Retention Time Summary (Form 8A-OR)	394	543	X	
	Sample Data	544	406	X	
43.	TAL Results – Organic Analysis Data Sheet (Form 1A-OR)	X	X		
44.	Tentatively Identified Compounds (Form 1B-OR)	X	X		
45.	Raw Data for Each Sample:	X	X		
	Reconstructed total ion chromatograms (RICs) for each sample	X	X		
	Raw Spectra and background-subtracted mass spectra of target analytes identified	X	X		
	Quantitation Reports	X	X		
	Mass Spectra of all reported TICs with three best library matches	X	X		
	GPC chromatograms (if GPC is required)	X	X		

FORM DC-2
ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

		PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
	Standards Data (All Instruments)	407	476	X	
46.	GC/MS Initial Calibration Data (Form 6A-OR)	X	X		
47.	RICs and Quantitation Reports for all Standards	X	X		
48.	Continuing Calibration Verification for GC/MS (Form 7A-OR)	X	X		
49.	RICs and Quantitation Reports for all Standards	X	X		
	Quality Control Data	477	523	X	
50.	Performance Check	478	488	X	
51.	Blank Data	489	498	X	
52.	Matrix Spike/Matrix Spike Duplicate Data (if requested by the EPA Region)	499	513	X	
53.	Raw GPC Data	N/A	N/A	X	
54.	For SIM analysis (if requested), at the same sequence as listed above, except for that Form 1B-OR and TIC spectra data which are not required for SIM method.	N/A	N/A	X	
55.	Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	514	523	X	
Pesticides					
	Quality Control Summary	N/A	N/A	X	
56.	Surrogate Recovery (Form 2C-OR)	N/A	N/A	X	
57.	Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR each columns)	N/A	N/A	X	
58.	Laboratory Control Sample Recovery (Form 3B-OR for each column)	N/A	N/A	X	
59.	Method Blank Summary (Form 4-OR)	N/A	N/A	X	
	Sample Data	N/A	N/A	X	
60.	TAL Results – Organic Analysis Data Sheet (Form 1A-OR)	X	X		
61.	Raw Data for Each Sample:	X	X		
	Chromatograms (Primary Column)	X	X		
	Chromatograms (Secondary Column)	X	X		
	Quantitation Reports	X	X		
	Manual Worksheets	X	X		
62.	For Pesticides by GC/MS Confirmation:	X	X		
	Copies of raw spectra and copies of background-subtracted mass spectra of target analytes (samples & standards)	X	X		

FORM DC-2
ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

		PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
	Standards Data	N/A	N/A	X	
63.	Initial Calibration of Single Component Analytes (Form 6B-OR and 6C-OR)	X	X		
64.	Initial Calibration of Multicomponent Analytes (Form 6D-OR and 6E-OR)	X	X		
65.	Analyte Resolution Summary (Form 6G-OR)	X	X		
66.	Pesticide Performance Evaluation Mixture Calibration Verification Summary (Form 7B-OR)	X	X		
67.	Continuing Calibration Verification Summary (Form 7C-OR)	X	X		
68.	Multicomponent Continuing Calibration Verification Summary (Form 7D-OR)	X	X		
69.	Analytical Sequence (Form 8B-OR)	X	X		
70.	Florisil Cartridge Check (Form 9A-OR)	X	X		
71.	GPC Calibration Verification (Form 9B-OR)	X	X		
72.	Identification Summary for Single Component Analytes (Form 10A-OR)	X	X		
73.	Identification Summary for Multicomponent Analytes (Form 10B-OR)	X	X		
74.	Chromatograms and Quantitation Reports:	X	X		
	A printout of Retention Times and corresponding peak areas or peak heights	X	X		
	Quality Control Data	N/A	N/A	X	
75.	Blank Data	N/A	N/A	X	
76.	Matrix Spike/Matrix Spike Duplicate Data	N/A	N/A	X	
77.	Laboratory Control Sample	N/A	N/A	X	
78.	Raw GPC Data	N/A	N/A	X	
79.	Raw Florisil Data	N/A	N/A	X	
80.	Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	N/A	N/A	X	
Aroclors					
	Quality Control Summary	N/A	N/A	X	
81.	Surrogate Recovery (Form 2C-OR)	N/A	N/A	X	
82.	Matrix Spike/Matrix Spike Duplicate Summary (Form 3A-OR)	N/A	N/A	X	
83.	Laboratory Control Sample Recovery (Form 3B-OR for each column)	N/A	N/A	X	
84.	Method Blank Summary (Form 4-OR)	N/A	N/A	X	

FORM DC-2
ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

		PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
	Sample Data	N/A	N/A	X	
85.	TAL Results – Organic Analysis Data Sheet (Form 1A-OR)	X	X		
86.	Raw Data for Each Sample:	X	X		
	Chromatograms (Primary Column)	X	X		
	Chromatograms (Secondary Column)	X	X		
	Quantitation Reports	X	X		
	Manual Worksheets	X	X		
87.	For Aroclors by GC/MS Confirmation:	X	X		
	Copies of raw spectra and copies of background-subtracted mass spectra of target analytes (samples & standards)	X	X		
	Standards Data	N/A	N/A	X	
88.	Initial Calibration of Multicomponent Analytes (Form 6D-OR, Form 6E-OR, and Form 6F-OR)	X	X		
89.	Multicomponent Continuing Calibration Verification Summary (Form 7D-OR)	X	X		
90.	Analytical Sequence (Form 8B-OR)	X	X		
91.	Identification Summary for Multicomponent Analytes (Form 10B-OR)	X	X		
92.	Chromatograms and data system printouts:	X	X		
	A printout of Retention Times and corresponding peak areas or peak heights	X	X		
	Quality Control Data	N/A	N/A	X	
93.	Blank Data	N/A	N/A	X	
94.	Matrix Spike/Matrix Spike Duplicate Data	N/A	N/A	X	
95.	Laboratory Control Sample (LCS) Data	N/A	N/A	X	
96.	Raw GPC Data (if performed)	N/A	N/A	X	
97.	Original preparation and analysis forms or copies of preparation and analysis logbook pages (including Percent Solid Determinations logs and screening records if applicable)	N/A	N/A	X	
Additional		524	544		
98.	EPA Shipping/Receiving Documents	525	526		
	Airbill (No. of Shipments 1)	525	525		
	Sample Tags	N/A	N/A		
	Sample Log-In Sheet (Lab)	526	526		

FORM DC-2
ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	TO	CHECK LAB	REGION
99. Misc. Shipping/Receiving Records (list all individual records)				
Communication Logs				
	N/A	N/A		
100. Internal Lab Sample Transfer Records & Tracking Sheets (describe or list)	527	541		
101. PE/PT Instruction Forms	N/A	N/A		
102. Other Records (describe or list)	N/A	N/A		
Communication Logs				
email	542	544		
103. Comments:				

Completed by:
(CLP Lab) Robert Zhu, Technical Director 05/23/2016
(Signature) (Print Name & Title) (Date)

Audited by:
(EPA)
(Signature) (Print Name & Title) (Date)

Narrative

Narrative

Manual Integration Form for each analysis

Calculation Sheets

Modified Analysis Instructions (if applicable)

Shealy Environmental Services, Inc.

SDG Narrative
5/23/2016
Case 46115
SDG H4001
SOW: SOM02.3
Contract Number: EPW14035

Columns	TVOA/TVOA SIM/VOA DB-624, 30m x 0.25mm x 1.4um SVOA/SVOA SIM ZEBRON ZB-SV, 30m x 0.25mm x 0.5um
VOA Trap	OI #10

TVOA/VOA Equation	Water sample concentration (ug/L) = $\frac{(A_x)(I_s)(DF)}{(A_{is})(\overline{RRF})(V_o)}$ Soil sample concentration (ug/Kg) = $\frac{(A_x)(I_s)(DF)}{(A_{is})(\overline{RRF})(W_s)(D)}$ Where A_x is the area of the characteristic ion (EICP) for the compound to be measured. A_{is} is the area of the characteristic ion (EICP) for the internal standard. I_s is the amount of internal standard added, in ng. $\overline{RRF}$ is the mean relative response factor from the initial calibration. DF is the dilution factor. V_o is total volume of water purged, in mL. Ws is the weight of sample added to the purge tube in g. D = $\frac{100 - \%moisture}{100}$
SVOA/SVOA SIM Equation	Water sample concentration ug/L = $\frac{(A_x)(I_s)(V_t)(DF)(GPC)}{(A_{is})(\overline{RRF})(V_o)(V_i)}$ Soil sample concentration (ug/Kg) = $\frac{(A_x)(I_s)(V_t)(DF)(GPC)}{(A_{is})(\overline{RRF})(V_i)(W_s)(D)}$ Where A_x is the area of the characteristic ion (EICP) for the compound to be measured. A_{is} is the area of the characteristic ion (EICP) for the internal standard. I_s is the amount of internal standard added, in ng. $\overline{RRF}$ is the mean relative response factor from the initial calibration. DF is the dilution factor. GPC = V_{in}/V_{out}: GPC factor. V_{in} is the volume of extract loaded onto GPC column. V_{out} is the volume of extract collected after GPC cleanup. V_t is volume of the concentrated extract in uL. (If no GPC cleanup is performed, then V_t = 1000uL. If GPC cleanup is performed, then $V_t = V_{out}$.). V_i is the volume of the extract injected in uL. V_o: Volume of water extracted in mL W_s is the weight of sample extracted in g. D= $\frac{100 - \%Moisture}{100}$

Sample Receiving

The seven water samples in this SDG were received in sealed shipping container on May 05, 2016. The cooler temperature associated with these samples was 0.9˚C.

The temperature was determined using a calibrated Fluke 66 IR thermometer.

The following issues are noted:

Issue 1: MS and MSD are listed separately on the COC (i.e. H4213MS and H4213MSD). The laboratory will combine the sample volume for H4213 + H4213MS and H4213MSD and receive under sample ID H4213 in their system.

Resolution 1: Per Region 8, the laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Issue 2: The COC lists the analysis as VOA, however, this Case was scheduled for TVOA analysis.

Resolution 2: Per Region 8, the laboratory shall analyze the samples as scheduled. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples

TVOA Fraction

The peak eluting at ~6.2min on MSD5 in all analyses is Pentafluorobenzene. This is an internal standard compound that is not being used for quantitation. This compound is not being identified as a TIC.

The peak eluting at ~8.8min on MSD5 in all analyses is an extra DMC in the standard that is not being used for quantitation. This compound is not being identified as a TIC.

The peak eluting at ~6.2min on MSD8 in all analyses is Pentafluorobenzene. This is an internal standard compound that is not being used for quantitation. This compound is not being identified as a TIC.

The peak eluting at ~8.8min on MSD8 in all analyses is an extra DMC in the standard that is not being used for quantitation. This compound is not being identified as a TIC.

See the attached Manual Integration Report for a listing of all manual integrations associated with the samples and standards in this SDG. Unless otherwise noted manual integrations were performed due to incorrect auto integration.

As per the SOW, an example calculation is attached for Vinyl Chloride-d_3 in sample H4001.

SVOA Fraction

See the attached Manual Integration Report for a listing of all manual integrations associated with the samples and standards in this SDG. Unless otherwise noted manual integrations were performed due to incorrect auto integration.

As per the SOW, an example calculation is attached for Phenol-d_5 in sample H4213.

CASE: **46115**
SDG: **H4001**

Example Calculation for the Trace Volatile Fraction

RRF Calculation

RRF=(Ax*Cis)/(Ais*Cx)

Where: Ax=Area of the characteristic ion (EICP) for the compound to be measured
Ais=Area of the characteristic ion (EICP) for the specific internal standard
Cis=Concentration of the internal standard
Cx=Concentration of the compound to be measured

Example: Vinyl Chloride-d_3 from VSTD005TT

Ax=	70362
Ais=	305671
Cis=	125
Cx=	125
RRF=	**0.23019**

Mean RRF from ICAL **0.19461**

Concentration Calculation

Concentration (ug/L)=(Ax*Is*Df)/(Ais*RRF*Vo)

Where: Ax=Area of the characteristic ion (EICP) for the compound to be measured
Ais=Area of the characteristic ion (EICP) for the specific internal standard
Is=Amount of the internal standard added, in nanograms
Mean RRF=Relative response factor from the Initial calibration standard
Vo=Total volume of water purged, in milliliters
Df=Dilution factor

Example: Vinyl Chloride-d_3 from H4001

Ax=	60491
Ais=	311455
Is=	125
Mean RRF=	0.19461
Vo=	25
Df=	1
Concentration (ug/L)=	**4.9901**

CASE: **46115**
SDG: **H4001**

Example Calculation for the BNA Fraction

RRF Calculation

RRF=(Ax*Cis)/(Ais*Cx)

Where: Ax=Area of the characteristic ion (EICP) for the compound to be measured
Ais=Area of the characteristic ion (EICP) for the specific internal standard
Cis=Concentration of the internal standard
Cx=Concentration of the compound to be measured

Example:	Phenol-d_5 from	**SSTD020LD**
	Ax=	303557
	Ais=	173356
	Cis=	20
	Cx=	20
	RRF=	**1.75106**

Mean RRF from ICAL **1.61640**

Concentration Calculation

Concentration (ug/L)=(Ax*Is*Vt*Df)/(Ais*RRF*Vo)

Where: Ax=Area of the characteristic ion (EICP) for the compound to be measured
Ais=Area of the characteristic ion (EICP) for the specific internal standard
Is=Amount of the internal standard added, in nanograms
Mean RRF=Relative response factor from the Initial calibration standard
Vo=Total volume of water extracted, in liters
Vt=extract final volume (mL)
Df=Dilution factor

Example:	Phenol-d_5 from	**H4213**
	Ax=	291606
	Ais=	173253
	Is=	20
	Mean RRF=	1.61640
	Vo=	1.04
	Vt=	1
	Df=	1

Concentration (ug/L)= **20.025**

MANUAL INTEGRATION REPORT
VOA_TRACE

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

EPA SAMPLE NO.	Column 1 DB-624 0.25(mm)	
VSTD0.5OW	Acetone	
	Methyl acetate	
	2-Butanone	
	Cyclohexane	
	1,2-Dichloroethane	
	1,2-Dichloropropane	
	1,2-Dibromoethane	
	Bromoform	
VSTD001OW	Methyl acetate	
	Cyclohexane	
	1,2-Dibromoethane	
VSTD0.5PT	Methyl acetate	
	Cyclohexane	
	1,2-Dichloroethane	
	1,2-Dichloropropane	
	1,2-Dibromoethane	
VSTD001PT	Cyclohexane	
	1,2-Dichloropropane	
	1,2-Dibromoethane	
VSTD010PT	Chloroethane-d5	

MANUAL INTEGRATION REPORT
SVOA

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

EPA SAMPLE NO.	Column 1 Zebron ZB-SV 0.25(mm)	
SSTD005LA	4-Chloro-3-methylphenol	
SSTD020LA	Caprolactam	
SSTD080LA	Caprolactam	
SSTD020LC	Caprolactam	
	2,4,6-Trichlorophenol	
	2,4,5-Trichlorophenol	
SSTD020LD	Caprolactam	
	2,4,6-Trichlorophenol	
	2,4,5-Trichlorophenol	
SSTD020LE	Caprolactam	
	2,4,6-Trichlorophenol	
	2,4,5-Trichlorophenol	

TRACE-VOLATILES

QC Summary

- Deuterated Monitoring Compound Recovery (Form 2)
- Matrix Spike/Matrix Spike Duplicate Recovery (Form 3) optional
- Laboratory Control Sample Recovery (Form 3) optional
- Method Blank Summary (Form 4)
- GC/MS Instrument Performance Check (Form 5)
- Internal Standard Area & RT Summary (Form 8)

Sample Data

Standards Data

- Initial Calibration (Form 6)
- Continuing Calibration Verification Data (Form 7)

Raw QC Data

- BFB Data
- Blank Data
- MS/MSD Data (optional)
- LCS Data (optional)

Miscellaneous Data

- Run Logs
- Standard Preparation Logs

TRACE-VOLATILE QC SUMMARY

Includes:

Deuterated Monitoring Compound Recovery (Form 2)

Matrix Spike/Matrix Spike Duplicate (Form 3A)

Laboratory Control Sample Recovery (From 3B)

Method Blank Summary (Form 4)

GC/MS Instrument Performance Check (Form 5)

Internal Standard Area and RT Summary (Form 8)

Deuterated Monitoring Compound Recovery

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

AnalyticalMethod: Trace VOA Level: TRACE

Matrix: Water

EPA SAMPLE NO.	DMC1	DMC2	DMC3	DMC4	DMC5	DMC6	DMC7	DMC8	DMC9
H4001	100	93	70	95	86	87	92	91	84
H4008	101	97	71	103	89	96	94	92	88
H4202	103	116	83	100	99	103	101	99	98
H4202DL	101	97	77	115	98	103	98	99	96
H4211	82	84	61	92	82	87	80	78	75
H4213	104	109	79	121	101	102	107	102	96
H4213DL	112	110	83	105	103	99	105	100	98
H4217	83	77	62	99	82	89	80	79	77
H4218	82	85	60	96	83	91	81	80	76
VHBLK01	112	113	95	86	104	99	118	101	118
H4213MSD	103	107	92	111	98	101	104	99	96
H4213MS	107	104	88	97	101	100	100	95	95
VBLKTT	110	106	77	106	99	97	107	104	100
VBLKPU	122	120	84	110	109	101	114	106	107
VIBLK40	99	93	71	107	96	97	97	91	91
VIBLK41	116	110	82	106	99	104	99	95	94
VIBLK42	113	103	73	104	99	104	97	94	93
VIBLK43	108	107	80	110	102	105	106	99	95
VBLKQF	113	106	79	105	101	100	102	95	98
VBLKRI	91	90	74	86	90	92	95	87	94

	QC LIMITS
DMC1 = Vinyl Chloride-d3	40-130
DMC2 = Chloroethane-d5	65-130
DMC3 = 1,1-Dichloroethene-d2	60-125
DMC4 = 2-Butanone-d5	40-130
DMC5 = Chloroform-d	70-125
DMC6 = 1,2-Dichloroethane-d4	70-130
DMC7 = Benzene-d6	70-125
DMC8 = 1,2-Dichloropropane-d6	60-140
DMC9 = Toluene-d8	70-130

* Values outside of contract required QC limits
D DMC diluted out

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

AnalyticalMethod: Trace VOA Level: TRACE

Matrix: Water

EPA SAMPLE NO.	DMC10	DMC11	DMC12	DMC13	DMC14	DMC15	DMC16	DMC17	TOT OUT
H4001	89	93	95	85					0
H4008	92	99	97	90					0
H4202	102	102	110	99					0
H4202DL	102	102	107	100					0
H4211	81	91	92	82					0
H4213	92	106	108	95					0
H4213DL	93	101	108	98					0
H4217	83	91	90	82					0
H4218	80	90	92	79 *					1
VHBLK01	94	74	85	103					0
H4213MSD	99	102	107	98					0
H4213MS	95	101	106	101					0
VBLKTT	98	99	97	97					0
VBLKPU	98	98	107	103					0
VIBLK40	90	93	101	94					0
VIBLK41	100	104	106	95					0
VIBLK42	92	102	107	95					0
VIBLK43	93	101	107	100					0
VBLKQF	97	95	97	100					0
VBLKRI	82	79	83	95					0

	QC LIMITS
DMC10 = trans-1,3-Dichloropropene-d4	55-130
DMC11 = 2-Hexanone-d5	45-130
DMC12 = 1,1,2,2-Tetrachloroethane-d2	65-120
DMC13 = 1,2-Dichlorobenzene-d4	80-120

* Values outside of contract required QC limits
D DMC diluted out

Matrix Spike/Matrix Spike Duplicate

FORM 3A-OR
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Matrix: Water

EPA Sample No. (Matrix Spike/Matrix Spike Duplicate): H4213

Instrument ID: Agilent__MSD5 GC Column: DB-624 ID: 0.25 (mm)

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %REC #	QC LIMITS REC.
1,1-Dichloroethene	5.0		3.2	64	61-145
Benzene	5.0		3.9	78	76-127
Trichloroethene	5.0	0.47	4.3	77	71-120
Toluene	5.0		3.9	78	76-125
Chlorobenzene	5.0		3.9	77	75-130

ANALYTE	SPIKE ADDED	MSD CONCENTRATION	MSD %R #	RPD #	QC LIMITS	
					RPD	%R
1,1-Dichloroethene	5.0	3.3	66	3	0-14	61-145
Benzene	5.0	4.2	85	9	0-11	76-127
Trichloroethene	5.0	4.6	82	6	0-14	71-120
Toluene	5.0	4.1	82	5	0-13	76-125
Chlorobenzene	5.0	4.2	84	9	0-13	75-130

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC Limits

Method Blank Summary

FORM 4-OR
METHOD BLANK SUMMARY

EPA SAMPLE NO.
VBLKTT

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12835-001

Instrument ID: Agilent MSD5 Lab File ID: 50509B01

Extraction Type: PT Date Extracted: _____

GC Column(1): DB-624 ID: 0.25 (mm) Date Analyzed: 05/09/2016

GC Column(2): _____ ID: _____ (mm) Time Analyzed: 19:43

Heated Purge:(Y/N) N Cleanup:(Y/N) _____ Cleanup Types: _____

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4001	RE05033-001	50509B04	05/09/2016
H4008	RE05033-002	50509B05	05/09/2016
H4211	RE05033-004	50509B21	05/10/2016
H4217	RE05033-006	50509B22	05/10/2016
H4218	RE05033-007	50509B23	05/10/2016

EPA SAMPLE NO.

VBLKPU

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12787-001

Instrument ID: Agilent MSD5 Lab File ID: 50509A04

Extraction Type: PT Date Extracted: _____

GC Column(1): DB-624 ID: 0.25 (mm) Date Analyzed: 05/09/2016

GC Column(2): _____ ID: _____ (mm) Time Analyzed: 08:43

Heated Purge:(Y/N) N Cleanup:(Y/N) _____ Cleanup Types: _____

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4202	RE05033-003	50509A11	05/09/2016
H4213	RE05033-005	50509A14	05/09/2016
H4213DL	RE05033-005	50509A13	05/09/2016
H4213MSD	RE05033-005MD	50509A18	05/09/2016
H4213MS	RE05033-005MS	50509A16	05/09/2016
VIBLK40	RQ12787-018D	50509A12	05/09/2016
VIBLK41	RQ12787-018A	50509A15	05/09/2016
VIBLK42	RQ12787-018B	50509A17	05/09/2016
VIBLK43	RQ12787-018C	50509A19	05/09/2016

FORM 4-OR
METHOD BLANK SUMMARY

EPA SAMPLE NO.
VBLKQF

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12874-001

Instrument ID: Agilent MSD5 Lab File ID: 50510A04

Extraction Type: PT Date Extracted: _____

GC Column(1): DB-624 ID: 0.25 (mm) Date Analyzed: 05/10/2016

GC Column(2): _____ ID: _____ (mm) Time Analyzed: 09:28

Heated Purge:(Y/N) N Cleanup:(Y/N) _____ Cleanup Types: _____

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4202DL	RE05033-003	50510A18	05/10/2016

FORM 4-OR
METHOD BLANK SUMMARY

EPA SAMPLE NO.
VBLKRI

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ13069-001

Instrument ID: Agilent MSD8 Lab File ID: 80512C03

Extraction Type: PT Date Extracted: _____

GC Column(1): DB-624 ID: 0.25 (mm) Date Analyzed: 05/12/2016

GC Column(2): _____ ID: _____ (mm) Time Analyzed: 10:29

Heated Purge:(Y/N) N Cleanup:(Y/N) _____ Cleanup Types: _____

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
VHBLK01	RE05033-008	80512C04h	05/12/2016

Instrument Performance Check

Form 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFBOW

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Lab File ID: 50505A01

Instrument ID: Agilent MSD5 BFB/DFTPP: BFB

GC Column: DB-624 ID: 0.25 (mm)

Injection Date: 05/05/2016 Injection Time: 1336

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	22.0	
75	30.0 - 80.0% of mass 95	51.7	
95	Base peak, 100% relative abundance	100.0	
96	5.0 - 9.0% of mass 95	6.8	
173	Less than 2.0% of mass 174	0.1	(0.1) 1
174	50.0 - 120% of mass 95	106.2	
175	5.0 - 9.0% of mass 174	8.6	(8.1) 1
176	95.0 - 101% of mass 174	103.2	(97.2) 1
177	5.0 - 9.0% of mass 176	7.2	(6.9) 2

1-Value is %mass 174 2-Value is %mass 176

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD020OW	VSTD020OW	50505A02	05/05/2016	1358
VSTD010OW	VSTD010OW	50505A03	05/05/2016	1420
VSTD005OW	VSTD005OW	50505A04	05/05/2016	1443
VSTD001OW	VSTD001OW	50505A05	05/05/2016	1506
VSTD0.5OW	VSTD0.5OW	50505A06	05/05/2016	1528

Form 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFBPU

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Lab File ID: 50509A01

Instrument ID: Agilent MSD5 BFB/DFTPP: BFB

GC Column: DB-624 ID: 0.25 (mm)

Injection Date: 05/09/2016 Injection Time: 0717

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	21.9	
75	30.0 - 80.0% of mass 95	51.1	
95	Base peak, 100% relative abundance	100.0	
96	5.0 - 9.0% of mass 95	6.7	
173	Less than 2.0% of mass 174	0.0	(0.0) 1
174	50.0 - 120% of mass 95	110.5	
175	5.0 - 9.0% of mass 174	8.6	(7.8) 1
176	95.0 - 101% of mass 174	107.2	(97.0) 1
177	5.0 - 9.0% of mass 176	7.1	(6.6) 2

1-Value is %mass 174 2-Value is %mass 176

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD005PU	VSTD005PU	50509A03	05/09/2016	0809
VBLKPU	RQ12787-001	50509A04	05/09/2016	0843
H4202	RE05033-003	50509A11	05/09/2016	1138
VIBLK40	RQ12787-018D	50509A12	05/09/2016	1201
H4213DL	RE05033-005	50509A13	05/09/2016	1223
H4213	RE05033-005	50509A14	05/09/2016	1246
VIBLK41	RQ12787-018A	50509A15	05/09/2016	1309
H4213MS	RE05033-005MS	50509A16	05/09/2016	1331
VIBLK42	RQ12787-018B	50509A17	05/09/2016	1354
H4213MSD	RE05033-005MD	50509A18	05/09/2016	1417
VIBLK43	RQ12787-018C	50509A19	05/09/2016	1440
VSTD005TT	VSTD005TT	50509A30	05/09/2016	1904
VBLKTT	RQ12835-001	50509B01	05/09/2016	1943
H4001	RE05033-001	50509B04	05/09/2016	2116
H4008	RE05033-002	50509B05	05/09/2016	2139
H4211	RE05033-004	50509B21	05/10/2016	0343
H4217	RE05033-006	50509B22	05/10/2016	0405
H4218	RE05033-007	50509B23	05/10/2016	0428
VSTD005QD	VSTD005QD	50509B24	05/10/2016	0451

Form 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFBQF

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Lab File ID: 50510A01

Instrument ID: Agilent MSD5 BFB/DFTPP: BFB

GC Column: DB-624 ID: 0.25 (mm)

Injection Date: 05/10/2016 Injection Time: 0758

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	22.4	
75	30.0 - 80.0% of mass 95	52.3	
95	Base peak, 100% relative abundance	100.0	
96	5.0 - 9.0% of mass 95	6.4	
173	Less than 2.0% of mass 174	0.0	(0.0) 1
174	50.0 - 120% of mass 95	109.1	
175	5.0 - 9.0% of mass 174	8.4	(7.7) 1
176	95.0 - 101% of mass 174	106.8	(97.9) 1
177	5.0 - 9.0% of mass 176	7.3	(6.8) 2

1-Value is %mass 174 2-Value is %mass 176

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD005QF	VSTD005QF	50510A03	05/10/2016	0854
VBLKQF	RQ12874-001	50510A04	05/10/2016	0928
H4202DL	RE05033-003	50510A18	05/10/2016	1508
VSTD005QN	VSTD005QN	50510A27	05/10/2016	1832

Form 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFBPT

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Lab File ID: 80509D01

Instrument ID: Agilent MSD8 BFB/DFTPP: BFB

GC Column: DB-624 ID: 0.25 (mm)

Injection Date: 05/09/2016 Injection Time: 1356

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	26.4	
75	30.0 - 80.0% of mass 95	48.8	
95	Base peak, 100% relative abundance	100.0	
96	5.0 - 9.0% of mass 95	6.9	
173	Less than 2.0% of mass 174	0.0	(0.0) 1
174	50.0 - 120% of mass 95	92.6	
175	5.0 - 9.0% of mass 174	7.1	(7.7) 1
176	95.0 - 101% of mass 174	88.7	(95.8) 1
177	5.0 - 9.0% of mass 176	5.9	(6.6) 2

1-Value is %mass 174 2-Value is %mass 176

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD020PT	VSTD020PT	80509D02	05/09/2016	1419
VSTD010PT	VSTD010PT	80509D03	05/09/2016	1446
VSTD005PT	VSTD005PT	80509D04	05/09/2016	1513
VSTD001PT	VSTD001PT	80509D05	05/09/2016	1540
VSTD0.5PT	VSTD0.5PT	80509D06	05/09/2016	1608

Form 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFBRI

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Lab File ID: 80512C01

Instrument ID: Agilent MSD8 BFB/DFTPP: BFB

GC Column: DB-624 ID: 0.25 (mm)

Injection Date: 05/12/2016 Injection Time: 0932

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	26.8	
75	30.0 - 80.0% of mass 95	49.9	
95	Base peak, 100% relative abundance	100.0	
96	5.0 - 9.0% of mass 95	6.8	
173	Less than 2.0% of mass 174	0.0	(0.0) 1
174	50.0 - 120% of mass 95	95.7	
175	5.0 - 9.0% of mass 174	7.1	(7.5) 1
176	95.0 - 101% of mass 174	93.2	(97.5) 1
177	5.0 - 9.0% of mass 176	6.2	(6.6) 2

1-Value is %mass 174 2-Value is %mass 176

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD005RI	VSTD005RI	80512C02	05/12/2016	0953
VBLKRI	RQ13069-001	80512C03	05/12/2016	1029
VHBLK01	RE05033-008	80512C04h	05/12/2016	1105
VSTD005RP	VSTD005RP	80512C25	05/12/2016	2042

Internal Standard & RT Summary

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

EPA Sample No.: VSTD005PU Lab File ID (Standard): 50509A03

Instrument ID: Agilent MSD5 Init. Calib. Date(s): 05/05/2016 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Analyzed: 05/09/2016

Heated Purge: (Y/N) N Time Analyzed: 0809

	IS1 AREA	RT	IS2 AREA	RT	IS3 AREA	RT
12 HOUR STD	216888	10.82	291090	7.24	125280	12.79
UPPER LIMIT	433776	10.99	582180	7.41	250560	12.96
LOWER LIMIT	108444	10.65	145545	7.07	62640	12.62
EPA SAMPLE NO.						
H4202	228178	10.82	298062	7.25	130949	12.79
H4213	226830	10.82	305848	7.25	135483	12.79
H4213DL	211915	10.82	280159	7.25	125802	12.79
H4213MSD	219992	10.82	296733	7.25	131883	12.79
H4213MS	232207	10.82	297780	7.24	135096	12.79
VBLKPU	199795	10.82	270690	7.24	116371	12.79
VIBLK40	223419	10.82	293964	7.25	130437	12.79
VIBLK41	225226	10.82	295283	7.25	134164	12.79
VIBLK42	221911	10.82	287012	7.25	131080	12.79
VIBLK43	216328	10.82	283952	7.25	126957	12.79

IS1 = Chlorobenzene-d5
IS2 = 1,4-Difluorobenzene
IS3 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.17 minutes of internal standard RT

RT LOWER LIMIT = - 0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

EPA Sample No.: VSTD005TT Lab File ID (Standard): 50509A30

Instrument ID: Agilent MSD5 Init. Calib. Date(s): 05/05/2016 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Analyzed: 05/09/2016

Heated Purge: (Y/N) N Time Analyzed: 1904

	IS1 AREA	RT	IS2 AREA	RT	IS3 AREA	RT
12 HOUR STD	232306	10.82	305671	7.24	130311	12.79
UPPER LIMIT	464612	10.99	611342	7.41	260622	12.96
LOWER LIMIT	116153	10.65	152836	7.07	65156	12.62
EPA SAMPLE NO.						
H4001	237851	10.82	311455	7.24	136623	12.79
H4008	236926	10.82	305989	7.24	136137	12.79
H4211	227398	10.82	287046	7.24	130940	12.79
H4217	230272	10.82	291221	7.24	133069	12.79
H4218	220387	10.82	281712	7.24	129628	12.79
VBLKTT	231567	10.82	312203	7.24	130861	12.79

IS1 = Chlorobenzene-d5
IS2 = 1,4-Difluorobenzene
IS3 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.17 minutes of internal standard RT

RT LOWER LIMIT = - 0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

EPA Sample No.: VSTD005QF Lab File ID (Standard): 50510A03

Instrument ID: Agilent MSD5 Init. Calib. Date(s): 05/05/2016 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Analyzed: 05/10/2016

Heated Purge: (Y/N) N Time Analyzed: 0854

	IS1 AREA	RT	IS2 AREA	RT	IS3 AREA	RT
12 HOUR STD	204617	10.82	269257	7.24	115067	12.79
UPPER LIMIT	409234	10.99	538514	7.41	230134	12.96
LOWER LIMIT	102309	10.65	134629	7.07	57534	12.62
EPA SAMPLE NO.						
H4202DL	262433	10.82	320937	7.24	146703	12.79
VBLKQF	211564	10.82	271236	7.24	120673	12.79

IS1 = Chlorobenzene-d5
IS2 = 1,4-Difluorobenzene
IS3 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.17 minutes of internal standard RT

RT LOWER LIMIT = - 0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

EPA Sample No.: VSTD005RI Lab File ID (Standard): 80512C02

Instrument ID: Agilent MSD8 Init. Calib. Date(s): 05/09/2016 05/09/2016

GC Column: DB-624 ID: 0.25 (mm) Date Analyzed: 05/12/2016

Heated Purge: (Y/N) N Time Analyzed: 0953

	IS1 AREA	RT	IS2 AREA	RT	IS3 AREA	RT
12 HOUR STD	175487	10.80	245287	7.20	94775	12.77
UPPER LIMIT	350974	10.97	490574	7.37	189550	12.94
LOWER LIMIT	87744	10.63	122644	7.03	47388	12.60
EPA SAMPLE NO.						
VHBLK01	170477	10.80	244420	7.20	89613	12.77
VBLKRI	170931	10.80	242115	7.20	92694	12.77

IS1 = Chlorobenzene-d5
IS2 = 1,4-Difluorobenzene
IS3 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.17 minutes of internal standard RT

RT LOWER LIMIT = - 0.17 minutes of internal standard RT

TRACE-VOLATILE SAMPLE DATA

Sample data shall be arranged in packets with the Volatile Analysis Data Sheet (Form 1A-OR, 1B-OR), followed by the raw da the VOA samples. These sample packets shall be placed in increasing EPA sample number order, considering both letters and numbers.

-Target Compound Results (Form 1A-OR)
-Tentatively Identified Compounds (Form 1B-OR)
List up to 30 TICs
-Quantitation Report showing calculation for TCL Analytes
-Quantitation Report showing calculation for TICs
-Reconstructed Total Ion Chromatograms
-Raw Spectra & background subtracted mass spectra of TCL Analytes identified in the sample
-Mass Spectra of organic compounds not listed in Exhibit C with associated best match spectra
-Printout of Manual Integrations

Spectra shall be labeled as follows:

EPA Sample ID number, Sample ID number, Lab file ID, Date & Time of analysis and Instrument ID.
The compound name must be clearly marked.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4001

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B04

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4001

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B04

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4001

Lab Name: Shealy Environmental Services, Inc.
Contract: EP-W-14035
Lab Code: EQI Case No.: 46115
MA No.: SDG No.: H4001
Analytical Method: Trace VOA
Level: TRACE
Matrix: Water
Lab Sample ID: RE05033-001
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: 50509B04
% Solids:
Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 05/09/2016
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) N
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume:
Cleanup Types:
pH: 2 Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L
Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B04.D		
Lab Sample ID:	RE05033-001	Client Sample ID:	H4001
Injection Date:	09-May-2016 21:16:30	Dil. Factor:	1.0
Operator:	JJG	Inst. ID:	msd5.i
Sample Info:	5050916B, RE05033-001		
Method:	\\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5.m		
Method Date:	10-May-2016 01:19:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	4
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rz	Review Date:	18-May-2016 09:49:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.702		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.962	1.962	0.000	60491	4.9901	4.9900	
4 Vinyl Chloride	62.0		1.974		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.389	0.012	42117	4.6719	4.6718	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	96462	3.4795	3.4795	
13 1,1-Dichloroethene	96.0		3.291		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.302		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.251		ND			
23 1,1-Dichloroethane	63.0		4.797		ND			
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	99695	47.301	47.301	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.959	5.959	0.000	107431	4.2938	4.2937	Q
31 Chloroform	83.0		5.994		ND			
33 1,1,1-Trichloroethane	97.0		6.243		ND			
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 18-May-2016 09:49:40 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916B.b\50509B04.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.647	6.647	-0.001	48116	4.3618	4.3618	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	206110	4.5877	4.5877	
37 Benzene	78.0		6.730		ND			
39 1,2-Dichloroethane	62.0		6.753		ND			
* 41 1,4-Difluorobenzene	114.0	7.239	7.240	-0.001	311455	5.0000	5.0000	
42 Trichloroethene	95.0		7.595		ND			
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	52662	4.5278	4.5278	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.078		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	162959	4.2175	4.2174	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	44238	4.4530	4.4529	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0		9.967		ND			
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	77467	46.392	46.392	
60 2-Hexanone	43.0		10.086		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	237851	5.0000	5.0000	
64 Chlorobenzene	112.0		10.856		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.426		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	26653	4.7263	4.7262	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	136623	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	63708	4.2530	4.2529	
89 1,2-Dichlorobenzene	146.0		13.098		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services

Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B04.D		
Lab Sample ID:	RE05033-001	Client Sample ID:	H4001
Injection Date:	09-May-2016 21:16:30	Dil. Factor:	1.0
Operator:	JJG	Inst. ID:	msd5.i
Sample Info:	5050916B, RE05033-001		
Method:	\\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5.m		
Method Date:	10-May-2016 01:19:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	4
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rz	Review Date:	18-May-2016 09:49:30

Tentative Identified Compound Results

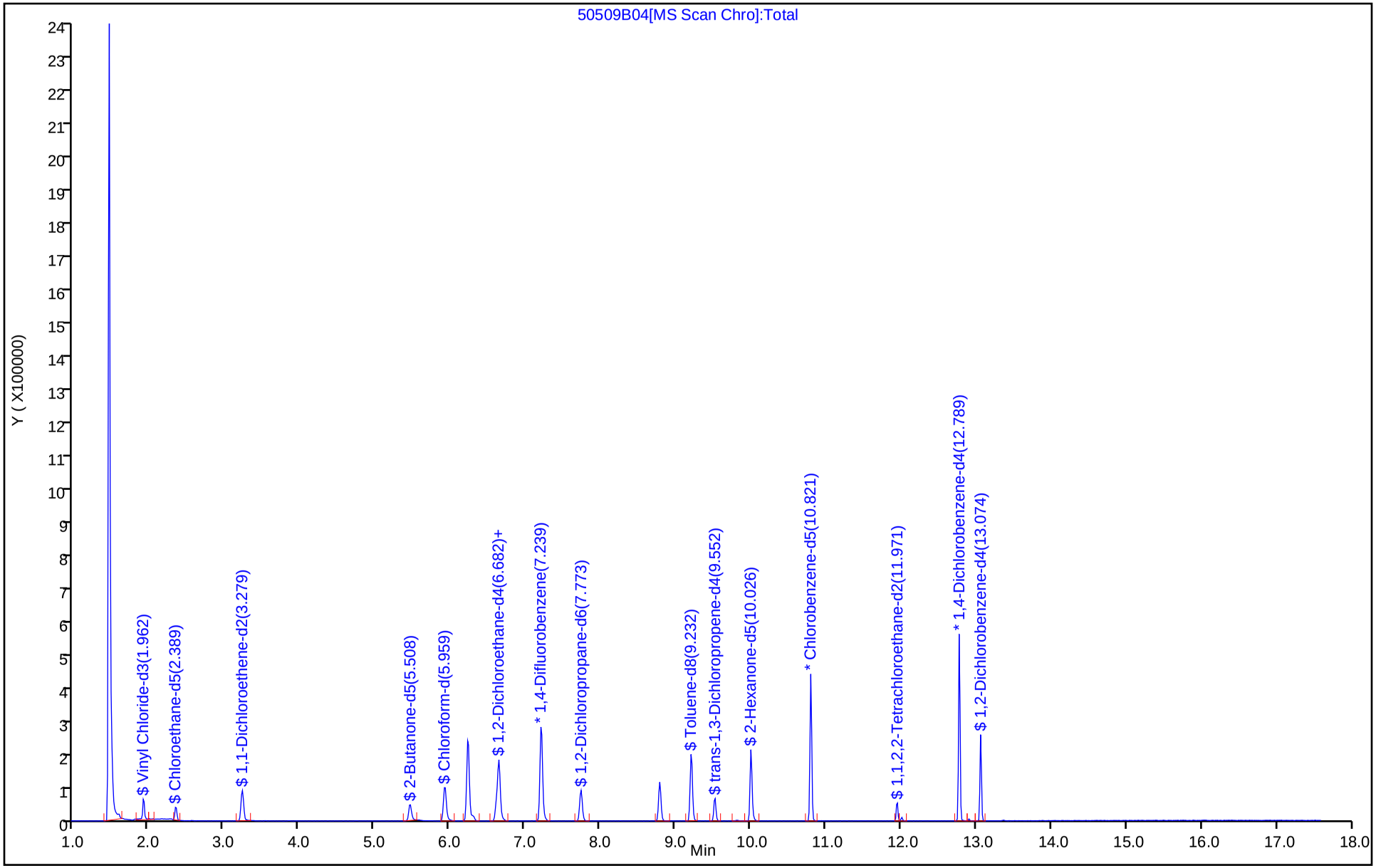
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 18-May-2016 09:49:40 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B04.D				
Injection Date:	09-May-2016 21:16:30	Inst. ID:	msd5.i	Operator:	JJG
Client ID:	H4001	Lab ID:	RE05033-001		
Sample Info:	5050916B, RE05033-001				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4008

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-002

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B05

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4008

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-002

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B05

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4008

Lab Name: Shealy Environmental Services, Inc.
Contract: EP-W-14035
Lab Code: EQI Case No.: 46115
MA No.: SDG No.: H4001
Analytical Method: Trace VOA
Level: TRACE
Matrix: Water
Lab Sample ID: RE05033-002
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: 50509B05
% Solids:
Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 05/09/2016
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) N
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume:
Cleanup Types:
pH: 2 Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L
Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B05.D		
Lab Sample ID:	RE05033-002	Client Sample ID:	H4008
Injection Date:	09-May-2016 21:39:30	Dil. Factor:	1.0
Operator:	JJG	Inst. ID:	msd5.i
Sample Info:	5050916B, RE05033-002		
Method:	\\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5.m		
Method Date:	10-May-2016 01:19:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	5
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rz	Review Date:	18-May-2016 09:49:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.702		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.962	1.962	0.000	60035	5.0409	5.0409	
4 Vinyl Chloride	62.0		1.974		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.389	0.012	42879	4.8413	4.8413	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	96544	3.5447	3.5447	
13 1,1-Dichloroethene	96.0		3.291		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.302		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.251		ND			
23 1,1-Dichloroethane	63.0		4.797		ND			
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	106533	51.449	51.449	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.970	5.959	0.011	109814	4.4674	4.4674	Q
31 Chloroform	83.0		5.994		ND			
33 1,1,1-Trichloroethane	97.0		6.243		ND			
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 18-May-2016 09:49:40 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916B.b\50509B05.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.647	-0.001	51753	4.7753	4.7753	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	209603	4.6837	4.6836	
37 Benzene	78.0		6.730		ND			
39 1,2-Dichloroethane	62.0		6.753		ND			
* 41 1,4-Difluorobenzene	114.0	7.239	7.240	-0.001	305989	5.0000	5.0000	
42 Trichloroethene	95.0		7.595		ND			
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	53137	4.5865	4.5865	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.078		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	168655	4.3819	4.3819	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	45511	4.5990	4.5990	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0		9.967		ND			
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	82371	49.521	49.521	
60 2-Hexanone	43.0		10.086		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	236926	5.0000	5.0000	
64 Chlorobenzene	112.0		10.856		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.426		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	27310	4.8617	4.8616	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	136137	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	67124	4.4970	4.4970	
89 1,2-Dichlorobenzene	146.0		13.098		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services
Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B05.D		
Lab Sample ID:	RE05033-002	Client Sample ID:	H4008
Injection Date:	09-May-2016 21:39:30	Dil. Factor:	1.0
Operator:	JJG	Inst. ID:	msd5.i
Sample Info:	5050916B, RE05033-002		
Method:	\\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5.m		
Method Date:	10-May-2016 01:19:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	5
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rz	Review Date:	18-May-2016 09:49:30

Tentative Identified Compound Results

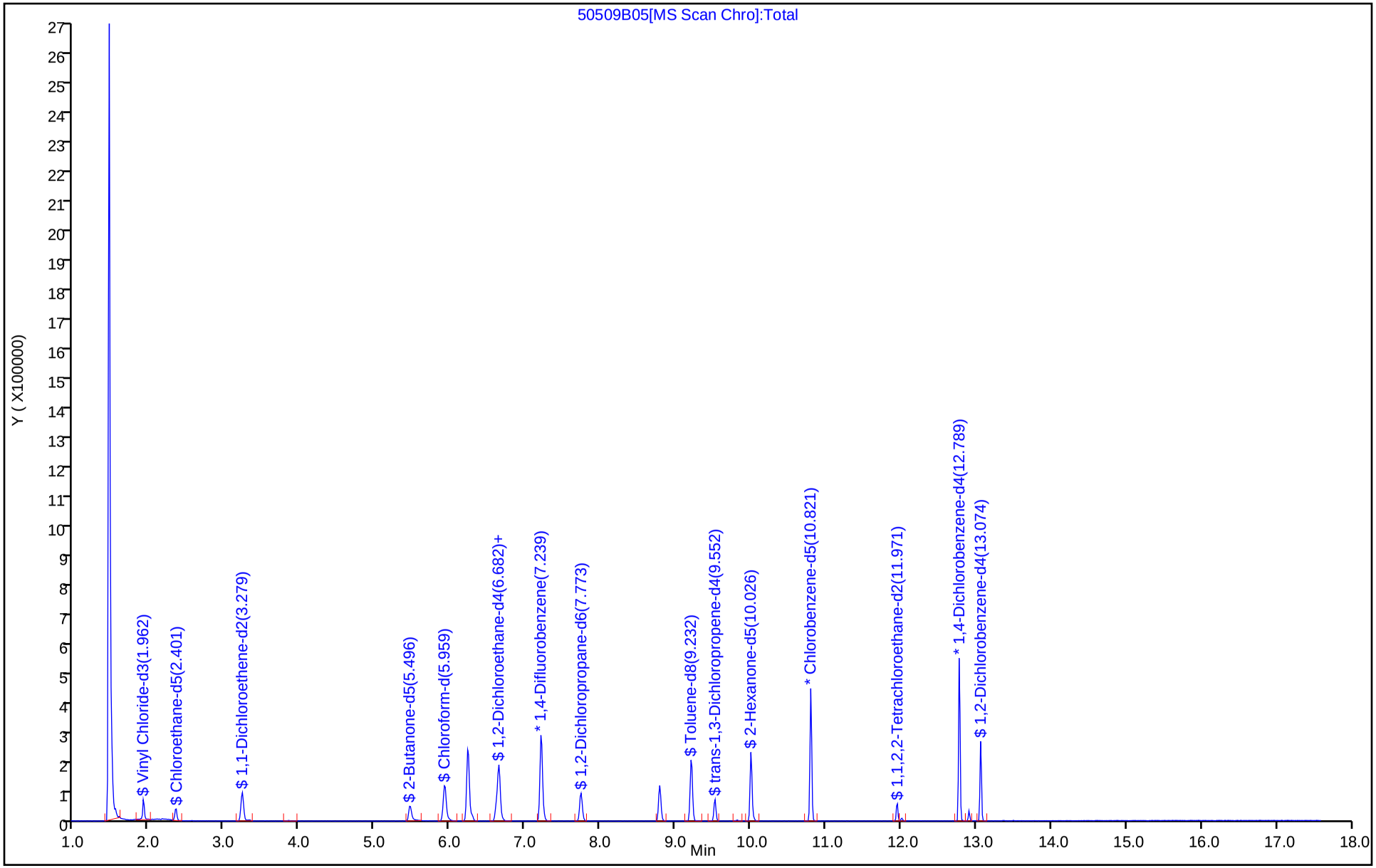
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 18-May-2016 09:49:40 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B05.D				
Injection Date:	09-May-2016 21:39:30	Inst. ID:	msd5.i	Operator:	JJG
Client ID:	H4008	Lab ID:	RE05033-002		
Sample Info:	5050916B, RE05033-002				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4202

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-003

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A11

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.5	
71-55-6	1,1,1-Trichloroethane	0.38	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.36	J
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4202

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-003

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A11

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	21	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4202

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RE05033-003
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A11
% Solids: Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 05/09/2016
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) N Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume:
Cleanup Types: pH: 2 Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Report Date: 11-May-2016 18:34:03 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A11.D		
Lab Sample ID:	RE05033-003	Client Sample ID:	H4202
Injection Date:	09-May-2016 11:38:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, RE05033-003		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	11
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:45:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.701		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	59802	5.1549	5.1549	
4 Vinyl Chloride	62.0		1.986		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	50209	5.8197	5.8197	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	110400	4.1612	4.1612	
13 1,1-Dichloroethene	96.0		3.302		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.314		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.263		ND			
23 1,1-Dichloroethane	63.0		4.808		ND			
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	101215	50.181	50.181	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.970	5.971	-0.001	118959	4.9681	4.9681	
31 Chloroform	83.0	5.994	5.994	0.000	34136	1.4795	1.4794	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	7034	0.38181	0.38180	Qe
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 11-May-2016 18:34:03 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916.b\50509A11.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.646	0.000	54323	5.1458	5.1457	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	218729	5.0750	5.0749	
37 Benzene	78.0		6.729		ND			
39 1,2-Dichloroethane	62.0		6.741		ND			
* 41 1,4-Difluorobenzene	114.0	7.251	7.239	0.012	298062	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	4313	0.36192	0.36190	e
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	55398	4.9650	4.9650	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.077		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	181217	4.8888	4.8888	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	48432	5.0818	5.0818	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0	9.967	9.967	0.000	257455	21.395	21.395	E
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	81533	50.897	50.897	
60 2-Hexanone	43.0		10.074		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	228178	5.0000	5.0000	
64 Chlorobenzene	112.0		10.844		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.425		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.959	0.012	29707	5.4911	5.4911	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	130949	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	71271	4.9640	4.9640	
89 1,2-Dichlorobenzene	146.0		13.086		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

E - Compound Concentration Exceeds Max. Calibration Range

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services
Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A11.D		
Lab Sample ID:	RE05033-003	Client Sample ID:	H4202
Injection Date:	09-May-2016 11:38:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, RE05033-003		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	11
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:45:30

Tentative Identified Compound Results

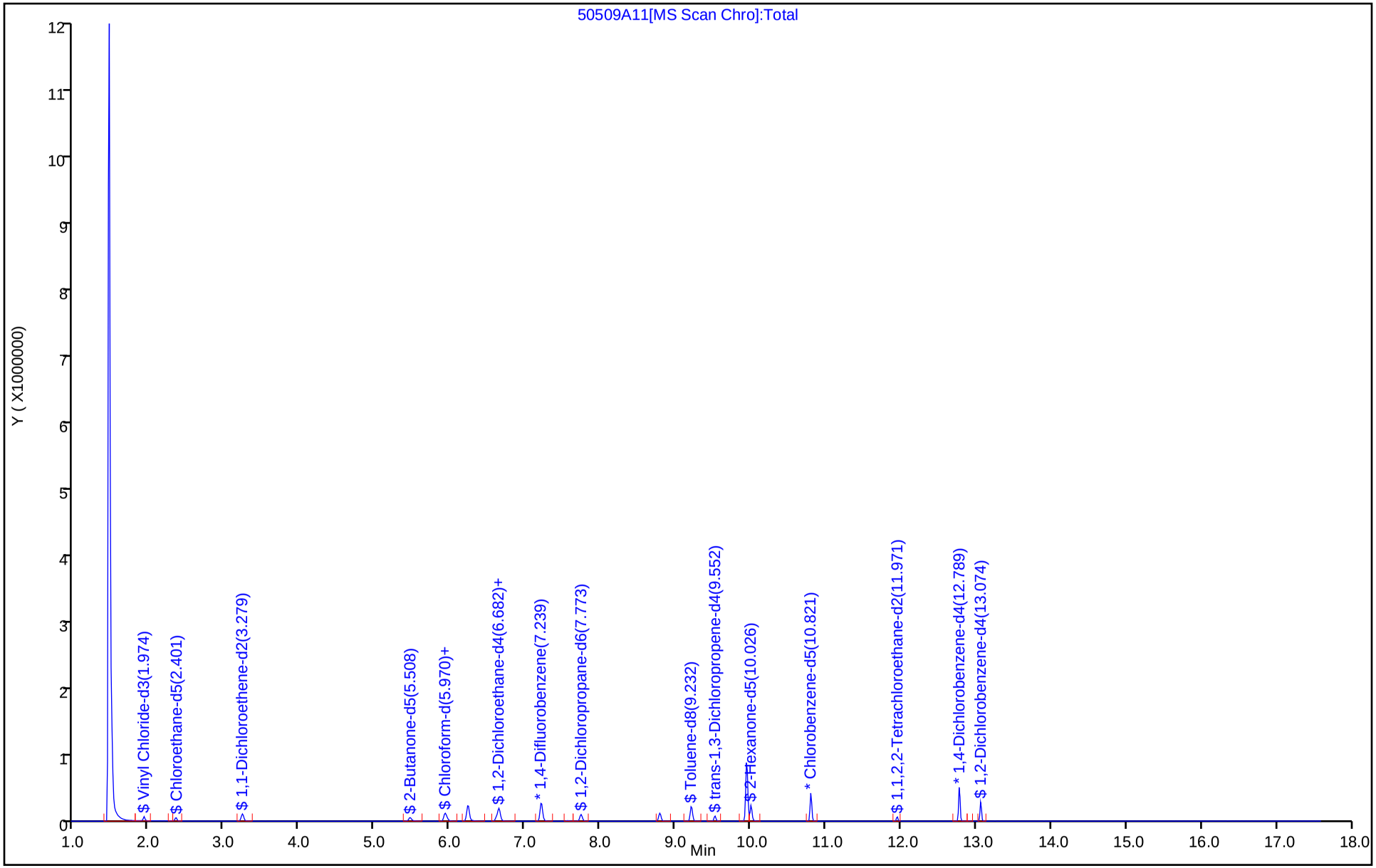
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 11-May-2016 18:34:03 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A11.D				
Injection Date:	09-May-2016 11:38:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	H4202	Lab ID:	RE05033-003		
Sample Info:	5050916, RE05033-003				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		

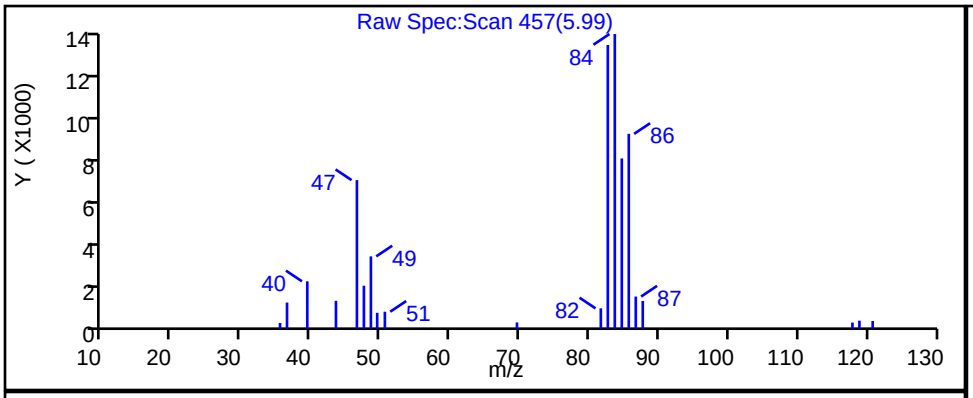


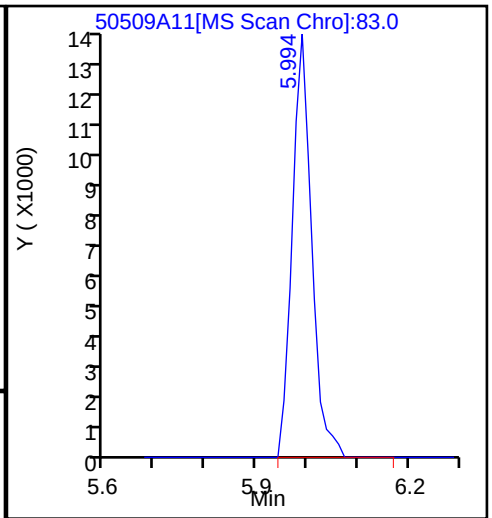
Report Date: 11-May-2016 18:34:03 AIM Revision: 1.0 26-May-2015 13:41:26

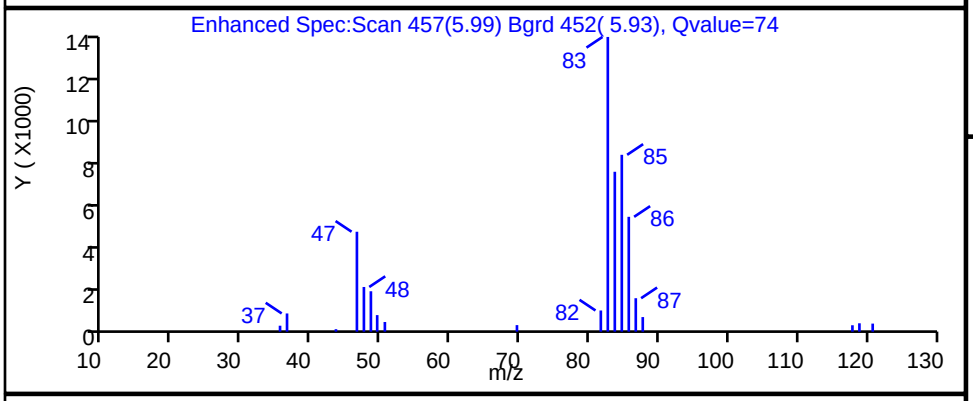
Shealy Environmental Services

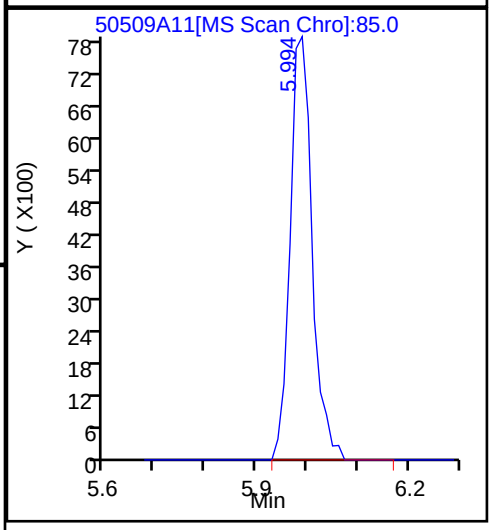
Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A11.D		
Injection Date:	09-May-2016 11:38:30	Inst. ID:	msd5.i
Client ID:	H4202	Lab ID:	RE05033-003
Sample Info:	5050916, RE05033-003		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

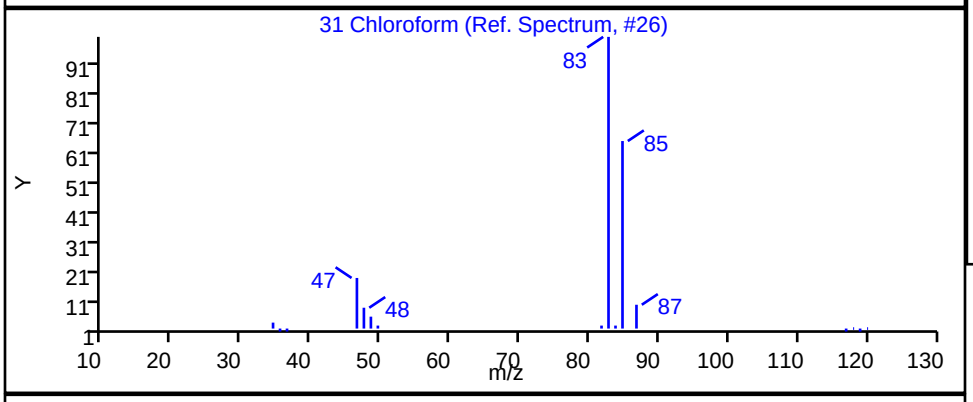
31 Chloroform

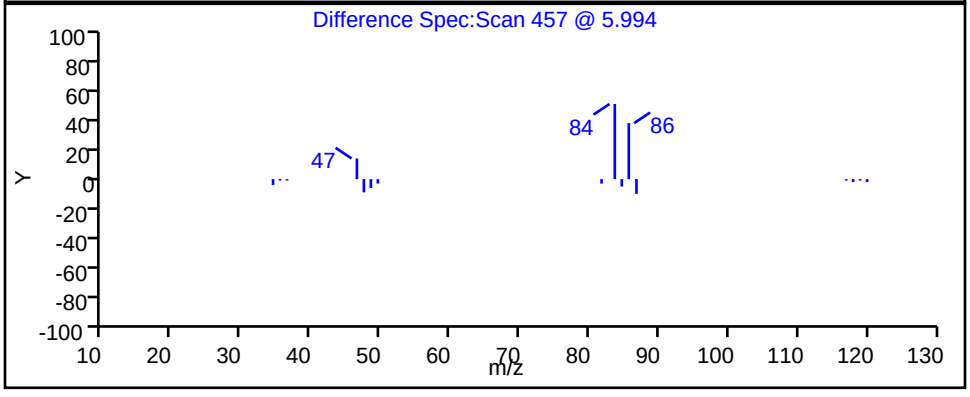










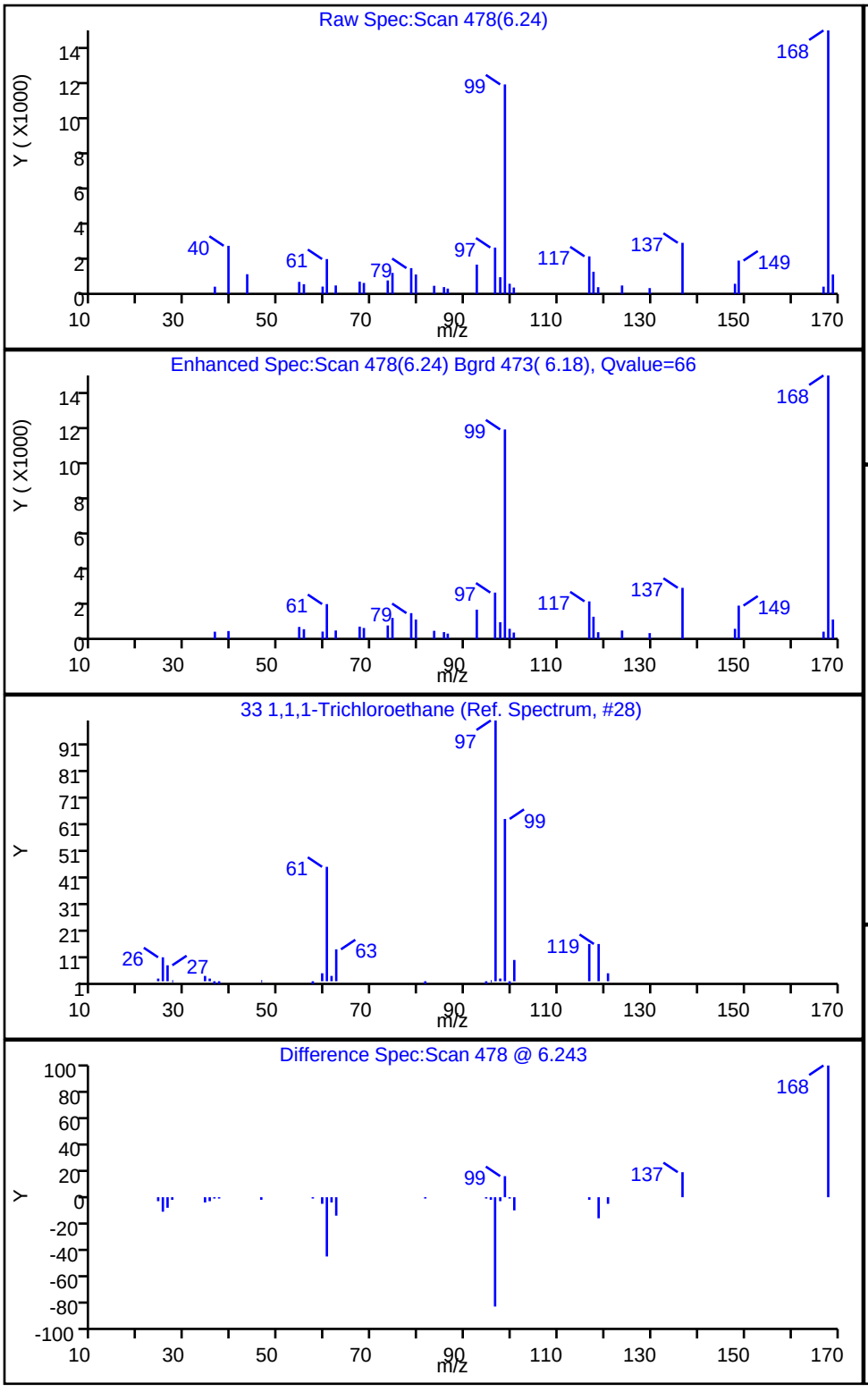


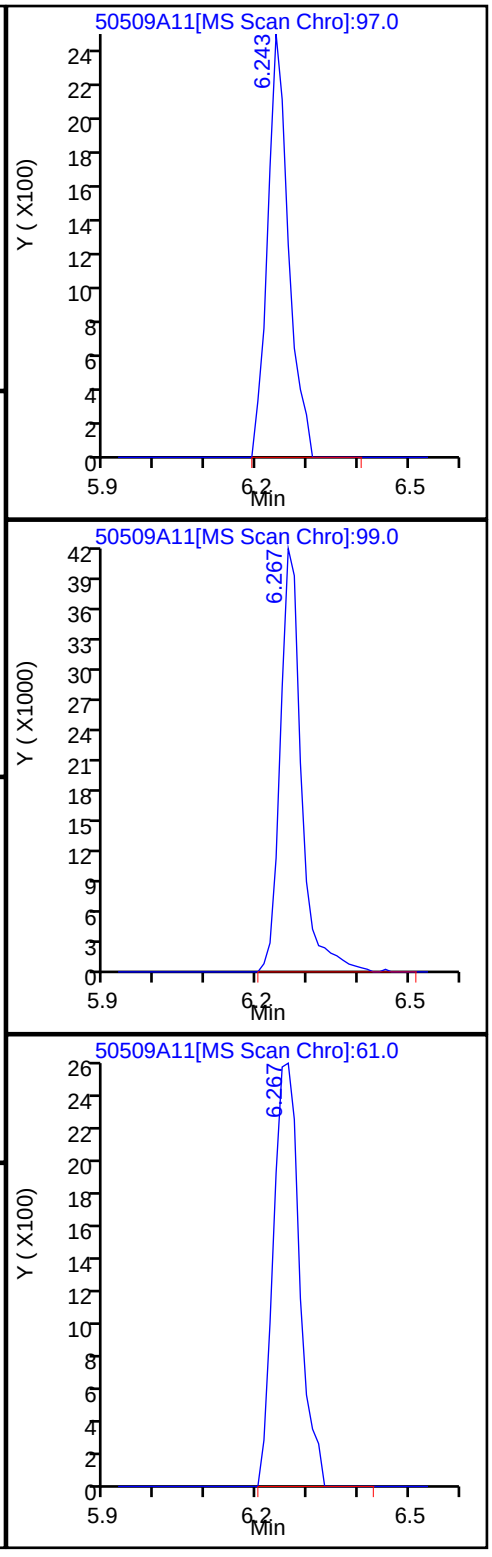
Report Date: 11-May-2016 18:34:03 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A11.D		
Injection Date:	09-May-2016 11:38:30	Inst. ID:	msd5.i
Client ID:	H4202	Lab ID:	RE05033-003
Sample Info:	5050916, RE05033-003		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

33 1,1,1-Trichloroethane



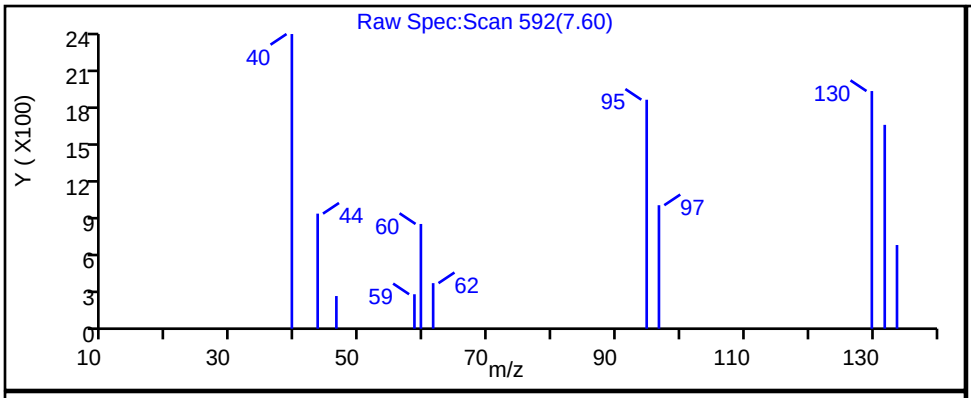


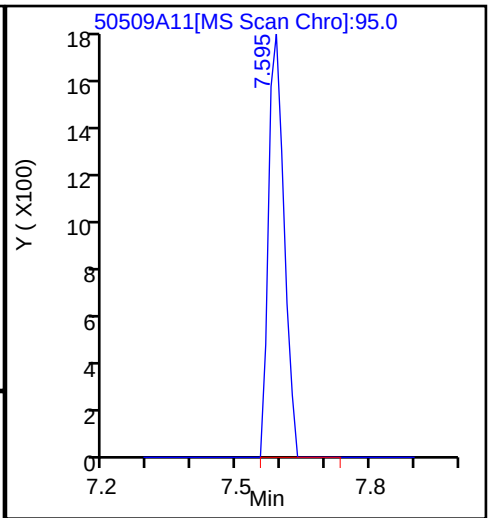
Report Date: 11-May-2016 18:34:03 AIM Revision: 1.0 26-May-2015 13:41:26

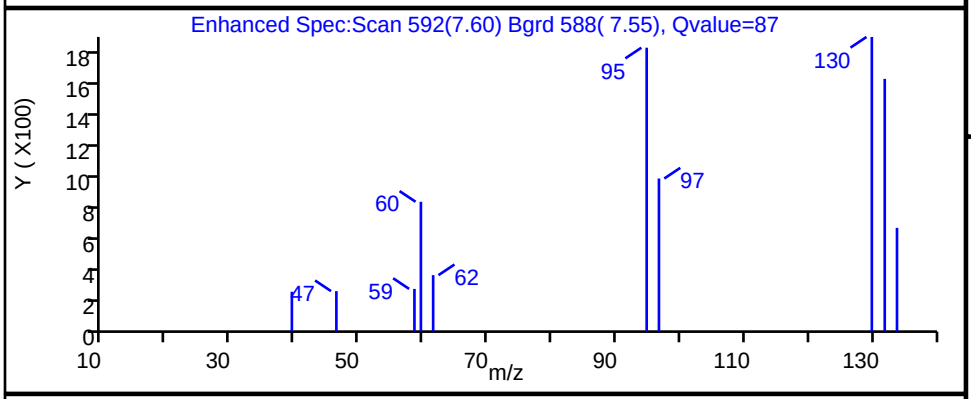
Shealy Environmental Services

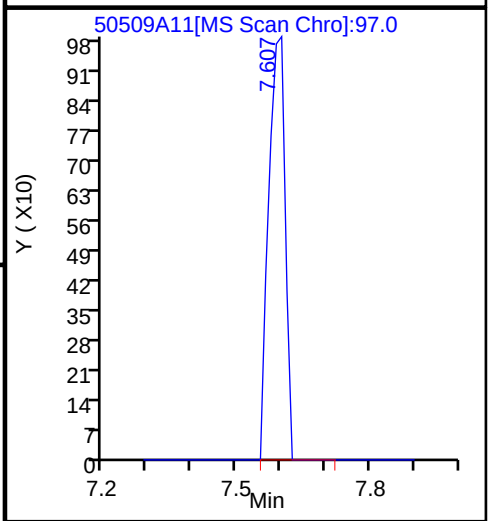
Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A11.D		
Injection Date:	09-May-2016 11:38:30	Inst. ID:	msd5.i
Client ID:	H4202	Lab ID:	RE05033-003
Sample Info:	5050916, RE05033-003		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

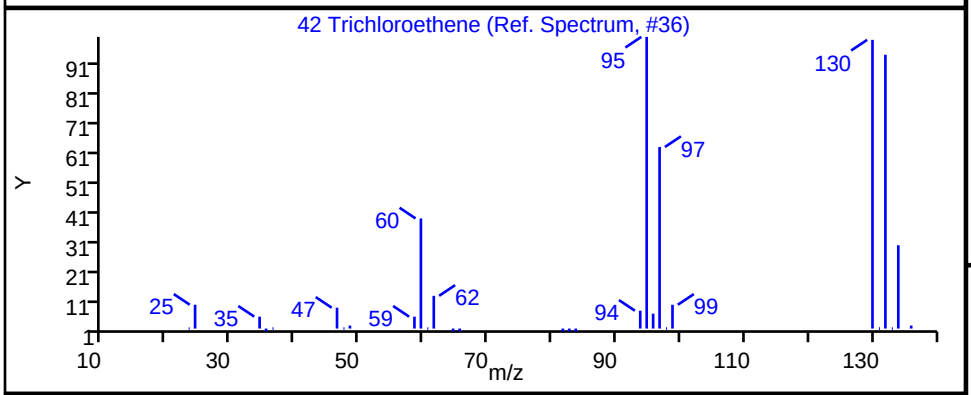
42 Trichloroethene

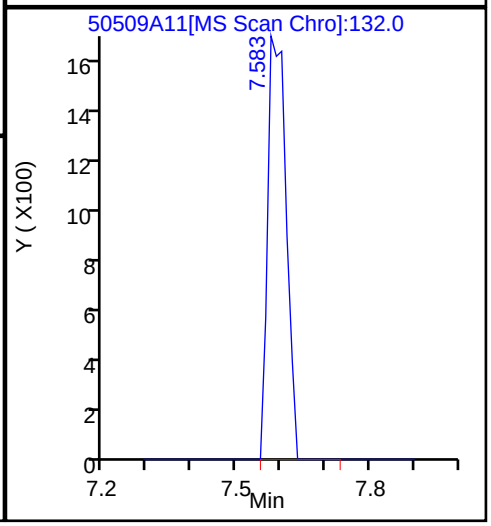


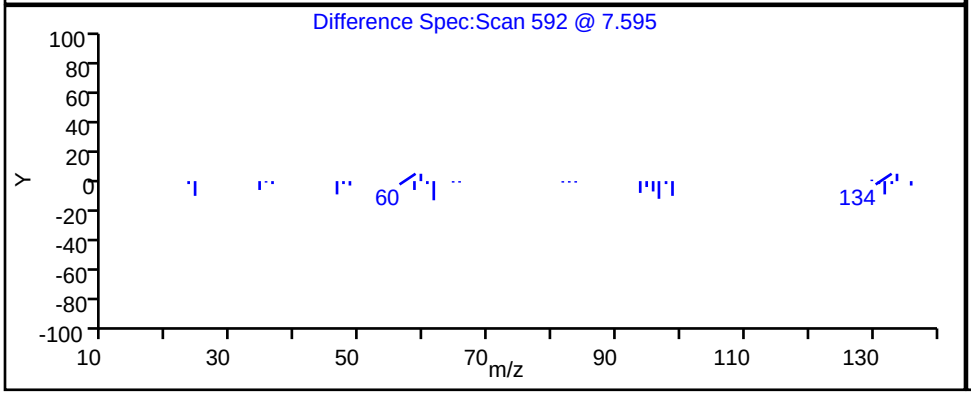










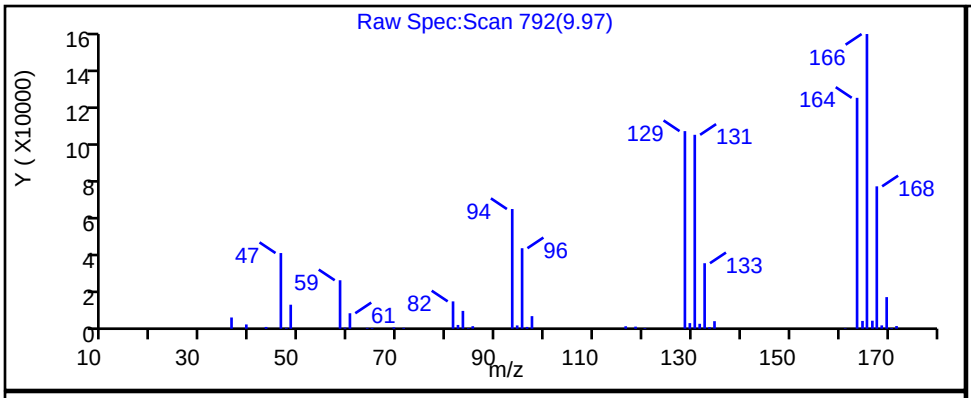


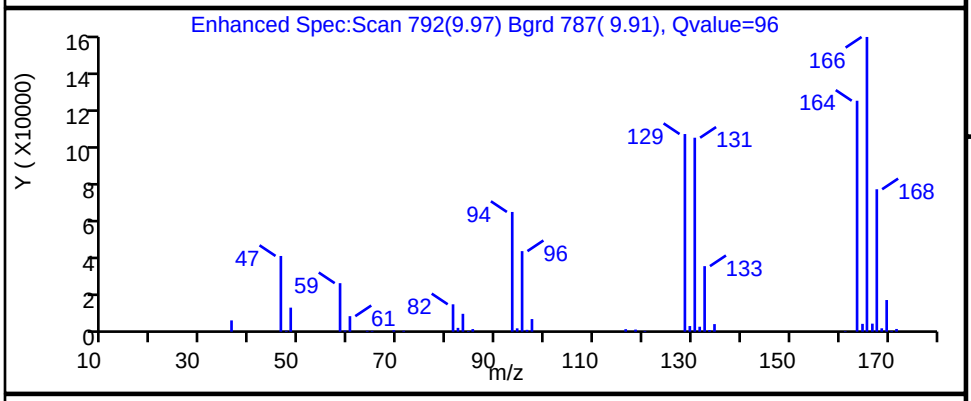
Report Date: 11-May-2016 18:34:03 AIM Revision: 1.0 26-May-2015 13:41:26

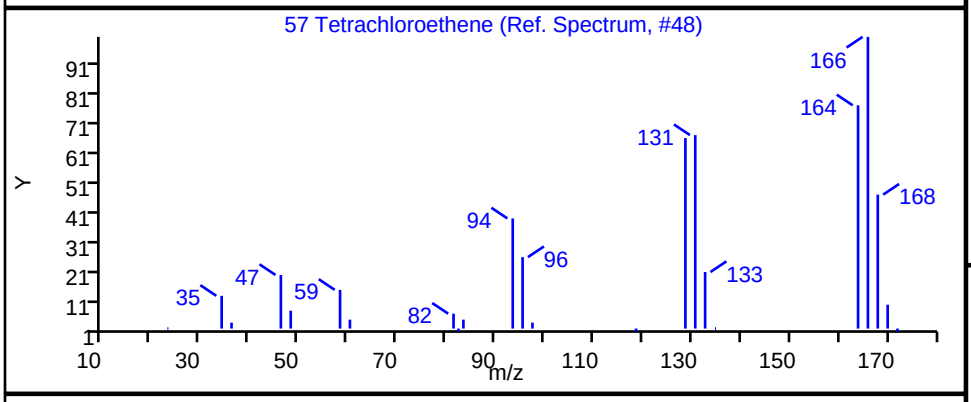
Shealy Environmental Services

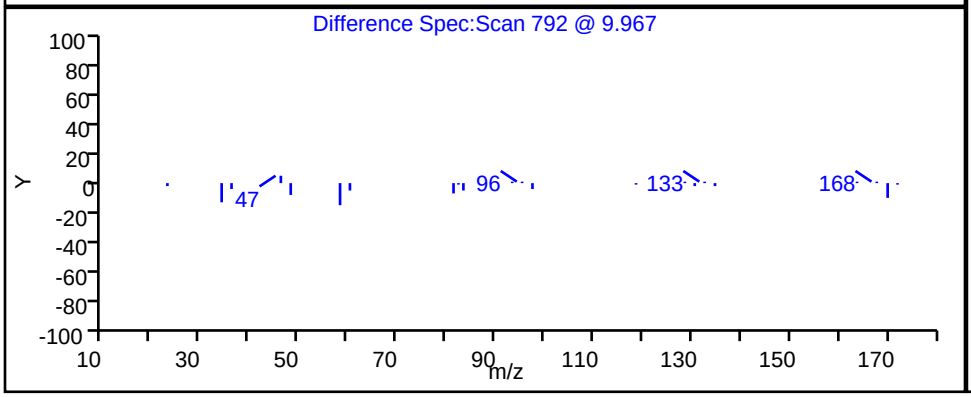
Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A11.D		
Injection Date:	09-May-2016 11:38:30	Inst. ID:	msd5.i
Client ID:	H4202	Lab ID:	RE05033-003
Sample Info:	5050916, RE05033-003		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

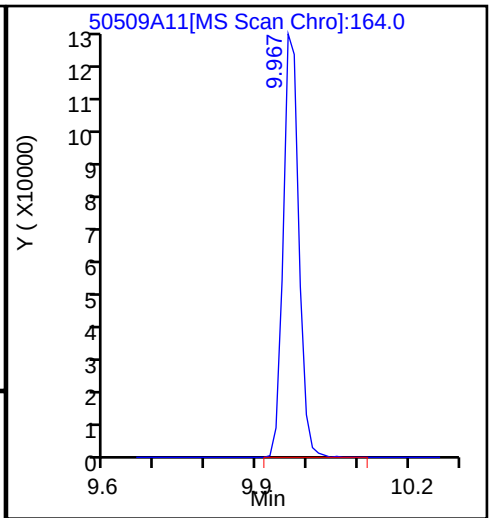
57 Tetrachloroethene

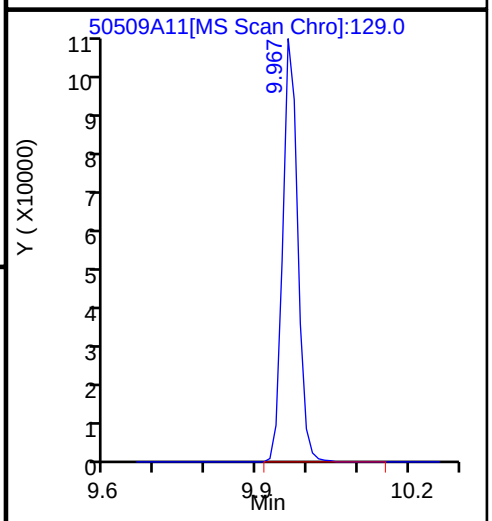


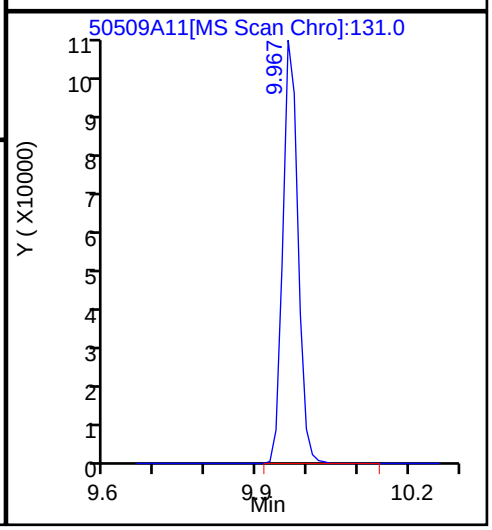












FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4202DL

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-003

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50510A18

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/10/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 5.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	1.3	J D
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4202DL

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-003

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50510A18

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/10/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 5.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	17	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m, p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-Trichlorobenzene	2.5	U
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4202DL

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RE05033-003
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50510A18
% Solids: Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 05/10/2016
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) N Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume:
Cleanup Types: pH: 2 Dilution Factor: 5.0
Concentration Units (ug/L, ug/Kg): ug/L Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	13.26	3.1	J D
02	138-87-4	Cyclohexanol, 1-methyl-4-(1-	13.97	13	NJ D
03		Unknown-02	14.31	2.9	J D
04	586-81-2	Cyclohexanol, 1-methyl-4-(1-	14.36	5.2	NJ D
05		Unknown-03	14.57	3.1	J D
06		Unknown-04	17.24	6.9	J D
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A18.D		
Lab Sample ID:	RE05033-003DL	Client Sample ID:	H4202DL
Injection Date:	10-May-2016 15:08:30	Dil. Factor:	5.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5051016, RE05033-003		
Method:	\\Organics\DD\chem\msd5.i\5051016.b\TRACE-5.m		
Method Date:	10-May-2016 09:13:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	18
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	5.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	11-May-2016 11:01:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.701		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	62878	5.0337	5.0337	
4 Vinyl Chloride	62.0		1.974		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	45136	4.8588	4.8588	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	110433	3.8658	3.8658	
13 1,1-Dichloroethene	96.0		3.290		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.302		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.587		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.263		ND			
23 1,1-Dichloroethane	63.0		4.808		ND			
$ 25 2-Butanone-d5	46.0	5.508	5.496	0.012	125022	57.566	57.566	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.888		ND			
$ 30 Chloroform-d	84.0	5.971	5.959	0.012	126961	4.9244	4.9244	Q
31 Chloroform	83.0	5.994	5.994	0.000	6560	0.26405	1.3202	Qe
33 1,1,1-Trichloroethane	97.0		6.243		ND			
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 11-May-2016 18:46:42 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5051016.b\50510A18.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.647	6.646	0.001	58446	5.1417	5.1417	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	241943	4.8809	4.8808	
37 Benzene	78.0		6.729		ND			
39 1,2-Dichloroethane	62.0		6.753		ND			
* 41 1,4-Difluorobenzene	114.0	7.239	7.239	0.000	320937	5.0000	25.000	
42 Trichloroethene	95.0		7.595		ND			
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	63355	4.9370	4.9369	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.077		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	203683	4.7777	4.7776	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	55770	5.0880	5.0879	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0	9.967	9.967	0.000	46431	3.3548	16.774	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	93704	50.859	50.859	
60 2-Hexanone	43.0		10.085		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.346		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	262433	5.0000	25.000	
64 Chlorobenzene	112.0		10.856		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.425		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	33268	5.3467	5.3467	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	146703	5.0000	25.000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	80464	5.0025	5.0024	
89 1,2-Dichlorobenzene	146.0		13.097		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services
Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A18.D		
Lab Sample ID:	RE05033-003DL	Client Sample ID:	H4202DL
Injection Date:	10-May-2016 15:08:30	Dil. Factor:	5.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5051016, RE05033-003		
Method:	\\Organics\DD\chem\msd5.i\5051016.b\TRACE-5.m		
Method Date:	10-May-2016 09:13:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	18
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	5.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	11-May-2016 11:01:30

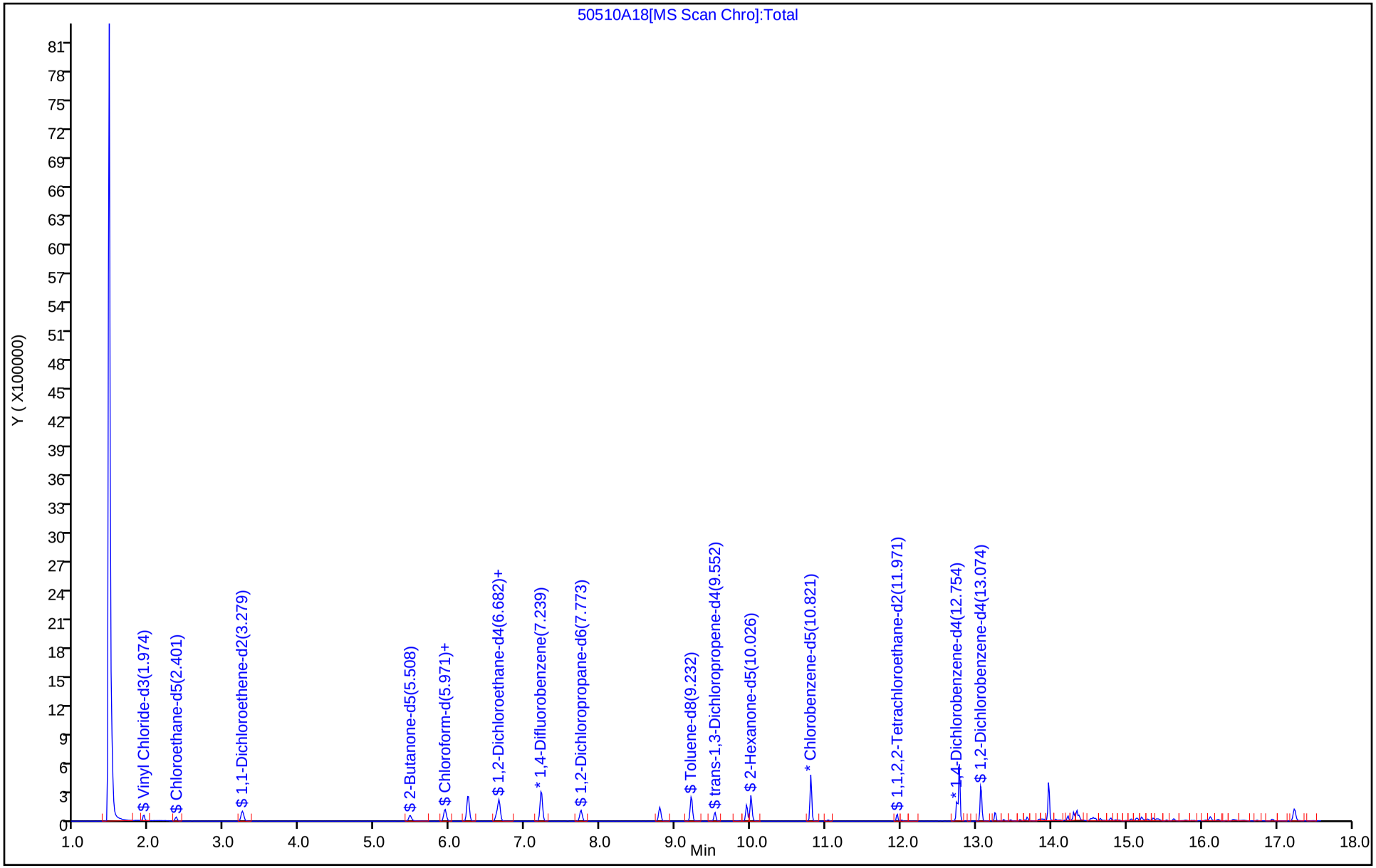
Tentative Identified Compound Results

RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight
	Unknown							
13.264	146200	0.62691	3.1345	85				
138-87-4	Cyclohexanol, 1-methyl-4-(1-methyletheny							
13.975	585492	2.5106	12.553	85	90	26869	C10H18O	154
	Unknown							
14.307	134724	0.57770	2.8885	85				
586-81-2	Cyclohexanol, 1-methyl-4-(1-methylethyli							
14.355	242955	1.0418	5.2090	85	91	26884	C10H18O	154
	Unknown							
14.568	146870	0.62978	3.1489	85				
	Unknown							
17.236	319523	1.3701	6.8506	85				

Quant. Compounds	RT	Response	Amount ug/L
* 85 1,4-Dichlorobenzene-d4	12.789	1166046	5.0000

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A18.D				
Injection Date:	10-May-2016 15:08:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	H4202DL	Lab ID:	RE05033-003DL		
Sample Info:	5051016, RE05033-003				
Purge Vol.	25 ML	Dil. Factor:	5.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		

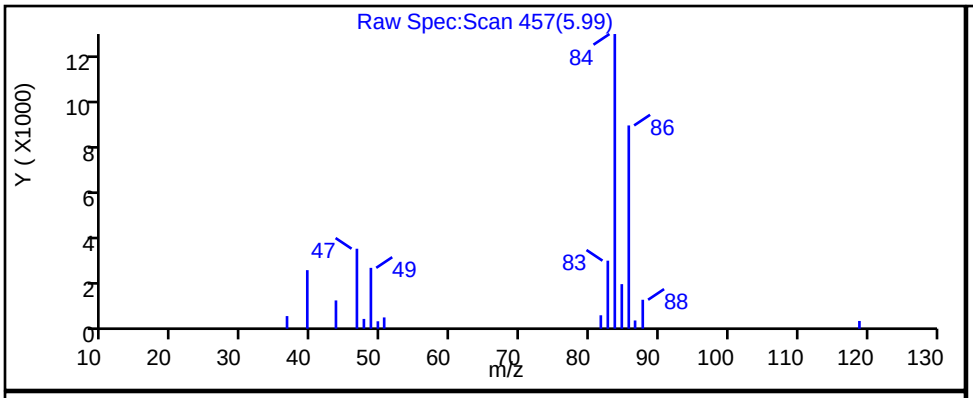


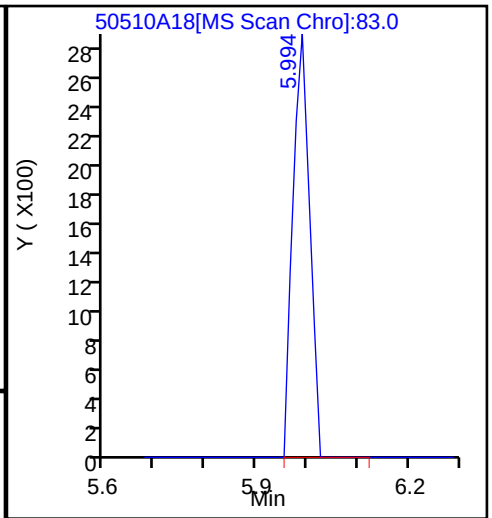
Report Date: 11-May-2016 18:46:42 AIM Revision: 1.0 26-May-2015 13:41:26

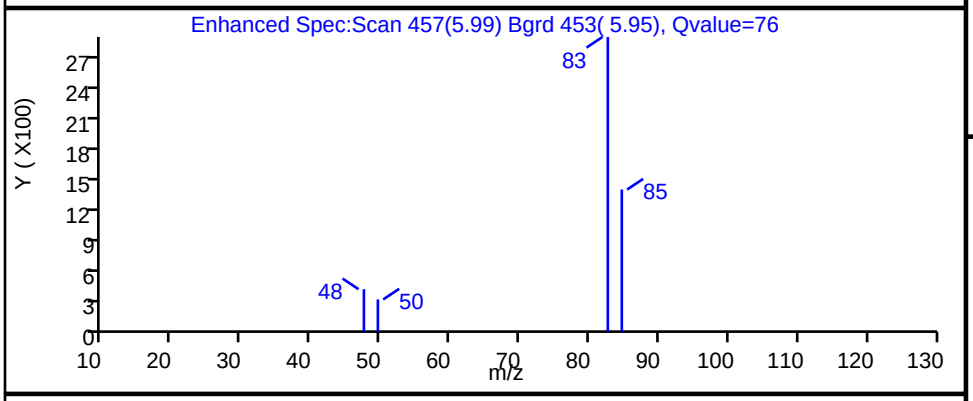
Shealy Environmental Services

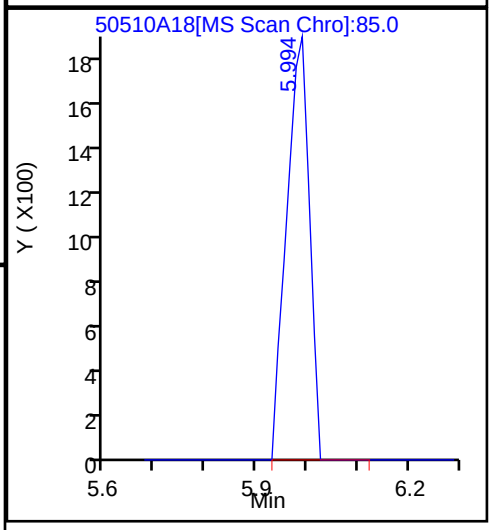
Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A18.D		
Injection Date:	10-May-2016 15:08:30	Inst. ID:	msd5.i
Client ID:	H4202DL	Lab ID:	RE05033-003DL
Sample Info:	5051016, RE05033-003		
Purge Vol.	25 ML	Dil. Factor:	5.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

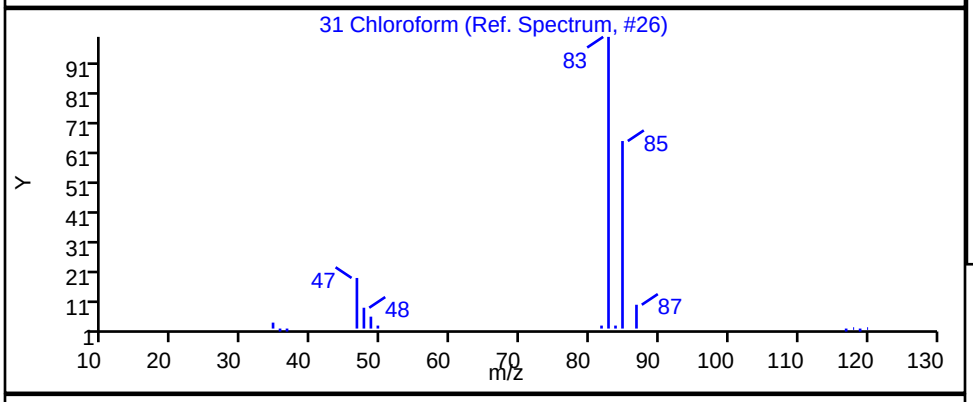
31 Chloroform

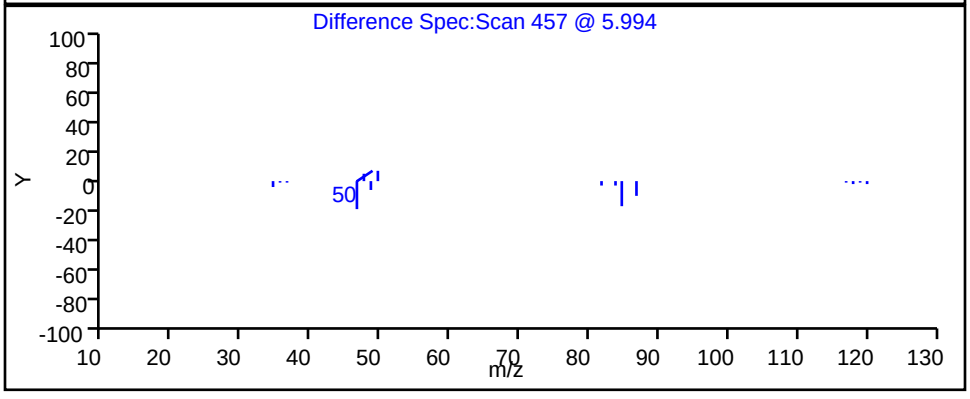










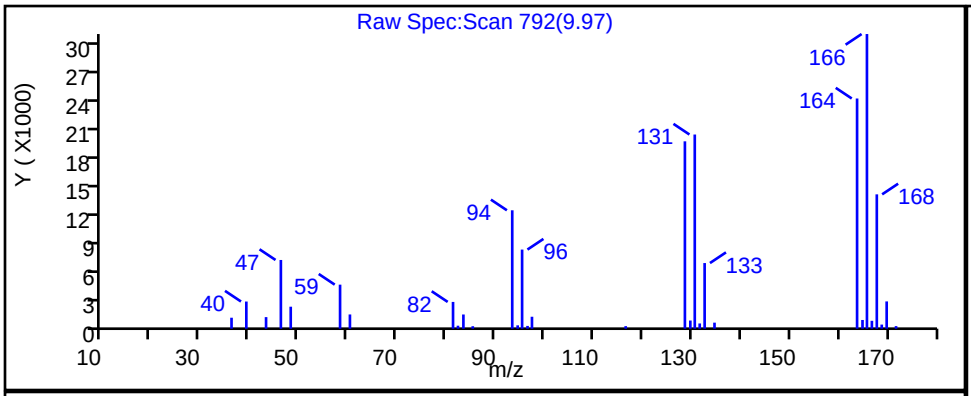


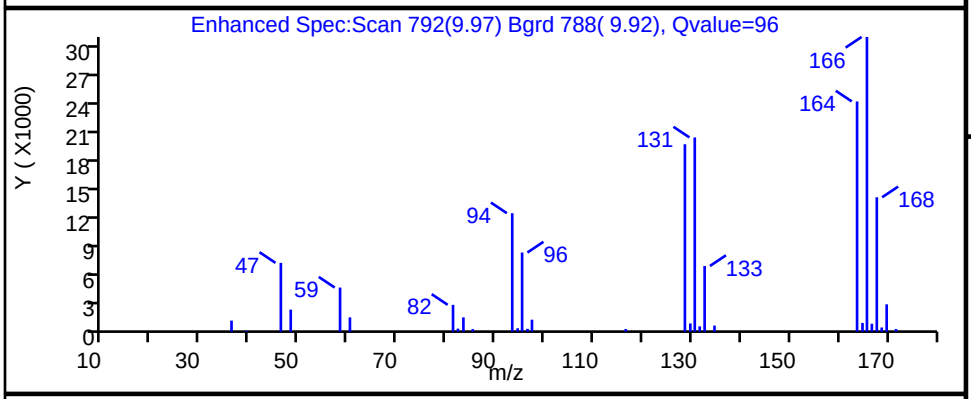
Report Date: 11-May-2016 18:46:42 AIM Revision: 1.0 26-May-2015 13:41:26

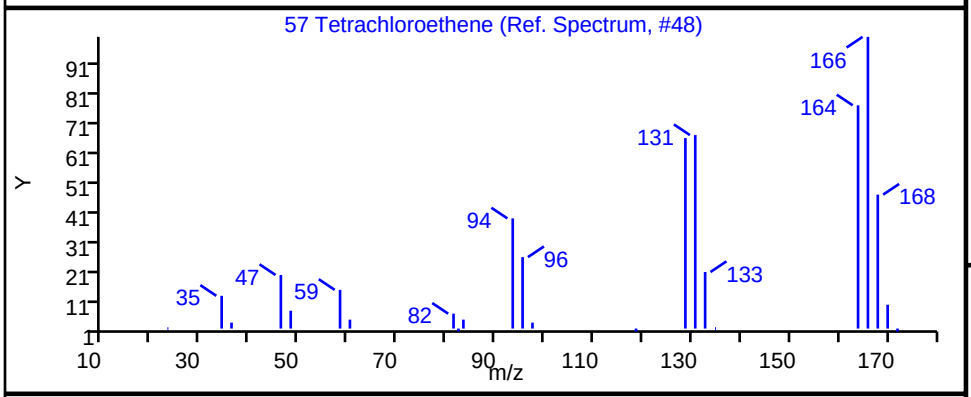
Shealy Environmental Services

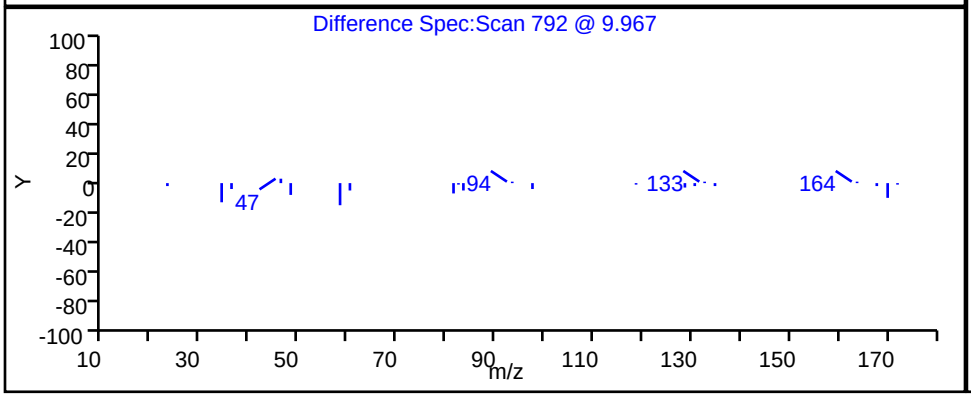
Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A18.D		
Injection Date:	10-May-2016 15:08:30	Inst. ID:	msd5.i
Client ID:	H4202DL	Lab ID:	RE05033-003DL
Sample Info:	5051016, RE05033-003		
Purge Vol.	25 ML	Dil. Factor:	5.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

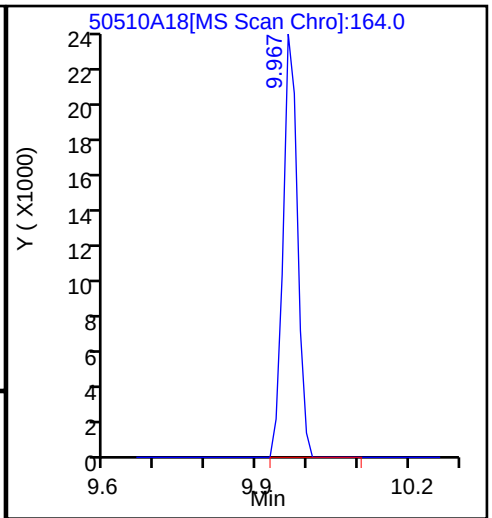
57 Tetrachloroethene

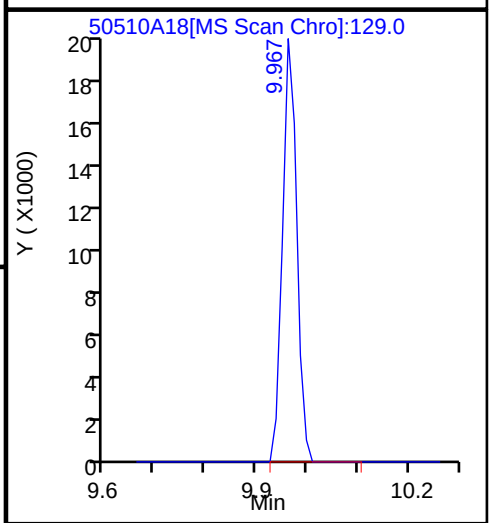


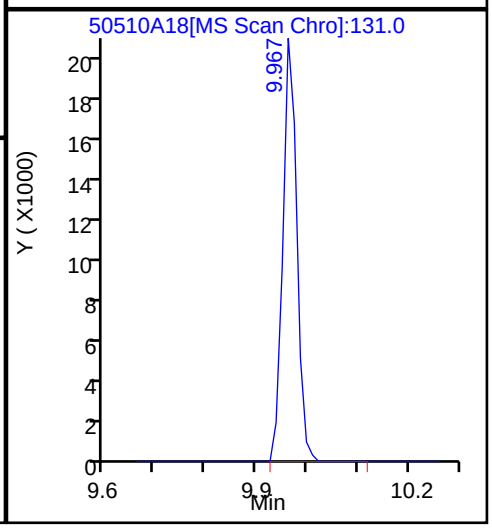












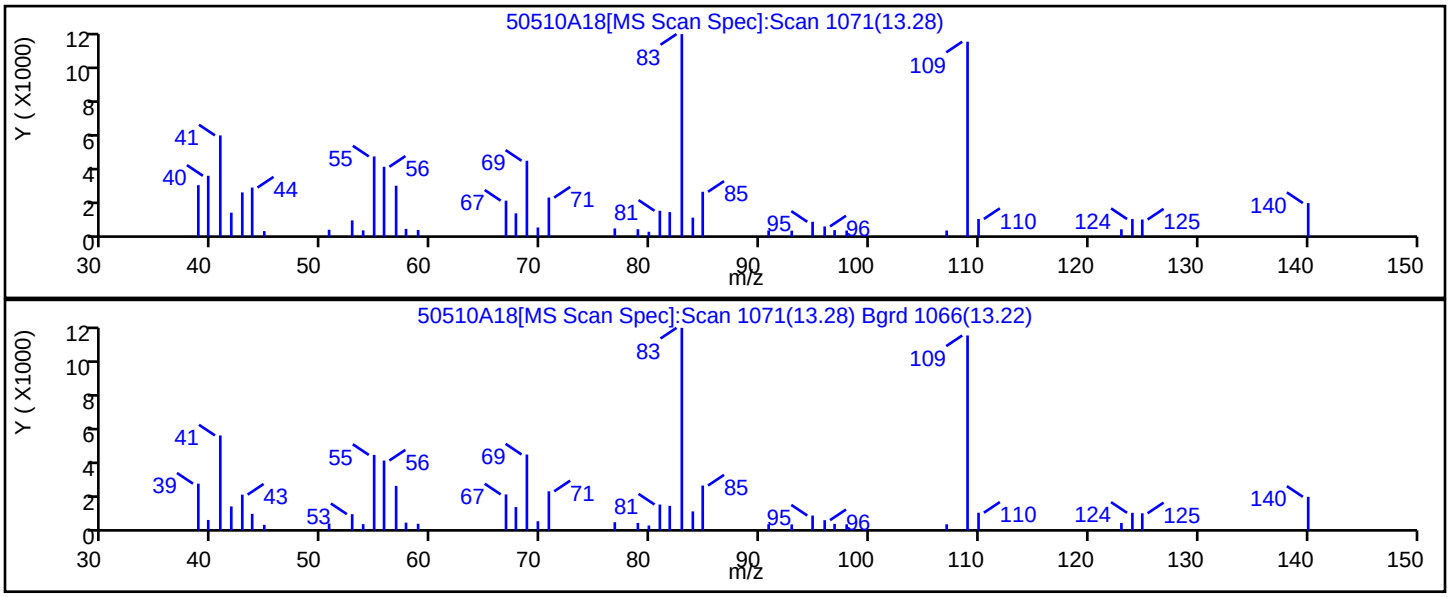
Report Date: 11-May-2016 18:46:42 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A18.D		
Injection Date:	10-May-2016 15:08:30	Inst. ID:	msd5.i
Client ID:	H4202DL	Lab ID:	RE05033-003DL
Sample Info:	5051016, RE05033-003		
Purge Vol.	25 ML	Dil. Factor:	5.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

TIC @ 13.264

Library Search Compound Match	CAS#	Library	Entry	Formula	Weight	Q
Unknown		NIST11				



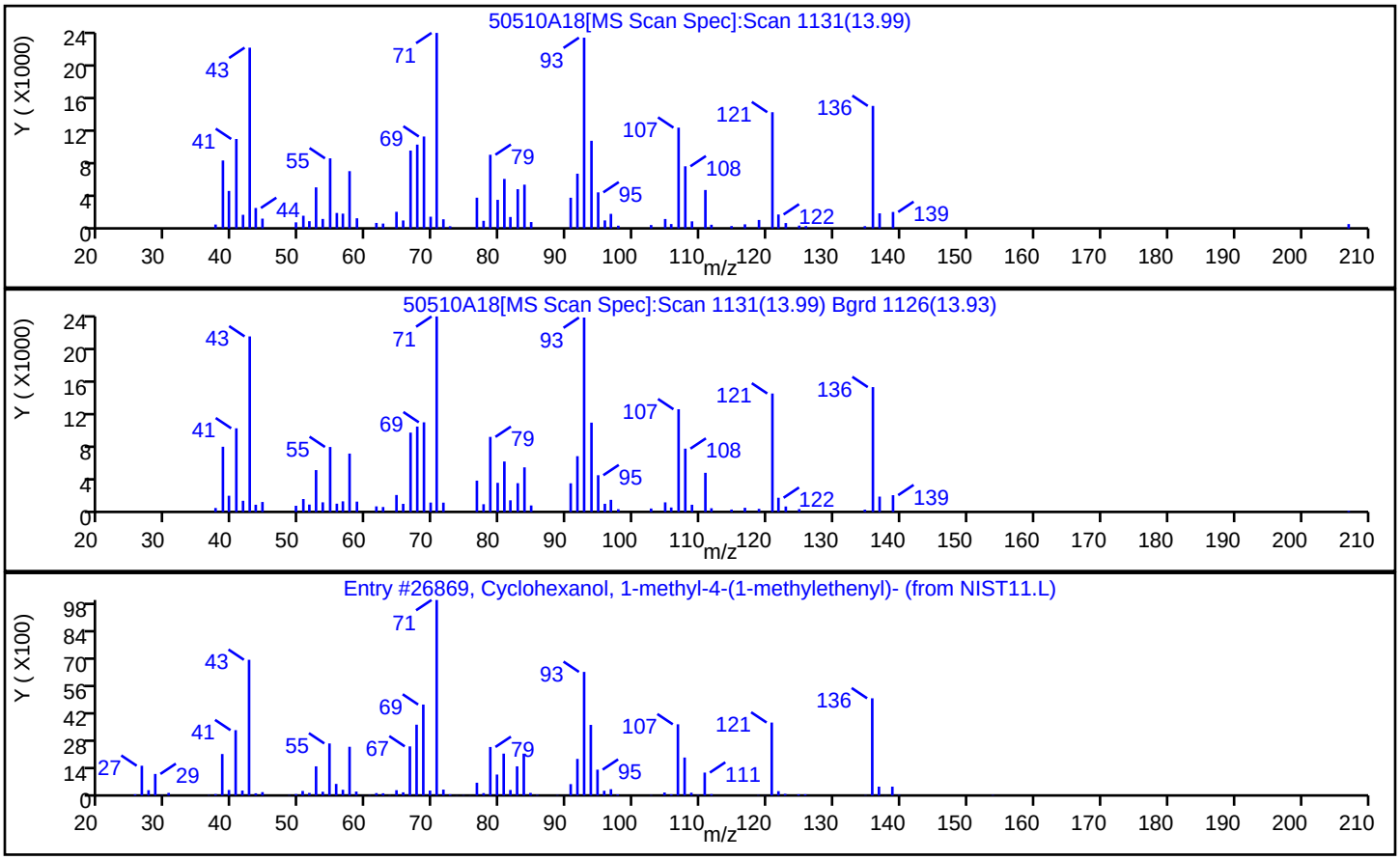
Report Date: 11-May-2016 18:46:42 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A18.D		
Injection Date:	10-May-2016 15:08:30	Inst. ID:	msd5.i
Client ID:	H4202DL	Lab ID:	RE05033-003DL
Sample Info:	5051016, RE05033-003		
Purge Vol.	25 ML	Dil. Factor:	5.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

TIC @ 13.975

Library Search Compound Match	CAS#	Library	Entry	Formula	Weight	Q
Cyclohexanol, 1-methyl-4-(1-methyletheny	138-87-4	NIST11	26869	C10H18O	154	90



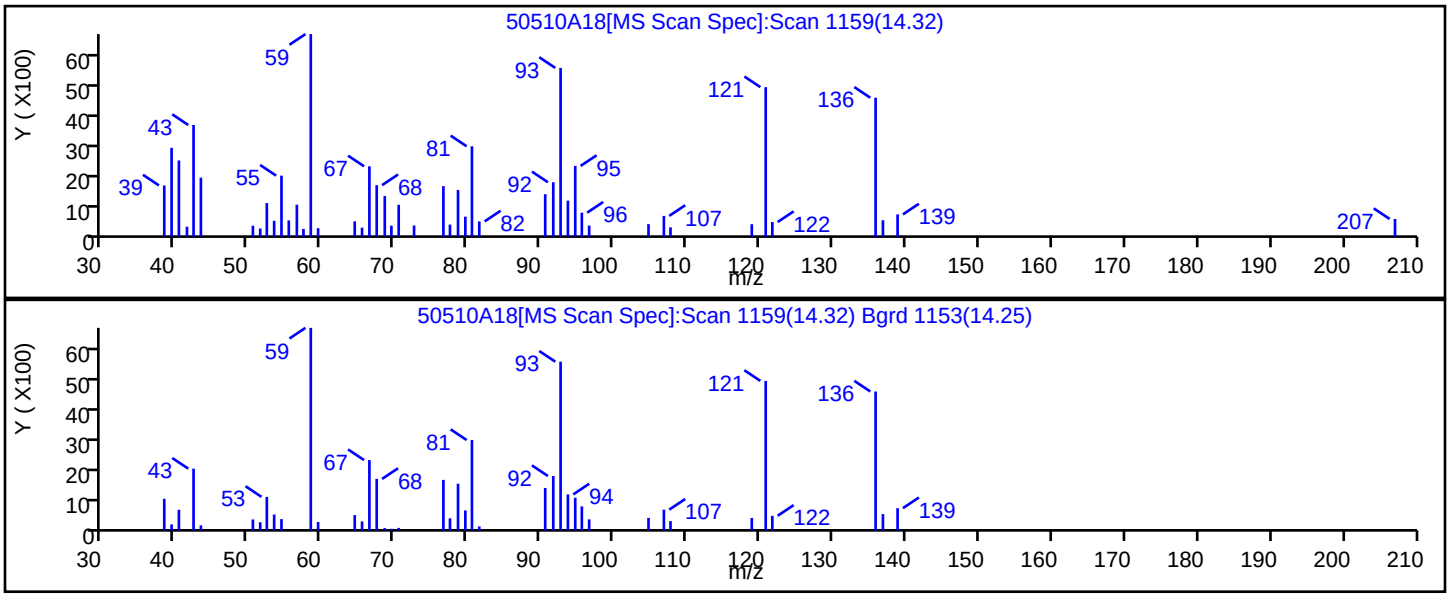
Report Date: 11-May-2016 18:46:42 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A18.D		
Injection Date:	10-May-2016 15:08:30	Inst. ID:	msd5.i
Client ID:	H4202DL	Lab ID:	RE05033-003DL
Sample Info:	5051016, RE05033-003		
Purge Vol.	25 ML	Dil. Factor:	5.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

TIC @ 14.307

Library Search Compound Match	CAS#	Library	Entry	Formula	Weight	Q
Unknown		NIST11				



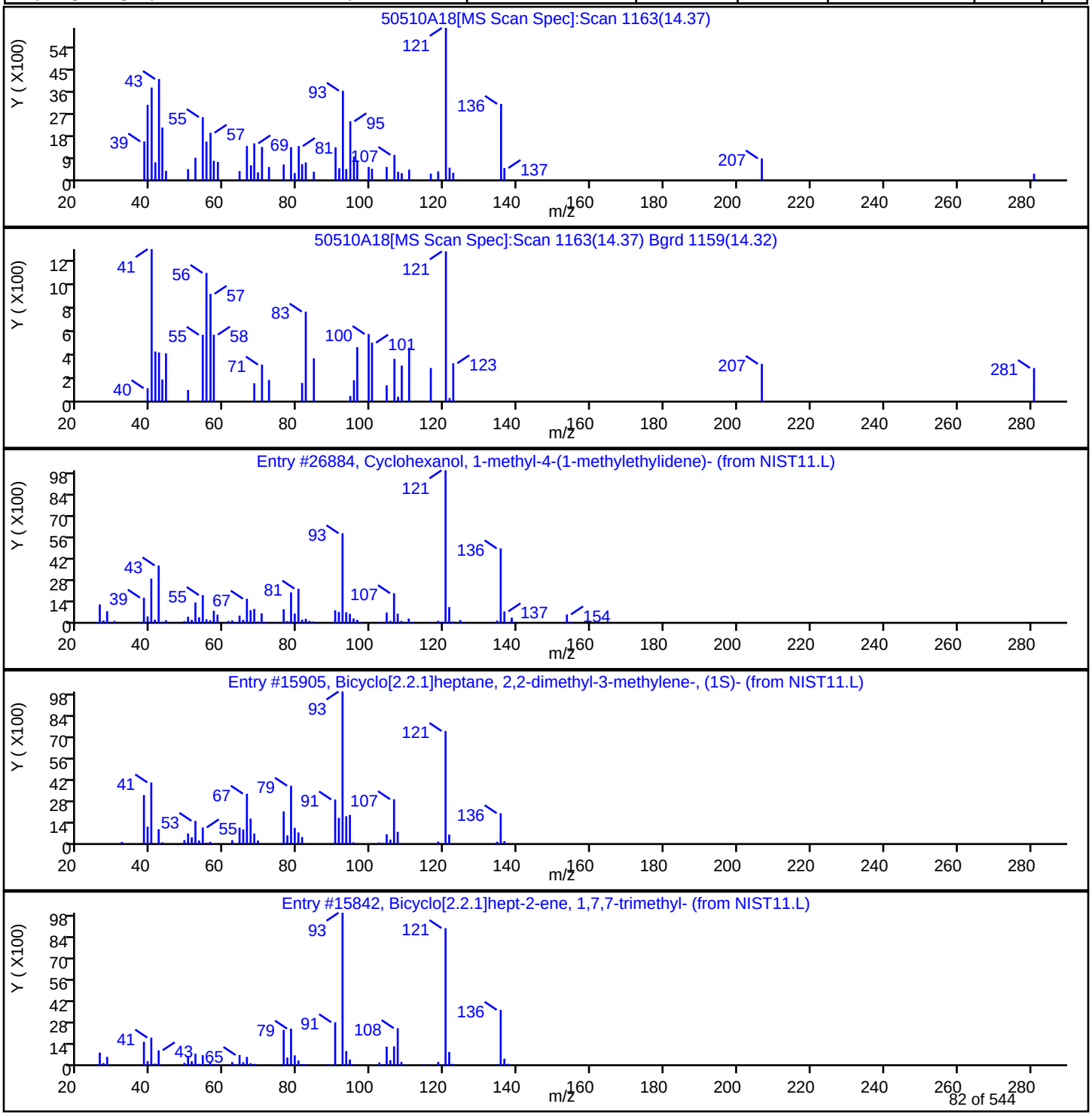
Report Date: 11-May-2016 18:46:42 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A18.D		
Injection Date:	10-May-2016 15:08:30	Inst. ID:	msd5.i
Client ID:	H4202DL	Lab ID:	RE05033-003DL
Sample Info:	5051016, RE05033-003		
Purge Vol.	25 ML	Dil. Factor:	5.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

TIC @ 14.355

Library Search Compound Match	CAS#	Library	Entry	Formula	Weight	Q
Cyclohexanol, 1-methyl-4-(1-methylethyli	586-81-2	NIST11	26884	C10H18O	154	91
Bicyclo[2.2.1]heptane, 2,2-dimethyl-3-me	5794-04-7	NIST11	15905	C10H16	136	90
Bicyclo[2.2.1]hept-2-ene, 1,7,7-trimethy	464-17-5	NIST11	15842	C10H16	136	87



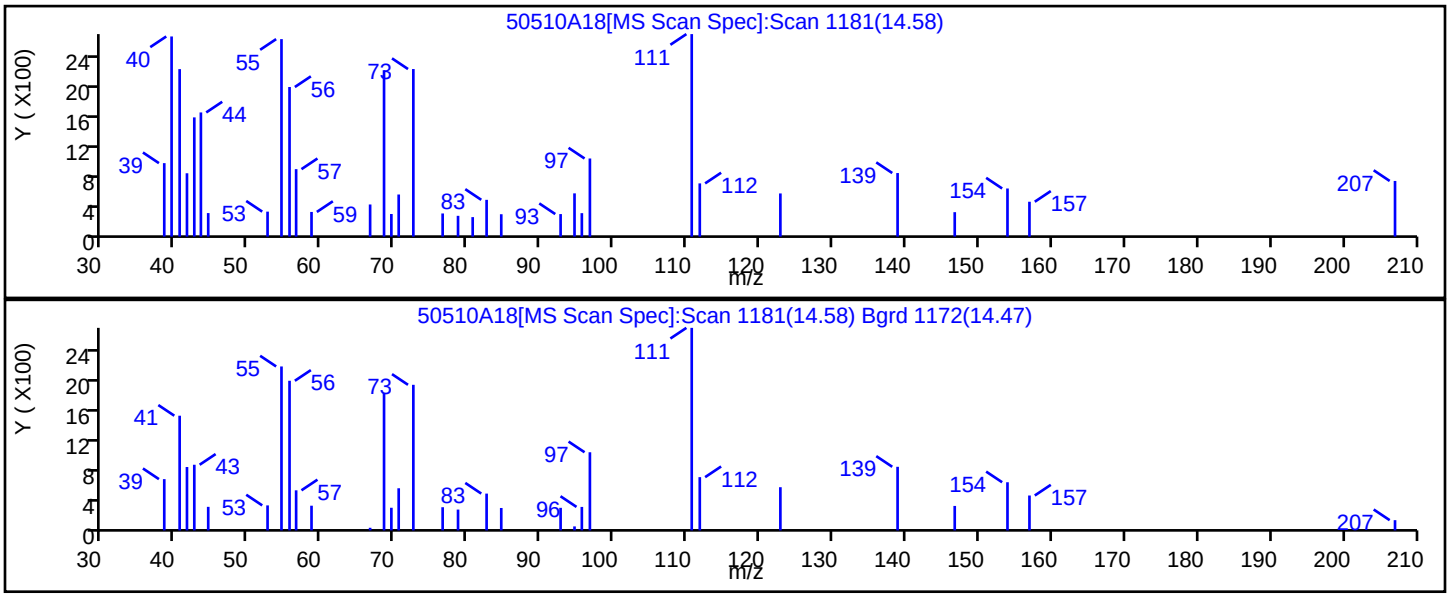
Report Date: 11-May-2016 18:46:42 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A18.D		
Injection Date:	10-May-2016 15:08:30	Inst. ID:	msd5.i
Client ID:	H4202DL	Lab ID:	RE05033-003DL
Sample Info:	5051016, RE05033-003		
Purge Vol.	25 ML	Dil. Factor:	5.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

TIC @ 14.568

Library Search Compound Match	CAS#	Library	Entry	Formula	Weight	Q
Unknown		NIST11				



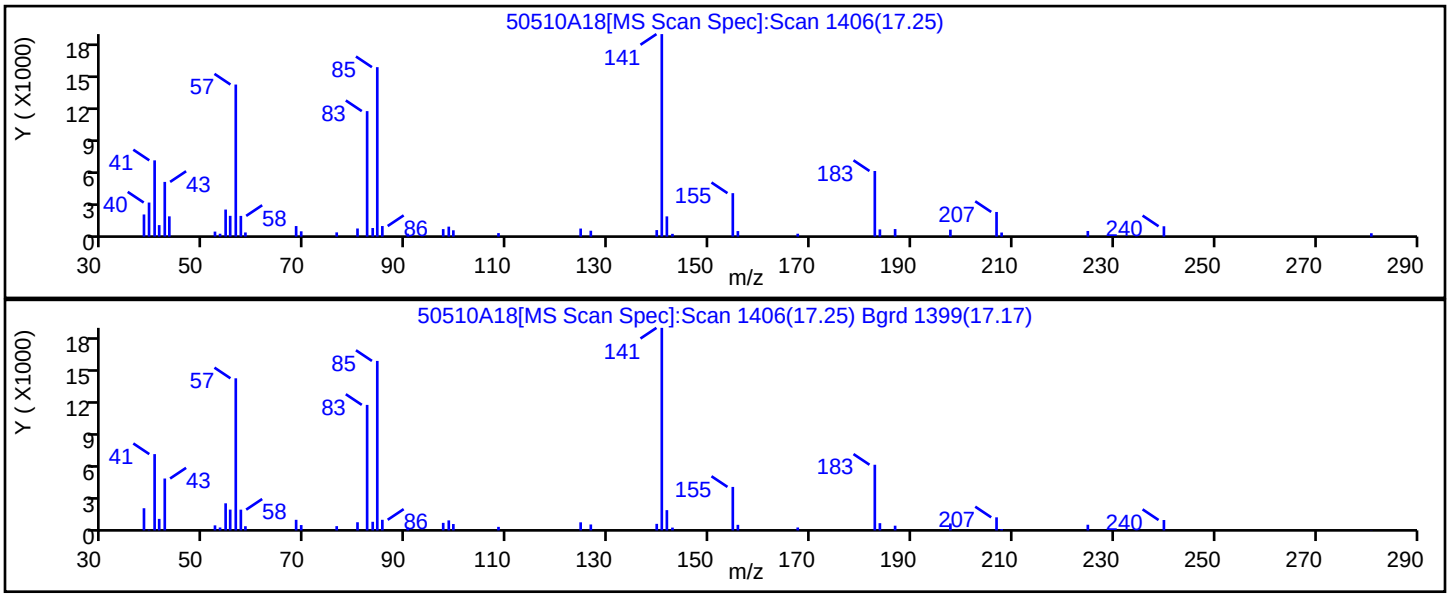
Report Date: 11-May-2016 18:46:42 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A18.D		
Injection Date:	10-May-2016 15:08:30	Inst. ID:	msd5.i
Client ID:	H4202DL	Lab ID:	RE05033-003DL
Sample Info:	5051016, RE05033-003		
Purge Vol.	25 ML	Dil. Factor:	5.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

TIC @ 17.236

Library Search Compound Match	CAS#	Library	Entry	Formula	Weight	Q
Unknown		NIST11				



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4211

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-004

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B21

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/10/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.41	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.53	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.49	J
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4211

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-004

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B21

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/10/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	5.2	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4211

Lab Name: Shealy Environmental Services, Inc.
Contract: EP-W-14035
Lab Code: EQI Case No.: 46115
MA No.: SDG No.: H4001
Analytical Method: Trace VOA
Level: TRACE
Matrix: Water
Lab Sample ID: RE05033-004
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: 50509B21
% Solids:
Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 05/10/2016
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) N
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume:
Cleanup Types:
pH: 2 Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L
Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B21.D		
Lab Sample ID:	RE05033-004	Client Sample ID:	H4211
Injection Date:	10-May-2016 03:43:30	Dil. Factor:	1.0
Operator:	JJG	Inst. ID:	msd5.i
Sample Info:	5050916B, RE05033-004		
Method:	\\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5.m		
Method Date:	10-May-2016 01:19:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	21
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rz	Review Date:	18-May-2016 09:49:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.702		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.974	1.962	0.012	45637	4.0849	4.0848	
4 Vinyl Chloride	62.0		1.974		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.389	2.389	0.000	34921	4.2030	4.2030	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	78278	3.0637	3.0637	
13 1,1-Dichloroethene	96.0		3.291		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.302		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.251		ND			
23 1,1-Dichloroethane	63.0		4.797		ND			
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	89741	46.199	46.199	
26 cis-1,2-Dichloroethene	96.0	5.579	5.567	0.012	4949	0.40562	0.40560	Qe
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.971	5.959	0.012	94519	4.0989	4.0989	Q
31 Chloroform	83.0	5.994	5.994	0.000	11774	0.52988	0.52980	
33 1,1,1-Trichloroethane	97.0		6.243		ND			
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916B.b\50509B21.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.647	-0.001	44002	4.3281	4.3280	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	171645	3.9962	3.9962	
37 Benzene	78.0		6.730		ND			
39 1,2-Dichloroethane	62.0		6.753		ND			
* 41 1,4-Difluorobenzene	114.0	7.239	7.240	-0.001	287046	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	5849	0.49250	0.49240	e
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	43176	3.8829	3.8828	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.078		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	139194	3.7680	3.7680	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	38410	4.0441	4.0440	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0	9.967	9.967	0.000	61943	5.1652	5.1651	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	72888	45.656	45.656	
60 2-Hexanone	43.0		10.086		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	227398	5.0000	5.0000	
64 Chlorobenzene	112.0		10.856		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.426		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	24733	4.5874	4.5874	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	130940	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	59214	4.1245	4.1245	
89 1,2-Dichlorobenzene	146.0		13.098		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services

Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B21.D		
Lab Sample ID:	RE05033-004	Client Sample ID:	H4211
Injection Date:	10-May-2016 03:43:30	Dil. Factor:	1.0
Operator:	JJG	Inst. ID:	msd5.i
Sample Info:	5050916B, RE05033-004		
Method:	\\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5.m		
Method Date:	10-May-2016 01:19:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	21
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rz	Review Date:	18-May-2016 09:49:30

Tentative Identified Compound Results

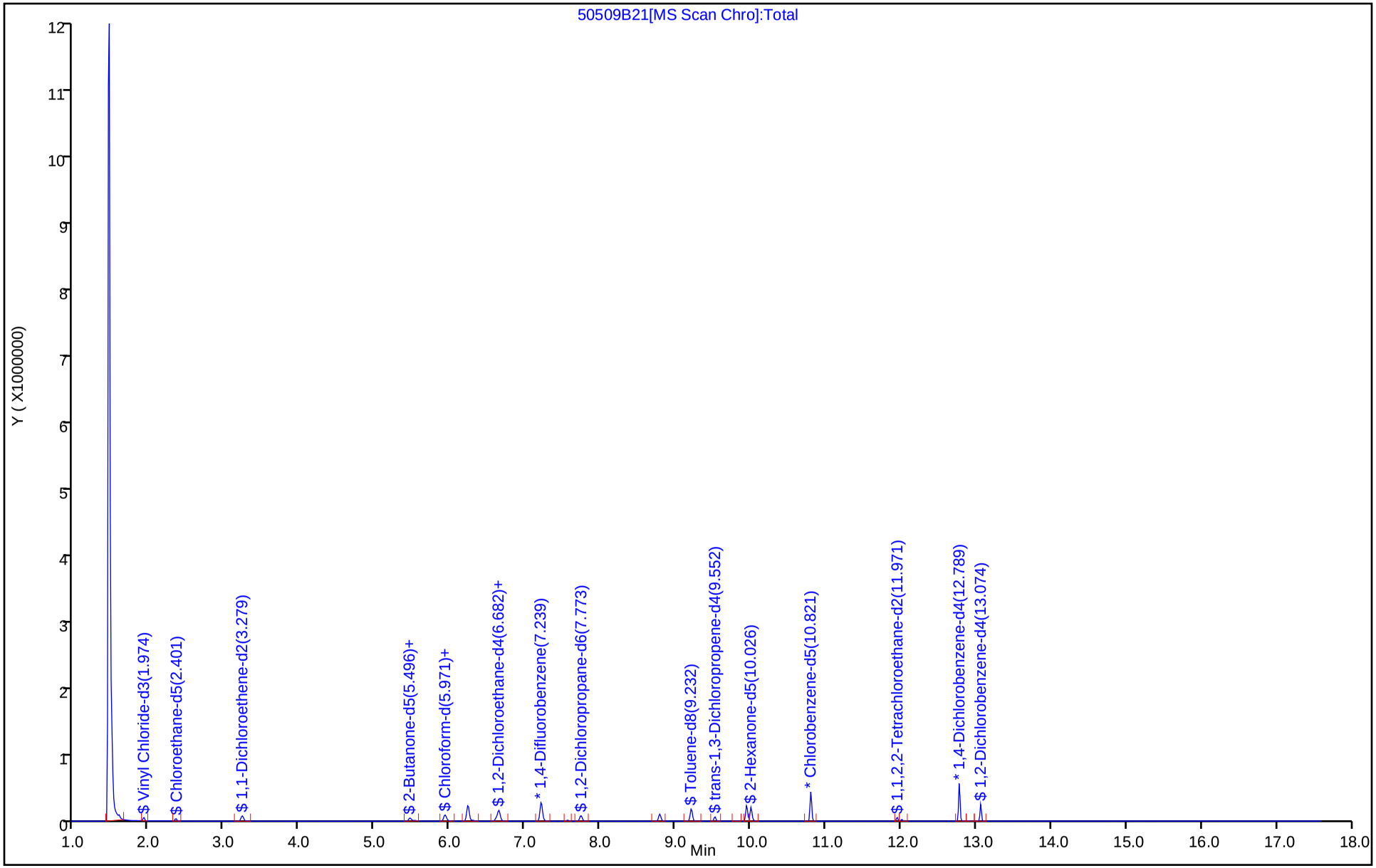
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B21.D				
Injection Date:	10-May-2016 03:43:30	Inst. ID:	msd5.i	Operator:	JJG
Client ID:	H4211	Lab ID:	RE05033-004		
Sample Info:	5050916B, RE05033-004				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		

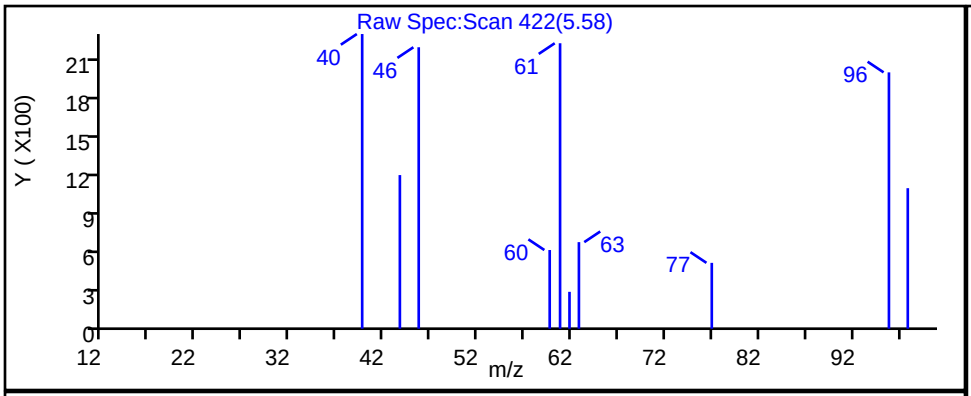


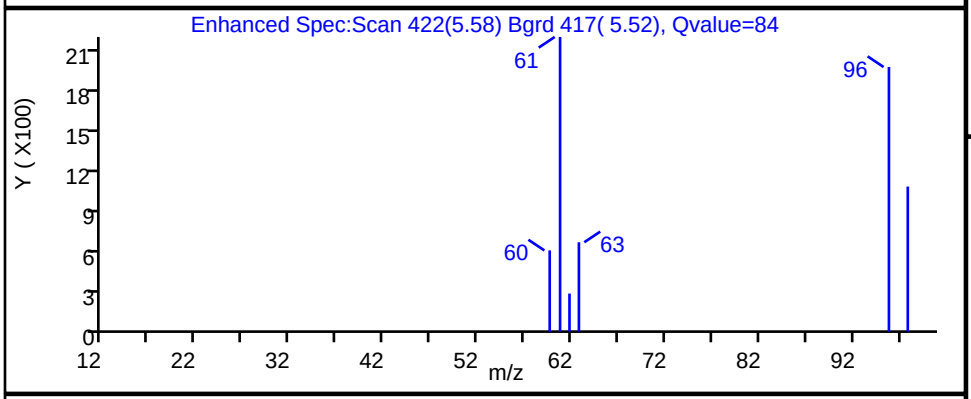
Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

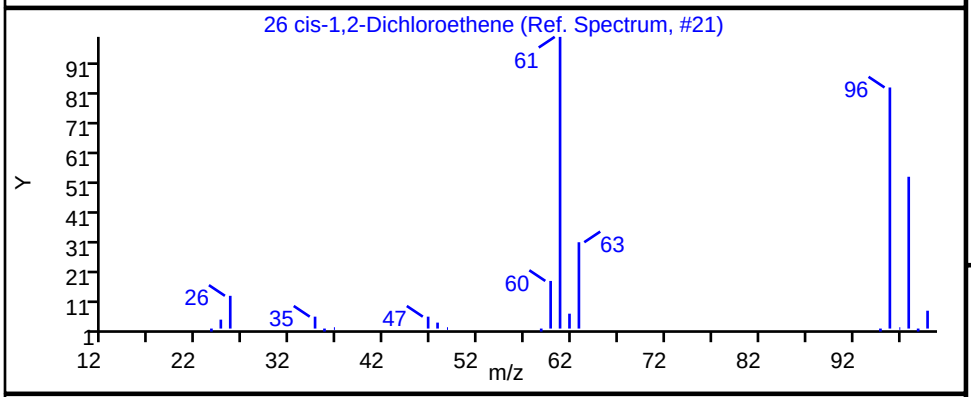
Shealy Environmental Services

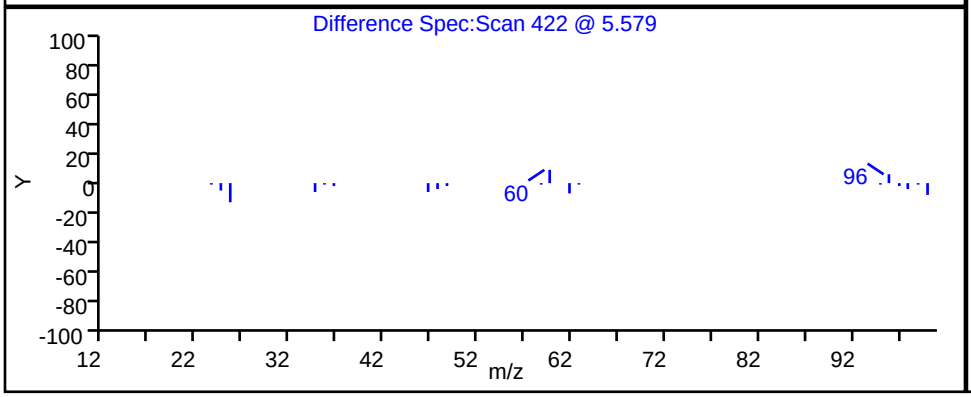
Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B21.D		
Injection Date:	10-May-2016 03:43:30	Inst. ID:	msd5.i
Client ID:	H4211	Lab ID:	RE05033-004
Sample Info:	5050916B, RE05033-004		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	JJG		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

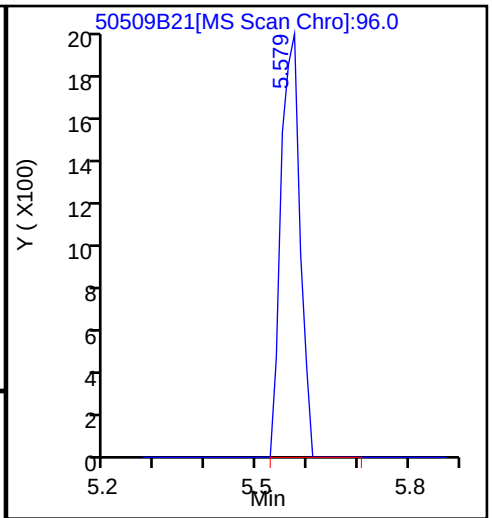
26 cis-1,2-Dichloroethene

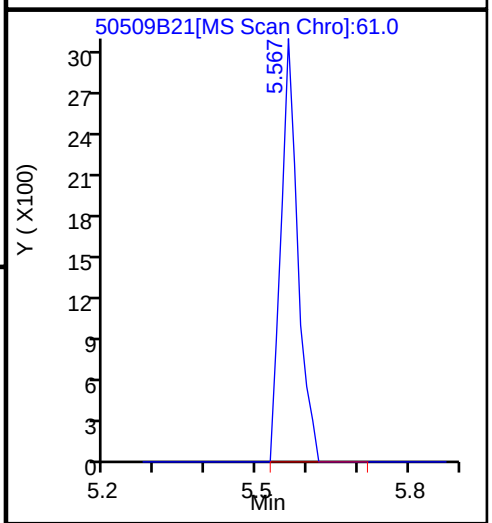


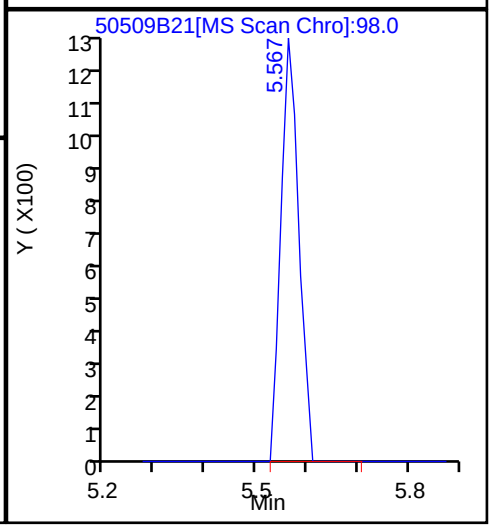










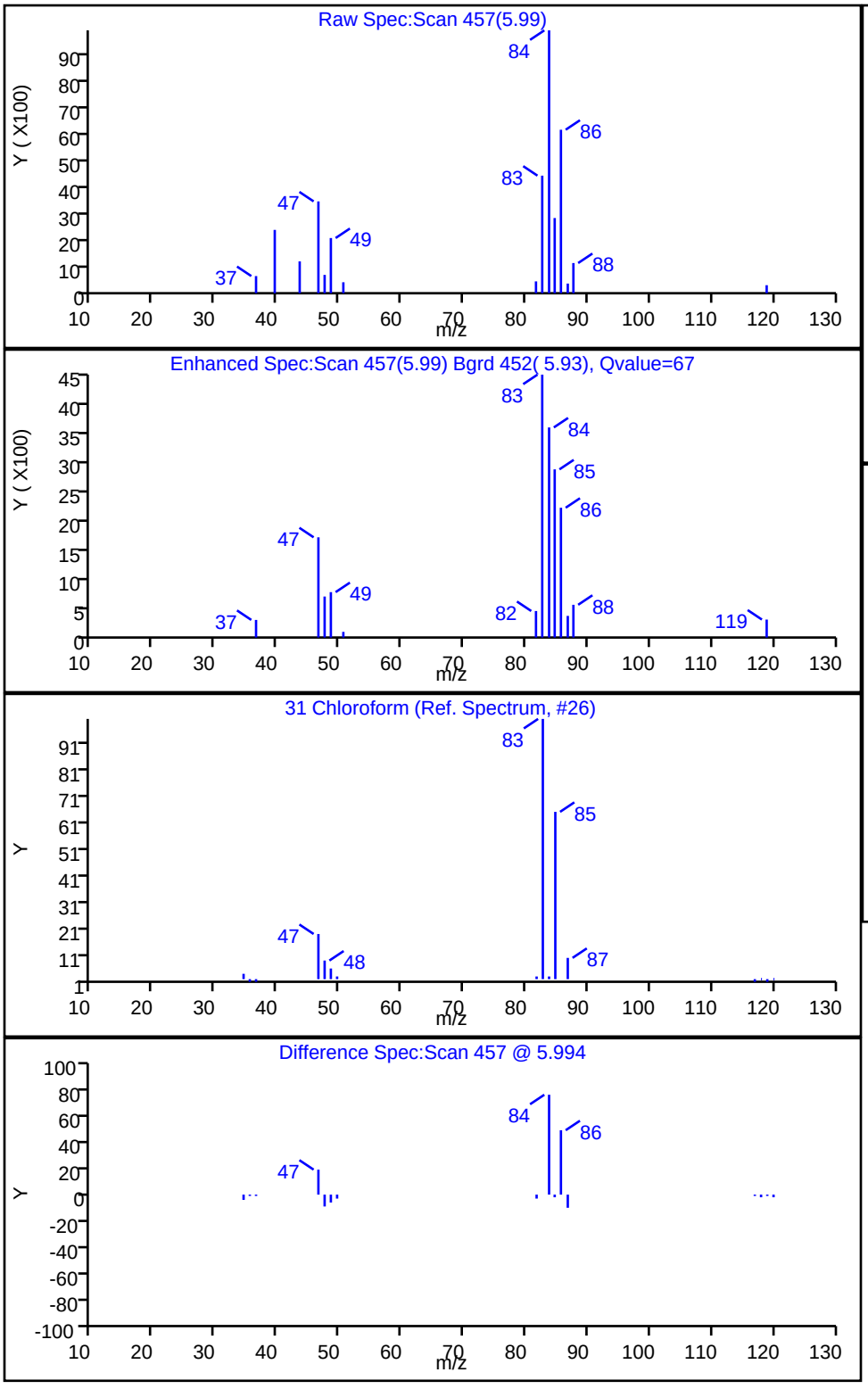


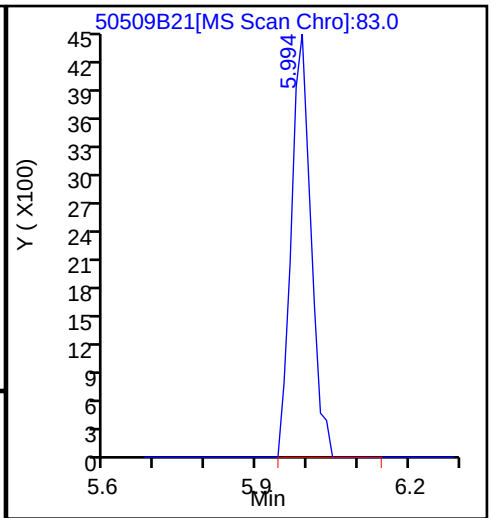
Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

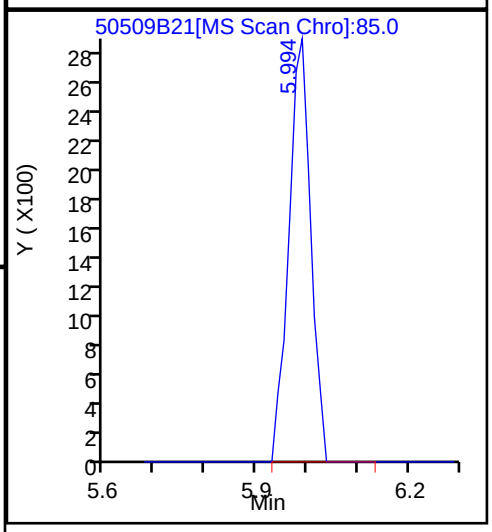
Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B21.D		
Injection Date:	10-May-2016 03:43:30	Inst. ID:	msd5.i
Client ID:	H4211	Lab ID:	RE05033-004
Sample Info:	5050916B, RE05033-004		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	JJG		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

31 Chloroform





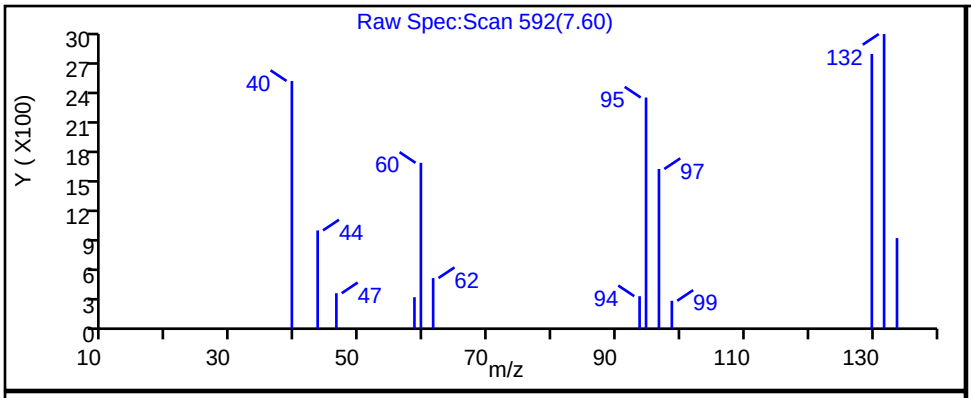


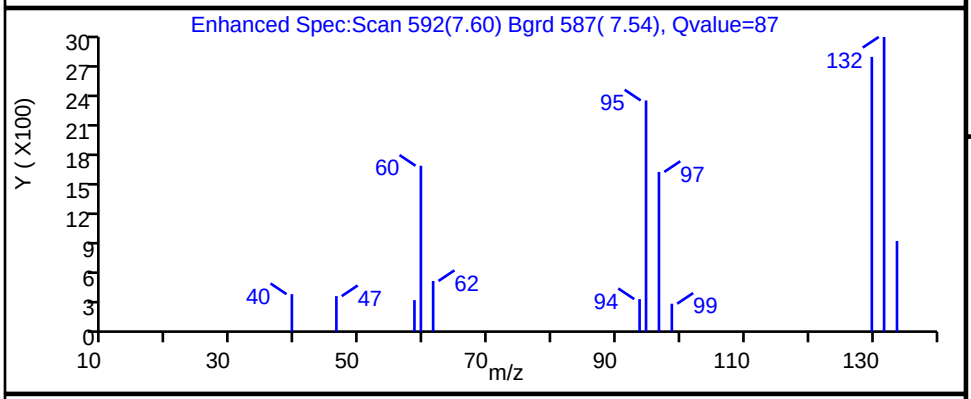
Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

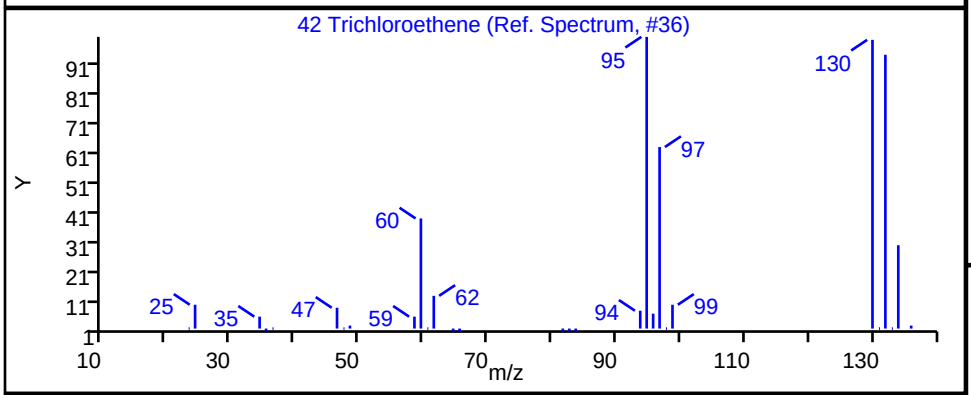
Shealy Environmental Services

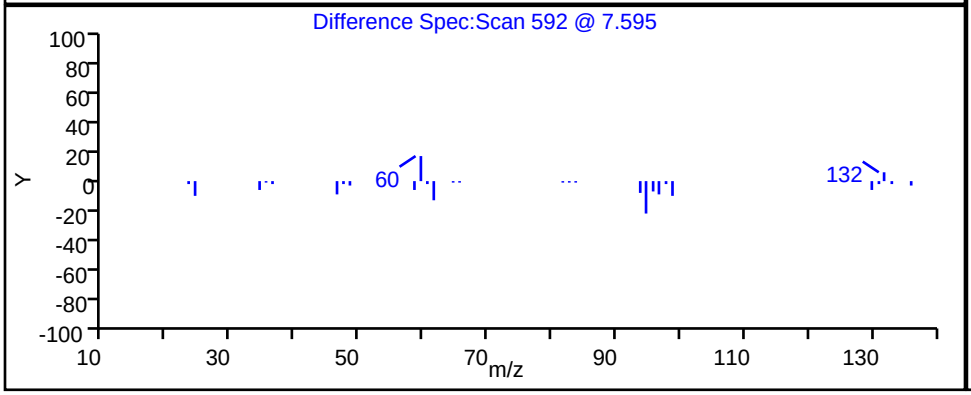
Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B21.D		
Injection Date:	10-May-2016 03:43:30	Inst. ID:	msd5.i
Client ID:	H4211	Lab ID:	RE05033-004
Sample Info:	5050916B, RE05033-004		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	JJG		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

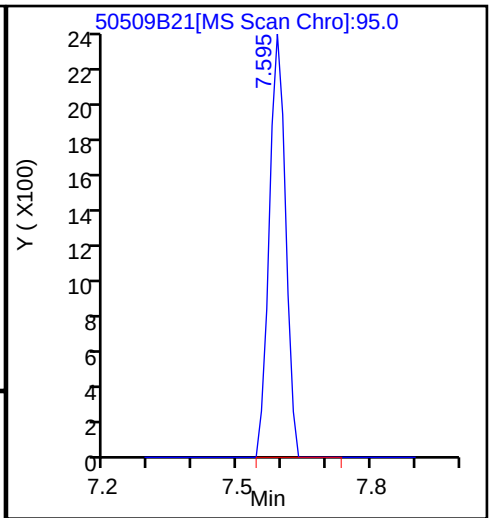
42 Trichloroethene

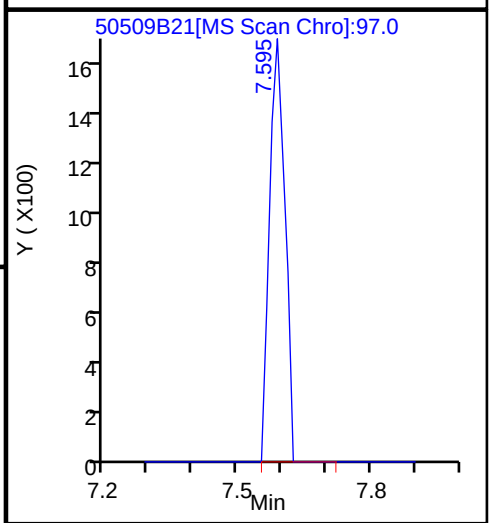


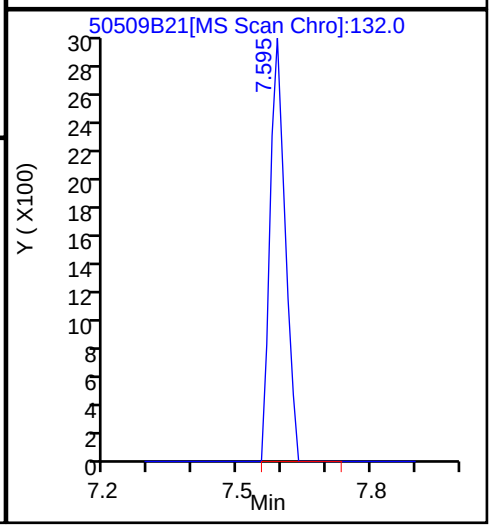










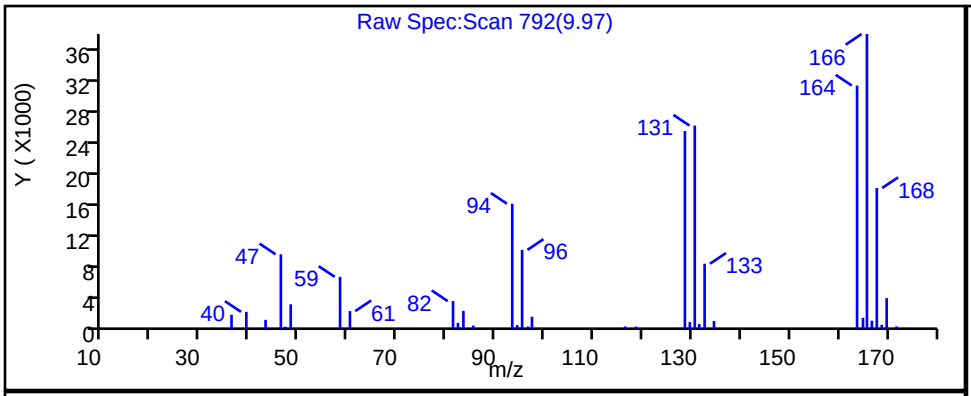


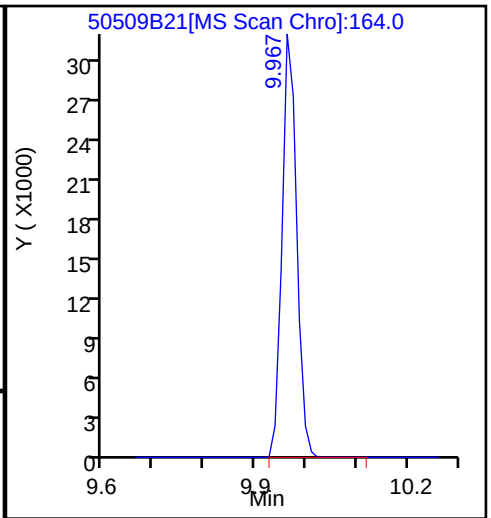
Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

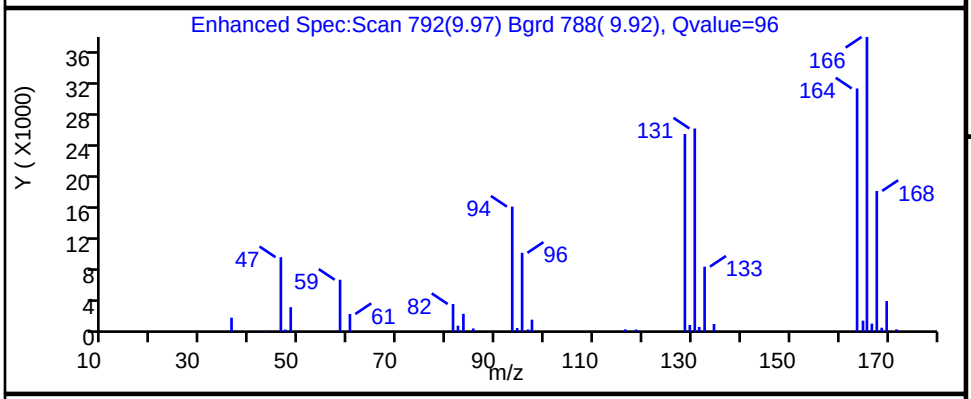
Shealy Environmental Services

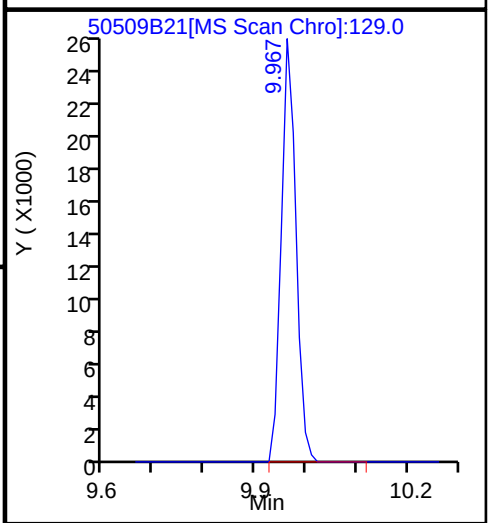
Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B21.D		
Injection Date:	10-May-2016 03:43:30	Inst. ID:	msd5.i
Client ID:	H4211	Lab ID:	RE05033-004
Sample Info:	5050916B, RE05033-004		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	JJG		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

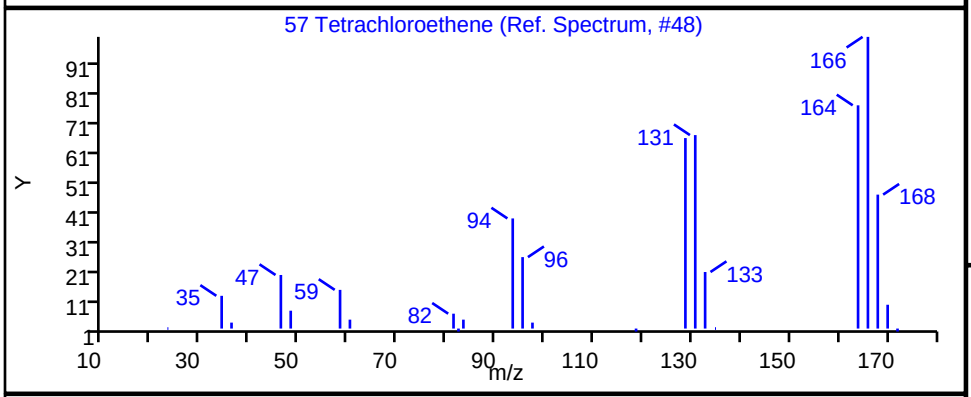
57 Tetrachloroethene

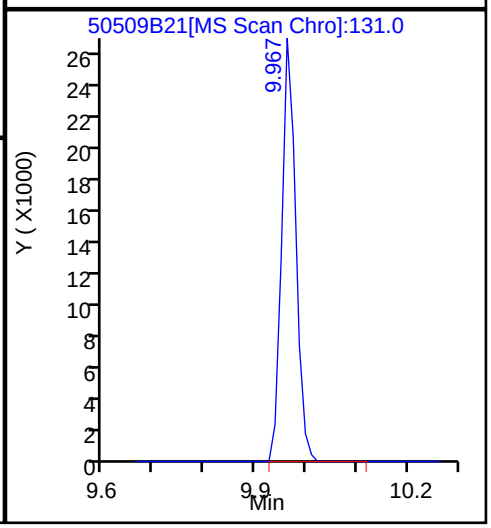


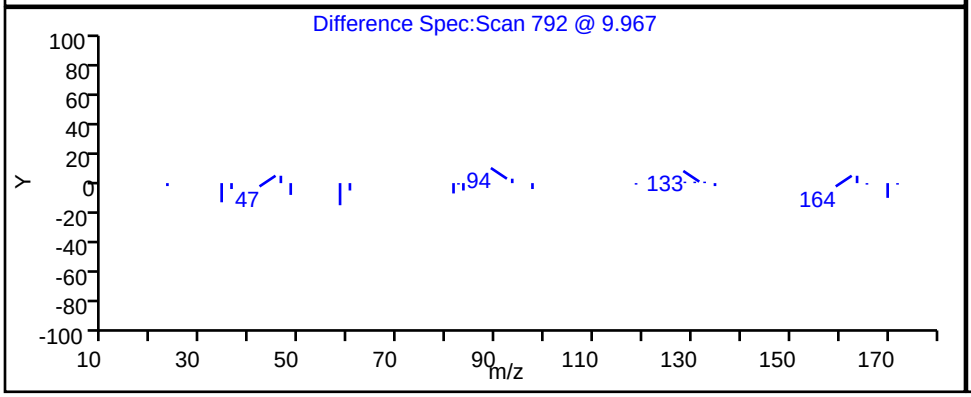












FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-005

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A14

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.6	
71-55-6	1,1,1-Trichloroethane	0.51	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.47	J
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-005

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A14

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	23	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4213

Lab Name: Shealy Environmental Services, Inc.
Contract: EP-W-14035
Lab Code: EQI Case No.: 46115
MA No.: SDG No.: H4001
Analytical Method: Trace VOA
Level: TRACE
Matrix: Water
Lab Sample ID: RE05033-005
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: 50509A14
% Solids:
Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 05/09/2016
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) N
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume:
Cleanup Types:
pH: 2 Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L
Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
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17					
18					
19					
20					
21					
22					
23					
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25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A14.D		
Lab Sample ID:	RE05033-005	Client Sample ID:	H4213
Injection Date:	09-May-2016 12:46:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, RE05033-005,		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	14
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:46:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.701		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	62011	5.2093	5.2092	
4 Vinyl Chloride	62.0		1.986		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	48027	5.4251	5.4250	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	107202	3.9378	3.9378	
13 1,1-Dichloroethene	96.0		3.302		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.314		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.263		ND			
23 1,1-Dichloroethane	63.0		4.808		ND			
$ 25 2-Butanone-d5	46.0	5.508	5.496	0.012	125386	60.582	60.582	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.971	5.971	0.000	124633	5.0726	5.0726	
31 Chloroform	83.0	5.994	5.994	0.000	60607	2.5599	2.5598	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	9394	0.51294	0.51290	Q
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 11-May-2016 18:34:05 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916.b\50509A14.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.646	0.000	55245	5.0999	5.0998	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	229055	5.3462	5.3461	
37 Benzene	78.0		6.729		ND			
39 1,2-Dichloroethane	62.0		6.741		ND			
* 41 1,4-Difluorobenzene	114.0	7.251	7.239	0.012	305848	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	5531	0.46689	0.46680	e
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	56545	5.0979	5.0979	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.077		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	177007	4.8036	4.8036	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	43438	4.5849	4.5849	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0	9.979	9.967	0.012	276196	23.089	23.089	E
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	84004	52.751	52.751	
60 2-Hexanone	43.0		10.074		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	226830	5.0000	5.0000	
64 Chlorobenzene	112.0		10.844		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.425		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.959	0.012	29118	5.4143	5.4142	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	135483	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	70893	4.7724	4.7724	
89 1,2-Dichlorobenzene	146.0		13.086		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

E - Compound Concentration Exceeds Max. Calibration Range

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services
Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A14.D		
Lab Sample ID:	RE05033-005	Client Sample ID:	H4213
Injection Date:	09-May-2016 12:46:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, RE05033-005,		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	14
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:46:30

Tentative Identified Compound Results

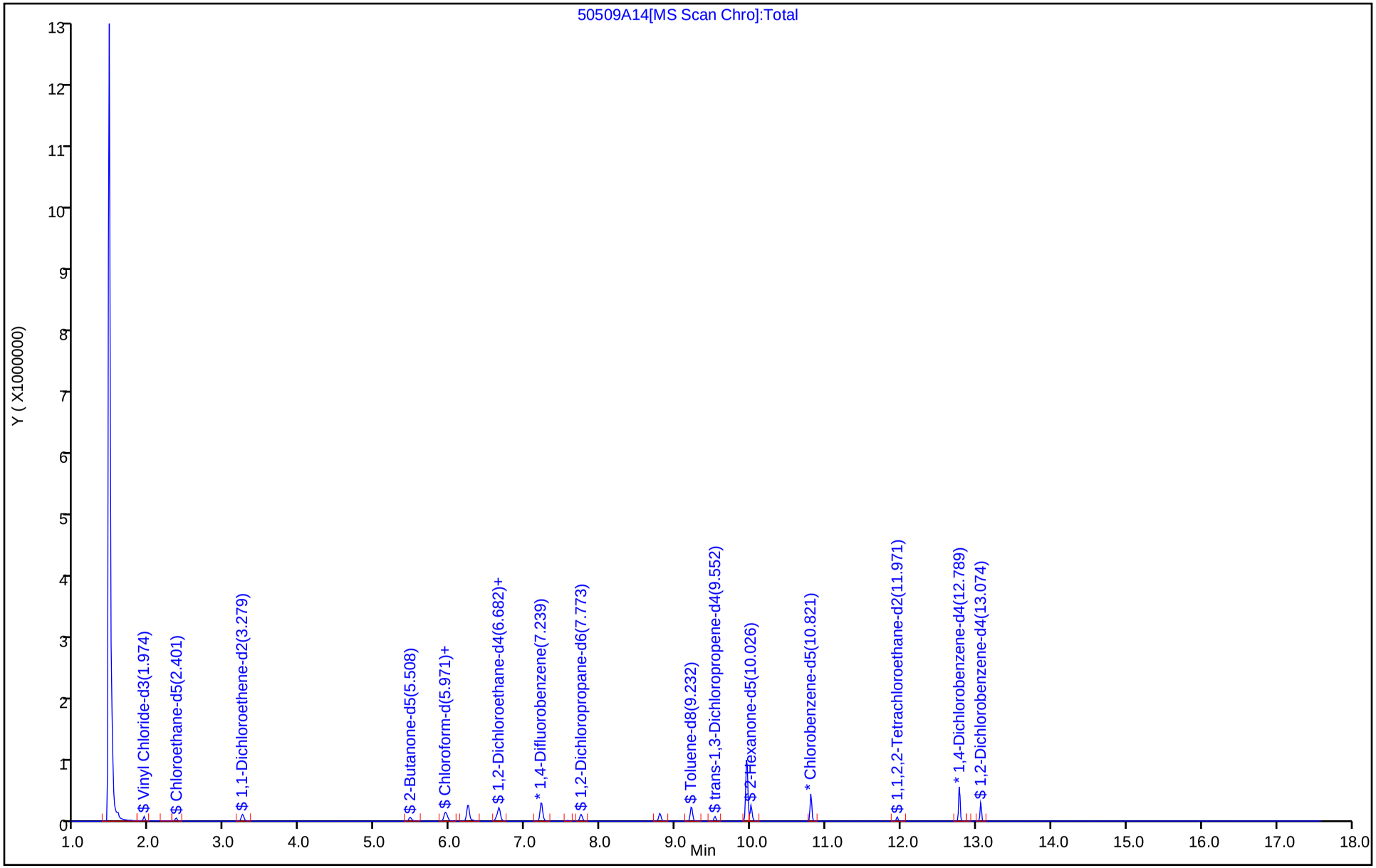
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 11-May-2016 18:34:05 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A14.D				
Injection Date:	09-May-2016 12:46:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	H4213	Lab ID:	RE05033-005		
Sample Info:	5050916, RE05033-005,				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		

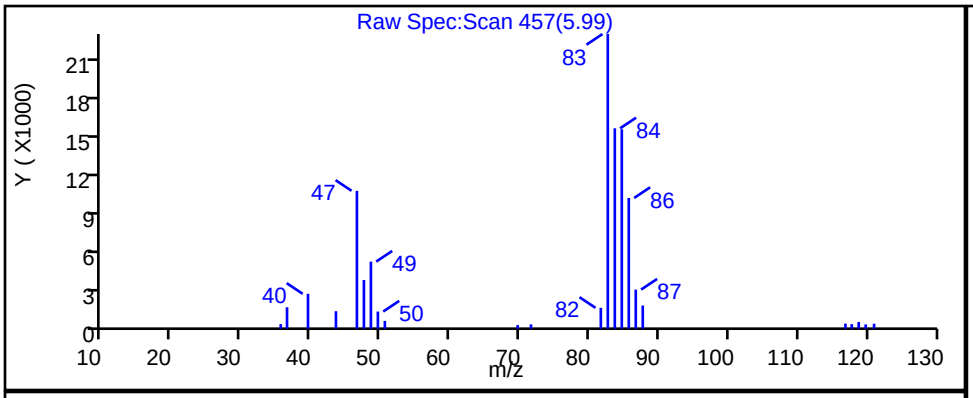


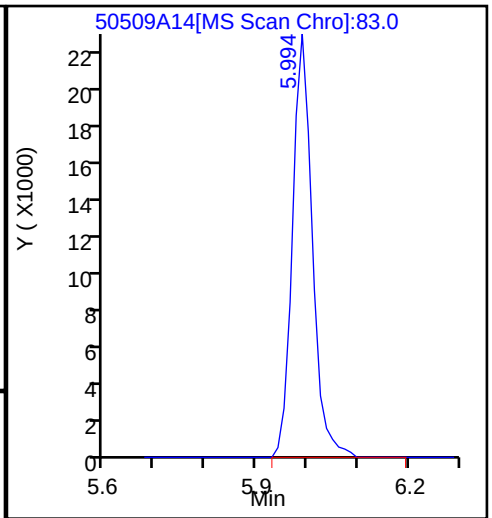
Report Date: 11-May-2016 18:34:05 AIM Revision: 1.0 26-May-2015 13:41:26

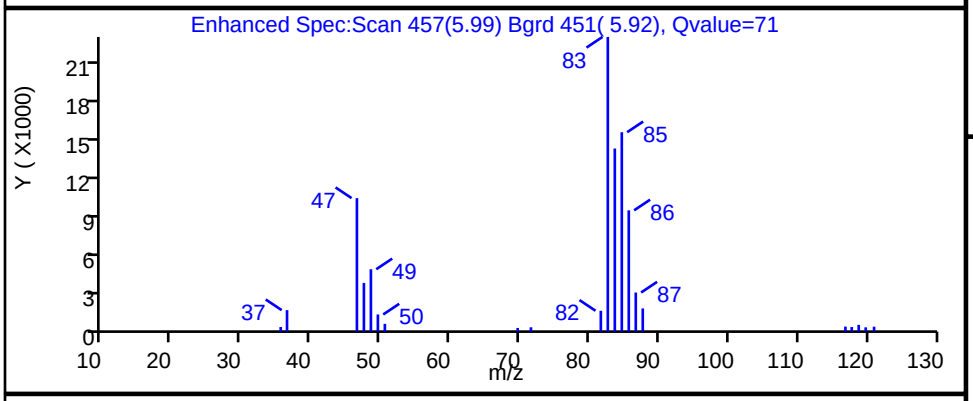
Shealy Environmental Services

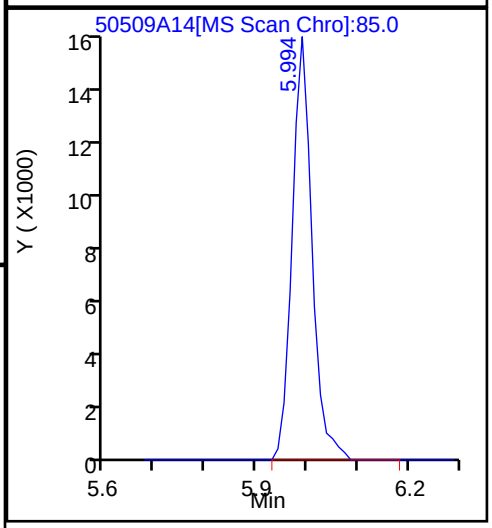
Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A14.D		
Injection Date:	09-May-2016 12:46:30	Inst. ID:	msd5.i
Client ID:	H4213	Lab ID:	RE05033-005
Sample Info:	5050916, RE05033-005,		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

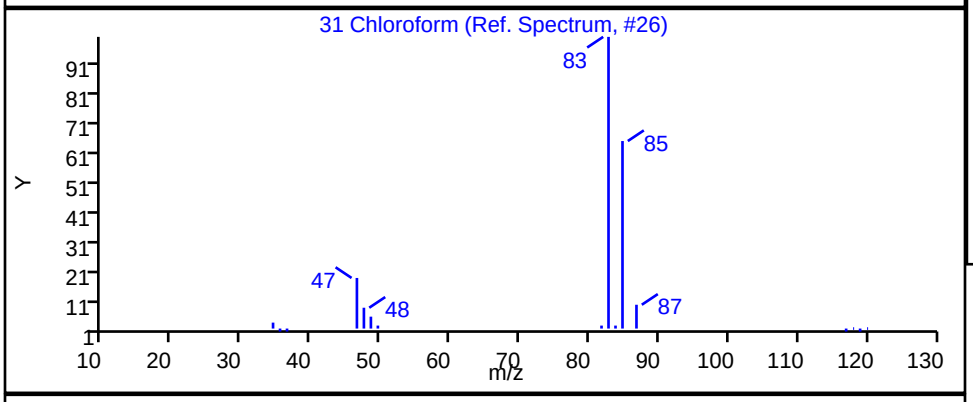
31 Chloroform

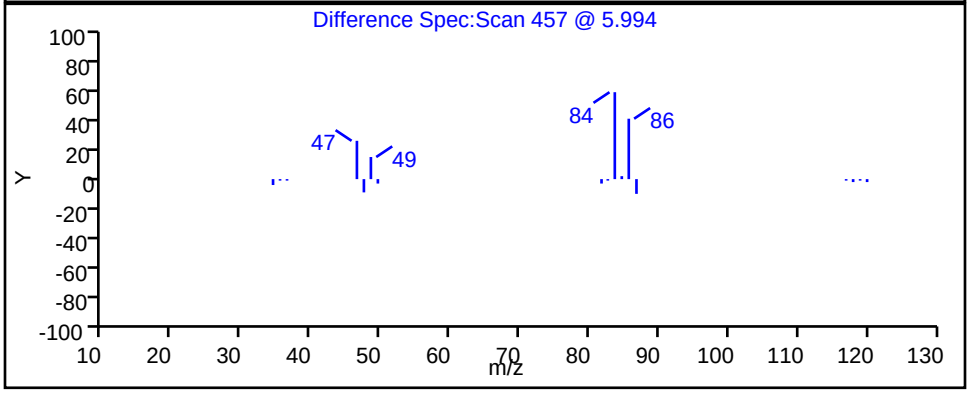










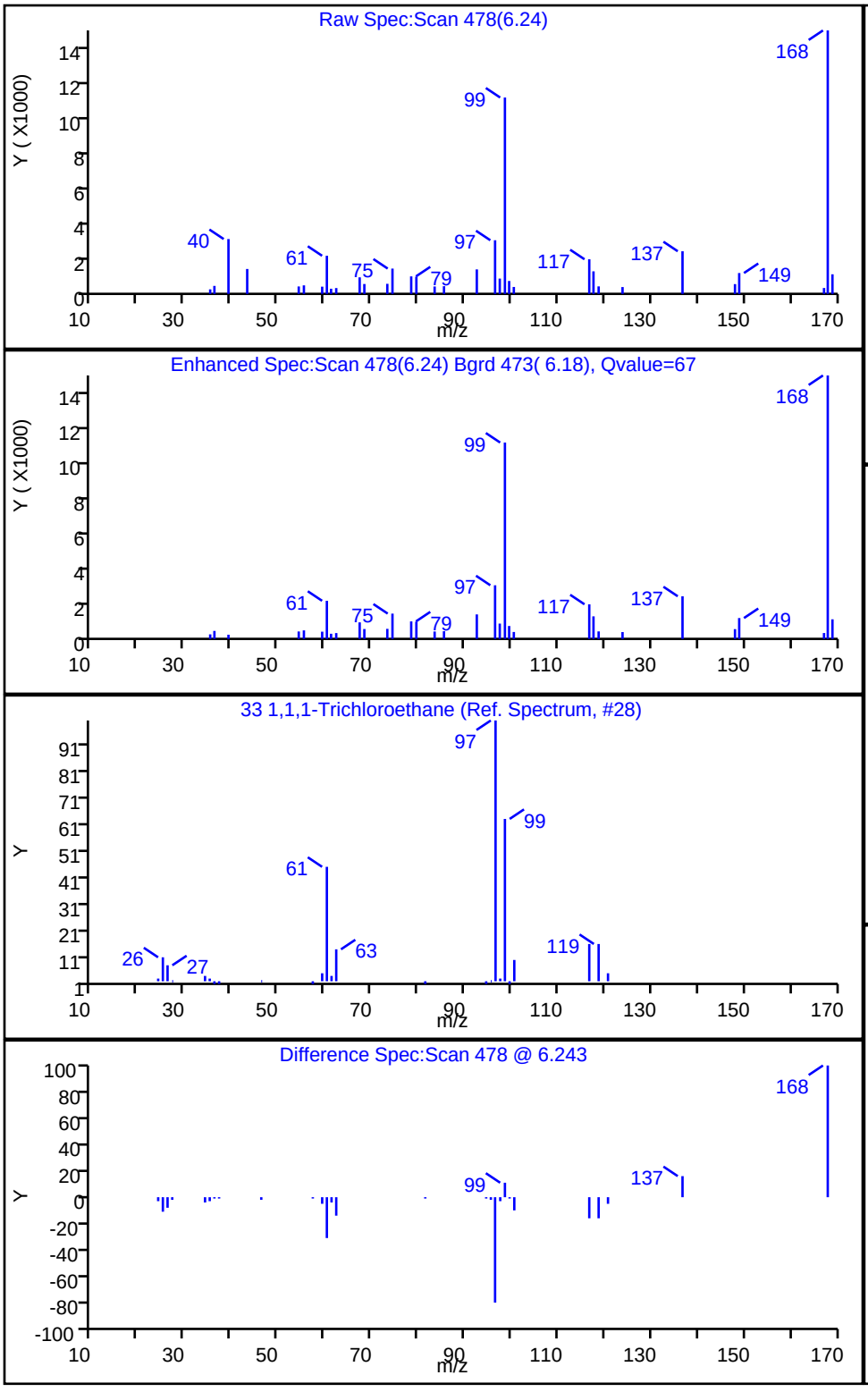


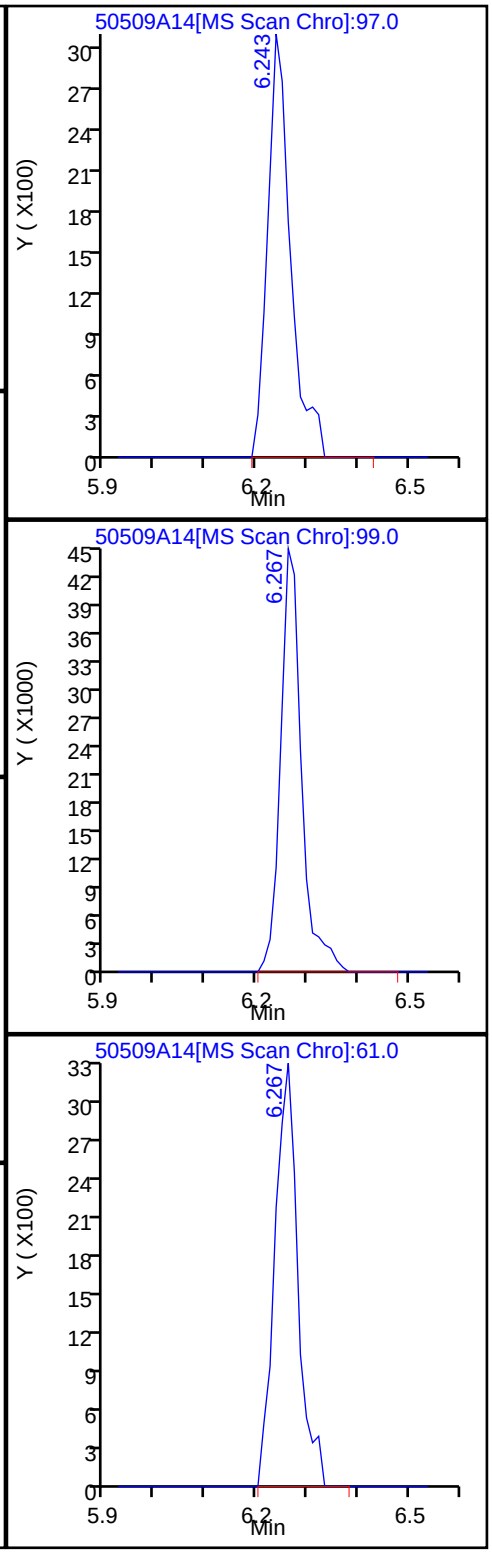
Report Date: 11-May-2016 18:34:05 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A14.D		
Injection Date:	09-May-2016 12:46:30	Inst. ID:	msd5.i
Client ID:	H4213	Lab ID:	RE05033-005
Sample Info:	5050916, RE05033-005,		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

33 1,1,1-Trichloroethane



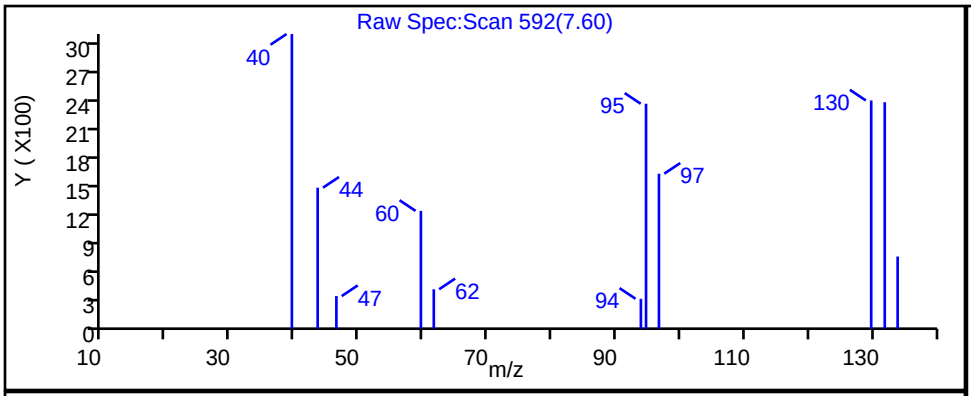


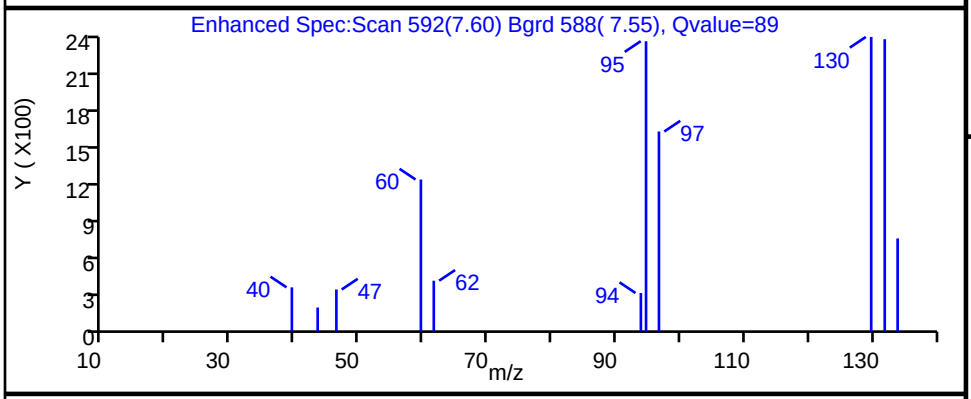
Report Date: 11-May-2016 18:34:05 AIM Revision: 1.0 26-May-2015 13:41:26

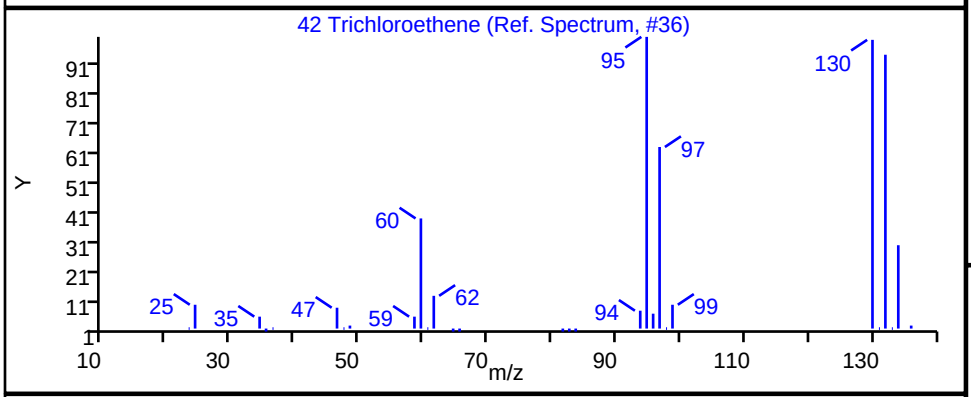
Shealy Environmental Services

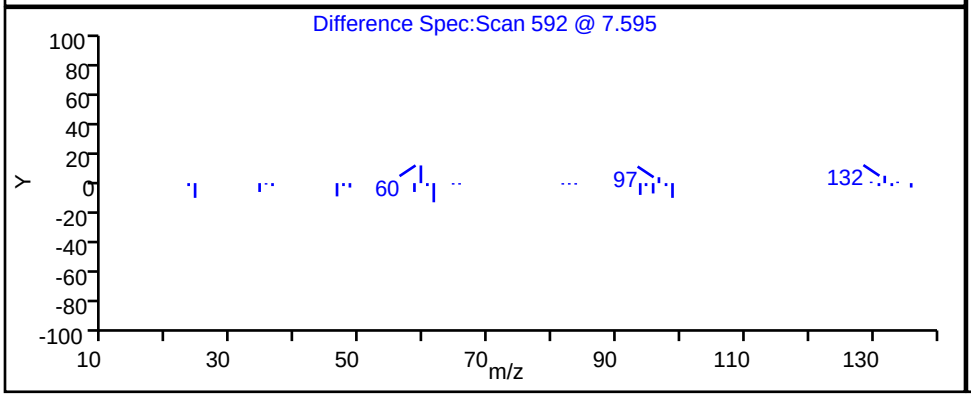
Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A14.D		
Injection Date:	09-May-2016 12:46:30	Inst. ID:	msd5.i
Client ID:	H4213	Lab ID:	RE05033-005
Sample Info:	5050916, RE05033-005,		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

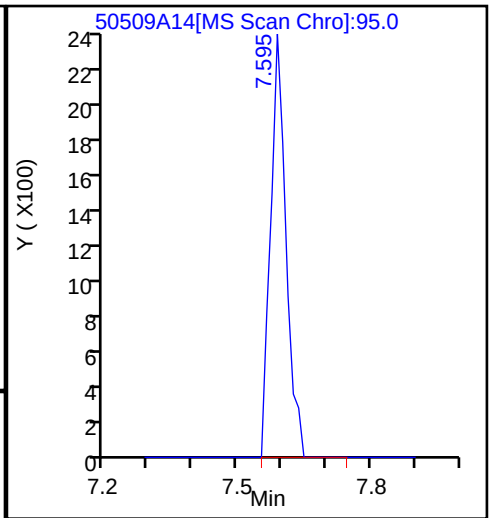
42 Trichloroethene

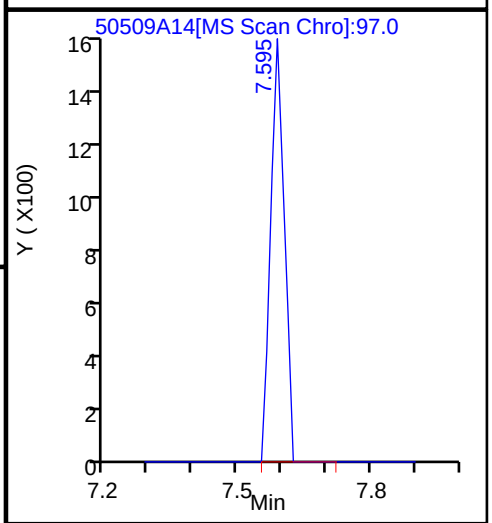


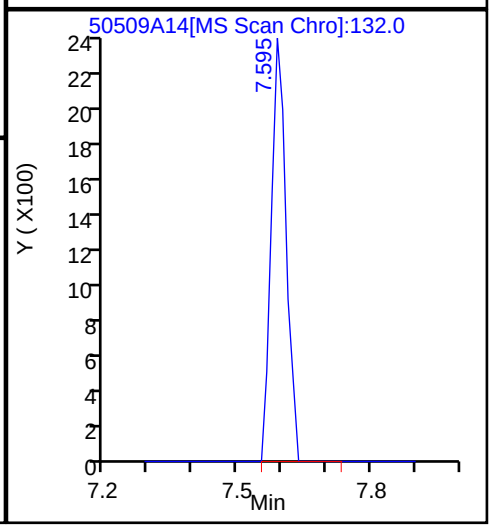










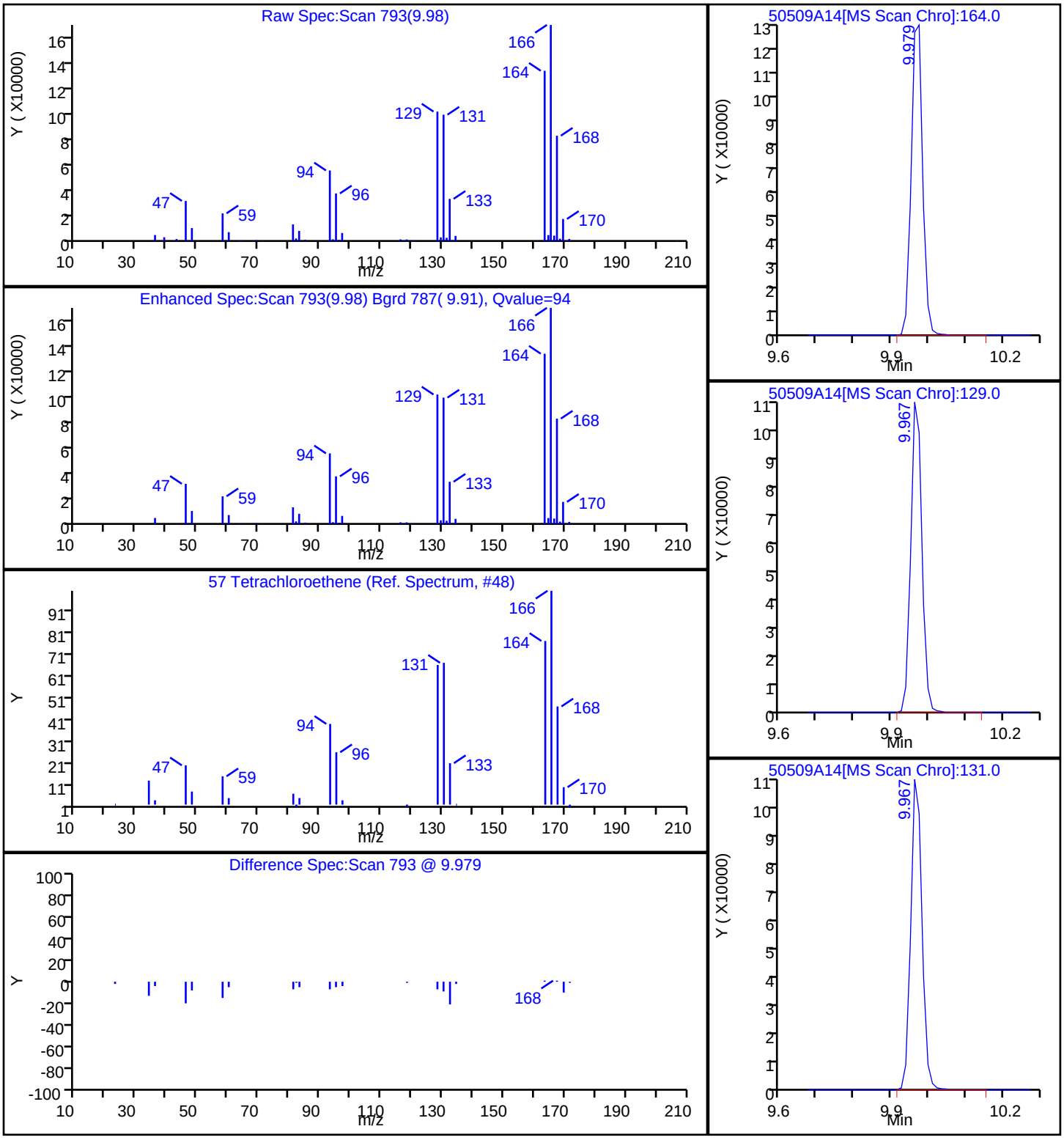


Report Date: 11-May-2016 18:34:05 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A14.D		
Injection Date:	09-May-2016 12:46:30	Inst. ID:	msd5.i
Client ID:	H4213	Lab ID:	RE05033-005
Sample Info:	5050916, RE05033-005,		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

57 Tetrachloroethene



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213DL

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-005

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A13

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 5.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.6	D
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	0.46	J D
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213DL

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-005

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A13

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 5.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	22	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m, p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-Trichlorobenzene	2.5	U
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4213DL

Lab Name: Shealy Environmental Services, Inc.
Contract: EP-W-14035
Lab Code: EQI Case No.: 46115
MA No.: SDG No.: H4001
Analytical Method: Trace VOA
Level: TRACE
Matrix: Water
Lab Sample ID: RE05033-005
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: 50509A13
% Solids:
Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 05/09/2016
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) N
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume:
Cleanup Types:
pH: 2 Dilution Factor: 5.0
Concentration Units (ug/L, ug/Kg): ug/L
Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	15.85	3.1	J D
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Report Date: 11-May-2016 18:34:05 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A13.D		
Lab Sample ID:	RE05033-005DL	Client Sample ID:	H4213DL
Injection Date:	09-May-2016 12:23:30	Dil. Factor:	5.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, RE05033-005,5		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	13
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	5.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:46:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.701		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	61028	5.5968	5.5967	
4 Vinyl Chloride	62.0		1.986		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	44552	5.4940	5.4940	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	103132	4.1357	4.1357	
13 1,1-Dichloroethene	96.0		3.302		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.314		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.263		ND			
23 1,1-Dichloroethane	63.0		4.808		ND			
$ 25 2-Butanone-d5	46.0	5.508	5.496	0.012	99182	52.315	52.315	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.971	5.971	0.000	115680	5.1399	5.1399	Q
31 Chloroform	83.0	5.994	5.994	0.000	11470	0.52889	2.6444	
33 1,1,1-Trichloroethane	97.0		6.243		ND			
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 11-May-2016 18:34:05 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916.b\50509A13.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.646	0.000	49272	4.9656	4.9655	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	210610	5.2616	5.2616	
37 Benzene	78.0		6.729		ND			
39 1,2-Dichloroethane	62.0		6.741		ND			
* 41 1,4-Difluorobenzene	114.0	7.251	7.239	0.012	280159	5.0000	25.000	
42 Trichloroethene	95.0	7.595	7.595	0.000	1018	0.09198	0.45990	Qe
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	51868	5.0054	5.0053	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.077		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	169440	4.9219	4.9218	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	41163	4.6506	4.6505	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0	9.967	9.967	0.000	48951	4.3801	21.900	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	75365	50.657	50.657	
60 2-Hexanone	43.0		10.074		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	211915	5.0000	25.000	
64 Chlorobenzene	112.0		10.844		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.425		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.959	0.012	27013	5.3764	5.3763	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	125802	5.0000	25.000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	67901	4.9228	4.9227	
89 1,2-Dichlorobenzene	146.0		13.086		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services
Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A13.D		
Lab Sample ID:	RE05033-005DL	Client Sample ID:	H4213DL
Injection Date:	09-May-2016 12:23:30	Dil. Factor:	5.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, RE05033-005,5		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	13
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	5.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:46:30

Tentative Identified Compound Results

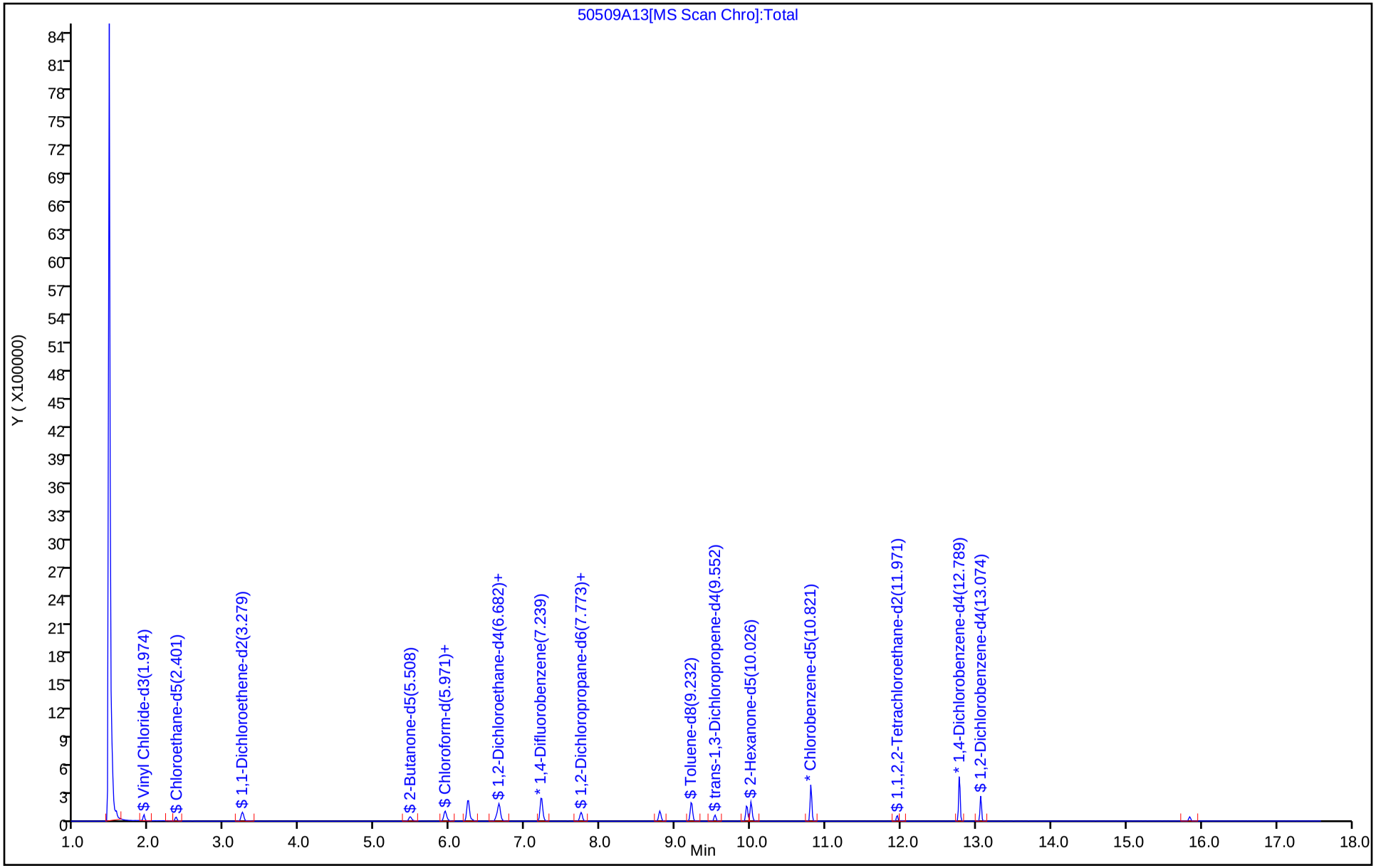
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight
	Unknown							
15.849	88276	0.62228	3.1114	85				

Quant. Compounds	RT	Response	Amount ug/L
* 85 1,4-Dichlorobenzene-d4	12.789	709292	5.0000

Report Date: 11-May-2016 18:34:05 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A13.D				
Injection Date:	09-May-2016 12:23:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	H4213DL	Lab ID:	RE05033-005DL		
Sample Info:	5050916, RE05033-005,5				
Purge Vol.	25 ML	Dil. Factor:	5.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		

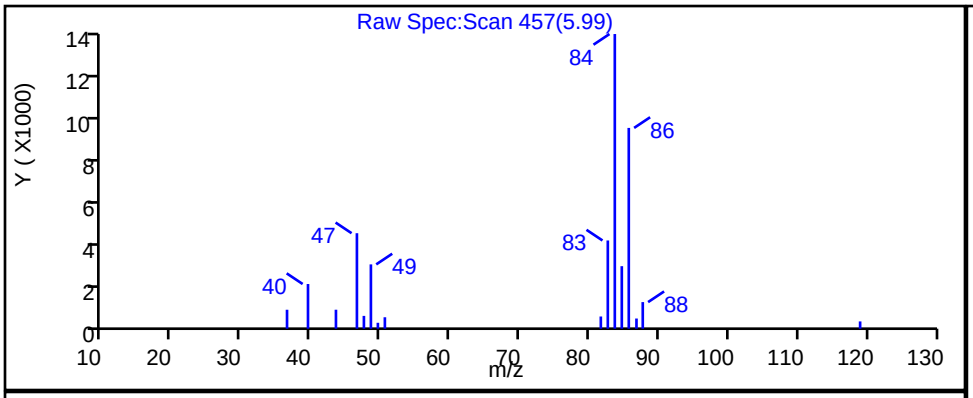


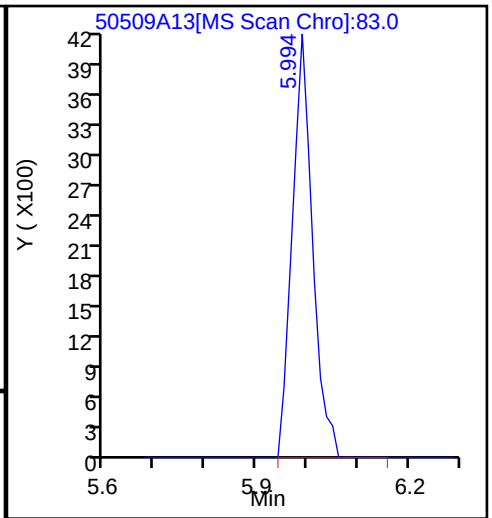
Report Date: 11-May-2016 18:34:05 AIM Revision: 1.0 26-May-2015 13:41:26

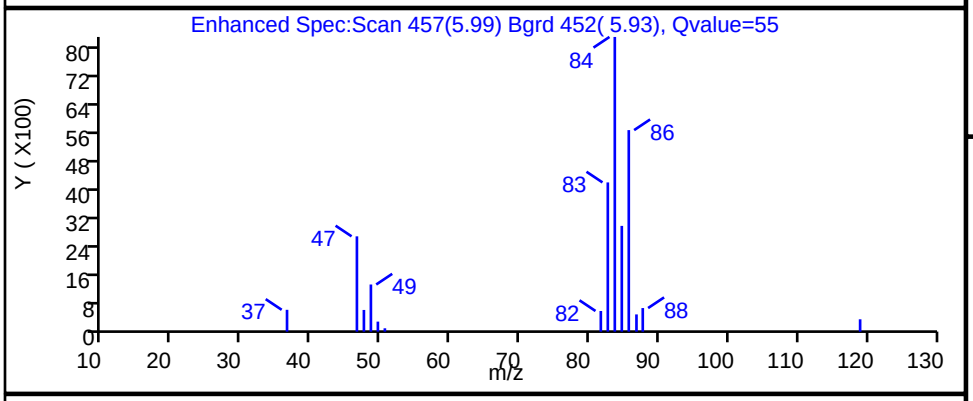
Shealy Environmental Services

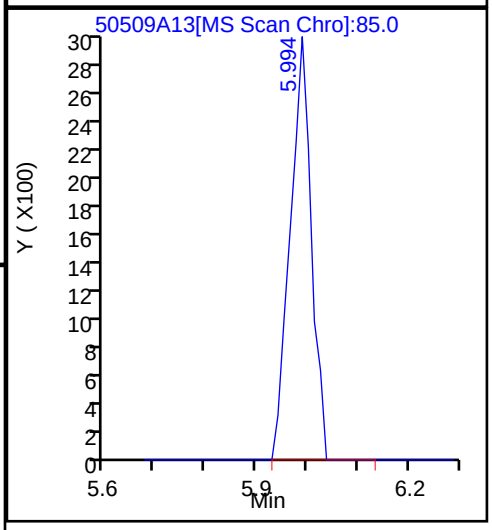
Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A13.D		
Injection Date:	09-May-2016 12:23:30	Inst. ID:	msd5.i
Client ID:	H4213DL	Lab ID:	RE05033-005DL
Sample Info:	5050916, RE05033-005,5		
Purge Vol.	25 ML	Dil. Factor:	5.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

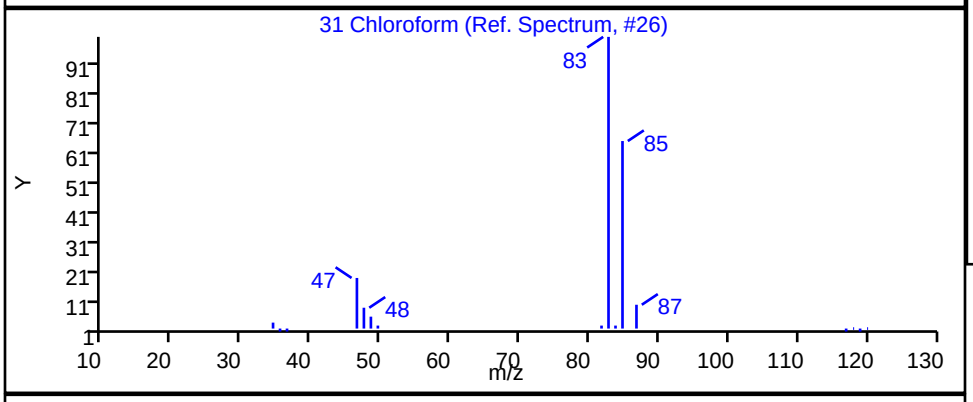
31 Chloroform

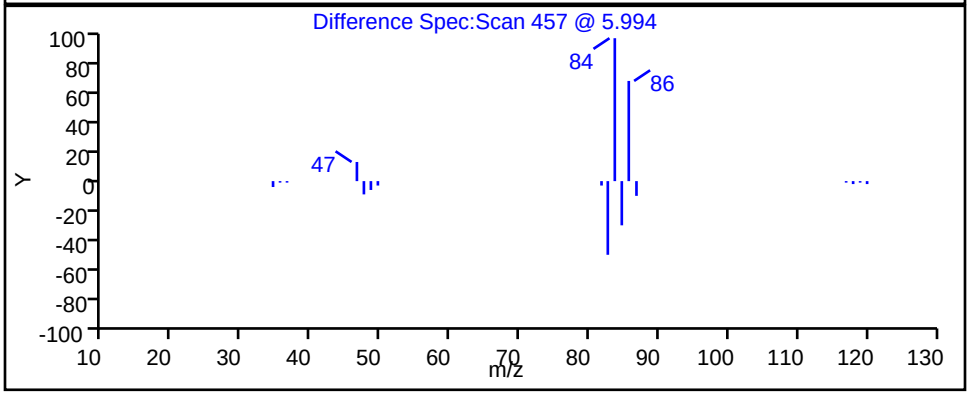










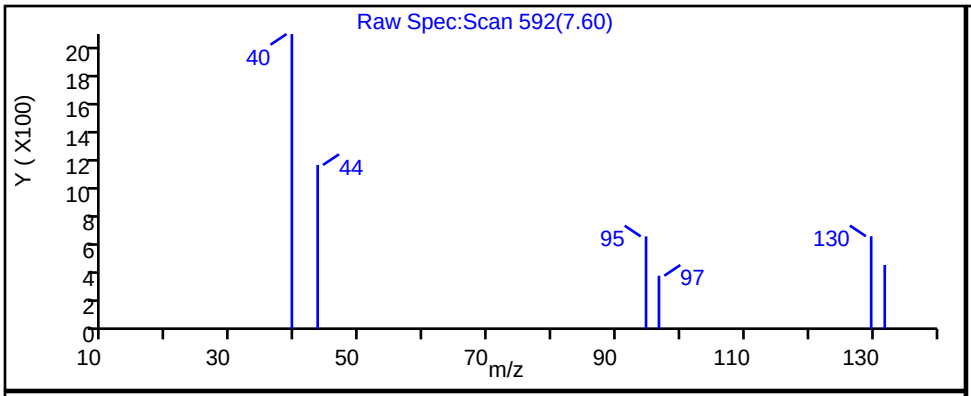


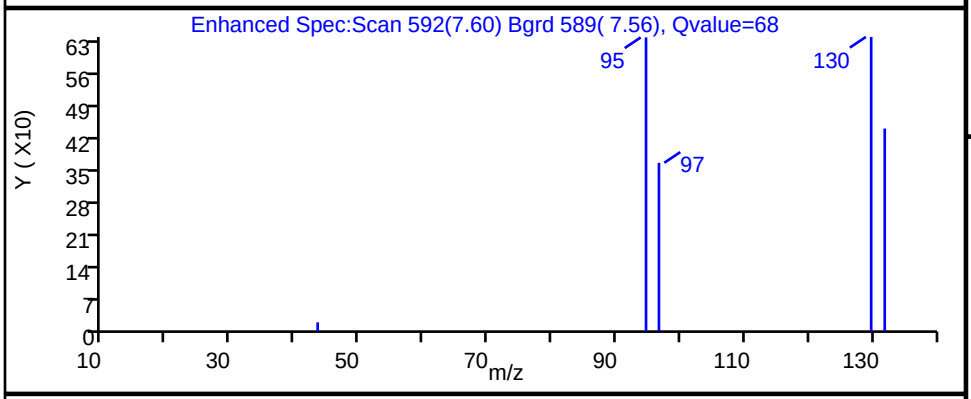
Report Date: 11-May-2016 18:34:05 AIM Revision: 1.0 26-May-2015 13:41:26

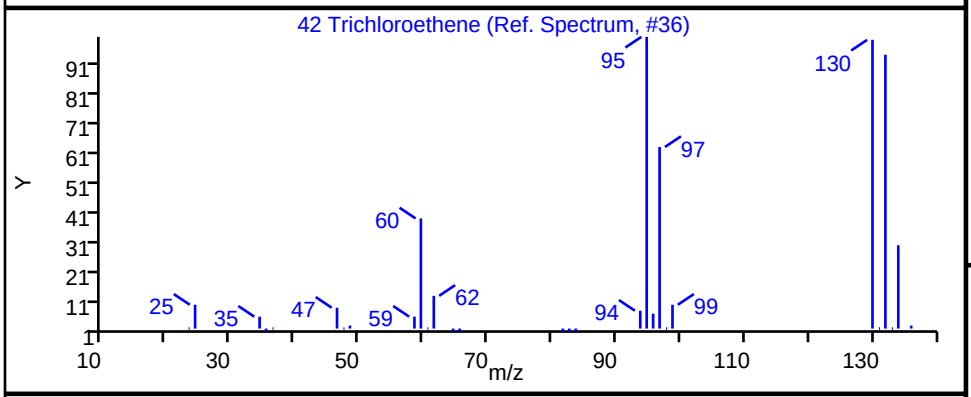
Shealy Environmental Services

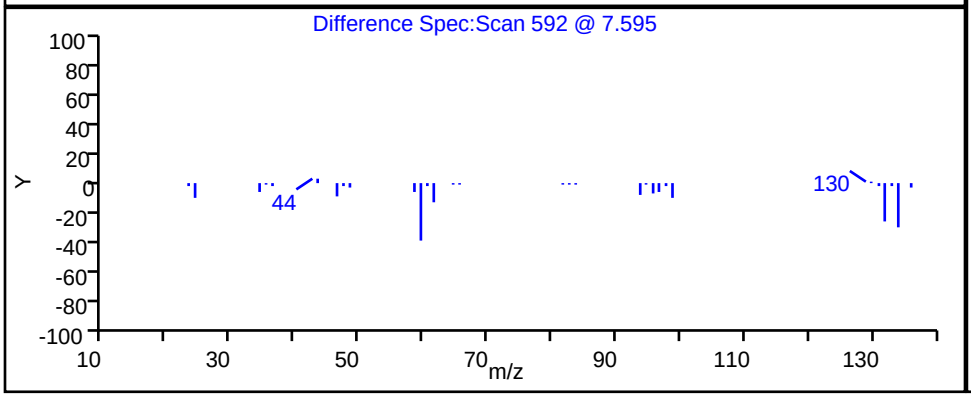
Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A13.D		
Injection Date:	09-May-2016 12:23:30	Inst. ID:	msd5.i
Client ID:	H4213DL	Lab ID:	RE05033-005DL
Sample Info:	5050916, RE05033-005,5		
Purge Vol.	25 ML	Dil. Factor:	5.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

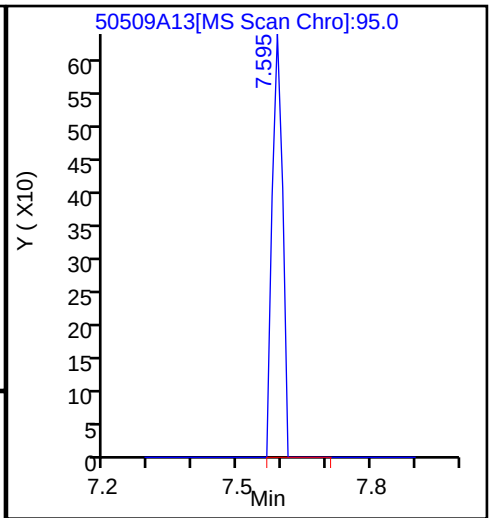
42 Trichloroethene

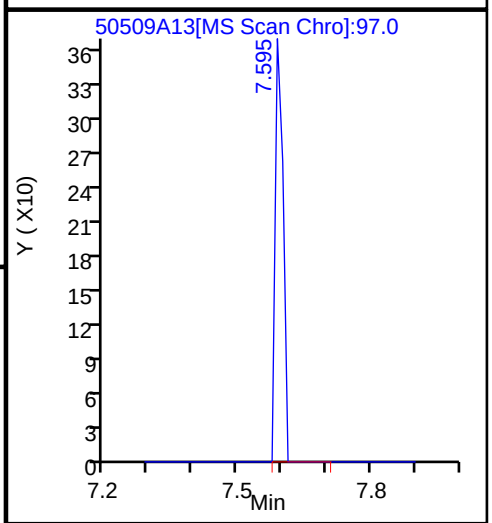


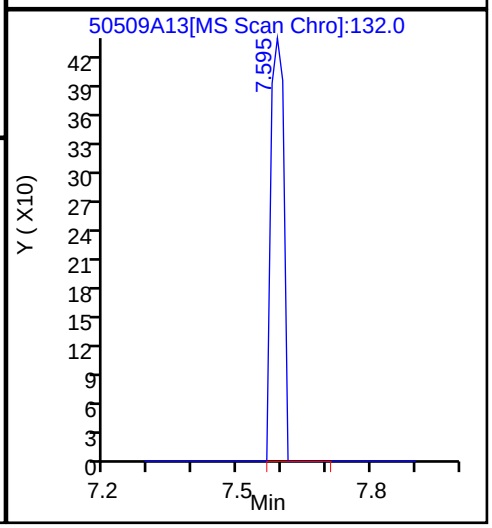










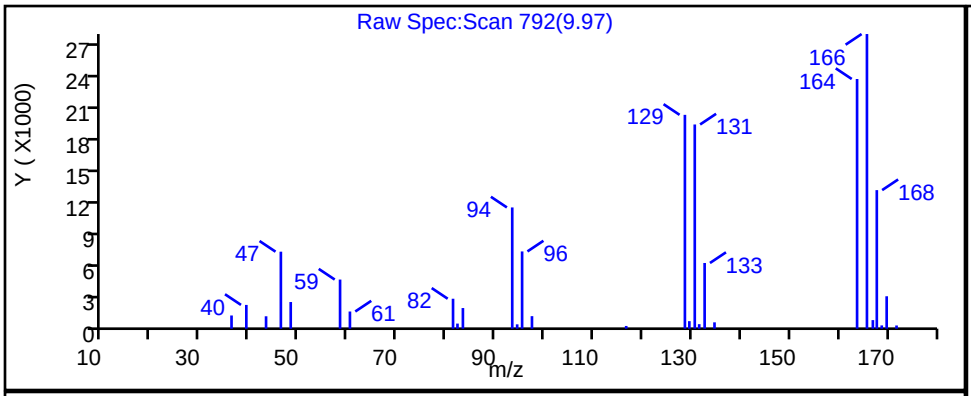


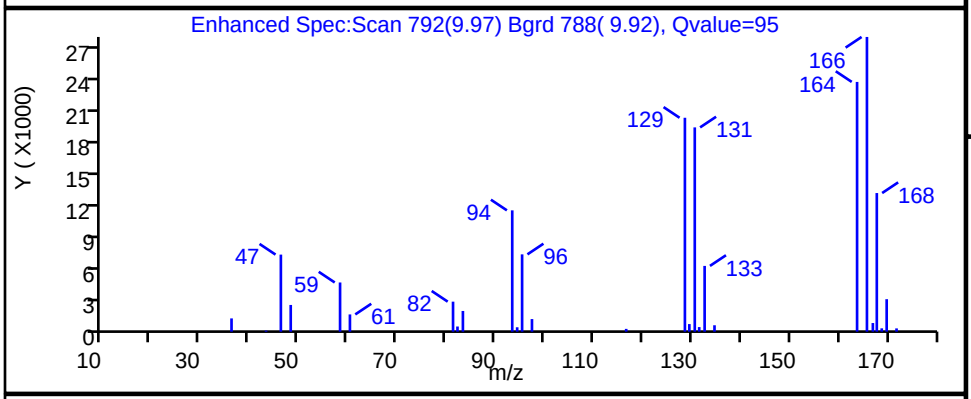
Report Date: 11-May-2016 18:34:05 AIM Revision: 1.0 26-May-2015 13:41:26

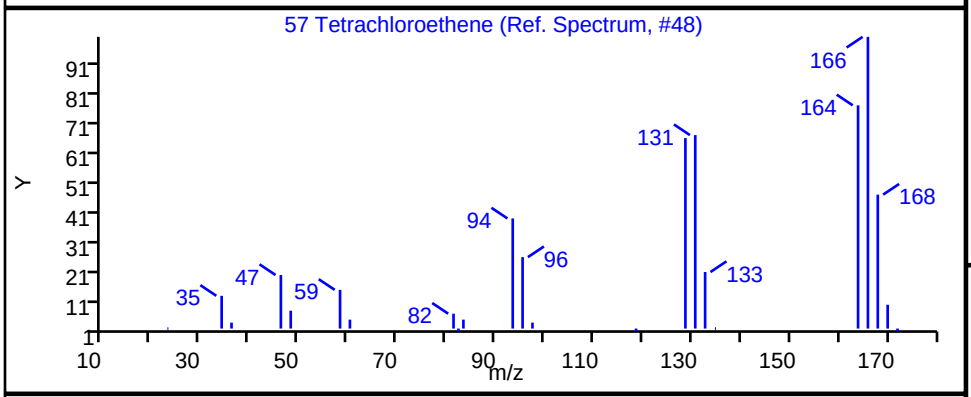
Shealy Environmental Services

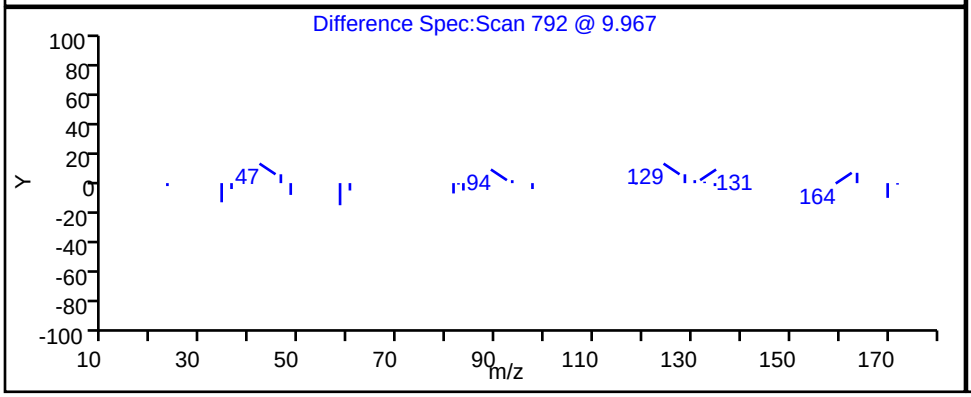
Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A13.D		
Injection Date:	09-May-2016 12:23:30	Inst. ID:	msd5.i
Client ID:	H4213DL	Lab ID:	RE05033-005DL
Sample Info:	5050916, RE05033-005,5		
Purge Vol.	25 ML	Dil. Factor:	5.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

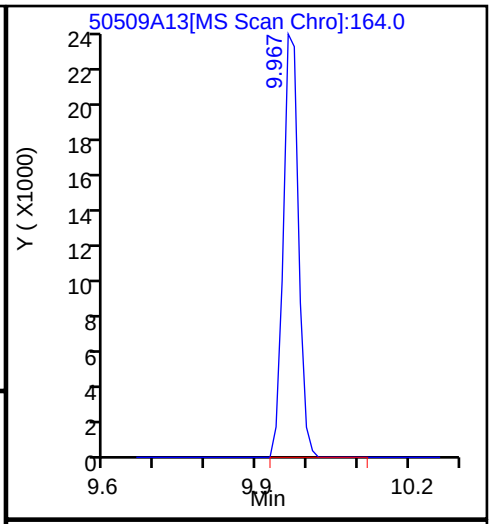
57 Tetrachloroethene

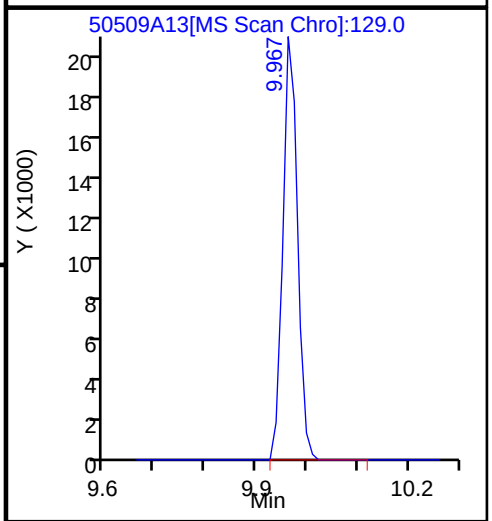


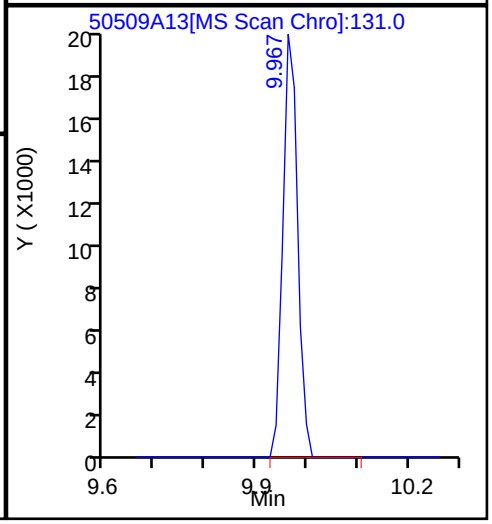












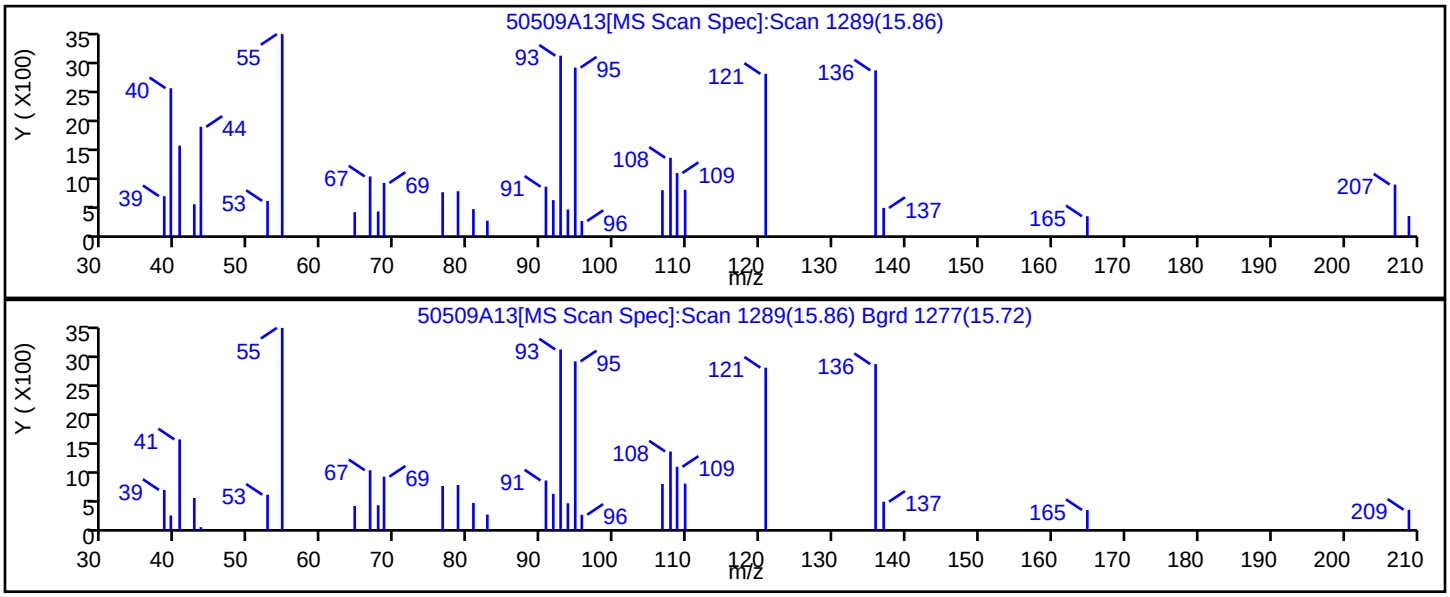
Report Date: 11-May-2016 18:34:05 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A13.D		
Injection Date:	09-May-2016 12:23:30	Inst. ID:	msd5.i
Client ID:	H4213DL	Lab ID:	RE05033-005DL
Sample Info:	5050916, RE05033-005,5		
Purge Vol.	25 ML	Dil. Factor:	5.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

TIC @ 15.849

Library Search Compound Match	CAS#	Library	Entry	Formula	Weight	Q
Unknown		NIST11				



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4217

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-006

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B22

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/10/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.46	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.6	
71-55-6	1,1,1-Trichloroethane	0.29	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.46	J
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4217

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-006

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B22

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/10/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	13	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4217

Lab Name: Shealy Environmental Services, Inc.
Contract: EP-W-14035
Lab Code: EQI Case No.: 46115
MA No.: SDG No.: H4001
Analytical Method: Trace VOA
Level: TRACE
Matrix: Water
Lab Sample ID: RE05033-006
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: 50509B22
% Solids:
Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 05/10/2016
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) N
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume:
Cleanup Types:
pH: 2 Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L
Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
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15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B22.D		
Lab Sample ID:	RE05033-006	Client Sample ID:	H4217
Injection Date:	10-May-2016 04:05:30	Dil. Factor:	1.0
Operator:	JJG	Inst. ID:	msd5.i
Sample Info:	5050916B, RE05033-006		
Method:	\\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5.m		
Method Date:	10-May-2016 01:19:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	22
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rz	Review Date:	18-May-2016 09:49:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.702		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.974	1.962	0.012	47196	4.1638	4.1638	
4 Vinyl Chloride	62.0		1.974		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.389	0.012	32464	3.8513	3.8512	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	80657	3.1116	3.1115	
13 1,1-Dichloroethene	96.0		3.291		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.302		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.251		ND			
23 1,1-Dichloroethane	63.0		4.797		ND			
$ 25 2-Butanone-d5	46.0	5.508	5.496	0.012	97988	49.722	49.722	
26 cis-1,2-Dichloroethene	96.0	5.567	5.567	0.000	5705	0.46088	0.46080	e
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.971	5.959	0.011	96417	4.1213	4.1213	
31 Chloroform	83.0	5.994	5.994	0.000	35191	1.5610	1.5610	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	5445	0.29287	0.29280	Qe
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916B.b\50509B22.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.647	-0.001	46098	4.4692	4.4692	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	174075	4.0022	4.0021	
37 Benzene	78.0		6.730		ND			
39 1,2-Dichloroethane	62.0		6.753		ND			
* 41 1,4-Difluorobenzene	114.0	7.239	7.240	-0.001	291221	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	5566	0.46282	0.46280	e
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	44339	3.9377	3.9377	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.078		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	144226	3.8555	3.8554	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	39854	4.1437	4.1437	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0	9.967	9.967	0.000	161387	13.289	13.289	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	73552	45.497	45.497	
60 2-Hexanone	43.0		10.086		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	230272	5.0000	5.0000	
64 Chlorobenzene	112.0		10.856		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.426		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	24699	4.5239	4.5239	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	133069	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	59580	4.0836	4.0836	
89 1,2-Dichlorobenzene	146.0		13.098		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services
Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B22.D		
Lab Sample ID:	RE05033-006	Client Sample ID:	H4217
Injection Date:	10-May-2016 04:05:30	Dil. Factor:	1.0
Operator:	JJG	Inst. ID:	msd5.i
Sample Info:	5050916B, RE05033-006		
Method:	\\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5.m		
Method Date:	10-May-2016 01:19:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	22
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rz	Review Date:	18-May-2016 09:49:30

Tentative Identified Compound Results

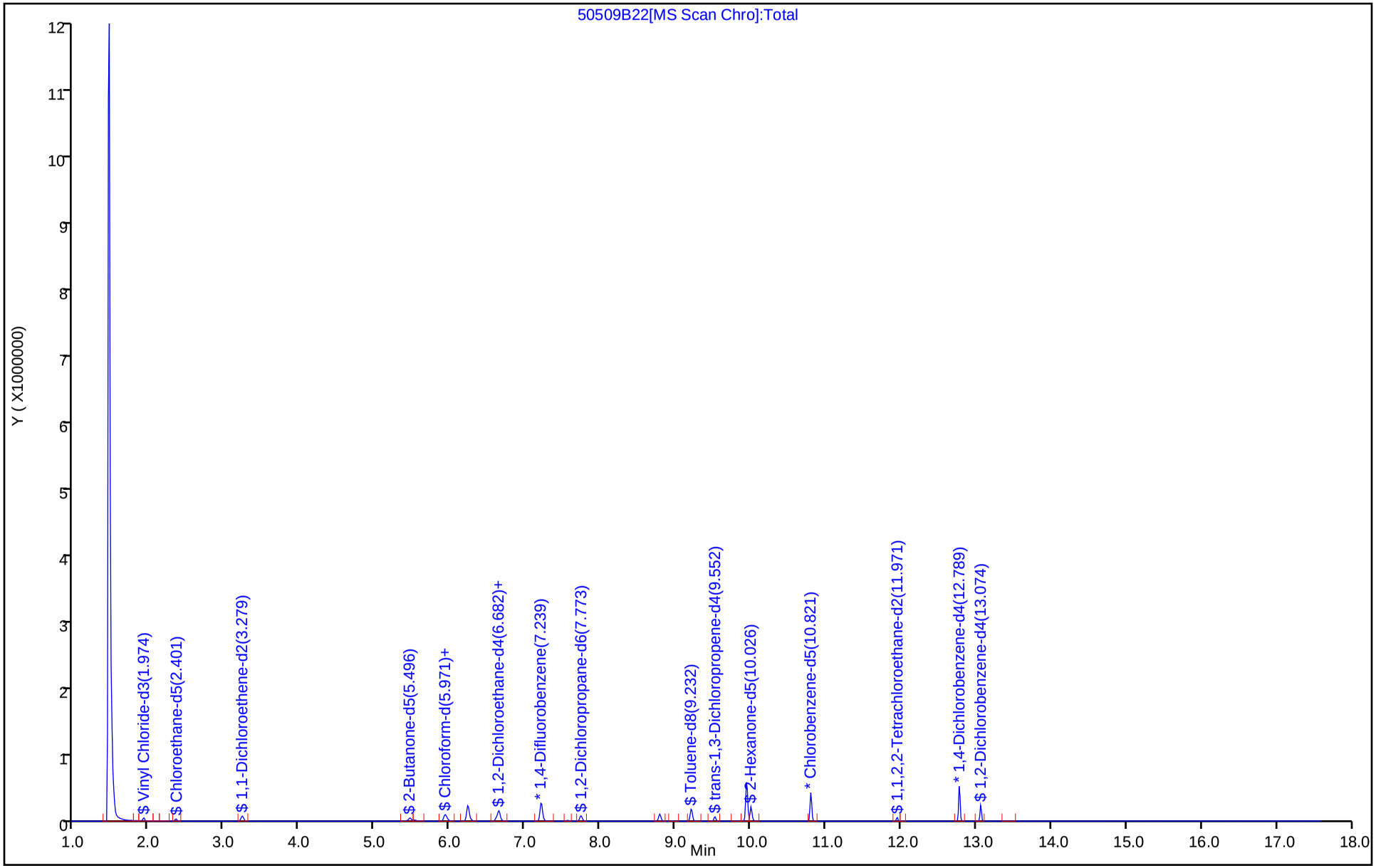
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B22.D				
Injection Date:	10-May-2016 04:05:30	Inst. ID:	msd5.i	Operator:	JJG
Client ID:	H4217	Lab ID:	RE05033-006		
Sample Info:	5050916B, RE05033-006				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		

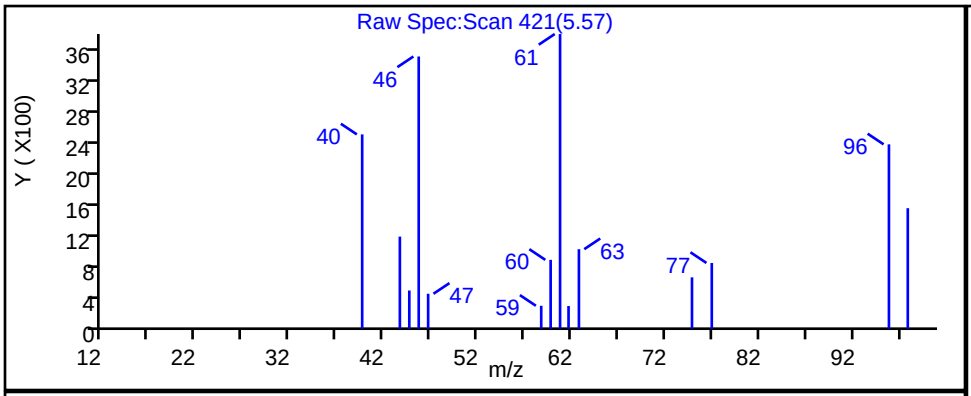


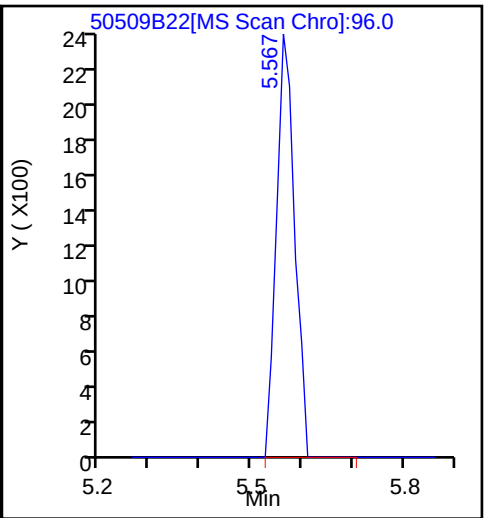
Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

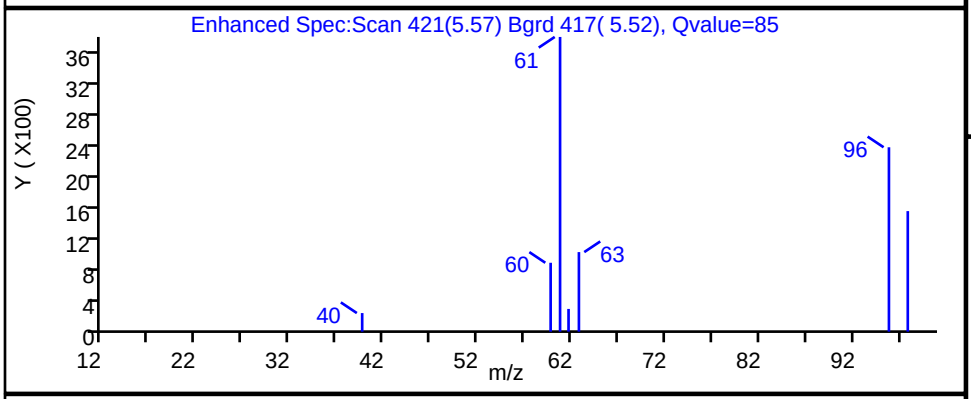
Shealy Environmental Services

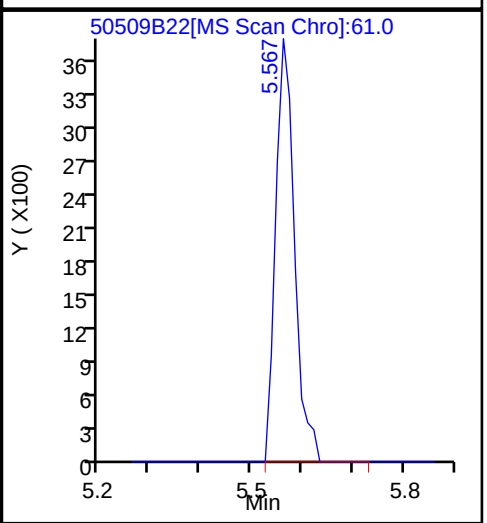
Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B22.D		
Injection Date:	10-May-2016 04:05:30	Inst. ID:	msd5.i
Client ID:	H4217	Lab ID:	RE05033-006
Sample Info:	5050916B, RE05033-006		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	JJG		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

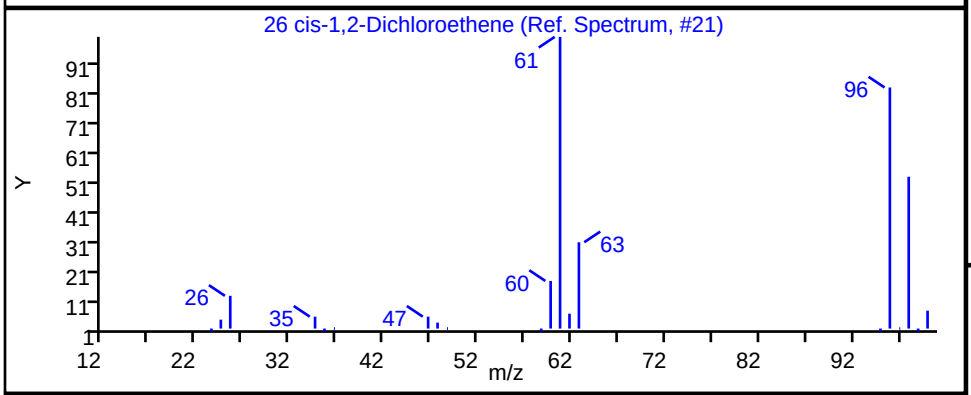
26 cis-1,2-Dichloroethene

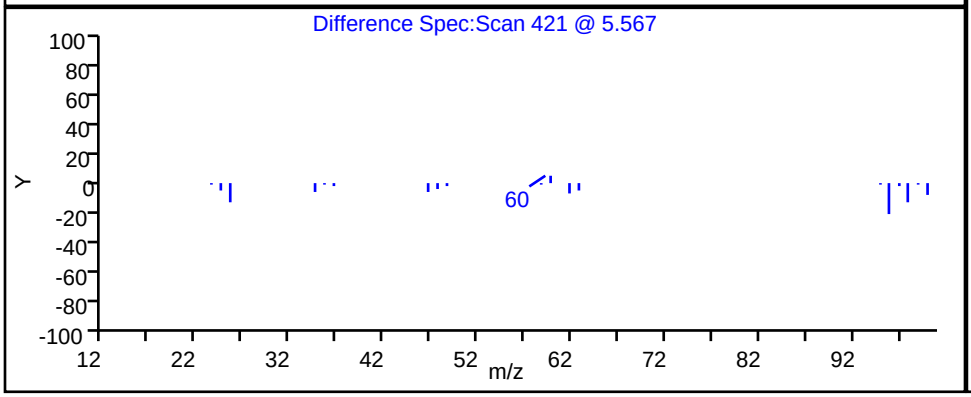


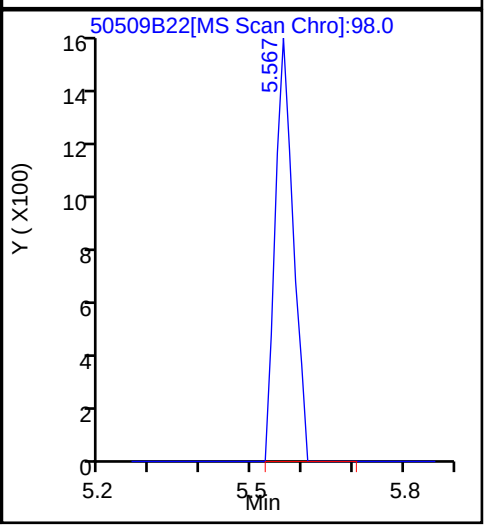










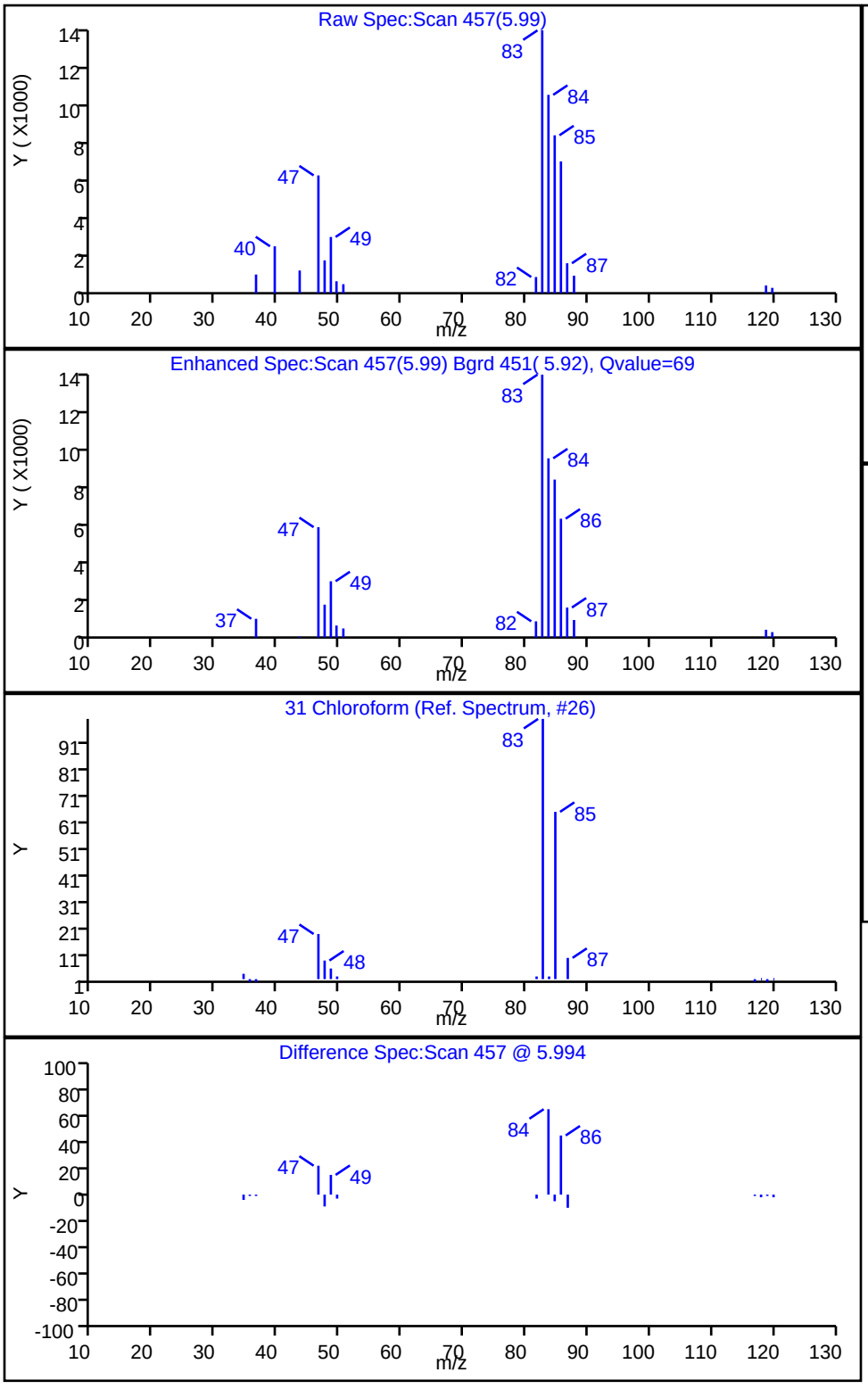


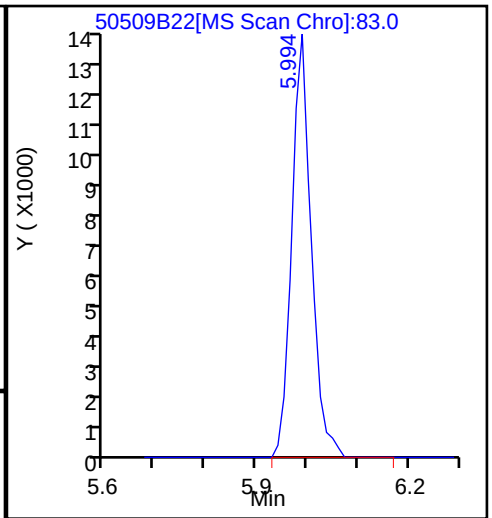
Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

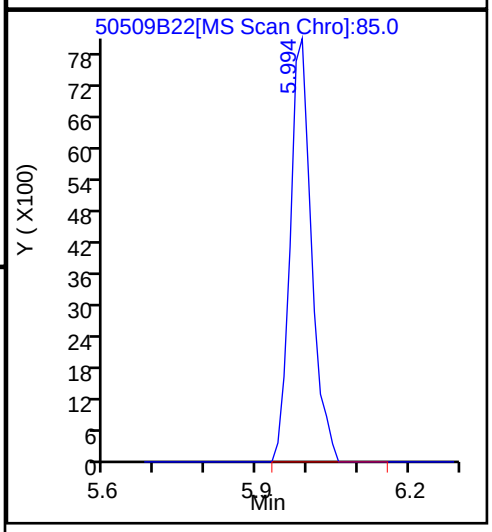
Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B22.D		
Injection Date:	10-May-2016 04:05:30	Inst. ID:	msd5.i
Client ID:	H4217	Lab ID:	RE05033-006
Sample Info:	5050916B, RE05033-006		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	JJG		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

31 Chloroform





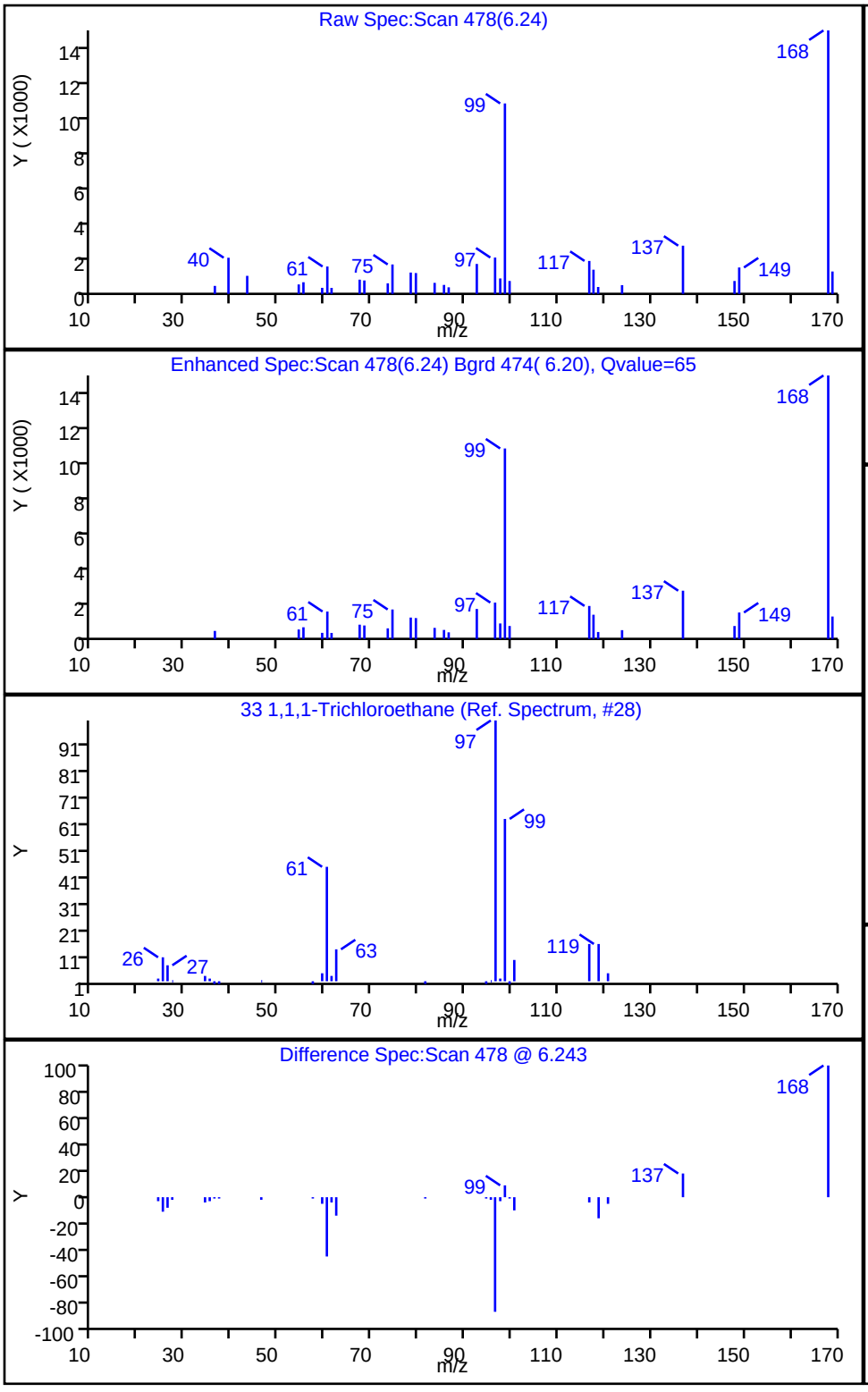


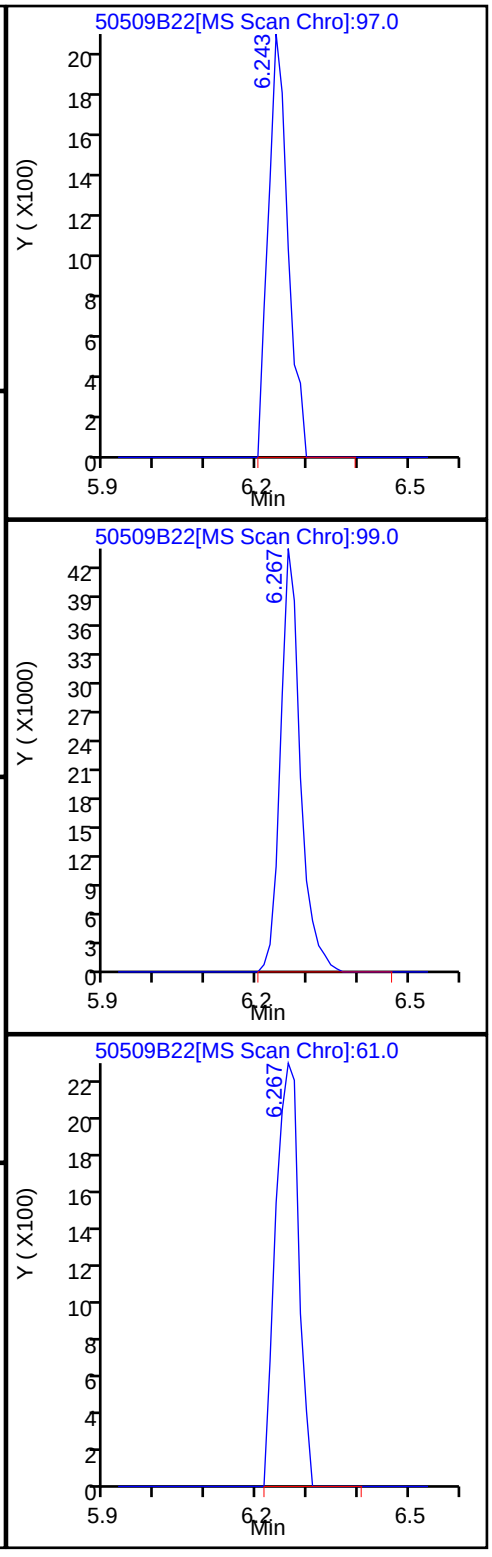
Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B22.D		
Injection Date:	10-May-2016 04:05:30	Inst. ID:	msd5.i
Client ID:	H4217	Lab ID:	RE05033-006
Sample Info:	5050916B, RE05033-006		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	JJG		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

33 1,1,1-Trichloroethane



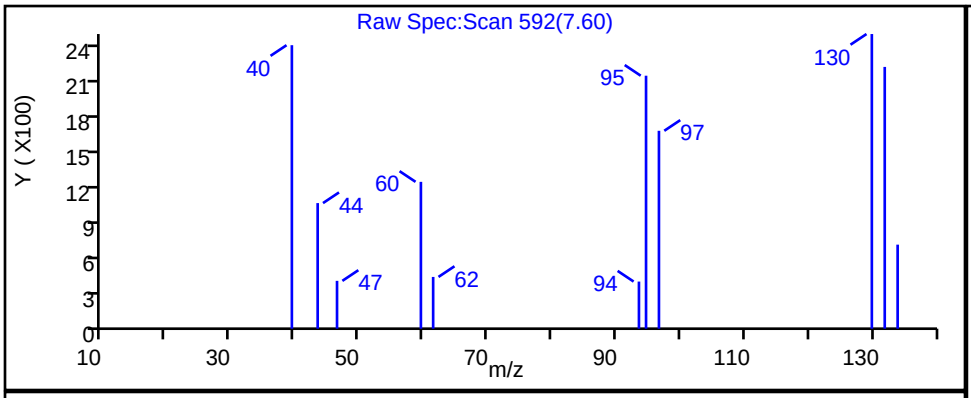


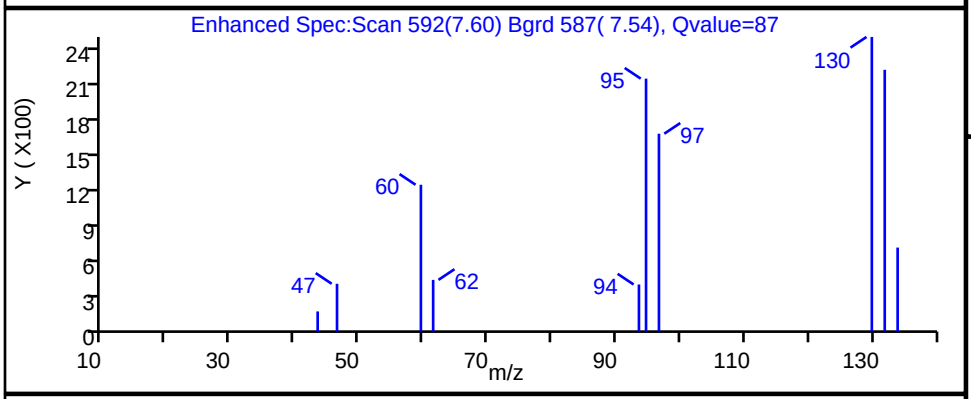
Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

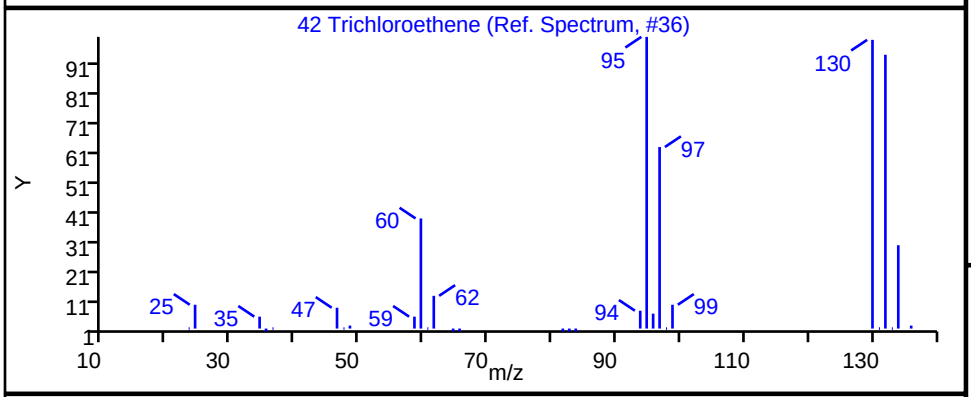
Shealy Environmental Services

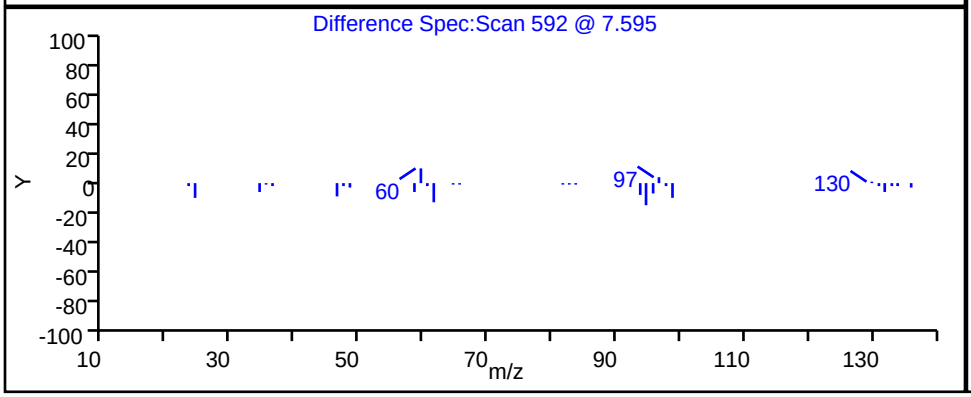
Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B22.D		
Injection Date:	10-May-2016 04:05:30	Inst. ID:	msd5.i
Client ID:	H4217	Lab ID:	RE05033-006
Sample Info:	5050916B, RE05033-006		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	JJG		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

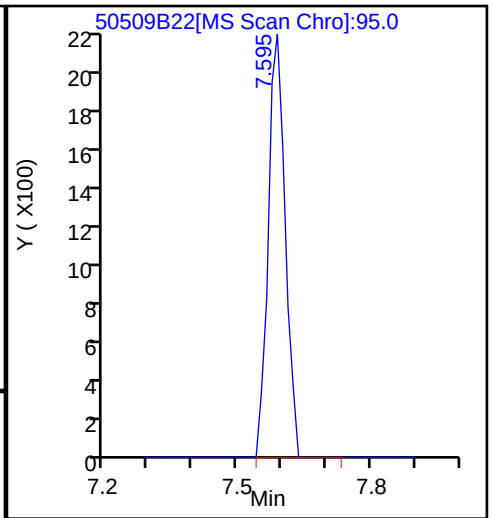
42 Trichloroethene

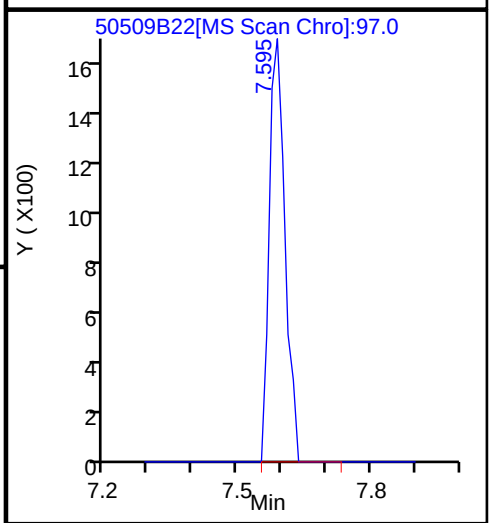


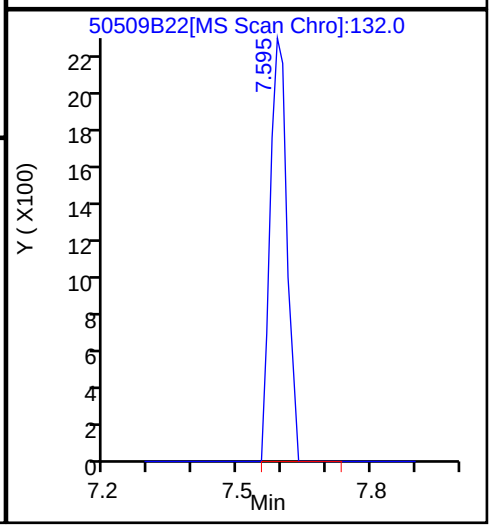










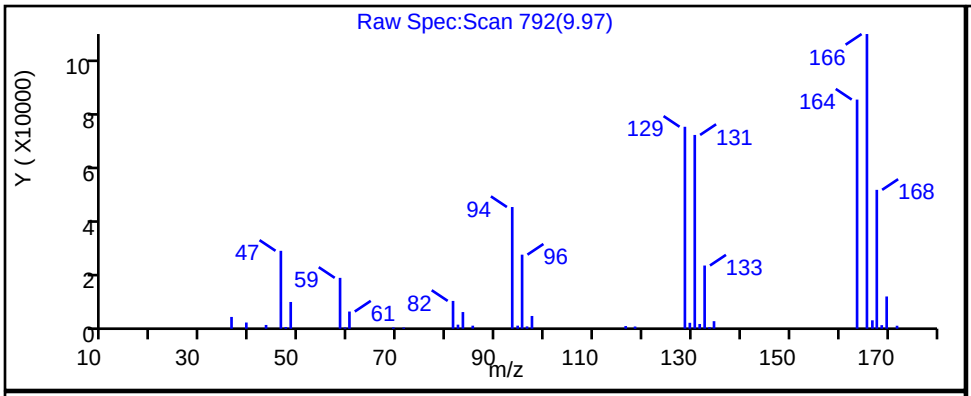


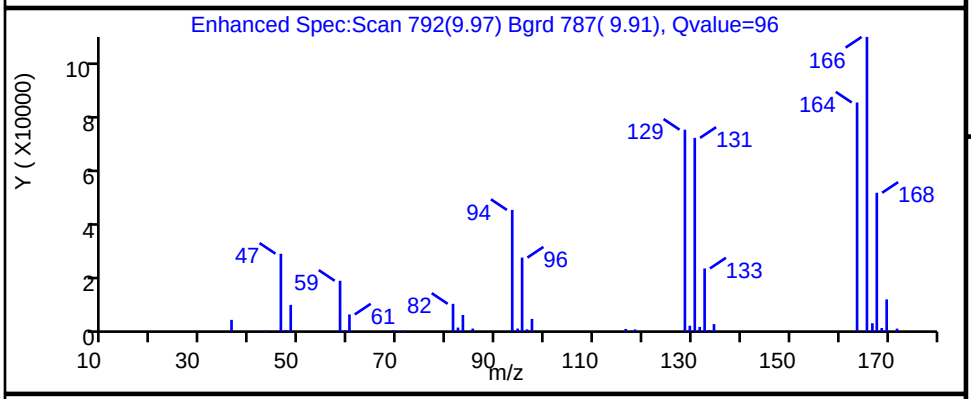
Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

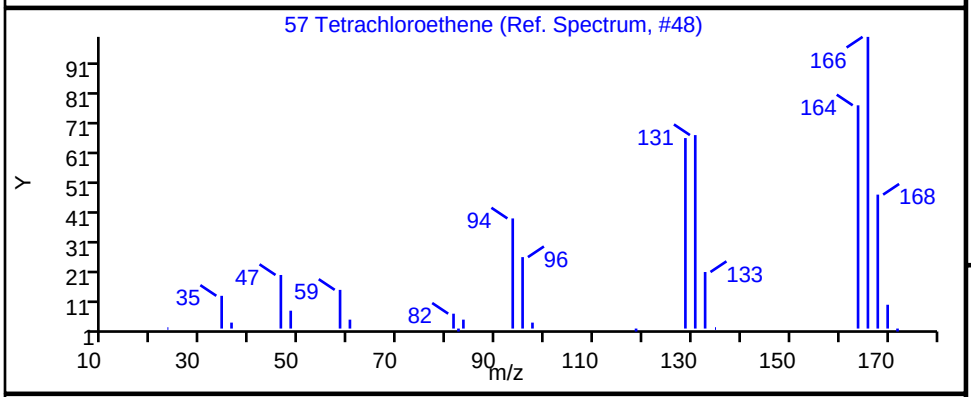
Shealy Environmental Services

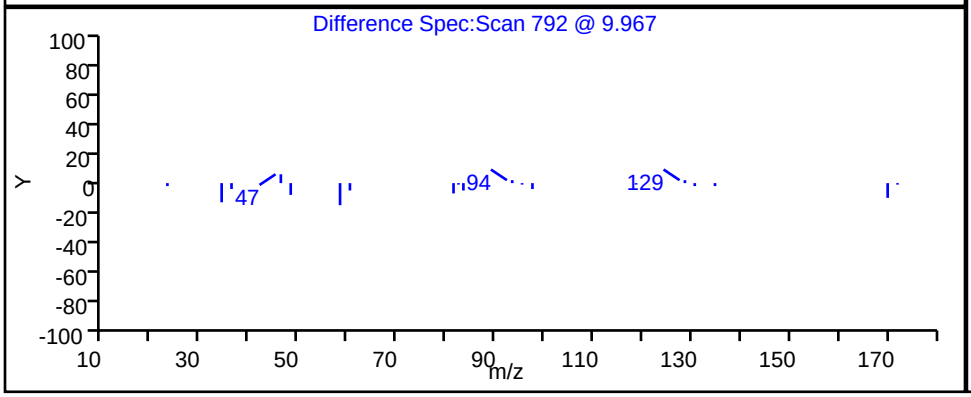
Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B22.D		
Injection Date:	10-May-2016 04:05:30	Inst. ID:	msd5.i
Client ID:	H4217	Lab ID:	RE05033-006
Sample Info:	5050916B, RE05033-006		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	JJG		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

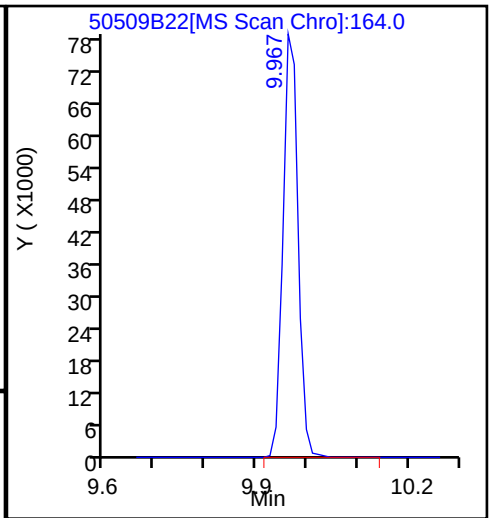
57 Tetrachloroethene

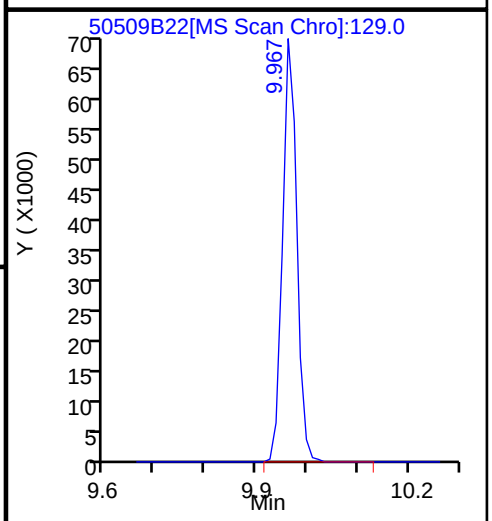


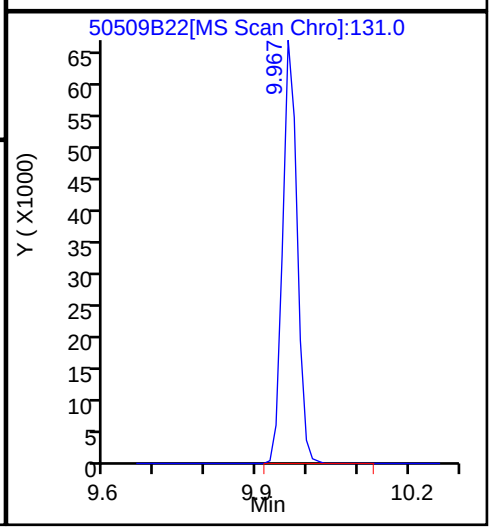












FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4218

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-007

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B23

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/10/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.1	
71-55-6	1,1,1-Trichloroethane	0.21	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.56	
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4218

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-007

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B23

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/10/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	12	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4218

Lab Name: Shealy Environmental Services, Inc.
Contract: EP-W-14035
Lab Code: EQI Case No.: 46115
MA No.: SDG No.: H4001
Analytical Method: Trace VOA
Level: TRACE
Matrix: Water
Lab Sample ID: RE05033-007
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: 50509B23
% Solids:
Date Received: 05/05/2016
GC Column: DB-624 ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 05/10/2016
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) N
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume:
Cleanup Types:
pH: 2 Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L
Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B23.D		
Lab Sample ID:	RE05033-007	Client Sample ID:	H4218
Injection Date:	10-May-2016 04:28:30	Dil. Factor:	1.0
Operator:	JJG	Inst. ID:	msd5.i
Sample Info:	5050916B, RE05033-007		
Method:	\\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5.m		
Method Date:	10-May-2016 01:19:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	23
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rz	Review Date:	18-May-2016 09:49:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.702		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.974	1.962	0.012	44972	4.1016	4.1015	
4 Vinyl Chloride	62.0		1.974		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.389	0.012	34819	4.2701	4.2701	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	75849	3.0249	3.0248	
13 1,1-Dichloroethene	96.0		3.291		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.302		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.251		ND			
23 1,1-Dichloroethane	63.0		4.797		ND			
$ 25 2-Butanone-d5	46.0	5.508	5.496	0.012	91740	48.123	48.123	
26 cis-1,2-Dichloroethene	96.0	5.567	5.567	0.000	5942	0.49623	0.49620	e
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.971	5.959	0.012	94279	4.1659	4.1659	Q
31 Chloroform	83.0	5.994	5.994	0.000	24683	1.1319	1.1318	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	3754	0.21097	0.21090	Qe
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916B.b\50509B23.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.647	-0.001	45349	4.5450	4.5450	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	167862	4.0325	4.0324	
37 Benzene	78.0		6.730		ND			
39 1,2-Dichloroethane	62.0		6.753		ND			
* 41 1,4-Difluorobenzene	114.0	7.239	7.240	-0.001	281712	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	6399	0.55595	0.55590	
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	43329	4.0206	4.0206	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.078		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	135958	3.7975	3.7974	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	36617	3.9779	3.9779	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0	9.967	9.967	0.000	135020	11.617	11.617	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	69918	45.189	45.189	
60 2-Hexanone	43.0		10.086		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	220387	5.0000	5.0000	
64 Chlorobenzene	112.0		10.856		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.426		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	24008	4.5946	4.5946	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	129628	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	56054	3.9439	3.9439	R
89 1,2-Dichlorobenzene	146.0		13.098		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

Q - Qualifier Signal(s) Fails Ratio Test

R - Spike/Surrogte Fails %Recovery Test

Shealy Environmental Services
Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B23.D		
Lab Sample ID:	RE05033-007	Client Sample ID:	H4218
Injection Date:	10-May-2016 04:28:30	Dil. Factor:	1.0
Operator:	JJG	Inst. ID:	msd5.i
Sample Info:	5050916B, RE05033-007		
Method:	\\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5.m		
Method Date:	10-May-2016 01:19:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	23
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rz	Review Date:	18-May-2016 09:49:30

Tentative Identified Compound Results

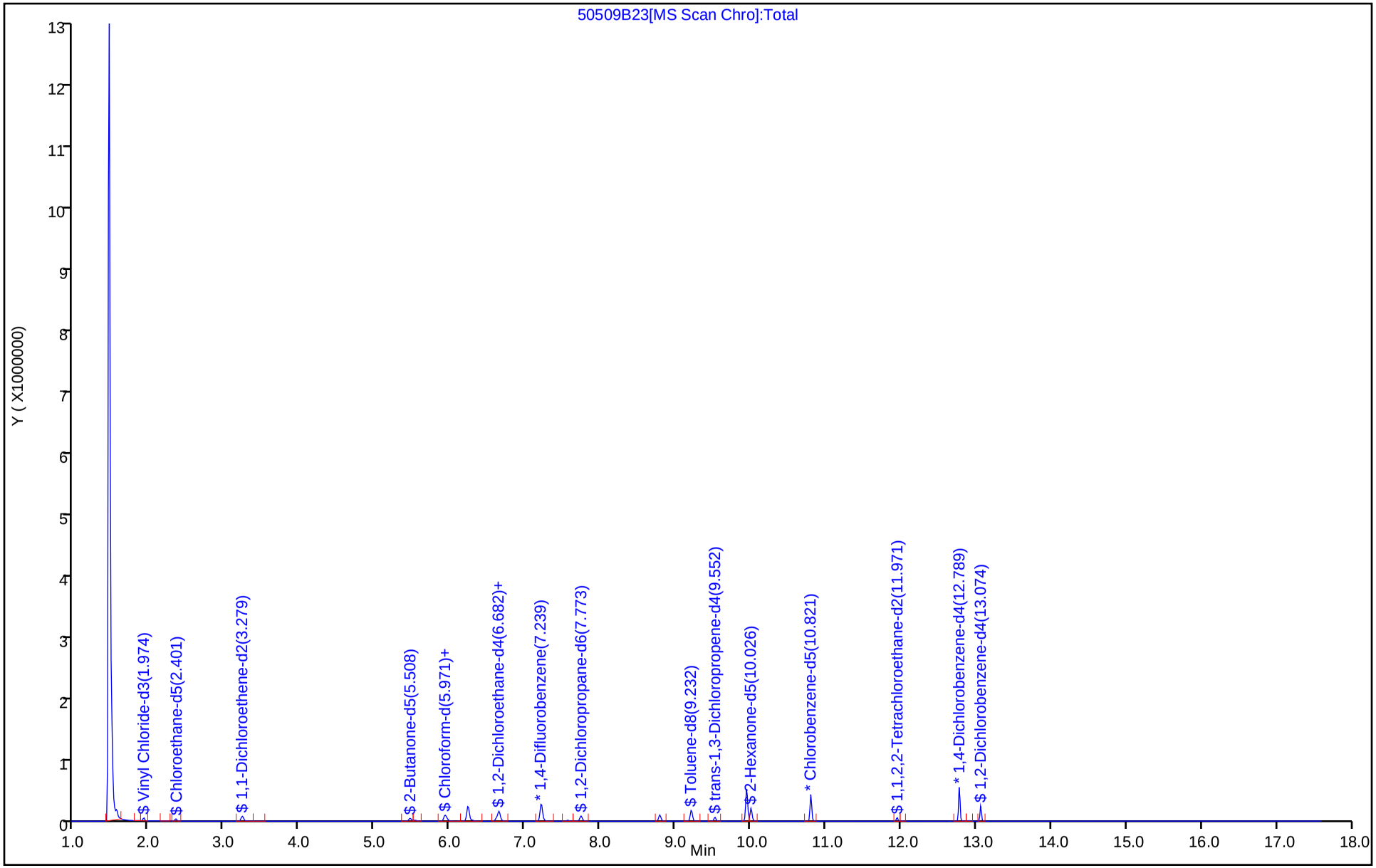
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B23.D				
Injection Date:	10-May-2016 04:28:30	Inst. ID:	msd5.i	Operator:	JJG
Client ID:	H4218	Lab ID:	RE05033-007		
Sample Info:	5050916B, RE05033-007				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		

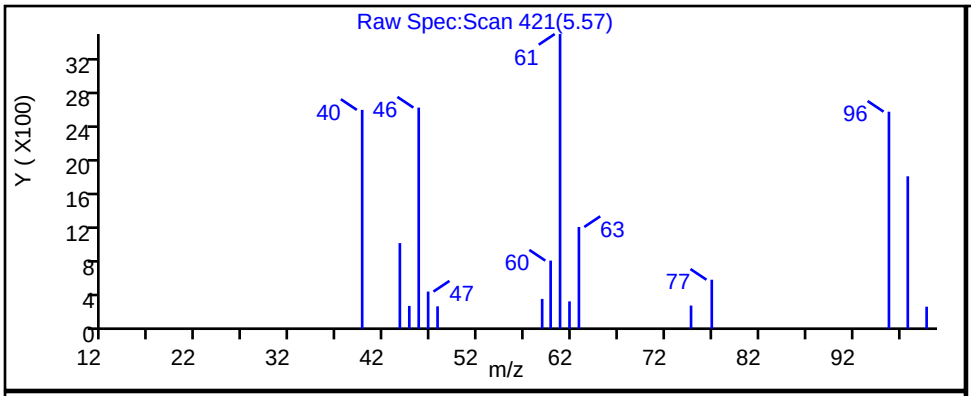


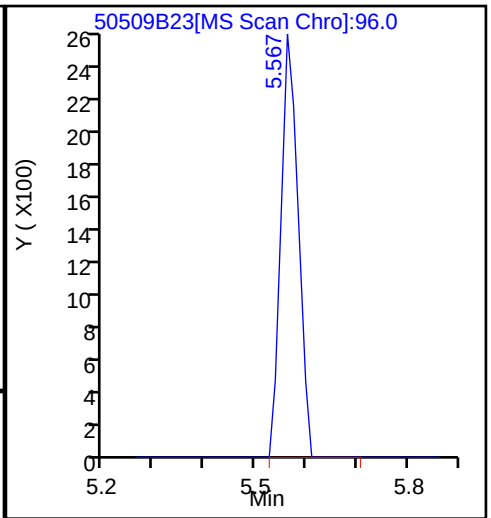
Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

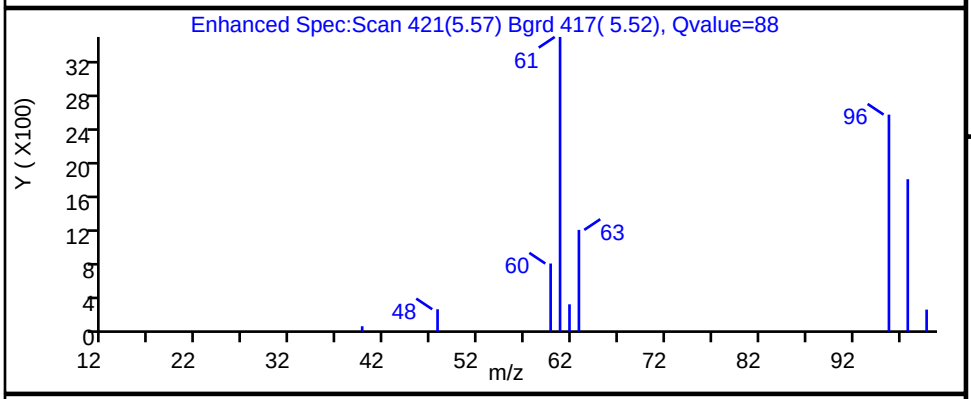
Shealy Environmental Services

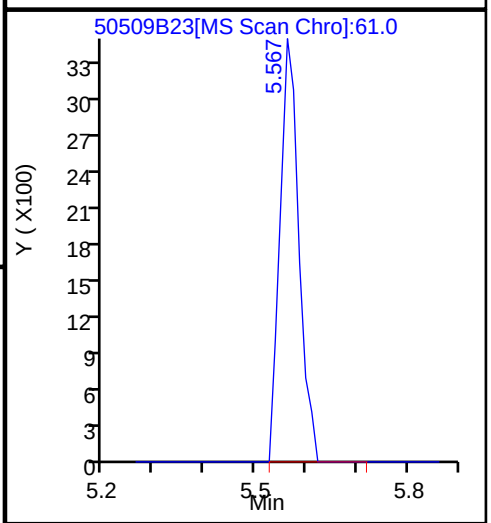
Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B23.D		
Injection Date:	10-May-2016 04:28:30	Inst. ID:	msd5.i
Client ID:	H4218	Lab ID:	RE05033-007
Sample Info:	5050916B, RE05033-007		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	JJG		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

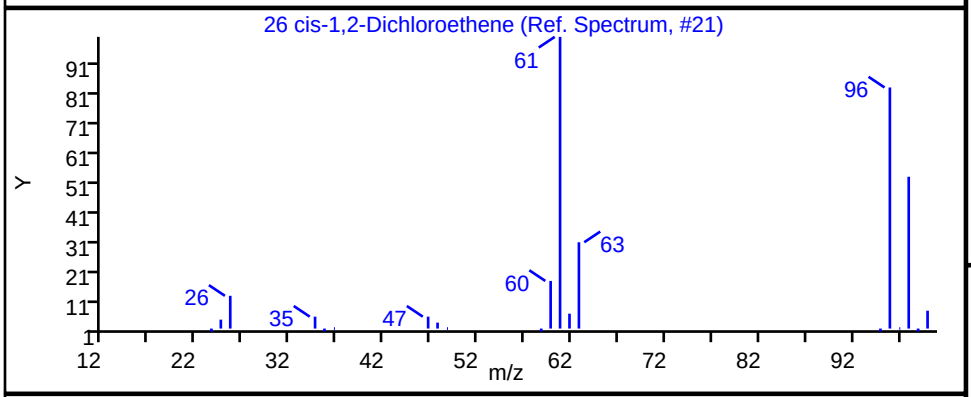
26 cis-1,2-Dichloroethene

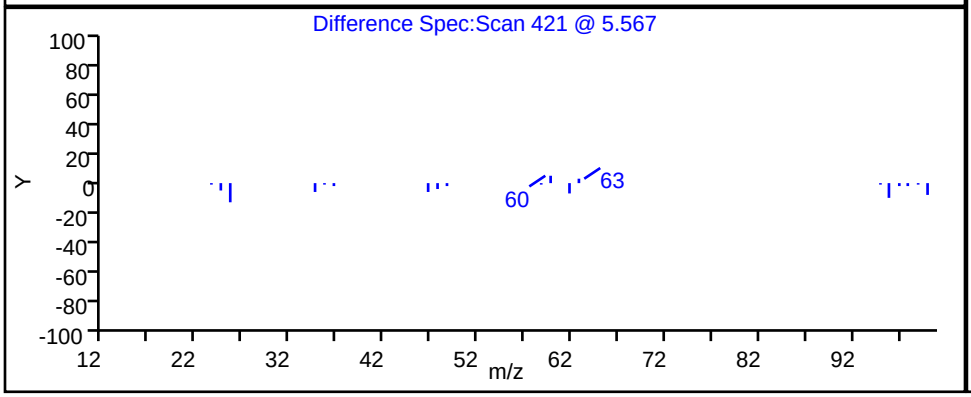


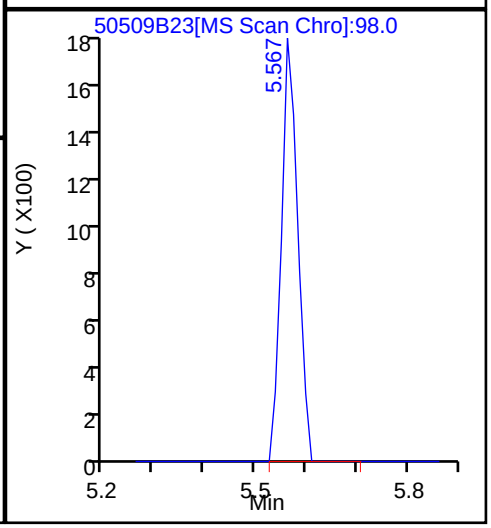










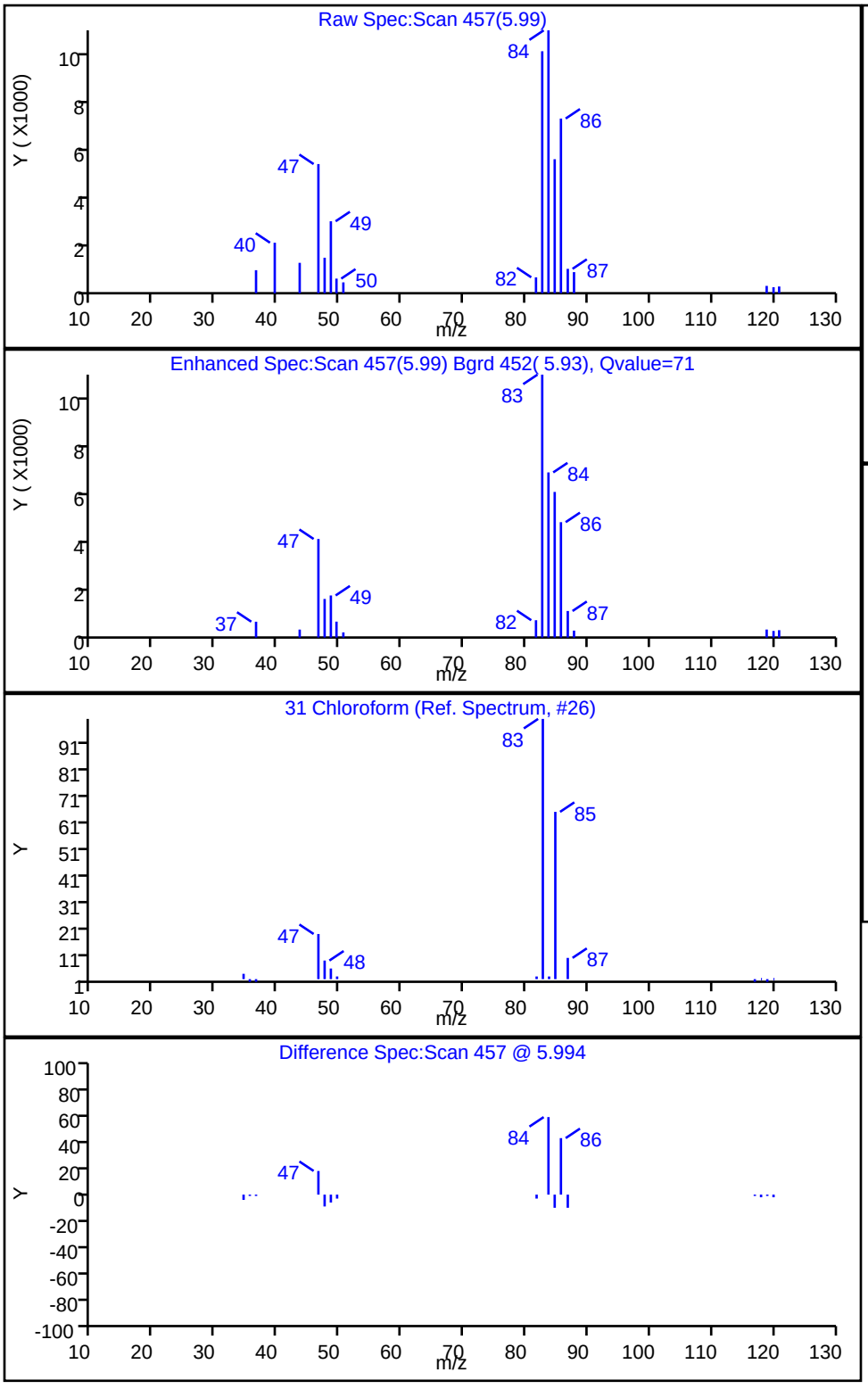


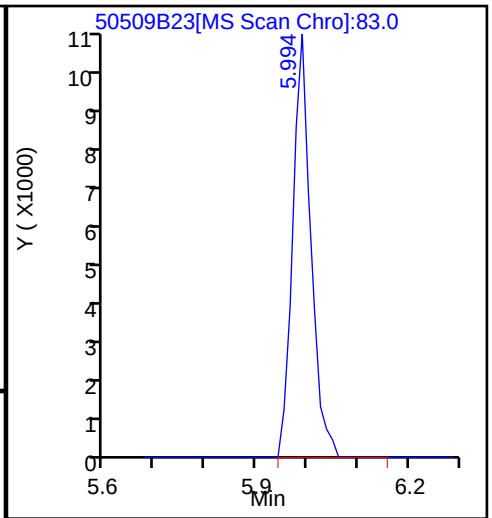
Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

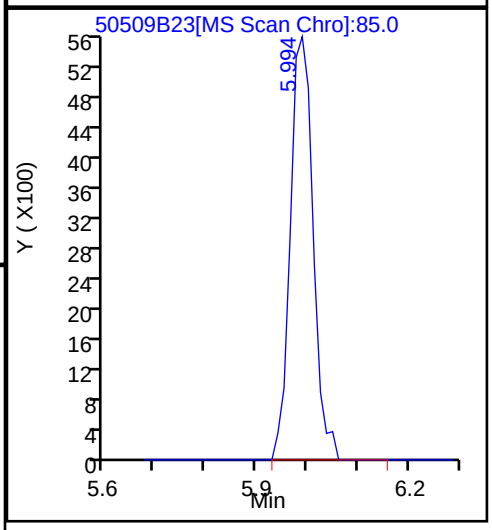
Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B23.D		
Injection Date:	10-May-2016 04:28:30	Inst. ID:	msd5.i
Client ID:	H4218	Lab ID:	RE05033-007
Sample Info:	5050916B, RE05033-007		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	JJG		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

31 Chloroform





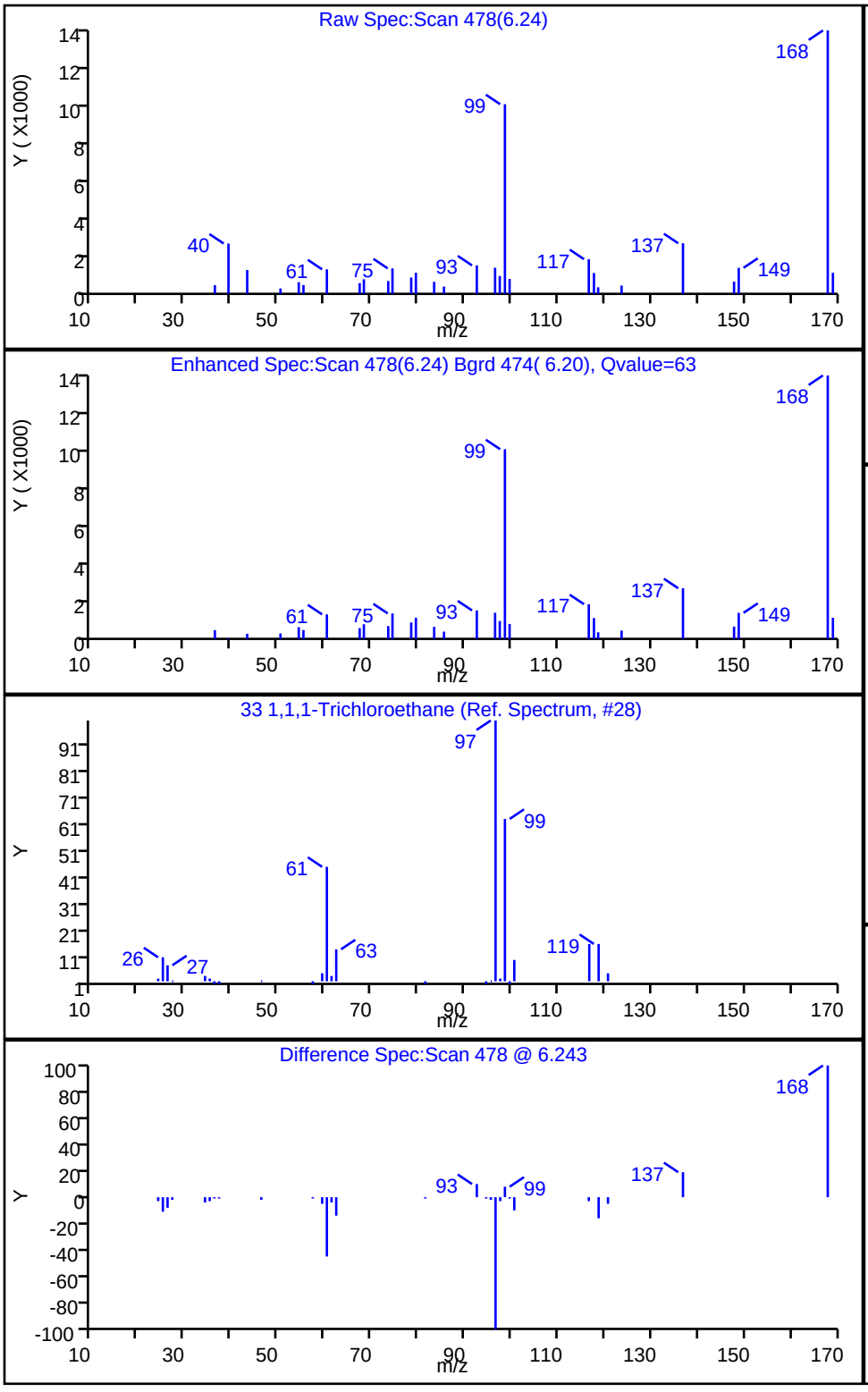


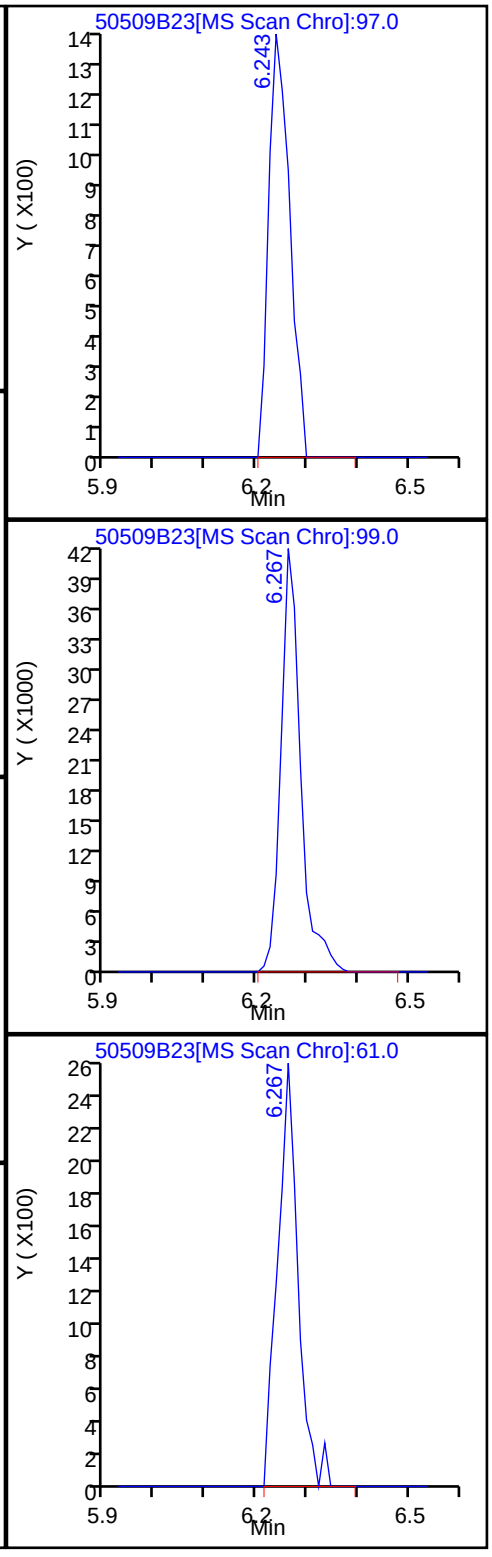
Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B23.D		
Injection Date:	10-May-2016 04:28:30	Inst. ID:	msd5.i
Client ID:	H4218	Lab ID:	RE05033-007
Sample Info:	5050916B, RE05033-007		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	JJG		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

33 1,1,1-Trichloroethane



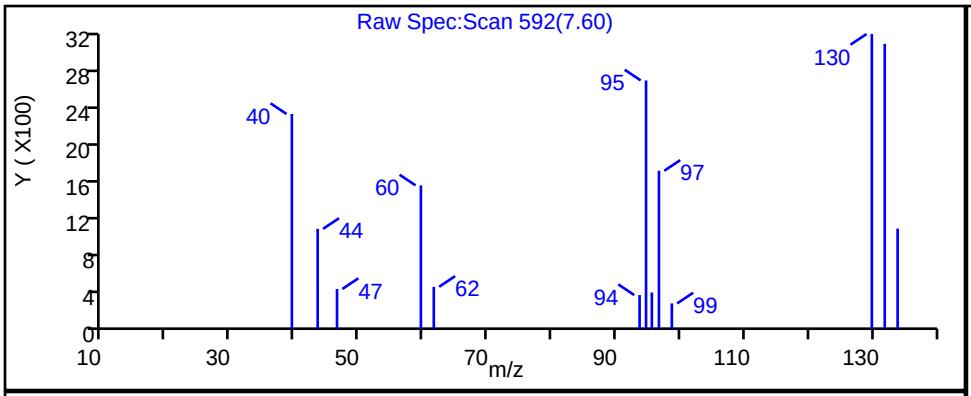


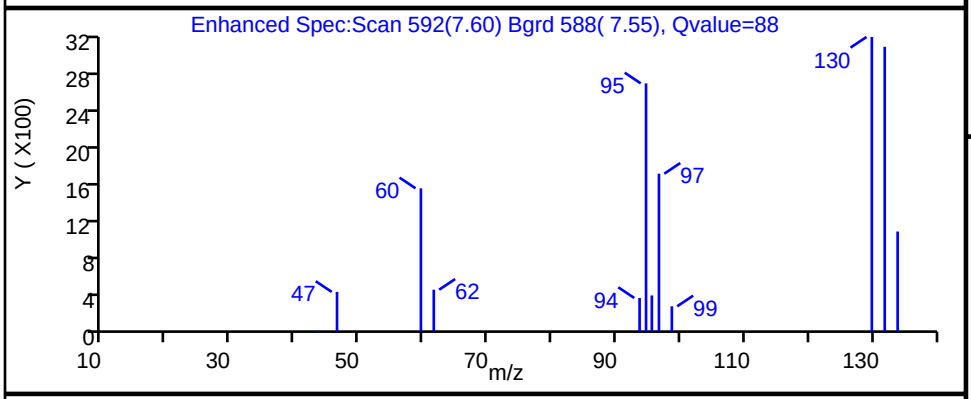
Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

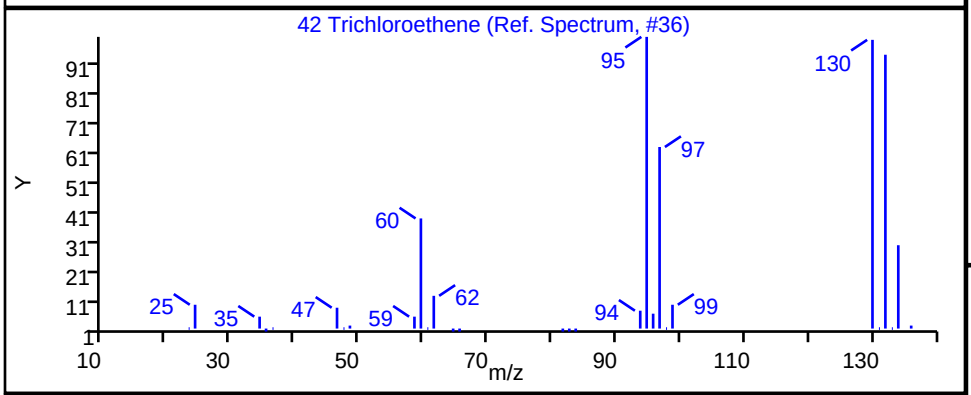
Shealy Environmental Services

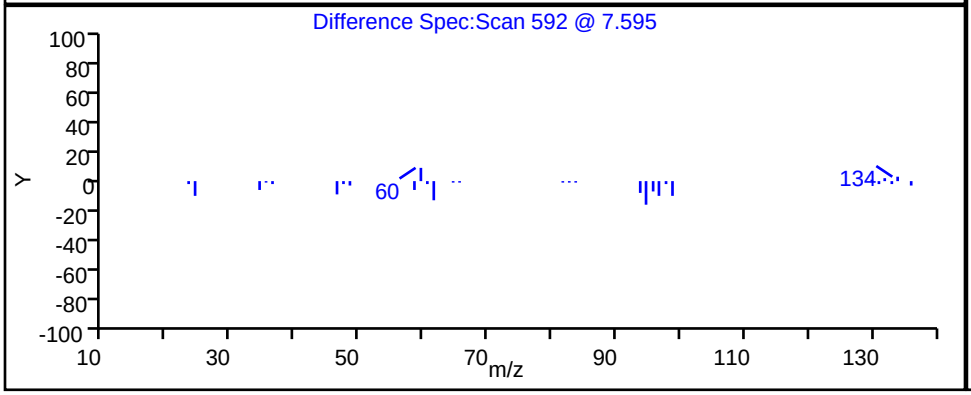
Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B23.D		
Injection Date:	10-May-2016 04:28:30	Inst. ID:	msd5.i
Client ID:	H4218	Lab ID:	RE05033-007
Sample Info:	5050916B, RE05033-007		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	JJG		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

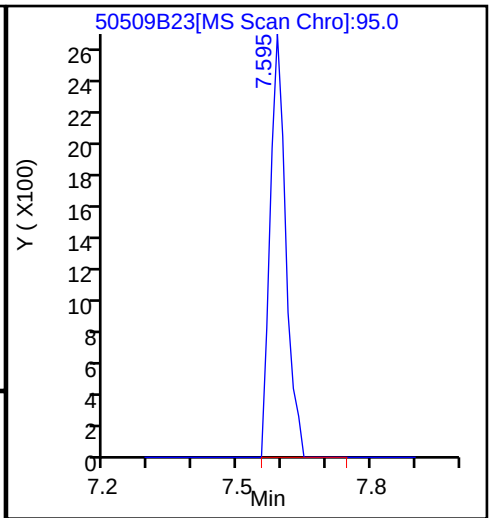
42 Trichloroethene

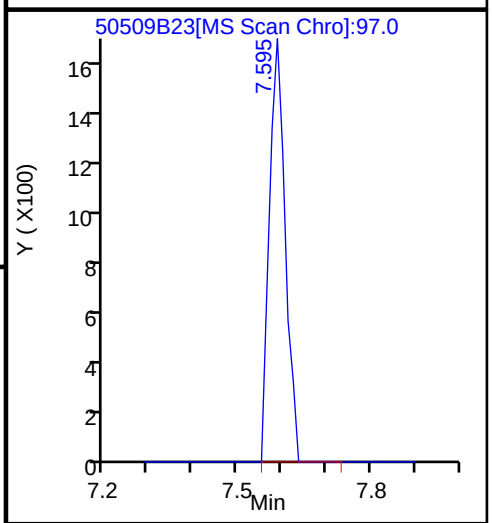


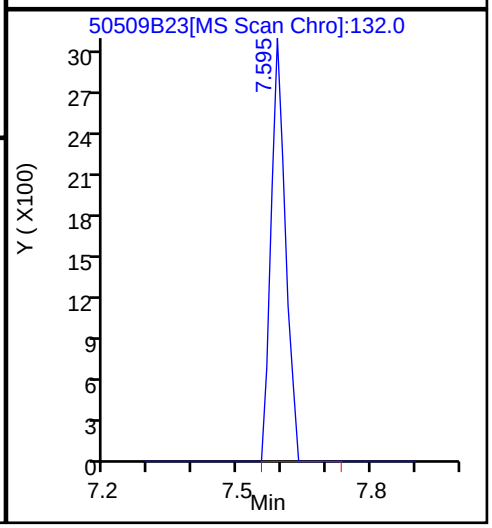










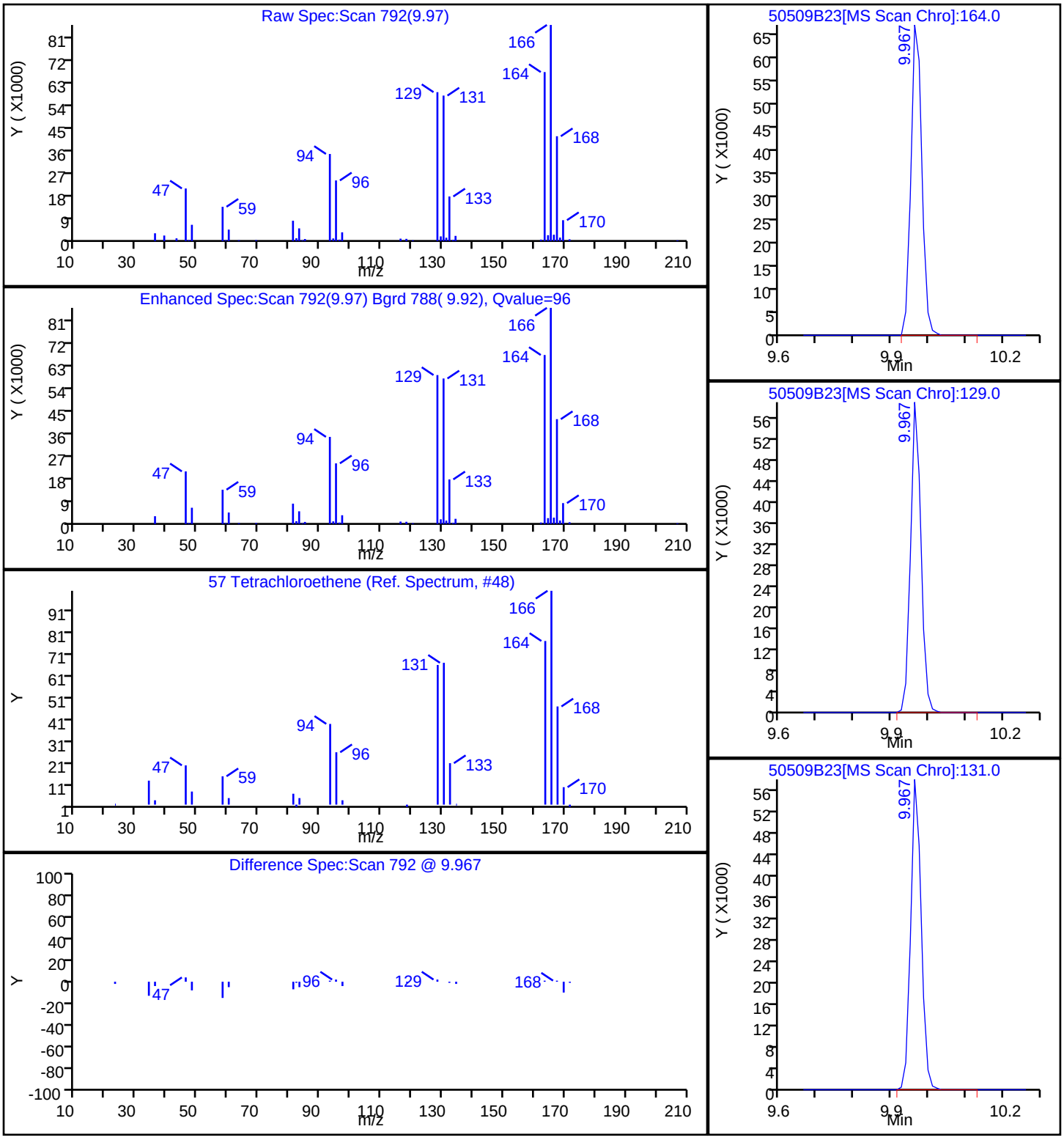


Report Date: 18-May-2016 09:49:41 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B23.D		
Injection Date:	10-May-2016 04:28:30	Inst. ID:	msd5.i
Client ID:	H4218	Lab ID:	RE05033-007
Sample Info:	5050916B, RE05033-007		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	JJG		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

57 Tetrachloroethene



TRACE-VOLATILE STANDARDS DATA

-Initial Calibration Data
Form 6A-OR

-Continuing Calibration Verification Data
Form 7A-OR

Initial Calibration

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD5 Calibration Date(s): 05/05/2016 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Calibration Time(s): 1358 1528

Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

LAB FILE ID: 50505A06 RRF 0.5 = 50505A06 RRF 1.0 = 50505A05

RRF 5.0 = 50505A04 RRF 10 = 50505A03 RRF 20 = 50505A02

COMPOUND	RRF 0.5	RRF 1.0	RRF 5.0	RRF 10	RRF 20	$\overline{RRF}$	%RSD
Dichlorodifluoromethane	0.149	0.199	0.227	0.229	0.221	0.205	16.3
Chloromethane	0.234	0.258	0.251	0.244	0.231	0.244	4.6
Vinyl chloride	0.207	0.230	0.243	0.237	0.224	0.228	6.1
Bromomethane	0.151	0.156	0.145	0.134	0.136	0.144	6.4
Chloroethane	0.135	0.120	0.131	0.129	0.135	0.130	4.6
Trichlorofluoromethane	0.133	0.154	0.206	0.210	0.213	0.183	20.2
1,1-Dichloroethene	0.183	0.178	0.186	0.189	0.195	0.186	3.5
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.176	0.166	0.192	0.194	0.196	0.185	7.1
Acetone	0.025	0.014	0.015	0.017	0.014	0.017	28.7
Carbon disulfide	0.528	0.469	0.468	0.471	0.483	0.484	5.3
Methyl acetate	0.092	0.073	0.072	0.080	0.069	0.077	11.6
Methylene chloride	0.188	0.168	0.175	0.179	0.177	0.177	4.2
trans-1,2-Dichloroethene	0.208	0.208	0.184	0.212	0.208	0.204	5.5
Methyl tert-butyl ether	0.389	0.340	0.367	0.377	0.347	0.364	5.6
1,1-Dichloroethane	0.453	0.412	0.409	0.426	0.434	0.427	4.2
cis-1,2-Dichloroethene	0.217	0.202	0.213	0.219	0.211	0.213	3.0
2-Butanone	0.031	0.025	0.024	0.026	0.023	0.026	11.7
Bromochloromethane	0.093	0.086	0.091	0.089	0.084	0.089	3.9
Chloroform	0.402	0.382	0.389	0.393	0.370	0.387	3.1
1,1,1-Trichloroethane	0.417	0.378	0.398	0.425	0.401	0.404	4.5
Cyclohexane	0.688	0.509	0.475	0.502	0.465	0.528	17.3
Carbon tetrachloride	0.428	0.392	0.415	0.443	0.424	0.420	4.4
Benzene	0.984	0.904	0.902	0.965	0.935	0.938	3.9
1,2-Dichloroethane	0.216	0.209	0.218	0.222	0.205	0.214	3.3
Trichloroethene	0.278	0.240	0.249	0.274	0.264	0.261	6.1
Methylcyclohexane	0.456	0.412	0.424	0.456	0.434	0.437	4.5
1,2-Dichloropropane	0.235	0.209	0.216	0.228	0.218	0.221	4.6
Bromodichloromethane	0.297	0.296	0.286	0.306	0.286	0.294	2.9
cis-1,3-Dichloropropene	0.275	0.304	0.288	0.309	0.300	0.295	4.6
4-Methyl-2-pentanone	0.113	0.097	0.098	0.098	0.082	0.098	11.3
Toluene	0.915	0.865	0.888	0.945	0.924	0.907	3.5
trans-1,3-Dichloropropene	0.224	0.216	0.220	0.221	0.218	0.220	1.4
1,1,2-Trichloroethane	0.116	0.112	0.108	0.107	0.102	0.109	4.9
Tetrachloroethene	0.285	0.268	0.248	0.261	0.256	0.264	5.3
2-Hexanone	0.070	0.061	0.061	0.057	0.051	0.060	11.6

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD5 Calibration Date(s): 05/05/2016 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Calibration Time(s): 1358 1528

Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

LAB FILE ID: 50505A06 RRF 0.5 = 50505A06 RRF 1.0 = 50505A05

RRF 5.0 = 50505A04 RRF 10 = 50505A03 RRF 20 = 50505A02

COMPOUND	RRF 0.5	RRF 1.0	RRF 5.0	RRF 10	RRF 20	$\overline{RRF}$	%RSD
Dibromochloromethane	0.158	0.176	0.176	0.184	0.170	0.173	5.4
1,2-Dibromoethane	0.120	0.106	0.114	0.113	0.106	0.112	5.1
Chlorobenzene	0.608	0.591	0.593	0.613	0.595	0.600	1.7
Ethylbenzene	1.070	1.030	1.037	1.076	1.040	1.051	2.0
o-Xylene	0.438	0.412	0.430	0.445	0.415	0.428	3.4
m, p-Xylene	0.445	0.431	0.449	0.468	0.450	0.448	2.9
Styrene	0.661	0.620	0.652	0.657	0.632	0.644	2.7
Bromoform	0.167	0.173	0.188	0.185	0.174	0.178	5.0
Isopropylbenzene	1.141	1.088	1.130	1.214	1.135	1.142	4.0
1,1,2,2-Tetrachloroethane	0.134	0.113	0.123	0.121	0.103	0.119	9.8
1,3-Dichlorobenzene	1.017	1.053	1.011	0.977	0.974	1.006	3.2
1,4-Dichlorobenzene	1.044	1.021	0.998	0.961	0.952	0.995	3.9
1,2-Dichlorobenzene	0.861	0.906	0.893	0.872	0.825	0.871	3.6
1,2-Dibromo-3-chloropropane	0.043	0.040	0.041	0.037	0.031	0.038	12.5
1,2,4-Trichlorobenzene	0.610	0.616	0.628	0.607	0.533	0.599	6.3
1,2,3-Trichlorobenzene	0.455	0.482	0.482	0.453	0.392	0.453	8.1
Vinyl Chloride-d3	0.189	0.198	0.203	0.195	0.188	0.195	3.2
Chloroethane-d5	0.149	0.131	0.148	0.143	0.152	0.145	5.6
1,1-Dichloroethene-d2	0.438	0.419	0.449	0.443	0.476	0.445	4.6
2-Butanone-d5	0.037	0.033	0.035	0.035	0.030	0.034	7.2
Chloroform-d	0.414	0.392	0.405	0.402	0.395	0.402	2.2
1,2-Dichloroethane-d4	0.184	0.177	0.187	0.172	0.165	0.177	5.1
Benzene-d6	0.972	0.906	0.928	0.961	0.955	0.944	2.8
1,2-Dichloropropane-d6	0.285	0.230	0.234	0.240	0.234	0.244	9.4
Toluene-d8	0.817	0.769	0.816	0.826	0.834	0.812	3.1
trans-1,3-Dichloropropene-d4	0.197	0.214	0.214	0.211	0.208	0.209	3.2
2-Hexanone-d5	0.038	0.037	0.036	0.034	0.031	0.035	8.4
1,1,2,2-Tetrachloroethane-d2	0.132	0.120	0.123	0.115	0.102	0.119	9.3
1,2-Dichlorobenzene-d4	0.559	0.562	0.572	0.535	0.513	0.548	4.3

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A02.D		
Lab Sample ID:	VSTD020OW	Client Sample ID:	VSTD020OW
Injection Date:	05-May-2016 13:58:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050516, VSTD020OW		
Method:	\\Organics\DD\chem\msd5.i\5050516.b\TRACE-5.m		
Method Date:	05-May-2016 15:55:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Ical, Level: 5	ALS Bottle:	2
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	05-May-2016 15:55:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.702	1.702	0.000	322913	20.000	20.179	
2 Chloromethane	50.0	1.856	1.856	0.000	337553	20.000	18.793	
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	274177	20.000	19.163	
4 Vinyl Chloride	62.0	1.986	1.986	0.000	326813	20.000	19.165	
5 Bromomethane	94.0	2.318	2.318	0.000	198175	20.000	19.030	
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	221614	20.000	21.135	
7 Chloroethane	64.0	2.425	2.425	0.000	197794	20.000	20.988	
8 Trichlorofluoromethane	101.0	2.698	2.698	0.000	310733	20.000	21.733	
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	694800	20.000	21.300	
13 1,1-Dichloroethene	96.0	3.302	3.302	0.000	285162	20.000	20.862	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.314	3.314	0.000	286041	20.000	20.925	
14 Acetone	43.0	3.326	3.326	0.000	197585	200.00	184.72	
15 Carbon Disulfide	76.0	3.587	3.587	0.000	704936	20.000	20.422	
16 Methyl Acetate	43.0	3.753	3.753	0.000	101489	20.000	18.871	
17 Methylene Chloride	84.0	3.895	3.895	0.000	258441	20.000	20.268	
20 Methyl tert-Butyl Ether	73.0	4.263	4.263	0.000	506639	20.000	19.395	
21 trans-1,2-Dichloroethene	96.0	4.263	4.263	0.000	303553	20.000	20.475	
23 1,1-Dichloroethane	63.0	4.809	4.809	0.000	633474	20.000	20.646	
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	442693	200.00	183.18	
26 cis-1,2-Dichloroethene	96.0	5.567	5.567	0.000	308806	20.000	20.008	
28 2-Butanone	43.0	5.579	5.579	0.000	338818	200.00	188.37	
29 Bromochloromethane	128.0	5.888	5.888	0.000	122635	20.000	19.197	
$ 30 Chloroform-d	84.0	5.971	5.971	0.000	577005	20.000	19.829	
31 Chloroform	83.0	5.994	5.994	0.000	539699	20.000	19.283	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	444074	20.000	20.014	
32 Cyclohexane	56.0	6.326	6.326	0.000	515590	20.000	19.068	
34 Carbon Tetrachloride	117.0	6.469	6.469	0.000	469517	20.000	20.251	

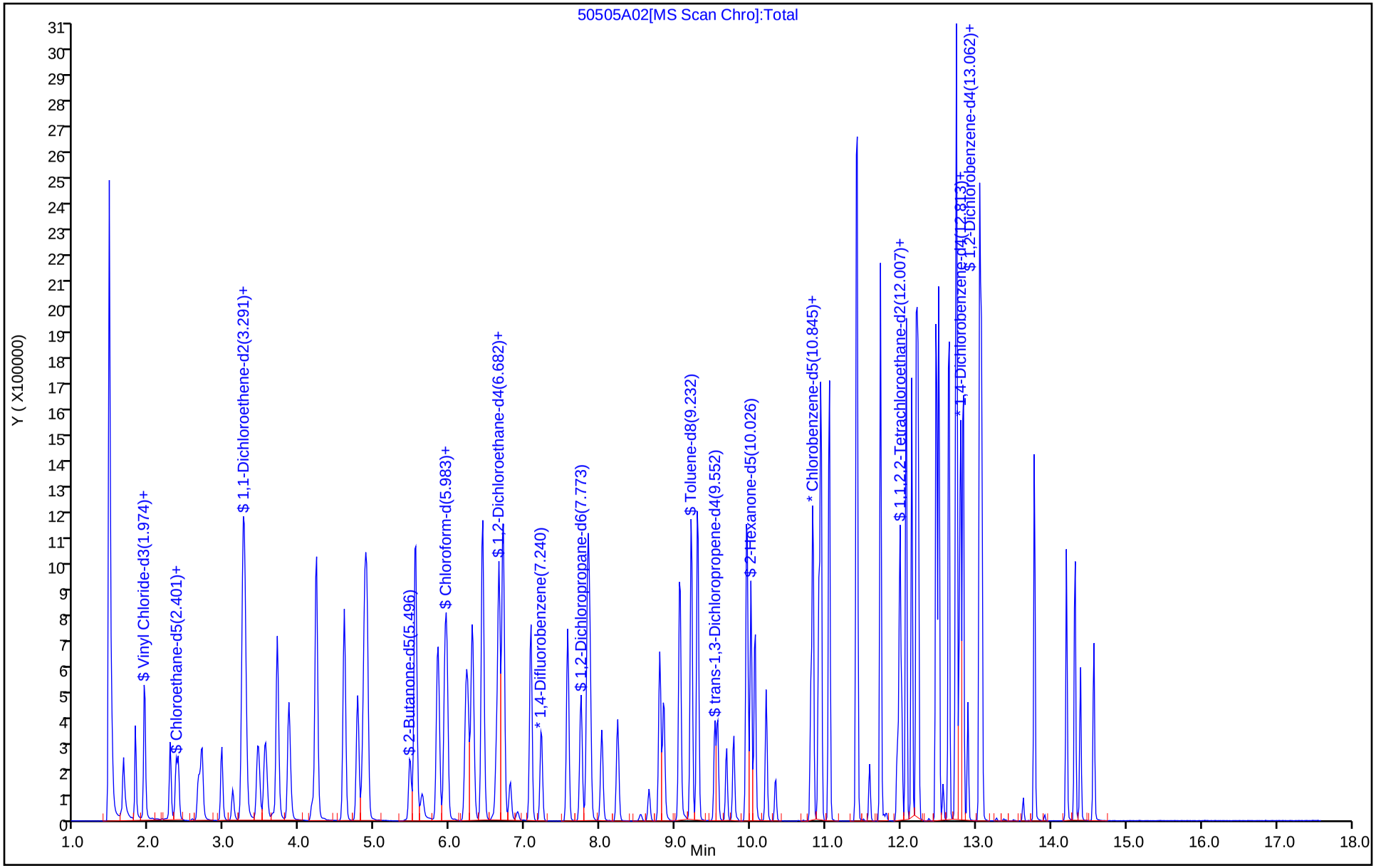
Report Date: 06-May-2016 10:12:31 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd5.i\5050516.b\50505A02.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.647	6.647	0.000	240982	20.000	18.832	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	1058740	20.000	20.376	
37 Benzene	78.0	6.730	6.730	0.000	1035887	20.000	20.177	
39 1,2-Dichloroethane	62.0	6.753	6.753	0.000	298859	20.000	19.185	
* 41 1,4-Difluorobenzene	114.0	7.240	7.240	0.000	365089	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	292722	20.000	20.555	
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	258933	20.000	19.936	
43 Methylcyclohexane	83.0	7.868	7.868	0.000	481127	20.000	20.117	
45 1,2-Dichloropropane	63.0	7.892	7.892	0.000	241143	20.000	20.001	
49 Bromodichloromethane	83.0	8.259	8.259	0.000	317287	20.000	19.488	
50 cis-1,3-Dichloropropene	75.0	8.876	8.876	0.000	332999	20.000	20.001	
51 4-Methyl-2-pentanone	43.0	9.078	9.078	0.000	910195	200.00	175.02	
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	924449	20.000	20.567	
53 Toluene	91.0	9.315	9.315	0.000	1024029	20.000	20.405	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	230973	20.000	19.688	
55 trans-1,3-Dichloropropene	75.0	9.588	9.588	0.000	241205	20.000	19.891	
56 1,1,2-Trichloroethane	97.0	9.801	9.801	0.000	112700	20.000	18.995	
57 Tetrachloroethene	164.0	9.967	9.967	0.000	283692	20.000	19.819	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	340555	200.00	179.28	
60 2-Hexanone	43.0	10.086	10.086	0.000	562271	200.00	176.56	
61 Dibromochloromethane	129.0	10.228	10.228	0.000	188878	20.000	19.306	
62 1,2-Dibromoethane	107.0	10.358	10.358	0.000	117701	20.000	19.325	
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	277079	5.0000	5.0000	
64 Chlorobenzene	112.0	10.845	10.845	0.000	659243	20.000	19.895	
65 Ethylbenzene	91.0	10.951	10.951	0.000	1152387	20.000	19.887	
67 m+p-Xylenes	106.0	11.070	11.070	0.000	498977	20.000	20.035	
68 o-Xylene	106.0	11.426	11.426	0.000	460104	20.000	19.518	
69 Styrene	104.0	11.437	11.437	0.000	700504	20.000	19.745	
70 Bromoform	173.0	11.603	11.603	0.000	105707	20.000	19.322	
71 Isopropylbenzene	105.0	11.746	11.746	0.000	1257511	20.000	19.875	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	112945	20.000	17.684	
74 1,1,2,2-Tetrachloroethane	83.0	11.983	11.983	0.000	114357	20.000	17.932	
83 1,3-Dichlorobenzene	146.0	12.742	12.742	0.000	591379	20.000	19.406	
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	151839	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.813	12.813	0.000	578055	20.000	19.365	
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	311862	20.000	18.825	
89 1,2-Dichlorobenzene	146.0	13.098	13.098	0.000	500956	20.000	18.871	
90 1,2-Dibromo-3-chloropropane	75.0	13.643	13.643	0.000	18598	20.000	16.440	
91 1,2,4-Trichlorobenzene	180.0	14.212	14.212	0.000	323456	20.000	17.870	
94 1,2,3-Trichlorobenzene	180.0	14.580	14.580	0.000	238194	20.000	17.350	

Report Date: 06-May-2016 10:12:31 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A02.D				
Injection Date:	05-May-2016 13:58:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VSTD020OW	Lab ID:	VSTD020OW		
Sample Info:	5050516, VSTD020OW				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A03.D		
Lab Sample ID:	VSTD010OW	Client Sample ID:	VSTD010OW
Injection Date:	05-May-2016 14:20:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050516, VSTD010OW		
Method:	\\Organics\DD\chem\msd5.i\5050516.b\TRACE-5.m		
Method Date:	05-May-2016 15:55:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Ical, Level: 4	ALS Bottle:	3
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	05-May-2016 15:55:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.701	1.701	0.000	160197	10.000	10.469	
2 Chloromethane	50.0	1.856	1.856	0.000	170301	10.000	9.9148	
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	136178	10.000	9.9530	
4 Vinyl Chloride	62.0	1.974	1.974	0.000	165485	10.000	10.148	
5 Bromomethane	94.0	2.318	2.318	0.000	93878	10.000	9.4268	
$ 6 Chloroethane-d5	69.0	2.389	2.389	0.000	99879	10.000	9.9609	
7 Chloroethane	64.0	2.425	2.425	0.000	90386	10.000	10.029	
8 Trichlorofluoromethane	101.0	2.698	2.698	0.000	146947	10.000	10.748	
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	309162	10.000	9.9114	
13 1,1-Dichloroethene	96.0	3.290	3.290	0.000	132040	10.000	10.101	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.302	3.302	0.000	135609	10.000	10.374	
14 Acetone	43.0	3.326	3.326	0.000	115221	100.00	112.64	
15 Carbon Disulfide	76.0	3.587	3.587	0.000	329215	10.000	9.9733	
16 Methyl Acetate	43.0	3.753	3.753	0.000	55965	10.000	10.882	
17 Methylene Chloride	84.0	3.895	3.895	0.000	125157	10.000	10.264	
20 Methyl tert-Butyl Ether	73.0	4.251	4.251	0.000	263395	10.000	10.544	
21 trans-1,2-Dichloroethene	96.0	4.263	4.263	0.000	148235	10.000	10.456	
23 1,1-Dichloroethane	63.0	4.808	4.808	0.000	297155	10.000	10.128	
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	243409	100.00	105.33	
26 cis-1,2-Dichloroethene	96.0	5.567	5.567	0.000	152731	10.000	10.348	
28 2-Butanone	43.0	5.579	5.579	0.000	180067	100.00	104.69	
29 Bromochloromethane	128.0	5.888	5.888	0.000	62217	10.000	10.185	
$ 30 Chloroform-d	84.0	5.971	5.971	0.000	280847	10.000	10.093	
31 Chloroform	83.0	5.994	5.994	0.000	274411	10.000	10.253	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	226478	10.000	10.614	
32 Cyclohexane	56.0	6.326	6.326	0.000	267754	10.000	10.297	
34 Carbon Tetrachloride	117.0	6.469	6.469	0.000	236008	10.000	10.585	

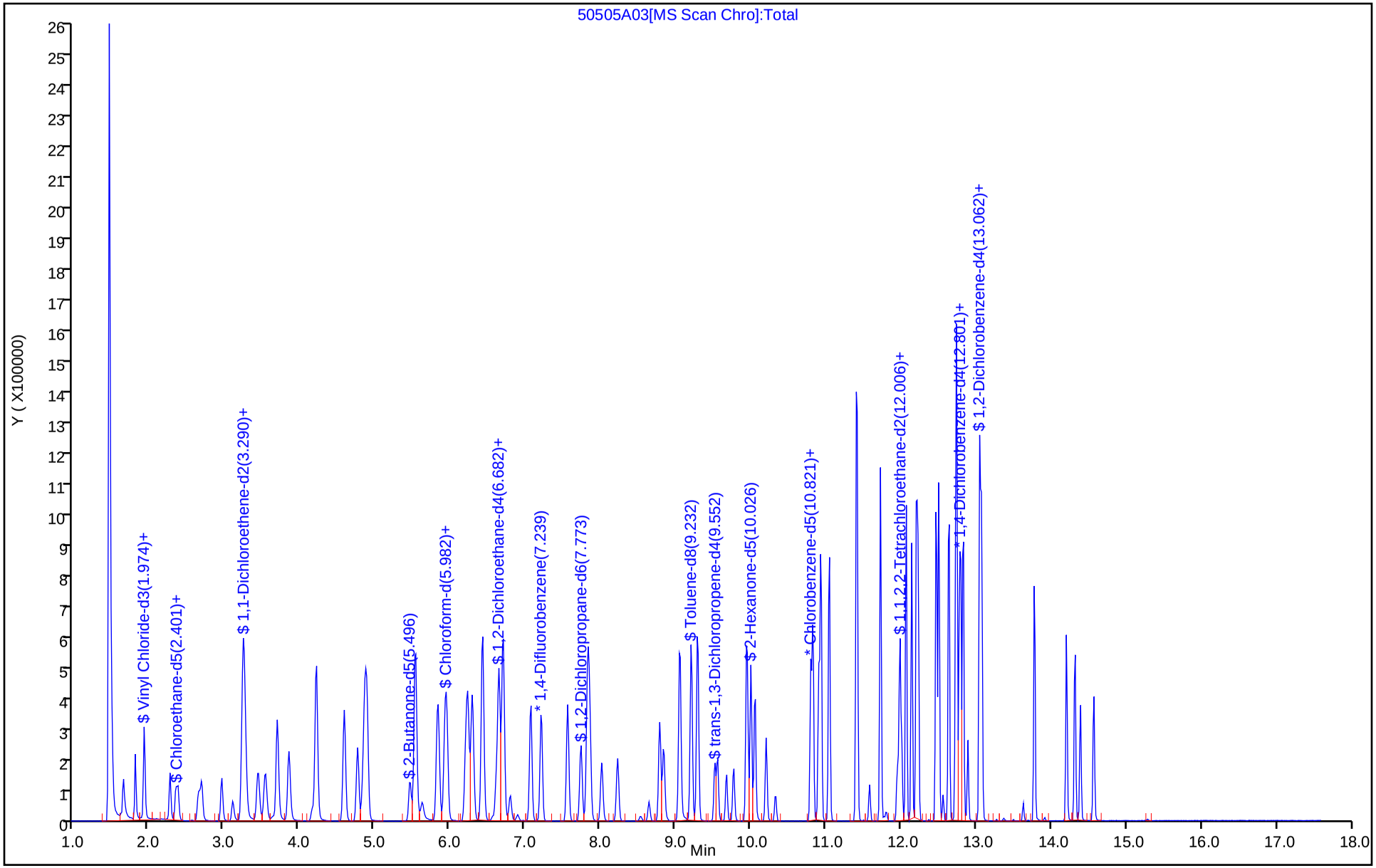
Report Date: 06-May-2016 10:12:31 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd5.i\5050516.b\50505A03.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.646	0.000	119977	10.000	9.8048	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	512252	10.000	10.252	
37 Benzene	78.0	6.729	6.729	0.000	514355	10.000	10.418	
39 1,2-Dichloroethane	62.0	6.753	6.753	0.000	155072	10.000	10.410	
* 41 1,4-Difluorobenzene	114.0	7.239	7.239	0.000	349122	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	146027	10.000	10.663	
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	127849	10.000	10.236	
43 Methylcyclohexane	83.0	7.868	7.868	0.000	243243	10.000	10.576	
45 1,2-Dichloropropane	63.0	7.892	7.892	0.000	121299	10.000	10.462	
49 Bromodichloromethane	83.0	8.259	8.259	0.000	163309	10.000	10.430	
50 cis-1,3-Dichloropropene	75.0	8.864	8.864	0.000	164746	10.000	10.290	
51 4-Methyl-2-pentanone	43.0	9.077	9.077	0.000	523554	100.00	104.69	
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	439978	10.000	10.179	
53 Toluene	91.0	9.315	9.315	0.000	503823	10.000	10.440	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	112436	10.000	9.9662	
55 trans-1,3-Dichloropropene	75.0	9.587	9.587	0.000	117943	10.000	10.114	
56 1,1,2-Trichloroethane	97.0	9.801	9.801	0.000	57011	10.000	9.992	
57 Tetrachloroethene	164.0	9.967	9.967	0.000	139030	10.000	10.100	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	180166	100.00	98.624	
60 2-Hexanone	43.0	10.085	10.085	0.000	304286	100.00	99.359	
61 Dibromochloromethane	129.0	10.228	10.228	0.000	97848	10.000	10.400	
62 1,2-Dibromoethane	107.0	10.346	10.346	0.000	60224	10.000	10.282	
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	266457	5.0000	5.0000	
64 Chlorobenzene	112.0	10.856	10.856	0.000	326734	10.000	10.253	
65 Ethylbenzene	91.0	10.951	10.951	0.000	573233	10.000	10.287	
67 m+p-Xylenes	106.0	11.070	11.070	0.000	249192	10.000	10.405	
68 o-Xylene	106.0	11.425	11.425	0.000	237002	10.000	10.455	
69 Styrene	104.0	11.437	11.437	0.000	350194	10.000	10.264	
70 Bromoform	173.0	11.603	11.603	0.000	56647	10.000	10.265	
71 Isopropylbenzene	105.0	11.746	11.746	0.000	647089	10.000	10.635	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	61514	10.000	10.015	
74 1,1,2,2-Tetrachloroethane	83.0	11.983	11.983	0.000	64473	10.000	10.513	
83 1,3-Dichlorobenzene	146.0	12.742	12.742	0.000	299356	10.000	9.7381	
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	153168	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.813	12.813	0.000	294273	10.000	9.7729	
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	163987	10.000	9.8127	
89 1,2-Dichlorobenzene	146.0	13.097	13.097	0.000	267142	10.000	9.9761	
90 1,2-Dibromo-3-chloropropane	75.0	13.643	13.643	0.000	11386	10.000	9.9777	
91 1,2,4-Trichlorobenzene	180.0	14.212	14.212	0.000	186009	10.000	10.187	
94 1,2,3-Trichlorobenzene	180.0	14.580	14.580	0.000	138709	10.000	10.016	

Report Date: 06-May-2016 10:12:31 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A03.D				
Injection Date:	05-May-2016 14:20:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VSTD010OW	Lab ID:	VSTD010OW		
Sample Info:	5050516, VSTD010OW				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A04.D		
Lab Sample ID:	VSTD005OW	Client Sample ID:	VSTD005OW
Injection Date:	05-May-2016 14:43:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050516, VSTD005OW		
Method:	\\Organics\DD\chem\msd5.i\5050516.b\TRACE-5.m		
Method Date:	05-May-2016 15:55:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Ical, Level: 3	ALS Bottle:	4
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	05-May-2016 15:55:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.702	1.702	0.000	78233	5.0000	5.1792	
2 Chloromethane	50.0	1.856	1.856	0.000	86388	5.0000	5.0951	
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	69928	5.0000	5.1776	
4 Vinyl Chloride	62.0	1.974	1.974	0.000	83871	5.0000	5.2103	
5 Bromomethane	94.0	2.318	2.318	0.000	49876	5.0000	5.0737	
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	51069	5.0000	5.1596	
7 Chloroethane	64.0	2.425	2.425	0.000	45119	5.0000	5.0718	
8 Trichlorofluoromethane	101.0	2.698	2.698	0.000	70897	5.0000	5.2531	
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	154715	5.0000	5.0247	
13 1,1-Dichloroethene	96.0	3.302	3.302	0.000	64153	5.0000	4.9719	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.302	3.302	0.000	66336	5.0000	5.1410	
14 Acetone	43.0	3.326	3.326	0.000	51497	50.000	51.002	
15 Carbon Disulfide	76.0	3.587	3.587	0.000	161161	5.0000	4.9460	
16 Methyl Acetate	43.0	3.765	3.765	0.000	24864	5.0000	4.8977	
17 Methylene Chloride	84.0	3.895	3.895	0.000	60189	5.0000	5.0005	
20 Methyl tert-Butyl Ether	73.0	4.263	4.263	0.000	126540	5.0000	5.1318	
21 trans-1,2-Dichloroethene	96.0	4.263	4.263	0.000	63510	5.0000	4.5382	
23 1,1-Dichloroethane	63.0	4.808	4.808	0.000	141095	5.0000	4.8716	
$ 25 2-Butanone-d5	46.0	5.508	5.508	0.000	118951	50.000	52.143	
26 cis-1,2-Dichloroethene	96.0	5.567	5.567	0.000	73400	5.0000	5.0382	
28 2-Butanone	43.0	5.579	5.579	0.000	83614	50.000	49.248	
29 Bromochloromethane	128.0	5.888	5.888	0.000	31206	5.0000	5.1750	
$ 30 Chloroform-d	84.0	5.971	5.971	0.000	139552	5.0000	5.0804	
31 Chloroform	83.0	5.994	5.994	0.000	133924	5.0000	5.0692	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	109767	5.0000	4.9748	
32 Cyclohexane	56.0	6.326	6.326	0.000	130997	5.0000	4.8718	
34 Carbon Tetrachloride	117.0	6.469	6.469	0.000	114213	5.0000	4.9539	

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Data File: \\Organics\DD\chem\msd5.i\5050516.b\50505A04.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.647	6.647	0.000	64493	5.0000	5.3393	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	255715	5.0000	4.9490	
37 Benzene	78.0	6.730	6.730	0.000	248519	5.0000	4.8679	
39 1,2-Dichloroethane	62.0	6.753	6.753	0.000	75015	5.0000	5.1015	
* 41 1,4-Difluorobenzene	114.0	7.239	7.239	0.000	344626	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	68725	5.0000	4.8530	
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	64576	5.0000	4.9999	
43 Methylcyclohexane	83.0	7.868	7.868	0.000	116694	5.0000	4.9065	
45 1,2-Dichloropropane	63.0	7.892	7.892	0.000	59475	5.0000	4.9606	
49 Bromodichloromethane	83.0	8.259	8.259	0.000	78831	5.0000	4.8690	
50 cis-1,3-Dichloropropene	75.0	8.876	8.876	0.000	79418	5.0000	4.7969	
51 4-Methyl-2-pentanone	43.0	9.078	9.078	0.000	269653	50.000	52.142	
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	224856	5.0000	5.0305	
53 Toluene	91.0	9.315	9.315	0.000	244765	5.0000	4.9047	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	58877	5.0000	5.0469	
55 trans-1,3-Dichloropropene	75.0	9.587	9.587	0.000	60681	5.0000	5.0321	
56 1,1,2-Trichloroethane	97.0	9.801	9.801	0.000	29751	5.0000	5.0425	
57 Tetrachloroethene	164.0	9.967	9.967	0.000	68455	5.0000	4.8093	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	99300	50.000	52.567	
60 2-Hexanone	43.0	10.086	10.086	0.000	168964	50.000	53.355	
61 Dibromochloromethane	129.0	10.228	10.228	0.000	48532	5.0000	4.9884	
62 1,2-Dibromoethane	107.0	10.358	10.358	0.000	31473	5.0000	5.1966	
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	275533	5.0000	5.0000	
64 Chlorobenzene	112.0	10.844	10.844	0.000	163496	5.0000	4.9617	
65 Ethylbenzene	91.0	10.951	10.951	0.000	285800	5.0000	4.9597	
67 m+p-Xylenes	106.0	11.070	11.070	0.000	123625	5.0000	4.9917	
68 o-Xylene	106.0	11.426	11.426	0.000	118520	5.0000	5.0560	
69 Styrene	104.0	11.437	11.437	0.000	179589	5.0000	5.0904	
70 Bromoform	173.0	11.603	11.603	0.000	28747	5.0000	5.2278	
71 Isopropylbenzene	105.0	11.746	11.746	0.000	311418	5.0000	4.9497	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	33967	5.0000	5.3480	
74 1,1,2,2-Tetrachloroethane	83.0	11.983	11.983	0.000	33960	5.0000	5.3550	
83 1,3-Dichlorobenzene	146.0	12.742	12.742	0.000	154233	5.0000	5.0352	
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	152620	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.813	12.813	0.000	152347	5.0000	5.0777	
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	87276	5.0000	5.2412	
89 1,2-Dichlorobenzene	146.0	13.098	13.098	0.000	136361	5.0000	5.1105	
90 1,2-Dibromo-3-chloropropane	75.0	13.643	13.643	0.000	6321	5.0000	5.5591	
91 1,2,4-Trichlorobenzene	180.0	14.212	14.212	0.000	95877	5.0000	5.2697	
94 1,2,3-Trichlorobenzene	180.0	14.580	14.580	0.000	73522	5.0000	5.3278	

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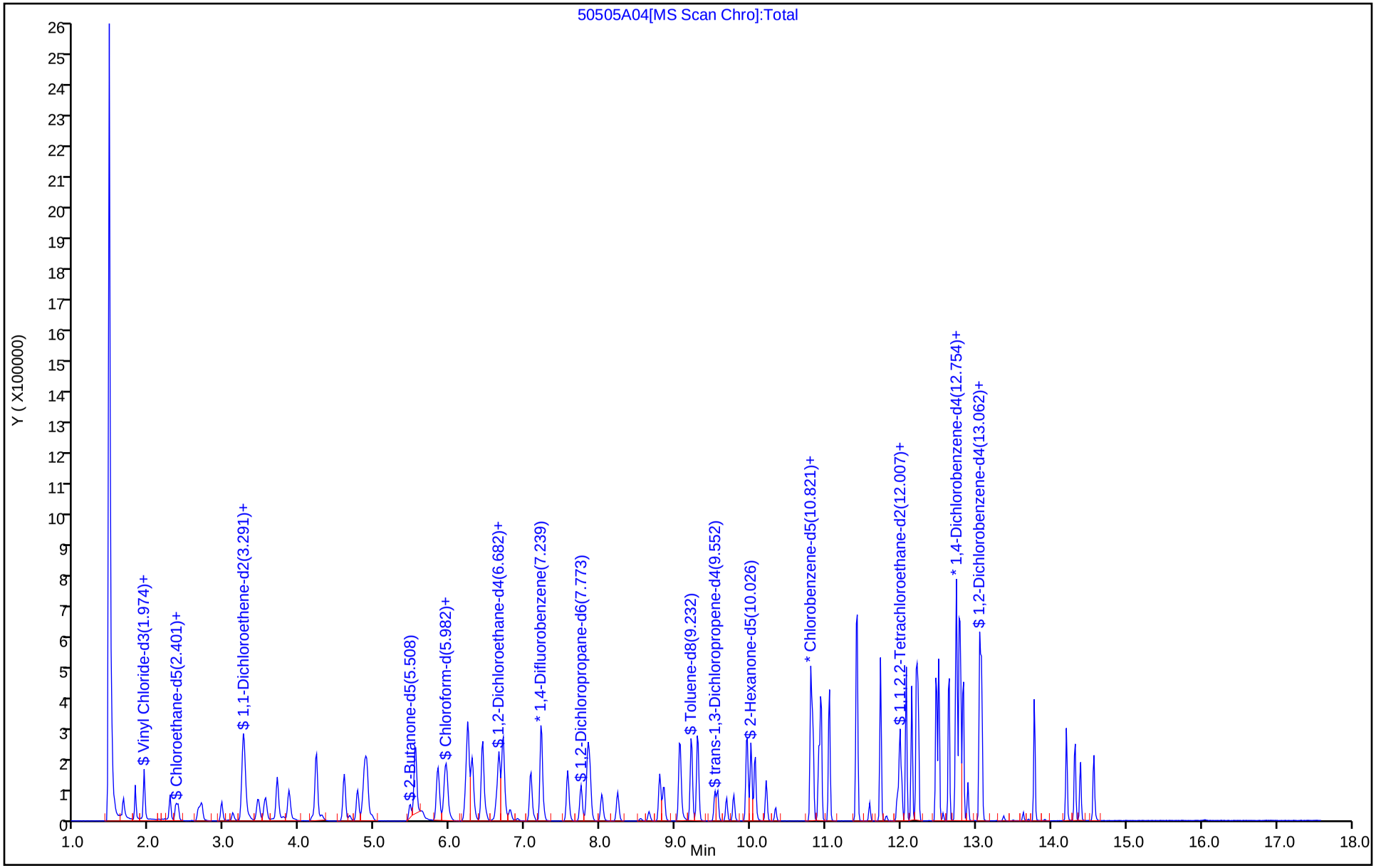
Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A04.D				
Injection Date:	05-May-2016 14:43:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VSTD005OW	Lab ID:	VSTD005OW		
Sample Info:	5050516, VSTD005OW				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



Report Date: 06-May-2016 10:12:32 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A05.D		
Lab Sample ID:	VSTD001OW	Client Sample ID:	VSTD001OW
Injection Date:	05-May-2016 15:06:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050516, VSTD001OW		
Method:	\\Organics\DD\chem\msd5.i\5050516.b\TRACE-5.m		
Method Date:	05-May-2016 15:55:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Ical, Level: 2	ALS Bottle:	5
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	05-May-2016 15:30:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.702	1.702	0.000	13837	1.0000	0.90833	
2 Chloromethane	50.0	1.856	1.856	0.000	17952	1.0000	1.0499	
$ 3 Vinyl Chloride-d3	65.0	1.962	1.962	0.000	13771	1.0000	1.0110	
4 Vinyl Chloride	62.0	1.974	1.974	0.000	15989	1.0000	0.98492	
5 Bromomethane	94.0	2.318	2.318	0.000	10817	1.0000	1.0911	
$ 6 Chloroethane-d5	69.0	2.389	2.389	0.000	9136	1.0000	0.91525	
7 Chloroethane	64.0	2.425	2.425	0.000	8373	1.0000	0.93329	
8 Trichlorofluoromethane	101.0	2.698	2.698	0.000	10724	1.0000	0.78791	
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	29155	1.0000	0.93890	
13 1,1-Dichloroethene	96.0	3.291	3.291	0.000	12393	1.0000	0.95239	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.302	3.302	0.000	11557	1.0000	0.88812	
14 Acetone	43.0	3.338	3.338	0.000	9469	10.000	9.2991	
15 Carbon Disulfide	76.0	3.587	3.587	0.000	32611	1.0000	0.9924	
16 Methyl Acetate	43.0	3.765	3.765	0.000	5062	1.0000	0.98872	M
17 Methylene Chloride	84.0	3.895	3.895	0.000	11654	1.0000	0.96007	
20 Methyl tert-Butyl Ether	73.0	4.263	4.263	0.000	23611	1.0000	0.94947	
21 trans-1,2-Dichloroethene	96.0	4.263	4.263	0.000	14438	1.0000	1.0230	
23 1,1-Dichloroethane	63.0	4.809	4.809	0.000	28641	1.0000	0.98058	
$ 25 2-Butanone-d5	46.0	5.508	5.508	0.000	22730	10.000	9.8799	
26 cis-1,2-Dichloroethene	96.0	5.579	5.579	0.000	14062	1.0000	0.95709	
28 2-Butanone	43.0	5.579	5.579	0.000	17572	10.000	10.263	
29 Bromochloromethane	128.0	5.888	5.888	0.000	6000	1.0000	0.98664	
$ 30 Chloroform-d	84.0	5.971	5.971	0.000	27237	1.0000	0.98322	
31 Chloroform	83.0	5.994	5.994	0.000	26555	1.0000	0.9967	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	20897	1.0000	0.94299	
32 Cyclohexane	56.0	6.326	6.326	0.000	28154	1.0000	1.0425	M
34 Carbon Tetrachloride	117.0	6.469	6.469	0.000	21722	1.0000	0.93811	

Report Date: 06-May-2016 10:12:32 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd5.i\5050516.b\50505A05.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.647	6.647	0.000	12304	1.0000	1.0101	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	50143	1.0000	0.96625	
37 Benzene	78.0	6.730	6.730	0.000	50031	1.0000	0.97575	
39 1,2-Dichloroethane	62.0	6.753	6.753	0.000	14524	1.0000	0.97942	
* 41 1,4-Difluorobenzene	114.0	7.239	7.239	0.000	347551	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	13303	1.0000	0.93534	
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	12707	1.0000	0.97961	
43 Methylcyclohexane	83.0	7.856	7.856	0.000	22818	1.0000	0.95527	
45 1,2-Dichloropropane	63.0	7.892	7.892	0.000	11580	1.0000	0.96168	
49 Bromodichloromethane	83.0	8.259	8.259	0.000	16403	1.0000	1.0088	
50 cis-1,3-Dichloropropene	75.0	8.864	8.864	0.000	16820	1.0000	1.0116	
51 4-Methyl-2-pentanone	43.0	9.078	9.078	0.000	53768	10.000	10.352	
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	42544	1.0000	0.94770	
53 Toluene	91.0	9.315	9.315	0.000	47857	1.0000	0.95484	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	11829	1.0000	1.0096	
55 trans-1,3-Dichloropropene	75.0	9.587	9.587	0.000	11962	1.0000	0.98768	
56 1,1,2-Trichloroethane	97.0	9.801	9.801	0.000	6178	1.0000	1.0426	
57 Tetrachloroethene	164.0	9.967	9.967	0.000	14827	1.0000	1.0372	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	20225	10.000	10.660	
60 2-Hexanone	43.0	10.086	10.086	0.000	33603	10.000	10.565	
61 Dibromochloromethane	129.0	10.228	10.228	0.000	9742	1.0000	0.9970	
62 1,2-Dibromoethane	107.0	10.358	10.358	0.000	5877	1.0000	0.96618	M
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	276727	5.0000	5.0000	
64 Chlorobenzene	112.0	10.844	10.844	0.000	32684	1.0000	0.98760	
65 Ethylbenzene	91.0	10.951	10.951	0.000	57008	1.0000	0.98504	
67 m+p-Xylenes	106.0	11.070	11.070	0.000	23864	1.0000	0.95942	
68 o-Xylene	106.0	11.426	11.426	0.000	22775	1.0000	0.96739	
69 Styrene	104.0	11.437	11.437	0.000	34308	1.0000	0.96825	
70 Bromoform	173.0	11.603	11.603	0.000	5255	1.0000	0.96185	
71 Isopropylbenzene	105.0	11.746	11.746	0.000	60206	1.0000	0.95278	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	6664	1.0000	1.0447	
74 1,1,2,2-Tetrachloroethane	83.0	11.983	11.983	0.000	6249	1.0000	0.98113	
83 1,3-Dichlorobenzene	146.0	12.742	12.742	0.000	31920	1.0000	1.0488	
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	151637	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.813	12.813	0.000	30970	1.0000	1.0389	
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	17029	1.0000	1.0293	
89 1,2-Dichlorobenzene	146.0	13.098	13.098	0.000	27484	1.0000	1.0367	
90 1,2-Dibromo-3-chloropropane	75.0	13.643	13.643	0.000	1207	1.0000	1.0684	
91 1,2,4-Trichlorobenzene	180.0	14.212	14.212	0.000	18689	1.0000	1.0339	
94 1,2,3-Trichlorobenzene	180.0	14.580	14.580	0.000	14607	1.0000	1.0654	

QC Flag Legend

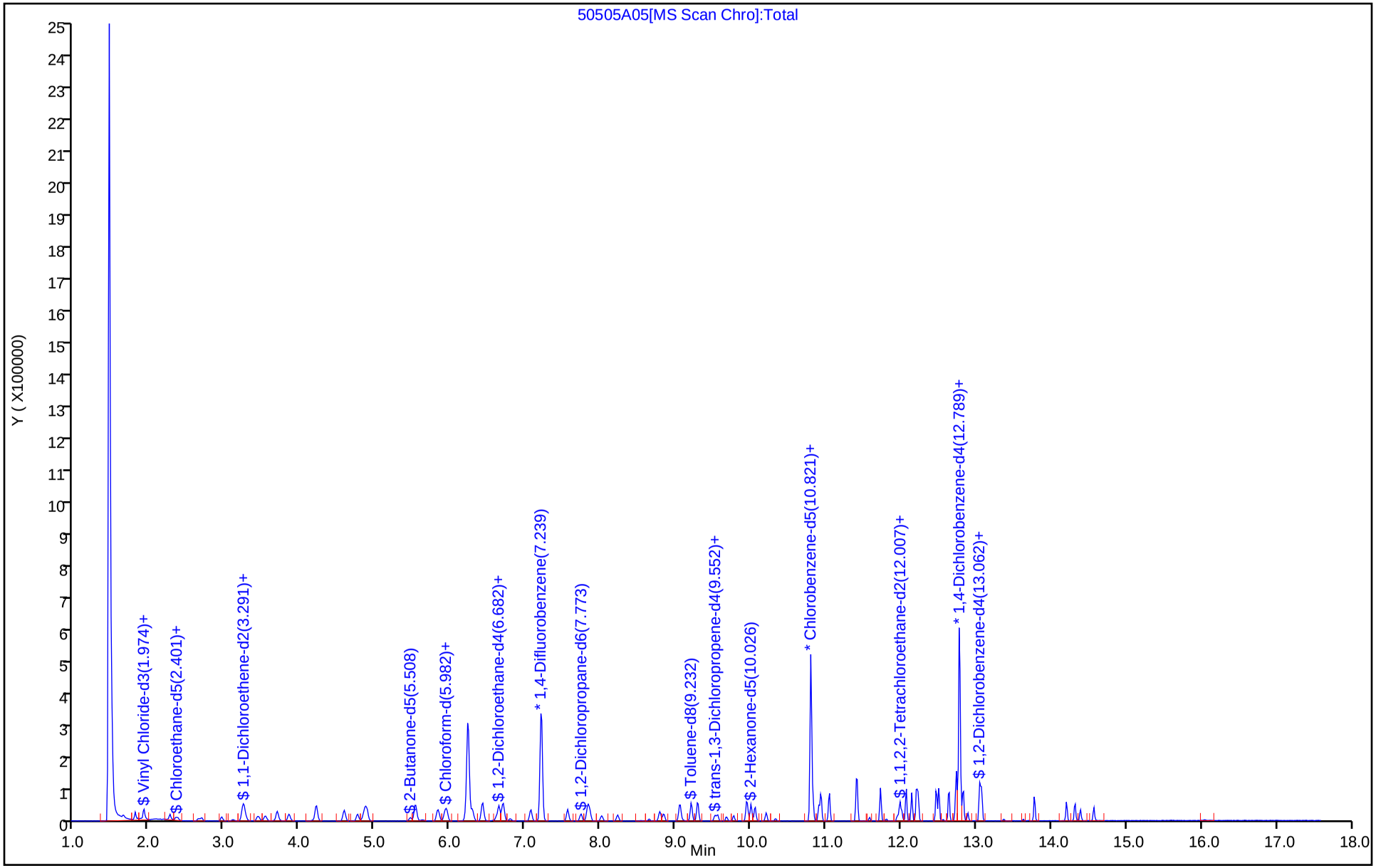
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 06-May-2016 10:12:32 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A05.D				
Injection Date:	05-May-2016 15:06:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VSTD001OW	Lab ID:	VSTD001OW		
Sample Info:	5050516, VSTD001OW				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



Report Date: 06-May-2016 10:12:32 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

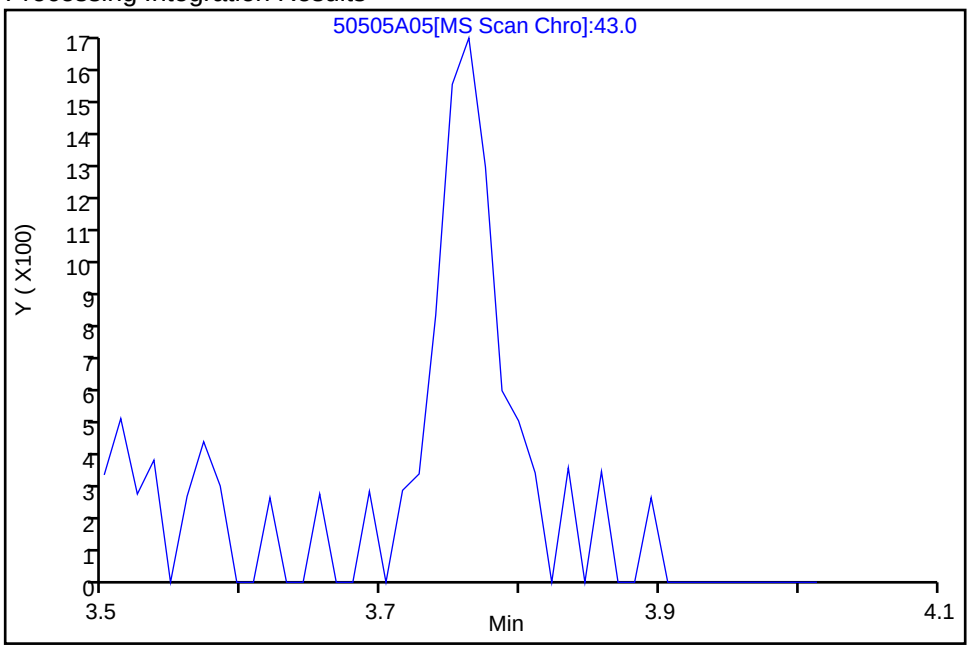
Manual Integration Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A05.D		
Injection Date:	05-May-2016 15:06:30	Inst. ID:	msd5.i
Client ID:	VSTD001OW	Lab ID:	VSTD001OW
Sample Info:	5050516, VSTD001OW		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

16 Methyl Acetate, CAS: 79-20-9

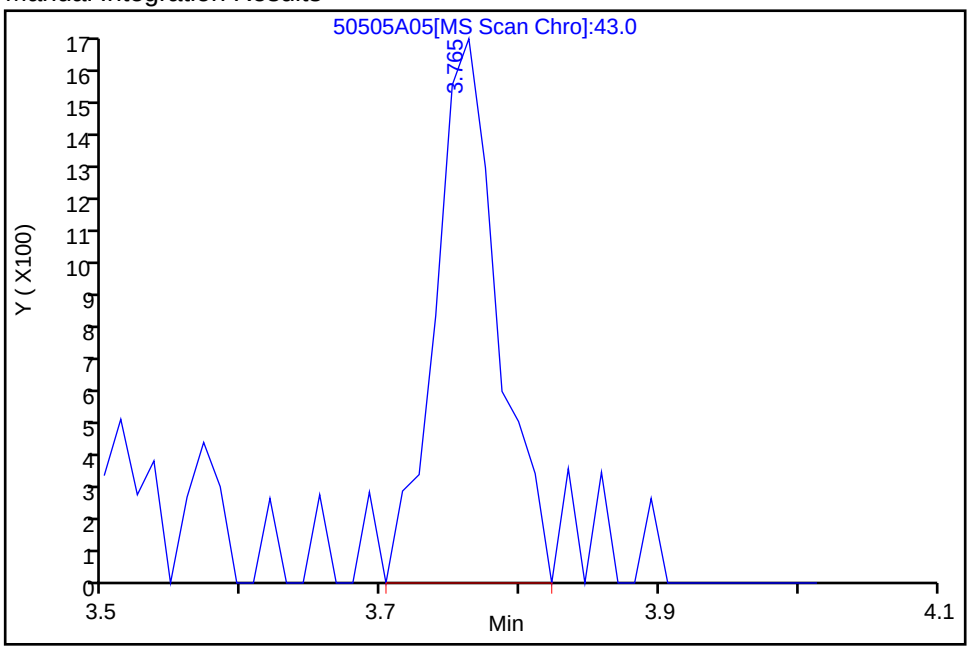
Not Detected
3.765

Processing Integration Results



Manual Integration Results

RT:	3.765
Area:	5062
Amount:	0.98872
Amount Units:	ug/L



Data Editor: all, 05-May-2016 15:30:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 06-May-2016 10:12:32 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

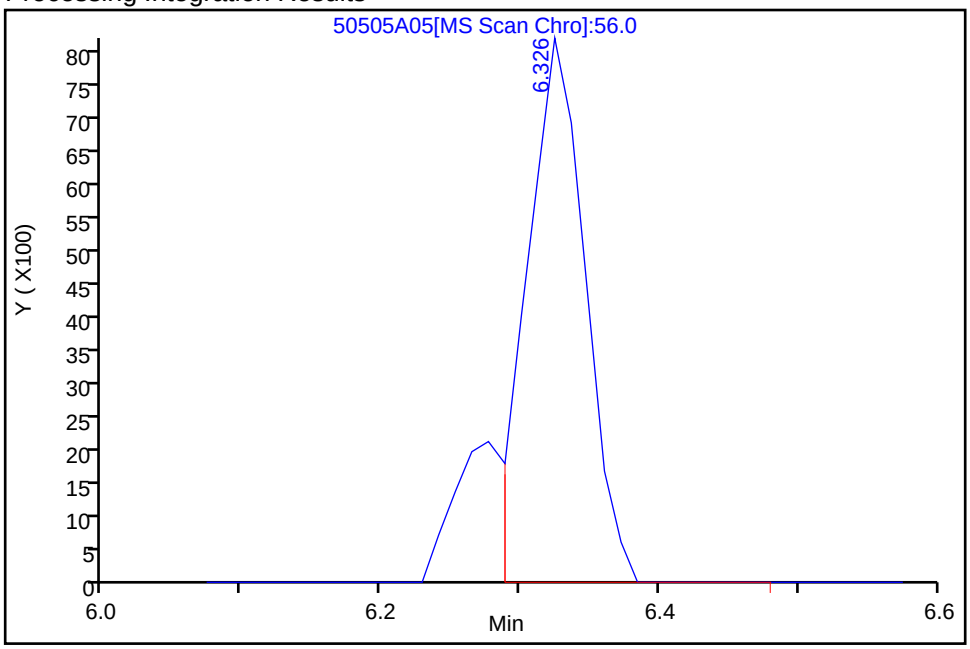
Manual Integration Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A05.D		
Injection Date:	05-May-2016 15:06:30	Inst. ID:	msd5.i
Client ID:	VSTD001OW	Lab ID:	VSTD001OW
Sample Info:	5050516, VSTD001OW		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

32 Cyclohexane, CAS: 110-82-7

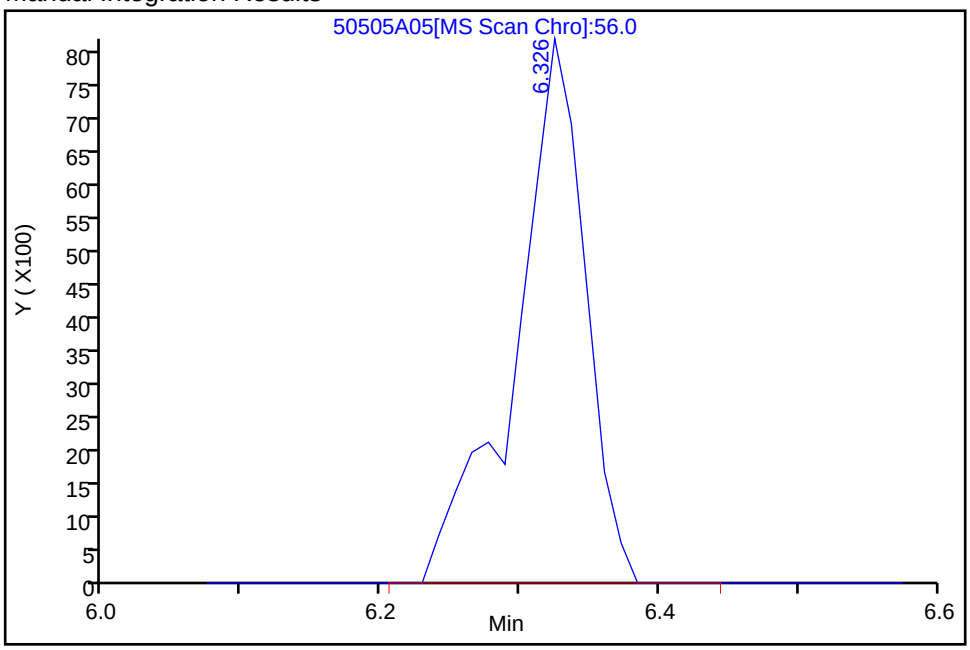
Processing Integration Results

RT: 6.326
Area: 23164
Amount: 0.89930
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.326
Area: 28154
Amount: 1.0425
Amount Units: ug/L



Data Editor: all, 05-May-2016 15:30:30
Audit Action: Mint
Audit Reason: IAI

Report Date: 06-May-2016 10:12:32 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

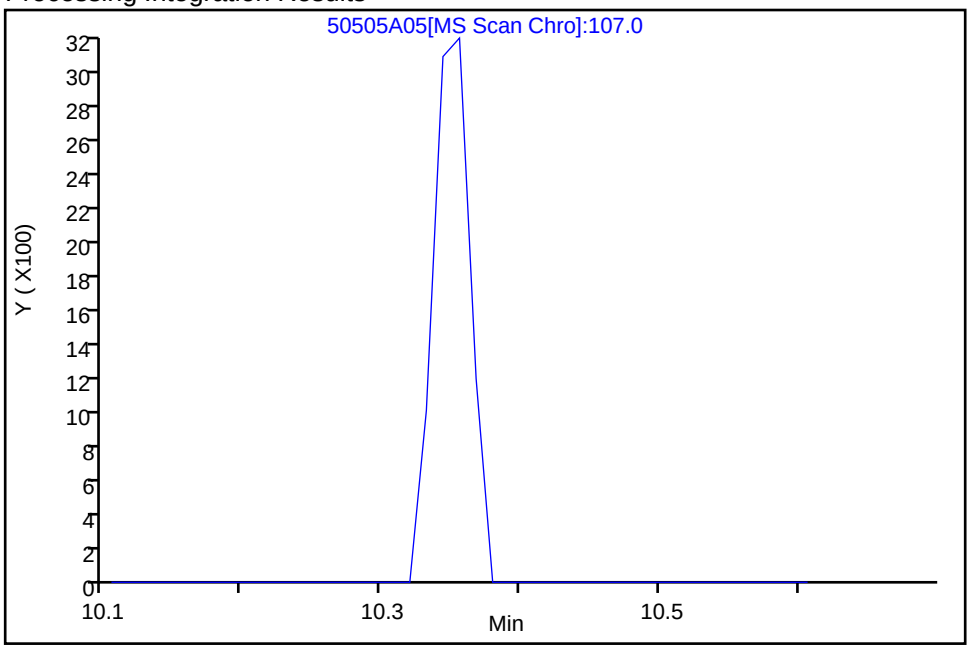
Manual Integration Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A05.D		
Injection Date:	05-May-2016 15:06:30	Inst. ID:	msd5.i
Client ID:	VSTD001OW	Lab ID:	VSTD001OW
Sample Info:	5050516, VSTD001OW		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

62 1,2-Dibromoethane, CAS: 106-93-4

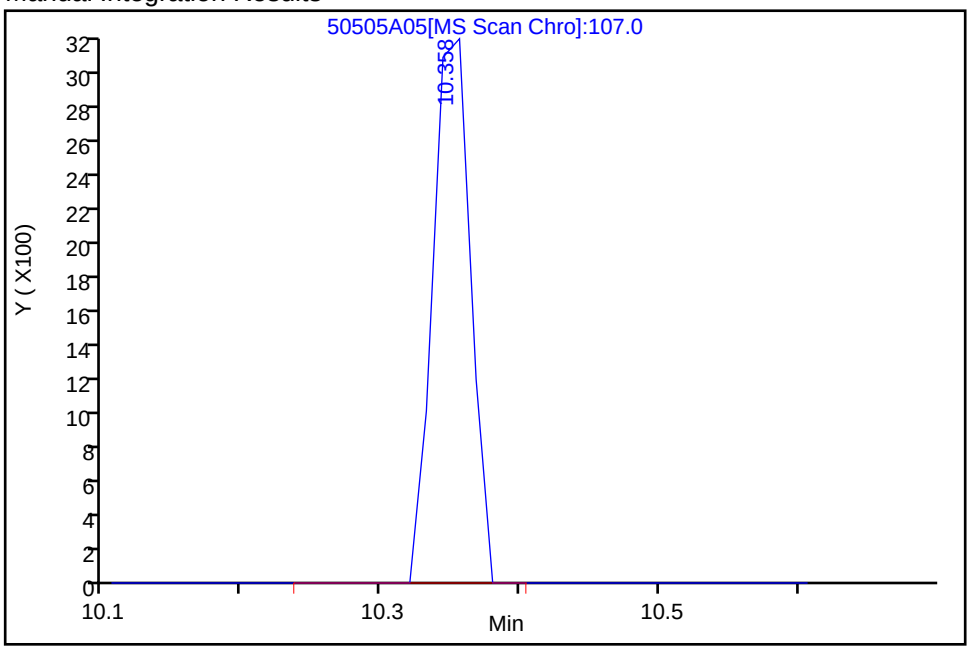
Not Detected
10.358

Processing Integration Results



Manual Integration Results

RT:	10.358
Area:	5877
Amount:	0.96618
Amount Units:	ug/L



Data Editor: all, 05-May-2016 15:30:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 06-May-2016 10:12:32 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

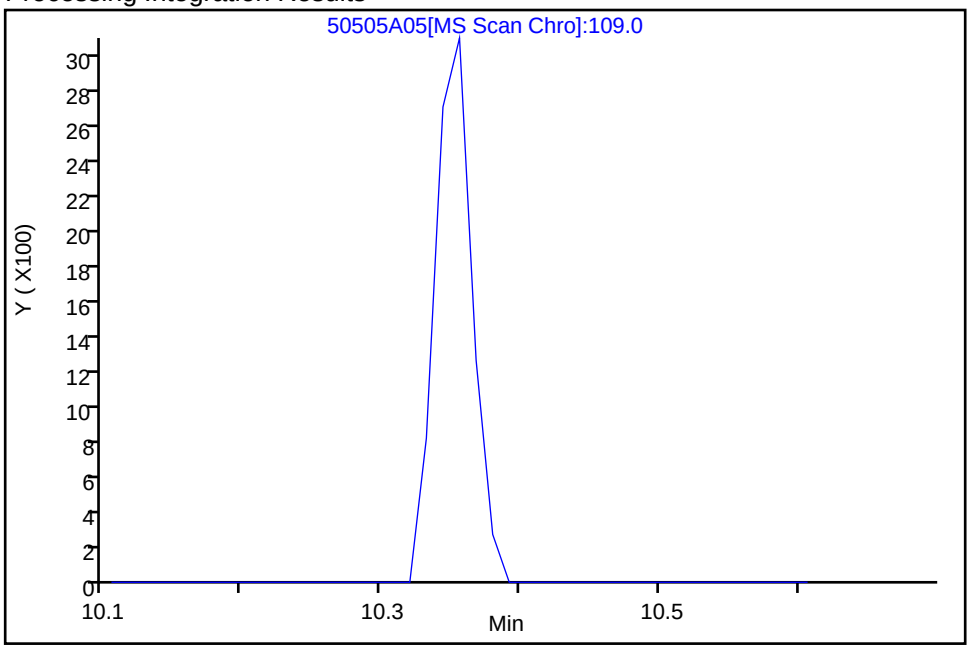
Manual Integration Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A05.D		
Injection Date:	05-May-2016 15:06:30	Inst. ID:	msd5.i
Client ID:	VSTD001OW	Lab ID:	VSTD001OW
Sample Info:	5050516, VSTD001OW		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

62 1,2-Dibromoethane, CAS: 106-93-4

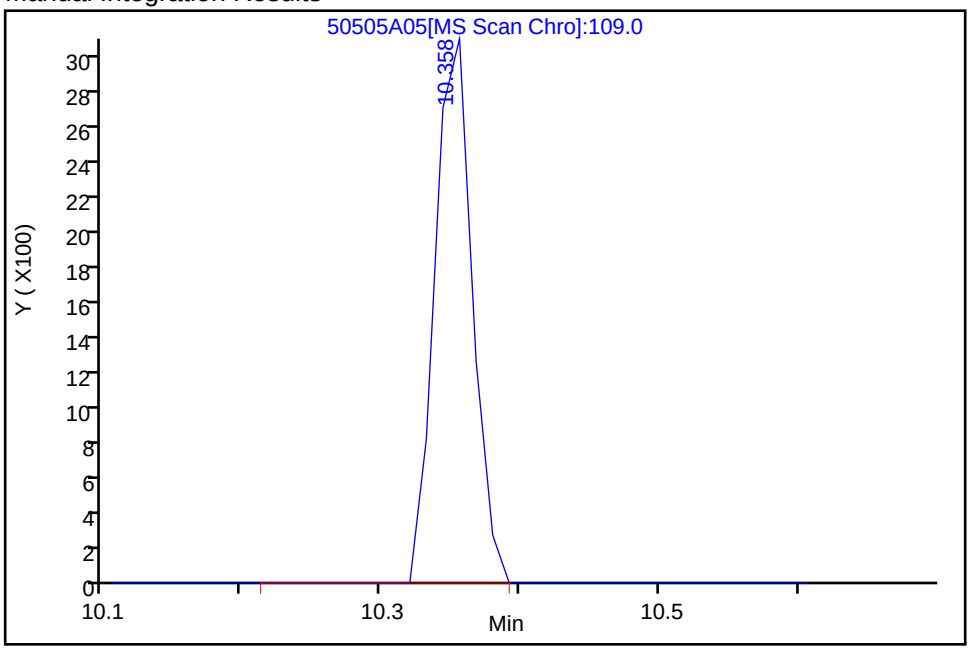
Not Detected
10.358

Processing Integration Results



Manual Integration Results

RT:	10.358
Area:	5754
Amount:	0.96618
Amount Units:	ug/L



Data Editor: all, 05-May-2016 15:30:30
Audit Action: Mint
Audit Reason: NOID

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A06.D		
Lab Sample ID:	VSTD0.5OW	Client Sample ID:	VSTD0.5OW
Injection Date:	05-May-2016 15:28:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050516, VSTD0.5OW		
Method:	\\Organics\DD\chem\msd5.i\5050516.b\TRACE-5.m		
Method Date:	05-May-2016 15:55:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Ical, Level: 1	ALS Bottle:	6
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	05-May-2016 15:47:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.702	1.702	0.000	5353	0.50000	0.36362	
2 Chloromethane	50.0	1.856	1.856	0.000	8413	0.50000	0.48113	
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	6789	0.50000	0.48619	
4 Vinyl Chloride	62.0	1.974	1.974	0.000	7439	0.50000	0.45410	
5 Bromomethane	94.0	2.318	2.318	0.000	5423	0.50000	0.52365	
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	5353	0.50000	0.51548	
7 Chloroethane	64.0	2.425	2.425	0.000	4827	0.50000	0.51683	
8 Trichlorofluoromethane	101.0	2.710	2.710	0.000	4765	0.50000	0.36247	
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	15726	0.50000	0.49246	
13 1,1-Dichloroethene	96.0	3.291	3.291	0.000	6555	0.50000	0.49035	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.314	3.314	0.000	6303	0.50000	0.47507	
14 Acetone	43.0	3.338	3.338	0.000	8982	5.0000	7.4839	M
15 Carbon Disulfide	76.0	3.587	3.587	0.000	18954	0.50000	0.54593	
16 Methyl Acetate	43.0	3.777	3.777	0.000	3287	0.50000	0.59303	M
17 Methylene Chloride	84.0	3.895	3.895	0.000	6750	0.50000	0.53048	
20 Methyl tert-Butyl Ether	73.0	4.251	4.251	0.000	13942	0.50000	0.53392	
21 trans-1,2-Dichloroethene	96.0	4.263	4.263	0.000	7470	0.50000	0.51014	
23 1,1-Dichloroethane	63.0	4.808	4.808	0.000	16257	0.50000	0.53087	
$ 25 2-Butanone-d5	46.0	5.508	5.508	0.000	13198	5.0000	5.4362	
26 cis-1,2-Dichloroethene	96.0	5.579	5.579	0.000	7791	0.50000	0.51090	
28 2-Butanone	43.0	5.591	5.591	0.000	11136	5.0000	5.9889	M
29 Bromochloromethane	128.0	5.888	5.888	0.000	3332	0.50000	0.52433	
$ 30 Chloroform-d	84.0	5.971	5.971	0.000	14861	0.50000	0.51563	
31 Chloroform	83.0	5.994	5.994	0.000	14424	0.50000	0.51937	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	11394	0.50000	0.51633	
32 Cyclohexane	56.0	6.326	6.326	0.000	18792	0.50000	0.65126	M
34 Carbon Tetrachloride	117.0	6.469	6.469	0.000	11707	0.50000	0.50948	

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Data File: \\Organics\DD\chem\msd5.i\5050516.b\50505A06.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.658	6.658	0.000	6618	0.50000	0.52082	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	26554	0.50000	0.51436	
37 Benzene	78.0	6.730	6.730	0.000	26905	0.50000	0.52471	
39 1,2-Dichloroethane	62.0	6.753	6.753	0.000	7764	0.50000	0.50574	M
* 41 1,4-Difluorobenzene	114.0	7.251	7.251	0.000	358765	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	7591	0.50000	0.53180	
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	7789	0.50000	0.58280	
43 Methylcyclohexane	83.0	7.868	7.868	0.000	12472	0.50000	0.52266	
45 1,2-Dichloropropane	63.0	7.892	7.892	0.000	6427	0.50000	0.53181	M
49 Bromodichloromethane	83.0	8.259	8.259	0.000	8108	0.50000	0.50388	
50 cis-1,3-Dichloropropene	75.0	8.876	8.876	0.000	7526	0.50000	0.46605	
51 4-Methyl-2-pentanone	43.0	9.089	9.089	0.000	30987	5.0000	5.7991	
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	22324	0.50000	0.50279	
53 Toluene	91.0	9.315	9.315	0.000	25008	0.50000	0.50414	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	5395	0.50000	0.47259	
55 trans-1,3-Dichloropropene	75.0	9.587	9.587	0.000	6114	0.50000	0.50886	
56 1,1,2-Trichloroethane	97.0	9.801	9.801	0.000	3171	0.50000	0.53290	
57 Tetrachloroethene	164.0	9.967	9.967	0.000	7796	0.50000	0.54086	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	10494	5.0000	5.4690	
60 2-Hexanone	43.0	10.086	10.086	0.000	19091	5.0000	5.8263	
61 Dibromochloromethane	129.0	10.228	10.228	0.000	4329	0.50000	0.45799	
62 1,2-Dibromoethane	107.0	10.358	10.358	0.000	3268	0.50000	0.53456	M
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	273316	5.0000	5.0000	
64 Chlorobenzene	112.0	10.856	10.856	0.000	16631	0.50000	0.50702	
65 Ethylbenzene	91.0	10.951	10.951	0.000	29250	0.50000	0.50933	
67 m+p-Xylenes	106.0	11.070	11.070	0.000	12156	0.50000	0.49585	
68 o-Xylene	106.0	11.426	11.426	0.000	11983	0.50000	0.51220	
69 Styrene	104.0	11.437	11.437	0.000	18068	0.50000	0.51294	
70 Bromoform	173.0	11.603	11.603	0.000	2629	0.50000	0.47040	M
71 Isopropylbenzene	105.0	11.746	11.746	0.000	31190	0.50000	0.49980	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	3600	0.50000	0.55554	
74 1,1,2,2-Tetrachloroethane	83.0	11.983	11.983	0.000	3672	0.50000	0.56481	
83 1,3-Dichlorobenzene	146.0	12.742	12.742	0.000	16009	0.50000	0.50537	
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	157413	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.813	12.813	0.000	16435	0.50000	0.52457	
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	8798	0.50000	0.50976	
89 1,2-Dichlorobenzene	146.0	13.098	13.098	0.000	13547	0.50000	0.49378	
90 1,2-Dibromo-3-chloropropane	75.0	13.643	13.643	0.000	672	0.50000	0.55675	
91 1,2,4-Trichlorobenzene	180.0	14.212	14.212	0.000	9606	0.50000	0.50948	
94 1,2,3-Trichlorobenzene	180.0	14.580	14.580	0.000	7157	0.50000	0.50228	

QC Flag Legend

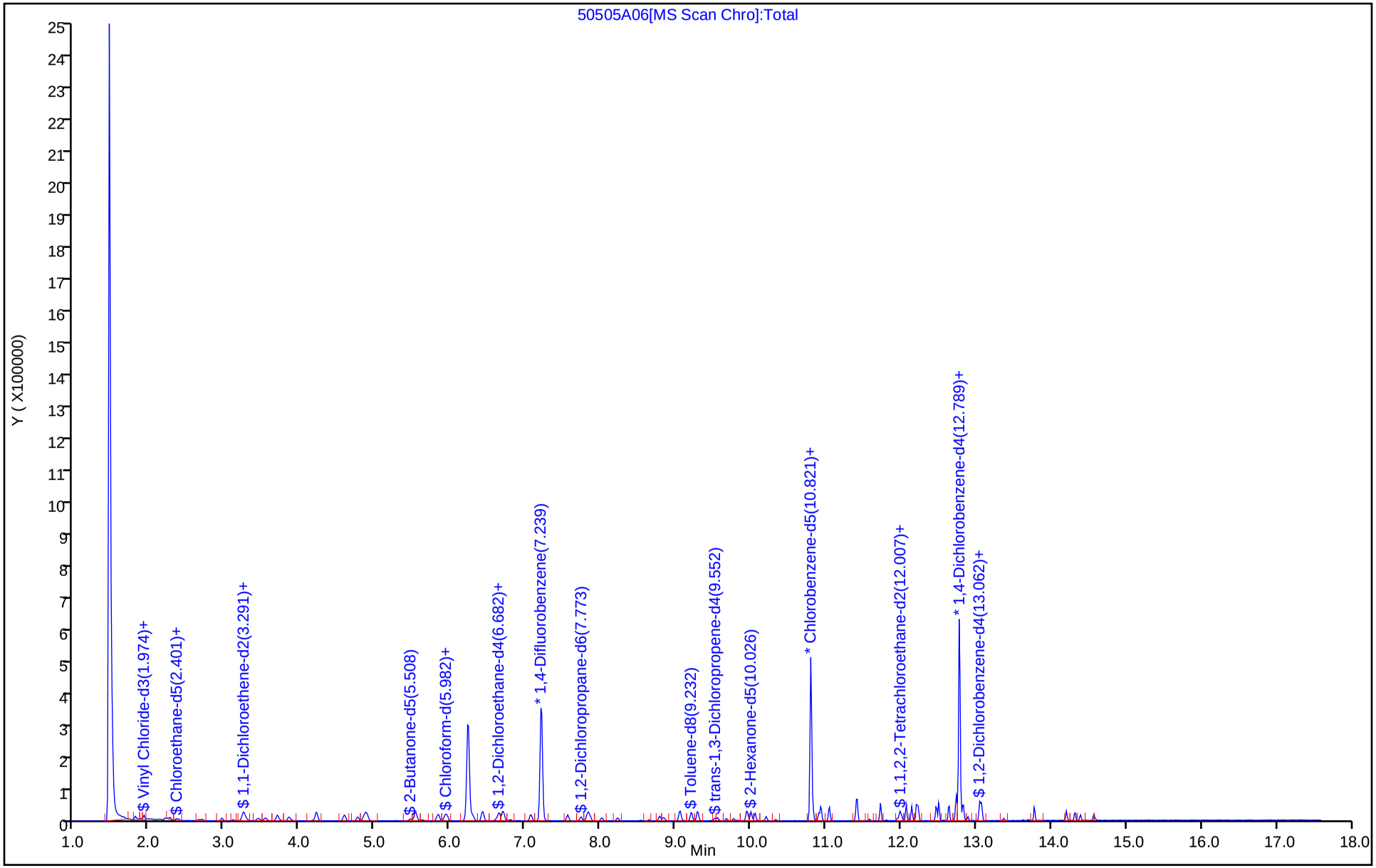
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 06-May-2016 10:12:33 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A06.D				
Injection Date:	05-May-2016 15:28:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VSTD0.5OW	Lab ID:	VSTD0.5OW		
Sample Info:	5050516, VSTD0.5OW				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



Report Date: 06-May-2016 10:12:33 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

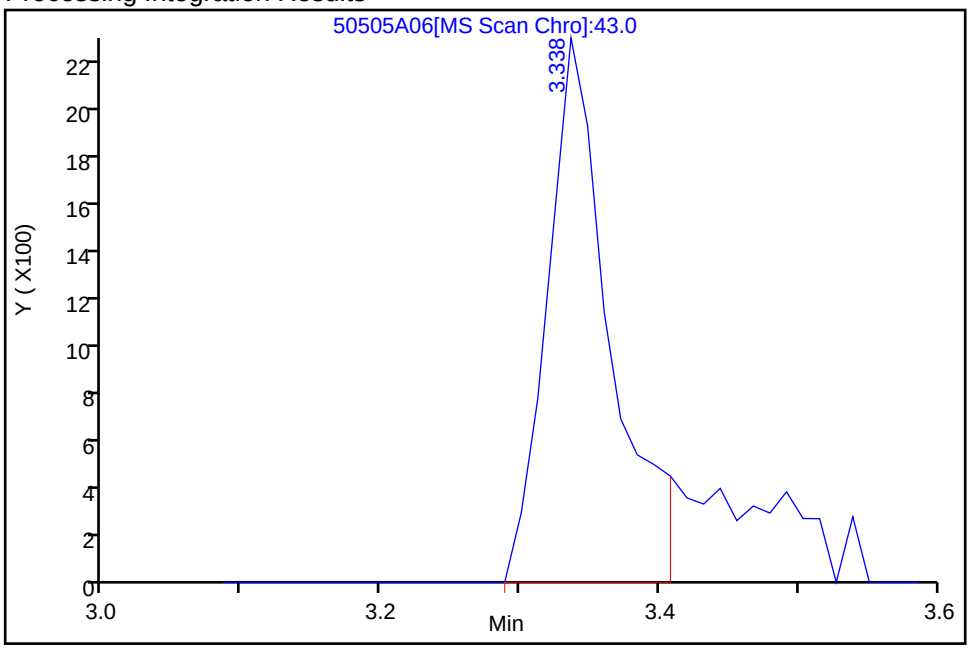
Manual Integration Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A06.D		
Injection Date:	05-May-2016 15:28:30	Inst. ID:	msd5.i
Client ID:	VSTD0.5OW	Lab ID:	VSTD0.5OW
Sample Info:	5050516, VSTD0.5OW		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

14 Acetone, CAS: 67-64-1

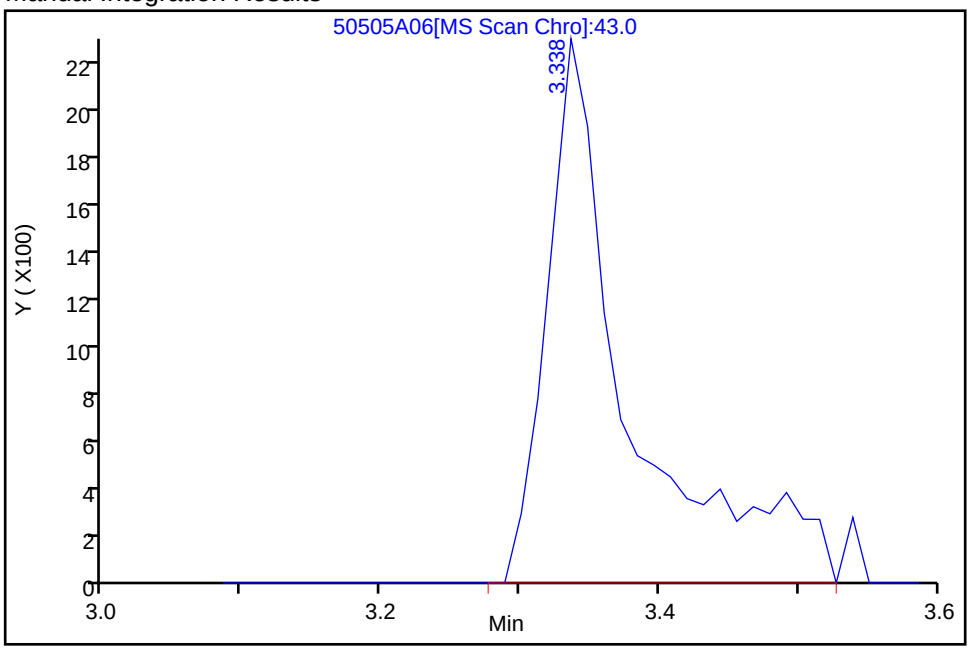
Processing Integration Results

RT: 3.338
Area: 6845
Amount: 6.1407
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.338
Area: 8982
Amount: 7.4839
Amount Units: ug/L



Data Editor: all, 05-May-2016 15:54:30
Audit Action: Mint
Audit Reason: IAI

Report Date: 06-May-2016 10:12:33 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

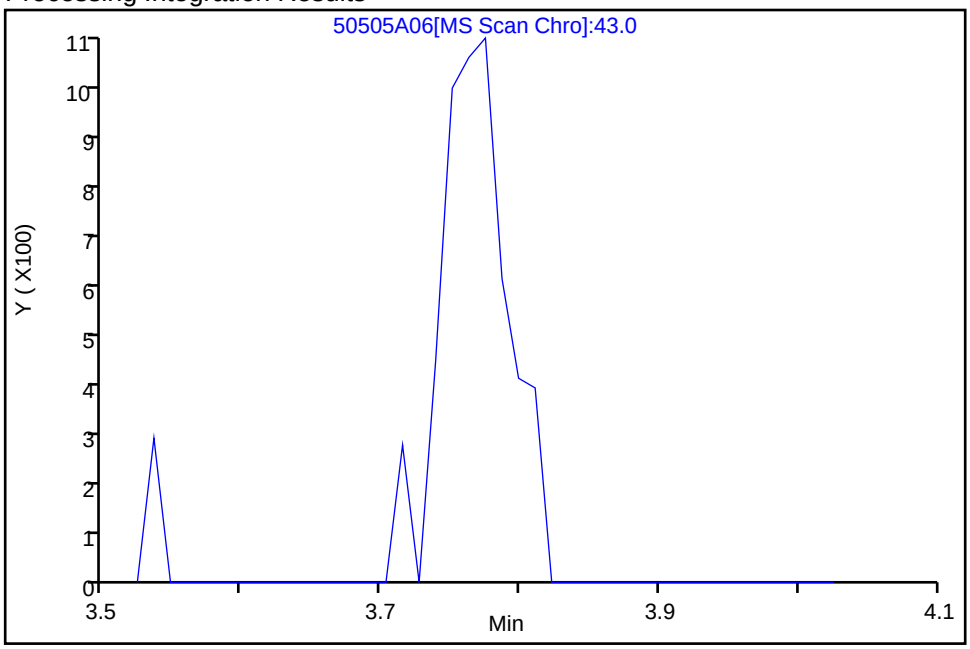
Manual Integration Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A06.D		
Injection Date:	05-May-2016 15:28:30	Inst. ID:	msd5.i
Client ID:	VSTD0.5OW	Lab ID:	VSTD0.5OW
Sample Info:	5050516, VSTD0.5OW		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

16 Methyl Acetate, CAS: 79-20-9

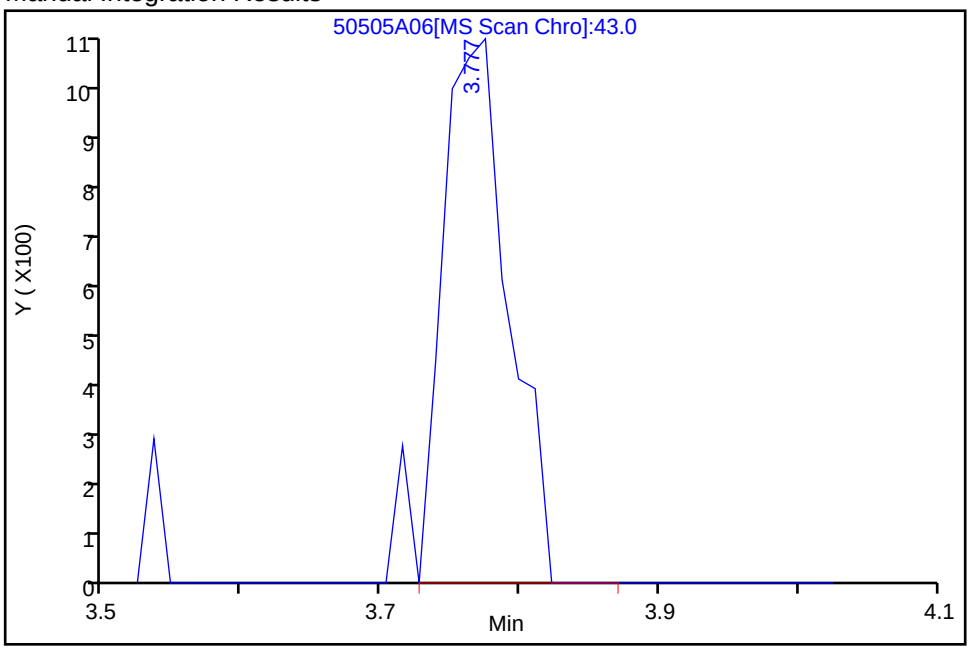
Processing Integration Results

Not Detected
3.777



Manual Integration Results

RT:	3.777
Area:	3287
Amount:	0.59303
Amount Units:	ug/L



Data Editor: all, 05-May-2016 15:46:30
Audit Action: Mint
Audit Reason: IAI

Report Date: 06-May-2016 10:12:33 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

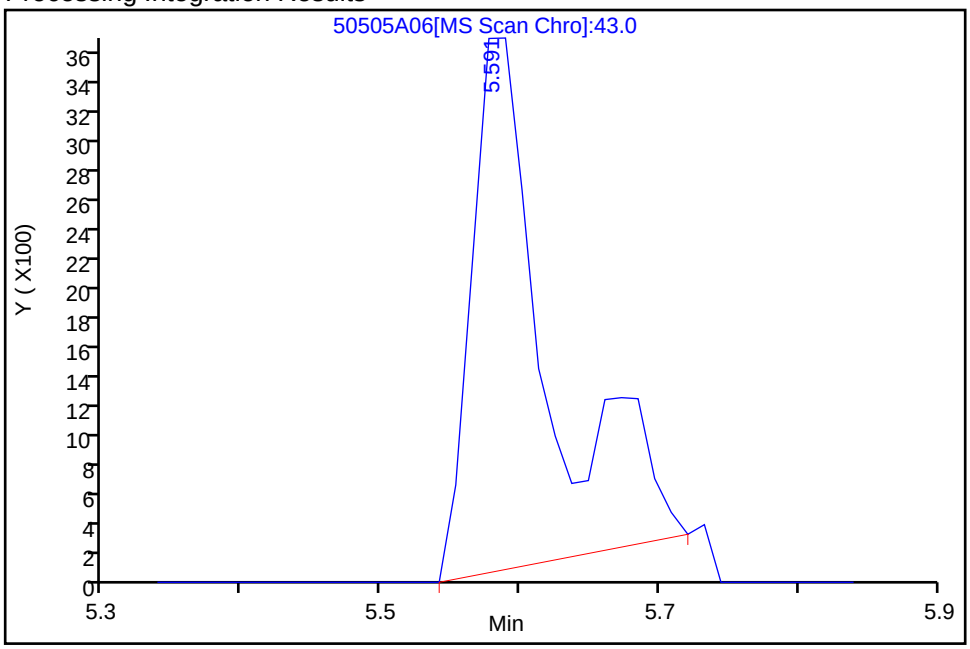
Manual Integration Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A06.D		
Injection Date:	05-May-2016 15:28:30	Inst. ID:	msd5.i
Client ID:	VSTD0.5OW	Lab ID:	VSTD0.5OW
Sample Info:	5050516, VSTD0.5OW		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

28 2-Butanone, CAS: 78-93-3

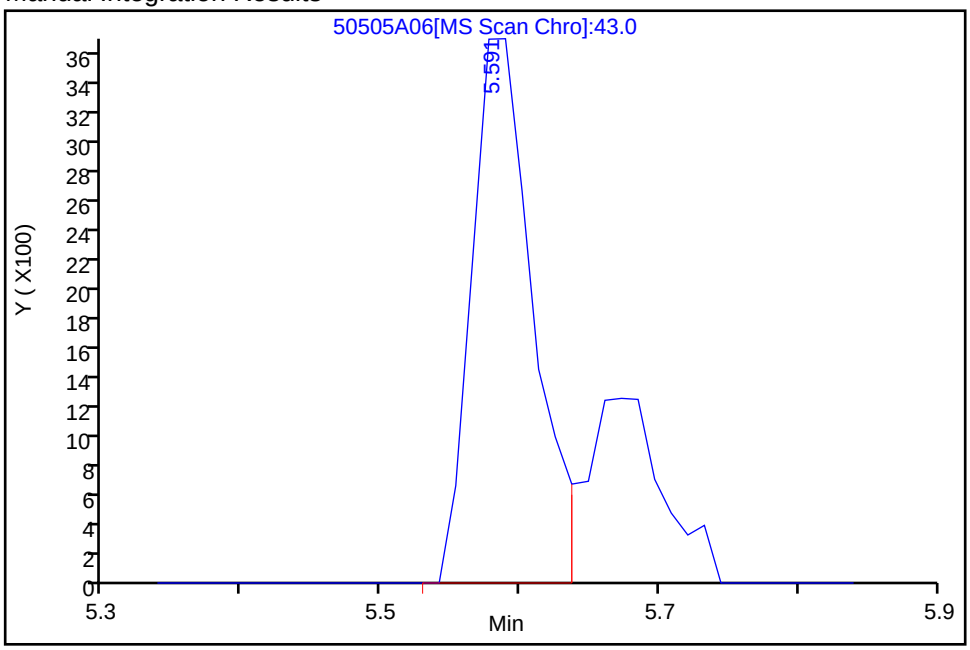
Processing Integration Results

RT: 5.591
Area: 13455
Amount: 6.8923
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 5.591
Area: 11136
Amount: 5.9889
Amount Units: ug/L



Data Editor: all, 05-May-2016 15:54:30
Audit Action: Mint
Audit Reason: IAI

Report Date: 06-May-2016 10:12:33 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

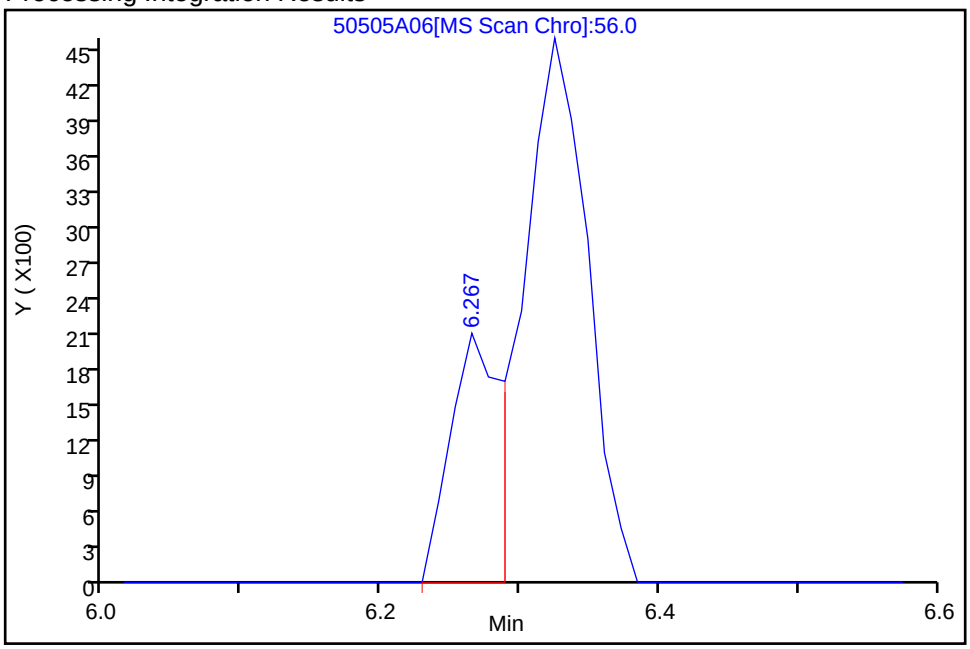
Manual Integration Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A06.D		
Injection Date:	05-May-2016 15:28:30	Inst. ID:	msd5.i
Client ID:	VSTD0.5OW	Lab ID:	VSTD0.5OW
Sample Info:	5050516, VSTD0.5OW		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

32 Cyclohexane, CAS: 110-82-7

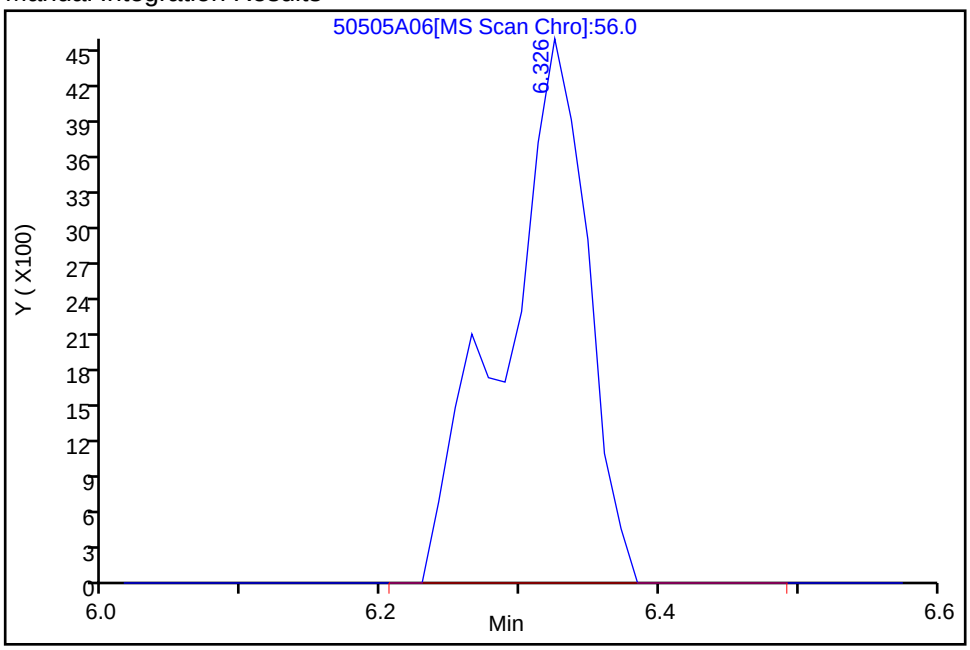
Processing Integration Results

RT: 6.267
Area: 4828
Amount: 0.20749
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.326
Area: 18792
Amount: 0.65126
Amount Units: ug/L



Data Editor: all, 05-May-2016 15:46:30
Audit Action: Mint
Audit Reason: IAI

Report Date: 06-May-2016 10:12:33 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

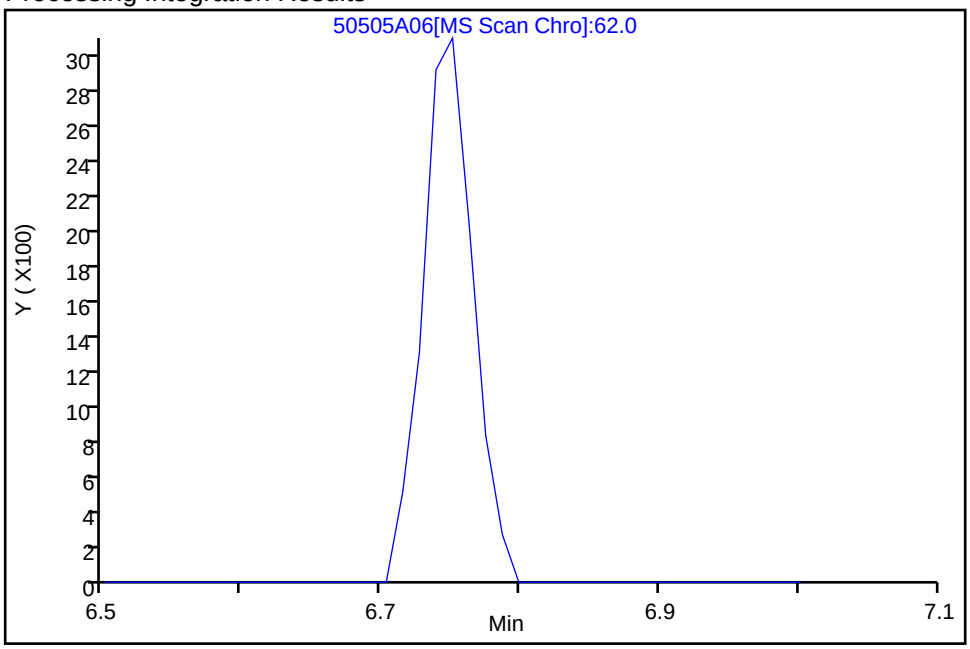
Manual Integration Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A06.D		
Injection Date:	05-May-2016 15:28:30	Inst. ID:	msd5.i
Client ID:	VSTD0.5OW	Lab ID:	VSTD0.5OW
Sample Info:	5050516, VSTD0.5OW		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

39 1,2-Dichloroethane, CAS: 107-06-2

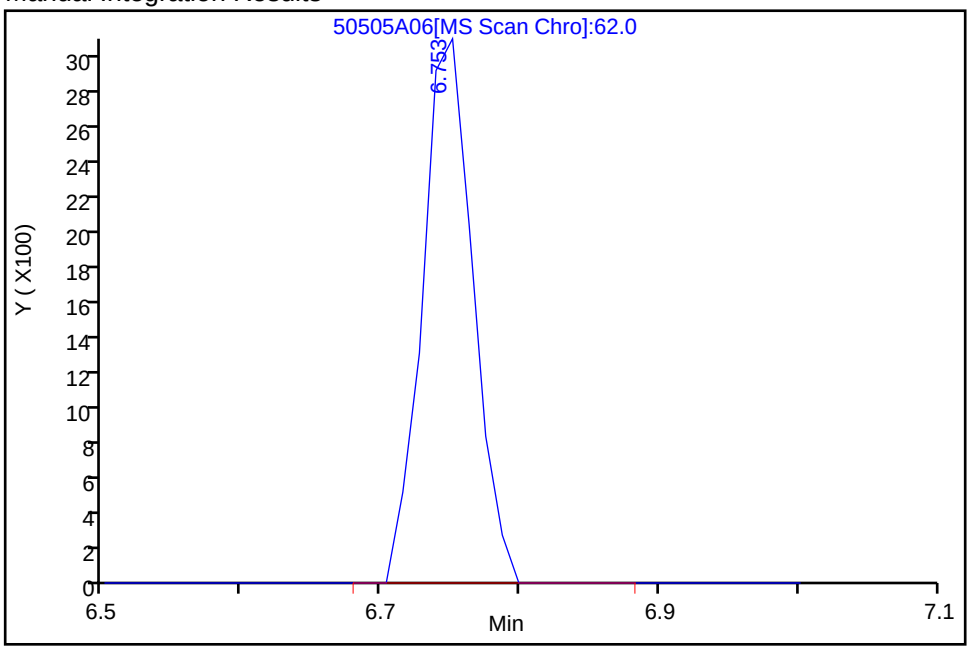
Not Detected
6.753

Processing Integration Results



Manual Integration Results

RT:	6.753
Area:	7764
Amount:	0.50574
Amount Units:	ug/L



Data Editor: all, 05-May-2016 15:46:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 06-May-2016 10:12:33 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

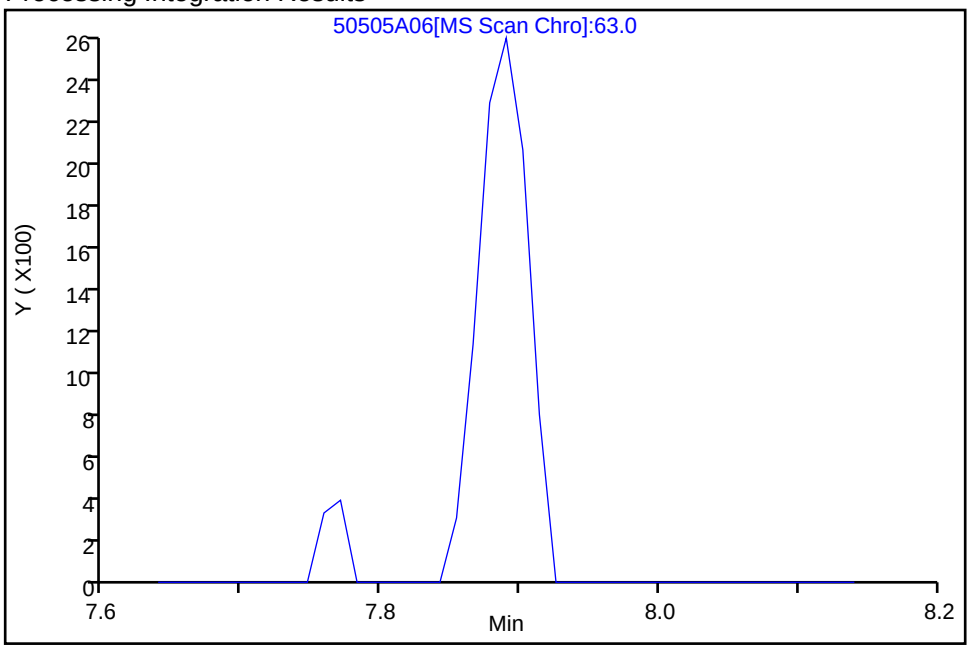
Manual Integration Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A06.D		
Injection Date:	05-May-2016 15:28:30	Inst. ID:	msd5.i
Client ID:	VSTD0.5OW	Lab ID:	VSTD0.5OW
Sample Info:	5050516, VSTD0.5OW		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

45 1,2-Dichloropropane, CAS: 78-87-5

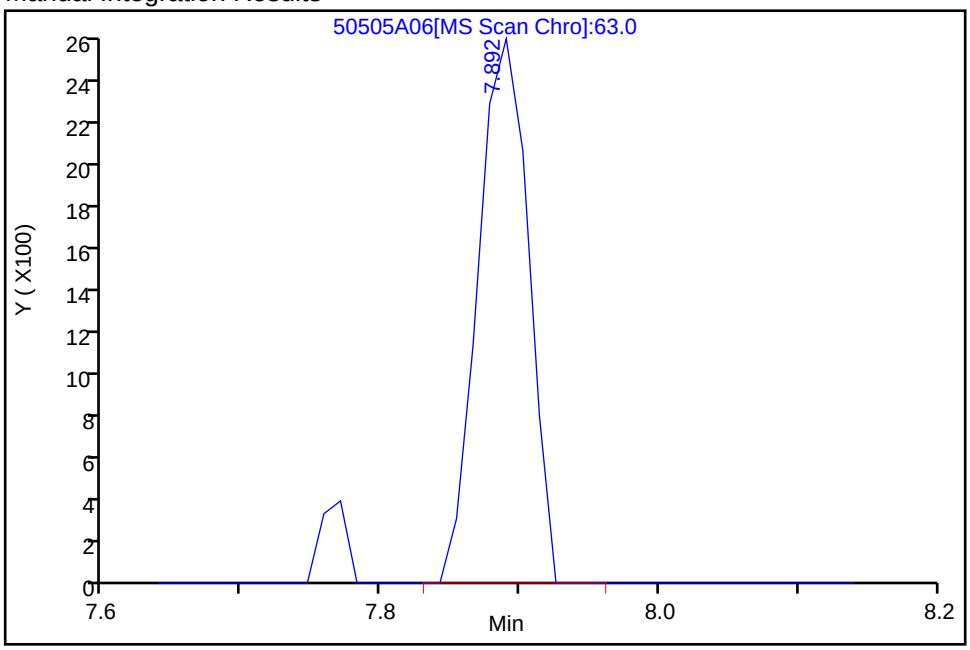
Not Detected
7.892

Processing Integration Results



Manual Integration Results

RT:	7.892
Area:	6427
Amount:	0.53181
Amount Units:	ug/L



Data Editor: all, 05-May-2016 15:46:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 06-May-2016 10:12:33 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

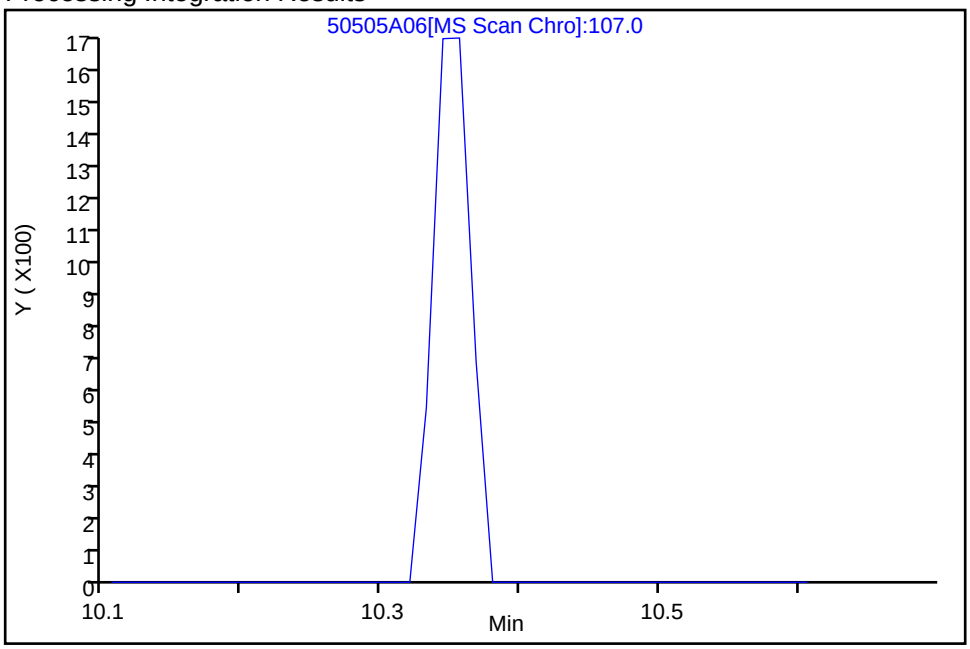
Manual Integration Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A06.D		
Injection Date:	05-May-2016 15:28:30	Inst. ID:	msd5.i
Client ID:	VSTD0.5OW	Lab ID:	VSTD0.5OW
Sample Info:	5050516, VSTD0.5OW		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

62 1,2-Dibromoethane, CAS: 106-93-4

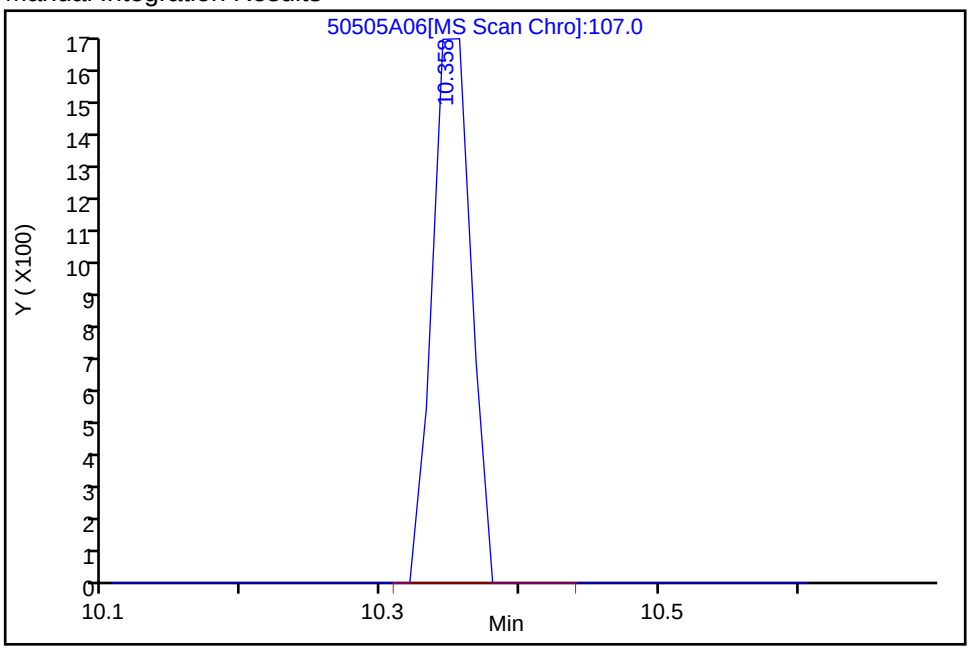
Not Detected
10.358

Processing Integration Results



Manual Integration Results

RT:	10.358
Area:	3268
Amount:	0.53456
Amount Units:	ug/L



Data Editor: all, 05-May-2016 15:47:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 06-May-2016 10:12:33 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

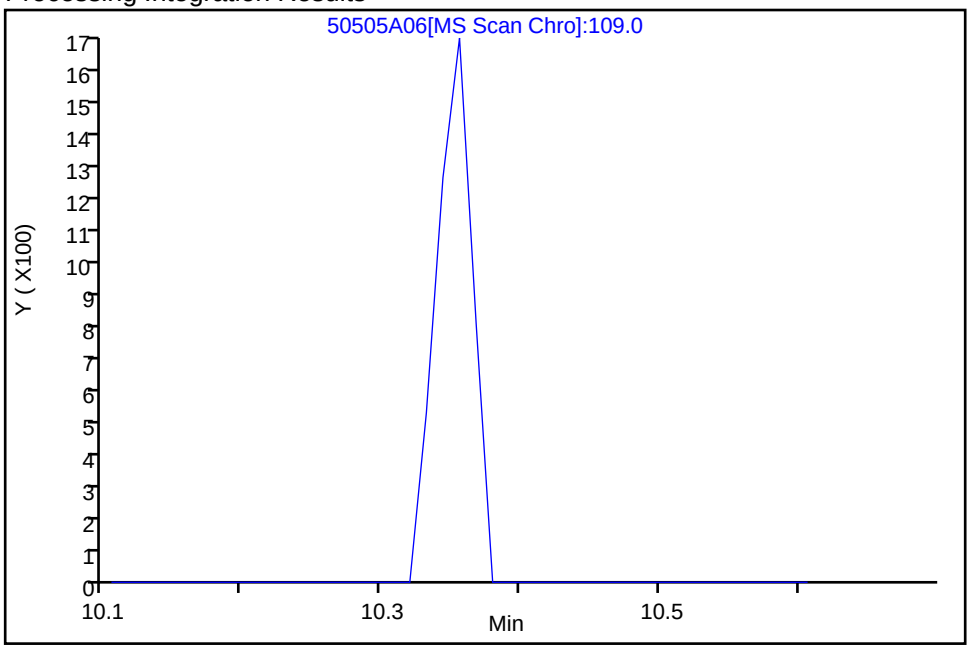
Manual Integration Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A06.D		
Injection Date:	05-May-2016 15:28:30	Inst. ID:	msd5.i
Client ID:	VSTD0.5OW	Lab ID:	VSTD0.5OW
Sample Info:	5050516, VSTD0.5OW		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

62 1,2-Dibromoethane, CAS: 106-93-4

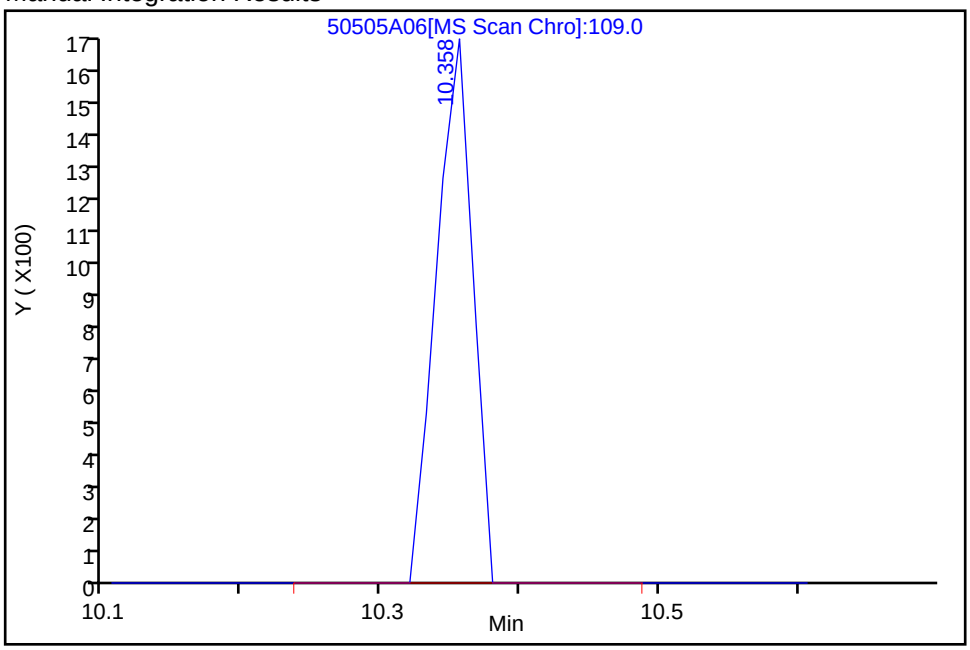
Not Detected
10.358

Processing Integration Results



Manual Integration Results

RT:	10.358
Area:	2914
Amount:	0.53456
Amount Units:	ug/L



Data Editor: all, 05-May-2016 15:47:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 06-May-2016 10:12:33 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

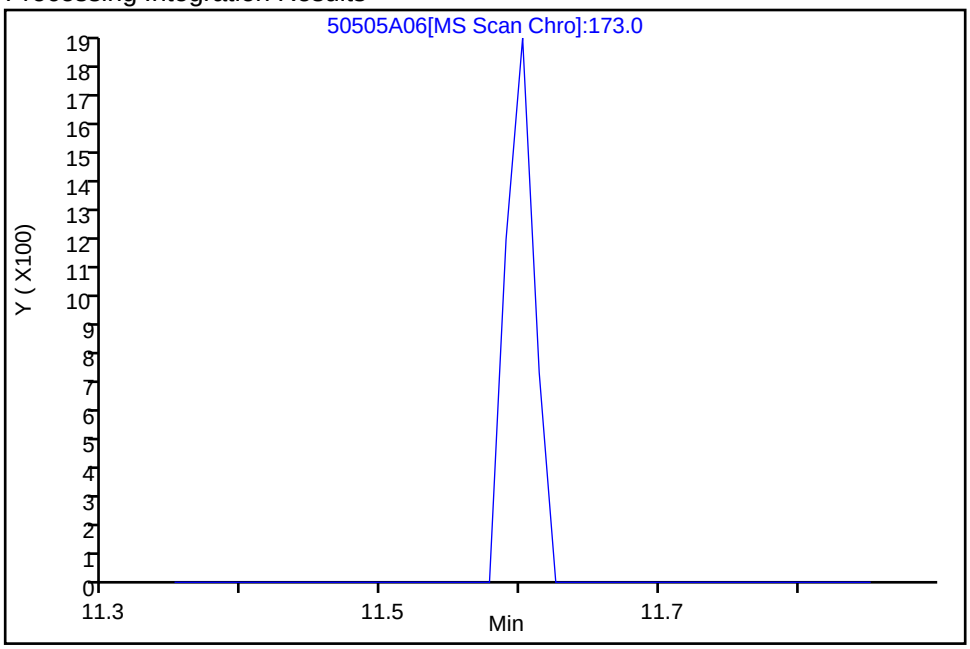
Manual Integration Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A06.D		
Injection Date:	05-May-2016 15:28:30	Inst. ID:	msd5.i
Client ID:	VSTD0.5OW	Lab ID:	VSTD0.5OW
Sample Info:	5050516, VSTD0.5OW		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

70 Bromoform, CAS: 75-25-2

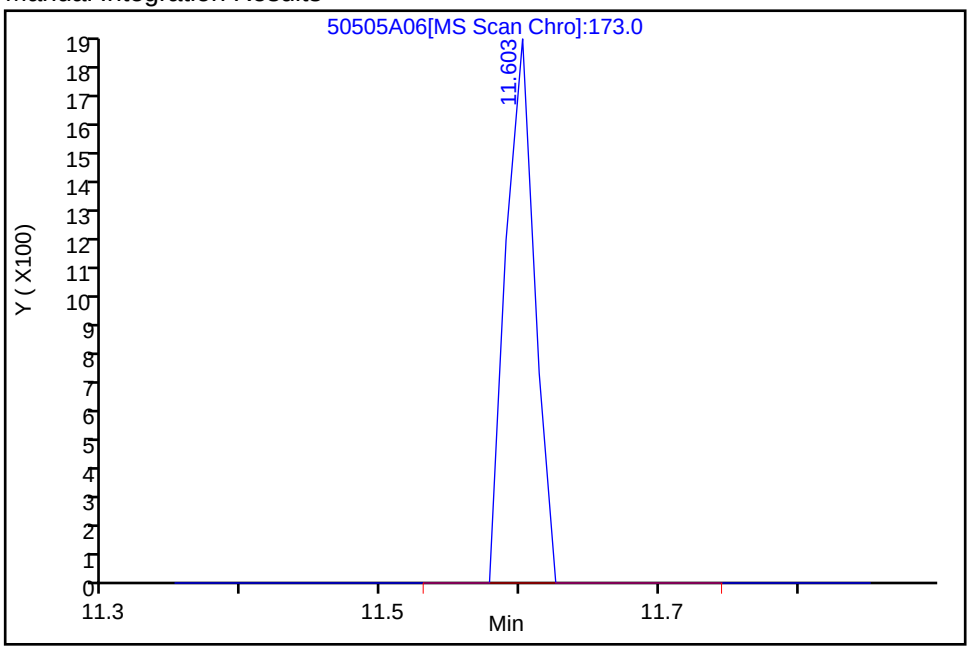
Not Detected
11.603

Processing Integration Results



Manual Integration Results

RT:	11.603
Area:	2629
Amount:	0.47040
Amount Units:	ug/L



Data Editor: all, 05-May-2016 15:47:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 06-May-2016 10:12:33 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

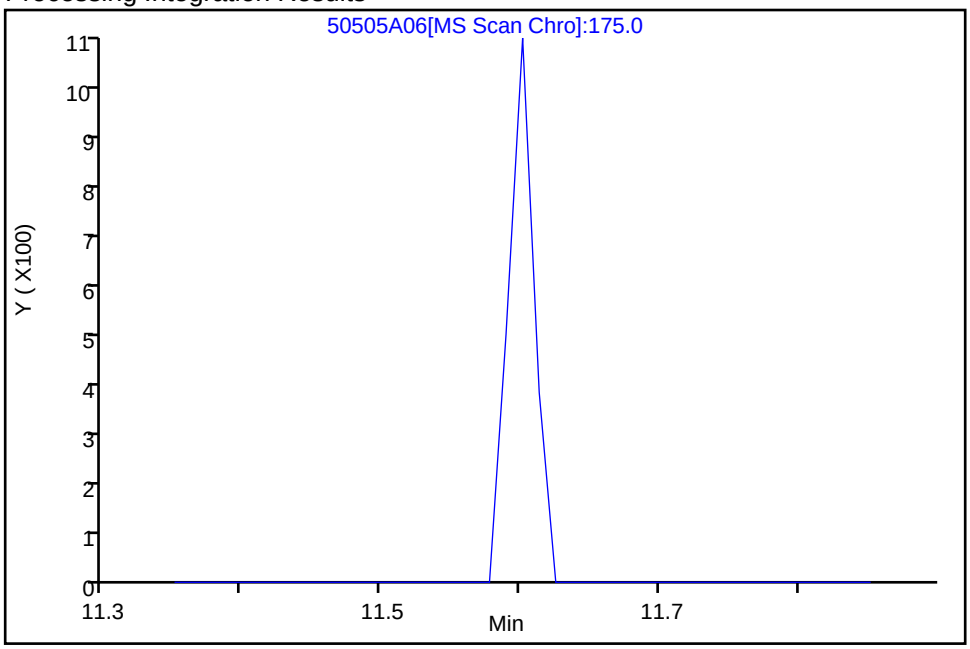
Manual Integration Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A06.D		
Injection Date:	05-May-2016 15:28:30	Inst. ID:	msd5.i
Client ID:	VSTD0.5OW	Lab ID:	VSTD0.5OW
Sample Info:	5050516, VSTD0.5OW		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

70 Bromoform, CAS: 75-25-2

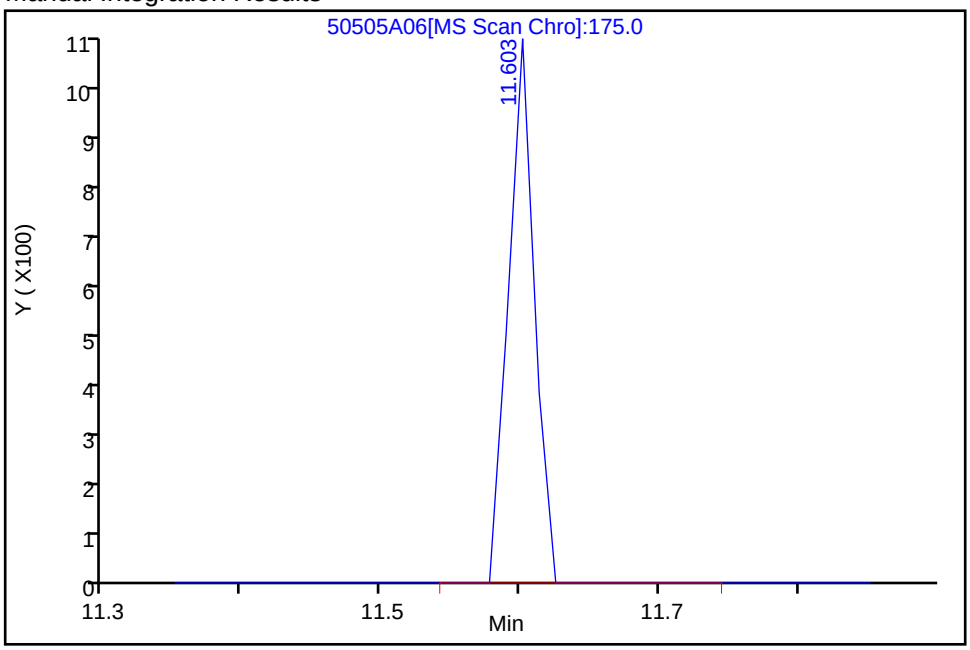
Not Detected
11.603

Processing Integration Results



Manual Integration Results

RT:	11.603
Area:	1383
Amount:	0.47040
Amount Units:	ug/L



Data Editor: all, 05-May-2016 15:47:30
Audit Action: Mint
Audit Reason: NOID

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD8 Calibration Date(s): 05/09/2016 05/09/2016

GC Column: DB-624 ID: 0.25 (mm) Calibration Time(s): 1419 1608

Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

LAB FILE ID: 80509D06 RRF 0.5 = 80509D06 RRF 1.0 = 80509D05

RRF 5.0 = 80509D04 RRF 10 = 80509D03 RRF 20 = 80509D02

COMPOUND	RRF 0.5	RRF 1.0	RRF 5.0	RRF 10	RRF 20	$\overline{RRF}$	%RSD
Dichlorodifluoromethane	0.252	0.287	0.319	0.339	0.312	0.302	11.1
Chloromethane	0.553	0.546	0.516	0.541	0.473	0.526	6.2
Vinyl chloride	0.328	0.373	0.367	0.381	0.339	0.358	6.5
Bromomethane	0.197	0.179	0.191	0.197	0.173	0.187	5.8
Chloroethane	0.196	0.213	0.205	0.213	0.192	0.204	4.8
Trichlorofluoromethane	0.245	0.297	0.351	0.392	0.369	0.331	17.9
1,1-Dichloroethene	0.244	0.226	0.260	0.263	0.235	0.245	6.5
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.233	0.209	0.268	0.271	0.241	0.244	10.6
Acetone	0.016	0.017	0.015	0.018	0.015	0.016	7.5
Carbon disulfide	0.675	0.659	0.753	0.776	0.672	0.707	7.6
Methyl acetate	0.098	0.104	0.100	0.107	0.099	0.102	3.7
Methylene chloride	0.209	0.213	0.234	0.242	0.212	0.222	6.7
trans-1,2-Dichloroethene	0.254	0.269	0.292	0.299	0.263	0.275	7.0
Methyl tert-butyl ether	0.306	0.345	0.377	0.393	0.339	0.352	9.8
1,1-Dichloroethane	0.537	0.571	0.611	0.636	0.561	0.583	6.8
cis-1,2-Dichloroethene	0.249	0.260	0.290	0.306	0.265	0.274	8.5
2-Butanone	0.030	0.030	0.032	0.033	0.031	0.031	3.9
Bromochloromethane	0.088	0.087	0.099	0.104	0.092	0.094	7.7
Chloroform	0.477	0.467	0.498	0.525	0.459	0.485	5.5
1,1,1-Trichloroethane	0.533	0.533	0.606	0.619	0.524	0.563	8.1
Cyclohexane	1.194	0.989	1.027	0.998	0.864	1.015	11.7
Carbon tetrachloride	0.503	0.504	0.585	0.599	0.512	0.541	8.8
Benzene	1.275	1.277	1.455	1.461	1.287	1.351	7.2
1,2-Dichloroethane	0.232	0.220	0.265	0.276	0.251	0.249	9.3
Trichloroethene	0.342	0.379	0.429	0.440	0.387	0.395	10.0
Methylcyclohexane	0.623	0.597	0.707	0.703	0.628	0.652	7.7
1,2-Dichloropropane	0.299	0.314	0.358	0.373	0.336	0.336	9.0
Bromodichloromethane	0.316	0.378	0.403	0.413	0.368	0.376	10.1
cis-1,3-Dichloropropene	0.325	0.355	0.404	0.442	0.412	0.388	12.2
4-Methyl-2-pentanone	0.128	0.129	0.138	0.143	0.136	0.135	4.4
Toluene	1.440	1.436	1.525	1.588	1.416	1.481	4.9
trans-1,3-Dichloropropene	0.204	0.245	0.277	0.288	0.271	0.257	13.1
1,1,2-Trichloroethane	0.115	0.128	0.138	0.144	0.133	0.132	8.2
Tetrachloroethene	0.317	0.324	0.362	0.380	0.334	0.343	7.7
2-Hexanone	0.082	0.084	0.082	0.087	0.084	0.084	2.3

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD8 Calibration Date(s): 05/09/2016 05/09/2016

GC Column: DB-624 ID: 0.25 (mm) Calibration Time(s): 1419 1608

Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

LAB FILE ID: 80509D06 RRF 0.5 = 80509D06 RRF 1.0 = 80509D05

RRF 5.0 = 80509D04 RRF 10 = 80509D03 RRF 20 = 80509D02

COMPOUND	RRF 0.5	RRF 1.0	RRF 5.0	RRF 10	RRF 20	$\overline{RRF}$	%RSD
Dibromochloromethane	0.156	0.185	0.209	0.213	0.203	0.193	12.1
1,2-Dibromoethane	0.114	0.131	0.134	0.134	0.130	0.128	6.4
Chlorobenzene	0.757	0.755	0.849	0.893	0.812	0.813	7.4
Ethylbenzene	1.491	1.510	1.682	1.724	1.551	1.592	6.6
o-Xylene	0.532	0.550	0.620	0.640	0.565	0.581	8.0
m, p-Xylene	0.578	0.607	0.673	0.697	0.618	0.635	7.7
Styrene	0.765	0.833	0.902	0.929	0.858	0.857	7.4
Bromoform	0.170	0.164	0.196	0.211	0.197	0.188	10.5
Isopropylbenzene	1.499	1.518	1.761	1.818	1.581	1.635	8.9
1,1,2,2-Tetrachloroethane	0.132	0.140	0.141	0.143	0.134	0.138	3.4
1,3-Dichlorobenzene	1.128	1.222	1.335	1.394	1.254	1.267	8.1
1,4-Dichlorobenzene	1.076	1.148	1.248	1.319	1.190	1.196	7.8
1,2-Dichlorobenzene	0.983	0.978	1.119	1.146	1.030	1.051	7.3
1,2-Dibromo-3-chloropropane	0.038	0.035	0.042	0.043	0.041	0.040	8.1
1,2,4-Trichlorobenzene	0.678	0.759	0.873	0.941	0.843	0.819	12.5
1,2,3-Trichlorobenzene	0.563	0.589	0.650	0.693	0.625	0.624	8.1
Vinyl Chloride-d3	0.328	0.297	0.229	0.240	0.275	0.274	15.0
Chloroethane-d5	0.219	0.252	0.196	0.196	0.220	0.217	10.6
1,1-Dichloroethene-d2	0.614	0.615	0.560	0.592	0.630	0.602	4.5
2-Butanone-d5	0.042	0.047	0.047	0.047	0.051	0.047	6.7
Chloroform-d	0.527	0.523	0.489	0.502	0.517	0.512	3.1
1,2-Dichloroethane-d4	0.186	0.202	0.205	0.198	0.199	0.198	3.6
Benzene-d6	1.382	1.439	1.334	1.373	1.441	1.394	3.3
1,2-Dichloropropane-d6	0.413	0.388	0.359	0.361	0.373	0.379	5.9
Toluene-d8	1.210	1.203	1.148	1.188	1.277	1.205	3.9
trans-1,3-Dichloropropene-d4	0.254	0.259	0.252	0.259	0.276	0.260	3.6
2-Hexanone-d5	0.041	0.040	0.044	0.042	0.045	0.042	4.6
1,1,2,2-Tetrachloroethane-d2	0.154	0.147	0.145	0.146	0.141	0.146	3.3
1,2-Dichlorobenzene-d4	0.707	0.673	0.678	0.704	0.705	0.693	2.3

Report Date: 10-May-2016 12:37:16 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd8.i\8050916D.b\80509D02.D
Lab Sample ID: VSTD020PT Client Sample ID: VSTD020PT
Injection Date: 09-May-2016 14:19:30 Dil. Factor: 1.0
Operator: ALL Inst. ID: msd8.i
Sample Info: 8050916D.b, VSTD020PT
Method: \\Organics\DD\chem\msd8.i\8050916D.b\TRACE-8.m
Method Date: 09-May-2016 16:28:30 Quant Method: ISTD
Calib Date: 09-May-2016 16:08:30 Calib File: 80509D06.D
Sample Type: Ical, Level: 5 ALS Bottle: 2
Cpnd Sublist: 2447.sub
Sample Matrix: Water Matrix Level: Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1: DB-624 (0.25 mm) Detector: MS Scan
Data Reviewer: all Review Date: 09-May-2016 16:10:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.674	1.674	0.000	348525	20.000	31.985	
2 Chloromethane	50.0	1.839	1.839	0.000	527799	20.000	25.805	
$ 3 Vinyl Chloride-d3	65.0	1.958	1.958	0.000	306515	20.000	23.979	
4 Vinyl Chloride	62.0	1.958	1.958	0.000	377847	20.000	27.161	
5 Bromomethane	94.0	2.289	2.289	0.000	192858	20.000	20.498	
$ 6 Chloroethane-d5	69.0	2.372	2.372	0.000	245605	20.000	26.309	
7 Chloroethane	64.0	2.395	2.395	0.000	213775	20.000	25.695	
8 Trichlorofluoromethane	101.0	2.679	2.679	0.000	411453	20.000	31.846	
$ 12 1,1-Dichloroethene-d2	63.0	3.247	3.247	0.000	702997	20.000	28.187	
13 1,1-Dichloroethene	96.0	3.259	3.259	0.000	261810	20.000	27.560	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.271	3.271	0.000	269095	20.000	30.639	
14 Acetone	43.0	3.295	3.295	0.000	171506	200.00	161.24	
15 Carbon Disulfide	76.0	3.543	3.543	0.000	750019	20.000	26.597	
16 Methyl Acetate	43.0	3.721	3.721	0.000	110851	20.000	18.913	
17 Methylene Chloride	84.0	3.863	3.863	0.000	236314	20.000	23.346	
20 Methyl tert-Butyl Ether	73.0	4.218	4.218	0.000	377871	20.000	22.169	
21 trans-1,2-Dichloroethene	96.0	4.218	4.218	0.000	293169	20.000	26.454	
23 1,1-Dichloroethane	63.0	4.762	4.762	0.000	625765	20.000	25.974	
$ 25 2-Butanone-d5	46.0	5.460	5.460	0.000	567723	200.00	217.45	
26 cis-1,2-Dichloroethene	96.0	5.531	5.531	0.000	295449	20.000	24.601	
27 2,2-Dichloropropane	77.0	5.531	5.531	0.000	282474	20.000	24.114	
28 2-Butanone	43.0	5.543	5.543	0.000	350613	200.00	198.57	
29 Bromochloromethane	128.0	5.839	5.839	0.000	102706	20.000	24.338	
$ 30 Chloroform-d	84.0	5.922	5.922	0.000	576707	20.000	25.321	
31 Chloroform	83.0	5.945	5.945	0.000	511681	20.000	23.631	
33 1,1,1-Trichloroethane	97.0	6.206	6.206	0.000	425250	20.000	25.702	
32 Cyclohexane	56.0	6.289	6.289	0.000	701940	20.000	28.973	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
34 Carbon Tetrachloride	117.0	6.431	6.431	0.000	415924	20.000	28.317	
35 1,1-Dichloropropene	75.0	6.419	6.419	0.000	394239	20.000	28.235	
$ 38 1,2-Dichloroethane-d4	65.0	6.608	6.608	0.000	221627	20.000	22.943	
$ 36 Benzene-d6	84.0	6.644	6.644	0.000	1170047	20.000	26.889	
37 Benzene	78.0	6.691	6.691	0.000	1045413	20.000	25.726	
39 1,2-Dichloroethane	62.0	6.703	6.703	0.000	279782	20.000	23.846	
* 41 1,4-Difluorobenzene	114.0	7.200	7.200	0.000	278948	5.0000	5.0000	
42 Trichloroethene	95.0	7.555	7.555	0.000	314023	20.000	26.235	
$ 44 1,2-Dichloropropane-d6	67.0	7.732	7.732	0.000	303223	20.000	22.306	
43 Methylcyclohexane	83.0	7.815	7.815	0.000	510173	20.000	28.316	
45 1,2-Dichloropropane	63.0	7.850	7.850	0.000	272820	20.000	25.318	
48 Dibromomethane	93.0	8.004	8.004	0.000	92671	20.000	22.764	
49 Bromodichloromethane	83.0	8.217	8.217	0.000	298685	20.000	22.952	
50 cis-1,3-Dichloropropene	75.0	8.821	8.821	0.000	334547	20.000	26.214	
51 4-Methyl-2-pentanone	43.0	9.034	9.034	0.000	1105198	200.00	212.24	
$ 52 Toluene-d8	98.0	9.188	9.188	0.000	1037444	20.000	27.746	
53 Toluene	91.0	9.282	9.282	0.000	1150524	20.000	25.999	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.507	9.507	0.000	224040	20.000	24.371	
55 trans-1,3-Dichloropropene	75.0	9.543	9.543	0.000	220392	20.000	25.892	
56 1,1,2-Trichloroethane	97.0	9.756	9.756	0.000	108330	20.000	22.301	
57 Tetrachloroethene	164.0	9.933	9.933	0.000	271546	20.000	28.771	
59 1,3-Dichloropropane	76.0	9.957	9.957	0.000	197301	20.000	24.271	
$ 58 2-Hexanone-d5	63.0	9.992	9.992	0.000	363857	200.00	242.94	
60 2-Hexanone	43.0	10.040	10.040	0.000	684157	200.00	221.60	
61 Dibromochloromethane	129.0	10.193	10.193	0.000	164505	20.000	24.564	
62 1,2-Dibromoethane	107.0	10.324	10.324	0.000	105383	20.000	23.780	
* 63 Chlorobenzene-d5	117.0	10.797	10.797	0.000	203061	5.0000	5.0000	
64 Chlorobenzene	112.0	10.821	10.821	0.000	659501	20.000	26.329	
66 1,1,1,2-Tetrachloroethane	131.0	10.892	10.892	0.000	233154	20.000	24.425	
65 Ethylbenzene	91.0	10.927	10.927	0.000	1259836	20.000	26.523	
67 m+p-Xylenes	106.0	11.034	11.034	0.000	501565	20.000	26.494	
68 o-Xylene	106.0	11.400	11.400	0.000	459155	20.000	25.370	
69 Styrene	104.0	11.412	11.412	0.000	696507	20.000	25.546	
70 Bromoform	173.0	11.578	11.578	0.000	87005	20.000	24.859	
71 Isopropylbenzene	105.0	11.720	11.720	0.000	1284062	20.000	26.222	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.945	11.945	0.000	114264	20.000	21.711	
74 1,1,2,2-Tetrachloroethane	83.0	11.956	11.956	0.000	108640	20.000	20.896	
73 Bromobenzene	77.0	11.980	11.980	0.000	392927	20.000	23.785	
76 1,2,3-Trichloropropane	75.0	12.004	12.004	0.000	140002	20.000	22.420	
75 n-Propylbenzene	91.0	12.063	12.063	0.000	1507433	20.000	27.148	
77 2-Chlorotoluene	91.0	12.134	12.134	0.000	875768	20.000	25.783	
78 1,3,5-Trimethylbenzene	105.0	12.193	12.193	0.000	1067797	20.000	25.691	
79 4-Chlorotoluene	91.0	12.217	12.217	0.000	983607	20.000	25.655	
80 tert-Butylbenzene	119.0	12.465	12.465	0.000	1065497	20.000	27.562	
81 1,2,4-Trimethylbenzene	105.0	12.489	12.489	0.000	1087058	20.000	25.068	
82 sec-Butylbenzene	105.0	12.631	12.631	0.000	1380277	20.000	27.680	
83 1,3-Dichlorobenzene	146.0	12.726	12.726	0.000	553097	20.000	25.803	
84 para-Isopropyltoluene	119.0	12.737	12.737	0.000	1155512	20.000	27.195	
* 85 1,4-Dichlorobenzene-d4	152.0	12.773	12.773	0.000	110237	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.785	12.785	0.000	524886	20.000	25.477	
88 n-Butylbenzene	91.0	13.033	13.033	0.000	1136485	20.000	26.681	

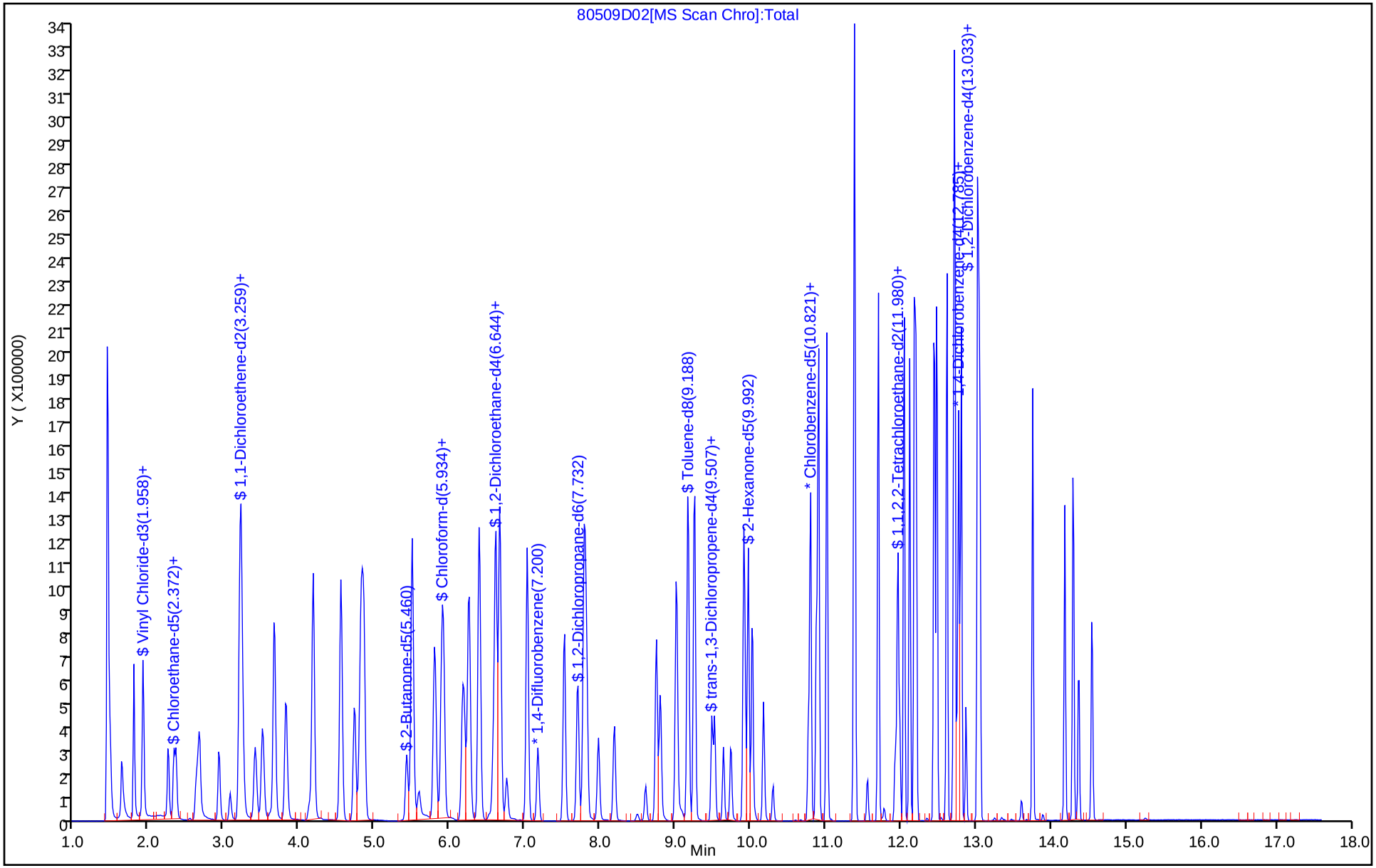
Report Date: 10-May-2016 12:37:16 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd8.i\8050916D.b\80509D02.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 87 1,2-Dichlorobenzene-d4	152.0	13.057	13.057	0.000	310930	20.000	25.088	
89 1,2-Dichlorobenzene	146.0	13.069	13.069	0.000	453975	20.000	24.458	
90 1,2-Dibromo-3-chloropropane	75.0	13.613	13.613	0.000	18210	20.000	21.660	
91 1,2,4-Trichlorobenzene	180.0	14.193	14.193	0.000	371868	20.000	24.294	
92 Hexachlorbutadiene	225.0	14.311	14.311	0.000	305594	20.000	28.707	
93 Napthalene	128.0	14.382	14.382	0.000	467352	20.000	22.428	
94 1,2,3-Trichlorobenzene	180.0	14.560	14.560	0.000	275808	20.000	23.777	

Report Date: 10-May-2016 12:37:16 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D02.D				
Injection Date:	09-May-2016 14:19:30	Inst. ID:	msd8.i	Operator:	ALL
Client ID:	VSTD020PT	Lab ID:	VSTD020PT		
Sample Info:	8050916D.b, VSTD020PT				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



Report Date: 10-May-2016 12:37:17 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd8.i\8050916D.b\80509D03.D
Lab Sample ID: VSTD010PT Client Sample ID: VSTD010PT
Injection Date: 09-May-2016 14:46:30 Dil. Factor: 1.0
Operator: ALL Inst. ID: msd8.i
Sample Info: 8050916D.b, VSTD010PT
Method: \\Organics\DD\chem\msd8.i\8050916D.b\TRACE-8.m
Method Date: 09-May-2016 16:28:30 Quant Method: ISTD
Calib Date: 09-May-2016 16:08:30 Calib File: 80509D06.D
Sample Type: Ical, Level: 4 ALS Bottle: 3
Cpnd Sublist: 2447.sub
Sample Matrix: Water Matrix Level: Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1: DB-624 (0.25 mm) Detector: MS Scan
Data Reviewer: all Review Date: 09-May-2016 15:08:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.674	1.674	0.000	183048	10.000	15.710	
2 Chloromethane	50.0	1.839	1.839	0.000	292147	10.000	13.557	
$ 3 Vinyl Chloride-d3	65.0	1.958	1.958	0.000	129275	10.000	10.158	
4 Vinyl Chloride	62.0	1.958	1.958	0.000	205731	10.000	14.196	
5 Bromomethane	94.0	2.289	2.289	0.000	106167	10.000	11.043	
$ 6 Chloroethane-d5	69.0	2.372	2.372	0.000	105662	10.000	11.216	M
7 Chloroethane	64.0	2.395	2.395	0.000	115069	10.000	13.372	
8 Trichlorofluoromethane	101.0	2.679	2.679	0.000	211341	10.000	15.691	
$ 12 1,1-Dichloroethene-d2	63.0	3.247	3.247	0.000	319683	10.000	12.567	
13 1,1-Dichloroethene	96.0	3.259	3.259	0.000	142040	10.000	14.291	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.271	3.271	0.000	146484	10.000	15.885	
14 Acetone	43.0	3.295	3.295	0.000	96226	100.00	89.752	
15 Carbon Disulfide	76.0	3.543	3.543	0.000	418572	10.000	14.268	
16 Methyl Acetate	43.0	3.721	3.721	0.000	57754	10.000	9.7944	
17 Methylene Chloride	84.0	3.863	3.863	0.000	130478	10.000	12.631	
20 Methyl tert-Butyl Ether	73.0	4.218	4.218	0.000	212043	10.000	12.416	
21 trans-1,2-Dichloroethene	96.0	4.218	4.218	0.000	161337	10.000	13.950	
23 1,1-Dichloroethane	63.0	4.762	4.762	0.000	343329	10.000	13.677	
$ 25 2-Butanone-d5	46.0	5.460	5.460	0.000	252543	100.00	96.254	
26 cis-1,2-Dichloroethene	96.0	5.531	5.531	0.000	165051	10.000	13.327	
27 2,2-Dichloropropane	77.0	5.531	5.531	0.000	157487	10.000	13.152	
28 2-Butanone	43.0	5.543	5.543	0.000	180657	100.00	102.61	
29 Bromochloromethane	128.0	5.851	5.851	0.000	56198	10.000	13.034	
$ 30 Chloroform-d	84.0	5.922	5.922	0.000	271117	10.000	11.653	
31 Chloroform	83.0	5.957	5.957	0.000	283180	10.000	12.739	
33 1,1,1-Trichloroethane	97.0	6.206	6.206	0.000	240167	10.000	14.069	
32 Cyclohexane	56.0	6.288	6.288	0.000	387684	10.000	15.372	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
34 Carbon Tetrachloride	117.0	6.430	6.430	0.000	232609	10.000	15.131	
35 1,1-Dichloropropene	75.0	6.419	6.419	0.000	216622	10.000	14.723	
$ 38 1,2-Dichloroethane-d4	65.0	6.608	6.608	0.000	106721	10.000	10.891	
$ 36 Benzene-d6	84.0	6.643	6.643	0.000	533086	10.000	12.037	
37 Benzene	78.0	6.691	6.691	0.000	567456	10.000	13.526	
39 1,2-Dichloroethane	62.0	6.714	6.714	0.000	149154	10.000	12.506	
* 41 1,4-Difluorobenzene	114.0	7.200	7.200	0.000	269786	5.0000	5.0000	
42 Trichloroethene	95.0	7.555	7.555	0.000	170764	10.000	13.778	
$ 44 1,2-Dichloropropane-d6	67.0	7.732	7.732	0.000	140088	10.000	10.288	
43 Methylcyclohexane	83.0	7.815	7.815	0.000	272899	10.000	14.746	
45 1,2-Dichloropropane	63.0	7.850	7.850	0.000	144636	10.000	13.184	
48 Dibromomethane	93.0	8.004	8.004	0.000	47338	10.000	11.668	
49 Bromodichloromethane	83.0	8.217	8.217	0.000	160537	10.000	12.310	
50 cis-1,3-Dichloropropene	75.0	8.833	8.833	0.000	171811	10.000	13.117	
51 4-Methyl-2-pentanone	43.0	9.034	9.034	0.000	553312	100.00	108.76	
$ 52 Toluene-d8	98.0	9.188	9.188	0.000	461472	10.000	12.095	
53 Toluene	91.0	9.282	9.282	0.000	616737	10.000	13.536	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.507	9.507	0.000	100705	10.000	10.917	
55 trans-1,3-Dichloropropene	75.0	9.543	9.543	0.000	111904	10.000	13.057	
56 1,1,2-Trichloroethane	97.0	9.767	9.767	0.000	55762	10.000	11.622	
57 Tetrachloroethene	164.0	9.933	9.933	0.000	147471	10.000	14.899	
59 1,3-Dichloropropane	76.0	9.957	9.957	0.000	100637	10.000	12.343	
$ 58 2-Hexanone-d5	63.0	9.992	9.992	0.000	164478	100.00	109.61	
60 2-Hexanone	43.0	10.040	10.040	0.000	337378	100.00	111.44	
61 Dibromochloromethane	129.0	10.205	10.205	0.000	82752	10.000	12.362	
62 1,2-Dibromoethane	107.0	10.323	10.323	0.000	51850	10.000	11.820	
* 63 Chlorobenzene-d5	117.0	10.797	10.797	0.000	194141	5.0000	5.0000	
64 Chlorobenzene	112.0	10.820	10.820	0.000	346736	10.000	13.536	
66 1,1,1,2-Tetrachloroethane	131.0	10.891	10.891	0.000	126637	10.000	13.113	
65 Ethylbenzene	91.0	10.927	10.927	0.000	669361	10.000	13.697	
67 m+p-Xylenes	106.0	11.033	11.033	0.000	270694	10.000	13.869	
68 o-Xylene	106.0	11.400	11.400	0.000	248499	10.000	13.471	
69 Styrene	104.0	11.412	11.412	0.000	360716	10.000	13.058	
70 Bromoform	173.0	11.578	11.578	0.000	43473	10.000	12.802	
71 Isopropylbenzene	105.0	11.720	11.720	0.000	705897	10.000	13.979	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.945	11.945	0.000	56581	10.000	10.747	
74 1,1,2,2-Tetrachloroethane	83.0	11.956	11.956	0.000	55574	10.000	10.997	
73 Bromobenzene	77.0	11.980	11.980	0.000	205682	10.000	12.463	
76 1,2,3-Trichloropropane	75.0	12.004	12.004	0.000	70049	10.000	11.571	
75 n-Propylbenzene	91.0	12.063	12.063	0.000	808106	10.000	14.357	
77 2-Chlorotoluene	91.0	12.134	12.134	0.000	472748	10.000	13.822	
78 1,3,5-Trimethylbenzene	105.0	12.193	12.193	0.000	586609	10.000	13.768	
79 4-Chlorotoluene	91.0	12.217	12.217	0.000	517670	10.000	13.434	
80 tert-Butylbenzene	119.0	12.465	12.465	0.000	579940	10.000	14.742	
81 1,2,4-Trimethylbenzene	105.0	12.489	12.489	0.000	583723	10.000	13.239	
82 sec-Butylbenzene	105.0	12.631	12.631	0.000	738661	10.000	14.579	
83 1,3-Dichlorobenzene	146.0	12.726	12.726	0.000	287212	10.000	13.480	
84 para-Isopropyltoluene	119.0	12.737	12.737	0.000	618206	10.000	14.320	
* 85 1,4-Dichlorobenzene-d4	152.0	12.773	12.773	0.000	103004	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.785	12.785	0.000	271662	10.000	13.312	
88 n-Butylbenzene	91.0	13.033	13.033	0.000	601157	10.000	13.958	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 87 1,2-Dichlorobenzene-d4	152.0	13.057	13.057	0.000	144956	10.000	11.812	
89 1,2-Dichlorobenzene	146.0	13.069	13.069	0.000	236000	10.000	12.964	
90 1,2-Dibromo-3-chloropropane	75.0	13.613	13.613	0.000	8918	10.000	11.062	
91 1,2,4-Trichlorobenzene	180.0	14.193	14.193	0.000	193767	10.000	12.775	
92 Hexachlorbutadiene	225.0	14.311	14.311	0.000	155123	10.000	14.135	
93 Napthalene	128.0	14.382	14.382	0.000	240989	10.000	11.896	
94 1,2,3-Trichlorobenzene	180.0	14.560	14.560	0.000	142771	10.000	12.468	

QC Flag Legend

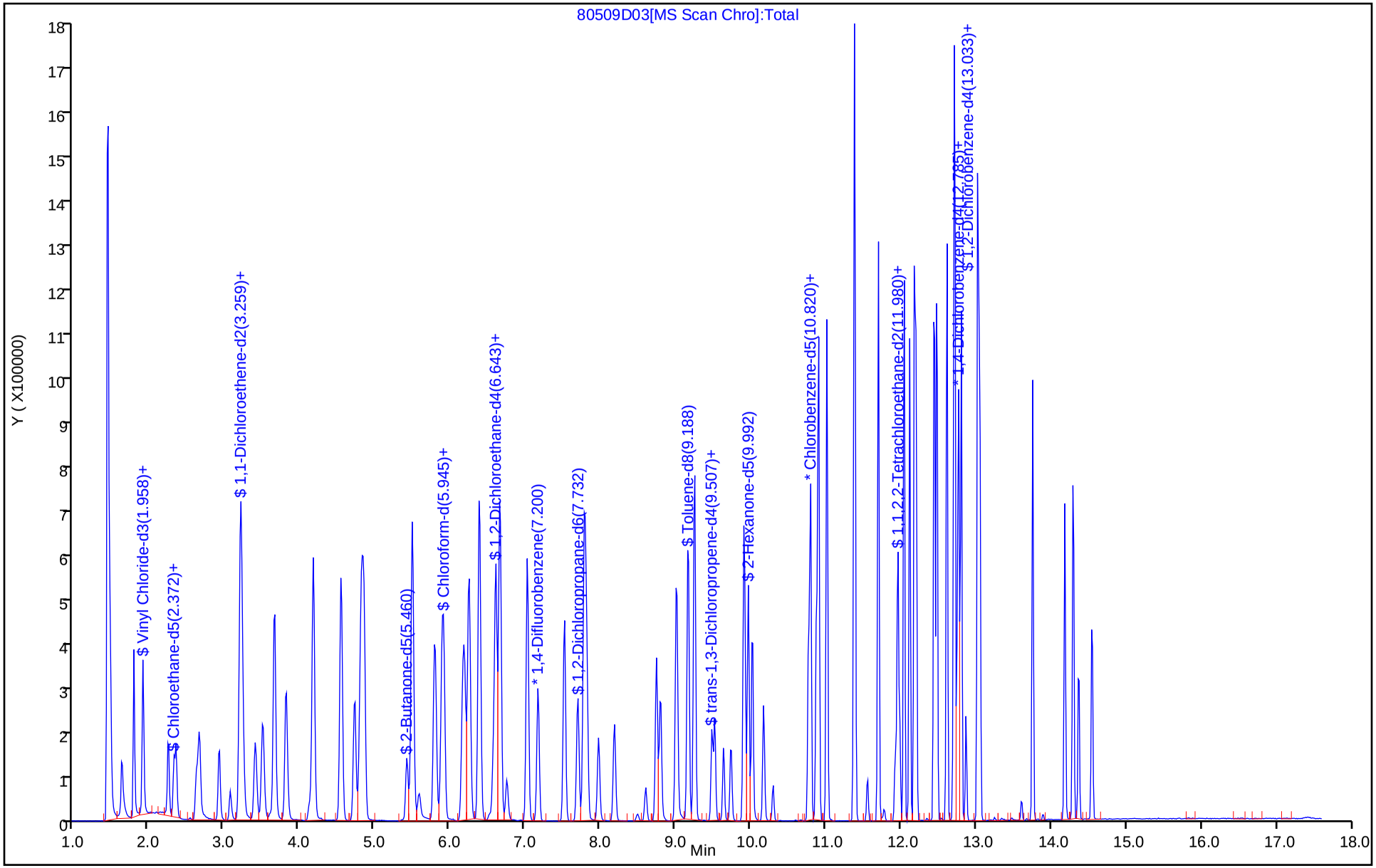
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-May-2016 12:37:17 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D03.D				
Injection Date:	09-May-2016 14:46:30	Inst. ID:	msd8.i	Operator:	ALL
Client ID:	VSTD010PT	Lab ID:	VSTD010PT		
Sample Info:	8050916D.b, VSTD010PT				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



Report Date: 10-May-2016 12:37:17 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

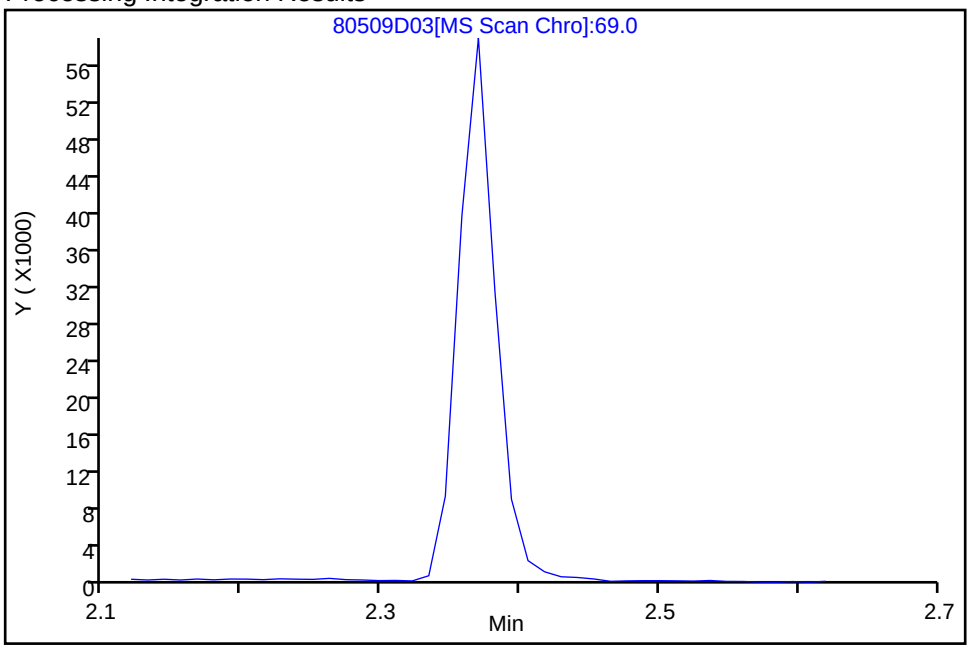
Manual Integration Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D03.D		
Injection Date:	09-May-2016 14:46:30	Inst. ID:	msd8.i
Client ID:	VSTD010PT	Lab ID:	VSTD010PT
Sample Info:	8050916D.b, VSTD010PT		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

$ 6 Chloroethane-d5, CAS: 19199-91-8

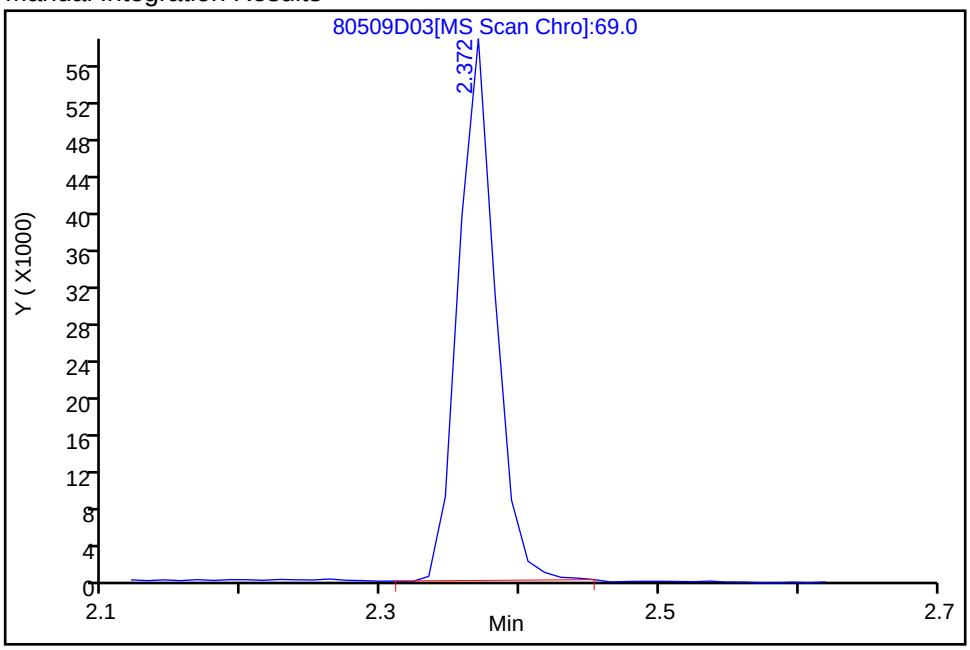
Not Detected
2.372

Processing Integration Results



Manual Integration Results

RT:	2.372
Area:	105662
Amount:	11.216
Amount Units:	ug/L



Data Editor: all, 09-May-2016 15:08:30
Audit Action: Mint
Audit Reason: IAI

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D04.D		
Lab Sample ID:	VSTD005PT	Client Sample ID:	VSTD005PT
Injection Date:	09-May-2016 15:13:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd8.i
Sample Info:	8050916D.b, VSTD005PT		
Method:	\\Organics\DD\chem\msd8.i\8050916D.b\TRACE-8.m		
Method Date:	09-May-2016 16:28:30	Quant Method:	ISTD
Calib Date:	09-May-2016 16:08:30	Calib File:	80509D06.D
Sample Type:	Ical, Level: 3	ALS Bottle:	4
Cpnd Sublist:	2447.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 16:10:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.674	1.674	0.000	82814	5.0000	6.3677	
2 Chloromethane	50.0	1.839	1.839	0.000	133915	5.0000	5.8540	
$ 3 Vinyl Chloride-d3	65.0	1.946	1.946	0.000	59352	5.0000	4.6086	
4 Vinyl Chloride	62.0	1.958	1.958	0.000	95216	5.0000	6.1398	
5 Bromomethane	94.0	2.289	2.289	0.000	49503	5.0000	4.9187	
$ 6 Chloroethane-d5	69.0	2.372	2.372	0.000	50900	5.0000	5.2295	
7 Chloroethane	64.0	2.396	2.396	0.000	53274	5.0000	5.8542	
8 Trichlorofluoromethane	101.0	2.680	2.680	0.000	91126	5.0000	6.2557	
$ 12 1,1-Dichloroethene-d2	63.0	3.248	3.248	0.000	145300	5.0000	5.4828	
13 1,1-Dichloroethene	96.0	3.259	3.259	0.000	67470	5.0000	6.2351	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.271	3.271	0.000	69472	5.0000	6.6858	
14 Acetone	43.0	3.295	3.295	0.000	39345	50.000	39.920	
15 Carbon Disulfide	76.0	3.543	3.543	0.000	195457	5.0000	6.1813	
16 Methyl Acetate	43.0	3.721	3.721	0.000	26058	5.0000	4.5147	
17 Methylene Chloride	84.0	3.863	3.863	0.000	60681	5.0000	5.6511	
20 Methyl tert-Butyl Ether	73.0	4.218	4.218	0.000	97961	5.0000	5.6268	
21 trans-1,2-Dichloroethene	96.0	4.218	4.218	0.000	75805	5.0000	6.1192	
23 1,1-Dichloroethane	63.0	4.762	4.762	0.000	158480	5.0000	5.9611	
$ 25 2-Butanone-d5	46.0	5.460	5.460	0.000	122836	50.000	49.104	
26 cis-1,2-Dichloroethene	96.0	5.531	5.531	0.000	75147	5.0000	5.7843	
27 2,2-Dichloropropane	77.0	5.531	5.531	0.000	74420	5.0000	5.8487	
28 2-Butanone	43.0	5.543	5.543	0.000	82051	50.000	49.145	
29 Bromochloromethane	128.0	5.851	5.851	0.000	25658	5.0000	5.7633	
$ 30 Chloroform-d	84.0	5.922	5.922	0.000	126961	5.0000	5.3426	
31 Chloroform	83.0	5.946	5.946	0.000	129193	5.0000	5.5890	
33 1,1,1-Trichloroethane	97.0	6.206	6.206	0.000	111834	5.0000	6.1356	
32 Cyclohexane	56.0	6.289	6.289	0.000	189684	5.0000	6.7467	

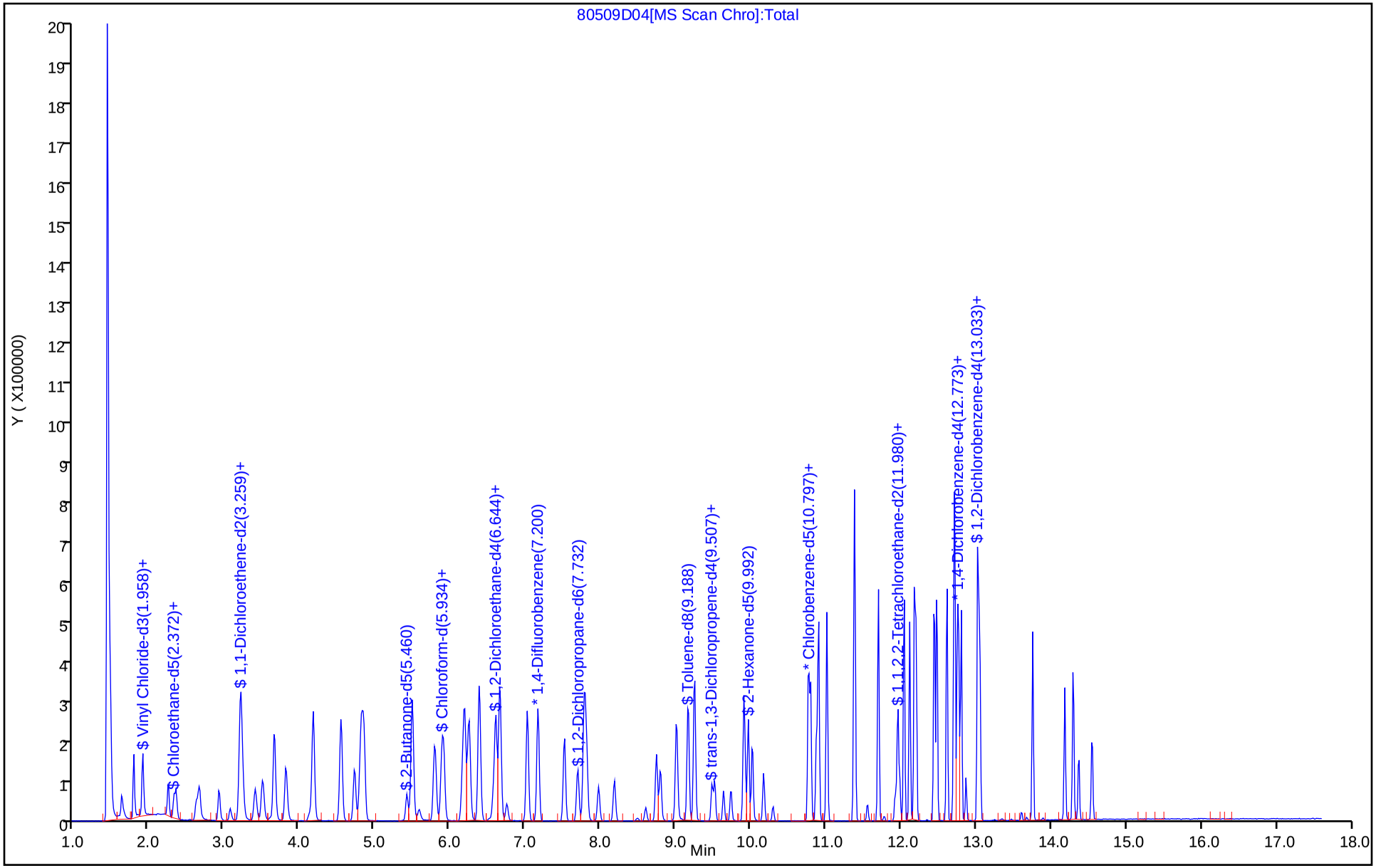
Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
34 Carbon Tetrachloride	117.0	6.419	6.419	0.000	108093	5.0000	6.4430	
35 1,1-Dichloropropene	75.0	6.419	6.419	0.000	99845	5.0000	6.2445	
$ 38 1,2-Dichloroethane-d4	65.0	6.608	6.608	0.000	53331	5.0000	5.4302	
$ 36 Benzene-d6	84.0	6.644	6.644	0.000	246355	5.0000	5.4662	
37 Benzene	78.0	6.691	6.691	0.000	268666	5.0000	6.0756	
39 1,2-Dichloroethane	62.0	6.703	6.703	0.000	68665	5.0000	5.6253	
* 41 1,4-Difluorobenzene	114.0	7.200	7.200	0.000	259570	5.0000	5.0000	
42 Trichloroethene	95.0	7.555	7.555	0.000	79172	5.0000	6.0176	
$ 44 1,2-Dichloropropane-d6	67.0	7.732	7.732	0.000	66241	5.0000	4.8628	
43 Methylcyclohexane	83.0	7.815	7.815	0.000	130513	5.0000	6.4333	
45 1,2-Dichloropropane	63.0	7.851	7.851	0.000	66079	5.0000	5.8016	
48 Dibromomethane	93.0	8.004	8.004	0.000	21585	5.0000	5.2637	
49 Bromodichloromethane	83.0	8.217	8.217	0.000	74365	5.0000	5.5527	
50 cis-1,3-Dichloropropene	75.0	8.821	8.821	0.000	74581	5.0000	5.5972	
51 4-Methyl-2-pentanone	43.0	9.034	9.034	0.000	253989	50.000	51.710	
$ 52 Toluene-d8	98.0	9.188	9.188	0.000	211932	5.0000	5.4555	
53 Toluene	91.0	9.282	9.282	0.000	281519	5.0000	5.8834	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.507	9.507	0.000	46475	5.0000	5.1039	
55 trans-1,3-Dichloropropene	75.0	9.543	9.543	0.000	51089	5.0000	5.8442	
56 1,1,2-Trichloroethane	97.0	9.768	9.768	0.000	25447	5.0000	5.3135	
57 Tetrachloroethene	164.0	9.933	9.933	0.000	66789	5.0000	6.2736	
59 1,3-Dichloropropane	76.0	9.957	9.957	0.000	45961	5.0000	5.5790	
$ 58 2-Hexanone-d5	63.0	9.992	9.992	0.000	81018	50.000	54.899	
60 2-Hexanone	43.0	10.040	10.040	0.000	151808	50.000	51.579	
61 Dibromochloromethane	129.0	10.194	10.194	0.000	38554	5.0000	5.6426	
62 1,2-Dibromoethane	107.0	10.324	10.324	0.000	24688	5.0000	5.6021	
* 63 Chlorobenzene-d5	117.0	10.797	10.797	0.000	184654	5.0000	5.0000	
64 Chlorobenzene	112.0	10.821	10.821	0.000	156843	5.0000	5.9052	
66 1,1,1,2-Tetrachloroethane	131.0	10.892	10.892	0.000	58436	5.0000	5.8662	
65 Ethylbenzene	91.0	10.927	10.927	0.000	310634	5.0000	6.0456	
67 m+p-Xylenes	106.0	11.034	11.034	0.000	124182	5.0000	6.0605	
68 o-Xylene	106.0	11.400	11.400	0.000	114438	5.0000	5.9613	
69 Styrene	104.0	11.412	11.412	0.000	166639	5.0000	5.8212	
70 Bromoform	173.0	11.578	11.578	0.000	19783	5.0000	5.5934	
71 Isopropylbenzene	105.0	11.720	11.720	0.000	325186	5.0000	6.1073	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.945	11.945	0.000	26771	5.0000	5.1972	
74 1,1,2,2-Tetrachloroethane	83.0	11.957	11.957	0.000	25993	5.0000	5.2165	
73 Bromobenzene	77.0	11.980	11.980	0.000	97333	5.0000	5.7343	
76 1,2,3-Trichloropropane	75.0	12.004	12.004	0.000	33092	5.0000	5.5121	
75 n-Propylbenzene	91.0	12.063	12.063	0.000	379796	5.0000	6.1548	
77 2-Chlorotoluene	91.0	12.134	12.134	0.000	219052	5.0000	5.9442	
78 1,3,5-Trimethylbenzene	105.0	12.193	12.193	0.000	269523	5.0000	6.0499	
79 4-Chlorotoluene	91.0	12.217	12.217	0.000	241483	5.0000	5.8208	
80 tert-Butylbenzene	119.0	12.465	12.465	0.000	266661	5.0000	6.2084	
81 1,2,4-Trimethylbenzene	105.0	12.489	12.489	0.000	272292	5.0000	5.9256	
82 sec-Butylbenzene	105.0	12.631	12.631	0.000	348112	5.0000	6.2607	
83 1,3-Dichlorobenzene	146.0	12.726	12.726	0.000	134481	5.0000	5.8854	
84 para-Isopropyltoluene	119.0	12.738	12.738	0.000	289578	5.0000	6.1528	
* 85 1,4-Dichlorobenzene-d4	152.0	12.773	12.773	0.000	100726	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.785	12.785	0.000	125707	5.0000	5.7872	
88 n-Butylbenzene	91.0	13.033	13.033	0.000	287504	5.0000	6.0916	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 87 1,2-Dichlorobenzene-d4	152.0	13.057	13.057	0.000	68321	5.0000	5.3887	
89 1,2-Dichlorobenzene	146.0	13.069	13.069	0.000	112681	5.0000	5.8375	
90 1,2-Dibromo-3-chloropropane	75.0	13.613	13.613	0.000	4269	5.0000	5.2023	
91 1,2,4-Trichlorobenzene	180.0	14.193	14.193	0.000	87895	5.0000	5.5184	
92 Hexachlorbutadiene	225.0	14.300	14.300	0.000	75829	5.0000	6.2324	
93 Napthalene	128.0	14.382	14.382	0.000	111035	5.0000	5.3577	
94 1,2,3-Trichlorobenzene	180.0	14.560	14.560	0.000	65430	5.0000	5.4806	

Report Date: 10-May-2016 12:37:18 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D04.D				
Injection Date:	09-May-2016 15:13:30	Inst. ID:	msd8.i	Operator:	ALL
Client ID:	VSTD005PT	Lab ID:	VSTD005PT		
Sample Info:	8050916D.b, VSTD005PT				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D05.D		
Lab Sample ID:	VSTD001PT	Client Sample ID:	VSTD001PT
Injection Date:	09-May-2016 15:40:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd8.i
Sample Info:	8050916D.b, VSTD001PT		
Method:	\\Organics\DD\chem\msd8.i\8050916D.b\TRACE-8.m		
Method Date:	09-May-2016 16:28:30	Quant Method:	ISTD
Calib Date:	09-May-2016 16:08:30	Calib File:	80509D06.D
Sample Type:	Ical, Level: 2	ALS Bottle:	5
Cpnd Sublist:	2447.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 16:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.674	1.674	0.000	14702	1.0000	1.0225	
2 Chloromethane	50.0	1.839	1.839	0.000	27976	1.0000	1.1352	
$ 3 Vinyl Chloride-d3	65.0	1.946	1.946	0.000	15242	1.0000	1.1625	
4 Vinyl Chloride	62.0	1.958	1.958	0.000	19140	1.0000	1.1179	
5 Bromomethane	94.0	2.289	2.289	0.000	9198	1.0000	0.92361	
$ 6 Chloroethane-d5	69.0	2.372	2.372	0.000	12902	1.0000	1.2336	
7 Chloroethane	64.0	2.395	2.395	0.000	10920	1.0000	1.1031	
8 Trichlorofluoromethane	101.0	2.679	2.679	0.000	15219	1.0000	0.95479	
$ 12 1,1-Dichloroethene-d2	63.0	3.236	3.236	0.000	31530	1.0000	1.1020	
13 1,1-Dichloroethene	96.0	3.259	3.259	0.000	11585	1.0000	1.0016	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.259	3.259	0.000	10687	1.0000	0.94269	
14 Acetone	43.0	3.295	3.295	0.000	8895	10.000	9.5533	
15 Carbon Disulfide	76.0	3.543	3.543	0.000	33763	1.0000	0.9985	
16 Methyl Acetate	43.0	3.721	3.721	0.000	5309	1.0000	0.94207	
17 Methylene Chloride	84.0	3.863	3.863	0.000	10928	1.0000	0.9938	
20 Methyl tert-Butyl Ether	73.0	4.218	4.218	0.000	17664	1.0000	1.0043	
21 trans-1,2-Dichloroethene	96.0	4.218	4.218	0.000	13799	1.0000	1.0406	
23 1,1-Dichloroethane	63.0	4.762	4.762	0.000	29281	1.0000	1.0411	
$ 25 2-Butanone-d5	46.0	5.460	5.460	0.000	23909	10.000	9.8096	
26 cis-1,2-Dichloroethene	96.0	5.531	5.531	0.000	13302	1.0000	0.98460	
27 2,2-Dichloropropane	77.0	5.531	5.531	0.000	12913	1.0000	0.97371	
28 2-Butanone	43.0	5.543	5.543	0.000	15617	10.000	9.6854	
29 Bromochloromethane	128.0	5.851	5.851	0.000	4469	1.0000	0.98580	
$ 30 Chloroform-d	84.0	5.922	5.922	0.000	26825	1.0000	1.0764	
31 Chloroform	83.0	5.945	5.945	0.000	23954	1.0000	1.0020	
33 1,1,1-Trichloroethane	97.0	6.206	6.206	0.000	19525	1.0000	1.0074	
32 Cyclohexane	56.0	6.288	6.288	0.000	36244	1.0000	1.1329	M

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
34 Carbon Tetrachloride	117.0	6.419	6.419	0.000	18476	1.0000	1.0130	
35 1,1-Dichloropropene	75.0	6.419	6.419	0.000	17510	1.0000	1.0152	
$ 38 1,2-Dichloroethane-d4	65.0	6.608	6.608	0.000	10338	1.0000	1.0306	
$ 36 Benzene-d6	84.0	6.643	6.643	0.000	52755	1.0000	1.0955	
37 Benzene	78.0	6.691	6.691	0.000	46807	1.0000	1.0051	
39 1,2-Dichloroethane	62.0	6.714	6.714	0.000	11265	1.0000	0.91388	
* 41 1,4-Difluorobenzene	114.0	7.200	7.200	0.000	256231	5.0000	5.0000	
42 Trichloroethene	95.0	7.555	7.555	0.000	13912	1.0000	1.0070	
$ 44 1,2-Dichloropropane-d6	67.0	7.732	7.732	0.000	14215	1.0000	1.0331	
43 Methylcyclohexane	83.0	7.815	7.815	0.000	21893	1.0000	0.98796	
45 1,2-Dichloropropane	63.0	7.850	7.850	0.000	11504	1.0000	0.97721	M
48 Dibromomethane	93.0	8.004	8.004	0.000	3775	1.0000	0.92555	
49 Bromodichloromethane	83.0	8.217	8.217	0.000	13851	1.0000	1.0133	
50 cis-1,3-Dichloropropene	75.0	8.821	8.821	0.000	13002	1.0000	0.94730	
51 4-Methyl-2-pentanone	43.0	9.034	9.034	0.000	47284	10.000	9.6677	
$ 52 Toluene-d8	98.0	9.187	9.187	0.000	44096	1.0000	1.0634	
53 Toluene	91.0	9.282	9.282	0.000	52651	1.0000	1.0352	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.507	9.507	0.000	9490	1.0000	1.0134	
55 trans-1,3-Dichloropropene	75.0	9.542	9.542	0.000	8968	1.0000	0.97967	
56 1,1,2-Trichloroethane	97.0	9.755	9.755	0.000	4681	1.0000	0.95792	
57 Tetrachloroethene	164.0	9.933	9.933	0.000	11885	1.0000	1.0282	
59 1,3-Dichloropropane	76.0	9.957	9.957	0.000	8044	1.0000	0.95846	
$ 58 2-Hexanone-d5	63.0	9.992	9.992	0.000	14706	10.000	9.7980	
60 2-Hexanone	43.0	10.051	10.051	0.000	30636	10.000	10.169	
61 Dibromochloromethane	129.0	10.193	10.193	0.000	6790	1.0000	0.96456	
62 1,2-Dibromoethane	107.0	10.323	10.323	0.000	4801	1.0000	1.0494	M
* 63 Chlorobenzene-d5	117.0	10.797	10.797	0.000	183305	5.0000	5.0000	
64 Chlorobenzene	112.0	10.820	10.820	0.000	27667	1.0000	0.98972	
66 1,1,1,2-Tetrachloroethane	131.0	10.903	10.903	0.000	9728	1.0000	0.95835	
65 Ethylbenzene	91.0	10.927	10.927	0.000	55346	1.0000	1.0119	
67 m+p-Xylenes	106.0	11.033	11.033	0.000	22271	1.0000	1.0185	
68 o-Xylene	106.0	11.400	11.400	0.000	20152	1.0000	1.0000	
69 Styrene	104.0	11.412	11.412	0.000	30556	1.0000	1.0098	
70 Bromoform	173.0	11.578	11.578	0.000	3428	1.0000	0.91708	
71 Isopropylbenzene	105.0	11.720	11.720	0.000	55643	1.0000	0.98736	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.945	11.945	0.000	5379	1.0000	1.0200	
74 1,1,2,2-Tetrachloroethane	83.0	11.956	11.956	0.000	5125	1.0000	1.0283	
73 Bromobenzene	77.0	11.980	11.980	0.000	17337	1.0000	0.9914	
76 1,2,3-Trichloropropane	75.0	12.004	12.004	0.000	6700	1.0000	1.0738	
75 n-Propylbenzene	91.0	12.063	12.063	0.000	67623	1.0000	0.98725	
77 2-Chlorotoluene	91.0	12.134	12.134	0.000	40436	1.0000	1.0023	
78 1,3,5-Trimethylbenzene	105.0	12.193	12.193	0.000	48337	1.0000	1.0247	
79 4-Chlorotoluene	91.0	12.217	12.217	0.000	44691	1.0000	0.98547	
80 tert-Butylbenzene	119.0	12.465	12.465	0.000	46781	1.0000	0.97805	
81 1,2,4-Trimethylbenzene	105.0	12.489	12.489	0.000	49437	1.0000	1.0238	
82 sec-Butylbenzene	105.0	12.631	12.631	0.000	64403	1.0000	1.0265	
83 1,3-Dichlorobenzene	146.0	12.726	12.726	0.000	25511	1.0000	1.0139	
84 para-Isopropyltoluene	119.0	12.737	12.737	0.000	52162	1.0000	0.9979	
* 85 1,4-Dichlorobenzene-d4	152.0	12.773	12.773	0.000	104343	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.785	12.785	0.000	23956	1.0000	1.0114	
88 n-Butylbenzene	91.0	13.033	13.033	0.000	52534	1.0000	1.0027	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 87 1,2-Dichlorobenzene-d4	152.0	13.057	13.057	0.000	14053	1.0000	1.0198	
89 1,2-Dichlorobenzene	146.0	13.069	13.069	0.000	20411	1.0000	0.98022	
90 1,2-Dibromo-3-chloropropane	75.0	13.613	13.613	0.000	739	1.0000	0.87990	
91 1,2,4-Trichlorobenzene	180.0	14.193	14.193	0.000	15833	1.0000	0.94039	
92 Hexachlorbutadiene	225.0	14.311	14.311	0.000	13651	1.0000	1.0076	
93 Napthalene	128.0	14.382	14.382	0.000	19572	1.0000	0.91567	
94 1,2,3-Trichlorobenzene	180.0	14.560	14.560	0.000	12296	1.0000	0.97488	

QC Flag Legend

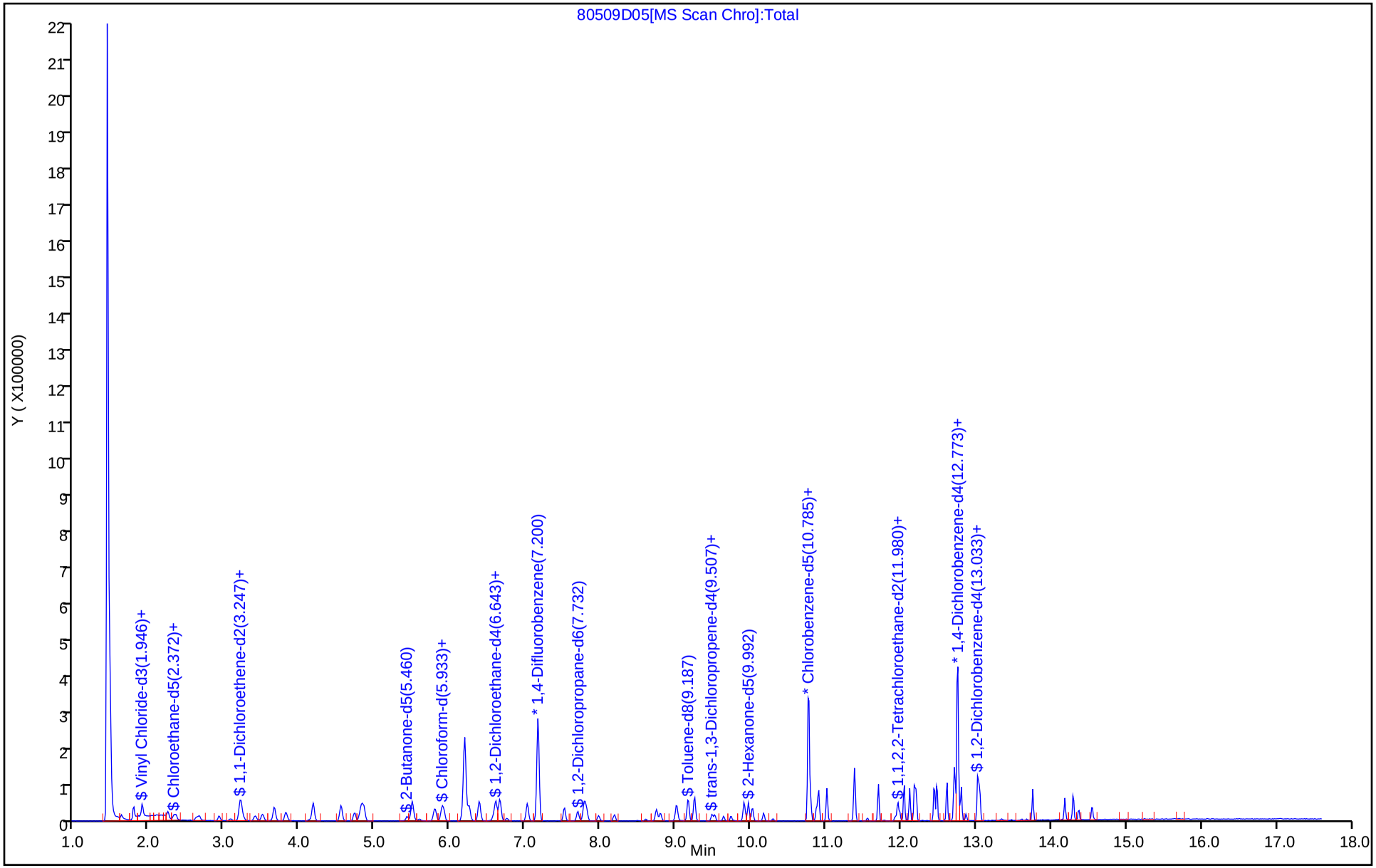
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-May-2016 12:37:18 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D05.D				
Injection Date:	09-May-2016 15:40:30	Inst. ID:	msd8.i	Operator:	ALL
Client ID:	VSTD001PT	Lab ID:	VSTD001PT		
Sample Info:	8050916D.b, VSTD001PT				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



Report Date: 10-May-2016 12:37:18 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

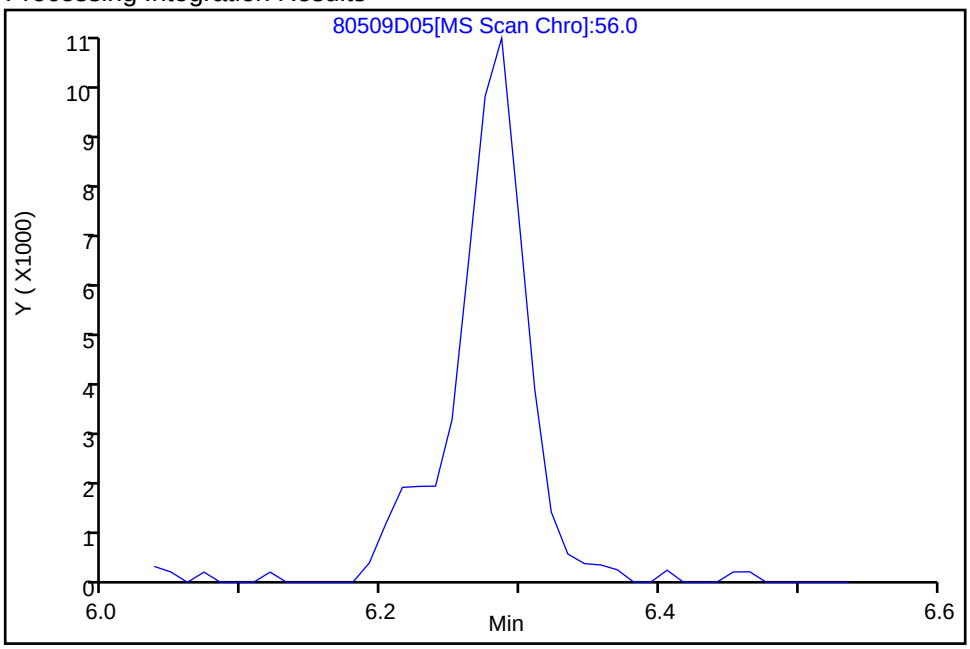
Manual Integration Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D05.D		
Injection Date:	09-May-2016 15:40:30	Inst. ID:	msd8.i
Client ID:	VSTD001PT	Lab ID:	VSTD001PT
Sample Info:	8050916D.b, VSTD001PT		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

32 Cyclohexane, CAS: 110-82-7

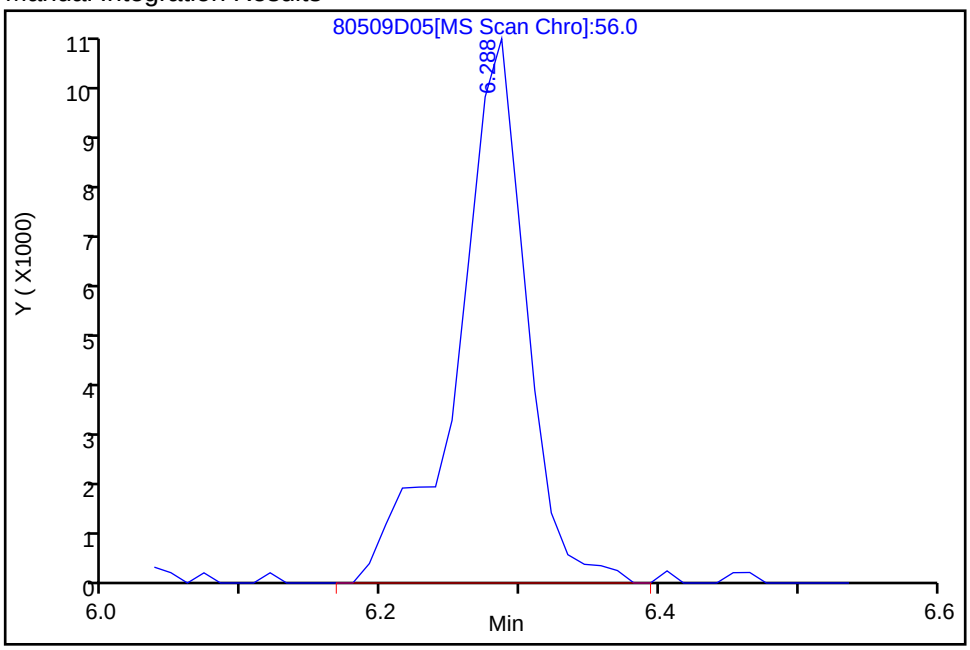
Not Detected
6.288

Processing Integration Results



Manual Integration Results

RT:	6.288
Area:	36244
Amount:	1.1329
Amount Units:	ug/L



Data Editor: all, 09-May-2016 16:04:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 10-May-2016 12:37:18 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

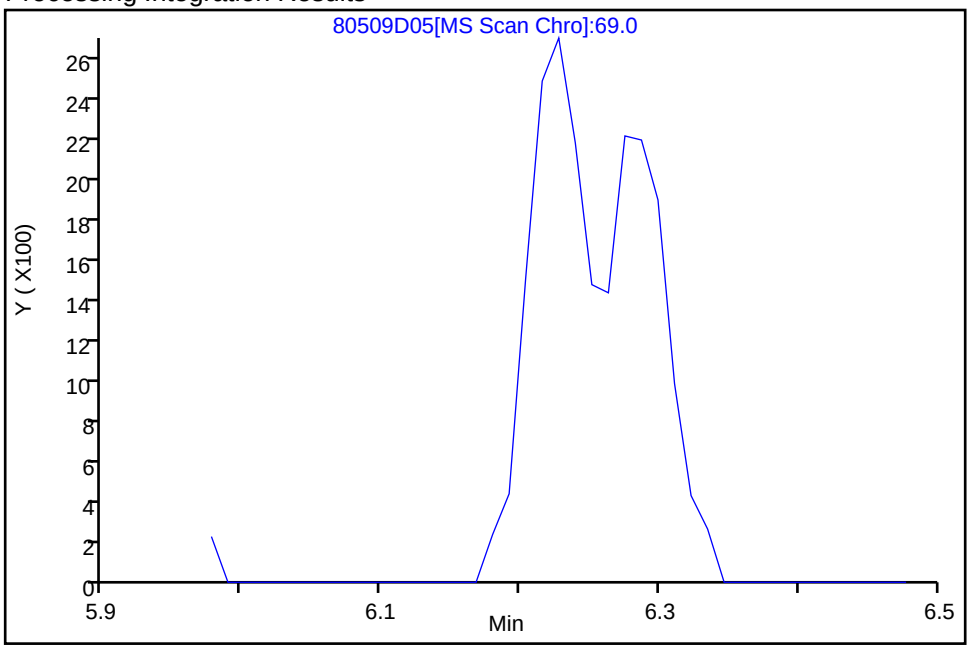
Manual Integration Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D05.D		
Injection Date:	09-May-2016 15:40:30	Inst. ID:	msd8.i
Client ID:	VSTD001PT	Lab ID:	VSTD001PT
Sample Info:	8050916D.b, VSTD001PT		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

32 Cyclohexane, CAS: 110-82-7

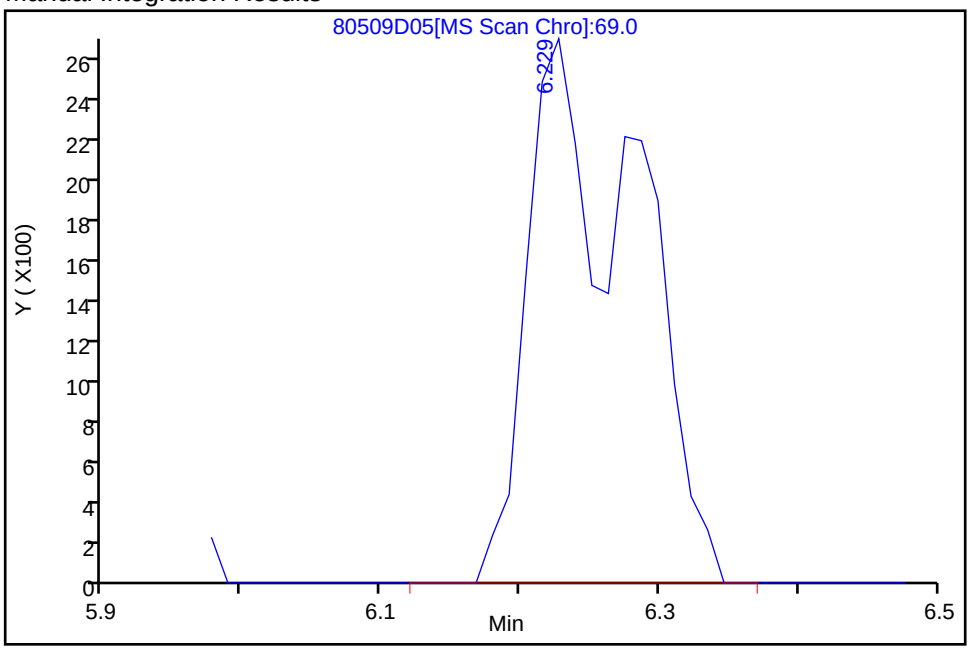
Not Detected
6.229

Processing Integration Results



Manual Integration Results

RT:	6.229
Area:	14345
Amount:	1.1329
Amount Units:	ug/L



Data Editor: all, 09-May-2016 16:04:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 10-May-2016 12:37:18 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

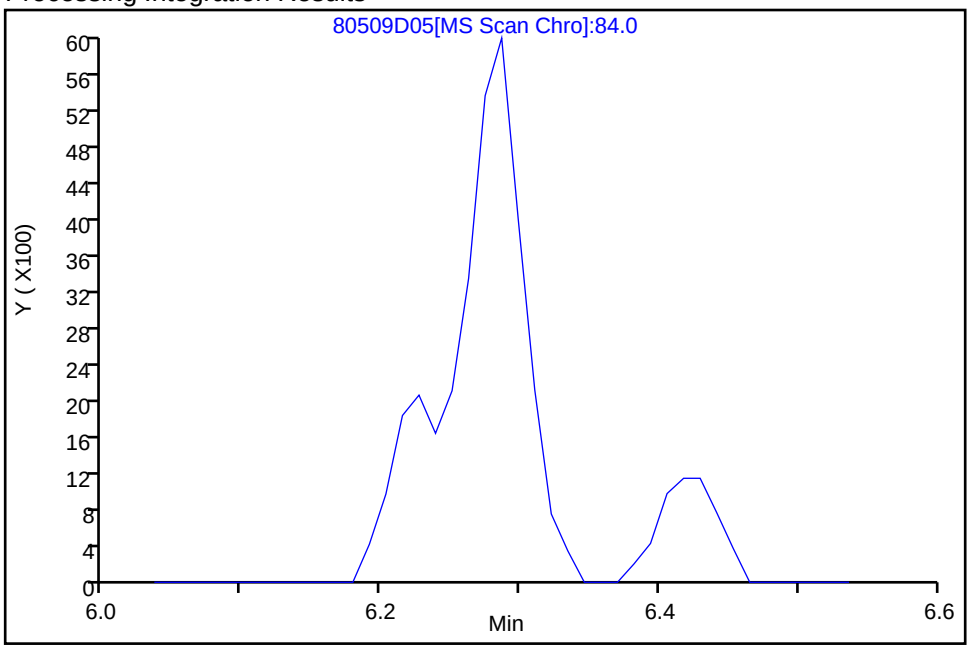
Manual Integration Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D05.D		
Injection Date:	09-May-2016 15:40:30	Inst. ID:	msd8.i
Client ID:	VSTD001PT	Lab ID:	VSTD001PT
Sample Info:	8050916D.b, VSTD001PT		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

32 Cyclohexane, CAS: 110-82-7

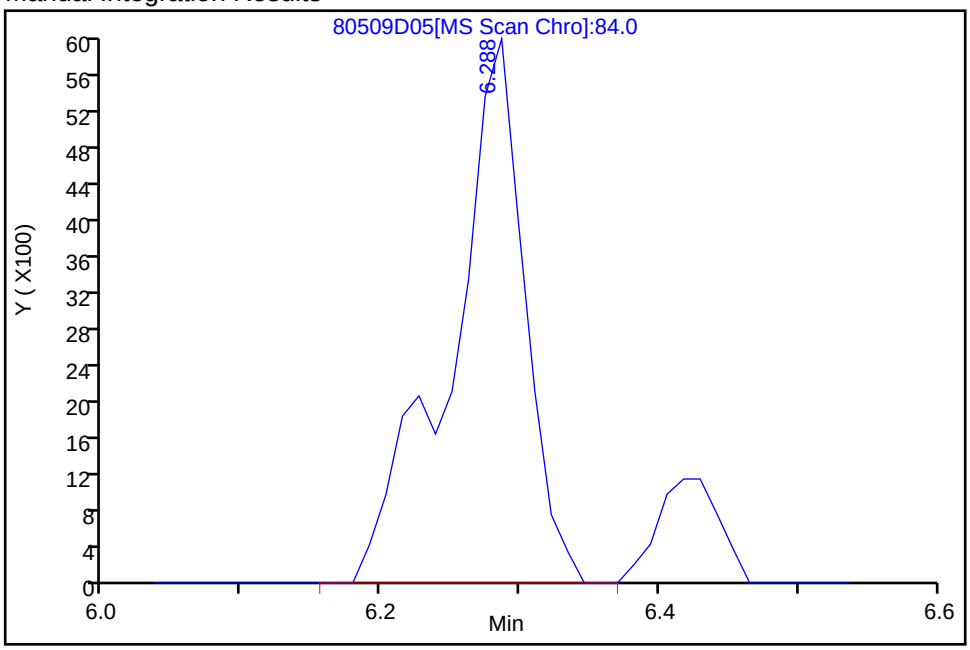
Not Detected
6.288

Processing Integration Results



Manual Integration Results

RT:	6.288
Area:	21933
Amount:	1.1329
Amount Units:	ug/L



Data Editor: all, 09-May-2016 16:04:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 10-May-2016 12:37:18 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

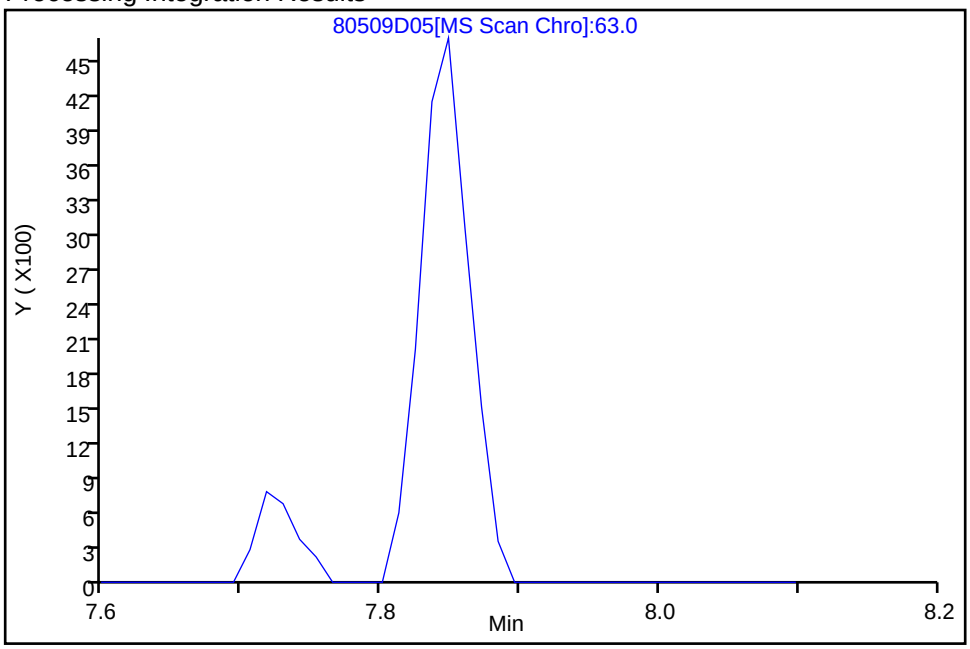
Manual Integration Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D05.D		
Injection Date:	09-May-2016 15:40:30	Inst. ID:	msd8.i
Client ID:	VSTD001PT	Lab ID:	VSTD001PT
Sample Info:	8050916D.b, VSTD001PT		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

45 1,2-Dichloropropane, CAS: 78-87-5

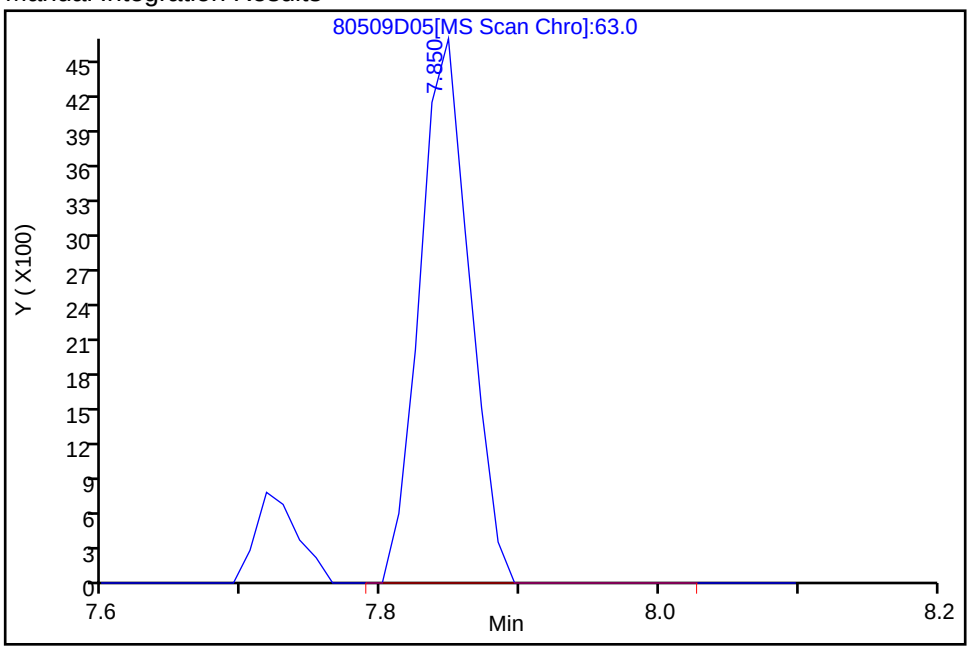
Not Detected
7.850

Processing Integration Results



Manual Integration Results

RT:	7.850
Area:	11504
Amount:	0.97721
Amount Units:	ug/L



Data Editor: all, 09-May-2016 16:04:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 10-May-2016 12:37:18 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

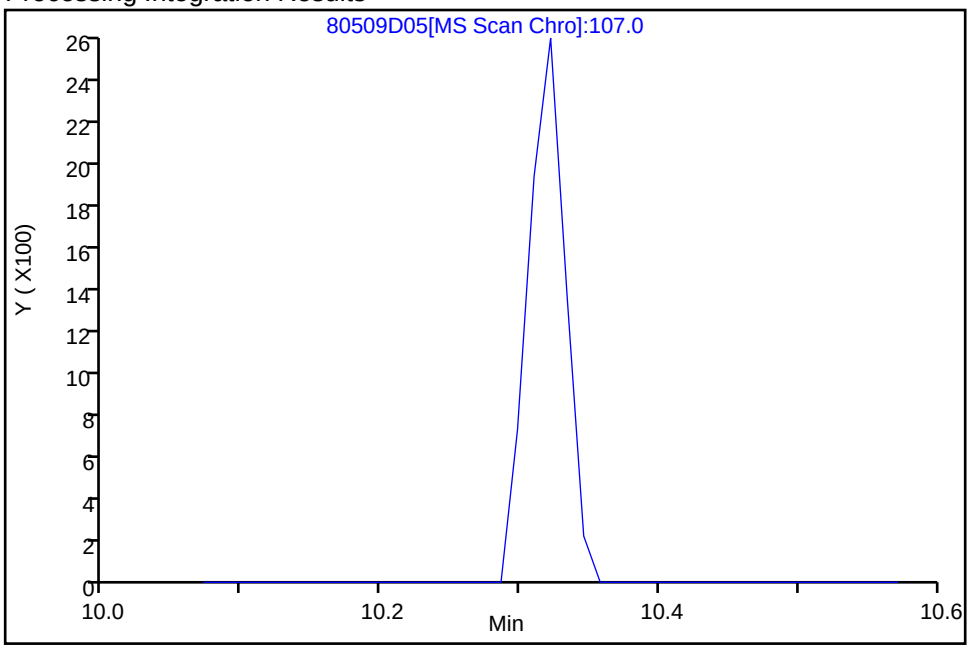
Manual Integration Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D05.D		
Injection Date:	09-May-2016 15:40:30	Inst. ID:	msd8.i
Client ID:	VSTD001PT	Lab ID:	VSTD001PT
Sample Info:	8050916D.b, VSTD001PT		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

62 1,2-Dibromoethane, CAS: 106-93-4

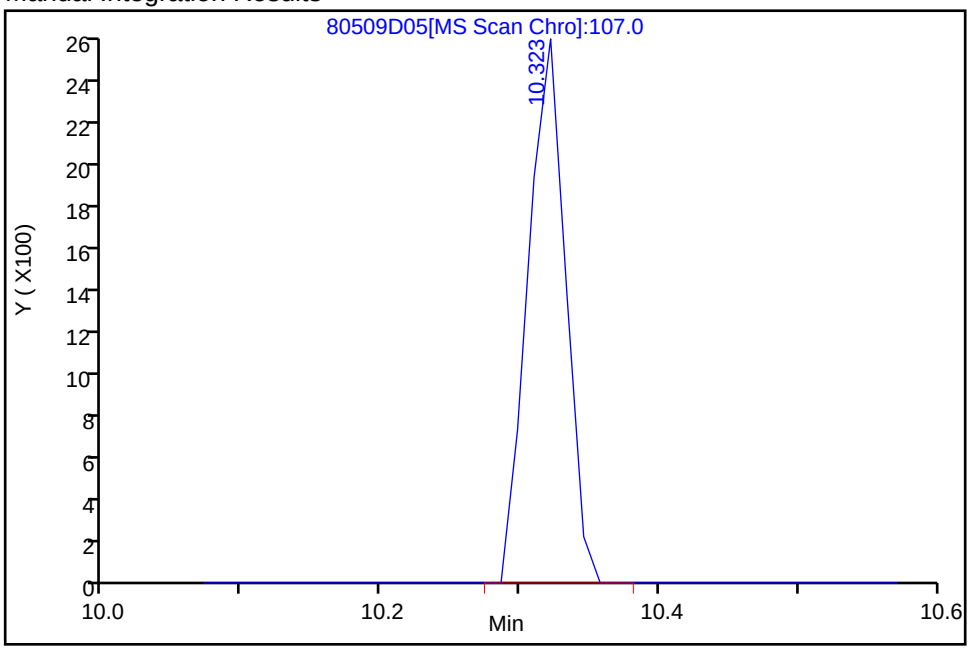
Not Detected
10.323

Processing Integration Results



Manual Integration Results

RT:	10.323
Area:	4801
Amount:	1.0494
Amount Units:	ug/L



Data Editor: all, 09-May-2016 16:04:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 10-May-2016 12:37:18 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

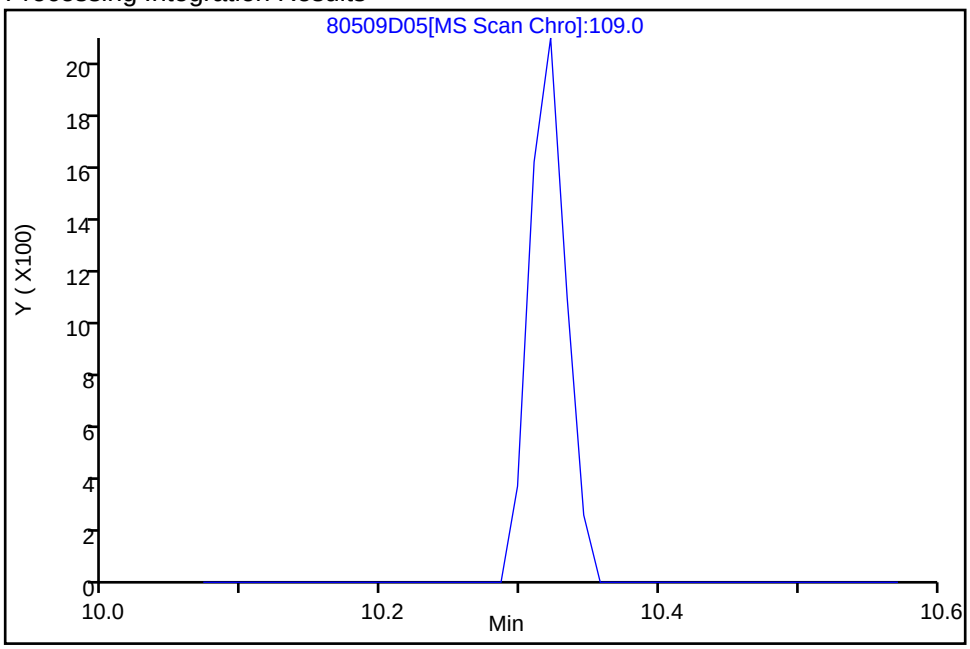
Manual Integration Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D05.D		
Injection Date:	09-May-2016 15:40:30	Inst. ID:	msd8.i
Client ID:	VSTD001PT	Lab ID:	VSTD001PT
Sample Info:	8050916D.b, VSTD001PT		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

62 1,2-Dibromoethane, CAS: 106-93-4

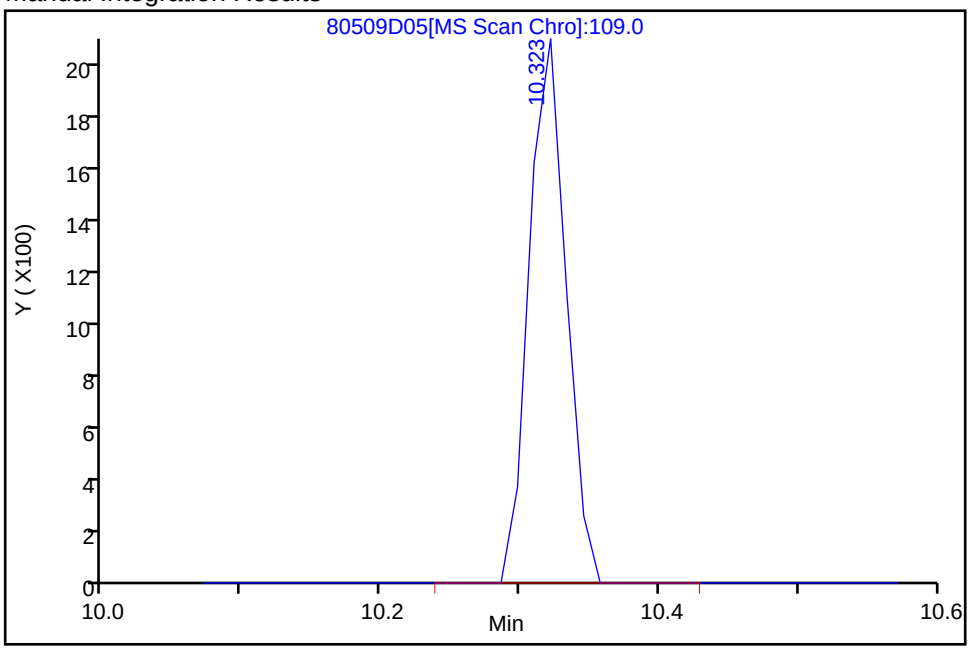
Not Detected
10.323

Processing Integration Results



Manual Integration Results

RT:	10.323
Area:	3817
Amount:	1.0494
Amount Units:	ug/L



Data Editor: all, 09-May-2016 16:04:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 13-May-2016 16:14:38 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D06.D		
Lab Sample ID:	VSTD0.5PT	Client Sample ID:	VSTD0.5PT
Injection Date:	09-May-2016 16:08:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd8.i
Sample Info:	8050916D.b, VSTD0.5PT		
Method:	\\Organics\DD\chem\msd8.i\8050916D.b\TRACE-8.m		
Method Date:	09-May-2016 16:28:30	Quant Method:	ISTD
Calib Date:	09-May-2016 16:08:30	Calib File:	80509D06.D
Sample Type:	Ical, Level: 1	ALS Bottle:	6
Cpnd Sublist:	2447.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 16:27:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.686	1.686	0.000	6322	0.50000	0.41737	
2 Chloromethane	50.0	1.839	1.839	0.000	13879	0.50000	0.52600	
$ 3 Vinyl Chloride-d3	65.0	1.946	1.946	0.000	8230	0.50000	0.59935	
4 Vinyl Chloride	62.0	1.958	1.958	0.000	8228	0.50000	0.45854	
5 Bromomethane	94.0	2.301	2.301	0.000	4946	0.50000	0.52607	
$ 6 Chloroethane-d5	69.0	2.372	2.372	0.000	5493	0.50000	0.50557	
7 Chloroethane	64.0	2.396	2.396	0.000	4925	0.50000	0.48142	
8 Trichlorofluoromethane	101.0	2.680	2.680	0.000	6149	0.50000	0.37058	
$ 12 1,1-Dichloroethene-d2	63.0	3.248	3.248	0.000	15397	0.50000	0.50955	
13 1,1-Dichloroethene	96.0	3.271	3.271	0.000	6111	0.50000	0.49614	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.271	3.271	0.000	5841	0.50000	0.47648	
14 Acetone	43.0	3.307	3.307	0.000	3932	5.0000	4.8143	
15 Carbon Disulfide	76.0	3.543	3.543	0.000	16921	0.50000	0.47713	
16 Methyl Acetate	43.0	3.733	3.733	0.000	2448	0.50000	0.48028	M
17 Methylene Chloride	84.0	3.851	3.851	0.000	5238	0.50000	0.47052	
20 Methyl tert-Butyl Ether	73.0	4.218	4.218	0.000	7664	0.50000	0.43415	
21 trans-1,2-Dichloroethene	96.0	4.218	4.218	0.000	6364	0.50000	0.46066	
23 1,1-Dichloroethane	63.0	4.774	4.774	0.000	13465	0.50000	0.46021	
$ 25 2-Butanone-d5	46.0	5.472	5.472	0.000	10556	5.0000	4.5006	
26 cis-1,2-Dichloroethene	96.0	5.531	5.531	0.000	6253	0.50000	0.45519	
27 2,2-Dichloropropane	77.0	5.531	5.531	0.000	6787	0.50000	0.49944	
28 2-Butanone	43.0	5.555	5.555	0.000	7635	5.0000	4.8333	
29 Bromochloromethane	128.0	5.839	5.839	0.000	2213	0.50000	0.46877	
$ 30 Chloroform-d	84.0	5.922	5.922	0.000	13219	0.50000	0.51483	
31 Chloroform	83.0	5.957	5.957	0.000	11958	0.50000	0.49138	
33 1,1,1-Trichloroethane	97.0	6.206	6.206	0.000	9809	0.50000	0.47370	
32 Cyclohexane	56.0	6.289	6.289	0.000	21975	0.50000	0.58856	M

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
34 Carbon Tetrachloride	117.0	6.431	6.431	0.000	9247	0.50000	0.46479	
35 1,1-Dichloropropene	75.0	6.419	6.419	0.000	8777	0.50000	0.47771	
$ 38 1,2-Dichloroethane-d4	65.0	6.608	6.608	0.000	4677	0.50000	0.47078	
$ 36 Benzene-d6	84.0	6.644	6.644	0.000	25431	0.50000	0.49582	
37 Benzene	78.0	6.691	6.691	0.000	23463	0.50000	0.47189	
39 1,2-Dichloroethane	62.0	6.715	6.715	0.000	5816	0.50000	0.46616	M
* 41 1,4-Difluorobenzene	114.0	7.200	7.200	0.000	250859	5.0000	5.0000	
42 Trichloroethene	95.0	7.555	7.555	0.000	6295	0.50000	0.43267	
$ 44 1,2-Dichloropropane-d6	67.0	7.732	7.732	0.000	7597	0.50000	0.54513	
43 Methylcyclohexane	83.0	7.815	7.815	0.000	11461	0.50000	0.47798	
45 1,2-Dichloropropane	63.0	7.851	7.851	0.000	5504	0.50000	0.44535	M
48 Dibromomethane	93.0	8.004	8.004	0.000	1782	0.50000	0.44549	
49 Bromodichloromethane	83.0	8.217	8.217	0.000	5818	0.50000	0.42093	
50 cis-1,3-Dichloropropene	75.0	8.821	8.821	0.000	5976	0.50000	0.41902	
51 4-Methyl-2-pentanone	43.0	9.046	9.046	0.000	23644	5.0000	4.7691	
$ 52 Toluene-d8	98.0	9.199	9.199	0.000	22267	0.50000	0.50201	
53 Toluene	91.0	9.282	9.282	0.000	26491	0.50000	0.48604	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.507	9.507	0.000	4672	0.50000	0.48842	
55 trans-1,3-Dichloropropene	75.0	9.554	9.554	0.000	3752	0.50000	0.39679	
56 1,1,2-Trichloroethane	97.0	9.756	9.756	0.000	2122	0.50000	0.43829	
57 Tetrachloroethene	164.0	9.933	9.933	0.000	5827	0.50000	0.46118	
59 1,3-Dichloropropane	76.0	9.957	9.957	0.000	3887	0.50000	0.44692	
$ 58 2-Hexanone-d5	63.0	9.992	9.992	0.000	7548	5.0000	4.8335	
60 2-Hexanone	43.0	10.051	10.051	0.000	15114	5.0000	4.9005	
61 Dibromochloromethane	129.0	10.193	10.193	0.000	2866	0.50000	0.40334	
62 1,2-Dibromoethane	107.0	10.324	10.324	0.000	2098	0.50000	0.44403	M
* 63 Chlorobenzene-d5	117.0	10.797	10.797	0.000	184005	5.0000	5.0000	
64 Chlorobenzene	112.0	10.821	10.821	0.000	13923	0.50000	0.46528	
66 1,1,1,2-Tetrachloroethane	131.0	10.892	10.892	0.000	4888	0.50000	0.45467	
65 Ethylbenzene	91.0	10.927	10.927	0.000	27439	0.50000	0.46846	
67 m+p-Xylenes	106.0	11.034	11.034	0.000	10642	0.50000	0.45568	
68 o-Xylene	106.0	11.400	11.400	0.000	9790	0.50000	0.45760	
69 Styrene	104.0	11.412	11.412	0.000	14076	0.50000	0.44606	
70 Bromoform	173.0	11.578	11.578	0.000	1765	0.50000	0.45321	
71 Isopropylbenzene	105.0	11.720	11.720	0.000	27583	0.50000	0.45832	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.945	11.945	0.000	2834	0.50000	0.52593	
74 1,1,2,2-Tetrachloroethane	83.0	11.957	11.957	0.000	2433	0.50000	0.47931	
73 Bromobenzene	77.0	11.980	11.980	0.000	8905	0.50000	0.48445	
76 1,2,3-Trichloropropane	75.0	12.004	12.004	0.000	3064	0.50000	0.47239	
75 n-Propylbenzene	91.0	12.063	12.063	0.000	33973	0.50000	0.46477	
77 2-Chlorotoluene	91.0	12.134	12.134	0.000	19649	0.50000	0.46060	
78 1,3,5-Trimethylbenzene	105.0	12.193	12.193	0.000	23239	0.50000	0.45983	
79 4-Chlorotoluene	91.0	12.217	12.217	0.000	21651	0.50000	0.45922	
80 tert-Butylbenzene	119.0	12.465	12.465	0.000	22322	0.50000	0.43863	
81 1,2,4-Trimethylbenzene	105.0	12.489	12.489	0.000	24085	0.50000	0.46924	
82 sec-Butylbenzene	105.0	12.631	12.631	0.000	32193	0.50000	0.47449	
83 1,3-Dichlorobenzene	146.0	12.726	12.726	0.000	11689	0.50000	0.44511	
84 para-Isopropyltoluene	119.0	12.738	12.738	0.000	27398	0.50000	0.48449	
* 85 1,4-Dichlorobenzene-d4	152.0	12.773	12.773	0.000	103655	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.785	12.785	0.000	11149	0.50000	0.44962	
88 n-Butylbenzene	91.0	13.033	13.033	0.000	24626	0.50000	0.44850	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 87 1,2-Dichlorobenzene-d4	152.0	13.057	13.057	0.000	7326	0.50000	0.50960	
89 1,2-Dichlorobenzene	146.0	13.069	13.069	0.000	10194	0.50000	0.46784	
90 1,2-Dibromo-3-chloropropane	75.0	13.613	13.613	0.000	396	0.50000	0.47615	
91 1,2,4-Trichlorobenzene	180.0	14.193	14.193	0.000	7024	0.50000	0.41391	
92 Hexachlorbutadiene	225.0	14.311	14.311	0.000	6577	0.50000	0.45484	
93 Napthalene	128.0	14.382	14.382	0.000	9140	0.50000	0.42791	
94 1,2,3-Trichlorobenzene	180.0	14.560	14.560	0.000	5839	0.50000	0.45128	

QC Flag Legend

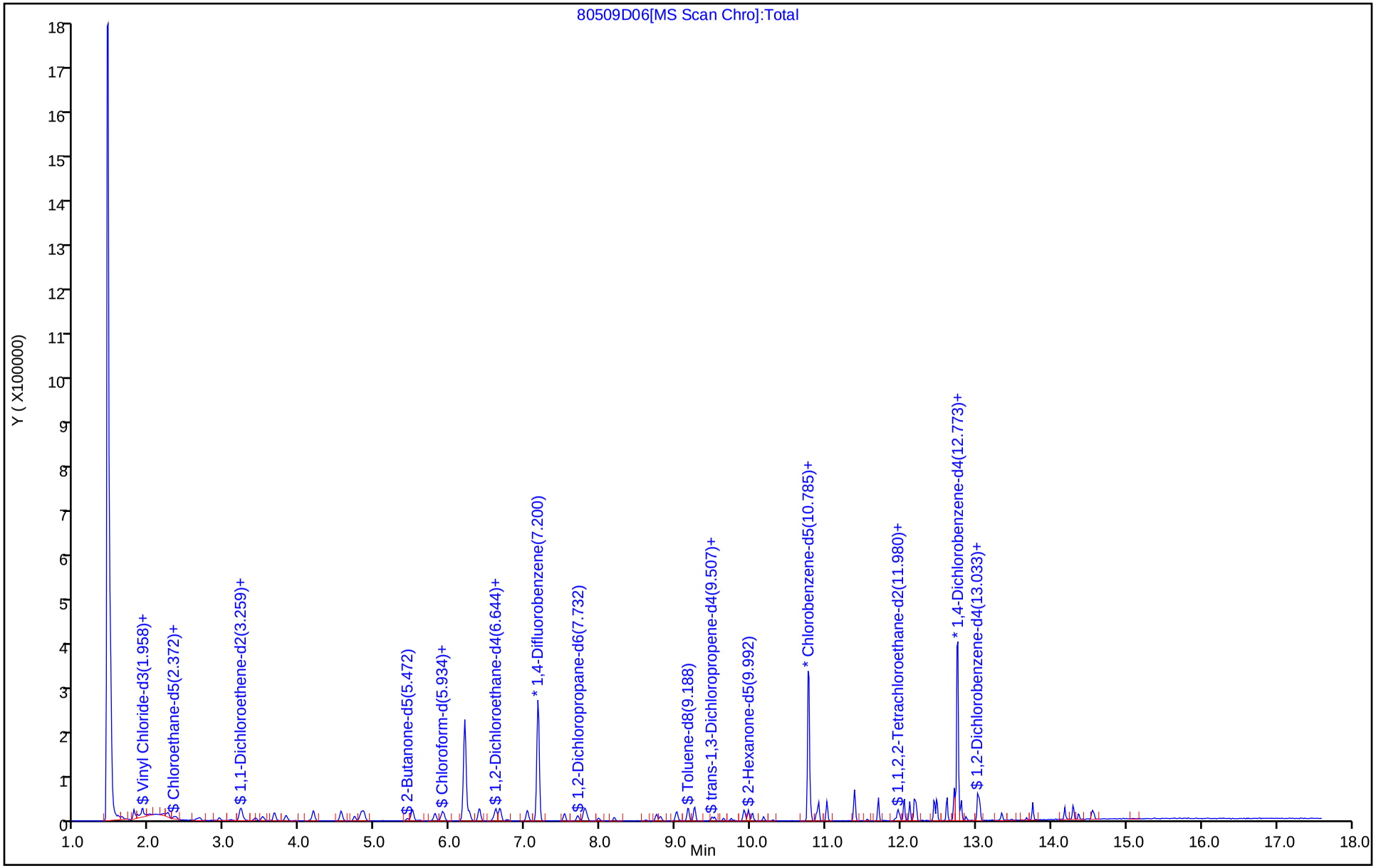
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 13-May-2016 16:14:38 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D06.D				
Injection Date:	09-May-2016 16:08:30	Inst. ID:	msd8.i	Operator:	ALL
Client ID:	VSTD0.5PT	Lab ID:	VSTD0.5PT		
Sample Info:	8050916D.b, VSTD0.5PT				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services

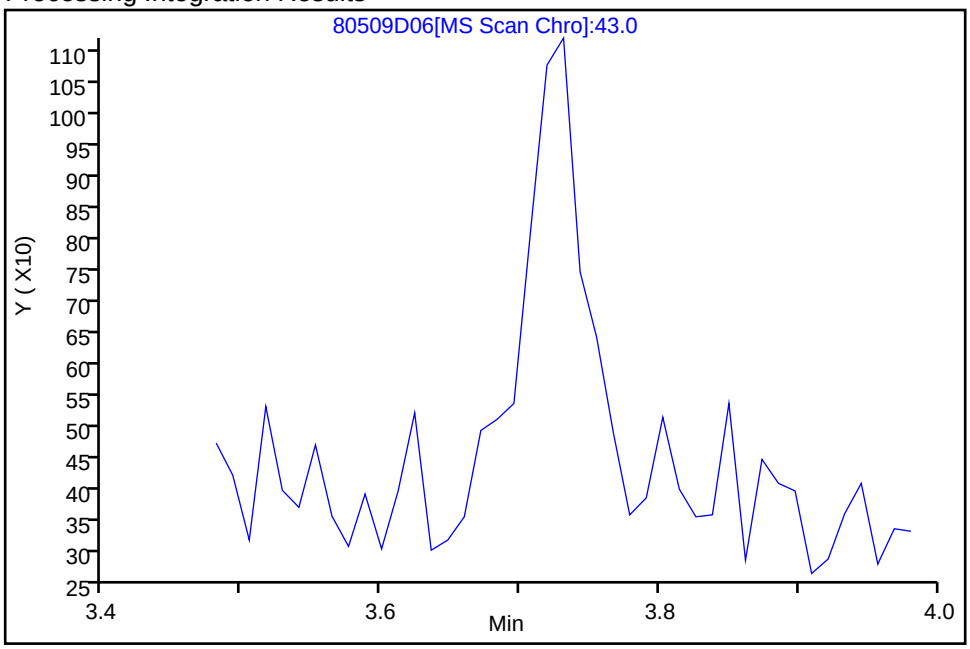
Manual Integration Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D06.D		
Injection Date:	09-May-2016 16:08:30	Inst. ID:	msd8.i
Client ID:	VSTD0.5PT	Lab ID:	VSTD0.5PT
Sample Info:	8050916D.b, VSTD0.5PT		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

16 Methyl Acetate, CAS: 79-20-9

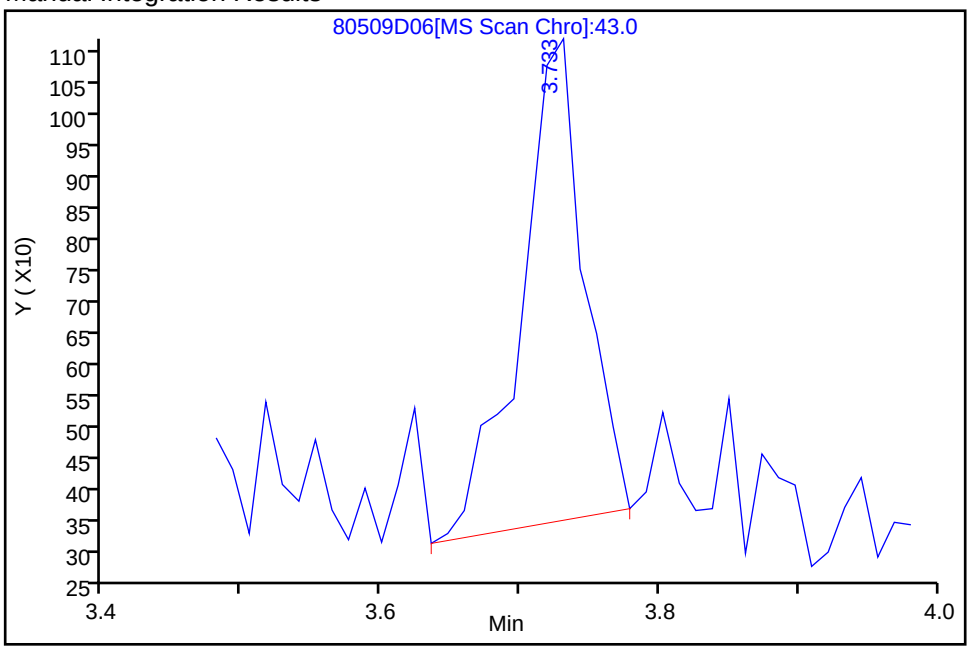
Not Detected
3.733

Processing Integration Results



Manual Integration Results

RT: 3.733
Area: 2448
Amount: 0.48028
Amount Units: ug/L



Data Editor: all, 09-May-2016 16:27:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 13-May-2016 16:14:38 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

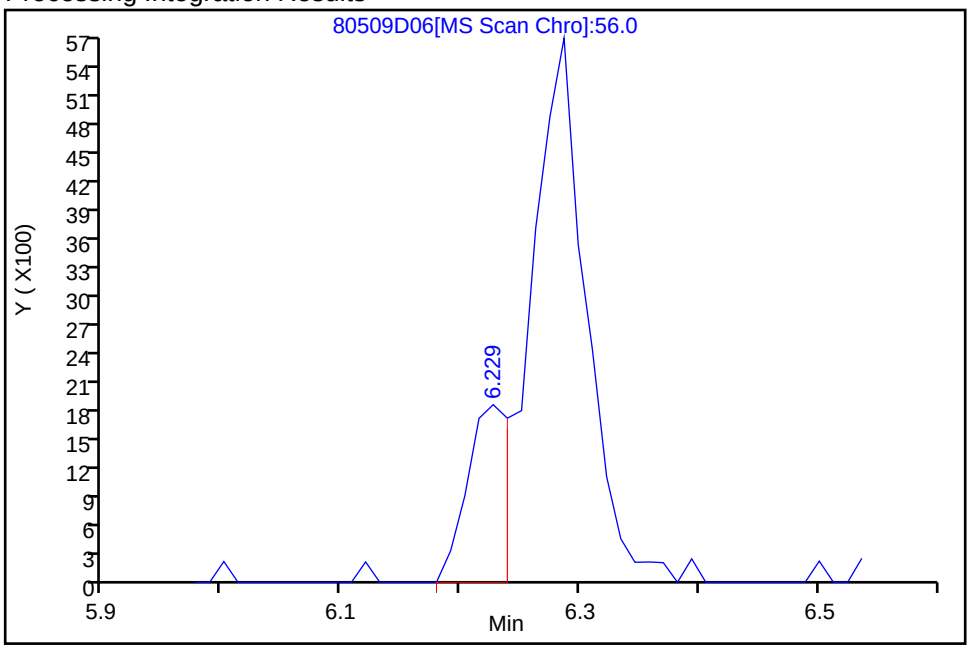
Manual Integration Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D06.D		
Injection Date:	09-May-2016 16:08:30	Inst. ID:	msd8.i
Client ID:	VSTD0.5PT	Lab ID:	VSTD0.5PT
Sample Info:	8050916D.b, VSTD0.5PT		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

32 Cyclohexane, CAS: 110-82-7

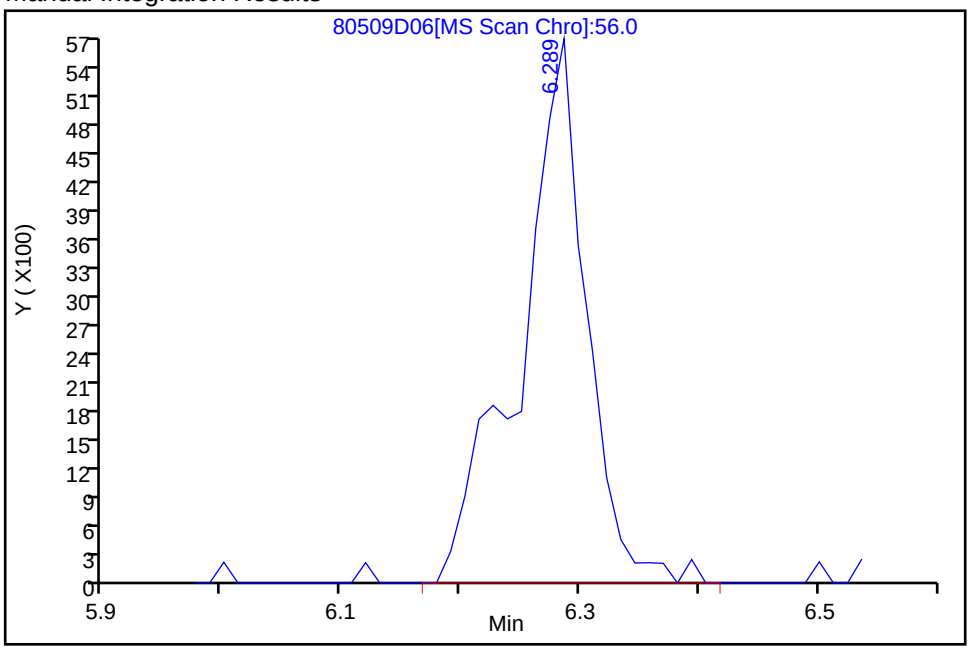
Processing Integration Results

RT: 6.229
Area: 4018
Amount: 0.13325
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.289
Area: 21975
Amount: 0.58856
Amount Units: ug/L



Data Editor: all, 09-May-2016 16:27:30
Audit Action: Mint
Audit Reason: IAI

Report Date: 13-May-2016 16:14:38 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

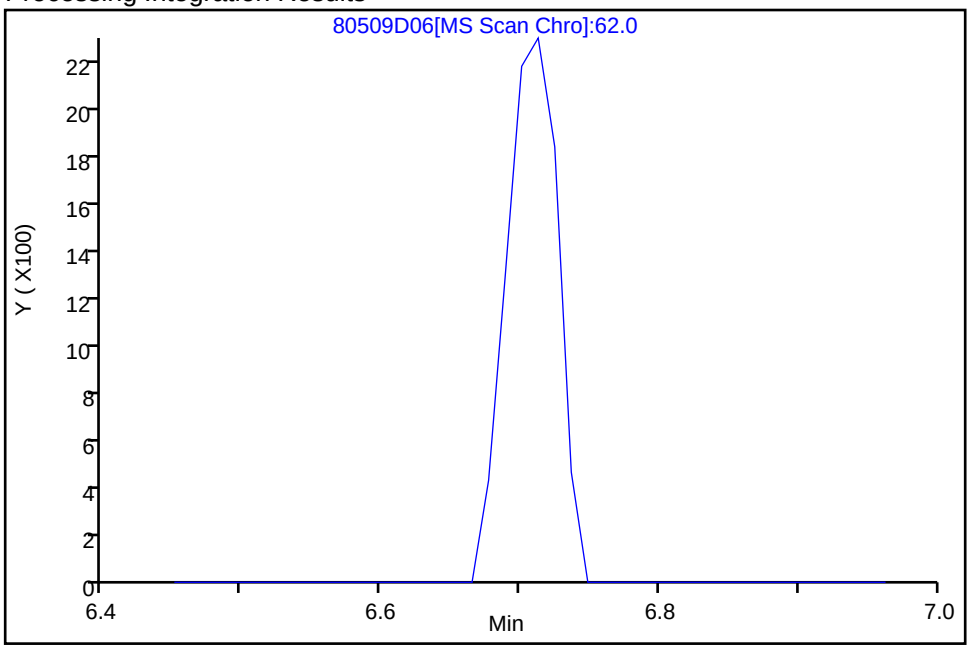
Manual Integration Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D06.D		
Injection Date:	09-May-2016 16:08:30	Inst. ID:	msd8.i
Client ID:	VSTD0.5PT	Lab ID:	VSTD0.5PT
Sample Info:	8050916D.b, VSTD0.5PT		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

39 1,2-Dichloroethane, CAS: 107-06-2

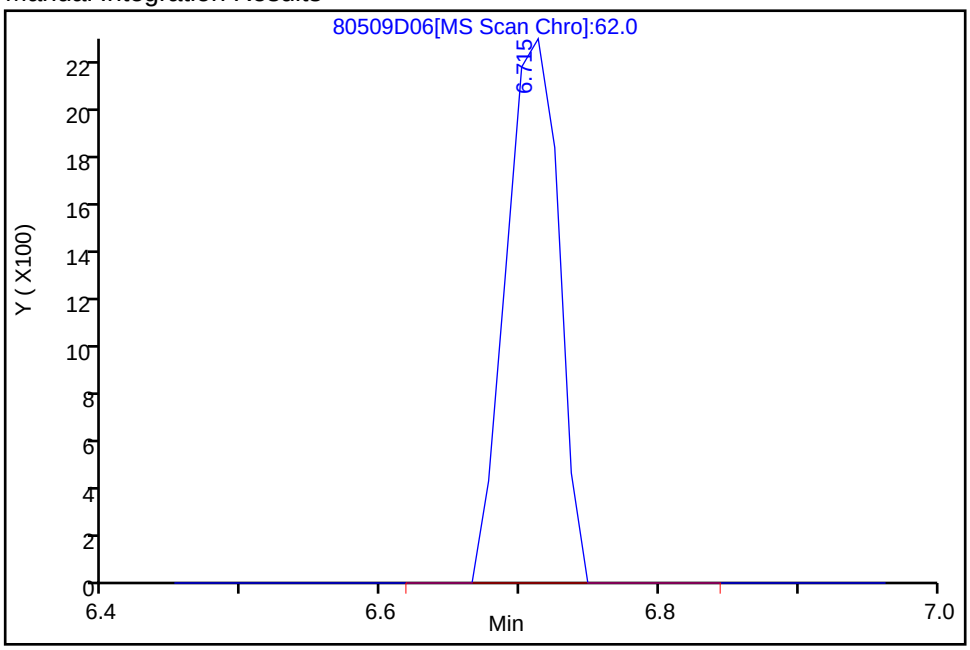
Not Detected
6.715

Processing Integration Results



Manual Integration Results

RT:	6.715
Area:	5816
Amount:	0.46616
Amount Units:	ug/L



Data Editor: all, 09-May-2016 16:27:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 13-May-2016 16:14:38 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

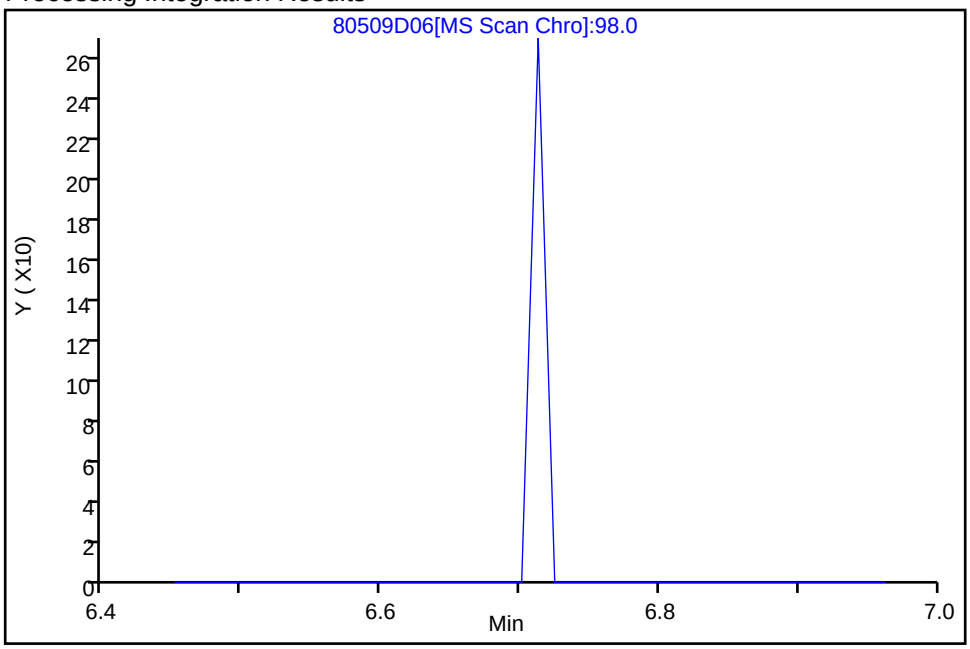
Manual Integration Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D06.D		
Injection Date:	09-May-2016 16:08:30	Inst. ID:	msd8.i
Client ID:	VSTD0.5PT	Lab ID:	VSTD0.5PT
Sample Info:	8050916D.b, VSTD0.5PT		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

39 1,2-Dichloroethane, CAS: 107-06-2

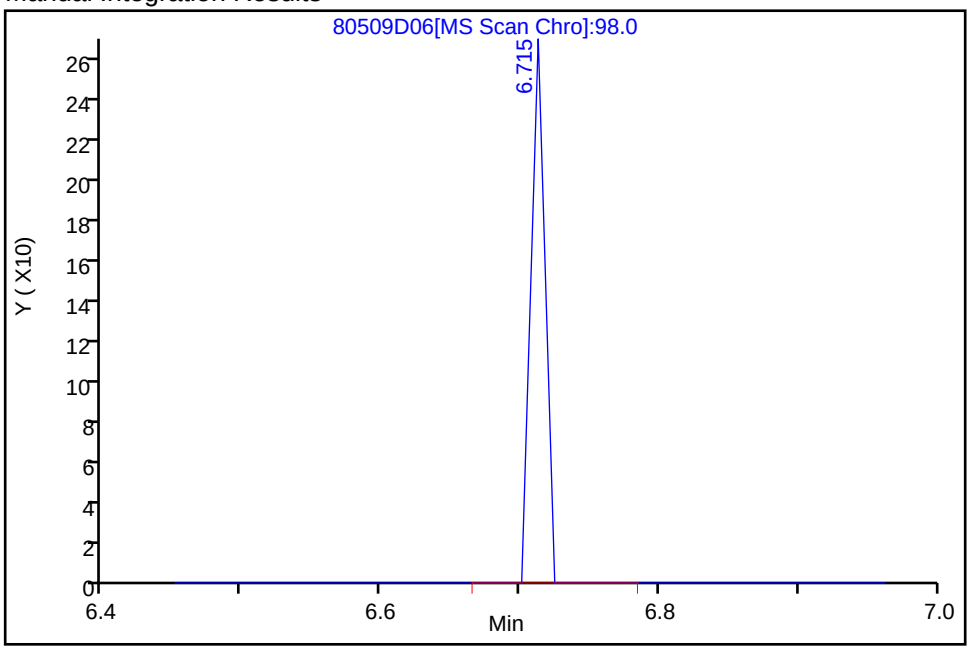
Not Detected
6.715

Processing Integration Results



Manual Integration Results

RT: 6.715
Area: 189
Amount: 0.46616
Amount Units: ug/L



Data Editor: all, 09-May-2016 16:27:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 13-May-2016 16:14:38 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

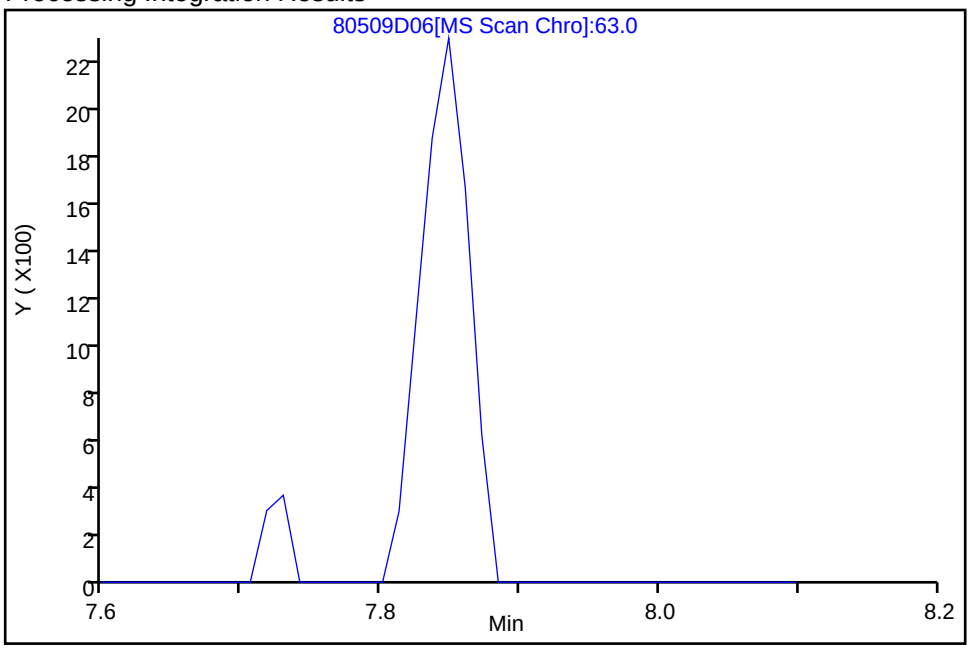
Manual Integration Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D06.D		
Injection Date:	09-May-2016 16:08:30	Inst. ID:	msd8.i
Client ID:	VSTD0.5PT	Lab ID:	VSTD0.5PT
Sample Info:	8050916D.b, VSTD0.5PT		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

45 1,2-Dichloropropane, CAS: 78-87-5

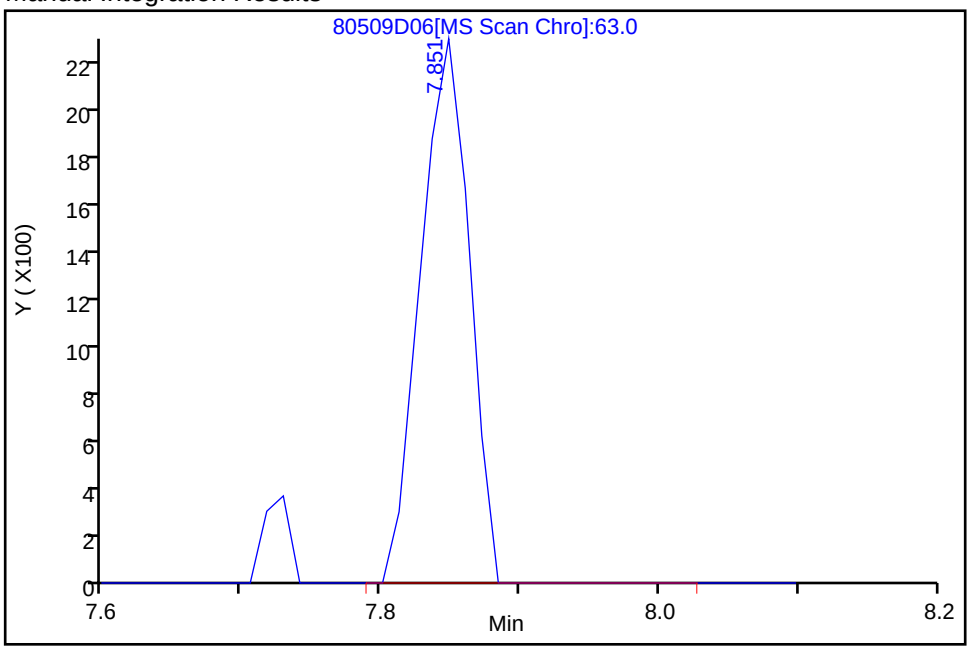
Not Detected
7.851

Processing Integration Results



Manual Integration Results

RT:	7.851
Area:	5504
Amount:	0.44535
Amount Units:	ug/L



Data Editor: all, 09-May-2016 16:27:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 13-May-2016 16:14:38 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

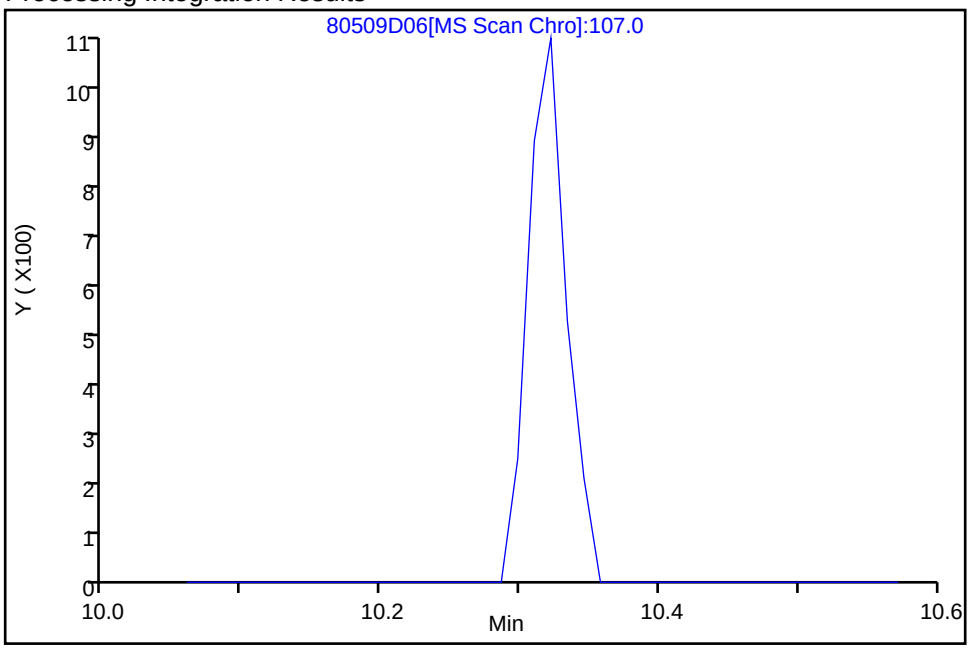
Manual Integration Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D06.D		
Injection Date:	09-May-2016 16:08:30	Inst. ID:	msd8.i
Client ID:	VSTD0.5PT	Lab ID:	VSTD0.5PT
Sample Info:	8050916D.b, VSTD0.5PT		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

62 1,2-Dibromoethane, CAS: 106-93-4

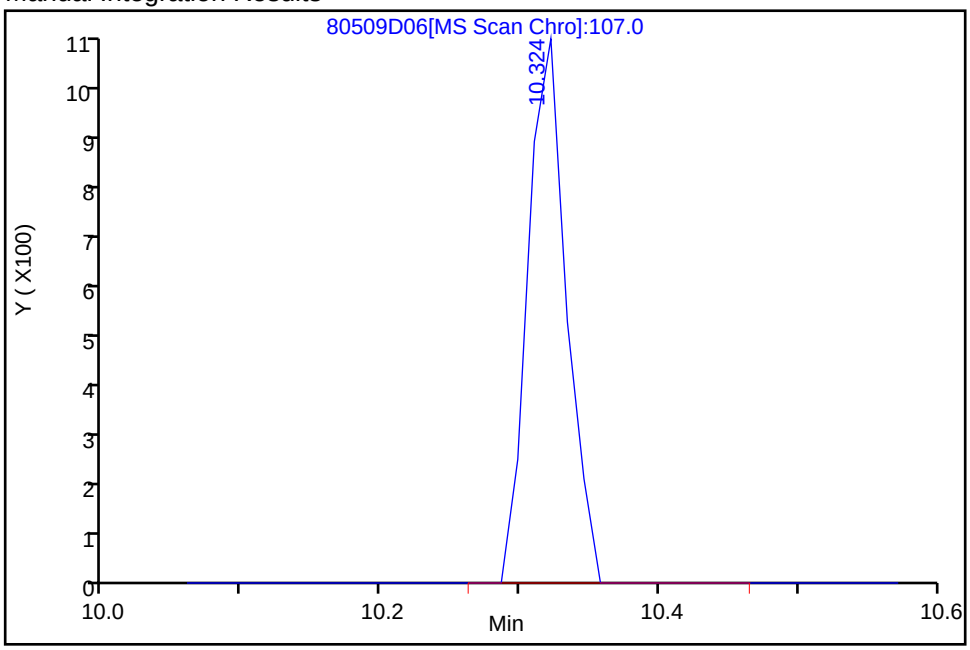
Not Detected
10.324

Processing Integration Results



Manual Integration Results

RT:	10.324
Area:	2098
Amount:	0.44403
Amount Units:	ug/L



Data Editor: all, 09-May-2016 16:27:30
Audit Action: Mint
Audit Reason: NOID

Report Date: 13-May-2016 16:14:38 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

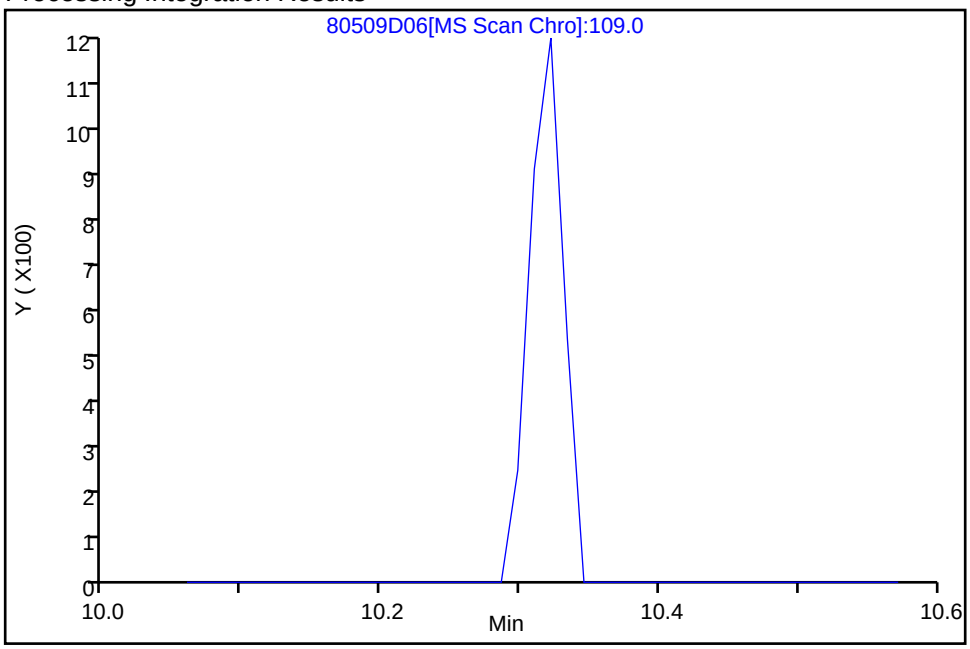
Manual Integration Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D06.D		
Injection Date:	09-May-2016 16:08:30	Inst. ID:	msd8.i
Client ID:	VSTD0.5PT	Lab ID:	VSTD0.5PT
Sample Info:	8050916D.b, VSTD0.5PT		
Purge Vol.	25 ML	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

62 1,2-Dibromoethane, CAS: 106-93-4

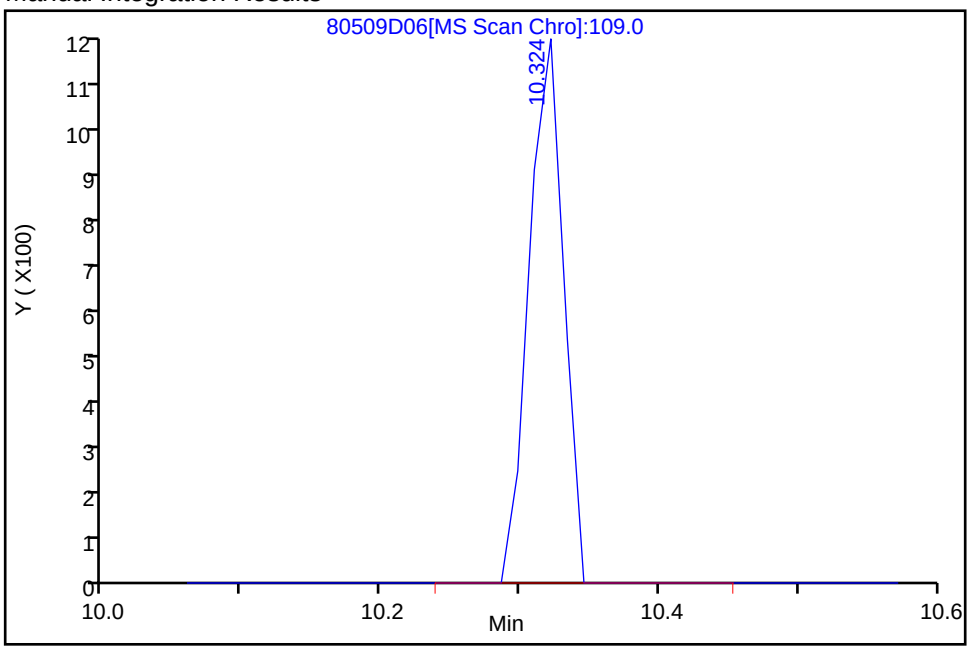
Not Detected
10.324

Processing Integration Results



Manual Integration Results

RT: 10.324
Area: 1921
Amount: 0.44403
Amount Units: ug/L



Data Editor: all, 09-May-2016 16:27:30
Audit Action: Mint
Audit Reason: NOID

Continuing Calibration Data

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD5 Calibration Date: 05/09/2016 Time: 0809

Lab File ID: 50509A03 Init. Calib. Date(s): 05/05/2016 05/05/2016

EPA Sample No.: VSTD005PU Init. Calib. Time(s): 1358 1528

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF 5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.205	0.190	0.010	-7.4	40.0
Chloromethane	0.244	0.228	0.010	-6.3	30.0
Vinyl chloride	0.228	0.207	0.010	-9.1	30.0
Bromomethane	0.144	0.126	0.010	-12.9	30.0
Chloroethane	0.130	0.117	0.010	-10.4	30.0
Trichlorofluoromethane	0.183	0.193	0.010	5.4	30.0
1,1-Dichloroethene	0.186	0.172	0.020	-7.5	20.0
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.185	0.173	0.010	-6.6	30.0
Acetone	0.017	0.021	0.010	23.3	40.0
Carbon disulfide	0.484	0.413	0.010	-14.6	25.0
Methyl acetate	0.077	0.087	0.010	12.8	40.0
Methylene chloride	0.177	0.174	0.010	-2.1	30.0
trans-1,2-Dichloroethene	0.204	0.199	0.070	-2.7	20.0
Methyl tert-butyl ether	0.364	0.376	0.010	3.4	30.0
1,1-Dichloroethane	0.427	0.428	0.100	0.2	20.0
cis-1,2-Dichloroethene	0.213	0.220	0.100	3.6	20.0
2-Butanone	0.026	0.028	0.010	8.5	40.0
Bromochloromethane	0.089	0.090	0.020	1.3	20.0
Chloroform	0.387	0.403	0.040	4.2	20.0
1,1,1-Trichloroethane	0.404	0.432	0.050	7.0	20.0
Cyclohexane	0.528	0.467	0.100	-11.6	25.0
Carbon tetrachloride	0.420	0.453	0.020	7.7	25.0
Benzene	0.938	0.978	0.300	4.3	20.0
1,2-Dichloroethane	0.214	0.216	0.010	0.9	25.0
Trichloroethene	0.261	0.277	0.100	6.2	20.0
Methylcyclohexane	0.437	0.417	0.200	-4.5	25.0
1,2-Dichloropropane	0.221	0.227	0.100	2.8	20.0
Bromodichloromethane	0.294	0.316	0.090	7.4	20.0
cis-1,3-Dichloropropene	0.295	0.300	0.100	1.6	20.0
4-Methyl-2-pentanone	0.098	0.102	0.010	4.5	30.0
Toluene	0.907	0.955	0.400	5.2	20.0
trans-1,3-Dichloropropene	0.220	0.228	0.010	3.8	20.0
1,1,2-Trichloroethane	0.109	0.106	0.040	-2.3	20.0
Tetrachloroethene	0.264	0.265	0.100	0.6	20.0
2-Hexanone	0.060	0.062	0.010	3.7	40.0
Dibromochloromethane	0.173	0.190	0.050	10.0	20.0

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD5 Calibration Date: 05/09/2016 Time: 0809

Lab File ID: 50509A03 Init. Calib. Date(s): 05/05/2016 05/05/2016

EPA Sample No.: VSTD005PU Init. Calib. Time(s): 1358 1528

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF 5.0	MIN RRF	%D	MAX %D
1,2-Dibromoethane	0.112	0.114	0.010	2.3	20.0
Chlorobenzene	0.600	0.622	0.400	3.7	20.0
Ethylbenzene	1.051	1.111	0.500	5.7	20.0
o-Xylene	0.428	0.470	0.300	9.8	20.0
m, p-Xylene	0.448	0.473	0.200	5.4	20.0
Styrene	0.644	0.690	0.200	7.1	20.0
Bromoform	0.178	0.194	0.010	9.5	30.0
Isopropylbenzene	1.142	1.252	0.700	9.7	25.0
1,1,2,2-Tetrachloroethane	0.119	0.130	0.050	9.1	25.0
1,3-Dichlorobenzene	1.006	1.046	0.500	4.0	20.0
1,4-Dichlorobenzene	0.995	1.017	0.700	2.2	20.0
1,2-Dichlorobenzene	0.871	0.937	0.400	7.5	20.0
1,2-Dibromo-3-chloropropane	0.038	0.043	0.010	11.1	40.0
1,2,4-Trichlorobenzene	0.599	0.641	0.300	7.1	30.0
1,2,3-Trichlorobenzene	0.453	0.482	0.200	6.5	40.0
Vinyl Chloride-d3	0.195	0.208	0.010	6.9	30.0
Chloroethane-d5	0.145	0.154	0.010	6.3	30.0
1,1-Dichloroethene-d2	0.445	0.452	0.010	1.6	25.0
2-Butanone-d5	0.034	0.046	0.010	35.7	40.0
Chloroform-d	0.402	0.453	0.010	12.8	20.0
1,2-Dichloroethane-d4	0.177	0.198	0.010	12.0	25.0
Benzene-d6	0.944	1.105	0.030	17.0	20.0
1,2-Dichloropropane-d6	0.244	0.271	0.100	10.8	20.0
Toluene-d8	0.812	0.915	0.200	12.6	20.0
trans-1,3-Dichloropropene-d4	0.209	0.235	0.010	12.7	25.0
2-Hexanone-d5	0.035	0.042	0.010	19.5	40.0
1,1,2,2-Tetrachloroethane-d2	0.119	0.146	0.010	22.9	25.0
1,2-Dichlorobenzene-d4	0.548	0.636	0.060	16.0	20.0

Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\DD\chem\msd5.i\5050916.b\50509A03.D
Lab Sample ID: VSTD005PU Client Sample ID: VSTD005PU
Injection Date: 09-May-2016 08:09:30 Dil. Factor: 1.0
Operator: ALL Inst. ID: msd5.i
Sample Info: 5050916, VSTD005PU
Method: \\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m
Method Date: 09-May-2016 08:28:30 Quant Method: ISTD
Calib Date: 05-May-2016 15:28:30 Calib File: 50505A06.D
Sample Type: CCV ALS Bottle: 3
Cpnd Sublist: std.sub
Sample Matrix: Water Matrix Level: Low
Target 4.14 Integrator: falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
1 Dichlorodifluoromethane	0.205165	0.189979	0.01	-7.4	40	93
2 Chloromethane	0.243696	0.228407	0.01	-6.3	30	94
$ 3 Vinyl Chloride-d3	0.194607	0.208097	0.01	6.9	30	107
4 Vinyl Chloride	0.228307	0.207472	0.01	-9.1	30	91
5 Bromomethane	0.14433	0.125642	0.01	-12.9	30	87
$ 6 Chloroethane-d5	0.144725	0.153787	0.01	6.3	30	106
7 Chloroethane	0.130163	0.116686	0.01	-10.4	30	90
8 Trichlorofluoromethane	0.18321	0.193026	0.01	5.4	30	105
$ 12 1,1-Dichloroethene-d2	0.445051	0.452338	0.01	1.6	25	102
11 1,1,2-Trichloro-1,2,2-tr	0.184904	0.172627	0.01	-6.6	30	93
13 1,1-Dichloroethene	0.186305	0.172359	0.02	-7.5	20	93
14 Acetone	0.016727	0.020625	0.01	23.3	40	123
15 Carbon Disulfide	0.483862	0.413432	0.01	-14.6	25	85
16 Methyl Acetate	0.077248	0.087131	0.01	12.8	40	113
17 Methylene Chloride	0.177334	0.173644	0.01	-2.1	30	98
20 Methyl tert-Butyl Ether	0.363924	0.376244	0.01	3.4	30	103
21 trans-1,2-Dichloroethene	0.204074	0.198547	0.07	-2.7	20	97
23 1,1-Dichloroethane	0.42679	0.427833	0.1	0.2	20	100
$ 25 2-Butanone-d5	0.033836	0.045921	0.01	35.7	40	136
26 cis-1,2-Dichloroethene	0.212529	0.2202	0.1	3.6	20	104
28 2-Butanone	0.025914	0.028119	0.01	8.5	40	109
29 Bromochloromethane	0.088565	0.089684	0.02	1.3	20	101
$ 30 Chloroform-d	0.401667	0.453234	0.01	12.8	20	113
31 Chloroform	0.38705	0.403191	0.04	4.2	20	104
33 1,1,1-Trichloroethane	0.403698	0.431804	0.05	7	20	107
32 Cyclohexane	0.527864	0.466517	0.1	-11.6	25	88
34 Carbon Tetrachloride	0.420365	0.45257	0.02	7.7	25	108
$ 38 1,2-Dichloroethane-d4	0.177092	0.198337	0.01	12	25	112
$ 36 Benzene-d6	0.944424	1.105225	0.03	17	20	117
37 Benzene	0.93803	0.977929	0.3	4.3	20	104
39 1,2-Dichloroethane	0.213953	0.215813	0.01	0.9	25	101
42 Trichloroethene	0.261131	0.27724	0.1	6.2	20	106
$ 44 1,2-Dichloropropane-d6	0.244495	0.270836	0.1	10.8	20	111
43 Methylcyclohexane	0.436534	0.416828	0.2	-4.5	25	95
45 1,2-Dichloropropane	0.221085	0.227274	0.1	2.8	20	103

Report Date: 10-May-2016 10:58:18 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd5.i\5050916.b\50509A03.D

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
49 Bromodichloromethane	0.294371	0.316297	0.09	7.4	20	107
50 cis-1,3-Dichloropropene	0.29542	0.300233	0.1	1.6	20	102
51 4-Methyl-2-pentanone	0.097752	0.102191	0.01	4.5	30	105
$ 52 Toluene-d8	0.812254	0.914998	0.2	12.6	20	113
53 Toluene	0.907475	0.954963	0.4	5.2	20	105
$ 54 trans-1,3-Dichloropropen	0.208838	0.23543	0.01	12.7	25	113
55 trans-1,3-Dichloropropen	0.219802	0.228238	0.01	3.8	20	104
56 1,1,2-Trichloroethane	0.108858	0.106322	0.04	-2.3	20	98
57 Tetrachloroethene	0.263687	0.265197	0.1	0.6	20	101
$ 58 2-Hexanone-d5	0.035103	0.041942	0.01	19.5	40	119
60 2-Hexanone	0.059944	0.062141	0.01	3.7	40	104
61 Dibromochloromethane	0.172915	0.190176	0.05	10	20	110
62 1,2-Dibromoethane	0.111838	0.114451	0.01	2.3	20	102
64 Chlorobenzene	0.600068	0.622427	0.4	3.7	20	104
65 Ethylbenzene	1.050583	1.110518	0.5	5.7	20	106
67 m+p-Xylenes	0.448487	0.472843	0.2	5.4	20	105
68 o-Xylene	0.42799	0.469915	0.3	9.8	20	110
69 Styrene	0.644383	0.69019	0.2	7.1	20	107
70 Bromoform	0.177522	0.194357	0.01	9.5	30	109
71 Isopropylbenzene	1.141618	1.252315	0.7	9.7	25	110
$ 72 1,1,2,2-Tetrachloroethan	0.118547	0.145748	0.01	22.9	25	123
74 1,1,2,2-Tetrachloroethan	0.118935	0.129795	0.05	9.1	25	109
83 1,3-Dichlorobenzene	1.006199	1.04644	0.5	4	20	104
86 1,4-Dichlorobenzene	0.995169	1.017114	0.7	2.2	20	102
$ 87 1,2-Dichlorobenzene-d4	0.548212	0.636079	0.06	16	20	116
89 1,2-Dichlorobenzene	0.871437	0.936806	0.4	7.5	20	108
90 1,2-Dibromo-3-chloroprop	0.038339	0.042577	0.01	11.1	40	111
91 1,2,4-Trichlorobenzene	0.598892	0.641315	0.3	7.1	30	107
94 1,2,3-Trichlorobenzene	0.452604	0.482048	0.2	6.5	40	107

Report Date: 10-May-2016 10:58:18 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A03.D		
Lab Sample ID:	VSTD005PU	Client Sample ID:	VSTD005PU
Injection Date:	09-May-2016 08:09:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, VSTD005PU		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:40:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.701	1.701	0.000	55301	5.0000	4.6299	
2 Chloromethane	50.0	1.856	1.856	0.000	66487	5.0000	4.6863	
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	60575	5.0000	5.3466	
4 Vinyl Chloride	62.0	1.986	1.986	0.000	60393	5.0000	4.5437	
5 Bromomethane	94.0	2.318	2.318	0.000	36573	5.0000	4.3526	
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	44766	5.0000	5.3131	
7 Chloroethane	64.0	2.425	2.425	0.000	33966	5.0000	4.4823	
8 Trichlorofluoromethane	101.0	2.698	2.698	0.000	56188	5.0000	5.2679	
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	131671	5.0000	5.0819	
13 1,1-Dichloroethene	96.0	3.302	3.302	0.000	50172	5.0000	4.6257	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.314	3.314	0.000	50250	5.0000	4.6680	
14 Acetone	43.0	3.326	3.326	0.000	60037	50.000	61.653	
15 Carbon Disulfide	76.0	3.575	3.575	0.000	120346	5.0000	4.2722	
16 Methyl Acetate	43.0	3.753	3.753	0.000	25363	5.0000	5.6397	
17 Methylene Chloride	84.0	3.895	3.895	0.000	50546	5.0000	4.8959	
20 Methyl tert-Butyl Ether	73.0	4.251	4.251	0.000	109521	5.0000	5.1693	
21 trans-1,2-Dichloroethene	96.0	4.263	4.263	0.000	57795	5.0000	4.8646	
23 1,1-Dichloroethane	63.0	4.808	4.808	0.000	124538	5.0000	5.0122	
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	133672	50.000	67.859	R
26 cis-1,2-Dichloroethene	96.0	5.567	5.567	0.000	64098	5.0000	5.1805	
28 2-Butanone	43.0	5.579	5.579	0.000	81851	50.000	54.253	
29 Bromochloromethane	128.0	5.876	5.876	0.000	26106	5.0000	5.0632	
$ 30 Chloroform-d	84.0	5.971	5.971	0.000	131932	5.0000	5.6419	
31 Chloroform	83.0	5.994	5.994	0.000	117365	5.0000	5.2085	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	93653	5.0000	5.3481	
32 Cyclohexane	56.0	6.326	6.326	0.000	101182	5.0000	4.4189	
34 Carbon Tetrachloride	117.0	6.469	6.469	0.000	98157	5.0000	5.3831	

Report Date: 10-May-2016 10:58:18 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd5.i\5050916.b\50509A03.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.646	0.000	57734	5.0000	5.5999	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	239710	5.0000	5.8513	
37 Benzene	78.0	6.729	6.729	0.000	212101	5.0000	5.2127	
39 1,2-Dichloroethane	62.0	6.741	6.741	0.000	62821	5.0000	5.0435	
* 41 1,4-Difluorobenzene	114.0	7.239	7.239	0.000	291090	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	60130	5.0000	5.3084	
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	58741	5.0000	5.5387	
43 Methylcyclohexane	83.0	7.856	7.856	0.000	90405	5.0000	4.7743	
45 1,2-Dichloropropane	63.0	7.892	7.892	0.000	49293	5.0000	5.1400	
49 Bromodichloromethane	83.0	8.259	8.259	0.000	68601	5.0000	5.3724	
50 cis-1,3-Dichloropropene	75.0	8.864	8.864	0.000	65117	5.0000	5.0815	
51 4-Methyl-2-pentanone	43.0	9.077	9.077	0.000	221640	50.000	52.271	
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	198452	5.0000	5.6325	
53 Toluene	91.0	9.315	9.315	0.000	207120	5.0000	5.2616	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	51062	5.0000	5.6367	
55 trans-1,3-Dichloropropene	75.0	9.587	9.587	0.000	49502	5.0000	5.1919	
56 1,1,2-Trichloroethane	97.0	9.801	9.801	0.000	23060	5.0000	4.8835	
57 Tetrachloroethene	164.0	9.967	9.967	0.000	57518	5.0000	5.0286	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	90968	50.000	59.743	
60 2-Hexanone	43.0	10.074	10.074	0.000	134777	50.000	51.833	
61 Dibromochloromethane	129.0	10.228	10.228	0.000	41247	5.0000	5.4991	
62 1,2-Dibromoethane	107.0	10.358	10.358	0.000	24823	5.0000	5.1168	
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	216888	5.0000	5.0000	
64 Chlorobenzene	112.0	10.844	10.844	0.000	134997	5.0000	5.1863	
65 Ethylbenzene	91.0	10.951	10.951	0.000	240858	5.0000	5.2852	
67 m+p-Xylenes	106.0	11.070	11.070	0.000	102554	5.0000	5.2715	
68 o-Xylene	106.0	11.425	11.425	0.000	101919	5.0000	5.4898	
69 Styrene	104.0	11.437	11.437	0.000	149694	5.0000	5.3554	
70 Bromoform	173.0	11.603	11.603	0.000	24349	5.0000	5.4742	
71 Isopropylbenzene	105.0	11.746	11.746	0.000	271612	5.0000	5.4848	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.959	11.959	0.000	31611	5.0000	6.1472	R
74 1,1,2,2-Tetrachloroethane	83.0	11.983	11.983	0.000	28151	5.0000	5.4566	
83 1,3-Dichlorobenzene	146.0	12.742	12.742	0.000	131098	5.0000	5.2000	
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	125280	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.813	12.813	0.000	127424	5.0000	5.1103	
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	79688	5.0000	5.8014	
89 1,2-Dichlorobenzene	146.0	13.086	13.086	0.000	117363	5.0000	5.3751	
90 1,2-Dibromo-3-chloropropane	75.0	13.643	13.643	0.000	5334	5.0000	5.5526	
91 1,2,4-Trichlorobenzene	180.0	14.212	14.212	0.000	80344	5.0000	5.3542	
94 1,2,3-Trichlorobenzene	180.0	14.580	14.580	0.000	60391	5.0000	5.3253	

QC Flag Legend

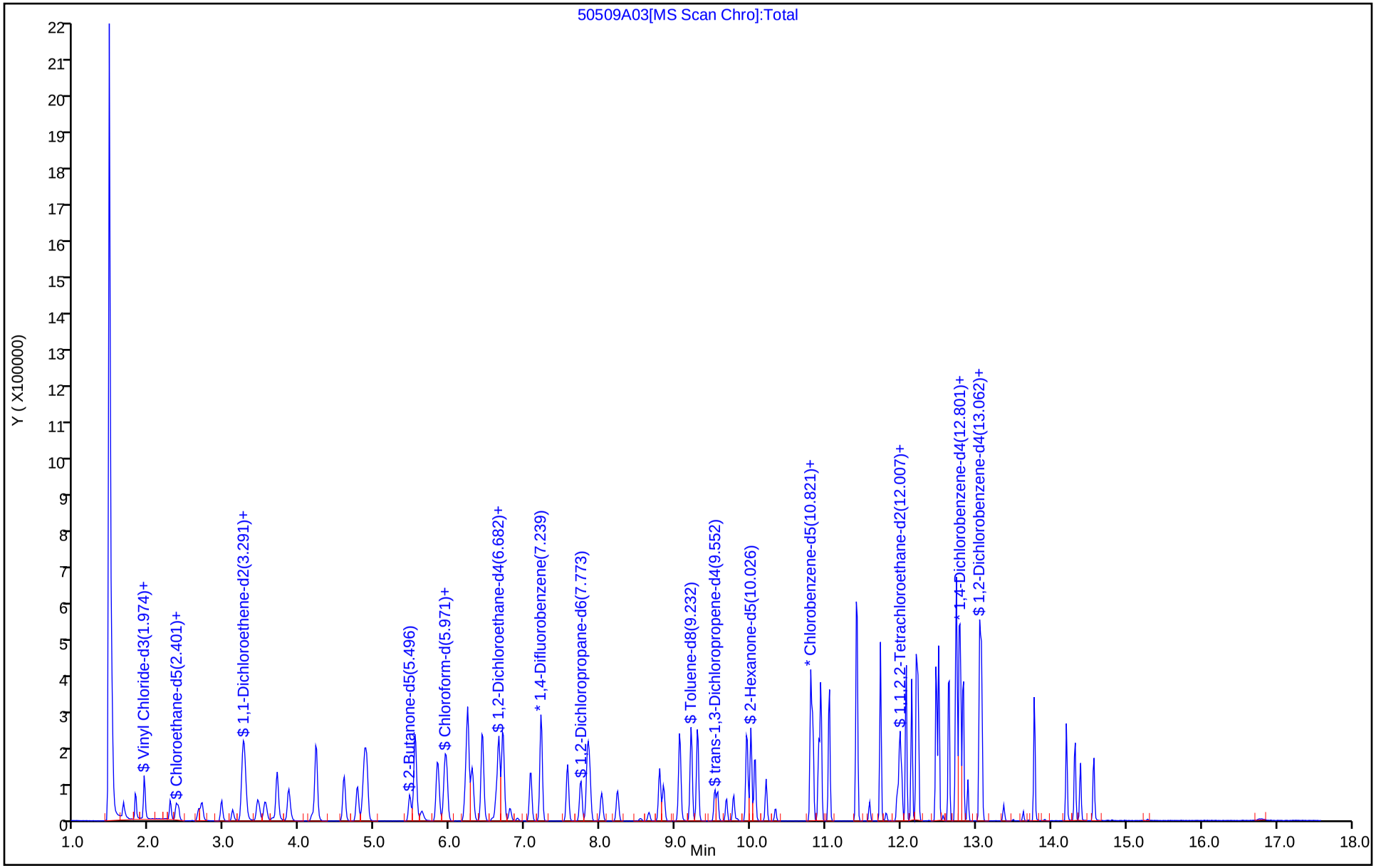
Processing Flags

R - Spike/Surrogte Fails %Recovery Test

Report Date: 10-May-2016 10:58:18 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A03.D				
Injection Date:	09-May-2016 08:09:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VSTD005PU	Lab ID:	VSTD005PU		
Sample Info:	5050916, VSTD005PU				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD5 Calibration Date: 05/09/2016 Time: 1904

Lab File ID: 50509A30 Init. Calib. Date(s): 05/05/2016 05/05/2016

EPA Sample No.: VSTD005TT Init. Calib. Time(s): 1358 1528

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

COMPOUND	$\overline{\text{RRF}}$	RRF 5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.205	0.219	0.010	6.7	40.0
Chloromethane	0.244	0.259	0.010	6.3	30.0
Vinyl chloride	0.228	0.236	0.010	3.3	30.0
Bromomethane	0.144	0.127	0.010	-12.1	30.0
Chloroethane	0.130	0.124	0.010	-4.9	30.0
Trichlorofluoromethane	0.183	0.167	0.010	-8.8	30.0
1,1-Dichloroethene	0.186	0.216	0.020	15.9	20.0
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.185	0.217	0.010	17.5	30.0
Acetone	0.017	0.017	0.010	0.8	40.0
Carbon disulfide	0.484	0.562	0.010	16.1	25.0
Methyl acetate	0.077	0.097	0.010	25.7	40.0
Methylene chloride	0.177	0.193	0.010	9.1	30.0
trans-1,2-Dichloroethene	0.204	0.231	0.070	13.3	20.0
Methyl tert-butyl ether	0.364	0.395	0.010	8.5	30.0
1,1-Dichloroethane	0.427	0.483	0.100	13.2	20.0
cis-1,2-Dichloroethene	0.213	0.236	0.100	11.2	20.0
2-Butanone	0.026	0.027	0.010	4.5	40.0
Bromochloromethane	0.089	0.094	0.020	5.7	20.0
Chloroform	0.387	0.434	0.040	12.2	20.0
1,1,1-Trichloroethane	0.404	0.472	0.050	16.9	20.0
Cyclohexane	0.528	0.572	0.100	8.3	25.0
Carbon tetrachloride	0.420	0.464	0.020	10.3	25.0
Benzene	0.938	1.079	0.300	15.0	20.0
1,2-Dichloroethane	0.214	0.237	0.010	10.7	25.0
Trichloroethene	0.261	0.294	0.100	12.5	20.0
Methylcyclohexane	0.437	0.518	0.200	18.6	25.0
1,2-Dichloropropane	0.221	0.255	0.100	15.2	20.0
Bromodichloromethane	0.294	0.325	0.090	10.4	20.0
cis-1,3-Dichloropropene	0.295	0.310	0.100	5.0	20.0
4-Methyl-2-pentanone	0.098	0.108	0.010	10.6	30.0
Toluene	0.907	1.026	0.400	13.0	20.0
trans-1,3-Dichloropropene	0.220	0.229	0.010	4.3	20.0
1,1,2-Trichloroethane	0.109	0.113	0.040	4.2	20.0
Tetrachloroethene	0.264	0.277	0.100	5.1	20.0
2-Hexanone	0.060	0.063	0.010	5.9	40.0
Dibromochloromethane	0.173	0.184	0.050	6.5	20.0

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD5 Calibration Date: 05/09/2016 Time: 1904

Lab File ID: 50509A30 Init. Calib. Date(s): 05/05/2016 05/05/2016

EPA Sample No.: VSTD005TT Init. Calib. Time(s): 1358 1528

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF 5.0	MIN RRF	%D	MAX %D
1,2-Dibromoethane	0.112	0.114	0.010	2.2	20.0
Chlorobenzene	0.600	0.660	0.400	10.0	20.0
Ethylbenzene	1.051	1.179	0.500	12.3	20.0
o-Xylene	0.428	0.487	0.300	13.8	20.0
m, p-Xylene	0.448	0.503	0.200	12.1	20.0
Styrene	0.644	0.724	0.200	12.3	20.0
Bromoform	0.178	0.183	0.010	3.3	30.0
Isopropylbenzene	1.142	1.313	0.700	15.0	25.0
1,1,2,2-Tetrachloroethane	0.119	0.136	0.050	14.7	25.0
1,3-Dichlorobenzene	1.006	1.100	0.500	9.3	20.0
1,4-Dichlorobenzene	0.995	1.054	0.700	5.9	20.0
1,2-Dichlorobenzene	0.871	0.949	0.400	9.0	20.0
1,2-Dibromo-3-chloropropane	0.038	0.042	0.010	8.3	40.0
1,2,4-Trichlorobenzene	0.599	0.643	0.300	7.4	30.0
1,2,3-Trichlorobenzene	0.453	0.464	0.200	2.6	40.0
Vinyl Chloride-d3	0.195	0.230	0.010	18.3	30.0
Chloroethane-d5	0.145	0.164	0.010	13.2	30.0
1,1-Dichloroethene-d2	0.445	0.491	0.010	10.4	25.0
2-Butanone-d5	0.034	0.036	0.010	5.9	40.0
Chloroform-d	0.402	0.440	0.010	9.5	20.0
1,2-Dichloroethane-d4	0.177	0.193	0.010	9.2	25.0
Benzene-d6	0.944	1.065	0.030	12.8	20.0
1,2-Dichloropropane-d6	0.244	0.266	0.100	8.8	20.0
Toluene-d8	0.812	0.885	0.200	9.0	20.0
trans-1,3-Dichloropropene-d4	0.209	0.221	0.010	6.0	25.0
2-Hexanone-d5	0.035	0.039	0.010	10.2	40.0
1,1,2,2-Tetrachloroethane-d2	0.119	0.129	0.010	8.6	25.0
1,2-Dichlorobenzene-d4	0.548	0.612	0.060	11.7	20.0

Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\DD\chem\msd5.i\5050916B.b\50509A30.D
Lab Sample ID: VSTD005TT Client Sample ID: VSTD005TT
Injection Date: 09-May-2016 19:04:30 Dil. Factor: 1.0
Operator: ALL Inst. ID: msd5.i
Sample Info: 5050916, VSTD005TT
Method: \\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5.m
Method Date: 10-May-2016 01:19:30 Quant Method: ISTD
Calib Date: 05-May-2016 15:28:30 Calib File: 50505A06.D
Sample Type: CCV ALS Bottle: 30
Cpnd Sublist: std.sub
Sample Matrix: Water Matrix Level: Low
Target 4.14 Integrator: falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
1 Dichlorodifluoromethane	0.205165	0.218961	0.01	6.7	40	107
2 Chloromethane	0.243696	0.25905	0.01	6.3	30	106
$ 3 Vinyl Chloride-d3	0.194607	0.230189	0.01	18.3	30	118
4 Vinyl Chloride	0.228307	0.235878	0.01	3.3	30	103
5 Bromomethane	0.14433	0.126911	0.01	-12.1	30	88
$ 6 Chloroethane-d5	0.144725	0.163898	0.01	13.2	30	113
7 Chloroethane	0.130163	0.123767	0.01	-4.9	30	95
8 Trichlorofluoromethane	0.18321	0.167019	0.01	-8.8	30	91
$ 12 1,1-Dichloroethene-d2	0.445051	0.491211	0.01	10.4	25	110
11 1,1,2-Trichloro-1,2,2-tr	0.184904	0.217328	0.01	17.5	30	118
13 1,1-Dichloroethene	0.186305	0.21586	0.02	15.9	20	116
14 Acetone	0.016727	0.016854	0.01	0.8	40	101
15 Carbon Disulfide	0.483862	0.561764	0.01	16.1	25	116
16 Methyl Acetate	0.077248	0.097108	0.01	25.7	40	126
17 Methylene Chloride	0.177334	0.193411	0.01	9.1	30	109
20 Methyl tert-Butyl Ether	0.363924	0.394758	0.01	8.5	30	108
21 trans-1,2-Dichloroethene	0.204074	0.231196	0.07	13.3	20	113
23 1,1-Dichloroethane	0.42679	0.483167	0.1	13.2	20	113
$ 25 2-Butanone-d5	0.033836	0.035827	0.01	5.9	40	106
26 cis-1,2-Dichloroethene	0.212529	0.236418	0.1	11.2	20	111
28 2-Butanone	0.025914	0.027089	0.01	4.5	40	105
29 Bromochloromethane	0.088565	0.093617	0.02	5.7	20	106
$ 30 Chloroform-d	0.401667	0.439643	0.01	9.5	20	109
31 Chloroform	0.38705	0.434153	0.04	12.2	20	112
33 1,1,1-Trichloroethane	0.403698	0.471817	0.05	16.9	20	117
32 Cyclohexane	0.527864	0.571617	0.1	8.3	25	108
34 Carbon Tetrachloride	0.420365	0.463742	0.02	10.3	25	110
$ 38 1,2-Dichloroethane-d4	0.177092	0.19345	0.01	9.2	25	109
$ 36 Benzene-d6	0.944424	1.065461	0.03	12.8	20	113
37 Benzene	0.93803	1.079197	0.3	15	20	115
39 1,2-Dichloroethane	0.213953	0.236817	0.01	10.7	25	111
42 Trichloroethene	0.261131	0.293854	0.1	12.5	20	113
$ 44 1,2-Dichloropropane-d6	0.244495	0.26605	0.1	8.8	20	109
43 Methylcyclohexane	0.436534	0.517864	0.2	18.6	25	119
45 1,2-Dichloropropane	0.221085	0.254763	0.1	15.2	20	115

Report Date: 10-May-2016 12:17:36 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd5.i\5050916B.b\50509A30.D

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
49 Bromodichloromethane	0.294371	0.324929	0.09	10.4	20	110
50 cis-1,3-Dichloropropene	0.29542	0.310151	0.1	5	20	105
51 4-Methyl-2-pentanone	0.097752	0.108107	0.01	10.6	30	111
$ 52 Toluene-d8	0.812254	0.885005	0.2	9	20	109
53 Toluene	0.907475	1.025794	0.4	13	20	113
$ 54 trans-1,3-Dichloropropen	0.208838	0.221402	0.01	6	25	106
55 trans-1,3-Dichloropropen	0.219802	0.229301	0.01	4.3	20	104
56 1,1,2-Trichloroethane	0.108858	0.113437	0.04	4.2	20	104
57 Tetrachloroethene	0.263687	0.277027	0.1	5.1	20	105
$ 58 2-Hexanone-d5	0.035103	0.038689	0.01	10.2	40	110
60 2-Hexanone	0.059944	0.063466	0.01	5.9	40	106
61 Dibromochloromethane	0.172915	0.184175	0.05	6.5	20	107
62 1,2-Dibromoethane	0.111838	0.114319	0.01	2.2	20	102
64 Chlorobenzene	0.600068	0.660297	0.4	10	20	110
65 Ethylbenzene	1.050583	1.179393	0.5	12.3	20	112
67 m+p-Xylenes	0.448487	0.502785	0.2	12.1	20	112
68 o-Xylene	0.42799	0.487052	0.3	13.8	20	114
69 Styrene	0.644383	0.723735	0.2	12.3	20	112
70 Bromoform	0.177522	0.1833	0.01	3.3	30	103
71 Isopropylbenzene	1.141618	1.313147	0.7	15	25	115
$ 72 1,1,2,2-Tetrachloroethan	0.118547	0.128757	0.01	8.6	25	109
74 1,1,2,2-Tetrachloroethan	0.118935	0.136389	0.05	14.7	25	115
83 1,3-Dichlorobenzene	1.006199	1.099892	0.5	9.3	20	109
86 1,4-Dichlorobenzene	0.995169	1.054078	0.7	5.9	20	106
$ 87 1,2-Dichlorobenzene-d4	0.548212	0.612366	0.06	11.7	20	112
89 1,2-Dichlorobenzene	0.871437	0.949467	0.4	9	20	109
90 1,2-Dibromo-3-chloroprop	0.038339	0.041539	0.01	8.3	40	108
91 1,2,4-Trichlorobenzene	0.598892	0.643177	0.3	7.4	30	107
94 1,2,3-Trichlorobenzene	0.452604	0.464458	0.2	2.6	40	103

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509A30.D		
Lab Sample ID:	VSTD005TT	Client Sample ID:	VSTD005TT
Injection Date:	09-May-2016 19:04:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, VSTD005TT		
Method:	\\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5.m		
Method Date:	10-May-2016 01:19:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	CCV	ALS Bottle:	30
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	10-May-2016 11:46:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.702	1.702	0.000	66930	5.0000	5.3362	
2 Chloromethane	50.0	1.856	1.856	0.000	79184	5.0000	5.3150	
$ 3 Vinyl Chloride-d3	65.0	1.962	1.962	0.000	70362	5.0000	5.9142	
4 Vinyl Chloride	62.0	1.974	1.974	0.000	72101	5.0000	5.1658	
5 Bromomethane	94.0	2.318	2.318	0.000	38793	5.0000	4.3965	
$ 6 Chloroethane-d5	69.0	2.389	2.389	0.000	50099	5.0000	5.6624	
7 Chloroethane	64.0	2.425	2.425	0.000	37832	5.0000	4.7543	
8 Trichlorofluoromethane	101.0	2.698	2.698	0.000	51053	5.0000	4.5581	
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	150149	5.0000	5.5186	
13 1,1-Dichloroethene	96.0	3.291	3.291	0.000	65982	5.0000	5.7932	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.302	3.302	0.000	66431	5.0000	5.8768	
14 Acetone	43.0	3.326	3.326	0.000	51517	50.000	50.380	
15 Carbon Disulfide	76.0	3.575	3.575	0.000	171715	5.0000	5.8050	
16 Methyl Acetate	43.0	3.753	3.753	0.000	29683	5.0000	6.2855	
17 Methylene Chloride	84.0	3.895	3.895	0.000	59120	5.0000	5.4533	
20 Methyl tert-Butyl Ether	73.0	4.251	4.251	0.000	120666	5.0000	5.4236	
21 trans-1,2-Dichloroethene	96.0	4.251	4.251	0.000	70670	5.0000	5.6645	
23 1,1-Dichloroethane	63.0	4.797	4.797	0.000	147690	5.0000	5.6605	
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	109513	50.000	52.943	
26 cis-1,2-Dichloroethene	96.0	5.567	5.567	0.000	72266	5.0000	5.5620	
28 2-Butanone	43.0	5.579	5.579	0.000	82804	50.000	52.267	
29 Bromochloromethane	128.0	5.876	5.876	0.000	28616	5.0000	5.2852	
$ 30 Chloroform-d	84.0	5.959	5.959	0.000	134386	5.0000	5.4727	
31 Chloroform	83.0	5.994	5.994	0.000	132708	5.0000	5.6085	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	109606	5.0000	5.8437	
32 Cyclohexane	56.0	6.326	6.326	0.000	132790	5.0000	5.4144	
34 Carbon Tetrachloride	117.0	6.469	6.469	0.000	107730	5.0000	5.5159	

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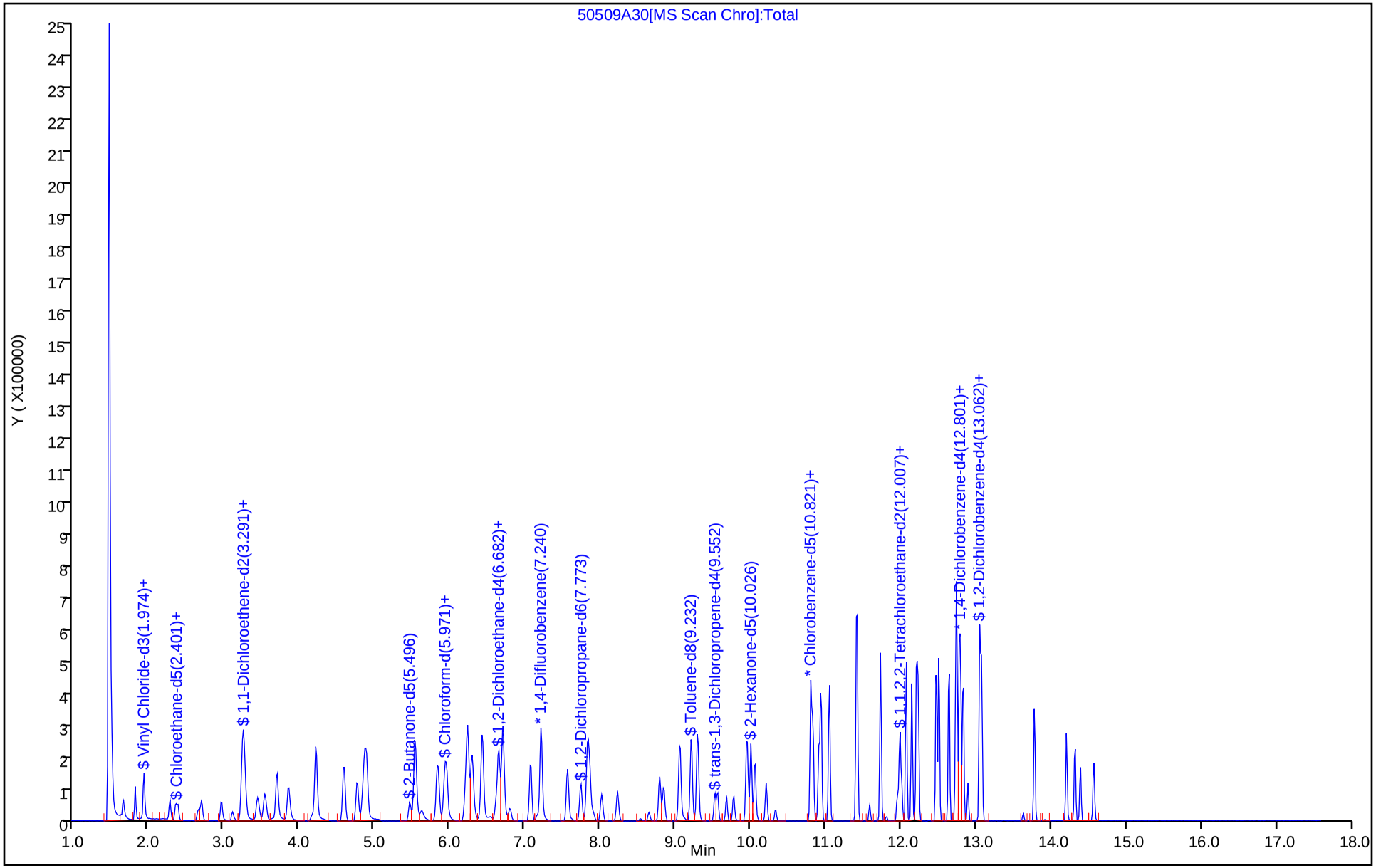
Data File: \\Organics\DD\chem\msd5.i\5050916B.b\50509A30.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.647	6.647	0.000	59132	5.0000	5.4619	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	247513	5.0000	5.6408	
37 Benzene	78.0	6.730	6.730	0.000	250704	5.0000	5.7525	
39 1,2-Dichloroethane	62.0	6.753	6.753	0.000	72388	5.0000	5.5343	
* 41 1,4-Difluorobenzene	114.0	7.240	7.240	0.000	305671	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	68264	5.0000	5.6266	
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	61805	5.0000	5.4408	
43 Methylcyclohexane	83.0	7.856	7.856	0.000	120303	5.0000	5.9315	
45 1,2-Dichloropropane	63.0	7.892	7.892	0.000	59183	5.0000	5.7617	
49 Bromodichloromethane	83.0	8.259	8.259	0.000	75483	5.0000	5.5190	
50 cis-1,3-Dichloropropene	75.0	8.864	8.864	0.000	72050	5.0000	5.2493	
51 4-Methyl-2-pentanone	43.0	9.078	9.078	0.000	251140	50.000	55.297	
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	205592	5.0000	5.4478	
53 Toluene	91.0	9.315	9.315	0.000	238298	5.0000	5.6519	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	51433	5.0000	5.3008	
55 trans-1,3-Dichloropropene	75.0	9.587	9.587	0.000	53268	5.0000	5.2161	
56 1,1,2-Trichloroethane	97.0	9.801	9.801	0.000	26352	5.0000	5.2103	
57 Tetrachloroethene	164.0	9.967	9.967	0.000	64355	5.0000	5.2529	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	89876	50.000	55.108	
60 2-Hexanone	43.0	10.086	10.086	0.000	147435	50.000	52.938	
61 Dibromochloromethane	129.0	10.228	10.228	0.000	42785	5.0000	5.3256	
62 1,2-Dibromoethane	107.0	10.358	10.358	0.000	26557	5.0000	5.1109	
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	232306	5.0000	5.0000	
64 Chlorobenzene	112.0	10.856	10.856	0.000	153391	5.0000	5.5019	
65 Ethylbenzene	91.0	10.951	10.951	0.000	273980	5.0000	5.6130	
67 m+p-Xylenes	106.0	11.070	11.070	0.000	116800	5.0000	5.6054	
68 o-Xylene	106.0	11.426	11.426	0.000	113145	5.0000	5.6900	
69 Styrene	104.0	11.437	11.437	0.000	168128	5.0000	5.6157	
70 Bromoform	173.0	11.603	11.603	0.000	23886	5.0000	5.1628	
71 Isopropylbenzene	105.0	11.746	11.746	0.000	305052	5.0000	5.7513	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	29911	5.0000	5.4306	
74 1,1,2,2-Tetrachloroethane	83.0	11.983	11.983	0.000	31684	5.0000	5.7338	
83 1,3-Dichlorobenzene	146.0	12.742	12.742	0.000	143328	5.0000	5.4656	
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	130311	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.813	12.813	0.000	137358	5.0000	5.2960	
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	79798	5.0000	5.5851	
89 1,2-Dichlorobenzene	146.0	13.098	13.098	0.000	123726	5.0000	5.4477	
90 1,2-Dibromo-3-chloropropane	75.0	13.643	13.643	0.000	5413	5.0000	5.4173	
91 1,2,4-Trichlorobenzene	180.0	14.212	14.212	0.000	83813	5.0000	5.3697	
94 1,2,3-Trichlorobenzene	180.0	14.580	14.580	0.000	60524	5.0000	5.1310	

Report Date: 10-May-2016 12:17:36 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509A30.D				
Injection Date:	09-May-2016 19:04:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VSTD005TT	Lab ID:	VSTD005TT		
Sample Info:	5050916, VSTD005TT				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD5 Calibration Date: 05/10/2016 Time: 0451

Lab File ID: 50509B24 Init. Calib. Date(s): 05/05/2016 05/05/2016

EPA Sample No.: VSTD005QD Init. Calib. Time(s): 1358 1528

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF 5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.205	0.176	0.010	-14.2	50.0
Chloromethane	0.244	0.186	0.010	-23.5	50.0
Vinyl chloride	0.228	0.184	0.010	-19.5	50.0
Bromomethane	0.144	0.100	0.010	-30.5	50.0
Chloroethane	0.130	0.098	0.010	-24.8	50.0
Trichlorofluoromethane	0.183	0.142	0.010	-22.6	50.0
1,1-Dichloroethene	0.186	0.170	0.020	-8.7	25.0
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.185	0.176	0.010	-4.9	50.0
Acetone	0.017	0.016	0.010	-6.2	50.0
Carbon disulfide	0.484	0.420	0.010	-13.2	25.0
Methyl acetate	0.077	0.081	0.010	4.4	50.0
Methylene chloride	0.177	0.163	0.010	-8.3	50.0
trans-1,2-Dichloroethene	0.204	0.184	0.070	-9.6	25.0
Methyl tert-butyl ether	0.364	0.381	0.010	4.8	50.0
1,1-Dichloroethane	0.427	0.393	0.100	-7.9	25.0
cis-1,2-Dichloroethene	0.213	0.199	0.100	-6.2	25.0
2-Butanone	0.026	0.026	0.010	-1.2	50.0
Bromochloromethane	0.089	0.088	0.020	-1.1	25.0
Chloroform	0.387	0.365	0.040	-5.8	25.0
1,1,1-Trichloroethane	0.404	0.367	0.050	-9.0	25.0
Cyclohexane	0.528	0.445	0.100	-15.7	50.0
Carbon tetrachloride	0.420	0.390	0.020	-7.2	50.0
Benzene	0.938	0.845	0.300	-10.0	25.0
1,2-Dichloroethane	0.214	0.225	0.010	4.9	50.0
Trichloroethene	0.261	0.240	0.100	-8.0	25.0
Methylcyclohexane	0.437	0.379	0.200	-13.1	50.0
1,2-Dichloropropane	0.221	0.201	0.100	-9.1	25.0
Bromodichloromethane	0.294	0.276	0.090	-6.1	25.0
cis-1,3-Dichloropropene	0.295	0.260	0.100	-11.9	25.0
4-Methyl-2-pentanone	0.098	0.097	0.010	-1.2	50.0
Toluene	0.907	0.791	0.400	-12.9	25.0
trans-1,3-Dichloropropene	0.220	0.203	0.010	-7.5	25.0
1,1,2-Trichloroethane	0.109	0.106	0.040	-2.6	25.0
Tetrachloroethene	0.264	0.221	0.100	-16.3	25.0
2-Hexanone	0.060	0.059	0.010	-0.8	50.0
Dibromochloromethane	0.173	0.173	0.050	0.1	25.0

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD5 Calibration Date: 05/10/2016 Time: 0451

Lab File ID: 50509B24 Init. Calib. Date(s): 05/05/2016 05/05/2016

EPA Sample No.: VSTD005QD Init. Calib. Time(s): 1358 1528

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF 5.0	MIN RRF	%D	MAX %D
1,2-Dibromoethane	0.112	0.109	0.010	-2.5	25.0
Chlorobenzene	0.600	0.530	0.400	-11.7	25.0
Ethylbenzene	1.051	0.925	0.500	-11.9	25.0
o-Xylene	0.428	0.386	0.300	-9.9	25.0
m, p-Xylene	0.448	0.387	0.200	-13.7	25.0
Styrene	0.644	0.583	0.200	-9.6	25.0
Bromoform	0.178	0.181	0.010	1.8	50.0
Isopropylbenzene	1.142	1.026	0.700	-10.1	25.0
1,1,2,2-Tetrachloroethane	0.119	0.118	0.050	-0.8	25.0
1,3-Dichlorobenzene	1.006	0.877	0.500	-12.9	25.0
1,4-Dichlorobenzene	0.995	0.854	0.700	-14.2	25.0
1,2-Dichlorobenzene	0.871	0.801	0.400	-8.0	25.0
1,2-Dibromo-3-chloropropane	0.038	0.040	0.010	5.3	50.0
1,2,4-Trichlorobenzene	0.599	0.524	0.300	-12.5	50.0
1,2,3-Trichlorobenzene	0.453	0.399	0.200	-11.9	50.0
Vinyl Chloride-d3	0.195	0.173	0.010	-11.3	50.0
Chloroethane-d5	0.145	0.128	0.010	-11.5	50.0
1,1-Dichloroethene-d2	0.445	0.403	0.010	-9.5	25.0
2-Butanone-d5	0.034	0.034	0.010	1.6	50.0
Chloroform-d	0.402	0.378	0.010	-6.0	25.0
1,2-Dichloroethane-d4	0.177	0.188	0.010	6.1	25.0
Benzene-d6	0.944	0.836	0.030	-11.5	25.0
1,2-Dichloropropane-d6	0.244	0.210	0.100	-14.1	25.0
Toluene-d8	0.812	0.698	0.200	-14.0	25.0
trans-1,3-Dichloropropene-d4	0.209	0.190	0.010	-9.0	25.0
2-Hexanone-d5	0.035	0.037	0.010	4.4	50.0
1,1,2,2-Tetrachloroethane-d2	0.119	0.118	0.010	-0.7	25.0
1,2-Dichlorobenzene-d4	0.548	0.499	0.060	-8.9	25.0

Shealy Environmental Services
Continuing Calibration Verification Report

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B24.D		
Lab Sample ID:	VSTD005QD	Client Sample ID:	VSTD005QD
Injection Date:	10-May-2016 04:51:30	Dil. Factor:	1.0
Operator:	JJG	Inst. ID:	msd5.i
Sample Info:	5050916B, VSTD005QD		
Method:	\\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5e.m		
Method Date:	10-May-2016 07:11:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	CCV	ALS Bottle:	24
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
1 Dichlorodifluoromethane	0.205165	0.176042	0.01	-14.2	50	86
2 Chloromethane	0.243696	0.186379	0.01	-23.5	50	76
$ 3 Vinyl Chloride-d3	0.194607	0.172602	0.01	-11.3	50	89
4 Vinyl Chloride	0.228307	0.183882	0.01	-19.5	50	81
5 Bromomethane	0.14433	0.100336	0.01	-30.5	50	70
$ 6 Chloroethane-d5	0.144725	0.128074	0.01	-11.5	50	88
7 Chloroethane	0.130163	0.097871	0.01	-24.8	50	75
8 Trichlorofluoromethane	0.18321	0.141803	0.01	-22.6	50	77
$ 12 1,1-Dichloroethene-d2	0.445051	0.402771	0.01	-9.5	25	91
11 1,1,2-Trichloro-1,2,2-tr	0.184904	0.175928	0.01	-4.9	50	95
13 1,1-Dichloroethene	0.186305	0.170057	0.02	-8.7	25	91
14 Acetone	0.016727	0.015695	0.01	-6.2	50	94
15 Carbon Disulfide	0.483862	0.419841	0.01	-13.2	25	87
16 Methyl Acetate	0.077248	0.080643	0.01	4.4	50	104
17 Methylene Chloride	0.177334	0.16256	0.01	-8.3	50	92
20 Methyl tert-Butyl Ether	0.363924	0.381336	0.01	4.8	50	105
21 trans-1,2-Dichloroethene	0.204074	0.184447	0.07	-9.6	25	90
23 1,1-Dichloroethane	0.42679	0.393019	0.1	-7.9	25	92
$ 25 2-Butanone-d5	0.033836	0.034382	0.01	1.6	50	102
26 cis-1,2-Dichloroethene	0.212529	0.199299	0.1	-6.2	25	94
28 2-Butanone	0.025914	0.025603	0.01	-1.2	50	99
29 Bromochloromethane	0.088565	0.087558	0.02	-1.1	25	99
$ 30 Chloroform-d	0.401667	0.377555	0.01	-6	25	94
31 Chloroform	0.38705	0.364624	0.04	-5.8	25	94
33 1,1,1-Trichloroethane	0.403698	0.367486	0.05	-9	25	91
32 Cyclohexane	0.527864	0.445134	0.1	-15.7	50	84
34 Carbon Tetrachloride	0.420365	0.390271	0.02	-7.2	50	93
$ 38 1,2-Dichloroethane-d4	0.177092	0.187959	0.01	6.1	25	106
$ 36 Benzene-d6	0.944424	0.835741	0.03	-11.5	25	88
37 Benzene	0.93803	0.844681	0.3	-10	25	90
39 1,2-Dichloroethane	0.213953	0.224533	0.01	4.9	50	105
42 Trichloroethene	0.261131	0.240285	0.1	-8	25	92
$ 44 1,2-Dichloropropane-d6	0.244495	0.210099	0.1	-14.1	25	86
43 Methylcyclohexane	0.436534	0.379315	0.2	-13.1	50	87
45 1,2-Dichloropropane	0.221085	0.201054	0.1	-9.1	25	91

Report Date: 10-May-2016 12:17:50 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd5.i\5050916B.b\50509B24.D

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
49 Bromodichloromethane	0.294371	0.276281	0.09	-6.1	25	94
50 cis-1,3-Dichloropropene	0.29542	0.260207	0.1	-11.9	25	88
51 4-Methyl-2-pentanone	0.097752	0.096574	0.01	-1.2	50	99
$ 52 Toluene-d8	0.812254	0.698486	0.2	-14	25	86
53 Toluene	0.907475	0.790661	0.4	-12.9	25	87
$ 54 trans-1,3-Dichloropropen	0.208838	0.19006	0.01	-9	25	91
55 trans-1,3-Dichloropropen	0.219802	0.203258	0.01	-7.5	25	92
56 1,1,2-Trichloroethane	0.108858	0.105985	0.04	-2.6	25	97
57 Tetrachloroethene	0.263687	0.220674	0.1	-16.3	25	84
$ 58 2-Hexanone-d5	0.035103	0.03663	0.01	4.4	50	104
60 2-Hexanone	0.059944	0.059483	0.01	-0.8	50	99
61 Dibromochloromethane	0.172915	0.173102	0.05	0.1	25	100
62 1,2-Dibromoethane	0.111838	0.109032	0.01	-2.5	25	97
64 Chlorobenzene	0.600068	0.529659	0.4	-11.7	25	88
65 Ethylbenzene	1.050583	0.925346	0.5	-11.9	25	88
67 m+p-Xylenes	0.448487	0.387241	0.2	-13.7	25	86
68 o-Xylene	0.42799	0.38561	0.3	-9.9	25	90
69 Styrene	0.644383	0.582665	0.2	-9.6	25	90
70 Bromoform	0.177522	0.180724	0.01	1.8	50	102
71 Isopropylbenzene	1.141618	1.02612	0.7	-10.1	25	90
$ 72 1,1,2,2-Tetrachloroethan	0.118547	0.117727	0.01	-0.7	25	99
74 1,1,2,2-Tetrachloroethan	0.118935	0.117994	0.05	-0.8	25	99
83 1,3-Dichlorobenzene	1.006199	0.876544	0.5	-12.9	25	87
86 1,4-Dichlorobenzene	0.995169	0.854352	0.7	-14.2	25	86
$ 87 1,2-Dichlorobenzene-d4	0.548212	0.499413	0.06	-8.9	25	91
89 1,2-Dichlorobenzene	0.871437	0.801475	0.4	-8	25	92
90 1,2-Dibromo-3-chloroprop	0.038339	0.040366	0.01	5.3	50	105
91 1,2,4-Trichlorobenzene	0.598892	0.524276	0.3	-12.5	50	88
94 1,2,3-Trichlorobenzene	0.452604	0.398882	0.2	-11.9	50	88

Report Date: 10-May-2016 12:17:50 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd5.i\5050916B.b\50509B24.D
Lab Sample ID: VSTD005QD Client Sample ID: VSTD005QD
Injection Date: 10-May-2016 04:51:30 Dil. Factor: 1.0
Operator: JJG Inst. ID: msd5.i
Sample Info: 5050916B, VSTD005QD
Method: \\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5e.m
Method Date: 10-May-2016 07:11:30 Quant Method: ISTD
Calib Date: 05-May-2016 15:28:30 Calib File: 50505A06.D
Sample Type: CCV ALS Bottle: 24
Cpnd Sublist: std.sub
Sample Matrix: Water Matrix Level: Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1: DB-624 (0.25 mm) Detector: MS Scan
Data Reviewer: all Review Date: 10-May-2016 12:02:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.702	1.702	0.000	51123	5.0000	4.2902	
2 Chloromethane	50.0	1.856	1.856	0.000	54125	5.0000	3.8240	
$ 3 Vinyl Chloride-d3	65.0	1.963	1.963	0.000	50124	5.0000	4.4346	
4 Vinyl Chloride	62.0	1.974	1.974	0.000	53400	5.0000	4.0271	
5 Bromomethane	94.0	2.318	2.318	0.000	29138	5.0000	3.4759	
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	37193	5.0000	4.4247	
7 Chloroethane	64.0	2.425	2.425	0.000	28422	5.0000	3.7596	
8 Trichlorofluoromethane	101.0	2.698	2.698	0.000	41180	5.0000	3.8700	
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	116966	5.0000	4.5250	
13 1,1-Dichloroethene	96.0	3.291	3.291	0.000	49385	5.0000	4.5639	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.303	3.303	0.000	51090	5.0000	4.7573	
14 Acetone	43.0	3.326	3.326	0.000	45579	50.000	46.917	
15 Carbon Disulfide	76.0	3.587	3.587	0.000	121923	5.0000	4.3384	
16 Methyl Acetate	43.0	3.765	3.765	0.000	23419	5.0000	5.2198	
17 Methylene Chloride	84.0	3.895	3.895	0.000	47208	5.0000	4.5834	
20 Methyl tert-Butyl Ether	73.0	4.263	4.263	0.000	110741	5.0000	5.2392	
21 trans-1,2-Dichloroethene	96.0	4.263	4.263	0.000	53564	5.0000	4.5191	
23 1,1-Dichloroethane	63.0	4.809	4.809	0.000	114134	5.0000	4.6044	
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	99845	50.000	50.807	
26 cis-1,2-Dichloroethene	96.0	5.568	5.568	0.000	57877	5.0000	4.6888	
28 2-Butanone	43.0	5.579	5.579	0.000	74352	50.000	49.399	
29 Bromochloromethane	128.0	5.888	5.888	0.000	25427	5.0000	4.9431	
$ 30 Chloroform-d	84.0	5.971	5.971	0.000	109643	5.0000	4.6998	
31 Chloroform	83.0	5.994	5.994	0.000	105888	5.0000	4.7103	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	84062	5.0000	4.5515	
32 Cyclohexane	56.0	6.326	6.326	0.000	101824	5.0000	4.2164	
34 Carbon Tetrachloride	117.0	6.469	6.469	0.000	89274	5.0000	4.6420	

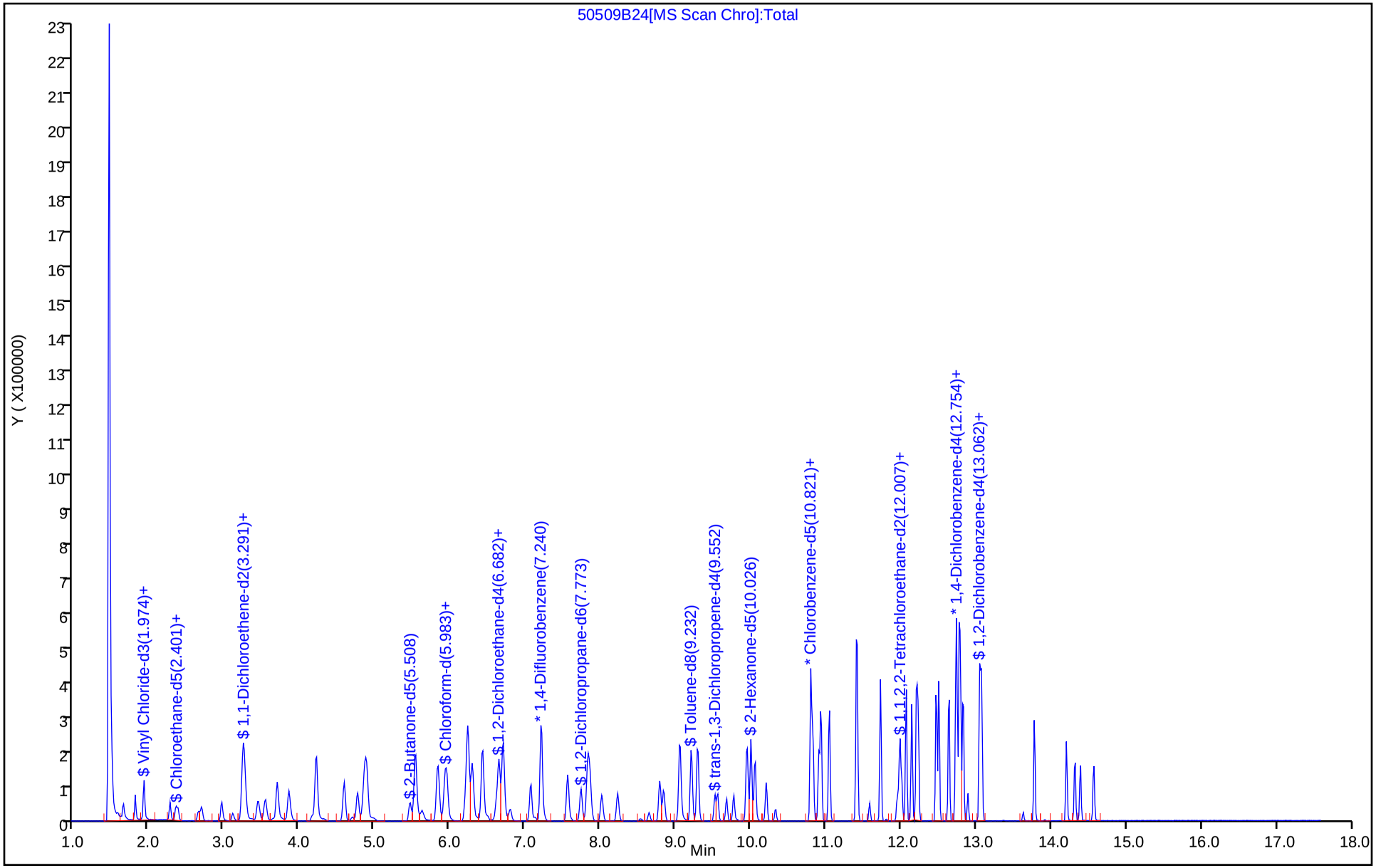
Report Date: 10-May-2016 12:17:50 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd5.i\5050916B.b\50509B24.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.647	6.647	0.000	54584	5.0000	5.3068	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	191175	5.0000	4.4246	
37 Benzene	78.0	6.730	6.730	0.000	193220	5.0000	4.5024	
39 1,2-Dichloroethane	62.0	6.753	6.753	0.000	65205	5.0000	5.2473	
* 41 1,4-Difluorobenzene	114.0	7.240	7.240	0.000	290403	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	54965	5.0000	4.6009	
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	48060	5.0000	4.2966	
43 Methylcyclohexane	83.0	7.856	7.856	0.000	86768	5.0000	4.3446	
45 1,2-Dichloropropane	63.0	7.892	7.892	0.000	45991	5.0000	4.5470	
49 Bromodichloromethane	83.0	8.259	8.259	0.000	63199	5.0000	4.6927	
50 cis-1,3-Dichloropropene	75.0	8.864	8.864	0.000	59522	5.0000	4.4040	
51 4-Methyl-2-pentanone	43.0	9.078	9.078	0.000	220911	50.000	49.397	
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	159778	5.0000	4.2997	
53 Toluene	91.0	9.315	9.315	0.000	180863	5.0000	4.3564	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	43476	5.0000	4.5504	
55 trans-1,3-Dichloropropene	75.0	9.588	9.588	0.000	46495	5.0000	4.6237	
56 1,1,2-Trichloroethane	97.0	9.801	9.801	0.000	24244	5.0000	4.8681	
57 Tetrachloroethene	164.0	9.967	9.967	0.000	50479	5.0000	4.1844	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	83791	50.000	52.176	
60 2-Hexanone	43.0	10.086	10.086	0.000	136067	50.000	49.616	
61 Dibromochloromethane	129.0	10.240	10.240	0.000	39597	5.0000	5.0054	
62 1,2-Dibromoethane	107.0	10.358	10.358	0.000	24941	5.0000	4.8746	
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	228749	5.0000	5.0000	
64 Chlorobenzene	112.0	10.856	10.856	0.000	121159	5.0000	4.4133	
65 Ethylbenzene	91.0	10.951	10.951	0.000	211672	5.0000	4.4040	
67 m+p-Xylenes	106.0	11.070	11.070	0.000	88581	5.0000	4.3172	
68 o-Xylene	106.0	11.426	11.426	0.000	88208	5.0000	4.5049	
69 Styrene	104.0	11.437	11.437	0.000	133284	5.0000	4.5211	
70 Bromoform	173.0	11.603	11.603	0.000	24154	5.0000	5.0902	
71 Isopropylbenzene	105.0	11.746	11.746	0.000	234724	5.0000	4.4941	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	26930	5.0000	4.9654	
74 1,1,2,2-Tetrachloroethane	83.0	11.983	11.983	0.000	26991	5.0000	4.9604	
83 1,3-Dichlorobenzene	146.0	12.742	12.742	0.000	117151	5.0000	4.3557	
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	133651	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.813	12.813	0.000	114185	5.0000	4.2925	
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	66747	5.0000	4.5549	
89 1,2-Dichlorobenzene	146.0	13.086	13.086	0.000	107118	5.0000	4.5986	
90 1,2-Dibromo-3-chloropropane	75.0	13.643	13.643	0.000	5395	5.0000	5.2644	
91 1,2,4-Trichlorobenzene	180.0	14.212	14.212	0.000	70070	5.0000	4.3770	
94 1,2,3-Trichlorobenzene	180.0	14.580	14.580	0.000	53311	5.0000	4.4065	

Report Date: 10-May-2016 12:17:50 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B24.D				
Injection Date:	10-May-2016 04:51:30	Inst. ID:	msd5.i	Operator:	JJG
Client ID:	VSTD005QD	Lab ID:	VSTD005QD		
Sample Info:	5050916B, VSTD005QD				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD5 Calibration Date: 05/10/2016 Time: 0854

Lab File ID: 50510A03 Init. Calib. Date(s): 05/05/2016 05/05/2016

EPA Sample No.: VSTD005QF Init. Calib. Time(s): 1358 1528

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

COMPOUND	$\overline{\text{RRF}}$	RRF 5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.205	0.238	0.010	16.2	40.0
Chloromethane	0.244	0.301	0.010	23.4	30.0
Vinyl chloride	0.228	0.254	0.010	11.2	30.0
Bromomethane	0.144	0.162	0.010	12.0	30.0
Chloroethane	0.130	0.140	0.010	7.4	30.0
Trichlorofluoromethane	0.183	0.210	0.010	14.6	30.0
1,1-Dichloroethene	0.186	0.193	0.020	3.8	20.0
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.185	0.189	0.010	2.4	30.0
Acetone	0.017	0.019	0.010	14.1	40.0
Carbon disulfide	0.484	0.523	0.010	8.0	25.0
Methyl acetate	0.077	0.091	0.010	17.4	40.0
Methylene chloride	0.177	0.197	0.010	10.9	30.0
trans-1,2-Dichloroethene	0.204	0.220	0.070	7.9	20.0
Methyl tert-butyl ether	0.364	0.401	0.010	10.2	30.0
1,1-Dichloroethane	0.427	0.462	0.100	8.4	20.0
cis-1,2-Dichloroethene	0.213	0.239	0.100	12.5	20.0
2-Butanone	0.026	0.028	0.010	7.5	40.0
Bromochloromethane	0.089	0.097	0.020	9.9	20.0
Chloroform	0.387	0.434	0.040	12.0	20.0
1,1,1-Trichloroethane	0.404	0.463	0.050	14.8	20.0
Cyclohexane	0.528	0.486	0.100	-8.0	25.0
Carbon tetrachloride	0.420	0.464	0.020	10.5	25.0
Benzene	0.938	1.039	0.300	10.8	20.0
1,2-Dichloroethane	0.214	0.237	0.010	10.8	25.0
Trichloroethene	0.261	0.283	0.100	8.4	20.0
Methylcyclohexane	0.437	0.435	0.200	-0.3	25.0
1,2-Dichloropropane	0.221	0.232	0.100	4.9	20.0
Bromodichloromethane	0.294	0.326	0.090	10.6	20.0
cis-1,3-Dichloropropene	0.295	0.291	0.100	-1.6	20.0
4-Methyl-2-pentanone	0.098	0.100	0.010	2.8	30.0
Toluene	0.907	0.966	0.400	6.4	20.0
trans-1,3-Dichloropropene	0.220	0.226	0.010	2.8	20.0
1,1,2-Trichloroethane	0.109	0.111	0.040	2.2	20.0
Tetrachloroethene	0.264	0.259	0.100	-1.7	20.0
2-Hexanone	0.060	0.061	0.010	1.7	40.0
Dibromochloromethane	0.173	0.189	0.050	9.2	20.0

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD5 Calibration Date: 05/10/2016 Time: 0854

Lab File ID: 50510A03 Init. Calib. Date(s): 05/05/2016 05/05/2016

EPA Sample No.: VSTD005QF Init. Calib. Time(s): 1358 1528

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF 5.0	MIN RRF	%D	MAX %D
1,2-Dibromoethane	0.112	0.116	0.010	3.4	20.0
Chlorobenzene	0.600	0.629	0.400	4.8	20.0
Ethylbenzene	1.051	1.133	0.500	7.8	20.0
o-Xylene	0.428	0.479	0.300	11.9	20.0
m, p-Xylene	0.448	0.495	0.200	10.3	20.0
Styrene	0.644	0.701	0.200	8.7	20.0
Bromoform	0.178	0.206	0.010	15.9	30.0
Isopropylbenzene	1.142	1.265	0.700	10.8	25.0
1,1,2,2-Tetrachloroethane	0.119	0.128	0.050	7.9	25.0
1,3-Dichlorobenzene	1.006	1.114	0.500	10.7	20.0
1,4-Dichlorobenzene	0.995	1.074	0.700	7.9	20.0
1,2-Dichlorobenzene	0.871	0.989	0.400	13.5	20.0
1,2-Dibromo-3-chloropropane	0.038	0.045	0.010	17.7	40.0
1,2,4-Trichlorobenzene	0.599	0.667	0.300	11.4	30.0
1,2,3-Trichlorobenzene	0.453	0.496	0.200	9.7	40.0
Vinyl Chloride-d3	0.195	0.211	0.010	8.4	30.0
Chloroethane-d5	0.145	0.162	0.010	12.1	30.0
1,1-Dichloroethene-d2	0.445	0.497	0.010	11.6	25.0
2-Butanone-d5	0.034	0.039	0.010	15.6	40.0
Chloroform-d	0.402	0.476	0.010	18.5	20.0
1,2-Dichloroethane-d4	0.177	0.209	0.010	18.3	25.0
Benzene-d6	0.944	1.090	0.030	15.4	20.0
1,2-Dichloropropane-d6	0.244	0.268	0.100	9.5	20.0
Toluene-d8	0.812	0.905	0.200	11.4	20.0
trans-1,3-Dichloropropene-d4	0.209	0.227	0.010	8.7	25.0
2-Hexanone-d5	0.035	0.038	0.010	9.4	40.0
1,1,2,2-Tetrachloroethane-d2	0.119	0.139	0.010	17.4	25.0
1,2-Dichlorobenzene-d4	0.548	0.643	0.060	17.3	20.0

Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\DD\chem\msd5.i\5051016.b\50510A03.D
Lab Sample ID: VSTD005QF Client Sample ID: VSTD005QF
Injection Date: 10-May-2016 08:54:30 Dil. Factor: 1.0
Operator: ALL Inst. ID: msd5.i
Sample Info: 5051016, VSTD005QF
Method: \\Organics\DD\chem\msd5.i\5051016.b\TRACE-5.m
Method Date: 10-May-2016 09:13:30 Quant Method: ISTD
Calib Date: 05-May-2016 15:28:30 Calib File: 50505A06.D
Sample Type: CCV ALS Bottle: 3
Cpnd Sublist: std.sub
Sample Matrix: Water Matrix Level: Low
Target 4.14 Integrator: falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
1 Dichlorodifluoromethane	0.205165	0.238434	0.01	16.2	40	116
2 Chloromethane	0.243696	0.300698	0.01	23.4	30	123
$ 3 Vinyl Chloride-d3	0.194607	0.211025	0.01	8.4	30	108
4 Vinyl Chloride	0.228307	0.253772	0.01	11.2	30	111
5 Bromomethane	0.14433	0.161715	0.01	12	30	112
$ 6 Chloroethane-d5	0.144725	0.162258	0.01	12.1	30	112
7 Chloroethane	0.130163	0.139829	0.01	7.4	30	107
8 Trichlorofluoromethane	0.18321	0.209996	0.01	14.6	30	115
$ 12 1,1-Dichloroethene-d2	0.445051	0.496849	0.01	11.6	25	112
11 1,1,2-Trichloro-1,2,2-tr	0.184904	0.189336	0.01	2.4	30	102
13 1,1-Dichloroethene	0.186305	0.193399	0.02	3.8	20	104
14 Acetone	0.016727	0.019087	0.01	14.1	40	114
15 Carbon Disulfide	0.483862	0.52275	0.01	8	25	108
16 Methyl Acetate	0.077248	0.090705	0.01	17.4	40	117
17 Methylene Chloride	0.177334	0.196582	0.01	10.9	30	111
20 Methyl tert-Butyl Ether	0.363924	0.400903	0.01	10.2	30	110
21 trans-1,2-Dichloroethene	0.204074	0.220113	0.07	7.9	20	108
23 1,1-Dichloroethane	0.42679	0.462484	0.1	8.4	20	108
$ 25 2-Butanone-d5	0.033836	0.0391	0.01	15.6	40	116
26 cis-1,2-Dichloroethene	0.212529	0.239073	0.1	12.5	20	112
28 2-Butanone	0.025914	0.027864	0.01	7.5	40	108
29 Bromochloromethane	0.088565	0.097305	0.02	9.9	20	110
$ 30 Chloroform-d	0.401667	0.475809	0.01	18.5	20	118
31 Chloroform	0.38705	0.433575	0.04	12	20	112
33 1,1,1-Trichloroethane	0.403698	0.463437	0.05	14.8	20	115
32 Cyclohexane	0.527864	0.4858	0.1	-8	25	92
34 Carbon Tetrachloride	0.420365	0.464473	0.02	10.5	25	110
$ 38 1,2-Dichloroethane-d4	0.177092	0.209469	0.01	18.3	25	118
$ 36 Benzene-d6	0.944424	1.09008	0.03	15.4	20	115
37 Benzene	0.93803	1.039425	0.3	10.8	20	111
39 1,2-Dichloroethane	0.213953	0.237097	0.01	10.8	25	111
42 Trichloroethene	0.261131	0.283124	0.1	8.4	20	108
$ 44 1,2-Dichloropropane-d6	0.244495	0.267617	0.1	9.5	20	109
43 Methylcyclohexane	0.436534	0.435096	0.2	-0.3	25	100
45 1,2-Dichloropropane	0.221085	0.232014	0.1	4.9	20	105

Report Date: 11-May-2016 18:46:34 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5051016.b\50510A03.D

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
49 Bromodichloromethane	0.294371	0.325623	0.09	10.6	20	111
50 cis-1,3-Dichloropropene	0.29542	0.290787	0.1	-1.6	20	98
51 4-Methyl-2-pentanone	0.097752	0.100463	0.01	2.8	30	103
$ 52 Toluene-d8	0.812254	0.905057	0.2	11.4	20	111
53 Toluene	0.907475	0.965975	0.4	6.4	20	106
$ 54 trans-1,3-Dichloropropen	0.208838	0.226926	0.01	8.7	25	109
55 trans-1,3-Dichloropropen	0.219802	0.226047	0.01	2.8	20	103
56 1,1,2-Trichloroethane	0.108858	0.111222	0.04	2.2	20	102
57 Tetrachloroethene	0.263687	0.259319	0.1	-1.7	20	98
$ 58 2-Hexanone-d5	0.035103	0.038396	0.01	9.4	40	109
60 2-Hexanone	0.059944	0.060991	0.01	1.7	40	102
61 Dibromochloromethane	0.172915	0.188841	0.05	9.2	20	109
62 1,2-Dibromoethane	0.111838	0.115675	0.01	3.4	20	103
64 Chlorobenzene	0.600068	0.628848	0.4	4.8	20	105
65 Ethylbenzene	1.050583	1.132609	0.5	7.8	20	108
67 m+p-Xylenes	0.448487	0.494768	0.2	10.3	20	110
68 o-Xylene	0.42799	0.478919	0.3	11.9	20	112
69 Styrene	0.644383	0.700616	0.2	8.7	20	109
70 Bromoform	0.177522	0.205724	0.01	15.9	30	116
71 Isopropylbenzene	1.141618	1.265227	0.7	10.8	25	111
$ 72 1,1,2,2-Tetrachloroethan	0.118547	0.139202	0.01	17.4	25	117
74 1,1,2,2-Tetrachloroethan	0.118935	0.128313	0.05	7.9	25	108
83 1,3-Dichlorobenzene	1.006199	1.114177	0.5	10.7	20	111
86 1,4-Dichlorobenzene	0.995169	1.073575	0.7	7.9	20	108
$ 87 1,2-Dichlorobenzene-d4	0.548212	0.643182	0.06	17.3	20	117
89 1,2-Dichlorobenzene	0.871437	0.989015	0.4	13.5	20	113
90 1,2-Dibromo-3-chloroprop	0.038339	0.045113	0.01	17.7	40	118
91 1,2,4-Trichlorobenzene	0.598892	0.667316	0.3	11.4	30	111
94 1,2,3-Trichlorobenzene	0.452604	0.496389	0.2	9.7	40	110

Report Date: 11-May-2016 18:46:34 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A03.D		
Lab Sample ID:	VSTD005QF	Client Sample ID:	VSTD005QF
Injection Date:	10-May-2016 08:54:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5051016, VSTD005QF		
Method:	\\Organics\DD\chem\msd5.i\5051016.b\TRACE-5.m		
Method Date:	10-May-2016 09:13:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rz	Review Date:	11-May-2016 18:42:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.701	1.701	0.000	64200	5.0000	5.8108	
2 Chloromethane	50.0	1.856	1.856	0.000	80965	5.0000	6.1695	
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	56820	5.0000	5.4218	
4 Vinyl Chloride	62.0	1.974	1.974	0.000	68330	5.0000	5.5577	
5 Bromomethane	94.0	2.318	2.318	0.000	43543	5.0000	5.6023	
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	43689	5.0000	5.6057	
7 Chloroethane	64.0	2.425	2.425	0.000	37650	5.0000	5.3713	
8 Trichlorofluoromethane	101.0	2.698	2.698	0.000	56543	5.0000	5.7310	
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	133780	5.0000	5.5819	
13 1,1-Dichloroethene	96.0	3.290	3.290	0.000	52074	5.0000	5.1904	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.302	3.302	0.000	50980	5.0000	5.1198	
14 Acetone	43.0	3.326	3.326	0.000	51392	50.000	57.055	
15 Carbon Disulfide	76.0	3.587	3.587	0.000	140754	5.0000	5.4018	
16 Methyl Acetate	43.0	3.753	3.753	0.000	24423	5.0000	5.8711	
17 Methylene Chloride	84.0	3.895	3.895	0.000	52931	5.0000	5.5427	
20 Methyl tert-Butyl Ether	73.0	4.251	4.251	0.000	107946	5.0000	5.5081	
21 trans-1,2-Dichloroethene	96.0	4.263	4.263	0.000	59267	5.0000	5.3930	
23 1,1-Dichloroethane	63.0	4.808	4.808	0.000	124527	5.0000	5.4182	
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	105279	50.000	57.779	
26 cis-1,2-Dichloroethene	96.0	5.567	5.567	0.000	64372	5.0000	5.6245	
28 2-Butanone	43.0	5.579	5.579	0.000	75026	50.000	53.762	
29 Bromochloromethane	128.0	5.888	5.888	0.000	26200	5.0000	5.4934	
$ 30 Chloroform-d	84.0	5.959	5.959	0.000	128115	5.0000	5.9229	
31 Chloroform	83.0	5.994	5.994	0.000	116743	5.0000	5.6010	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	94827	5.0000	5.7399	
32 Cyclohexane	56.0	6.326	6.326	0.000	99403	5.0000	4.6016	
34 Carbon Tetrachloride	117.0	6.469	6.469	0.000	95039	5.0000	5.5246	

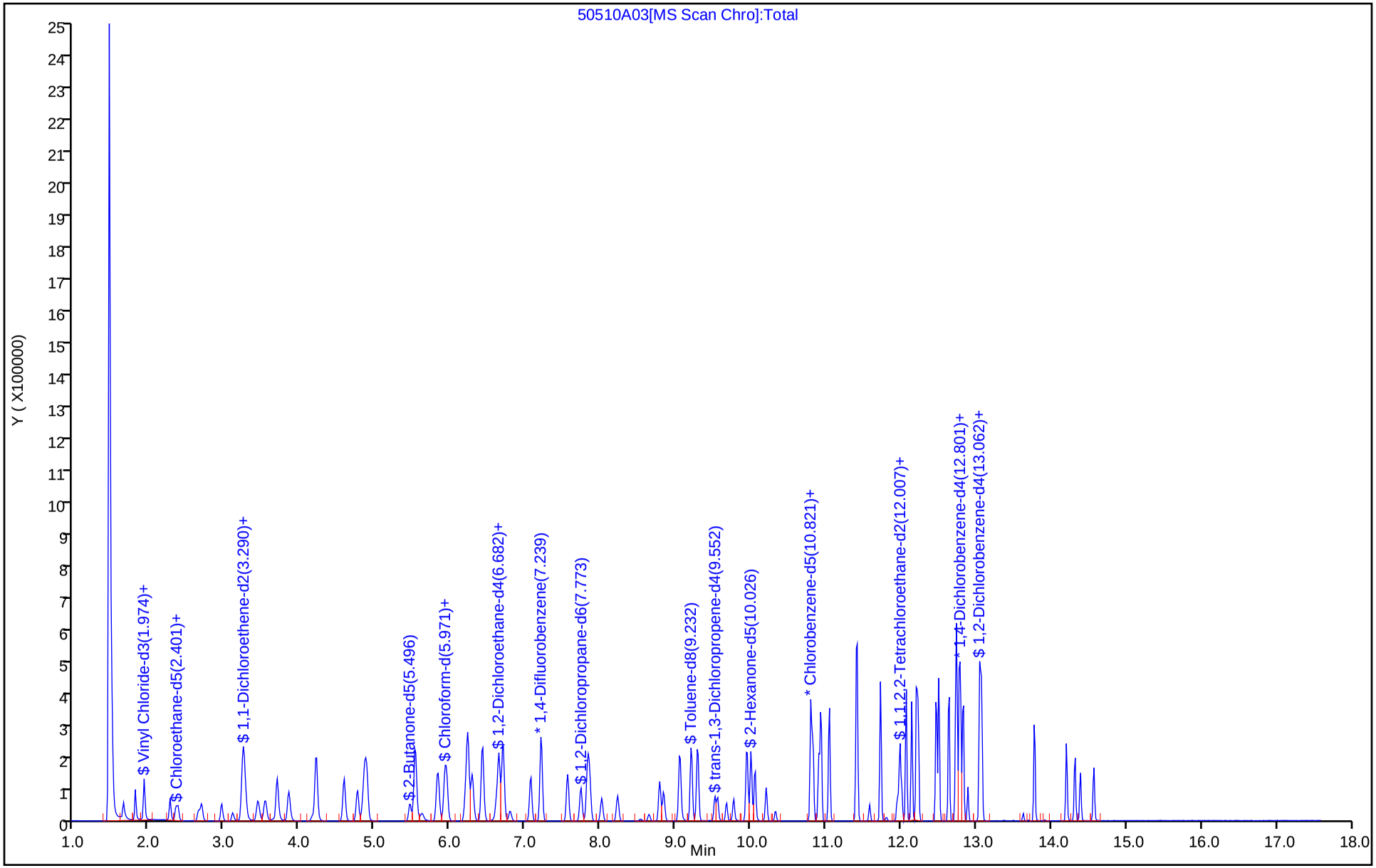
Report Date: 11-May-2016 18:46:34 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5051016.b\50510A03.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.646	0.000	56401	5.0000	5.9141	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	223049	5.0000	5.7711	
37 Benzene	78.0	6.729	6.729	0.000	212684	5.0000	5.5405	
39 1,2-Dichloroethane	62.0	6.753	6.753	0.000	63840	5.0000	5.5409	
* 41 1,4-Difluorobenzene	114.0	7.239	7.239	0.000	269257	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	57932	5.0000	5.4211	
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	54759	5.0000	5.4728	
43 Methylcyclohexane	83.0	7.856	7.856	0.000	89028	5.0000	4.9835	
45 1,2-Dichloropropane	63.0	7.892	7.892	0.000	47474	5.0000	5.2472	
49 Bromodichloromethane	83.0	8.259	8.259	0.000	66628	5.0000	5.5308	
50 cis-1,3-Dichloropropene	75.0	8.864	8.864	0.000	59500	5.0000	4.9216	
51 4-Methyl-2-pentanone	43.0	9.077	9.077	0.000	205565	50.000	51.387	
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	185190	5.0000	5.5713	
53 Toluene	91.0	9.315	9.315	0.000	197655	5.0000	5.3223	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	46433	5.0000	5.4331	
55 trans-1,3-Dichloropropene	75.0	9.587	9.587	0.000	46253	5.0000	5.1420	
56 1,1,2-Trichloroethane	97.0	9.801	9.801	0.000	22758	5.0000	5.1086	
57 Tetrachloroethene	164.0	9.967	9.967	0.000	53061	5.0000	4.9172	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	78565	50.000	54.691	
60 2-Hexanone	43.0	10.085	10.085	0.000	124798	50.000	50.874	
61 Dibromochloromethane	129.0	10.228	10.228	0.000	38640	5.0000	5.4605	
62 1,2-Dibromoethane	107.0	10.346	10.346	0.000	23669	5.0000	5.1715	
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	204617	5.0000	5.0000	
64 Chlorobenzene	112.0	10.856	10.856	0.000	128673	5.0000	5.2398	
65 Ethylbenzene	91.0	10.951	10.951	0.000	231751	5.0000	5.3904	
67 m+p-Xylenes	106.0	11.070	11.070	0.000	101238	5.0000	5.5160	
68 o-Xylene	106.0	11.425	11.425	0.000	97995	5.0000	5.5950	
69 Styrene	104.0	11.437	11.437	0.000	143358	5.0000	5.4363	
70 Bromoform	173.0	11.603	11.603	0.000	23672	5.0000	5.7943	
71 Isopropylbenzene	105.0	11.746	11.746	0.000	258887	5.0000	5.5414	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	28483	5.0000	5.8711	
74 1,1,2,2-Tetrachloroethane	83.0	11.983	11.983	0.000	26255	5.0000	5.3943	
83 1,3-Dichlorobenzene	146.0	12.742	12.742	0.000	128205	5.0000	5.5366	
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	115067	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.813	12.813	0.000	123533	5.0000	5.3939	
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	74009	5.0000	5.8662	
89 1,2-Dichlorobenzene	146.0	13.097	13.097	0.000	113803	5.0000	5.6746	
90 1,2-Dibromo-3-chloropropane	75.0	13.643	13.643	0.000	5191	5.0000	5.8834	
91 1,2,4-Trichlorobenzene	180.0	14.212	14.212	0.000	76786	5.0000	5.5713	
94 1,2,3-Trichlorobenzene	180.0	14.580	14.580	0.000	57118	5.0000	5.4837	

Report Date: 11-May-2016 18:46:34 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A03.D				
Injection Date:	10-May-2016 08:54:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VSTD005QF	Lab ID:	VSTD005QF		
Sample Info:	5051016, VSTD005QF				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD5 Calibration Date: 05/10/2016 Time: 1832

Lab File ID: 50510A27 Init. Calib. Date(s): 05/05/2016 05/05/2016

EPA Sample No.: VSTD005QN Init. Calib. Time(s): 1358 1528

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

COMPOUND	$\overline{\text{RRF}}$	RRF 5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.205	0.236	0.010	15.2	50.0
Chloromethane	0.244	0.293	0.010	20.3	50.0
Vinyl chloride	0.228	0.285	0.010	24.6	50.0
Bromomethane	0.144	0.156	0.010	8.1	50.0
Chloroethane	0.130	0.149	0.010	14.2	50.0
Trichlorofluoromethane	0.183	0.139	0.010	-24.1	50.0
1,1-Dichloroethene	0.186	0.167	0.020	-10.2	25.0
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.185	0.159	0.010	-14.0	50.0
Acetone	0.017	0.017	0.010	0.7	50.0
Carbon disulfide	0.484	0.442	0.010	-8.7	25.0
Methyl acetate	0.077	0.088	0.010	13.3	50.0
Methylene chloride	0.177	0.176	0.010	-0.6	50.0
trans-1,2-Dichloroethene	0.204	0.189	0.070	-7.5	25.0
Methyl tert-butyl ether	0.364	0.374	0.010	2.7	50.0
1,1-Dichloroethane	0.427	0.395	0.100	-7.5	25.0
cis-1,2-Dichloroethene	0.213	0.220	0.100	3.4	25.0
2-Butanone	0.026	0.031	0.010	20.9	50.0
Bromochloromethane	0.089	0.090	0.020	2.1	25.0
Chloroform	0.387	0.372	0.040	-3.9	25.0
1,1,1-Trichloroethane	0.404	0.339	0.050	-15.9	25.0
Cyclohexane	0.528	0.380	0.100	-28.0	50.0
Carbon tetrachloride	0.420	0.318	0.020	-24.3	50.0
Benzene	0.938	0.885	0.300	-5.6	25.0
1,2-Dichloroethane	0.214	0.230	0.010	7.5	50.0
Trichloroethene	0.261	0.240	0.100	-8.2	25.0
Methylcyclohexane	0.437	0.322	0.200	-26.3	50.0
1,2-Dichloropropane	0.221	0.228	0.100	3.1	25.0
Bromodichloromethane	0.294	0.309	0.090	5.1	25.0
cis-1,3-Dichloropropene	0.295	0.339	0.100	14.8	25.0
4-Methyl-2-pentanone	0.098	0.108	0.010	10.3	50.0
Toluene	0.907	0.922	0.400	1.6	25.0
trans-1,3-Dichloropropene	0.220	0.247	0.010	12.3	25.0
1,1,2-Trichloroethane	0.109	0.122	0.040	11.7	25.0
Tetrachloroethene	0.264	0.227	0.100	-13.8	25.0
2-Hexanone	0.060	0.068	0.010	14.2	50.0
Dibromochloromethane	0.173	0.192	0.050	10.8	25.0

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD5 Calibration Date: 05/10/2016 Time: 1832

Lab File ID: 50510A27 Init. Calib. Date(s): 05/05/2016 05/05/2016

EPA Sample No.: VSTD005QN Init. Calib. Time(s): 1358 1528

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF 5.0	MIN RRF	%D	MAX %D
1,2-Dibromoethane	0.112	0.130	0.010	16.3	25.0
Chlorobenzene	0.600	0.617	0.400	2.8	25.0
Ethylbenzene	1.051	1.006	0.500	-4.2	25.0
o-Xylene	0.428	0.405	0.300	-5.5	25.0
m, p-Xylene	0.448	0.431	0.200	-3.9	25.0
Styrene	0.644	0.651	0.200	1.1	25.0
Bromoform	0.178	0.212	0.010	19.5	50.0
Isopropylbenzene	1.142	1.065	0.700	-6.7	25.0
1,1,2,2-Tetrachloroethane	0.119	0.130	0.050	9.1	25.0
1,3-Dichlorobenzene	1.006	1.031	0.500	2.5	25.0
1,4-Dichlorobenzene	0.995	1.022	0.700	2.7	25.0
1,2-Dichlorobenzene	0.871	0.915	0.400	5.0	25.0
1,2-Dibromo-3-chloropropane	0.038	0.044	0.010	15.5	50.0
1,2,4-Trichlorobenzene	0.599	0.579	0.300	-3.2	50.0
1,2,3-Trichlorobenzene	0.453	0.454	0.200	0.3	50.0
Vinyl Chloride-d3	0.195	0.188	0.010	-3.4	50.0
Chloroethane-d5	0.145	0.149	0.010	2.8	50.0
1,1-Dichloroethene-d2	0.445	0.408	0.010	-8.3	25.0
2-Butanone-d5	0.034	0.045	0.010	32.6	50.0
Chloroform-d	0.402	0.381	0.010	-5.0	25.0
1,2-Dichloroethane-d4	0.177	0.195	0.010	9.9	25.0
Benzene-d6	0.944	0.910	0.030	-3.6	25.0
1,2-Dichloropropane-d6	0.244	0.256	0.100	4.5	25.0
Toluene-d8	0.812	0.808	0.200	-0.6	25.0
trans-1,3-Dichloropropene-d4	0.209	0.239	0.010	14.6	25.0
2-Hexanone-d5	0.035	0.043	0.010	22.3	50.0
1,1,2,2-Tetrachloroethane-d2	0.119	0.133	0.010	12.5	25.0
1,2-Dichlorobenzene-d4	0.548	0.573	0.060	4.4	25.0

Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\DD\chem\msd5.i\5051016.b\50510A27.D
Lab Sample ID: VSTD005QN Client Sample ID: VSTD005QN
Injection Date: 10-May-2016 18:32:30 Dil. Factor: 1.0
Operator: ALL Inst. ID: msd5.i
Sample Info: 5051016, VSTD005QN
Method: \\Organics\DD\chem\msd5.i\5051016.b\TRACE-5e.m
Method Date: 10-May-2016 19:02:30 Quant Method: ISTD
Calib Date: 05-May-2016 15:28:30 Calib File: 50505A06.D
Sample Type: CCV ALS Bottle: 27
Cpnd Sublist: std.sub
Sample Matrix: Water Matrix Level: Low
Target 4.14 Integrator: falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
1 Dichlorodifluoromethane	0.205165	0.236252	0.01	15.2	50	115
2 Chloromethane	0.243696	0.293259	0.01	20.3	50	120
$ 3 Vinyl Chloride-d3	0.194607	0.188058	0.01	-3.4	50	97
4 Vinyl Chloride	0.228307	0.284572	0.01	24.6	50	125
5 Bromomethane	0.14433	0.156046	0.01	8.1	50	108
$ 6 Chloroethane-d5	0.144725	0.14878	0.01	2.8	50	103
7 Chloroethane	0.130163	0.148611	0.01	14.2	50	114
8 Trichlorofluoromethane	0.18321	0.139022	0.01	-24.1	50	76
$ 12 1,1-Dichloroethene-d2	0.445051	0.40817	0.01	-8.3	25	92
11 1,1,2-Trichloro-1,2,2-tr	0.184904	0.158955	0.01	-14	50	86
13 1,1-Dichloroethene	0.186305	0.167271	0.02	-10.2	25	90
14 Acetone	0.016727	0.016843	0.01	0.7	50	101
15 Carbon Disulfide	0.483862	0.441567	0.01	-8.7	25	91
16 Methyl Acetate	0.077248	0.087516	0.01	13.3	50	113
17 Methylene Chloride	0.177334	0.176189	0.01	-0.6	50	99
20 Methyl tert-Butyl Ether	0.363924	0.373818	0.01	2.7	50	103
21 trans-1,2-Dichloroethene	0.204074	0.1888	0.07	-7.5	25	93
23 1,1-Dichloroethane	0.42679	0.39464	0.1	-7.5	25	92
$ 25 2-Butanone-d5	0.033836	0.044882	0.01	32.6	50	133
26 cis-1,2-Dichloroethene	0.212529	0.219786	0.1	3.4	25	103
28 2-Butanone	0.025914	0.031319	0.01	20.9	50	121
29 Bromochloromethane	0.088565	0.090384	0.02	2.1	25	102
$ 30 Chloroform-d	0.401667	0.381401	0.01	-5	25	95
31 Chloroform	0.38705	0.372098	0.04	-3.9	25	96
33 1,1,1-Trichloroethane	0.403698	0.339382	0.05	-15.9	25	84
32 Cyclohexane	0.527864	0.380251	0.1	-28	50	72
34 Carbon Tetrachloride	0.420365	0.318366	0.02	-24.3	50	76
$ 38 1,2-Dichloroethane-d4	0.177092	0.194577	0.01	9.9	25	110
$ 36 Benzene-d6	0.944424	0.910108	0.03	-3.6	25	96
37 Benzene	0.93803	0.885385	0.3	-5.6	25	94
39 1,2-Dichloroethane	0.213953	0.230029	0.01	7.5	50	108
42 Trichloroethene	0.261131	0.239713	0.1	-8.2	25	92
$ 44 1,2-Dichloropropane-d6	0.244495	0.255553	0.1	4.5	25	105
43 Methylcyclohexane	0.436534	0.321621	0.2	-26.3	50	74
45 1,2-Dichloropropane	0.221085	0.227895	0.1	3.1	25	103

Report Date: 11-May-2016 18:46:51 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5051016.b\50510A27.D

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
49 Bromodichloromethane	0.294371	0.309243	0.09	5.1	25	105
50 cis-1,3-Dichloropropene	0.29542	0.339255	0.1	14.8	25	115
51 4-Methyl-2-pentanone	0.097752	0.107784	0.01	10.3	50	110
$ 52 Toluene-d8	0.812254	0.807605	0.2	-0.6	25	99
53 Toluene	0.907475	0.921925	0.4	1.6	25	102
$ 54 trans-1,3-Dichloropropen	0.208838	0.239324	0.01	14.6	25	115
55 trans-1,3-Dichloropropen	0.219802	0.246831	0.01	12.3	25	112
56 1,1,2-Trichloroethane	0.108858	0.12157	0.04	11.7	25	112
57 Tetrachloroethene	0.263687	0.227266	0.1	-13.8	25	86
$ 58 2-Hexanone-d5	0.035103	0.042945	0.01	22.3	50	122
60 2-Hexanone	0.059944	0.068464	0.01	14.2	50	114
61 Dibromochloromethane	0.172915	0.191544	0.05	10.8	25	111
62 1,2-Dibromoethane	0.111838	0.130044	0.01	16.3	25	116
64 Chlorobenzene	0.600068	0.616857	0.4	2.8	25	103
65 Ethylbenzene	1.050583	1.005991	0.5	-4.2	25	96
67 m+p-Xylenes	0.448487	0.430937	0.2	-3.9	25	96
68 o-Xylene	0.42799	0.404624	0.3	-5.5	25	95
69 Styrene	0.644383	0.651365	0.2	1.1	25	101
70 Bromoform	0.177522	0.212054	0.01	19.5	50	119
71 Isopropylbenzene	1.141618	1.065257	0.7	-6.7	25	93
$ 72 1,1,2,2-Tetrachloroethan	0.118547	0.133369	0.01	12.5	25	113
74 1,1,2,2-Tetrachloroethan	0.118935	0.129753	0.05	9.1	25	109
83 1,3-Dichlorobenzene	1.006199	1.031469	0.5	2.5	25	103
86 1,4-Dichlorobenzene	0.995169	1.021678	0.7	2.7	25	103
$ 87 1,2-Dichlorobenzene-d4	0.548212	0.572606	0.06	4.4	25	104
89 1,2-Dichlorobenzene	0.871437	0.915035	0.4	5	25	105
90 1,2-Dibromo-3-chloroprop	0.038339	0.044294	0.01	15.5	50	116
91 1,2,4-Trichlorobenzene	0.598892	0.579481	0.3	-3.2	50	97
94 1,2,3-Trichlorobenzene	0.452604	0.453899	0.2	0.3	50	100

Report Date: 11-May-2016 18:46:51 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A27.D		
Lab Sample ID:	VSTD005QN	Client Sample ID:	VSTD005QN
Injection Date:	10-May-2016 18:32:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5051016, VSTD005QN		
Method:	\\Organics\DD\chem\msd5.i\5051016.b\TRACE-5e.m		
Method Date:	10-May-2016 19:02:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	CCV	ALS Bottle:	27
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	11-May-2016 10:50:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.701	1.701	0.000	79660	5.0000	5.7576	
2 Chloromethane	50.0	1.856	1.856	0.000	98882	5.0000	6.0169	
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	63410	5.0000	4.8318	
4 Vinyl Chloride	62.0	1.974	1.974	0.000	95953	5.0000	6.2322	
5 Bromomethane	94.0	2.330	2.330	0.000	52616	5.0000	5.4059	
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	50166	5.0000	5.1401	
7 Chloroethane	64.0	2.437	2.437	0.000	50109	5.0000	5.7087	
8 Trichlorofluoromethane	101.0	2.698	2.698	0.000	46876	5.0000	3.7941	
$ 12 1,1-Dichloroethene-d2	63.0	3.291	3.291	0.000	137628	5.0000	4.5857	
13 1,1-Dichloroethene	96.0	3.302	3.302	0.000	56401	5.0000	4.4892	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.314	3.314	0.000	53597	5.0000	4.2983	
14 Acetone	43.0	3.338	3.338	0.000	56791	50.000	50.347	
15 Carbon Disulfide	76.0	3.587	3.587	0.000	148889	5.0000	4.5629	
16 Methyl Acetate	43.0	3.765	3.765	0.000	29509	5.0000	5.6647	
17 Methylene Chloride	84.0	3.895	3.895	0.000	59408	5.0000	4.9677	
20 Methyl tert-Butyl Ether	73.0	4.263	4.263	0.000	126045	5.0000	5.1359	
21 trans-1,2-Dichloroethene	96.0	4.263	4.263	0.000	63660	5.0000	4.6258	
23 1,1-Dichloroethane	63.0	4.808	4.808	0.000	133066	5.0000	4.6234	
$ 25 2-Butanone-d5	46.0	5.508	5.508	0.000	151333	50.000	66.323	R
26 cis-1,2-Dichloroethene	96.0	5.567	5.567	0.000	74108	5.0000	5.1707	
28 2-Butanone	43.0	5.579	5.579	0.000	105604	50.000	60.429	
29 Bromochloromethane	128.0	5.888	5.888	0.000	30476	5.0000	5.1027	
$ 30 Chloroform-d	84.0	5.971	5.971	0.000	128602	5.0000	4.7477	
31 Chloroform	83.0	5.994	5.994	0.000	125465	5.0000	4.8068	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	93306	5.0000	4.2034	
32 Cyclohexane	56.0	6.326	6.326	0.000	104542	5.0000	3.6018	
34 Carbon Tetrachloride	117.0	6.469	6.469	0.000	87528	5.0000	3.7868	

Report Date: 11-May-2016 18:46:51 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5051016.b\50510A27.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.646	0.000	65608	5.0000	5.4937	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	250215	5.0000	4.8183	
37 Benzene	78.0	6.741	6.741	0.000	243418	5.0000	4.7194	
39 1,2-Dichloroethane	62.0	6.753	6.753	0.000	77562	5.0000	5.3757	
* 41 1,4-Difluorobenzene	114.0	7.251	7.251	0.000	337183	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	65904	5.0000	4.5899	
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	70259	5.0000	5.2261	
43 Methylcyclohexane	83.0	7.868	7.868	0.000	88423	5.0000	3.6838	
45 1,2-Dichloropropane	63.0	7.892	7.892	0.000	62655	5.0000	5.1540	
49 Bromodichloromethane	83.0	8.259	8.259	0.000	85020	5.0000	5.2526	
50 cis-1,3-Dichloropropene	75.0	8.876	8.876	0.000	93271	5.0000	5.7419	
51 4-Methyl-2-pentanone	43.0	9.089	9.089	0.000	296329	50.000	55.132	
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	222034	5.0000	4.9714	
53 Toluene	91.0	9.327	9.327	0.000	253464	5.0000	5.0796	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	65797	5.0000	5.7299	
55 trans-1,3-Dichloropropene	75.0	9.587	9.587	0.000	67861	5.0000	5.6148	
56 1,1,2-Trichloroethane	97.0	9.801	9.801	0.000	33423	5.0000	5.5839	
57 Tetrachloroethene	164.0	9.967	9.967	0.000	62482	5.0000	4.3094	
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	118069	50.000	61.171	
60 2-Hexanone	43.0	10.085	10.085	0.000	188228	50.000	57.107	
61 Dibromochloromethane	129.0	10.228	10.228	0.000	52661	5.0000	5.5387	
62 1,2-Dibromoethane	107.0	10.358	10.358	0.000	35753	5.0000	5.8140	
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	274929	5.0000	5.0000	
64 Chlorobenzene	112.0	10.856	10.856	0.000	169592	5.0000	5.1399	
65 Ethylbenzene	91.0	10.963	10.963	0.000	276576	5.0000	4.7878	
67 m+p-Xylenes	106.0	11.070	11.070	0.000	118477	5.0000	4.8043	
68 o-Xylene	106.0	11.425	11.425	0.000	111243	5.0000	4.7270	
69 Styrene	104.0	11.437	11.437	0.000	179079	5.0000	5.0542	
70 Bromoform	173.0	11.603	11.603	0.000	30970	5.0000	5.9726	
71 Isopropylbenzene	105.0	11.746	11.746	0.000	292870	5.0000	4.6656	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	36667	5.0000	5.6251	
74 1,1,2,2-Tetrachloroethane	83.0	11.983	11.983	0.000	35673	5.0000	5.4548	
83 1,3-Dichlorobenzene	146.0	12.742	12.742	0.000	150644	5.0000	5.1256	
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	146048	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.813	12.813	0.000	149214	5.0000	5.1332	
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	83628	5.0000	5.2225	
89 1,2-Dichlorobenzene	146.0	13.098	13.098	0.000	133639	5.0000	5.2502	
90 1,2-Dibromo-3-chloropropane	75.0	13.643	13.643	0.000	6469	5.0000	5.7766	
91 1,2,4-Trichlorobenzene	180.0	14.212	14.212	0.000	84632	5.0000	4.8379	
94 1,2,3-Trichlorobenzene	180.0	14.580	14.580	0.000	66291	5.0000	5.0143	

QC Flag Legend

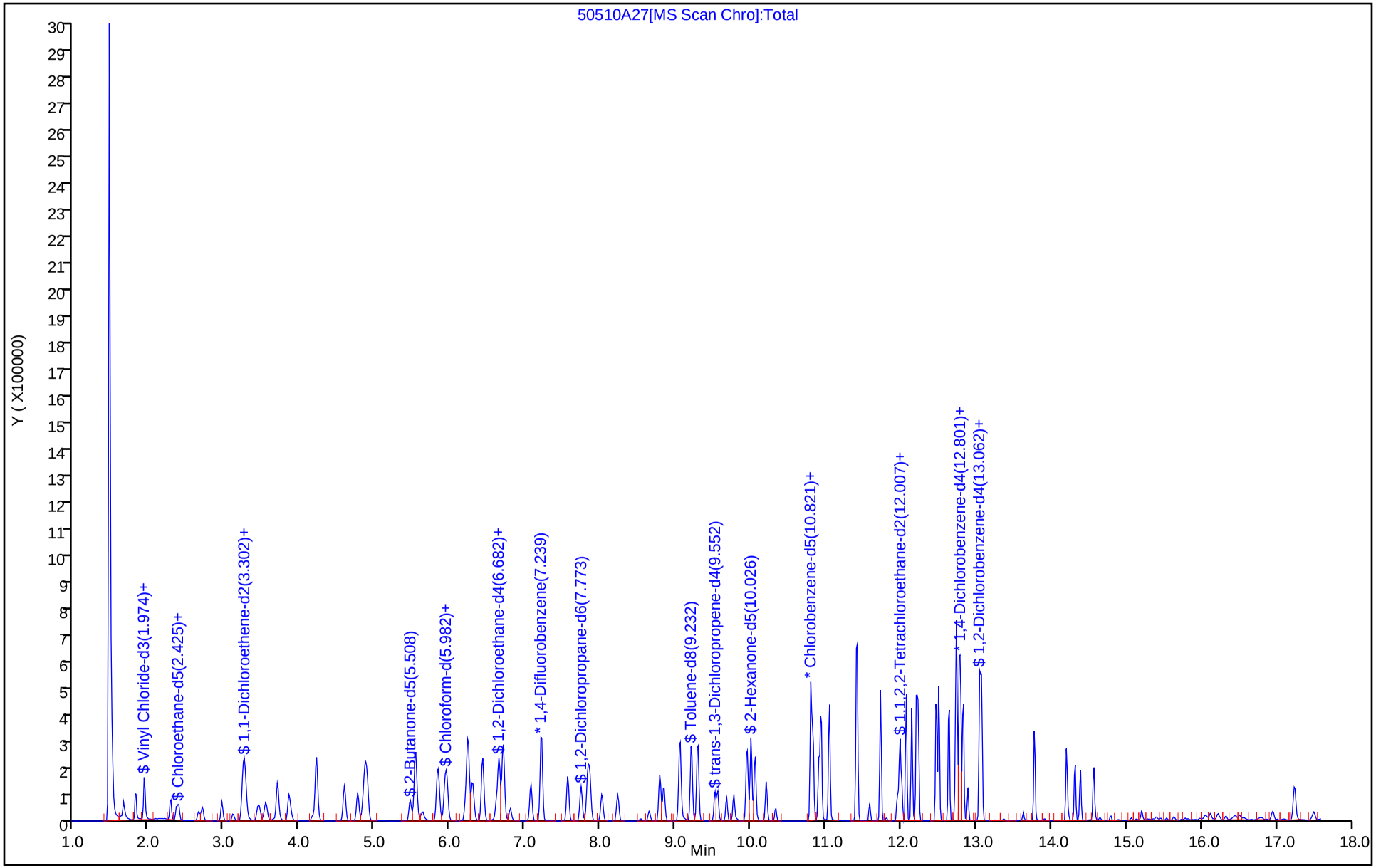
Processing Flags

R - Spike/Surrogte Fails %Recovery Test

Report Date: 11-May-2016 18:46:51 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A27.D				
Injection Date:	10-May-2016 18:32:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VSTD005QN	Lab ID:	VSTD005QN		
Sample Info:	5051016, VSTD005QN				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD8 Calibration Date: 05/12/2016 Time: 0953

Lab File ID: 80512C02 Init. Calib. Date(s): 05/09/2016 05/09/2016

EPA Sample No.: VSTD005RI Init. Calib. Time(s): 1419 1608

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF 5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.302	0.276	0.010	-8.5	40.0
Chloromethane	0.526	0.501	0.010	-4.7	30.0
Vinyl chloride	0.358	0.339	0.010	-5.2	30.0
Bromomethane	0.187	0.184	0.010	-2.0	30.0
Chloroethane	0.204	0.187	0.010	-8.3	30.0
Trichlorofluoromethane	0.331	0.304	0.010	-8.0	30.0
1,1-Dichloroethene	0.245	0.207	0.020	-15.9	20.0
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.244	0.220	0.010	-9.8	30.0
Acetone	0.016	0.016	0.010	-4.3	40.0
Carbon disulfide	0.707	0.575	0.010	-18.7	25.0
Methyl acetate	0.102	0.085	0.010	-16.0	40.0
Methylene chloride	0.222	0.185	0.010	-16.5	30.0
trans-1,2-Dichloroethene	0.275	0.238	0.070	-13.7	20.0
Methyl tert-butyl ether	0.352	0.318	0.010	-9.5	30.0
1,1-Dichloroethane	0.583	0.515	0.100	-11.8	20.0
cis-1,2-Dichloroethene	0.274	0.242	0.100	-11.7	20.0
2-Butanone	0.031	0.031	0.010	-1.6	40.0
Bromochloromethane	0.094	0.085	0.020	-9.3	20.0
Chloroform	0.485	0.439	0.040	-9.5	20.0
1,1,1-Trichloroethane	0.563	0.521	0.050	-7.4	20.0
Cyclohexane	1.015	0.795	0.100	-21.7	25.0
Carbon tetrachloride	0.541	0.505	0.020	-6.6	25.0
Benzene	1.351	1.215	0.300	-10.1	20.0
1,2-Dichloroethane	0.249	0.239	0.010	-3.8	25.0
Trichloroethene	0.395	0.380	0.100	-3.9	20.0
Methylcyclohexane	0.652	0.578	0.200	-11.4	25.0
1,2-Dichloropropane	0.336	0.310	0.100	-7.6	20.0
Bromodichloromethane	0.376	0.350	0.090	-6.9	20.0
cis-1,3-Dichloropropene	0.388	0.368	0.100	-5.1	20.0
4-Methyl-2-pentanone	0.135	0.129	0.010	-4.4	30.0
Toluene	1.481	1.402	0.400	-5.3	20.0
trans-1,3-Dichloropropene	0.257	0.245	0.010	-4.5	20.0
1,1,2-Trichloroethane	0.132	0.122	0.040	-7.3	20.0
Tetrachloroethene	0.343	0.344	0.100	0.3	20.0
2-Hexanone	0.084	0.078	0.010	-6.5	40.0
Dibromochloromethane	0.193	0.184	0.050	-4.9	20.0

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD8 Calibration Date: 05/12/2016 Time: 0953

Lab File ID: 80512C02 Init. Calib. Date(s): 05/09/2016 05/09/2016

EPA Sample No.: VSTD005RI Init. Calib. Time(s): 1419 1608

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF 5.0	MIN RRF	%D	MAX %D
1,2-Dibromoethane	0.128	0.116	0.010	-9.3	20.0
Chlorobenzene	0.813	0.786	0.400	-3.3	20.0
Ethylbenzene	1.592	1.584	0.500	-0.5	20.0
o-Xylene	0.581	0.572	0.300	-1.6	20.0
m, p-Xylene	0.635	0.639	0.200	0.7	20.0
Styrene	0.857	0.825	0.200	-3.8	20.0
Bromoform	0.188	0.176	0.010	-6.6	30.0
Isopropylbenzene	1.635	1.641	0.700	0.4	25.0
1,1,2,2-Tetrachloroethane	0.138	0.125	0.050	-9.0	25.0
1,3-Dichlorobenzene	1.267	1.246	0.500	-1.6	20.0
1,4-Dichlorobenzene	1.196	1.173	0.700	-1.9	20.0
1,2-Dichlorobenzene	1.051	1.024	0.400	-2.6	20.0
1,2-Dibromo-3-chloropropane	0.040	0.037	0.010	-8.4	40.0
1,2,4-Trichlorobenzene	0.819	0.799	0.300	-2.4	30.0
1,2,3-Trichlorobenzene	0.624	0.592	0.200	-5.1	40.0
Vinyl Chloride-d3	0.274	0.212	0.010	-22.6	30.0
Chloroethane-d5	0.217	0.175	0.010	-19.1	30.0
1,1-Dichloroethene-d2	0.602	0.522	0.010	-13.2	25.0
2-Butanone-d5	0.047	0.041	0.010	-11.9	40.0
Chloroform-d	0.512	0.450	0.010	-12.0	20.0
1,2-Dichloroethane-d4	0.198	0.176	0.010	-11.0	25.0
Benzene-d6	1.394	1.249	0.030	-10.4	20.0
1,2-Dichloropropane-d6	0.379	0.329	0.100	-13.2	20.0
Toluene-d8	1.205	1.110	0.200	-7.9	20.0
trans-1,3-Dichloropropene-d4	0.260	0.227	0.010	-12.8	25.0
2-Hexanone-d5	0.042	0.037	0.010	-12.3	40.0
1,1,2,2-Tetrachloroethane-d2	0.146	0.129	0.010	-11.6	25.0
1,2-Dichlorobenzene-d4	0.693	0.643	0.060	-7.3	20.0

Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\DD\chem\msd8.i\8051216C.b\80512C02.D
Lab Sample ID: VSTD005RI Client Sample ID: VSTD005RI
Injection Date: 12-May-2016 09:53:30 Dil. Factor: 1.0
Operator: ALL Inst. ID: msd8.i
Sample Info: 8051216C.b, VSTD005RI
Method: \\Organics\DD\chem\msd8.i\8051216C.b\TRACE-8.m
Method Date: 12-May-2016 10:14:30 Quant Method: ISTD
Calib Date: 09-May-2016 16:08:30 Calib File: 80509D06.D
Sample Type: CCV ALS Bottle: 2
Cpnd Sublist: 2447.sub
Sample Matrix: Water Matrix Level: Low
Target 4.14 Integrator: falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
1 Dichlorodifluoromethane	0.30191	0.276097	0.01	-8.5	40	91
2 Chloromethane	0.52591	0.501421	0.01	-4.7	30	95
$ 3 Vinyl Chloride-d3	0.27369	0.211809	0.01	-22.6	30	77
4 Vinyl Chloride	0.357645	0.339035	0.01	-5.2	30	95
5 Bromomethane	0.187393	0.18365	0.01	-2	30	98
$ 6 Chloroethane-d5	0.216554	0.175093	0.01	-19.1	30	81
7 Chloroethane	0.203901	0.187054	0.01	-8.3	30	92
8 Trichlorofluoromethane	0.33072	0.304097	0.01	-8	30	92
$ 12 1,1-Dichloroethene-d2	0.602265	0.522478	0.01	-13.2	25	87
11 1,1,2-Trichloro-1,2,2-tr	0.244335	0.220277	0.01	-9.8	30	90
13 1,1-Dichloroethene	0.245497	0.206521	0.02	-15.9	20	84
14 Acetone	0.016279	0.015577	0.01	-4.3	40	96
15 Carbon Disulfide	0.70686	0.574963	0.01	-18.7	25	81
16 Methyl Acetate	0.101591	0.085349	0.01	-16	40	84
17 Methylene Chloride	0.221886	0.185371	0.01	-16.5	30	84
20 Methyl tert-Butyl Ether	0.351847	0.318292	0.01	-9.5	30	90
21 trans-1,2-Dichloroethene	0.27535	0.237713	0.07	-13.7	20	86
23 1,1-Dichloroethane	0.583161	0.514622	0.1	-11.8	20	88
$ 25 2-Butanone-d5	0.046749	0.041177	0.01	-11.9	40	88
26 cis-1,2-Dichloroethene	0.273804	0.24179	0.1	-11.7	20	88
27 2,2-Dichloropropane	0.270854	0.244314	0.1	-9.8	20	90
28 2-Butanone	0.031485	0.030971	0.01	-1.6	40	98
29 Bromochloromethane	0.094094	0.085361	0.02	-9.3	20	91
$ 30 Chloroform-d	0.51177	0.45035	0.01	-12	20	88
31 Chloroform	0.485047	0.438935	0.04	-9.5	20	90
33 1,1,1-Trichloroethane	0.562679	0.521173	0.05	-7.4	20	93
32 Cyclohexane	1.014557	0.794583	0.1	-21.7	25	78
34 Carbon Tetrachloride	0.540606	0.504824	0.02	-6.6	25	93
35 1,1-Dichloropropene	0.366203	0.330079	0.1	-9.9	20	90
$ 38 1,2-Dichloroethane-d4	0.198009	0.176271	0.01	-11	25	89
$ 36 Benzene-d6	1.393734	1.248708	0.03	-10.4	20	90
37 Benzene	1.351074	1.214882	0.3	-10.1	20	90
39 1,2-Dichloroethane	0.248675	0.239299	0.01	-3.8	25	96
42 Trichloroethene	0.39535	0.379846	0.1	-3.9	20	96
$ 44 1,2-Dichloropropane-d6	0.378689	0.328685	0.1	-13.2	20	87

Report Date: 13-May-2016 08:50:18 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd8.i\8051216C.b\80512C02.D

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
43 Methylcyclohexane	0.651555	0.577507	0.2	-11.4	25	89
45 1,2-Dichloropropane	0.335831	0.310302	0.1	-7.6	20	92
48 Dibromomethane	0.079729	* 0.076384	0.1	-4.2	20	96
49 Bromodichloromethane	0.375582	0.349519	0.09	-6.9	20	93
50 cis-1,3-Dichloropropene	0.387539	0.367879	0.1	-5.1	20	95
51 4-Methyl-2-pentanone	0.134718	0.12877	0.01	-4.4	30	96
$ 52 Toluene-d8	1.205283	1.10994	0.2	-7.9	20	92
53 Toluene	1.481055	1.402013	0.4	-5.3	20	95
$ 54 trans-1,3-Dichloropropen	0.259928	0.226661	0.01	-12.8	25	87
55 trans-1,3-Dichloropropen	0.256948	0.245408	0.01	-4.5	20	96
56 1,1,2-Trichloroethane	0.13156	0.122015	0.04	-7.3	20	93
57 Tetrachloroethene	0.343336	0.344288	0.1	0.3	20	100
59 1,3-Dichloropropane	0.236331	0.22604	0.1	-4.4	20	96
$ 58 2-Hexanone-d5	0.042433	0.0372	0.01	-12.3	40	88
60 2-Hexanone	0.083807	0.078355	0.01	-6.5	40	93
61 Dibromochloromethane	0.193083	0.183695	0.05	-4.9	20	95
62 1,2-Dibromoethane	0.128391	0.116464	0.01	-9.3	20	91
64 Chlorobenzene	0.813135	0.786263	0.4	-3.3	20	97
66 1,1,1,2-Tetrachloroethan	0.292131	0.297173	0.1	1.7	20	102
65 Ethylbenzene	1.591618	1.583604	0.5	-0.5	20	99
67 m+p-Xylenes	0.634603	0.639312	0.2	0.7	20	101
68 o-Xylene	0.581353	0.572185	0.3	-1.6	20	98
69 Styrene	0.857481	0.824904	0.2	-3.8	20	96
70 Bromoform	0.187857	0.17551	0.01	-6.6	30	93
75 n-Propylbenzene	3.525964	3.568304	0.7	1.2	25	101
71 Isopropylbenzene	1.635349	1.641341	0.7	0.4	25	100
$ 72 1,1,2,2-Tetrachloroethan	0.146424	0.129394	0.01	-11.6	25	88
74 1,1,2,2-Tetrachloroethan	0.137933	0.125462	0.05	-9	25	91
73 Bromobenzene	0.499489	* 0.465442	0.7	-6.8	25	93
80 tert-Butylbenzene	2.454817	2.548404	0.7	3.8	25	104
76 1,2,3-Trichloropropane	0.176251	0.157943	0.1	-10.4	20	90
77 2-Chlorotoluene	2.05778	2.067149	0.7	0.5	25	100
79 4-Chlorotoluene	2.27425	2.205233	0.7	-3	25	97
78 1,3,5-Trimethylbenzene	1.373292	1.38755	0.01	1	30	101
81 1,2,4-Trimethylbenzene	1.394743	1.392958	0.01	-0.1	30	100
84 para-Isopropyltoluene	2.727809	2.677858	0.7	-1.8	25	98
82 sec-Butylbenzene	3.272755	3.336407	0.7	1.9	25	102
83 1,3-Dichlorobenzene	1.266755	1.245888	0.5	-1.6	20	98
88 n-Butylbenzene	2.648589	2.594904	0.7	-2	25	98
86 1,4-Dichlorobenzene	1.196119	1.1732	0.7	-1.9	20	98
$ 87 1,2-Dichlorobenzene-d4	0.693448	0.642944	0.06	-7.3	20	93
89 1,2-Dichlorobenzene	1.051069	1.023635	0.4	-2.6	20	97
90 1,2-Dibromo-3-chloroprop	0.040117	0.03674	0.01	-8.4	40	92
93 Napthalene	1.030334	0.957731	0.7	-7	25	93
91 1,2,4-Trichlorobenzene	0.818573	0.798544	0.3	-2.4	30	98
92 Hexachlorbutadiene	0.697502	0.709438	0.1	1.7	20	102
94 1,2,3-Trichlorobenzene	0.624126	0.592065	0.2	-5.1	40	95

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd8.i\8051216C.b\80512C02.D		
Lab Sample ID:	VSTD005RI	Client Sample ID:	VSTD005RI
Injection Date:	12-May-2016 09:53:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd8.i
Sample Info:	8051216C.b, VSTD005RI		
Method:	\\Organics\DD\chem\msd8.i\8051216C.b\TRACE-8.m		
Method Date:	12-May-2016 10:14:30	Quant Method:	ISTD
Calib Date:	09-May-2016 16:08:30	Calib File:	80509D06.D
Sample Type:	CCV	ALS Bottle:	2
Cpnd Sublist:	2447.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	13-May-2016 08:39:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.674	1.674	0.000	67723	5.0000	4.5725	
2 Chloromethane	50.0	1.839	1.839	0.000	122992	5.0000	4.7672	
$ 3 Vinyl Chloride-d3	65.0	1.946	1.946	0.000	51954	5.0000	3.8695	
4 Vinyl Chloride	62.0	1.958	1.958	0.000	83161	5.0000	4.7398	
5 Bromomethane	94.0	2.289	2.289	0.000	45047	5.0000	4.9001	
$ 6 Chloroethane-d5	69.0	2.372	2.372	0.000	42948	5.0000	4.0427	
7 Chloroethane	64.0	2.396	2.396	0.000	45882	5.0000	4.5869	
8 Trichlorofluoromethane	101.0	2.680	2.680	0.000	74591	5.0000	4.5975	
$ 12 1,1-Dichloroethene-d2	63.0	3.248	3.248	0.000	128157	5.0000	4.3376	
13 1,1-Dichloroethene	96.0	3.259	3.259	0.000	50657	5.0000	4.2062	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.271	3.271	0.000	54031	5.0000	4.5077	
14 Acetone	43.0	3.295	3.295	0.000	38209	50.000	47.845	
15 Carbon Disulfide	76.0	3.543	3.543	0.000	141031	5.0000	4.0670	
16 Methyl Acetate	43.0	3.721	3.721	0.000	20935	5.0000	4.2006	
17 Methylene Chloride	84.0	3.851	3.851	0.000	45469	5.0000	4.1772	
20 Methyl tert-Butyl Ether	73.0	4.218	4.218	0.000	78073	5.0000	4.5232	
21 trans-1,2-Dichloroethene	96.0	4.218	4.218	0.000	58308	5.0000	4.3166	
23 1,1-Dichloroethane	63.0	4.762	4.762	0.000	126230	5.0000	4.4123	
$ 25 2-Butanone-d5	46.0	5.460	5.460	0.000	101001	50.000	44.041	
26 cis-1,2-Dichloroethene	96.0	5.531	5.531	0.000	59308	5.0000	4.4154	
27 2,2-Dichloropropane	77.0	5.531	5.531	0.000	59927	5.0000	4.5101	
28 2-Butanone	43.0	5.543	5.543	0.000	75968	50.000	49.184	
29 Bromochloromethane	128.0	5.839	5.839	0.000	20938	5.0000	4.5359	
$ 30 Chloroform-d	84.0	5.922	5.922	0.000	110465	5.0000	4.3999	
31 Chloroform	83.0	5.946	5.946	0.000	107665	5.0000	4.5247	
33 1,1,1-Trichloroethane	97.0	6.206	6.206	0.000	91459	5.0000	4.6312	
32 Cyclohexane	56.0	6.289	6.289	0.000	139439	5.0000	3.9159	

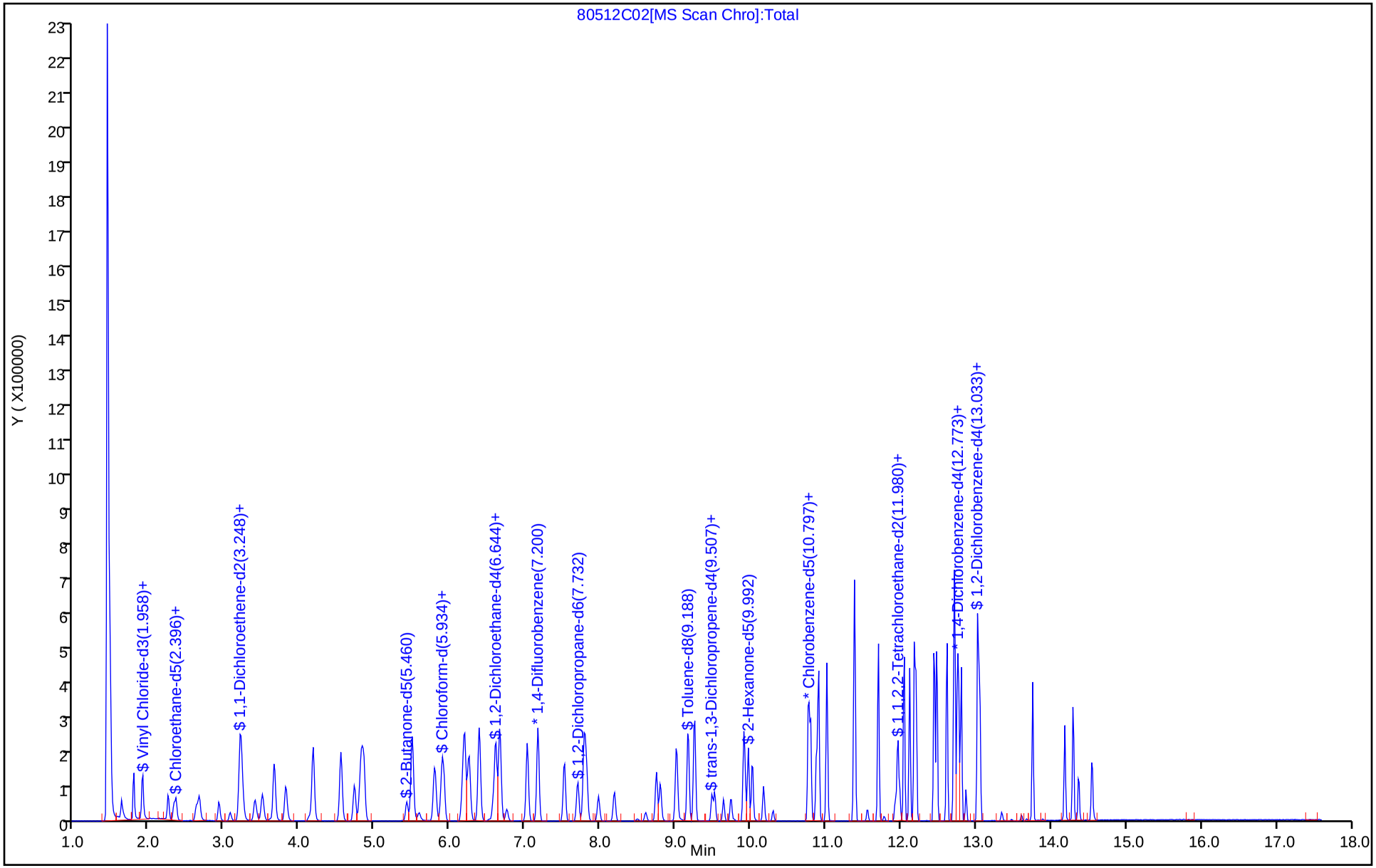
Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
34 Carbon Tetrachloride	117.0	6.419	6.419	0.000	88590	5.0000	4.6691	
35 1,1-Dichloropropene	75.0	6.419	6.419	0.000	80964	5.0000	4.5068	
$ 38 1,2-Dichloroethane-d4	65.0	6.608	6.608	0.000	43237	5.0000	4.4511	
$ 36 Benzene-d6	84.0	6.644	6.644	0.000	219132	5.0000	4.4797	
37 Benzene	78.0	6.691	6.691	0.000	213196	5.0000	4.4960	
39 1,2-Dichloroethane	62.0	6.703	6.703	0.000	58697	5.0000	4.8115	
* 41 1,4-Difluorobenzene	114.0	7.200	7.200	0.000	245287	5.0000	5.0000	
42 Trichloroethene	95.0	7.555	7.555	0.000	66658	5.0000	4.8039	
$ 44 1,2-Dichloropropane-d6	67.0	7.732	7.732	0.000	57680	5.0000	4.3398	
43 Methylcyclohexane	83.0	7.815	7.815	0.000	101345	5.0000	4.4318	
45 1,2-Dichloropropane	63.0	7.851	7.851	0.000	54454	5.0000	4.6199	
48 Dibromomethane	93.0	8.004	8.004	0.000	18736	5.0000	4.7902	
49 Bromodichloromethane	83.0	8.217	8.217	0.000	61336	5.0000	4.6530	
50 cis-1,3-Dichloropropene	75.0	8.821	8.821	0.000	64558	5.0000	4.7464	
51 4-Methyl-2-pentanone	43.0	9.034	9.034	0.000	225974	50.000	47.792	
$ 52 Toluene-d8	98.0	9.188	9.188	0.000	194780	5.0000	4.6045	
53 Toluene	91.0	9.282	9.282	0.000	246035	5.0000	4.7332	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.507	9.507	0.000	39776	5.0000	4.3601	
55 trans-1,3-Dichloropropene	75.0	9.543	9.543	0.000	43066	5.0000	4.7754	
56 1,1,2-Trichloroethane	97.0	9.768	9.768	0.000	21412	5.0000	4.6372	
57 Tetrachloroethene	164.0	9.933	9.933	0.000	60418	5.0000	5.0139	
59 1,3-Dichloropropane	76.0	9.957	9.957	0.000	39667	5.0000	4.7823	
$ 58 2-Hexanone-d5	63.0	9.992	9.992	0.000	65282	50.000	43.834	
60 2-Hexanone	43.0	10.040	10.040	0.000	137502	50.000	46.747	
61 Dibromochloromethane	129.0	10.194	10.194	0.000	32236	5.0000	4.7569	
62 1,2-Dibromoethane	107.0	10.324	10.324	0.000	20438	5.0000	4.5355	
* 63 Chlorobenzene-d5	117.0	10.797	10.797	0.000	175487	5.0000	5.0000	
64 Chlorobenzene	112.0	10.821	10.821	0.000	137979	5.0000	4.8348	
66 1,1,1,2-Tetrachloroethane	131.0	10.904	10.904	0.000	52150	5.0000	5.0863	
65 Ethylbenzene	91.0	10.927	10.927	0.000	277902	5.0000	4.9748	
67 m+p-Xylenes	106.0	11.034	11.034	0.000	112191	5.0000	5.0371	
68 o-Xylene	106.0	11.400	11.400	0.000	100411	5.0000	4.9211	
69 Styrene	104.0	11.412	11.412	0.000	144760	5.0000	4.8100	
70 Bromoform	173.0	11.578	11.578	0.000	16634	5.0000	4.6714	
71 Isopropylbenzene	105.0	11.720	11.720	0.000	288034	5.0000	5.0183	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.945	11.945	0.000	22707	5.0000	4.4185	
74 1,1,2,2-Tetrachloroethane	83.0	11.957	11.957	0.000	22017	5.0000	4.5479	
73 Bromobenzene	77.0	11.980	11.980	0.000	81679	5.0000	4.6592	
76 1,2,3-Trichloropropane	75.0	12.004	12.004	0.000	27717	5.0000	4.4806	
75 n-Propylbenzene	91.0	12.063	12.063	0.000	338186	5.0000	5.0600	
77 2-Chlorotoluene	91.0	12.134	12.134	0.000	195914	5.0000	5.0228	
78 1,3,5-Trimethylbenzene	105.0	12.193	12.193	0.000	243497	5.0000	5.0519	
79 4-Chlorotoluene	91.0	12.217	12.217	0.000	209001	5.0000	4.8483	
80 tert-Butylbenzene	119.0	12.465	12.465	0.000	241525	5.0000	5.1906	
81 1,2,4-Trimethylbenzene	105.0	12.489	12.489	0.000	244446	5.0000	4.9936	
82 sec-Butylbenzene	105.0	12.631	12.631	0.000	316208	5.0000	5.0972	
83 1,3-Dichlorobenzene	146.0	12.726	12.726	0.000	118079	5.0000	4.9176	
84 para-Isopropyltoluene	119.0	12.738	12.738	0.000	253794	5.0000	4.9084	
* 85 1,4-Dichlorobenzene-d4	152.0	12.773	12.773	0.000	94775	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.785	12.785	0.000	111190	5.0000	4.9042	
88 n-Butylbenzene	91.0	13.033	13.033	0.000	245932	5.0000	4.8987	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 87 1,2-Dichlorobenzene-d4	152.0	13.057	13.057	0.000	60935	5.0000	4.6358	
89 1,2-Dichlorobenzene	146.0	13.069	13.069	0.000	97015	5.0000	4.8695	
90 1,2-Dibromo-3-chloropropane	75.0	13.613	13.613	0.000	3482	5.0000	4.5791	
91 1,2,4-Trichlorobenzene	180.0	14.193	14.193	0.000	75682	5.0000	4.8777	
92 Hexachlorbutadiene	225.0	14.300	14.300	0.000	67237	5.0000	5.0856	
93 Napthalene	128.0	14.382	14.382	0.000	90769	5.0000	4.6477	
94 1,2,3-Trichlorobenzene	180.0	14.560	14.560	0.000	56113	5.0000	4.7432	

Report Date: 13-May-2016 08:50:18 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd8.i\8051216C.b\80512C02.D				
Injection Date:	12-May-2016 09:53:30	Inst. ID:	msd8.i	Operator:	ALL
Client ID:	VSTD005RI	Lab ID:	VSTD005RI		
Sample Info:	8051216C.b, VSTD005RI				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD8 Calibration Date: 05/12/2016 Time: 2042

Lab File ID: 80512C25 Init. Calib. Date(s): 05/09/2016 05/09/2016

EPA Sample No.: VSTD005RP Init. Calib. Time(s): 1419 1608

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF 5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.302	0.400	0.010	32.5	50.0
Chloromethane	0.526	0.570	0.010	8.4	50.0
Vinyl chloride	0.358	0.431	0.010	20.5	50.0
Bromomethane	0.187	0.216	0.010	15.1	50.0
Chloroethane	0.204	0.230	0.010	12.7	50.0
Trichlorofluoromethane	0.331	0.439	0.010	32.7	50.0
1,1-Dichloroethene	0.245	0.237	0.020	-3.5	25.0
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.244	0.248	0.010	1.7	50.0
Acetone	0.016	0.021	0.010	28.3	50.0
Carbon disulfide	0.707	0.639	0.010	-9.6	25.0
Methyl acetate	0.102	0.120	0.010	17.9	50.0
Methylene chloride	0.222	0.217	0.010	-2.1	50.0
trans-1,2-Dichloroethene	0.275	0.274	0.070	-0.4	25.0
Methyl tert-butyl ether	0.352	0.385	0.010	9.5	50.0
1,1-Dichloroethane	0.583	0.592	0.100	1.5	25.0
cis-1,2-Dichloroethene	0.274	0.281	0.100	2.6	25.0
2-Butanone	0.031	0.040	0.010	27.3	50.0
Bromochloromethane	0.094	0.104	0.020	10.7	25.0
Chloroform	0.485	0.521	0.040	7.3	25.0
1,1,1-Trichloroethane	0.563	0.632	0.050	12.3	25.0
Cyclohexane	1.015	0.941	0.100	-7.3	50.0
Carbon tetrachloride	0.541	0.602	0.020	11.4	50.0
Benzene	1.351	1.405	0.300	4.0	25.0
1,2-Dichloroethane	0.249	0.281	0.010	13.0	50.0
Trichloroethene	0.395	0.459	0.100	16.1	25.0
Methylcyclohexane	0.652	0.699	0.200	7.2	50.0
1,2-Dichloropropane	0.336	0.365	0.100	8.7	25.0
Bromodichloromethane	0.376	0.419	0.090	11.6	25.0
cis-1,3-Dichloropropene	0.388	0.401	0.100	3.4	25.0
4-Methyl-2-pentanone	0.135	0.165	0.010	22.6	50.0
Toluene	1.481	1.577	0.400	6.5	25.0
trans-1,3-Dichloropropene	0.257	0.279	0.010	8.7	25.0
1,1,2-Trichloroethane	0.132	0.149	0.040	13.4	25.0
Tetrachloroethene	0.343	0.396	0.100	15.3	25.0
2-Hexanone	0.084	0.095	0.010	13.2	50.0
Dibromochloromethane	0.193	0.216	0.050	11.8	25.0

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: Trace

Instrument ID: Agilent MSD8 Calibration Date: 05/12/2016 Time: 2042

Lab File ID: 80512C25 Init. Calib. Date(s): 05/09/2016 05/09/2016

EPA Sample No.: VSTD005RP Init. Calib. Time(s): 1419 1608

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF 5.0	MIN RRF	%D	MAX %D
1,2-Dibromoethane	0.128	0.141	0.010	9.9	25.0
Chlorobenzene	0.813	0.929	0.400	14.2	25.0
Ethylbenzene	1.592	1.793	0.500	12.6	25.0
o-Xylene	0.581	0.696	0.300	19.8	25.0
m, p-Xylene	0.635	0.733	0.200	15.5	25.0
Styrene	0.857	0.940	0.200	9.6	25.0
Bromoform	0.188	0.204	0.010	8.8	50.0
Isopropylbenzene	1.635	1.982	0.700	21.2	25.0
1,1,2,2-Tetrachloroethane	0.138	0.147	0.050	6.5	25.0
1,3-Dichlorobenzene	1.267	1.447	0.500	14.3	25.0
1,4-Dichlorobenzene	1.196	1.334	0.700	11.5	25.0
1,2-Dichlorobenzene	1.051	1.220	0.400	16.1	25.0
1,2-Dibromo-3-chloropropane	0.040	0.047	0.010	16.5	50.0
1,2,4-Trichlorobenzene	0.819	0.995	0.300	21.6	50.0
1,2,3-Trichlorobenzene	0.624	0.719	0.200	15.2	50.0
Vinyl Chloride-d3	0.274	0.270	0.010	-1.3	50.0
Chloroethane-d5	0.217	0.221	0.010	2.1	50.0
1,1-Dichloroethene-d2	0.602	0.650	0.010	8.0	25.0
2-Butanone-d5	0.047	0.052	0.010	11.6	50.0
Chloroform-d	0.512	0.557	0.010	8.8	25.0
1,2-Dichloroethane-d4	0.198	0.219	0.010	10.7	25.0
Benzene-d6	1.394	1.509	0.030	8.3	25.0
1,2-Dichloropropane-d6	0.379	0.380	0.100	0.3	25.0
Toluene-d8	1.205	1.315	0.200	9.1	25.0
trans-1,3-Dichloropropene-d4	0.260	0.251	0.010	-3.6	25.0
2-Hexanone-d5	0.042	0.042	0.010	0.1	50.0
1,1,2,2-Tetrachloroethane-d2	0.146	0.144	0.010	-1.5	25.0
1,2-Dichlorobenzene-d4	0.693	0.756	0.060	9.0	25.0

Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\DD\chem\msd8.i\8051216C.b\80512C25.D
Lab Sample ID: VSTD005RP Client Sample ID: VSTD005RP
Injection Date: 12-May-2016 20:42:30 Dil. Factor: 1.0
Operator: ALL Inst. ID: msd8.i
Sample Info: 8051216C.b, VSTD005RP
Method: \\Organics\DD\chem\msd8.i\8051216C.b\TRACE-8e.m
Method Date: 12-May-2016 21:03:30 Quant Method: ISTD
Calib Date: 09-May-2016 16:08:30 Calib File: 80509D06.D
Sample Type: CCV ALS Bottle: 25
Cpnd Sublist: 2447.sub
Sample Matrix: Water Matrix Level: Low
Target 4.14 Integrator: falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
1 Dichlorodifluoromethane	0.30191	0.399907	0.01	32.5	50	132
2 Chloromethane	0.52591	0.570175	0.01	8.4	50	108
$ 3 Vinyl Chloride-d3	0.27369	0.270193	0.01	-1.3	50	99
4 Vinyl Chloride	0.357645	0.430896	0.01	20.5	50	120
5 Bromomethane	0.187393	0.215763	0.01	15.1	50	115
$ 6 Chloroethane-d5	0.216554	0.221058	0.01	2.1	50	102
7 Chloroethane	0.203901	0.229809	0.01	12.7	50	113
8 Trichlorofluoromethane	0.33072	0.439011	0.01	32.7	50	133
$ 12 1,1-Dichloroethene-d2	0.602265	0.650243	0.01	8	25	108
11 1,1,2-Trichloro-1,2,2-tr	0.244335	0.248425	0.01	1.7	50	102
13 1,1-Dichloroethene	0.245497	0.236875	0.02	-3.5	25	96
14 Acetone	0.016279	0.02089	0.01	28.3	50	128
15 Carbon Disulfide	0.70686	0.639295	0.01	-9.6	25	90
16 Methyl Acetate	0.101591	0.119811	0.01	17.9	50	118
17 Methylene Chloride	0.221886	0.217184	0.01	-2.1	50	98
20 Methyl tert-Butyl Ether	0.351847	0.385281	0.01	9.5	50	110
21 trans-1,2-Dichloroethene	0.27535	0.274276	0.07	-0.4	25	100
23 1,1-Dichloroethane	0.583161	0.591846	0.1	1.5	25	101
$ 25 2-Butanone-d5	0.046749	0.052167	0.01	11.6	50	112
26 cis-1,2-Dichloroethene	0.273804	0.280979	0.1	2.6	25	103
27 2,2-Dichloropropane	0.270854	0.233743	0.1	-13.7	25	86
28 2-Butanone	0.031485	0.040089	0.01	27.3	50	127
29 Bromochloromethane	0.094094	0.104174	0.02	10.7	25	111
$ 30 Chloroform-d	0.51177	0.556684	0.01	8.8	25	109
31 Chloroform	0.485047	0.520589	0.04	7.3	25	107
33 1,1,1-Trichloroethane	0.562679	0.632167	0.05	12.3	25	112
32 Cyclohexane	1.014557	0.940956	0.1	-7.3	50	93
34 Carbon Tetrachloride	0.540606	0.602484	0.02	11.4	50	111
35 1,1-Dichloropropene	0.366203	0.379107	0.1	3.5	25	104
$ 38 1,2-Dichloroethane-d4	0.198009	0.219292	0.01	10.7	25	111
$ 36 Benzene-d6	1.393734	1.509035	0.03	8.3	25	108
37 Benzene	1.351074	1.404921	0.3	4	25	104
39 1,2-Dichloroethane	0.248675	0.281111	0.01	13	50	113
42 Trichloroethene	0.39535	0.459023	0.1	16.1	25	116
$ 44 1,2-Dichloropropane-d6	0.378689	0.379959	0.1	0.3	25	100

Report Date: 13-May-2016 08:50:35 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd8.i\8051216C.b\80512C25.D

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
43 Methylcyclohexane	0.651555	0.698532	0.2	7.2	50	107
45 1,2-Dichloropropane	0.335831	0.364912	0.1	8.7	25	109
48 Dibromomethane	0.079729	* 0.093179	0.1	16.9	25	117
49 Bromodichloromethane	0.375582	0.419235	0.09	11.6	25	112
50 cis-1,3-Dichloropropene	0.387539	0.400903	0.1	3.4	25	103
51 4-Methyl-2-pentanone	0.134718	0.165113	0.01	22.6	50	123
$ 52 Toluene-d8	1.205283	1.314554	0.2	9.1	25	109
53 Toluene	1.481055	1.576837	0.4	6.5	25	106
$ 54 trans-1,3-Dichloropropen	0.259928	0.250532	0.01	-3.6	25	96
55 trans-1,3-Dichloropropen	0.256948	0.279214	0.01	8.7	25	109
56 1,1,2-Trichloroethane	0.13156	0.14925	0.04	13.4	25	113
57 Tetrachloroethene	0.343336	0.395889	0.1	15.3	25	115
59 1,3-Dichloropropane	0.236331	0.25855	0.1	9.4	25	109
$ 58 2-Hexanone-d5	0.042433	0.042489	0.01	0.1	50	100
60 2-Hexanone	0.083807	0.094883	0.01	13.2	50	113
61 Dibromochloromethane	0.193083	0.215859	0.05	11.8	25	112
62 1,2-Dibromoethane	0.128391	0.141124	0.01	9.9	25	110
64 Chlorobenzene	0.813135	0.928878	0.4	14.2	25	114
66 1,1,1,2-Tetrachloroethan	0.292131	0.349865	0.1	19.8	25	120
65 Ethylbenzene	1.591618	1.792702	0.5	12.6	25	113
67 m+p-Xylenes	0.634603	0.733258	0.2	15.5	25	116
68 o-Xylene	0.581353	0.696236	0.3	19.8	25	120
69 Styrene	0.857481	0.939567	0.2	9.6	25	110
70 Bromoform	0.187857	0.204411	0.01	8.8	50	109
75 n-Propylbenzene	3.525964	4.167077	0.7	18.2	25	118
71 Isopropylbenzene	1.635349	1.98168	0.7	21.2	25	121
$ 72 1,1,2,2-Tetrachloroethan	0.146424	0.144242	0.01	-1.5	25	99
74 1,1,2,2-Tetrachloroethan	0.137933	0.146931	0.05	6.5	25	107
73 Bromobenzene	0.499489	* 0.550886	0.7	10.3	25	110
80 tert-Butylbenzene	2.454817	3.023923	0.7	23.2	25	123
76 1,2,3-Trichloropropane	0.176251	0.179243	0.1	1.7	25	102
77 2-Chlorotoluene	2.05778	2.407339	0.7	17	25	117
79 4-Chlorotoluene	2.27425	2.587782	0.7	13.8	25	114
78 1,3,5-Trimethylbenzene	1.373292	1.584831	0.01	15.4	50	115
81 1,2,4-Trimethylbenzene	1.394743	1.592265	0.01	14.2	50	114
84 para-Isopropyltoluene	2.727809	3.174789	0.7	16.4	25	116
82 sec-Butylbenzene	3.272755	3.957326	0.7	20.9	25	121
83 1,3-Dichlorobenzene	1.266755	1.447382	0.5	14.3	25	114
88 n-Butylbenzene	2.648589	2.966297	0.7	12	25	112
86 1,4-Dichlorobenzene	1.196119	1.333659	0.7	11.5	25	111
$ 87 1,2-Dichlorobenzene-d4	0.693448	0.75604	0.06	9	25	109
89 1,2-Dichlorobenzene	1.051069	1.220487	0.4	16.1	25	116
90 1,2-Dibromo-3-chloroprop	0.040117	0.046721	0.01	16.5	50	116
93 Napthalene	1.030334	1.221533	0.7	18.6	25	119
91 1,2,4-Trichlorobenzene	0.818573	0.995447	0.3	21.6	50	122
92 Hexachlorbutadiene	0.697502	0.81751	0.1	17.2	25	117
94 1,2,3-Trichlorobenzene	0.624126	0.719009	0.2	15.2	50	115

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd8.i\8051216C.b\80512C25.D		
Lab Sample ID:	VSTD005RP	Client Sample ID:	VSTD005RP
Injection Date:	12-May-2016 20:42:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd8.i
Sample Info:	8051216C.b, VSTD005RP		
Method:	\\Organics\DD\chem\msd8.i\8051216C.b\TRACE-8e.m		
Method Date:	12-May-2016 21:03:30	Quant Method:	ISTD
Calib Date:	09-May-2016 16:08:30	Calib File:	80509D06.D
Sample Type:	CCV	ALS Bottle:	25
Cpnd Sublist:	2447.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	13-May-2016 08:47:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.674	1.674	0.000	93729	5.0000	6.6230	
2 Chloromethane	50.0	1.839	1.839	0.000	133636	5.0000	5.4208	
$ 3 Vinyl Chloride-d3	65.0	1.946	1.946	0.000	63327	5.0000	4.9361	
4 Vinyl Chloride	62.0	1.958	1.958	0.000	100992	5.0000	6.0241	
5 Bromomethane	94.0	2.289	2.289	0.000	50570	5.0000	5.7570	
$ 6 Chloroethane-d5	69.0	2.372	2.372	0.000	51811	5.0000	5.1040	
7 Chloroethane	64.0	2.396	2.396	0.000	53862	5.0000	5.6353	
8 Trichlorofluoromethane	101.0	2.680	2.680	0.000	102894	5.0000	6.6372	
$ 12 1,1-Dichloroethene-d2	63.0	3.248	3.248	0.000	152402	5.0000	5.3983	
13 1,1-Dichloroethene	96.0	3.259	3.259	0.000	55518	5.0000	4.8244	
11 1,1,2-Trichloro-1,2,2-trifluo	101.0	3.271	3.271	0.000	58225	5.0000	5.0837	
14 Acetone	43.0	3.295	3.295	0.000	48961	50.000	64.163	
15 Carbon Disulfide	76.0	3.543	3.543	0.000	149836	5.0000	4.5221	
16 Methyl Acetate	43.0	3.721	3.721	0.000	28081	5.0000	5.8967	
17 Methylene Chloride	84.0	3.851	3.851	0.000	50903	5.0000	4.8940	
20 Methyl tert-Butyl Ether	73.0	4.218	4.218	0.000	90301	5.0000	5.4751	
21 trans-1,2-Dichloroethene	96.0	4.218	4.218	0.000	64284	5.0000	4.9805	
23 1,1-Dichloroethane	63.0	4.762	4.762	0.000	138715	5.0000	5.0745	
$ 25 2-Butanone-d5	46.0	5.460	5.460	0.000	122267	50.000	55.795	
26 cis-1,2-Dichloroethene	96.0	5.531	5.531	0.000	65855	5.0000	5.1310	
28 2-Butanone	43.0	5.543	5.543	0.000	93960	50.000	63.664	
29 Bromochloromethane	128.0	5.851	5.851	0.000	24416	5.0000	5.5356	
$ 30 Chloroform-d	84.0	5.922	5.922	0.000	130474	5.0000	5.4388	
31 Chloroform	83.0	5.945	5.945	0.000	122014	5.0000	5.3664	
33 1,1,1-Trichloroethane	97.0	6.206	6.206	0.000	106039	5.0000	5.6175	
32 Cyclohexane	56.0	6.289	6.289	0.000	157835	5.0000	4.6373	
34 Carbon Tetrachloride	117.0	6.431	6.431	0.000	101060	5.0000	5.5723	

Report Date: 13-May-2016 08:50:35 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd8.i\8051216C.b\80512C25.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.608	6.608	0.000	51397	5.0000	5.5374	
$ 36 Benzene-d6	84.0	6.644	6.644	0.000	253124	5.0000	5.4136	
37 Benzene	78.0	6.691	6.691	0.000	235660	5.0000	5.1993	
39 1,2-Dichloroethane	62.0	6.715	6.715	0.000	65886	5.0000	5.6522	
* 41 1,4-Difluorobenzene	114.0	7.200	7.200	0.000	234377	5.0000	5.0000	
42 Trichloroethene	95.0	7.555	7.555	0.000	76996	5.0000	5.8053	
$ 44 1,2-Dichloropropane-d6	67.0	7.732	7.732	0.000	63734	5.0000	5.0168	
43 Methylcyclohexane	83.0	7.815	7.815	0.000	117171	5.0000	5.3605	
45 1,2-Dichloropropane	63.0	7.851	7.851	0.000	61210	5.0000	5.4330	
49 Bromodichloromethane	83.0	8.217	8.217	0.000	70322	5.0000	5.5811	
50 cis-1,3-Dichloropropene	75.0	8.821	8.821	0.000	67247	5.0000	5.1724	
51 4-Methyl-2-pentanone	43.0	9.034	9.034	0.000	276959	50.000	61.281	
$ 52 Toluene-d8	98.0	9.200	9.200	0.000	220502	5.0000	5.4533	
53 Toluene	91.0	9.282	9.282	0.000	264497	5.0000	5.3234	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.507	9.507	0.000	42024	5.0000	4.8193	
55 trans-1,3-Dichloropropene	75.0	9.543	9.543	0.000	46835	5.0000	5.4333	
56 1,1,2-Trichloroethane	97.0	9.768	9.768	0.000	25035	5.0000	5.6723	
57 Tetrachloroethene	164.0	9.933	9.933	0.000	66406	5.0000	5.7653	
$ 58 2-Hexanone-d5	63.0	9.992	9.992	0.000	71271	50.000	50.066	
60 2-Hexanone	43.0	10.040	10.040	0.000	159155	50.000	56.607	
61 Dibromochloromethane	129.0	10.194	10.194	0.000	36208	5.0000	5.5898	
62 1,2-Dibromoethane	107.0	10.324	10.324	0.000	23672	5.0000	5.4959	
* 63 Chlorobenzene-d5	117.0	10.797	10.797	0.000	167739	5.0000	5.0000	
64 Chlorobenzene	112.0	10.821	10.821	0.000	155809	5.0000	5.7117	
65 Ethylbenzene	91.0	10.927	10.927	0.000	300706	5.0000	5.6317	
67 m+p-Xylenes	106.0	11.034	11.034	0.000	122996	5.0000	5.7773	
68 o-Xylene	106.0	11.400	11.400	0.000	116786	5.0000	5.9881	
69 Styrene	104.0	11.412	11.412	0.000	157602	5.0000	5.4786	
70 Bromoform	173.0	11.578	11.578	0.000	18183	5.0000	5.4406	
71 Isopropylbenzene	105.0	11.720	11.720	0.000	332405	5.0000	6.0589	
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.945	11.945	0.000	24195	5.0000	4.9255	
74 1,1,2,2-Tetrachloroethane	83.0	11.957	11.957	0.000	24646	5.0000	5.3262	
83 1,3-Dichlorobenzene	146.0	12.726	12.726	0.000	128749	5.0000	5.7130	
* 85 1,4-Dichlorobenzene-d4	152.0	12.773	12.773	0.000	88953	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0	12.785	12.785	0.000	118633	5.0000	5.5749	
$ 87 1,2-Dichlorobenzene-d4	152.0	13.057	13.057	0.000	67252	5.0000	5.4513	
89 1,2-Dichlorobenzene	146.0	13.069	13.069	0.000	108566	5.0000	5.8059	
90 1,2-Dibromo-3-chloropropane	75.0	13.613	13.613	0.000	4156	5.0000	5.8231	
91 1,2,4-Trichlorobenzene	180.0	14.193	14.193	0.000	88548	5.0000	6.0804	
94 1,2,3-Trichlorobenzene	180.0	14.560	14.560	0.000	63958	5.0000	5.7601	
73 Bromobenzene	77.0	11.980	11.980	0.000	92405	5.0000	5.5145	
88 n-Butylbenzene	91.0	13.033	13.033	0.000	263861	5.0000	5.5998	
82 sec-Butylbenzene	105.0	12.631	12.631	0.000	352016	5.0000	6.0459	
80 tert-Butylbenzene	119.0	12.465	12.465	0.000	268987	5.0000	6.1592	
77 2-Chlorotoluene	91.0	12.134	12.134	0.000	214140	5.0000	5.8494	
79 4-Chlorotoluene	91.0	12.217	12.217	0.000	230191	5.0000	5.6893	
48 Dibromomethane	93.0	8.004	8.004	0.000	21839	5.0000	5.8435	
59 1,3-Dichloropropane	76.0	9.957	9.957	0.000	43369	5.0000	5.4701	
27 2,2-Dichloropropane	77.0	5.531	5.531	0.000	54784	5.0000	4.3149	
35 1,1-Dichloropropene	75.0	6.419	6.419	0.000	88854	5.0000	5.1762	
92 Hexachlorbutadiene	225.0	14.300	14.300	0.000	72720	5.0000	5.8603	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
84 para-Isopropyltoluene	119.0	12.738	12.738	0.000	282407	5.0000	5.8193	
93 Napthalene	128.0	14.382	14.382	0.000	108659	5.0000	5.9278	
75 n-Propylbenzene	91.0	12.063	12.063	0.000	370674	5.0000	5.9091	
66 1,1,1,2-Tetrachloroethane	131.0	10.903	10.903	0.000	58686	5.0000	5.9882	
76 1,2,3-Trichloropropane	75.0	12.004	12.004	0.000	30066	5.0000	5.0849	
78 1,3,5-Trimethylbenzene	105.0	12.193	12.193	0.000	265838	5.0000	5.7702	
81 1,2,4-Trimethylbenzene	105.0	12.489	12.489	0.000	267085	5.0000	5.7081	

Report Date: 13-May-2016 08:50:35 AIM Revision: 1.0 26-Feb-2016 08:31:08

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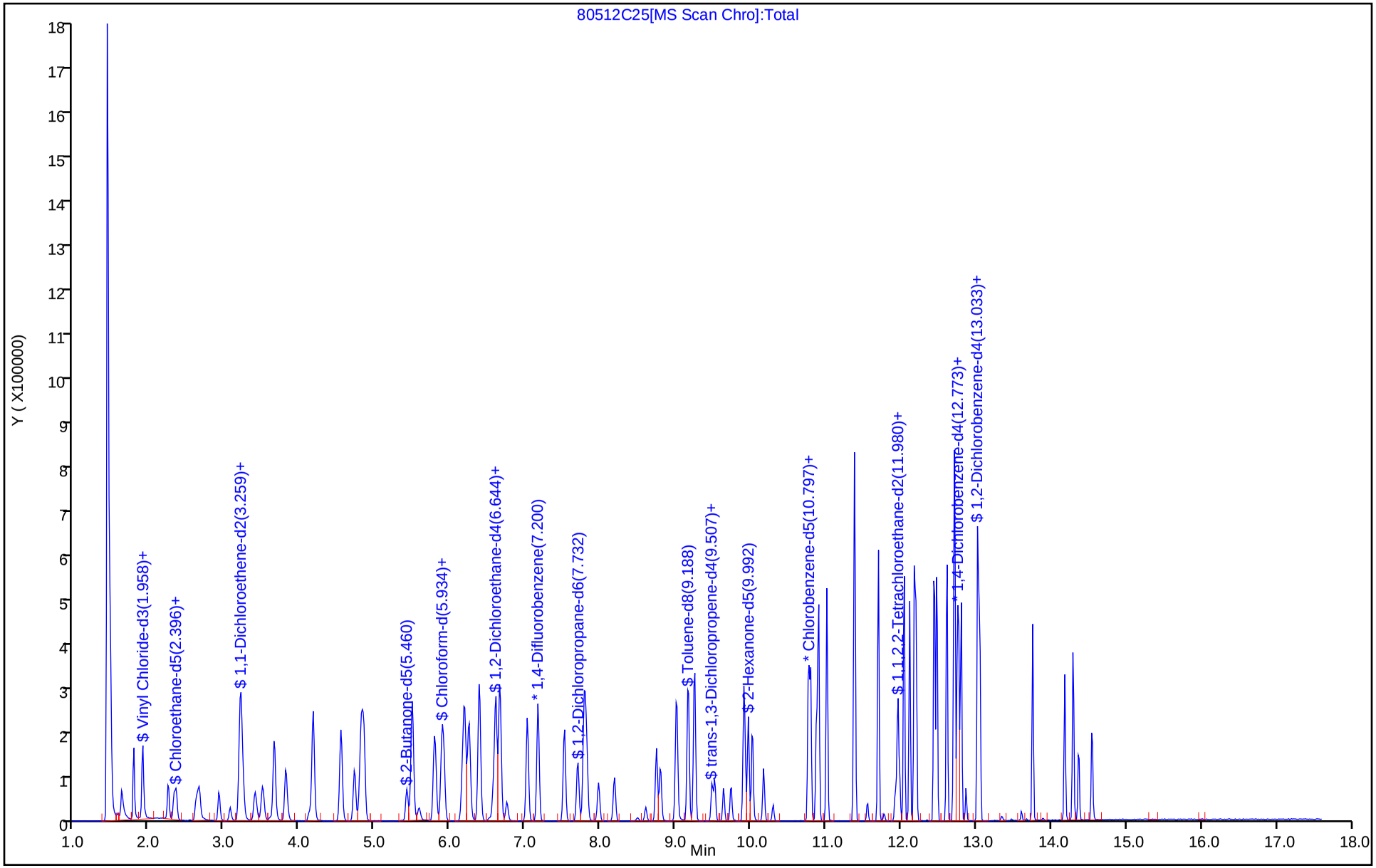
Data File:	\\Organics\DD\chem\msd8.i\8051216C.b\80512C25.D				
Injection Date:	12-May-2016 20:42:30	Inst. ID:	msd8.i	Operator:	ALL
Client ID:	VSTD005RP	Lab ID:	VSTD005RP		
Sample Info:	8051216C.b, VSTD005RP				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



TRACE-VOLATILE RAW QC DATA

BFB Data

Blank Data

Matrix Spike / Matrix Spike Duplicate-optional

Laboratory Control Sample Data-optional

BFB Data

BFBs are arranged in chronological order by instrument

-Reconstructed Total Ion Chromatogram

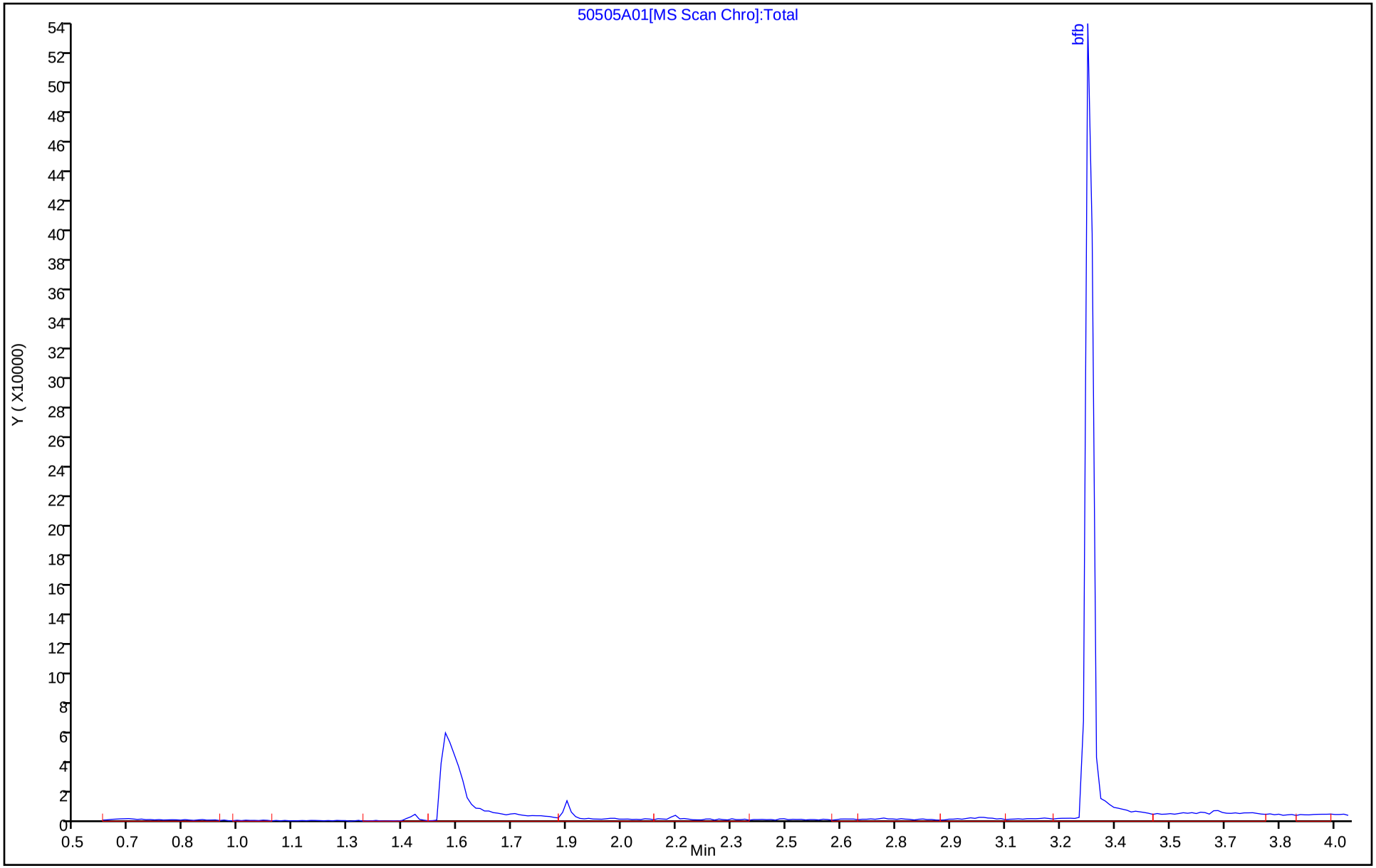
-Bar Graph Spectrum & Tabulated Relative Abundances

-Mass Listing

Report Date: 06-May-2016 10:12:30 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A01.D				
Injection Date:	05-May-2016 13:36:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	BFBOW	Lab ID:	BFBOW		
Sample Info:	5050516, BFBOW				
Injection Vol.	2.00 uL	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



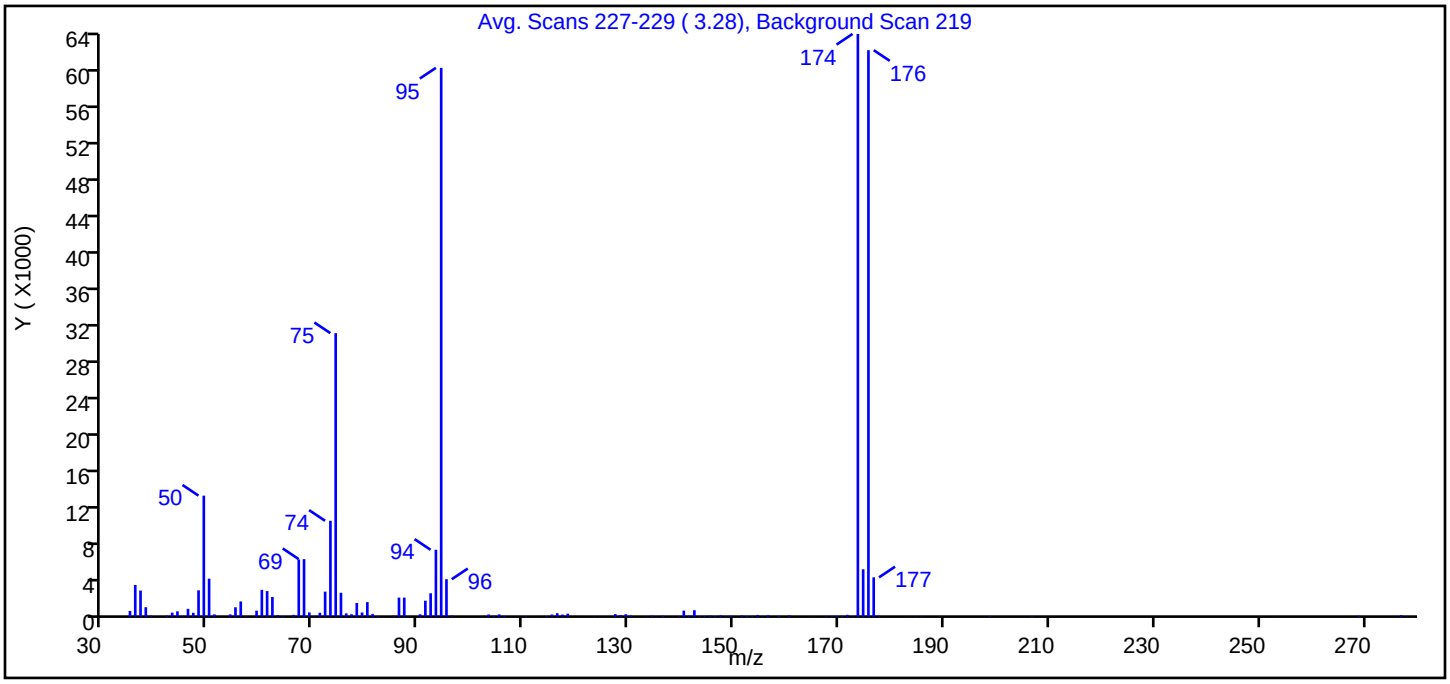
Report Date: 06-May-2016 10:12:30 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\DD\chem\msd5.i\5050516.b\50505A01.D		
Injection Date:	05-May-2016 13:36:30	Inst. ID:	msd5.i
Client ID:	BFBOW	Lab ID:	BFBOW
Sample Info:	5050516, BFBOW		
Injection Vol.	2.00 uL	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

1 bfb



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	22.0
75	30.00 - 80.00% of mass 95	51.7
96	5.00 - 9.00% of mass 95	6.8
173	Less than 2.00% of mass 174	0.1 (0.0)
174	50.00 - 120.00% of mass 95	106.2
175	5.00 - 9.00% of mass 174	8.6 (8.1)
176	95.00 - 101.00% of mass 174	103.2 (97.2)
177	5.00 - 9.00% of mass 176	7.2 (6.9)

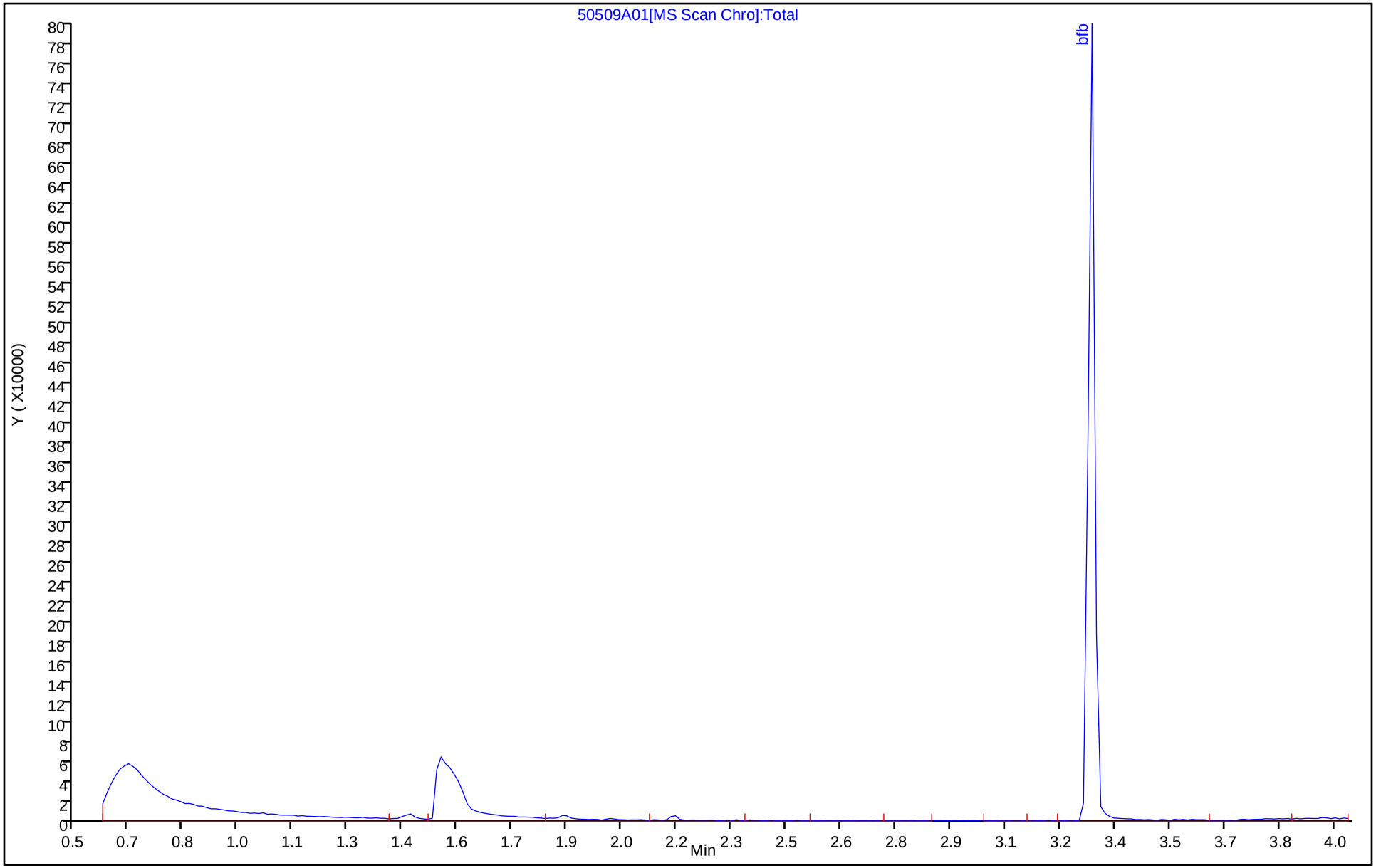
Data File: \\Organics\DD\chem\msd5.i\5050516.b\50505A01.D
Injection Date: 05-May-2016 13:36:30
Spectrum: Avg. Scans 227-229 (3.28), Background Scan 219
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 121

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	612	73.00	2704	117.00	370	157.00	136
37.00	3425	74.00	10371	118.00	223	159.00	81
38.00	2820	75.00	30680	119.00	316	161.00	139
39.00	1019	76.00	2576	124.00	25	165.00	18
40.00	106	77.00	348	125.00	19	168.00	42
43.00	105	78.00	257	126.00	17	169.00	53
44.00	429	79.00	1467	128.00	274	170.00	70
45.00	571	80.00	446	129.00	169	171.00	72
46.00	41	81.00	1568	130.00	258	172.00	194
47.00	838	82.00	291	131.00	115	173.00	31
48.00	412	83.00	67	134.00	17	174.00	63064
49.00	2845	86.00	82	135.00	105	175.00	5123
50.00	13092	87.00	2057	136.00	21	176.00	61304
51.00	4105	88.00	2054	137.00	92	177.00	4249
52.00	238	89.00	23	139.00	19	178.00	100
55.00	236	91.00	253	140.00	55	183.00	6
56.00	1009	92.00	1719	141.00	649	184.00	18
57.00	1640	93.00	2527	142.00	108	185.00	19
58.00	59	94.00	7233	143.00	694	186.00	27
60.00	642	95.00	59392	144.00	51	199.00	47
61.00	2896	96.00	4048	145.00	51	201.00	10
62.00	2765	97.00	118	146.00	112	207.00	45
63.00	2124	103.00	17	147.00	50	209.00	19
64.00	174	104.00	228	148.00	132	253.00	19
65.00	41	105.00	93	149.00	49	269.00	80
67.00	187	106.00	242	150.00	81	277.00	164
68.00	6182	107.00	68	152.00	113	278.00	44
69.00	6221	111.00	56	153.00	64	279.00	23
70.00	455	113.00	21	154.00	86		
71.00	39	115.00	48	155.00	179		
72.00	417	116.00	226	156.00	17		

Report Date: 10-May-2016 10:58:15 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A01.D				
Injection Date:	09-May-2016 07:17:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	BFBPU	Lab ID:	BFBPU		
Sample Info:	5050916, BFBPU				
Injection Vol.	2.00 uL	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



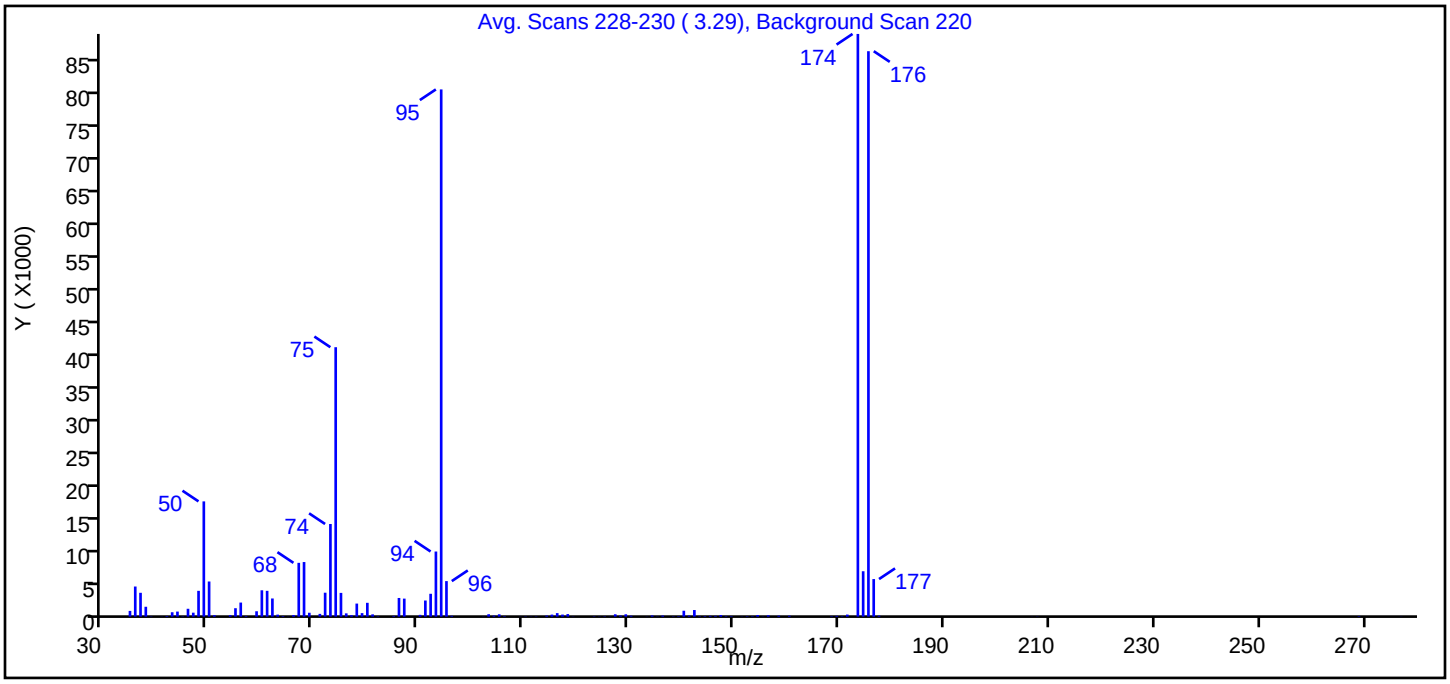
Report Date: 10-May-2016 10:58:15 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A01.D		
Injection Date:	09-May-2016 07:17:30	Inst. ID:	msd5.i
Client ID:	BFBPU	Lab ID:	BFBPU
Sample Info:	5050916, BFBPU		
Injection Vol.	2.00 uL	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

1 bfb



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	21.9
75	30.00 - 80.00% of mass 95	51.1
96	5.00 - 9.00% of mass 95	6.7
173	Less than 2.00% of mass 174	0.0 (0.0)
174	50.00 - 120.00% of mass 95	110.5
175	5.00 - 9.00% of mass 174	8.6 (7.8)
176	95.00 - 101.00% of mass 174	107.2 (97.0)
177	5.00 - 9.00% of mass 176	7.1 (6.6)

Report Date: 10-May-2016 10:58:15 AIM Revision: 1.0 26-Feb-2016 08:31:08

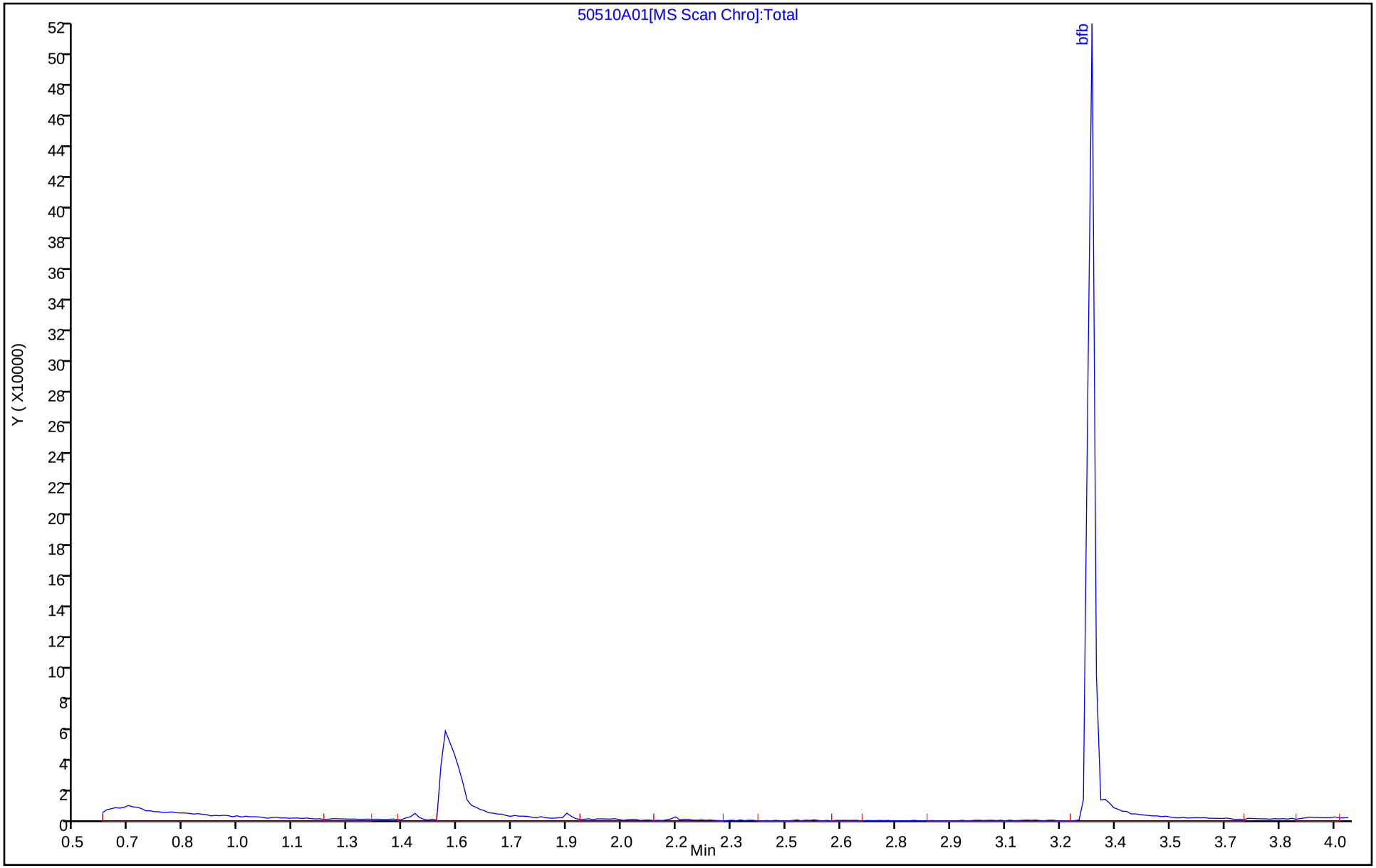
Data File: \\Organics\DD\chem\msd5.i\5050916.b\50509A01.D
Injection Date: 09-May-2016 07:17:30
Spectrum: Avg. Scans 228-230 (3.29), Background Scan 220
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 113

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	868	69.00	8314	110.00	17	146.00	111
37.00	4585	70.00	587	111.00	39	147.00	108
38.00	3628	72.00	416	112.00	26	148.00	239
39.00	1499	73.00	3642	113.00	41	149.00	69
40.00	45	74.00	14114	115.00	154	150.00	76
42.00	19	75.00	41056	116.00	306	152.00	26
43.00	95	76.00	3613	117.00	533	153.00	62
44.00	665	77.00	496	118.00	309	154.00	62
45.00	765	78.00	213	119.00	385	155.00	240
46.00	51	79.00	1985	120.00	29	156.00	27
47.00	1193	80.00	533	124.00	50	157.00	200
48.00	599	81.00	2101	125.00	25	159.00	137
49.00	3926	82.00	345	126.00	52	161.00	128
50.00	17560	83.00	54	127.00	21	169.00	65
51.00	5351	86.00	108	128.00	357	170.00	113
52.00	214	87.00	2838	129.00	147	171.00	59
55.00	225	88.00	2742	130.00	355	172.00	311
56.00	1279	91.00	266	131.00	127	174.00	88800
57.00	2139	92.00	2452	134.00	21	175.00	6913
58.00	89	93.00	3477	135.00	177	176.00	86168
60.00	816	94.00	9920	136.00	30	177.00	5721
61.00	4011	95.00	80344	137.00	156	178.00	140
62.00	3927	96.00	5410	139.00	49	207.00	13
63.00	2763	97.00	120	140.00	71	208.00	24
64.00	302	103.00	26	141.00	895	269.00	66
65.00	89	104.00	362	142.00	151	277.00	16
66.00	20	105.00	153	143.00	1002		
67.00	237	106.00	352	144.00	59		
68.00	8194	107.00	72	145.00	83		

Report Date: 11-May-2016 11:18:55 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A01.D				
Injection Date:	10-May-2016 07:58:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	BFBQF	Lab ID:	BFBQF		
Sample Info:	5051016, BFBQF				
Injection Vol.	2.00 uL	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



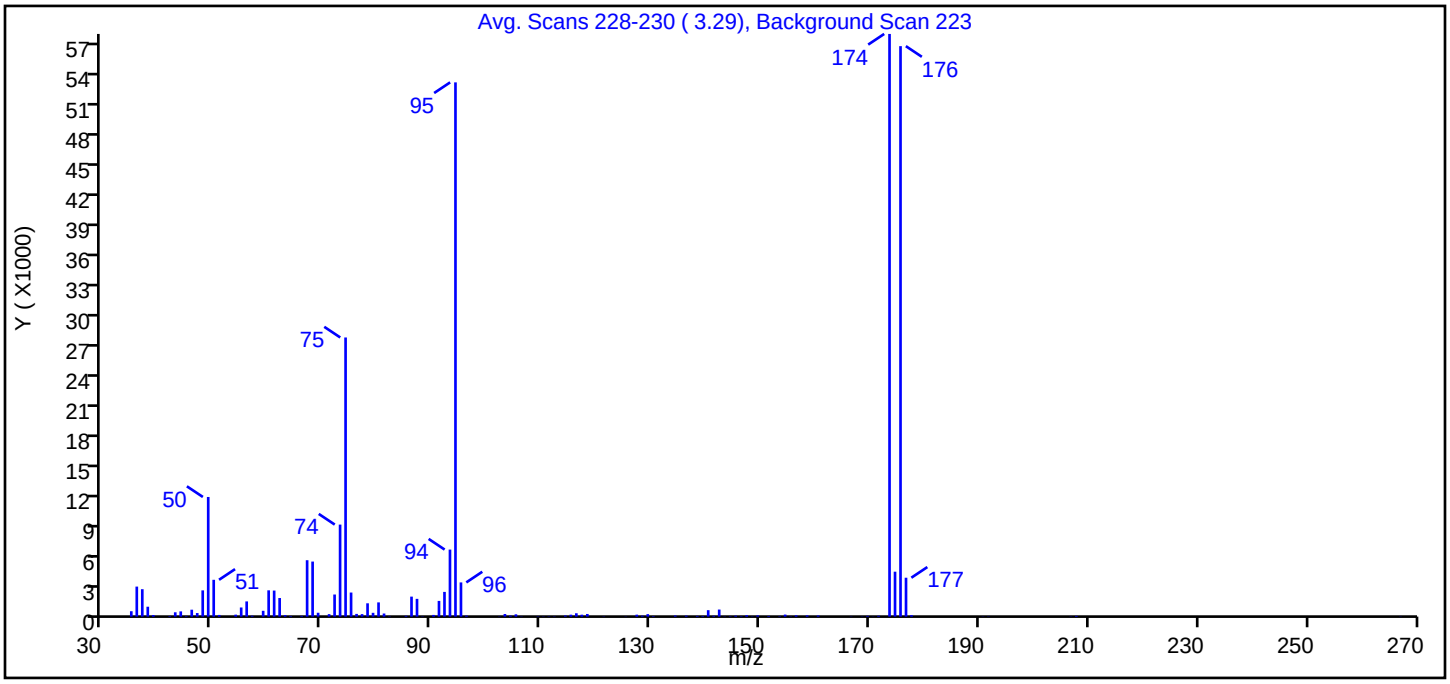
Report Date: 11-May-2016 11:18:55 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A01.D		
Injection Date:	10-May-2016 07:58:30	Inst. ID:	msd5.i
Client ID:	BFBQF	Lab ID:	BFBQF
Sample Info:	5051016, BFBQF		
Injection Vol.	2.00 uL	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

1 bfb



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	22.4
75	30.00 - 80.00% of mass 95	52.2
96	5.00 - 9.00% of mass 95	6.4
173	Less than 2.00% of mass 174	0.0 (0.0)
174	50.00 - 120.00% of mass 95	109.1
175	5.00 - 9.00% of mass 174	8.4 (7.7)
176	95.00 - 101.00% of mass 174	106.8 (97.9)
177	5.00 - 9.00% of mass 176	7.3 (6.8)

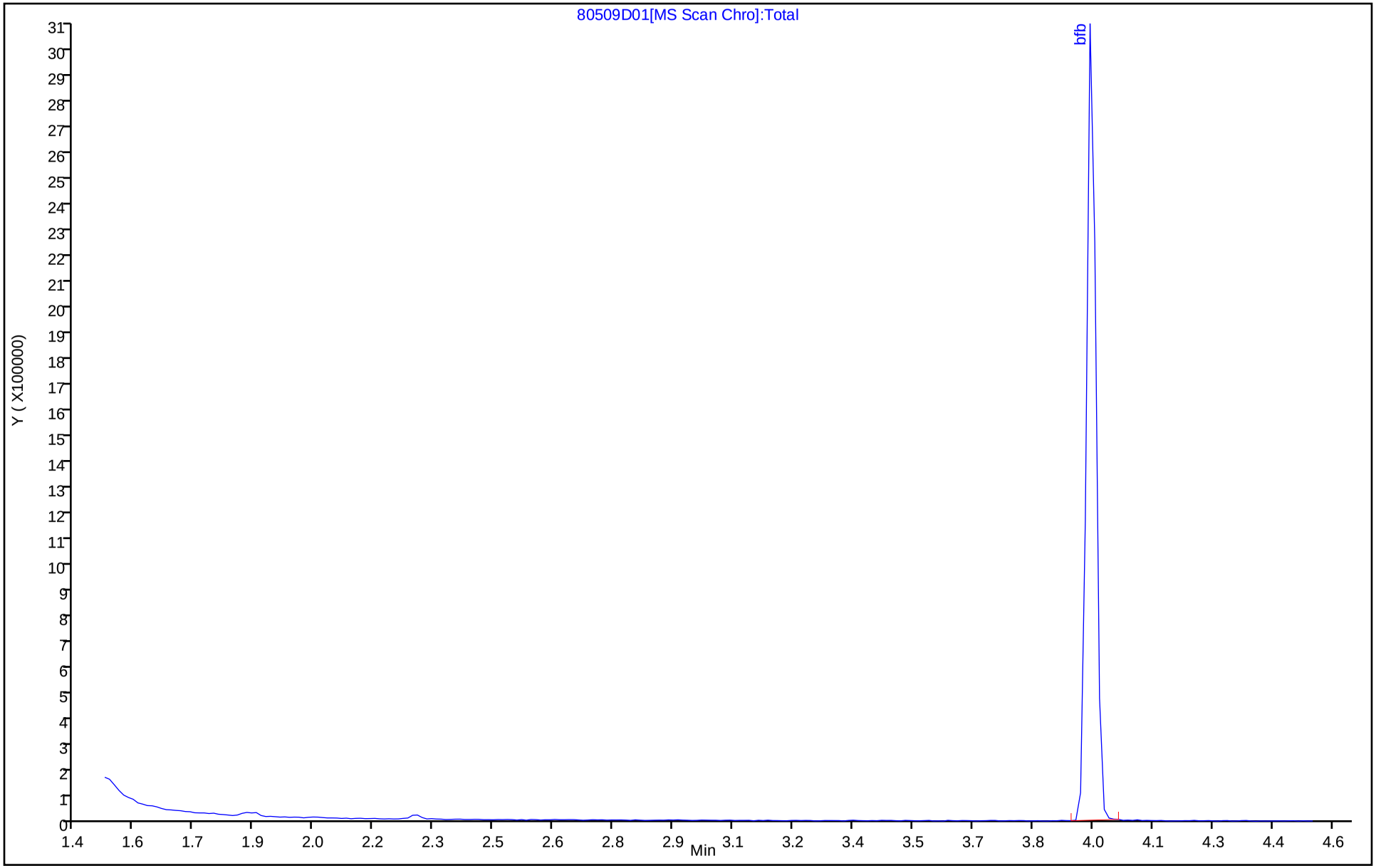
Data File: \\Organics\DD\chem\msd5.i\5051016.b\50510A01.D
Injection Date: 10-May-2016 07:58:30
Spectrum: Avg. Scans 228-230 (3.29), Background Scan 223
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 108

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	529	69.00	5409	105.00	89	146.00	90
37.00	2949	70.00	378	106.00	225	147.00	44
38.00	2693	72.00	243	107.00	25	148.00	136
39.00	971	73.00	2171	110.00	32	149.00	27
40.00	156	74.00	9043	111.00	23	150.00	116
43.00	55	75.00	27432	112.00	28	152.00	63
44.00	424	76.00	2365	113.00	27	154.00	40
45.00	513	77.00	266	115.00	105	155.00	200
46.00	50	78.00	243	116.00	189	156.00	27
47.00	678	79.00	1307	117.00	330	157.00	125
48.00	350	80.00	372	118.00	189	159.00	121
49.00	2578	81.00	1397	119.00	258	161.00	108
50.00	11757	82.00	304	122.00	24	167.00	20
51.00	3617	83.00	32	126.00	19	169.00	22
52.00	164	86.00	79	128.00	191	170.00	71
55.00	193	87.00	1964	129.00	90	171.00	17
56.00	897	88.00	1744	130.00	243	172.00	78
57.00	1493	89.00	29	131.00	52	174.00	57264
58.00	86	91.00	165	135.00	103	175.00	4414
60.00	571	92.00	1542	137.00	93	176.00	56064
61.00	2582	93.00	2428	139.00	69	177.00	3821
62.00	2559	94.00	6587	140.00	65	178.00	142
63.00	1826	95.00	52504	141.00	632	191.00	19
64.00	144	96.00	3360	142.00	83	192.00	21
65.00	60	97.00	96	143.00	693	207.00	22
67.00	70	103.00	24	144.00	24	208.00	71
68.00	5542	104.00	256	145.00	37	267.00	18

Report Date: 10-May-2016 12:37:15 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D01.D				
Injection Date:	09-May-2016 13:56:30	Inst. ID:	msd8.i	Operator:	ALL
Client ID:	BFBPT	Lab ID:	BFBPT		
Sample Info:	8050916D.b, BFBPT				
Injection Vol.	2.00 uL	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



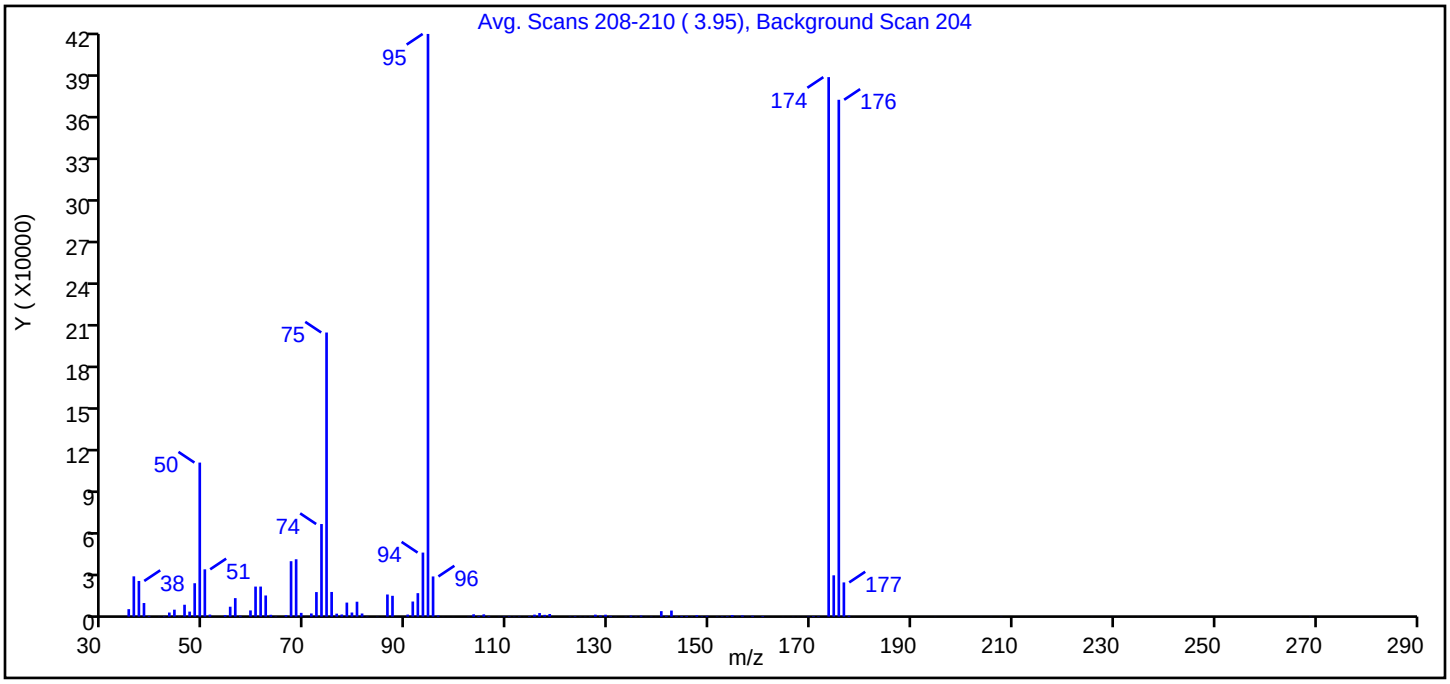
Report Date: 10-May-2016 12:37:15 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\DD\chem\msd8.i\8050916D.b\80509D01.D		
Injection Date:	09-May-2016 13:56:30	Inst. ID:	msd8.i
Client ID:	BFBPT	Lab ID:	BFBPT
Sample Info:	8050916D.b, BFBPT		
Injection Vol.	2.00 uL	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

1 bfb



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	26.4
75	30.00 - 80.00% of mass 95	48.8
96	5.00 - 9.00% of mass 95	6.9
173	Less than 2.00% of mass 174	0.0 (0.0)
174	50.00 - 120.00% of mass 95	92.6
175	5.00 - 9.00% of mass 174	7.1 (7.7)
176	95.00 - 101.00% of mass 174	88.7 (95.8)
177	5.00 - 9.00% of mass 176	5.9 (6.6)

Data File: \\Organics\DD\chem\msd8.i\8050916D.b\80509D01.D
Injection Date: 09-May-2016 13:56:30
Spectrum: Avg. Scans 208-210 (3.95), Background Scan 204
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 165

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	5264	82.00	2199	130.00	1346	176.00	365248
37.00	28456	83.00	174	131.00	477	177.00	24168
38.00	25184	85.00	119	132.00	87	178.00	614
39.00	9598	86.00	46	134.00	140	179.00	32
40.00	453	87.00	15626	135.00	681	182.00	25
42.00	68	88.00	14700	136.00	204	183.00	5
43.00	273	89.00	28	137.00	693	185.00	21
44.00	2869	90.00	47	138.00	74	188.00	17
45.00	4893	91.00	1439	139.00	168	190.00	18
46.00	184	92.00	10663	140.00	57	193.00	20
47.00	8386	93.00	16576	141.00	3860	195.00	53
48.00	3534	94.00	45248	142.00	489	197.00	22
49.00	23584	95.00	411776	143.00	4266	198.00	17
50.00	108848	96.00	28376	144.00	281	201.00	17
51.00	33408	97.00	796	145.00	465	202.00	23
52.00	1423	98.00	62	146.00	513	204.00	28
53.00	6	99.00	27	147.00	181	206.00	43
55.00	1105	100.00	40	148.00	956	208.00	79
56.00	6982	103.00	126	149.00	277	213.00	19
57.00	13055	104.00	1633	150.00	517	216.00	17
58.00	601	105.00	484	152.00	182	226.00	23
60.00	4375	106.00	1598	153.00	272	229.00	24
61.00	21216	107.00	346	154.00	342	230.00	27
62.00	21224	109.00	89	155.00	1085	231.00	18
63.00	14929	110.00	263	156.00	120	234.00	18
64.00	1278	111.00	316	157.00	815	235.00	27
65.00	197	112.00	146	158.00	67	238.00	23
67.00	1044	113.00	206	159.00	573	245.00	17
68.00	39152	114.00	45	160.00	4	249.00	17
69.00	40520	115.00	386	161.00	432	254.00	18
70.00	2639	116.00	1393	162.00	16	255.00	20
71.00	62	117.00	2525	163.00	21	263.00	20
72.00	2223	118.00	1239	165.00	69	267.00	50

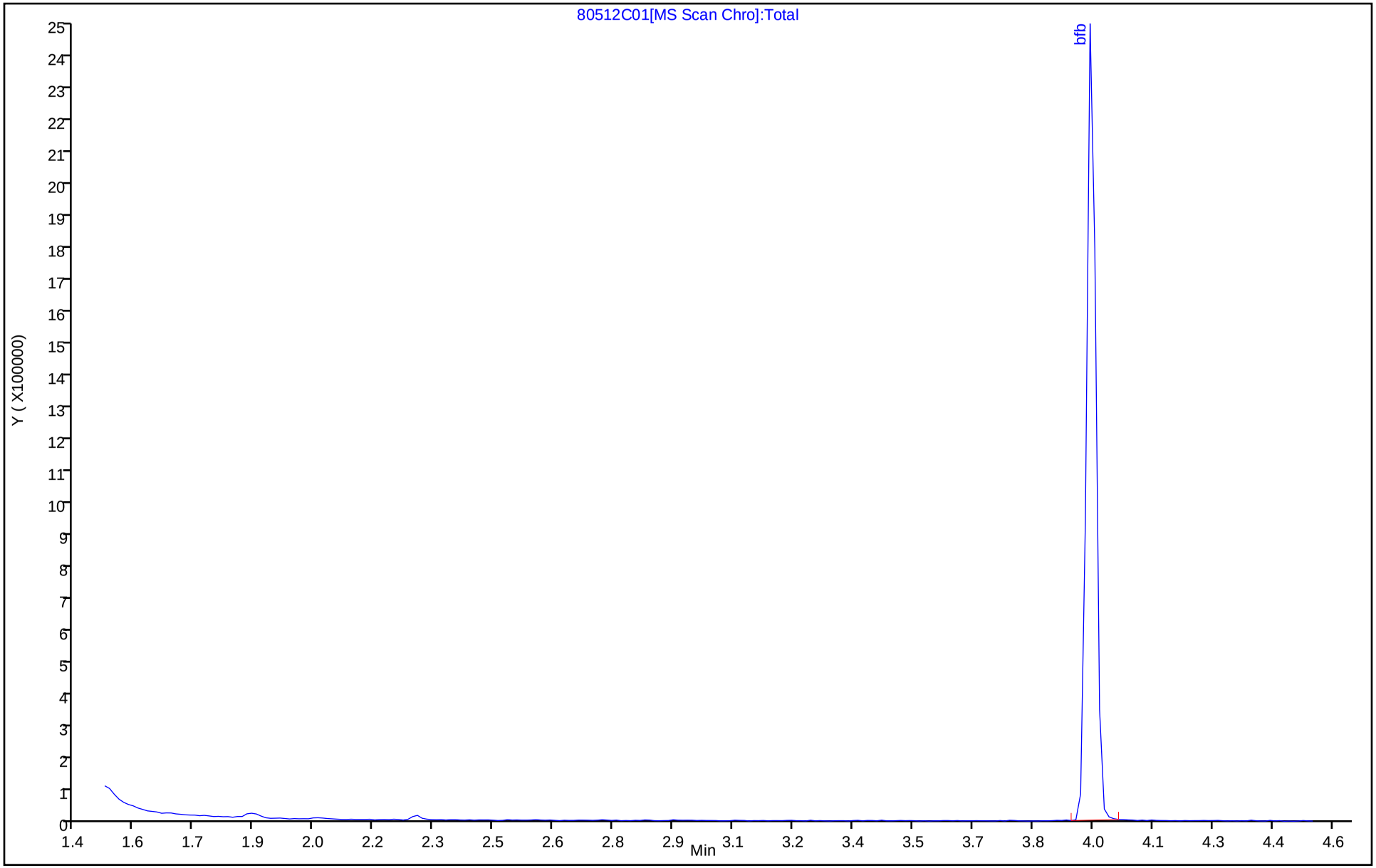
Report Date: 10-May-2016 12:37:15 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd8.i\8050916D.b\80509D01.D
Injection Date: 09-May-2016 13:56:30
Spectrum: Avg. Scans 208-210 (3.95), Background Scan 204
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 165

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	17336	119.00	1844	166.00	21	269.00	105
74.00	65424	122.00	20	167.00	92	270.00	9
75.00	200768	123.00	181	168.00	59	271.00	25
76.00	17416	124.00	336	169.00	49	274.00	19
77.00	2084	125.00	128	170.00	220	281.00	29
78.00	1493	126.00	130	171.00	401	283.00	25
79.00	9902	127.00	179	172.00	283		
80.00	2878	128.00	1374	174.00	381248		
81.00	10522	129.00	696	175.00	29176		

Report Date: 13-May-2016 08:50:17 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd8.i\8051216C.b\80512C01.D				
Injection Date:	12-May-2016 09:32:30	Inst. ID:	msd8.i	Operator:	ALL
Client ID:	BFBRI	Lab ID:	BFBRI		
Sample Info:	8051216C.b, BFBRI				
Injection Vol.	2.00 uL	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



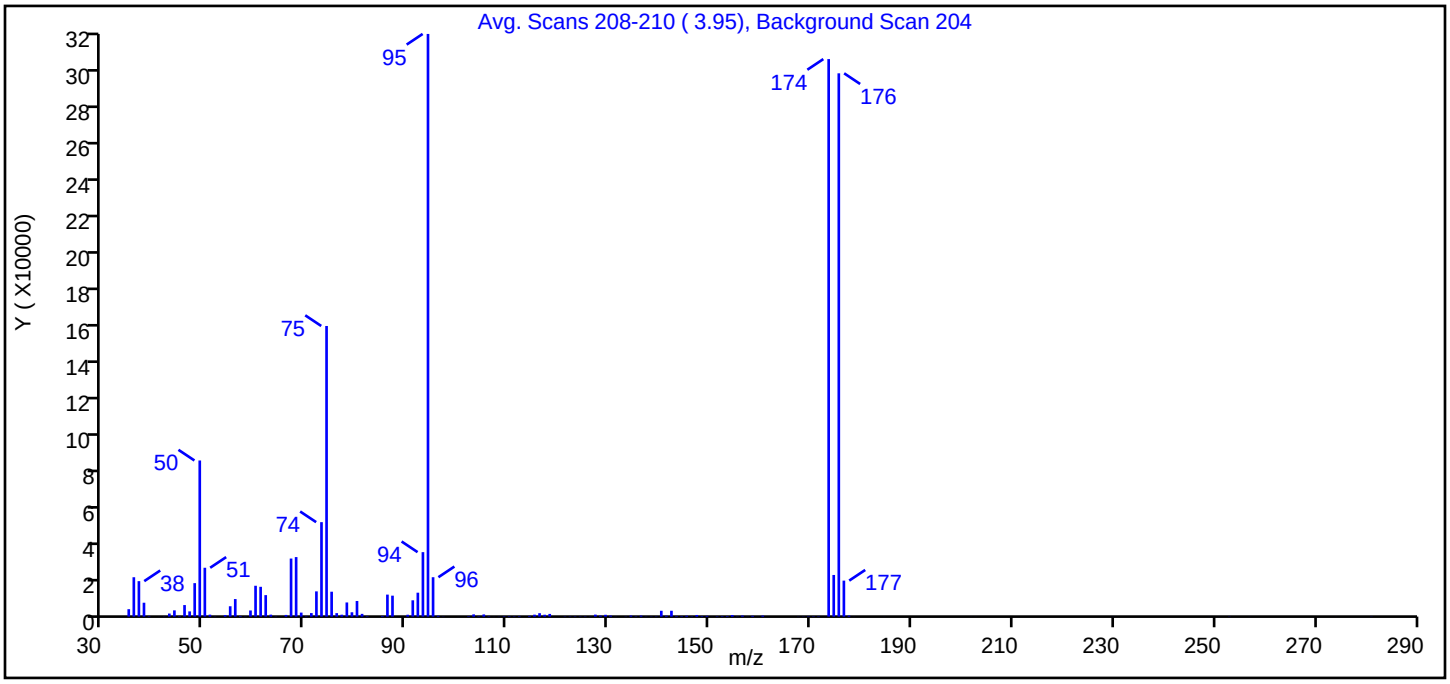
Report Date: 13-May-2016 08:50:17 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\DD\chem\msd8.i\8051216C.b\80512C01.D		
Injection Date:	12-May-2016 09:32:30	Inst. ID:	msd8.i
Client ID:	BFBRI	Lab ID:	BFBRI
Sample Info:	8051216C.b, BFBRI		
Injection Vol.	2.00 uL	Dil. Factor:	1.0
Operator:	ALL		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan

1 bfb



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	26.8
75	30.00 - 80.00% of mass 95	49.9
96	5.00 - 9.00% of mass 95	6.8
173	Less than 2.00% of mass 174	0.0 (0.0)
174	50.00 - 120.00% of mass 95	95.7
175	5.00 - 9.00% of mass 174	7.1 (7.5)
176	95.00 - 101.00% of mass 174	93.2 (97.4)
177	5.00 - 9.00% of mass 176	6.2 (6.6)

Data File: \\Organics\DD\chem\msd8.i\8051216C.b\80512C01.D
Injection Date: 12-May-2016 09:32:30
Spectrum: Avg. Scans 208-210 (3.95), Background Scan 204
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 136

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4005	71.00	171	111.00	221	149.00	275
37.00	21240	72.00	1903	112.00	158	150.00	401
38.00	19128	73.00	13614	113.00	232	151.00	30
39.00	7488	74.00	50960	115.00	382	152.00	190
40.00	216	75.00	156800	116.00	1048	153.00	251
42.00	25	76.00	13428	117.00	1844	154.00	287
43.00	97	77.00	1873	118.00	1010	155.00	863
44.00	1653	78.00	1025	119.00	1453	156.00	108
45.00	3369	79.00	7632	122.00	135	157.00	571
46.00	236	80.00	2335	123.00	134	158.00	57
47.00	6224	81.00	8424	124.00	164	159.00	424
48.00	2816	82.00	1482	125.00	126	160.00	21
49.00	18056	83.00	227	126.00	149	161.00	536
50.00	84232	86.00	356	127.00	75	168.00	64
51.00	26352	87.00	11868	128.00	1077	169.00	86
52.00	1054	88.00	11299	129.00	493	170.00	171
53.00	94	90.00	18	130.00	983	171.00	170
54.00	4	91.00	1012	131.00	524	172.00	168
55.00	816	92.00	8794	132.00	56	174.00	300800
56.00	5584	93.00	12903	134.00	106	175.00	22464
57.00	9465	94.00	34776	135.00	561	176.00	293120
58.00	351	95.00	314368	136.00	183	177.00	19416
59.00	97	96.00	21248	137.00	524	178.00	523
60.00	3312	97.00	441	138.00	87	179.00	31
61.00	16640	98.00	83	139.00	115	185.00	22
62.00	16074	101.00	21	140.00	143	202.00	19
63.00	11590	103.00	237	141.00	3151	203.00	19
64.00	1057	104.00	1205	142.00	438	230.00	25
65.00	111	105.00	197	143.00	3158	249.00	16
66.00	28	106.00	1175	144.00	262	251.00	19
67.00	907	107.00	201	145.00	235	253.00	85
68.00	31328	108.00	34	146.00	474	257.00	21
69.00	32112	109.00	67	147.00	168	274.00	17

Report Date: 13-May-2016 08:50:17 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd8.i\8051216C.b\80512C01.D
Injection Date: 12-May-2016 09:32:30
Spectrum: Avg. Scans 208-210 (3.95), Background Scan 204
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 136

m/z	Y	m/z	Y	m/z	Y	m/z	Y
70.00	2157	110.00	210	148.00	877	281.00	76

Blank Data

Blanks are arranged by type of blank
(Method, Storage, Instrument)

Listed in Chronological Order by instrument.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLKPU

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12787-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A04

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLKPU

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12787-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A04

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLKPU

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RQ12787-001
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A04
% Solids: Date Received:
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 05/09/2016
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) N Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume:
Cleanup Types: pH: Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A04.D		
Lab Sample ID:	VBLKPU	Client Sample ID:	VBLKPU
Injection Date:	09-May-2016 08:43:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, VBLKPU		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	BLANK	ALS Bottle:	4
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:40:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.701		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.962	1.974	-0.012	64328	6.1058	6.1057	
4 Vinyl Chloride	62.0		1.986		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.389	2.401	-0.012	47176	6.0211	6.0211	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.267	3.279	-0.012	101793	4.2248	4.2248	
13 1,1-Dichloroethene	96.0		3.302		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.314		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.263		ND			
23 1,1-Dichloroethane	63.0		4.808		ND			
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	100385	54.802	54.802	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.959	5.971	-0.012	118160	5.4338	5.4337	Q
31 Chloroform	83.0		5.994		ND			
33 1,1,1-Trichloroethane	97.0		6.243		ND			
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 11-May-2016 18:33:59 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916.b\50509A04.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.647	6.646	0.001	48450	5.0535	5.0535	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	214609	5.6868	5.6867	
37 Benzene	78.0		6.729		ND			
39 1,2-Dichloroethane	62.0		6.741		ND			
* 41 1,4-Difluorobenzene	114.0	7.239	7.239	0.000	270690	5.0000	5.0000	
42 Trichloroethene	95.0		7.595		ND			
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	51710	5.2928	5.2928	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.077		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	173304	5.3395	5.3395	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	40749	4.8831	4.8830	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0		9.967		ND			
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	68828	49.070	49.070	
60 2-Hexanone	43.0		10.074		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	199795	5.0000	5.0000	
64 Chlorobenzene	112.0		10.844		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.425		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.959	0.012	25383	5.3584	5.3584	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	116371	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	65914	5.1660	5.1659	
89 1,2-Dichlorobenzene	146.0		13.086		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services

Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A04.D		
Lab Sample ID:	VBLKPU	Client Sample ID:	VBLKPU
Injection Date:	09-May-2016 08:43:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, VBLKPU		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	BLANK	ALS Bottle:	4
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:40:30

Tentative Identified Compound Results

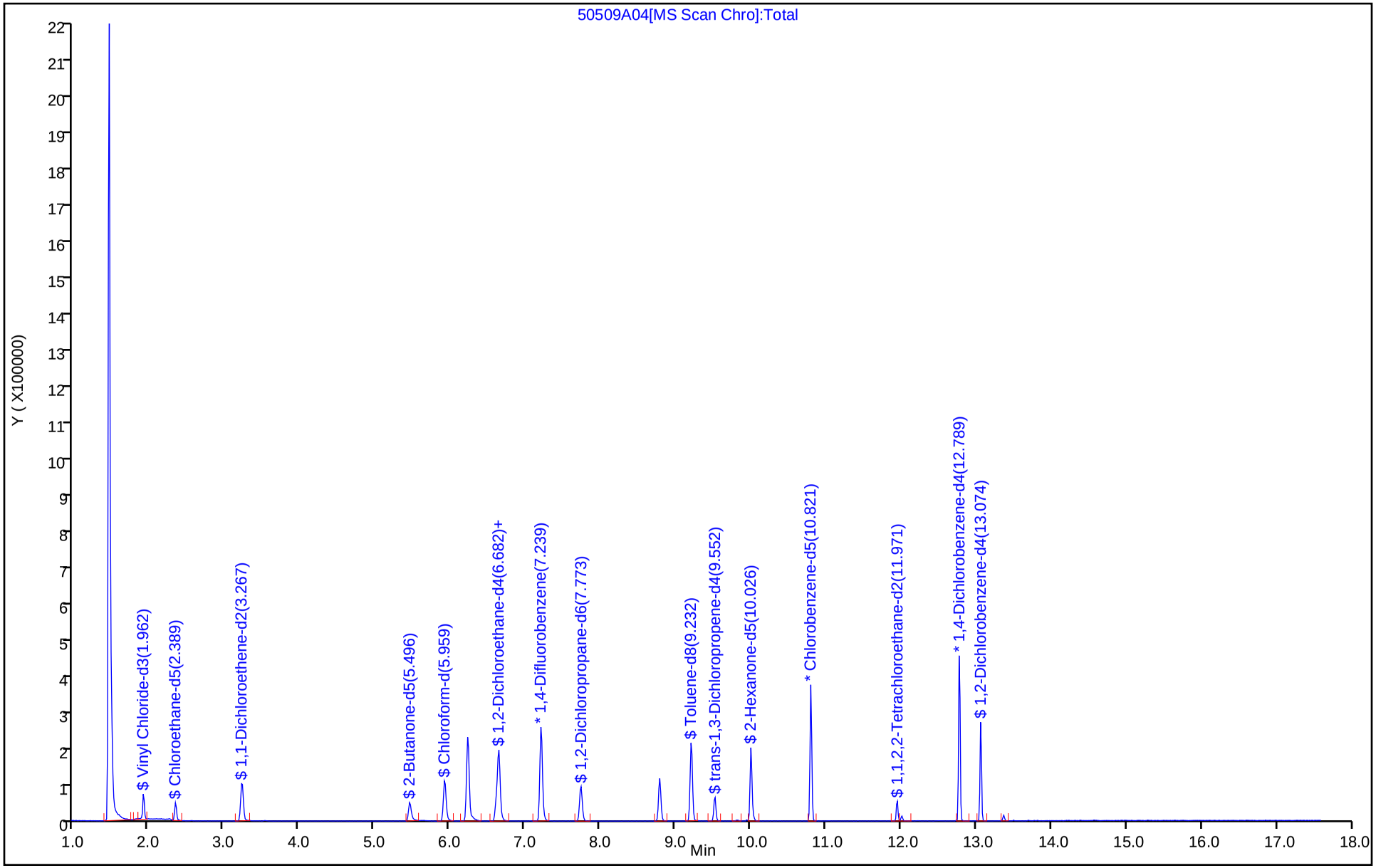
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 11-May-2016 18:33:59 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A04.D				
Injection Date:	09-May-2016 08:43:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VBLKPU	Lab ID:	VBLKPU		
Sample Info:	5050916, VBLKPU				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLKTT

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12835-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B01

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLKTT

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12835-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B01

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLKTT

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RQ12835-001
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509B01
% Solids: Date Received:
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 05/09/2016
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) N Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume:
Cleanup Types: pH: Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B01.D		
Lab Sample ID:	VBLKTT	Client Sample ID:	VBLKTT
Injection Date:	09-May-2016 19:43:30	Dil. Factor:	1.0
Operator:	JJG	Inst. ID:	msd5.i
Sample Info:	5050916B, VBLKTT		
Method:	\\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5.m		
Method Date:	10-May-2016 01:19:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	BLANK	ALS Bottle:	1
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	10-May-2016 11:47:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.702		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.962	1.962	0.000	66852	5.5016	5.5016	
4 Vinyl Chloride	62.0		1.974		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.389	2.389	0.000	47864	5.2966	5.2966	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	107298	3.8611	3.8611	
13 1,1-Dichloroethene	96.0		3.291		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.302		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.251		ND			
23 1,1-Dichloroethane	63.0		4.797		ND			
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	111695	52.868	52.868	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.959	5.959	0.000	124060	4.9465	4.9465	Q
31 Chloroform	83.0		5.994		ND			
33 1,1,1-Trichloroethane	97.0		6.243		ND			
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 10-May-2016 12:17:39 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd5.i\5050916B.b\50509B01.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.647	6.647	0.000	53498	4.8381	4.8380	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	234819	5.3686	5.3685	
37 Benzene	78.0		6.730		ND			
39 1,2-Dichloroethane	62.0		6.753		ND			
* 41 1,4-Difluorobenzene	114.0	7.240	7.240	0.000	312203	5.0000	5.0000	
42 Trichloroethene	95.0		7.595		ND			
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	58743	5.1877	5.1877	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.078		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	187449	4.9829	4.9829	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	47200	4.8801	4.8800	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0		9.967		ND			
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	80688	49.632	49.632	
60 2-Hexanone	43.0		10.086		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	231567	5.0000	5.0000	
64 Chlorobenzene	112.0		10.856		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.426		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	26728	4.8682	4.8681	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	130861	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	69886	4.8708	4.8708	
89 1,2-Dichlorobenzene	146.0		13.098		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services

Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B01.D		
Lab Sample ID:	VBLKTT	Client Sample ID:	VBLKTT
Injection Date:	09-May-2016 19:43:30	Dil. Factor:	1.0
Operator:	JJG	Inst. ID:	msd5.i
Sample Info:	5050916B, VBLKTT		
Method:	\\Organics\DD\chem\msd5.i\5050916B.b\TRACE-5.m		
Method Date:	10-May-2016 01:19:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	BLANK	ALS Bottle:	1
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	10-May-2016 11:47:30

Tentative Identified Compound Results

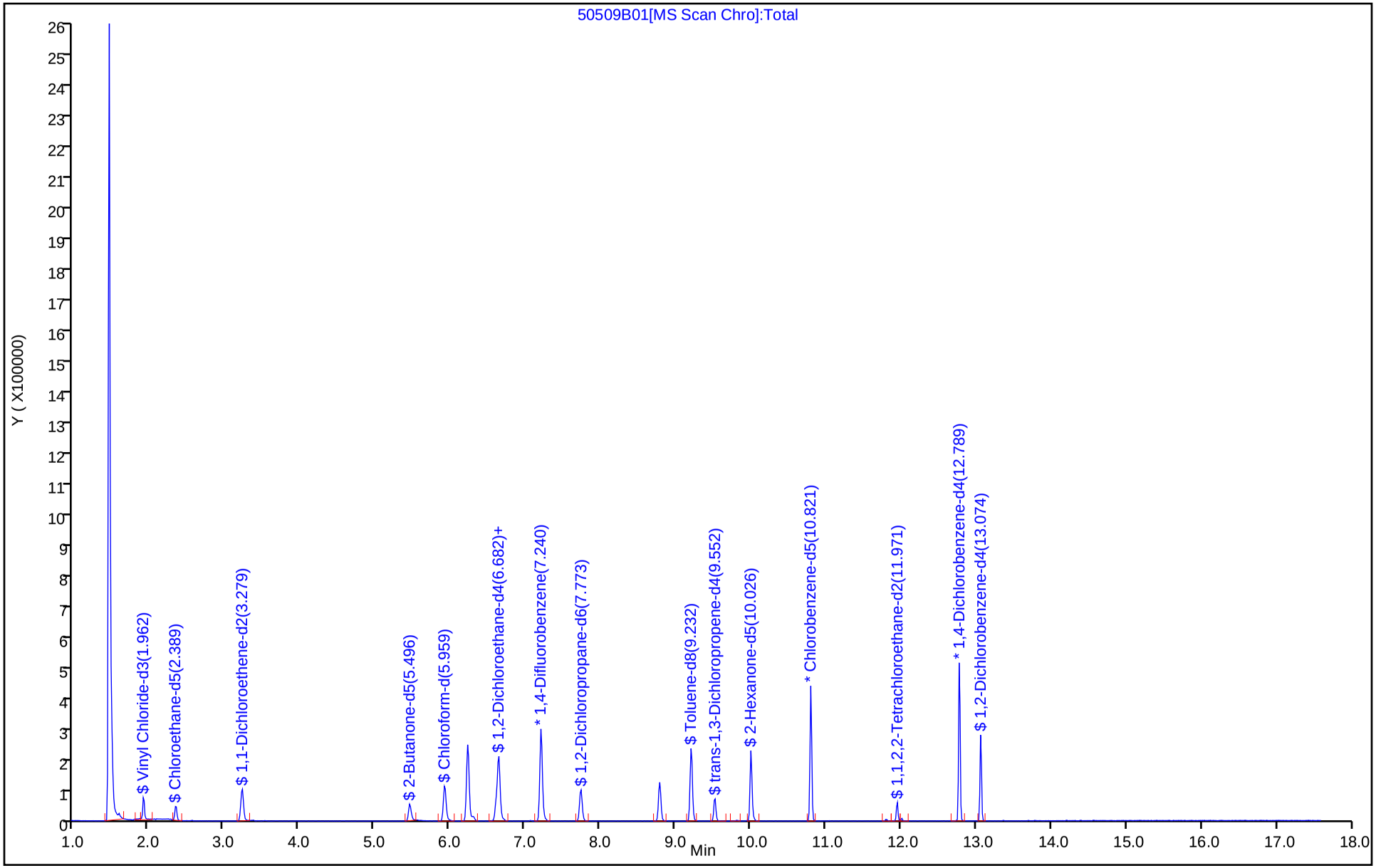
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 10-May-2016 12:17:39 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916B.b\50509B01.D				
Injection Date:	09-May-2016 19:43:30	Inst. ID:	msd5.i	Operator:	JJG
Client ID:	VBLKTT	Lab ID:	VBLKTT		
Sample Info:	5050916B, VBLKTT				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLKQF

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12874-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50510A04

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/10/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLKQF

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12874-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50510A04

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/10/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLKQF

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RQ12874-001
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50510A04
% Solids: Date Received:
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 05/10/2016
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) N Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume:
Cleanup Types: pH: Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
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11					
12					
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17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Report Date: 11-May-2016 18:46:34 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A04.D		
Lab Sample ID:	VBLKQF	Client Sample ID:	VBLKQF
Injection Date:	10-May-2016 09:28:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5051016, VBLKQF		
Method:	\\Organics\DD\chem\msd5.i\5051016.b\TRACE-5.m		
Method Date:	10-May-2016 09:13:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	BLANK	ALS Bottle:	4
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	10-May-2016 09:49:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.701		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.962	1.974	-0.012	59598	5.6454	5.6454	
4 Vinyl Chloride	62.0		1.974		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	41673	5.3080	5.3080	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.267	3.279	-0.012	95447	3.9534	3.9534	
13 1,1-Dichloroethene	96.0		3.290		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.302		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.587		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.263		ND			
23 1,1-Dichloroethane	63.0		4.808		ND			
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	96498	52.574	52.574	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.888		ND			
$ 30 Chloroform-d	84.0	5.959	5.959	0.000	109707	5.0349	5.0348	Q
31 Chloroform	83.0		5.994		ND			
33 1,1,1-Trichloroethane	97.0		6.243		ND			
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 11-May-2016 18:46:34 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5051016.b\50510A04.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.646	0.000	47892	4.9853	4.9852	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	203044	5.0810	5.0810	
37 Benzene	78.0		6.729		ND			
39 1,2-Dichloroethane	62.0		6.753		ND			
* 41 1,4-Difluorobenzene	114.0	7.239	7.239	0.000	271236	5.0000	5.0000	
42 Trichloroethene	95.0		7.595		ND			
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	49143	4.7503	4.7502	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.077		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	168728	4.9093	4.9093	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	42706	4.8329	4.8329	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0		9.967		ND			
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	70441	47.426	47.426	
60 2-Hexanone	43.0		10.085		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.346		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	211564	5.0000	5.0000	
64 Chlorobenzene	112.0		10.856		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.425		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.971	0.000	24216	4.8277	4.8276	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	120673	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	65892	4.9802	4.9801	Q
89 1,2-Dichlorobenzene	146.0		13.097		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services
Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A04.D		
Lab Sample ID:	VBLKQF	Client Sample ID:	VBLKQF
Injection Date:	10-May-2016 09:28:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5051016, VBLKQF		
Method:	\\Organics\DD\chem\msd5.i\5051016.b\TRACE-5.m		
Method Date:	10-May-2016 09:13:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	BLANK	ALS Bottle:	4
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	10-May-2016 09:49:30

Tentative Identified Compound Results

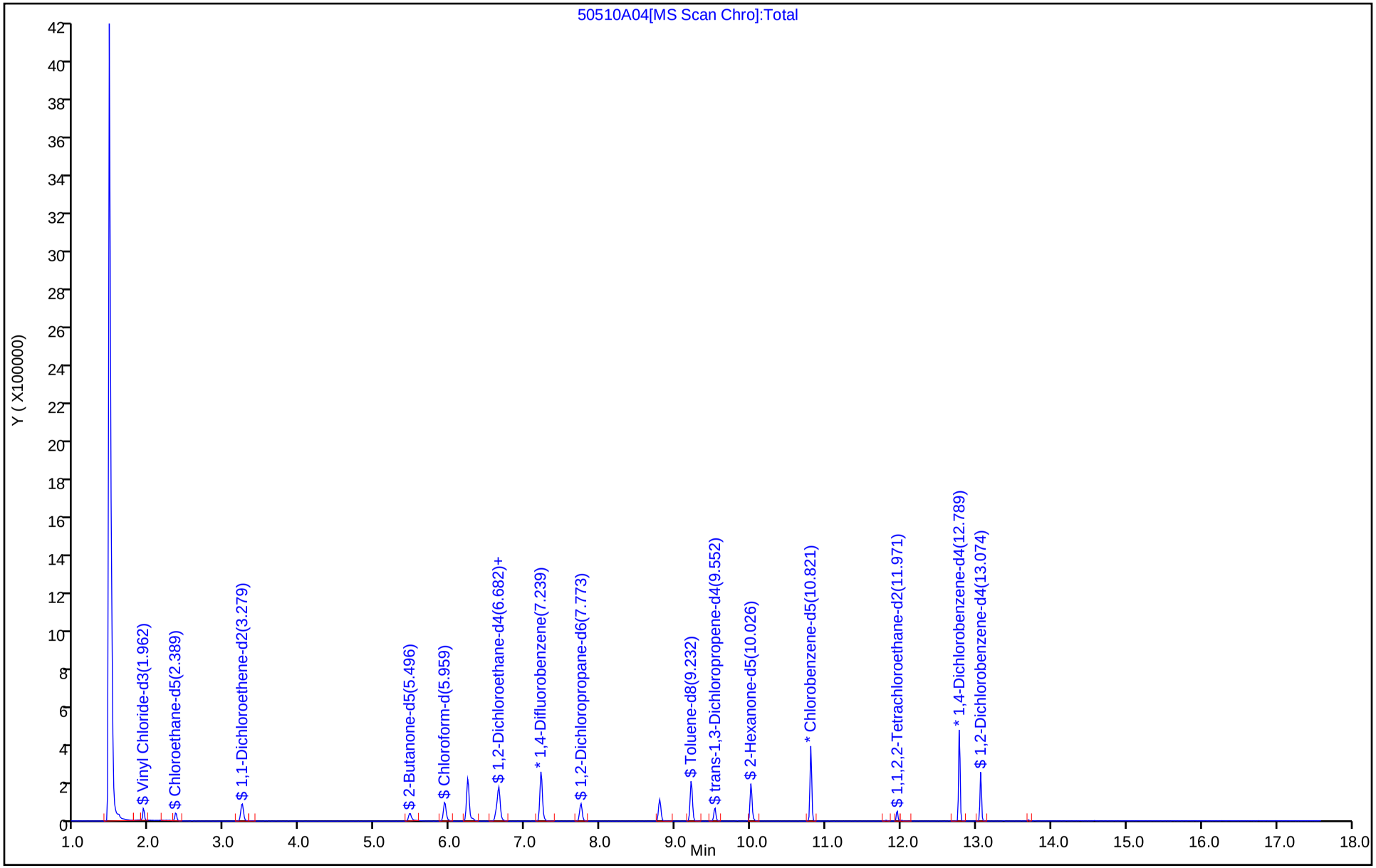
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 11-May-2016 18:46:34 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5051016.b\50510A04.D				
Injection Date:	10-May-2016 09:28:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VBLKQF	Lab ID:	VBLKQF		
Sample Info:	5051016, VBLKQF				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLKRI

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ13069-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 80512C03

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/12/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLKRI

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ13069-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 80512C03

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/12/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLKRI

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RQ13069-001
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 80512C03
% Solids: Date Received:
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 05/12/2016
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) N Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume:
Cleanup Types: pH: Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd8.i\8051216C.b\80512C03.D		
Lab Sample ID:	VBLKRI	Client Sample ID:	VBLKRI
Injection Date:	12-May-2016 10:29:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd8.i
Sample Info:	8051216C.b, VBLKRI		
Method:	\\Organics\DD\chem\msd8.i\8051216C.b\TRACE-8.m		
Method Date:	12-May-2016 10:14:30	Quant Method:	ISTD
Calib Date:	09-May-2016 16:08:30	Calib File:	80509D06.D
Sample Type:	BLANK	ALS Bottle:	3
Cpnd Sublist:	2447.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	13-May-2016 08:39:30

	Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
	1 Dichlorodifluoromethane	85.0		1.674		ND			
	2 Chloromethane	50.0		1.839		ND			
$	3 Vinyl Chloride-d3	65.0	1.946	1.946	0.000	60133	4.5374	4.5373	
	4 Vinyl Chloride	62.0		1.958		ND			
	5 Bromomethane	94.0		2.289		ND			
$	6 Chloroethane-d5	69.0	2.372	2.372	0.000	47169	4.4982	4.4982	
	7 Chloroethane	64.0		2.396		ND			
	8 Trichlorofluoromethane	101.0		2.680		ND			
$	12 1,1-Dichloroethene-d2	63.0	3.236	3.248	-0.012	108111	3.7071	3.7070	
	13 1,1-Dichloroethene	96.0		3.259		ND			
	11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.271		ND			
	14 Acetone	43.0		3.295		ND			
	15 Carbon Disulfide	76.0		3.543		ND			
	16 Methyl Acetate	43.0		3.721		ND			
	17 Methylene Chloride	84.0		3.851		ND			
	20 Methyl tert-Butyl Ether	73.0		4.218		ND			
	21 trans-1,2-Dichloroethene	96.0		4.218		ND			
	23 1,1-Dichloroethane	63.0		4.762		ND			
$	25 2-Butanone-d5	46.0	5.460	5.460	0.000	96841	42.780	42.780	
	26 cis-1,2-Dichloroethene	96.0		5.531		ND			
	27 2,2-Dichloropropane	77.0		5.531		ND			
	28 2-Butanone	43.0		5.543		ND			
	29 Bromochloromethane	128.0		5.839		ND			
$	30 Chloroform-d	84.0	5.922	5.922	0.000	111985	4.5189	4.5189	Q
	31 Chloroform	83.0		5.946		ND			
	33 1,1,1-Trichloroethane	97.0		6.206		ND			
	32 Cyclohexane	56.0		6.289		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
34 Carbon Tetrachloride	117.0		6.419		ND			
35 1,1-Dichloropropene	75.0		6.419		ND			
$ 38 1,2-Dichloroethane-d4	65.0	6.608	6.608	0.000	43886	4.5771	4.5770	
$ 36 Benzene-d6	84.0	6.644	6.644	0.000	226738	4.7588	4.7587	
37 Benzene	78.0		6.691		ND			
39 1,2-Dichloroethane	62.0		6.703		ND			
* 41 1,4-Difluorobenzene	114.0	7.200	7.200	0.000	242115	5.0000	5.0000	
42 Trichloroethene	95.0		7.555		ND			
$ 44 1,2-Dichloropropane-d6	67.0	7.732	7.732	0.000	56400	4.3566	4.3565	
43 Methylcyclohexane	83.0		7.815		ND			
45 1,2-Dichloropropane	63.0		7.851		ND			
48 Dibromomethane	93.0		8.004		ND			
49 Bromodichloromethane	83.0		8.217		ND			
50 cis-1,3-Dichloropropene	75.0		8.821		ND			
51 4-Methyl-2-pentanone	43.0		9.034		ND			
$ 52 Toluene-d8	98.0	9.200	9.188	0.012	193193	4.6887	4.6886	
53 Toluene	91.0		9.282		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.507	9.507	0.000	36475	4.1048	4.1047	
55 trans-1,3-Dichloropropene	75.0		9.543		ND			
56 1,1,2-Trichloroethane	97.0		9.768		ND			
57 Tetrachloroethene	164.0		9.933		ND			
59 1,3-Dichloropropane	76.0		9.957		ND			
$ 58 2-Hexanone-d5	63.0	9.992	9.992	0.000	57079	39.348	39.348	
60 2-Hexanone	43.0		10.040		ND			
61 Dibromochloromethane	129.0		10.194		ND			
62 1,2-Dibromoethane	107.0		10.324		ND			
* 63 Chlorobenzene-d5	117.0	10.797	10.797	0.000	170931	5.0000	5.0000	
64 Chlorobenzene	112.0		10.821		ND			
66 1,1,1,2-Tetrachloroethane	131.0		10.904		ND			
65 Ethylbenzene	91.0		10.927		ND			
67 m+p-Xylenes	106.0		11.034		ND			
68 o-Xylene	106.0		11.400		ND			
69 Styrene	104.0		11.412		ND			
70 Bromoform	173.0		11.578		ND			
71 Isopropylbenzene	105.0		11.720		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.945	11.945	0.000	20797	4.1547	4.1546	
74 1,1,2,2-Tetrachloroethane	83.0		11.957		ND			
73 Bromobenzene	77.0		11.980		ND			
76 1,2,3-Trichloropropane	75.0		12.004		ND			
75 n-Propylbenzene	91.0		12.063		ND			
77 2-Chlorotoluene	91.0		12.134		ND			
78 1,3,5-Trimethylbenzene	105.0		12.193		ND			
79 4-Chlorotoluene	91.0		12.217		ND			
80 tert-Butylbenzene	119.0		12.465		ND			
81 1,2,4-Trimethylbenzene	105.0		12.489		ND			
82 sec-Butylbenzene	105.0		12.631		ND			
83 1,3-Dichlorobenzene	146.0		12.726		ND			
84 para-Isopropyltoluene	119.0		12.738		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.773	12.773	0.000	92694	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.785		ND			
88 n-Butylbenzene	91.0		13.033		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 87 1,2-Dichlorobenzene-d4	152.0	13.057	13.057	0.000	61200	4.7605	4.7605	
89 1,2-Dichlorobenzene	146.0		13.069		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.613		ND			
91 1,2,4-Trichlorobenzene	180.0		14.193		ND			
92 Hexachlorbutadiene	225.0		14.300		ND			
93 Napthalene	128.0		14.382		ND			
94 1,2,3-Trichlorobenzene	180.0		14.560		ND			

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services

Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd8.i\8051216C.b\80512C03.D		
Lab Sample ID:	VBLKRI	Client Sample ID:	VBLKRI
Injection Date:	12-May-2016 10:29:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd8.i
Sample Info:	8051216C.b, VBLKRI		
Method:	\\Organics\DD\chem\msd8.i\8051216C.b\TRACE-8.m		
Method Date:	12-May-2016 10:14:30	Quant Method:	ISTD
Calib Date:	09-May-2016 16:08:30	Calib File:	80509D06.D
Sample Type:	BLANK	ALS Bottle:	3
Cpnd Sublist:	2447.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	13-May-2016 08:39:30

Tentative Identified Compound Results

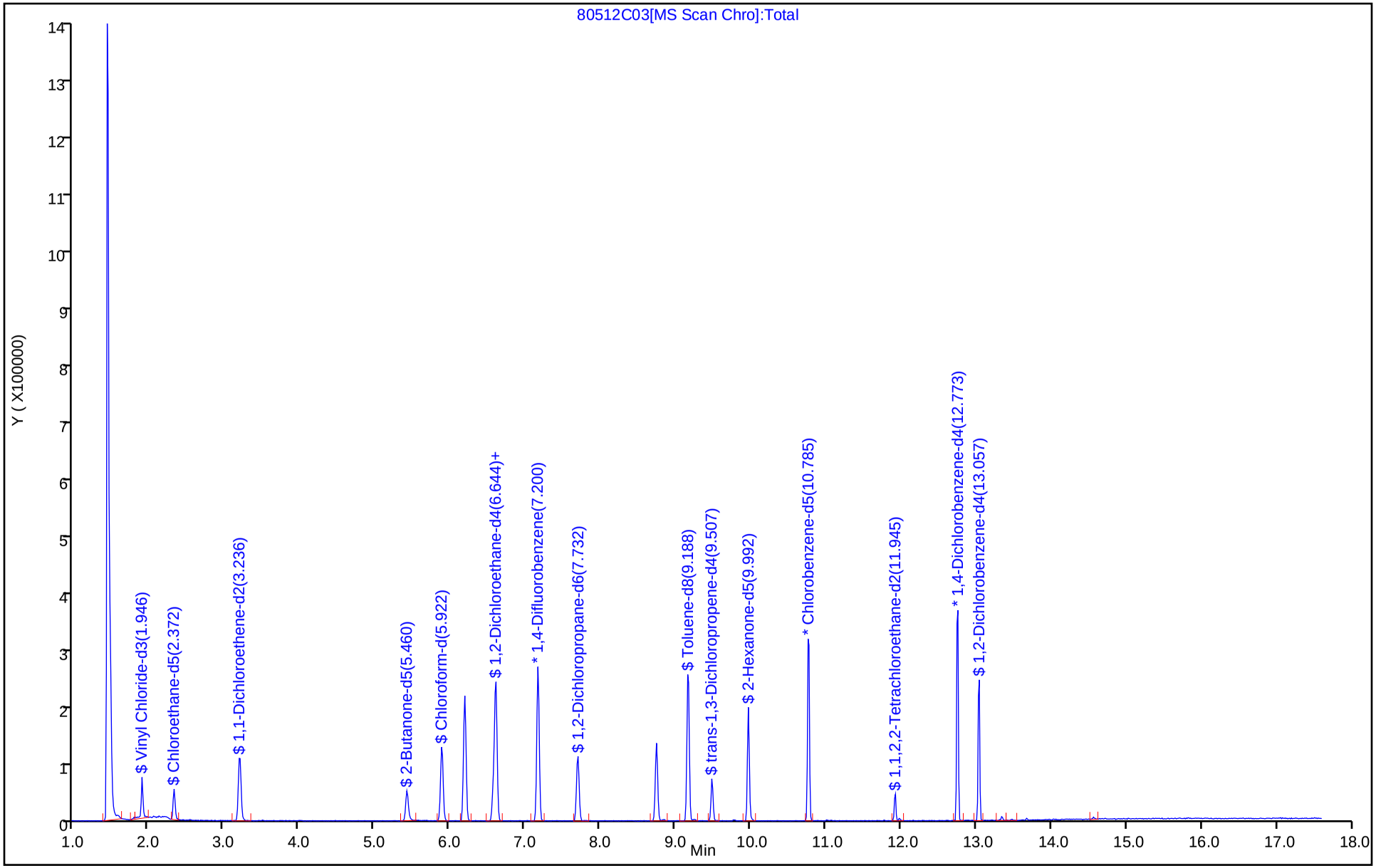
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 13-May-2016 08:50:19 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd8.i\8051216C.b\80512C03.D				
Injection Date:	12-May-2016 10:29:30	Inst. ID:	msd8.i	Operator:	ALL
Client ID:	VBLKRI	Lab ID:	VBLKRI		
Sample Info:	8051216C.b, VBLKRI				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-008

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 80512C04h

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/12/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-008

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 80512C04h

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/12/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VHBLK01

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RE05033-008
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 80512C04h
% Solids: Date Received:
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 05/12/2016
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) N Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume:
Cleanup Types: pH: 2 Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd8.i\8051216C.b\80512C04h.D		
Lab Sample ID:	RE05033-008	Client Sample ID:	VHBLK01
Injection Date:	12-May-2016 11:05:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd8.i
Sample Info:	8051216C.b, RE05033-008		
Method:	\\Organics\DD\chem\msd8.i\8051216C.b\TRACE-8.m		
Method Date:	12-May-2016 10:14:30	Quant Method:	ISTD
Calib Date:	09-May-2016 16:08:30	Calib File:	80509D06.D
Sample Type:	Client	ALS Bottle:	4
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	12-May-2016 12:48:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.674		ND			
2 Chloromethane	50.0		1.839		ND			
$ 3 Vinyl Chloride-d3	65.0	1.946	1.946	0.000	74738	5.5862	5.5861	
4 Vinyl Chloride	62.0		1.958		ND			
5 Bromomethane	94.0		2.289		ND			
$ 6 Chloroethane-d5	69.0	2.372	2.372	0.000	59743	5.6436	5.6435	
7 Chloroethane	64.0		2.396		ND			
8 Trichlorofluoromethane	101.0		2.680		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.236	3.248	-0.012	140399	4.7688	4.7688	
13 1,1-Dichloroethene	96.0		3.259		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.271		ND			
14 Acetone	43.0		3.295		ND			
15 Carbon Disulfide	76.0		3.543		ND			
16 Methyl Acetate	43.0		3.721		ND			
17 Methylene Chloride	84.0		3.851		ND			
20 Methyl tert-Butyl Ether	73.0		4.218		ND			
21 trans-1,2-Dichloroethene	96.0		4.218		ND			
23 1,1-Dichloroethane	63.0		4.762		ND			
$ 25 2-Butanone-d5	46.0	5.460	5.460	0.000	98733	43.204	43.204	
26 cis-1,2-Dichloroethene	96.0		5.531		ND			
28 2-Butanone	43.0		5.543		ND			
29 Bromochloromethane	128.0		5.839		ND			
$ 30 Chloroform-d	84.0	5.922	5.922	0.000	130259	5.2067	5.2067	Q
31 Chloroform	83.0		5.946		ND			
33 1,1,1-Trichloroethane	97.0		6.206		ND			
32 Cyclohexane	56.0		6.289		ND			
34 Carbon Tetrachloride	117.0		6.419		ND			

Report Date: 13-May-2016 08:50:22 AIM Revision: 1.0 26-Feb-2016 08:31:08
Data File: \\Organics\DD\chem\msd8.i\8051216C.b\80512C04h.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.608	6.608	0.000	47821	4.9404	4.9404	
$ 36 Benzene-d6	84.0	6.644	6.644	0.000	281320	5.9200	5.9200	
37 Benzene	78.0		6.691		ND			
39 1,2-Dichloroethane	62.0		6.703		ND			
* 41 1,4-Difluorobenzene	114.0	7.200	7.200	0.000	244420	5.0000	5.0000	
42 Trichloroethene	95.0		7.555		ND			
$ 44 1,2-Dichloropropane-d6	67.0	7.732	7.732	0.000	65366	5.0626	5.0625	
43 Methylcyclohexane	83.0		7.815		ND			
45 1,2-Dichloropropane	63.0		7.851		ND			
49 Bromodichloromethane	83.0		8.217		ND			
50 cis-1,3-Dichloropropene	75.0		8.821		ND			
51 4-Methyl-2-pentanone	43.0		9.034		ND			
$ 52 Toluene-d8	98.0	9.188	9.188	0.000	241653	5.8804	5.8804	
53 Toluene	91.0		9.282		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.507	9.507	0.000	41822	4.7191	4.7190	
55 trans-1,3-Dichloropropene	75.0		9.543		ND			
56 1,1,2-Trichloroethane	97.0		9.768		ND			
57 Tetrachloroethene	164.0		9.933		ND			
$ 58 2-Hexanone-d5	63.0	9.992	9.992	0.000	53321	36.855	36.855	
60 2-Hexanone	43.0		10.040		ND			
61 Dibromochloromethane	129.0		10.194		ND			
62 1,2-Dibromoethane	107.0		10.324		ND			
* 63 Chlorobenzene-d5	117.0	10.797	10.797	0.000	170477	5.0000	5.0000	
64 Chlorobenzene	112.0		10.821		ND			
65 Ethylbenzene	91.0		10.927		ND			
67 m+p-Xylenes	106.0		11.034		ND			
68 o-Xylene	106.0		11.400		ND			
69 Styrene	104.0		11.412		ND			
70 Bromoform	173.0		11.578		ND			
71 Isopropylbenzene	105.0		11.720		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.945	11.945	0.000	21117	4.2299	4.2298	
74 1,1,2,2-Tetrachloroethane	83.0		11.957		ND			
83 1,3-Dichlorobenzene	146.0		12.726		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.773	12.773	0.000	89613	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.785		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.057	13.057	0.000	64143	5.1610	5.1610	
89 1,2-Dichlorobenzene	146.0		13.069		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.613		ND			
91 1,2,4-Trichlorobenzene	180.0		14.193		ND			
94 1,2,3-Trichlorobenzene	180.0		14.560		ND			

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services

Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd8.i\8051216C.b\80512C04h.D		
Lab Sample ID:	RE05033-008	Client Sample ID:	VHBLK01
Injection Date:	12-May-2016 11:05:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd8.i
Sample Info:	8051216C.b, RE05033-008		
Method:	\\Organics\DD\chem\msd8.i\8051216C.b\TRACE-8.m		
Method Date:	12-May-2016 10:14:30	Quant Method:	ISTD
Calib Date:	09-May-2016 16:08:30	Calib File:	80509D06.D
Sample Type:	Client	ALS Bottle:	4
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	12-May-2016 12:48:30

Tentative Identified Compound Results

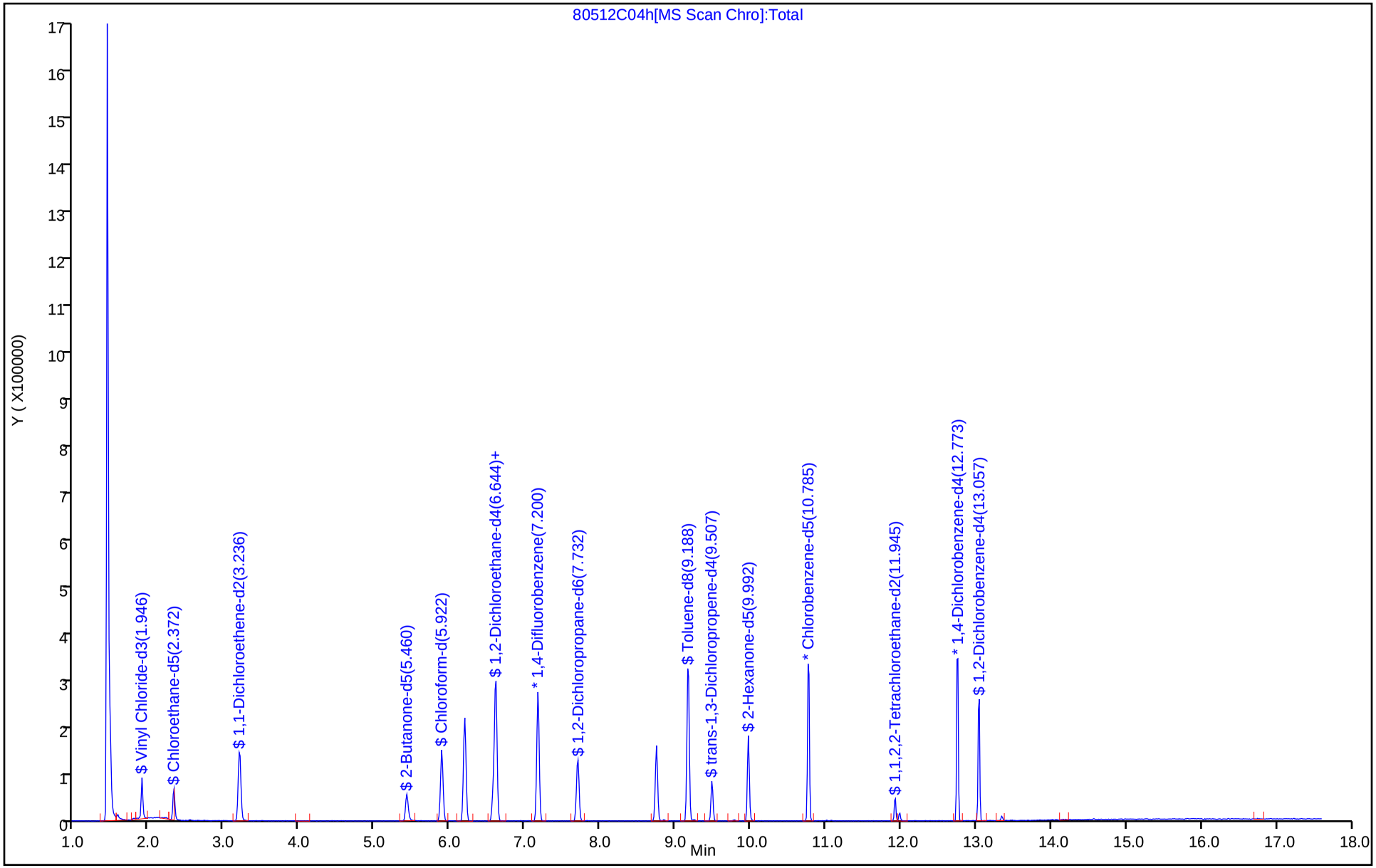
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 13-May-2016 08:50:22 AIM Revision: 1.0 26-Feb-2016 08:31:08

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd8.i\8051216C.b\80512C04h.D				
Injection Date:	12-May-2016 11:05:30	Inst. ID:	msd8.i	Operator:	ALL
Client ID:	VHBLK01	Lab ID:	RE05033-008		
Sample Info:	8051216C.b, RE05033-008				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VIBLK40

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12787-018D

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A12

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VIBLK40

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12787-018D

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A12

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VIBLK40

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RQ12787-018D
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A12
% Solids: Date Received:
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 05/09/2016
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) N Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume:
Cleanup Types: pH: Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A12.D		
Lab Sample ID:	VIBLK40	Client Sample ID:	VIBLK40
Injection Date:	09-May-2016 12:01:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, VIBLK40		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	12
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 16:02:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.701		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	56844	4.9682	4.9682	
4 Vinyl Chloride	62.0		1.986		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	39415	4.6323	4.6322	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	92722	3.5436	3.5436	
13 1,1-Dichloroethene	96.0		3.302		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.314		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.263		ND			
23 1,1-Dichloroethane	63.0		4.808		ND			
$ 25 2-Butanone-d5	46.0	5.508	5.496	0.012	106697	53.636	53.636	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.971	5.971	0.000	112947	4.7828	4.7828	Q
31 Chloroform	83.0		5.994		ND			
33 1,1,1-Trichloroethane	97.0		6.243		ND			
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 11-May-2016 18:34:04 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916.b\50509A12.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.647	6.646	0.000	50486	4.8490	4.8489	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	205154	4.8614	4.8614	
37 Benzene	78.0		6.729		ND			
39 1,2-Dichloroethane	62.0		6.741		ND			
* 41 1,4-Difluorobenzene	114.0	7.251	7.239	0.012	293964	5.0000	5.0000	
42 Trichloroethene	95.0		7.595		ND			
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	49952	4.5723	4.5722	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.077		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	165558	4.5615	4.5615	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	41885	4.4885	4.4884	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0		9.967		ND			
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	73291	46.726	46.726	
60 2-Hexanone	43.0		10.074		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	223419	5.0000	5.0000	
64 Chlorobenzene	112.0		10.844		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.425		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.959	0.012	26637	5.0286	5.0285	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	130437	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	66977	4.6832	4.6832	
89 1,2-Dichlorobenzene	146.0		13.086		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services
Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A12.D		
Lab Sample ID:	VIBLK40	Client Sample ID:	VIBLK40
Injection Date:	09-May-2016 12:01:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, VIBLK40		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	12
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 16:02:30

Tentative Identified Compound Results

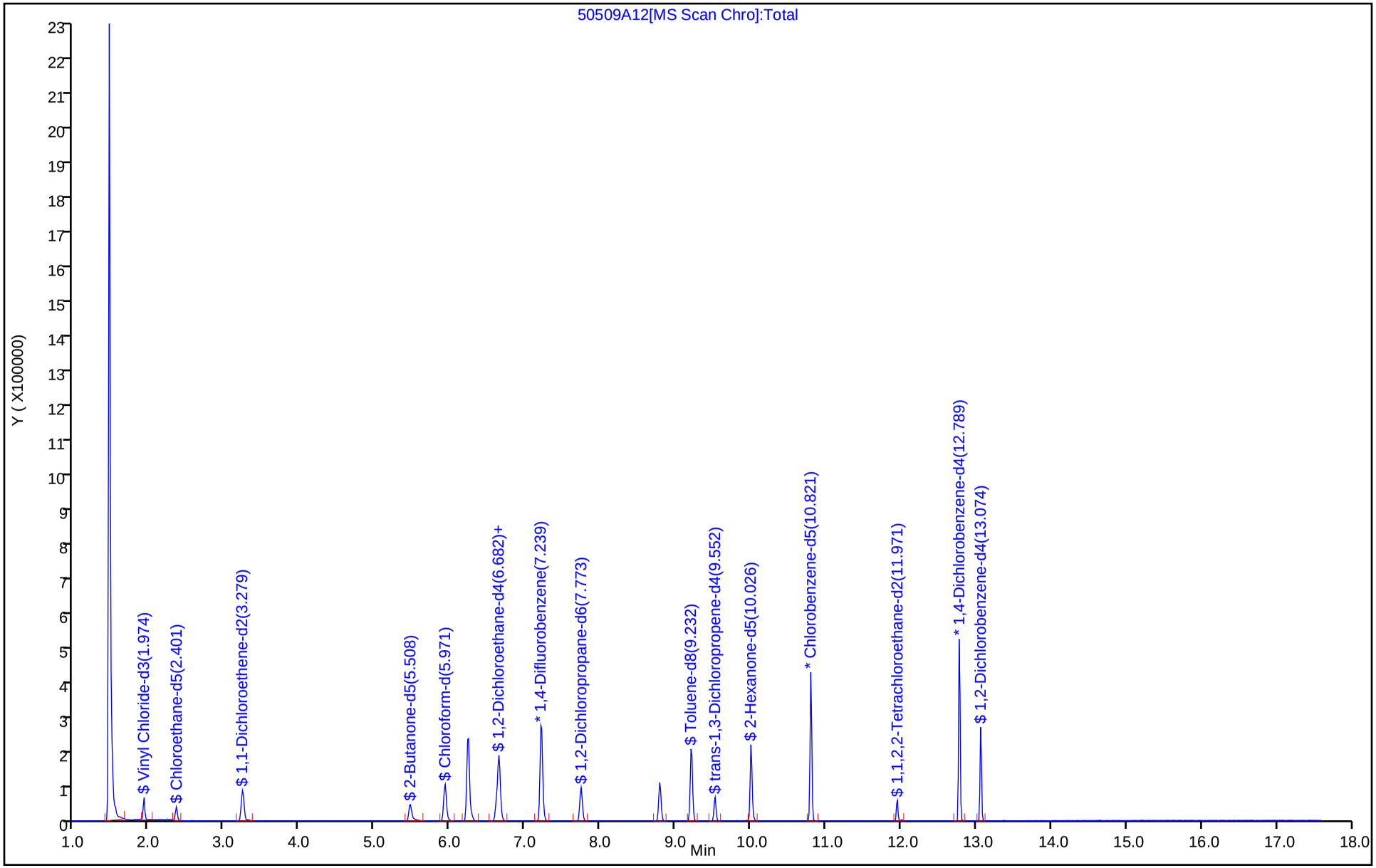
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 11-May-2016 18:34:04 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A12.D				
Injection Date:	09-May-2016 12:01:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VIBLK40	Lab ID:	VIBLK40		
Sample Info:	5050916, VIBLK40				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VIBLK41

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12787-018A

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A15

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VIBLK41

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12787-018A

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A15

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VIBLK41

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RQ12787-018A
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A15
% Solids: Date Received:
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 05/09/2016
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) N Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume:
Cleanup Types: pH: Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A15.D		
Lab Sample ID:	VIBLK41	Client Sample ID:	VIBLK41
Injection Date:	09-May-2016 13:09:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, VIBLK41		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	15
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:46:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.701		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	66847	5.8164	5.8164	
4 Vinyl Chloride	62.0		1.986		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	46913	5.4889	5.4888	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	107628	4.0949	4.0949	
13 1,1-Dichloroethene	96.0		3.302		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.314		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.263		ND			
23 1,1-Dichloroethane	63.0		4.808		ND			
$ 25 2-Butanone-d5	46.0	5.508	5.496	0.012	106106	53.100	53.100	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.971	5.971	0.000	116876	4.9271	4.9270	Q
31 Chloroform	83.0		5.994		ND			
33 1,1,1-Trichloroethane	97.0		6.243		ND			
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 11-May-2016 18:34:06 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916.b\50509A15.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.647	6.646	0.000	54203	5.1827	5.1827	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	209858	4.9330	4.9329	
37 Benzene	78.0		6.729		ND			
39 1,2-Dichloroethane	62.0		6.741		ND			
* 41 1,4-Difluorobenzene	114.0	7.251	7.239	0.012	295283	5.0000	5.0000	
42 Trichloroethene	95.0		7.595		ND			
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	52395	4.7574	4.7574	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.077		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	172531	4.7155	4.7154	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	47164	5.0136	5.0136	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0		9.967		ND			
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	82158	51.959	51.959	
60 2-Hexanone	43.0		10.074		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	225226	5.0000	5.0000	
64 Chlorobenzene	112.0		10.844		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.425		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.959	0.012	28193	5.2796	5.2795	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	134164	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	69932	4.7540	4.7540	Q
89 1,2-Dichlorobenzene	146.0		13.086		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services
Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A15.D		
Lab Sample ID:	VIBLK41	Client Sample ID:	VIBLK41
Injection Date:	09-May-2016 13:09:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, VIBLK41		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	15
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:46:30

Tentative Identified Compound Results

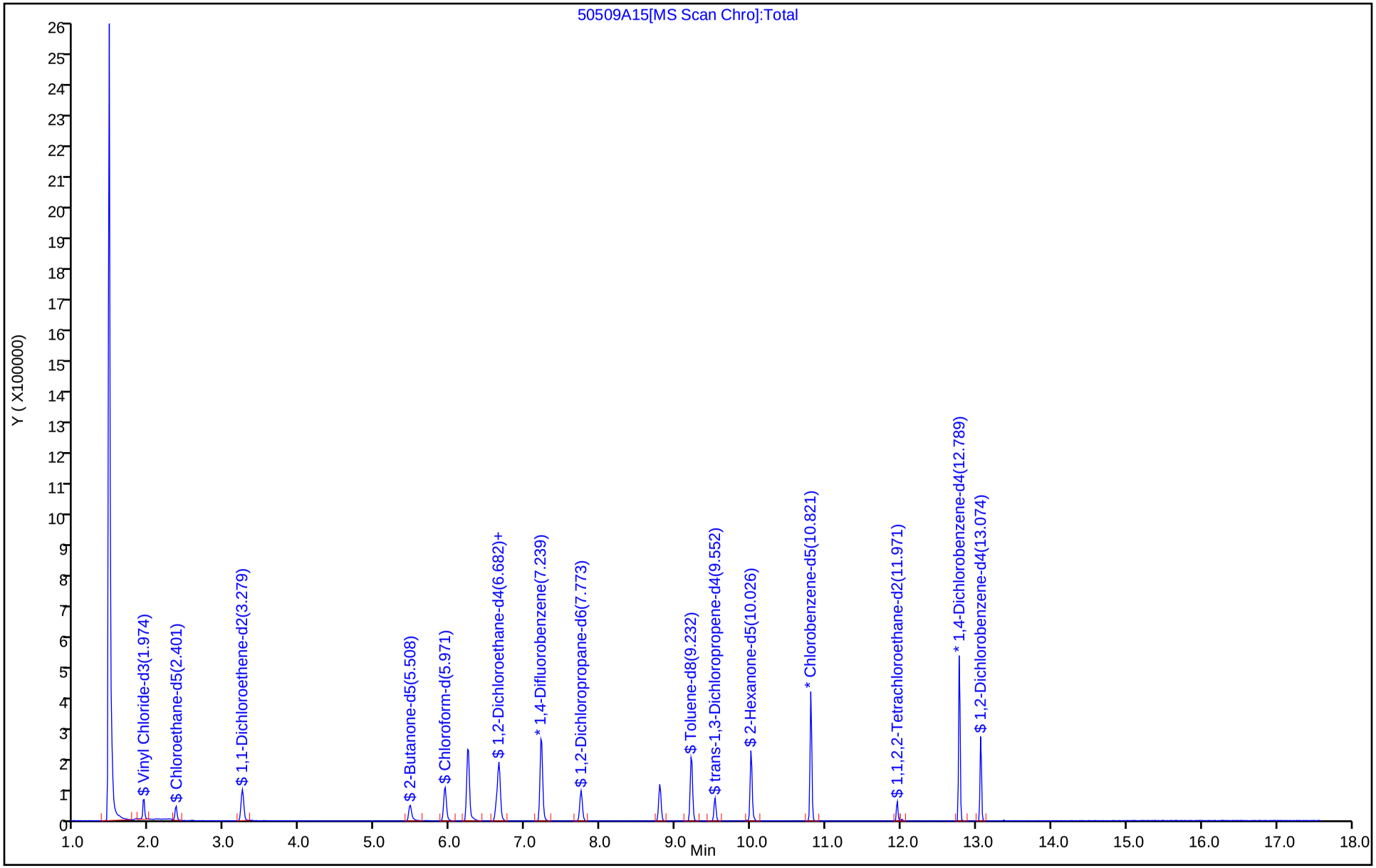
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 11-May-2016 18:34:06 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A15.D				
Injection Date:	09-May-2016 13:09:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VIBLK41	Lab ID:	VIBLK41		
Sample Info:	5050916, VIBLK41				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VIBLK42

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12787-018B

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A17

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VIBLK42

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12787-018B

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A17

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VIBLK42

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RQ12787-018B
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A17
% Solids: Date Received:
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 05/09/2016
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) N Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume:
Cleanup Types: pH: Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A17.D		
Lab Sample ID:	VIBLK42	Client Sample ID:	VIBLK42
Injection Date:	09-May-2016 13:54:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, VIBLK42		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	17
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:47:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.701		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	63226	5.6599	5.6598	
4 Vinyl Chloride	62.0		1.986		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	42882	5.1618	5.1618	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	93253	3.6503	3.6502	
13 1,1-Dichloroethene	96.0		3.302		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.314		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.263		ND			
23 1,1-Dichloroethane	63.0		4.808		ND			
$ 25 2-Butanone-d5	46.0	5.508	5.496	0.012	100599	51.795	51.795	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.970	5.971	-0.001	113780	4.9348	4.9347	Q
31 Chloroform	83.0		5.994		ND			
33 1,1,1-Trichloroethane	97.0		6.243		ND			
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 11-May-2016 18:34:06 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916.b\50509A17.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.646	0.000	52646	5.1789	5.1788	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	204040	4.8679	4.8678	
37 Benzene	78.0		6.729		ND			
39 1,2-Dichloroethane	62.0		6.741		ND			
* 41 1,4-Difluorobenzene	114.0	7.251	7.239	0.012	287012	5.0000	5.0000	
42 Trichloroethene	95.0		7.595		ND			
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	51235	4.7216	4.7215	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.077		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	167036	4.6335	4.6335	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	42509	4.5863	4.5863	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0		9.967		ND			
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	79401	50.966	50.966	
60 2-Hexanone	43.0		10.074		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	221911	5.0000	5.0000	
64 Chlorobenzene	112.0		10.844		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.425		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.959	0.012	28185	5.3569	5.3569	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	131080	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	68551	4.7698	4.7697	
89 1,2-Dichlorobenzene	146.0		13.086		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services
Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A17.D		
Lab Sample ID:	VIBLK42	Client Sample ID:	VIBLK42
Injection Date:	09-May-2016 13:54:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, VIBLK42		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	17
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:47:30

Tentative Identified Compound Results

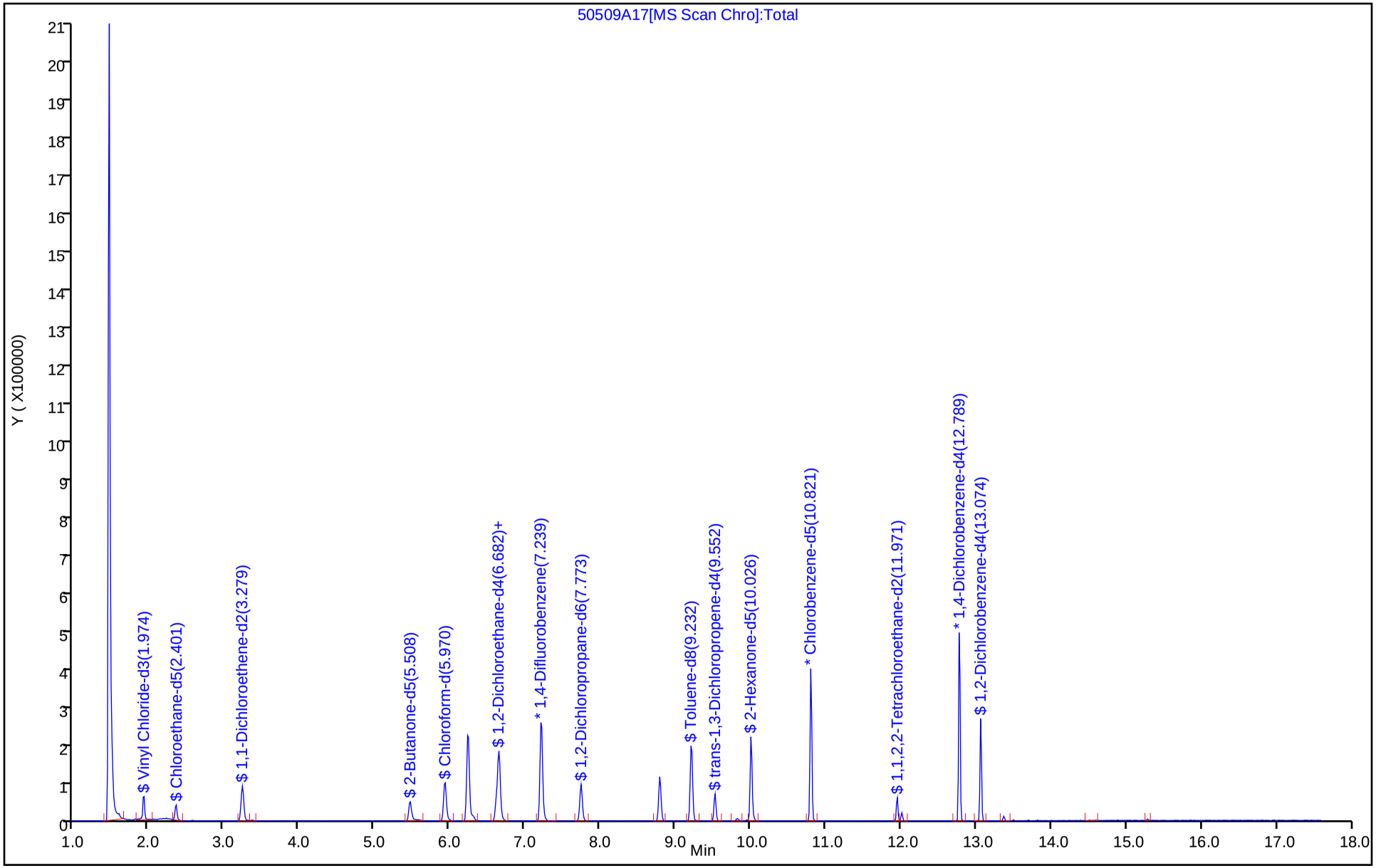
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 11-May-2016 18:34:06 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A17.D				
Injection Date:	09-May-2016 13:54:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VIBLK42	Lab ID:	VIBLK42		
Sample Info:	5050916, VIBLK42				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VIBLK43

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12787-018C

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A19

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VIBLK43

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RQ12787-018C

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A19

% Solids: _____ Date Received: _____

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VIBLK43

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035
Lab Code: EQI Case No.: 46115 MA No.: SDG No.: H4001
Analytical Method: Trace VOA Level: TRACE
Matrix: Water Lab Sample ID: RQ12787-018C
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A19
% Solids: Date Received:
GC Column: DB-624 ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 05/09/2016
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) N Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume:
Cleanup Types: pH: Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A19.D		
Lab Sample ID:	VIBLK43	Client Sample ID:	VIBLK43
Injection Date:	09-May-2016 14:40:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, VIBLK43		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	19
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:48:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.701		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.962	1.974	-0.012	59678	5.3999	5.3998	
4 Vinyl Chloride	62.0		1.986		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	44085	5.3638	5.3638	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	101034	3.9975	3.9974	
13 1,1-Dichloroethene	96.0		3.302		ND			
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.314		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.263		ND			
23 1,1-Dichloroethane	63.0		4.808		ND			
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	105220	54.758	54.758	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.971	5.971	0.000	116810	5.1208	5.1208	Q
31 Chloroform	83.0		5.994		ND			
33 1,1,1-Trichloroethane	97.0		6.243		ND			
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 11-May-2016 18:34:07 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916.b\50509A19.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.647	6.646	0.001	52639	5.2340	5.2340	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	216034	5.2870	5.2870	
37 Benzene	78.0		6.729		ND			
39 1,2-Dichloroethane	62.0		6.741		ND			
* 41 1,4-Difluorobenzene	114.0	7.251	7.239	0.012	283952	5.0000	5.0000	
42 Trichloroethene	95.0		7.595		ND			
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	52202	4.9348	4.9348	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.077		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	166892	4.7490	4.7489	
53 Toluene	91.0		9.315		ND			
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	41863	4.6332	4.6331	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0		9.967		ND			
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	76906	50.638	50.638	
60 2-Hexanone	43.0		10.074		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	216328	5.0000	5.0000	
64 Chlorobenzene	112.0		10.844		ND			
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.425		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.959	0.012	27526	5.3667	5.3667	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	126957	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	69908	5.0222	5.0221	
89 1,2-Dichlorobenzene	146.0		13.086		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services

Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A19.D		
Lab Sample ID:	VIBLK43	Client Sample ID:	VIBLK43
Injection Date:	09-May-2016 14:40:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, VIBLK43		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	Client	ALS Bottle:	19
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:48:30

Tentative Identified Compound Results

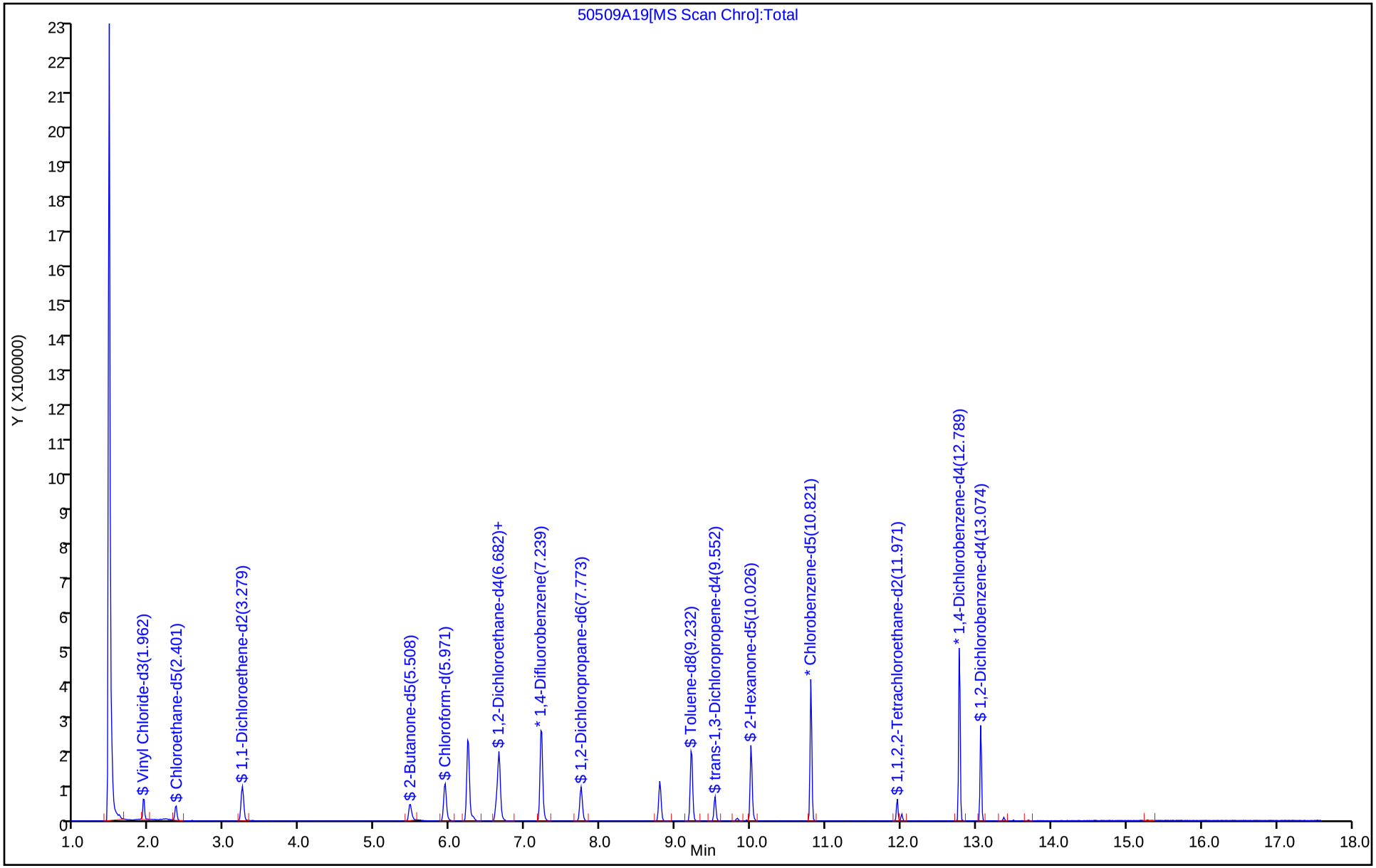
RT	Response	Amount ug/L	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ug/L

Report Date: 11-May-2016 18:34:07 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A19.D				
Injection Date:	09-May-2016 14:40:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	VIBLK43	Lab ID:	VIBLK43		
Sample Info:	5050916, VIBLK43				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



MS / MSD Data

LCS Data

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-005MS

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A16

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	3.2	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.6	
71-55-6	1,1,1-Trichloroethane	0.49	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	3.9	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	4.3	
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-005MS

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A16

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	3.9	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	24	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	3.9	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A16.D		
Lab Sample ID:	RE05033-005MS	Client Sample ID:	H4213MS
Injection Date:	09-May-2016 13:31:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, RE05033-005,MS		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	MS	ALS Bottle:	16
Cpnd Sublist:	std.sub	Spike List File:	watermsd.spk
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:47:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.701		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	62154	5.3627	5.3627	
4 Vinyl Chloride	62.0		1.986		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	44722	5.1886	5.1886	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	116705	4.4031	4.4030	
13 1,1-Dichloroethene	96.0	3.290	3.302	-0.012	35754	3.2224	3.2223	Q
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.314		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.263		ND			
23 1,1-Dichloroethane	63.0		4.808		ND			
$ 25 2-Butanone-d5	46.0	5.508	5.496	0.012	97785	48.526	48.526	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.970	5.971	-0.001	120235	5.0262	5.0261	
31 Chloroform	83.0	5.994	5.994	0.000	60011	2.6034	2.6033	
33 1,1,1-Trichloroethane	97.0	6.255	6.243	0.012	9135	0.48724	0.48720	Qe
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 11-May-2016 18:34:06 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916.b\50509A16.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.646	0.000	52932	5.0187	5.0187	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	219958	5.0150	5.0149	
37 Benzene	78.0	6.729	6.729	0.000	168854	3.8760	3.8760	
39 1,2-Dichloroethane	62.0		6.741		ND			
* 41 1,4-Difluorobenzene	114.0	7.239	7.239	0.000	297780	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	52586	4.3362	4.3361	
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	53800	4.7381	4.7381	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.077		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	179945	4.7703	4.7702	
53 Toluene	91.0	9.326	9.315	0.011	164827	3.9110	3.9110	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	46266	4.7703	4.7703	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0	9.967	9.967	0.000	288914	23.593	23.593	E
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	82600	50.668	50.668	
60 2-Hexanone	43.0		10.074		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	232207	5.0000	5.0000	
64 Chlorobenzene	112.0	10.856	10.844	0.012	107929	3.8729	3.8728	
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.425		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.959	0.012	29133	5.2916	5.2916	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	135096	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	74476	5.0280	5.0279	Q
89 1,2-Dichlorobenzene	146.0		13.086		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

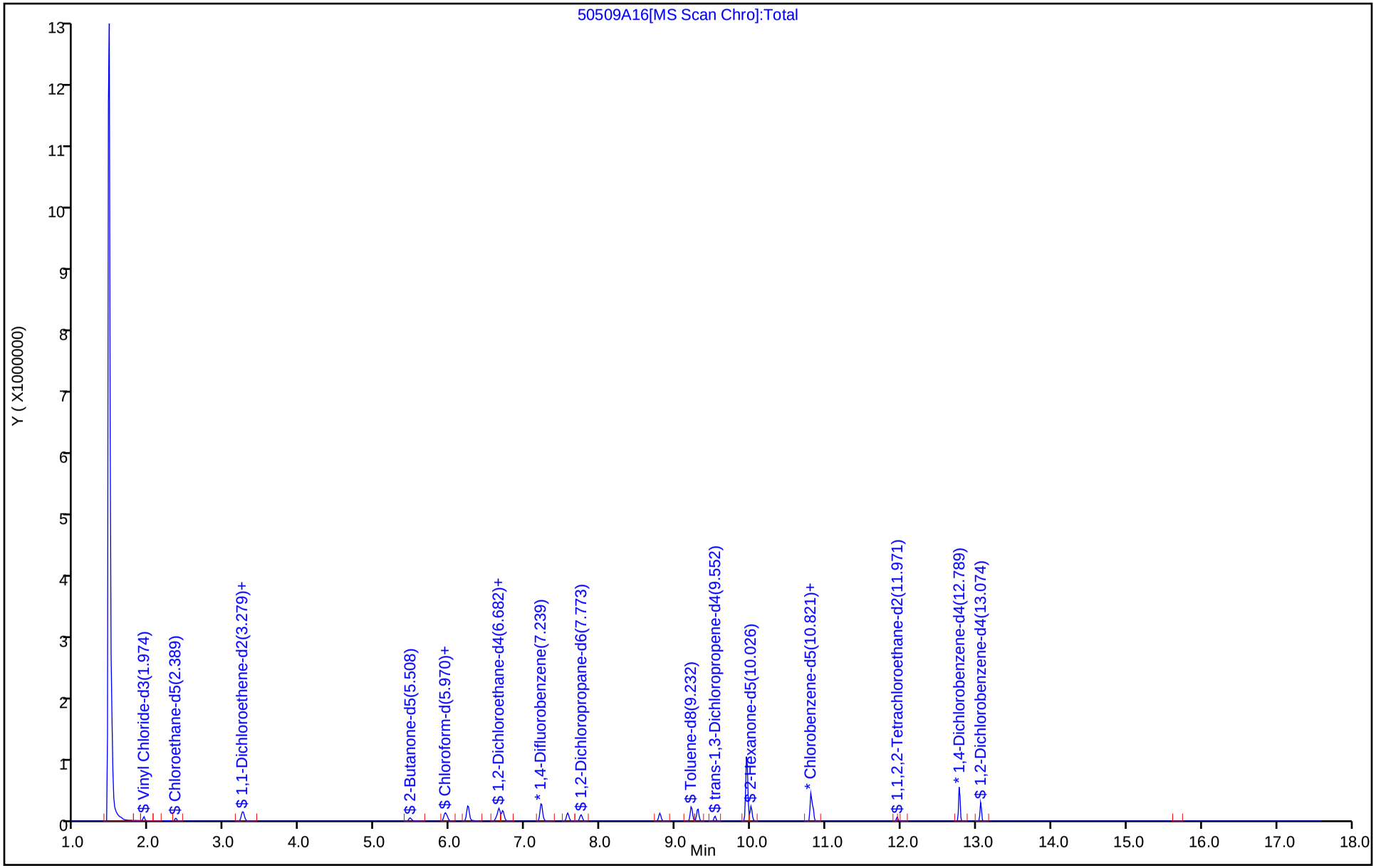
E - Compound Concentration Exceeds Max. Calibration Range

Q - Qualifier Signal(s) Fails Ratio Test

Report Date: 11-May-2016 18:34:06 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A16.D				
Injection Date:	09-May-2016 13:31:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	H4213MS	Lab ID:	RE05033-005MS		
Sample Info:	5050916, RE05033-005,MS				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213MSD

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-005MD

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A18

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	3.3	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.5	
71-55-6	1,1,1-Trichloroethane	0.51	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	4.2	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	4.6	
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213MSD

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: Trace VOA Level: TRACE

Matrix: Water Lab Sample ID: RE05033-005MD

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 50509A18

% Solids: _____ Date Received: 05/05/2016

GC Column: DB-624 ID: 0.25 (mm) Date Extracted: _____

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/09/2016

Extract Concentrated: (Y/N) _____ Extract Volume: _____ (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: PT

Heated Purge: (Y/N) N Injection Volume: _____ (uL)

Purge Volume: 25.0 (mL) pH: 2 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	4.1	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	24	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	4.2	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m, p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A18.D		
Lab Sample ID:	RE05033-005MD	Client Sample ID:	H4213MSD
Injection Date:	09-May-2016 14:17:30	Dil. Factor:	1.0
Operator:	ALL	Inst. ID:	msd5.i
Sample Info:	5050916, RE05033-005,MSD		
Method:	\\Organics\DD\chem\msd5.i\5050916.b\TRACE-5.m		
Method Date:	09-May-2016 08:28:30	Quant Method:	ISTD
Calib Date:	05-May-2016 15:28:30	Calib File:	50505A06.D
Sample Type:	MSD	ALS Bottle:	18
Cpnd Sublist:	std.sub	Spike List File:	watermsd.spk
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vo	25.000	Purge Volume in ML
Cpnd Variable		Local Cpnd Variable

Column1:	DB-624 (0.25 mm)	Detector:	MS Scan
Data Reviewer:	all	Review Date:	09-May-2016 15:48:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.701		ND			
2 Chloromethane	50.0		1.856		ND			
$ 3 Vinyl Chloride-d3	65.0	1.974	1.974	0.000	59424	5.1453	5.1452	
4 Vinyl Chloride	62.0		1.986		ND			
5 Bromomethane	94.0		2.318		ND			
$ 6 Chloroethane-d5	69.0	2.401	2.401	0.000	45832	5.3362	5.3361	
7 Chloroethane	64.0		2.425		ND			
8 Trichlorofluoromethane	101.0		2.698		ND			
$ 12 1,1-Dichloroethene-d2	63.0	3.279	3.279	0.000	121230	4.5899	4.5899	
13 1,1-Dichloroethene	96.0	3.302	3.302	0.000	36265	3.2800	3.2799	Q
11 1,1,2-Trichloro-1,2,2-trifluo	101.0		3.314		ND			
14 Acetone	43.0		3.326		ND			
15 Carbon Disulfide	76.0		3.575		ND			
16 Methyl Acetate	43.0		3.753		ND			
17 Methylene Chloride	84.0		3.895		ND			
20 Methyl tert-Butyl Ether	73.0		4.251		ND			
21 trans-1,2-Dichloroethene	96.0		4.263		ND			
23 1,1-Dichloroethane	63.0		4.808		ND			
$ 25 2-Butanone-d5	46.0	5.496	5.496	0.000	111524	55.539	55.539	
26 cis-1,2-Dichloroethene	96.0		5.567		ND			
28 2-Butanone	43.0		5.579		ND			
29 Bromochloromethane	128.0		5.876		ND			
$ 30 Chloroform-d	84.0	5.970	5.971	-0.001	116705	4.8958	4.8958	
31 Chloroform	83.0	5.994	5.994	0.000	56984	2.4808	2.4807	
33 1,1,1-Trichloroethane	97.0	6.243	6.243	0.000	9147	0.51497	0.51490	Q
32 Cyclohexane	56.0		6.326		ND			
34 Carbon Tetrachloride	117.0		6.469		ND			

Report Date: 11-May-2016 18:34:07 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\DD\chem\msd5.i\5050916.b\50509A18.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 38 1,2-Dichloroethane-d4	65.0	6.646	6.646	0.000	53075	5.0501	5.0500	
$ 36 Benzene-d6	84.0	6.682	6.682	0.000	215490	5.1859	5.1858	
37 Benzene	78.0	6.741	6.729	0.012	174510	4.2283	4.2283	
39 1,2-Dichloroethane	62.0		6.741		ND			
* 41 1,4-Difluorobenzene	114.0	7.251	7.239	0.012	296733	5.0000	5.0000	
42 Trichloroethene	95.0	7.595	7.595	0.000	52425	4.5629	4.5629	
$ 44 1,2-Dichloropropane-d6	67.0	7.773	7.773	0.000	53088	4.9350	4.9350	
43 Methylcyclohexane	83.0		7.856		ND			
45 1,2-Dichloropropane	63.0		7.892		ND			
49 Bromodichloromethane	83.0		8.259		ND			
50 cis-1,3-Dichloropropene	75.0		8.864		ND			
51 4-Methyl-2-pentanone	43.0		9.077		ND			
$ 52 Toluene-d8	98.0	9.232	9.232	0.000	170873	4.7813	4.7812	
53 Toluene	91.0	9.326	9.315	0.011	163295	4.0898	4.0897	
$ 54 trans-1,3-Dichloropropene-d4	79.0	9.552	9.552	0.000	45544	4.9566	4.9566	
55 trans-1,3-Dichloropropene	75.0		9.587		ND			
56 1,1,2-Trichloroethane	97.0		9.801		ND			
57 Tetrachloroethene	164.0	9.967	9.967	0.000	277040	23.879	23.879	E
$ 58 2-Hexanone-d5	63.0	10.026	10.026	0.000	79056	51.187	51.187	
60 2-Hexanone	43.0		10.074		ND			
61 Dibromochloromethane	129.0		10.228		ND			
62 1,2-Dibromoethane	107.0		10.358		ND			
* 63 Chlorobenzene-d5	117.0	10.821	10.821	0.000	219992	5.0000	5.0000	
64 Chlorobenzene	112.0	10.856	10.844	0.012	110364	4.1801	4.1801	
65 Ethylbenzene	91.0		10.951		ND			
67 m+p-Xylenes	106.0		11.070		ND			
68 o-Xylene	106.0		11.425		ND			
69 Styrene	104.0		11.437		ND			
70 Bromoform	173.0		11.603		ND			
71 Isopropylbenzene	105.0		11.746		ND			
$ 72 1,1,2,2-Tetrachloroethane-d2	84.0	11.971	11.959	0.012	28022	5.3724	5.3724	
74 1,1,2,2-Tetrachloroethane	83.0		11.983		ND			
83 1,3-Dichlorobenzene	146.0		12.742		ND			
* 85 1,4-Dichlorobenzene-d4	152.0	12.789	12.789	0.000	131883	5.0000	5.0000	
86 1,4-Dichlorobenzene	146.0		12.813		ND			
$ 87 1,2-Dichlorobenzene-d4	152.0	13.074	13.074	0.000	70645	4.8856	4.8855	
89 1,2-Dichlorobenzene	146.0		13.086		ND			
90 1,2-Dibromo-3-chloropropane	75.0		13.643		ND			
91 1,2,4-Trichlorobenzene	180.0		14.212		ND			
94 1,2,3-Trichlorobenzene	180.0		14.580		ND			

QC Flag Legend

Processing Flags

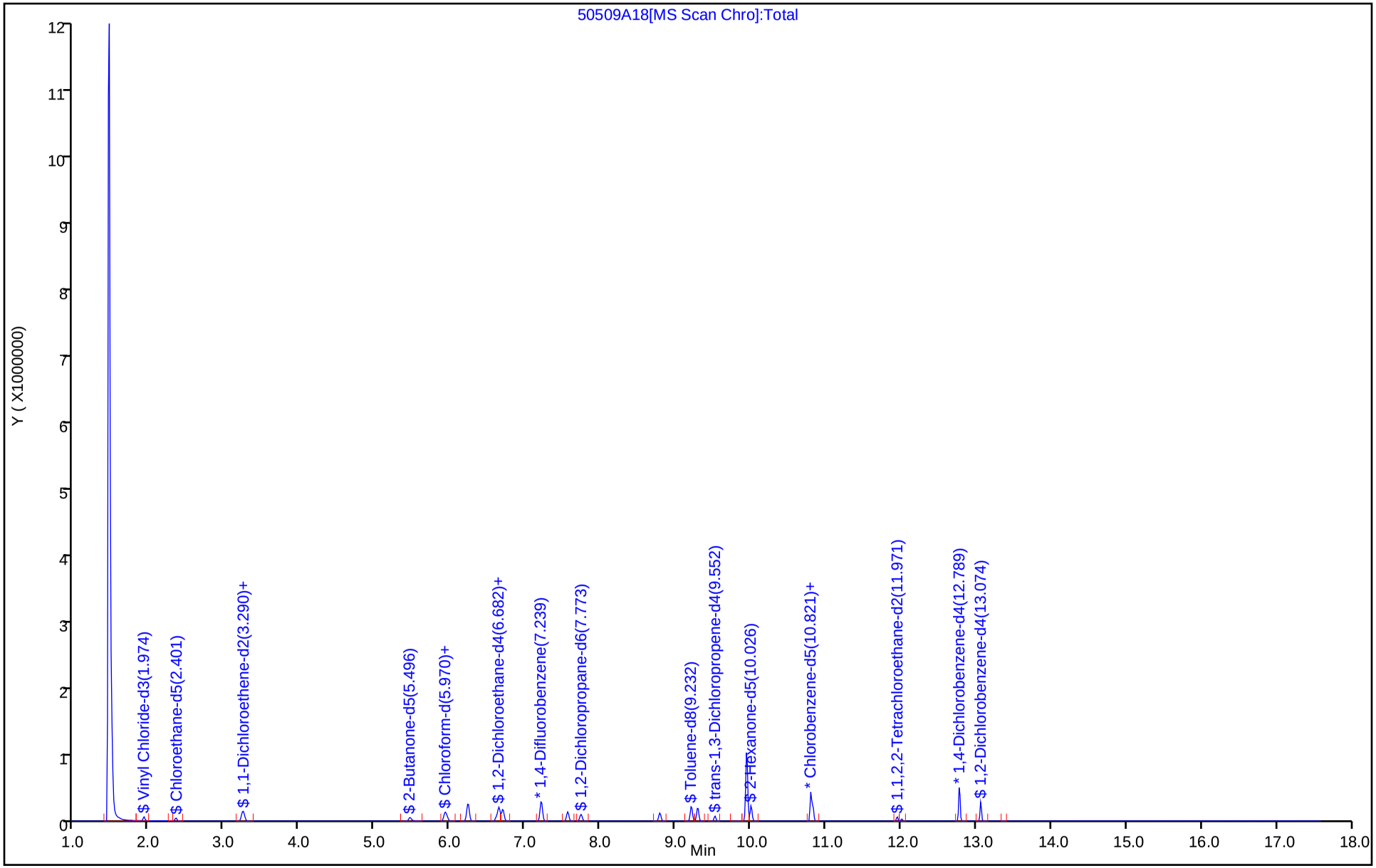
E - Compound Concentration Exceeds Max. Calibration Range

Q - Qualifier Signal(s) Fails Ratio Test

Report Date: 11-May-2016 18:34:07 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd5.i\5050916.b\50509A18.D				
Injection Date:	09-May-2016 14:17:30	Inst. ID:	msd5.i	Operator:	ALL
Client ID:	H4213MSD	Lab ID:	RE05033-005MD		
Sample Info:	5050916, RE05033-005,MSD				
Purge Vol.	25 ML	Dil. Factor:	1.0		
Column1:	DB-624 (0.25 mm)	Detector:	MS Scan		



TRACE-VOLATILE
Miscellaneous Data

Run Logs

Standard Preparation Logs

Report Date: 06-May-2016 10:13:19 AIM Revision: 1.0 26-Feb-2016 08:31:08

Batch: 12611
ICAL: 12610
IS: 14210
SS: 8247

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\DD\chem\msd5.i\5050516.b
Inst. ID: msd5.i Method: TRACE-5
Matrix: Water Operator: ALL
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 30

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	ICal Lvl	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
1	BFBOW	05-May-2016 13:36:30	50505A01.D	BFB		BFBOW	Water	1	all				Yes			14214		BFBSOM-5
2	VSTD020OW	05-May-2016 13:58:30	50505A02.D	Ical	5	VSTD020OW	Water	1	std							8285		TRACE-5
3	VSTD010OW	05-May-2016 14:20:30	50505A03.D	Ical	4	VSTD010OW	Water	1	std							8284		TRACE-5
4	VSTD005OW	05-May-2016 14:43:30	50505A04.D	Ical	3	VSTD005OW	Water	1	std							8283		TRACE-5
5	VSTD001OW	05-May-2016 15:06:30	50505A05.D	Ical	2	VSTD001OW	Water	1	std							8282		TRACE-5
6	VSTD0.5OW	05-May-2016 15:28:30	50505A06.D	Ical	1	VSTD0.5OW	Water	1	std							8281		TRACE-5
7	VBLKOW	05-May-2016 16:02:30	50505A07.D	BLANK		VBLKOW	Water	1	std									TRACE-5
8	RE04034-002	05-May-2016 16:36:30	50505A08.D	Client		BCZ16	Water	1	std		Yes				<=2			TRACE-5
9	RE04034-004	05-May-2016 16:59:30	50505A09.D	Client		BCZ18	Water	1	std		Yes	1						TRACE-5
10	RE04034-007	05-May-2016 17:21:30	50505A10.D	Client		BCZ20	Water	1	std		Yes	1						TRACE-5
11	RE04034-008	05-May-2016 17:44:30	50505A11.D	Client		BCZ21	Water	1	std		Yes							TRACE-5
12	RD27011-008	05-May-2016 18:07:30	50505A12.D	Client		BCZ03	Water	1	std		Yes							TRACE-5
13	RD27011-011	05-May-2016 18:29:30	50505A13.D	Client		BCZ06	Water	1	std		Yes							TRACE-5
14	RD27011-013	05-May-2016 18:52:30	50505A14.D	Client		BCZ08	Water	1	std		Yes							TRACE-5
15	RD27011-014	05-May-2016 19:14:30	50505A15.D	Client		BCZ09	Water	1	std		Yes							TRACE-5
16	RD27011-017	05-May-2016 19:37:30	50505A16.D	Client		BCZ12	Water	1	std		Yes							TRACE-5
17	RD27011-019	05-May-2016 19:59:30	50505A17.D	Client		BCZ14	Water	1	std		Yes							TRACE-5
18	RD27011-002RE	05-May-2016 20:22:30	50505A18.D	Client		BCYZ9RE	Water	1	std		Yes	11						TRACE-5
19	RD27011-009	05-May-2016 20:44:30	50505A19.D	Client		BCZ04	Water	1	std		Yes	2						TRACE-5
20	RD27011-012	05-May-2016 21:07:30	50505A20.D	Client		BCZ07	Water	1	std		Yes							TRACE-5
21	RD27011-015	05-May-2016 21:29:30	50505A21.D	Client		BCZ10	Water	1	std		Yes							TRACE-5
22	RD27011-016	05-May-2016 21:52:30	50505A22.D	Client		BCZ11	Water	1	std		Yes	1						TRACE-5
23	RD27011-018	05-May-2016 22:15:30	50505A23.D	Client		BCZ13	Water	1	std		Yes	2						TRACE-5
24	RD28003-011RE	05-May-2016 22:37:30	50505A24.D	Client		BC471RE	Water	1	std		Yes							TRACE-5
25	RD28003-009	05-May-2016 23:00:30	50505A25.D	Client		BC469	Water	1	std		Yes	1						TRACE-5
26	RD28003-009MS	05-May-2016 23:22:30	50505A26.D	MS		BC469MS	Water	1	std	watermsd						8142		TRACE-5
27	RD28003-009MD	05-May-2016 23:45:30	50505A27.D	MSD		BC469MSD	Water	1	std	watermsd						8142		TRACE-5
28	RD28003-010	06-May-2016 00:08:30	50505A28.D	Client			Water	1	std		Yes	2					NR	TRACE-5
29	VSTD005QZ	06-May-2016 00:30:30	50505A29.D	Ccv		VSTD005QZ	Water	1	std							8283		TRACE-5e
30	VSTD005QZ	06-May-2016 00:53:30	50505A30.D	Client			Water	1	std		Yes	22						TRACE-5

Report Date: 10-May-2016 10:58:54 AIM Revision: 1.0 26-Feb-2016 08:31:08

Batch: 12787
ICAL: 12610
IS: 14210
SS: 8247

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\DD\chem\msd5.i\5050916.b
Inst. ID: msd5.i Method: TRACE-5
Matrix: Water Operator: ALL
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 30

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
1	BFBPU	09-May-2016 07:17:30	50509A01.D	BFB	BFBPU	Water	1	all				Yes			14214		BFBSOM-5
2	VSTD005PU	09-May-2016 07:36:30	50509A02.D	Ccv	VSTD005PU	Water	1	std							F		TRACE-5
3	VSTD005PU	09-May-2016 08:09:30	50509A03.D	Ccv	VSTD005PU	Water	1	std							8304		TRACE-5
4	VBLKPU	09-May-2016 08:43:30	50509A04.D	BLANK	VBLKPU	Water	1	std									TRACE-5
5	RE05006-022	09-May-2016 09:20:30	50509A05.D	Client	D9WP2	Water	1	std		Yes				<=2			TRACE-5
6	RE05006-023	09-May-2016 09:43:30	50509A06.D	Client	D9WP3	Water	1	std		Yes	5			<=2			TRACE-5
7	RE05006-024	09-May-2016 10:06:30	50509A07.D	Client	D9WP4	Water	1	std		Yes	8			<=2			TRACE-5
8	RE05006-025	09-May-2016 10:29:30	50509A08.D	Client	D9WP5	Water	1	std		Yes				2.5			TRACE-5
9	RE05006-026	09-May-2016 10:52:30	50509A09.D	Client	D9WQ3	Water	1	std		Yes	4			2.5			TRACE-5
10	RE05006-027	09-May-2016 11:14:30	50509A10.D	Client	D9WQ6	Water	1	std		Yes	3			2.5			TRACE-5
11	RE05033-003	09-May-2016 11:38:30	50509A11.D	Client	H4202	Water	1	std		Yes				<=2		R5X	TRACE-5
12	VIBLK40	09-May-2016 12:01:30	50509A12.D	Client	VIBLK40	Water	1	std		Yes							TRACE-5
13	RE05033-005DL	09-May-2016 12:23:30	50509A13.D	Client	H4213DL	Water	5	std		Yes	1			<=2			TRACE-5
14	RE05033-005	09-May-2016 12:46:30	50509A14.D	Client	H4213	Water	1	std		Yes				<=2			TRACE-5
15	VIBLK41	09-May-2016 13:09:30	50509A15.D	Client	VIBLK41	Water	1	std		Yes							TRACE-5
16	RE05033-005MS	09-May-2016 13:31:30	50509A16.D	MS	H4213MS	Water	1	std	watermsd					<=2	8142		TRACE-5
17	VIBLK42	09-May-2016 13:54:30	50509A17.D	Client	VIBLK42	Water	1	std		Yes							TRACE-5
18	RE05033-005MD	09-May-2016 14:17:30	50509A18.D	MSD	H4213MSD	Water	1	std	watermsd					<=2	8142		TRACE-5
19	VIBLK43	09-May-2016 14:40:30	50509A19.D	Client	VIBLK43	Water	1	std		Yes							TRACE-5
20	RE06040-002	09-May-2016 15:02:30	50509A20.D	Client	D9WP7	Water	1	std		Yes	3			<=2			TRACE-5
21	RE06040-003	09-May-2016 15:25:30	50509A21.D	Client	D9WP8	Water	1	std		Yes				2.5			TRACE-5
22	RE06040-004	09-May-2016 15:47:30	50509A22.D	Client	D9WP9	Water	1	std		Yes				<=2			TRACE-5
23	RE06040-006	09-May-2016 16:10:30	50509A23.D	Client	D9WM0	Water	1	std		Yes				2.5			TRACE-5
24	RE06040-007	09-May-2016 16:33:30	50509A24.D	Client	D9WM1	Water	1	std		Yes				<=2			TRACE-5
25	RE06040-001	09-May-2016 16:56:30	50509A25.D	Client	D9WP6	Water	1	std		Yes	12			<=2			TRACE-5
26	VIBLK44	09-May-2016 17:18:30	50509A26.D	Client	VIBLK44	Water	1	std		Yes							TRACE-5
27	RE06040-005	09-May-2016 17:41:30	50509A27.D	Client	D9WQ2	Water	1	std		Yes	9			2.5			TRACE-5
28	VSTD005TT	09-May-2016 18:03:30	50509A28.D	Ccv	VSTD005TT	Water	1	std									TRACE-5e
29	VSTD005TT	09-May-2016 18:26:30	50509A29.D	Ccv	VSTD005TT	Water	1	std									TRACE-5e
30	VSTD005TT	09-May-2016 19:04:30	50509A30.D	Ccv	VSTD005TT	Water	1	std							8304		TRACE-5e

Batch: 12835
ICAL: 12610
Tune: 12787
IS: 14210
SS: 8247

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\DD\chem\msd5.i\5050916B.b
Inst. ID: msd5.i Method: TRACE-5
Matrix: Water Operator: JJG
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 30

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
30	VSTD005TT	09-May-2016 19:04:30	50509A30.D	Ccv	VSTD005TT	Water	1	std							8304		TRACE-5
1	VBLKTT	09-May-2016 19:43:30	50509B01.D	BLANK	VBLKTT	Water	1	std									TRACE-5
2	RD27011-010DL	09-May-2016 20:31:30	50509B02.D	Client	BCZ05DL	Water	5	std		Yes	3			<=2			TRACE-5
3	RE04048-011RE	09-May-2016 20:53:30	50509B03.D	Client	H1A11RE	Water	1	std		Yes							TRACE-5
4	RE05033-001	09-May-2016 21:16:30	50509B04.D	Client	H4001	Water	1	std		Yes							TRACE-5
5	RE05033-002	09-May-2016 21:39:30	50509B05.D	Client	H4008	Water	1	std		Yes							TRACE-5
6	RE05006-014	09-May-2016 22:02:30	50509B06.D	Client	D9WQ5	Water	1	std		Yes							TRACE-5
7	RE04034-001	09-May-2016 22:24:30	50509B07.D	Client	BCZ15	Water	1	std		Yes	2						TRACE-5
8	RE04034-003	09-May-2016 22:47:30	50509B08.D	Client	BCZ17	Water	1	std		Yes							TRACE-5
9	RE04034-005	09-May-2016 23:10:30	50509B09.D	Client	BCZ19	Water	1	std		Yes	2						TRACE-5
10	RE04034-009	09-May-2016 23:34:30	50509B10.D	Client	BCZ22	Water	1	std		Yes							TRACE-5
11	RE05006-001	09-May-2016 23:56:30	50509B11.D	Client	D9WM2	Water	1	std		Yes							TRACE-5
12	RE05006-002	10-May-2016 00:19:30	50509B12.D	Client	D9WM3	Water	1	std		Yes							TRACE-5
13	RE05006-003RE	10-May-2016 00:41:30	50509B13.D	Client	D9WM4RE	Water	1	std		Yes							TRACE-5
14	RE05006-004	10-May-2016 01:04:30	50509B14.D	Client	D9WN1	Water	1	std		Yes							TRACE-5
15	RE05006-005	10-May-2016 01:27:30	50509B15.D	Client	D9WN4	Water	1	std		Yes							TRACE-5
16	RE05006-009	10-May-2016 01:49:30	50509B16.D	Client	D9WN8	Water	1	std		Yes							TRACE-5
17	RE05006-010	10-May-2016 02:12:30	50509B17.D	Client	D9WN9	Water	1	std		Yes				2.5			TRACE-5
18	RE05006-012	10-May-2016 02:34:30	50509B18.D	Client	D9WP1	Water	1	std		Yes				2.5			TRACE-5
19	RE05006-013	10-May-2016 02:57:30	50509B19.D	Client	D9WQ0	Water	1	std		Yes	1			2.5			TRACE-5
20	RE05006-011DL	10-May-2016 03:20:30	50509B20.D	Client	D9WP0DL	Water	20	std		Yes				<=2			TRACE-5
21	RE05033-004	10-May-2016 03:43:30	50509B21.D	Client	H4211	Water	1	std		Yes				<=2			TRACE-5
22	RE05033-006	10-May-2016 04:05:30	50509B22.D	Client	H4217	Water	1	std		Yes				<=2			TRACE-5
23	RE05033-007	10-May-2016 04:28:30	50509B23.D	Client	H4218	Water	1	std		Yes				<=2			TRACE-5
24	VSTD005QD	10-May-2016 04:51:30	50509B24.D	Ccv	VSTD005QD	Water	1	std							8306		TRACE-5e
25	VSTD005QD	10-May-2016 05:13:30	50509B25.D	Ccv	VSTD005QD	Water	1	std									TRACE-5e

Report Date: 11-May-2016 11:19:43 AIM Revision: 1.0 26-Feb-2016 08:31:08

Batch: 12874
ICAL: 12610
IS: 14210
SS: 8247/8305

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\DD\chem\msd5.i\5051016.b
Inst. ID: msd5.i Method: TRACE-5
Matrix: Water Operator: ALL
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 30

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
1	BFBQF	10-May-2016 07:58:30	50510A01.D	BFB	BFBQF	Water	1	all				Yes			14214		BFBSOM-5
2	VSTD005QF	10-May-2016 08:18:30	50510A02.D	Ccv	VSTD005QF	Water	1	std							F		TRACE-5
3	VSTD005QF	10-May-2016 08:54:30	50510A03.D	Ccv	VSTD005QF	Water	1	std							8309		TRACE-5
4	VBLKQF	10-May-2016 09:28:30	50510A04.D	BLANK	VBLKQF	Water	1	std									TRACE-5
5	RE05006-006	10-May-2016 10:12:30	50510A05.D	Client		Water	20	std		Yes	6					NR	TRACE-5
6	RE05006-007	10-May-2016 10:35:30	50510A06.D	Client		Water	5	std		Yes	13					NR	TRACE-5
7	RE05006-008	10-May-2016 10:58:30	50510A07.D	Client		Water	5	std		Yes	17					NR	TRACE-5
8	RE05006-018	10-May-2016 11:20:30	50510A08.D	Client	D9WL5	Water	1	std		Yes	5			<=2		R5X	TRACE-5
9	RE06040-008	10-May-2016 11:43:30	50510A09.D	Client		Water	100	std		Yes	2					NR	TRACE-5
10	RE06040-009DL	10-May-2016 12:05:30	50510A10.D	Client	D9WM6DL	Water	5	std		Yes				<=2		R1X	TRACE-5
11	RE06040-010	10-May-2016 12:28:30	50510A11.D	Client		Water	10	std		Yes	10					NR	TRACE-5
12	RE06040-011	10-May-2016 12:51:30	50510A12.D	Client		Water	100	std		Yes	2					NR	TRACE-5
13	RE06040-012	10-May-2016 13:14:30	50510A13.D	Client	D9WM9	Water	20	std		Yes				<=2		matrix	TRACE-5
14	RE06040-013DL	10-May-2016 13:37:30	50510A14.D	Client	D9WN0DL	Water	20	std		Yes	2			<=2			TRACE-5
15	RE06040-014	10-May-2016 14:00:30	50510A15.D	Client	D9WN2	Water	20	std		Yes	6			<=2		matrix	TRACE-5
16	RE06040-016	10-May-2016 14:23:30	50510A16.D	Client	D9WQ4	Water	1	std		Yes	1			<=2			TRACE-5
17	RE06040-015	10-May-2016 14:45:30	50510A17.D	Client	D9WN3	Water	1	std		Yes	3			<=2			TRACE-5
18	RE05033-003DL	10-May-2016 15:08:30	50510A18.D	Client	H4202DL	Water	5	std		Yes	6			<=2			TRACE-5
19	RE05006-018DL	10-May-2016 15:31:30	50510A19.D	Client	D9WL5DL	Water	5	std		Yes	1						TRACE-5
20	RE05006-006	10-May-2016 15:53:30	50510A20.D	Client	D9WN5	Water	1	std		Yes	9			<=2		AF	TRACE-5
21	RE05006-007	10-May-2016 16:16:30	50510A21.D	Client	D9WN6	Water	1	std		Yes	18			<=2		AF	TRACE-5
22	RE05006-008	10-May-2016 16:39:30	50510A22.D	Client	D9WN7	Water	1	std		Yes	24			<=2		AF	TRACE-5
23	RE06040-008	10-May-2016 17:01:30	50510A23.D	Client	D9WM5	Water	5	std		Yes	4			<=2		matrix	TRACE-5
24	RE06040-009	10-May-2016 17:24:30	50510A24.D	Client	D9WM6	Water	1	std		Yes	3			<=2			TRACE-5
25	RE06040-010	10-May-2016 17:47:30	50510A25.D	Client	D9WM7	Water	1	std		Yes	27			<=2			TRACE-5
26	RE06040-011	10-May-2016 18:09:30	50510A26.D	Client	D9WM8	Water	1	std		Yes	28			<=2		R20X	TRACE-5
27	VSTD005QN	10-May-2016 18:32:30	50510A27.D	Ccv	VSTD005QN	Water	1	std							8309		TRACE-5e
28	VSTD005QN	10-May-2016 18:55:30	50510A28.D	Client		Water	1	std		Yes	20						TRACE-5

Report Date: 10-May-2016 12:38:04 AIM Revision: 1.0 26-Feb-2016 08:31:08

Batch: 12832
ICAL: 12831
IS: 14210
SS: 8247

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\DD\chem\msd8.i\8050916D.b
Inst. ID: msd8.i Method: TRACE-8
Matrix: Water Operator: ALL
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 30

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	ICal Lvl	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
1	BFBPT	09-May-2016 13:56:30	80509D01.D	BFB		BFBPT	Water	1	all				Yes			14214		BFBSOM-8
2	VSTD020PT	09-May-2016 14:19:30	80509D02.D	Ical	5	VSTD020PT	Water	1	2447							8302		TRACE-8
3	VSTD010PT	09-May-2016 14:46:30	80509D03.D	Ical	4	VSTD010PT	Water	1	2447							8301		TRACE-8
4	VSTD005PT	09-May-2016 15:13:30	80509D04.D	Ical	3	VSTD005PT	Water	1	2447							8300		TRACE-8
5	VSTD001PT	09-May-2016 15:40:30	80509D05.D	Ical	2	VSTD001PT	Water	1	2447							8299		TRACE-8
6	VSTD0.5PT	09-May-2016 16:08:30	80509D06.D	Ical	1	VSTD0.5PT	Water	1	2447							8298		TRACE-8
7	VBLKPT	09-May-2016 16:43:30	80509D07.D	BLANK		VBLKPT	Water	1	2447									TRACE-8
8	RE05030-002RE	09-May-2016 17:22:30	80509D08.D	Client		G9HE1RE	Water	1	2447		Yes				<=2			TRACE-8
9	RE05030-004	09-May-2016 17:49:30	80509D09.D	Client		G9HE3	Water	1	2447		Yes							TRACE-8
10	RE05030-005	09-May-2016 18:17:30	80509D10.D	Client		G9HE4	Water	1	2447		Yes	1					R5X	TRACE-8
11	RE05030-006	09-May-2016 18:44:30	80509D11.D	Client		G9HE5	Water	1	2447		Yes						R1X	TRACE-8
12	RE05030-007	09-May-2016 19:11:30	80509D12.D	Client		G9HE6	Water	1	2447		Yes						R1X	TRACE-8
13	RE05030-008	09-May-2016 19:38:30	80509D13.D	Client		G9HE7	Water	1	2447		Yes	3					R5X	TRACE-8
14	RE05030-009	09-May-2016 20:06:30	80509D14.D	Client		G9HE8	Water	1	2447		Yes							TRACE-8
15	RE05030-010	09-May-2016 20:33:30	80509D15.D	Client		G9HE9	Water	1	2447		Yes							TRACE-8
16	RE05030-011	09-May-2016 21:00:30	80509D16.D	Client		G9HF0	Water	1	2447		Yes							TRACE-8
17	RE05030-013	09-May-2016 21:27:30	80509D17.D	Client		G9HX4	Water	1	2447		Yes							TRACE-8
18	RE05030-014	09-May-2016 21:55:30	80509D18.D	Client		G9HX5	Water	1	2447		Yes	2					S R1X	TRACE-8
19	RE05030-015	09-May-2016 22:22:30	80509D19.D	Client		G9HX6	Water	1	2447		Yes	1					R5X	TRACE-8
20	RE05030-016	09-May-2016 22:50:30	80509D20.D	Client		G9HX7	Water	1	2447		Yes							TRACE-8
21	RE05030-017	09-May-2016 23:17:30	80509D21.D	Client		G9HX8	Water	1	2447		Yes							TRACE-8
22	RE05030-018	09-May-2016 23:44:30	80509D22.D	Client		G9HX9	Water	1	2447		Yes							TRACE-8
23	VSTD005QA	10-May-2016 00:12:30	80509D23.D	Ccv		VSTD005QA	Water	1	2447									TRACE-8e
24	VSTD005QA	10-May-2016 00:40:30	80509D24.D	Ccv		VSTD005QA	Water	1	2447							8300		TRACE-8e

Report Date: 13-May-2016 08:50:40 AIM Revision: 1.0 26-Feb-2016 08:31:08

Batch: 13069
ICAL: 12610
IS: 14210
SS: 8305

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\DD\chem\msd8.i\8051216C.b
Inst. ID: msd8.i Method: TRACE-8
Matrix: Water Operator: ALL
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 30

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
1	BFBRI	12-May-2016 09:32:30	80512C01.D	BFB	BFBRI	Water	1	all				Yes			14214		BFBSOM-8
2	VSTD005RI	12-May-2016 09:53:30	80512C02.D	Ccv	VSTD005RI	Water	1	2447							8314		TRACE-8
3	VBLKRI	12-May-2016 10:29:30	80512C03.D	BLANK	VBLKRI	Water	1	2447									TRACE-8
4	RD27011-007	12-May-2016 11:05:30	80512C04.D	Client	VHBLK02	Water	1	std		Yes				<=2			TRACE-8
4	RD27016-012	12-May-2016 11:05:30	80512C04a.D	Client	VHBLK01	Water	1	2447		Yes							TRACE-8
4	RD28003-017	12-May-2016 11:05:30	80512C04b.D	Client	VHBLK01	Water	1	std		Yes							TRACE-8
4	RE04048-021	12-May-2016 11:05:30	80512C04c.D	Client	VHBLK01	Water	1	std		Yes							TRACE-8
4	RE04057-002	12-May-2016 11:05:30	80512C04d.D	Client	VHBLK01	Water	1	std		Yes							TRACE-8
4	RE05006-019	12-May-2016 11:05:30	80512C04e.D	Client	VHBLK01	Water	1	std		Yes							TRACE-8
4	RE05030-012	12-May-2016 11:05:30	80512C04f.D	Client	VHBLK01	Water	1	2447		Yes							TRACE-8
4	RE05031-021	12-May-2016 11:05:30	80512C04g.D	Client	VHBLK01	Water	1	2447		Yes							TRACE-8
4	RE05033-008	12-May-2016 11:05:30	80512C04h.D	Client	VHBLK01	Water	1	std		Yes							TRACE-8
4	RE06040-017	12-May-2016 11:05:30	80512C04i.D	Client	VHBLK01	Water	1	std		Yes							TRACE-8
5	RE05032-002	12-May-2016 11:33:30	80512C05.D	Client	G9HH2	Water	1	2447		Yes							TRACE-8
6	RE05032-002MS	12-May-2016 12:01:30	80512C06.D	MS	G9HH2MS	Water	1	2447	watermsd						8308		TRACE-8
7	RE05032-002MD	12-May-2016 12:28:30	80512C07.D	MSD	G9HH2MSD	Water	1	2447	watermsd						8308		TRACE-8
8	RE05032-003	12-May-2016 12:55:30	80512C08.D	Client	G9HH3	Water	1	2447		Yes							TRACE-8
9	RE05032-004	12-May-2016 13:23:30	80512C09.D	Client	G9HH4	Water	1	2447		Yes							TRACE-8
10	RE05032-005	12-May-2016 13:50:30	80512C10.D	Client	G9HH5	Water	1	2447		Yes							TRACE-8
11	RE05032-006	12-May-2016 14:17:30	80512C11.D	Client	G9HH6	Water	1	2447		Yes							TRACE-8
12	RE05032-007	12-May-2016 14:45:30	80512C12.D	Client	G9HH7	Water	1	2447		Yes							TRACE-8
13	RE05032-008	12-May-2016 15:12:30	80512C13.D	Client	G9HH8	Water	1	2447		Yes	2						TRACE-8
14	RE05032-009	12-May-2016 15:40:30	80512C14.D	Client	G9HH9	Water	1	2447		Yes							TRACE-8
15	RE05032-010	12-May-2016 16:07:30	80512C15.D	Client	G9HJ0	Water	1	2447		Yes							TRACE-8
16	RE05032-011	12-May-2016 16:35:30	80512C16.D	Client	G9HJ1	Water	1	2447		Yes							TRACE-8
17	RE05032-012	12-May-2016 17:03:30	80512C17.D	Client	G9HJ2	Water	1	2447		Yes							TRACE-8
18	RE05032-013	12-May-2016 17:30:30	80512C18.D	Client	G9HJ3	Water	1	2447		Yes							TRACE-8
19	RE05032-014	12-May-2016 17:57:30	80512C19.D	Client	G9HJ4	Water	1	2447		Yes							TRACE-8
20	RE05032-015	12-May-2016 18:25:30	80512C20.D	Client	G9HJ5	Water	1	2447		Yes				8			TRACE-8
21	RE05032-016	12-May-2016 18:52:30	80512C21.D	Client	G9HJ6	Water	1	2447		Yes				<=2			TRACE-8
22	RE05032-017	12-May-2016 19:20:30	80512C22.D	Client	G9HJ7	Water	1	2447		Yes	2						TRACE-8
23	RE05032-001	12-May-2016 19:47:30	80512C23.D	Client	G9HH1	Water	1	2447		Yes	2			<=2		R5X	TRACE-8
24	VSTD005RP	12-May-2016 20:14:30	80512C24.D	Client		Water	1	2447		Yes	14						TRACE-8
25	VSTD005RP	12-May-2016 20:42:30	80512C25.D	Ccv	VSTD005RP	Water	1	2447							8314		TRACE-8e

Working Standard Prep Log - Volatiles

Standard ID: SOMV 8142 | Analyst: ALL | Prep Date: 4/8/2016 | Level 2 Reviewed by: PAP
Solv. Lot: 16-458 | Exp. Date: 5/8/2016 | Date of Review: 4/25/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/ml)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace Matrix Spike									
CLP Matrix Spike Std	15-1342B	2500	5	1	12.5	MeOH	7/8/2025	4/8/2016	6/8/2016
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles
(Aqueous CLP)

Standard ID: SOMV 8285 Analyst: ALL Prep Date: 5/5/2016
Solv. Lot: NA Exp. Date: 5/6/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/L)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace ICAL 5									
SOM Trace Ketone Std	SOMV 8226	800	10	50	160	H2O	NA	4/25/2016	5/25/2016
8260 Sec. Std	VOMS 14221	100	10	50	20	H2O	NA	4/28/2016	5/16/2016
8260 Sec. Gas Std	VOMS 14225	100	10	50	20	H2O	NA	5/2/2016	5/9/2016
Trace DMC Mix	SOMV 8247	20	50	50	20	H2O	NA	4/29/2016	5/29/2016
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles
(Aqueous CLP)

Standard ID: SOMV 8284 Analyst: ALL Prep Date: 5/5/2016
Solv. Lot: NA Exp. Date: 5/6/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/L)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace ICAL 4									
SOM Trace Ketone Std	SOMV 8226	800	5	50	80	H2O	NA	4/25/2016	5/25/2016
8260 Sec. Std	VOMS 14221	100	5	50	10	H2O	NA	4/28/2016	5/16/2016
8260 Sec. Gas Std	VOMS 14225	100	5	50	10	H2O	NA	5/2/2016	5/9/2016
Trace DMC Mix	SOMV 8247	20	25	50	10	H2O	NA	4/29/2016	5/29/2016
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles
(Aqueous CLP)

Standard ID: SOMV 8283 Analyst: ALL Prep Date: 5/5/2016
Solv. Lot: NA Exp. Date: 5/6/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/L)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace ICAL 3									
SOM Trace Ketone Std	SOMV 8226	800	5	100	40	H2O	NA	4/25/2016	5/25/2016
8260 Sec. Std	VOMS 14221	100	5	100	5	H2O	NA	4/28/2016	5/16/2016
8260 Sec. Gas Std	VOMS 14225	100	5	100	5	H2O	NA	5/2/2016	5/9/2016
Trace DMC Mix	SOMV 8247	20	25	100	5	H2O	NA	4/29/2016	5/29/2016
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles
(Aqueous CLP)

Standard ID: SOMV 8282 Analyst: ALL Prep Date: 5/5/2016
Solv. Lot: NA Exp. Date: 5/6/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/L)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace ICAL 2									
SOM Trace Ketone Std	SOMV 8226	800	5	500	8	H2O	NA	4/25/2016	5/25/2016
8260 Sec. Std	VOMS 14221	100	5	500	1	H2O	NA	4/28/2016	5/16/2016
8260 Sec. Gas Std	VOMS 14225	100	5	500	1	H2O	NA	5/2/2016	5/9/2016
Trace DMC Mix	SOMV 8247	20	25	500	1	H2O	NA	4/29/2016	5/29/2016
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles
(Aqueous CLP)

Standard ID: SOMV 8281 Analyst: ALL Prep Date: 5/5/2016
Solv. Lot: NA Exp. Date: 5/6/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/L)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace ICAL 1									
SOM Trace Ketone Std	SOMV 8226	800	2.5	500	4	H2O	NA	4/25/2016	5/25/2016
8260 Sec. Std	VOMS 14221	100	2.5	500	0.5	H2O	NA	4/28/2016	5/16/2016
8260 Sec. Gas Std	VOMS 14225	100	2.5	500	0.5	H2O	NA	5/2/2016	5/9/2016
Trace DMC Mix	SOMV 8247	20	12.5	500	0.5	H2O	NA	4/29/2016	5/29/2016
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles
(Aqueous CLP)

Standard ID: SOMV 8302 Analyst: ALL Prep Date: 5/6/2016
Solv. Lot: NA Exp. Date: 5/7/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/L)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace ICAL 5									
SOM Trace Ketone Std	SOMV 8226	800	10	50	160	H2O	NA	4/25/2016	5/25/2016
8260 Sec. Std	VOMS 14228	100	10	50	20	H2O	NA	5/6/2016	5/16/2016
8260 Sec. Gas Std	VOMS 14225	100	10	50	20	H2O	NA	5/2/2016	5/9/2016
Trace DMC Mix	SOMV 8247	20	50	50	20	H2O	NA	4/29/2016	5/29/2016
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles
(Aqueous CLP)

Standard ID: SOMV 8301 Analyst: ALL Prep Date: 5/6/2016
Solv. Lot: NA Exp. Date: 5/7/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/L)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace ICAL 4									
SOM Trace Ketone Std	SOMV 8226	800	5	50	80	H2O	NA	4/25/2016	5/25/2016
8260 Sec. Std	VOMS 14228	100	5	50	10	H2O	NA	5/6/2016	5/16/2016
8260 Sec. Gas Std	VOMS 14225	100	5	50	10	H2O	NA	5/2/2016	5/9/2016
Trace DMC Mix	SOMV 8247	20	25	50	10	H2O	NA	4/29/2016	5/29/2016
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles
(Aqueous CLP)

Standard ID: SOMV 8300 Analyst: ALL Prep Date: 5/6/2016
Solv. Lot: NA Exp. Date: 5/7/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/L)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace ICAL 3									
SOM Trace Ketone Std	SOMV 8226	800	5	100	40	H2O	NA	4/25/2016	5/25/2016
8260 Sec. Std	VOMS 14228	100	5	100	5	H2O	NA	5/6/2016	5/16/2016
8260 Sec. Gas Std	VOMS 14225	100	5	100	5	H2O	NA	5/2/2016	5/9/2016
Trace DMC Mix	SOMV 8247	20	25	100	5	H2O	NA	4/29/2016	5/29/2016
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles
(Aqueous CLP)

Standard ID: SOMV 8299 Analyst: ALL Prep Date: 5/6/2016
Solv. Lot: NA Exp. Date: 5/7/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/L)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace ICAL 2									
SOM Trace Ketone Std	SOMV 8226	800	5	500	8	H2O	NA	4/25/2016	5/25/2016
8260 Sec. Std	VOMS 14228	100	5	500	1	H2O	NA	5/6/2016	5/16/2016
8260 Sec. Gas Std	VOMS 14225	100	5	500	1	H2O	NA	5/2/2016	5/9/2016
Trace DMC Mix	SOMV 8247	20	25	500	1	H2O	NA	4/29/2016	5/29/2016
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles
(Aqueous CLP)

Standard ID: SOMV 8298 Analyst: ALL Prep Date: 5/6/2016
Solv. Lot: NA Exp. Date: 5/7/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/L)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace ICAL 1									
SOM Trace Ketone Std	SOMV 8226	800	2.5	500	4	H2O	NA	4/25/2016	5/25/2016
8260 Sec. Std	VOMS 14228	100	2.5	500	0.5	H2O	NA	5/6/2016	5/16/2016
8260 Sec. Gas Std	VOMS 14225	100	2.5	500	0.5	H2O	NA	5/2/2016	5/9/2016
Trace DMC Mix	SOMV 8247	20	12.5	500	0.5	H2O	NA	4/29/2016	5/29/2016
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles
(Aqueous CLP)

Standard ID: SOMV 8304 Analyst: ALL Prep Date: 5/9/2016
Solv. Lot: NA Exp. Date: 5/10/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/L)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace CCV									
SOM Trace Ketone Std	SOMV 8226	800	5	100	40	H2O	NA	4/25/2016	5/25/2016
8260 Sec. Std	VOMS 14228	100	5	100	5	H2O	NA	5/6/2016	5/16/2016
8260 Sec. Gas Std	VOMS 14225	100	5	100	5	H2O	NA	5/2/2016	5/9/2016
Trace DMC Mix	SOMV 8247	20	25	100	5	H2O	NA	4/29/2016	5/29/2016
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles
(Aqueous CLP)

Standard ID: SOMV 8306 Analyst: JJG Prep Date: 5/9/2016
Solv. Lot: NA Exp. Date: 5/10/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/L)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace CCV									
SOM Trace Ketone Std	SOMV 8226	800	5	100	40	H2O	NA	4/25/2016	5/25/2016
8260 Sec. Std	VOMS 14228	100	5	100	5	H2O	NA	5/6/2016	5/16/2016
8260 Sec. Gas Std	VOMS 14230	100	5	100	5	H2O	NA	5/9/2016	5/16/2016
Trace DMC Mix	SOMV 8247	20	25	100	5	H2O	NA	4/29/2016	5/29/2016
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles

Standard ID: SOMV 8308 | Analyst: ALL | Prep Date: 5/10/2016 | Level 2 Reviewed by: PAP
Solv. Lot: 16-552 | Exp. Date: 6/8/2016 | Date of Review: 5/10/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/ml)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace Matrix Spike									
CLP Matrix Spike Std	15-1342B	2500	5	1	12.5	MeOH	7/8/2025	4/8/2016	6/8/2016
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-
-	-	1000	10	100	0.1	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles
(Aqueous CLP)

Standard ID: SOMV 8309 Analyst: ALL Prep Date: 5/10/2016
Solv. Lot: NA Exp. Date: 5/11/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/L)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace CCV									
SOM Trace Ketone Std	SOMV 8226	800	5	100	40	H2O	NA	4/25/2016	5/25/2016
8260 Sec. Std	VOMS 14229	100	5	100	5	H2O	NA	5/9/2016	5/16/2016
8260 Sec. Gas Std	VOMS 14230	100	5	100	5	H2O	NA	5/9/2016	5/16/2016
Trace DMC Mix	SOMV 8247	20	25	100	5	H2O	NA	4/29/2016	5/29/2016
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

Working Standard Prep Log - Volatiles
(Aqueous CLP)

Standard ID: SOMV 8314 Analyst: ALL Prep Date: 5/12/2016
Solv. Lot: NA Exp. Date: 5/13/2016

Stock Standard	Shealy ID	Stock Conc (ug/ml)	Init. Vol. (ul)	Final Vol. (ml)	Final Conc. (ug/L)	Solvent	Mfg. Exp. Date	Ampule Opened	Ampule Exp. Date
Trace CCV									
SOM Trace Ketone Std	SOMV 8226	800	5	100	40	H2O	NA	4/25/2016	5/25/2016
8260 Sec. Std	VOMS 14229	100	5	100	5	H2O	NA	5/9/2016	5/16/2016
8260 Sec. Gas Std	VOMS 14230	100	5	100	5	H2O	NA	5/9/2016	5/16/2016
Trace DMC Mix	SOMV 8305	20	25	100	5	H2O	NA	5/10/2016	6/10/2016
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-
-	-	1000	10	100	100	-	-	-	-

*Refer to COA for specific compound concentrations for mixed standards.

SEMIVOLATILES

QC Summary

- Deuterated Monitoring Compound Recovery (Form 2)
- Matrix Spike/Matrix Spike Duplicate Recovery (Form 3) optional
- Laboratory Control Sample Recovery (Form 3) optional
- Method Blank Summary (Form 4)
- GC/MS Instrument Performance Check (Form 5)
- Internal Standard Area & RT Summary (Form 8)

Sample Data

Standards Data

- Initial Calibration (Form 6)
- Continuing Calibration Verification Data (Form 7)

Raw QC Data

- DFTPP Data
- Blank Data
- MS/MSD Data (optional)
- LCS Data (optional)

Miscellaneous Data

- Run Logs
- Standard Preparation Logs

SEMIVOLATILE QC SUMMARY

Includes:

Deuterated Monitoring Compound Recovery (Form 2)

Matrix Spike/Matrix Spike Duplicate (Form 3A)

Laboratory Control Sample Recovery (From 3B)

Method Blank Summary (Form 4)

GC/MS Instrument Performance Check (Form 5)

Internal Standard Area and RT Summary (Form 8)

Deuterated Monitoring Compound Recovery

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

AnalyticalMethod: SVOA Level: LOW

Matrix: Water

EPA SAMPLE NO.	DMC1	DMC2	DMC3	DMC4	DMC5	DMC6	DMC7	DMC8	DMC9
H4213	44	52	57	72	56	37	62	67	59
H4213MSD	61	74	69	90	74	72	76	82	75
H4213MS	56	69	67	85	70	64	74	79	71
SBLK13	60	74	72	92	75	63	77	83	75

	QC LIMITS
DMC1 = 1,4-Dioxane-d8	40-110
DMC2 = Phenol-d5	10-130
DMC3 = Bis-(2-chloroethyl)ether-d8	25-120
DMC4 = 2-Chlorophenol-d4	20-130
DMC5 = 4-Methylphenol-d8	25-125
DMC6 = 4-Chloroaniline-d4	1-145
DMC7 = Nitrobenzene-d5	20-125
DMC8 = 2-Nitrophenol-d4	20-130
DMC9 = 2,4-Dichlorophenol-d3	20-120

* Values outside of contract required QC limits
D DMC diluted out

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

AnalyticalMethod: SVOA Level: LOW

Matrix: Water

EPA SAMPLE NO.	DMC10	DMC11	DMC12	DMC13	DMC14	DMC15	DMC16	DMC17	TOT OUT
H4213	60	62	50	61	55	68	66	46	0
H4213MSD	78	77	75	75	74	80	81	72	0
H4213MS	76	74	72	72	73	80	81	72	0
SBLK13	80	78	73	78	74	88	88	79	0

	QC LIMITS
DMC10 = Dimethylphthalate-d6	25-130
DMC11 = Acenaphthylene-d8	10-130
DMC12 = 4-Nitrophenol-d4	10-150
DMC13 = Fluorene-d10	25-125
DMC14 = 4,6-Dinitro-2-methylphenol-d2	10-130
DMC15 = Anthracene-d10	25-130
DMC16 = Pyrene-d10	15-130
DMC17 = Benzo(a)pyrene-d12	20-130

* Values outside of contract required QC limits
D DMC diluted out

Matrix Spike Summary

FORM 3A-OR
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

Matrix: Water

EPA Sample No. (Matrix Spike/Matrix Spike Duplicate): H4213

Instrument ID: Agilent__MSD4 GC Column: Zebron ID: 0.25 (mm)

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %REC #	QC LIMITS REC.
Phenol	40		27	68	12-110
2-Chlorophenol	40		27	69	27-123
N-Nitroso-di-n propylamine	40		29	74	41-116
4-Chloro-3-methylphenol	40		31	78	23-97
Acenaphthene	40		29	73	46-118
4-Nitrophenol	40		25	63	10-80
2,4-Dinitrotoluene	40		30	76	24-96
Pentachlorophenol	40		33	83	9-103
Pyrene	40		29	74	26-127

ANALYTE	SPIKE ADDED	MSD CONCENTRATION	MSD %R #	RPD #	QC LIMITS	
					RPD	%R
Phenol	39	28	72	6	0-42	12-110
2-Chlorophenol	39	29	73	6	0-40	27-123
N-Nitroso-di-n propylamine	39	30	77	4	0-38	41-116
4-Chloro-3-methylphenol	39	32	81	4	0-42	23-97
Acenaphthene	39	29	73	0	0-31	46-118
4-Nitrophenol	39	26	67	6	0-50	10-80
2,4-Dinitrotoluene	39	30	78	1	0-38	24-96
Pentachlorophenol	39	35	89	7	0-50	9-103
Pyrene	39	29	74	0	0-31	26-127

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC Limits

Method Blank Summary

FORM 4-OR
METHOD BLANK SUMMARY

EPA SAMPLE NO.
SBLK13

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No: _____ SDG No.: H4001

Analytical Method: SVOA Level: LOW

Matrix: Water Lab Sample ID: RQ12813-001

Instrument ID: Agilent MSD4 Lab File ID: 40517B19

Extraction Type: CLLE Date Extracted: 05/09/2016

GC Column(1): Zebron ZB-SV ID: 0.25 (mm) Date Analyzed: 05/17/2016

GC Column(2): _____ ID: _____ (mm) Time Analyzed: 17:04

Heated Purge:(Y/N) _____ Cleanup:(Y/N) _____ Cleanup Types: _____

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4213	RE05033-005	40517B20	05/17/2016
H4213MSD	RE05033-005MD	40517B22	05/17/2016
H4213MS	RE05033-005MS	40517B21	05/17/2016

Instrument Performance Check

Form 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

DFTPPKZ

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Lab File ID: 40516C01

Instrument ID: Agilent MSD4 BFB/DFTPP: DFTPP

GC Column: Zebron ZB-SV ID: 0.25 (mm)

Injection Date: 05/16/2016 Injection Time: 1511

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10.0 - 80.0% of mass 198	30.7	
68	Less than 2.0% of mass 69	0.4	(1.1) 1
69	Mass 69 relative abundance	37.5	
70	Less than 2.0% of mass 69	0.2	(0.6) 1
127	10.0 - 80.0% of mass 198	47.9	
197	Less than 2.0% of mass 198	0.1	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.9	
275	10.0 - 60.0% of mass 198	28.3	
365	Greater than 1.0% of mass 198	3.3	
441	Present, but less than mass 443	15.8	(79.0) 3
442	50.0 - 100% of mass 198	101.5	
443	15.0 - 24.0% of mass 442	20.0	(19.7) 2

1-Value is %mass 69 2-Value is %mass 442 3-Value is %mass 443

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD005LA	SSTD005LA	40516C02	05/16/2016	1527
SSTD010LA	SSTD010LA	40516C03	05/16/2016	1554
SSTD020LA	SSTD020LA	40516C04	05/16/2016	1621
SSTD040LA	SSTD040LA	40516C05	05/16/2016	1648
SSTD080LA	SSTD080LA	40516C06	05/16/2016	1715

Form 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

DFTPPLB

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Lab File ID: 40517B01

Instrument ID: Agilent MSD4 BFB/DFTPP: DFTPP

GC Column: Zebron ZB-SV ID: 0.25 (mm)

Injection Date: 05/17/2016 Injection Time: 0903

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10.0 - 80.0% of mass 198	35.3	
68	Less than 2.0% of mass 69	0.6	(1.5) 1
69	Mass 69 relative abundance	41.9	
70	Less than 2.0% of mass 69	0.2	(0.5) 1
127	10.0 - 80.0% of mass 198	50.8	
197	Less than 2.0% of mass 198	0.2	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.8	
275	10.0 - 60.0% of mass 198	27.1	
365	Greater than 1.0% of mass 198	3.0	
441	Present, but less than mass 443	13.5	(78.9) 3
442	50.0 - 100% of mass 198	87.0	
443	15.0 - 24.0% of mass 442	17.1	(19.6) 2

1-Value is %mass 69 2-Value is %mass 442 3-Value is %mass 443

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD020LC	SSTD020LC	40517B02	05/17/2016	0919
SSTD020LD	SSTD020LD	40517B18	05/17/2016	1628
SBLK13	RQ12813-001	40517B19	05/17/2016	1704
H4213	RE05033-005	40517B20	05/17/2016	1731
H4213MS	RE05033-005MS	40517B21	05/17/2016	1758
H4213MSD	RE05033-005MD	40517B22	05/17/2016	1825
SSTD020LE	SSTD020LE	40517B41	05/18/2016	0254

Internal Standard & RT Summary

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

EPA Sample No.: SSTD020LD Lab File ID (Standard): 40517B18

Instrument ID: Agilent MSD4 Init. Calib. Date(s): 05/16/2016 05/16/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Analyzed: 05/17/2016

Heated Purge: (Y/N) _____ Time Analyzed: 1628

	IS1 AREA	RT	IS2 AREA	RT	IS3 AREA	RT
12 HOUR STD	173356	5.94	689091	7.01	330463	8.49
UPPER LIMIT	346712	6.44	1378182	7.51	660926	8.99
LOWER LIMIT	86678	5.44	344546	6.51	165232	7.99
EPA SAMPLE NO.						
H4213	173253	5.94	681825	7.00	330238	8.49
H4213MSD	178812	5.94	711107	7.00	345613	8.49
H4213MS	162044	5.94	637027	7.00	312041	8.49
SBLK13	153968	5.94	611670	7.00	297764	8.49

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = 200% internal standard area

AREA LOWER LIMIT = 50% internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

EPA Sample No.: SSTD020LD Lab File ID (Standard): 40517B18

Instrument ID: Agilent MSD4 Init. Calib. Date(s): 05/16/2016 05/16/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Analyzed: 05/17/2016

Heated Purge: (Y/N) _____ Time Analyzed: 1628

	IS4 AREA	RT	IS5 AREA	RT	IS6 AREA	RT
12 HOUR STD	615510	9.77	662612	12.70	511556	15.00
UPPER LIMIT	1231020	10.27	1325224	13.20	1023112	15.50
LOWER LIMIT	307755	9.27	331306	12.20	255778	14.50
EPA SAMPLE NO.						
H4213	567024	9.77	654131	12.69	526146	14.99
H4213MSD	619427	9.77	691836	12.69	553605	15.00
H4213MS	560628	9.77	620033	12.69	492414	14.99
SBLK13	518437	9.77	588792	12.69	470120	15.00

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = 200% internal standard area

AREA LOWER LIMIT = 50% internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

SEMIVOLATILE SAMPLE DATA

Sample data shall be arranged in packets with the Volatile Analysis Data Sheet (Form 1A-OR, 1B-OR), followed by the raw data for the VOA samples. These sample packets shall be placed in increasing EPA sample number order, considering both letters and numbers.

-Target Compound Results (Form 1A-OR)
-Tentatively Identified Compounds (Form 1B-OR)
List up to 30 TICs
-Quantitation Report showing calculation for TCL Analytes
-Quantitation Report showing calculation for TICs
-Reconstructed Total Ion Chromatograms
-Raw Spectra & background subtracted mass spectra of TCL Analytes identified in the sample
-Mass Spectra of organic compounds not listed in Exhibit C with associated best match spectra
-Printout of Manual Integrations

Spectra shall be labeled as follows:

EPA Sample ID number, Sample ID number, Lab file ID, Date & Time of analysis and Instrument ID.
The compound name must be clearly marked.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: LOW

Matrix: Water Lab Sample ID: RE05033-005

Sample wt/vol: 1040 (g/mL) mL Lab File ID: 40517B20

% Solids: _____ Date Received: 05/05/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/17/2016

Extract Concentrated: (Y/N) _____ Extract Volume: 1000 (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: CLLE

Heated Purge: (Y/N) _____ Injection Volume: 1.0 (uL)

Purge Volume: _____ (mL) pH: 7 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
123-91-1	1,4-Dioxane	1.9	U
100-52-7	Benzaldehyde	9.6	U
108-95-2	Phenol	9.6	U
111-44-4	Bis(2-Chloroethyl) ether	9.6	U
95-57-8	2-Chlorophenol	4.8	U
95-48-7	2-Methylphenol	9.6	U
108-60-1	2,2'-Oxybis(1-chloropropane)	9.6	U
98-86-2	Acetophenone	9.6	U
106-44-5	3-Methylphenol + 4-Methylphenol	9.6	U
621-64-7	N-Nitroso-di-n propylamine	4.8	U
67-72-1	Hexachloroethane	4.8	U
98-95-3	Nitrobenzene	4.8	U
78-59-1	Isophorone	4.8	U
88-75-5	2-Nitrophenol	4.8	U
105-67-9	2,4-Dimethylphenol	4.8	U
111-91-1	Bis(2-chloroethoxy)methane	4.8	U
120-83-2	2,4-Dichlorophenol	4.8	U
91-20-3	Naphthalene	4.8	U
106-47-8	4-Chloroaniline	9.6	U
87-68-3	Hexachlorobutadiene	4.8	U
105-60-2	Caprolactam	9.6	U
59-50-7	4-Chloro-3-methylphenol	4.8	U
91-57-6	2-Methylnaphthalene	4.8	U
77-47-4	Hexachlorocyclo-pentadiene	9.6	U
88-06-2	2,4,6-Trichlorophenol	4.8	U
95-95-4	2,4,5-Trichlorophenol	4.8	U
92-52-4	1,1'-Biphenyl	4.8	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: LOW

Matrix: Water Lab Sample ID: RE05033-005

Sample wt/vol: 1040 (g/mL) mL Lab File ID: 40517B20

% Solids: _____ Date Received: 05/05/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/17/2016

Extract Concentrated: (Y/N) _____ Extract Volume: 1000 (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: CLLE

Heated Purge: (Y/N) _____ Injection Volume: 1.0 (uL)

Purge Volume: _____ (mL) pH: 7 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
91-58-7	2-Chloronaphthalene	4.8	U
88-74-4	2-Nitroaniline	4.8	U
131-11-3	Dimethylphthalate	4.8	U
606-20-2	2,6-Dinitrotoluene	4.8	U
208-96-8	Acenaphthylene	4.8	U
99-09-2	3-Nitroaniline	9.6	U
83-32-9	Acenaphthene	4.8	U
51-28-5	2,4-Dinitrophenol	9.6	U
100-02-7	4-Nitrophenol	9.6	U
132-64-9	Dibenzofuran	4.8	U
121-14-2	2,4-Dinitrotoluene	4.8	U
84-66-2	Diethylphthalate	4.8	U
95-94-3	1,2,4,5-Tetrachlorobenzene	4.8	U
7005-72-3	4-Chlorophenyl-phenyl ether	4.8	U
86-73-7	Fluorene	4.8	U
100-01-6	4-Nitroaniline	9.6	U
534-52-1	4,6-Dinitro-2-methylphenol	9.6	U
101-55-3	4-Bromophenyl-phenylether	4.8	U
86-30-6	N-Nitrosodiphenylamine	4.8	U
118-74-1	Hexachlorobenzene	4.8	U
1912-24-9	Atrazine	9.6	U
87-86-5	Pentachlorophenol	9.6	U
85-01-8	Phenanthrene	4.8	U
120-12-7	Anthracene	4.8	U
86-74-8	Carbazole	9.6	U
84-74-2	Di-n-butylphthalate	4.8	U
206-44-0	Fluoranthene	9.6	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: LOW

Matrix: Water Lab Sample ID: RE05033-005

Sample wt/vol: 1040 (g/mL) mL Lab File ID: 40517B20

% Solids: _____ Date Received: 05/05/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/17/2016

Extract Concentrated: (Y/N) _____ Extract Volume: 1000 (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: CLLE

Heated Purge: (Y/N) _____ Injection Volume: 1.0 (uL)

Purge Volume: _____ (mL) pH: 7 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
129-00-0	Pyrene	4.8	U
85-68-7	Butylbenzylphthalate	4.8	U
91-94-1	3,3'-Dichlorobenzidine	9.6	U
56-55-3	Benzo(a)anthracene	4.8	U
218-01-9	Chrysene	4.8	U
117-81-7	Bis(2-ethylhexyl)phthalate	4.8	U
117-84-0	Di-n-octylphthalate	9.6	U
205-99-2	Benzo(b)fluoranthene	4.8	U
207-08-9	Benzo(k)fluoranthene	4.8	U
50-32-8	Benzo(a)pyrene	4.8	U
193-39-5	Indeno(1,2,3-cd)pyrene	4.8	U
53-70-3	Dibenzo(a,h)anthracene	4.8	U
191-24-2	Benzo(g,h,i)perylene	4.8	U
58-90-2	2,3,4,6-Tetrachlorophenol	4.8	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4213

Lab Name: Shealy Environmental Services, Inc.
Contract: EP-W-14035
Lab Code: EQI Case No.: 46115
MA No.: SDG No.: H4001
Analytical Method: SVOA
Level: LOW
Matrix: Water
Lab Sample ID: RE05033-005
Sample wt/vol: 1040 (g/mL) mL
Lab File ID: 40517B20
% Solids:
Date Received: 05/05/2016
GC Column: Zebron ZB-SV ID: 0.25 (mm)
Date Extracted: 05/09/2016
Extract Concentrated: (Y/N)
Date Analyzed: 05/17/2016
Soil Aliquot (VOA): (uL)
Extract Volume: 1000 (uL)
Heated Purge: (Y/N)
Extraction Type: CLLE
Purge Volume: (mL)
Injection Volume: 1.0
Cleanup Types:
pH: 7 Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L
Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
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16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B20.D		
Lab Sample ID:	RE05033-005	Client Sample ID:	H4213
Injection Date:	17-May-2016 17:31:30	Dil. Factor:	1.0
Operator:	RBH	Inst. ID:	msd4.i
Sample Info:	4051716B, RE05033-005		
Misc. Info:	12813		
Method:	\\Organics\HH\chem\msd4.i\4051716B.b\SOMBNA.m		
Method Date:	17-May-2016 17:07:30	Quant Method:	ISTD
Calib Date:	16-May-2016 17:15:30	Calib File:	40516C06.D
Sample Type:	Client	ALS Bottle:	2
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	1000.00	Volume of final extract (uL)
Vo	1040.00	Volume of sample extracted (mL)
Cpnd Variable		Local Cpnd Variable

Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rz	Review Date:	18-May-2016 14:38:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Final Conc ug/L	Flags
$ 3 Phenol-d5	99.0	5.580	5.591	-0.010	291606	20.826	20.025	
108 1,4-Dioxane	88.0		3.559		ND			
$ 109 1,4-Dioxane-d8	96.0	3.528	3.528	0.000	16550	3.5034	3.3687	
4 Phenol	94.0		5.601		ND			
2 Benzaldehyde	77.0		5.601		ND			
$ 93 bis-(2-Chloroethyl)ether-d8	67.0	5.653	5.663	-0.010	209139	22.658	21.786	
5 bis(2-Chloroethyl)Ether	93.0		5.694		ND			
$ 6 2-Chlorophenol-d4	132.0	5.767	5.767	0.000	290720	28.753	27.647	
7 2-Chlorophenol	128.0		5.777		ND			
* 8 1,4-Dichlorobenzene-d4	152.0	5.943	5.943	0.000	173253	20.000	19.231	
10 2-Methylphenol	108.0		6.098		ND			
11 2,2'-oxybis(1-Chloropropane)	45.0		6.129		ND			
$ 94 4-Methylphenol-d8	113.0	6.181	6.192	-0.011	254196	22.555	21.687	Q
14 4-Methylphenol	108.0		6.212		ND			
13 N-Nitroso-di-n-propylamine	70.0		6.243		ND			
12 Acetophenone	105.0		6.264		ND			
15 Hexachloroethane	117.0		6.378		ND			
$ 16 Nitrobenzene-d5	128.0	6.399	6.399	0.000	141025	24.635	23.688	
17 Nitrobenzene	77.0		6.409		ND			
18 Isophorone	82.0		6.596		ND			
20 2,4-Dimethylphenol	107.0		6.658		ND			
$ 95 2-Nitrophenol-d4	143.0	6.658	6.658	0.000	154957	26.760	25.731	
19 2-Nitrophenol	139.0		6.668		ND			
21 bis(2-Chloroethoxy)methane	93.0		6.741		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Final Conc ug/L	Flags
$ 96 2,4-Dichlorophenol-d3	165.0	6.844	6.855	-0.011	232921	23.775	22.860	
22 2,4-Dichlorophenol	162.0		6.865		ND			
* 23 Naphthalene-d8	136.0	7.000	7.010	-0.010	681825	20.000	19.231	
24 Naphthalene	128.0		7.021		ND			
$ 97 4-Chloroaniline-d4	131.0	7.031	7.031	0.000	204089	14.675	14.110	
25 4-Chloroaniline	127.0		7.041		ND			
26 Hexachlorobutadiene	225.0		7.093		ND			
27 Caprolactam	113.0		7.342		ND			
28 4-Chloro-3-methylphenol	107.0		7.414		ND			
29 2-Methylnaphthalene	142.0		7.601		ND			
30 Hexachlorocyclopentadiene	237.0		7.715		ND			
92 1,2,4,5-Tetrachlorobenzene	216.0		7.736		ND			
31 2,4,6-Trichlorophenol	196.0		7.819		ND			
32 2,4,5-Trichlorophenol	196.0		7.850		ND			
34 1,1'-Biphenyl	154.0		7.974		ND			
35 2-Chloronaphthalene	162.0		8.015		ND			
36 2-Nitroaniline	65.0		8.078		ND			
$ 98 Dimethylphthalate-d6	166.0	8.171	8.181	-0.010	559381	23.831	22.915	
37 Dimethylphthalate	163.0		8.202		ND			
39 2,6-Dinitrotoluene	165.0		8.275		ND			
$ 99 Acenaphthylene-d8	160.0	8.368	8.368	0.000	804959	24.765	23.812	
38 Acenaphthylene	152.0		8.378		ND			
40 3-Nitroaniline	138.0		8.430		ND			
* 41 Acenaphthene-d10	164.0	8.492	8.492	0.000	330238	20.000	19.231	
43 2,4-Dinitrophenol	184.0		8.513		ND			
42 Acenaphthene	153.0		8.523		ND			
$ 100 4-Nitrophenol-d4	143.0	8.513	8.523	-0.010	91920	20.077	19.305	
44 4-Nitrophenol	109.0		8.534		ND			
46 2,4-Dinitrotoluene	165.0		8.617		ND			
45 Dibenzofuran	168.0		8.668		ND			
107 2,3,4,6-Tetrachlorophenol	232.0		8.751		ND			
47 Diethylphthalate	149.0		8.782		ND			
49 4-Chlorophenyl-phenylether	204.0		8.927		ND			
$ 101 Fluorene-d10	176.0	8.927	8.938	-0.011	508614	24.222	23.291	
50 4-Nitroaniline	138.0		8.958		ND			
48 Fluorene	166.0		8.958		ND			
$ 102 4,6-Dinitro-2-methylphenol-d2	200.0	8.958	8.969	-0.011	71006	21.883	21.041	Q
51 4,6-Dinitro-2-methylphenol	198.0		8.969		ND			
52 N-Nitrosodiphenylamine	169.0		9.021		ND			
54 4-Bromophenyl-phenylether	248.0		9.352		ND			
55 Hexachlorobenzene	284.0		9.435		ND			
56 Atrazine	200.0		9.435		ND			
57 Pentachlorophenol	266.0		9.591		ND			
* 58 Phenanthrene-d10	188.0	9.767	9.767	0.000	567024	20.000	19.231	
59 Phenanthrene	178.0		9.788		ND			
$ 103 Anthracene-d10	188.0	9.818	9.819	-0.001	776101	27.036	25.996	
60 Anthracene	178.0		9.839		ND			
106 Carbazole	167.0		9.953		ND			
62 Di-n-butylphthalate	149.0		10.171		ND			
63 Fluoranthene	202.0		10.907		ND			
$ 104 Pyrene-d10	212.0	11.145	11.145	0.000	871644	26.528	25.508	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Final Conc ug/L	Flags
64 Pyrene	202.0		11.166		ND			
66 Butylbenzylphthalate	149.0		11.788		ND			
71 bis(2-Ethylhexyl)phthalate	149.0		12.534		ND			
68 3,3'-Dichlorobenzidine	252.0		12.586		ND			
67 Benzo(a)anthracene	228.0		12.679		ND			
* 69 Chrysene-d12	240.0	12.689	12.700	-0.011	654131	20.000	19.231	
70 Chrysene	228.0		12.741		ND			
72 Di-n-octylphthalate	149.0		13.529		ND			
73 Benzo(b)fluoranthene	252.0		14.347		ND			
74 Benzo(k)fluoranthene	252.0		14.389		ND			
$ 105 Benzo(a)pyrene-d12	264.0	14.855	14.865	-0.010	515435	18.265	17.563	
75 Benzo(a)pyrene	252.0		14.907		ND			
* 76 Perylene-d12	264.0	14.990	15.000	-0.010	526146	20.000	19.231	
77 Indeno(1,2,3-cd)pyrene	276.0		17.187		ND			
78 Dibenzo(a,h)anthracene	278.0		17.207		ND			
79 Benzo(g,h,i)perylene	276.0		17.850		ND			

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services

Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B20.D		
Lab Sample ID:	RE05033-005	Client Sample ID:	H4213
Injection Date:	17-May-2016 17:31:30	Dil. Factor:	1.0
Operator:	RBH	Inst. ID:	msd4.i
Sample Info:	4051716B, RE05033-005		
Misc. Info:	12813		
Method:	\\Organics\HH\chem\msd4.i\4051716B.b\SOMBNA.m		
Method Date:	17-May-2016 17:07:30	Quant Method:	ISTD
Calib Date:	16-May-2016 17:15:30	Calib File:	40516C06.D
Sample Type:	Client	ALS Bottle:	2
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	1000.00	Volume of final extract (uL)
Vo	1040.00	Volume of sample extracted (mL)
Cpnd Variable		Local Cpnd Variable

Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rz	Review Date:	18-May-2016 14:38:30

Tentative Identified Compound Results

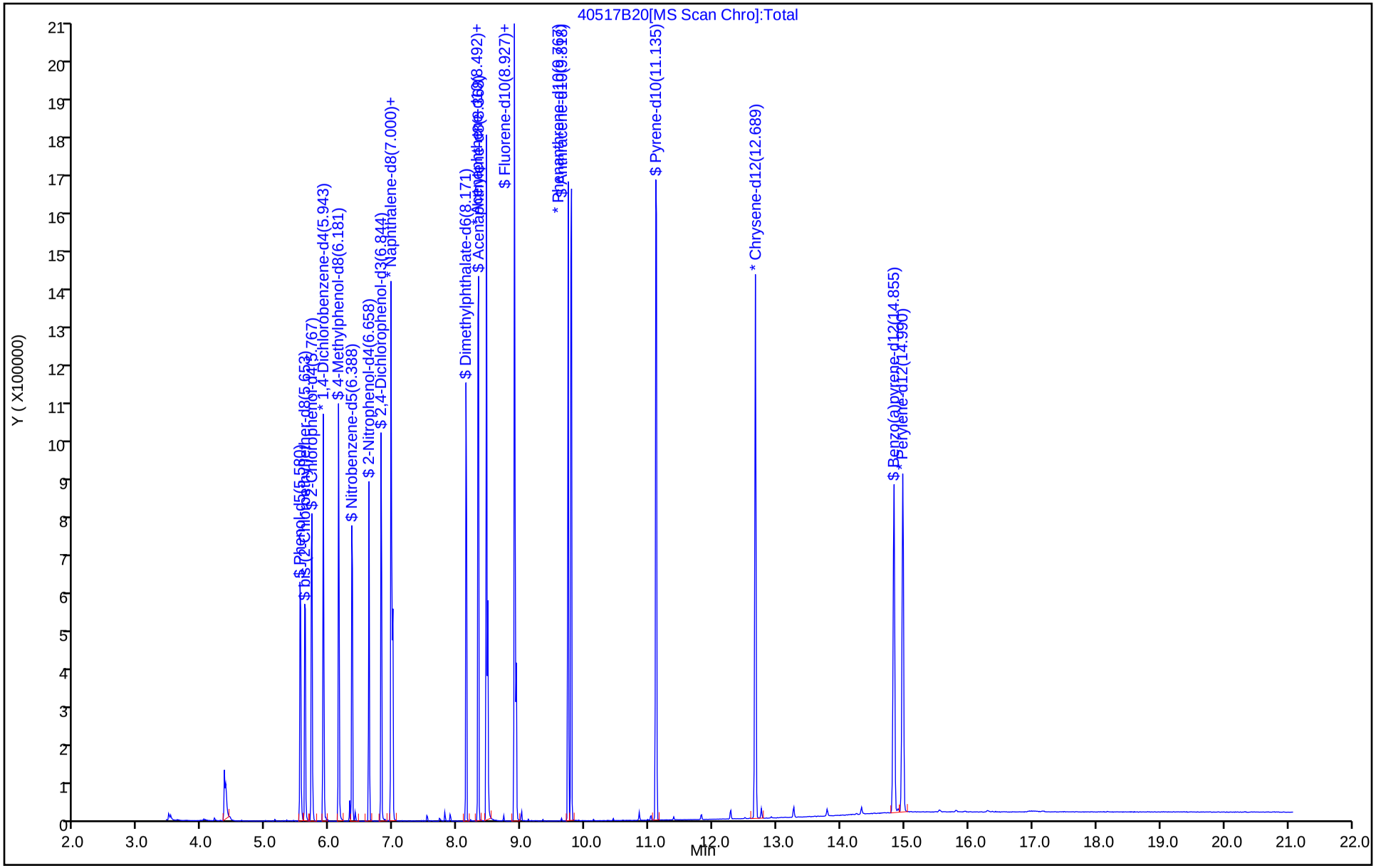
RT	Response	Amount ng/ul	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ng/ul

Report Date: 18-May-2016 14:39:20 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B20.D				
Injection Date:	17-May-2016 17:31:30	Inst. ID:	msd4.i	Operator:	RBH
Client ID:	H4213	Lab ID:	RE05033-005		
Sample Info:	4051716B, RE05033-005				
Injection Vol.	1.00 1	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



SEMIVOLATILE STANDARDS DATA

-Initial Calibration Data Form 6A-OR

-Continuing Calibration Verification Data Form 7A-OR

Initial Calibration

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

Instrument ID: Agilent MSD4 Calibration Date(s): 05/16/2016 05/16/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Calibration Time(s): 1527 1715

Length: 30 (m)

Heated Purge: (Y/N) _____ Purge Volume: _____ (mL)

LAB FILE ID: 40516C02 RRF 5.0 = 40516C02 RRF 10 = 40516C03

RRF 20 = 40516C04 RRF 40 = 40516C05 RRF 80 = 40516C06

COMPOUND	RRF 5.0	RRF 10	RRF 20	RRF 40	RRF 80	$\overline{RRF}$	%RSD
1,4-Dioxane	0.757	0.644	0.611	0.530	0.585	0.625	13.5
Benzaldehyde	1.541	1.314	1.170	0.769	0.532	1.065	38.5
Phenol	1.940	1.836	1.838	1.443	1.268	1.665	17.5
Bis(2-Chloroethyl) ether	1.548	1.485	1.466	1.207	1.081	1.357	14.9
2-Chlorophenol	1.546	1.511	1.531	1.268	1.131	1.398	13.4
2-Methylphenol	1.385	1.351	1.365	1.167	1.063	1.266	11.3
2,2'-Oxybis(1-chloropropane)	2.154	2.086	2.041	1.543	1.262	1.817	21.7
Acetophenone	2.127	2.038	2.065	1.644	1.462	1.867	15.8
3-Methylphenol + 4-Methylphenol	1.479	1.442	1.459	1.222	1.144	1.349	11.5
N-Nitroso-di-n propylamine	1.239	1.186	1.185	0.926	0.682	1.044	22.6
Hexachloroethane	0.652	0.637	0.656	0.544	0.499	0.598	12.0
Nitrobenzene	0.436	0.422	0.416	0.343	0.291	0.381	16.3
Isophorone	0.771	0.760	0.745	0.598	0.544	0.684	15.3
2-Nitrophenol	0.196	0.195	0.206	0.177	0.150	0.185	12.0
2,4-Dimethylphenol	0.397	0.374	0.357	0.296	0.241	0.333	19.1
Bis(2-chloroethoxy)methane	0.463	0.434	0.445	0.359	0.325	0.405	14.7
2,4-Dichlorophenol	0.296	0.285	0.302	0.252	0.223	0.271	12.3
Naphthalene	1.160	1.104	1.088	0.873	0.711	0.987	19.2
4-Chloroaniline	0.611	0.595	0.601	0.472	0.401	0.536	17.6
Hexachlorobutadiene	0.186	0.178	0.185	0.163	0.142	0.171	10.8
Caprolactam	0.130	0.119	0.125	0.111	0.108	0.119	7.8
4-Chloro-3-methylphenol	0.312	0.316	0.316	0.261	0.247	0.290	11.5
2-Methylnaphthalene	0.786	0.746	0.754	0.626	0.497	0.682	17.6
Hexachlorocyclo-pentadiene	0.354	0.363	0.408	0.380	0.364	0.374	5.6
2,4,6-Trichlorophenol	0.386	0.391	0.418	0.379	0.352	0.385	6.2
2,4,5-Trichlorophenol	0.446	0.439	0.468	0.398	0.389	0.428	7.8
1,1'-Biphenyl	1.867	1.810	1.805	1.542	1.219	1.649	16.4
2-Chloronaphthalene	1.392	1.361	1.391	1.187	1.016	1.270	13.0
2-Nitroaniline	0.414	0.412	0.433	0.379	0.354	0.398	7.9
Dimethylphthalate	1.511	1.420	1.531	1.281	1.159	1.380	11.5
2,6-Dinitrotoluene	0.314	0.313	0.363	0.303	0.288	0.316	8.9
Acenaphthylene	2.232	2.184	2.193	1.780	1.413	1.961	18.2
3-Nitroaniline	0.358	0.356	0.387	0.339	0.318	0.352	7.2
Acenaphthene	1.448	1.390	1.419	1.044	0.833	1.227	22.4
2,4-Dinitrophenol	0.080	0.102	0.152	0.157	0.135	0.125	26.4

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

Instrument ID: Agilent MSD4 Calibration Date(s): 05/16/2016 05/16/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Calibration Time(s): 1527 1715

Length: 30 (m)

Heated Purge: (Y/N) _____ Purge Volume: _____ (mL)

LAB FILE ID: 40516C02 RRF 5.0 = 40516C02 RRF 10 = 40516C03
RRF 20 = 40516C04 RRF 40 = 40516C05 RRF 80 = 40516C06

COMPOUND	RRF 5.0	RRF 10	RRF 20	RRF 40	RRF 80	$\overline{RRF}$	%RSD
4-Nitrophenol	0.224	0.232	0.220	0.197	0.183	0.212	9.7
Dibenzofuran	1.948	1.859	1.922	1.588	1.478	1.759	12.1
2,4-Dinitrotoluene	0.412	0.432	0.472	0.444	0.412	0.434	5.8
Diethylphthalate	1.504	1.495	1.516	1.324	1.181	1.404	10.5
1,2,4,5-Tetrachlorobenzene	0.643	0.639	0.675	0.580	0.528	0.613	9.5
4-Chlorophenyl-phenyl ether	0.731	0.692	0.717	0.608	0.484	0.647	15.8
Fluorene	1.626	1.567	1.559	1.296	1.028	1.415	17.7
4-Nitroaniline	0.386	0.377	0.359	0.262	0.194	0.316	26.6
4,6-Dinitro-2-methylphenol	0.090	0.107	0.136	0.130	0.119	0.116	15.7
4-Bromophenyl-phenylether	0.232	0.226	0.241	0.214	0.198	0.222	7.5
N-Nitrosodiphenylamine	0.739	0.733	0.752	0.607	0.506	0.668	16.1
Hexachlorobenzene	0.251	0.247	0.258	0.225	0.214	0.239	7.8
Atrazine	0.265	0.247	0.220	0.192	0.177	0.220	16.8
Pentachlorophenol	0.097	0.109	0.133	0.131	0.137	0.121	14.3
Phenanthrene	1.268	1.251	1.224	1.037	0.910	1.138	13.8
Anthracene	1.279	1.251	1.272	0.994	0.838	1.127	17.8
Carbazole	1.169	1.122	1.102	0.869	0.789	1.010	16.8
Di-n-butylphthalate	1.453	1.428	1.433	1.092	0.944	1.270	18.6
Fluoranthene	1.343	1.344	1.337	1.072	0.964	1.212	14.9
Pyrene	1.277	1.299	1.304	1.112	0.980	1.194	12.0
Butylbenzylphthalate	0.541	0.561	0.583	0.513	0.471	0.534	8.1
3,3'-Dichlorobenzidine	0.400	0.392	0.382	0.323	0.290	0.358	13.6
Benzo(a)anthracene	1.231	1.224	1.254	1.080	1.019	1.161	9.0
Chrysene	1.182	1.178	1.177	1.031	0.945	1.103	9.9
Bis(2-ethylhexyl)phthalate	0.716	0.775	0.800	0.701	0.632	0.725	9.1
Di-n-octylphthalate	1.466	1.542	1.635	1.368	1.129	1.428	13.6
Benzo(b)fluoranthene	1.434	1.393	1.472	1.251	1.058	1.322	12.8
Benzo(k)fluoranthene	1.374	1.397	1.384	1.156	1.035	1.269	13.0
Benzo(a)pyrene	1.368	1.361	1.415	1.202	1.045	1.278	12.0
Indeno(1,2,3-cd)pyrene	1.362	1.351	1.370	1.152	0.997	1.246	13.4
Dibenzo(a,h)anthracene	1.136	1.128	1.162	0.982	0.880	1.058	11.5
Benzo(g,h,i)perylene	1.070	1.035	1.028	0.806	0.596	0.907	22.3
2,3,4,6-Tetrachlorophenol	0.301	0.316	0.357	0.342	0.329	0.329	6.6
1,4-Dioxane-d8	0.543	0.580	0.573	0.522	0.510	0.545	5.7
Phenol-d5	1.831	1.777	1.792	1.420	1.262	1.616	16.0

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

Instrument ID: Agilent MSD4 Calibration Date(s): 05/16/2016 05/16/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Calibration Time(s): 1527 1715

Length: 30 (m)

Heated Purge: (Y/N) _____ Purge Volume: _____ (mL)

LAB FILE ID: 40516C02 RRF 5.0 = 40516C02 RRF 10 = 40516C03

RRF 20 = 40516C04 RRF 40 = 40516C05 RRF 80 = 40516C06

COMPOUND	RRF 5.0	RRF 10	RRF 20	RRF 40	RRF 80	$\overline{RRF}$	%RSD
Bis-(2-chloroethyl)ether-d8	1.212	1.158	1.161	0.937	0.859	1.066	14.7
2-Chlorophenol-d4	1.270	1.254	1.284	1.061	0.967	1.167	12.4
4-Methylphenol-d8	1.370	1.509	1.385	1.165	1.077	1.301	13.5
4-Chloroaniline-d4	0.488	0.463	0.447	0.350	0.291	0.408	20.6
Nitrobenzene-d5	0.176	0.175	0.184	0.156	0.148	0.168	8.9
2-Nitrophenol-d4	0.177	0.180	0.190	0.162	0.139	0.170	11.8
2,4-Dichlorophenol-d3	0.308	0.301	0.320	0.269	0.239	0.287	11.5
Dimethylphthalate-d6	1.527	1.443	1.556	1.332	1.250	1.422	9.1
Acenaphthylene-d8	2.193	2.156	2.191	1.767	1.536	1.969	15.3
4-Nitrophenol-d4	0.271	0.278	0.309	0.276	0.252	0.277	7.4
Fluorene-d10	1.483	1.378	1.390	1.169	0.937	1.272	17.3
4,6-Dinitro-2-methylphenol-d2	0.088	0.109	0.131	0.121	0.124	0.114	14.8
Anthracene-d10	1.118	1.110	1.110	0.923	0.801	1.013	14.2
Pyrene-d10	1.052	1.080	1.093	0.934	0.864	1.005	10.0
Benzo(a)pyrene-d12	1.123	1.138	1.181	1.011	0.911	1.073	10.3

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C02.D		
Lab Sample ID:	SSTD005LA	Client Sample ID:	SSTD005LA
Injection Date:	16-May-2016 15:27:30	Dil. Factor:	1.0
Operator:	RBH	Inst. ID:	msd4.i
Sample Info:	4051616C, SVMS 2054		
Misc. Info:	L1		
Method:	\\Organics\HH\chem\msd4.i\4051616C.b\SOMBNA.m		
Method Date:	17-May-2016 09:47:30	Quant Method:	ISTD
Calib Date:	16-May-2016 17:15:30	Calib File:	40516C06.D
Sample Type:	Ical, Level: 1	ALS Bottle:	91
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	1000.00	Volume of final extract (uL)
Vo	1000.00	Volume of sample extracted (mL)
Cpnd Variable		Local Cpnd Variable

Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	jcg	Review Date:	16-May-2016 16:01:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 3 Phenol-d5	99.0	5.580	5.580	0.000	77508	5.0000	5.6638	
117 1-Methylnaphthalene	142.0	7.684	7.684	0.000	118018	5.0000	5.6096	
108 1,4-Dioxane	88.0	3.559	3.559	0.000	12821	2.0000	2.4213	
$ 109 1,4-Dioxane-d8	96.0	3.528	3.528	0.000	9189	2.0000	1.9903	
4 Phenol	94.0	5.591	5.591	0.000	82102	5.0000	5.8241	
2 Benzaldehyde	77.0	5.601	5.601	0.000	65243	5.0000	7.2354	
$ 93 bis-(2-Chloroethyl)ether-d8	67.0	5.653	5.653	0.000	51314	5.0000	5.6883	
5 bis(2-Chloroethyl)Ether	93.0	5.694	5.694	0.000	65535	5.0000	5.7029	
$ 6 2-Chlorophenol-d4	132.0	5.756	5.756	0.000	53772	5.0000	5.4415	
7 2-Chlorophenol	128.0	5.777	5.777	0.000	65460	5.0000	5.5316	
* 8 1,4-Dichlorobenzene-d4	152.0	5.943	5.943	0.000	169325	20.000	20.000	
10 2-Methylphenol	108.0	6.088	6.088	0.000	58641	5.0000	5.4700	
11 2,2'-oxybis(1-Chloropropane)	45.0	6.119	6.119	0.000	91177	5.0000	5.9270	
$ 94 4-Methylphenol-d8	113.0	6.181	6.181	0.000	57985	5.0000	5.2644	
14 4-Methylphenol	108.0	6.202	6.202	0.000	62604	5.0000	5.4801	
13 N-Nitroso-di-n-propylamine	70.0	6.233	6.233	0.000	52467	5.0000	5.9374	
12 Acetophenone	105.0	6.254	6.254	0.000	90055	5.0000	5.6964	
15 Hexachloroethane	117.0	6.368	6.368	0.000	27615	5.0000	5.4568	
$ 16 Nitrobenzene-d5	128.0	6.388	6.388	0.000	29060	5.0000	5.2498	
17 Nitrobenzene	77.0	6.409	6.409	0.000	71802	5.0000	5.7110	
18 Isophorone	82.0	6.585	6.585	0.000	127160	5.0000	5.6433	
20 2,4-Dimethylphenol	107.0	6.648	6.648	0.000	65358	5.0000	5.9547	
$ 95 2-Nitrophenol-d4	143.0	6.658	6.658	0.000	29231	5.0000	5.2205	
19 2-Nitrophenol	139.0	6.668	6.668	0.000	32282	5.0000	5.2969	

Report Date: 17-May-2016 09:47:59 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051616C.b\40516C02.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
21 bis(2-Chloroethoxy)methane	93.0	6.730	6.730	0.000	76273	5.0000	5.7120	
$ 96 2,4-Dichlorophenol-d3	165.0	6.844	6.844	0.000	50736	5.0000	5.3556	
22 2,4-Dichlorophenol	162.0	6.855	6.855	0.000	48865	5.0000	5.4611	
* 23 Naphthalene-d8	136.0	7.000	7.000	0.000	659312	20.000	20.000	
24 Naphthalene	128.0	7.021	7.021	0.000	191175	5.0000	5.8754	
$ 97 4-Chloroaniline-d4	131.0	7.031	7.031	0.000	80514	5.0000	5.9870	
25 4-Chloroaniline	127.0	7.031	7.031	0.000	100651	5.0000	5.6974	
26 Hexachlorobutadiene	225.0	7.093	7.093	0.000	30612	5.0000	5.4425	
27 Caprolactam	113.0	7.321	7.321	0.000	21401	5.0000	6.0442	
28 4-Chloro-3-methylphenol	107.0	7.404	7.404	0.000	51373	5.0000	5.3680	M
29 2-Methylnaphthalene	142.0	7.591	7.591	0.000	129505	5.0000	5.7629	
30 Hexachlorocyclopentadiene	237.0	7.715	7.715	0.000	28372	5.0000	4.7346	
92 1,2,4,5-Tetrachlorobenzene	216.0	7.736	7.736	0.000	51524	5.0000	5.2400	
31 2,4,6-Trichlorophenol	196.0	7.819	7.819	0.000	30973	5.0000	5.0123	
32 2,4,5-Trichlorophenol	196.0	7.850	7.850	0.000	35730	5.0000	5.2081	
34 1,1'-Biphenyl	154.0	7.974	7.974	0.000	149667	5.0000	5.6613	
35 2-Chloronaphthalene	162.0	8.015	8.015	0.000	111613	5.0000	5.4831	
36 2-Nitroaniline	65.0	8.078	8.078	0.000	33177	5.0000	5.1958	
$ 98 Dimethylphthalate-d6	166.0	8.171	8.171	0.000	122429	5.0000	5.3713	
37 Dimethylphthalate	163.0	8.192	8.192	0.000	121149	5.0000	5.4737	
39 2,6-Dinitrotoluene	165.0	8.264	8.264	0.000	25186	5.0000	4.9677	
$ 99 Acenaphthylene-d8	160.0	8.357	8.357	0.000	175837	5.0000	5.5709	
38 Acenaphthylene	152.0	8.378	8.378	0.000	178957	5.0000	5.6925	
40 3-Nitroaniline	138.0	8.420	8.420	0.000	28714	5.0000	5.0936	
* 41 Acenaphthene-d10	164.0	8.492	8.492	0.000	320681	20.000	20.000	
43 2,4-Dinitrophenol	184.0	8.503	8.503	0.000	12822	10.000	6.3880	
42 Acenaphthene	153.0	8.523	8.523	0.000	116102	5.0000	5.9021	
$ 100 4-Nitrophenol-d4	143.0	8.513	8.513	0.000	21755	5.0000	4.8933	
44 4-Nitrophenol	109.0	8.513	8.513	0.000	17996	5.0000	5.3062	
46 2,4-Dinitrotoluene	165.0	8.606	8.606	0.000	33051	5.0000	4.7452	
45 Dibenzofuran	168.0	8.658	8.658	0.000	156141	5.0000	5.5361	
107 2,3,4,6-Tetrachlorophenol	232.0	8.751	8.751	0.000	24163	5.0000	4.5804	
47 Diethylphthalate	149.0	8.782	8.782	0.000	120555	5.0000	5.3552	
49 4-Chlorophenyl-phenylether	204.0	8.917	8.917	0.000	58624	5.0000	5.6546	
$ 101 Fluorene-d10	176.0	8.927	8.927	0.000	118925	5.0000	5.8325	
50 4-Nitroaniline	138.0	8.948	8.948	0.000	30933	5.0000	6.1145	
48 Fluorene	166.0	8.958	8.958	0.000	130377	5.0000	5.7450	
$ 102 4,6-Dinitro-2-methylphenol-d2	200.0	8.958	8.958	0.000	12198	5.0000	3.8409	
51 4,6-Dinitro-2-methylphenol	198.0	8.958	8.958	0.000	12490	5.0000	3.8754	
52 N-Nitrosodiphenylamine	169.0	9.021	9.021	0.000	102590	5.0000	5.5389	
54 4-Bromophenyl-phenylether	248.0	9.342	9.342	0.000	32169	5.0000	5.2212	
55 Hexachlorobenzene	284.0	9.425	9.425	0.000	34764	5.0000	5.2496	
56 Atrazine	200.0	9.435	9.435	0.000	36779	5.0000	6.0181	
57 Pentachlorophenol	266.0	9.580	9.580	0.000	13495	5.0000	4.0103	
* 58 Phenanthrene-d10	188.0	9.767	9.767	0.000	554959	20.000	20.000	
59 Phenanthrene	178.0	9.788	9.788	0.000	175984	5.0000	5.5725	
$ 103 Anthracene-d10	188.0	9.808	9.808	0.000	155127	5.0000	5.5214	
60 Anthracene	178.0	9.829	9.829	0.000	177415	5.0000	5.6740	
106 Carbazole	167.0	9.943	9.943	0.000	162152	5.0000	5.7855	
62 Di-n-butylphthalate	149.0	10.161	10.161	0.000	201557	5.0000	5.7183	
63 Fluoranthene	202.0	10.896	10.896	0.000	186350	5.0000	5.5413	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 104 Pyrene-d10	212.0	11.135	11.135	0.000	161056	5.0000	5.2365	
64 Pyrene	202.0	11.155	11.155	0.000	195469	5.0000	5.3459	
66 Butylbenzylphthalate	149.0	11.788	11.788	0.000	82819	5.0000	5.0678	
71 bis(2-Ethylhexyl)phthalate	149.0	12.534	12.534	0.000	109572	5.0000	4.9377	
68 3,3'-Dichlorobenzidine	252.0	12.575	12.575	0.000	61279	5.0000	5.5984	
67 Benzo(a)anthracene	228.0	12.668	12.668	0.000	188376	5.0000	5.2976	
* 69 Chrysene-d12	240.0	12.689	12.689	0.000	612297	20.000	20.000	
70 Chrysene	228.0	12.731	12.731	0.000	180902	5.0000	5.3595	
72 Di-n-octylphthalate	149.0	13.529	13.529	0.000	185676	5.0000	5.1321	
73 Benzo(b)fluoranthene	252.0	14.337	14.337	0.000	181634	5.0000	5.4240	
74 Benzo(k)fluoranthene	252.0	14.378	14.378	0.000	174069	5.0000	5.4133	
$ 105 Benzo(a)pyrene-d12	264.0	14.845	14.845	0.000	142328	5.0000	5.2364	
75 Benzo(a)pyrene	252.0	14.897	14.897	0.000	173282	5.0000	5.3505	
* 76 Perylene-d12	264.0	14.990	14.990	0.000	506775	20.000	20.000	
77 Indeno(1,2,3-cd)pyrene	276.0	17.166	17.166	0.000	172579	5.0000	5.4645	
78 Dibenzo(a,h)anthracene	278.0	17.187	17.187	0.000	143862	5.0000	5.3686	
79 Benzo(g,h,i)perylene	276.0	17.829	17.829	0.000	135562	5.0000	5.8981	

QC Flag Legend

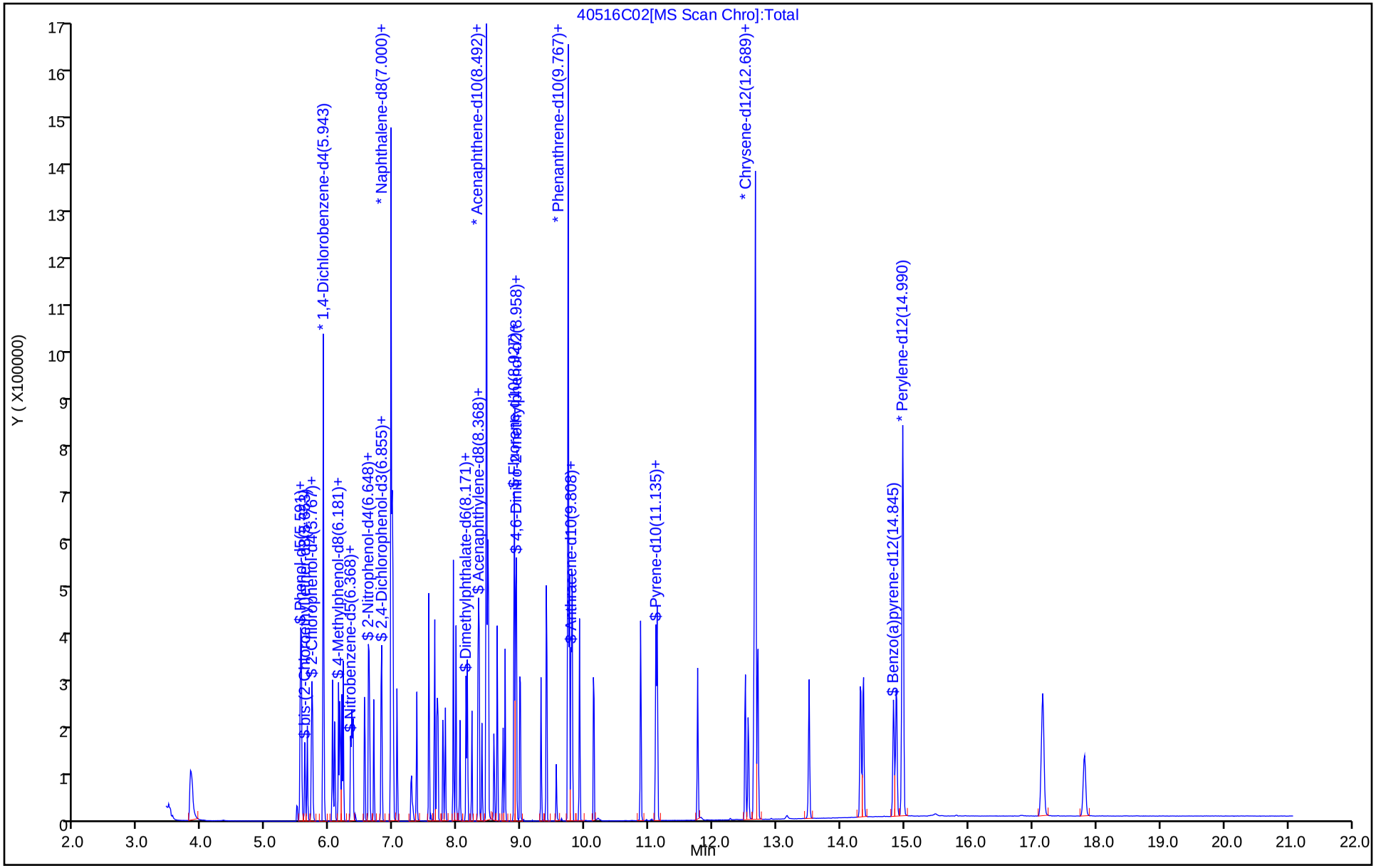
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 17-May-2016 09:47:59 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C02.D				
Injection Date:	16-May-2016 15:27:30	Inst. ID:	msd4.i	Operator:	RBH
Client ID:	SSTD005LA	Lab ID:	SSTD005LA		
Sample Info:	4051616C, SVMS 2054				
Injection Vol.	1.00 1	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 17-May-2016 09:47:59 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

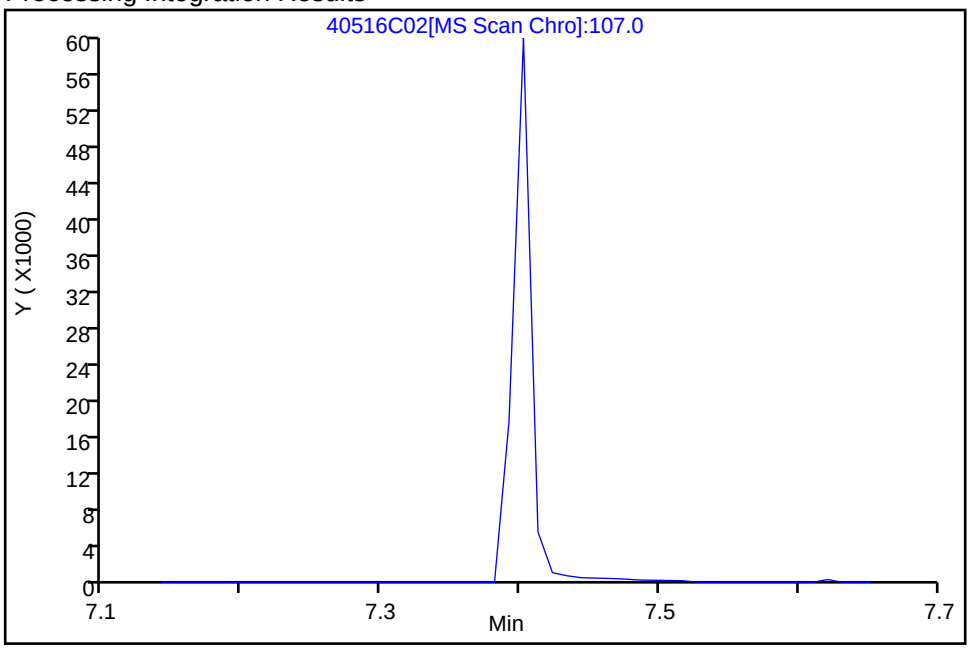
Manual Integration Report

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C02.D		
Injection Date:	16-May-2016 15:27:30	Inst. ID:	msd4.i
Client ID:	SSTD005LA	Lab ID:	SSTD005LA
Sample Info:	4051616C, SVMS 2054		
Injection Vol.	1.00 1	Dil. Factor:	1.0
Operator:	RBH		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

28 4-Chloro-3-methylphenol, CAS: 59-50-7

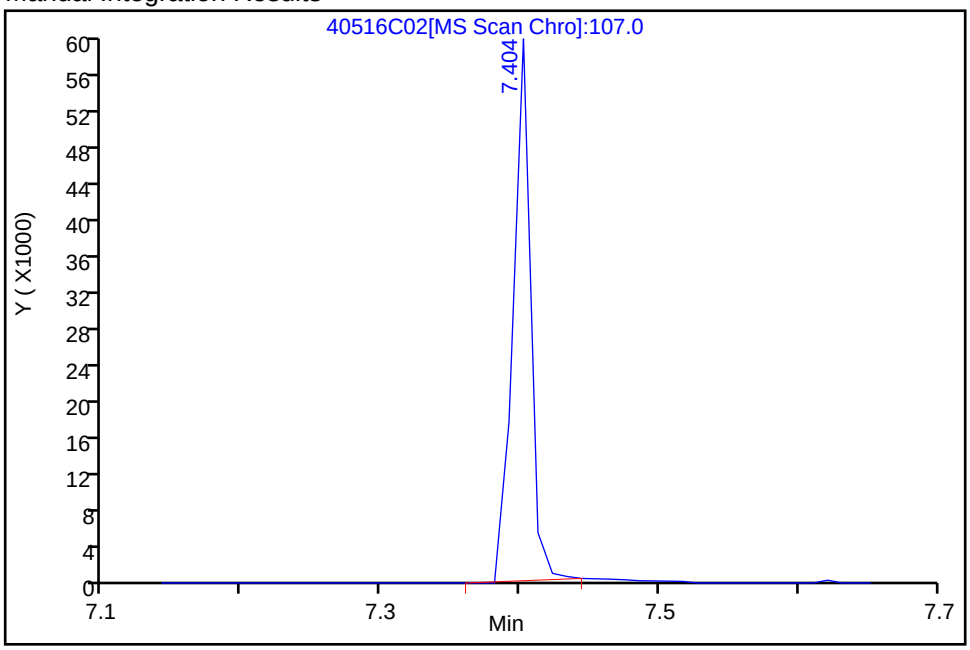
Processing Integration Results

Not Detected
7.404



Manual Integration Results

RT:	7.404
Area:	51373
Amount:	5.3680
Amount Units:	ng/ul



Data Editor: jcg, 16-May-2016 16:01:30
Audit Action: Mint
Audit Reason:

Report Date: 17-May-2016 09:47:59 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

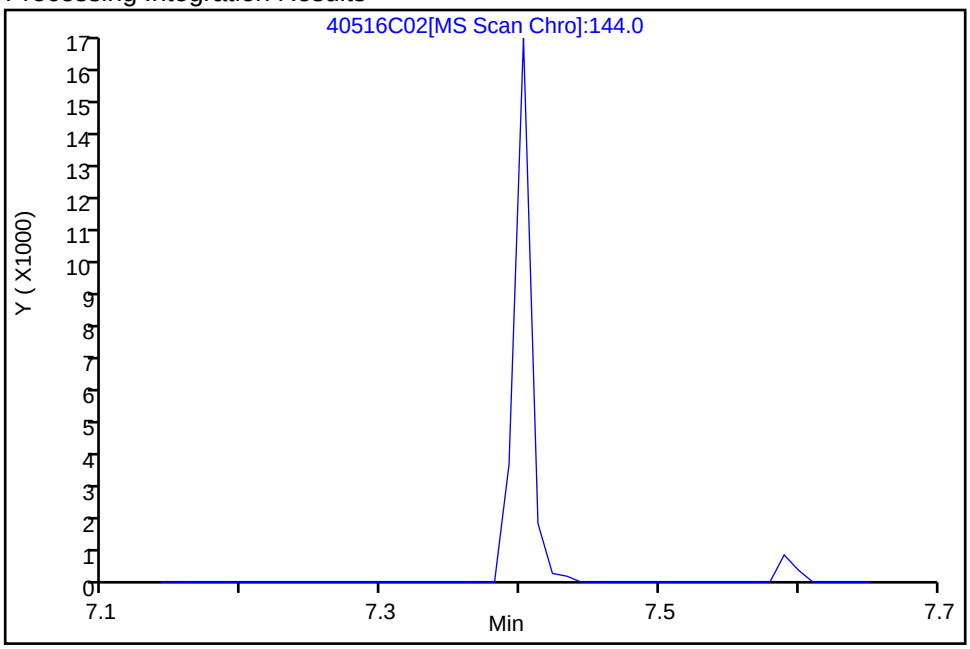
Manual Integration Report

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C02.D		
Injection Date:	16-May-2016 15:27:30	Inst. ID:	msd4.i
Client ID:	SSTD005LA	Lab ID:	SSTD005LA
Sample Info:	4051616C, SVMS 2054		
Injection Vol.	1.00 1	Dil. Factor:	1.0
Operator:	RBH		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

28 4-Chloro-3-methylphenol, CAS: 59-50-7

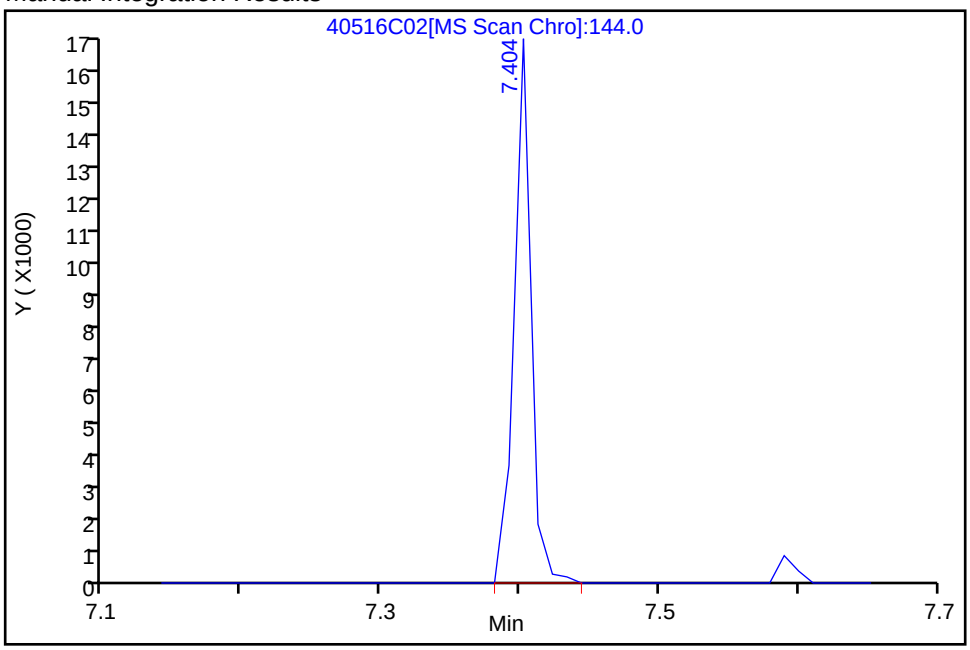
Not Detected
7.404

Processing Integration Results



Manual Integration Results

RT: 7.404
Area: 13836
Amount: 5.3680
Amount Units: ng/ul



Data Editor: jcg, 16-May-2016 16:01:30
Audit Action: Mint
Audit Reason:

Report Date: 17-May-2016 09:47:59 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

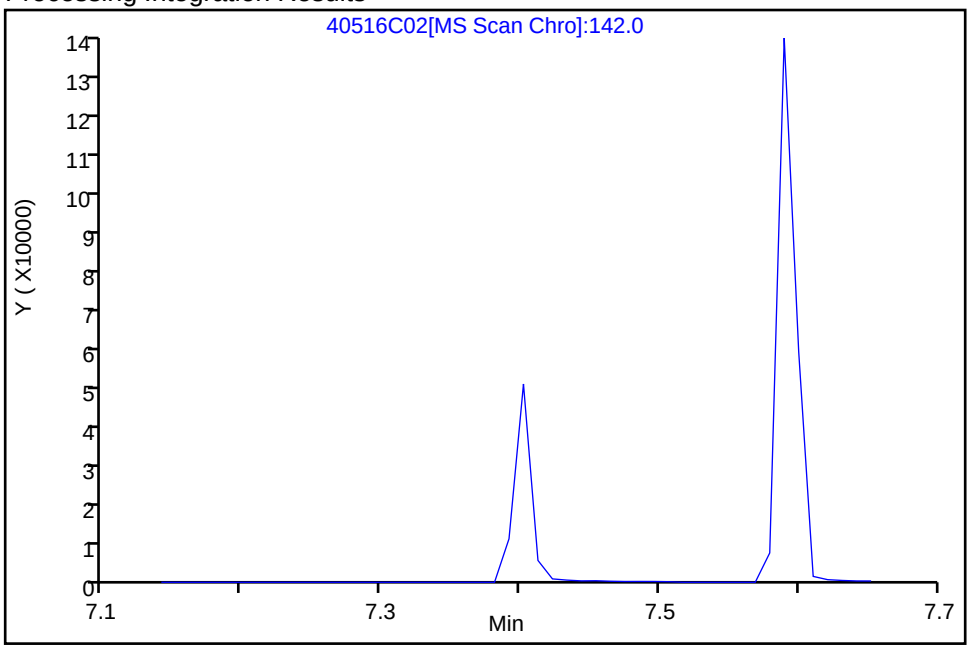
Manual Integration Report

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C02.D		
Injection Date:	16-May-2016 15:27:30	Inst. ID:	msd4.i
Client ID:	SSTD005LA	Lab ID:	SSTD005LA
Sample Info:	4051616C, SVMS 2054		
Injection Vol.	1.00 1	Dil. Factor:	1.0
Operator:	RBH		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

28 4-Chloro-3-methylphenol, CAS: 59-50-7

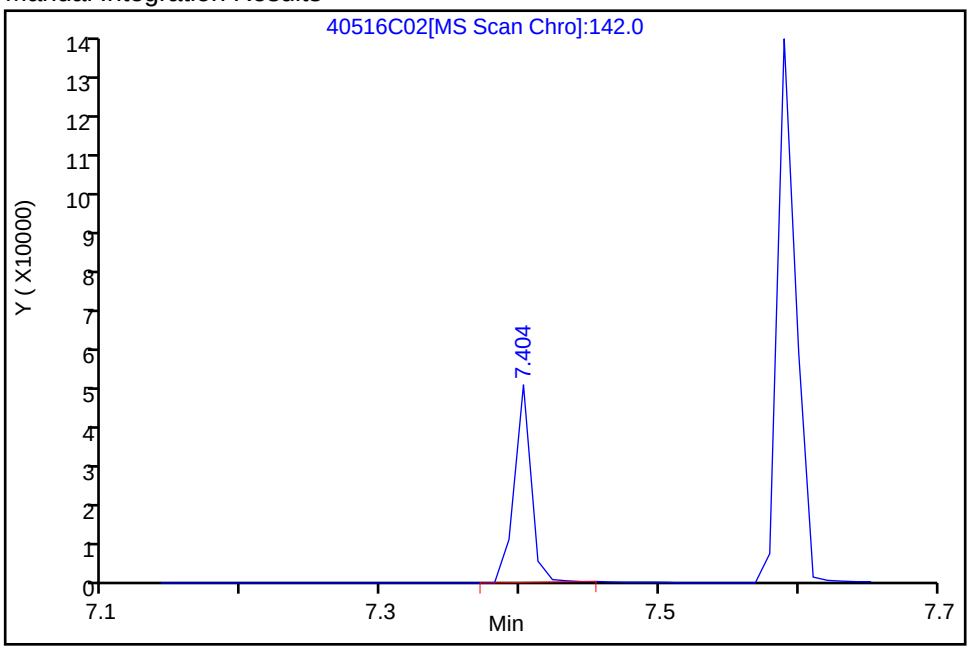
Not Detected
7.404

Processing Integration Results



Manual Integration Results

RT:	7.404
Area:	42325
Amount:	5.3680
Amount Units:	ng/ul



Data Editor: jcg, 16-May-2016 16:01:30
Audit Action: Mint
Audit Reason:

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C03.D		
Lab Sample ID:	SSTD010LA	Client Sample ID:	SSTD010LA
Injection Date:	16-May-2016 15:54:30	Dil. Factor:	1.0
Operator:	RBH	Inst. ID:	msd4.i
Sample Info:	4051616C, SVMS 2055		
Misc. Info:	L2		
Method:	\\Organics\HH\chem\msd4.i\4051616C.b\SOMBNA.m		
Method Date:	17-May-2016 09:47:30	Quant Method:	ISTD
Calib Date:	16-May-2016 17:15:30	Calib File:	40516C06.D
Sample Type:	Ical, Level: 2	ALS Bottle:	92
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	1000.00	Volume of final extract (uL)
Vo	1000.00	Volume of sample extracted (mL)
Cpnd Variable		Local Cpnd Variable

Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rbh	Review Date:	17-May-2016 09:37:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 3 Phenol-d5	99.0	5.580	5.580	0.000	146000	10.000	10.994	
117 1-Methylnaphthalene	142.0	7.684	7.684	0.000	234271	10.000	11.342	
108 1,4-Dioxane	88.0	3.559	3.559	0.000	21179	4.0000	4.1218	
$ 109 1,4-Dioxane-d8	96.0	3.528	3.528	0.000	19070	4.0000	4.2566	
4 Phenol	94.0	5.601	5.601	0.000	150818	10.000	11.025	
2 Benzaldehyde	77.0	5.601	5.601	0.000	107911	10.000	12.333	
$ 93 bis-(2-Chloroethyl)ether-d8	67.0	5.653	5.653	0.000	95130	10.000	10.867	
5 bis(2-Chloroethyl)Ether	93.0	5.694	5.694	0.000	121983	10.000	10.939	
$ 6 2-Chlorophenol-d4	132.0	5.767	5.767	0.000	103062	10.000	10.748	
7 2-Chlorophenol	128.0	5.777	5.777	0.000	124146	10.000	10.811	
* 8 1,4-Dichlorobenzene-d4	152.0	5.943	5.943	0.000	164310	20.000	20.000	
10 2-Methylphenol	108.0	6.088	6.088	0.000	111030	10.000	10.673	
11 2,2'-oxybis(1-Chloropropane)	45.0	6.119	6.119	0.000	171377	10.000	11.480	
$ 94 4-Methylphenol-d8	113.0	6.181	6.181	0.000	123987	10.000	11.600	
14 4-Methylphenol	108.0	6.212	6.212	0.000	118464	10.000	10.686	
13 N-Nitroso-di-n-propylamine	70.0	6.233	6.233	0.000	97447	10.000	11.364	
12 Acetophenone	105.0	6.254	6.254	0.000	167457	10.000	10.916	
15 Hexachloroethane	117.0	6.368	6.368	0.000	52344	10.000	10.659	
$ 16 Nitrobenzene-d5	128.0	6.388	6.388	0.000	56598	10.000	10.414	
17 Nitrobenzene	77.0	6.409	6.409	0.000	136537	10.000	11.061	
18 Isophorone	82.0	6.596	6.596	0.000	245844	10.000	11.113	
20 2,4-Dimethylphenol	107.0	6.648	6.648	0.000	121136	10.000	11.241	
$ 95 2-Nitrophenol-d4	143.0	6.658	6.658	0.000	58376	10.000	10.619	
19 2-Nitrophenol	139.0	6.668	6.668	0.000	63193	10.000	10.561	

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Data File: \\Organics\HH\chem\msd4.i\4051616C.b\40516C03.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
21 bis(2-Chloroethoxy)methane	93.0	6.730	6.730	0.000	140468	10.000	10.714	
$ 96 2,4-Dichlorophenol-d3	165.0	6.844	6.844	0.000	97445	10.000	10.477	
22 2,4-Dichlorophenol	162.0	6.855	6.855	0.000	92170	10.000	10.492	
* 23 Naphthalene-d8	136.0	7.000	7.000	0.000	647316	20.000	20.000	
24 Naphthalene	128.0	7.021	7.021	0.000	357372	10.000	11.187	
$ 97 4-Chloroaniline-d4	131.0	7.031	7.031	0.000	149904	10.000	11.353	
25 4-Chloroaniline	127.0	7.041	7.041	0.000	192446	10.000	11.095	
26 Hexachlorobutadiene	225.0	7.093	7.093	0.000	57647	10.000	10.439	
27 Caprolactam	113.0	7.321	7.321	0.000	38608	10.000	11.106	
28 4-Chloro-3-methylphenol	107.0	7.404	7.404	0.000	102271	10.000	10.884	
29 2-Methylnaphthalene	142.0	7.591	7.591	0.000	241498	10.000	10.946	
30 Hexachlorocyclopentadiene	237.0	7.715	7.715	0.000	57196	10.000	9.7227	
92 1,2,4,5-Tetrachlorobenzene	216.0	7.736	7.736	0.000	100645	10.000	10.427	
31 2,4,6-Trichlorophenol	196.0	7.819	7.819	0.000	61596	10.000	10.154	
32 2,4,5-Trichlorophenol	196.0	7.850	7.850	0.000	69041	10.000	10.251	
34 1,1'-Biphenyl	154.0	7.974	7.974	0.000	284963	10.000	10.980	
35 2-Chloronaphthalene	162.0	8.015	8.015	0.000	214292	10.000	10.724	
36 2-Nitroaniline	65.0	8.078	8.078	0.000	64819	10.000	10.340	
$ 98 Dimethylphthalate-d6	166.0	8.171	8.171	0.000	227136	10.000	10.151	
37 Dimethylphthalate	163.0	8.192	8.192	0.000	223564	10.000	10.289	
39 2,6-Dinitrotoluene	165.0	8.264	8.264	0.000	49288	10.000	9.9030	
$ 99 Acenaphthylene-d8	160.0	8.368	8.368	0.000	339367	10.000	10.952	
38 Acenaphthylene	152.0	8.378	8.378	0.000	343836	10.000	11.141	
40 3-Nitroaniline	138.0	8.420	8.420	0.000	56010	10.000	10.121	
* 41 Acenaphthene-d10	164.0	8.492	8.492	0.000	314808	20.000	20.000	
43 2,4-Dinitrophenol	184.0	8.513	8.513	0.000	32250	20.000	16.367	
42 Acenaphthene	153.0	8.523	8.523	0.000	218802	10.000	11.331	
$ 100 4-Nitrophenol-d4	143.0	8.513	8.513	0.000	43738	10.000	10.021	
44 4-Nitrophenol	109.0	8.523	8.523	0.000	36546	10.000	10.977	
46 2,4-Dinitrotoluene	165.0	8.616	8.616	0.000	67970	10.000	9.9407	
45 Dibenzofuran	168.0	8.658	8.658	0.000	292581	10.000	10.567	
107 2,3,4,6-Tetrachlorophenol	232.0	8.751	8.751	0.000	49709	10.000	9.5987	
47 Diethylphthalate	149.0	8.782	8.782	0.000	235379	10.000	10.651	
49 4-Chlorophenyl-phenylether	204.0	8.927	8.927	0.000	108906	10.000	10.701	
$ 101 Fluorene-d10	176.0	8.927	8.927	0.000	216905	10.000	10.836	
50 4-Nitroaniline	138.0	8.948	8.948	0.000	59339	10.000	11.948	
48 Fluorene	166.0	8.958	8.958	0.000	246665	10.000	11.072	
$ 102 4,6-Dinitro-2-methylphenol-d2	200.0	8.958	8.958	0.000	30161	10.000	9.4837	
51 4,6-Dinitro-2-methylphenol	198.0	8.969	8.969	0.000	29711	10.000	9.2058	
52 N-Nitrosodiphenylamine	169.0	9.021	9.021	0.000	203575	10.000	10.976	
54 4-Bromophenyl-phenylether	248.0	9.342	9.342	0.000	62723	10.000	10.166	
55 Hexachlorobenzene	284.0	9.425	9.425	0.000	68499	10.000	10.329	
56 Atrazine	200.0	9.435	9.435	0.000	68766	10.000	11.236	
57 Pentachlorophenol	266.0	9.580	9.580	0.000	30188	10.000	8.9583	
* 58 Phenanthrene-d10	188.0	9.767	9.767	0.000	555744	20.000	20.000	
59 Phenanthrene	178.0	9.788	9.788	0.000	347489	10.000	10.988	
$ 103 Anthracene-d10	188.0	9.819	9.819	0.000	308438	10.000	10.963	
60 Anthracene	178.0	9.829	9.829	0.000	347743	10.000	11.106	
106 Carbazole	167.0	9.943	9.943	0.000	311651	10.000	11.104	
62 Di-n-butylphthalate	149.0	10.171	10.171	0.000	396888	10.000	11.244	
63 Fluoranthene	202.0	10.896	10.896	0.000	373447	10.000	11.089	

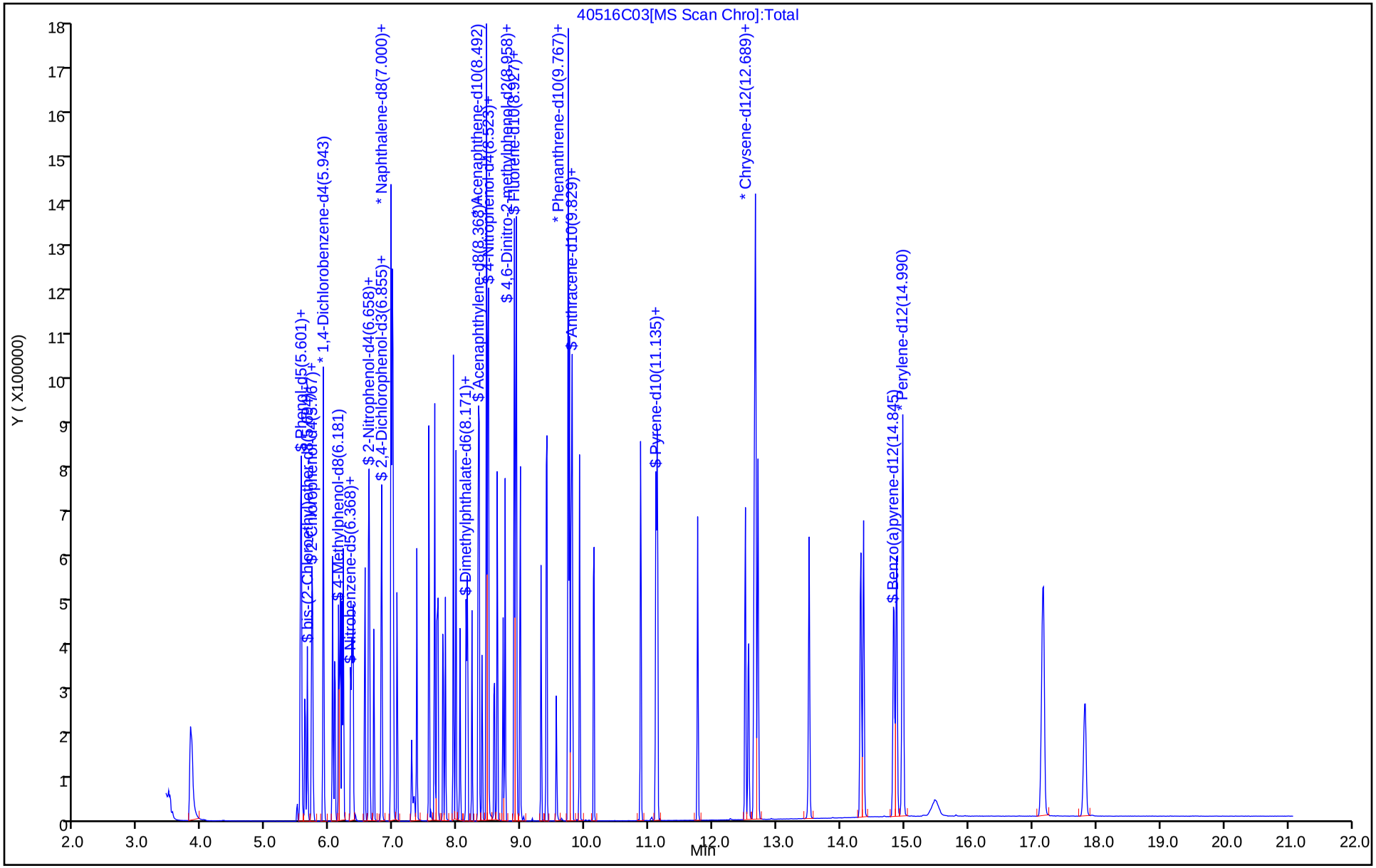
Report Date: 17-May-2016 09:47:59 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051616C.b\40516C03.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 104 Pyrene-d10	212.0	11.135	11.135	0.000	325595	10.000	10.746	
64 Pyrene	202.0	11.155	11.155	0.000	391636	10.000	10.873	
66 Butylbenzylphthalate	149.0	11.788	11.788	0.000	169134	10.000	10.506	
71 bis(2-Ethylhexyl)phthalate	149.0	12.534	12.534	0.000	233744	10.000	10.692	
68 3,3'-Dichlorobenzidine	252.0	12.586	12.586	0.000	118354	10.000	10.976	
67 Benzo(a)anthracene	228.0	12.668	12.668	0.000	369202	10.000	10.540	
* 69 Chrysene-d12	240.0	12.689	12.689	0.000	603189	20.000	20.000	
70 Chrysene	228.0	12.731	12.731	0.000	355138	10.000	10.680	
72 Di-n-octylphthalate	149.0	13.529	13.529	0.000	393815	10.000	10.801	
73 Benzo(b)fluoranthene	252.0	14.337	14.337	0.000	355670	10.000	10.539	
74 Benzo(k)fluoranthene	252.0	14.378	14.378	0.000	356760	10.000	11.009	
$ 105 Benzo(a)pyrene-d12	264.0	14.855	14.855	0.000	290550	10.000	10.607	
75 Benzo(a)pyrene	252.0	14.896	14.896	0.000	347581	10.000	10.650	
* 76 Perylene-d12	264.0	14.990	14.990	0.000	510709	20.000	20.000	
77 Indeno(1,2,3-cd)pyrene	276.0	17.176	17.176	0.000	344946	10.000	10.838	
78 Dibenzo(a,h)anthracene	278.0	17.187	17.187	0.000	288037	10.000	10.666	
79 Benzo(g,h,i)perylene	276.0	17.840	17.840	0.000	264310	10.000	11.411	

Report Date: 17-May-2016 09:47:59 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C03.D				
Injection Date:	16-May-2016 15:54:30	Inst. ID:	msd4.i	Operator:	RBH
Client ID:	SSTD010LA	Lab ID:	SSTD010LA		
Sample Info:	4051616C, SVMS 2055				
Injection Vol.	1.00 1	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C04.D		
Lab Sample ID:	SSTD020LA	Client Sample ID:	SSTD020LA
Injection Date:	16-May-2016 16:21:30	Dil. Factor:	1.0
Operator:	RBH	Inst. ID:	msd4.i
Sample Info:	4051616C, SVMS 2056		
Misc. Info:	L3		
Method:	\\Organics\HH\chem\msd4.i\4051616C.b\SOMBNA.m		
Method Date:	17-May-2016 09:47:30	Quant Method:	ISTD
Calib Date:	16-May-2016 17:15:30	Calib File:	40516C06.D
Sample Type:	Ical, Level: 3	ALS Bottle:	93
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	1000.00	Volume of final extract (uL)
Vo	1000.00	Volume of sample extracted (mL)
Cpnd Variable		Local Cpnd Variable

Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rbh	Review Date:	17-May-2016 09:47:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 3 Phenol-d5	99.0	5.590	5.590	0.000	303439	20.000	22.172	
117 1-Methylnaphthalene	142.0	7.684	7.684	0.000	469976	20.000	22.016	
108 1,4-Dioxane	88.0	3.559	3.559	0.000	41377	8.0000	7.8138	
$ 109 1,4-Dioxane-d8	96.0	3.528	3.528	0.000	38781	8.0000	8.3996	
4 Phenol	94.0	5.601	5.601	0.000	311300	20.000	22.082	
2 Benzaldehyde	77.0	5.601	5.601	0.000	198044	20.000	21.962	
$ 93 bis-(2-Chloroethyl)ether-d8	67.0	5.663	5.663	0.000	196658	20.000	21.799	
5 bis(2-Chloroethyl)Ether	93.0	5.694	5.694	0.000	248228	20.000	21.600	
$ 6 2-Chlorophenol-d4	132.0	5.767	5.767	0.000	217363	20.000	21.995	
7 2-Chlorophenol	128.0	5.777	5.777	0.000	259330	20.000	21.913	
* 8 1,4-Dichlorobenzene-d4	152.0	5.943	5.943	0.000	169332	20.000	20.000	
10 2-Methylphenol	108.0	6.088	6.088	0.000	231165	20.000	21.562	
11 2,2'-oxybis(1-Chloropropane)	45.0	6.129	6.129	0.000	345541	20.000	22.461	
$ 94 4-Methylphenol-d8	113.0	6.192	6.192	0.000	234456	20.000	21.285	
14 4-Methylphenol	108.0	6.212	6.212	0.000	247096	20.000	21.629	
13 N-Nitroso-di-n-propylamine	70.0	6.243	6.243	0.000	200701	20.000	22.711	
12 Acetophenone	105.0	6.264	6.264	0.000	349605	20.000	22.113	
15 Hexachloroethane	117.0	6.368	6.368	0.000	111038	20.000	21.941	
$ 16 Nitrobenzene-d5	128.0	6.399	6.399	0.000	122964	20.000	21.893	
17 Nitrobenzene	77.0	6.409	6.409	0.000	278054	20.000	21.797	
18 Isophorone	82.0	6.596	6.596	0.000	498047	20.000	21.784	
20 2,4-Dimethylphenol	107.0	6.658	6.658	0.000	238857	20.000	21.448	
$ 95 2-Nitrophenol-d4	143.0	6.658	6.658	0.000	127434	20.000	22.430	
19 2-Nitrophenol	139.0	6.668	6.668	0.000	138020	20.000	22.320	

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Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
21 bis(2-Chloroethoxy)methane	93.0	6.741	6.741	0.000	297422	20.000	21.952	
$ 96 2,4-Dichlorophenol-d3	165.0	6.855	6.855	0.000	214111	20.000	22.275	
22 2,4-Dichlorophenol	162.0	6.865	6.865	0.000	201787	20.000	22.226	
* 23 Naphthalene-d8	136.0	7.000	7.000	0.000	668967	20.000	20.000	
24 Naphthalene	128.0	7.021	7.021	0.000	727777	20.000	22.044	
$ 97 4-Chloroaniline-d4	131.0	7.031	7.031	0.000	299358	20.000	21.939	
25 4-Chloroaniline	127.0	7.041	7.041	0.000	402162	20.000	22.436	
26 Hexachlorobutadiene	225.0	7.093	7.093	0.000	123436	20.000	21.629	
27 Caprolactam	113.0	7.342	7.342	0.000	83391	20.000	21.038	M
28 4-Chloro-3-methylphenol	107.0	7.404	7.404	0.000	211152	20.000	21.745	
29 2-Methylnaphthalene	142.0	7.601	7.601	0.000	504503	20.000	22.126	
30 Hexachlorocyclopentadiene	237.0	7.715	7.715	0.000	131789	20.000	21.810	
92 1,2,4,5-Tetrachlorobenzene	216.0	7.736	7.736	0.000	218352	20.000	22.022	
31 2,4,6-Trichlorophenol	196.0	7.819	7.819	0.000	135184	20.000	21.695	
32 2,4,5-Trichlorophenol	196.0	7.850	7.850	0.000	151296	20.000	21.870	
34 1,1'-Biphenyl	154.0	7.974	7.974	0.000	583823	20.000	21.900	
35 2-Chloronaphthalene	162.0	8.015	8.015	0.000	449751	20.000	21.911	
36 2-Nitroaniline	65.0	8.078	8.078	0.000	139925	20.000	21.731	
$ 98 Dimethylphthalate-d6	166.0	8.181	8.181	0.000	503219	20.000	21.894	
37 Dimethylphthalate	163.0	8.202	8.202	0.000	494981	20.000	22.178	
39 2,6-Dinitrotoluene	165.0	8.202	8.202	0.000	117243	20.000	22.933	
$ 99 Acenaphthylene-d8	160.0	8.368	8.368	0.000	708376	20.000	22.256	
38 Acenaphthylene	152.0	8.378	8.378	0.000	709106	20.000	22.369	
40 3-Nitroaniline	138.0	8.430	8.430	0.000	125059	20.000	22.000	
* 41 Acenaphthene-d10	164.0	8.492	8.492	0.000	323367	20.000	20.000	
43 2,4-Dinitrophenol	184.0	8.513	8.513	0.000	98265	40.000	48.549	
42 Acenaphthene	153.0	8.523	8.523	0.000	458772	20.000	23.128	
$ 100 4-Nitrophenol-d4	143.0	8.523	8.523	0.000	99964	20.000	22.298	
44 4-Nitrophenol	109.0	8.534	8.534	0.000	71243	20.000	20.832	
46 2,4-Dinitrotoluene	165.0	8.616	8.616	0.000	152761	20.000	21.750	
45 Dibenzofuran	168.0	8.668	8.668	0.000	621544	20.000	21.854	
107 2,3,4,6-Tetrachlorophenol	232.0	8.751	8.751	0.000	115350	20.000	21.684	
47 Diethylphthalate	149.0	8.782	8.782	0.000	490244	20.000	21.596	
49 4-Chlorophenyl-phenylether	204.0	8.927	8.927	0.000	231924	20.000	22.185	
$ 101 Fluorene-d10	176.0	8.927	8.927	0.000	449637	20.000	21.868	
50 4-Nitroaniline	138.0	8.958	8.958	0.000	115943	20.000	22.728	
48 Fluorene	166.0	8.958	8.958	0.000	504231	20.000	22.034	
$ 102 4,6-Dinitro-2-methylphenol-d2	200.0	8.969	8.969	0.000	77929	20.000	22.894	
51 4,6-Dinitro-2-methylphenol	198.0	8.969	8.969	0.000	80610	20.000	23.336	
52 N-Nitrosodiphenylamine	169.0	9.021	9.021	0.000	447349	20.000	22.534	
54 4-Bromophenyl-phenylether	248.0	9.352	9.352	0.000	143167	20.000	21.680	
55 Hexachlorobenzene	284.0	9.435	9.435	0.000	153365	20.000	21.607	
56 Atrazine	200.0	9.435	9.435	0.000	130790	20.000	19.967	
57 Pentachlorophenol	266.0	9.591	9.591	0.000	79165	20.000	21.949	
* 58 Phenanthrene-d10	188.0	9.767	9.767	0.000	594819	20.000	20.000	
59 Phenanthrene	178.0	9.788	9.788	0.000	728110	20.000	21.511	
$ 103 Anthracene-d10	188.0	9.819	9.819	0.000	660389	20.000	21.930	
60 Anthracene	178.0	9.839	9.839	0.000	756818	20.000	22.582	
106 Carbazole	167.0	9.953	9.953	0.000	655740	20.000	21.828	
62 Di-n-butylphthalate	149.0	10.171	10.171	0.000	852580	20.000	22.567	
63 Fluoranthene	202.0	10.907	10.907	0.000	794984	20.000	22.055	

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Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 104 Pyrene-d10	212.0	11.145	11.145	0.000	696575	20.000	21.763	
64 Pyrene	202.0	11.166	11.166	0.000	831191	20.000	21.844	
66 Butylbenzylphthalate	149.0	11.788	11.788	0.000	371245	20.000	21.829	
71 bis(2-Ethylhexyl)phthalate	149.0	12.534	12.534	0.000	509849	20.000	22.078	
68 3,3'-Dichlorobenzidine	252.0	12.586	12.586	0.000	243387	20.000	21.367	
67 Benzo(a)anthracene	228.0	12.679	12.679	0.000	798730	20.000	21.585	
* 69 Chrysene-d12	240.0	12.700	12.700	0.000	637194	20.000	20.000	
70 Chrysene	228.0	12.741	12.741	0.000	749774	20.000	21.345	
72 Di-n-octylphthalate	149.0	13.529	13.529	0.000	879267	20.000	22.904	
73 Benzo(b)fluoranthene	252.0	14.347	14.347	0.000	791788	20.000	22.284	
74 Benzo(k)fluoranthene	252.0	14.389	14.389	0.000	743959	20.000	21.804	
$ 105 Benzo(a)pyrene-d12	264.0	14.865	14.865	0.000	634838	20.000	22.012	
75 Benzo(a)pyrene	252.0	14.907	14.907	0.000	760687	20.000	22.136	
* 76 Perylene-d12	264.0	15.000	15.000	0.000	537725	20.000	20.000	
77 Indeno(1,2,3-cd)pyrene	276.0	17.187	17.187	0.000	736923	20.000	21.991	
78 Dibenzo(a,h)anthracene	278.0	17.207	17.207	0.000	625054	20.000	21.983	
79 Benzo(g,h,i)perylene	276.0	17.850	17.850	0.000	552612	20.000	22.659	

QC Flag Legend

Review Flags

M - Compound Hit/Peak Manually Integrated

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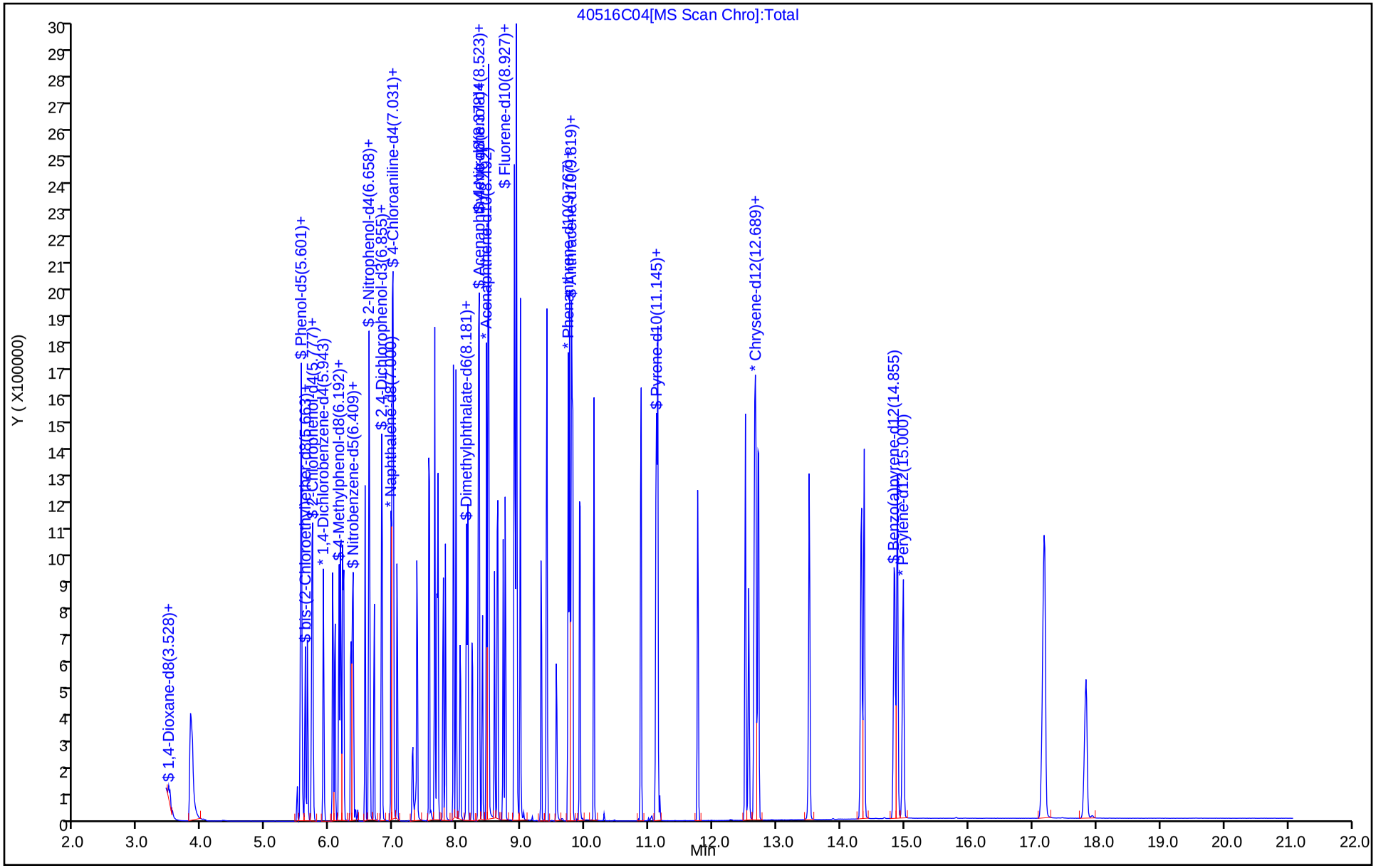
Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C04.D				
Injection Date:	16-May-2016 16:21:30	Inst. ID:	msd4.i	Operator:	RBH
Client ID:	SSTD020LA	Lab ID:	SSTD020LA		
Sample Info:	4051616C, SVMS 2056				
Injection Vol.	1.00 1	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 17-May-2016 09:47:59 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

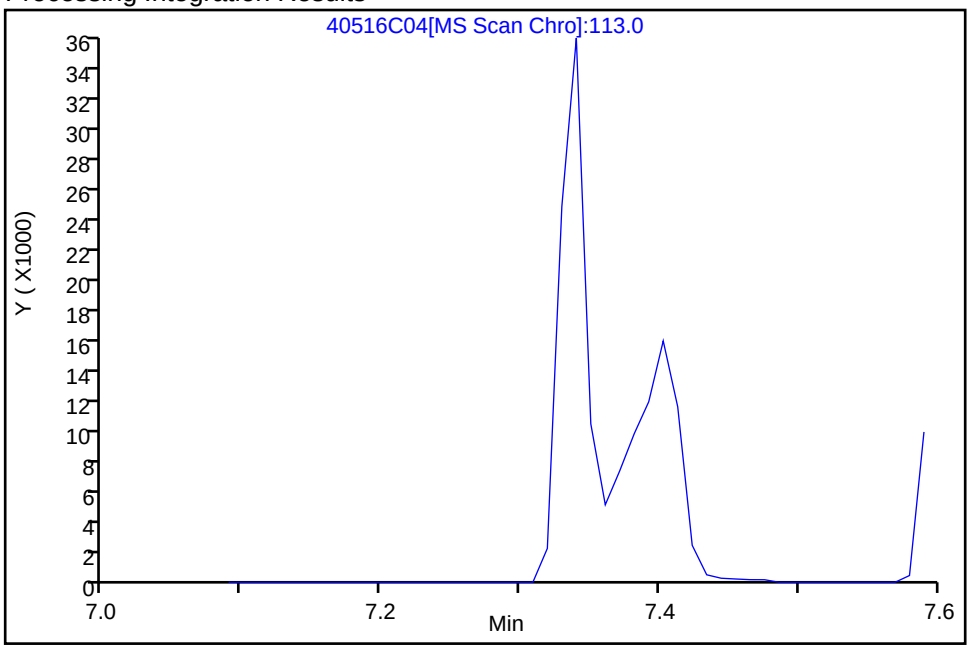
Manual Integration Report

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C04.D		
Injection Date:	16-May-2016 16:21:30	Inst. ID:	msd4.i
Client ID:	SSTD020LA	Lab ID:	SSTD020LA
Sample Info:	4051616C, SVMS 2056		
Injection Vol.	1.00 1	Dil. Factor:	1.0
Operator:	RBH		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

27 Caprolactam, CAS: 105-60-2

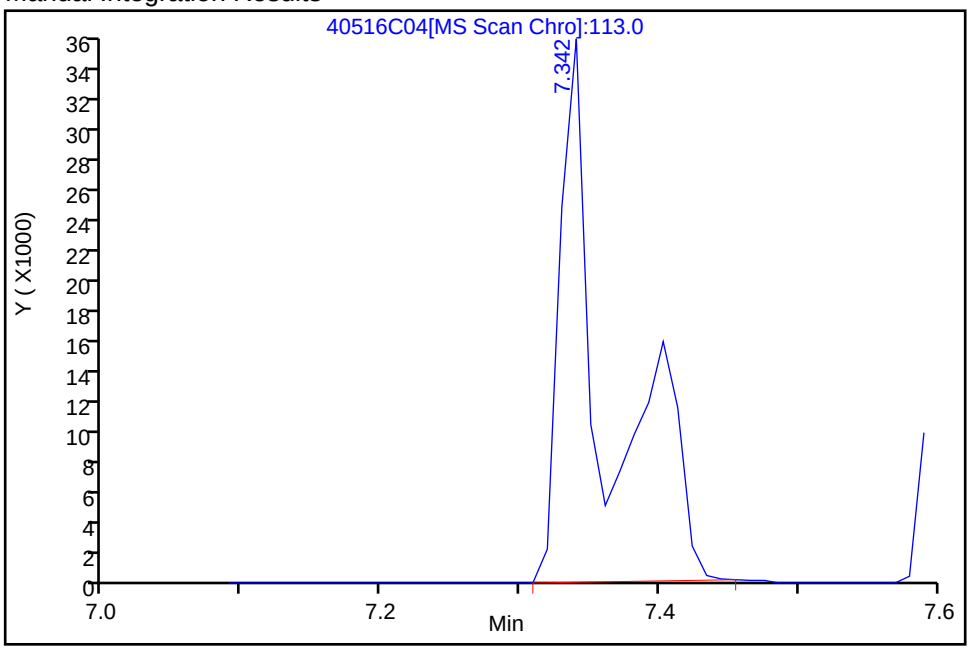
Processing Integration Results

Not Detected
7.342



Manual Integration Results

RT: 7.342
Area: 83391
Amount: 21.038
Amount Units: ng/ul



Data Editor: rbh, 17-May-2016 09:47:30
Audit Action: Mint
Audit Reason: IAI

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C05.D		
Lab Sample ID:	SSTD040LA	Client Sample ID:	SSTD040LA
Injection Date:	16-May-2016 16:48:30	Dil. Factor:	1.0
Operator:	RBH	Inst. ID:	msd4.i
Sample Info:	4051616C, SVMS 2057		
Misc. Info:	L4		
Method:	\\Organics\HH\chem\msd4.i\4051616C.b\SOMBNA.m		
Method Date:	17-May-2016 09:47:30	Quant Method:	ISTD
Calib Date:	16-May-2016 17:15:30	Calib File:	40516C06.D
Sample Type:	Ical, Level: 4	ALS Bottle:	94
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	1000.00	Volume of final extract (uL)
Vo	1000.00	Volume of sample extracted (mL)
Cpnd Variable		Local Cpnd Variable

Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rbh	Review Date:	17-May-2016 09:37:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 3 Phenol-d5	99.0	5.591	5.591	0.000	549994	40.000	35.149	
117 1-Methylnaphthalene	142.0	7.684	7.684	0.000	857116	40.000	35.161	
108 1,4-Dioxane	88.0	3.549	3.549	0.000	82101	16.000	13.560	
$ 109 1,4-Dioxane-d8	96.0	3.528	3.528	0.000	80782	16.000	15.303	
4 Phenol	94.0	5.611	5.611	0.000	558873	40.000	34.672	
2 Benzaldehyde	77.0	5.601	5.601	0.000	297625	40.000	28.866	
$ 93 bis-(2-Chloroethyl)ether-d8	67.0	5.663	5.663	0.000	362815	40.000	35.174	
5 bis(2-Chloroethyl)Ether	93.0	5.705	5.705	0.000	467331	40.000	35.566	
$ 6 2-Chlorophenol-d4	132.0	5.767	5.767	0.000	410827	40.000	36.359	
7 2-Chlorophenol	128.0	5.777	5.777	0.000	491172	40.000	36.300	
* 8 1,4-Dichlorobenzene-d4	152.0	5.943	5.943	0.000	193610	20.000	20.000	
10 2-Methylphenol	108.0	6.098	6.098	0.000	451725	40.000	36.852	
11 2,2'-oxybis(1-Chloropropane)	45.0	6.129	6.129	0.000	597392	40.000	33.963	
$ 94 4-Methylphenol-d8	113.0	6.192	6.192	0.000	451026	40.000	35.812	
14 4-Methylphenol	108.0	6.223	6.223	0.000	473275	40.000	36.232	
13 N-Nitroso-di-n-propylamine	70.0	6.254	6.254	0.000	358582	40.000	35.489	
12 Acetophenone	105.0	6.264	6.264	0.000	636669	40.000	35.221	
15 Hexachloroethane	117.0	6.378	6.378	0.000	210770	40.000	36.425	
$ 16 Nitrobenzene-d5	128.0	6.399	6.399	0.000	238635	40.000	37.206	
17 Nitrobenzene	77.0	6.420	6.420	0.000	523560	40.000	35.940	
18 Isophorone	82.0	6.606	6.606	0.000	913987	40.000	35.007	
20 2,4-Dimethylphenol	107.0	6.658	6.658	0.000	452730	40.000	35.599	
$ 95 2-Nitrophenol-d4	143.0	6.668	6.668	0.000	247848	40.000	38.202	
19 2-Nitrophenol	139.0	6.679	6.679	0.000	270238	40.000	38.269	

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Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
21 bis(2-Chloroethoxy)methane	93.0	6.741	6.741	0.000	548351	40.000	35.441	
$ 96 2,4-Dichlorophenol-d3	165.0	6.855	6.855	0.000	410435	40.000	37.391	
22 2,4-Dichlorophenol	162.0	6.865	6.865	0.000	384418	40.000	37.078	
* 23 Naphthalene-d8	136.0	7.010	7.010	0.000	763931	20.000	20.000	
24 Naphthalene	128.0	7.031	7.031	0.000	1333072	40.000	35.359	
$ 97 4-Chloroaniline-d4	131.0	7.031	7.031	0.000	534161	40.000	34.280	
25 4-Chloroaniline	127.0	7.041	7.041	0.000	721387	40.000	35.243	
26 Hexachlorobutadiene	225.0	7.104	7.104	0.000	248676	40.000	38.157	
27 Caprolactam	113.0	7.363	7.363	0.000	169888	40.000	41.410	
28 4-Chloro-3-methylphenol	107.0	7.414	7.414	0.000	398764	40.000	35.961	
29 2-Methylnaphthalene	142.0	7.601	7.601	0.000	955934	40.000	36.713	
30 Hexachlorocyclopentadiene	237.0	7.725	7.725	0.000	275340	40.000	40.670	
92 1,2,4,5-Tetrachlorobenzene	216.0	7.736	7.736	0.000	420590	40.000	37.861	
31 2,4,6-Trichlorophenol	196.0	7.819	7.819	0.000	274823	40.000	39.366	
32 2,4,5-Trichlorophenol	196.0	7.860	7.860	0.000	288723	40.000	37.251	
34 1,1'-Biphenyl	154.0	7.984	7.984	0.000	1117271	40.000	37.408	
35 2-Chloronaphthalene	162.0	8.016	8.016	0.000	860137	40.000	37.402	
36 2-Nitroaniline	65.0	8.088	8.088	0.000	274270	40.000	38.019	
$ 98 Dimethylphthalate-d6	166.0	8.181	8.181	0.000	965050	40.000	37.476	
37 Dimethylphthalate	163.0	8.202	8.202	0.000	928097	40.000	37.116	
39 2,6-Dinitrotoluene	165.0	8.275	8.275	0.000	219774	40.000	38.369	
$ 99 Acenaphthylene-d8	160.0	8.368	8.368	0.000	1280210	40.000	35.901	
38 Acenaphthylene	152.0	8.378	8.378	0.000	1290012	40.000	36.321	
40 3-Nitroaniline	138.0	8.440	8.440	0.000	245803	40.000	38.595	
* 41 Acenaphthene-d10	164.0	8.492	8.492	0.000	362294	20.000	20.000	
43 2,4-Dinitrophenol	184.0	8.523	8.523	0.000	226950	80.000	100.08	
42 Acenaphthene	153.0	8.523	8.523	0.000	756797	40.000	34.054	
$ 100 4-Nitrophenol-d4	143.0	8.534	8.534	0.000	200189	40.000	39.856	
44 4-Nitrophenol	109.0	8.544	8.544	0.000	142912	40.000	37.298	
46 2,4-Dinitrotoluene	165.0	8.627	8.627	0.000	321373	40.000	40.841	
45 Dibenzofuran	168.0	8.668	8.668	0.000	1150931	40.000	36.120	
107 2,3,4,6-Tetrachlorophenol	232.0	8.762	8.762	0.000	248056	40.000	41.621	
47 Diethylphthalate	149.0	8.793	8.793	0.000	959093	40.000	37.710	
49 4-Chlorophenyl-phenylether	204.0	8.927	8.927	0.000	440670	40.000	37.623	
$ 101 Fluorene-d10	176.0	8.938	8.938	0.000	847383	40.000	36.785	
50 4-Nitroaniline	138.0	8.969	8.969	0.000	190043	40.000	33.251	
48 Fluorene	166.0	8.959	8.959	0.000	939103	40.000	36.628	
$ 102 4,6-Dinitro-2-methylphenol-d2	200.0	8.969	8.969	0.000	168662	40.000	42.273	
51 4,6-Dinitro-2-methylphenol	198.0	8.979	8.979	0.000	180788	40.000	44.650	
52 N-Nitrosodiphenylamine	169.0	9.021	9.021	0.000	846919	40.000	36.396	
54 4-Bromophenyl-phenylether	248.0	9.352	9.352	0.000	298094	40.000	38.511	
55 Hexachlorobenzene	284.0	9.435	9.435	0.000	313202	40.000	37.646	
56 Atrazine	200.0	9.446	9.446	0.000	268065	40.000	34.914	
57 Pentachlorophenol	266.0	9.591	9.591	0.000	182166	40.000	43.090	
* 58 Phenanthrene-d10	188.0	9.767	9.767	0.000	697210	20.000	20.000	
59 Phenanthrene	178.0	9.798	9.798	0.000	1446296	40.000	36.453	
$ 103 Anthracene-d10	188.0	9.819	9.819	0.000	1287067	40.000	36.464	
60 Anthracene	178.0	9.839	9.839	0.000	1386366	40.000	35.292	
106 Carbazole	167.0	9.953	9.953	0.000	1211064	40.000	34.394	
62 Di-n-butylphthalate	149.0	10.171	10.171	0.000	1523403	40.000	34.402	
63 Fluoranthene	202.0	10.907	10.907	0.000	1495318	40.000	35.392	

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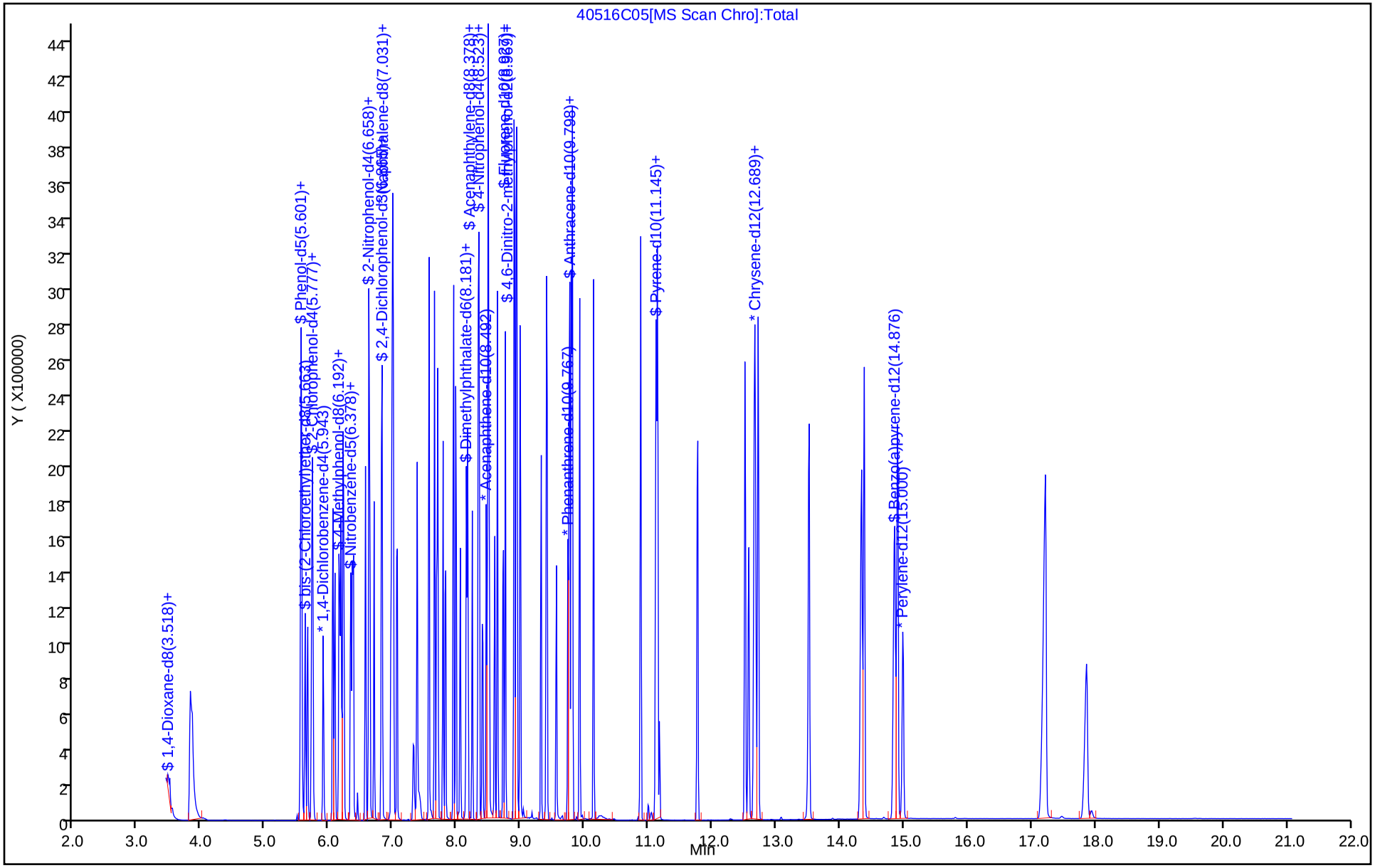
Data File: \\Organics\HH\chem\msd4.i\4051616C.b\40516C05.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 104 Pyrene-d10	212.0	11.145	11.145	0.000	1328903	40.000	37.180	
64 Pyrene	202.0	11.166	11.166	0.000	1582458	40.000	37.241	
66 Butylbenzylphthalate	149.0	11.798	11.798	0.000	730486	40.000	38.464	
71 bis(2-Ethylhexyl)phthalate	149.0	12.534	12.534	0.000	997997	40.000	38.700	
68 3,3'-Dichlorobenzidine	252.0	12.596	12.596	0.000	459444	40.000	36.119	
67 Benzo(a)anthracene	228.0	12.689	12.689	0.000	1537488	40.000	37.207	
* 69 Chrysene-d12	240.0	12.700	12.700	0.000	711557	20.000	20.000	
70 Chrysene	228.0	12.741	12.741	0.000	1467639	40.000	37.416	
72 Di-n-octylphthalate	149.0	13.539	13.539	0.000	1696958	40.000	38.314	
73 Benzo(b)fluoranthene	252.0	14.358	14.358	0.000	1551975	40.000	37.857	
74 Benzo(k)fluoranthene	252.0	14.399	14.399	0.000	1434379	40.000	36.437	
$ 105 Benzo(a)pyrene-d12	264.0	14.876	14.876	0.000	1254159	40.000	37.691	
75 Benzo(a)pyrene	252.0	14.917	14.917	0.000	1491350	40.000	37.615	
* 76 Perylene-d12	264.0	15.000	15.000	0.000	620401	20.000	20.000	
77 Indeno(1,2,3-cd)pyrene	276.0	17.208	17.208	0.000	1429004	40.000	36.960	
78 Dibenzo(a,h)anthracene	278.0	17.228	17.228	0.000	1218473	40.000	37.142	
79 Benzo(g,h,i)perylene	276.0	17.871	17.871	0.000	1000356	40.000	35.553	

Report Date: 17-May-2016 09:48:00 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C05.D				
Injection Date:	16-May-2016 16:48:30	Inst. ID:	msd4.i	Operator:	RBH
Client ID:	SSTD040LA	Lab ID:	SSTD040LA		
Sample Info:	4051616C, SVMS 2057				
Injection Vol.	1.00 1	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C06.D		
Lab Sample ID:	SSTD080LA	Client Sample ID:	SSTD080LA
Injection Date:	16-May-2016 17:15:30	Dil. Factor:	1.0
Operator:	RBH	Inst. ID:	msd4.i
Sample Info:	4051616C, SVMS 2108		
Misc. Info:	L5		
Method:	\\Organics\HH\chem\msd4.i\4051616C.b\SOMBNA.m		
Method Date:	17-May-2016 09:47:30	Quant Method:	ISTD
Calib Date:	16-May-2016 17:15:30	Calib File:	40516C06.D
Sample Type:	Ical, Level: 5	ALS Bottle:	95
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	1000.00	Volume of final extract (uL)
Vo	1000.00	Volume of sample extracted (mL)
Cpnd Variable		Local Cpnd Variable

Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rbh	Review Date:	17-May-2016 08:07:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 3 Phenol-d5	99.0	5.611	5.611	0.000	946739	80.000	62.437	
117 1-Methylnaphthalene	142.0	7.694	7.694	0.000	1459188	80.000	61.127	
108 1,4-Dioxane	88.0	3.559	3.559	0.000	175484	32.000	29.910	
$ 109 1,4-Dioxane-d8	96.0	3.528	3.528	0.000	152946	32.000	29.898	
4 Phenol	94.0	5.622	5.622	0.000	951839	80.000	60.939	
2 Benzaldehyde	77.0	5.601	5.601	0.000	399580	80.000	39.993	
$ 93 bis-(2-Chloroethyl)ether-d8	67.0	5.663	5.663	0.000	644769	80.000	64.506	
5 bis(2-Chloroethyl)Ether	93.0	5.704	5.704	0.000	811224	80.000	63.711	
$ 6 2-Chlorophenol-d4	132.0	5.777	5.777	0.000	725418	80.000	66.253	
7 2-Chlorophenol	128.0	5.787	5.787	0.000	849060	80.000	64.754	
* 8 1,4-Dichlorobenzene-d4	152.0	5.943	5.943	0.000	187616	20.000	20.000	
10 2-Methylphenol	108.0	6.109	6.109	0.000	797551	80.000	67.143	
11 2,2'-oxybis(1-Chloropropane)	45.0	6.129	6.129	0.000	946919	80.000	55.554	
$ 94 4-Methylphenol-d8	113.0	6.202	6.202	0.000	807997	80.000	66.205	
14 4-Methylphenol	108.0	6.233	6.233	0.000	858857	80.000	67.851	
13 N-Nitroso-di-n-propylamine	70.0	6.264	6.264	0.000	511722	80.000	52.263	
12 Acetophenone	105.0	6.274	6.274	0.000	1097204	80.000	62.637	
15 Hexachloroethane	117.0	6.378	6.378	0.000	374610	80.000	66.807	
$ 16 Nitrobenzene-d5	128.0	6.409	6.409	0.000	444075	80.000	70.704	
17 Nitrobenzene	77.0	6.420	6.420	0.000	871126	80.000	61.066	
18 Isophorone	82.0	6.616	6.616	0.000	1627474	80.000	63.656	
20 2,4-Dimethylphenol	107.0	6.668	6.668	0.000	719890	80.000	57.805	
$ 95 2-Nitrophenol-d4	143.0	6.668	6.668	0.000	415485	80.000	65.397	
19 2-Nitrophenol	139.0	6.679	6.679	0.000	449108	80.000	64.946	

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Data File: \\Organics\HH\chem\msd4.i\4051616C.b\40516C06.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
21 bis(2-Chloroethoxy)methane	93.0	6.751	6.751	0.000	972741	80.000	64.203	
$ 96 2,4-Dichlorophenol-d3	165.0	6.865	6.865	0.000	716063	80.000	66.616	
22 2,4-Dichlorophenol	162.0	6.876	6.876	0.000	666316	80.000	65.630	
* 23 Naphthalene-d8	136.0	7.010	7.010	0.000	748084	20.000	20.000	
24 Naphthalene	128.0	7.031	7.031	0.000	2126822	80.000	57.607	
$ 97 4-Chloroaniline-d4	131.0	7.041	7.041	0.000	870770	80.000	57.066	
25 4-Chloroaniline	127.0	7.052	7.052	0.000	1199614	80.000	59.847	
26 Hexachlorobutadiene	225.0	7.104	7.104	0.000	424900	80.000	66.578	
27 Caprolactam	113.0	7.383	7.383	0.000	321838	80.000	80.110	M
28 4-Chloro-3-methylphenol	107.0	7.425	7.425	0.000	739858	80.000	68.135	
29 2-Methylnaphthalene	142.0	7.601	7.601	0.000	1486428	80.000	58.296	
30 Hexachlorocyclopentadiene	237.0	7.725	7.725	0.000	520080	80.000	77.887	
92 1,2,4,5-Tetrachlorobenzene	216.0	7.746	7.746	0.000	755306	80.000	68.937	
31 2,4,6-Trichlorophenol	196.0	7.829	7.829	0.000	503056	80.000	73.059	
32 2,4,5-Trichlorophenol	196.0	7.860	7.860	0.000	555577	80.000	72.677	
34 1,1'-Biphenyl	154.0	7.984	7.984	0.000	1742830	80.000	59.163	
35 2-Chloronaphthalene	162.0	8.026	8.026	0.000	1452350	80.000	64.031	
36 2-Nitroaniline	65.0	8.098	8.098	0.000	506465	80.000	71.181	
$ 98 Dimethylphthalate-d6	166.0	8.192	8.192	0.000	1786072	80.000	70.323	
37 Dimethylphthalate	163.0	8.212	8.212	0.000	1656383	80.000	67.162	
39 2,6-Dinitrotoluene	165.0	8.285	8.285	0.000	411399	80.000	72.822	
$ 99 Acenaphthylene-d8	160.0	8.378	8.378	0.000	2195358	80.000	62.420	
38 Acenaphthylene	152.0	8.389	8.389	0.000	2020322	80.000	57.674	
40 3-Nitroaniline	138.0	8.451	8.451	0.000	454426	80.000	72.343	
* 41 Acenaphthene-d10	164.0	8.503	8.503	0.000	357330	20.000	20.000	
43 2,4-Dinitrophenol	184.0	8.534	8.534	0.000	385818	160.00	172.50	
42 Acenaphthene	153.0	8.534	8.534	0.000	1190240	80.000	54.301	
$ 100 4-Nitrophenol-d4	143.0	8.554	8.554	0.000	359825	80.000	72.633	
44 4-Nitrophenol	109.0	8.554	8.554	0.000	262131	80.000	69.363	
46 2,4-Dinitrotoluene	165.0	8.637	8.637	0.000	588819	80.000	75.868	
45 Dibenzofuran	168.0	8.679	8.679	0.000	2112744	80.000	67.226	
107 2,3,4,6-Tetrachlorophenol	232.0	8.762	8.762	0.000	469940	80.000	79.946	
47 Diethylphthalate	149.0	8.803	8.803	0.000	1688301	80.000	67.304	
49 4-Chlorophenyl-phenylether	204.0	8.938	8.938	0.000	692396	80.000	59.936	
$ 101 Fluorene-d10	176.0	8.948	8.948	0.000	1339302	80.000	58.947	
50 4-Nitroaniline	138.0	8.990	8.990	0.000	277163	80.000	49.168	
48 Fluorene	166.0	8.969	8.969	0.000	1469443	80.000	58.110	
$ 102 4,6-Dinitro-2-methylphenol-d2	200.0	8.990	8.990	0.000	333605	80.000	86.555	
51 4,6-Dinitro-2-methylphenol	198.0	8.990	8.990	0.000	319569	80.000	81.703	
52 N-Nitrosodiphenylamine	169.0	9.031	9.031	0.000	1363189	80.000	60.644	
54 4-Bromophenyl-phenylether	248.0	9.352	9.352	0.000	533833	80.000	71.393	
55 Hexachlorobenzene	284.0	9.435	9.435	0.000	575885	80.000	71.655	
56 Atrazine	200.0	9.456	9.456	0.000	475640	80.000	64.128	
57 Pentachlorophenol	266.0	9.591	9.591	0.000	368338	80.000	90.192	
* 58 Phenanthrene-d10	188.0	9.777	9.777	0.000	673511	20.000	20.000	
59 Phenanthrene	178.0	9.798	9.798	0.000	2452576	80.000	63.991	
$ 103 Anthracene-d10	188.0	9.829	9.829	0.000	2158635	80.000	63.308	
60 Anthracene	178.0	9.850	9.850	0.000	2256308	80.000	59.458	
106 Carbazole	167.0	9.964	9.964	0.000	2125975	80.000	62.501	
62 Di-n-butylphthalate	149.0	10.171	10.171	0.000	2544423	80.000	59.481	
63 Fluoranthene	202.0	10.917	10.917	0.000	2596572	80.000	63.620	

Report Date: 17-May-2016 09:48:00 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051616C.b\40516C06.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 104 Pyrene-d10	212.0	11.155	11.155	0.000	2395612	80.000	68.834	
64 Pyrene	202.0	11.176	11.176	0.000	2715363	80.000	65.628	
66 Butylbenzylphthalate	149.0	11.798	11.798	0.000	1306022	80.000	70.625	
71 bis(2-Ethylhexyl)phthalate	149.0	12.544	12.544	0.000	1751397	80.000	69.748	
68 3,3'-Dichlorobenzidine	252.0	12.606	12.606	0.000	803952	80.000	64.909	
67 Benzo(a)anthracene	228.0	12.700	12.700	0.000	2823362	80.000	70.169	
* 69 Chrysene-d12	240.0	12.710	12.710	0.000	692854	20.000	20.000	
70 Chrysene	228.0	12.751	12.751	0.000	2619785	80.000	68.591	
72 Di-n-octylphthalate	149.0	13.539	13.539	0.000	3022852	80.000	63.231	
73 Benzo(b)fluoranthene	252.0	14.378	14.378	0.000	2834216	80.000	64.051	
74 Benzo(k)fluoranthene	252.0	14.420	14.420	0.000	2771344	80.000	65.222	
$ 105 Benzo(a)pyrene-d12	264.0	14.886	14.886	0.000	2439795	80.000	67.930	
75 Benzo(a)pyrene	252.0	14.948	14.948	0.000	2799696	80.000	65.421	
* 76 Perylene-d12	264.0	15.021	15.021	0.000	669648	20.000	20.000	
77 Indeno(1,2,3-cd)pyrene	276.0	17.249	17.249	0.000	2670076	80.000	63.981	
78 Dibenzo(a,h)anthracene	278.0	17.270	17.270	0.000	2356808	80.000	66.559	
79 Benzo(g,h,i)perylene	276.0	17.902	17.902	0.000	1597483	80.000	52.599	

QC Flag Legend

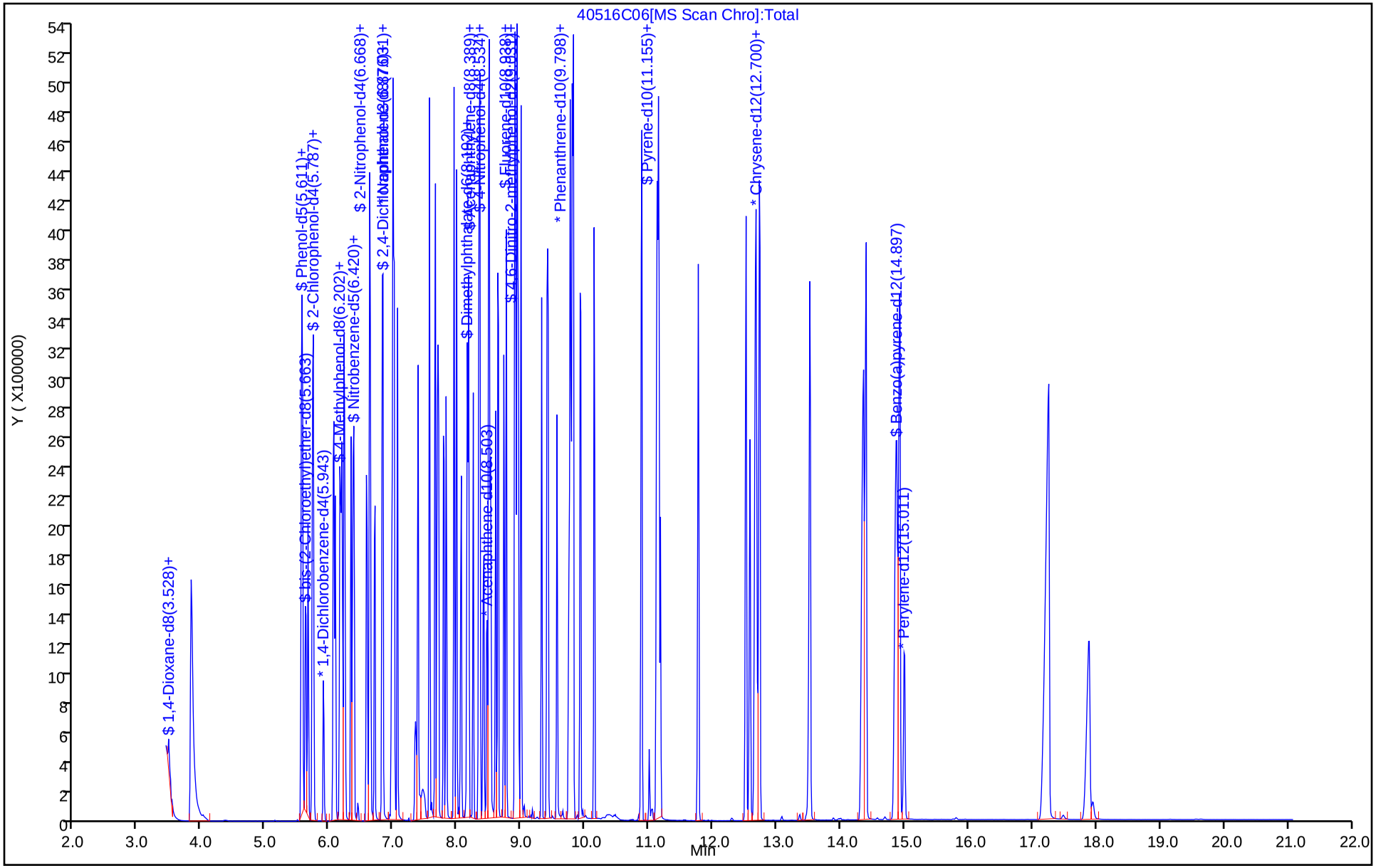
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 17-May-2016 09:48:00 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C06.D				
Injection Date:	16-May-2016 17:15:30	Inst. ID:	msd4.i	Operator:	RBH
Client ID:	SSTD080LA	Lab ID:	SSTD080LA		
Sample Info:	4051616C, SVMS 2108				
Injection Vol.	1.00 1	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 17-May-2016 09:48:00 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

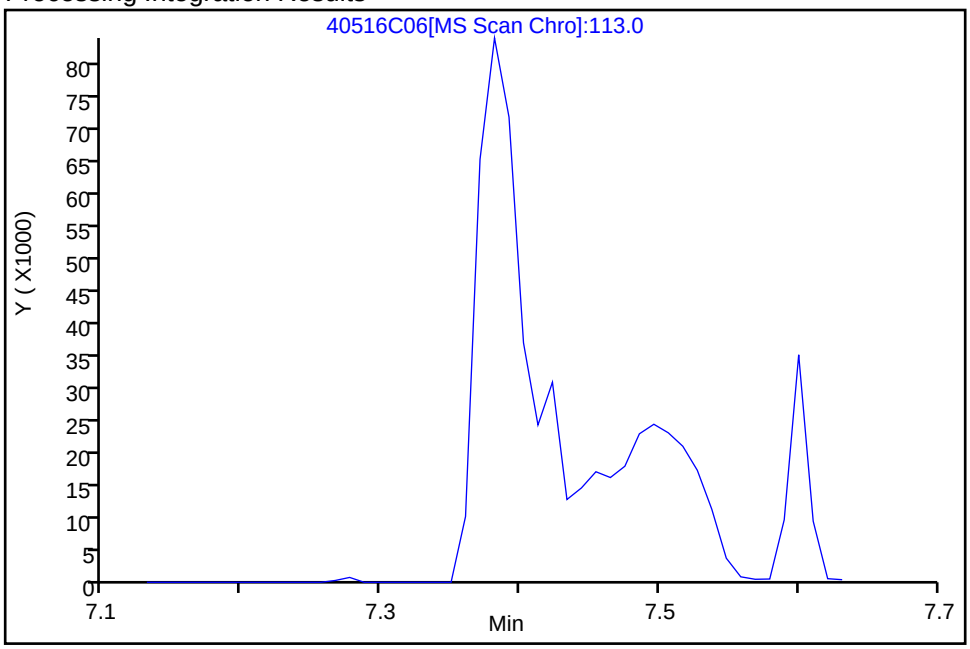
Manual Integration Report

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C06.D		
Injection Date:	16-May-2016 17:15:30	Inst. ID:	msd4.i
Client ID:	SSTD080LA	Lab ID:	SSTD080LA
Sample Info:	4051616C, SVMS 2108		
Injection Vol.	1.00 1	Dil. Factor:	1.0
Operator:	RBH		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

27 Caprolactam, CAS: 105-60-2

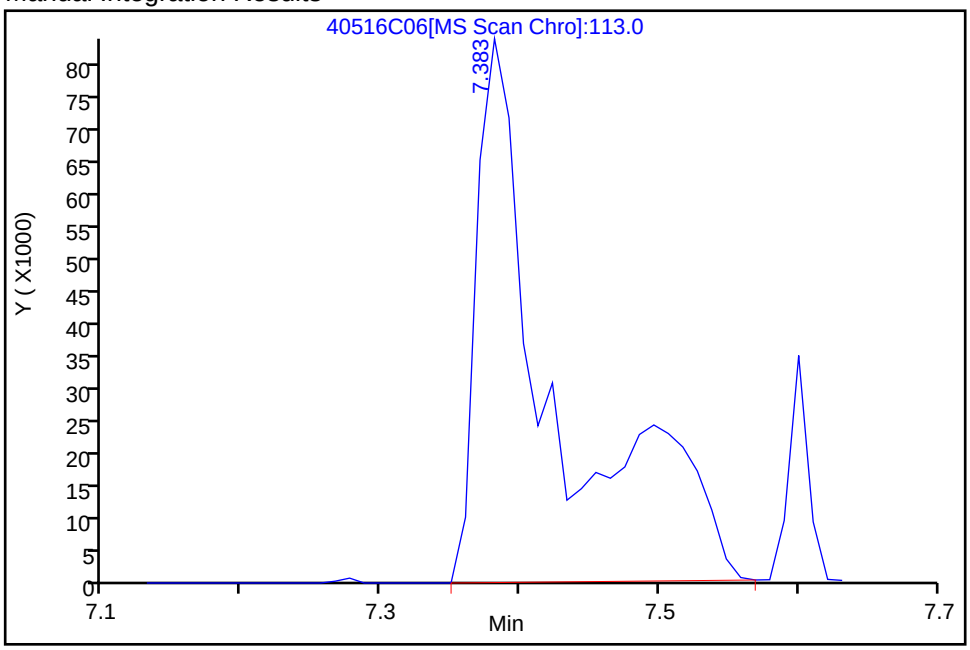
Not Detected
7.383

Processing Integration Results



Manual Integration Results

RT:	7.383
Area:	321838
Amount:	80.110
Amount Units:	ng/ul



Data Editor: rbh, 17-May-2016 08:07:30
Audit Action: Mint
Audit Reason: IAI

Continuing Calibration Data

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

Instrument ID: Agilent MSD4 Calibration Date: 05/17/2016 Time: 0919

Lab File ID: 40517B02 Init. Calib. Date(s): 05/16/2016 05/16/2016

EPA Sample No.: SSTD020LC Init. Calib. Time(s): 1527 1715

GC Column: Zebron ZB-SV ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) _____ Purge Volume: _____ (mL)

COMPOUND	RRF	RRF 20	MIN RRF	%D	MAX %D
1,4-Dioxane	0.625	0.608	0.010	-2.8	40.0
Benzaldehyde	1.065	1.169	0.100	9.8	40.0
Phenol	1.665	1.832	0.080	10.0	20.0
Bis(2-Chloroethyl) ether	1.357	1.443	0.100	6.3	20.0
2-Chlorophenol	1.398	1.520	0.200	8.8	20.0
2-Methylphenol	1.266	1.359	0.010	7.3	20.0
2,2'-Oxybis(1-chloropropane)	1.817	2.012	0.010	10.7	25.0
Acetophenone	1.867	2.052	0.060	9.9	20.0
3-Methylphenol + 4-Methylphenol	1.349	1.463	0.010	8.4	20.0
N-Nitroso-di-n propylamine	1.044	1.183	0.080	13.4	25.0
Hexachloroethane	0.598	0.652	0.100	9.0	20.0
Nitrobenzene	0.381	0.411	0.090	7.8	20.0
Isophorone	0.684	0.730	0.100	6.7	20.0
2-Nitrophenol	0.185	0.203	0.060	9.6	20.0
2,4-Dimethylphenol	0.333	0.363	0.050	9.0	25.0
Bis(2-chloroethoxy)methane	0.405	0.440	0.080	8.7	20.0
2,4-Dichlorophenol	0.271	0.303	0.060	11.5	20.0
Naphthalene	0.987	1.087	0.200	10.1	20.0
4-Chloroaniline	0.536	0.599	0.010	11.8	40.0
Hexachlorobutadiene	0.171	0.183	0.040	7.1	20.0
Caprolactam	0.119	0.124	0.010	4.2	30.0
4-Chloro-3-methylphenol	0.290	0.314	0.040	8.1	20.0
2-Methylnaphthalene	0.682	0.745	0.100	9.3	20.0
Hexachlorocyclo-pentadiene	0.374	0.407	0.010	8.9	40.0
2,4,6-Trichlorophenol	0.385	0.441	0.090	14.5	20.0
2,4,5-Trichlorophenol	0.428	0.461	0.100	7.7	20.0
1,1'-Biphenyl	1.649	1.818	0.200	10.3	20.0
2-Chloronaphthalene	1.270	1.418	0.300	11.7	20.0
2-Nitroaniline	0.398	0.434	0.060	9.0	25.0
Dimethylphthalate	1.380	1.540	0.300	11.6	20.0
2,6-Dinitrotoluene	0.316	0.353	0.080	11.5	20.0
Acenaphthylene	1.961	2.201	0.400	12.2	20.0
3-Nitroaniline	0.352	0.392	0.010	11.5	25.0
Acenaphthene	1.227	1.405	0.200	14.5	20.0
2,4-Dinitrophenol	0.125	0.154	0.010	23.3	50.0
4-Nitrophenol	0.212	0.222	0.010	4.9	40.0

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

Instrument ID: Agilent MSD4 Calibration Date: 05/17/2016 Time: 0919

Lab File ID: 40517B02 Init. Calib. Date(s): 05/16/2016 05/16/2016

EPA Sample No.: SSTD020LC Init. Calib. Time(s): 1527 1715

GC Column: Zebron ZB-SV ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) _____ Purge Volume: _____ (mL)

COMPOUND	RRF	RRF 20	MIN RRF	%D	MAX %D
Dibenzofuran	1.759	1.941	0.300	10.4	20.0
2,4-Dinitrotoluene	0.434	0.479	0.070	10.2	20.0
Diethylphthalate	1.404	1.517	0.300	8.1	20.0
1,2,4,5-Tetrachlorobenzene	0.613	0.680	0.100	10.9	20.0
4-Chlorophenyl-phenyl ether	0.647	0.733	0.100	13.4	20.0
Fluorene	1.415	1.577	0.200	11.4	20.0
4-Nitroaniline	0.316	0.360	0.010	14.1	40.0
4,6-Dinitro-2-methylphenol	0.116	0.133	0.010	14.8	30.0
4-Bromophenyl-phenylether	0.222	0.240	0.070	7.9	20.0
N-Nitrosodiphenylamine	0.668	0.729	0.100	9.2	20.0
Hexachlorobenzene	0.239	0.250	0.050	4.9	20.0
Atrazine	0.220	0.221	0.010	0.2	25.0
Pentachlorophenol	0.121	0.137	0.010	13.0	40.0
Phenanthrene	1.138	1.221	0.200	7.2	20.0
Anthracene	1.127	1.243	0.200	10.3	20.0
Carbazole	1.010	1.086	0.050	7.5	20.0
Di-n-butylphthalate	1.270	1.421	0.500	11.9	20.0
Fluoranthene	1.212	1.326	0.100	9.4	20.0
Pyrene	1.194	1.315	0.400	10.1	25.0
Butylbenzylphthalate	0.534	0.584	0.100	9.5	25.0
3,3'-Dichlorobenzidine	0.358	0.391	0.010	9.4	40.0
Benzo(a)anthracene	1.161	1.251	0.300	7.7	20.0
Chrysene	1.103	1.196	0.200	8.5	20.0
Bis(2-ethylhexyl)phthalate	0.725	0.806	0.200	11.3	25.0
Di-n-octylphthalate	1.428	1.636	0.010	14.6	40.0
Benzo(b)fluoranthene	1.322	1.484	0.010	12.3	25.0
Benzo(k)fluoranthene	1.269	1.378	0.010	8.6	25.0
Benzo(a)pyrene	1.278	1.411	0.010	10.4	20.0
Indeno(1,2,3-cd)pyrene	1.246	1.382	0.010	10.9	25.0
Dibenzo(a,h)anthracene	1.058	1.171	0.010	10.7	25.0
Benzo(g,h,i)perylene	0.907	1.054	0.010	16.2	30.0
2,3,4,6-Tetrachlorophenol	0.329	0.357	0.040	8.5	20.0
1,4-Dioxane-d8	0.545	0.571	0.010	4.8	25.0
Phenol-d5	1.616	1.774	0.010	9.8	25.0
Bis-(2-chloroethyl)ether-d8	1.066	1.145	0.100	7.4	20.0
2-Chlorophenol-d4	1.167	1.260	0.200	8.0	20.0

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

Instrument ID: Agilent MSD4 Calibration Date: 05/17/2016 Time: 0919

Lab File ID: 40517B02 Init. Calib. Date(s): 05/16/2016 05/16/2016

EPA Sample No.: SSTD020LC Init. Calib. Time(s): 1527 1715

GC Column: Zebron ZB-SV ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) _____ Purge Volume: _____ (mL)

COMPOUND	$\overline{\text{RRF}}$	RRF 20	MIN RRF	%D	MAX %D
4-Methylphenol-d8	1.301	1.363	0.010	4.8	20.0
4-Chloroaniline-d4	0.408	0.446	0.010	9.4	40.0
Nitrobenzene-d5	0.168	0.182	0.050	8.2	20.0
2-Nitrophenol-d4	0.170	0.188	0.050	10.8	20.0
2,4-Dichlorophenol-d3	0.287	0.317	0.060	10.3	20.0
Dimethylphthalate-d6	1.422	1.558	0.300	9.6	20.0
Acenaphthylene-d8	1.969	2.233	0.400	13.4	20.0
4-Nitrophenol-d4	0.277	0.311	0.010	12.0	40.0
Fluorene-d10	1.272	1.407	0.100	10.7	20.0
4,6-Dinitro-2-methylphenol-d2	0.114	0.130	0.010	13.2	30.0
Anthracene-d10	1.013	1.108	0.300	9.4	20.0
Pyrene-d10	1.005	1.091	0.300	8.6	25.0
Benzo(a)pyrene-d12	1.073	1.181	0.010	10.1	20.0

Shealy Environmental Services
Continuing Calibration Verification Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B02.D		
Lab Sample ID:	SSTD020LC	Client Sample ID:	SSTD020LC
Injection Date:	17-May-2016 09:19:30	Dil. Factor:	1.0
Operator:	RBH	Inst. ID:	msd4.i
Sample Info:	4051716B, SVMS 2056		
Misc. Info:	L3		
Method:	\\Organics\HH\chem\msd4.i\4051716B.b\SOMBNA.m		
Method Date:	17-May-2016 17:07:30	Quant Method:	ISTD
Calib Date:	16-May-2016 17:15:30	Calib File:	40516C06.D
Sample Type:	CCV	ALS Bottle:	93
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
2 Benzaldehyde	1.065076	1.169114	0.1	9.8	40	110
$ 3 Phenol-d5	1.616399	1.774309	0.01	9.8	25	110
4 Phenol	1.665063	1.831736	0.08	10	20	110
5 bis(2-Chloroethyl)Ether	1.357343	1.442935	0.1	6.3	20	106
$ 6 2-Chlorophenol-d4	1.167198	1.260197	0.2	8	20	108
7 2-Chlorophenol	1.397764	1.520375	0.2	8.8	20	109
10 2-Methylphenol	1.266249	1.358676	0.01	7.3	20	107
11 2,2'-oxybis(1-Chloroprop	1.817015	2.012182	0.01	10.7	25	111
12 Acetophenone	1.867309	2.05181	0.06	9.9	20	110
13 N-Nitroso-di-n-propylami	1.043749	1.183486	0.08	13.4	25	113
14 4-Methylphenol	1.349355	1.462936	0.01	8.4	20	108
15 Hexachloroethane	0.597744	0.651701	0.1	9	20	109
$ 16 Nitrobenzene-d5	0.167916	0.181693	0.05	8.2	20	108
17 Nitrobenzene	0.381383	0.411257	0.09	7.8	20	108
18 Isophorone	0.683529	0.72954	0.1	6.7	20	107
19 2-Nitrophenol	0.184875	0.202714	0.06	9.6	20	110
20 2,4-Dimethylphenol	0.332948	0.362783	0.05	9	25	109
21 bis(2-Chloroethoxy)metha	0.405064	0.440444	0.08	8.7	20	109
22 2,4-Dichlorophenol	0.271431	0.302563	0.06	11.5	20	111
24 Naphthalene	0.987037	1.08675	0.2	10.1	20	110
25 4-Chloroaniline	0.535892	0.598991	0.01	11.8	40	112
26 Hexachlorobutadiene	0.170621	0.182798	0.04	7.1	20	107
27 Caprolactam	0.118506	0.123521	0.01	4.2	30	104
28 4-Chloro-3-methylphenol	0.290309	0.313769	0.04	8.1	20	108
29 2-Methylnaphthalene	0.681683	0.745176	0.1	9.3	20	109
30 Hexachlorocyclopentadien	0.373736	0.407065	0.01	8.9	40	109
31 2,4,6-Trichlorophenol	0.38539	0.441446	0.09	14.5	20	115
32 2,4,5-Trichlorophenol	0.427868	0.461018	0.1	7.7	20	108
34 1,1'-Biphenyl	1.648798	1.817897	0.2	10.3	20	110
35 2-Chloronaphthalene	1.269527	1.418252	0.3	11.7	20	112
36 2-Nitroaniline	0.398241	0.434151	0.06	9	25	109
37 Dimethylphthalate	1.38038	1.540178	0.3	11.6	20	112
38 Acenaphthylene	1.960667	2.200813	0.4	12.2	20	112
39 2,6-Dinitrotoluene	0.316199	0.352587	0.08	11.5	20	112

Report Date: 18-May-2016 10:52:42 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B02.D

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
40 3-Nitroaniline	0.35158	0.39208	0.01	11.5	25	112
42 Acenaphthene	1.226835	1.404796	0.2	14.5	20	115
43 2,4-Dinitrophenol	0.125185	0.154298	0.01	23.3	50	123
44 4-Nitrophenol	0.211519	0.221898	0.01	4.9	40	105
45 Dibenzofuran	1.75901	1.941351	0.3	10.4	20	110
46 2,4-Dinitrotoluene	0.434394	0.478705	0.07	10.2	20	110
47 Diethylphthalate	1.404002	1.517404	0.3	8.1	20	108
92 1,2,4,5-Tetrachlorobenze	0.613245	0.680194	0.1	10.9	20	111
48 Fluorene	1.415354	1.576815	0.2	11.4	20	111
49 4-Chlorophenyl-phenyleth	0.646588	0.733067	0.1	13.4	20	113
50 4-Nitroaniline	0.315513	0.360103	0.01	14.1	40	114
51 4,6-Dinitro-2-methylphen	0.116148	0.133391	0.01	14.8	30	115
52 N-Nitrosodiphenylamine	0.667501	0.729206	0.1	9.2	20	109
54 4-Bromophenyl-phenylethe	0.222042	0.239639	0.07	7.9	20	108
55 Hexachlorobenzene	0.238658	0.250275	0.05	4.9	20	105
56 Atrazine	0.220249	0.220704	0.01	0.2	25	100
57 Pentachlorophenol	0.121272	0.137086	0.01	13	40	113
59 Phenanthrene	1.138128	1.220632	0.2	7.2	20	107
60 Anthracene	1.126861	1.243011	0.2	10.3	20	110
62 Di-n-butylphthalate	1.270278	1.421377	0.5	11.9	20	112
63 Fluoranthene	1.211962	1.325793	0.1	9.4	20	109
64 Pyrene	1.194341	1.315117	0.4	10.1	25	110
66 Butylbenzylphthalate	0.533802	0.584255	0.1	9.5	25	109
67 Benzo(a)anthracene	1.161482	1.251041	0.3	7.7	20	108
68 3,3'-Dichlorobenzidine	0.35753	0.39096	0.01	9.4	40	109
70 Chrysene	1.102517	1.195701	0.2	8.5	20	108
71 bis(2-Ethylhexyl)phthala	0.724842	0.806403	0.2	11.3	25	111
72 Di-n-octylphthalate	1.427818	1.635934	0.01	14.6	40	115
73 Benzo(b)fluoranthene	1.321571	1.483899	0.01	12.3	25	112
74 Benzo(k)fluoranthene	1.269044	1.37778	0.01	8.6	25	109
75 Benzo(a)pyrene	1.278134	1.411186	0.01	10.4	20	110
77 Indeno(1,2,3-cd)pyrene	1.246394	1.381639	0.01	10.9	25	111
78 Dibenzo(a,h)anthracene	1.057555	1.170733	0.01	10.7	25	111
79 Benzo(g,h,i)perylene	0.907072	1.054304	0.01	16.2	30	116
$ 93 bis-(2-Chloroethyl)ether	1.065529	1.144666	0.1	7.4	20	107
$ 94 4-Methylphenol-d8	1.301002	1.363479	0.01	4.8	20	105
$ 95 2-Nitrophenol-d4	0.169854	0.188268	0.05	10.8	20	111
$ 96 2,4-Dichlorophenol-d3	0.287376	0.316929	0.06	10.3	20	110
$ 97 4-Chloroaniline-d4	0.407947	0.446226	0.01	9.4	40	109
$ 98 Dimethylphthalate-d6	1.421553	1.557567	0.3	9.6	20	110
$ 99 Acenaphthylene-d8	1.96854	2.2327	0.4	13.4	20	113
$ 100 4-Nitrophenol-d4	0.277278	0.310667	0.01	12	40	112
$ 101 Fluorene-d10	1.271679	1.407431	0.1	10.7	20	111
$ 102 4,6-Dinitro-2-methylphen	0.114452	0.129532	0.01	13.2	30	113
$ 103 Anthracene-d10	1.012525	1.107813	0.3	9.4	20	109
$ 104 Pyrene-d10	1.004623	1.091092	0.3	8.6	25	109
$ 105 Benzo(a)pyrene-d12	1.072689	1.180629	0.01	10.1	20	110

Report Date: 18-May-2016 10:52:42 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B02.D

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
106 Carbazole	1.010076	1.085715	0.05	7.5	20	107
107 2,3,4,6-Tetrachloropheno	0.329009	0.356885	0.04	8.5	20	108
108 1,4-Dioxane	0.625441	0.608227	0.01	-2.8	40	97
$ 109 1,4-Dioxane-d8	0.545321	0.571452	0.01	4.8	25	105

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B02.D		
Lab Sample ID:	SSTD020LC	Client Sample ID:	SSTD020LC
Injection Date:	17-May-2016 09:19:30	Dil. Factor:	1.0
Operator:	RBH	Inst. ID:	msd4.i
Sample Info:	4051716B, SVMS 2056		
Misc. Info:	L3		
Method:	\\Organics\HH\chem\msd4.i\4051716B.b\SOMBNA.m		
Method Date:	17-May-2016 17:07:30	Quant Method:	ISTD
Calib Date:	16-May-2016 17:15:30	Calib File:	40516C06.D
Sample Type:	CCV	ALS Bottle:	93
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	1000.00	Volume of final extract (uL)
Vo	1000.00	Volume of sample extracted (mL)
Cpnd Variable		Local Cpnd Variable

Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rbh	Review Date:	17-May-2016 09:42:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 3 Phenol-d5	99.0	5.591	5.591	0.000	294074	20.000	21.954	
108 1,4-Dioxane	88.0	3.559	3.559	0.000	40323	8.0000	7.7798	
$ 109 1,4-Dioxane-d8	96.0	3.528	3.528	0.000	37885	8.0000	8.3834	
4 Phenol	94.0	5.601	5.601	0.000	303592	20.000	22.002	
2 Benzaldehyde	77.0	5.601	5.601	0.000	193769	20.000	21.954	
$ 93 bis-(2-Chloroethyl)ether-d8	67.0	5.663	5.663	0.000	189717	20.000	21.485	
5 bis(2-Chloroethyl)Ether	93.0	5.694	5.694	0.000	239152	20.000	21.261	
$ 6 2-Chlorophenol-d4	132.0	5.767	5.767	0.000	208865	20.000	21.594	
7 2-Chlorophenol	128.0	5.777	5.777	0.000	251987	20.000	21.754	
* 8 1,4-Dichlorobenzene-d4	152.0	5.943	5.943	0.000	165740	20.000	20.000	
10 2-Methylphenol	108.0	6.088	6.088	0.000	225187	20.000	21.460	
11 2,2'-oxybis(1-Chloropropane)	45.0	6.129	6.129	0.000	333499	20.000	22.148	
$ 94 4-Methylphenol-d8	113.0	6.192	6.192	0.000	225983	20.000	20.960	
14 4-Methylphenol	108.0	6.212	6.212	0.000	242467	20.000	21.683	
13 N-Nitroso-di-n-propylamine	70.0	6.243	6.243	0.000	196151	20.000	22.678	
12 Acetophenone	105.0	6.264	6.264	0.000	340067	20.000	21.976	
15 Hexachloroethane	117.0	6.368	6.368	0.000	108013	20.000	21.805	
$ 16 Nitrobenzene-d5	128.0	6.399	6.399	0.000	119235	20.000	21.641	
17 Nitrobenzene	77.0	6.409	6.409	0.000	269885	20.000	21.567	
18 Isophorone	82.0	6.596	6.596	0.000	478756	20.000	21.346	
20 2,4-Dimethylphenol	107.0	6.658	6.658	0.000	238074	20.000	21.792	
$ 95 2-Nitrophenol-d4	143.0	6.658	6.658	0.000	123550	20.000	22.168	
19 2-Nitrophenol	139.0	6.668	6.668	0.000	133030	20.000	21.930	
21 bis(2-Chloroethoxy)methane	93.0	6.741	6.741	0.000	289039	20.000	21.747	

Report Date: 18-May-2016 10:52:42 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B02.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 96 2,4-Dichlorophenol-d3	165.0	6.855	6.855	0.000	207983	20.000	22.057	
22 2,4-Dichlorophenol	162.0	6.865	6.865	0.000	198555	20.000	22.294	
* 23 Naphthalene-d8	136.0	7.010	7.010	0.000	656244	20.000	20.000	
24 Naphthalene	128.0	7.021	7.021	0.000	713173	20.000	22.020	
$ 97 4-Chloroaniline-d4	131.0	7.031	7.031	0.000	292833	20.000	21.877	
25 4-Chloroaniline	127.0	7.041	7.041	0.000	393084	20.000	22.355	
26 Hexachlorobutadiene	225.0	7.104	7.104	0.000	119960	20.000	21.427	
27 Caprolactam	113.0	7.342	7.342	0.000	81060	20.000	20.846	M
28 4-Chloro-3-methylphenol	107.0	7.404	7.404	0.000	205909	20.000	21.616	
29 2-Methylnaphthalene	142.0	7.601	7.601	0.000	489017	20.000	21.863	
30 Hexachlorocyclopentadiene	237.0	7.715	7.715	0.000	126995	20.000	21.784	
92 1,2,4,5-Tetrachlorobenzene	216.0	7.736	7.736	0.000	212205	20.000	22.183	
31 2,4,6-Trichlorophenol	196.0	7.819	7.819	0.000	137721	20.000	22.909	M
32 2,4,5-Trichlorophenol	196.0	7.850	7.850	0.000	143827	20.000	21.550	M
34 1,1'-Biphenyl	154.0	7.974	7.974	0.000	567142	20.000	22.051	
35 2-Chloronaphthalene	162.0	8.016	8.016	0.000	442462	20.000	22.343	
36 2-Nitroaniline	65.0	8.078	8.078	0.000	135445	20.000	21.803	
$ 98 Dimethylphthalate-d6	166.0	8.181	8.181	0.000	485925	20.000	21.914	
37 Dimethylphthalate	163.0	8.202	8.202	0.000	480500	20.000	22.315	
39 2,6-Dinitrotoluene	165.0	8.275	8.275	0.000	109999	20.000	22.302	
$ 99 Acenaphthylene-d8	160.0	8.368	8.368	0.000	696551	20.000	22.684	
38 Acenaphthylene	152.0	8.378	8.378	0.000	686603	20.000	22.450	
40 3-Nitroaniline	138.0	8.430	8.430	0.000	122320	20.000	22.304	
* 41 Acenaphthene-d10	164.0	8.492	8.492	0.000	311977	20.000	20.000	
43 2,4-Dinitrophenol	184.0	8.513	8.513	0.000	96275	40.000	49.303	
42 Acenaphthene	153.0	8.523	8.523	0.000	438264	20.000	22.901	
$ 100 4-Nitrophenol-d4	143.0	8.523	8.523	0.000	96921	20.000	22.408	
44 4-Nitrophenol	109.0	8.534	8.534	0.000	69227	20.000	20.981	
46 2,4-Dinitrotoluene	165.0	8.617	8.617	0.000	149345	20.000	22.040	
45 Dibenzofuran	168.0	8.668	8.668	0.000	605657	20.000	22.073	
107 2,3,4,6-Tetrachlorophenol	232.0	8.751	8.751	0.000	111340	20.000	21.695	
47 Diethylphthalate	149.0	8.782	8.782	0.000	473395	20.000	21.615	
49 4-Chlorophenyl-phenylether	204.0	8.927	8.927	0.000	228700	20.000	22.675	
$ 101 Fluorene-d10	176.0	8.927	8.927	0.000	439086	20.000	22.135	
50 4-Nitroaniline	138.0	8.959	8.959	0.000	112344	20.000	22.827	
48 Fluorene	166.0	8.959	8.959	0.000	491930	20.000	22.282	
$ 102 4,6-Dinitro-2-methylphenol-d2	200.0	8.969	8.969	0.000	75366	20.000	22.635	
51 4,6-Dinitro-2-methylphenol	198.0	8.969	8.969	0.000	77611	20.000	22.969	
52 N-Nitrosodiphenylamine	169.0	9.021	9.021	0.000	424276	20.000	21.849	
54 4-Bromophenyl-phenylether	248.0	9.352	9.352	0.000	139430	20.000	21.585	
55 Hexachlorobenzene	284.0	9.435	9.435	0.000	145618	20.000	20.973	
56 Atrazine	200.0	9.435	9.435	0.000	128413	20.000	20.041	
57 Pentachlorophenol	266.0	9.591	9.591	0.000	79761	20.000	22.608	
* 58 Phenanthrene-d10	188.0	9.767	9.767	0.000	581833	20.000	20.000	
59 Phenanthrene	178.0	9.788	9.788	0.000	710204	20.000	21.450	
$ 103 Anthracene-d10	188.0	9.819	9.819	0.000	644562	20.000	21.882	
60 Anthracene	178.0	9.839	9.839	0.000	723225	20.000	22.061	
106 Carbazole	167.0	9.953	9.953	0.000	631705	20.000	21.498	
62 Di-n-butylphthalate	149.0	10.171	10.171	0.000	827004	20.000	22.379	
63 Fluoranthene	202.0	10.907	10.907	0.000	771390	20.000	21.878	
$ 104 Pyrene-d10	212.0	11.145	11.145	0.000	678608	20.000	21.721	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
64 Pyrene	202.0	11.166	11.166	0.000	817941	20.000	22.022	
66 Butylbenzylphthalate	149.0	11.788	11.788	0.000	363379	20.000	21.890	
71 bis(2-Ethylhexyl)phthalate	149.0	12.534	12.534	0.000	501545	20.000	22.250	
68 3,3'-Dichlorobenzidine	252.0	12.586	12.586	0.000	243159	20.000	21.870	
67 Benzo(a)anthracene	228.0	12.679	12.679	0.000	778089	20.000	21.542	
* 69 Chrysene-d12	240.0	12.700	12.700	0.000	621953	20.000	20.000	
70 Chrysene	228.0	12.731	12.731	0.000	743670	20.000	21.690	
72 Di-n-octylphthalate	149.0	13.529	13.529	0.000	860565	20.000	22.915	
73 Benzo(b)fluoranthene	252.0	14.347	14.347	0.000	780589	20.000	22.457	
74 Benzo(k)fluoranthene	252.0	14.389	14.389	0.000	724766	20.000	21.714	
$ 105 Benzo(a)pyrene-d12	264.0	14.855	14.855	0.000	621057	20.000	22.013	
75 Benzo(a)pyrene	252.0	14.907	14.907	0.000	742339	20.000	22.082	
* 76 Perylene-d12	264.0	15.000	15.000	0.000	526039	20.000	20.000	
77 Indeno(1,2,3-cd)pyrene	276.0	17.187	17.187	0.000	726796	20.000	22.170	
78 Dibenzo(a,h)anthracene	278.0	17.208	17.208	0.000	615851	20.000	22.140	
79 Benzo(g,h,i)perylene	276.0	17.850	17.850	0.000	554605	20.000	23.246	

QC Flag Legend

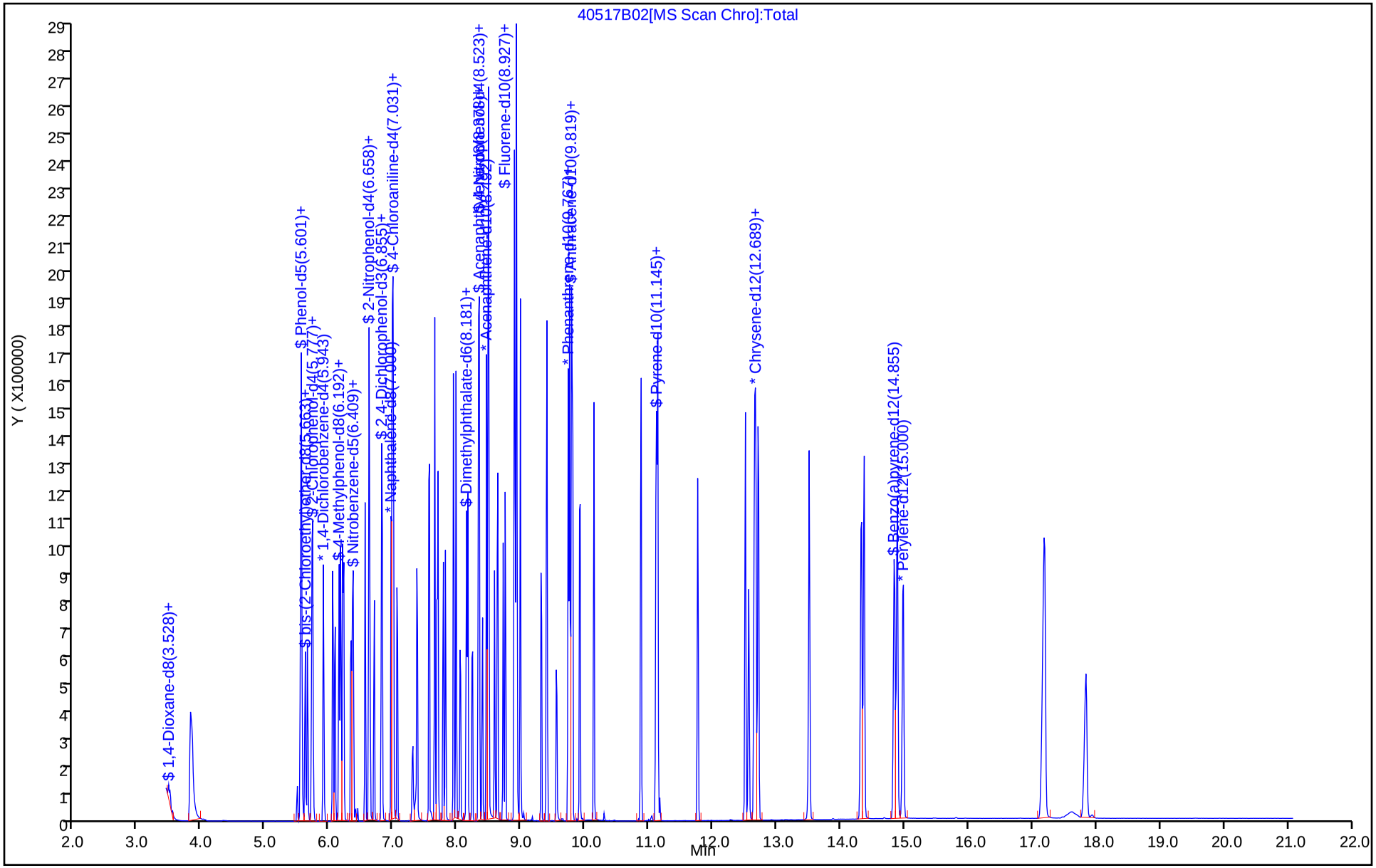
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 18-May-2016 10:52:42 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B02.D				
Injection Date:	17-May-2016 09:19:30	Inst. ID:	msd4.i	Operator:	RBH
Client ID:	SSTD020LC	Lab ID:	SSTD020LC		
Sample Info:	4051716B, SVMS 2056				
Injection Vol.	1.00 1	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 18-May-2016 10:52:42 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

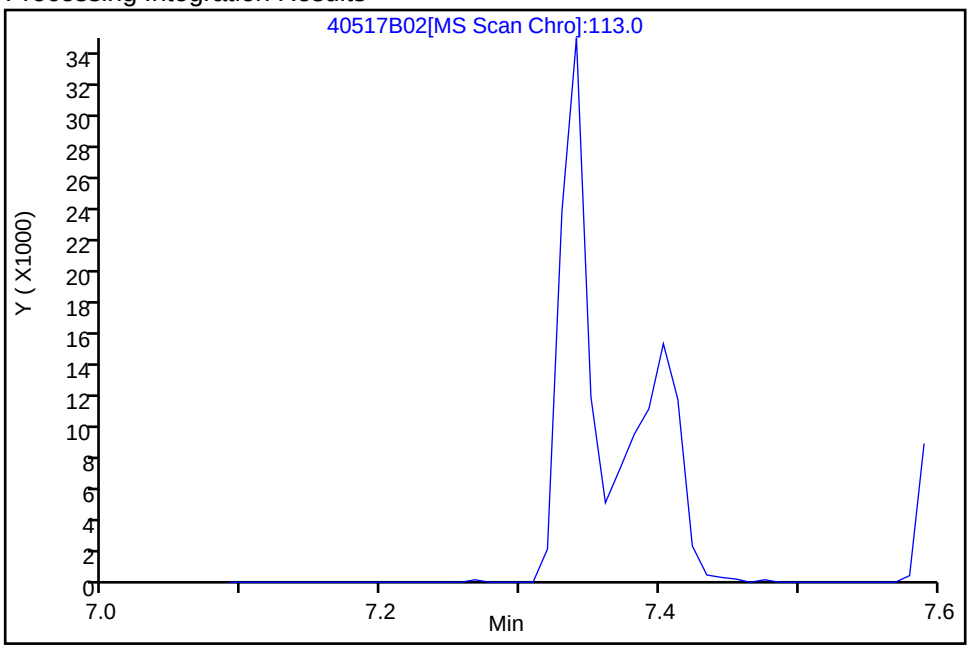
Manual Integration Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B02.D		
Injection Date:	17-May-2016 09:19:30	Inst. ID:	msd4.i
Client ID:	SSTD020LC	Lab ID:	SSTD020LC
Sample Info:	4051716B, SVMS 2056		
Injection Vol.	1.00 1	Dil. Factor:	1.0
Operator:	RBH		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

27 Caprolactam, CAS: 105-60-2

Not Detected
7.342

Processing Integration Results



Manual Integration Results

RT:	7.342
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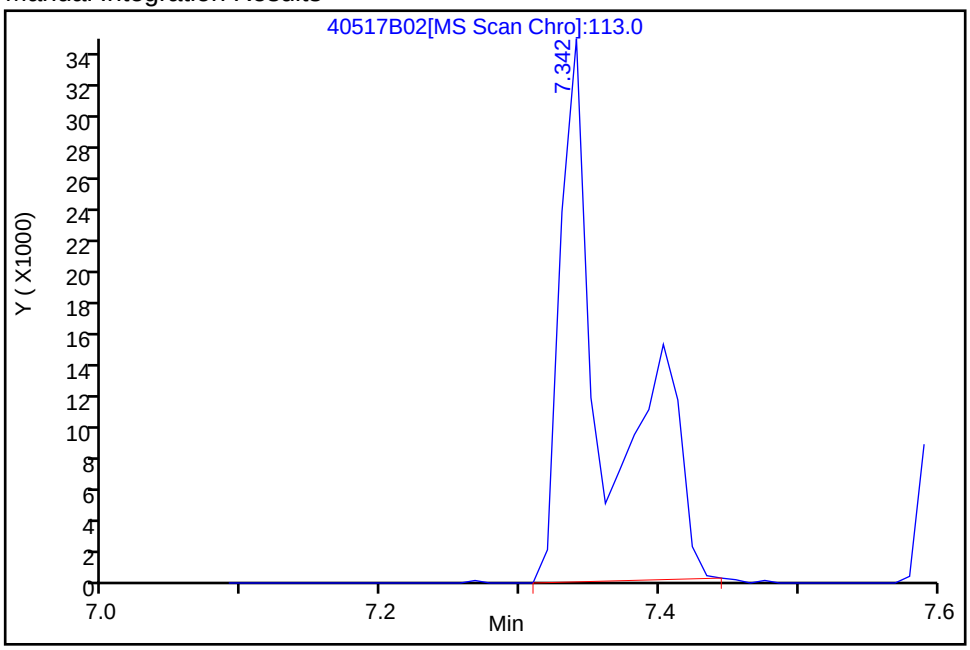
Amount Units:	ng/ul



Data Editor: rbh, 17-May-2016 09:42:30
Audit Action: Mint
Audit Reason: IAI

Report Date: 18-May-2016 10:52:42 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

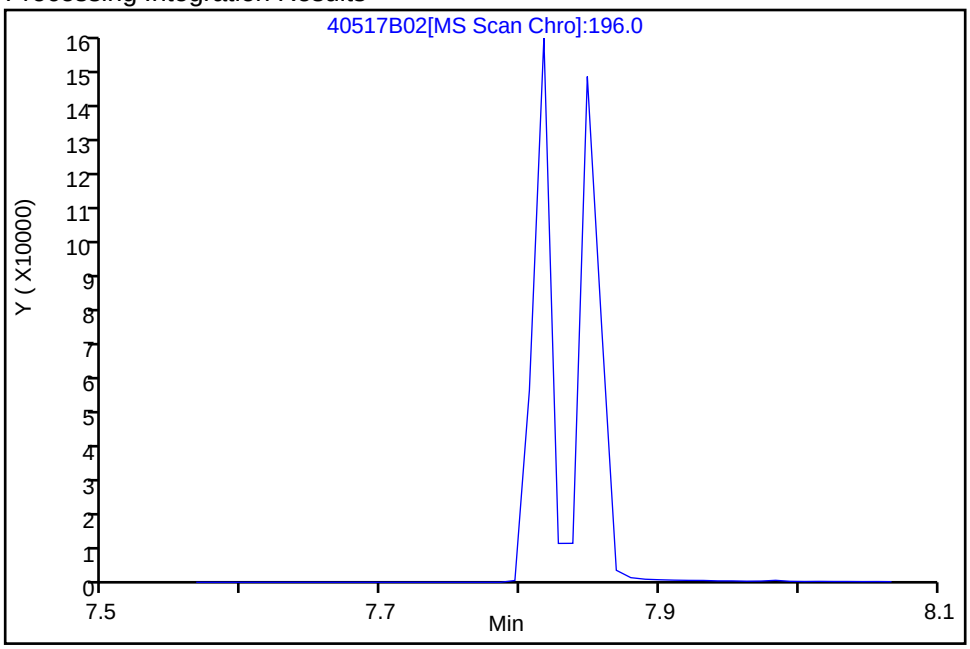
Manual Integration Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B02.D		
Injection Date:	17-May-2016 09:19:30	Inst. ID:	msd4.i
Client ID:	SSTD020LC	Lab ID:	SSTD020LC
Sample Info:	4051716B, SVMS 2056		
Injection Vol.	1.00 1	Dil. Factor:	1.0
Operator:	RBH		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

31 2,4,6-Trichlorophenol, CAS: 88-06-2

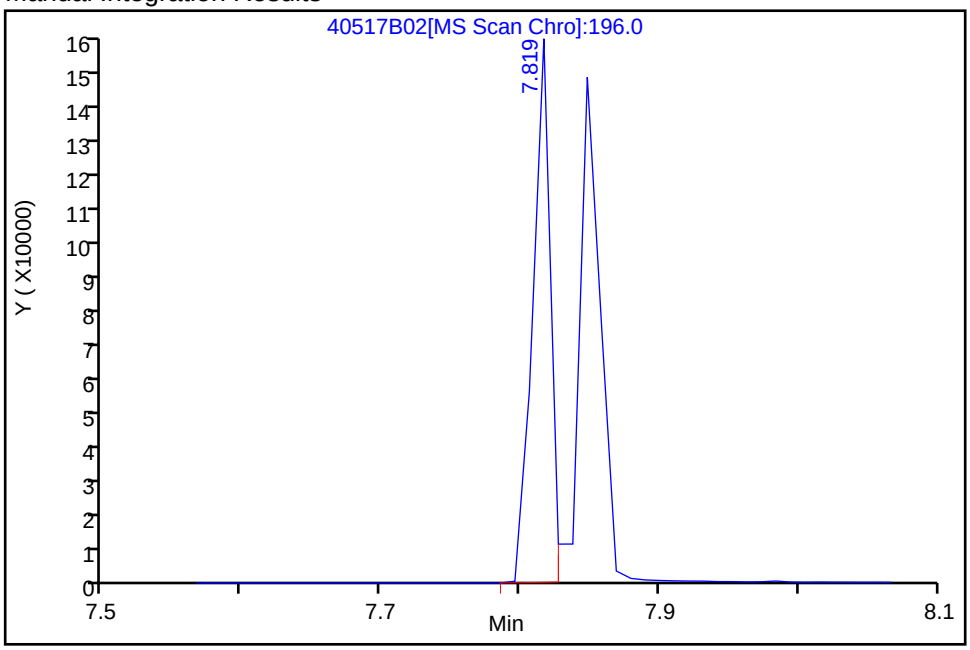
Not Detected
7.819

Processing Integration Results



Manual Integration Results

RT:	7.819
Area:	137721
Amount:	22.909
Amount Units:	ng/ul



Data Editor: rbh, 17-May-2016 09:42:30
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Report Date: 18-May-2016 10:52:42 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Manual Integration Report

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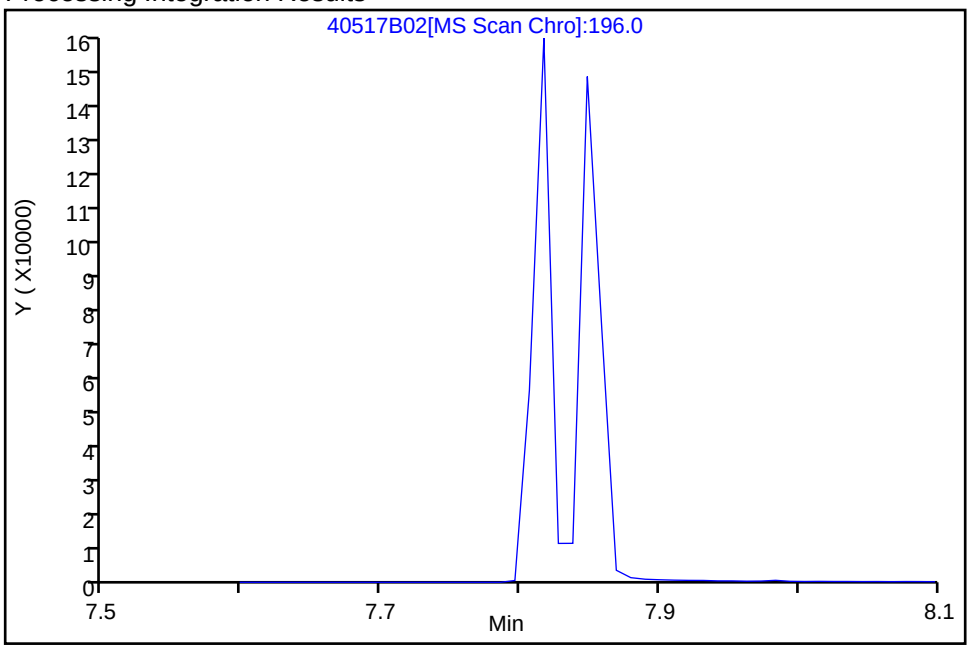
Client ID:	SSTD020LC	Lab ID:	SSTD020LC
Sample Info:	4051716B, SVMS 2056		
Injection Vol.	1.00 1	Dil. Factor:	1.0
Operator:	RBH		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

32 2,4,5-Trichlorophenol, CAS: 95-95-4

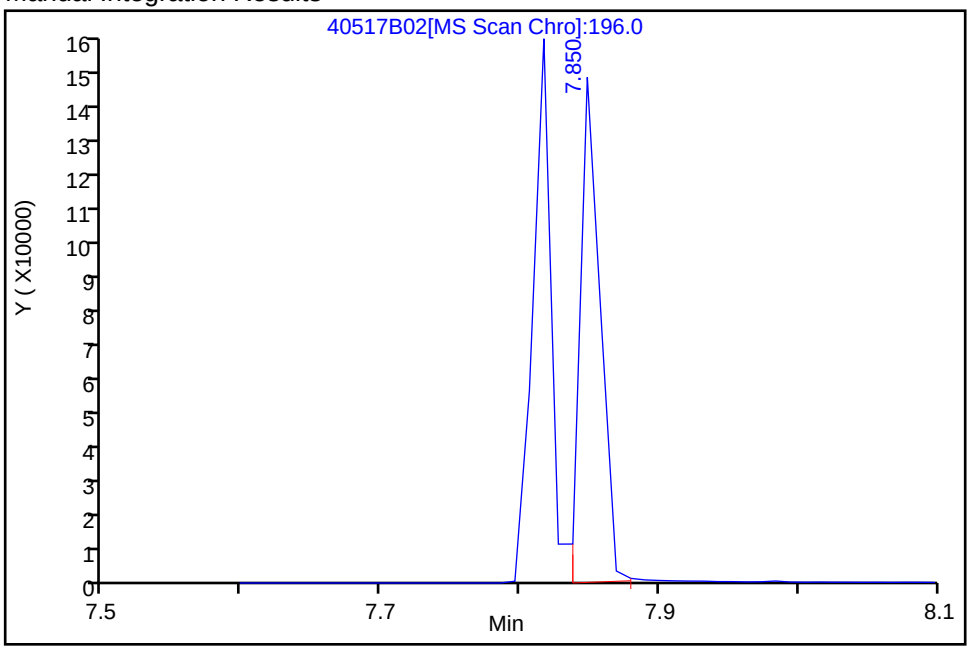
Not Detected
7.850

Processing Integration Results



Manual Integration Results

RT:	7.850
Area:	143827
Amount:	21.550
Amount Units:	ng/ul



Data Editor: rbh, 17-May-2016 09:42:30
Audit Action: Mint
Audit Reason: SP

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

Instrument ID: Agilent MSD4 Calibration Date: 05/17/2016 Time: 1628

Lab File ID: 40517B18 Init. Calib. Date(s): 05/16/2016 05/16/2016

EPA Sample No.: SSTD020LD Init. Calib. Time(s): 1527 1715

GC Column: Zebron ZB-SV ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) _____ Purge Volume: _____ (mL)

COMPOUND	RRF	RRF 20	MIN RRF	%D	MAX %D
1,4-Dioxane	0.625	0.574	0.010	-8.1	40.0
Benzaldehyde	1.065	1.128	0.100	5.9	40.0
Phenol	1.665	1.788	0.080	7.4	20.0
Bis(2-Chloroethyl) ether	1.357	1.433	0.100	5.5	20.0
2-Chlorophenol	1.398	1.522	0.200	8.9	20.0
2-Methylphenol	1.266	1.373	0.010	8.4	20.0
2,2'-Oxybis(1-chloropropane)	1.817	1.881	0.010	3.5	25.0
Acetophenone	1.867	2.017	0.060	8.0	20.0
3-Methylphenol + 4-Methylphenol	1.349	1.452	0.010	7.6	20.0
N-Nitroso-di-n propylamine	1.044	1.149	0.080	10.1	25.0
Hexachloroethane	0.598	0.641	0.100	7.2	20.0
Nitrobenzene	0.381	0.403	0.090	5.7	20.0
Isophorone	0.684	0.713	0.100	4.3	20.0
2-Nitrophenol	0.185	0.205	0.060	10.9	20.0
2,4-Dimethylphenol	0.333	0.356	0.050	7.1	25.0
Bis(2-chloroethoxy)methane	0.405	0.437	0.080	7.8	20.0
2,4-Dichlorophenol	0.271	0.307	0.060	13.3	20.0
Naphthalene	0.987	1.053	0.200	6.7	20.0
4-Chloroaniline	0.536	0.583	0.010	8.8	40.0
Hexachlorobutadiene	0.171	0.186	0.040	9.1	20.0
Caprolactam	0.119	0.126	0.010	6.1	30.0
4-Chloro-3-methylphenol	0.290	0.324	0.040	11.5	20.0
2-Methylnaphthalene	0.682	0.748	0.100	9.8	20.0
Hexachlorocyclo-pentadiene	0.374	0.318	0.010	-15.0	40.0
2,4,6-Trichlorophenol	0.385	0.468	0.090	21.4	20.0
2,4,5-Trichlorophenol	0.428	0.461	0.100	7.6	20.0
1,1'-Biphenyl	1.649	1.830	0.200	11.0	20.0
2-Chloronaphthalene	1.270	1.408	0.300	10.9	20.0
2-Nitroaniline	0.398	0.429	0.060	7.7	25.0
Dimethylphthalate	1.380	1.528	0.300	10.7	20.0
2,6-Dinitrotoluene	0.316	0.358	0.080	13.1	20.0
Acenaphthylene	1.961	2.175	0.400	11.0	20.0
3-Nitroaniline	0.352	0.401	0.010	14.2	25.0
Acenaphthene	1.227	1.400	0.200	14.1	20.0
2,4-Dinitrophenol	0.125	0.162	0.010	29.8	50.0
4-Nitrophenol	0.212	0.230	0.010	8.6	40.0

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

Instrument ID: Agilent MSD4 Calibration Date: 05/17/2016 Time: 1628

Lab File ID: 40517B18 Init. Calib. Date(s): 05/16/2016 05/16/2016

EPA Sample No.: SSTD020LD Init. Calib. Time(s): 1527 1715

GC Column: Zebron ZB-SV ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) _____ Purge Volume: _____ (mL)

COMPOUND	RRF	RRF 20	MIN RRF	%D	MAX %D
Dibenzofuran	1.759	1.934	0.300	9.9	20.0
2,4-Dinitrotoluene	0.434	0.488	0.070	12.4	20.0
Diethylphthalate	1.404	1.550	0.300	10.4	20.0
1,2,4,5-Tetrachlorobenzene	0.613	0.694	0.100	13.2	20.0
4-Chlorophenyl-phenyl ether	0.647	0.734	0.100	13.5	20.0
Fluorene	1.415	1.522	0.200	7.5	20.0
4-Nitroaniline	0.316	0.405	0.010	28.2	40.0
4,6-Dinitro-2-methylphenol	0.116	0.135	0.010	15.9	30.0
4-Bromophenyl-phenylether	0.222	0.242	0.070	8.8	20.0
N-Nitrosodiphenylamine	0.668	0.741	0.100	10.9	20.0
Hexachlorobenzene	0.239	0.259	0.050	8.3	20.0
Atrazine	0.220	0.228	0.010	3.4	25.0
Pentachlorophenol	0.121	0.144	0.010	18.9	40.0
Phenanthrene	1.138	1.237	0.200	8.7	20.0
Anthracene	1.127	1.282	0.200	13.8	20.0
Carbazole	1.010	1.127	0.050	11.6	20.0
Di-n-butylphthalate	1.270	1.438	0.500	13.2	20.0
Fluoranthene	1.212	1.350	0.100	11.4	20.0
Pyrene	1.194	1.291	0.400	8.1	25.0
Butylbenzylphthalate	0.534	0.592	0.100	10.9	25.0
3,3'-Dichlorobenzidine	0.358	0.405	0.010	13.3	40.0
Benzo(a)anthracene	1.161	1.252	0.300	7.8	20.0
Chrysene	1.103	1.186	0.200	7.6	20.0
Bis(2-ethylhexyl)phthalate	0.725	0.805	0.200	11.1	25.0
Di-n-octylphthalate	1.428	1.844	0.010	29.2	40.0
Benzo(b)fluoranthene	1.322	1.512	0.010	14.4	25.0
Benzo(k)fluoranthene	1.269	1.531	0.010	20.6	25.0
Benzo(a)pyrene	1.278	1.423	0.010	11.4	20.0
Indeno(1,2,3-cd)pyrene	1.246	1.091	0.010	-12.5	25.0
Dibenzo(a,h)anthracene	1.058	0.959	0.010	-9.3	25.0
Benzo(g,h,i)perylene	0.907	0.758	0.010	-16.4	30.0
2,3,4,6-Tetrachlorophenol	0.329	0.378	0.040	15.0	20.0
1,4-Dioxane-d8	0.545	0.548	0.010	0.6	25.0
Phenol-d5	1.616	1.751	0.010	8.3	25.0
Bis-(2-chloroethyl)ether-d8	1.066	1.115	0.100	4.6	20.0
2-Chlorophenol-d4	1.167	1.267	0.200	8.6	20.0

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

Instrument ID: Agilent MSD4 Calibration Date: 05/17/2016 Time: 1628

Lab File ID: 40517B18 Init. Calib. Date(s): 05/16/2016 05/16/2016

EPA Sample No.: SSTD020LD Init. Calib. Time(s): 1527 1715

GC Column: Zebron ZB-SV ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) _____ Purge Volume: _____ (mL)

COMPOUND	$\overline{\text{RRF}}$	RRF 20	MIN RRF	%D	MAX %D
4-Methylphenol-d8	1.301	1.383	0.010	6.3	20.0
4-Chloroaniline-d4	0.408	0.434	0.010	6.4	40.0
Nitrobenzene-d5	0.168	0.186	0.050	10.7	20.0
2-Nitrophenol-d4	0.170	0.194	0.050	14.5	20.0
2,4-Dichlorophenol-d3	0.287	0.321	0.060	11.7	20.0
Dimethylphthalate-d6	1.422	1.570	0.300	10.5	20.0
Acenaphthylene-d8	1.969	2.199	0.400	11.7	20.0
4-Nitrophenol-d4	0.277	0.316	0.010	13.9	40.0
Fluorene-d10	1.272	1.394	0.100	9.6	20.0
4,6-Dinitro-2-methylphenol-d2	0.114	0.136	0.010	18.8	30.0
Anthracene-d10	1.013	1.114	0.300	10.0	20.0
Pyrene-d10	1.005	1.091	0.300	8.6	25.0
Benzo(a)pyrene-d12	1.073	1.210	0.010	12.8	20.0

Shealy Environmental Services
Continuing Calibration Verification Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B18.D		
Lab Sample ID:	SSTD020LD	Client Sample ID:	SSTD020LD
Injection Date:	17-May-2016 16:28:30	Dil. Factor:	1.0
Operator:	RBH	Inst. ID:	msd4.i
Sample Info:	4051716B, SVMS 2056		
Misc. Info:	L3		
Method:	\\Organics\HH\chem\msd4.i\4051716B.b\SOMBNA.m		
Method Date:	17-May-2016 17:07:30	Quant Method:	ISTD
Calib Date:	16-May-2016 17:15:30	Calib File:	40516C06.D
Sample Type:	CCV	ALS Bottle:	93
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
2 Benzaldehyde	1.065076	1.128147	0.1	5.9	40	106
$ 3 Phenol-d5	1.616399	1.751061	0.01	8.3	25	108
4 Phenol	1.665063	1.787737	0.08	7.4	20	107
5 bis(2-Chloroethyl)Ether	1.357343	1.43267	0.1	5.5	20	106
$ 6 2-Chlorophenol-d4	1.167198	1.267023	0.2	8.6	20	109
7 2-Chlorophenol	1.397764	1.521586	0.2	8.9	20	109
10 2-Methylphenol	1.266249	1.372684	0.01	8.4	20	108
11 2,2'-oxybis(1-Chloroprop	1.817015	1.880633	0.01	3.5	25	104
12 Acetophenone	1.867309	2.016694	0.06	8	20	108
13 N-Nitroso-di-n-propylami	1.043749	1.149225	0.08	10.1	25	110
14 4-Methylphenol	1.349355	1.452375	0.01	7.6	20	108
15 Hexachloroethane	0.597744	0.640584	0.1	7.2	20	107
$ 16 Nitrobenzene-d5	0.167916	0.185874	0.05	10.7	20	111
17 Nitrobenzene	0.381383	0.403302	0.09	5.7	20	106
18 Isophorone	0.683529	0.71265	0.1	4.3	20	104
19 2-Nitrophenol	0.184875	0.205009	0.06	10.9	20	111
20 2,4-Dimethylphenol	0.332948	0.356465	0.05	7.1	25	107
21 bis(2-Chloroethoxy)metha	0.405064	0.436624	0.08	7.8	20	108
22 2,4-Dichlorophenol	0.271431	0.307438	0.06	13.3	20	113
24 Naphthalene	0.987037	1.053174	0.2	6.7	20	107
25 4-Chloroaniline	0.535892	0.583207	0.01	8.8	40	109
26 Hexachlorobutadiene	0.170621	0.186176	0.04	9.1	20	109
27 Caprolactam	0.118506	0.125689	0.01	6.1	30	106
28 4-Chloro-3-methylphenol	0.290309	0.323681	0.04	11.5	20	111
29 2-Methylnaphthalene	0.681683	0.748316	0.1	9.8	20	110
30 Hexachlorocyclopentadien	0.373736	0.317651	0.01	-15	40	85
31 2,4,6-Trichlorophenol	0.38539	0.467892	0.09	* 21.4	20	121
32 2,4,5-Trichlorophenol	0.427868	0.460505	0.1	7.6	20	108
34 1,1'-Biphenyl	1.648798	1.829651	0.2	11	20	111
35 2-Chloronaphthalene	1.269527	1.408436	0.3	10.9	20	111
36 2-Nitroaniline	0.398241	0.429089	0.06	7.7	25	108
37 Dimethylphthalate	1.38038	1.528235	0.3	10.7	20	111
38 Acenaphthylene	1.960667	2.175378	0.4	11	20	111
39 2,6-Dinitrotoluene	0.316199	0.35761	0.08	13.1	20	113

Report Date: 18-May-2016 10:53:03 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B18.D

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
40 3-Nitroaniline	0.35158	0.401385	0.01	14.2	25	114
42 Acenaphthene	1.226835	1.400099	0.2	14.1	20	114
43 2,4-Dinitrophenol	0.125185	0.162451	0.01	29.8	50	130
44 4-Nitrophenol	0.211519	0.229611	0.01	8.6	40	109
45 Dibenzofuran	1.75901	1.933563	0.3	9.9	20	110
46 2,4-Dinitrotoluene	0.434394	0.488327	0.07	12.4	20	112
47 Diethylphthalate	1.404002	1.549922	0.3	10.4	20	110
92 1,2,4,5-Tetrachlorobenze	0.613245	0.694474	0.1	13.2	20	113
48 Fluorene	1.415354	1.52152	0.2	7.5	20	108
49 4-Chlorophenyl-phenyleth	0.646588	0.7341	0.1	13.5	20	114
50 4-Nitroaniline	0.315513	0.404532	0.01	28.2	40	128
51 4,6-Dinitro-2-methylphen	0.116148	0.134588	0.01	15.9	30	116
52 N-Nitrosodiphenylamine	0.667501	0.740583	0.1	10.9	20	111
54 4-Bromophenyl-phenylethe	0.222042	0.241634	0.07	8.8	20	109
55 Hexachlorobenzene	0.238658	0.258508	0.05	8.3	20	108
56 Atrazine	0.220249	0.227826	0.01	3.4	25	103
57 Pentachlorophenol	0.121272	0.144253	0.01	18.9	40	119
59 Phenanthrene	1.138128	1.237021	0.2	8.7	20	109
60 Anthracene	1.126861	1.281872	0.2	13.8	20	114
62 Di-n-butylphthalate	1.270278	1.438295	0.5	13.2	20	113
63 Fluoranthene	1.211962	1.350258	0.1	11.4	20	111
64 Pyrene	1.194341	1.291198	0.4	8.1	25	108
66 Butylbenzylphthalate	0.533802	0.592173	0.1	10.9	25	111
67 Benzo(a)anthracene	1.161482	1.251553	0.3	7.8	20	108
68 3,3'-Dichlorobenzidine	0.35753	0.405202	0.01	13.3	40	113
70 Chrysene	1.102517	1.185863	0.2	7.6	20	108
71 bis(2-Ethylhexyl)phthala	0.724842	0.80513	0.2	11.1	25	111
72 Di-n-octylphthalate	1.427818	1.844201	0.01	29.2	40	129
73 Benzo(b)fluoranthene	1.321571	1.511707	0.01	14.4	25	114
74 Benzo(k)fluoranthene	1.269044	1.530532	0.01	20.6	25	121
75 Benzo(a)pyrene	1.278134	1.423436	0.01	11.4	20	111
77 Indeno(1,2,3-cd)pyrene	1.246394	1.09096	0.01	-12.5	25	88
78 Dibenzo(a,h)anthracene	1.057555	0.959287	0.01	-9.3	25	91
79 Benzo(g,h,i)perylene	0.907072	0.758042	0.01	-16.4	30	84
$ 93 bis-(2-Chloroethyl)ether	1.065529	1.114781	0.1	4.6	20	105
$ 94 4-Methylphenol-d8	1.301002	1.382554	0.01	6.3	20	106
$ 95 2-Nitrophenol-d4	0.169854	0.194495	0.05	14.5	20	115
$ 96 2,4-Dichlorophenol-d3	0.287376	0.321053	0.06	11.7	20	112
$ 97 4-Chloroaniline-d4	0.407947	0.434189	0.01	6.4	40	106
$ 98 Dimethylphthalate-d6	1.421553	1.570391	0.3	10.5	20	110
$ 99 Acenaphthylene-d8	1.96854	2.19916	0.4	11.7	20	112
$ 100 4-Nitrophenol-d4	0.277278	0.315896	0.01	13.9	40	114
$ 101 Fluorene-d10	1.271679	1.393959	0.1	9.6	20	110
$ 102 4,6-Dinitro-2-methylphen	0.114452	0.135949	0.01	18.8	30	119
$ 103 Anthracene-d10	1.012525	1.113561	0.3	10	20	110
$ 104 Pyrene-d10	1.004623	1.090967	0.3	8.6	25	109
$ 105 Benzo(a)pyrene-d12	1.072689	1.209789	0.01	12.8	20	113

Report Date: 18-May-2016 10:53:03 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B18.D

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
106 Carbazole	1.010076	1.126887	0.05	11.6	20	112
107 2,3,4,6-Tetrachloropheno	0.329009	0.378306	0.04	15	20	115
108 1,4-Dioxane	0.625441	0.574468	0.01	-8.1	40	92
$ 109 1,4-Dioxane-d8	0.545321	0.548467	0.01	0.6	25	101

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B18.D		
Lab Sample ID:	SSTD020LD	Client Sample ID:	SSTD020LD
Injection Date:	17-May-2016 16:28:30	Dil. Factor:	1.0
Operator:	RBH	Inst. ID:	msd4.i
Sample Info:	4051716B, SVMS 2056		
Misc. Info:	L3		
Method:	\\Organics\HH\chem\msd4.i\4051716B.b\SOMBNA.m		
Method Date:	17-May-2016 17:07:30	Quant Method:	ISTD
Calib Date:	16-May-2016 17:15:30	Calib File:	40516C06.D
Sample Type:	CCV	ALS Bottle:	93
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	1000.00	Volume of final extract (uL)
Vo	1000.00	Volume of sample extracted (mL)
Cpnd Variable		Local Cpnd Variable

Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	JCG	Review Date:	17-May-2016 16:53:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 3 Phenol-d5	99.0	5.591	5.591	0.000	303557	20.000	21.666	
108 1,4-Dioxane	88.0	3.559	3.559	0.000	39835	8.0000	7.3480	
$ 109 1,4-Dioxane-d8	96.0	3.528	3.528	0.000	38032	8.0000	8.0462	
4 Phenol	94.0	5.601	5.601	0.000	309915	20.000	21.474	
2 Benzaldehyde	77.0	5.601	5.601	0.000	195571	20.000	21.184	
$ 93 bis-(2-Chloroethyl)ether-d8	67.0	5.663	5.663	0.000	193254	20.000	20.924	
5 bis(2-Chloroethyl)Ether	93.0	5.694	5.694	0.000	248362	20.000	21.110	
$ 6 2-Chlorophenol-d4	132.0	5.767	5.767	0.000	219646	20.000	21.710	
7 2-Chlorophenol	128.0	5.777	5.777	0.000	263776	20.000	21.772	
* 8 1,4-Dichlorobenzene-d4	152.0	5.943	5.943	0.000	173356	20.000	20.000	
10 2-Methylphenol	108.0	6.098	6.098	0.000	237963	20.000	21.681	
11 2,2'-oxybis(1-Chloropropane)	45.0	6.129	6.129	0.000	326019	20.000	20.700	
$ 94 4-Methylphenol-d8	113.0	6.192	6.192	0.000	239674	20.000	21.254	
14 4-Methylphenol	108.0	6.212	6.212	0.000	251778	20.000	21.527	
13 N-Nitroso-di-n-propylamine	70.0	6.243	6.243	0.000	199225	20.000	22.021	
12 Acetophenone	105.0	6.264	6.264	0.000	349606	20.000	21.600	
15 Hexachloroethane	117.0	6.378	6.378	0.000	111049	20.000	21.433	
$ 16 Nitrobenzene-d5	128.0	6.399	6.399	0.000	128084	20.000	22.139	
17 Nitrobenzene	77.0	6.409	6.409	0.000	277912	20.000	21.149	
18 Isophorone	82.0	6.596	6.596	0.000	491081	20.000	20.852	
20 2,4-Dimethylphenol	107.0	6.658	6.658	0.000	245637	20.000	21.413	
$ 95 2-Nitrophenol-d4	143.0	6.658	6.658	0.000	134025	20.000	22.902	
19 2-Nitrophenol	139.0	6.668	6.668	0.000	141270	20.000	22.178	
21 bis(2-Chloroethoxy)methane	93.0	6.741	6.741	0.000	300874	20.000	21.558	

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Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B18.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 96 2,4-Dichlorophenol-d3	165.0	6.855	6.855	0.000	221235	20.000	22.344	
22 2,4-Dichlorophenol	162.0	6.865	6.865	0.000	211853	20.000	22.653	
* 23 Naphthalene-d8	136.0	7.010	7.010	0.000	689091	20.000	20.000	
24 Naphthalene	128.0	7.021	7.021	0.000	725733	20.000	21.340	
$ 97 4-Chloroaniline-d4	131.0	7.031	7.031	0.000	299196	20.000	21.287	
25 4-Chloroaniline	127.0	7.041	7.041	0.000	401883	20.000	21.766	
26 Hexachlorobutadiene	225.0	7.093	7.093	0.000	128292	20.000	21.823	
27 Caprolactam	113.0	7.342	7.342	0.000	86611	20.000	21.212	M
28 4-Chloro-3-methylphenol	107.0	7.414	7.414	0.000	223046	20.000	22.299	
29 2-Methylnaphthalene	142.0	7.601	7.601	0.000	515658	20.000	21.955	
30 Hexachlorocyclopentadiene	237.0	7.715	7.715	0.000	104972	20.000	16.999	
92 1,2,4,5-Tetrachlorobenzene	216.0	7.736	7.736	0.000	229498	20.000	22.649	
31 2,4,6-Trichlorophenol	196.0	7.819	7.819	0.000	154621	20.000	24.281	M
32 2,4,5-Trichlorophenol	196.0	7.850	7.850	0.000	152180	20.000	21.526	M
34 1,1'-Biphenyl	154.0	7.974	7.974	0.000	604632	20.000	22.194	
35 2-Chloronaphthalene	162.0	8.015	8.015	0.000	465436	20.000	22.188	
36 2-Nitroaniline	65.0	8.078	8.078	0.000	141798	20.000	21.549	
$ 98 Dimethylphthalate-d6	166.0	8.181	8.181	0.000	518956	20.000	22.094	
37 Dimethylphthalate	163.0	8.202	8.202	0.000	505025	20.000	22.142	
39 2,6-Dinitrotoluene	165.0	8.275	8.275	0.000	118177	20.000	22.619	
$ 99 Acenaphthylene-d8	160.0	8.368	8.368	0.000	726741	20.000	22.343	
38 Acenaphthylene	152.0	8.378	8.378	0.000	718882	20.000	22.190	
40 3-Nitroaniline	138.0	8.430	8.430	0.000	132643	20.000	22.833	
* 41 Acenaphthene-d10	164.0	8.492	8.492	0.000	330463	20.000	20.000	
43 2,4-Dinitrophenol	184.0	8.513	8.513	0.000	107368	40.000	51.908	
42 Acenaphthene	153.0	8.523	8.523	0.000	462681	20.000	22.825	
$ 100 4-Nitrophenol-d4	143.0	8.523	8.523	0.000	104392	20.000	22.786	
44 4-Nitrophenol	109.0	8.534	8.534	0.000	75878	20.000	21.711	
46 2,4-Dinitrotoluene	165.0	8.617	8.617	0.000	161374	20.000	22.483	
45 Dibenzofuran	168.0	8.668	8.668	0.000	638971	20.000	21.985	
107 2,3,4,6-Tetrachlorophenol	232.0	8.751	8.751	0.000	125016	20.000	22.997	
47 Diethylphthalate	149.0	8.782	8.782	0.000	512192	20.000	22.079	
49 4-Chlorophenyl-phenylether	204.0	8.927	8.927	0.000	242593	20.000	22.707	
$ 101 Fluorene-d10	176.0	8.938	8.938	0.000	460652	20.000	21.923	
50 4-Nitroaniline	138.0	8.958	8.958	0.000	133683	20.000	25.643	
48 Fluorene	166.0	8.958	8.958	0.000	502806	20.000	21.500	
$ 102 4,6-Dinitro-2-methylphenol-d2	200.0	8.969	8.969	0.000	83678	20.000	23.756	
51 4,6-Dinitro-2-methylphenol	198.0	8.969	8.969	0.000	82840	20.000	23.175	
52 N-Nitrosodiphenylamine	169.0	9.021	9.021	0.000	455836	20.000	22.190	
54 4-Bromophenyl-phenylether	248.0	9.352	9.352	0.000	148728	20.000	21.765	
55 Hexachlorobenzene	284.0	9.435	9.435	0.000	159114	20.000	21.663	
56 Atrazine	200.0	9.435	9.435	0.000	140229	20.000	20.688	
57 Pentachlorophenol	266.0	9.591	9.591	0.000	88789	20.000	23.790	
* 58 Phenanthrene-d10	188.0	9.767	9.767	0.000	615510	20.000	20.000	
59 Phenanthrene	178.0	9.788	9.788	0.000	761399	20.000	21.738	
$ 103 Anthracene-d10	188.0	9.819	9.819	0.000	685408	20.000	21.996	
60 Anthracene	178.0	9.839	9.839	0.000	789005	20.000	22.751	
106 Carbazole	167.0	9.953	9.953	0.000	693610	20.000	22.313	
62 Di-n-butylphthalate	149.0	10.171	10.171	0.000	885285	20.000	22.645	
63 Fluoranthene	202.0	10.907	10.907	0.000	831097	20.000	22.282	
$ 104 Pyrene-d10	212.0	11.145	11.145	0.000	722888	20.000	21.719	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
64 Pyrene	202.0	11.166	11.166	0.000	855563	20.000	21.622	
66 Butylbenzylphthalate	149.0	11.788	11.788	0.000	392381	20.000	22.187	
71 bis(2-Ethylhexyl)phthalate	149.0	12.534	12.534	0.000	533489	20.000	22.215	
68 3,3'-Dichlorobenzidine	252.0	12.586	12.586	0.000	268492	20.000	22.667	
67 Benzo(a)anthracene	228.0	12.679	12.679	0.000	829294	20.000	21.551	
* 69 Chrysene-d12	240.0	12.700	12.700	0.000	662612	20.000	20.000	
70 Chrysene	228.0	12.741	12.741	0.000	785767	20.000	21.512	
72 Di-n-octylphthalate	149.0	13.529	13.529	0.000	943412	20.000	25.832	
73 Benzo(b)fluoranthene	252.0	14.347	14.347	0.000	773323	20.000	22.877	
74 Benzo(k)fluoranthene	252.0	14.389	14.389	0.000	782953	20.000	24.121	
$ 105 Benzo(a)pyrene-d12	264.0	14.865	14.865	0.000	618875	20.000	22.556	
75 Benzo(a)pyrene	252.0	14.907	14.907	0.000	728167	20.000	22.274	
* 76 Perylene-d12	264.0	15.000	15.000	0.000	511556	20.000	20.000	
77 Indeno(1,2,3-cd)pyrene	276.0	17.187	17.187	0.000	558087	20.000	17.506	
78 Dibenzo(a,h)anthracene	278.0	17.207	17.207	0.000	490729	20.000	18.142	
79 Benzo(g,h,i)perylene	276.0	17.850	17.850	0.000	387781	20.000	16.714	

QC Flag Legend

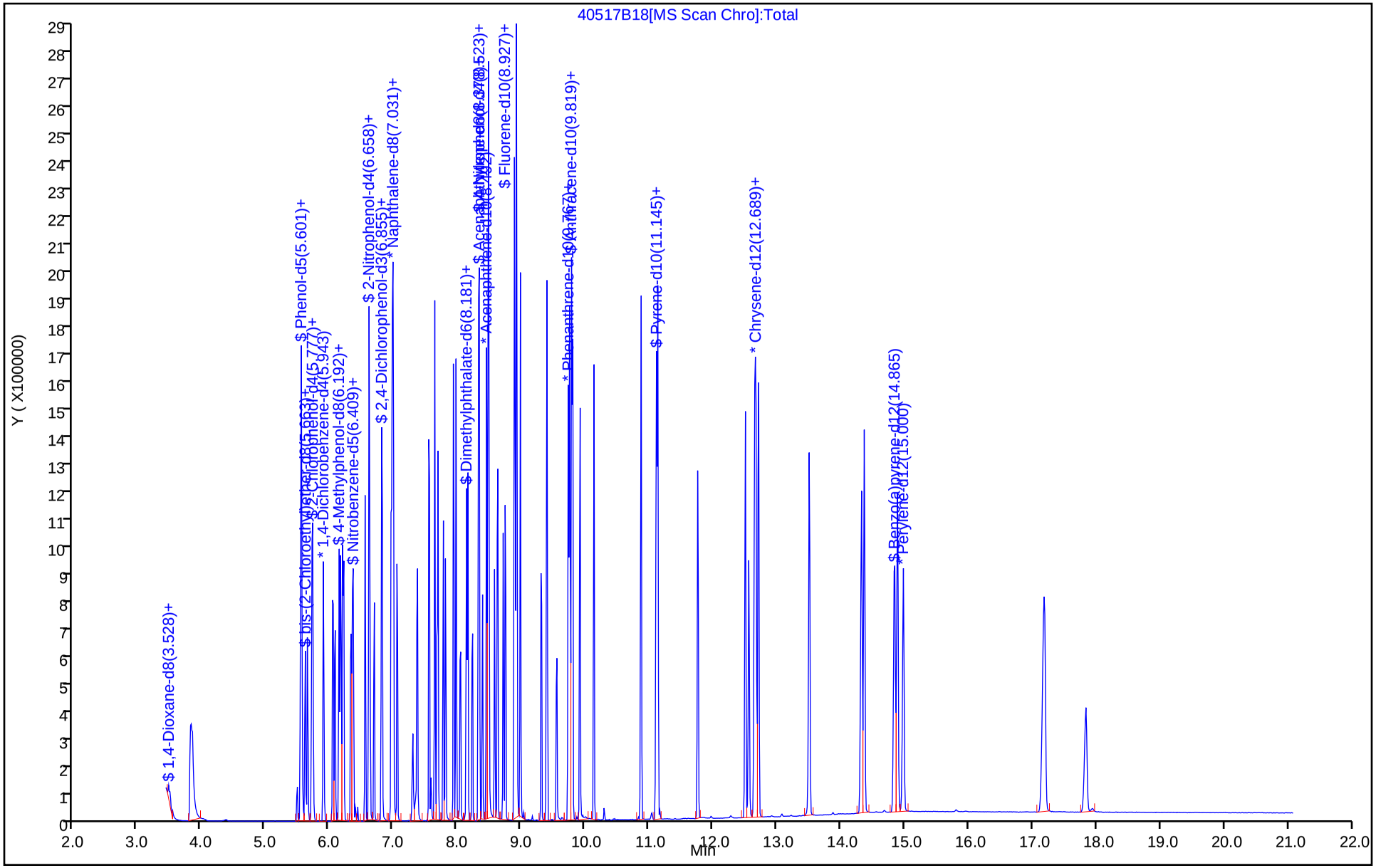
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 18-May-2016 10:53:03 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B18.D				
Injection Date:	17-May-2016 16:28:30	Inst. ID:	msd4.i	Operator:	RBH
Client ID:	SSTD020LD	Lab ID:	SSTD020LD		
Sample Info:	4051716B, SVMS 2056				
Injection Vol.	1.00 1	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 18-May-2016 10:53:03 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

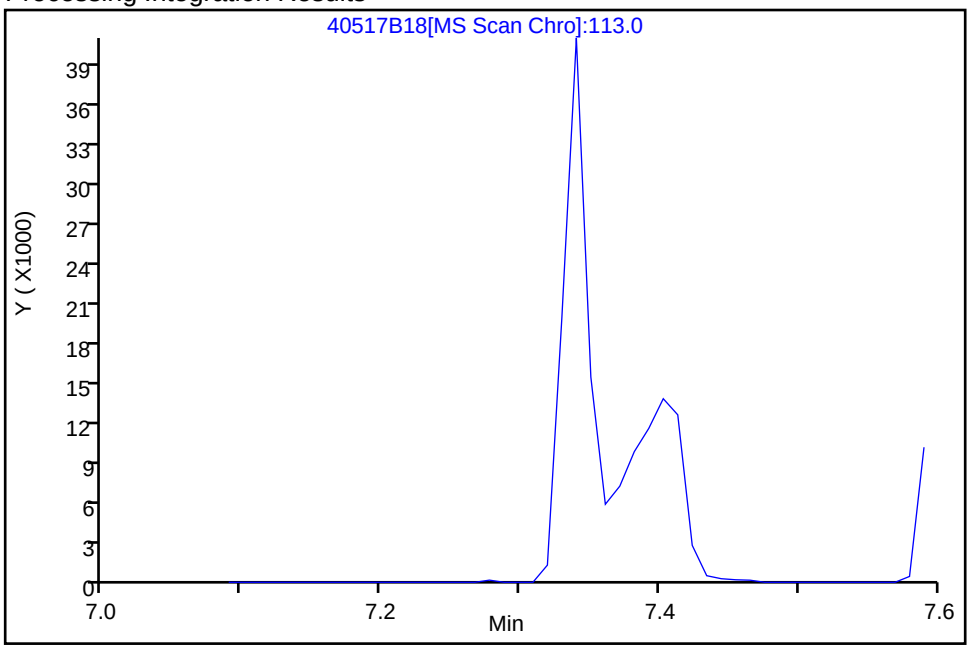
Manual Integration Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B18.D		
Injection Date:	17-May-2016 16:28:30	Inst. ID:	msd4.i
Client ID:	SSTD020LD	Lab ID:	SSTD020LD
Sample Info:	4051716B, SVMS 2056		
Injection Vol.	1.00 1	Dil. Factor:	1.0
Operator:	RBH		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

27 Caprolactam, CAS: 105-60-2

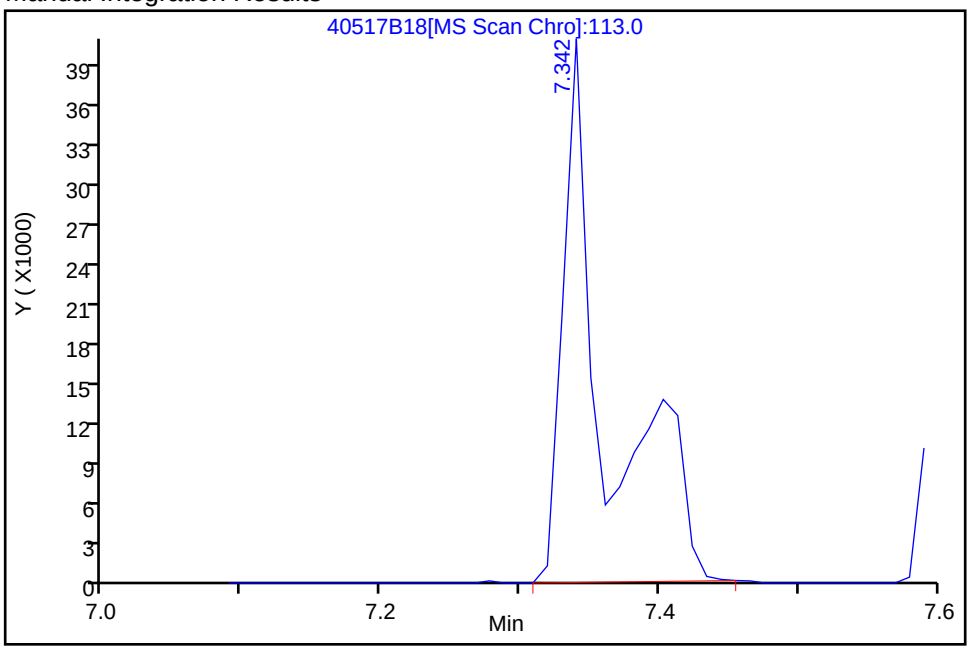
Not Detected
7.342

Processing Integration Results



Manual Integration Results

RT:	7.342
Area:	86611
Amount:	21.212
Amount Units:	ng/ul



Data Editor: JCG, 17-May-2016 16:53:30
Audit Action: Mint
Audit Reason: SP

Report Date: 18-May-2016 10:53:03 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

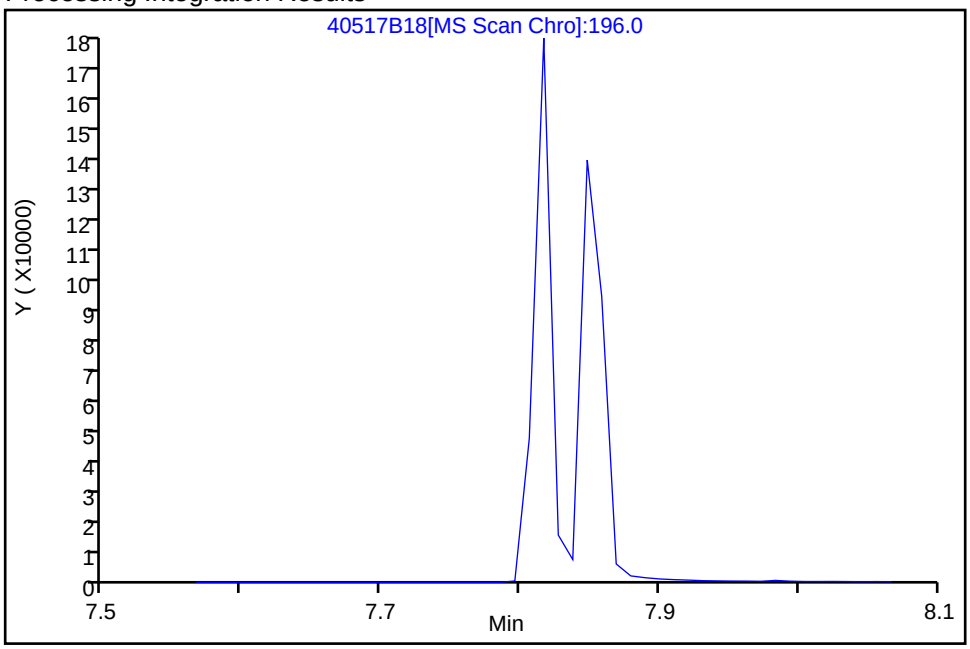
Manual Integration Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B18.D		
Injection Date:	17-May-2016 16:28:30	Inst. ID:	msd4.i
Client ID:	SSTD020LD	Lab ID:	SSTD020LD
Sample Info:	4051716B, SVMS 2056		
Injection Vol.	1.00 1	Dil. Factor:	1.0
Operator:	RBH		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

31 2,4,6-Trichlorophenol, CAS: 88-06-2

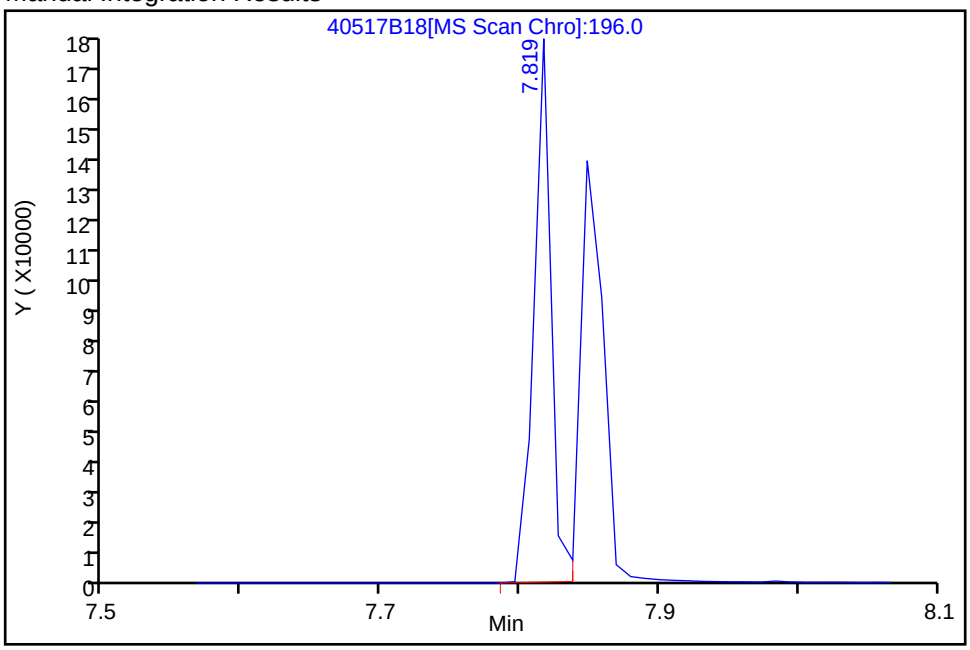
Not Detected
7.819

Processing Integration Results



Manual Integration Results

RT:	7.819
Area:	154621
Amount:	24.281
Amount Units:	ng/ul



Data Editor: JCG, 17-May-2016 16:53:30
Audit Action: Mint
Audit Reason: SP

Report Date: 18-May-2016 10:53:03 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

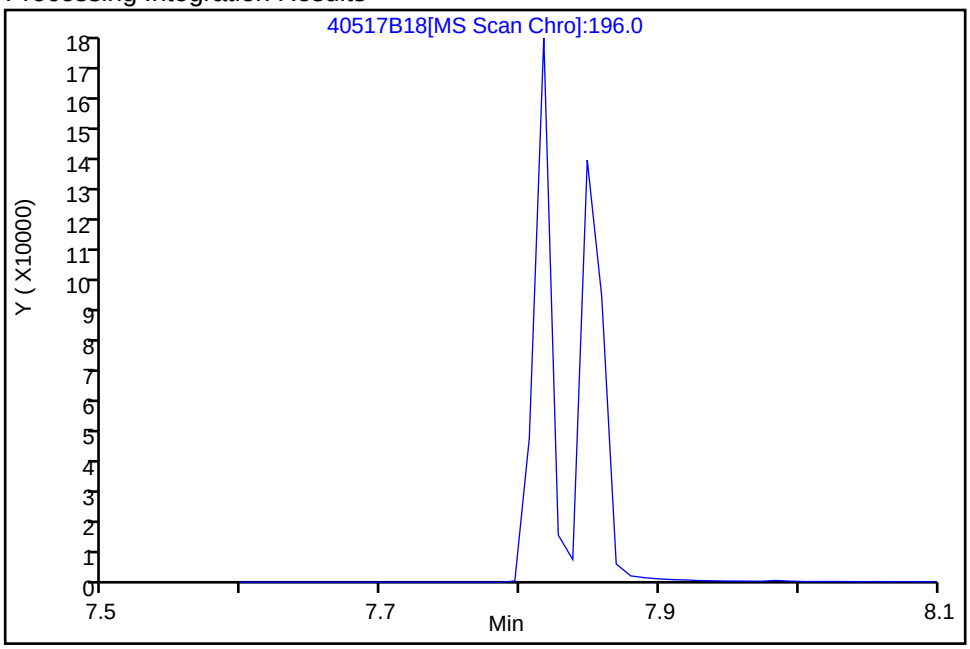
Manual Integration Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B18.D		
Injection Date:	17-May-2016 16:28:30	Inst. ID:	msd4.i
Client ID:	SSTD020LD	Lab ID:	SSTD020LD
Sample Info:	4051716B, SVMS 2056		
Injection Vol.	1.00 1	Dil. Factor:	1.0
Operator:	RBH		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

32 2,4,5-Trichlorophenol, CAS: 95-95-4

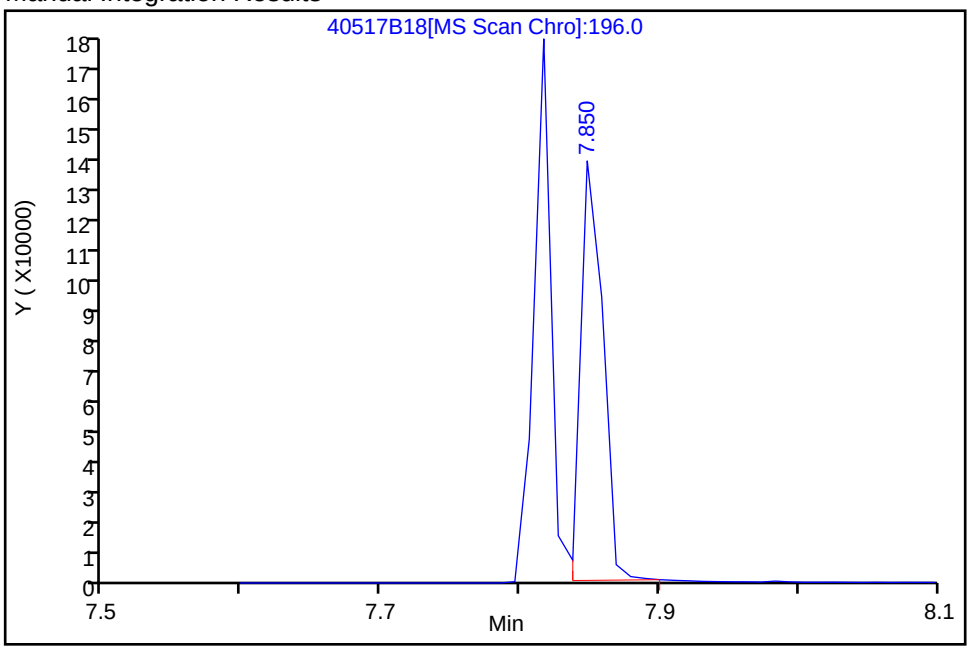
Not Detected
7.850

Processing Integration Results



Manual Integration Results

RT:	7.850
Area:	152180
Amount:	21.526
Amount Units:	ng/ul



Data Editor: JCG, 17-May-2016 16:53:30
Audit Action: Mint
Audit Reason: SP

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

Instrument ID: Agilent MSD4 Calibration Date: 05/18/2016 Time: 0254

Lab File ID: 40517B41 Init. Calib. Date(s): 05/16/2016 05/16/2016

EPA Sample No.: SSTD020LE Init. Calib. Time(s): 1527 1715

GC Column: Zebron ZB-SV ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) _____ Purge Volume: _____ (mL)

COMPOUND	RRF	RRF 20	MIN RRF	%D	MAX %D
1,4-Dioxane	0.625	0.625	0.010	0.0	40.0
Benzaldehyde	1.065	1.153	0.100	8.3	40.0
Phenol	1.665	1.769	0.080	6.2	20.0
Bis(2-Chloroethyl) ether	1.357	1.442	0.100	6.2	20.0
2-Chlorophenol	1.398	1.529	0.200	9.4	20.0
2-Methylphenol	1.266	1.355	0.010	7.0	20.0
2,2'-Oxybis(1-chloropropane)	1.817	1.880	0.010	3.4	25.0
Acetophenone	1.867	1.978	0.060	5.9	20.0
3-Methylphenol + 4-Methylphenol	1.349	1.432	0.010	6.1	20.0
N-Nitroso-di-n propylamine	1.044	1.160	0.080	11.1	25.0
Hexachloroethane	0.598	0.635	0.100	6.2	20.0
Nitrobenzene	0.381	0.407	0.090	6.6	20.0
Isophorone	0.684	0.718	0.100	5.0	20.0
2-Nitrophenol	0.185	0.203	0.060	10.1	20.0
2,4-Dimethylphenol	0.333	0.357	0.050	7.2	25.0
Bis(2-chloroethoxy)methane	0.405	0.420	0.080	3.7	20.0
2,4-Dichlorophenol	0.271	0.305	0.060	12.4	20.0
Naphthalene	0.987	1.068	0.200	8.2	20.0
4-Chloroaniline	0.536	0.593	0.010	10.6	40.0
Hexachlorobutadiene	0.171	0.188	0.040	10.2	20.0
Caprolactam	0.119	0.123	0.010	4.1	30.0
4-Chloro-3-methylphenol	0.290	0.322	0.040	11.0	20.0
2-Methylnaphthalene	0.682	0.735	0.100	7.8	20.0
Hexachlorocyclo-pentadiene	0.374	0.302	0.010	-19.1	40.0
2,4,6-Trichlorophenol	0.385	0.455	0.090	18.2	20.0
2,4,5-Trichlorophenol	0.428	0.447	0.100	4.4	20.0
1,1'-Biphenyl	1.649	1.771	0.200	7.4	20.0
2-Chloronaphthalene	1.270	1.414	0.300	11.4	20.0
2-Nitroaniline	0.398	0.432	0.060	8.5	25.0
Dimethylphthalate	1.380	1.542	0.300	11.7	20.0
2,6-Dinitrotoluene	0.316	0.352	0.080	11.2	20.0
Acenaphthylene	1.961	2.218	0.400	13.1	20.0
3-Nitroaniline	0.352	0.398	0.010	13.1	25.0
Acenaphthene	1.227	1.395	0.200	13.7	20.0
2,4-Dinitrophenol	0.125	0.122	0.010	-2.4	50.0
4-Nitrophenol	0.212	0.222	0.010	5.1	40.0

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

Instrument ID: Agilent MSD4 Calibration Date: 05/18/2016 Time: 0254

Lab File ID: 40517B41 Init. Calib. Date(s): 05/16/2016 05/16/2016

EPA Sample No.: SSTD020LE Init. Calib. Time(s): 1527 1715

GC Column: Zebron ZB-SV ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) _____ Purge Volume: _____ (mL)

COMPOUND	RRF	RRF 20	MIN RRF	%D	MAX %D
Dibenzofuran	1.759	1.900	0.300	8.0	20.0
2,4-Dinitrotoluene	0.434	0.488	0.070	12.4	20.0
Diethylphthalate	1.404	1.514	0.300	7.8	20.0
1,2,4,5-Tetrachlorobenzene	0.613	0.679	0.100	10.8	20.0
4-Chlorophenyl-phenyl ether	0.647	0.727	0.100	12.4	20.0
Fluorene	1.415	1.563	0.200	10.4	20.0
4-Nitroaniline	0.316	0.394	0.010	25.0	40.0
4,6-Dinitro-2-methylphenol	0.116	0.122	0.010	4.7	30.0
4-Bromophenyl-phenylether	0.222	0.240	0.070	8.1	20.0
N-Nitrosodiphenylamine	0.668	0.752	0.100	12.6	20.0
Hexachlorobenzene	0.239	0.262	0.050	9.8	20.0
Atrazine	0.220	0.226	0.010	2.7	25.0
Pentachlorophenol	0.121	0.079	0.010	-34.9	40.0
Phenanthrene	1.138	1.225	0.200	7.6	20.0
Anthracene	1.127	1.255	0.200	11.4	20.0
Carbazole	1.010	1.147	0.050	13.5	20.0
Di-n-butylphthalate	1.270	1.441	0.500	13.4	20.0
Fluoranthene	1.212	1.369	0.100	12.9	20.0
Pyrene	1.194	1.300	0.400	8.9	25.0
Butylbenzylphthalate	0.534	0.581	0.100	8.9	25.0
3,3'-Dichlorobenzidine	0.358	0.383	0.010	7.2	40.0
Benzo(a)anthracene	1.161	1.264	0.300	8.8	20.0
Chrysene	1.103	1.172	0.200	6.3	20.0
Bis(2-ethylhexyl)phthalate	0.725	0.798	0.200	10.1	25.0
Di-n-octylphthalate	1.428	1.936	0.010	35.6	40.0
Benzo(b)fluoranthene	1.322	1.676	0.010	26.8	25.0
Benzo(k)fluoranthene	1.269	1.513	0.010	19.2	25.0
Benzo(a)pyrene	1.278	1.445	0.010	13.1	20.0
Indeno(1,2,3-cd)pyrene	1.246	1.008	0.010	-19.1	25.0
Dibenzo(a,h)anthracene	1.058	0.880	0.010	-16.8	25.0
Benzo(g,h,i)perylene	0.907	0.710	0.010	-21.7	30.0
2,3,4,6-Tetrachlorophenol	0.329	0.336	0.040	2.3	20.0
1,4-Dioxane-d8	0.545	0.551	0.010	1.0	25.0
Phenol-d5	1.616	1.732	0.010	7.2	25.0
Bis-(2-chloroethyl)ether-d8	1.066	1.120	0.100	5.1	20.0
2-Chlorophenol-d4	1.167	1.270	0.200	8.8	20.0

FORM 7A-OR
CONTINUING CALIBRATION DATA FOR GC/MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: Low

Instrument ID: Agilent MSD4 Calibration Date: 05/18/2016 Time: 0254

Lab File ID: 40517B41 Init. Calib. Date(s): 05/16/2016 05/16/2016

EPA Sample No.: SSTD020LE Init. Calib. Time(s): 1527 1715

GC Column: Zebron ZB-SV ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) _____ Purge Volume: _____ (mL)

COMPOUND	$\overline{RRF}$	RRF 20	MIN RRF	%D	MAX %D
4-Methylphenol-d8	1.301	1.379	0.010	6.0	20.0
4-Chloroaniline-d4	0.408	0.444	0.010	8.9	40.0
Nitrobenzene-d5	0.168	0.187	0.050	11.5	20.0
2-Nitrophenol-d4	0.170	0.195	0.050	14.9	20.0
2,4-Dichlorophenol-d3	0.287	0.325	0.060	12.9	20.0
Dimethylphthalate-d6	1.422	1.563	0.300	10.0	20.0
Acenaphthylene-d8	1.969	2.198	0.400	11.7	20.0
4-Nitrophenol-d4	0.277	0.306	0.010	10.5	40.0
Fluorene-d10	1.272	1.373	0.100	8.0	20.0
4,6-Dinitro-2-methylphenol-d2	0.114	0.115	0.010	0.3	30.0
Anthracene-d10	1.013	1.132	0.300	11.8	20.0
Pyrene-d10	1.005	1.089	0.300	8.4	25.0
Benzo(a)pyrene-d12	1.073	1.223	0.010	14.0	20.0

Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B41.D
Lab Sample ID: SSTD020LE Client Sample ID: SSTD020LE
Injection Date: 18-May-2016 02:54:30 Dil. Factor: 1.0
Operator: RBH Inst. ID: msd4.i
Sample Info: 4051716B, SVMS 2056
Misc. Info: L3
Method: \\Organics\HH\chem\msd4.i\4051716B.b\SOMBNA-end.m
Method Date: 18-May-2016 09:35:30 Quant Method: ISTD
Calib Date: 16-May-2016 17:15:30 Calib File: 40516C06.D
Sample Type: CCV ALS Bottle: 93
Cpnd Sublist: std.sub
Sample Matrix: Water Matrix Level: Low
Target 4.14 Integrator: falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
2 Benzaldehyde	1.065076	1.152977	0.1	8.3	40	108
$ 3 Phenol-d5	1.616399	1.732303	0.01	7.2	25	107
4 Phenol	1.665063	1.769022	0.08	6.2	20	106
5 bis(2-Chloroethyl)Ether	1.357343	1.441802	0.1	6.2	20	106
$ 6 2-Chlorophenol-d4	1.167198	1.269608	0.2	8.8	20	109
7 2-Chlorophenol	1.397764	1.529282	0.2	9.4	20	109
10 2-Methylphenol	1.266249	1.354758	0.01	7	20	107
11 2,2'-oxybis(1-Chloroprop	1.817015	1.879582	0.01	3.4	25	103
12 Acetophenone	1.867309	1.978326	0.06	5.9	20	106
13 N-Nitroso-di-n-propylami	1.043749	1.160087	0.08	11.1	25	111
14 4-Methylphenol	1.349355	1.431514	0.01	6.1	20	106
15 Hexachloroethane	0.597744	0.634632	0.1	6.2	20	106
$ 16 Nitrobenzene-d5	0.167916	0.18729	0.05	11.5	20	112
17 Nitrobenzene	0.381383	0.406652	0.09	6.6	20	107
18 Isophorone	0.683529	0.717872	0.1	5	20	105
19 2-Nitrophenol	0.184875	0.203484	0.06	10.1	20	110
20 2,4-Dimethylphenol	0.332948	0.35692	0.05	7.2	25	107
21 bis(2-Chloroethoxy)metha	0.405064	0.420056	0.08	3.7	20	104
22 2,4-Dichlorophenol	0.271431	0.305186	0.06	12.4	20	112
24 Naphthalene	0.987037	1.067609	0.2	8.2	20	108
25 4-Chloroaniline	0.535892	0.592595	0.01	10.6	40	111
26 Hexachlorobutadiene	0.170621	0.187994	0.04	10.2	20	110
27 Caprolactam	0.118506	0.123408	0.01	4.1	30	104
28 4-Chloro-3-methylphenol	0.290309	0.322243	0.04	11	20	111
29 2-Methylnaphthalene	0.681683	0.73473	0.1	7.8	20	108
30 Hexachlorocyclopentadien	0.373736	0.302194	0.01	-19.1	40	81
31 2,4,6-Trichlorophenol	0.38539	0.455339	0.09	18.2	20	118
32 2,4,5-Trichlorophenol	0.427868	0.446751	0.1	4.4	20	104
34 1,1'-Biphenyl	1.648798	1.771055	0.2	7.4	20	107
35 2-Chloronaphthalene	1.269527	1.413779	0.3	11.4	20	111
36 2-Nitroaniline	0.398241	0.431983	0.06	8.5	25	108
37 Dimethylphthalate	1.38038	1.541864	0.3	11.7	20	112
38 Acenaphthylene	1.960667	2.21849	0.4	13.1	20	113
39 2,6-Dinitrotoluene	0.316199	0.3515	0.08	11.2	20	111

Report Date: 18-May-2016 10:53:17 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B41.D

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
40 3-Nitroaniline	0.35158	0.397574	0.01	13.1	25	113
42 Acenaphthene	1.226835	1.395203	0.2	13.7	20	114
43 2,4-Dinitrophenol	0.125185	0.122216	0.01	-2.4	50	98
44 4-Nitrophenol	0.211519	0.222267	0.01	5.1	40	105
45 Dibenzofuran	1.75901	1.899617	0.3	8	20	108
46 2,4-Dinitrotoluene	0.434394	0.488266	0.07	12.4	20	112
47 Diethylphthalate	1.404002	1.513796	0.3	7.8	20	108
92 1,2,4,5-Tetrachlorobenze	0.613245	0.679344	0.1	10.8	20	111
48 Fluorene	1.415354	1.563042	0.2	10.4	20	110
49 4-Chlorophenyl-phenyleth	0.646588	0.726896	0.1	12.4	20	112
50 4-Nitroaniline	0.315513	0.394289	0.01	25	40	125
51 4,6-Dinitro-2-methylphen	0.116148	0.121582	0.01	4.7	30	105
52 N-Nitrosodiphenylamine	0.667501	0.751727	0.1	12.6	20	113
54 4-Bromophenyl-phenylethe	0.222042	0.240113	0.07	8.1	20	108
55 Hexachlorobenzene	0.238658	0.262006	0.05	9.8	20	110
56 Atrazine	0.220249	0.226291	0.01	2.7	25	103
57 Pentachlorophenol	0.121272	0.078936	0.01	-34.9	40	65
59 Phenanthrene	1.138128	1.224646	0.2	7.6	20	108
60 Anthracene	1.126861	1.254767	0.2	11.4	20	111
62 Di-n-butylphthalate	1.270278	1.441028	0.5	13.4	20	113
63 Fluoranthene	1.211962	1.368528	0.1	12.9	20	113
64 Pyrene	1.194341	1.300279	0.4	8.9	25	109
66 Butylbenzylphthalate	0.533802	0.581277	0.1	8.9	25	109
67 Benzo(a)anthracene	1.161482	1.26361	0.3	8.8	20	109
68 3,3'-Dichlorobenzidine	0.35753	0.383178	0.01	7.2	40	107
70 Chrysene	1.102517	1.171953	0.2	6.3	20	106
71 bis(2-Ethylhexyl)phthala	0.724842	0.798045	0.2	10.1	25	110
72 Di-n-octylphthalate	1.427818	1.935742	0.01	35.6	40	136
73 Benzo(b)fluoranthene	1.321571	1.675624	0.01	* 26.8	25	127
74 Benzo(k)fluoranthene	1.269044	1.513318	0.01	19.2	25	119
75 Benzo(a)pyrene	1.278134	1.445478	0.01	13.1	20	113
77 Indeno(1,2,3-cd)pyrene	1.246394	1.008348	0.01	-19.1	25	81
78 Dibenzo(a,h)anthracene	1.057555	0.880364	0.01	-16.8	25	83
79 Benzo(g,h,i)perylene	0.907072	0.710065	0.01	-21.7	30	78
$ 93 bis-(2-Chloroethyl)ether	1.065529	1.119867	0.1	5.1	20	105
$ 94 4-Methylphenol-d8	1.301002	1.379215	0.01	6	20	106
$ 95 2-Nitrophenol-d4	0.169854	0.195185	0.05	14.9	20	115
$ 96 2,4-Dichlorophenol-d3	0.287376	0.324506	0.06	12.9	20	113
$ 97 4-Chloroaniline-d4	0.407947	0.444078	0.01	8.9	40	109
$ 98 Dimethylphthalate-d6	1.421553	1.56338	0.3	10	20	110
$ 99 Acenaphthylene-d8	1.96854	2.198419	0.4	11.7	20	112
$ 100 4-Nitrophenol-d4	0.277278	0.306406	0.01	10.5	40	111
$ 101 Fluorene-d10	1.271679	1.373346	0.1	8	20	108
$ 102 4,6-Dinitro-2-methylphen	0.114452	0.114843	0.01	0.3	30	100
$ 103 Anthracene-d10	1.012525	1.131956	0.3	11.8	20	112
$ 104 Pyrene-d10	1.004623	1.088898	0.3	8.4	25	108
$ 105 Benzo(a)pyrene-d12	1.072689	1.222637	0.01	14	20	114

Report Date: 18-May-2016 10:53:17 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B41.D

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
106 Carbazole	1.010076	1.146623	0.05	13.5	20	114
107 2,3,4,6-Tetrachloropheno	0.329009	0.336489	0.04	2.3	20	102
108 1,4-Dioxane	0.625441	0.62533	0.01	0	40	100
$ 109 1,4-Dioxane-d8	0.545321	0.550775	0.01	1	25	101

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B41.D
Lab Sample ID: SSTD020LE Client Sample ID: SSTD020LE
Injection Date: 18-May-2016 02:54:30 Dil. Factor: 1.0
Operator: RBH Inst. ID: msd4.i
Sample Info: 4051716B, SVMS 2056
Misc. Info: L3
Method: \\Organics\HH\chem\msd4.i\4051716B.b\SOMBNA-end.m
Method Date: 18-May-2016 09:35:30 Quant Method: ISTD
Calib Date: 16-May-2016 17:15:30 Calib File: 40516C06.D
Sample Type: CCV ALS Bottle: 93
Cpnd Sublist: std.sub
Sample Matrix: Water Matrix Level: Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	1000.00	Volume of final extract (uL)
Vo	1000.00	Volume of sample extracted (mL)
Cpnd Variable		Local Cpnd Variable

Column1: Zebron ZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: rbh Review Date: 18-May-2016 08:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 3 Phenol-d5	99.0	5.590	5.590	0.000	301885	20.000	21.434	
108 1,4-Dioxane	88.0	3.559	3.559	0.000	43590	8.0000	7.9986	
$ 109 1,4-Dioxane-d8	96.0	3.528	3.528	0.000	38393	8.0000	8.0800	
4 Phenol	94.0	5.601	5.601	0.000	308284	20.000	21.249	
2 Benzaldehyde	77.0	5.601	5.601	0.000	200927	20.000	21.651	
$ 93 bis-(2-Chloroethyl)ether-d8	67.0	5.663	5.663	0.000	195157	20.000	21.020	
5 bis(2-Chloroethyl)Ether	93.0	5.694	5.694	0.000	251260	20.000	21.244	
$ 6 2-Chlorophenol-d4	132.0	5.767	5.767	0.000	221252	20.000	21.755	
7 2-Chlorophenol	128.0	5.777	5.777	0.000	266505	20.000	21.882	
* 8 1,4-Dichlorobenzene-d4	152.0	5.943	5.943	0.000	174268	20.000	20.000	
10 2-Methylphenol	108.0	6.098	6.098	0.000	236091	20.000	21.398	
11 2,2'-oxybis(1-Chloropropane)	45.0	6.119	6.119	0.000	327551	20.000	20.689	
$ 94 4-Methylphenol-d8	113.0	6.192	6.192	0.000	240353	20.000	21.202	
14 4-Methylphenol	108.0	6.212	6.212	0.000	249467	20.000	21.218	
13 N-Nitroso-di-n-propylamine	70.0	6.243	6.243	0.000	202166	20.000	22.229	
12 Acetophenone	105.0	6.264	6.264	0.000	344759	20.000	21.189	
15 Hexachloroethane	117.0	6.368	6.368	0.000	110596	20.000	21.234	
$ 16 Nitrobenzene-d5	128.0	6.399	6.399	0.000	129518	20.000	22.308	
17 Nitrobenzene	77.0	6.409	6.409	0.000	281215	20.000	21.325	
18 Isophorone	82.0	6.596	6.596	0.000	496436	20.000	21.005	
20 2,4-Dimethylphenol	107.0	6.658	6.658	0.000	246824	20.000	21.440	
$ 95 2-Nitrophenol-d4	143.0	6.658	6.658	0.000	134978	20.000	22.983	
19 2-Nitrophenol	139.0	6.668	6.668	0.000	140717	20.000	22.013	
21 bis(2-Chloroethoxy)methane	93.0	6.741	6.741	0.000	290485	20.000	20.740	

Report Date: 18-May-2016 10:53:17 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B41.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
$ 96 2,4-Dichlorophenol-d3	165.0	6.855	6.855	0.000	224408	20.000	22.584	
22 2,4-Dichlorophenol	162.0	6.865	6.865	0.000	211048	20.000	22.487	
* 23 Naphthalene-d8	136.0	7.000	7.000	0.000	691538	20.000	20.000	
24 Naphthalene	128.0	7.021	7.021	0.000	738292	20.000	21.633	
$ 97 4-Chloroaniline-d4	131.0	7.031	7.031	0.000	307097	20.000	21.771	
25 4-Chloroaniline	127.0	7.041	7.041	0.000	409802	20.000	22.116	
26 Hexachlorobutadiene	225.0	7.093	7.093	0.000	130005	20.000	22.036	
27 Caprolactam	113.0	7.342	7.342	0.000	85341	20.000	20.827	M
28 4-Chloro-3-methylphenol	107.0	7.414	7.414	0.000	222843	20.000	22.200	
29 2-Methylnaphthalene	142.0	7.591	7.591	0.000	508094	20.000	21.556	
30 Hexachlorocyclopentadiene	237.0	7.715	7.715	0.000	100816	20.000	16.172	
92 1,2,4,5-Tetrachlorobenzene	216.0	7.736	7.736	0.000	226638	20.000	22.156	
31 2,4,6-Trichlorophenol	196.0	7.819	7.819	0.000	151907	20.000	23.630	M
32 2,4,5-Trichlorophenol	196.0	7.850	7.850	0.000	149042	20.000	20.883	M
34 1,1'-Biphenyl	154.0	7.974	7.974	0.000	590847	20.000	21.483	
35 2-Chloronaphthalene	162.0	8.015	8.015	0.000	471655	20.000	22.273	
36 2-Nitroaniline	65.0	8.078	8.078	0.000	144115	20.000	21.695	
$ 98 Dimethylphthalate-d6	166.0	8.181	8.181	0.000	521564	20.000	21.995	
37 Dimethylphthalate	163.0	8.202	8.202	0.000	514386	20.000	22.340	
39 2,6-Dinitrotoluene	165.0	8.274	8.274	0.000	117265	20.000	22.233	
$ 99 Acenaphthylene-d8	160.0	8.368	8.368	0.000	733421	20.000	22.336	
38 Acenaphthylene	152.0	8.378	8.378	0.000	740117	20.000	22.630	
40 3-Nitroaniline	138.0	8.430	8.430	0.000	132636	20.000	22.616	
* 41 Acenaphthene-d10	164.0	8.492	8.492	0.000	333613	20.000	20.000	
43 2,4-Dinitrophenol	184.0	8.513	8.513	0.000	81546	40.000	39.052	
42 Acenaphthene	153.0	8.523	8.523	0.000	465458	20.000	22.745	
$ 100 4-Nitrophenol-d4	143.0	8.523	8.523	0.000	102221	20.000	22.101	
44 4-Nitrophenol	109.0	8.534	8.534	0.000	74151	20.000	21.016	
46 2,4-Dinitrotoluene	165.0	8.616	8.616	0.000	162892	20.000	22.480	
45 Dibenzofuran	168.0	8.668	8.668	0.000	633737	20.000	21.599	
107 2,3,4,6-Tetrachlorophenol	232.0	8.751	8.751	0.000	112257	20.000	20.455	
47 Diethylphthalate	149.0	8.782	8.782	0.000	505022	20.000	21.564	
49 4-Chlorophenyl-phenylether	204.0	8.927	8.927	0.000	242502	20.000	22.484	
$ 101 Fluorene-d10	176.0	8.927	8.927	0.000	458166	20.000	21.599	
50 4-Nitroaniline	138.0	8.958	8.958	0.000	131540	20.000	24.994	
48 Fluorene	166.0	8.958	8.958	0.000	521451	20.000	22.087	
$ 102 4,6-Dinitro-2-methylphenol-d2	200.0	8.969	8.969	0.000	69807	20.000	20.068	
51 4,6-Dinitro-2-methylphenol	198.0	8.969	8.969	0.000	73903	20.000	20.936	
52 N-Nitrosodiphenylamine	169.0	9.021	9.021	0.000	456934	20.000	22.524	
54 4-Bromophenyl-phenylether	248.0	9.342	9.342	0.000	145952	20.000	21.628	
55 Hexachlorobenzene	284.0	9.425	9.425	0.000	159259	20.000	21.957	
56 Atrazine	200.0	9.435	9.435	0.000	137550	20.000	20.549	
57 Pentachlorophenol	266.0	9.591	9.591	0.000	47981	20.000	13.018	
* 58 Phenanthrene-d10	188.0	9.767	9.767	0.000	607846	20.000	20.000	
59 Phenanthrene	178.0	9.787	9.787	0.000	744396	20.000	21.520	
$ 103 Anthracene-d10	188.0	9.819	9.819	0.000	688055	20.000	22.359	
60 Anthracene	178.0	9.829	9.829	0.000	762705	20.000	22.270	
106 Carbazole	167.0	9.953	9.953	0.000	696970	20.000	22.704	
62 Di-n-butylphthalate	149.0	10.171	10.171	0.000	875923	20.000	22.688	
63 Fluoranthene	202.0	10.907	10.907	0.000	831854	20.000	22.584	
$ 104 Pyrene-d10	212.0	11.145	11.145	0.000	725853	20.000	21.678	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
64 Pyrene	202.0	11.166	11.166	0.000	866758	20.000	21.774	
66 Butylbenzylphthalate	149.0	11.788	11.788	0.000	387476	20.000	21.779	
71 bis(2-Ethylhexyl)phthalate	149.0	12.534	12.534	0.000	531972	20.000	22.020	
68 3,3'-Dichlorobenzidine	252.0	12.586	12.586	0.000	255424	20.000	21.435	
67 Benzo(a)anthracene	228.0	12.679	12.679	0.000	842315	20.000	21.759	
* 69 Chrysene-d12	240.0	12.700	12.700	0.000	666594	20.000	20.000	
70 Chrysene	228.0	12.731	12.731	0.000	781217	20.000	21.260	
72 Di-n-octylphthalate	149.0	13.529	13.529	0.000	933825	20.000	27.115	
73 Benzo(b)fluoranthene	252.0	14.347	14.347	0.000	808341	20.000	25.358	
74 Benzo(k)fluoranthene	252.0	14.389	14.389	0.000	730043	20.000	23.850	
$ 105 Benzo(a)pyrene-d12	264.0	14.855	14.855	0.000	589815	20.000	22.796	
75 Benzo(a)pyrene	252.0	14.907	14.907	0.000	697316	20.000	22.619	
* 76 Perylene-d12	264.0	14.990	14.990	0.000	482412	20.000	20.000	
77 Indeno(1,2,3-cd)pyrene	276.0	17.176	17.176	0.000	486439	20.000	16.180	
78 Dibenzo(a,h)anthracene	278.0	17.197	17.197	0.000	424698	20.000	16.649	
79 Benzo(g,h,i)perylene	276.0	17.840	17.840	0.000	342544	20.000	15.656	

QC Flag Legend

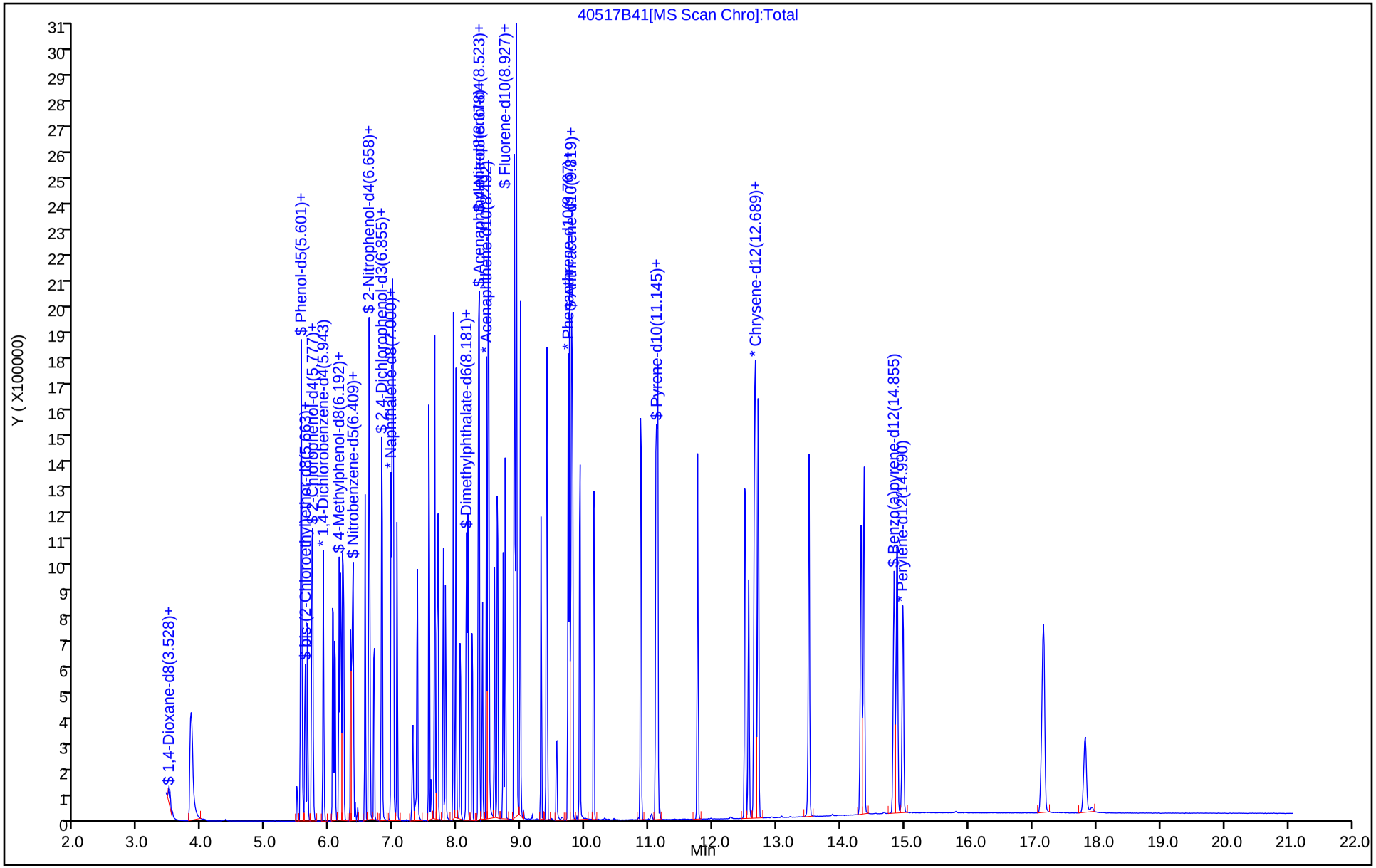
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 18-May-2016 10:53:17 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B41.D				
Injection Date:	18-May-2016 02:54:30	Inst. ID:	msd4.i	Operator:	RBH
Client ID:	SSTD020LE	Lab ID:	SSTD020LE		
Sample Info:	4051716B, SVMS 2056				
Injection Vol.	1.00 1	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 18-May-2016 10:53:17 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

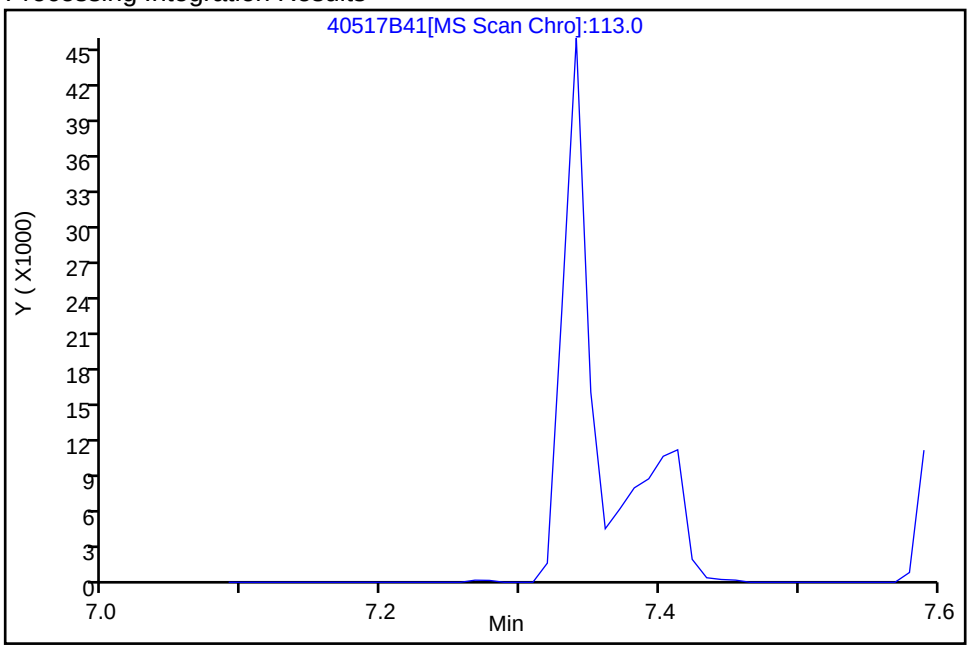
Manual Integration Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B41.D		
Injection Date:	18-May-2016 02:54:30	Inst. ID:	msd4.i
Client ID:	SSTD020LE	Lab ID:	SSTD020LE
Sample Info:	4051716B, SVMS 2056		
Injection Vol.	1.00 1	Dil. Factor:	1.0
Operator:	RBH		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

27 Caprolactam, CAS: 105-60-2

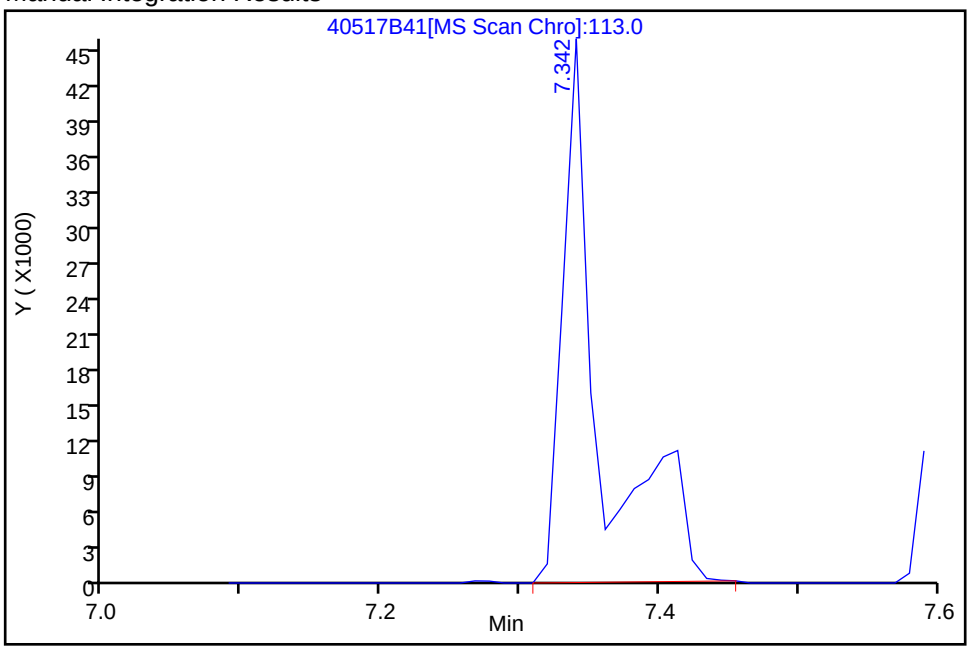
Not Detected
7.342

Processing Integration Results



Manual Integration Results

RT:	7.342
Area:	85341
Amount:	20.827
Amount Units:	ng/ul



Data Editor: rbh, 18-May-2016 08:04:30
Audit Action: Mint
Audit Reason: IAI

Report Date: 18-May-2016 10:53:17 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

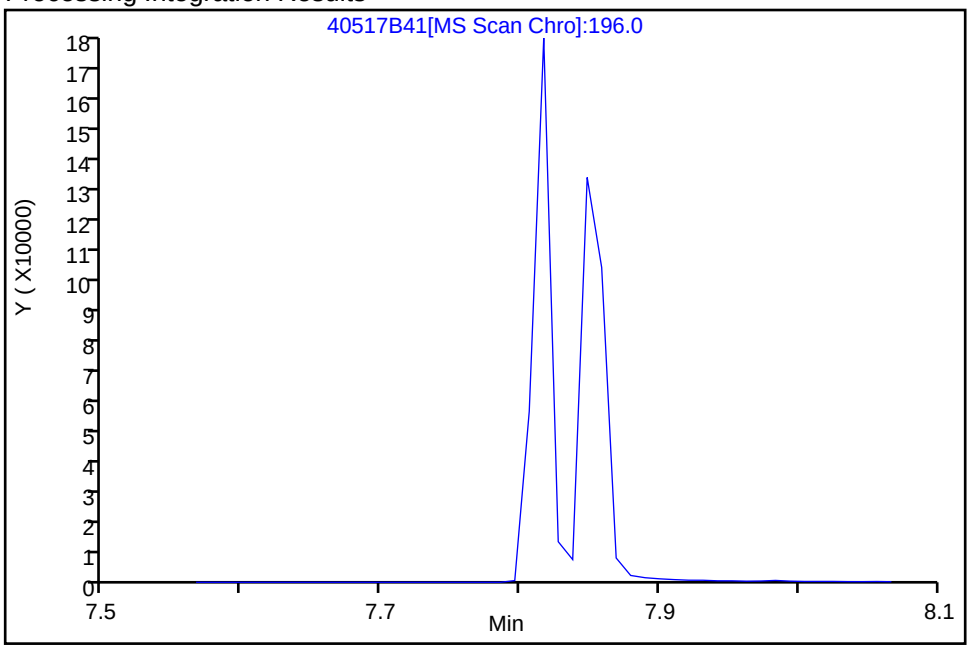
Manual Integration Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B41.D		
Injection Date:	18-May-2016 02:54:30	Inst. ID:	msd4.i
Client ID:	SSTD020LE	Lab ID:	SSTD020LE
Sample Info:	4051716B, SVMS 2056		
Injection Vol.	1.00 1	Dil. Factor:	1.0
Operator:	RBH		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

31 2,4,6-Trichlorophenol, CAS: 88-06-2

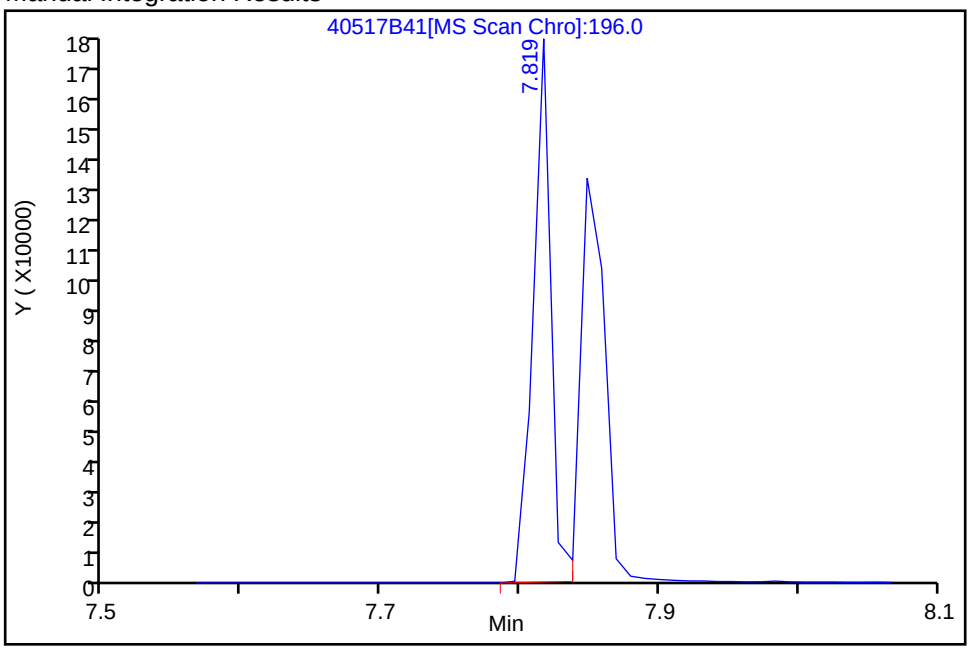
Not Detected
7.819

Processing Integration Results



Manual Integration Results

RT:	7.819
Area:	151907
Amount:	23.630
Amount Units:	ng/ul



Data Editor: rbh, 18-May-2016 08:04:30
Audit Action: Mint
Audit Reason: SP

Report Date: 18-May-2016 10:53:17 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

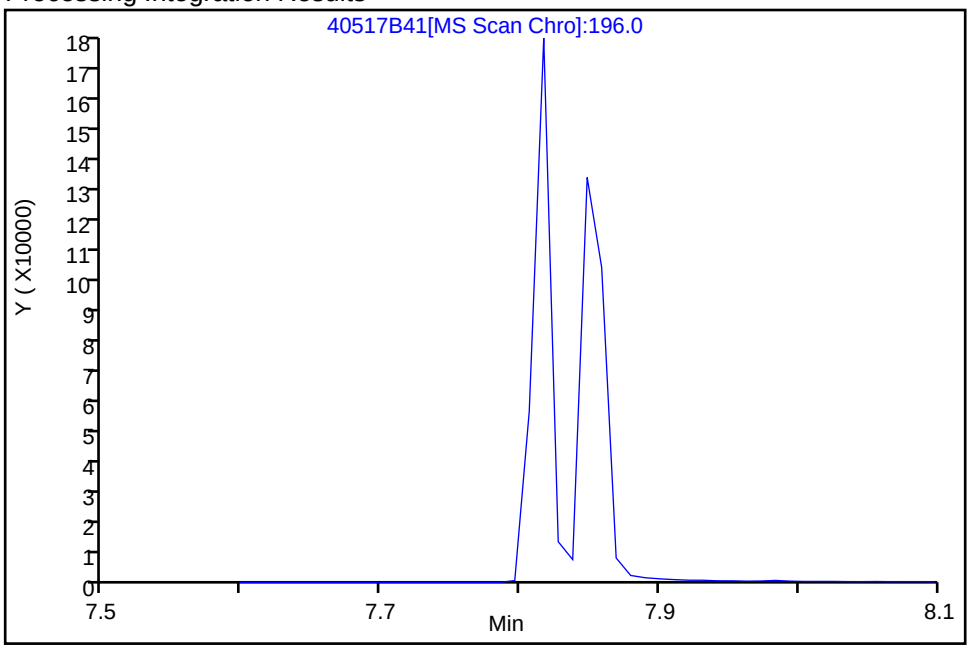
Manual Integration Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B41.D		
Injection Date:	18-May-2016 02:54:30	Inst. ID:	msd4.i
Client ID:	SSTD020LE	Lab ID:	SSTD020LE
Sample Info:	4051716B, SVMS 2056		
Injection Vol.	1.00 1	Dil. Factor:	1.0
Operator:	RBH		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

32 2,4,5-Trichlorophenol, CAS: 95-95-4

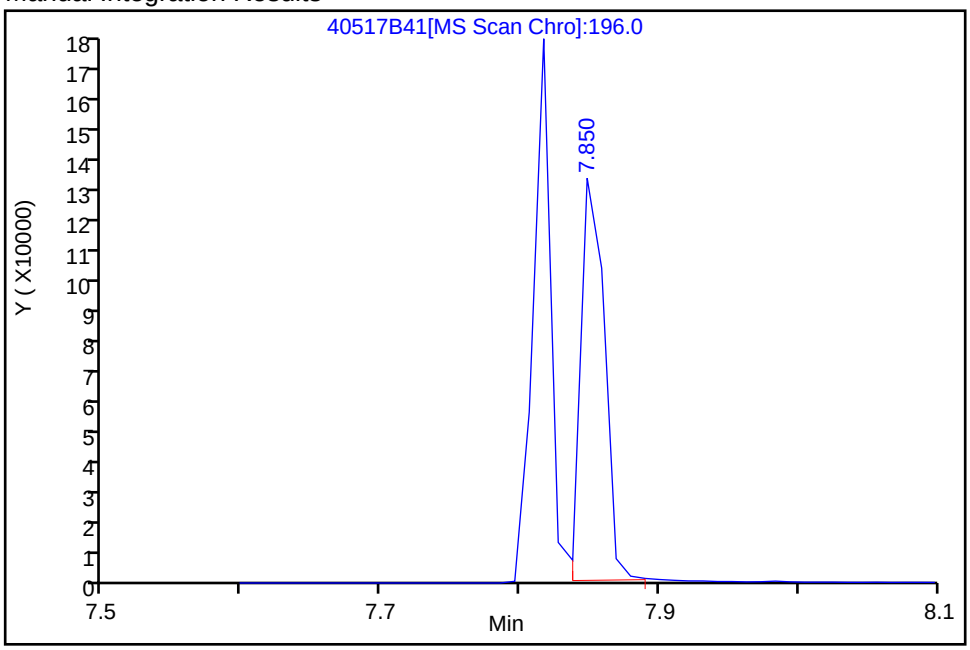
Not Detected
7.850

Processing Integration Results



Manual Integration Results

RT:	7.850
Area:	149042
Amount:	20.883
Amount Units:	ng/ul



Data Editor: rbh, 18-May-2016 08:04:30
Audit Action: Mint
Audit Reason: SP

SEMIVOLATILE RAW QC DATA

DFTPP Data

Blank Data

Matrix Spike / Matrix Spike Duplicate-optional

Laboratory Control Sample Data-optional

DFTPP Data

DFTPPs are arranged in chronological order by instrument

-Reconstructed Total Ion Chromatogram

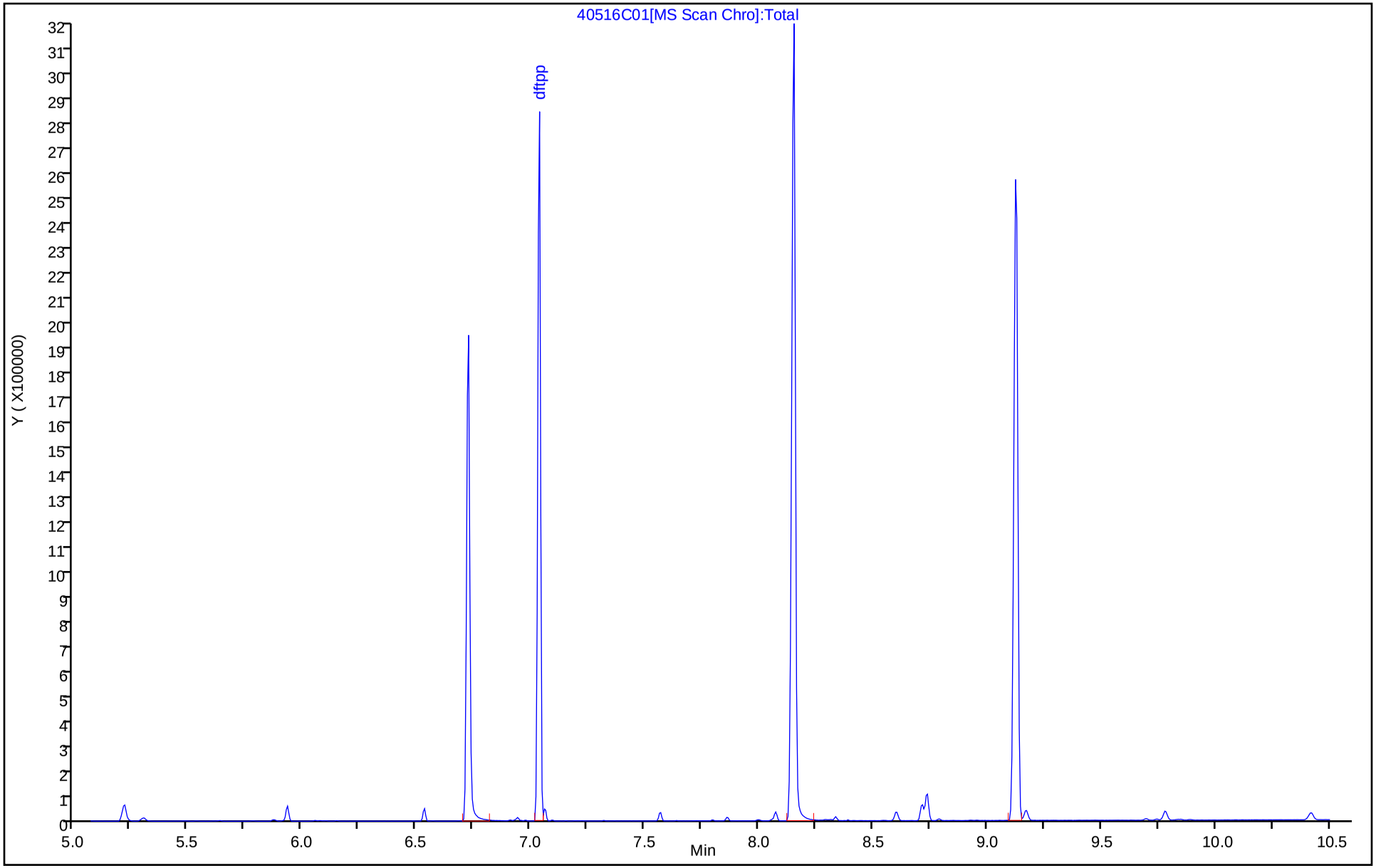
-Bar Graph Spectrum & Tabulated Relative Abundances

-Mass Listing

Report Date: 17-May-2016 09:47:58 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C01.D				
Injection Date:	16-May-2016 15:11:30	Inst. ID:	msd4.i	Operator:	JCG
Client ID:	DFTPPKZ	Lab ID:	SVMS 2067		
Sample Info:	4051616C, SVMS 2067				
Injection Vol.	1.00	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



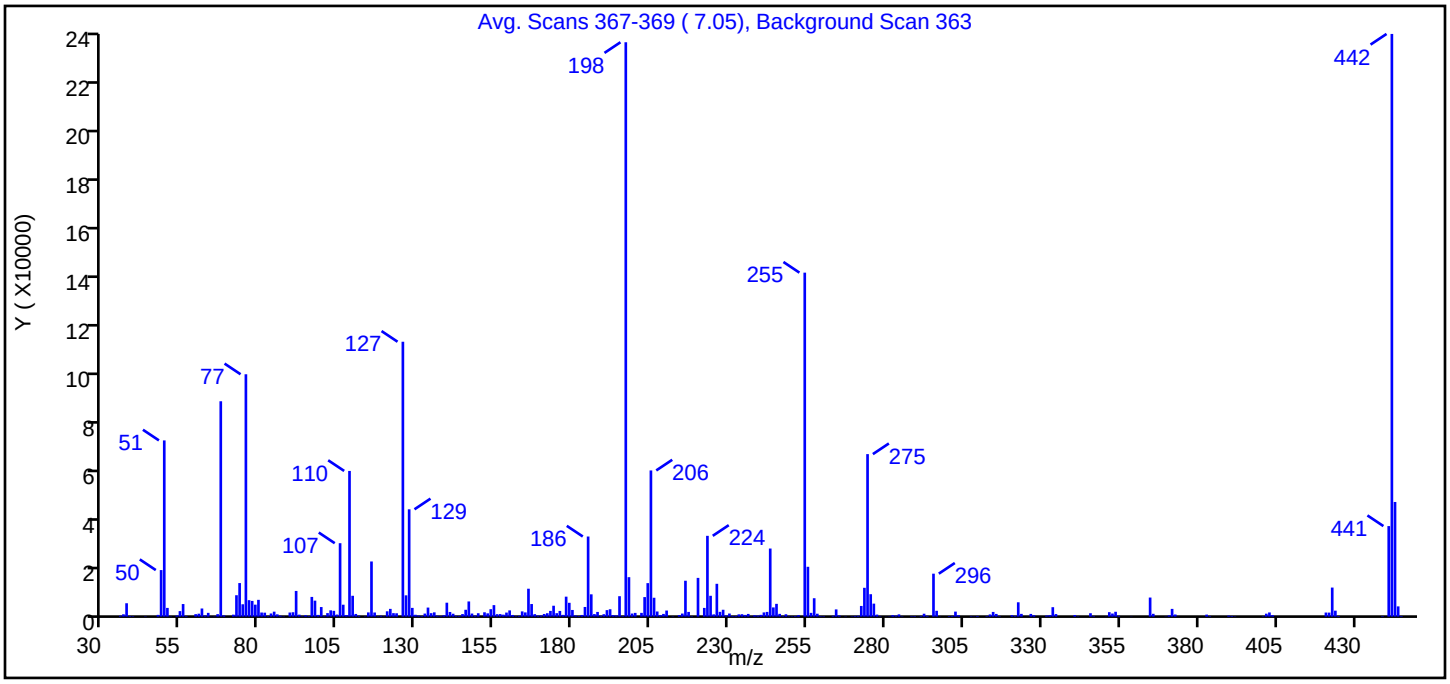
Report Date: 17-May-2016 09:47:58 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\HH\chem\msd4.i\4051616C.b\40516C01.D		
Injection Date:	16-May-2016 15:11:30	Inst. ID:	msd4.i
Client ID:	DFTPPKZ	Lab ID:	SVMS 2067
Sample Info:	4051616C, SVMS 2067		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JCG		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

1 dftpp



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% relative abundance	100.0
51	10.00 - 80.00% of mass 198	30.7
68	Less than 2.00% of mass 69	0.4 (1.1)
69	Present	37.5
70	Less than 2.00% of mass 69	0.2 (0.6)
127	10.00 - 80.00% of mass 198	47.9
197	Less than 2.00% of mass 198	0.1
199	5.00 - 9.00% of mass 198	6.9
275	10.00 - 60.00% of mass 198	28.3
365	Greater than 1.00% of mass 198	3.3
441	0.01 - 99.99% of mass 443	15.8 (79.0)
442	Greater than 50.00% of mass 198	101.4
443	15.00 - 24.00% of mass 442	20.0 (19.7)

Data File: \\Organics\HH\chem\msd4.i\4051616C.b\40516C01.D
Injection Date: 16-May-2016 15:11:30
Spectrum: Avg. Scans 367-369 (7.05), Background Scan 363
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 293

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	341	124.00	1416	200.00	1255	285.00	908
38.00	943	125.00	1359	201.00	1511	286.00	138
39.00	5450	127.00	112160	203.00	1526	289.00	180
40.00	268	128.00	8677	204.00	7962	290.00	205
41.00	186	129.00	43784	205.00	13659	291.00	51
45.00	125	130.00	3556	206.00	59640	292.00	235
49.00	706	131.00	750	207.00	7690	293.00	1175
50.00	18984	132.00	425	208.00	2083	294.00	313
51.00	71896	133.00	232	209.00	592	296.00	17520
52.00	3547	134.00	1239	210.00	1097	297.00	2368
53.00	130	135.00	3685	211.00	2469	298.00	77
55.00	448	136.00	1411	213.00	126	301.00	224
56.00	2238	137.00	1736	215.00	606	302.00	288
57.00	5123	138.00	339	216.00	1247	303.00	2037
58.00	227	139.00	219	217.00	14635	304.00	542
61.00	1000	140.00	557	218.00	1915	308.00	169
62.00	1193	141.00	5672	219.00	173	309.00	90
63.00	3307	142.00	1893	221.00	15797	310.00	252
64.00	451	143.00	1174	223.00	3545	313.00	218
65.00	1527	144.00	297	224.00	32960	314.00	878
66.00	55	145.00	272	225.00	8494	315.00	1906
67.00	125	146.00	1031	226.00	910	316.00	1094
68.00	1008	147.00	2792	227.00	13385	317.00	197
69.00	87872	148.00	6184	228.00	1940	321.00	596
70.00	493	149.00	1248	229.00	2790	322.00	261
73.00	795	150.00	389	230.00	439	323.00	5844
74.00	8722	151.00	1377	231.00	1255	324.00	1116
75.00	13686	153.00	1754	232.00	230	326.00	51
76.00	5033	154.00	1333	233.00	260	327.00	1093
77.00	98888	155.00	3023	234.00	915	328.00	548
78.00	6709	156.00	4680	235.00	973	332.00	433
79.00	6405	157.00	989	236.00	691	333.00	590
80.00	4874	158.00	1033	237.00	1094	334.00	3840

Report Date: 17-May-2016 09:47:58 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051616C.b\40516C01.D
Injection Date: 16-May-2016 15:11:30
Spectrum: Avg. Scans 367-369 (7.05), Background Scan 363
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 293

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	6842	159.00	796	238.00	114	335.00	1036
82.00	1667	160.00	1643	239.00	552	341.00	643
83.00	1601	161.00	2535	240.00	410	342.00	117
84.00	225	162.00	668	241.00	711	346.00	1381
85.00	1277	163.00	183	242.00	1707	347.00	193
86.00	2016	164.00	324	243.00	1914	351.00	61
87.00	919	165.00	2126	244.00	27776	352.00	1809
88.00	367	166.00	1710	245.00	3748	353.00	1256
89.00	134	167.00	11379	246.00	5206	354.00	1972
91.00	1661	168.00	5131	247.00	1120	355.00	335
92.00	1775	169.00	1003	248.00	211	359.00	60
93.00	10469	170.00	421	249.00	956	365.00	7775
94.00	790	171.00	444	250.00	160	366.00	1141
95.00	160	172.00	1075	251.00	147	370.00	91
96.00	569	173.00	1383	252.00	245	371.00	482
97.00	231	174.00	2326	253.00	585	372.00	3147
98.00	8030	175.00	4434	255.00	140352	373.00	862
99.00	6509	176.00	1400	256.00	20328	374.00	51
100.00	695	177.00	2310	257.00	1526	383.00	814
101.00	3901	178.00	707	258.00	7501	384.00	222
102.00	197	179.00	8137	259.00	1177	390.00	402
103.00	1432	180.00	5631	260.00	217	391.00	262
104.00	2554	181.00	2709	261.00	178	392.00	111
105.00	2355	182.00	474	264.00	348	401.00	162
106.00	826	183.00	242	265.00	2942	402.00	1192
107.00	29952	184.00	668	266.00	449	403.00	1692
108.00	4853	185.00	3931	268.00	109	404.00	574
109.00	650	186.00	32680	270.00	131	421.00	1657
110.00	59440	187.00	9091	271.00	294	422.00	1630
111.00	8496	188.00	1030	272.00	333	423.00	11848
112.00	1083	189.00	1908	273.00	4344	424.00	2418
113.00	347	190.00	322	274.00	11751	425.00	252
115.00	128	191.00	974	275.00	66304	439.00	209
116.00	1710	192.00	2647	276.00	9138	441.00	36936

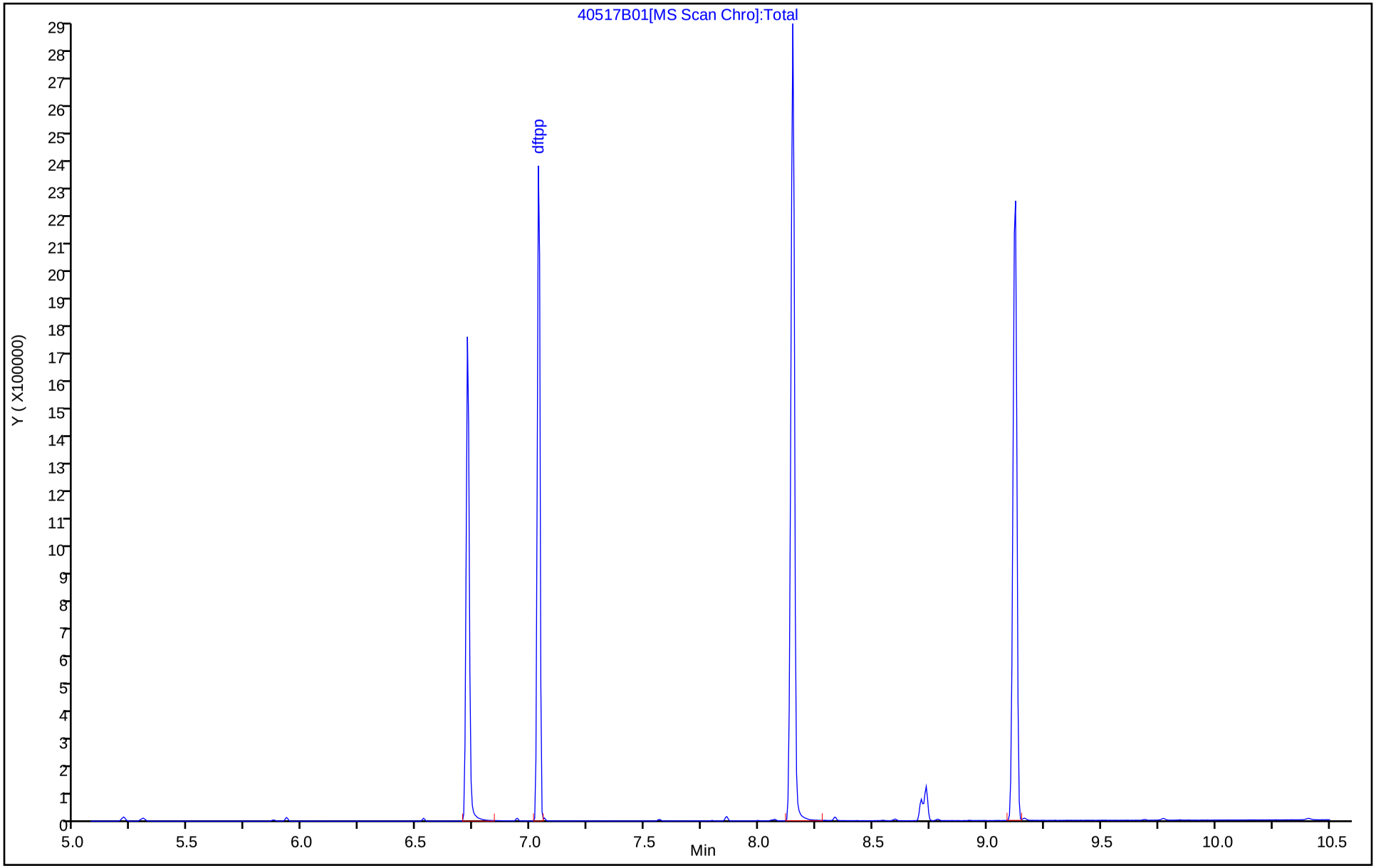
Report Date: 17-May-2016 09:47:58 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051616C.b\40516C01.D
Injection Date: 16-May-2016 15:11:30
Spectrum: Avg. Scans 367-369 (7.05), Background Scan 363
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 293

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	22496	193.00	3003	277.00	5290	442.00	237760
118.00	1671	194.00	625	278.00	817	443.00	46776
119.00	174	195.00	450	279.00	160	444.00	4168
120.00	361	196.00	8329	281.00	55	445.00	250
121.00	131	197.00	233	282.00	110		
122.00	2165	198.00	234368	283.00	601		
123.00	3154	199.00	16088	284.00	403		

Report Date: 18-May-2016 10:52:41 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B01.D				
Injection Date:	17-May-2016 09:03:30	Inst. ID:	msd4.i	Operator:	JCG
Client ID:	DFTPPLB	Lab ID:	SVMS 2067		
Sample Info:	4051716B, SVMS 2067				
Injection Vol.	1.00	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



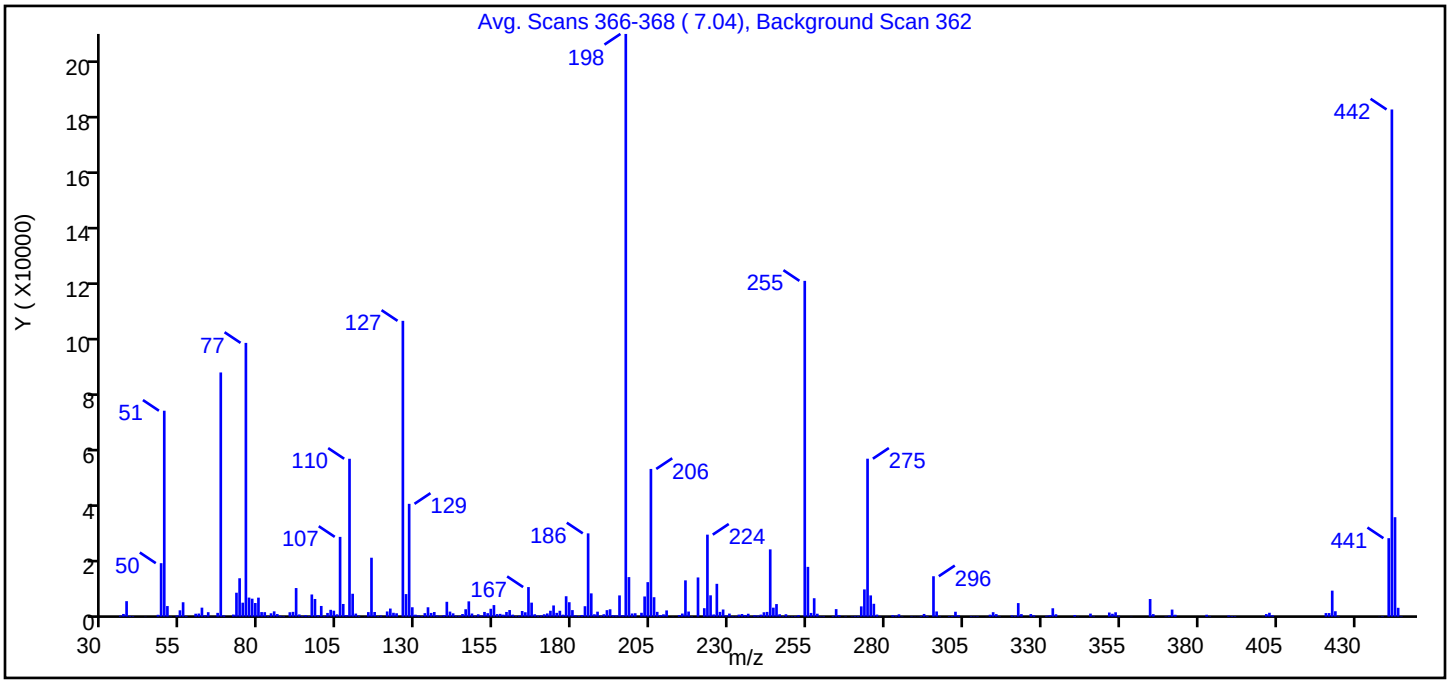
Report Date: 18-May-2016 10:52:41 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B01.D		
Injection Date:	17-May-2016 09:03:30	Inst. ID:	msd4.i
Client ID:	DFTPPLB	Lab ID:	SVMS 2067
Sample Info:	4051716B, SVMS 2067		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JCG		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

1 dftpp



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% relative abundance	100.0
51	10.00 - 80.00% of mass 198	35.3
68	Less than 2.00% of mass 69	0.6 (1.5)
69	Present	41.9
70	Less than 2.00% of mass 69	0.2 (0.5)
127	10.00 - 80.00% of mass 198	50.8
197	Less than 2.00% of mass 198	0.2
199	5.00 - 9.00% of mass 198	6.8
275	10.00 - 60.00% of mass 198	27.1
365	Greater than 1.00% of mass 198	3.0
441	0.01 - 99.99% of mass 443	13.5 (78.9)
442	Greater than 50.00% of mass 198	87.0
443	15.00 - 24.00% of mass 442	17.1 (19.6)

Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B01.D
Injection Date: 17-May-2016 09:03:30
Spectrum: Avg. Scans 366-368 (7.04), Background Scan 362
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	324	123.00	2856	197.00	474	281.00	50
38.00	942	124.00	1358	198.00	206848	283.00	513
39.00	5482	125.00	1183	199.00	14021	284.00	336
40.00	265	127.00	105000	200.00	1110	285.00	819
41.00	178	128.00	7994	201.00	1195	286.00	120
45.00	63	129.00	40032	203.00	1358	289.00	138
49.00	645	130.00	3316	204.00	7147	290.00	75
50.00	18968	131.00	684	205.00	12234	291.00	62
51.00	73088	132.00	421	206.00	52424	292.00	214
52.00	3745	133.00	206	207.00	6885	293.00	941
53.00	119	134.00	1230	208.00	1688	294.00	256
55.00	388	135.00	3312	209.00	536	296.00	14331
56.00	2238	136.00	1299	210.00	811	297.00	1830
57.00	5096	137.00	1627	211.00	2191	298.00	126
58.00	215	138.00	396	213.00	63	301.00	189
61.00	1024	139.00	226	215.00	538	302.00	234
62.00	1092	140.00	527	216.00	1086	303.00	1722
63.00	3179	141.00	5259	217.00	12867	304.00	455
64.00	450	142.00	1779	218.00	1798	308.00	182
65.00	1569	143.00	1167	219.00	153	309.00	128
66.00	60	144.00	296	221.00	13902	310.00	151
67.00	58	145.00	269	223.00	2985	313.00	50
68.00	1331	146.00	916	224.00	29096	314.00	672
69.00	86672	147.00	2613	225.00	7557	315.00	1565
70.00	428	148.00	5414	226.00	762	316.00	877
73.00	727	149.00	1099	227.00	11638	317.00	148
74.00	8479	150.00	320	228.00	1674	321.00	430
75.00	13616	151.00	831	229.00	2520	322.00	234
76.00	4939	152.00	360	230.00	394	323.00	4800
77.00	97168	153.00	1654	231.00	1070	324.00	881
78.00	6751	154.00	1223	232.00	174	327.00	900
79.00	6359	155.00	2781	233.00	154	328.00	443
80.00	4827	156.00	4085	234.00	713	332.00	302

Report Date: 18-May-2016 10:52:41 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B01.D
Injection Date: 17-May-2016 09:03:30
Spectrum: Avg. Scans 366-368 (7.04), Background Scan 362
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	6732	157.00	891	235.00	914	333.00	508
82.00	1608	158.00	973	236.00	586	334.00	2960
83.00	1579	159.00	694	237.00	1015	335.00	832
84.00	233	160.00	1651	238.00	110	341.00	557
85.00	1186	161.00	2330	239.00	498	342.00	71
86.00	1865	162.00	696	240.00	368	346.00	1065
87.00	902	163.00	211	241.00	698	347.00	130
88.00	327	164.00	339	242.00	1540	352.00	1452
89.00	184	165.00	1985	243.00	1666	353.00	1008
91.00	1549	166.00	1541	244.00	23864	354.00	1536
92.00	1687	167.00	10482	245.00	3176	355.00	279
93.00	10136	168.00	4957	246.00	4449	359.00	52
94.00	757	169.00	836	247.00	834	365.00	6246
95.00	235	170.00	370	248.00	181	366.00	884
96.00	533	171.00	418	249.00	836	370.00	128
97.00	230	172.00	832	250.00	139	371.00	367
98.00	7855	173.00	1129	251.00	145	372.00	2497
99.00	6253	174.00	2082	252.00	212	373.00	654
100.00	521	175.00	3959	253.00	512	383.00	663
101.00	3777	176.00	1334	255.00	119192	384.00	155
102.00	211	177.00	2075	256.00	17656	390.00	374
103.00	1299	178.00	684	257.00	1300	391.00	200
104.00	2406	179.00	7231	258.00	6528	392.00	177
105.00	2096	180.00	5111	259.00	1025	401.00	70
106.00	807	181.00	2309	260.00	151	402.00	909
107.00	28304	182.00	449	261.00	180	403.00	1360
108.00	4483	183.00	218	264.00	243	404.00	454
109.00	553	184.00	576	265.00	2661	421.00	1254
110.00	56032	185.00	3689	266.00	506	422.00	1255
111.00	8111	186.00	29552	268.00	122	423.00	9215
112.00	1074	187.00	8250	270.00	123	424.00	1906
113.00	317	188.00	832	271.00	262	425.00	145
115.00	58	189.00	1755	272.00	256	438.00	51
116.00	1597	190.00	303	273.00	3631	439.00	169

Report Date: 18-May-2016 10:52:41 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B01.D
Injection Date: 17-May-2016 09:03:30
Spectrum: Avg. Scans 366-368 (7.04), Background Scan 362
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	20904	191.00	837	274.00	9654	441.00	27840
118.00	1632	192.00	2294	275.00	56056	442.00	180032
119.00	209	193.00	2602	276.00	7524	443.00	35288
120.00	390	194.00	509	277.00	4551	444.00	3126
121.00	58	195.00	414	278.00	714	445.00	150
122.00	1829	196.00	7525	279.00	118		

Blank Data

Blanks are arranged by type of blank
(Method, Storage, Instrument)

Listed in Chronological Order by instrument.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK13

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: LOW

Matrix: Water Lab Sample ID: RQ12813-001

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 40517B19

% Solids: _____ Date Received: _____

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/17/2016

Extract Concentrated: (Y/N) _____ Extract Volume: 1000 (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: CLLE

Heated Purge: (Y/N) _____ Injection Volume: 1.0 (uL)

Purge Volume: _____ (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl) ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	3-Methylphenol + 4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclo-pentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK13

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: LOW

Matrix: Water Lab Sample ID: RQ12813-001

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 40517B19

% Solids: _____ Date Received: _____

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/17/2016

Extract Concentrated: (Y/N) _____ Extract Volume: 1000 (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: CLLE

Heated Purge: (Y/N) _____ Injection Volume: 1.0 (uL)

Purge Volume: _____ (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
7005-72-3	4-Chlorophenyl-phenyl ether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	10	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK13

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: LOW

Matrix: Water Lab Sample ID: RQ12813-001

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 40517B19

% Solids: _____ Date Received: _____

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/17/2016

Extract Concentrated: (Y/N) _____ Extract Volume: 1000 (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: CLLE

Heated Purge: (Y/N) _____ Injection Volume: 1.0 (uL)

Purge Volume: _____ (mL) pH: _____ Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SBLK13

Lab Name: Shealy Environmental Services, Inc.
Contract: EP-W-14035
Lab Code: EQI Case No.: 46115
MA No.: SDG No.: H4001
Analytical Method: SVOA
Level: LOW
Matrix: Water
Lab Sample ID: RQ12813-001
Sample wt/vol: 1000 (g/mL) mL
Lab File ID: 40517B19
% Solids:
Date Received:
GC Column: Zebron ZB-SV ID: 0.25 (mm)
Date Extracted: 05/09/2016
Extract Concentrated: (Y/N)
Date Analyzed: 05/17/2016
Soil Aliquot (VOA): (uL)
Extract Volume: 1000 (uL)
Heated Purge: (Y/N)
Extraction Type: CLLE
Purge Volume: (mL)
Injection Volume: 1.0
Cleanup Types:
pH: Dilution Factor: 1.0
Concentration Units (ug/L, ug/Kg): ug/L
Cleanup Factor:

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B19.D		
Lab Sample ID:	RQ12813-001	Client Sample ID:	SBLK13
Injection Date:	17-May-2016 17:04:30	Dil. Factor:	1.0
Operator:	RBH	Inst. ID:	msd4.i
Sample Info:	4051716B, RQ12813-001		
Misc. Info:	12813		
Method:	\\Organics\HH\chem\msd4.i\4051716B.b\SOMBNA.m		
Method Date:	17-May-2016 17:07:30	Quant Method:	ISTD
Calib Date:	16-May-2016 17:15:30	Calib File:	40516C06.D
Sample Type:	BLANK	ALS Bottle:	1
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	1000.00	Volume of final extract (uL)
Vo	1000.00	Volume of sample extracted (mL)
Cpnd Variable		Local Cpnd Variable

Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	jcg	Review Date:	18-May-2016 10:29:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Final Conc ug/L	Flags
$ 3 Phenol-d5	99.0	5.580	5.591	-0.010	366571	29.458	29.458	
108 1,4-Dioxane	88.0		3.559		ND			
$ 109 1,4-Dioxane-d8	96.0	3.528	3.528	0.000	20308	4.8374	4.8374	
4 Phenol	94.0		5.601		ND			
2 Benzaldehyde	77.0		5.601		ND			
$ 93 bis-(2-Chloroethyl)ether-d8	67.0	5.653	5.663	-0.010	235780	28.744	28.744	
5 bis(2-Chloroethyl)Ether	93.0		5.694		ND			
$ 6 2-Chlorophenol-d4	132.0	5.767	5.767	0.000	329106	36.626	36.626	
7 2-Chlorophenol	128.0		5.777		ND			
* 8 1,4-Dichlorobenzene-d4	152.0	5.943	5.943	0.000	153968	20.000	20.000	
10 2-Methylphenol	108.0		6.098		ND			
11 2,2'-oxybis(1-Chloropropane)	45.0		6.129		ND			
$ 94 4-Methylphenol-d8	113.0	6.181	6.192	-0.011	299521	29.905	29.905	Q
14 4-Methylphenol	108.0		6.212		ND			
13 N-Nitroso-di-n-propylamine	70.0		6.243		ND			
12 Acetophenone	105.0		6.264		ND			
15 Hexachloroethane	117.0		6.378		ND			
$ 16 Nitrobenzene-d5	128.0	6.399	6.399	0.000	158380	30.840	30.840	
17 Nitrobenzene	77.0		6.409		ND			
18 Isophorone	82.0		6.596		ND			
20 2,4-Dimethylphenol	107.0		6.658		ND			
$ 95 2-Nitrophenol-d4	143.0	6.658	6.658	0.000	173175	33.337	33.337	Q
19 2-Nitrophenol	139.0		6.668		ND			
21 bis(2-Chloroethoxy)methane	93.0		6.741		ND			

Report Date: 18-May-2016 10:53:04 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B19.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Final Conc ug/L	Flags
$ 96 2,4-Dichlorophenol-d3	165.0	6.844	6.855	-0.011	264019	30.040	30.040	
22 2,4-Dichlorophenol	162.0		6.865		ND			
* 23 Naphthalene-d8	136.0	7.000	7.010	-0.010	611670	20.000	20.000	Q
24 Naphthalene	128.0		7.021		ND			
$ 97 4-Chloroaniline-d4	131.0	7.031	7.031	0.000	312663	25.060	25.060	
25 4-Chloroaniline	127.0		7.041		ND			
26 Hexachlorobutadiene	225.0		7.093		ND			
27 Caprolactam	113.0		7.342		ND			
28 4-Chloro-3-methylphenol	107.0		7.414		ND			
29 2-Methylnaphthalene	142.0		7.601		ND			
30 Hexachlorocyclopentadiene	237.0		7.715		ND			
92 1,2,4,5-Tetrachlorobenzene	216.0		7.736		ND			
31 2,4,6-Trichlorophenol	196.0		7.819		ND			
32 2,4,5-Trichlorophenol	196.0		7.850		ND			
34 1,1'-Biphenyl	154.0		7.974		ND			
35 2-Chloronaphthalene	162.0		8.015		ND			
36 2-Nitroaniline	65.0		8.078		ND			
$ 98 Dimethylphthalate-d6	166.0	8.181	8.181	0.000	680653	32.160	32.160	
37 Dimethylphthalate	163.0		8.202		ND			
39 2,6-Dinitrotoluene	165.0		8.275		ND			
$ 99 Acenaphthylene-d8	160.0	8.368	8.368	0.000	918521	31.340	31.340	
38 Acenaphthylene	152.0		8.378		ND			
40 3-Nitroaniline	138.0		8.430		ND			
* 41 Acenaphthene-d10	164.0	8.492	8.492	0.000	297764	20.000	20.000	
43 2,4-Dinitrophenol	184.0		8.513		ND			
42 Acenaphthene	153.0		8.523		ND			
$ 100 4-Nitrophenol-d4	143.0	8.513	8.523	-0.010	119769	29.013	29.013	
44 4-Nitrophenol	109.0		8.534		ND			
46 2,4-Dinitrotoluene	165.0		8.617		ND			
45 Dibenzofuran	168.0		8.668		ND			
107 2,3,4,6-Tetrachlorophenol	232.0		8.751		ND			
47 Diethylphthalate	149.0		8.782		ND			
49 4-Chlorophenyl-phenylether	204.0		8.927		ND			
$ 101 Fluorene-d10	176.0	8.927	8.938	-0.011	590169	31.171	31.171	
50 4-Nitroaniline	138.0		8.958		ND			
48 Fluorene	166.0		8.958		ND			
$ 102 4,6-Dinitro-2-methylphenol-d2	200.0	8.958	8.969	-0.011	87593	29.524	29.524	Q
51 4,6-Dinitro-2-methylphenol	198.0		8.969		ND			
52 N-Nitrosodiphenylamine	169.0		9.021		ND			
54 4-Bromophenyl-phenylether	248.0		9.352		ND			
55 Hexachlorobenzene	284.0		9.435		ND			
56 Atrazine	200.0		9.435		ND			
57 Pentachlorophenol	266.0		9.591		ND			
* 58 Phenanthrene-d10	188.0	9.767	9.767	0.000	518437	20.000	20.000	
59 Phenanthrene	178.0		9.788		ND			
$ 103 Anthracene-d10	188.0	9.819	9.819	0.000	925513	35.262	35.262	
60 Anthracene	178.0		9.839		ND			
106 Carbazole	167.0		9.953		ND			
62 Di-n-butylphthalate	149.0		10.171		ND			
63 Fluoranthene	202.0		10.907		ND			
$ 104 Pyrene-d10	212.0	11.145	11.145	0.000	1044306	35.310	35.310	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Final Conc ug/L	Flags
64 Pyrene	202.0		11.166		ND			
66 Butylbenzylphthalate	149.0		11.788		ND			
71 bis(2-Ethylhexyl)phthalate	149.0		12.534		ND			
68 3,3'-Dichlorobenzidine	252.0		12.586		ND			
67 Benzo(a)anthracene	228.0		12.679		ND			
* 69 Chrysene-d12	240.0	12.689	12.700	-0.011	588792	20.000	20.000	
70 Chrysene	228.0		12.741		ND			
72 Di-n-octylphthalate	149.0		13.529		ND			
73 Benzo(b)fluoranthene	252.0		14.347		ND			
74 Benzo(k)fluoranthene	252.0		14.389		ND			
$ 105 Benzo(a)pyrene-d12	264.0	14.865	14.865	0.000	795483	31.548	31.548	
75 Benzo(a)pyrene	252.0		14.907		ND			
* 76 Perylene-d12	264.0	15.000	15.000	0.000	470120	20.000	20.000	
77 Indeno(1,2,3-cd)pyrene	276.0		17.187		ND			
78 Dibenzo(a,h)anthracene	278.0		17.207		ND			
79 Benzo(g,h,i)perylene	276.0		17.850		ND			

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Shealy Environmental Services

Tentatively Identified Compound Quantitation Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B19.D		
Lab Sample ID:	RQ12813-001	Client Sample ID:	SBLK13
Injection Date:	17-May-2016 17:04:30	Dil. Factor:	1.0
Operator:	RBH	Inst. ID:	msd4.i
Sample Info:	4051716B, RQ12813-001		
Misc. Info:	12813		
Method:	\\Organics\HH\chem\msd4.i\4051716B.b\SOMBNA.m		
Method Date:	17-May-2016 17:07:30	Quant Method:	ISTD
Calib Date:	16-May-2016 17:15:30	Calib File:	40516C06.D
Sample Type:	BLANK	ALS Bottle:	1
Cpnd Sublist:	std.sub		
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	1000.00	Volume of final extract (uL)
Vo	1000.00	Volume of sample extracted (mL)
Cpnd Variable		Local Cpnd Variable

Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	jcg	Review Date:	18-May-2016 10:29:30

Tentative Identified Compound Results

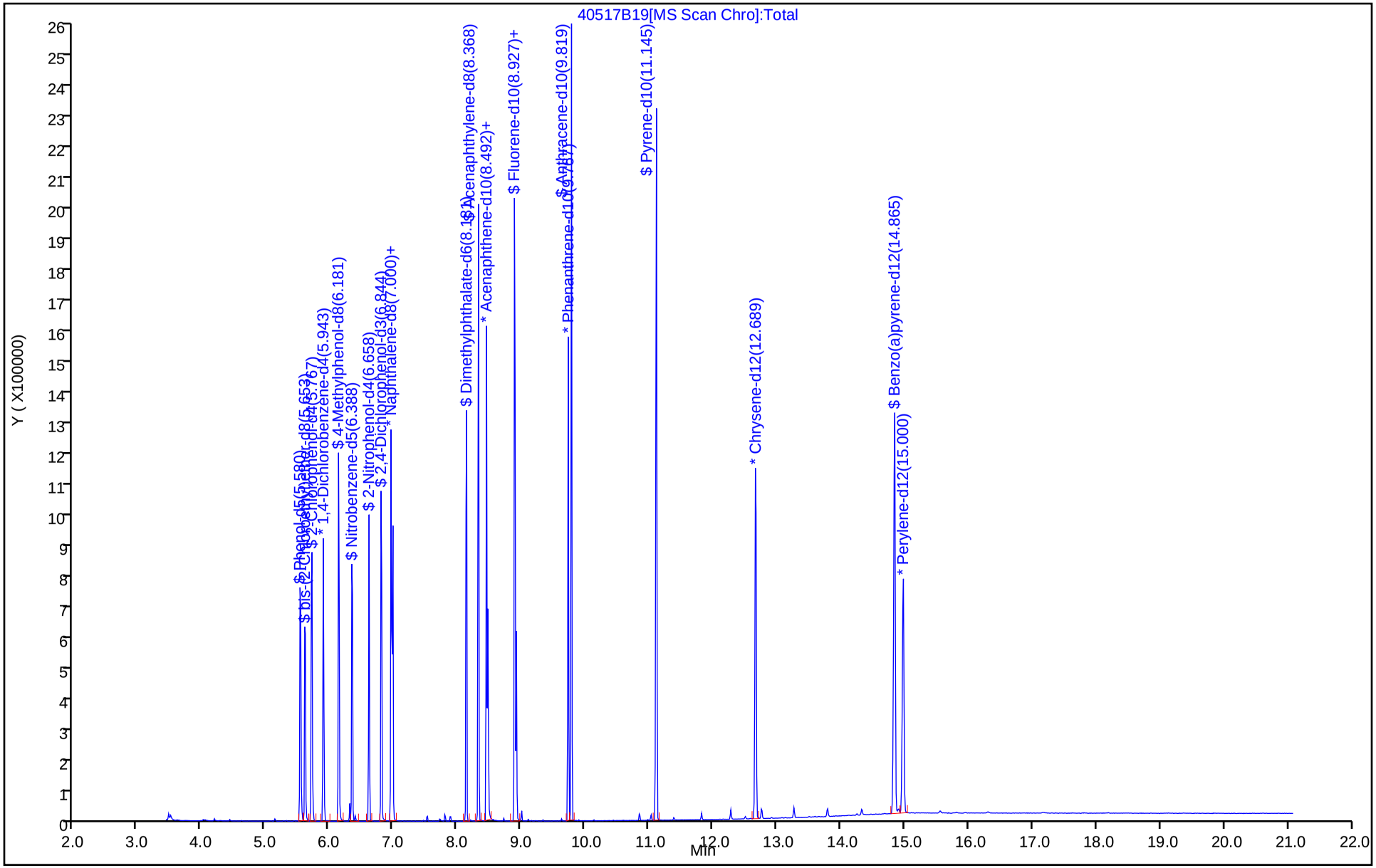
RT	Response	Amount ng/ul	Final Conc ug/L	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight

Quant. Compounds	RT	Response	Amount ng/ul

Report Date: 18-May-2016 10:53:04 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B19.D				
Injection Date:	17-May-2016 17:04:30	Inst. ID:	msd4.i	Operator:	RBH
Client ID:	SBLK13	Lab ID:	RQ12813-001		
Sample Info:	4051716B, RQ12813-001				
Injection Vol.	1.00 1	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



Matrix Spike and Duplicate Data

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: LOW

Matrix: Water Lab Sample ID: RE05033-005MS

Sample wt/vol: 1010 (g/mL) mL Lab File ID: 40517B21

% Solids: _____ Date Received: 05/05/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/17/2016

Extract Concentrated: (Y/N) _____ Extract Volume: 1000 (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: CLLE

Heated Purge: (Y/N) _____ Injection Volume: 1.0 (uL)

Purge Volume: _____ (mL) pH: 7 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	9.9	U
108-95-2	Phenol	27	
111-44-4	Bis(2-Chloroethyl) ether	9.9	U
95-57-8	2-Chlorophenol	27	
95-48-7	2-Methylphenol	9.9	U
108-60-1	2,2'-Oxybis(1-chloropropane)	9.9	U
98-86-2	Acetophenone	9.9	U
106-44-5	3-Methylphenol + 4-Methylphenol	9.9	U
621-64-7	N-Nitroso-di-n propylamine	29	
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	9.9	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	9.9	U
59-50-7	4-Chloro-3-methylphenol	31	
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclo-pentadiene	9.9	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: LOW

Matrix: Water Lab Sample ID: RE05033-005MS

Sample wt/vol: 1010 (g/mL) mL Lab File ID: 40517B21

% Solids: _____ Date Received: 05/05/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/17/2016

Extract Concentrated: (Y/N) _____ Extract Volume: 1000 (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: CLLE

Heated Purge: (Y/N) _____ Injection Volume: 1.0 (uL)

Purge Volume: _____ (mL) pH: 7 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	9.9	U
83-32-9	Acenaphthene	29	
51-28-5	2,4-Dinitrophenol	9.9	U
100-02-7	4-Nitrophenol	25	
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	30	
84-66-2	Diethylphthalate	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
7005-72-3	4-Chlorophenyl-phenyl ether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	9.9	U
534-52-1	4,6-Dinitro-2-methylphenol	9.9	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	9.9	U
87-86-5	Pentachlorophenol	33	
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	9.9	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	9.9	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: LOW

Matrix: Water Lab Sample ID: RE05033-005MS

Sample wt/vol: 1010 (g/mL) mL Lab File ID: 40517B21

% Solids: _____ Date Received: 05/05/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/17/2016

Extract Concentrated: (Y/N) _____ Extract Volume: 1000 (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: CLLE

Heated Purge: (Y/N) _____ Injection Volume: 1.0 (uL)

Purge Volume: _____ (mL) pH: 7 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
129-00-0	Pyrene	29	
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	9.9	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octylphthalate	9.9	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B21.D		
Lab Sample ID:	RE05033-005MS	Client Sample ID:	H4213MS
Injection Date:	17-May-2016 17:58:30	Dil. Factor:	1.0
Operator:	RBH	Inst. ID:	msd4.i
Sample Info:	4051716B, RE05033-005MS		
Misc. Info:	12813		
Method:	\\Organics\HH\chem\msd4.i\4051716B.b\SOMBNA.m		
Method Date:	17-May-2016 17:07:30	Quant Method:	ISTD
Calib Date:	16-May-2016 17:15:30	Calib File:	40516C06.D
Sample Type:	MS	ALS Bottle:	3
Cpnd Sublist:	std.sub	Spike List File:	somwatermsd.spk
Sample Matrix:	Water	Matrix Level:	Low
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	1000.00	Volume of final extract (uL)
Vo	1010.00	Volume of sample extracted (mL)
Cpnd Variable		Local Cpnd Variable

Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	rz	Review Date:	18-May-2016 14:39:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Final Conc ug/L	Flags
$ 3 Phenol-d5	99.0	5.590	5.591	0.000	360498	27.527	27.254	
108 1,4-Dioxane	88.0		3.559		ND			
$ 109 1,4-Dioxane-d8	96.0	3.538	3.528	0.010	19640	4.4452	4.4011	
4 Phenol	94.0	5.601	5.601	0.000	368391	27.307	27.037	Q
2 Benzaldehyde	77.0		5.601		ND			
$ 93 bis-(2-Chloroethyl)ether-d8	67.0	5.663	5.663	0.000	230550	26.705	26.441	
5 bis(2-Chloroethyl)Ether	93.0		5.694		ND			
$ 6 2-Chlorophenol-d4	132.0	5.767	5.767	0.000	320629	33.904	33.569	
7 2-Chlorophenol	128.0	5.777	5.777	0.000	313113	27.648	27.374	
* 8 1,4-Dichlorobenzene-d4	152.0	5.943	5.943	0.000	162044	20.000	19.802	
10 2-Methylphenol	108.0		6.098		ND			
11 2,2'-oxybis(1-Chloropropane)	45.0		6.129		ND			
$ 94 4-Methylphenol-d8	113.0	6.191	6.192	-0.001	294185	27.909	27.632	Q
14 4-Methylphenol	108.0		6.212		ND			
13 N-Nitroso-di-n-propylamine	70.0	6.243	6.243	0.000	249201	29.468	29.176	
12 Acetophenone	105.0		6.264		ND			
15 Hexachloroethane	117.0		6.378		ND			
$ 16 Nitrobenzene-d5	128.0	6.399	6.399	0.000	159060	29.740	29.446	
17 Nitrobenzene	77.0		6.409		ND			
18 Isophorone	82.0		6.596		ND			
20 2,4-Dimethylphenol	107.0		6.658		ND			
$ 95 2-Nitrophenol-d4	143.0	6.658	6.658	0.000	171551	31.710	31.396	
19 2-Nitrophenol	139.0		6.668		ND			
21 bis(2-Chloroethoxy)methane	93.0		6.741		ND			

Report Date: 18-May-2016 14:39:20 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B21.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Final Conc ug/L	Flags
$ 96 2,4-Dichlorophenol-d3	165.0	6.855	6.855	0.000	260962	28.510	28.228	
22 2,4-Dichlorophenol	162.0		6.865		ND			
* 23 Naphthalene-d8	136.0	7.000	7.010	-0.010	637027	20.000	19.802	Q
24 Naphthalene	128.0		7.021		ND			
$ 97 4-Chloroaniline-d4	131.0	7.031	7.031	0.000	333322	25.653	25.399	
25 4-Chloroaniline	127.0		7.041		ND			
26 Hexachlorobutadiene	225.0		7.093		ND			
27 Caprolactam	113.0		7.342		ND			
28 4-Chloro-3-methylphenol	107.0	7.404	7.414	-0.010	287335	31.074	30.767	
29 2-Methylnaphthalene	142.0		7.601		ND			
30 Hexachlorocyclopentadiene	237.0		7.715		ND			
92 1,2,4,5-Tetrachlorobenzene	216.0		7.736		ND			
31 2,4,6-Trichlorophenol	196.0		7.819		ND			
32 2,4,5-Trichlorophenol	196.0		7.850		ND			
34 1,1'-Biphenyl	154.0		7.974		ND			
35 2-Chloronaphthalene	162.0		8.015		ND			
36 2-Nitroaniline	65.0		8.078		ND			
$ 98 Dimethylphthalate-d6	166.0	8.181	8.181	0.000	674119	30.394	30.093	
37 Dimethylphthalate	163.0		8.202		ND			
39 2,6-Dinitrotoluene	165.0		8.275		ND			
$ 99 Acenaphthylene-d8	160.0	8.368	8.368	0.000	914533	29.776	29.482	
38 Acenaphthylene	152.0		8.378		ND			
40 3-Nitroaniline	138.0		8.430		ND			
* 41 Acenaphthene-d10	164.0	8.492	8.492	0.000	312041	20.000	19.802	
43 2,4-Dinitrophenol	184.0		8.513		ND			
42 Acenaphthene	153.0	8.523	8.523	0.000	559643	29.238	28.948	
$ 100 4-Nitrophenol-d4	143.0	8.523	8.523	0.000	125121	28.922	28.636	
44 4-Nitrophenol	109.0	8.523	8.534	-0.011	83084	25.176	24.927	
46 2,4-Dinitrotoluene	165.0	8.616	8.617	0.000	207339	30.593	30.290	
45 Dibenzofuran	168.0		8.668		ND			
107 2,3,4,6-Tetrachlorophenol	232.0		8.751		ND			
47 Diethylphthalate	149.0		8.782		ND			
49 4-Chlorophenyl-phenylether	204.0		8.927		ND			
$ 101 Fluorene-d10	176.0	8.927	8.938	-0.011	572978	28.879	28.593	
50 4-Nitroaniline	138.0		8.958		ND			
48 Fluorene	166.0		8.958		ND			
$ 102 4,6-Dinitro-2-methylphenol-d2	200.0	8.958	8.969	-0.011	93512	29.147	28.859	Q
51 4,6-Dinitro-2-methylphenol	198.0		8.969		ND			
52 N-Nitrosodiphenylamine	169.0		9.021		ND			
54 4-Bromophenyl-phenylether	248.0		9.352		ND			
55 Hexachlorobenzene	284.0		9.435		ND			
56 Atrazine	200.0		9.435		ND			
57 Pentachlorophenol	266.0	9.580	9.591	-0.011	112416	33.069	32.742	
* 58 Phenanthrene-d10	188.0	9.767	9.767	0.000	560628	20.000	19.802	
59 Phenanthrene	178.0		9.788		ND			
$ 103 Anthracene-d10	188.0	9.818	9.819	-0.001	903946	31.849	31.533	
60 Anthracene	178.0		9.839		ND			
106 Carbazole	167.0		9.953		ND			
62 Di-n-butylphthalate	149.0		10.171		ND			
63 Fluoranthene	202.0		10.907		ND			
$ 104 Pyrene-d10	212.0	11.145	11.145	0.000	1003627	32.224	31.905	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Final Conc ug/L	Flags
64 Pyrene	202.0	11.166	11.166	0.000	1098891	29.678	29.385	
66 Butylbenzylphthalate	149.0		11.788		ND			
71 bis(2-Ethylhexyl)phthalate	149.0		12.534		ND			
68 3,3'-Dichlorobenzidine	252.0		12.586		ND			
67 Benzo(a)anthracene	228.0		12.679		ND			
* 69 Chrysene-d12	240.0	12.689	12.700	-0.011	620033	20.000	19.802	
70 Chrysene	228.0		12.741		ND			
72 Di-n-octylphthalate	149.0		13.529		ND			
73 Benzo(b)fluoranthene	252.0		14.347		ND			
74 Benzo(k)fluoranthene	252.0		14.389		ND			
$ 105 Benzo(a)pyrene-d12	264.0	14.855	14.865	-0.010	757688	28.689	28.405	
75 Benzo(a)pyrene	252.0		14.907		ND			
* 76 Perylene-d12	264.0	14.990	15.000	-0.010	492414	20.000	19.802	
77 Indeno(1,2,3-cd)pyrene	276.0		17.187		ND			
78 Dibenzo(a,h)anthracene	278.0		17.207		ND			
79 Benzo(g,h,i)perylene	276.0		17.850		ND			

QC Flag Legend

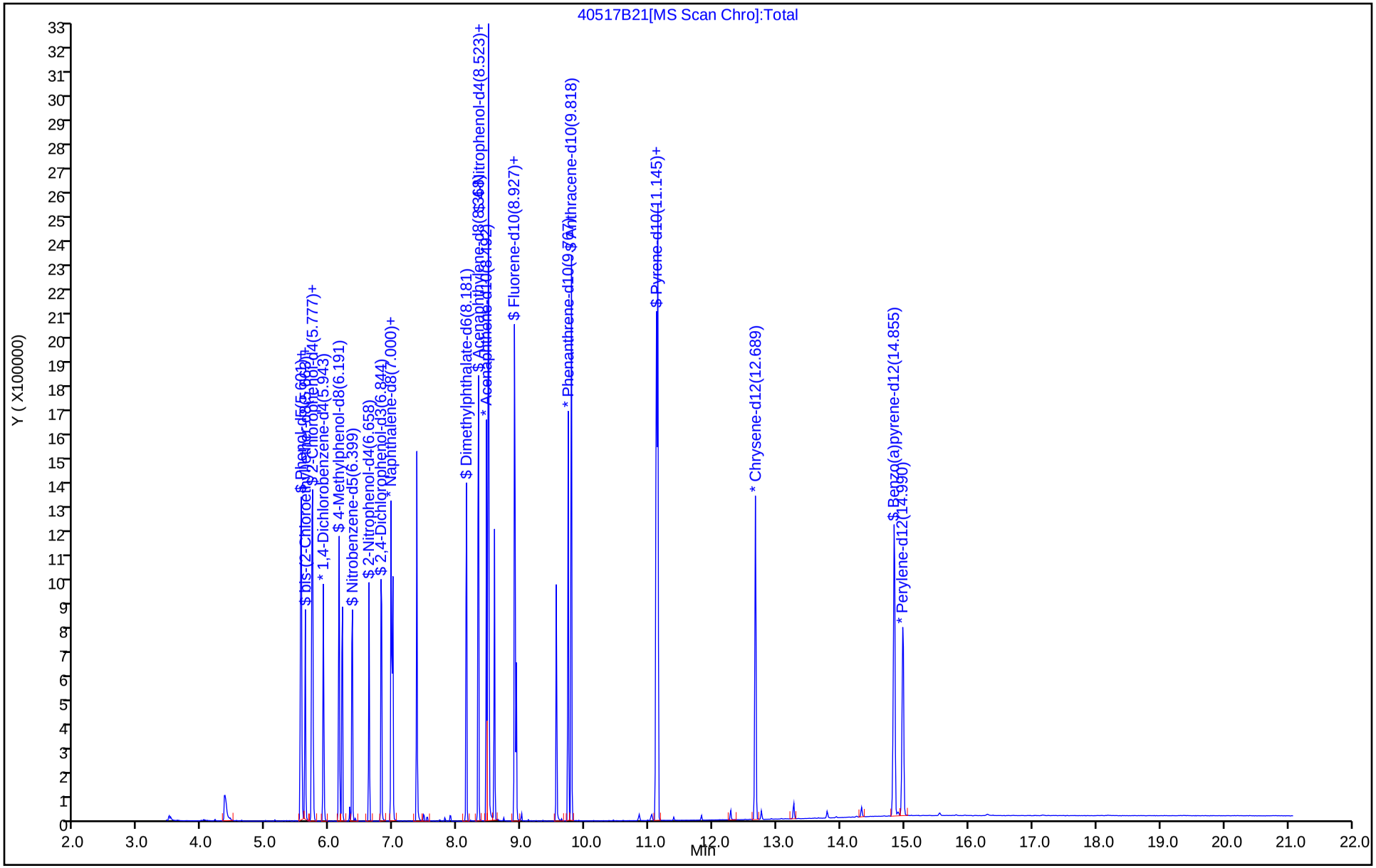
Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Report Date: 18-May-2016 14:39:21 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B21.D				
Injection Date:	17-May-2016 17:58:30	Inst. ID:	msd4.i	Operator:	RBH
Client ID:	H4213MS	Lab ID:	RE05033-005MS		
Sample Info:	4051716B, RE05033-005MS				
Injection Vol.	1.00 1	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213MSD

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: LOW

Matrix: Water Lab Sample ID: RE05033-005MD

Sample wt/vol: 1020 (g/mL) mL Lab File ID: 40517B22

% Solids: _____ Date Received: 05/05/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/17/2016

Extract Concentrated: (Y/N) _____ Extract Volume: 1000 (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: CLLE

Heated Purge: (Y/N) _____ Injection Volume: 1.0 (uL)

Purge Volume: _____ (mL) pH: 7 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	9.8	U
108-95-2	Phenol	28	
111-44-4	Bis(2-Chloroethyl) ether	9.8	U
95-57-8	2-Chlorophenol	29	
95-48-7	2-Methylphenol	9.8	U
108-60-1	2,2'-Oxybis(1-chloropropane)	9.8	U
98-86-2	Acetophenone	9.8	U
106-44-5	3-Methylphenol + 4-Methylphenol	9.8	U
621-64-7	N-Nitroso-di-n propylamine	30	
67-72-1	Hexachloroethane	4.9	U
98-95-3	Nitrobenzene	4.9	U
78-59-1	Isophorone	4.9	U
88-75-5	2-Nitrophenol	4.9	U
105-67-9	2,4-Dimethylphenol	4.9	U
111-91-1	Bis(2-chloroethoxy)methane	4.9	U
120-83-2	2,4-Dichlorophenol	4.9	U
91-20-3	Naphthalene	4.9	U
106-47-8	4-Chloroaniline	9.8	U
87-68-3	Hexachlorobutadiene	4.9	U
105-60-2	Caprolactam	9.8	U
59-50-7	4-Chloro-3-methylphenol	32	
91-57-6	2-Methylnaphthalene	4.9	U
77-47-4	Hexachlorocyclo-pentadiene	9.8	U
88-06-2	2,4,6-Trichlorophenol	4.9	U
95-95-4	2,4,5-Trichlorophenol	4.9	U
92-52-4	1,1'-Biphenyl	4.9	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213MSD

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: LOW

Matrix: Water Lab Sample ID: RE05033-005MD

Sample wt/vol: 1020 (g/mL) mL Lab File ID: 40517B22

% Solids: _____ Date Received: 05/05/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/17/2016

Extract Concentrated: (Y/N) _____ Extract Volume: 1000 (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: CLLE

Heated Purge: (Y/N) _____ Injection Volume: 1.0 (uL)

Purge Volume: _____ (mL) pH: 7 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
91-58-7	2-Chloronaphthalene	4.9	U
88-74-4	2-Nitroaniline	4.9	U
131-11-3	Dimethylphthalate	4.9	U
606-20-2	2,6-Dinitrotoluene	4.9	U
208-96-8	Acenaphthylene	4.9	U
99-09-2	3-Nitroaniline	9.8	U
83-32-9	Acenaphthene	29	
51-28-5	2,4-Dinitrophenol	9.8	U
100-02-7	4-Nitrophenol	26	
132-64-9	Dibenzofuran	4.9	U
121-14-2	2,4-Dinitrotoluene	30	
84-66-2	Diethylphthalate	4.9	U
95-94-3	1,2,4,5-Tetrachlorobenzene	4.9	U
7005-72-3	4-Chlorophenyl-phenyl ether	4.9	U
86-73-7	Fluorene	4.9	U
100-01-6	4-Nitroaniline	9.8	U
534-52-1	4,6-Dinitro-2-methylphenol	9.8	U
101-55-3	4-Bromophenyl-phenylether	4.9	U
86-30-6	N-Nitrosodiphenylamine	4.9	U
118-74-1	Hexachlorobenzene	4.9	U
1912-24-9	Atrazine	9.8	U
87-86-5	Pentachlorophenol	35	
85-01-8	Phenanthrene	4.9	U
120-12-7	Anthracene	4.9	U
86-74-8	Carbazole	9.8	U
84-74-2	Di-n-butylphthalate	4.9	U
206-44-0	Fluoranthene	9.8	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4213MSD

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-14035

Lab Code: EQI Case No.: 46115 MA No.: _____ SDG No.: H4001

Analytical Method: SVOA Level: LOW

Matrix: Water Lab Sample ID: RE05033-005MD

Sample wt/vol: 1020 (g/mL) mL Lab File ID: 40517B22

% Solids: _____ Date Received: 05/05/2016

GC Column: Zebron ZB-SV ID: 0.25 (mm) Date Extracted: 05/09/2016

GC Column: _____ ID: _____ (mm) Date Analyzed: 05/17/2016

Extract Concentrated: (Y/N) _____ Extract Volume: 1000 (uL)

Soil Aliquot (VOA): _____ (uL) Extraction Type: CLLE

Heated Purge: (Y/N) _____ Injection Volume: 1.0 (uL)

Purge Volume: _____ (mL) pH: 7 Dilution Factor: 1.0

Cleanup Types: _____ Cleanup Factor: _____

Concentration Units (ug/L, mg/L, ug/Kg): ug/L

CAS NO.	COMPOUND	CONCENTRATION	Q
129-00-0	Pyrene	29	
85-68-7	Butylbenzylphthalate	4.9	U
91-94-1	3,3'-Dichlorobenzidine	9.8	U
56-55-3	Benzo(a)anthracene	4.9	U
218-01-9	Chrysene	4.9	U
117-81-7	Bis(2-ethylhexyl)phthalate	4.9	U
117-84-0	Di-n-octylphthalate	9.8	U
205-99-2	Benzo(b)fluoranthene	4.9	U
207-08-9	Benzo(k)fluoranthene	4.9	U
50-32-8	Benzo(a)pyrene	4.9	U
193-39-5	Indeno(1,2,3-cd)pyrene	4.9	U
53-70-3	Dibenzo(a,h)anthracene	4.9	U
191-24-2	Benzo(g,h,i)perylene	4.9	U
58-90-2	2,3,4,6-Tetrachlorophenol	4.9	U

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B22.D
Lab Sample ID: RE05033-005MD Client Sample ID: H4213MSD
Injection Date: 17-May-2016 18:25:30 Dil. Factor: 1.0
Operator: RBH Inst. ID: msd4.i
Sample Info: 4051716B, RE05033-005MD
Misc. Info: 12813
Method: \\Organics\HH\chem\msd4.i\4051716B.b\SOMBNA.m
Method Date: 17-May-2016 17:07:30 Quant Method: ISTD
Calib Date: 16-May-2016 17:15:30 Calib File: 40516C06.D
Sample Type: MSD ALS Bottle: 4
Cpnd Sublist: std.sub Spike List File: somwatermsd.spk
Sample Matrix: Water Matrix Level: Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	1000.00	Volume of final extract (uL)
Vo	1020.00	Volume of sample extracted (mL)
Cpnd Variable		Local Cpnd Variable

Column1: Zebron ZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: rz Review Date: 18-May-2016 14:39:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Final Conc ug/L	Flags
$ 3 Phenol-d5	99.0	5.591	5.591	0.001	425629	29.452	28.875	
108 1,4-Dioxane	88.0		3.559		ND			
$ 109 1,4-Dioxane-d8	96.0	3.539	3.528	0.011	23911	4.9043	4.8082	
4 Phenol	94.0	5.601	5.601	0.000	426360	28.640	28.079	Q
2 Benzaldehyde	77.0		5.601		ND			
$ 93 bis-(2-Chloroethyl)ether-d8	67.0	5.663	5.663	0.000	264801	27.796	27.251	
5 bis(2-Chloroethyl)Ether	93.0		5.694		ND			
$ 6 2-Chlorophenol-d4	132.0	5.767	5.767	0.000	374432	35.881	35.177	
7 2-Chlorophenol	128.0	5.777	5.777	0.000	363532	29.090	28.520	
* 8 1,4-Dichlorobenzene-d4	152.0	5.943	5.943	0.000	178812	20.000	19.608	
10 2-Methylphenol	108.0		6.098		ND			
11 2,2'-oxybis(1-Chloropropane)	45.0		6.129		ND			
$ 94 4-Methylphenol-d8	113.0	6.192	6.192	0.000	342052	29.407	28.830	Q
14 4-Methylphenol	108.0		6.212		ND			
13 N-Nitroso-di-n-propylamine	70.0	6.243	6.243	0.000	286792	30.733	30.130	
12 Acetophenone	105.0		6.264		ND			
15 Hexachloroethane	117.0		6.378		ND			
$ 16 Nitrobenzene-d5	128.0	6.399	6.399	0.000	181464	30.394	29.798	
17 Nitrobenzene	77.0		6.409		ND			
18 Isophorone	82.0		6.596		ND			
20 2,4-Dimethylphenol	107.0		6.658		ND			
$ 95 2-Nitrophenol-d4	143.0	6.658	6.658	0.000	197459	32.696	32.055	Q
19 2-Nitrophenol	139.0		6.668		ND			
21 bis(2-Chloroethoxy)methane	93.0		6.741		ND			

Report Date: 18-May-2016 14:39:21 AIM Revision: 1.0 26-May-2015 13:41:26
Data File: \\Organics\HH\chem\msd4.i\4051716B.b\40517B22.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Final Conc ug/L	Flags
$ 96 2,4-Dichlorophenol-d3	165.0	6.855	6.855	0.000	308035	30.147	29.556	
22 2,4-Dichlorophenol	162.0		6.865		ND			
* 23 Naphthalene-d8	136.0	7.000	7.010	-0.010	711107	20.000	19.608	Q
24 Naphthalene	128.0		7.021		ND			
$ 97 4-Chloroaniline-d4	131.0	7.031	7.031	0.000	415751	28.663	28.101	
25 4-Chloroaniline	127.0		7.041		ND			
26 Hexachlorobutadiene	225.0		7.093		ND			
27 Caprolactam	113.0		7.342		ND			
28 4-Chloro-3-methylphenol	107.0	7.404	7.414	-0.010	333016	32.263	31.630	
29 2-Methylnaphthalene	142.0		7.601		ND			
30 Hexachlorocyclopentadiene	237.0		7.715		ND			
92 1,2,4,5-Tetrachlorobenzene	216.0		7.736		ND			
31 2,4,6-Trichlorophenol	196.0		7.819		ND			
32 2,4,5-Trichlorophenol	196.0		7.850		ND			
34 1,1'-Biphenyl	154.0		7.974		ND			
35 2-Chloronaphthalene	162.0		8.015		ND			
36 2-Nitroaniline	65.0		8.078		ND			
$ 98 Dimethylphthalate-d6	166.0	8.181	8.181	0.000	764595	31.125	30.515	
37 Dimethylphthalate	163.0		8.202		ND			
39 2,6-Dinitrotoluene	165.0		8.275		ND			
$ 99 Acenaphthylene-d8	160.0	8.368	8.368	0.000	1048527	30.823	30.219	
38 Acenaphthylene	152.0		8.378		ND			
40 3-Nitroaniline	138.0		8.430		ND			
* 41 Acenaphthene-d10	164.0	8.492	8.492	0.000	345613	20.000	19.608	
43 2,4-Dinitrophenol	184.0		8.513		ND			
42 Acenaphthene	153.0	8.523	8.523	0.000	620479	29.267	28.693	
$ 100 4-Nitrophenol-d4	143.0	8.523	8.523	0.000	144040	30.061	29.472	
44 4-Nitrophenol	109.0	8.534	8.534	0.000	98641	26.987	26.457	
46 2,4-Dinitrotoluene	165.0	8.617	8.617	0.001	232866	31.021	30.413	
45 Dibenzofuran	168.0		8.668		ND			
107 2,3,4,6-Tetrachlorophenol	232.0		8.751		ND			
47 Diethylphthalate	149.0		8.782		ND			
49 4-Chlorophenyl-phenylether	204.0		8.927		ND			
$ 101 Fluorene-d10	176.0	8.927	8.938	-0.011	659088	29.992	29.404	
50 4-Nitroaniline	138.0		8.958		ND			
48 Fluorene	166.0		8.958		ND			
$ 102 4,6-Dinitro-2-methylphenol-d2	200.0	8.959	8.969	-0.010	105412	29.738	29.154	Q
51 4,6-Dinitro-2-methylphenol	198.0		8.969		ND			
52 N-Nitrosodiphenylamine	169.0		9.021		ND			
54 4-Bromophenyl-phenylether	248.0		9.352		ND			
55 Hexachlorobenzene	284.0		9.435		ND			
56 Atrazine	200.0		9.435		ND			
57 Pentachlorophenol	266.0	9.580	9.591	-0.011	133154	35.451	34.756	
* 58 Phenanthrene-d10	188.0	9.767	9.767	0.000	619427	20.000	19.608	
59 Phenanthrene	178.0		9.788		ND			
$ 103 Anthracene-d10	188.0	9.819	9.819	0.000	1002220	31.959	31.333	
60 Anthracene	178.0		9.839		ND			
106 Carbazole	167.0		9.953		ND			
62 Di-n-butylphthalate	149.0		10.171		ND			
63 Fluoranthene	202.0		10.907		ND			
$ 104 Pyrene-d10	212.0	11.145	11.145	0.000	1129250	32.495	31.858	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Final Conc ug/L	Flags
64 Pyrene	202.0	11.166	11.166	0.000	1220603	29.544	28.965	
66 Butylbenzylphthalate	149.0		11.788		ND			
71 bis(2-Ethylhexyl)phthalate	149.0		12.534		ND			
68 3,3'-Dichlorobenzidine	252.0		12.586		ND			
67 Benzo(a)anthracene	228.0		12.679		ND			
* 69 Chrysene-d12	240.0	12.689	12.700	-0.011	691836	20.000	19.608	
70 Chrysene	228.0		12.741		ND			
72 Di-n-octylphthalate	149.0		13.529		ND			
73 Benzo(b)fluoranthene	252.0		14.347		ND			
74 Benzo(k)fluoranthene	252.0		14.389		ND			
$ 105 Benzo(a)pyrene-d12	264.0	14.866	14.865	0.001	854414	28.776	28.211	
75 Benzo(a)pyrene	252.0		14.907		ND			
* 76 Perylene-d12	264.0	15.000	15.000	0.000	553605	20.000	19.608	
77 Indeno(1,2,3-cd)pyrene	276.0		17.187		ND			
78 Dibenzo(a,h)anthracene	278.0		17.207		ND			
79 Benzo(g,h,i)perylene	276.0		17.850		ND			

QC Flag Legend

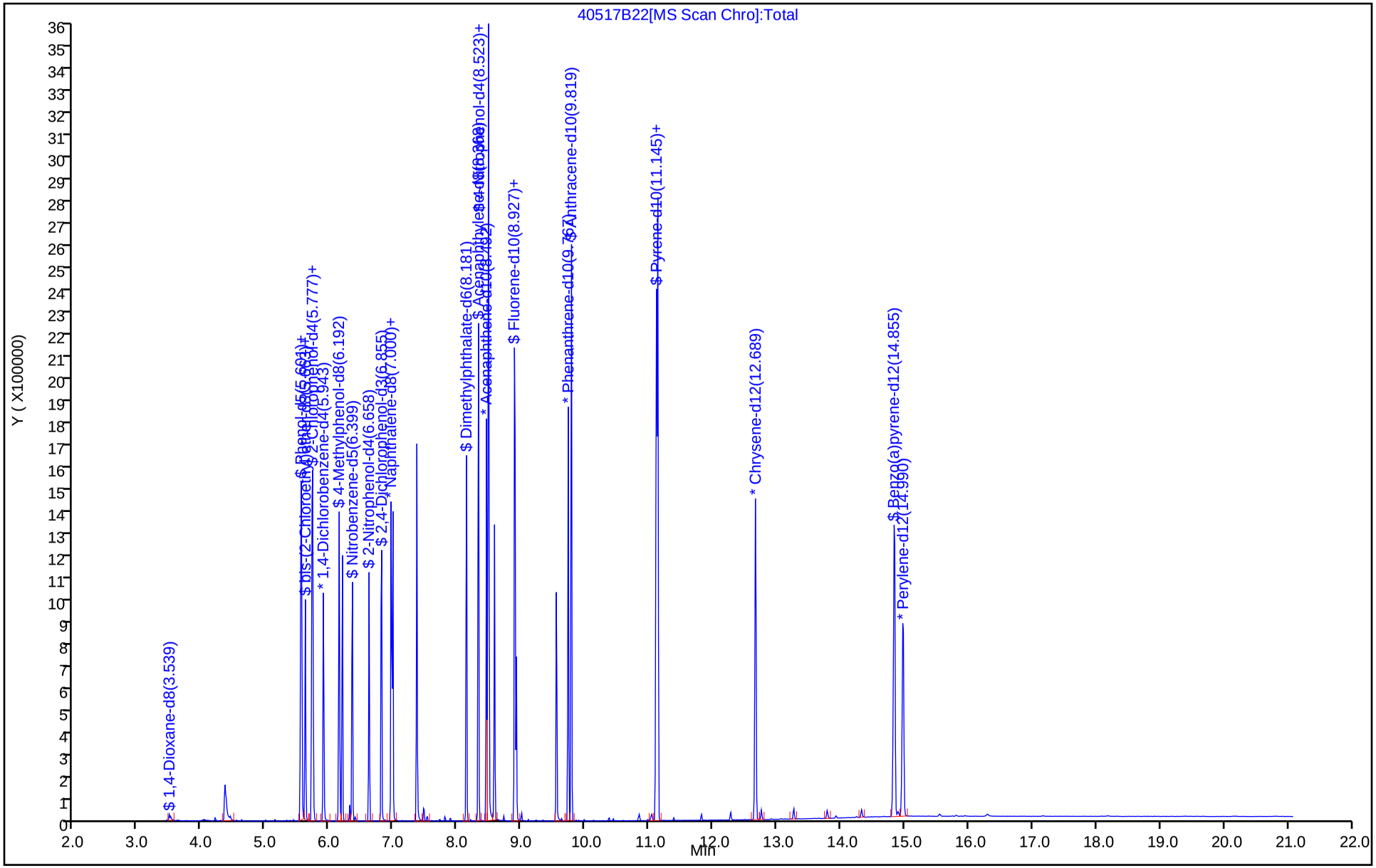
Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Report Date: 18-May-2016 14:39:21 AIM Revision: 1.0 26-May-2015 13:41:26

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd4.i\4051716B.b\40517B22.D				
Injection Date:	17-May-2016 18:25:30	Inst. ID:	msd4.i	Operator:	RBH
Client ID:	H4213MSD	Lab ID:	RE05033-005MD		
Sample Info:	4051716B, RE05033-005MD				
Injection Vol.	1.00 1	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



SEMIVOLATILE
Miscellaneous Data

Run Logs

Standard Preparation Logs

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\HH\chem\msd4.i\4051616C.b
Inst. ID: msd4.i Method: SOMBNA
Matrix: Water Operator: RBH

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	ICal Lvl	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
96	SVMS 2067	16-May-2016 15:11:30	40516C01.D	DFTPP		DFTPPKZ	Water	1	all			Yes					SOMDFTPP
91	SSTD005LA	16-May-2016 15:27:30	40516C02.D	Ical	1	SSTD005LA	Water	1	std		Yes					SVMS 2054	SOMBNA
92	SSTD010LA	16-May-2016 15:54:30	40516C03.D	Ical	2	SSTD010LA	Water	1	std		Yes					SVMS 2055	SOMBNA
93	SSTD020LA	16-May-2016 16:21:30	40516C04.D	Ical	3	SSTD020LA	Water	1	std		Yes					SVMS 2056	SOMBNA
94	SSTD040LA	16-May-2016 16:48:30	40516C05.D	Ical	4	SSTD040LA	Water	1	std		Yes					SVMS 2057	SOMBNA
95	SSTD080LA	16-May-2016 17:15:30	40516C06.D	Ical	5	SSTD080LA	Water	1	std		Yes					SVMS 2108	SOMBNA

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\HH\chem\msd4.i\4051716B.b
Inst. ID: msd4.i Method: SOMBNA
Matrix: Water Operator: RBH

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
96	SVMS 2067	17-May-2016 09:03:30	40517B01.D	DFTPP	DFTPPLB	Water	1	all			Yes					SOMDFTPP
93	SSTD020LC	17-May-2016 09:19:30	40517B02.D	Ccv	SSTD020LC	Water	1	std		Yes					SVMS-2056	SOMBNA
31	RD27067-003	17-May-2016 09:46:30	40517B03.D	Client	D9WG2	Soil	5	std		Yes						SOMBNA
32	RD27067-004	17-May-2016 10:13:30	40517B04.D	Client	D9WG3	Soil	5	std		Yes						SOMBNA
33	RD27067-005	17-May-2016 10:39:30	40517B05.D	Client	D9WG5	Soil	5	std		Yes						SOMBNA
34	RD27067-006	17-May-2016 11:06:30	40517B06.D	Client	D9WG6	Soil	5	std		Yes					13371	SOMBNA
35	RD27067-008	17-May-2016 11:33:30	40517B07.D	Client	D9WG8	Soil	5	std		Yes						SOMBNA
36	RD27067-009	17-May-2016 12:00:30	40517B08.D	Client	D9WG9	Soil	5	std		Yes						SOMBNA
37	RD27067-010	17-May-2016 12:27:30	40517B09.D	Client	D9WH0	Soil	5	std		Yes						SOMBNA
38	RD27067-011	17-May-2016 12:54:30	40517B10.D	Client	D9WH1	Soil	5	std		Yes						SOMBNA
39	RD27067-012	17-May-2016 13:20:30	40517B11.D	Client	D9WH2	Soil	5	std		Yes					rr 2X	SOMBNA
40	RD27067-001	17-May-2016 13:47:30	40517B12.D	Client	D9WG0	Soil	50	std		Yes						SOMBNA
41	RD27067-002	17-May-2016 14:14:30	40517B13.D	Client	D9WG1	Soil	50	std		Yes						SOMBNA
46	RD27067-001	17-May-2016 14:41:30	40517B14.D	Client	D9WG0DL	Soil	100	std		Yes						SOMBNA
48	RD27067-002	17-May-2016 15:08:30	40517B15.D	Client	D9WG1DL	Soil	100	std		Yes						SOMBNA
47	RD27067-012	17-May-2016 15:35:30	40517B16.D	Client	D9WH2	Soil	2	std		Yes						SOMBNA
49	RD27067-020	17-May-2016 16:02:30	40517B17.D	Client	D9WF6	Soil	1	std		Yes					na	SOMBNA
93	SSTD020LD	17-May-2016 16:28:30	40517B18.D	Ccv	SSTD020LD	Water	1	std		Yes					svms-2056	SOMBNA
1	RQ12813-001	17-May-2016 17:04:30	40517B19.D	BLANK	SBLK13	Water	1	std		Yes						SOMBNA
2	RE05033-005	17-May-2016 17:31:30	40517B20.D	Client	H4213	Water	1	std		Yes						SOMBNA
3	RE05033-005MS	17-May-2016 17:58:30	40517B21.D	MS	H4213MS	Water	1	std	somwatermsd	Yes						SOMBNA
4	RE05033-005MD	17-May-2016 18:25:30	40517B22.D	MSD	H4213MSD	Water	1	std	somwatermsd	Yes						SOMBNA
5	RE06040-001	17-May-2016 18:52:30	40517B23.D	Client	D9WP6	Water	1	std		Yes						SOMBNA
6	RE06040-002	17-May-2016 19:19:30	40517B24.D	Client	D9WP7	Water	1	std		Yes						SOMBNA
7	RE06040-003	17-May-2016 19:45:30	40517B25.D	Client	D9WP8	Water	1	std		Yes						SOMBNA
8	RE06040-004	17-May-2016 20:12:30	40517B26.D	Client	D9WP9	Water	1	std		Yes					13436	SOMBNA
9	RE06040-005	17-May-2016 20:39:30	40517B27.D	Client	D9WQ2	Water	1	std		Yes						SOMBNA
10	RE06040-006	17-May-2016 21:06:30	40517B28.D	Client	D9WM0	Water	1	std		Yes						SOMBNA
11	RE06040-007	17-May-2016 21:33:30	40517B29.D	Client	D9WM1	Water	1	std		Yes						SOMBNA
12	RE06040-008	17-May-2016 22:00:30	40517B30.D	Client	D9WM5	Water	1	std		Yes					20X	SOMBNA
13	RE06040-009	17-May-2016 22:27:30	40517B31.D	Client	D9WM6	Water	1	std		Yes						SOMBNA
14	RE06040-010	17-May-2016 22:53:30	40517B32.D	Client	D9WM7	Water	1	std		Yes						SOMBNA
15	RE06040-010MS	17-May-2016 23:20:30	40517B33.D	MS	D9WM7MS	Water	1	std	somwatermsd	Yes						SOMBNA
16	RE06040-010MD	17-May-2016 23:47:30	40517B34.D	MSD	D9WM7MSD	Water	1	std	somwatermsd	Yes						SOMBNA
17	RE06040-011	18-May-2016 00:14:30	40517B35.D	Client	D9WM8	Water	1	std		Yes						SOMBNA
18	RE06040-012	18-May-2016 00:41:30	40517B36.D	Client	D9WM9	Water	1	std		Yes					5X	SOMBNA
19	RE06040-013	18-May-2016 01:07:30	40517B37.D	Client	D9WN0	Water	1	std		Yes					5X	SOMBNA
20	RE06040-014	18-May-2016 01:34:30	40517B38.D	Client	D9WN2	Water	1	std		Yes						SOMBNA
21	RE06040-015	18-May-2016 02:01:30	40517B39.D	Client	D9WN3	Water	1	std		Yes					5X	SOMBNA
22	RE06040-016	18-May-2016 02:28:30	40517B40.D	Client	D9WQ4	Water	1	std		Yes						SOMBNA
93	SSTD020LE	18-May-2016 02:54:30	40517B41.D	Ccv	SSTD020LE	Water	1	std		Yes					svms-2056	SOMBNA-end

Analyst: JBK
Status: Level 2 review released
Matrix: Aqueous

Printed: 05/23/16 1115

Prep Batch: 12813
SOM02.3 SV EXT - CLP SVOC Low Water Extraction

Start Date: 05/09/2016 1750
End Date: 05/10/2016 1150

Level 2 Analyst: TAC
Conc Analyst: DAL1
Conc Start Date: 05/10/2016 1410
Conc End Date: 05/10/2016 1635
Sodium Sulfate ID: EXTR-3610

Ext Solvent: CH2Cl2 > CH2Cl2
Reagents Vol. (mL): 300
Chem ID: 16-531 > 16-531

Surrogate: EXTW-4402 EXP100216
Surrogate Vol. (mL): 0.5

Sample ID	QC Code	Client Sample ID	Run	Analysis Descript	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Init. pH (SU)	pH Adjust 1	Comments
RQ12813-001	MB		1	SOM02.3 SV	1000		0.0	1.0	7	2	SHARE W/12814 WITNESS:TAC
RE05033-005	Sample	H4213	1	SOM02.3 SV	1040		0.0	1.0	7	2	Glass wool:16-178/Boiling chips:EXTR-3609/pH strip:16-422,16-454
RE05033-005MS	MS		1	SOM02.3 SV	1010	EXTW-4261 EXP060216	0.5	1.0	7	2	1:1 Sulfric acid:EXTR-3607
RE05033-005MD	MSD		1	SOM02.3 SV	1020	EXTW-4261 EXP060216	0.5	1.0	7	2	
RE06040-001	Sample	D9WP6	1	SOM02.3 SV	1000		0.0	1.0	7	2	SHARE W/12814
RE06040-002	Sample	D9WP7	1	SOM02.3 SV	1000		0.0	1.0	7	2	SHARE W/12814
RE06040-003	Sample	D9WP8	1	SOM02.3 SV	1020		0.0	1.0	7	2	SHARE W/12814
RE06040-004	Sample	D9WP9	1	SOM02.3 SV	1000		0.0	1.0	7	2	SHARE W/12814
RE06040-005	Sample	D9WQ2	1	SOM02.3 SV	1000		0.0	1.0	7	2	SHARE W/12814
RE06040-006	Sample	D9WM0	1	SOM02.3 SV	1010		0.0	1.0	9	2	SHARE W/12814
RE06040-007	Sample	D9WM1	1	SOM02.3 SV	1030		0.0	1.0	9	2	SHARE W/12814
RE06040-008	Sample	D9WM5	1	SOM02.3 SV	1000		0.0	1.0	6	2	SHARE W/12814
RE06040-009	Sample	D9WM6	1	SOM02.3 SV	1000		0.0	1.0	6	2	SHARE W/12814
RE06040-010	Sample	D9WM7	1	SOM02.3 SV	1000		0.0	1.0	6	2	SHARE W/12814

Analyst: JBK
Status: Level 2 review released
Matrix: Aqueous

Prep Batch: 12813
SOM02.3 SV EXT - CLP SVOC Low Water Extraction

Printed: 05/23/16 1115

Start Date: 05/09/2016 1750
End Date: 05/10/2016 1150

Level 2 Analyst: TAC
Conc Analyst: DAL1
Conc Start Date: 05/10/2016 1410
Conc End Date: 05/10/2016 1635
Sodium Sulfate ID: EXTR-3610

Ext Solvent: CH2Cl2 > CH2Cl2
Reagents Vol. (mL): 300
Chem ID: 16-531 > 16-531

Surrogate: EXTW-4402 EXP100216
Surrogate Vol. (mL): 0.5

Sample ID	QC Code	Client Sample ID	Run	Analysis Descript	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Init. pH (SU)	pH Adjust 1	Comments
RE06040-010MS	MS		1	SOM02.3 SV	1000	EXTW-4261 EXP060216	0.5	1.0	6	2	
RE06040-010MD	MSD		1	SOM02.3 SV	1000	EXTW-4261 EXP060216	0.5	1.0	6	2	
RE06040-011	Sample	D9WM8	1	SOM02.3 SV	1000		0.0	1.0	6	2	SHARE W/12814
RE06040-012	Sample	D9WM9	1	SOM02.3 SV	1000		0.0	1.0	7	2	SHARE W/12814
RE06040-013	Sample	D9WN0	1	SOM02.3 SV	1010		0.0	1.0	7	2	SHARE W/12814
RE06040-014	Sample	D9WN2	1	SOM02.3 SV	1000		0.0	1.0	6	2	SHARE W/12814
RE06040-015	Sample	D9WN3	1	SOM02.3 SV	1000		0.0	1.0	7	2	SHARE W/12814
RE06040-016	Sample	D9WQ4	1	SOM02.3 SV	1000		0.0	1.0	7	2	SHARE W/12814

(end of report) **Total Samples: 17**

Working Standards Prep Log - GC/MS Semi-volatiles

Initials:	RBH	Mix #:	SVMS 2054
Prep Date:	05/04/16	Solvent Lot #:	16-530
Exp Date:	07/14/16	Solvent:	CH2Cl2

Compound	Stock Std. #	Conc. of Stock Std.	Aliquoted Volume	Dilution Volume	Final Conc.	Foot Notes (if applicable)	MFG. Exp Date
		µg/mL	µL	mL	µg/mL		
SOM L-1							
SOM Intermediate	SVMS 2015	200	25.0	1.0	5		7/31/2016
SV Addition	15-312	1,000	5.0	1.0	5		12/31/2016
Internal Standard	15-1292	4,000	5.0	1.0	20		8/21/2025
1,4 Dioxane	15-463	1,000	2.0	1.0	2		9/16/2019
1,4 Dioxane d8	15-462	1,000	2.0	1.0	2		3/26/2020
2,4 Dinitrophenol	15-1294	1,000	5.0	1.0	5		11/3/2024
Pyridine/d5 Intermediate	SVMS 2036	500	10.0	1.0	5		10/22/2016
1-Methyl Naphtahlene	15-1318	1,000	5.0	1.0	5		7/16/2018

Refer to COA for specific compound concentrations for mixed standards.

Working Standards Prep Log - GC/MS Semi-volatiles

Initials:	RBH	Mix #:	SVMS 2055
Prep Date:	05/04/16	Solvent Lot #:	16-530
Exp Date:	07/14/16	Solvent:	CH2Cl2

Compound	Stock Std. #	Conc. of Stock Std.	Aliquoted Volume	Dilution Volume	Final Conc.	Foot Notes (if applicable)	MFG. Exp Date
		µg/mL	µL	mL	µg/mL		
SOM L-2							
SOM Intermediate	SVMS 2015	200	50.0	1.0	10		7/31/2016
SV Addition	15-312	1,000	10.0	1.0	10		12/31/2016
Internal Standard	15-1292	4,000	5.0	1.0	20		8/21/2025
1,4 Dioxane	15-463	1,000	4.0	1.0	4		9/16/2019
1,4 Dioxane d8	15-462	1,000	4.0	1.0	4		3/26/2020
2,4 Dinitrophenol	15-1294	1,000	10.0	1.0	10		11/3/2024
Pyridine/D5 Intermediate	SVMS 2036	500	20.0	1.0	10		10/22/2016
1-Methyl Naphthalene	15-1318	1,000	10.0	1.0	10		7/16/2018

Refer to COA for specific compound concentrations for mixed standards.

Working Standards Prep Log - GC/MS Semi-volatiles

Initials:	RBH	Mix #:	SVMS 2056
Prep Date:	05/04/16	Solvent Lot #:	16-530
Exp Date:	07/14/16	Solvent:	CH2Cl2

Compound	Stock Std. #	Conc. of Stock Std.	Aliquoted Volume	Dilution Volume	Final Conc.	Foot Notes (if applicable)	MFG. Exp Date
		µg/mL	µL	mL	µg/mL		
SOM L-3							
SOM Intermediate	SVMS 2015	200	200.0	2.0	20		7/31/2016
SV Addition	15-312	1,000	40.0	2.0	20		12/31/2016
Internal Standard	15-1292	4,000	10.0	2.0	20		8/21/2025
1,4 Dioxane	15-463	1,000	16.0	2.0	8		9/16/2019
1,4 Dioxane d8	15-462	1,000	16.0	2.0	8		3/26/2020
2,4 Dinitrophenol	15-1294	1,000	40.0	2.0	20		11/3/2024
Pyridine/d5 Intermediate	SVMS 2036	500	80.0	2.0	20		10/22/2016
1-Methyl Naphthalene	15-1318	1,000	40.0	2.0	20		7/16/2018

Refer to COA for specific compound concentrations for mixed standards.

Working Standards Prep Log - GC/MS Semi-volatiles

Initials:	RBH	Mix #:	SVMS 2057
Prep Date:	05/04/16	Solvent Lot #:	16-530
Exp Date:	07/14/16	Solvent:	CH2Cl2

Compound	Stock Std. #	Conc. of Stock Std.	Aliquoted Volume	Dilution Volume	Final Conc.	Foot Notes (if applicable)	MFG. Exp Date
		µg/mL	µL	mL	µg/mL		
SOM L-4							
SOM Intermediate	SVMS 2015	200	200.0	1.0	40		7/31/2016
SV Addition	15-312	1,000	40.0	1.0	40		12/31/2016
Internal Standard	15-1292	4,000	5.0	1.0	20		8/21/2025
1,4 Dioxane	15-463	1,000	16.0	1.0	16		9/16/2019
1,4 Dioxane d8	15-462	1,000	16.0	1.0	16		3/26/2020
2,4 Dinitrophenol	15-1294	1,000	40.0	1.0	40		11/3/2024
Pyridine/d5 Intermediate	SVMS 2036	500	80.0	1.0	40		10/22/2016
1-Methyl Naphthalene	15-1318	1,000	40.0	1.0	40		7/26/2018

Refer to COA for specific compound concentrations for mixed standards.

Working Standards Prep Log - GC/MS Semi-volatiles

Initials:	RBH	Mix #:	SVMS 2108
Prep Date:	05/13/16	Solvent Lot #:	16-531
Exp Date:	07/14/16	Solvent:	CH2Cl2

Compound	Stock Std. #	Conc. of Stock Std.	Aliquoted Volume	Dilution Volume	Final Conc.	Foot Notes (if applicable)	MFG. Exp Date
		µg/mL	µL	mL	µg/mL		
SOM L-5							
SOM Intermediate	SVMS 2015	200	400.0	1.0	80		7/31/2016
SV Addition	15-312	1,000	80.0	1.0	80		12/31/2016
Internal Standard	15-1292	4,000	5.0	1.0	20		8/21/2025
1,4 Dioxane	15-463	1,000	32.0	1.0	32		9/16/2019
1,4 Dioxane d8	15-462	1,000	32.0	1.0	32		3/26/2020
2,4 Dinitrophenol	15-1294	1,000	80.0	1.0	80		11/3/2024
Pyridine/d5 Intermediate	SVMS 2036	500	160.0	1.0	80		10/22/2016
1-Methyl Naphthalene	15-1318	1,000	80.0	1.0	80		7/16/2018

Refer to COA for specific compound concentrations for mixed standards.

MISCELLANEOUS

Shipping Documents (Airbills –Original)

DC-1

Internal Chain of Custody

Other Records

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

FORM DC-1
SAMPLE LOG-IN SHEET

Lab Name	Shealy Environmental		Page 1 of 1
Received By (Print Name)	Lacey Goulding		Log-in Date 5/5/16
Received By (Signature)	Lacey Goulding		
Case Number	SDG No.		MA No.
46115	H4001		NA

Remarks:	
1. Custody Seal(s)	Present/Absent* Intact/Broken
2. Custody Seal Nos.	NA
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*
4. Airbill	Airbill/Sticker Present/Absent*
5. Airbill No.	7762 5733 2609
6. Sample Tags Sample Tag Numbers	Present/Absent* Listed/Not Listed on Traffic Report/Chain of Custody Record
7. Sample Condition	Intact/Broken/Leaking
8. Shipping Container Temperature Indicator Bottle	Present/Absent*
9. Shipping Container Temperature	0.9°C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree?	Yes/No*
11. Date Received at Lab	5/5/16
12. Time Received	1037

	EPA Sample #	Corresponding: Sample Tag #	Corresponding: Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	H4001	NA	RE05033-001	OK
2	H4008		-002	1
3	H4202		-003	1 Vial broken
4	H4211		-004	OK
5	H4213		-005	
6	H4217		-006	
7	H4218		-007	
8				
9				
10				
11				
12				
13				
14			JGG	
15			5/5/16	
16				
17				
18				
19				
20				
21				
22				

* Contact SMO and attach record of resolution

Reviewed By JGG	Logbook No. NA
Date 5/16/16	Logbook Page No. NA

Volatile Internal Chain of Custody

Date	Time	Analyst	From	To	Lab Sample ID	Container #	Consumed Y/N
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE05006-022	1	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE05006-023	1	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE05006-024	1	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE05006-025	1	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE05006-026	1	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE05006-027	1	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE05033-003	1	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE05033-005	1	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE05033-005	2	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE05033-005	3	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE05033-005	4	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE06040-002	1	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE06040-003	1	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE06040-004	1	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE06040-006	1	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE06040-007	1	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE06040-001	1	Y
5/9/2016	8:00	ALL	Refrigerator #18	MSD5	RE06040-005	1	Y

Volatile Internal Chain of Custody

Date	Time	Analyst	From	To	Lab Sample ID	Container #	Consumed Y/N
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RD27011-010	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE04048-011	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05033-001	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05033-002	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05006-014	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE04034-001	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE04034-003	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE04034-005	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE04034-009	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05006-001	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05006-002	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05006-003	4	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05006-004	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05006-005	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05006-009	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05006-010	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05006-012	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05006-013	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05006-011	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05033-004	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05033-006	2	Y
5/9/2016	14:00	JJG	Refrigerator #18	MSD5	RE05033-007	2	Y

Volatile Internal Chain of Custody

Date	Time	Analyst	From	To	Lab Sample ID	Container #	Consumed Y/N
5/10/2016	9:00	ALL	Walk-In #1	MSD5	RE06040-018	1	Y
5/10/2016	9:00	ALL	Refrigerator #18	MSD5	RE06040-012	1	Y
5/10/2016	9:00	ALL	Refrigerator #18	MSD5	RE06040-013	1	Y
5/10/2016	9:00	ALL	Refrigerator #18	MSD5	RE06040-014	1	Y
5/10/2016	9:00	ALL	Refrigerator #18	MSD5	RE06040-016	1	Y
5/10/2016	9:00	ALL	Refrigerator #18	MSD5	RE06040-015	1	Y
5/10/2016	9:00	ALL	Refrigerator #18	MSD5	RE05033-003	2	Y
5/10/2016	9:00	ALL	Refrigerator #18	MSD5	RE05006-006	1	Y
5/10/2016	9:00	ALL	Refrigerator #18	MSD5	RE05006-007	1	Y
5/10/2016	9:00	ALL	Refrigerator #18	MSD5	RE05006-008	1	Y
5/10/2016	9:00	ALL	Refrigerator #18	MSD5	RE06040-008	1	Y
5/10/2016	9:00	ALL	Refrigerator #18	MSD5	RE06040-009	1	Y
5/10/2016	9:00	ALL	Refrigerator #18	MSD5	RE06040-010	1	Y
5/10/2016	9:00	ALL	Refrigerator #18	MSD5	RE06040-011	1	Y
5/10/2016	9:00	ALL	Refrigerator #18	MSD5	RE06040-009	2	Y

Volatile Internal Chain of Custody

Date	Time	Analyst	From	To	Lab Sample ID	Container #	Consumed Y/N
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RD27011-007	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RD27016-012	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RD28003-017	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE04048-021	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE04057-002	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05006-019	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05030-012	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05031-021	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05033-008	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE06040-017	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-002	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-002	2	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-002	3	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-003	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-004	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-005	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-006	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-007	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-008	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-009	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-010	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-011	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-012	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-013	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-014	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-015	1	Y
5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-016	1	Y
5/12/2016	9:00	ALL	Walk-In #1	MSD8	RE05032-017	1	Y

5/12/2016	9:00	ALL	Refrigerator #18	MSD8	RE05032-001	1	Y

Internal Chain of Custody for SOM, GCSV, and GCMS Samples: Refrigerator #24 Extraction Prep Area

Date of Receipt	Time of Receipt	Custodian	From: EP or CP	Received To	Batch #	Batch Out Date	Batch Out Time	Custodian	Out To: SV , D , CP
5/7/16	2302	SDW	EP	Ref #24	12715 TICest	5/9/16	0753	MEM	SV
↓	↓	↓	↓	Ref #24	12686 8270D	5/9/16	0923	DRB	SV
↓	↓	↓	↓	Ref #24	12580 625	5/9/16	0645	MBH	SV
↓	↓	↓	↓	Ref #24	12697/98 SOM SV/SM	↓	↓	↓	↓
5/8/16	1217	SDW	EP	Ref #24	12716 8270D	5/10/16	1625	JCG	SV
↓	↓	↓	↓	Ref #24	12675 8270D	5/10/16	0825	MBH	SV
5/8/16	1633	SDW	EP	Ref #24	12727 8270D	5/9/16	0923	DRB	SV
5/8/16	2130	EWR	~~EP~~ ~~CP~~ EWR 5/9/16	Ref #24	12706 8151A	5/9/16	0753	MEM	SV
↓	↓	↓	EP CP	Ref #24	12738 8082A	↓	↓	↓	↓
↓	↓	↓	EP CP	Ref #24	12739 8082A	↓	↓	↓	↓
↓	↓	↓	~~CP~~ EP	Ref #24	12740 8270D	5/9/16	1537	DRB	SV
5/8/16	2345	EWR	CP	Ref #24	12499 SOM23Pest	5/9/16	0753	MEM	SV
5/9/16	1020	DALI	EP	Ref #24	12731 T-BNA	5/9/16	1537	DRB	SV
5/9/16	1224	DALI	EP	Ref #24	12737 T-PCB	5/9/16	1309	MEM	SV
5/9/16	1232	DALI	EP	Ref #24	12741 LL8270D	5/10/16	0825	MBH	SV
↓	1241	JAR	↓	Ref #24	12775 8330A	NR			
5/9/16	1545	DALI	EP	Ref #24	12726 625	5/9/16	1545	DALI	EP
5/9/16	1628	TAC	EP	Ref #24	12806 8011	5/10/16	0756	MEM	SV

SOP 5.344

To and From Locations: EP = Extraction Prep, CP = Cleanup Procedure, SV = SV Ref #10, D = Disposed of
Refer to the Batch Sheet for the individual lab samples assigned to each batch.

Internal Chain of Custody for SOM, GCSV, and GCMS Samples: Refrigerator #24 Extraction Prep Area

Date of Receipt	Time of Receipt	Custodian	From: EP or CP	Received To	Batch #	Batch Out Date	Batch Out Time	Custodian	Out To: SV , D , CP
5/9/16	1657	TAC	EP	Ref #24	12867 8011	5/10/16	0756	~~0756 MEM~~	SV
5/9/16	1745	DALI	CP	Ref #24	12659 625	5/10/16	0825	ABH	SV
"	"	"	EP	Ref #24	12643 LL8270	"	"	"	"
"	"	"	"	Ref #24	12639/40 EPH	5/10/16	0756	MEM	SV
"	"	"	"	Ref #24	12642 8081B	"	"	"	"
"	"	"	"	Ref #24	12641 8015	"	"	"	"
5/10/16	1154	DALI	EP	Ref #24	12812 Som SV (5.0)	5/11/16	0827	ABH	SV
"	"	"	"	Ref #24	12804 8015C	5/10/16	1410	MEM	SV
5/10/16	1550	DALI	EP	Ref #24	12813/14 Som SV (5.)	5/11/16	0827	ABH	SV
5/10/16	1649	DALI	CP	Ref #24	12754 Som Pest	5/11/16	0804	CMS	SV
5/10/16	1802	DALI	CP	Ref #24	12883 Som ARO	"	"	"	"
5/11/16	1246	TAC	EP	Ref #24	12891 LL8270D	5/11/16	1405	DRO1	SV
5/11/16	1616	DALI	EP	Ref #24	12950 8011	5/11/16	1616	DALI	SV
"	"	"	"	Ref #24	12952 8011	"	"	"	"
5/11/16	1625	TAC	EP	Ref #24	12895 Som SV	5/18/16	0904	ABH	SV
5/11/16	1758	TAC	EP	Ref #24	12983/4 EPH	5/12/16	0758	CMS	SV
5/11/16	2354	GWR	EP	Ref #24	12993 8270D	5/12/16	0822	DRO1	SV
"	"	"	CP	Ref #24	12872 608	5/12/16	0758	CMS	SV

To and From Locations: EP = Extraction Prep, CP = Cleanup Procedure, SV = SV Ref #10, D = Disposed of
Refer to the Batch Sheet for the individual lab samples assigned to each batch.

Internal Chain of Custody for SOM, GCSV, and GCMS Samples: Refrigerator #24 Extraction Prep Area

Date of Receipt	Time of Receipt	Custodian	From: EP or CP	Received To	Batch #	Batch Out Date	Batch Out Time	Custodian	Out To: SV , D, CP
5/13/16	0809	DALI	EP	Ref #24	13116/ EPH	5/13/16	1118	CMJ	SV
5/13/16	1055	DALI	EP	Ref #24	12995 T-BNA	5/13/16	1110	DRDI	SV
5/13/16	1217	DALI	EP	Ref #24	13022/3 8270	5/16/16	0819	DRDI	SV
5/13/16	1237	DALI	EP	Ref #24	~~12~~ 13020 8081B	5/16/16	0755	MEM	SV
5/13/16	1555	DALI	EP	Ref #24	12980 625	5/13/16	1555	DALI	SV
5/14/16	0005	SDW	EP	Ref #24	13180 8270D	5/16/16	1004	DRDI	SV
5/14/16	0015	SDW	CP	Ref #24	13178 8082A	5/16/16	0755	MEM	SV
5/14/16	1700	SDW	CP	Ref #24	12929 625	5/16/16	0819	DRDI	SV
			EP	Ref #24	13177 SOM SIM	5/17/16	1645	JCG	SV
				Ref #24	13176 SOM SIM				
				Ref #24	13174 SOM SIM	5/17/16	1035	JCG	SV
				Ref #24	13086 8270D	5/16/16	0819	DRDI	SV
				Ref #24	13142 SOM SIM	5/18/16	1556	MBH	SV
5/14/16	1847	SDW	EP	Ref #24	13105 8330A		SDW 5/14/16		
5/15/16	1314	DALI	EP	Ref #24	13211/2 SOM SV	5/18/16	0904	MBH	SV
L	L	L	L	Ref #24	13210 SOM SV	5/18/16	1551	MBH	SV
5/15/16	1555	DALI	EP	Ref #24	13153 625	5/16/16	0819	DRDI	SV
~~5~~ 5/16/16	1132	DALI	CP	Ref #24	13021 8082A	5/16/16	1145	MEM	SV

DAH 0516/16

To and From Locations: EP = Extraction Prep, CP = Cleanup Procedure, SV = SV Ref #10, D = Disposed of
Refer to the Batch Sheet for the individual lab samples assigned to each batch.

Internal Chain of Custody for SOM, GCSV, and GCMS Samples: Refrigerator #24 Extraction Prep Area

Date of Receipt	Time of Receipt	Custodian	From: EP or CP	Received To	Batch #	Batch Out Date	Batch Out Time	Custodian	Out To: SV , D , CP
5/16/16	1255	DALI	EP	Ref #24	13225 LL82700	5/16/16	1423	DRBI	SV
5/16/16	1444	DALI	EP	Ref #24	~~13224~~ 13226 Som SIM SV	5/17/16	1035	JCG	SV
5/16/16	1501	DALI	CP	Ref #24	~~13227~~ 13227 608	5/16/16	1501	DALI	SV
5/16/16	1530	TAC	EP	Ref #24	13249 8011	5/16/16	1544	MEM	SV
5/16/16	1556	TAC	EP	Ref #24	13251 8011	〃	1626	MEM	SV
5/16/16	1558	EWR	CP	Ref #24	13296 8082A	5/17/16	0747	MEM	SV
5/16/16	1730	TAC	EP	Ref #24	13272 8011				
〃	〃	〃		Ref #24	13273 8011				
5/16/16	2327	EWR	EP	Ref #24	13314 8015C				
〃	〃	〃	〃	Ref #24	13311 EPH				
5/17/16	0012	EWR	EP	Ref #24	13313 8270D SIM	5/17/16	1350	JCG	SV
5/17/16	0954	TAC	EP	Ref #24	13276 DRO ~~8015C~~ 8270D ~~PAH/LL~~	5/17/16	1313	MEM	SV
5/17/16	1030	TAC	EP	Ref #24	13280/9	5/18/16	0824	DRBI	SV
5/17/16	1429	DRBI	EP	Ref #24	13315 8270D	5/17/16	1427	DRBI	SV
	1520	JBK		Ref #24	13242 SOM SV	5/19/16	1619	MBH	SV
	〃	〃		Ref #24	13243 SIM SV	〃	〃	〃	〃
5/17/16	1719	DALI	EP	Ref #24	13404 8011	5/18/16	0755	MEM	SV
〃	〃	〃	〃	Ref #24	13405 8011	〃	〃	〃	〃

To and From Locations: EP = Extraction Prep, CP = Cleanup Procedure, SV = SV Ref #10, D = Disposed of
Refer to the Batch Sheet for the individual lab samples assigned to each batch.

SESS 01 544

Internal Chain of Custody for SOM, GCSV, and GCMS Samples: Refrigerator #24 Extraction Prep Area

Date of Receipt	Time of Receipt	Custodian	From: EP or CP	Received To	Batch #	Batch Out Date	Batch Out Time	Custodian	Out To: SV , D , CP
5/17/16	1723	TAC	EP	Ref #24	13366/7 82700	5/18/16	0824	DR01	SV
5/17/16	2307	SDW	EP	Ref #24	13451 8011	5/18/16	0755	MEM	SV
5/18/16	0044	EWR	EP	Ref #24	13425/7 82700	5/18/16	0824	DR01	SV
5/18/16	0143	EWR	CP	Ref #24	13428 Som23 Aro	5/18/16	0755	MEM	SV
DR01 5/18/16 5/18/16	0944	DR01	EP	Ref #24	13250 TCLP	5/18/16	0944	DR01	SV
5/18/16	1122	DR01	EP	Ref #24	13244	5/18/16	1122	DR01	SV
5/18/16	1415	TAC	EP	Ref #24	13480 8011	5/18/16	1448	MEM	SV
"	"	"	"	Ref #24	13481 8011	"	"	"	"
5/18/16	1422	DAU	EP	Ref #24	13344 8081B	"	"	"	"
5/18/16	1500	TAC	EP	Ref #24	13482 8011	5/18/16	1616	MEM	SV
"	"	"	"	Ref #24	13484 8011	"	"	"	"
5/18/16	1513	DAU	EP	Ref #24	13345 Som SV	5/20/16	1540	RBH	SV
5/18/16	1547	TAC	EP	Ref #24	13485 8011	5/18/16	1616	MEM	SV
"	"	"	"	Ref #24	13486 8011	"	"	"	"
5/18/16	1600	DAU	EP	Ref #24	13346 Som SV(Sim)	5/20/16	1540	RBH	SV
5/18/16	1828	EWR	EP	Ref #24	13452 8151A	5/19/16	0807	MEM	SV
5/18/16	2044	SDW	CP	Ref #24	13466 Som Aro	"	"	"	"
5/18/16	2205	SDW	EP	Ref #24	13539 82700	5/19/16	0825	DR01	SV

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To and From Locations: EP = Extraction Prep, CP = Cleanup Procedure, SV = SV Ref #10, D = Disposed of
Refer to the Batch Sheet for the individual lab samples assigned to each batch.

Internal Chain of Custody for SOM, GCSV, and GCMS Samples: Refrigerator #24 Extraction Prep Area

Date of Receipt	Time of Receipt	Custodian	From: EP or CP	Received To	Batch #	Batch Out Date	Batch Out Time	Custodian	Out To: SV , D , CP
5/18/16	2243	SDW	EP	Ref #24	13542 DRO	05/19/16	0807	MEM	SV
5/19/16	0006	SDW	EP	Ref #24	13554 8011				
5/19/16	0015	EWR	EP	Ref #24	13551 8011				
〃	〃	〃	〃	Ref #24	13553 8011				
5/19/16	~~0805~~ 0956 DALI 05/19/16	DALI	EP	Ref #24	13585 504	5/19/16	0956	DALI	SV
5/19/16	1150	DALI	EP	Ref #24	13543 625				
5/19/16	1439	DALI	EP	Ref #24	13468 Som SVSIM	5/19/16	1445	RBH	SV
5/19/16	1451	DALI	EP	Ref #24	13467 Som SV	5/20/16	0855	RBH	SV
5/19/16	1537	SDW	EP	Ref #24	13647 8270D	5/20/16	0835	DRO	SV
5/19/16	2053	SDW	CP	Ref #24	13458 ~~608~~ SDW 5/19/16	5/20/16	0800	MEM	SV
5/19/16	2117	SDW	CP	Ref #24	13655 8082A				
5/19/16	2314	SDW	EP	Ref #24	13670 8011				
5/19/16	2359	EWR	EP	Ref #24	13654 8081B				
〃	〃	〃	〃	Ref #24	13658/7 8270D	5/20/16	0836	DRO	SV
5/20/16 ~~5/19/16~~ DALI 05/20/16	0025	SDW	CP	Ref #24	13653 Flo-Pro	5/20/16	0800	MEM	SV
5/20/16 ~~5/19/16~~	0949	DALI	EP	Ref #24	13541 T-DNA	5/20/16	0949	DALI	SV
5/20/16 ~~5/19/16~~	1107	DALI	EP	Ref #24	13631 Som SV(SIM)	5/20/16	1114	RBH	SV
5/20/16	1130	DALI	EP	Ref #24	13586 8081B	5/20/16	1313	MEM	SV

To and From Locations: EP = Extraction Prep, CP = Cleanup Procedure, SV = SV Ref #10, D = Disposed of
Refer to the Batch Sheet for the individual lab samples assigned to each batch.

Internal Chain of Custody for SOM, GCSV, and GCMS Samples: Refrigerator #24 Extraction Prep Area

Date of Receipt	Time of Receipt	Custodian	From: EP or CP	Received To	Batch #	Batch Out Date	Batch Out Time	Custodian	Out To: SV , D , CP
5/20/16	1441	DALI	EP	Ref #24	13646/5 82700	5/23/16	0915	DALI	SV
5/20/16	1526	DALI	EP	Ref #24	13648 8270D				
5/20/16	1604	SDW	EP	Ref #24	13747 8011	5/20/16	1609	SDW	SV
5/20/16	1655	DALI	EP	Ref #24	13518 625				
5/20/16	2037	SDW	EP	Ref #24	13647 FloPro	5/23/16	0756	MEM	SV
↓	2056	↓	↓	Ref #24	13759 8082A	↓	↓	↓	↓
↓	↓	↓	↓	Ref #24	1363 ↓				
5/21/16	0012	SDW	EP	Ref #24	13762 8270D				
5/21/16	1100	JW	↓	Ref #24	13742 82700	5/23/16	0815	DALI	SV
↓	~~1212~~ 1254	↓	↓	Ref #24	13703 Sonsimv	5/23/16	0827	EB/H	SV
↓	~~1254~~ 1212	↓	CP	Ref #24	13515 625	5/23/16	↓	↓	↓
↓	1254	↓	EP	Ref #24	13705 Sonsimv	5/23/16	0827	EB/H	SV
↓	1423	↓	↓	Ref #24	13765 Son IV	↓	↓	↓	↓
↓	1607	↓	↓	Ref #24	13706 Sonsim IV	↓	↓	↓	↓
5/22/16	1339	EWR	EP	Ref #24	13721 625				
5/22/16	2251	EWR	EP	Ref #24	13781 Son 2.5SV	5/23/16	0827	EB/H	SV
↓	↓	↓	↓	Ref #24	13793 EPH	5/23/16	0756	MEM	SV
5/23/16	0930	DALI	EP	Ref #24	13760/1 EPH	5/23/16	1022	DALI	SV

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To and From Locations: EP = Extraction Prep, CP = Cleanup Procedure, SV = SV Ref #10, D = Disposed of
Refer to the Batch Sheet for the individual lab samples assigned to each batch.

Pest/PCB/GCMS Internal Chain of Custody Record
from Extractions Ref # 24 to Semivolatiles Ref # 23 or Disposal

*Date of Receipt	Time of Receipt	Custodian	Batch # or Sample #	Out Date	Out Time	Custodian	Out To: D=Disposal	Comments
5/2/16	1645	CWJ	12205 SOMPEST					
5/2/16	1705	JCG	SOMSV 12208					
↓	1705	CWJ	12151 SOMPEST					
5/3/16	0754	MEM	12206 SomSVD					
↓	↓	↓	12050 SomPest					
5/5/16	0755	MEM	12508 SOMPCB					
↓	↓	↓	12501 SOMPCB					
5/5/16	1424	RBH	12160/1 Som/SimSV					
↓	↓	↓	12290/1 Som/SimSV					
5/6/16	1135	RBH	12200 SomSimSV					
↓	↓	↓	12385 SomSV					
5/9/16	0753	MEM	12499 SomPest					
5/9/16	0845	RBH	12697/8 Som/SimSV					
↓	↓	↓	12615 SomSV					
↓	↓	↓	12621 SomSimSV					
5/11/16	0804	CWJ	12754 SOMPEST					
↓	↓	↓	12883 SomPCB					
5/11/16	0827	RBH	12813/~~14~~ Som/SimSV RBH 5/12/16					

* All samples are Received from Extractions Ref #24 and Received to Semivolatiles Ref #23
Refer to the Batch Sheet for the individual lab samples assigned to each batch.

Pest/PCB/GCMS Internal Chain of Custody Record from Extractions Ref # 24 to Semivolatiles Ref # 23 or Disposal

*Date of Receipt	Time of Receipt	Custodian	Batch # or Sample #	Out Date	Out Time	Custodian	Out To: D=Disposal	Comments
5/11/16	0827	RBH	12812 somsim sv					
5/12/16	1621	CMS	12847 SOMPEST					
5/17/16	1040	JLS	13174 SOMSIM SV					
5/17/16	1644	RBH	13224 Somsim sv					
↓	↓	↓	13176 Somsim sv					
↓	↓	↓	13177 somsim sv					
5/18/16	0755	MEM	13428 SOMPCB					
5/18/16	0904	RBH	12895 Som sv					
↓	↓	↓	13211/2 som/sim sv					
5/18/16	1556	RBH	13210 som sv					
↓	↓	↓	13192 somsim sv					
5/19/16	0807	MEM	13466 SOMPCB					
5/19/16	1445	RBH	13468 somsim sv					
5/19/16	1615	RBH	13242 Som sv					
↓	↓	↓	13243 Somsim sv					
5/20/16	0855	RBH	13467 Som sv					
5/20/16	1114	RBH	13631 Somsim sv					
5/20/16	1540	RBH	13345 Som sv					

* All samples are Received from Extractions Ref #24 and Received to Semivolatiles Ref #23
Refer to the Batch Sheet for the individual lab samples assigned to each batch.

Pest/PCB/GCMS Internal Chain of Custody Record
from Extractions Ref # 24 to Semivolatiles Ref # 23 or Disposal

*Date of Receipt	Time of Receipt	Custodian	Batch # or Sample #	Out Date	Out Time	Custodian	Out To: D=Disposal	Comments
5/20/16	1540	RBH	13346 SomSimSV					
5/23/16	0827	RBH	13765 Som SV					
↓	↓	↓	13701 SomSim SV					
			13703 SomSim SV					
			13705 SomSim SV					
			13781 Som SV					

* All samples are Received from Extractions Ref #24 and Received to Semivolatiles Ref #23
Refer to the Batch Sheet for the individual lab samples assigned to each batch.

Robert Zhu

From: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Sent: Friday, May 06, 2016 9:47 AM
To: Brad Belding; Cathy Dover; Dan Wright; Neil Magee; Robert Zhu
Cc: "Goodrich, Donald"; Moss, Pamela
Subject: Region 08 | Case 46115 | Lab EQI | Issue Documentation | FINAL

Good morning,

Incorrect/duplicated sample IDs
Issue 1: MS and MSD are listed separately on the COC (i.e. H4213MS and H4213MSD). The laboratory will combine the sample volume for H4213 + H4213MS and H4213MSD and receive under sample ID H4213 in their system.
Resolution 1: Per Region 8, the laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Discrepancies with tags, jars, and/or COC
Issue 2: The COC lists the analysis as VOA, however, this Case was scheduled for TVOA analysis.
Resolution 2: Per Region 8, the laboratory shall analyze the samples as scheduled. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Please let me know if you have any questions. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Friday, May 06, 2016 9:46 AM
To: Vanaman, Alexandra
Cc: Moss, Pamela
Subject: RE: Region 08 | Case 46115 | Lab EQI | Issue Documentation

Hi Ali, resolve the issues as follows:

Issue 1: Report the issue in the case narrative and continue with sample analysis.

Issue 2: The laboratory shall analyze the samples as scheduled.

Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Friday, May 06, 2016 7:39 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Cc: Moss, Pamela <pmoss@eaest.com>
Subject: Region 08 | Case 46115 | Lab EQI | Issue Documentation

Good morning,

EQI is reporting the following issues regarding Case 46115. Please advise.

Incorrect/duplicated sample IDs
Issue 1: MS and MSD are listed separately on the COC (i.e. H4213MS and H4213MSD). The laboratory will combine the sample volume for H4213 + H4213MS and H4213MSD and receive under sample ID H4213 in their system.

Discrepancies with tags, jars, and/or COC
Issue 2: The COC lists the analysis as VOA, however, this Case was scheduled for TVOA analysis.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8
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From: Cathy Dover [mailto:cdover@shealylab.com]
Sent: Thursday, May 05, 2016 5:47 PM
To: Vanaman, Alexandra
Cc: Robert Zhu; Linda Waters; Brad Belding
Subject: Region 8 Case 46115 receiving issues

Hi Alexandra,

We received one cooler for Case 46115 today. Everything is fine except for two items.

The shipper listed the MS & MSD separately on the TR/COC (i.e. H4213MS & H4213MSD). We will combine the sample volume for H4213 + H4213MS and H4213MSD and receive under one CLP sample ID in our LIMS (H4213).

Also, the TR/COC notes “VOA” for analysis whereas the schedule notes “TVOA”. We have received these samples in our LIMS as TVOA per the schedule.

A copy of the TR/COC attached.

Cathy

Cathy Dover
Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, SC 29172
(919)616-1180 cell
(803)791-9700 lab

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U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/20/16

Subject: Analytical Results--- **700 S 1600 E PCE Plume_SW_MAY 2016_A107 / A-107**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Vera Moritz
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[C160505 : 05/04/2016]

Attached are the analytical results for the samples received from the 700 S 1600 E PCE Plume_SW_MAY 2016_A107 sampling event, according to TDF A-107. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review,* October 2004, referred to as "NFGI".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

C160505

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

1. Initial and Continuing calibration blanks (ICBs and CCBs).
   Exceptions: None.
2. Preparation (PB) / Method blanks (MB)
   Exceptions: None.
3. Interference Checks (ICSA / ICSAB) for ICP-MS and ICP-OE analyses only.
   Exceptions: None.
4. Initial and Continuing calibration verification analyses (ICVs, SCVs and CCVs).
   Exceptions: None.
5. Laboratory Control Sample (LCS) or second source analysis or SRM.
   Exceptions: None.
6. Laboratory Fortified blank (LFB) / Blank spike (BS), same source as used for the matrix spikes. PBS performed with analyses/methods requiring preparation or digestion prior to analysis.
   Exceptions: None.
7. Contract Reporting Detection Limit Standard, labeled as CRA, CRDL or CRL.
   Exceptions: None.
8. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. If either the "source" or the duplicate result is <5X the reporting limit, the %D limit of 20% does not apply.
   Exceptions: None.
9. Laboratory Matrix Spike (MS) and spike duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
   Exceptions: None.
10. Serial Dilution sample analysis (SRD). "Source" is parent field sample diluted 1:5 in the laboratory. Performed for ICP-OE and ICP-MS metals analyses. Percent difference (%D) limits do not apply when analyte concentration(s) are below 50x the source sample's MDL (or 10x it's PQL).
    Exceptions: None.
11. Internal standards, criteria specified for ICP-MS analyses only, monitored at the instrument.
    Exceptions: None.
12. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995.
    Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Parts per million (millligrams per liter). Solids equivalent = mg/Kg.
ug/L	Parts per billion (micrograms per liter). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFGI	*USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review,* October 2004
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier.

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples* , Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP -OE (ICP).
- Method 200.8 / 6020 using a Perkin -Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) dige stion.
- Method 245.1 using a Perkin -Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater* , 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW -846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids .

From EPA's *Determination of Inorganic Anions by Ion Chromatography* , Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes* , March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended sol ids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: A-SW-012 **Date / Time Sampled:** 05/03/16 10:30 **Workorder:** C160505
EPA Tag No.: 8-A **Matrix:** Surface Water **Lab Number:** C160505-01 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 160.1	**Total Dissolved Solids**	**898**		mg/L	10	1	05/10/2016	KJB	1605014
EPA 300.0	**Chloride**	**246**		mg/L	1.6	4	05/05/2016	NP	1605007
EPA 300.0	**Nitrate as N**	**3.2**		mg/L	0.2	4	05/05/2016	NP	1605007
EPA 300.0	**Sulfate as SO4**	**95.2**		mg/L	4.0	4	05/05/2016	NP	1605007

Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: A-SW-021 **Date / Time Sampled:** 05/03/16 13:20 **Workorder:** C160505
EPA Tag No.: 8-A **Matrix:** Surface Water **Lab Number:** C160505-02 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 160.1	**Total Dissolved Solids**	**802**		mg/L	10	1	05/10/2016	KJB	1605014
EPA 300.0	**Chloride**	**208**		mg/L	1.6	4	05/05/2016	NP	1605007
EPA 300.0	**Nitrate as N**	**2.3**		mg/L	0.2	4	05/05/2016	NP	1605007
EPA 300.0	**Sulfate as SO4**	**93.4**		mg/L	4.0	4	05/05/2016	NP	1605007

Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: A-SW-023 **Date / Time Sampled:** 05/03/16 09:30 **Workorder:** C160505
EPA Tag No.: 8-A **Matrix:** Surface Water **Lab Number:** C160505-03 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 160.1	**Total Dissolved Solids**	**984**		mg/L	10	1	05/10/2016	KJB	1605014
EPA 300.0	**Chloride**	**259**		mg/L	1.6	4	05/05/2016	NP	1605007
EPA 300.0	**Nitrate as N**	**2.8**		mg/L	0.2	4	05/05/2016	NP	1605007
EPA 300.0	**Sulfate as SO4**	**92.1**		mg/L	4.0	4	05/05/2016	NP	1605007

Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: A-SW-026 **Date / Time Sampled:** 05/03/16 13:45 **Workorder:** C160505
EPA Tag No.: 8-A **Matrix:** Surface Water **Lab Number:** C160505-06 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 160.1	**Total Dissolved Solids**	**1030**		mg/L	10	1	05/10/2016	KJB	1605014
EPA 300.0	**Chloride**	**272**		mg/L	1.6	4	05/05/2016	NP	1605007
EPA 300.0	**Nitrate as N**	**3.5**		mg/L	0.2	4	05/05/2016	NP	1605007
EPA 300.0	**Sulfate as SO4**	**91.5**		mg/L	4.0	4	05/05/2016	NP	1605007

Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: A-SW-027 **Date / Time Sampled:** 05/03/16 11:20 **Workorder:** C160505
EPA Tag No.: 8-A **Matrix:** Surface Water **Lab Number:** C160505-07 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 160.1	**Total Dissolved Solids**	**940**		mg/L	10	1	05/10/2016	KJB	1605014
EPA 300.0	**Chloride**	**246**		mg/L	1.6	4	05/05/2016	NP	1605007
EPA 300.0	**Nitrate as N**	**2.8**		mg/L	0.2	4	05/05/2016	NP	1605007
EPA 300.0	**Sulfate as SO4**	**93.7**		mg/L	4.0	4	05/05/2016	NP	1605007

Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: A-SW-028 **Date / Time Sampled:** 05/03/16 12:00 **Workorder:** C160505
EPA Tag No.: 8-A **Matrix:** Surface Water **Lab Number:** C160505-08 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 160.1	**Total Dissolved Solids**	**860**		mg/L	10	1	05/10/2016	KJB	1605014
EPA 300.0	**Chloride**	**237**		mg/L	1.6	4	05/05/2016	NP	1605007
EPA 300.0	**Nitrate as N**	**2.3**		mg/L	0.2	4	05/05/2016	NP	1605007
EPA 300.0	**Sulfate as SO4**	**95.5**		mg/L	4.0	4	05/05/2016	NP	1605007

"J" Qualifier indicates an estimated value

Classical Chemistry by EPA/ASTM/APHA Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

Analyte	Result	Det. Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
ESAT Dionex IC									
Batch 1605007 - No Prep Req			***Water***						**ESAT Dionex IC**
Method Blank (1605007-BLK1)		Dilution Factor: 1				Prepared & Analyzed: 05/05/16			
Chloride	< 0.4	0.8	mg/L						
Nitrate as N	< 0.05	0.1	"						
Sulfate as SO4	< 1.0	2.0	"						
Method Blank Spike (1605007-BS1)		Dilution Factor: 1				Prepared & Analyzed: 05/05/16			
Chloride	25.8	0.8	mg/L	25.0		103	90-110		
Nitrate as N	4.7	0.1	"	5.00		93	90-110		
Sulfate as SO4	24.6	2.0	"	25.0		98	90-110		
Duplicate (1605007-DUP1)		Dilution Factor: 4	**Source: C160505-01**			Prepared & Analyzed: 05/05/16			
Chloride	245	3.2	mg/L		246			0.1	20
Nitrate as N	3.2	0.4	"		3.2			0.4	20
Sulfate as SO4	95.4	8.0	"		95.2			0.2	20
Matrix Spike (1605007-MS1)		Dilution Factor: 4	**Source: C160505-01**			Prepared & Analyzed: 05/05/16			
Chloride	314	3.2	mg/L	100	246	69	80-120		
Nitrate as N	21.3	0.4	"	20.0	3.2	90	80-120		
Sulfate as SO4	193	8.0	"	100	95.2	98	80-120		
Batch 1605059 - 1605007			***Water***						**ESAT Dionex IC**
Instrument Blank (1605059-IBL1)		Dilution Factor: 1				Prepared & Analyzed: 05/05/16			
Chloride	< 0.4	0.8	mg/L						
Nitrate as N	< 0.05	0.1	"						
Sulfate as SO4	< 1.0	2.0	"						

Classical Chemistry by EPA/ASTM/APHA Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

Analyte	Result	Det. Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
None - Gravimetric									
Batch 1605014 - No Prep Req			***Water***						**None - Gravimetric**
Method Blank (1605014-BLK1)		Dilution Factor: 1				Prepared: 05/06/16 Analyzed: 05/10/16			
Total Dissolved Solids	< 10	10	mg/L						
Method Blank (1605014-BLK2)		Dilution Factor: 1				Prepared: 05/06/16 Analyzed: 05/10/16			
Total Dissolved Solids	< 10	10	mg/L						
Duplicate (1605014-DUP1)		Dilution Factor: 1	**Source: C160505-01**			Prepared: 05/06/16 Analyzed: 05/10/16			
Total Dissolved Solids	928	10	mg/L		898			3	20
Duplicate (1605014-DUP2)		Dilution Factor: 1	**Source: C160506-01**			Prepared: 05/06/16 Analyzed: 05/10/16			
Total Dissolved Solids	788	10	mg/L		786			0.3	20
Reference (1605014-SRM1)		Dilution Factor: 1				Prepared: 05/06/16 Analyzed: 05/10/16			
Total Dissolved Solids	4410	10	mg/L	4500		98	75-125		

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

Project Name: 700 S 1600 E PCE Plume_SW_MAY 2016_A107 **Certificate of Analysis**

TDF #: A-107

TechLaw Inc., ESAT Region 8

INORGANIC ANALYSES DATA SHEET

Intial and Continuing Calibration Blanks

Analytical Method: EPA 300.0 Analysis Name: WC - Anions by Ion Chromatography

Instrument: **ESAT Dionex IC** Work Order: Nu C160505

Analytical Sequence: 1605059 **Dissolved** Concentration Units: mg/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

Analyte	Initial Calibration Blank (1 & 2)	Continuing Calibration Blanks				Method Blank (Batch ID)		PQL
Chloride	0.00	1	2	3	4	1605007-BLK1	NA	0.80
		0.00	0.00			0.00	NA	
		5	6	7	8			
Nitrate as N	0.00	1	2	3	4	1605007-BLK1	NA	0.10
		0.00	0.00			0.00	NA	
		5	6	7	8			
Sulfate as SO4	0.00	1	2	3	4	1605007-BLK1	NA	2.00
		0.00	0.00			0.00	NA	
		5	6	7	8			

TechLaw, Inc. - ESAT Region 8

Initial and Continuing Calibration Verification Results

ESAT Dionex IC Method: EPA 300.0 Analysis Name: WC - Anions by Ion Chromatography 2013

Sequence: 1605059 Work Order: C160505 Units: mg/L

Dissolved Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
Chloride	40.0	40.0	100.0	1			2			3		
				40.0	40.2	100.5	40.0	40.6	101.5			
				4			5			6		
				7			8			9		
Nitrate as N	10.0	9.9	99.0	1			2			3		
				10.0	10.0	100.0	10.0	10.1	101.0			
				4			5			6		
				7			8			9		
Sulfate as SO4	100	100	100.0	1			2			3		
				100	101	101.0	100	102	102.0			
				4			5			6		
				7			8			9		

Metals - ICV & CCV %R Criteria = 90 - 110%, Classical Chemistry %R Criteria - ICV = 90 - 110%R, CCV = 80 - 120%R.

ICP Interference Check Sample

Analyte	Check Sample	Result*	Units	True	%R	PQL
Sequence:	Analysis:					

*Criteria = 80-120%R of True Value or +/- PQL
See raw data for complete analyte list and results.

Detection Limit (PQL) Standard

Sequence:

Analyte	True	Found	%R	Units

Recovery Control Limits: 70-130% except Pb, Tl, Sb, & Hg at 50-150%. No limits for Al, Ca, Fe, K, Mg & Na.

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 300.0 **Dissolved** **Sequence ID#:** 1605059

Instrument ID #: ESAT Dionex IC Water **LSR #:** A-107

Analysis ID	Sample Name	Analysis Date	Analysis Time
1605059-ICV1	Initial Cal Check	05/05/16	12:21
1605059-ICB1	Initial Cal Blank	05/05/16	12:35
1605059-SCV1	Secondary Cal Check	05/05/16	12:50
1605059-IBL1	Instrument Blank	05/05/16	13:04
1605007-BS1	Blank Spike	05/05/16	14:31
1605007-BLK1	Blank	05/05/16	14:45
1605059-CCV1	Calibration Check	05/05/16	16:27
1605059-CCB1	Calibration Blank	05/05/16	16:42
C160505-01	A-SW-012	05/05/16	17:26
1605007-DUP1	Duplicate	05/05/16	17:40
1605007-MS1	Matrix Spike	05/05/16	17:55
C160505-02	A-SW-021	05/05/16	18:09
C160505-03	A-SW-023	05/05/16	18:24
C160505-06	A-SW-026	05/05/16	18:38
C160505-07	A-SW-027	05/05/16	18:53
C160505-08	A-SW-028	05/05/16	19:08
1605059-CCV2	Calibration Check	05/05/16	21:04
1605059-CCB2	Calibration Blank	05/05/16	21:19

USEPA CLP COC (LAB COPY)
DateShipped: 5/3/2016
CarrierName: FedEx
AirbillNo: 776255754862

CHAIN OF CUSTODY RECORD

Case #: A-107

No: 8-050316-110305-0011
Lab: EPA Region 8 Laboratory
Lab Contact: Don Goodrich
Lab Phone: 303-312-6687

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-012		Surface Water/ Ned Lundvall	Grab	TDS(30), Anion(30)	1414 (6 C), 1415 (6 C) (2)	A-SW-12	05/03/2016 10:30	
A-SW-021		Surface Water/ Ned Lundvall	Grab	TDS(30), Anion(30)	1443 (6 C), 1444 (6 C) (2)	A-SW-21	05/03/2016 13:20	
A-SW-023		Surface Water/ Ned Lundvall	Grab	TDS(30), Anion(30)	1373 (6 C), 1374 (6 C) (2)	A-SW-23	05/03/2016 09:30	
A-SW-023-MS		Surface Water/ Ned Lundvall	Grab	TDS(30), Anion(30)	1388 (6 C), 1389 (6 C) (2)	A-SW-23	05/03/2016 09:30	
A-SW-023-MSD		Surface Water/ Ned Lundvall	Grab	TDS(30), Anion(30)	1403 (6 C), 1404 (6 C) (2)	A-SW-23	05/03/2016 09:30	
A-SW-026		Surface Water/ Ned Lundvall	Grab	TDS(30), Anion(30)	1452 (6 C), 1453 (6 C) (2)	A-SW-26	05/03/2016 13:45	
A-SW-027		Surface Water/ Ned Lundvall	Grab	TDS(30), Anion(30)	1423 (6 C), 1424 (6 C) (2)	A-SW-27	05/03/2016 11:20	
A-SW-028		Surface Water/ Ned Lundvall	Grab	TDS(30), Anion(30)	1427 (6 C), 1428 (6 C) (2)	A-SW-28	05/03/2016 12:00	

Sample(s) to be used for Lab QC: A-SW-023-MS Tag 1388, A-SW-023-MS Tag 1389, A-SW-023-MSD Tag 1403, A-SW-023-MSD Tag 1404

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: TDS=Dissolved Solids, Anion=Anions

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/3/16	FedEx		
	FedEx	5/4/16 1700	[illegible]	5/4/16 1700	

Walker, Scott

From: Goodrich, Donald
Sent: Thursday, May 05, 2016 9:42 AM
To: Lohman, Janelle
Cc: Walker, Scott
Subject: RE: 700 South 1600 East PCE Plume
Attachments: TO2_A-107Rev1.pdf

Hey Janelle, attached is the revised TDF that I submitted back in early April but I likely did not include you on the distribution list. pH is not required for the samples that just arrived.

Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Lohman, Janelle
Sent: Wednesday, May 04, 2016 3:07 PM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Cc: Walker, Scott <Walker.Scott@epa.gov>
Subject: 700 South 1600 East PCE Plume

Don,
We just received samples collected on 5/3/16, indicating A-107 as the TDF. The TDF has one sampling event ending 2/26/16. They are requesting TDS, Anion for analyses (I do not know about pH which is stated on the TDF). How do you want us to proceed?

Thanks,

Janelle Lohman
Techlaw Inc., Region 8 ESAT Contractor

Office - (303) 312-7702
Cell - (303) 810-1118

TechLaw

Sample Receipt Form - TLF-51.01

Project: 700 South 1600 East PCE Plume **TDF #:** 4107

Date Received: 5/1/12 **Time Received:** 10:00 **By:** Lauren Langer

1	Airbill/shipping documents present?	Drop Off	Yes	No
2	Custody seals on **shipping** containers present and intact?	None	Yes	No
3	Custody seals on **sample** containers present and intact?	None	Yes	No
4	Chain of Custody (COC) present?		Yes	No
5	COC and sample container information agree?		Yes	No
6	Aqueous samples preserved correctly, if required?	N/A	Yes	No
7	Samples received within holding times for requested analyses?		Yes	No
8	Sufficient sample volume for requested analyses?		Yes	No
9	Sample containers intact and not leaking?		Yes	No
10	Sample containers appropriate for requested analyses?		Yes	No
11	Samples shipped on ice?		Yes	No
12	Cooler temperature(s) ≤ 6.0 °C?	N/A	Yes	No

Cooler #:	1	2	3	4	5
Temperature (°C):	4				

pH Strip Lot #: HC 123184

Preservation Name and Lot #:

Comments and Additional Information:

Client notified of anomalies, if necessary?	N/A	Yes (if checked)	No
Anomalies noted in case narrative and data qualified, if necessary ?	N/A	Yes	No

C160505

ESAT Technical Direction Form

Contract No. EPW13028
EPA Region 8

Site ID: 082R	*Date Issued:* 2/18/2016	*Date Closed:*
TDF ID: A-107	*Date Updated:* 4/5/2016	*Closed By:*

Name: 700 South 1600 East PCE Plume

Details: The Contractor shall analyze several water samples encompassing two separate sampling events at the 700 South 1600 East PCE Plume Superfund site. For the first event, ESAT shall analyze approximately eight samples for anions, pH, and TDS as indicated in the Analytical Information Section. The samples are expected to be collected by EA Engineering and submitted to the R8 ESAT Lab the week ending 2/26/16. The second sampling event is expected to take place in late-April 2016. Approximately 11 samples will be submitted by EA Engineering for the same parameter list as for the first event.

TO49/Subtask 49b: Inorganic Chemistry

Site RPM: Vera Moritz/Mark Aguilar

Analytical Information:

MATRIX

☑ Water ☐ Soils ☐ Vegetation ☐ Biota

WET CHEM

☐ TSS ☑ TDS ☐ DOC ☐ Alk ☑ Chloride ☑ Sulfate ☐ Fluoride ☑ Nitrate ☐ Nitrite

Other pH

METALS

☐ Dissolved ☐ Total Recoverabl ☐ Total ☐ Hardness (Calc)

200.7: ☐ Ag ☐ Al ☐ As ☐ Ba ☐ Be ☐ B ☐ Ca ☐ Cd ☐ Co ☐ Cr ☐ Cu ☐ Fe ☐ K ☐ Mg
☐ Mn ☐ Mo ☐ Na ☐ Ni ☐ Pb ☐ Sb ☐ Se ☐ Sr ☐ Ti ☐ Tl ☐ V ☐ Zn ☐ SiO2

200.8: ☐ Ag ☐ Al ☐ As ☐ Ba ☐ Be ☐ Cd ☐ Co ☐ Cr ☐ Cu ☐ M ☐ M ☐ Ni ☐ Pb ☐ Sb
☐ Se ☐ Th ☐ Tl ☐ U ☐ V ☐ Zn

7470/7471/7473 ☐ Hg

FIBERS

☐ PLM ☐ TEM

Deliverables

ID	*Description*	*Due Date*	*Submission Date*
1	Provide final deliverable package to Task Monitor no later than 30 days after delivery of samples		
2	Provide final deliverable package to Task Monitor no later than 30 days after delivery of samples		

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/20/16

Subject: Analytical Results--- **700 S 1600 E PCE Plume_SW 2_MAY 2016_A107 / A-107**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Vera Moritz
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[C160506 : 05/05/2016]

Attached are the analytical results for the samples received from the 700 S 1600 E PCE Plume_SW 2_MAY 2016_A107 sampling event, according to TDF A-107. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review,* October 2004, referred to as "NFGI".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

C160506

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

1. Initial and Continuing calibration blanks (ICBs and CCBs).
   Exceptions: None.
2. Preparation (PB) / Method blanks (MB)
   Exceptions: None.
3. Interference Checks (ICSA / ICSAB) for ICP-MS and ICP-OE analyses only.
   Exceptions: None.
4. Initial and Continuing calibration verification analyses (ICVs, SCVs and CCVs).
   Exceptions: None.
5. Laboratory Control Sample (LCS) or second source analysis or SRM.
   Exceptions: None.
6. Laboratory Fortified blank (LFB) / Blank spike (BS), same source as used for the matrix spikes. PBS performed with analyses/methods requiring preparation or digestion prior to analysis.
   Exceptions: None.
7. Contract Reporting Detection Limit Standard, labeled as CRA, CRDL or CRL.
   Exceptions: None.
8. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. If either the "source" or the duplicate result is <5X the reporting limit, the %D limit of 20% does not apply.
   Exceptions: None.
9. Laboratory Matrix Spike (MS) and spike duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
   Exceptions: None.
10. Serial Dilution sample analysis (SRD). "Source" is parent field sample diluted 1:5 in the laboratory. Performed for ICP-OE and ICP-MS metals analyses. Percent difference (%D) limits do not apply when analyte concentration(s) are below 50x the source sample's MDL (or 10x it's PQL).
    Exceptions: None.
11. Internal standards, criteria specified for ICP-MS analyses only, monitored at the instrument.
    Exceptions: None.
12. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995.
    Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Parts per million (millligrams per liter). Solids equivalent = mg/Kg.
ug/L	Parts per billion (micrograms per liter). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFGI	*USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review,* October 2004
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier.

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples* , Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP -OE (ICP).
- Method 200.8 / 6020 using a Perkin -Elmer Elan 6000 ICP -MS.
- Method 200.2 for total recoverable metals (only) dige stion.
- Method 245.1 using a Perkin -Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater* , 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW -846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids .

From EPA's *Determination of Inorganic Anions by Ion Chromatography* , Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes* , March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended sol ids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: A-SW-007 **Date / Time Sampled:** 05/04/16 11:00 **Workorder:** C160506
EPA Tag No.: 8-A **Matrix:** Surface Water **Lab Number:** C160506-01 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 160.1	**Total Dissolved Solids**	**786**		mg/L	10	1	05/10/2016	KJB	1605014
EPA 300.0	**Chloride**	**184**		mg/L	2.0	5	05/05/2016	NP	1605012
EPA 300.0	**Nitrate as N**	**2.7**		mg/L	0.2	5	05/05/2016	NP	1605012
EPA 300.0	**Sulfate as SO4**	**124**		mg/L	5.0	5	05/05/2016	NP	1605012

Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: A-SW-007-D **Date / Time Sampled:** 05/04/16 11:00 **Workorder:** C160506
EPA Tag No.: 8-A **Matrix:** Surface Water **Lab Number:** C160506-02 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 160.1	**Total Dissolved Solids**	**814**		mg/L	10	1	05/10/2016	KJB	1605014
EPA 300.0	**Chloride**	**183**		mg/L	2.0	5	05/05/2016	NP	1605012
EPA 300.0	**Nitrate as N**	**2.7**		mg/L	0.2	5	05/05/2016	NP	1605012
EPA 300.0	**Sulfate as SO4**	**123**		mg/L	5.0	5	05/05/2016	NP	1605012

Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: A-SW-015 **Date / Time Sampled:** 05/04/16 11:30 **Workorder:** C160506
EPA Tag No.: 8-A **Matrix:** Surface Water **Lab Number:** C160506-03 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 160.1	**Total Dissolved Solids**	**948**		mg/L	10	1	05/10/2016	KJB	1605014
EPA 300.0	**Chloride**	**242**		mg/L	2.0	5	05/05/2016	NP	1605012
EPA 300.0	**Nitrate as N**	**0.3**	J	mg/L	0.2	5	05/05/2016	NP	1605012
EPA 300.0	**Sulfate as SO4**	**122**		mg/L	5.0	5	05/05/2016	NP	1605012

Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: A-SW-016 **Date / Time Sampled:** 05/04/16 13:20 **Workorder:** C160506
EPA Tag No.: 8-A **Matrix:** Surface Water **Lab Number:** C160506-04 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 160.1	**Total Dissolved Solids**	**780**		mg/L	10	1	05/10/2016	KJB	1605014
EPA 300.0	**Chloride**	**190**		mg/L	2.0	5	05/05/2016	NP	1605012
EPA 300.0	**Nitrate as N**	**3.3**		mg/L	0.2	5	05/05/2016	NP	1605012
EPA 300.0	**Sulfate as SO4**	**150**		mg/L	5.0	5	05/05/2016	NP	1605012

Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: A-SW-047 **Date / Time Sampled:** 05/04/16 08:40 **Workorder:** C160506
EPA Tag No.: 8-A **Matrix:** Surface Water **Lab Number:** C160506-05 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 160.1	**Total Dissolved Solids**	**414**		mg/L	10	1	05/10/2016	KJB	1605014
EPA 300.0	**Chloride**	**35.2**		mg/L	0.8	2	05/05/2016	NP	1605012
EPA 300.0	**Nitrate as N**	**0.3**		mg/L	0.1	2	05/05/2016	NP	1605012
EPA 300.0	**Sulfate as SO4**	**85.7**		mg/L	2.0	2	05/05/2016	NP	1605012

"J" Qualifier indicates an estimated value

Classical Chemistry by EPA/ASTM/APHA Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

Analyte	Result	Det. Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
ESAT Dionex IC									
Batch 1605012 - No Prep Req			***Water***						**ESAT Dionex IC**
Method Blank (1605012-BLK1)		Dilution Factor: 1				Prepared & Analyzed: 05/05/16			
Chloride	< 0.4	0.8	mg/L						
Nitrate as N	< 0.05	0.1	"						
Sulfate as SO4	< 1.0	2.0	"						
Method Blank Spike (1605012-BS1)		Dilution Factor: 1				Prepared & Analyzed: 05/05/16			
Chloride	25.8	0.8	mg/L	25.0		103	90-110		
Nitrate as N	4.7	0.1	"	5.00		93	90-110		
Sulfate as SO4	24.6	2.0	"	25.0		98	90-110		
Duplicate (1605012-DUP1)		Dilution Factor: 5	**Source: C160506-01**			Prepared & Analyzed: 05/05/16			
Chloride	184	4.0	mg/L		184			0.1	20
Nitrate as N	2.7	0.5	"		2.7			0.4	20
Sulfate as SO4	124	10.0	"		124			0.07	20
Matrix Spike (1605012-MS1)		Dilution Factor: 5	**Source: C160506-01**			Prepared & Analyzed: 05/05/16			
Chloride	291	4.0	mg/L	125	184	85	80-120		
Nitrate as N	26.0	0.5	"	25.0	2.7	93	80-120		
Sulfate as SO4	248	10.0	"	125	124	100	80-120		
Batch 1605060 - 1605012			***Water***						**ESAT Dionex IC**
Instrument Blank (1605060-IBL1)		Dilution Factor: 1				Prepared & Analyzed: 05/05/16			
Chloride	< 0.4	0.8	mg/L						
Nitrate as N	< 0.05	0.1	"						
Sulfate as SO4	< 1.0	2.0	"						

Classical Chemistry by EPA/ASTM/APHA Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

Analyte	Result	Det. Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
None - Gravimetric									
Batch 1605014 - No Prep Req			***Water***						**None - Gravimetric**
Method Blank (1605014-BLK1)		Dilution Factor: 1				Prepared: 05/06/16 Analyzed: 05/10/16			
Total Dissolved Solids	< 10	10	mg/L						
Method Blank (1605014-BLK2)		Dilution Factor: 1				Prepared: 05/06/16 Analyzed: 05/10/16			
Total Dissolved Solids	< 10	10	mg/L						
Duplicate (1605014-DUP1)		Dilution Factor: 1	**Source: C160505-01**			Prepared: 05/06/16 Analyzed: 05/10/16			
Total Dissolved Solids	928	10	mg/L		898			3	20
Duplicate (1605014-DUP2)		Dilution Factor: 1	**Source: C160506-01**			Prepared: 05/06/16 Analyzed: 05/10/16			
Total Dissolved Solids	788	10	mg/L		786			0.3	20
Reference (1605014-SRM1)		Dilution Factor: 1				Prepared: 05/06/16 Analyzed: 05/10/16			
Total Dissolved Solids	4410	10	mg/L	4500		98	75-125		

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

Project Name: 700 S 1600 E PCE Plume_SW 2_MAY 2016_A107 **Certificate of Analysis**

TDF #: A-107

TechLaw Inc., ESAT Region 8

INORGANIC ANALYSES DATA SHEET

Intial and Continuing Calibration Blanks

Analytical Method: EPA 300.0 Analysis Name: WC - Anions by Ion Chromatography

Instrument: **ESAT Dionex IC** Work Order: Nu C160506

Analytical Sequence: 1605060 **Dissolved** Concentration Units: mg/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

Analyte	Initial Calibration Blank (1 & 2)	Continuing Calibration Blanks				Method Blank (Batch ID)		PQL
Chloride	0.00	1	2	3	4	1605012-BLK1	NA	0.80
		0.00	0.00			0.00	NA	
		5	6	7	8			
Nitrate as N	0.00	1	2	3	4	1605012-BLK1	NA	0.10
		0.00	0.00			0.00	NA	
		5	6	7	8			
Sulfate as SO4	0.00	1	2	3	4	1605012-BLK1	NA	2.00
		0.00	0.00			0.00	NA	
		5	6	7	8			

TechLaw, Inc. - ESAT Region 8

Initial and Continuing Calibration Verification Results

ESAT Dionex IC Method: EPA 300.0 Analysis Name: WC - Anions by Ion Chromatography 2013

Sequence: 1605060 Work Order: C160506 Units: mg/L

Dissolved Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
Chloride	40.0	40.0	100.0	1			2			3		
				40.0	40.2	100.5	40.0	40.6	101.5			
				4			5			6		
				7			8			9		
Nitrate as N	10.0	9.9	99.0	1			2			3		
				10.0	10.0	100.0	10.0	10.1	101.0			
				4			5			6		
				7			8			9		
Sulfate as SO4	100	100	100.0	1			2			3		
				100	101	101.0	100	102	102.0			
				4			5			6		
				7			8			9		

Metals - ICV & CCV %R Criteria = 90 - 110%, Classical Chemistry %R Criteria - ICV = 90 - 110%R, CCV = 80 - 120%R.

ICP Interference Check Sample

Analyte	Check Sample	Result*	Units	True	%R	PQL
Sequence:	Analysis:					

*Criteria = 80-120%R of True Value or +/- PQL
See raw data for complete analyte list and results.

Detection Limit (PQL) Standard

Sequence:

Analyte	True	Found	%R	Units

Recovery Control Limits: 70-130% except Pb, Tl, Sb, & Hg at 50-150%. No limits for Al, Ca, Fe, K, Mg & Na.

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 300.0 **Dissolved** **Sequence ID#:** 1605060

Instrument ID #: ESAT Dionex IC Water **LSR #:** A-107

Analysis ID	Sample Name	Analysis Date	Analysis Time
1605060-ICV1	Initial Cal Check	05/05/16	12:21
1605060-ICB1	Initial Cal Blank	05/05/16	12:35
1605060-SCV1	Secondary Cal Check	05/05/16	12:50
1605060-IBL1	Instrument Blank	05/05/16	13:04
1605012-BS1	Blank Spike	05/05/16	14:31
1605012-BLK1	Blank	05/05/16	14:45
1605060-CCV1	Calibration Check	05/05/16	16:27
1605060-CCB1	Calibration Blank	05/05/16	16:42
C160506-01	A-SW-007	05/05/16	19:22
1605012-DUP1	Duplicate	05/05/16	19:37
1605012-MS1	Matrix Spike	05/05/16	19:51
C160506-02	A-SW-007-D	05/05/16	20:06
C160506-03	A-SW-015	05/05/16	20:20
C160506-04	A-SW-016	05/05/16	20:35
C160506-05	A-SW-047	05/05/16	20:50
1605060-CCV2	Calibration Check	05/05/16	21:04
1605060-CCB2	Calibration Blank	05/05/16	21:19

USEPA CLP COC (LAB COPY)
DateShipped: 5/4/2016
CarrierName: FedEx
AirbillNo: 776257370530

CHAIN OF CUSTODY RECORD

DAS #: TDF(A-107)

No: 8-060316-193806-0015
Lab: EPA Region 8 Laboratory
Lab Contact: Don Goodrich
Lab Phone: 303-312-6687

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-007		Surface Water/ Ned Lundvall	Grab	TDS(30), Anion(30)	1489 (6 C), 1490 (6 C) (2)	A-SW-07	05/04/2016 11:00	
A-SW-007-D		Surface Water/ Ned Lundvall	Grab	TDS(30), Anion(30)	1498 (6 C), 1499 (6 C) (2)	A-SW-07	05/04/2016 11:00	
A-SW-015		Surface Water/ Ned Lundvall	Grab	TDS(30), Anion(30)	1503 (6 C), 1504 (6 C) (2)	A-SW-15	05/04/2016 11:30	
A-SW-016		Surface Water/ Ned Lundvall	Grab	TDS(30), Anion(30)	1522 (6 C), 1523 (6 C) (2)	A-SW-16	05/04/2016 13:20	
A-SW-047		Surface Water/ Ned Lundvall	Grab	TDS(30), Anion(30)	1481 (6 C), 1482 (6 C) (2)	A-SW-47	05/04/2016 08:40	

Special Instructions:

Shipment for Case Complete? Y

Samples Transferred From Chain of Custody #

Analysis Key: TDS=Dissolved Solids, Anion=Anions

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	5/4/16 1400	Fedex		
	[signature]		[signature]	5/5/16	

TechLaw

Sample Receipt Form - TLF-51.01

Project: 700 S 1600 E PCE Plume **TDF #:** A-107

Date Received: [illegible] **Time Received:** 9:10 **By:** [illegible]

1	Airbill/shipping documents present?	Drop Off	Yes	No
2	Custody seals on **shipping** containers present and intact?	None	Yes	No
3	Custody seals on **sample** containers present and intact?	None	Yes	No
4	Chain of Custody (COC) present?		Yes	No
5	COC and sample container information agree?		Yes	No
6	Aqueous samples preserved correctly, if required?	N/A	Yes	No
7	Samples received within holding times for requested analyses?		Yes	No
8	Sufficient sample volume for requested analyses?		Yes	No
9	Sample containers intact and not leaking?		Yes	No
10	Sample containers appropriate for requested analyses?		Yes	No
11	Samples shipped on ice?		Yes	No
12	Cooler temperature(s) ≤ 6.0 °C?	N/A	Yes	No

Cooler #:	1	2	3	4	5
Temperature (°C):	1.1				

pH Strip Lot #: HC 950918

Preservation Name and Lot #:

Comments and Additional Information:

Client notified of anomalies, if necessary?	N/A	Yes	No
Anomalies noted in case narrative and data qualified, if necessary ?	N/A	Yes	No

C160506

ESAT Technical Direction Form

Contract No. EPW13028
EPA Region 8

Site ID:	082R	***Date Issued:***	2/18/2016	***Date Closed:***	
TDF ID:	A-107	***Date Updated:***	4/5/2016	***Closed By:***	

Name: 700 South 1600 East PCE Plume

Details: The Contractor shall analyze several water samples encompassing two separate sampling events at the 700 South 1600 East PCE Plume Superfund site. For the first event, ESAT shall analyze approximately eight samples for anions, pH, and TDS as indicated in the Analytical Information Section. The samples are expected to be collected by EA Engineering and submitted to the R8 ESAT Lab the week ending 2/26/16. The second sampling event is expected to take place in late-April 2016. Approximately 11 samples will be submitted by EA Engineering for the same parameter list as for the first event.

TO49/Subtask 49b: Inorganic Chemistry

Site RPM: Vera Moritz/Mark Aguilar

Analytical Information:

MATRIX

☑ Water ☐ Soils ☐ Vegetation ☐ Biota

WET CHEM

☐ TSS ☑ TDS ☐ DOC ☐ Alk ☑ Chloride ☑ Sulfate ☐ Fluoride ☑ Nitrate ☐ Nitrite

Other pH

METALS

☐ Dissolved ☐ Total Recoverabl ☐ Total ☐ Hardness (Calc)

200.7: ☐ Ag ☐ Al ☐ As ☐ Ba ☐ Be ☐ B ☐ Ca ☐ Cd ☐ Co ☐ Cr ☐ Cu ☐ Fe ☐ K ☐ Mg
☐ Mn ☐ Mo ☐ Na ☐ Ni ☐ Pb ☐ Sb ☐ Se ☐ Sr ☐ Ti ☐ Tl ☐ V ☐ Zn ☐ SiO2

200.8: ☐ Ag ☐ Al ☐ As ☐ Ba ☐ Be ☐ Cd ☐ Co ☐ Cr ☐ Cu ☐ M ☐ M ☐ Ni ☐ Pb ☐ Sb
☐ Se ☐ Th ☐ Tl ☐ U ☐ V ☐ Zn

7470/7471/7473 ☐ Hg

FIBERS

☐ PLM ☐ TEM

Deliverables

ID	*Description*	*Due Date*	*Submission Date*
1	Provide final deliverable package to Task Monitor no later than 30 days after delivery of samples		
2	Provide final deliverable package to Task Monitor no later than 30 days after delivery of samples		

Attachment 2
Laboratory Analytical Data Reports

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SDG COVER PAGE

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Cas No.: 46018 MA No. : SDG No.: H0001

SOW No. : SOM02.3

EPA Sample No.	Lab Sample ID	Analysis Method: Trace VOA	Low Med VOA	SVOA	SVOA SIM	PEST	ARO
H0001	H1584-01	X					
H0001MS	H1584-02	X					
H0001MSD	H1584-03	X					
H0003	H1584-04	X					
H0060	H1584-05	X					
VHBLK01	H1584-06	X					
H0002	H1584-07	X					
H0007	H1584-08	X					
H0013	H1584-09	X					
H0051	H1584-10	X					
H0061	H1584-11	X					
H0075	H1584-12			X			
H0075MS	H1584-13			X			
H0075MSD	H1584-14			X			
H0011	H1584-15	X					
H0012	H1584-16	X					
H0014	H1584-17	X					
H0015	H1584-18	X					
H0019	H1584-19	X					
H0062	H1584-20	X					
H0901	H1584-21	X					

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative.Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee,as verified by the following signature.

Signature: [signature] for Name: Mildred Reyes

Date: 03/17/16 Title: Document Control Officer

SDG #: H0001

USEPA CLP COC (LAB COPY)
DateShipped: 2/23/2016
CarrierName: FedEx
AirbillNo: 7757 1722 6887

CHAIN OF CUSTODY RECORD

Case #: 46018
Cooler #: 001

No: 8-022316-173016-0001
Lab: Chemtech Consulting Group -CHM
Lab Contact: Snehal Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-GW-023	H0001	Groundwater/ Aaron Bugher	Grab	VOA(21)	1001 (HCL Ice to 6C) (5)	A-GW-023	02/22/2016 14:25	*QC
A-GW-039	H0003	Groundwater/ Aaron Bugher	Grab	VOA(21)	1003 (HCL Ice to 6C) (3)	A-GW-039	02/23/2016 11:15	
A-TB-001	H0060	Water/ Aaron Bugher	Grab	VOA(21)	1060 (HCL Ice to 6C) (3)	A-TB-001	02/23/2016 08:00	

Sample(s) to be used for Lab QC: A-GW-023 Tag 1001

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: VOA=CLP Volatiles

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Aaron Bugher EA	18:00 2-23-16	FedEx (courier)	18:00 2-23-16	
	FEDEX	10:20 2-25-16	C Lata	10:10 2-25-16	4.1-C

N

SDG #: H0001

USEPA CLP COC (LAB COPY)
DateShipped: 2/25/2016
CarrierName: FedEx
AirbillNo: 7757 3949 3082

CHAIN OF CUSTODY RECORD

Case #: 46018

No: 8-022516-173525-0003
Lab: Chemtech Consulting Group -CHM
Lab Contact: Snehal Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-GW-024	H0002	Groundwater/ Aaron Bugher	Grab	VOA(21)	1002 (HCL Ice to 6C) (3)	A-GW-024	02/25/2016 09:20	
A-GW-046	H0007	Groundwater/ Aaron Bugher	Grab	VOA(21)	1007 (HCL Ice to 6C) (3)	A-GW-046	02/24/2016 15:20	
A-GW-049	H0013	Groundwater/ Aaron Bugher	Grab	VOA(21)	1013 (HCL Ice to 6C) (3)	A-GW-049	02/25/2016 13:25	
A-GW-049-D	H0051	Groundwater/ Aaron Bugher	Grab	VOA(21)	1051 (HCL Ice to 6C) (3)	A-GW-049-D	02/25/2016 13:25	
A-TB-002	H0061	Water/ Aaron Bugher	Grab	VOA(21)	1061 (HCL Ice to 6C) (3)	A-TB-002	02/24/2016 08:00	
A-GW-049	MH0076	Groundwater/ Aaron Bugher	Grab	Total Metals(21)	1076 (HNO3 Ice to 6C) (2)	A-GW-049	02/25/2016 13:25	*QC -T
A-GW-049-F	MH0083	Groundwater/ Aaron Bugher	Grab	Dissolved Metals(21)	1077 (HNO3 Ice to 6C) (2)	A-GW-049-F	02/25/2016 13:25	*QC -D

Sample(s) to be used for Lab QC: A-GW-049 Tag 1076, A-GW-049-F Tag 1077

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: VOA=CLP Volatiles, Total Metals=CLP ICP-AES / ICP-MS / Hg, Dissolved Metals=CLP ICP-AES / ICP-MS / Hg FILTERED

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Aaron Bugher EA	2-25-16 1700	FedEx (courier)	2-25-16 1700	
	FEDEX	2-26-16 0925	L. Cutro	2-26-16 0925	

TEMP 3c

3

SDG #: H0001

USEPA CLP COC (LAB COPY)
DateShipped: 2/25/2016
CarrierName: FedEx
AirbillNo: 7757 3949 2270

CHAIN OF CUSTODY RECORD

Case #: 46018

No: 8-022516-173523-0002
Lab: Chemtech Consulting Group -CHM
Lab Contact: Snehal Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-GW-049	H0075	Groundwater/ Aaron Bugher	Grab	SVOA(21)	1075 (Ice to 6C) (6)	A-GW-049	02/25/2016 13:25	

Sample(s) to be used for Lab QC: A-GW-049 Tag 1075

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: SVOA=CLP Semivolatiles

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Aaron Bugher EA	2-25-16 1700	FedEx (courier)	2-25-16 1700	
	FEDEX	2-26-16 0925	L. Putnam	2-26-16 0925	

TEMP 4°C

SDG #: H0001

USEPA CLP COC (LAB COPY)

DateShipped: 2/26/2016

CarrierName: FedEx

AirbillNo: 7757 4984 9401

CHAIN OF CUSTODY RECORD

Case #: 46018

No: 8-022616-140824-0005

Lab: Chemtech Consulting Group -CHM

Lab Contact: Snehal Mehta

Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-GW-003	H0011	Groundwater/ Aaron Bugher	Grab	VOA(21)	1011 (HCL Ice to 6C) (3)	A-GW-003	02/26/2016 10:10	
A-GW-005	H0012	Groundwater/ Aaron Bugher	Grab	VOA(21)	1012 (HCL Ice to 6C) (3)	A-GW-005	02/26/2016 11:20	
A-GW-006	H0014	Groundwater/ Aaron Bugher	Grab	VOA(21)	1014 (HCL Ice to 6C) (3)	A-GW-006	02/26/2016 12:05	
A-GW-004	H0015	Groundwater/ Aaron Bugher	Grab	VOA(21)	1015 (HCL Ice to 6C) (3)	A-GW-004	02/26/2016 15:00	
A-GW-009	H0019	Groundwater/ Aaron Bugher	Grab	VOA(21)	1019 (HCL Ice to 6C) (3)	A-GW-009	02/26/2016 16:20	
A-TB-003	H0062	Water/ Aaron Bugher	Grab	VOA(21)	1062 (HCL Ice to 6C) (3)	A-TB-003	02/26/2016 08:00	
A-SW-001	H0901	Groundwater/ Aaron Bugher	Grab	VOA(21)	1008 (HCL Ice to 6C) (3)	A-SW-001	02/26/2016 15:15	

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: VOA=CLP Volatiles

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Aaron Bugher EA	2-26-16/1700	FedEx (carrier)	2-26-16/1700	
			Deepak Parmar	2/27/16 10:45	Unice

Temp. 3°C

Sample Delivery Group (SDG) Cover Sheet

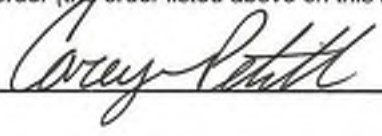
SDG Number	H0001	Case Number	46018	Contract Number	EP-W-14-030
Lab Code	CHM	SDG Turnaround	21 DAYS	Delivery CLIN(s)	

First Sample Received in SDG	H0001	Last Sample Received in SDG	H0901
First Sample Receipt Date	2/25/2016 10:20:00 AM	Last Sample Receipt Date	2/27/2016 10:15:00 AM

USEPA Sample Numbers in SDG (Listed in Numerical Order)

CLP Sample ID	Sample Type	Requested Analytical CLIN(s)/SubCLIN(s)	Solicitation Number	MA Number(s)
H0001	Field Sample	0001AB	N/A	N/A
H0001MS	Field Sample	0001AB	N/A	N/A
H0001MSD	Field Sample	0001AB	N/A	N/A
H0003	Field Sample	0001AB	N/A	N/A
H0060	Field Sample	0001AB	N/A	N/A
H0002	Field Sample	0001AB	N/A	N/A
H0007	Field Sample	0001AB	N/A	N/A
H0013	Field Sample	0001AB	N/A	N/A
H0051	Field Sample	0001AB	N/A	N/A
H0061	Field Sample	0001AB	N/A	N/A
H0075	Field Sample	0004AB	N/A	N/A
H0075MS	Field Sample	0004AB	N/A	N/A
H0075MSD	Field Sample	0004AB	N/A	N/A
H0011	Field Sample	0001AB	N/A	N/A
H0012	Field Sample	0001AB	N/A	N/A
H0014	Field Sample	0001AB	N/A	N/A
H0015	Field Sample	0001AB	N/A	N/A
H0019	Field Sample	0001AB	N/A	N/A
H0062	Field Sample	0001AB	N/A	N/A
H0901	Field Sample	0001AB	N/A	N/A

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature  Date 2/29/2016

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 1 of 4
Received By (Print Name) DEEPAK PARMAR		Log-in Date 2/25/2016
Received By (Signature) Deepak Parmar		
Case Number 46018	SDG No. H0001	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	775717226887
6. Sample Tags Sample Tag #	N/A YES
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	4.1 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	02/25/2016
12.Time Received	10:20

	EPA Sample #	Corresponding: Sample Tag #	Corresponding: Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H0001	1001	H1584-01	INTACT
2	H0001MS	1	H1584-02	1
3	H0001MSD	1	H1584-03	
4	H0003	1003	H1584-04	
5	H0060	1060	H1584-05	1
6	1			
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* Contact SMO and attach record of resolution

Reviewed By	Carey Pettitt	Logbook No.	1
Date	2/29/2016	Logbook Page No.	1

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 2 of 4
Received By (Print Name) DEEPAK PARMAR		Log-in Date 2/26/2016
Received By (Signature) Deepak Parmar		
Case Number 46018	SDG No. H0001	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	775739493082
6. Sample Tags Sample Tag #	N/A YES
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	3 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	02/26/2016
12.Time Received	09:25

	EPA Sample #	Corresponding: Sample Tag #	Corresponding: Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H0002	1002	H1584-07	INTACT
2	H0007	1007	H1584-08	
3	H0013	1013	H1584-09	
4	H0051	1051	H1584-10	
5	H0061	1061	H1584-11	
6				
7				
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* Contact SMO and attach record of resolution

Reviewed By	Corey Pettitt	Logbook No.	
Date	2/29/2016	Logbook Page No.	

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 3 of 4
Received By (Print Name) DEEPAK PARMAR		Log-in Date 2/26/2016
Received By (Signature) Deepak Parmar		
Case Number 46018	SDG No. H0001	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	775739492270
6. Sample Tags Sample Tag #	N/A YES
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	4 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	02/26/2016
12.Time Received	09:25

	EPA Sample #	Corresponding: Sample Tag #	Corresponding: Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H0075	1075	H1584-12	INTACT
2	H0075MS	1	H1584-13	1
3	H0075MSD	1	H1584-14	1
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* Contact SMO and attach record of resolution

Reviewed By Corey Petit	Logbook No. 1
Date 2/29/2016	Logbook Page No. 2

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 4 of 4
Received By (Print Name) DEEPAK PARMAR		Log-in Date 2/27/2016
Received By (Signature) Deepak Parmar		
Case Number 46018	SDG No. H0001	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	775749849401
6. Sample Tags Sample Tag #	N/A YES
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	3 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	02/27/2016
12.Time Received	10:15

	EPA Sample #	Corresponding: Sample Tag #	Corresponding: Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H0011		H1584-15	INTACT
2	H0012		H1584-16	
3	H0014		H1584-17	
4	H0015		H1584-18	
5	H0019		H1584-19	
6	H0062		H1584-20	
7	H0901		H1584-21	
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* Contact SMO and attach record of resolution

Reviewed By	Corey Petitt	Logbook No.	
Date	2/29/2016	Logbook Page No.	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME CHEMTECH CONSULTING GROUP
LAB CODE CHM
CONTRACT NO. EPW14030
CASE NO. 46018 SDG NO. H0001
MA NO.
SOW NO. SOM02.3

All documents delivered in the complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.4)

		PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
1.	SDG Cover Page	1	1	✓	
2.	Traffic Report/Chain of Custody Record(s)	2	6	✓	
3.	Sample Log-In Sheet (DC-1)	7	10	✓	
4.	CSF Inventory Sheet (DC-2)	11	17	✓	
5.	SDG Narrative	18	30	✓	
Organic Analysis					
Trace Volatiles					
	Quality Control Summary				
6.	Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	31	32	✓	
7.	Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR)(if requeste by the EPA Region)	33	33	✓	
8.	Method Blank Summary (Form 4-OR)	34	39	✓	
9.	GC/MS Instrument Performance Check (Form 5-OR)	40	46	✓	
10.	Internal Standard Area and Retention Summary (Form 8A-OR)	47	52	✓	
	Sample Data				
11.	TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	53	271	✓	
12.	Tentatively Identified Compounds (Form 1B-OR)				
13.	Raw Data for each sample:				
	Reconstructed total ion chromatograms (RICs) for each sample				
	Raw Spectra and bacground-subtracted mass spectra of target analytes identified				
	Quantitation Reports				
	Mass Spectra of all reported TICs with three best library matches				
	Standards Data (All Instruments)				
14.	GC/MS Initial Calibration Data (Form 6A-OR)	272	371	✓	
15.	RICs and Quantitation Reports for all Standards				

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
16. Continuing Calibration Verification for GC/MS (Form 7-OR)	372	479	✓	
17. RICs and Quantitation Reports for all Standards				
Quality Control Data				
18. Performance Check	480	530	✓	
19. Blank Data	531	612	✓	
20. Matrix Spike/Matrix Spike Duplicate Data (Form 3A-OR) (if requested by EPA Region)	613	630	✓	
21. Original Preparation and analysis forms or copies of preparation and analysis logbook pages (including screening records if applicable)	751	878	✓	
Low-Medium Volatiles				
Quality Control Summary				
22. Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	NA	NA	✓	
23. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by EPA Region)	NA	NA	✓	
24. Method Blank Summary (Form 4-OR)	NA	NA	✓	
25. GC/MS Instrument Performance Check (Form 5-OR)	NA	NA	✓	
26. Internal Standard Area and Retention Time Summary (Form 8A-OR)	NA	NA	✓	
Sample Data				
27. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	
28. Tentatively Identified Compounds (Form 1B-OR)				
29. Raw Data for Each Sample:				
Reconstructed total ion chromatograms (RICs) for each sample				
Raw Spectra and background-subtracted mass spectra of target analytes identified				
Quantitation Reports				
Mass Spectra of all reported TICs with three best library matches				
Standards Data (All Instruments)				
30. GC/MS Initial Calibration Data (Form 6A-OR)	NA	NA	✓	
31. RICs and Quantitation Reports for all Standards				
32. Continuing Calibration Verification for GC/MS (Form 7A-OR)	NA	NA	✓	
33. RICs and Quantitation Reports for all Standards				
Quality Control Data				
34. Performance Check	NA	NA	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
35. Blank Data	NA	NA	✓	
36. Matrix Spike/Matrix Spike Duplicate Data (if requested by EPA Region)	NA	NA	✓	
37. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	NA	NA	✓	
Semivolatiles				
Quality Control Summary				
38. Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	631	632	✓	
39. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by EPA Region)	633	633	✓	
40. Method Blank Summary (Form 4-OR)	634	634	✓	
41. GC/MS Instrument Performance Check (Form 5-OR)	635	635	✓	
42. Internal Standard Area and Retention Time Summary (Form 8A-OR)	636	637	✓	
Sample Data				
43. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	638	652	✓	
44. Tentatively Identified Compounds (Form 1B-OR)				
45. Raw Data for Each sample:				
Reconstructed total ion chromatograms (RICs) for each sample	NA	NA	✓	
Raw Spectra and background-subtracted mass spectra of target analytes identified				
Quantitation Reports				
Mass Spectra of all reported TICs with three best library matches				
GPC chromatograms (if GPC is required)				
Standards Data (All Instruments)				
46. GC/MS Initial Calibration Data (Form 6A-OR)	653	700	✓	
47. RICs and Quantitation Reports for all Standards				
48. Continuing Calibration Verification for GC/MS (Form 7A-OR)	701	708	✓	
49. RICs and Quantitation Reports for all Standards				
Quality Control Data				
50. Performance Check	709	716	✓	
51. Blank Data	717	726	✓	
52. Matrix Spike/Matrix Spike Duplicate Data (if requested by EPA Region)	727	750	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
53. Raw GPC Data	NA	NA	✓	
54. For SIM analysis (if requested), at the same sequence as listed above, except for that Form 1B-OR and TIC spectra data which are not required for SIM method.	NA	NA	✓	
55. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	751	878	✓	
Pesticides				
Quality Control Summary				
56. Surrogate Recovery (Form 2C-OR)	NA	NA	✓	
57. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR each columns)	NA	NA	✓	
58. Laboratory Control Sample Recovery (Form 3B-OR each column)	NA	NA	✓	
59. Method Blank Summary (Form 4-OR)	NA	NA	✓	
Sample Data				
60. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	
61. Raw Data for Each Sample:				
Chromatograms (Primary Column)				
Chromatograms (Secondary Column)				
Quantitation Reports				
Manual Worksheets				
62. For Pesticides by GC/MS Confirmation:				
Copies of raw spectra and copies of background-subtracted mass spectra of target analytes (samples & standards)				
Standards Data				
63. Initial Calibration of Single Component Analytes (Form 6B-OR and 6C-OR)	NA	NA	✓	
64. Initial Calibration of Multicomponent Analytes (Form 6D-OR and 6E-OR)	NA	NA	✓	
65. Analyte Resolution Summary (Form 6G-OR)	NA	NA	✓	
66. Pesticide Performance Evaluation Mixture Calibration Verification Summary (Form 7B-OR)	NA	NA	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
67. Continuing Calibration Verification Summary (Form 7C-OR)	NA	NA	✓	
68. Multicomponent Coninuing Calibration Verification Summary (Form 7D-OR)	NA	NA	✓	
69. Analytical Sequence (Form 8B-OR)	NA	NA	✓	
70. Florisil Cartridge Check (Form 9A-OR)	NA	NA	✓	
71. GPC Calibration Verification (Form 9B-OR)	NA	NA	✓	
72. Identification Summary for Single Component Analytes (Form 10A-OR)	NA	NA	✓	
73. Identification Summary for Multicomponent Analytes (Form 10B-OR)				
74. Chromatograms and Quantitation Reports:	NA	NA	✓	
A printout of Retention Times and corresponding peak areas or peak heights				
Quality Control Data				
75. Blank Data	NA	NA	✓	
76. Matrix Spike/Matrix Spike Duplicate Data	NA	NA	✓	
77. Laboratory Control Sample	NA	NA	✓	
78. Raw GPC Data	NA	NA	✓	
79. Raw Florisil Data	NA	NA	✓	
80. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	NA	NA	✓	
Aroclor Data				
Quality Control Summary				
81. Surrogate Recovery (Form 2C-OR)	NA	NA	✓	
82. Matrix Spike/Matrix Spike Duplicate Summary (Form 3A-OR)	NA	NA	✓	
83. Laboratory Control Sample Recovery (Form 3B-OR for each column)	NA	NA	✓	
84. Method Blank Summary (Form 4-OR)	NA	NA	✓	
Sample Data				
85. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
86. Raw Data for Each Sample:	NA	NA		
Chromatograms (Primary Column)	NA	NA	✓	
Chromatograms (Secondary Column)	NA	NA	✓	
Quantitation Reports	NA	NA	✓	
Manual Worksheets	NA	NA	✓	
87. For Aroclors by GC/MS Confirmation:	NA	NA	✓	
Copies of raw spectra and copies of background-subtracted mass spectra of target analytes (samples & standards)	NA	NA	✓	
Standards Data				
88. Initial Calibration of Multicomponent Analytes(Form 6D-OR, Form 6E-OR, and Form 6F-OR)	NA	NA	✓	
89. Multicomponent Continuing Calibration Verification Summary (Form 7D-OR)	NA	NA	✓	
90. Analytical Sequence (Form 8B-OR)	NA	NA	✓	
91. Identification Summary for Multicomponent Analytes (Form 10B-OR)	NA	NA	✓	
92. Chromatograms and data system printouts:	NA	NA	✓	
A printout of Retention Times and corresponding peak areas or peak heights				
Qaulity Control Data				
93. Blank Data	NA	NA	✓	
94. Matrix Spike/Matrix Spike Duplicate Data	NA	NA	✓	
95. Laboratory Control Sample (LCS) Data	NA	NA	✓	
96. Raw GPC Data (if performed)	NA	NA	✓	
97. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including Percent Solid Determinations logs and screening records if applicable)	NA	NA	✓	
Additional				
98. EPA Shipping/Receiving Documents Airbills (No. of shipments 4)	879	882	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab)	883	883	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	TO	CHECK LAB	REGION
99. Misc. Shipping/Receiving Records (list all individual records) Communication Logs	NA	NA	✓	
100. Internal Lab Sample Transfer Records & Tracking Sheets (describe or list)	884	891	✓	
101. PE/PT Instruction Forms	NA	NA	✓	
102. Other Records (describe or list)				
Communication Log	892	894	✓	

103. Comments

Completed by:
(CLP Lab) [signature] for Michael Reyes 03/17/16
(Signature) (Printed Name/Title) (Date)

Audited by:
(EPA) (Signature) (Printed Name/Title) (Date)

CHEMTECH

SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE# 46018
SDG# H0001
CONTRACT# EPW14030
LAB CODE: CHEM
CHEMTECH PROJECT # H1584
MODIFICATION REF. NUMBER: N/A

Sample ID	EPA Sample ID	pH
H1584-01	H0001	1.0
H1584-02	H0001MS	1.0
H1584-03	H0001MSD	1.0
H1584-04	H0003	1.0
H1584-05	H0060	1.0
H1584-07	H0002	1.0
H1584-08	H0007	1.0
H1584-09	H0013	1.0
H1584-10	H0051	1.0
H1584-11	H0061	1.0
H1584-12	H0075	1.0
H1584-13	H0075MS	1.0
H1584-14	H0075MSD	1.0
H1584-15	H0011	1.0
H1584-16	H0012	1.0
H1584-17	H0014	1.0
H1584-18	H0015	1.0
H1584-19	H0019	1.0
H1584-20	H0062	1.0
H1584-21	H0901	1.0

13 water samples were delivered to the laboratory intact on 02/26/2016.
7 water samples were delivered to the laboratory intact on 02/27/2016.

Test requested on the Chain of Custody was Volatile Organic by Method SOM02.3.

Samples for Volatile Organic analyses were transferred unopened to the Volatile Laboratory.
Sample Tags were not received with the samples.

The temperature of the samples was measured using an I R Gun. The samples temperature was 3.1, 4.0 and 4.1 degrees Celsius for the samples received on 2/26/2016. The samples temperature was 3.0 degrees Celsius for the samples received on 2/27/2016.

Shipping Discrepancies and/or QC issues:

Issue 1 : Sample tags were not received with samples at the laboratory. Sample tag numbers may or may not be listed on the TR/COC.

Resolution 1: In accordance with previous direction from Region 8, the laboratory will note the issue in the SDG Narrative, and proceed with the analysis of the sample. The Resolution will be applied to all samples received for this Case.

Issue 2: The laboratory received three organic water samples 2/23 for Case 46018. Organic samples for this Case are scheduled for TVOA and SVOA; however, COC lists the analysis as VOA.

Resolution 2: Per Region 8, the laboratory will analyze the three samples as scheduled for TVOA. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Trace Volatiles:

The analysis performed on instrument MSVOA_I were done using C column RXI-624 30m 0.25mm 1.4um 872456. The Trap was supplied by OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.

The analysis performed on instrument MSVOA_R were done using GC column RXI-624SIL MS 30m 0.25mm 1.4um 872456. The Trap was supplied by OI Analytical, OI #10 Trap, OI Eclipse 4660 Concentrator.
The analysis of VOC-Low Level -15 was based on method SOM02.3_Trace.

Surrogate recoveries met the criteria except for the followings:
H0002 [2-Butanone-d5-148%,1,1,2,2-Tetrachloroethane-d2-123%].
H0007 [2-Butanone-d5-139%, 2-Hexanone-d5-133%, 1,1,2,2-Tetrachloroethane-d2-125%,].
H0061[1,1,2,2-Tetrachloroethane-d2-125%].
H0012 [1,1-Dichloroethene-d2-57%].
H0015[[1,1-Dichloroethene-d2-57%].
H0901 [1,1-Dichloroethene-d2-58%].
As per method, up to 3 surrogates are allowed to fail; therefore no corrective action was needed for above mention samples.
Holding Times were met.

Instrument Performance Check met requirements.
The MS { H0001MS } recoveries met the requirements.
The MSD { H0001MSD}recoveries met the requirements.
The RPD for recoveries met criteria
Retention Times met requirements.
The Internal Standards Areas met requirements.
The Initial Calibration met the requirements.
The Continuing Calibration met the requirements.
The Blank analysis did not indicate the presence of lab contamination.
The Storage Blank did not indicate the presence of lab contamination

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Calculation:

$$\text{Concentration in ug/L} = \frac{(Ax)\,(Is)\,(DF)}{(Ais)\,(RRF)\,(Vo)}$$

Where,

Ax = Area of the characteristic ion (EICP) for the compound to be measured.
Ais = Area of the characteristic ion (EICP) for the internal standard.
Is = Amount of internal standard added in ng.
RRF = Mean Relative Response Factor from the initial calibration standard.
Vo = Total volume of water purged, in mL.
DF = Dilution Factor.

Example Calculation for sample # H0001 for Chloroform:

Ax= 84586
Is= 250
RRF= 0.648
DF=1
Ais=537659
Vo = 50

$$\text{Concentration in ug/L} = \frac{(84586)\ (250)\ (1)}{(537659)(0.648)\ (50)}$$

$$= 1.21 \text{ ug/L}$$

Reported Result = 1.2 ug/L

Relative Response Factor =:Tetrachloroethene RUN # VR022516 for 5 ppb

$$RRF = \frac{\text{Area of compound}}{\text{Area of Internal Standard}} \times \frac{\text{Conc. of Internal Standard}}{\text{Conc. of Compound}}$$

$$RRF = \frac{146506}{461306} \times \frac{5.0}{5.0} = 0.3175$$

RRF=0.318

Semivolatiles

The samples were analyzed on instrument BNA_M using GC Column ZB-SemiVolatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

Semi volatile Organic samples for water were extracted by Method SOM02.3 on 02/26/16

The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for H0075 [1,4-Dioxane-d8 - 0%, 4-Chloroaniline-d4 - 0%, 4-Nitrophenol-d4 - 5%], H0075MS [1,4-Dioxane-d8 - 13%, 4-Chloroaniline-d4 - 0%, 4-Nitrophenol-d4 - 9%], H0075MSD [1,4-Dioxane-d8 - 0%, 4-Chloroaniline-d4 - 0% and 4-Nitrophenol-d4 - 8%]. As per method four surrogates are allowed to fail. No further corrective action was taken.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The MS {H0075MS} with File ID: BM004537.D recoveries met the requirements for all compounds except for 4-Nitrophenol [7%].
The MSD {H0075MSD} with File ID: BM004538.D recoveries met the acceptable requirements except for 4-Nitrophenol [6%].
The RPD recoveries met criteria.
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements.
The Continuous Calibration met the requirements.
The Tuning criteria met requirements.

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Concentration of Water Sample:

$$\text{Concentration ug/L} = \frac{(Ax)\,(Is)\,(Vt)\,(DF)\,(GPC)}{(Ais)\,(\overline{RRF})\,(Vo)\,(Vi)}$$

Where,

Ax = Area of the characteristic ion for the compound to be measured.
Ais = Area of the characteristic ion for the internal standard.
Is = Amount of internal standard injected in ng.
Vo = Volume of water extracted in mL.
Vi = Volume of extract injected in uL.
Vt = Volume of the concentrated extract in uL

$\overline{RRF}$ = Mean Relative Response Factor determined from the initial calibration standard.
GPC = $\frac{Vin}{Vout}$ = GPC factor (If no GPC is performed, GPC=1)

No target compounds were detected on the sample.

RRF Calculation of standard 20 ppb for Dimethylphthalate for the run 03/03/16 with M instrument.

RRF= Area of compound / Area of Internal Standard X Conc. of Internal Standard / Conc. of Compound

= 132354/ 71935 X 20/20

= 1.840 (Reported RRF)

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature _____ Name: Mildred V. Reyes

Date: 03/17/16 Title: Document Control Officer

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Manual Integration Report

Sequence:	VI022616	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTD0.526/ VSTD0.526	VI047387.D	Vinyl Chloride-d3	feifei	2/29/2016 10:33:09 AM	sam	2/29/2016 2:10:47 PM	Peak Integrated by Software incorrectly
VSTD00127/ VSTD00127	VI047388.D	Methyl Acetate	feifei	2/29/2016 10:33:11 AM	sam	2/29/2016 1:07:30 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	vi022916	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VI0229WBL01/ VBLK26	VI047394.D	Chloroethane-d5	feifei	3/1/2016 10:22:16 AM	MMdadoda	3/1/2016 1:08:47 PM	Peak Integrated by Software incorrectly
H1584-07/ H0002	VI047400.D	1,1-Dichloroethene-d2	feifei	3/1/2016 10:22:26 AM	MMdadoda	3/1/2016 1:09:00 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VI030116	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VI0301WBL01/ VBLK27	VI047411.D	1,1-Dichloroethene-d2	feifei	3/2/2016 11:38:51 AM	MMDadoda	3/2/2016 5:46:06 PM	Peak Integrated by Software incorrectly
VSTDCCC005EC/ VSTD00534	VI047426.D	1,1,2,2-Tetrachloroethane	feifei	3/2/2016 11:38:58 AM	MMDadoda	3/2/2016 5:46:30 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VR022516	Instrument	MSVOA_r

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTD0.551/ VSTD0.551	VR018140.D	2-Butanone	feifei	2/26/2016 9:38:09 AM	sam	2/26/2016 2:37:17 PM	Peak Integrated by Software incorrectly
VSTD0.551/ VSTD0.551	VR018140.D	Carbon disulfide	feifei	2/26/2016 9:38:09 AM	sam	2/26/2016 2:37:17 PM	Peak Integrated by Software incorrectly
VSTD0.551/ VSTD0.551	VR018140.D	Methylene chloride	feifei	2/26/2016 9:38:09 AM	sam	2/26/2016 2:37:17 PM	Peak Integrated by Software incorrectly
VSTD0.551/ VSTD0.551	VR018140.D	Trichlorofluoromethane	feifei	2/26/2016 9:38:09 AM	sam	2/26/2016 2:37:17 PM	Peak Integrated by Software incorrectly
VSTD00152/ VSTD00152	VR018141.D	Methylene chloride	feifei	2/26/2016 9:38:11 AM	sam	2/26/2016 2:37:23 PM	Peak Integrated by Software incorrectly
VSTD00152/ VSTD00152	VR018141.D	Trichlorofluoromethane	feifei	2/26/2016 9:38:11 AM	sam	2/26/2016 2:37:23 PM	Peak Integrated by Software incorrectly
VSTD00553/ VSTD00553	VR018142.D	Methylene chloride	feifei	2/26/2016 9:38:12 AM	sam	2/26/2016 2:46:30 PM	Peak Integrated by Software incorrectly
VSTD00553/ VSTD00553	VR018142.D	Trichlorofluoromethane	feifei	2/26/2016 9:38:12 AM	sam	2/26/2016 2:46:30 PM	Peak Integrated by Software incorrectly
VSTD01054/ VSTD01054	VR018143.D	Methylene chloride	feifei	2/26/2016 9:38:14 AM	sam	2/26/2016 2:37:28 PM	Peak Integrated by Software incorrectly
VSTD01054/ VSTD01054	VR018143.D	Trichlorofluoromethane	feifei	2/26/2016 9:38:14 AM	sam	2/26/2016 2:37:28 PM	Peak Integrated by Software incorrectly
VSTD02055/ VSTD02055	VR018144.D	Methylene chloride	feifei	2/26/2016 9:38:16 AM	sam	2/26/2016 2:37:34 PM	Peak Integrated by Software incorrectly
VSTD02055/ VSTD02055	VR018144.D	Trichlorofluoromethane	feifei	2/26/2016 9:38:16 AM	sam	2/26/2016 2:37:34 PM	Peak Integrated by Software incorrectly
VSTDCCC005/ VSTD00556	VR018145.D	Methylene chloride	feifei	2/26/2016 9:38:17 AM	sam	2/26/2016 2:37:39 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VR022516	Instrument	MSVOA_r

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005/ VSTD00556	VR018145.D	Trichlorofluoromethane	feifei	2/26/2016 9:38:17 AM	sam	2/26/2016 2:37:39 PM	Peak Integrated by Software incorrectly
VSTDCCC005EC/ VSTD00557	VR018162.D	Trichlorofluoromethane	feifei	2/26/2016 9:38:21 AM	sam	2/26/2016 2:37:51 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VR022616	Instrument	MSVOA_r

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005/ VSTD00558	VR018164.D	Methylene chloride	feifei	2/29/2016 10:31:38 AM	sam	2/29/2016 2:21:56 PM	Peak Integrated by Software incorrectly
VSTDCCC005/ VSTD00558	VR018164.D	Trichlorofluoromethane	feifei	2/29/2016 10:31:38 AM	sam	2/29/2016 2:21:56 PM	Peak Integrated by Software incorrectly
VSTDCCC005EC/ VSTD00559	VR018175.D	Methylene chloride	feifei	2/29/2016 10:31:42 AM	sam	2/29/2016 2:22:02 PM	Peak Integrated by Software incorrectly
VSTDCCC005EC/ VSTD00559	VR018175.D	Trichlorofluoromethane	feifei	2/29/2016 10:31:42 AM	sam	2/29/2016 2:22:02 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VR030216	Instrument	MSVOA_r

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005/ VSTD00567	VR018203.D	Trichlorofluoromethane	feifei	3/3/2016 11:00:52 AM	MMdadoda	3/3/2016 3:37:18 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	BM030316	Instrument	BNA_m

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTD02036/ SSTD02036	BM004526.D	Caprolactam	Sohil	3/4/2016 3:20:51 PM	UMANGI	3/4/2016 4:20:49 PM	Peak Integrated by Software incorrectly
SSTD04037/ SSTD04037	BM004527.D	Caprolactam	Sohil	3/4/2016 3:20:56 PM	UMANGI	3/4/2016 4:20:51 PM	Peak Integrated by Software incorrectly
SSTD08038/ SSTD08038	BM004528.D	Caprolactam	Sohil	3/4/2016 3:21:00 PM	UMANGI	3/4/2016 4:20:54 PM	Peak Integrated by Software incorrectly
SSTD16039/ SSTD16039	BM004529.D	Caprolactam	Sohil	3/4/2016 3:21:04 PM	UMANGI	3/4/2016 4:20:56 PM	Peak Integrated by Software incorrectly
H1584-12/ H0075	BM004536.D	4-Nitrophenol-d4	Sohil	3/4/2016 3:21:24 PM	UMANGI	3/4/2016 4:20:57 PM	Peak Integrated by Software incorrectly
H1584-14MSD/ H0075MSD	BM004538.D	4-Nitrophenol-d4	Sohil	3/4/2016 3:21:21 PM	UMANGI	3/4/2016 4:20:59 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02041	BM004555.D	4-Nitrophenol	Sohil	3/4/2016 3:24:10 PM	UMANGI	3/4/2016 4:21:30 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02041	BM004555.D	4-Nitrophenol-d4	Sohil	3/4/2016 3:24:10 PM	UMANGI	3/4/2016 4:21:30 PM	Peak Integrated by Software incorrectly

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No.: 46018 MA No.: _____ SDG No.: H0001

Analytical Method : Trace VOA Level : _____

Matrix : Water

EPA Sample No .	DMC1 (VCL)	DMC2 (CLA)	DMC3 (DCE)	DMC4 (BUT)	DMC5 (CLF)	DMC6 (DCA)	DMC7 (BEN)	DMC8 (DPA)
VBLK51	98	95	73	86	92	92	101	99
H0060	99	97	75	86	92	95	104	102
H0003	103	102	79	90	101	97	106	102
VBLK52	102	101	78	73	90	85	103	96
H0001	89	91	75	69	82	76	89	84
H0001MS	103	104	109	82	96	94	105	101
H0001MSD	100	105	108	87	92	92	103	102
VBLK26	105	102	73	114	95	95	100	105
H0002	110	107	78	148 *	117	118	112	124
H0007	113	105	76	139 *	105	111	101	107
VBLK27	79	82	63	82	85	87	95	106
H0013	96	97	75	125	108	109	105	120
H0051	92	97	69	102	107	99	117	130
H0061	103	116	78	130	109	118	105	123
VBLK53	85	87	64	90	82	87	88	89
H0011	86	93	62	95	88	93	90	92
H0012	80	84	57 *	94	83	89	82	86
H0014	75	81	60	92	78	86	80	81
H0015	71	77	57 *	94	82	88	83	85
H0019	85	87	61	107	87	96	90	94
H0062	80	82	61	99	84	92	85	87
H0901	78	82	58 *	97	82	88	82	84
VBLK54	97	99	70	118	99	111	99	102
VHBLK01	97	101	70	123	103	117	101	104

	QC LIMITS
DMC1 (VCL) = Vinyl Chloride-d3	(40-130)
DMC2 (CLA) = Chloroethane-d5	(65-130)
DMC3 (DCE) = 1,1-Dichloroethene-d2	(60-125)
DMC4 (BUT) = 2-Butanone-d5	(40-130)
DMC5 (CLF) = Chloroform-d	(70-125)
DMC6 (DCA) = 1,2-Dichloroethane-d4	(70-130)
DMC7 (BEN) = Benzene-d6	(70-125)
DMC8 (DPA) = 1,2-Dichloropropane-d6	(60-140)

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 46018 MA No.: _____ SDG No.: H0001
Analytical Method : Trace VOA Level : _____
Matrix : Water

EPA Sample No .	DMC9 (TOL)	DMC10 (TDP)	DMC11 (HEX)	DMC12 (TCA)	DMC13 (DCZ)	DMC14	DMC15	DMC16	TOT OUT
VBLK51	101	85	81	80	106				0
H0060	106	92	81	82	110				0
H0003	106	87	84	84	113				0
VBLK52	101	76	70	75	102				0
H0001	89	69	65	69	88				0
H0001MS	105	85	81	81	101				0
H0001MSD	106	85	83	82	104				0
VBLK26	94	98	105	105	96				0
H0002	97	118	128	123 *	98				2
H0007	102	112	133 *	125 *	103				3
VBLK27	91	99	89	89	83				0
H0013	96	107	118	115	99				0
H0051	98	111	107	107	98				0
H0061	98	111	115	125 *	104				1
VBLK53	88	76	86	86	89				0
H0011	89	80	97	90	88				0
H0012	82	76	93	85	83				1
H0014	79	68	90	81	82				0
H0015	81	74	92	82	84				1
H0019	90	81	101	90	91				0
H0062	84	71	91	84	88				0
H0901	81	71	91	84	84				1
VBLK54	100	86	109	98	103				0
VHBLK01	103	91	115	106	106				0

	QC LIMITS
DMC9 (TOL) = Toluene-d8	(70-130)
DMC10 (TDP) = trans-1,3-Dichloropropene-d4	(55-130)
DMC11 (HEX) = 2-Hexanone-d5	(45-130)
DMC12 (TCA) = 1,1,2,2-Tetrachloroethane-d2	(65-120)
DMC13 (DCZ) = 1,2-Dichlorobenzene-d4	(80-120)

FORM 3A-OR
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No. : 46018 MA No .: _____ SDG No. : H0001

Analytical Method : Trace VOA Level : _____

Matrix Water

EPA Sample No.(Matrix Spike/Metrix Spike Duplicate): H0001

Instrument ID : MSVOA_R GC Column RXI-624 ID : 0.25 (mm)

Concentration Units (ug/L,mg/L ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %R #	QC Limits %R
1,1-Dichloroethene	5	0	5.1	102	61 - 145
Benzene	5	0	5	100	76 - 127
Trichloroethene	5	0	4.9	98	71 - 120
Toluene	5	0	5.1	102	76 - 125
Chlorobenzene	5	0	4.7	94	75 - 130

ANALYTE	SPIKE AADDED	MSD CONCENTRATION	MSD %R #	RPD	QC Limits	
					RPD	%R
1,1-Dichloroethene	5	5.2	104	2	14	61 - 145
Benzene	5	5.3	106	6	11	76 - 127
Trichloroethene	5	5.3	106	8	14	71 - 120
Toluene	5	5.5	110	8	13	76 - 125
Chlorobenzene	5	5.1	102	8	13	75 - 130

EPA SAMPLE NO.

VBLK26

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46018
MA No. :
SDG No.: H0001
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0229WBL01
Instrument ID: MSVOA_I
Lab File ID : VI047394.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 02/29/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 13:11
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H0002	H1584-07	VI047400.D	02/29/2016 16:29
H0007	H1584-08	VI047401.D	02/29/2016 17:00

EPA SAMPLE NO.

VBLK27

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0301WBL01
Instrument ID: MSVOA_I
Lab File ID : VI047411.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 03/01/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 10:55
Heated Purge: (Y/N) N Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H0013	H1584-09	VI047412.D	03/01/2016 11:39
H0051	H1584-10	VI047413.D	03/01/2016 12:11
H0061	H1584-11	VI047414.D	03/01/2016 12:43

EPA SAMPLE NO.

VBLK51

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46018
MA No. :
SDG No.: H0001
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VR0225WBL01
Instrument ID: MSVOA_R
Lab File ID : VR018146.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 02/25/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 19:53
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H0060	H1584-05	VR018148.D	02/25/2016 20:55
H0003	H1584-04	VR018149.D	02/25/2016 21:26

EPA SAMPLE NO.

VBLK52

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46018
MA No. :
SDG No.: H0001
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VR0226WBL01
Instrument ID: MSVOA_R
Lab File ID : VR018165.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 02/26/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 10:09
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H0001	H1584-01	VR018166.D	02/26/2016 10:59
H0001MS	H1584-02MS	VR018167.D	02/26/2016 11:31
H0001MSD	H1584-03MSD	VR018168.D	02/26/2016 12:02

EPA SAMPLE NO.

VBLK53

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46018
MA No. :
SDG No.: H0001
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VR0301WBL01
Instrument ID: MSVOA_R
Lab File ID : VR018183.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 03/01/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 17:26
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H0011	H1584-15	VR018185.D	03/01/2016 18:28
H0012	H1584-16	VR018186.D	03/01/2016 18:59
H0014	H1584-17	VR018187.D	03/01/2016 19:31
H0015	H1584-18	VR018188.D	03/01/2016 20:02
H0019	H1584-19	VR018189.D	03/01/2016 20:33
H0062	H1584-20	VR018190.D	03/01/2016 21:04
H0901	H1584-21	VR018191.D	03/01/2016 21:35

EPA SAMPLE NO.

VBLK54

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46018
MA No. :
SDG No.: H0001
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VR0302WBL01
Instrument ID: MSVOA_R
Lab File ID : VR018204.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 03/02/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 12:15
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
VHBLK01	H1584-06	VR018206.D	03/02/2016 13:39

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB26

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method : Trace VOA Lab File ID : VI047386.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 02/26/2016 Injection Time: 15:32

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	25.4	
75	30.0 - 80.0% of mass 95	55.2	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.9	
173	Less than 2.0% of mass 174	0.1(0.1)	1
174	50.0 - 120% of mass 95	84.5	
175	5.0 - 9.0% of mass 174	6.8(8.1)	1
176	95.0 - 101% of mass 174	82.7(97.8)	1
177	5.0 - 9.0% of mass 176	5.5(6.7)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD0.526	VSTD0.526	VI047387.D	02/26/2016	16:20
VSTD00127	VSTD00127	VI047388.D	02/26/2016	16:52
VSTD00528	VSTD00528	VI047389.D	02/26/2016	17:24
VSTD01029	VSTD01029	VI047390.D	02/26/2016	17:56
VSTD02030	VSTD02030	VI047391.D	02/26/2016	18:27

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB27

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method : Trace VOA Lab File ID : VI047392.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 02/29/2016 Injection Time: 10:13

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	23.9	
75	30.0 - 80.0% of mass 95	51.3	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	7	
173	Less than 2.0% of mass 174	0.0(0.0)	1
174	50.0 - 120% of mass 95	85.7	
175	5.0 - 9.0% of mass 174	6.8(8)	1
176	95.0 - 101% of mass 174	83.6(97.5)	1
177	5.0 - 9.0% of mass 176	4.9(5.8)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00531	VSTDCCC005	VI047393.D	02/29/2016	12:31
VBLK26	VI0229WBL01	VI047394.D	02/29/2016	13:11
H0002	H1584-07	VI047400.D	02/29/2016	16:29
H0007	H1584-08	VI047401.D	02/29/2016	17:00
VSTD00532	VSTDCCC005EC	VI047408.D	02/29/2016	21:15

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB28

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method : Trace VOA Lab File ID : VI047409.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 03/01/2016 Injection Time: 09:28

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	23.1	
75	30.0 - 80.0% of mass 95	51.6	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.6	
173	Less than 2.0% of mass 174	0.0(0.0)	1
174	50.0 - 120% of mass 95	81.3	
175	5.0 - 9.0% of mass 174	5.6(6.9)	1
176	95.0 - 101% of mass 174	81.6(100.4)	1
177	5.0 - 9.0% of mass 176	5.3(6.5)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00533	VSTDCCC005	VI047410.D	03/01/2016	10:11
VBLK27	VI0301WBL01	VI047411.D	03/01/2016	10:55
H0013	H1584-09	VI047412.D	03/01/2016	11:39
H0051	H1584-10	VI047413.D	03/01/2016	12:11
H0061	H1584-11	VI047414.D	03/01/2016	12:43
VSTD00534	VSTDCCC005EC	VI047426.D	03/01/2016	19:31

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB51

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method : Trace VOA Lab File ID : VR018139.D

Instrument ID: MSVOA_R BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 02/25/2016 Injection Time: 13:02

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	27.7	
75	30.0 - 80.0% of mass 95	59.8	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6	
173	Less than 2.0% of mass 174	0.0(0.0)	1
174	50.0 - 120% of mass 95	77.1	
175	5.0 - 9.0% of mass 174	6.5(8.4)	1
176	95.0 - 101% of mass 174	75.2(97.6)	1
177	5.0 - 9.0% of mass 176	5.7(7.6)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD0.551	VSTD0.551	VR018140.D	02/25/2016	13:49
VSTD00152	VSTD00152	VR018141.D	02/25/2016	14:20
VSTD00553	VSTD00553	VR018142.D	02/25/2016	14:52
VSTD01054	VSTD01054	VR018143.D	02/25/2016	15:23
VSTD02055	VSTD02055	VR018144.D	02/25/2016	15:54
VSTD00556	VSTDCCC005	VR018145.D	02/25/2016	18:44
VBLK51	VR0225WBL01	VR018146.D	02/25/2016	19:53
H0060	H1584-05	VR018148.D	02/25/2016	20:55
H0003	H1584-04	VR018149.D	02/25/2016	21:26
VSTD00557	VSTDCCC005EC	VR018162.D	02/26/2016	04:11

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB52

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method : Trace VOA Lab File ID : VR018163.D

Instrument ID: MSVOA_R BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 02/26/2016 Injection Time: 08:48

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	27.6	
75	30.0 - 80.0% of mass 95	61.2	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.4	
173	Less than 2.0% of mass 174	0.5(0.7)	1
174	50.0 - 120% of mass 95	75.2	
175	5.0 - 9.0% of mass 174	4.1(5.5)	1
176	95.0 - 101% of mass 174	72(95.8)	1
177	5.0 - 9.0% of mass 176	4.4(6.1)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00558	VSTDCCC005	VR018164.D	02/26/2016	09:27
VBLK52	VR0226WBL01	VR018165.D	02/26/2016	10:09
H0001	H1584-01	VR018166.D	02/26/2016	10:59
H0001MS	H1584-02MS	VR018167.D	02/26/2016	11:31
H0001MSD	H1584-03MSD	VR018168.D	02/26/2016	12:02
VSTD00559	VSTDCCC005EC	VR018175.D	02/26/2016	15:39

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB53

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method : Trace VOA Lab File ID : VR018176.D

Instrument ID: MSVOA_R BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 03/01/2016 Injection Time: 12:21

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	25.4	
75	30.0 - 80.0% of mass 95	57.3	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.7	
173	Less than 2.0% of mass 174	0.0(0.0)	1
174	50.0 - 120% of mass 95	80.7	
175	5.0 - 9.0% of mass 174	6.3(7.8)	1
176	95.0 - 101% of mass 174	77.8(96.4)	1
177	5.0 - 9.0% of mass 176	4.8(6.2)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD0.560	VSTD0.560	VR018177.D	03/01/2016	12:59
VSTD00161	VSTD00161	VR018178.D	03/01/2016	13:47
VSTD00562	VSTD00562	VR018179.D	03/01/2016	14:18
VSTD01063	VSTD01063	VR018180.D	03/01/2016	14:50
VSTD02064	VSTD02064	VR018181.D	03/01/2016	15:21
VSTD00565	VSTDCCC005	VR018182.D	03/01/2016	16:18
VBLK53	VR0301WBL01	VR018183.D	03/01/2016	17:26
H0011	H1584-15	VR018185.D	03/01/2016	18:28
H0012	H1584-16	VR018186.D	03/01/2016	18:59
H0014	H1584-17	VR018187.D	03/01/2016	19:31
H0015	H1584-18	VR018188.D	03/01/2016	20:02
H0019	H1584-19	VR018189.D	03/01/2016	20:33
H0062	H1584-20	VR018190.D	03/01/2016	21:04
H0901	H1584-21	VR018191.D	03/01/2016	21:35
VSTD00566	VSTDCCC005EC	VR018201.D	03/02/2016	02:46

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB54

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method : Trace VOA Lab File ID : VR018202.D

Instrument ID: MSVOA_R BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 03/02/2016 Injection Time: 10:43

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	25	
75	30.0 - 80.0% of mass 95	57.6	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	7.3	
173	Less than 2.0% of mass 174	0.0(0.0)	1
174	50.0 - 120% of mass 95	76.9	
175	5.0 - 9.0% of mass 174	6(7.8)	1
176	95.0 - 101% of mass 174	76.1(98.9)	1
177	5.0 - 9.0% of mass 176	5.1(6.7)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00567	VSTDCCC005	VR018203.D	03/02/2016	11:27
VBLK54	VR0302WBL01	VR018204.D	03/02/2016	12:15
VHBLK01	H1584-06	VR018206.D	03/02/2016	13:39
VSTD00568	VSTDCCC005EC	VR018217.D	03/02/2016	20:00

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46018 | MA No.: | SDG No.: H0001
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00531 | Lab File ID (Standard) : VI047393.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 02/26/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 02/29/2016
Heated Purge: (Y/N) N | Time Analyzed : 12:31

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	881982	7.94	779293	11.22	301620	13.43
UPPER LIMIT	1763960	8.11	1558590	11.39	603240	13.6
LOWER LIMIT	440991	7.77	389647	11.05	150810	13.26
EPA SAMPLE NO.						
VBLK26	756036	7.93	670774	11.22	290007	13.43
H0002	540160	7.93	478326	11.22	231671	13.42
H0007	622956	7.92	600373	11.21	261757	13.42

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46018 | MA No.: | SDG No.: H0001
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00533 | Lab File ID (Standard) : VI047410.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 02/26/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 03/01/2016
Heated Purge: (Y/N) N | Time Analyzed : 10:11

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	840373	7.90	771290	11.19	287641	13.40
UPPER LIMIT	1680750	8.07	1542580	11.36	575282	13.57
LOWER LIMIT	420187	7.73	385645	11.02	143821	13.23
EPA SAMPLE NO.						
VBLK27	857057	7.90	716241	11.19	290867	13.40
H0013	612415	7.90	551802	11.20	245229	13.40
H0051	715036	7.90	570893	11.19	229729	13.41
H0061	764896	7.90	696842	11.20	328823	13.40

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46018 | MA No.: | SDG No.: H0001
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00556 | Lab File ID (Standard) : VR018145.D
Instrument ID : MSVOA_R | Init.Calib.Date(s): 02/25/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 02/25/2016
Heated Purge: (Y/N) N | Time Analyzed : 18:44

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	584396	8.33	494569	11.18	201454	13.13
UPPER LIMIT	1168790	8.5	989138	11.35	402908	13.3
LOWER LIMIT	292198	8.16	247285	11.01	100727	12.96
EPA SAMPLE NO.						
VBLK51	566480	8.33	463455	11.18	155955	13.13
H0060	515663	8.33	418320	11.18	134427	13.13
H0003	497789	8.33	411834	11.18	131893	13.13

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46018 | MA No.: | SDG No.: H0001
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00558 | Lab File ID (Standard) : VR018164.D
Instrument ID : MSVOA_R | Init.Calib.Date(s): 02/25/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 02/26/2016
Heated Purge: (Y/N) N | Time Analyzed : 09:27

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	524656	8.33	444639	11.18	181914	13.13
UPPER LIMIT	1049310	8.5	889278	11.35	363828	13.3
LOWER LIMIT	262328	8.16	222320	11.01	90957	12.96
EPA SAMPLE NO.						
VBLK52	529626	8.33	423106	11.18	144330	13.13
H0001	537659	8.33	444256	11.18	160155	13.13
H0001MS	489955	8.33	405786	11.18	148088	13.13
H0001MSD	507122	8.33	414076	11.18	145170	13.13

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46018 | MA No.: | SDG No.: H0001
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00565 | Lab File ID (Standard) : VR018182.D
Instrument ID : MSVOA_R | Init.Calib.Date(s): 03/01/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 03/01/2016
Heated Purge: (Y/N) N | Time Analyzed : 16:18

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1075590	8.33	667757	11.18	203870	13.12
UPPER LIMIT	2151170	8.5	1335510	11.35	407740	13.29
LOWER LIMIT	537794	8.16	333879	11.01	101935	12.95
EPA SAMPLE NO.						
VBLK53	962947	8.33	600019	11.18	178940	13.13
H0011	959773	8.33	604660	11.18	185715	13.13
H0012	986182	8.33	630308	11.18	188643	13.12
H0014	1009992	8.33	642602	11.18	189682	13.13
H0015	1009319	8.33	641128	11.18	181727	13.12
H0019	948893	8.33	600681	11.18	173698	13.13
H0062	952132	8.33	608341	11.18	174648	13.13
H0901	952548	8.33	607793	11.18	182068	13.13

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46018 | MA No.: | SDG No.: H0001
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00567 | Lab File ID (Standard) : VR018203.D
Instrument ID : MSVOA_R | Init.Calib.Date(s): 03/01/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 03/02/2016
Heated Purge: (Y/N) N | Time Analyzed : 11:27

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	865131	8.33	575720	11.18	194708	13.13
UPPER LIMIT	1730260	8.5	1151440	11.35	389416	13.3
LOWER LIMIT	432566	8.16	287860	11.01	97354	12.96
EPA SAMPLE NO.						
VBLK54	846159	8.33	541695	11.18	164956	13.13
VHBLK01	778116	8.33	505792	11.18	152898	13.13

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0001

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018166.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.9	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.2	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0001

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018166.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0001

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018166.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0001

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018166.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 02/26/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

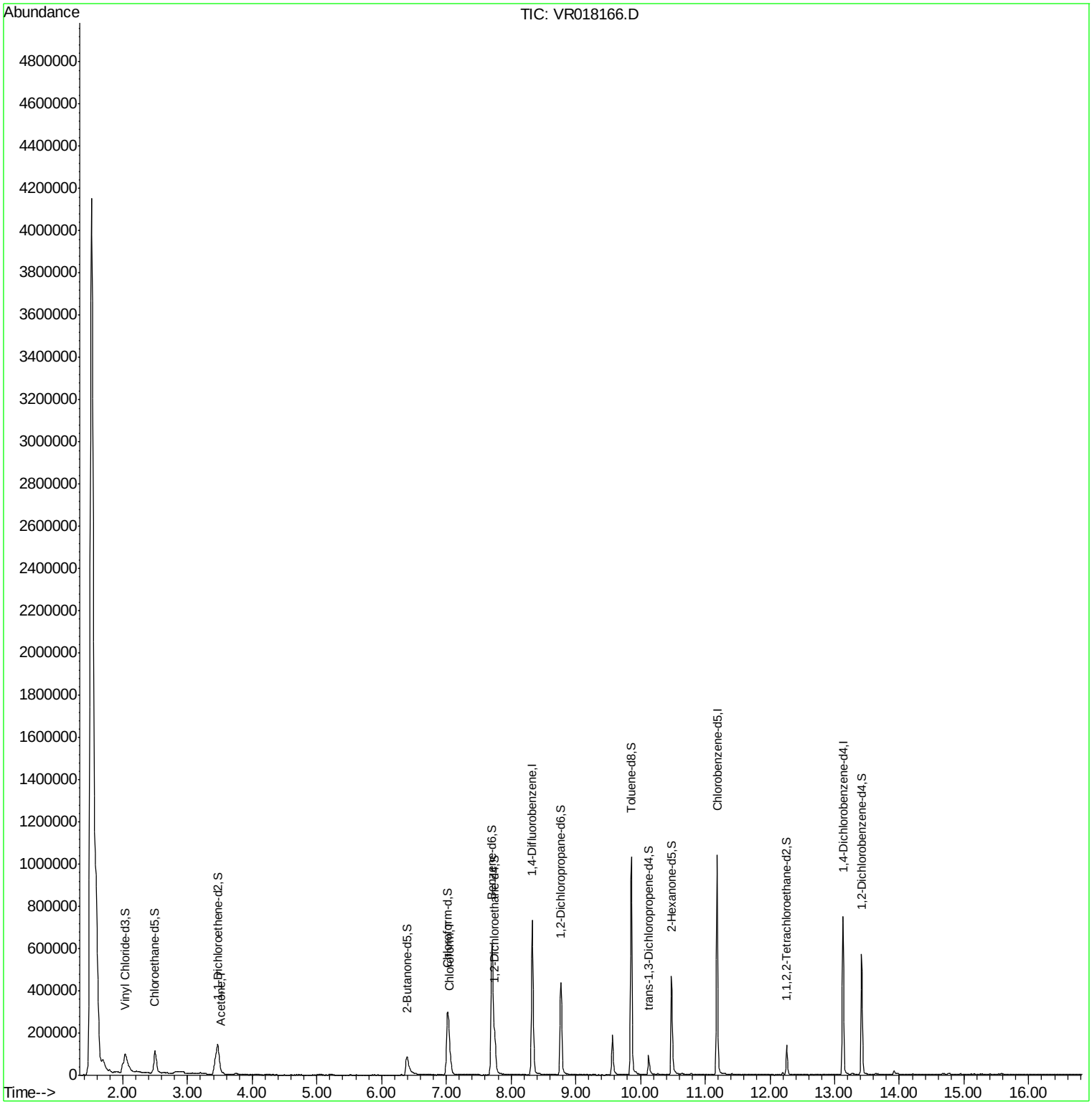
EPA-designated Registry Number.

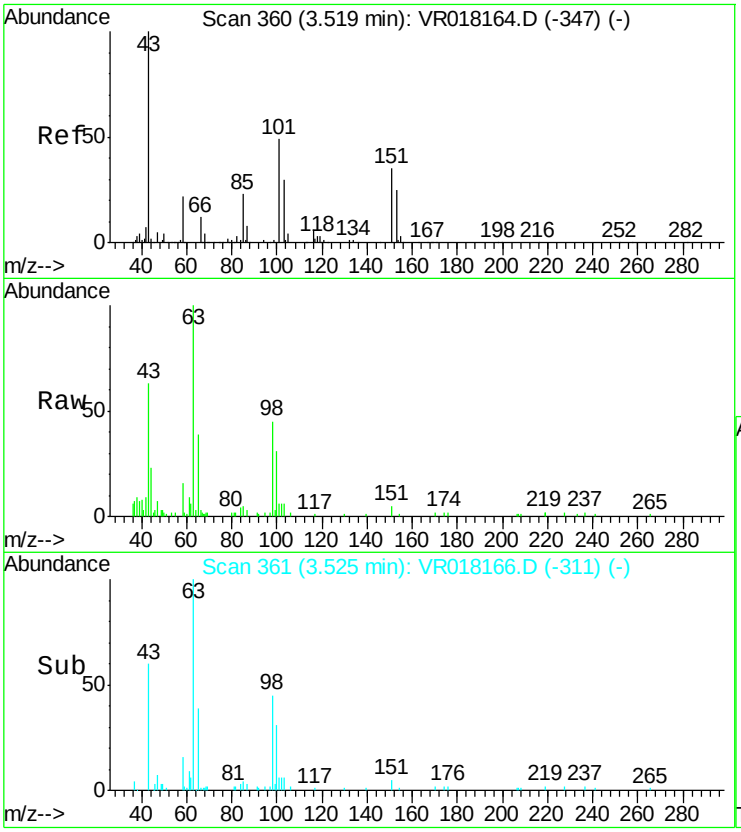
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018166.D
Acq On : 26 Feb 2016 10:59
Operator : MD\SY
Sample : H1584-01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0001

Quant Time: Feb 27 01:27:59 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration



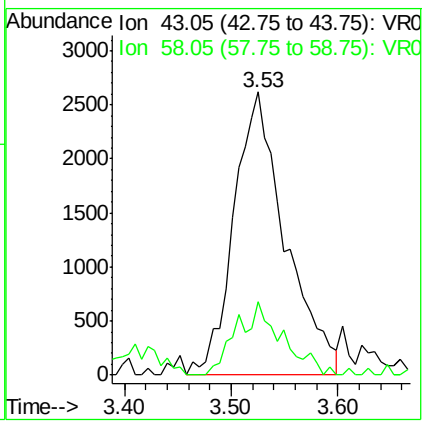


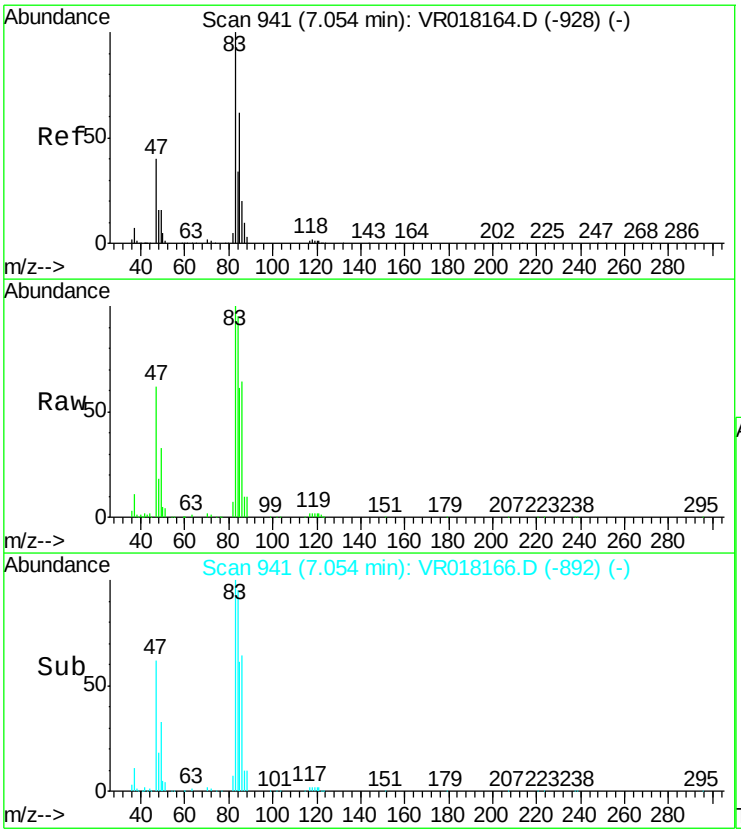
#13
Acetone
Concen: 1.91 ug/L
RT: 3.53 min Scan# 361
Delta R.T. 0.01 min
Lab File: VR018166.D
Acq: 26 Feb 2016 10:59

Instrument : MSVOA_R
ClientSampleId : H0001

Tgt Ion: 43 Resp: 8837

Ion	Ratio	Lower	Upper
43	100		
58	23.0	0.0	47.4

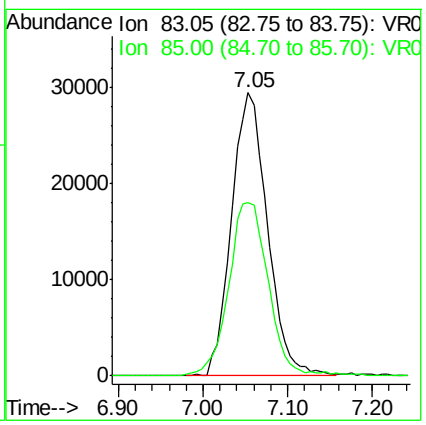




#25
Chloroform
Concen: 1.21 ug/L
RT: 7.05 min Scan# 941
Delta R.T. 0.00 min
Lab File: VR018166.D
Acq: 26 Feb 2016 10:59

Tgt Ion: 83 Resp: 84586

Ion	Ratio	Lower	Upper
83	100		
85	61.4	43.8	81.3



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018166.D
Acq On : 26 Feb 2016 10:59
Operator : MD\SY
Sample : H1584-01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0001

Quant Time: Feb 27 01:27:59 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	537659	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	444256	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	160155	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	204602	4.46	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 89.20%			
7) Chloroethane-d5	2.50	69	153407	4.53	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 90.60%			
11) 1,1-Dichloroethene-d2	3.46	63	244850	3.73	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 74.60%			
20) 2-Butanone-d5	6.40	46	193830	34.41	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 68.82%			
24) Chloroform-d	7.02	84	302995	4.12	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 82.40%			
26) 1,2-Dichloroethane-d4	7.75	65	152899	3.81	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 76.20%			
32) Benzene-d6	7.70	84	606724	4.46	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.20%			
36) 1,2-Dichloropropane-d6	8.77	67	183408	4.22	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 84.40%			
41) Toluene-d8	9.86	98	572941	4.44	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.80%			
43) trans-1,3-Dichloropropene-	10.13	79	49964	3.44	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 68.80%			
46) 2-Hexanone-d5	10.48	63	132527	32.64	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 65.28%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	59613	3.46	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 69.20%			
64) 1,2-Dichlorobenzene-d4	13.42	152	119025	4.41	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.20%			
Target Compounds						Qvalue
13) Acetone	3.53	43	8837	1.91	ug/L	99
25) Chloroform	7.05	83	84586	1.21	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA R\DATA\VR022616\
Data File : VR018166.D
Acq On : 26 Feb 2016 10:59
Operator : MD\SY
Sample : H1584-01
Misc : 25mL/MSVOA R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0001

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.518	16	31	56	rBV	4151923	17479156	100.00%	56.120%
2	2.035	105	116	138	rBV2	86000	435911	2.49%	1.400%
3	2.497	181	192	205	rBV	107289	304634	1.74%	0.978%
4	3.464	336	351	379	rVB2	145044	637269	3.65%	2.046%
5	6.397	825	833	857	rBV2	86490	341592	1.95%	1.097%
6	7.023	924	936	959	rBV2	297158	1004171	5.74%	3.224%
7	7.705	1039	1048	1071	rBV2	617979	1852720	10.60%	5.948%
8	8.331	1143	1151	1168	rBV	733519	1475461	8.44%	4.737%
9	8.769	1215	1223	1236	rBV	436269	904602	5.18%	2.904%
10	9.566	1346	1354	1367	rBV	187861	344884	1.97%	1.107%
11	9.858	1395	1402	1411	rBV	1031960	1667464	9.54%	5.354%
12	10.126	1440	1446	1457	rBV	94226	176825	1.01%	0.568%
13	10.479	1497	1504	1518	rBV	465104	780343	4.46%	2.505%
14	11.184	1613	1620	1635	rBV	1040108	1587650	9.08%	5.097%
15	12.261	1791	1797	1806	rVB	138378	212851	1.22%	0.683%
16	13.131	1934	1940	1952	rBV	746608	1099697	6.29%	3.531%
17	13.417	1981	1987	2001	rBV	571250	840826	4.81%	2.700%

Sum of corrected areas: 31146056

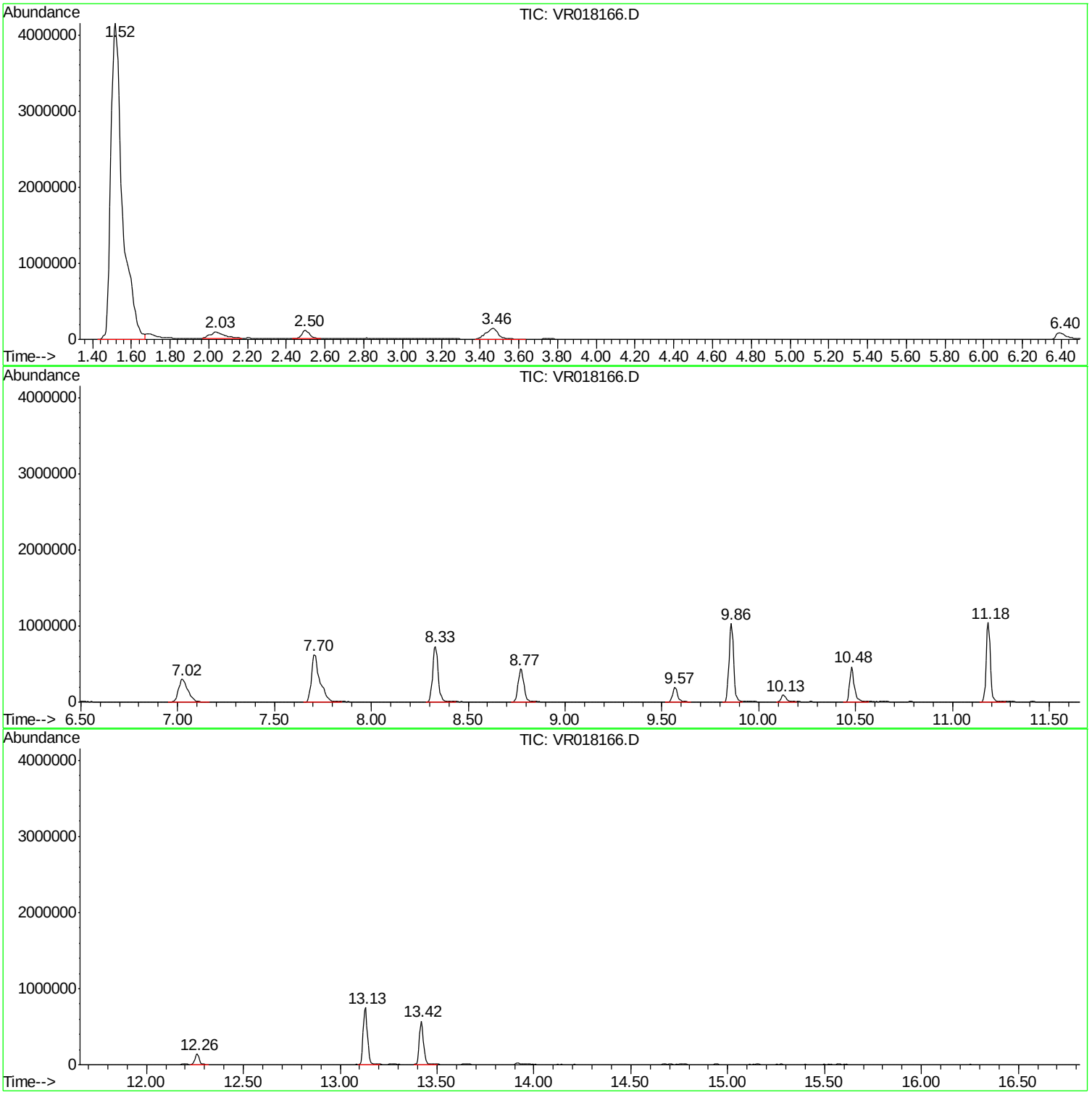
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018166.D
Acq On : 26 Feb 2016 10:59
Operator : MD\SY
Sample : H1584-01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0001

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018166.D
Acq On : 26 Feb 2016 10:59
Operator : MD\SY
Sample : H1584-01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H0001

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018166.D
Acq On : 26 Feb 2016 10:59
Operator : MD\SY
Sample : H1584-01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0001

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0003

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018149.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	3.4	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0003

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018149.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.21	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0003

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018149.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0003

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018149.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 02/25/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

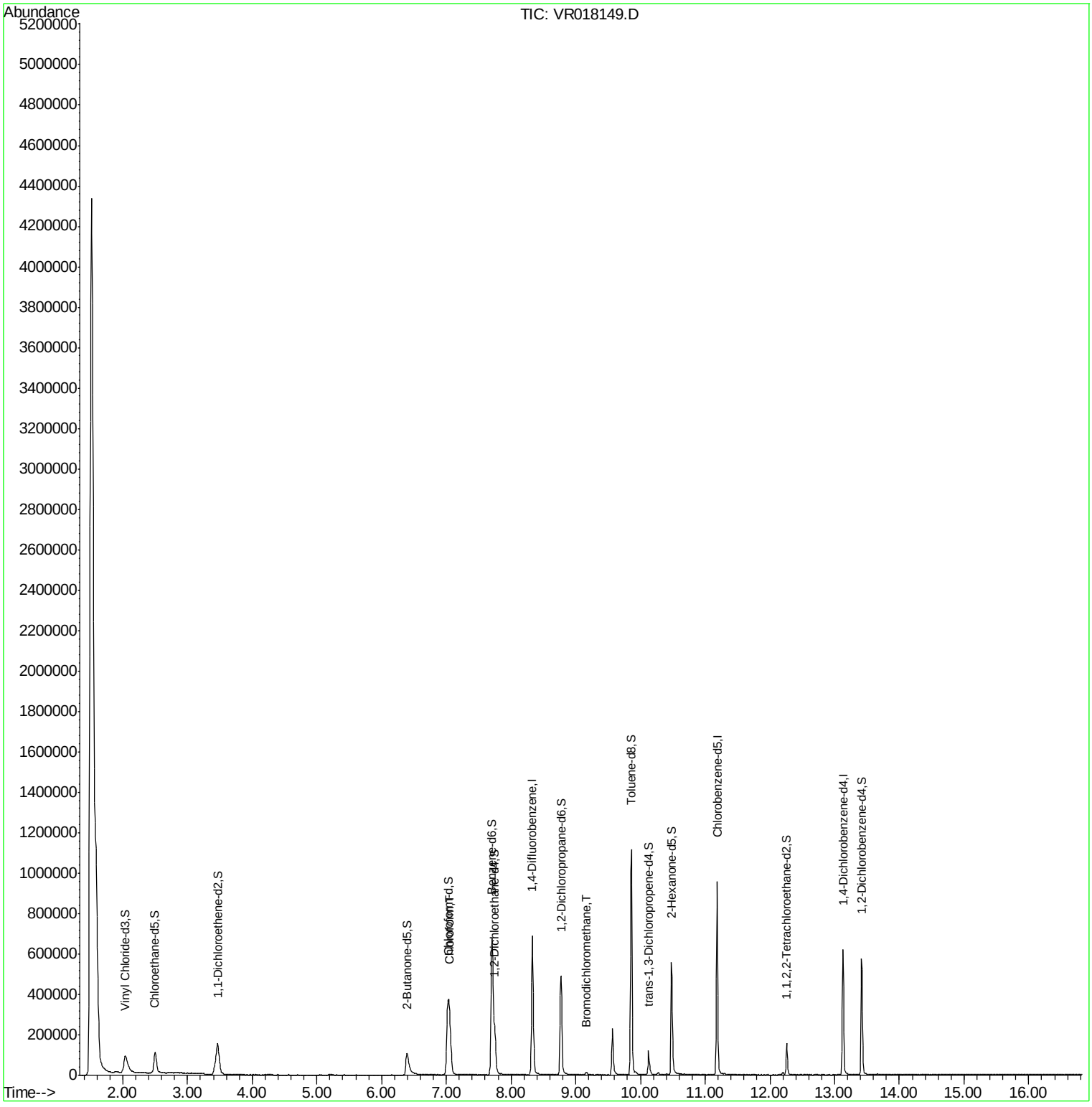
EPA-designated Registry Number.

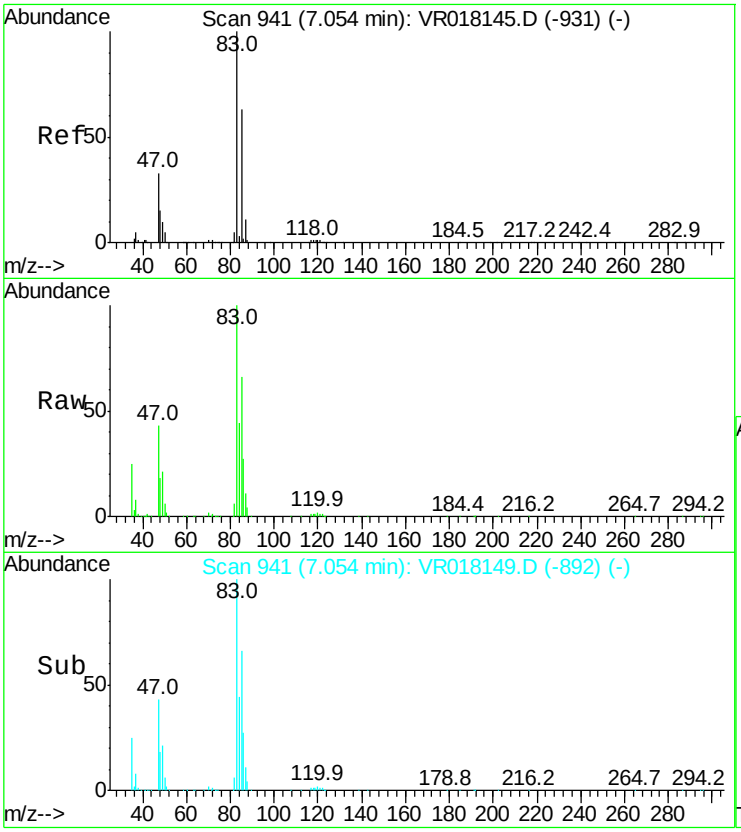
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018149.D
Acq On : 25 Feb 2016 21:26
Operator : MD\SY
Sample : H1584-04
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0003

Quant Time: Feb 26 04:29:00 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration



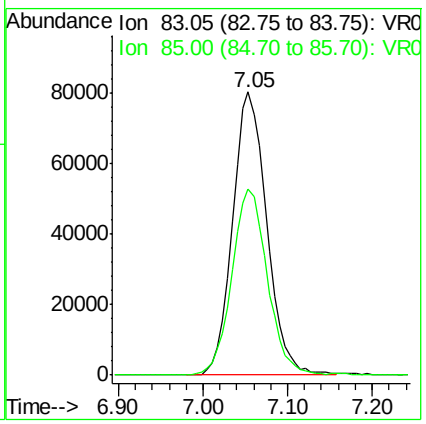


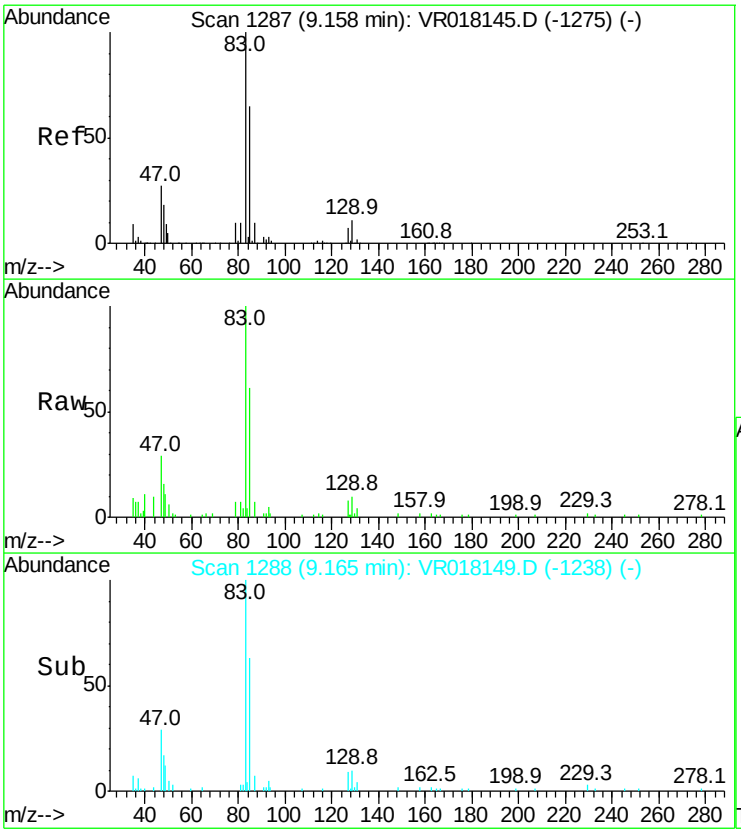
#25
Chloroform
Concen: 3.39 ug/L
RT: 7.05 min Scan# 941
Delta R.T. 0.00 min
Lab File: VR018149.D
Acq: 25 Feb 2016 21:26

Instrument : MSVOA_R
ClientSampleId : H0003

Tgt Ion: 83 Resp: 218896

Ion	Ratio	Lower	Upper
83	100		
85	65.6	43.8	81.3

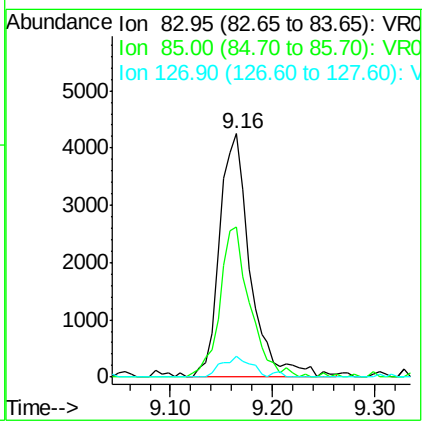




#38
Bromodichloromethane
Concen: 0.21 ug/L
RT: 9.16 min Scan# 1288
Delta R.T. 0.01 min
Lab File: VR018149.D
Acq: 25 Feb 2016 21:26

Tgt Ion: 83 Resp: 8872

Ion	Ratio	Lower	Upper
83	100		
85	61.4	43.8	81.4
127	9.7	6.5	9.7



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018149.D
Acq On : 25 Feb 2016 21:26
Operator : MD\SY
Sample : H1584-04
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0003

Quant Time: Feb 26 04:29:00 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	497789	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	411834	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	131893	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	219399	5.16	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 103.20%			
7) Chloroethane-d5	2.50	69	159649	5.09	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.80%			
11) 1,1-Dichloroethene-d2	3.46	63	241239	3.97	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 79.40%			
20) 2-Butanone-d5	6.39	46	233840	44.83	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 89.66%			
24) Chloroform-d	7.02	84	344759	5.06	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.20%			
26) 1,2-Dichloroethane-d4	7.75	65	179462	4.83	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.60%			
32) Benzene-d6	7.70	84	668498	5.31	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 106.20%			
36) 1,2-Dichloropropane-d6	8.78	67	204910	5.09	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.80%			
41) Toluene-d8	9.86	98	631704	5.28	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.60%			
43) trans-1,3-Dichloropropene-	10.13	79	58379	4.34	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 86.80%			
46) 2-Hexanone-d5	10.48	63	157354	41.81	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 83.62%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	67317	4.22	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 84.40%			
64) 1,2-Dichlorobenzene-d4	13.42	152	125332	5.64	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 112.80%			
Target Compounds						Qvalue
25) Chloroform	7.05	83	218896	3.39	ug/L	96
38) Bromodichloromethane	9.16	83	8872	0.21	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018149.D
Acq On : 25 Feb 2016 21:26
Operator : MD\SY
Sample : H1584-04
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0003

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.518	16	31	73	rBV	4336796	19086104	100.00%	57.061%
2	2.041	107	117	136	rBV	80745	335148	1.76%	1.002%
3	2.497	180	192	204	rBV	103596	309089	1.62%	0.924%
4	3.464	336	351	367	rBV2	157032	601638	3.15%	1.799%
5	6.391	825	832	853	rBV	107313	390083	2.04%	1.166%
6	7.035	923	938	959	rBV3	373335	1459708	7.65%	4.364%
7	7.705	1038	1048	1069	rBV2	673087	2047257	10.73%	6.121%
8	8.331	1143	1151	1166	rBV	687425	1366348	7.16%	4.085%
9	8.775	1215	1224	1244	rBV	486338	1015419	5.32%	3.036%
10	9.566	1348	1354	1364	rBV	231016	401099	2.10%	1.199%
11	9.858	1395	1402	1410	rBV	1114686	1835281	9.62%	5.487%
12	10.126	1440	1446	1459	rBV	117358	208894	1.09%	0.625%
13	10.479	1498	1504	1522	rBV	556643	927316	4.86%	2.772%
14	11.184	1614	1620	1632	rBV	955148	1443073	7.56%	4.314%
15	12.261	1791	1797	1805	rBV	153557	237439	1.24%	0.710%
16	13.131	1934	1940	1953	rBV	617500	910994	4.77%	2.724%
17	13.417	1981	1987	1999	rBV	574437	873561	4.58%	2.612%

Sum of corrected areas: 33448451

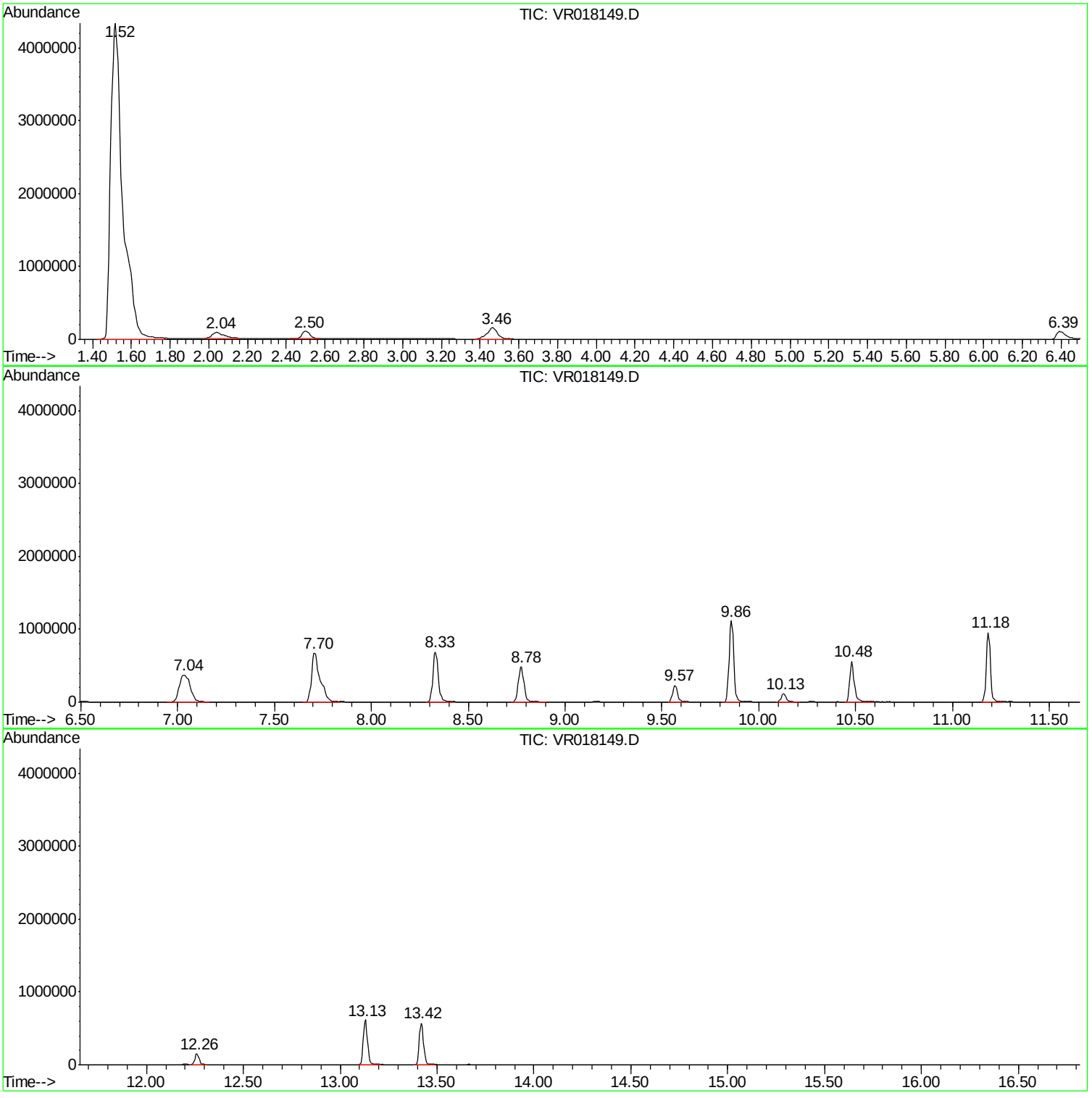
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018149.D
Acq On : 25 Feb 2016 21:26
Operator : MD\SY
Sample : H1584-04
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0003

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018149.D
Acq On : 25 Feb 2016 21:26
Operator : MD\SY
Sample : H1584-04
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H0003

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018149.D
Acq On : 25 Feb 2016 21:26
Operator : MD\SY
Sample : H1584-04
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0003

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0060

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018148.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0060

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018148.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0060

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018148.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0060

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018148.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 02/25/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.91	0.51	JN
2	E966796	Total Alkanes	N/A	0	

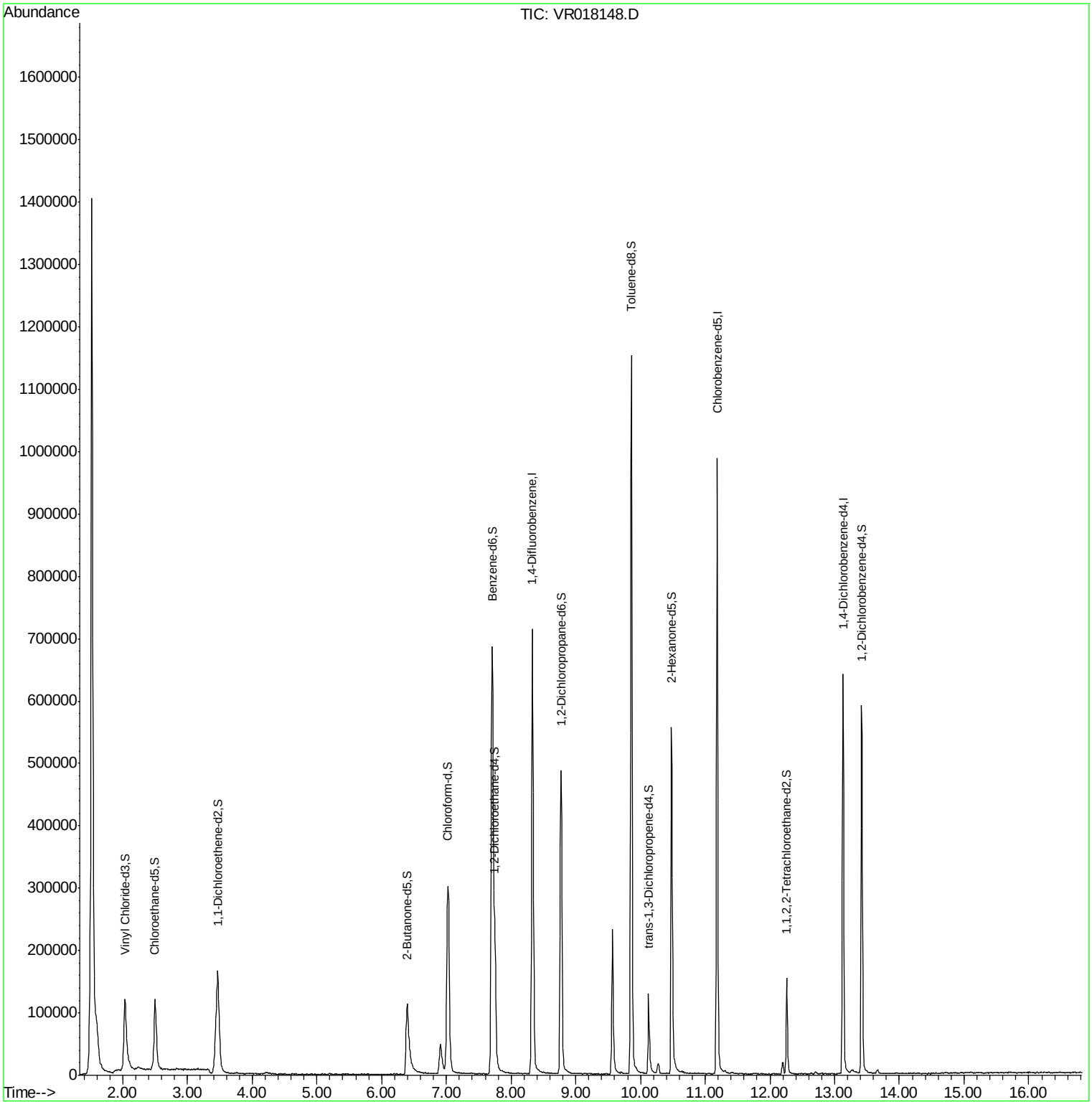
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018148.D
Acq On : 25 Feb 2016 20:55
Operator : MD\SY
Sample : H1584-05
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0060

Quant Time: Feb 26 04:23:47 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018148.D
Acq On : 25 Feb 2016 20:55
Operator : MD\SY
Sample : H1584-05
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0060

Quant Time: Feb 26 04:23:47 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	515663	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	418320	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	134427	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	217731	4.95	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 99.00%			
7) Chloroethane-d5	2.50	69	157593	4.85	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 97.00%			
11) 1,1-Dichloroethene-d2	3.46	63	235108	3.74	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 74.80%			
20) 2-Butanone-d5	6.40	46	232534	43.04	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 86.08%			
24) Chloroform-d	7.02	84	323723	4.59	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 91.80%			
26) 1,2-Dichloroethane-d4	7.75	65	183337	4.76	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.20%			
32) Benzene-d6	7.71	84	665573	5.20	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.00%			
36) 1,2-Dichloropropane-d6	8.78	67	208230	5.09	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.80%			
41) Toluene-d8	9.86	98	642516	5.29	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.80%			
43) trans-1,3-Dichloropropene-	10.13	79	62728	4.59	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.80%			
46) 2-Hexanone-d5	10.48	63	154056	40.30	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 80.60%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	66100	4.08	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 81.60%			
64) 1,2-Dichlorobenzene-d4	13.42	152	124964	5.52	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 110.40%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018148.D
Acq On : 25 Feb 2016 20:55
Operator : MD\SY
Sample : H1584-05
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0060

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.517	16	31	58	rBV	1404519	3355277	100.00%	19.268%
2	2.035	107	116	133	rBV	112710	348284	10.38%	2.000%
3	2.497	180	192	206	rBV	112744	302806	9.02%	1.739%
4	3.464	336	351	368	rBV2	164428	599941	17.88%	3.445%
5	6.396	824	833	855	rBV	113287	399740	11.91%	2.296%
6	6.907	908	917	928	rBV	47853	143007	4.26%	0.821%
7	7.023	928	936	950	rVB	299005	829427	24.72%	4.763%
8	7.711	1036	1049	1066	rBV2	686585	2037722	60.73%	11.702%
9	8.331	1142	1151	1164	rBV	713498	1394189	41.55%	8.006%
10	8.775	1212	1224	1241	rBV	485821	1017454	30.32%	5.843%
11	9.566	1347	1354	1373	rBV	232359	417287	12.44%	2.396%
12	9.858	1395	1402	1412	rBV	1150896	1854572	55.27%	10.650%
13	10.126	1440	1446	1461	rBV	129121	224981	6.71%	1.292%
14	10.479	1498	1504	1526	rBV	555809	921995	27.48%	5.295%
15	11.184	1609	1620	1636	rBV	987853	1499471	44.69%	8.611%
16	12.194	1780	1786	1791	rBV2	19095	33849	1.01%	0.194%
17	12.261	1791	1797	1811	rVB	153853	241494	7.20%	1.387%
18	13.131	1934	1940	1955	rBV	640658	921925	27.48%	5.294%
19	13.417	1981	1987	2004	rBV	588649	870030	25.93%	4.996%

Sum of corrected areas: 17413451

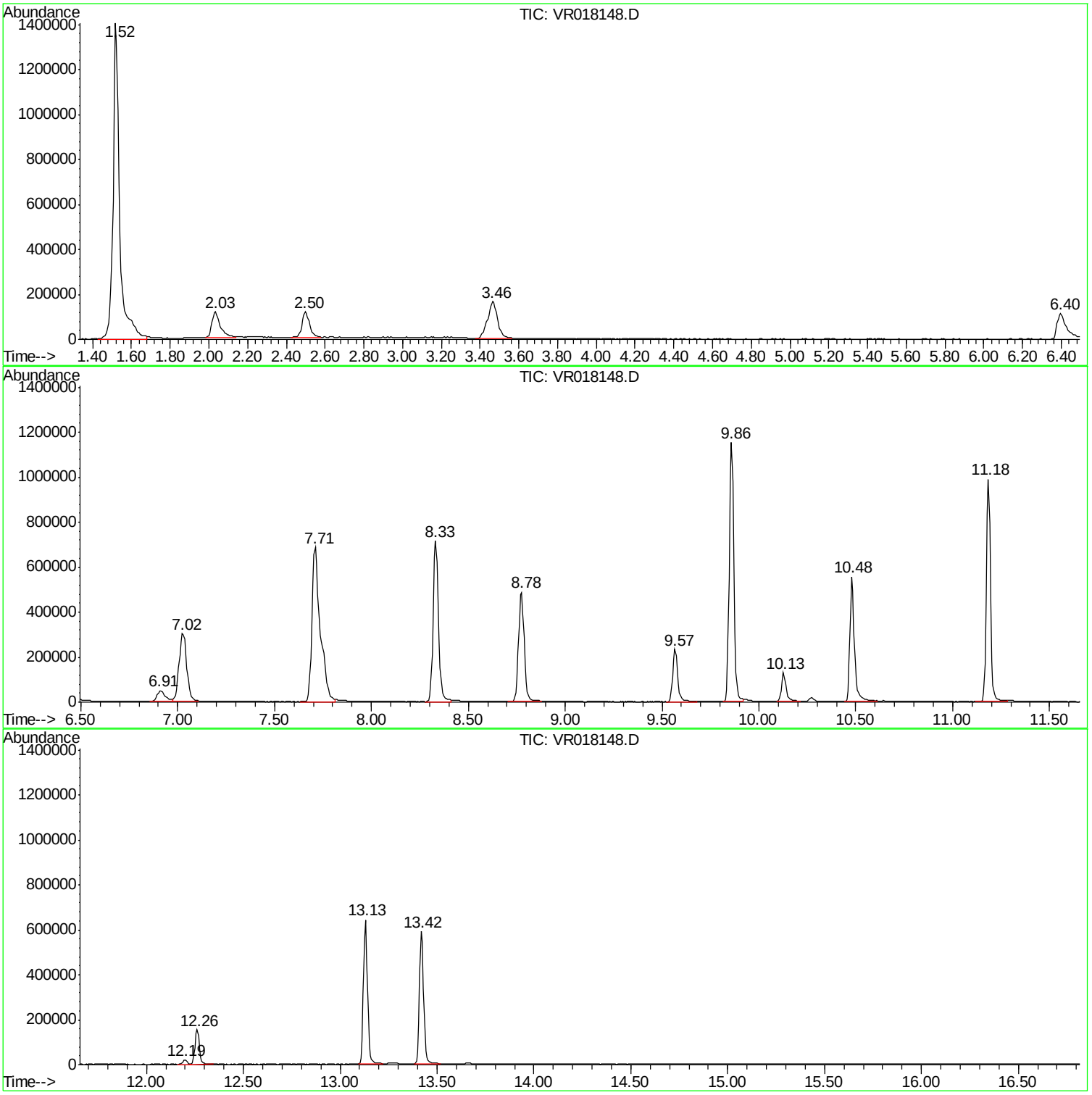
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018148.D
Acq On : 25 Feb 2016 20:55
Operator : MD\SY
Sample : H1584-05
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H0060

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018148.D
Acq On : 25 Feb 2016 20:55
Operator : MD\SY
Sample : H1584-05
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0060

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

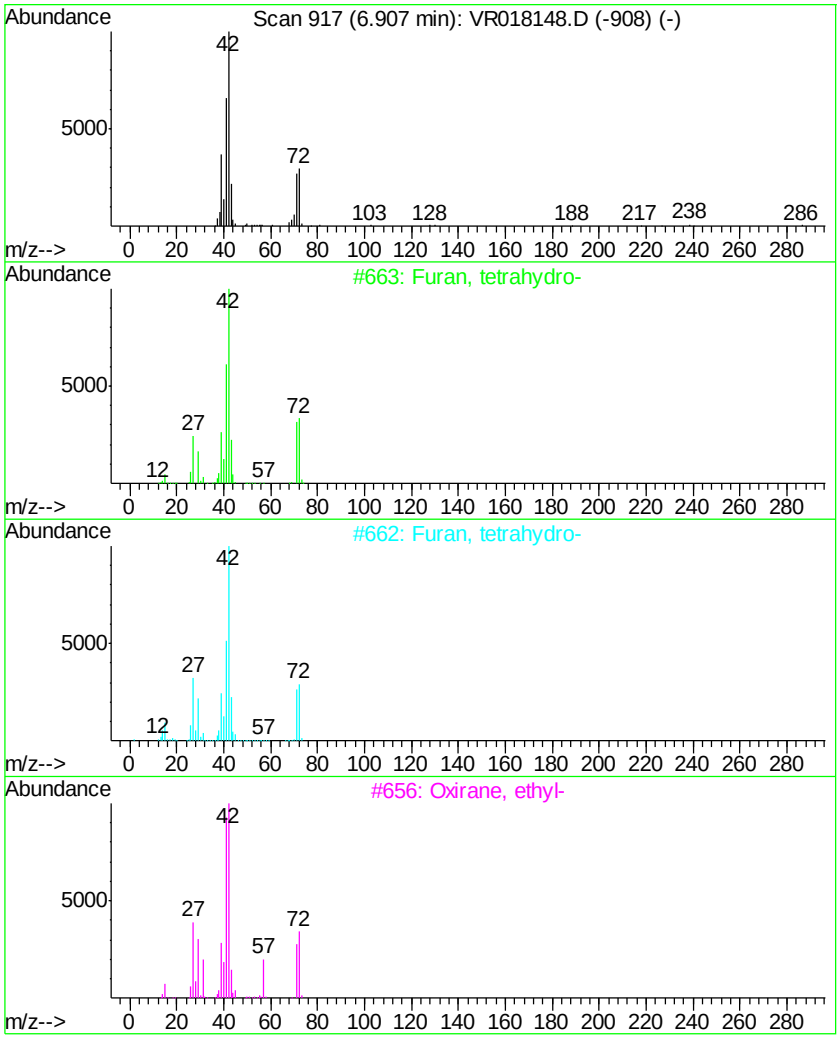
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

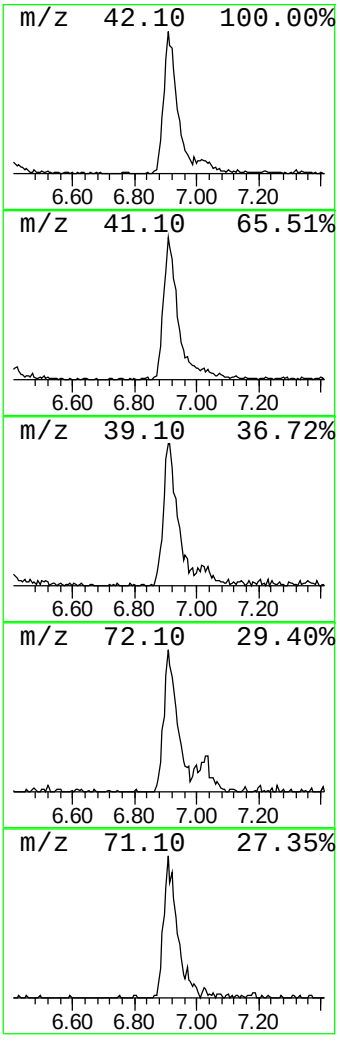
****

Peak Number 2 Furan, tetrahydro- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.91	0.51 ug/L	143007	1,4-Difluorobenzene	8.33

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Furan, tetrahydro-	72	C4H8O	000109-99-9	86
2	Furan, tetrahydro-	72	C4H8O	000109-99-9	86
3	Oxirane, ethyl-	72	C4H8O	000106-88-7	72
4	Furan, tetrahydro-	72	C4H8O	000109-99-9	72
5	Oxirane, ethyl-	72	C4H8O	000106-88-7	56





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018148.D
Acq On : 25 Feb 2016 20:55
Operator : MD\SY
Sample : H1584-05
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0060

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Furan, tetrahydro-	6.91	0.5	ug/L	143007	1	8.33	1394190	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047400.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	20	
75-15-0	Carbon disulfide	0.28	J
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.5	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047400.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.12	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047400.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047400.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 02/29/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	253664-95-8	Bis(3-methylbutyl) fluorene-2,7-di	1.41	2.9	JN
2	000420-56-4	Trimethylsilyl fluoride	1.86	0.59	JN
3	000627-27-0	3-Buten-1-ol	2.47	0.36	JN
4		unknown-01	13.26	0.44	J
5	000535-77-3	Benzene, 1-methyl-3-(1-methylethyl	13.36	0.49	JN
6	000470-82-6	Eucalyptol	13.49	0.34	JN
7	000104-76-7	1-Hexanol, 2-ethyl-	13.54	0.8	JN
8		unknown-02	14.3	0.59	J
9	001195-79-5	Bicyclo[2.2.1]heptan-2-one, 1,3,3-	14.41	0.28	JN
10		unknown-03	14.56	0.99	J
11		unknown-04	14.64	0.68	J
12	001632-73-1	Bicyclo[2.2.1]heptan-2-ol, 1,3,3-t	14.7	1.3	JN
13		unknown-05	14.87	0.78	J
14	000076-22-2	Camphor	15.11	0.99	JN
15	000124-76-5	Isoborneol	15.17	0.35	JN
16	E966796	Total Alkanes	N/A	0.41	

EPA-designated Registry Number.

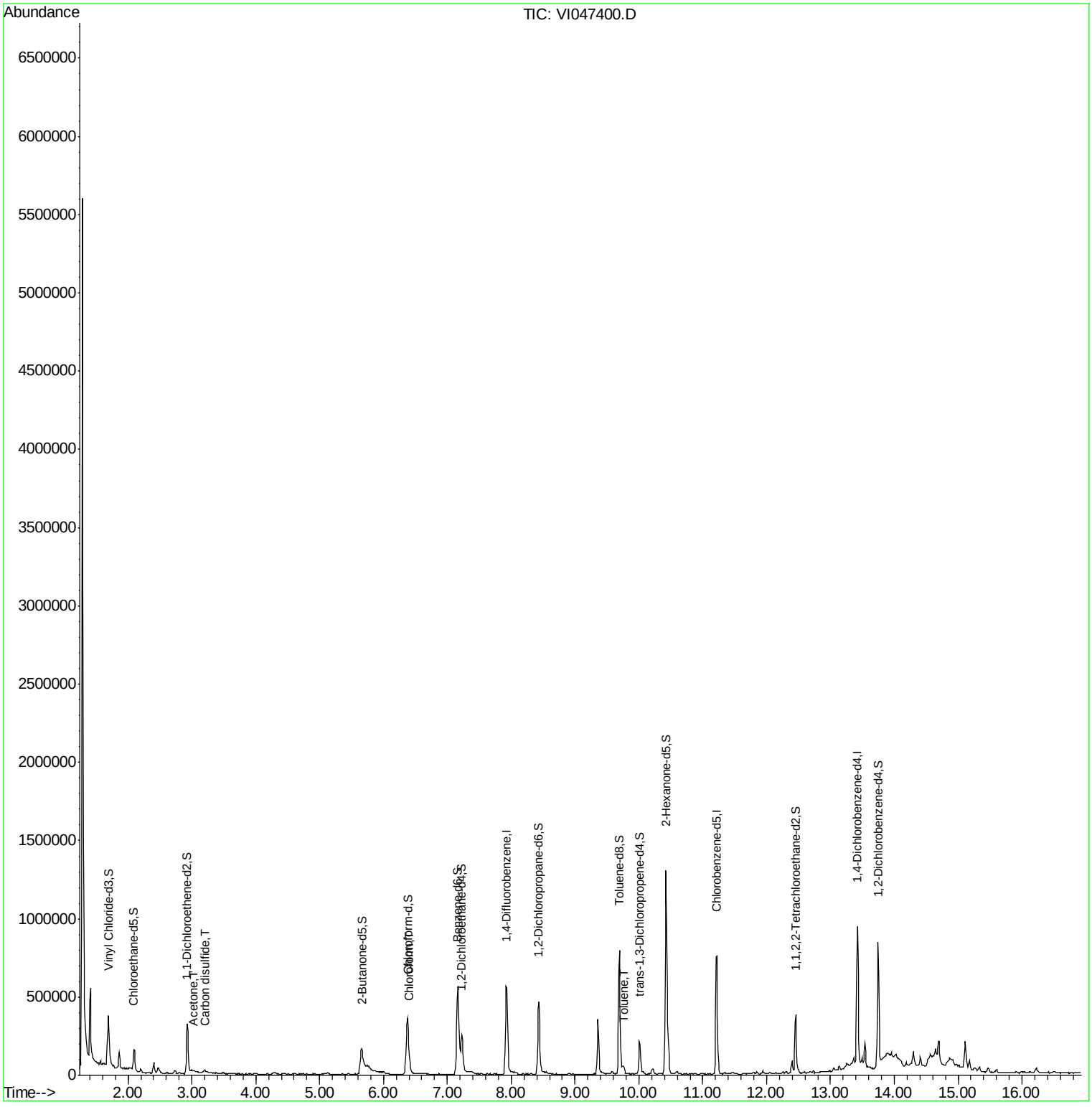
Quantitation Report (LSC Reviewed)

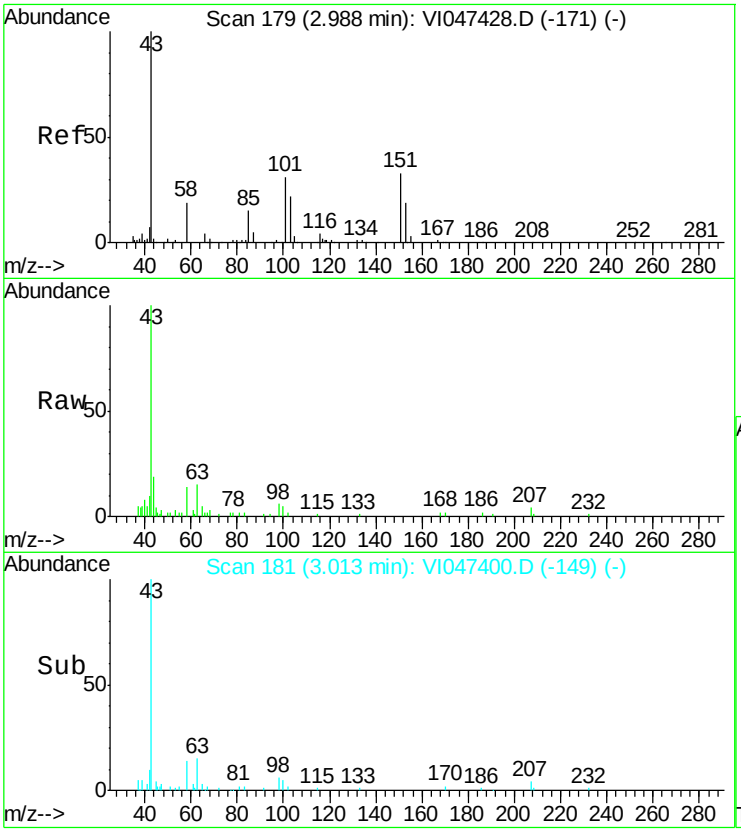
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 16 16:26:38 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H0002

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:09:00 PM

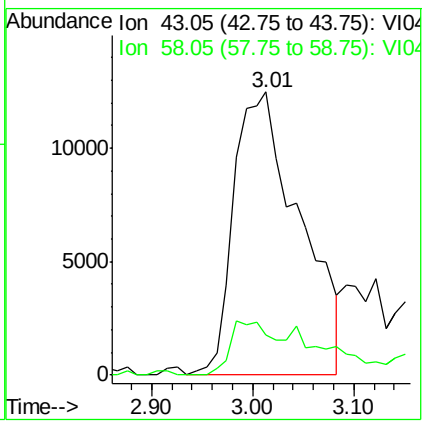




#13
Acetone
Concen: 20.00 ug/L
RT: 3.01 min Scan# 181
Delta R.T. 0.02 min
Lab File: VI047400.D
Acq: 29 Feb 2016 16:29

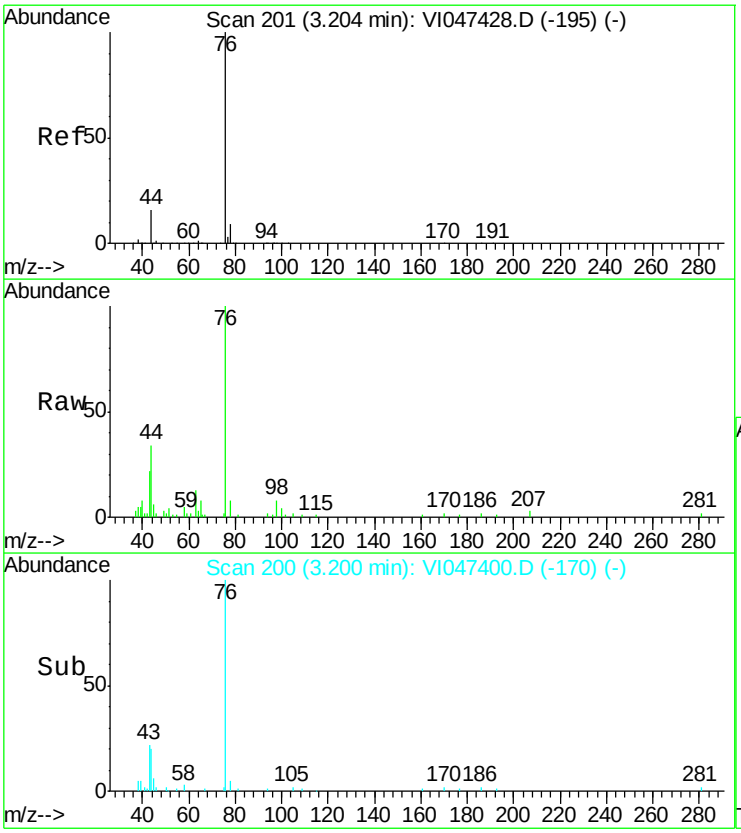
Tgt Ion: 43 Resp: 56568

Ion	Ratio	Lower	Upper
43	100		
58	1.2	0.0	37.8



Instrument :
MSVOA_I
ClientSampleId :
H0002

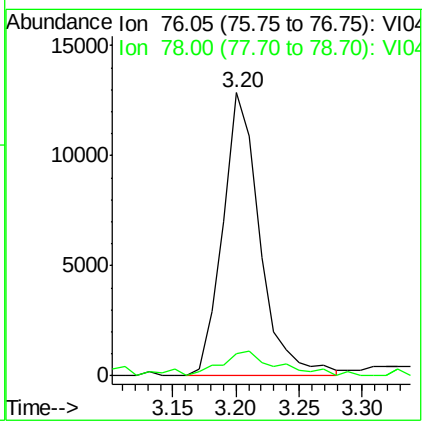
Manual Integrations APPROVED
MMdadoda
3/1/2016 1:09:00 PM

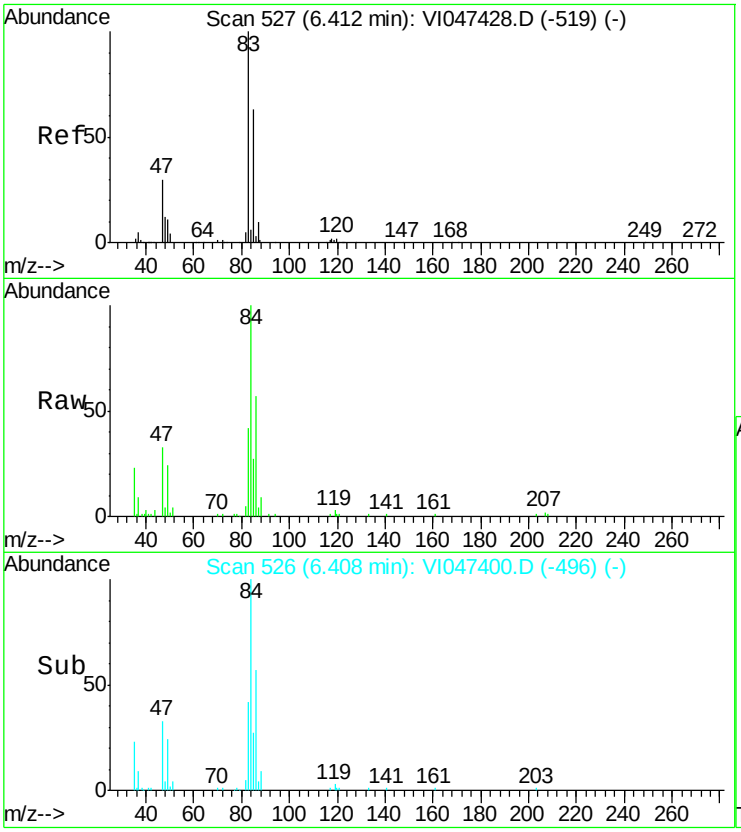


#14
Carbon disulfide
Concen: 0.28 ug/L
RT: 3.20 min Scan# 200
Delta R.T. -0.00 min
Lab File: VI047400.D
Acq: 29 Feb 2016 16:29

Tgt Ion: 76 Resp: 26136

Ion	Ratio	Lower	Upper
76	100		
78	7.8	7.6	11.4





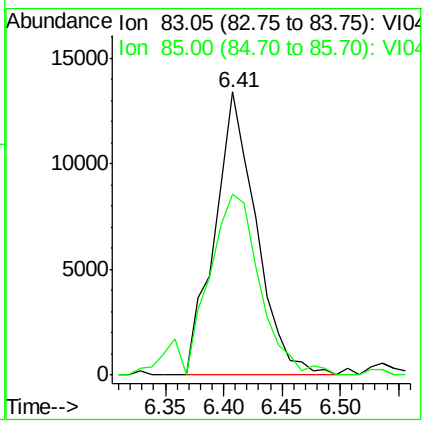
#25
Chloroform
Concen: 0.50 ug/L
RT: 6.41 min Scan# 526
Delta R.T. -0.00 min
Lab File: VI047400.D
Acq: 29 Feb 2016 16:29

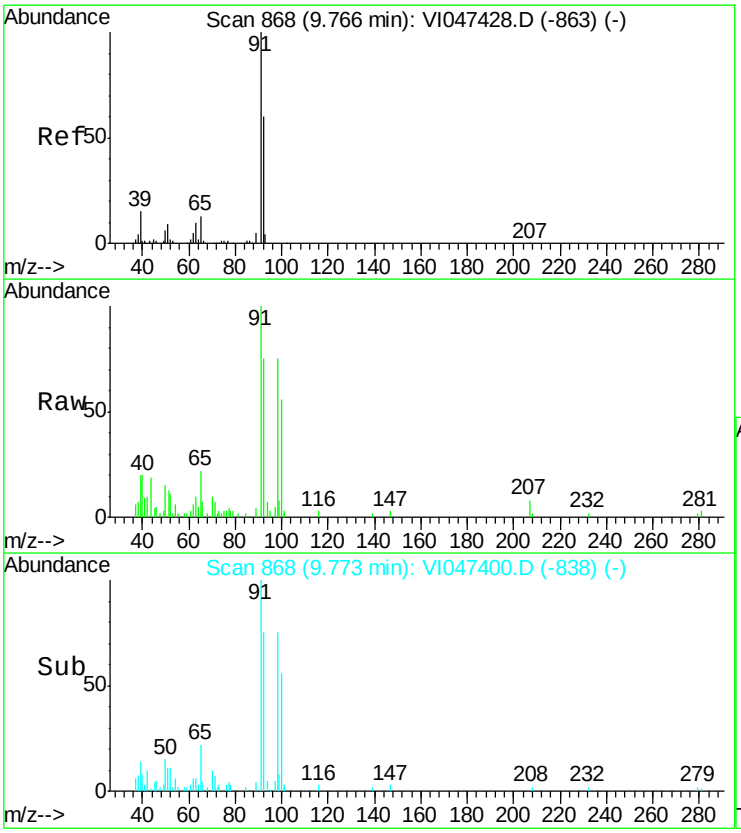
Tgt Ion: 83 Resp: 33042

Ion	Ratio	Lower	Upper
83	100		
85	64.1	43.2	80.2

Instrument :
MSVOA_I
ClientSampleId :
H0002

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:09:00 PM

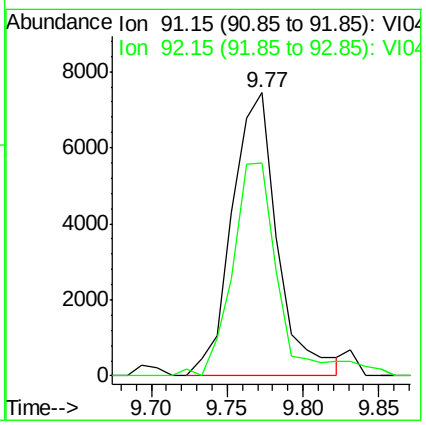




#42
Toluene
Concen: 0.12 ug/L
RT: 9.77 min Scan# 868
Delta R.T. -0.00 min
Lab File: VI047400.D
Acq: 29 Feb 2016 16:29

Tgt Ion: 91 Resp: 15573

Ion	Ratio	Lower	Upper
91	100		
92	75.1	41.3	76.7



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:09:00 PM

Quant Time: Mar 16 16:26:38 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	540160	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	478326	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.42	152	231671	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	165713	5.51	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 110.20%			
7) Chloroethane-d5	2.10	69	122504	5.33	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 106.60%			
11) 1,1-Dichloroethene-d2	2.92	63	260888m	3.92	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 78.40%			
20) 2-Butanone-d5	5.66	46	464264	74.22	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 148.44%#			
24) Chloroform-d	6.38	84	397405	5.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 116.80%			
26) 1,2-Dichloroethane-d4	7.22	65	233705	5.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 118.00%			
32) Benzene-d6	7.17	84	644574	5.59	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 111.80%			
36) 1,2-Dichloropropane-d6	8.43	67	215529	6.19	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 123.80%			
41) Toluene-d8	9.69	98	540838	4.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.80%			
43) trans-1,3-Dichloropropene-	10.01	79	121791	5.91	ug/L	-0.01
Spiked Amount 5.000	Range 55 - 130		Recovery = 118.20%			
46) 2-Hexanone-d5	10.42	63	538815	63.85	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 127.70%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	184936	6.14	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 122.80%#			
64) 1,2-Dichlorobenzene-d4	13.75	152	206020	4.88	ug/L	-0.01
Spiked Amount 5.000	Range 80 - 120		Recovery = 97.60%			
Target Compounds						Qvalue
13) Acetone	3.01	43	56568	20.00	ug/L	61
14) Carbon disulfide	3.20	76	26136	0.28	ug/L	95
25) Chloroform	6.41	83	33042	0.50	ug/L	97
42) Toluene	9.77	91	15573	0.12	ug/L	79

(#) = qualifier out of range (m) = manual integration (+) = signals summed

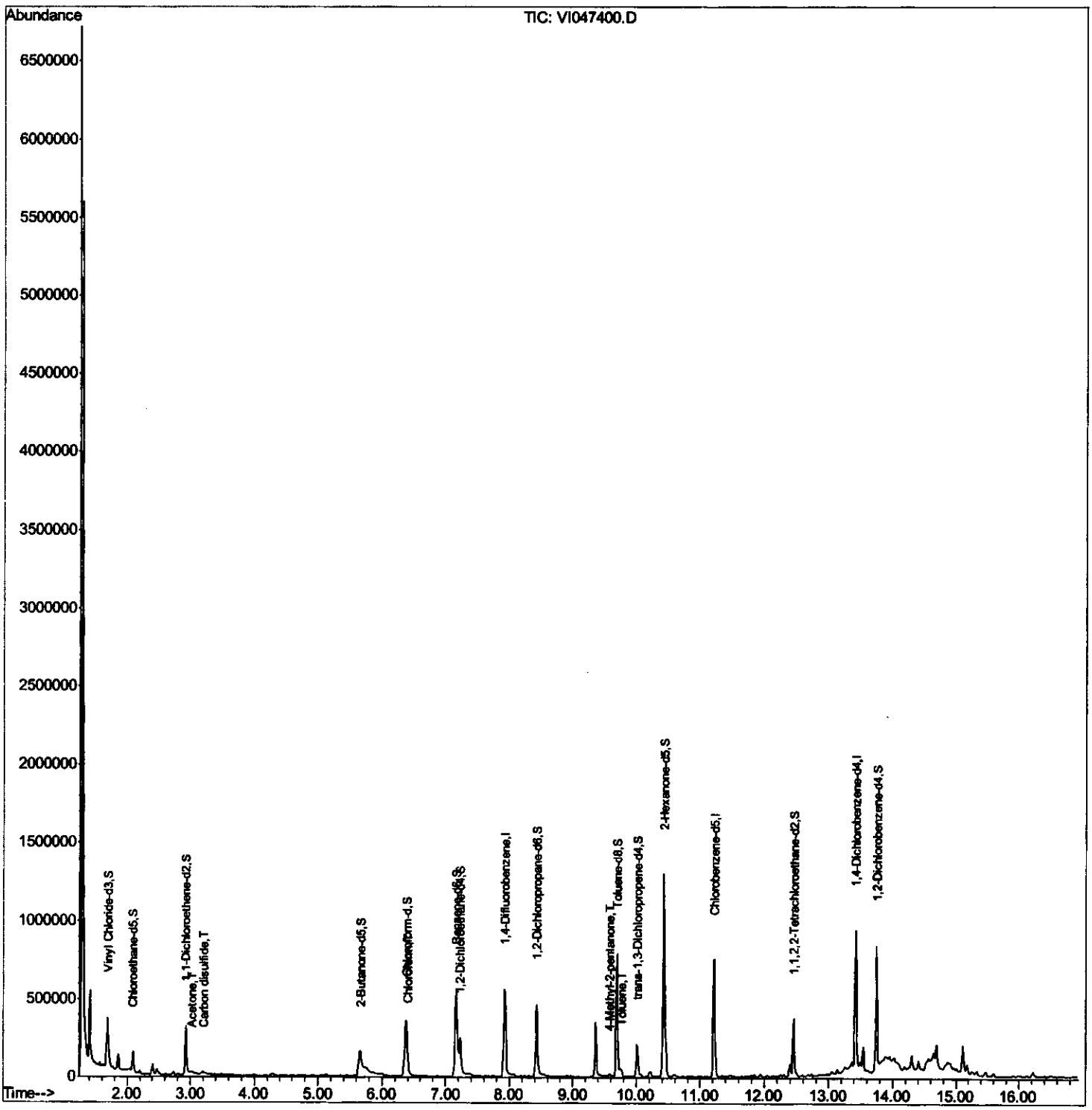
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 01 04:36:08 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H0002

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:09:00 PM



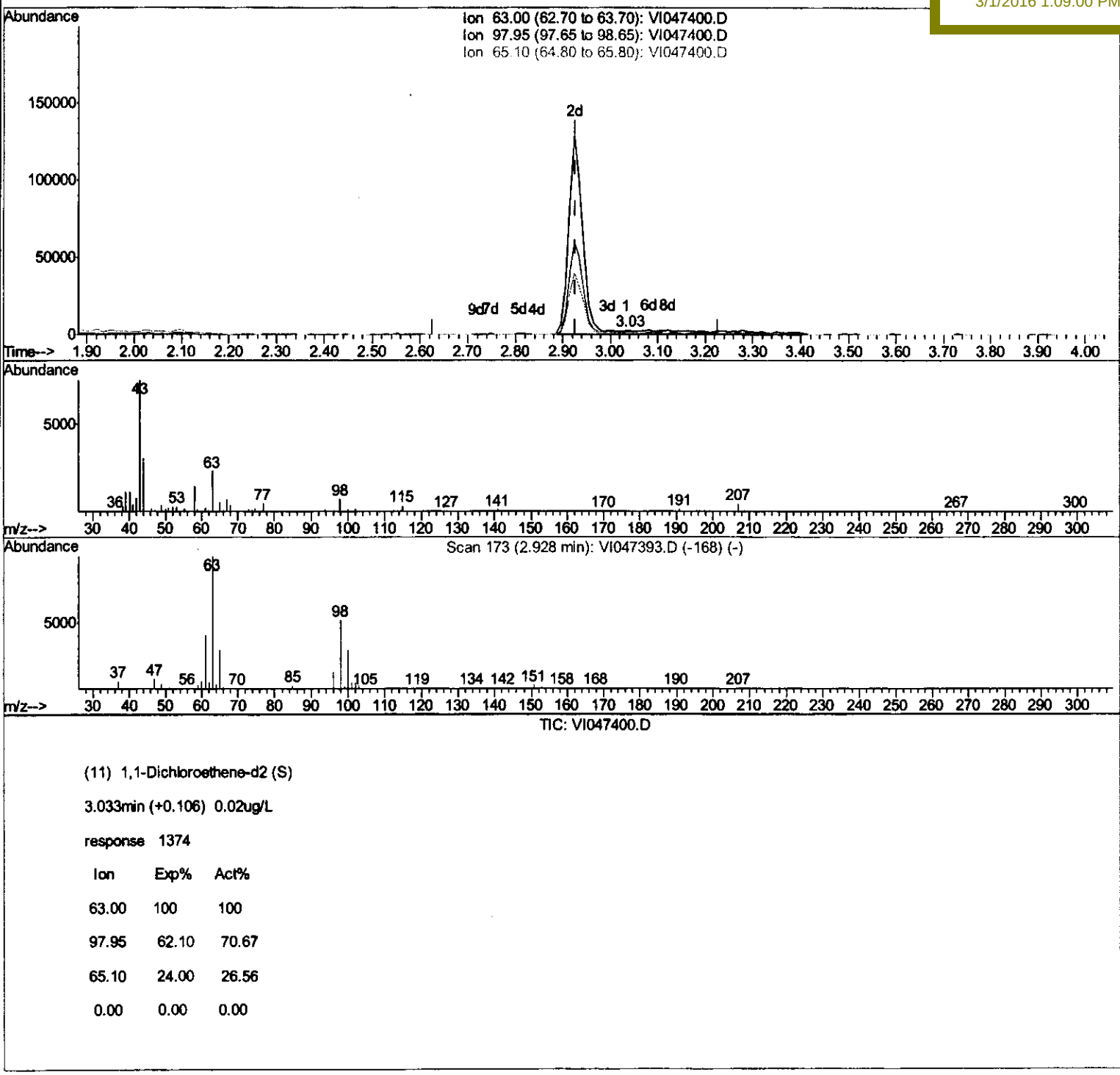
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 01 04:10:00 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H0002

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:09:00 PM



TIC: VI047400.D

(11) 1,1-Dichloroethene-d2 (S)

3.033min (+0.106) 0.02ug/L

response 1374

Ion	Exp%	Act%
63.00	100	100
97.95	62.10	70.67
65.10	24.00	26.56
0.00	0.00	0.00

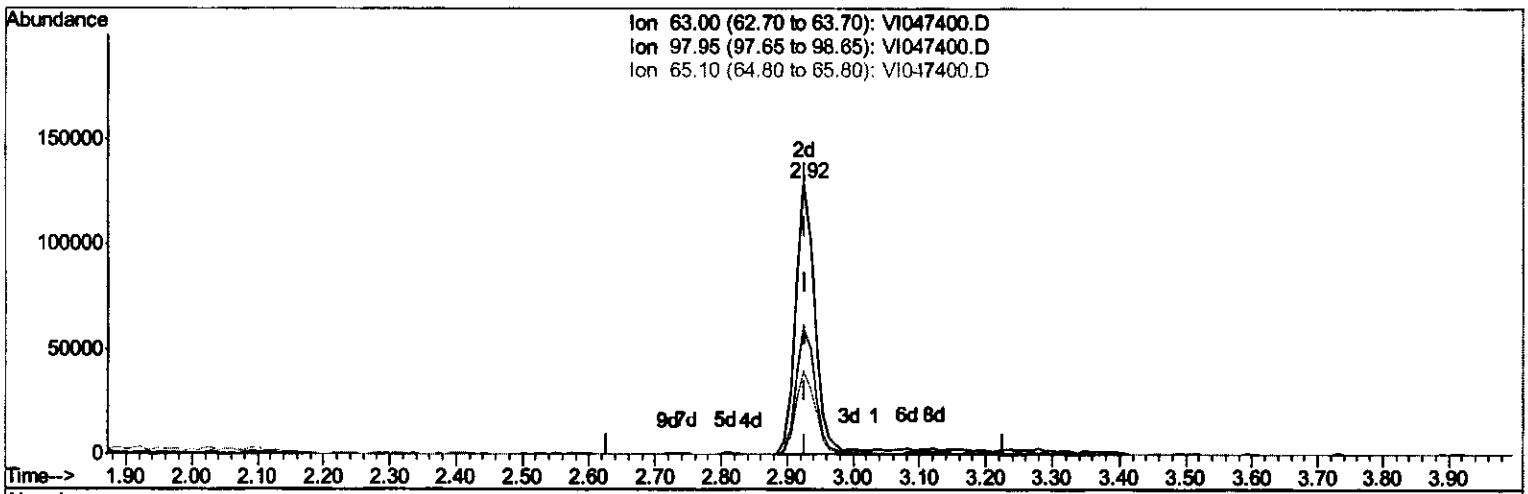
Quantitation Report (Qedit)

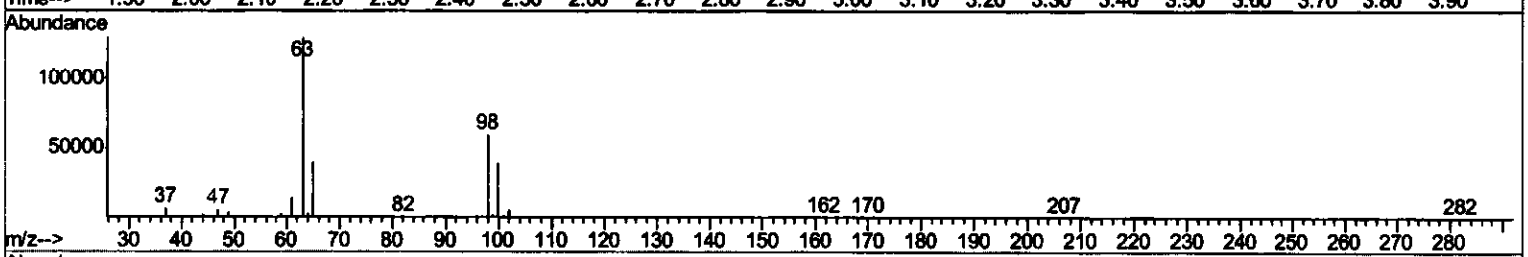
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

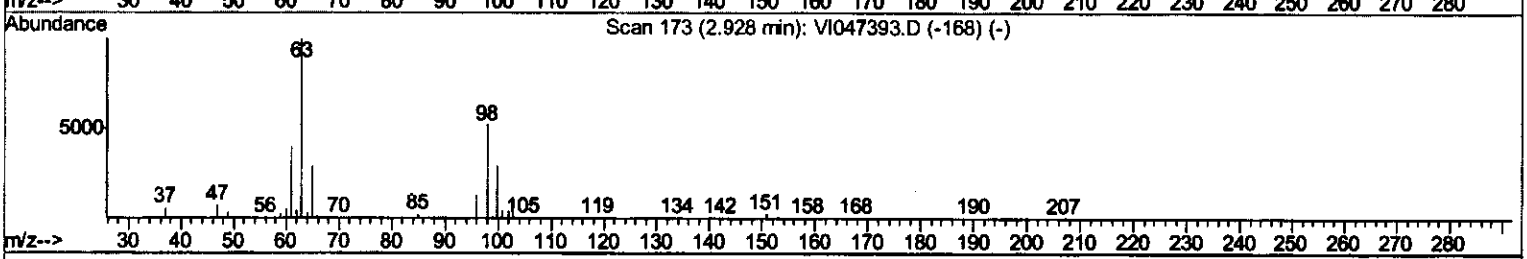
Quant Time: Mar 01 04:10:00 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H0002

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:09:00 PM







TIC: VI047400.D

(11) 1,1-Dichloroethene-d2 (S)
2.925min (-0.003) 3.92ug/L m
response 260888

Ion	Exp%	Act%
63.00	100	100
97.95	62.10	0.37#
65.10	24.00	0.14#
0.00	0.00	0.00

F.Y 03/05/16

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 16 16:26:38 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H0002

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:09:00 PM

F-Y. 03/05/2016

Internal Standards			R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene			7.93	114	540160	5.00	ug/L	0.00
28) Chlorobenzene-d5			11.22	117	478326	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4			13.42	152	231671	5.00	ug/L	0.00
System Monitoring Compounds								
4) Vinyl Chloride-d3			1.70	65	165713	5.51	ug/L	0.00
Spiked Amount	5.000	Range 40 - 130			Recovery = 110.20%			
7) Chloroethane-d5			2.10	69	122504	5.33	ug/L	0.00
Spiked Amount	5.000	Range 65 - 130			Recovery = 106.60%			
11) 1,1-Dichloroethene-d2			2.92	63	260888m	3.92	ug/L	0.00
Spiked Amount	5.000	Range 60 - 125			Recovery = 78.40%			
20) 2-Butanone-d5			5.66	46	464264	74.22	ug/L	0.00
Spiked Amount	50.000	Range 40 - 130			Recovery = 148.44%#			
24) Chloroform-d			6.38	84	397405	5.84	ug/L	0.00
Spiked Amount	5.000	Range 70 - 125			Recovery = 116.80%			
26) 1,2-Dichloroethane-d4			7.22	65	233705	5.90	ug/L	0.00
Spiked Amount	5.000	Range 70 - 130			Recovery = 118.00%			
32) Benzene-d6			7.17	84	644574	5.59	ug/L	0.00
Spiked Amount	5.000	Range 70 - 125			Recovery = 111.80%			
36) 1,2-Dichloropropane-d6			8.43	67	215529	6.19	ug/L	0.00
Spiked Amount	5.000	Range 60 - 140			Recovery = 123.80%			
41) Toluene-d8			9.69	98	540838	4.84	ug/L	0.00
Spiked Amount	5.000	Range 70 - 130			Recovery = 96.80%			
43) trans-1,3-Dichloropropene-			10.01	79	121791	5.91	ug/L	-0.01
Spiked Amount	5.000	Range 55 - 130			Recovery = 118.20%			
46) 2-Hexanone-d5			10.42	63	538815	63.85	ug/L	0.00
Spiked Amount	50.000	Range 45 - 130			Recovery = 127.70%			
57) 1,1,2,2-Tetrachloroethane-			12.46	84	184936	6.14	ug/L	0.00
Spiked Amount	5.000	Range 65 - 120			Recovery = 122.80%#			
64) 1,2-Dichlorobenzene-d4			13.75	152	206020	4.88	ug/L	-0.01
Spiked Amount	5.000	Range 80 - 120			Recovery = 97.60%			
Target Compounds								Qvalue
13) Acetone			3.01	43	56568	20.00	ug/L	61
14) Carbon disulfide			3.20	76	26136	0.28	ug/L	95
25) Chloroform			6.41	83	33042	0.50	ug/L	97
42) Toluene			9.77	91	15573	0.12	ug/L	79

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.282	3	5	15	rBV	5537760	7933469	100.00%	25.061%
2	1.410	15	18	27	rVB	474334	752552	9.49%	2.377%
3	1.567	32	34	35	rVB2	25023	23564	0.30%	0.074%
4	1.695	43	47	53	rVB3	325437	661125	8.33%	2.088%
5	1.862	61	64	69	rVB	106124	153044	1.93%	0.483%
6	2.089	84	87	95	rVB	142271	274019	3.45%	0.866%
7	2.197	95	98	102	rVB2	22585	42973	0.54%	0.136%
8	2.325	106	111	114	rVB5	5322	16268	0.21%	0.051%
9	2.403	115	119	123	rBV	64761	106965	1.35%	0.338%
10	2.472	123	126	132	rVB4	36533	92373	1.16%	0.292%
11	2.620	137	141	145	rVB4	8378	21010	0.26%	0.066%
12	2.738	148	153	157	rBV2	22345	53285	0.67%	0.168%
13	2.797	157	159	163	rBV4	6280	13295	0.17%	0.042%
14	2.925	167	172	177	rBV	317679	669499	8.44%	2.115%
15	2.994	177	179	187	rVB2	12343	43670	0.55%	0.138%
16	3.200	196	200	205	rVV	19910	45290	0.57%	0.143%
17	3.377	216	218	223	rVB4	6702	15170	0.19%	0.048%
18	3.486	223	229	234	rVB5	11857	34934	0.44%	0.110%
19	3.604	237	241	246	rBV7	3991	12207	0.15%	0.039%
20	4.302	304	312	316	rBV5	14136	54350	0.69%	0.172%
21	4.411	320	323	324	rBV	6634	8100	0.10%	0.026%
22	4.597	341	342	346	rVB4	4160	9014	0.11%	0.028%
23	5.089	389	392	393	rBV2	5552	9444	0.12%	0.030%
24	5.119	393	395	399	rVB3	11474	21107	0.27%	0.067%
25	5.266	407	410	414	rBV3	3612	10124	0.13%	0.032%
26	5.463	425	430	434	rBV4	3802	12030	0.15%	0.038%
27	5.660	443	450	457	rBV	161678	641289	8.08%	2.026%
28	6.004	483	485	492	rVB3	12653	27288	0.34%	0.086%
29	6.378	516	523	534	rBV	354880	1094849	13.80%	3.459%
30	6.732	557	559	564	rVB5	4005	9936	0.13%	0.031%
31	6.841	564	570	571	rBV3	3691	9924	0.13%	0.031%
32	7.165	596	603	607	rBV	561555	1505369	18.97%	4.755%
33	7.224	607	609	618	rVB	236988	514726	6.49%	1.626%
34	7.529	638	640	645	rVB5	3661	8829	0.11%	0.028%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

35	7.795	666	667	673	rVB5	3740	7973	0.10%	0.025%
36	7.923	675	680	688	rBV	561240	1297066	16.35%	4.097%
37	8.307	716	719	725	rBV5	4494	11064	0.14%	0.035%
38	8.434	725	732	738	rBV	465949	1059118	13.35%	3.346%
39	8.926	776	782	784	rBV4	6032	17954	0.23%	0.057%
40	9.359	822	826	834	rBV	351647	635718	8.01%	2.008%
41	9.517	838	842	844	rVV5	5795	13151	0.17%	0.042%
42	9.576	844	848	855	rVV2	15417	38442	0.48%	0.121%
43	9.694	855	860	864	rVV	791843	1483064	18.69%	4.685%
44	9.753	864	866	871	rVV3	52932	126108	1.59%	0.398%
45	9.832	871	874	878	rVB6	6369	14576	0.18%	0.046%
46	9.891	878	880	884	rBV4	5885	10332	0.13%	0.033%
47	9.959	884	887	889	rBV3	5626	10483	0.13%	0.033%
48	10.009	889	892	902	rVB	213356	420434	5.30%	1.328%
49	10.215	907	913	920	rBV	35643	81885	1.03%	0.259%
50	10.422	930	934	947	rVV	1300709	2700278	34.04%	8.530%
51	10.589	947	951	956	rVV4	13423	33314	0.42%	0.105%
52	11.002	987	993	995	rBV6	7700	19772	0.25%	0.062%
53	11.219	1010	1015	1021	rVV	753361	1490616	18.79%	4.709%
54	11.347	1024	1028	1032	rVV4	11203	23286	0.29%	0.074%
55	11.475	1034	1041	1044	rVV4	11323	33942	0.43%	0.107%
56	11.514	1044	1045	1049	rVB4	5803	9394	0.12%	0.030%
57	11.652	1057	1059	1062	rVB2	6739	9761	0.12%	0.031%
58	11.711	1062	1065	1067	rBV4	4840	7715	0.10%	0.024%
59	11.789	1071	1073	1077	rVV2	9179	22723	0.29%	0.072%
60	11.848	1077	1079	1083	rVB3	12827	23139	0.29%	0.073%
61	11.937	1083	1088	1092	rBV2	18338	33991	0.43%	0.107%
62	12.055	1097	1100	1103	rBV4	10059	18158	0.23%	0.057%
63	12.262	1117	1121	1123	rBV3	10528	22123	0.28%	0.070%
64	12.301	1123	1125	1128	rVB4	12711	22522	0.28%	0.071%
65	12.399	1128	1135	1137	rBV	80217	147458	1.86%	0.466%
66	12.458	1137	1141	1149	rVB	372633	698098	8.80%	2.205%
67	12.596	1149	1155	1158	rVB3	8201	18426	0.23%	0.058%
68	12.695	1161	1165	1167	rBV5	6671	11957	0.15%	0.038%
69	12.734	1167	1169	1171	rVB2	13006	18913	0.24%	0.060%
70	12.872	1178	1183	1184	rBV4	7284	14235	0.18%	0.045%
71	13.049	1198	1201	1204	rBV2	21744	41441	0.52%	0.131%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

72	13.137	1207	1210	1213	rVV2	30281	52860	0.67%	0.167%
73	13.255	1217	1222	1226	rVV6	39011	139002	1.75%	0.439%
74	13.364	1230	1233	1235	rVV	67696	154671	1.95%	0.489%
75	13.423	1235	1239	1244	rVV	901830	1587276	20.01%	5.014%
76	13.492	1244	1246	1248	rVV2	58273	107459	1.35%	0.339%
77	13.541	1248	1251	1254	rVB	154123	254312	3.21%	0.803%
78	13.747	1264	1272	1276	rBV	811161	1476058	18.61%	4.663%
79	14.180	1314	1316	1320	rBV4	22122	41106	0.52%	0.130%
80	14.298	1325	1328	1336	rVV3	92416	186642	2.35%	0.590%
81	14.406	1336	1339	1342	rVV	56056	88138	1.11%	0.278%
82	14.564	1348	1355	1358	rBV4	79790	314364	3.96%	0.993%
83	14.643	1361	1363	1365	rVV2	108745	216823	2.73%	0.685%
84	14.702	1365	1369	1377	rVV3	158400	412491	5.20%	1.303%
85	14.869	1379	1386	1394	rVB4	47775	248548	3.13%	0.785%
86	15.115	1407	1411	1414	rBV	166854	313799	3.96%	0.991%
87	15.174	1414	1417	1421	rVB3	57694	110355	1.39%	0.349%
88	15.272	1423	1427	1430	rVV6	19156	45773	0.58%	0.145%
89	15.331	1430	1433	1436	rVB2	31822	53654	0.68%	0.169%
90	15.469	1444	1447	1452	rVB6	25481	62314	0.79%	0.197%
91	15.597	1455	1460	1465	rVB3	17473	42813	0.54%	0.135%
92	15.735	1470	1474	1477	rVB4	3588	9461	0.12%	0.030%
93	15.991	1496	1500	1502	rBV5	10142	21921	0.28%	0.069%
94	16.030	1502	1504	1507	rVV3	11271	19858	0.25%	0.063%
95	16.118	1511	1513	1516	rBV4	8784	13991	0.18%	0.044%
96	16.227	1519	1524	1529	rVB5	26981	74046	0.93%	0.234%
97	16.414	1540	1543	1545	rVB3	7225	12891	0.16%	0.041%
98	16.502	1548	1552	1555	rBV5	10049	26592	0.34%	0.084%
99	16.640	1564	1566	1569	rVV4	5801	11197	0.14%	0.035%
100	16.827	1583	1585	1586	rBV2	4844	7928	0.10%	0.025%

Sum of corrected areas: 31656064

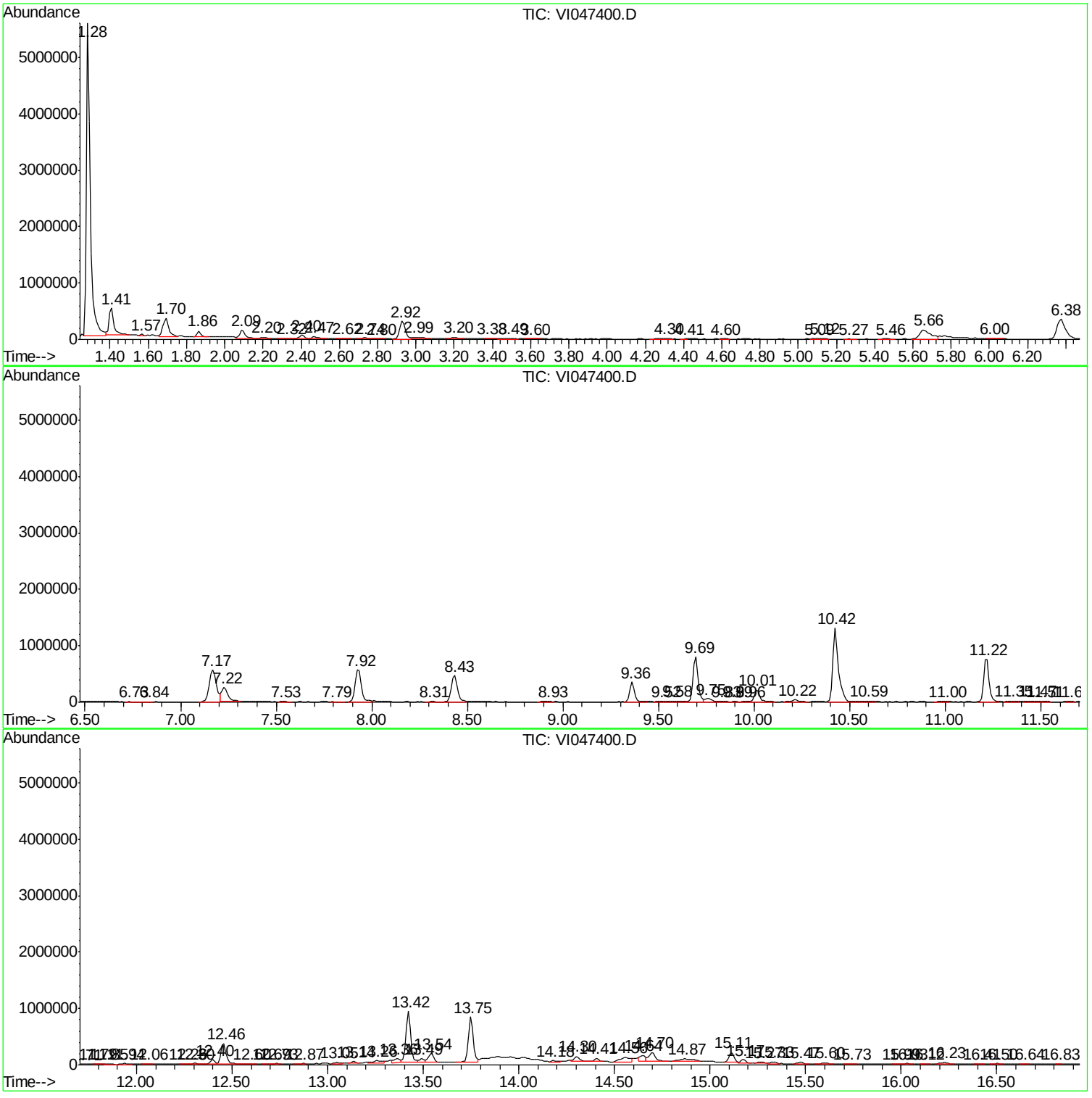
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

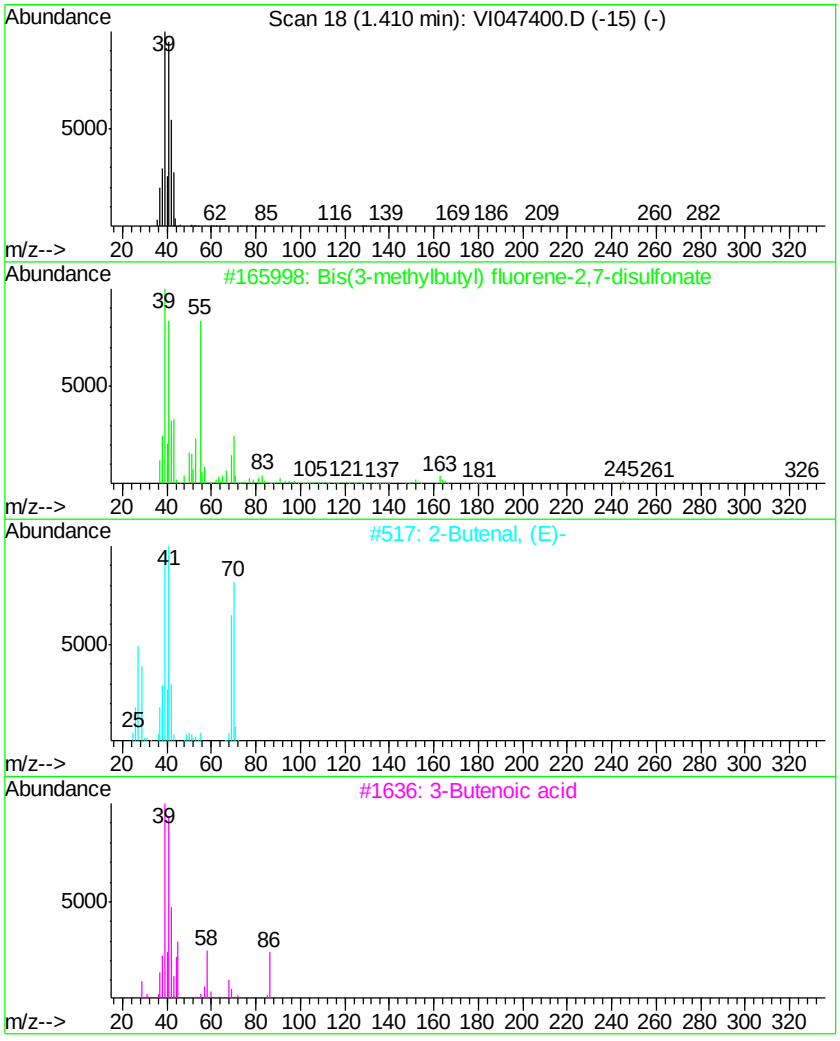
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

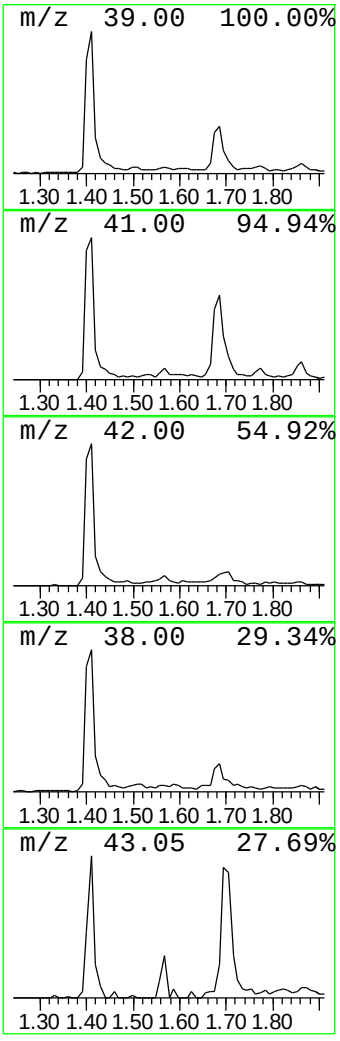
****

Peak Number 2 Bis(3-methylbutyl) fluorene... Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.41	2.90 ug/L	752552	1,4-Difluorobenzene	7.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bis(3-methylbutyl) fluorene-2,7-...	466	C23H30O6S2	253664-95-8	78
2	2-Butenal, (E)-	70	C4H6O	000123-73-9	78
3	3-Butenoic acid	86	C4H6O2	000625-38-7	74
4	2H-Pyran, 2-(2,5-hexadiynyloxy)t...	178	C11H14O2	040924-58-1	56
5	2-Butenal	70	C4H6O	004170-30-3	43





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

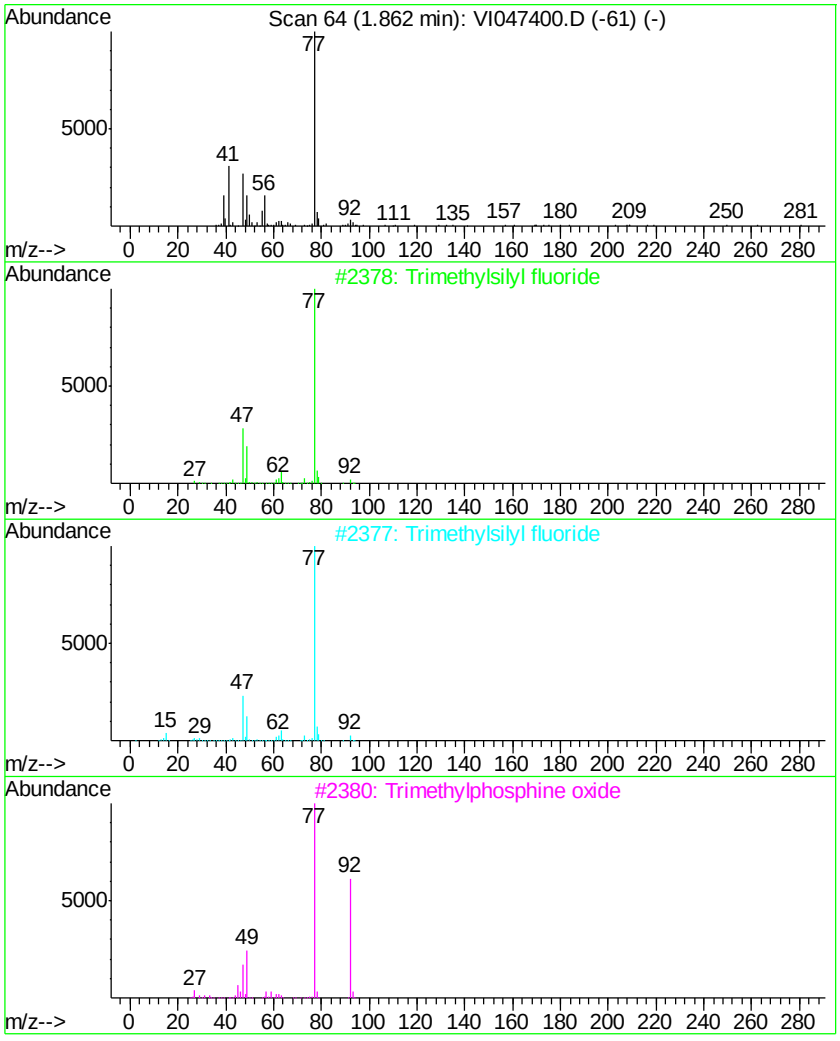
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

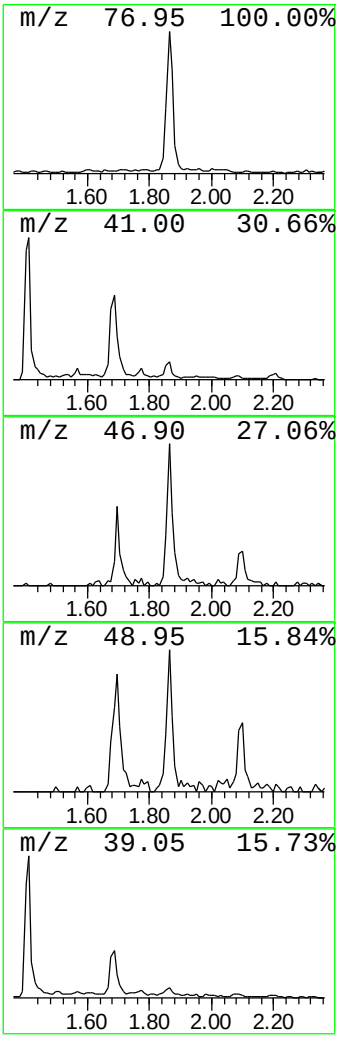
****

Peak Number 3 Trimethylsilyl fluoride Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.86	0.59 ug/L	153044	1,4-Difluorobenzene	7.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Trimethylsilyl fluoride	92	C3H9FSi	000420-56-4	81
2	Trimethylsilyl fluoride	92	C3H9FSi	000420-56-4	74
3	Trimethylphosphine oxide	92	C3H9OP	000676-96-0	9
4	Benzenesulfonic acid, 2-nitro-, ...	217	C6H7N3O4S	005906-99-0	5
5	Vinyl chloroacetate	120	C4H5ClO2	002549-51-1	4





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

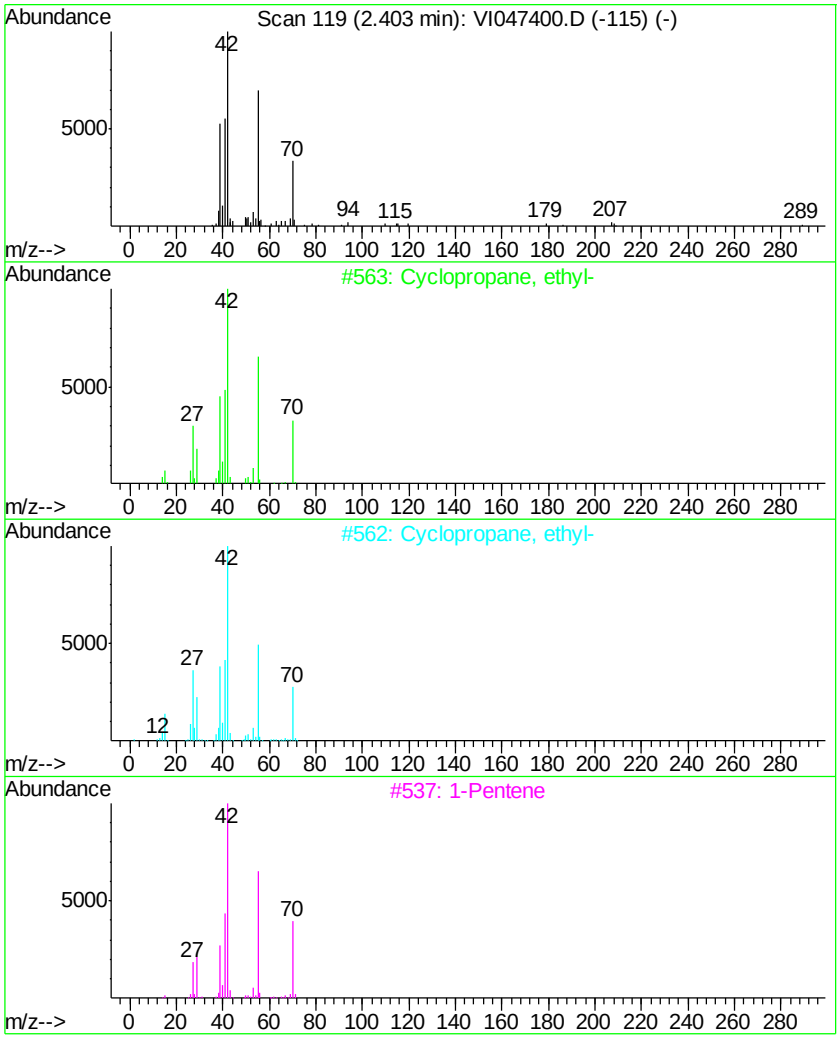
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

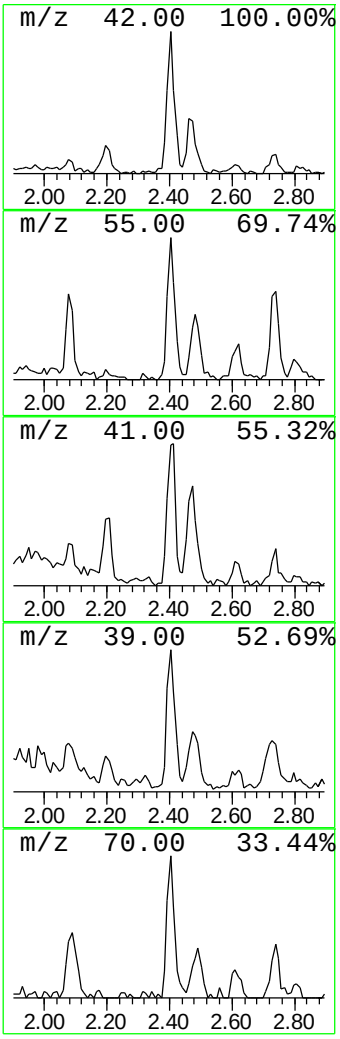
****

Peak Number 4 (DEL) Alkane: Cyclic2.40 Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.40	0.41 ug/L	106965	1,4-Difluorobenzene	7.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopropane, ethyl-	70	C5H10	001191-96-4	86
2	Cyclopropane, ethyl-	70	C5H10	001191-96-4	86
3	1-Pentene	70	C5H10	000109-67-1	53
4	Cyclopropane, ethyl-	70	C5H10	001191-96-4	52
5	Cyclobutane, methyl-	70	C5H10	000598-61-8	52





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

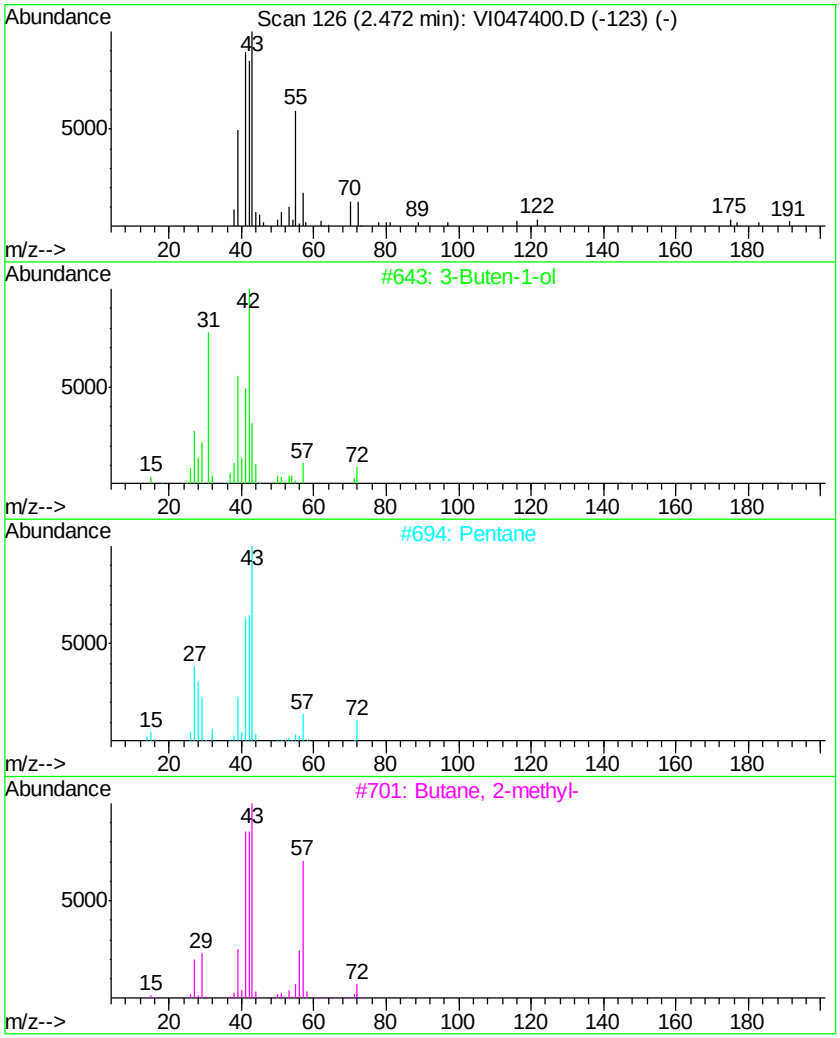
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

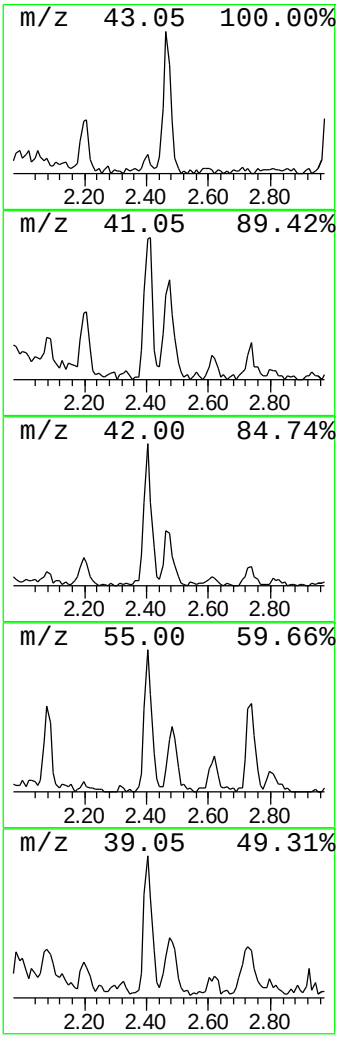
****

Peak Number 5 3-Buten-1-ol Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.47	0.36 ug/L	92373	1,4-Difluorobenzene	7.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Buten-1-ol	72	C4H8O	000627-27-0	64
2	Pentane	72	C5H12	000109-66-0	47
3	Butane, 2-methyl-	72	C5H12	000078-78-4	37
4	Butane, 2-methyl-	72	C5H12	000078-78-4	25
5	1-Propanol, 2-methyl-	74	C4H10O	000078-83-1	17





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

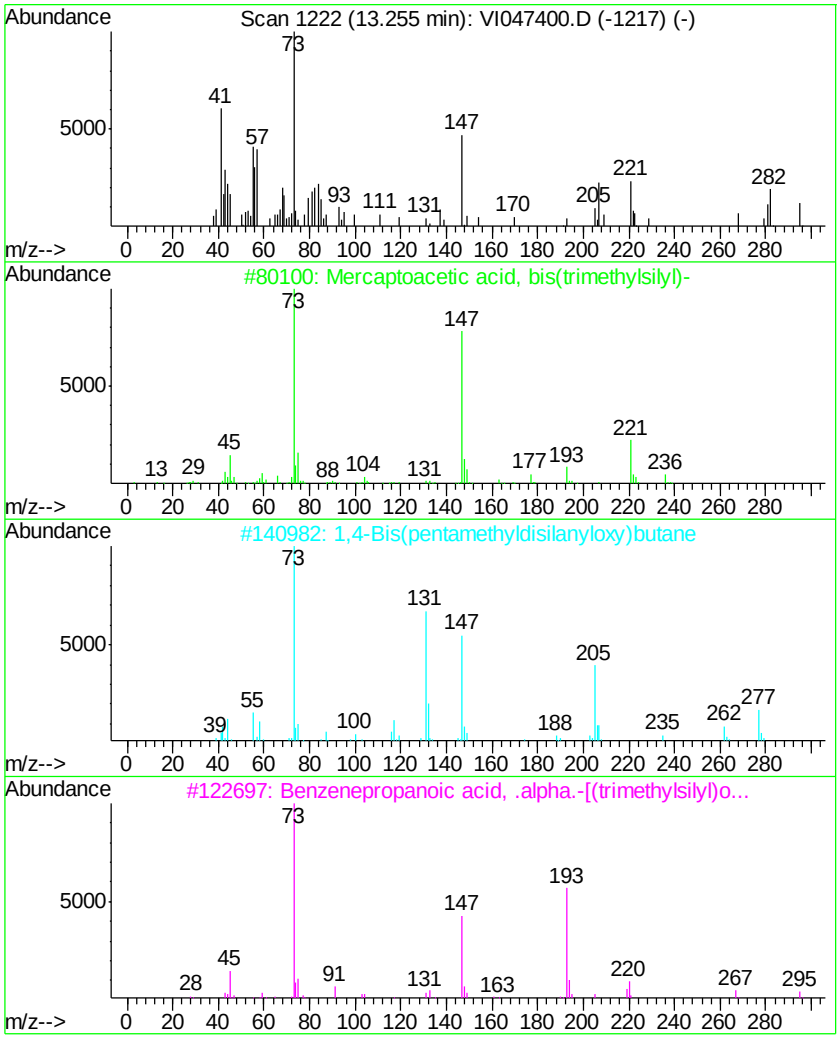
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

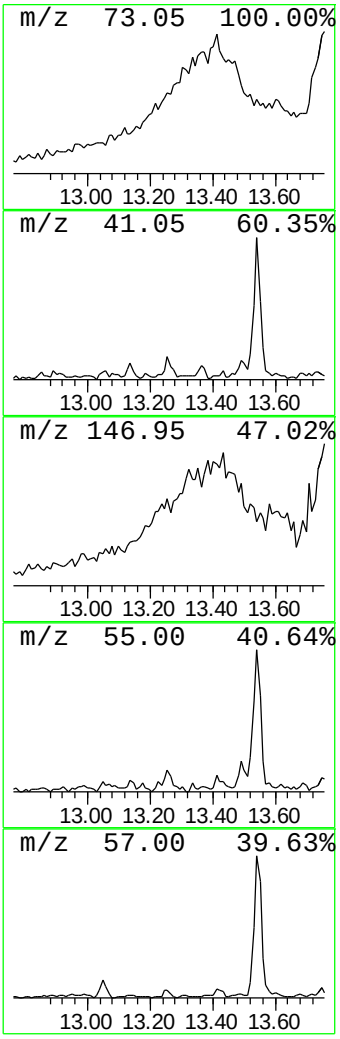
****

Peak Number 9 unknown-01 Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.26	0.44 ug/L	139002	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Mercaptoacetic acid, bis(trimeth...	236	C8H20O2SSi2	006398-62-5	32
2	1,4-Bis(pentamethyldisilanyloxy)...	350	C14H38O2Si4	1000216-98-8	12
3	Benzenepropanoic acid, .alpha.-[...	310	C15H26O3Si2	027750-45-4	12
4	Erythrose, O-methyloxime, tris-O...	365	C14H35NO4Si3	1000149-35-5	12
5	Trimethylsilyl ether of glycerol	308	C12H32O3Si3	006787-10-6	12





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

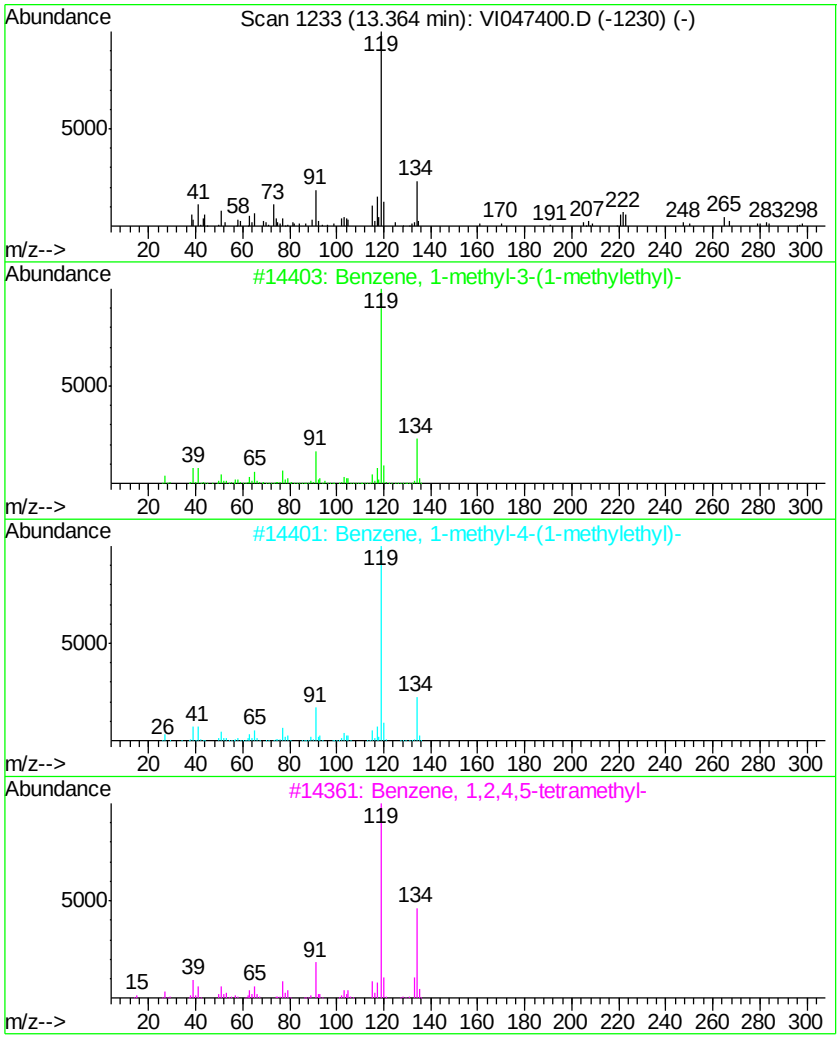
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

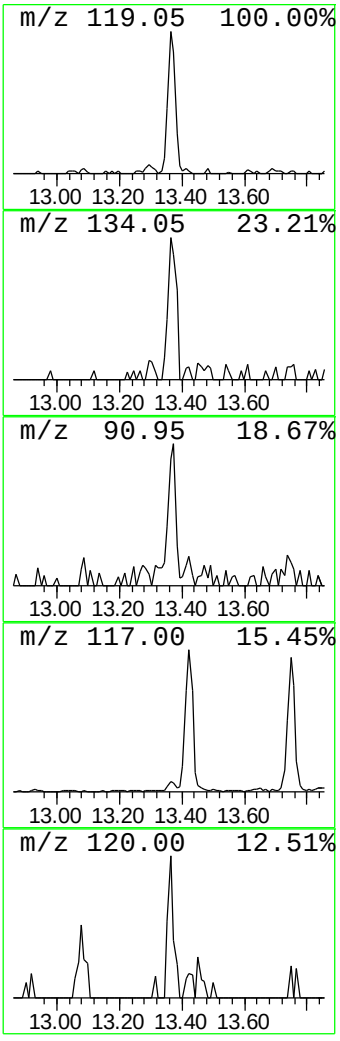
****

Peak Number 10 Benzene, 1-methyl-3-(1-meth... Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.36	0.49 ug/L	154671	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	93
2	Benzene, 1-methyl-4-(1-methyleth...	134	C10H14	000099-87-6	81
3	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	81
4	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	81
5	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	81





Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

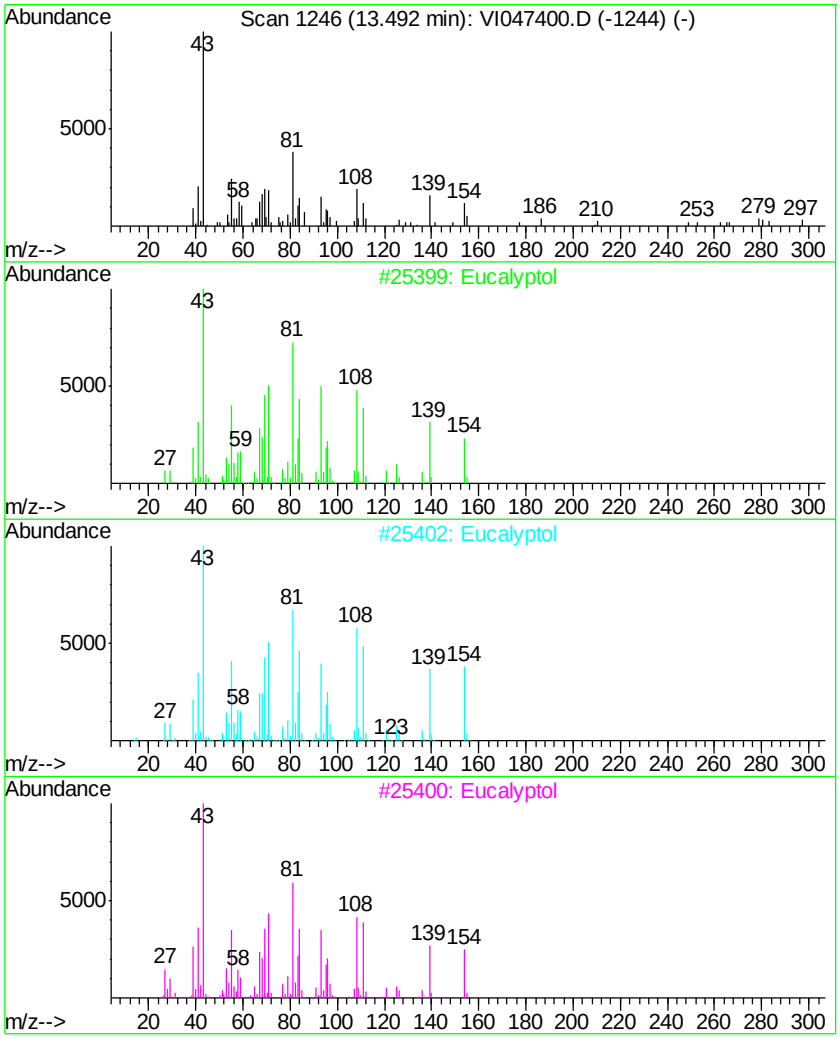
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

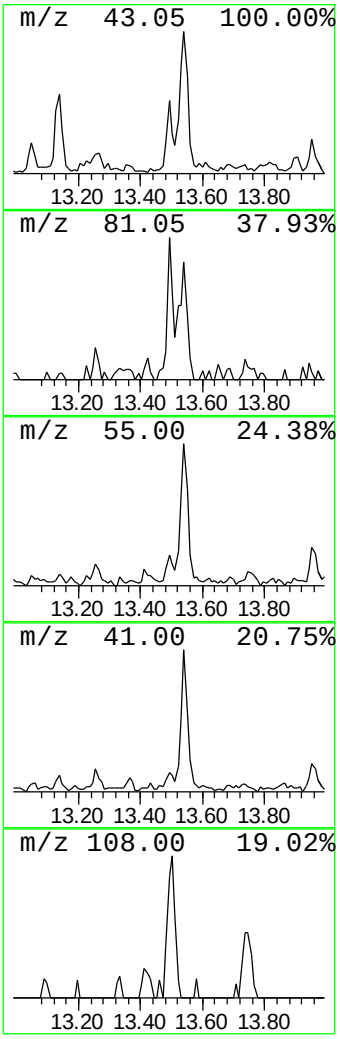
****

Peak Number 11 Eucalyptol Concentration Rank 18

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.49	0.34 ug/L	107459	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Eucalyptol	154	C10H18O	000470-82-6	93
2	Eucalyptol	154	C10H18O	000470-82-6	74
3	Eucalyptol	154	C10H18O	000470-82-6	70
4	Eucalyptol	154	C10H18O	000470-82-6	70
5	Eucalyptol	154	C10H18O	000470-82-6	58





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

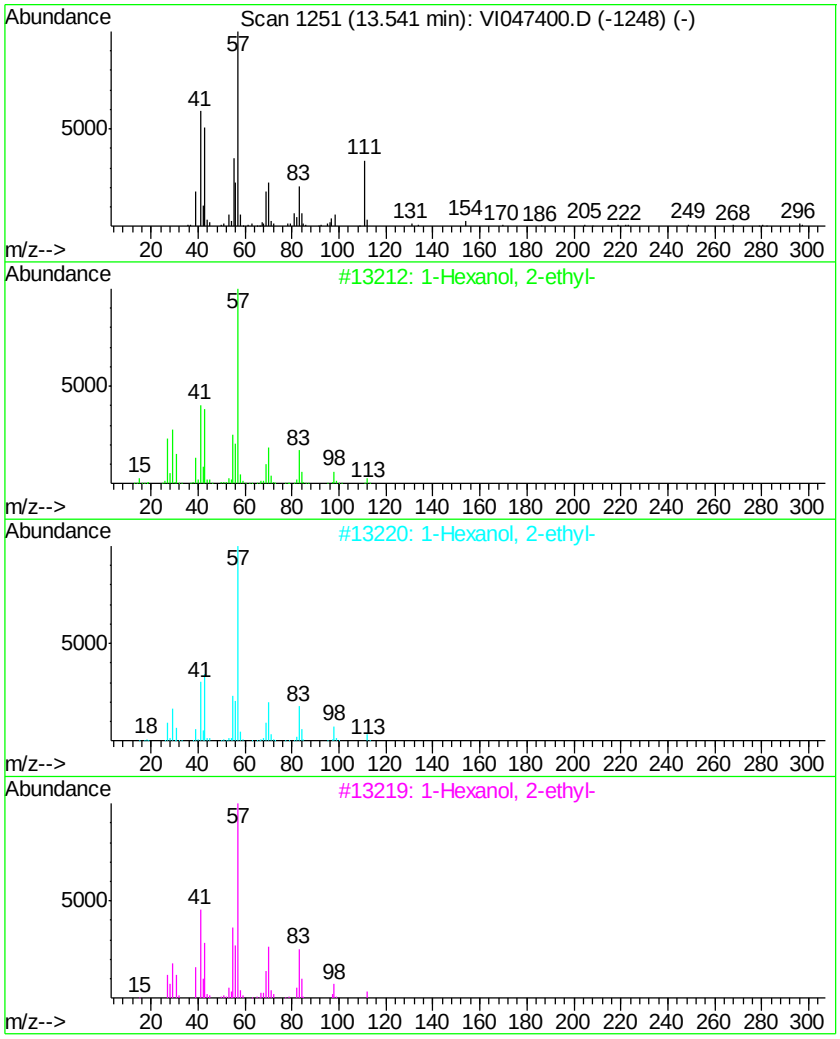
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

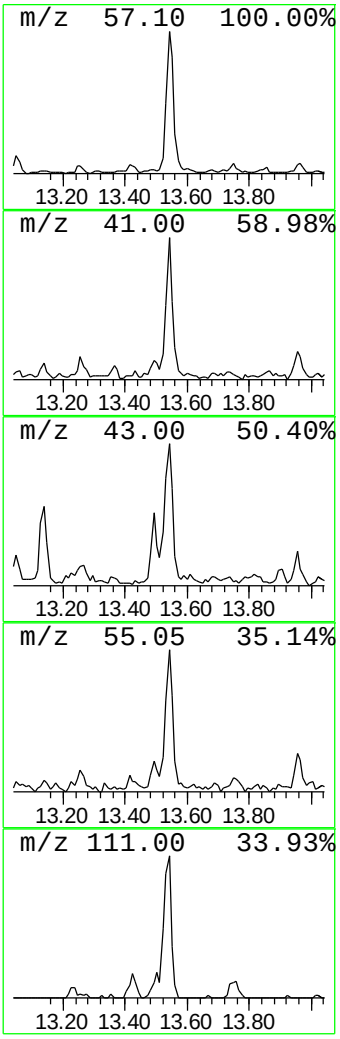
****

Peak Number 12 1-Hexanol, 2-ethyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.54	0.80 ug/L	254312	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Hexanol, 2-ethyl-	130	C8H18O	000104-76-7	59
2	1-Hexanol, 2-ethyl-	130	C8H18O	000104-76-7	59
3	1-Hexanol, 2-ethyl-	130	C8H18O	000104-76-7	53
4	1-Pentanol, 2-ethyl-4-methyl-	130	C8H18O	000106-67-2	47
5	2-Propyl-1-pentanol	130	C8H18O	058175-57-8	47





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

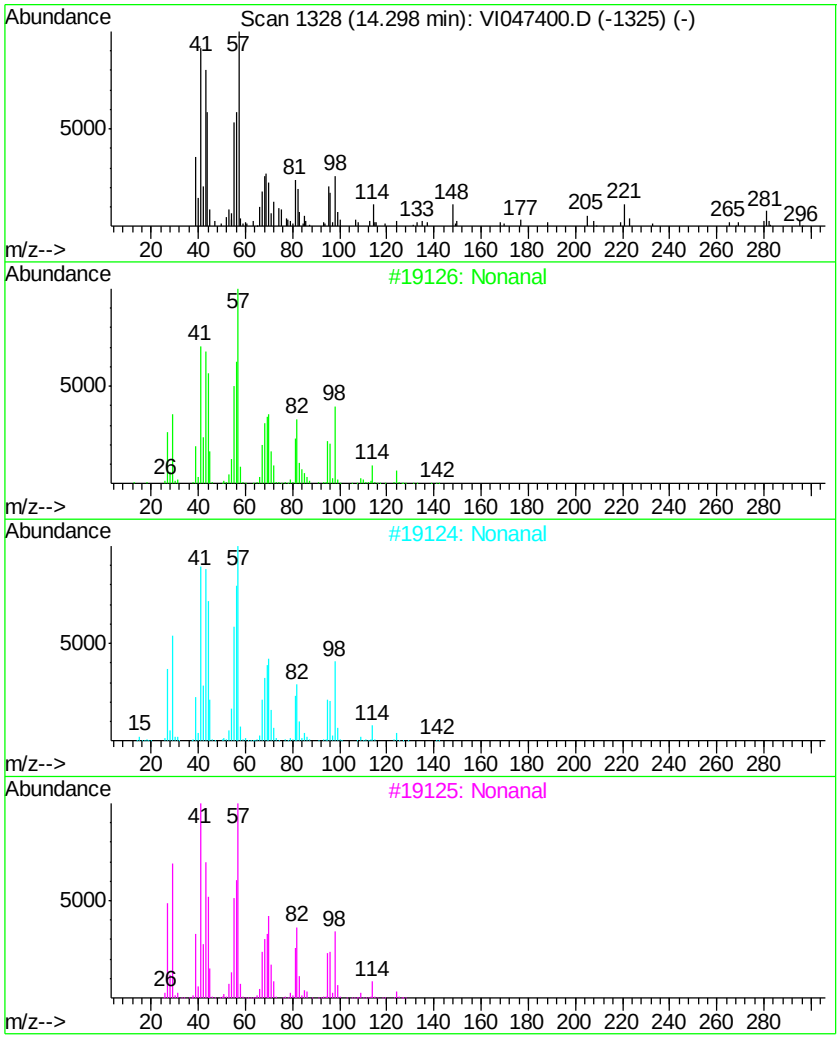
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

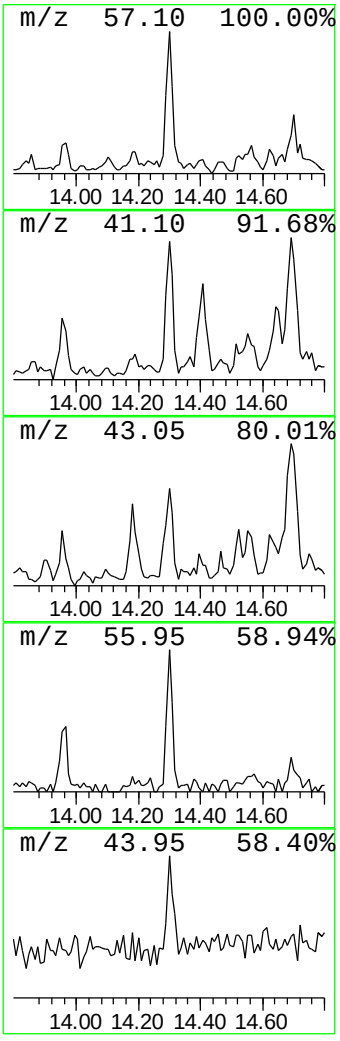
****

Peak Number 13 unknown-02 Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.30	0.59 ug/L	186642	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonanal	142	C9H18O	000124-19-6	47
2	Nonanal	142	C9H18O	000124-19-6	43
3	Nonanal	142	C9H18O	000124-19-6	43
4	(Z)-2-Heptene	98	C7H14	006443-92-1	18
5	2-Heptene	98	C7H14	000592-77-8	18





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Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

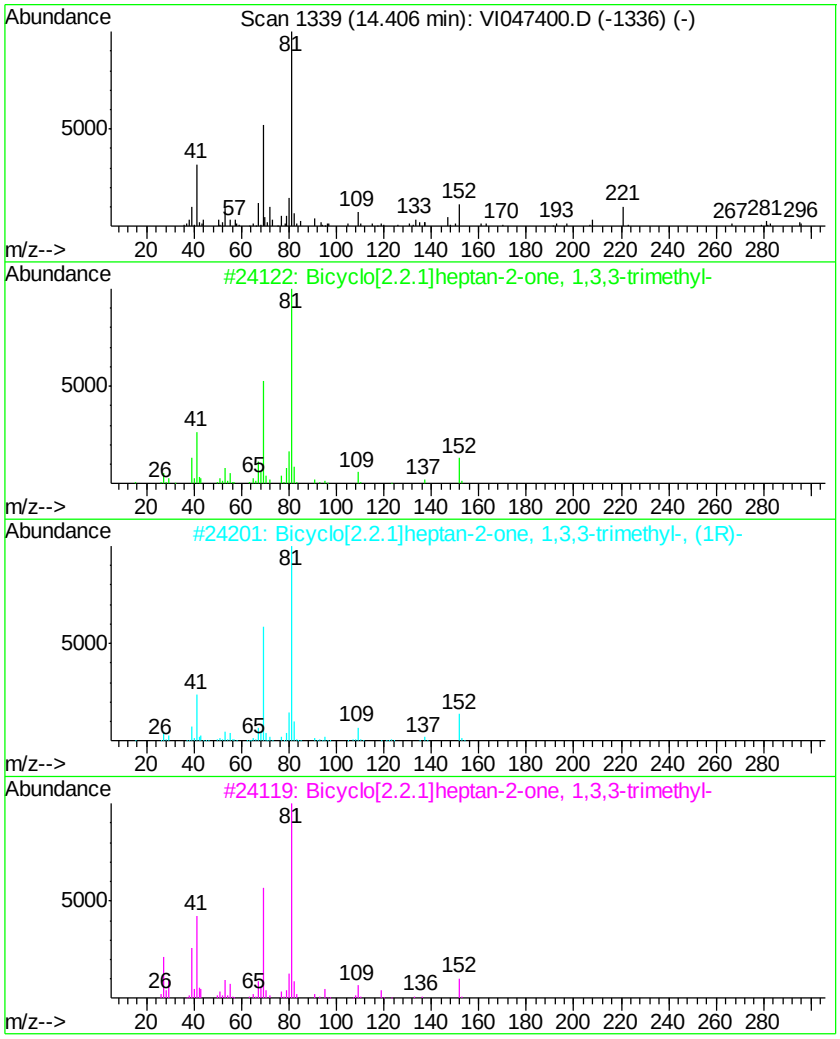
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

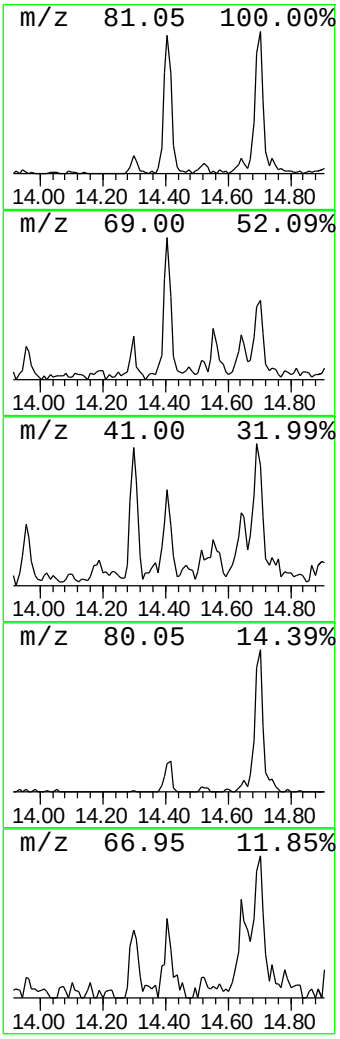
****

Peak Number 14 Bicyclo[2.2.1]heptan-2-one,... Concentration Rank 19

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.41	0.28 ug/L	88138	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[2.2.1]heptan-2-one, 1,3,...	152	C10H16O	001195-79-5	68
2	Bicyclo[2.2.1]heptan-2-one, 1,3,...	152	C10H16O	007787-20-4	64
3	Bicyclo[2.2.1]heptan-2-one, 1,3,...	152	C10H16O	001195-79-5	64
4	Bicyclo[2.2.1]heptan-2-one, 1,3,...	152	C10H16O	001195-79-5	64
5	L-Fenchone	152	C10H16O	000126-21-6	64





Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

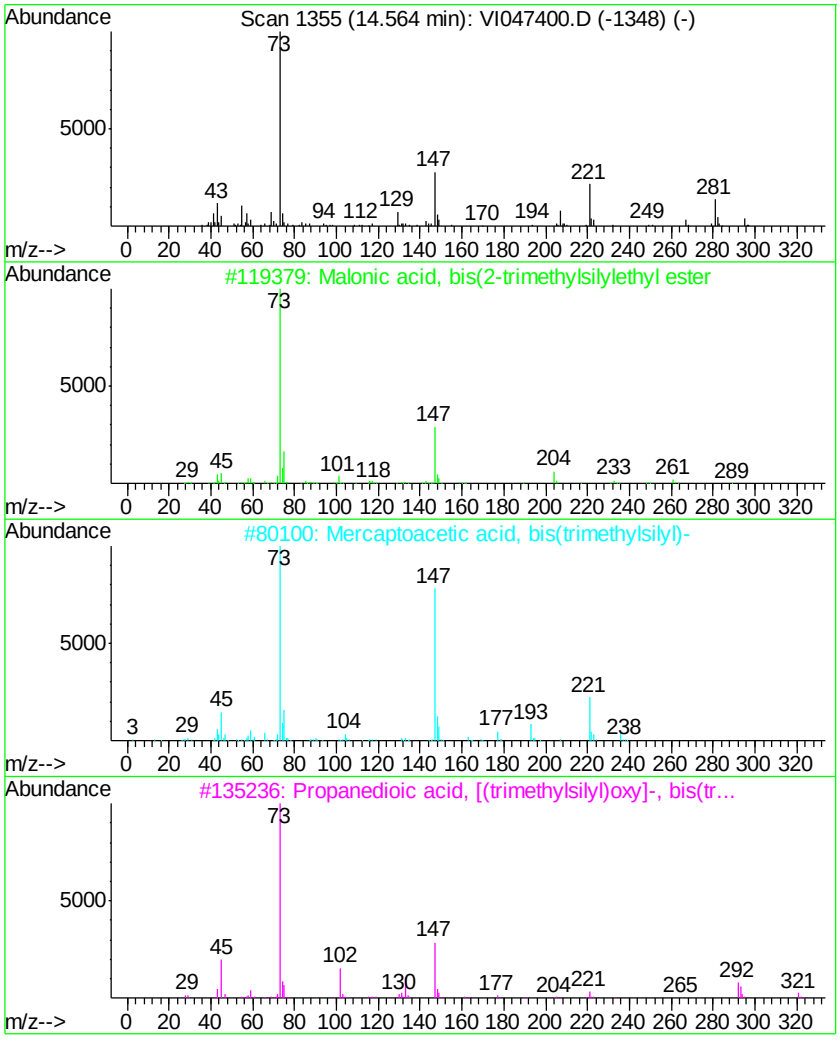
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

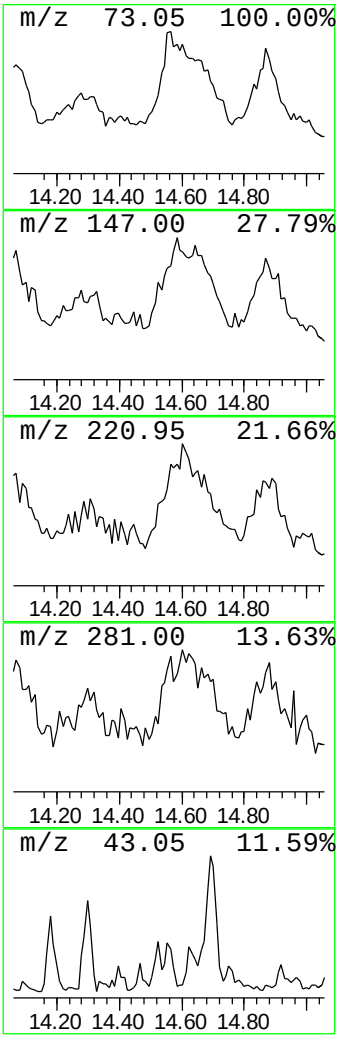
****

Peak Number 15 unknown-03 Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.56	0.99 ug/L	314364	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Malonic acid, bis(2-trimethylsil...	304	C13H28O4Si2	090744-45-9	27
2	Mercaptoacetic acid, bis(trimeth...	236	C8H20O2SSi2	006398-62-5	23
3	Propanedioic acid, [(trimethylsi...	336	C12H28O5Si3	038165-93-4	17
4	Silane, [[5,5-dimethyl-4-methyle...	282	C15H30OSi2	095798-15-5	16
5	Ethanedioic acid, bis(trimethyls...	234	C8H18O4Si2	018294-04-7	16





Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

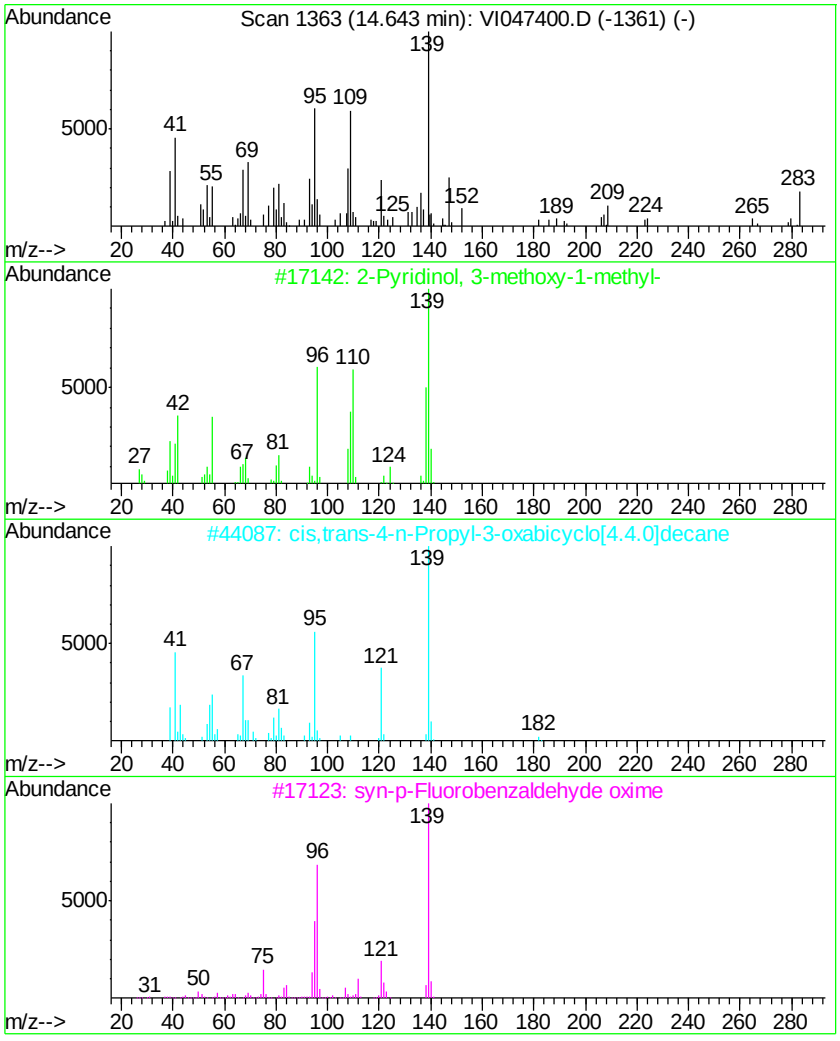
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

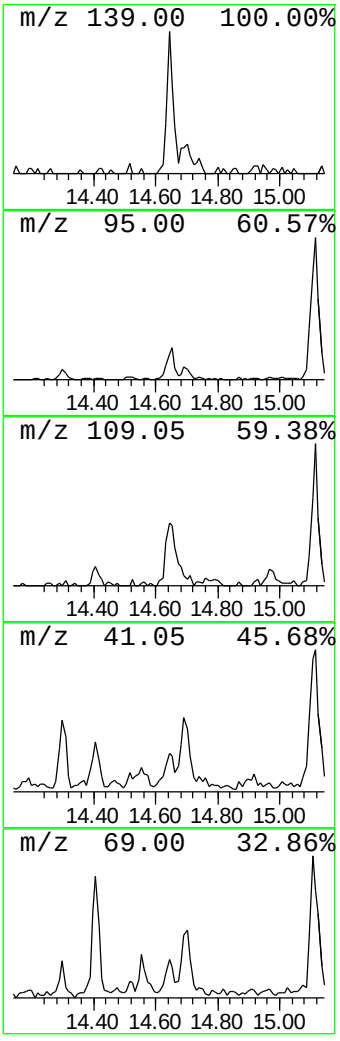
****

Peak Number 16 unknown-04 Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.64	0.68 ug/L	216823	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pyridinol, 3-methoxy-1-methyl-	139	C7H9NO2	054955-13-4	38
2	cis,trans-4-n-Propyl-3-oxabicycl...	182	C12H22O	1000216-88-4	38
3	syn-p-Fluorobenzaldehyde oxime	139	C7H6FNO	007304-35-0	27
4	Phenol, 4-nitro-	139	C6H5NO3	000100-02-7	27
5	2-Propenoic acid, 3-(2,2,6-trime...	224	C13H20O3	052298-37-0	27





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

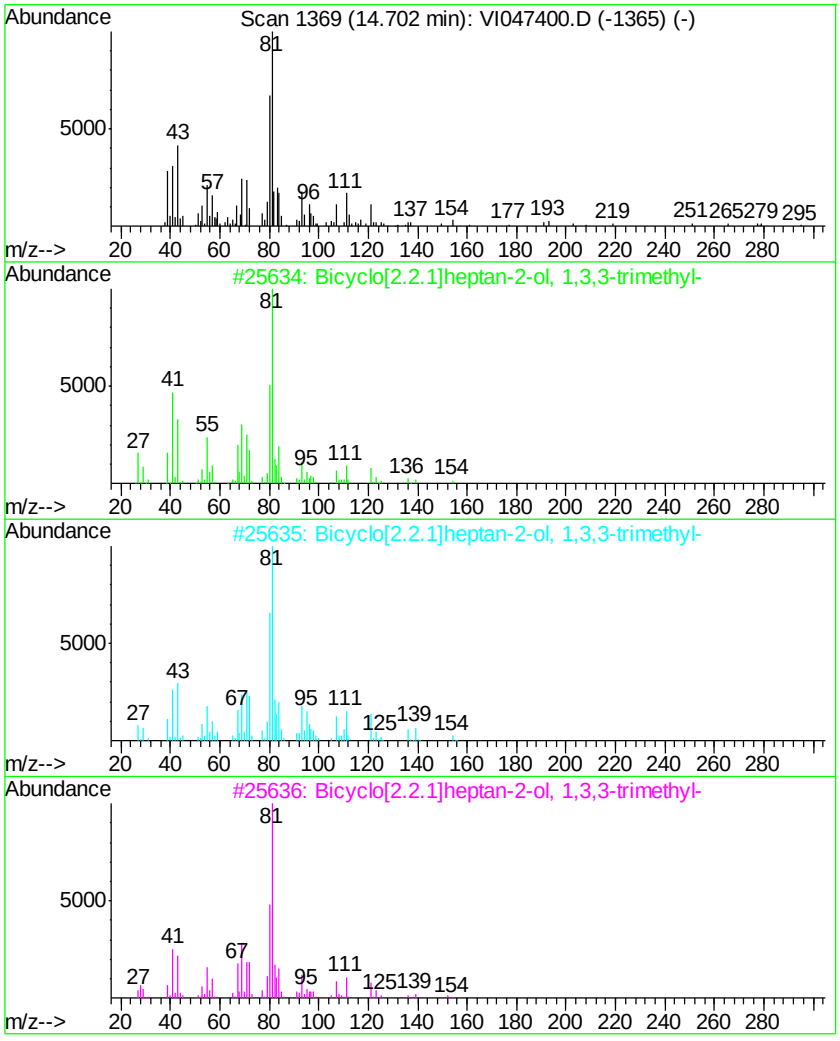
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

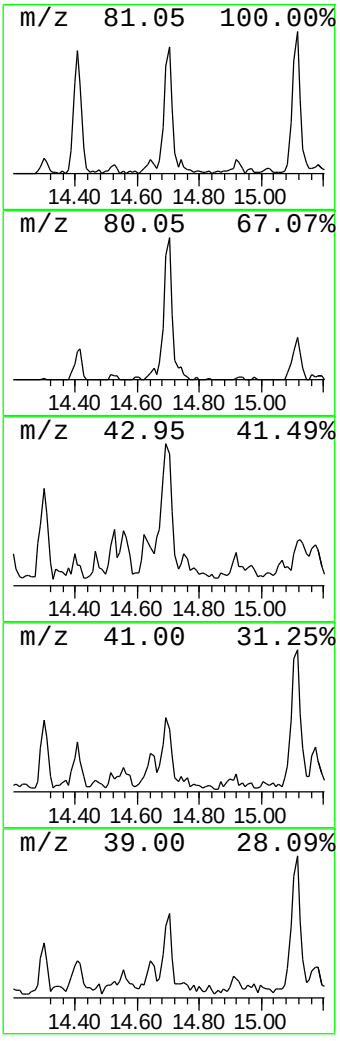
****

Peak Number 17 Bicyclo[2.2.1]heptan-2-ol, ... Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.70	1.30 ug/L	412491	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[2.2.1]heptan-2-ol, 1,3,3...	154	C10H18O	001632-73-1	81
2	Bicyclo[2.2.1]heptan-2-ol, 1,3,3...	154	C10H18O	001632-73-1	72
3	Bicyclo[2.2.1]heptan-2-ol, 1,3,3...	154	C10H18O	001632-73-1	59
4	Bicyclo[2.2.1]heptan-2-ol, 1,3,3...	154	C10H18O	002217-02-9	59
5	Bi-2-cyclohexen-1-yl	162	C12H18	001541-20-4	43





Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

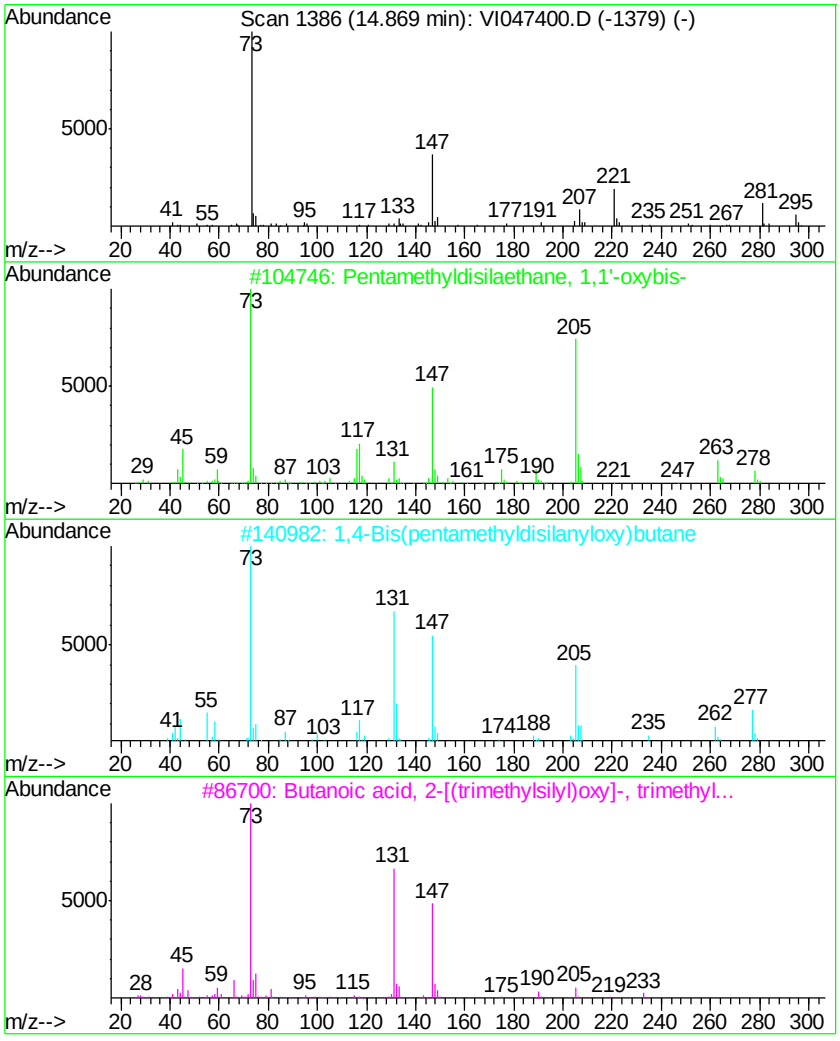
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

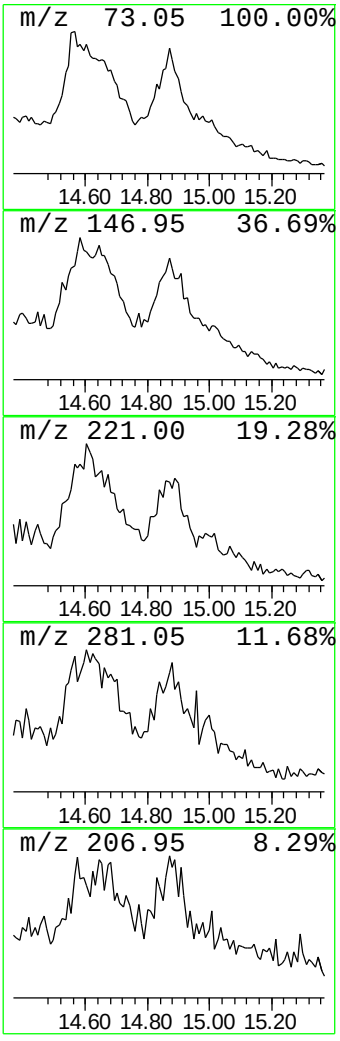
****

Peak Number 18 unknown-05 Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.87	0.78 ug/L	248548	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentamethyldisilaethane, 1,1'-ox...	278	C10H30OSi4	001560-31-2	17
2	1,4-Bis(pentamethyldisilanyloxy)...	350	C14H38O2Si4	1000216-98-8	17
3	Butanoic acid, 2-[(trimethylsilv...	248	C10H24O3Si2	055133-93-2	17
4	Trimethylsilyl ether of glycerol	308	C12H32O3Si3	006787-10-6	17
5	Butanoic acid, 3-methyl-2-[(trim...	262	C11H26O3Si2	055124-92-0	17





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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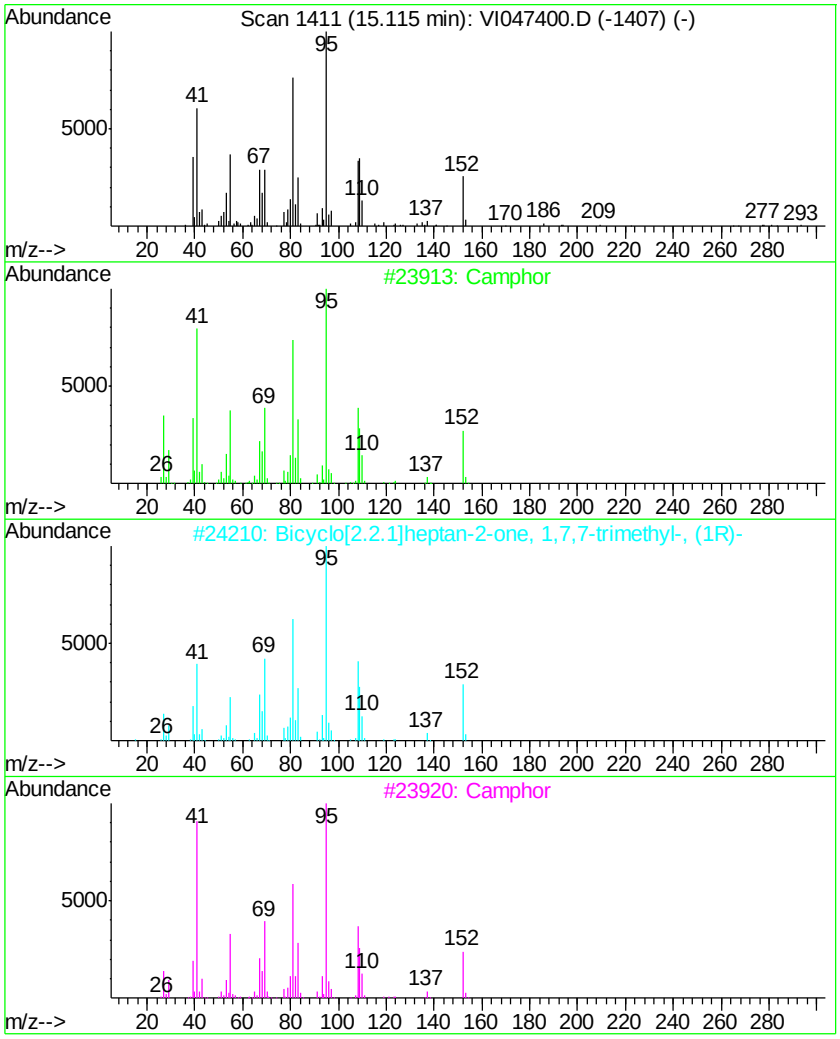
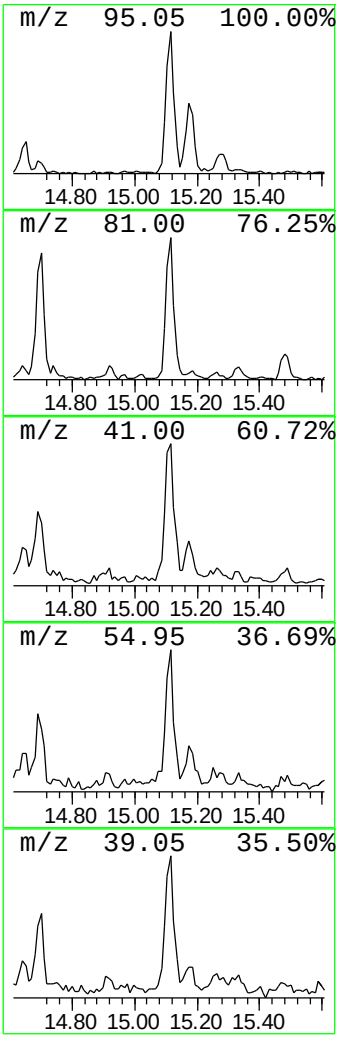
Peak Number 19 Camphor Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.11	0.99 ug/L	313799	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Camphor	152	C10H16O	000076-22-2	97
2	Bicyclo[2.2.1]heptan-2-one, 1,7,...	152	C10H16O	000464-49-3	91
3	Camphor	152	C10H16O	000076-22-2	90
4	Bicyclo[2.2.1]heptan-2-one, 1,7,...	152	C10H16O	000464-48-2	83
5	Camphor	152	C10H16O	000076-22-2	80





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

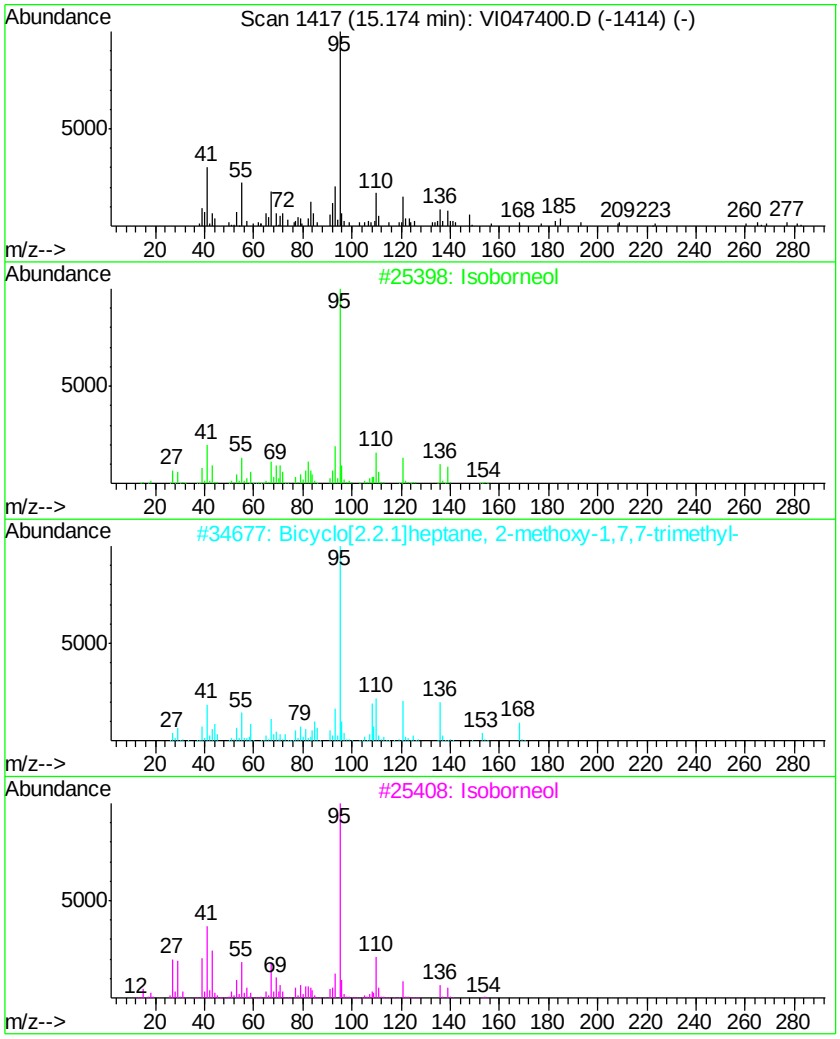
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

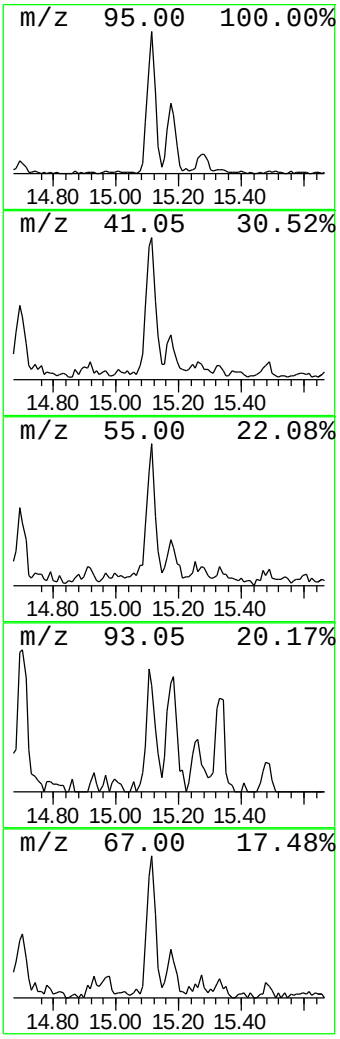
****

Peak Number 20 Isoborneol Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.17	0.35 ug/L	110355	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isoborneol	154	C10H18O	000124-76-5	64
2	Bicyclo[2.2.1]heptane, 2-methoxy...	168	C11H20O	004443-51-0	59
3	Isoborneol	154	C10H18O	000124-76-5	59
4	Borneol	154	C10H18O	000507-70-0	59
5	Borneol	154	C10H18O	010385-78-1	53





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Bis(3-methylbutyl...	1.41	2.9	ug/L	752552	1	7.93	1297070	5.0
Trimethylsilyl fl...	1.86	0.6	ug/L	153044	1	7.93	1297070	5.0
(DEL) Alkane: Cyc...	2.40	0.4	ug/L	106965	1	7.93	1297070	5.0
3-Buten-1-ol	2.47	0.4	ug/L	92373	1	7.93	1297070	5.0
unknown-01	13.26	0.4	ug/L	139002	3	13.42	1587280	5.0
Benzene, 1-methyl...	13.36	0.5	ug/L	154671	3	13.42	1587280	5.0
Eucalyptol	13.49	0.3	ug/L	107459	3	13.42	1587280	5.0
1-Hexanol, 2-ethyl-	13.54	0.8	ug/L	254312	3	13.42	1587280	5.0
unknown-02	14.30	0.6	ug/L	186642	3	13.42	1587280	5.0
Bicyclo[2.2.1]hep...	14.41	0.3	ug/L	88138	3	13.42	1587280	5.0
unknown-03	14.56	1.0	ug/L	314364	3	13.42	1587280	5.0
unknown-04	14.64	0.7	ug/L	216823	3	13.42	1587280	5.0
Bicyclo[2.2.1]hep...	14.70	1.3	ug/L	412491	3	13.42	1587280	5.0
unknown-05	14.87	0.8	ug/L	248548	3	13.42	1587280	5.0
Camphor	15.11	1.0	ug/L	313799	3	13.42	1587280	5.0
Isoborneol	15.17	0.3	ug/L	110355	3	13.42	1587280	5.0

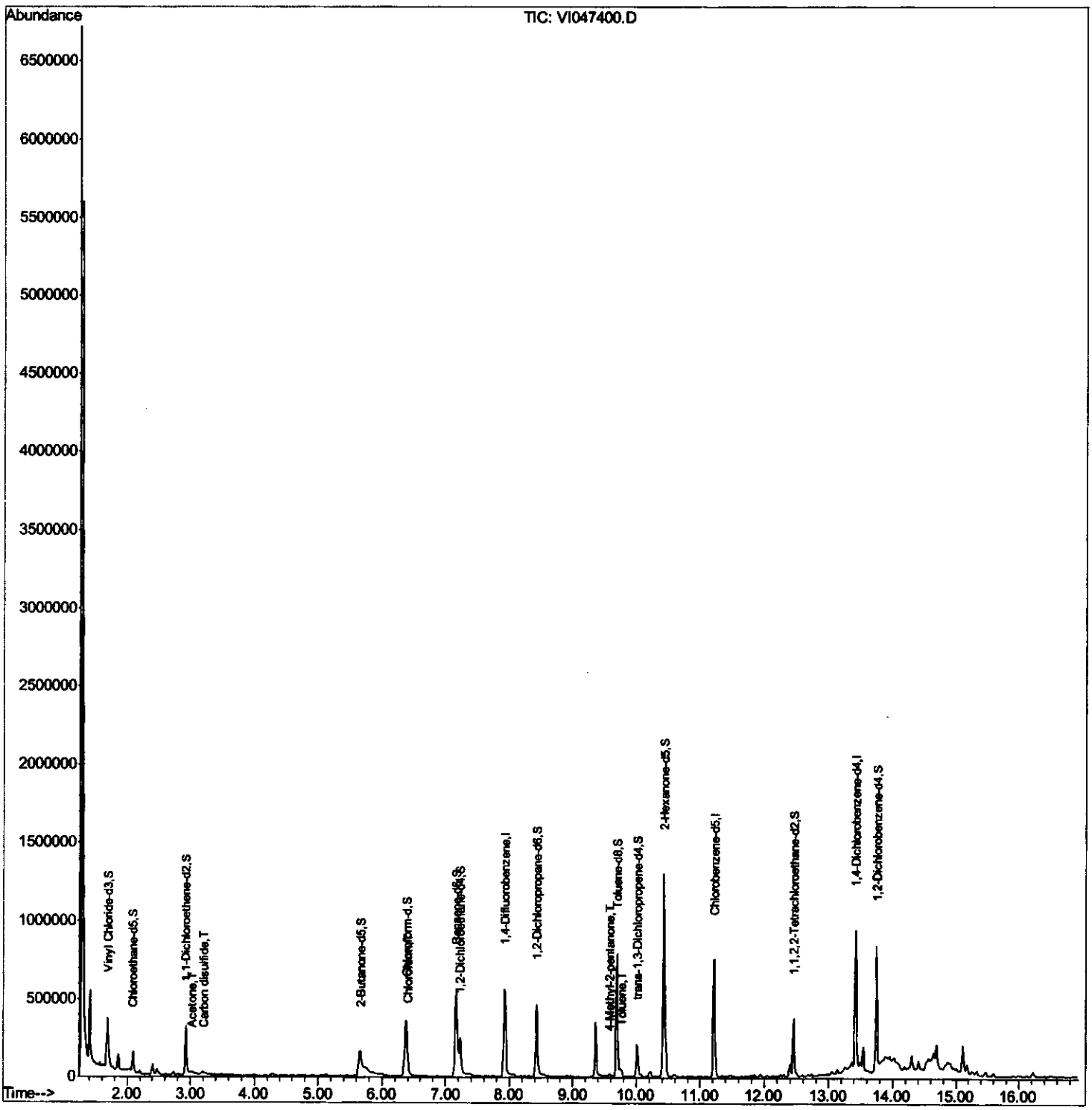
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 01 04:36:08 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H0002

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:09:00 PM



Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 01 04:10:00 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H0002

Manual Integrations APPROVED
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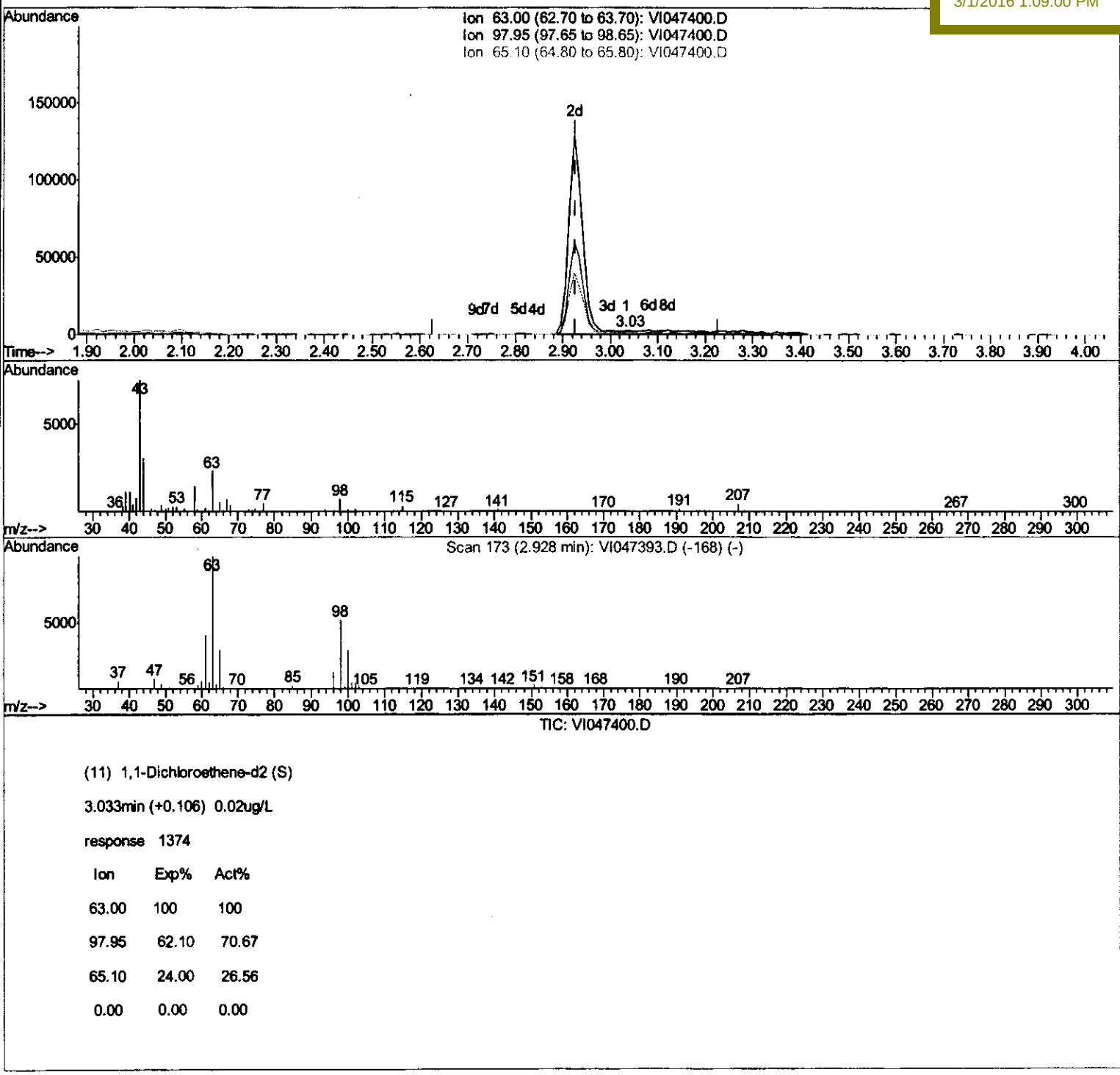
3/1/2016 1:09:00 PM



TIC: VI047400.D

(11) 1,1-Dichloroethene-d2 (S)

3.033min (+0.106) 0.02ug/L

response 1374

Ion	Exp%	Act%
63.00	100	100
97.95	62.10	70.67
65.10	24.00	26.56
0.00	0.00	0.00

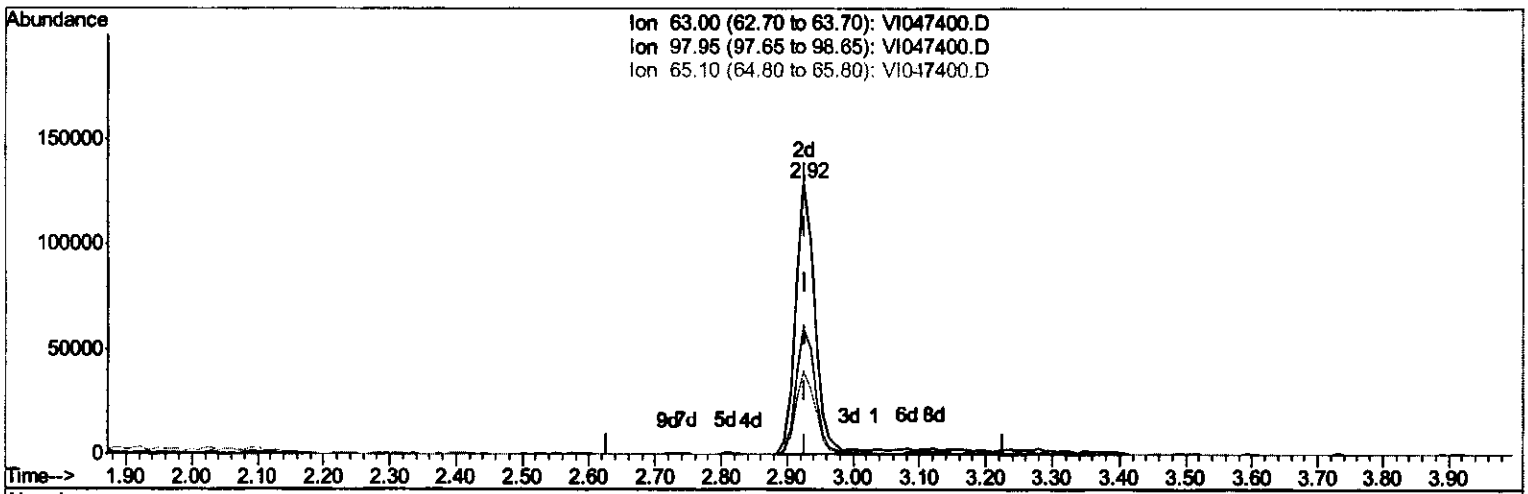
Quantitation Report (Qedit)

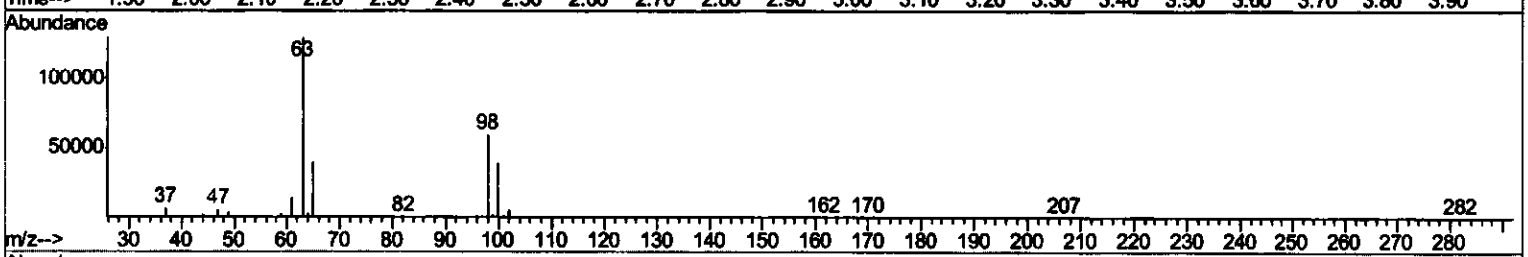
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

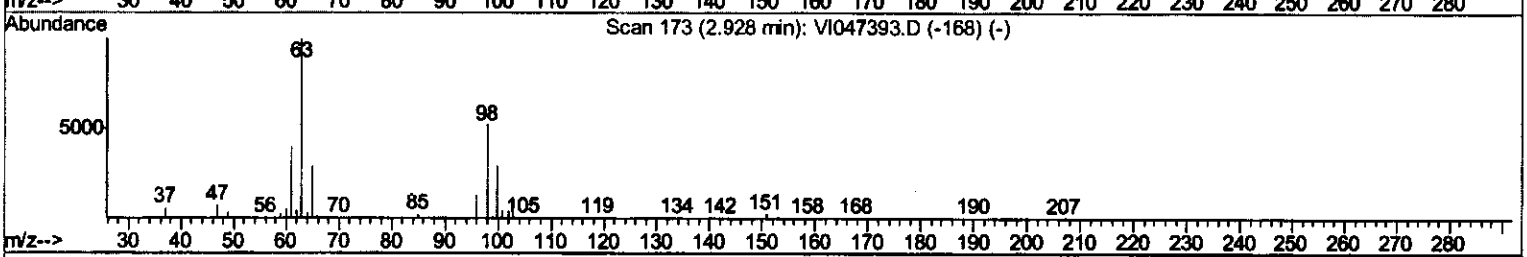
Quant Time: Mar 01 04:10:00 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H0002

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:09:00 PM







TIC: VI047400.D

(11) 1,1-Dichloroethene-d2 (S)
2.925min (-0.003) 3.92ug/L m
response 260888

F.Y 03/05/16

Ion	Exp%	Act%
63.00	100	100
97.95	62.10	0.37#
65.10	24.00	0.14#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047400.D
Acq On : 29 Feb 2016 16:29
Operator : FY/SY
Sample : H1584-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 01 04:36:08 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H0002

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:09:00 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	540160	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	478326	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.42	152	231671	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	165713	5.51	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 110.20%			
7) Chloroethane-d5	2.10	69	122504	5.33	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 106.60%			
11) 1,1-Dichloroethene-d2	2.92	63	260888m>	3.92	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 78.40%			
20) 2-Butanone-d5	5.66	46	464264	74.22	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 148.44%#			
24) Chloroform-d	6.38	84	397405	5.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 116.80%			
26) 1,2-Dichloroethane-d4	7.22	65	233705	5.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 118.00%			
32) Benzene-d6	7.17	84	644574	5.59	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 111.80%			
36) 1,2-Dichloropropane-d6	8.43	67	215529	6.19	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 123.80%			
41) Toluene-d8	9.69	98	540838	4.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.80%			
43) trans-1,3-Dichloropropene-	10.01	79	121791	5.91	ug/L	-0.01
Spiked Amount 5.000	Range 55 - 130		Recovery = 118.20%			
46) 2-Hexanone-d5	10.42	63	538815	63.85	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 127.70%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	184936	6.14	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 122.80%#			
64) 1,2-Dichlorobenzene-d4	13.75	152	206020	4.88	ug/L	-0.01
Spiked Amount 5.000	Range 80 - 120		Recovery = 97.60%			
Target Compounds						Qvalue
13) Acetone	3.01	43	56568	20.00	ug/L	61
14) Carbon disulfide	3.20	76	26136	0.28	ug/L	95
25) Chloroform	6.41	83	33042	0.50	ug/L	97
40) 4-Methyl-2-pentanone	9.58	43	11448	0.44	ug/L #	90
42) Toluene	9.77	91	15573	0.12	ug/L	79

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FY 03/05/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0007

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047401.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 7.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.6	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0007

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047401.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 7.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.27	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.2	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.1	J
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.16	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0007

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047401.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 7.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0007

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047401.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 02/29/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 7.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	318259-17-5	Imidazol-5(2H)-one, 4-amino-2-(2-f	1.4	3.1	JN
2	000075-44-5	Phosgene	3.17	0.27	JN
3	000372-18-9	Benzene, 1,3-difluoro-	8.02	0.73	JN
4		unknown-01	8.5	0.73	J
5	000066-25-1	Hexanal	10.59	0.52	JN
6	000124-13-0	Octanal	13.25	0.96	JN
7	000104-76-7	1-Hexanol, 2-ethyl-	13.54	0.45	JN
8	000124-19-6	Nonanal	14.29	4.3	JN
9	001632-73-1	Bicyclo[2.2.1]heptan-2-ol, 1,3,3-t	14.7	0.38	JN
10	000143-08-8	1-Nonanol	14.9	0.27	JN
11	000464-49-3	Bicyclo[2.2.1]heptan-2-one, 1,7,7-	15.11	0.49	JN
12	000507-70-0	Borneol	15.17	0.3	JN
13	E966796	Total Alkanes	N/A	1.39	

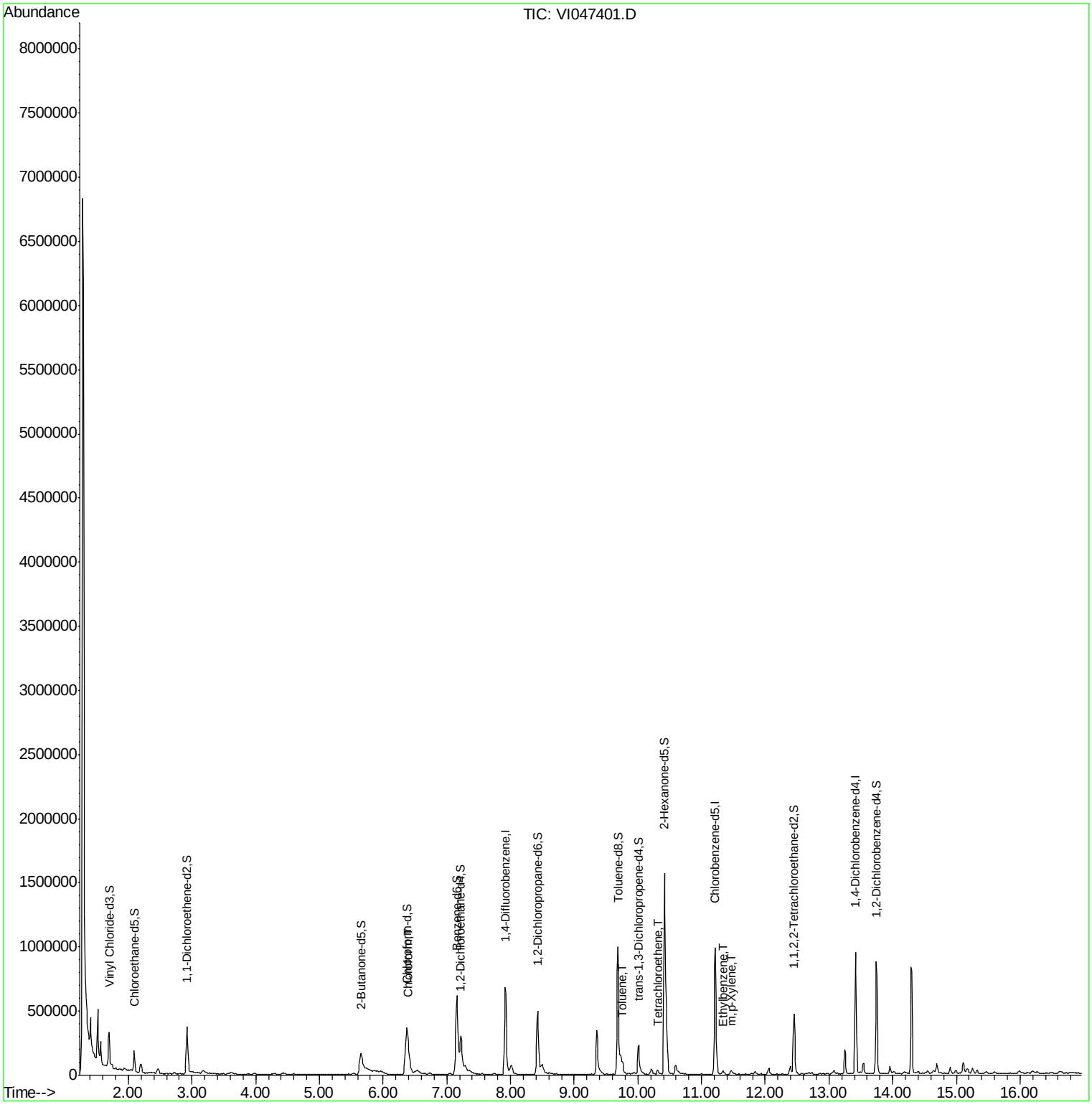
EPA-designated Registry Number.

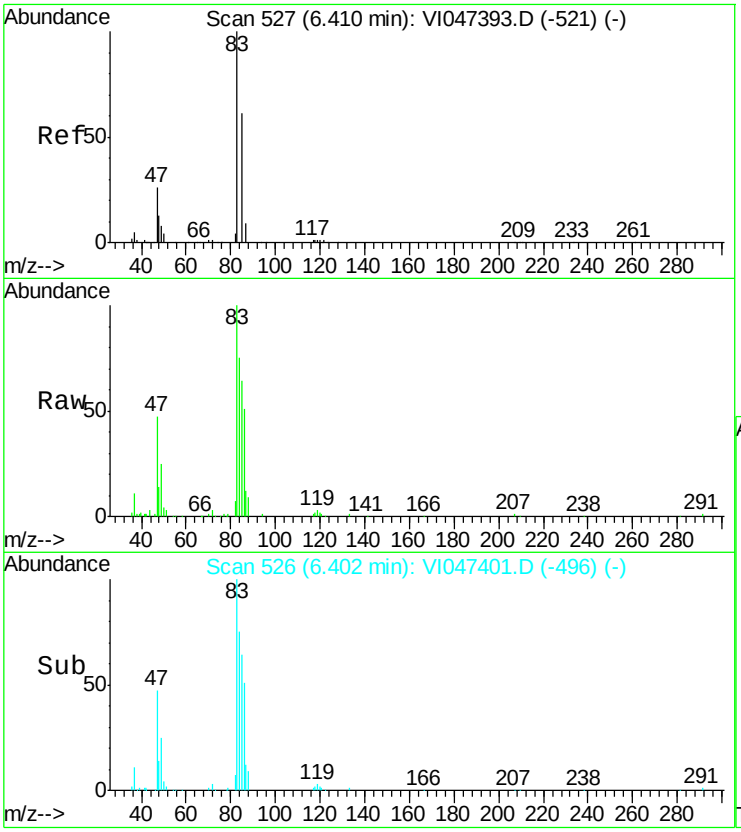
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Time: Mar 01 12:24:56 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration



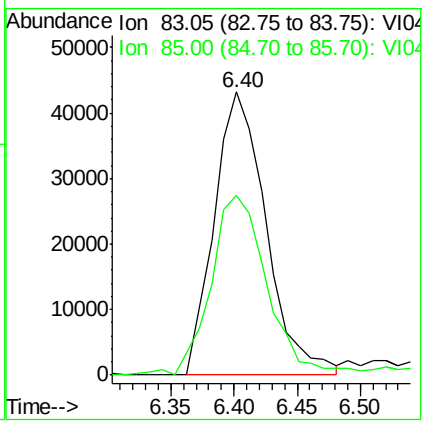


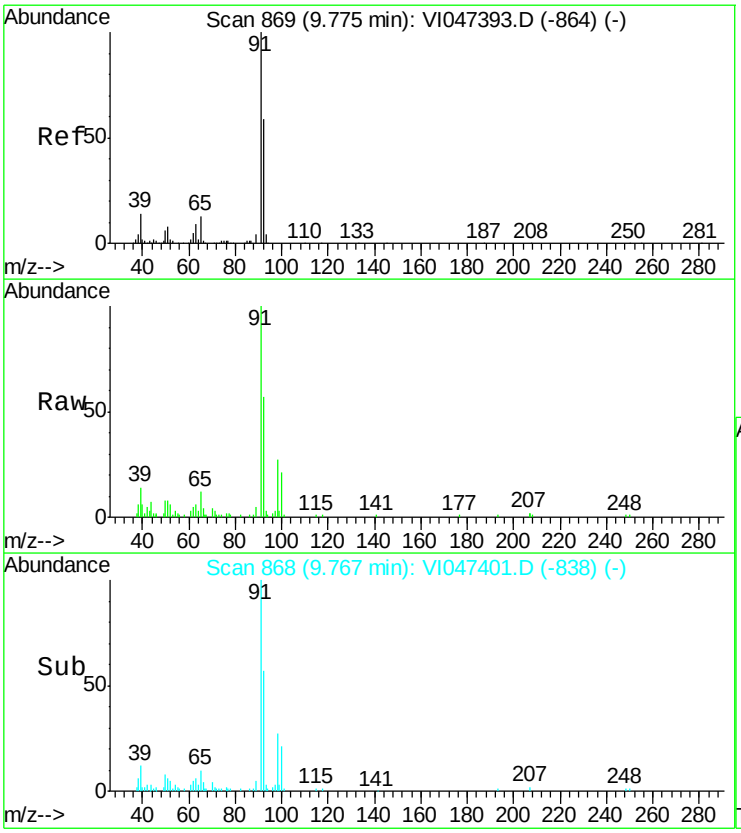
#25
Chloroform
Concen: 1.60 ug/L
RT: 6.40 min Scan# 526
Delta R.T. -0.01 min
Lab File: VI047401.D
Acq: 29 Feb 2016 17:00

Instrument : MSVOA_I
ClientSampleId : H0007

Tgt Ion: 83 Resp: 122920

Ion	Ratio	Lower	Upper
83	100		
85	63.7	43.2	80.2

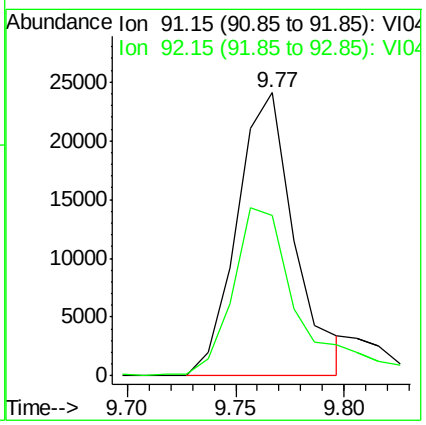


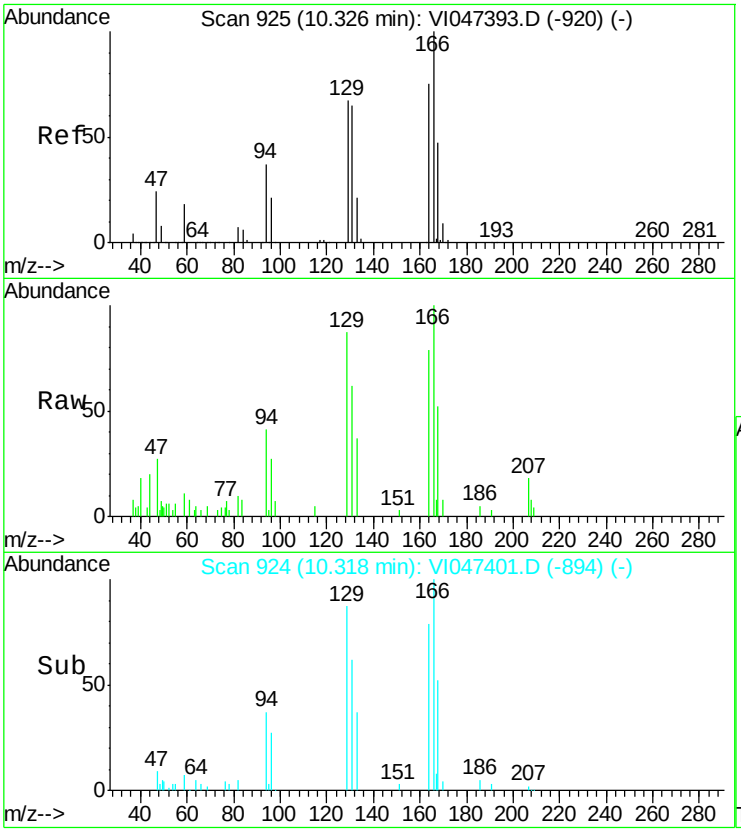


#42
Toluene
Concen: 0.27 ug/L
RT: 9.77 min Scan# 868
Delta R.T. -0.01 min
Lab File: VI047401.D
Acq: 29 Feb 2016 17:00

Tgt Ion: 91 Resp: 44587

Ion	Ratio	Lower	Upper
91	100		
92	56.7	41.3	76.7



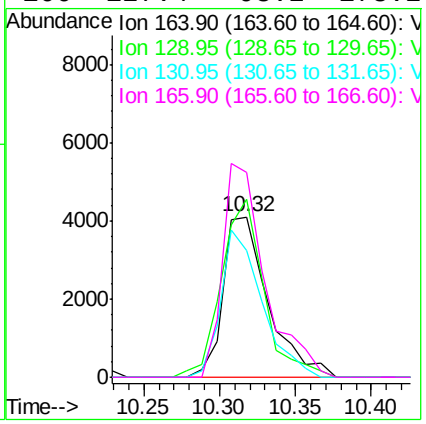


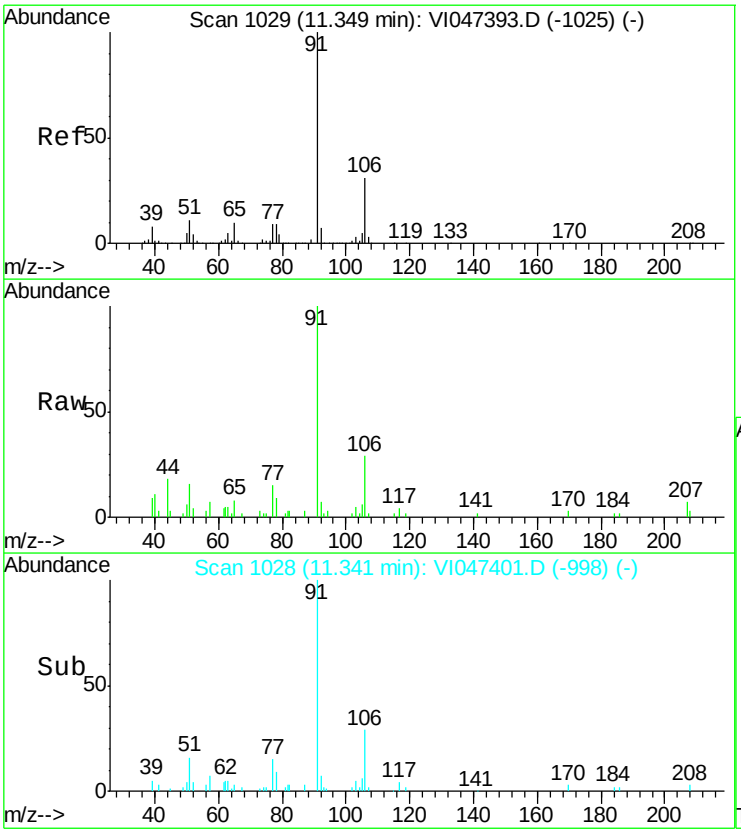
#47
Tetrachloroethene
Concen: 0.20 ug/L
RT: 10.32 min Scan# 924
Delta R.T. -0.01 min
Lab File: VI047401.D
Acq: 29 Feb 2016 17:00

Instrument : MSVOA_I
ClientSampleId : H0007

Tgt Ion:164 Resp: 8522

Ion	Ratio	Lower	Upper
164	100		
129	111.2	62.6	116.2
131	79.2	60.5	112.5
166	127.4	93.2	173.2

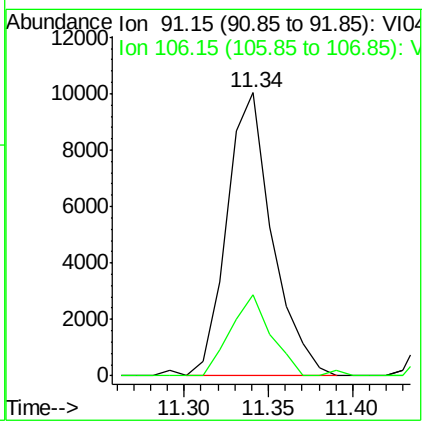


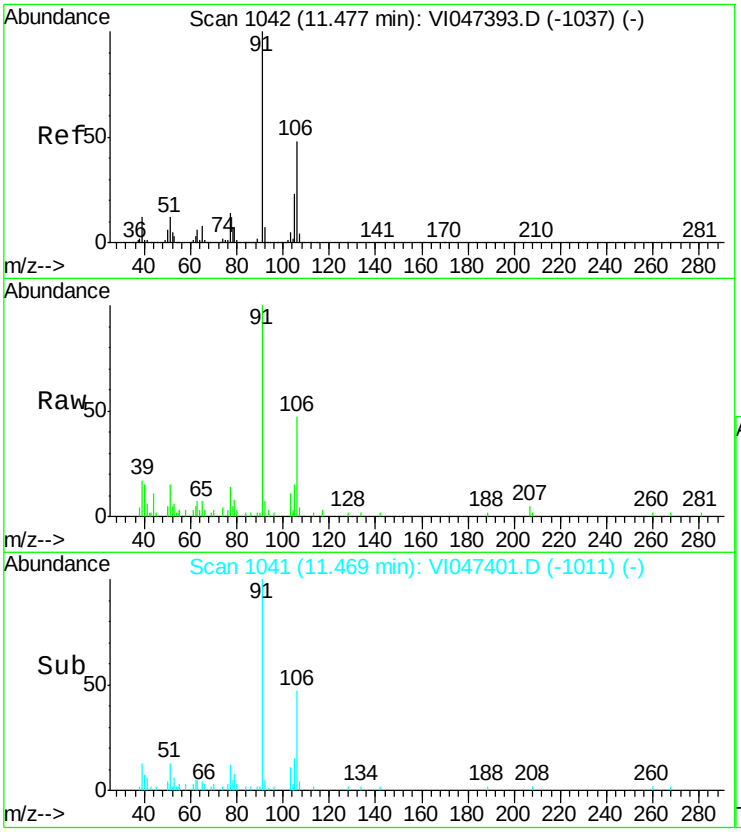


#52
Ethylbenzene
Concen: 0.10 ug/L
RT: 11.34 min Scan# 1028
Delta R.T. -0.01 min
Lab File: VI047401.D
Acq: 29 Feb 2016 17:00

Tgt Ion: 91 Resp: 18732

Ion	Ratio	Lower	Upper
91	100		
106	28.8	21.6	40.0



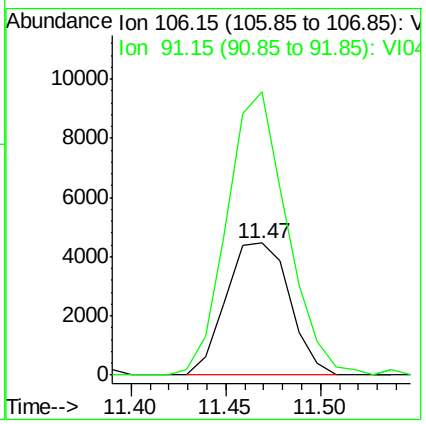


#53
m,p-Xylene
Concen: 0.16 ug/L
RT: 11.47 min Scan# 1041
Delta R.T. -0.01 min
Lab File: VI047401.D
Acq: 29 Feb 2016 17:00

Instrument :
MSVOA_I
ClientSampleId :
H0007

Tgt Ion:106 Resp: 10389

Ion	Ratio	Lower	Upper
106	100		
91	214.2	145.5	270.1



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Time: Mar 01 12:24:56 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	622956	5.00	ug/L	-0.02
28) Chlorobenzene-d5	11.21	117	600373	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.42	152	261757	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	195878	5.65	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 113.00%			
7) Chloroethane-d5	2.09	69	138829	5.24	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 104.80%			
11) 1,1-Dichloroethene-d2	2.92	63	292371	3.81	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 76.20%			
20) 2-Butanone-d5	5.65	46	501792	69.56	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 139.12%#			
24) Chloroform-d	6.37	84	413066	5.26	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 105.20%			
26) 1,2-Dichloroethane-d4	7.22	65	253526	5.55	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 111.00%			
32) Benzene-d6	7.16	84	729473	5.04	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.80%			
36) 1,2-Dichloropropane-d6	8.43	67	232621	5.33	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 106.60%			
41) Toluene-d8	9.69	98	715119	5.10	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.00%			
43) trans-1,3-Dichloropropene-	10.01	79	144990	5.60	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 112.00%			
46) 2-Hexanone-d5	10.42	63	706463	66.70	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 133.40%#			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	235705	6.23	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 124.60%#			
64) 1,2-Dichlorobenzene-d4	13.74	152	246964	5.17	ug/L	-0.02
Spiked Amount 5.000	Range 80 - 120		Recovery = 103.40%			
Target Compounds						Qvalue
25) Chloroform	6.40	83	122920	1.60	ug/L	97
42) Toluene	9.77	91	44587	0.27	ug/L	97
47) Tetrachloroethene	10.32	164	8522	0.20	ug/L	89
52) Ethylbenzene	11.34	91	18732	0.10	ug/L	96
53) m,p-Xylene	11.47	106	10389	0.16	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	3	6	16	rBV	6754776	15006042	100.00%	34.542%
2	1.404	16	18	27	rVV	371308	933487	6.22%	2.149%
3	1.522	27	30	33	rVV	431660	633914	4.22%	1.459%
4	1.561	33	34	37	rVB	184025	191992	1.28%	0.442%
5	1.699	44	48	56	rVB	291472	563220	3.75%	1.296%
6	1.807	56	59	63	rVB3	12128	22061	0.15%	0.051%
7	1.935	69	72	77	rVB4	18439	46548	0.31%	0.107%
8	2.093	85	88	95	rVB	172071	282875	1.89%	0.651%
9	2.191	95	98	105	rVB	67879	132864	0.89%	0.306%
10	2.467	121	126	132	rVB3	42149	108019	0.72%	0.249%
11	2.722	147	152	158	rBV7	10448	30182	0.20%	0.069%
12	2.919	167	172	177	rBV	370186	758587	5.06%	1.746%
13	3.175	194	198	206	rVB3	23092	81186	0.54%	0.187%
14	3.273	206	208	214	rVV7	6600	14453	0.10%	0.033%
15	3.608	234	242	248	rBV6	16183	61148	0.41%	0.141%
16	3.972	276	279	285	rVB3	9164	24417	0.16%	0.056%
17	4.257	303	308	309	rBV3	6324	10840	0.07%	0.025%
18	4.287	309	311	314	rVB4	6217	11778	0.08%	0.027%
19	4.434	321	326	331	rBV4	11513	34891	0.23%	0.080%
20	5.457	424	430	432	rBV5	5309	11073	0.07%	0.025%
21	5.536	434	438	443	rVB4	7865	20712	0.14%	0.048%
22	5.654	443	450	457	rBV	164073	673090	4.49%	1.549%
23	5.989	482	484	492	rVB3	19685	58818	0.39%	0.135%
24	6.372	516	523	534	rBV2	366428	1390462	9.27%	3.201%
25	6.490	534	535	537	rVV2	13742	22678	0.15%	0.052%
26	6.540	537	540	549	rVB3	26790	87407	0.58%	0.201%
27	6.736	555	560	565	rVB6	11659	33046	0.22%	0.076%
28	6.855	569	572	574	rBV3	4584	9626	0.06%	0.022%
29	7.032	586	590	592	rBV3	6103	13212	0.09%	0.030%
30	7.160	597	603	606	rBV	618305	1531664	10.21%	3.526%
31	7.219	606	609	615	rVB	233412	544140	3.63%	1.253%
32	7.543	639	642	647	rVB6	4310	10388	0.07%	0.024%
33	7.750	659	663	666	rBV3	9977	21165	0.14%	0.049%
34	7.917	675	680	686	rBV	681611	1528564	10.19%	3.519%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

35	8.015	686	690	701	rVB	73189	223880	1.49%	0.515%
36	8.193	703	708	711	rBV4	3263	9381	0.06%	0.022%
37	8.429	726	732	736	rBV	497201	1134204	7.56%	2.611%
38	8.498	736	739	748	rVV5	72596	222657	1.48%	0.513%
39	8.606	748	750	753	rVV	6168	9073	0.06%	0.021%
40	8.852	768	775	777	rVB5	3621	9069	0.06%	0.021%
41	9.354	822	826	839	rVV	345748	732034	4.88%	1.685%
42	9.688	855	860	874	rBV	994719	2242273	14.94%	5.161%
43	9.855	874	877	880	rVV5	6557	14656	0.10%	0.034%
44	9.914	880	883	884	rVV3	5759	11297	0.08%	0.026%
45	9.944	884	886	889	rVV2	15207	28516	0.19%	0.066%
46	10.013	889	893	903	rVV	228071	503431	3.35%	1.159%
47	10.209	909	913	921	rVV	44933	102876	0.69%	0.237%
48	10.308	921	923	927	rVV2	32726	65273	0.43%	0.150%
49	10.416	930	934	946	rBV	1565496	3497294	23.31%	8.050%
50	10.593	948	952	959	rVV2	72070	196765	1.31%	0.453%
51	10.692	959	962	966	rVV6	8579	21445	0.14%	0.049%
52	11.213	1010	1015	1023	rVV	983613	1876722	12.51%	4.320%
53	11.341	1025	1028	1033	rVV2	24821	52790	0.35%	0.122%
54	11.469	1036	1041	1050	rVB2	30204	80624	0.54%	0.186%
55	11.784	1070	1073	1076	rBV5	4230	9985	0.07%	0.023%
56	11.843	1076	1079	1083	rVV3	18235	40269	0.27%	0.093%
57	12.059	1096	1101	1107	rVV	46185	89082	0.59%	0.205%
58	12.187	1109	1114	1116	rBV4	4365	10893	0.07%	0.025%
59	12.394	1129	1135	1137	rBV2	60709	117550	0.78%	0.271%
60	12.453	1137	1141	1148	rVV	473707	835012	5.56%	1.922%
61	12.571	1151	1153	1157	rVB3	4432	9567	0.06%	0.022%
62	12.659	1157	1162	1163	rBV4	7046	17500	0.12%	0.040%
63	12.679	1163	1164	1167	rVV3	11777	20146	0.13%	0.046%
64	12.738	1167	1170	1172	rVB4	11872	18738	0.12%	0.043%
65	12.856	1180	1182	1185	rVV3	9178	15311	0.10%	0.035%
66	12.905	1185	1187	1191	rVB5	8495	15714	0.10%	0.036%
67	12.984	1191	1195	1199	rBV6	8180	19600	0.13%	0.045%
68	13.082	1199	1205	1208	rBV2	26179	62983	0.42%	0.145%
69	13.132	1208	1210	1212	rVB3	8227	10410	0.07%	0.024%
70	13.250	1218	1222	1228	rBV	187932	306616	2.04%	0.706%
71	13.417	1235	1239	1245	rBV	949977	1594025	10.62%	3.669%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

72	13.496	1245	1247	1248	rVV2	11648	15345	0.10%	0.035%
73	13.545	1248	1252	1255	rVB	81742	143508	0.96%	0.330%
74	13.742	1268	1272	1279	rVB	873584	1515908	10.10%	3.489%
75	13.958	1289	1294	1297	rBV2	59113	105125	0.70%	0.242%
76	14.027	1297	1301	1306	rVB4	20481	47934	0.32%	0.110%
77	14.115	1306	1310	1312	rVB5	6050	14375	0.10%	0.033%
78	14.184	1312	1317	1320	rBV5	15929	49035	0.33%	0.113%
79	14.292	1325	1328	1333	rVV	827703	1358413	9.05%	3.127%
80	14.401	1337	1339	1343	rVB2	15577	25206	0.17%	0.058%
81	14.529	1348	1352	1353	rBV3	9854	21055	0.14%	0.048%
82	14.548	1353	1354	1359	rVB2	19500	26395	0.18%	0.061%
83	14.637	1359	1363	1366	rBV4	24221	59895	0.40%	0.138%
84	14.696	1366	1369	1372	rVB2	70799	121580	0.81%	0.280%
85	14.902	1387	1390	1395	rBV3	47784	84579	0.56%	0.195%
86	14.991	1395	1399	1403	rVV6	24551	51862	0.35%	0.119%
87	15.109	1408	1411	1414	rVV3	83129	155573	1.04%	0.358%
88	15.168	1414	1417	1422	rVV4	39124	95396	0.64%	0.220%
89	15.257	1422	1426	1430	rVV4	40555	87868	0.59%	0.202%
90	15.326	1430	1433	1438	rVV4	27313	45566	0.30%	0.105%
91	15.473	1443	1448	1453	rBV8	12480	38071	0.25%	0.088%
92	15.601	1457	1461	1465	rVB2	10301	21482	0.14%	0.049%
93	15.847	1484	1486	1489	rBV3	5030	9516	0.06%	0.022%
94	15.995	1497	1501	1504	rBV7	19014	42767	0.28%	0.098%
95	16.034	1504	1505	1509	rVB4	10346	10116	0.07%	0.023%
96	16.122	1509	1514	1518	rBV7	9808	27855	0.19%	0.064%
97	16.201	1518	1522	1527	rBV5	19852	57560	0.38%	0.132%
98	16.408	1541	1543	1547	rVV5	5894	12460	0.08%	0.029%
99	16.496	1547	1552	1556	rVB7	6689	19795	0.13%	0.046%
100	16.634	1561	1566	1572	rVV5	12477	45975	0.31%	0.106%

Sum of corrected areas: 43442425

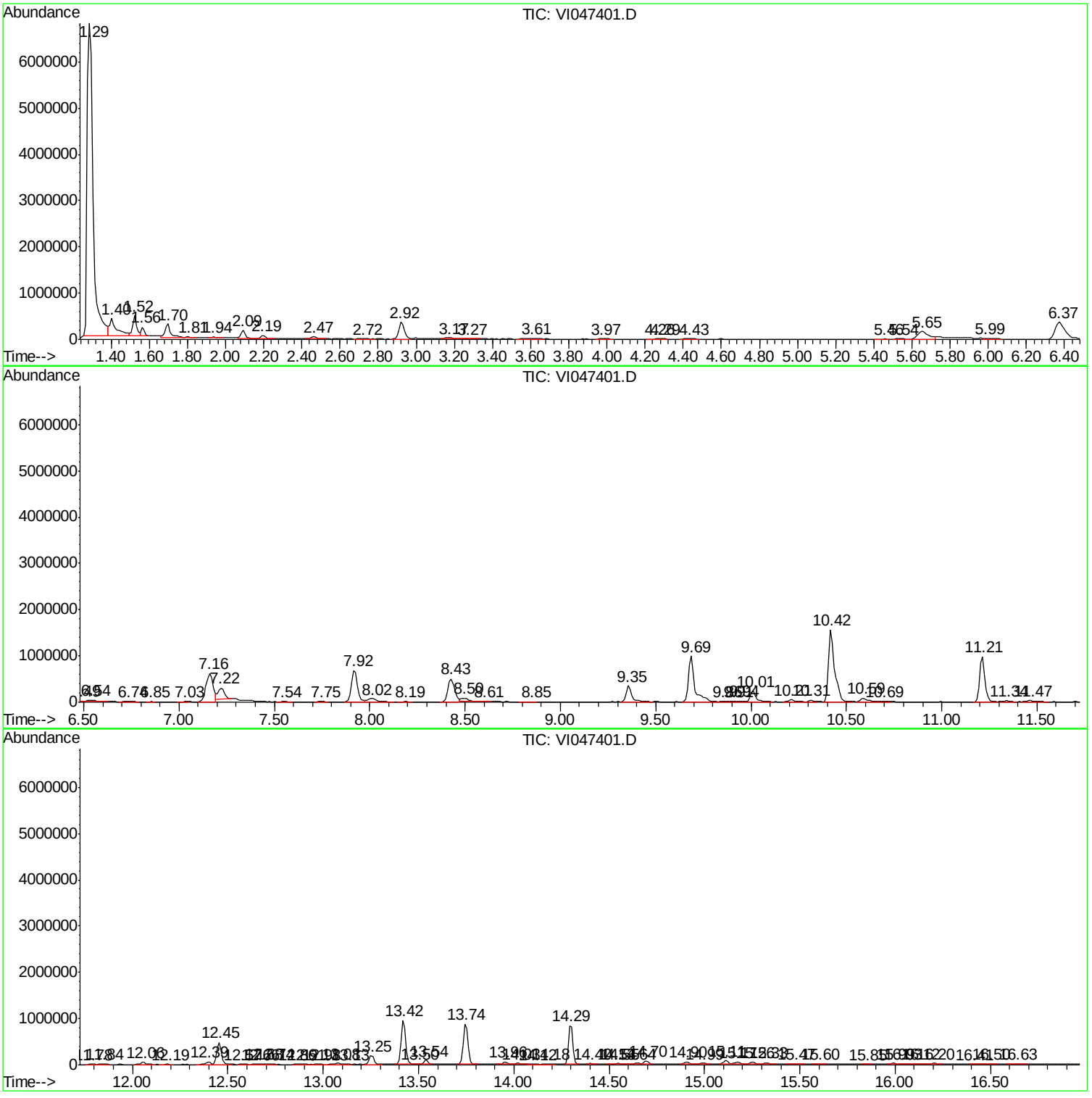
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

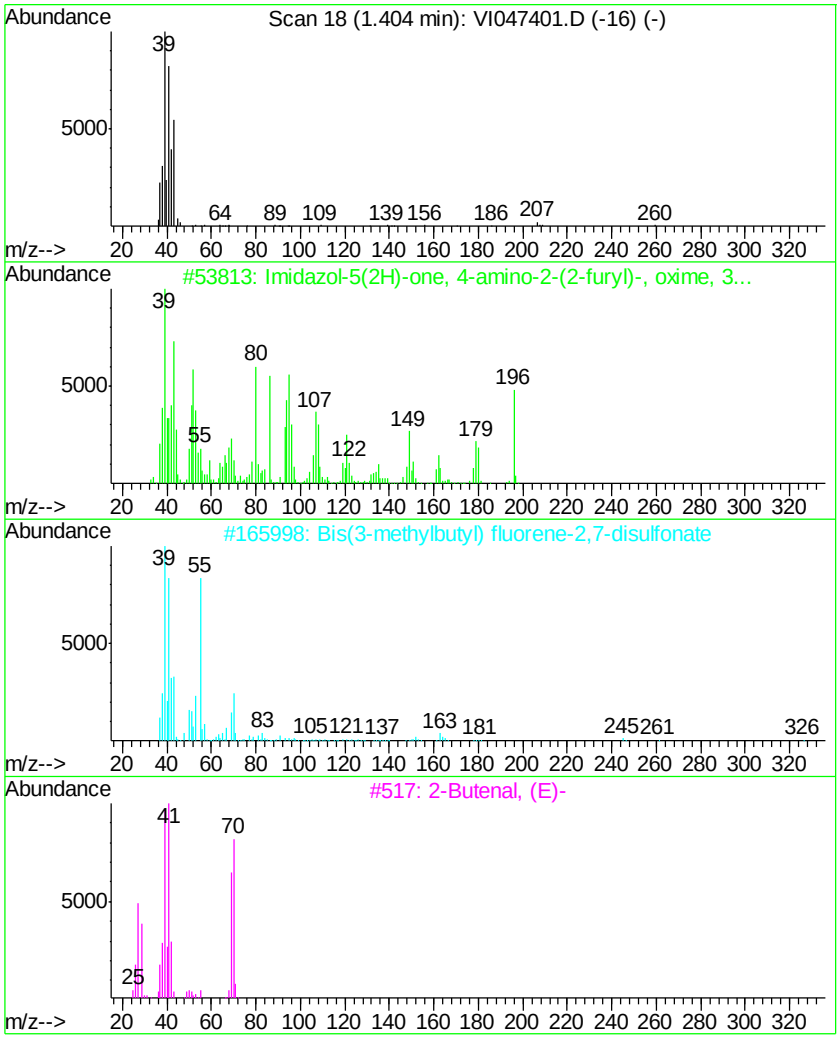
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

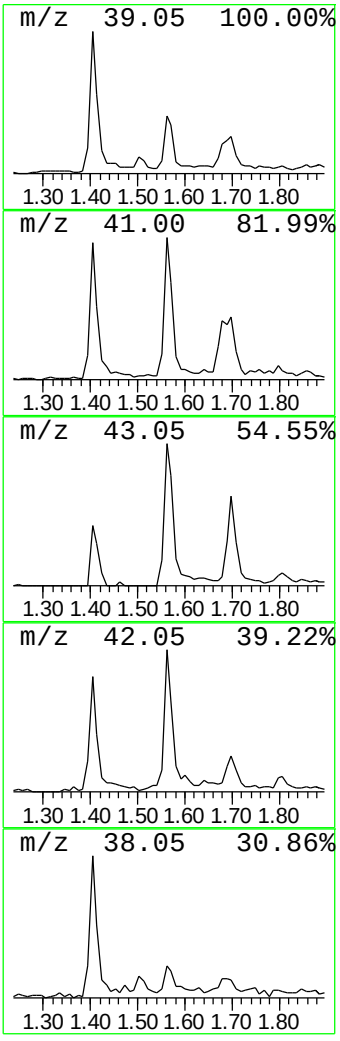
****

Peak Number 2 Imidazol-5(2H)-one, 4-amino... Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.40	3.05 ug/L	933487	1,4-Difluorobenzene	7.92

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Imidazol-5(2H)-one, 4-amino-2-(2...	196	C7H8N4O3	318259-17-5	90
2	Bis(3-methylbutyl) fluorene-2,7-...	466	C23H30O6S2	253664-95-8	78
3	2-Butenal, (E)-	70	C4H6O	000123-73-9	56
4	Thiocyanic acid, 2-propynyl ester	97	C4H3NS	024309-48-6	40
5	1-Propyne, 3-bromo-	118	C3H3Br	000106-96-7	40





Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

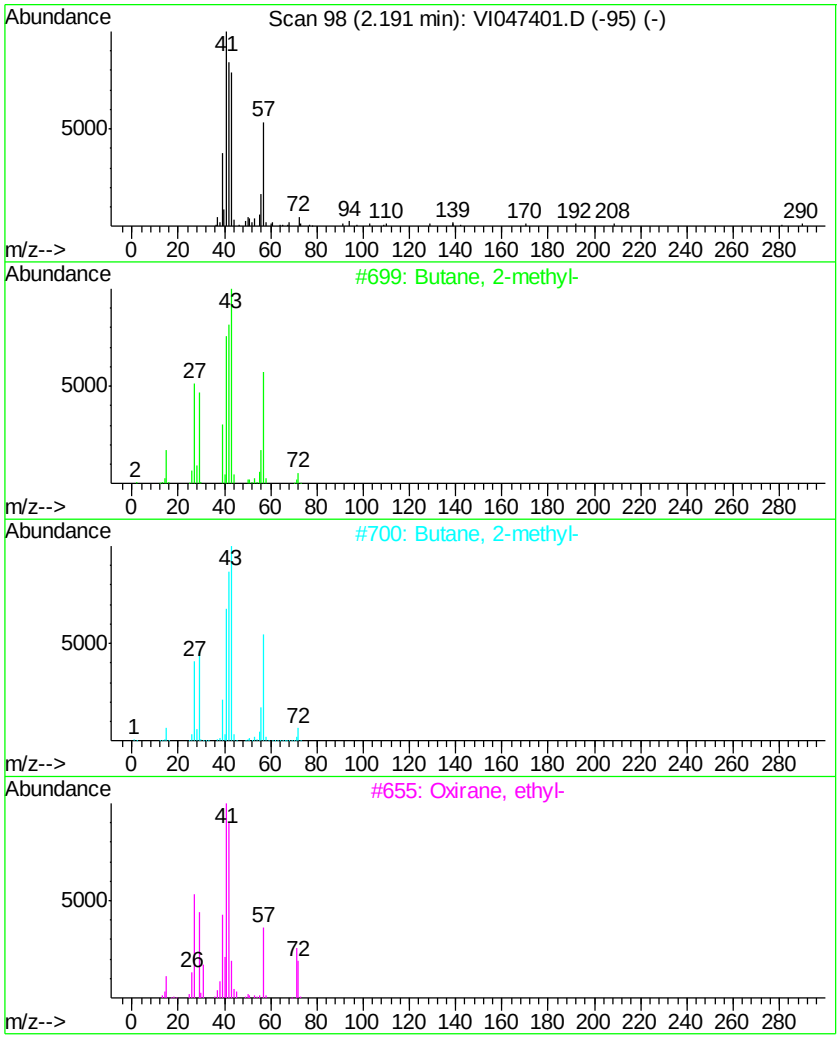
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

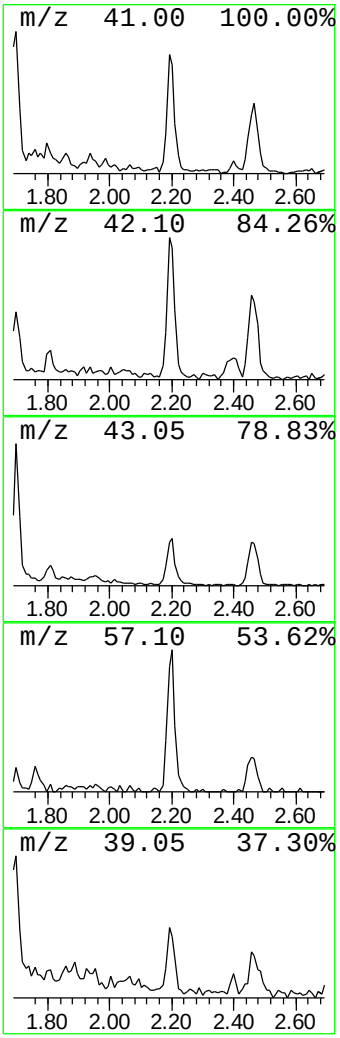
****

Peak Number 5 (DEL) Alkane: Straight-Chai... Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.19	0.43 ug/L	132864	1,4-Difluorobenzene	7.92

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	80
2	Butane, 2-methyl-	72	C5H12	000078-78-4	80
3	Oxirane, ethyl-	72	C4H8O	000106-88-7	59
4	Butane, 2-methyl-	72	C5H12	000078-78-4	46
5	Aziridine, 1-methyl-	57	C3H7N	001072-44-2	39





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

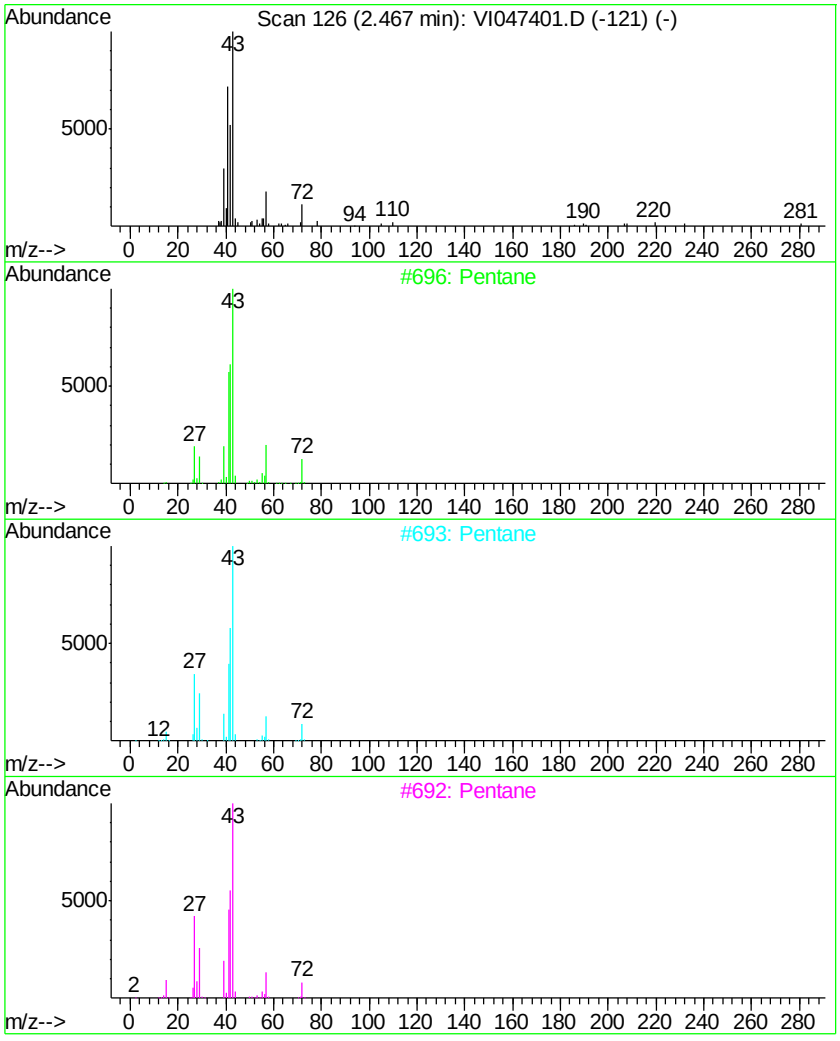
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

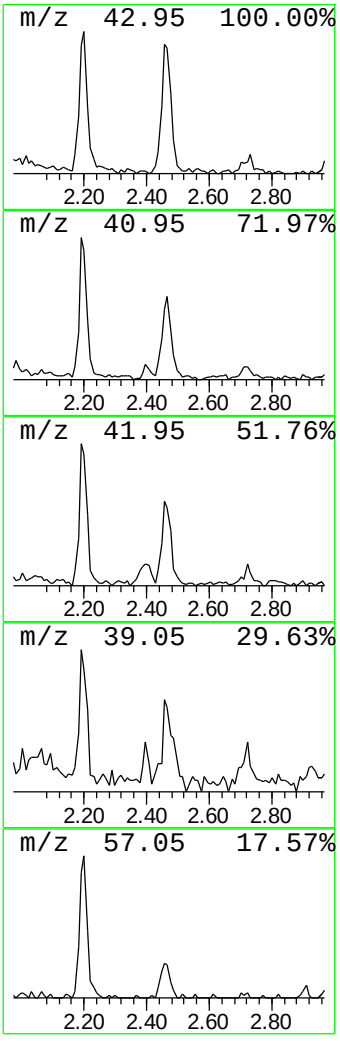
****

Peak Number 6 (DEL) Alkane: Straight-Chai... Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.47	0.35 ug/L	108019	1,4-Difluorobenzene	7.92

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	72
2	Pentane	72	C5H12	000109-66-0	64
3	Pentane	72	C5H12	000109-66-0	64
4	Pentane	72	C5H12	000109-66-0	53
5	Oxirane, ethyl-	72	C4H8O	000106-88-7	38





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

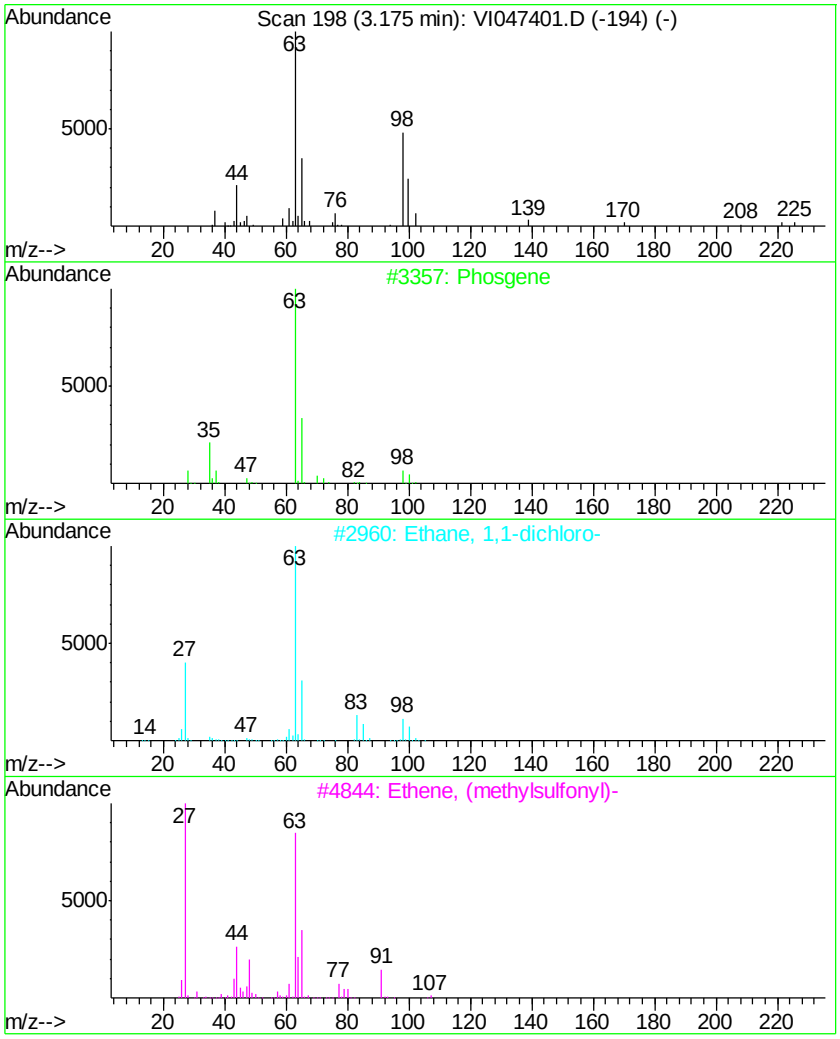
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

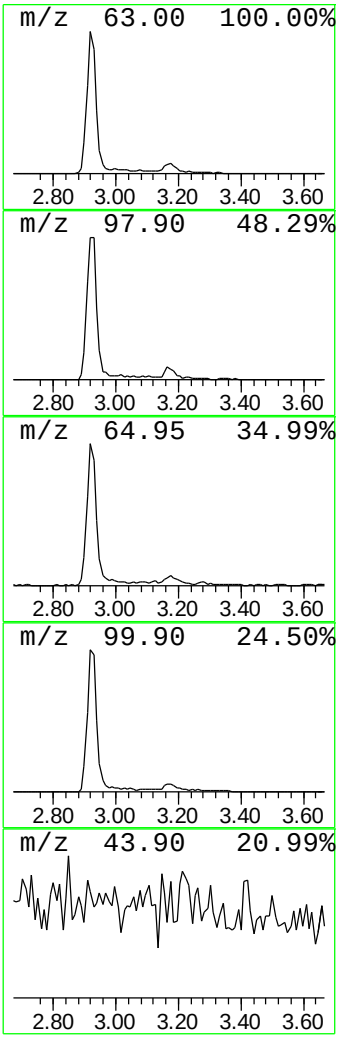
****

Peak Number 7 Phosgene Concentration Rank 22

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.17	0.27 ug/L	81186	1,4-Difluorobenzene	7.92

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phosgene	98	CCl2O	000075-44-5	78
2	Ethane, 1,1-dichloro-	98	C2H4Cl2	000075-34-3	56
3	Ethene, (methylsulfonyl)-	106	C3H6O2S	003680-02-2	50
4	Ethane, 1,1-dichloro-	98	C2H4Cl2	000075-34-3	40
5	1,4-Bis[2-[2-(2-chloroethoxy)eth...	410	C18H28Cl2O6	199984-37-7	9





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

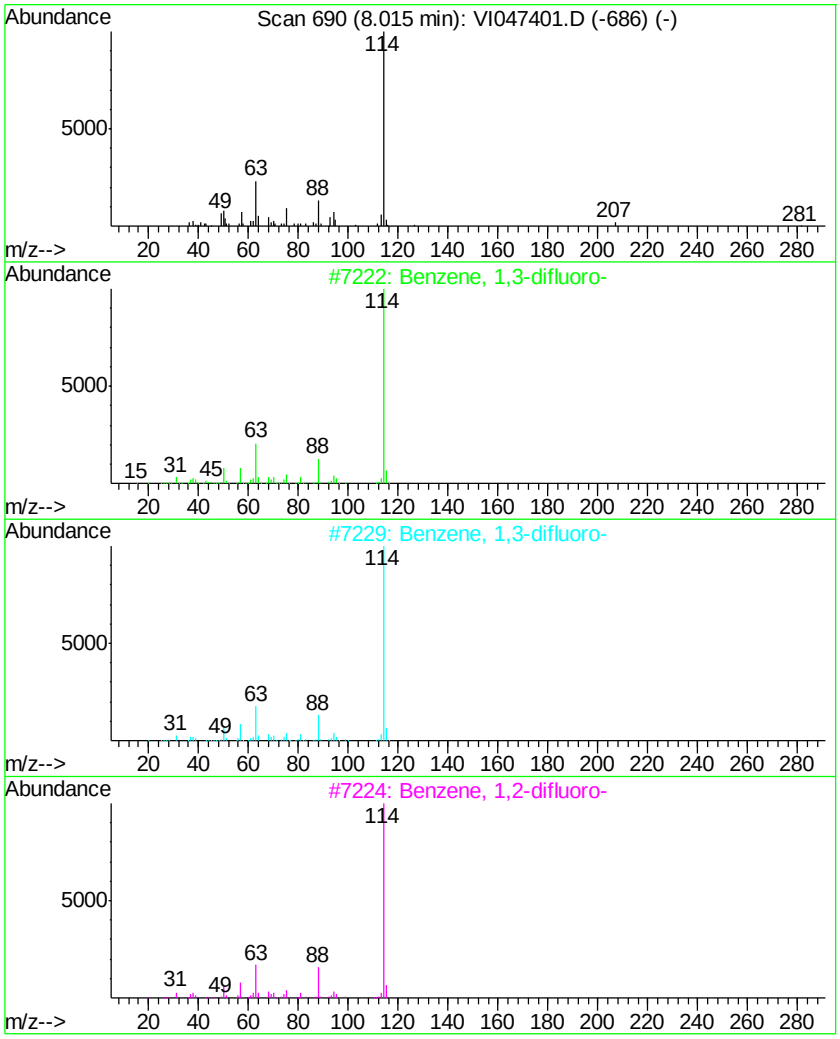
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

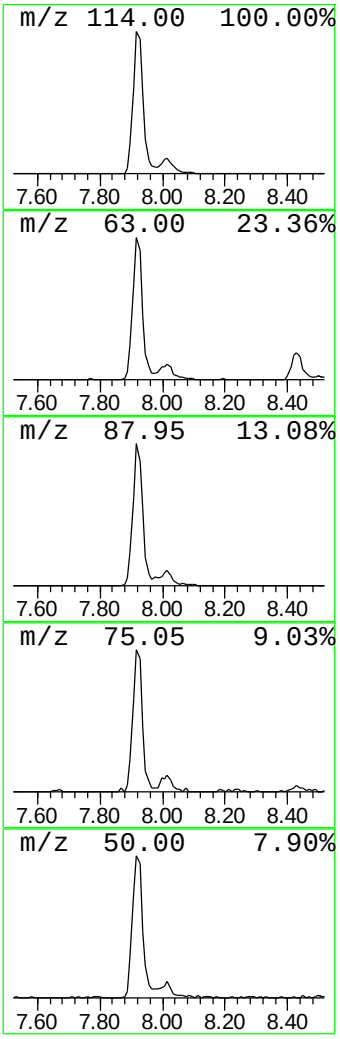
****

Peak Number 9 Benzene, 1,3-difluoro- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.02	0.73 ug/L	223880	1,4-Difluorobenzene	7.92

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-difluoro-	114	C6H4F2	000372-18-9	87
2	Benzene, 1,3-difluoro-	114	C6H4F2	000372-18-9	83
3	Benzene, 1,2-difluoro-	114	C6H4F2	000367-11-3	80
4	Benzene, 1,4-difluoro-	114	C6H4F2	000540-36-3	80
5	Benzene, 1,2-difluoro-	114	C6H4F2	000367-11-3	72





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

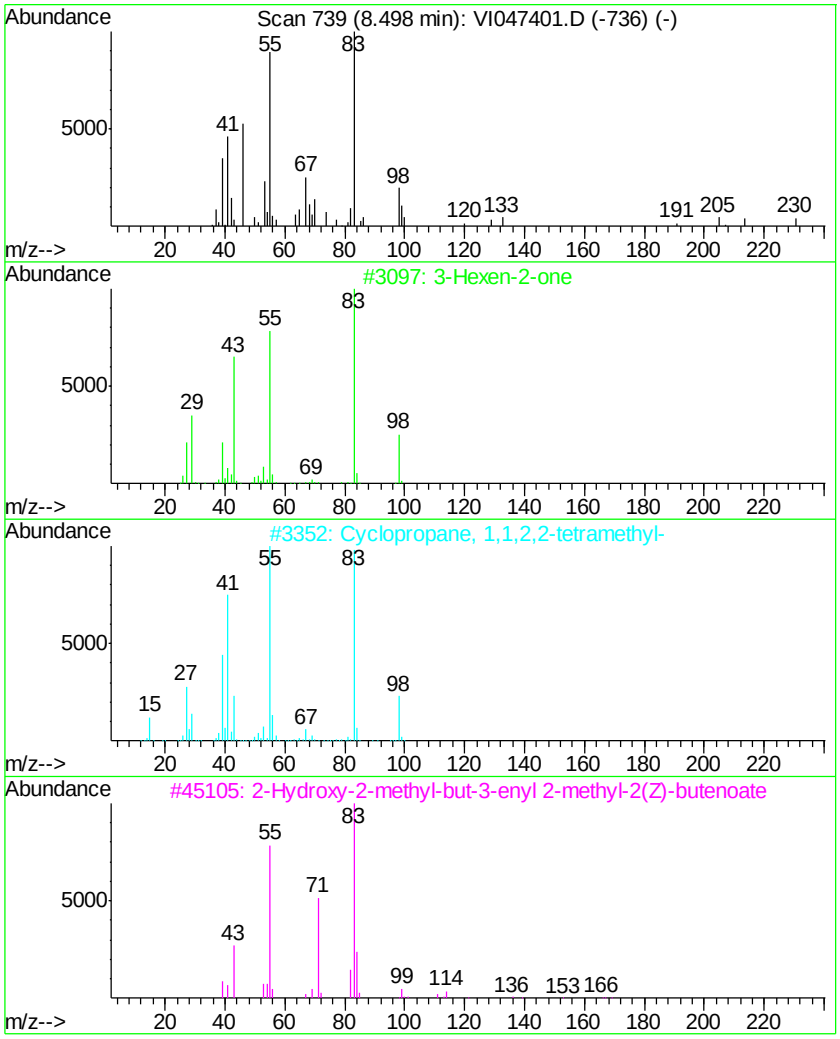
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

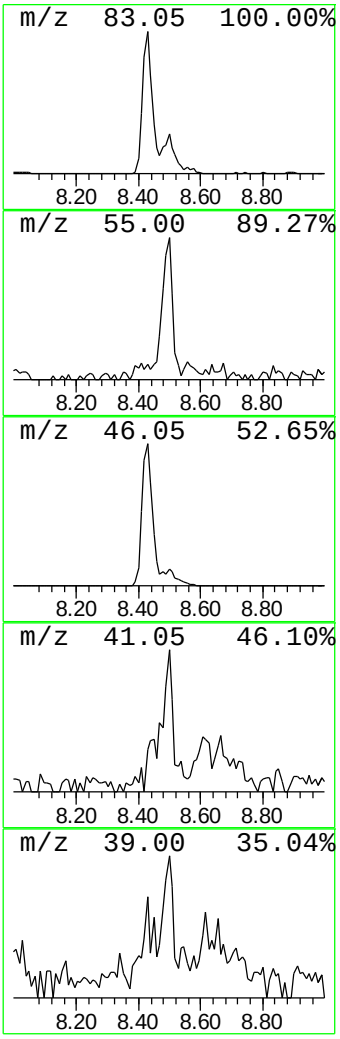
****

Peak Number 10 unknown-01 Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.50	0.73 ug/L	222657	1,4-Difluorobenzene	7.92

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Hexen-2-one	98	C6H10O	000763-93-9	38
2	Cyclopropane, 1,1,2,2-tetramethyl-	98	C7H14	004127-47-3	38
3	2-Hydroxy-2-methyl-but-3-enyl 2-...	184	C10H16O3	080758-67-4	38
4	2-Pentene, 4,4-dimethyl-, (E)-	98	C7H14	000690-08-4	38
5	2-Pentene, 4,4-dimethyl-, (E)-	98	C7H14	000690-08-4	35





Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

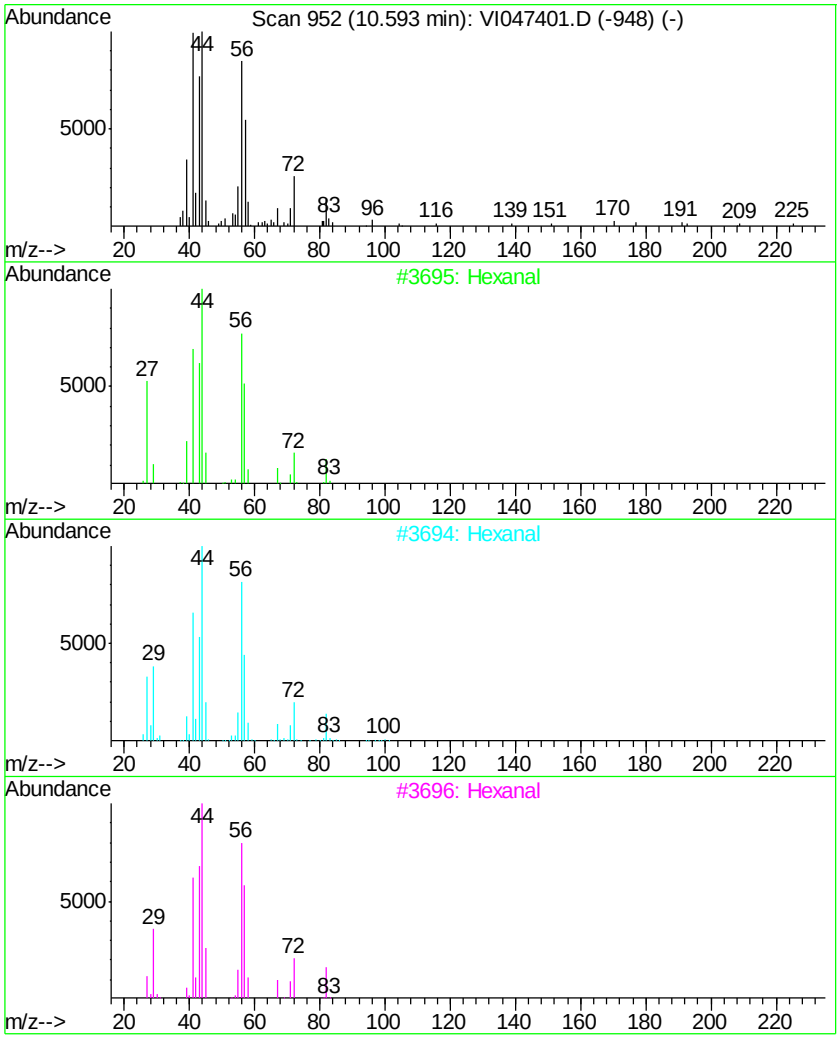
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

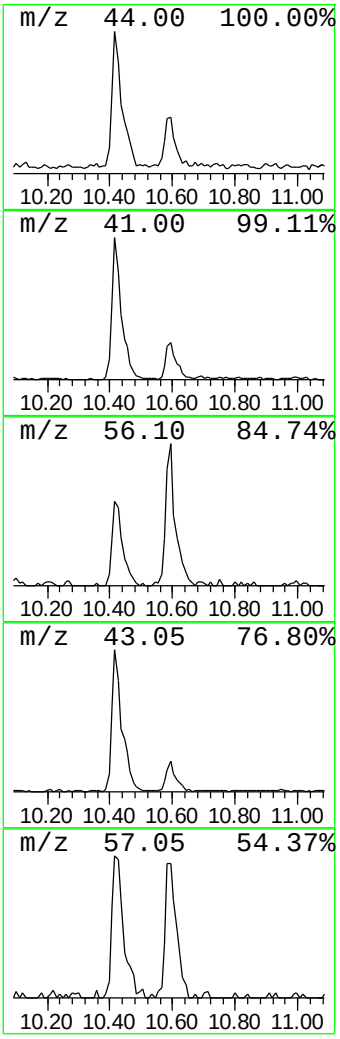
****

Peak Number 13 Hexanal Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.59	0.52 ug/L	196765	Chlorobenzene-d5	11.21

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexanal	100	C6H12O	000066-25-1	78
2	Hexanal	100	C6H12O	000066-25-1	74
3	Hexanal	100	C6H12O	000066-25-1	74
4	Cyclobutanol, 2-ethyl-	100	C6H12O	035301-43-0	50
5	Butanal	72	C4H8O	000123-72-8	38





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

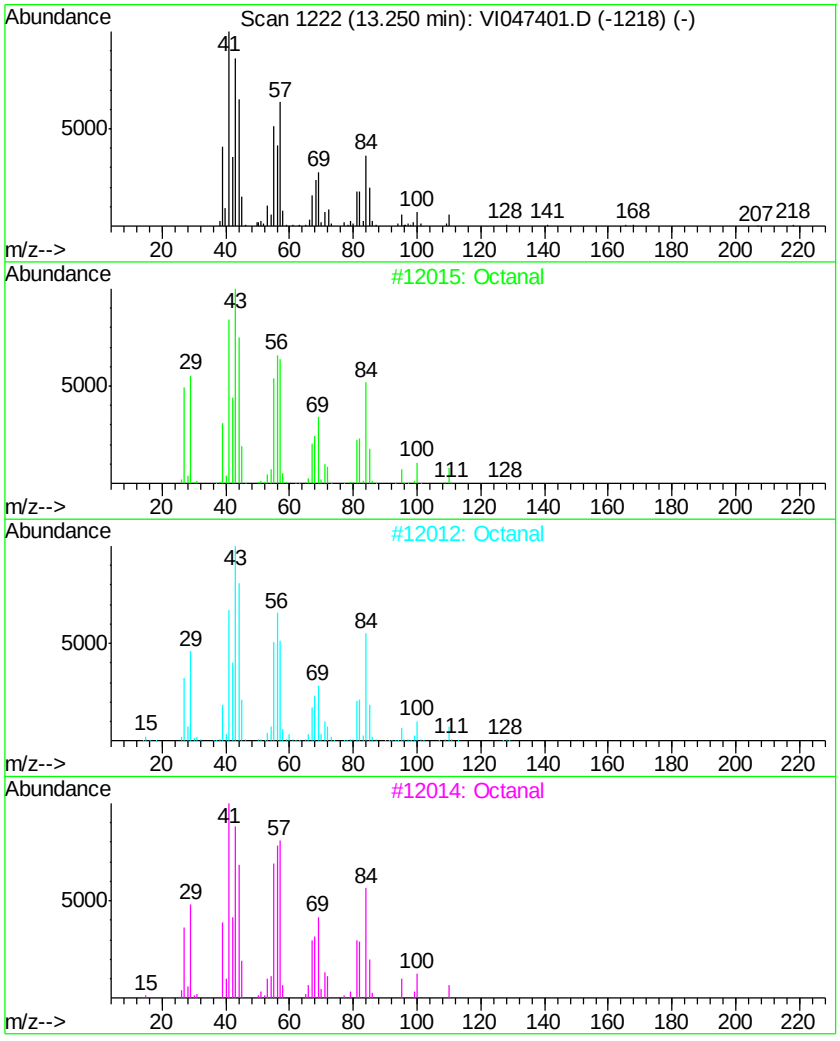
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

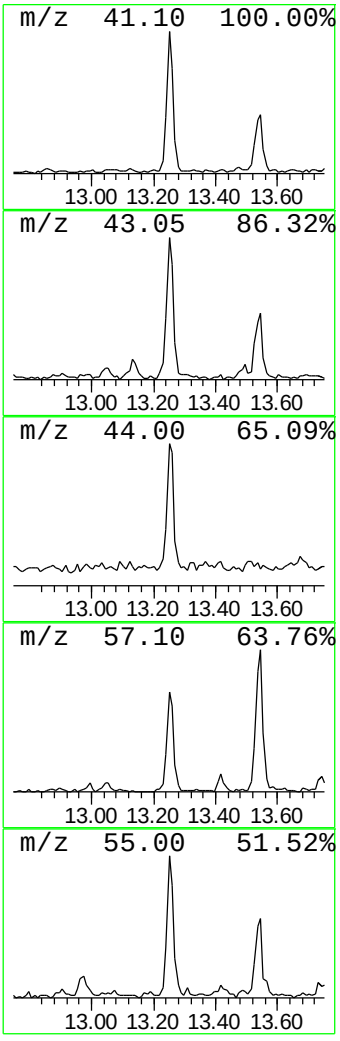
****

Peak Number 15 Octanal Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.25	0.96 ug/L	306616	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octanal	128	C8H16O	000124-13-0	58
2	Octanal	128	C8H16O	000124-13-0	58
3	Octanal	128	C8H16O	000124-13-0	50
4	Piperidine, 3-methyl-	99	C6H13N	000626-56-2	46
5	Piperazine, 2-methyl-	100	C5H12N2	000109-07-9	38





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

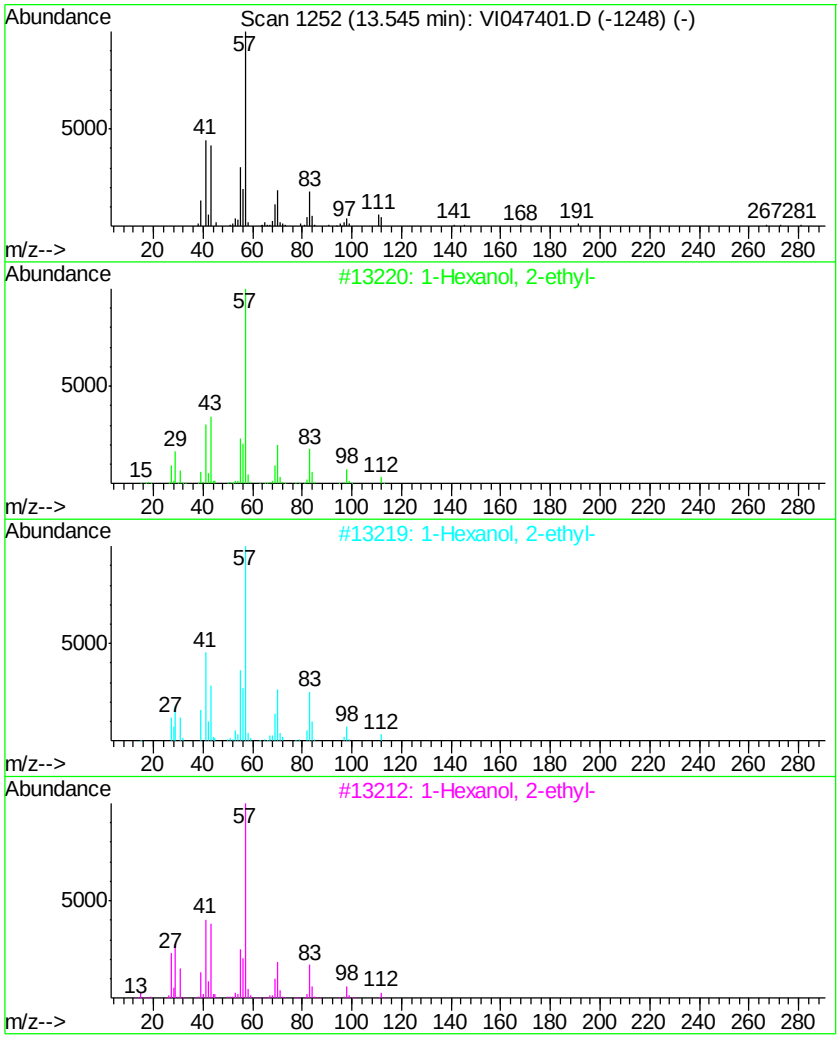
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

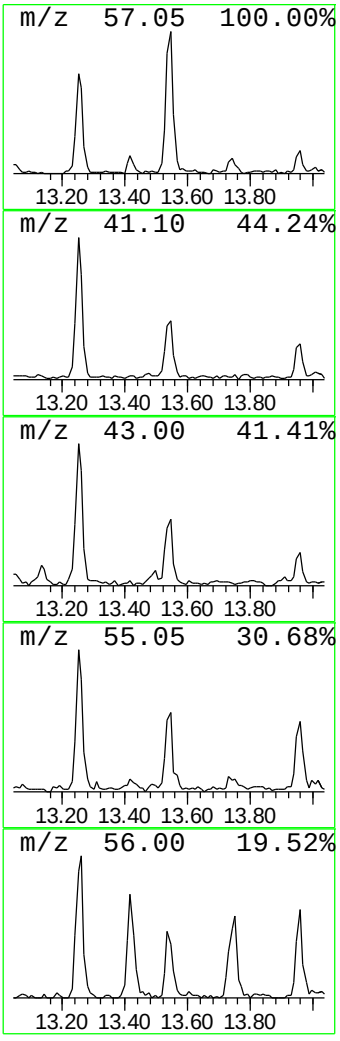
****

Peak Number 16 1-Hexanol, 2-ethyl- Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.54	0.45 ug/L	143508	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Hexanol, 2-ethyl-	130	C8H18O	000104-76-7	72
2	1-Hexanol, 2-ethyl-	130	C8H18O	000104-76-7	59
3	1-Hexanol, 2-ethyl-	130	C8H18O	000104-76-7	56
4	1-Pentanol, 2-ethyl-4-methyl-	130	C8H18O	000106-67-2	53
5	1-Hexene, 5,5-dimethyl-	112	C8H16	007116-86-1	53





Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

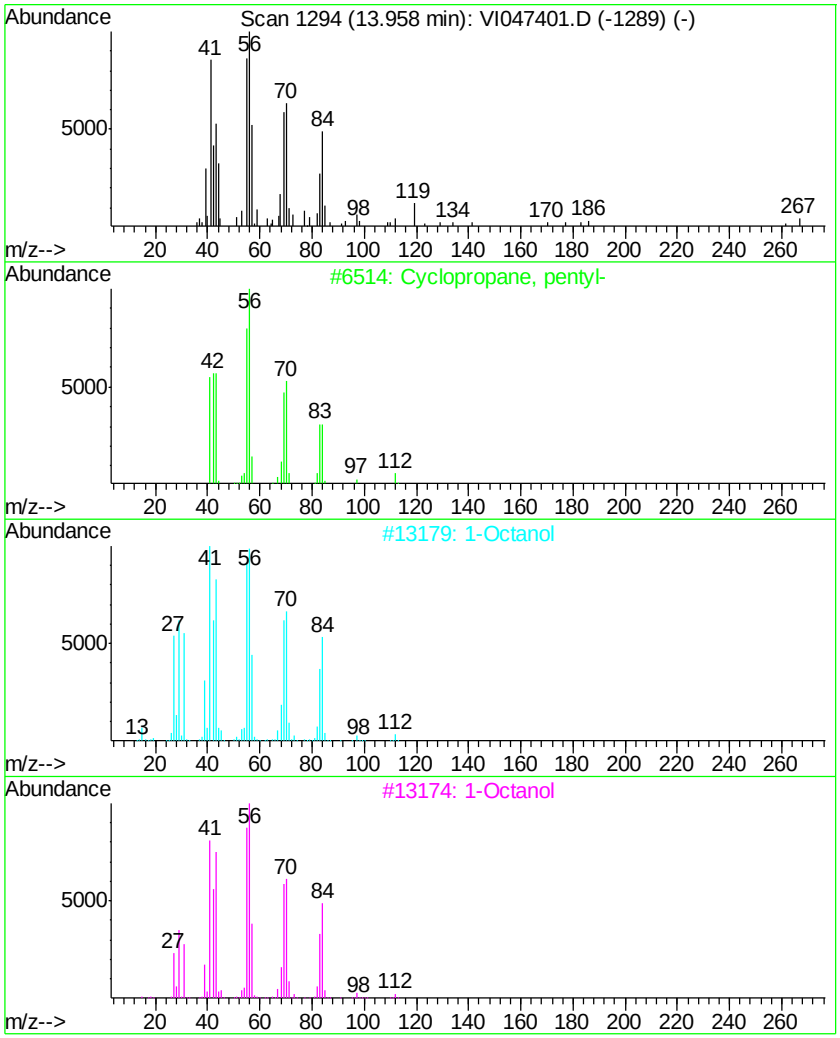
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

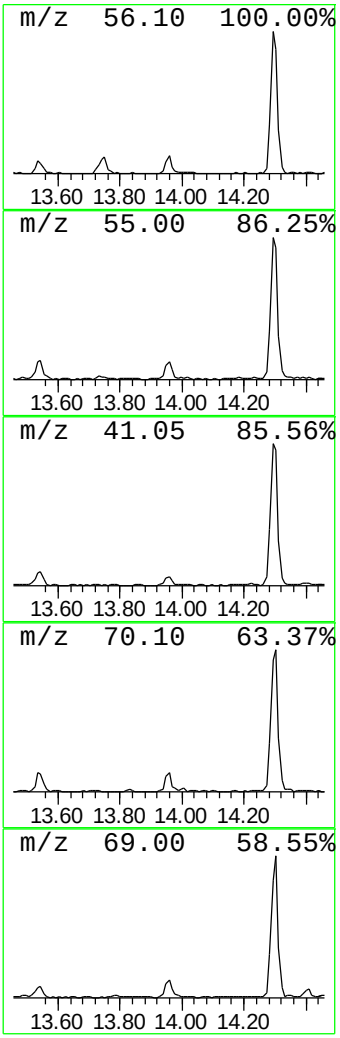
****

Peak Number 17 (DEL) Alkane: Cyclic13.96 Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.96	0.33 ug/L	105125	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopropane, pentyl-	112	C8H16	002511-91-3	76
2	1-Octanol	130	C8H18O	000111-87-5	72
3	1-Octanol	130	C8H18O	000111-87-5	64
4	Cyclooctane	112	C8H16	000292-64-8	58
5	Cyclobutane, 1,2-diethyl-	112	C8H16	061141-83-1	58





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

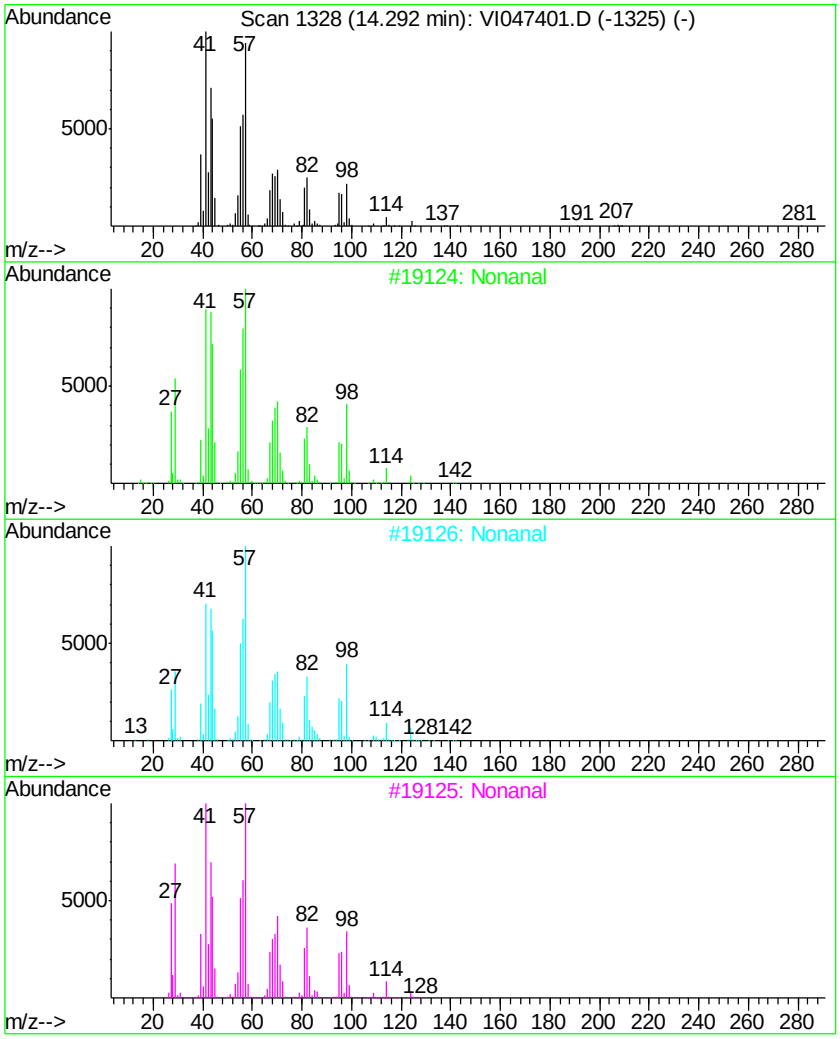
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

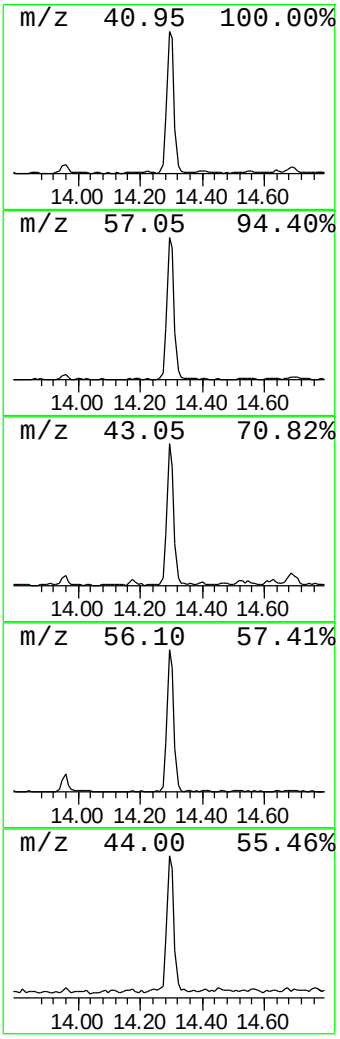
****

Peak Number 18 Nonanal Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.29	4.26 ug/L	1358410	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonanal	142	C9H18O	000124-19-6	87
2	Nonanal	142	C9H18O	000124-19-6	83
3	Nonanal	142	C9H18O	000124-19-6	53
4	2-Nonen-1-ol	142	C9H18O	022104-79-6	30
5	Heptane, 2-chloro-	134	C7H15Cl	001001-89-4	27





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

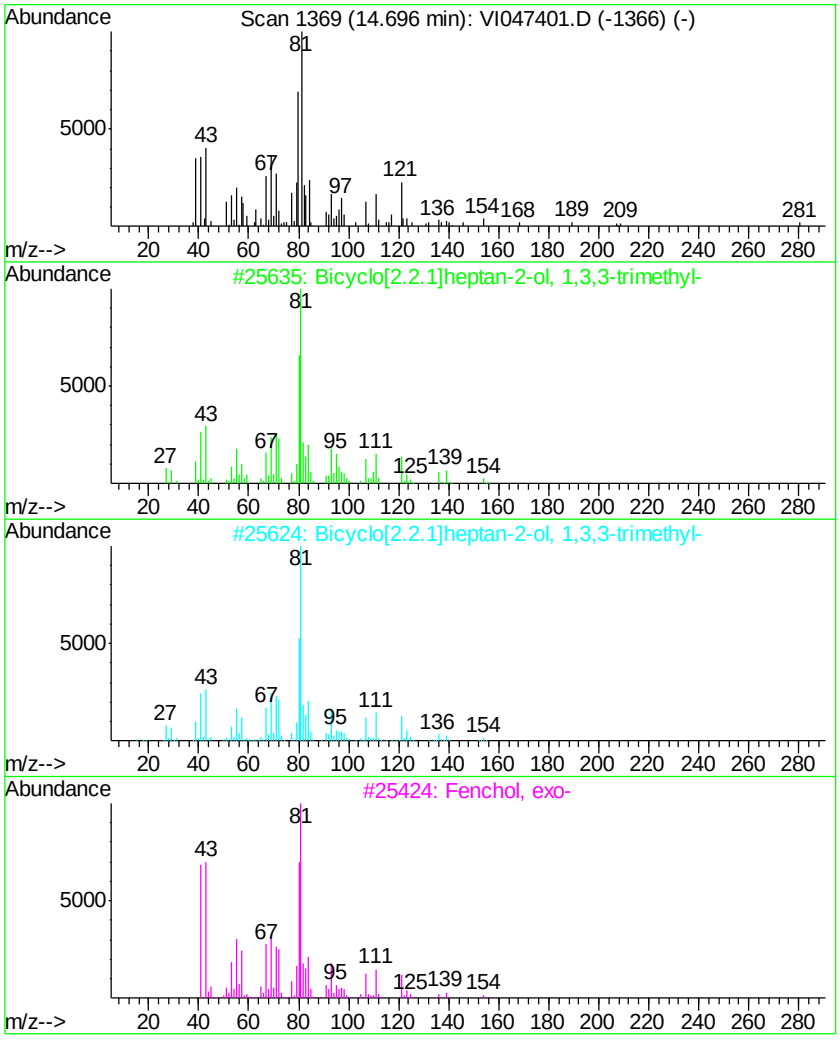
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

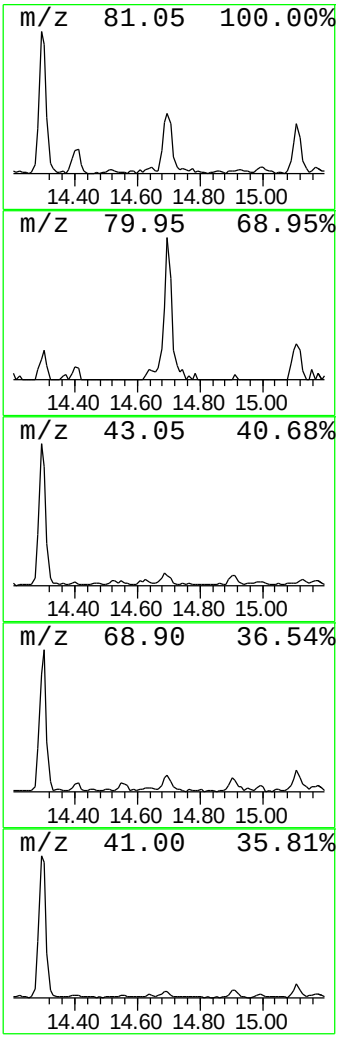
****

Peak Number 19 Bicyclo[2.2.1]heptan-2-ol, ... Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.70	0.38 ug/L	121580	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[2.2.1]heptan-2-ol, 1,3,3...	154	C10H18O	001632-73-1	81
2	Bicyclo[2.2.1]heptan-2-ol, 1,3,3...	154	C10H18O	001632-73-1	70
3	Fenchol, exo-	154	C10H18O	022627-95-8	58
4	Bicyclo[2.2.1]heptan-2-ol, 1,3,3...	154	C10H18O	002217-02-9	56
5	Bicyclo[2.2.1]heptan-2-ol, 1,3,3...	154	C10H18O	001632-73-1	38





Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

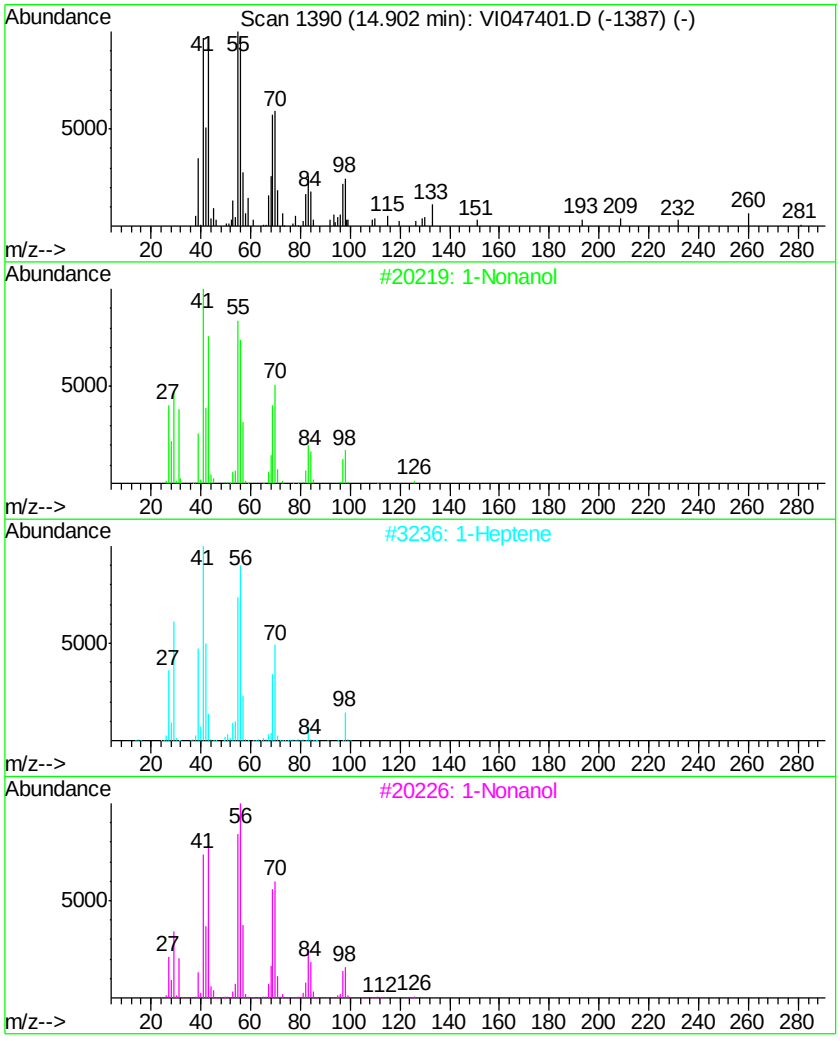
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

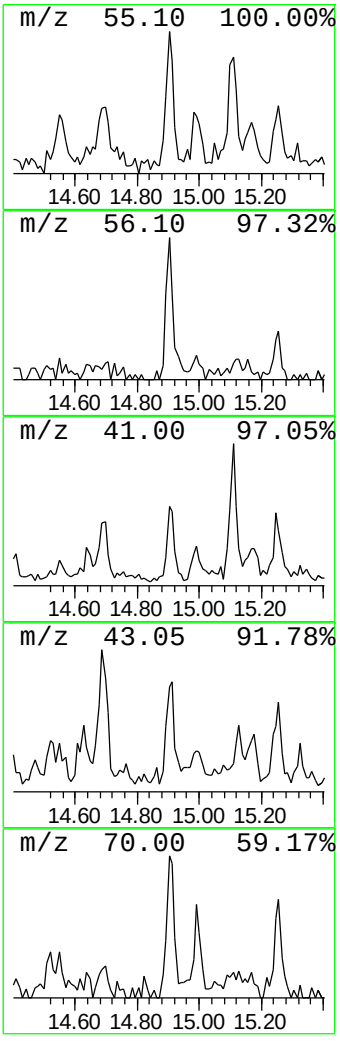
****

Peak Number 20 1-Nonanol Concentration Rank 23

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.90	0.27 ug/L	84579	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Nonanol	144	C9H20O	000143-08-8	80
2	1-Heptene	98	C7H14	000592-76-7	70
3	1-Nonanol	144	C9H20O	000143-08-8	64
4	Cyclopropane, 1-heptyl-2-methyl-	154	C11H22	074663-91-5	59
5	Cyclopropane, 1-ethyl-2-pentyl-	140	C10H20	062238-08-8	53





Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

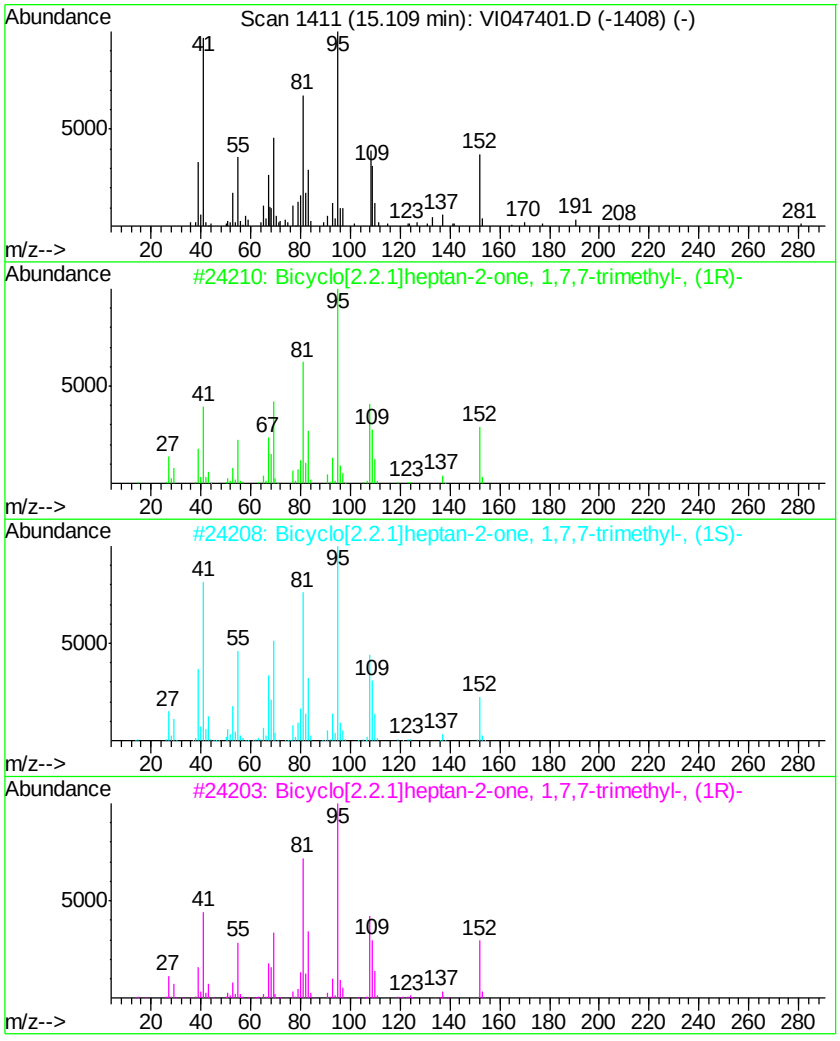
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

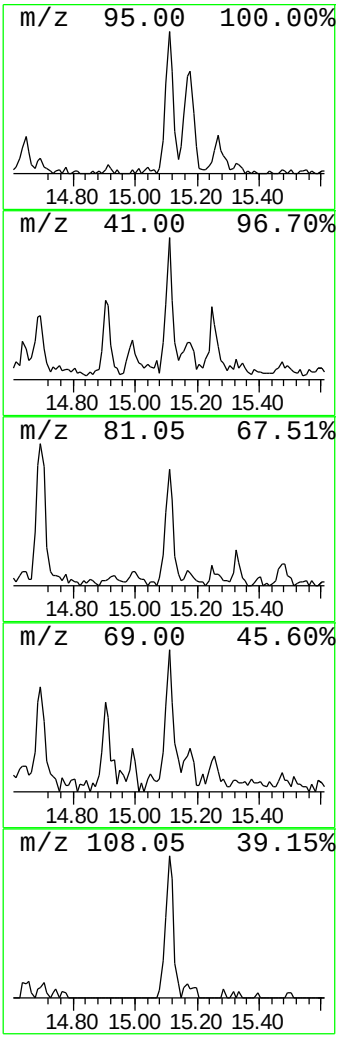
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 21 Bicyclo[2.2.1]heptan-2-one,... Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.11	0.49 ug/L	155573	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[2.2.1]heptan-2-one, 1,7,...	152	C10H16O	000464-49-3	98
2	Bicyclo[2.2.1]heptan-2-one, 1,7,...	152	C10H16O	000464-48-2	97
3	Bicyclo[2.2.1]heptan-2-one, 1,7,...	152	C10H16O	000464-49-3	96
4	Bicyclo[2.2.1]heptan-2-one, 1,7,...	152	C10H16O	000464-49-3	96
5	Camphor	152	C10H16O	000076-22-2	96





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

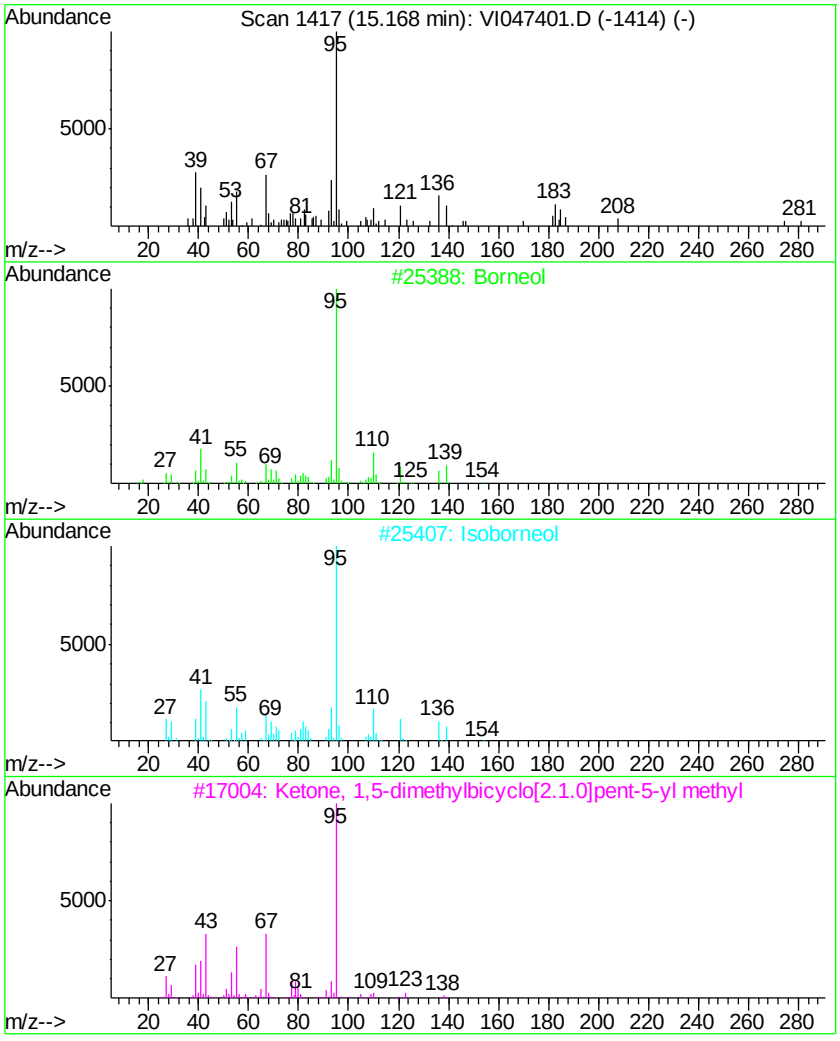
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

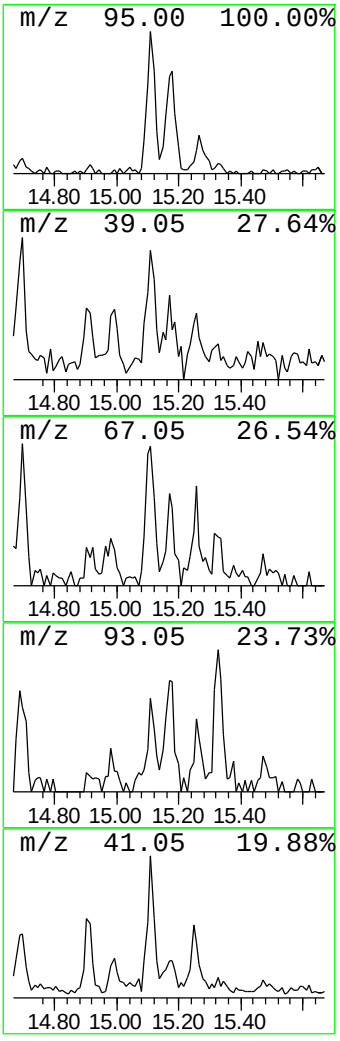
****

Peak Number 22 Borneol Concentration Rank 18

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.17	0.30 ug/L	95396	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Borneol	154	C10H18O	000507-70-0	50
2	Isoborneol	154	C10H18O	000124-76-5	50
3	Ketone, 1,5-dimethylbicyclo[2.1....	138	C9H14O	024081-57-0	47
4	2(1H)-Pyridinone	95	C5H5NO	000142-08-5	46
5	4(1H)-Pyridone	95	C5H5NO	000108-96-3	43





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

****

Peak Number 23 (DEL) Alkane: Cyclic15.26 Concentration Rank 20

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.26	0.28 ug/L	87868	1,4-Dichlorobenzene-d4	13.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Octene, (E)-	112	C8H16	014919-01-8	38
2	3-Octene, (Z)-	112	C8H16	014850-22-7	30
3	3-Octene, (Z)-	112	C8H16	014850-22-7	30
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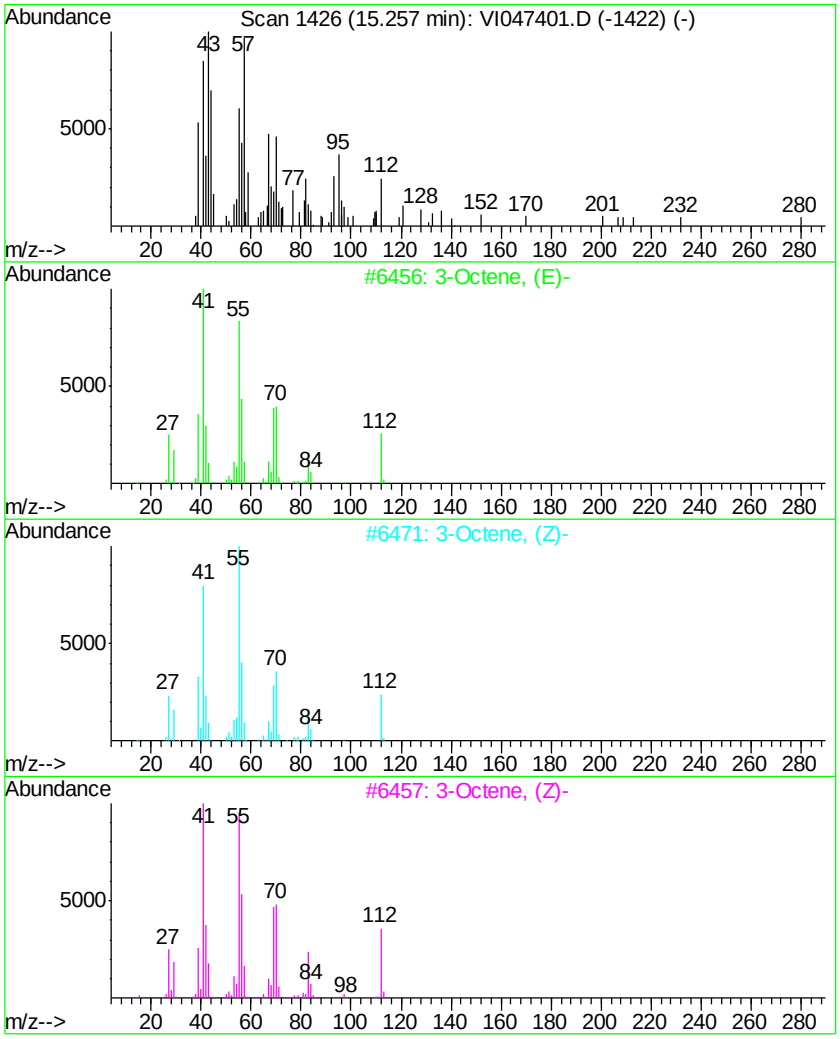
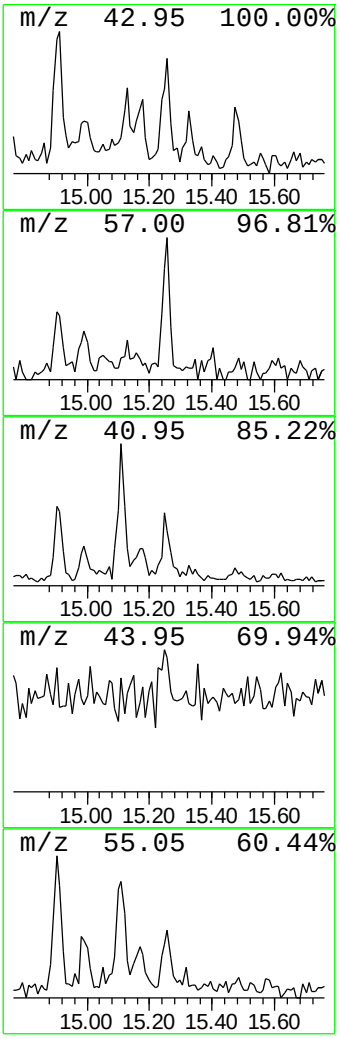




Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047401.D
Acq On : 29 Feb 2016 17:00
Operator : FY/SY
Sample : H1584-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0007

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Imidazol-5(2H)-on...	1.40	3.0	ug/L	933487	1	7.92	1528560	5.0
(DEL) Alkane: Str...	2.19	0.4	ug/L	132864	1	7.92	1528560	5.0
(DEL) Alkane: Str...	2.47	0.3	ug/L	108019	1	7.92	1528560	5.0
Phosgene	3.17	0.3	ug/L	81186	1	7.92	1528560	5.0
Benzene, 1,3-difl...	8.02	0.7	ug/L	223880	1	7.92	1528560	5.0
unknown-01	8.50	0.7	ug/L	222657	1	7.92	1528560	5.0
Hexanal	10.59	0.5	ug/L	196765	2	11.21	1876720	5.0
Octanal	13.25	1.0	ug/L	306616	3	13.42	1594030	5.0
1-Hexanol, 2-ethyl-	13.54	0.5	ug/L	143508	3	13.42	1594030	5.0
(DEL) Alkane: Cyc...	13.96	0.3	ug/L	105125	3	13.42	1594030	5.0
Nonanal	14.29	4.3	ug/L	1358410	3	13.42	1594030	5.0
Bicyclo[2.2.1]hep...	14.70	0.4	ug/L	121580	3	13.42	1594030	5.0
1-Nonanol	14.90	0.3	ug/L	84579	3	13.42	1594030	5.0
Bicyclo[2.2.1]hep...	15.11	0.5	ug/L	155573	3	13.42	1594030	5.0
Borneol	15.17	0.3	ug/L	95396	3	13.42	1594030	5.0
(DEL) Alkane: Cyc...	15.26	0.3	ug/L	87868	3	13.42	1594030	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047412.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	4.1	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047412.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.2	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047412.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047412.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/01/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

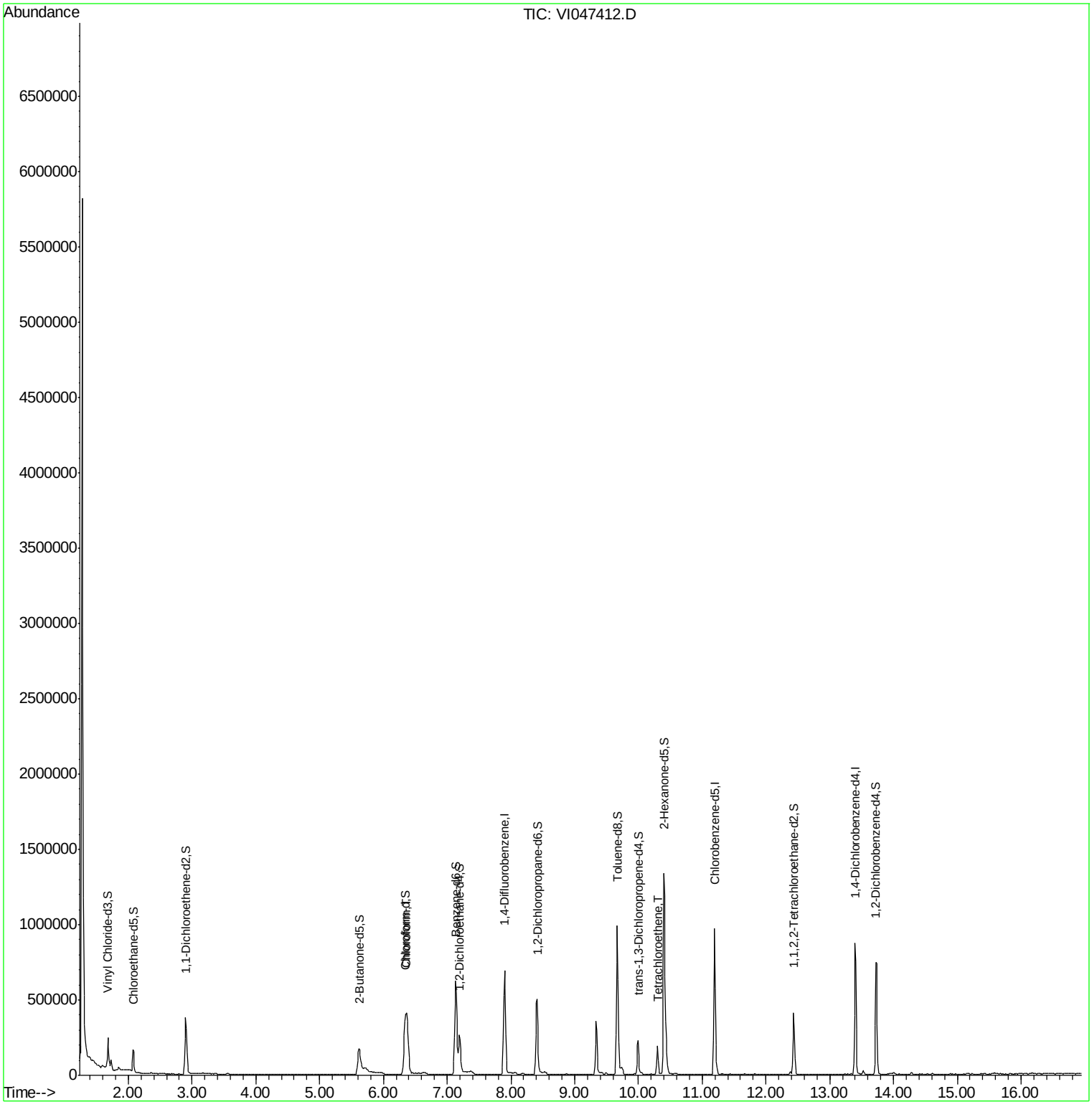
EPA-designated Registry Number.

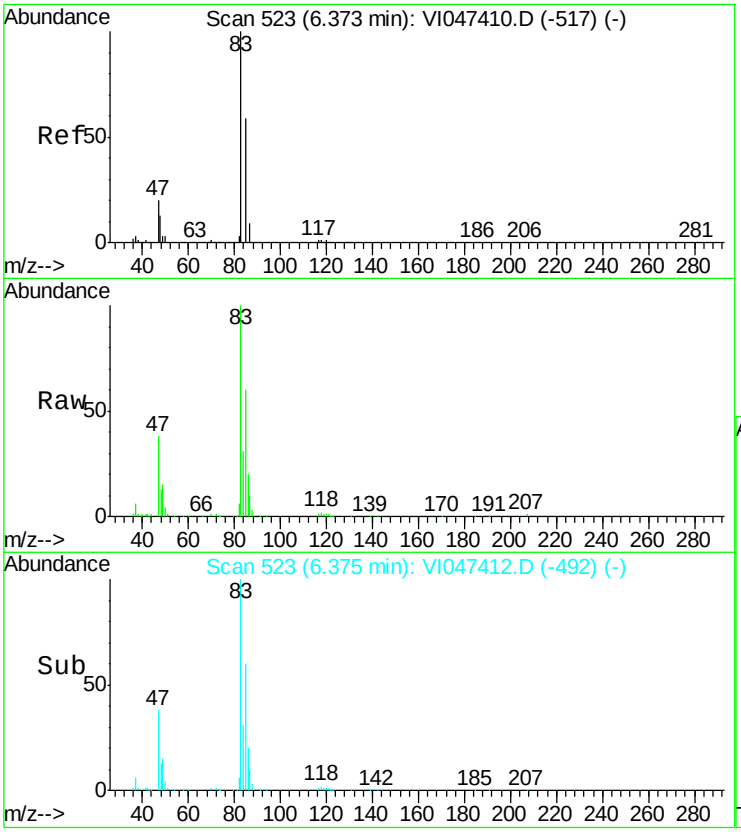
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047412.D
Acq On : 1 Mar 2016 11:39
Operator : FY/SY
Sample : H1584-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0013

Quant Time: Mar 02 02:47:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration



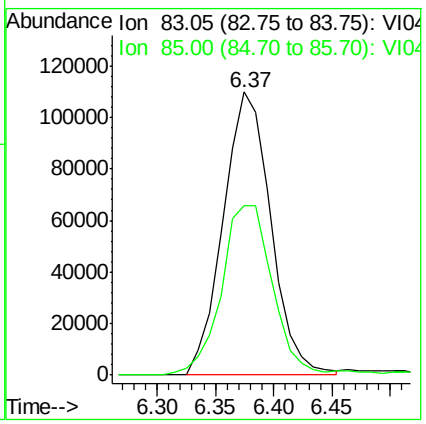


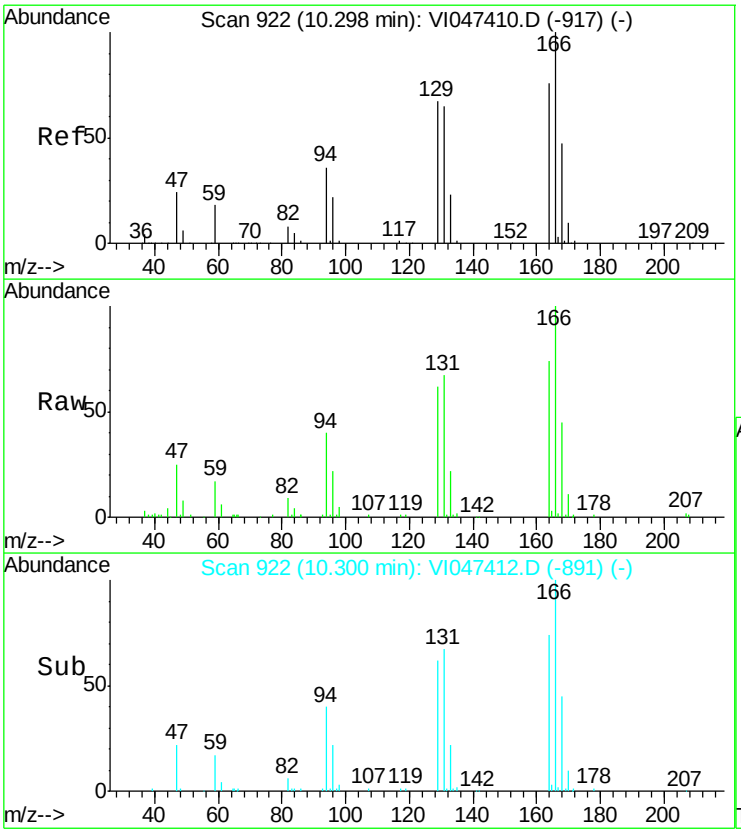
#25
Chloroform
Concen: 4.11 ug/L
RT: 6.37 min Scan# 523
Delta R.T. 0.00 min
Lab File: VI047412.D
Acq: 1 Mar 2016 11:39

Instrument : MSVOA_I
ClientSampleId : H0013

Tgt Ion: 83 Resp: 310447

Ion	Ratio	Lower	Upper
83	100		
85	59.8	43.2	80.2

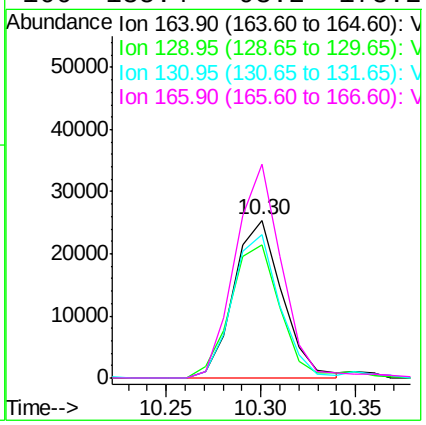




#47
Tetrachloroethene
Concen: 1.15 ug/L
RT: 10.30 min Scan# 922
Delta R.T. 0.00 min
Lab File: VI047412.D
Acq: 1 Mar 2016 11:39

Tgt Ion:164 Resp: 45134

Ion	Ratio	Lower	Upper
164	100		
129	84.1	62.6	116.2
131	90.5	60.5	112.5
166	135.4	93.2	173.2



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047412.D
Acq On : 1 Mar 2016 11:39
Operator : FY/SY
Sample : H1584-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0013

Quant Time: Mar 02 02:47:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	612415	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	551802	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.40	152	245229	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.68	65	163980	4.81	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 96.20%			
7) Chloroethane-d5	2.08	69	126589	4.86	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 97.20%			
11) 1,1-Dichloroethene-d2	2.90	63	281661	3.73	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 74.60%			
20) 2-Butanone-d5	5.62	46	444138	62.63	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 125.26%			
24) Chloroform-d	6.35	84	415844	5.39	ug/L	0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 107.80%			
26) 1,2-Dichloroethane-d4	7.19	65	245072	5.46	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.20%			
32) Benzene-d6	7.13	84	701446	5.27	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 105.40%			
36) 1,2-Dichloropropane-d6	8.41	67	241056	6.00	ug/L	0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 120.00%			
41) Toluene-d8	9.67	98	615724	4.78	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.60%			
43) trans-1,3-Dichloropropene-	10.00	79	126960	5.34	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 106.80%			
46) 2-Hexanone-d5	10.40	63	573458	58.90	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 117.80%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	200063	5.76	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 115.20%			
64) 1,2-Dichlorobenzene-d4	13.73	152	221748	4.96	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 99.20%			
Target Compounds						Qvalue
25) Chloroform	6.37	83	310447	4.11	ug/L	98
47) Tetrachloroethene	10.30	164	45134	1.15	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI030116\
Data File : VI047412.D
Acq On : 1 Mar 2016 11:39
Operator : FY/SY
Sample : H1584-09
Misc : 25mL/MSVOA I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0013

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.278	3	5	15	rVB	5701809	7635596	100.00%	27.173%
2	1.682	43	46	50	rBV	196246	279998	3.67%	0.996%
3	1.731	50	51	55	rVB	68450	66582	0.87%	0.237%
4	1.849	61	63	67	rVB2	17776	26713	0.35%	0.095%
5	2.075	83	86	91	rVB	155082	252082	3.30%	0.897%
6	2.361	112	115	118	rBV4	4006	7408	0.10%	0.026%
7	2.902	165	170	178	rBV	373584	725237	9.50%	2.581%
8	3.108	189	191	192	rBV2	3280	3249	0.04%	0.012%
9	3.167	195	197	200	rVB2	6400	7972	0.10%	0.028%
10	3.374	214	218	221	rVB3	9124	21989	0.29%	0.078%
11	3.413	221	222	225	rBV2	3581	4874	0.06%	0.017%
12	3.561	233	237	239	rBV4	6248	14895	0.20%	0.053%
13	3.777	258	259	264	rVB4	2115	4353	0.06%	0.015%
14	3.905	269	272	275	rBV5	2430	4560	0.06%	0.016%
15	4.033	281	285	286	rBV2	2095	3983	0.05%	0.014%
16	4.259	307	308	310	rBV2	2975	3659	0.05%	0.013%
17	4.328	313	315	318	rVB4	2490	3464	0.05%	0.012%
18	4.397	320	322	324	rBV	2741	3538	0.05%	0.013%
19	4.850	364	368	369	rBV3	1759	3200	0.04%	0.011%
20	5.066	388	390	392	rBV2	2255	4153	0.05%	0.015%
21	5.420	425	426	429	rVB3	2581	3318	0.04%	0.012%
22	5.479	429	432	434	rBV3	2067	3452	0.05%	0.012%
23	5.617	437	446	453	rBV	175561	642941	8.42%	2.288%
24	6.079	491	493	494	rVB2	3678	3783	0.05%	0.013%
25	6.365	512	522	530	rBV3	412901	1828951	23.95%	6.509%
26	7.132	594	600	604	rBV	620148	1581535	20.71%	5.628%
27	7.191	604	606	613	rVB	244863	540363	7.08%	1.923%
28	7.545	640	642	645	rVB2	2457	3427	0.04%	0.012%
29	7.732	657	661	664	rBV3	3379	6481	0.08%	0.023%
30	7.900	672	678	684	rBV	692617	1477811	19.35%	5.259%
31	8.067	692	695	700	rVB2	15233	34426	0.45%	0.123%
32	8.185	702	707	711	rVB4	10031	24336	0.32%	0.087%
33	8.411	724	730	737	rBV	499109	1126632	14.75%	4.009%
34	8.657	754	755	759	rVB2	2318	3827	0.05%	0.014%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI030116\
Data File : VI047412.D
Acq On : 1 Mar 2016 11:39
Operator : FY/SY
Sample : H1584-09
Misc : 25mL/MSVOA I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0013

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

35	8.815	767	771	772	rBV2	3022	6328	0.08%	0.023%
36	8.874	772	777	781	rBV5	6227	14393	0.19%	0.051%
37	9.159	804	806	809	rBV2	2900	3720	0.05%	0.013%
38	9.336	820	824	831	rBV	352082	656159	8.59%	2.335%
39	9.493	837	840	845	rVB4	10757	22169	0.29%	0.079%
40	9.671	853	858	863	rBV	984176	1779225	23.30%	6.332%
41	9.936	883	885	887	rVV2	4923	8340	0.11%	0.030%
42	9.995	887	891	902	rVB	229935	442211	5.79%	1.574%
43	10.202	909	912	917	rBV3	6034	14030	0.18%	0.050%
44	10.300	917	922	926	rVV	186706	330352	4.33%	1.176%
45	10.349	926	927	928	rVV	7308	6989	0.09%	0.025%
46	10.399	928	932	945	rVV	1336827	2841324	37.21%	10.112%
47	10.576	947	950	956	rVV6	7641	20473	0.27%	0.073%
48	10.713	962	964	967	rBV2	3114	3444	0.05%	0.012%
49	10.782	969	971	972	rBV2	2730	3272	0.04%	0.012%
50	10.920	983	985	987	rVB3	3262	3308	0.04%	0.012%
51	11.196	1009	1013	1021	rBV	969084	1710935	22.41%	6.089%
52	11.323	1023	1026	1030	rVB4	4689	12149	0.16%	0.043%
53	11.392	1030	1033	1035	rBV3	2553	4971	0.07%	0.018%
54	11.441	1035	1038	1042	rVB4	5573	9806	0.13%	0.035%
55	11.491	1042	1043	1046	rBV	2052	3637	0.05%	0.013%
56	11.540	1046	1048	1050	rBV2	2188	3269	0.04%	0.012%
57	11.589	1052	1053	1056	rVB	3294	3808	0.05%	0.014%
58	11.638	1056	1058	1059	rBV2	2619	3815	0.05%	0.014%
59	11.668	1059	1061	1063	rVB3	4091	3585	0.05%	0.013%
60	11.786	1071	1073	1075	rBV2	2922	4082	0.05%	0.015%
61	11.825	1075	1077	1080	rVB3	3694	5162	0.07%	0.018%
62	11.943	1087	1089	1091	rBV3	2186	3607	0.05%	0.013%
63	12.051	1098	1100	1102	rVB2	3607	3722	0.05%	0.013%
64	12.091	1102	1104	1106	rVB2	2457	4023	0.05%	0.014%
65	12.140	1106	1109	1110	rBV	2033	3354	0.04%	0.012%
66	12.238	1118	1119	1121	rBV2	3136	3260	0.04%	0.012%
67	12.337	1125	1129	1130	rBV3	1871	3206	0.04%	0.011%
68	12.386	1130	1134	1136	rVV	15537	30334	0.40%	0.108%
69	12.435	1136	1139	1146	rVV	410178	676277	8.86%	2.407%
70	12.622	1155	1158	1160	rBV4	2162	3577	0.05%	0.013%
71	12.917	1185	1188	1191	rBV2	2647	6263	0.08%	0.022%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI030116\
Data File : VI047412.D
Acq On : 1 Mar 2016 11:39
Operator : FY/SY
Sample : H1584-09
Misc : 25mL/MSVOA I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0013

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

72	13.035	1197	1200	1202	rVB3	3182	5151	0.07%	0.018%
73	13.242	1218	1221	1223	rBV3	2638	4063	0.05%	0.014%
74	13.340	1227	1231	1233	rBV5	4804	8927	0.12%	0.032%
75	13.399	1233	1237	1247	rVB	874017	1464914	19.19%	5.213%
76	13.527	1247	1250	1254	rBV	26769	43524	0.57%	0.155%
77	13.606	1256	1258	1259	rBV2	3100	3275	0.04%	0.012%
78	13.724	1266	1270	1278	rBV	744814	1370913	17.95%	4.879%
79	13.832	1279	1281	1283	rVV2	2886	4110	0.05%	0.015%
80	13.931	1287	1291	1295	rBV4	4755	15622	0.20%	0.056%
81	14.009	1295	1299	1303	rVB3	10751	25880	0.34%	0.092%
82	14.167	1314	1315	1318	rVB3	3823	4239	0.06%	0.015%
83	14.285	1323	1327	1330	rVB3	10981	19975	0.26%	0.071%
84	14.452	1341	1344	1345	rBV3	4854	7592	0.10%	0.027%
85	14.531	1350	1352	1354	rVV2	3709	4527	0.06%	0.016%
86	14.580	1354	1357	1358	rVV3	2967	5414	0.07%	0.019%
87	14.610	1358	1360	1362	rVB2	5532	7408	0.10%	0.026%
88	14.649	1362	1364	1366	rBV2	2555	3654	0.05%	0.013%
89	14.924	1391	1392	1395	rBV2	2960	3394	0.04%	0.012%
90	14.974	1395	1397	1399	rVB2	2578	3565	0.05%	0.013%
91	15.141	1413	1414	1415	rBV	3860	4190	0.05%	0.015%
92	15.239	1422	1424	1430	rBV6	3052	7817	0.10%	0.028%
93	15.308	1430	1431	1434	rBV3	2212	4056	0.05%	0.014%
94	15.426	1441	1443	1450	rVB5	4002	6536	0.09%	0.023%
95	15.584	1452	1459	1462	rBV3	9350	27039	0.35%	0.096%
96	15.672	1466	1468	1470	rBV2	3490	3992	0.05%	0.014%
97	15.829	1482	1484	1486	rBV3	2501	5205	0.07%	0.019%
98	16.125	1512	1514	1516	rBV3	2091	3772	0.05%	0.013%
99	16.272	1526	1529	1533	rVB3	3106	8517	0.11%	0.030%
100	16.774	1578	1580	1581	rBV2	3239	4844	0.06%	0.017%

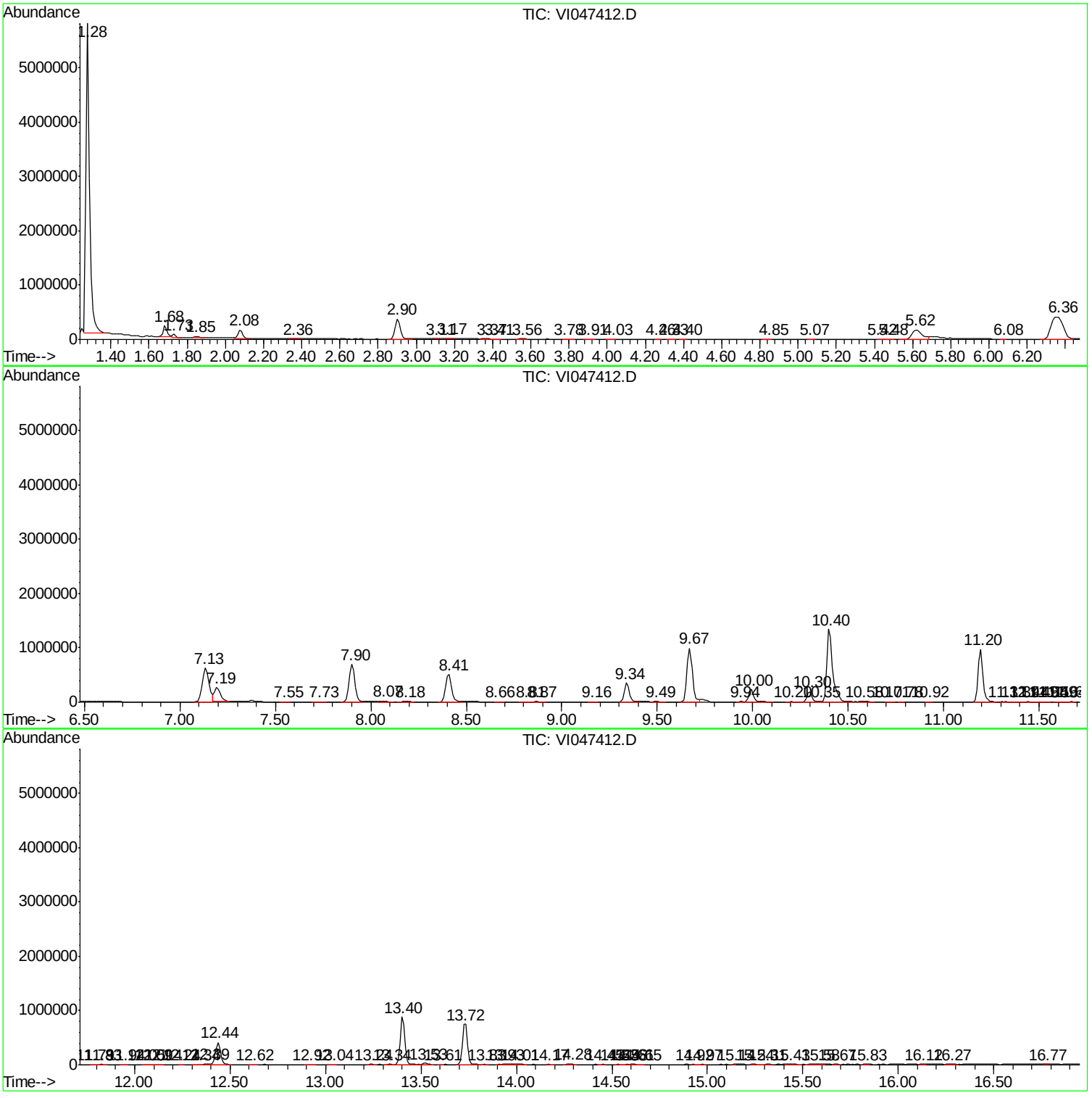
Sum of corrected areas: 28099482

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047412.D
Acq On : 1 Mar 2016 11:39
Operator : FY/SY
Sample : H1584-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0013

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047412.D
Acq On : 1 Mar 2016 11:39
Operator : FY/SY
Sample : H1584-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H0013

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047412.D
Acq On : 1 Mar 2016 11:39
Operator : FY/SY
Sample : H1584-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0013

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0051

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047413.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	4.0	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0051

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047413.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.2	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0051

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047413.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0051

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047413.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/01/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	16.39	0.47	JB
2	E966796	Total Alkanes	N/A	0	

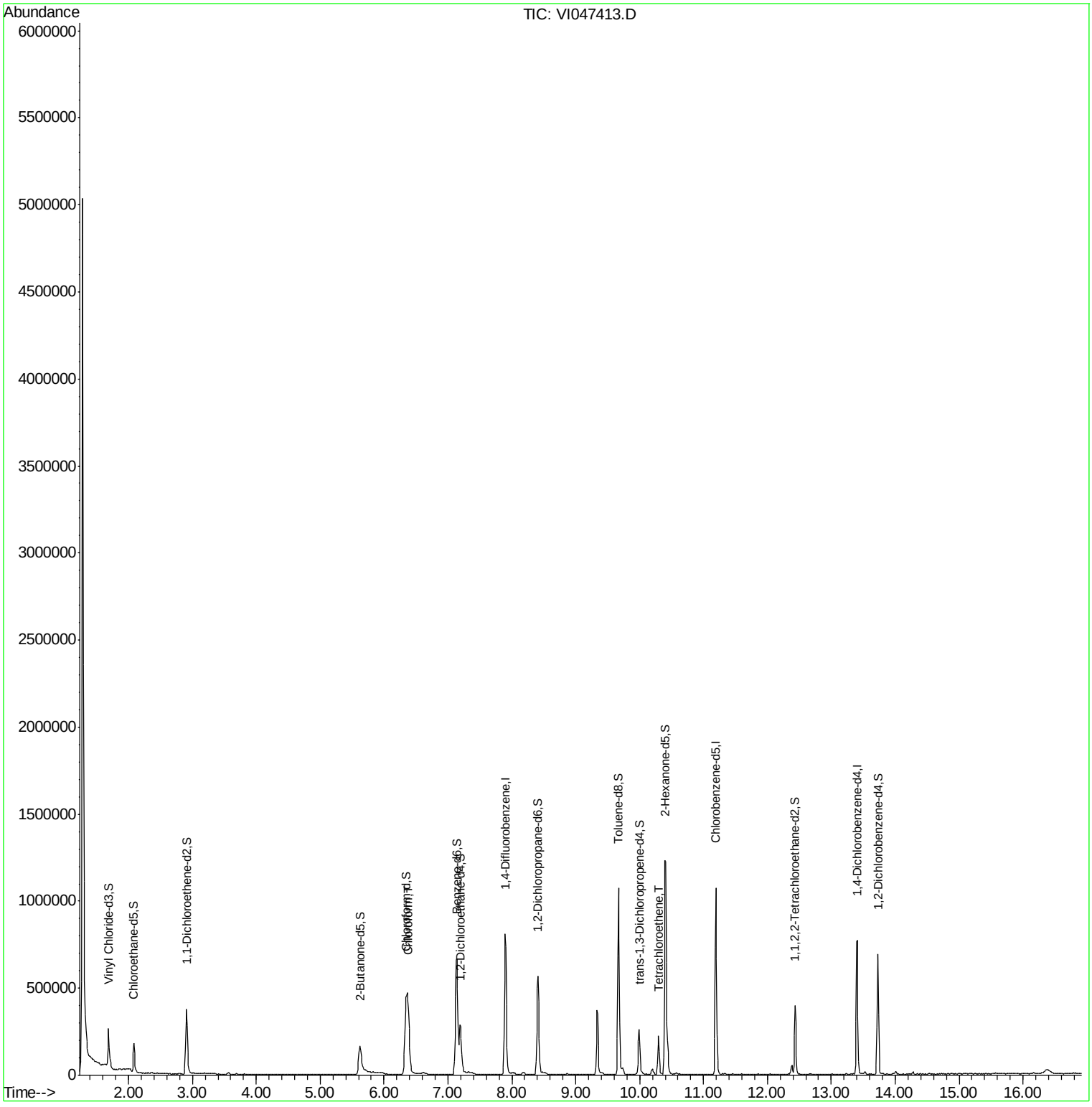
EPA-designated Registry Number.

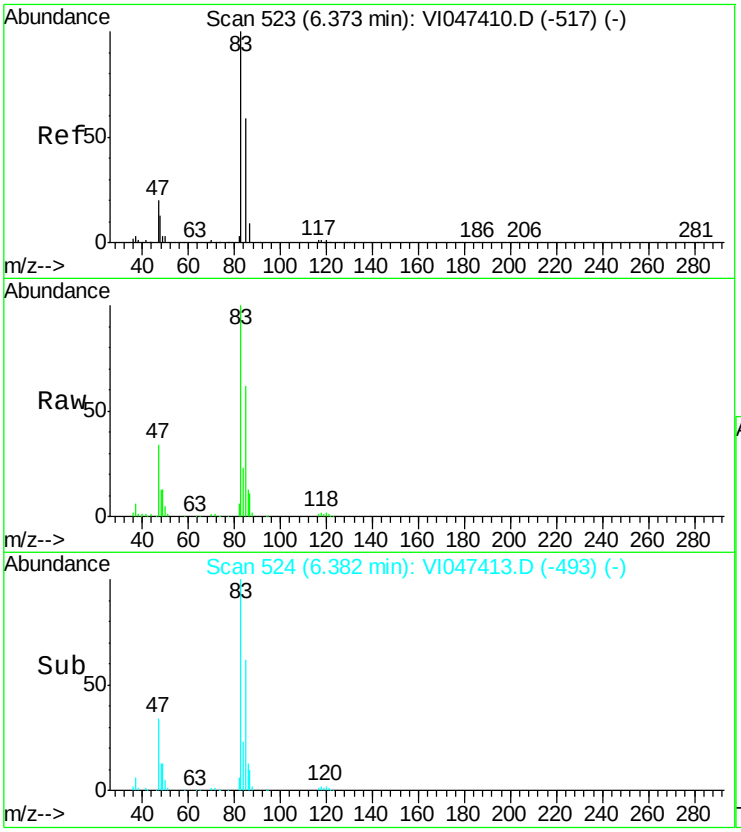
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047413.D
Acq On : 1 Mar 2016 12:11
Operator : FY/SY
Sample : H1584-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0051

Quant Time: Mar 02 02:51:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration



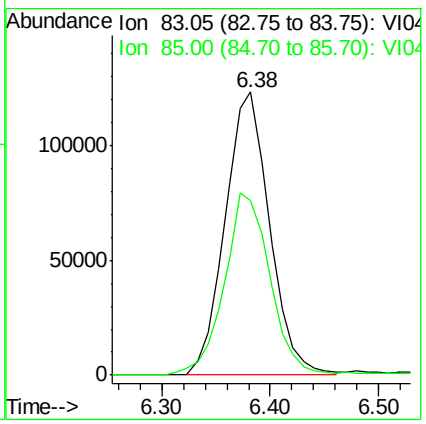


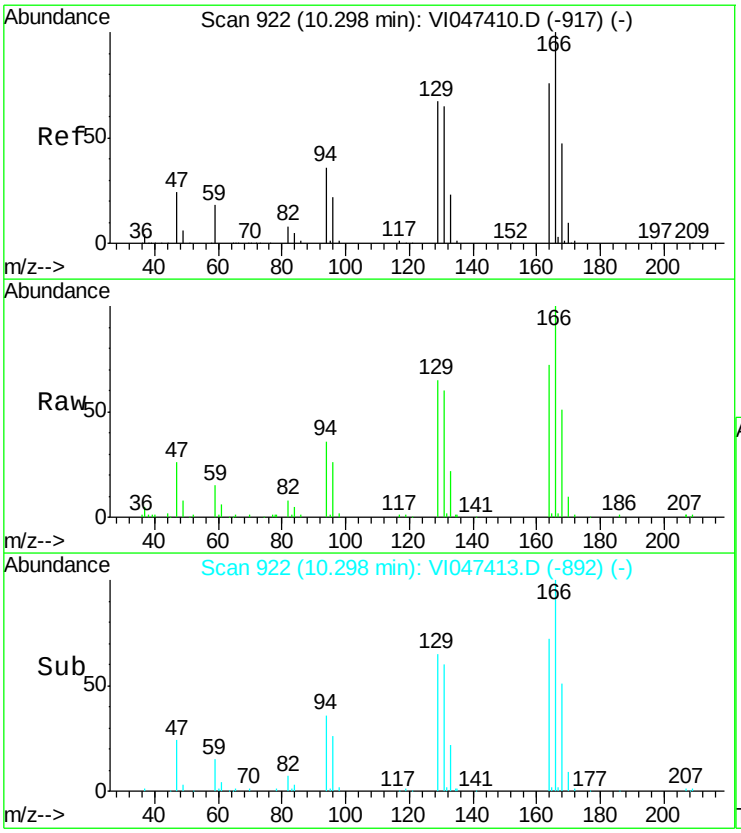
#25
Chloroform
Concen: 4.00 ug/L
RT: 6.38 min Scan# 524
Delta R.T. 0.01 min
Lab File: VI047413.D
Acq: 1 Mar 2016 12:11

Instrument : MSVOA_I
ClientSampleId : H0051

Tgt Ion: 83 Resp: 352580

Ion	Ratio	Lower	Upper
83	100		
85	61.8	43.2	80.2

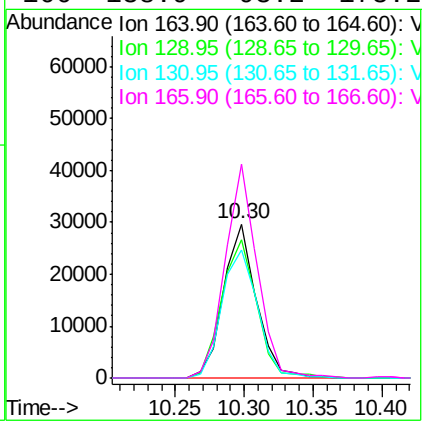




#47
Tetrachloroethene
Concen: 1.22 ug/L
RT: 10.30 min Scan# 922
Delta R.T. -0.00 min
Lab File: VI047413.D
Acq: 1 Mar 2016 12:11

Tgt Ion:164 Resp: 49398

Ion	Ratio	Lower	Upper
164	100		
129	90.2	62.6	116.2
131	83.4	60.5	112.5
166	138.9	93.2	173.2



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047413.D
Acq On : 1 Mar 2016 12:11
Operator : FY/SY
Sample : H1584-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0051

Quant Time: Mar 02 02:51:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	715036	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	570893	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.41	152	229729	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	183247	4.60	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 92.00%			
7) Chloroethane-d5	2.08	69	148231	4.87	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 97.40%			
11) 1,1-Dichloroethene-d2	2.91	63	305343	3.47	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 69.40%			
20) 2-Butanone-d5	5.62	46	423445	51.14	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 102.28%			
24) Chloroform-d	6.34	84	482337	5.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 107.20%			
26) 1,2-Dichloroethane-d4	7.20	65	260077	4.96	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.20%			
32) Benzene-d6	7.14	84	804618	5.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 116.80%			
36) 1,2-Dichloropropane-d6	8.41	67	269300	6.48	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 129.60%			
41) Toluene-d8	9.67	98	653220	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
43) trans-1,3-Dichloropropene-	9.99	79	136751	5.56	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 111.20%			
46) 2-Hexanone-d5	10.40	63	536592	53.27	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 106.54%			
57) 1,1,2,2-Tetrachloroethane-	12.43	84	193116	5.37	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 107.40%			
64) 1,2-Dichlorobenzene-d4	13.73	152	206271	4.92	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.40%			
Target Compounds						Qvalue
25) Chloroform	6.38	83	352580	4.00	ug/L	100
47) Tetrachloroethene	10.30	164	49398	1.22	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI030116\
Data File : VI047413.D
Acq On : 1 Mar 2016 12:11
Operator : FY/SY
Sample : H1584-10
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0051

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.276	3	5	28	rVB	4966307	8871473	100.00%	28.970%
2	1.689	44	47	55	rVB	238399	411878	4.64%	1.345%
3	2.083	84	87	96	rVB	170797	302690	3.41%	0.988%
4	2.230	100	102	103	rBV	3518	4217	0.05%	0.014%
5	2.643	142	144	147	rBV3	1811	3581	0.04%	0.012%
6	2.909	166	171	179	rBV	375097	808634	9.11%	2.641%
7	3.558	231	237	241	rBV4	9327	22374	0.25%	0.073%
8	3.686	248	250	253	rBV	4966	7090	0.08%	0.023%
9	3.814	257	263	265	rBV4	3626	8401	0.09%	0.027%
10	3.863	265	268	271	rVV2	1840	5026	0.06%	0.016%
11	4.267	307	309	310	rBV	2858	3598	0.04%	0.012%
12	4.395	319	322	324	rBV3	2581	6202	0.07%	0.020%
13	4.709	352	354	356	rVB3	3524	4661	0.05%	0.015%
14	4.768	356	360	361	rBV3	2255	4862	0.05%	0.016%
15	4.887	371	372	375	rVB	3446	4806	0.05%	0.016%
16	5.044	385	388	390	rBV2	3636	7281	0.08%	0.024%
17	5.123	395	396	399	rBV2	3070	3503	0.04%	0.011%
18	5.182	401	402	405	rVB3	2804	4099	0.05%	0.013%
19	5.270	408	411	413	rVB3	2249	4025	0.05%	0.013%
20	5.319	413	416	418	rBV2	2122	3294	0.04%	0.011%
21	5.418	425	426	431	rBV4	2110	4438	0.05%	0.014%
22	5.624	440	447	455	rBV	167093	616042	6.94%	2.012%
23	6.136	498	499	501	rVB	3583	3558	0.04%	0.012%
24	6.166	501	502	504	rBV2	3451	5017	0.06%	0.016%
25	6.362	512	522	534	rBV3	471378	2105801	23.74%	6.877%
26	6.707	556	557	561	rVB	3129	3881	0.04%	0.013%
27	6.795	565	566	570	rVB3	2046	3665	0.04%	0.012%
28	7.051	590	592	594	rVB2	3605	3857	0.04%	0.013%
29	7.140	594	601	604	rBV	668554	1790151	20.18%	5.846%
30	7.189	604	606	615	rVB	273577	666549	7.51%	2.177%
31	7.612	648	649	654	rVB5	3808	9707	0.11%	0.032%
32	7.681	654	656	657	rBV2	3120	3564	0.04%	0.012%
33	7.897	672	678	686	rBV	805949	1760533	19.84%	5.749%
34	8.182	703	707	711	rVV5	13288	32301	0.36%	0.105%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI030116\
Data File : VI047413.D
Acq On : 1 Mar 2016 12:11
Operator : FY/SY
Sample : H1584-10
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0051

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

35	8.409	724	730	738	rBV	563702	1284210	14.48%	4.194%
36	8.665	753	756	760	rVB3	2347	4639	0.05%	0.015%
37	8.871	772	777	779	rBV4	4688	10628	0.12%	0.035%
38	9.156	804	806	809	rBV3	1796	3466	0.04%	0.011%
39	9.255	813	816	818	rBV4	1963	3966	0.04%	0.013%
40	9.334	820	824	835	rBV	366858	712917	8.04%	2.328%
41	9.481	835	839	841	rVB4	2487	4756	0.05%	0.016%
42	9.550	844	846	849	rVB2	2723	4328	0.05%	0.014%
43	9.668	854	858	863	rBV	1068593	1886049	21.26%	6.159%
44	9.894	878	881	883	rBV3	1948	3545	0.04%	0.012%
45	9.944	885	886	887	rVV	5142	5145	0.06%	0.017%
46	9.993	887	891	900	rVV	261311	459327	5.18%	1.500%
47	10.101	900	902	903	rVB2	3327	3269	0.04%	0.011%
48	10.199	908	912	918	rVV2	32175	76100	0.86%	0.249%
49	10.298	918	922	928	rVV	220089	385822	4.35%	1.260%
50	10.396	928	932	941	rVV	1228837	2636718	29.72%	8.610%
51	10.534	945	946	947	rVV	3618	3291	0.04%	0.011%
52	10.573	947	950	954	rVV4	7945	18441	0.21%	0.060%
53	10.622	954	955	958	rVB3	3533	4541	0.05%	0.015%
54	10.839	975	977	980	rVB3	2929	4623	0.05%	0.015%
55	10.878	980	981	985	rBV2	3115	6006	0.07%	0.020%
56	11.026	993	996	997	rBV2	3029	4619	0.05%	0.015%
57	11.193	1009	1013	1022	rVV	1072306	1795375	20.24%	5.863%
58	11.301	1022	1024	1025	rVV2	3203	4198	0.05%	0.014%
59	11.331	1025	1027	1032	rVB2	5427	9612	0.11%	0.031%
60	11.498	1043	1044	1047	rVB	2812	4413	0.05%	0.014%
61	11.547	1047	1049	1050	rBV2	2681	3566	0.04%	0.012%
62	11.596	1053	1054	1056	rBV	3929	5221	0.06%	0.017%
63	11.636	1056	1058	1063	rVB4	2990	7698	0.09%	0.025%
64	11.744	1066	1069	1071	rBV3	2130	3408	0.04%	0.011%
65	11.921	1082	1087	1092	rVB4	2547	7379	0.08%	0.024%
66	11.990	1092	1094	1096	rBV3	3566	4062	0.05%	0.013%
67	12.039	1096	1099	1103	rBV4	3728	9711	0.11%	0.032%
68	12.285	1122	1124	1126	rVV3	2705	3865	0.04%	0.013%
69	12.334	1127	1129	1130	rVV2	3749	4240	0.05%	0.014%
70	12.383	1130	1134	1136	rVV	54554	96226	1.08%	0.314%
71	12.433	1136	1139	1149	rVV	395970	664942	7.50%	2.171%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI030116\
Data File : VI047413.D
Acq On : 1 Mar 2016 12:11
Operator : FY/SY
Sample : H1584-10
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0051

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

72	12.629	1155	1159	1160	rBV2	3648	5613	0.06%	0.018%
73	12.659	1160	1162	1166	rVV4	3241	7644	0.09%	0.025%
74	12.846	1177	1181	1184	rBV3	1722	4033	0.05%	0.013%
75	13.072	1201	1204	1206	rVB3	2383	3844	0.04%	0.013%
76	13.151	1211	1212	1216	rBV2	2434	3456	0.04%	0.011%
77	13.230	1219	1220	1223	rVB2	4941	6047	0.07%	0.020%
78	13.348	1229	1232	1233	rVB3	2949	3813	0.04%	0.012%
79	13.407	1233	1238	1247	rBV	770814	1384860	15.61%	4.522%
80	13.525	1247	1250	1254	rVB2	12642	19995	0.23%	0.065%
81	13.731	1266	1271	1278	rBV	690980	1248866	14.08%	4.078%
82	14.007	1295	1299	1305	rVB3	17204	37937	0.43%	0.124%
83	14.213	1318	1320	1322	rBV2	3582	6581	0.07%	0.021%
84	14.282	1324	1327	1330	rVB3	13495	19185	0.22%	0.063%
85	14.391	1336	1338	1340	rBV3	2216	3327	0.04%	0.011%
86	14.528	1350	1352	1355	rVB3	3678	7761	0.09%	0.025%
87	14.577	1355	1357	1359	rBV3	3567	4911	0.06%	0.016%
88	14.814	1380	1381	1385	rBV	2664	5743	0.06%	0.019%
89	15.148	1414	1415	1417	rBV	3063	3410	0.04%	0.011%
90	15.325	1430	1433	1434	rBV2	2452	3338	0.04%	0.011%
91	15.424	1440	1443	1445	rBV3	3347	6445	0.07%	0.021%
92	15.512	1451	1452	1455	rBV2	3422	3662	0.04%	0.012%
93	15.571	1457	1458	1462	rVB3	5650	9151	0.10%	0.030%
94	15.738	1474	1475	1477	rBV2	3869	5419	0.06%	0.018%
95	15.984	1498	1500	1503	rBV3	3516	6123	0.07%	0.020%
96	16.171	1517	1519	1521	rBV2	6638	10226	0.12%	0.033%
97	16.388	1532	1541	1550	rVB4	20857	130167	1.47%	0.425%
98	16.604	1561	1563	1566	rVB4	4726	8658	0.10%	0.028%
99	16.653	1566	1568	1569	rBV2	3889	5279	0.06%	0.017%
100	16.712	1572	1574	1576	rBV3	3243	6122	0.07%	0.020%

Sum of corrected areas: 30622697

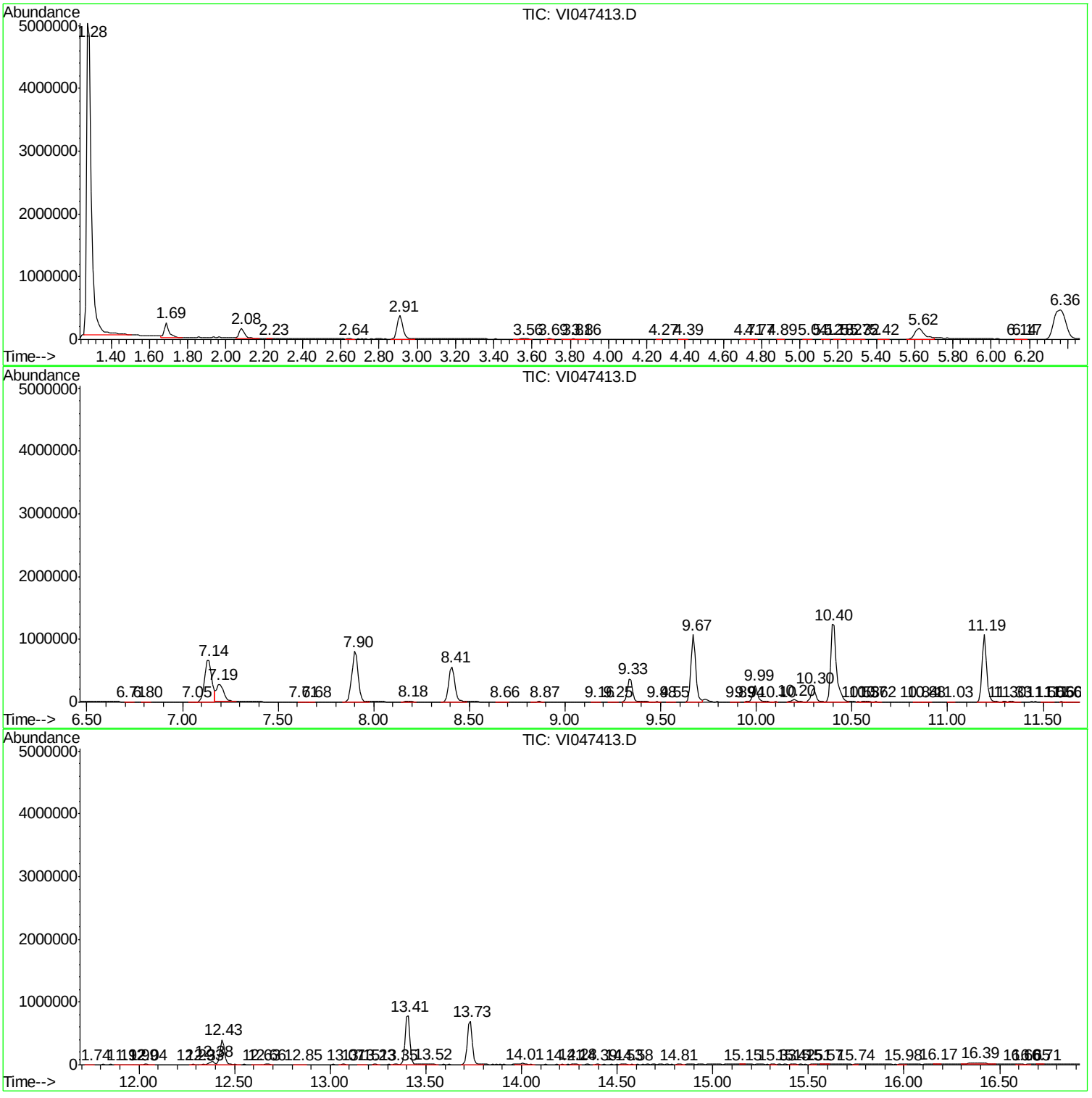
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047413.D
Acq On : 1 Mar 2016 12:11
Operator : FY/SY
Sample : H1584-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0051

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047413.D
Acq On : 1 Mar 2016 12:11
Operator : FY/SY
Sample : H1584-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0051

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

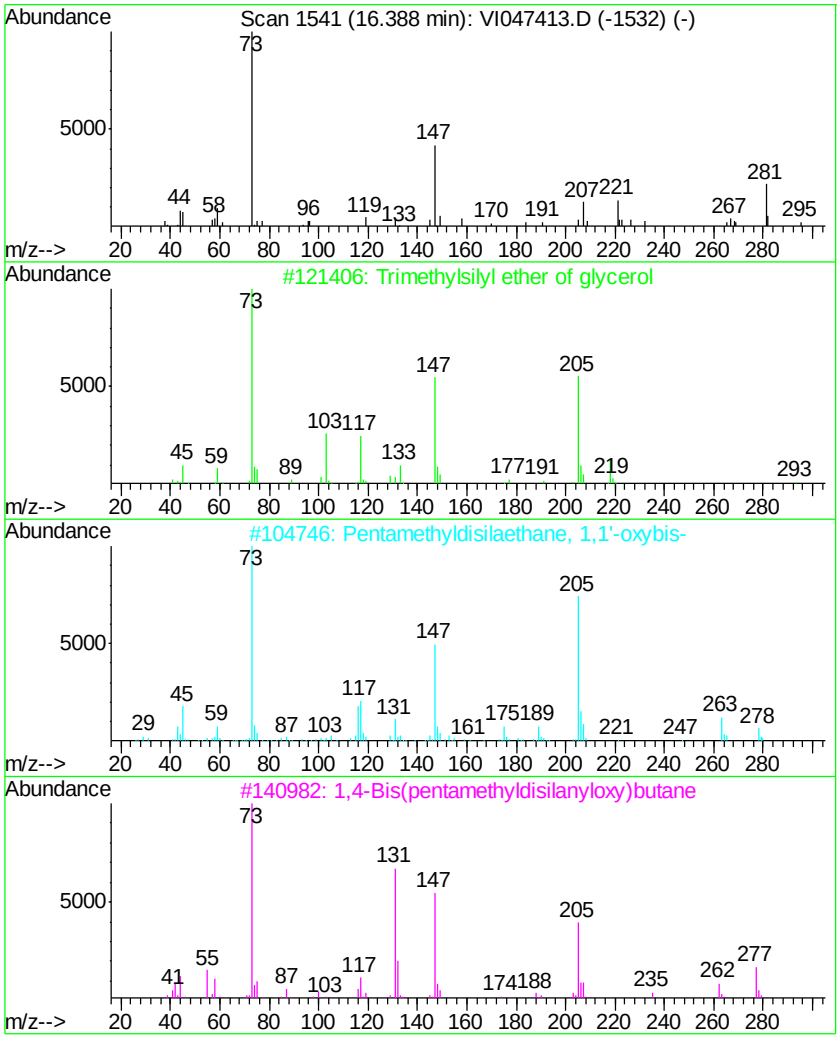
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

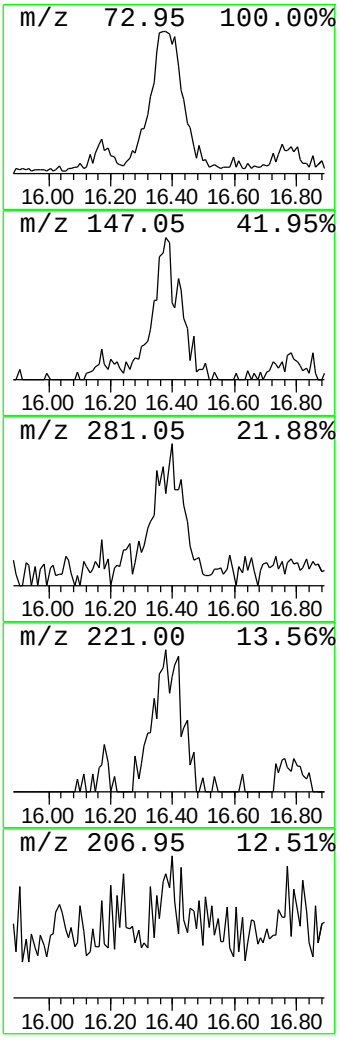
****

Peak Number 3 unknown-01 Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.39	0.47 ug/L	130167	1,4-Dichlorobenzene-d4	13.41

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Trimethylsilyl ether of glycerol	308	C12H32O3Si3	006787-10-6	47
2	Pentamethyldisilaethane, 1,1'-ox...	278	C10H30OSi4	001560-31-2	28
3	1,4-Bis(pentamethyldisilanyloxy)...	350	C14H38O2Si4	1000216-98-8	25
4	Trimethylsilyl ether of glycerol	308	C12H32O3Si3	006787-10-6	25
5	Trimethylsilyl ether of glycerol	308	C12H32O3Si3	006787-10-6	25





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047413.D
Acq On : 1 Mar 2016 12:11
Operator : FY/SY
Sample : H1584-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0051

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
unknown-01	16.39	0.5	ug/L	130167	3	13.41	1384860	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047414.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047414.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047414.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047414.D
% Solids :
Date Received : 02/26/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/01/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.17	0.78	JN
2	E966796	Total Alkanes	N/A	0	

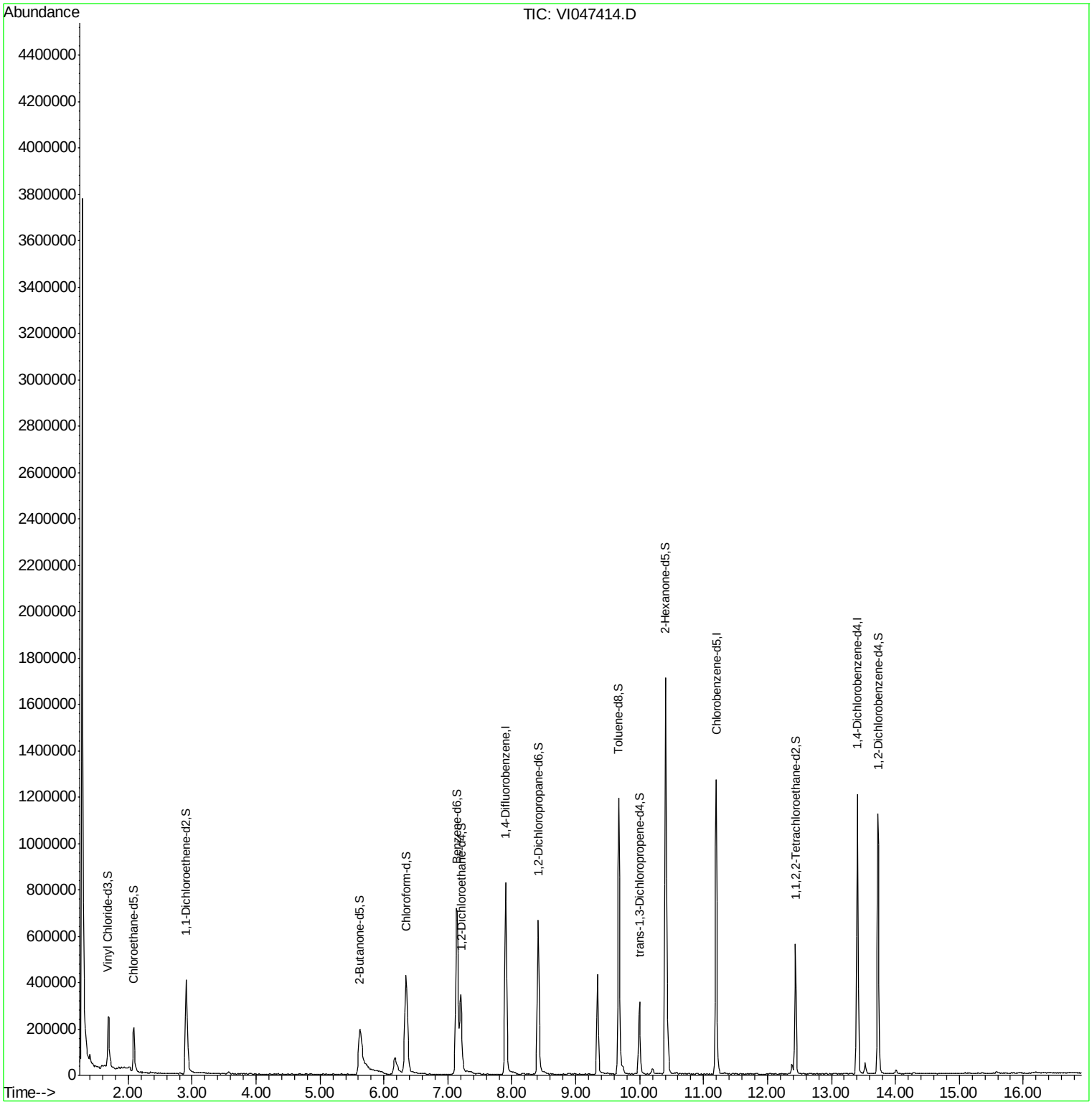
EPA-designated Registry Number.

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047414.D
Acq On : 1 Mar 2016 12:43
Operator : FY/SY
Sample : H1584-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0061

Quant Time: Mar 02 02:53:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047414.D
Acq On : 1 Mar 2016 12:43
Operator : FY/SY
Sample : H1584-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0061

Quant Time: Mar 02 02:53:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	764896	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	696842	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.40	152	328823	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.68	65	220372	5.17	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 103.40%			
7) Chloroethane-d5	2.09	69	188171	5.78	ug/L	0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 115.60%			
11) 1,1-Dichloroethene-d2	2.90	63	366170	3.88	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 77.60%			
20) 2-Butanone-d5	5.63	46	576835	65.12	ug/L	0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 130.24%#			
24) Chloroform-d	6.35	84	526573	5.47	ug/L	0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 109.40%			
26) 1,2-Dichloroethane-d4	7.20	65	329878	5.88	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 117.60%			
32) Benzene-d6	7.14	84	880943	5.24	ug/L	0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.80%			
36) 1,2-Dichloropropane-d6	8.41	67	312049	6.15	ug/L	0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 123.00%			
41) Toluene-d8	9.67	98	794652	4.89	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 97.80%			
43) trans-1,3-Dichloropropene-	10.00	79	166601	5.55	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 111.00%			
46) 2-Hexanone-d5	10.40	63	708149	57.60	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 115.20%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	274412	6.25	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 125.00%#			
64) 1,2-Dichlorobenzene-d4	13.74	152	311973	5.20	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 104.00%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI030116\
Data File : VI047414.D
Acq On : 1 Mar 2016 12:43
Operator : FY/SY
Sample : H1584-11
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0061

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.281	3	5	15	rBV	3713548	4887341	100.00%	16.219%
2	1.399	15	17	21	rVB2	41206	55900	1.14%	0.186%
3	1.586	34	36	39	rBV3	11494	25306	0.52%	0.084%
4	1.684	43	46	53	rVB	218905	387972	7.94%	1.288%
5	2.087	83	87	93	rVB	191130	350662	7.17%	1.164%
6	2.343	111	113	114	rBV	4959	4093	0.08%	0.014%
7	2.648	142	144	145	rBV	2634	3067	0.06%	0.010%
8	2.806	158	160	164	rBV3	5748	9945	0.20%	0.033%
9	2.904	166	170	179	rBV	405470	961284	19.67%	3.190%
10	3.258	204	206	209	rVB3	3073	4114	0.08%	0.014%
11	3.573	233	238	242	rBV4	8352	20478	0.42%	0.068%
12	3.780	256	259	260	rBV4	3158	3890	0.08%	0.013%
13	3.809	260	262	264	rBV3	2172	3211	0.07%	0.011%
14	4.183	298	300	302	rBV2	1741	3306	0.07%	0.011%
15	4.282	305	310	312	rVB4	2518	5550	0.11%	0.018%
16	4.311	312	313	315	rBV2	3037	3139	0.06%	0.010%
17	4.409	322	323	326	rVB2	4119	4590	0.09%	0.015%
18	4.468	326	329	331	rBV2	2209	3960	0.08%	0.013%
19	4.557	337	338	342	rBV4	2589	3453	0.07%	0.011%
20	4.773	358	360	361	rVB2	3017	3054	0.06%	0.010%
21	4.793	361	362	365	rBV2	3132	4303	0.09%	0.014%
22	5.098	390	393	396	rVV2	2223	4113	0.08%	0.014%
23	5.334	413	417	420	rBV4	2445	6308	0.13%	0.021%
24	5.433	424	427	429	rBV3	2766	4167	0.09%	0.014%
25	5.620	440	446	460	rBV	193835	920891	18.84%	3.056%
26	6.170	497	502	513	rBV	71036	286955	5.87%	0.952%
27	6.348	513	520	530	rVV	419890	1269843	25.98%	4.214%
28	6.535	538	539	545	rVB5	2612	3811	0.08%	0.013%
29	6.977	582	584	587	rBV2	2516	4925	0.10%	0.016%
30	7.135	594	600	604	rBV	714353	1948879	39.88%	6.468%
31	7.204	604	607	615	rVB	330945	802936	16.43%	2.665%
32	7.558	640	643	645	rBV	2316	3180	0.07%	0.011%
33	7.902	673	678	687	rBV	825005	1837659	37.60%	6.098%
34	8.178	703	706	709	rBV4	4015	8970	0.18%	0.030%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI030116\
Data File : VI047414.D
Acq On : 1 Mar 2016 12:43
Operator : FY/SY
Sample : H1584-11
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0061

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

35	8.414	724	730	738	rBV	664078	1474442	30.17%	4.893%
36	8.610	747	750	751	rVB3	2479	3321	0.07%	0.011%
37	8.640	751	753	757	rVB2	2474	4232	0.09%	0.014%
38	8.807	766	770	773	rVB4	2494	5412	0.11%	0.018%
39	8.876	773	777	783	rBV5	3209	13142	0.27%	0.044%
40	9.220	809	812	813	rVB3	2657	3846	0.08%	0.013%
41	9.338	819	824	836	rBV	430179	834444	17.07%	2.769%
42	9.496	836	840	844	rVB4	6565	16288	0.33%	0.054%
43	9.673	853	858	873	rVV	1190000	2276246	46.57%	7.554%
44	9.870	876	878	882	rVB4	1835	3893	0.08%	0.013%
45	9.939	882	885	886	rBV3	3809	6791	0.14%	0.023%
46	9.998	887	891	902	rVB	313507	552551	11.31%	1.834%
47	10.126	902	904	906	rBV2	2141	3576	0.07%	0.012%
48	10.194	906	911	919	rBV	24046	56331	1.15%	0.187%
49	10.401	928	932	946	rVV	1708564	3544781	72.53%	11.764%
50	10.549	946	947	948	rVV	4430	3853	0.08%	0.013%
51	10.568	948	949	950	rVV	6909	6803	0.14%	0.023%
52	10.618	953	954	956	rVV2	2919	3631	0.07%	0.012%
53	10.706	961	963	965	rVB2	2019	3131	0.06%	0.010%
54	10.893	980	982	987	rVB5	2553	5128	0.10%	0.017%
55	10.962	987	989	992	rVB3	2237	3044	0.06%	0.010%
56	11.198	1008	1013	1022	rBV	1271966	2177432	44.55%	7.226%
57	11.326	1024	1026	1032	rVV5	4859	11130	0.23%	0.037%
58	11.444	1036	1038	1040	rBV3	2652	4354	0.09%	0.014%
59	11.493	1042	1043	1046	rVB2	2065	3042	0.06%	0.010%
60	11.572	1050	1051	1053	rBV	2989	4179	0.09%	0.014%
61	11.838	1072	1078	1083	rVB6	4196	11297	0.23%	0.037%
62	12.044	1096	1099	1101	rBV4	4133	6245	0.13%	0.021%
63	12.182	1112	1113	1116	rBV3	2526	3679	0.08%	0.012%
64	12.320	1125	1127	1129	rBV3	2757	4008	0.08%	0.013%
65	12.379	1129	1133	1136	rVV	42591	85530	1.75%	0.284%
66	12.438	1136	1139	1145	rVB	560827	911207	18.64%	3.024%
67	12.566	1149	1152	1154	rBV2	1584	3064	0.06%	0.010%
68	12.654	1159	1161	1168	rBV4	3723	11176	0.23%	0.037%
69	12.782	1171	1174	1175	rVB2	2813	3805	0.08%	0.013%
70	12.821	1175	1178	1180	rBV3	2208	4011	0.08%	0.013%
71	12.979	1191	1194	1196	rBV3	3729	4290	0.09%	0.014%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI030116\
Data File : VI047414.D
Acq On : 1 Mar 2016 12:43
Operator : FY/SY
Sample : H1584-11
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0061

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

72	13.038	1196	1200	1201	rBV3	2355	3927	0.08%	0.013%
73	13.117	1205	1208	1211	rVB4	1803	3162	0.06%	0.010%
74	13.156	1211	1212	1214	rVB2	3523	2972	0.06%	0.010%
75	13.313	1226	1228	1233	rVB3	2172	2951	0.06%	0.010%
76	13.402	1233	1237	1242	rBV	1207451	2023385	41.40%	6.715%
77	13.530	1247	1250	1255	rVB	48737	82300	1.68%	0.273%
78	13.727	1266	1270	1275	rBV	1120489	1922971	39.35%	6.382%
79	13.933	1289	1291	1293	rBV2	2749	4842	0.10%	0.016%
80	14.012	1294	1299	1304	rBB2	18424	34492	0.71%	0.114%
81	14.081	1304	1306	1308	rVB2	2386	3851	0.08%	0.013%
82	14.169	1311	1315	1318	rBV4	2517	4886	0.10%	0.016%
83	14.277	1324	1326	1333	rBV5	7836	21014	0.43%	0.070%
84	14.425	1339	1341	1344	rVB2	2913	4390	0.09%	0.015%
85	14.671	1364	1366	1368	rBV3	3176	5108	0.10%	0.017%
86	14.887	1386	1388	1389	rBV2	2677	2977	0.06%	0.010%
87	14.917	1389	1391	1393	rVB3	2835	3751	0.08%	0.012%
88	15.065	1404	1406	1407	rBV2	2361	3192	0.07%	0.011%
89	15.094	1407	1409	1412	rVV2	3855	6974	0.14%	0.023%
90	15.163	1415	1416	1419	rVB3	5190	5212	0.11%	0.017%
91	15.360	1432	1436	1437	rBV2	2538	5969	0.12%	0.020%
92	15.586	1455	1459	1462	rVV4	7022	16866	0.35%	0.056%
93	15.694	1468	1470	1472	rVB3	3409	3703	0.08%	0.012%
94	15.743	1472	1475	1478	rVB	5319	10101	0.21%	0.034%
95	15.783	1478	1479	1480	rBV	3576	3261	0.07%	0.011%
96	15.812	1480	1482	1484	rBV2	3112	4582	0.09%	0.015%
97	16.098	1510	1511	1513	rVB2	3850	3593	0.07%	0.012%
98	16.137	1513	1515	1517	rBV3	5983	11339	0.23%	0.038%
99	16.511	1551	1553	1554	rBV2	3182	3550	0.07%	0.012%
100	16.570	1557	1559	1560	rBV2	2885	3499	0.07%	0.012%

Sum of corrected areas: 30133410

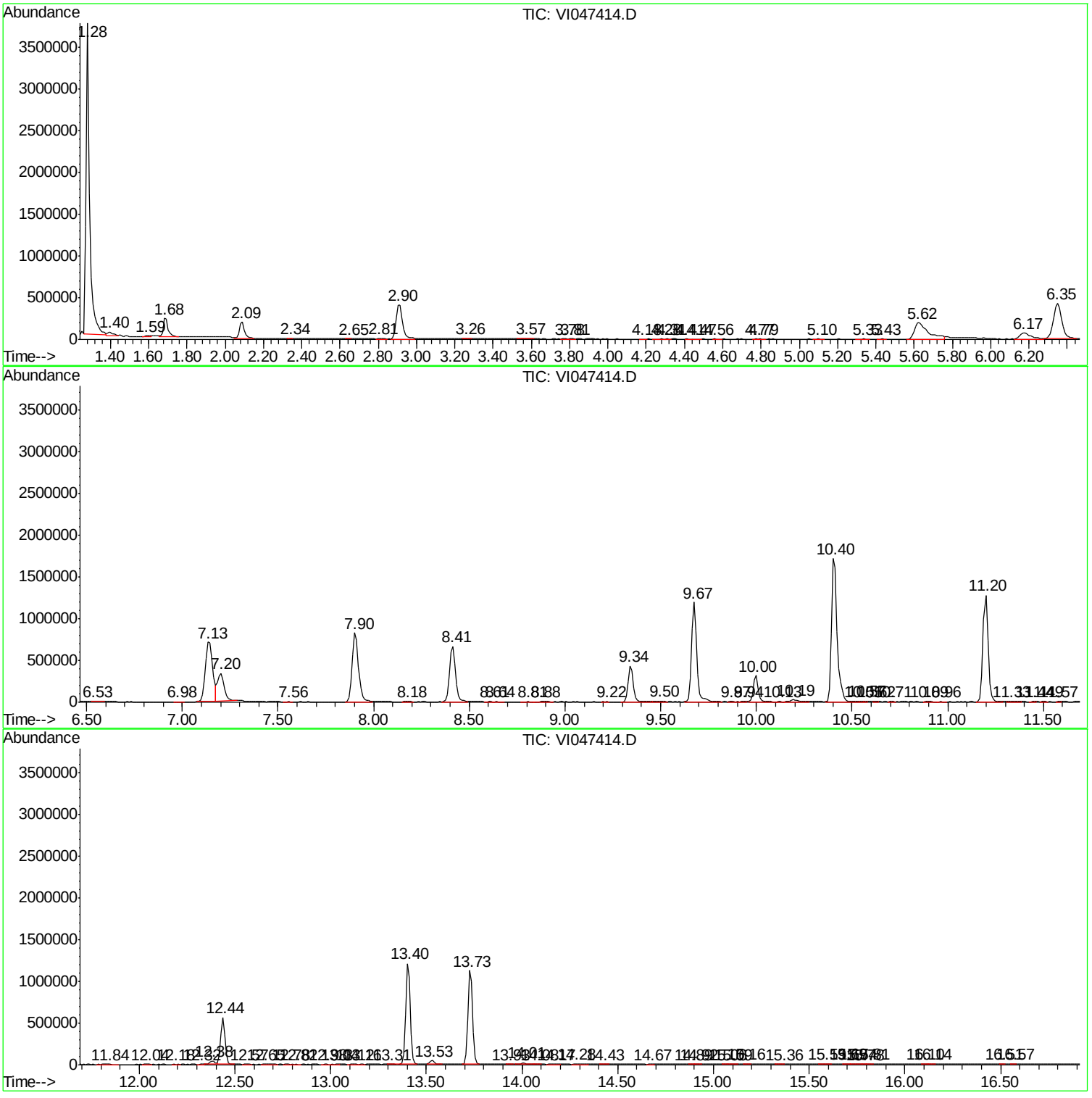
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047414.D
Acq On : 1 Mar 2016 12:43
Operator : FY/SY
Sample : H1584-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0061

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047414.D
Acq On : 1 Mar 2016 12:43
Operator : FY/SY
Sample : H1584-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0061

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

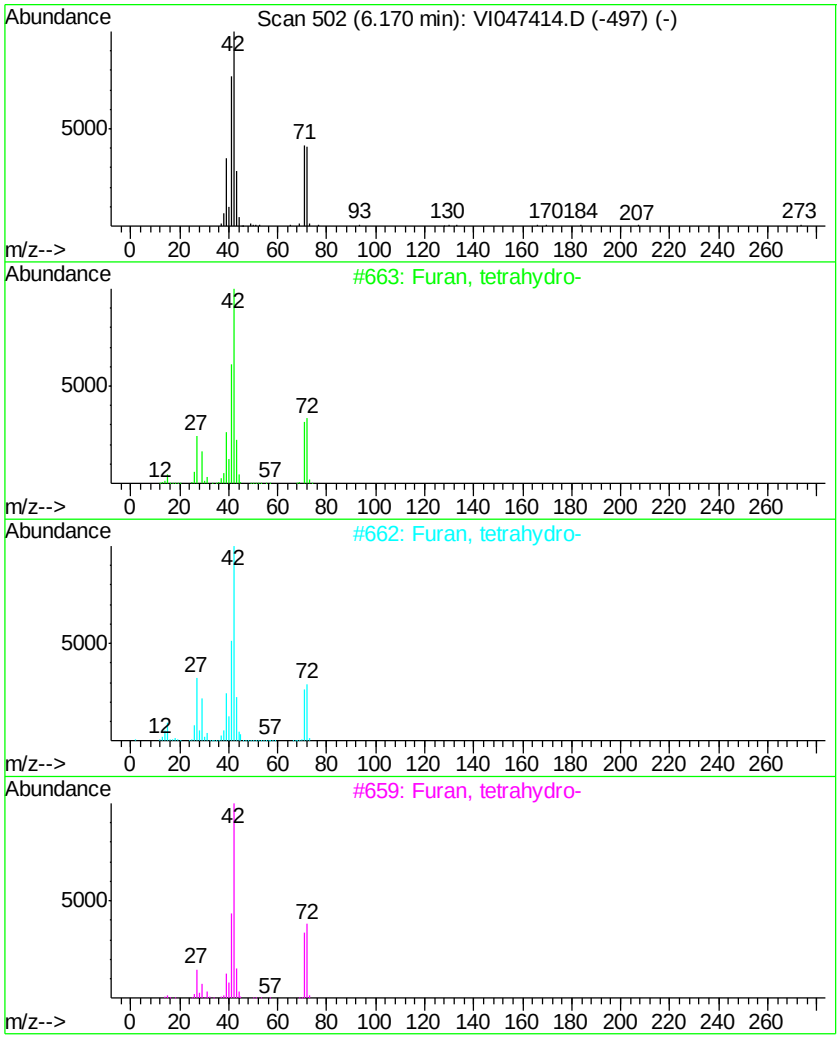
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

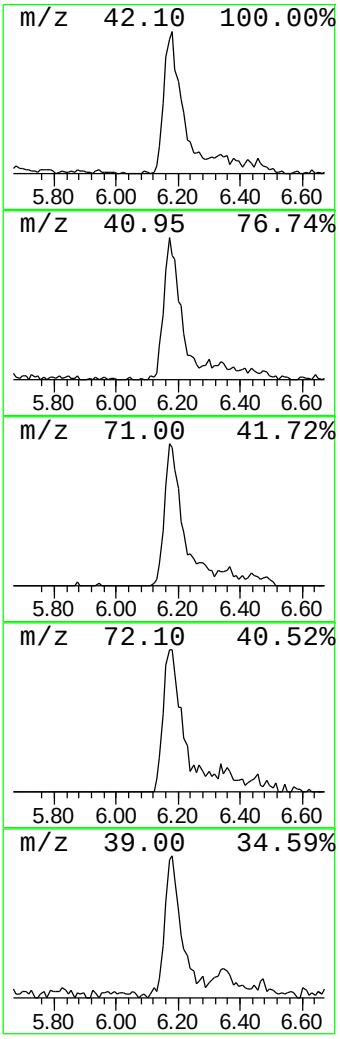
****

Peak Number 2 Furan, tetrahydro- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.17	0.78 ug/L	286955	1,4-Difluorobenzene	7.90

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Furan, tetrahydro-	72	C4H8O	000109-99-9	86
2	Furan, tetrahydro-	72	C4H8O	000109-99-9	78
3	Furan, tetrahydro-	72	C4H8O	000109-99-9	78
4	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	58
5	Isobutylene epoxide	72	C4H8O	000558-30-5	47





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047414.D
Acq On : 1 Mar 2016 12:43
Operator : FY/SY
Sample : H1584-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H0061

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Furan, tetrahydro-	6.17	0.8	ug/L	286955	1	7.90	1837660	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0011

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018185.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.5	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0011

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018185.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.31	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.48	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0011

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018185.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0011

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018185.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/01/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

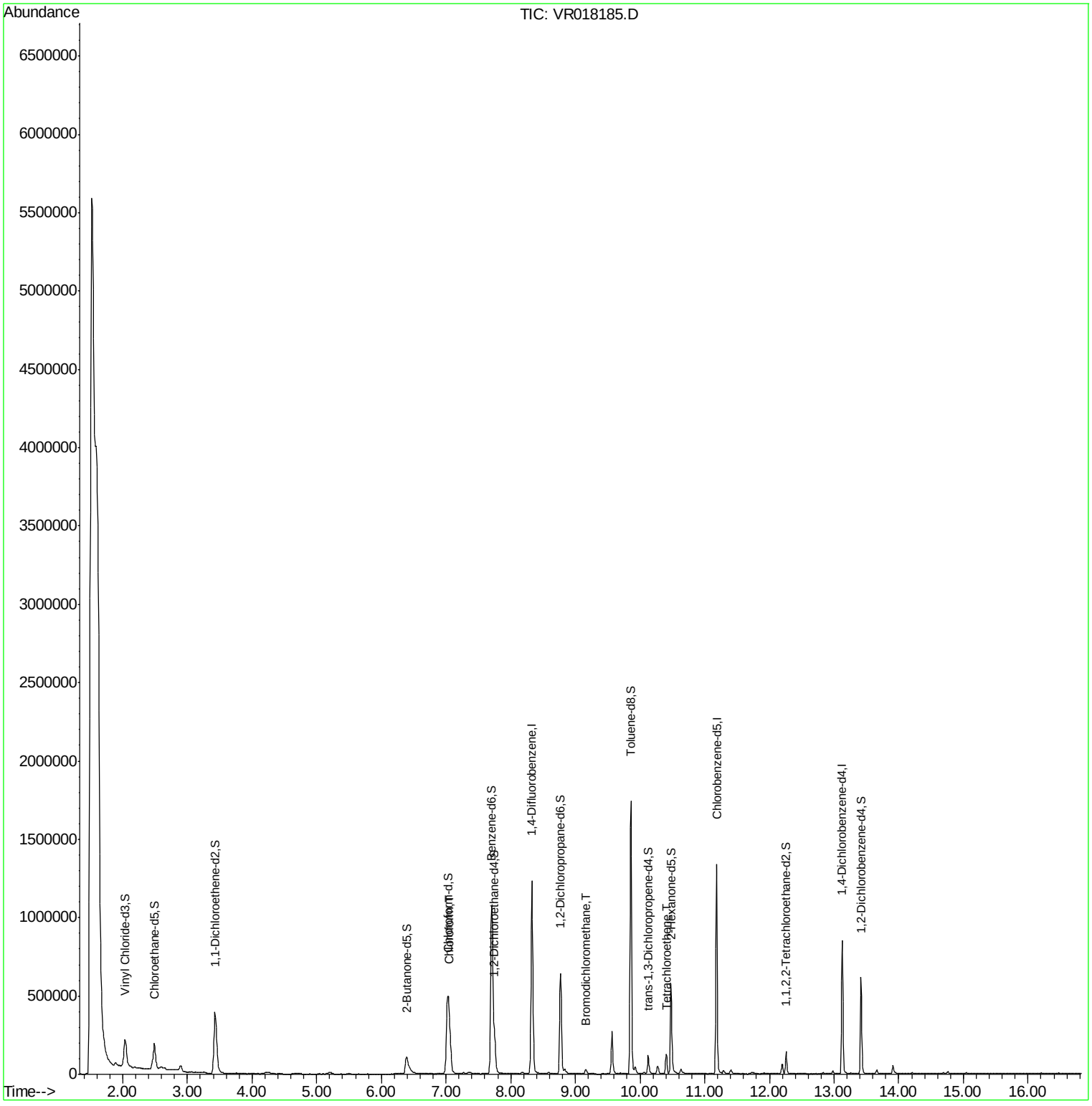
EPA-designated Registry Number.

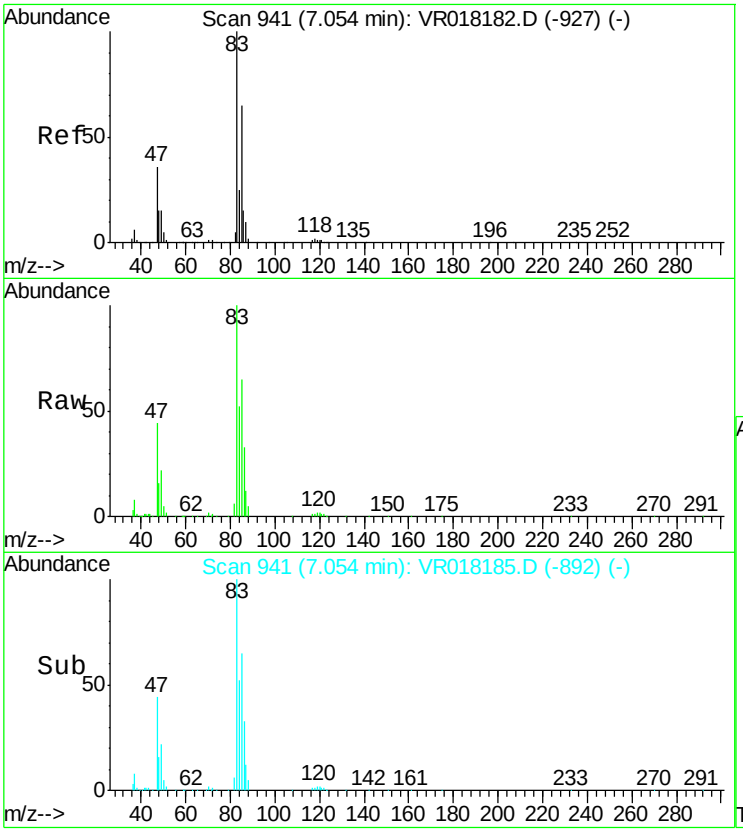
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018185.D
Acq On : 1 Mar 2016 18:28
Operator : MD\SY
Sample : H1584-15
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0011

Quant Time: Mar 02 03:45:08 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration



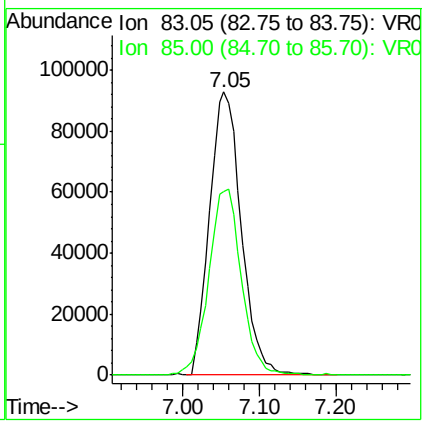


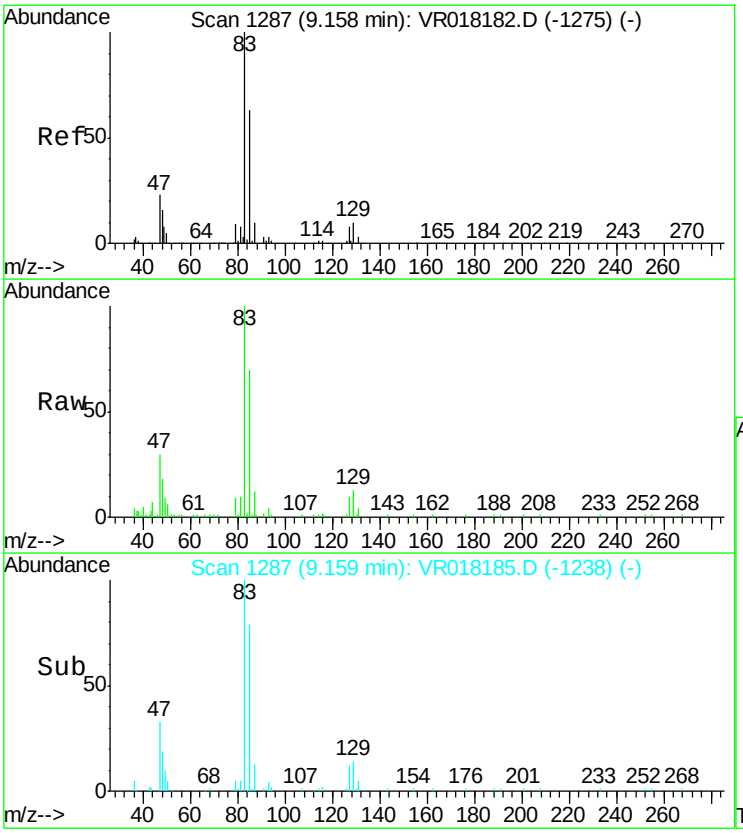
#25
Chloroform
Concen: 2.51 ug/L
RT: 7.05 min Scan# 941
Delta R.T. 0.00 min
Lab File: VR018185.D
Acq: 1 Mar 2016 18:28

Instrument : MSVOA_R
ClientSampleId : H0011

Tgt Ion: 83 Resp: 266210

Ion	Ratio	Lower	Upper
83	100		
85	65.0	45.1	83.7

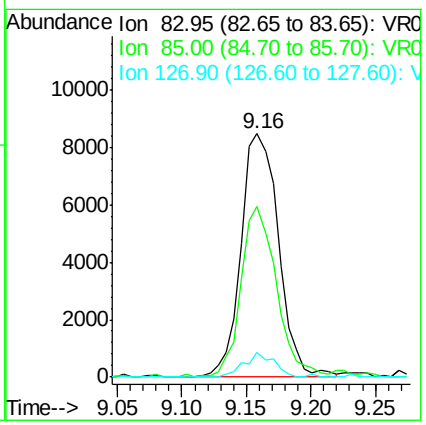


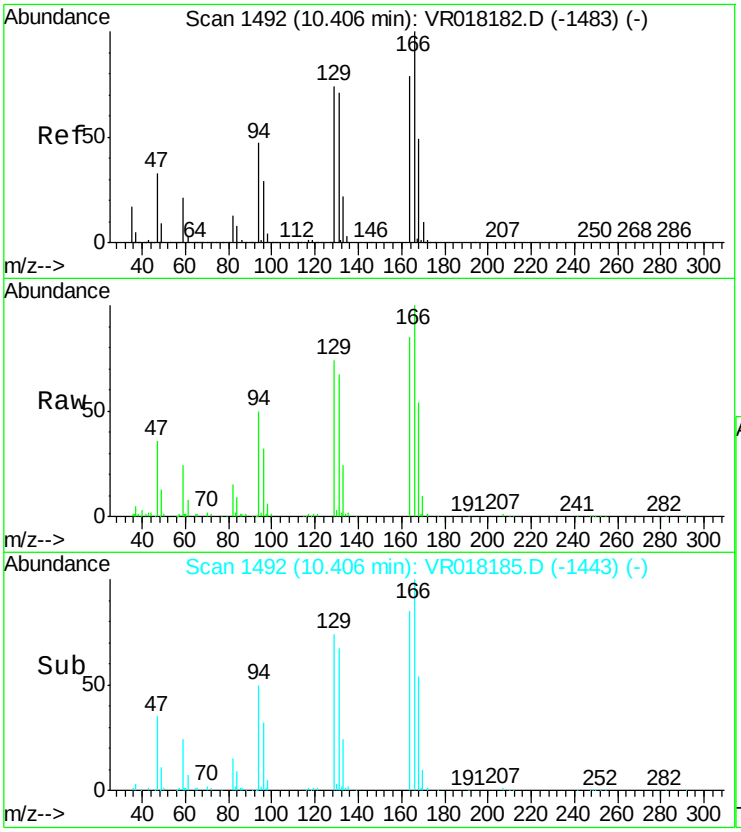


#38
Bromodichloromethane
Concen: 0.31 ug/L
RT: 9.16 min Scan# 1287
Delta R.T. 0.00 min
Lab File: VR018185.D
Acq: 1 Mar 2016 18:28

Tgt Ion: 83 Resp: 17061

Ion	Ratio	Lower	Upper
83	100		
85	70.1	42.4	78.8
127	10.2	6.1	9.1#



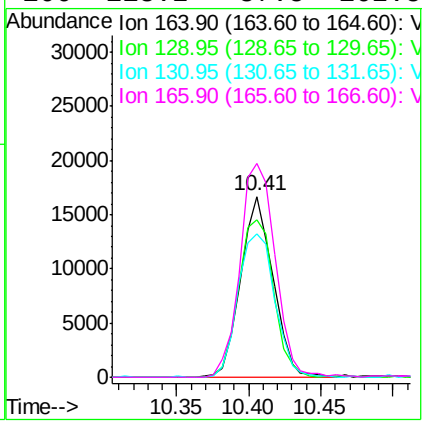


#47
Tetrachloroethene
Concen: 0.48 ug/L
RT: 10.41 min Scan# 1492
Delta R.T. 0.00 min
Lab File: VR018185.D
Acq: 1 Mar 2016 18:28

Instrument :
MSVOA_R
ClientSampleId :
H0011

Tgt Ion:164 Resp: 25863

Ion	Ratio	Lower	Upper
164	100		
129	87.1	66.4	123.2
131	79.1	63.3	117.5
166	118.2	87.5	162.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018185.D
Acq On : 1 Mar 2016 18:28
Operator : MD\SY
Sample : H1584-15
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0011

Quant Time: Mar 02 03:45:08 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	959773	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	604660	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	185715	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	317930	4.28	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 85.60%			
7) Chloroethane-d5	2.48	69	255870	4.63	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 92.60%			
11) 1,1-Dichloroethene-d2	3.43	63	474665	3.11	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 62.20%			
20) 2-Butanone-d5	6.39	46	243976	47.28	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 94.56%			
24) Chloroform-d	7.02	84	487875	4.40	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 88.00%			
26) 1,2-Dichloroethane-d4	7.75	65	189584	4.65	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.00%			
32) Benzene-d6	7.70	84	1131478	4.49	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.80%			
36) 1,2-Dichloropropane-d6	8.77	67	289594	4.59	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 91.80%			
41) Toluene-d8	9.86	98	999923	4.44	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.80%			
43) trans-1,3-Dichloropropene-	10.13	79	57704	4.02	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 80.40%			
46) 2-Hexanone-d5	10.48	63	177544	48.28	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 96.56%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	63392	4.48	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 89.60%			
64) 1,2-Dichlorobenzene-d4	13.42	152	133080	4.38	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 87.60%			
Target Compounds						Qvalue
25) Chloroform	7.05	83	266210	2.51	ug/L	99
38) Bromodichloromethane	9.16	83	17061	0.31	ug/L #	88
47) Tetrachloroethene	10.41	164	25863	0.48	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018185.D
Acq On : 1 Mar 2016 18:28
Operator : MD\SY
Sample : H1584-15
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0011

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	16	32	41	rBV	5590404	26232200	100.00%	56.879%
2	2.035	109	116	129	rVB	169354	499985	1.91%	1.084%
3	2.491	180	191	201	rBV	164890	453607	1.73%	0.984%
4	3.428	334	345	371	rBV2	395496	1241262	4.73%	2.691%
5	6.391	824	832	850	rBV	108184	410962	1.57%	0.891%
6	7.029	924	937	953	rBV3	495738	1905615	7.26%	4.132%
7	7.705	1039	1048	1069	rBV2	1076567	3101514	11.82%	6.725%
8	8.331	1142	1151	1165	rBV	1234961	2490467	9.49%	5.400%
9	8.769	1215	1223	1231	rBV	643746	1295128	4.94%	2.808%
10	9.566	1346	1354	1365	rBV	270257	472783	1.80%	1.025%
11	9.858	1394	1402	1409	rBV	1743911	2845404	10.85%	6.170%
12	10.479	1498	1504	1520	rVV	574784	966014	3.68%	2.095%
13	11.184	1613	1620	1634	rBV	1340707	2081590	7.94%	4.513%
14	13.125	1934	1939	1951	rBV	851931	1229001	4.69%	2.665%
15	13.417	1981	1987	2000	rVB	614739	893937	3.41%	1.938%

Sum of corrected areas: 46119469

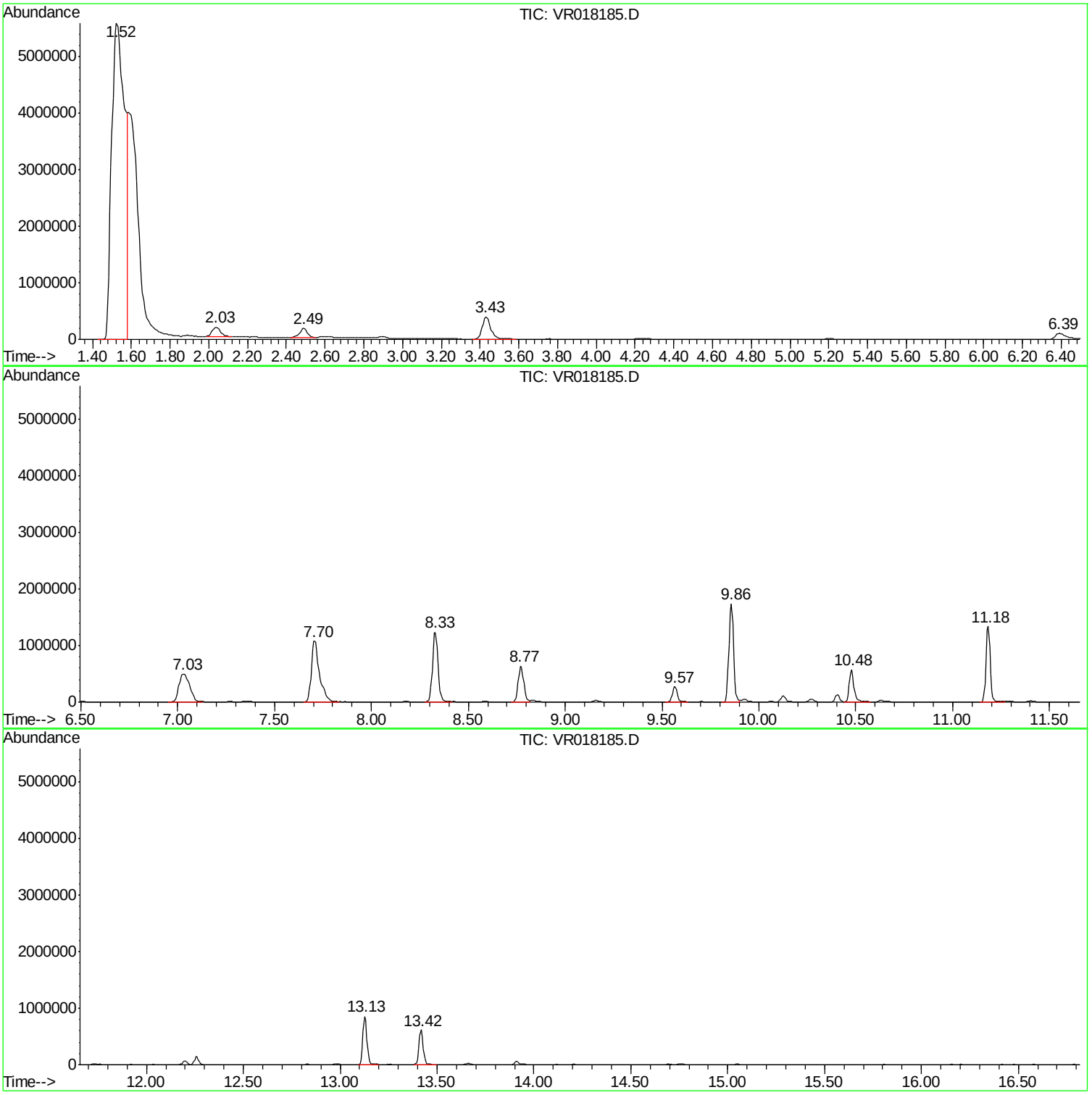
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018185.D
Acq On : 1 Mar 2016 18:28
Operator : MD\SY
Sample : H1584-15
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0011

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018185.D
Acq On : 1 Mar 2016 18:28
Operator : MD\SY
Sample : H1584-15
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H0011

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018185.D
Acq On : 1 Mar 2016 18:28
Operator : MD\SY
Sample : H1584-15
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0011

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018186.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	3.9	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018186.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.12	J
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.29	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.4	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018186.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018186.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/01/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

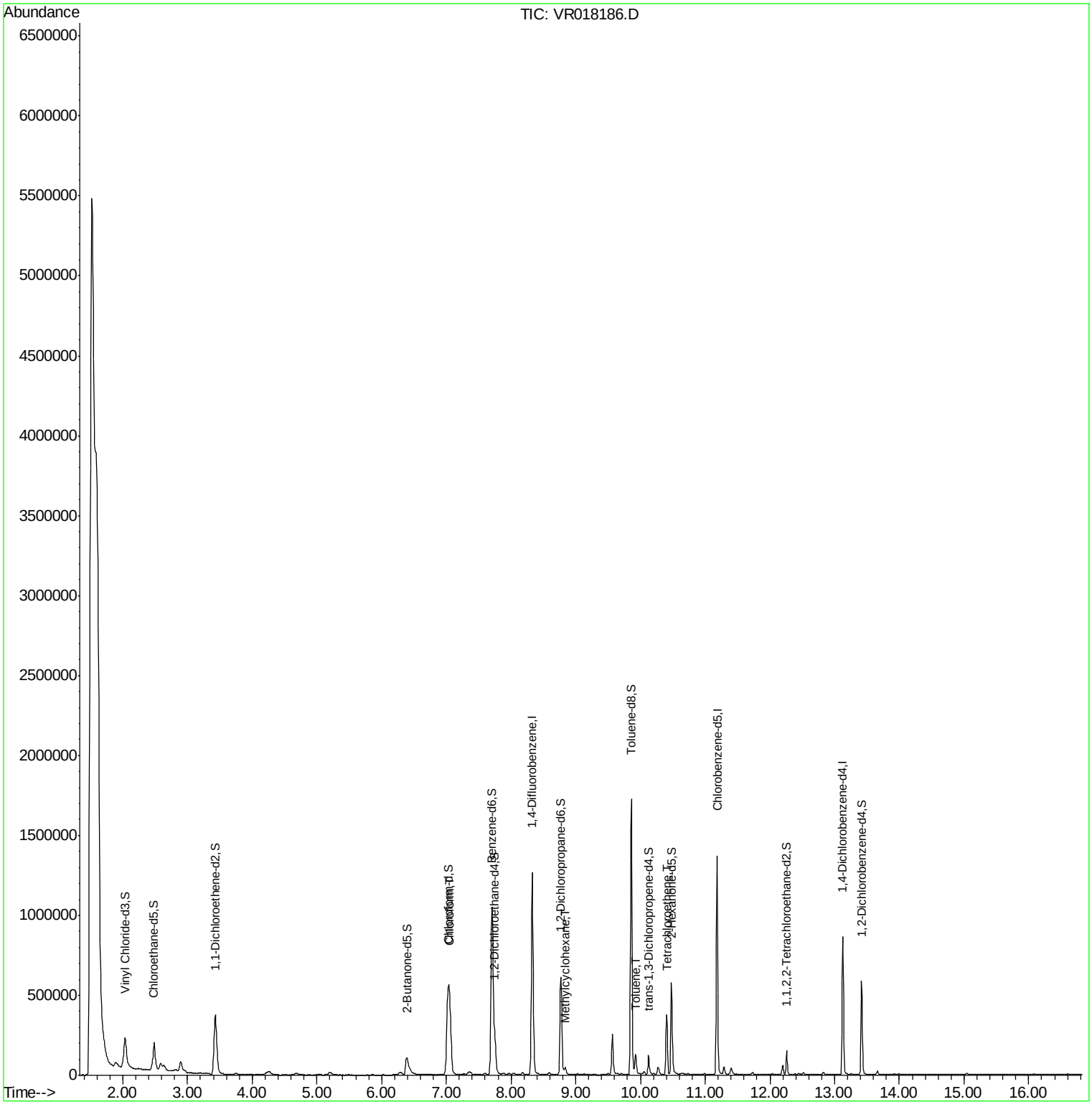
EPA-designated Registry Number.

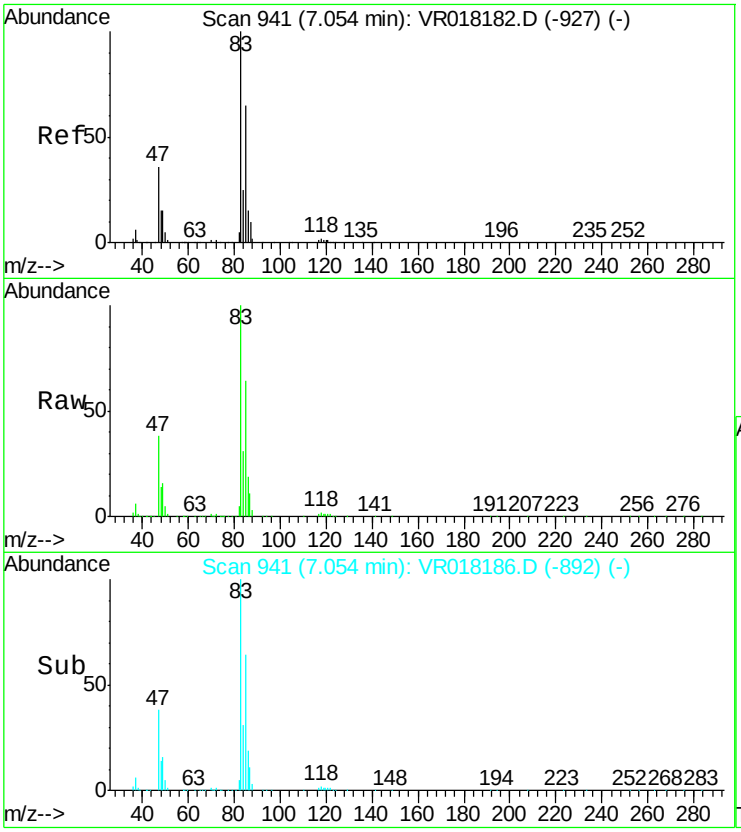
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018186.D
Acq On : 1 Mar 2016 18:59
Operator : MD\SY
Sample : H1584-16
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0012

Quant Time: Mar 02 03:48:12 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration



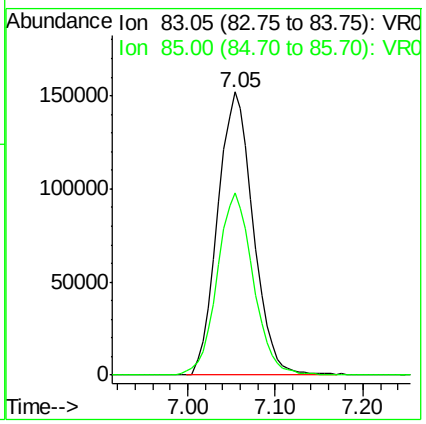


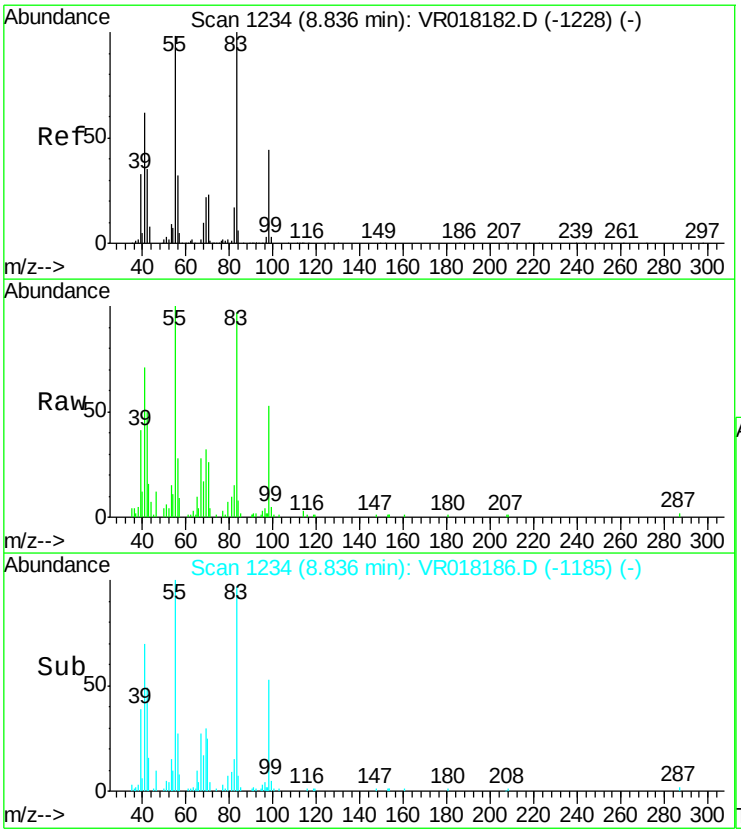
#25
Chloroform
Concen: 3.93 ug/L
RT: 7.05 min Scan# 941
Delta R.T. 0.00 min
Lab File: VR018186.D
Acq: 1 Mar 2016 18:59

Instrument : MSVOA_R
ClientSampleId : H0012

Tgt Ion: 83 Resp: 428579

Ion	Ratio	Lower	Upper
83	100		
85	64.3	45.1	83.7

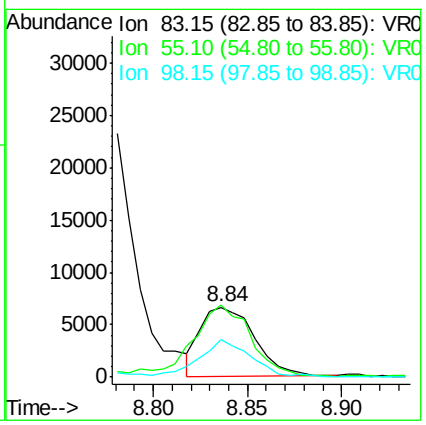


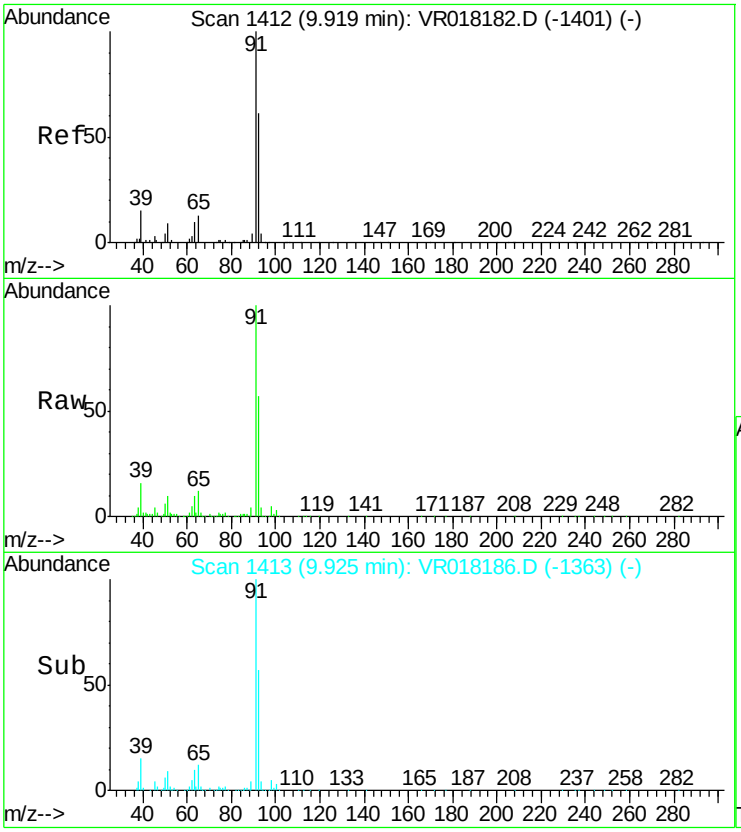


#35
Methylcyclohexane
Concen: 0.12 ug/L
RT: 8.84 min Scan# 1234
Delta R.T. 0.00 min
Lab File: VR018186.D
Acq: 1 Mar 2016 18:59

Tgt Ion: 83 Resp: 13002

Ion	Ratio	Lower	Upper
83	100		
55	120.5	75.8	113.6#
98	52.9	34.6	51.8#



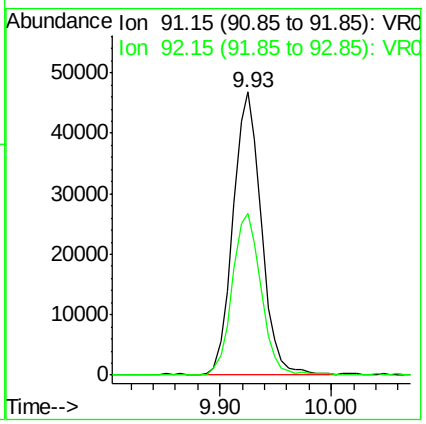


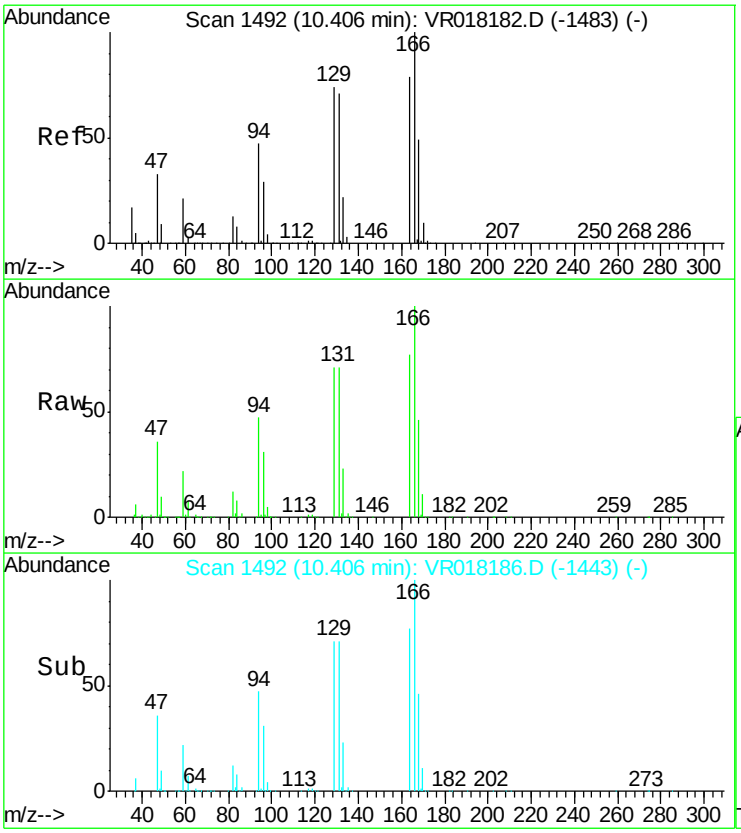
#42
Toluene
Concen: 0.29 ug/L
RT: 9.93 min Scan# 1413
Delta R.T. 0.01 min
Lab File: VR018186.D
Acq: 1 Mar 2016 18:59

Instrument : MSVOA_R
ClientSampleId : H0012

Tgt Ion: 91 Resp: 82456

Ion	Ratio	Lower	Upper
91	100		
92	57.2	41.9	77.7

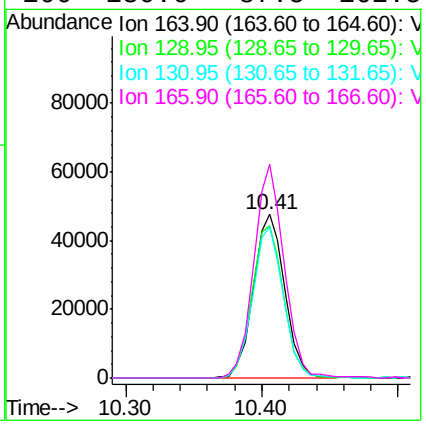




#47
Tetrachloroethene
Concen: 1.38 ug/L
RT: 10.41 min Scan# 1492
Delta R.T. 0.00 min
Lab File: VR018186.D
Acq: 1 Mar 2016 18:59

Tgt Ion:164 Resp: 76897

Ion	Ratio	Lower	Upper
164	100		
129	93.3	66.4	123.2
131	92.5	63.3	117.5
166	130.6	87.5	162.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018186.D
Acq On : 1 Mar 2016 18:59
Operator : MD\SY
Sample : H1584-16
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0012

Quant Time: Mar 02 03:48:12 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	986182	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	630308	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.12	152	188643	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	306203	4.01	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 80.20%			
7) Chloroethane-d5	2.48	69	238888	4.20	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 84.00%			
11) 1,1-Dichloroethene-d2	3.43	63	447249	2.86	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 57.20%#			
20) 2-Butanone-d5	6.39	46	248756	46.91	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 93.82%			
24) Chloroform-d	7.02	84	475432	4.17	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 83.40%			
26) 1,2-Dichloroethane-d4	7.75	65	185684	4.44	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.80%			
32) Benzene-d6	7.70	84	1082168	4.12	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 82.40%			
36) 1,2-Dichloropropane-d6	8.77	67	284356	4.32	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 86.40%			
41) Toluene-d8	9.86	98	968296	4.12	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 82.40%			
43) trans-1,3-Dichloropropene-	10.13	79	57051	3.81	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 76.20%			
46) 2-Hexanone-d5	10.48	63	177531	46.31	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 92.62%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	62412	4.23	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 84.60%			
64) 1,2-Dichlorobenzene-d4	13.42	152	128027	4.15	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 83.00%			
Target Compounds						Qvalue
25) Chloroform	7.05	83	428579	3.93	ug/L	100
35) Methylcyclohexane	8.84	83	13002	0.12	ug/L #	77
42) Toluene	9.93	91	82456	0.29	ug/L	97
47) Tetrachloroethene	10.41	164	76897	1.38	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018186.D
Acq On : 1 Mar 2016 18:59
Operator : MD\SY
Sample : H1584-16
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0012

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	17	32	80	rBV	5482473	39979169	100.00%	65.858%
2	2.035	106	116	137	rVB	192354	643326	1.61%	1.060%
3	2.485	180	190	200	rBV	169284	425410	1.06%	0.701%
4	3.434	335	346	361	rBV2	372963	1130263	2.83%	1.862%
5	6.390	823	832	855	rBV	107075	418024	1.05%	0.689%
6	7.035	924	938	960	rBV3	565863	2281694	5.71%	3.759%
7	7.705	1038	1048	1067	rBV2	1047173	2993495	7.49%	4.931%
8	8.331	1142	1151	1165	rBV	1266181	2557297	6.40%	4.213%
9	8.769	1215	1223	1231	rBV	614150	1270691	3.18%	2.093%
10	9.566	1347	1354	1362	rBV	251692	436291	1.09%	0.719%
11	9.858	1395	1402	1409	rBV	1722765	2775309	6.94%	4.572%
12	10.406	1486	1492	1498	rBV	373788	600975	1.50%	0.990%
13	10.479	1498	1504	1517	rVV	570038	942111	2.36%	1.552%
14	11.184	1613	1620	1632	rBV	1370849	2141793	5.36%	3.528%
15	13.125	1933	1939	1953	rBV	863976	1248117	3.12%	2.056%
16	13.417	1980	1987	1999	rVB	585801	861344	2.15%	1.419%

Sum of corrected areas: 60705309

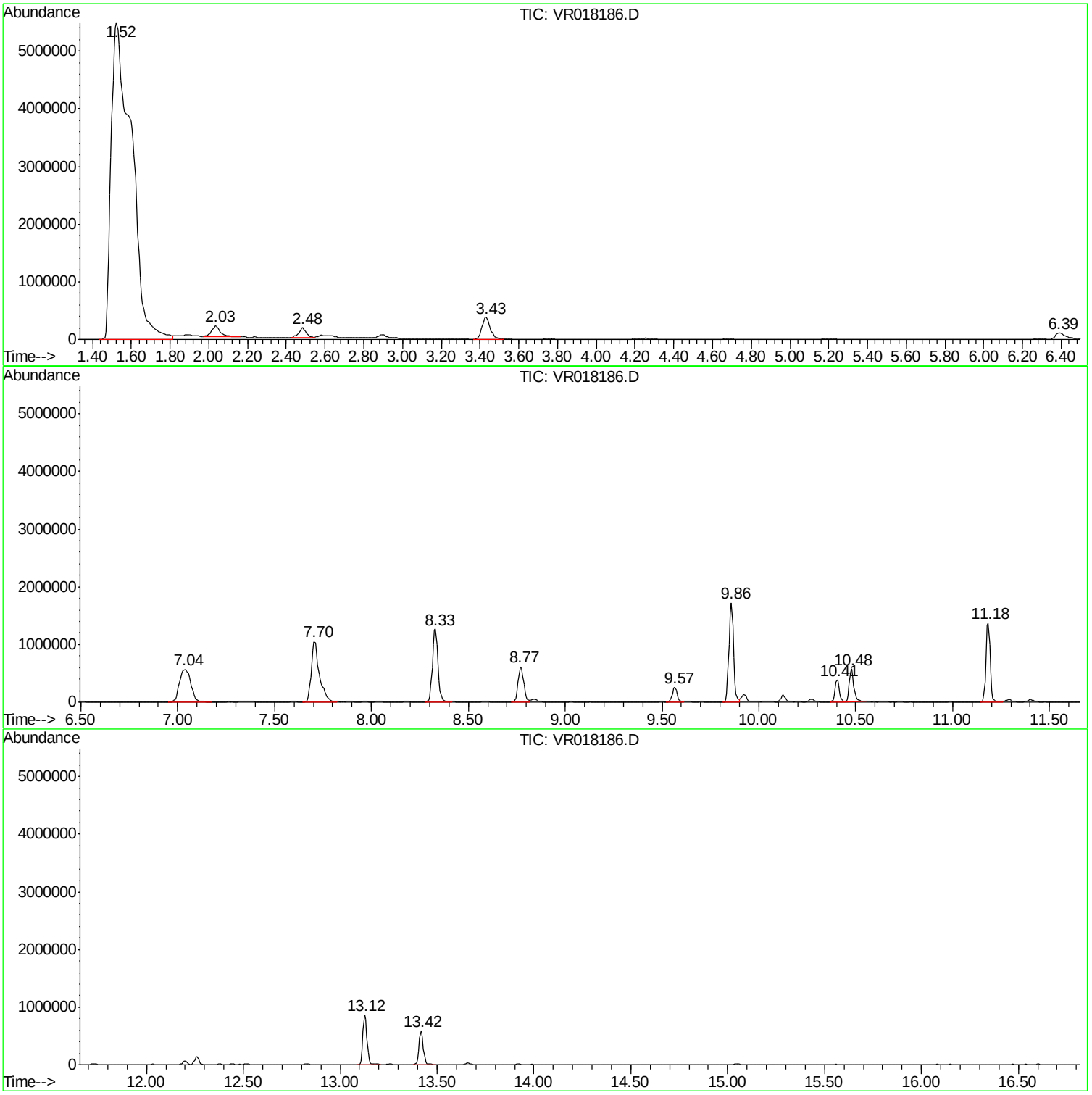
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018186.D
Acq On : 1 Mar 2016 18:59
Operator : MD\SY
Sample : H1584-16
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0012

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018186.D
Acq On : 1 Mar 2016 18:59
Operator : MD\SY
Sample : H1584-16
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H0012

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018186.D
Acq On : 1 Mar 2016 18:59
Operator : MD\SY
Sample : H1584-16
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0012

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0014

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018187.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.45	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	1.0	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0014

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018187.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	3.1	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0014

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018187.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0014

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018187.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/01/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

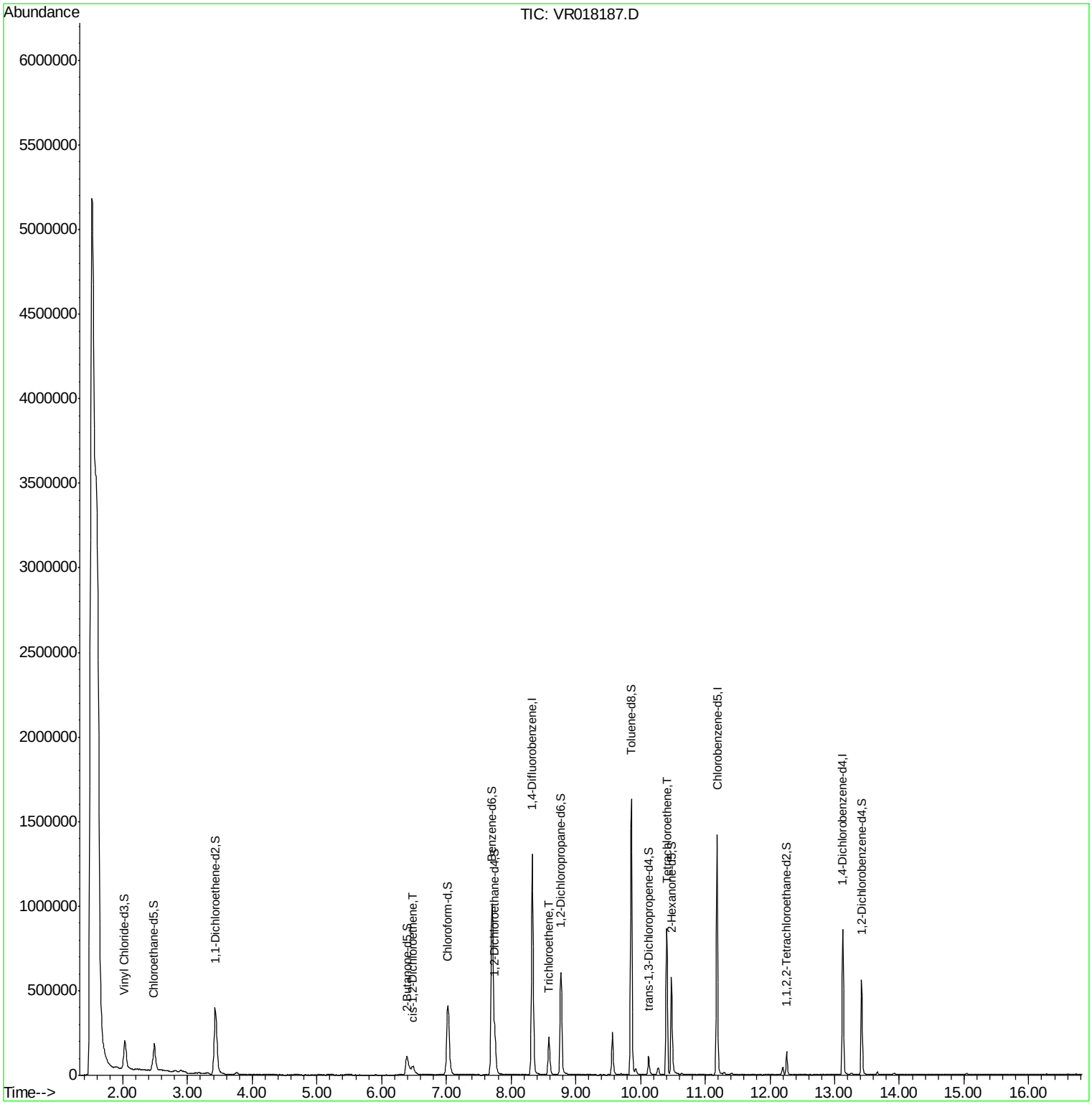
EPA-designated Registry Number.

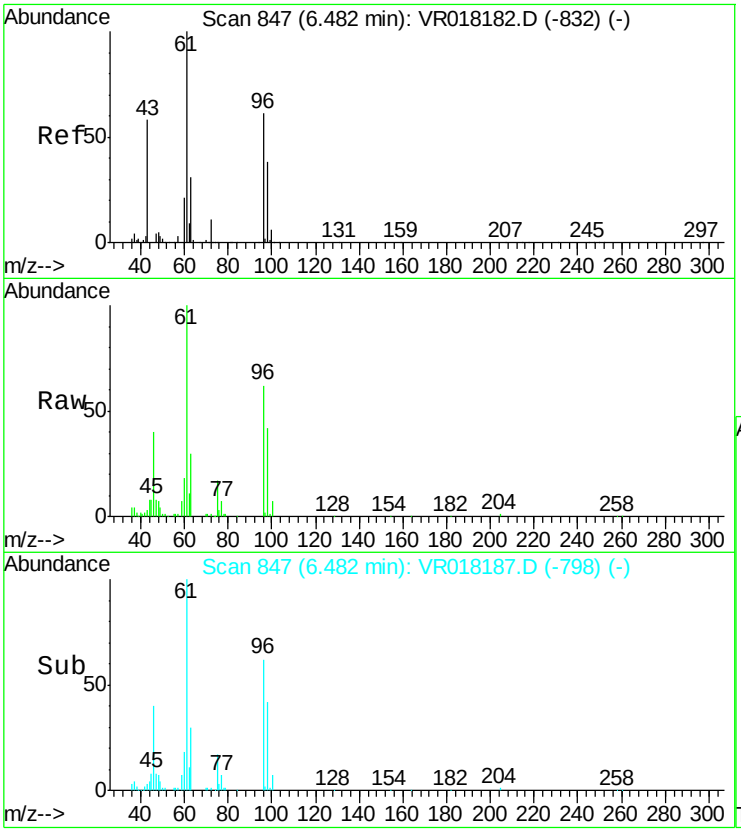
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018187.D
Acq On : 1 Mar 2016 19:31
Operator : MD\SY
Sample : H1584-17
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0014

Quant Time: Mar 02 03:52:54 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration



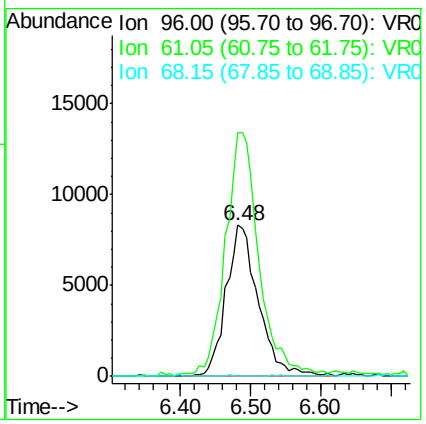


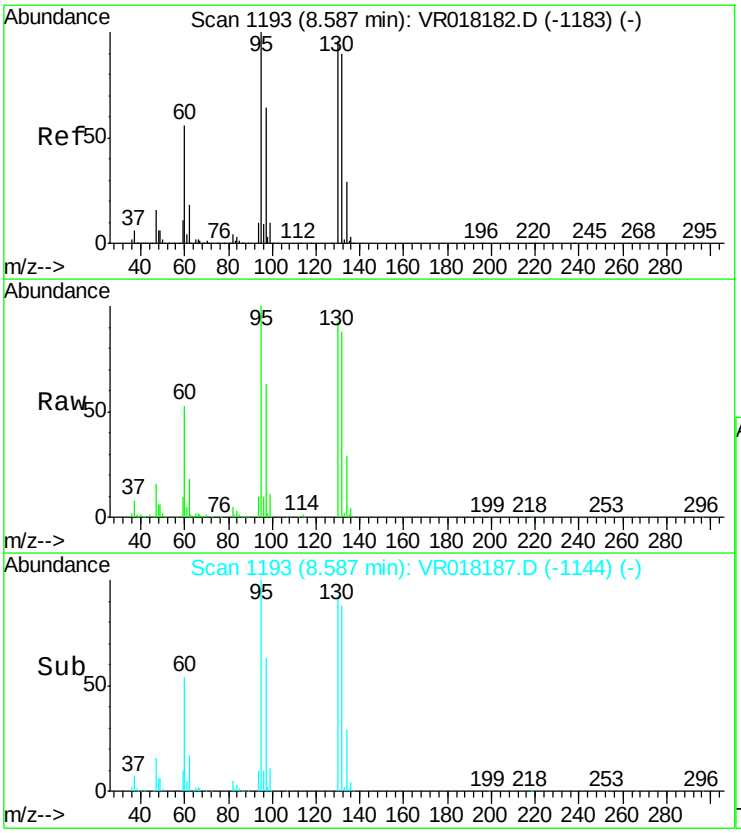
#22
cis-1,2-Dichloroethene
Concen: 0.45 ug/L
RT: 6.48 min Scan# 847
Delta R.T. 0.00 min
Lab File: VR018187.D
Acq: 1 Mar 2016 19:31

Instrument : MSVOA_R
ClientSampleId : H0014

Tgt Ion: 96 Resp: 26554

Ion	Ratio	Lower	Upper
96	100		
61	161.3	115.5	214.5
68	0.0	0.0	0.0

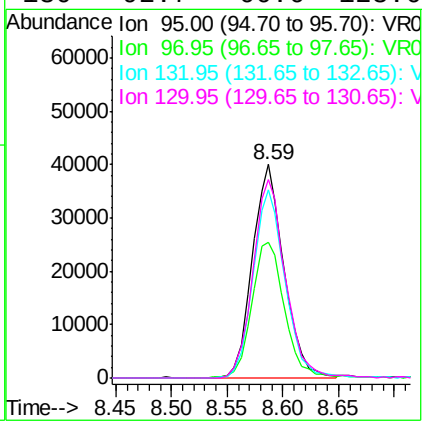


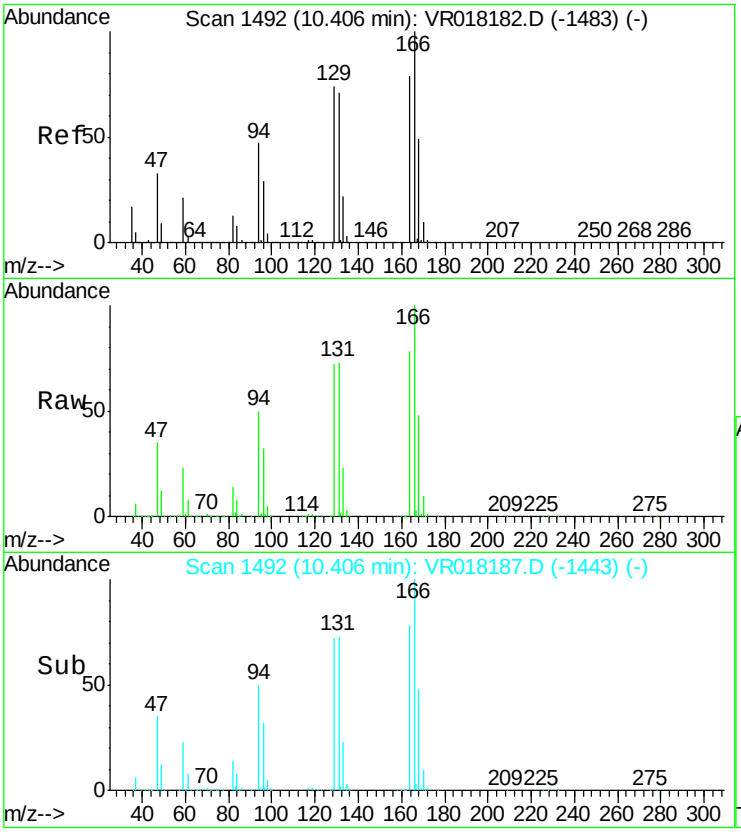


#34
Trichloroethene
Concen: 1.03 ug/L
RT: 8.59 min Scan# 1193
Delta R.T. 0.00 min
Lab File: VR018187.D
Acq: 1 Mar 2016 19:31

Tgt Ion: 95 Resp: 78496

Ion	Ratio	Lower	Upper
95	100		
97	63.4	45.5	84.5
132	87.9	64.2	119.2
130	92.7	66.6	123.6



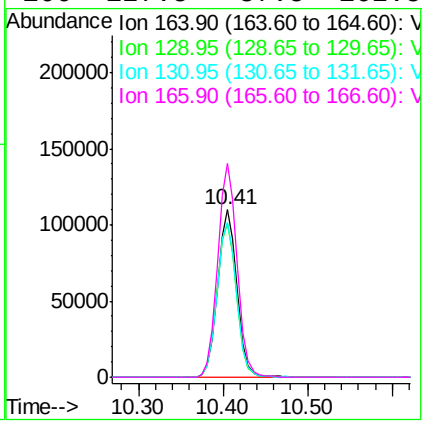


#47
Tetrachloroethene
Concen: 3.06 ug/L
RT: 10.41 min Scan# 1492
Delta R.T. 0.00 min
Lab File: VR018187.D
Acq: 1 Mar 2016 19:31

Instrument :
MSVOA_R
ClientSampleId :
H0014

Tgt Ion:164 Resp: 173572

Ion	Ratio	Lower	Upper
164	100		
129	91.4	66.4	123.2
131	92.6	63.3	117.5
166	127.5	87.5	162.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018187.D
Acq On : 1 Mar 2016 19:31
Operator : MD\SY
Sample : H1584-17
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0014

Quant Time: Mar 02 03:52:54 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	1009992	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	642602	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	189682	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	293140	3.75	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 75.00%			
7) Chloroethane-d5	2.49	69	234631	4.03	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 80.60%			
11) 1,1-Dichloroethene-d2	3.43	63	478540	2.98	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 59.60%#			
20) 2-Butanone-d5	6.39	46	249168	45.88	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 91.76%			
24) Chloroform-d	7.02	84	452687	3.88	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 77.60%			
26) 1,2-Dichloroethane-d4	7.75	65	185128	4.32	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 86.40%			
32) Benzene-d6	7.71	84	1066157	3.98	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 79.60%			
36) 1,2-Dichloropropane-d6	8.77	67	272995	4.07	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 81.40%			
41) Toluene-d8	9.86	98	944479	3.94	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 78.80%			
43) trans-1,3-Dichloropropene-	10.13	79	52198	3.42	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 68.40%			
46) 2-Hexanone-d5	10.48	63	176382	45.13	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 90.26%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	60965	4.06	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 81.20%			
64) 1,2-Dichlorobenzene-d4	13.42	152	126661	4.08	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 81.60%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	6.48	96	26554	0.45	ug/L	97
34) Trichloroethene	8.59	95	78496	1.03	ug/L	97
47) Tetrachloroethene	10.41	164	173572	3.06	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA R\DATA\VR030116\
Data File : VR018187.D
Acq On : 1 Mar 2016 19:31
Operator : MD\SY
Sample : H1584-17
Misc : 25mL/MSVOA R/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0014

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	15	32	87	rBV	5182182	35740903	100.00%	63.304%
2	2.029	108	115	139	rVB	175045	518874	1.45%	0.919%
3	2.485	180	190	204	rBV	162957	436074	1.22%	0.772%
4	3.428	336	345	371	rVB	396440	1219545	3.41%	2.160%
5	6.391	824	832	841	rBV2	109704	364162	1.02%	0.645%
6	7.023	925	936	955	rBV	406355	1188264	3.32%	2.105%
7	7.705	1039	1048	1071	rBV2	1001427	2932494	8.20%	5.194%
8	8.331	1142	1151	1164	rBV	1304985	2626789	7.35%	4.653%
9	8.587	1185	1193	1202	rBV2	221302	446147	1.25%	0.790%
10	8.769	1215	1223	1241	rBV	606221	1258907	3.52%	2.230%
11	9.566	1347	1354	1370	rBV	250823	447035	1.25%	0.792%
12	9.858	1394	1402	1409	rBV	1631885	2667890	7.46%	4.725%
13	10.406	1485	1492	1498	rBV	868004	1385766	3.88%	2.454%
14	10.479	1498	1504	1517	rVB	572067	943793	2.64%	1.672%
15	11.184	1613	1620	1634	rBV	1421135	2192607	6.13%	3.884%
16	13.125	1934	1939	1950	rBV	857348	1256593	3.52%	2.226%
17	13.417	1981	1987	1997	rBV	562396	833092	2.33%	1.476%

Sum of corrected areas: 56458935

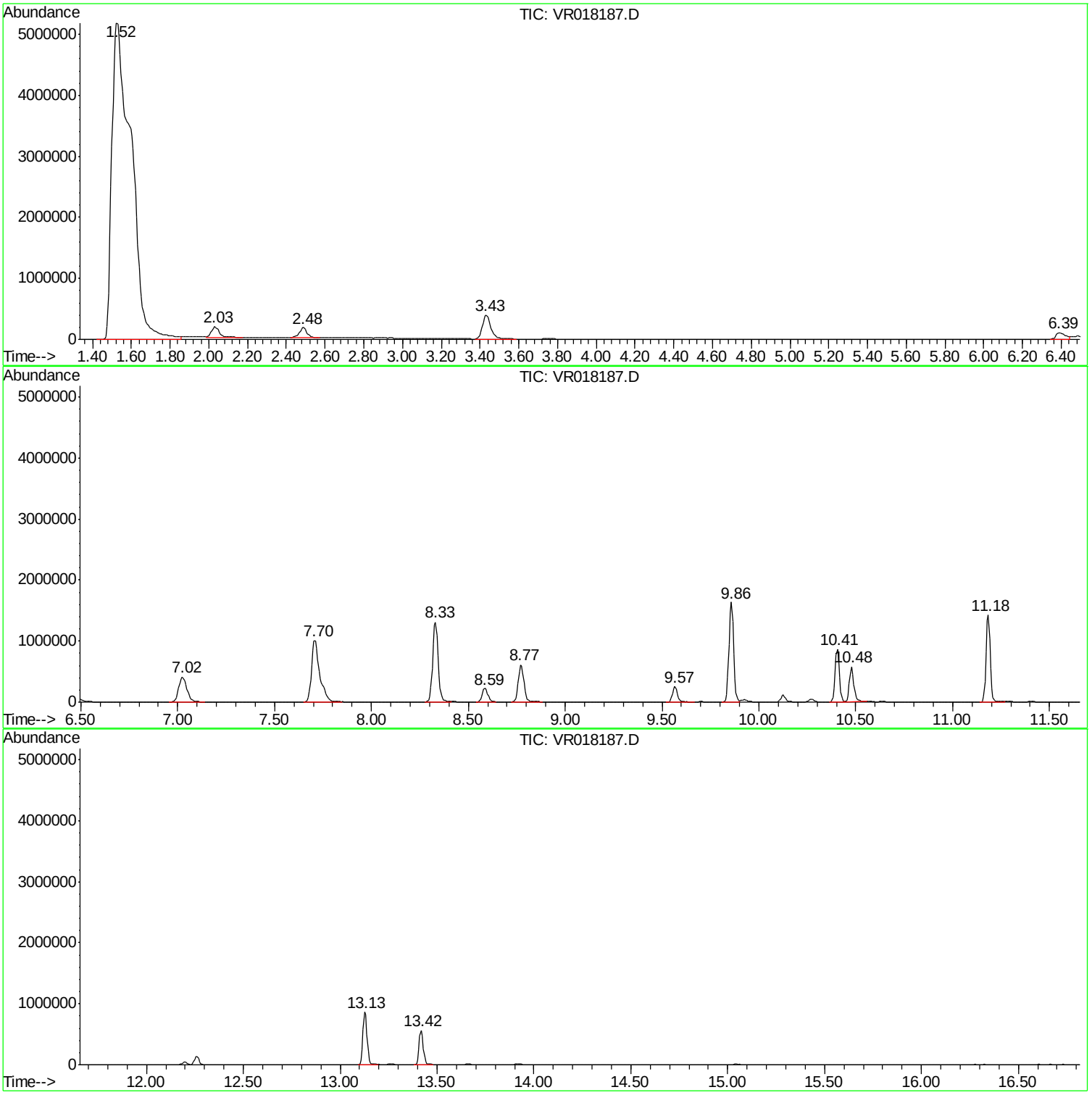
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018187.D
Acq On : 1 Mar 2016 19:31
Operator : MD\SY
Sample : H1584-17
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0014

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018187.D
Acq On : 1 Mar 2016 19:31
Operator : MD\SY
Sample : H1584-17
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H0014

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018187.D
Acq On : 1 Mar 2016 19:31
Operator : MD\SY
Sample : H1584-17
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0014

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0015

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018188.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.2	
71-55-6	1,1,1-Trichloroethane	0.19	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.34	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0015

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018188.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	12	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0015

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018188.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0015

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018188.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/01/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

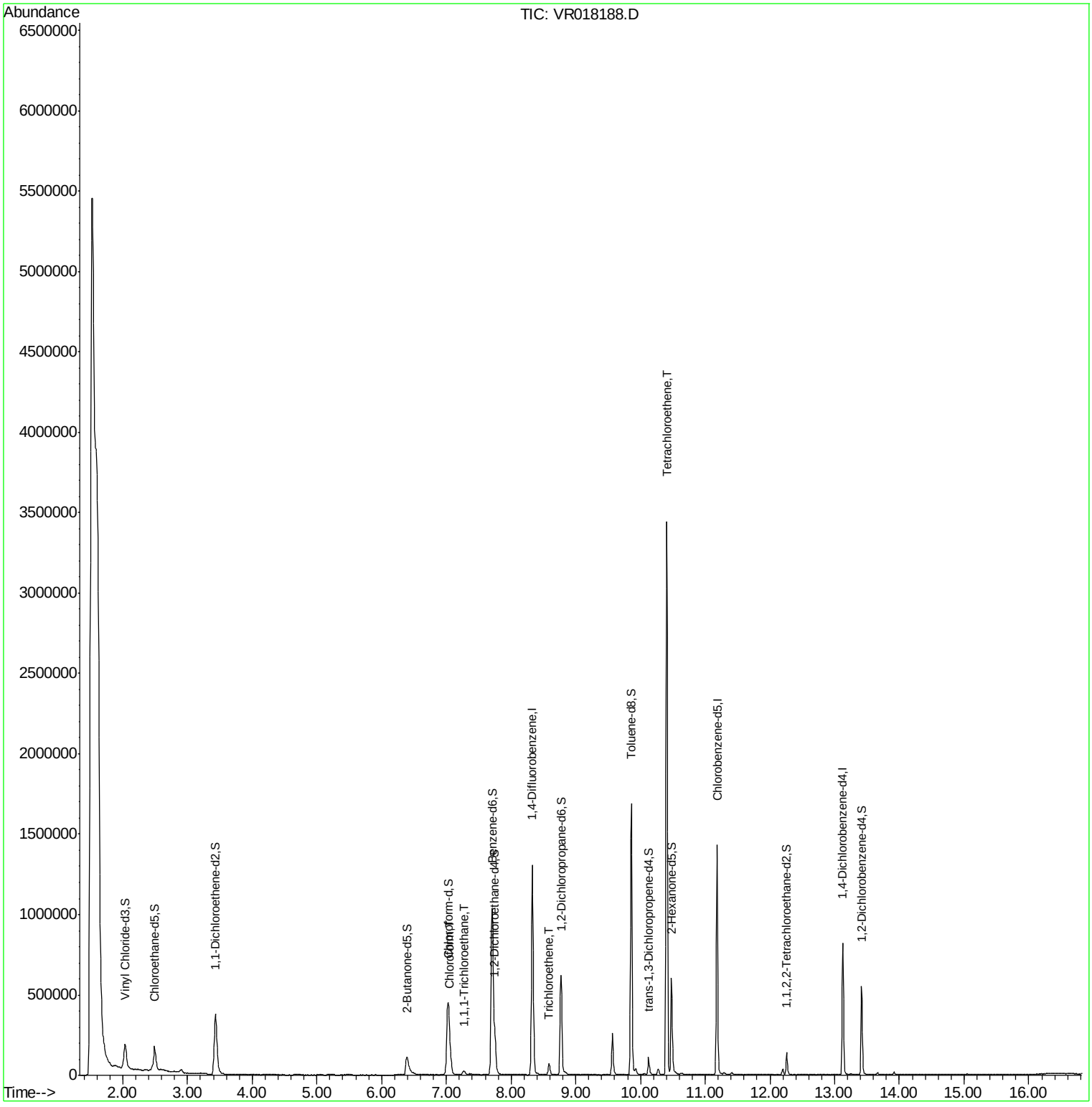
EPA-designated Registry Number.

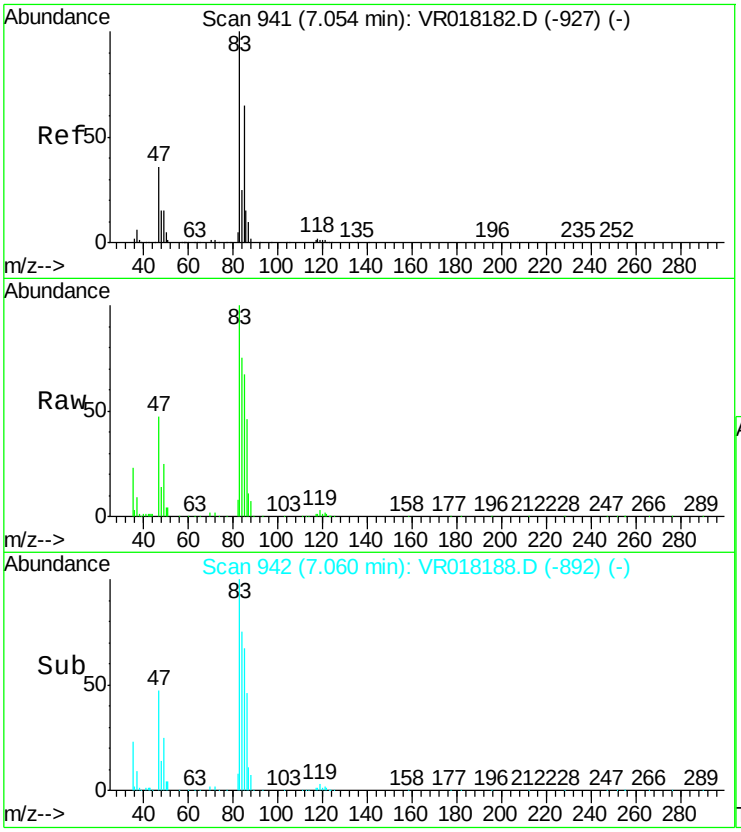
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018188.D
Acq On : 1 Mar 2016 20:02
Operator : MD\SY
Sample : H1584-18
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0015

Quant Time: Mar 02 03:54:42 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration



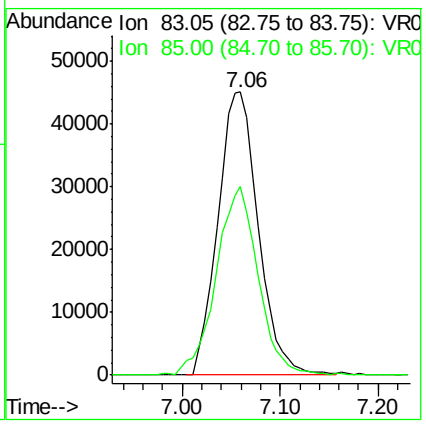


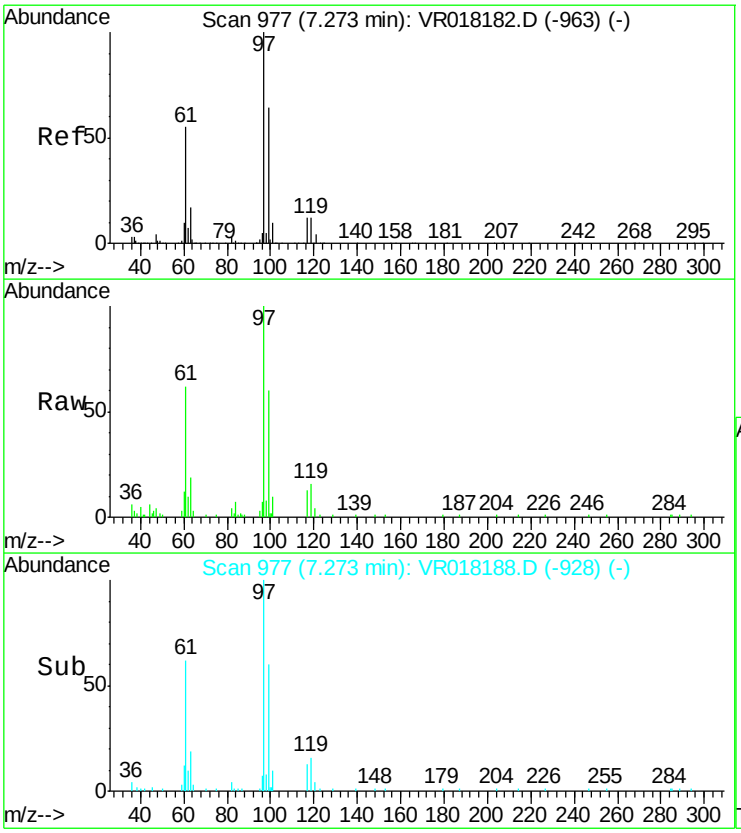
#25
Chloroform
Concen: 1.15 ug/L
RT: 7.06 min Scan# 942
Delta R.T. 0.01 min
Lab File: VR018188.D
Acq: 1 Mar 2016 20:02

Instrument : MSVOA_R
ClientSampleId : H0015

Tgt Ion: 83 Resp: 128855

Ion	Ratio	Lower	Upper
83	100		
85	66.6	45.1	83.7

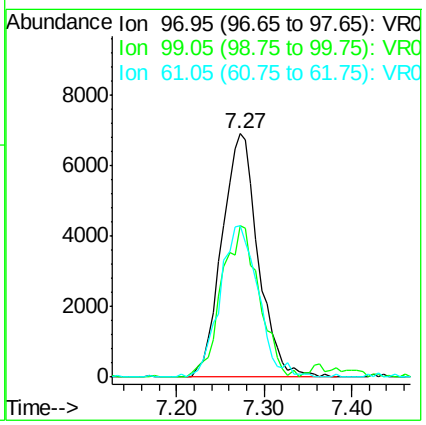


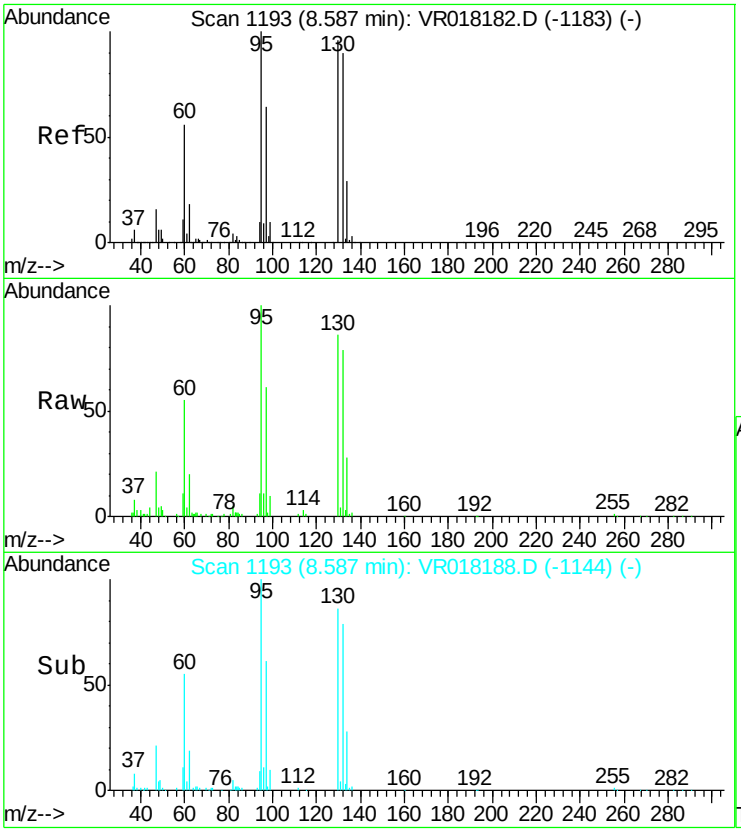


#29
1,1,1-Trichloroethane
Concen: 0.19 ug/L
RT: 7.27 min Scan# 977
Delta R.T. -0.00 min
Lab File: VR018188.D
Acq: 1 Mar 2016 20:02

Tgt Ion: 97 Resp: 19854

Ion	Ratio	Lower	Upper
97	100		
99	64.5	50.7	76.1
61	65.7	45.5	68.3



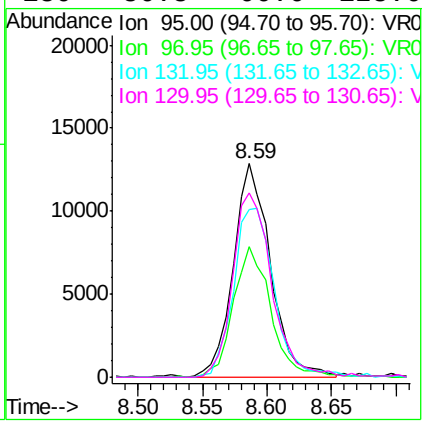


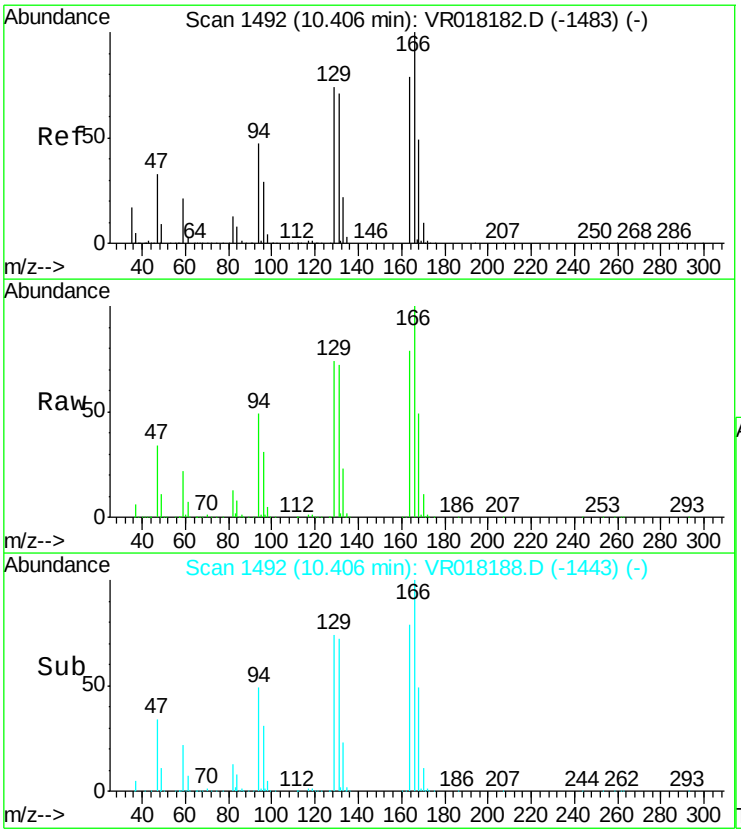
#34
Trichloroethene
Concen: 0.34 ug/L
RT: 8.59 min Scan# 1193
Delta R.T. -0.00 min
Lab File: VR018188.D
Acq: 1 Mar 2016 20:02

Instrument : MSVOA_R
ClientSampleId : H0015

Tgt Ion: 95 Resp: 25770

Ion	Ratio	Lower	Upper
95	100		
97	61.4	45.5	84.5
132	78.6	64.2	119.2
130	86.3	66.6	123.6

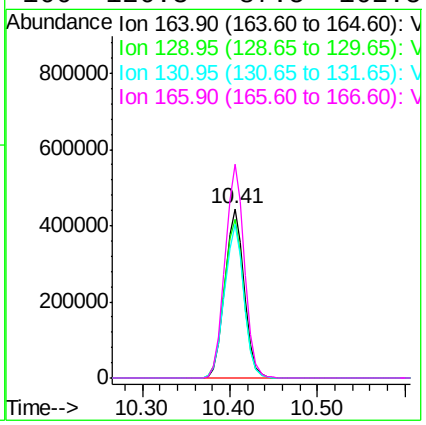




#47
Tetrachloroethene
Concen: 11.96 ug/L
RT: 10.41 min Scan# 1492
Delta R.T. -0.00 min
Lab File: VR018188.D
Acq: 1 Mar 2016 20:02

Tgt Ion:164 Resp: 676647

Ion	Ratio	Lower	Upper
164	100		
129	93.6	66.4	123.2
131	90.8	63.3	117.5
166	126.3	87.5	162.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018188.D
Acq On : 1 Mar 2016 20:02
Operator : MD\SY
Sample : H1584-18
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0015

Quant Time: Mar 02 03:54:42 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	1009319	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	641128	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.12	152	181727	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	277169	3.55	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 71.00%			
7) Chloroethane-d5	2.49	69	224476	3.86	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 77.20%			
11) 1,1-Dichloroethene-d2	3.43	63	460061	2.87	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 57.40%#			
20) 2-Butanone-d5	6.39	46	253897	46.79	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 93.58%			
24) Chloroform-d	7.02	84	476828	4.09	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 81.80%			
26) 1,2-Dichloroethane-d4	7.75	65	189246	4.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.40%			
32) Benzene-d6	7.70	84	1106919	4.14	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 82.80%			
36) 1,2-Dichloropropane-d6	8.78	67	284937	4.26	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 85.20%			
41) Toluene-d8	9.86	98	973370	4.07	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 81.40%			
43) trans-1,3-Dichloropropene-	10.13	79	56547	3.71	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 74.20%			
46) 2-Hexanone-d5	10.48	63	179390	46.01	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 92.02%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	61394	4.10	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 82.00%			
64) 1,2-Dichlorobenzene-d4	13.42	152	125358	4.22	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 84.40%			
Target Compounds						Qvalue
25) Chloroform	7.06	83	128855	1.15	ug/L	97
29) 1,1,1-Trichloroethane	7.27	97	19854	0.19	ug/L	94
34) Trichloroethene	8.59	95	25770	0.34	ug/L	90
47) Tetrachloroethene	10.41	164	676647	11.96	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018188.D
Acq On : 1 Mar 2016 20:02
Operator : MD\SY
Sample : H1584-18
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0015

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	16	32	84	rBV	5453568	39382589	100.00%	61.486%
2	2.035	108	116	131	rVB	153690	452951	1.15%	0.707%
3	2.491	180	191	203	rBV	148599	396558	1.01%	0.619%
4	3.434	336	346	363	rBV	375853	1162809	2.95%	1.815%
5	6.390	824	832	862	rBV	111902	434392	1.10%	0.678%
6	7.029	924	937	955	rBV3	446208	1524698	3.87%	2.380%
7	7.711	1039	1049	1068	rBV2	1039130	3038021	7.71%	4.743%
8	8.331	1142	1151	1167	rBV	1307366	2632742	6.69%	4.110%
9	8.775	1215	1224	1232	rBV	620915	1282625	3.26%	2.003%
10	9.566	1346	1354	1363	rBV	257551	452193	1.15%	0.706%
11	9.858	1394	1402	1409	rBV	1688695	2746886	6.97%	4.289%
12	10.406	1485	1492	1499	rBV	3443623	5325857	13.52%	8.315%
13	10.479	1499	1504	1520	rVB	599188	997282	2.53%	1.557%
14	11.184	1613	1620	1633	rBV	1428997	2196857	5.58%	3.430%
15	13.125	1934	1939	1956	rBV	817106	1197587	3.04%	1.870%
16	13.417	1978	1987	1998	rBV	550688	826786	2.10%	1.291%

Sum of corrected areas: 64050833

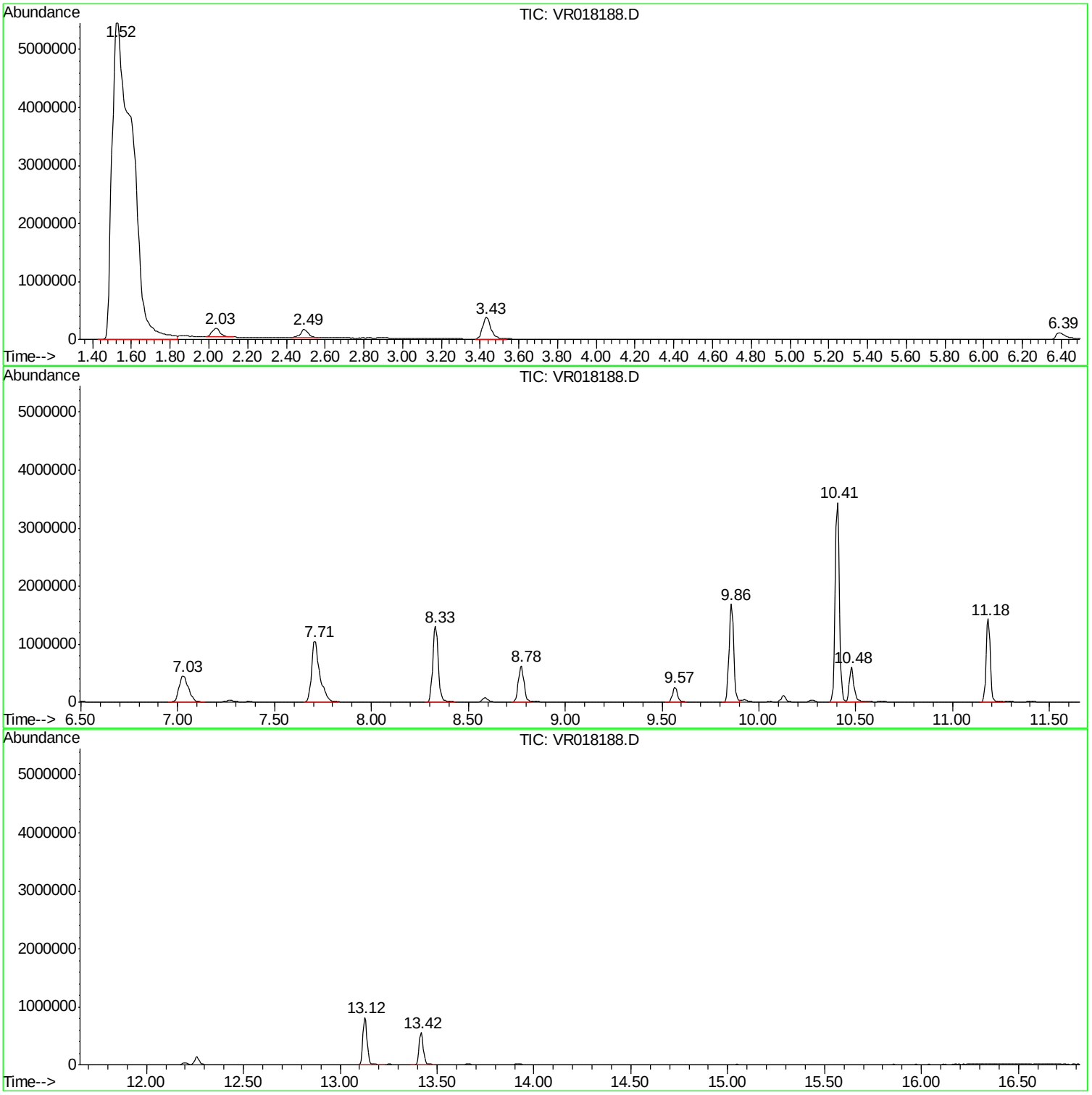
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018188.D
Acq On : 1 Mar 2016 20:02
Operator : MD\SY
Sample : H1584-18
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0015

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018188.D
Acq On : 1 Mar 2016 20:02
Operator : MD\SY
Sample : H1584-18
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H0015

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018188.D
Acq On : 1 Mar 2016 20:02
Operator : MD\SY
Sample : H1584-18
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0015

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0019

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018189.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.68	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	2.4	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0019

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018189.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.7	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0019

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018189.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0019

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018189.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/01/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

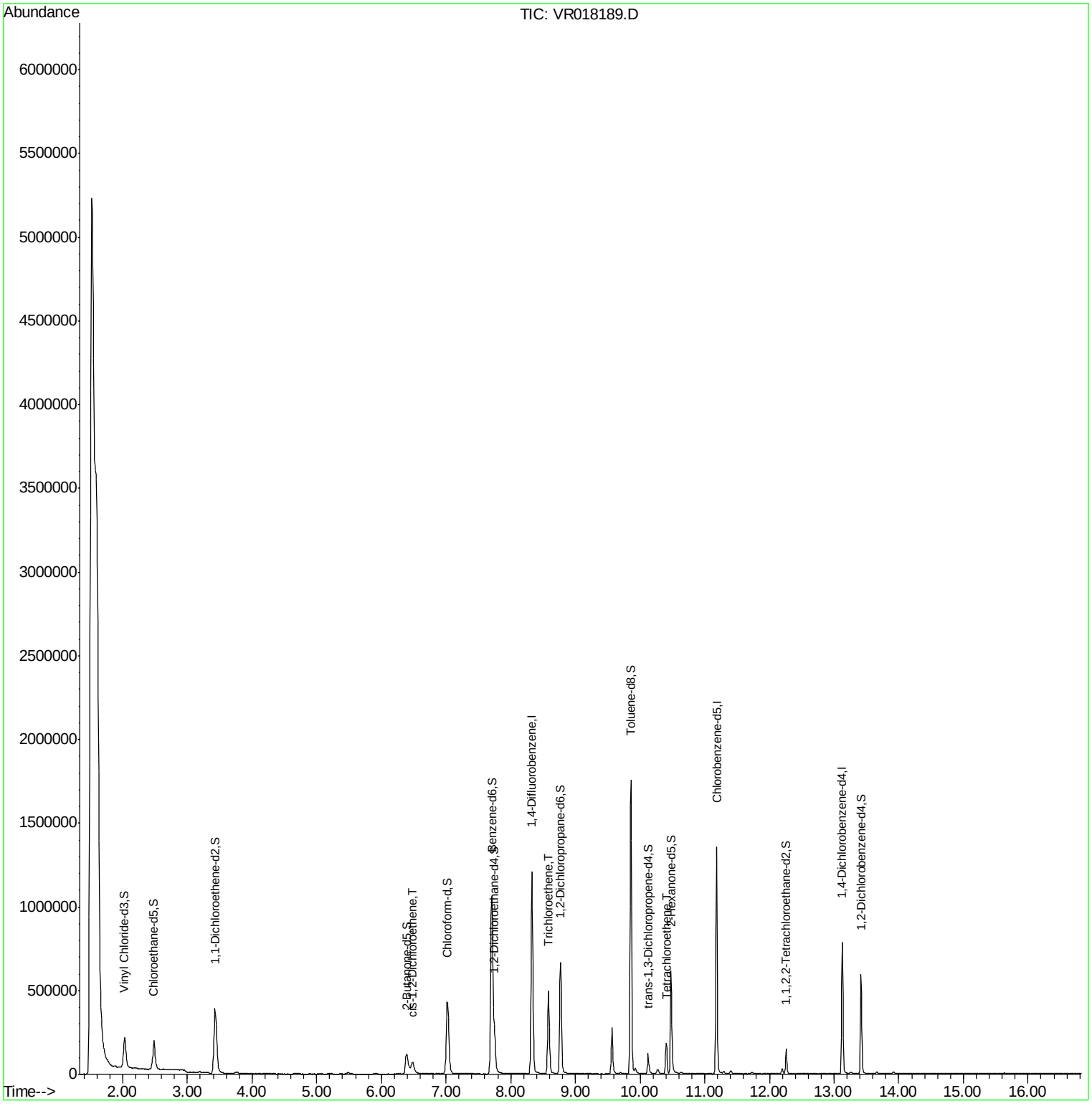
EPA-designated Registry Number.

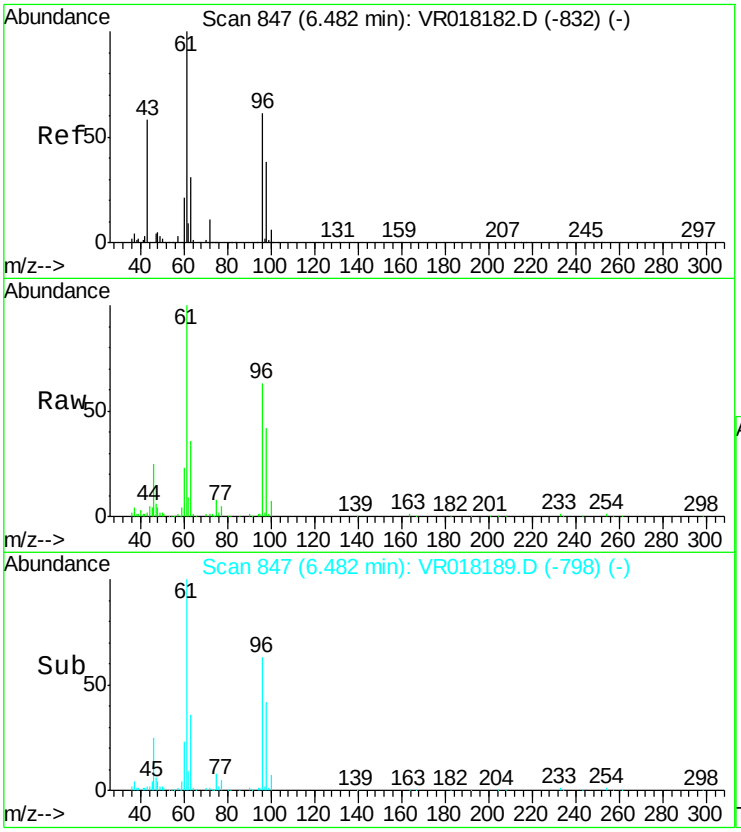
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018189.D
Acq On : 1 Mar 2016 20:33
Operator : MD\SY
Sample : H1584-19
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0019

Quant Time: Mar 02 04:16:27 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration



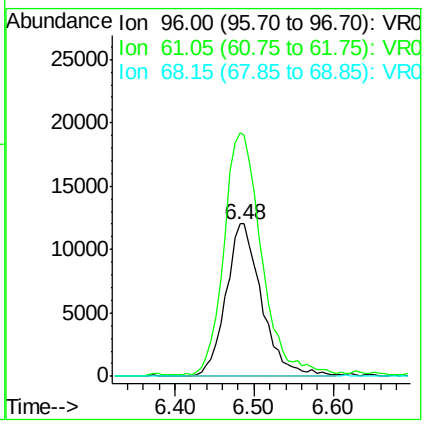


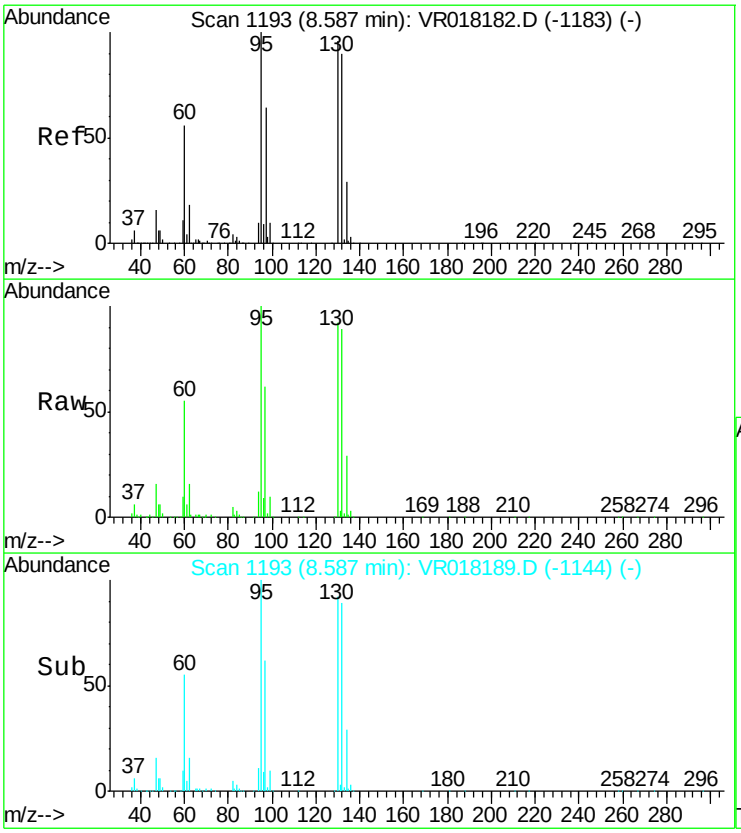
#22
cis-1,2-Dichloroethene
Concen: 0.68 ug/L
RT: 6.48 min Scan# 847
Delta R.T. 0.00 min
Lab File: VR018189.D
Acq: 1 Mar 2016 20:33

Instrument : MSVOA_R
ClientSampleId : H0019

Tgt Ion: 96 Resp: 38018

Ion	Ratio	Lower	Upper
96	100		
61	159.8	115.5	214.5
68	0.0	0.0	0.0

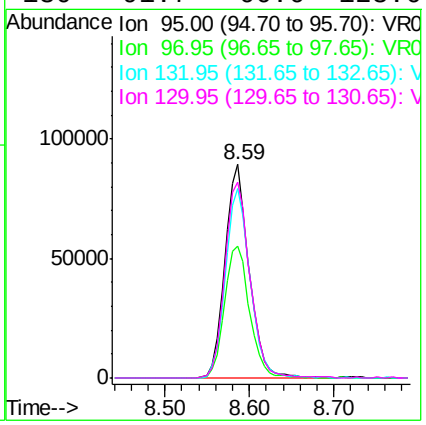


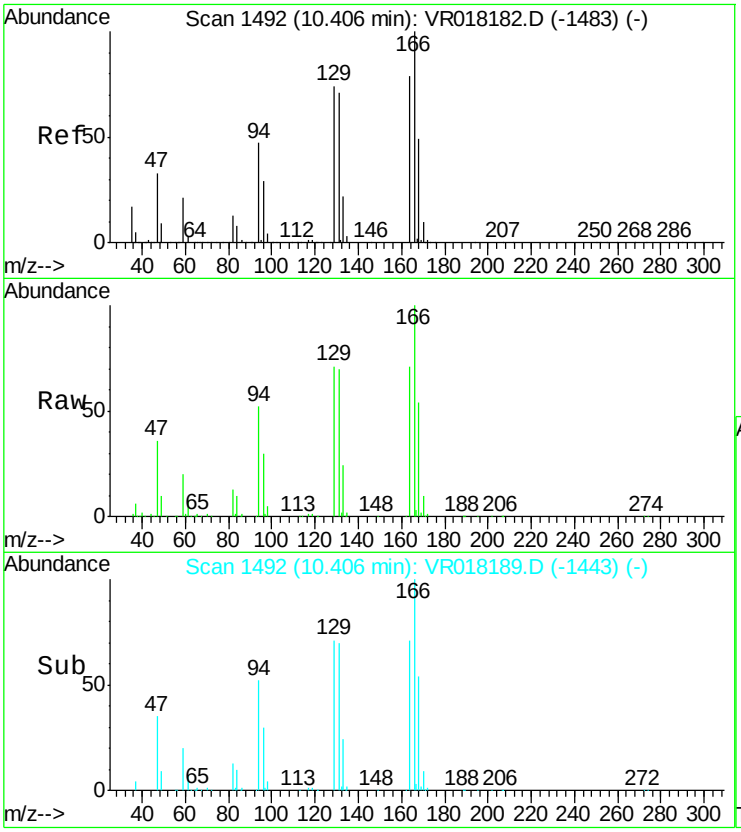


#34
Trichloroethene
Concen: 2.44 ug/L
RT: 8.59 min Scan# 1193
Delta R.T. 0.00 min
Lab File: VR018189.D
Acq: 1 Mar 2016 20:33

Tgt Ion: 95 Resp: 174447

Ion	Ratio	Lower	Upper
95	100		
97	61.7	45.5	84.5
132	88.7	64.2	119.2
130	91.7	66.6	123.6



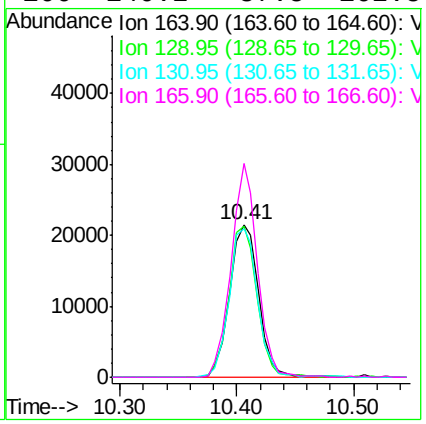


#47
Tetrachloroethene
Concen: 0.70 ug/L
RT: 10.41 min Scan# 1492
Delta R.T. 0.00 min
Lab File: VR018189.D
Acq: 1 Mar 2016 20:33

Instrument :
MSVOA_R
ClientSampleId :
H0019

Tgt Ion:164 Resp: 37276

Ion	Ratio	Lower	Upper
164	100		
129	99.5	66.4	123.2
131	97.6	63.3	117.5
166	140.2	87.5	162.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018189.D
Acq On : 1 Mar 2016 20:33
Operator : MD\SY
Sample : H1584-19
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0019

Quant Time: Mar 02 04:16:27 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	948893	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	600681	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	173698	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	311325	4.24	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 84.80%			
7) Chloroethane-d5	2.48	69	237263	4.34	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 86.80%			
11) 1,1-Dichloroethene-d2	3.43	63	460027	3.05	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 61.00%			
20) 2-Butanone-d5	6.39	46	273523	53.61	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 107.22%			
24) Chloroform-d	7.02	84	474371	4.33	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 86.60%			
26) 1,2-Dichloroethane-d4	7.75	65	193373	4.80	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.00%			
32) Benzene-d6	7.70	84	1129144	4.51	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.20%			
36) 1,2-Dichloropropane-d6	8.77	67	294970	4.70	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 94.00%			
41) Toluene-d8	9.86	98	1012603	4.52	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.40%			
43) trans-1,3-Dichloropropene-	10.13	79	57809	4.05	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 81.00%			
46) 2-Hexanone-d5	10.48	63	183876	50.33	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 100.66%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	63551	4.52	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 90.40%			
64) 1,2-Dichlorobenzene-d4	13.42	152	128591	4.53	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 90.60%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	6.48	96	38018	0.68	ug/L	96
34) Trichloroethene	8.59	95	174447	2.44	ug/L	96
47) Tetrachloroethene	10.41	164	37276	0.70	ug/L	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018189.D
Acq On : 1 Mar 2016 20:33
Operator : MD\SY
Sample : H1584-19
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0019

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	18	32	87	rBV	5230992	35720348	100.00%	64.096%
2	2.029	108	115	127	rVB2	178827	474172	1.33%	0.851%
3	2.485	180	190	201	rVB	169719	436587	1.22%	0.783%
4	3.428	335	345	367	rBV	387475	1177893	3.30%	2.114%
5	6.391	823	832	841	rBV	117594	389917	1.09%	0.700%
6	7.017	924	935	950	rBV	430625	1205165	3.37%	2.163%
7	7.711	1039	1049	1072	rBV2	1057160	3096879	8.67%	5.557%
8	8.331	1140	1151	1169	rBV	1208640	2463183	6.90%	4.420%
9	8.587	1185	1193	1209	rBV	496066	992110	2.78%	1.780%
10	8.769	1214	1223	1243	rBV	662404	1341567	3.76%	2.407%
11	9.566	1348	1354	1370	rBV	277963	476362	1.33%	0.855%
12	9.858	1394	1402	1410	rBV	1754201	2863881	8.02%	5.139%
13	10.479	1498	1504	1522	rVB	612210	1010482	2.83%	1.813%
14	11.184	1610	1620	1634	rBV	1356997	2072925	5.80%	3.720%
15	13.125	1933	1939	1950	rBV	782761	1135200	3.18%	2.037%
16	13.417	1981	1987	2001	rBV	593286	873100	2.44%	1.567%

Sum of corrected areas: 55729771

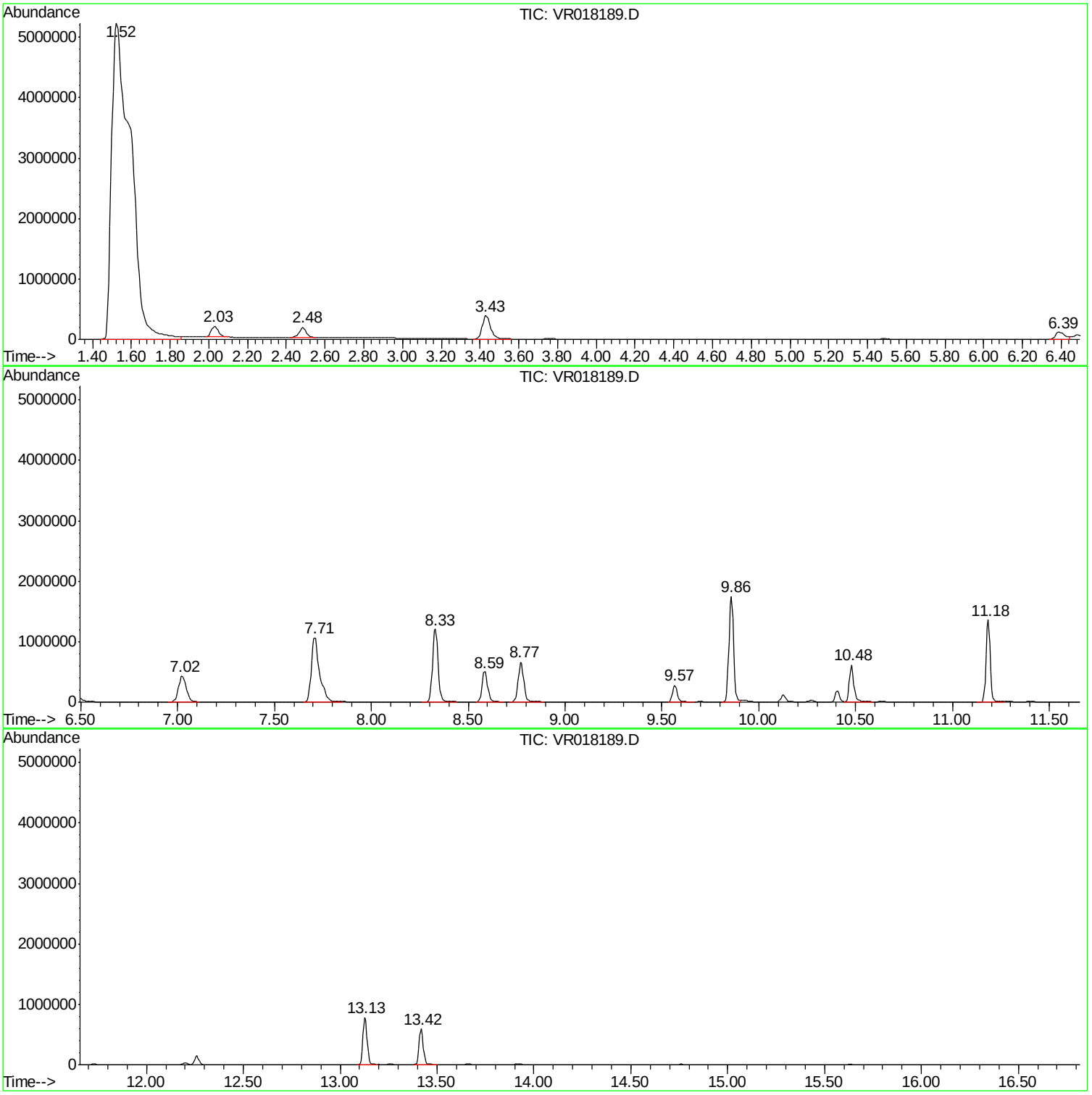
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018189.D
Acq On : 1 Mar 2016 20:33
Operator : MD\SY
Sample : H1584-19
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0019

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018189.D
Acq On : 1 Mar 2016 20:33
Operator : MD\SY
Sample : H1584-19
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H0019

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018189.D
Acq On : 1 Mar 2016 20:33
Operator : MD\SY
Sample : H1584-19
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0019

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0062

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018190.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0062

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018190.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0062

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018190.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0062

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018190.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/01/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

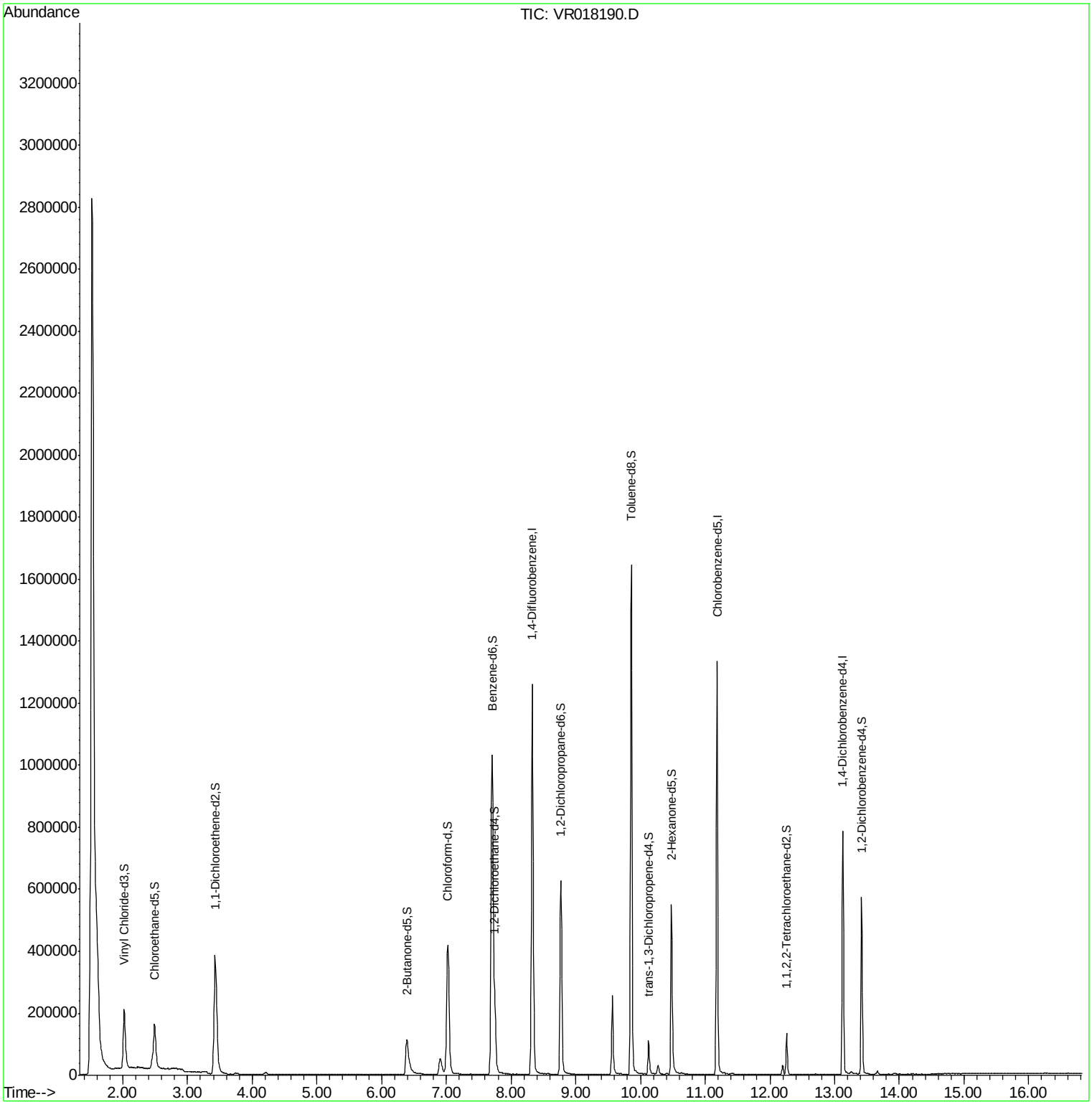
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018190.D
Acq On : 1 Mar 2016 21:04
Operator : MD\SY
Sample : H1584-20
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0062

Quant Time: Mar 02 04:19:13 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018190.D
Acq On : 1 Mar 2016 21:04
Operator : MD\SY
Sample : H1584-20
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0062

Quant Time: Mar 02 04:19:13 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	952132	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	608341	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	174648	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.02	65	296442	4.02	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 80.40%			
7) Chloroethane-d5	2.49	69	225773	4.11	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 82.20%			
11) 1,1-Dichloroethene-d2	3.43	63	457533	3.03	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 60.60%			
20) 2-Butanone-d5	6.39	46	253374	49.49	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 98.98%			
24) Chloroform-d	7.02	84	464487	4.22	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 84.40%			
26) 1,2-Dichloroethane-d4	7.75	65	185065	4.58	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 91.60%			
32) Benzene-d6	7.71	84	1073477	4.23	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 84.60%			
36) 1,2-Dichloropropane-d6	8.77	67	275047	4.33	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 86.60%			
41) Toluene-d8	9.86	98	951365	4.19	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 83.80%			
43) trans-1,3-Dichloropropene-	10.13	79	51497	3.56	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 71.20%			
46) 2-Hexanone-d5	10.48	63	168086	45.43	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 90.86%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	59453	4.18	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 83.60%			
64) 1,2-Dichlorobenzene-d4	13.42	152	125229	4.38	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 87.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018190.D
Acq On : 1 Mar 2016 21:04
Operator : MD\SY
Sample : H1584-20
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0062

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	16	32	72	rBV	2826740	10488805	100.00%	35.622%
2	2.023	107	114	128	rVB	187993	451596	4.31%	1.534%
3	2.491	179	191	206	rBV	143143	416500	3.97%	1.415%
4	3.428	334	345	367	rBV	384513	1176329	11.22%	3.995%
5	6.391	824	832	852	rBV	111749	406209	3.87%	1.380%
6	6.902	904	916	926	rBV3	52324	166796	1.59%	0.566%
7	7.023	926	936	951	rVB	414643	1158605	11.05%	3.935%
8	7.711	1038	1049	1071	rBV2	1030810	2934099	27.97%	9.965%
9	8.331	1142	1151	1172	rBV	1259430	2497813	23.81%	8.483%
10	8.769	1215	1223	1238	rBV	624526	1258144	12.00%	4.273%
11	9.566	1347	1354	1365	rBV	253465	429978	4.10%	1.460%
12	9.858	1393	1402	1412	rBV	1642884	2684828	25.60%	9.118%
13	10.126	1440	1446	1457	rBV	107463	181839	1.73%	0.618%
14	10.479	1497	1504	1519	rBV	548275	939124	8.95%	3.189%
15	11.184	1612	1620	1629	rBV	1333428	2071655	19.75%	7.036%
16	12.261	1791	1797	1806	rVB	132509	207067	1.97%	0.703%
17	13.125	1933	1939	1950	rBV	784820	1152182	10.98%	3.913%
18	13.417	1981	1987	1998	rBV	569151	823105	7.85%	2.795%

Sum of corrected areas: 29444674

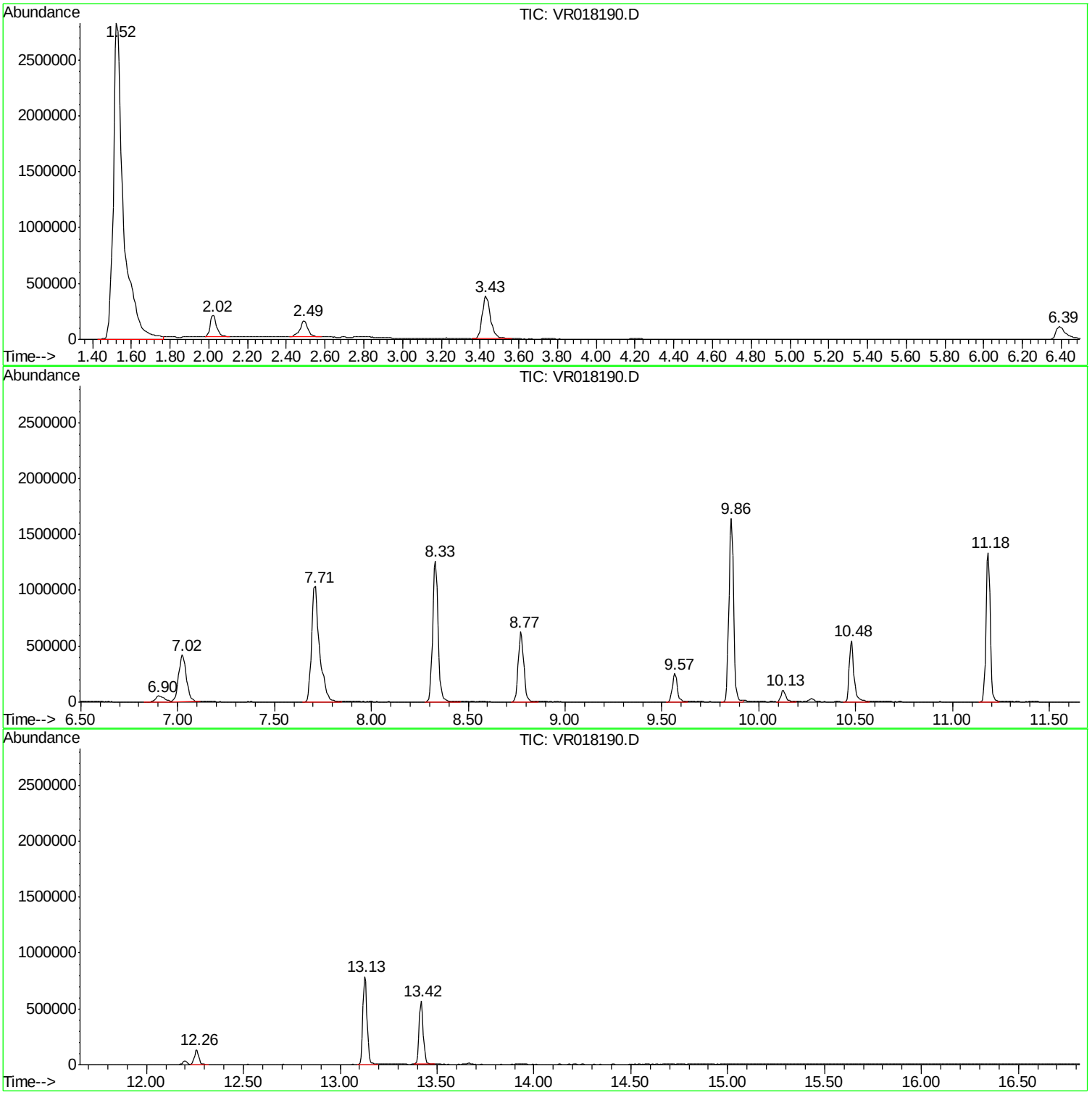
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018190.D
Acq On : 1 Mar 2016 21:04
Operator : MD\SY
Sample : H1584-20
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0062

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018190.D
Acq On : 1 Mar 2016 21:04
Operator : MD\SY
Sample : H1584-20
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H0062

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018190.D
Acq On : 1 Mar 2016 21:04
Operator : MD\SY
Sample : H1584-20
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0062

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0901

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018191.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.1	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.13	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0901

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018191.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.1	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	6.3	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0901

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018191.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H0901

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018191.D
% Solids :
Date Received : 02/27/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/01/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

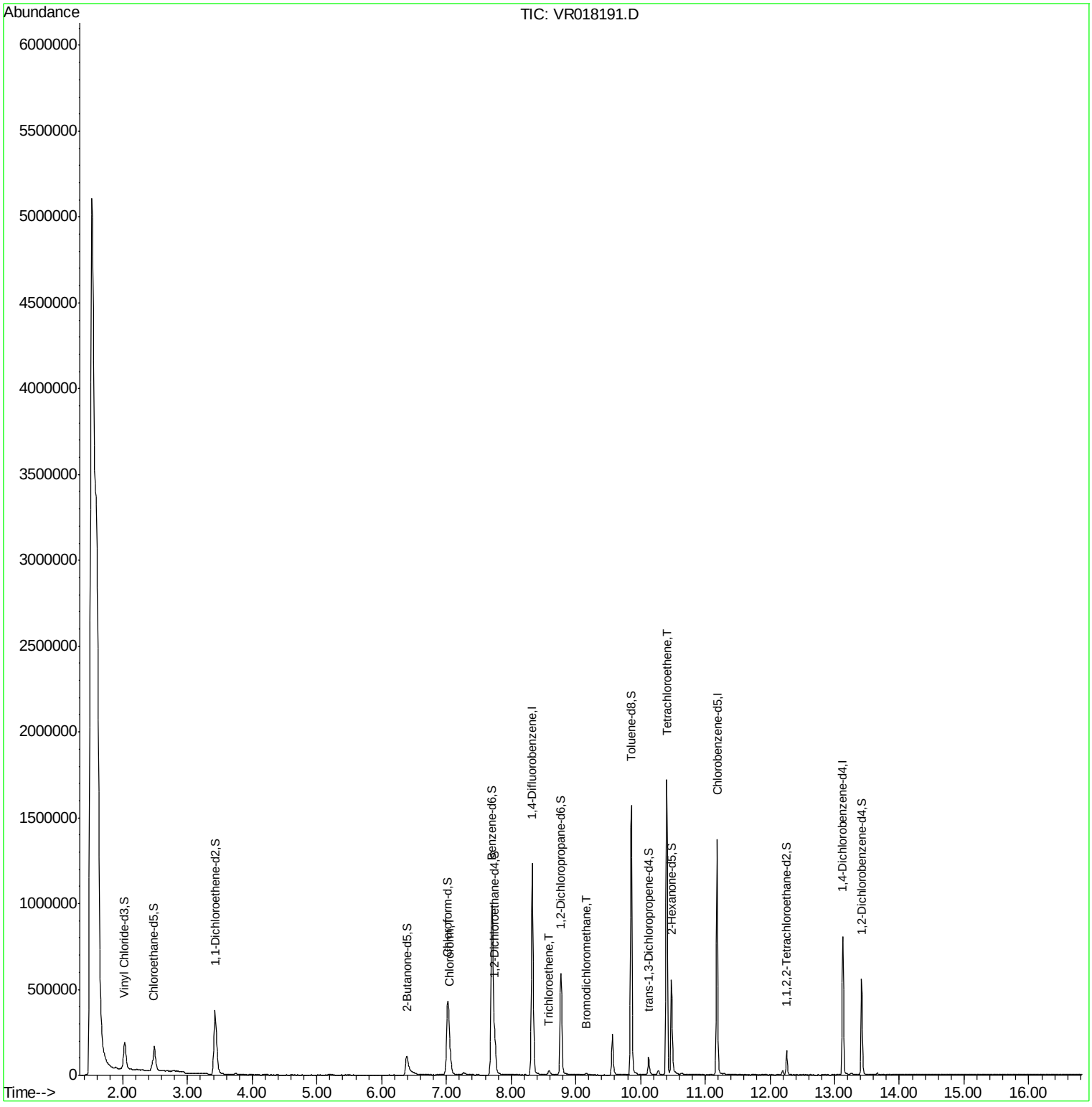
EPA-designated Registry Number.

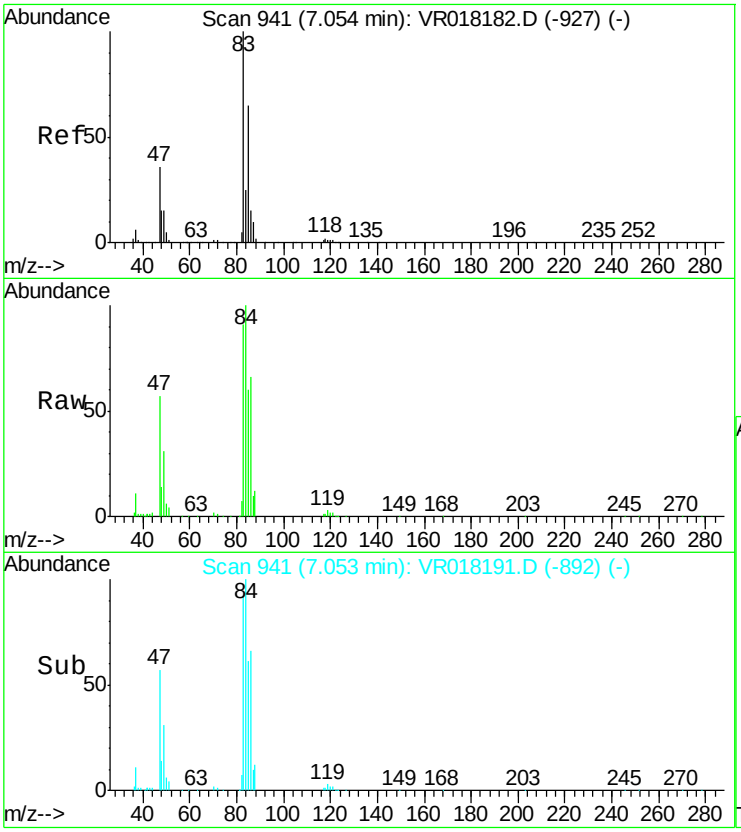
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018191.D
Acq On : 1 Mar 2016 21:35
Operator : MD\SY
Sample : H1584-21
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0901

Quant Time: Mar 02 05:03:02 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration



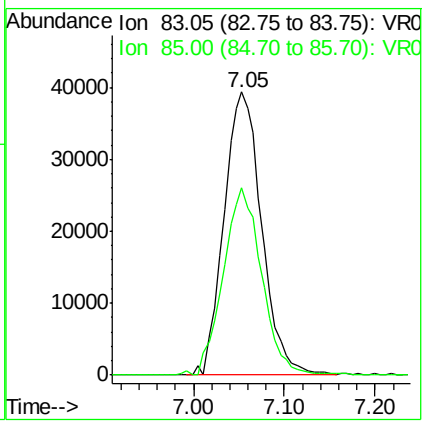


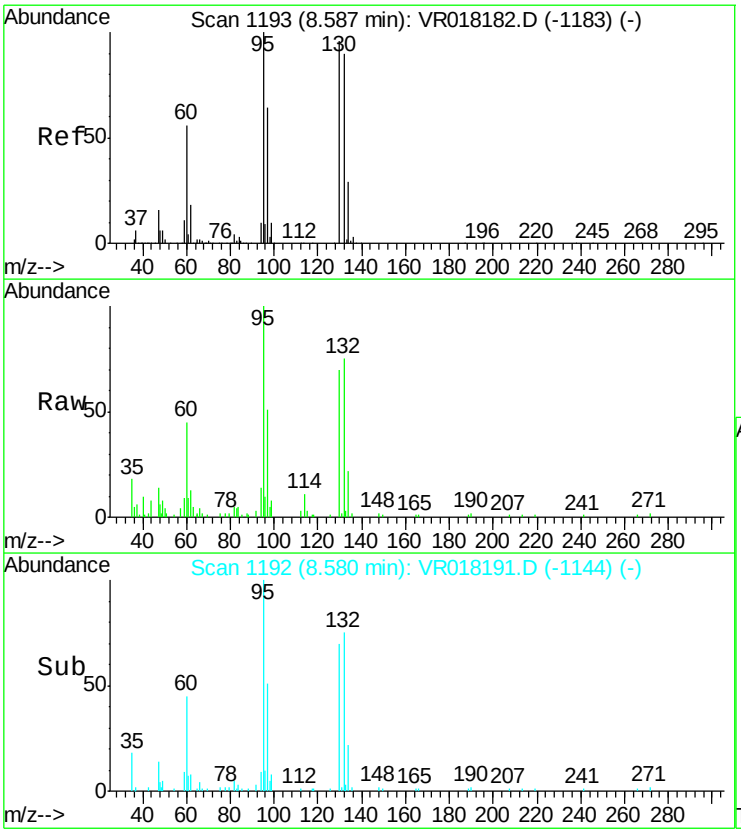
#25
Chloroform
Concen: 1.07 ug/L
RT: 7.05 min Scan# 941
Delta R.T. -0.00 min
Lab File: VR018191.D
Acq: 1 Mar 2016 21:35

Instrument : MSVOA_R
ClientSampleId : H0901

Tgt Ion: 83 Resp: 113064

Ion	Ratio	Lower	Upper
83	100		
85	66.1	45.1	83.7

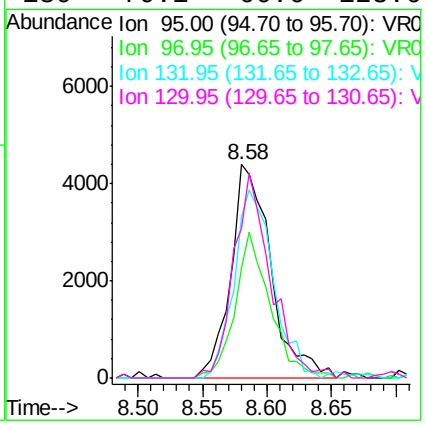


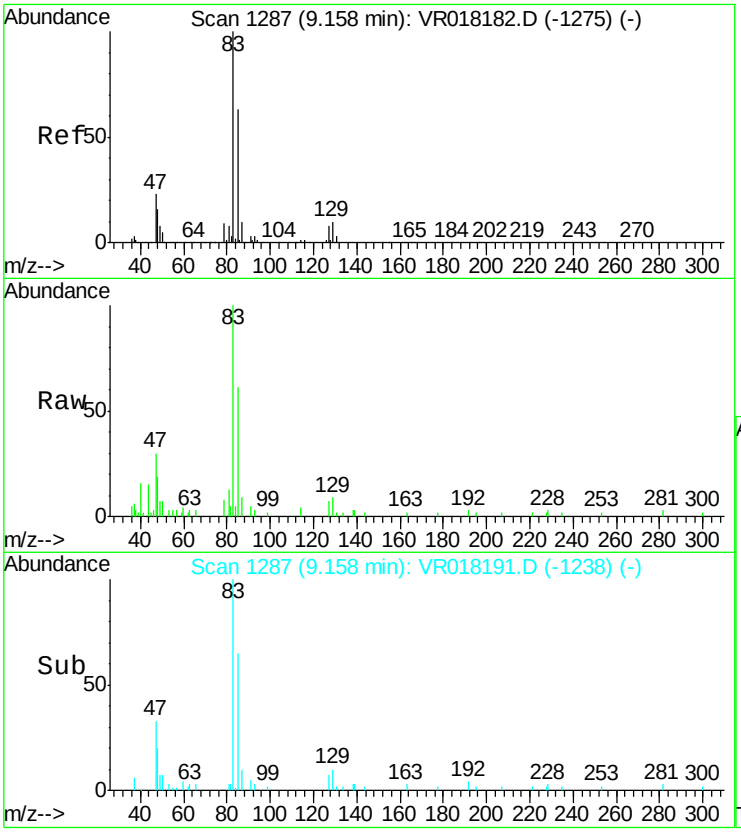


#34
Trichloroethene
Concen: 0.13 ug/L
RT: 8.58 min Scan# 1192
Delta R.T. -0.01 min
Lab File: VR018191.D
Acq: 1 Mar 2016 21:35

Tgt Ion: 95 Resp: 9452

Ion	Ratio	Lower	Upper
95	100		
97	51.3	45.5	84.5
132	75.4	64.2	119.2
130	70.1	66.6	123.6



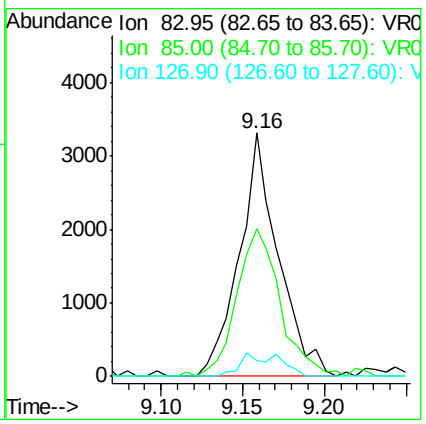


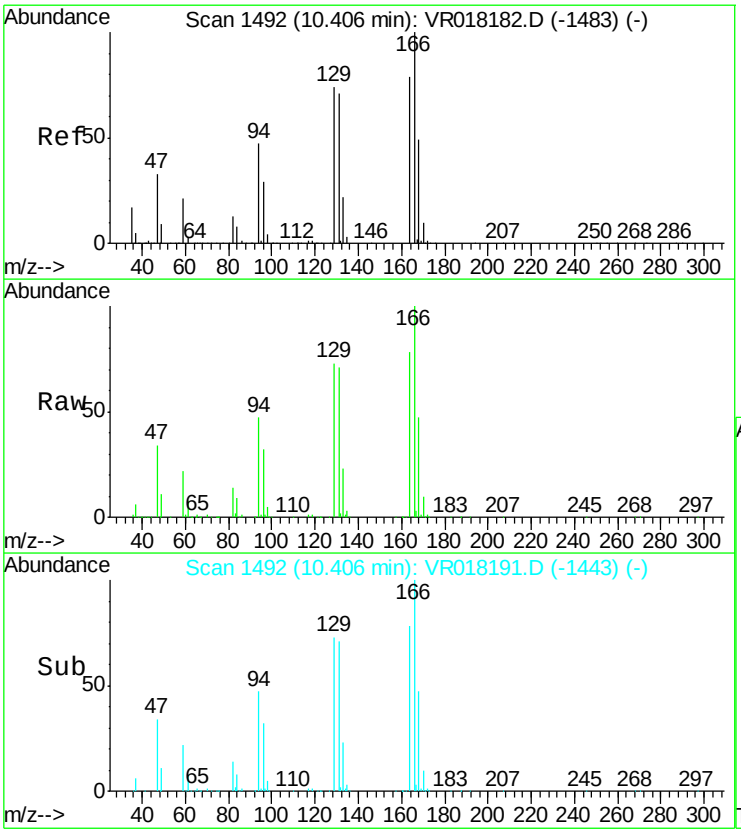
#38
Bromodichloromethane
Concen: 0.10 ug/L
RT: 9.16 min Scan# 1287
Delta R.T. -0.00 min
Lab File: VR018191.D
Acq: 1 Mar 2016 21:35

Instrument : MSVOA_R
ClientSampleId : H0901

Tgt Ion: 83 Resp: 5514

Ion	Ratio	Lower	Upper
83	100		
85	60.8	42.4	78.8
127	6.7	6.1	9.1

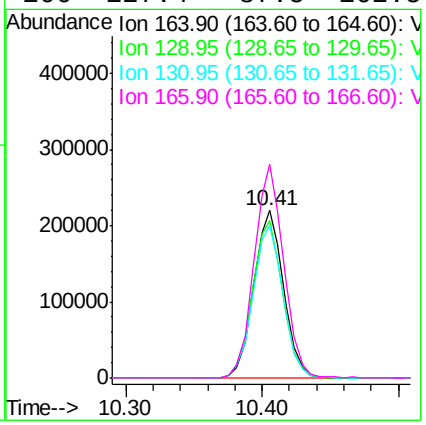




#47
Tetrachloroethene
Concen: 6.28 ug/L
RT: 10.41 min Scan# 1492
Delta R.T. -0.00 min
Lab File: VR018191.D
Acq: 1 Mar 2016 21:35

Tgt Ion:164 Resp: 336579

Ion	Ratio	Lower	Upper
164	100		
129	93.6	66.4	123.2
131	90.7	63.3	117.5
166	127.4	87.5	162.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018191.D
Acq On : 1 Mar 2016 21:35
Operator : MD\SY
Sample : H1584-21
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0901

Quant Time: Mar 02 05:03:02 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	952548	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	607793	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	182068	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	286354	3.88	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 77.60%			
7) Chloroethane-d5	2.48	69	223781	4.08	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 81.60%			
11) 1,1-Dichloroethene-d2	3.43	63	441669	2.92	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 58.40%#			
20) 2-Butanone-d5	6.39	46	248059	48.43	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 96.86%			
24) Chloroform-d	7.02	84	453156	4.12	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 82.40%			
26) 1,2-Dichloroethane-d4	7.75	65	178879	4.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.40%			
32) Benzene-d6	7.70	84	1039301	4.10	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 82.00%			
36) 1,2-Dichloropropane-d6	8.77	67	268088	4.22	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 84.40%			
41) Toluene-d8	9.86	98	916684	4.05	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 81.00%			
43) trans-1,3-Dichloropropene-	10.13	79	51120	3.54	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 70.80%			
46) 2-Hexanone-d5	10.48	63	168093	45.47	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 90.94%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	59682	4.20	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 84.00%			
64) 1,2-Dichlorobenzene-d4	13.42	152	124424	4.18	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 83.60%			
Target Compounds						Qvalue
25) Chloroform	7.05	83	113064	1.07	ug/L	98
34) Trichloroethene	8.58	95	9452	0.13	ug/L	80
38) Bromodichloromethane	9.16	83	5514	0.10	ug/L	99
47) Tetrachloroethene	10.41	164	336579	6.28	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018191.D
Acq On : 1 Mar 2016 21:35
Operator : MD\SY
Sample : H1584-21
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0901

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	17	32	85	rBV	5106732	34350925	100.00%	61.852%
2	2.028	107	115	134	rVB	162337	477336	1.39%	0.859%
3	2.485	179	190	204	rVB	149058	433147	1.26%	0.780%
4	3.428	334	345	374	rVB	373345	1150077	3.35%	2.071%
5	6.390	824	832	860	rBV	108871	434509	1.26%	0.782%
6	7.023	924	936	957	rBV2	429222	1414736	4.12%	2.547%
7	7.704	1038	1048	1068	rBV2	992376	2853139	8.31%	5.137%
8	8.325	1143	1150	1170	rBV	1231282	2483359	7.23%	4.472%
9	8.769	1215	1223	1234	rBV	591892	1211816	3.53%	2.182%
10	9.566	1346	1354	1366	rBV	240543	424270	1.24%	0.764%
11	9.858	1394	1402	1410	rBV	1567260	2587690	7.53%	4.659%
12	10.406	1485	1492	1499	rBV	1718998	2687430	7.82%	4.839%
13	10.479	1499	1504	1521	rVB	551406	925542	2.69%	1.667%
14	11.184	1611	1620	1634	rBV	1372229	2086145	6.07%	3.756%
15	13.125	1933	1939	1950	rBV	805574	1190924	3.47%	2.144%
16	13.417	1980	1987	1997	rBV	556487	826361	2.41%	1.488%

Sum of corrected areas: 55537406

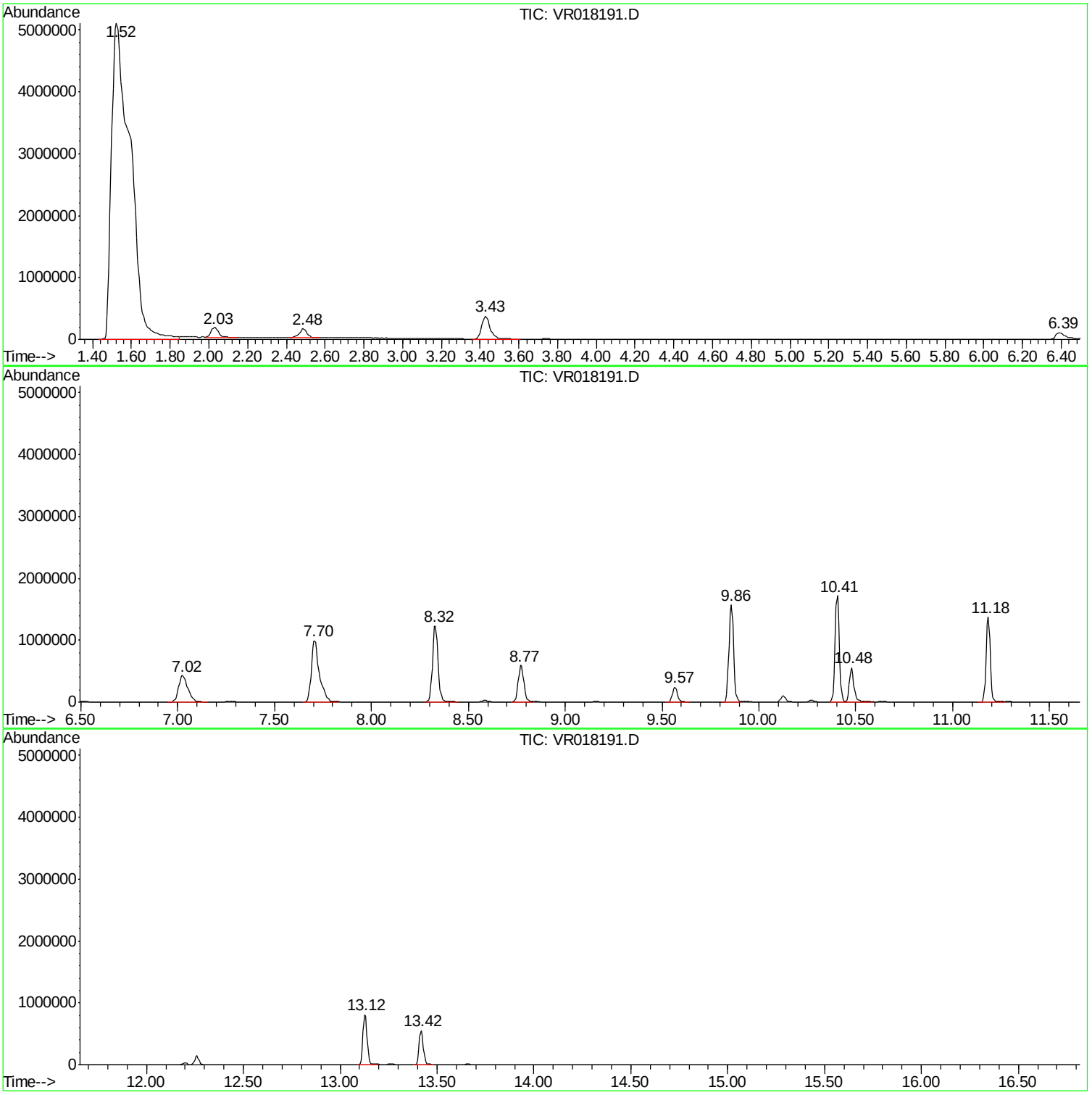
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018191.D
Acq On : 1 Mar 2016 21:35
Operator : MD\SY
Sample : H1584-21
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0901

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018191.D
Acq On : 1 Mar 2016 21:35
Operator : MD\SY
Sample : H1584-21
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H0901

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018191.D
Acq On : 1 Mar 2016 21:35
Operator : MD\SY
Sample : H1584-21
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0901

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method : Trace VOA Level :

Instrument ID: MSVOA_I Calibration Date(s): 02/26/2016 02/26/2016

GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 16:20 18:27

Length : 30 (m)

Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VI047387.D RRF1.0 = VI047388.D
RRF5.0 = VI047389.D RRF10 = VI047390.D RRF20 = VI047391.D

ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.391	0.334	0.384	0.386	0.399	0.379	6.8
Chloromethane	0.389	0.390	0.365	0.368	0.379	0.378	3.1
Vinyl chloride	0.304	0.287	0.275	0.325	0.285	0.295	6.7
Bromomethane	0.189	0.123	0.121	0.148	0.125	0.141	20.5
Chloroethane	0.193	0.188	0.160	0.189	0.157	0.178	9.7
Trichlorofluoromethane	0.334	0.265	0.313	0.341	0.322	0.315	9.5
1,1-Dichloroethene	0.258	0.226	0.226	0.245	0.209	0.233	8.2
1,1,2-Trichloro-1,2,2-trifluoroetha	0.312	0.287	0.343	0.292	0.305	0.308	7.1
Acetone	0.028	0.023	0.026	0.028	0.024	0.026	8.7
Carbon disulfide	0.937	0.817	0.830	0.933	0.813	0.866	7.3
Methyl Acetate	0.135	0.104	0.097	0.112	0.098	0.109	14.1
Methylene chloride	0.268	0.235	0.219	0.243	0.205	0.234	10.2
trans-1,2-Dichloroethene	0.313	0.336	0.317	0.318	0.289	0.315	5.3
Methyl tert-butyl Ether	0.795	0.803	0.757	0.822	0.774	0.790	3.2
1,1-Dichloroethane	0.596	0.589	0.544	0.507	0.420	0.531	13.5
cis-1,2-Dichloroethene	0.316	0.289	0.290	0.297	0.259	0.290	7.1
2-Butanone	0.067	0.061	0.065	0.055	0.050	0.059	12.1
Bromochloromethane	0.132	0.126	0.120	0.126	0.111	0.123	6.6
Chloroform	0.641	0.608	0.604	0.641	0.587	0.616	3.9
1,1,1-Trichloroethane	0.599	0.608	0.624	0.634	0.589	0.611	3
Cyclohexane	0.509	0.489	0.567	0.531	0.520	0.523	5.5
Carbon tetrachloride	0.564	0.529	0.584	0.578	0.538	0.559	4.4
Benzene	1.259	1.245	1.176	1.294	1.211	1.237	3.7
1,2-Dichloroethane	0.446	0.470	0.460	0.443	0.419	0.448	4.3
Trichloroethene	0.406	0.390	0.402	0.401	0.375	0.395	3.2
Methylcyclohexane	0.512	0.453	0.553	0.506	0.517	0.508	7.1
1,2-Dichloropropane	0.345	0.333	0.316	0.325	0.306	0.325	4.7
Bromodichloromethane	0.496	0.521	0.541	0.542	0.518	0.524	3.6
cis-1,3-Dichloropropene	0.527	0.580	0.573	0.613	0.532	0.565	6.3
4-Methyl-2-pentanone	0.281	0.285	0.277	0.263	0.250	0.271	5.4
Toluene	1.455	1.398	1.413	1.414	1.297	1.396	4.2
trans-1,3-Dichloropropene	0.472	0.496	0.543	0.570	0.539	0.524	7.5

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method : Trace VOA Level :

Instrument ID: MSVOA_I Calibration Date(s): 02/26/2016 02/26/2016

GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 16:20 18:27

Length : 30 (m)

Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VI047387.D RRF1.0 = VI047388.D
RRF5.0 = VI047389.D RRF10 = VI047390.D RRF20 = VI047391.D

ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
1,1,2-Trichloroethane	0.260	0.268	0.258	0.259	0.251	0.259	2.4
Tetrachloroethene	0.336	0.358	0.368	0.370	0.344	0.355	4.2
2-Hexanone	0.196	0.199	0.197	0.185	0.176	0.191	5.1
Dibromochloromethane	0.361	0.379	0.403	0.412	0.405	0.392	5.4
1,2-Dibromoethane	0.298	0.317	0.292	0.281	0.272	0.292	5.9
Chlorobenzene	0.939	0.960	0.929	0.951	0.903	0.937	2.3
Ethylbenzene	1.653	1.518	1.575	1.579	1.429	1.551	5.4
o-Xylene	0.529	0.482	0.524	0.509	0.465	0.502	5.5
m,p-Xylene	0.558	0.521	0.557	0.555	0.507	0.540	4.4
Styrene	0.906	0.855	0.890	0.878	0.807	0.867	4.5
Bromoform	0.470	0.460	0.526	0.531	0.560	0.510	8.4
Isopropylbenzene	1.405	1.290	1.459	1.413	1.228	1.359	7.1
1,1,2,2-Tetrachloroethane	0.328	0.306	0.318	0.297	0.299	0.310	4.2
1,3-Dichlorobenzene	1.595	1.508	1.538	1.526	1.414	1.516	4.3
1,4-Dichlorobenzene	1.522	1.514	1.537	1.541	1.388	1.500	4.2
1,2-Dichlorobenzene	1.436	1.445	1.373	1.355	1.272	1.376	5.1
1,2-Dibromo-3-chloropropane	0.127	0.123	0.122	0.113	0.113	0.120	5.2
1,2,4-trichlorobenzene	0.925	0.964	1.015	1.053	0.930	0.978	5.7
1,2,3-Trichlorobenzene	0.732	0.857	0.892	0.930	0.799	0.842	9.3
Vinyl Chloride-d3	0.282	0.266	0.262	0.311	0.272	0.278	7
Chloroethane-d5	0.224	0.214	0.191	0.235	0.199	0.213	8.4
1,1-Dichloroethene-d2	0.672	0.625	0.588	0.641	0.555	0.616	7.4
2-Butanone-d5	0.057	0.058	0.059	0.062	0.054	0.058	5.3
Chloroform-d	0.599	0.642	0.638	0.653	0.618	0.630	3.4
1,2-Dichloroethane-d4	0.392	0.380	0.348	0.363	0.350	0.366	5.2
Benzene-d6	1.198	1.230	1.176	1.235	1.191	1.206	2.1
1,2-Dichloropropane-d6	0.339	0.379	0.351	0.379	0.372	0.364	5
Toluene-d8	1.129	1.182	1.186	1.196	1.142	1.167	2.5
trans-1,3-Dichloropropene-d4	0.185	0.205	0.227	0.235	0.225	0.216	9.5
2-Hexanone-d5	0.088	0.088	0.091	0.088	0.085	0.088	2.5
1,1,2,2-Tetrachloroethane-d2	0.295	0.323	0.338	0.311	0.308	0.315	5.2
1,2-Dichlorobenzene-d4	0.928	1.010	0.888	0.888	0.847	0.912	6.8

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method : Trace VOA Level :

Instrument ID: MSVOA_R Calibration Date(s): 02/25/2016 02/25/2016

GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 13:49 15:54

Length : 30 (m)

Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VR018140.D RRF1.0 = VR018141.D
RRF5.0 = VR018142.D RRF10 = VR018143.D RRF20 = VR018144.D

ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.363	0.358	0.418	0.387	0.427	0.390	8.1
Chloromethane	0.469	0.482	0.474	0.462	0.522	0.482	4.9
Vinyl chloride	0.455	0.470	0.476	0.481	0.512	0.479	4.3
Bromomethane	0.249	0.282	0.257	0.259	0.277	0.265	5.3
Chloroethane	0.282	0.288	0.264	0.271	0.297	0.281	4.7
Trichlorofluoromethane	0.626	0.626	0.667	0.646	0.613	0.636	3.3
1,1-Dichloroethene	0.227	0.232	0.234	0.229	0.260	0.237	5.7
1,1,2-Trichloro-1,2,2-trifluoroetha	0.207	0.213	0.241	0.230	0.251	0.229	8.1
Acetone	0.043	0.043	0.043	0.043	0.044	0.043	1.4
Carbon disulfide	0.705	0.691	0.739	0.747	0.796	0.735	5.6
Methyl Acetate	0.083	0.104	0.108	0.114	0.116	0.105	12.5
Methylene chloride	0.262	0.253	0.247	0.241	0.254	0.251	3.1
trans-1,2-Dichloroethene	0.287	0.281	0.311	0.307	0.325	0.302	5.9
Methyl tert-butyl Ether	0.360	0.403	0.463	0.474	0.521	0.444	14.2
1,1-Dichloroethane	0.641	0.692	0.717	0.704	0.742	0.699	5.4
cis-1,2-Dichloroethene	0.258	0.279	0.329	0.331	0.345	0.308	12.2
2-Butanone	0.044	0.052	0.069	0.073	0.074	0.062	21.4
Bromochloromethane	0.107	0.108	0.113	0.113	0.116	0.111	3.7
Chloroform	0.610	0.653	0.663	0.648	0.667	0.648	3.5
1,1,1-Trichloroethane	0.519	0.539	0.562	0.557	0.574	0.550	3.9
Cyclohexane	0.388	0.486	0.679	0.679	0.729	0.592	24.9
Carbon tetrachloride	0.501	0.525	0.538	0.535	0.562	0.532	4.1
Benzene	1.543	1.732	1.703	1.731	1.733	1.689	4.9
1,2-Dichloroethane	0.428	0.437	0.442	0.439	0.434	0.436	1.2
Trichloroethene	0.382	0.406	0.409	0.423	0.433	0.410	4.8
Methylcyclohexane	0.388	0.430	0.577	0.573	0.610	0.515	19.3
1,2-Dichloropropane	0.422	0.465	0.456	0.478	0.476	0.459	4.9
Bromodichloromethane	0.485	0.512	0.511	0.523	0.523	0.511	3
cis-1,3-Dichloropropene	0.409	0.507	0.604	0.656	0.657	0.567	19
4-Methyl-2-pentanone	0.130	0.163	0.199	0.214	0.201	0.181	19
Toluene	1.533	1.817	1.826	1.864	1.775	1.763	7.5
trans-1,3-Dichloropropene	0.334	0.391	0.463	0.511	0.512	0.442	17.7

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method : Trace VOA Level :

Instrument ID: MSVOA_R Calibration Date(s): 02/25/2016 02/25/2016

GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 13:49 15:54

Length : 30 (m)

Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VR018140.D RRF1.0 = VR018141.D
RRF5.0 = VR018142.D RRF10 = VR018143.D RRF20 = VR018144.D

ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
1,1,2-Trichloroethane	0.194	0.219	0.203	0.218	0.214	0.209	5.2
Tetrachloroethene	0.266	0.313	0.318	0.334	0.341	0.314	9.4
2-Hexanone	0.082	0.104	0.134	0.152	0.147	0.124	24.2
Dibromochloromethane	0.235	0.261	0.262	0.277	0.281	0.263	6.9
1,2-Dibromoethane	0.166	0.185	0.183	0.191	0.192	0.183	5.5
Chlorobenzene	0.966	1.040	1.017	1.075	1.049	1.029	4
Ethylbenzene	1.616	1.880	2.038	2.080	1.938	1.910	9.6
o-Xylene	0.452	0.535	0.654	0.694	0.719	0.611	18.6
m,p-Xylene	0.526	0.645	0.736	0.777	0.777	0.692	15.5
Styrene	0.691	0.915	1.113	1.206	1.208	1.027	21.7
Bromoform	0.264	0.305	0.280	0.306	0.285	0.288	6.2
Isopropylbenzene	1.134	1.342	1.681	1.718	1.705	1.516	17.4
1,1,2,2-Tetrachloroethane	0.168	0.180	0.183	0.190	0.197	0.184	6
1,3-Dichlorobenzene	1.209	1.360	1.486	1.599	1.602	1.451	11.6
1,4-Dichlorobenzene	1.574	1.592	1.565	1.626	1.605	1.593	1.5
1,2-Dichlorobenzene	1.247	1.326	1.291	1.306	1.356	1.305	3.1
1,2-Dibromo-3-chloropropane	0.063	0.064	0.059	0.062	0.066	0.063	3.7
1,2,4-trichlorobenzene	0.572	0.695	0.714	0.797	0.823	0.720	13.8
1,2,3-Trichlorobenzene	0.490	0.571	0.580	0.628	0.617	0.577	9.4
Vinyl Chloride-d3	0.443	0.421	0.416	0.416	0.438	0.427	2.9
Chloroethane-d5	0.328	0.319	0.298	0.302	0.328	0.315	4.6
1,1-Dichloroethene-d2	0.597	0.602	0.611	0.596	0.645	0.610	3.3
2-Butanone-d5	0.037	0.044	0.055	0.062	0.064	0.052	22.5
Chloroform-d	0.693	0.678	0.684	0.676	0.688	0.684	1
1,2-Dichloroethane-d4	0.379	0.383	0.368	0.370	0.367	0.373	1.9
Benzene-d6	1.428	1.563	1.530	1.559	1.567	1.529	3.8
1,2-Dichloropropane-d6	0.483	0.495	0.474	0.496	0.495	0.489	2
Toluene-d8	1.321	1.447	1.486	1.537	1.472	1.453	5.5
trans-1,3-Dichloropropene-d4	0.138	0.148	0.163	0.183	0.184	0.163	12.6
2-Hexanone-d5	0.026	0.032	0.049	0.060	0.061	0.046	35
1,1,2,2-Tetrachloroethane-d2	0.200	0.182	0.188	0.197	0.201	0.194	4.2
1,2-Dichlorobenzene-d4	0.867	0.879	0.791	0.827	0.847	0.842	4.1

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001
Analytical Method : Trace VOA Level :
Instrument ID: MSVOA_R Calibration Date(s): 03/01/2016 03/01/2016
GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 12:59 15:21
Length : 30 (m)
Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VR018177.D RRF1.0 = VR018178.D
RRF5.0 = VR018179.D RRF10 = VR018180.D RRF20 = VR018181.D

ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.313	0.309	0.329	0.328	0.310	0.318	3
Chloromethane	0.487	0.502	0.448	0.446	0.423	0.461	7
Vinyl chloride	0.449	0.470	0.459	0.467	0.425	0.454	4
Bromomethane	0.230	0.218	0.189	0.208	0.189	0.207	8.7
Chloroethane	0.298	0.273	0.257	0.268	0.240	0.267	7.9
Trichlorofluoromethane	0.607	0.543	0.576	0.587	0.550	0.573	4.6
1,1-Dichloroethene	0.332	0.318	0.312	0.332	0.320	0.323	2.7
1,1,2-Trichloro-1,2,2-trifluoroetha	0.245	0.224	0.235	0.247	0.227	0.236	4.4
Acetone	0.023	0.022	0.019	0.022	0.019	0.021	9.4
Carbon disulfide	1.179	1.121	1.107	1.144	1.071	1.124	3.6
Methyl Acetate	0.053	0.052	0.055	0.059	0.057	0.055	5
Methylene chloride	0.314	0.295	0.239	0.245	0.228	0.264	14.4
trans-1,2-Dichloroethene	0.329	0.341	0.335	0.352	0.340	0.339	2.6
Methyl tert-butyl Ether	0.256	0.262	0.259	0.286	0.280	0.268	5
1,1-Dichloroethane	0.705	0.708	0.683	0.719	0.676	0.698	2.6
cis-1,2-Dichloroethene	0.287	0.292	0.288	0.306	0.293	0.293	2.6
2-Butanone	0.026	0.029	0.030	0.033	0.032	0.030	9.7
Bromochloromethane	0.070	0.078	0.074	0.080	0.074	0.075	5.2
Chloroform	0.569	0.566	0.537	0.563	0.532	0.553	3.1
1,1,1-Trichloroethane	0.807	0.788	0.799	0.820	0.774	0.798	2.2
Cyclohexane	1.085	1.021	1.118	1.135	1.052	1.082	4.3
Carbon tetrachloride	0.713	0.725	0.753	0.772	0.729	0.738	3.2
Benzene	2.390	2.430	2.265	2.276	2.040	2.280	6.7
1,2-Dichloroethane	0.245	0.250	0.242	0.252	0.238	0.246	2.3
Trichloroethene	0.615	0.607	0.581	0.598	0.573	0.595	3
Methylcyclohexane	0.877	0.843	0.916	0.923	0.878	0.887	3.7
1,2-Dichloropropane	0.484	0.513	0.479	0.495	0.470	0.488	3.4
Bromodichloromethane	0.451	0.454	0.451	0.462	0.442	0.452	1.6
cis-1,3-Dichloropropene	0.433	0.486	0.522	0.569	0.547	0.511	10.5
4-Methyl-2-pentanone	0.109	0.118	0.122	0.129	0.117	0.119	6.2
Toluene	2.330	2.418	2.279	2.249	1.915	2.238	8.6
trans-1,3-Dichloropropene	0.268	0.298	0.332	0.363	0.357	0.324	12.5

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method : Trace VOA Level :

Instrument ID: MSVOA_R Calibration Date(s): 03/01/2016 03/01/2016

GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 12:59 15:21

Length : 30 (m)

Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VR018177.D RRF1.0 = VR018178.D
RRF5.0 = VR018179.D RRF10 = VR018180.D RRF20 = VR018181.D

ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
1,1,2-Trichloroethane	0.168	0.164	0.153	0.162	0.151	0.159	4.6
Tetrachloroethene	0.451	0.436	0.435	0.444	0.441	0.441	1.5
2-Hexanone	0.068	0.074	0.077	0.083	0.076	0.076	7.3
Dibromochloromethane	0.182	0.189	0.187	0.199	0.192	0.190	3.3
1,2-Dibromoethane	0.122	0.121	0.126	0.134	0.127	0.126	4.3
Chlorobenzene	1.109	1.122	1.055	1.084	0.994	1.073	4.7
Ethylbenzene	2.437	2.599	2.484	2.409	1.971	2.380	10.1
o-Xylene	0.645	0.703	0.717	0.732	0.710	0.701	4.7
m,p-Xylene	0.824	0.908	0.896	0.904	0.870	0.880	4
Styrene	0.939	1.034	1.039	1.087	1.032	1.026	5.2
Bromoform	0.212	0.201	0.204	0.225	0.213	0.211	4.4
Isopropylbenzene	1.865	2.055	2.047	2.018	1.732	1.944	7.3
1,1,2,2-Tetrachloroethane	0.122	0.112	0.110	0.118	0.110	0.114	4.7
1,3-Dichlorobenzene	1.667	1.699	1.664	1.737	1.641	1.682	2.2
1,4-Dichlorobenzene	1.734	1.738	1.627	1.654	1.553	1.661	4.7
1,2-Dichlorobenzene	1.267	1.311	1.233	1.258	1.181	1.250	3.8
1,2-Dibromo-3-chloropropane	0.037	0.046	0.034	0.039	0.037	0.039	11.3
1,2,4-trichlorobenzene	0.700	0.724	0.731	0.773	0.712	0.728	3.9
1,2,3-Trichlorobenzene	0.534	0.531	0.519	0.545	0.498	0.525	3.4
Vinyl Chloride-d3	0.386	0.444	0.372	0.383	0.352	0.387	8.8
Chloroethane-d5	0.309	0.317	0.274	0.282	0.259	0.288	8.4
1,1-Dichloroethene-d2	0.797	0.845	0.744	0.848	0.736	0.794	6.7
2-Butanone-d5	0.022	0.028	0.027	0.029	0.029	0.027	10.8
Chloroform-d	0.575	0.635	0.553	0.574	0.552	0.578	5.8
1,2-Dichloroethane-d4	0.211	0.231	0.201	0.212	0.207	0.212	5.2
Benzene-d6	2.104	2.388	2.022	2.049	1.861	2.085	9.2
1,2-Dichloropropane-d6	0.513	0.582	0.500	0.518	0.498	0.522	6.6
Toluene-d8	1.848	2.147	1.829	1.853	1.645	1.864	9.7
trans-1,3-Dichloropropene-d4	0.100	0.118	0.116	0.129	0.130	0.119	10.3
2-Hexanone-d5	0.025	0.030	0.030	0.034	0.033	0.030	11.2
1,1,2,2-Tetrachloroethane-d2	0.116	0.123	0.113	0.118	0.114	0.117	3.4
1,2-Dichlorobenzene-d4	0.867	0.912	0.766	0.792	0.752	0.818	8.4

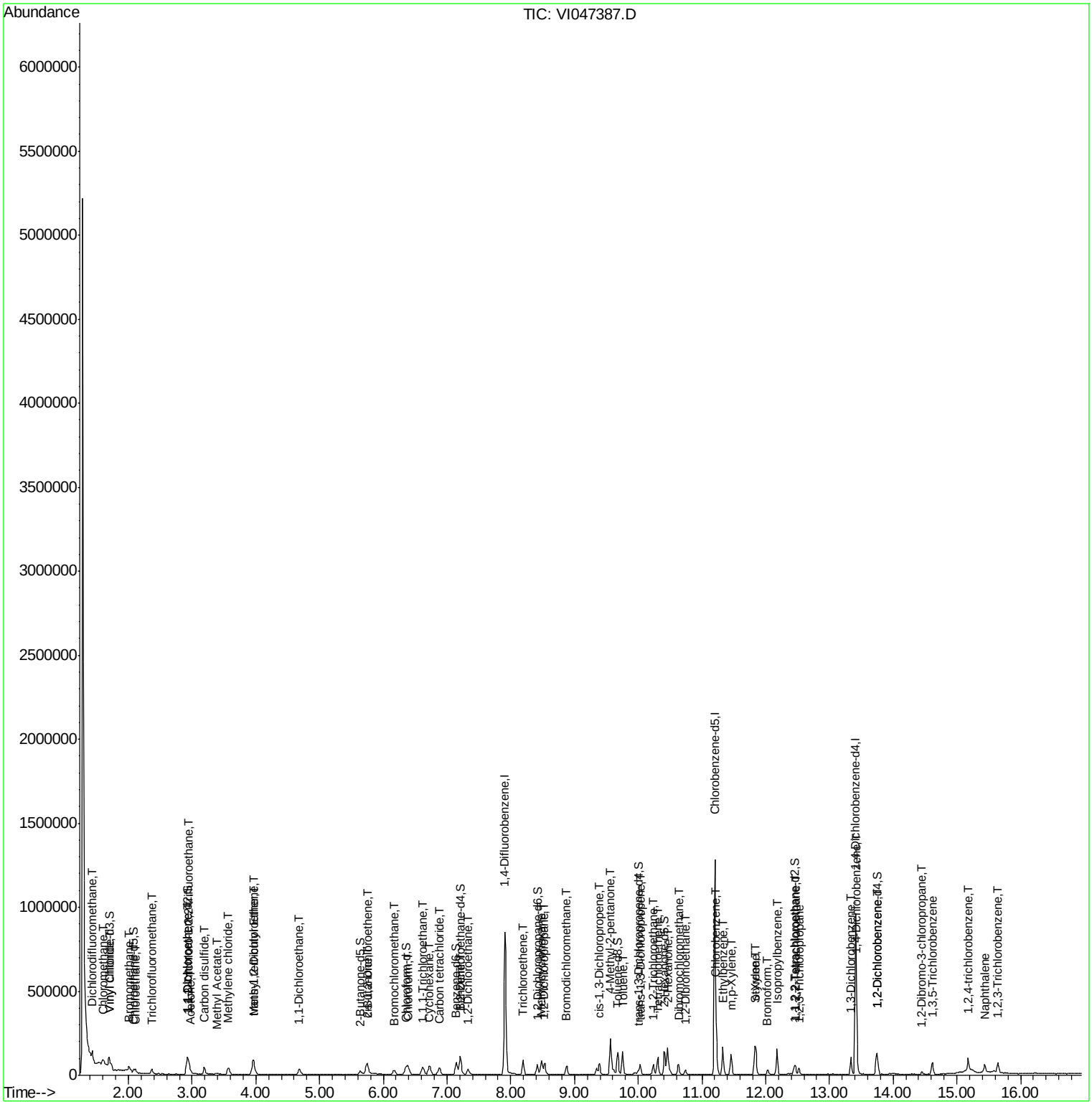
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047387.D
Acq On : 26 Feb 2016 16:20
Operator : FY/SY
Sample : VSTD0.526
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 27 05:52:47 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD0.526

Manual Integrations APPROVED
sam
2/29/2016 2:10:47 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047387.D
Acq On : 26 Feb 2016 16:20
Operator : FY/SY
Sample : VSTD0.526
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD0.526

Manual Integrations APPROVED
sam
2/29/2016 2:10:47 PM

Quant Time: Feb 27 05:52:47 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	740288	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.20	117	686220	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.42	152	271589	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	1.69	65	20857m	0.50	ug/L		0.00
7) Chloroethane-d5	2.08	69	16585	0.60	ug/L		0.00
11) 1,1-Dichloroethene-d2	2.92	63	49732	0.62	ug/L		0.00
20) 2-Butanone-d5	5.63	46	42352	5.28	ug/L		0.00
24) Chloroform-d	6.35	84	44310	0.50	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.21	65	29031	0.52	ug/L		0.00
32) Benzene-d6	7.14	84	82228	0.52	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.42	67	23248	0.46	ug/L		0.00
41) Toluene-d8	9.68	98	77490	0.50	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.00	79	12696	0.40	ug/L		0.00
46) 2-Hexanone-d5	10.41	63	60517	5.38	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.44	84	20241	0.45	ug/L		0.00
64) 1,2-Dichlorobenzene-d4	13.74	152	25193	0.51	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.43	85	28975	0.51	ug/L		96
3) Chloromethane	1.60	50	28804	0.55	ug/L		90
5) Vinyl chloride	1.70	62	22517	0.52	ug/L		91
6) Bromomethane	2.00	94	14010	0.63	ug/L		96
8) Chloroethane	2.11	64	14305	0.62	ug/L		95
9) Trichlorofluoromethane	2.37	101	24727	0.42	ug/L		99
10) 1,1,2-Trichloro-1,2,2-trif	2.95	101	23128	0.55	ug/L		95
12) 1,1-Dichloroethene	2.93	96	19101	0.60	ug/L		80
13) Acetone	2.98	43	20914	5.46	ug/L		97
14) Carbon disulfide	3.18	76	69393	0.62	ug/L	#	92
15) Methyl Acetate	3.38	43	9963	0.61	ug/L		93
16) Methylene chloride	3.57	84	19822	0.62	ug/L		98
17) Methyl tert-butyl Ether	3.95	73	58870	0.50	ug/L		97
18) trans-1,2-Dichloroethene	3.97	96	23204	0.53	ug/L		98
19) 1,1-Dichloroethane	4.68	63	44103	0.59	ug/L		96
21) 2-Butanone	5.75	43	49267	5.78	ug/L		99
22) cis-1,2-Dichloroethene	5.74	96	23381	0.56	ug/L		96
23) Bromochloromethane	6.18	128	9798	0.56	ug/L		82
25) Chloroform	6.39	83	47455	0.52	ug/L		85
27) 1,2-Dichloroethane	7.33	62	33047	0.49	ug/L		99
29) 1,1,1-Trichloroethane	6.62	97	41077	0.50	ug/L		97
30) Cyclohexane	6.73	56	34919	0.54	ug/L		95
31) Carbon tetrachloride	6.87	117	38697	0.51	ug/L		93
33) Benzene	7.21	78	86408	0.53	ug/L		100
34) Trichloroethene	8.19	95	27876	0.53	ug/L		88
35) Methylcyclohexane	8.48	83	35103	0.55	ug/L		95
37) 1,2-Dichloropropane	8.54	63	23673	0.55	ug/L		97
38) Bromodichloromethane	8.87	83	34069	0.48	ug/L	#	93
39) cis-1,3-Dichloropropene	9.39	75	36154	0.45	ug/L		89
40) 4-Methyl-2-pentanone	9.56	43	193034	5.50	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047387.D
Acq On : 26 Feb 2016 16:20
Operator : FY/SY
Sample : VSTD0.526
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD0.526

Manual Integrations APPROVED
sam
2/29/2016 2:10:47 PM

Quant Time: Feb 27 05:52:47 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.75	91	99870	0.56	ug/L		91
44) trans-1,3-Dichloropropene	10.03	75	32365	0.43	ug/L		97
45) 1,1,2-Trichloroethane	10.24	97	17811	0.50	ug/L		85
47) Tetrachloroethene	10.31	164	23072	0.50	ug/L		94
48) 2-Hexanone	10.47	43	134638	5.42	ug/L		98
49) Dibromochloromethane	10.62	129	24791	0.45	ug/L		96
50) 1,2-Dibromoethane	10.74	107	20458	0.51	ug/L	#	96
51) Chlorobenzene	11.23	112	64432	0.51	ug/L		98
52) Ethylbenzene	11.33	91	113426	0.56	ug/L		98
53) m,p-Xylene	11.46	106	38292	0.53	ug/L		80
54) o-Xylene	11.83	106	36314	0.54	ug/L		86
55) Styrene	11.85	104	62150	0.53	ug/L		89
56) Isopropylbenzene	12.18	105	96417	0.52	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.47	83	22491	0.52	ug/L		91
59) 1,2,3-Trichloropropane	12.52	75	16690	0.53	ug/L	#	85
61) Bromoform	12.03	173	12762	0.43	ug/L		95
62) 1,3-Dichlorobenzene	13.34	146	43327	0.54	ug/L		95
63) 1,4-Dichlorobenzene	13.44	146	41326	0.51	ug/L		97
65) 1,2-Dichlorobenzene	13.75	146	39009	0.52	ug/L		89
66) 1,2-Dibromo-3-chloropropan	14.46	75	3452	0.56	ug/L	#	73
67) 1,3,5-Trichlorobenzene	14.62	180	25926	0.44	ug/L		97
68) 1,2,4-trichlorobenzene	15.18	180	25135	0.47	ug/L		96
69) Naphthalene	15.43	128	42437	0.62	ug/L		97
70) 1,2,3-Trichlorobenzene	15.64	180	19881	0.43	ug/L		93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

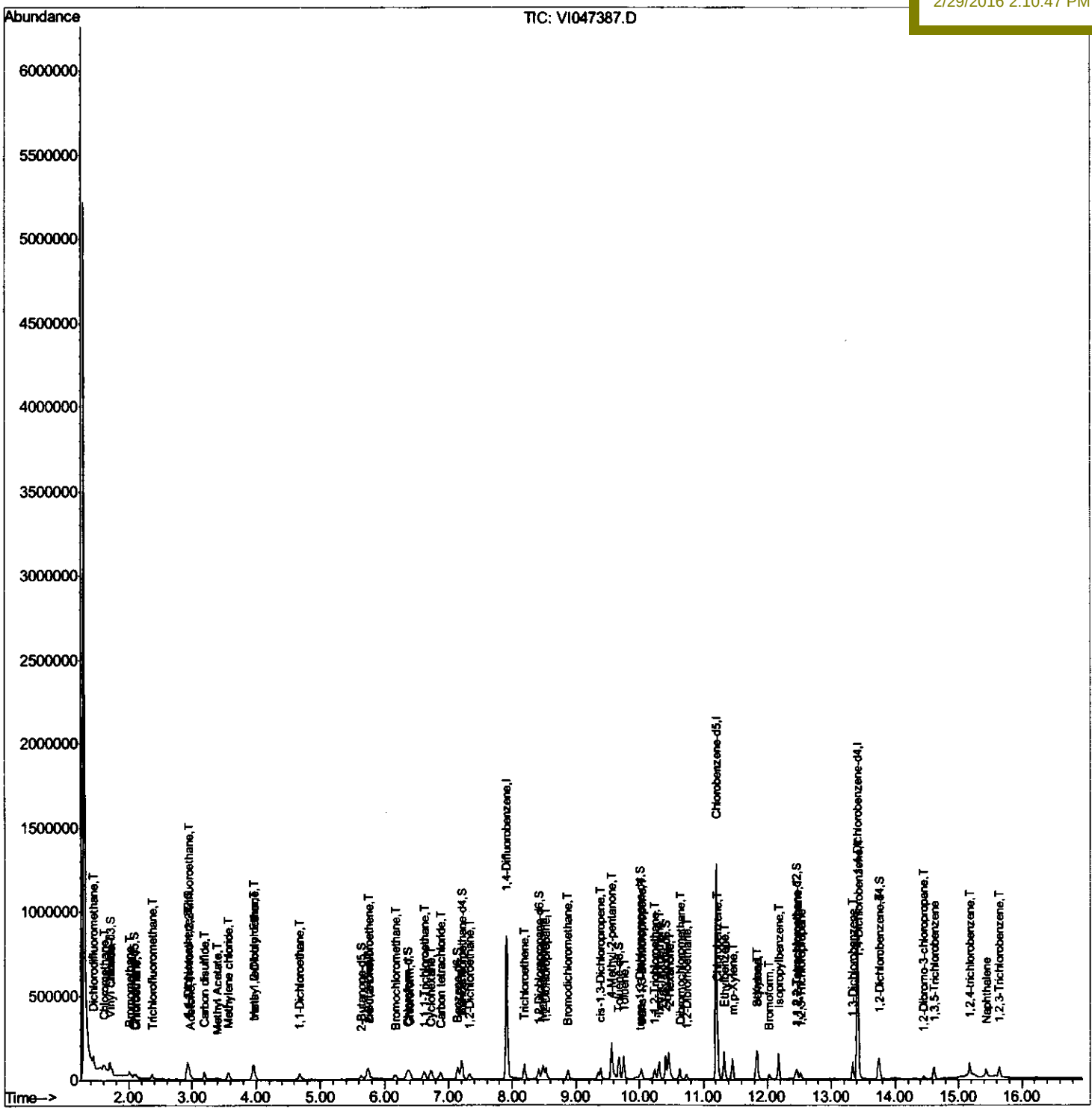
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047387.D
Acq On : 26 Feb 2016 16:20
Operator : FY/SY
Sample : VSTD0.526
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 27 05:52:47 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD0.526

Manual Integrations APPROVED
sam
2/29/2016 2:10:47 PM



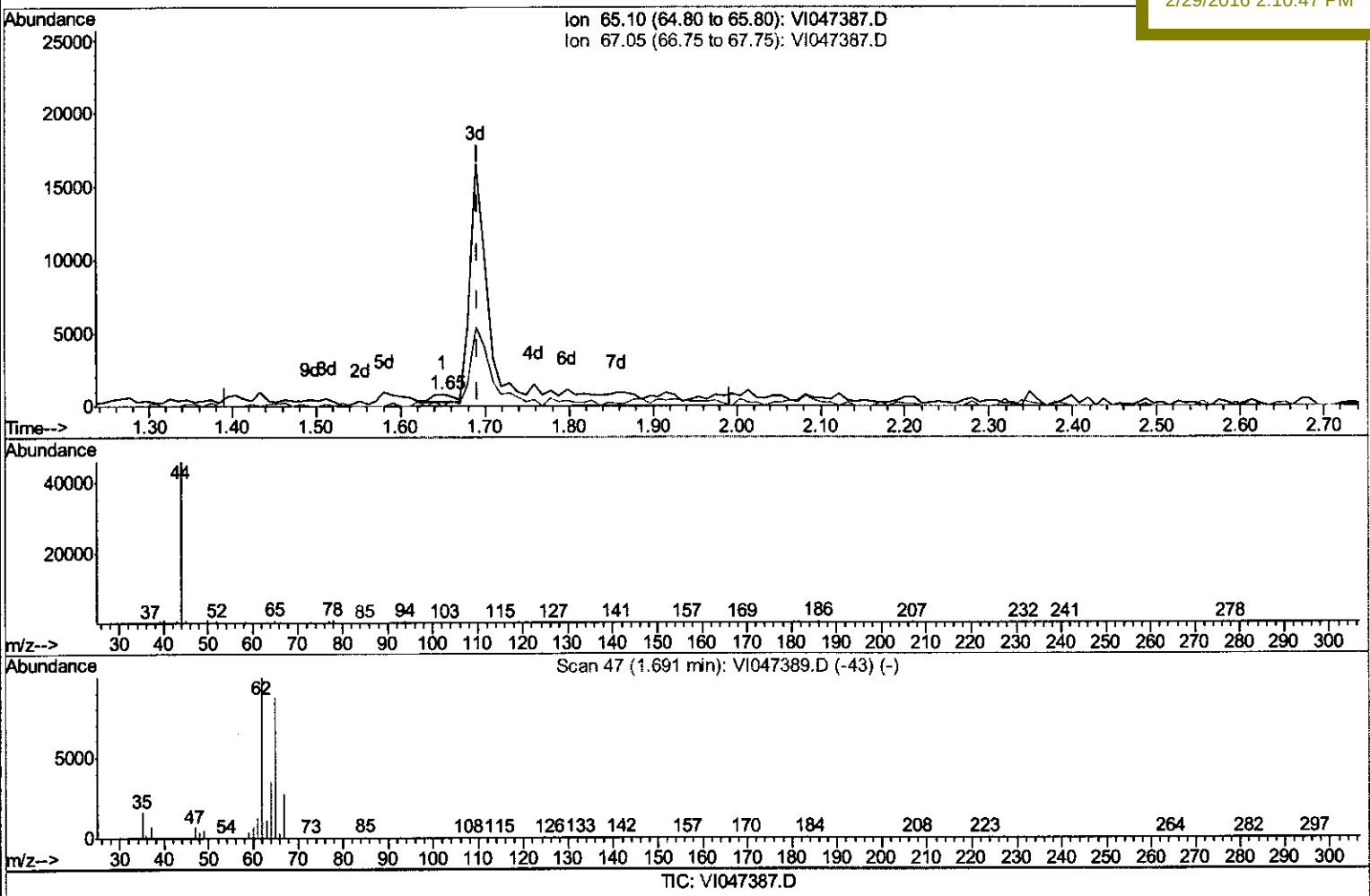
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047387.D
Acq On : 26 Feb 2016 16:20
Operator : FY/SY
Sample : VSTD0.526
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 27 05:48:59 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD0.526

Manual Integrations APPROVED
sam
2/29/2016 2:10:47 PM



TIC: VI047387.D

(4) Vinyl Chloride-d3 (S)

1.650min (-0.042) 0.02ug/L

response 965

Ion	Exp%	Act%
65.10	100	100
67.05	31.50	31.92
0.00	0.00	0.00
0.00	0.00	0.00

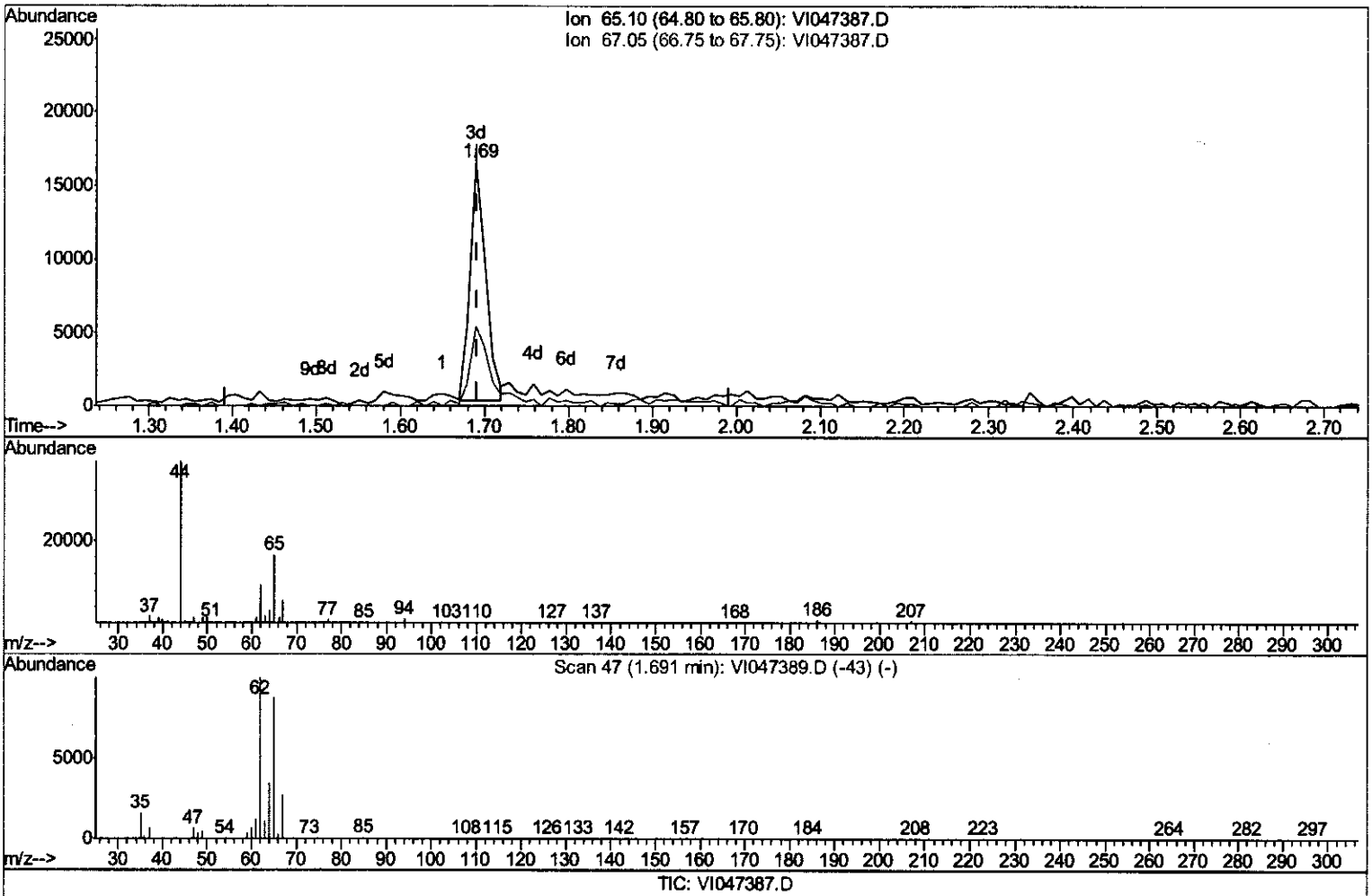
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047387.D
Acq On : 26 Feb 2016 16:20
Operator : FY/SY
Sample : VSTD0.526
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 27 05:48:59 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD0.526

Manual Integrations APPROVED
sam
2/29/2016 2:10:47 PM



TIC: VI047387.D

(4) Vinyl Chloride-d3 (S)

1.689min (-0.002) 0.50ug/L m

response 20857

> F.Y 03/05/16

Ion	Exp%	Act%
65.10	100	100
67.05	31.50	1.48#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047387.D
Acq On : 26 Feb 2016 16:20
Operator : FY/SY
Sample : VSTD0.526
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 27 05:52:47 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD0.526

Manual Integrations APPROVED
sam
2/29/2016 2:10:47 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	740288	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.20	117	686220	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.42	152	271589	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	1.69	65	20857m	0.50	ug/L		0.00
7) Chloroethane-d5	2.08	69	16585	0.60	ug/L		0.00
11) 1,1-Dichloroethene-d2	2.92	63	49732	0.62	ug/L		0.00
20) 2-Butanone-d5	5.63	46	42352	5.28	ug/L		0.00
24) Chloroform-d	6.35	84	44310	0.50	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.21	65	29031	0.52	ug/L		0.00
32) Benzene-d6	7.14	84	82228	0.52	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.42	67	23248	0.46	ug/L		0.00
41) Toluene-d8	9.68	98	77490	0.50	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.00	79	12696	0.40	ug/L		0.00
46) 2-Hexanone-d5	10.41	63	60517	5.38	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.44	84	20241	0.45	ug/L		0.00
64) 1,2-Dichlorobenzene-d4	13.74	152	25193	0.51	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.43	85	28975	0.51	ug/L		96
3) Chloromethane	1.60	50	28804	0.55	ug/L		90
5) Vinyl chloride	1.70	62	22517	0.52	ug/L		91
6) Bromomethane	2.00	94	14010	0.63	ug/L		96
8) Chloroethane	2.11	64	14305	0.62	ug/L		95
9) Trichlorofluoromethane	2.37	101	24727	0.42	ug/L		99
10) 1,1,2-Trichloro-1,2,2-trif	2.95	101	23128	0.55	ug/L		95
12) 1,1-Dichloroethene	2.93	96	19101	0.60	ug/L		80
13) Acetone	2.98	43	20914	5.46	ug/L		97
14) Carbon disulfide	3.18	76	69393	0.62	ug/L	#	92
15) Methyl Acetate	3.38	43	9963	0.61	ug/L		93
16) Methylene chloride	3.57	84	19822	0.62	ug/L		98
17) Methyl tert-butyl Ether	3.95	73	58870	0.50	ug/L		97
18) trans-1,2-Dichloroethene	3.97	96	23204	0.53	ug/L		98
19) 1,1-Dichloroethane	4.68	63	44103	0.59	ug/L		96
21) 2-Butanone	5.75	43	49267	5.78	ug/L		99
22) cis-1,2-Dichloroethene	5.74	96	23381	0.56	ug/L		96
23) Bromochloromethane	6.18	128	9798	0.56	ug/L		82
25) Chloroform	6.39	83	47455	0.52	ug/L		85
27) 1,2-Dichloroethane	7.33	62	33047	0.49	ug/L		99
29) 1,1,1-Trichloroethane	6.62	97	41077	0.50	ug/L		97
30) Cyclohexane	6.73	56	34919	0.54	ug/L		95
31) Carbon tetrachloride	6.87	117	38697	0.51	ug/L		93
33) Benzene	7.21	78	86408	0.53	ug/L		100
34) Trichloroethene	8.19	95	27876	0.53	ug/L		88
35) Methylcyclohexane	8.48	83	35103	0.55	ug/L		95
37) 1,2-Dichloropropane	8.54	63	23673	0.55	ug/L		97
38) Bromodichloromethane	8.87	83	34069	0.48	ug/L	#	93
39) cis-1,3-Dichloropropene	9.39	75	36154	0.45	ug/L		89
40) 4-Methyl-2-pentanone	9.56	43	193034	5.50	ug/L		99

> F.Y 03/05/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047387.D
Acq On : 26 Feb 2016 16:20
Operator : FY/SY
Sample : VSTD0.526
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 27 05:52:47 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD0.526

Manual Integrations APPROVED
sam
2/29/2016 2:10:47 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.75	91	99870	0.56	ug/L		91
44) trans-1,3-Dichloropropene	10.03	75	32365	0.43	ug/L		97
45) 1,1,2-Trichloroethane	10.24	97	17811	0.50	ug/L		85
47) Tetrachloroethene	10.31	164	23072	0.50	ug/L		94
48) 2-Hexanone	10.47	43	134638	5.42	ug/L		98
49) Dibromochloromethane	10.62	129	24791	0.45	ug/L		96
50) 1,2-Dibromoethane	10.74	107	20458	0.51	ug/L	#	96
51) Chlorobenzene	11.23	112	64432	0.51	ug/L		98
52) Ethylbenzene	11.33	91	113426	0.56	ug/L		98
53) m,p-Xylene	11.46	106	38292	0.53	ug/L		80
54) o-Xylene	11.83	106	36314	0.54	ug/L		86
55) Styrene	11.85	104	62150	0.53	ug/L		89
56) Isopropylbenzene	12.18	105	96417	0.52	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.47	83	22491	0.52	ug/L		91
59) 1,2,3-Trichloropropane	12.52	75	16690	0.53	ug/L	#	85
61) Bromoform	12.03	173	12762	0.43	ug/L		95
62) 1,3-Dichlorobenzene	13.34	146	43327	0.54	ug/L		95
63) 1,4-Dichlorobenzene	13.44	146	41326	0.51	ug/L		97
65) 1,2-Dichlorobenzene	13.75	146	39009	0.52	ug/L		89
66) 1,2-Dibromo-3-chloropropan	14.46	75	3452	0.56	ug/L	#	73
67) 1,3,5-Trichlorobenzene	14.62	180	25926	0.44	ug/L		97
68) 1,2,4-trichlorobenzene	15.18	180	25135	0.47	ug/L		96
69) Naphthalene	15.43	128	42437	0.62	ug/L		97
70) 1,2,3-Trichlorobenzene	15.64	180	19881	0.43	ug/L		93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

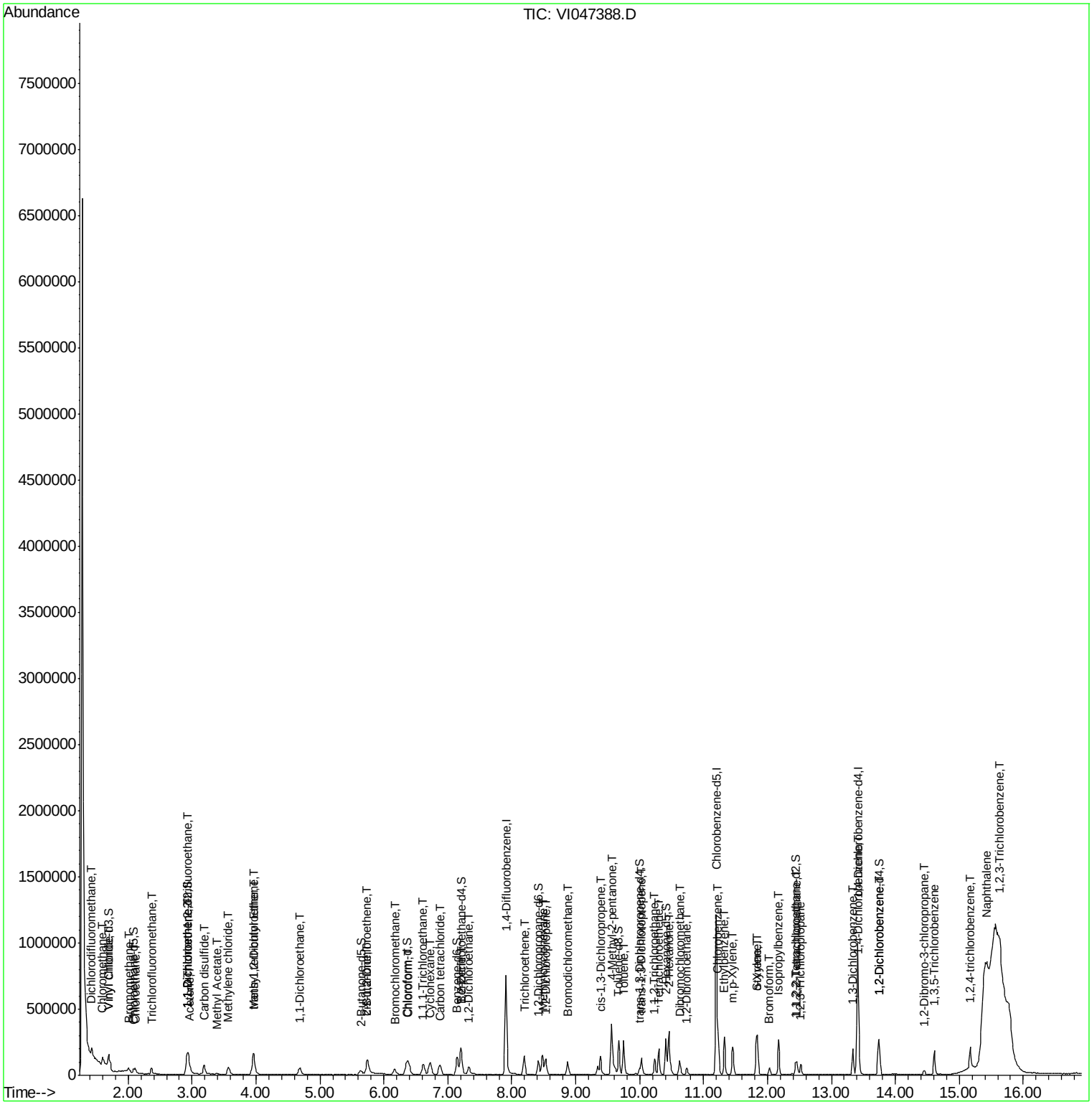
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI022616\
Data File : VI047388.D
Acq On : 26 Feb 2016 16:52
Operator : FY/SY
Sample : VSTD00127
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 27 05:55:24 2016
Quant Method : W:\HPCHEM1\MSVOA I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00127

Manual Integrations APPROVED
sam
2/29/2016 1:07:30 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047388.D
Acq On : 26 Feb 2016 16:52
Operator : FY/SY
Sample : VSTD00127
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 27 05:55:24 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00127

Manual Integrations APPROVED
sam
2/29/2016 1:07:30 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	712147	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.20	117	652062	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.41	152	275857	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	1.68	65	37825	0.95	ug/L		0.00
7) Chloroethane-d5	2.09	69	30428	1.14	ug/L		0.00
11) 1,1-Dichloroethene-d2	2.91	63	88980	1.16	ug/L		0.00
20) 2-Butanone-d5	5.63	46	82003	10.62	ug/L		0.00
24) Chloroform-d	6.35	84	91453	1.07	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.20	65	54094	1.00	ug/L		0.00
32) Benzene-d6	7.15	84	160380	1.06	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.41	67	49439	1.03	ug/L		0.00
41) Toluene-d8	9.67	98	154154	1.04	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.00	79	26692	0.89	ug/L		0.00
46) 2-Hexanone-d5	10.41	63	115156	10.78	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.44	84	42184	0.98	ug/L		0.00
64) 1,2-Dichlorobenzene-d4	13.74	152	55743	1.12	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.43	85	47561	0.87	ug/L		92
3) Chloromethane	1.60	50	55565	1.11	ug/L		97
5) Vinyl chloride	1.69	62	40886	0.98	ug/L		100
6) Bromomethane	2.01	94	17548	0.82	ug/L		89
8) Chloroethane	2.11	64	26709	1.21	ug/L		86
9) Trichlorofluoromethane	2.36	101	37778	0.67	ug/L		91
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	40948	1.00	ug/L		94
12) 1,1-Dichloroethene	2.93	96	32226	1.05	ug/L		92
13) Acetone	2.97	43	33291	9.03	ug/L		97
14) Carbon disulfide	3.19	76	116298	1.07	ug/L		95
15) Methyl Acetate	3.38	43	14795m	0.95	ug/L		
16) Methylene chloride	3.56	84	33526	1.08	ug/L		90
17) Methyl tert-butyl Ether	3.96	73	114378	1.01	ug/L		98
18) trans-1,2-Dichloroethene	3.97	96	47803	1.14	ug/L		88
19) 1,1-Dichloroethane	4.69	63	83864	1.17	ug/L		98
21) 2-Butanone	5.75	43	86489	10.55	ug/L		92
22) cis-1,2-Dichloroethene	5.74	96	41091	1.03	ug/L		99
23) Bromochloromethane	6.17	128	17977	1.07	ug/L		99
25) Chloroform	6.39	83	86591	0.98	ug/L		96
27) 1,2-Dichloroethane	7.33	62	66924	1.04	ug/L		99
29) 1,1,1-Trichloroethane	6.61	97	79323	1.02	ug/L		99
30) Cyclohexane	6.73	56	63772	1.04	ug/L	#	93
31) Carbon tetrachloride	6.88	117	69018	0.96	ug/L		100
33) Benzene	7.20	78	162326	1.05	ug/L		100
34) Trichloroethene	8.20	95	50841	1.02	ug/L		92
35) Methylcyclohexane	8.48	83	59037	0.97	ug/L		95
37) 1,2-Dichloropropane	8.53	63	43433	1.06	ug/L	#	96
38) Bromodichloromethane	8.88	83	68005	1.00	ug/L		96
39) cis-1,3-Dichloropropene	9.39	75	75582	0.98	ug/L		98
40) 4-Methyl-2-pentanone	9.57	43	371768	11.14	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047388.D
Acq On : 26 Feb 2016 16:52
Operator : FY/SY
Sample : VSTD00127
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00127

Manual Integrations APPROVED
sam
2/29/2016 1:07:30 PM

Quant Time: Feb 27 05:55:24 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.75	91	182335	1.07	ug/L		99
44) trans-1,3-Dichloropropene	10.03	75	64717	0.90	ug/L		93
45) 1,1,2-Trichloroethane	10.23	97	34962	1.03	ug/L		97
47) Tetrachloroethene	10.30	164	46728	1.07	ug/L		95
48) 2-Hexanone	10.46	43	258954	10.97	ug/L		99
49) Dibromochloromethane	10.63	129	49412	0.94	ug/L		98
50) 1,2-Dibromoethane	10.74	107	41335	1.09	ug/L	#	75
51) Chlorobenzene	11.23	112	125228	1.05	ug/L		94
52) Ethylbenzene	11.33	91	197943	1.03	ug/L		96
53) m,p-Xylene	11.45	106	67988	1.00	ug/L		98
54) o-Xylene	11.83	106	62885	0.98	ug/L		95
55) Styrene	11.85	104	111465	0.99	ug/L		94
56) Isopropylbenzene	12.17	105	168178	0.96	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.47	83	39932	0.98	ug/L		95
59) 1,2,3-Trichloropropane	12.52	75	32089	1.06	ug/L	#	83
61) Bromoform	12.03	173	25387	0.83	ug/L		99
62) 1,3-Dichlorobenzene	13.33	146	83221	1.02	ug/L		95
63) 1,4-Dichlorobenzene	13.43	146	83521	1.02	ug/L		96
65) 1,2-Dichlorobenzene	13.76	146	79718	1.05	ug/L		90
66) 1,2-Dibromo-3-chloropropan	14.45	75	6762	1.09	ug/L		93
67) 1,3,5-Trichlorobenzene	14.61	180	60809	1.02	ug/L		98
68) 1,2,4-trichlorobenzene	15.17	180	53207	0.99	ug/L		95
69) Naphthalene	15.43	128	74008	1.06	ug/L	#	96
70) 1,2,3-Trichlorobenzene	15.64	180	47295	1.01	ug/L	#	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

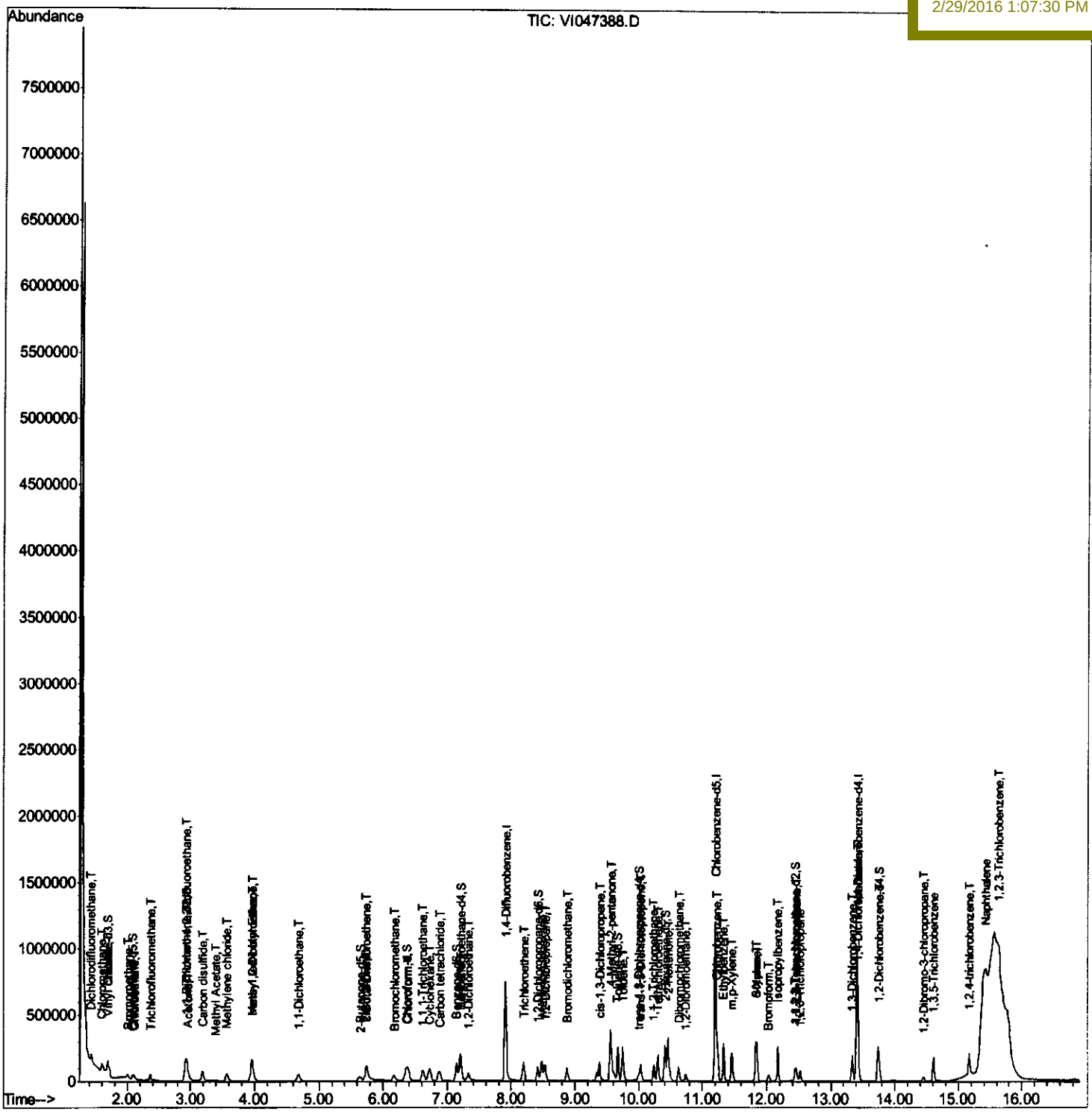
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047388.D
Acq On : 26 Feb 2016 16:52
Operator : FY/SY
Sample : VSTD00127
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 27 05:55:24 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00127

Manual Integrations APPROVED
sam
2/29/2016 1:07:30 PM



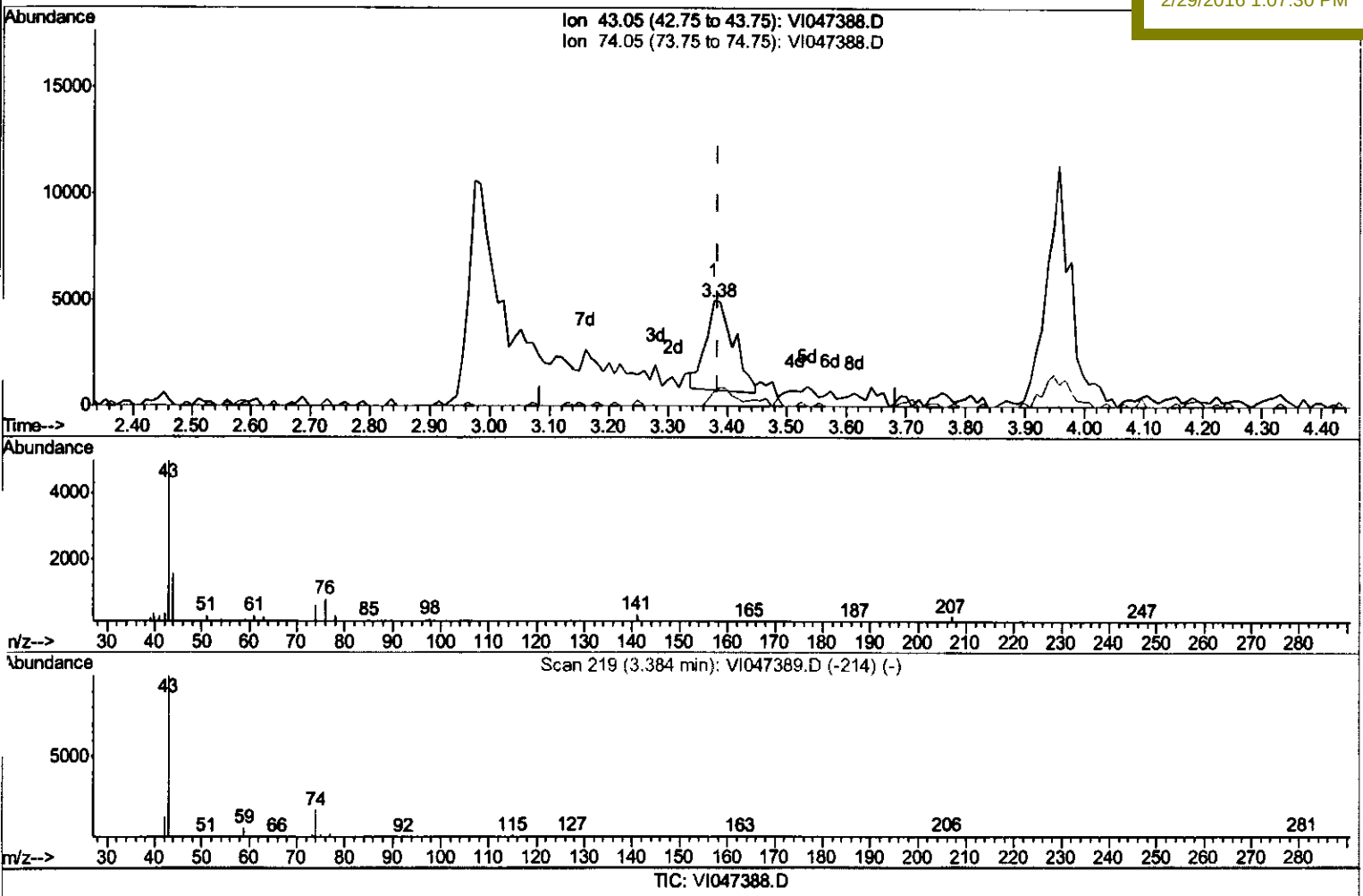
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047388.D
Acq On : 26 Feb 2016 16:52
Operator : FY/SY
Sample : VSTD00127
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 27 05:49:24 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00127

Manual Integrations APPROVED
sam
2/29/2016 1:07:30 PM



TIC: VI047388.D

(15) Methyl Acetate (T)

3.377min (-0.007) 0.89ug/L

response 13923

Ion	Exp%	Act%
43.05	100	100
74.05	17.60	15.58
0.00	0.00	0.00
0.00	0.00	0.00

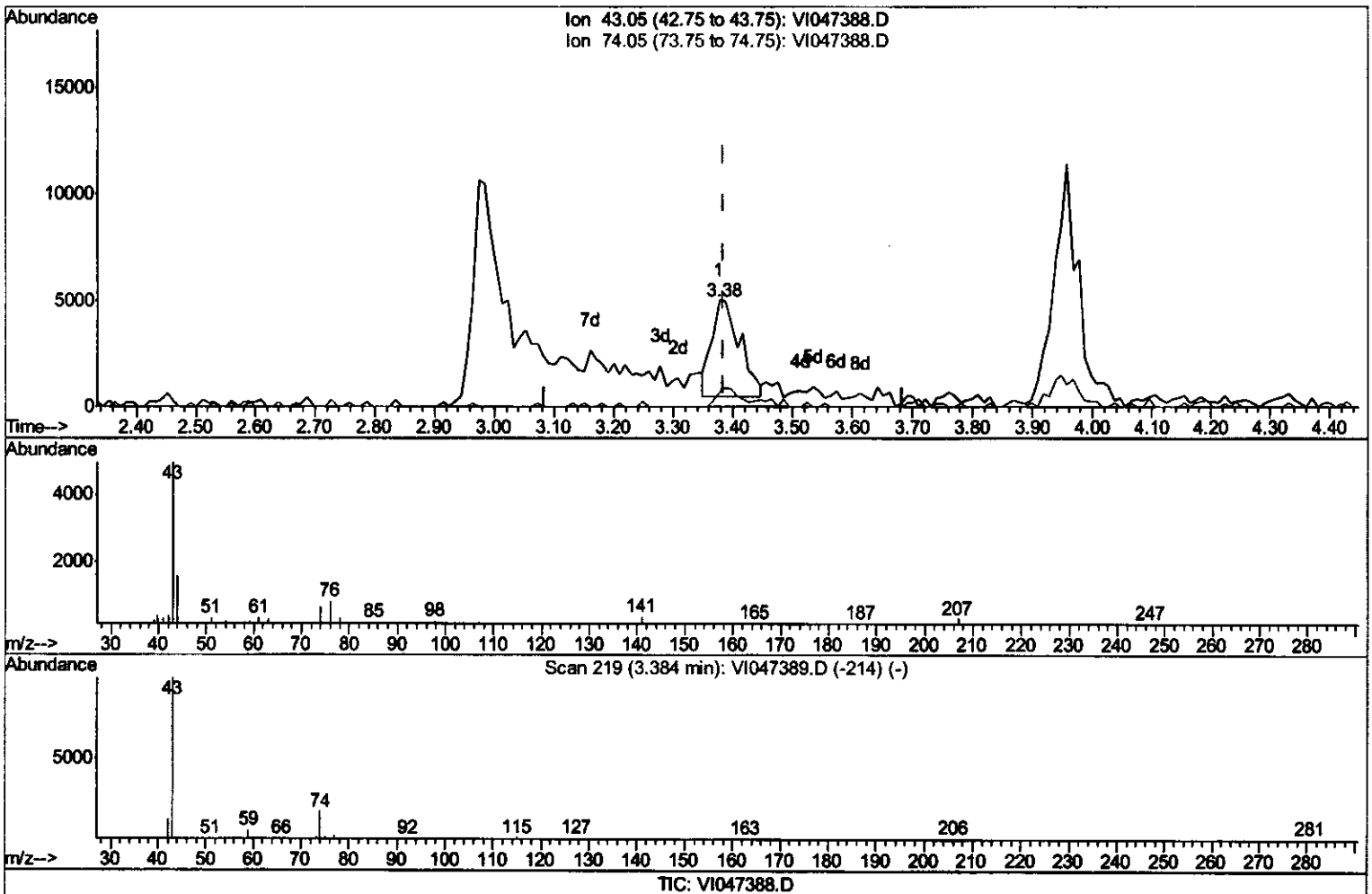
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047388.D
Acq On : 26 Feb 2016 16:52
Operator : FY/SY
Sample : VSTD00127
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 27 05:49:24 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00127

Manual Integrations APPROVED
sam
2/29/2016 1:07:30 PM



TIC: VI047388.D

(15) Methyl Acetate (T)

3.377min (-0.007) 0.95ug/L m

response 14795

Ion	Exp%	Act%
43.05	100	100
74.05	17.60	14.66
0.00	0.00	0.00
0.00	0.00	0.00

F.Y 03/05/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047388.D
Acq On : 26 Feb 2016 16:52
Operator : FY/SY
Sample : VSTD00127
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 27 05:55:24 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00127

Manual Integrations APPROVED
sam
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Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	712147	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.20	117	652062	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.41	152	275857	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	1.68	65	37825	0.95	ug/L		0.00
7) Chloroethane-d5	2.09	69	30428	1.14	ug/L		0.00
11) 1,1-Dichloroethene-d2	2.91	63	88980	1.16	ug/L		0.00
20) 2-Butanone-d5	5.63	46	82003	10.62	ug/L		0.00
24) Chloroform-d	6.35	84	91453	1.07	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.20	65	54094	1.00	ug/L		0.00
32) Benzene-d6	7.15	84	160380	1.06	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.41	67	49439	1.03	ug/L		0.00
41) Toluene-d8	9.67	98	154154	1.04	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.00	79	26692	0.89	ug/L		0.00
46) 2-Hexanone-d5	10.41	63	115156	10.78	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.44	84	42184	0.98	ug/L		0.00
64) 1,2-Dichlorobenzene-d4	13.74	152	55743	1.12	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.43	85	47561	0.87	ug/L		92
3) Chloromethane	1.60	50	55565	1.11	ug/L		97
5) Vinyl chloride	1.69	62	40886	0.98	ug/L		100
6) Bromomethane	2.01	94	17548	0.82	ug/L		89
8) Chloroethane	2.11	64	26709	1.21	ug/L		86
9) Trichlorofluoromethane	2.36	101	37778	0.67	ug/L		91
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	40948	1.00	ug/L		94
12) 1,1-Dichloroethene	2.93	96	32226	1.05	ug/L		92
13) Acetone	2.97	43	33291	9.03	ug/L		97
14) Carbon disulfide	3.19	76	116298	1.07	ug/L		95
15) Methyl Acetate	3.38	43	14795m	0.95	ug/L		
16) Methylene chloride	3.56	84	33526	1.08	ug/L		90
17) Methyl tert-butyl Ether	3.96	73	114378	1.01	ug/L		98
18) trans-1,2-Dichloroethene	3.97	96	47803	1.14	ug/L		88
19) 1,1-Dichloroethane	4.69	63	83864	1.17	ug/L		98
21) 2-Butanone	5.75	43	86489	10.55	ug/L		92
22) cis-1,2-Dichloroethene	5.74	96	41091	1.03	ug/L		99
23) Bromochloromethane	6.17	128	17977	1.07	ug/L		99
25) Chloroform	6.39	83	86591	0.98	ug/L		96
27) 1,2-Dichloroethane	7.33	62	66924	1.04	ug/L		99
29) 1,1,1-Trichloroethane	6.61	97	79323	1.02	ug/L		99
30) Cyclohexane	6.73	56	63772	1.04	ug/L	#	93
31) Carbon tetrachloride	6.88	117	69018	0.96	ug/L		100
33) Benzene	7.20	78	162326	1.05	ug/L		100
34) Trichloroethene	8.20	95	50841	1.02	ug/L		92
35) Methylcyclohexane	8.48	83	59037	0.97	ug/L		95
37) 1,2-Dichloropropane	8.53	63	43433	1.06	ug/L	#	96
38) Bromodichloromethane	8.88	83	68005	1.00	ug/L		96
39) cis-1,3-Dichloropropene	9.39	75	75582	0.98	ug/L		98
40) 4-Methyl-2-pentanone	9.57	43	371768	11.14	ug/L		99

F.Y 03/09/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047388.D
Acq On : 26 Feb 2016 16:52
Operator : FY/SY
Sample : VSTD00127
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 27 05:55:24 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00127

Manual Integrations APPROVED
sam
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Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.75	91	182335	1.07	ug/L		99
44) trans-1,3-Dichloropropene	10.03	75	64717	0.90	ug/L		93
45) 1,1,2-Trichloroethane	10.23	97	34962	1.03	ug/L		97
47) Tetrachloroethene	10.30	164	46728	1.07	ug/L		95
48) 2-Hexanone	10.46	43	258954	10.97	ug/L		99
49) Dibromochloromethane	10.63	129	49412	0.94	ug/L		98
50) 1,2-Dibromoethane	10.74	107	41335	1.09	ug/L	#	75
51) Chlorobenzene	11.23	112	125228	1.05	ug/L		94
52) Ethylbenzene	11.33	91	197943	1.03	ug/L		96
53) m,p-Xylene	11.45	106	67988	1.00	ug/L		98
54) o-Xylene	11.83	106	62885	0.98	ug/L		95
55) Styrene	11.85	104	111465	0.99	ug/L		94
56) Isopropylbenzene	12.17	105	168178	0.96	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.47	83	39932	0.98	ug/L		95
59) 1,2,3-Trichloropropane	12.52	75	32089	1.06	ug/L	#	83
61) Bromoform	12.03	173	25387	0.83	ug/L		99
62) 1,3-Dichlorobenzene	13.33	146	83221	1.02	ug/L		95
63) 1,4-Dichlorobenzene	13.43	146	83521	1.02	ug/L		96
65) 1,2-Dichlorobenzene	13.76	146	79718	1.05	ug/L		90
66) 1,2-Dibromo-3-chloropropan	14.45	75	6762	1.09	ug/L		93
67) 1,3,5-Trichlorobenzene	14.61	180	60809	1.02	ug/L		98
68) 1,2,4-trichlorobenzene	15.17	180	53207	0.99	ug/L		95
69) Naphthalene	15.43	128	74008	1.06	ug/L	#	96
70) 1,2,3-Trichlorobenzene	15.64	180	47295	1.01	ug/L	#	91

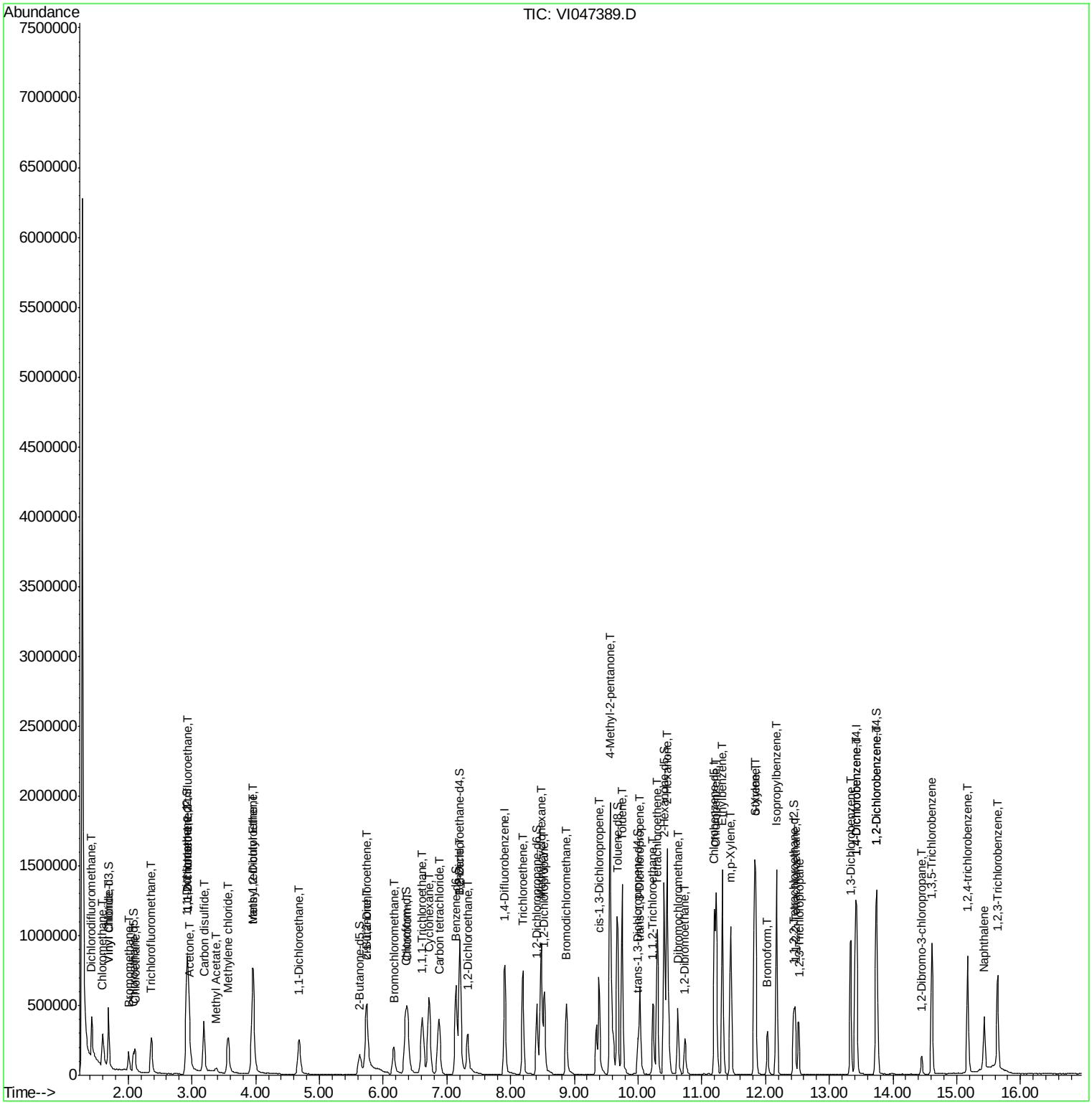
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047389.D
Acq On : 26 Feb 2016 17:24
Operator : FY/SY
Sample : VSTD00528
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Quant Time: Feb 27 05:49:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047389.D
Acq On : 26 Feb 2016 17:24
Operator : FY/SY
Sample : VSTD00528
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Quant Time: Feb 27 05:49:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	723575	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	647752	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.41	152	288688	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	189532	4.68	ug/L	0.00
7) Chloroethane-d5	2.09	69	138493	5.10	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.91	63	425811	5.46	ug/L	0.00
20) 2-Butanone-d5	5.63	46	427367	54.46	ug/L	0.00
24) Chloroform-d	6.35	84	461758	5.29	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.20	65	251701	4.58	ug/L	0.00
32) Benzene-d6	7.14	84	761753	5.06	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.41	67	227264	4.75	ug/L	0.00
41) Toluene-d8	9.67	98	768387	5.24	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.00	79	147338	4.95	ug/L	0.00
46) 2-Hexanone-d5	10.41	63	592108	55.80	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.44	84	218860	5.10	ug/L	0.00
64) 1,2-Dichlorobenzene-d4	13.73	152	256293	4.91	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	277831	4.99	ug/L	100
3) Chloromethane	1.59	50	264424	5.21	ug/L	100
5) Vinyl chloride	1.69	62	198641	4.71	ug/L	100
6) Bromomethane	2.01	94	87445	4.02	ug/L	100
8) Chloroethane	2.10	64	116024	5.18	ug/L	100
9) Trichlorofluoromethane	2.36	101	226409	3.92	ug/L	100
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	247841	5.98	ug/L	100
12) 1,1-Dichloroethene	2.93	96	163305	5.24	ug/L	100
13) Acetone	2.97	43	191352	51.07	ug/L	100
14) Carbon disulfide	3.19	76	600214	5.45	ug/L	100
15) Methyl Acetate	3.38	43	70422	4.44	ug/L	100
16) Methylene chloride	3.56	84	158822	5.05	ug/L	100
17) Methyl tert-butyl Ether	3.94	73	547810	4.75	ug/L	100
18) trans-1,2-Dichloroethene	3.96	96	229553	5.39	ug/L	100
19) 1,1-Dichloroethane	4.68	63	393497	5.40	ug/L	100
21) 2-Butanone	5.74	43	471685	56.62	ug/L	100
22) cis-1,2-Dichloroethene	5.74	96	210050	5.17	ug/L	100
23) Bromochloromethane	6.17	128	86997	5.11	ug/L	100
25) Chloroform	6.38	83	436908	4.88	ug/L	100
27) 1,2-Dichloroethane	7.33	62	332535	5.08	ug/L	100
29) 1,1,1-Trichloroethane	6.61	97	404095	5.25	ug/L	100
30) Cyclohexane	6.72	56	367109	6.03	ug/L	100
31) Carbon tetrachloride	6.88	117	378566	5.27	ug/L	100
33) Benzene	7.20	78	761885	4.97	ug/L	100
34) Trichloroethene	8.19	95	260404	5.24	ug/L	100
35) Methylcyclohexane	8.48	83	358308	5.95	ug/L	100
37) 1,2-Dichloropropane	8.53	63	204940	5.02	ug/L	100
38) Bromodichloromethane	8.87	83	350738	5.18	ug/L	100
39) cis-1,3-Dichloropropene	9.39	75	371335	4.87	ug/L	100
40) 4-Methyl-2-pentanone	9.56	43	1792338	54.09	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047389.D
Acq On : 26 Feb 2016 17:24
Operator : FY/SY
Sample : VSTD00528
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Quant Time: Feb 27 05:49:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.75	91	915242	5.41	ug/L	100
44) trans-1,3-Dichloropropene	10.02	75	351596	4.91	ug/L	100
45) 1,1,2-Trichloroethane	10.24	97	167378	4.94	ug/L	100
47) Tetrachloroethene	10.30	164	238487	5.49	ug/L	100
48) 2-Hexanone	10.46	43	1275849	54.42	ug/L	100
49) Dibromochloromethane	10.62	129	261117	4.99	ug/L	100
50) 1,2-Dibromoethane	10.73	107	189067	5.03	ug/L	100
51) Chlorobenzene	11.23	112	601895	5.08	ug/L	100
52) Ethylbenzene	11.32	91	1019957	5.37	ug/L	100
53) m,p-Xylene	11.45	106	360973	5.33	ug/L	100
54) o-Xylene	11.83	106	339512	5.34	ug/L	100
55) Styrene	11.84	104	576765	5.18	ug/L	100
56) Isopropylbenzene	12.17	105	944914	5.44	ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.46	83	205878	5.06	ug/L	100
59) 1,2,3-Trichloropropane	12.52	75	158380	5.29	ug/L	100
61) Bromoform	12.03	173	151984	4.78	ug/L	100
62) 1,3-Dichlorobenzene	13.34	146	444013	5.19	ug/L	100
63) 1,4-Dichlorobenzene	13.43	146	443714	5.16	ug/L	100
65) 1,2-Dichlorobenzene	13.75	146	396423	4.99	ug/L	100
66) 1,2-Dibromo-3-chloropropan	14.45	75	35325	5.42	ug/L	100
67) 1,3,5-Trichlorobenzene	14.61	180	313892	5.02	ug/L	100
68) 1,2,4-trichlorobenzene	15.17	180	293060	5.19	ug/L	100
69) Naphthalene	15.43	128	360775	4.96	ug/L	100
70) 1,2,3-Trichlorobenzene	15.64	180	257566	5.27	ug/L	100

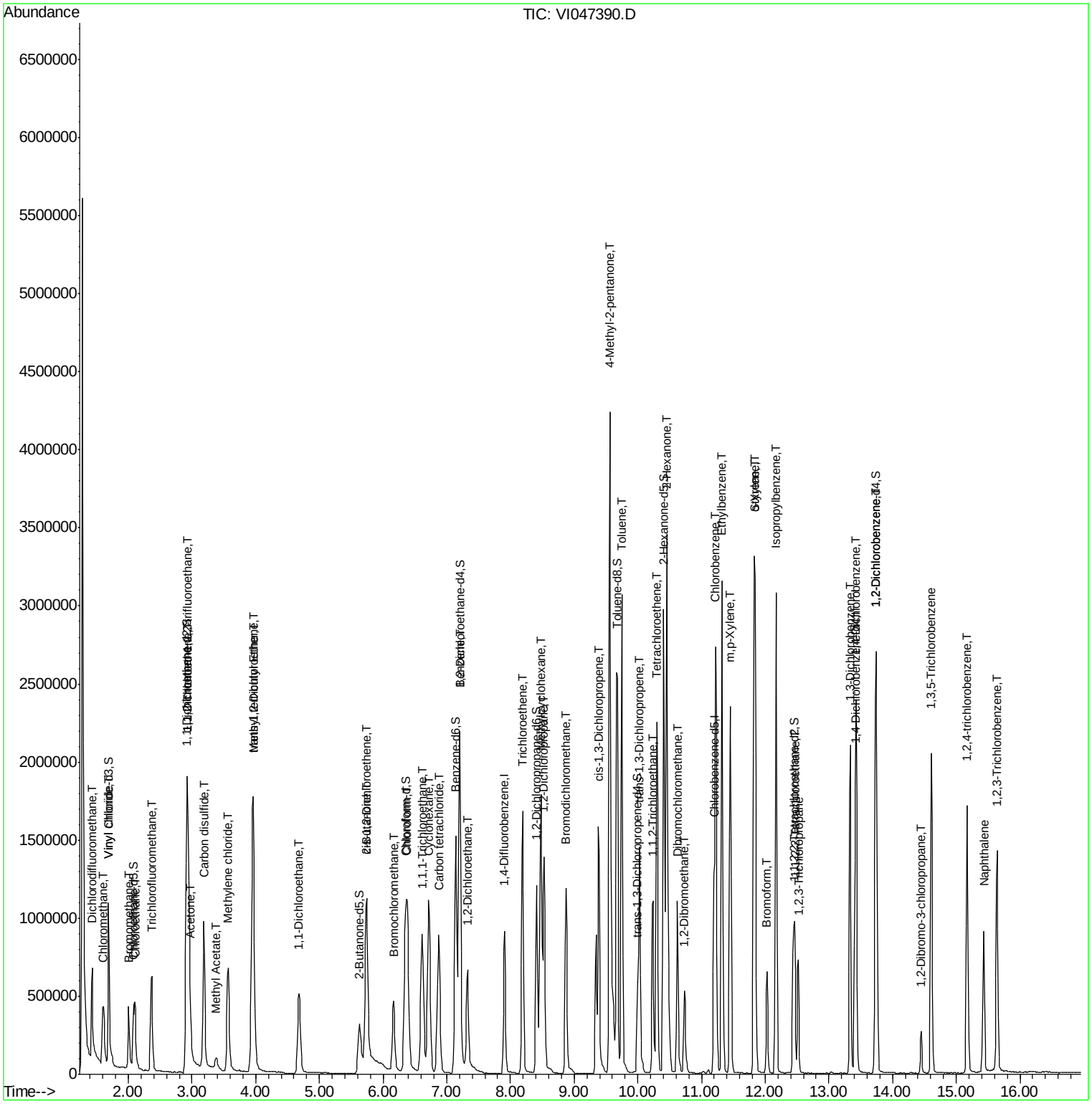
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047390.D
Acq On : 26 Feb 2016 17:56
Operator : FY/SY
Sample : VSTD01029
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01029

Quant Time: Feb 27 05:50:18 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047390.D
Acq On : 26 Feb 2016 17:56
Operator : FY/SY
Sample : VSTD01029
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01029

Quant Time: Feb 27 05:50:18 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	785805	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	700915	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.41	152	295531	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	488270	11.10	ug/L	0.00
7) Chloroethane-d5	2.08	69	369520	12.52	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.91	63	1006670	11.89	ug/L	0.00
20) 2-Butanone-d5	5.62	46	975026	114.42	ug/L	0.00
24) Chloroform-d	6.35	84	1025602	10.83	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.20	65	570176	9.56	ug/L	0.00
32) Benzene-d6	7.14	84	1731045	10.63	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.41	67	530862	10.25	ug/L	0.00
41) Toluene-d8	9.68	98	1676302	10.56	ug/L	0.00
43) trans-1,3-Dichloropropene-	9.99	79	329297	10.23	ug/L	0.00
46) 2-Hexanone-d5	10.41	63	1234668	107.52	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.44	84	435803	9.38	ug/L	0.00
64) 1,2-Dichlorobenzene-d4	13.73	152	524575	9.81	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	606920	10.03	ug/L	100
3) Chloromethane	1.61	50	577663	10.48	ug/L	97
5) Vinyl chloride	1.70	62	510881	11.15	ug/L	98
6) Bromomethane	2.00	94	232897	9.85	ug/L	87
8) Chloroethane	2.11	64	297409	12.23	ug/L	96
9) Trichlorofluoromethane	2.36	101	536110	8.56	ug/L	100
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	458608	10.20	ug/L	98
12) 1,1-Dichloroethene	2.93	96	384975	11.38	ug/L	94
13) Acetone	2.98	43	447637	110.00	ug/L	96
14) Carbon disulfide	3.18	76	1466688	12.27	ug/L	99
15) Methyl Acetate	3.38	43	175833	10.21	ug/L	93
16) Methylene chloride	3.57	84	381371	11.16	ug/L	91
17) Methyl tert-butyl Ether	3.95	73	1291480	10.30	ug/L	99
18) trans-1,2-Dichloroethene	3.96	96	499466	10.79	ug/L	98
19) 1,1-Dichloroethane	4.68	63	796418	10.06	ug/L	99
21) 2-Butanone	5.74	43	860159	95.07	ug/L	94
22) cis-1,2-Dichloroethene	5.74	96	466105	10.56	ug/L	91
23) Bromochloromethane	6.17	128	198631	10.73	ug/L	95
25) Chloroform	6.38	83	1007618	10.37	ug/L	96
27) 1,2-Dichloroethane	7.33	62	696337	9.80	ug/L	100
29) 1,1,1-Trichloroethane	6.62	97	888441	10.67	ug/L	99
30) Cyclohexane	6.72	56	743900	11.29	ug/L	97
31) Carbon tetrachloride	6.87	117	810925	10.44	ug/L	98
33) Benzene	7.21	78	1813702	10.93	ug/L	100
34) Trichloroethene	8.19	95	562105	10.46	ug/L	97
35) Methylcyclohexane	8.48	83	710022	10.89	ug/L	98
37) 1,2-Dichloropropane	8.53	63	455178	10.30	ug/L	99
38) Bromodichloromethane	8.87	83	760135	10.38	ug/L	96
39) cis-1,3-Dichloropropene	9.38	75	859051	10.40	ug/L	98
40) 4-Methyl-2-pentanone	9.56	43	3683062	102.72	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047390.D
Acq On : 26 Feb 2016 17:56
Operator : FY/SY
Sample : VSTD01029
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01029

Quant Time: Feb 27 05:50:18 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.75	91	1982430	10.83	ug/L		99
44) trans-1,3-Dichloropropene	10.03	75	799162	10.32	ug/L		99
45) 1,1,2-Trichloroethane	10.24	97	362404	9.89	ug/L		98
47) Tetrachloroethene	10.30	164	518671	11.03	ug/L		92
48) 2-Hexanone	10.45	43	2596032	102.33	ug/L		99
49) Dibromochloromethane	10.62	129	577504	10.21	ug/L		96
50) 1,2-Dibromoethane	10.73	107	394332	9.69	ug/L	#	98
51) Chlorobenzene	11.22	112	1333167	10.39	ug/L		99
52) Ethylbenzene	11.32	91	2213283	10.77	ug/L		100
53) m,p-Xylene	11.45	106	777695	10.61	ug/L		94
54) o-Xylene	11.82	106	714002	10.38	ug/L		100
55) Styrene	11.84	104	1230109	10.21	ug/L		99
56) Isopropylbenzene	12.17	105	1980425	10.54	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.46	83	416644	9.47	ug/L		97
59) 1,2,3-Trichloropropane	12.52	75	309923	9.56	ug/L		98
61) Bromoform	12.03	173	313987	9.64	ug/L		99
62) 1,3-Dichlorobenzene	13.34	146	901864	10.31	ug/L		99
63) 1,4-Dichlorobenzene	13.43	146	910640	10.34	ug/L		99
65) 1,2-Dichlorobenzene	13.75	146	800860	9.85	ug/L		99
66) 1,2-Dibromo-3-chloropropan	14.45	75	66974	10.03	ug/L		97
67) 1,3,5-Trichlorobenzene	14.61	180	682935	10.67	ug/L		99
68) 1,2,4-trichlorobenzene	15.17	180	622516	10.76	ug/L		98
69) Naphthalene	15.43	128	877155	11.78	ug/L		99
70) 1,2,3-Trichlorobenzene	15.64	180	549604	10.98	ug/L		99

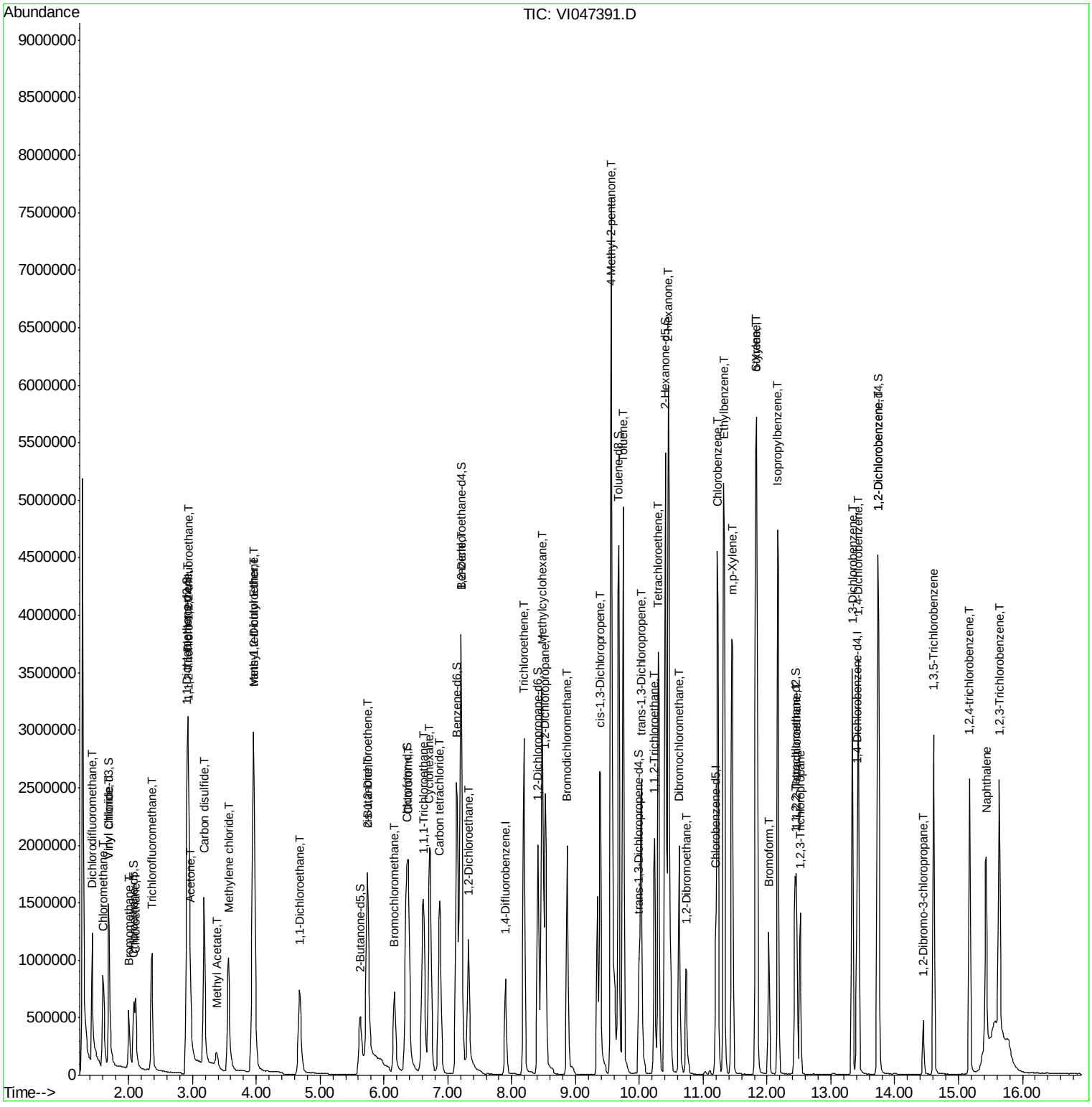
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047391.D
Acq On : 26 Feb 2016 18:27
Operator : FY/SY
Sample : VSTD02030
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02030

Quant Time: Feb 27 05:50:45 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047391.D
Acq On : 26 Feb 2016 18:27
Operator : FY/SY
Sample : VSTD02030
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02030

Quant Time: Feb 27 05:50:45 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	715106	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	644999	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.41	152	259177	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	777889	19.42	ug/L	0.00
7) Chloroethane-d5	2.08	69	569313	21.20	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.91	63	1588393	20.61	ug/L	0.00
20) 2-Butanone-d5	5.63	46	1533533	197.75	ug/L	0.00
24) Chloroform-d	6.35	84	1766854	20.50	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.20	65	1000739	18.43	ug/L	0.00
32) Benzene-d6	7.14	84	3071631	20.50	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.41	67	958722	20.11	ug/L	0.00
41) Toluene-d8	9.68	98	2946387	20.17	ug/L	0.00
43) trans-1,3-Dichloropropene-	9.99	79	581682	19.64	ug/L	0.00
46) 2-Hexanone-d5	10.40	63	2195406	207.76	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.44	84	793646	18.57	ug/L	0.00
64) 1,2-Dichlorobenzene-d4	13.73	152	877843	18.73	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	1140894	20.72	ug/L	100
3) Chloromethane	1.60	50	1083350	21.60	ug/L	99
5) Vinyl chloride	1.70	62	814517	19.53	ug/L	99
6) Bromomethane	2.00	94	358018	16.64	ug/L	85
8) Chloroethane	2.11	64	450290	20.34	ug/L	96
9) Trichlorofluoromethane	2.37	101	921773	16.17	ug/L	97
10) 1,1,2-Trichloro-1,2,2-trif	2.95	101	871174	21.28	ug/L	97
12) 1,1-Dichloroethene	2.93	96	597493	19.40	ug/L	90
13) Acetone	2.98	43	697490	188.34	ug/L	92
14) Carbon disulfide	3.18	76	2326038	21.38	ug/L	99
15) Methyl Acetate	3.38	43	280863	17.91	ug/L	94
16) Methylene chloride	3.57	84	585388	18.82	ug/L	91
17) Methyl tert-butyl Ether	3.95	73	2215332	19.42	ug/L	99
18) trans-1,2-Dichloroethene	3.96	96	827612	19.65	ug/L	95
19) 1,1-Dichloroethane	4.68	63	1200541	16.66	ug/L	98
21) 2-Butanone	5.74	43	1417733	172.19	ug/L	90
22) cis-1,2-Dichloroethene	5.74	96	740448	18.43	ug/L	100
23) Bromochloromethane	6.16	128	316821	18.81	ug/L	98
25) Chloroform	6.38	83	1680270	19.00	ug/L	92
27) 1,2-Dichloroethane	7.33	62	1197754	18.52	ug/L	100
29) 1,1,1-Trichloroethane	6.62	97	1518664	19.82	ug/L	99
30) Cyclohexane	6.72	56	1342679	22.14	ug/L	97
31) Carbon tetrachloride	6.87	117	1388445	19.43	ug/L	99
33) Benzene	7.21	78	3123945	20.45	ug/L	100
34) Trichloroethene	8.19	95	968035	19.58	ug/L	94
35) Methylcyclohexane	8.48	83	1333829	22.23	ug/L	98
37) 1,2-Dichloropropane	8.53	63	788491	19.38	ug/L	100
38) Bromodichloromethane	8.87	83	1336466	19.84	ug/L	97
39) cis-1,3-Dichloropropene	9.39	75	1373620	18.07	ug/L	99
40) 4-Methyl-2-pentanone	9.56	43	6452262	195.54	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022616\
Data File : VI047391.D
Acq On : 26 Feb 2016 18:27
Operator : FY/SY
Sample : VSTD02030
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02030

Quant Time: Feb 27 05:50:45 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 05:32:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.75	91	3347062	19.87	ug/L	100
44) trans-1,3-Dichloropropene	10.03	75	1390991	19.52	ug/L	98
45) 1,1,2-Trichloroethane	10.24	97	647299	19.19	ug/L	99
47) Tetrachloroethene	10.30	164	886859	20.50	ug/L	96
48) 2-Hexanone	10.45	43	4540118	194.47	ug/L	98
49) Dibromochloromethane	10.62	129	1044740	20.07	ug/L	100
50) 1,2-Dibromoethane	10.73	107	701043	18.72	ug/L	97
51) Chlorobenzene	11.23	112	2330550	19.74	ug/L	94
52) Ethylbenzene	11.32	91	3686392	19.49	ug/L	99
53) m,p-Xylene	11.46	106	1308057	19.40	ug/L	97
54) o-Xylene	11.82	106	1199975	18.97	ug/L	99
55) Styrene	11.84	104	2080956	18.77	ug/L	99
56) Isopropylbenzene	12.17	105	3168905	18.32	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.46	83	770960	19.04	ug/L	99
59) 1,2,3-Trichloropropane	12.52	75	561939	18.83	ug/L	100
61) Bromoform	12.03	173	581060	20.33	ug/L	100
62) 1,3-Dichlorobenzene	13.34	146	1465807	19.10	ug/L	97
63) 1,4-Dichlorobenzene	13.43	146	1438858	18.64	ug/L	98
65) 1,2-Dichlorobenzene	13.75	146	1318444	18.49	ug/L	99
66) 1,2-Dibromo-3-chloropropan	14.45	75	117162	20.02	ug/L	98
67) 1,3,5-Trichlorobenzene	14.61	180	1022226	18.20	ug/L	99
68) 1,2,4-trichlorobenzene	15.18	180	963644	18.99	ug/L	98
69) Naphthalene	15.43	128	1610738	24.67	ug/L	99
70) 1,2,3-Trichlorobenzene	15.64	180	828272	18.87	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

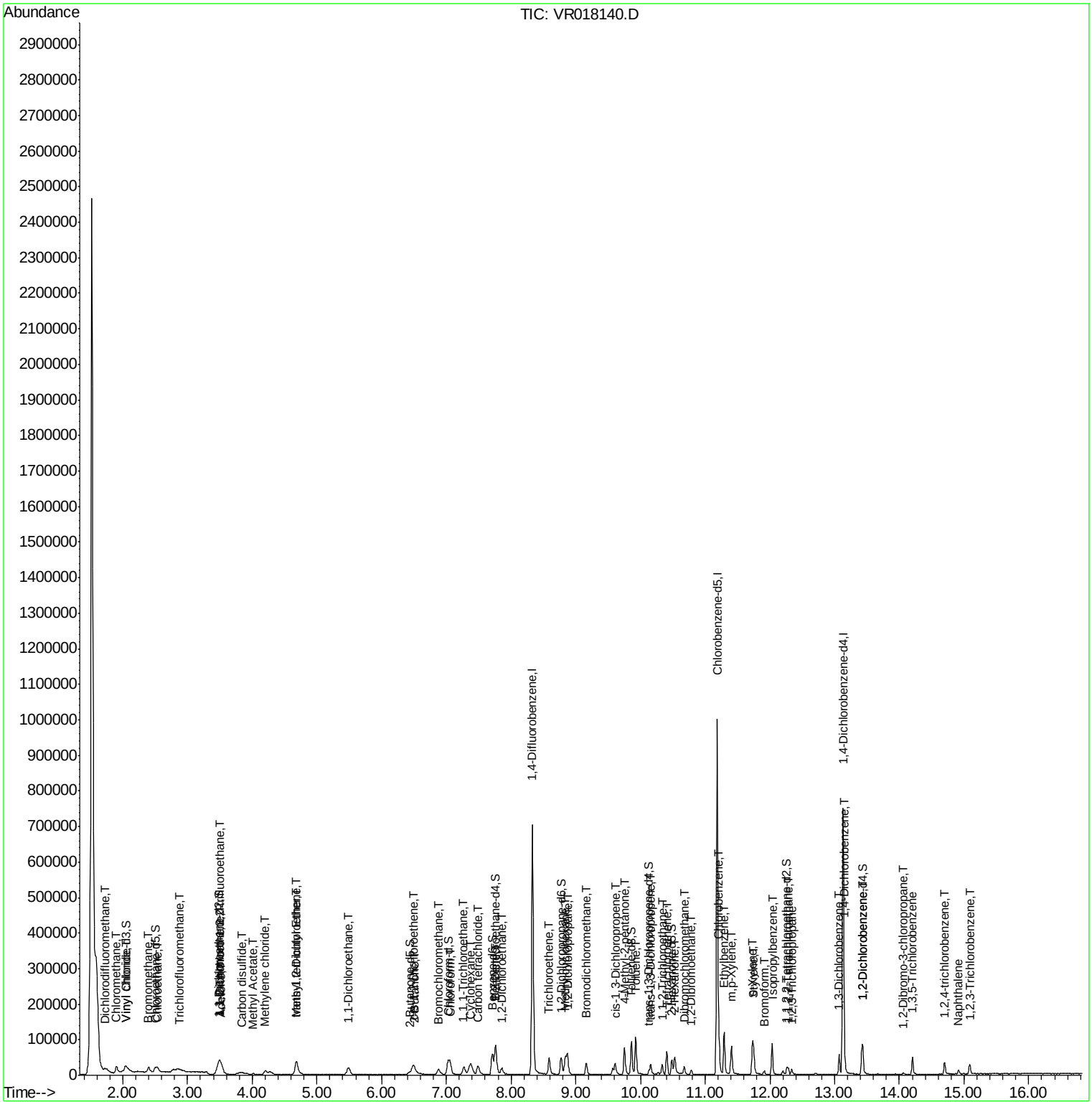
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018140.D
Acq On : 25 Feb 2016 13:49
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 25 16:15:18 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
2/26/2016 2:37:17 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018140.D
Acq On : 25 Feb 2016 13:49
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD0.551

Manual Integrations APPROVED
sam
2/26/2016 2:37:17 PM

Quant Time: Feb 25 16:15:18 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	505677	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	418254	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	155279	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.05	65	22387	0.46	ug/L		0.00
7) Chloroethane-d5	2.50	69	16599	0.46	ug/L		0.00
11) 1,1-Dichloroethene-d2	3.48	63	30179	0.43	ug/L		0.00
20) 2-Butanone-d5	6.43	46	18680	3.77	ug/L		0.04
24) Chloroform-d	7.03	84	35047	0.49	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	19158	0.53	ug/L		0.00
32) Benzene-d6	7.71	84	59731	0.43	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.78	67	20216	0.47	ug/L		0.00
41) Toluene-d8	9.86	98	55270	0.42	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	5791	0.43	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	10782	3.09	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	8363	0.52	ug/L		0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	13467	0.49	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.74	85	18337	0.52	ug/L	#	88
3) Chloromethane	1.91	50	23700	0.49	ug/L		99
5) Vinyl chloride	2.05	62	23016	0.47	ug/L		96
6) Bromomethane	2.40	94	12597	0.48	ug/L		86
8) Chloroethane	2.53	64	14278	0.50	ug/L		98
9) Trichlorofluoromethane	2.87	101	31674m	0.54	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	10476	0.41	ug/L		91
12) 1,1-Dichloroethene	3.49	96	11502	0.45	ug/L		93
13) Acetone	3.53	43	21976	5.38	ug/L		98
14) Carbon disulfide	3.84	76	35638m	0.54	ug/L		
15) Methyl Acetate	4.02	43	4196	0.44	ug/L	#	92
16) Methylene chloride	4.19	84	13231m	0.50	ug/L		
17) Methyl tert-butyl Ether	4.69	73	18224	0.43	ug/L	#	86
18) trans-1,2-Dichloroethene	4.69	96	14523	0.50	ug/L		92
19) 1,1-Dichloroethane	5.48	63	32399	0.46	ug/L		91
21) 2-Butanone	6.52	43	22350m	3.91	ug/L		
22) cis-1,2-Dichloroethene	6.48	96	13038	0.43	ug/L		77
23) Bromochloromethane	6.88	128	5399	0.51	ug/L		83
25) Chloroform	7.06	83	30821	0.48	ug/L		95
27) 1,2-Dichloroethane	7.86	62	21636	0.54	ug/L	#	95
29) 1,1,1-Trichloroethane	7.27	97	21704	0.46	ug/L		97
30) Cyclohexane	7.38	56	16228	0.31	ug/L	#	92
31) Carbon tetrachloride	7.50	117	20946	0.48	ug/L		96
33) Benzene	7.77	78	64518	0.45	ug/L		100
34) Trichloroethene	8.59	95	15958	0.46	ug/L		96
35) Methylcyclohexane	8.84	83	16214	0.36	ug/L		94
37) 1,2-Dichloropropane	8.87	63	17671	0.47	ug/L	#	97
38) Bromodichloromethane	9.16	83	20300	0.52	ug/L		94
39) cis-1,3-Dichloropropene	9.61	75	17094	0.37	ug/L		99
40) 4-Methyl-2-pentanone	9.75	43	54277	3.93	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018140.D
Acq On : 25 Feb 2016 13:49
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD0.551

Manual Integrations APPROVED
sam
2/26/2016 2:37:17 PM

Quant Time: Feb 25 16:15:18 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.92	91	64107	0.44	ug/L		99
44) trans-1,3-Dichloropropene	10.16	75	13961	0.42	ug/L		96
45) 1,1,2-Trichloroethane	10.34	97	8108	0.50	ug/L		88
47) Tetrachloroethene	10.41	164	11116	0.42	ug/L		93
48) 2-Hexanone	10.53	43	34149	3.66	ug/L		96
49) Dibromochloromethane	10.68	129	9837	0.51	ug/L		95
50) 1,2-Dibromoethane	10.78	107	6959	0.49	ug/L	#	78
51) Chlorobenzene	11.21	112	40396	0.47	ug/L		99
52) Ethylbenzene	11.29	91	67580	0.41	ug/L		99
53) m,p-Xylene	11.41	106	22013	0.37	ug/L		93
54) o-Xylene	11.73	106	18893	0.36	ug/L		94
55) Styrene	11.75	104	28881	0.33	ug/L		99
56) Isopropylbenzene	12.04	105	47426	0.34	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.29	83	7010	0.47	ug/L	#	92
59) 1,2,3-Trichloropropane	12.34	75	5334	0.45	ug/L		97
61) Bromoform	11.91	173	4092	0.57	ug/L		96
62) 1,3-Dichlorobenzene	13.07	146	18772	0.41	ug/L		92
63) 1,4-Dichlorobenzene	13.15	146	24436	0.50	ug/L		95
65) 1,2-Dichlorobenzene	13.44	146	19365	0.49	ug/L		95
66) 1,2-Dibromo-3-chloropropan	14.05	75	986	0.59	ug/L	#	68
67) 1,3,5-Trichlorobenzene	14.21	180	12661	0.42	ug/L		93
68) 1,2,4-trichlorobenzene	14.70	180	8879	0.43	ug/L		96
69) Naphthalene	14.92	128	7068	0.31	ug/L		97
70) 1,2,3-Trichlorobenzene	15.09	180	7612	0.48	ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018140.D
Acq On : 25 Feb 2016 13:49
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 25 16:15:18 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
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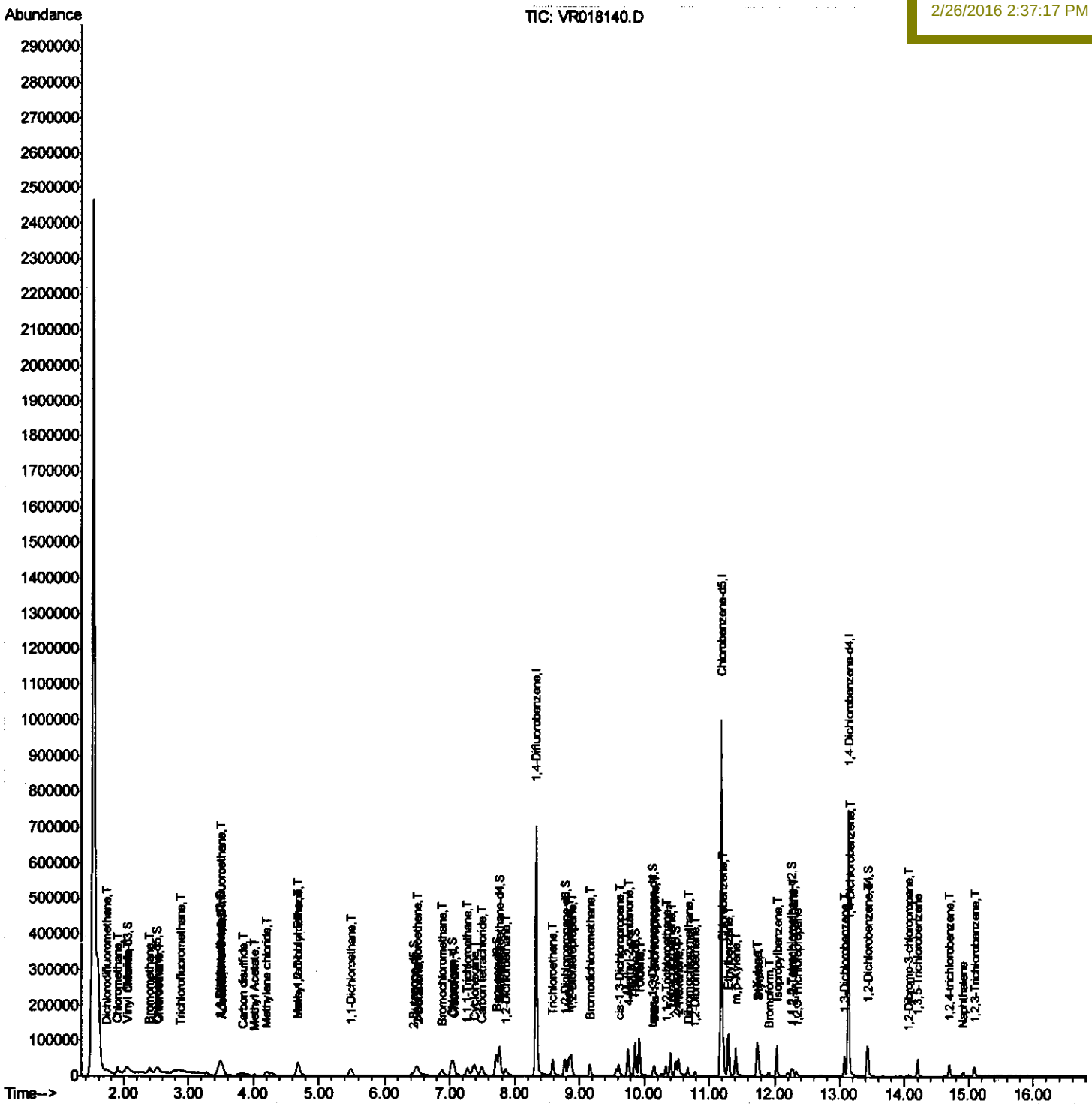


SOMRTR022516W.M Thu Feb 25 16:12:53 2016 Page: 3

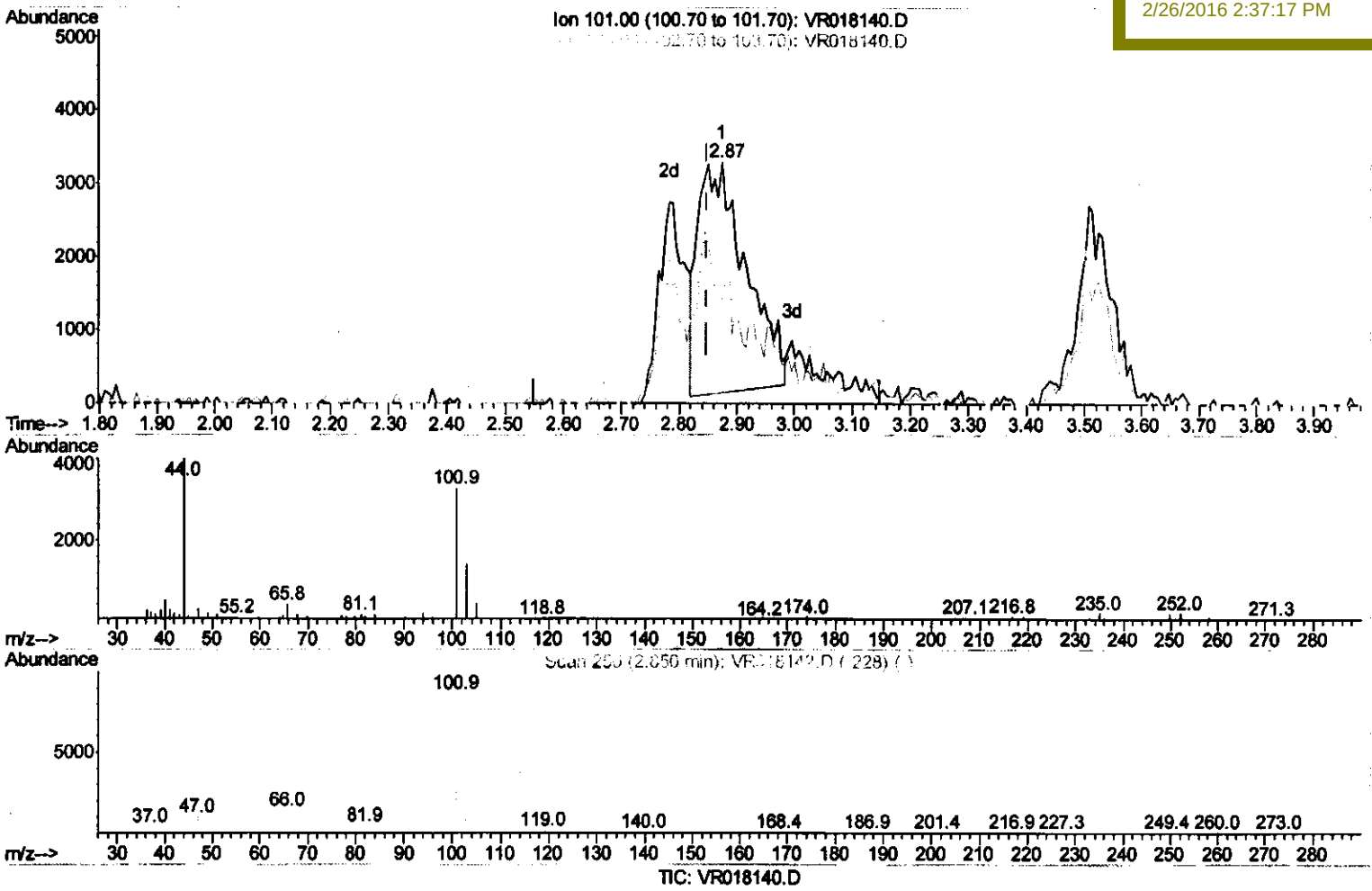
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018140.D
Acq On : 25 Feb 2016 13:49
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 25 16:11:00 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
2/26/2016 2:37:17 PM



TIC: VR018140.D

(9) Trichlorofluoromethane (T)

2.874min (+0.024) 0.31ug/L

response 18122

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	16.62
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018140.D
Acq On : 25 Feb 2016 13:49
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 25 16:11:00 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
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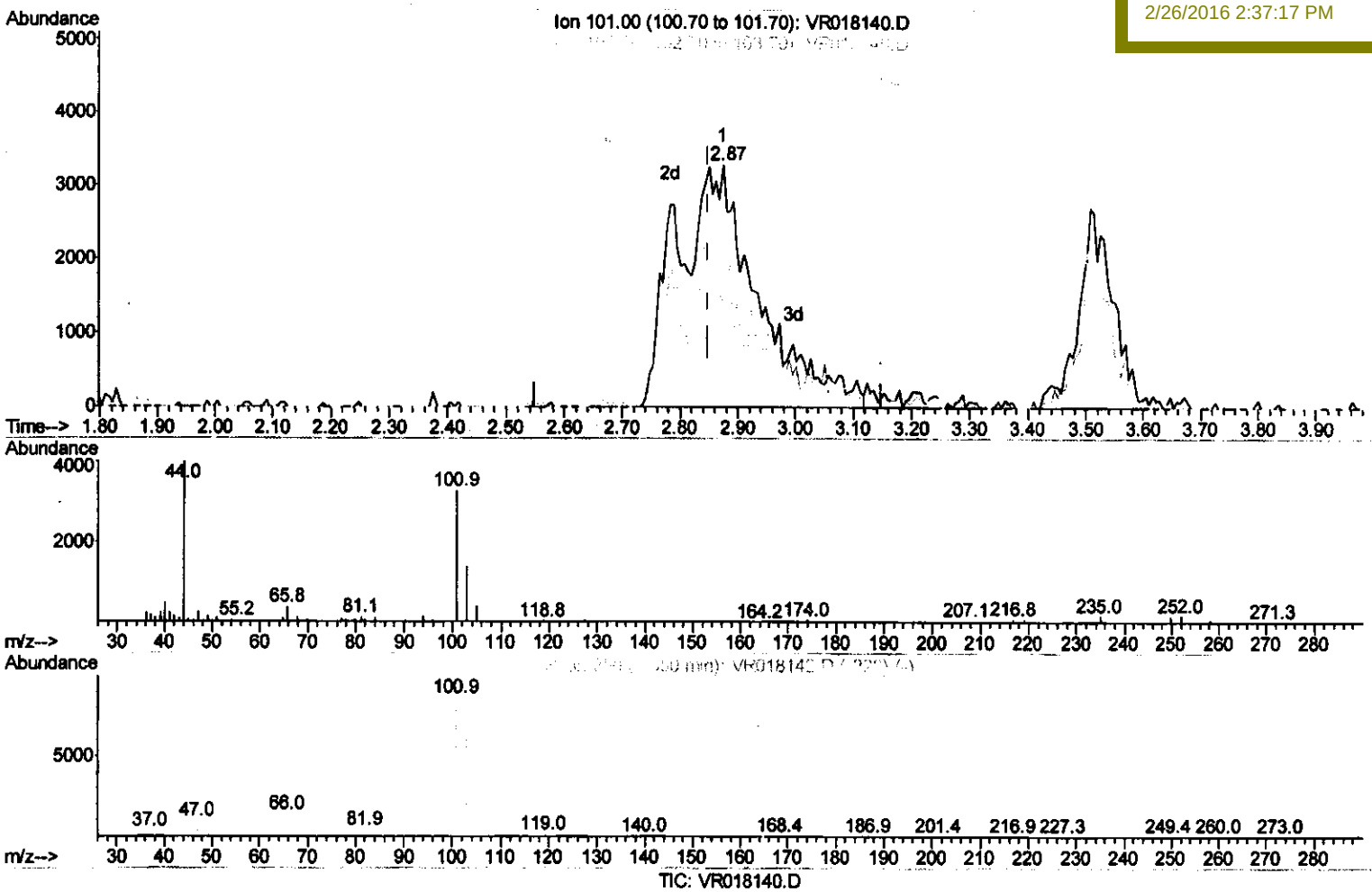

(9) Trichlorofluoromethane (T)

2.874min (+0.024) 0.54ug/L m

response 31674

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	9.51#
0.00	0.00	0.00
0.00	0.00	0.00

M.D 03/01/16

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018140.D
Acq On : 25 Feb 2016 13:49
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 25 16:11:00 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
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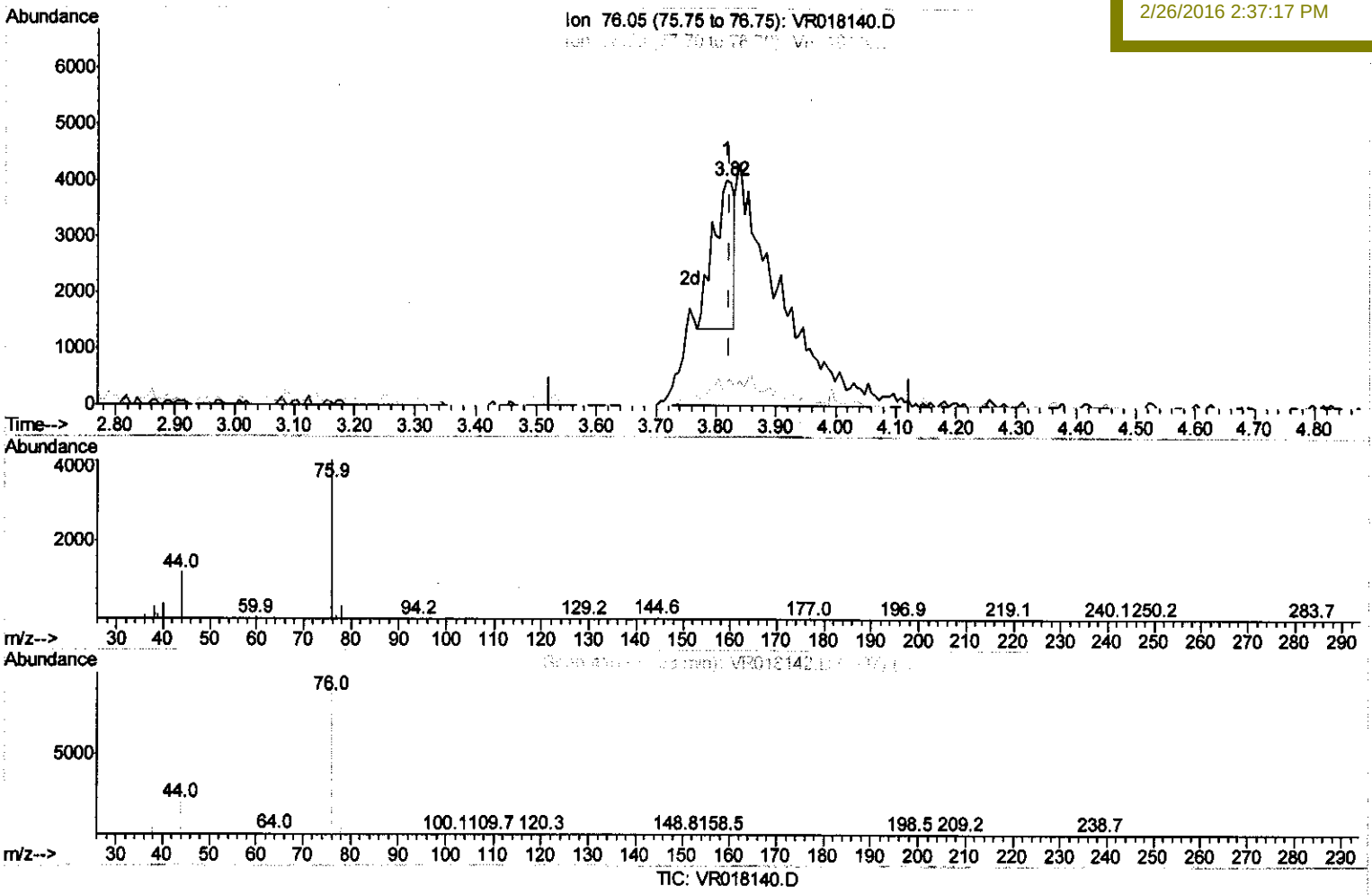
2/26/2016 2:37:17 PM



TIC: VR018140.D

(14) Carbon disulfide (T)

3.817min (-0.006) 0.10ug/L

response 6370

Ion	Exp%	Act%
76.05	100	100
78.00	8.10	9.23
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018140.D
Acq On : 25 Feb 2016 13:49
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 25 16:11:00 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
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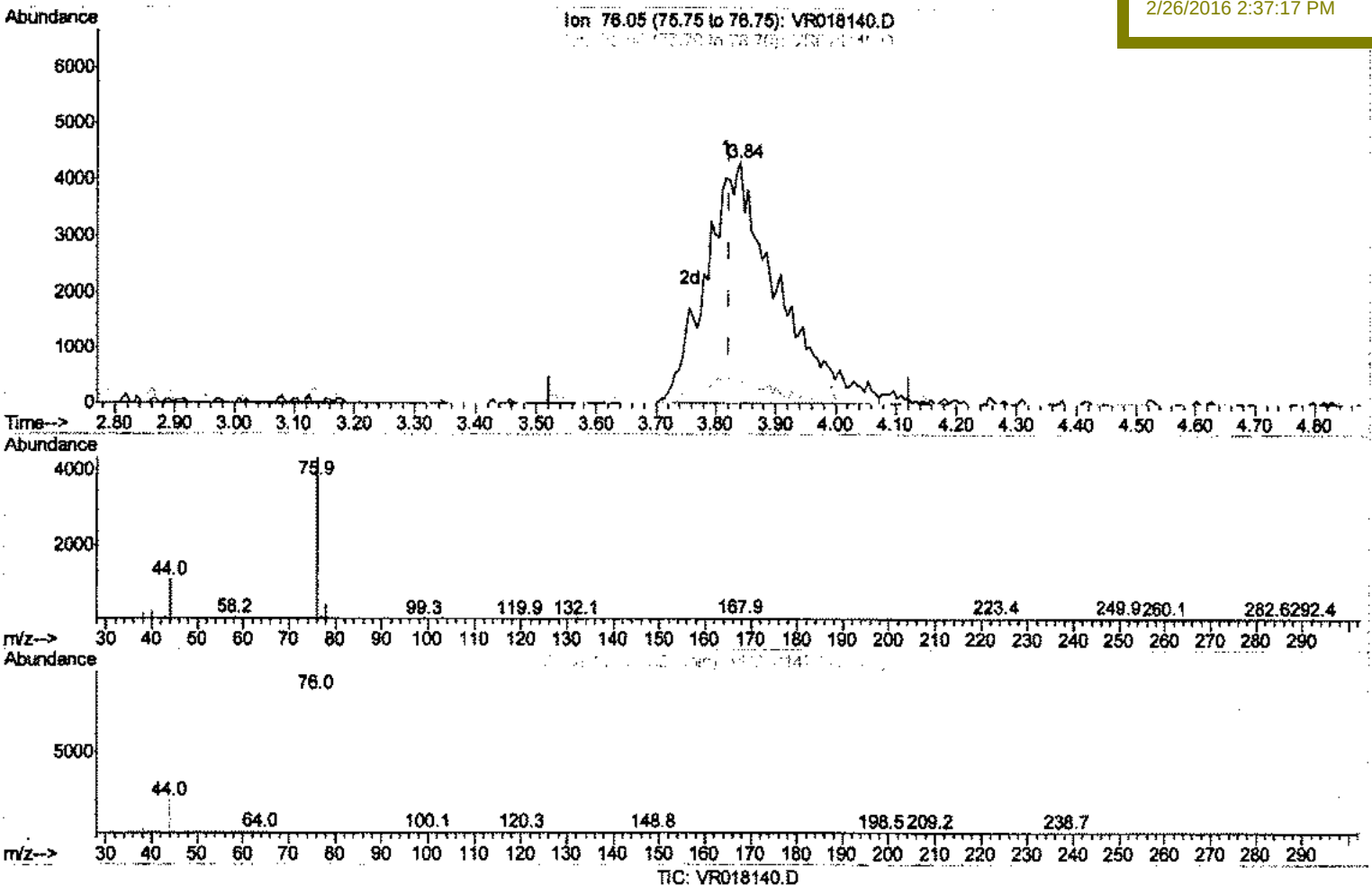
2/26/2016 2:37:17 PM



TIC: VR018140.D

(14) Carbon disulfide (T)

3.841min (+0.018) 0.54ug/L m

response 35638

M·D 03/01/16

Ion	Exp%	Act%
76.05	100	100
78.00	8.10	9.85#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018140.D
Acq On : 25 Feb 2016 13:49
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 25 16:11:00 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
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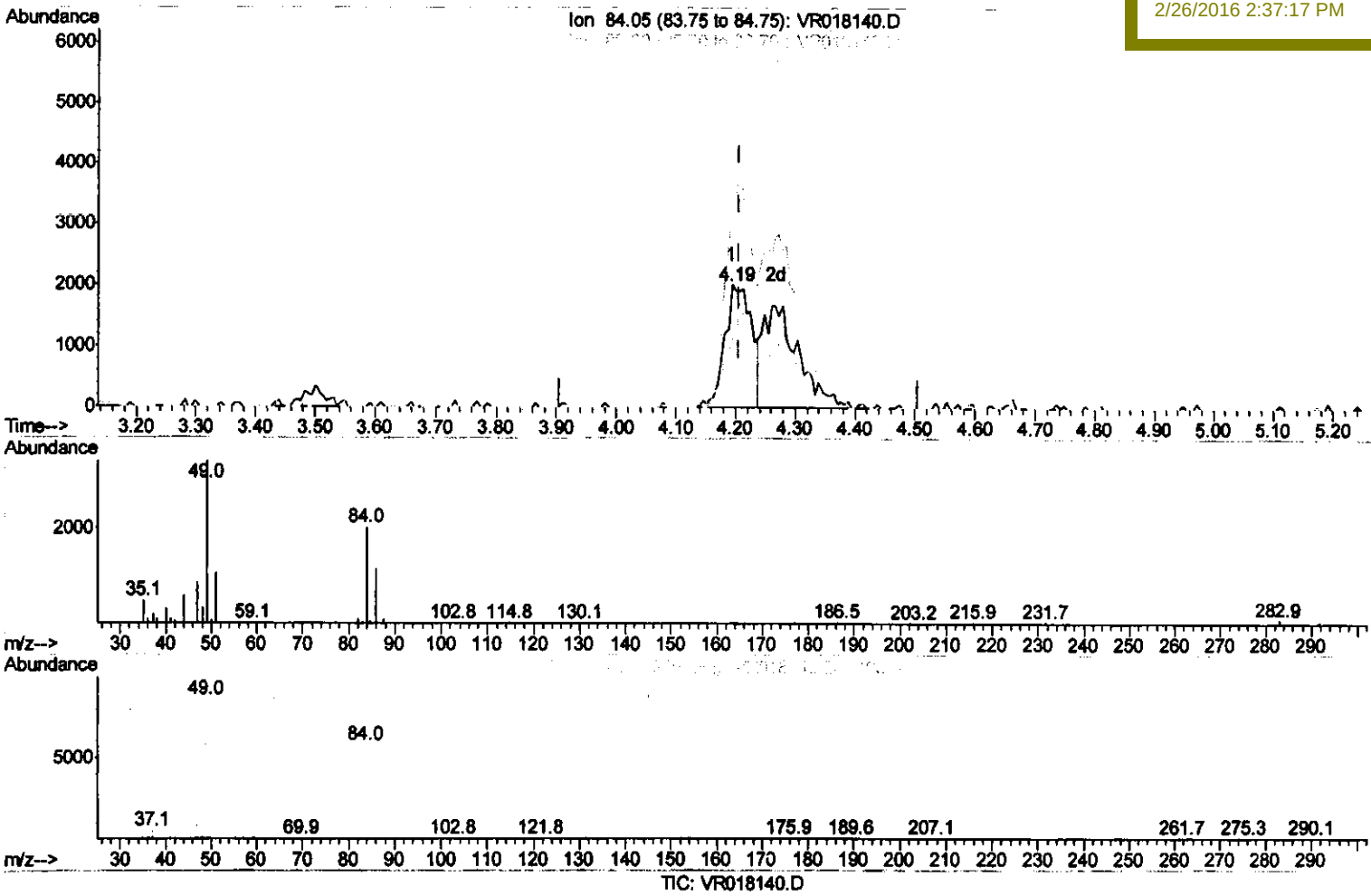

TIC: VR018140.D

(16) Methylene chloride (T)

4.194min (-0.012) 0.24ug/L

response 6274

Ion	Exp%	Act%
84.05	100	100
86.00	58.60	58.13
49.10	171.30	167.96
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018140.D
Acq On : 25 Feb 2016 13:49
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 25 16:11:00 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
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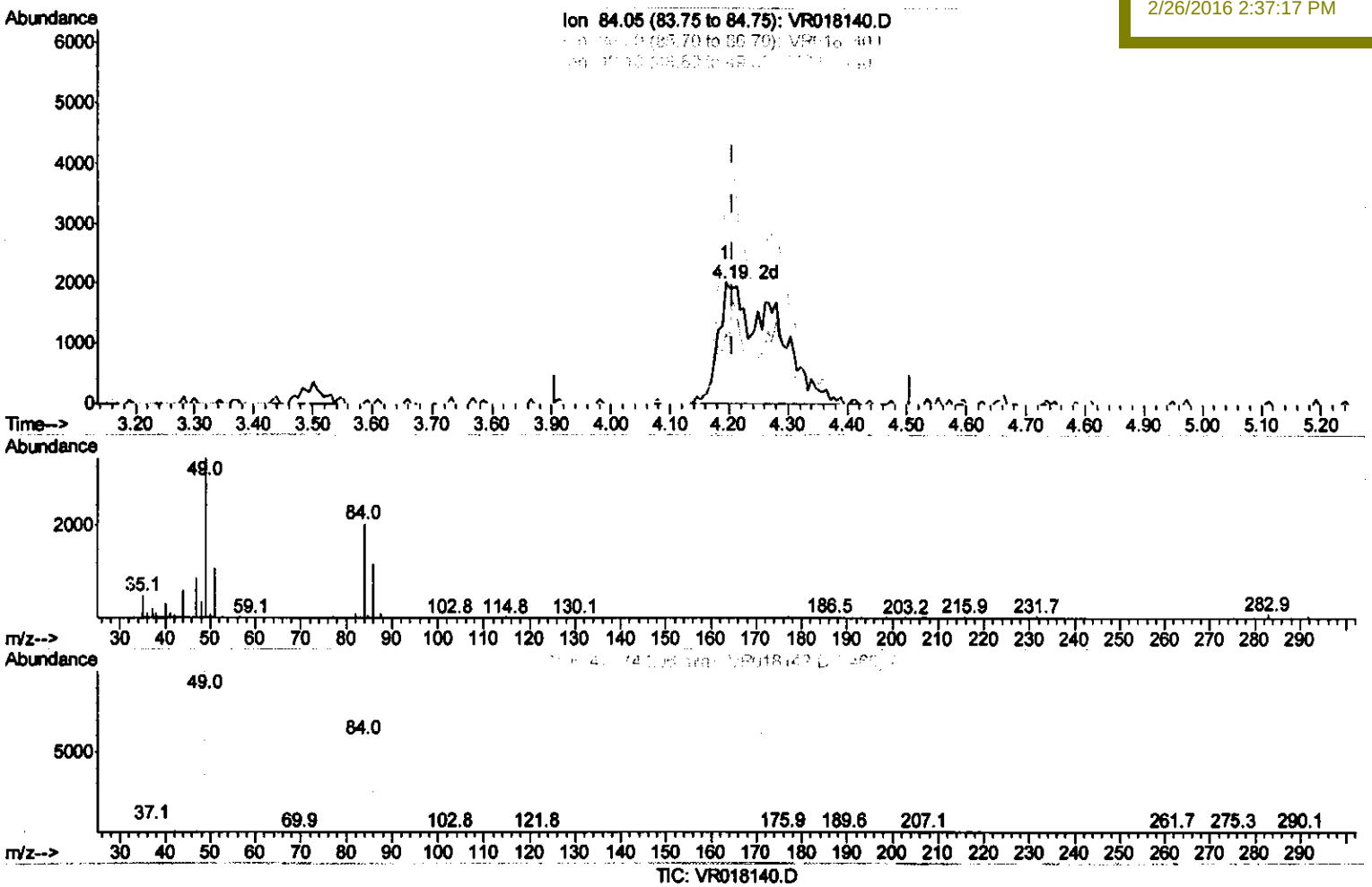

(16) Methylene chloride (T)

4.194min (-0.012) 0.50ug/L m

response 13231

Ion	Exp%	Act%
84.05	100	100
86.00	58.60	58.13
49.10	171.30	167.96
0.00	0.00	0.00

M.D 03/01/16

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018140.D
Acq On : 25 Feb 2016 13:49
Operator : MD\SY
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QLast Update : Thu Feb 25 16:07:00 2016
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Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
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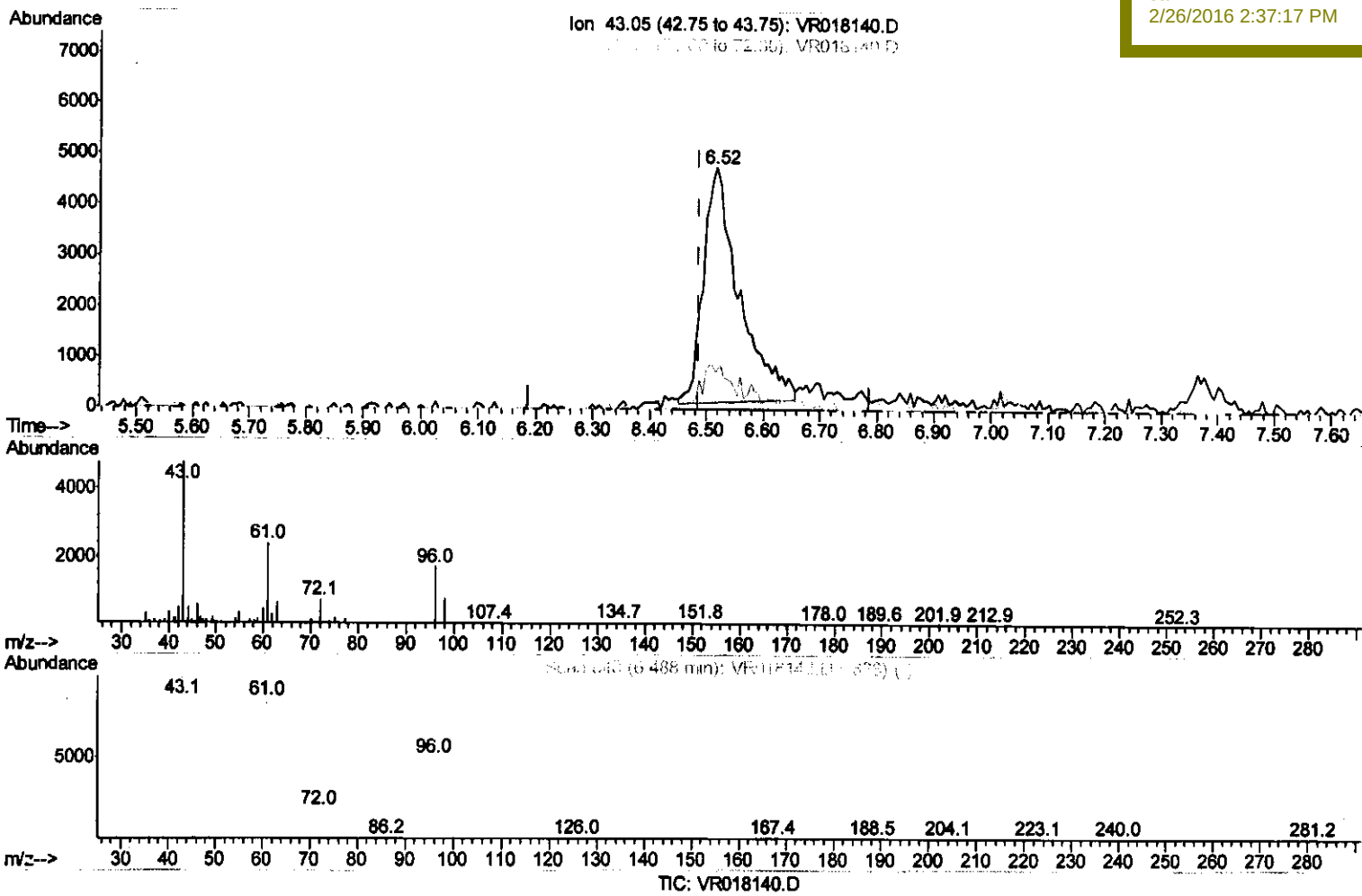

TIC: VR018140.D

(21) 2-Butanone (T)

6.518min (+0.030) 3.57ug/L

response 20415

Ion	Exp%	Act%
43.05	100	100
72.10	19.00	14.65
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018140.D
Acq On : 25 Feb 2016 13:49
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 25 16:11:00 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
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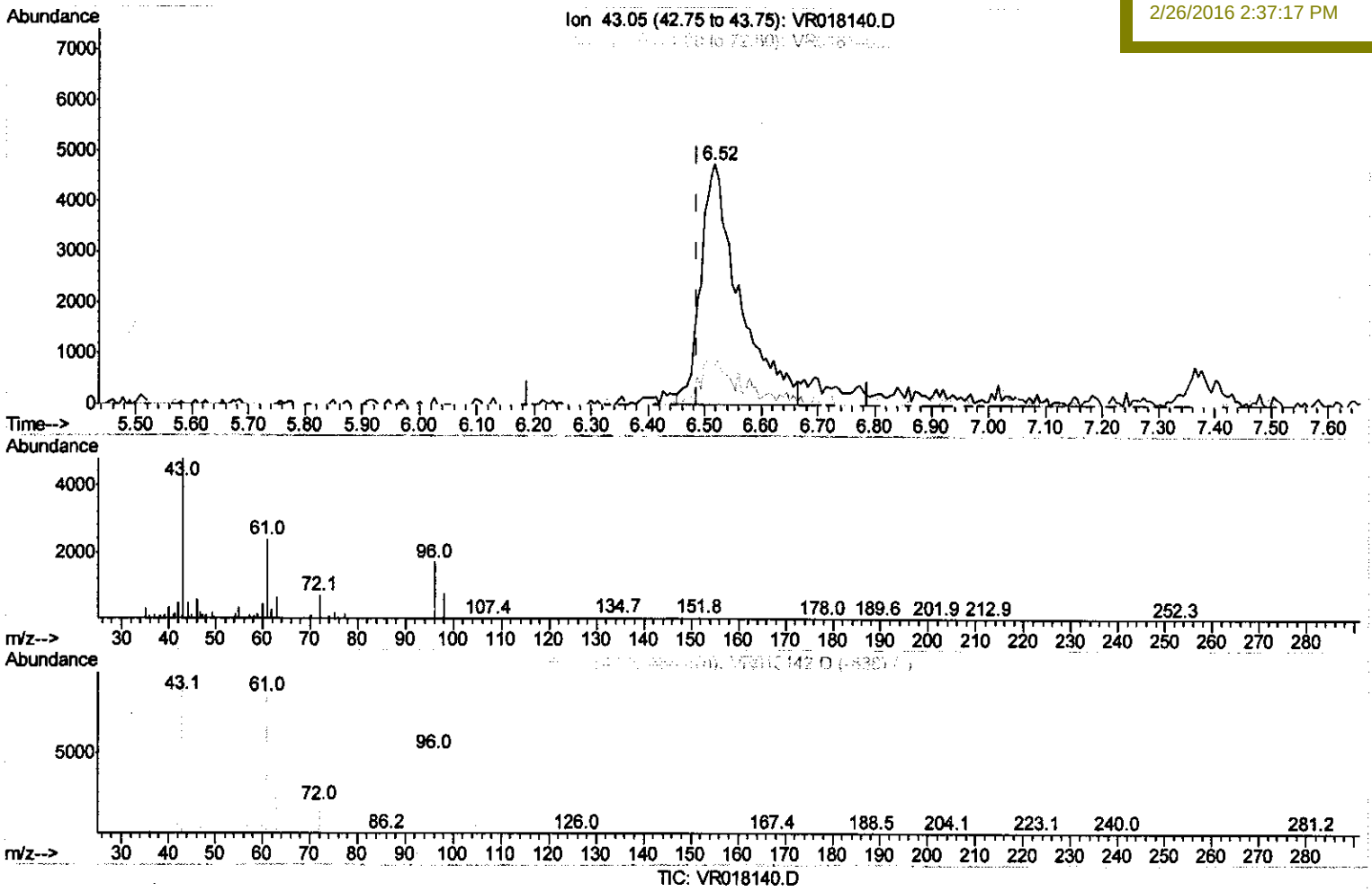

TIC: VR018140.D

(21) 2-Butanone (T)

6.518min (+0.030) 3.91ug/L m

response 22350

Ion	Exp%	Act%
43.05	100	100
72.10	19.00	13.38
0.00	0.00	0.00
0.00	0.00	0.00

M.D 03/01/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018140.D
Acq On : 25 Feb 2016 13:49
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 25 16:15:18 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD0.551

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	505677	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	418254	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	155279	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.05	65	22387	0.46	ug/L		0.00
7) Chloroethane-d5	2.50	69	16599	0.46	ug/L		0.00
11) 1,1-Dichloroethene-d2	3.48	63	30179	0.43	ug/L		0.00
20) 2-Butanone-d5	6.43	46	18680	3.77	ug/L		0.04
24) Chloroform-d	7.03	84	35047	0.49	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	19158	0.53	ug/L		0.00
32) Benzene-d6	7.71	84	59731	0.43	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.78	67	20216	0.47	ug/L		0.00
41) Toluene-d8	9.86	98	55270	0.42	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	5791	0.43	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	10782	3.09	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	8363	0.52	ug/L		0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	13467	0.49	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.74	85	18337	0.52	ug/L	#	88
3) Chloromethane	1.91	50	23700	0.49	ug/L		99
5) Vinyl chloride	2.05	62	23016	0.47	ug/L		96
6) Bromomethane	2.40	94	12597	0.48	ug/L		86
8) Chloroethane	2.53	64	14278	0.50	ug/L		98
9) Trichlorofluoromethane	2.87	101	31674m	0.54	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	10476	0.41	ug/L		91
12) 1,1-Dichloroethene	3.49	96	11502	0.45	ug/L		93
13) Acetone	3.53	43	21976	5.38	ug/L		98
14) Carbon disulfide	3.84	76	35638m	0.54	ug/L		
15) Methyl Acetate	4.02	43	4196	0.44	ug/L	#	92
16) Methylene chloride	4.19	84	13231m	0.50	ug/L		
17) Methyl tert-butyl Ether	4.69	73	18224	0.43	ug/L	#	86
18) trans-1,2-Dichloroethene	4.69	96	14523	0.50	ug/L		92
19) 1,1-Dichloroethane	5.48	63	32399	0.46	ug/L		91
21) 2-Butanone	6.52	43	22350m	3.91	ug/L		
22) cis-1,2-Dichloroethene	6.48	96	13038	0.43	ug/L		77
23) Bromochloromethane	6.88	128	5399	0.51	ug/L		83
25) Chloroform	7.06	83	30821	0.48	ug/L		95
27) 1,2-Dichloroethane	7.86	62	21636	0.54	ug/L	#	95
29) 1,1,1-Trichloroethane	7.27	97	21704	0.46	ug/L		97
30) Cyclohexane	7.38	56	16228	0.31	ug/L	#	92
31) Carbon tetrachloride	7.50	117	20946	0.48	ug/L		96
33) Benzene	7.77	78	64518	0.45	ug/L		100
34) Trichloroethene	8.59	95	15958	0.46	ug/L		96
35) Methylcyclohexane	8.84	83	16214	0.36	ug/L		94
37) 1,2-Dichloropropane	8.87	63	17671	0.47	ug/L	#	97
38) Bromodichloromethane	9.16	83	20300	0.52	ug/L		94
39) cis-1,3-Dichloropropene	9.61	75	17094	0.37	ug/L		99
40) 4-Methyl-2-pentanone	9.75	43	54277	3.93	ug/L		95

M.D 03/01/16

M.D 03/01/16

M.D 03/01/16

M.D 03/01/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018140.D
Acq On : 25 Feb 2016 13:49
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 25 16:15:18 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD0.551

Manual Integrations APPROVED
sam
2/26/2016 2:37:17 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.92	91	64107	0.44	ug/L		99
44) trans-1,3-Dichloropropene	10.16	75	13961	0.42	ug/L		96
45) 1,1,2-Trichloroethane	10.34	97	8108	0.50	ug/L		88
47) Tetrachloroethene	10.41	164	11116	0.42	ug/L		93
48) 2-Hexanone	10.53	43	34149	3.66	ug/L		96
49) Dibromochloromethane	10.68	129	9837	0.51	ug/L		95
50) 1,2-Dibromoethane	10.78	107	6959	0.49	ug/L	#	78
51) Chlorobenzene	11.21	112	40396	0.47	ug/L		99
52) Ethylbenzene	11.29	91	67580	0.41	ug/L		99
53) m,p-Xylene	11.41	106	22013	0.37	ug/L		93
54) o-Xylene	11.73	106	18893	0.36	ug/L		94
55) Styrene	11.75	104	28881	0.33	ug/L		99
56) Isopropylbenzene	12.04	105	47426	0.34	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.29	83	7010	0.47	ug/L	#	92
59) 1,2,3-Trichloropropane	12.34	75	5334	0.45	ug/L		97
61) Bromoform	11.91	173	4092	0.57	ug/L		96
62) 1,3-Dichlorobenzene	13.07	146	18772	0.41	ug/L		92
63) 1,4-Dichlorobenzene	13.15	146	24436	0.50	ug/L		95
65) 1,2-Dichlorobenzene	13.44	146	19365	0.49	ug/L		95
66) 1,2-Dibromo-3-chloropropan	14.05	75	986	0.59	ug/L	#	68
67) 1,3,5-Trichlorobenzene	14.21	180	12661	0.42	ug/L		93
68) 1,2,4-trichlorobenzene	14.70	180	8879	0.43	ug/L		96
69) Naphthalene	14.92	128	7068	0.31	ug/L		97
70) 1,2,3-Trichlorobenzene	15.09	180	7612	0.48	ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018141.D
Acq On : 25 Feb 2016 14:20
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 25 16:17:25 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
sam
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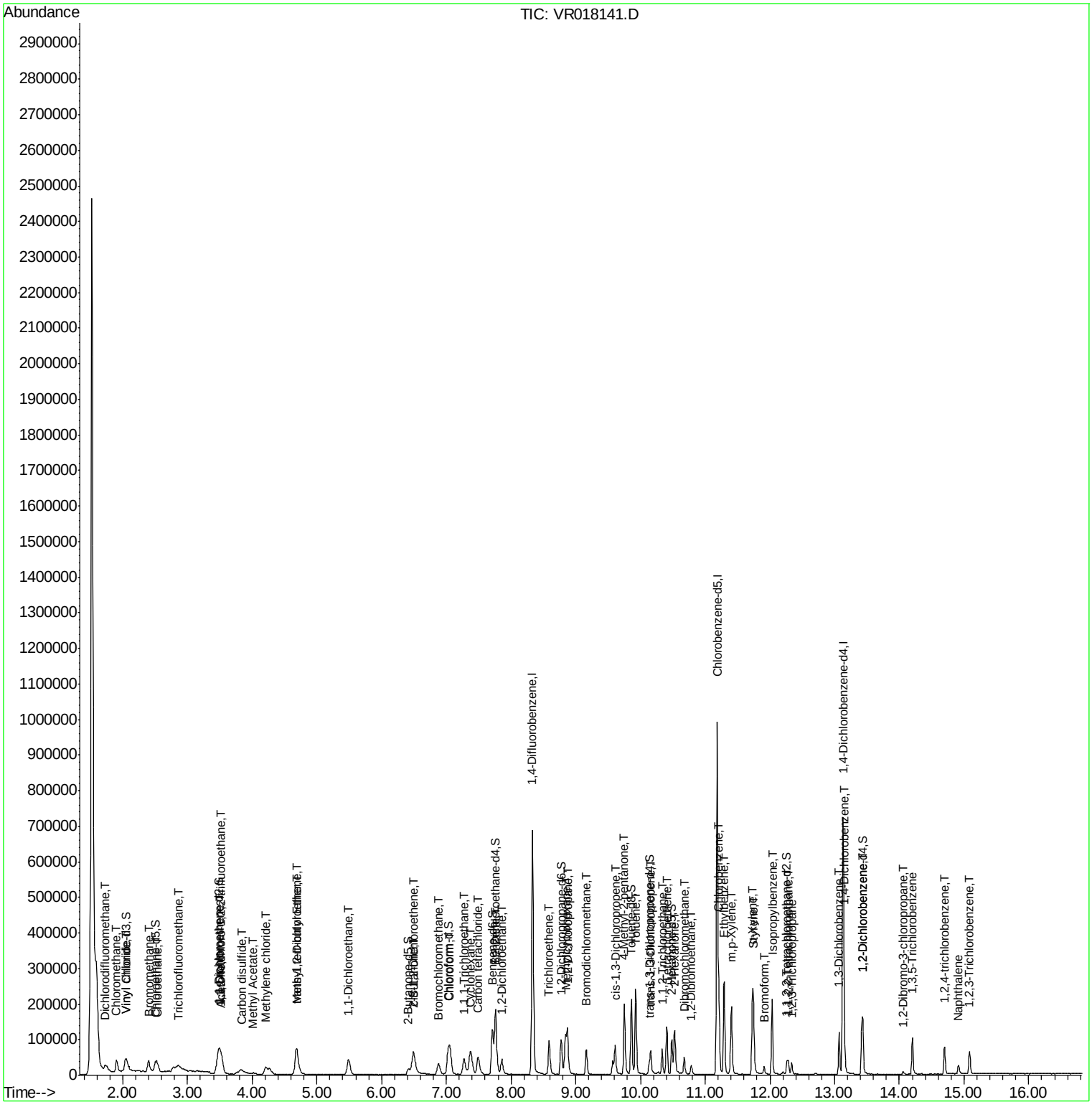

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018141.D
Acq On : 25 Feb 2016 14:20
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00152

Manual Integrations APPROVED
sam
2/26/2016 2:37:23 PM

Quant Time: Feb 25 16:17:25 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	495017	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	410351	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	149356	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.04	65	41669	0.88	ug/L		-0.01
7) Chloroethane-d5	2.50	69	31578	0.90	ug/L		0.00
11) 1,1-Dichloroethene-d2	3.48	63	59563	0.86	ug/L		0.00
20) 2-Butanone-d5	6.41	46	43209	8.91	ug/L		0.02
24) Chloroform-d	7.03	84	67139	0.97	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.76	65	37874	1.06	ug/L		0.01
32) Benzene-d6	7.71	84	128303	0.94	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.78	67	40648	0.97	ug/L		0.00
41) Toluene-d8	9.86	98	118740	0.93	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	12128	0.92	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	26590	7.76	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	14947	0.95	ug/L		0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	26249	0.99	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.72	85	35399	1.03	ug/L		100
3) Chloromethane	1.90	50	47715	1.00	ug/L		97
5) Vinyl chloride	2.05	62	46571	0.98	ug/L		86
6) Bromomethane	2.40	94	27963	1.08	ug/L		97
8) Chloroethane	2.54	64	28555	1.02	ug/L		93
9) Trichlorofluoromethane	2.86	101	62019m	1.07	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	21118	0.84	ug/L		98
12) 1,1-Dichloroethene	3.49	96	23007	0.91	ug/L		84
13) Acetone	3.53	43	42133	10.54	ug/L		98
14) Carbon disulfide	3.83	76	68393	1.07	ug/L		99
15) Methyl Acetate	4.01	43	10327	1.10	ug/L		97
16) Methylene chloride	4.21	84	25021m	0.96	ug/L		
17) Methyl tert-butyl Ether	4.69	73	39892	0.97	ug/L		98
18) trans-1,2-Dichloroethene	4.68	96	27836	0.98	ug/L		91
19) 1,1-Dichloroethane	5.48	63	68525	1.00	ug/L		96
21) 2-Butanone	6.51	43	51501	9.19	ug/L		98
22) cis-1,2-Dichloroethene	6.49	96	27645	0.93	ug/L		93
23) Bromochloromethane	6.87	128	10643	1.03	ug/L		93
25) Chloroform	7.06	83	64639	1.03	ug/L		99
27) 1,2-Dichloroethane	7.86	62	43268	1.11	ug/L		98
29) 1,1,1-Trichloroethane	7.27	97	44220	0.95	ug/L		95
30) Cyclohexane	7.38	56	39898	0.78	ug/L		99
31) Carbon tetrachloride	7.50	117	43072	1.00	ug/L		96
33) Benzene	7.77	78	142178	1.02	ug/L		100
34) Trichloroethene	8.59	95	33280	0.98	ug/L		97
35) Methylcyclohexane	8.85	83	35298	0.81	ug/L		97
37) 1,2-Dichloropropane	8.87	63	38122	1.03	ug/L	#	98
38) Bromodichloromethane	9.16	83	42013	1.09	ug/L	#	96
39) cis-1,3-Dichloropropene	9.61	75	41594	0.92	ug/L		95
40) 4-Methyl-2-pentanone	9.75	43	133616	9.86	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018141.D
Acq On : 25 Feb 2016 14:20
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00152

Manual Integrations APPROVED
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2/26/2016 2:37:23 PM

Quant Time: Feb 25 16:17:25 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.93	91	149104	1.03	ug/L		99
44) trans-1,3-Dichloropropene	10.16	75	32062	0.97	ug/L		95
45) 1,1,2-Trichloroethane	10.34	97	17977	1.13	ug/L		94
47) Tetrachloroethene	10.41	164	25716	1.00	ug/L		93
48) 2-Hexanone	10.53	43	85499	9.34	ug/L		95
49) Dibromochloromethane	10.67	129	21386	1.13	ug/L		99
50) 1,2-Dibromoethane	10.78	107	15197	1.09	ug/L		99
51) Chlorobenzene	11.21	112	85353	1.01	ug/L		99
52) Ethylbenzene	11.29	91	154291	0.96	ug/L		99
53) m,p-Xylene	11.40	106	52953	0.91	ug/L		87
54) o-Xylene	11.73	106	43898	0.84	ug/L		98
55) Styrene	11.75	104	75134	0.88	ug/L		98
56) Isopropylbenzene	12.04	105	110147	0.81	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.29	83	14797	1.02	ug/L		92
59) 1,2,3-Trichloropropane	12.33	75	12665	1.08	ug/L		100
61) Bromoform	11.91	173	9113	1.31	ug/L		95
62) 1,3-Dichlorobenzene	13.07	146	40622	0.92	ug/L		100
63) 1,4-Dichlorobenzene	13.15	146	47562	1.01	ug/L		98
65) 1,2-Dichlorobenzene	13.44	146	39605	1.03	ug/L		97
66) 1,2-Dibromo-3-chloropropan	14.06	75	1910	1.18	ug/L	#	72
67) 1,3,5-Trichlorobenzene	14.20	180	27796	0.96	ug/L		98
68) 1,2,4-trichlorobenzene	14.70	180	20749	1.05	ug/L		94
69) Naphthalene	14.91	128	18432	0.83	ug/L		98
70) 1,2,3-Trichlorobenzene	15.09	180	17063	1.11	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018141.D
Acq On : 25 Feb 2016 14:20
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 25 16:17:25 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
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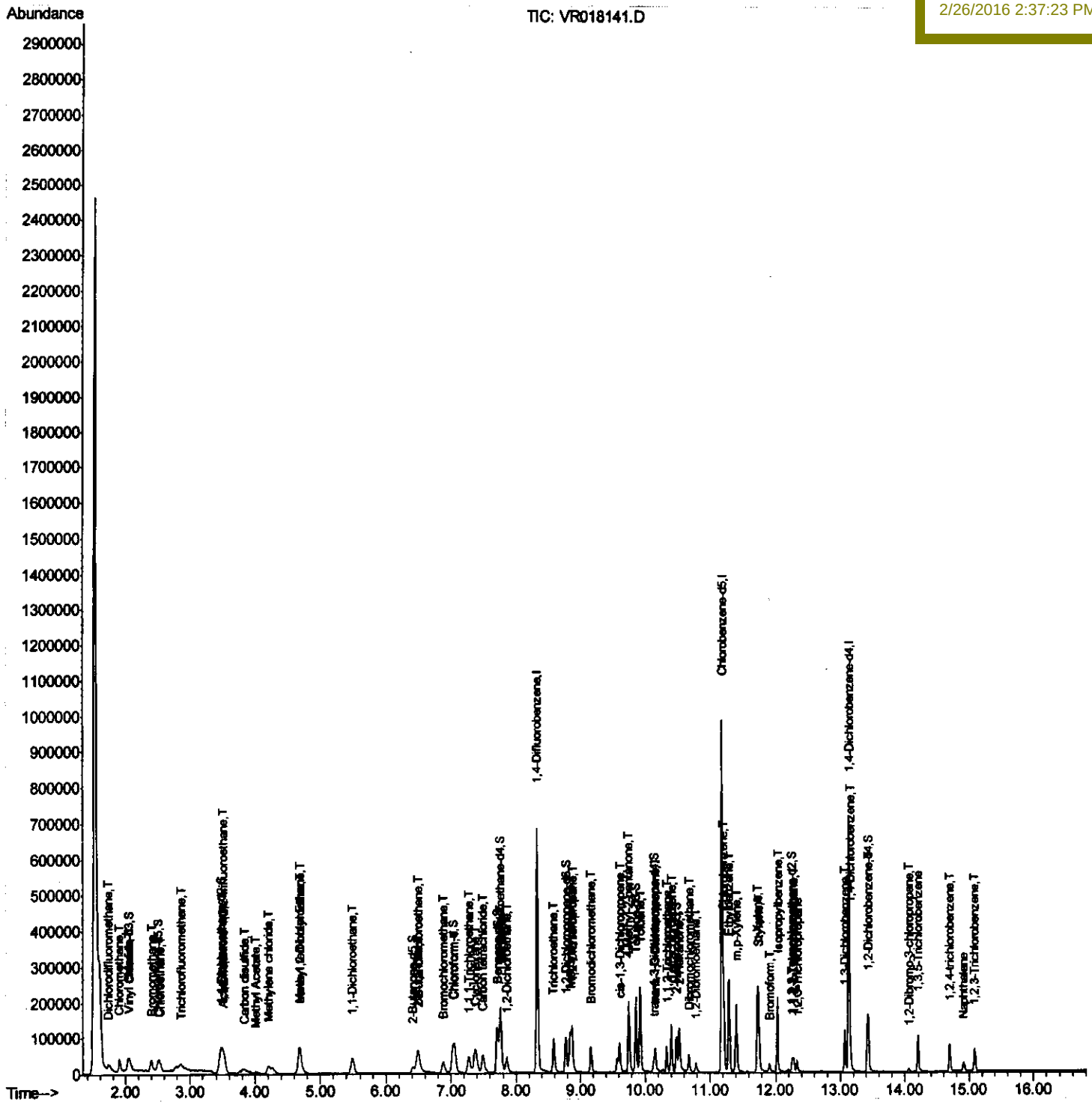

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018141.D
Acq On : 25 Feb 2016 14:20
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 25 16:11:53 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
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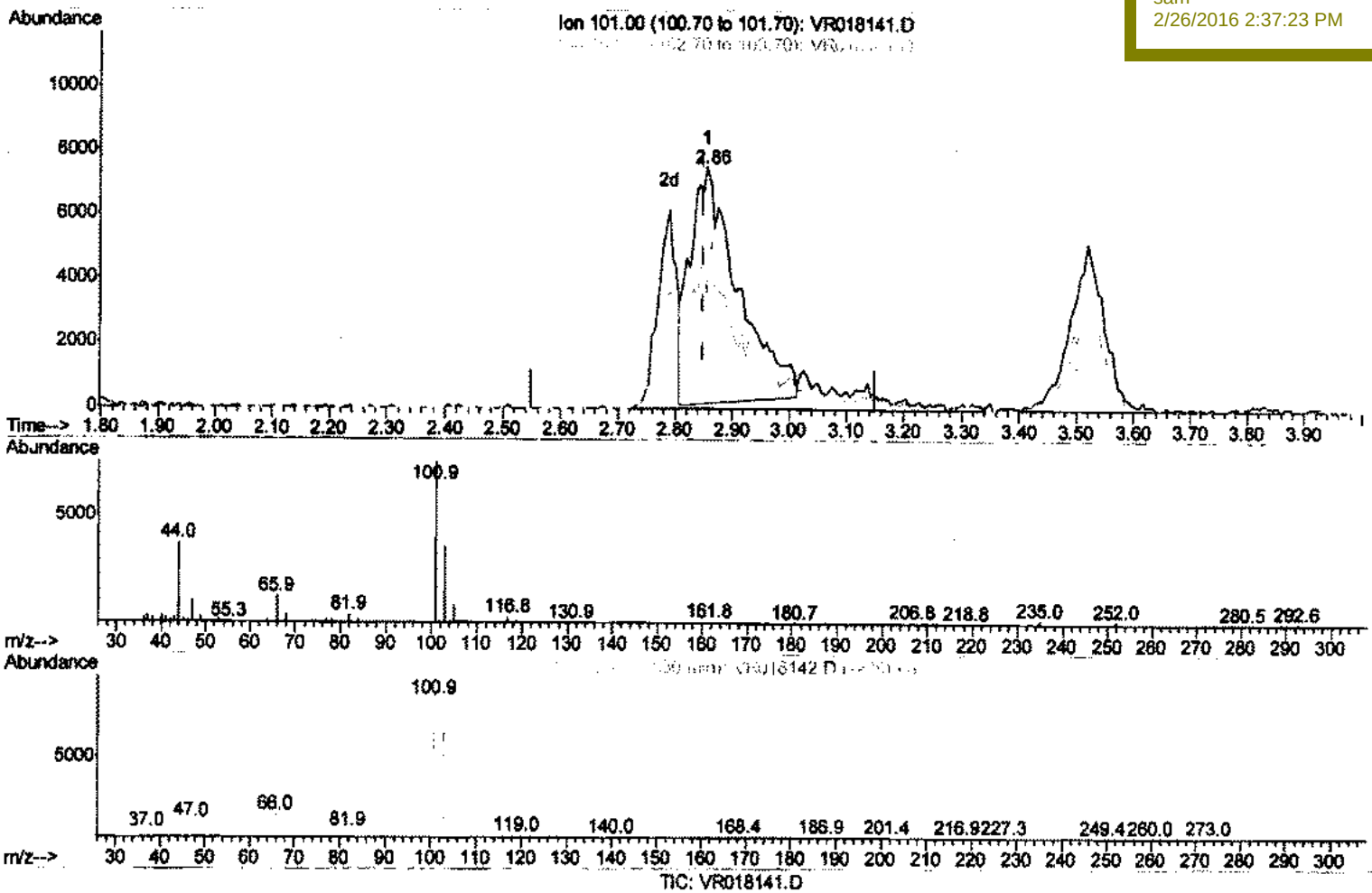
2/26/2016 2:37:23 PM



TIC: VR018141.D

(9) Trichlorofluoromethane (T)

2.856min (+0.006) 0.74ug/L

response 42442

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	7.17#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018141.D
Acq On : 25 Feb 2016 14:20
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 25 16:11:53 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
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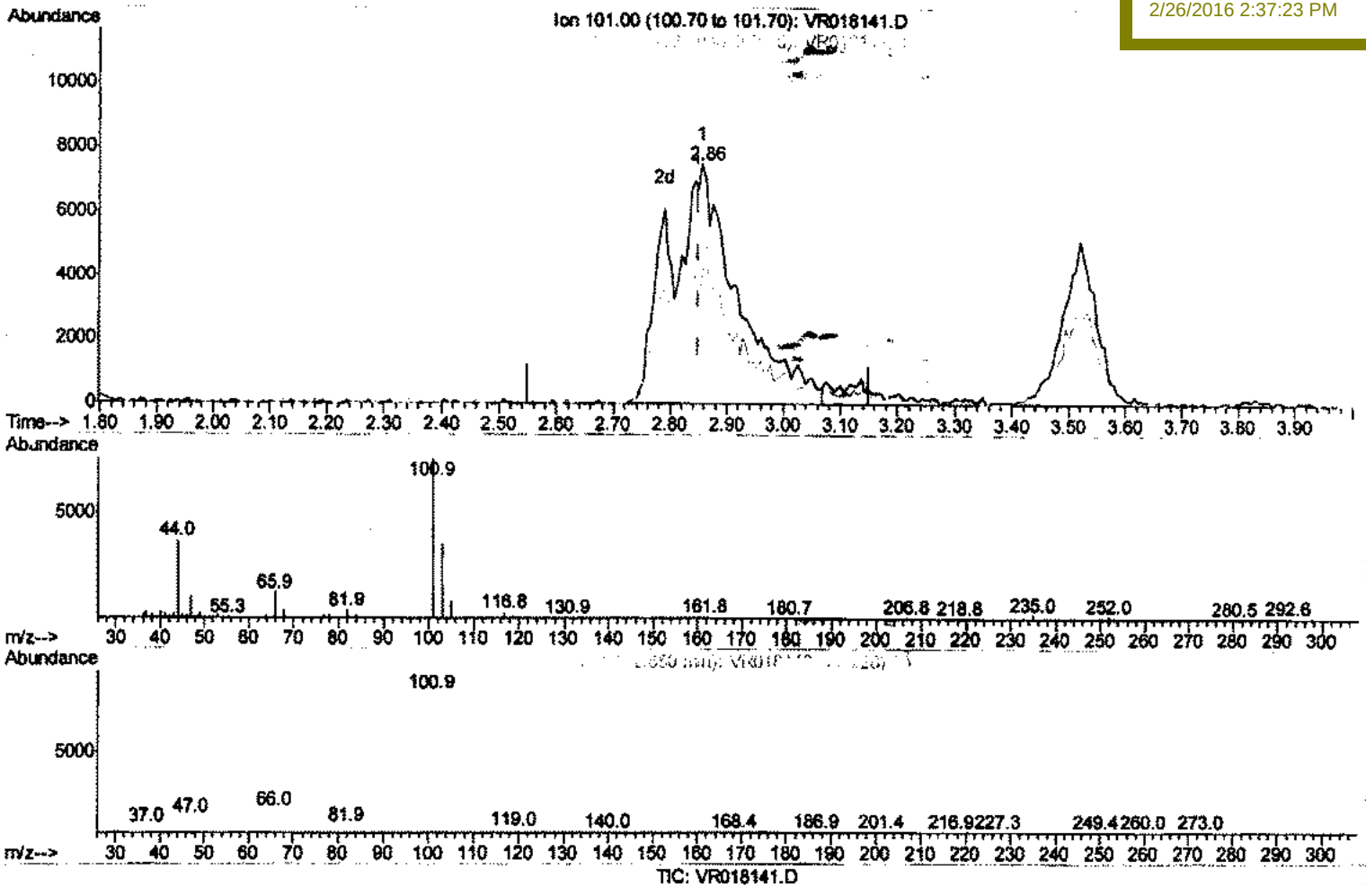
2/26/2016 2:37:23 PM



(9) Trichlorofluoromethane (T)

2.856min (+0.006) 1.07ug/L m

response 62019

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	4.90#
0.00	0.00	0.00
0.00	0.00	0.00

M.D 03/01/16

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018141.D
Acq On : 25 Feb 2016 14:20
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 25 16:11:53 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
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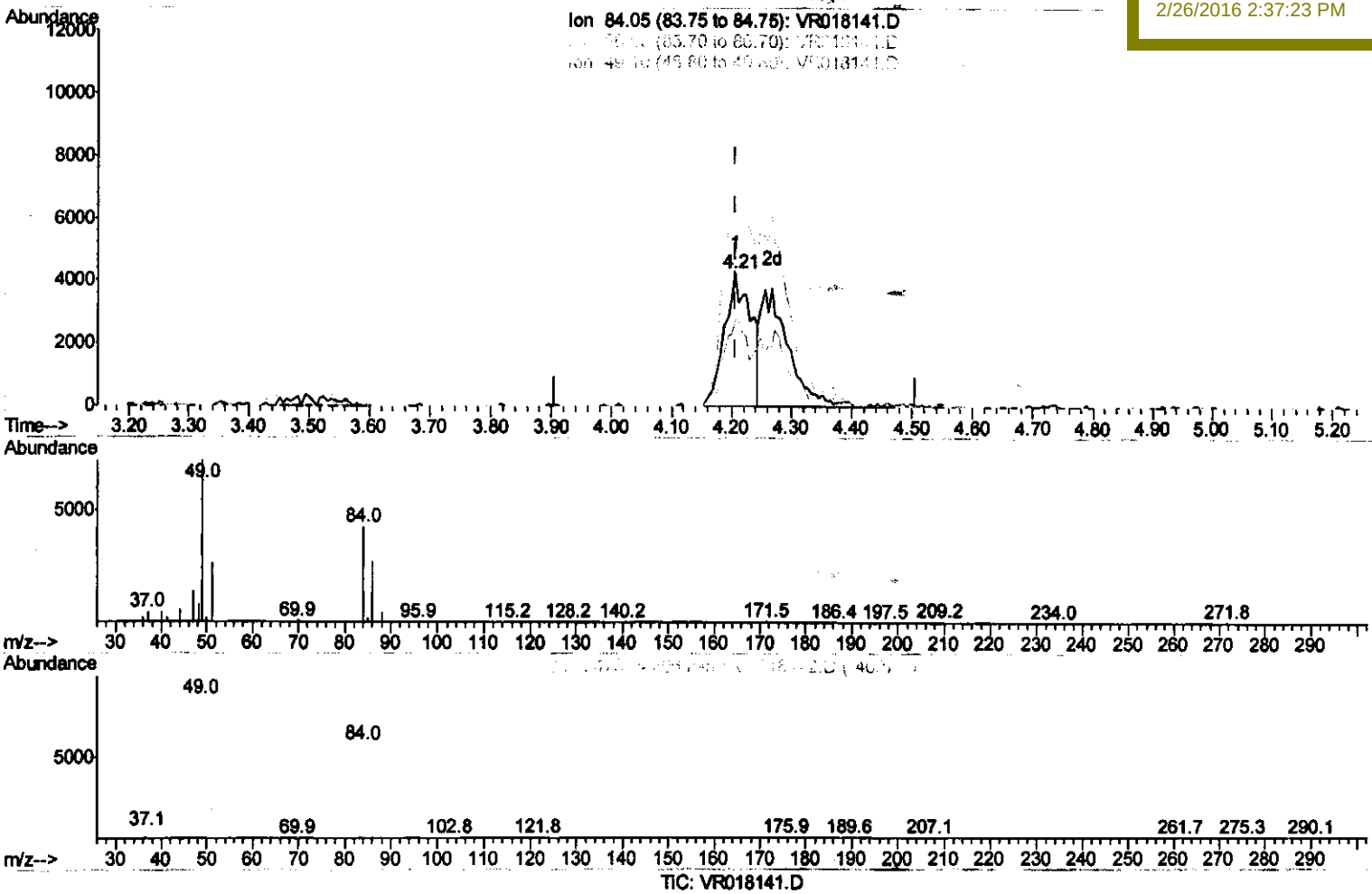
2/26/2016 2:37:23 PM



TIC: VR018141.D

(16) Methylene chloride (T)

4.206min (+0.000) 0.50ug/L

response 13033

Ion	Exp%	Act%
84.05	100	100
86.00	58.60	64.57
49.10	171.30	168.72
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018141.D
Acq On : 25 Feb 2016 14:20
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 25 16:11:53 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
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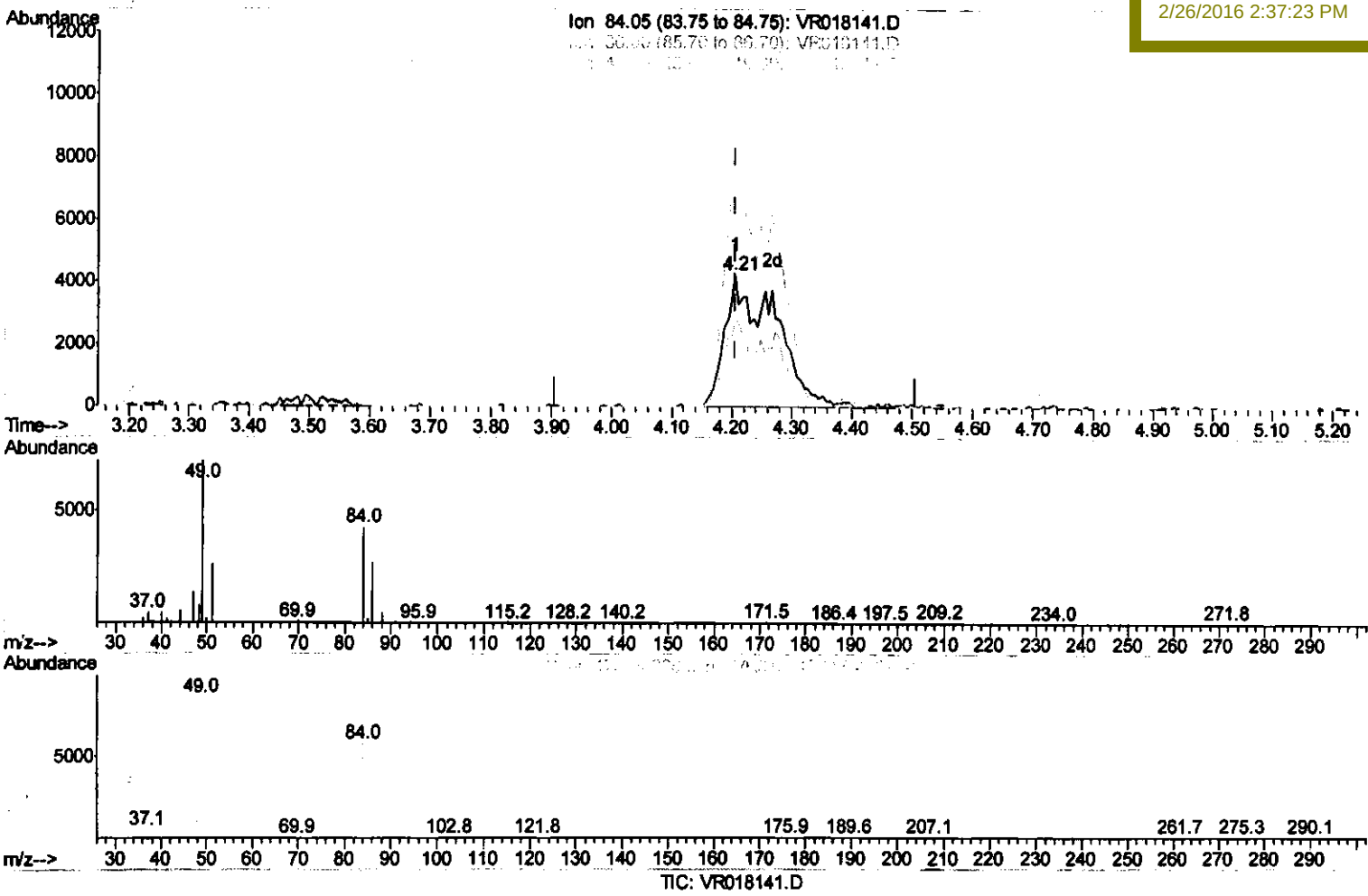

TIC: VR018141.D

(16) Methylene chloride (T)

4.206min (+0.000) 0.96ug/L m

response 25021

M.D 03/01/16

Ion	Exp%	Act%
84.05	100	100
86.00	58.60	64.57
49.10	171.30	168.72
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018141.D
Acq On : 25 Feb 2016 14:20
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 25 16:17:25 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00152

Manual Integrations APPROVED
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2/26/2016 2:37:23 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	495017	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	410351	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	149356	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.04	65	41669	0.88	ug/L		-0.01
7) Chloroethane-d5	2.50	69	31578	0.90	ug/L		0.00
11) 1,1-Dichloroethene-d2	3.48	63	59563	0.86	ug/L		0.00
20) 2-Butanone-d5	6.41	46	43209	8.91	ug/L		0.02
24) Chloroform-d	7.03	84	67139	0.97	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.76	65	37874	1.06	ug/L		0.01
32) Benzene-d6	7.71	84	128303	0.94	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.78	67	40648	0.97	ug/L		0.00
41) Toluene-d8	9.86	98	118740	0.93	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	12128	0.92	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	26590	7.76	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	14947	0.95	ug/L		0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	26249	0.99	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.72	85	35399	1.03	ug/L		100
3) Chloromethane	1.90	50	47715	1.00	ug/L		97
5) Vinyl chloride	2.05	62	46571	0.98	ug/L		86
6) Bromomethane	2.40	94	27963	1.08	ug/L		97
8) Chloroethane	2.54	64	28555	1.02	ug/L		93
9) Trichlorofluoromethane	2.86	101	62019m	1.07	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	21118	0.84	ug/L		98
12) 1,1-Dichloroethene	3.49	96	23007	0.91	ug/L		84
13) Acetone	3.53	43	42133	10.54	ug/L		98
14) Carbon disulfide	3.83	76	68393	1.07	ug/L		99
15) Methyl Acetate	4.01	43	10327	1.10	ug/L		97
16) Methylene chloride	4.21	84	25021m	0.96	ug/L		
17) Methyl tert-butyl Ether	4.69	73	39892	0.97	ug/L		98
18) trans-1,2-Dichloroethene	4.68	96	27836	0.98	ug/L		91
19) 1,1-Dichloroethane	5.48	63	68525	1.00	ug/L		96
21) 2-Butanone	6.51	43	51501	9.19	ug/L		98
22) cis-1,2-Dichloroethene	6.49	96	27645	0.93	ug/L		93
23) Bromochloromethane	6.87	128	10643	1.03	ug/L		93
25) Chloroform	7.06	83	64639	1.03	ug/L		99
27) 1,2-Dichloroethane	7.86	62	43268	1.11	ug/L		98
29) 1,1,1-Trichloroethane	7.27	97	44220	0.95	ug/L		95
30) Cyclohexane	7.38	56	39898	0.78	ug/L		99
31) Carbon tetrachloride	7.50	117	43072	1.00	ug/L		96
33) Benzene	7.77	78	142178	1.02	ug/L		100
34) Trichloroethene	8.59	95	33280	0.98	ug/L		97
35) Methylcyclohexane	8.85	83	35298	0.81	ug/L		97
37) 1,2-Dichloropropane	8.87	63	38122	1.03	ug/L	#	98
38) Bromodichloromethane	9.16	83	42013	1.09	ug/L	#	96
39) cis-1,3-Dichloropropene	9.61	75	41594	0.92	ug/L		95
40) 4-Methyl-2-pentanone	9.75	43	133616	9.86	ug/L		97

M.D 03/01/16

M.D 03/01/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018141.D
Acq On : 25 Feb 2016 14:20
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 25 16:17:25 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00152

Manual Integrations APPROVED
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2/26/2016 2:37:23 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.93	91	149104	1.03	ug/L		99
44) trans-1,3-Dichloropropene	10.16	75	32062	0.97	ug/L		95
45) 1,1,2-Trichloroethane	10.34	97	17977	1.13	ug/L		94
47) Tetrachloroethene	10.41	164	25716	1.00	ug/L		93
48) 2-Hexanone	10.53	43	85499	9.34	ug/L		95
49) Dibromochloromethane	10.67	129	21386	1.13	ug/L		99
50) 1,2-Dibromoethane	10.78	107	15197	1.09	ug/L		99
51) Chlorobenzene	11.21	112	85353	1.01	ug/L		99
52) Ethylbenzene	11.29	91	154291	0.96	ug/L		99
53) m,p-Xylene	11.40	106	52953	0.91	ug/L		87
54) o-Xylene	11.73	106	43898	0.84	ug/L		98
55) Styrene	11.75	104	75134	0.88	ug/L		98
56) Isopropylbenzene	12.04	105	110147	0.81	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.29	83	14797	1.02	ug/L		92
59) 1,2,3-Trichloropropane	12.33	75	12665	1.08	ug/L		100
61) Bromoform	11.91	173	9113	1.31	ug/L		95
62) 1,3-Dichlorobenzene	13.07	146	40622	0.92	ug/L		100
63) 1,4-Dichlorobenzene	13.15	146	47562	1.01	ug/L		98
65) 1,2-Dichlorobenzene	13.44	146	39605	1.03	ug/L		97
66) 1,2-Dibromo-3-chloropropan	14.06	75	1910	1.18	ug/L	#	72
67) 1,3,5-Trichlorobenzene	14.20	180	27796	0.96	ug/L		98
68) 1,2,4-trichlorobenzene	14.70	180	20749	1.05	ug/L		94
69) Naphthalene	14.91	128	18432	0.83	ug/L		98
70) 1,2,3-Trichlorobenzene	15.09	180	17063	1.11	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018142.D
Acq On : 25 Feb 2016 14:52
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 25 16:08:47 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 13:04:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00553

Manual Integrations APPROVED
sam
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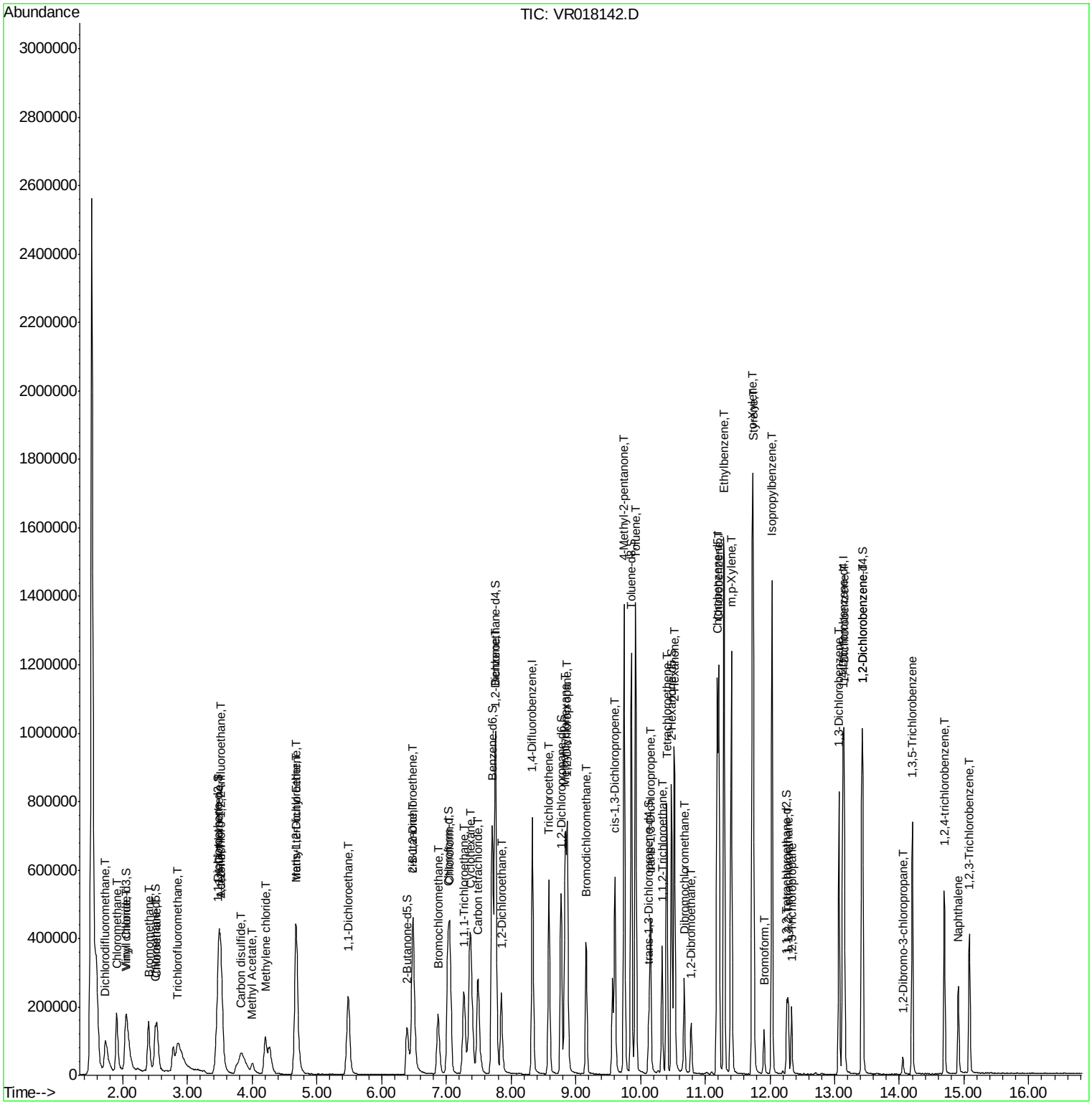

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018142.D
Acq On : 25 Feb 2016 14:52
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00553

Manual Integrations APPROVED
sam
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Quant Time: Feb 25 16:08:47 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 13:04:30 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	528755	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	461306	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	185025	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.05	65	219930	4.32	ug/L		0.02
7) Chloroethane-d5	2.50	69	157411	4.18	ug/L		0.00
11) 1,1-Dichloroethene-d2	3.47	63	322846	4.35	ug/L		0.00
20) 2-Butanone-d5	6.39	46	291923	56.34	ug/L		0.00
24) Chloroform-d	7.02	84	361908	4.88	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	194445	5.10	ug/L		0.00
32) Benzene-d6	7.71	84	705687	4.62	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.77	67	218817	4.63	ug/L		0.00
41) Toluene-d8	9.86	98	685589	4.76	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	75203	5.06	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	227681	59.12	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	86900	4.93	ug/L		0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	146391	4.46	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.73	85	221096	6.04	ug/L		97
3) Chloromethane	1.91	50	250449	4.91	ug/L		98
5) Vinyl chloride	2.07	62	251858	4.95	ug/L		99
6) Bromomethane	2.40	94	135979	4.93	ug/L		96
8) Chloroethane	2.53	64	139819	4.66	ug/L		97
9) Trichlorofluoromethane	2.85	101	352838m	5.72	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	127513	4.77	ug/L		100
12) 1,1-Dichloroethene	3.49	96	123754	4.60	ug/L	#	73
13) Acetone	3.52	43	226361	53.03	ug/L		99
14) Carbon disulfide	3.82	76	390560	5.70	ug/L		98
15) Methyl Acetate	4.00	43	57239	5.72	ug/L		98
16) Methylene chloride	4.21	84	130710m	4.71	ug/L		
17) Methyl tert-butyl Ether	4.69	73	244972	5.56	ug/L		100
18) trans-1,2-Dichloroethene	4.67	96	164362	5.43	ug/L		88
19) 1,1-Dichloroethane	5.48	63	378985	5.18	ug/L		96
21) 2-Butanone	6.49	43	363203	60.71	ug/L		99
22) cis-1,2-Dichloroethene	6.48	96	173717	5.49	ug/L		91
23) Bromochloromethane	6.88	128	59883	5.44	ug/L		94
25) Chloroform	7.06	83	350594	5.24	ug/L		100
27) 1,2-Dichloroethane	7.85	62	233478	5.61	ug/L		99
29) 1,1,1-Trichloroethane	7.27	97	259225	4.95	ug/L		98
30) Cyclohexane	7.37	56	313220	5.47	ug/L		99
31) Carbon tetrachloride	7.49	117	248321	5.13	ug/L		100
33) Benzene	7.76	78	785761	5.02	ug/L		100
34) Trichloroethene	8.59	95	188499	4.94	ug/L		97
35) Methylcyclohexane	8.84	83	266196	5.41	ug/L		98
37) 1,2-Dichloropropane	8.87	63	210270	5.04	ug/L		100
38) Bromodichloromethane	9.16	83	235766	5.43	ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	278477	5.50	ug/L		99
40) 4-Methyl-2-pentanone	9.75	43	918998	60.34	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018142.D
Acq On : 25 Feb 2016 14:52
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00553

Manual Integrations APPROVED
sam
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Quant Time: Feb 25 16:08:47 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 13:04:30 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.93	91	842424	5.19	ug/L		100
44) trans-1,3-Dichloropropene	10.16	75	213506	5.76	ug/L		96
45) 1,1,2-Trichloroethane	10.33	97	93456	5.23	ug/L		97
47) Tetrachloroethene	10.41	164	146506	5.05	ug/L		97
48) 2-Hexanone	10.52	43	616726	59.95	ug/L		99
49) Dibromochloromethane	10.67	129	120833	5.66	ug/L		98
50) 1,2-Dibromoethane	10.78	107	84491	5.39	ug/L	#	96
51) Chlorobenzene	11.21	112	469111	4.95	ug/L		98
52) Ethylbenzene	11.29	91	940142	5.18	ug/L		97
53) m,p-Xylene	11.40	106	339476	5.17	ug/L		95
54) o-Xylene	11.73	106	301513	5.14	ug/L		95
55) Styrene	11.74	104	513361	5.36	ug/L		95
56) Isopropylbenzene	12.03	105	775446	5.09	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	84611	5.18	ug/L		99
59) 1,2,3-Trichloropropane	12.33	75	72343	5.47	ug/L		100
61) Bromoform	11.91	173	51737	6.03	ug/L		98
62) 1,3-Dichlorobenzene	13.07	146	274860	5.02	ug/L		98
63) 1,4-Dichlorobenzene	13.15	146	289645	4.95	ug/L		98
65) 1,2-Dichlorobenzene	13.44	146	238829	5.02	ug/L		98
66) 1,2-Dibromo-3-chloropropan	14.06	75	10996	5.50	ug/L		97
67) 1,3,5-Trichlorobenzene	14.20	180	185530	5.16	ug/L		99
68) 1,2,4-trichlorobenzene	14.69	180	132093	5.37	ug/L		98
69) Naphthalene	14.91	128	163872	5.97	ug/L		99
70) 1,2,3-Trichlorobenzene	15.08	180	107322	5.63	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018142.D
Acq On : 25 Feb 2016 14:52
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 25 16:08:47 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 13:04:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00553

Manual Integrations APPROVED
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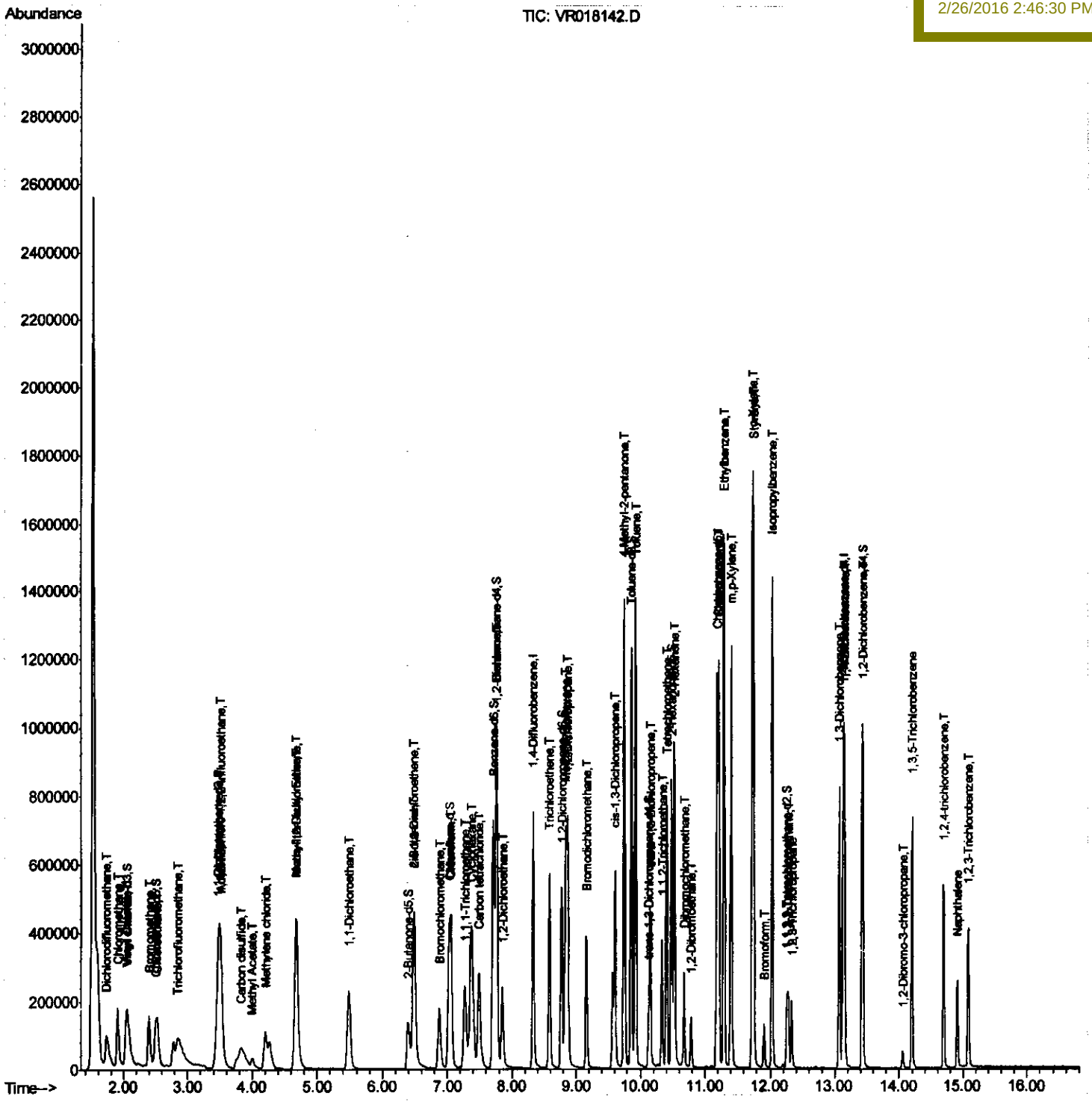

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018142.D
Acq On : 25 Feb 2016 14:52
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 25 16:06:56 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 13:04:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00553

Manual Integrations APPROVED
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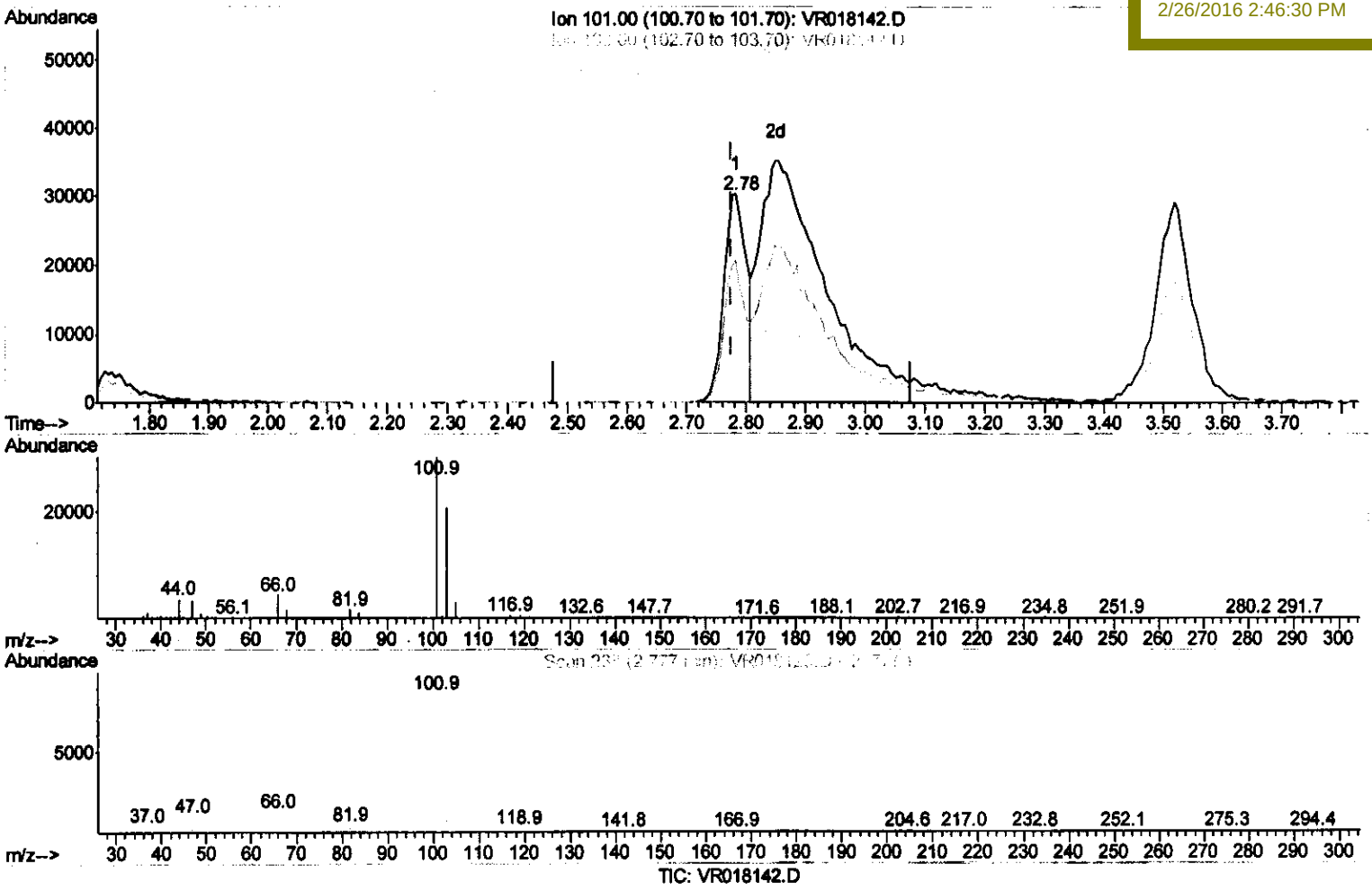

TIC: VR018142.D

(9) Trichlorofluoromethane (T)

2.783min (+0.006) 1.30ug/L

response 80368

Ion	Exp%	Act%
101.00	100	100
103.00	21.90	65.21#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018142.D
Acq On : 25 Feb 2016 14:52
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 25 16:06:56 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 13:04:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00553

Manual Integrations APPROVED
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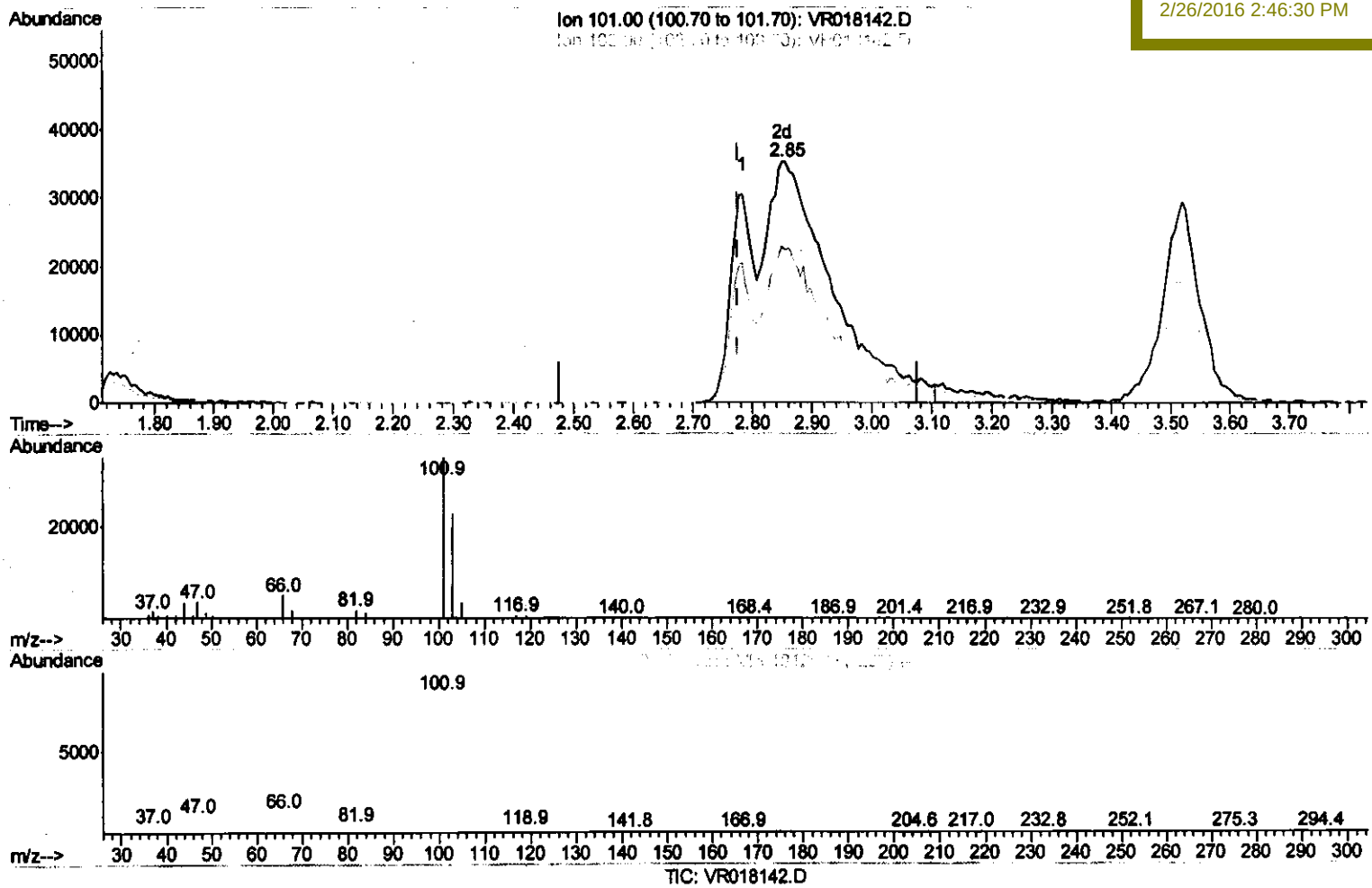

TIC: VR018142.D

(9) Trichlorofluoromethane (T)

2.850min (+0.073) 5.72ug/L m

response 352838

M.D 03/01/16

Ion	Exp%	Act%
101.00	100	100
103.00	21.90	14.85#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018142.D
Acq On : 25 Feb 2016 14:52
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 25 16:06:56 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 13:04:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00553

Manual Integrations APPROVED
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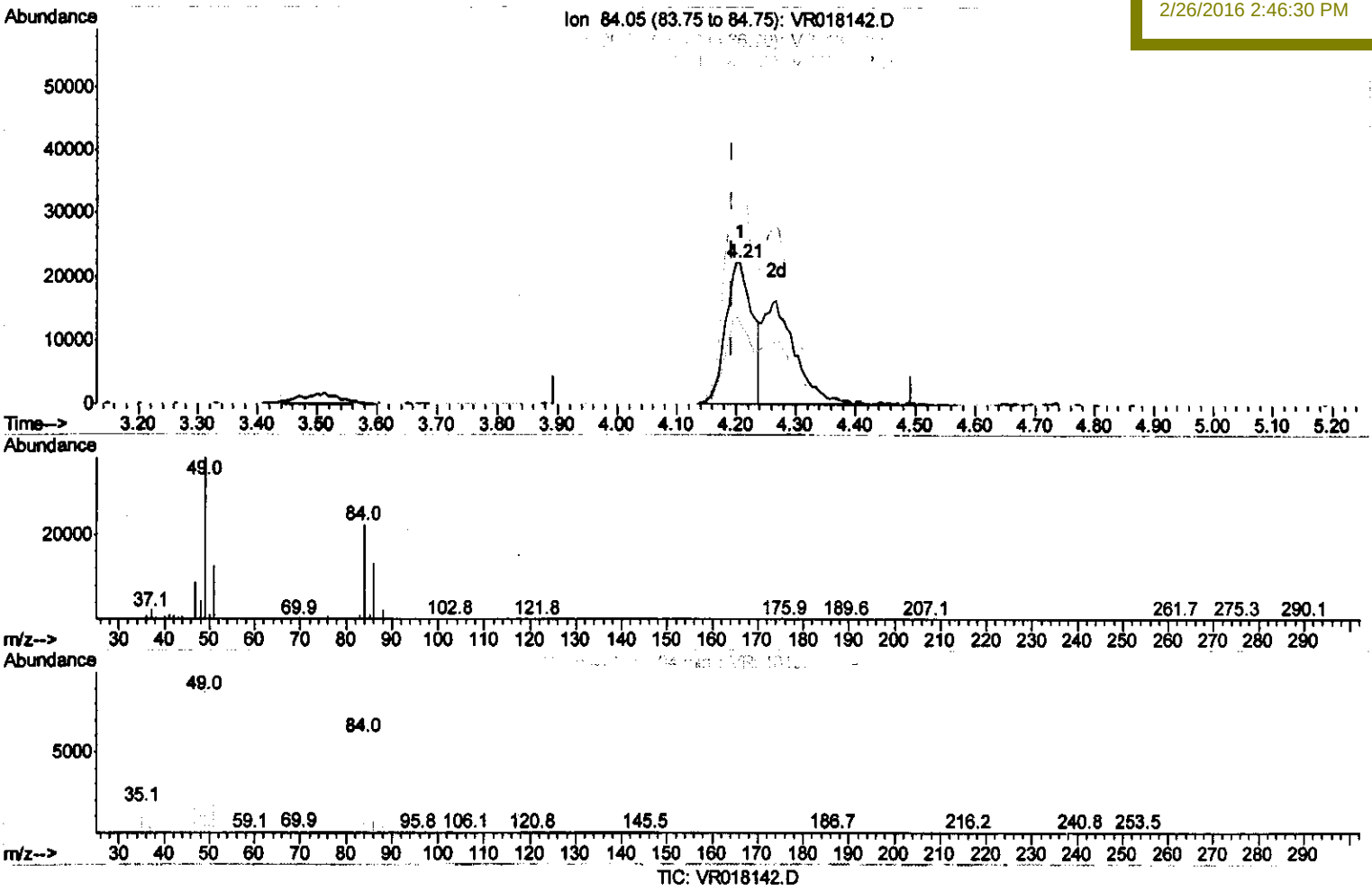

TIC: VR018142.D

(16) Methylene chloride (T)

4.206min (+0.012) 2.48ug/L

response 68858

Ion	Exp%	Act%
84.05	100	100
86.00	65.30	58.61
49.10	168.80	171.31
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018142.D
Acq On : 25 Feb 2016 14:52
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 25 16:06:56 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 13:04:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00553

Manual Integrations APPROVED
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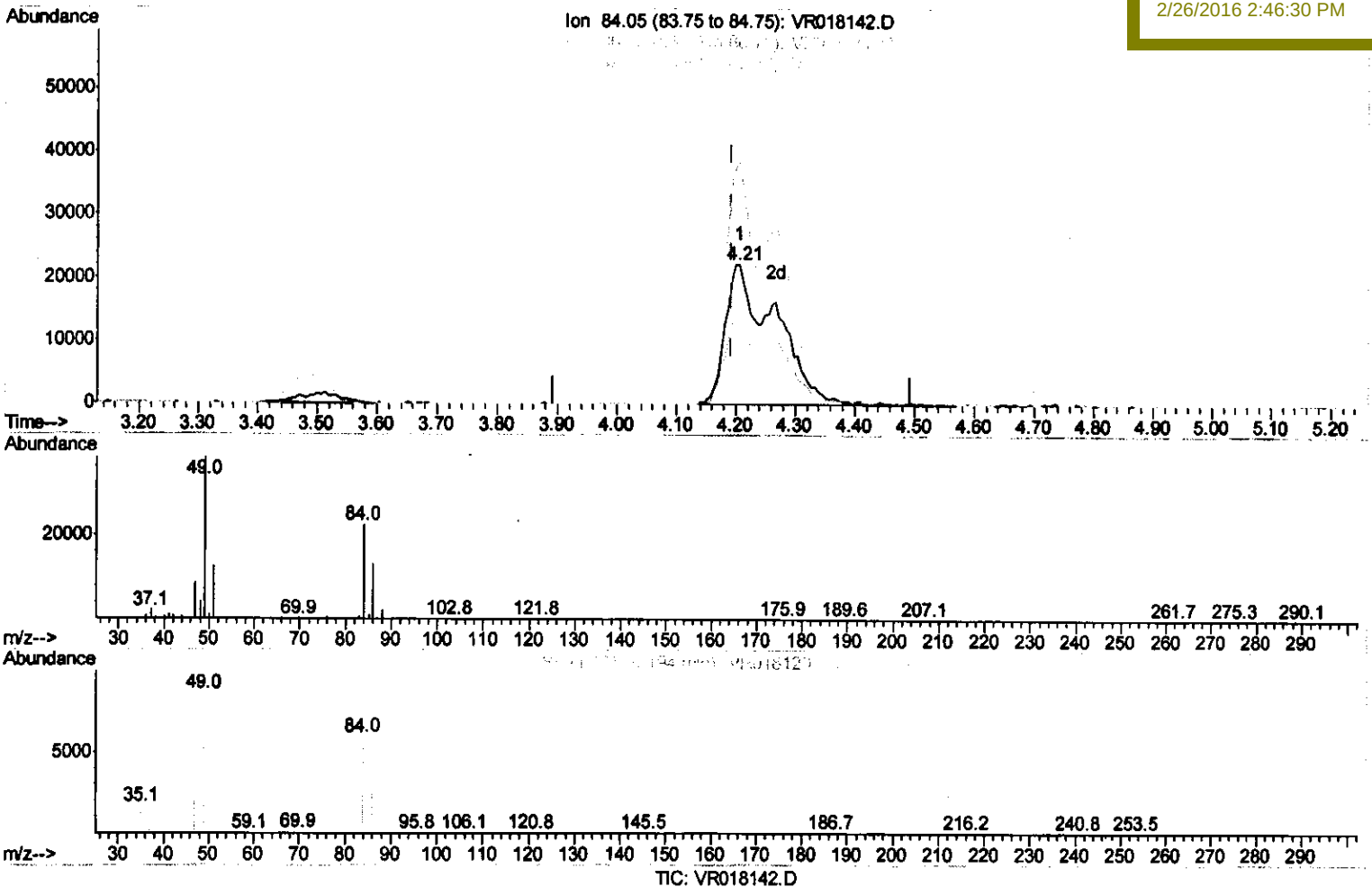

TIC: VR018142.D

(16) Methylene chloride (T)

4.206min (+0.012) 4.71ug/L m

response 130710

M.D 03/01/16

Ion	Exp%	Act%
84.05	100	100
86.00	65.30	58.61
49.10	168.80	171.31
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018142.D
Acq On : 25 Feb 2016 14:52
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 25 16:08:47 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 13:04:30 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00553

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	528755	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	461306	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	185025	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.05	65	219930	4.32	ug/L		0.02
7) Chloroethane-d5	2.50	69	157411	4.18	ug/L		0.00
11) 1,1-Dichloroethene-d2	3.47	63	322846	4.35	ug/L		0.00
20) 2-Butanone-d5	6.39	46	291923	56.34	ug/L		0.00
24) Chloroform-d	7.02	84	361908	4.88	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	194445	5.10	ug/L		0.00
32) Benzene-d6	7.71	84	705687	4.62	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.77	67	218817	4.63	ug/L		0.00
41) Toluene-d8	9.86	98	685589	4.76	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	75203	5.06	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	227681	59.12	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	86900	4.93	ug/L		0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	146391	4.46	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.73	85	221096	6.04	ug/L		97
3) Chloromethane	1.91	50	250449	4.91	ug/L		98
5) Vinyl chloride	2.07	62	251858	4.95	ug/L		99
6) Bromomethane	2.40	94	135979	4.93	ug/L		96
8) Chloroethane	2.53	64	139819	4.66	ug/L		97
9) Trichlorofluoromethane	2.85	101	352838m	5.72	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	127513	4.77	ug/L		100
12) 1,1-Dichloroethene	3.49	96	123754	4.60	ug/L	#	73
13) Acetone	3.52	43	226361	53.03	ug/L		99
14) Carbon disulfide	3.82	76	390560	5.70	ug/L		98
15) Methyl Acetate	4.00	43	57239	5.72	ug/L		98
16) Methylene chloride	4.21	84	130710m	4.71	ug/L		
17) Methyl tert-butyl Ether	4.69	73	244972	5.56	ug/L		100
18) trans-1,2-Dichloroethene	4.67	96	164362	5.43	ug/L		88
19) 1,1-Dichloroethane	5.48	63	378985	5.18	ug/L		96
21) 2-Butanone	6.49	43	363203	60.71	ug/L		99
22) cis-1,2-Dichloroethene	6.48	96	173717	5.49	ug/L		91
23) Bromochloromethane	6.88	128	59883	5.44	ug/L		94
25) Chloroform	7.06	83	350594	5.24	ug/L		100
27) 1,2-Dichloroethane	7.85	62	233478	5.61	ug/L		99
29) 1,1,1-Trichloroethane	7.27	97	259225	4.95	ug/L		98
30) Cyclohexane	7.37	56	313220	5.47	ug/L		99
31) Carbon tetrachloride	7.49	117	248321	5.13	ug/L		100
33) Benzene	7.76	78	785761	5.02	ug/L		100
34) Trichloroethene	8.59	95	188499	4.94	ug/L		97
35) Methylcyclohexane	8.84	83	266196	5.41	ug/L		98
37) 1,2-Dichloropropane	8.87	63	210270	5.04	ug/L		100
38) Bromodichloromethane	9.16	83	235766	5.43	ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	278477	5.50	ug/L		99
40) 4-Methyl-2-pentanone	9.75	43	918998	60.34	ug/L		100

M.D 03/01/16

M.D 03/01/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018142.D
Acq On : 25 Feb 2016 14:52
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 25 16:08:47 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 13:04:30 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00553

Manual Integrations APPROVED
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2/26/2016 2:46:30 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.93	91	842424	5.19	ug/L		100
44) trans-1,3-Dichloropropene	10.16	75	213506	5.76	ug/L		96
45) 1,1,2-Trichloroethane	10.33	97	93456	5.23	ug/L		97
47) Tetrachloroethene	10.41	164	146506	5.05	ug/L		97
48) 2-Hexanone	10.52	43	616726	59.95	ug/L		99
49) Dibromochloromethane	10.67	129	120833	5.66	ug/L		98
50) 1,2-Dibromoethane	10.78	107	84491	5.39	ug/L	#	96
51) Chlorobenzene	11.21	112	469111	4.95	ug/L		98
52) Ethylbenzene	11.29	91	940142	5.18	ug/L		97
53) m,p-Xylene	11.40	106	339476	5.17	ug/L		95
54) o-Xylene	11.73	106	301513	5.14	ug/L		95
55) Styrene	11.74	104	513361	5.36	ug/L		95
56) Isopropylbenzene	12.03	105	775446	5.09	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	84611	5.18	ug/L		99
59) 1,2,3-Trichloropropane	12.33	75	72343	5.47	ug/L		100
61) Bromoform	11.91	173	51737	6.03	ug/L		98
62) 1,3-Dichlorobenzene	13.07	146	274860	5.02	ug/L		98
63) 1,4-Dichlorobenzene	13.15	146	289645	4.95	ug/L		98
65) 1,2-Dichlorobenzene	13.44	146	238829	5.02	ug/L		98
66) 1,2-Dibromo-3-chloropropan	14.06	75	10996	5.50	ug/L		97
67) 1,3,5-Trichlorobenzene	14.20	180	185530	5.16	ug/L		99
68) 1,2,4-trichlorobenzene	14.69	180	132093	5.37	ug/L		98
69) Naphthalene	14.91	128	163872	5.97	ug/L		99
70) 1,2,3-Trichlorobenzene	15.08	180	107322	5.63	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018143.D
Acq On : 25 Feb 2016 15:23
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 25 16:19:23 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD01054

Manual Integrations APPROVED
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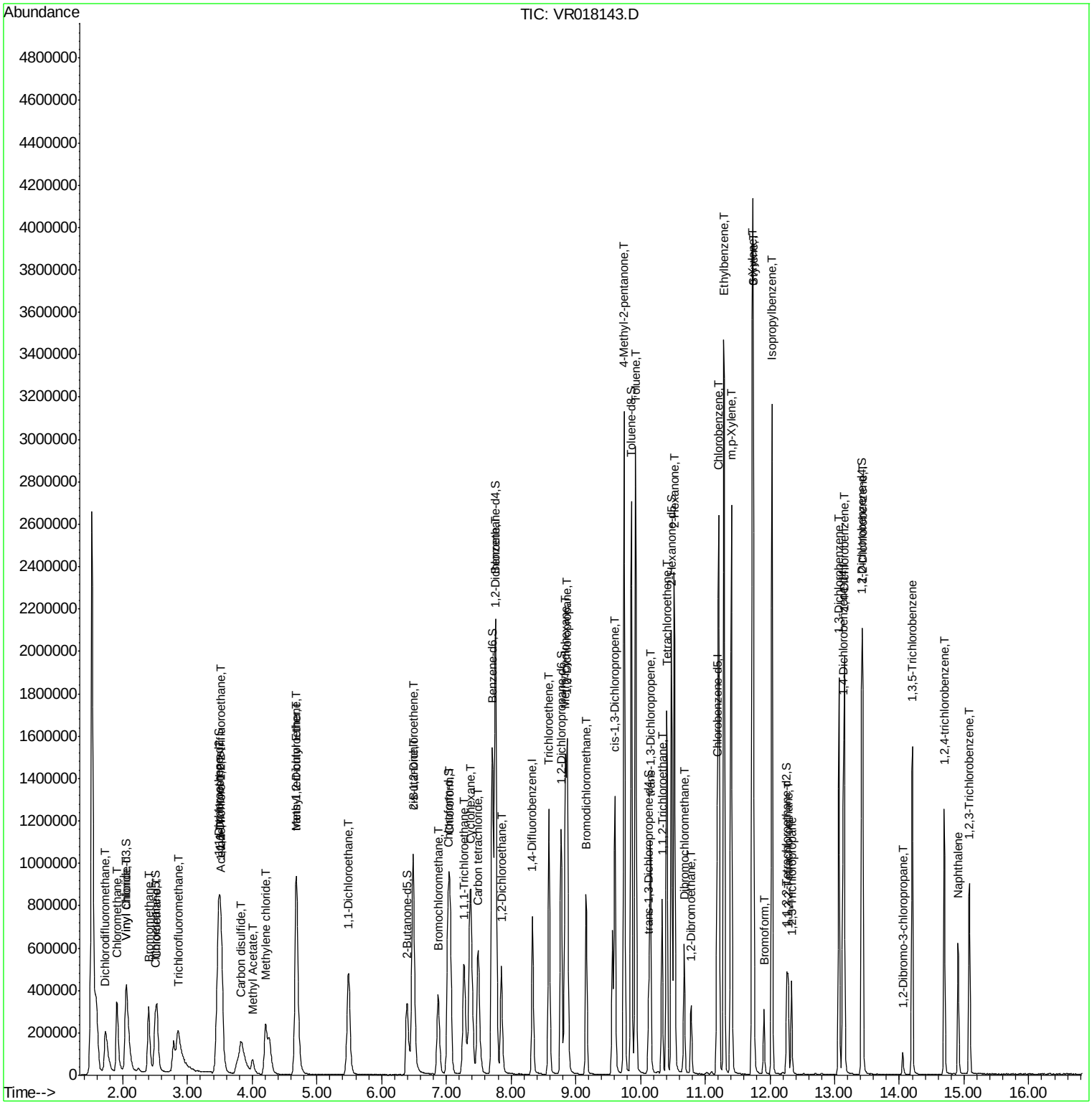

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018143.D
Acq On : 25 Feb 2016 15:23
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD01054

Manual Integrations APPROVED
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Quant Time: Feb 25 16:19:23 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	562163	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	486560	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	192528	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.05	65	468227	8.66	ug/L		0.00
7) Chloroethane-d5	2.50	69	339415	8.48	ug/L		0.00
11) 1,1-Dichloroethene-d2	3.48	63	670543	8.50	ug/L		0.00
20) 2-Butanone-d5	6.39	46	696448	126.43	ug/L		0.00
24) Chloroform-d	7.02	84	760601	9.64	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	416176	10.27	ug/L		0.00
32) Benzene-d6	7.71	84	1516950	9.42	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.78	67	482818	9.68	ug/L		0.00
41) Toluene-d8	9.86	98	1495586	9.85	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	178310	11.38	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	581549	143.18	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	191768	10.31	ug/L		0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	318559	9.33	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.73	85	434826	11.18	ug/L		98
3) Chloromethane	1.91	50	519573	9.58	ug/L		99
5) Vinyl chloride	2.06	62	541020	10.00	ug/L		98
6) Bromomethane	2.40	94	291578	9.95	ug/L		99
8) Chloroethane	2.53	64	304976	9.57	ug/L		100
9) Trichlorofluoromethane	2.86	101	726059m	11.07	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	258923	9.12	ug/L		98
12) 1,1-Dichloroethene	3.49	96	257930	9.02	ug/L		92
13) Acetone	3.53	43	480903	105.96	ug/L		100
14) Carbon disulfide	3.83	76	839839	11.52	ug/L		100
15) Methyl Acetate	4.01	43	127730	12.00	ug/L		98
16) Methylene chloride	4.21	84	270947m	9.19	ug/L		
17) Methyl tert-butyl Ether	4.69	73	533446	11.39	ug/L		99
18) trans-1,2-Dichloroethene	4.68	96	345424	10.74	ug/L		93
19) 1,1-Dichloroethane	5.49	63	791771	10.18	ug/L		98
21) 2-Butanone	6.49	43	818461	128.67	ug/L		100
22) cis-1,2-Dichloroethene	6.48	96	372320	11.07	ug/L	#	94
23) Bromochloromethane	6.88	128	126576	10.81	ug/L		98
25) Chloroform	7.06	83	728606	10.24	ug/L		98
27) 1,2-Dichloroethane	7.85	62	493957	11.15	ug/L		100
29) 1,1,1-Trichloroethane	7.28	97	542475	9.81	ug/L		99
30) Cyclohexane	7.37	56	661203	10.95	ug/L		99
31) Carbon tetrachloride	7.49	117	520543	10.19	ug/L		100
33) Benzene	7.77	78	1684795	10.21	ug/L		100
34) Trichloroethene	8.59	95	412036	10.24	ug/L		98
35) Methylcyclohexane	8.84	83	557465	10.74	ug/L		99
37) 1,2-Dichloropropane	8.87	63	465143	10.57	ug/L		100
38) Bromodichloromethane	9.16	83	508870	11.11	ug/L		100
39) cis-1,3-Dichloropropene	9.60	75	638841	11.97	ug/L		99
40) 4-Methyl-2-pentanone	9.75	43	2078443	129.38	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018143.D
Acq On : 25 Feb 2016 15:23
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD01054

Manual Integrations APPROVED
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Quant Time: Feb 25 16:19:23 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.93	91	1813808	10.60	ug/L	98
44) trans-1,3-Dichloropropene	10.15	75	497516	12.72	ug/L	99
45) 1,1,2-Trichloroethane	10.33	97	211989	11.25	ug/L	97
47) Tetrachloroethene	10.41	164	325356	10.64	ug/L	98
48) 2-Hexanone	10.52	43	1477190	136.15	ug/L	99
49) Dibromochloromethane	10.67	129	269203	11.94	ug/L	99
50) 1,2-Dibromoethane	10.78	107	185502	11.21	ug/L	98
51) Chlorobenzene	11.21	112	1046023	10.46	ug/L	98
52) Ethylbenzene	11.29	91	2023745	10.58	ug/L	95
53) m,p-Xylene	11.40	106	755758	10.91	ug/L	98
54) o-Xylene	11.73	106	675347	10.93	ug/L	93
55) Styrene	11.74	104	1173519	11.63	ug/L	100
56) Isopropylbenzene	12.03	105	1671385	10.40	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	184629	10.71	ug/L	99
59) 1,2,3-Trichloropropane	12.33	75	156127	11.20	ug/L	98
61) Bromoform	11.91	173	117791	13.19	ug/L	99
62) 1,3-Dichlorobenzene	13.06	146	615552	10.80	ug/L	97
63) 1,4-Dichlorobenzene	13.15	146	626260	10.29	ug/L	98
65) 1,2-Dichlorobenzene	13.44	146	502830	10.16	ug/L	97
66) 1,2-Dibromo-3-chloropropan	14.06	75	23811	11.45	ug/L	92
67) 1,3,5-Trichlorobenzene	14.20	180	397194	10.61	ug/L	99
68) 1,2,4-trichlorobenzene	14.69	180	306977	12.00	ug/L	98
69) Naphthalene	14.91	128	395472	13.84	ug/L	99
70) 1,2,3-Trichlorobenzene	15.08	180	241905	12.20	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018143.D
Acq On : 25 Feb 2016 15:23
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 25 16:19:23 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD01054

Manual Integrations APPROVED
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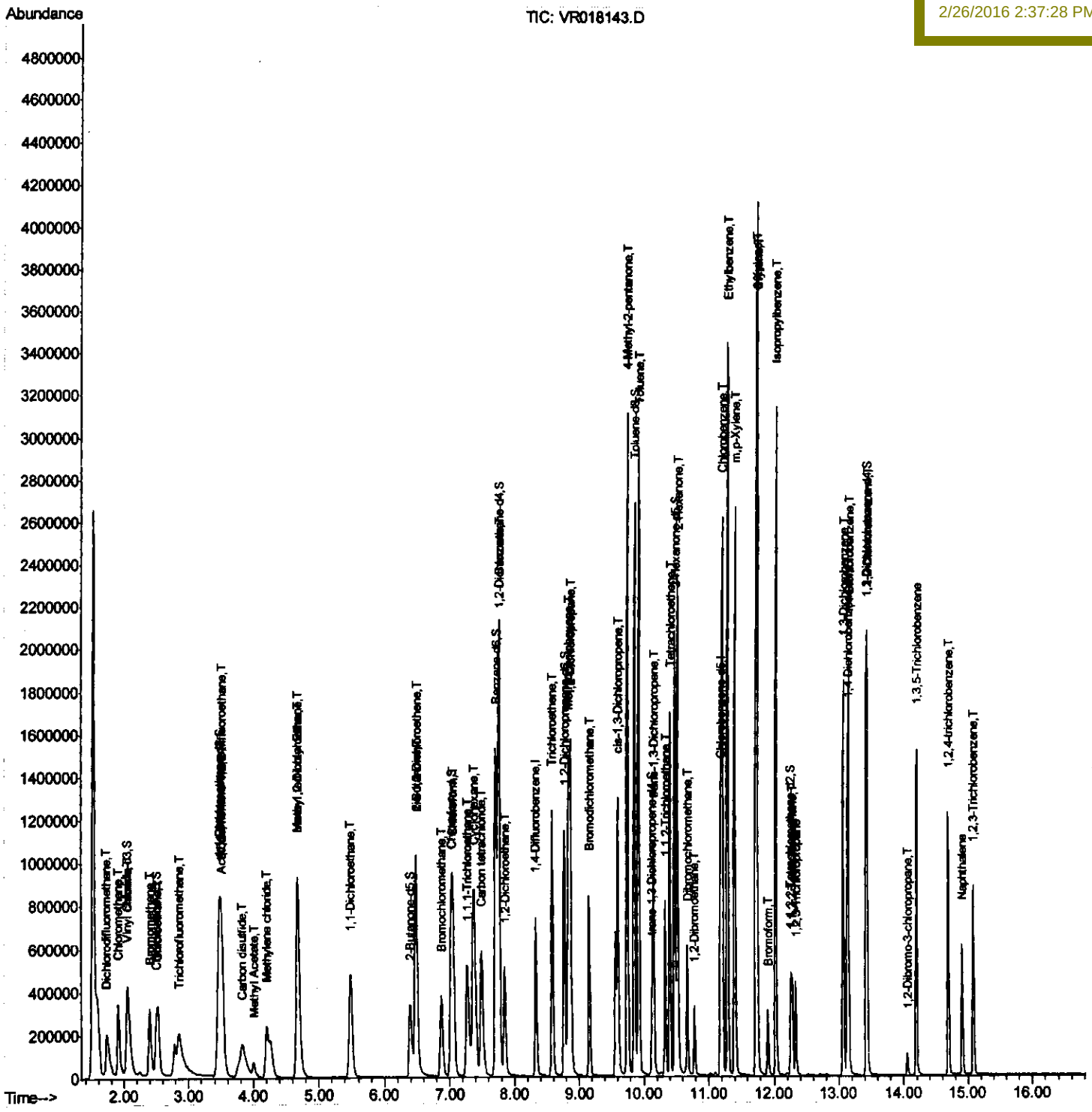

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018143.D
Acq On : 25 Feb 2016 15:23
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 25 16:12:43 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD01054

Manual Integrations APPROVED
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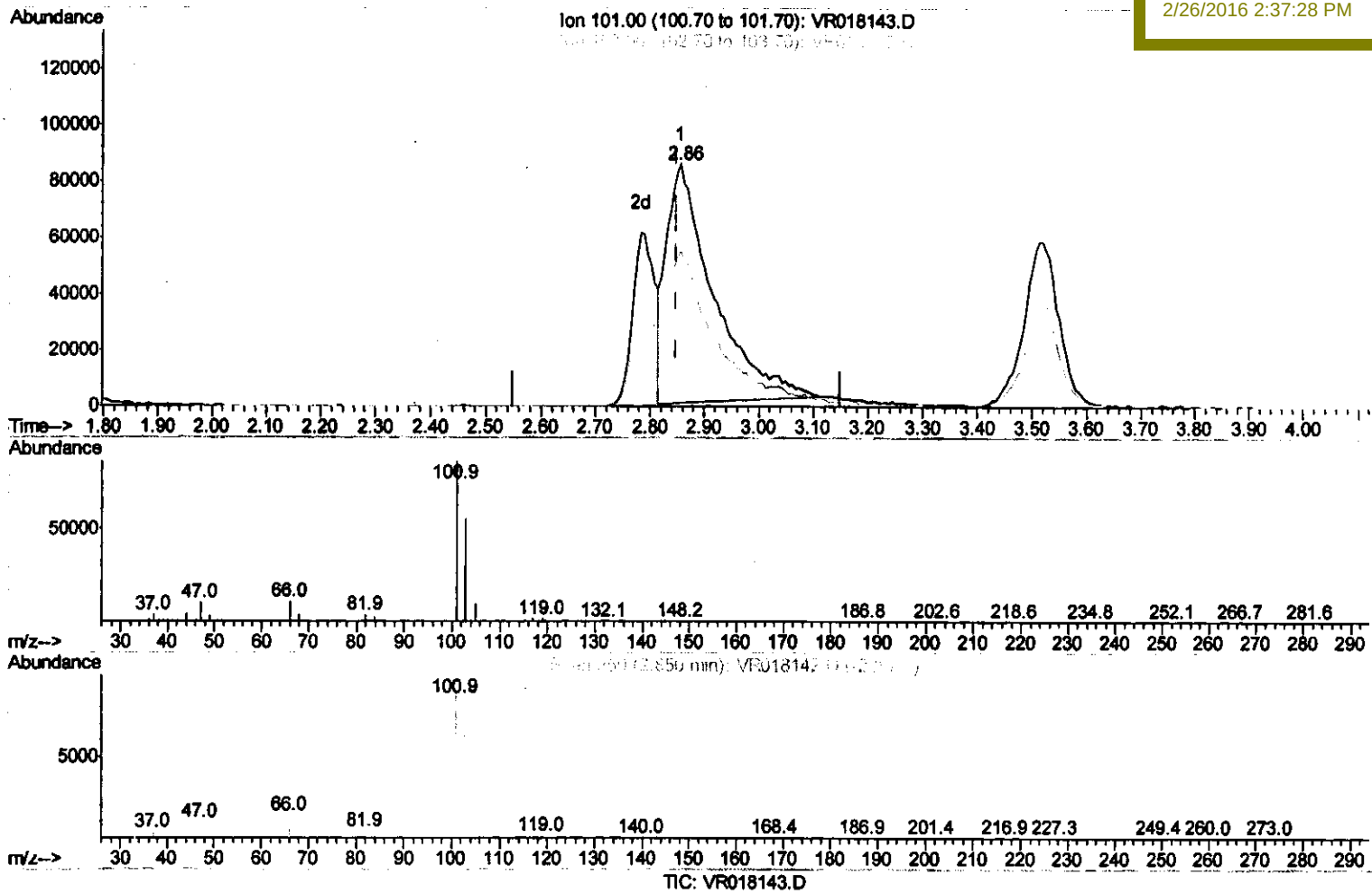

TIC: VR018143.D

(9) Trichlorofluoromethane (T)

2.856min (+0.006) 7.83ug/L

response 513101

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	53.15#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018143.D
Acq On : 25 Feb 2016 15:23
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 25 16:12:43 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD01054

Manual Integrations APPROVED
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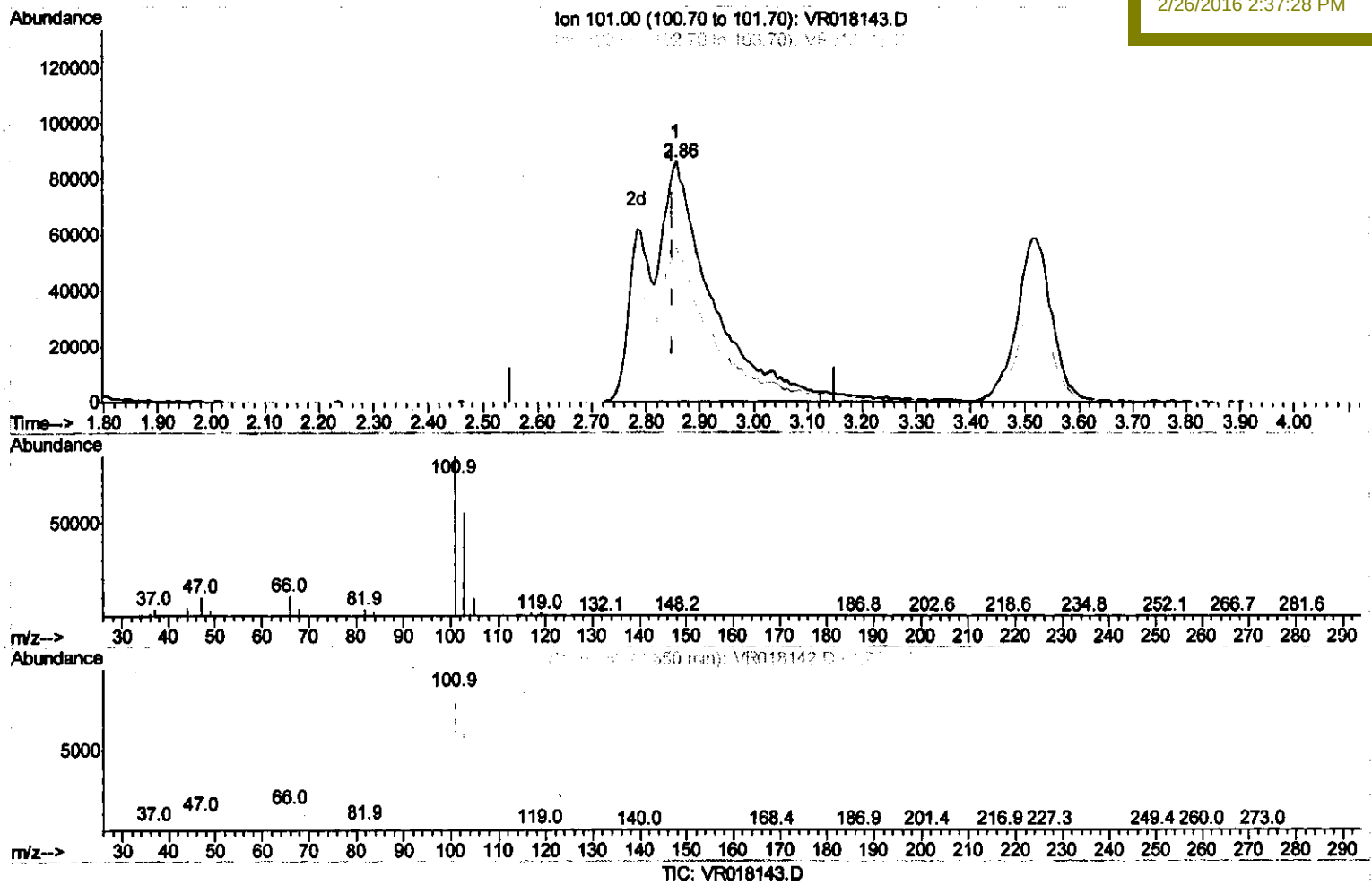

TIC: VR018143.D

(9) Trichlorofluoromethane (T)

2.856min (+0.006) 11.07ug/L m

response 726059

M-D 03/01/16

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	37.56#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018143.D
Acq On : 25 Feb 2016 15:23
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 25 16:12:43 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD01054

Manual Integrations APPROVED
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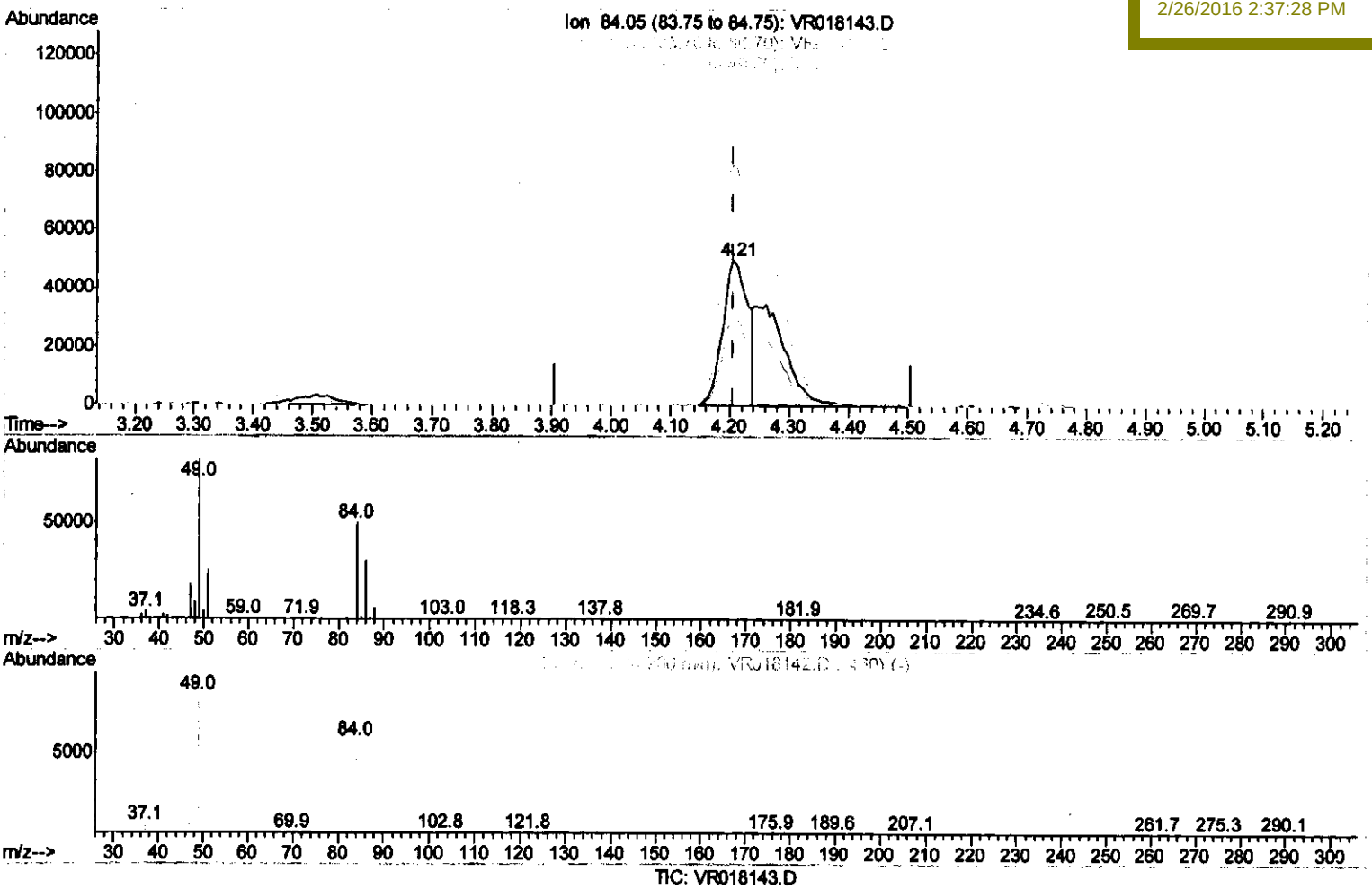

TIC: VR018143.D

(16) Methylene chloride (T)

4.206min (+0.000) 4.91ug/L

response 144937

Ion	Exp%	Act%
84.05	100	100
86.00	58.60	60.69
49.10	171.30	165.44
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018143.D
Acq On : 25 Feb 2016 15:23
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 25 16:12:43 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD01054

Manual Integrations APPROVED
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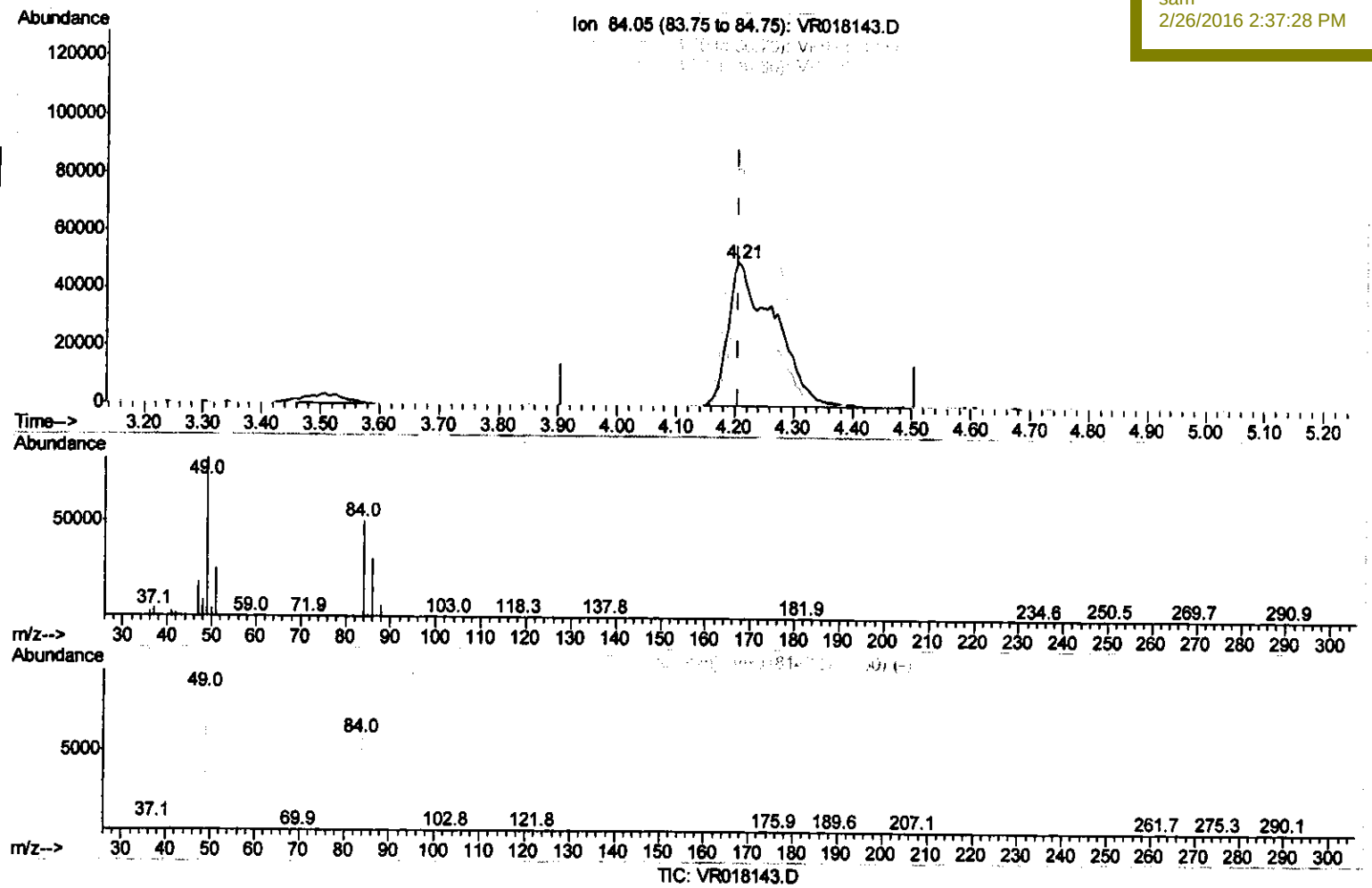

TIC: VR018143.D

(16) Methylene chloride (T)

4.206min (+0.000) 9.19ug/L m

response 270947

M.D 03/01/16

Ion	Exp%	Act%
84.05	100	100
86.00	58.60	60.69
49.10	171.30	165.44
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018143.D
Acq On : 25 Feb 2016 15:23
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 25 16:19:23 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD01054

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	562163	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	486560	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	192528	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.05	65	468227	8.66	ug/L		0.00
7) Chloroethane-d5	2.50	69	339415	8.48	ug/L		0.00
11) 1,1-Dichloroethene-d2	3.48	63	670543	8.50	ug/L		0.00
20) 2-Butanone-d5	6.39	46	696448	126.43	ug/L		0.00
24) Chloroform-d	7.02	84	760601	9.64	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	416176	10.27	ug/L		0.00
32) Benzene-d6	7.71	84	1516950	9.42	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.78	67	482818	9.68	ug/L		0.00
41) Toluene-d8	9.86	98	1495586	9.85	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	178310	11.38	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	581549	143.18	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	191768	10.31	ug/L		0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	318559	9.33	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.73	85	434826	11.18	ug/L		98
3) Chloromethane	1.91	50	519573	9.58	ug/L		99
5) Vinyl chloride	2.06	62	541020	10.00	ug/L		98
6) Bromomethane	2.40	94	291578	9.95	ug/L		99
8) Chloroethane	2.53	64	304976	9.57	ug/L		100
9) Trichlorofluoromethane	2.86	101	726059m	11.07	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	258923	9.12	ug/L		98
12) 1,1-Dichloroethene	3.49	96	257930	9.02	ug/L		92
13) Acetone	3.53	43	480903	105.96	ug/L		100
14) Carbon disulfide	3.83	76	839839	11.52	ug/L		100
15) Methyl Acetate	4.01	43	127730	12.00	ug/L		98
16) Methylene chloride	4.21	84	270947m	9.19	ug/L		
17) Methyl tert-butyl Ether	4.69	73	533446	11.39	ug/L		99
18) trans-1,2-Dichloroethene	4.68	96	345424	10.74	ug/L		93
19) 1,1-Dichloroethane	5.49	63	791771	10.18	ug/L		98
21) 2-Butanone	6.49	43	818461	128.67	ug/L		100
22) cis-1,2-Dichloroethene	6.48	96	372320	11.07	ug/L	#	94
23) Bromochloromethane	6.88	128	126576	10.81	ug/L		98
25) Chloroform	7.06	83	728606	10.24	ug/L		98
27) 1,2-Dichloroethane	7.85	62	493957	11.15	ug/L		100
29) 1,1,1-Trichloroethane	7.28	97	542475	9.81	ug/L		99
30) Cyclohexane	7.37	56	661203	10.95	ug/L		99
31) Carbon tetrachloride	7.49	117	520543	10.19	ug/L		100
33) Benzene	7.77	78	1684795	10.21	ug/L		100
34) Trichloroethene	8.59	95	412036	10.24	ug/L		98
35) Methylcyclohexane	8.84	83	557465	10.74	ug/L		99
37) 1,2-Dichloropropane	8.87	63	465143	10.57	ug/L		100
38) Bromodichloromethane	9.16	83	508870	11.11	ug/L		100
39) cis-1,3-Dichloropropene	9.60	75	638841	11.97	ug/L		99
40) 4-Methyl-2-pentanone	9.75	43	2078443	129.38	ug/L		99

M.D 03/01/16

M.D 03/01/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018143.D
Acq On : 25 Feb 2016 15:23
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 25 16:19:23 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD01054

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.93	91	1813808	10.60	ug/L	98
44) trans-1,3-Dichloropropene	10.15	75	497516	12.72	ug/L	99
45) 1,1,2-Trichloroethane	10.33	97	211989	11.25	ug/L	97
47) Tetrachloroethene	10.41	164	325356	10.64	ug/L	98
48) 2-Hexanone	10.52	43	1477190	136.15	ug/L	99
49) Dibromochloromethane	10.67	129	269203	11.94	ug/L	99
50) 1,2-Dibromoethane	10.78	107	185502	11.21	ug/L	98
51) Chlorobenzene	11.21	112	1046023	10.46	ug/L	98
52) Ethylbenzene	11.29	91	2023745	10.58	ug/L	95
53) m,p-Xylene	11.40	106	755758	10.91	ug/L	98
54) o-Xylene	11.73	106	675347	10.93	ug/L	93
55) Styrene	11.74	104	1173519	11.63	ug/L	100
56) Isopropylbenzene	12.03	105	1671385	10.40	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	184629	10.71	ug/L	99
59) 1,2,3-Trichloropropane	12.33	75	156127	11.20	ug/L	98
61) Bromoform	11.91	173	117791	13.19	ug/L	99
62) 1,3-Dichlorobenzene	13.06	146	615552	10.80	ug/L	97
63) 1,4-Dichlorobenzene	13.15	146	626260	10.29	ug/L	98
65) 1,2-Dichlorobenzene	13.44	146	502830	10.16	ug/L	97
66) 1,2-Dibromo-3-chloropropan	14.06	75	23811	11.45	ug/L	92
67) 1,3,5-Trichlorobenzene	14.20	180	397194	10.61	ug/L	99
68) 1,2,4-trichlorobenzene	14.69	180	306977	12.00	ug/L	98
69) Naphthalene	14.91	128	395472	13.84	ug/L	99
70) 1,2,3-Trichlorobenzene	15.08	180	241905	12.20	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018144.D
Acq On : 25 Feb 2016 15:54
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 25 16:22:43 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD02055

Manual Integrations APPROVED
sam
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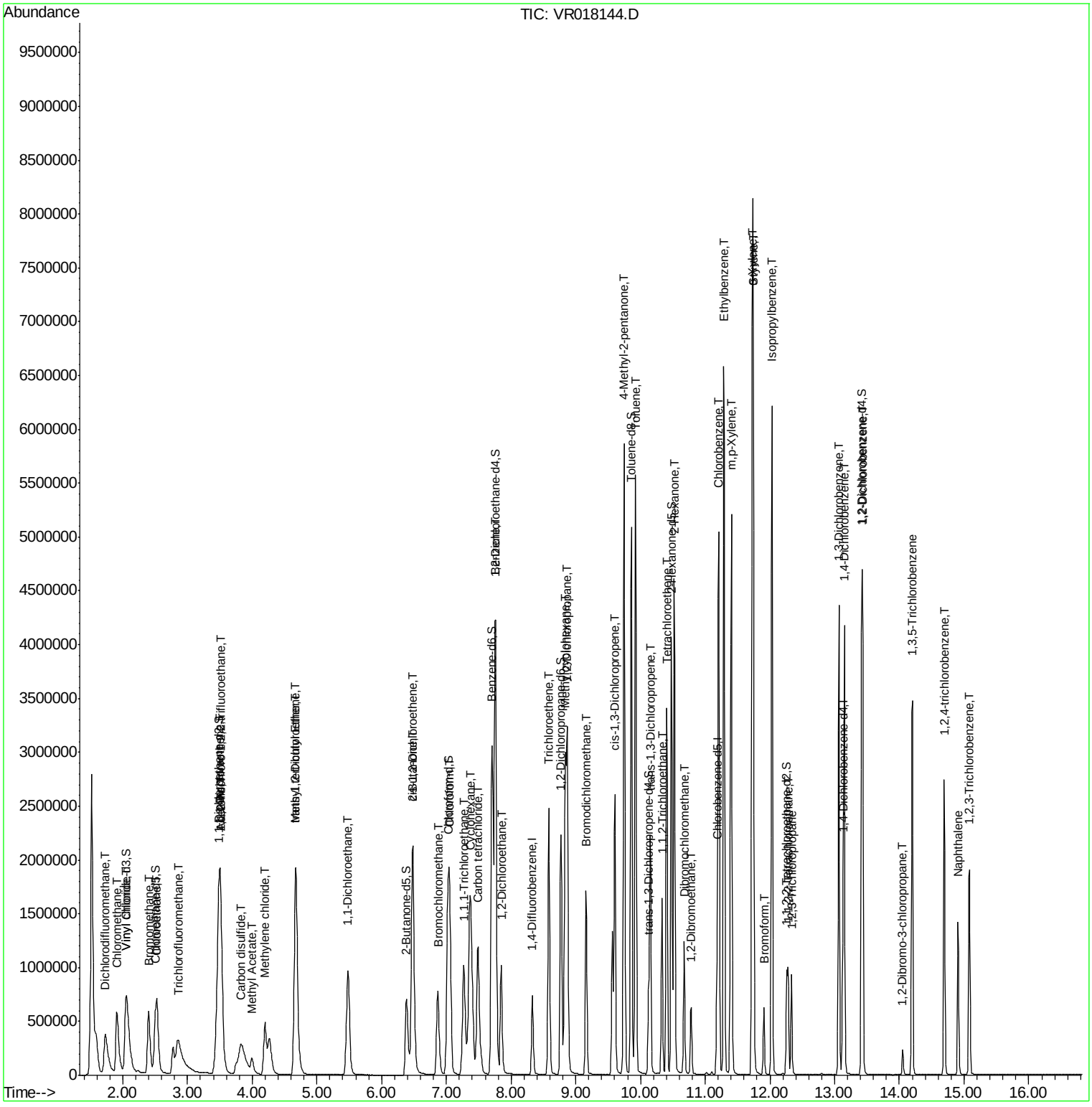

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018144.D
Acq On : 25 Feb 2016 15:54
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD02055

Manual Integrations APPROVED
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Quant Time: Feb 25 16:22:43 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	552442	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	478340	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.12	152	209932	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.05	65	967132	18.20	ug/L	0.00
7) Chloroethane-d5	2.50	69	724061	18.40	ug/L	0.00
11) 1,1-Dichloroethene-d2	3.48	63	1425441	18.38	ug/L	0.00
20) 2-Butanone-d5	6.38	46	1418771	262.09	ug/L	0.00
24) Chloroform-d	7.02	84	1519870	19.60	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.75	65	810614	20.35	ug/L	0.00
32) Benzene-d6	7.70	84	2999131	18.94	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.77	67	947773	19.34	ug/L	0.00
41) Toluene-d8	9.86	98	2815919	18.87	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.13	79	352969	22.92	ug/L	0.00
46) 2-Hexanone-d5	10.48	63	1170362	293.10	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	385194	21.07	ug/L	0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	711087	19.10	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	943562	24.69	ug/L	99
3) Chloromethane	1.91	50	1152464	21.62	ug/L	99
5) Vinyl chloride	2.06	62	1130898	21.27	ug/L	98
6) Bromomethane	2.40	94	611360	21.23	ug/L	98
8) Chloroethane	2.53	64	657088	20.98	ug/L	99
9) Trichlorofluoromethane	2.86	101	1355216m	21.03	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	554820	19.88	ug/L	98
12) 1,1-Dichloroethene	3.49	96	574997	20.45	ug/L	81
13) Acetone	3.51	43	972704	218.09	ug/L	98
14) Carbon disulfide	3.83	76	1758225	24.54	ug/L	97
15) Methyl Acetate	3.99	43	255650	24.44	ug/L	97
16) Methylene chloride	4.20	84	560810m	19.35	ug/L	
17) Methyl tert-butyl Ether	4.67	73	1151143	25.01	ug/L	99
18) trans-1,2-Dichloroethene	4.67	96	717972	22.71	ug/L	95
19) 1,1-Dichloroethane	5.48	63	1639013	21.44	ug/L	98
21) 2-Butanone	6.48	43	1628046	260.46	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	763455	23.09	ug/L	93
23) Bromochloromethane	6.87	128	257223	22.35	ug/L	98
25) Chloroform	7.05	83	1474351	21.08	ug/L	98
27) 1,2-Dichloroethane	7.85	62	959282	22.04	ug/L	100
29) 1,1,1-Trichloroethane	7.27	97	1098638	20.22	ug/L	99
30) Cyclohexane	7.37	56	1395454	23.50	ug/L	100
31) Carbon tetrachloride	7.49	117	1074551	21.40	ug/L	99
33) Benzene	7.76	78	3316270	20.44	ug/L	100
34) Trichloroethene	8.58	95	828877	20.95	ug/L	97
35) Methylcyclohexane	8.84	83	1166331	22.86	ug/L	99
37) 1,2-Dichloropropane	8.87	63	910728	21.04	ug/L	100
38) Bromodichloromethane	9.16	83	1000175	22.21	ug/L	98
39) cis-1,3-Dichloropropene	9.60	75	1258031	23.97	ug/L	99
40) 4-Methyl-2-pentanone	9.75	43	3848112	243.66	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018144.D
Acq On : 25 Feb 2016 15:54
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD02055

Manual Integrations APPROVED
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Quant Time: Feb 25 16:22:43 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.92	91	3396120	20.18	ug/L	93
44) trans-1,3-Dichloropropene	10.15	75	979045	25.46	ug/L	99
45) 1,1,2-Trichloroethane	10.33	97	409684	22.11	ug/L	97
47) Tetrachloroethene	10.41	164	653323	21.73	ug/L	99
48) 2-Hexanone	10.52	43	2809545	263.40	ug/L	95
49) Dibromochloromethane	10.67	129	538281	24.29	ug/L	98
50) 1,2-Dibromoethane	10.78	107	366552	22.54	ug/L	100
51) Chlorobenzene	11.21	112	2006834	20.41	ug/L	98
52) Ethylbenzene	11.29	91	3708892	19.73	ug/L	87
53) m,p-Xylene	11.40	106	1487107	21.84	ug/L	95
54) o-Xylene	11.73	106	1375477	22.63	ug/L	83
55) Styrene	11.74	104	2311613	23.30	ug/L	99
56) Isopropylbenzene	12.03	105	3261798	20.64	ug/L	96
58) 1,1,2,2-Tetrachloroethane	12.28	83	377442	22.27	ug/L	99
59) 1,2,3-Trichloropropane	12.33	75	318757	23.26	ug/L	99
61) Bromoform	11.91	173	239642	24.60	ug/L	100
62) 1,3-Dichlorobenzene	13.06	146	1344961	21.65	ug/L	97
63) 1,4-Dichlorobenzene	13.15	146	1347761	20.32	ug/L	98
65) 1,2-Dichlorobenzene	13.44	146	1138655	21.11	ug/L	98
66) 1,2-Dibromo-3-chloropropan	14.05	75	55026	24.27	ug/L	95
67) 1,3,5-Trichlorobenzene	14.20	180	909762	22.28	ug/L	99
68) 1,2,4-trichlorobenzene	14.69	180	691388	24.78	ug/L	98
69) Naphthalene	14.91	128	889355	28.55	ug/L	99
70) 1,2,3-Trichlorobenzene	15.08	180	518062	23.96	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018144.D
Acq On : 25 Feb 2016 15:54
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 25 16:22:43 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD02055

Manual Integrations APPROVED
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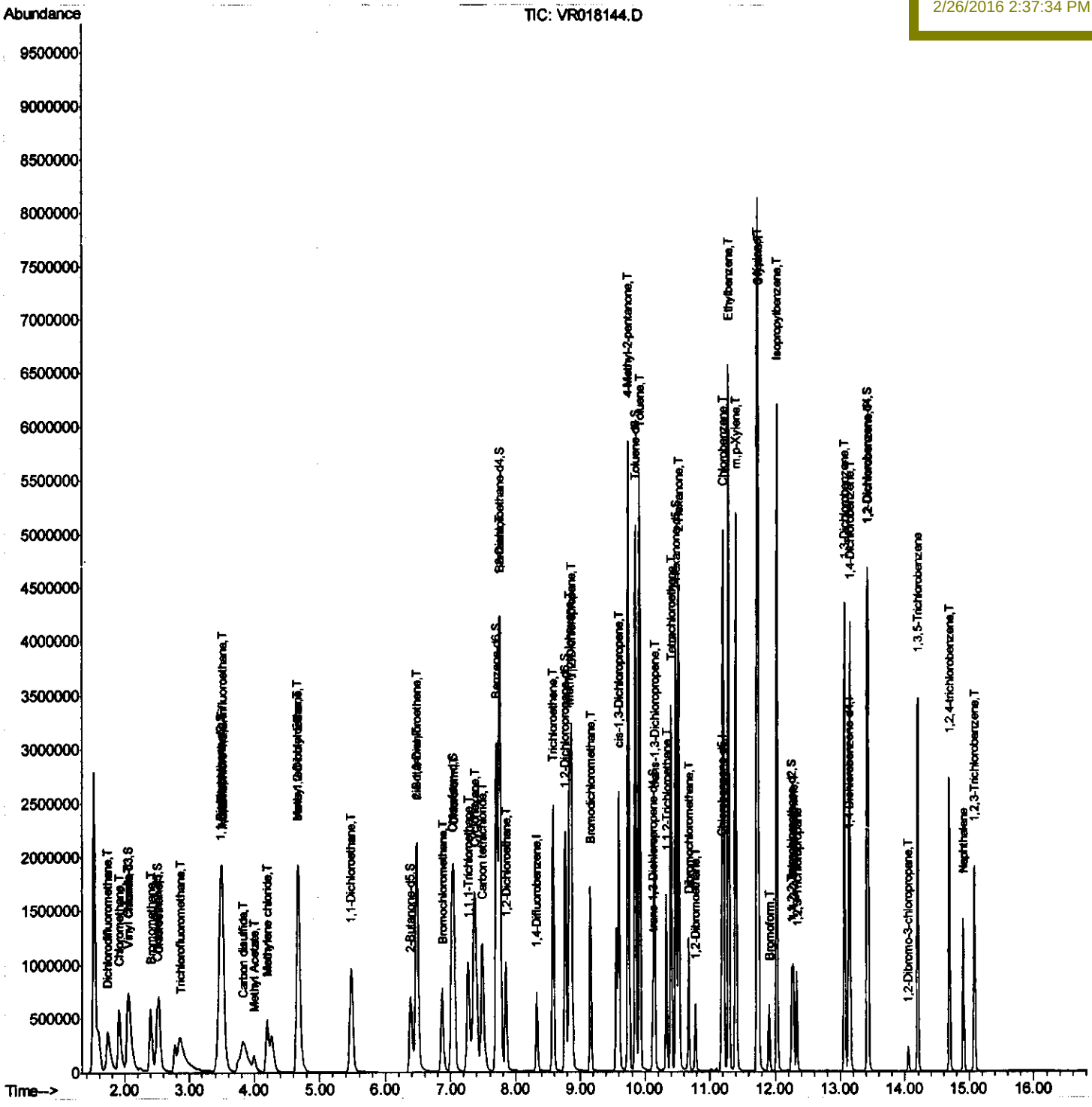

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018144.D
Acq On : 25 Feb 2016 15:54
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 25 16:21:04 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD02055

Manual Integrations APPROVED
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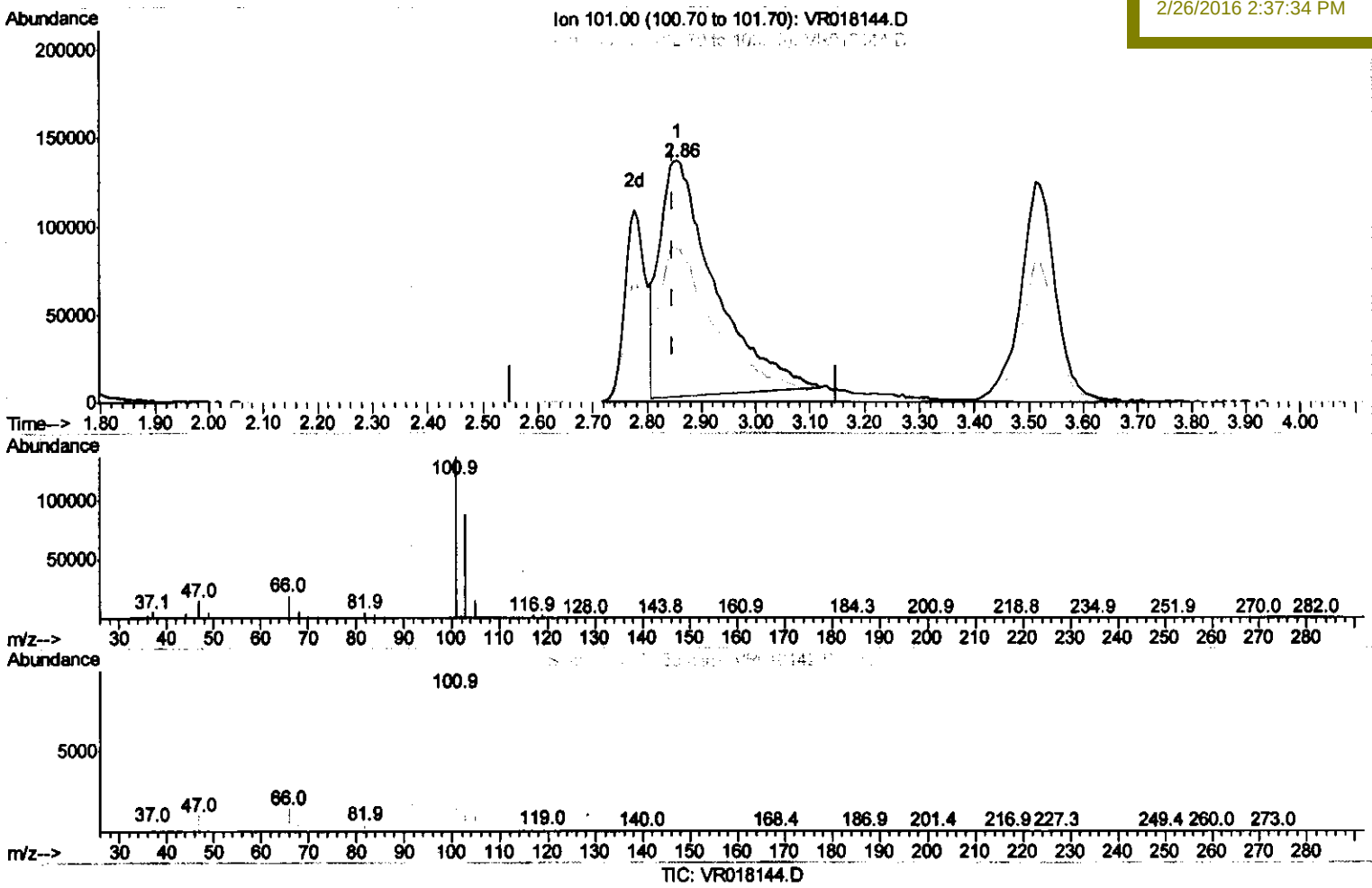

(9) Trichlorofluoromethane (T)

2.856min (+0.006) 14.69ug/L

response 946669

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	53.95#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018144.D
Acq On : 25 Feb 2016 15:54
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 25 16:21:04 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD02055

Manual Integrations APPROVED
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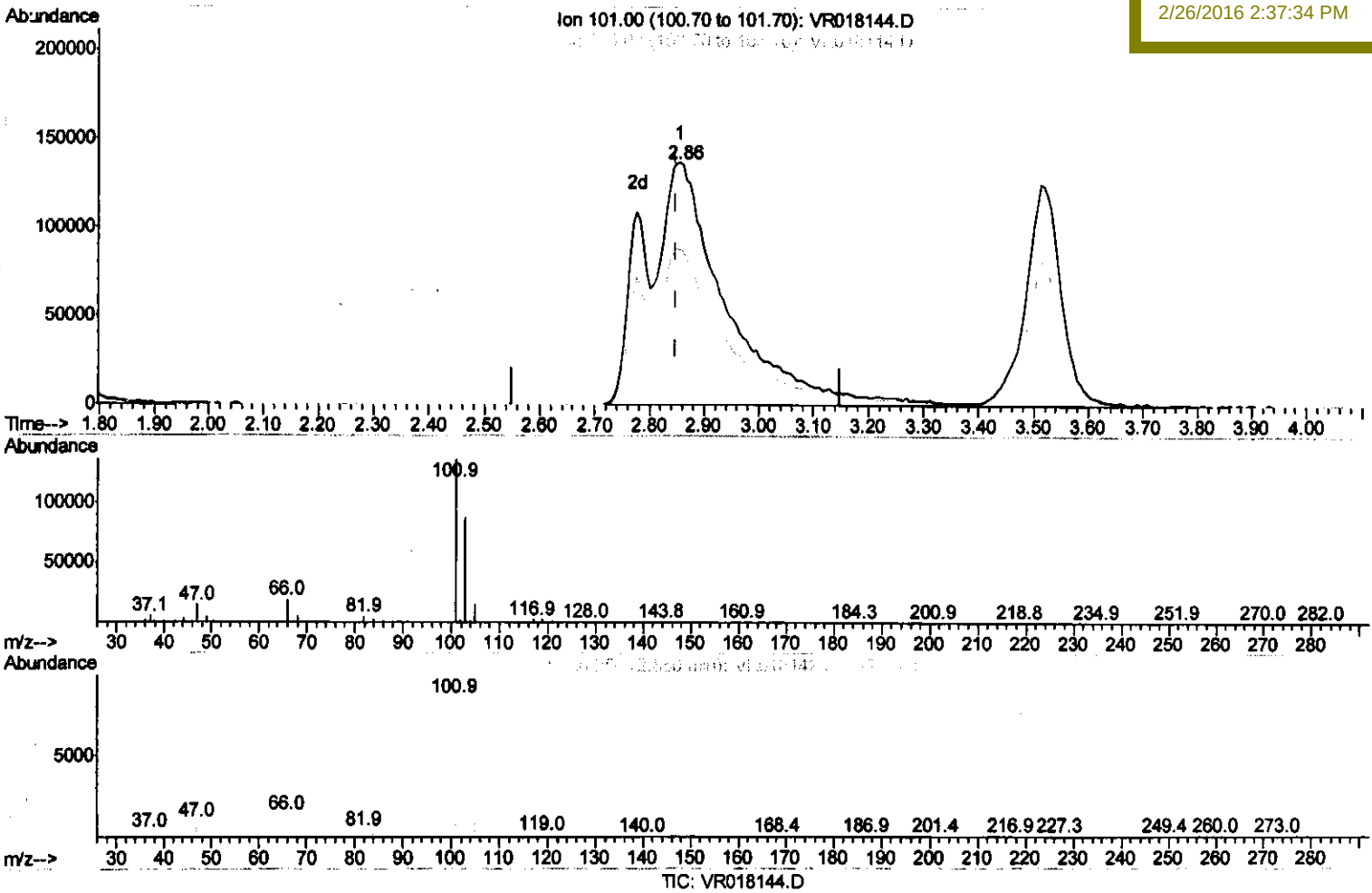

TIC: VR018144.D

(9) Trichlorofluoromethane (T)

2.856min (+0.006) 21.03ug/L m > M.D 03/01/16

response 1355216

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	37.69#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018144.D
Acq On : 25 Feb 2016 15:54
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 25 16:21:04 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD02055

Manual Integrations APPROVED
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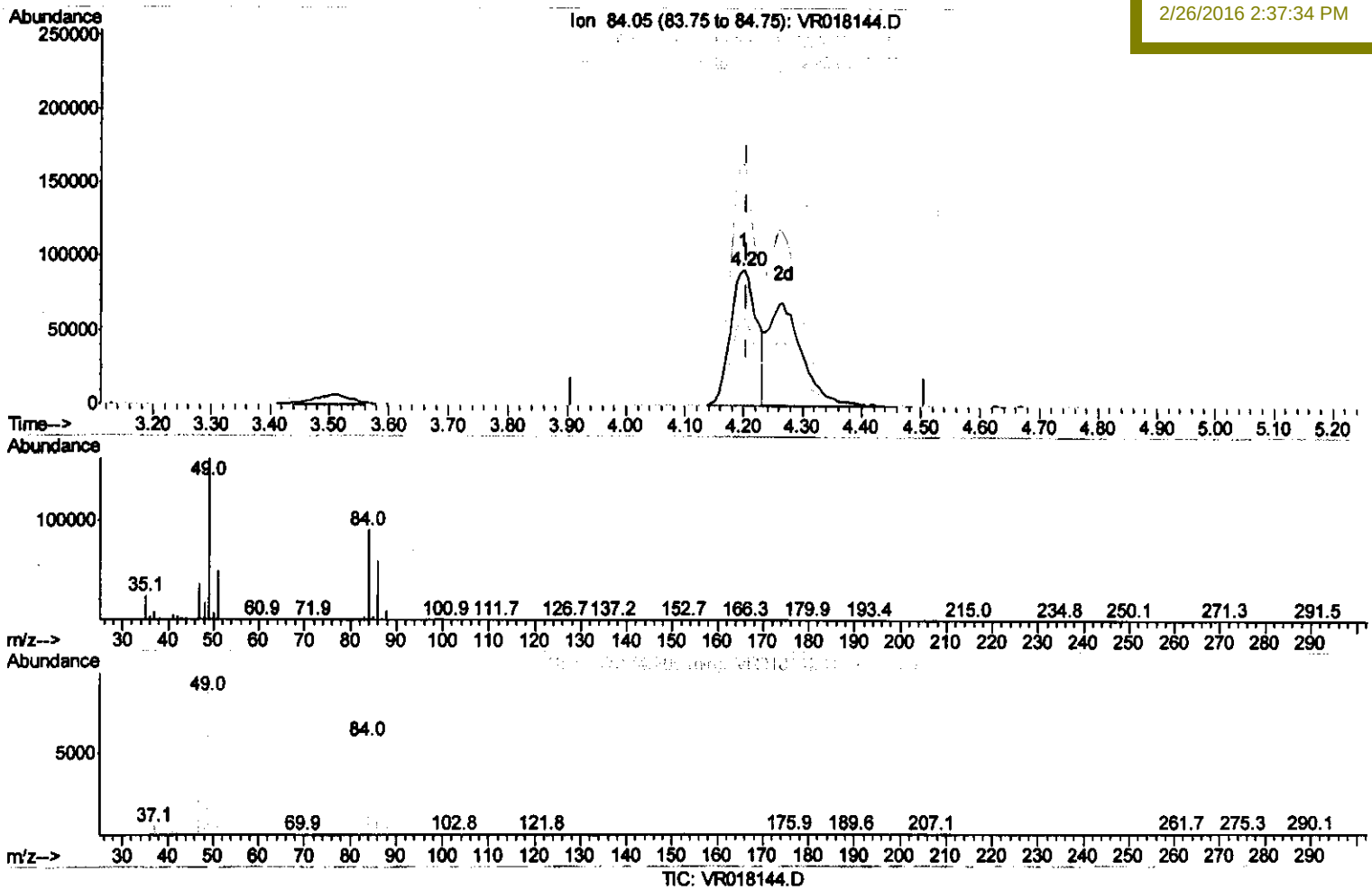
2/26/2016 2:37:34 PM



(16) Methylene chloride (T)

4.200min (-0.006) 9.67ug/L

response 280387

Ion	Exp%	Act%
84.05	100	100
86.00	58.60	64.88
49.10	171.30	178.49
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018144.D
Acq On : 25 Feb 2016 15:54
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 25 16:21:04 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD02055

Manual Integrations APPROVED
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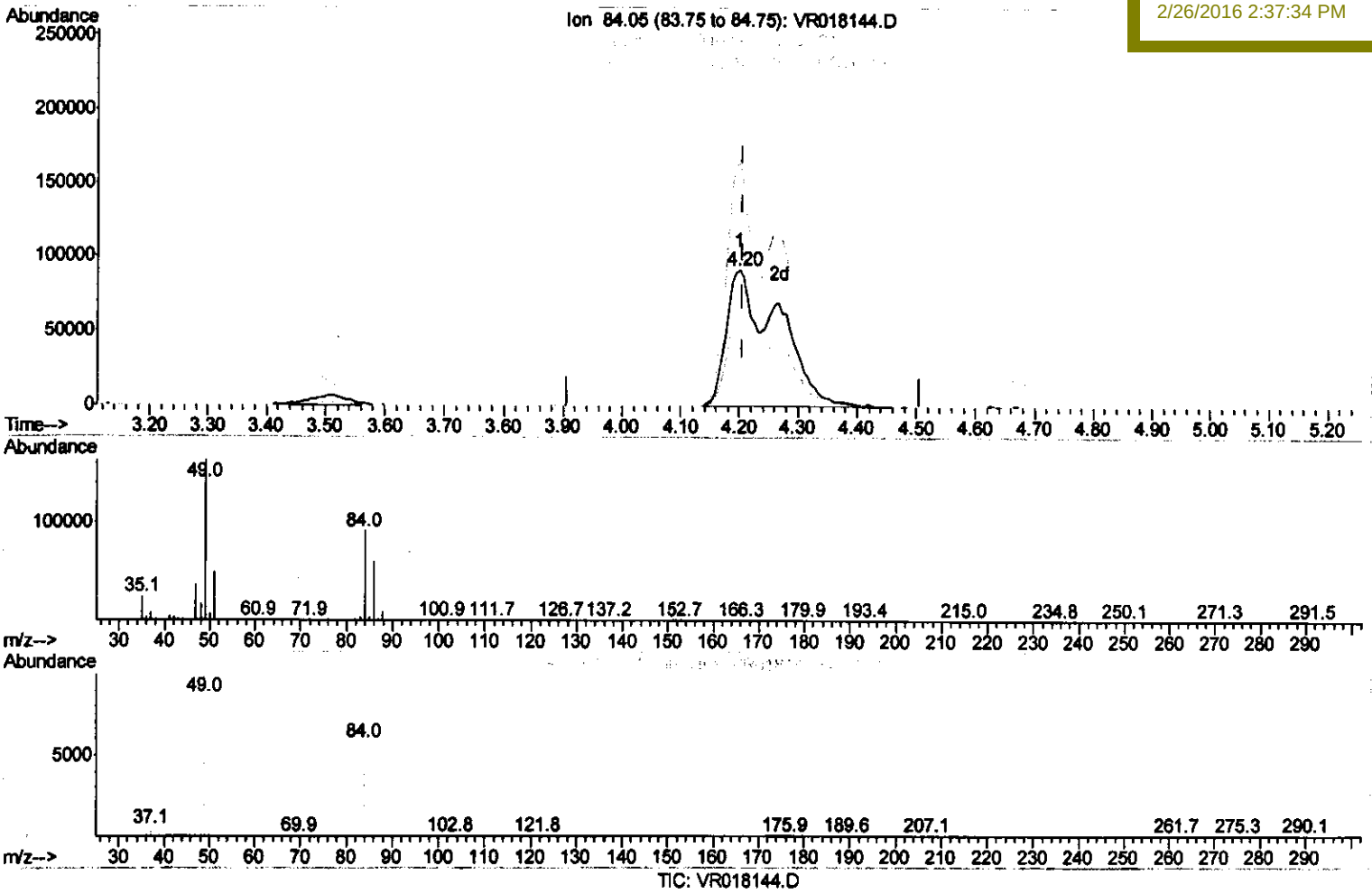

(16) Methylene chloride (T)

4.200min (-0.006) 19.35ug/L m

response 560810

M.D 03/01/16

Ion	Exp%	Act%
84.05	100	100
86.00	58.60	64.88
49.10	171.30	178.49
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018144.D
Acq On : 25 Feb 2016 15:54
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 25 16:22:43 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD02055

Manual Integrations APPROVED
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2/26/2016 2:37:34 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	552442	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	478340	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.12	152	209932	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.05	65	967132	18.20	ug/L	0.00
7) Chloroethane-d5	2.50	69	724061	18.40	ug/L	0.00
11) 1,1-Dichloroethene-d2	3.48	63	1425441	18.38	ug/L	0.00
20) 2-Butanone-d5	6.38	46	1418771	262.09	ug/L	0.00
24) Chloroform-d	7.02	84	1519870	19.60	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.75	65	810614	20.35	ug/L	0.00
32) Benzene-d6	7.70	84	2999131	18.94	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.77	67	947773	19.34	ug/L	0.00
41) Toluene-d8	9.86	98	2815919	18.87	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.13	79	352969	22.92	ug/L	0.00
46) 2-Hexanone-d5	10.48	63	1170362	293.10	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	385194	21.07	ug/L	0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	711087	19.10	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	943562	24.69	ug/L	99
3) Chloromethane	1.91	50	1152464	21.62	ug/L	99
5) Vinyl chloride	2.06	62	1130898	21.27	ug/L	98
6) Bromomethane	2.40	94	611360	21.23	ug/L	98
8) Chloroethane	2.53	64	657088	20.98	ug/L	99
9) Trichlorofluoromethane	2.86	101	1355216m	21.03	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	554820	19.88	ug/L	98
12) 1,1-Dichloroethene	3.49	96	574997	20.45	ug/L	81
13) Acetone	3.51	43	972704	218.09	ug/L	98
14) Carbon disulfide	3.83	76	1758225	24.54	ug/L	97
15) Methyl Acetate	3.99	43	255650	24.44	ug/L	97
16) Methylene chloride	4.20	84	560810m	19.35	ug/L	
17) Methyl tert-butyl Ether	4.67	73	1151143	25.01	ug/L	99
18) trans-1,2-Dichloroethene	4.67	96	717972	22.71	ug/L	95
19) 1,1-Dichloroethane	5.48	63	1639013	21.44	ug/L	98
21) 2-Butanone	6.48	43	1628046	260.46	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	763455	23.09	ug/L	93
23) Bromochloromethane	6.87	128	257223	22.35	ug/L	98
25) Chloroform	7.05	83	1474351	21.08	ug/L	98
27) 1,2-Dichloroethane	7.85	62	959282	22.04	ug/L	100
29) 1,1,1-Trichloroethane	7.27	97	1098638	20.22	ug/L	99
30) Cyclohexane	7.37	56	1395454	23.50	ug/L	100
31) Carbon tetrachloride	7.49	117	1074551	21.40	ug/L	99
33) Benzene	7.76	78	3316270	20.44	ug/L	100
34) Trichloroethene	8.58	95	828877	20.95	ug/L	97
35) Methylcyclohexane	8.84	83	1166331	22.86	ug/L	99
37) 1,2-Dichloropropane	8.87	63	910728	21.04	ug/L	100
38) Bromodichloromethane	9.16	83	1000175	22.21	ug/L	98
39) cis-1,3-Dichloropropene	9.60	75	1258031	23.97	ug/L	99
40) 4-Methyl-2-pentanone	9.75	43	3848112	243.66	ug/L	95

M.D 03/01/16

M.D 03/01/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018144.D
Acq On : 25 Feb 2016 15:54
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 25 16:22:43 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:07:00 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD02055

Manual Integrations APPROVED
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2/26/2016 2:37:34 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.92	91	3396120	20.18	ug/L	93
44) trans-1,3-Dichloropropene	10.15	75	979045	25.46	ug/L	99
45) 1,1,2-Trichloroethane	10.33	97	409684	22.11	ug/L	97
47) Tetrachloroethene	10.41	164	653323	21.73	ug/L	99
48) 2-Hexanone	10.52	43	2809545	263.40	ug/L	95
49) Dibromochloromethane	10.67	129	538281	24.29	ug/L	98
50) 1,2-Dibromoethane	10.78	107	366552	22.54	ug/L	100
51) Chlorobenzene	11.21	112	2006834	20.41	ug/L	98
52) Ethylbenzene	11.29	91	3708892	19.73	ug/L	87
53) m,p-Xylene	11.40	106	1487107	21.84	ug/L	95
54) o-Xylene	11.73	106	1375477	22.63	ug/L	83
55) Styrene	11.74	104	2311613	23.30	ug/L	99
56) Isopropylbenzene	12.03	105	3261798	20.64	ug/L	96
58) 1,1,2,2-Tetrachloroethane	12.28	83	377442	22.27	ug/L	99
59) 1,2,3-Trichloropropane	12.33	75	318757	23.26	ug/L	99
61) Bromoform	11.91	173	239642	24.60	ug/L	100
62) 1,3-Dichlorobenzene	13.06	146	1344961	21.65	ug/L	97
63) 1,4-Dichlorobenzene	13.15	146	1347761	20.32	ug/L	98
65) 1,2-Dichlorobenzene	13.44	146	1138655	21.11	ug/L	98
66) 1,2-Dibromo-3-chloropropan	14.05	75	55026	24.27	ug/L	95
67) 1,3,5-Trichlorobenzene	14.20	180	909762	22.28	ug/L	99
68) 1,2,4-trichlorobenzene	14.69	180	691388	24.78	ug/L	98
69) Naphthalene	14.91	128	889355	28.55	ug/L	99
70) 1,2,3-Trichlorobenzene	15.08	180	518062	23.96	ug/L	98

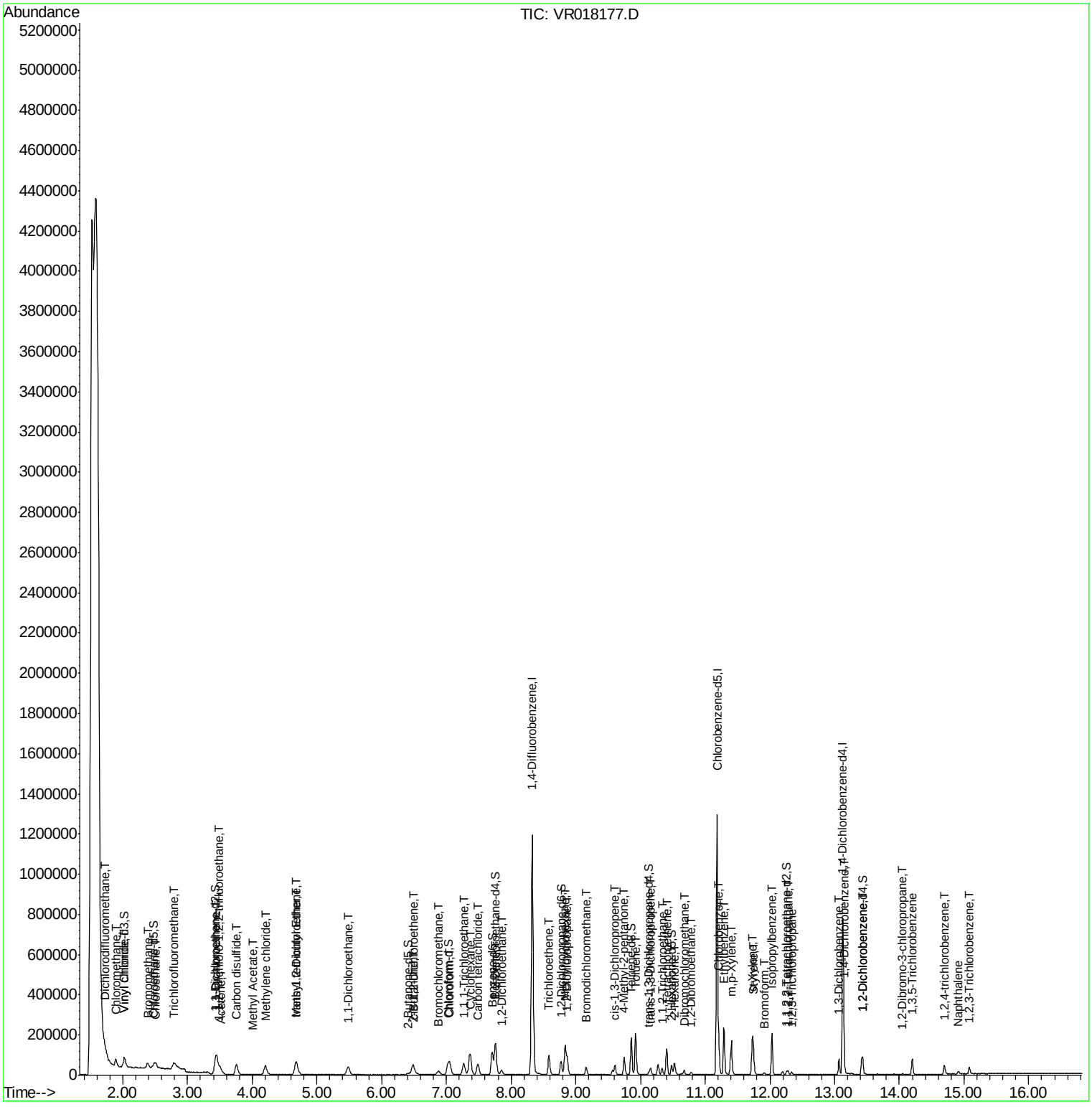
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018177.D
Acq On : 1 Mar 2016 12:59
Operator : MD\SY
Sample : VSTD0.560
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.560

Quant Time: Mar 02 03:03:06 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018177.D
Acq On : 1 Mar 2016 12:59
Operator : MD\SY
Sample : VSTD0.560
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD0.560

Quant Time: Mar 02 03:03:06 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	933254	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	579998	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	170209	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.02	65	36046	0.50	ug/L		0.00
7) Chloroethane-d5	2.48	69	28805	0.54	ug/L		0.00
11) 1,1-Dichloroethene-d2	3.43	63	74388	0.50	ug/L		0.00
20) 2-Butanone-d5	6.40	46	20496	4.08	ug/L		0.02
24) Chloroform-d	7.02	84	53633	0.50	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	19654	0.50	ug/L		0.00
32) Benzene-d6	7.71	84	122045	0.50	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.77	67	29761	0.49	ug/L		0.00
41) Toluene-d8	9.86	98	107212	0.50	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	5795	0.42	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	14467	4.10	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	6748	0.50	ug/L		0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	14763	0.53	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.73	85	29235	0.49	ug/L		95
3) Chloromethane	1.89	50	45407	0.53	ug/L		99
5) Vinyl chloride	2.03	62	41868	0.49	ug/L		91
6) Bromomethane	2.38	94	21484	0.56	ug/L		92
8) Chloroethane	2.52	64	27768	0.56	ug/L		98
9) Trichlorofluoromethane	2.80	101	56653	0.53	ug/L		99
10) 1,1,2-Trichloro-1,2,2-trif	3.49	101	22847	0.52	ug/L		99
12) 1,1-Dichloroethene	3.45	96	30965	0.51	ug/L	#	78
13) Acetone	3.52	43	21885	5.54	ug/L		97
14) Carbon disulfide	3.76	76	110022	0.52	ug/L		98
15) Methyl Acetate	4.01	43	4987	0.48	ug/L	#	83
16) Methylene chloride	4.20	84	29347	0.59	ug/L		85
17) Methyl tert-butyl Ether	4.68	73	23861	0.48	ug/L		97
18) trans-1,2-Dichloroethene	4.68	96	30671	0.48	ug/L		94
19) 1,1-Dichloroethane	5.48	63	65770	0.50	ug/L		96
21) 2-Butanone	6.51	43	23844	4.26	ug/L		79
22) cis-1,2-Dichloroethene	6.49	96	26807	0.49	ug/L		80
23) Bromochloromethane	6.86	128	6495	0.46	ug/L	#	91
25) Chloroform	7.05	83	53058	0.51	ug/L		99
27) 1,2-Dichloroethane	7.85	62	22861	0.50	ug/L		98
29) 1,1,1-Trichloroethane	7.27	97	46782	0.51	ug/L		99
30) Cyclohexane	7.37	56	62952	0.50	ug/L		97
31) Carbon tetrachloride	7.49	117	41359	0.48	ug/L		97
33) Benzene	7.76	78	138629	0.52	ug/L		100
34) Trichloroethene	8.59	95	35671	0.52	ug/L		96
35) Methylcyclohexane	8.84	83	50843	0.49	ug/L		96
37) 1,2-Dichloropropane	8.87	63	28080	0.50	ug/L	#	97
38) Bromodichloromethane	9.16	83	26135	0.50	ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	25095	0.42	ug/L		99
40) 4-Methyl-2-pentanone	9.75	43	63029	4.57	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018177.D
Acq On : 1 Mar 2016 12:59
Operator : MD\SY
Sample : VSTD0.560
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD0.560

Quant Time: Mar 02 03:03:06 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.93	91	135158	0.52	ug/L		100
44) trans-1,3-Dichloropropene	10.16	75	15532	0.41	ug/L		96
45) 1,1,2-Trichloroethane	10.33	97	9752	0.53	ug/L		98
47) Tetrachloroethene	10.41	164	26148	0.51	ug/L		95
48) 2-Hexanone	10.53	43	39300	4.48	ug/L		91
49) Dibromochloromethane	10.67	129	10559	0.48	ug/L		97
50) 1,2-Dibromoethane	10.78	107	7060	0.48	ug/L		90
51) Chlorobenzene	11.21	112	64340	0.52	ug/L		97
52) Ethylbenzene	11.29	91	141351	0.51	ug/L		97
53) m,p-Xylene	11.40	106	47770	0.47	ug/L		95
54) o-Xylene	11.73	106	37414	0.46	ug/L		89
55) Styrene	11.74	104	54467	0.46	ug/L		94
56) Isopropylbenzene	12.03	105	108173	0.48	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.28	83	7089	0.53	ug/L		92
59) 1,2,3-Trichloropropane	12.33	75	5252	0.49	ug/L		97
61) Bromoform	11.91	173	3611	0.50	ug/L	#	90
62) 1,3-Dichlorobenzene	13.07	146	28370	0.50	ug/L		98
63) 1,4-Dichlorobenzene	13.15	146	29512	0.52	ug/L		98
65) 1,2-Dichlorobenzene	13.44	146	21572	0.51	ug/L		96
66) 1,2-Dibromo-3-chloropropan	14.04	75	636	0.48	ug/L	#	72
67) 1,3,5-Trichlorobenzene	14.20	180	21090	0.51	ug/L		97
68) 1,2,4-trichlorobenzene	14.70	180	11908	0.48	ug/L		97
69) Naphthalene	14.91	128	8963	0.40	ug/L	#	92
70) 1,2,3-Trichlorobenzene	15.08	180	9085	0.51	ug/L		98

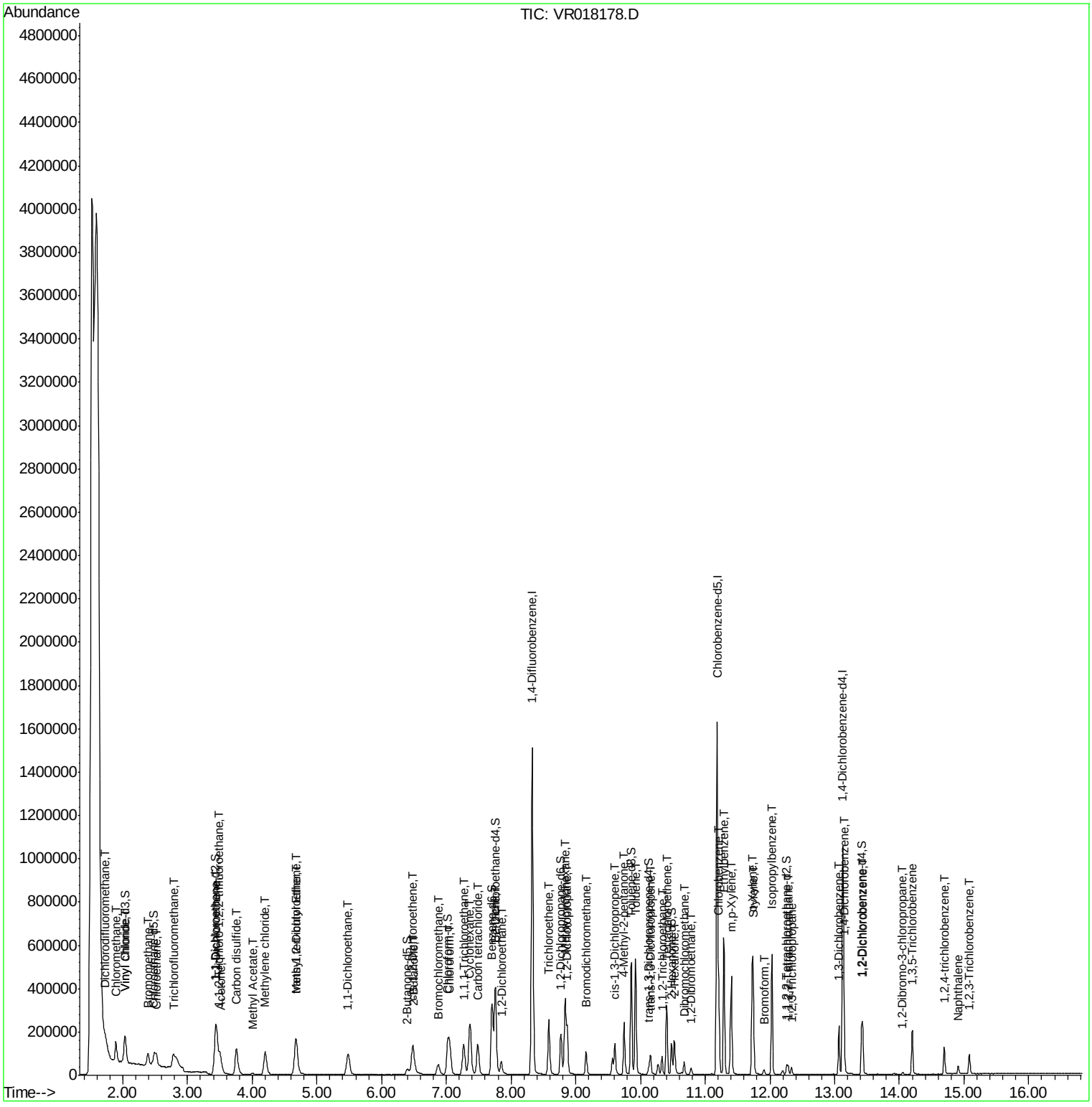
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018178.D
Acq On : 1 Mar 2016 13:47
Operator : MD\SY
Sample : VSTD00161
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VSTD00161

Quant Time: Mar 02 03:03:27 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018178.D
Acq On : 1 Mar 2016 13:47
Operator : MD\SY
Sample : VSTD00161
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00161

Quant Time: Mar 02 03:03:27 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	1176463	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	729907	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	227560	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.03	65	104355	1.15	ug/L		0.00
7) Chloroethane-d5	2.48	69	74654	1.10	ug/L		0.00
11) 1,1-Dichloroethene-d2	3.43	63	198891	1.06	ug/L		0.00
20) 2-Butanone-d5	6.40	46	66058	10.44	ug/L		0.01
24) Chloroform-d	7.02	84	149333	1.10	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	54267	1.09	ug/L		0.00
32) Benzene-d6	7.70	84	348643	1.15	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.77	67	84979	1.11	ug/L		0.00
41) Toluene-d8	9.86	98	313352	1.15	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	17290	1.00	ug/L		0.00
46) 2-Hexanone-d5	10.47	63	43946	9.90	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	17956	1.05	ug/L		0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	41508	1.12	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.73	85	72807	0.97	ug/L		98
3) Chloromethane	1.89	50	118033	1.09	ug/L		98
5) Vinyl chloride	2.03	62	110695	1.04	ug/L		99
6) Bromomethane	2.39	94	51242	1.05	ug/L		100
8) Chloroethane	2.52	64	64137	1.02	ug/L		96
9) Trichlorofluoromethane	2.79	101	127739	0.95	ug/L		98
10) 1,1,2-Trichloro-1,2,2-trif	3.49	101	52703	0.95	ug/L		99
12) 1,1-Dichloroethene	3.45	96	74744	0.98	ug/L		93
13) Acetone	3.51	43	51468	10.34	ug/L		97
14) Carbon disulfide	3.76	76	263789	1.00	ug/L		98
15) Methyl Acetate	4.01	43	12226	0.94	ug/L	#	82
16) Methylene chloride	4.20	84	69487	1.12	ug/L		94
17) Methyl tert-butyl Ether	4.68	73	61695	0.98	ug/L		97
18) trans-1,2-Dichloroethene	4.67	96	80292	1.01	ug/L		97
19) 1,1-Dichloroethane	5.48	63	166683	1.01	ug/L		98
21) 2-Butanone	6.50	43	68638	9.72	ug/L		99
22) cis-1,2-Dichloroethene	6.48	96	68657	0.99	ug/L	#	93
23) Bromochloromethane	6.87	128	18387	1.04	ug/L		85
25) Chloroform	7.05	83	133149	1.02	ug/L		99
27) 1,2-Dichloroethane	7.85	62	58905	1.02	ug/L		98
29) 1,1,1-Trichloroethane	7.27	97	115100	0.99	ug/L		98
30) Cyclohexane	7.37	56	148998	0.94	ug/L		100
31) Carbon tetrachloride	7.49	117	105864	0.98	ug/L		100
33) Benzene	7.76	78	354683	1.07	ug/L		100
34) Trichloroethene	8.59	95	88648	1.02	ug/L		97
35) Methylcyclohexane	8.84	83	123048	0.95	ug/L		99
37) 1,2-Dichloropropane	8.87	63	74900	1.05	ug/L		99
38) Bromodichloromethane	9.16	83	66331	1.01	ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	70961	0.95	ug/L		95
40) 4-Methyl-2-pentanone	9.74	43	171534	9.89	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018178.D
Acq On : 1 Mar 2016 13:47
Operator : MD\SY
Sample : VSTD00161
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00161

Quant Time: Mar 02 03:03:27 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.93	91	353048	1.08	ug/L		97
44) trans-1,3-Dichloropropene	10.15	75	43566	0.92	ug/L		98
45) 1,1,2-Trichloroethane	10.33	97	23868	1.03	ug/L		99
47) Tetrachloroethene	10.41	164	63611	0.99	ug/L		94
48) 2-Hexanone	10.52	43	108224	9.80	ug/L		99
49) Dibromochloromethane	10.67	129	27624	1.00	ug/L		91
50) 1,2-Dibromoethane	10.78	107	17593	0.96	ug/L		96
51) Chlorobenzene	11.21	112	163729	1.05	ug/L		99
52) Ethylbenzene	11.29	91	379407	1.09	ug/L		97
53) m,p-Xylene	11.40	106	132556	1.03	ug/L		96
54) o-Xylene	11.73	106	102672	1.00	ug/L		95
55) Styrene	11.74	104	150977	1.01	ug/L		98
56) Isopropylbenzene	12.03	105	299965	1.06	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	16359	0.98	ug/L	#	97
59) 1,2,3-Trichloropropane	12.33	75	13511	1.01	ug/L		99
61) Bromoform	11.91	173	9134	0.95	ug/L		94
62) 1,3-Dichlorobenzene	13.06	146	77328	1.01	ug/L		99
63) 1,4-Dichlorobenzene	13.15	146	79122	1.05	ug/L		96
65) 1,2-Dichlorobenzene	13.44	146	59646	1.05	ug/L		95
66) 1,2-Dibromo-3-chloropropan	14.06	75	2089	1.18	ug/L	#	87
67) 1,3,5-Trichlorobenzene	14.20	180	54839	1.00	ug/L		98
68) 1,2,4-trichlorobenzene	14.69	180	32941	0.99	ug/L		98
69) Naphthalene	14.91	128	26257	0.89	ug/L		98
70) 1,2,3-Trichlorobenzene	15.08	180	24173	1.01	ug/L		97

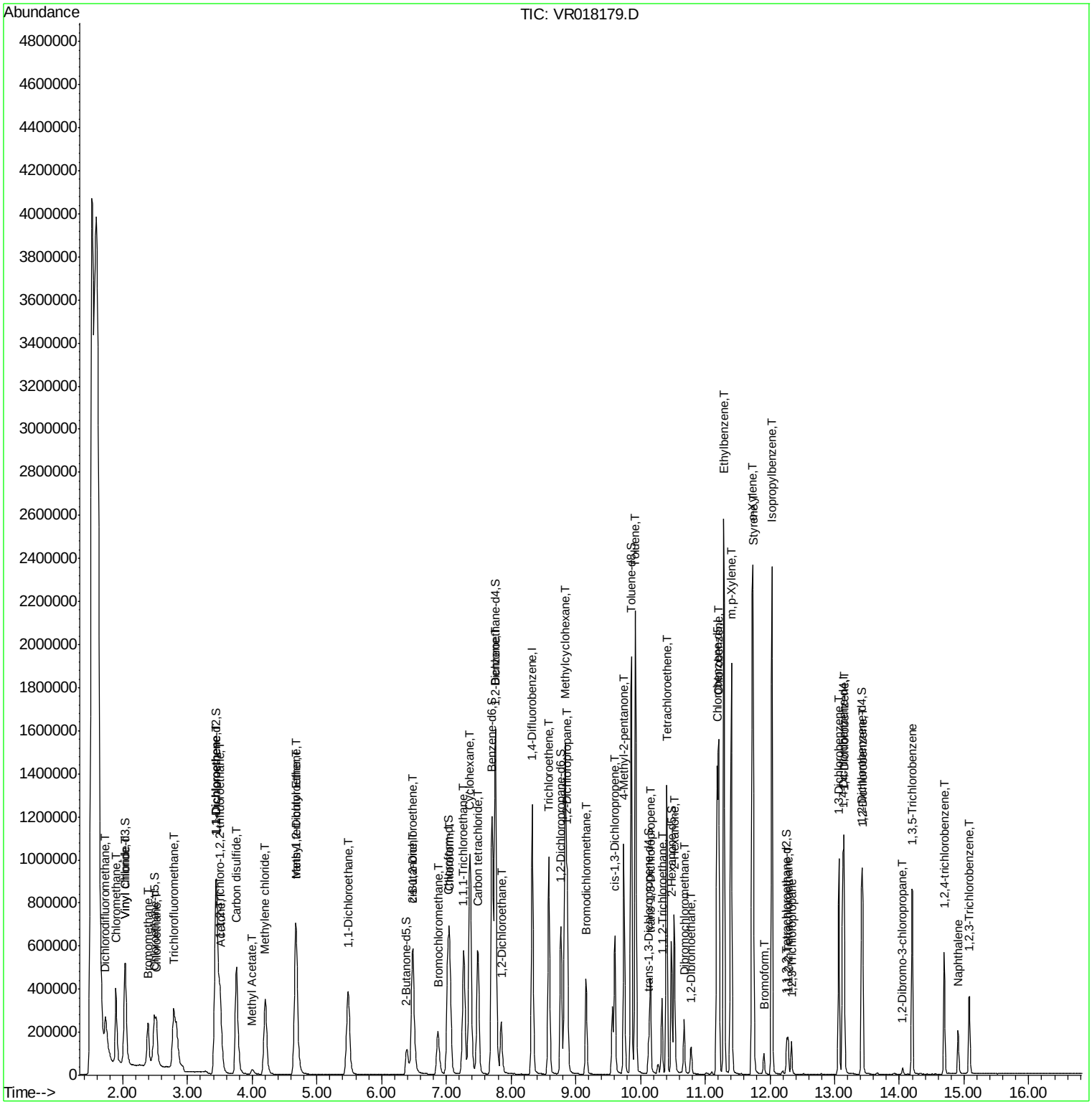
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018179.D
Acq On : 1 Mar 2016 14:18
Operator : MD\SY
Sample : VSTD00562
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00562

Quant Time: Mar 02 03:03:47 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018179.D
Acq On : 1 Mar 2016 14:18
Operator : MD\SY
Sample : VSTD00562
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00562

Quant Time: Mar 02 03:03:47 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	975958	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	613798	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.12	152	197900	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	363147	4.80	ug/L	0.00
7) Chloroethane-d5	2.48	69	267384	4.75	ug/L	0.00
11) 1,1-Dichloroethene-d2	3.43	63	726086	4.68	ug/L	0.00
20) 2-Butanone-d5	6.38	46	259251	49.40	ug/L	0.00
24) Chloroform-d	7.02	84	539802	4.79	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.75	65	196407	4.74	ug/L	0.00
32) Benzene-d6	7.70	84	1241131	4.85	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.77	67	306667	4.78	ug/L	0.00
41) Toluene-d8	9.86	98	1122356	4.90	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.13	79	71297	4.89	ug/L	0.00
46) 2-Hexanone-d5	10.48	63	187186	50.14	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	69629	4.85	ug/L	0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	151531	4.68	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.74	85	321035	5.18	ug/L	100
3) Chloromethane	1.89	50	436983	4.86	ug/L	100
5) Vinyl chloride	2.04	62	447592	5.05	ug/L	100
6) Bromomethane	2.39	94	184676	4.58	ug/L	100
8) Chloroethane	2.52	64	250802	4.81	ug/L	100
9) Trichlorofluoromethane	2.79	101	562592	5.03	ug/L	100
10) 1,1,2-Trichloro-1,2,2-trif	3.50	101	229597	4.99	ug/L	100
12) 1,1-Dichloroethene	3.45	96	304966	4.84	ug/L	100
13) Acetone	3.51	43	185488	44.92	ug/L	100
14) Carbon disulfide	3.76	76	1080234	4.92	ug/L	100
15) Methyl Acetate	4.00	43	53397	4.96	ug/L	100
16) Methylene chloride	4.20	84	233533	4.52	ug/L	100
17) Methyl tert-butyl Ether	4.67	73	252859	4.83	ug/L	100
18) trans-1,2-Dichloroethene	4.67	96	327137	4.94	ug/L	100
19) 1,1-Dichloroethane	5.48	63	666835	4.89	ug/L	100
21) 2-Butanone	6.49	43	294546	50.30	ug/L	100
22) cis-1,2-Dichloroethene	6.48	96	281518	4.92	ug/L	100
23) Bromochloromethane	6.86	128	72310	4.93	ug/L	100
25) Chloroform	7.05	83	523956	4.85	ug/L	100
27) 1,2-Dichloroethane	7.84	62	236358	4.93	ug/L	100
29) 1,1,1-Trichloroethane	7.27	97	490425	5.01	ug/L	100
30) Cyclohexane	7.36	56	686191	5.17	ug/L	100
31) Carbon tetrachloride	7.49	117	462102	5.10	ug/L	100
33) Benzene	7.76	78	1390175	4.97	ug/L	100
34) Trichloroethene	8.58	95	356898	4.89	ug/L	100
35) Methylcyclohexane	8.84	83	562161	5.16	ug/L	100
37) 1,2-Dichloropropane	8.87	63	293851	4.90	ug/L	100
38) Bromodichloromethane	9.16	83	277028	4.99	ug/L	100
39) cis-1,3-Dichloropropene	9.60	75	320495	5.11	ug/L	100
40) 4-Methyl-2-pentanone	9.74	43	745955	51.15	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018179.D
Acq On : 1 Mar 2016 14:18
Operator : MD\SY
Sample : VSTD00562
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00562

Quant Time: Mar 02 03:03:47 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.92	91	1398735	5.09	ug/L	100
44) trans-1,3-Dichloropropene	10.15	75	203849	5.13	ug/L	100
45) 1,1,2-Trichloroethane	10.33	97	93723	4.79	ug/L	100
47) Tetrachloroethene	10.41	164	266788	4.93	ug/L	100
48) 2-Hexanone	10.52	43	472651	50.90	ug/L	100
49) Dibromochloromethane	10.67	129	114857	4.93	ug/L	100
50) 1,2-Dibromoethane	10.78	107	77073	4.99	ug/L	100
51) Chlorobenzene	11.21	112	647441	4.92	ug/L	100
52) Ethylbenzene	11.29	91	1524924	5.22	ug/L	100
53) m,p-Xylene	11.40	106	549661	5.09	ug/L	100
54) o-Xylene	11.73	106	440227	5.11	ug/L	100
55) Styrene	11.74	104	637853	5.06	ug/L	100
56) Isopropylbenzene	12.03	105	1256508	5.27	ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.28	83	67332	4.79	ug/L	100
59) 1,2,3-Trichloropropane	12.33	75	55566	4.95	ug/L	100
61) Bromoform	11.91	173	40284	4.83	ug/L	100
62) 1,3-Dichlorobenzene	13.06	146	329358	4.95	ug/L	100
63) 1,4-Dichlorobenzene	13.15	146	322067	4.90	ug/L	100
65) 1,2-Dichlorobenzene	13.44	146	243938	4.93	ug/L	100
66) 1,2-Dibromo-3-chloropropan	14.05	75	6782	4.42	ug/L	100
67) 1,3,5-Trichlorobenzene	14.20	180	236950	4.98	ug/L	100
68) 1,2,4-trichlorobenzene	14.69	180	144708	5.02	ug/L	100
69) Naphthalene	14.91	128	133849	5.19	ug/L	100
70) 1,2,3-Trichlorobenzene	15.08	180	102718	4.94	ug/L	100

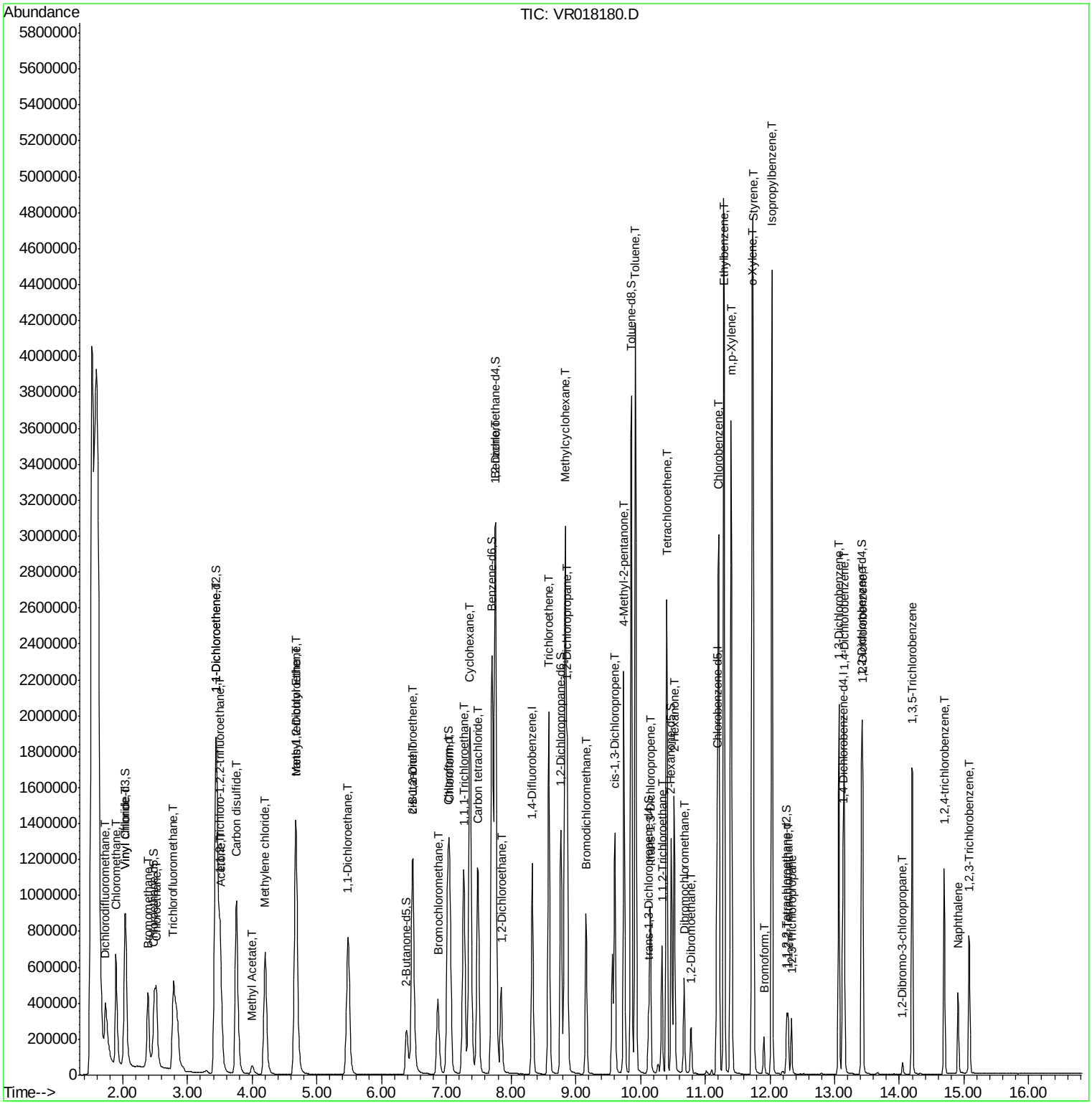
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018180.D
Acq On : 1 Mar 2016 14:50
Operator : MD\SY
Sample : VSTD01063
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD01063

Quant Time: Mar 02 03:04:08 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018180.D
Acq On : 1 Mar 2016 14:50
Operator : MD\SY
Sample : VSTD01063
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD01063

Quant Time: Mar 02 03:04:08 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	918374	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	589553	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	191307	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	703239	9.89	ug/L	0.00
7) Chloroethane-d5	2.48	69	517773	9.78	ug/L	0.00
11) 1,1-Dichloroethene-d2	3.43	63	1557401	10.68	ug/L	0.00
20) 2-Butanone-d5	6.38	46	530854	107.51	ug/L	0.00
24) Chloroform-d	7.02	84	1054738	9.94	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.75	65	388978	9.98	ug/L	0.00
32) Benzene-d6	7.70	84	2415445	9.83	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.77	67	610658	9.92	ug/L	0.00
41) Toluene-d8	9.86	98	2185023	9.94	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.13	79	152251	10.87	ug/L	0.00
46) 2-Hexanone-d5	10.47	63	397356	110.82	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	139416	10.11	ug/L	0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	303038	9.68	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	601694	10.31	ug/L	98
3) Chloromethane	1.89	50	819677	9.68	ug/L	100
5) Vinyl chloride	2.04	62	857636	10.29	ug/L	96
6) Bromomethane	2.39	94	381544	10.05	ug/L	97
8) Chloroethane	2.52	64	492178	10.03	ug/L	99
9) Trichlorofluoromethane	2.78	101	1078602	10.25	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	3.50	101	454368	10.50	ug/L	95
12) 1,1-Dichloroethene	3.45	96	609085	10.27	ug/L	93
13) Acetone	3.51	43	409448	105.38	ug/L	98
14) Carbon disulfide	3.76	76	2101035	10.17	ug/L	98
15) Methyl Acetate	4.00	43	107878	10.64	ug/L	95
16) Methylene chloride	4.20	84	450608	9.28	ug/L	97
17) Methyl tert-butyl Ether	4.67	73	524936	10.65	ug/L	98
18) trans-1,2-Dichloroethene	4.67	96	647448	10.38	ug/L	99
19) 1,1-Dichloroethane	5.48	63	1321060	10.30	ug/L	100
21) 2-Butanone	6.49	43	607578	110.26	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	562777	10.45	ug/L	98
23) Bromochloromethane	6.87	128	146244	10.59	ug/L	96
25) Chloroform	7.05	83	1033809	10.17	ug/L	100
27) 1,2-Dichloroethane	7.85	62	462827	10.26	ug/L	97
29) 1,1,1-Trichloroethane	7.27	97	966588	10.28	ug/L	99
30) Cyclohexane	7.36	56	1338128	10.49	ug/L	100
31) Carbon tetrachloride	7.49	117	910367	10.46	ug/L	100
33) Benzene	7.76	78	2684159	9.98	ug/L	100
34) Trichloroethene	8.58	95	705538	10.06	ug/L	98
35) Methylcyclohexane	8.84	83	1088790	10.41	ug/L	100
37) 1,2-Dichloropropane	8.87	63	583484	10.14	ug/L	100
38) Bromodichloromethane	9.16	83	544819	10.22	ug/L	96
39) cis-1,3-Dichloropropene	9.60	75	670986	11.13	ug/L	97
40) 4-Methyl-2-pentanone	9.74	43	1522266	108.67	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018180.D
Acq On : 1 Mar 2016 14:50
Operator : MD\SY
Sample : VSTD01063
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD01063

Quant Time: Mar 02 03:04:08 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.93	91	2651497	10.05	ug/L	98
44) trans-1,3-Dichloropropene	10.15	75	428245	11.22	ug/L	94
45) 1,1,2-Trichloroethane	10.33	97	191004	10.16	ug/L	100
47) Tetrachloroethene	10.41	164	523685	10.07	ug/L	98
48) 2-Hexanone	10.52	43	979160	109.78	ug/L	100
49) Dibromochloromethane	10.67	129	234686	10.48	ug/L	97
50) 1,2-Dibromoethane	10.78	107	158201	10.67	ug/L	100
51) Chlorobenzene	11.21	112	1277748	10.10	ug/L	99
52) Ethylbenzene	11.29	91	2839970	10.12	ug/L	95
53) m,p-Xylene	11.40	106	1066260	10.27	ug/L	99
54) o-Xylene	11.73	106	862876	10.43	ug/L	96
55) Styrene	11.74	104	1282020	10.59	ug/L	99
56) Isopropylbenzene	12.03	105	2379964	10.39	ug/L	98
58) 1,1,2,2-Tetrachloroethane	12.28	83	138926	10.30	ug/L	98
59) 1,2,3-Trichloropropane	12.33	75	110897	10.28	ug/L	99
61) Bromoform	11.91	173	85921	10.65	ug/L	98
62) 1,3-Dichlorobenzene	13.06	146	664547	10.33	ug/L	100
63) 1,4-Dichlorobenzene	13.15	146	632924	9.96	ug/L	97
65) 1,2-Dichlorobenzene	13.44	146	481409	10.07	ug/L	98
66) 1,2-Dibromo-3-chloropropan	14.05	75	15062	10.16	ug/L	98
67) 1,3,5-Trichlorobenzene	14.20	180	471200	10.24	ug/L	99
68) 1,2,4-trichlorobenzene	14.69	180	295915	10.62	ug/L	98
69) Naphthalene	14.91	128	294700	11.82	ug/L	100
70) 1,2,3-Trichlorobenzene	15.08	180	208669	10.38	ug/L	98

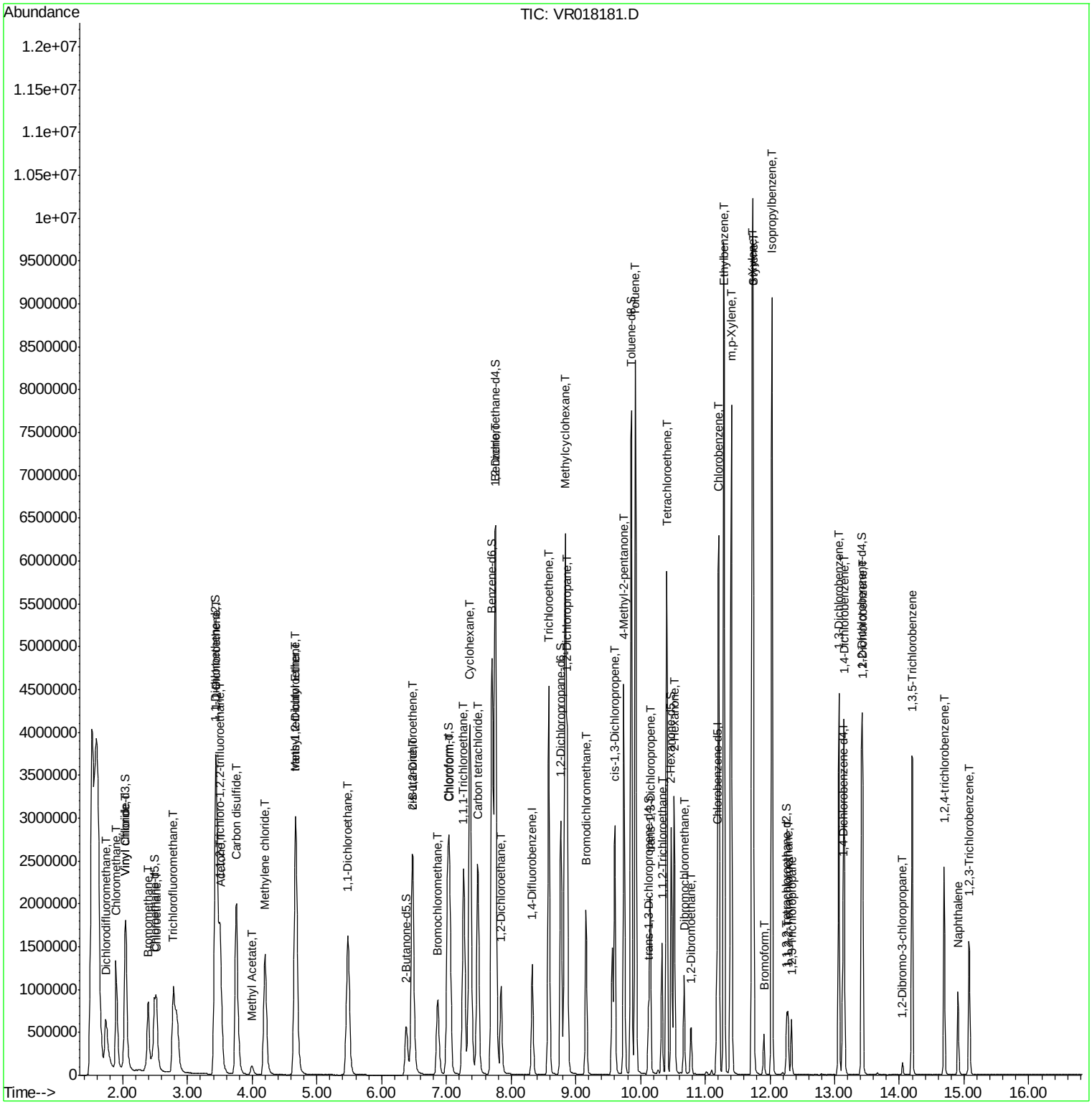
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018181.D
Acq On : 1 Mar 2016 15:21
Operator : MD\SY
Sample : VSTD02064
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VSTD02064

Quant Time: Mar 02 03:04:29 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018181.D
Acq On : 1 Mar 2016 15:21
Operator : MD\SY
Sample : VSTD02064
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD02064

Quant Time: Mar 02 03:04:29 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	1028217	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	665690	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.12	152	219525	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	1446757	18.17	ug/L	0.01
7) Chloroethane-d5	2.49	69	1064512	17.97	ug/L	0.00
11) 1,1-Dichloroethene-d2	3.43	63	3026460	18.53	ug/L	0.00
20) 2-Butanone-d5	6.38	46	1189287	215.12	ug/L	0.00
24) Chloroform-d	7.02	84	2271579	19.12	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.75	65	851402	19.51	ug/L	0.00
32) Benzene-d6	7.70	84	4955519	17.85	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.77	67	1326026	19.07	ug/L	0.00
41) Toluene-d8	9.86	98	4379511	17.64	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.12	79	346370	21.91	ug/L	0.00
46) 2-Hexanone-d5	10.47	63	873333	215.72	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.25	84	302262	19.42	ug/L	0.00
64) 1,2-Dichlorobenzene-d4	13.42	152	660622	18.40	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.74	85	1274175	19.50	ug/L	100
3) Chloromethane	1.89	50	1738930	18.34	ug/L	99
5) Vinyl chloride	2.05	62	1748235	18.73	ug/L	97
6) Bromomethane	2.39	94	775922	18.25	ug/L	100
8) Chloroethane	2.52	64	988220	17.99	ug/L	99
9) Trichlorofluoromethane	2.78	101	2261780	19.20	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	3.50	101	932599	19.25	ug/L	99
12) 1,1-Dichloroethene	3.45	96	1317434	19.85	ug/L	84
13) Acetone	3.51	43	787369	181.00	ug/L	100
14) Carbon disulfide	3.76	76	4405999	19.05	ug/L	98
15) Methyl Acetate	3.99	43	235247	20.72	ug/L	96
16) Methylene chloride	4.20	84	938163	17.25	ug/L	96
17) Methyl tert-butyl Ether	4.67	73	1150054	20.83	ug/L	99
18) trans-1,2-Dichloroethene	4.67	96	1397562	20.02	ug/L	97
19) 1,1-Dichloroethane	5.48	63	2778727	19.35	ug/L	99
21) 2-Butanone	6.48	43	1317183	213.50	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	1203539	19.95	ug/L	94
23) Bromochloromethane	6.87	128	306378	19.81	ug/L	91
25) Chloroform	7.05	83	2187254	19.23	ug/L	98
27) 1,2-Dichloroethane	7.84	62	979667	19.40	ug/L	99
29) 1,1,1-Trichloroethane	7.27	97	2061234	19.41	ug/L	98
30) Cyclohexane	7.36	56	2799898	19.43	ug/L	99
31) Carbon tetrachloride	7.49	117	1941392	19.75	ug/L	99
33) Benzene	7.76	78	5431188	17.89	ug/L	100
34) Trichloroethene	8.58	95	1524975	19.25	ug/L	100
35) Methylcyclohexane	8.84	83	2338706	19.79	ug/L	98
37) 1,2-Dichloropropane	8.87	63	1252171	19.26	ug/L	100
38) Bromodichloromethane	9.16	83	1177340	19.56	ug/L	96
39) cis-1,3-Dichloropropene	9.60	75	1455646	21.38	ug/L	99
40) 4-Methyl-2-pentanone	9.74	43	3121306	197.33	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018181.D
Acq On : 1 Mar 2016 15:21
Operator : MD\SY
Sample : VSTD02064
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD02064

Quant Time: Mar 02 03:04:29 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:57:20 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.92	91	5098042	17.11	ug/L		87
44) trans-1,3-Dichloropropene	10.15	75	951048	22.06	ug/L		98
45) 1,1,2-Trichloroethane	10.33	97	401873	18.93	ug/L		99
47) Tetrachloroethene	10.41	164	1173116	19.97	ug/L		99
48) 2-Hexanone	10.52	43	2031048	201.67	ug/L		98
49) Dibromochloromethane	10.67	129	512312	20.26	ug/L		100
50) 1,2-Dibromoethane	10.78	107	337957	20.18	ug/L		98
51) Chlorobenzene	11.21	112	2647518	18.54	ug/L		95
52) Ethylbenzene	11.29	91	5247109	16.56	ug/L	#	77
53) m,p-Xylene	11.40	106	2315464	19.76	ug/L		84
54) o-Xylene	11.73	106	1889275	20.23	ug/L		81
55) Styrene	11.74	104	2747398	20.11	ug/L		96
56) Isopropylbenzene	12.03	105	4612168	17.82	ug/L		92
58) 1,1,2,2-Tetrachloroethane	12.28	83	293675	19.28	ug/L		98
59) 1,2,3-Trichloropropane	12.33	75	238784	19.61	ug/L		97
61) Bromoform	11.91	173	186995	20.21	ug/L		97
62) 1,3-Dichlorobenzene	13.06	146	1440620	19.51	ug/L		99
63) 1,4-Dichlorobenzene	13.15	146	1363366	18.69	ug/L		97
65) 1,2-Dichlorobenzene	13.44	146	1037057	18.90	ug/L		98
66) 1,2-Dibromo-3-chloropropan	14.05	75	32393	19.04	ug/L		94
67) 1,3,5-Trichlorobenzene	14.20	180	1003446	19.00	ug/L		99
68) 1,2,4-trichlorobenzene	14.69	180	624838	19.55	ug/L		99
69) Naphthalene	14.91	128	621537	21.73	ug/L		99
70) 1,2,3-Trichlorobenzene	15.08	180	436984	18.94	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 02/29/2016 Time: 12:31

Lab File ID: VI047393.D Init. Calib Date(s): 02/26/2016 02/26/2016

EPA Sample No.: VSTD00531 Init. Calib Time(s): 16:20 18:27

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.379	0.467	0.01	23.2	± 40.0
Chloromethane	0.378	0.376	0.01	-0.6	± 30.0
Vinyl chloride	0.295	0.356	0.01	20.7	± 30.0
Bromomethane	0.141	0.175	0.01	24.1	± 30.0
Chloroethane	0.178	0.202	0.01	13.6	± 30.0
Trichlorofluoromethane	0.315	0.383	0.01	21.7	± 30.0
1,1-Dichloroethene	0.233	0.254	0.02	9.1	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.308	0.336	0.01	9.2	± 30.0
Acetone	0.026	0.028	0.01	8.0	± 40.0
Carbon disulfide	0.866	1.006	0.01	16.2	± 25.0
Methyl Acetate	0.109	0.119	0.01	9.1	± 40.0
Methylene chloride	0.234	0.270	0.01	15.3	± 30.0
trans-1,2-Dichloroethene	0.315	0.304	0.07	-3.4	± 20.0
Methyl tert-butyl Ether	0.790	0.827	0.01	4.6	± 30.0
1,1-Dichloroethane	0.531	0.580	0.1	9.2	± 20.0
cis-1,2-Dichloroethene	0.290	0.305	0.1	5.2	± 20.0
2-Butanone	0.059	0.059	0.01	-1.5	± 40.0
Bromochloromethane	0.123	0.128	0.02	4.1	± 20.0
Chloroform	0.616	0.637	0.04	3.3	± 20.0
1,1,1-Trichloroethane	0.611	0.623	0.05	2.0	± 20.0
Cyclohexane	0.523	0.614	0.1	17.5	± 25.0
Carbon tetrachloride	0.559	0.569	0.02	1.9	± 25.0
Benzene	1.237	1.324	0.3	7.0	± 20.0
1,2-Dichloroethane	0.448	0.431	0.01	-3.8	± 25.0
Trichloroethene	0.395	0.408	0.1	3.4	± 20.0
Methylcyclohexane	0.508	0.588	0.2	15.7	± 25.0
1,2-Dichloropropane	0.325	0.335	0.1	3.1	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 02/29/2016 Time: 12:31

Lab File ID: VI047393.D Init. Calib Date(s): 02/26/2016 02/26/2016

EPA Sample No.: VSTD00531 Init. Calib Time(s): 16:20 18:27

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.524	0.531	0.09	1.4	± 20.0
cis-1,3-Dichloropropene	0.565	0.631	0.1	11.7	± 20.0
4-Methyl-2-pentanone	0.271	0.255	0.01	-5.9	± 30.0
Toluene	1.396	1.445	0.4	3.6	± 20.0
trans-1,3-Dichloropropene	0.524	0.564	0.01	7.6	± 20.0
1,1,2-Trichloroethane	0.259	0.258	0.04	-0.3	± 20.0
Tetrachloroethene	0.355	0.364	0.1	2.5	± 20.0
2-Hexanone	0.191	0.176	0.01	-7.6	± 40.0
Dibromochloromethane	0.392	0.388	0.05	-1	± 20.0
1,2-Dibromoethane	0.292	0.271	0.01	-7.1	± 20.0
Chlorobenzene	0.937	0.948	0.4	1.2	± 20.0
Ethylbenzene	1.551	1.621	0.5	4.6	± 20.0
o-Xylene	0.502	0.520	0.3	3.7	± 20.0
m,p-Xylene	0.540	0.571	0.2	5.8	± 20.0
Styrene	0.867	0.888	0.2	2.4	± 20.0
Bromoform	0.510	0.528	0.01	3.7	± 30.0
Isopropylbenzene	1.359	1.402	0.7	3.1	± 25.0
1,1,2,2-Tetrachloroethane	0.310	0.282	0.05	-9	± 25.0
1,3-Dichlorobenzene	1.516	1.545	0.5	1.9	± 20.0
1,4-Dichlorobenzene	1.500	1.536	0.7	2.4	± 20.0
1,2-Dichlorobenzene	1.376	1.316	0.4	-4.3	± 20.0
1,2-Dibromo-3-chloropropane	0.120	0.109	0.01	-9	± 40.0
1,2,4-trichlorobenzene	0.978	0.782	0.3	-20	± 30.0
1,2,3-Trichlorobenzene	0.842	0.676	0.2	-19.7	± 40.0
Vinyl Chloride-d3	0.278	0.306	0.01	9.9	± 30.0
Chloroethane-d5	0.213	0.236	0.01	11.2	± 30.0
1,1-Dichloroethene-d2	0.616	0.648	0.01	5.2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 02/29/2016 Time: 12:31

Lab File ID: VI047393.D Init. Calib Date(s): 02/26/2016 02/26/2016

EPA Sample No.: VSTD00531 Init. Calib Time(s): 16:20 18:27

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.058	0.060	0.01	2.8	± 40.0
Chloroform-d	0.630	0.649	0.01	3.0	± 20.0
1,2-Dichloroethane-d4	0.366	0.347	0.01	-5.4	± 25.0
Benzene-d6	1.206	1.234	0.03	2.3	± 20.0
1,2-Dichloropropane-d6	0.364	0.390	0.1	7.2	± 20.0
Toluene-d8	1.167	1.190	0.2	1.9	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.229	0.01	6.4	± 25.0
2-Hexanone-d5	0.088	0.081	0.01	-8.2	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.315	0.291	0.01	-7.7	± 25.0
1,2-Dichlorobenzene-d4	0.912	0.856	0.06	-6.1	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 02/29/2016 Time: 21:15

Lab File ID: VI047408.D Init. Calib Date(s): 02/26/2016 02/26/2016

EPA Sample No.: VSTD00532 Init. Calib Time(s): 16:20 18:27

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.379	0.300	0.01	-20.8	± 50.0
Chloromethane	0.378	0.366	0.01	-3.4	± 50.0
Vinyl chloride	0.295	0.235	0.01	-20.3	± 50.0
Bromomethane	0.141	0.110	0.01	-21.9	± 50.0
Chloroethane	0.178	0.136	0.01	-23.5	± 50.0
Trichlorofluoromethane	0.315	0.321	0.01	1.8	± 50.0
1,1-Dichloroethene	0.233	0.182	0.02	-21.7	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.308	0.281	0.01	-8.8	± 50.0
Acetone	0.026	0.024	0.01	-8.8	± 50.0
Carbon disulfide	0.866	0.679	0.01	-21.6	± 25.0
Methyl Acetate	0.109	0.105	0.01	-3.8	± 50.0
Methylene chloride	0.234	0.197	0.01	-16	± 50.0
trans-1,2-Dichloroethene	0.315	0.289	0.07	-8	± 25.0
Methyl tert-butyl Ether	0.790	0.802	0.01	1.5	± 50.0
1,1-Dichloroethane	0.531	0.519	0.1	-2.2	± 25.0
cis-1,2-Dichloroethene	0.290	0.294	0.1	1.4	± 25.0
2-Butanone	0.059	0.060	0.01	0.7	± 50.0
Bromochloromethane	0.123	0.110	0.02	-10.7	± 25.0
Chloroform	0.616	0.607	0.04	-1.5	± 25.0
1,1,1-Trichloroethane	0.611	0.619	0.05	1.4	± 25.0
Cyclohexane	0.523	0.490	0.1	-6.4	± 50.0
Carbon tetrachloride	0.559	0.550	0.02	-1.6	± 50.0
Benzene	1.237	1.270	0.3	2.7	± 25.0
1,2-Dichloroethane	0.448	0.428	0.01	-4.3	± 50.0
Trichloroethene	0.395	0.391	0.1	-1.1	± 25.0
Methylcyclohexane	0.508	0.490	0.2	-3.6	± 50.0
1,2-Dichloropropane	0.325	0.361	0.1	11.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 02/29/2016 Time: 21:15

Lab File ID: VI047408.D Init. Calib Date(s): 02/26/2016 02/26/2016

EPA Sample No.: VSTD00532 Init. Calib Time(s): 16:20 18:27

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.524	0.560	0.09	6.8	± 25.0
cis-1,3-Dichloropropene	0.565	0.589	0.1	4.3	± 25.0
4-Methyl-2-pentanone	0.271	0.274	0.01	1.1	± 50.0
Toluene	1.396	1.331	0.4	-4.6	± 25.0
trans-1,3-Dichloropropene	0.524	0.564	0.01	7.7	± 25.0
1,1,2-Trichloroethane	0.259	0.265	0.04	2.1	± 25.0
Tetrachloroethene	0.355	0.347	0.1	-2.3	± 25.0
2-Hexanone	0.191	0.187	0.01	-1.9	± 50.0
Dibromochloromethane	0.392	0.416	0.05	6.2	± 25.0
1,2-Dibromoethane	0.292	0.270	0.01	-7.6	± 25.0
Chlorobenzene	0.937	0.909	0.4	-2.9	± 25.0
Ethylbenzene	1.551	1.469	0.5	-5.3	± 25.0
o-Xylene	0.502	0.472	0.3	-5.9	± 25.0
m,p-Xylene	0.540	0.519	0.2	-3.8	± 25.0
Styrene	0.867	0.822	0.2	-5.2	± 25.0
Bromoform	0.510	0.573	0.01	12.5	± 50.0
Isopropylbenzene	1.359	1.314	0.7	-3.3	± 25.0
1,1,2,2-Tetrachloroethane	0.310	0.308	0.05	-0.4	± 25.0
1,3-Dichlorobenzene	1.516	1.495	0.5	-1.4	± 25.0
1,4-Dichlorobenzene	1.500	1.471	0.7	-1.9	± 25.0
1,2-Dichlorobenzene	1.376	1.347	0.4	-2.1	± 25.0
1,2-Dibromo-3-chloropropane	0.120	0.097	0.01	-19	± 50.0
1,2,4-trichlorobenzene	0.978	1.011	0.3	3.4	± 50.0
1,2,3-Trichlorobenzene	0.842	0.905	0.2	7.5	± 50.0
Vinyl Chloride-d3	0.278	0.244	0.01	-12.2	± 50.0
Chloroethane-d5	0.213	0.189	0.01	-11.2	± 50.0
1,1-Dichloroethene-d2	0.616	0.513	0.01	-16.8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 02/29/2016 Time: 21:15

Lab File ID: VI047408.D Init. Calib Date(s): 02/26/2016 02/26/2016

EPA Sample No.: VSTD00532 Init. Calib Time(s): 16:20 18:27

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.058	0.065	0.01	11.6	± 50.0
Chloroform-d	0.630	0.697	0.01	10.7	± 25.0
1,2-Dichloroethane-d4	0.366	0.394	0.01	7.5	± 25.0
Benzene-d6	1.206	1.387	0.03	15	± 25.0
1,2-Dichloropropane-d6	0.364	0.445	0.1	22.3	± 25.0
Toluene-d8	1.167	1.294	0.2	10.9	± 25.0
trans-1,3-Dichloropropene-d4	0.216	0.258	0.01	19.6	± 25.0
2-Hexanone-d5	0.088	0.098	0.01	10.7	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.315	0.356	0.01	12.9	± 25.0
1,2-Dichlorobenzene-d4	0.912	0.960	0.06	5.3	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 03/01/2016 Time: 10:11

Lab File ID: VI047410.D Init. Calib Date(s): 02/26/2016 02/26/2016

EPA Sample No.: VSTD00533 Init. Calib Time(s): 16:20 18:27

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.379	0.381	0.01	0.5	± 40.0
Chloromethane	0.378	0.324	0.01	-14.3	± 30.0
Vinyl chloride	0.295	0.259	0.01	-12.1	± 30.0
Bromomethane	0.141	0.128	0.01	-9.3	± 30.0
Chloroethane	0.178	0.144	0.01	-19.1	± 30.0
Trichlorofluoromethane	0.315	0.390	0.01	23.7	± 30.0
1,1-Dichloroethene	0.233	0.208	0.02	-10.8	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.308	0.315	0.01	2.4	± 30.0
Acetone	0.026	0.023	0.01	-13.4	± 40.0
Carbon disulfide	0.866	0.763	0.01	-11.9	± 25.0
Methyl Acetate	0.109	0.111	0.01	1.2	± 40.0
Methylene chloride	0.234	0.187	0.01	-20.1	± 30.0
trans-1,2-Dichloroethene	0.315	0.291	0.07	-7.5	± 20.0
Methyl tert-butyl Ether	0.790	0.783	0.01	-1	± 30.0
1,1-Dichloroethane	0.531	0.554	0.1	4.3	± 20.0
cis-1,2-Dichloroethene	0.290	0.287	0.1	-0.9	± 20.0
2-Butanone	0.059	0.060	0.01	1.2	± 40.0
Bromochloromethane	0.123	0.110	0.02	-11	± 20.0
Chloroform	0.616	0.582	0.04	-5.6	± 20.0
1,1,1-Trichloroethane	0.611	0.553	0.05	-9.4	± 20.0
Cyclohexane	0.523	0.551	0.1	5.4	± 25.0
Carbon tetrachloride	0.559	0.520	0.02	-7	± 25.0
Benzene	1.237	1.181	0.3	-4.5	± 20.0
1,2-Dichloroethane	0.448	0.410	0.01	-8.3	± 25.0
Trichloroethene	0.395	0.365	0.1	-7.7	± 20.0
Methylcyclohexane	0.508	0.541	0.2	6.4	± 25.0
1,2-Dichloropropane	0.325	0.319	0.1	-1.8	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 03/01/2016 Time: 10:11

Lab File ID: VI047410.D Init. Calib Date(s): 02/26/2016 02/26/2016

EPA Sample No.: VSTD00533 Init. Calib Time(s): 16:20 18:27

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.524	0.483	0.09	-7.9	± 20.0
cis-1,3-Dichloropropene	0.565	0.542	0.1	-4	± 20.0
4-Methyl-2-pentanone	0.271	0.244	0.01	-10.2	± 30.0
Toluene	1.396	1.299	0.4	-6.9	± 20.0
trans-1,3-Dichloropropene	0.524	0.528	0.01	0.8	± 20.0
1,1,2-Trichloroethane	0.259	0.252	0.04	-2.7	± 20.0
Tetrachloroethene	0.355	0.345	0.1	-2.9	± 20.0
2-Hexanone	0.191	0.169	0.01	-11.5	± 40.0
Dibromochloromethane	0.392	0.385	0.05	-1.9	± 20.0
1,2-Dibromoethane	0.292	0.256	0.01	-12.2	± 20.0
Chlorobenzene	0.937	0.893	0.4	-4.7	± 20.0
Ethylbenzene	1.551	1.473	0.5	-5	± 20.0
o-Xylene	0.502	0.465	0.3	-7.5	± 20.0
m,p-Xylene	0.540	0.496	0.2	-8.1	± 20.0
Styrene	0.867	0.801	0.2	-7.6	± 20.0
Bromoform	0.510	0.569	0.01	11.7	± 30.0
Isopropylbenzene	1.359	1.275	0.7	-6.2	± 25.0
1,1,2,2-Tetrachloroethane	0.310	0.285	0.05	-8	± 25.0
1,3-Dichlorobenzene	1.516	1.483	0.5	-2.2	± 20.0
1,4-Dichlorobenzene	1.500	1.436	0.7	-4.3	± 20.0
1,2-Dichlorobenzene	1.376	1.325	0.4	-3.7	± 20.0
1,2-Dibromo-3-chloropropane	0.120	0.106	0.01	-11.7	± 40.0
1,2,4-trichlorobenzene	0.978	0.932	0.3	-4.7	± 30.0
1,2,3-Trichlorobenzene	0.842	0.783	0.2	-7	± 40.0
Vinyl Chloride-d3	0.278	0.255	0.01	-8.4	± 30.0
Chloroethane-d5	0.213	0.183	0.01	-14	± 30.0
1,1-Dichloroethene-d2	0.616	0.536	0.01	-13	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 03/01/2016 Time: 10:11

Lab File ID: VI047410.D Init. Calib Date(s): 02/26/2016 02/26/2016

EPA Sample No.: VSTD00533 Init. Calib Time(s): 16:20 18:27

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.058	0.055	0.01	-4.5	± 40.0
Chloroform-d	0.630	0.624	0.01	-1	± 20.0
1,2-Dichloroethane-d4	0.366	0.355	0.01	-3.2	± 25.0
Benzene-d6	1.206	1.182	0.03	-2	± 20.0
1,2-Dichloropropane-d6	0.364	0.379	0.1	4.3	± 20.0
Toluene-d8	1.167	1.158	0.2	-0.8	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.229	0.01	6.0	± 25.0
2-Hexanone-d5	0.088	0.083	0.01	-6.3	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.315	0.313	0.01	-0.7	± 25.0
1,2-Dichlorobenzene-d4	0.912	0.885	0.06	-2.9	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 03/01/2016 Time: 19:31

Lab File ID: VI047426.D Init. Calib Date(s): 02/26/2016 02/26/2016

EPA Sample No.: VSTD00534 Init. Calib Time(s): 16:20 18:27

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.379	0.363	0.01	-4.2	± 50.0
Chloromethane	0.378	0.339	0.01	-10.4	± 50.0
Vinyl chloride	0.295	0.246	0.01	-16.7	± 50.0
Bromomethane	0.141	0.114	0.01	-19.4	± 50.0
Chloroethane	0.178	0.142	0.01	-20.2	± 50.0
Trichlorofluoromethane	0.315	0.418	0.01	32.7	± 50.0
1,1-Dichloroethene	0.233	0.200	0.02	-14	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.308	0.306	0.01	-0.6	± 50.0
Acetone	0.026	0.019	0.01	-26.3	± 50.0
Carbon disulfide	0.866	0.694	0.01	-19.9	± 25.0
Methyl Acetate	0.109	0.058	0.01	-46.6	± 50.0
Methylene chloride	0.234	0.190	0.01	-18.8	± 50.0
trans-1,2-Dichloroethene	0.315	0.290	0.07	-7.8	± 25.0
Methyl tert-butyl Ether	0.790	0.709	0.01	-10.2	± 50.0
1,1-Dichloroethane	0.531	0.533	0.1	0.3	± 25.0
cis-1,2-Dichloroethene	0.290	0.282	0.1	-2.9	± 25.0
2-Butanone	0.059	0.044	0.01	-25.9	± 50.0
Bromochloromethane	0.123	0.099	0.02	-19.7	± 25.0
Chloroform	0.616	0.579	0.04	-6	± 25.0
1,1,1-Trichloroethane	0.611	0.628	0.05	2.8	± 25.0
Cyclohexane	0.523	0.566	0.1	8.3	± 50.0
Carbon tetrachloride	0.559	0.564	0.02	0.9	± 50.0
Benzene	1.237	1.267	0.3	2.4	± 25.0
1,2-Dichloroethane	0.448	0.381	0.01	-14.9	± 50.0
Trichloroethene	0.395	0.412	0.1	4.4	± 25.0
Methylcyclohexane	0.508	0.558	0.2	9.7	± 50.0
1,2-Dichloropropane	0.325	0.334	0.1	3.0	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 03/01/2016 Time: 19:31

Lab File ID: VI047426.D Init. Calib Date(s): 02/26/2016 02/26/2016

EPA Sample No.: VSTD00534 Init. Calib Time(s): 16:20 18:27

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.524	0.525	0.09	0.2	± 25.0
cis-1,3-Dichloropropene	0.565	0.594	0.1	5.1	± 25.0
4-Methyl-2-pentanone	0.271	0.234	0.01	-13.8	± 50.0
Toluene	1.396	1.313	0.4	-5.9	± 25.0
trans-1,3-Dichloropropene	0.524	0.540	0.01	3.1	± 25.0
1,1,2-Trichloroethane	0.259	0.257	0.04	-0.9	± 25.0
Tetrachloroethene	0.355	0.368	0.1	3.5	± 25.0
2-Hexanone	0.191	0.159	0.01	-16.8	± 50.0
Dibromochloromethane	0.392	0.398	0.05	1.5	± 25.0
1,2-Dibromoethane	0.292	0.264	0.01	-9.6	± 25.0
Chlorobenzene	0.937	0.904	0.4	-3.5	± 25.0
Ethylbenzene	1.551	1.507	0.5	-2.8	± 25.0
o-Xylene	0.502	0.487	0.3	-2.9	± 25.0
m,p-Xylene	0.540	0.539	0.2	-0.2	± 25.0
Styrene	0.867	0.820	0.2	-5.5	± 25.0
Bromoform	0.510	0.516	0.01	1.3	± 50.0
Isopropylbenzene	1.359	1.416	0.7	4.2	± 25.0
1,1,2,2-Tetrachloroethane	0.310	0.280	0.05	-9.4	± 25.0
1,3-Dichlorobenzene	1.516	1.451	0.5	-4.3	± 25.0
1,4-Dichlorobenzene	1.500	1.443	0.7	-3.8	± 25.0
1,2-Dichlorobenzene	1.376	1.250	0.4	-9.1	± 25.0
1,2-Dibromo-3-chloropropane	0.120	0.087	0.01	-27.2	± 50.0
1,2,4-trichlorobenzene	0.978	0.907	0.3	-7.2	± 50.0
1,2,3-Trichlorobenzene	0.842	0.754	0.2	-10.5	± 50.0
Vinyl Chloride-d3	0.278	0.215	0.01	-22.9	± 50.0
Chloroethane-d5	0.213	0.170	0.01	-20.2	± 50.0
1,1-Dichloroethene-d2	0.616	0.476	0.01	-22.7	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 03/01/2016 Time: 19:31

Lab File ID: VI047426.D Init. Calib Date(s): 02/26/2016 02/26/2016

EPA Sample No.: VSTD00534 Init. Calib Time(s): 16:20 18:27

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.058	0.045	0.01	-22.3	± 50.0
Chloroform-d	0.630	0.595	0.01	-5.5	± 25.0
1,2-Dichloroethane-d4	0.366	0.319	0.01	-12.9	± 25.0
Benzene-d6	1.206	1.213	0.03	0.6	± 25.0
1,2-Dichloropropane-d6	0.364	0.382	0.1	4.9	± 25.0
Toluene-d8	1.167	1.108	0.2	-5.1	± 25.0
trans-1,3-Dichloropropene-d4	0.216	0.218	0.01	1.3	± 25.0
2-Hexanone-d5	0.088	0.079	0.01	-10.2	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.315	0.306	0.01	-2.8	± 25.0
1,2-Dichlorobenzene-d4	0.912	0.809	0.06	-11.3	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 02/25/2016 Time: 18:44

Lab File ID: VR018145.D Init. Calib Date(s): 02/25/2016 02/25/2016

EPA Sample No.: VSTD00556 Init. Calib Time(s): 13:49 15:54

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.390	0.395	0.01	1.1	± 40.0
Chloromethane	0.482	0.451	0.01	-6.3	± 30.0
Vinyl chloride	0.479	0.460	0.01	-4	± 30.0
Bromomethane	0.265	0.233	0.01	-12.1	± 30.0
Chloroethane	0.281	0.251	0.01	-10.5	± 30.0
Trichlorofluoromethane	0.636	0.615	0.01	-3.3	± 30.0
1,1-Dichloroethene	0.237	0.236	0.02	-0.2	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.229	0.231	0.01	1.2	± 30.0
Acetone	0.043	0.039	0.01	-9.7	± 40.0
Carbon disulfide	0.735	0.703	0.01	-4.5	± 25.0
Methyl Acetate	0.105	0.098	0.01	-7	± 40.0
Methylene chloride	0.251	0.237	0.01	-5.7	± 30.0
trans-1,2-Dichloroethene	0.302	0.295	0.07	-2.3	± 20.0
Methyl tert-butyl Ether	0.444	0.426	0.01	-4.2	± 30.0
1,1-Dichloroethane	0.699	0.674	0.1	-3.5	± 20.0
cis-1,2-Dichloroethene	0.308	0.302	0.1	-2	± 20.0
2-Butanone	0.062	0.060	0.01	-3.2	± 40.0
Bromochloromethane	0.111	0.105	0.02	-5.8	± 20.0
Chloroform	0.648	0.614	0.04	-5.3	± 20.0
1,1,1-Trichloroethane	0.550	0.528	0.05	-4	± 20.0
Cyclohexane	0.592	0.672	0.1	13.4	± 25.0
Carbon tetrachloride	0.532	0.524	0.02	-1.6	± 25.0
Benzene	1.689	1.655	0.3	-2	± 20.0
1,2-Dichloroethane	0.436	0.394	0.01	-9.7	± 25.0
Trichloroethene	0.410	0.404	0.1	-1.5	± 20.0
Methylcyclohexane	0.515	0.576	0.2	11.7	± 25.0
1,2-Dichloropropane	0.459	0.437	0.1	-4.8	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 02/25/2016 Time: 18:44

Lab File ID: VR018145.D Init. Calib Date(s): 02/25/2016 02/25/2016

EPA Sample No.: VSTD00556 Init. Calib Time(s): 13:49 15:54

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.511	0.472	0.09	-7.5	± 20.0
cis-1,3-Dichloropropene	0.567	0.563	0.1	-0.6	± 20.0
4-Methyl-2-pentanone	0.181	0.180	0.01	-0.6	± 30.0
Toluene	1.763	1.754	0.4	-0.5	± 20.0
trans-1,3-Dichloropropene	0.442	0.424	0.01	-4	± 20.0
1,1,2-Trichloroethane	0.209	0.192	0.04	-8.2	± 20.0
Tetrachloroethene	0.314	0.308	0.1	-2	± 20.0
2-Hexanone	0.124	0.119	0.01	-3.4	± 40.0
Dibromochloromethane	0.263	0.237	0.05	-9.9	± 20.0
1,2-Dibromoethane	0.183	0.167	0.01	-9.1	± 20.0
Chlorobenzene	1.029	0.989	0.4	-3.9	± 20.0
Ethylbenzene	1.910	1.948	0.5	2.0	± 20.0
o-Xylene	0.611	0.627	0.3	2.7	± 20.0
m,p-Xylene	0.692	0.712	0.2	2.8	± 20.0
Styrene	1.027	1.056	0.2	2.9	± 20.0
Bromoform	0.288	0.248	0.01	-13.8	± 30.0
Isopropylbenzene	1.516	1.655	0.7	9.2	± 25.0
1,1,2,2-Tetrachloroethane	0.184	0.167	0.05	-8.9	± 25.0
1,3-Dichlorobenzene	1.451	1.386	0.5	-4.5	± 20.0
1,4-Dichlorobenzene	1.593	1.457	0.7	-8.5	± 20.0
1,2-Dichlorobenzene	1.305	1.214	0.4	-7	± 20.0
1,2-Dibromo-3-chloropropane	0.063	0.057	0.01	-9.4	± 40.0
1,2,4-trichlorobenzene	0.720	0.693	0.3	-3.8	± 30.0
1,2,3-Trichlorobenzene	0.577	0.540	0.2	-6.5	± 40.0
Vinyl Chloride-d3	0.427	0.398	0.01	-6.7	± 30.0
Chloroethane-d5	0.315	0.293	0.01	-7.1	± 30.0
1,1-Dichloroethene-d2	0.610	0.610	0.01	0.0	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 02/25/2016 Time: 18:44

Lab File ID: VR018145.D Init. Calib Date(s): 02/25/2016 02/25/2016

EPA Sample No.: VSTD00556 Init. Calib Time(s): 13:49 15:54

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.052	0.052	0.01	-1.7	± 40.0
Chloroform-d	0.684	0.667	0.01	-2.4	± 20.0
1,2-Dichloroethane-d4	0.373	0.349	0.01	-6.6	± 25.0
Benzene-d6	1.529	1.549	0.03	1.2	± 20.0
1,2-Dichloropropane-d6	0.489	0.473	0.1	-3.2	± 20.0
Toluene-d8	1.453	1.480	0.2	1.9	± 20.0
trans-1,3-Dichloropropene-d4	0.163	0.158	0.01	-3.1	± 25.0
2-Hexanone-d5	0.046	0.047	0.01	2.0	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.194	0.178	0.01	-8.2	± 25.0
1,2-Dichlorobenzene-d4	0.842	0.777	0.06	-7.8	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 02/26/2016 Time: 04:11

Lab File ID: VR018162.D Init. Calib Date(s): 02/25/2016 02/25/2016

EPA Sample No.: VSTD00557 Init. Calib Time(s): 13:49 15:54

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.390	0.381	0.01	-2.5	± 50.0
Chloromethane	0.482	0.479	0.01	-0.5	± 50.0
Vinyl chloride	0.479	0.472	0.01	-1.4	± 50.0
Bromomethane	0.265	0.252	0.01	-5	± 50.0
Chloroethane	0.281	0.279	0.01	-0.5	± 50.0
Trichlorofluoromethane	0.636	0.594	0.01	-6.6	± 50.0
1,1-Dichloroethene	0.237	0.237	0.02	0.2	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.229	0.216	0.01	-5.3	± 50.0
Acetone	0.043	0.036	0.01	-17.4	± 50.0
Carbon disulfide	0.735	0.686	0.01	-6.8	± 25.0
Methyl Acetate	0.105	0.092	0.01	-12.2	± 50.0
Methylene chloride	0.251	0.237	0.01	-5.8	± 50.0
trans-1,2-Dichloroethene	0.302	0.278	0.07	-8.1	± 25.0
Methyl tert-butyl Ether	0.444	0.360	0.01	-19	± 50.0
1,1-Dichloroethane	0.699	0.636	0.1	-9	± 25.0
cis-1,2-Dichloroethene	0.308	0.289	0.1	-6.3	± 25.0
2-Butanone	0.062	0.054	0.01	-13.6	± 50.0
Bromochloromethane	0.111	0.094	0.02	-15.7	± 25.0
Chloroform	0.648	0.583	0.04	-10	± 25.0
1,1,1-Trichloroethane	0.550	0.529	0.05	-4	± 25.0
Cyclohexane	0.592	0.601	0.1	1.5	± 50.0
Carbon tetrachloride	0.532	0.493	0.02	-7.4	± 50.0
Benzene	1.689	1.598	0.3	-5.4	± 25.0
1,2-Dichloroethane	0.436	0.380	0.01	-12.9	± 50.0
Trichloroethene	0.410	0.393	0.1	-4.2	± 25.0
Methylcyclohexane	0.515	0.472	0.2	-8.4	± 50.0
1,2-Dichloropropane	0.459	0.411	0.1	-10.5	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 02/26/2016 Time: 04:11

Lab File ID: VR018162.D Init. Calib Date(s): 02/25/2016 02/25/2016

EPA Sample No.: VSTD00557 Init. Calib Time(s): 13:49 15:54

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.511	0.445	0.09	-13	± 25.0
cis-1,3-Dichloropropene	0.567	0.512	0.1	-9.7	± 25.0
4-Methyl-2-pentanone	0.181	0.167	0.01	-7.7	± 50.0
Toluene	1.763	1.702	0.4	-3.5	± 25.0
trans-1,3-Dichloropropene	0.442	0.381	0.01	-13.9	± 25.0
1,1,2-Trichloroethane	0.209	0.186	0.04	-11.3	± 25.0
Tetrachloroethene	0.314	0.289	0.1	-8.1	± 25.0
2-Hexanone	0.124	0.111	0.01	-10.4	± 50.0
Dibromochloromethane	0.263	0.220	0.05	-16.4	± 25.0
1,2-Dibromoethane	0.183	0.154	0.01	-16	± 25.0
Chlorobenzene	1.029	0.956	0.4	-7.1	± 25.0
Ethylbenzene	1.910	1.907	0.5	-0.2	± 25.0
o-Xylene	0.611	0.609	0.3	-0.2	± 25.0
m,p-Xylene	0.692	0.683	0.2	-1.3	± 25.0
Styrene	1.027	1.015	0.2	-1.1	± 25.0
Bromoform	0.288	0.233	0.01	-19	± 50.0
Isopropylbenzene	1.516	1.591	0.7	5.0	± 25.0
1,1,2,2-Tetrachloroethane	0.184	0.162	0.05	-12	± 25.0
1,3-Dichlorobenzene	1.451	1.381	0.5	-4.8	± 25.0
1,4-Dichlorobenzene	1.593	1.466	0.7	-8	± 25.0
1,2-Dichlorobenzene	1.305	1.209	0.4	-7.3	± 25.0
1,2-Dibromo-3-chloropropane	0.063	0.049	0.01	-21.2	± 50.0
1,2,4-trichlorobenzene	0.720	0.635	0.3	-11.8	± 50.0
1,2,3-Trichlorobenzene	0.577	0.503	0.2	-12.9	± 50.0
Vinyl Chloride-d3	0.427	0.407	0.01	-4.5	± 50.0
Chloroethane-d5	0.315	0.314	0.01	-0.2	± 50.0
1,1-Dichloroethene-d2	0.610	0.623	0.01	2.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 02/26/2016 Time: 04:11

Lab File ID: VR018162.D Init. Calib Date(s): 02/25/2016 02/25/2016

EPA Sample No.: VSTD00557 Init. Calib Time(s): 13:49 15:54

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.052	0.044	0.01	-15.3	± 50.0
Chloroform-d	0.684	0.617	0.01	-9.8	± 25.0
1,2-Dichloroethane-d4	0.373	0.318	0.01	-14.7	± 25.0
Benzene-d6	1.529	1.455	0.03	-4.9	± 25.0
1,2-Dichloropropane-d6	0.489	0.439	0.1	-10.1	± 25.0
Toluene-d8	1.453	1.401	0.2	-3.6	± 25.0
trans-1,3-Dichloropropene-d4	0.163	0.135	0.01	-17.3	± 25.0
2-Hexanone-d5	0.046	0.042	0.01	-9.2	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.194	0.165	0.01	-15	± 25.0
1,2-Dichlorobenzene-d4	0.842	0.768	0.06	-8.8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 02/26/2016 Time: 09:27

Lab File ID: VR018164.D Init. Calib Date(s): 02/25/2016 02/25/2016

EPA Sample No.: VSTD00558 Init. Calib Time(s): 13:49 15:54

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.390	0.434	0.01	11.2	± 40.0
Chloromethane	0.482	0.509	0.01	5.7	± 30.0
Vinyl chloride	0.479	0.503	0.01	5.0	± 30.0
Bromomethane	0.265	0.259	0.01	-2.2	± 30.0
Chloroethane	0.281	0.295	0.01	4.9	± 30.0
Trichlorofluoromethane	0.636	0.656	0.01	3.1	± 30.0
1,1-Dichloroethene	0.237	0.255	0.02	7.6	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.229	0.257	0.01	12.3	± 30.0
Acetone	0.043	0.037	0.01	-14.2	± 40.0
Carbon disulfide	0.735	0.750	0.01	2.0	± 25.0
Methyl Acetate	0.105	0.086	0.01	-18	± 40.0
Methylene chloride	0.251	0.253	0.01	0.8	± 30.0
trans-1,2-Dichloroethene	0.302	0.299	0.07	-1.1	± 20.0
Methyl tert-butyl Ether	0.444	0.375	0.01	-15.5	± 30.0
1,1-Dichloroethane	0.699	0.681	0.1	-2.6	± 20.0
cis-1,2-Dichloroethene	0.308	0.306	0.1	-0.7	± 20.0
2-Butanone	0.062	0.054	0.01	-12.7	± 40.0
Bromochloromethane	0.111	0.101	0.02	-9.1	± 20.0
Chloroform	0.648	0.621	0.04	-4.2	± 20.0
1,1,1-Trichloroethane	0.550	0.561	0.05	1.9	± 20.0
Cyclohexane	0.592	0.716	0.1	20.8	± 25.0
Carbon tetrachloride	0.532	0.537	0.02	0.9	± 25.0
Benzene	1.689	1.709	0.3	1.2	± 20.0
1,2-Dichloroethane	0.436	0.393	0.01	-9.9	± 25.0
Trichloroethene	0.410	0.415	0.1	1.2	± 20.0
Methylcyclohexane	0.515	0.609	0.2	18.2	± 25.0
1,2-Dichloropropane	0.459	0.433	0.1	-5.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 02/26/2016 Time: 09:27

Lab File ID: VR018164.D Init. Calib Date(s): 02/25/2016 02/25/2016

EPA Sample No.: VSTD00558 Init. Calib Time(s): 13:49 15:54

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.511	0.458	0.09	-10.3	± 20.0
cis-1,3-Dichloropropene	0.567	0.558	0.1	-1.4	± 20.0
4-Methyl-2-pentanone	0.181	0.167	0.01	-8.2	± 30.0
Toluene	1.763	1.825	0.4	3.5	± 20.0
trans-1,3-Dichloropropene	0.442	0.405	0.01	-8.4	± 20.0
1,1,2-Trichloroethane	0.209	0.190	0.04	-9.5	± 20.0
Tetrachloroethene	0.314	0.327	0.1	4.0	± 20.0
2-Hexanone	0.124	0.111	0.01	-10	± 40.0
Dibromochloromethane	0.263	0.229	0.05	-12.8	± 20.0
1,2-Dibromoethane	0.183	0.162	0.01	-11.7	± 20.0
Chlorobenzene	1.029	1.022	0.4	-0.7	± 20.0
Ethylbenzene	1.910	2.082	0.5	9.0	± 20.0
o-Xylene	0.611	0.656	0.3	7.5	± 20.0
m,p-Xylene	0.692	0.751	0.2	8.5	± 20.0
Styrene	1.027	1.082	0.2	5.4	± 20.0
Bromoform	0.288	0.228	0.01	-20.9	± 30.0
Isopropylbenzene	1.516	1.779	0.7	17.4	± 25.0
1,1,2,2-Tetrachloroethane	0.184	0.159	0.05	-13.4	± 25.0
1,3-Dichlorobenzene	1.451	1.467	0.5	1.1	± 20.0
1,4-Dichlorobenzene	1.593	1.559	0.7	-2.1	± 20.0
1,2-Dichlorobenzene	1.305	1.272	0.4	-2.5	± 20.0
1,2-Dibromo-3-chloropropane	0.063	0.050	0.01	-20.2	± 40.0
1,2,4-trichlorobenzene	0.720	0.674	0.3	-6.4	± 30.0
1,2,3-Trichlorobenzene	0.577	0.507	0.2	-12.2	± 40.0
Vinyl Chloride-d3	0.427	0.438	0.01	2.6	± 30.0
Chloroethane-d5	0.315	0.332	0.01	5.5	± 30.0
1,1-Dichloroethene-d2	0.610	0.682	0.01	11.8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 02/26/2016 Time: 09:27

Lab File ID: VR018164.D Init. Calib Date(s): 02/25/2016 02/25/2016

EPA Sample No.: VSTD00558 Init. Calib Time(s): 13:49 15:54

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.052	0.049	0.01	-7.1	± 40.0
Chloroform-d	0.684	0.691	0.01	1.0	± 20.0
1,2-Dichloroethane-d4	0.373	0.353	0.01	-5.4	± 25.0
Benzene-d6	1.529	1.603	0.03	4.8	± 20.0
1,2-Dichloropropane-d6	0.489	0.483	0.1	-1.1	± 20.0
Toluene-d8	1.453	1.550	0.2	6.7	± 20.0
trans-1,3-Dichloropropene-d4	0.163	0.152	0.01	-6.7	± 25.0
2-Hexanone-d5	0.046	0.044	0.01	-3.5	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.194	0.177	0.01	-8.7	± 25.0
1,2-Dichlorobenzene-d4	0.842	0.830	0.06	-1.4	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 02/26/2016 Time: 15:39

Lab File ID: VR018175.D Init. Calib Date(s): 02/25/2016 02/25/2016

EPA Sample No.: VSTD00559 Init. Calib Time(s): 13:49 15:54

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.390	0.458	0.01	17.2	± 50.0
Chloromethane	0.482	0.501	0.01	4.1	± 50.0
Vinyl chloride	0.479	0.517	0.01	7.9	± 50.0
Bromomethane	0.265	0.256	0.01	-3.4	± 50.0
Chloroethane	0.281	0.290	0.01	3.3	± 50.0
Trichlorofluoromethane	0.636	0.672	0.01	5.6	± 50.0
1,1-Dichloroethene	0.237	0.251	0.02	6.1	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.229	0.254	0.01	11.1	± 50.0
Acetone	0.043	0.040	0.01	-6.3	± 50.0
Carbon disulfide	0.735	0.678	0.01	-7.8	± 25.0
Methyl Acetate	0.105	0.092	0.01	-12.7	± 50.0
Methylene chloride	0.251	0.254	0.01	1.2	± 50.0
trans-1,2-Dichloroethene	0.302	0.297	0.07	-1.9	± 25.0
Methyl tert-butyl Ether	0.444	0.415	0.01	-6.6	± 50.0
1,1-Dichloroethane	0.699	0.686	0.1	-1.9	± 25.0
cis-1,2-Dichloroethene	0.308	0.311	0.1	0.9	± 25.0
2-Butanone	0.062	0.059	0.01	-5.5	± 50.0
Bromochloromethane	0.111	0.102	0.02	-8.1	± 25.0
Chloroform	0.648	0.637	0.04	-1.8	± 25.0
1,1,1-Trichloroethane	0.550	0.564	0.05	2.5	± 25.0
Cyclohexane	0.592	0.722	0.1	22	± 50.0
Carbon tetrachloride	0.532	0.539	0.02	1.3	± 50.0
Benzene	1.689	1.693	0.3	0.3	± 25.0
1,2-Dichloroethane	0.436	0.400	0.01	-8.4	± 50.0
Trichloroethene	0.410	0.411	0.1	0.2	± 25.0
Methylcyclohexane	0.515	0.617	0.2	19.7	± 50.0
1,2-Dichloropropane	0.459	0.435	0.1	-5.3	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 02/26/2016 Time: 15:39

Lab File ID: VR018175.D Init. Calib Date(s): 02/25/2016 02/25/2016

EPA Sample No.: VSTD00559 Init. Calib Time(s): 13:49 15:54

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.511	0.469	0.09	-8.2	± 25.0
cis-1,3-Dichloropropene	0.567	0.560	0.1	-1.2	± 25.0
4-Methyl-2-pentanone	0.181	0.176	0.01	-2.9	± 50.0
Toluene	1.763	1.806	0.4	2.4	± 25.0
trans-1,3-Dichloropropene	0.442	0.409	0.01	-7.4	± 25.0
1,1,2-Trichloroethane	0.209	0.189	0.04	-9.9	± 25.0
Tetrachloroethene	0.314	0.326	0.1	3.6	± 25.0
2-Hexanone	0.124	0.116	0.01	-6.5	± 50.0
Dibromochloromethane	0.263	0.230	0.05	-12.7	± 25.0
1,2-Dibromoethane	0.183	0.165	0.01	-10.1	± 25.0
Chlorobenzene	1.029	1.019	0.4	-1	± 25.0
Ethylbenzene	1.910	2.069	0.5	8.3	± 25.0
o-Xylene	0.611	0.663	0.3	8.5	± 25.0
m,p-Xylene	0.692	0.738	0.2	6.6	± 25.0
Styrene	1.027	1.094	0.2	6.6	± 25.0
Bromoform	0.288	0.235	0.01	-18.5	± 50.0
Isopropylbenzene	1.516	1.777	0.7	17.2	± 25.0
1,1,2,2-Tetrachloroethane	0.184	0.169	0.05	-8.1	± 25.0
1,3-Dichlorobenzene	1.451	1.480	0.5	2.0	± 25.0
1,4-Dichlorobenzene	1.593	1.582	0.7	-0.7	± 25.0
1,2-Dichlorobenzene	1.305	1.273	0.4	-2.4	± 25.0
1,2-Dibromo-3-chloropropane	0.063	0.050	0.01	-20.5	± 50.0
1,2,4-trichlorobenzene	0.720	0.680	0.3	-5.6	± 50.0
1,2,3-Trichlorobenzene	0.577	0.532	0.2	-7.8	± 50.0
Vinyl Chloride-d3	0.427	0.433	0.01	1.5	± 50.0
Chloroethane-d5	0.315	0.328	0.01	4.1	± 50.0
1,1-Dichloroethene-d2	0.610	0.655	0.01	7.4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 02/26/2016 Time: 15:39

Lab File ID: VR018175.D Init. Calib Date(s): 02/25/2016 02/25/2016

EPA Sample No.: VSTD00559 Init. Calib Time(s): 13:49 15:54

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.052	0.052	0.01	-1.1	± 50.0
Chloroform-d	0.684	0.690	0.01	1.0	± 25.0
1,2-Dichloroethane-d4	0.373	0.354	0.01	-5	± 25.0
Benzene-d6	1.529	1.558	0.03	1.9	± 25.0
1,2-Dichloropropane-d6	0.489	0.479	0.1	-2	± 25.0
Toluene-d8	1.453	1.503	0.2	3.4	± 25.0
trans-1,3-Dichloropropene-d4	0.163	0.151	0.01	-7.8	± 25.0
2-Hexanone-d5	0.046	0.045	0.01	-1.8	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.194	0.185	0.01	-4.6	± 25.0
1,2-Dichlorobenzene-d4	0.842	0.827	0.06	-1.8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 03/01/2016 Time: 16:18

Lab File ID: VR018182.D Init. Calib Date(s): 03/01/2016 03/01/2016

EPA Sample No.: VSTD00565 Init. Calib Time(s): 12:59 15:21

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.318	0.261	0.01	-18	± 40.0
Chloromethane	0.461	0.363	0.01	-21.3	± 30.0
Vinyl chloride	0.454	0.380	0.01	-16.2	± 30.0
Bromomethane	0.207	0.187	0.01	-9.3	± 30.0
Chloroethane	0.267	0.235	0.01	-11.9	± 30.0
Trichlorofluoromethane	0.573	0.525	0.01	-8.4	± 30.0
1,1-Dichloroethene	0.323	0.314	0.02	-2.8	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.236	0.212	0.01	-10.2	± 30.0
Acetone	0.021	0.021	0.01	-3.3	± 40.0
Carbon disulfide	1.124	1.075	0.01	-4.4	± 25.0
Methyl Acetate	0.055	0.056	0.01	0.9	± 40.0
Methylene chloride	0.264	0.283	0.01	7.0	± 30.0
trans-1,2-Dichloroethene	0.339	0.327	0.07	-3.8	± 20.0
Methyl tert-butyl Ether	0.268	0.273	0.01	1.8	± 30.0
1,1-Dichloroethane	0.698	0.672	0.1	-3.7	± 20.0
cis-1,2-Dichloroethene	0.293	0.282	0.1	-4	± 20.0
2-Butanone	0.030	0.031	0.01	4.0	± 40.0
Bromochloromethane	0.075	0.072	0.02	-3.9	± 20.0
Chloroform	0.553	0.521	0.04	-5.8	± 20.0
1,1,1-Trichloroethane	0.798	0.781	0.05	-2	± 20.0
Cyclohexane	1.082	1.116	0.1	3.2	± 25.0
Carbon tetrachloride	0.738	0.735	0.02	-0.5	± 25.0
Benzene	2.280	2.223	0.3	-2.5	± 20.0
1,2-Dichloroethane	0.246	0.236	0.01	-4	± 25.0
Trichloroethene	0.595	0.573	0.1	-3.8	± 20.0
Methylcyclohexane	0.887	0.924	0.2	4.1	± 25.0
1,2-Dichloropropane	0.488	0.470	0.1	-3.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 03/01/2016 Time: 16:18

Lab File ID: VR018182.D Init. Calib Date(s): 03/01/2016 03/01/2016

EPA Sample No.: VSTD00565 Init. Calib Time(s): 12:59 15:21

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.452	0.433	0.09	-4.1	± 20.0
cis-1,3-Dichloropropene	0.511	0.518	0.1	1.4	± 20.0
4-Methyl-2-pentanone	0.119	0.121	0.01	1.9	± 30.0
Toluene	2.238	2.203	0.4	-1.6	± 20.0
trans-1,3-Dichloropropene	0.324	0.323	0.01	-0.2	± 20.0
1,1,2-Trichloroethane	0.159	0.153	0.04	-4.3	± 20.0
Tetrachloroethene	0.441	0.428	0.1	-3	± 20.0
2-Hexanone	0.076	0.076	0.01	1.1	± 40.0
Dibromochloromethane	0.190	0.177	0.05	-6.6	± 20.0
1,2-Dibromoethane	0.126	0.121	0.01	-4.1	± 20.0
Chlorobenzene	1.073	1.035	0.4	-3.5	± 20.0
Ethylbenzene	2.380	2.363	0.5	-0.7	± 20.0
o-Xylene	0.701	0.693	0.3	-1.3	± 20.0
m,p-Xylene	0.880	0.861	0.2	-2.2	± 20.0
Styrene	1.026	1.002	0.2	-2.3	± 20.0
Bromoform	0.211	0.202	0.01	-4.3	± 30.0
Isopropylbenzene	1.944	1.954	0.7	0.5	± 25.0
1,1,2,2-Tetrachloroethane	0.114	0.105	0.05	-8.1	± 25.0
1,3-Dichlorobenzene	1.682	1.632	0.5	-3	± 20.0
1,4-Dichlorobenzene	1.661	1.570	0.7	-5.5	± 20.0
1,2-Dichlorobenzene	1.250	1.187	0.4	-5	± 20.0
1,2-Dibromo-3-chloropropane	0.039	0.038	0.01	-2.1	± 40.0
1,2,4-trichlorobenzene	0.728	0.738	0.3	1.4	± 30.0
1,2,3-Trichlorobenzene	0.525	0.553	0.2	5.3	± 40.0
Vinyl Chloride-d3	0.387	0.317	0.01	-18	± 30.0
Chloroethane-d5	0.288	0.252	0.01	-12.7	± 30.0
1,1-Dichloroethene-d2	0.794	0.731	0.01	-8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 03/01/2016 Time: 16:18

Lab File ID: VR018182.D Init. Calib Date(s): 03/01/2016 03/01/2016

EPA Sample No.: VSTD00565 Init. Calib Time(s): 12:59 15:21

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.027	0.027	0.01	0.0	± 40.0
Chloroform-d	0.578	0.520	0.01	-10	± 20.0
1,2-Dichloroethane-d4	0.212	0.191	0.01	-9.8	± 25.0
Benzene-d6	2.085	1.922	0.03	-7.8	± 20.0
1,2-Dichloropropane-d6	0.522	0.478	0.1	-8.4	± 20.0
Toluene-d8	1.864	1.705	0.2	-8.6	± 20.0
trans-1,3-Dichloropropene-d4	0.119	0.107	0.01	-9.9	± 25.0
2-Hexanone-d5	0.030	0.030	0.01	-2.6	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.117	0.104	0.01	-11.3	± 25.0
1,2-Dichlorobenzene-d4	0.818	0.696	0.06	-14.9	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 03/02/2016 Time: 02:46

Lab File ID: VR018201.D Init. Calib Date(s): 03/01/2016 03/01/2016

EPA Sample No.: VSTD00566 Init. Calib Time(s): 12:59 15:21

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.318	0.254	0.01	-19.9	± 50.0
Chloromethane	0.461	0.409	0.01	-11.4	± 50.0
Vinyl chloride	0.454	0.402	0.01	-11.5	± 50.0
Bromomethane	0.207	0.206	0.01	-0.1	± 50.0
Chloroethane	0.267	0.243	0.01	-9.2	± 50.0
Trichlorofluoromethane	0.573	0.523	0.01	-8.6	± 50.0
1,1-Dichloroethene	0.323	0.302	0.02	-6.5	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.236	0.195	0.01	-17.3	± 50.0
Acetone	0.021	0.026	0.01	24.5	± 50.0
Carbon disulfide	1.124	0.947	0.01	-15.8	± 25.0
Methyl Acetate	0.055	0.074	0.01	33.3	± 50.0
Methylene chloride	0.264	0.273	0.01	3.2	± 50.0
trans-1,2-Dichloroethene	0.339	0.337	0.07	-0.8	± 25.0
Methyl tert-butyl Ether	0.268	0.309	0.01	15.2	± 50.0
1,1-Dichloroethane	0.698	0.734	0.1	5.1	± 25.0
cis-1,2-Dichloroethene	0.293	0.319	0.1	8.7	± 25.0
2-Butanone	0.030	0.041	0.01	35.7	± 50.0
Bromochloromethane	0.075	0.085	0.02	12.4	± 25.0
Chloroform	0.553	0.602	0.04	8.8	± 25.0
1,1,1-Trichloroethane	0.798	0.760	0.05	-4.8	± 25.0
Cyclohexane	1.082	0.918	0.1	-15.1	± 50.0
Carbon tetrachloride	0.738	0.687	0.02	-7	± 50.0
Benzene	2.280	2.320	0.3	1.7	± 25.0
1,2-Dichloroethane	0.246	0.293	0.01	19.3	± 50.0
Trichloroethene	0.595	0.570	0.1	-4.2	± 25.0
Methylcyclohexane	0.887	0.754	0.2	-15	± 50.0
1,2-Dichloropropane	0.488	0.531	0.1	8.8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 03/02/2016 Time: 02:46

Lab File ID: VR018201.D Init. Calib Date(s): 03/01/2016 03/01/2016

EPA Sample No.: VSTD00566 Init. Calib Time(s): 12:59 15:21

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.452	0.498	0.09	10.2	± 25.0
cis-1,3-Dichloropropene	0.511	0.555	0.1	8.6	± 25.0
4-Methyl-2-pentanone	0.119	0.158	0.01	33.2	± 50.0
Toluene	2.238	2.260	0.4	1.0	± 25.0
trans-1,3-Dichloropropene	0.324	0.350	0.01	8.2	± 25.0
1,1,2-Trichloroethane	0.159	0.186	0.04	16.6	± 25.0
Tetrachloroethene	0.441	0.394	0.1	-10.7	± 25.0
2-Hexanone	0.076	0.101	0.01	33.7	± 50.0
Dibromochloromethane	0.190	0.212	0.05	11.4	± 25.0
1,2-Dibromoethane	0.126	0.145	0.01	15.4	± 25.0
Chlorobenzene	1.073	1.077	0.4	0.4	± 25.0
Ethylbenzene	2.380	2.334	0.5	-1.9	± 25.0
o-Xylene	0.701	0.699	0.3	-0.3	± 25.0
m,p-Xylene	0.880	0.836	0.2	-5.1	± 25.0
Styrene	1.026	1.041	0.2	1.4	± 25.0
Bromoform	0.211	0.235	0.01	11.3	± 50.0
Isopropylbenzene	1.944	1.832	0.7	-5.7	± 25.0
1,1,2,2-Tetrachloroethane	0.114	0.130	0.05	13.6	± 25.0
1,3-Dichlorobenzene	1.682	1.702	0.5	1.2	± 25.0
1,4-Dichlorobenzene	1.661	1.668	0.7	0.4	± 25.0
1,2-Dichlorobenzene	1.250	1.304	0.4	4.3	± 25.0
1,2-Dibromo-3-chloropropane	0.039	0.041	0.01	6.7	± 50.0
1,2,4-trichlorobenzene	0.728	0.763	0.3	4.9	± 50.0
1,2,3-Trichlorobenzene	0.525	0.596	0.2	13.4	± 50.0
Vinyl Chloride-d3	0.387	0.329	0.01	-15	± 50.0
Chloroethane-d5	0.288	0.249	0.01	-13.5	± 50.0
1,1-Dichloroethene-d2	0.794	0.695	0.01	-12.4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 03/02/2016 Time: 02:46

Lab File ID: VR018201.D Init. Calib Date(s): 03/01/2016 03/01/2016

EPA Sample No.: VSTD00566 Init. Calib Time(s): 12:59 15:21

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.027	0.036	0.01	33.1	± 50.0
Chloroform-d	0.578	0.595	0.01	2.9	± 25.0
1,2-Dichloroethane-d4	0.212	0.239	0.01	12.8	± 25.0
Benzene-d6	2.085	2.003	0.03	-3.9	± 25.0
1,2-Dichloropropane-d6	0.522	0.523	0.1	0.1	± 25.0
Toluene-d8	1.864	1.717	0.2	-7.9	± 25.0
trans-1,3-Dichloropropene-d4	0.119	0.112	0.01	-5.7	± 25.0
2-Hexanone-d5	0.030	0.039	0.01	28	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.117	0.129	0.01	10.5	± 25.0
1,2-Dichlorobenzene-d4	0.818	0.756	0.06	-7.5	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 03/02/2016 Time: 11:27

Lab File ID: VR018203.D Init. Calib Date(s): 03/01/2016 03/01/2016

EPA Sample No.: VSTD00567 Init. Calib Time(s): 12:59 15:21

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.318	0.357	0.01	12.3	± 40.0
Chloromethane	0.461	0.463	0.01	0.4	± 30.0
Vinyl chloride	0.454	0.499	0.01	10	± 30.0
Bromomethane	0.207	0.210	0.01	1.7	± 30.0
Chloroethane	0.267	0.262	0.01	-1.8	± 30.0
Trichlorofluoromethane	0.573	0.626	0.01	9.3	± 30.0
1,1-Dichloroethene	0.323	0.336	0.02	4.0	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.236	0.257	0.01	8.9	± 30.0
Acetone	0.021	0.026	0.01	22.2	± 40.0
Carbon disulfide	1.124	1.083	0.01	-3.7	± 25.0
Methyl Acetate	0.055	0.065	0.01	17	± 40.0
Methylene chloride	0.264	0.254	0.01	-4.2	± 30.0
trans-1,2-Dichloroethene	0.339	0.352	0.07	3.5	± 20.0
Methyl tert-butyl Ether	0.268	0.299	0.01	11.4	± 30.0
1,1-Dichloroethane	0.698	0.727	0.1	4.1	± 20.0
cis-1,2-Dichloroethene	0.293	0.310	0.1	5.7	± 20.0
2-Butanone	0.030	0.039	0.01	29.3	± 40.0
Bromochloromethane	0.075	0.084	0.02	11.3	± 20.0
Chloroform	0.553	0.588	0.04	6.3	± 20.0
1,1,1-Trichloroethane	0.798	0.788	0.05	-1.2	± 20.0
Cyclohexane	1.082	1.115	0.1	3.1	± 25.0
Carbon tetrachloride	0.738	0.777	0.02	5.2	± 25.0
Benzene	2.280	2.250	0.3	-1.3	± 20.0
1,2-Dichloroethane	0.246	0.279	0.01	13.6	± 25.0
Trichloroethene	0.595	0.580	0.1	-2.5	± 20.0
Methylcyclohexane	0.887	0.939	0.2	5.8	± 25.0
1,2-Dichloropropane	0.488	0.493	0.1	1.1	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 03/02/2016 Time: 11:27

Lab File ID: VR018203.D Init. Calib Date(s): 03/01/2016 03/01/2016

EPA Sample No.: VSTD00567 Init. Calib Time(s): 12:59 15:21

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.452	0.465	0.09	2.9	± 20.0
cis-1,3-Dichloropropene	0.511	0.545	0.1	6.6	± 20.0
4-Methyl-2-pentanone	0.119	0.140	0.01	17.9	± 30.0
Toluene	2.238	2.298	0.4	2.7	± 20.0
trans-1,3-Dichloropropene	0.324	0.350	0.01	8.1	± 20.0
1,1,2-Trichloroethane	0.159	0.166	0.04	4.3	± 20.0
Tetrachloroethene	0.441	0.448	0.1	1.5	± 20.0
2-Hexanone	0.076	0.092	0.01	21.4	± 40.0
Dibromochloromethane	0.190	0.199	0.05	4.6	± 20.0
1,2-Dibromoethane	0.126	0.138	0.01	9.5	± 20.0
Chlorobenzene	1.073	1.102	0.4	2.7	± 20.0
Ethylbenzene	2.380	2.506	0.5	5.3	± 20.0
o-Xylene	0.701	0.744	0.3	6.1	± 20.0
m,p-Xylene	0.880	0.895	0.2	1.6	± 20.0
Styrene	1.026	1.096	0.2	6.8	± 20.0
Bromoform	0.211	0.194	0.01	-7.8	± 30.0
Isopropylbenzene	1.944	2.126	0.7	9.4	± 25.0
1,1,2,2-Tetrachloroethane	0.114	0.124	0.05	8.4	± 25.0
1,3-Dichlorobenzene	1.682	1.726	0.5	2.6	± 20.0
1,4-Dichlorobenzene	1.661	1.684	0.7	1.4	± 20.0
1,2-Dichlorobenzene	1.250	1.287	0.4	2.9	± 20.0
1,2-Dibromo-3-chloropropane	0.039	0.038	0.01	-1.3	± 40.0
1,2,4-trichlorobenzene	0.728	0.776	0.3	6.7	± 30.0
1,2,3-Trichlorobenzene	0.525	0.558	0.2	6.2	± 40.0
Vinyl Chloride-d3	0.387	0.390	0.01	0.6	± 30.0
Chloroethane-d5	0.288	0.283	0.01	-1.7	± 30.0
1,1-Dichloroethene-d2	0.794	0.792	0.01	-0.2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 03/02/2016 Time: 11:27

Lab File ID: VR018203.D Init. Calib Date(s): 03/01/2016 03/01/2016

EPA Sample No.: VSTD00567 Init. Calib Time(s): 12:59 15:21

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.027	0.034	0.01	27.9	± 40.0
Chloroform-d	0.578	0.625	0.01	8.1	± 20.0
1,2-Dichloroethane-d4	0.212	0.242	0.01	14	± 25.0
Benzene-d6	2.085	2.043	0.03	-2	± 20.0
1,2-Dichloropropane-d6	0.522	0.522	0.1	-0.1	± 20.0
Toluene-d8	1.864	1.869	0.2	0.2	± 20.0
trans-1,3-Dichloropropene-d4	0.119	0.118	0.01	-0.6	± 25.0
2-Hexanone-d5	0.030	0.037	0.01	21.7	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.117	0.131	0.01	11.7	± 25.0
1,2-Dichlorobenzene-d4	0.818	0.817	0.06	-0.1	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 03/02/2016 Time: 20:00

Lab File ID: VR018217.D Init. Calib Date(s): 03/01/2016 03/01/2016

EPA Sample No.: VSTD00568 Init. Calib Time(s): 12:59 15:21

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.318	0.302	0.01	-4.9	± 50.0
Chloromethane	0.461	0.391	0.01	-15.2	± 50.0
Vinyl chloride	0.454	0.408	0.01	-10.1	± 50.0
Bromomethane	0.207	0.191	0.01	-7.5	± 50.0
Chloroethane	0.267	0.235	0.01	-11.8	± 50.0
Trichlorofluoromethane	0.573	0.541	0.01	-5.5	± 50.0
1,1-Dichloroethene	0.323	0.283	0.02	-12.2	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.236	0.209	0.01	-11.2	± 50.0
Acetone	0.021	0.021	0.01	1.4	± 50.0
Carbon disulfide	1.124	0.898	0.01	-20.2	± 25.0
Methyl Acetate	0.055	0.055	0.01	-0.5	± 50.0
Methylene chloride	0.264	0.216	0.01	-18.4	± 50.0
trans-1,2-Dichloroethene	0.339	0.294	0.07	-13.5	± 25.0
Methyl tert-butyl Ether	0.268	0.244	0.01	-9.2	± 50.0
1,1-Dichloroethane	0.698	0.623	0.1	-10.7	± 25.0
cis-1,2-Dichloroethene	0.293	0.263	0.1	-10.3	± 25.0
2-Butanone	0.030	0.032	0.01	7.0	± 50.0
Bromochloromethane	0.075	0.068	0.02	-9.2	± 25.0
Chloroform	0.553	0.516	0.04	-6.7	± 25.0
1,1,1-Trichloroethane	0.798	0.696	0.05	-12.7	± 25.0
Cyclohexane	1.082	0.921	0.1	-14.9	± 50.0
Carbon tetrachloride	0.738	0.662	0.02	-10.4	± 50.0
Benzene	2.280	1.979	0.3	-13.2	± 25.0
1,2-Dichloroethane	0.246	0.245	0.01	-0.1	± 50.0
Trichloroethene	0.595	0.514	0.1	-13.6	± 25.0
Methylcyclohexane	0.887	0.752	0.2	-15.3	± 50.0
1,2-Dichloropropane	0.488	0.429	0.1	-12.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 03/02/2016 Time: 20:00

Lab File ID: VR018217.D Init. Calib Date(s): 03/01/2016 03/01/2016

EPA Sample No.: VSTD00568 Init. Calib Time(s): 12:59 15:21

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.452	0.405	0.09	-10.5	± 25.0
cis-1,3-Dichloropropene	0.511	0.468	0.1	-8.6	± 25.0
4-Methyl-2-pentanone	0.119	0.122	0.01	2.8	± 50.0
Toluene	2.238	2.038	0.4	-9	± 25.0
trans-1,3-Dichloropropene	0.324	0.289	0.01	-10.6	± 25.0
1,1,2-Trichloroethane	0.159	0.144	0.04	-9.7	± 25.0
Tetrachloroethene	0.441	0.385	0.1	-12.8	± 25.0
2-Hexanone	0.076	0.081	0.01	6.6	± 50.0
Dibromochloromethane	0.190	0.166	0.05	-12.7	± 25.0
1,2-Dibromoethane	0.126	0.116	0.01	-8	± 25.0
Chlorobenzene	1.073	0.971	0.4	-9.5	± 25.0
Ethylbenzene	2.380	2.227	0.5	-6.4	± 25.0
o-Xylene	0.701	0.651	0.3	-7.1	± 25.0
m,p-Xylene	0.880	0.797	0.2	-9.5	± 25.0
Styrene	1.026	0.948	0.2	-7.6	± 25.0
Bromoform	0.211	0.163	0.01	-22.4	± 50.0
Isopropylbenzene	1.944	1.880	0.7	-3.3	± 25.0
1,1,2,2-Tetrachloroethane	0.114	0.106	0.05	-7.3	± 25.0
1,3-Dichlorobenzene	1.682	1.460	0.5	-13.2	± 25.0
1,4-Dichlorobenzene	1.661	1.465	0.7	-11.8	± 25.0
1,2-Dichlorobenzene	1.250	1.098	0.4	-12.1	± 25.0
1,2-Dibromo-3-chloropropane	0.039	0.030	0.01	-22.9	± 50.0
1,2,4-trichlorobenzene	0.728	0.649	0.3	-10.8	± 50.0
1,2,3-Trichlorobenzene	0.525	0.484	0.2	-7.8	± 50.0
Vinyl Chloride-d3	0.387	0.343	0.01	-11.4	± 50.0
Chloroethane-d5	0.288	0.268	0.01	-6.9	± 50.0
1,1-Dichloroethene-d2	0.794	0.704	0.01	-11.4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 03/02/2016 Time: 20:00

Lab File ID: VR018217.D Init. Calib Date(s): 03/01/2016 03/01/2016

EPA Sample No.: VSTD00568 Init. Calib Time(s): 12:59 15:21

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

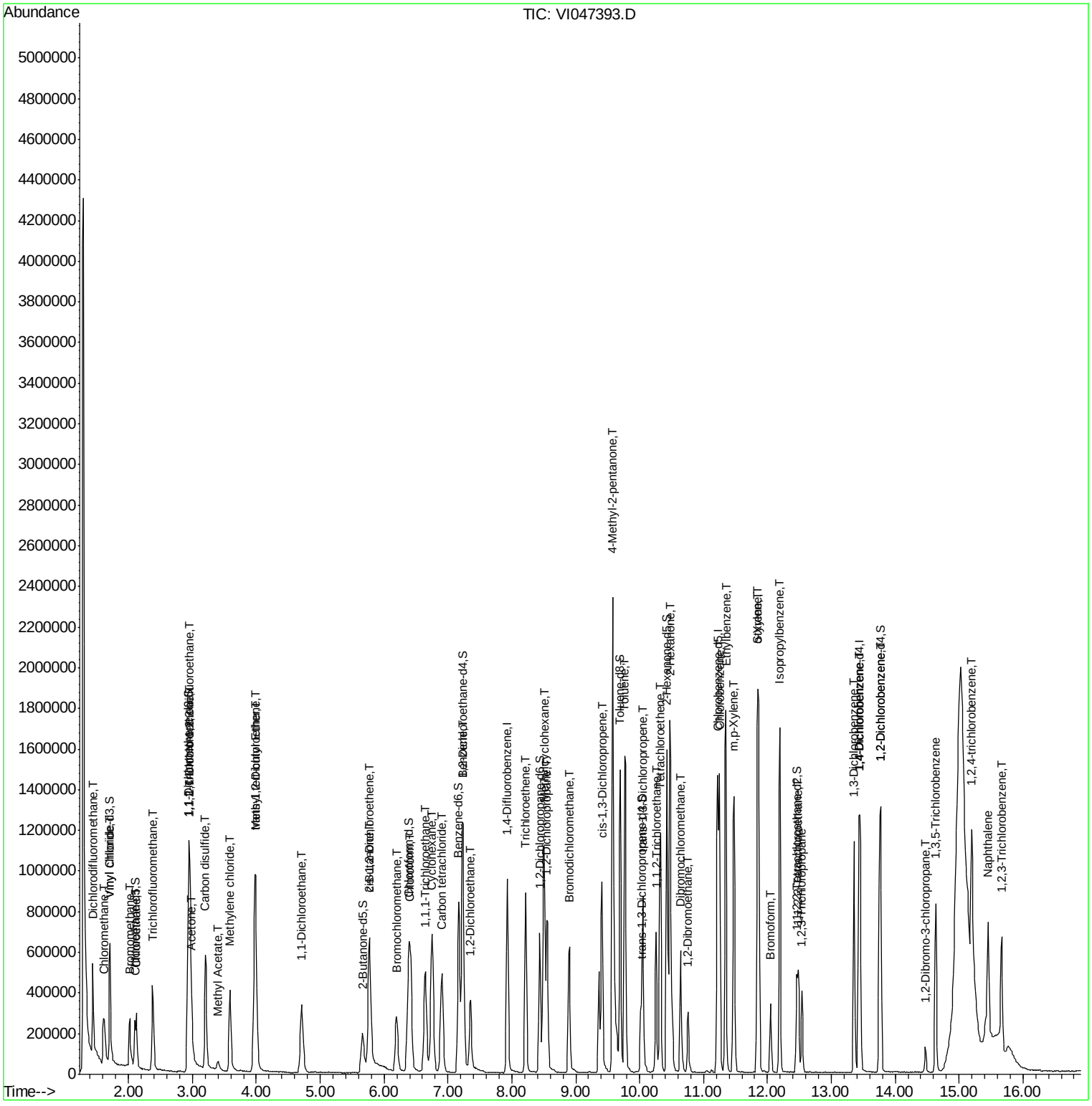
ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.027	0.032	0.01	19.7	± 50.0
Chloroform-d	0.578	0.575	0.01	-0.4	± 25.0
1,2-Dichloroethane-d4	0.212	0.227	0.01	6.8	± 25.0
Benzene-d6	2.085	1.914	0.03	-8.2	± 25.0
1,2-Dichloropropane-d6	0.522	0.496	0.1	-5	± 25.0
Toluene-d8	1.864	1.750	0.2	-6.1	± 25.0
trans-1,3-Dichloropropene-d4	0.119	0.108	0.01	-8.8	± 25.0
2-Hexanone-d5	0.030	0.035	0.01	15.5	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.117	0.123	0.01	5.0	± 25.0
1,2-Dichlorobenzene-d4	0.818	0.755	0.06	-7.7	± 25.0

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047393.D
Acq On : 29 Feb 2016 12:31
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00531

Quant Time: Feb 29 13:20:06 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Mon Feb 29 13:13:39 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047393.D
Acq On : 29 Feb 2016 12:31
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00531

Quant Time: Feb 29 13:20:06 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Mon Feb 29 13:13:39 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	881982	5.00	ug/L		0.03
28) Chlorobenzene-d5	11.22	117	779293	5.00	ug/L		0.03
60) 1,4-Dichlorobenzene-d4	13.43	152	301620	5.00	ug/L		0.02
System Monitoring Compounds							
4) Vinyl Chloride-d3	1.70	65	269819	5.49	ug/L		0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 109.80%				
7) Chloroethane-d5	2.09	69	208500	5.56	ug/L		0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 111.20%				
11) 1,1-Dichloroethene-d2	2.93	63	571555	5.26	ug/L		0.02
Spiked Amount 5.000	Range 60 - 125		Recovery = 105.20%				
20) 2-Butanone-d5	5.66	46	524955	51.40	ug/L		0.04
Spiked Amount 50.000	Range 40 - 130		Recovery = 102.80%				
24) Chloroform-d	6.38	84	572375	5.15	ug/L		0.04
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.00%				
26) 1,2-Dichloroethane-d4	7.23	65	305690	4.73	ug/L		0.03
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%				
32) Benzene-d6	7.17	84	961368	5.12	ug/L		0.03
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.40%				
36) 1,2-Dichloropropane-d6	8.44	67	303924	5.36	ug/L		0.03
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.20%				
41) Toluene-d8	9.70	98	927156	5.10	ug/L		0.03
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.00%				
43) trans-1,3-Dichloropropene-	10.02	79	178708	5.32	ug/L		0.03
Spiked Amount 5.000	Range 55 - 130		Recovery = 106.40%				
46) 2-Hexanone-d5	10.42	63	631398	45.92	ug/L		0.02
Spiked Amount 50.000	Range 45 - 130		Recovery = 91.84%				
57) 1,1,2,2-Tetrachloroethane-	12.46	84	226570	4.62	ug/L		0.03
Spiked Amount 5.000	Range 65 - 120		Recovery = 92.40%				
64) 1,2-Dichlorobenzene-d4	13.76	152	258226	4.69	ug/L		0.03
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.80%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.44	85	411819	6.16	ug/L		93
3) Chloromethane	1.61	50	331556	4.97	ug/L		97
5) Vinyl chloride	1.71	62	314119	6.03	ug/L		95
6) Bromomethane	2.02	94	154660	6.20	ug/L		87
8) Chloroethane	2.12	64	177879	5.68	ug/L		97
9) Trichlorofluoromethane	2.38	101	338225	6.08	ug/L		99
10) 1,1,2-Trichloro-1,2,2-trif	2.97	101	296553	5.46	ug/L		97
12) 1,1-Dichloroethene	2.95	96	223973	5.45	ug/L		90
13) Acetone	3.00	43	249979	54.12	ug/L		97
14) Carbon disulfide	3.20	76	887302	5.81	ug/L		99
15) Methyl Acetate	3.40	43	105050	5.46	ug/L	#	89
16) Methylene chloride	3.59	84	238081	5.77	ug/L		94
17) Methyl tert-butyl Ether	3.98	73	728979	5.23	ug/L		98
18) trans-1,2-Dichloroethene	3.99	96	268052	4.83	ug/L		93
19) 1,1-Dichloroethane	4.71	63	511367	5.46	ug/L		99
21) 2-Butanone	5.77	43	516249	49.31	ug/L		97
22) cis-1,2-Dichloroethene	5.77	96	269206	5.26	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047393.D
Acq On : 29 Feb 2016 12:31
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00531

Quant Time: Feb 29 13:20:06 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Mon Feb 29 13:13:39 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.19	128	113042	5.20	ug/L		99
25) Chloroform	6.41	83	561676	5.17	ug/L		91
27) 1,2-Dichloroethane	7.35	62	379880	4.81	ug/L		97
29) 1,1,1-Trichloroethane	6.65	97	485346	5.10	ug/L		99
30) Cyclohexane	6.74	56	478813	5.87	ug/L		97
31) Carbon tetrachloride	6.90	117	443725	5.09	ug/L		100
33) Benzene	7.24	78	1031963	5.35	ug/L		100
34) Trichloroethene	8.21	95	318217	5.17	ug/L		93
35) Methylcyclohexane	8.51	83	458404	5.79	ug/L		99
37) 1,2-Dichloropropane	8.56	63	261148	5.16	ug/L		99
38) Bromodichloromethane	8.90	83	413885	5.07	ug/L		100
39) cis-1,3-Dichloropropene	9.41	75	491922	5.59	ug/L		95
40) 4-Methyl-2-pentanone	9.58	43	1989287	47.07	ug/L		99
42) Toluene	9.78	91	1126251	5.18	ug/L		98
44) trans-1,3-Dichloropropene	10.05	75	439318	5.38	ug/L		96
45) 1,1,2-Trichloroethane	10.26	97	201390	4.99	ug/L		96
47) Tetrachloroethene	10.33	164	283818	5.13	ug/L		96
48) 2-Hexanone	10.47	43	1373312	46.23	ug/L		99
49) Dibromochloromethane	10.64	129	302511	4.95	ug/L		99
50) 1,2-Dibromoethane	10.76	107	211345	4.64	ug/L		99
51) Chlorobenzene	11.25	112	738748	5.06	ug/L		95
52) Ethylbenzene	11.35	91	1263560	5.23	ug/L		97
53) m,p-Xylene	11.48	106	445149	5.29	ug/L		97
54) o-Xylene	11.84	106	405510	5.18	ug/L		92
55) Styrene	11.86	104	691935	5.12	ug/L		98
56) Isopropylbenzene	12.20	105	1092370	5.16	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.48	83	219561	4.55	ug/L		97
59) 1,2,3-Trichloropropane	12.54	75	157210	4.30	ug/L		99
61) Bromoform	12.05	173	159333	5.18	ug/L		98
62) 1,3-Dichlorobenzene	13.36	146	466001	5.09	ug/L		98
63) 1,4-Dichlorobenzene	13.45	146	463265	5.12	ug/L		97
65) 1,2-Dichlorobenzene	13.77	146	397046	4.78	ug/L		95
66) 1,2-Dibromo-3-chloropropan	14.47	75	32861	4.55	ug/L	#	76
67) 1,3,5-Trichlorobenzene	14.64	180	275429	4.32	ug/L		98
68) 1,2,4-trichlorobenzene	15.20	180	235739	4.00	ug/L		98
69) Naphthalene	15.45	128	492239	5.67	ug/L		98
70) 1,2,3-Trichlorobenzene	15.67	180	203851	4.01	ug/L		99

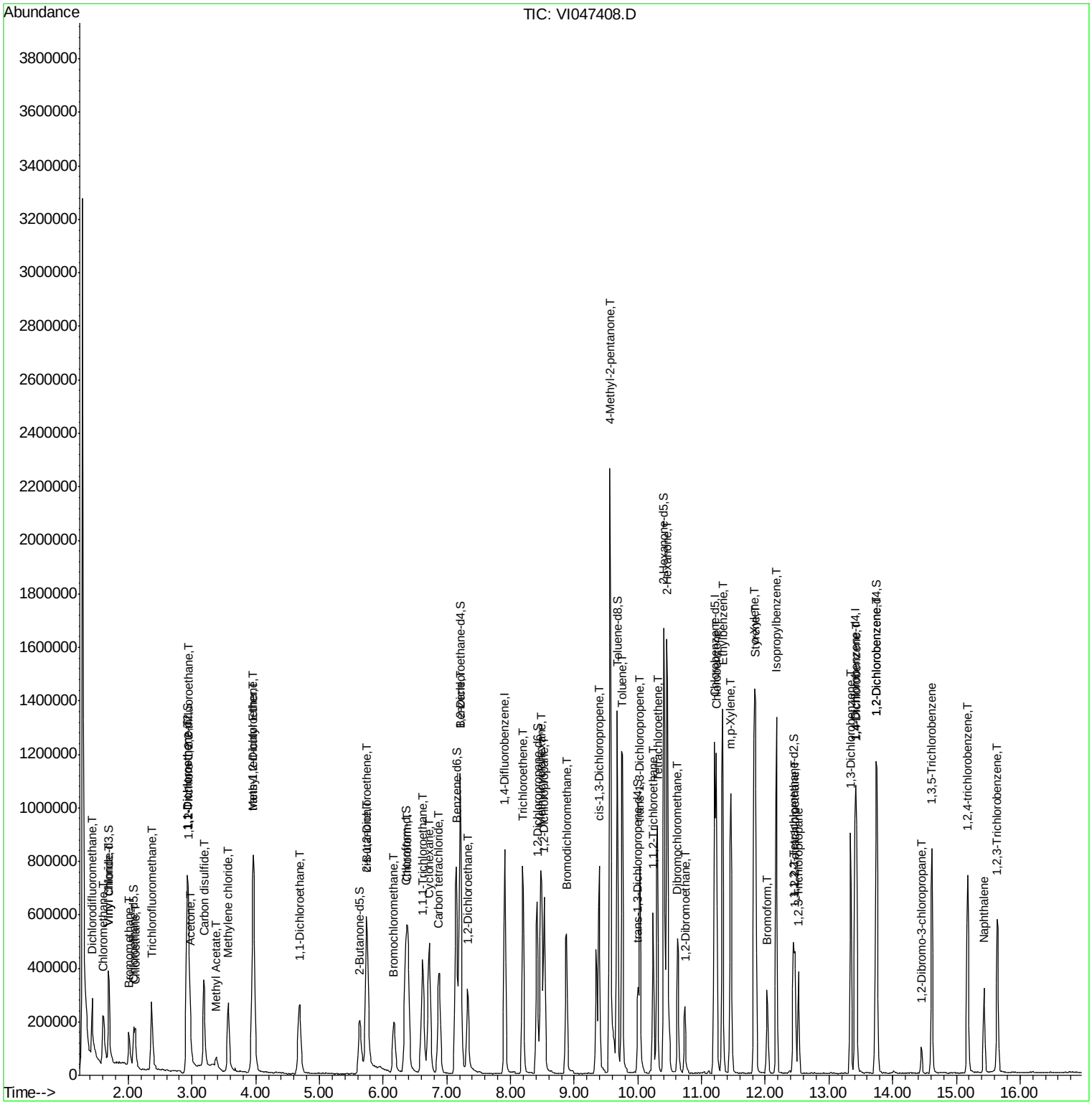
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047408.D
Acq On : 29 Feb 2016 21:15
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00532

Quant Time: Mar 01 05:50:56 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047408.D
Acq On : 29 Feb 2016 21:15
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00532

Quant Time: Mar 01 05:50:56 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	760650	5.00	ug/L	-0.03
28) Chlorobenzene-d5	11.20	117	642543	5.00	ug/L	-0.02
60) 1,4-Dichlorobenzene-d4	13.41	152	253306	5.00	ug/L	-0.02
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	185793	4.39	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 87.80%			
7) Chloroethane-d5	2.08	69	143599	4.44	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 88.80%			
11) 1,1-Dichloroethene-d2	2.92	63	390147	4.16	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 83.20%			
20) 2-Butanone-d5	5.63	46	491045	55.75	ug/L	-0.03
Spiked Amount 50.000	Range 40 - 130		Recovery = 111.50%			
24) Chloroform-d	6.35	84	530092	5.53	ug/L	-0.03
Spiked Amount 5.000	Range 70 - 125		Recovery = 110.60%			
26) 1,2-Dichloroethane-d4	7.21	65	299754	5.38	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.60%			
32) Benzene-d6	7.15	84	891066	5.75	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 115.00%			
36) 1,2-Dichloropropane-d6	8.42	67	285808	6.11	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 140		Recovery = 122.20%			
41) Toluene-d8	9.68	98	831762	5.55	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 111.00%			
43) trans-1,3-Dichloropropene-	10.00	79	165608	5.98	ug/L	-0.02
Spiked Amount 5.000	Range 55 - 130		Recovery = 119.60%			
46) 2-Hexanone-d5	10.41	63	626891	55.30	ug/L	-0.02
Spiked Amount 50.000	Range 45 - 130		Recovery = 110.60%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	228566	5.65	ug/L	-0.02
Spiked Amount 5.000	Range 65 - 120		Recovery = 113.00%			
64) 1,2-Dichlorobenzene-d4	13.74	152	243295	5.27	ug/L	-0.02
Spiked Amount 5.000	Range 80 - 120		Recovery = 105.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	228281	3.96	ug/L	92
3) Chloromethane	1.60	50	278051	4.83	ug/L	91
5) Vinyl chloride	1.70	62	178829	3.98	ug/L	99
6) Bromomethane	2.00	94	84008	3.91	ug/L	97
8) Chloroethane	2.11	64	103376	3.83	ug/L	98
9) Trichlorofluoromethane	2.37	101	244038	5.09	ug/L	97
10) 1,1,2-Trichloro-1,2,2-trif	2.95	101	213587	4.56	ug/L	96
12) 1,1-Dichloroethene	2.93	96	138637	3.92	ug/L	83
13) Acetone	2.98	43	181894	45.66	ug/L	97
14) Carbon disulfide	3.18	76	516520	3.92	ug/L	100
15) Methyl Acetate	3.38	43	79898	4.81	ug/L	94
16) Methylene chloride	3.57	84	149499	4.20	ug/L	97
17) Methyl tert-butyl Ether	3.95	73	609863	5.07	ug/L	97
18) trans-1,2-Dichloroethene	3.97	96	220143	4.60	ug/L	91
19) 1,1-Dichloroethane	4.68	63	395030	4.89	ug/L	96
21) 2-Butanone	5.74	43	454856	50.38	ug/L	95
22) cis-1,2-Dichloroethene	5.74	96	223749	5.07	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047408.D
Acq On : 29 Feb 2016 21:15
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00532

Quant Time: Mar 01 05:50:56 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.17	128	83643	4.46	ug/L		96
25) Chloroform	6.39	83	461794	4.93	ug/L		93
27) 1,2-Dichloroethane	7.33	62	325637	4.78	ug/L		100
29) 1,1,1-Trichloroethane	6.62	97	397699	5.07	ug/L		98
30) Cyclohexane	6.73	56	314554	4.68	ug/L		97
31) Carbon tetrachloride	6.87	117	353159	4.92	ug/L		100
33) Benzene	7.21	78	816247	5.13	ug/L		100
34) Trichloroethene	8.19	95	250958	4.95	ug/L		96
35) Methylcyclohexane	8.49	83	314631	4.82	ug/L		97
37) 1,2-Dichloropropane	8.53	63	231930	5.55	ug/L		99
38) Bromodichloromethane	8.88	83	359650	5.34	ug/L		98
39) cis-1,3-Dichloropropene	9.39	75	378562	5.21	ug/L		95
40) 4-Methyl-2-pentanone	9.56	43	1761441	50.55	ug/L		97
42) Toluene	9.76	91	855331	4.77	ug/L		97
44) trans-1,3-Dichloropropene	10.03	75	362510	5.38	ug/L		99
45) 1,1,2-Trichloroethane	10.24	97	169973	5.11	ug/L		98
47) Tetrachloroethene	10.31	164	223138	4.89	ug/L		97
48) 2-Hexanone	10.46	43	1201844	49.07	ug/L		99
49) Dibromochloromethane	10.62	129	267494	5.31	ug/L		98
50) 1,2-Dibromoethane	10.74	107	173423	4.62	ug/L		95
51) Chlorobenzene	11.23	112	584207	4.85	ug/L		98
52) Ethylbenzene	11.33	91	943964	4.74	ug/L		97
53) m,p-Xylene	11.46	106	333762	4.81	ug/L		95
54) o-Xylene	11.82	106	303448	4.70	ug/L		91
55) Styrene	11.85	104	528377	4.74	ug/L		91
56) Isopropylbenzene	12.18	105	844002	4.83	ug/L		100
58) 1,1,2,2-Tetrachloroethane	12.46	83	198134	4.98	ug/L		96
59) 1,2,3-Trichloropropane	12.52	75	146210	4.85	ug/L		97
61) Bromoform	12.03	173	145229	5.62	ug/L		99
62) 1,3-Dichlorobenzene	13.34	146	378704	4.93	ug/L		99
63) 1,4-Dichlorobenzene	13.44	146	372660	4.90	ug/L		99
65) 1,2-Dichlorobenzene	13.75	146	341162	4.89	ug/L		97
66) 1,2-Dibromo-3-chloropropan	14.45	75	24575	4.05	ug/L	#	73
67) 1,3,5-Trichlorobenzene	14.62	180	285656	5.33	ug/L		99
68) 1,2,4-trichlorobenzene	15.18	180	256008	5.17	ug/L		98
69) Naphthalene	15.43	128	294431	4.04	ug/L		98
70) 1,2,3-Trichlorobenzene	15.65	180	229279	5.37	ug/L		97

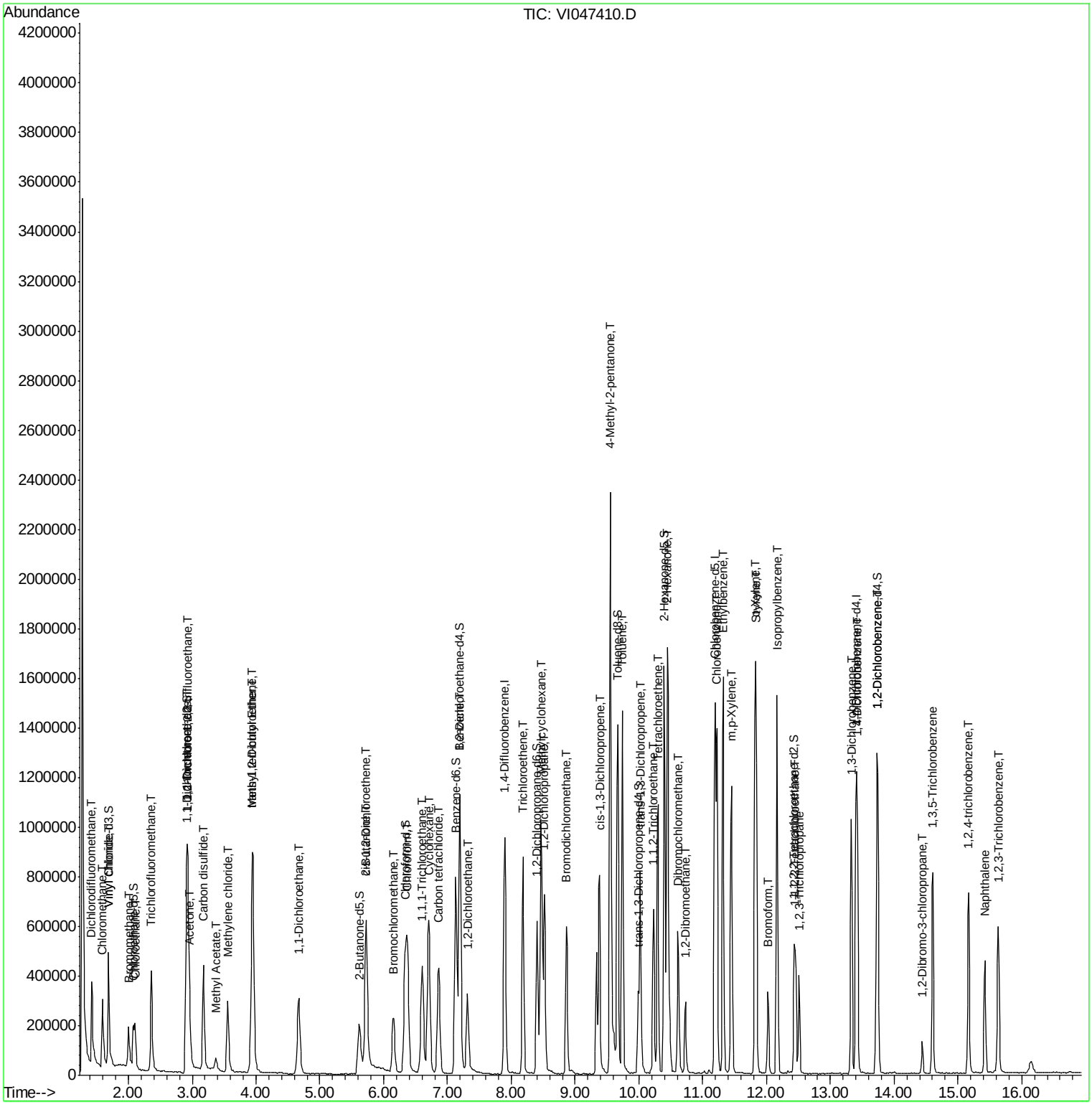
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047410.D
Acq On : 1 Mar 2016 10:11
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00533

Quant Time: Mar 02 02:36:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047410.D
Acq On : 1 Mar 2016 10:11
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00533

Quant Time: Mar 02 02:36:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	840373	5.00	ug/L	-0.04
28) Chlorobenzene-d5	11.19	117	771290	5.00	ug/L	-0.03
60) 1,4-Dichlorobenzene-d4	13.40	152	287641	5.00	ug/L	-0.03
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	214172	4.58	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 91.60%			
7) Chloroethane-d5	2.07	69	153689	4.30	ug/L	-0.02
Spiked Amount 5.000	Range 65 - 130		Recovery = 86.00%			
11) 1,1-Dichloroethene-d2	2.90	63	450288	4.35	ug/L	-0.03
Spiked Amount 5.000	Range 60 - 125		Recovery = 87.00%			
20) 2-Butanone-d5	5.62	46	464729	47.76	ug/L	-0.05
Spiked Amount 50.000	Range 40 - 130		Recovery = 95.52%			
24) Chloroform-d	6.33	84	524220	4.95	ug/L	-0.05
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.00%			
26) 1,2-Dichloroethane-d4	7.19	65	298045	4.84	ug/L	-0.04
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.80%			
32) Benzene-d6	7.13	84	911766	4.90	ug/L	-0.04
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.00%			
36) 1,2-Dichloropropane-d6	8.40	67	292622	5.21	ug/L	-0.04
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.20%			
41) Toluene-d8	9.67	98	892979	4.96	ug/L	-0.03
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.20%			
43) trans-1,3-Dichloropropene-	9.99	79	176244	5.30	ug/L	-0.03
Spiked Amount 5.000	Range 55 - 130		Recovery = 106.00%			
46) 2-Hexanone-d5	10.40	63	636839	46.80	ug/L	-0.03
Spiked Amount 50.000	Range 45 - 130		Recovery = 93.60%			
57) 1,1,2,2-Tetrachloroethane-	12.43	84	241285	4.97	ug/L	-0.03
Spiked Amount 5.000	Range 65 - 120		Recovery = 99.40%			
64) 1,2-Dichlorobenzene-d4	13.73	152	254621	4.85	ug/L	-0.03
Spiked Amount 5.000	Range 80 - 120		Recovery = 97.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.42	85	320089	5.03	ug/L	91
3) Chloromethane	1.59	50	272446	4.29	ug/L	98
5) Vinyl chloride	1.69	62	217982	4.39	ug/L	94
6) Bromomethane	2.00	94	107650	4.53	ug/L	95
8) Chloroethane	2.10	64	120790	4.05	ug/L	95
9) Trichlorofluoromethane	2.36	101	327639	6.19	ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	264911	5.12	ug/L	99
12) 1,1-Dichloroethene	2.92	96	174537	4.46	ug/L	98
13) Acetone	2.97	43	191110	43.42	ug/L	96
14) Carbon disulfide	3.18	76	641272	4.41	ug/L	99
15) Methyl Acetate	3.37	43	92903	5.06	ug/L	95
16) Methylene chloride	3.56	84	157083	3.99	ug/L	96
17) Methyl tert-butyl Ether	3.94	73	657737	4.95	ug/L	98
18) trans-1,2-Dichloroethene	3.95	96	244681	4.63	ug/L	92
19) 1,1-Dichloroethane	4.67	63	465268	5.21	ug/L	98
21) 2-Butanone	5.72	43	505001	50.62	ug/L	95
22) cis-1,2-Dichloroethene	5.72	96	241499	4.95	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047410.D
Acq On : 1 Mar 2016 10:11
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00533

Quant Time: Mar 02 02:36:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.16	128	92154	4.45	ug/L		98
25) Chloroform	6.37	83	489062	4.72	ug/L		98
27) 1,2-Dichloroethane	7.32	62	344954	4.59	ug/L		100
29) 1,1,1-Trichloroethane	6.60	97	426662	4.53	ug/L		99
30) Cyclohexane	6.71	56	425298	5.27	ug/L		100
31) Carbon tetrachloride	6.86	117	400691	4.65	ug/L		99
33) Benzene	7.20	78	911225	4.78	ug/L		100
34) Trichloroethene	8.18	95	281199	4.62	ug/L		97
35) Methylcyclohexane	8.47	83	416984	5.32	ug/L		97
37) 1,2-Dichloropropane	8.52	63	246058	4.91	ug/L		98
38) Bromodichloromethane	8.86	83	372266	4.61	ug/L		96
39) cis-1,3-Dichloropropene	9.38	75	418424	4.80	ug/L		96
40) 4-Methyl-2-pentanone	9.55	43	1878888	44.92	ug/L		98
42) Toluene	9.74	91	1002122	4.65	ug/L		98
44) trans-1,3-Dichloropropene	10.02	75	407286	5.04	ug/L		98
45) 1,1,2-Trichloroethane	10.23	97	194377	4.86	ug/L		94
47) Tetrachloroethene	10.30	164	266120	4.86	ug/L		98
48) 2-Hexanone	10.45	43	1300699	44.24	ug/L		98
49) Dibromochloromethane	10.61	129	296588	4.90	ug/L		94
50) 1,2-Dibromoethane	10.73	107	197810	4.39	ug/L		98
51) Chlorobenzene	11.22	112	688632	4.77	ug/L		99
52) Ethylbenzene	11.32	91	1136088	4.75	ug/L		97
53) m,p-Xylene	11.45	106	382722	4.60	ug/L		98
54) o-Xylene	11.81	106	358295	4.63	ug/L		95
55) Styrene	11.84	104	618017	4.62	ug/L		91
56) Isopropylbenzene	12.17	105	983124	4.69	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.45	83	219662	4.60	ug/L		100
59) 1,2,3-Trichloropropane	12.51	75	156683	4.33	ug/L		100
61) Bromoform	12.02	173	163783	5.59	ug/L		98
62) 1,3-Dichlorobenzene	13.33	146	426714	4.89	ug/L		98
63) 1,4-Dichlorobenzene	13.43	146	413063	4.79	ug/L		94
65) 1,2-Dichlorobenzene	13.74	146	381228	4.82	ug/L		97
66) 1,2-Dibromo-3-chloropropan	14.44	75	30392	4.41	ug/L	#	61
67) 1,3,5-Trichlorobenzene	14.61	180	291002	4.79	ug/L		98
68) 1,2,4-trichlorobenzene	15.17	180	268065	4.77	ug/L		98
69) Naphthalene	15.42	128	430811	5.21	ug/L		98
70) 1,2,3-Trichlorobenzene	15.63	180	225308	4.65	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047426.D
Acq On : 1 Mar 2016 19:31
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Mar 02 03:30:44 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00534

Manual Integrations APPROVED
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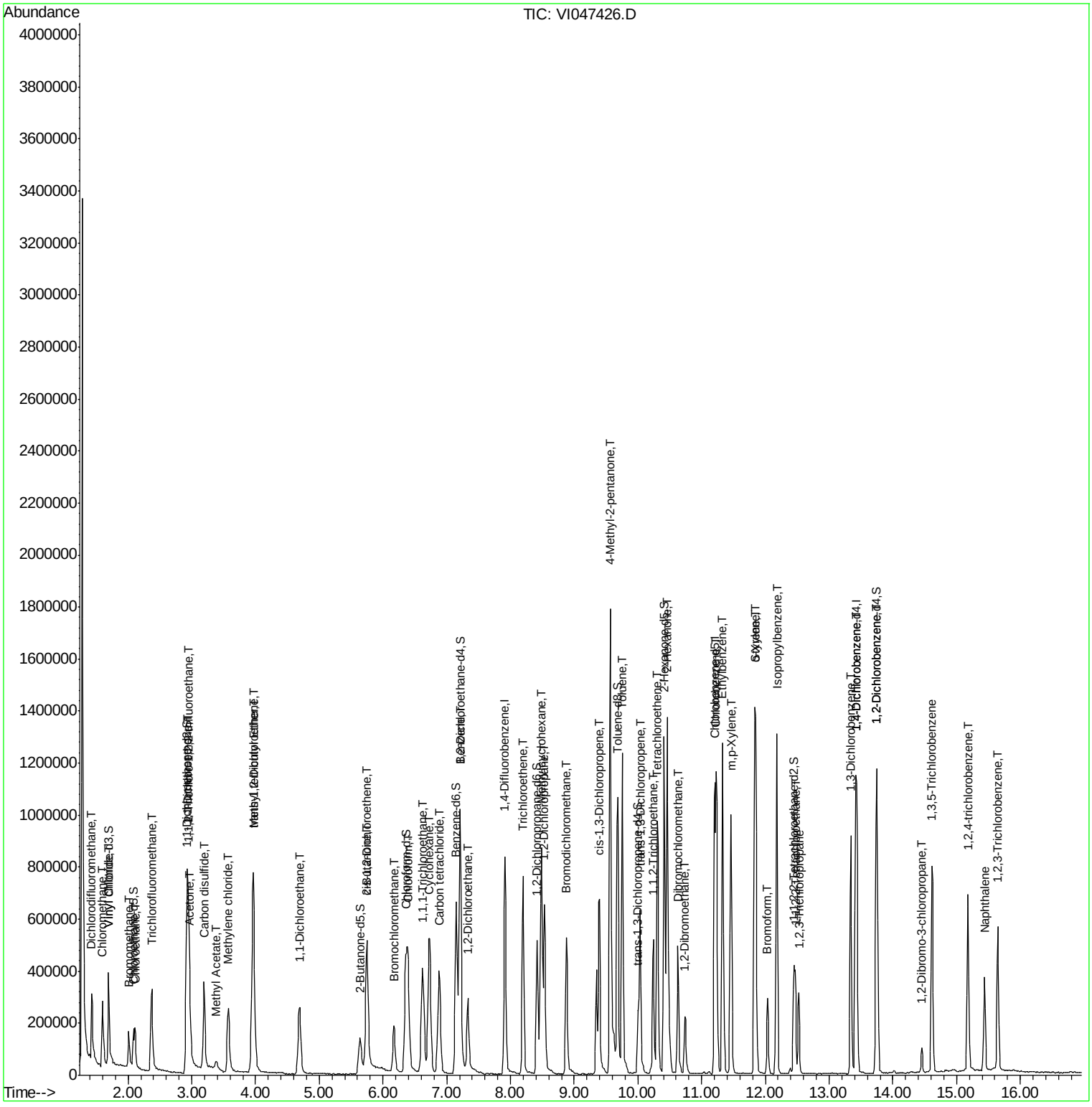

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047426.D
Acq On : 1 Mar 2016 19:31
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00534

Manual Integrations APPROVED
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3/2/2016 5:46:30 PM

Quant Time: Mar 02 03:30:44 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	756158	5.00	ug/L		0.01
28) Chlorobenzene-d5	11.21	117	639223	5.00	ug/L		0.01
60) 1,4-Dichlorobenzene-d4	13.41	152	271761	5.00	ug/L		0.01
System Monitoring Compounds							
4) Vinyl Chloride-d3	1.69	65	162279	3.85	ug/L		0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 77.00%				
7) Chloroethane-d5	2.09	69	128317	3.99	ug/L		0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 79.80%				
11) 1,1-Dichloroethene-d2	2.91	63	360194	3.87	ug/L		0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 77.40%				
20) 2-Butanone-d5	5.64	46	339938	38.82	ug/L		0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 77.64%				
24) Chloroform-d	6.36	84	450190	4.73	ug/L		0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.60%				
26) 1,2-Dichloroethane-d4	7.21	65	241506	4.36	ug/L		0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.20%				
32) Benzene-d6	7.14	84	775671	5.03	ug/L		0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.60%				
36) 1,2-Dichloropropane-d6	8.41	67	244028	5.25	ug/L		0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 105.00%				
41) Toluene-d8	9.68	98	708197	4.75	ug/L		0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.00%				
43) trans-1,3-Dichloropropene-	10.00	79	139605	5.07	ug/L		0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 101.40%				
46) 2-Hexanone-d5	10.41	63	506426	44.91	ug/L		0.01
Spiked Amount 50.000	Range 45 - 130		Recovery = 89.82%				
57) 1,1,2,2-Tetrachloroethane-	12.45	84	195739	4.86	ug/L		0.01
Spiked Amount 5.000	Range 65 - 120		Recovery = 97.20%				
64) 1,2-Dichlorobenzene-d4	13.74	152	219962	4.44	ug/L		0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.80%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.43	85	274535	4.79	ug/L		100
3) Chloromethane	1.60	50	256184	4.48	ug/L		89
5) Vinyl chloride	1.69	62	185781	4.16	ug/L		98
6) Bromomethane	2.01	94	86144	4.03	ug/L		87
8) Chloroethane	2.12	64	107162	3.99	ug/L		97
9) Trichlorofluoromethane	2.37	101	316102	6.63	ug/L		94
10) 1,1,2-Trichloro-1,2,2-trif	2.95	101	231352	4.97	ug/L		98
12) 1,1-Dichloroethene	2.93	96	151473	4.30	ug/L		89
13) Acetone	2.97	43	146307	36.94	ug/L		98
14) Carbon disulfide	3.19	76	524445	4.00	ug/L		99
15) Methyl Acetate	3.39	43	44104	2.67	ug/L	#	78
16) Methylene chloride	3.57	84	143557	4.06	ug/L		97
17) Methyl tert-butyl Ether	3.96	73	536311	4.49	ug/L		97
18) trans-1,2-Dichloroethene	3.97	96	219466	4.61	ug/L		99
19) 1,1-Dichloroethane	4.69	63	402771	5.02	ug/L		98
21) 2-Butanone	5.75	43	332743	37.07	ug/L		95
22) cis-1,2-Dichloroethene	5.75	96	212951	4.86	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047426.D
Acq On : 1 Mar 2016 19:31
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00534

Manual Integrations APPROVED
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3/2/2016 5:46:30 PM

Quant Time: Mar 02 03:30:44 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.17	128	74819	4.02	ug/L		91
25) Chloroform	6.40	83	437925	4.70	ug/L		96
27) 1,2-Dichloroethane	7.33	62	288077	4.26	ug/L		96
29) 1,1,1-Trichloroethane	6.62	97	401366	5.14	ug/L		99
30) Cyclohexane	6.72	56	361991	5.41	ug/L		99
31) Carbon tetrachloride	6.88	117	360362	5.04	ug/L		100
33) Benzene	7.21	78	809774	5.12	ug/L		100
34) Trichloroethene	8.20	95	263438	5.22	ug/L		97
35) Methylcyclohexane	8.48	83	356411	5.49	ug/L		97
37) 1,2-Dichloropropane	8.53	63	213807	5.15	ug/L		98
38) Bromodichloromethane	8.88	83	335487	5.01	ug/L		98
39) cis-1,3-Dichloropropene	9.40	75	379531	5.25	ug/L		97
40) 4-Methyl-2-pentanone	9.56	43	1494108	43.10	ug/L		99
42) Toluene	9.75	91	839622	4.71	ug/L		99
44) trans-1,3-Dichloropropene	10.04	75	345329	5.16	ug/L		96
45) 1,1,2-Trichloroethane	10.24	97	164145	4.96	ug/L		97
47) Tetrachloroethene	10.31	164	235106	5.18	ug/L		97
48) 2-Hexanone	10.46	43	1013983	41.62	ug/L		100
49) Dibromochloromethane	10.63	129	254223	5.07	ug/L		97
50) 1,2-Dibromoethane	10.74	107	168685	4.52	ug/L		95
51) Chlorobenzene	11.24	112	577951	4.83	ug/L		97
52) Ethylbenzene	11.33	91	963280	4.86	ug/L		96
53) m,p-Xylene	11.46	106	344289	4.99	ug/L		98
54) o-Xylene	11.83	106	311430	4.85	ug/L		97
55) Styrene	11.85	104	523935	4.73	ug/L		97
56) Isopropylbenzene	12.18	105	904959	5.21	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.47	83	179244m	4.53	ug/L		
59) 1,2,3-Trichloropropane	12.53	75	128159	4.27	ug/L		97
61) Bromoform	12.03	173	140227	5.06	ug/L		100
62) 1,3-Dichlorobenzene	13.34	146	394365	4.79	ug/L		98
63) 1,4-Dichlorobenzene	13.43	146	392268	4.81	ug/L		96
65) 1,2-Dichlorobenzene	13.76	146	339824	4.54	ug/L		97
66) 1,2-Dibromo-3-chloropropan	14.45	75	23669	3.64	ug/L	#	81
67) 1,3,5-Trichlorobenzene	14.62	180	275043	4.79	ug/L		99
68) 1,2,4-trichlorobenzene	15.18	180	246532	4.64	ug/L		98
69) Naphthalene	15.44	128	339908	4.35	ug/L		98
70) 1,2,3-Trichlorobenzene	15.65	180	204843	4.48	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047426.D
Acq On : 1 Mar 2016 19:31
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Mar 02 03:30:44 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00534

Manual Integrations APPROVED
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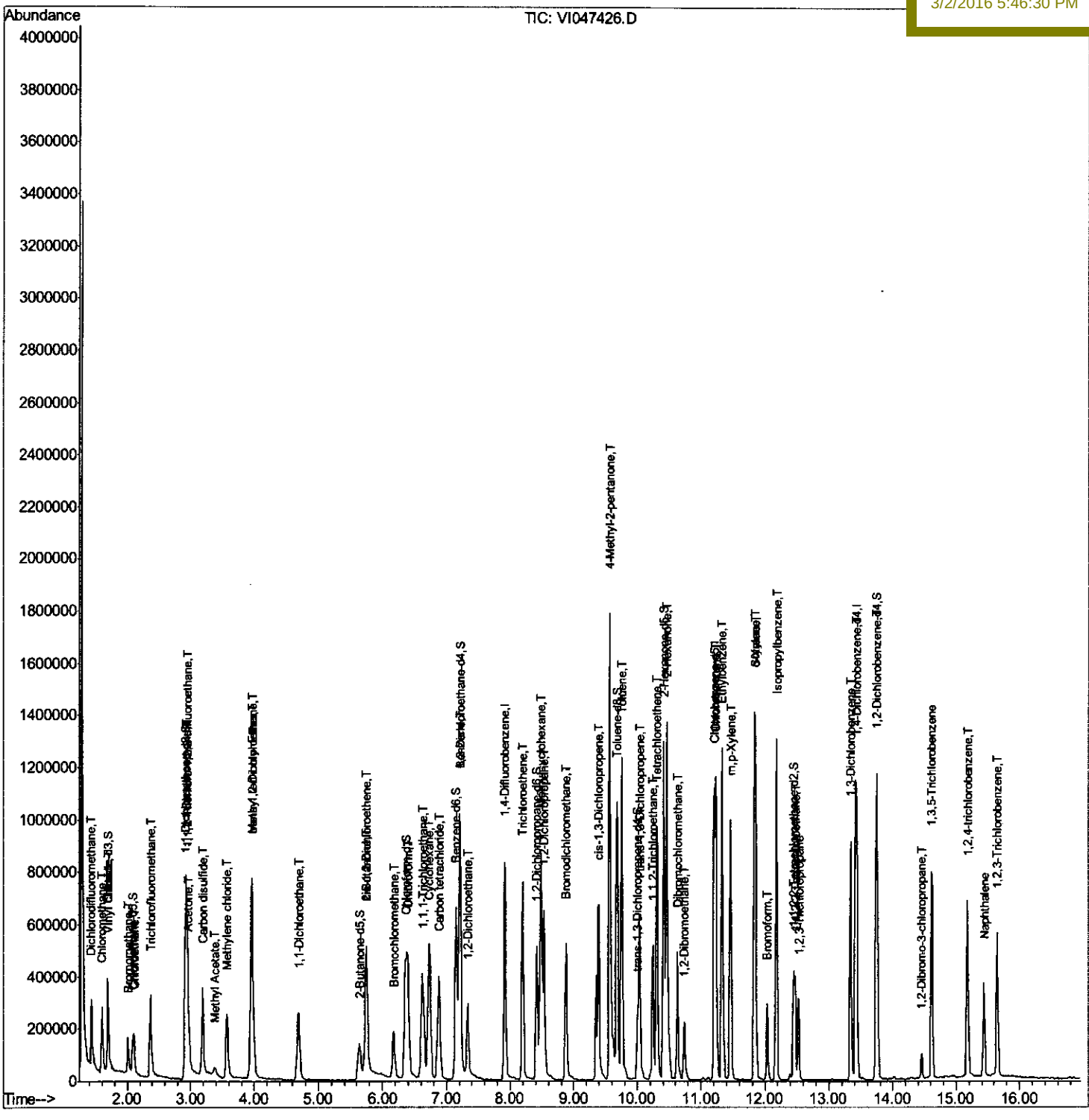


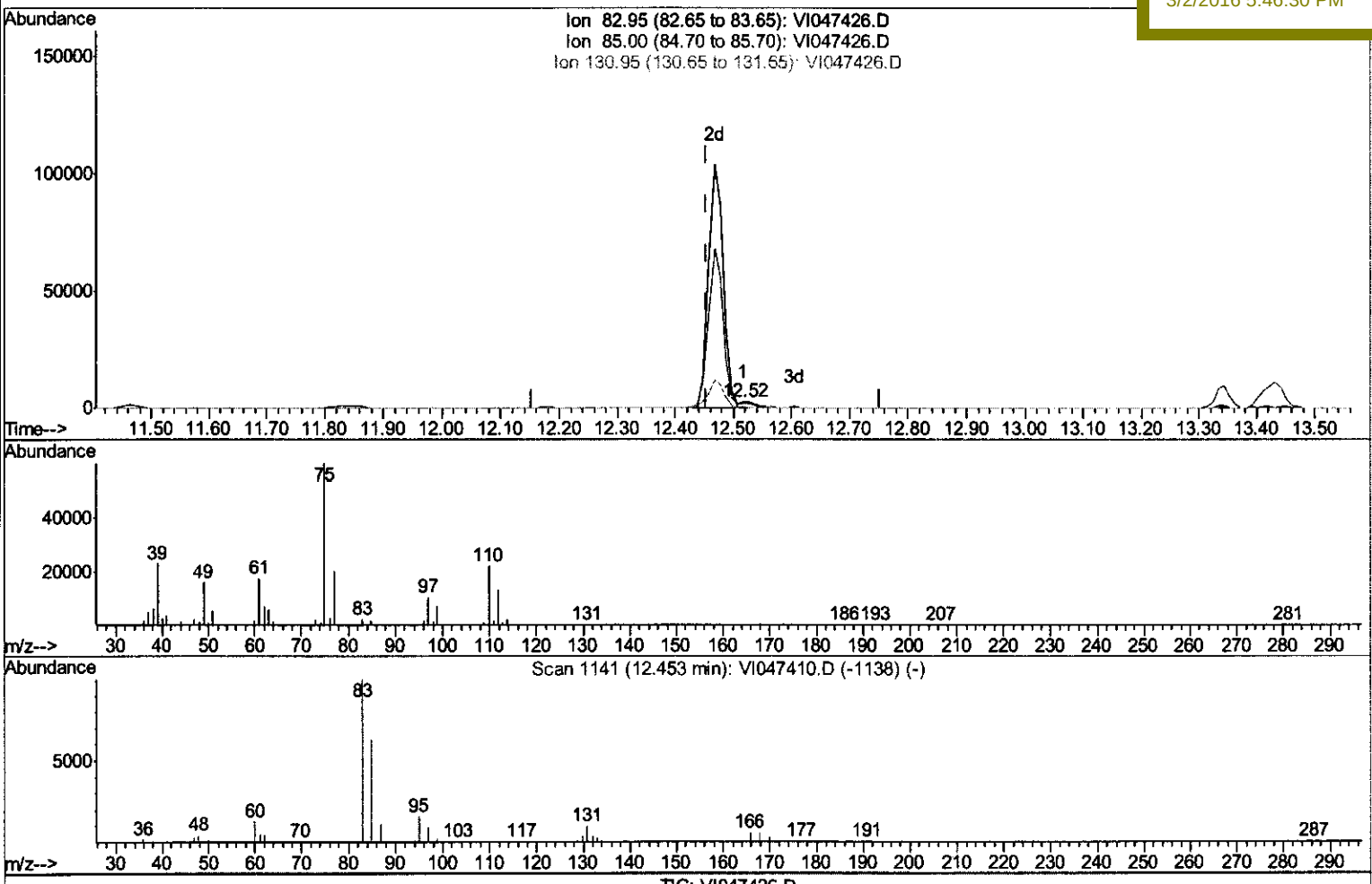
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047426.D
Acq On : 1 Mar 2016 19:31
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Mar 02 02:41:43 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00534

Manual Integrations APPROVED
MMDadoda
3/2/2016 5:46:30 PM



TIC: VI047426.D

(58) 1,1,2,2-Tetrachloroethane (T)

12.517min (+0.063) 0.11ug/L

response 4232

Ion	Exp%	Act%
82.95	100	100
85.00	62.90	81.57
130.95	9.50	10.69
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047426.D
Acq On : 1 Mar 2016 19:31
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Mar 02 02:41:43 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00534

Manual Integrations APPROVED
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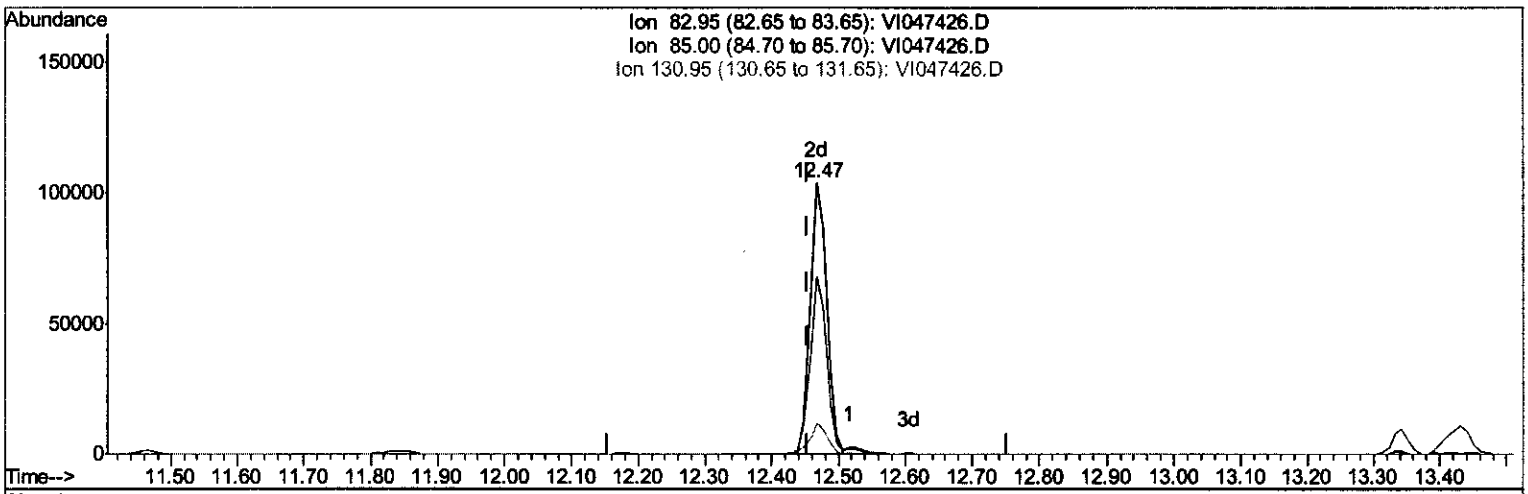
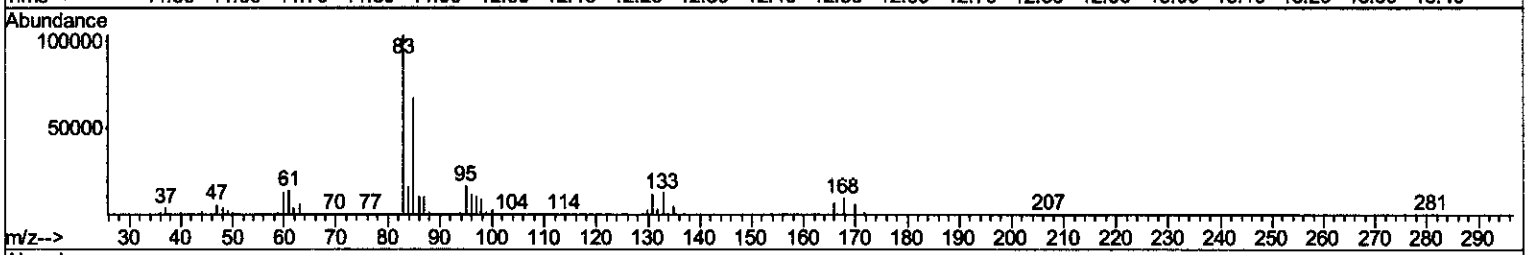
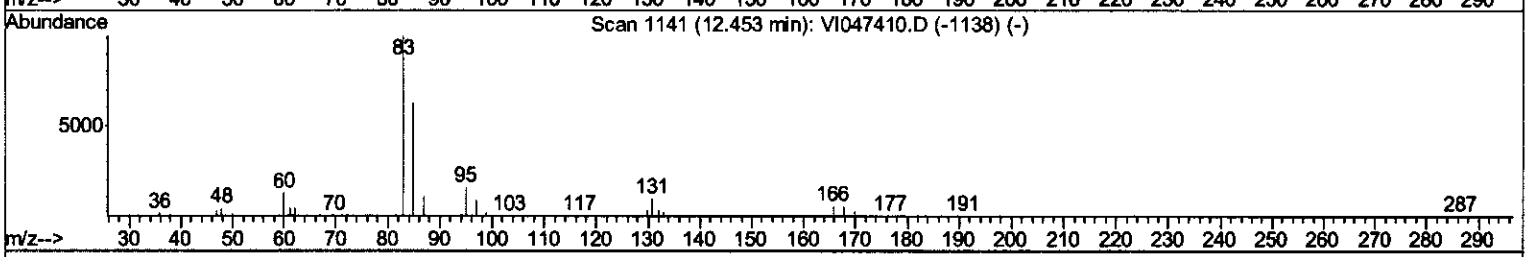
3/2/2016 5:46:30 PM







TIC: VI047426.D

(58) 1,1,2,2-Tetrachloroethane (T)

12.467min (+0.014) 4.53ug/L m

response 179244

Ion	Exp%	Act%
82.95	100	100
85.00	62.90	65.29
130.95	9.50	11.50#
0.00	0.00	0.00

F.Y 03/05/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047426.D
Acq On : 1 Mar 2016 19:31
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Mar 02 03:30:44 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00534

Manual Integrations APPROVED
MMDadoda
3/2/2016 5:46:30 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	756158	5.00	ug/L		0.01
28) Chlorobenzene-d5	11.21	117	639223	5.00	ug/L		0.01
60) 1,4-Dichlorobenzene-d4	13.41	152	271761	5.00	ug/L		0.01
System Monitoring Compounds							
4) Vinyl Chloride-d3	1.69	65	162279	3.85	ug/L		0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 77.00%				
7) Chloroethane-d5	2.09	69	128317	3.99	ug/L		0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 79.80%				
11) 1,1-Dichloroethene-d2	2.91	63	360194	3.87	ug/L		0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 77.40%				
20) 2-Butanone-d5	5.64	46	339938	38.82	ug/L		0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 77.64%				
24) Chloroform-d	6.36	84	450190	4.73	ug/L		0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.60%				
26) 1,2-Dichloroethane-d4	7.21	65	241506	4.36	ug/L		0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.20%				
32) Benzene-d6	7.14	84	775671	5.03	ug/L		0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.60%				
36) 1,2-Dichloropropane-d6	8.41	67	244028	5.25	ug/L		0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 105.00%				
41) Toluene-d8	9.68	98	708197	4.75	ug/L		0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.00%				
43) trans-1,3-Dichloropropene-	10.00	79	139605	5.07	ug/L		0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 101.40%				
46) 2-Hexanone-d5	10.41	63	506426	44.91	ug/L		0.01
Spiked Amount 50.000	Range 45 - 130		Recovery = 89.82%				
57) 1,1,2,2-Tetrachloroethane-	12.45	84	195739	4.86	ug/L		0.01
Spiked Amount 5.000	Range 65 - 120		Recovery = 97.20%				
64) 1,2-Dichlorobenzene-d4	13.74	152	219962	4.44	ug/L		0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.80%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.43	85	274535	4.79	ug/L		100
3) Chloromethane	1.60	50	256184	4.48	ug/L		89
5) Vinyl chloride	1.69	62	185781	4.16	ug/L		98
6) Bromomethane	2.01	94	86144	4.03	ug/L		87
8) Chloroethane	2.12	64	107162	3.99	ug/L		97
9) Trichlorofluoromethane	2.37	101	316102	6.63	ug/L		94
10) 1,1,2-Trichloro-1,2,2-trif	2.95	101	231352	4.97	ug/L		98
12) 1,1-Dichloroethene	2.93	96	151473	4.30	ug/L		89
13) Acetone	2.97	43	146307	36.94	ug/L		98
14) Carbon disulfide	3.19	76	524445	4.00	ug/L		99
15) Methyl Acetate	3.39	43	44104	2.67	ug/L	#	78
16) Methylene chloride	3.57	84	143557	4.06	ug/L		97
17) Methyl tert-butyl Ether	3.96	73	536311	4.49	ug/L		97
18) trans-1,2-Dichloroethene	3.97	96	219466	4.61	ug/L		99
19) 1,1-Dichloroethane	4.69	63	402771	5.02	ug/L		98
21) 2-Butanone	5.75	43	332743	37.07	ug/L		95
22) cis-1,2-Dichloroethene	5.75	96	212951	4.86	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047426.D
Acq On : 1 Mar 2016 19:31
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Mar 02 03:30:44 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00534

Manual Integrations APPROVED
MMDadoda
3/2/2016 5:46:30 PM

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
23) Bromochloromethane	6.17	128	74819	4.02 ug/L		91
25) Chloroform	6.40	83	437925	4.70 ug/L		96
27) 1,2-Dichloroethane	7.33	62	288077	4.26 ug/L		96
29) 1,1,1-Trichloroethane	6.62	97	401366	5.14 ug/L		99
30) Cyclohexane	6.72	56	361991	5.41 ug/L		99
31) Carbon tetrachloride	6.88	117	360362	5.04 ug/L		100
33) Benzene	7.21	78	809774	5.12 ug/L		100
34) Trichloroethene	8.20	95	263438	5.22 ug/L		97
35) Methylcyclohexane	8.48	83	356411	5.49 ug/L		97
37) 1,2-Dichloropropane	8.53	63	213807	5.15 ug/L		98
38) Bromodichloromethane	8.88	83	335487	5.01 ug/L		98
39) cis-1,3-Dichloropropene	9.40	75	379531	5.25 ug/L		97
40) 4-Methyl-2-pentanone	9.56	43	1494108	43.10 ug/L		99
42) Toluene	9.75	91	839622	4.71 ug/L		99
44) trans-1,3-Dichloropropene	10.04	75	345329	5.16 ug/L		96
45) 1,1,2-Trichloroethane	10.24	97	164145	4.96 ug/L		97
47) Tetrachloroethene	10.31	164	235106	5.18 ug/L		97
48) 2-Hexanone	10.46	43	1013983	41.62 ug/L		100
49) Dibromochloromethane	10.63	129	254223	5.07 ug/L		97
50) 1,2-Dibromoethane	10.74	107	168685	4.52 ug/L		95
51) Chlorobenzene	11.24	112	577951	4.83 ug/L		97
52) Ethylbenzene	11.33	91	963280	4.86 ug/L		96
53) m,p-Xylene	11.46	106	344289	4.99 ug/L		98
54) o-Xylene	11.83	106	311430	4.85 ug/L		97
55) Styrene	11.85	104	523935	4.73 ug/L		97
56) Isopropylbenzene	12.18	105	904959	5.21 ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.47	83	179244m	4.53 ug/L		
59) 1,2,3-Trichloropropane	12.53	75	128159	4.27 ug/L		97
61) Bromoform	12.03	173	140227	5.06 ug/L		100
62) 1,3-Dichlorobenzene	13.34	146	394365	4.79 ug/L		98
63) 1,4-Dichlorobenzene	13.43	146	392268	4.81 ug/L		96
65) 1,2-Dichlorobenzene	13.76	146	339824	4.54 ug/L		97
66) 1,2-Dibromo-3-chloropropan	14.45	75	23669	3.64 ug/L	#	81
67) 1,3,5-Trichlorobenzene	14.62	180	275043	4.79 ug/L		99
68) 1,2,4-trichlorobenzene	15.18	180	246532	4.64 ug/L		98
69) Naphthalene	15.44	128	339908	4.35 ug/L		98
70) 1,2,3-Trichlorobenzene	15.65	180	204843	4.48 ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

> F.Y 03/05/16

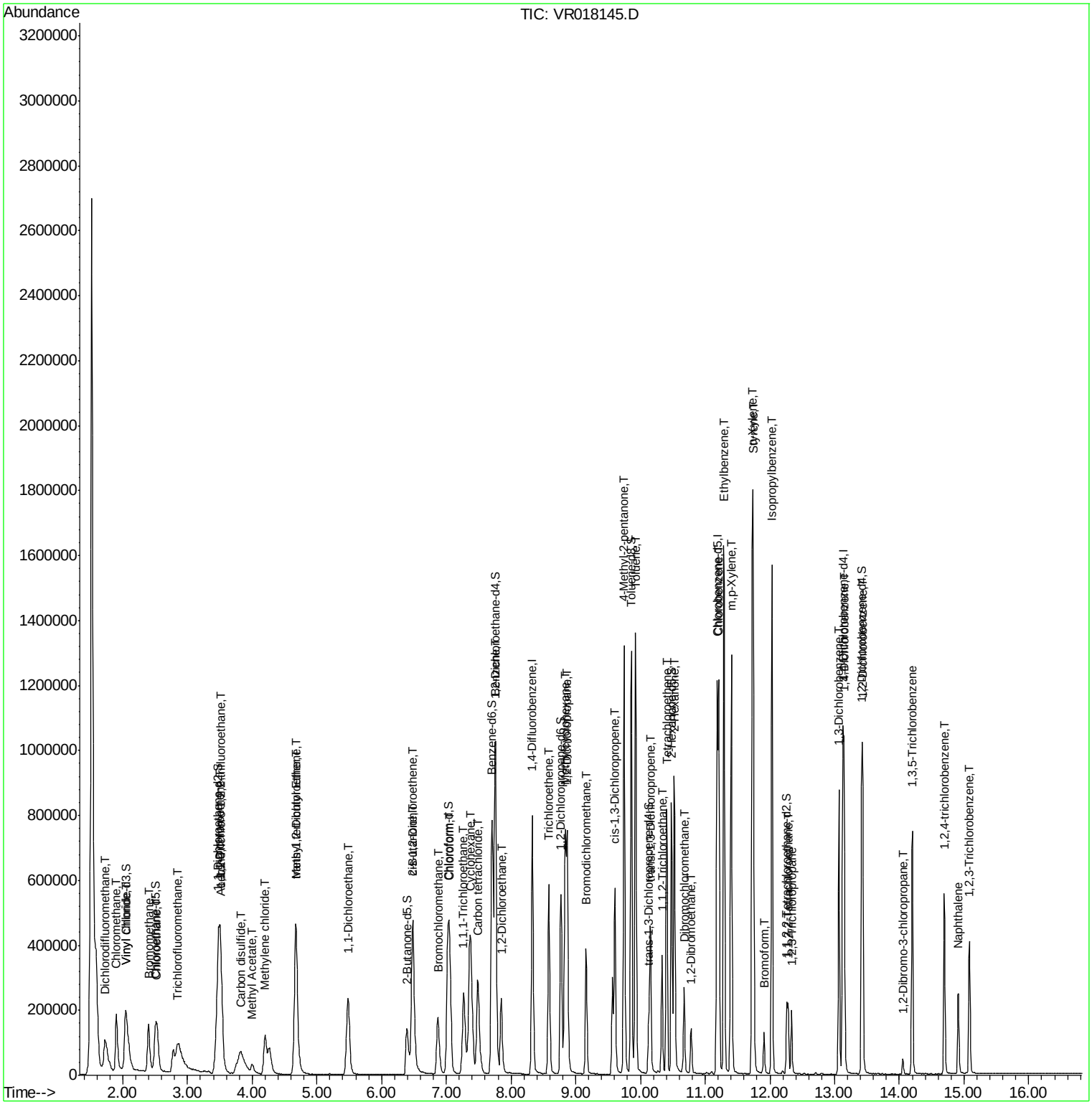
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018145.D
Acq On : 25 Feb 2016 18:44
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 26 04:11:10 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:56:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00556

Manual Integrations APPROVED
sam
2/26/2016 2:37:39 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018145.D
Acq On : 25 Feb 2016 18:44
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00556

Manual Integrations APPROVED
sam
2/26/2016 2:37:39 PM

Quant Time: Feb 26 04:11:10 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:56:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	584396	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	494569	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	201454	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	232617	4.66	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 93.20%			
7) Chloroethane-d5	2.50	69	171023	4.65	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.00%			
11) 1,1-Dichloroethene-d2	3.47	63	356656	5.00	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 100.00%			
20) 2-Butanone-d5	6.39	46	301007	49.16	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 98.32%			
24) Chloroform-d	7.02	84	390063	4.88	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.60%			
26) 1,2-Dichloroethane-d4	7.75	65	203666	4.67	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.40%			
32) Benzene-d6	7.70	84	765908	5.06	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.20%			
36) 1,2-Dichloropropane-d6	8.77	67	234108	4.84	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 96.80%			
41) Toluene-d8	9.86	98	732175	5.10	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.00%			
43) trans-1,3-Dichloropropene-	10.13	79	78266	4.84	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 96.80%			
46) 2-Hexanone-d5	10.48	63	230664	51.04	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 102.08%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	87991	4.59	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.80%			
64) 1,2-Dichlorobenzene-d4	13.42	152	156499	4.61	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 92.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.72	85	230706	5.06	ug/L	99
3) Chloromethane	1.90	50	263832	4.69	ug/L	100
5) Vinyl chloride	2.05	62	268575	4.80	ug/L	100
6) Bromomethane	2.40	94	136084	4.39	ug/L	94
8) Chloroethane	2.53	64	146821	4.47	ug/L	96
9) Trichlorofluoromethane	2.84	101	359314m	4.83	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	135188	5.06	ug/L	98
12) 1,1-Dichloroethene	3.49	96	138056	4.99	ug/L	85
13) Acetone	3.52	43	227485	45.13	ug/L	99
14) Carbon disulfide	3.83	76	410558	4.78	ug/L	98
15) Methyl Acetate	4.00	43	57063	4.65	ug/L	97
16) Methylene chloride	4.19	84	138440m	4.71	ug/L	
17) Methyl tert-butyl Ether	4.68	73	248853	4.79	ug/L	100
18) trans-1,2-Dichloroethene	4.67	96	172645	4.89	ug/L	97
19) 1,1-Dichloroethane	5.48	63	394076	4.82	ug/L	98
21) 2-Butanone	6.49	43	352620	48.45	ug/L	100
22) cis-1,2-Dichloroethene	6.48	96	176617	4.90	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018145.D
Acq On : 25 Feb 2016 18:44
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00556

Manual Integrations APPROVED
sam
2/26/2016 2:37:39 PM

Quant Time: Feb 26 04:11:10 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:56:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.87	128	61272	4.71	ug/L		95
25) Chloroform	7.05	83	358612	4.73	ug/L		98
27) 1,2-Dichloroethane	7.84	62	230203	4.52	ug/L		98
29) 1,1,1-Trichloroethane	7.27	97	261228	4.80	ug/L		100
30) Cyclohexane	7.36	56	332265	5.67	ug/L		99
31) Carbon tetrachloride	7.49	117	259055	4.92	ug/L		99
33) Benzene	7.76	78	818749	4.90	ug/L		100
34) Trichloroethene	8.58	95	200032	4.93	ug/L		97
35) Methylcyclohexane	8.84	83	284797	5.59	ug/L		99
37) 1,2-Dichloropropane	8.87	63	216284	4.76	ug/L		100
38) Bromodichloromethane	9.16	83	233586	4.62	ug/L		97
39) cis-1,3-Dichloropropene	9.60	75	278475	4.97	ug/L		100
40) 4-Methyl-2-pentanone	9.75	43	891091	49.69	ug/L		99
42) Toluene	9.92	91	867681	4.98	ug/L		98
44) trans-1,3-Dichloropropene	10.15	75	209923	4.80	ug/L		100
45) 1,1,2-Trichloroethane	10.33	97	95176	4.59	ug/L		97
47) Tetrachloroethene	10.41	164	152461	4.90	ug/L		98
48) 2-Hexanone	10.52	43	590705	48.30	ug/L		99
49) Dibromochloromethane	10.67	129	117273	4.51	ug/L		99
50) 1,2-Dibromoethane	10.78	107	82420	4.54	ug/L	#	97
51) Chlorobenzene	11.21	112	489131	4.80	ug/L		99
52) Ethylbenzene	11.29	91	963445	5.10	ug/L		97
53) m,p-Xylene	11.40	106	352107	5.14	ug/L		97
54) o-Xylene	11.73	106	310245	5.14	ug/L		96
55) Styrene	11.74	104	522255	5.14	ug/L		99
56) Isopropylbenzene	12.03	105	818322	5.46	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	82763	4.56	ug/L		98
59) 1,2,3-Trichloropropane	12.33	75	69360	4.58	ug/L		98
61) Bromoform	11.91	173	50006	4.31	ug/L		98
62) 1,3-Dichlorobenzene	13.07	146	279269	4.78	ug/L		97
63) 1,4-Dichlorobenzene	13.15	146	293509	4.57	ug/L		98
65) 1,2-Dichlorobenzene	13.44	146	244562	4.65	ug/L		97
66) 1,2-Dibromo-3-chloropropan	14.06	75	11467	4.53	ug/L		90
67) 1,3,5-Trichlorobenzene	14.20	180	191304	4.88	ug/L		97
68) 1,2,4-trichlorobenzene	14.69	180	139603	4.81	ug/L		97
69) Naphthalene	14.91	128	165069	5.07	ug/L		98
70) 1,2,3-Trichlorobenzene	15.08	180	108778	4.68	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

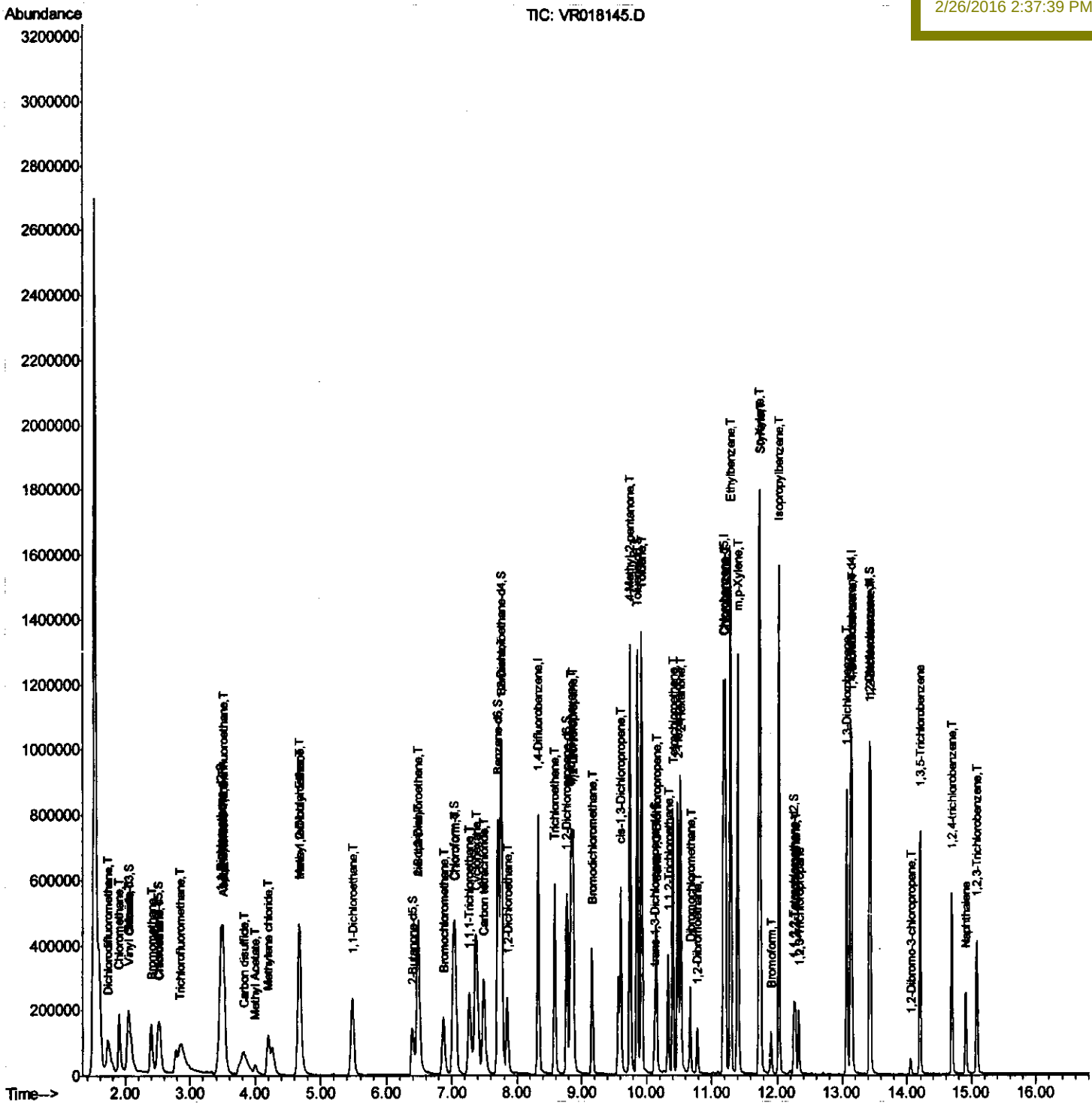
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018145.D
Acq On : 25 Feb 2016 18:44
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 26 04:11:10 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:56:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00556

Manual Integrations APPROVED
sam
2/26/2016 2:37:39 PM



Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018145.D
Acq On : 25 Feb 2016 18:44
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 26 04:09:42 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:56:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00556

Manual Integrations APPROVED
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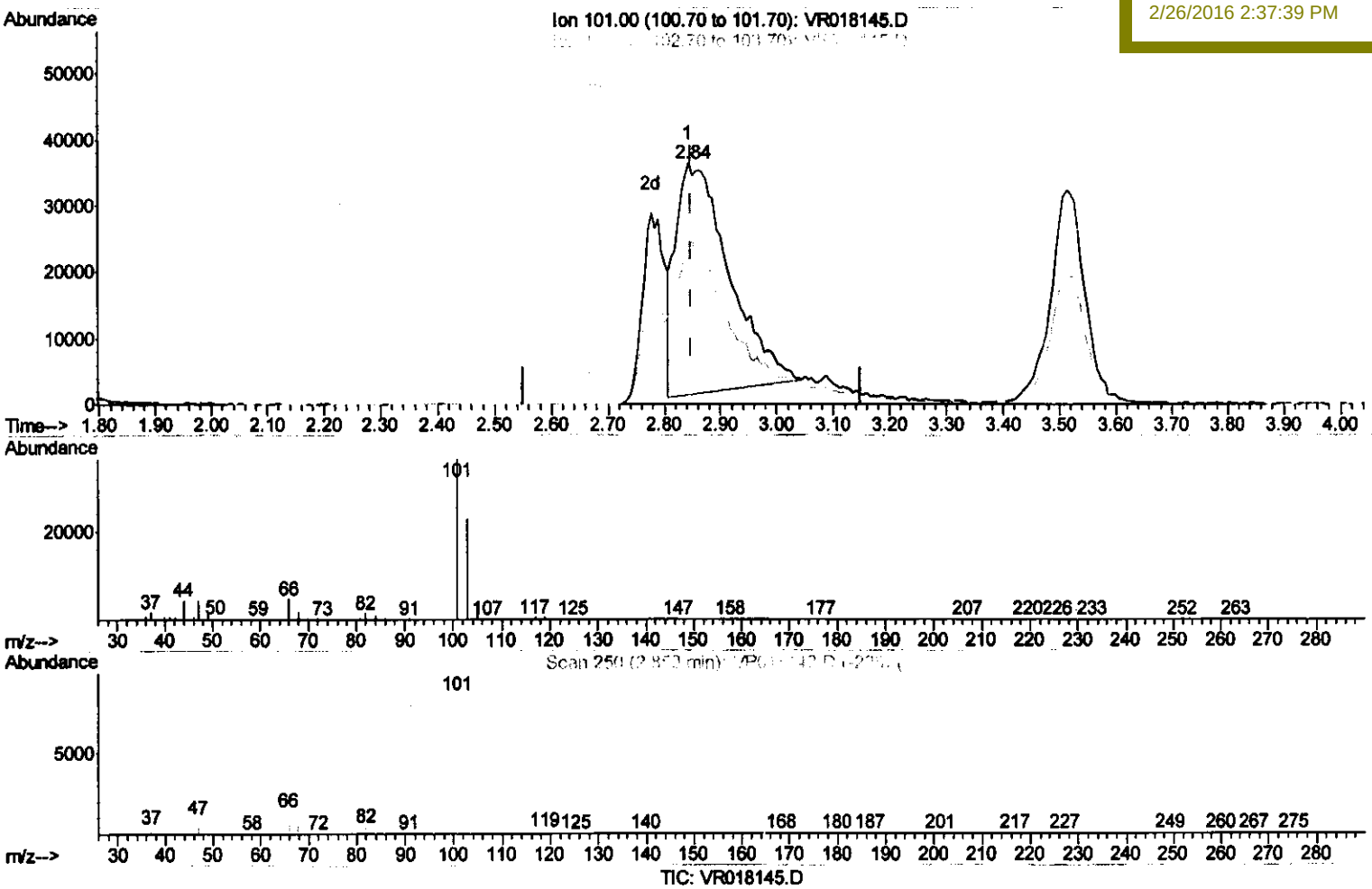


TIC: VR018145.D

(9) Trichlorofluoromethane (T)

2.844min (-0.006) 3.07ug/L

response 227949

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	68.97#
0.00	0.00	0.00
0.00	0.00	0.00

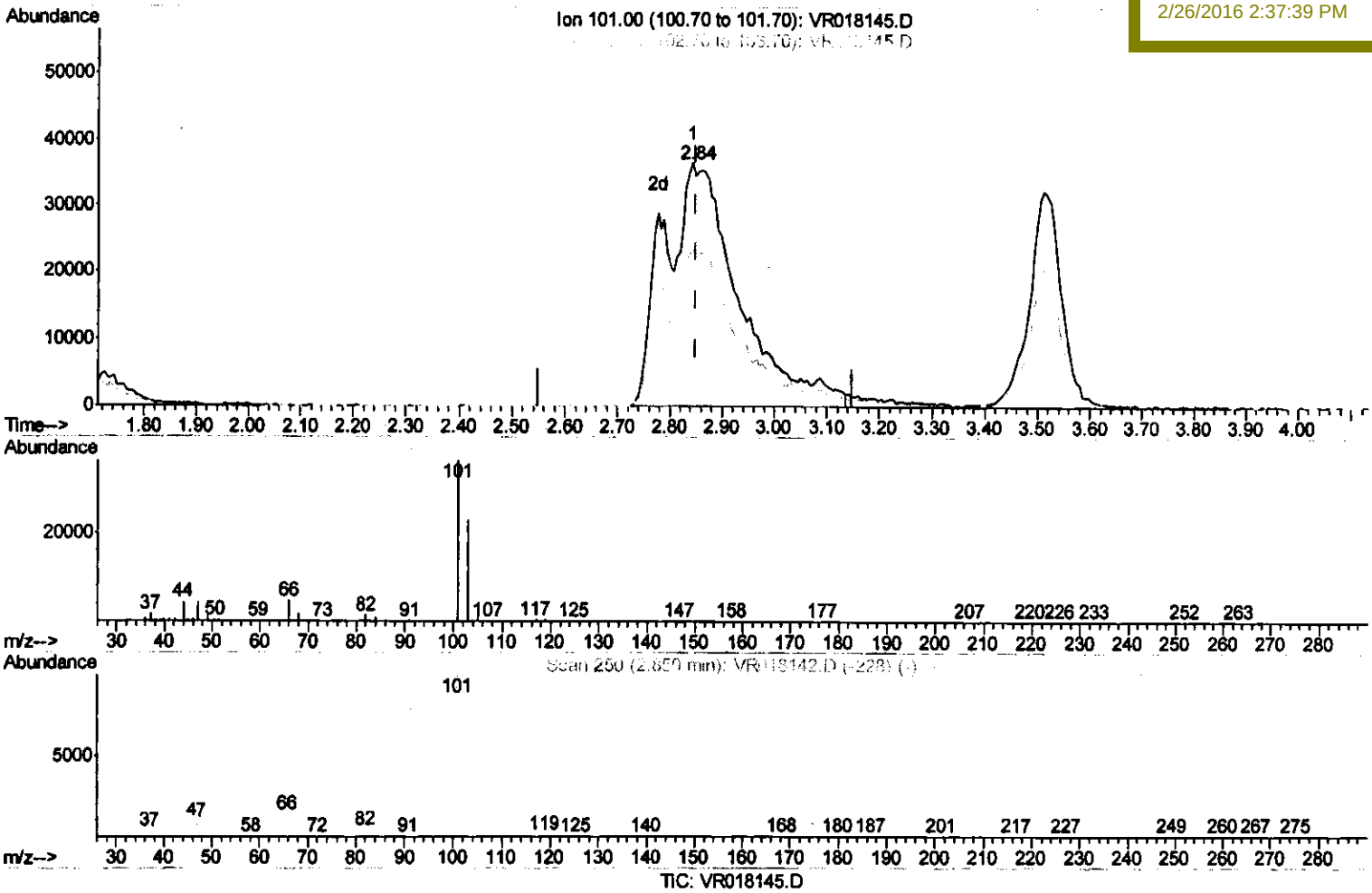
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018145.D
Acq On : 25 Feb 2016 18:44
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 26 04:09:42 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:56:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00556

Manual Integrations APPROVED
sam
2/26/2016 2:37:39 PM



TIC: VR018145.D

(9) Trichlorofluoromethane (T)

2.844min (-0.006) 4.83ug/L m

response 359314

M·D 03/01/16

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	43.76#
0.00	0.00	0.00
0.00	0.00	0.00

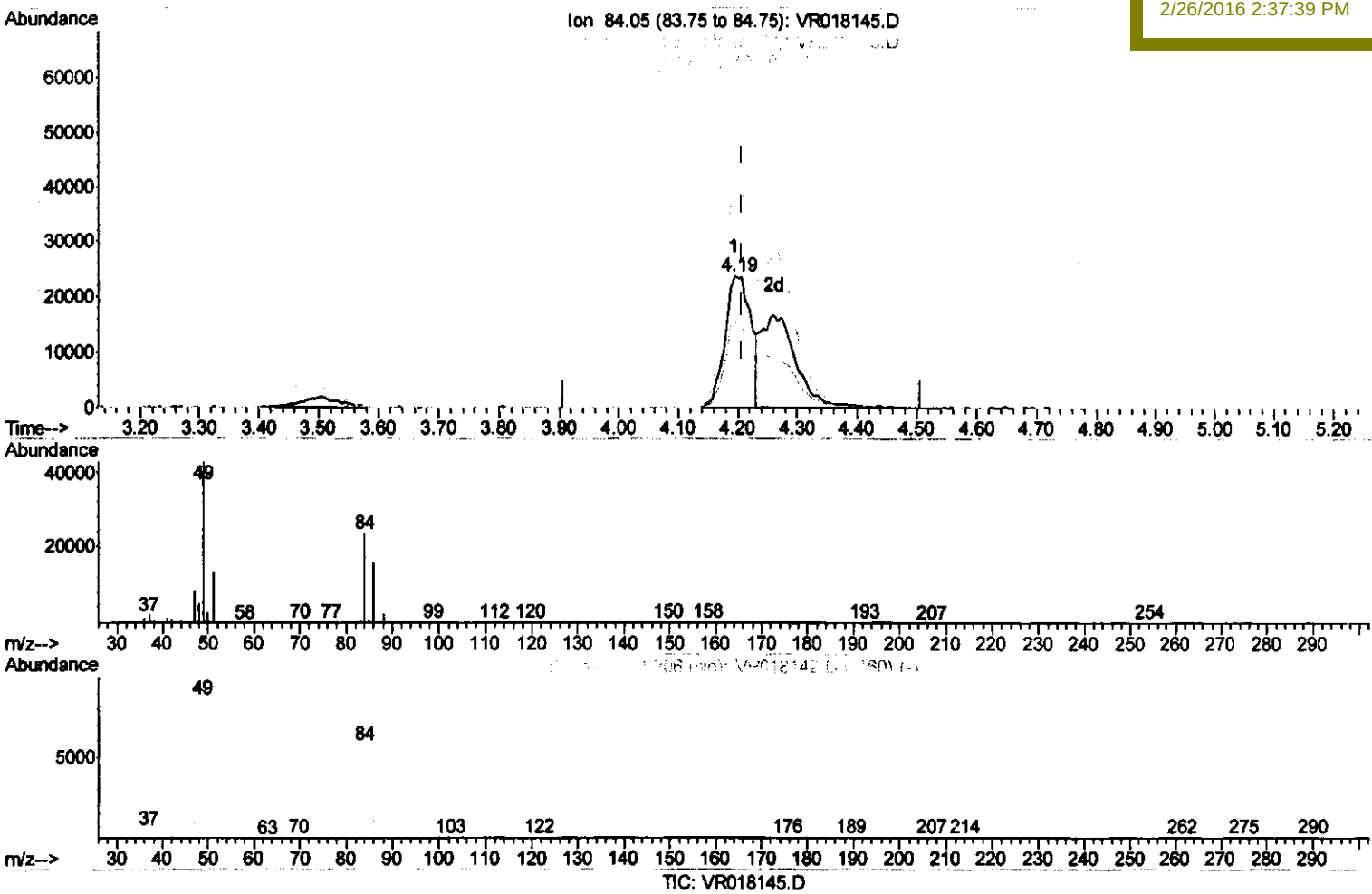
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018145.D
Acq On : 25 Feb 2016 18:44
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 26 04:09:42 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:56:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00556

Manual Integrations APPROVED
sam
2/26/2016 2:37:39 PM



TIC: VR018145.D

(16) Methylene chloride (T)

4.194min (-0.012) 2.44ug/L

response 71639

Ion	Exp%	Act%
84.05	100	100
86.00	58.60	66.45
49.10	171.30	179.78
0.00	0.00	0.00

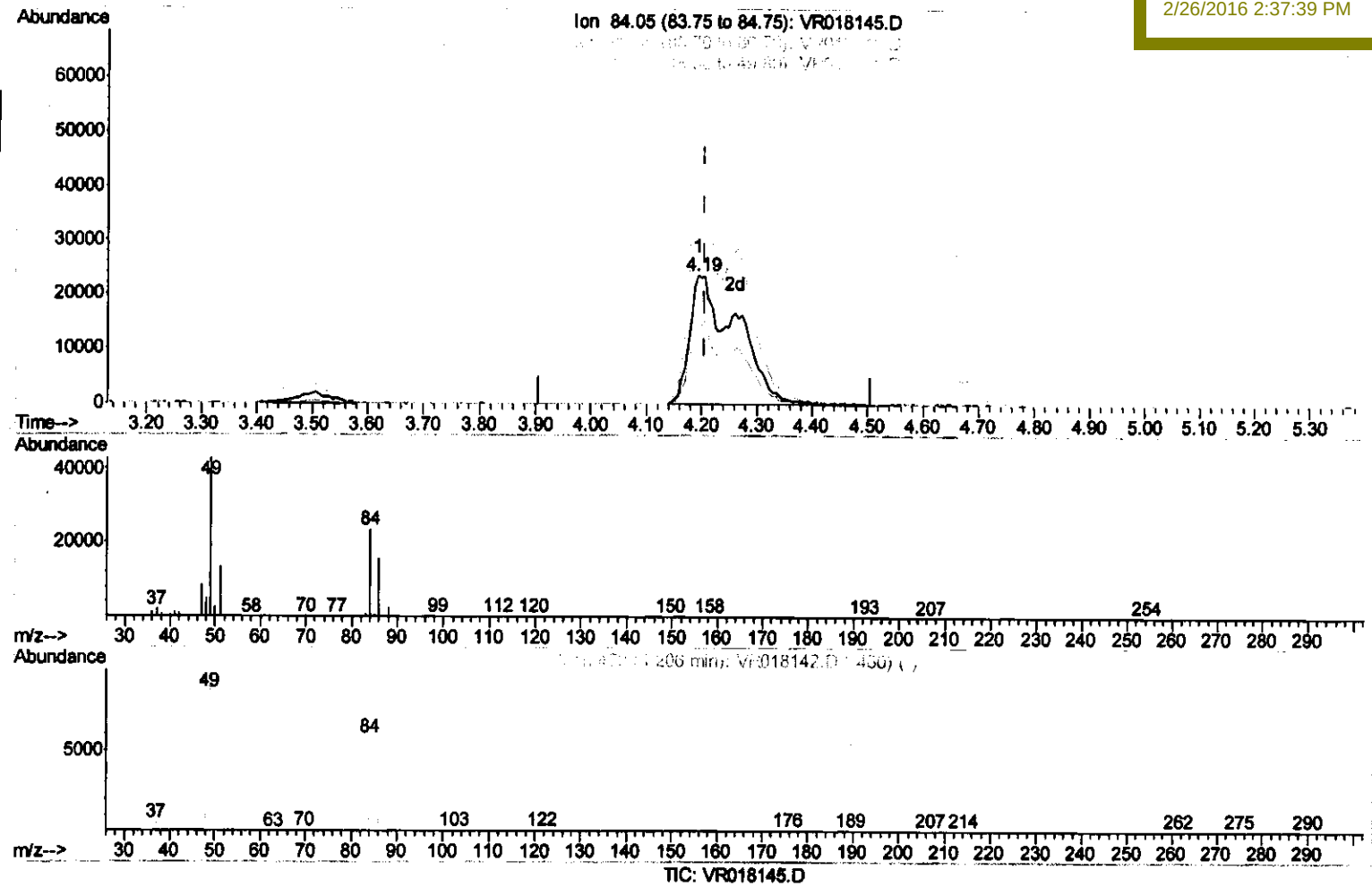
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018145.D
Acq On : 25 Feb 2016 18:44
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 26 04:09:42 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:56:00 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00556

Manual Integrations APPROVED
sam
2/26/2016 2:37:39 PM



(16) Methylene chloride (T)

4.194min (-0.012) 4.71ug/L m > M.D 03/01/16

response 138440

Ion	Exp%	Act%
84.05	100	100
86.00	58.60	66.45
49.10	171.30	179.78
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018145.D
Acq On : 25 Feb 2016 18:44
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 26 04:11:10 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:56:00 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00556

Manual Integrations APPROVED
sam
2/26/2016 2:37:39 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	584396	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	494569	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	201454	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	232617	4.66	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 93.20%			
7) Chloroethane-d5	2.50	69	171023	4.65	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.00%			
11) 1,1-Dichloroethene-d2	3.47	63	356656	5.00	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 100.00%			
20) 2-Butanone-d5	6.39	46	301007	49.16	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 98.32%			
24) Chloroform-d	7.02	84	390063	4.88	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.60%			
26) 1,2-Dichloroethane-d4	7.75	65	203666	4.67	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.40%			
32) Benzene-d6	7.70	84	765908	5.06	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.20%			
36) 1,2-Dichloropropane-d6	8.77	67	234108	4.84	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 96.80%			
41) Toluene-d8	9.86	98	732175	5.10	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.00%			
43) trans-1,3-Dichloropropene-	10.13	79	78266	4.84	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 96.80%			
46) 2-Hexanone-d5	10.48	63	230664	51.04	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 102.08%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	87991	4.59	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.80%			
64) 1,2-Dichlorobenzene-d4	13.42	152	156499	4.61	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 92.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.72	85	230706	5.06	ug/L	99
3) Chloromethane	1.90	50	263832	4.69	ug/L	100
5) Vinyl chloride	2.05	62	268575	4.80	ug/L	100
6) Bromomethane	2.40	94	136084	4.39	ug/L	94
8) Chloroethane	2.53	64	146821	4.47	ug/L	96
9) Trichlorofluoromethane	2.84	101	359314m	4.83	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	135188	5.06	ug/L	98
12) 1,1-Dichloroethene	3.49	96	138056	4.99	ug/L	85
13) Acetone	3.52	43	227485	45.13	ug/L	99
14) Carbon disulfide	3.83	76	410558	4.78	ug/L	98
15) Methyl Acetate	4.00	43	57063	4.65	ug/L	97
16) Methylene chloride	4.19	84	138440m	4.71	ug/L	
17) Methyl tert-butyl Ether	4.68	73	248853	4.79	ug/L	100
18) trans-1,2-Dichloroethene	4.67	96	172645	4.89	ug/L	97
19) 1,1-Dichloroethane	5.48	63	394076	4.82	ug/L	98
21) 2-Butanone	6.49	43	352620	48.45	ug/L	100
22) cis-1,2-Dichloroethene	6.48	96	176617	4.90	ug/L	99

M.D 03/01/16

M.D 03/01/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018145.D
Acq On : 25 Feb 2016 18:44
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 26 04:11:10 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Feb 25 16:56:00 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00556

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.87	128	61272	4.71	ug/L		95
25) Chloroform	7.05	83	358612	4.73	ug/L		98
27) 1,2-Dichloroethane	7.84	62	230203	4.52	ug/L		98
29) 1,1,1-Trichloroethane	7.27	97	261228	4.80	ug/L		100
30) Cyclohexane	7.36	56	332265	5.67	ug/L		99
31) Carbon tetrachloride	7.49	117	259055	4.92	ug/L		99
33) Benzene	7.76	78	818749	4.90	ug/L		100
34) Trichloroethene	8.58	95	200032	4.93	ug/L		97
35) Methylcyclohexane	8.84	83	284797	5.59	ug/L		99
37) 1,2-Dichloropropane	8.87	63	216284	4.76	ug/L		100
38) Bromodichloromethane	9.16	83	233586	4.62	ug/L		97
39) cis-1,3-Dichloropropene	9.60	75	278475	4.97	ug/L		100
40) 4-Methyl-2-pentanone	9.75	43	891091	49.69	ug/L		99
42) Toluene	9.92	91	867681	4.98	ug/L		98
44) trans-1,3-Dichloropropene	10.15	75	209923	4.80	ug/L		100
45) 1,1,2-Trichloroethane	10.33	97	95176	4.59	ug/L		97
47) Tetrachloroethene	10.41	164	152461	4.90	ug/L		98
48) 2-Hexanone	10.52	43	590705	48.30	ug/L		99
49) Dibromochloromethane	10.67	129	117273	4.51	ug/L		99
50) 1,2-Dibromoethane	10.78	107	82420	4.54	ug/L	#	97
51) Chlorobenzene	11.21	112	489131	4.80	ug/L		99
52) Ethylbenzene	11.29	91	963445	5.10	ug/L		97
53) m,p-Xylene	11.40	106	352107	5.14	ug/L		97
54) o-Xylene	11.73	106	310245	5.14	ug/L		96
55) Styrene	11.74	104	522255	5.14	ug/L		99
56) Isopropylbenzene	12.03	105	818322	5.46	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	82763	4.56	ug/L		98
59) 1,2,3-Trichloropropane	12.33	75	69360	4.58	ug/L		98
61) Bromoform	11.91	173	50006	4.31	ug/L		98
62) 1,3-Dichlorobenzene	13.07	146	279269	4.78	ug/L		97
63) 1,4-Dichlorobenzene	13.15	146	293509	4.57	ug/L		98
65) 1,2-Dichlorobenzene	13.44	146	244562	4.65	ug/L		97
66) 1,2-Dibromo-3-chloropropan	14.06	75	11467	4.53	ug/L		90
67) 1,3,5-Trichlorobenzene	14.20	180	191304	4.88	ug/L		97
68) 1,2,4-trichlorobenzene	14.69	180	139603	4.81	ug/L		97
69) Naphthalene	14.91	128	165069	5.07	ug/L		98
70) 1,2,3-Trichlorobenzene	15.08	180	108778	4.68	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018162.D
Acq On : 26 Feb 2016 4:11
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 26 05:56:11 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00557

Manual Integrations APPROVED
sam
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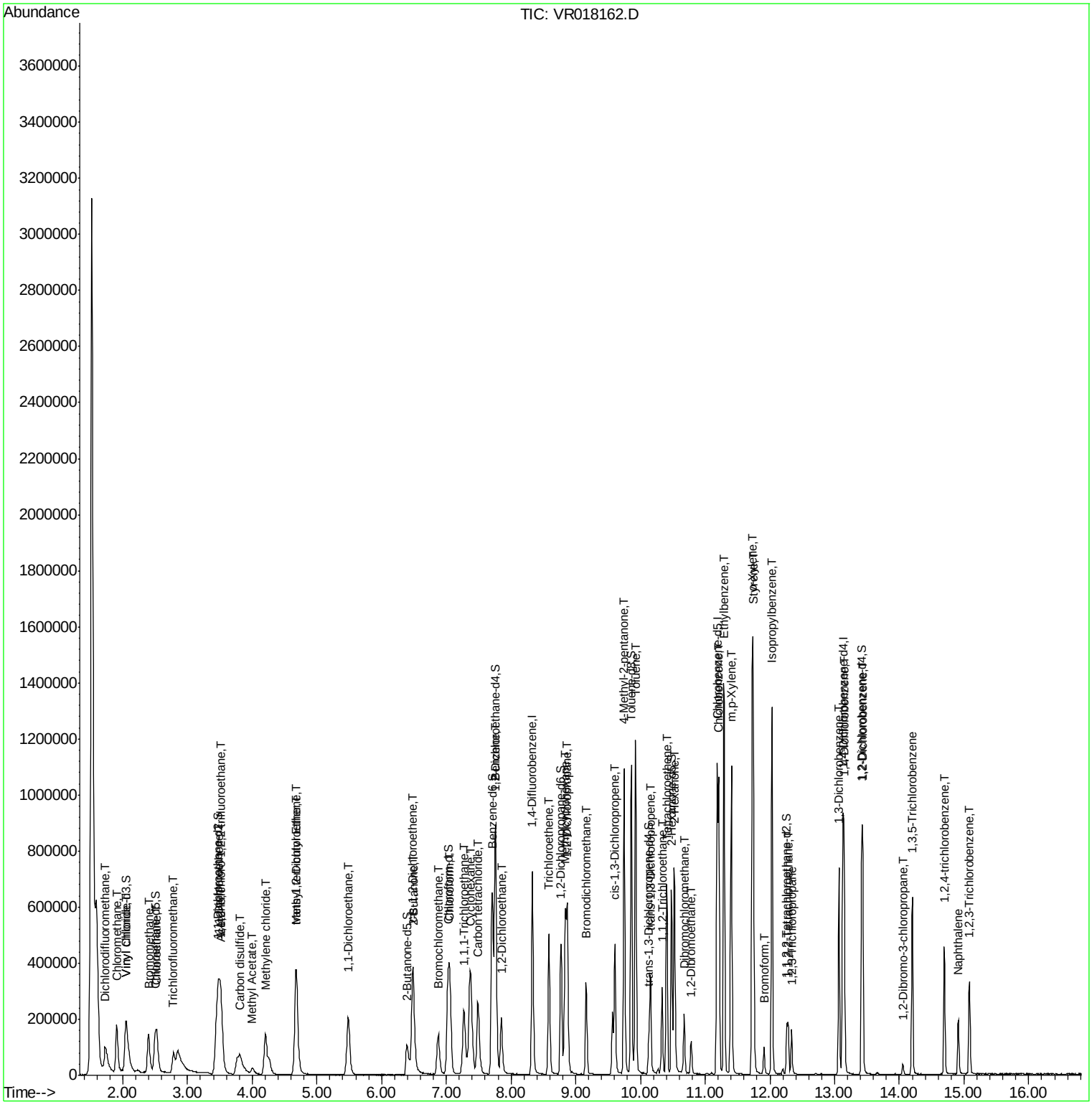

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018162.D
Acq On : 26 Feb 2016 4:11
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 26 05:56:11 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00557

Manual Integrations APPROVED
sam
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	520962	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	439768	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	175598	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.05	65	212188	4.77	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 95.40%			
7) Chloroethane-d5	2.50	69	163706	4.99	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 99.80%			
11) 1,1-Dichloroethene-d2	3.46	63	324424	5.10	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 102.00%			
20) 2-Butanone-d5	6.39	46	231449	42.40	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 84.80%			
24) Chloroform-d	7.02	84	321484	4.51	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.20%			
26) 1,2-Dichloroethane-d4	7.75	65	165885	4.27	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 85.40%			
32) Benzene-d6	7.71	84	639653	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
36) 1,2-Dichloropropane-d6	8.78	67	193217	4.49	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 89.80%			
41) Toluene-d8	9.86	98	616011	4.82	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.40%			
43) trans-1,3-Dichloropropene-	10.13	79	59419	4.13	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 82.60%			
46) 2-Hexanone-d5	10.48	63	182587	45.43	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 90.86%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	72470	4.25	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 85.00%			
64) 1,2-Dichlorobenzene-d4	13.42	152	134843	4.56	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 91.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.72	85	198306	4.88	ug/L	99
3) Chloromethane	1.90	50	249515	4.97	ug/L	99
5) Vinyl chloride	2.05	62	246001	4.93	ug/L	98
6) Bromomethane	2.40	94	131149	4.75	ug/L	97
8) Chloroethane	2.53	64	145539	4.98	ug/L	98
9) Trichlorofluoromethane	2.78	101	309271m	4.67	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	112763	4.73	ug/L	99
12) 1,1-Dichloroethene	3.48	96	123569	5.01	ug/L	88
13) Acetone	3.52	43	185211	41.22	ug/L	99
14) Carbon disulfide	3.80	76	357140	4.66	ug/L #	94
15) Methyl Acetate	4.00	43	48033	4.39	ug/L #	79
16) Methylene chloride	4.21	84	123305	4.71	ug/L	96
17) Methyl tert-butyl Ether	4.67	73	187495	4.05	ug/L	98
18) trans-1,2-Dichloroethene	4.67	96	144792	4.60	ug/L	92
19) 1,1-Dichloroethane	5.48	63	331305	4.55	ug/L	100
21) 2-Butanone	6.49	43	280279	43.20	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	150520	4.68	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018162.D
Acq On : 26 Feb 2016 4:11
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VSTD00557

Manual Integrations APPROVED
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Quant Time: Feb 26 05:56:11 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.88	128	48867	4.21	ug/L	88
25) Chloroform	7.05	83	303943	4.50	ug/L	98
27) 1,2-Dichloroethane	7.85	62	197740	4.35	ug/L	99
29) 1,1,1-Trichloroethane	7.27	97	232426	4.80	ug/L	98
30) Cyclohexane	7.37	56	264284	5.07	ug/L	100
31) Carbon tetrachloride	7.49	117	216645	4.63	ug/L	100
33) Benzene	7.76	78	702539	4.73	ug/L	100
34) Trichloroethene	8.59	95	173024	4.79	ug/L	95
35) Methylcyclohexane	8.84	83	207646	4.58	ug/L	98
37) 1,2-Dichloropropane	8.87	63	180848	4.48	ug/L	100
38) Bromodichloromethane	9.16	83	195509	4.35	ug/L	98
39) cis-1,3-Dichloropropene	9.60	75	225081	4.52	ug/L	99
40) 4-Methyl-2-pentanone	9.75	43	736369	46.18	ug/L	98
42) Toluene	9.93	91	748373	4.83	ug/L	100
44) trans-1,3-Dichloropropene	10.15	75	167411	4.31	ug/L	99
45) 1,1,2-Trichloroethane	10.33	97	81744	4.44	ug/L	96
47) Tetrachloroethene	10.41	164	127033	4.59	ug/L	98
48) 2-Hexanone	10.52	43	486824	44.77	ug/L	98
49) Dibromochloromethane	10.67	129	96763	4.18	ug/L	100
50) 1,2-Dibromoethane	10.78	107	67713	4.20	ug/L	97
51) Chlorobenzene	11.21	112	420492	4.64	ug/L	99
52) Ethylbenzene	11.29	91	838655	4.99	ug/L	98
53) m,p-Xylene	11.40	106	300509	4.94	ug/L	94
54) o-Xylene	11.73	106	267842	4.99	ug/L	100
55) Styrene	11.74	104	446506	4.95	ug/L	100
56) Isopropylbenzene	12.03	105	699869	5.25	ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.28	83	71121	4.40	ug/L	96
59) 1,2,3-Trichloropropane	12.33	75	57904	4.30	ug/L	97
61) Bromoform	11.91	173	40969	4.05	ug/L	97
62) 1,3-Dichlorobenzene	13.07	146	242455	4.76	ug/L	99
63) 1,4-Dichlorobenzene	13.15	146	257365	4.60	ug/L	99
65) 1,2-Dichlorobenzene	13.44	146	212354	4.63	ug/L	98
66) 1,2-Dibromo-3-chloropropan	14.06	75	8688	3.94	ug/L	95
67) 1,3,5-Trichlorobenzene	14.20	180	162018	4.74	ug/L	99
68) 1,2,4-trichlorobenzene	14.69	180	111546	4.41	ug/L	99
69) Naphthalene	14.91	128	128542	4.53	ug/L	98
70) 1,2,3-Trichlorobenzene	15.08	180	88331	4.36	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018162.D
Acq On : 26 Feb 2016 4:11
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 26 05:56:11 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00557

Manual Integrations APPROVED
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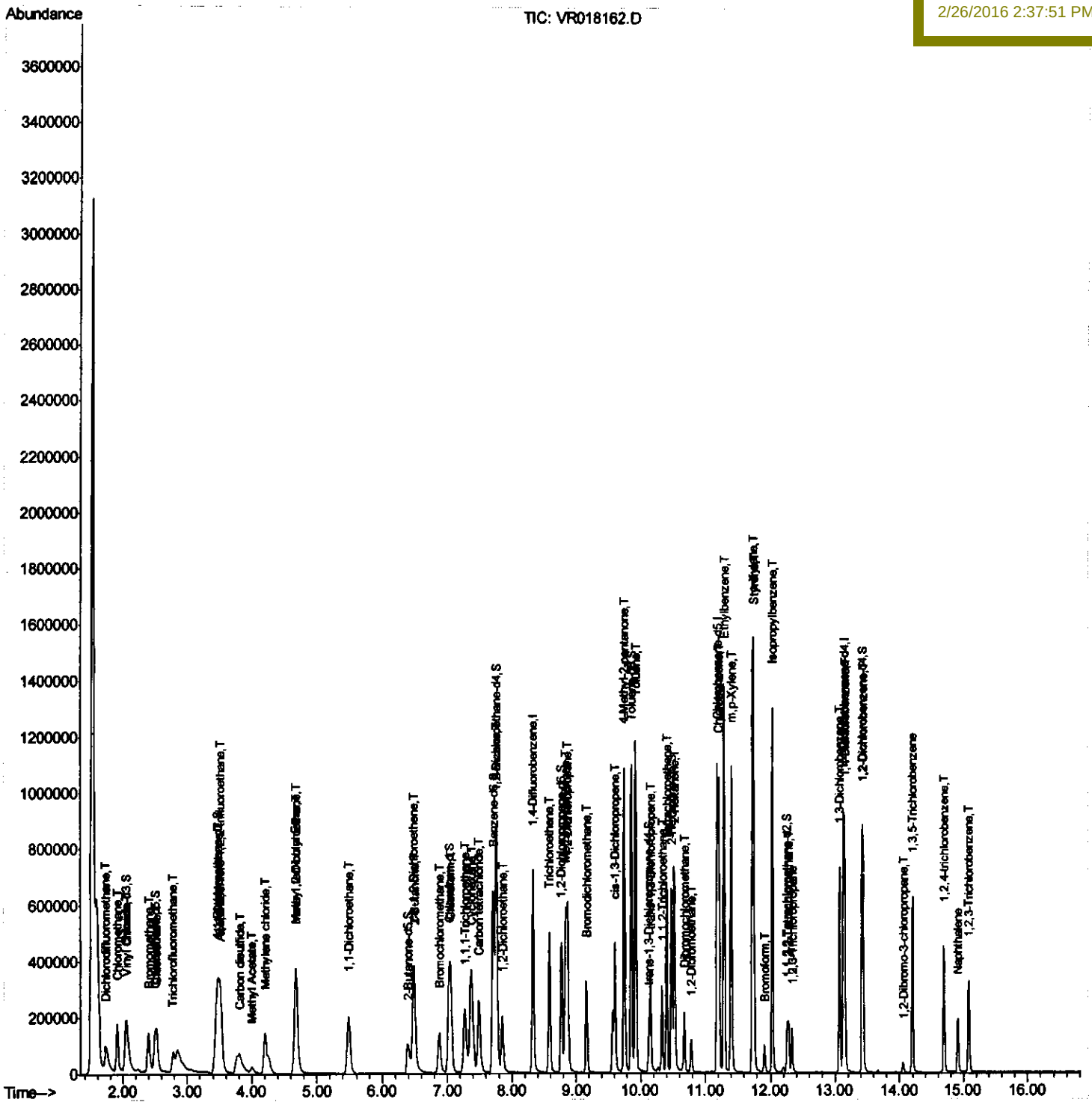

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018162.D
Acq On : 26 Feb 2016 4:11
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 26 05:54:20 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00557

Manual Integrations APPROVED
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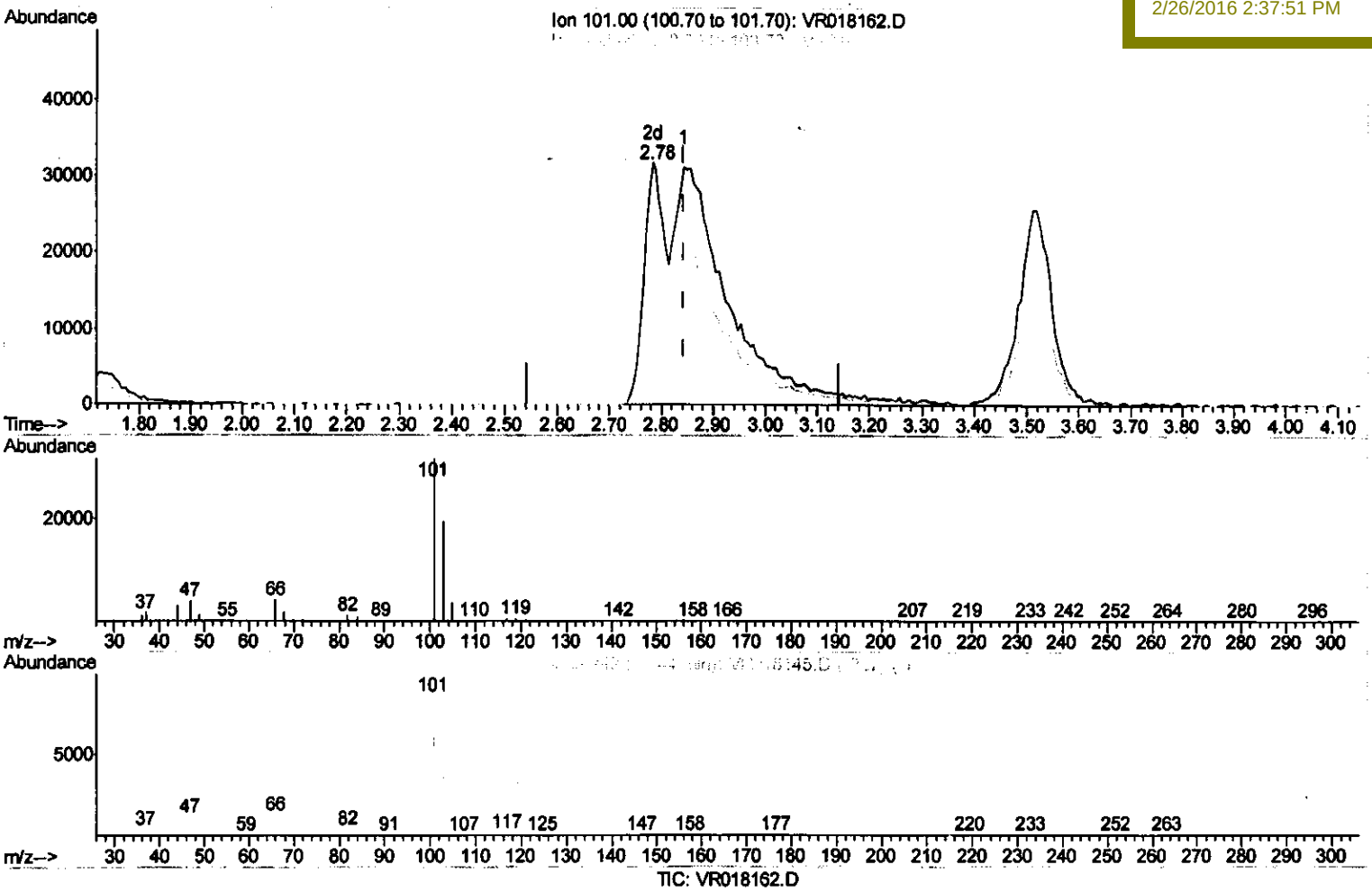
2/26/2016 2:37:51 PM



(9) Trichlorofluoromethane (T)

2.783min (-0.061) 4.67ug/L m

response 309271

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	34.23#
0.00	0.00	0.00
0.00	0.00	0.00

M.D 03/01/16

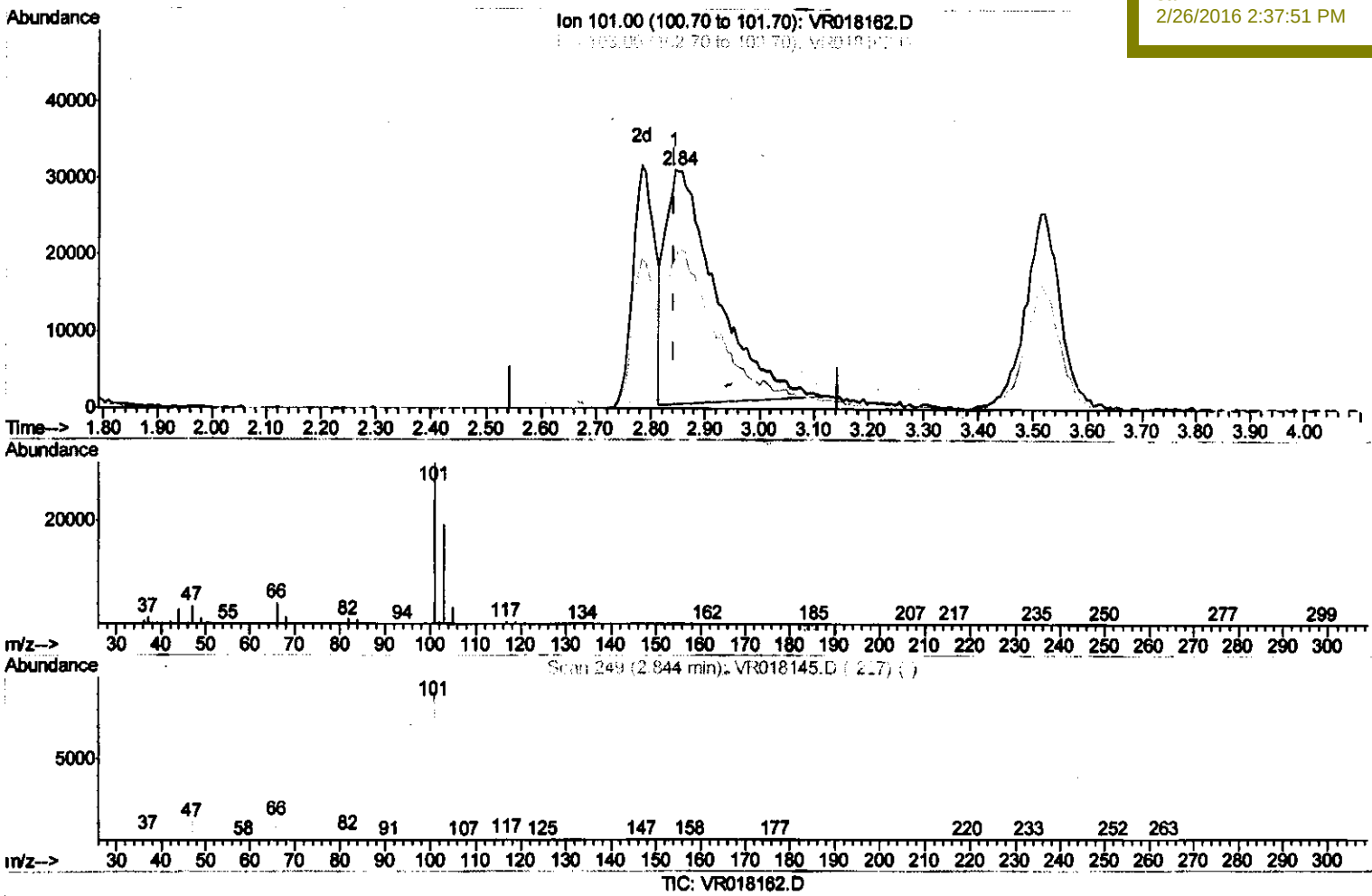
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018162.D
Acq On : 26 Feb 2016 4:11
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 26 05:54:20 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00557

Manual Integrations APPROVED
sam
2/26/2016 2:37:51 PM



(9) Trichlorofluoromethane (T)

2.844min (+0.000) 3.05ug/L

response 202291

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	52.34#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018162.D
Acq On : 26 Feb 2016 4:11
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 26 05:56:11 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00557

Manual Integrations APPROVED
sam
2/26/2016 2:37:51 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	520962	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	439768	5.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	175598	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.05	65	212188	4.77	ug/L		0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 95.40%				
7) Chloroethane-d5	2.50	69	163706	4.99	ug/L		0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 99.80%				
11) 1,1-Dichloroethene-d2	3.46	63	324424	5.10	ug/L		0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 102.00%				
20) 2-Butanone-d5	6.39	46	231449	42.40	ug/L		0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 84.80%				
24) Chloroform-d	7.02	84	321484	4.51	ug/L		0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.20%				
26) 1,2-Dichloroethane-d4	7.75	65	165885	4.27	ug/L		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 85.40%				
32) Benzene-d6	7.71	84	639653	4.75	ug/L		0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%				
36) 1,2-Dichloropropane-d6	8.78	67	193217	4.49	ug/L		0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 89.80%				
41) Toluene-d8	9.86	98	616011	4.82	ug/L		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.40%				
43) trans-1,3-Dichloropropene-	10.13	79	59419	4.13	ug/L		0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 82.60%				
46) 2-Hexanone-d5	10.48	63	182587	45.43	ug/L		0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 90.86%				
57) 1,1,2,2-Tetrachloroethane-	12.26	84	72470	4.25	ug/L		0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 85.00%				
64) 1,2-Dichlorobenzene-d4	13.42	152	134843	4.56	ug/L		0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 91.20%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.72	85	198306	4.88	ug/L		99
3) Chloromethane	1.90	50	249515	4.97	ug/L		99
5) Vinyl chloride	2.05	62	246001	4.93	ug/L		98
6) Bromomethane	2.40	94	131149	4.75	ug/L		97
8) Chloroethane	2.53	64	145539	4.98	ug/L		98
9) Trichlorofluoromethane	2.78	101	309271m	4.67	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	112763	4.73	ug/L		99
12) 1,1-Dichloroethene	3.48	96	123569	5.01	ug/L		88
13) Acetone	3.52	43	185211	41.22	ug/L		99
14) Carbon disulfide	3.80	76	357140	4.66	ug/L	#	94
15) Methyl Acetate	4.00	43	48033	4.39	ug/L	#	79
16) Methylene chloride	4.21	84	123305	4.71	ug/L		96
17) Methyl tert-butyl Ether	4.67	73	187495	4.05	ug/L		98
18) trans-1,2-Dichloroethene	4.67	96	144792	4.60	ug/L		92
19) 1,1-Dichloroethane	5.48	63	331305	4.55	ug/L		100
21) 2-Butanone	6.49	43	280279	43.20	ug/L		99
22) cis-1,2-Dichloroethene	6.48	96	150520	4.68	ug/L		95

M.D 03/01/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018162.D
Acq On : 26 Feb 2016 4:11
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 26 05:56:11 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00557

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.88	128	48867	4.21	ug/L	88
25) Chloroform	7.05	83	303943	4.50	ug/L	98
27) 1,2-Dichloroethane	7.85	62	197740	4.35	ug/L	99
29) 1,1,1-Trichloroethane	7.27	97	232426	4.80	ug/L	98
30) Cyclohexane	7.37	56	264284	5.07	ug/L	100
31) Carbon tetrachloride	7.49	117	216645	4.63	ug/L	100
33) Benzene	7.76	78	702539	4.73	ug/L	100
34) Trichloroethene	8.59	95	173024	4.79	ug/L	95
35) Methylcyclohexane	8.84	83	207646	4.58	ug/L	98
37) 1,2-Dichloropropane	8.87	63	180848	4.48	ug/L	100
38) Bromodichloromethane	9.16	83	195509	4.35	ug/L	98
39) cis-1,3-Dichloropropene	9.60	75	225081	4.52	ug/L	99
40) 4-Methyl-2-pentanone	9.75	43	736369	46.18	ug/L	98
42) Toluene	9.93	91	748373	4.83	ug/L	100
44) trans-1,3-Dichloropropene	10.15	75	167411	4.31	ug/L	99
45) 1,1,2-Trichloroethane	10.33	97	81744	4.44	ug/L	96
47) Tetrachloroethene	10.41	164	127033	4.59	ug/L	98
48) 2-Hexanone	10.52	43	486824	44.77	ug/L	98
49) Dibromochloromethane	10.67	129	96763	4.18	ug/L	100
50) 1,2-Dibromoethane	10.78	107	67713	4.20	ug/L	97
51) Chlorobenzene	11.21	112	420492	4.64	ug/L	99
52) Ethylbenzene	11.29	91	838655	4.99	ug/L	98
53) m,p-Xylene	11.40	106	300509	4.94	ug/L	94
54) o-Xylene	11.73	106	267842	4.99	ug/L	100
55) Styrene	11.74	104	446506	4.95	ug/L	100
56) Isopropylbenzene	12.03	105	699869	5.25	ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.28	83	71121	4.40	ug/L	96
59) 1,2,3-Trichloropropane	12.33	75	57904	4.30	ug/L	97
61) Bromoform	11.91	173	40969	4.05	ug/L	97
62) 1,3-Dichlorobenzene	13.07	146	242455	4.76	ug/L	99
63) 1,4-Dichlorobenzene	13.15	146	257365	4.60	ug/L	99
65) 1,2-Dichlorobenzene	13.44	146	212354	4.63	ug/L	98
66) 1,2-Dibromo-3-chloropropan	14.06	75	8688	3.94	ug/L	95
67) 1,3,5-Trichlorobenzene	14.20	180	162018	4.74	ug/L	99
68) 1,2,4-trichlorobenzene	14.69	180	111546	4.41	ug/L	99
69) Naphthalene	14.91	128	128542	4.53	ug/L	98
70) 1,2,3-Trichlorobenzene	15.08	180	88331	4.36	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018164.D
Acq On : 26 Feb 2016 9:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 26 09:50:30 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00558

Manual Integrations APPROVED
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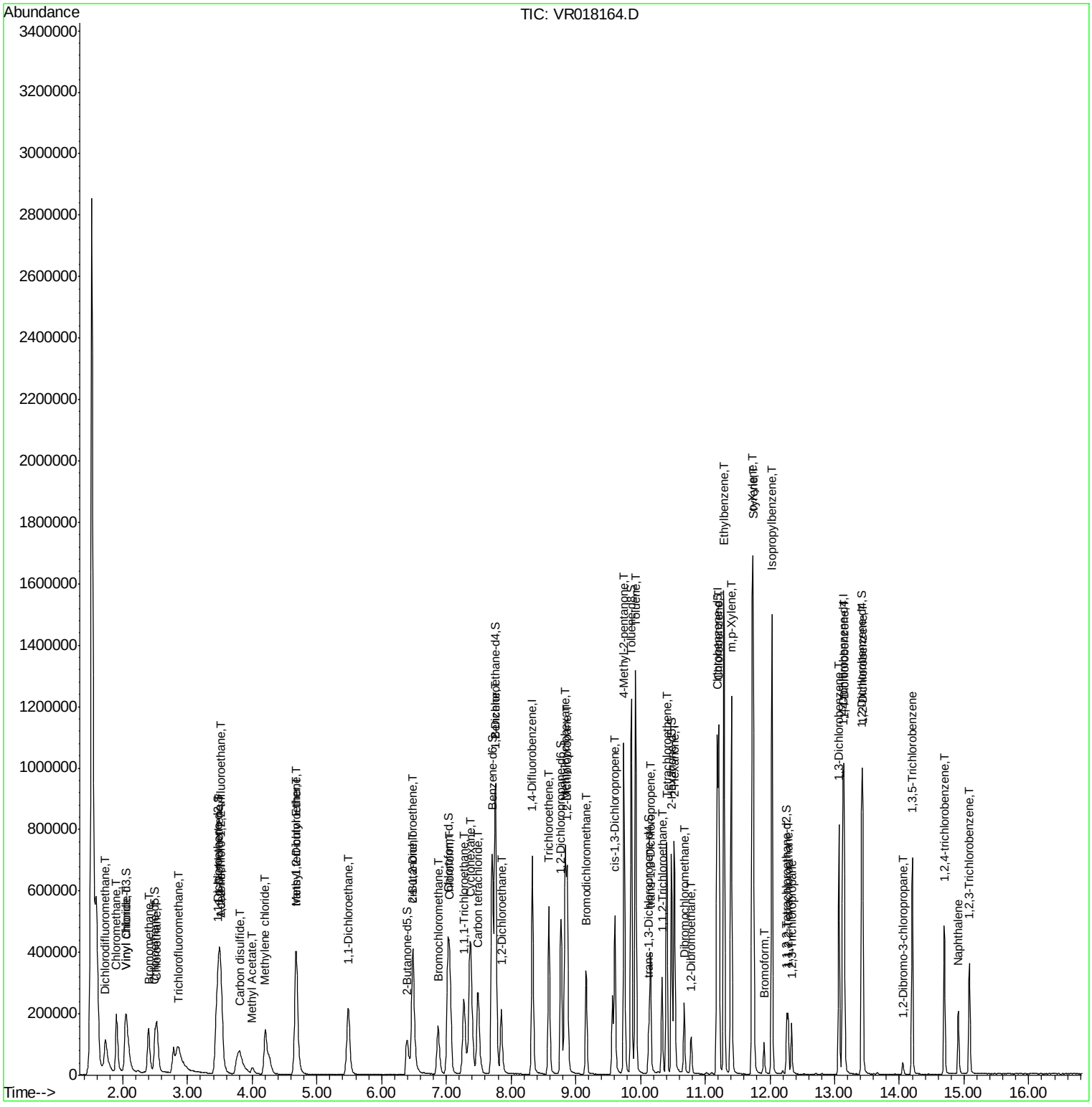

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018164.D
Acq On : 26 Feb 2016 9:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00558

Manual Integrations APPROVED
sam
2/29/2016 2:21:56 PM

Quant Time: Feb 26 09:50:30 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	524656	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	444639	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	181914	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.05	65	229798	5.13	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 102.60%			
7) Chloroethane-d5	2.50	69	174300	5.28	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 105.60%			
11) 1,1-Dichloroethene-d2	3.46	63	357748	5.59	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 111.80%			
20) 2-Butanone-d5	6.39	46	255654	46.51	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 93.02%			
24) Chloroform-d	7.02	84	362356	5.05	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.00%			
26) 1,2-Dichloroethane-d4	7.75	65	185198	4.73	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
32) Benzene-d6	7.70	84	712870	5.24	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.80%			
36) 1,2-Dichloropropane-d6	8.77	67	214875	4.94	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 98.80%			
41) Toluene-d8	9.86	98	689259	5.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 106.80%			
43) trans-1,3-Dichloropropene-	10.13	79	67753	4.66	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 93.20%			
46) 2-Hexanone-d5	10.48	63	196078	48.26	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 96.52%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	78658	4.56	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.20%			
64) 1,2-Dichlorobenzene-d4	13.42	152	151026	4.93	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	227876	5.56	ug/L	99
3) Chloromethane	1.90	50	267025	5.28	ug/L	98
5) Vinyl chloride	2.05	62	263849	5.25	ug/L	98
6) Bromomethane	2.40	94	135942	4.89	ug/L	97
8) Chloroethane	2.53	64	154537	5.25	ug/L	95
9) Trichlorofluoromethane	2.86	101	343956m	5.16	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	134706	5.62	ug/L	99
12) 1,1-Dichloroethene	3.48	96	133665	5.38	ug/L	93
13) Acetone	3.52	43	193911	42.85	ug/L	98
14) Carbon disulfide	3.80	76	393516	5.10	ug/L	100
15) Methyl Acetate	4.00	43	45163	4.10	ug/L	99
16) Methylene chloride	4.19	84	132904m	5.04	ug/L	
17) Methyl tert-butyl Ether	4.68	73	196989	4.22	ug/L	99
18) trans-1,2-Dichloroethene	4.67	96	156888	4.95	ug/L	90
19) 1,1-Dichloroethane	5.48	63	357086	4.87	ug/L	98
21) 2-Butanone	6.49	43	285622	43.71	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	160654	4.96	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018164.D
Acq On : 26 Feb 2016 9:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00558

Manual Integrations APPROVED
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Quant Time: Feb 26 09:50:30 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.87	128	53073	4.54	ug/L		90
25) Chloroform	7.05	83	325804	4.79	ug/L		99
27) 1,2-Dichloroethane	7.85	62	206049	4.50	ug/L		99
29) 1,1,1-Trichloroethane	7.27	97	249442	5.10	ug/L		98
30) Cyclohexane	7.37	56	318255	6.04	ug/L		100
31) Carbon tetrachloride	7.49	117	238706	5.04	ug/L		99
33) Benzene	7.76	78	759938	5.06	ug/L		100
34) Trichloroethene	8.59	95	184673	5.06	ug/L		98
35) Methylcyclohexane	8.84	83	270846	5.91	ug/L		100
37) 1,2-Dichloropropane	8.87	63	192674	4.72	ug/L		100
38) Bromodichloromethane	9.16	83	203838	4.49	ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	248267	4.93	ug/L		98
40) 4-Methyl-2-pentanone	9.75	43	740439	45.93	ug/L		99
42) Toluene	9.93	91	811549	5.18	ug/L		100
44) trans-1,3-Dichloropropene	10.15	75	180013	4.58	ug/L		98
45) 1,1,2-Trichloroethane	10.33	97	84265	4.52	ug/L		98
47) Tetrachloroethene	10.41	164	145384	5.20	ug/L		98
48) 2-Hexanone	10.52	43	494906	45.02	ug/L		99
49) Dibromochloromethane	10.67	129	102005	4.36	ug/L		98
50) 1,2-Dibromoethane	10.78	107	71982	4.41	ug/L		97
51) Chlorobenzene	11.21	112	454298	4.96	ug/L		99
52) Ethylbenzene	11.29	91	925849	5.45	ug/L		100
53) m,p-Xylene	11.40	106	333989	5.43	ug/L		96
54) o-Xylene	11.73	106	291855	5.37	ug/L		97
55) Styrene	11.74	104	481270	5.27	ug/L		98
56) Isopropylbenzene	12.03	105	791054	5.87	ug/L		100
58) 1,1,2,2-Tetrachloroethane	12.28	83	70701	4.33	ug/L	#	99
59) 1,2,3-Trichloropropane	12.33	75	59204	4.35	ug/L		94
61) Bromoform	11.91	173	41419	3.95	ug/L		99
62) 1,3-Dichlorobenzene	13.07	146	266863	5.06	ug/L		99
63) 1,4-Dichlorobenzene	13.15	146	283677	4.90	ug/L		97
65) 1,2-Dichlorobenzene	13.44	146	231394	4.87	ug/L		97
66) 1,2-Dibromo-3-chloropropan	14.06	75	9105	3.98	ug/L	#	86
67) 1,3,5-Trichlorobenzene	14.20	180	181148	5.12	ug/L		99
68) 1,2,4-trichlorobenzene	14.69	180	122581	4.68	ug/L		98
69) Naphthalene	14.91	128	134368	4.57	ug/L		99
70) 1,2,3-Trichlorobenzene	15.08	180	92186	4.39	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022616\
Data File : VR018164.D
Acq On : 26 Feb 2016 9:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 26 09:50:30 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00558

Manual Integrations APPROVED
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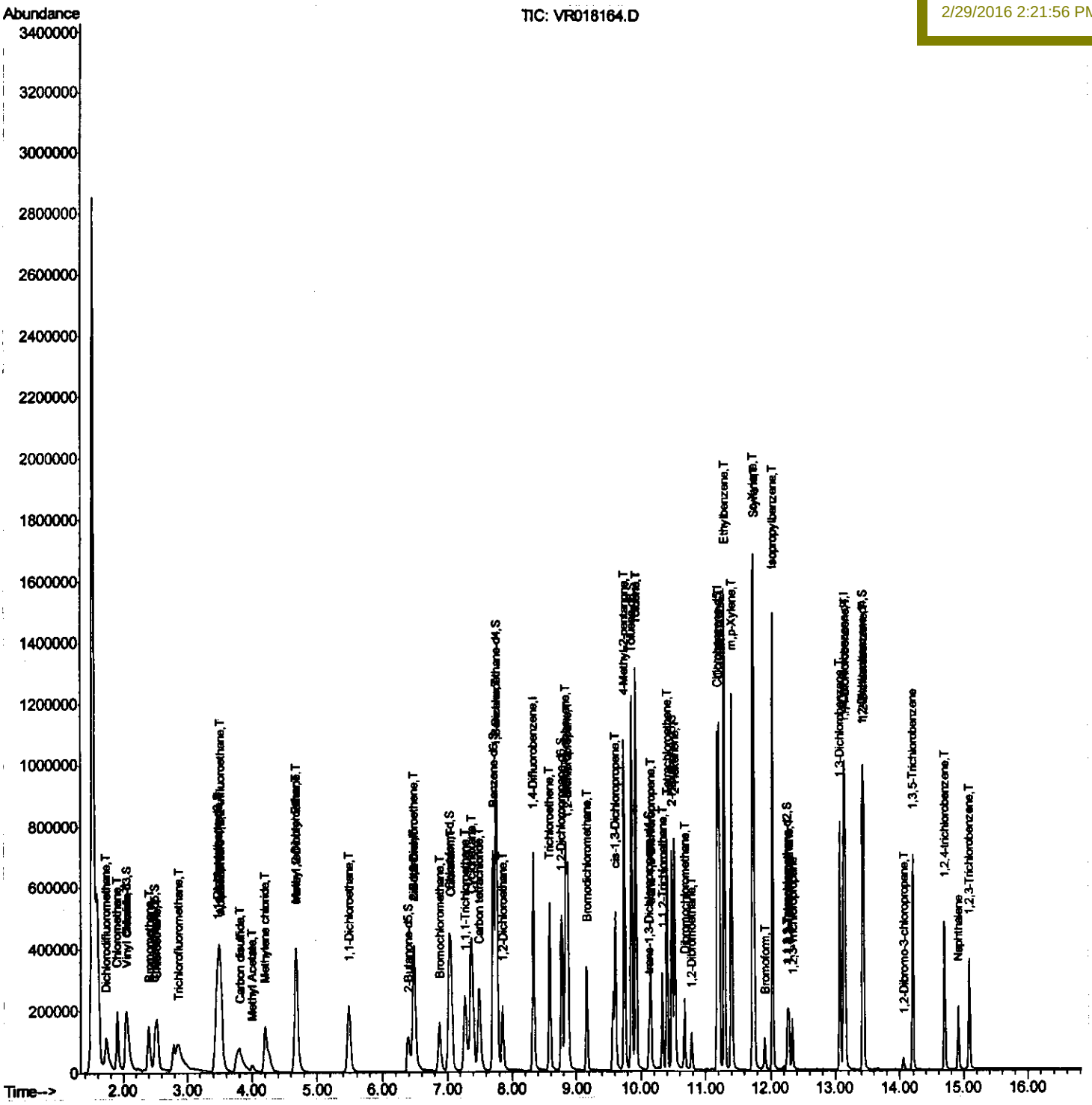

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022616\
Data File : VR018164.D
Acq On : 26 Feb 2016 9:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 01 07:02:42 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00558

Manual Integrations APPROVED
sam
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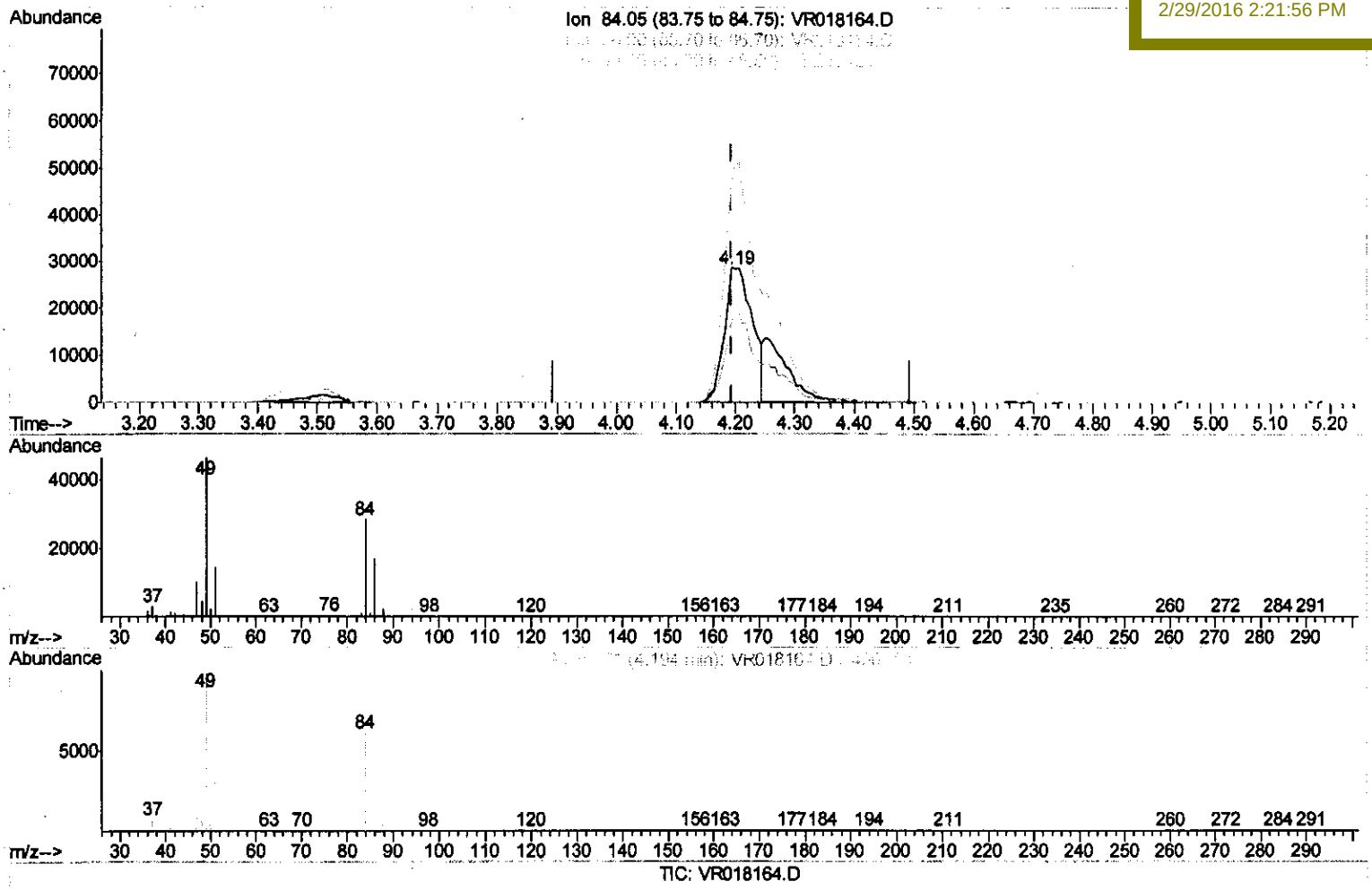

TIC: VR018164.D

(16) Methylene chloride (T)

4.194min (0.000) 3.52ug/L

response 92825

Ion	Exp%	Act%
84.05	100	100
86.00	58.80	60.46
49.10	171.30	162.42
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022616\
Data File : VR018164.D
Acq On : 26 Feb 2016 9:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 26 09:50:30 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00558

Manual Integrations APPROVED
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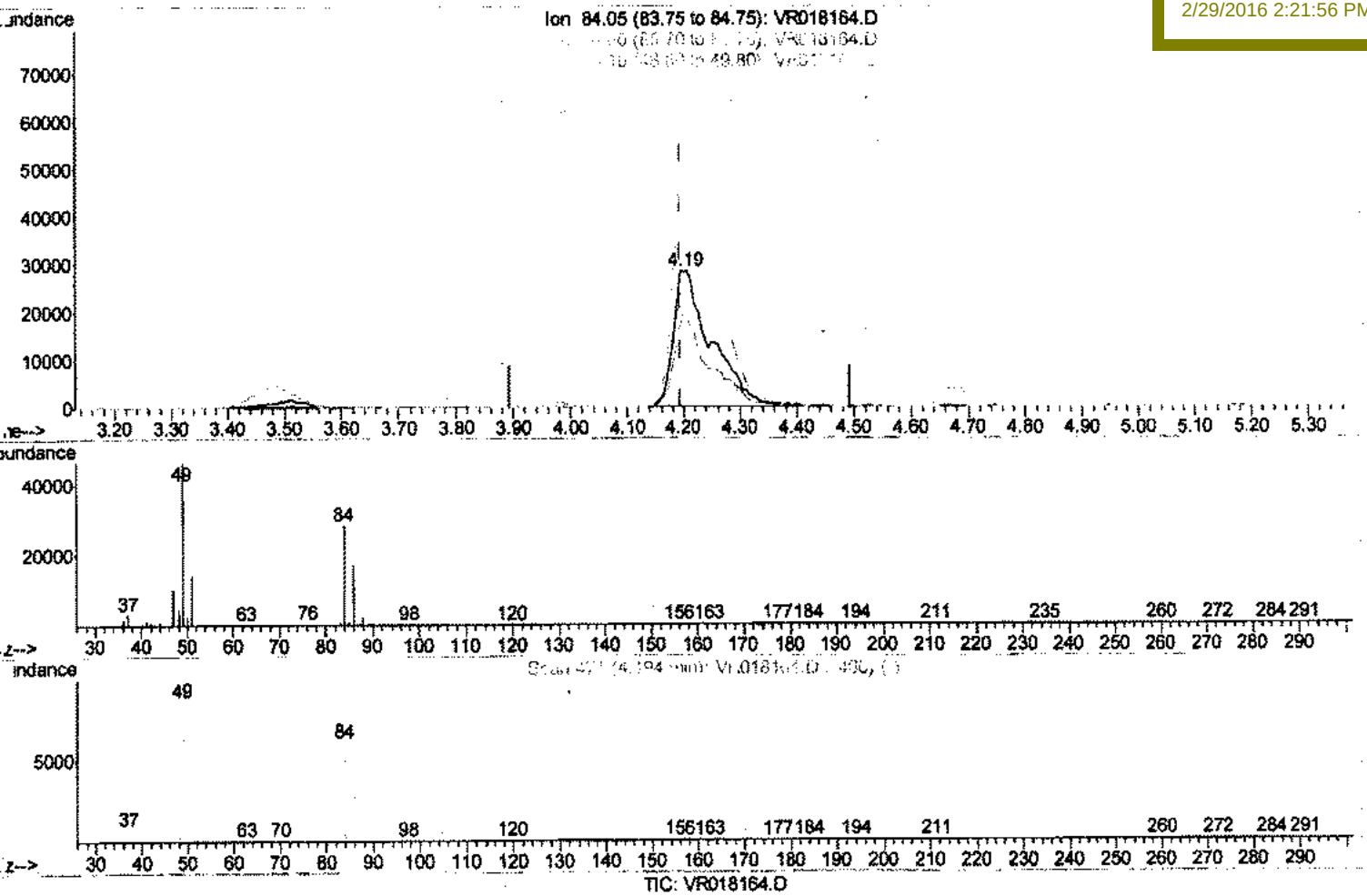

(16) Methylene chloride (T)
4.194min (+0.000) 5.04ug/L m
response 132904

M.D 03/01/16

Ion	Exp%	Act%
84.05	100	100
86.00	58.60	60.46
49.10	171.30	162.42
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022616\
Data File : VR018164.D
Acq On : 26 Feb 2016 9:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 01 07:02:42 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00558

Manual Integrations APPROVED
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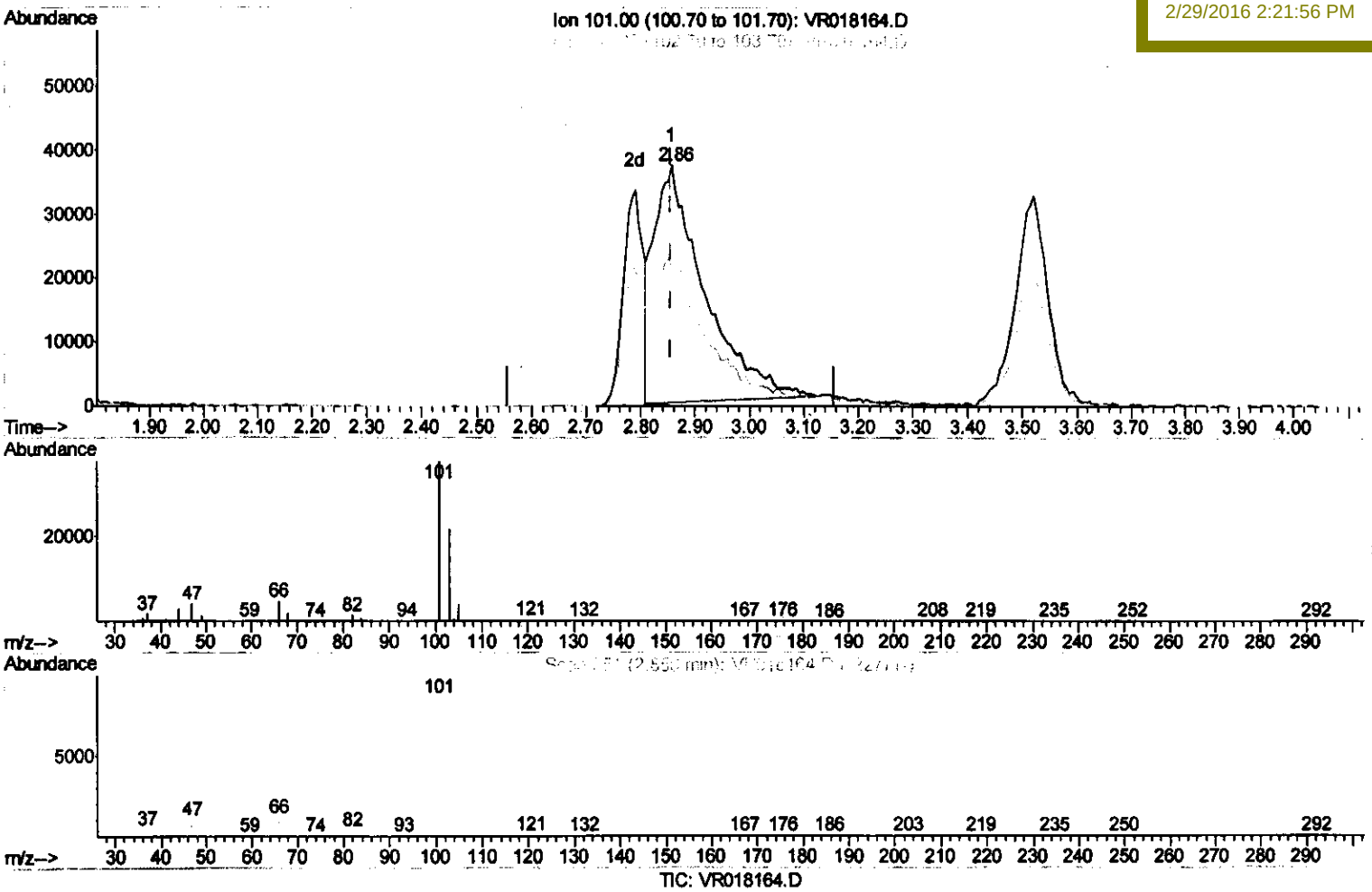

(9) Trichlorofluoromethane (T)

2.856min (0.000) 3.60ug/L

response 240161

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	55.27#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022616\
Data File : VR018164.D
Acq On : 26 Feb 2016 9:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 26 09:50:30 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00558

Manual Integrations APPROVED
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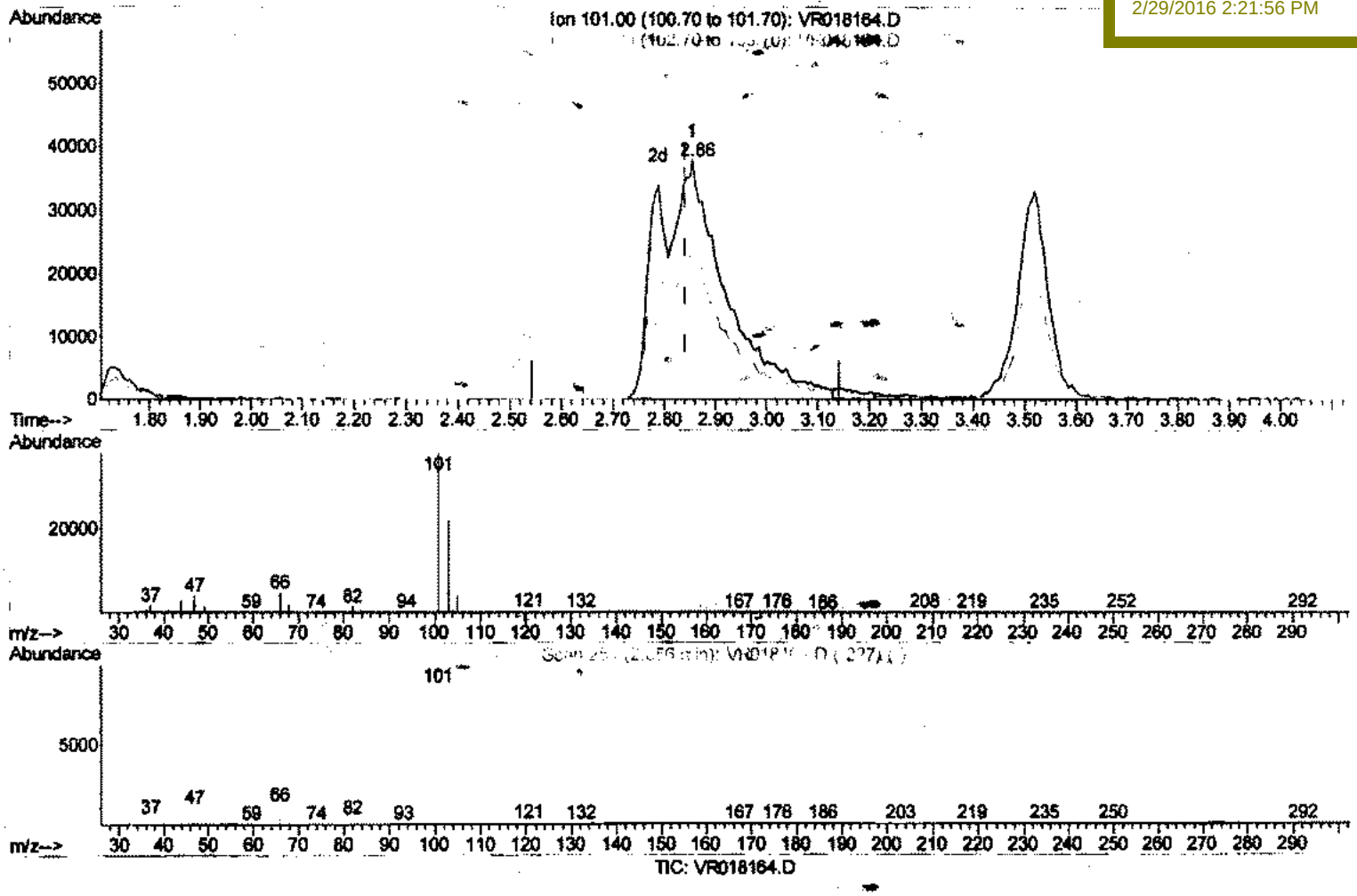


(9) Trichlorofluoromethane (T)

2.856min (+0.012) 5.16ug/L m

response 343956

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	38.59#
0.00	0.00	0.00
0.00	0.00	0.00

M.D 03/01/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022616\
Data File : VR018164.D
Acq On : 26 Feb 2016 9:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 26 09:50:30 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00558

Manual Integrations APPROVED
sam
2/29/2016 2:21:56 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	524656	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	444639	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	181914	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.05	65	229798	5.13	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 102.60%			
7) Chloroethane-d5	2.50	69	174300	5.28	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 105.60%			
11) 1,1-Dichloroethene-d2	3.46	63	357748	5.59	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 111.80%			
20) 2-Butanone-d5	6.39	46	255654	46.51	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 93.02%			
24) Chloroform-d	7.02	84	362356	5.05	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.00%			
26) 1,2-Dichloroethane-d4	7.75	65	185198	4.73	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
32) Benzene-d6	7.70	84	712870	5.24	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.80%			
36) 1,2-Dichloropropane-d6	8.77	67	214875	4.94	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 98.80%			
41) Toluene-d8	9.86	98	689259	5.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 106.80%			
43) trans-1,3-Dichloropropene-	10.13	79	67753	4.66	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 93.20%			
46) 2-Hexanone-d5	10.48	63	196078	48.26	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 96.52%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	78658	4.56	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.20%			
64) 1,2-Dichlorobenzene-d4	13.42	152	151026	4.93	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	227876	5.56	ug/L	99
3) Chloromethane	1.90	50	267025	5.28	ug/L	98
5) Vinyl chloride	2.05	62	263849	5.25	ug/L	98
6) Bromomethane	2.40	94	135942	4.89	ug/L	97
8) Chloroethane	2.53	64	154537	5.25	ug/L	95
9) Trichlorofluoromethane	2.86	101	343956m	5.16	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	134706	5.62	ug/L	99
12) 1,1-Dichloroethene	3.48	96	133665	5.38	ug/L	93
13) Acetone	3.52	43	193911	42.85	ug/L	98
14) Carbon disulfide	3.80	76	393516	5.10	ug/L	100
15) Methyl Acetate	4.00	43	45163	4.10	ug/L	99
16) Methylene chloride	4.19	84	132904m	5.04	ug/L	
17) Methyl tert-butyl Ether	4.68	73	196989	4.22	ug/L	99
18) trans-1,2-Dichloroethene	4.67	96	156888	4.95	ug/L	90
19) 1,1-Dichloroethane	5.48	63	357086	4.87	ug/L	98
21) 2-Butanone	6.49	43	285622	43.71	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	160654	4.96	ug/L	99

M.D 03/01/16

M.D 03/01/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022616\
Data File : VR018164.D
Acq On : 26 Feb 2016 9:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 26 09:50:30 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00558

Manual Integrations APPROVED
sam
2/29/2016 2:21:56 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.87	128	53073	4.54	ug/L		90
25) Chloroform	7.05	83	325804	4.79	ug/L		99
27) 1,2-Dichloroethane	7.85	62	206049	4.50	ug/L		99
29) 1,1,1-Trichloroethane	7.27	97	249442	5.10	ug/L		98
30) Cyclohexane	7.37	56	318255	6.04	ug/L		100
31) Carbon tetrachloride	7.49	117	238706	5.04	ug/L		99
33) Benzene	7.76	78	759938	5.06	ug/L		100
34) Trichloroethene	8.59	95	184673	5.06	ug/L		98
35) Methylcyclohexane	8.84	83	270846	5.91	ug/L		100
37) 1,2-Dichloropropane	8.87	63	192674	4.72	ug/L		100
38) Bromodichloromethane	9.16	83	203838	4.49	ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	248267	4.93	ug/L		98
40) 4-Methyl-2-pentanone	9.75	43	740439	45.93	ug/L		99
42) Toluene	9.93	91	811549	5.18	ug/L		100
44) trans-1,3-Dichloropropene	10.15	75	180013	4.58	ug/L		98
45) 1,1,2-Trichloroethane	10.33	97	84265	4.52	ug/L		98
47) Tetrachloroethene	10.41	164	145384	5.20	ug/L		98
48) 2-Hexanone	10.52	43	494906	45.02	ug/L		99
49) Dibromochloromethane	10.67	129	102005	4.36	ug/L		98
50) 1,2-Dibromoethane	10.78	107	71982	4.41	ug/L		97
51) Chlorobenzene	11.21	112	454298	4.96	ug/L		99
52) Ethylbenzene	11.29	91	925849	5.45	ug/L		100
53) m,p-Xylene	11.40	106	333989	5.43	ug/L		96
54) o-Xylene	11.73	106	291855	5.37	ug/L		97
55) Styrene	11.74	104	481270	5.27	ug/L		98
56) Isopropylbenzene	12.03	105	791054	5.87	ug/L		100
58) 1,1,2,2-Tetrachloroethane	12.28	83	70701	4.33	ug/L	#	99
59) 1,2,3-Trichloropropane	12.33	75	59204	4.35	ug/L		94
61) Bromoform	11.91	173	41419	3.95	ug/L		99
62) 1,3-Dichlorobenzene	13.07	146	266863	5.06	ug/L		99
63) 1,4-Dichlorobenzene	13.15	146	283677	4.90	ug/L		97
65) 1,2-Dichlorobenzene	13.44	146	231394	4.87	ug/L		97
66) 1,2-Dibromo-3-chloropropan	14.06	75	9105	3.98	ug/L	#	86
67) 1,3,5-Trichlorobenzene	14.20	180	181148	5.12	ug/L		99
68) 1,2,4-trichlorobenzene	14.69	180	122581	4.68	ug/L		98
69) Naphthalene	14.91	128	134368	4.57	ug/L		99
70) 1,2,3-Trichlorobenzene	15.08	180	92186	4.39	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

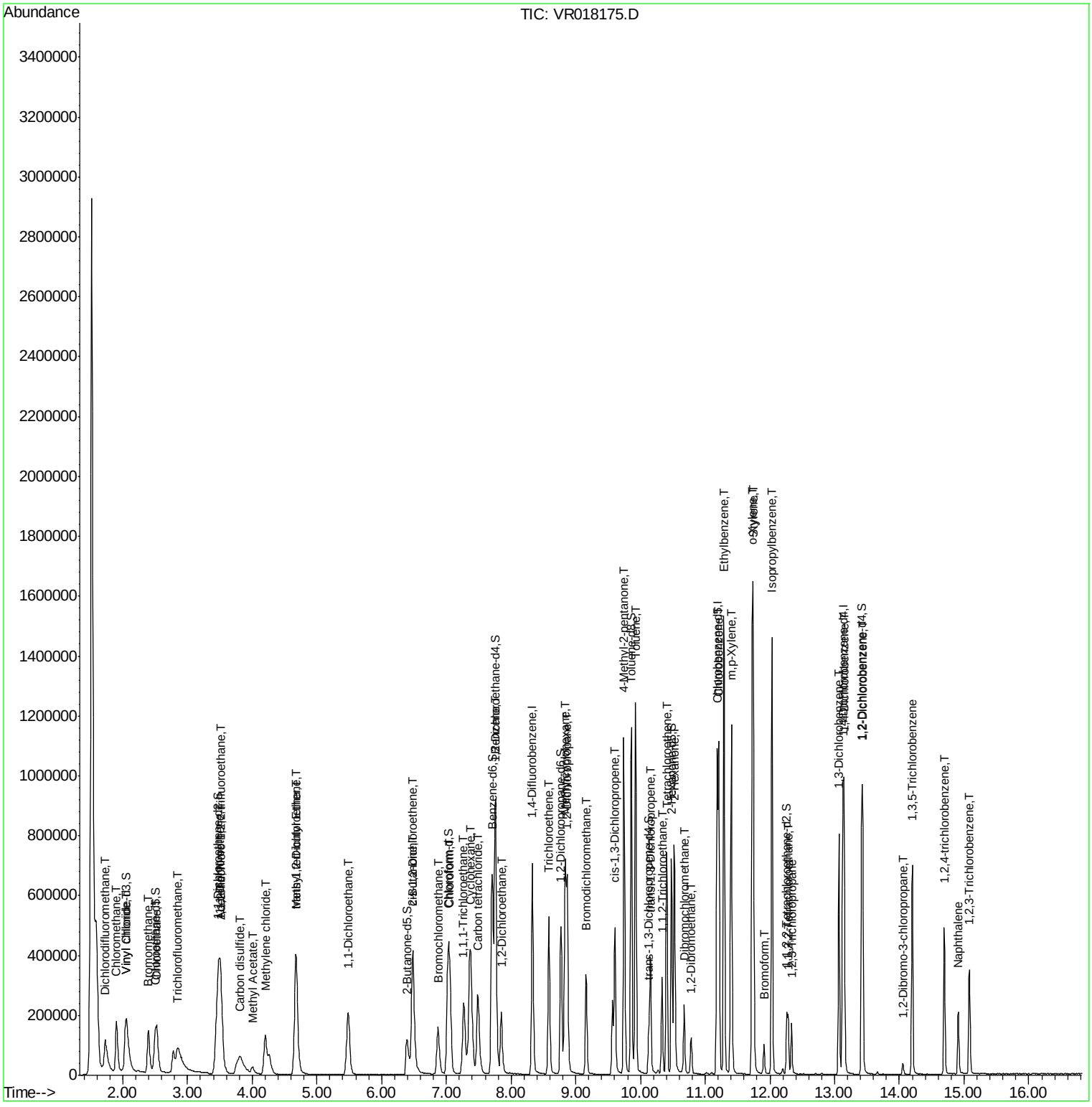
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018175.D
Acq On : 26 Feb 2016 15:39
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 27 02:41:38 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00559

Manual Integrations APPROVED
sam
2/29/2016 2:22:02 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018175.D
Acq On : 26 Feb 2016 15:39
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00559

Manual Integrations APPROVED
sam
2/29/2016 2:22:02 PM

Quant Time: Feb 27 02:41:38 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	503499	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	433220	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.12	152	177495	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.05	65	218039	5.07	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 101.40%			
7) Chloroethane-d5	2.50	69	165027	5.20	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 104.00%			
11) 1,1-Dichloroethene-d2	3.47	63	329962	5.37	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 107.40%			
20) 2-Butanone-d5	6.39	46	260918	49.46	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 98.92%			
24) Chloroform-d	7.02	84	347665	5.05	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.00%			
26) 1,2-Dichloroethane-d4	7.75	65	178461	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.00%			
32) Benzene-d6	7.71	84	675146	5.09	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.80%			
36) 1,2-Dichloropropane-d6	8.77	67	207521	4.90	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 98.00%			
41) Toluene-d8	9.86	98	650927	5.17	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.40%			
43) trans-1,3-Dichloropropene-	10.13	79	65301	4.61	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.20%			
46) 2-Hexanone-d5	10.48	63	194690	49.18	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 98.36%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	80118	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.40%			
64) 1,2-Dichlorobenzene-d4	13.42	152	146758	4.91	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	230447	5.86	ug/L	99
3) Chloromethane	1.90	50	252384	5.20	ug/L	99
5) Vinyl chloride	2.05	62	260226	5.40	ug/L	99
6) Bromomethane	2.39	94	128863	4.83	ug/L	99
8) Chloroethane	2.53	64	146136	5.17	ug/L	96
9) Trichlorofluoromethane	2.85	101	338135m	5.28	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	127873	5.55	ug/L	98
12) 1,1-Dichloroethene	3.49	96	126417	5.30	ug/L	89
13) Acetone	3.52	43	203294	46.81	ug/L	98
14) Carbon disulfide	3.81	76	341553	4.61	ug/L	98
15) Methyl Acetate	4.00	43	46179	4.37	ug/L	100
16) Methylene chloride	4.20	84	128092m	5.06	ug/L	
17) Methyl tert-butyl Ether	4.68	73	208877	4.67	ug/L	98
18) trans-1,2-Dichloroethene	4.67	96	149391	4.91	ug/L	95
19) 1,1-Dichloroethane	5.48	63	345359	4.91	ug/L	99
21) 2-Butanone	6.49	43	296472	47.28	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	156751	5.05	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018175.D
Acq On : 26 Feb 2016 15:39
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00559

Manual Integrations APPROVED
sam
2/29/2016 2:22:02 PM

Quant Time: Feb 27 02:41:38 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.87	128	51489	4.59	ug/L	96
25) Chloroform	7.05	83	320564	4.91	ug/L	99
27) 1,2-Dichloroethane	7.85	62	201170	4.58	ug/L	100
29) 1,1,1-Trichloroethane	7.27	97	244310	5.12	ug/L	99
30) Cyclohexane	7.37	56	312980	6.10	ug/L	100
31) Carbon tetrachloride	7.49	117	233400	5.06	ug/L	99
33) Benzene	7.76	78	733491	5.01	ug/L	100
34) Trichloroethene	8.59	95	178229	5.01	ug/L	98
35) Methylcyclohexane	8.84	83	267229	5.98	ug/L	99
37) 1,2-Dichloropropane	8.87	63	188515	4.74	ug/L	100
38) Bromodichloromethane	9.16	83	203112	4.59	ug/L	99
39) cis-1,3-Dichloropropene	9.60	75	242606	4.94	ug/L	99
40) 4-Methyl-2-pentanone	9.74	43	762896	48.57	ug/L	100
42) Toluene	9.92	91	782245	5.12	ug/L	99
44) trans-1,3-Dichloropropene	10.16	75	177348	4.63	ug/L	99
45) 1,1,2-Trichloroethane	10.33	97	81762	4.50	ug/L	98
47) Tetrachloroethene	10.41	164	141115	5.18	ug/L	99
48) 2-Hexanone	10.52	43	500614	46.73	ug/L	99
49) Dibromochloromethane	10.67	129	99529	4.37	ug/L	99
50) 1,2-Dibromoethane	10.78	107	71425	4.50	ug/L	100
51) Chlorobenzene	11.21	112	441590	4.95	ug/L	99
52) Ethylbenzene	11.29	91	896467	5.42	ug/L	98
53) m,p-Xylene	11.40	106	319585	5.33	ug/L	93
54) o-Xylene	11.73	106	287064	5.43	ug/L	96
55) Styrene	11.74	104	474097	5.33	ug/L	98
56) Isopropylbenzene	12.03	105	769642	5.86	ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.28	83	73177	4.60	ug/L	100
59) 1,2,3-Trichloropropane	12.33	75	62076	4.68	ug/L	99
61) Bromoform	11.91	173	41630	4.07	ug/L	98
62) 1,3-Dichlorobenzene	13.07	146	262655	5.10	ug/L	98
63) 1,4-Dichlorobenzene	13.15	146	280781	4.97	ug/L	97
65) 1,2-Dichlorobenzene	13.44	146	226010	4.88	ug/L	97
66) 1,2-Dibromo-3-chloropropan	14.06	75	8856	3.97	ug/L	99
67) 1,3,5-Trichlorobenzene	14.20	180	173156	5.01	ug/L	97
68) 1,2,4-trichlorobenzene	14.69	180	120695	4.72	ug/L	99
69) Naphthalene	14.91	128	136992	4.77	ug/L	99
70) 1,2,3-Trichlorobenzene	15.08	180	94427	4.61	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

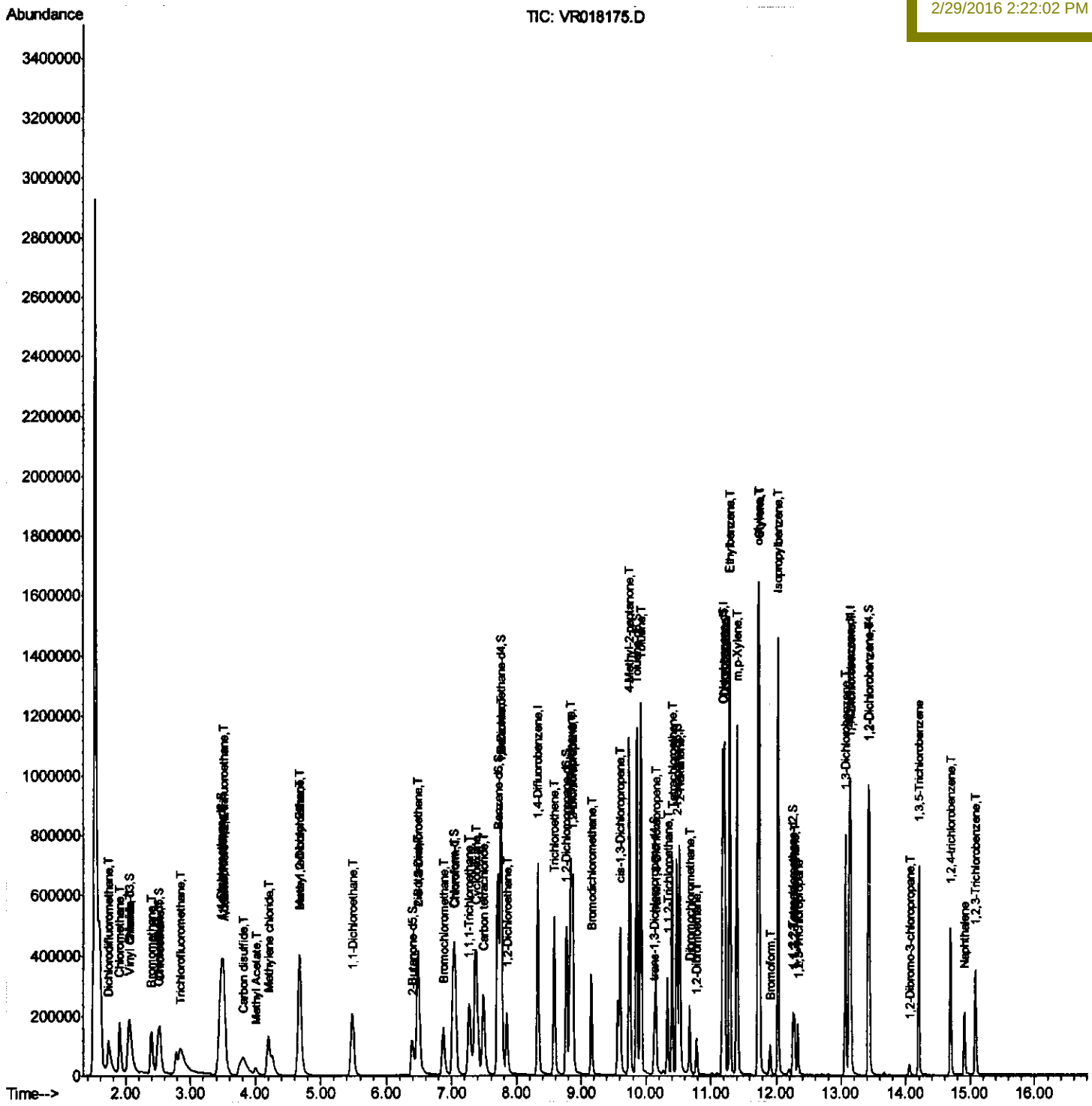
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018175.D
Acq On : 26 Feb 2016 15:39
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 27 02:41:38 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00559

Manual Integrations APPROVED
sam
2/29/2016 2:22:02 PM



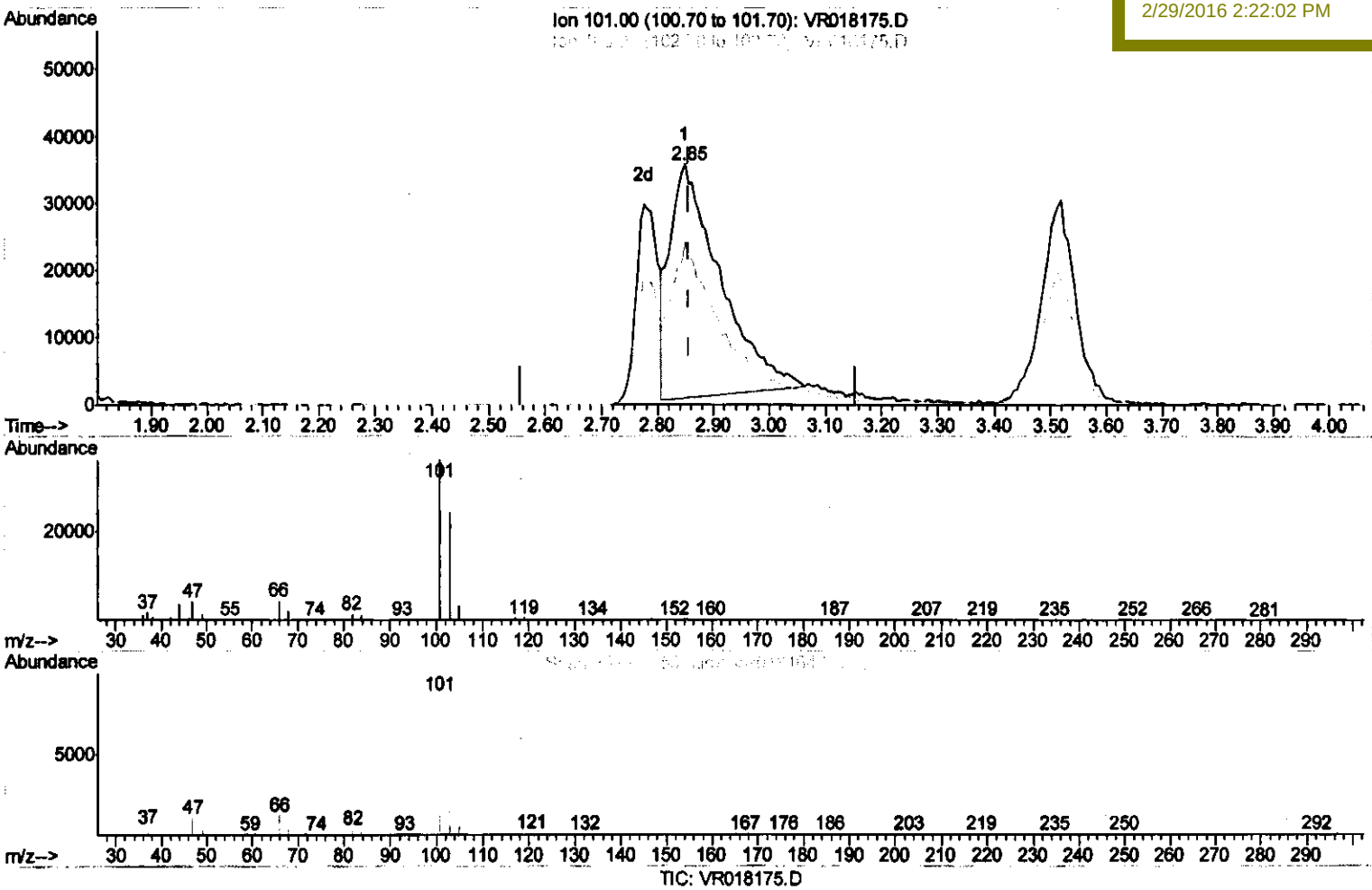
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018175.D
Acq On : 26 Feb 2016 15:39
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 27 01:15:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00559

Manual Integrations APPROVED
sam
2/29/2016 2:22:02 PM



(9) Trichlorofluoromethane (T)

2.850min (-0.006) 3.38ug/L

response 216133

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	48.50#
0.00	0.00	0.00
0.00	0.00	0.00

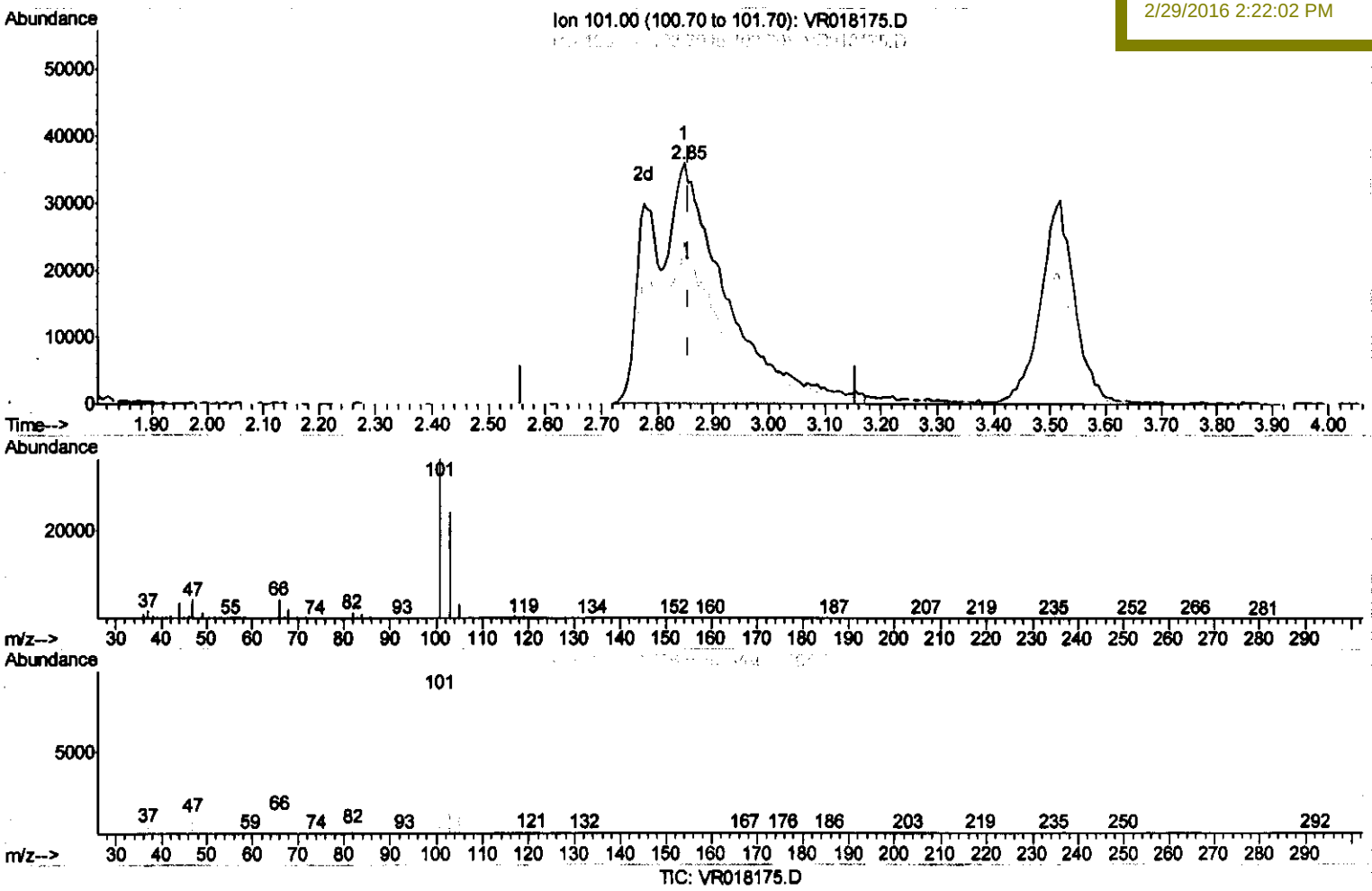
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018175.D
Acq On : 26 Feb 2016 15:39
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 27 01:15:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00559

Manual Integrations APPROVED
sam
2/29/2016 2:22:02 PM



(9) Trichlorofluoromethane (T)

2.850min (-0.006) 5.28ug/L m

response 338135

Ion	Exp%	Act%
101.00	100	100
103.00	14.90	31.00#
0.00	0.00	0.00
0.00	0.00	0.00

M.D 03/07/16

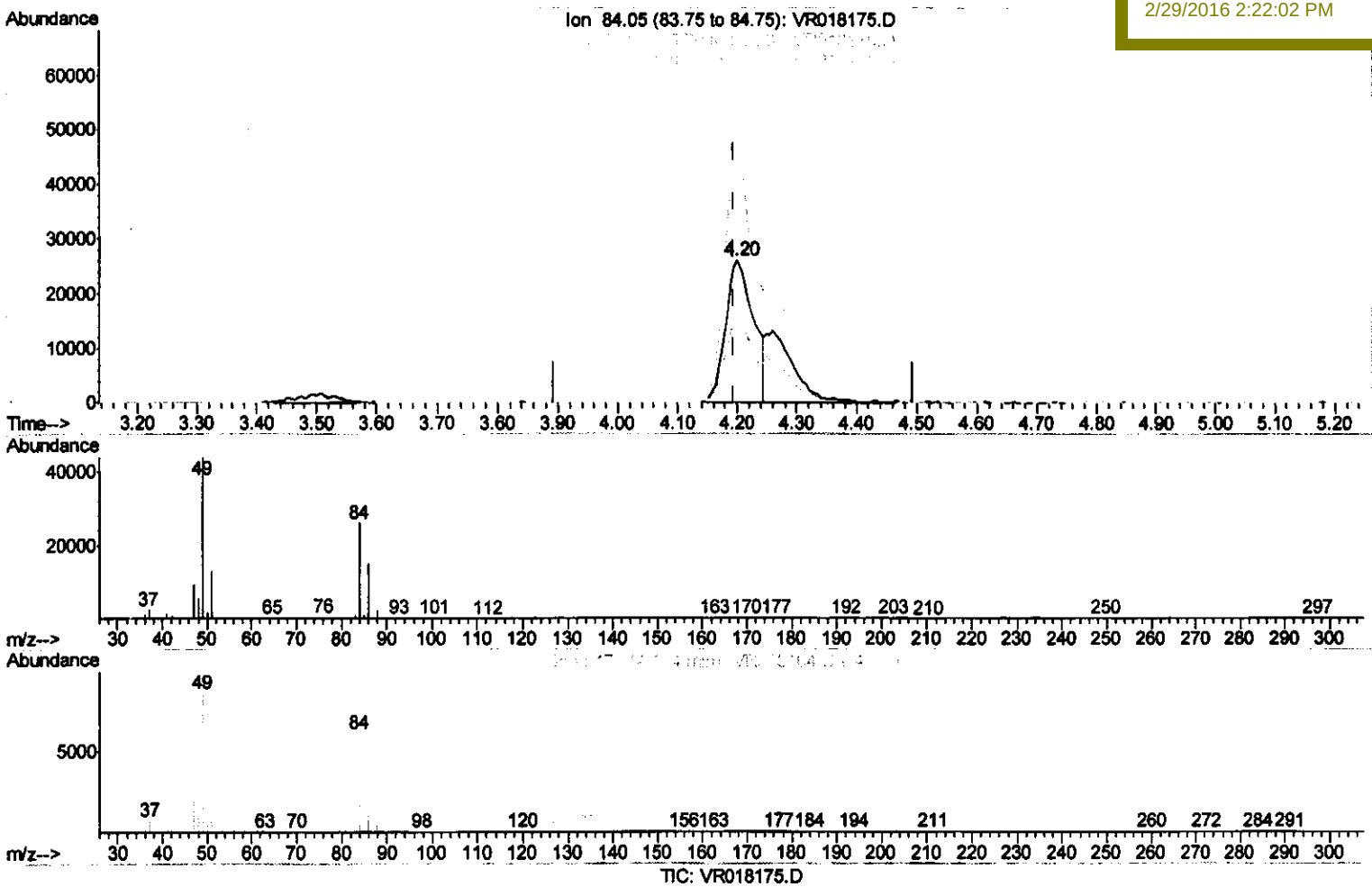
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018175.D
Acq On : 26 Feb 2016 15:39
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 27 01:15:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00559

Manual Integrations APPROVED
sam
2/29/2016 2:22:02 PM



TIC: VR018175.D

(16) Methylene chloride (T)

4.200min (+0.006) 3.34ug/L

response 84539

Ion	Exp%	Act%
84.05	100	100
86.00	58.60	57.30
49.10	171.30	167.81
0.00	0.00	0.00

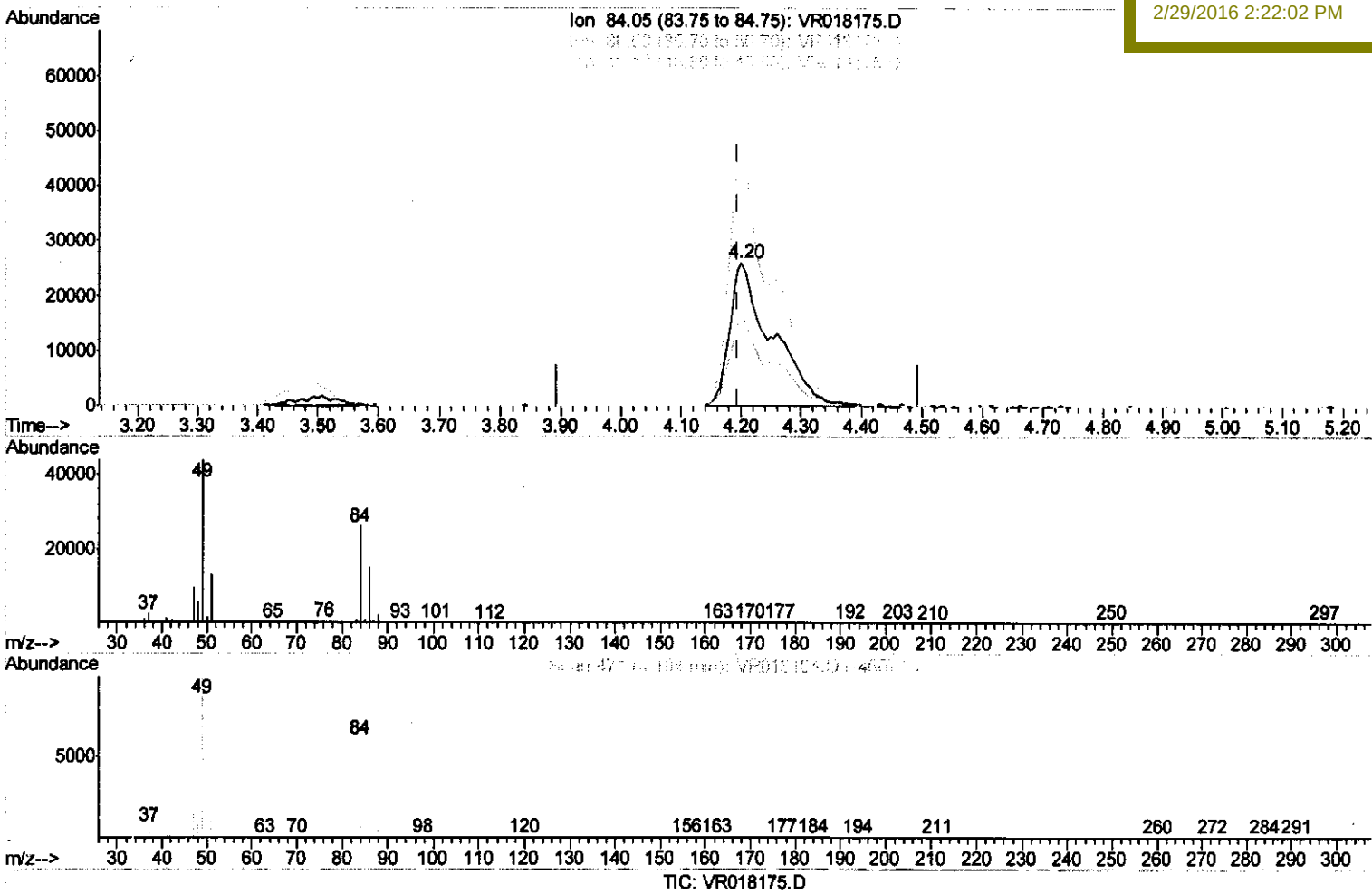
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018175.D
Acq On : 26 Feb 2016 15:39
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 27 01:15:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00559

Manual Integrations APPROVED
sam
2/29/2016 2:22:02 PM



(16) Methylene chloride (T)

4.200min (+0.006) 5.06ug/L m

response 128092

Ion	Exp%	Act%
84.05	100	100
86.00	58.60	57.30
49.10	171.30	167.81
0.00	0.00	0.00

M.D 03/01/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018175.D
Acq On : 26 Feb 2016 15:39
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 27 02:41:38 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00559

Manual Integrations APPROVED
sam
2/29/2016 2:22:02 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	503499	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	433220	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.12	152	177495	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.05	65	218039	5.07	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 101.40%			
7) Chloroethane-d5	2.50	69	165027	5.20	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 104.00%			
11) 1,1-Dichloroethene-d2	3.47	63	329962	5.37	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 107.40%			
20) 2-Butanone-d5	6.39	46	260918	49.46	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 98.92%			
24) Chloroform-d	7.02	84	347665	5.05	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.00%			
26) 1,2-Dichloroethane-d4	7.75	65	178461	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.00%			
32) Benzene-d6	7.71	84	675146	5.09	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.80%			
36) 1,2-Dichloropropane-d6	8.77	67	207521	4.90	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 98.00%			
41) Toluene-d8	9.86	98	650927	5.17	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.40%			
43) trans-1,3-Dichloropropene-	10.13	79	65301	4.61	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.20%			
46) 2-Hexanone-d5	10.48	63	194690	49.18	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 98.36%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	80118	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.40%			
64) 1,2-Dichlorobenzene-d4	13.42	152	146758	4.91	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	230447	5.86	ug/L	99
3) Chloromethane	1.90	50	252384	5.20	ug/L	99
5) Vinyl chloride	2.05	62	260226	5.40	ug/L	99
6) Bromomethane	2.39	94	128863	4.83	ug/L	99
8) Chloroethane	2.53	64	146136	5.17	ug/L	96
9) Trichlorofluoromethane	2.85	101	338135m	5.28	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	127873	5.55	ug/L	98
12) 1,1-Dichloroethene	3.49	96	126417	5.30	ug/L	89
13) Acetone	3.52	43	203294	46.81	ug/L	98
14) Carbon disulfide	3.81	76	341553	4.61	ug/L	98
15) Methyl Acetate	4.00	43	46179	4.37	ug/L	100
16) Methylene chloride	4.20	84	128092m	5.06	ug/L	
17) Methyl tert-butyl Ether	4.68	73	208877	4.67	ug/L	98
18) trans-1,2-Dichloroethene	4.67	96	149391	4.91	ug/L	95
19) 1,1-Dichloroethane	5.48	63	345359	4.91	ug/L	99
21) 2-Butanone	6.49	43	296472	47.28	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	156751	5.05	ug/L	97

M.D 03/01/16

M.D 03/01/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018175.D
Acq On : 26 Feb 2016 15:39
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 27 02:41:38 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00559

Manual Integrations APPROVED
sam
2/29/2016 2:22:02 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.87	128	51489	4.59	ug/L	96
25) Chloroform	7.05	83	320564	4.91	ug/L	99
27) 1,2-Dichloroethane	7.85	62	201170	4.58	ug/L	100
29) 1,1,1-Trichloroethane	7.27	97	244310	5.12	ug/L	99
30) Cyclohexane	7.37	56	312980	6.10	ug/L	100
31) Carbon tetrachloride	7.49	117	233400	5.06	ug/L	99
33) Benzene	7.76	78	733491	5.01	ug/L	100
34) Trichloroethene	8.59	95	178229	5.01	ug/L	98
35) Methylcyclohexane	8.84	83	267229	5.98	ug/L	99
37) 1,2-Dichloropropane	8.87	63	188515	4.74	ug/L	100
38) Bromodichloromethane	9.16	83	203112	4.59	ug/L	99
39) cis-1,3-Dichloropropene	9.60	75	242606	4.94	ug/L	99
40) 4-Methyl-2-pentanone	9.74	43	762896	48.57	ug/L	100
42) Toluene	9.92	91	782245	5.12	ug/L	99
44) trans-1,3-Dichloropropene	10.16	75	177348	4.63	ug/L	99
45) 1,1,2-Trichloroethane	10.33	97	81762	4.50	ug/L	98
47) Tetrachloroethene	10.41	164	141115	5.18	ug/L	99
48) 2-Hexanone	10.52	43	500614	46.73	ug/L	99
49) Dibromochloromethane	10.67	129	99529	4.37	ug/L	99
50) 1,2-Dibromoethane	10.78	107	71425	4.50	ug/L	100
51) Chlorobenzene	11.21	112	441590	4.95	ug/L	99
52) Ethylbenzene	11.29	91	896467	5.42	ug/L	98
53) m,p-Xylene	11.40	106	319585	5.33	ug/L	93
54) o-Xylene	11.73	106	287064	5.43	ug/L	96
55) Styrene	11.74	104	474097	5.33	ug/L	98
56) Isopropylbenzene	12.03	105	769642	5.86	ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.28	83	73177	4.60	ug/L	100
59) 1,2,3-Trichloropropane	12.33	75	62076	4.68	ug/L	99
61) Bromoform	11.91	173	41630	4.07	ug/L	98
62) 1,3-Dichlorobenzene	13.07	146	262655	5.10	ug/L	98
63) 1,4-Dichlorobenzene	13.15	146	280781	4.97	ug/L	97
65) 1,2-Dichlorobenzene	13.44	146	226010	4.88	ug/L	97
66) 1,2-Dibromo-3-chloropropan	14.06	75	8856	3.97	ug/L	99
67) 1,3,5-Trichlorobenzene	14.20	180	173156	5.01	ug/L	97
68) 1,2,4-trichlorobenzene	14.69	180	120695	4.72	ug/L	99
69) Naphthalene	14.91	128	136992	4.77	ug/L	99
70) 1,2,3-Trichlorobenzene	15.08	180	94427	4.61	ug/L	99

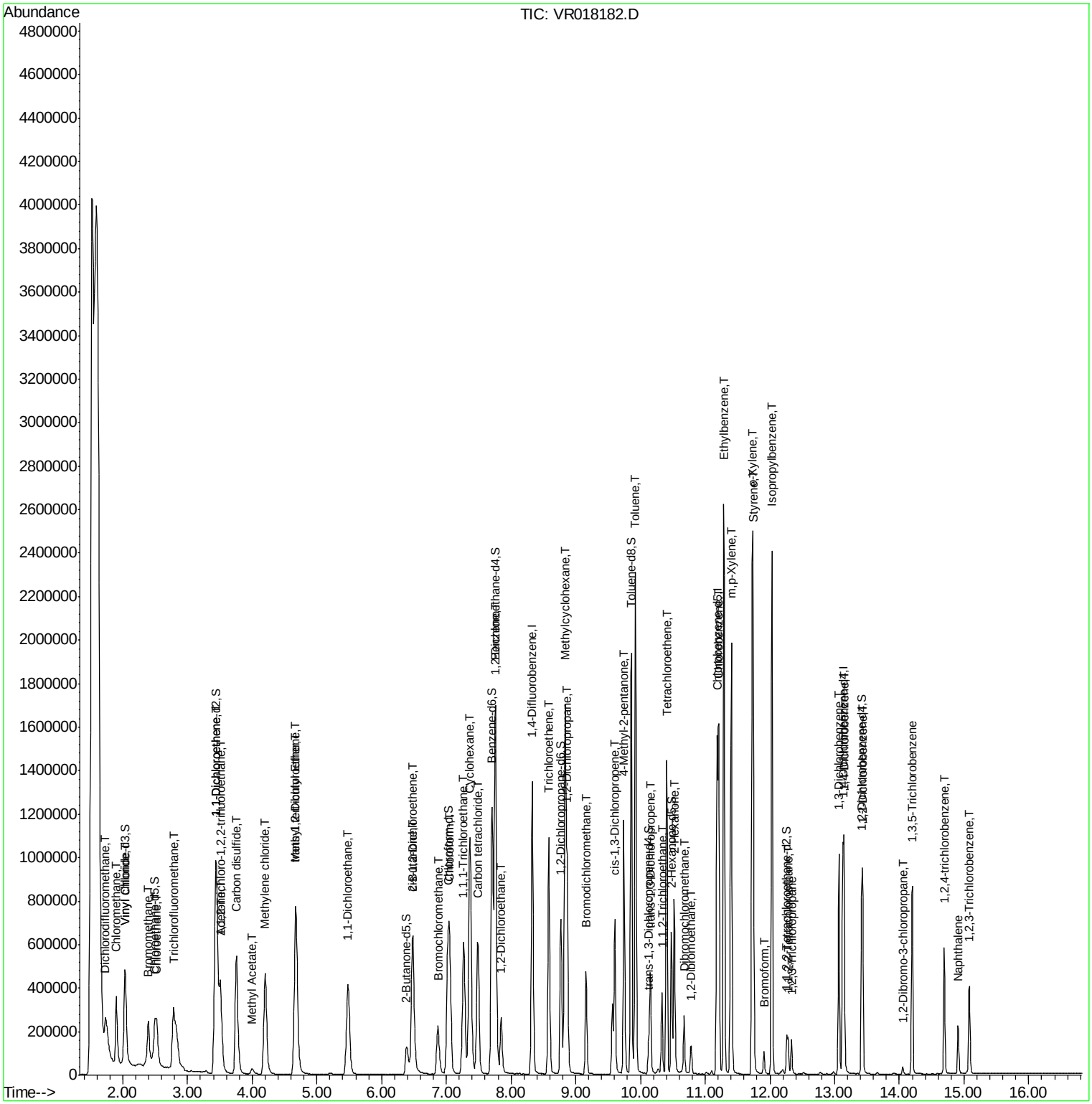
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018182.D
Acq On : 1 Mar 2016 16:18
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00565

Quant Time: Mar 02 03:28:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:21:24 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018182.D
Acq On : 1 Mar 2016 16:18
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00565

Quant Time: Mar 02 03:28:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:21:24 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	1075587	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	667757	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.12	152	203870	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	341374	4.10	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.00%			
7) Chloroethane-d5	2.50	69	270592	4.37	ug/L	0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 87.40%			
11) 1,1-Dichloroethene-d2	3.43	63	785930	4.60	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 92.00%			
20) 2-Butanone-d5	6.38	46	288955	49.96	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 99.92%			
24) Chloroform-d	7.02	84	559043	4.50	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.00%			
26) 1,2-Dichloroethane-d4	7.75	65	205915	4.51	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.20%			
32) Benzene-d6	7.70	84	1283375	4.61	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 92.20%			
36) 1,2-Dichloropropane-d6	8.77	67	319456	4.58	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 91.60%			
41) Toluene-d8	9.86	98	1138370	4.57	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 91.40%			
43) trans-1,3-Dichloropropene-	10.13	79	71481	4.51	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 90.20%			
46) 2-Hexanone-d5	10.48	63	197856	48.72	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 97.44%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	69265	4.44	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 88.80%			
64) 1,2-Dichlorobenzene-d4	13.42	152	141983	4.26	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 85.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.74	85	280264	4.10	ug/L	99
3) Chloromethane	1.89	50	390069	3.93	ug/L	98
5) Vinyl chloride	2.03	62	409058	4.19	ug/L	100
6) Bromomethane	2.39	94	201597	4.53	ug/L	98
8) Chloroethane	2.53	64	253191	4.41	ug/L	100
9) Trichlorofluoromethane	2.78	101	564330	4.58	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	227501	4.49	ug/L	99
12) 1,1-Dichloroethene	3.45	96	337578	4.86	ug/L	91
13) Acetone	3.51	43	220535	48.46	ug/L	98
14) Carbon disulfide	3.76	76	1156081	4.78	ug/L	98
15) Methyl Acetate	4.00	43	59904	5.04	ug/L	99
16) Methylene chloride	4.20	84	304246	5.35	ug/L	94
17) Methyl tert-butyl Ether	4.67	73	293821	5.09	ug/L	99
18) trans-1,2-Dichloroethene	4.67	96	351436	4.81	ug/L	97
19) 1,1-Dichloroethane	5.48	63	723311	4.82	ug/L	99
21) 2-Butanone	6.49	43	335320	51.96	ug/L	100
22) cis-1,2-Dichloroethene	6.48	96	303005	4.80	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018182.D
Acq On : 1 Mar 2016 16:18
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00565

Quant Time: Mar 02 03:28:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:21:24 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.87	128	77805	4.81	ug/L		95
25) Chloroform	7.05	83	560297	4.71	ug/L		100
27) 1,2-Dichloroethane	7.84	62	253663	4.80	ug/L		100
29) 1,1,1-Trichloroethane	7.27	97	521767	4.90	ug/L		99
30) Cyclohexane	7.36	56	745407	5.16	ug/L		99
31) Carbon tetrachloride	7.49	117	490686	4.98	ug/L		100
33) Benzene	7.76	78	1484464	4.87	ug/L		100
34) Trichloroethene	8.59	95	382370	4.81	ug/L		99
35) Methylcyclohexane	8.84	83	617040	5.21	ug/L		100
37) 1,2-Dichloropropane	8.87	63	313891	4.81	ug/L		100
38) Bromodichloromethane	9.16	83	289461	4.79	ug/L		97
39) cis-1,3-Dichloropropene	9.60	75	346027	5.07	ug/L		97
40) 4-Methyl-2-pentanone	9.74	43	807783	50.91	ug/L		100
42) Toluene	9.92	91	1470938	4.92	ug/L		98
44) trans-1,3-Dichloropropene	10.15	75	215696	4.99	ug/L		98
45) 1,1,2-Trichloroethane	10.33	97	101888	4.78	ug/L		99
47) Tetrachloroethene	10.41	164	285769	4.85	ug/L		99
48) 2-Hexanone	10.52	43	510445	50.53	ug/L		99
49) Dibromochloromethane	10.67	129	118459	4.67	ug/L		97
50) 1,2-Dibromoethane	10.78	107	80526	4.79	ug/L		96
51) Chlorobenzene	11.21	112	691182	4.82	ug/L		98
52) Ethylbenzene	11.29	91	1577924	4.96	ug/L		100
53) m,p-Xylene	11.40	106	574865	4.89	ug/L		100
54) o-Xylene	11.73	106	462514	4.94	ug/L		97
55) Styrene	11.74	104	669284	4.88	ug/L		99
56) Isopropylbenzene	12.03	105	1304672	5.03	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	70194	4.59	ug/L		99
59) 1,2,3-Trichloropropane	12.33	75	57904	4.74	ug/L		99
61) Bromoform	11.91	173	41124	4.78	ug/L		98
62) 1,3-Dichlorobenzene	13.06	146	332631	4.85	ug/L		99
63) 1,4-Dichlorobenzene	13.15	146	320142	4.73	ug/L		98
65) 1,2-Dichlorobenzene	13.44	146	242015	4.75	ug/L		98
66) 1,2-Dibromo-3-chloropropan	14.05	75	7742	4.90	ug/L	#	78
67) 1,3,5-Trichlorobenzene	14.20	180	239072	4.87	ug/L		99
68) 1,2,4-trichlorobenzene	14.69	180	150511	5.07	ug/L		100
69) Naphthalene	14.91	128	147050	5.53	ug/L		99
70) 1,2,3-Trichlorobenzene	15.08	180	112799	5.27	ug/L		98

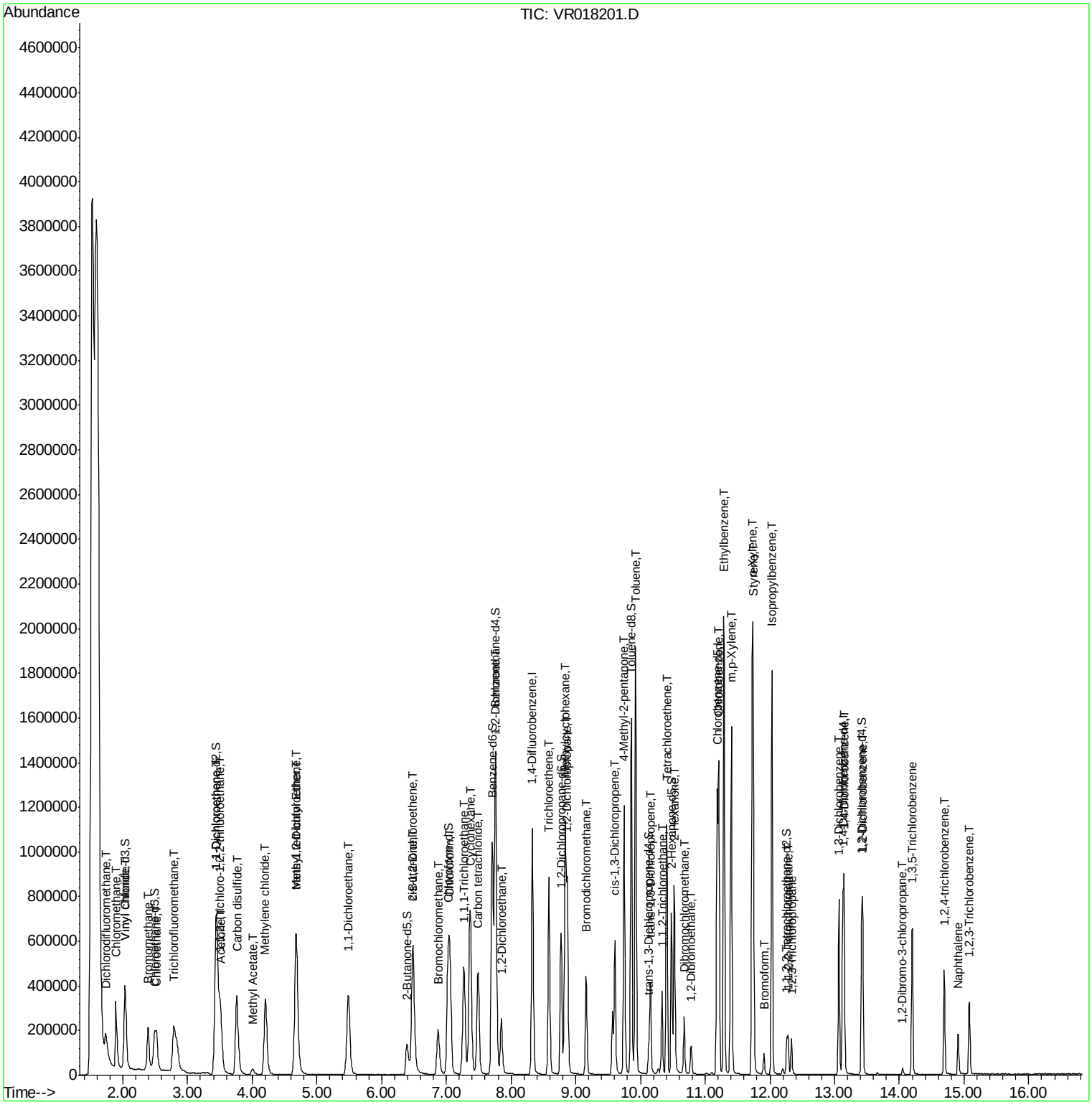
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018201.D
Acq On : 2 Mar 2016 2:46
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VSTD00566

Quant Time: Mar 02 08:00:52 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018201.D
Acq On : 2 Mar 2016 2:46
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00566

Quant Time: Mar 02 08:00:52 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	826672	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	531688	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.12	152	153434	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	272079	4.25	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 85.00%			
7) Chloroethane-d5	2.49	69	206113	4.33	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 86.60%			
11) 1,1-Dichloroethene-d2	3.44	63	574847	4.38	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 87.60%			
20) 2-Butanone-d5	6.39	46	295592	66.50	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 133.00%#			
24) Chloroform-d	7.02	84	491503	5.14	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.80%			
26) 1,2-Dichloroethane-d4	7.75	65	197876	5.64	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 112.80%			
32) Benzene-d6	7.71	84	1065055	4.80	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.00%			
36) 1,2-Dichloropropane-d6	8.77	67	277900	5.01	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 100.20%			
41) Toluene-d8	9.86	98	912848	4.60	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.00%			
43) trans-1,3-Dichloropropene-	10.13	79	59514	4.71	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 94.20%			
46) 2-Hexanone-d5	10.48	63	206832	63.96	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 127.92%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	68669	5.52	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 110.40%			
64) 1,2-Dichlorobenzene-d4	13.42	152	116067	4.62	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 92.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.74	85	210282	4.00	ug/L	98
3) Chloromethane	1.89	50	337785	4.43	ug/L	100
5) Vinyl chloride	2.04	62	332006	4.42	ug/L	100
6) Bromomethane	2.39	94	170677	4.99	ug/L	98
8) Chloroethane	2.52	64	200543	4.54	ug/L	98
9) Trichlorofluoromethane	2.79	101	432672	4.57	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	3.50	101	161108	4.14	ug/L	99
12) 1,1-Dichloroethene	3.45	96	249591	4.68	ug/L	94
13) Acetone	3.52	43	218300	62.42	ug/L	99
14) Carbon disulfide	3.76	76	782725	4.21	ug/L	99
15) Methyl Acetate	4.01	43	60827	6.66	ug/L	98
16) Methylene chloride	4.21	84	225685	5.16	ug/L	98
17) Methyl tert-butyl Ether	4.67	73	255692	5.76	ug/L	99
18) trans-1,2-Dichloroethene	4.67	96	278302	4.96	ug/L	99
19) 1,1-Dichloroethane	5.49	63	606432	5.25	ug/L	99
21) 2-Butanone	6.49	43	336208	67.78	ug/L	100
22) cis-1,2-Dichloroethene	6.48	96	263504	5.43	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018201.D
Acq On : 2 Mar 2016 2:46
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00566

Quant Time: Mar 02 08:00:52 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.88	128	69866	5.62	ug/L	95
25) Chloroform	7.06	83	497758	5.44	ug/L	100
27) 1,2-Dichloroethane	7.85	62	242114	5.96	ug/L	99
29) 1,1,1-Trichloroethane	7.27	97	403904	4.76	ug/L	99
30) Cyclohexane	7.36	56	488190	4.24	ug/L	100
31) Carbon tetrachloride	7.49	117	365292	4.65	ug/L	99
33) Benzene	7.76	78	1233361	5.09	ug/L	100
34) Trichloroethene	8.59	95	302972	4.79	ug/L	99
35) Methylcyclohexane	8.84	83	400977	4.25	ug/L	98
37) 1,2-Dichloropropane	8.87	63	282314	5.44	ug/L	100
38) Bromodichloromethane	9.16	83	264761	5.51	ug/L	97
39) cis-1,3-Dichloropropene	9.60	75	295319	5.43	ug/L	97
40) 4-Methyl-2-pentanone	9.75	43	841159	66.58	ug/L	99
42) Toluene	9.92	91	1201799	5.05	ug/L	99
44) trans-1,3-Dichloropropene	10.15	75	186230	5.41	ug/L	96
45) 1,1,2-Trichloroethane	10.33	97	98825	5.83	ug/L	98
47) Tetrachloroethene	10.41	164	209459	4.46	ug/L	99
48) 2-Hexanone	10.52	43	537763	66.85	ug/L	99
49) Dibromochloromethane	10.67	129	112531	5.57	ug/L	97
50) 1,2-Dibromoethane	10.78	107	77205	5.77	ug/L	98
51) Chlorobenzene	11.21	112	572572	5.02	ug/L	98
52) Ethylbenzene	11.29	91	1241118	4.90	ug/L	100
53) m,p-Xylene	11.40	106	444229	4.75	ug/L	99
54) o-Xylene	11.73	106	371628	4.98	ug/L	100
55) Styrene	11.74	104	553509	5.07	ug/L	99
56) Isopropylbenzene	12.03	105	974154	4.71	ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.28	83	69121	5.68	ug/L	97
59) 1,2,3-Trichloropropane	12.33	75	57545	5.92	ug/L	98
61) Bromoform	11.91	173	36013	5.57	ug/L	97
62) 1,3-Dichlorobenzene	13.06	146	261208	5.06	ug/L	98
63) 1,4-Dichlorobenzene	13.15	146	255873	5.02	ug/L	97
65) 1,2-Dichlorobenzene	13.44	146	200023	5.21	ug/L	100
66) 1,2-Dibromo-3-chloropropan	14.05	75	6354	5.34	ug/L	91
67) 1,3,5-Trichlorobenzene	14.20	180	180471	4.89	ug/L	98
68) 1,2,4-trichlorobenzene	14.69	180	117140	5.24	ug/L	100
69) Naphthalene	14.91	128	124579	6.23	ug/L	99
70) 1,2,3-Trichlorobenzene	15.08	180	91400	5.67	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

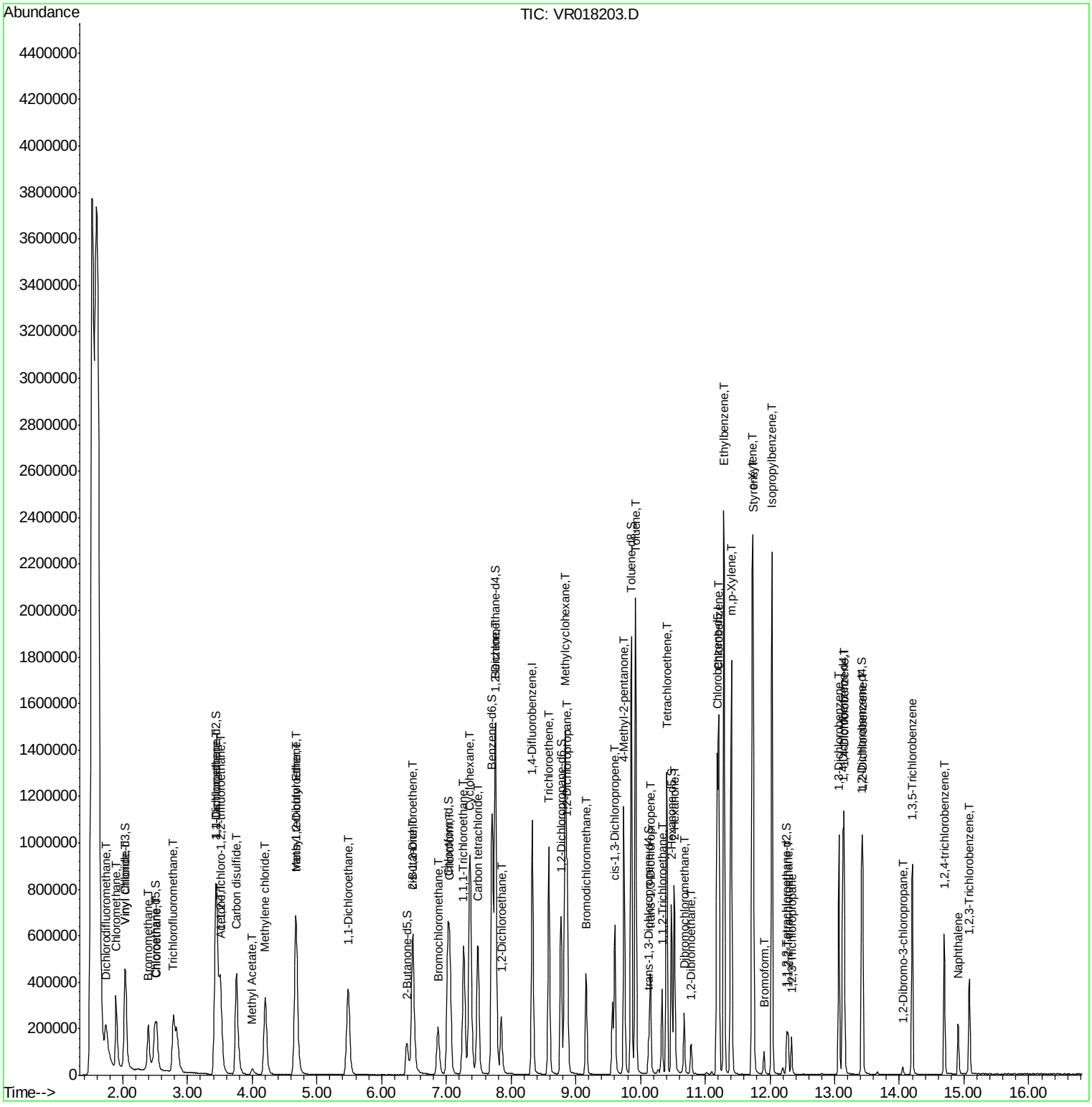
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018203.D
Acq On : 2 Mar 2016 11:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 03 02:27:11 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00567

Manual Integrations APPROVED
MMdadoda
3/3/2016 3:37:18 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018203.D
Acq On : 2 Mar 2016 11:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VSTD00567

Manual Integrations APPROVED
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3/3/2016 3:37:18 PM

Quant Time: Mar 03 02:27:11 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	865131	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	575720	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	194708	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	337249	5.03	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 100.60%			
7) Chloroethane-d5	2.50	69	245090	4.92	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 98.40%			
11) 1,1-Dichloroethene-d2	3.43	63	685374	4.99	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 99.80%			
20) 2-Butanone-d5	6.38	46	297232	63.90	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 127.80%			
24) Chloroform-d	7.02	84	540484	5.41	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 108.20%			
26) 1,2-Dichloroethane-d4	7.75	65	209367	5.70	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 114.00%			
32) Benzene-d6	7.70	84	1176025	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.00%			
36) 1,2-Dichloropropane-d6	8.78	67	300480	5.00	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 100.00%			
41) Toluene-d8	9.86	98	1075839	5.01	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.20%			
43) trans-1,3-Dichloropropene-	10.13	79	67951	4.97	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 99.40%			
46) 2-Hexanone-d5	10.48	63	212823	60.78	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 121.56%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	75181	5.58	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 111.60%			
64) 1,2-Dichlorobenzene-d4	13.42	152	159151	5.00	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 100.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.74	85	308887	5.62	ug/L	100
3) Chloromethane	1.89	50	400568	5.02	ug/L	98
5) Vinyl chloride	2.04	62	431939	5.50	ug/L	98
6) Bromomethane	2.39	94	181908	5.09	ug/L	100
8) Chloroethane	2.52	64	227035	4.91	ug/L	100
9) Trichlorofluoromethane	2.78	101	541548m	5.46	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	221973	5.44	ug/L	99
12) 1,1-Dichloroethene	3.45	96	290407	5.20	ug/L	85
13) Acetone	3.52	43	224341	61.29	ug/L	98
14) Carbon disulfide	3.76	76	937216	4.82	ug/L	99
15) Methyl Acetate	4.00	43	55892	5.85	ug/L	98
16) Methylene chloride	4.20	84	219327	4.79	ug/L	97
17) Methyl tert-butyl Ether	4.67	73	258652	5.57	ug/L	99
18) trans-1,2-Dichloroethene	4.67	96	304105	5.18	ug/L	100
19) 1,1-Dichloroethane	5.48	63	628641	5.20	ug/L	97
21) 2-Butanone	6.49	43	335448	64.62	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	268246	5.29	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018203.D
Acq On : 2 Mar 2016 11:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00567

Manual Integrations APPROVED
MMdadoda
3/3/2016 3:37:18 PM

Quant Time: Mar 03 02:27:11 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.88	128	72425	5.57	ug/L		87
25) Chloroform	7.05	83	508537	5.31	ug/L		99
27) 1,2-Dichloroethane	7.85	62	241227	5.68	ug/L		99
29) 1,1,1-Trichloroethane	7.27	97	453502	4.94	ug/L		98
30) Cyclohexane	7.36	56	642045	5.15	ug/L		100
31) Carbon tetrachloride	7.49	117	447151	5.26	ug/L		100
33) Benzene	7.76	78	1295373	4.93	ug/L		100
34) Trichloroethene	8.59	95	333995	4.88	ug/L		100
35) Methylcyclohexane	8.84	83	540335	5.29	ug/L		99
37) 1,2-Dichloropropane	8.87	63	284066	5.05	ug/L		100
38) Bromodichloromethane	9.16	83	267922	5.15	ug/L		95
39) cis-1,3-Dichloropropene	9.60	75	313852	5.33	ug/L		97
40) 4-Methyl-2-pentanone	9.74	43	806340	58.94	ug/L		100
42) Toluene	9.92	91	1322979	5.13	ug/L		99
44) trans-1,3-Dichloropropene	10.15	75	201527	5.41	ug/L		99
45) 1,1,2-Trichloroethane	10.33	97	95708	5.21	ug/L		98
47) Tetrachloroethene	10.41	164	257885	5.08	ug/L		98
48) 2-Hexanone	10.52	43	528228	60.65	ug/L		99
49) Dibromochloromethane	10.67	129	114385	5.23	ug/L		100
50) 1,2-Dibromoethane	10.78	107	79280	5.47	ug/L		100
51) Chlorobenzene	11.21	112	634288	5.14	ug/L		99
52) Ethylbenzene	11.29	91	1442553	5.26	ug/L		99
53) m,p-Xylene	11.40	106	515083	5.08	ug/L		95
54) o-Xylene	11.73	106	428257	5.30	ug/L		99
55) Styrene	11.74	104	631255	5.34	ug/L		100
56) Isopropylbenzene	12.03	105	1223822	5.47	ug/L		100
58) 1,1,2,2-Tetrachloroethane	12.28	83	71412	5.42	ug/L	#	98
59) 1,2,3-Trichloropropane	12.33	75	58959	5.60	ug/L		97
61) Bromoform	11.91	173	37848	4.61	ug/L		97
62) 1,3-Dichlorobenzene	13.06	146	335971	5.13	ug/L		99
63) 1,4-Dichlorobenzene	13.15	146	327859	5.07	ug/L		98
65) 1,2-Dichlorobenzene	13.44	146	250524	5.15	ug/L		97
66) 1,2-Dibromo-3-chloropropan	14.05	75	7449	4.94	ug/L	#	89
67) 1,3,5-Trichlorobenzene	14.20	180	240787	5.14	ug/L		99
68) 1,2,4-trichlorobenzene	14.69	180	151188	5.33	ug/L		99
69) Naphthalene	14.91	128	143038	5.64	ug/L		99
70) 1,2,3-Trichlorobenzene	15.08	180	108681	5.31	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

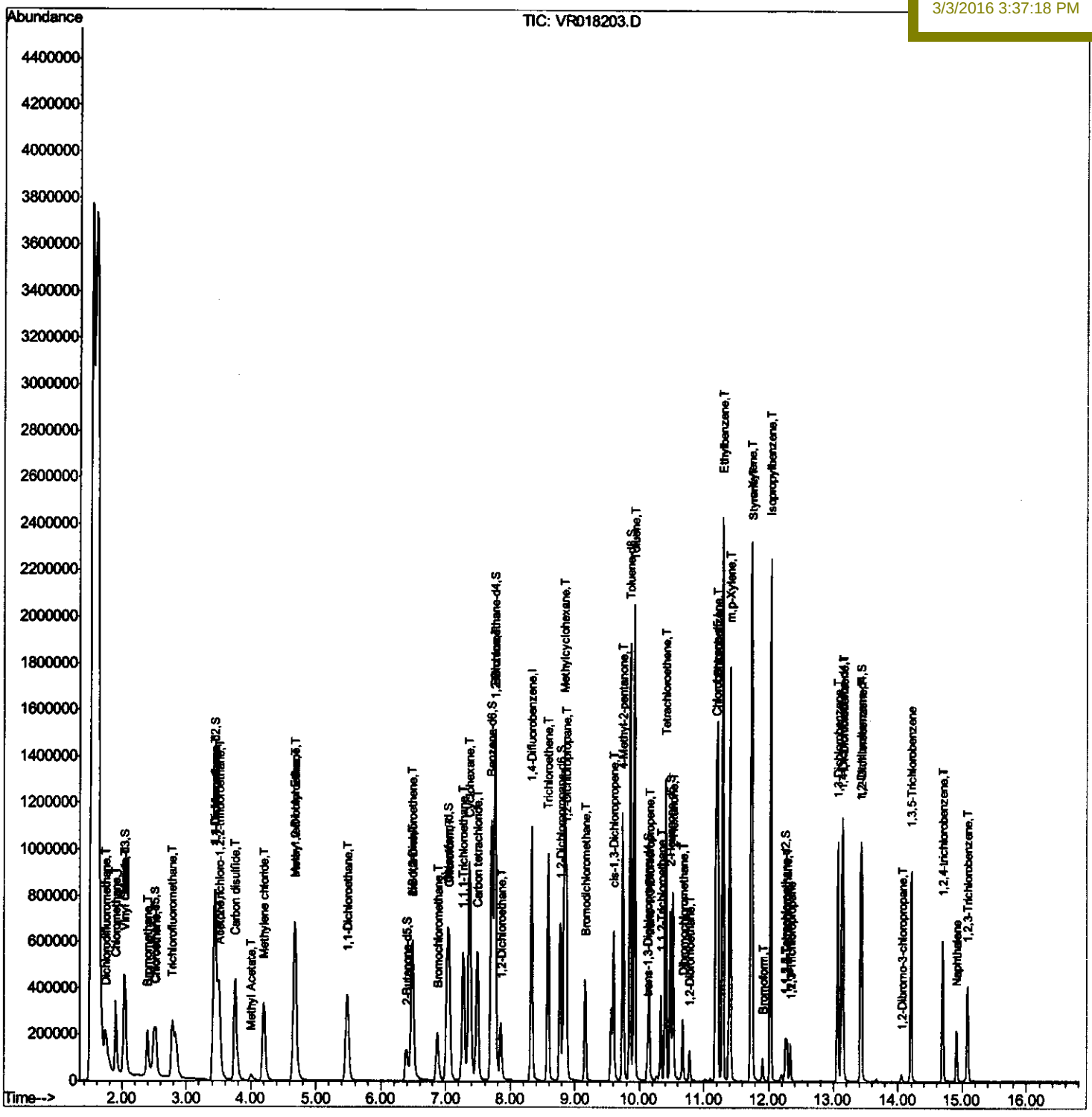
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018203.D
Acq On : 2 Mar 2016 11:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 03 02:27:11 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00567

Manual Integrations APPROVED
MMdadoda
3/3/2016 3:37:18 PM



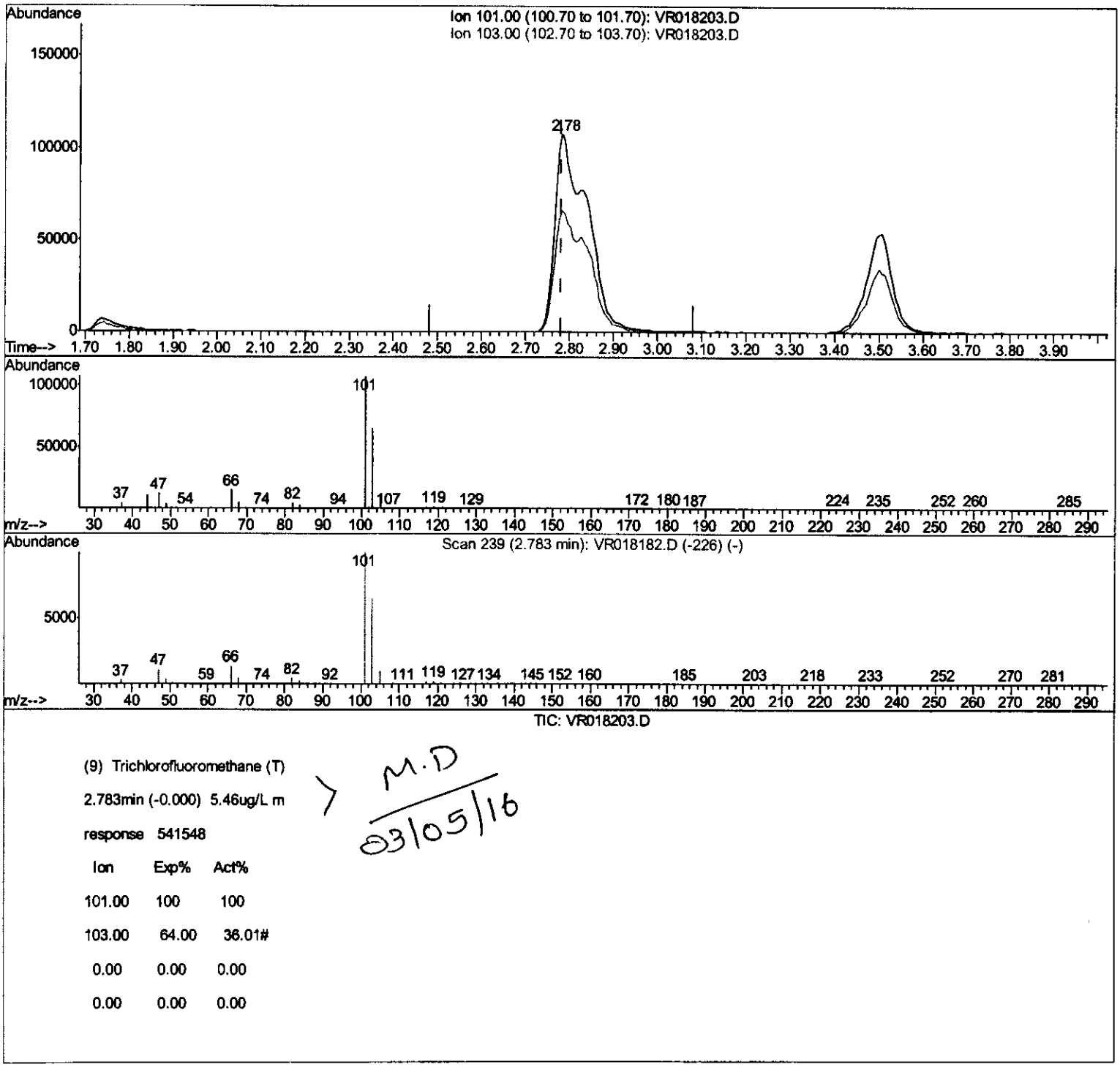
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018203.D
Acq On : 2 Mar 2016 11:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 03 02:25:18 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00567

Manual Integrations APPROVED
MMdadoda
3/3/2016 3:37:18 PM



(9) Trichlorofluoromethane (T)

2.783min (-0.000) 5.46ug/L m

response 541548

Ion	Exp%	Act%
101.00	100	100
103.00	64.00	36.01#
0.00	0.00	0.00
0.00	0.00	0.00

M.D
03/05/16

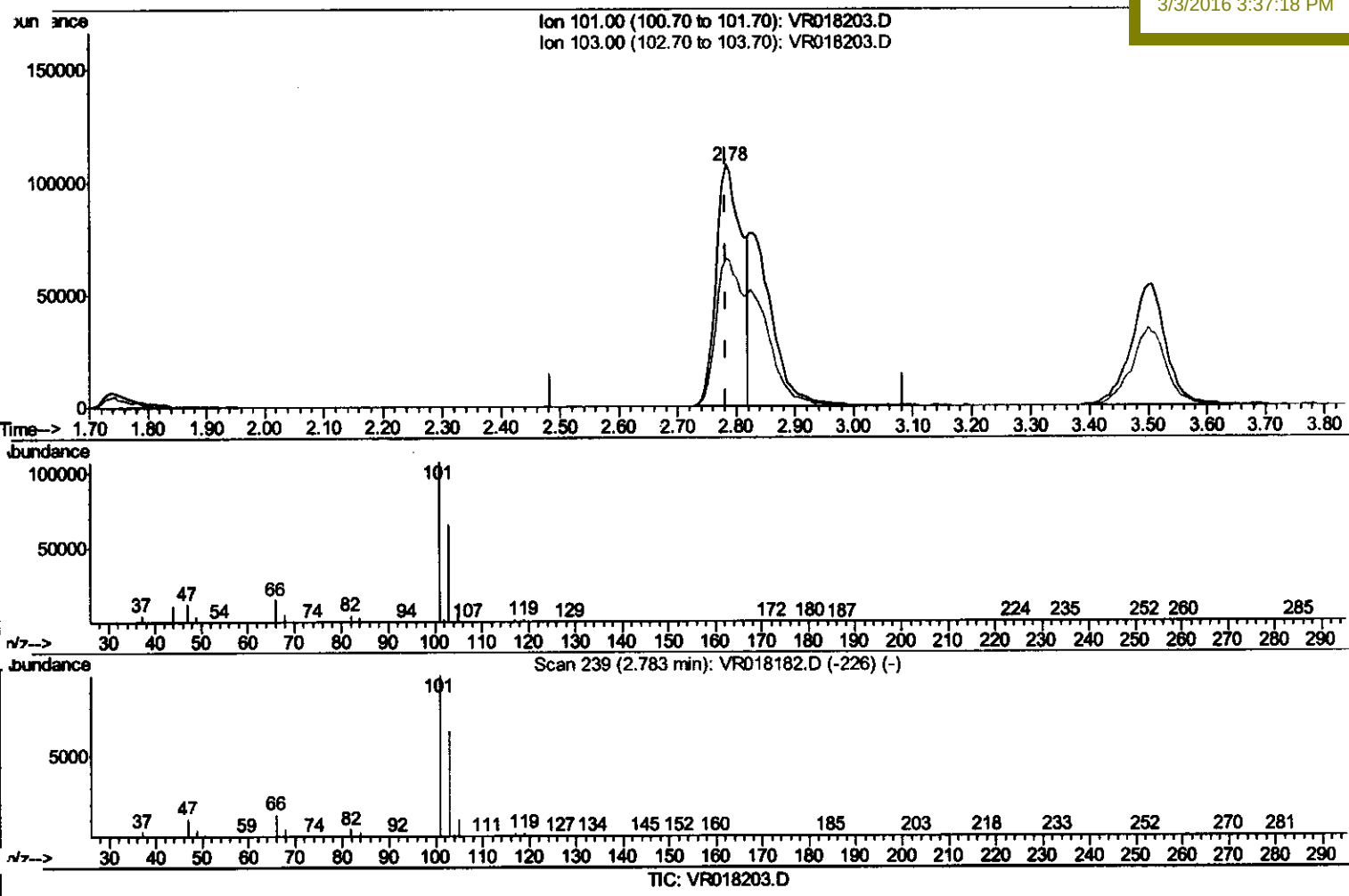
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018203.D
Acq On : 2 Mar 2016 11:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 03 02:25:18 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00567

Manual Integrations APPROVED
MMdadoda
3/3/2016 3:37:18 PM



(9) Trichlorofluoromethane (T)

2.783min (-0.000) 3.35ug/L

response 332292

Ion	Exp%	Act%
101.00	100	100
103.00	64.00	58.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018203.D
Acq On : 2 Mar 2016 11:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 03 02:27:11 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00567

Manual Integrations APPROVED
MMdadoda
3/3/2016 3:37:18 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	865131	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	575720	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	194708	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	337249	5.03	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 100.60%			
7) Chloroethane-d5	2.50	69	245090	4.92	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 98.40%			
11) 1,1-Dichloroethene-d2	3.43	63	685374	4.99	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 99.80%			
20) 2-Butanone-d5	6.38	46	297232	63.90	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 127.80%			
24) Chloroform-d	7.02	84	540484	5.41	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 108.20%			
26) 1,2-Dichloroethane-d4	7.75	65	209367	5.70	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 114.00%			
32) Benzene-d6	7.70	84	1176025	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.00%			
36) 1,2-Dichloropropane-d6	8.78	67	300480	5.00	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 100.00%			
41) Toluene-d8	9.86	98	1075839	5.01	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.20%			
43) trans-1,3-Dichloropropene-	10.13	79	67951	4.97	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 99.40%			
46) 2-Hexanone-d5	10.48	63	212823	60.78	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 121.56%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	75181	5.58	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 111.60%			
64) 1,2-Dichlorobenzene-d4	13.42	152	159151	5.00	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 100.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.74	85	308887	5.62	ug/L	100
3) Chloromethane	1.89	50	400568	5.02	ug/L	98
5) Vinyl chloride	2.04	62	431939	5.50	ug/L	98
6) Bromomethane	2.39	94	181908	5.09	ug/L	100
8) Chloroethane	2.52	64	227035	4.91	ug/L	100
9) Trichlorofluoromethane	2.78	101	541548m	5.46	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	221973	5.44	ug/L	99
12) 1,1-Dichloroethene	3.45	96	290407	5.20	ug/L	85
13) Acetone	3.52	43	224341	61.29	ug/L	98
14) Carbon disulfide	3.76	76	937216	4.82	ug/L	99
15) Methyl Acetate	4.00	43	55892	5.85	ug/L	98
16) Methylene chloride	4.20	84	219327	4.79	ug/L	97
17) Methyl tert-butyl Ether	4.67	73	258652	5.57	ug/L	99
18) trans-1,2-Dichloroethene	4.67	96	304105	5.18	ug/L	100
19) 1,1-Dichloroethane	5.48	63	628641	5.20	ug/L	97
21) 2-Butanone	6.49	43	335448	64.62	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	268246	5.29	ug/L	98

M.D 03/05/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018203.D
Acq On : 2 Mar 2016 11:27
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 03 02:27:11 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00567

Manual Integrations APPROVED
MMdadoda
3/3/2016 3:37:18 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.88	128	72425	5.57	ug/L		87
25) Chloroform	7.05	83	508537	5.31	ug/L		99
27) 1,2-Dichloroethane	7.85	62	241227	5.68	ug/L		99
29) 1,1,1-Trichloroethane	7.27	97	453502	4.94	ug/L		98
30) Cyclohexane	7.36	56	642045	5.15	ug/L		100
31) Carbon tetrachloride	7.49	117	447151	5.26	ug/L		100
33) Benzene	7.76	78	1295373	4.93	ug/L		100
34) Trichloroethene	8.59	95	333995	4.88	ug/L		100
35) Methylcyclohexane	8.84	83	540335	5.29	ug/L		99
37) 1,2-Dichloropropane	8.87	63	284066	5.05	ug/L		100
38) Bromodichloromethane	9.16	83	267922	5.15	ug/L		95
39) cis-1,3-Dichloropropene	9.60	75	313852	5.33	ug/L		97
40) 4-Methyl-2-pentanone	9.74	43	806340	58.94	ug/L		100
42) Toluene	9.92	91	1322979	5.13	ug/L		99
44) trans-1,3-Dichloropropene	10.15	75	201527	5.41	ug/L		99
45) 1,1,2-Trichloroethane	10.33	97	95708	5.21	ug/L		98
47) Tetrachloroethene	10.41	164	257885	5.08	ug/L		98
48) 2-Hexanone	10.52	43	528228	60.65	ug/L		99
49) Dibromochloromethane	10.67	129	114385	5.23	ug/L		100
50) 1,2-Dibromoethane	10.78	107	79280	5.47	ug/L		100
51) Chlorobenzene	11.21	112	634288	5.14	ug/L		99
52) Ethylbenzene	11.29	91	1442553	5.26	ug/L		99
53) m,p-Xylene	11.40	106	515083	5.08	ug/L		95
54) o-Xylene	11.73	106	428257	5.30	ug/L		99
55) Styrene	11.74	104	631255	5.34	ug/L		100
56) Isopropylbenzene	12.03	105	1223822	5.47	ug/L		100
58) 1,1,2,2-Tetrachloroethane	12.28	83	71412	5.42	ug/L	#	98
59) 1,2,3-Trichloropropane	12.33	75	58959	5.60	ug/L		97
61) Bromoform	11.91	173	37848	4.61	ug/L		97
62) 1,3-Dichlorobenzene	13.06	146	335971	5.13	ug/L		99
63) 1,4-Dichlorobenzene	13.15	146	327859	5.07	ug/L		98
65) 1,2-Dichlorobenzene	13.44	146	250524	5.15	ug/L		97
66) 1,2-Dibromo-3-chloropropan	14.05	75	7449	4.94	ug/L	#	89
67) 1,3,5-Trichlorobenzene	14.20	180	240787	5.14	ug/L		99
68) 1,2,4-trichlorobenzene	14.69	180	151188	5.33	ug/L		99
69) Naphthalene	14.91	128	143038	5.64	ug/L		99
70) 1,2,3-Trichlorobenzene	15.08	180	108681	5.31	ug/L		99

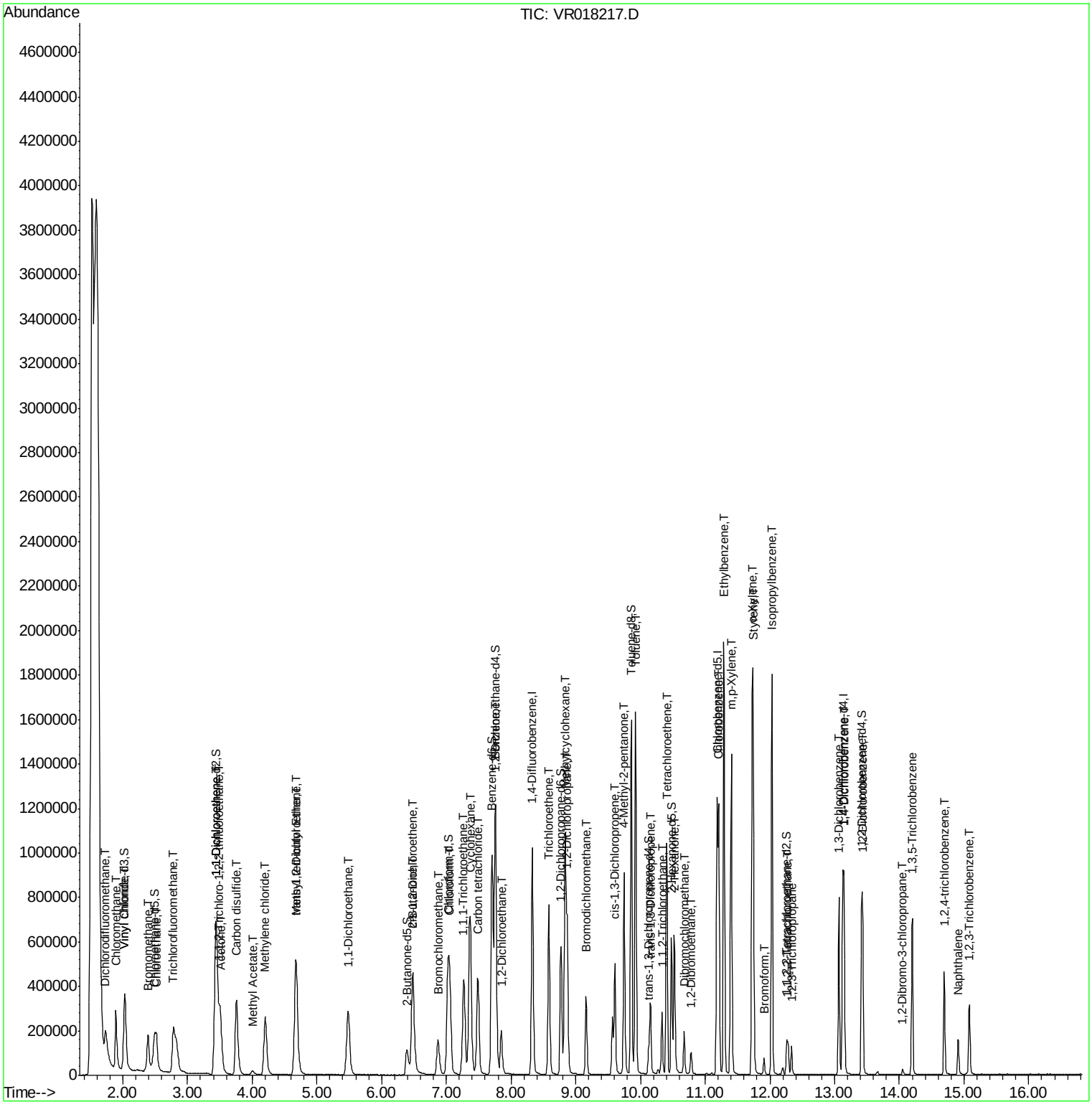
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018217.D
Acq On : 2 Mar 2016 20:00
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00568

Quant Time: Mar 03 02:49:37 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Mar 03 02:31:02 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018217.D
Acq On : 2 Mar 2016 20:00
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00568

Quant Time: Mar 03 02:49:37 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Mar 03 02:31:02 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	785691	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	516655	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.12	152	175560	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.02	65	269688	4.43	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 88.60%			
7) Chloroethane-d5	2.49	69	210756	4.65	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.00%			
11) 1,1-Dichloroethene-d2	3.43	63	552787	4.43	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 88.60%			
20) 2-Butanone-d5	6.39	46	253055	59.90	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 119.80%			
24) Chloroform-d	7.02	84	451982	4.98	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.60%			
26) 1,2-Dichloroethane-d4	7.75	65	178223	5.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 106.80%			
32) Benzene-d6	7.70	84	988733	4.59	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 91.80%			
36) 1,2-Dichloropropane-d6	8.77	67	256289	4.75	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 95.00%			
41) Toluene-d8	9.86	98	904035	4.69	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.80%			
43) trans-1,3-Dichloropropene-	10.13	79	55960	4.56	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.20%			
46) 2-Hexanone-d5	10.48	63	181369	57.72	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 115.44%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	63375	5.25	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 105.00%			
64) 1,2-Dichlorobenzene-d4	13.42	152	132599	4.62	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 92.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.74	85	237429	4.75	ug/L	98
3) Chloromethane	1.89	50	307126	4.24	ug/L	98
5) Vinyl chloride	2.03	62	320681	4.50	ug/L	99
6) Bromomethane	2.39	94	150253	4.63	ug/L	96
8) Chloroethane	2.52	64	185009	4.41	ug/L	97
9) Trichlorofluoromethane	2.79	101	425030	4.72	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	3.49	101	164377	4.44	ug/L	98
12) 1,1-Dichloroethene	3.45	96	222550	4.39	ug/L	98
13) Acetone	3.52	43	168842	50.80	ug/L	98
14) Carbon disulfide	3.76	76	705338	3.99	ug/L	99
15) Methyl Acetate	4.01	43	43162	4.98	ug/L	96
16) Methylene chloride	4.20	84	169641	4.08	ug/L	95
17) Methyl tert-butyl Ether	4.67	73	191592	4.54	ug/L	99
18) trans-1,2-Dichloroethene	4.67	96	230616	4.32	ug/L	97
19) 1,1-Dichloroethane	5.48	63	489690	4.46	ug/L	100
21) 2-Butanone	6.49	43	252228	53.50	ug/L	100
22) cis-1,2-Dichloroethene	6.48	96	206804	4.49	ug/L #	98

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018217.D
Acq On : 2 Mar 2016 20:00
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00568

Quant Time: Mar 03 02:49:37 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Mar 03 02:31:02 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.88	128	53682	4.54	ug/L		90
25) Chloroform	7.05	83	405373	4.66	ug/L		100
27) 1,2-Dichloroethane	7.85	62	192670	4.99	ug/L		98
29) 1,1,1-Trichloroethane	7.27	97	359784	4.37	ug/L		97
30) Cyclohexane	7.37	56	475748	4.25	ug/L		99
31) Carbon tetrachloride	7.49	117	341947	4.48	ug/L		99
33) Benzene	7.76	78	1022541	4.34	ug/L		100
34) Trichloroethene	8.59	95	265492	4.32	ug/L		98
35) Methylcyclohexane	8.84	83	388459	4.24	ug/L		99
37) 1,2-Dichloropropane	8.87	63	221680	4.39	ug/L		100
38) Bromodichloromethane	9.16	83	209109	4.48	ug/L		97
39) cis-1,3-Dichloropropene	9.60	75	241545	4.57	ug/L		96
40) 4-Methyl-2-pentanone	9.75	43	631063	51.40	ug/L		99
42) Toluene	9.92	91	1052688	4.55	ug/L		98
44) trans-1,3-Dichloropropene	10.15	75	149502	4.47	ug/L		99
45) 1,1,2-Trichloroethane	10.33	97	74390	4.52	ug/L		96
47) Tetrachloroethene	10.41	164	198884	4.36	ug/L		98
48) 2-Hexanone	10.52	43	416324	53.26	ug/L		98
49) Dibromochloromethane	10.67	129	85644	4.36	ug/L		97
50) 1,2-Dibromoethane	10.78	107	59776	4.60	ug/L	#	93
51) Chlorobenzene	11.21	112	501608	4.53	ug/L		97
52) Ethylbenzene	11.29	91	1150663	4.68	ug/L		99
53) m,p-Xylene	11.40	106	411642	4.53	ug/L		95
54) o-Xylene	11.73	106	336573	4.64	ug/L		99
55) Styrene	11.74	104	489681	4.62	ug/L		99
56) Isopropylbenzene	12.03	105	971221	4.84	ug/L		100
58) 1,1,2,2-Tetrachloroethane	12.28	83	54777	4.63	ug/L		97
59) 1,2,3-Trichloropropane	12.33	75	46208	4.89	ug/L		97
61) Bromoform	11.91	173	28699	3.88	ug/L		97
62) 1,3-Dichlorobenzene	13.06	146	256351	4.34	ug/L		96
63) 1,4-Dichlorobenzene	13.15	146	257155	4.41	ug/L		97
65) 1,2-Dichlorobenzene	13.44	146	192813	4.39	ug/L		99
66) 1,2-Dibromo-3-chloropropan	14.06	75	5255	3.86	ug/L	#	75
67) 1,3,5-Trichlorobenzene	14.20	180	182256	4.31	ug/L		99
68) 1,2,4-trichlorobenzene	14.69	180	114002	4.46	ug/L		99
69) Naphthalene	14.91	128	106084	4.64	ug/L		99
70) 1,2,3-Trichlorobenzene	15.08	180	85021	4.61	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

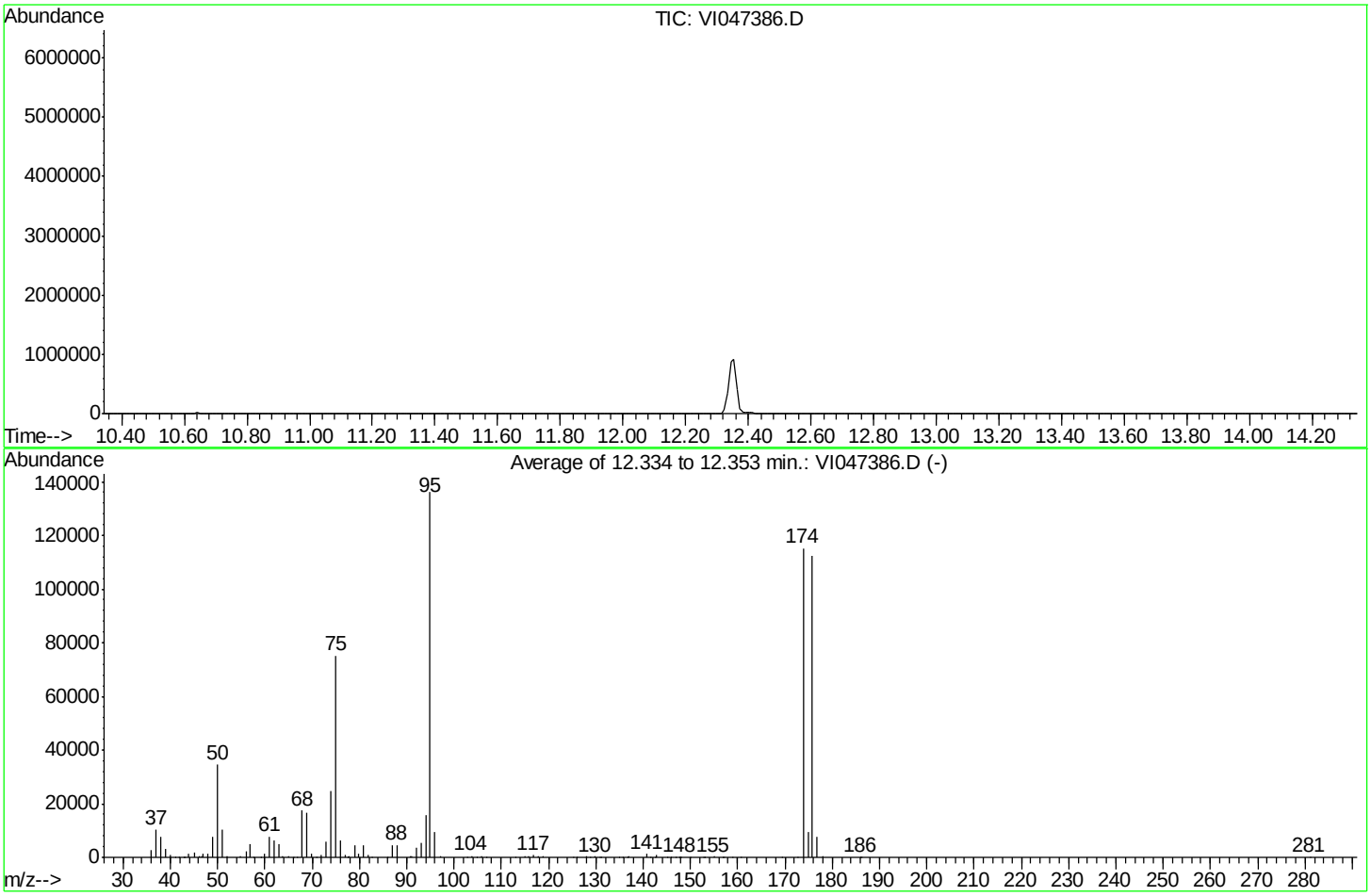
BFB

Data Path : W:\HPCHEM1\MSVOA I\Data\VI022616\
Data File : VI047386.D
Acq On : 26 Feb 2016 15:32
Operator : FY/SY
Sample : BFB26
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB26

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0
Last Update : Mon Feb 29 13:19:30 2016



AutoFind: Scans 1129, 1130, 1131; Background Corrected with Scan 1125

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.4	34605	PASS
75	95	30	80	55.2	75160	PASS
95	95	100	100	100.0	136125	PASS
96	95	5	9	6.9	9436	PASS
173	174	0.00	2	0.1	145	PASS
174	95	50	120	84.5	115085	PASS
175	174	5	9	8.1	9305	PASS
176	174	95	101	97.8	112560	PASS
177	176	5	9	6.7	7487	PASS

Scan 1125 (12.294 min): VI047386.D
BFB26

m/z	Abundance
37.95	207.0
38.85	352.0
39.80	557.0
43.95	1585.0
50.10	197.0
73.05	264.0
81.15	182.0
94.10	427.0
142.00	185.0
170.05	292.0
207.05	501.0
208.80	289.0
281.05	180.0
281.90	163.0
283.10	181.0

Instrument :
MSVOA_I
ClientSampleId :
BFB26

Scan 1129 (12.334 min): VI047386.D
BFB26

Instrument :
MSVOA_I
ClientSampleId :
BFB26

m/z	Abundance
36.05	1624.0
36.95	6780.0
38.05	5421.0
38.95	2211.0
39.80	442.0
43.05	337.0
44.05	2501.0
44.95	1280.0
46.15	242.0
46.70	741.0
48.00	779.0
49.00	4747.0
50.00	22608.0
50.95	6011.0
51.85	282.0
55.00	377.0
56.00	2015.0
56.90	2797.0
60.05	980.0
60.95	5775.0
62.00	3922.0
63.00	1921.0
63.90	297.0
65.05	358.0
66.85	312.0
67.95	10535.0
69.00	10104.0
70.00	768.0
71.00	153.0
72.00	626.0
72.95	3369.0
74.05	14108.0
75.05	40736.0
76.00	3749.0
76.90	477.0
77.50	209.0
77.80	163.0
78.90	2355.0
79.85	590.0
80.85	2503.0
81.95	439.0
86.00	280.0
86.85	1984.0
87.95	2038.0
92.00	2060.0
93.00	3096.0
94.00	7675.0
94.95	68920.0
95.95	5230.0
103.85	239.0
104.75	151.0
106.00	185.0
114.80	323.0
115.80	334.0
116.85	455.0
117.85	208.0
118.85	415.0
128.00	306.0
128.90	180.0
129.80	384.0
130.80	172.0
134.90	163.0
135.70	195.0
140.95	520.0
142.50	327.0
143.00	414.0
147.65	150.0
153.05	173.0
155.05	162.0
172.80	437.0
173.90	37416.0
174.90	3917.0
175.85	38016.0
176.85	3267.0
177.95	205.0
186.20	202.0
207.05	169.0
281.05	317.0

Scan 1130 (12.344 min): VI047386.D
BFB26

Instrument :
MSVOA_I
ClientSampleId :
BFB26

m/z	Abundance
35.95	3449.0
37.05	14039.0
38.05	10154.0
39.05	4111.0
40.00	1553.0
41.10	166.0
41.80	169.0
43.95	3094.0
45.05	2665.0
46.15	362.0
47.00	1508.0
47.90	1469.0
49.00	9460.0
50.00	44504.0
50.95	15719.0
51.95	654.0
54.80	722.0
56.00	2287.0
57.00	6647.0
59.95	1828.0
61.05	8696.0
62.00	7821.0
63.00	6934.0
63.80	417.0
65.15	233.0
67.95	21312.0
68.90	20136.0
70.00	1548.0
71.90	1237.0
73.05	8600.0
74.05	31944.0
75.05	92768.0
76.00	7004.0
76.80	940.0
78.90	5885.0
79.95	1557.0
80.95	5236.0
81.85	978.0
82.75	153.0
86.85	5812.0
87.95	6582.0
90.80	892.0
92.00	4654.0
93.00	5648.0
94.00	22016.0
94.95	171136.0
95.95	12028.0
97.05	551.0
102.85	464.0
103.95	594.0
105.80	597.0
106.80	248.0
113.00	193.0
114.90	307.0
115.80	362.0
116.95	812.0
117.95	472.0
118.85	790.0
125.95	158.0
128.00	505.0
128.70	234.0
129.80	344.0
130.90	223.0
134.80	243.0
136.60	175.0
137.00	254.0
140.75	1812.0
141.55	265.0
142.00	205.0
142.80	1418.0
145.20	154.0
145.85	296.0
147.85	626.0
152.80	230.0
154.85	206.0
155.15	179.0
156.70	269.0
157.10	208.0
160.95	189.0
173.90	133824.0
175.00	10197.0
175.85	127504.0
176.85	8265.0
185.95	174.0
206.85	191.0
281.05	380.0
283.10	161.0

Scan 1131 (12.353 min): VI047386.D
BFB26

Instrument :
MSVOA_I
ClientSampleId :
BFB26

m/z	Abundance
35.95	2639.0
37.05	10001.0
38.05	8257.0
38.95	4701.0
40.00	956.0
40.90	194.0
42.75	194.0
43.95	3411.0
45.05	1575.0
46.05	218.0
46.90	1968.0
47.90	1655.0
49.00	8222.0
50.00	37296.0
50.95	9637.0
51.95	759.0
54.80	580.0
56.00	2067.0
57.00	5687.0
57.75	221.0
59.05	188.0
60.05	1825.0
60.95	8896.0
62.00	7765.0
63.00	5644.0
63.80	152.0
65.05	230.0
66.15	336.0
66.95	368.0
67.95	20632.0
69.00	19680.0
69.90	1335.0
72.00	1120.0
72.95	7001.0
73.95	27784.0
75.05	91976.0
76.00	7970.0
77.00	714.0
77.90	805.0
79.00	5062.0
79.95	1729.0
80.95	5657.0
81.85	731.0
85.80	254.0
86.95	5233.0
87.85	5247.0
91.00	732.0
92.00	4591.0
93.00	6938.0
94.00	18712.0
94.95	168320.0
95.95	11050.0
97.15	261.0
103.75	868.0
104.65	257.0
105.90	554.0
115.00	377.0
115.90	599.0
116.85	1409.0
117.85	702.0
118.95	803.0
125.15	254.0
127.90	243.0
129.90	497.0
131.05	282.0
134.90	281.0
136.90	513.0
140.85	1655.0
143.00	1485.0
145.95	158.0
146.95	396.0
148.05	244.0
149.90	333.0
152.95	241.0
154.85	523.0
156.80	333.0
158.90	153.0
160.75	347.0
169.25	220.0
173.90	174016.0
175.00	13803.0
175.85	172160.0
176.85	10929.0
177.95	716.0
186.00	157.0
206.85	192.0
280.95	207.0

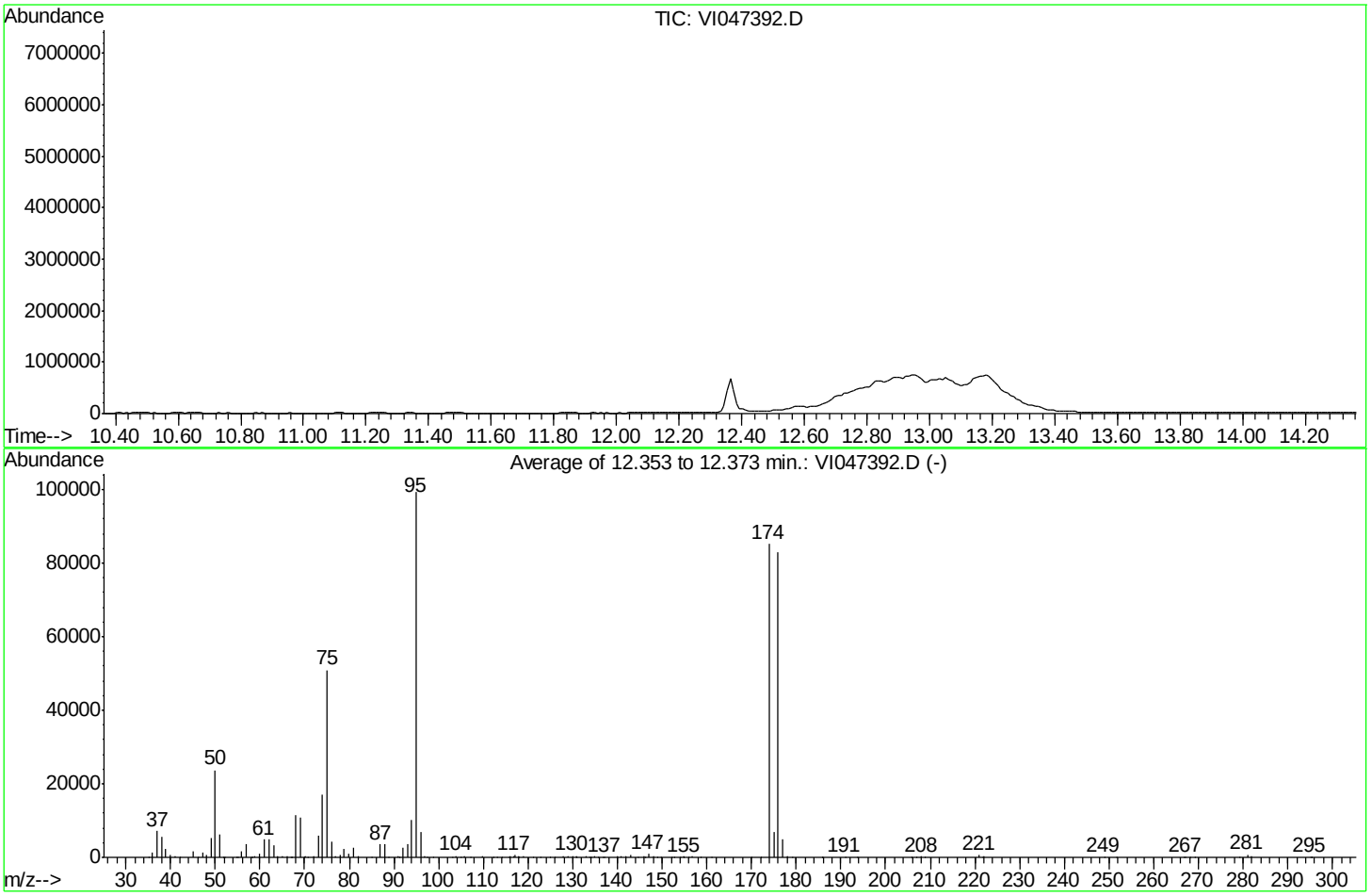
BFB

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI022916\
Data File : VI047392.D
Acq On : 29 Feb 2016 10:13
Operator : FY/SY
Sample : BFB27
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB27

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0
Last Update : Tue Mar 01 04:04:21 2016



AutoFind: Scans 1131, 1132, 1133; Background Corrected with Scan 1127

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.9	23674	PASS
75	95	30	80	51.3	50907	PASS
95	95	100	100	100.0	99255	PASS
96	95	5	9	7.0	6936	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	85.7	85066	PASS
175	174	5	9	8.0	6794	PASS
176	174	95	101	97.5	82941	PASS
177	176	5	9	5.8	4837	PASS

Scan 1127 (12.314 min): VI047392.D
BFB27

m/z	Abundance
35.85	212.0
37.85	215.0
38.95	218.0
40.00	761.0
42.70	185.0
43.95	3468.0
45.15	307.0
51.05	707.0
52.05	185.0
52.85	179.0
55.10	300.0
68.90	181.0
69.70	173.0
73.05	8864.0
74.05	654.0
75.05	490.0
77.10	364.0
77.90	156.0
79.10	246.0
82.95	306.0
87.55	207.0
94.00	189.0
94.95	153.0
95.95	171.0
108.40	210.0
115.00	171.0
116.75	198.0
118.85	269.0
130.90	198.0
132.85	257.0
140.95	399.0
147.05	2853.0
148.15	448.0
148.95	373.0
167.65	188.0
185.95	448.0
186.90	161.0
191.15	221.0
192.95	220.0
204.95	300.0
206.85	1309.0
207.95	183.0
208.60	198.0
208.80	221.0
221.05	1212.0
222.15	226.0
223.00	245.0
264.95	328.0
266.85	213.0
280.95	1865.0
282.10	463.0
282.90	487.0

Instrument :
MSVOA_I
ClientSampleId :
BFB27

Scan 1131 (12.353 min): VI047392.D
BFB27

Instrument :
MSVOA_I
ClientSampleId :
BFB27

m/z	Abundance
35.95	1787.0
37.05	6825.0
38.05	5950.0
39.05	3097.0
39.90	1245.0
40.90	245.0
42.85	196.0
44.05	3804.0
45.05	2148.0
47.10	1160.0
48.00	662.0
49.00	5206.0
50.00	22272.0
50.95	7129.0
51.75	442.0
52.15	238.0
55.00	392.0
55.90	1846.0
57.00	3386.0
57.95	358.0
58.45	168.0
58.95	288.0
60.05	1158.0
60.95	4071.0
62.00	4867.0
63.00	2901.0
64.10	325.0
64.95	208.0
66.15	292.0
66.95	290.0
68.05	9814.0
69.00	10007.0
69.80	805.0
70.70	214.0
73.05	14536.0
73.95	15776.0
75.05	49016.0
76.00	4239.0
77.00	724.0
78.10	737.0
78.90	2114.0
79.85	821.0
80.95	2555.0
82.15	357.0
84.90	175.0
86.95	3444.0
87.95	3324.0
91.10	320.0
92.00	2135.0
93.00	3001.0
94.00	9373.0
94.95	88208.0
95.95	7780.0
96.85	206.0
98.60	211.0
103.85	224.0
105.05	166.0
105.90	353.0
109.75	179.0
116.10	252.0
116.75	477.0
117.05	492.0
117.75	233.0
118.95	373.0
121.20	182.0
128.00	244.0
129.00	309.0
129.90	221.0
130.95	555.0
133.05	252.0
133.75	170.0
134.80	151.0
135.80	159.0
137.10	279.0
140.95	519.0
142.00	330.0
143.00	547.0
145.95	218.0
147.05	3554.0
147.95	715.0
149.05	449.0
152.20	151.0
154.75	280.0
156.80	241.0
170.05	300.0
172.20	279.0
173.90	60672.0
175.00	4364.0
175.85	53424.0
176.85	3316.0
178.05	170.0
185.75	257.0

186.00	240.0
190.95	263.0
192.95	262.0
207.05	1340.0
208.05	321.0
209.00	200.0
221.15	1624.0
221.75	320.0
248.95	171.0
266.90	381.0
281.15	2092.0
281.90	411.0
282.90	492.0
295.05	245.0

Instrument :
MSVOA_I
ClientSampleId :
BFB27

Scan 1132 (12.363 min): VI047392.D
BFB27

Instrument :
MSVOA_I
ClientSampleId :
BFB27

m/z	Abundance
35.95	1363.0
36.95	10198.0
38.05	8021.0
38.95	2542.0
40.00	1238.0
40.90	244.0
42.95	258.0
43.95	3019.0
45.05	2096.0
46.05	278.0
47.10	1739.0
47.80	1049.0
49.00	6905.0
50.00	31040.0
50.95	9133.0
52.05	619.0
55.00	572.0
56.00	1674.0
57.10	4604.0
58.85	200.0
59.95	1205.0
60.95	7137.0
62.00	6614.0
63.00	4384.0
63.90	723.0
64.95	270.0
66.05	418.0
68.05	15420.0
69.00	14352.0
70.00	774.0
72.10	834.0
73.05	16624.0
74.05	24096.0
75.05	64024.0
76.00	5101.0
77.10	1090.0
77.90	633.0
78.90	3442.0
79.95	1147.0
80.85	3495.0
81.95	729.0
86.95	4402.0
87.85	4584.0
90.80	760.0
91.90	3792.0
93.00	5180.0
94.00	13284.0
95.05	127264.0
96.05	9577.0
97.25	157.0
103.05	171.0
103.95	588.0
105.80	532.0
107.00	251.0
109.65	229.0
112.25	198.0
113.00	217.0
115.80	256.0
116.85	1008.0
117.05	1020.0
117.95	323.0
118.95	657.0
124.85	192.0
125.95	188.0
127.90	789.0
128.80	278.0
129.80	575.0
130.70	155.0
131.05	187.0
133.05	646.0
134.70	254.0
136.70	263.0
140.15	326.0
140.95	1003.0
141.85	246.0
142.80	801.0
144.50	157.0
145.85	307.0
147.05	4313.0
148.05	776.0
148.85	493.0
152.80	209.0
153.95	196.0
154.95	577.0
155.85	197.0
156.80	266.0
158.60	342.0
173.90	108472.0
174.90	8930.0
175.85	107880.0
176.95	6266.0
177.95	166.0

179.10	275.0
186.00	396.0
191.15	378.0
204.85	242.0
206.95	1095.0
207.95	301.0
209.00	290.0
221.05	1765.0
222.05	1115.0
265.15	244.0
267.10	418.0
268.10	230.0
281.05	2710.0
282.10	741.0
295.35	267.0

Instrument :
MSVOA_I
ClientSampleId :
BFB27

Scan 1133 (12.373 min): VI047392.D
BFB27

Instrument :
MSVOA_I
ClientSampleId :
BFB27

m/z	Abundance
35.10	162.0
35.95	1671.0
36.95	4593.0
37.95	3136.0
39.05	2069.0
40.00	1571.0
41.00	183.0
42.20	176.0
43.95	3476.0
44.95	1714.0
47.00	939.0
47.80	267.0
49.00	3710.0
50.00	17712.0
51.05	4596.0
54.70	323.0
55.90	1163.0
57.00	2520.0
58.25	228.0
58.95	336.0
59.85	631.0
61.05	3457.0
62.00	3164.0
63.00	2634.0
64.10	348.0
65.05	366.0
66.25	181.0
67.15	508.0
68.05	8887.0
69.00	8898.0
70.10	676.0
71.90	491.0
73.05	13133.0
73.95	13012.0
75.05	41152.0
76.00	3548.0
76.90	754.0
77.80	735.0
78.90	2094.0
79.85	887.0
80.95	2151.0
81.95	343.0
85.00	154.0
86.95	2684.0
87.95	2798.0
88.65	402.0
90.90	210.0
91.90	1839.0
93.00	2598.0
94.10	8445.0
95.05	82752.0
96.05	3966.0
96.75	362.0
103.95	500.0
105.05	209.0
105.90	267.0
107.00	153.0
109.85	196.0
114.20	175.0
115.10	458.0
116.00	366.0
117.05	355.0
117.85	455.0
118.75	392.0
122.80	298.0
127.80	185.0
129.00	372.0
130.00	568.0
130.70	392.0
131.15	241.0
132.85	727.0
134.05	171.0
134.80	238.0
140.05	230.0
140.85	655.0
141.95	175.0
142.80	717.0
145.75	246.0
146.15	359.0
146.95	3328.0
147.95	1107.0
148.95	596.0
149.70	224.0
154.95	322.0
156.80	255.0
161.05	285.0
170.05	198.0
173.90	86056.0
175.00	7090.0
175.85	87520.0
176.95	4931.0
177.85	201.0

179.20	187.0
185.85	299.0
190.95	191.0
192.95	247.0
193.80	156.0
205.85	214.0
206.95	1720.0
208.05	687.0
209.00	344.0
221.05	1879.0
222.15	470.0
223.00	152.0
248.95	301.0
251.75	152.0
265.05	215.0
266.90	291.0
269.10	205.0
279.15	164.0
281.05	3257.0
281.90	1064.0
282.90	396.0
294.95	163.0

Instrument :
MSVOA_I
ClientSampleId :
BFB27

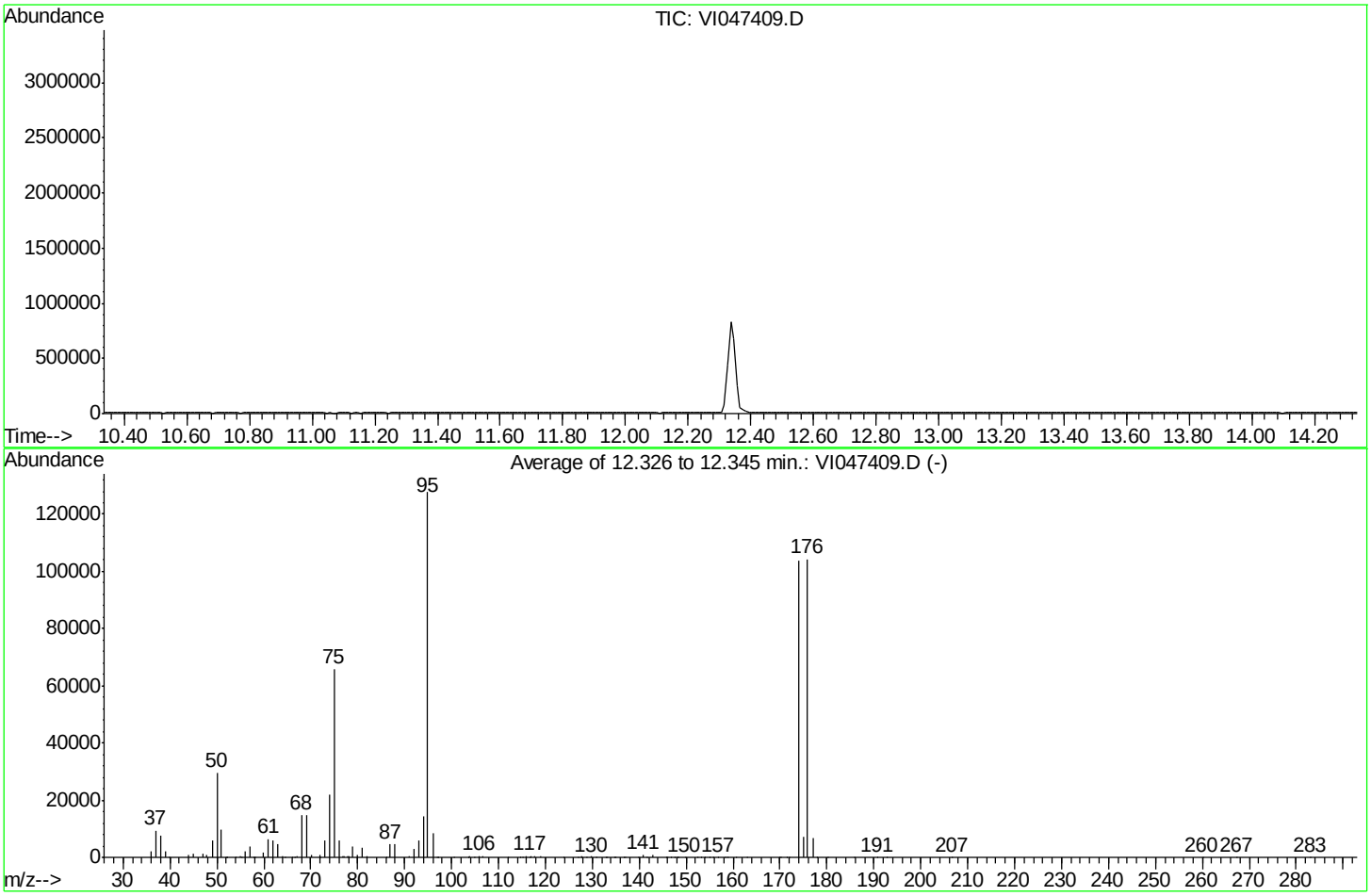
BFB

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI030116\
Data File : VI047409.D
Acq On : 1 Mar 2016 9:28
Operator : FY/SY
Sample : BFB28
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB28

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0
Last Update : Wed Mar 02 02:34:25 2016



AutoFind: Scans 1128, 1129, 1130; Background Corrected with Scan 1124

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.1	29560	PASS
75	95	30	80	51.6	65850	PASS
95	95	100	100	100.0	127722	PASS
96	95	5	9	6.6	8387	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	81.3	103797	PASS
175	174	5	9	6.9	7203	PASS
176	174	95	101	100.4	104178	PASS
177	176	5	9	6.5	6789	PASS

Scan 1124 (12.286 min): VI047409.D
BFB28

m/z	Abundance
39.10	473.0
40.00	790.0
42.75	189.0
43.95	2367.0
44.85	174.0
51.05	167.0
51.85	152.0
52.85	155.0
64.95	233.0
72.85	640.0
75.80	267.0
81.05	193.0
81.75	160.0
93.90	280.0
101.65	198.0
138.85	175.0
186.10	155.0
191.15	167.0
206.95	429.0
266.90	387.0
281.15	640.0
282.00	315.0

Instrument :
MSVOA_I
ClientSampleId :
BFB28

Scan 1128 (12.326 min): VI047409.D
BFB28

Instrument :
MSVOA_I
ClientSampleId :
BFB28

m/z	Abundance
35.95	1854.0
36.95	8112.0
38.05	5971.0
39.05	1662.0
39.90	715.0
43.95	3748.0
44.95	1542.0
46.90	675.0
48.00	732.0
49.00	5443.0
50.00	26120.0
50.95	8789.0
51.85	278.0
55.00	404.0
56.00	1834.0
57.00	2982.0
59.95	1057.0
60.95	5413.0
62.00	5040.0
63.00	3281.0
64.00	222.0
65.05	157.0
68.05	10990.0
69.00	10946.0
70.20	529.0
71.90	629.0
72.95	4331.0
73.95	15942.0
74.95	51096.0
76.00	4753.0
76.80	763.0
77.80	860.0
78.90	2441.0
79.75	780.0
80.95	1948.0
82.05	467.0
86.95	3028.0
87.95	3305.0
90.90	220.0
91.90	1846.0
93.00	4512.0
94.00	11364.0
94.95	91616.0
96.05	5215.0
97.15	243.0
103.65	410.0
106.00	445.0
106.80	277.0
115.80	353.0
116.95	597.0
118.95	210.0
127.70	439.0
128.80	248.0
129.90	284.0
130.80	210.0
133.15	239.0
134.60	205.0
137.00	265.0
140.95	548.0
142.90	465.0
145.65	182.0
148.25	168.0
154.95	268.0
163.05	189.0
171.50	205.0
173.90	50320.0
175.00	4303.0
175.85	54328.0
176.95	3793.0
180.10	225.0
186.00	186.0
192.85	165.0
207.05	269.0
266.90	184.0
281.05	388.0

Scan 1129 (12.336 min): VI047409.D
BFB28

Instrument :
MSVOA_I
ClientSampleId :
BFB28

m/z	Abundance
35.95	2755.0
37.05	12798.0
38.05	10210.0
39.05	3018.0
39.90	709.0
43.95	2647.0
45.05	1981.0
47.00	2320.0
47.80	1590.0
49.00	7403.0
50.00	37856.0
51.05	11817.0
52.15	314.0
54.00	200.0
54.80	598.0
55.90	2227.0
57.00	4958.0
57.85	245.0
58.15	213.0
59.95	2084.0
60.95	7781.0
61.90	8155.0
63.00	6184.0
64.10	1164.0
66.15	173.0
67.95	19584.0
69.00	18408.0
70.00	1901.0
72.10	1254.0
73.05	8111.0
73.95	29872.0
75.05	87816.0
76.00	9886.0
77.10	780.0
78.00	725.0
78.90	4897.0
79.85	1582.0
80.95	5407.0
81.95	925.0
86.10	206.0
86.95	5867.0
87.95	6220.0
90.80	458.0
92.00	3806.0
93.00	7130.0
94.00	18184.0
94.95	163648.0
95.95	12728.0
96.85	352.0
100.60	170.0
103.85	239.0
104.85	190.0
106.00	809.0
106.70	165.0
112.05	261.0
114.60	200.0
115.10	233.0
115.90	642.0
116.55	612.0
116.95	522.0
117.75	399.0
119.05	668.0
123.95	175.0
126.95	222.0
127.90	506.0
129.90	538.0
130.80	316.0
132.85	194.0
134.80	177.0
140.85	1541.0
142.90	870.0
145.65	434.0
146.85	249.0
147.95	319.0
152.40	196.0
156.90	370.0
158.20	188.0
158.80	325.0
160.75	264.0
170.15	181.0
172.00	161.0
173.90	133184.0
175.00	8526.0
175.85	128840.0
176.95	8069.0
177.85	200.0
185.75	166.0
206.75	571.0
260.10	207.0
266.90	270.0
267.30	239.0
281.15	426.0

282.00 183.0

Instrument :
MSVOA_I
ClientSampleId :
BFB28

Scan 1130 (12.345 min): VI047409.D
BFB28

Instrument :
MSVOA_I
ClientSampleId :
BFB28

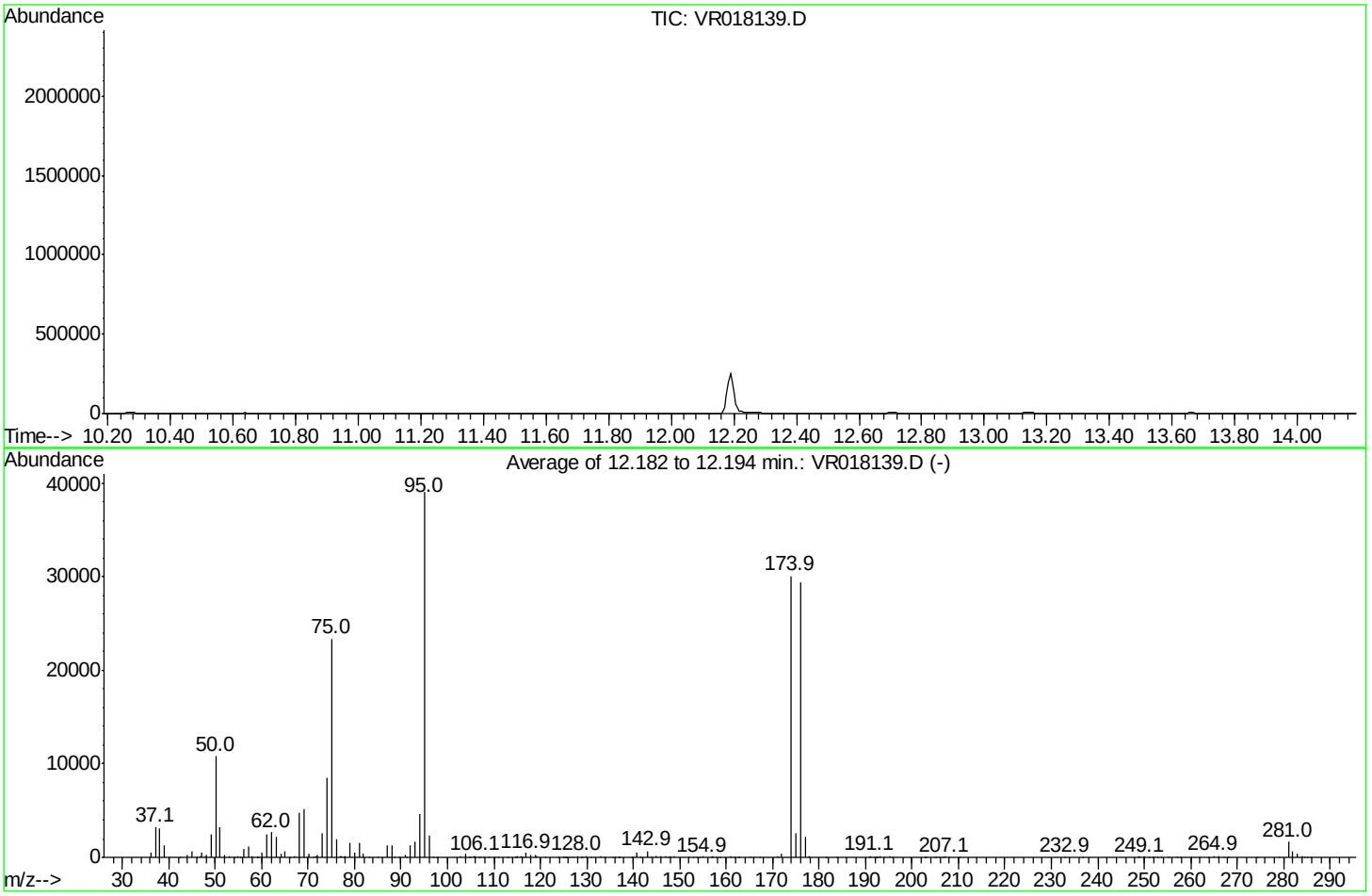
m/z	Abundance
35.95	1358.0
36.95	7415.0
37.95	6334.0
38.95	2745.0
39.90	1082.0
42.85	363.0
43.95	3050.0
44.95	1210.0
47.00	1073.0
47.90	805.0
48.90	5402.0
50.00	24704.0
51.05	8476.0
51.85	261.0
52.15	234.0
55.20	615.0
55.90	2166.0
57.10	3065.0
58.05	165.0
59.95	1425.0
60.95	6299.0
62.00	4903.0
63.00	4782.0
64.00	385.0
64.60	152.0
66.45	225.0
66.95	752.0
68.05	14020.0
69.00	15303.0
70.00	759.0
72.00	840.0
72.95	6730.0
74.05	20128.0
75.05	58640.0
76.00	4352.0
77.00	923.0
77.60	382.0
78.10	360.0
78.90	3992.0
79.95	784.0
80.85	3913.0
86.85	5497.0
87.95	4092.0
90.90	452.0
92.00	2840.0
93.00	5656.0
94.00	14773.0
94.95	127904.0
96.05	7220.0
97.05	328.0
103.85	557.0
104.75	220.0
105.80	410.0
106.70	256.0
115.00	234.0
115.80	461.0
116.75	770.0
117.75	690.0
118.85	418.0
123.85	230.0
127.80	576.0
129.90	281.0
130.90	158.0
134.60	439.0
136.70	227.0
139.75	153.0
140.85	1082.0
141.55	162.0
142.80	954.0
145.85	343.0
147.55	179.0
149.80	455.0
153.05	170.0
153.85	212.0
154.85	322.0
155.65	175.0
156.80	235.0
160.65	178.0
169.85	158.0
173.90	127888.0
175.05	8780.0
175.85	129368.0
176.95	8506.0
177.75	493.0
190.75	206.0
207.05	480.0
267.00	195.0
281.05	608.0
282.00	331.0
283.00	157.0

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022516\
Data File : VR018139.D
Acq On : 25 Feb 2016 13:02
Operator : MD\SY
Sample : BFB51
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
BFB51

Integration File: rteint.p

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Title : TRACE VOA SOM01.0
Last Update : Thu Feb 25 13:04:30 2016



AutoFind: Scans 1784, 1785, 1786; Background Corrected with Scan 1777

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.7	10802	PASS
75	95	30	80	59.8	23341	PASS
95	95	100	100	100.0	39050	PASS
96	95	5	9	6.0	2361	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	77.1	30090	PASS
175	174	5	9	8.4	2535	PASS
176	174	95	101	97.6	29354	PASS
177	176	5	9	7.6	2223	PASS

Scan 1784 (12.182 min): VR018139.D
BFB51

Instrument :
MSVOA_R
ClientSampleId :
BFB51

m/z	Abundance
36.00	516.0
37.10	3599.0
38.10	2772.0
39.10	1407.0
40.10	378.0
42.40	61.0
44.00	681.0
45.10	536.0
46.10	69.0
47.20	813.0
47.80	311.0
49.10	2363.0
50.00	10020.0
51.00	3206.0
52.00	210.0
53.10	71.0
54.90	136.0
56.10	922.0
57.00	1355.0
58.00	109.0
60.00	398.0
61.00	2510.0
62.00	3005.0
63.10	2221.0
64.20	371.0
65.10	698.0
68.00	4646.0
69.00	5022.0
70.00	279.0
71.20	80.0
72.00	419.0
73.00	2217.0
74.00	7965.0
75.00	22816.0
76.00	1817.0
76.90	88.0
77.20	132.0
77.70	101.0
78.90	1362.0
80.00	411.0
80.90	1536.0
82.00	393.0
83.10	110.0
87.00	1287.0
88.10	1079.0
90.90	275.0
92.00	1123.0
92.90	1483.0
94.10	3844.0
95.00	34792.0
96.00	2640.0
103.10	50.0
103.90	317.0
105.60	169.0
106.10	113.0
106.80	117.0
108.90	55.0
110.10	63.0
111.00	69.0
112.90	131.0
114.60	88.0
114.80	107.0
115.80	172.0
116.80	331.0
117.90	188.0
118.90	189.0
121.10	56.0
123.80	88.0
124.90	90.0
126.10	88.0
127.10	60.0
127.90	182.0
128.80	140.0
129.90	80.0
131.00	67.0
133.10	138.0
133.70	90.0
135.30	59.0
135.50	71.0
136.80	67.0
140.00	60.0
140.90	497.0
143.10	739.0
144.80	244.0
145.80	90.0
147.00	130.0
147.90	118.0
148.90	85.0
152.80	90.0
154.90	94.0
157.00	147.0

157.90	62.0
158.70	107.0
160.90	68.0
165.00	69.0
171.00	173.0
172.00	286.0
173.90	24104.0
175.00	2110.0
176.00	23448.0
177.00	1896.0
177.80	145.0
191.10	73.0
192.40	95.0
192.90	57.0
204.90	55.0
207.00	93.0
209.20	68.0
232.90	55.0
249.10	75.0
250.10	52.0
256.90	63.0
257.80	63.0
263.60	67.0
265.00	58.0
265.80	107.0
281.00	920.0
282.00	238.0
283.10	129.0
284.40	83.0

Instrument :
MSVOA_R
ClientSampleId :
BFB51

Scan 1785 (12.188 min): VR018139.D
BFB51

Instrument :
MSVOA_R
ClientSampleId :
BFB51

m/z	Abundance
36.10	629.0
37.10	3354.0
38.00	3881.0
39.10	1471.0
40.00	356.0
44.10	526.0
45.00	865.0
47.00	468.0
48.20	391.0
49.00	3088.0
50.10	12490.0
51.00	3747.0
52.10	263.0
53.00	54.0
54.10	102.0
54.90	124.0
56.10	933.0
57.10	920.0
57.90	66.0
59.30	54.0
60.10	630.0
61.00	2825.0
62.00	2862.0
63.00	2299.0
64.10	461.0
65.00	749.0
65.90	112.0
67.10	238.0
68.00	5663.0
69.00	6029.0
70.10	394.0
72.10	288.0
73.00	2910.0
74.00	9466.0
75.10	26760.0
76.10	1962.0
77.00	253.0
78.00	157.0
78.90	1926.0
79.90	603.0
80.90	1543.0
81.90	384.0
82.90	63.0
86.90	1384.0
87.90	1515.0
89.50	54.0
90.90	301.0
92.00	1636.0
93.00	1842.0
94.10	5805.0
95.00	45664.0
96.00	2524.0
97.00	98.0
102.90	189.0
103.90	352.0
104.70	90.0
105.70	179.0
107.00	108.0
107.90	65.0
115.00	167.0
115.80	312.0
116.90	618.0
117.90	258.0
118.90	656.0
125.10	107.0
125.60	70.0
125.80	82.0
126.10	63.0
127.90	192.0
129.10	168.0
130.00	165.0
133.10	133.0
133.60	80.0
135.10	134.0
139.60	54.0
140.80	489.0
142.90	693.0
143.80	68.0
145.00	194.0
145.90	147.0
147.60	84.0
148.00	103.0
149.00	130.0
149.70	83.0
149.90	85.0
151.80	66.0
153.80	71.0
155.00	141.0
157.00	103.0
160.80	78.0
165.90	53.0

167.30	60.0
172.00	454.0
173.90	34064.0
175.00	2813.0
175.90	33512.0
177.00	2257.0
177.90	128.0
190.70	125.0
190.90	128.0
191.20	67.0
192.10	109.0
192.80	185.0
193.90	77.0
195.20	142.0
202.70	51.0
206.70	88.0
207.00	72.0
210.40	111.0
236.80	74.0
248.80	134.0
249.90	163.0
251.00	84.0
253.70	78.0
255.20	55.0
262.00	58.0
264.90	219.0
266.00	66.0
268.20	56.0
281.10	1167.0
282.10	644.0
282.90	480.0
284.10	137.0
285.00	54.0

Instrument :
MSVOA_R
ClientSampleId :
BFB51

Scan 1786 (12.194 min): VR018139.D
BFB51

Instrument :
MSVOA_R
ClientSampleId :
BFB51

m/z	Abundance
36.10	606.0
37.10	2757.0
38.00	2667.0
39.10	1262.0
40.10	294.0
43.10	64.0
44.00	411.0
45.20	447.0
46.80	407.0
47.00	452.0
48.10	246.0
49.00	1893.0
50.10	9896.0
51.00	2573.0
52.00	211.0
53.10	188.0
55.00	184.0
55.30	132.0
56.00	998.0
57.00	1518.0
57.80	142.0
59.00	117.0
60.00	530.0
61.00	2158.0
62.00	2418.0
63.10	2048.0
64.20	204.0
65.00	500.0
68.00	4168.0
69.00	4281.0
70.00	402.0
71.80	261.0
73.10	2458.0
74.10	8034.0
75.00	20448.0
76.00	1898.0
77.10	222.0
77.90	69.0
78.90	1534.0
80.00	433.0
81.00	1532.0
81.90	278.0
84.90	89.0
86.90	1056.0
88.00	1439.0
88.70	136.0
90.80	105.0
91.20	71.0
92.00	1025.0
93.00	1884.0
94.00	4427.0
95.00	36696.0
96.10	1921.0
97.00	84.0
97.70	55.0
103.90	335.0
104.90	83.0
106.00	318.0
110.00	62.0
110.90	105.0
115.10	80.0
116.10	195.0
117.00	582.0
118.00	241.0
119.10	279.0
125.40	56.0
127.00	93.0
128.00	195.0
129.80	164.0
132.90	300.0
134.90	120.0
136.00	58.0
137.00	68.0
140.80	614.0
141.60	82.0
142.90	638.0
143.80	55.0
145.00	165.0
145.80	97.0
146.80	193.0
148.80	106.0
154.10	131.0
154.90	96.0
156.70	59.0
157.00	74.0
158.70	59.0
161.00	132.0
161.80	53.0
162.40	61.0
162.90	51.0
171.00	64.0

171.20	62.0
171.90	394.0
173.90	32104.0
175.00	2682.0
175.90	31104.0
177.00	2516.0
178.00	98.0
181.40	89.0
183.90	53.0
191.00	235.0
191.80	99.0
193.10	322.0
193.90	107.0
195.10	141.0
195.70	74.0
202.90	63.0
204.70	59.0
205.20	86.0
205.90	70.0
207.10	104.0
207.90	70.0
232.90	69.0
249.00	209.0
251.70	115.0
252.00	117.0
252.90	99.0
260.10	57.0
265.00	295.0
265.90	144.0
267.00	120.0
267.90	54.0
274.30	74.0
279.00	64.0
281.00	2904.0
282.00	928.0
283.00	442.0
284.00	152.0
285.70	63.0

Instrument :
MSVOA_R
ClientSampleId :
BFB51

Scan 1777 (12.139 min): VR018139.D
BFB51

m/z	Abundance
37.50	76.0
39.10	51.0
40.10	300.0
43.00	52.0
44.00	216.0
57.10	79.0
62.10	63.0
66.40	83.0
70.90	71.0
110.70	117.0
119.00	52.0
135.20	50.0
192.70	58.0
209.20	50.0
247.80	60.0
287.20	116.0

Instrument :
MSVOA_R
ClientSampleId :
BFB51

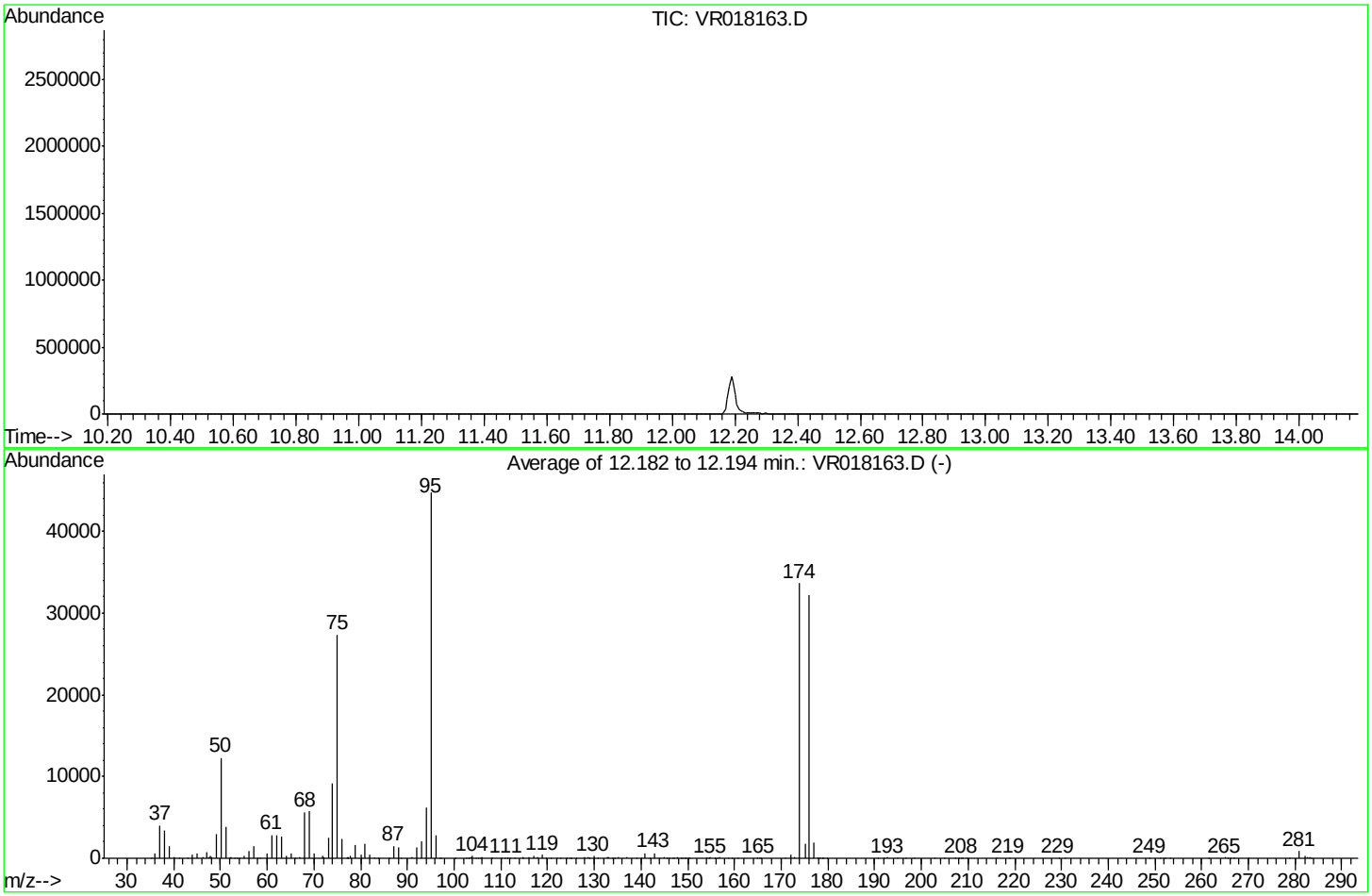
BFB

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR022616\
Data File : VR018163.D
Acq On : 26 Feb 2016 8:48
Operator : MD\SY
Sample : BFB52
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : BFB52

Integration File: rteint.p

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Title : TRACE VOA SOM01.0
Last Update : Sat Feb 27 01:09:43 2016



AutoFind: Scans 1784, 1785, 1786; Background Corrected with Scan 1777

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.6	12327	PASS
75	95	30	80	61.2	27365	PASS
95	95	100	100	100.0	44722	PASS
96	95	5	9	6.4	2861	PASS
173	174	0.00	2	0.7	219	PASS
174	95	50	120	75.2	33610	PASS
175	174	5	9	5.5	1841	PASS
176	174	95	101	95.8	32194	PASS
177	176	5	9	6.1	1968	PASS

Scan 1777 (12.139 min): VR018163.D
BFB52

m/z	Abundance
35.90	66.0
36.10	63.0
39.00	56.0
40.00	144.0
40.60	78.0
43.00	53.0
44.00	103.0
48.30	56.0
52.80	58.0
54.70	54.0
59.30	51.0
77.70	53.0
78.80	106.0
144.50	61.0
162.00	74.0
194.20	85.0
195.20	52.0
207.20	65.0
236.70	115.0
255.00	66.0
268.70	93.0
283.80	56.0
289.50	51.0

Instrument :
MSVOA_R
ClientSampleId :
BFB52

Scan 1784 (12.182 min): VR018163.D
BFB52

Instrument :
MSVOA_R
ClientSampleId :
BFB52

m/z	Abundance
36.00	735.0
37.10	3696.0
38.00	3546.0
39.10	1519.0
40.00	213.0
41.10	60.0
42.90	52.0
43.10	52.0
44.00	759.0
45.00	558.0
46.20	146.0
47.00	577.0
48.00	320.0
49.10	2824.0
50.10	11043.0
51.10	3539.0
52.20	141.0
52.90	106.0
55.10	241.0
56.10	770.0
57.10	1330.0
58.30	63.0
60.10	396.0
61.00	2868.0
62.10	2288.0
63.00	2830.0
64.10	361.0
65.10	546.0
66.90	170.0
68.00	4846.0
69.00	5866.0
70.00	649.0
71.90	235.0
73.00	2268.0
74.00	8718.0
75.10	24792.0
76.10	2391.0
77.20	264.0
78.10	117.0
79.00	1447.0
80.00	264.0
80.90	1828.0
82.00	253.0
83.70	61.0
87.10	1427.0
88.00	1160.0
91.00	205.0
91.90	918.0
93.00	1452.0
94.00	5734.0
95.00	38448.0
96.00	2745.0
97.10	76.0
100.20	86.0
102.70	105.0
104.00	360.0
104.70	73.0
105.80	83.0
107.90	75.0
111.30	123.0
112.80	147.0
114.70	100.0
115.80	84.0
116.90	304.0
118.00	155.0
118.90	257.0
122.80	98.0
127.90	139.0
128.90	107.0
129.90	151.0
133.20	79.0
134.40	63.0
135.20	123.0
139.00	61.0
140.10	159.0
140.90	411.0
142.00	106.0
142.80	417.0
144.70	142.0
147.90	141.0
150.10	70.0
153.90	106.0
154.60	73.0
155.80	81.0
156.30	53.0
157.10	71.0
159.40	57.0
165.20	70.0
172.10	276.0
172.90	658.0
173.90	27112.0
176.00	23656.0

176.90	1667.0
178.00	124.0
178.40	52.0
179.90	74.0
191.90	63.0
196.70	74.0
208.60	110.0
251.80	52.0
253.10	101.0
266.90	188.0
278.80	54.0
281.00	581.0
282.00	219.0
282.70	117.0

Instrument :
MSVOA_R
ClientSampleId :
BFB52

Scan 1785 (12.188 min): VR018163.D
BFB52

Instrument :
MSVOA_R
ClientSampleId :
BFB52

m/z	Abundance
36.00	895.0
37.10	4166.0
38.10	3496.0
39.10	1643.0
40.00	373.0
41.20	163.0
42.80	66.0
44.00	608.0
45.00	605.0
46.20	112.0
47.00	716.0
47.60	276.0
48.20	468.0
49.00	3576.0
50.10	13972.0
51.10	4186.0
52.30	269.0
53.10	57.0
55.10	255.0
56.00	1068.0
57.00	1706.0
57.90	202.0
59.30	53.0
60.00	648.0
61.00	3300.0
62.00	3142.0
63.00	2675.0
64.10	420.0
65.10	763.0
68.00	7222.0
69.00	6469.0
70.10	572.0
72.00	489.0
73.00	2813.0
74.00	10173.0
75.00	31176.0
76.10	2502.0
77.90	289.0
78.90	2080.0
80.10	640.0
80.90	2086.0
81.90	608.0
82.90	81.0
87.10	1745.0
88.00	1590.0
90.90	184.0
92.00	1780.0
93.10	2148.0
94.00	7432.0
95.10	50752.0
96.00	3315.0
97.10	108.0
103.00	72.0
103.90	327.0
105.30	76.0
106.00	278.0
108.10	54.0
110.20	73.0
110.90	59.0
112.80	53.0
114.90	88.0
115.90	326.0
117.00	389.0
117.80	252.0
119.00	607.0
121.90	89.0
124.10	128.0
124.90	50.0
125.10	51.0
126.10	90.0
127.90	308.0
128.60	63.0
128.90	96.0
129.90	305.0
130.90	152.0
133.10	173.0
135.00	97.0
137.00	221.0
140.80	674.0
142.90	738.0
143.80	100.0
145.00	135.0
145.40	86.0
146.00	100.0
146.80	76.0
147.90	82.0
148.70	73.0
149.30	60.0
149.50	60.0
154.10	56.0
154.90	121.0
155.60	64.0

156.90	104.0
164.80	74.0
165.50	57.0
171.90	500.0
174.00	37784.0
175.00	2579.0
176.00	36976.0
176.90	2182.0
177.70	163.0
190.80	94.0
192.80	127.0
198.50	91.0
207.10	71.0
216.00	50.0
252.20	51.0
265.00	77.0
265.50	124.0
269.90	63.0
281.00	623.0
282.10	401.0
282.70	178.0
283.50	199.0

Instrument :
MSVOA_R
ClientSampleId :
BFB52

Scan 1786 (12.194 min): VR018163.D
BFB52

Instrument :
MSVOA_R
ClientSampleId :
BFB52

m/z	Abundance
35.10	92.0
36.10	727.0
37.10	4297.0
38.00	2942.0
39.10	1482.0
39.90	278.0
43.10	109.0
44.00	383.0
45.10	517.0
47.00	767.0
47.90	423.0
49.10	2400.0
50.10	11967.0
51.10	3907.0
52.00	168.0
53.40	76.0
54.10	88.0
54.90	191.0
56.00	1000.0
57.00	1604.0
60.10	913.0
61.00	2465.0
62.10	2908.0
63.10	2398.0
64.00	237.0
65.00	444.0
65.90	118.0
66.90	214.0
68.10	4916.0
69.00	5135.0
70.00	417.0
72.20	387.0
73.10	2314.0
74.00	8722.0
75.00	26128.0
76.00	2090.0
76.90	214.0
77.40	221.0
77.80	231.0
78.00	239.0
79.00	1847.0
79.90	598.0
81.00	1628.0
82.00	440.0
86.00	132.0
87.00	1484.0
88.10	1385.0
88.70	89.0
91.00	185.0
92.10	1274.0
93.00	2701.0
94.00	5381.0
95.00	44968.0
96.10	2523.0
96.80	71.0
103.20	63.0
103.70	279.0
105.90	333.0
111.90	89.0
114.80	202.0
115.90	246.0
116.90	366.0
117.80	227.0
118.80	370.0
119.70	108.0
120.80	67.0
125.20	116.0
126.00	101.0
128.00	130.0
128.70	234.0
130.00	244.0
130.70	70.0
132.90	338.0
133.80	114.0
135.00	239.0
137.00	183.0
138.90	70.0
140.90	556.0
141.80	116.0
142.90	636.0
145.00	233.0
147.00	65.0
147.90	298.0
148.90	97.0
149.60	156.0
150.30	50.0
154.80	268.0
156.90	107.0
158.70	63.0
160.80	75.0
165.30	60.0
170.80	73.0

172.00	482.0
174.00	35936.0
175.10	2945.0
176.00	35952.0
177.00	2055.0
177.90	76.0
178.90	70.0
179.10	69.0
190.80	141.0
192.80	158.0
194.80	56.0
202.80	90.0
204.90	58.0
207.10	164.0
208.10	93.0
208.80	58.0
209.70	65.0
218.80	64.0
229.40	62.0
230.80	58.0
248.90	136.0
251.00	102.0
261.40	89.0
264.90	148.0
265.10	141.0
266.00	117.0
280.90	1399.0
282.00	377.0
283.10	351.0

Instrument :
MSVOA_R
ClientSampleId :
BFB52

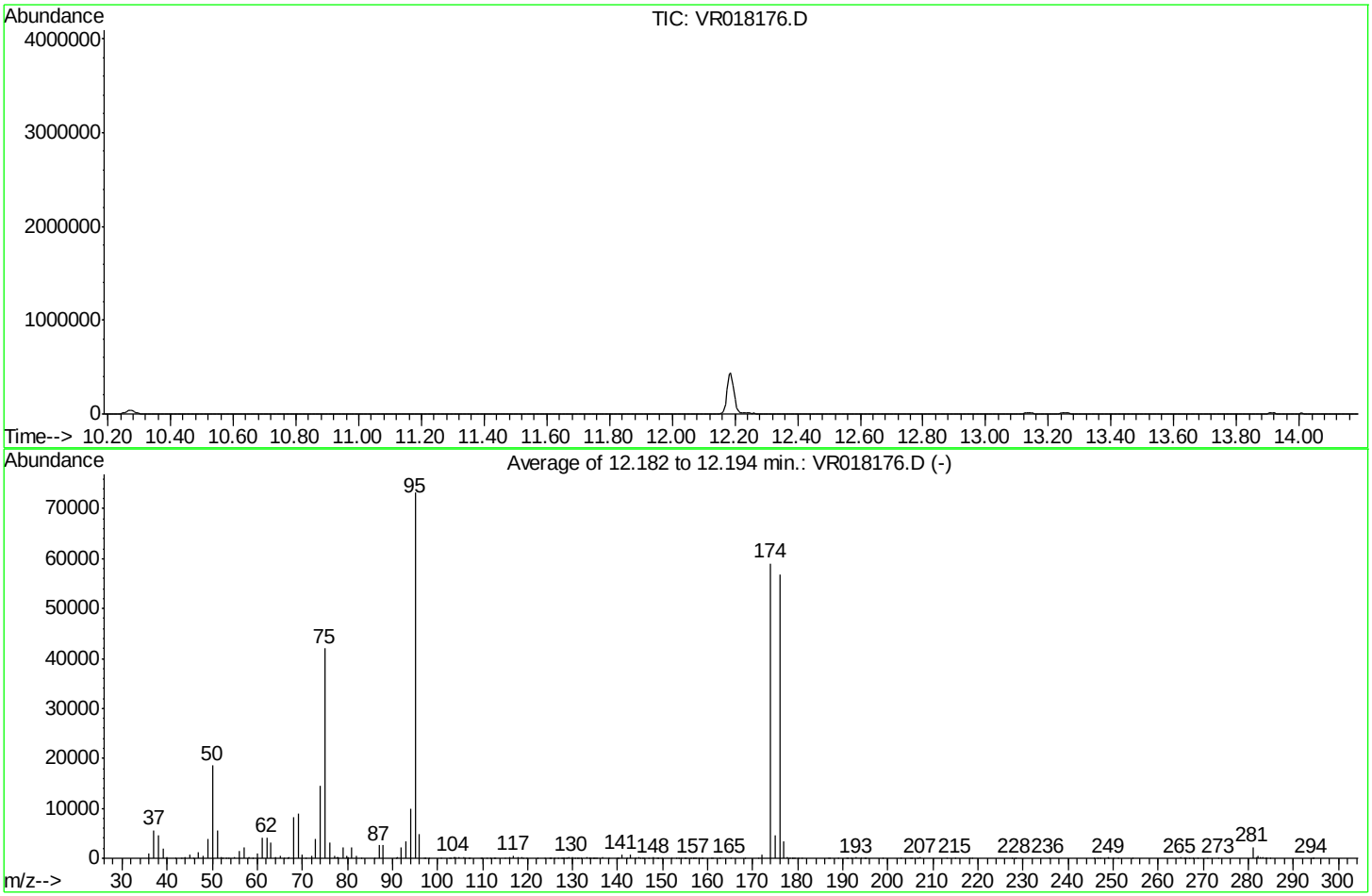
BFB

Data Path : W:\HPCHEM1\MSVOA R\DATA\VR030116\
Data File : VR018176.D
Acq On : 1 Mar 2016 12:21
Operator : MD\SY
Sample : BFB53
Misc : 25mL/MSVOA R/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : BFB53

Integration File: rteint.p

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Title : TRACE VOA SOM01.0
Last Update : Wed Mar 02 03:26:49 2016



AutoFind: Scans 1784, 1785, 1786; Background Corrected with Scan 1775

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.4	18581	PASS
75	95	30	80	57.3	41946	PASS
95	95	100	100	100.0	73200	PASS
96	95	5	9	6.7	4909	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	80.7	59058	PASS
175	174	5	9	7.8	4601	PASS
176	174	95	101	96.4	56914	PASS
177	176	5	9	6.2	3511	PASS

Scan 1775 (12.127 min): VR018176.D
BFB53

m/z	Abundance
38.20	55.0
39.00	58.0
40.00	306.0
40.90	100.0
42.20	83.0
43.00	117.0
43.90	573.0
45.10	61.0
47.60	77.0
48.20	60.0
52.30	59.0
54.90	62.0
70.90	88.0
73.00	101.0
76.60	59.0
77.10	82.0
108.30	70.0
117.70	107.0
135.90	54.0
137.60	82.0
159.00	61.0
160.10	55.0
161.90	73.0
170.60	66.0
201.00	54.0
234.00	50.0
234.70	82.0
235.30	50.0
238.70	50.0
251.90	60.0
263.50	98.0

Instrument :
MSVOA_R
ClientSampleId :
BFB53

Scan 1784 (12.182 min): VR018176.D
BFB53

m/z	Abundance
36.00	1184.0
37.10	6957.0
38.00	6258.0
39.00	2240.0
40.10	603.0
41.20	87.0
43.10	170.0
44.10	1048.0
45.10	1226.0
45.90	91.0
47.00	1617.0
48.00	850.0
49.00	5178.0
50.00	21840.0
51.10	6661.0
52.20	383.0
53.00	82.0
55.10	454.0
56.10	1717.0
57.10	2687.0
58.10	128.0
60.00	958.0
61.00	5160.0
62.10	5084.0
63.10	3681.0
64.20	485.0
65.00	486.0
66.10	106.0
66.60	71.0
67.20	406.0
68.00	9223.0
69.00	10164.0
70.10	628.0
71.00	111.0
72.00	520.0
73.10	4425.0
74.00	17168.0
75.00	48112.0
76.10	3414.0
77.10	614.0
77.70	264.0
78.00	247.0
79.00	2496.0
79.80	514.0
80.20	571.0
80.90	2408.0
82.00	672.0
83.00	86.0
86.00	176.0
87.00	3150.0
88.00	2929.0
90.80	338.0
91.10	332.0
92.00	2721.0
93.00	3545.0
94.10	11111.0
95.00	81328.0
96.00	5430.0
97.00	135.0
98.20	64.0
102.90	93.0
104.00	430.0
104.80	136.0
105.90	342.0
106.90	147.0
108.40	52.0
109.60	57.0
110.90	126.0
112.60	59.0
116.00	419.0
116.90	607.0
117.70	176.0
118.70	317.0
119.00	323.0
122.10	87.0
124.90	117.0
126.10	84.0
126.70	109.0
127.60	210.0
128.60	53.0
129.10	127.0
130.00	385.0
131.00	177.0
131.90	67.0
133.10	162.0
134.80	99.0
135.40	54.0
136.70	75.0
138.10	53.0
140.80	986.0
142.10	102.0

Instrument :
MSVOA_R
ClientSampleId :
BFB53

142.90	649.0
143.80	105.0
144.70	216.0
145.60	101.0
146.00	69.0
147.00	86.0
147.90	102.0
148.70	104.0
154.00	74.0
155.00	57.0
157.00	97.0
158.10	121.0
159.00	105.0
160.80	68.0
161.10	50.0
162.80	125.0
168.30	64.0
171.10	161.0
171.90	358.0
173.90	58792.0
174.90	4832.0
175.90	55984.0
176.90	3215.0
177.70	259.0
179.10	59.0
192.90	60.0
193.90	104.0
195.10	74.0
198.80	61.0
205.00	58.0
206.50	58.0
207.10	71.0
213.10	51.0
215.00	76.0
218.20	51.0
235.80	53.0
247.00	108.0
248.80	98.0
249.00	102.0
251.00	78.0
264.90	54.0
280.90	986.0
282.10	309.0
283.00	69.0
284.20	50.0

Instrument :
MSVOA_R
ClientSampleId :
BFB53

Scan 1785 (12.188 min): VR018176.D
BFB53

Instrument :
MSVOA_R
ClientSampleId :
BFB53

m/z	Abundance
36.00	1340.0
37.10	6689.0
38.00	4672.0
39.10	1902.0
40.00	475.0
41.00	112.0
41.70	83.0
43.00	63.0
43.20	60.0
44.00	879.0
45.10	800.0
45.90	141.0
47.00	1229.0
47.90	636.0
49.00	4232.0
50.10	20496.0
51.10	6301.0
51.90	426.0
53.70	61.0
55.00	314.0
56.10	1561.0
57.00	2591.0
58.00	202.0
60.00	1090.0
61.00	4542.0
62.10	4511.0
63.10	4110.0
64.10	231.0
65.00	473.0
66.10	101.0
67.10	250.0
68.00	9309.0
69.00	9917.0
70.10	876.0
71.10	68.0
72.00	457.0
73.00	3930.0
74.10	16235.0
75.00	47088.0
76.10	3840.0
77.10	445.0
78.00	218.0
78.90	2741.0
79.90	961.0
81.00	2394.0
81.80	366.0
83.00	113.0
87.00	2772.0
88.00	2867.0
91.10	386.0
92.00	2286.0
93.00	4009.0
94.10	11529.0
95.00	83288.0
96.00	5717.0
97.20	239.0
102.50	69.0
102.90	62.0
103.70	530.0
104.90	125.0
105.80	378.0
111.00	129.0
111.80	125.0
112.80	80.0
115.00	154.0
115.90	377.0
116.90	751.0
118.00	267.0
118.80	399.0
125.10	171.0
127.90	300.0
129.00	161.0
130.00	286.0
130.90	115.0
133.20	215.0
134.00	92.0
134.90	220.0
135.80	77.0
136.70	245.0
139.90	150.0
140.20	164.0
140.90	850.0
142.10	171.0
142.90	817.0
143.80	78.0
144.70	208.0
145.80	133.0
146.80	90.0
148.00	197.0
148.80	57.0
149.90	104.0

151.90	157.0
153.10	121.0
153.60	71.0
154.70	179.0
155.10	185.0
157.00	121.0
158.70	79.0
159.10	55.0
160.80	135.0
171.80	559.0
172.00	591.0
174.00	67552.0
174.90	5416.0
176.00	65368.0
177.00	4396.0
177.80	175.0
178.20	175.0
178.70	56.0
179.20	58.0
186.80	83.0
187.00	82.0
190.70	111.0
191.00	124.0
191.80	65.0
193.00	286.0
194.00	77.0
207.10	212.0
248.90	198.0
249.90	89.0
251.10	82.0
251.90	89.0
254.30	79.0
264.90	148.0
265.80	53.0
266.10	95.0
266.80	50.0
267.80	65.0
273.40	59.0
281.00	2278.0
282.00	834.0
283.10	350.0
283.80	146.0
284.90	65.0

Instrument :
MSVOA_R
ClientSampleId :
BFB53

Scan 1786 (12.194 min): VR018176.D
BFB53

m/z	Abundance
36.10	646.0
37.10	3317.0
38.10	3039.0
39.10	1530.0
40.00	415.0
41.10	97.0
41.80	75.0
43.20	268.0
44.10	767.0
45.00	605.0
46.00	154.0
47.10	783.0
48.10	364.0
49.00	2536.0
50.10	13409.0
51.10	3952.0
52.00	148.0
53.10	86.0
55.20	160.0
56.10	811.0
57.10	1345.0
58.00	90.0
58.90	172.0
60.00	595.0
61.00	2754.0
62.00	3110.0
63.00	1616.0
64.20	174.0
64.90	313.0
65.90	102.0
67.00	178.0
68.00	6226.0
69.10	6447.0
70.00	693.0
70.70	57.0
71.00	61.0
71.90	560.0
73.00	3495.0
74.00	10194.0
75.00	30640.0
76.00	2474.0
77.10	620.0
77.80	183.0
78.10	144.0
78.90	1510.0
80.00	391.0
81.00	1617.0
82.00	407.0
85.90	180.0
87.00	1932.0
87.90	1890.0
91.00	256.0
92.00	1630.0
92.90	2464.0
94.00	7113.0
95.00	54984.0
96.00	3581.0
97.00	210.0
100.70	51.0
102.50	85.0
103.70	216.0
105.00	232.0
106.10	181.0
107.10	246.0
109.80	119.0
111.00	109.0
111.80	95.0
112.90	56.0
116.00	304.0
117.00	314.0
118.00	322.0
118.80	386.0
119.70	101.0
123.90	55.0
125.00	80.0
125.90	83.0
128.10	160.0
129.00	131.0
129.90	351.0
130.60	85.0
131.20	122.0
133.00	246.0
133.70	66.0
134.50	99.0
135.10	146.0
136.80	90.0
141.00	608.0
142.90	768.0
145.00	151.0
145.90	109.0
146.70	70.0

Instrument :
MSVOA_R
ClientSampleId :
BFB53

147.00	55.0
147.90	229.0
149.00	169.0
153.10	61.0
154.80	162.0
156.10	96.0
156.70	57.0
157.20	97.0
159.00	144.0
162.70	57.0
165.00	65.0
172.00	367.0
174.00	50832.0
175.00	3557.0
175.90	49392.0
177.00	2922.0
178.90	104.0
180.10	64.0
180.90	79.0
188.90	77.0
191.00	257.0
192.90	286.0
194.10	129.0
194.70	75.0
201.20	71.0
202.90	120.0
205.20	71.0
207.20	259.0
218.60	73.0
227.40	50.0
228.20	80.0
245.80	68.0
246.50	51.0
249.10	249.0
249.90	56.0
251.00	79.0
251.80	64.0
265.00	206.0
266.10	143.0
266.70	89.0
268.70	61.0
270.90	66.0
281.00	3573.0
281.80	907.0
282.80	432.0
283.80	86.0
284.10	107.0
294.10	74.0
294.40	71.0

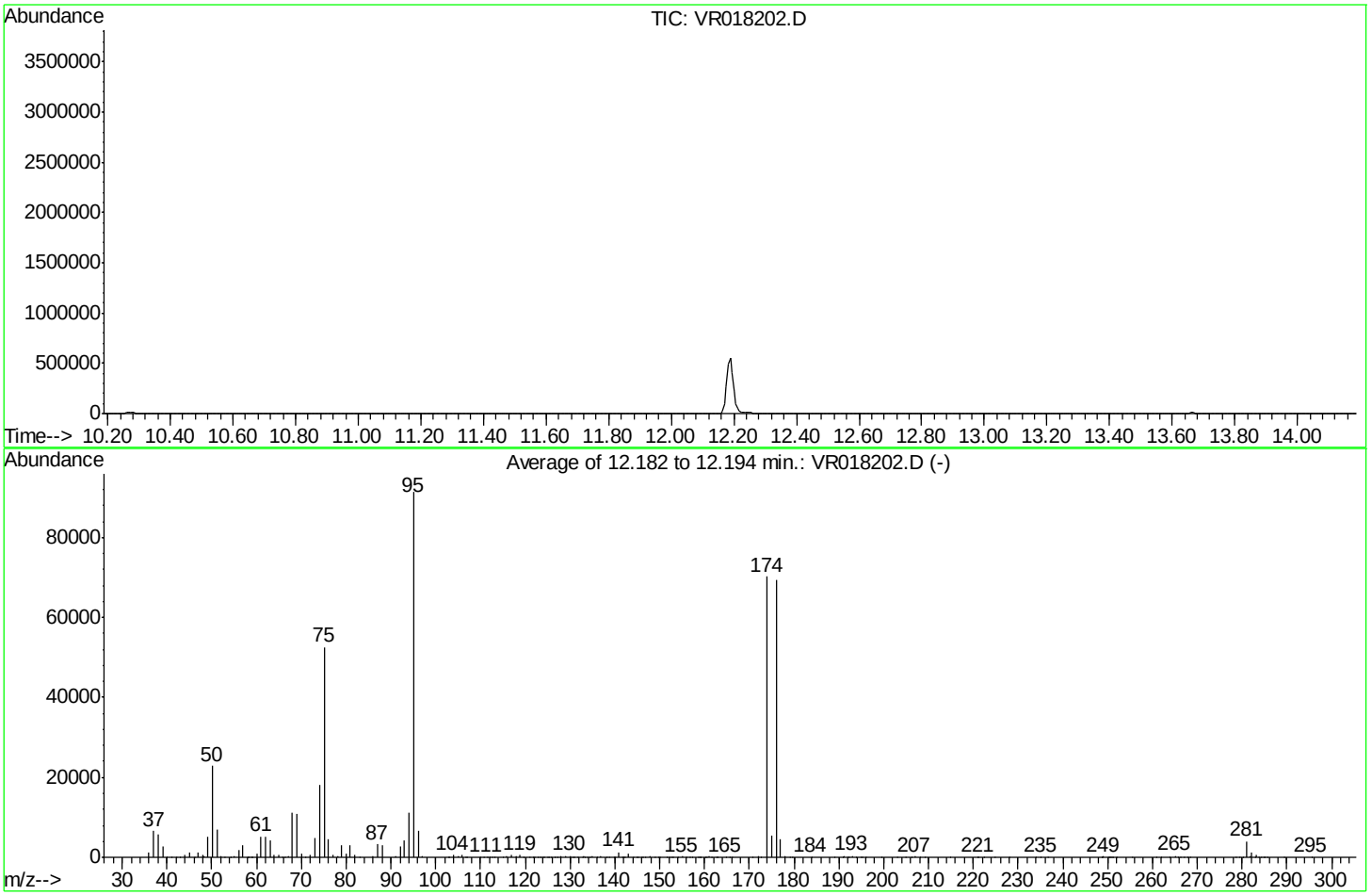
Instrument :
MSVOA_R
ClientSampleId :
BFB53

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018202.D
Acq On : 2 Mar 2016 10:43
Operator : MD\SY
Sample : BFB54
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : BFB54

Integration File: rteint.p

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Title : TRACE VOA SOM01.0
Last Update : Thu Mar 03 02:31:02 2016



AutoFind: Scans 1784, 1785, 1786; Background Corrected with Scan 1775

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.0	22845	PASS
75	95	30	80	57.6	52645	PASS
95	95	100	100	100.0	91370	PASS
96	95	5	9	7.3	6647	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	76.9	70269	PASS
175	174	5	9	7.8	5472	PASS
176	174	95	101	98.9	69493	PASS
177	176	5	9	6.7	4632	PASS

Scan 1775 (12.127 min): VR018202.D
BFB54

m/z	Abundance
35.80	55.0
37.60	72.0
38.30	131.0
40.10	262.0
43.00	81.0
44.00	383.0
46.90	54.0
69.20	68.0
73.00	72.0
113.00	66.0
127.90	51.0
171.00	87.0
202.60	54.0
217.80	53.0

Instrument :
MSVOA_R
ClientSampleId :
BFB54

Scan 1784 (12.182 min): VR018202.D
BFB54

m/z	Abundance
36.00	1214.0
37.10	8000.0
38.10	7353.0
39.10	2671.0
39.90	463.0
43.00	130.0
44.10	1094.0
45.00	1199.0
46.10	103.0
47.10	1495.0
48.00	1199.0
49.10	5332.0
50.10	26720.0
51.10	7113.0
52.10	470.0
52.90	113.0
54.10	68.0
55.20	217.0
56.10	1855.0
57.00	3388.0
57.90	221.0
59.10	86.0
60.10	1192.0
61.10	5604.0
62.00	5688.0
63.00	4830.0
64.00	640.0
64.90	812.0
67.00	267.0
68.00	12638.0
69.00	12709.0
70.10	883.0
70.90	99.0
72.10	657.0
73.00	4440.0
74.00	19824.0
75.00	58088.0
76.10	5345.0
77.00	648.0
78.10	358.0
79.00	3253.0
79.90	842.0
80.90	3282.0
82.00	680.0
83.00	83.0
85.90	224.0
87.00	3285.0
88.00	3494.0
91.00	270.0
92.00	3192.0
93.00	4191.0
94.00	11713.0
95.00	94400.0
96.10	7508.0
97.10	276.0
102.80	144.0
104.00	443.0
105.00	155.0
105.90	478.0
107.00	120.0
109.90	92.0
110.70	158.0
111.60	58.0
112.70	83.0
113.00	100.0
115.80	414.0
117.00	609.0
118.00	492.0
118.90	472.0
120.90	51.0
121.80	60.0
122.80	82.0
123.80	51.0
125.00	101.0
127.90	406.0
128.90	174.0
129.90	387.0
130.70	131.0
132.80	202.0
133.40	171.0
134.00	108.0
135.00	285.0
136.80	215.0
138.80	70.0
139.70	127.0
140.90	1247.0
141.90	259.0
142.80	996.0
143.90	60.0
145.00	128.0
145.90	118.0
146.90	95.0

Instrument :
MSVOA_R
ClientSampleId :
BFB54

147.90	217.0
148.90	99.0
149.80	134.0
152.00	52.0
152.70	72.0
154.90	174.0
155.90	65.0
156.80	101.0
157.10	75.0
158.70	53.0
161.00	214.0
166.00	63.0
170.70	59.0
172.00	481.0
173.90	63976.0
175.00	5015.0
176.00	62520.0
177.00	4419.0
177.80	276.0
179.60	51.0
189.00	62.0
190.90	189.0
191.20	182.0
192.00	68.0
192.90	147.0
206.80	92.0
220.90	89.0
233.80	53.0
236.60	65.0
248.60	122.0
250.60	62.0
260.80	60.0
265.10	211.0
266.20	97.0
268.30	75.0
278.60	50.0
280.20	96.0
281.10	1570.0
282.10	317.0
282.80	402.0
283.90	98.0
285.60	112.0

Instrument :
MSVOA_R
ClientSampleId :
BFB54

Scan 1785 (12.188 min): VR018202.D
BFB54

Instrument :
MSVOA_R
ClientSampleId :
BFB54

m/z	Abundance
36.00	1592.0
37.10	7571.0
38.10	6253.0
39.10	3109.0
40.00	328.0
41.00	92.0
42.80	147.0
44.00	820.0
45.00	1513.0
45.90	100.0
47.10	1328.0
48.00	798.0
49.00	6528.0
50.00	24936.0
51.10	7962.0
52.20	325.0
53.00	70.0
55.10	347.0
56.10	2215.0
57.00	3646.0
58.30	199.0
58.80	63.0
59.00	58.0
59.90	1200.0
61.00	6058.0
62.00	6264.0
63.00	4991.0
64.00	405.0
65.00	468.0
65.80	120.0
67.00	189.0
68.00	11455.0
69.00	12071.0
70.00	1054.0
72.00	479.0
73.00	6239.0
74.00	19976.0
75.00	59304.0
76.00	4905.0
77.10	753.0
78.10	437.0
78.90	3175.0
79.90	743.0
80.90	3361.0
81.90	429.0
82.90	181.0
86.00	243.0
87.00	3873.0
88.00	3213.0
90.90	471.0
92.00	2942.0
93.00	4878.0
94.00	12429.0
95.00	107984.0
96.10	7010.0
96.90	192.0
103.00	268.0
103.90	431.0
104.90	375.0
105.90	557.0
107.00	137.0
110.80	105.0
111.40	152.0
111.90	76.0
112.70	85.0
115.00	245.0
115.90	291.0
116.90	775.0
117.90	381.0
118.90	727.0
119.70	61.0
122.00	103.0
123.40	104.0
124.10	55.0
125.00	279.0
125.80	69.0
126.70	95.0
127.90	458.0
128.90	251.0
130.00	483.0
131.00	128.0
133.00	620.0
134.40	190.0
135.00	177.0
136.90	352.0
139.70	66.0
140.00	67.0
140.90	1313.0
142.10	229.0
142.90	1071.0
144.70	166.0
145.90	69.0

146.80	65.0
147.80	219.0
150.00	159.0
152.90	127.0
155.00	195.0
157.10	216.0
158.90	237.0
160.30	52.0
161.00	106.0
161.60	50.0
162.50	100.0
163.00	67.0
164.70	76.0
165.50	72.0
166.10	55.0
171.90	437.0
173.90	82536.0
175.00	6737.0
175.90	80904.0
177.00	5665.0
177.90	193.0
179.10	69.0
183.80	75.0
191.00	293.0
192.30	75.0
193.00	521.0
195.00	196.0
203.00	62.0
206.10	120.0
206.90	125.0
214.80	50.0
222.30	60.0
228.10	64.0
235.10	138.0
248.80	130.0
249.20	98.0
250.10	75.0
250.30	82.0
250.90	132.0
255.50	57.0
265.00	344.0
265.80	91.0
266.10	89.0
266.90	213.0
267.80	50.0
279.40	97.0
281.10	4027.0
281.80	759.0
282.10	944.0
283.10	762.0
283.80	174.0
284.70	88.0

Instrument :
MSVOA_R
ClientSampleId :
BFB54

Scan 1786 (12.194 min): VR018202.D
BFB54

Instrument :
MSVOA_R
ClientSampleId :
BFB54

m/z	Abundance
36.10	831.0
37.00	4240.0
38.00	4219.0
39.10	1972.0
40.00	178.0
42.10	92.0
43.00	54.0
44.10	704.0
45.10	1116.0
46.10	94.0
47.10	932.0
48.20	718.0
49.00	3886.0
50.10	16880.0
51.10	5585.0
52.00	336.0
55.00	261.0
56.00	1482.0
57.00	2315.0
58.10	66.0
59.10	90.0
60.10	800.0
61.00	4054.0
62.10	3666.0
63.00	3067.0
64.00	357.0
65.10	429.0
66.20	97.0
67.00	174.0
68.00	9105.0
69.10	8220.0
70.10	856.0
72.10	552.0
73.00	4122.0
74.00	14150.0
75.10	40544.0
76.10	3449.0
77.00	506.0
78.00	225.0
78.90	2376.0
79.90	720.0
80.90	2241.0
82.00	437.0
85.80	161.0
87.00	2609.0
88.00	2749.0
90.80	196.0
91.00	210.0
92.00	2286.0
93.00	3547.0
94.00	9139.0
95.00	71728.0
96.00	5425.0
97.10	122.0
102.90	152.0
103.80	580.0
104.90	279.0
105.80	371.0
106.60	138.0
110.90	162.0
112.00	80.0
113.00	167.0
115.10	175.0
115.90	217.0
117.00	367.0
117.90	265.0
118.90	572.0
120.70	50.0
125.20	284.0
127.00	63.0
127.90	295.0
128.90	157.0
129.90	334.0
131.00	143.0
131.80	92.0
133.10	526.0
133.90	151.0
135.00	277.0
135.90	84.0
137.00	92.0
138.10	69.0
140.90	1094.0
141.60	93.0
142.90	1126.0
144.00	107.0
144.80	158.0
146.10	157.0
146.80	177.0
148.00	243.0
149.00	64.0
149.80	145.0
151.70	125.0

152.90	65.0
153.90	108.0
155.10	209.0
156.70	61.0
157.20	101.0
159.10	52.0
160.60	140.0
161.10	237.0
161.70	51.0
164.70	73.0
171.10	94.0
171.90	340.0
172.50	217.0
174.00	64296.0
175.00	4665.0
176.00	65056.0
176.90	3814.0
178.00	180.0
178.90	280.0
191.10	440.0
191.90	128.0
192.90	701.0
193.90	77.0
194.80	69.0
195.30	66.0
196.10	113.0
199.60	53.0
202.80	141.0
204.80	85.0
207.00	562.0
208.20	130.0
209.20	50.0
221.10	163.0
224.80	75.0
235.00	162.0
249.00	477.0
250.00	169.0
251.10	330.0
251.90	53.0
261.80	63.0
263.70	90.0
264.90	526.0
266.00	111.0
266.90	111.0
267.80	53.0
281.00	6419.0
282.10	2175.0
283.00	1265.0
283.70	174.0
284.20	318.0
285.00	124.0
289.40	51.0
295.50	60.0

Instrument :
MSVOA_R
ClientSampleId :
BFB54

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK26

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0229WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047394.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK26

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0229WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047394.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK26

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0229WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047394.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/29/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLK26

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0229WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047394.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 02/29/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

EPA-designated Registry Number.

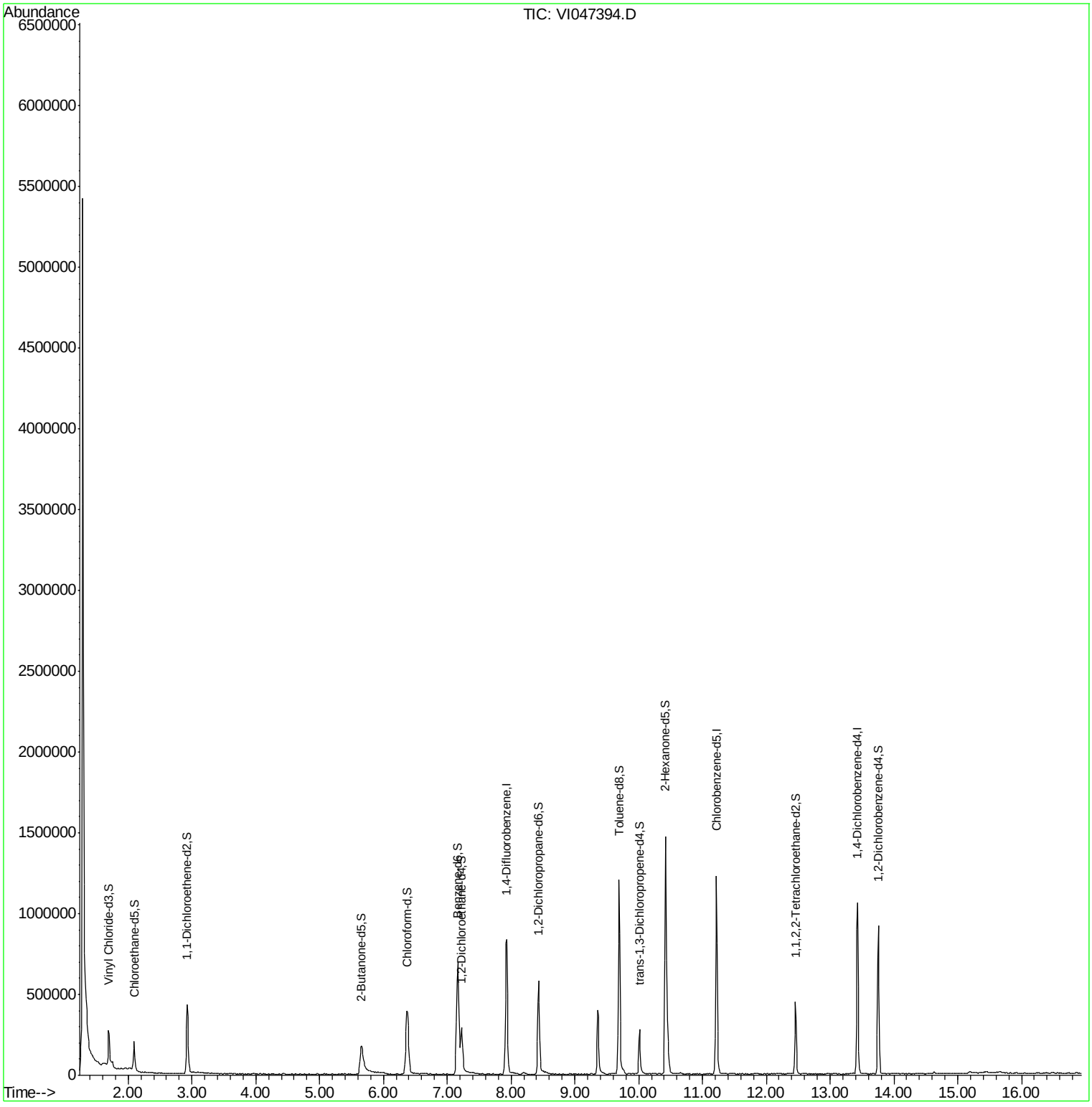
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047394.D
Acq On : 29 Feb 2016 13:11
Operator : FY/SY
Sample : VI0229WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 01 04:15:55 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK26

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:08:47 PM



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047394.D
Acq On : 29 Feb 2016 13:11
Operator : FY/SY
Sample : VI0229WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK26

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:08:47 PM

Quant Time: Mar 01 04:15:55 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	756036	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	670774	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.43	152	290007	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	220023	5.23	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 104.60%			
7) Chloroethane-d5	2.10	69	163583m	5.09	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.80%			
11) 1,1-Dichloroethene-d2	2.92	63	337833	3.63	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 72.60%			
20) 2-Butanone-d5	5.65	46	497372	56.81	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 113.62%			
24) Chloroform-d	6.38	84	452169	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
26) 1,2-Dichloroethane-d4	7.22	65	263208	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.00%			
32) Benzene-d6	7.16	84	806492	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.80%			
36) 1,2-Dichloropropane-d6	8.43	67	255922	5.24	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.80%			
41) Toluene-d8	9.69	98	737532	4.71	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.20%			
43) trans-1,3-Dichloropropene-	10.02	79	141992	4.91	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.20%			
46) 2-Hexanone-d5	10.42	63	618847	52.29	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 104.58%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	221429	5.24	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 104.80%			
64) 1,2-Dichlorobenzene-d4	13.76	152	255082	4.82	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 96.40%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI022916\
Data File : VI047394.D
Acq On : 29 Feb 2016 13:11
Operator : FY/SY
Sample : VI0229WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK26

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.290	3	6	29	rVB	5343166	9155067	100.00%	29.155%
2	1.693	45	47	52	rBV	205658	304227	3.32%	0.969%
3	2.097	84	88	99	rVB	190904	367511	4.01%	1.170%
4	2.225	99	101	103	rVB3	5108	4581	0.05%	0.015%
5	2.589	136	138	140	rBV3	2261	4568	0.05%	0.015%
6	2.923	168	172	180	rBV	429144	884747	9.66%	2.818%
7	3.336	212	214	215	rVB3	4741	4772	0.05%	0.015%
8	3.356	215	216	218	rBV2	3758	6174	0.07%	0.020%
9	3.395	218	220	224	rVB5	5349	8573	0.09%	0.027%
10	3.582	237	239	241	rBV3	3437	5318	0.06%	0.017%
11	3.789	259	260	264	rVB4	2552	4327	0.05%	0.014%
12	3.946	275	276	278	rBV2	2908	4812	0.05%	0.015%
13	4.064	285	288	291	rBV	3094	6122	0.07%	0.019%
14	4.163	297	298	301	rBV3	2354	4670	0.05%	0.015%
15	4.438	324	326	330	rVB3	3015	5914	0.06%	0.019%
16	4.566	333	339	340	rBV4	3197	4324	0.05%	0.014%
17	4.960	377	379	381	rBV3	3756	4325	0.05%	0.014%
18	5.078	389	391	393	rBV3	3084	5531	0.06%	0.018%
19	5.343	415	418	421	rBV2	2426	5459	0.06%	0.017%
20	5.452	427	429	431	rVB3	2814	4126	0.05%	0.013%
21	5.481	431	432	435	rBV3	3022	5197	0.06%	0.017%
22	5.658	444	450	467	rBV	170751	793759	8.67%	2.528%
23	6.150	498	500	504	rBV4	1881	3834	0.04%	0.012%
24	6.367	516	522	532	rVV	390151	1119987	12.23%	3.567%
25	6.485	532	534	536	rVV3	2710	4506	0.05%	0.014%
26	6.583	542	544	547	rBV3	4478	8205	0.09%	0.026%
27	6.682	552	554	556	rVB2	3410	5067	0.06%	0.016%
28	6.741	556	560	562	rVB4	2901	6159	0.07%	0.020%
29	6.878	570	574	575	rBV2	2835	4246	0.05%	0.014%
30	6.937	579	580	582	rBV2	3912	3824	0.04%	0.012%
31	7.164	596	603	607	rBV	690944	1837258	20.07%	5.851%
32	7.223	607	609	618	rVB	274321	600312	6.56%	1.912%
33	7.547	639	642	644	rBV3	4320	9588	0.10%	0.031%
34	7.646	649	652	653	rBV3	2944	5005	0.05%	0.016%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI022916\
Data File : VI047394.D
Acq On : 29 Feb 2016 13:11
Operator : FY/SY
Sample : VI0229WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK26

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

35	7.724	657	660	664	rVB5	2359	7274	0.08%	0.023%
36	7.833	668	671	673	rVB3	2838	3882	0.04%	0.012%
37	7.931	675	681	688	rBV	832974	1841618	20.12%	5.865%
38	8.197	704	708	711	rBV4	10506	24002	0.26%	0.076%
39	8.236	711	712	717	rVB4	4899	6673	0.07%	0.021%
40	8.433	726	732	741	rBV	579922	1273144	13.91%	4.054%
41	8.659	753	755	757	rVB3	2780	3810	0.04%	0.012%
42	8.925	778	782	783	rVB4	3682	5961	0.07%	0.019%
43	9.220	810	812	814	rVB2	2678	3835	0.04%	0.012%
44	9.249	814	815	818	rBV3	3665	5824	0.06%	0.019%
45	9.308	818	821	822	rBV2	3048	5269	0.06%	0.017%
46	9.358	822	826	834	rBV	395015	758050	8.28%	2.414%
47	9.574	846	848	852	rBV5	3872	9844	0.11%	0.031%
48	9.692	856	860	865	rBV	1201207	2133218	23.30%	6.793%
49	9.968	884	888	889	rBV4	4979	9762	0.11%	0.031%
50	10.017	889	893	903	rVB	274262	492223	5.38%	1.568%
51	10.164	906	908	911	rVB3	2603	4285	0.05%	0.014%
52	10.223	911	914	917	rBV4	6388	15565	0.17%	0.050%
53	10.322	920	924	927	rBV5	6877	16001	0.17%	0.051%
54	10.420	930	934	943	rBV	1469868	3041778	33.23%	9.687%
55	10.646	955	957	962	rVB2	9974	22016	0.24%	0.070%
56	10.951	987	988	990	rVB2	4709	4278	0.05%	0.014%
57	11.020	993	995	997	rVB	3151	4099	0.04%	0.013%
58	11.070	997	1000	1002	rBV3	3463	6424	0.07%	0.020%
59	11.119	1002	1005	1006	rBV2	3532	5073	0.06%	0.016%
60	11.217	1011	1015	1023	rBV	1226320	2101546	22.96%	6.692%
61	11.630	1054	1057	1060	rVV2	3243	4760	0.05%	0.015%
62	11.807	1073	1075	1076	rBV2	2540	4413	0.05%	0.014%
63	11.847	1076	1079	1081	rVV4	5577	11873	0.13%	0.038%
64	12.083	1101	1103	1105	rVB3	3001	5007	0.05%	0.016%
65	12.122	1105	1107	1109	rBV2	2298	4053	0.04%	0.013%
66	12.191	1113	1114	1116	rVV2	5391	6720	0.07%	0.021%
67	12.319	1123	1127	1129	rBV3	3147	7423	0.08%	0.024%
68	12.368	1129	1132	1133	rVV3	3319	5213	0.06%	0.017%
69	12.398	1133	1135	1136	rVV2	2570	3768	0.04%	0.012%
70	12.457	1137	1141	1147	rVV	446562	741218	8.10%	2.360%
71	12.555	1149	1151	1154	rBV4	3529	7019	0.08%	0.022%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI022916\
Data File : VI047394.D
Acq On : 29 Feb 2016 13:11
Operator : FY/SY
Sample : VI0229WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK26

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

72	12.762	1168	1172	1175	rBV5	2858	6563	0.07%	0.021%
73	13.018	1196	1198	1199	rBV2	3008	3848	0.04%	0.012%
74	13.332	1226	1230	1231	rBV4	3578	5686	0.06%	0.018%
75	13.362	1231	1233	1235	rVB3	5269	4893	0.05%	0.016%
76	13.431	1235	1240	1247	rBV	1059946	1799655	19.66%	5.731%
77	13.578	1254	1255	1259	rVB4	3482	4302	0.05%	0.014%
78	13.687	1264	1266	1268	rVB3	4462	6562	0.07%	0.021%
79	13.755	1268	1273	1280	rBV	920637	1588000	17.35%	5.057%
80	13.923	1286	1290	1291	rBV4	3276	3972	0.04%	0.013%
81	13.962	1291	1294	1295	rBV3	2809	4536	0.05%	0.014%
82	14.031	1298	1301	1304	rVV3	4591	10582	0.12%	0.034%
83	14.119	1308	1310	1312	rBV	2947	4255	0.05%	0.014%
84	14.218	1319	1320	1323	rBV3	3769	5973	0.07%	0.019%
85	14.306	1327	1329	1330	rBV	5624	5027	0.05%	0.016%
86	14.336	1330	1332	1333	rBV	2462	3930	0.04%	0.013%
87	14.434	1340	1342	1345	rBV2	2580	5197	0.06%	0.017%
88	14.543	1349	1353	1355	rBV4	4086	10604	0.12%	0.034%
89	14.592	1355	1358	1359	rBV3	4230	6852	0.07%	0.022%
90	14.631	1359	1362	1365	rVB4	12105	19735	0.22%	0.063%
91	14.985	1395	1398	1399	rVB2	3733	4343	0.05%	0.014%
92	15.143	1411	1414	1415	rBV2	3608	5185	0.06%	0.017%
93	15.192	1415	1419	1423	rBV6	11970	35685	0.39%	0.114%
94	15.389	1437	1439	1440	rBV2	5191	5198	0.06%	0.017%
95	15.418	1440	1442	1443	rBV2	5475	6867	0.08%	0.022%
96	15.890	1489	1490	1491	rBV	6034	5307	0.06%	0.017%
97	16.048	1504	1506	1508	rBV3	3714	6286	0.07%	0.020%
98	16.471	1547	1549	1551	rBV3	3307	6078	0.07%	0.019%
99	16.796	1580	1582	1584	rBV3	2470	3808	0.04%	0.012%
100	16.855	1586	1588	1592	rBV5	5908	13749	0.15%	0.044%

Sum of corrected areas: 31401694

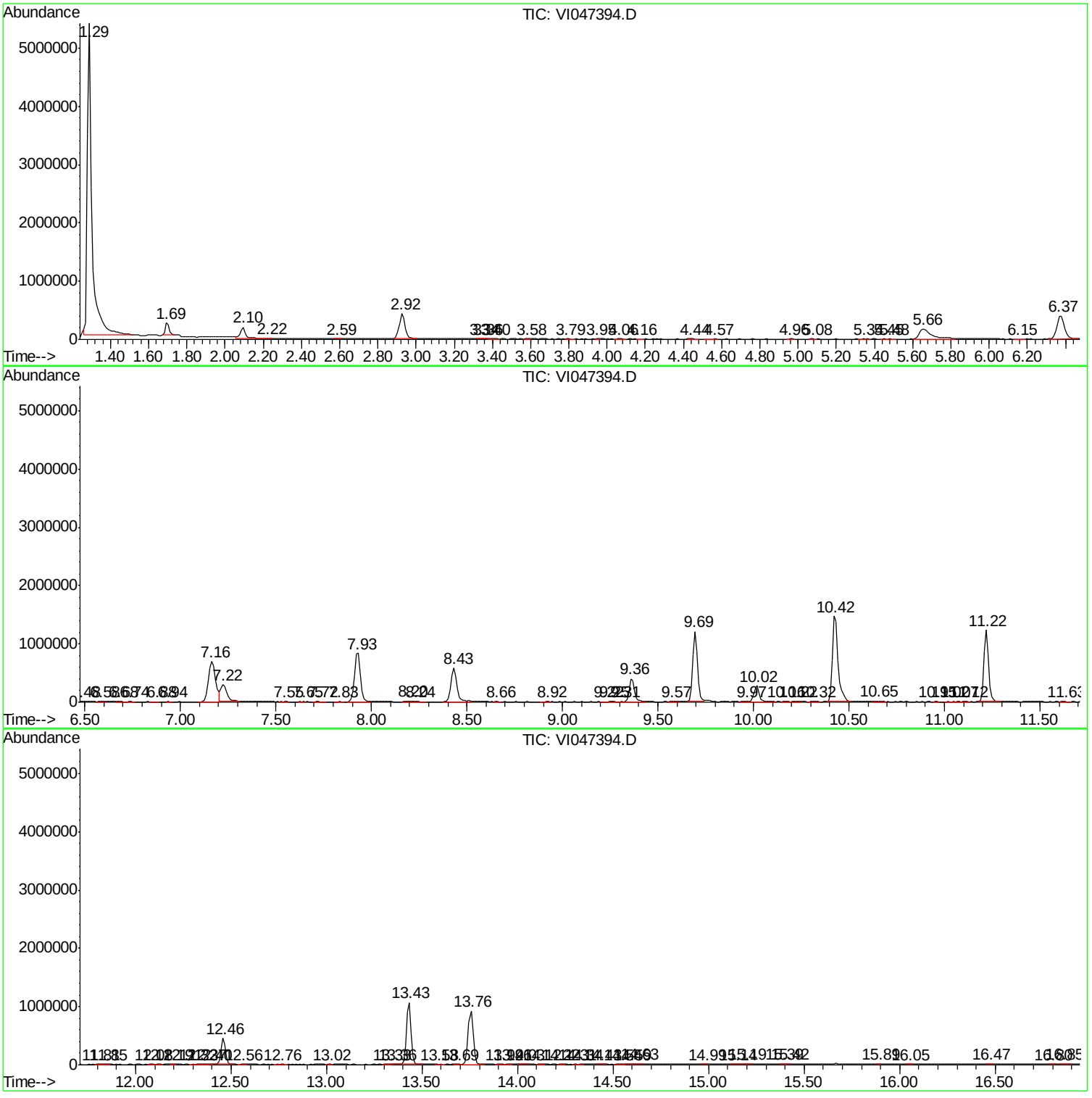
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047394.D
Acq On : 29 Feb 2016 13:11
Operator : FY/SY
Sample : VI0229WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK26

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047394.D
Acq On : 29 Feb 2016 13:11
Operator : FY/SY
Sample : VI0229WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK26

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047394.D
Acq On : 29 Feb 2016 13:11
Operator : FY/SY
Sample : VI0229WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK26

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

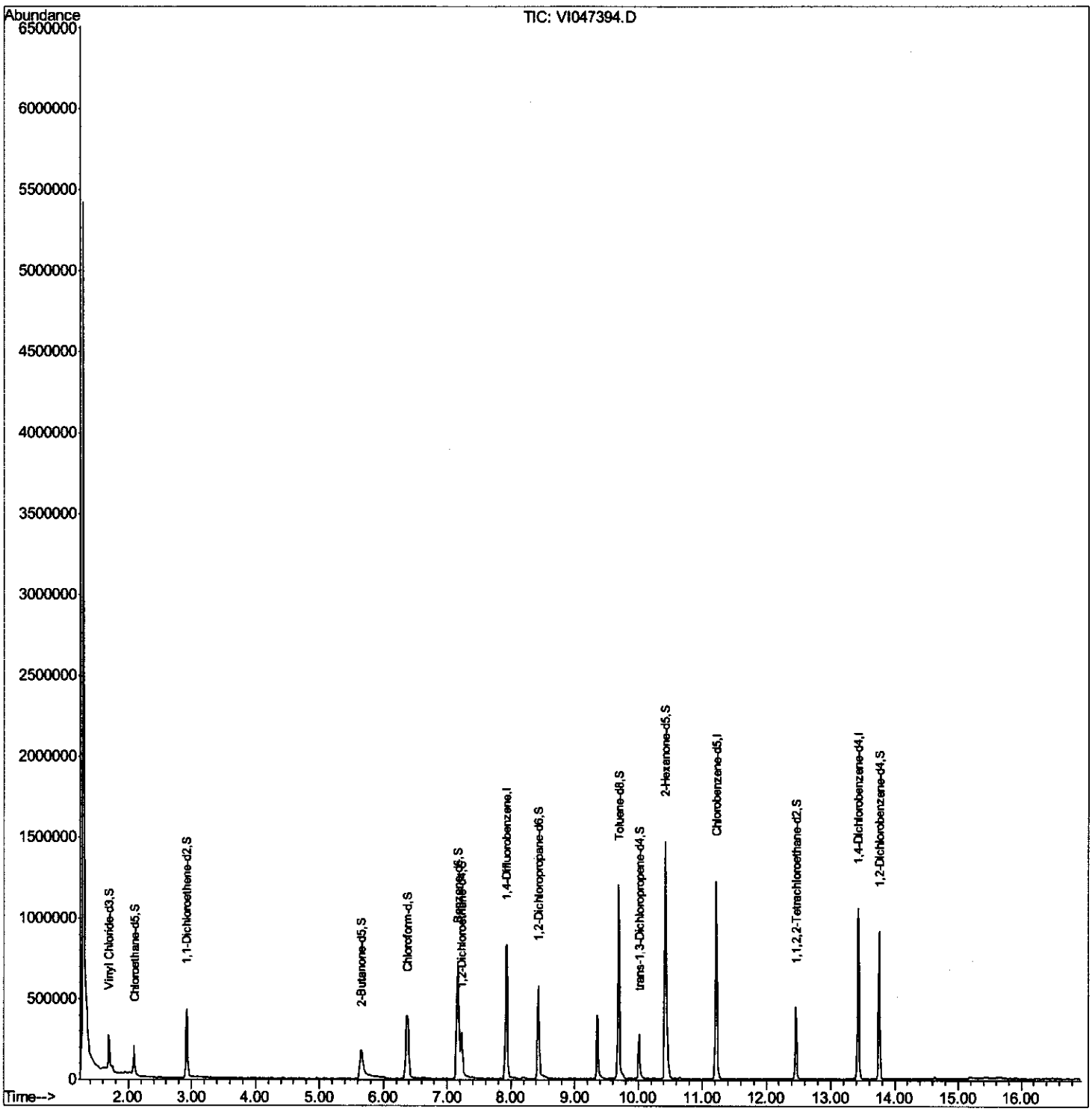
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047394.D
Acq On : 29 Feb 2016 13:11
Operator : FY/SY
Sample : VI0229WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 01 04:15:55 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK26

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:08:47 PM



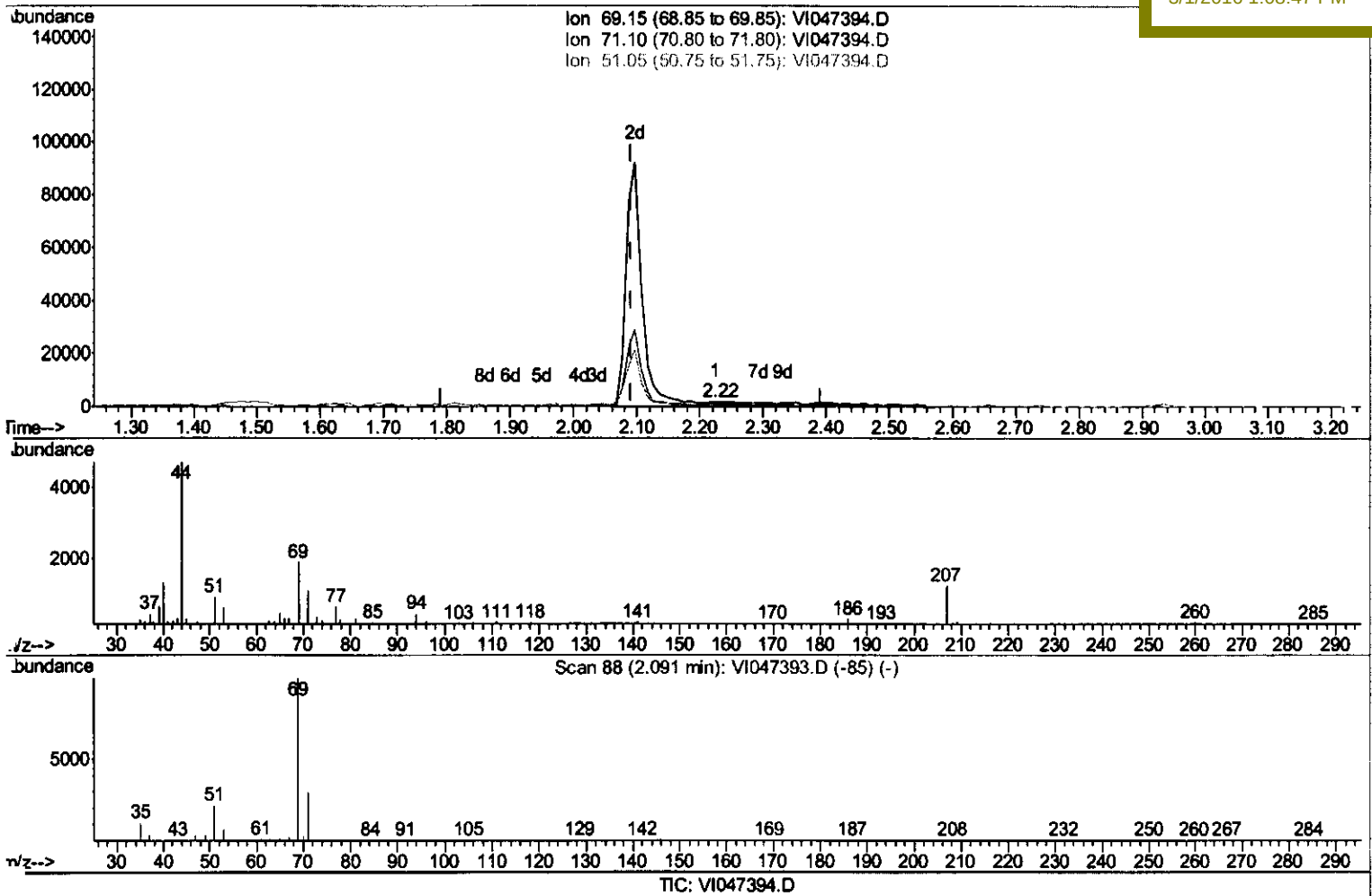
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047394.D
Acq On : 29 Feb 2016 13:11
Operator : FY/SY
Sample : VI0229WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 01 04:09:15 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK26

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:08:47 PM



(7) Chloroethane-d5 (S)

2.225min (+0.133) 0.07ug/L

response 2255

Ion	Exp%	Act%
69.15	100	100
71.10	32.10	28.34
51.05	30.30	39.38
0.00	0.00	0.00

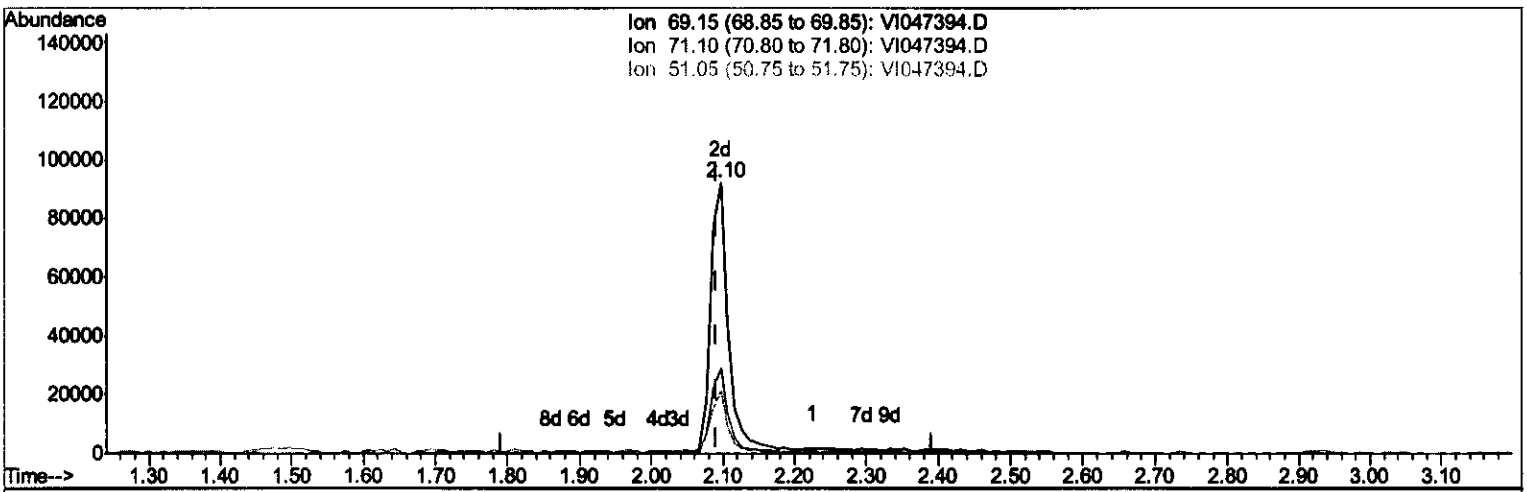
Quantitation Report (Qedit)

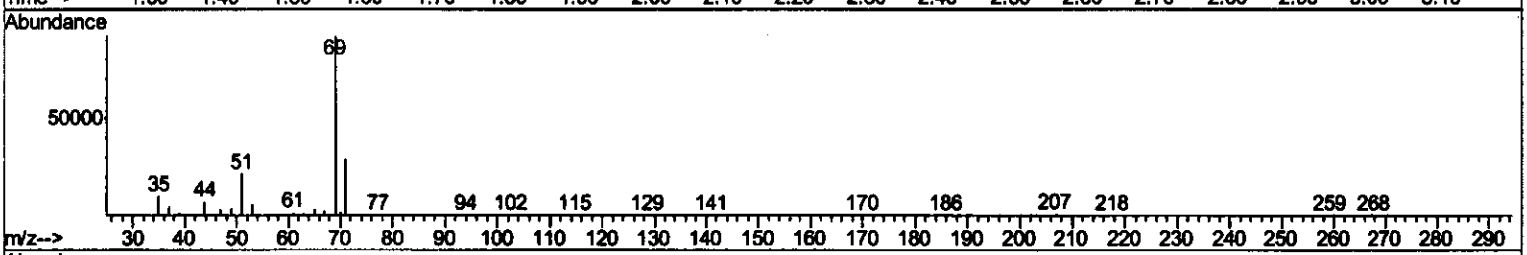
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047394.D
Acq On : 29 Feb 2016 13:11
Operator : FY/SY
Sample : VI0229WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

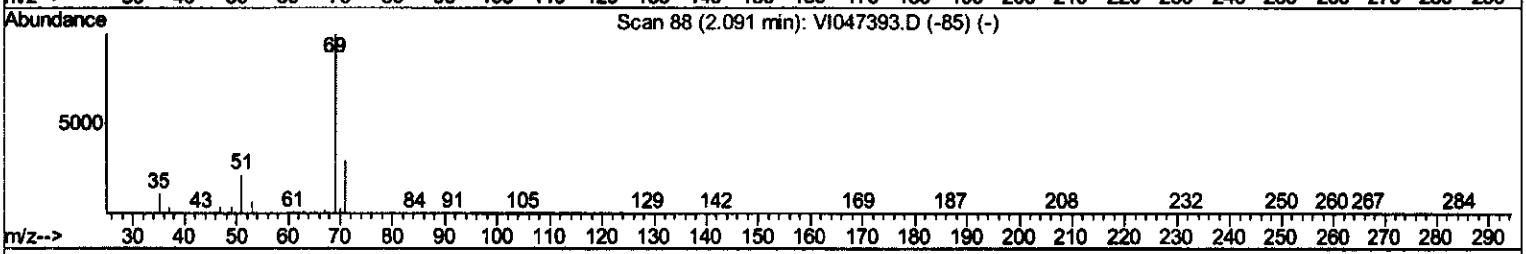
Quant Time: Mar 01 04:09:15 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VBLK26

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:08:47 PM







TIC: VI047394.D

(7) Chloroethane-d5 (S)

2.097min (+0.006) 5.09ug/L m

response 163583

Ion	Exp%	Act%
69.15	100	100
71.10	32.10	0.39#
51.05	30.30	0.54#
0.00	0.00	0.00

F.Y 03/05/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI022916\
Data File : VI047394.D
Acq On : 29 Feb 2016 13:11
Operator : FY/SY
Sample : VI0229WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 01 04:15:55 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue Mar 01 04:04:21 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VBLK26

Manual Integrations APPROVED
MMdadoda
3/1/2016 1:08:47 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	756036	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	670774	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.43	152	290007	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	220023	5.23	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 104.60%			
7) Chloroethane-d5	2.10	69	163583m	5.09	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.80%			
11) 1,1-Dichloroethene-d2	2.92	63	337833	3.63	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 72.60%			
20) 2-Butanone-d5	5.65	46	497372	56.81	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 113.62%			
24) Chloroform-d	6.38	84	452169	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
26) 1,2-Dichloroethane-d4	7.22	65	263208	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.00%			
32) Benzene-d6	7.16	84	806492	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.80%			
36) 1,2-Dichloropropane-d6	8.43	67	255922	5.24	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.80%			
41) Toluene-d8	9.69	98	737532	4.71	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.20%			
43) trans-1,3-Dichloropropene-	10.02	79	141992	4.91	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.20%			
46) 2-Hexanone-d5	10.42	63	618847	52.29	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 104.58%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	221429	5.24	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 104.80%			
64) 1,2-Dichlorobenzene-d4	13.76	152	255082	4.82	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 96.40%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FY 03/05/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK27

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0301WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047411.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK27

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0301WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047411.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK27

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0301WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047411.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK27

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0301WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI047411.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/01/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	16.74	0.73	J
2	E966796	Total Alkanes	N/A	0	

EPA-designated Registry Number.

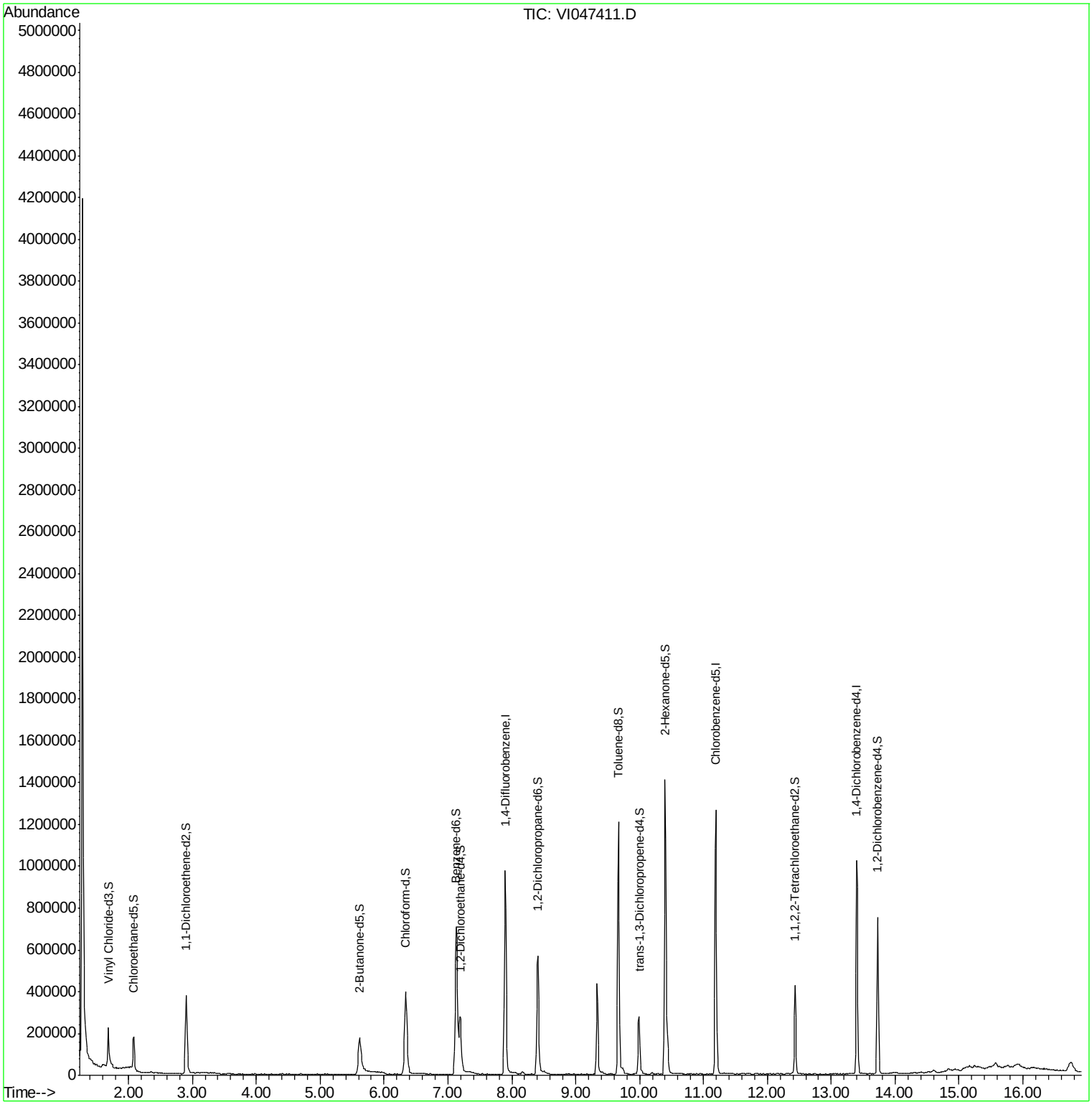
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI030116\
Data File : VI047411.D
Acq On : 1 Mar 2016 10:55
Operator : FY/SY
Sample : VI0301WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 02 02:43:39 2016
Quant Method : W:\HPCHEM1\MSVOA I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK27

Manual Integrations APPROVED
MMDadoda
3/2/2016 5:46:06 PM



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047411.D
Acq On : 1 Mar 2016 10:55
Operator : FY/SY
Sample : VI0301WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK27

Manual Integrations APPROVED
MMDadoda
3/2/2016 5:46:06 PM

Quant Time: Mar 02 02:43:39 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	857057	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	716241	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.40	152	290867	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	187771	3.94	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 78.80%			
7) Chloroethane-d5	2.08	69	149252	4.09	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 81.80%			
11) 1,1-Dichloroethene-d2	2.90	63	333186m	3.15	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.00%			
20) 2-Butanone-d5	5.62	46	407404	41.05	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 82.10%			
24) Chloroform-d	6.33	84	460545	4.27	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 85.40%			
26) 1,2-Dichloroethane-d4	7.20	65	273730	4.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.20%			
32) Benzene-d6	7.13	84	824647	4.77	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.40%			
36) 1,2-Dichloropropane-d6	8.41	67	277022	5.32	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 106.40%			
41) Toluene-d8	9.67	98	762613	4.56	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 91.20%			
43) trans-1,3-Dichloropropene-	9.99	79	152214	4.93	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.60%			
46) 2-Hexanone-d5	10.40	63	564186	44.65	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 89.30%			
57) 1,1,2,2-Tetrachloroethane-	12.43	84	200926	4.45	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 89.00%			
64) 1,2-Dichlorobenzene-d4	13.73	152	220133	4.15	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 83.00%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI030116\
Data File : VI047411.D
Acq On : 1 Mar 2016 10:55
Operator : FY/SY
Sample : VI0301WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK27

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.277	3	5	17	rVB	4116871	5475801	100.00%	19.705%
2	1.611	35	39	43	rBV3	12987	47054	0.86%	0.169%
3	1.690	44	47	55	rVB	194159	365680	6.68%	1.316%
4	1.837	60	62	63	rBV	4911	5090	0.09%	0.018%
5	1.995	76	78	80	rBV3	7728	17425	0.32%	0.063%
6	2.083	83	87	94	rVB	165523	312763	5.71%	1.126%
7	2.349	113	114	116	rVB2	3878	4342	0.08%	0.016%
8	2.526	129	132	134	rVV3	3279	6832	0.12%	0.025%
9	2.792	157	159	163	rVB3	5762	11664	0.21%	0.042%
10	2.851	163	165	166	rBV2	2842	4010	0.07%	0.014%
11	2.900	166	170	179	rBV	377441	847523	15.48%	3.050%
12	3.097	185	190	192	rBV4	3088	7825	0.14%	0.028%
13	3.136	192	194	196	rVV3	3556	5658	0.10%	0.020%
14	3.205	199	201	205	rVV5	4705	10507	0.19%	0.038%
15	3.254	205	206	207	rVV	4163	3565	0.07%	0.013%
16	3.313	211	212	214	rVV2	4013	5203	0.10%	0.019%
17	3.352	214	216	219	rVB3	3538	6677	0.12%	0.024%
18	3.559	233	237	242	rBV5	4431	14375	0.26%	0.052%
19	3.618	242	243	246	rVB2	2945	3471	0.06%	0.012%
20	3.933	273	275	278	rVB3	3222	4599	0.08%	0.017%
21	3.972	278	279	281	rVB2	3298	3570	0.07%	0.013%
22	4.081	287	290	293	rBV2	2320	4777	0.09%	0.017%
23	4.513	331	334	338	rVB4	3122	8060	0.15%	0.029%
24	4.582	338	341	342	rBV2	2070	3520	0.06%	0.013%
25	4.651	342	348	349	rVB4	2162	5532	0.10%	0.020%
26	4.700	349	353	354	rBV2	3284	5331	0.10%	0.019%
27	4.799	360	363	367	rVB2	1816	3522	0.06%	0.013%
28	5.448	426	429	430	rBV3	2412	4378	0.08%	0.016%
29	5.468	430	431	434	rBV3	2201	3536	0.06%	0.013%
30	5.615	439	446	454	rBV	176471	627255	11.46%	2.257%
31	5.851	469	470	473	rVB3	5614	7228	0.13%	0.026%
32	5.901	473	475	476	rBV	3708	3734	0.07%	0.013%
33	6.088	491	494	497	rVB5	2903	6393	0.12%	0.023%
34	6.206	503	506	511	rBV3	3065	6005	0.11%	0.022%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI030116\
Data File : VI047411.D
Acq On : 1 Mar 2016 10:55
Operator : FY/SY
Sample : VI0301WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK27

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

35	6.334	511	519	531	rBV	394229	1173810	21.44%	4.224%
36	6.530	536	539	541	rVB3	2341	4223	0.08%	0.015%
37	6.609	544	547	549	rBV3	2614	4341	0.08%	0.016%
38	6.717	557	558	563	rVB3	2722	5742	0.10%	0.021%
39	6.983	583	585	587	rVB2	2766	3979	0.07%	0.014%
40	7.022	587	589	592	rBV3	2850	5699	0.10%	0.021%
41	7.130	594	600	604	rBV	701027	1847635	33.74%	6.649%
42	7.190	604	606	612	rVB	260129	599003	10.94%	2.156%
43	7.396	625	627	630	rVB3	4912	7336	0.13%	0.026%
44	7.475	633	635	636	rVB2	3487	3829	0.07%	0.014%
45	7.534	638	641	643	rVB2	3178	4936	0.09%	0.018%
46	7.898	673	678	690	rBV	973695	2060918	37.64%	7.417%
47	8.164	703	705	709	rVB4	10518	22037	0.40%	0.079%
48	8.409	723	730	739	rBV	568632	1301269	23.76%	4.683%
49	9.088	793	799	801	rBV3	2918	5478	0.10%	0.020%
50	9.334	820	824	831	rBV	431741	776634	14.18%	2.795%
51	9.669	853	858	863	rBV	1207404	2131693	38.93%	7.671%
52	9.944	881	886	887	rVV5	5144	10535	0.19%	0.038%
53	9.993	887	891	901	rVB	276565	509701	9.31%	1.834%
54	10.190	907	911	914	rBV3	6879	13303	0.24%	0.048%
55	10.299	919	922	925	rVV2	4498	5230	0.10%	0.019%
56	10.397	928	932	944	rBV	1409084	2791470	50.98%	10.046%
57	10.554	946	948	950	rVV3	3236	4407	0.08%	0.016%
58	10.633	952	956	961	rVV7	4471	14492	0.26%	0.052%
59	10.751	964	968	969	rVB3	3952	5050	0.09%	0.018%
60	10.938	984	987	990	rVB4	4934	8064	0.15%	0.029%
61	11.095	1000	1003	1005	rBV3	3097	5229	0.10%	0.019%
62	11.194	1008	1013	1020	rBV	1265239	2220241	40.55%	7.990%
63	11.322	1023	1026	1029	rVB5	5470	8988	0.16%	0.032%
64	11.528	1044	1047	1049	rBV2	3038	5062	0.09%	0.018%
65	11.597	1052	1054	1055	rBV2	2759	3886	0.07%	0.014%
66	11.686	1060	1063	1066	rBV3	3290	7147	0.13%	0.026%
67	11.823	1073	1077	1082	rBV5	6143	17950	0.33%	0.065%
68	11.883	1082	1083	1086	rBV2	2446	4258	0.08%	0.015%
69	12.030	1097	1098	1101	rVB2	3991	5167	0.09%	0.019%
70	12.099	1103	1105	1107	rBV2	2864	4467	0.08%	0.016%
71	12.178	1107	1113	1114	rVB7	3173	6407	0.12%	0.023%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI030116\
Data File : VI047411.D
Acq On : 1 Mar 2016 10:55
Operator : FY/SY
Sample : VI0301WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK27

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Title : TRACE VOA SOM01.0

72	12.345	1128	1130	1131	rVB2	3921	3399	0.06%	0.012%
73	12.384	1131	1134	1135	rBV3	6663	12581	0.23%	0.045%
74	12.433	1135	1139	1144	rVB	423088	680569	12.43%	2.449%
75	12.738	1169	1170	1176	rVB3	1931	4009	0.07%	0.014%
76	12.916	1186	1188	1191	rVB2	3128	4434	0.08%	0.016%
77	12.975	1191	1194	1195	rBV3	2126	3960	0.07%	0.014%
78	13.329	1226	1230	1233	rBV4	3777	6130	0.11%	0.022%
79	13.398	1233	1237	1243	rBV	1021014	1726276	31.53%	6.212%
80	13.476	1243	1245	1248	rVB4	4063	6402	0.12%	0.023%
81	13.516	1248	1249	1253	rVB3	3554	6843	0.12%	0.025%
82	13.722	1266	1270	1277	rVB	748222	1329640	24.28%	4.785%
83	13.919	1287	1290	1291	rBV3	3162	4490	0.08%	0.016%
84	14.244	1320	1323	1324	rBV2	3340	5305	0.10%	0.019%
85	14.283	1324	1327	1329	rBV4	5582	11232	0.21%	0.040%
86	14.411	1339	1340	1344	rVB4	6063	8155	0.15%	0.029%
87	14.480	1344	1347	1349	rBV3	4131	9383	0.17%	0.034%
88	14.529	1349	1352	1354	rBV3	4588	9178	0.17%	0.033%
89	14.598	1354	1359	1364	rVB9	12069	36927	0.67%	0.133%
90	14.657	1364	1365	1369	rVB3	3219	4225	0.08%	0.015%
91	14.716	1369	1371	1372	rBV	5232	6240	0.11%	0.022%
92	14.834	1375	1383	1387	rBV6	13170	53390	0.98%	0.192%
93	14.932	1389	1393	1402	rVB6	9405	42302	0.77%	0.152%
94	15.041	1402	1404	1405	rBV2	4373	6470	0.12%	0.023%
95	15.060	1405	1406	1407	rBV	9063	9169	0.17%	0.033%
96	15.159	1414	1416	1421	rVB5	12113	24010	0.44%	0.086%
97	15.424	1441	1443	1444	rBV2	6332	10156	0.19%	0.037%
98	15.572	1456	1458	1462	rVB	20058	38156	0.70%	0.137%
99	15.710	1470	1472	1473	rBV2	8139	11474	0.21%	0.041%
100	16.743	1569	1577	1590	rVB3	44934	251182	4.59%	0.904%

Sum of corrected areas: 27788208

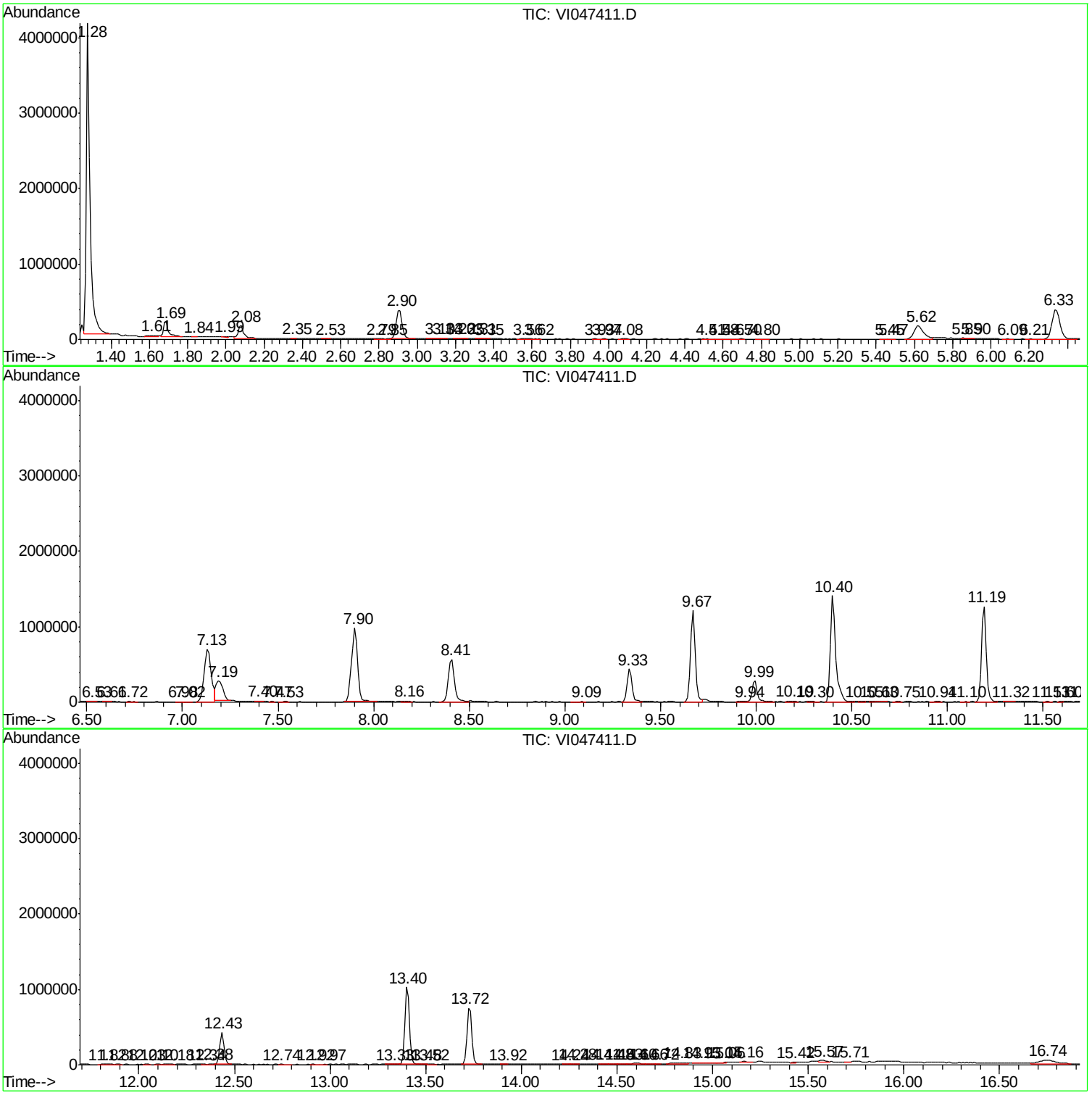
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047411.D
Acq On : 1 Mar 2016 10:55
Operator : FY/SY
Sample : VI0301WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK27

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047411.D
Acq On : 1 Mar 2016 10:55
Operator : FY/SY
Sample : VI0301WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK27

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

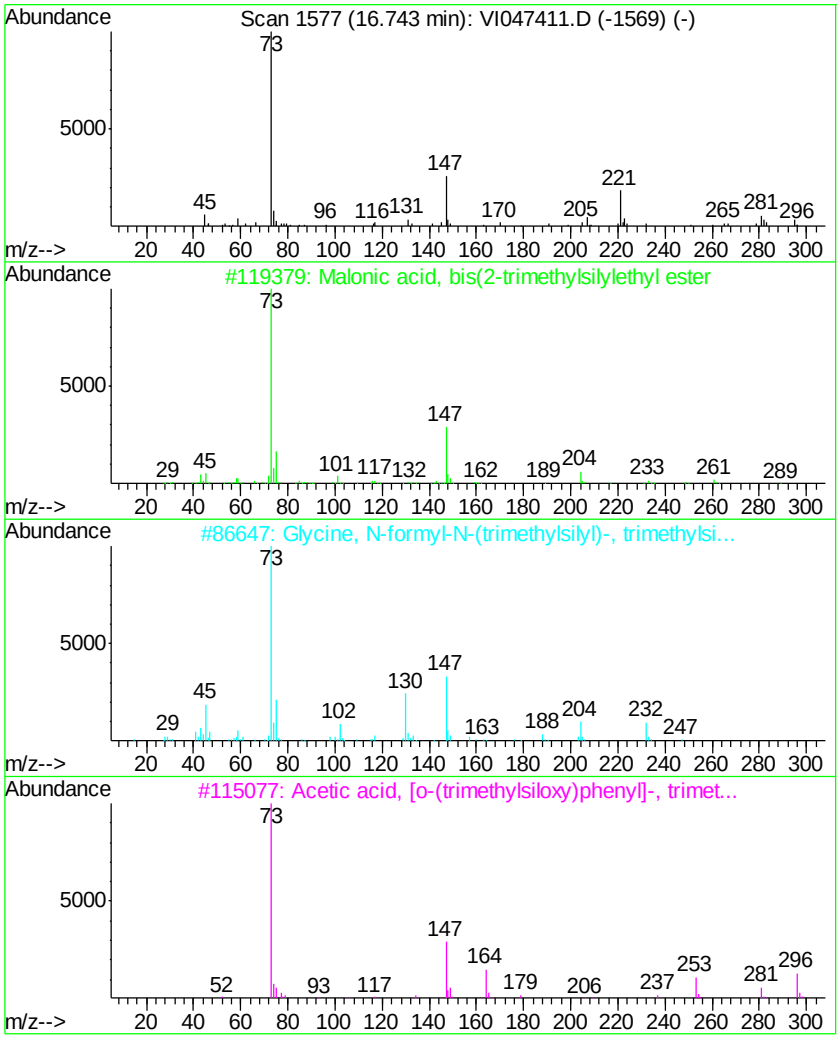
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

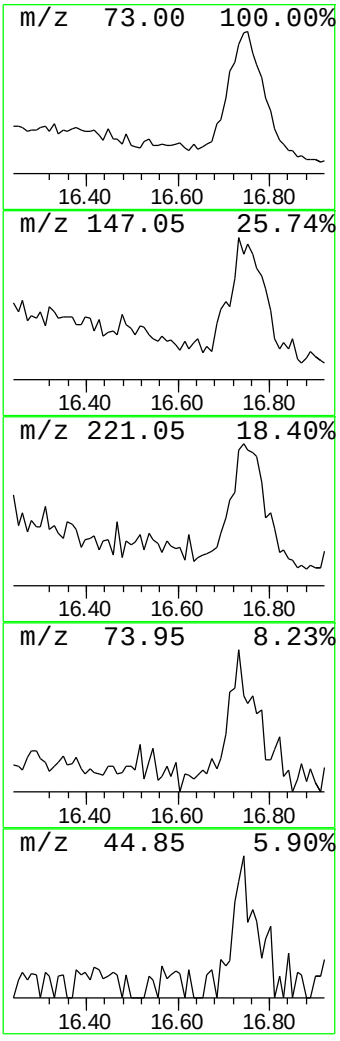
****

Peak Number 3 unknown-01 Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.74	0.73 ug/L	251182	1,4-Dichlorobenzene-d4	13.40

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Malonic acid, bis(2-trimethylsil...	304	C13H28O4Si2	090744-45-9	37
2	Glycine, N-formyl-N-(trimethylsi...	247	C9H21NO3Si2	055517-31-2	37
3	Acetic acid, [o-(trimethylsiloxy...	296	C14H24O3Si2	027750-52-3	28
4	trans-3-Hexenedioic acid, bis(tr...	288	C12H24O4Si2	1000078-95-4	25
5	Propanedioic acid, [(trimethylsi...	336	C12H28O5Si3	038165-93-4	25





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047411.D
Acq On : 1 Mar 2016 10:55
Operator : FY/SY
Sample : VI0301WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK27

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
unknown-01	16.74	0.7	ug/L	251182	3	13.40	1726280	5.0

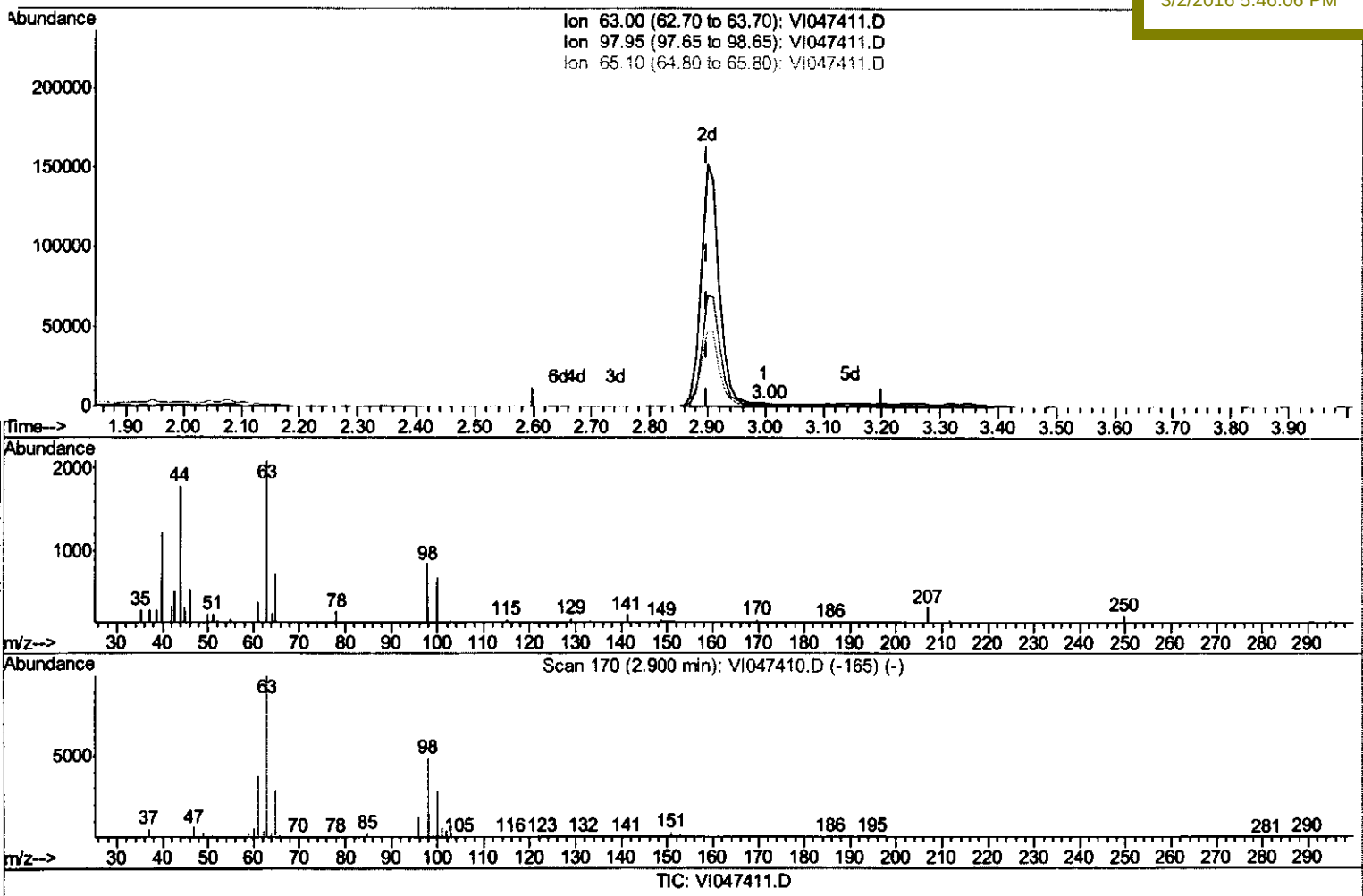
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047411.D
Acq On : 1 Mar 2016 10:55
Operator : FY/SY
Sample : VI0301WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 02 02:39:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VBLK27

Manual Integrations APPROVED
MMDadoda
3/2/2016 5:46:06 PM



TIC: VI047411.D

(11) 1,1-Dichloroethene-d2 (S)

2.998min (+0.099) 0.01ug/L

response 967

Ion	Exp%	Act%
63.00	100	100
97.95	62.10	74.35
65.10	24.00	17.79
0.00	0.00	0.00

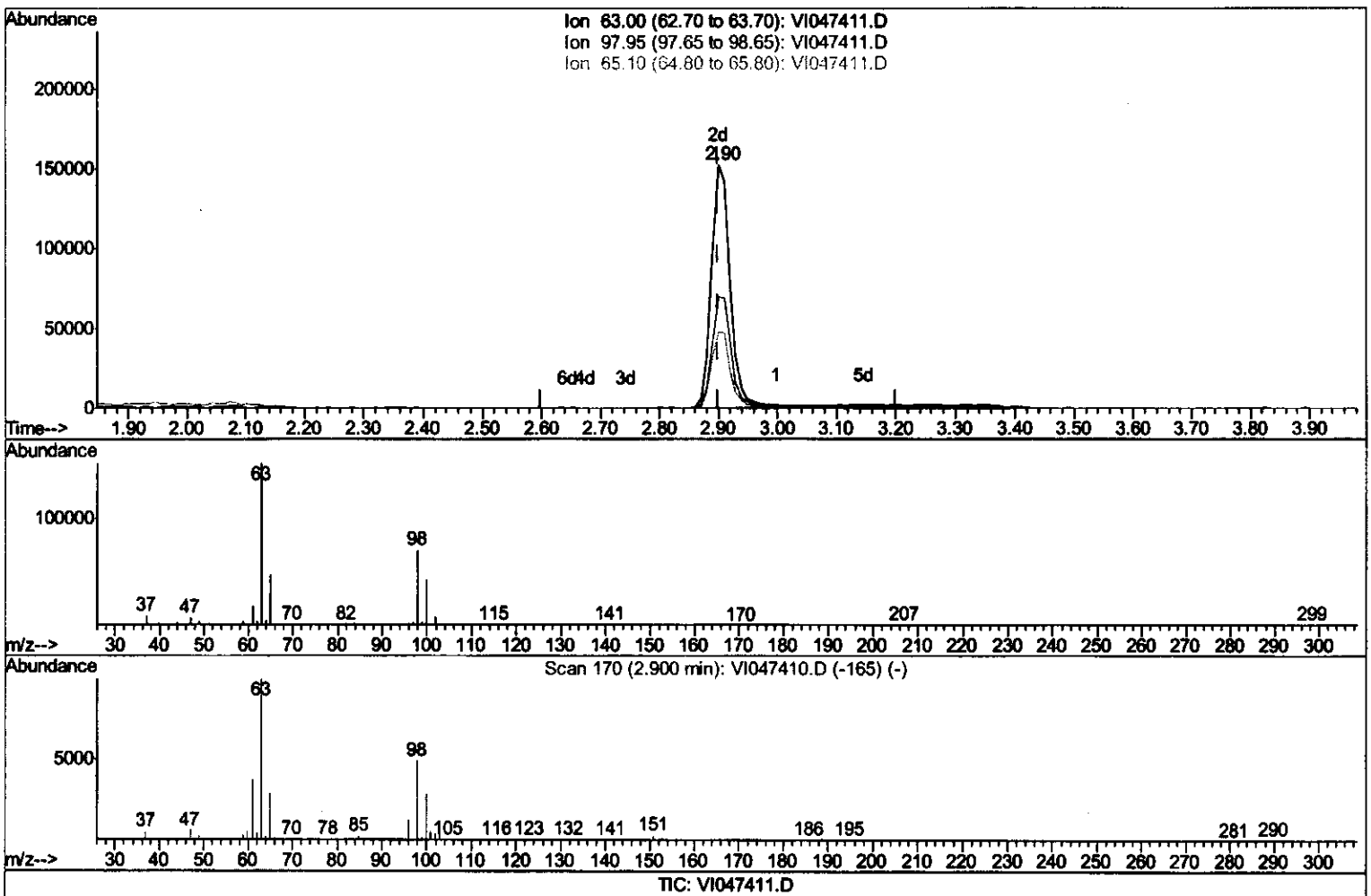
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047411.D
Acq On : 1 Mar 2016 10:55
Operator : FY/SY
Sample : VI0301WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 02 02:39:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VBLK27

Manual Integrations APPROVED
MMDadoda
3/2/2016 5:46:06 PM



TIC: VI047411.D

(11) 1,1-Dichloroethene-d2 (S)

2.900min (+0.000) 3.15ug/L m > F.Y 03/05/16

response 333186

Ion	Exp%	Act%
63.00	100	100
97.95	62.10	0.22#
65.10	24.00	0.05#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047411.D
Acq On : 1 Mar 2016 10:55
Operator : FY/SY
Sample : VI0301WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 02 02:43:39 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VBLK27

Manual Integrations APPROVED
MMDadoda
3/2/2016 5:46:06 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	857057	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	716241	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.40	152	290867	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	187771	3.94	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 78.80%			
7) Chloroethane-d5	2.08	69	149252	4.09	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 81.80%			
11) 1,1-Dichloroethene-d2	2.90	63	333186m	3.15	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.00%			
20) 2-Butanone-d5	5.62	46	407404	41.05	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 82.10%			
24) Chloroform-d	6.33	84	460545	4.27	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 85.40%			
26) 1,2-Dichloroethane-d4	7.20	65	273730	4.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.20%			
32) Benzene-d6	7.13	84	824647	4.77	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.40%			
36) 1,2-Dichloropropane-d6	8.41	67	277022	5.32	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 106.40%			
41) Toluene-d8	9.67	98	762613	4.56	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 91.20%			
43) trans-1,3-Dichloropropene-	9.99	79	152214	4.93	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.60%			
46) 2-Hexanone-d5	10.40	63	564186	44.65	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 89.30%			
57) 1,1,2,2-Tetrachloroethane-	12.43	84	200926	4.45	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 89.00%			
64) 1,2-Dichlorobenzene-d4	13.73	152	220133	4.15	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 83.00%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

F.Y 03/05/16

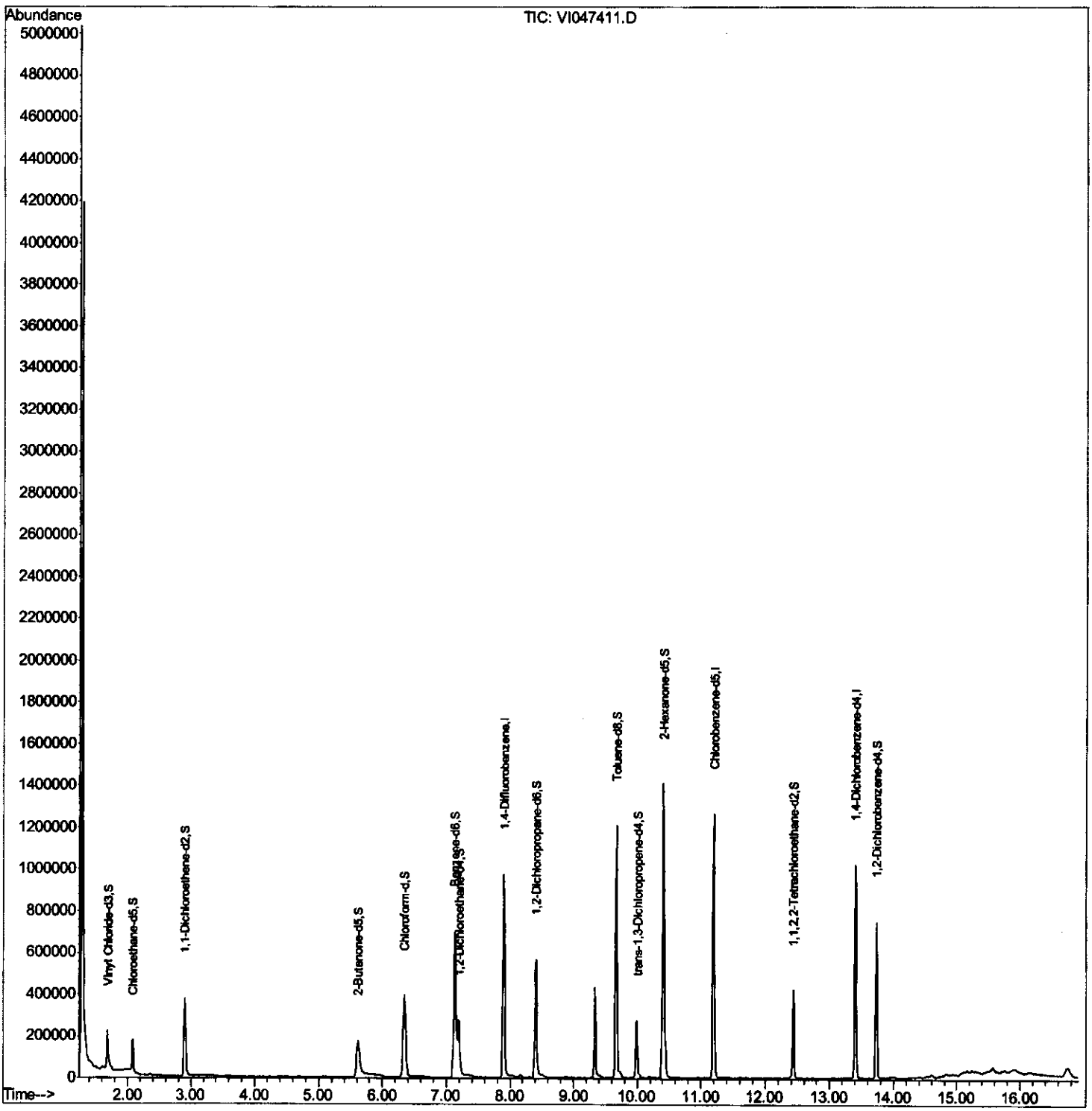
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI030116\
Data File : VI047411.D
Acq On : 1 Mar 2016 10:55
Operator : FY/SY
Sample : VI0301WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 02 02:43:39 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR022616W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 02:34:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK27

Manual Integrations APPROVED
MMDadoda
3/2/2016 5:46:06 PM



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK51

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0225WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018146.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK51

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0225WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018146.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK51

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0225WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018146.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/25/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK51

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0225WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018146.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 02/25/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

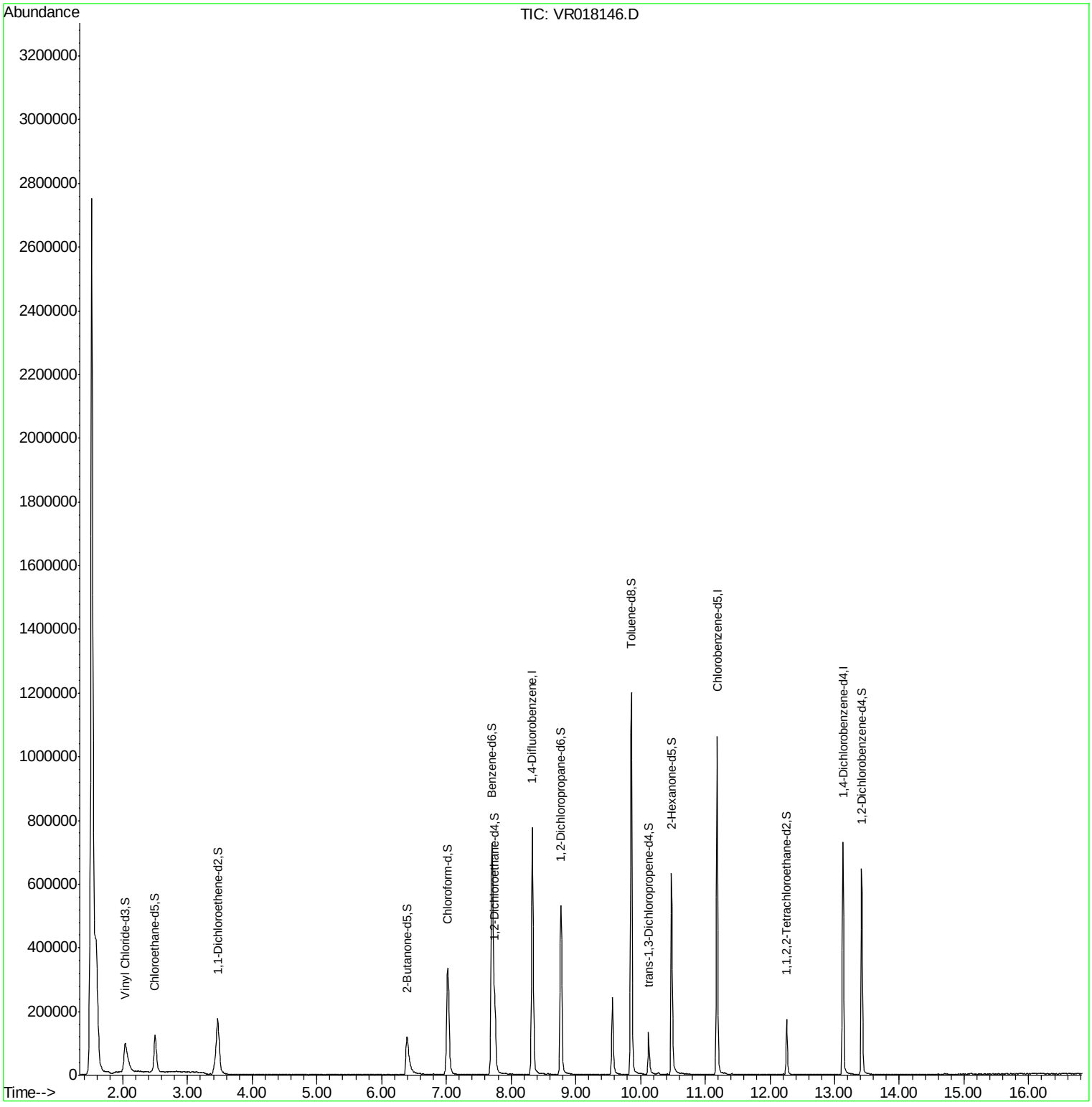
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018146.D
Acq On : 25 Feb 2016 19:53
Operator : MD\SY
Sample : VR0225WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK51

Quant Time: Feb 26 04:19:49 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018146.D
Acq On : 25 Feb 2016 19:53
Operator : MD\SY
Sample : VR0225WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK51

Quant Time: Feb 26 04:19:49 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri Feb 26 04:00:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	566480	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	463455	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	155955	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	235984	4.88	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 97.60%			
7) Chloroethane-d5	2.50	69	170153	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.40%			
11) 1,1-Dichloroethene-d2	3.47	63	253789	3.67	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 73.40%			
20) 2-Butanone-d5	6.39	46	256267	43.18	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 86.36%			
24) Chloroform-d	7.02	84	354925	4.58	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 91.60%			
26) 1,2-Dichloroethane-d4	7.75	65	194173	4.59	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 91.80%			
32) Benzene-d6	7.70	84	716275	5.05	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.00%			
36) 1,2-Dichloropropane-d6	8.77	67	225386	4.97	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 99.40%			
41) Toluene-d8	9.86	98	677889	5.03	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.60%			
43) trans-1,3-Dichloropropene-	10.13	79	64466	4.26	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 85.20%			
46) 2-Hexanone-d5	10.48	63	171199	40.42	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 80.84%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	72195	4.02	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 80.40%			
64) 1,2-Dichlorobenzene-d4	13.42	152	139589	5.31	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 106.20%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018146.D
Acq On : 25 Feb 2016 19:53
Operator : MD\SY
Sample : VR0225WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK51

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.518	15	31	62	rBV	2751021	8094222	100.00%	34.908%
2	2.041	107	117	133	rBV2	91045	377849	4.67%	1.630%
3	2.497	185	192	205	rVB	113645	301647	3.73%	1.301%
4	3.470	335	352	369	rBV	174276	635665	7.85%	2.741%
5	6.391	825	832	855	rBV	119197	438753	5.42%	1.892%
6	7.023	923	936	953	rBV	334666	915509	11.31%	3.948%
7	7.705	1038	1048	1073	rBV2	728744	2197562	27.15%	9.478%
8	8.331	1141	1151	1170	rBV	775900	1548434	19.13%	6.678%
9	8.769	1216	1223	1238	rBV	529743	1086794	13.43%	4.687%
10	9.566	1347	1354	1366	rBV	244124	433321	5.35%	1.869%
11	9.858	1394	1402	1410	rBV	1200115	1962159	24.24%	8.462%
12	10.126	1440	1446	1459	rBV	133155	227245	2.81%	0.980%
13	10.479	1498	1504	1525	rBV	631114	1031290	12.74%	4.448%
14	11.184	1613	1620	1631	rBV	1062120	1634005	20.19%	7.047%
15	12.261	1791	1797	1806	rBV	171889	260945	3.22%	1.125%
16	13.131	1934	1940	1955	rBV	729120	1082257	13.37%	4.667%
17	13.417	1981	1987	1998	rBV	645667	959432	11.85%	4.138%

Sum of corrected areas: 23187089

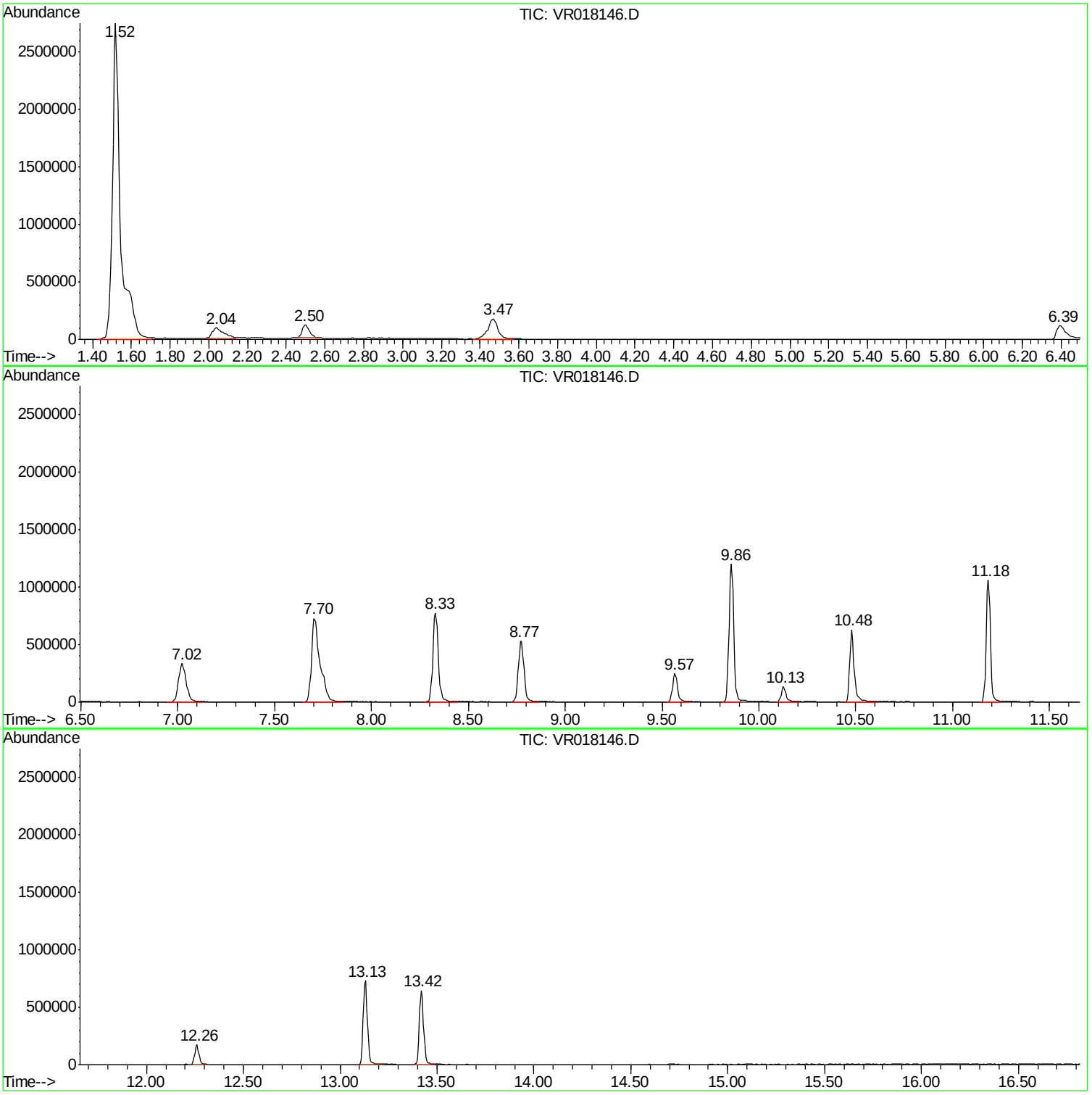
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018146.D
Acq On : 25 Feb 2016 19:53
Operator : MD\SY
Sample : VR0225WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK51

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018146.D
Acq On : 25 Feb 2016 19:53
Operator : MD\SY
Sample : VR0225WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VBLK51

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022516\
Data File : VR018146.D
Acq On : 25 Feb 2016 19:53
Operator : MD\SY
Sample : VR0225WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK51

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK52

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0226WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018165.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK52

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0226WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018165.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK52

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0226WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018165.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK52

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0226WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018165.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 02/26/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

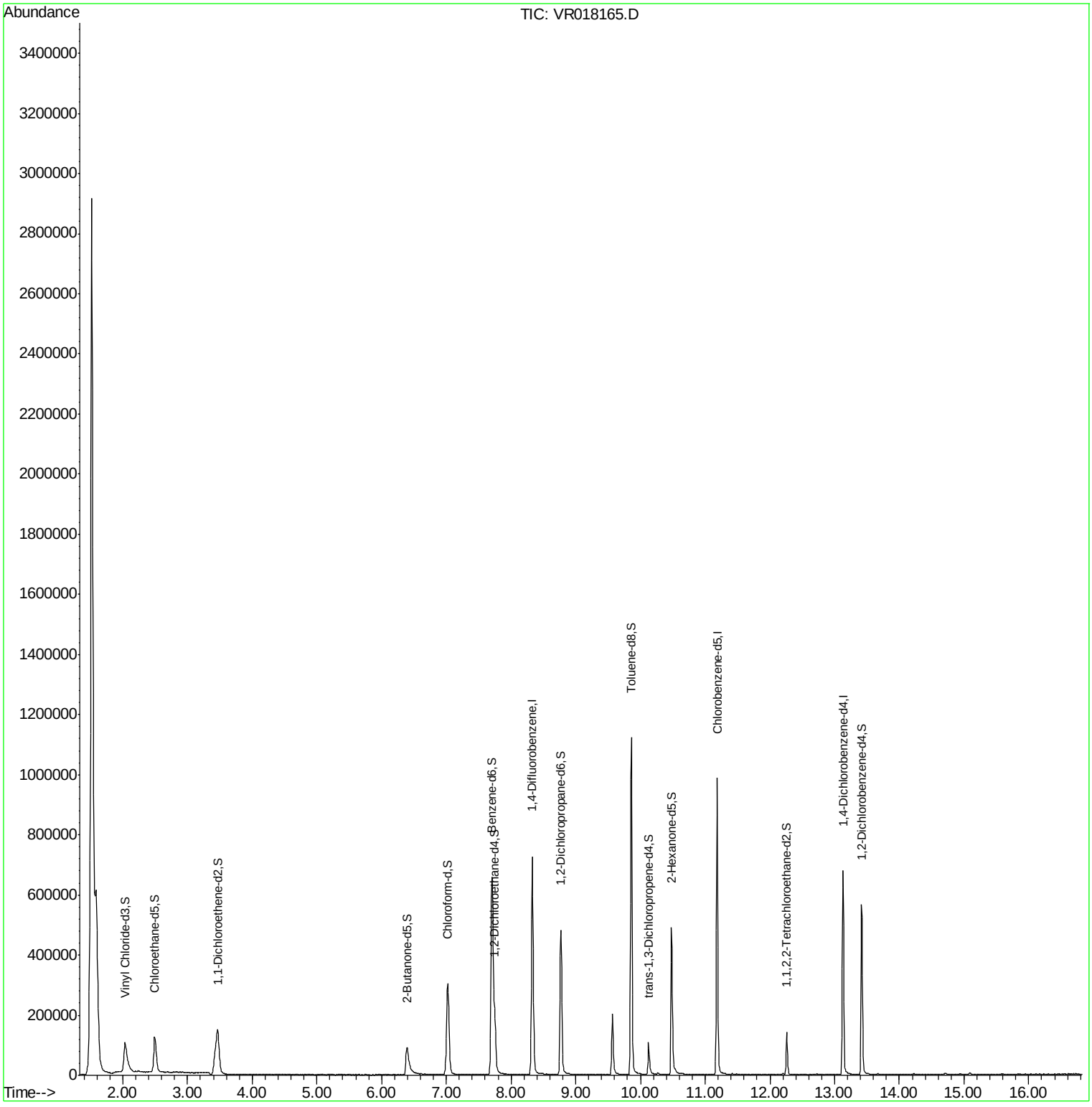
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018165.D
Acq On : 26 Feb 2016 10:09
Operator : MD\SY
Sample : VR0226WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK52

Quant Time: Feb 27 01:17:51 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018165.D
Acq On : 26 Feb 2016 10:09
Operator : MD\SY
Sample : VR0226WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK52

Quant Time: Feb 27 01:17:51 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	529626	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	423106	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	144330	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	230197	5.09	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 101.80%			
7) Chloroethane-d5	2.49	69	168360	5.05	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.00%			
11) 1,1-Dichloroethene-d2	3.46	63	251769	3.90	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 78.00%			
20) 2-Butanone-d5	6.39	46	202426	36.48	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 72.96%			
24) Chloroform-d	7.02	84	327078	4.51	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.20%			
26) 1,2-Dichloroethane-d4	7.75	65	168760	4.27	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 85.40%			
32) Benzene-d6	7.70	84	663673	5.13	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.60%			
36) 1,2-Dichloropropane-d6	8.77	67	199498	4.82	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 96.40%			
41) Toluene-d8	9.86	98	618716	5.03	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.60%			
43) trans-1,3-Dichloropropene-	10.13	79	52487	3.80	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 76.00%			
46) 2-Hexanone-d5	10.48	63	135272	34.99	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 69.98%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	61186	3.73	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 74.60%			
64) 1,2-Dichlorobenzene-d4	13.42	152	123853	5.09	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.80%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA R\DATA\VR022616\
Data File : VR018165.D
Acq On : 26 Feb 2016 10:09
Operator : MD\SY
Sample : VR0226WBL01
Misc : 25mL/MSVOA R/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK52

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.517	14	31	40	rBV	2916150	8063529	100.00%	37.032%
2	2.035	107	116	138	rBV	97041	361130	4.48%	1.658%
3	2.491	183	191	208	rVB	115330	318948	3.96%	1.465%
4	3.464	335	351	367	rBV2	149357	632392	7.84%	2.904%
5	6.390	824	832	854	rBV	91369	342981	4.25%	1.575%
6	7.023	926	936	954	rBV	301790	824524	10.23%	3.787%
7	7.704	1039	1048	1071	rBV2	657543	2012373	24.96%	9.242%
8	8.331	1142	1151	1169	rBV	726694	1458192	18.08%	6.697%
9	8.769	1215	1223	1235	rBV	481705	974138	12.08%	4.474%
10	9.566	1345	1354	1368	rBV	204541	376884	4.67%	1.731%
11	9.858	1395	1402	1418	rBV	1120451	1813182	22.49%	8.327%
12	10.126	1440	1446	1457	rBV	105298	186650	2.31%	0.857%
13	10.479	1498	1504	1521	rBV	489560	807213	10.01%	3.707%
14	11.184	1613	1620	1633	rBV	986476	1505794	18.67%	6.915%
15	12.261	1791	1797	1810	rVB	141548	217754	2.70%	1.000%
16	13.131	1933	1940	1949	rBV	677756	997799	12.37%	4.582%
17	13.417	1980	1987	2006	rBV	564656	881240	10.93%	4.047%

Sum of corrected areas: 21774723

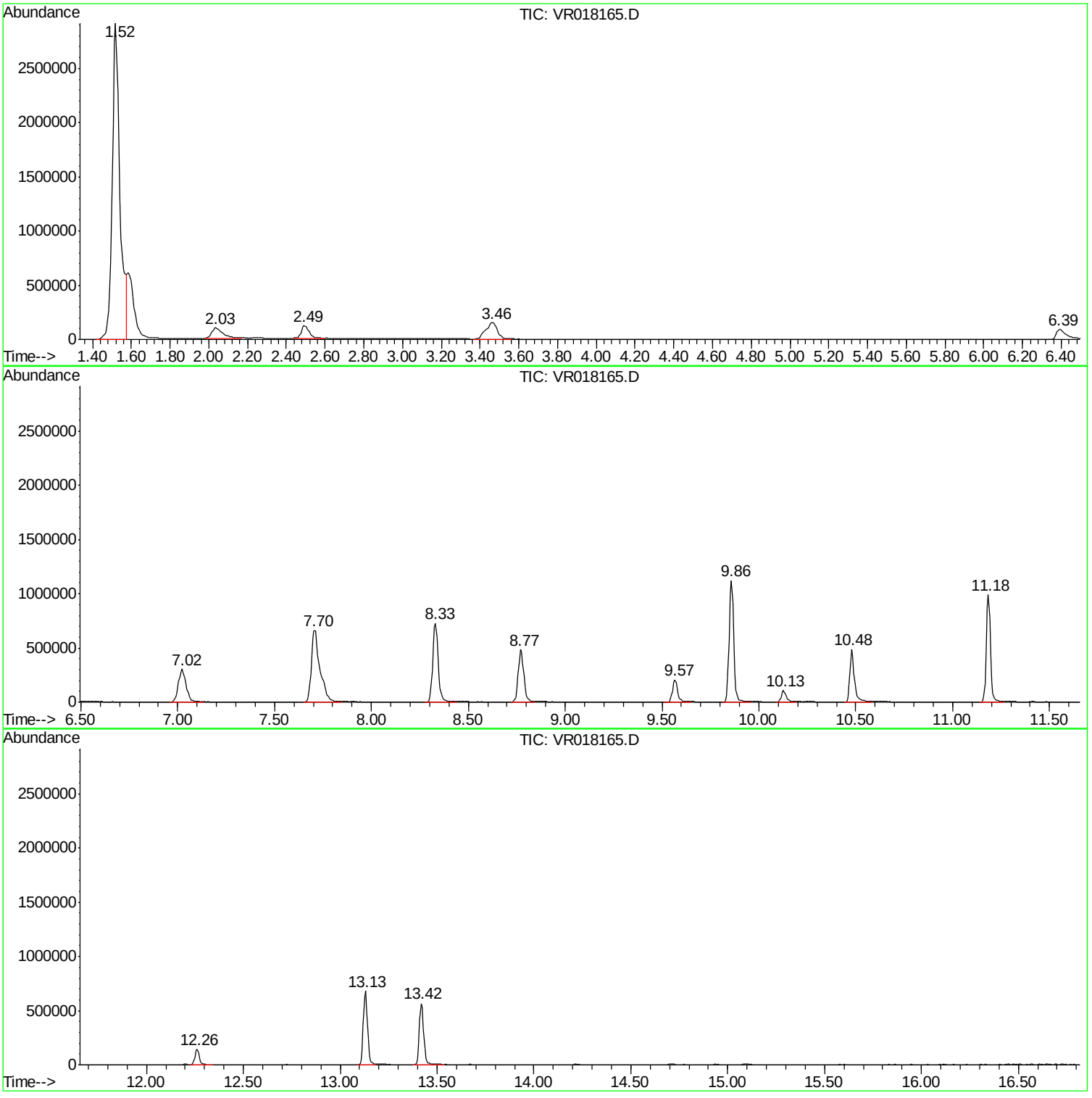
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018165.D
Acq On : 26 Feb 2016 10:09
Operator : MD\SY
Sample : VR0226WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK52

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018165.D
Acq On : 26 Feb 2016 10:09
Operator : MD\SY
Sample : VR0226WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VBLK52

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018165.D
Acq On : 26 Feb 2016 10:09
Operator : MD\SY
Sample : VR0226WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK52

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK53

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0301WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018183.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK53

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0301WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018183.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK53

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0301WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018183.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/01/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK53

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0301WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018183.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/01/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

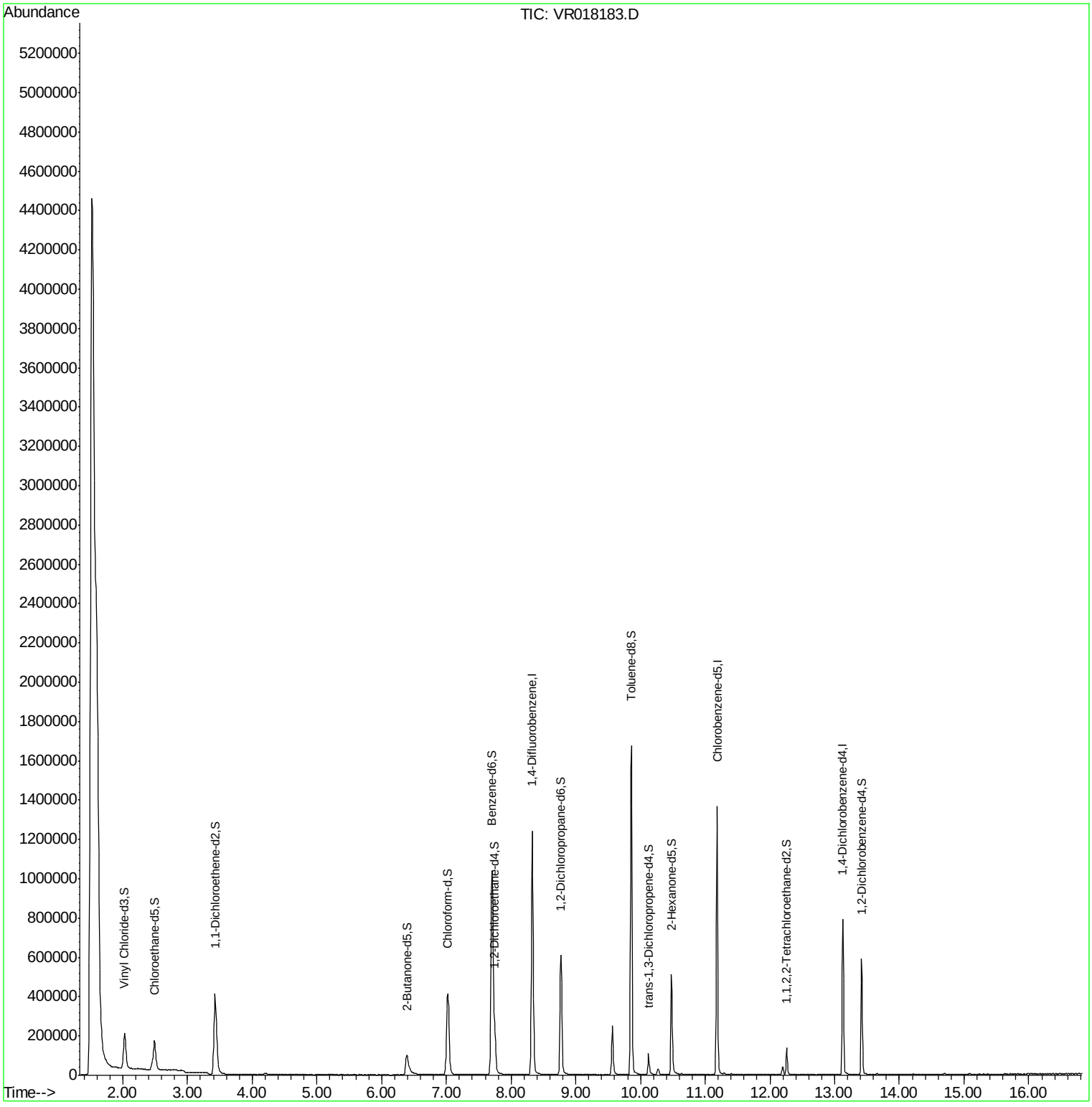
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018183.D
Acq On : 1 Mar 2016 17:26
Operator : MD\SY
Sample : VR0301WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK53

Quant Time: Mar 02 03:41:23 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018183.D
Acq On : 1 Mar 2016 17:26
Operator : MD\SY
Sample : VR0301WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK53

Quant Time: Mar 02 03:41:23 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed Mar 02 03:26:49 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	962947	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	600019	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	178940	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	315265	4.23	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 84.60%			
7) Chloroethane-d5	2.49	69	241263	4.35	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 87.00%			
11) 1,1-Dichloroethene-d2	3.43	63	486879	3.18	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.60%			
20) 2-Butanone-d5	6.39	46	232597	44.92	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 89.84%			
24) Chloroform-d	7.02	84	458940	4.12	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 82.40%			
26) 1,2-Dichloroethane-d4	7.75	65	178063	4.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.20%			
32) Benzene-d6	7.70	84	1104561	4.41	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 88.20%			
36) 1,2-Dichloropropane-d6	8.77	67	279597	4.46	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 89.20%			
41) Toluene-d8	9.86	98	979353	4.38	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.60%			
43) trans-1,3-Dichloropropene-	10.13	79	54147	3.80	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 76.00%			
46) 2-Hexanone-d5	10.48	63	156568	42.91	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 85.82%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	60446	4.31	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 86.20%			
64) 1,2-Dichlorobenzene-d4	13.42	152	130617	4.46	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 89.20%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018183.D
Acq On : 1 Mar 2016 17:26
Operator : MD\SY
Sample : VR0301WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK53

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.523	17	32	81	rBV	4459836	26896627	100.00%	59.071%
2	2.028	107	115	130	rVB	179576	484533	1.80%	1.064%
3	2.491	179	191	204	rBV	150582	435085	1.62%	0.956%
4	3.428	334	345	363	rBV	412496	1231609	4.58%	2.705%
5	6.390	820	832	855	rBV	99815	389616	1.45%	0.856%
6	7.023	926	936	953	rBV	412940	1158151	4.31%	2.544%
7	7.704	1038	1048	1068	rBV2	1041066	2988601	11.11%	6.564%
8	8.331	1141	1151	1164	rBV	1242316	2499033	9.29%	5.488%
9	8.769	1214	1223	1234	rBV	606692	1257086	4.67%	2.761%
10	9.566	1345	1354	1365	rBV	250630	443671	1.65%	0.974%
11	9.858	1395	1402	1410	rBV	1677089	2776507	10.32%	6.098%
12	10.479	1498	1504	1521	rBV	510979	861975	3.20%	1.893%
13	11.184	1613	1620	1634	rBV	1363785	2052247	7.63%	4.507%
14	13.125	1933	1939	1957	rBV	790014	1185371	4.41%	2.603%
15	13.417	1980	1987	2003	rBV	588307	872595	3.24%	1.916%

Sum of corrected areas: 45532707

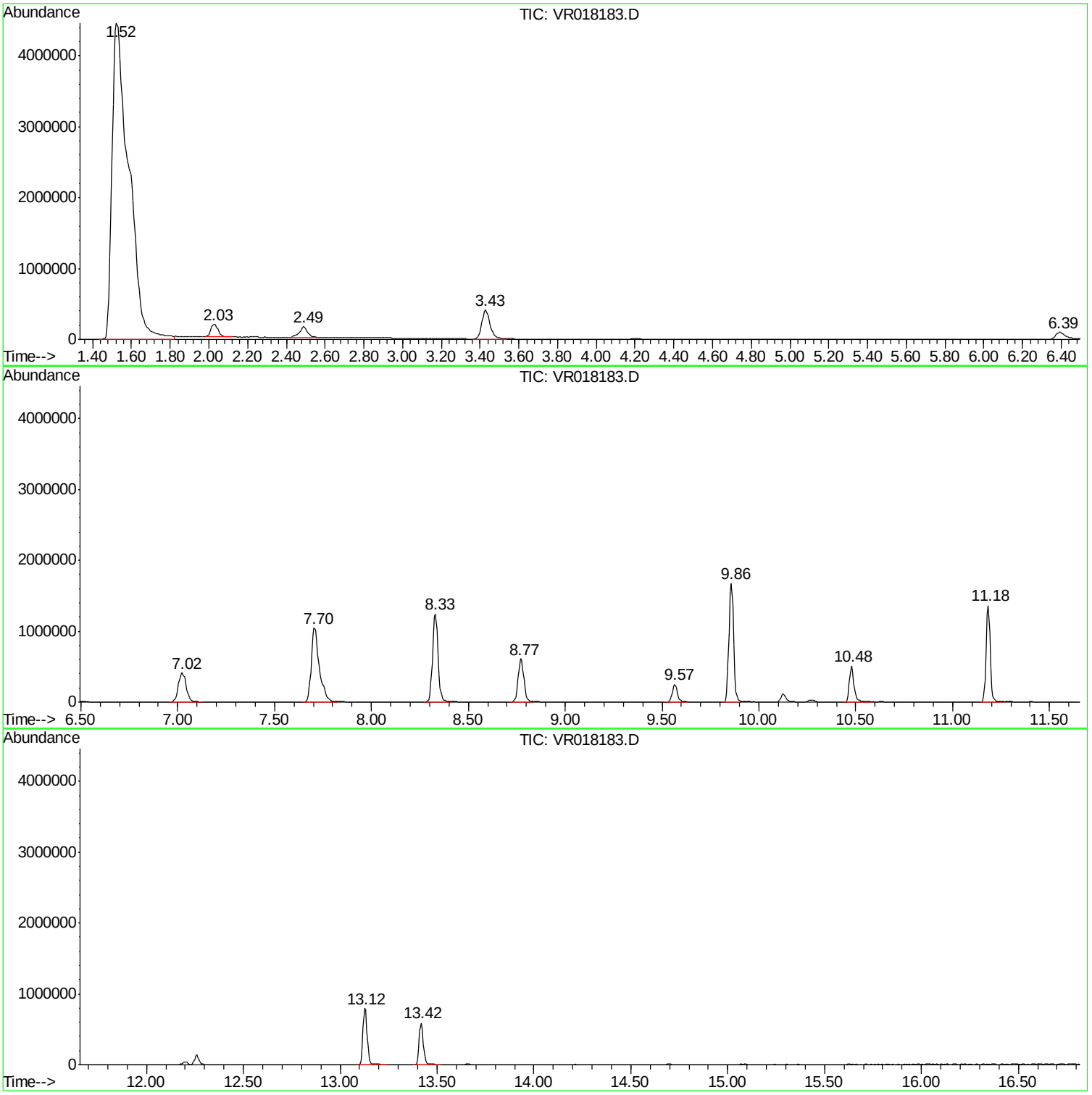
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018183.D
Acq On : 1 Mar 2016 17:26
Operator : MD\SY
Sample : VR0301WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK53

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018183.D
Acq On : 1 Mar 2016 17:26
Operator : MD\SY
Sample : VR0301WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VBLK53

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030116\
Data File : VR018183.D
Acq On : 1 Mar 2016 17:26
Operator : MD\SY
Sample : VR0301WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK53

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK54

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0302WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018204.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/02/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK54

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0302WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018204.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/02/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK54

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0302WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018204.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/02/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLK54

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0302WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018204.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/02/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

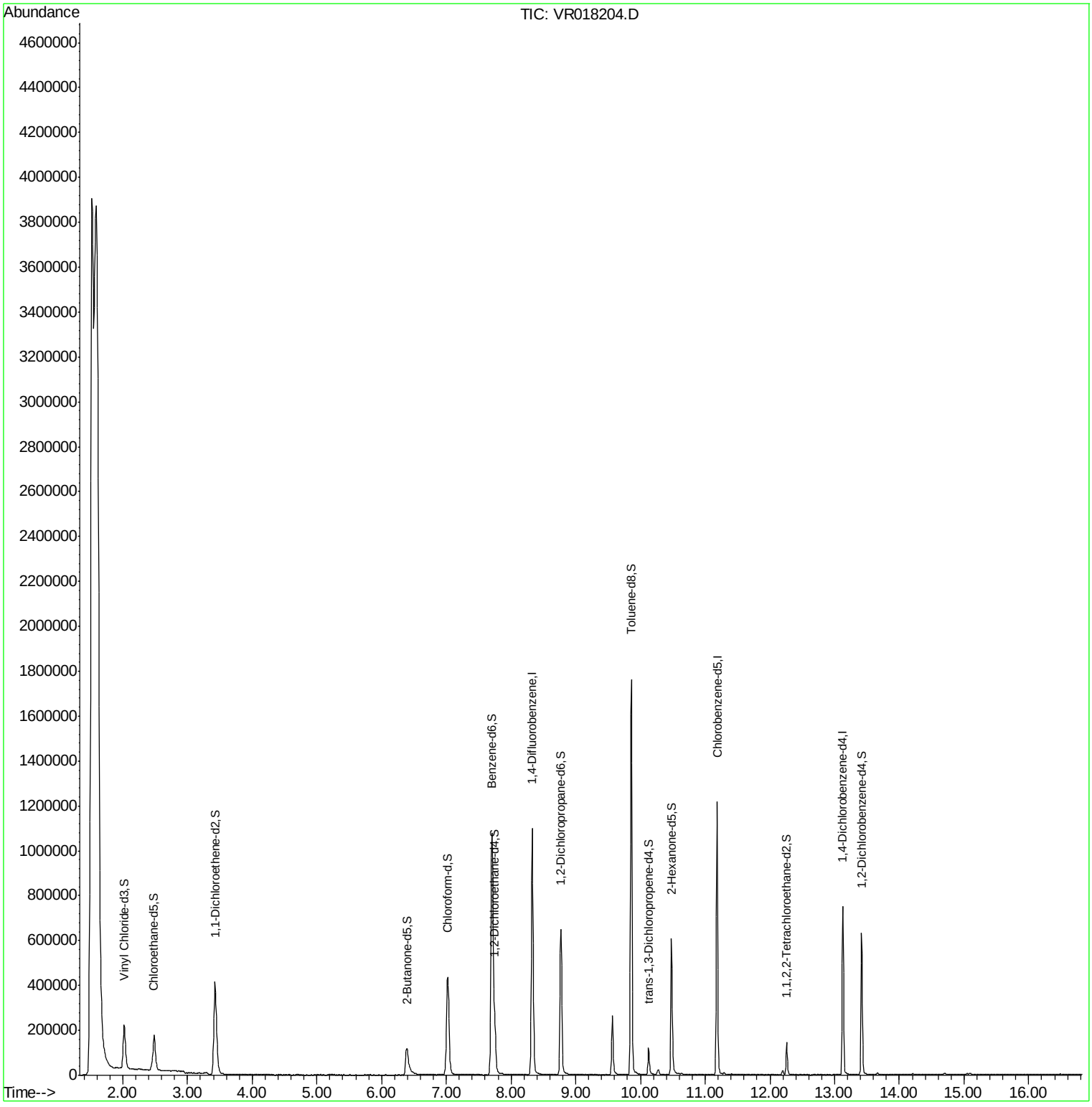
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018204.D
Acq On : 2 Mar 2016 12:15
Operator : MD\SY
Sample : VR0302WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK54

Quant Time: Mar 03 02:52:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Mar 03 02:31:02 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018204.D
Acq On : 2 Mar 2016 12:15
Operator : MD\SY
Sample : VR0302WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK54

Quant Time: Mar 03 02:52:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Mar 03 02:31:02 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	846159	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	541695	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	164956	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.02	65	319228	4.87	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 97.40%			
7) Chloroethane-d5	2.48	69	240709	4.94	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 98.80%			
11) 1,1-Dichloroethene-d2	3.43	63	472466	3.52	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 70.40%			
20) 2-Butanone-d5	6.39	46	268186	58.95	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 117.90%			
24) Chloroform-d	7.02	84	481634	4.93	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.60%			
26) 1,2-Dichloroethane-d4	7.75	65	198622	5.53	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 110.60%			
32) Benzene-d6	7.70	84	1118448	4.95	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.00%			
36) 1,2-Dichloropropane-d6	8.77	67	288007	5.09	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.80%			
41) Toluene-d8	9.86	98	1009448	5.00	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.00%			
43) trans-1,3-Dichloropropene-	10.13	79	55479	4.31	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 86.20%			
46) 2-Hexanone-d5	10.48	63	179595	54.52	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 109.04%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	62334	4.92	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.40%			
64) 1,2-Dichlorobenzene-d4	13.42	152	138575	5.14	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 102.80%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA R\DATA\VR030216\
Data File : VR018204.D
Acq On : 2 Mar 2016 12:15
Operator : MD\SY
Sample : VR0302WBL01
Misc : 25mL/MSVOA R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK54

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	15	32	37	rBV	3905043	13096586	100.00%	40.632%
2	2.022	107	114	130	rVB	196351	505041	3.86%	1.567%
3	2.485	179	190	202	rVB2	156095	432725	3.30%	1.343%
4	3.428	334	345	362	rBV	413907	1220422	9.32%	3.786%
5	6.390	822	832	852	rBV	118180	440596	3.36%	1.367%
6	7.023	923	936	950	rBV	434695	1220970	9.32%	3.788%
7	7.704	1037	1048	1069	rBV2	1076373	3076204	23.49%	9.544%
8	8.331	1141	1151	1166	rBV	1099018	2227307	17.01%	6.910%
9	8.769	1211	1223	1233	rBV	648112	1323849	10.11%	4.107%
10	9.566	1347	1354	1369	rBV	266054	468285	3.58%	1.453%
11	9.858	1394	1402	1412	rBV	1761711	2870670	21.92%	8.906%
12	10.126	1441	1446	1456	rBV	117434	199467	1.52%	0.619%
13	10.479	1497	1504	1519	rBV	607711	1003931	7.67%	3.115%
14	11.184	1612	1620	1635	rBV	1217771	1878132	14.34%	5.827%
15	12.261	1791	1797	1807	rVB	144038	220415	1.68%	0.684%
16	13.125	1933	1939	1956	rBV	748601	1104292	8.43%	3.426%
17	13.417	1981	1987	2000	rBV	632710	943522	7.20%	2.927%

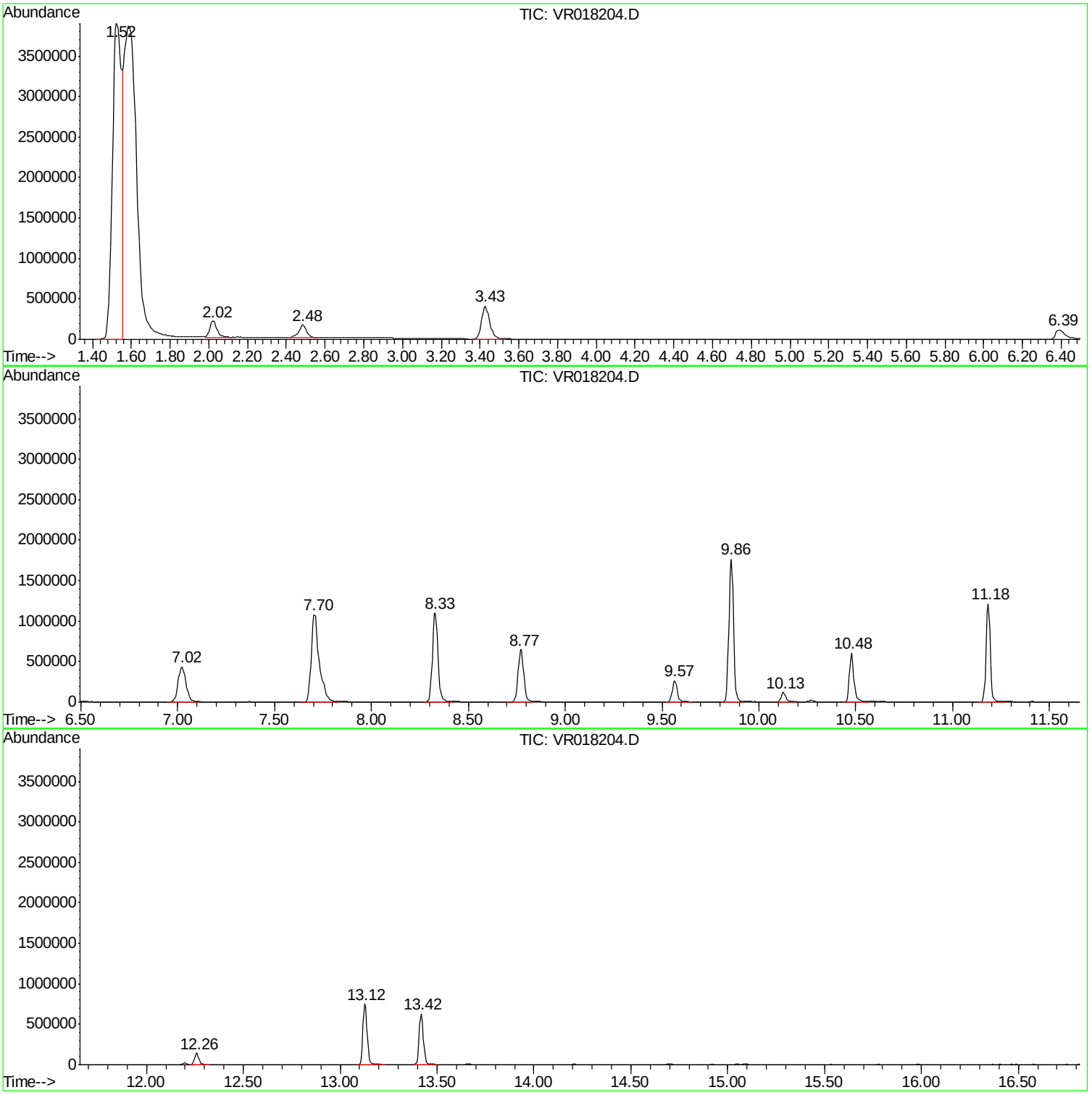
Sum of corrected areas: 32232414

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018204.D
Acq On : 2 Mar 2016 12:15
Operator : MD\SY
Sample : VR0302WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK54

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018204.D
Acq On : 2 Mar 2016 12:15
Operator : MD\SY
Sample : VR0302WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VBLK54

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018204.D
Acq On : 2 Mar 2016 12:15
Operator : MD\SY
Sample : VR0302WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK54

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018206.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/02/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018206.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/02/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018206.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 03/02/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018206.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 03/02/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

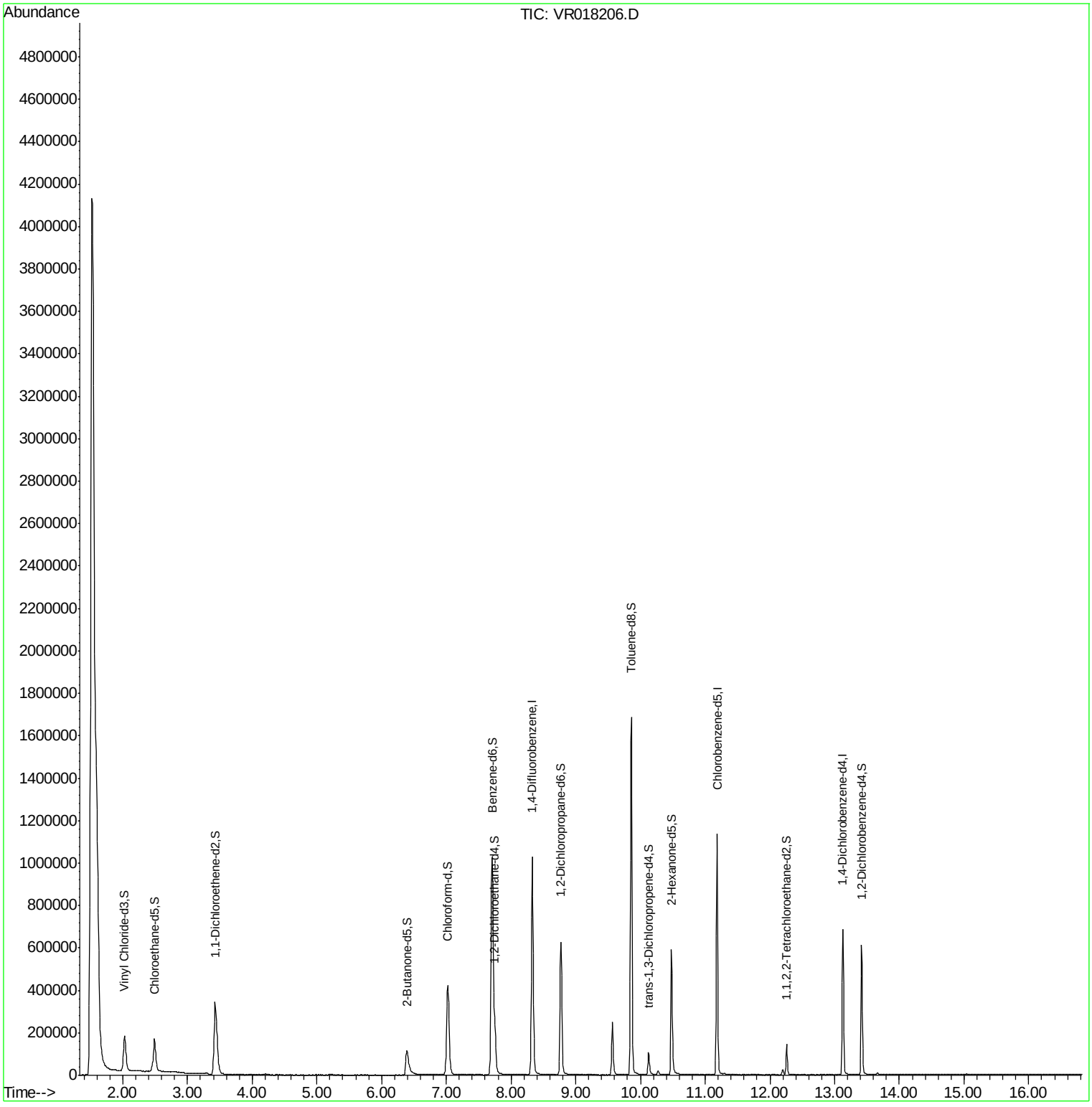
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018206.D
Acq On : 2 Mar 2016 13:39
Operator : MD\SY
Sample : H1584-06
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VHBLK01

Quant Time: Mar 03 03:02:41 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Mar 03 02:31:02 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018206.D
Acq On : 2 Mar 2016 13:39
Operator : MD\SY
Sample : H1584-06
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VHBLK01

Quant Time: Mar 03 03:02:41 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu Mar 03 02:31:02 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	778116	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	505792	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	152898	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	291061	4.83	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 96.60%			
7) Chloroethane-d5	2.49	69	225746	5.03	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 100.60%			
11) 1,1-Dichloroethene-d2	3.43	63	432912	3.50	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 70.00%			
20) 2-Butanone-d5	6.39	46	257064	61.44	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 122.88%			
24) Chloroform-d	7.02	84	461058	5.13	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.60%			
26) 1,2-Dichloroethane-d4	7.75	65	192492	5.83	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 116.60%			
32) Benzene-d6	7.70	84	1065200	5.05	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.00%			
36) 1,2-Dichloropropane-d6	8.77	67	274406	5.20	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.00%			
41) Toluene-d8	9.86	98	969870	5.14	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.80%			
43) trans-1,3-Dichloropropene-	10.13	79	54884	4.57	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.40%			
46) 2-Hexanone-d5	10.48	63	176423	57.35	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 114.70%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	62456	5.28	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 105.60%			
64) 1,2-Dichlorobenzene-d4	13.42	152	132280	5.29	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 105.80%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018206.D
Acq On : 2 Mar 2016 13:39
Operator : MD\SY
Sample : H1584-06
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VHBLK01

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	13	32	70	rBV	4131566	20184023	100.00%	52.974%
2	2.029	108	115	127	rVB	162776	437761	2.17%	1.149%
3	2.491	179	191	202	rBV	154048	419763	2.08%	1.102%
4	3.428	335	345	366	rBV	342285	1100243	5.45%	2.888%
5	6.391	824	832	854	rBV	115170	415861	2.06%	1.091%
6	7.023	924	936	952	rBV	420985	1161394	5.75%	3.048%
7	7.711	1039	1049	1078	rBV2	1025345	2953048	14.63%	7.750%
8	8.331	1142	1151	1170	rBV	1026584	2055015	10.18%	5.393%
9	8.769	1214	1223	1234	rBV	627011	1268623	6.29%	3.330%
10	9.566	1346	1354	1369	rBV	250363	446426	2.21%	1.172%
11	9.858	1393	1402	1422	rBV	1684844	2794301	13.84%	7.334%
12	10.479	1495	1504	1525	rBV	590267	985026	4.88%	2.585%
13	11.184	1613	1620	1634	rBV	1134231	1751814	8.68%	4.598%
14	12.261	1791	1797	1808	rVB	145504	223469	1.11%	0.587%
15	13.125	1933	1939	1950	rBV	683651	1015557	5.03%	2.665%
16	13.417	1980	1987	1996	rBV	612528	889686	4.41%	2.335%

Sum of corrected areas: 38102010

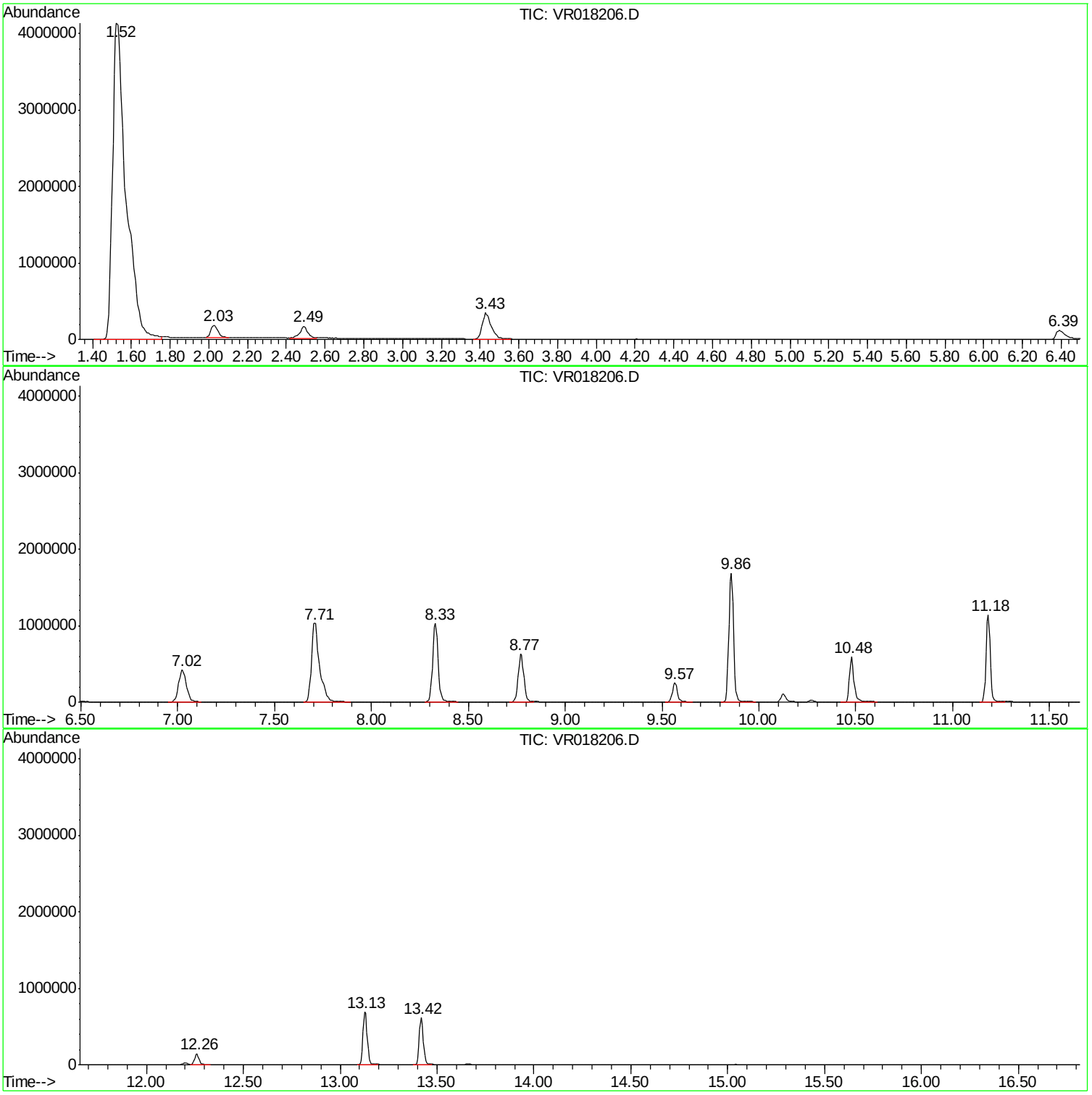
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018206.D
Acq On : 2 Mar 2016 13:39
Operator : MD\SY
Sample : H1584-06
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018206.D
Acq On : 2 Mar 2016 13:39
Operator : MD\SY
Sample : H1584-06
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR030216\
Data File : VR018206.D
Acq On : 2 Mar 2016 13:39
Operator : MD\SY
Sample : H1584-06
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR030116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0001MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-02MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018167.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	5.1	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	2.5	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.3	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	5.0	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	4.9	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0001MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-02MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018167.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.1	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	4.7	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0001MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-02MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018167.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

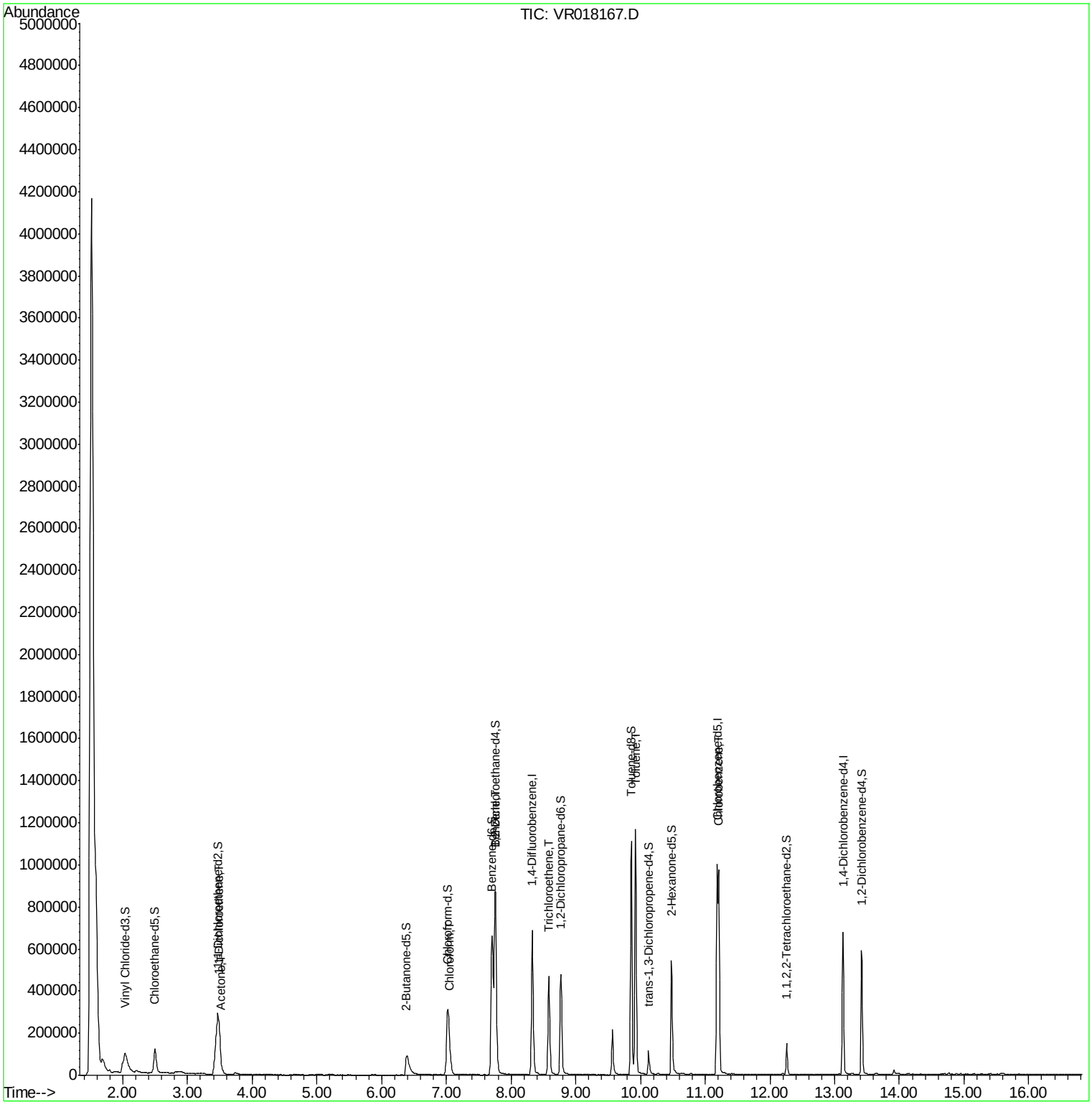
CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

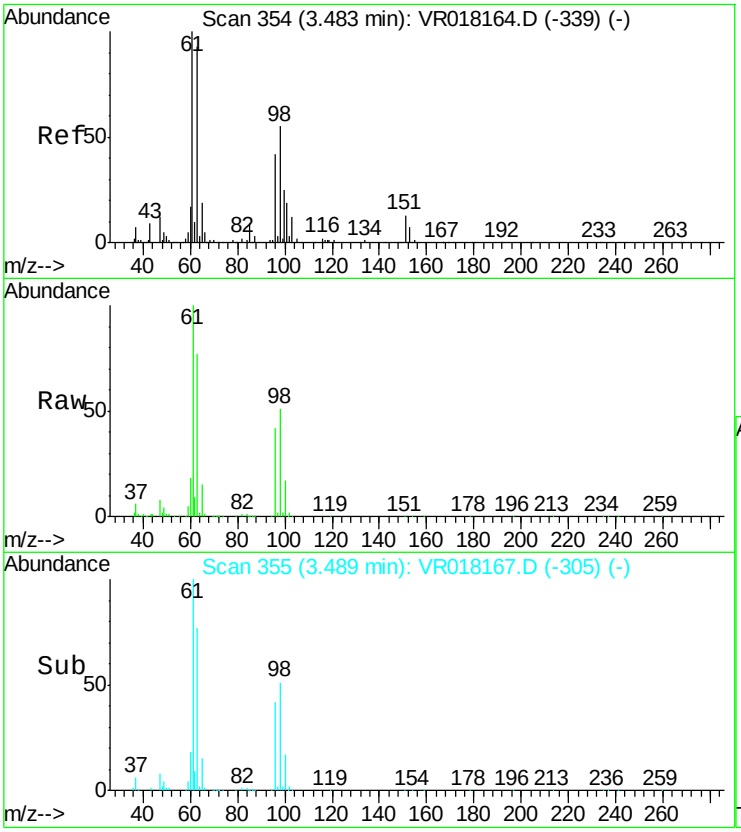
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018167.D
Acq On : 26 Feb 2016 11:31
Operator : MD\SY
Sample : H1584-02MS
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0001MS

Quant Time: Feb 27 01:23:14 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration



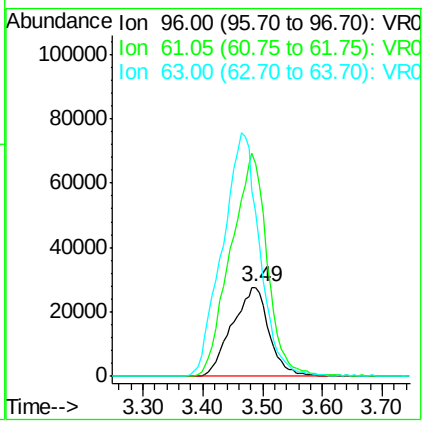


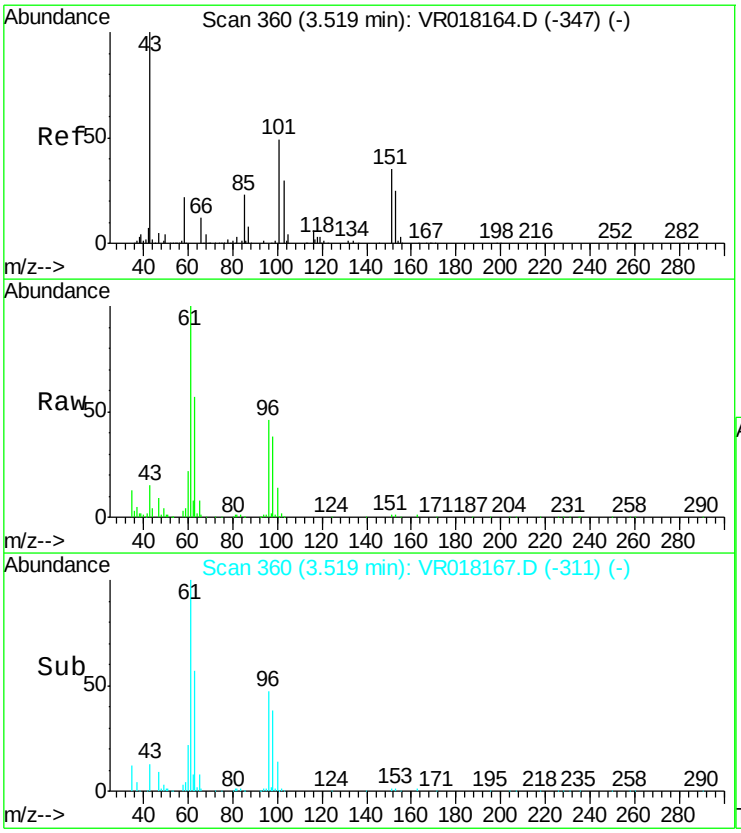
#12
1,1-Dichloroethene
Concen: 5.11 ug/L
RT: 3.49 min Scan# 355
Delta R.T. 0.01 min
Lab File: VR018167.D
Acq: 26 Feb 2016 11:31

Instrument : MSVOA_R
ClientSampleId : H0001MS

Tgt Ion: 96 Resp: 118485

Ion	Ratio	Lower	Upper
96	100		
61	238.6	170.5	316.7
63	184.4	147.4	273.8

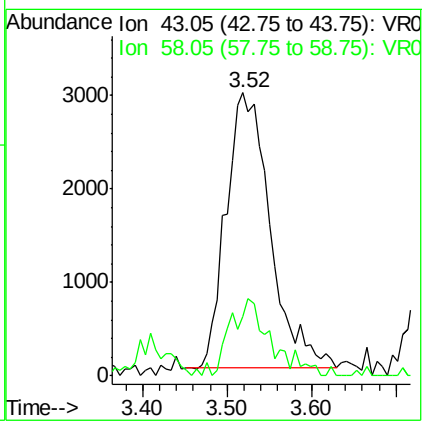


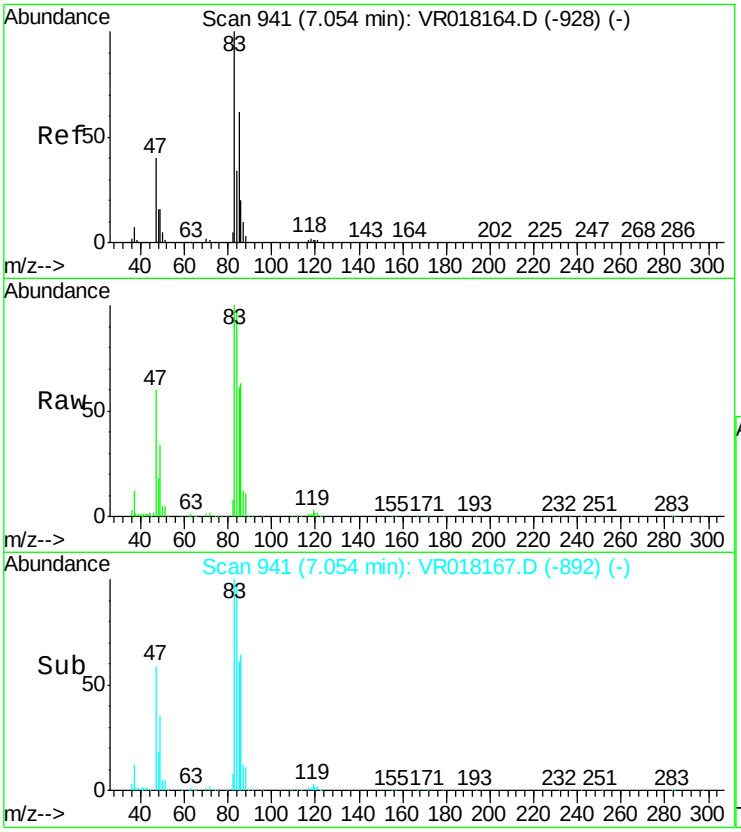


#13
Acetone
Concen: 2.49 ug/L
RT: 3.52 min Scan# 360
Delta R.T. 0.00 min
Lab File: VR018167.D
Acq: 26 Feb 2016 11:31

Tgt Ion: 43 Resp: 10522

Ion	Ratio	Lower	Upper
43	100		
58	23.5	0.0	47.4



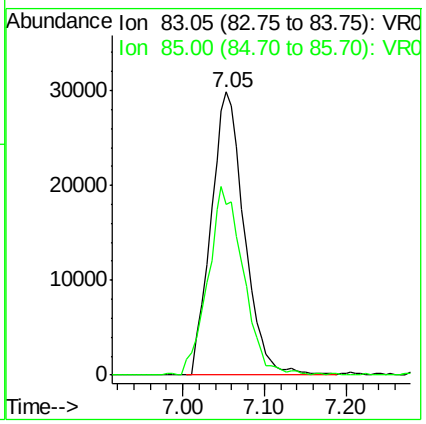


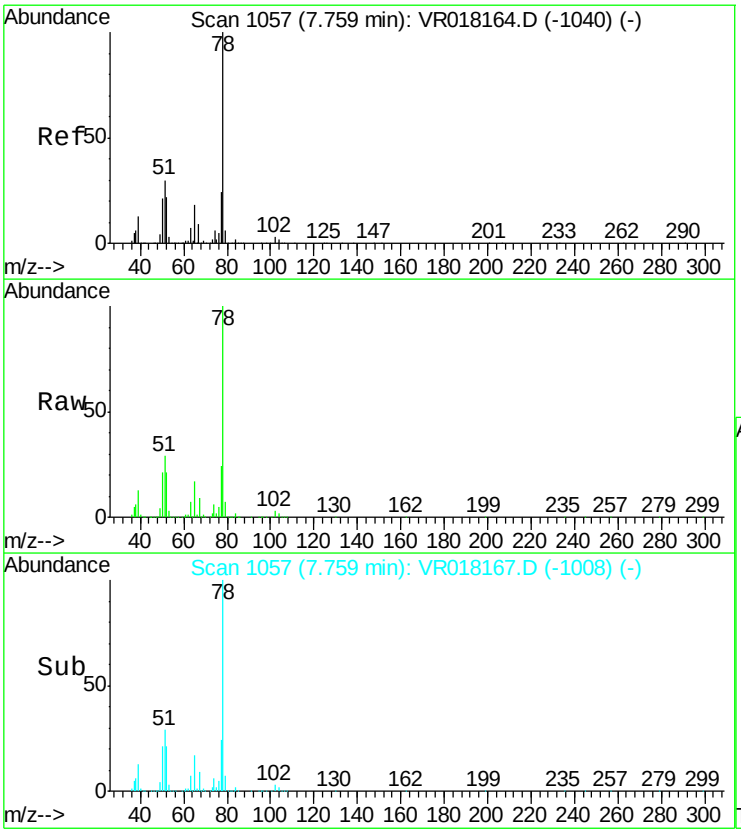
#25
Chloroform
Concen: 1.33 ug/L
RT: 7.05 min Scan# 941
Delta R.T. 0.00 min
Lab File: VR018167.D
Acq: 26 Feb 2016 11:31

Instrument :
MSVOA_R
ClientSampleId :
H0001MS

Tgt Ion: 83 Resp: 84491

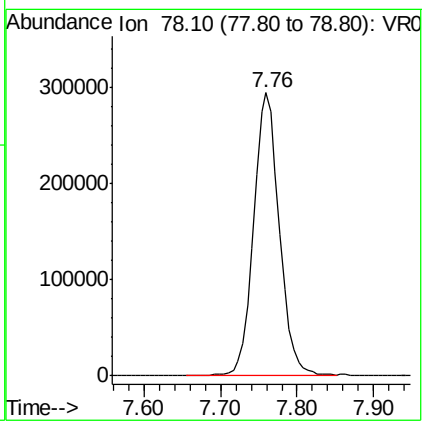
Ion	Ratio	Lower	Upper
83	100		
85	60.5	43.8	81.3

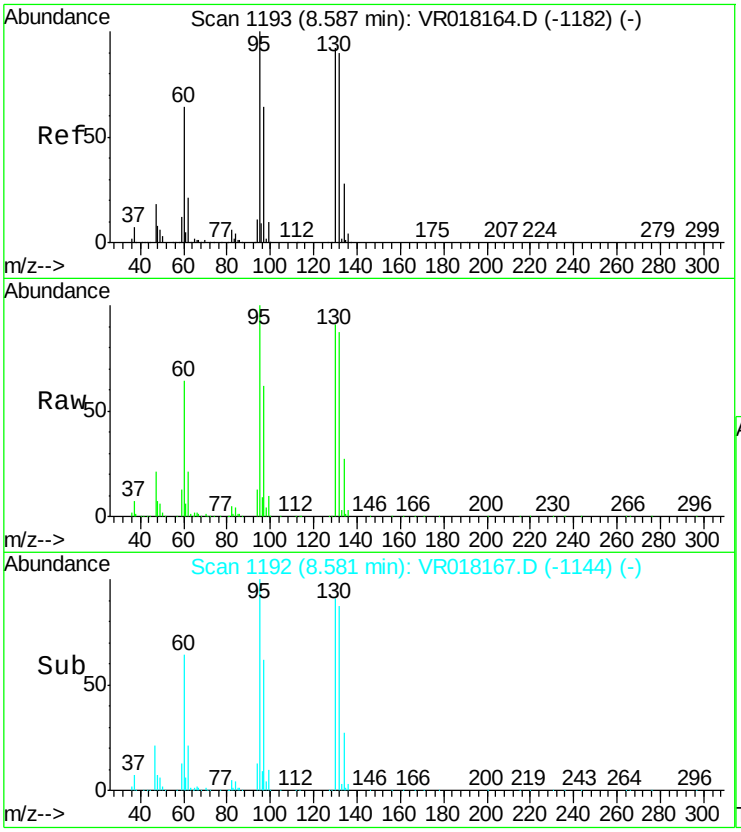




#33
Benzene
Concen: 5.03 ug/L
RT: 7.76 min Scan# 1057
Delta R.T. 0.00 min
Lab File: VR018167.D
Acq: 26 Feb 2016 11:31

Tgt Ion: 78 Resp: 689472



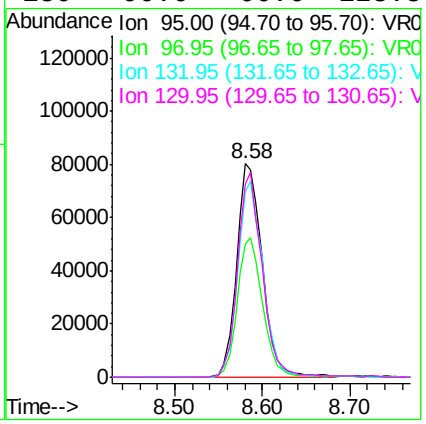


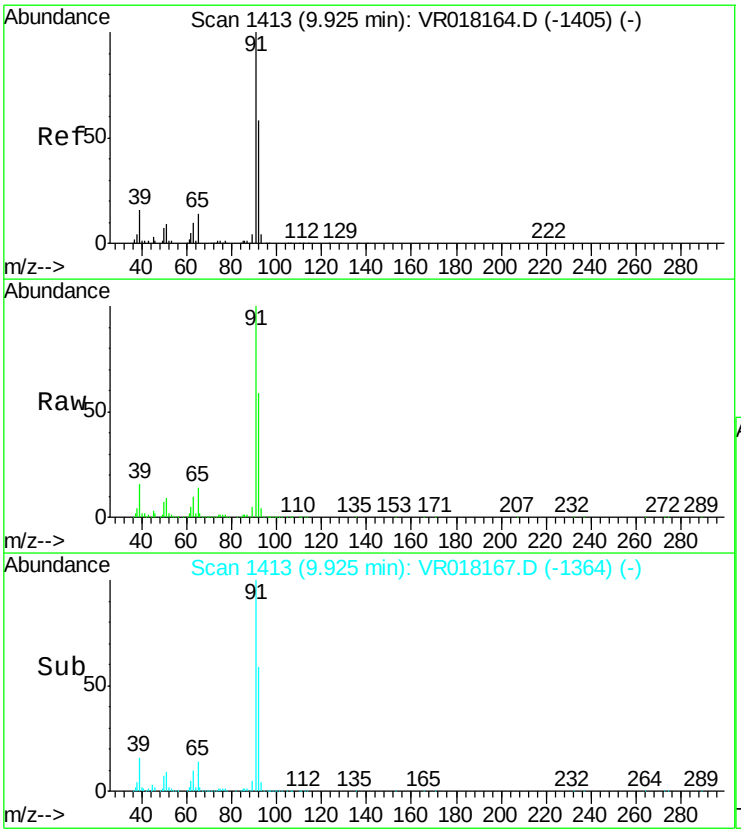
#34
Trichloroethene
Concen: 4.89 ug/L
RT: 8.58 min Scan# 1192
Delta R.T. -0.01 min
Lab File: VR018167.D
Acq: 26 Feb 2016 11:31

Instrument : MSVOA_R
ClientSampleId : H0001MS

Tgt Ion: 95 Resp: 162762

Ion	Ratio	Lower	Upper
95	100		
97	62.3	44.0	81.6
132	87.2	61.9	115.1
130	90.6	66.6	123.8

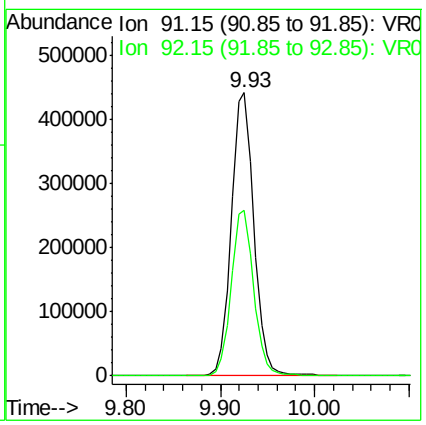


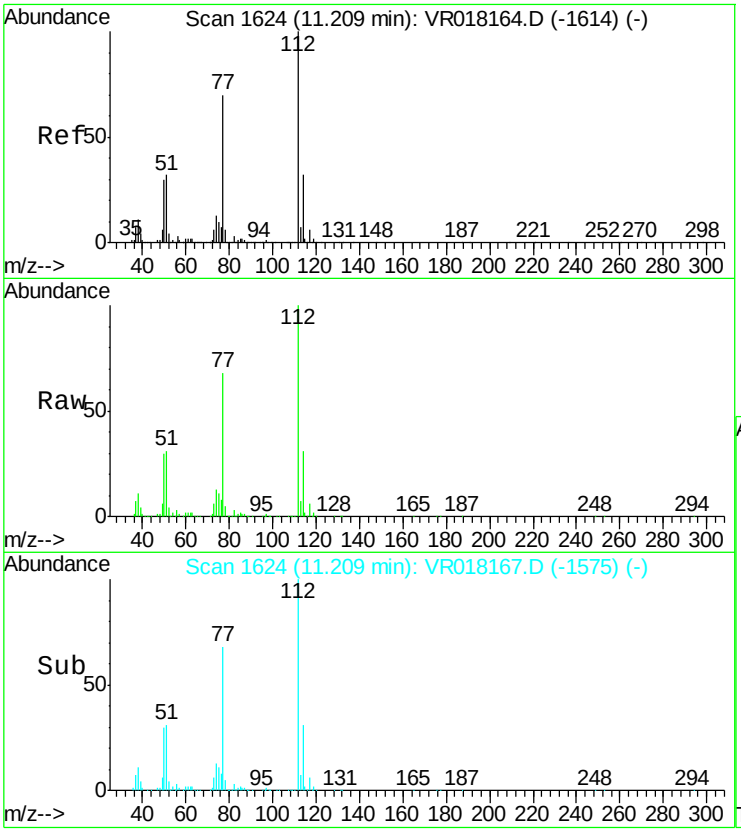


#42
Toluene
Concen: 5.12 ug/L
RT: 9.93 min Scan# 1413
Delta R.T. 0.00 min
Lab File: VR018167.D
Acq: 26 Feb 2016 11:31

Tgt Ion: 91 Resp: 733130

Ion	Ratio	Lower	Upper
91	100		
92	58.5	40.6	75.4



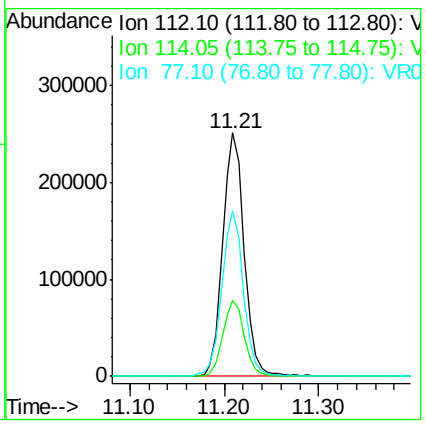


#51
Chlorobenzene
Concen: 4.74 ug/L
RT: 11.21 min Scan# 1624
Delta R.T. 0.00 min
Lab File: VR018167.D
Acq: 26 Feb 2016 11:31

Instrument :
MSVOA_R
ClientSampleId :
H0001MS

Tgt Ion:112 Resp: 395780

Ion	Ratio	Lower	Upper
112	100		
114	31.3	22.7	42.3
77	68.1	55.4	83.0



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018167.D
Acq On : 26 Feb 2016 11:31
Operator : MD\SY
Sample : H1584-02MS
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0001MS

Quant Time: Feb 27 01:23:14 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	489955	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	405786	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	148088	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	214769	5.14	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 102.80%			
7) Chloroethane-d5	2.50	69	160598	5.20	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 104.00%			
11) 1,1-Dichloroethene-d2	3.46	63	326926	5.47	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 109.40%			
20) 2-Butanone-d5	6.38	46	211519	41.20	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 82.40%			
24) Chloroform-d	7.02	84	320469	4.78	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.60%			
26) 1,2-Dichloroethane-d4	7.75	65	171755	4.70	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.00%			
32) Benzene-d6	7.70	84	651517	5.25	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 105.00%			
36) 1,2-Dichloropropane-d6	8.77	67	200376	5.05	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.00%			
41) Toluene-d8	9.86	98	616864	5.23	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.60%			
43) trans-1,3-Dichloropropene-	10.13	79	56056	4.23	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 84.60%			
46) 2-Hexanone-d5	10.48	63	150281	40.53	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 81.06%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	63430	4.03	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 80.60%			
64) 1,2-Dichlorobenzene-d4	13.42	152	125988	5.05	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.00%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	3.49	96	118485	5.11	ug/L	91
13) Acetone	3.52	43	10522	2.49	ug/L	100
25) Chloroform	7.05	83	84491	1.33	ug/L	97
33) Benzene	7.76	78	689472	5.03	ug/L	100
34) Trichloroethene	8.58	95	162762	4.89	ug/L	98
42) Toluene	9.93	91	733130	5.12	ug/L	99
51) Chlorobenzene	11.21	112	395780	4.74	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0001MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-03MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018168.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	5.2	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	2.4	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.3	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	5.3	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	5.3	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0001MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-03MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018168.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.5	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	5.1	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0001MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H1584-03MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR018168.D
% Solids :
Date Received : 02/25/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 02/26/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

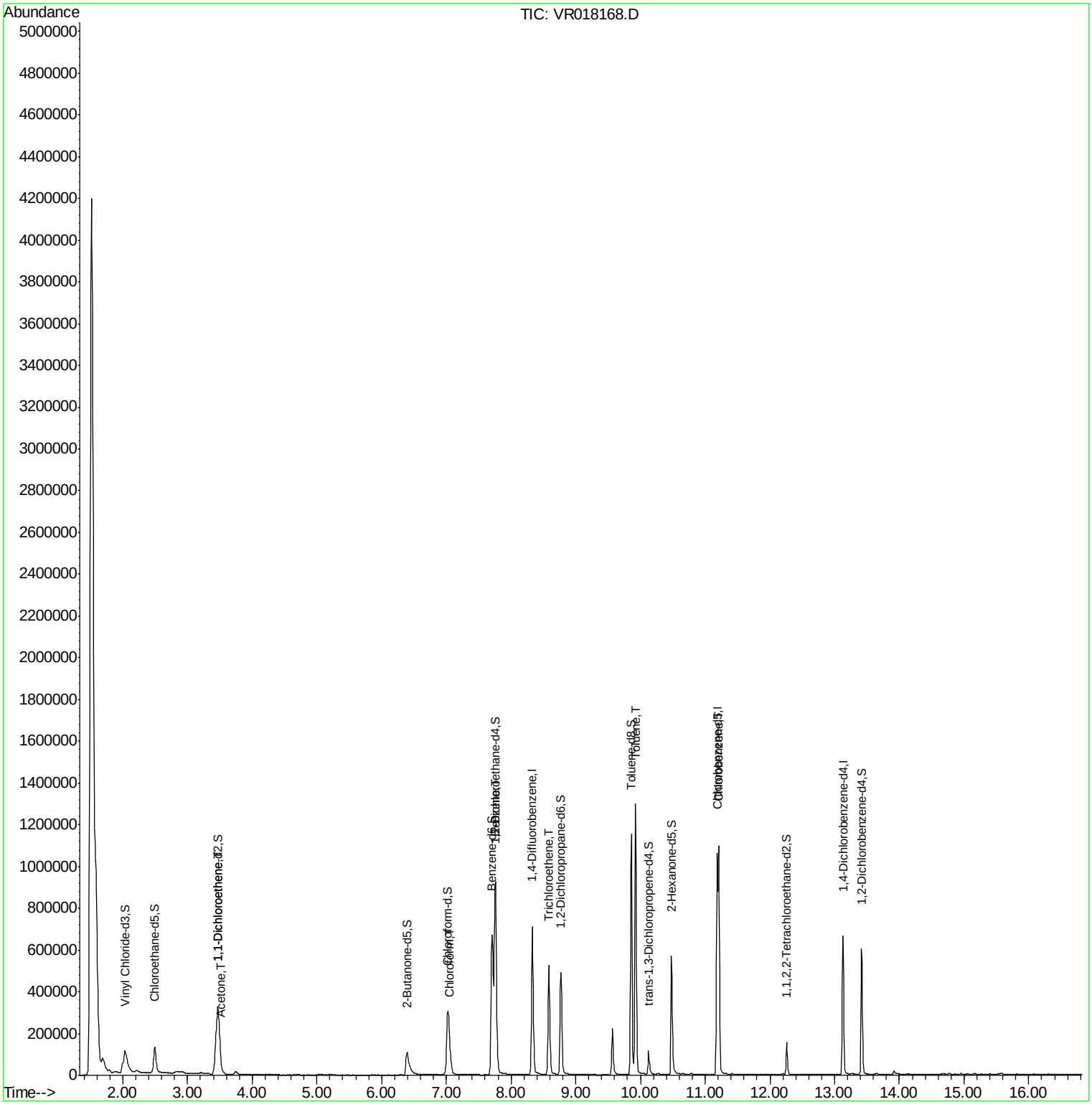
CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

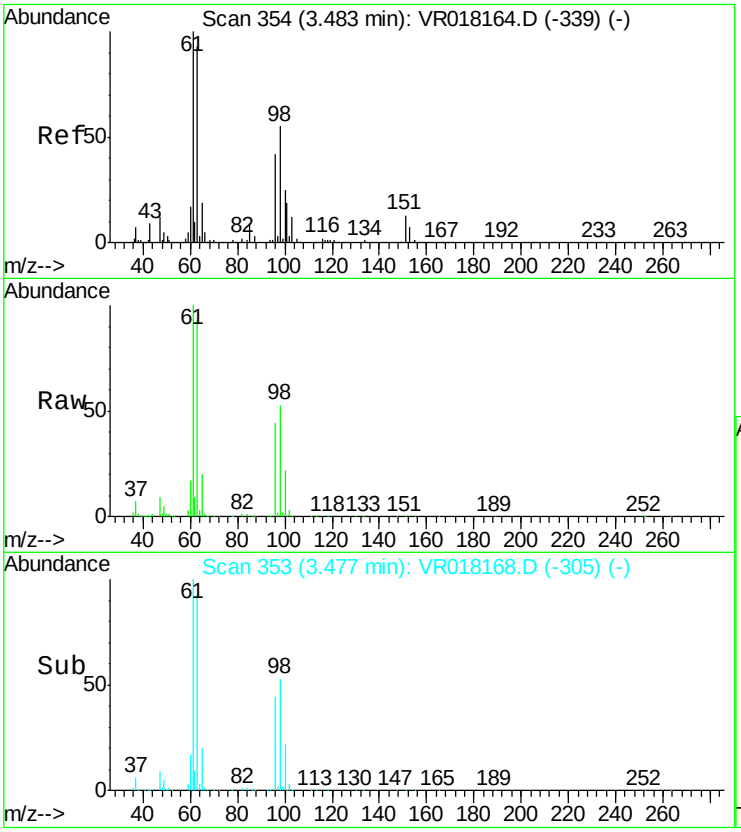
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018168.D
Acq On : 26 Feb 2016 12:02
Operator : MD\SY
Sample : H1584-03MSD
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0001MSD

Quant Time: Feb 27 02:18:00 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration



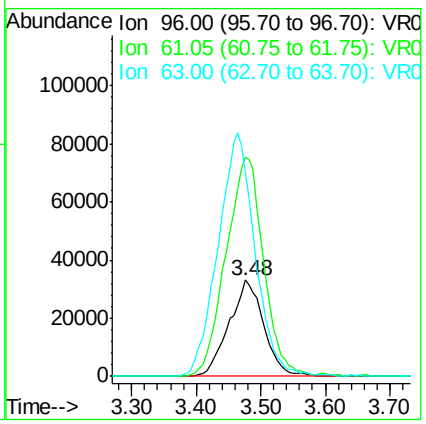


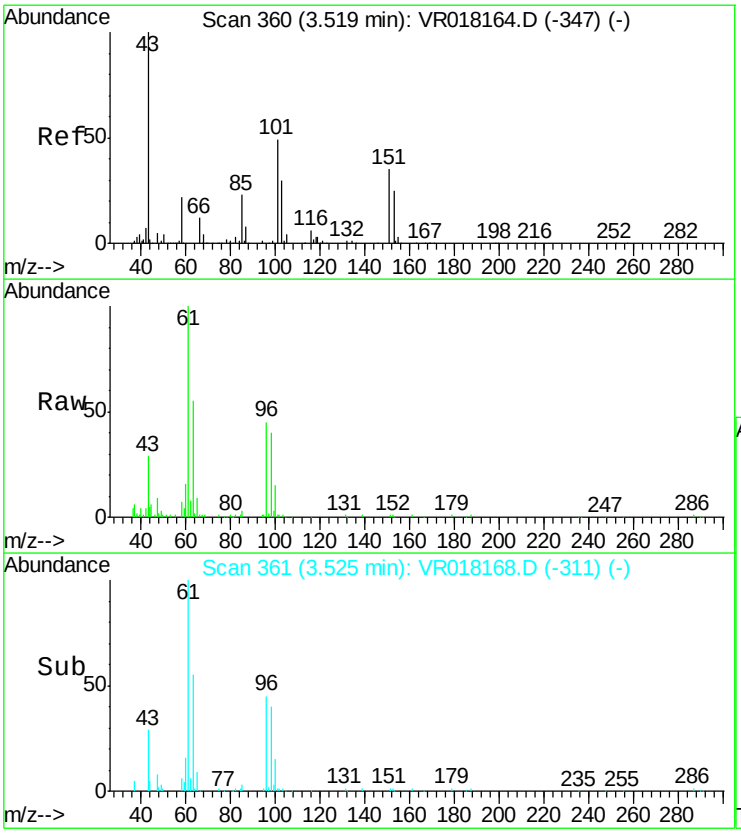
#12
1,1-Dichloroethene
Concen: 5.15 ug/L
RT: 3.48 min Scan# 353
Delta R.T. -0.01 min
Lab File: VR018168.D
Acq: 26 Feb 2016 12:02

Instrument : MSVOA_R
ClientSampleId : H0001MSD

Tgt Ion: 96 Resp: 123566

Ion	Ratio	Lower	Upper
96	100		
61	227.9	170.5	316.7
63	212.3	147.4	273.8

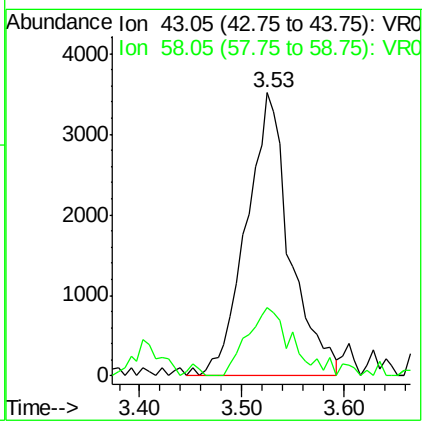


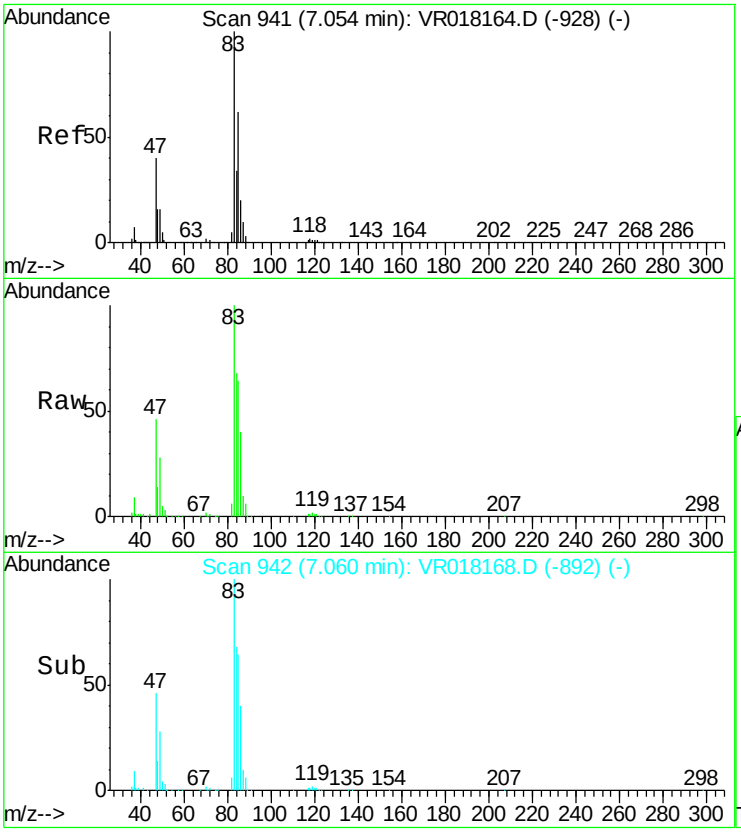


#13
Acetone
Concen: 2.39 ug/L
RT: 3.53 min Scan# 361
Delta R.T. 0.01 min
Lab File: VR018168.D
Acq: 26 Feb 2016 12:02

Tgt Ion: 43 Resp: 10436

Ion	Ratio	Lower	Upper
43	100		
58	22.9	0.0	47.4



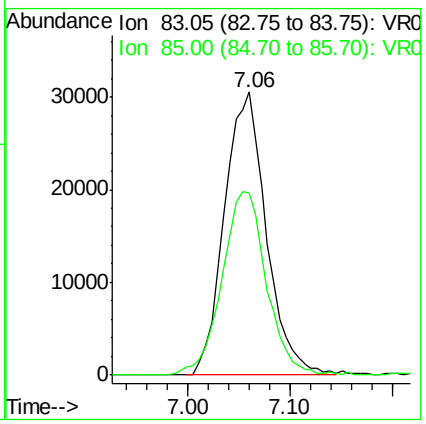


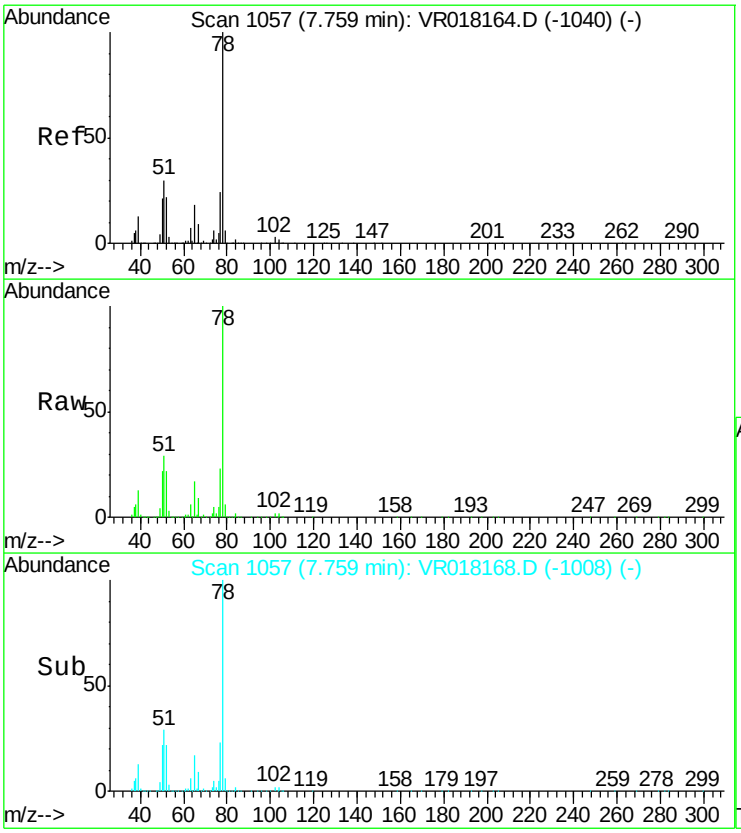
#25
Chloroform
Concen: 1.32 ug/L
RT: 7.06 min Scan# 942
Delta R.T. 0.01 min
Lab File: VR018168.D
Acq: 26 Feb 2016 12:02

Instrument : MSVOA_R
ClientSampleId : H0001MSD

Tgt Ion: 83 Resp: 86589

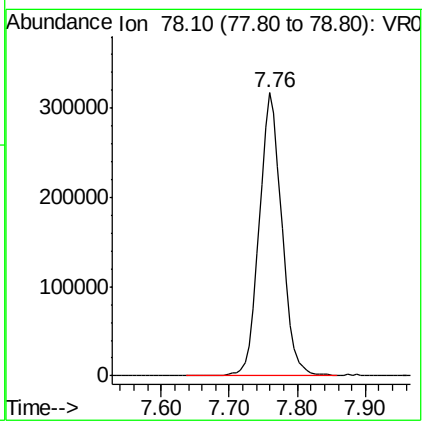
Ion	Ratio	Lower	Upper
83	100		
85	64.4	43.8	81.3

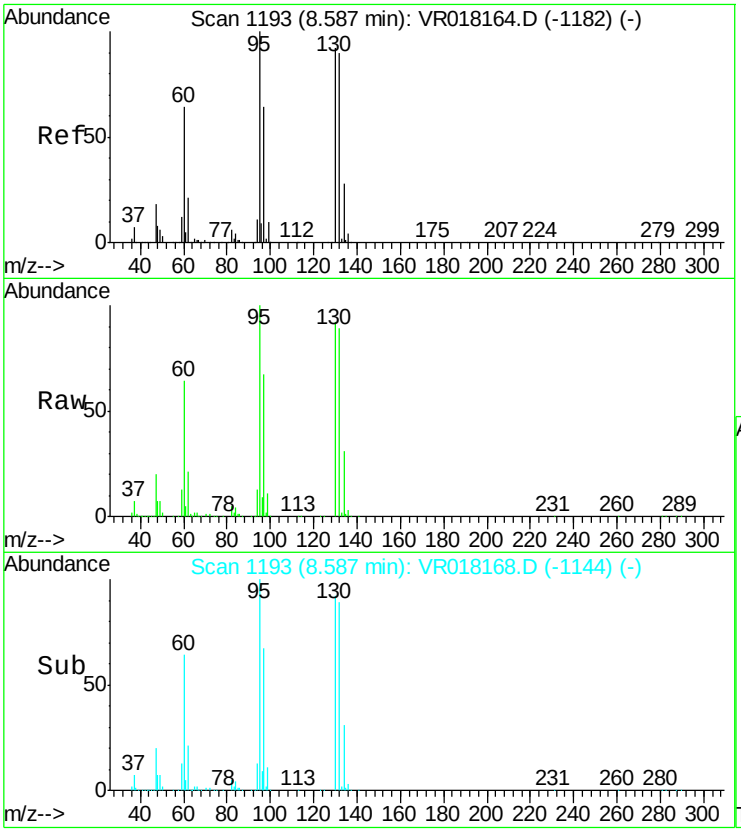




#33
Benzene
Concen: 5.28 ug/L
RT: 7.76 min Scan# 1057
Delta R.T. 0.00 min
Lab File: VR018168.D
Acq: 26 Feb 2016 12:02

Tgt Ion: 78 Resp: 738679



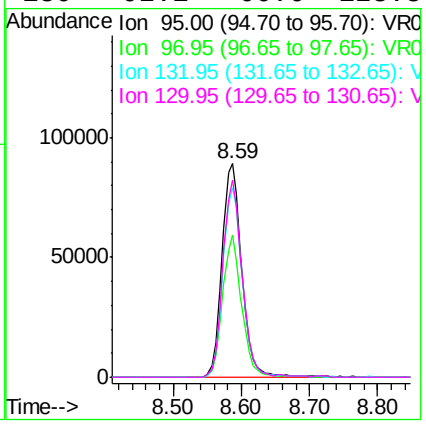


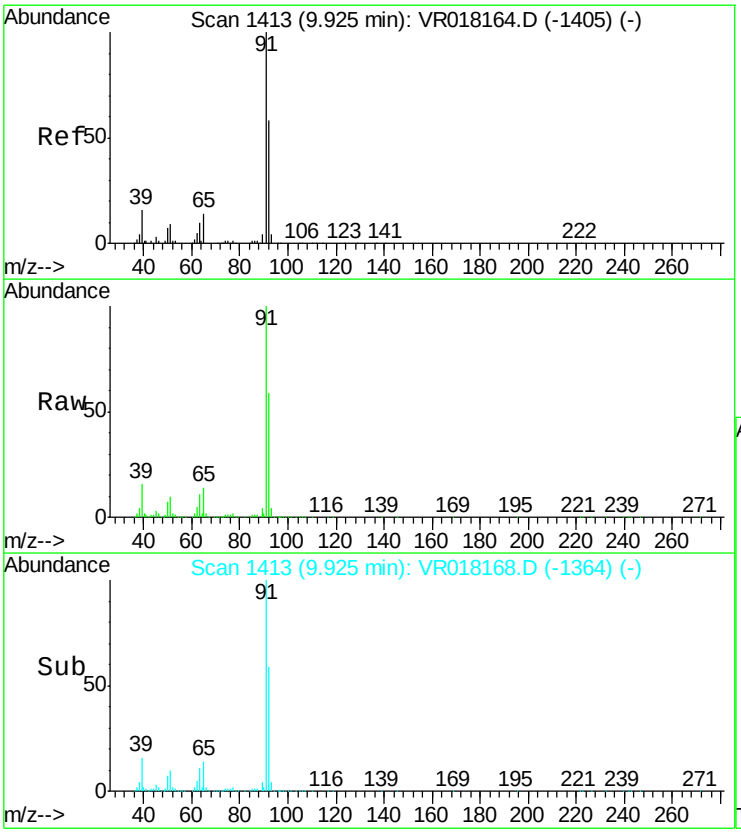
#34
Trichloroethene
Concen: 5.29 ug/L
RT: 8.59 min Scan# 1193
Delta R.T. 0.00 min
Lab File: VR018168.D
Acq: 26 Feb 2016 12:02

Instrument : MSVOA_R
ClientSampleId : H0001MSD

Tgt Ion: 95 Resp: 179708

Ion	Ratio	Lower	Upper
95	100		
97	66.6	44.0	81.6
132	88.7	61.9	115.1
130	92.1	66.6	123.8

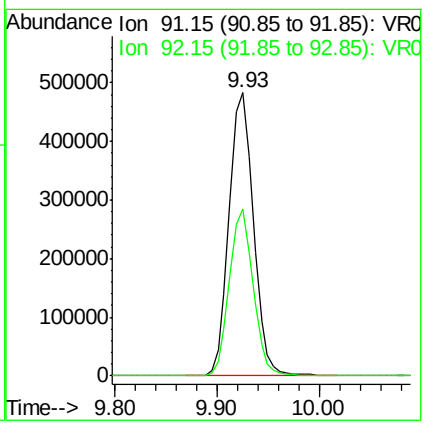


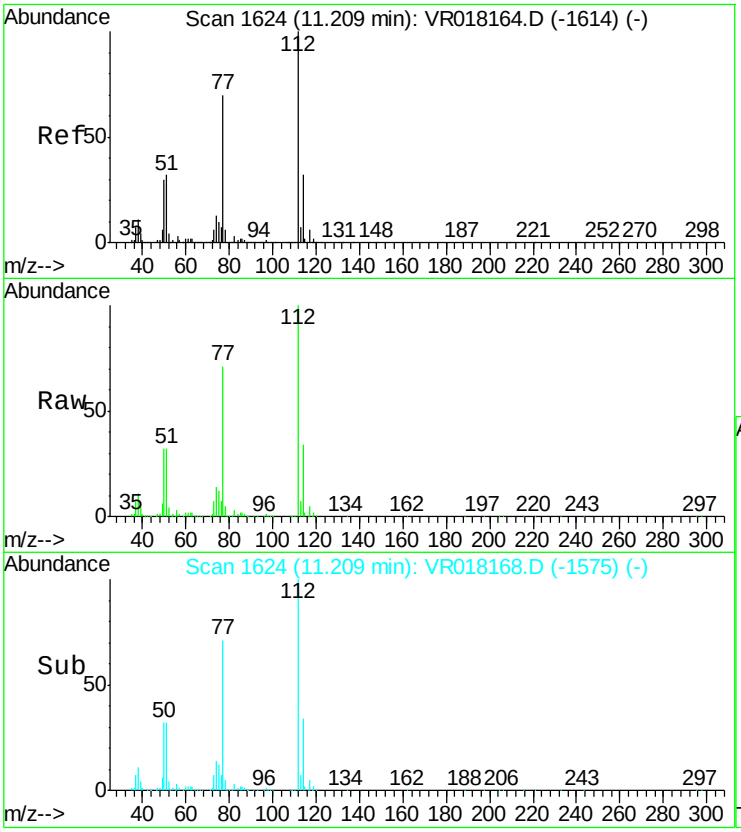


#42
Toluene
Concen: 5.47 ug/L
RT: 9.93 min Scan# 1413
Delta R.T. 0.00 min
Lab File: VR018168.D
Acq: 26 Feb 2016 12:02

Tgt Ion: 91 Resp: 799253

Ion	Ratio	Lower	Upper
91	100		
92	58.9	40.6	75.4



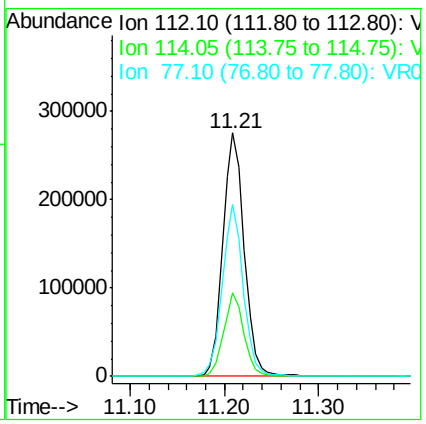


#51
Chlorobenzene
Concen: 5.09 ug/L
RT: 11.21 min Scan# 1624
Delta R.T. 0.00 min
Lab File: VR018168.D
Acq: 26 Feb 2016 12:02

Instrument :
MSVOA_R
ClientSampleId :
H0001MSD

Tgt Ion:112 Resp: 433607

Ion	Ratio	Lower	Upper
112	100		
114	34.2	22.7	42.3
77	70.6	55.4	83.0



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR022616\
Data File : VR018168.D
Acq On : 26 Feb 2016 12:02
Operator : MD\SY
Sample : H1584-03MSD
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H0001MSD

Quant Time: Feb 27 02:18:00 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR022516W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat Feb 27 01:09:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	507122	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	414076	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.13	152	145170	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	215794	4.99	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 99.80%			
7) Chloroethane-d5	2.50	69	167524	5.25	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 105.00%			
11) 1,1-Dichloroethene-d2	3.46	63	334088	5.40	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 108.00%			
20) 2-Butanone-d5	6.40	46	231807	43.63	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 87.26%			
24) Chloroform-d	7.02	84	319631	4.61	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 92.20%			
26) 1,2-Dichloroethane-d4	7.75	65	174844	4.62	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.40%			
32) Benzene-d6	7.70	84	651996	5.15	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.00%			
36) 1,2-Dichloropropane-d6	8.77	67	205758	5.08	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.60%			
41) Toluene-d8	9.86	98	634684	5.28	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.60%			
43) trans-1,3-Dichloropropene-	10.13	79	57568	4.25	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 85.00%			
46) 2-Hexanone-d5	10.48	63	156282	41.30	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 82.60%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	65560	4.09	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 81.80%			
64) 1,2-Dichlorobenzene-d4	13.42	152	126676	5.18	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 103.60%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	3.48	96	123566	5.15	ug/L	95
13) Acetone	3.53	43	10436	2.39	ug/L	98
25) Chloroform	7.06	83	86589	1.32	ug/L	97
33) Benzene	7.76	78	738679	5.28	ug/L	100
34) Trichloroethene	8.59	95	179708	5.29	ug/L	97
42) Toluene	9.93	91	799253	5.47	ug/L	99
51) Chlorobenzene	11.21	112	433607	5.09	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract: EPW14030

Lab Code : CHM Case No.: 46018 MA No.: _____ SDG No.: H0001

Analytical Method : SVOA Level : _____

Matrix : Water

EPA Sample No .	DMC1 (DXE)	DMC2 (PHL)	DMC3 (BCE)	DMC4 (2CP)	DMC5 (4MP)	DMC6 (NBZ)	DMC7 (2NP)	DMC8 (DCP)	DMC9 (4CA)
H0075	0 *	12	67	54	30	71	71	61	0 *
H0075MS	13 *	14	69	57	31	75	75	65	0 *
H0075MSD	0 *	14	68	55	29	75	72	63	0 *
SBLK01	84	76	84	79	80	81	83	74	98

	QC LIMITS
DMC1 (DXE) = 1,4-Dioxane-d8	40 - 110
DMC2 (PHL) = Phenol-d5	10 - 130
DMC3 (BCE) = Bis(2-Chloroethyl)ether-d8	25 - 120
DMC4 (2CP) = 2-Chlorophenol-d4	20 - 130
DMC5 (4MP) = 4-Methylphenol-d8	25 - 125
DMC6 (NBZ) = Nitrobenzene-d5	20 - 125
DMC7 (2NP) = 2-Nitrophenol-d4	20 - 130
DMC8 (DCP) = 2,4-Dichlorophenol-d3	20 - 120
DMC9 (4CA) = 4-Chloroaniline-d4	1 - 146

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 46018 MA No.: _____ SDG No.: H0001
Analytical Method : SVOA Level : _____
Matrix : Water

EPA Sample No .	DMC10 (DMP)	DMC11 ACY	DMC12 (4NP)	DMC13 (FLR)	DMC14 (NMP)	DMC15 (ANC)	DMC16 (PYR)	DMC17 (BAP)	Tot Out
H0075	77	76	5 *	77	55	77	71	76	3
H0075MS	78	77	9 *	79	62	80	72	75	3
H0075MSD	75	74	8 *	76	61	77	69	74	3
SBLK01	89	85	73	86	65	87	90	87	0

	QC LIMITS
DMC10 (DMP) = Dimethylphthalate-d6	25 - 130
DMC11 (ACY) = Acenaphthylene-d8	10 - 130
DMC12 (4NP) = 4-Nitrophenol-d4	10 - 150
DMC13 (FLR) = Fluorene-d10	25 - 125
DMC14 (NMP) = 4,6-Dinitro-2-methylphenol-d2	10 - 130
DMC15 (ANC) = Anthracene-d10	25 - 130
DMC16 (PYR) = Pyrene-d10	15 - 130
DMC17 (BAP) = Benzo(a)pyrene-d12	20 - 130

FORM 3A-OR
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No. : 46018 MA No .: SDG No. : H0001

Analytical Method : SVOA Level :

Matrix Water

EPA Sample No.(Matrix Spike/Metrix Spike Duplicate): H0075

Instrument ID : BNA_M GC Column ZB-GR ID : 0.25 (mm)

Concentration Units (ug/L,mg/L ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %R #	QC Limits %R
Phenol	40	0	5.6	14	12 - 110
2-Chlorophenol	40	0	21	52	27 - 123
N-Nitroso-di-n-propylamine	40	0	23	58	41 - 116
4-Chloro-3-methylphenol	40	0	20	50	23 - 97
Acenaphthene	40	0	28	70	46 - 118
4-Nitrophenol	40	0	2.6	7 *	10 - 80
2,4-Dinitrotoluene	40	0	27	68	24 - 96
Pentachlorophenol	40	0	31	78	9 - 103
Pyrene	40	0	26	65	26 - 127

ANALYTE	SPIKE AADDED	MSD CONCENTRATION	MSD %R #	RPD	QC Limits	
					RPD	%R
Phenol	40	5.4	14	0	42	12 - 110
2-Chlorophenol	40	21	52	0	40	27 - 123
N-Nitroso-di-n-propylamine	40	25	63	8	38	41 - 116
4-Chloro-3-methylphenol	40	21	52	4	42	23 - 97
Acenaphthene	40	29	73	4	31	46 - 118
4-Nitrophenol	40	2.4	6 *	15	50	10 - 80
2,4-Dinitrotoluene	40	29	73	7	38	24 - 96
Pentachlorophenol	40	35	88	12	50	9 - 103
Pyrene	40	27	68	5	31	26 - 127

EPA SAMPLE NO.

SBLK01

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : _____ sdg no.: H0001
Analytical Method: SVOA
Level : _____
Matrix : Water
Lab Sample ID: PB88601BL
Instrument ID: BNA_M
Lab File ID : BM004535.D
Extraction Type : CONH
Date Extracted : 02/26/2016
GC Column ( ) : ZB-GR ID : 0.25 (mm)
Date Analyzed : 03/03/2016
GC Column ( ) : _____ ID : _____ (mm)
Time Analyzed : 16:36
Heated Purge: (Y/N) _____ Cleanup(Y/N): N
Cleanup Types : _____

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
H0075	H1584-12	BM004536.D	03/03/2016 17:13
H0075MS	H1584-13MS	BM004537.D	03/03/2016 17:49
H0075MSD	H1584-14MSD	BM004538.D	03/03/2016 18:25

FORM 5-OR
GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.
DFTPP34

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code: CHM Case No.: 46018 MA No. : SDG No.: H0001
Analytical Method : SVOA Lab File ID : BM004523.D
Instrument ID: BNA_M BFB / DFTPP : DFTPP
GC Column : ZB-GR ID : 0.25 (mm)
Injection Date : 03/03/2016 Injection Time : 09:17

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	19.9
68	Less than 2.0% of mass 69	0.0(0.0) 1
69	Present	25.7
70	Less than 2.0% of mass 69	0.0(0.0) 1
127	10.0 - 80.0% of mass 198	41.6
197	Less than 2.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	26.6
365	Greater than 1% of mass 198	2.8
441	Present, but less than mass 443	14.3
442	Greater than 50.0% of mass 198	94.8
443	15.0 - 24.0% of mass 442	18.5(19.5) 2

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD00534	SSTD00534	BM004524.D	03/03/2016	09:53
SSTD01035	SSTD01035	BM004525.D	03/03/2016	10:29
SSTD02036	SSTD02036	BM004526.D	03/03/2016	11:05
SSTD04037	SSTD04037	BM004527.D	03/03/2016	11:41
SSTD08038	SSTD08038	BM004528.D	03/03/2016	12:17
SSTD16039	SSTD16039	BM004529.D	03/03/2016	12:53
SBLK01	PB88601BL	BM004535.D	03/03/2016	16:36
H0075	H1584-12	BM004536.D	03/03/2016	17:13
H0075MS	H1584-13MS	BM004537.D	03/03/2016	17:49
H0075MSD	H1584-14MSD	BM004538.D	03/03/2016	18:25
SSTD02040	SSTDCCC020	BM004539.D	03/03/2016	19:37

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001
Analytical Method: SVOA Level :
EPA Sample No. : SSTD02036 Lab File ID (Standard) : BM004526.D
Instrument ID : BNA_M Init.Calib.Date(s): 03/03/2016
GC Column : ZB-GR ID: 0.25 (mm) Date Analyzed : 03/03/2016
Heated Purge: Time Analyzed : 11:05

	IS1 (DCB) AREA	RT	IS2 (NPT) AREA	RT	IS3 (ANT) AREA	RT
12 HOUR STD	23060	7.59	110700	10.37	71935	14.26
UPPER LIMIT	46120	8.09	221400	10.87	143870	14.76
LOWER LIMIT	11530	7.09	55350	9.87	35967.5	13.76
EPA SAMPLE NO.						
H0075	19159	7.59	81000	10.38	45817	14.26
H0075MS	19547	7.59	82449	10.38	46137	14.26
H0075MSD	19042	7.59	81060	10.37	46309	14.26
SBLK01	23471	7.59	112935	10.37	73042	14.26

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

FORM 8B-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001
Analytical Method: SVOA Level :
EPA Sample No. : SSTD02036 Lab File ID (Standard) : BM004526.D
Instrument ID : BNA_M Init.Calib.Date(s): 03/03/2016
GC Column : ZB-GR ID: 0.25 (mm) Date Analyzed : 03/03/2016
Heated Purge: Time Analyzed : 11:05

	IS4 (PHN) AREA	RT	IS5 (CRY) AREA	RT	IS6 (PRY) AREA	RT
12 HOUR STD	166319	17.01	167017	21.23	128752	23.44
UPPER LIMIT	332638	17.5	334034	21.73	257504	23.94
LOWER LIMIT	83159.5	16.5	83508.5	20.73	64376	22.94
EPA SAMPLE NO.						
H0075	104860	17.01	118250	21.22	114597	23.43
H0075MS	105421	17.01	118286	21.23	118799	23.44
H0075MSD	105301	17.01	119808	21.23	116298	23.44
SBLK01	170877	17.01	163611	21.23	125550	23.44

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0075

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H1584-12
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004536.D
% Solids :
Date Received : 02/26/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0075

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H1584-12
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004536.D
% Solids :
Date Received : 02/26/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0075

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H1584-12
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004536.D
% Solids :
Date Received : 02/26/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H0075

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H1584-12
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004536.D
% Solids :
Date Received : 02/26/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 03/03/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : 6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000994-05-8	Butane, 2-methoxy-2-methyl-	2.79	4.5	JN
2	004606-07-9	Ethyl cyclopropanecarboxylate	12.11	53	JN
3	E966796	Total Alkanes	N/A	0	

EPA-designated Registry Number.

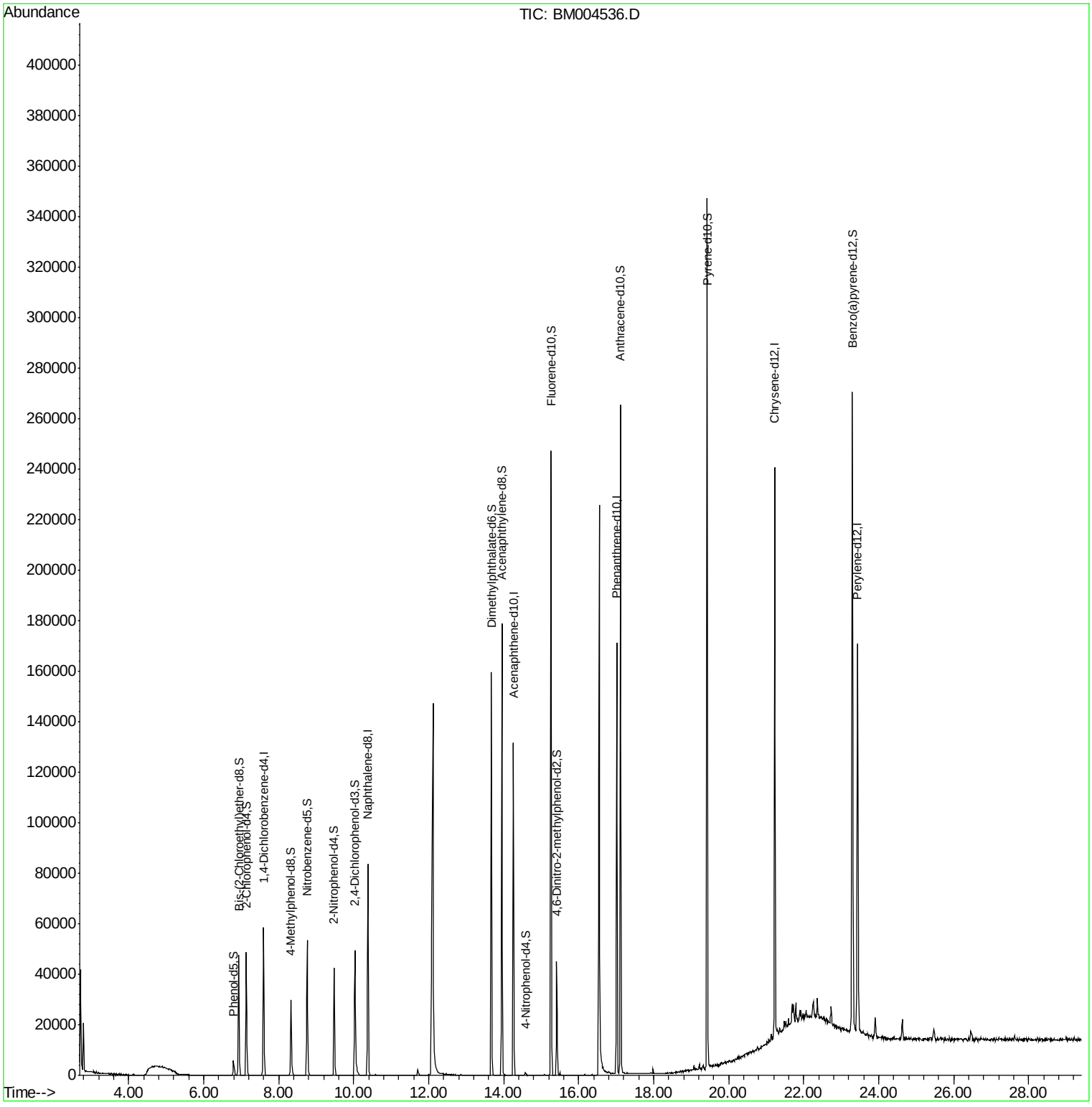
Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004536.D
Acq On : 03 Mar 2016 17:13
Operator : SJ/UM
Sample : H1584-12
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 04 04:20:05 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H0075

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:57 PM



Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004536.D
Acq On : 03 Mar 2016 17:13
Operator : SJ/UM
Sample : H1584-12
Misc :
ALS Vial : 14 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H0075

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:57 PM

Quant Time: Mar 04 04:20:05 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	19159	20.00	ng/ul	0.00
18) Naphthalene-d8	10.38	136	81000	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	45817	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.01	188	104860	20.00	ng/ul	0.00
78) Chrysene-d12	21.22	240	118250	20.00	ng/ul	0.00
86) Perylene-d12	23.43	264	114597	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0	0.00	ng/uL	
5) Phenol-d5	6.79	99	7600	4.92	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	6.93	67	20718	26.63	ng/ul	0.00
9) 2-Chlorophenol-d4	7.13	132	29874	21.70	ng/ul	0.00
13) 4-Methylphenol-d8	8.32	113	16165	11.88	ng/ul	0.00
19) Nitrobenzene-d5	8.76	128	17119	28.28	ng/ul	0.00
22) 2-Nitrophenol-d4	9.47	143	19657	28.37	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.03	165	30636	24.44	ng/ul	0.01
29) 4-Chloroaniline-d4	0.00	131	0	0.00	ng/ul	
44) Dimethylphthalate-d6	13.67	166	116847	30.66	ng/ul	0.00
47) Acenaphthylene-d8	13.95	160	140168	30.42	ng/ul	0.00
52) 4-Nitrophenol-d4	14.57	143	1068m	1.90	ng/ul	0.06
58) Fluorene-d10	15.26	176	102077	30.88	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	15.41	200	14913	21.90	ng/ul	0.00
71) Anthracene-d10	17.11	188	159059	31.00	ng/ul	0.00
79) Pyrene-d10	19.42	212	180269	28.35	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.30	264	186404	30.57	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004536.D
Acq On : 03 Mar 2016 17:13
Operator : SJ/UM
Sample : H1584-12
Misc :
ALS Vial : 14 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H0075

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.710	3	4	14	rVB	39432	47483	10.13%	1.005%
2	2.793	14	18	23	rVB	18693	21000	4.48%	0.445%
3	6.793	695	698	708	rBB	5870	11478	2.45%	0.243%
4	6.934	717	722	731	rBB	47525	72596	15.49%	1.537%
5	7.134	751	756	767	rBB	48717	76871	16.41%	1.627%
6	7.593	829	834	843	rBB	58574	92943	19.84%	1.968%
7	8.322	954	958	970	rBB	29692	50214	10.72%	1.063%
8	8.757	1026	1032	1044	rBB	53440	87234	18.62%	1.847%
9	9.475	1149	1154	1164	rBB	42591	70251	14.99%	1.487%
10	10.028	1242	1248	1268	rBV	49406	101507	21.66%	2.149%
11	10.375	1301	1307	1317	rBB	83798	140841	30.06%	2.982%
12	11.704	1529	1533	1542	rBB2	2330	4803	1.03%	0.102%
13	12.110	1590	1602	1619	rBV	147297	373888	79.79%	7.915%
14	13.669	1862	1867	1878	rBB	159584	212770	45.41%	4.504%
15	13.945	1908	1914	1928	rBB	178903	263921	56.32%	5.587%
16	14.257	1962	1967	1974	rBB2	131817	191750	40.92%	4.059%
17	15.257	2131	2137	2146	rBB	247483	346269	73.90%	7.330%
18	15.410	2159	2163	2175	rBB	45276	63638	13.58%	1.347%
19	16.545	2349	2356	2370	rBV	225364	318852	68.05%	6.750%
20	17.010	2430	2435	2446	rVB2	170604	233752	49.89%	4.948%
21	17.110	2446	2452	2466	rVB2	264882	375733	80.19%	7.954%
22	19.421	2839	2845	2855	rBV	343886	461128	98.41%	9.762%
23	21.221	3147	3151	3160	rBV	225161	293756	62.69%	6.219%
24	21.692	3227	3231	3233	rBV	6747	10494	2.24%	0.222%
25	21.786	3244	3247	3251	rBV2	6432	7266	1.55%	0.154%
26	22.362	3343	3345	3350	rVB	7101	7546	1.61%	0.160%
27	23.291	3496	3503	3515	rBV	252638	468573	100.00%	9.920%
28	23.433	3521	3527	3540	rVB2	153215	290971	62.10%	6.160%
29	23.903	3604	3607	3614	rVB2	7593	12771	2.73%	0.270%
30	24.627	3727	3730	3737	rVB4	7714	13417	2.86%	0.284%

Sum of corrected areas: 4723716

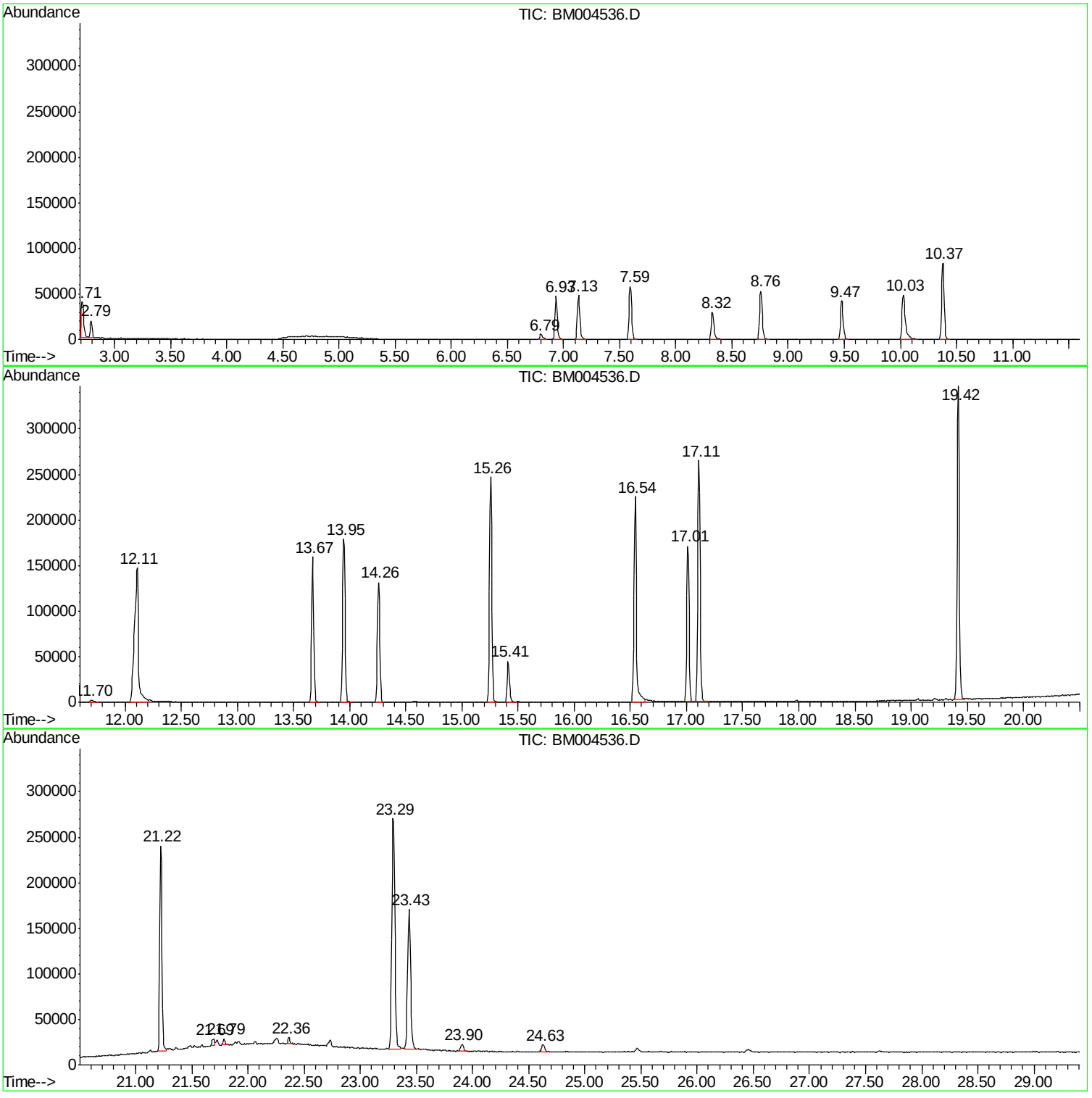
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004536.D
Acq On : 03 Mar 2016 17:13
Operator : SJ/UM
Sample : H1584-12
Misc :
ALS Vial : 14 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H0075

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004536.D
Acq On : 03 Mar 2016 17:13
Operator : SJ/UM
Sample : H1584-12
Misc :
ALS Vial : 14 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H0075

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION

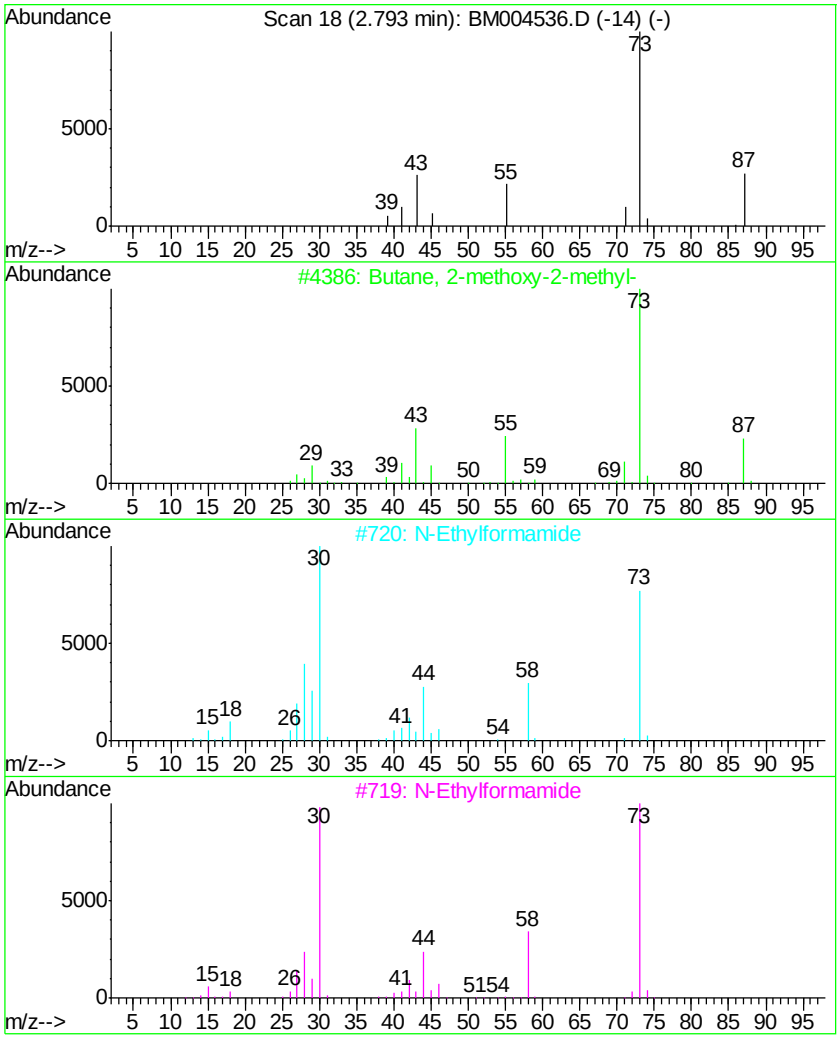
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

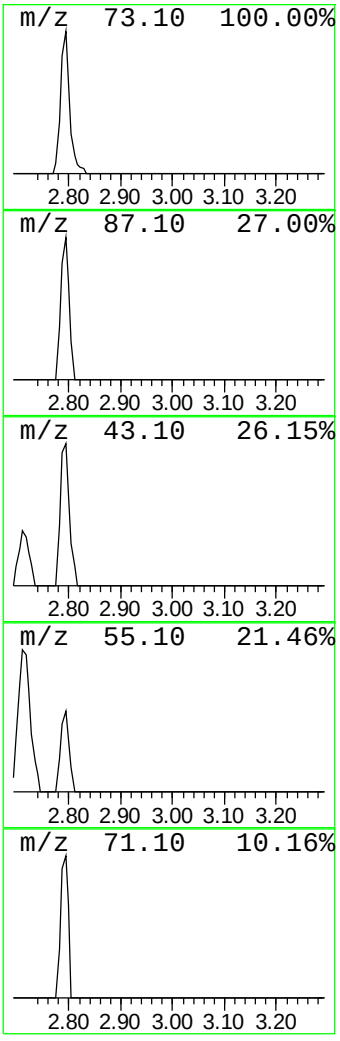
****

Peak Number 2 Butane, 2-methoxy-2-methyl- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.79	4.52 ng/ul	21000	1,4-Dichlorobenzene-d4	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methoxy-2-methyl-	102	C6H14O	000994-05-8	83
2	N-Ethylformamide	73	C3H7NO	000627-45-2	5
3	N-Ethylformamide	73	C3H7NO	000627-45-2	4
4	Acetamide, N-ethyl-	87	C4H9NO	000625-50-3	4
5	1-Butanamine, 3-methyl-	87	C5H13N	000107-85-7	4





Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004536.D
Acq On : 03 Mar 2016 17:13
Operator : SJ/UM
Sample : H1584-12
Misc :
ALS Vial : 14 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H0075

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION

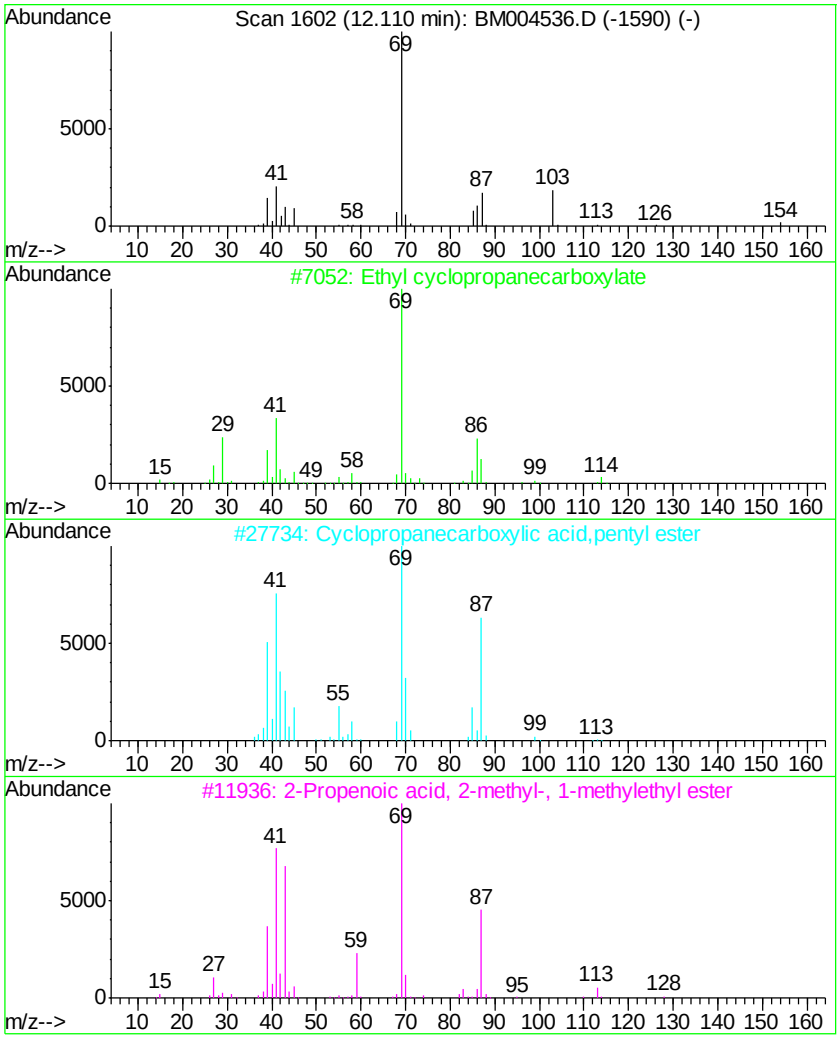
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

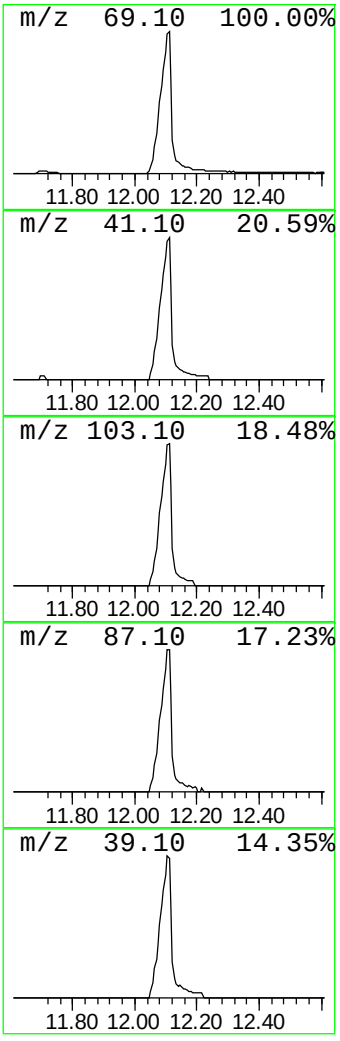
****

Peak Number 3 Ethyl cyclopropanecarboxylate Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.11	53.09 ng/ul	373888	Naphthalene-d8	10.38

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethyl cyclopropanecarboxylate	114	C6H10O2	004606-07-9	50
2	Cyclopropanecarboxylic acid,pent...	156	C9H16O2	060128-02-1	9
3	2-Propenoic acid, 2-methyl-, 1-m...	128	C7H12O2	004655-34-9	9
4	Cyclopropanecarboxylic acid,buty...	142	C8H14O2	054947-39-6	9
5	2,3'-Bifuran, 2,2',3',5-tetrahydro-	138	C8H10O2	098869-93-3	9





Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004536.D
Acq On : 03 Mar 2016 17:13
Operator : SJ/UM
Sample : H1584-12
Misc :
ALS Vial : 14 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H0075

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Butane, 2-methoxy...	2.79	4.5	ng/ul	21000	1	7.59	92943	20.0
Ethyl cyclopropan...	12.11	53.1	ng/ul	373888	2	10.38	140841	20.0

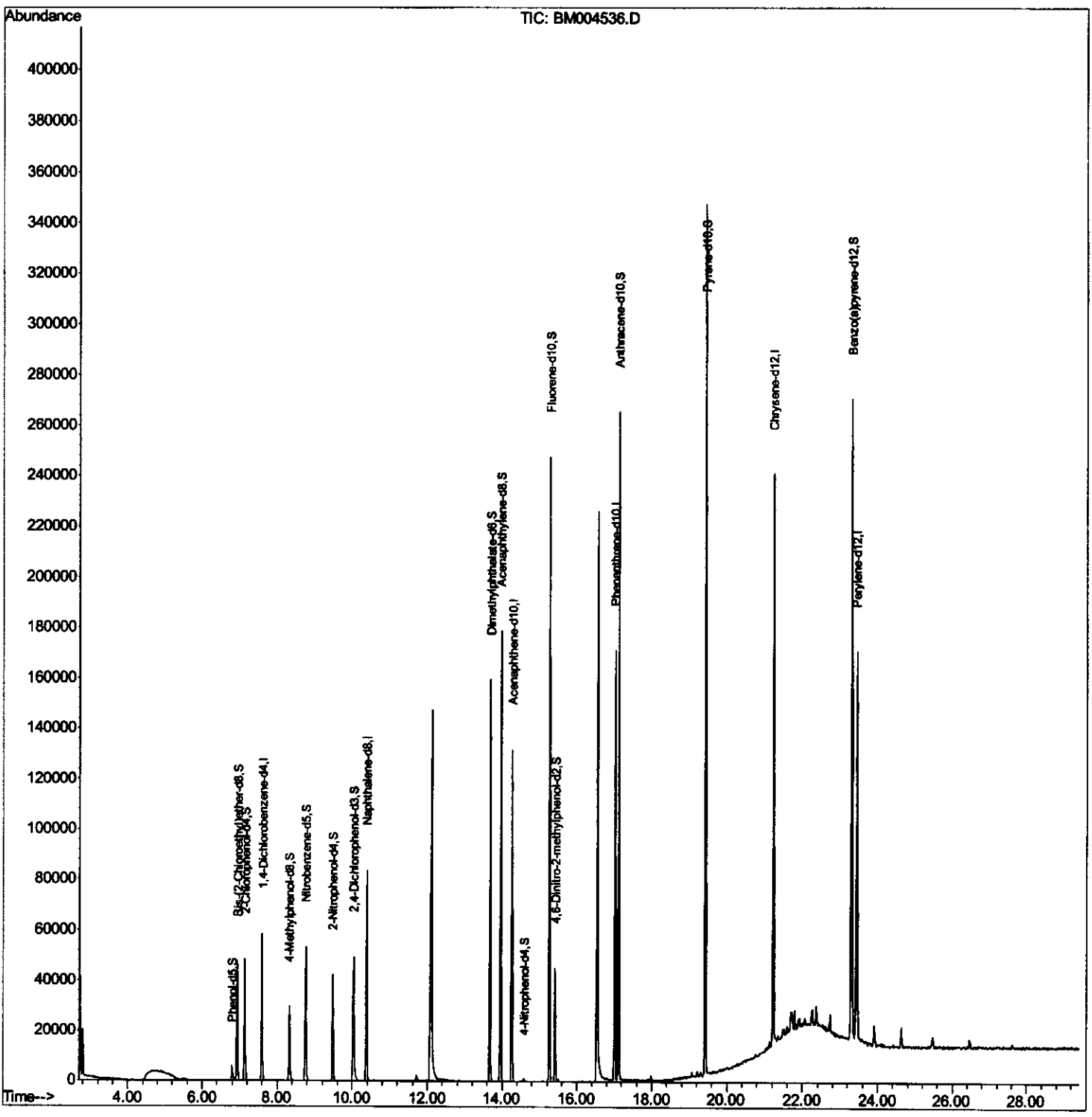
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004536.D
Acq On : 03 Mar 2016 17:13
Operator : SJ/UM
Sample : H1584-12
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 04 04:20:05 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H0075

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:57 PM



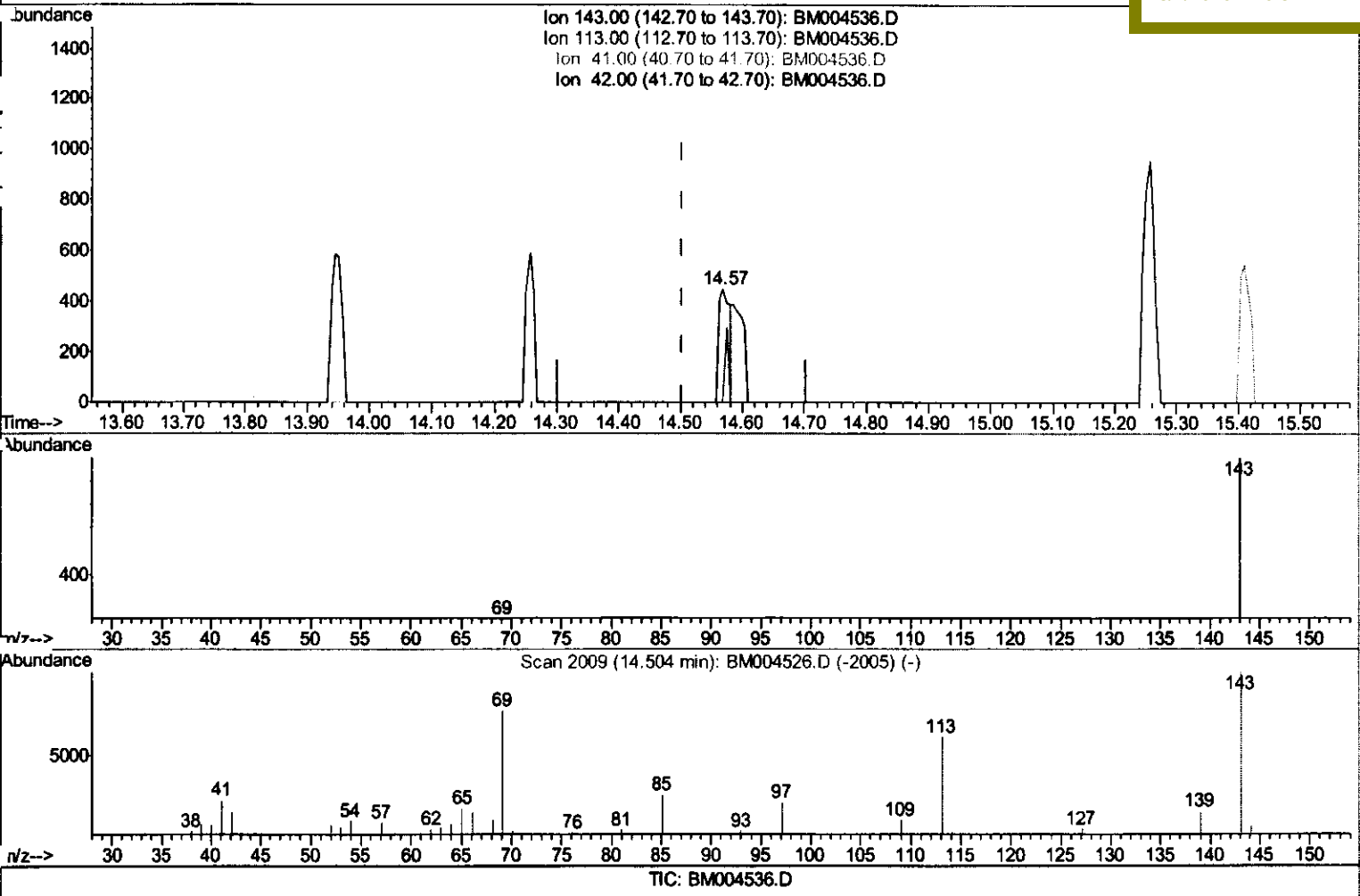
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004536.D
Acq On : 03 Mar 2016 17:13
Operator : SJ/UM
Sample : H1584-12
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 04 04:02:58 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H0075

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:57 PM



TIC: BM004536.D

(52) 4-Nitrophenol-d4 (S)

14.569min (+0.065) 1.03ng/ul

response 580

Ion	Exp%	Act%
143.00	100	100
113.00	75.10	0.00#
41.00	28.80	0.00#
42.00	19.10	0.00#

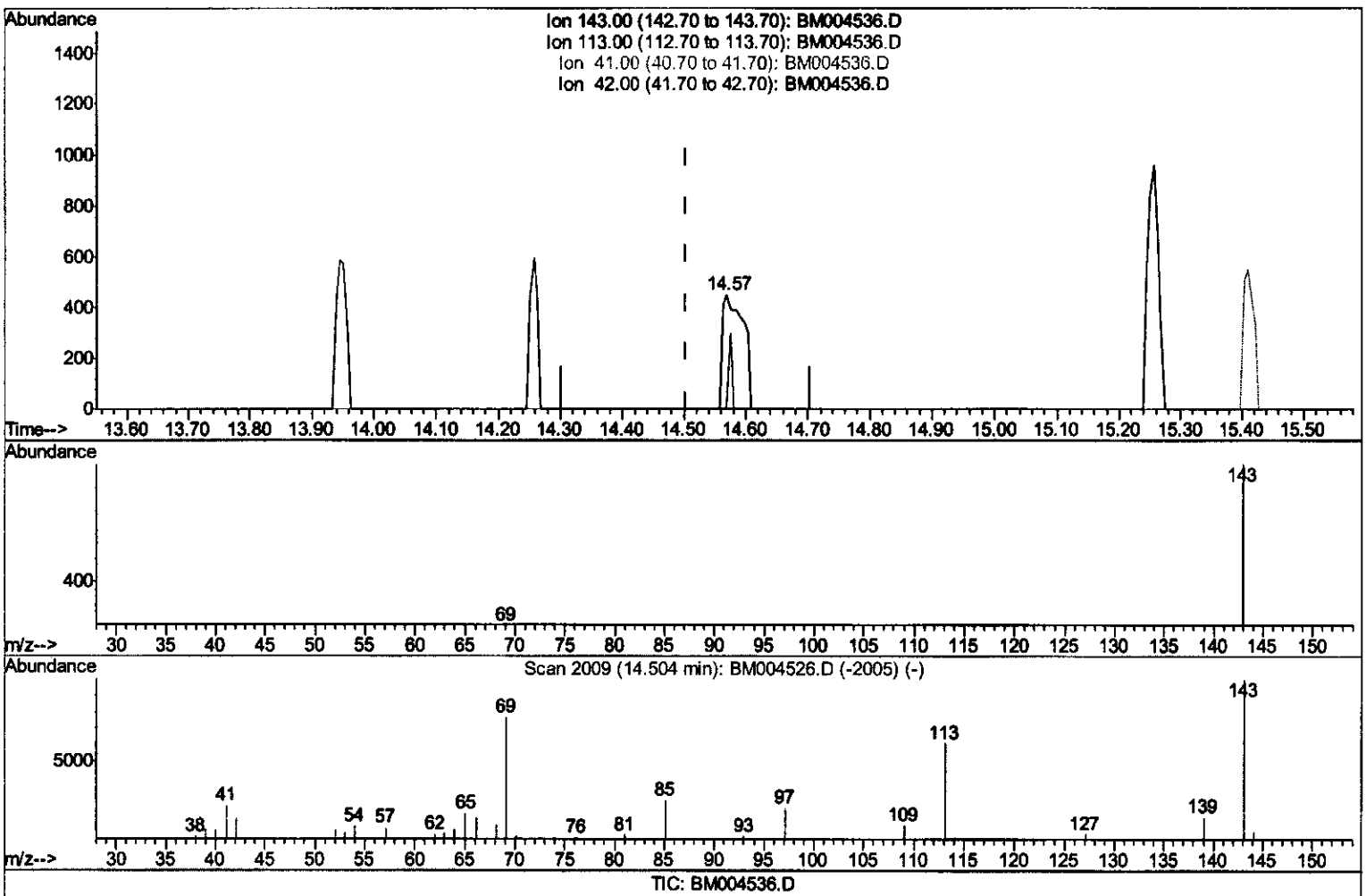
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004536.D
Acq On : 03 Mar 2016 17:13
Operator : SJ/UM
Sample : H1584-12
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 04 04:02:58 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H0075

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:57 PM



TIC: BM004536.D

(52) 4-Nitrophenol-d4 (S)

14.569min (+0.065) 1.90ng/ul m > SJ 03/07/16

response 1068

Ion	Exp%	Act%
143.00	100	100
113.00	75.10	0.00#
41.00	28.80	0.00#
42.00	19.10	0.00#

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004536.D
Acq On : 03 Mar 2016 17:13
Operator : SJ/UM
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Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H0075

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:57 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	19159	20.00	ng/ul	0.00
18) Naphthalene-d8	10.38	136	81000	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	45817	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.01	188	104860	20.00	ng/ul	0.00
78) Chrysene-d12	21.22	240	118250	20.00	ng/ul	0.00
86) Perylene-d12	23.43	264	114597	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0	0.00	ng/uL	
5) Phenol-d5	6.79	99	7600	4.92	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	6.93	67	20718	26.63	ng/ul	0.00
9) 2-Chlorophenol-d4	7.13	132	29874	21.70	ng/ul	0.00
13) 4-Methylphenol-d8	8.32	113	16165	11.88	ng/ul	0.00
19) Nitrobenzene-d5	8.76	128	17119	28.28	ng/ul	0.00
22) 2-Nitrophenol-d4	9.47	143	19657	28.37	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.03	165	30636	24.44	ng/ul	0.01
29) 4-Chloroaniline-d4	0.00	131	0	0.00	ng/ul	
44) Dimethylphthalate-d6	13.67	166	116847	30.66	ng/ul	0.00
47) Acenaphthylene-d8	13.95	160	140168	30.42	ng/ul	0.00
52) 4-Nitrophenol-d4	14.57	143	1068m	1.90	ng/ul	0.06
58) Fluorene-d10	15.26	176	102077	30.88	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	15.41	200	14913	21.90	ng/ul	0.00
71) Anthracene-d10	17.11	188	159059	31.00	ng/ul	0.00
79) Pyrene-d10	19.42	212	180269	28.35	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.30	264	186404	30.57	ng/ul	0.00

> SJ 03/07/16

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group | Contract: EPW14030

Lab Code: CHM | Case No.: 46018 | MA No.: | SDG No.: H0001

Analytical Method : SVOA | Level :

Instrument ID: BNA_M | Calibration Date(s): 03/03/2016 03/03/2016

GC Column: ZB-GR | ID: 0.25 (mm) | Calibration Time(s): 09:53 12:53

Length : 30 (m)

Heated Purge: (Y/N) | Purge Volume : (mL)

LAB FILE ID:	RRF005 =BM004524.D RRF040 =BM004527.D			RRF010= BM004525.D RRF080= BM004528.D			RRF020 =BM004526.D RRF160 =BM004529.D	
ANALYTE	RRF005	RRF010	RRF020	RRF040	RRF080	RRF160	$\overline{\text{RRF}}$	% RSD
1,4-Dioxane	0.371	0.423	0.443	0.428	0.409		0.415	6.6
Benzaldehyde		0.967	1.056	0.997	0.840	0.366	0.845	33.0
Phenol		1.650	1.793	1.753	1.754	1.574	1.705	5.3
Bis(2-Chloroethyl)ether		1.316	1.375	1.318	1.280	1.176	1.293	5.7
2-Chlorophenol	1.381	1.491	1.566	1.543	1.522		1.501	4.8
2-Methylphenol		1.367	1.464	1.443	1.411	1.257	1.388	5.9
2,2-oxybis(1-Chloropropane)		1.215	1.245	1.193	1.155	1.042	1.170	6.7
Acetophenone		2.361	2.479	2.315	2.187	1.863	2.241	10.5
4-Methylphenol		1.517	1.644	1.598	1.532	1.318	1.522	8.2
N-Nitroso-di-n-propylamine	0.973	1.073	1.131	1.057	1.003		1.048	5.9
Hexachloroethane	0.520	0.573	0.588	0.569	0.559		0.562	4.6
Nitrobenzene	0.283	0.309	0.333	0.325	0.318		0.313	6.2
Isophorone	0.603	0.648	0.692	0.652	0.625		0.644	5.2
2-Nitrophenol	0.164	0.191	0.207	0.206	0.201		0.194	9.1
2,4-Dimethylphenol	0.349	0.376	0.398	0.384	0.369		0.375	4.8
Bis(2-Chloroethoxy)methane	0.377	0.410	0.425	0.406	0.388		0.401	4.7
2,4-Dichlorophenol	0.286	0.323	0.347	0.339	0.328		0.325	7.2
Naphthalene	1.087	1.118	1.154	1.092	1.049		1.100	3.5
4-Chloroaniline		0.415	0.480	0.446	0.396	0.290	0.405	17.7
Hexachlorobutadiene	0.204	0.214	0.216	0.213	0.207		0.211	2.5
Caprolactam		0.090	0.107	0.104	0.098	0.087	0.097	8.9
4-Chloro-3-methylphenol	0.325	0.364	0.388	0.367	0.346		0.358	6.6
2-Methylnaphthalene	0.815	0.848	0.875	0.814	0.770		0.824	4.8
Hexachlorocyclopentadiene		0.134	0.204	0.272	0.331	0.375	0.263	36.7
2,4,6-Trichlorophenol	0.377	0.419	0.445	0.443	0.444		0.426	6.9
2,4,5-Trichlorophenol	0.411	0.447	0.482	0.470	0.476		0.457	6.3
1,1-Biphenyl	1.696	1.767	1.787	1.723	1.662		1.727	3.0
2-Chloronaphthalene	1.249	1.321	1.366	1.324	1.297		1.311	3.3
2-Nitroaniline	0.224	0.285	0.313	0.317	0.314		0.291	13.5
Dimethylphthalate	1.756	1.819	1.840	1.713	1.618		1.749	5.1
2,6-Dinitrotoluene	0.300	0.345	0.379	0.368	0.361		0.351	8.8
Acenaphthylene	2.093	2.220	2.258	2.159	2.053		2.157	4.0

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group | Contract: EPW14030

Lab Code: CHM | Case No.: 46018 | MA No.: | SDG No.: H0001

Analytical Method : SVOA | Level :

Instrument ID: BNA_M | Calibration Date(s): 03/03/2016 03/03/2016

GC Column: ZB-GR | ID: 0.25 (mm) | Calibration Time(s): 09:53 12:53

Length : 30 (m)

Heated Purge: (Y/N) | Purge Volume : (mL)

LAB FILE ID:	RRF005 =BM004524.D RRF040 =BM004527.D			RRF010= BM004525.D RRF080= BM004528.D			RRF020 =BM004526.D RRF160 =BM004529.D	
ANALYTE	RRF005	RRF010	RRF020	RRF040	RRF080	RRF160	$\overline{RRF}$	% RSD
3-Nitroaniline		0.318	0.374	0.359	0.313	0.286	0.330	10.9
Acenaphthene	1.482	1.531	1.548	1.446	1.378		1.477	4.6
2,4-Dinitrophenol		0.117	0.171	0.186	0.205	0.207	0.177	20.8
4-Nitrophenol		0.149	0.173	0.176	0.171	0.173	0.169	6.5
Dibenzofuran	2.076	2.170	2.181	2.019	1.878		2.065	6.0
2,4-Dinitrotoluene	0.472	0.537	0.562	0.518	0.474		0.512	7.7
Diethylphthalate	1.797	1.862	1.907	1.726	1.595		1.777	6.9
Fluorene	1.747	1.790	1.808	1.644	1.487		1.695	7.8
4-Chlorophenyl-phenylether	0.885	0.909	0.905	0.829	0.760		0.858	7.4
4-Nitroaniline		0.336	0.396	0.356	0.312	0.335	0.347	9.0
4,6-Dinitro-2-methylphenol		0.126	0.144	0.145	0.145	0.143	0.140	5.9
N-Nitrosodiphenylamine	0.625	0.653	0.684	0.658	0.653		0.655	3.2
4-Bromophenyl-phenylether	0.215	0.227	0.237	0.234	0.232		0.229	3.7
1,2,4,5-Tetrachlorobenzene	0.641	0.680	0.699	0.696	0.686		0.681	3.4
Hexachlorobenzene	0.241	0.252	0.262	0.255	0.252		0.252	3.1
Atrazine		0.238	0.249	0.237	0.228	0.212	0.233	5.9
Pentachlorophenol		0.085	0.105	0.109	0.115	0.116	0.106	11.8
Phenanthrene	1.204	1.236	1.262	1.173	1.115		1.198	4.8
Anthracene	1.201	1.261	1.290	1.203	1.133		1.218	5.0
Carbazole		1.080	1.126	1.031	0.972	0.942	1.030	7.3
Di-n-butylphthalate	1.290	1.360	1.435	1.306	1.225		1.323	6.0
Fluoranthene		1.437	1.451	1.257	1.159	1.152	1.291	11.3
Pyrene	1.350	1.436	1.502	1.524	1.445		1.451	4.7
Butylbenzylphthalate	0.520	0.564	0.604	0.593	0.587		0.574	5.8
3,3-Dichlorobenzidine		0.425	0.458	0.434	0.394	0.361	0.414	9.0
Benzo(a)anthracene	1.269	1.319	1.354	1.273	1.240		1.291	3.5
Chrysene	1.236	1.272	1.289	1.219	1.172		1.238	3.7
Bis(2-ethylhexyl)phthalate	0.767	0.812	0.850	0.818	0.798		0.809	3.7
Di-n-octyl phthalate		1.543	1.727	1.558	1.447	1.239	1.503	11.9
Benzo(b)fluoranthene	1.278	1.358	1.453	1.336	1.239		1.333	6.2
Benzo(k)fluoranthene	1.330	1.344	1.416	1.279	1.236		1.321	5.1
Benzo(a)pyrene	1.212	1.253	1.351	1.260	1.219		1.259	4.4

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group | Contract: EPW14030

Lab Code: CHM | Case No.: 46018 | MA No.: | SDG No.: H0001

Analytical Method : SVOA | Level :

Instrument ID: BNA_M | Calibration Date(s): 03/03/2016 03/03/2016

GC Column: ZB-GR | ID: 0.25 (mm) | Calibration Time(s): 09:53 12:53

Length : 30 (m)

Heated Purge: (Y/N) | Purge Volume : (mL)

LAB FILE ID: RRF005 =BM004524.D RRF010= BM004525.D RRF020 =BM004526.D
RRF040 =BM004527.D RRF080= BM004528.D RRF160 =BM004529.D

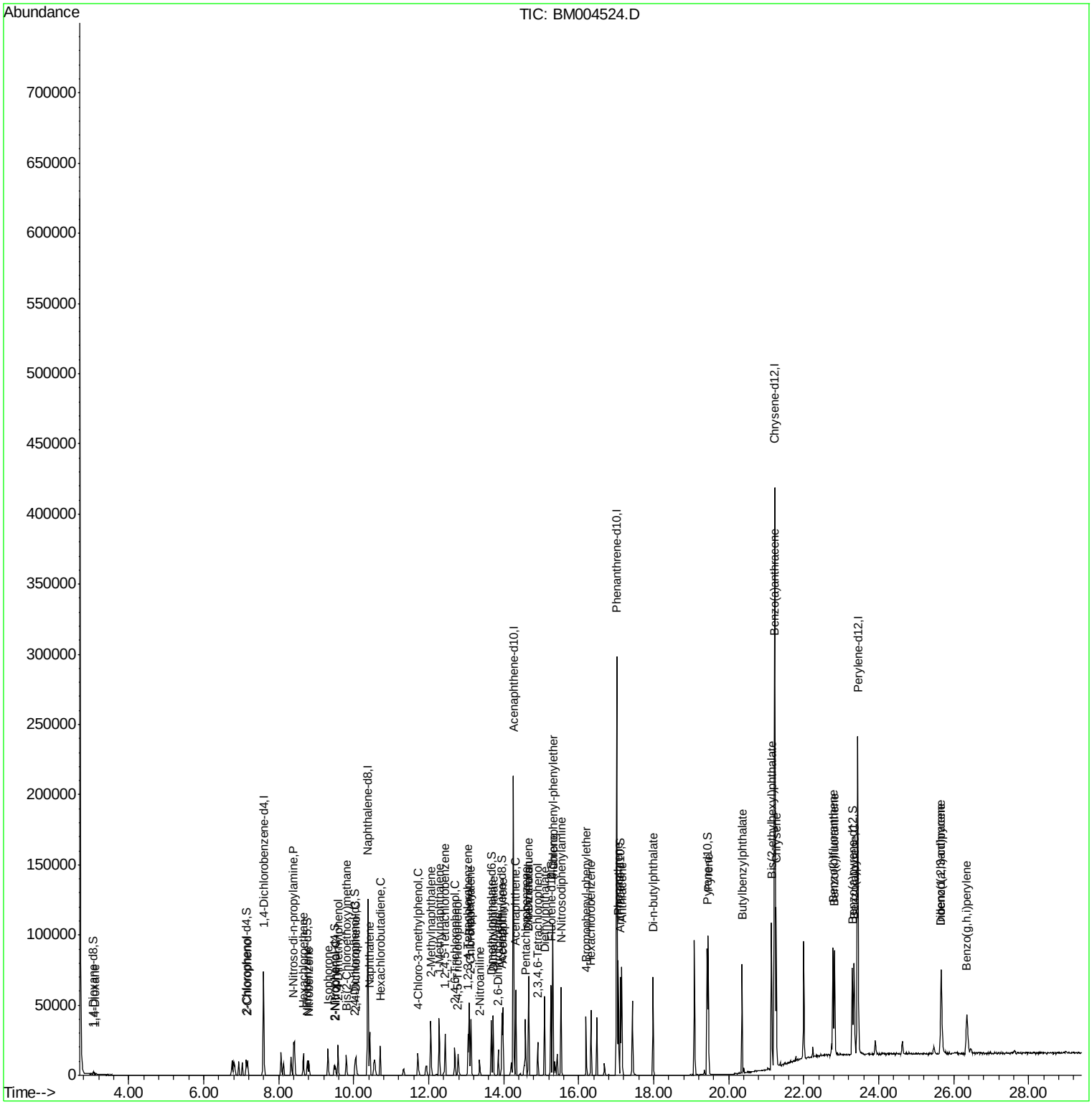
ANALYTE	RRF005	RRF010	RRF020	RRF040	RRF080	RRF160	$\overline{RRF}$	% RSD
Indeno(1,2,3-cd)pyrene	1.121	1.173	1.268	1.355	1.354		1.254	8.4
Dibenzo(a,h)anthracene	0.908	0.960	1.063	1.127	1.129		1.037	9.6
Benzo(g,h,i)perylene	0.928	0.974	1.063	1.150	1.166		1.056	9.9
2,3,4,6-Tetrachlorophenol	0.350	0.398	0.420	0.412	0.397		0.395	6.9
1,4-Dioxane-d8	0.330	0.370	0.408	0.378	0.371		0.372	7.5
Phenol-d5		1.544	1.674	1.670	1.659	1.511	1.611	4.8
Bis-(2-Chloroethyl)ether-d8		0.837	0.852	0.828	0.802	0.741	0.812	5.4
2-Chlorophenol-d4	1.286	1.418	1.514	1.485	1.481		1.437	6.4
4-Methylphenol-d8		1.410	1.510	1.481	1.436	1.265	1.420	6.7
Nitrobenzene-d5	0.127	0.145	0.158	0.159	0.157		0.149	9.3
2-Nitrophenol-d4	0.141	0.163	0.184	0.183	0.184		0.171	11.0
2,4-Dichlorophenol-d3	0.271	0.308	0.331	0.323	0.314		0.310	7.4
4-Chloroaniline-d4		0.388	0.451	0.419	0.375	0.270	0.381	18.0
Dimethylphthalate-d6	1.640	1.713	1.767	1.641	1.557		1.664	4.8
Acenaphthylene-d8	1.926	2.061	2.115	2.013	1.942		2.012	3.9
4-Nitrophenol-d4		0.215	0.257	0.256	0.250	0.250	0.245	7.1
Fluorene-d10	1.474	1.508	1.515	1.405	1.313		1.443	5.9
4,6-Dinitro-2-methylphenol-d2		0.111	0.133	0.135	0.136	0.133	0.130	8.4
Anthracene-d10	0.968	1.001	1.035	0.965	0.924		0.979	4.3
Pyrene-d10	0.986	1.046	1.117	1.138	1.091		1.076	5.6
Benzo(a)pyrene-d12	1.021	1.063	1.138	1.068	1.031		1.064	4.3

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004524.D
Acq On : 03 Mar 2016 09:53
Operator : SJ/UM
Sample : SSTD00534
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD00534

Quant Time: Mar 03 12:44:29 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:17:26 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004524.D
Acq On : 03 Mar 2016 09:53
Operator : SJ/UM
Sample : SSTD00534
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD00534

Quant Time: Mar 03 12:44:29 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:17:26 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	23554	20.00	ng/ul	0.00
18) Naphthalene-d8	10.37	136	112664	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	74442	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.01	188	178781	20.00	ng/ul	0.00
78) Chrysene-d12	21.23	240	199588	20.00	ng/ul	0.00
86) Perylene-d12	23.44	264	173107	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.06	96	778	1.74	ng/uL	0.00
5) Phenol-d5	0.00	99	0d	0.00	ng/ul	
7) Bis-(2-Chloroethyl)ether-d	0.00	67	0d	0.00	ng/ul	
9) 2-Chlorophenol-d4	7.13	132	7570	4.44	ng/ul	0.00
13) 4-Methylphenol-d8	0.00	113	0d	0.00	ng/ul	
19) Nitrobenzene-d5	8.76	128	3574	4.17	ng/ul	0.00
22) 2-Nitrophenol-d4	9.48	143	3984	4.08	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.03	165	7647	4.33	ng/ul	0.01
29) 4-Chloroaniline-d4	0.00	131	0d	0.00	ng/ul	
44) Dimethylphthalate-d6	13.67	166	30526	4.78	ng/ul	0.00
47) Acenaphthylene-d8	13.95	160	35849	4.80	ng/ul	0.00
52) 4-Nitrophenol-d4	0.00	143	0d	0.00	ng/ul	
58) Fluorene-d10	15.26	176	27441	5.05	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	0.00	200	0d	0.00	ng/ul	
71) Anthracene-d10	17.11	188	43270	4.94	ng/ul	0.00
79) Pyrene-d10	19.42	212	49219	5.10	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.30	264	44178	4.86	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.09	88	874	1.70	ng/uL#	62
10) 2-Chlorophenol	7.17	128	8132	4.59	ng/ul	95
15) N-Nitroso-di-n-propylamine	8.40	70	5728	4.31	ng/ul	95
17) Hexachloroethane	8.66	117	3060	4.55	ng/ul	87
20) Nitrobenzene	8.80	77	7960	4.25	ng/ul	98
21) Isophorone	9.32	82	16996	4.38	ng/ul	99
23) 2-Nitrophenol	9.51	139	4627	4.21	ng/ul	89
24) 2,4-Dimethylphenol	9.58	107	9837	4.48	ng/ul	93
25) Bis(2-Chloroethoxy)methane	9.80	93	10618	4.54	ng/ul	97
27) 2,4-Dichlorophenol	10.06	162	8054	4.33	ng/ul	98
28) Naphthalene	10.43	128	30618	4.87	ng/ul	99
31) Hexachlorobutadiene	10.70	225	5743	4.92	ng/ul	97
33) 4-Chloro-3-methylphenol	11.71	107	9159	4.20	ng/ul	99
34) 2-Methylnaphthalene	12.06	142	22952	4.88	ng/ul	100
35) 1-Methylnaphthalene	12.27	142	22195	4.96	ng/ul	100
37) 1,2,4,5-Tetrachlorobenzene	12.43	216	11934	4.82	ng/ul	98
39) 2,4,6-Trichlorophenol	12.69	196	7007	4.35	ng/ul	96
40) 2,4,5-Trichlorophenol	12.78	196	7655	4.38	ng/ul	98
41) 1,1'-Biphenyl	13.08	154	31570	4.94	ng/ul	99
42) 2-Chloronaphthalene	13.13	162	23242	4.77	ng/ul	98
43) 2-Nitroaniline	13.36	65	4171	3.40	ng/ul	95
45) Dimethylphthalate	13.72	163	32687	4.91	ng/ul	99
46) 2,6-Dinitrotoluene	13.85	165	5587	4.18	ng/ul	98

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004524.D
Acq On : 03 Mar 2016 09:53
Operator : SJ/UM
Sample : SSTD00534
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD00534

Quant Time: Mar 03 12:44:29 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:17:26 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
48) Acenaphthylene	13.97	152	38961	4.79	ng/ul	99
50) Acenaphthene	14.32	153	27583	4.97	ng/ul	95
54) Dibenzofuran	14.66	168	38644	4.98	ng/ul	95
55) 2,4-Dinitrotoluene	14.66	165	8787	4.41	ng/ul#	82
56) 2,3,4,6-Tetrachlorophenol	14.90	232	6514	4.50	ng/ul#	94
57) Diethylphthalate	15.09	149	33436	4.85	ng/ul	99
59) Fluorene	15.31	166	32518	5.06	ng/ul	100
60) 4-Chlorophenyl-phenylether	15.30	204	16473	5.22	ng/ul	92
65) N-Nitrosodiphenylamine	15.53	169	27953	4.89	ng/ul	98
66) 4-Bromophenyl-phenylether	16.20	248	9612	4.94	ng/ul	96
67) Hexachlorobenzene	16.32	284	10758	4.97	ng/ul	95
70) Phenanthrene	17.05	178	53830	5.01	ng/ul	99
72) Anthracene	17.14	178	53688	4.92	ng/ul	99
73) 1,2,3,4-Tetrachlorobenzene	13.05	216	11329	4.76	ng/uL	97
74) Pentachlorobenzene	14.59	250	12438	5.08	ng/uL	99
76) Di-n-butylphthalate	17.98	149	57669	4.37	ng/ul	98
80) Pyrene	19.45	202	67352	5.16	ng/ul	100
81) Butylbenzylphthalate	20.35	149	25954	4.52	ng/ul	97
83) Benzo(a)anthracene	21.21	228	63311	4.93	ng/ul	99
84) Bis(2-ethylhexyl)phthalate	21.13	149	38247	4.51	ng/ul	97
85) Chrysene	21.26	228	61697	5.00	ng/ul	98
88) Benzo(b)fluoranthene	22.77	252	55311	4.73	ng/ul	100
89) Benzo(k)fluoranthene	22.82	252	57540	5.22	ng/ul	99
91) Benzo(a)pyrene	23.34	252	52469	4.83	ng/ul	98
92) Indeno(1,2,3-cd)pyrene	25.66	276	48514	4.77	ng/ul	97
93) Dibenzo(a,h)anthracene	25.67	278	39285	4.68	ng/ul	98
94) Benzo(g,h,i)perylene	26.34	276	40157	4.80	ng/ul	98

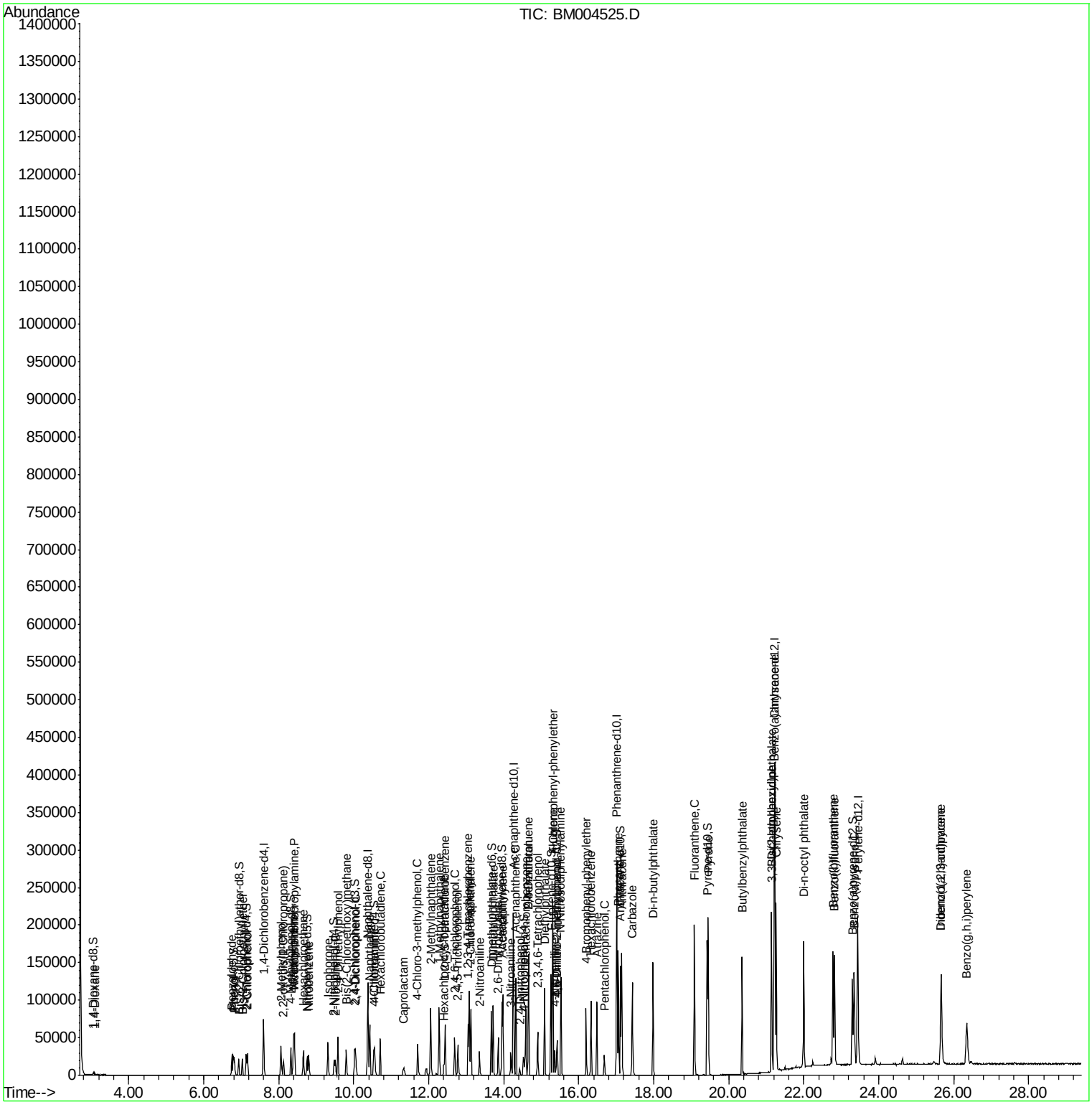
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004525.D
Acq On : 03 Mar 2016 10:29
Operator : SJ/UM
Sample : SSTD01035
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD01035

Quant Time: Mar 03 13:03:50 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:47:42 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004525.D
Acq On : 03 Mar 2016 10:29
Operator : SJ/UM
Sample : SSTD01035
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD01035

Quant Time: Mar 03 13:03:50 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:47:42 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	23517	20.00	ng/ul	0.00
18) Naphthalene-d8	10.37	136	112594	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	73109	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.01	188	173976	20.00	ng/ul	0.00
78) Chrysene-d12	21.23	240	184641	20.00	ng/ul	0.00
86) Perylene-d12	23.44	264	153593	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.05	96	1741	3.90	ng/uL	0.00
5) Phenol-d5	6.79	99	18160	9.21	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	6.93	67	9839	9.81	ng/ul	0.00
9) 2-Chlorophenol-d4	7.13	132	16677	9.81	ng/ul	0.00
13) 4-Methylphenol-d8	8.32	113	16576	9.41	ng/ul	0.00
19) Nitrobenzene-d5	8.76	128	8170	9.54	ng/ul	0.00
22) 2-Nitrophenol-d4	9.47	143	9179	9.40	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.02	165	17365	9.84	ng/ul	0.00
29) 4-Chloroaniline-d4	10.53	131	21837	9.93	ng/ul	0.00
44) Dimethylphthalate-d6	13.67	166	62629	9.99	ng/ul	0.00
47) Acenaphthylene-d8	13.94	160	75328	10.26	ng/ul	0.00
52) 4-Nitrophenol-d4	14.52	143	7852	7.79	ng/ul	0.01
58) Fluorene-d10	15.26	176	55117	10.34	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	15.41	200	9616	9.00	ng/ul	0.00
71) Anthracene-d10	17.11	188	87075	10.21	ng/ul	0.00
79) Pyrene-d10	19.42	212	96582	10.81	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.30	264	81606	10.12	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.09	88	1990	3.87	ng/uL#	75
4) Benzaldehyde	6.75	77	11369	10.66	ng/ul	93
6) Phenol	6.82	94	19397	9.22	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.03	93	15478	9.94	ng/ul	94
10) 2-Chlorophenol	7.16	128	17536	9.92	ng/ul	97
11) 2-Methylphenol	8.06	108	16077	9.38	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.13	45	14289	9.56	ng/ul	93
14) Acetophenone	8.42	105	27767	10.06	ng/ul	96
15) N-Nitroso-di-n-propylamine	8.40	70	12620	9.51	ng/ul	93
16) 4-Methylphenol	8.39	108	17835	9.49	ng/ul	96
17) Hexachloroethane	8.66	117	6742	10.04	ng/ul	90
20) Nitrobenzene	8.80	77	17401	9.29	ng/ul	94
21) Isophorone	9.32	82	36501	9.41	ng/ul	96
23) 2-Nitrophenol	9.51	139	10755	9.79	ng/ul	92
24) 2,4-Dimethylphenol	9.57	107	21195	9.66	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.80	93	23107	9.88	ng/ul	99
27) 2,4-Dichlorophenol	10.05	162	18174	9.77	ng/ul	99
28) Naphthalene	10.43	128	62955	10.03	ng/ul	99
30) 4-Chloroaniline	10.56	127	23372	10.09	ng/ul	97
31) Hexachlorobutadiene	10.70	225	12053	10.33	ng/ul	98
32) Caprolactam	11.33	113	5048	7.80	ng/ul	84
33) 4-Chloro-3-methylphenol	11.70	107	20515	9.42	ng/ul	96
34) 2-Methylnaphthalene	12.05	142	47743	10.16	ng/ul	99

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004525.D
Acq On : 03 Mar 2016 10:29
Operator : SJ/UM
Sample : SSTD01035
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD01035

Quant Time: Mar 03 13:03:50 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:47:42 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) 1-Methylnaphthalene	12.27	142	45932	10.28	ng/ul	96
37) 1,2,4,5-Tetrachlorobenzene	12.43	216	24866	10.23	ng/ul	97
38) Hexachlorocyclopentadiene	12.40	237	4890	5.39	ng/ul	94
39) 2,4,6-Trichlorophenol	12.69	196	15311	9.69	ng/ul	99
40) 2,4,5-Trichlorophenol	12.77	196	16355	9.54	ng/ul	97
41) 1,1'-Biphenyl	13.08	154	64609	10.28	ng/ul	98
42) 2-Chloronaphthalene	13.12	162	48283	10.10	ng/ul	99
43) 2-Nitroaniline	13.35	65	10436	8.66	ng/ul	92
45) Dimethylphthalate	13.72	163	66486	10.17	ng/ul	98
46) 2,6-Dinitrotoluene	13.85	165	12606	9.61	ng/ul	94
48) Acenaphthylene	13.97	152	81153	10.16	ng/ul	99
49) 3-Nitroaniline	14.19	138	11612	8.93	ng/ul	99
50) Acenaphthene	14.32	153	55950	10.26	ng/ul	97
51) 2,4-Dinitrophenol	14.43	184	4270	7.18	ng/ul	91
53) 4-Nitrophenol	14.53	109	5461	7.25	ng/ul	91
54) Dibenzofuran	14.66	168	79326	10.42	ng/ul	94
55) 2,4-Dinitrotoluene	14.66	165	19631	10.02	ng/ul#	87
56) 2,3,4,6-Tetrachlorophenol	14.90	232	14533	10.23	ng/ul#	93
57) Diethylphthalate	15.09	149	68065	10.06	ng/ul	99
59) Fluorene	15.31	166	65436	10.37	ng/ul	100
60) 4-Chlorophenyl-phenylether	15.30	204	33226	10.73	ng/ul	92
61) 4-Nitroaniline	15.36	138	12279	8.76	ng/ul	88
64) 4,6-Dinitro-2-methylphenol	15.43	198	10932	9.49	ng/ul#	86
65) N-Nitrosodiphenylamine	15.53	169	56846	10.21	ng/ul	99
66) 4-Bromophenyl-phenylether	16.20	248	19776	10.44	ng/ul#	90
67) Hexachlorobenzene	16.32	284	21929	10.41	ng/ul	96
68) Atrazine	16.48	200	20699	10.03	ng/ul	95
69) Pentachlorophenol	16.68	266	7427	8.93	ng/ul	99
70) Phenanthrene	17.05	178	107514	10.29	ng/ul	99
72) Anthracene	17.14	178	109701	10.33	ng/ul	99
73) 1,2,3,4-Tetrachlorobenzene	13.05	216	23598	10.18	ng/uL	99
74) Pentachlorobenzene	14.59	250	24491	10.28	ng/uL	98
75) Carbazole	17.43	167	93983	10.16	ng/ul	98
76) Di-n-butylphthalate	17.98	149	118337	9.21	ng/ul	99
77) Fluoranthene	19.09	202	124966	10.56	ng/ul	99
80) Pyrene	19.45	202	132556	10.98	ng/ul	99
81) Butylbenzylphthalate	20.36	149	52065	9.80	ng/ul	90
82) 3,3'-Dichlorobenzidine	21.14	252	39219	10.54	ng/ul	98
83) Benzo(a)anthracene	21.21	228	121761	10.25	ng/ul	99
84) Bis(2-ethylhexyl)phthalate	21.13	149	74979	9.55	ng/ul	98
85) Chrysene	21.26	228	117410	10.28	ng/ul	99
87) Di-n-octyl phthalate	22.00	149	118466	9.37	ng/ul	97
88) Benzo(b)fluoranthene	22.77	252	104283	10.05	ng/ul	100
89) Benzo(k)fluoranthene	22.82	252	103226	10.55	ng/ul	99
91) Benzo(a)pyrene	23.34	252	96246	9.98	ng/ul	100
92) Indeno(1,2,3-cd)pyrene	25.66	276	90080	9.99	ng/ul	98
93) Dibenzo(a,h)anthracene	25.66	278	73696	9.90	ng/ul	98
94) Benzo(g,h,i)perylene	26.34	276	74774	10.08	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004525.D
Acq On : 03 Mar 2016 10:29
Operator : SJ/UM
Sample : SSTD01035
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD01035

Quant Time: Mar 03 13:03:50 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:47:42 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004526.D
Acq On : 03 Mar 2016 11:05
Operator : SJ/UM
Sample : SSTD02036
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 03 12:37:41 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:17:26 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02036

Manual Integrations APPROVED
UMANGI
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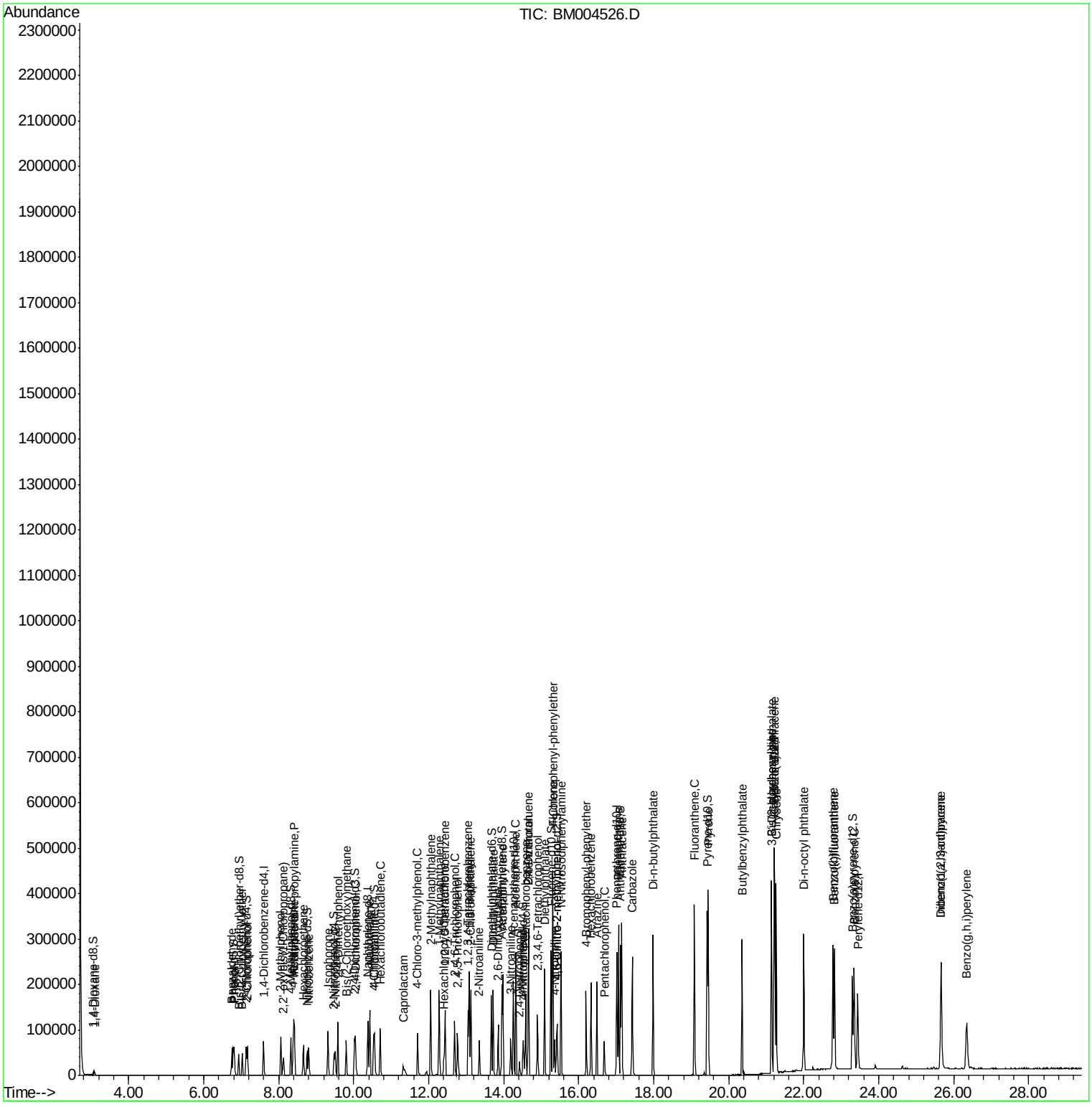

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004526.D
Acq On : 03 Mar 2016 11:05
Operator : SJ/UM
Sample : SSTD02036
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 03 12:37:41 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:17:26 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02036

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	23060	20.00	ng/ul	0.00
18) Naphthalene-d8	10.37	136	110700	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	71935	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.01	188	166319	20.00	ng/ul	0.00
78) Chrysene-d12	21.23	240	167017	20.00	ng/ul	0.00
86) Perylene-d12	23.44	264	128752	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.05	96	3767	8.61	ng/uL	0.00
5) Phenol-d5	6.79	99	38598	19.96	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	6.93	67	19657	19.99	ng/ul	0.00
9) 2-Chlorophenol-d4	7.13	132	34923	20.94	ng/ul	0.00
13) 4-Methylphenol-d8	8.32	113	34824	20.15	ng/ul	0.00
19) Nitrobenzene-d5	8.76	128	17540	20.83	ng/ul	0.00
22) 2-Nitrophenol-d4	9.47	143	20402	21.25	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.02	165	36592	21.09	ng/ul	0.00
29) 4-Chloroaniline-d4	10.53	131	49952	23.09	ng/ul	0.00
44) Dimethylphthalate-d6	13.67	166	127117	20.60	ng/ul	0.00
47) Acenaphthylene-d8	13.94	160	152160	21.07	ng/ul	0.00
52) 4-Nitrophenol-d4	14.50	143	18463	18.62	ng/ul	0.00
58) Fluorene-d10	15.26	176	109011	20.78	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	15.41	200	22196	21.72	ng/ul	0.00
71) Anthracene-d10	17.11	188	172180	21.13	ng/ul	0.00
79) Pyrene-d10	19.42	212	186499	23.08	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.30	264	146461	21.68	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.09	88	4084	8.10	ng/uL#	90
4) Benzaldehyde	6.75	77	24353	23.28	ng/ul	92
6) Phenol	6.81	94	41340	20.05	ng/ul	96
8) Bis(2-Chloroethyl)ether	7.02	93	31700	20.77	ng/ul	94
10) 2-Chlorophenol	7.16	128	36103	20.83	ng/ul	96
11) 2-Methylphenol	8.06	108	33750	20.07	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.13	45	28712	19.59	ng/ul	97
14) Acetophenone	8.42	105	57162	21.11	ng/ul	94
15) N-Nitroso-di-n-propylamine	8.40	70	26086	20.05	ng/ul	92
16) 4-Methylphenol	8.38	108	37906	20.56	ng/ul	97
17) Hexachloroethane	8.65	117	13565	20.59	ng/ul	97
20) Nitrobenzene	8.80	77	36834	20.01	ng/ul	94
21) Isophorone	9.32	82	76654	20.09	ng/ul	97
23) 2-Nitrophenol	9.50	139	22868	21.17	ng/ul	93
24) 2,4-Dimethylphenol	9.57	107	44061	20.43	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.80	93	47048	20.46	ng/ul	99
27) 2,4-Dichlorophenol	10.05	162	38403	21.00	ng/ul	99
28) Naphthalene	10.43	128	127738	20.69	ng/ul	100
30) 4-Chloroaniline	10.55	127	53112	23.32	ng/ul	100
31) Hexachlorobutadiene	10.70	225	23963	20.88	ng/ul	99
32) Caprolactam	11.32	113	11848m	18.61	ng/ul	
33) 4-Chloro-3-methylphenol	11.70	107	42946	20.06	ng/ul	95
34) 2-Methylnaphthalene	12.05	142	96905	20.98	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004526.D
Acq On : 03 Mar 2016 11:05
Operator : SJ/UM
Sample : SSTD02036
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 03 12:37:41 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:17:26 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02036

Manual Integrations APPROVED
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3/4/2016 4:20:49 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) 1-Methylnaphthalene	12.27	142	92111	20.97	ng/ul	99
37) 1,2,4,5-Tetrachlorobenzene	12.43	216	50270	21.02	ng/ul	98
38) Hexachlorocyclopentadiene	12.40	237	14666	16.44	ng/ul	97
39) 2,4,6-Trichlorophenol	12.69	196	32009	20.59	ng/ul	99
40) 2,4,5-Trichlorophenol	12.77	196	34637	20.53	ng/ul	100
41) 1,1'-Biphenyl	13.08	154	128581	20.80	ng/ul	99
42) 2-Chloronaphthalene	13.12	162	98259	20.89	ng/ul	98
43) 2-Nitroaniline	13.34	65	22483	18.96	ng/ul	94
45) Dimethylphthalate	13.72	163	132354	20.57	ng/ul	99
46) 2,6-Dinitrotoluene	13.85	165	27286	21.15	ng/ul	94
48) Acenaphthylene	13.97	152	162437	20.67	ng/ul	99
49) 3-Nitroaniline	14.19	138	26918	21.03	ng/ul	96
50) Acenaphthene	14.32	153	111340	20.75	ng/ul	98
51) 2,4-Dinitrophenol	14.42	184	12327	21.06	ng/ul#	87
53) 4-Nitrophenol	14.52	109	12462	16.81	ng/ul	87
54) Dibenzofuran	14.66	168	156870	20.93	ng/ul	97
55) 2,4-Dinitrotoluene	14.65	165	40425	20.98	ng/ul	90
56) 2,3,4,6-Tetrachlorophenol	14.90	232	30236	21.64	ng/ul#	95
57) Diethylphthalate	15.09	149	137184	20.61	ng/ul	100
59) Fluorene	15.31	166	130023	20.93	ng/ul	99
60) 4-Chlorophenyl-phenylether	15.30	204	65124	21.37	ng/ul	93
61) 4-Nitroaniline	15.36	138	28470	20.63	ng/ul	86
64) 4,6-Dinitro-2-methylphenol	15.42	198	23873	21.69	ng/ul	93
65) N-Nitrosodiphenylamine	15.53	169	113750	21.38	ng/ul	99
66) 4-Bromophenyl-phenylether	16.20	248	39336	21.71	ng/ul	95
67) Hexachlorobenzene	16.32	284	43630	21.66	ng/ul	93
68) Atrazine	16.48	200	41445	21.00	ng/ul	98
69) Pentachlorophenol	16.68	266	17381	21.86	ng/ul	97
70) Phenanthrene	17.06	178	209939	21.02	ng/ul	99
72) Anthracene	17.14	178	214493	21.13	ng/ul	99
73) 1,2,3,4-Tetrachlorobenzene	13.04	216	47826	21.58	ng/uL	100
74) Pentachlorobenzene	14.59	250	49190	21.60	ng/uL	99
75) Carbazole	17.43	167	187298	21.17	ng/ul	99
76) Di-n-butylphthalate	17.98	149	238740	19.44	ng/ul	99
77) Fluoranthene	19.09	202	241338	21.32	ng/ul	99
80) Pyrene	19.45	202	250863	22.98	ng/ul	99
81) Butylbenzylphthalate	20.36	149	100841	20.99	ng/ul	93
82) 3,3'-Dichlorobenzidine	21.14	252	76453	22.72	ng/ul	99
83) Benzo(a)anthracene	21.21	228	226097	21.04	ng/ul	99
84) Bis(2-ethylhexyl)phthalate	21.13	149	141912	19.99	ng/ul	98
85) Chrysene	21.26	228	215362	20.84	ng/ul	99
87) Di-n-octyl phthalate	22.00	149	222304	20.98	ng/ul#	95
88) Benzo(b)fluoranthene	22.77	252	187080	21.50	ng/ul	99
89) Benzo(k)fluoranthene	22.82	252	182281	22.23	ng/ul	100
91) Benzo(a)pyrene	23.34	252	173998	21.52	ng/ul	99
92) Indeno(1,2,3-cd)pyrene	25.66	276	163244	21.59	ng/ul	100
93) Dibenzo(a,h)anthracene	25.66	278	136859	21.93	ng/ul	99
94) Benzo(g,h,i)perylene	26.34	276	136928	22.02	ng/ul	100

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004526.D
Acq On : 03 Mar 2016 11:05
Operator : SJ/UM
Sample : SSTD02036
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 03 12:37:41 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:17:26 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02036

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:49 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

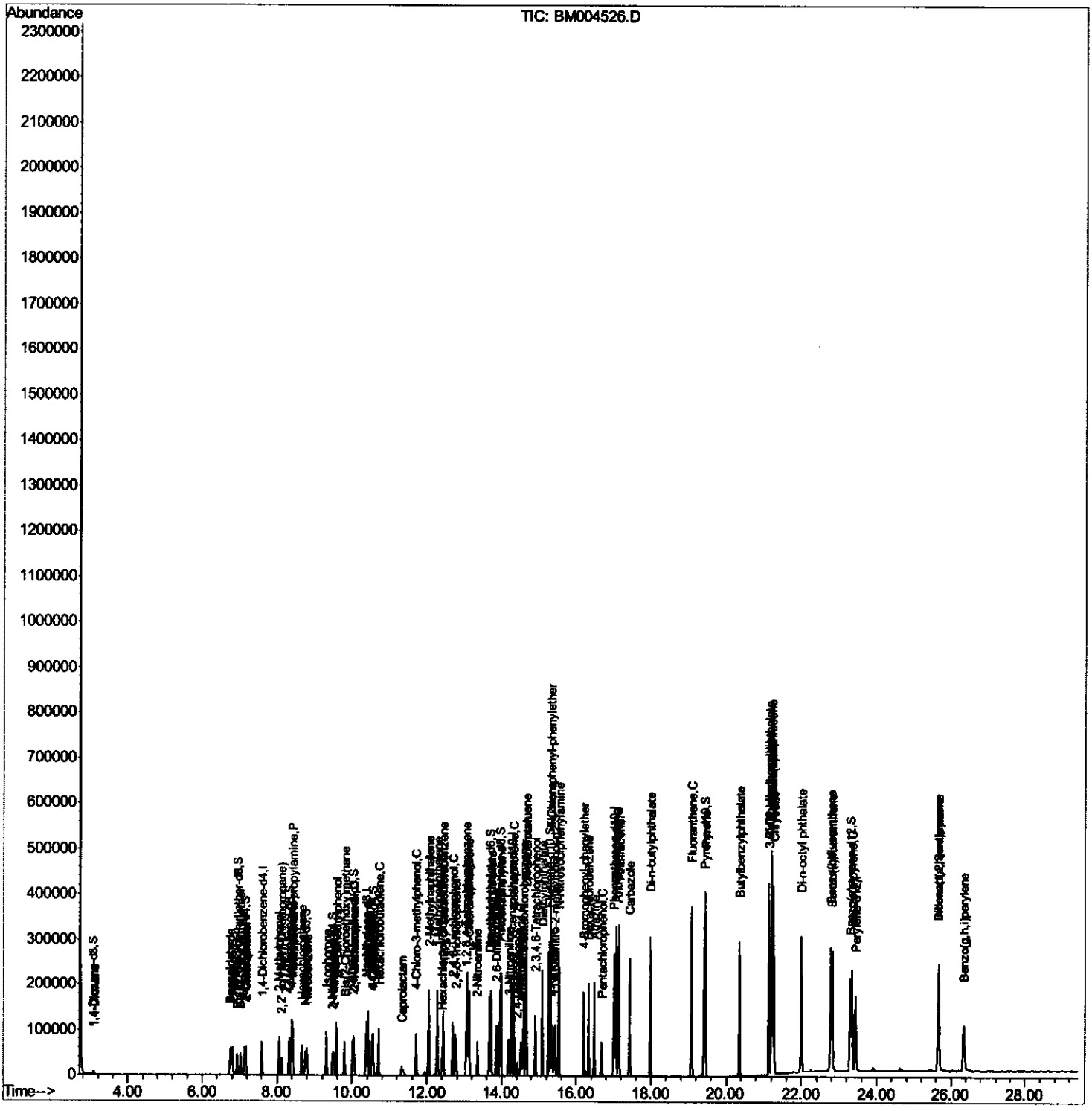
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004526.D
Acq On : 03 Mar 2016 11:05
Operator : SJ/UM
Sample : SSTD02036
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 03 12:37:41 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:17:26 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02036

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:49 PM



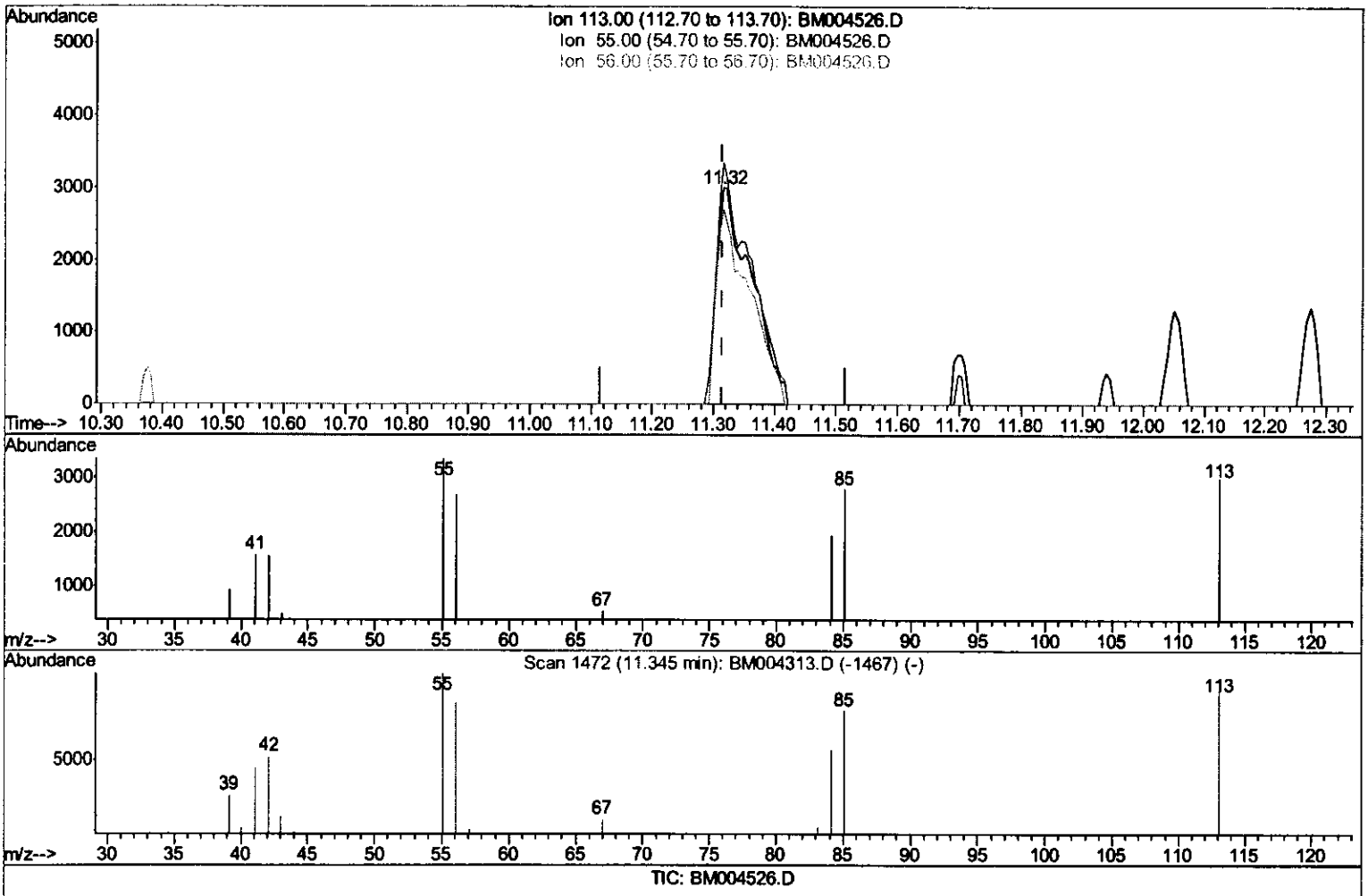
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004526.D
Acq On : 03 Mar 2016 11:05
Operator : SJ/UM
Sample : SSTD02036
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 03 12:34:22 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:17:26 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02036

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:49 PM



TIC: BM004526.D

(32) Caprolactam

11.316min (0.000) 18.61ng/ul m

response 11848

> S.J 03/07/16

Ion	Exp%	Act%
113.00	100	100
55.00	127.40	111.86
56.00	101.50	90.01
0.00	0.00	0.00

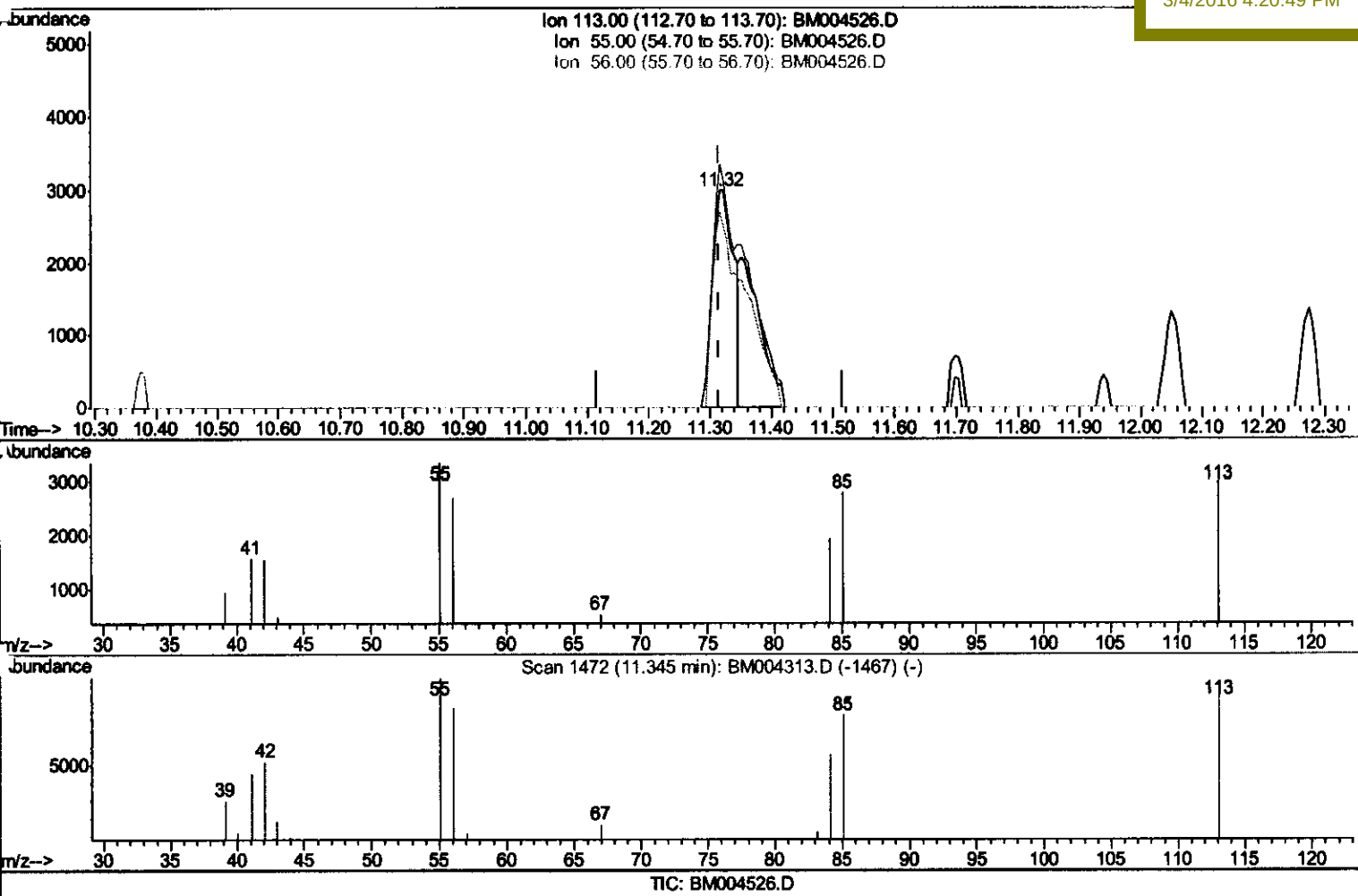
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004526.D
Acq On : 03 Mar 2016 11:05
Operator : SJ/UM
Sample : SSTD02036
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 03 12:34:22 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:17:26 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02036

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:49 PM



TIC: BM004526.D

(32) Caprolactam

11.316min (0.000) 11.02ng/ul

response 7015

Ion	Exp%	Act%
113.00	100	100
55.00	127.40	111.86
56.00	101.50	90.01
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004526.D
Acq On : 03 Mar 2016 11:05
Operator : SJ/UM
Sample : SSTD02036
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 03 12:37:41 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:17:26 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02036

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:49 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	23060	20.00	ng/ul	0.00
18) Naphthalene-d8	10.37	136	110700	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	71935	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.01	188	166319	20.00	ng/ul	0.00
78) Chrysene-d12	21.23	240	167017	20.00	ng/ul	0.00
86) Perylene-d12	23.44	264	128752	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.05	96	3767	8.61	ng/uL	0.00
5) Phenol-d5	6.79	99	38598	19.96	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	6.93	67	19657	19.99	ng/ul	0.00
9) 2-Chlorophenol-d4	7.13	132	34923	20.94	ng/ul	0.00
13) 4-Methylphenol-d8	8.32	113	34824	20.15	ng/ul	0.00
19) Nitrobenzene-d5	8.76	128	17540	20.83	ng/ul	0.00
22) 2-Nitrophenol-d4	9.47	143	20402	21.25	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.02	165	36592	21.09	ng/ul	0.00
29) 4-Chloroaniline-d4	10.53	131	49952	23.09	ng/ul	0.00
44) Dimethylphthalate-d6	13.67	166	127117	20.60	ng/ul	0.00
47) Acenaphthylene-d8	13.94	160	152160	21.07	ng/ul	0.00
52) 4-Nitrophenol-d4	14.50	143	18463	18.62	ng/ul	0.00
58) Fluorene-d10	15.26	176	109011	20.78	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	15.41	200	22196	21.72	ng/ul	0.00
71) Anthracene-d10	17.11	188	172180	21.13	ng/ul	0.00
79) Pyrene-d10	19.42	212	186499	23.08	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.30	264	146461	21.68	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.09	88	4084	8.10	ng/uL#	90
4) Benzaldehyde	6.75	77	24353	23.28	ng/ul	92
6) Phenol	6.81	94	41340	20.05	ng/ul	96
8) Bis(2-Chloroethyl)ether	7.02	93	31700	20.77	ng/ul	94
10) 2-Chlorophenol	7.16	128	36103	20.83	ng/ul	96
11) 2-Methylphenol	8.06	108	33750	20.07	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.13	45	28712	19.59	ng/ul	97
14) Acetophenone	8.42	105	57162	21.11	ng/ul	94
15) N-Nitroso-di-n-propylamine	8.40	70	26086	20.05	ng/ul	92
16) 4-Methylphenol	8.38	108	37906	20.56	ng/ul	97
17) Hexachloroethane	8.65	117	13565	20.59	ng/ul	97
20) Nitrobenzene	8.80	77	36834	20.01	ng/ul	94
21) Isophorone	9.32	82	76654	20.09	ng/ul	97
23) 2-Nitrophenol	9.50	139	22868	21.17	ng/ul	93
24) 2,4-Dimethylphenol	9.57	107	44061	20.43	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.80	93	47048	20.46	ng/ul	99
27) 2,4-Dichlorophenol	10.05	162	38403	21.00	ng/ul	99
28) Naphthalene	10.43	128	127738	20.69	ng/ul	100
30) 4-Chloroaniline	10.55	127	53112	23.32	ng/ul	100
31) Hexachlorobutadiene	10.70	225	23963	20.88	ng/ul	99
32) Caprolactam	11.32	113	11848m	18.61	ng/ul	95
33) 4-Chloro-3-methylphenol	11.70	107	42946	20.06	ng/ul	99
34) 2-Methylnaphthalene	12.05	142	96905	20.98	ng/ul	99

S.J 03/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004526.D
Acq On : 03 Mar 2016 11:05
Operator : SJ/UM
Sample : SSTD02036
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 03 12:37:41 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:17:26 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02036

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) 1-Methylnaphthalene	12.27	142	92111	20.97	ng/ul	99
37) 1,2,4,5-Tetrachlorobenzene	12.43	216	50270	21.02	ng/ul	98
38) Hexachlorocyclopentadiene	12.40	237	14666	16.44	ng/ul	97
39) 2,4,6-Trichlorophenol	12.69	196	32009	20.59	ng/ul	99
40) 2,4,5-Trichlorophenol	12.77	196	34637	20.53	ng/ul	100
41) 1,1'-Biphenyl	13.08	154	128581	20.80	ng/ul	99
42) 2-Chloronaphthalene	13.12	162	98259	20.89	ng/ul	98
43) 2-Nitroaniline	13.34	65	22483	18.96	ng/ul	94
45) Dimethylphthalate	13.72	163	132354	20.57	ng/ul	99
46) 2,6-Dinitrotoluene	13.85	165	27286	21.15	ng/ul	94
48) Acenaphthylene	13.97	152	162437	20.67	ng/ul	99
49) 3-Nitroaniline	14.19	138	26918	21.03	ng/ul	96
50) Acenaphthene	14.32	153	111340	20.75	ng/ul	98
51) 2,4-Dinitrophenol	14.42	184	12327	21.06	ng/ul#	87
53) 4-Nitrophenol	14.52	109	12462	16.81	ng/ul	87
54) Dibenzofuran	14.66	168	156870	20.93	ng/ul	97
55) 2,4-Dinitrotoluene	14.65	165	40425	20.98	ng/ul	90
56) 2,3,4,6-Tetrachlorophenol	14.90	232	30236	21.64	ng/ul#	95
57) Diethylphthalate	15.09	149	137184	20.61	ng/ul	100
59) Fluorene	15.31	166	130023	20.93	ng/ul	99
60) 4-Chlorophenyl-phenylether	15.30	204	65124	21.37	ng/ul	93
61) 4-Nitroaniline	15.36	138	28470	20.63	ng/ul	86
64) 4,6-Dinitro-2-methylphenol	15.42	198	23873	21.69	ng/ul	93
65) N-Nitrosodiphenylamine	15.53	169	113750	21.38	ng/ul	99
66) 4-Bromophenyl-phenylether	16.20	248	39336	21.71	ng/ul	95
67) Hexachlorobenzene	16.32	284	43630	21.66	ng/ul	93
68) Atrazine	16.48	200	41445	21.00	ng/ul	98
69) Pentachlorophenol	16.68	266	17381	21.86	ng/ul	97
70) Phenanthrene	17.06	178	209939	21.02	ng/ul	99
72) Anthracene	17.14	178	214493	21.13	ng/ul	99
73) 1,2,3,4-Tetrachlorobenzene	13.04	216	47826	21.58	ng/uL	100
74) Pentachlorobenzene	14.59	250	49190	21.60	ng/uL	99
75) Carbazole	17.43	167	187298	21.17	ng/ul	99
76) Di-n-butylphthalate	17.98	149	238740	19.44	ng/ul	99
77) Fluoranthene	19.09	202	241338	21.32	ng/ul	99
80) Pyrene	19.45	202	250863	22.98	ng/ul	99
81) Butylbenzylphthalate	20.36	149	100841	20.99	ng/ul	93
82) 3,3'-Dichlorobenzidine	21.14	252	76453	22.72	ng/ul	99
83) Benzo(a)anthracene	21.21	228	226097	21.04	ng/ul	99
84) Bis(2-ethylhexyl)phthalate	21.13	149	141912	19.99	ng/ul	98
85) Chrysene	21.26	228	215362	20.84	ng/ul	99
87) Di-n-octyl phthalate	22.00	149	222304	20.98	ng/ul#	95
88) Benzo(b)fluoranthene	22.77	252	187080	21.50	ng/ul	99
89) Benzo(k)fluoranthene	22.82	252	182281	22.23	ng/ul	100
91) Benzo(a)pyrene	23.34	252	173998	21.52	ng/ul	99
92) Indeno(1,2,3-cd)pyrene	25.66	276	163244	21.59	ng/ul	100
93) Dibenzo(a,h)anthracene	25.66	278	136859	21.93	ng/ul	99
94) Benzo(g,h,i)perylene	26.34	276	136928	22.02	ng/ul	100

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004526.D
Acq On : 03 Mar 2016 11:05
Operator : SJ/UM
Sample : SSTD02036
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 03 12:37:41 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:17:26 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02036

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004527.D
Acq On : 03 Mar 2016 11:41
Operator : SJ/UM
Sample : SSTD04037
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 03 13:07:22 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:43:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04037

Manual Integrations APPROVED
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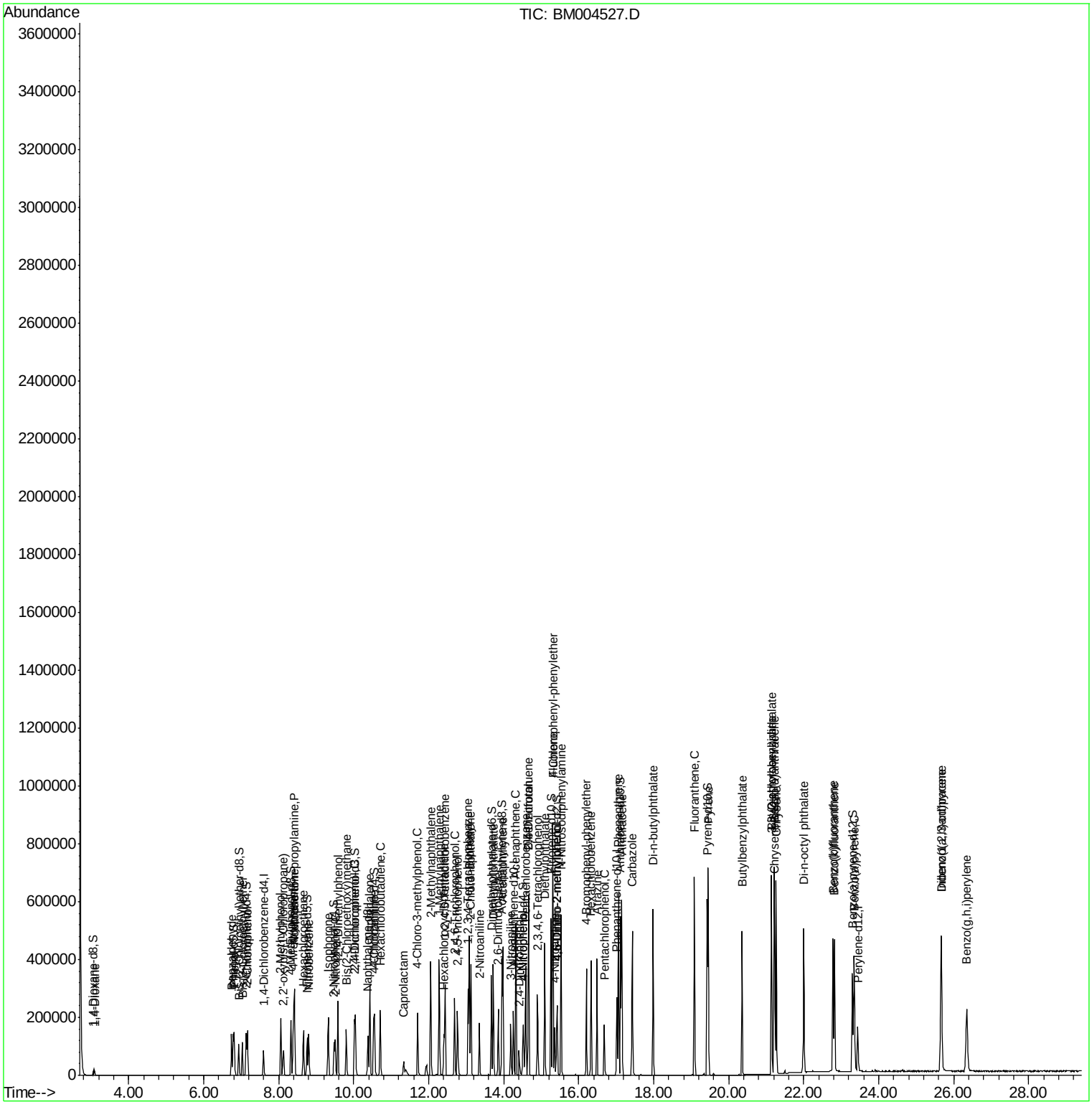

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004527.D
Acq On : 03 Mar 2016 11:41
Operator : SJ/UM
Sample : SSTD04037
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 03 13:07:22 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:43:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04037

Manual Integrations APPROVED
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3/4/2016 4:20:51 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	26567	20.00	ng/ul	0.00
18) Naphthalene-d8	10.38	136	125309	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	77105	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.02	188	167507	20.00	ng/ul	0.00
78) Chrysene-d12	21.23	240	141011	20.00	ng/ul	0.00
86) Perylene-d12	23.44	264	118557	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.05	96	8034	15.94	ng/uL	0.00
5) Phenol-d5	6.79	99	88709	39.82	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	6.93	67	44014	38.85	ng/ul	0.00
9) 2-Chlorophenol-d4	7.13	132	78904	41.07	ng/ul	0.00
13) 4-Methylphenol-d8	8.32	113	78690	39.53	ng/ul	0.00
19) Nitrobenzene-d5	8.76	128	39940	41.90	ng/ul	0.00
22) 2-Nitrophenol-d4	9.47	143	45883	42.22	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.02	165	81039	41.26	ng/ul	0.00
29) 4-Chloroaniline-d4	10.53	131	105038	42.90	ng/ul	0.00
44) Dimethylphthalate-d6	13.67	166	252984	38.26	ng/ul	0.00
47) Acenaphthylene-d8	13.95	160	310459	40.10	ng/ul	0.00
52) 4-Nitrophenol-d4	14.51	143	39410	37.08	ng/ul	0.00
58) Fluorene-d10	15.26	176	216671	38.53	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	15.41	200	45374	44.10	ng/ul	0.00
71) Anthracene-d10	17.12	188	323315	39.39	ng/ul	0.00
79) Pyrene-d10	19.42	212	320966	47.06	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.30	264	253218	40.70	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.09	88	9102	15.67	ng/uL#	91
4) Benzaldehyde	6.74	77	52960	43.95	ng/ul	92
6) Phenol	6.81	94	93155	39.21	ng/ul	96
8) Bis(2-Chloroethyl)ether	7.03	93	70023	39.82	ng/ul	94
10) 2-Chlorophenol	7.16	128	81990	41.06	ng/ul	96
11) 2-Methylphenol	8.05	108	76663	39.57	ng/ul	98
12) 2,2'-oxybis(1-Chloropropan	8.13	45	63366	37.53	ng/ul	97
14) Acetophenone	8.42	105	123018	39.44	ng/ul	95
15) N-Nitroso-di-n-propylamine	8.41	70	56187	37.49	ng/ul	94
16) 4-Methylphenol	8.39	108	84914	39.97	ng/ul	99
17) Hexachloroethane	8.66	117	30245	39.86	ng/ul	89
20) Nitrobenzene	8.80	77	81387	39.06	ng/ul	94
21) Isophorone	9.32	82	163326	37.82	ng/ul	95
23) 2-Nitrophenol	9.50	139	51588	42.19	ng/ul	91
24) 2,4-Dimethylphenol	9.57	107	96119	39.37	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.80	93	101757	39.09	ng/ul	100
27) 2,4-Dichlorophenol	10.05	162	84944	41.04	ng/ul	99
28) Naphthalene	10.43	128	273703	39.17	ng/ul	99
30) 4-Chloroaniline	10.55	127	111789	43.35	ng/ul	99
31) Hexachlorobutadiene	10.70	225	53361	41.08	ng/ul	98
32) Caprolactam	11.33	113	25987m	36.06	ng/ul	
33) 4-Chloro-3-methylphenol	11.70	107	91931	37.94	ng/ul	96
34) 2-Methylnaphthalene	12.05	142	203982	39.02	ng/ul	100

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004527.D
Acq On : 03 Mar 2016 11:41
Operator : SJ/UM
Sample : SSTD04037
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 03 13:07:22 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:43:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04037

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:51 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) 1-Methylnaphthalene	12.27	142	193819	38.98	ng/ul	99
37) 1,2,4,5-Tetrachlorobenzene	12.43	216	107381	41.88	ng/ul	98
38) Hexachlorocyclopentadiene	12.40	237	42007	43.94	ng/ul	98
39) 2,4,6-Trichlorophenol	12.69	196	68365	41.02	ng/ul	99
40) 2,4,5-Trichlorophenol	12.77	196	72467	40.06	ng/ul	100
41) 1,1'-Biphenyl	13.08	154	265751	40.11	ng/ul	98
42) 2-Chloronaphthalene	13.13	162	204201	40.50	ng/ul	98
43) 2-Nitroaniline	13.35	65	48886	38.46	ng/ul	88
45) Dimethylphthalate	13.72	163	264089	38.30	ng/ul	99
46) 2,6-Dinitrotoluene	13.85	165	56720	41.01	ng/ul	93
48) Acenaphthylene	13.98	152	332872	39.52	ng/ul	100
49) 3-Nitroaniline	14.19	138	55314	40.31	ng/ul	96
50) Acenaphthene	14.32	153	223054	38.78	ng/ul	98
51) 2,4-Dinitrophenol	14.42	184	28700	45.74	ng/ul#	87
53) 4-Nitrophenol	14.52	109	27169	34.19	ng/ul	89
54) Dibenzofuran	14.66	168	311412	38.77	ng/ul	96
55) 2,4-Dinitrotoluene	14.66	165	79810	38.64	ng/ul	93
56) 2,3,4,6-Tetrachlorophenol	14.90	232	63469	42.37	ng/ul#	91
57) Diethylphthalate	15.09	149	266202	37.31	ng/ul	99
59) Fluorene	15.32	166	253475	38.07	ng/ul	100
60) 4-Chlorophenyl-phenylether	15.30	204	127854	39.14	ng/ul	94
61) 4-Nitroaniline	15.36	138	54848	37.08	ng/ul	87
64) 4,6-Dinitro-2-methylphenol	15.43	198	48543	43.79	ng/ul#	89
65) N-Nitrosodiphenylamine	15.53	169	220326	41.11	ng/ul	99
66) 4-Bromophenyl-phenylether	16.20	248	78455	43.00	ng/ul	91
67) Hexachlorobenzene	16.33	284	85427	42.12	ng/ul	92
68) Atrazine	16.49	200	79262	39.88	ng/ul	98
69) Pentachlorophenol	16.68	266	36386	45.45	ng/ul	99
70) Phenanthrene	17.06	178	393067	39.07	ng/ul	99
72) Anthracene	17.15	178	402972	39.42	ng/ul	100
73) 1,2,3,4-Tetrachlorobenzene	13.05	216	99558	44.61	ng/uL	100
74) Pentachlorobenzene	14.59	250	99563	43.41	ng/uL	100
75) Carbazole	17.43	167	345323	38.76	ng/ul	99
76) Di-n-butylphthalate	17.98	149	437685	35.40	ng/ul	99
77) Fluoranthene	19.09	202	420976	36.93	ng/ul	99
80) Pyrene	19.45	202	429868	46.64	ng/ul	100
81) Butylbenzylphthalate	20.36	149	167208	41.23	ng/ul	92
82) 3,3'-Dichlorobenzidine	21.14	252	122389	43.08	ng/ul	99
83) Benzo(a)anthracene	21.21	228	359049	39.58	ng/ul	99
84) Bis(2-ethylhexyl)phthalate	21.13	149	230752	38.49	ng/ul	98
85) Chrysene	21.26	228	343650	39.38	ng/ul	99
87) Di-n-octyl phthalate	22.00	149	369527	37.87	ng/ul#	96
88) Benzo(b)fluoranthene	22.77	252	316667	39.53	ng/ul	100
89) Benzo(k)fluoranthene	22.82	252	303327	40.18	ng/ul	100
91) Benzo(a)pyrene	23.34	252	298745	40.13	ng/ul	100
92) Indeno(1,2,3-cd)pyrene	25.67	276	321325	46.15	ng/ul	99
93) Dibenzo(a,h)anthracene	25.67	278	267143	46.50	ng/ul	99
94) Benzo(g,h,i)perylene	26.34	276	272596	47.61	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004527.D
Acq On : 03 Mar 2016 11:41
Operator : SJ/UM
Sample : SSTD04037
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 03 13:07:22 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:43:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04037

Manual Integrations APPROVED
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3/4/2016 4:20:51 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004527.D
Acq On : 03 Mar 2016 11:41
Operator : SJ/UM
Sample : SSTD04037
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 03 13:07:22 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:43:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04037

Manual Integrations APPROVED
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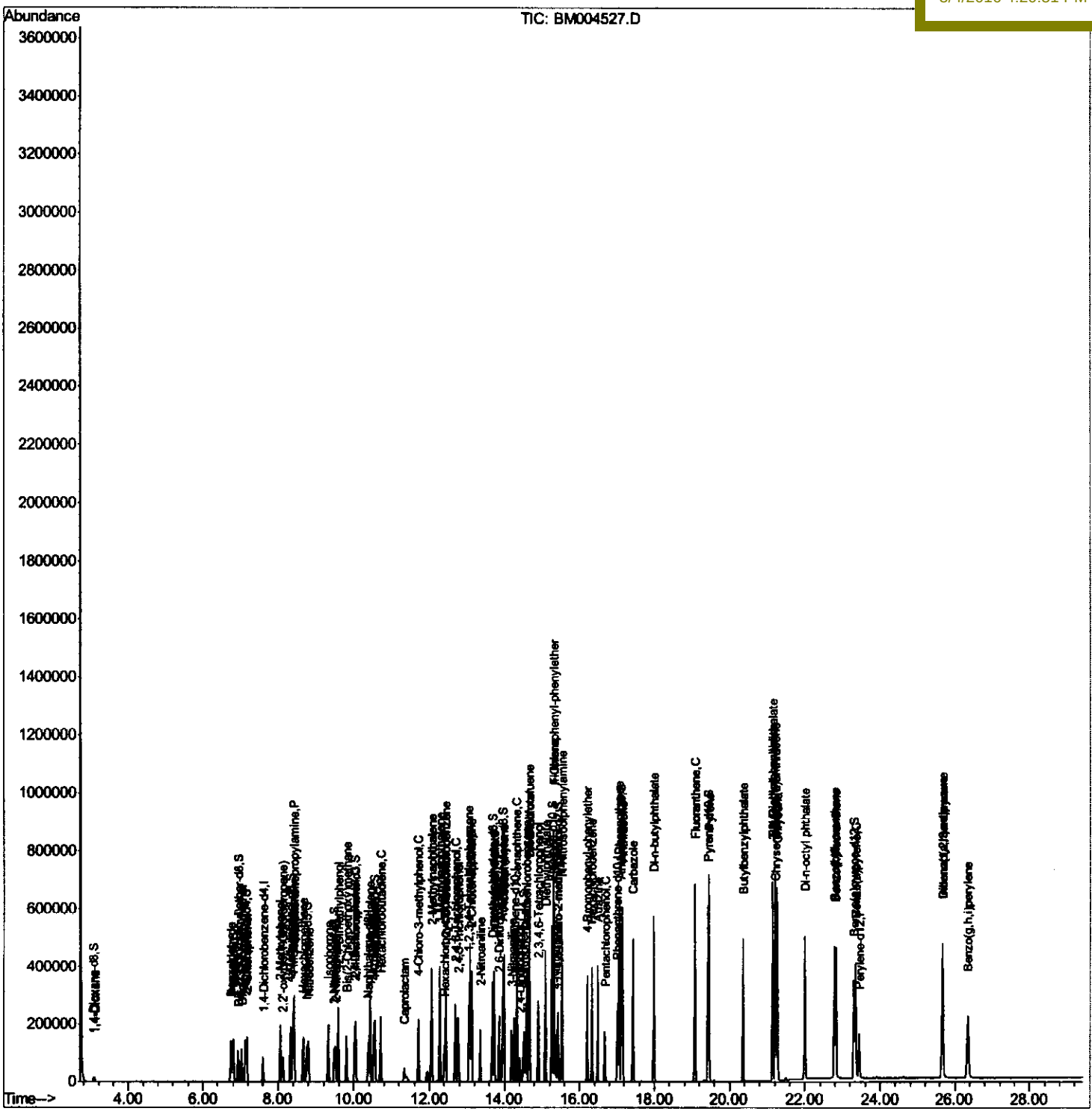

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004527.D
Acq On : 03 Mar 2016 11:41
Operator : SJ/UM
Sample : SSTD04037
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 03 13:00:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:43:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04037

Manual Integrations APPROVED
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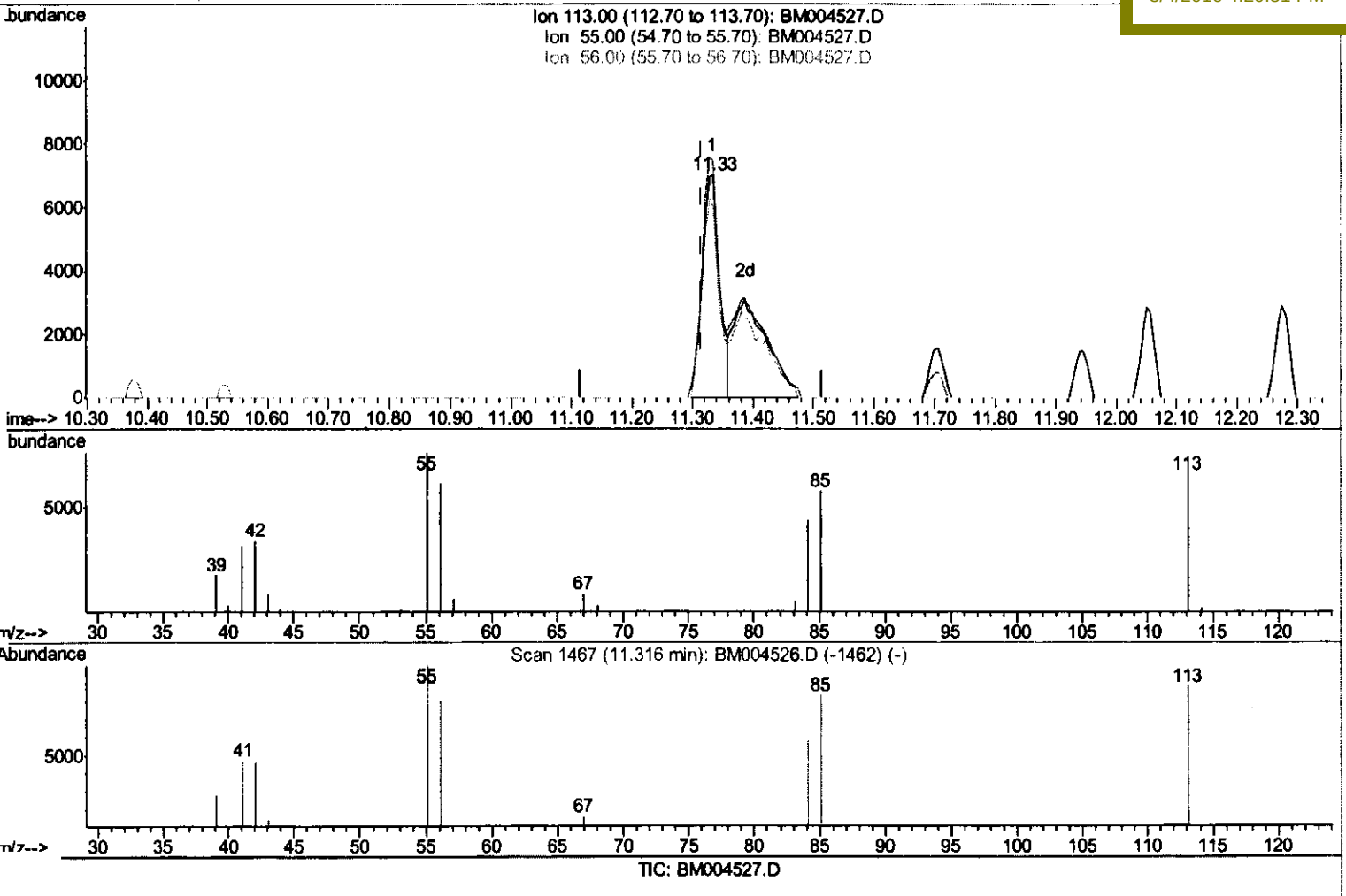

(32) Caprolactam

11.333min (+0.018) 19.16ng/ul

response 13807

Ion	Exp%	Act%
113.00	100	100
55.00	127.40	106.31
56.00	101.50	86.45
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004527.D
Acq On : 03 Mar 2016 11:41
Operator : SJ/UM
Sample : SSTD04037
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 03 13:00:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:43:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04037

Manual Integrations APPROVED
UMANGI
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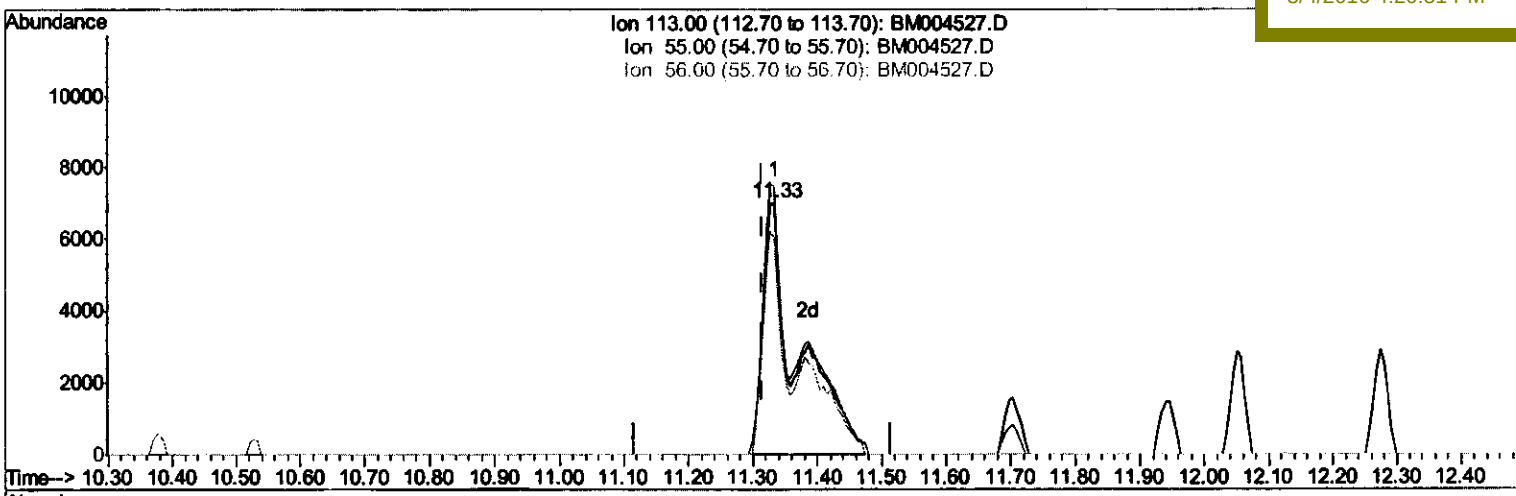

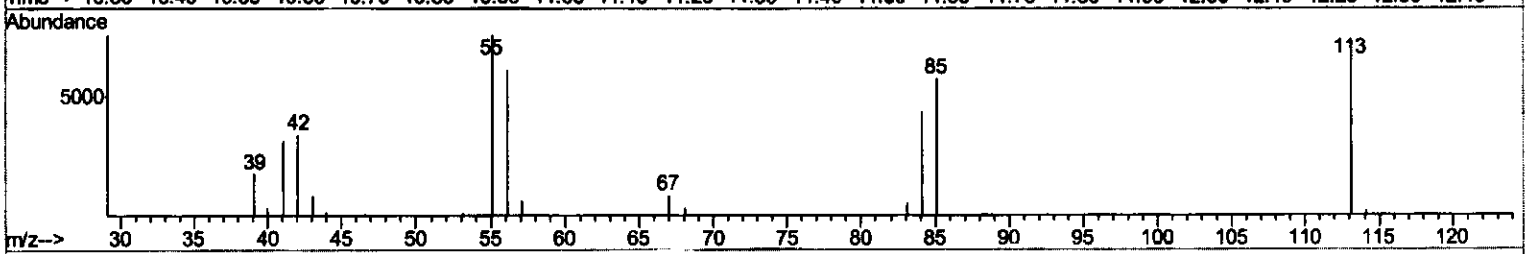

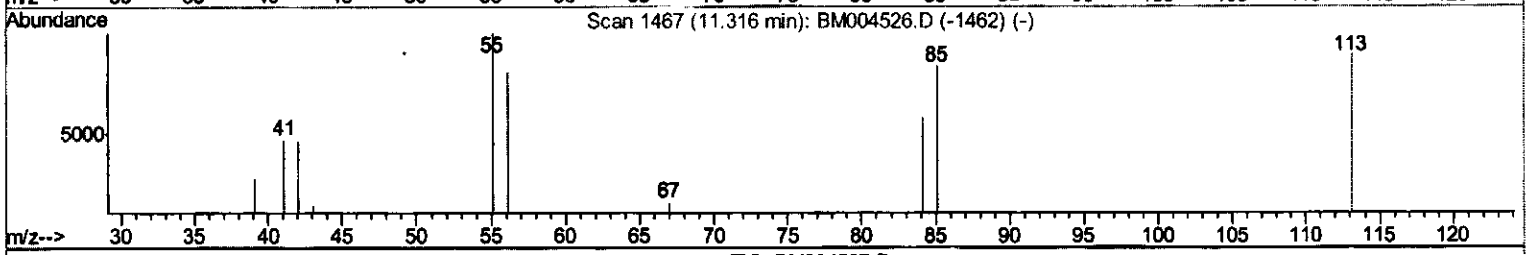

TIC: BM004527.D

(32) Caprolactam

11.333min (+0.018) 36.06ng/ul m > SJ 03/07/16

response 25987

Ion	Exp%	Act%
113.00	100	100
55.00	127.40	106.31
56.00	101.50	86.45
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004527.D
Acq On : 03 Mar 2016 11:41
Operator : SJ/UM
Sample : SSTD04037
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 03 13:07:22 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:43:42 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD04037

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	26567	20.00	ng/ul	0.00
18) Naphthalene-d8	10.38	136	125309	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	77105	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.02	188	167507	20.00	ng/ul	0.00
78) Chrysene-d12	21.23	240	141011	20.00	ng/ul	0.00
86) Perylene-d12	23.44	264	118557	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.05	96	8034	15.94	ng/uL	0.00
5) Phenol-d5	6.79	99	88709	39.82	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	6.93	67	44014	38.85	ng/ul	0.00
9) 2-Chlorophenol-d4	7.13	132	78904	41.07	ng/ul	0.00
13) 4-Methylphenol-d8	8.32	113	78690	39.53	ng/ul	0.00
19) Nitrobenzene-d5	8.76	128	39940	41.90	ng/ul	0.00
22) 2-Nitrophenol-d4	9.47	143	45883	42.22	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.02	165	81039	41.26	ng/ul	0.00
29) 4-Chloroaniline-d4	10.53	131	105038	42.90	ng/ul	0.00
44) Dimethylphthalate-d6	13.67	166	252984	38.26	ng/ul	0.00
47) Acenaphthylene-d8	13.95	160	310459	40.10	ng/ul	0.00
52) 4-Nitrophenol-d4	14.51	143	39410	37.08	ng/ul	0.00
58) Fluorene-d10	15.26	176	216671	38.53	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	15.41	200	45374	44.10	ng/ul	0.00
71) Anthracene-d10	17.12	188	323315	39.39	ng/ul	0.00
79) Pyrene-d10	19.42	212	320966	47.06	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.30	264	253218	40.70	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.09	88	9102	15.67	ng/uL#	91
4) Benzaldehyde	6.74	77	52960	43.95	ng/ul	92
6) Phenol	6.81	94	93155	39.21	ng/ul	96
8) Bis(2-Chloroethyl)ether	7.03	93	70023	39.82	ng/ul	94
10) 2-Chlorophenol	7.16	128	81990	41.06	ng/ul	96
11) 2-Methylphenol	8.05	108	76663	39.57	ng/ul	98
12) 2,2'-oxybis(1-Chloropropan	8.13	45	63366	37.53	ng/ul	97
14) Acetophenone	8.42	105	123018	39.44	ng/ul	95
15) N-Nitroso-di-n-propylamine	8.41	70	56187	37.49	ng/ul	94
16) 4-Methylphenol	8.39	108	84914	39.97	ng/ul	99
17) Hexachloroethane	8.66	117	30245	39.86	ng/ul	89
20) Nitrobenzene	8.80	77	81387	39.06	ng/ul	94
21) Isophorone	9.32	82	163326	37.82	ng/ul	95
23) 2-Nitrophenol	9.50	139	51588	42.19	ng/ul	91
24) 2,4-Dimethylphenol	9.57	107	96119	39.37	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.80	93	101757	39.09	ng/ul	100
27) 2,4-Dichlorophenol	10.05	162	84944	41.04	ng/ul	99
28) Naphthalene	10.43	128	273703	39.17	ng/ul	99
30) 4-Chloroaniline	10.55	127	111789	43.35	ng/ul	99
31) Hexachlorobutadiene	10.70	225	53361	41.08	ng/ul	98
32) Caprolactam	11.33	113	25987m	36.06	ng/ul	7
33) 4-Chloro-3-methylphenol	11.70	107	91931	37.94	ng/ul	96
34) 2-Methylnaphthalene	12.05	142	203982	39.02	ng/ul	100

SJ 02/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004527.D
Acq On : 03 Mar 2016 11:41
Operator : SJ/UM
Sample : SSTD04037
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 03 13:07:22 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:43:42 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD04037

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) 1-Methylnaphthalene	12.27	142	193819	38.98	ng/ul	99
37) 1,2,4,5-Tetrachlorobenzene	12.43	216	107381	41.88	ng/ul	98
38) Hexachlorocyclopentadiene	12.40	237	42007	43.94	ng/ul	98
39) 2,4,6-Trichlorophenol	12.69	196	68365	41.02	ng/ul	99
40) 2,4,5-Trichlorophenol	12.77	196	72467	40.06	ng/ul	100
41) 1,1'-Biphenyl	13.08	154	265751	40.11	ng/ul	98
42) 2-Chloronaphthalene	13.13	162	204201	40.50	ng/ul	98
43) 2-Nitroaniline	13.35	65	48886	38.46	ng/ul	88
45) Dimethylphthalate	13.72	163	264089	38.30	ng/ul	99
46) 2,6-Dinitrotoluene	13.85	165	56720	41.01	ng/ul	93
48) Acenaphthylene	13.98	152	332872	39.52	ng/ul	100
49) 3-Nitroaniline	14.19	138	55314	40.31	ng/ul	96
50) Acenaphthene	14.32	153	223054	38.78	ng/ul	98
51) 2,4-Dinitrophenol	14.42	184	28700	45.74	ng/ul#	87
53) 4-Nitrophenol	14.52	109	27169	34.19	ng/ul	89
54) Dibenzofuran	14.66	168	311412	38.77	ng/ul	96
55) 2,4-Dinitrotoluene	14.66	165	79810	38.64	ng/ul	93
56) 2,3,4,6-Tetrachlorophenol	14.90	232	63469	42.37	ng/ul#	91
57) Diethylphthalate	15.09	149	266202	37.31	ng/ul	99
59) Fluorene	15.32	166	253475	38.07	ng/ul	100
60) 4-Chlorophenyl-phenylether	15.30	204	127854	39.14	ng/ul	94
61) 4-Nitroaniline	15.36	138	54848	37.08	ng/ul	87
64) 4,6-Dinitro-2-methylphenol	15.43	198	48543	43.79	ng/ul#	89
65) N-Nitrosodiphenylamine	15.53	169	220326	41.11	ng/ul	99
66) 4-Bromophenyl-phenylether	16.20	248	78455	43.00	ng/ul	91
67) Hexachlorobenzene	16.33	284	85427	42.12	ng/ul	92
68) Atrazine	16.49	200	79262	39.88	ng/ul	98
69) Pentachlorophenol	16.68	266	36386	45.45	ng/ul	99
70) Phenanthrene	17.06	178	393067	39.07	ng/ul	99
72) Anthracene	17.15	178	402972	39.42	ng/ul	100
73) 1,2,3,4-Tetrachlorobenzene	13.05	216	99558	44.61	ng/uL	100
74) Pentachlorobenzene	14.59	250	99563	43.41	ng/uL	100
75) Carbazole	17.43	167	345323	38.76	ng/ul	99
76) Di-n-butylphthalate	17.98	149	437685	35.40	ng/ul	99
77) Fluoranthene	19.09	202	420976	36.93	ng/ul	99
80) Pyrene	19.45	202	429868	46.64	ng/ul	100
81) Butylbenzylphthalate	20.36	149	167208	41.23	ng/ul	92
82) 3,3'-Dichlorobenzidine	21.14	252	122389	43.08	ng/ul	99
83) Benzo(a)anthracene	21.21	228	359049	39.58	ng/ul	99
84) Bis(2-ethylhexyl)phthalate	21.13	149	230752	38.49	ng/ul	98
85) Chrysene	21.26	228	343650	39.38	ng/ul	99
87) Di-n-octyl phthalate	22.00	149	369527	37.87	ng/ul#	96
88) Benzo(b)fluoranthene	22.77	252	316667	39.53	ng/ul	100
89) Benzo(k)fluoranthene	22.82	252	303327	40.18	ng/ul	100
91) Benzo(a)pyrene	23.34	252	298745	40.13	ng/ul	100
92) Indeno(1,2,3-cd)pyrene	25.67	276	321325	46.15	ng/ul	99
93) Dibenzo(a,h)anthracene	25.67	278	267143	46.50	ng/ul	99
94) Benzo(g,h,i)perylene	26.34	276	272596	47.61	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004527.D
Acq On : 03 Mar 2016 11:41
Operator : SJ/UM
Sample : SSTD04037
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 03 13:07:22 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:43:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04037

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004528.D
Acq On : 03 Mar 2016 12:17
Operator : SJ/UM
Sample : SSTD08038
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 03 13:10:51 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:47:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08038

Manual Integrations APPROVED
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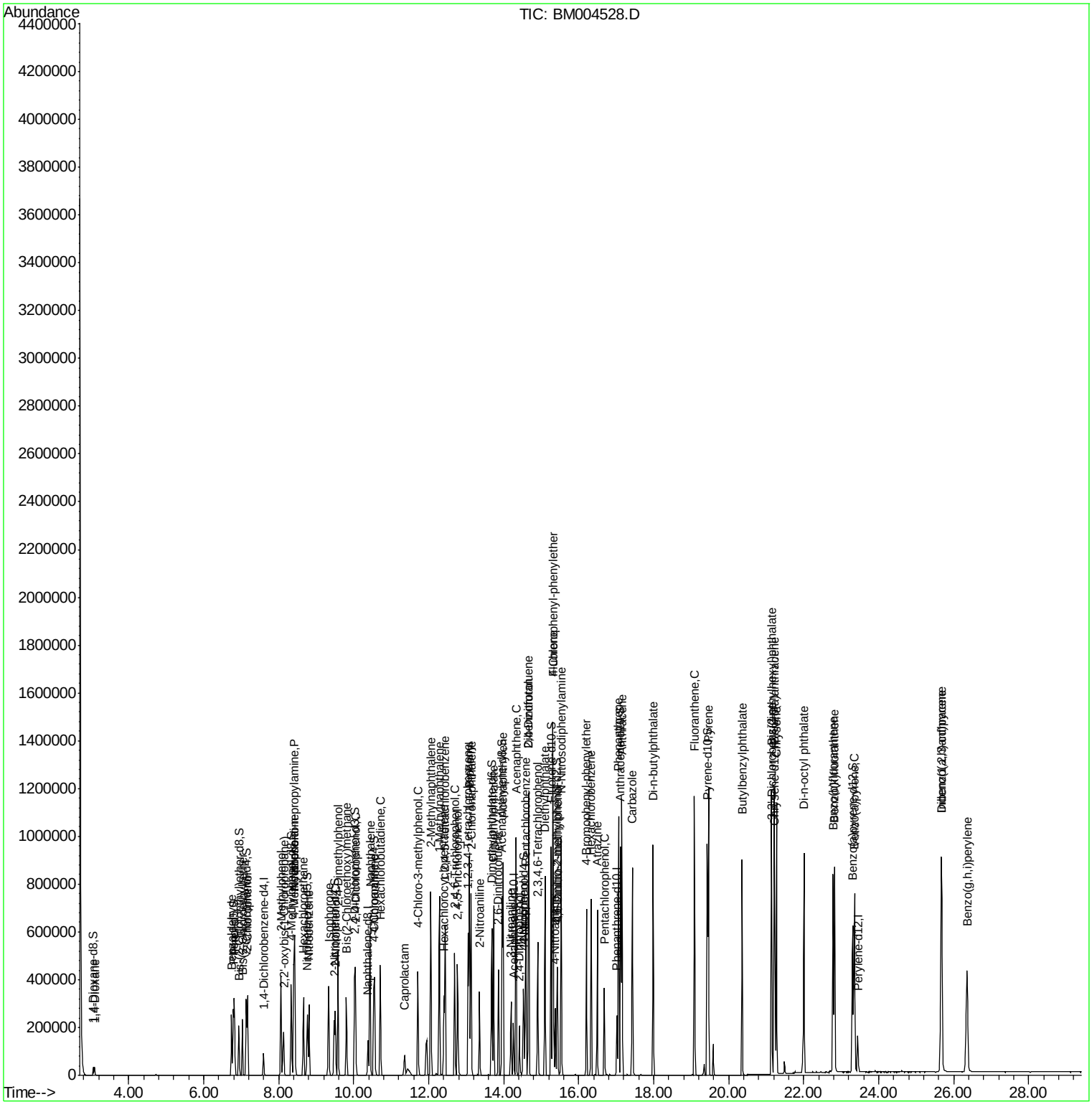

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004528.D
Acq On : 03 Mar 2016 12:17
Operator : SJ/UM
Sample : SSTD08038
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 03 13:10:51 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:47:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08038

Manual Integrations APPROVED
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3/4/2016 4:20:54 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	27892	20.00	ng/ul	0.00
18) Naphthalene-d8	10.38	136	130918	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	76724	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.02	188	155987	20.00	ng/ul	0.00
78) Chrysene-d12	21.23	240	126642	20.00	ng/ul	0.00
86) Perylene-d12	23.44	264	115320	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.05	96	16566	31.30	ng/uL	0.00
5) Phenol-d5	6.79	99	185056	79.13	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	6.93	67	89495	75.24	ng/ul	0.00
9) 2-Chlorophenol-d4	7.13	132	165206	81.90	ng/ul	0.00
13) 4-Methylphenol-d8	8.33	113	160263	76.68	ng/ul	0.01
19) Nitrobenzene-d5	8.76	128	82476	82.81	ng/ul	0.00
22) 2-Nitrophenol-d4	9.48	143	96158	84.69	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.02	165	164372	80.09	ng/ul	0.00
29) 4-Chloroaniline-d4	10.53	131	196546	76.84	ng/ul	0.00
44) Dimethylphthalate-d6	13.68	166	477851	72.62	ng/ul	0.01
47) Acenaphthylene-d8	13.95	160	596106	77.38	ng/ul	0.00
52) 4-Nitrophenol-d4	14.52	143	76600	72.42	ng/ul	0.01
58) Fluorene-d10	15.26	176	402834	71.99	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	15.42	200	85096	88.81	ng/ul	0.00
71) Anthracene-d10	17.12	188	576250	75.39	ng/ul	0.00
79) Pyrene-d10	19.42	212	552441	90.18	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.30	264	475682	78.60	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.09	88	18273	29.96	ng/uL#	94
4) Benzaldehyde	6.74	77	93708	74.06	ng/ul	94
6) Phenol	6.82	94	195741	78.48	ng/ul	96
8) Bis(2-Chloroethyl)ether	7.03	93	142847	77.37	ng/ul	95
10) 2-Chlorophenol	7.16	128	169807	80.99	ng/ul	97
11) 2-Methylphenol	8.06	108	157462	77.42	ng/ul	100
12) 2,2'-oxybis(1-Chloropropan	8.13	45	128833	72.68	ng/ul	97
14) Acetophenone	8.43	105	244034	74.52	ng/ul	95
15) N-Nitroso-di-n-propylamine	8.42	70	111894	71.11	ng/ul	94
16) 4-Methylphenol	8.40	108	170874	76.62	ng/ul	99
17) Hexachloroethane	8.66	117	62386	78.31	ng/ul	89
20) Nitrobenzene	8.80	77	166660	76.56	ng/ul	92
21) Isophorone	9.33	82	327292	72.53	ng/ul	96
23) 2-Nitrophenol	9.51	139	105508	82.60	ng/ul	91
24) 2,4-Dimethylphenol	9.58	107	193148	75.72	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.80	93	203382	74.79	ng/ul	99
27) 2,4-Dichlorophenol	10.05	162	171749	79.42	ng/ul	99
28) Naphthalene	10.43	128	549332	75.24	ng/ul	100
30) 4-Chloroaniline	10.56	127	207617	77.07	ng/ul	98
31) Hexachlorobutadiene	10.71	225	108345	79.83	ng/ul	99
32) Caprolactam	11.36	113	51238m	68.06	ng/ul	
33) 4-Chloro-3-methylphenol	11.71	107	181196	71.58	ng/ul	96
34) 2-Methylnaphthalene	12.06	142	403047	73.79	ng/ul	100

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004528.D
Acq On : 03 Mar 2016 12:17
Operator : SJ/UM
Sample : SSTD08038
Misc :
ALS Vial : 6 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD08038

Manual Integrations APPROVED
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3/4/2016 4:20:54 PM

Quant Time: Mar 03 13:10:51 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:47:42 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) 1-Methylnaphthalene	12.28	142	377492	72.66	ng/ul	100
37) 1,2,4,5-Tetrachlorobenzene	12.43	216	210556	82.54	ng/ul	98
38) Hexachlorocyclopentadiene	12.40	237	101556	106.75	ng/ul	99
39) 2,4,6-Trichlorophenol	12.69	196	136384	82.24	ng/ul	100
40) 2,4,5-Trichlorophenol	12.77	196	145959	81.09	ng/ul	99
41) 1,1'-Biphenyl	13.09	154	510003	77.36	ng/ul	99
42) 2-Chloronaphthalene	13.13	162	398053	79.34	ng/ul	98
43) 2-Nitroaniline	13.35	65	96370	76.20	ng/ul	92
45) Dimethylphthalate	13.73	163	496481	72.36	ng/ul	99
46) 2,6-Dinitrotoluene	13.86	165	110758	80.48	ng/ul	93
48) Acenaphthylene	13.98	152	630055	75.17	ng/ul	99
49) 3-Nitroaniline	14.19	138	96082	70.38	ng/ul	93
50) Acenaphthene	14.33	153	423006	73.91	ng/ul	97
51) 2,4-Dinitrophenol	14.42	184	62954	100.83	ng/ul#	88
53) 4-Nitrophenol	14.53	109	52496	66.39	ng/ul	89
54) Dibenzofuran	14.66	168	576312	72.10	ng/ul	96
55) 2,4-Dinitrotoluene	14.66	165	145325	70.70	ng/ul	93
56) 2,3,4,6-Tetrachlorophenol	14.90	232	121901	81.78	ng/ul#	93
57) Diethylphthalate	15.10	149	489507	68.95	ng/ul	99
59) Fluorene	15.32	166	456416	68.89	ng/ul	99
60) 4-Chlorophenyl-phenylether	15.31	204	233326	71.79	ng/ul	93
61) 4-Nitroaniline	15.37	138	95855	65.13	ng/ul	87
64) 4,6-Dinitro-2-methylphenol	15.43	198	90761	87.91	ng/ul#	90
65) N-Nitrosodiphenylamine	15.53	169	407593	81.67	ng/ul	99
66) 4-Bromophenyl-phenylether	16.20	248	144700	85.16	ng/ul	92
67) Hexachlorobenzene	16.33	284	157131	83.19	ng/ul	93
68) Atrazine	16.49	200	142440	76.96	ng/ul	98
69) Pentachlorophenol	16.68	266	71861	96.38	ng/ul	100
70) Phenanthrene	17.06	178	695600	74.25	ng/ul	99
72) Anthracene	17.15	178	707223	74.30	ng/ul	100
73) 1,2,3,4-Tetrachlorobenzene	13.05	216	196002	94.31	ng/uL	100
74) Pentachlorobenzene	14.59	250	189146	88.57	ng/uL	99
75) Carbazole	17.43	167	606568	73.11	ng/ul	99
76) Di-n-butylphthalate	17.98	149	764101	66.36	ng/ul	99
77) Fluoranthene	19.09	202	722887	68.10	ng/ul	100
80) Pyrene	19.46	202	732163	88.45	ng/ul	99
81) Butylbenzylphthalate	20.36	149	297321	81.63	ng/ul	92
82) 3,3'-Dichlorobenzidine	21.15	252	199543	78.21	ng/ul	99
83) Benzo(a)anthracene	21.22	228	628295	77.11	ng/ul	99
84) Bis(2-ethylhexyl)phthalate	21.13	149	404422	75.11	ng/ul#	97
85) Chrysene	21.27	228	593718	75.76	ng/ul	99
87) Di-n-octyl phthalate	22.00	149	667600	70.35	ng/ul#	95
88) Benzo(b)fluoranthene	22.78	252	571345	73.32	ng/ul	100
89) Benzo(k)fluoranthene	22.82	252	570299	77.67	ng/ul	99
91) Benzo(a)pyrene	23.35	252	562353	77.67	ng/ul	100
92) Indeno(1,2,3-cd)pyrene	25.67	276	624451	92.20	ng/ul	99
93) Dibenzo(a,h)anthracene	25.67	278	520825	93.20	ng/ul	99
94) Benzo(g,h,i)perylene	26.35	276	537656	96.54	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004528.D
Acq On : 03 Mar 2016 12:17
Operator : SJ/UM
Sample : SSTD08038
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 03 13:10:51 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:47:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08038

Manual Integrations APPROVED
UMANGI
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004528.D
Acq On : 03 Mar 2016 12:17
Operator : SJ/UM
Sample : SSTD08038
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 03 13:10:51 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:47:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08038

Manual Integrations APPROVED
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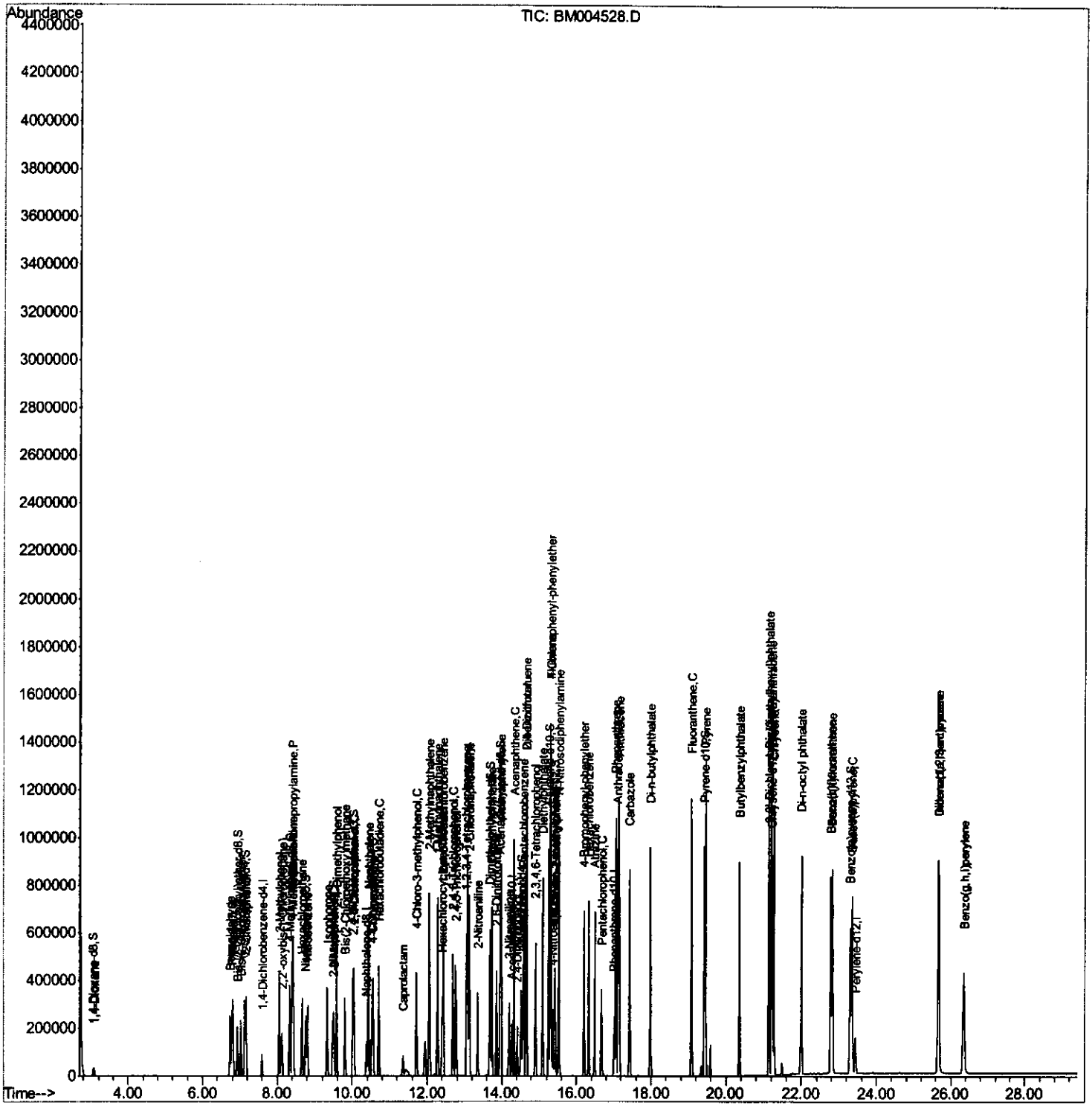

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004528.D
Acq On : 03 Mar 2016 12:17
Operator : SJ/UM
Sample : SSTD08038
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 03 13:09:26 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:47:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08038

Manual Integrations APPROVED
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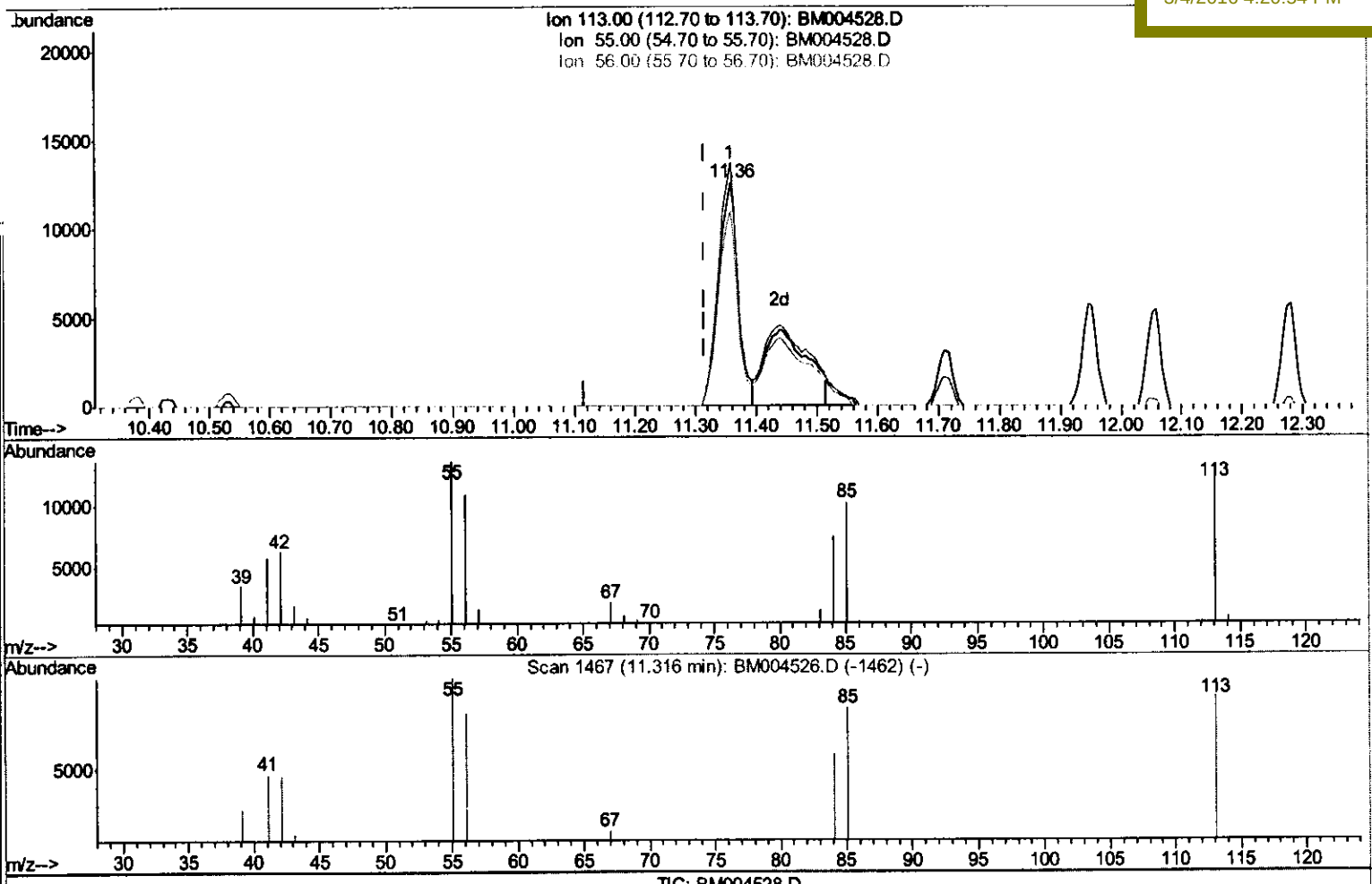


TIC: BM004528.D

(32) Caprolactam

11.357min (+0.042) 37.28ng/ul

response 28063

Ion	Exp%	Act%
113.00	100	100
55.00	127.40	108.88
56.00	101.50	87.18
0.00	0.00	0.00

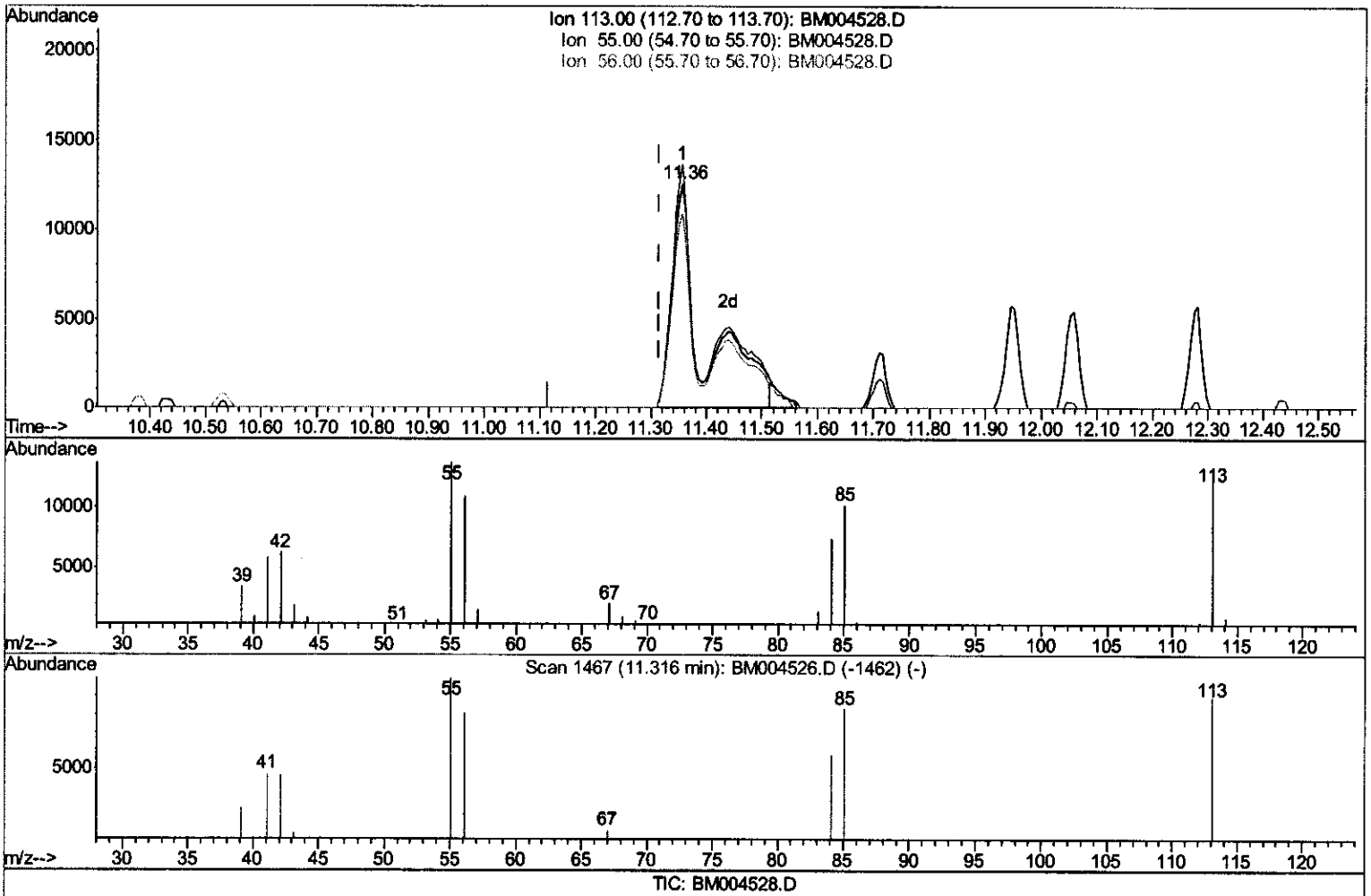
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004528.D
Acq On : 03 Mar 2016 12:17
Operator : SJ/UM
Sample : SSTD08038
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 03 13:09:26 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:47:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08038

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:54 PM



TIC: BM004528.D

(32) Caprolactam

11.357min (+0.042) 68.06ng/ul m > S.J 03/07/16

response 51238

Ion	Exp%	Act%
113.00	100	100
55.00	127.40	108.88
56.00	101.50	87.18
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004528.D
Acq On : 03 Mar 2016 12:17
Operator : SJ/UM
Sample : SSTD08038
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 03 13:10:51 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:47:42 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD08038

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:54 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	27892	20.00	ng/ul	0.00
18) Naphthalene-d8	10.38	136	130918	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	76724	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.02	188	155987	20.00	ng/ul	0.00
78) Chrysene-d12	21.23	240	126642	20.00	ng/ul	0.00
86) Perylene-d12	23.44	264	115320	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.05	96	16566	31.30	ng/uL	0.00
5) Phenol-d5	6.79	99	185056	79.13	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	6.93	67	89495	75.24	ng/ul	0.00
9) 2-Chlorophenol-d4	7.13	132	165206	81.90	ng/ul	0.00
13) 4-Methylphenol-d8	8.33	113	160263	76.68	ng/ul	0.01
19) Nitrobenzene-d5	8.76	128	82476	82.81	ng/ul	0.00
22) 2-Nitrophenol-d4	9.48	143	96158	84.69	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.02	165	164372	80.09	ng/ul	0.00
29) 4-Chloroaniline-d4	10.53	131	196546	76.84	ng/ul	0.00
44) Dimethylphthalate-d6	13.68	166	477851	72.62	ng/ul	0.01
47) Acenaphthylene-d8	13.95	160	596106	77.38	ng/ul	0.00
52) 4-Nitrophenol-d4	14.52	143	76600	72.42	ng/ul	0.01
58) Fluorene-d10	15.26	176	402834	71.99	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	15.42	200	85096	88.81	ng/ul	0.00
71) Anthracene-d10	17.12	188	576250	75.39	ng/ul	0.00
79) Pyrene-d10	19.42	212	552441	90.18	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.30	264	475682	78.60	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.09	88	18273	29.96	ng/uL#	94
4) Benzaldehyde	6.74	77	93708	74.06	ng/ul	94
6) Phenol	6.82	94	195741	78.48	ng/ul	96
8) Bis(2-Chloroethyl)ether	7.03	93	142847	77.37	ng/ul	95
10) 2-Chlorophenol	7.16	128	169807	80.99	ng/ul	97
11) 2-Methylphenol	8.06	108	157462	77.42	ng/ul	100
12) 2,2'-oxybis(1-Chloropropan	8.13	45	128833	72.68	ng/ul	97
14) Acetophenone	8.43	105	244034	74.52	ng/ul	95
15) N-Nitroso-di-n-propylamine	8.42	70	111894	71.11	ng/ul	94
16) 4-Methylphenol	8.40	108	170874	76.62	ng/ul	99
17) Hexachloroethane	8.66	117	62386	78.31	ng/ul	89
20) Nitrobenzene	8.80	77	166660	76.56	ng/ul	92
21) Isophorone	9.33	82	327292	72.53	ng/ul	96
23) 2-Nitrophenol	9.51	139	105508	82.60	ng/ul	91
24) 2,4-Dimethylphenol	9.58	107	193148	75.72	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.80	93	203382	74.79	ng/ul	99
27) 2,4-Dichlorophenol	10.05	162	171749	79.42	ng/ul	99
28) Naphthalene	10.43	128	549332	75.24	ng/ul	100
30) 4-Chloroaniline	10.56	127	207617	77.07	ng/ul	98
31) Hexachlorobutadiene	10.71	225	108345	79.83	ng/ul	99
32) Caprolactam	11.36	113	51238m	68.06	ng/ul	
33) 4-Chloro-3-methylphenol	11.71	107	181196	71.58	ng/ul	96
34) 2-Methylnaphthalene	12.06	142	403047	73.79	ng/ul	100

S.J 03/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004528.D
Acq On : 03 Mar 2016 12:17
Operator : SJ/UM
Sample : SSTD08038
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 03 13:10:51 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:47:42 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD08038

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
35) 1-Methylnaphthalene	12.28	142	377492	72.66 ng/ul	100
37) 1,2,4,5-Tetrachlorobenzene	12.43	216	210556	82.54 ng/ul	98
38) Hexachlorocyclopentadiene	12.40	237	101556	106.75 ng/ul	99
39) 2,4,6-Trichlorophenol	12.69	196	136384	82.24 ng/ul	100
40) 2,4,5-Trichlorophenol	12.77	196	145959	81.09 ng/ul	99
41) 1,1'-Biphenyl	13.09	154	510003	77.36 ng/ul	99
42) 2-Chloronaphthalene	13.13	162	398053	79.34 ng/ul	98
43) 2-Nitroaniline	13.35	65	96370	76.20 ng/ul	92
45) Dimethylphthalate	13.73	163	496481	72.36 ng/ul	99
46) 2,6-Dinitrotoluene	13.86	165	110758	80.48 ng/ul	93
48) Acenaphthylene	13.98	152	630055	75.17 ng/ul	99
49) 3-Nitroaniline	14.19	138	96082	70.38 ng/ul	93
50) Acenaphthene	14.33	153	423006	73.91 ng/ul	97
51) 2,4-Dinitrophenol	14.42	184	62954	100.83 ng/ul#	88
53) 4-Nitrophenol	14.53	109	52496	66.39 ng/ul	89
54) Dibenzofuran	14.66	168	576312	72.10 ng/ul	96
55) 2,4-Dinitrotoluene	14.66	165	145325	70.70 ng/ul	93
56) 2,3,4,6-Tetrachlorophenol	14.90	232	121901	81.78 ng/ul#	93
57) Diethylphthalate	15.10	149	489507	68.95 ng/ul	99
59) Fluorene	15.32	166	456416	68.89 ng/ul	99
60) 4-Chlorophenyl-phenylether	15.31	204	233326	71.79 ng/ul	93
61) 4-Nitroaniline	15.37	138	95855	65.13 ng/ul	87
64) 4,6-Dinitro-2-methylphenol	15.43	198	90761	87.91 ng/ul#	90
65) N-Nitrosodiphenylamine	15.53	169	407593	81.67 ng/ul	99
66) 4-Bromophenyl-phenylether	16.20	248	144700	85.16 ng/ul	92
67) Hexachlorobenzene	16.33	284	157131	83.19 ng/ul	93
68) Atrazine	16.49	200	142440	76.96 ng/ul	98
69) Pentachlorophenol	16.68	266	71861	96.38 ng/ul	100
70) Phenanthrene	17.06	178	695600	74.25 ng/ul	99
72) Anthracene	17.15	178	707223	74.30 ng/ul	100
73) 1,2,3,4-Tetrachlorobenzene	13.05	216	196002	94.31 ng/uL	100
74) Pentachlorobenzene	14.59	250	189146	88.57 ng/uL	99
75) Carbazole	17.43	167	606568	73.11 ng/ul	99
76) Di-n-butylphthalate	17.98	149	764101	66.36 ng/ul	99
77) Fluoranthene	19.09	202	722887	68.10 ng/ul	100
80) Pyrene	19.46	202	732163	88.45 ng/ul	99
81) Butylbenzylphthalate	20.36	149	297321	81.63 ng/ul	92
82) 3,3'-Dichlorobenzidine	21.15	252	199543	78.21 ng/ul	99
83) Benzo(a)anthracene	21.22	228	628295	77.11 ng/ul	99
84) Bis(2-ethylhexyl)phthalate	21.13	149	404422	75.11 ng/ul#	97
85) Chrysene	21.27	228	593718	75.76 ng/ul	99
87) Di-n-octyl phthalate	22.00	149	667600	70.35 ng/ul#	95
88) Benzo(b)fluoranthene	22.78	252	571345	73.32 ng/ul	100
89) Benzo(k)fluoranthene	22.82	252	570299	77.67 ng/ul	99
91) Benzo(a)pyrene	23.35	252	562353	77.67 ng/ul	100
92) Indeno(1,2,3-cd)pyrene	25.67	276	624451	92.20 ng/ul	99
93) Dibenzo(a,h)anthracene	25.67	278	520825	93.20 ng/ul	99
94) Benzo(g,h,i)perylene	26.35	276	537656	96.54 ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004528.D
Acq On : 03 Mar 2016 12:17
Operator : SJ/UM
Sample : SSTD08038
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 03 13:10:51 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:47:42 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08038

Manual Integrations APPROVED
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3/4/2016 4:20:54 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004529.D
Acq On : 03 Mar 2016 12:53
Operator : SJ/UM
Sample : SSTD16039
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 03 13:35:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:35:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16039

Manual Integrations APPROVED
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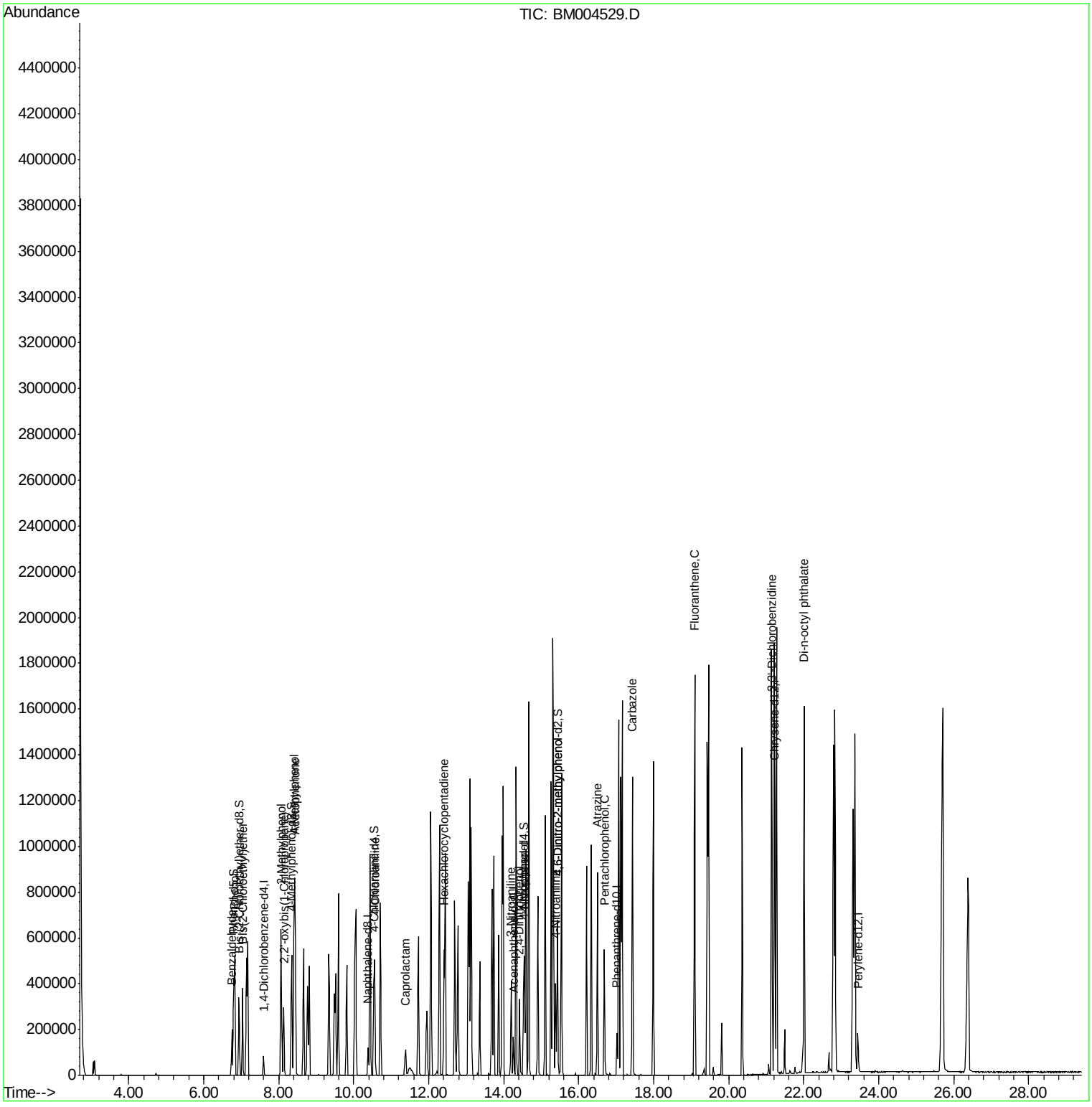

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004529.D
Acq On : 03 Mar 2016 12:53
Operator : SJ/UM
Sample : SSTD16039
Misc :
ALS Vial : 7 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD16039

Manual Integrations APPROVED
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Quant Time: Mar 03 13:35:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:35:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	25491	20.00	ng/ul	0.00
18) Naphthalene-d8	10.38	136	109415	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	58345	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.02	188	120102	20.00	ng/ul	0.00
78) Chrysene-d12	21.23	240	118571	20.00	ng/ul	0.00
86) Perylene-d12	23.44	264	125188	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0d	0.00	ng/uL	
5) Phenol-d5	6.80	99	308093	144.14	ng/ul	0.01
7) Bis-(2-Chloroethyl)ether-d	6.94	67	151027	138.93	ng/ul	0.00
9) 2-Chlorophenol-d4	0.00	132	0d	0.00	ng/ul	
13) 4-Methylphenol-d8	8.34	113	257896	135.02	ng/ul	0.02
19) Nitrobenzene-d5	0.00	128	0d	0.00	ng/ul	
22) 2-Nitrophenol-d4	0.00	143	0d	0.00	ng/ul	
26) 2,4-Dichlorophenol-d3	0.00	165	0d	0.00	ng/ul	
29) 4-Chloroaniline-d4	10.53	131	236510	110.63	ng/ul	0.00
44) Dimethylphthalate-d6	0.00	166	0d	0.00	ng/ul	
47) Acenaphthylene-d8	0.00	160	0d	0.00	ng/ul	
52) 4-Nitrophenol-d4	14.53	143	116692	145.09	ng/ul	0.02
58) Fluorene-d10	0.00	176	0d	0.00	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.43	200	128249	173.83	ng/ul	0.02
71) Anthracene-d10	0.00	188	0d	0.00	ng/ul	
79) Pyrene-d10	0.00	212	0d	0.00	ng/ul	
90) Benzo(a)pyrene-d12	0.00	264	0d	0.00	ng/ul	
Target Compounds						Qvalue
4) Benzaldehyde	6.75	77	74694	64.60	ng/ul	91
6) Phenol	6.83	94	320933	140.79	ng/ul	96
8) Bis(2-Chloroethyl)ether	7.03	93	239758	142.09	ng/ul	96
11) 2-Methylphenol	8.06	108	256354	137.91	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.13	45	212465	131.15	ng/ul	97
14) Acetophenone	8.43	105	380017	126.97	ng/ul	95
16) 4-Methylphenol	8.41	108	268741	131.86	ng/ul	99
30) 4-Chloroaniline	10.56	127	253823	112.74	ng/ul	99
32) Caprolactam	11.38	113	76105m	120.96	ng/ul	
38) Hexachlorocyclopentadiene	12.40	237	174826	241.66	ng/ul	99
49) 3-Nitroaniline	14.20	138	133577	128.66	ng/ul	93
51) 2,4-Dinitrophenol	14.42	184	96701	203.67	ng/ul#	87
53) 4-Nitrophenol	14.54	109	80832	134.43	ng/ul	90
61) 4-Nitroaniline	15.38	138	156239	139.60	ng/ul	88
64) 4,6-Dinitro-2-methylphenol	15.44	198	137268	172.69	ng/ul#	91
68) Atrazine	16.50	200	203997	143.14	ng/ul	97
69) Pentachlorophenol	16.68	266	111570	194.35	ng/ul	100
75) Carbazole	17.43	167	904869	141.66	ng/ul	99
77) Fluoranthene	19.09	202	1106549	135.39	ng/ul	100
82) 3,3'-Dichlorobenzidine	21.15	252	342710	143.47	ng/ul	99
87) Di-n-octyl phthalate	22.00	149	1241045	120.46	ng/ul#	96

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004529.D
Acq On : 03 Mar 2016 12:53
Operator : SJ/UM
Sample : SSTD16039
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 03 13:35:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:35:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16039

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:56 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

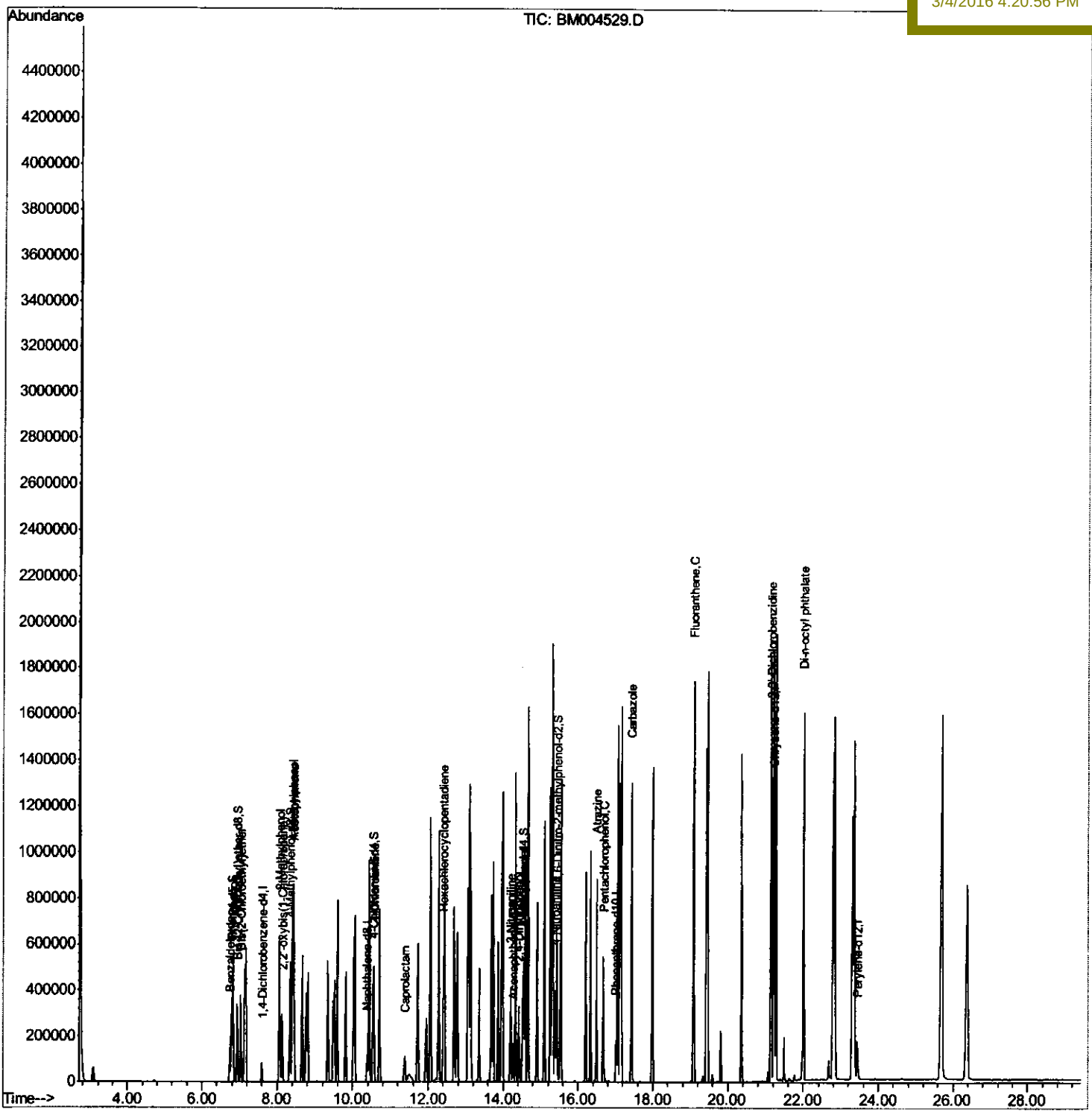
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004529.D
Acq On : 03 Mar 2016 12:53
Operator : SJ/UM
Sample : SSTD16039
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 03 13:35:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:35:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16039

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:56 PM



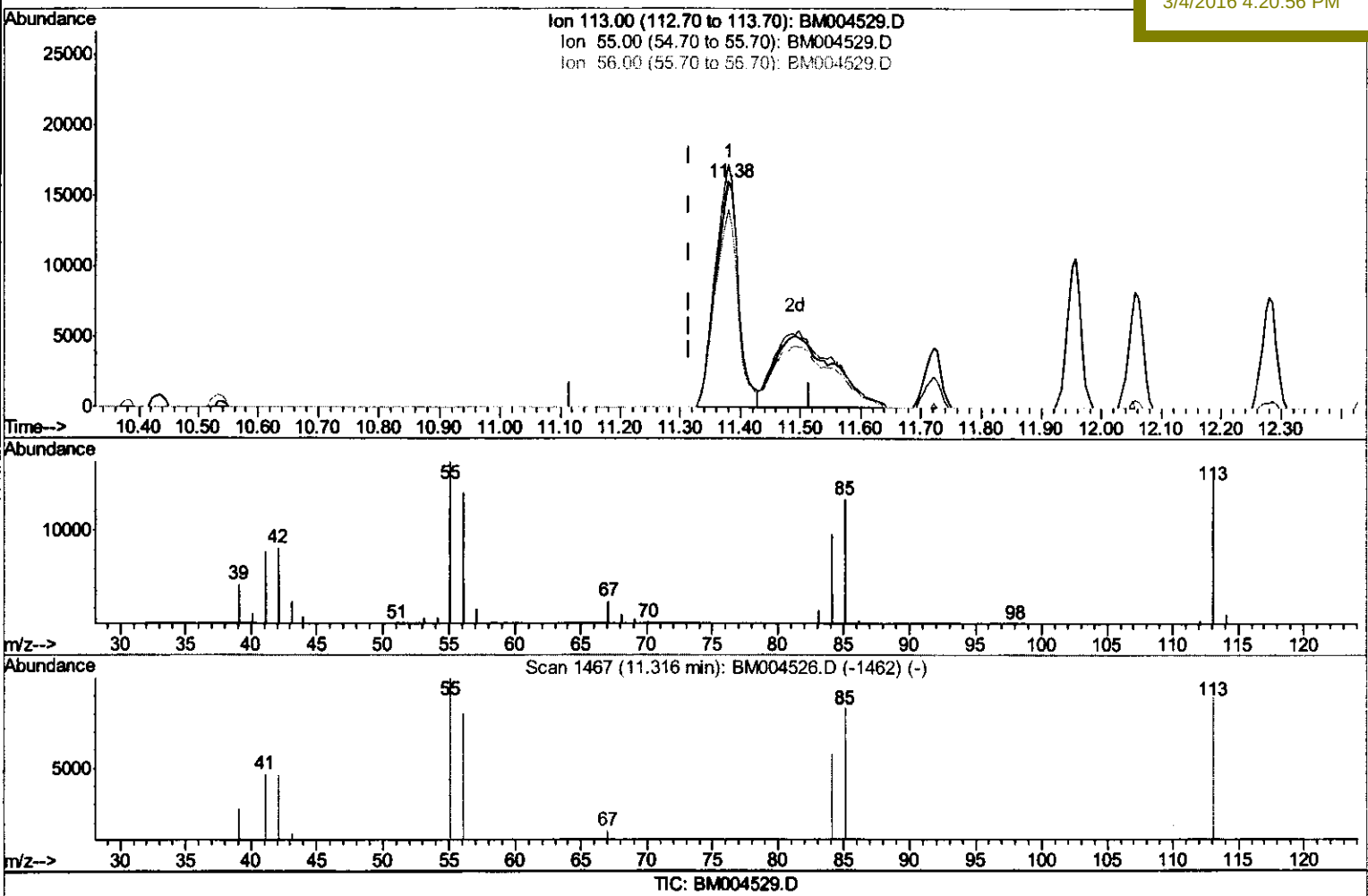
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004529.D
Acq On : 03 Mar 2016 12:53
Operator : SJ/UM
Sample : SSTD16039
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 03 13:33:14 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:35:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16039

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:56 PM



TIC: BM004529.D

(32) Caprolactam

11.380min (+0.065) 66.79ng/ul

response 42024

Ion	Exp%	Act%
113.00	100	100
55.00	127.40	107.56
56.00	101.50	87.61
0.00	0.00	0.00

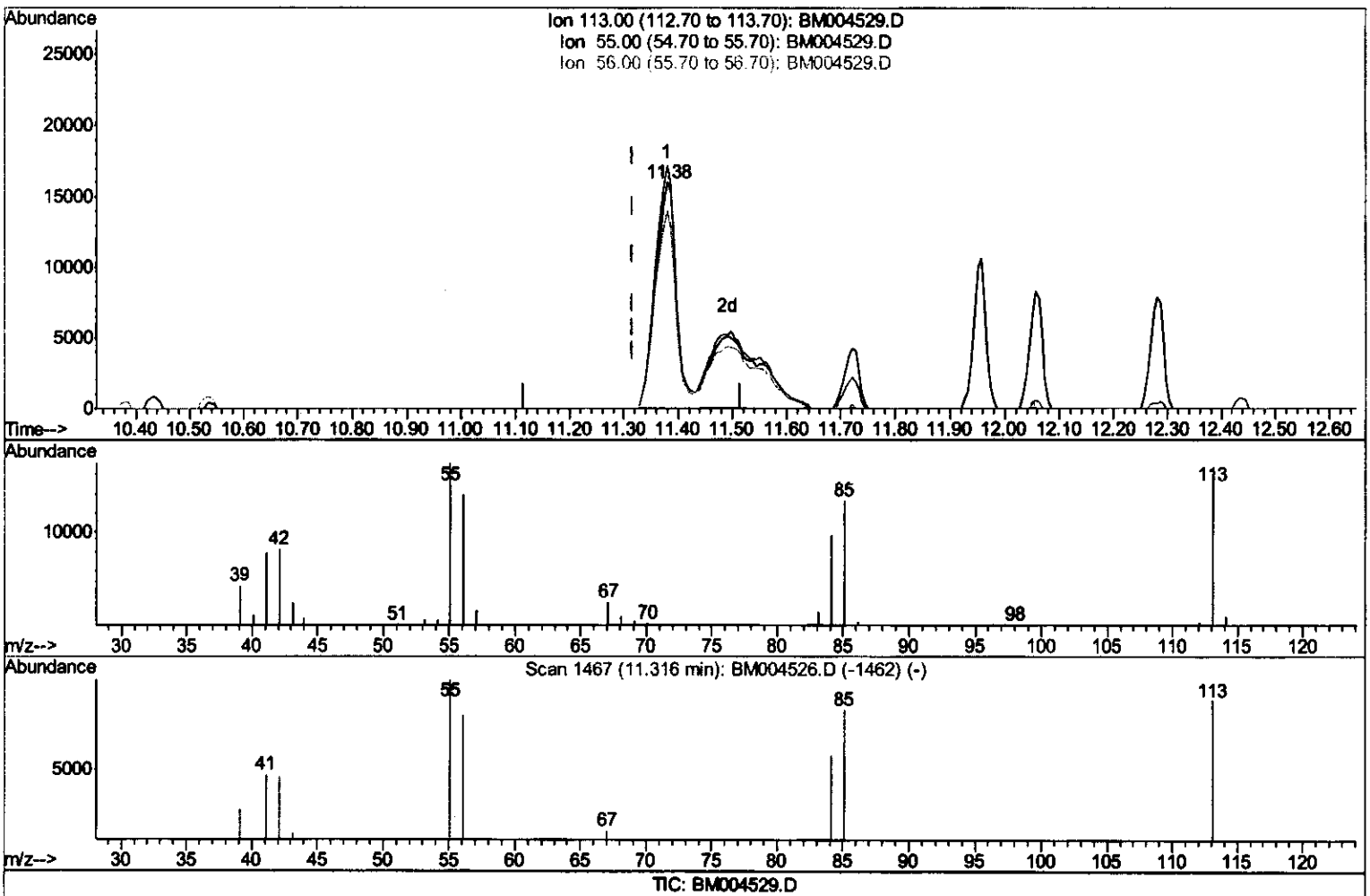
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004529.D
Acq On : 03 Mar 2016 12:53
Operator : SJ/UM
Sample : SSTD16039
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 03 13:33:14 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:35:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16039

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:56 PM



TIC: BM004529.D

(32) Caprolactam

11.380min (+0.065) 120.96ng/ul m > SJ 03/07/16

response 76105

Ion	Exp%	Act%
113.00	100	100
55.00	127.40	107.56
56.00	101.50	87.61
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004529.D
Acq On : 03 Mar 2016 12:53
Operator : SJ/UM
Sample : SSTD16039
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 03 13:35:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:35:36 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD16039

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:56 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	25491	20.00	ng/ul	0.00
18) Naphthalene-d8	10.38	136	109415	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	58345	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.02	188	120102	20.00	ng/ul	0.00
78) Chrysene-d12	21.23	240	118571	20.00	ng/ul	0.00
86) Perylene-d12	23.44	264	125188	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0d	0.00	ng/uL	
5) Phenol-d5	6.80	99	308093	144.14	ng/ul	0.01
7) Bis-(2-Chloroethyl)ether-d	6.94	67	151027	138.93	ng/ul	0.00
9) 2-Chlorophenol-d4	0.00	132	0d	0.00	ng/ul	
13) 4-Methylphenol-d8	8.34	113	257896	135.02	ng/ul	0.02
19) Nitrobenzene-d5	0.00	128	0d	0.00	ng/ul	
22) 2-Nitrophenol-d4	0.00	143	0d	0.00	ng/ul	
26) 2,4-Dichlorophenol-d3	0.00	165	0d	0.00	ng/ul	
29) 4-Chloroaniline-d4	10.53	131	236510	110.63	ng/ul	0.00
44) Dimethylphthalate-d6	0.00	166	0d	0.00	ng/ul	
47) Acenaphthylene-d8	0.00	160	0d	0.00	ng/ul	
52) 4-Nitrophenol-d4	14.53	143	116692	145.09	ng/ul	0.02
58) Fluorene-d10	0.00	176	0d	0.00	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.43	200	128249	173.83	ng/ul	0.02
71) Anthracene-d10	0.00	188	0d	0.00	ng/ul	
79) Pyrene-d10	0.00	212	0d	0.00	ng/ul	
90) Benzo(a)pyrene-d12	0.00	264	0d	0.00	ng/ul	
Target Compounds						Qvalue
4) Benzaldehyde	6.75	77	74694	64.60	ng/ul	91
6) Phenol	6.83	94	320933	140.79	ng/ul	96
8) Bis(2-Chloroethyl)ether	7.03	93	239758	142.09	ng/ul	96
11) 2-Methylphenol	8.06	108	256354	137.91	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.13	45	212465	131.15	ng/ul	97
14) Acetophenone	8.43	105	380017	126.97	ng/ul	95
16) 4-Methylphenol	8.41	108	268741	131.86	ng/ul	99
30) 4-Chloroaniline	10.56	127	253823	112.74	ng/ul	99
32) Caprolactam	11.38	113	76105m	120.96	ng/ul	
38) Hexachlorocyclopentadiene	12.40	237	174826	241.66	ng/ul	99
49) 3-Nitroaniline	14.20	138	133577	128.66	ng/ul	93
51) 2,4-Dinitrophenol	14.42	184	96701	203.67	ng/ul#	87
53) 4-Nitrophenol	14.54	109	80832	134.43	ng/ul	90
61) 4-Nitroaniline	15.38	138	156239	139.60	ng/ul	88
64) 4,6-Dinitro-2-methylphenol	15.44	198	137268	172.69	ng/ul#	91
68) Atrazine	16.50	200	203997	143.14	ng/ul	97
69) Pentachlorophenol	16.68	266	111570	194.35	ng/ul	100
75) Carbazole	17.43	167	904869	141.66	ng/ul	99
77) Fluoranthene	19.09	202	1106549	135.39	ng/ul	100
82) 3,3'-Dichlorobenzidine	21.15	252	342710	143.47	ng/ul	99
87) Di-n-octyl phthalate	22.00	149	1241045	120.46	ng/ul#	96

> S.J 03/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004529.D
Acq On : 03 Mar 2016 12:53
Operator : SJ/UM
Sample : SSTD16039
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 03 13:35:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 12:35:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Instrument :
BNA_M
ClientSampleId :
SSTD16039

Manual Integrations APPROVED
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3/4/2016 4:20:56 PM

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 03/03/2016 Time: 19:37

Lab File ID: BM004539.D Init. Calib Date(s): 03/03/2016 03/03/2016

EPA Sample No.: SSTD02040 Init. Calib Time(s): 09:53 12:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.415	0.424	0.01	2.2	± 40.0
Benzaldehyde	0.845	0.979	0.10	15.9	± 40.0
Phenol	1.705	1.677	0.08	-1.6	± 20.0
Bis(2-Chloroethyl)ether	1.293	1.302	0.10	0.7	± 20.0
2-Chlorophenol	1.501	1.481	0.20	-1.3	± 20.0
2-Methylphenol	1.388	1.372	0.01	-1.2	± 20.0
2,2-oxybis(1-Chloropropane)	1.170	1.194	0.01	2.1	± 25.0
Acetophenone	2.241	2.292	0.06	2.3	± 20.0
4-Methylphenol	1.522	1.543	0.01	1.4	± 20.0
N-Nitroso-di-n-propylamine	1.048	1.057	0.08	0.9	± 25.0
Hexachloroethane	0.562	0.558	0.10	-0.7	± 20.0
Nitrobenzene	0.313	0.314	0.09	0.3	± 20.0
Isophorone	0.644	0.633	0.10	-1.7	± 20.0
2-Nitrophenol	0.194	0.192	0.06	-1.0	± 20.0
2,4-Dimethylphenol	0.375	0.371	0.05	-1.1	± 25.0
Bis(2-Chloroethoxy)methane	0.401	0.403	0.08	0.5	± 20.0
2,4-Dichlorophenol	0.325	0.322	0.06	-0.9	± 20.0
Naphthalene	1.100	1.087	0.20	-1.2	± 20.0
4-Chloroaniline	0.405	0.443	0.01	9.4	± 40.0
Hexachlorobutadiene	0.211	0.208	0.04	-1.4	± 20.0
Caprolactam	0.097	0.093	0.01	-4.1	± 30.0
4-Chloro-3-methylphenol	0.358	0.354	0.04	-1.1	± 20.0
2-Methylnaphthalene	0.824	0.816	0.10	-1.0	± 20.0
Hexachlorocyclopentadiene	0.263	0.199	0.01	-24.3	± 40.0
2,4,6-Trichlorophenol	0.426	0.415	0.09	-2.6	± 20.0
2,4,5-Trichlorophenol	0.457	0.447	0.10	-2.2	± 20.0
1,1-Biphenyl	1.727	1.727	0.20	0.0	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 03/03/2016 Time: 19:37

Lab File ID: BM004539.D Init. Calib Date(s): 03/03/2016 03/03/2016

EPA Sample No.: SSTD02040 Init. Calib Time(s): 09:53 12:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
2-Chloronaphthalene	1.311	1.313	0.30	0.2	± 20.0
2-Nitroaniline	0.291	0.293	0.06	0.7	± 25.0
Dimethylphthalate	1.749	1.704	0.30	-2.6	± 20.0
2,6-Dinitrotoluene	0.351	0.345	0.08	-1.7	± 20.0
Acenaphthylene	2.157	2.164	0.40	0.3	± 20.0
3-Nitroaniline	0.330	0.335	0.01	1.5	± 25.0
Acenaphthene	1.477	1.460	0.20	-1.2	± 20.0
2,4-Dinitrophenol	0.177	0.135	0.01	-23.7	± 50.0
4-Nitrophenol	0.169	0.143	0.01	-15.4	± 40.0
Dibenzofuran	2.065	2.040	0.30	-1.2	± 20.0
2,4-Dinitrotoluene	0.512	0.505	0.07	-1.4	± 20.0
Diethylphthalate	1.777	1.713	0.30	-3.6	± 20.0
Fluorene	1.695	1.677	0.20	-1.1	± 20.0
4-Chlorophenyl-phenylether	0.858	0.844	0.10	-1.6	± 20.0
4-Nitroaniline	0.347	0.337	0.01	-2.9	± 40.0
4,6-Dinitro-2-methylphenol	0.140	0.127	0.01	-9.3	± 30.0
N-Nitrosodiphenylamine	0.655	0.669	0.10	2.1	± 20.0
4-Bromophenyl-phenylether	0.229	0.229	0.07	0.0	± 20.0
1,2,4,5-Tetrachlorobenzene	0.681	0.688	0.10	1.0	± 20.0
Hexachlorobenzene	0.252	0.252	0.05	0.0	± 20.0
Atrazine	0.233	0.231	0.01	-0.9	± 25.0
Pentachlorophenol	0.106	0.083	0.01	-21.7	± 40.0
Phenanthrene	1.198	1.191	0.20	-0.6	± 20.0
Anthracene	1.218	1.214	0.20	-0.3	± 20.0
Carbazole	1.030	1.010	0.05	-1.9	± 20.0
Di-n-butylphthalate	1.323	1.252	0.50	-5.4	± 20.0
Fluoranthene	1.291	1.256	0.10	-2.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 03/03/2016 Time: 19:37

Lab File ID: BM004539.D Init. Calib Date(s): 03/03/2016 03/03/2016

EPA Sample No.: SSTD02040 Init. Calib Time(s): 09:53 12:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
Pyrene	1.451	1.505	0.40	3.7	± 25.0
Butylbenzylphthalate	0.574	0.547	0.10	-4.7	± 25.0
3,3-Dichlorobenzidine	0.414	0.419	0.01	1.2	± 40.0
Benzo(a)anthracene	1.291	1.251	0.30	-3.1	± 20.0
Chrysene	1.238	1.215	0.20	-1.9	± 20.0
Bis(2-ethylhexyl)phthalate	0.809	0.763	0.20	-5.7	± 25.0
Di-n-octyl phthalate	1.503	1.455	0.01	-3.2	± 40.0
Benzo(b)fluoranthene	1.333	1.340	0.01	0.5	± 25.0
Benzo(k)fluoranthene	1.321	1.221	0.01	-7.6	± 25.0
Benzo(a)pyrene	1.259	1.226	0.01	-2.6	± 20.0
Indeno(1,2,3-cd)pyrene	1.254	1.329	0.01	6.0	± 25.0
Dibenzo(a,h)anthracene	1.037	1.099	0.01	6.0	± 25.0
Benzo(g,h,i)perylene	1.056	1.104	0.01	4.5	± 30.0
2,3,4,6-Tetrachlorophenol	0.395	0.375	0.04	-5.1	± 20.0
1,4-Dioxane-d8	0.372	0.376	0.01	1.1	± 25.0
Phenol-d5	1.611	1.577	0.01	-2.1	± 25.0
Bis-(2-Chloroethyl)ether-d8	0.812	0.815	0.10	0.4	± 20.0
2-Chlorophenol-d4	1.437	1.416	0.20	-1.5	± 20.0
4-Methylphenol-d8	1.420	1.400	0.01	-1.4	± 20.0
Nitrobenzene-d5	0.149	0.149	0.05	0.0	± 20.0
2-Nitrophenol-d4	0.171	0.170	0.05	-0.6	± 20.0
2,4-Dichlorophenol-d3	0.310	0.306	0.06	-1.3	± 20.0
4-Chloroaniline-d4	0.381	0.413	0.01	8.4	± 40.0
Dimethylphthalate-d6	1.664	1.627	0.30	-2.2	± 20.0
Acenaphthylene-d8	2.012	2.008	0.40	-0.2	± 20.0
4-Nitrophenol-d4	0.245	0.210	0.01	-14.3	± 40.0
Fluorene-d10	1.443	1.400	0.10	-3.0	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46018 MA No.: SDG No.: H0001

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 03/03/2016 Time: 19:37

Lab File ID: BM004539.D Init. Calib Date(s): 03/03/2016 03/03/2016

EPA Sample No.: SSTD02040 Init. Calib Time(s): 09:53 12:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

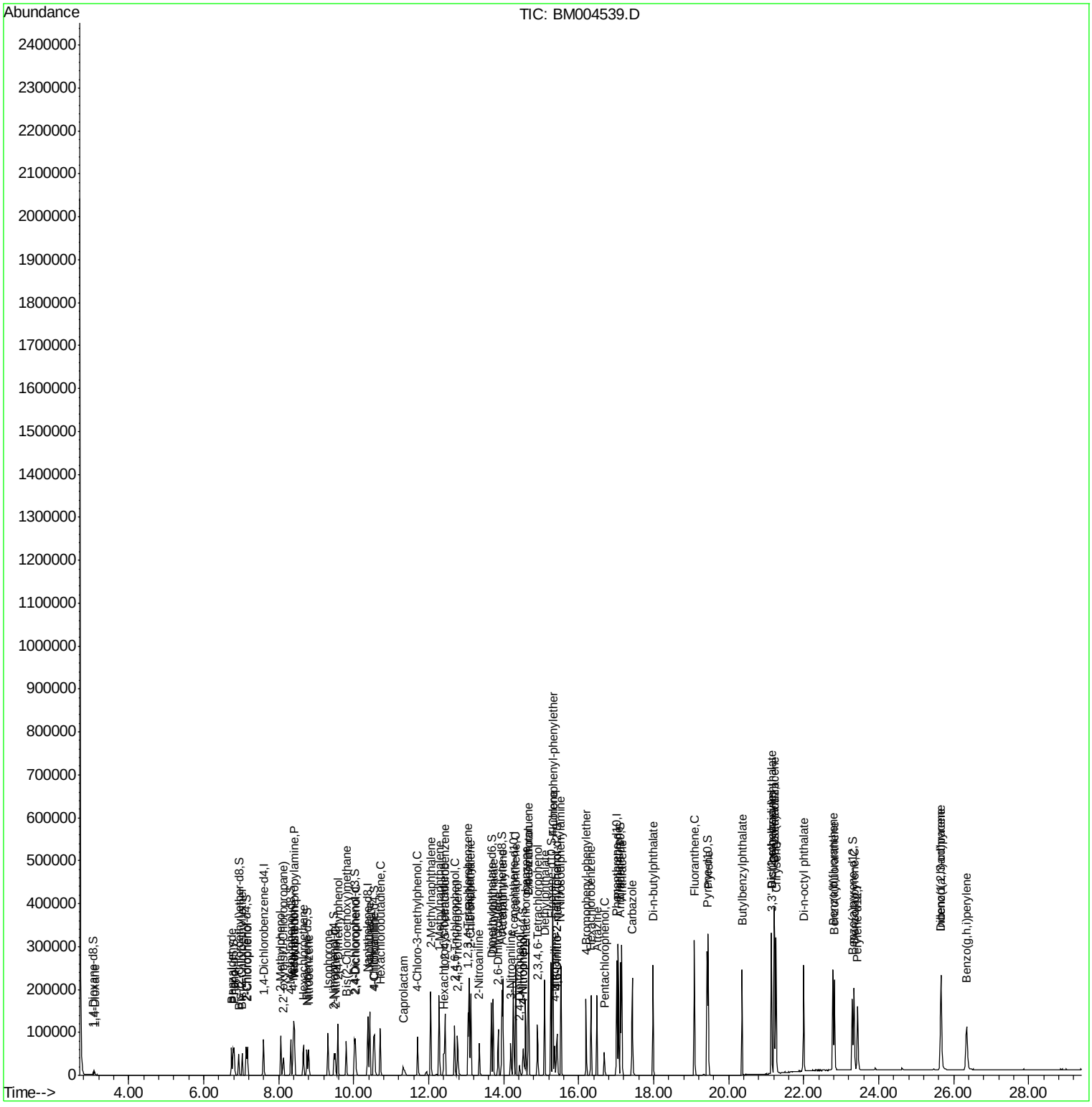
ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
4,6-Dinitro-2-methylphenol-d2	0.130	0.120	0.01	-7.7	± 30.0
Anthracene-d10	0.979	0.966	0.30	-1.3	± 20.0
Pyrene-d10	1.076	1.115	0.30	3.6	± 25.0
Benzo(a)pyrene-d12	1.064	1.025	0.01	-3.7	± 20.0

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004539.D
Acq On : 03 Mar 2016 19:37
Operator : SJ/UM
Sample : SSTDCCC020
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD02040

Quant Time: Mar 04 04:03:27 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004539.D
Acq On : 03 Mar 2016 19:37
Operator : SJ/UM
Sample : SSTDCCC020
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD02040

Quant Time: Mar 04 04:03:27 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	25619	20.00	ng/ul	0.00
18) Naphthalene-d8	10.37	136	121703	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	75164	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.01	188	162065	20.00	ng/ul	0.00
78) Chrysene-d12	21.22	240	139082	20.00	ng/ul	0.00
86) Perylene-d12	23.43	264	118903	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.05	96	3848	8.08	ng/uL	0.00
5) Phenol-d5	6.79	99	40392	19.57	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	6.93	67	20877	20.07	ng/ul	0.00
9) 2-Chlorophenol-d4	7.13	132	36280	19.71	ng/ul	0.00
13) 4-Methylphenol-d8	8.32	113	35879	19.72	ng/ul	0.00
19) Nitrobenzene-d5	8.76	128	18191	20.00	ng/ul	0.00
22) 2-Nitrophenol-d4	9.47	143	20633	19.82	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.02	165	37181	19.74	ng/ul	0.00
29) 4-Chloroaniline-d4	10.53	131	50215	21.67	ng/ul	0.00
44) Dimethylphthalate-d6	13.67	166	122303	19.56	ng/ul	0.00
47) Acenaphthylene-d8	13.95	160	150930	19.96	ng/ul	0.00
52) 4-Nitrophenol-d4	14.51	143	15758	17.09	ng/ul	0.00
58) Fluorene-d10	15.26	176	105223	19.40	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	15.41	200	19369	18.41	ng/ul	0.00
71) Anthracene-d10	17.11	188	156566	19.74	ng/ul	0.00
79) Pyrene-d10	19.42	212	155070	20.73	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.29	264	121900	19.27	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.09	88	4342	8.17	ng/uL#	90
4) Benzaldehyde	6.75	77	25069	23.16	ng/ul	96
6) Phenol	6.81	94	42955	19.67	ng/ul	95
8) Bis(2-Chloroethyl)ether	7.02	93	33354	20.14	ng/ul	97
10) 2-Chlorophenol	7.16	128	37940	19.74	ng/ul	96
11) 2-Methylphenol	8.05	108	35159	19.77	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.13	45	30600	20.42	ng/ul	97
14) Acetophenone	8.42	105	58722	20.45	ng/ul	98
15) N-Nitroso-di-n-propylamine	8.40	70	27088	20.19	ng/ul	94
16) 4-Methylphenol	8.38	108	39522	20.28	ng/ul	99
17) Hexachloroethane	8.66	117	14286	19.85	ng/ul	88
20) Nitrobenzene	8.80	77	38265	20.06	ng/ul	94
21) Isophorone	9.32	82	77086	19.66	ng/ul	95
23) 2-Nitrophenol	9.50	139	23336	19.78	ng/ul	92
24) 2,4-Dimethylphenol	9.57	107	45193	19.79	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.80	93	49018	20.07	ng/ul	100
27) 2,4-Dichlorophenol	10.05	162	39233	19.87	ng/ul	97
28) Naphthalene	10.43	128	132264	19.76	ng/ul	100
30) 4-Chloroaniline	10.55	127	53895	21.84	ng/ul	99
31) Hexachlorobutadiene	10.70	225	25351	19.76	ng/ul	99
32) Caprolactam	11.32	113	11271	19.09	ng/ul	82
33) 4-Chloro-3-methylphenol	11.70	107	43125	19.79	ng/ul	97
34) 2-Methylnaphthalene	12.05	142	99357	19.81	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004539.D
Acq On : 03 Mar 2016 19:37
Operator : SJ/UM
Sample : SSTDCCC020
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD02040

Quant Time: Mar 04 04:03:27 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) 1-Methylnaphthalene	12.27	142	93794	19.61	ng/ul	99
37) 1,2,4,5-Tetrachlorobenzene	12.43	216	51692	20.21	ng/ul	98
38) Hexachlorocyclopentadiene	12.40	237	14943	15.11	ng/ul	100
39) 2,4,6-Trichlorophenol	12.69	196	31175	19.49	ng/ul	99
40) 2,4,5-Trichlorophenol	12.77	196	33585	19.55	ng/ul	100
41) 1,1'-Biphenyl	13.08	154	129797	20.00	ng/ul	98
42) 2-Chloronaphthalene	13.12	162	98665	20.02	ng/ul	97
43) 2-Nitroaniline	13.35	65	22019	20.16	ng/ul	95
45) Dimethylphthalate	13.72	163	128067	19.48	ng/ul	99
46) 2,6-Dinitrotoluene	13.85	165	25936	19.68	ng/ul	94
48) Acenaphthylene	13.97	152	162684	20.07	ng/ul	99
49) 3-Nitroaniline	14.19	138	25168	20.30	ng/ul	96
50) Acenaphthene	14.32	153	109728	19.77	ng/ul	96
51) 2,4-Dinitrophenol	14.42	184	10115	15.18	ng/ul#	89
53) 4-Nitrophenol	14.52	109	10754	16.97	ng/ul	86
54) Dibenzofuran	14.66	168	153353	19.76	ng/ul	96
55) 2,4-Dinitrotoluene	14.65	165	37956	19.71	ng/ul	92
56) 2,3,4,6-Tetrachlorophenol	14.90	232	28150	18.95	ng/ul	95
57) Diethylphthalate	15.09	149	128769	19.28	ng/ul	100
59) Fluorene	15.31	166	126016	19.78	ng/ul	100
60) 4-Chlorophenyl-phenylether	15.30	204	63433	19.68	ng/ul	92
61) 4-Nitroaniline	15.36	138	25303	19.41	ng/ul	87
64) 4,6-Dinitro-2-methylphenol	15.42	198	20550	18.05	ng/ul	96
65) N-Nitrosodiphenylamine	15.53	169	108352	20.42	ng/ul	99
66) 4-Bromophenyl-phenylether	16.20	248	37151	20.02	ng/ul	95
67) Hexachlorobenzene	16.32	284	40853	19.98	ng/ul	97
68) Atrazine	16.48	200	37404	19.82	ng/ul	97
69) Pentachlorophenol	16.68	266	13445	15.66	ng/ul	99
70) Phenanthrene	17.05	178	193024	19.88	ng/ul	99
72) Anthracene	17.14	178	196743	19.94	ng/ul	99
73) 1,2,3,4-Tetrachlorobenzene	13.05	216	48065	20.83	ng/uL	99
74) Pentachlorobenzene	14.59	250	48471	20.54	ng/uL	99
75) Carbazole	17.43	167	163713	19.61	ng/ul	99
76) Di-n-butylphthalate	17.98	149	202915	18.92	ng/ul	99
77) Fluoranthene	19.09	202	203474	19.45	ng/ul	99
80) Pyrene	19.45	202	209330	20.74	ng/ul	100
81) Butylbenzylphthalate	20.35	149	76091	19.08	ng/ul	98
82) 3,3'-Dichlorobenzidine	21.14	252	58315	20.24	ng/ul	100
83) Benzo(a)anthracene	21.21	228	173931	19.37	ng/ul	99
84) Bis(2-ethylhexyl)phthalate	21.13	149	106107	18.86	ng/ul#	98
85) Chrysene	21.26	228	169020	19.64	ng/ul	99
87) Di-n-octyl phthalate	22.00	149	173046	19.37	ng/ul#	96
88) Benzo(b)fluoranthene	22.77	252	159279	20.10	ng/ul	100
89) Benzo(k)fluoranthene	22.82	252	145201	18.49	ng/ul	98
91) Benzo(a)pyrene	23.34	252	145781	19.47	ng/ul	98
92) Indeno(1,2,3-cd)pyrene	25.66	276	157982	21.19	ng/ul	99
93) Dibenzo(a,h)anthracene	25.66	278	130645	21.19	ng/ul	100
94) Benzo(g,h,i)perylene	26.34	276	131287	20.91	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004539.D
Acq On : 03 Mar 2016 19:37
Operator : SJ/UM
Sample : SSTDCCC020
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD02040

Quant Time: Mar 04 04:03:27 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

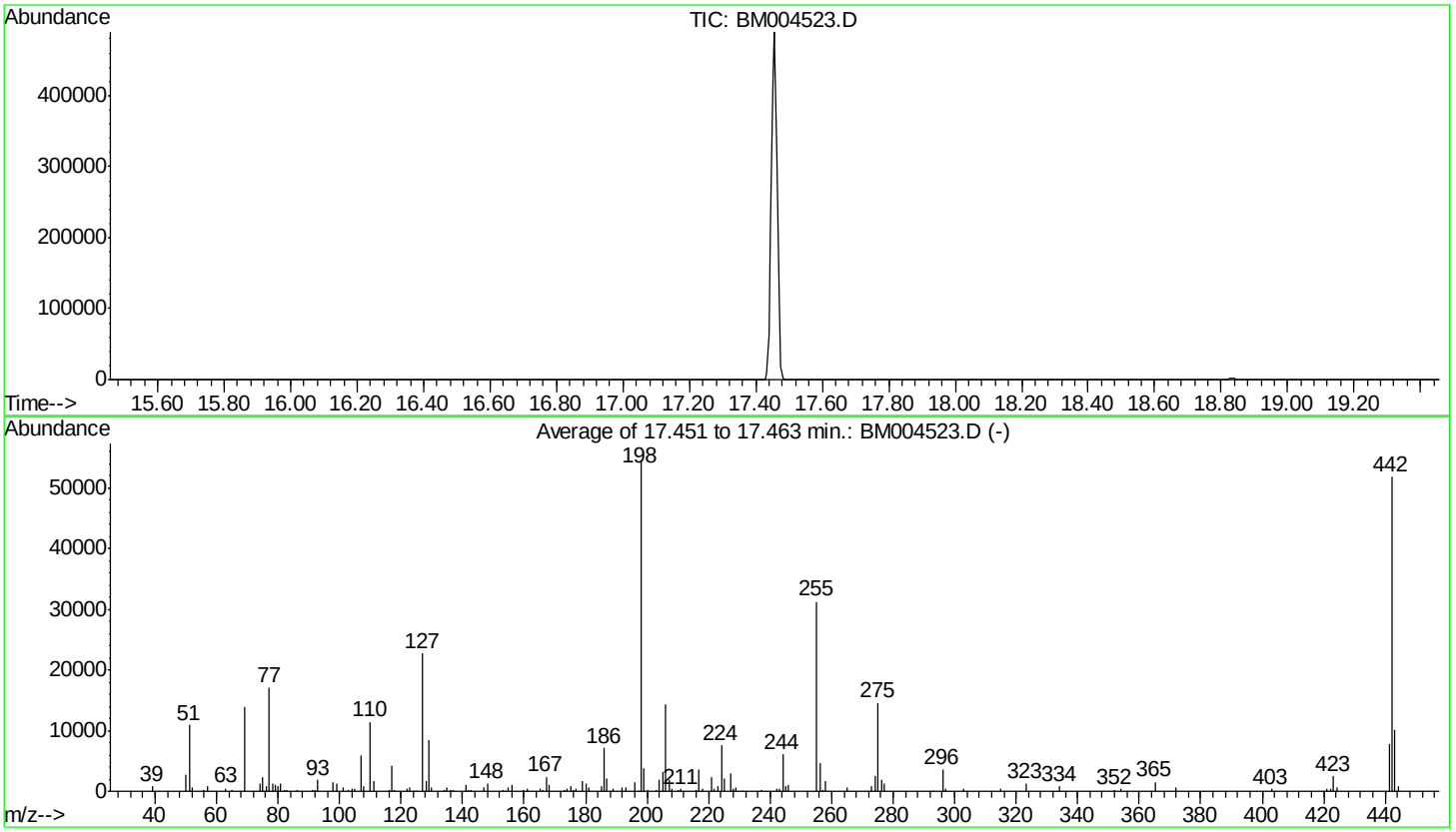
DFTPP

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004523.D
Acq On : 03 Mar 2016 09:17
Operator : SJ/UM
Sample : DFTPP34
Misc :
ALS Vial : 1 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : DFTPP34

Integration File: LSCINT.P

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Title : SVOA CALIBRATION
Last Update : Fri Mar 04 17:00:47 2016



AutoFind: Scans 2510, 2511, 2512; Background Corrected with Scan 2505

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	19.9	10886	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	25.7	14017	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	41.6	22714	PASS
197	198	0.00	2	0.2	106	PASS
198	198	100	100	100.0	54576	PASS
199	198	5	9	6.8	3724	PASS
275	198	10	60	26.6	14543	PASS
365	198	1	100	2.8	1524	PASS
441	443	0.01	100	77.6	7819	PASS
442	198	50	100	94.8	51752	PASS
443	442	15	24	19.5	10070	PASS

Scan 2510 (17.451 min): BM004523.D
DFTPP34

m/z	Abundance
39.10	901.0
50.10	3176.0
51.10	12850.0
52.00	692.0
56.00	391.0
57.00	963.0
63.00	590.0
65.00	322.0
69.00	16284.0
74.10	1599.0
75.00	2570.0
76.10	887.0
77.10	19536.0
78.10	1347.0
79.00	1338.0
80.00	1004.0
81.00	1466.0
82.00	362.0
83.00	308.0
86.00	395.0
91.00	360.0
92.10	348.0
93.00	2046.0
98.00	1616.0
99.00	1324.0
101.00	860.0
103.00	336.0
104.00	531.0
105.00	468.0
107.00	6619.0
108.00	970.0
110.00	12749.0
111.00	1934.0
116.10	376.0
117.00	4701.0
118.00	353.0
122.00	458.0
123.00	595.0
127.10	25224.0
128.10	1943.0
129.00	9325.0
130.00	796.0
134.00	309.0
135.00	690.0
136.00	334.0
137.00	431.0
141.00	1192.0
142.00	445.0
142.90	309.0
147.00	615.0
148.00	1380.0
153.00	382.0
155.00	692.0
156.10	1041.0
160.00	381.0
161.00	608.0
165.00	449.0
166.00	417.0
167.10	2434.0
168.00	1167.0
173.00	313.0
174.00	519.0
175.10	967.0
176.00	314.0
177.00	463.0
179.00	1866.0
180.10	1423.0
181.00	601.0
185.10	904.0
186.00	7479.0
187.00	2265.0
189.00	433.0
192.00	571.0
193.00	640.0
196.10	1598.0
198.00	56880.0
199.00	4033.0
200.00	330.0
203.00	341.0
204.10	1876.0
205.10	3300.0
206.10	14845.0
207.10	2031.0
208.00	468.0
210.90	542.0
217.00	3599.0
218.00	470.0
221.10	2437.0
221.80	582.0
223.10	817.0
224.10	7612.0

Instrument :
BNA_M
ClientSampleId :
DFTPP34

225.10	2078.0
227.10	3073.0
228.00	419.0
229.00	702.0
237.10	313.0
242.00	396.0
243.10	396.0
244.10	6083.0
245.10	853.0
246.00	1115.0
255.10	30552.0
256.10	4676.0
257.00	388.0
258.10	1607.0
265.00	675.0
273.00	856.0
274.10	2432.0
275.10	13951.0
276.10	1907.0
277.00	1138.0
296.10	3288.0
297.00	485.0
303.10	445.0
315.10	371.0
323.10	1133.0
334.10	707.0
354.10	417.0
365.10	1327.0
372.10	549.0
403.10	305.0
421.10	300.0
422.10	301.0
423.10	2029.0
424.10	678.0
441.20	6601.0
442.20	42136.0
443.20	8439.0
444.10	789.0

Instrument :
BNA_M
ClientSampleId :
DFTPP34

Scan 2511 (17.457 min): BM004523.D
DFTPP34

m/z	Abundance
39.00	876.0
50.10	3141.0
51.10	12645.0
52.10	667.0
56.00	449.0
57.00	955.0
63.00	615.0
65.10	322.0
69.00	16265.0
74.00	1637.0
75.00	2655.0
76.00	853.0
77.10	20344.0
78.10	1393.0
79.00	1348.0
80.00	1001.0
81.00	1388.0
82.00	317.0
83.00	344.0
86.00	370.0
91.00	354.0
92.00	360.0
93.00	2298.0
98.00	1708.0
99.00	1392.0
101.00	820.0
104.00	537.0
105.00	498.0
107.00	7025.0
108.00	1079.0
110.00	13428.0
111.00	1994.0
116.00	362.0
117.00	4965.0
118.00	440.0
122.00	488.0
123.00	710.0
124.00	332.0
125.00	321.0
127.10	26760.0
128.10	1992.0
129.00	10002.0
130.00	812.0
134.00	310.0
135.00	724.0
136.00	322.0
137.00	423.0
141.00	1271.0
142.00	480.0
143.00	302.0
147.00	766.0
148.00	1403.0
153.00	460.0
154.00	328.0
155.00	817.0
156.10	1169.0
160.00	450.0
161.00	590.0
165.10	525.0
166.00	400.0
167.10	2879.0
168.00	1244.0
172.90	322.0
174.00	646.0
175.00	1045.0
176.10	394.0
177.00	557.0
179.00	2080.0
180.00	1600.0
181.00	659.0
185.00	1008.0
186.10	8444.0
187.10	2503.0
189.00	551.0
192.00	704.0
193.00	799.0
196.00	1796.0
198.00	65408.0
199.00	4366.0
200.10	335.0
203.00	382.0
204.10	2334.0
205.10	3797.0
206.10	17128.0
207.10	2446.0
208.10	569.0
210.30	348.0
211.10	597.0
216.10	343.0
217.00	4279.0
218.00	525.0

Instrument :
BNA_M
ClientSampleId :
DFTPP34

221.10	2923.0
223.10	901.0
224.10	8827.0
225.10	2367.0
227.10	3658.0
228.10	521.0
229.00	749.0
231.10	334.0
237.00	310.0
242.00	469.0
243.10	505.0
244.10	7147.0
245.10	906.0
246.10	1259.0
255.10	37632.0
256.10	5480.0
257.10	437.0
258.00	1962.0
265.00	808.0
273.10	1141.0
274.10	2951.0
275.10	17576.0
276.10	2356.0
277.10	1451.0
293.10	333.0
296.10	4276.0
297.00	530.0
303.10	516.0
315.00	441.0
323.10	1523.0
334.10	941.0
352.10	382.0
354.20	457.0
365.10	1834.0
372.10	754.0
403.10	412.0
421.10	435.0
422.10	407.0
423.10	2846.0
424.20	758.0
441.20	9070.0
442.20	61128.0
443.20	11781.0
444.10	1133.0

Instrument :
BNA_M
ClientSampleId :
DFTPP34

Scan 2512 (17.463 min): BM004523.D
DFTPP34

m/z	Abundance
39.10	488.0
50.10	1652.0
51.10	7164.0
52.00	354.0
57.00	532.0
63.00	322.0
69.00	9502.0
74.00	889.0
75.00	1482.0
76.00	550.0
77.10	11236.0
78.10	787.0
79.00	743.0
80.00	551.0
81.00	822.0
93.00	1297.0
98.00	1118.0
99.00	829.0
101.00	519.0
104.00	333.0
105.00	380.0
107.00	4033.0
108.00	609.0
110.00	8099.0
111.00	1122.0
117.00	3000.0
122.00	304.0
123.00	491.0
127.10	16160.0
128.00	1057.0
129.00	5975.0
130.00	565.0
135.00	439.0
141.00	760.0
147.00	424.0
148.00	904.0
155.00	508.0
156.10	766.0
161.00	341.0
167.00	1702.0
168.00	823.0
174.00	392.0
175.10	702.0
177.00	347.0
179.00	1241.0
180.00	889.0
181.00	441.0
185.00	603.0
186.10	5532.0
187.00	1534.0
188.90	320.0
192.00	437.0
193.00	488.0
196.00	1268.0
197.10	320.0
198.00	41440.0
199.00	2775.0
204.10	1399.0
205.10	2557.0
206.10	10934.0
207.00	1427.0
208.00	373.0
211.10	462.0
217.00	2695.0
218.00	312.0
221.00	1916.0
221.80	530.0
223.10	624.0
224.10	6113.0
225.00	1711.0
227.00	2252.0
228.00	374.0
229.00	501.0
242.10	322.0
243.10	362.0
244.10	4981.0
245.10	585.0
246.00	914.0
255.10	25520.0
256.10	3725.0
258.00	1350.0
265.10	512.0
273.10	773.0
274.10	2123.0
275.10	12102.0
276.10	1634.0
277.00	1047.0
296.10	3093.0
297.00	442.0
303.00	404.0
315.00	319.0

Instrument :
BNA_M
ClientSampleId :
DFTPP34

323.10	1029.0
334.10	706.0
352.10	323.0
354.10	355.0
365.10	1413.0
372.10	624.0
403.10	324.0
421.10	320.0
422.10	319.0
423.10	2582.0
424.10	518.0
441.20	7786.0
442.20	51992.0
443.20	9992.0
444.10	871.0

Instrument :
BNA_M
ClientSampleId :
DFTPP34

Scan 2505 (17.421 min): BM004523.D
DFTPP34

m/z Abundance

Instrument :
BNA_M
ClientSampleId :
DFTPP34

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB88601BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004535.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB88601BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004535.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB88601BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004535.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB88601BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004535.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 03/03/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

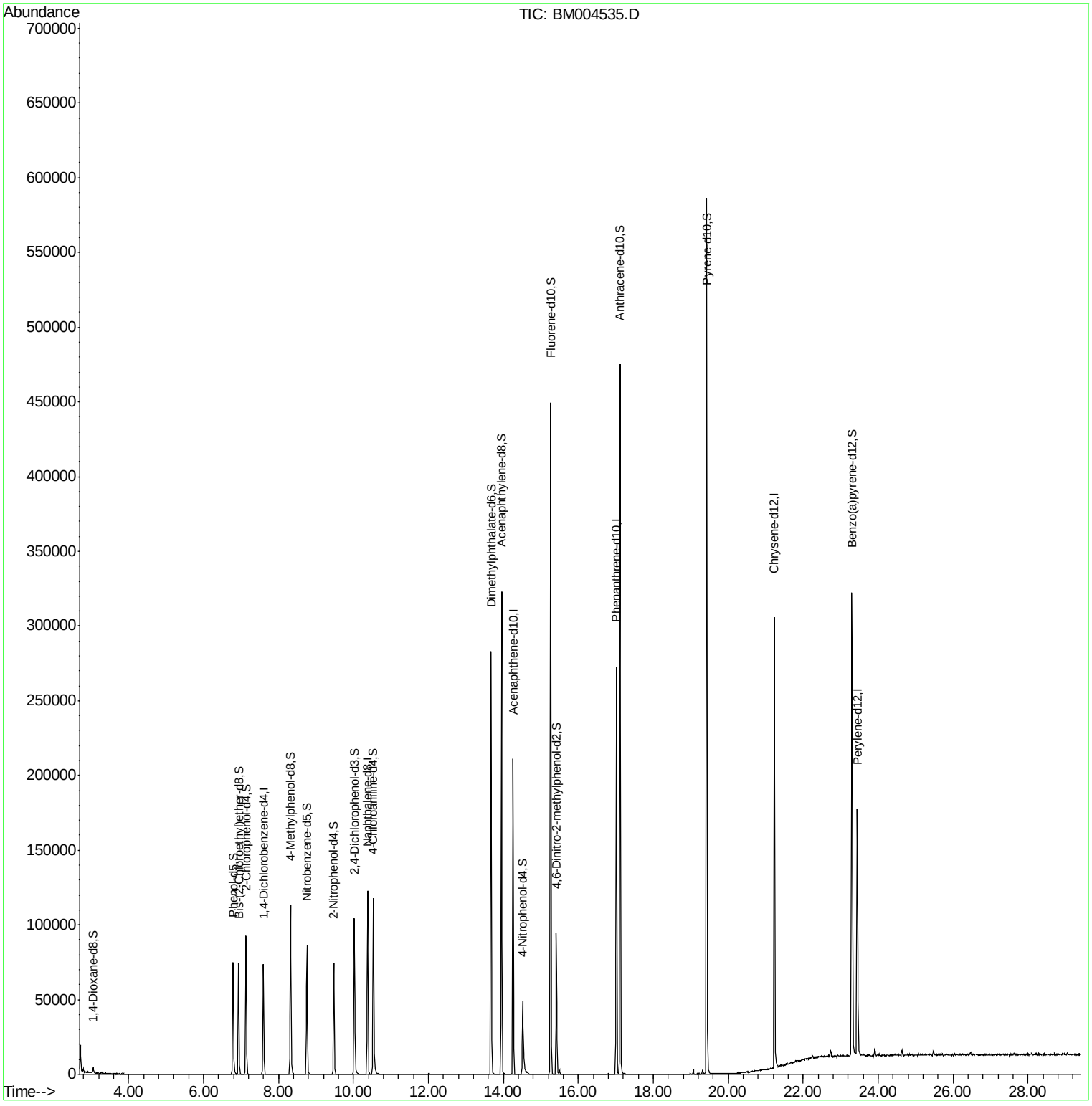
	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0	

EPA-designated Registry Number.

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004535.D
Acq On : 03 Mar 2016 16:36
Operator : SJ/UM
Sample : PB88601BL
Misc :
ALS Vial : 13 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SBLK01

Quant Time: Mar 04 04:02:49 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004535.D
Acq On : 03 Mar 2016 16:36
Operator : SJ/UM
Sample : PB88601BL
Misc :
ALS Vial : 13 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK01

Quant Time: Mar 04 04:02:49 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	23471	20.00	ng/ul	0.00
18) Naphthalene-d8	10.37	136	112935	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	73042	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.01	188	170877	20.00	ng/ul	0.00
78) Chrysene-d12	21.23	240	163611	20.00	ng/ul	0.00
86) Perylene-d12	23.44	264	125550	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.05	96	2936	6.73	ng/uL	0.00
5) Phenol-d5	6.79	99	57773	30.55	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	6.93	67	31852	33.42	ng/ul	0.00
9) 2-Chlorophenol-d4	7.13	132	53416	31.68	ng/ul	0.00
13) 4-Methylphenol-d8	8.32	113	53019	31.81	ng/ul	0.00
19) Nitrobenzene-d5	8.76	128	27483	32.56	ng/ul	0.00
22) 2-Nitrophenol-d4	9.48	143	32231	33.36	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.02	165	52002	29.75	ng/ul	0.00
29) 4-Chloroaniline-d4	10.53	131	83864	39.01	ng/ul	0.00
44) Dimethylphthalate-d6	13.67	166	215080	35.40	ng/ul	0.00
47) Acenaphthylene-d8	13.95	160	248934	33.89	ng/ul	0.00
52) 4-Nitrophenol-d4	14.51	143	26033	29.06	ng/ul	0.00
58) Fluorene-d10	15.26	176	182044	34.54	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	15.41	200	29042	26.18	ng/ul	0.00
71) Anthracene-d10	17.11	188	289504	34.63	ng/ul	0.00
79) Pyrene-d10	19.42	212	315166	35.82	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.30	264	233386	34.94	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA M\Data\BM030316\
Data File : BM004535.D
Acq On : 03 Mar 2016 16:36
Operator : SJ/UM
Sample : PB88601BL
Misc :
ALS Vial : 13 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK01

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.787	692	697	716	rBB	75123	125501	15.57%	1.843%
2	6.934	716	722	732	rBV	74400	116192	14.41%	1.706%
3	7.128	750	755	768	rBB	92913	146946	18.23%	2.157%
4	7.593	829	834	843	rBB	73913	115477	14.32%	1.695%
5	8.316	952	957	973	rBB	113384	190362	23.61%	2.795%
6	8.757	1026	1032	1041	rBV	86513	142365	17.66%	2.090%
7	9.475	1149	1154	1164	rBB	74386	121347	15.05%	1.782%
8	10.022	1241	1247	1268	rBB	104510	189674	23.53%	2.785%
9	10.375	1301	1307	1317	rBB	122805	201011	24.93%	2.951%
10	10.528	1327	1333	1354	rBV	117830	214517	26.61%	3.150%
11	13.669	1861	1867	1879	rBV	282929	401432	49.79%	5.894%
12	13.945	1908	1914	1930	rBB	323129	476516	59.10%	6.996%
13	14.257	1961	1967	1974	rBB2	211238	310921	38.56%	4.565%
14	14.510	2006	2010	2035	rBV	48931	108346	13.44%	1.591%
15	15.257	2131	2137	2148	rBB	449564	624845	77.50%	9.174%
16	15.410	2159	2163	2175	rBV	94431	135386	16.79%	1.988%
17	17.010	2430	2435	2446	rBB2	272909	387602	48.08%	5.691%
18	17.110	2446	2452	2472	rBV2	475302	691235	85.74%	10.149%
19	19.421	2839	2845	2865	rBV	585939	806228	100.00%	11.837%
20	21.227	3147	3152	3164	rBV	301728	407902	50.59%	5.989%
21	23.298	3497	3504	3518	rBV	310210	582663	72.27%	8.555%
22	23.439	3521	3528	3541	rVB2	163954	314533	39.01%	4.618%

Sum of corrected areas: 6811001

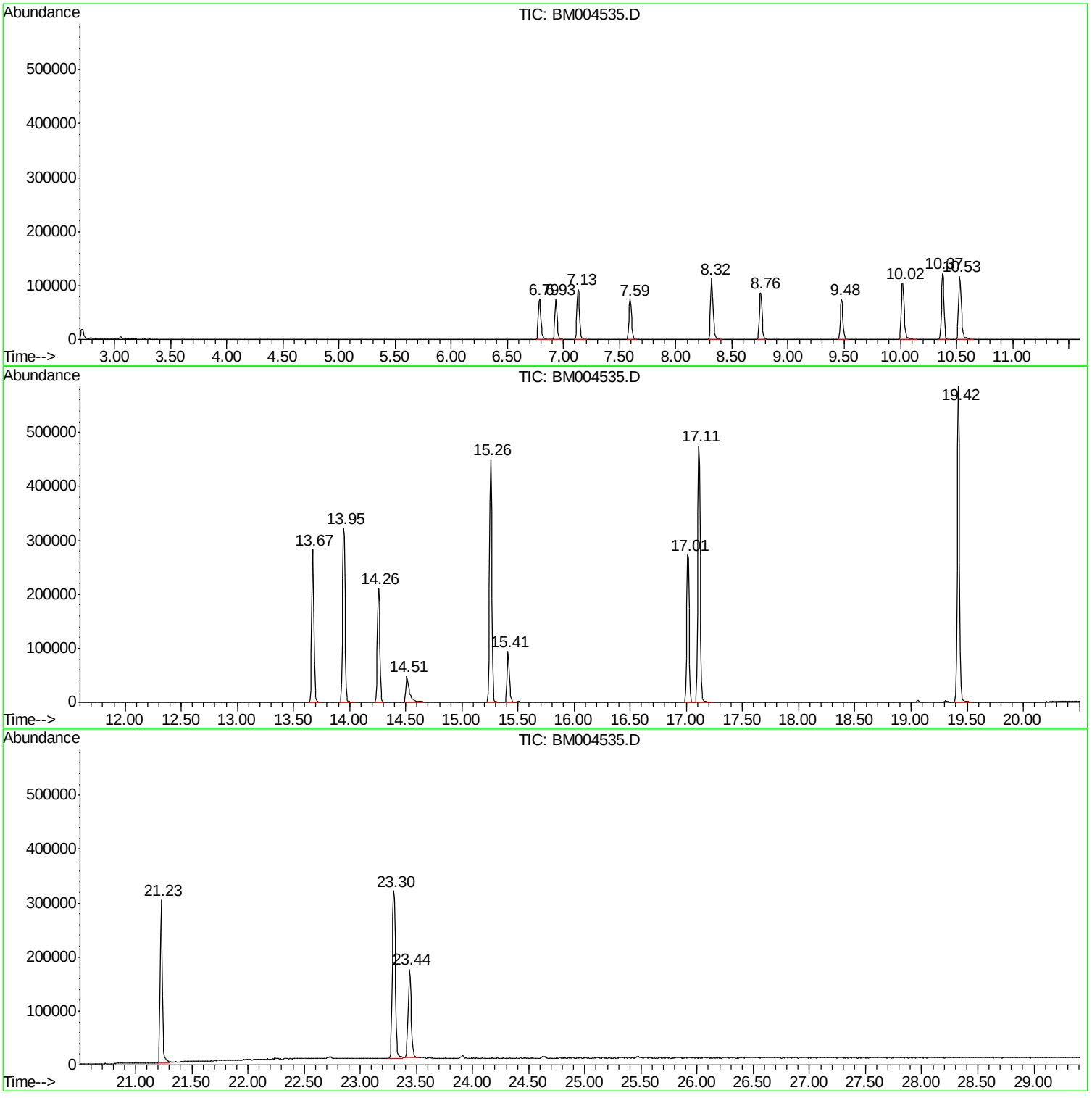
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA M\Data\BM030316\
Data File : BM004535.D
Acq On : 03 Mar 2016 16:36
Operator : SJ/UM
Sample : PB88601BL
Misc :
ALS Vial : 13 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK01

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\Data\BM030316\
Data File : BM004535.D
Acq On : 03 Mar 2016 16:36
Operator : SJ/UM
Sample : PB88601BL
Misc :
ALS Vial : 13 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SBLK01

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\Data\BM030316\
Data File : BM004535.D
Acq On : 03 Mar 2016 16:36
Operator : SJ/UM
Sample : PB88601BL
Misc :
ALS Vial : 13 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SBLK01

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0075MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H1584-13MS
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004537.D
% Solids :
Date Received : 02/26/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	5.6	J
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	21	
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	23	
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	20	
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0075MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H1584-13MS
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004537.D
% Solids :
Date Received : 02/26/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	28	
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	2.6	J
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	27	
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	31	
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0075MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H1584-13MS
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004537.D
% Solids :
Date Received : 02/26/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

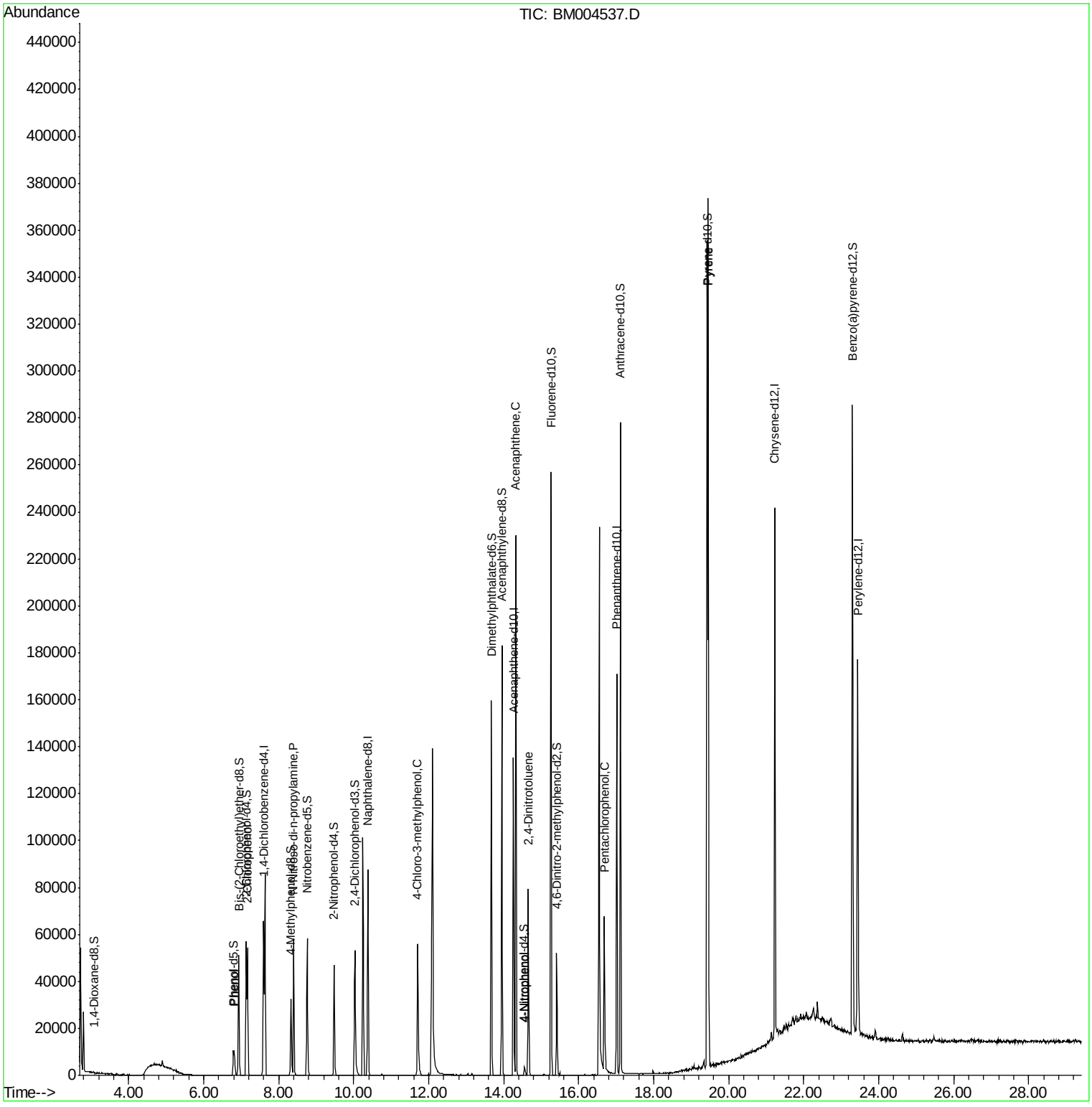
CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	26	
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

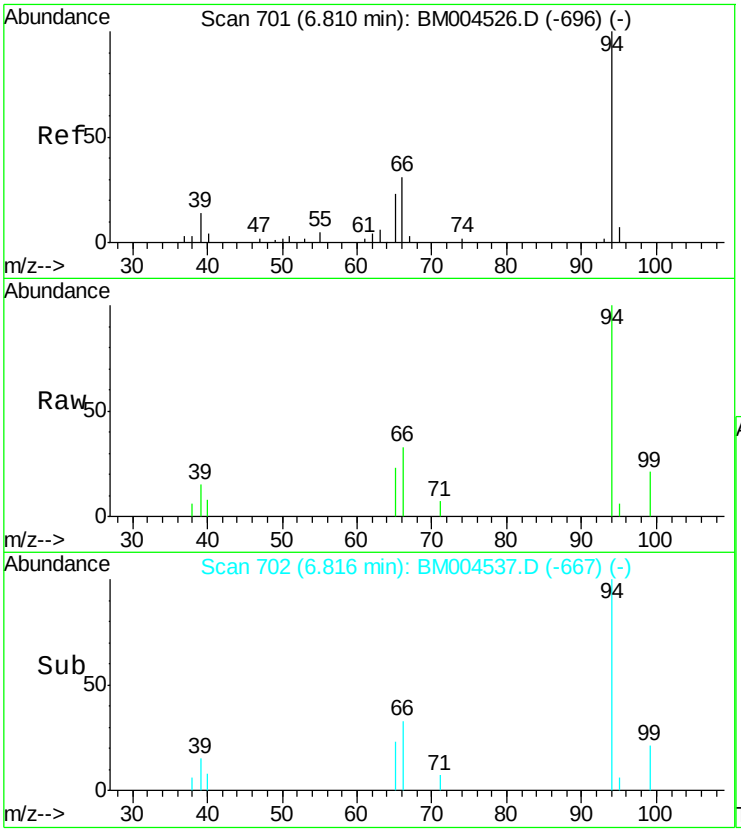
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004537.D
Acq On : 03 Mar 2016 17:49
Operator : SJ/UM
Sample : H1584-13MS
Misc :
ALS Vial : 15 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H0075MS

Quant Time: Mar 04 04:03:05 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration



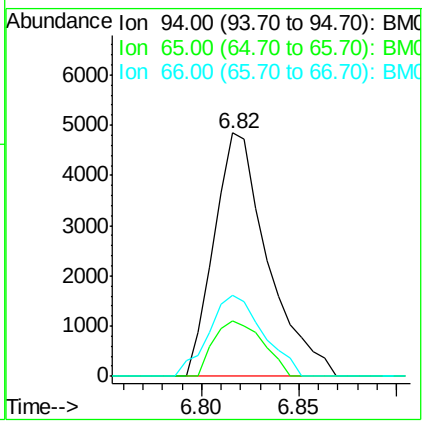


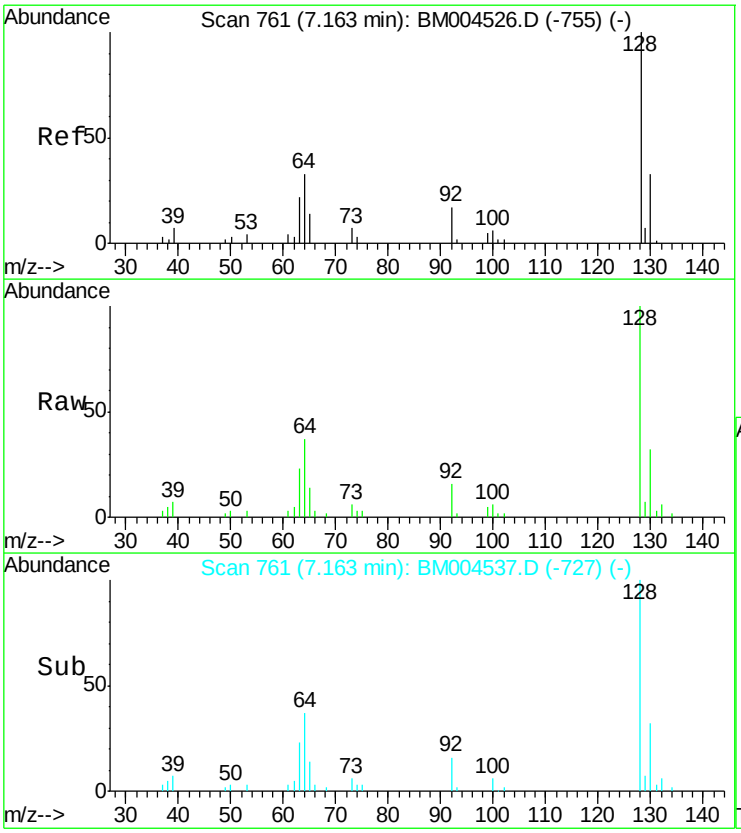
#6
Phenol
Concen: 5.55 ng/ul
RT: 6.82 min Scan# 702
Delta R.T. 0.01 min
Lab File: BM004537.D
Acq: 03 Mar 2016 17:49

Instrument :
BNA_M
ClientSampleId :
H0075MS

Tgt Ion: 94 Resp: 9255

Ion	Ratio	Lower	Upper
94	100		
65	22.6	21.0	31.6
66	33.3	29.3	43.9

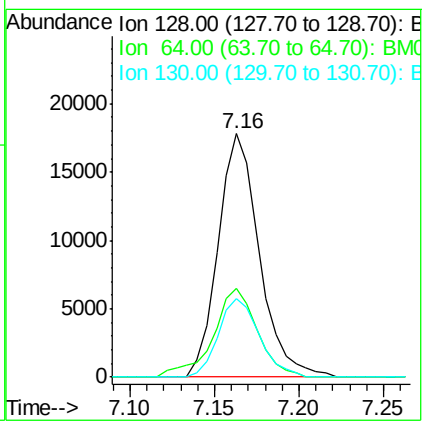


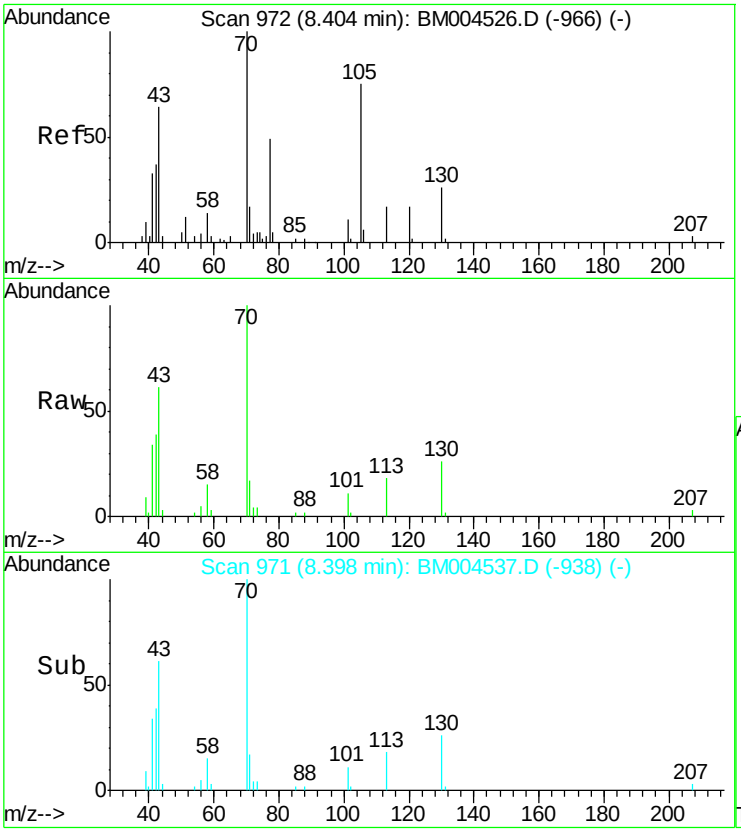


#10
2-Chlorophenol
Concen: 20.59 ng/ul
RT: 7.16 min Scan# 761
Delta R.T. 0.00 min
Lab File: BM004537.D
Acq: 03 Mar 2016 17:49

Tgt Ion:128 Resp: 30193

Ion	Ratio	Lower	Upper
128	100		
64	36.6	31.9	47.9
130	32.3	25.6	38.4



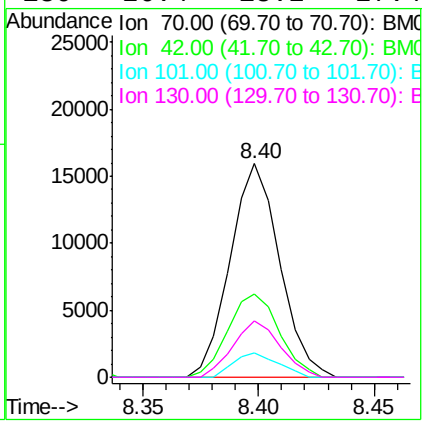


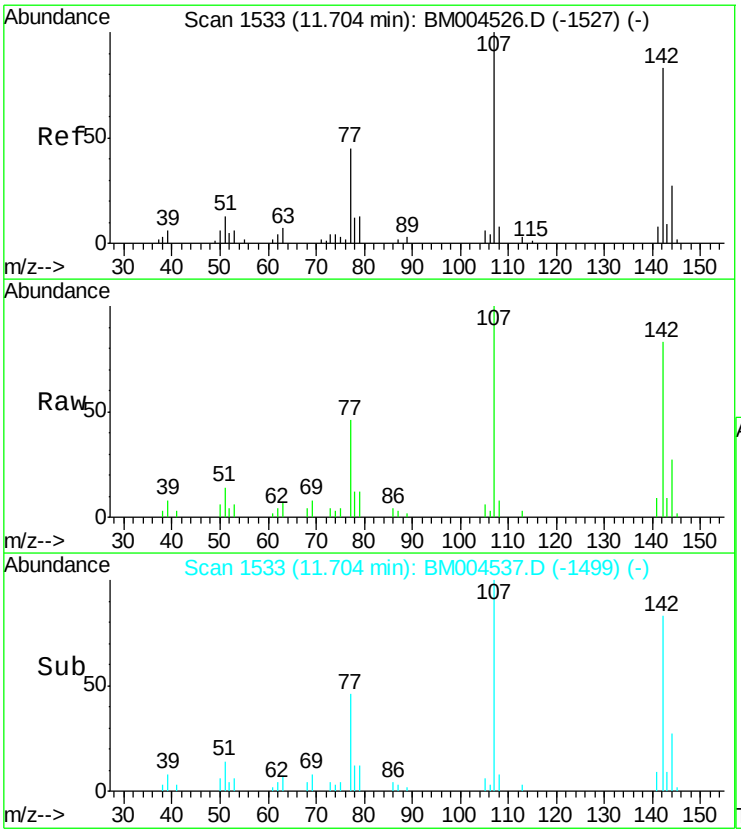
#15
N-Nitroso-di-n-propylamine
Concen: 23.27 ng/ul
RT: 8.40 min Scan# 971
Delta R.T. -0.01 min
Lab File: BM004537.D
Acq: 03 Mar 2016 17:49

Instrument : BNA_M
ClientSampleId : H0075MS

Tgt Ion: 70 Resp: 23820

Ion	Ratio	Lower	Upper
70	100		
42	39.2	35.4	53.0
101	11.1	8.4	12.6
130	26.4	18.2	27.4

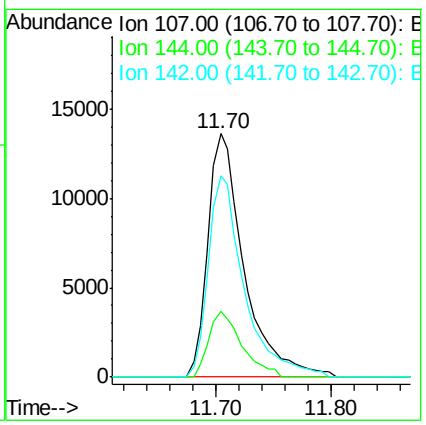


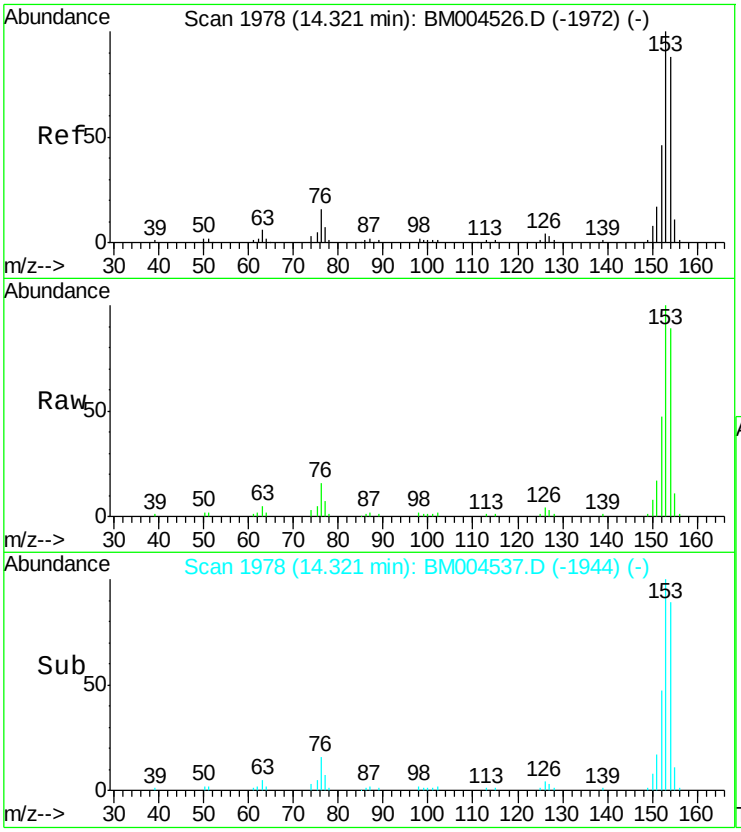


#33
4-Chloro-3-methylphenol
Concen: 20.17 ng/ul
RT: 11.70 min Scan# 1533
Delta R.T. 0.00 min
Lab File: BM004537.D
Acq: 03 Mar 2016 17:49

Tgt Ion:107 Resp: 29768

Ion	Ratio	Lower	Upper
107	100		
144	27.0	20.4	30.6
142	82.7	62.5	93.7



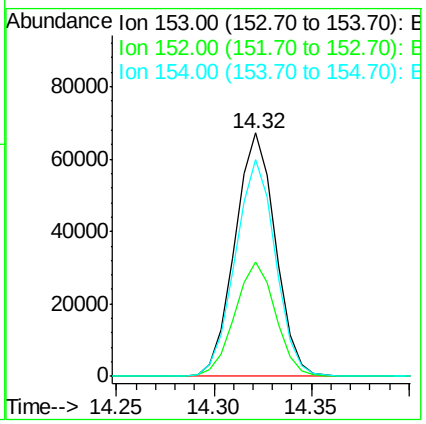


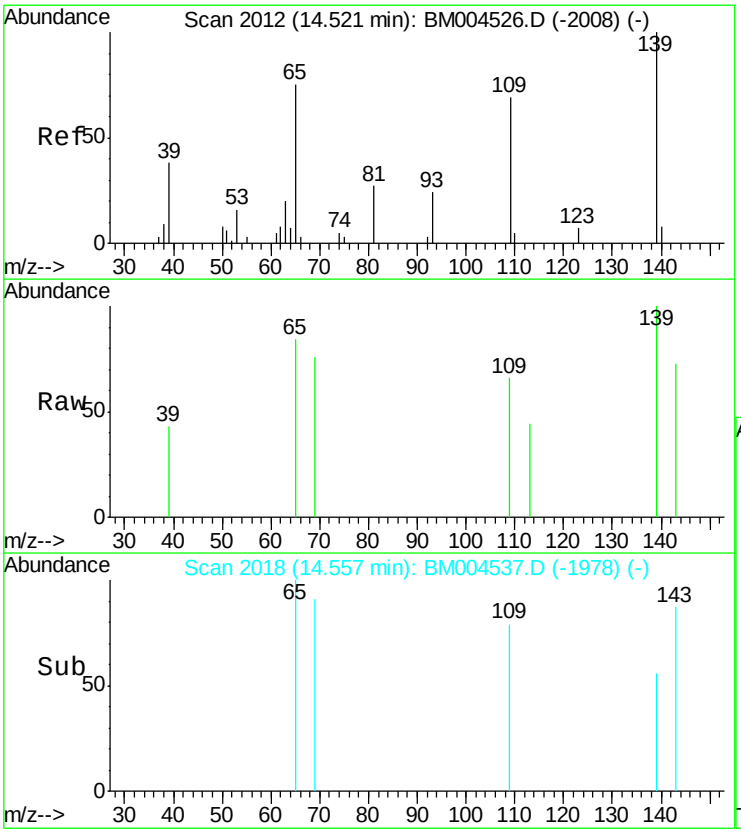
#50
Acenaphthene
Concen: 28.48 ng/ul
RT: 14.32 min Scan# 1978
Delta R.T. -0.00 min
Lab File: BM004537.D
Acq: 03 Mar 2016 17:49

Instrument :
BNA_M
ClientSampleId :
H0075MS

Tgt Ion:153 Resp: 97028

Ion	Ratio	Lower	Upper
153	100		
152	47.1	38.3	57.5
154	89.2	71.8	107.8

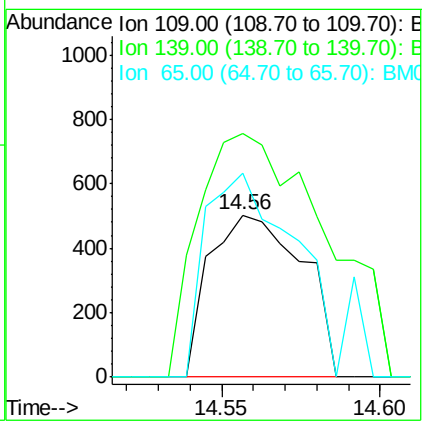


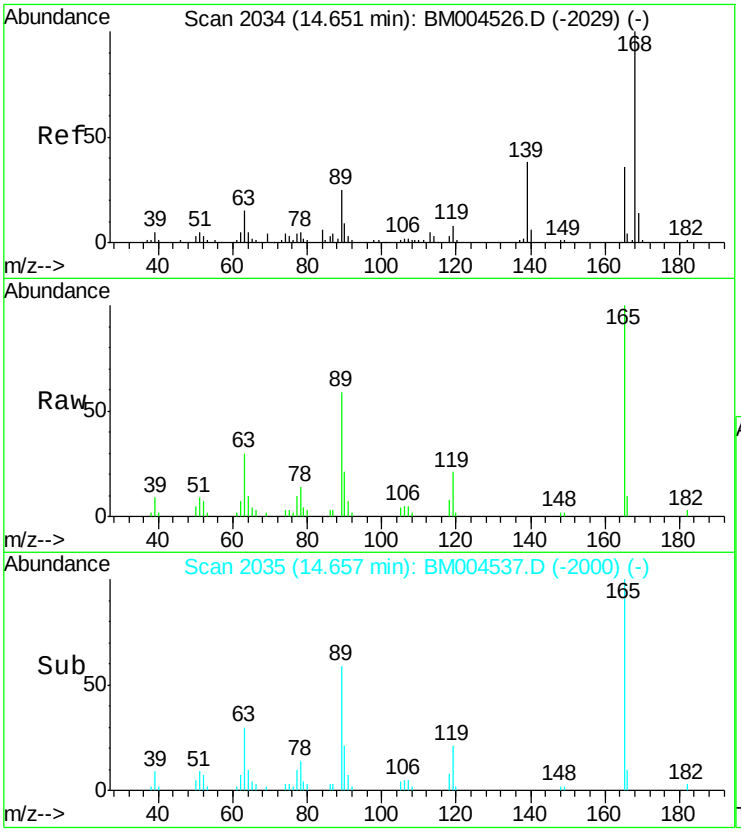


#53
4-Nitrophenol
Concen: 2.64 ng/ul
RT: 14.56 min Scan# 2018
Delta R.T. 0.04 min
Lab File: BM004537.D
Acq: 03 Mar 2016 17:49

Tgt Ion:109 Resp: 1026

Ion	Ratio	Lower	Upper
109	100		
139	150.6	103.7	155.5
65	126.1	89.4	134.2



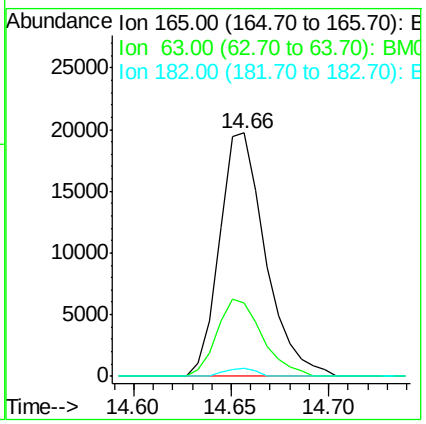


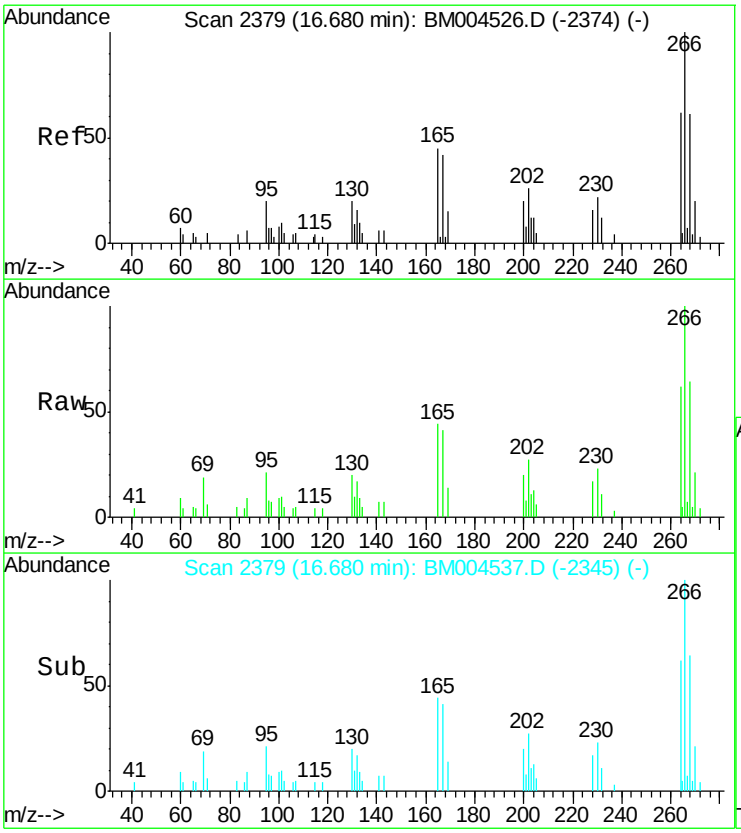
#55
2,4-Dinitrotoluene
Concen: 27.17 ng/ul
RT: 14.66 min Scan# 2035
Delta R.T. 0.01 min
Lab File: BM004537.D
Acq: 03 Mar 2016 17:49

Instrument :
BNA_M
ClientSampleId :
H0075MS

Tgt Ion:165 Resp: 32121

Ion	Ratio	Lower	Upper
165	100		
63	30.2	29.8	44.6
182	3.1	2.2	3.4

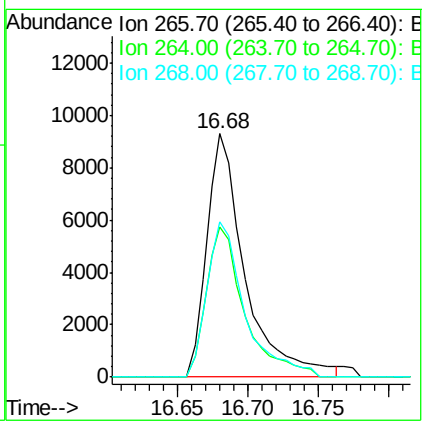


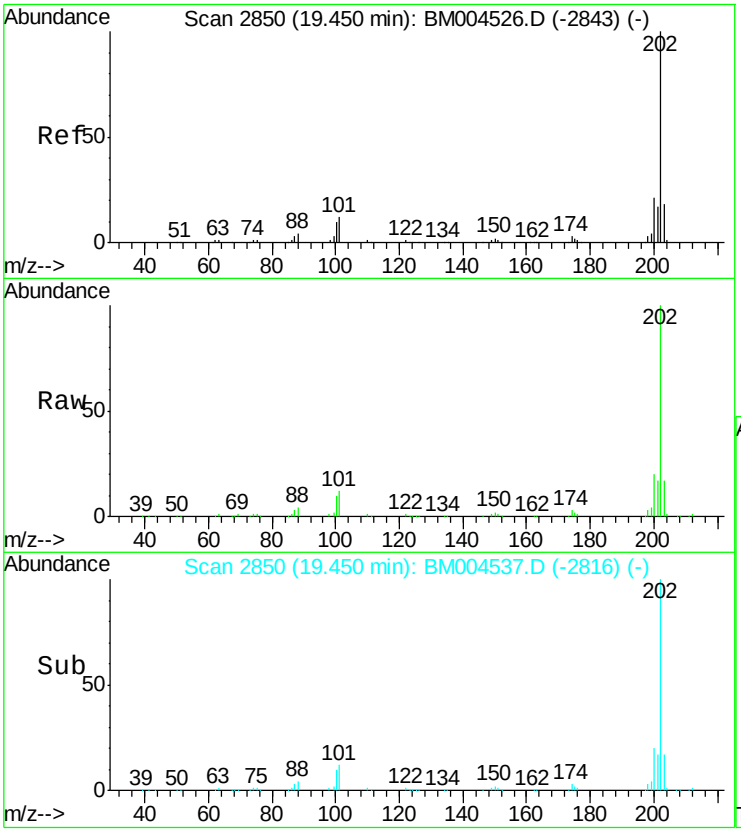


#69
Pentachlorophenol
Concen: 31.40 ng/ul
RT: 16.68 min Scan# 2379
Delta R.T. 0.00 min
Lab File: BM004537.D
Acq: 03 Mar 2016 17:49

Tgt Ion:266 Resp: 17535

Ion	Ratio	Lower	Upper
266	100		
264	61.9	50.5	75.7
268	63.7	50.9	76.3



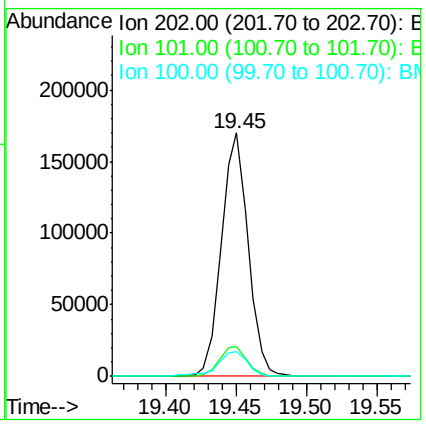


#80
Pyrene
Concen: 26.00 ng/ul
RT: 19.45 min Scan# 2850
Delta R.T. -0.00 min
Lab File: BM004537.D
Acq: 03 Mar 2016 17:49

Instrument :
BNA_M
ClientSampleId :
H0075MS

Tgt Ion:202 Resp: 223193

Ion	Ratio	Lower	Upper
202	100		
101	12.3	10.2	15.2
100	10.2	8.5	12.7



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004537.D
Acq On : 03 Mar 2016 17:49
Operator : SJ/UM
Sample : H1584-13MS
Misc :
ALS Vial : 15 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H0075MS

Quant Time: Mar 04 04:03:05 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	19547	20.00	ng/ul	0.00
18) Naphthalene-d8	10.38	136	82449	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	46137	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.01	188	105421	20.00	ng/ul	0.00
78) Chrysene-d12	21.23	240	118286	20.00	ng/ul	0.00
86) Perylene-d12	23.44	264	118799	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.06	96	377	1.04	ng/uL	0.00
5) Phenol-d5	6.79	99	9073	5.76	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	6.93	67	21828	27.50	ng/ul	0.00
9) 2-Chlorophenol-d4	7.13	132	32005	22.79	ng/ul	0.00
13) 4-Methylphenol-d8	8.33	113	17291	12.46	ng/ul	0.00
19) Nitrobenzene-d5	8.76	128	18600	30.19	ng/ul	0.00
22) 2-Nitrophenol-d4	9.47	143	21078	29.88	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.02	165	33261	26.06	ng/ul	0.00
29) 4-Chloroaniline-d4	0.00	131	0	0.00	ng/ul	
44) Dimethylphthalate-d6	13.67	166	119669	31.18	ng/ul	0.00
47) Acenaphthylene-d8	13.94	160	143080	30.83	ng/ul	0.00
52) 4-Nitrophenol-d4	14.54	143	2016	3.56	ng/ul	0.04
58) Fluorene-d10	15.26	176	105282	31.63	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	15.41	200	16865	24.64	ng/ul	0.00
71) Anthracene-d10	17.11	188	164787	31.95	ng/ul	0.00
79) Pyrene-d10	19.42	212	182290	28.66	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.30	264	189123	29.92	ng/ul	0.00
Target Compounds						Qvalue
6) Phenol	6.82	94	9255	5.55	ng/ul	94
10) 2-Chlorophenol	7.16	128	30193	20.59	ng/ul	97
15) N-Nitroso-di-n-propylamine	8.40	70	23820	23.27	ng/ul	93
33) 4-Chloro-3-methylphenol	11.70	107	29768	20.17	ng/ul	95
50) Acenaphthene	14.32	153	97028	28.48	ng/ul	99
53) 4-Nitrophenol	14.56	109	1026	2.64	ng/ul	84
55) 2,4-Dinitrotoluene	14.66	165	32121	27.17	ng/ul	89
69) Pentachlorophenol	16.68	266	17535	31.40	ng/ul	99
80) Pyrene	19.45	202	223193	26.00	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0075MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H1584-14MSD
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004538.D
% Solids :
Date Received : 02/26/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	5.4	J
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	21	
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	25	
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	21	
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0075MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H1584-14MSD
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004538.D
% Solids :
Date Received : 02/26/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	29	
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	2.4	J
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	29	
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	35	
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H0075MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46018
MA No. : SDG No.: H0001
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H1584-14MSD
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM004538.D
% Solids :
Date Received : 02/26/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 02/26/2016
GC Column : ID : (mm)
Date Analyzed : 03/03/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	27	
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

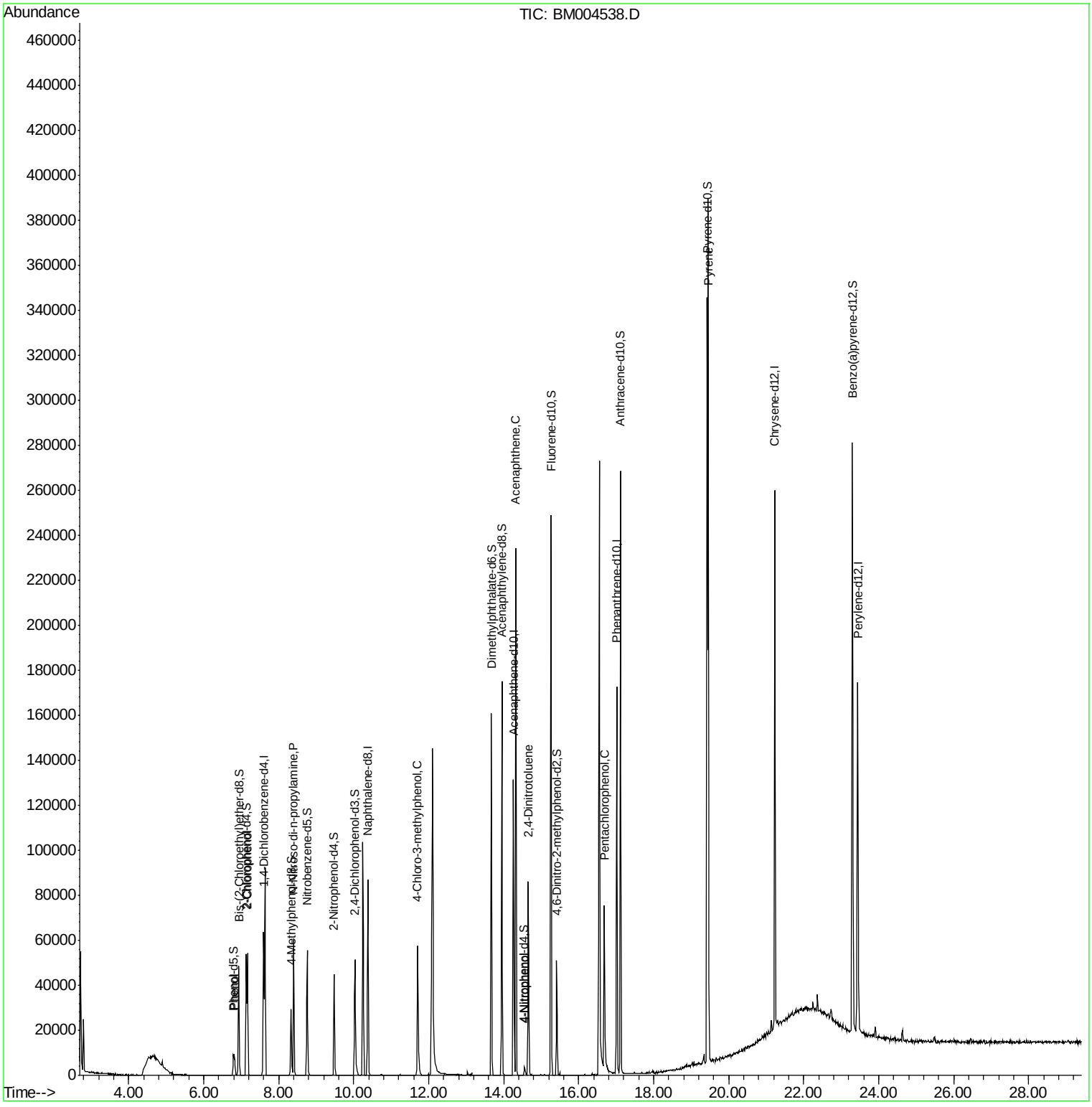
Quantitation Report (QT Reviewed)

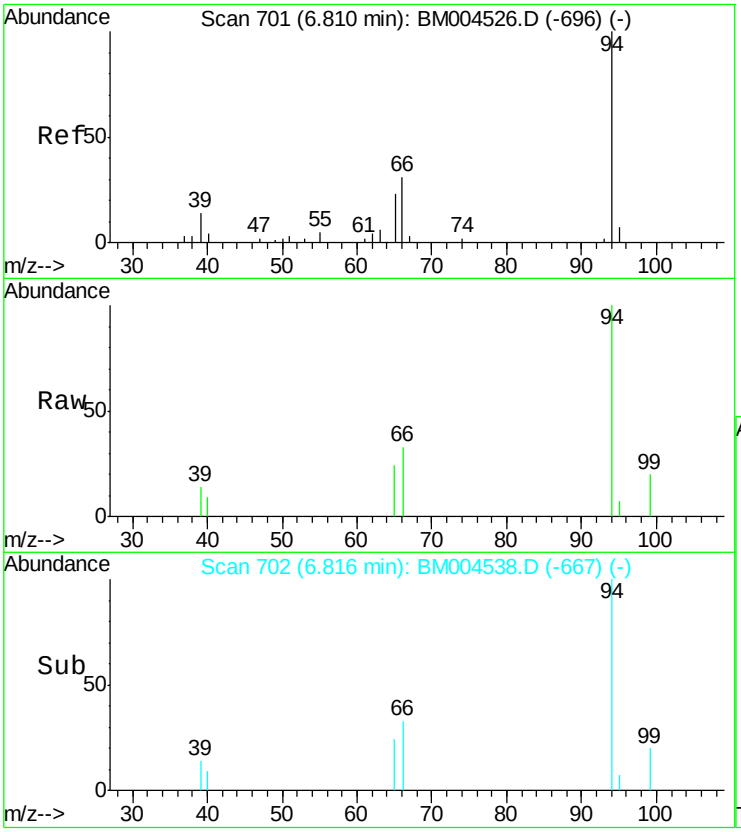
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004538.D
Acq On : 03 Mar 2016 18:25
Operator : SJ/UM
Sample : H1584-14MSD
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 04 04:25:42 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H0075MSD

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:59 PM

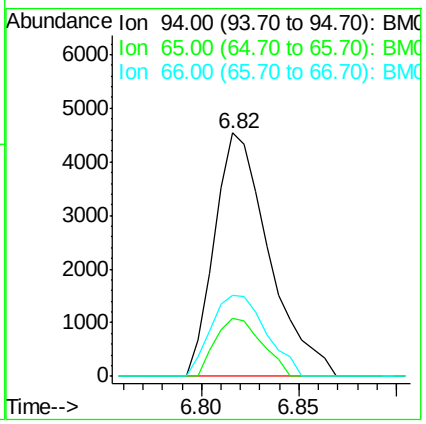




#6
Phenol
Concen: 5.43 ng/ul
RT: 6.82 min Scan# 702
Delta R.T. 0.01 min
Lab File: BM004538.D
Acq: 03 Mar 2016 18:25

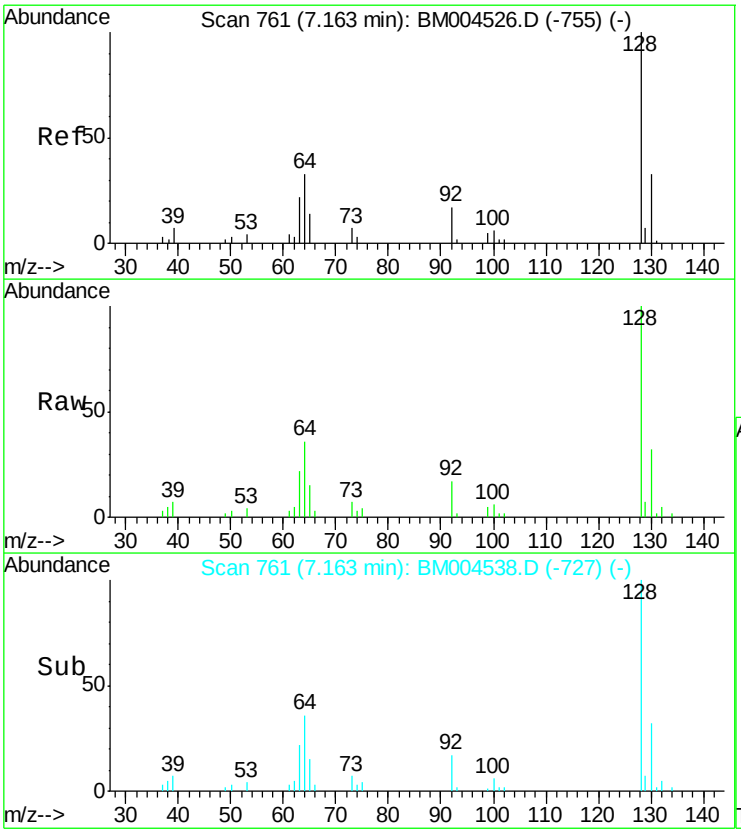
Tgt Ion: 94 Resp: 8806

Ion	Ratio	Lower	Upper
94	100		
65	23.9	21.0	31.6
66	33.4	29.3	43.9



Instrument :
BNA_M
ClientSampleId :
H0075MSD

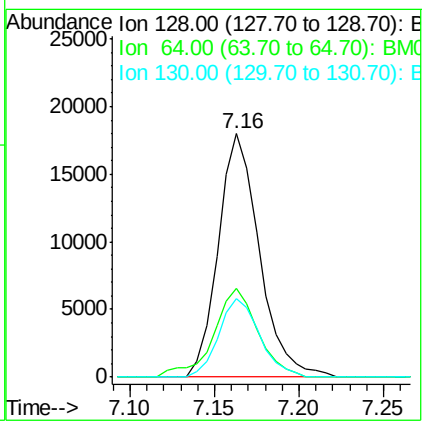
Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:59 PM

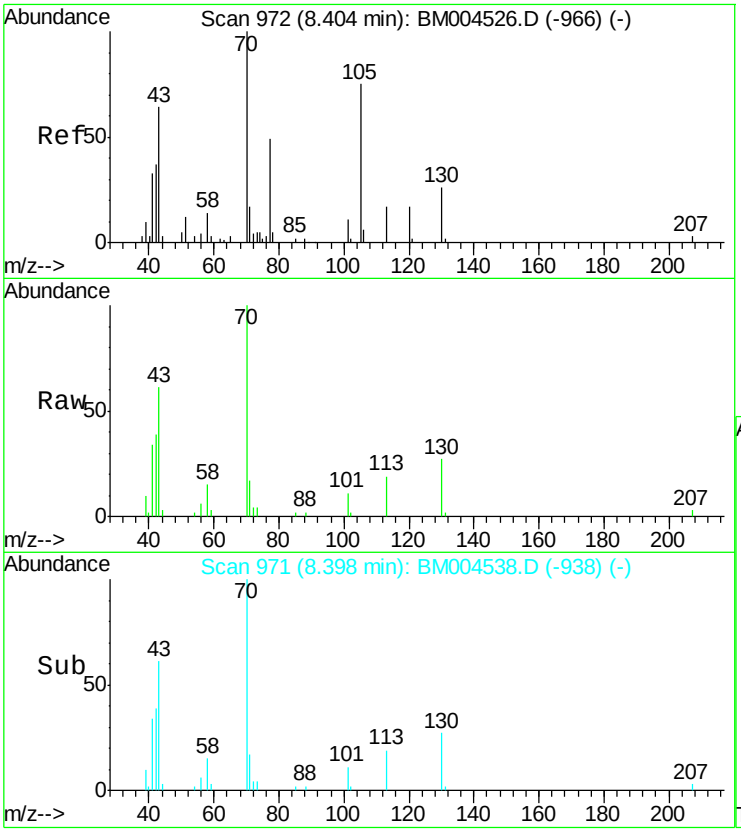


#10
2-Chlorophenol
Concen: 21.33 ng/ul
RT: 7.16 min Scan# 761
Delta R.T. 0.00 min
Lab File: BM004538.D
Acq: 03 Mar 2016 18:25

Tgt Ion:128 Resp: 30469

Ion	Ratio	Lower	Upper
128	100		
64	36.3	31.9	47.9
130	32.1	25.6	38.4

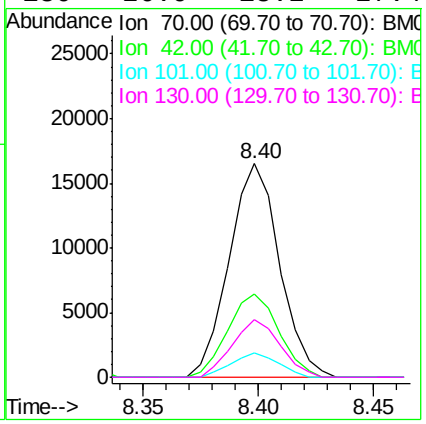




#15
N-Nitroso-di-n-propylamine
Concen: 25.14 ng/ul
RT: 8.40 min Scan# 971
Delta R.T. -0.01 min
Lab File: BM004538.D
Acq: 03 Mar 2016 18:25

Tgt Ion: 70 Resp: 25076

Ion	Ratio	Lower	Upper
70	100		
42	39.0	35.4	53.0
101	11.4	8.4	12.6
130	26.9	18.2	27.4



Instrument :
BNA_M
ClientSampleId :
H0075MSD

Manual Integrations APPROVED
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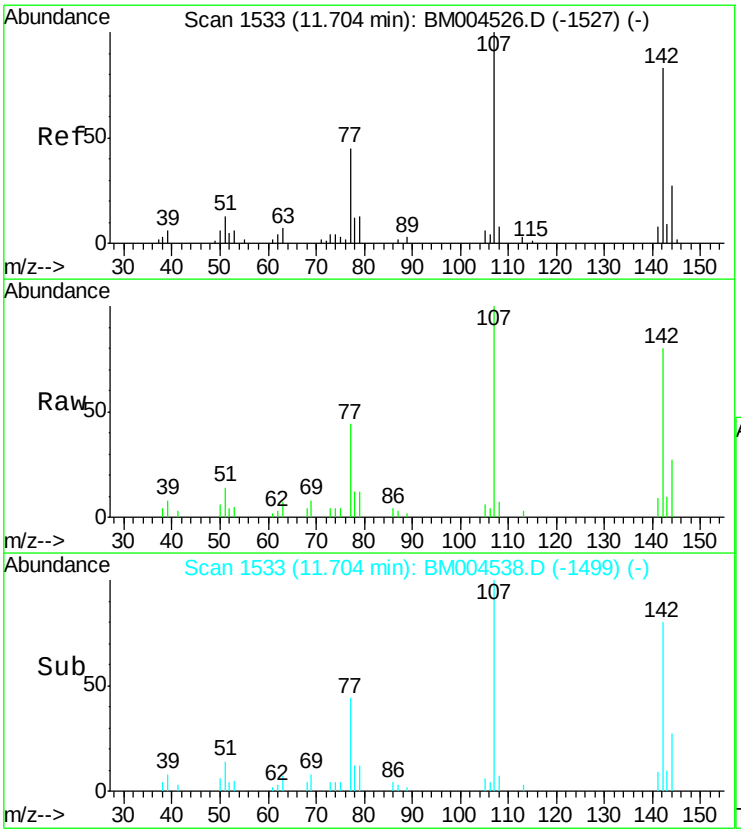
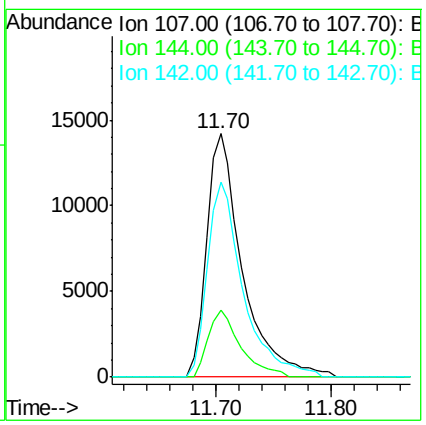
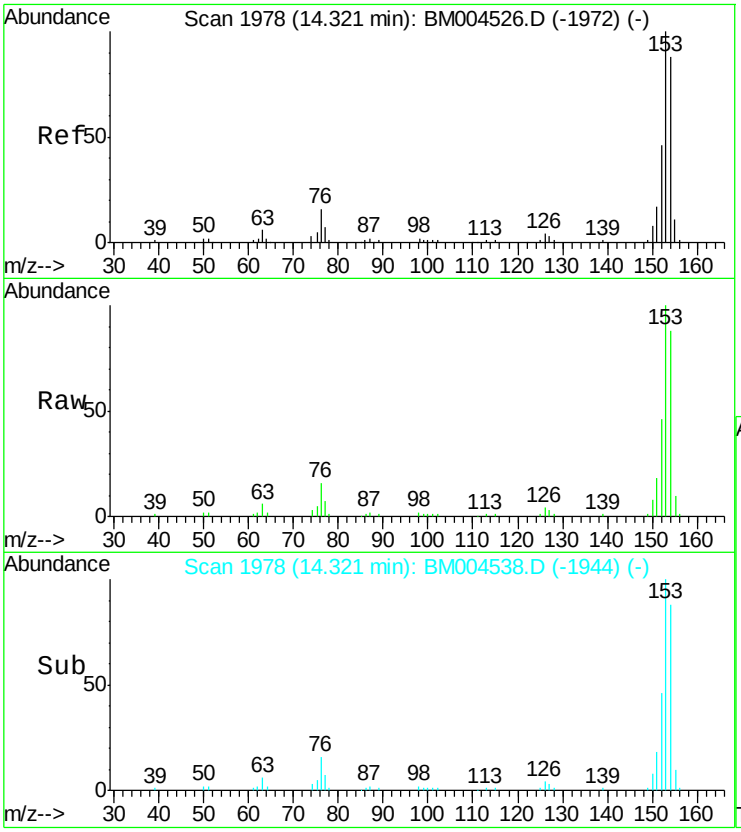


#33
4-Chloro-3-methylphenol
Concen: 21.05 ng/ul
RT: 11.70 min Scan# 1533
Delta R.T. 0.00 min
Lab File: BM004538.D
Acq: 03 Mar 2016 18:25

Tgt Ion:107 Resp: 30551

Ion	Ratio	Lower	Upper
107	100		
144	27.5	20.4	30.6
142	80.1	62.5	93.7

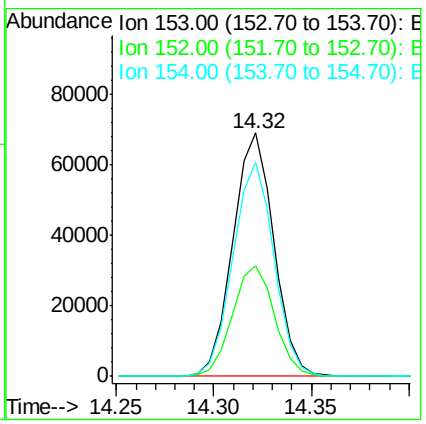




#50
Acenaphthene
Concen: 29.35 ng/ul
RT: 14.32 min Scan# 1978
Delta R.T. 0.00 min
Lab File: BM004538.D
Acq: 03 Mar 2016 18:25

Tgt Ion:153 Resp: 100363

Ion	Ratio	Lower	Upper
153	100		
152	45.6	38.3	57.5
154	88.2	71.8	107.8



Instrument :
BNA_M
ClientSampleId :
H0075MSD

Manual Integrations APPROVED
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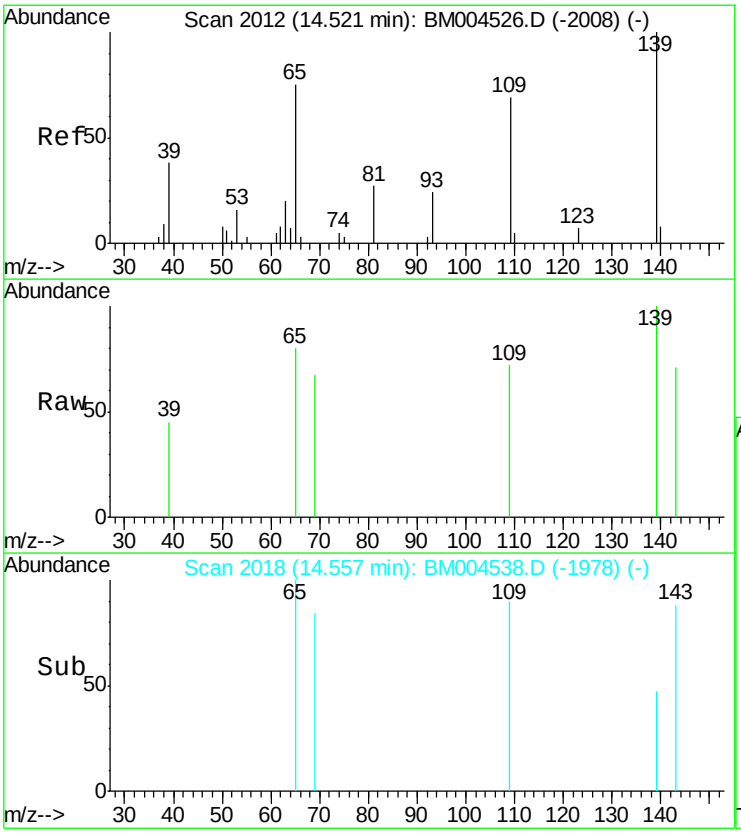
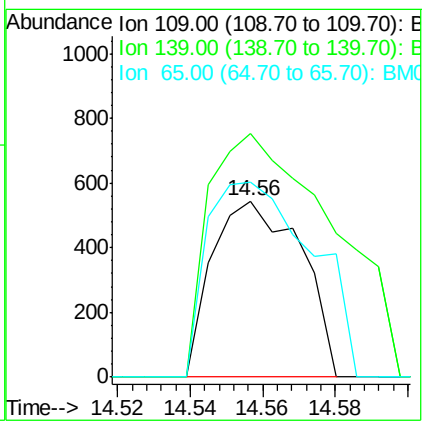
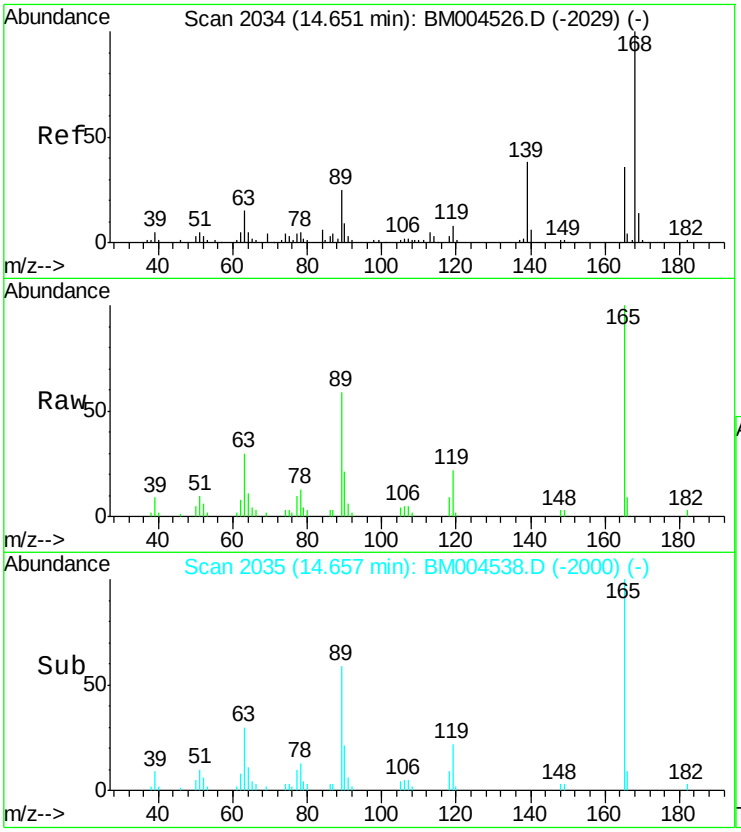


#53
4-Nitrophenol
Concen: 2.37 ng/ul
RT: 14.56 min Scan# 2018
Delta R.T. 0.04 min
Lab File: BM004538.D
Acq: 03 Mar 2016 18:25

Tgt Ion:109 Resp: 927

Ion	Ratio	Lower	Upper
109	100		
139	138.2	103.7	155.5
65	110.6	89.4	134.2

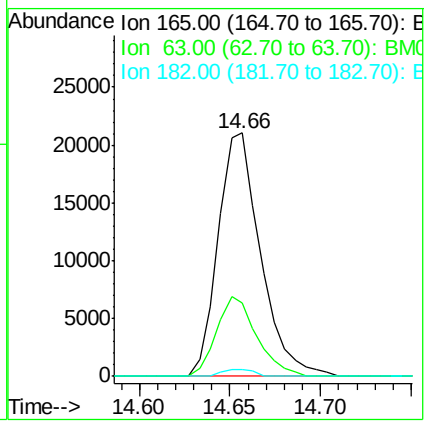




#55
2,4-Dinitrotoluene
Concen: 28.87 ng/ul
RT: 14.66 min Scan# 2035
Delta R.T. 0.01 min
Lab File: BM004538.D
Acq: 03 Mar 2016 18:25

Tgt Ion:165 Resp: 34261

Ion	Ratio	Lower	Upper
165	100		
63	30.3	29.8	44.6
182	3.1	2.2	3.4



Instrument :
BNA_M
ClientSampleId :
H0075MSD

Manual Integrations APPROVED
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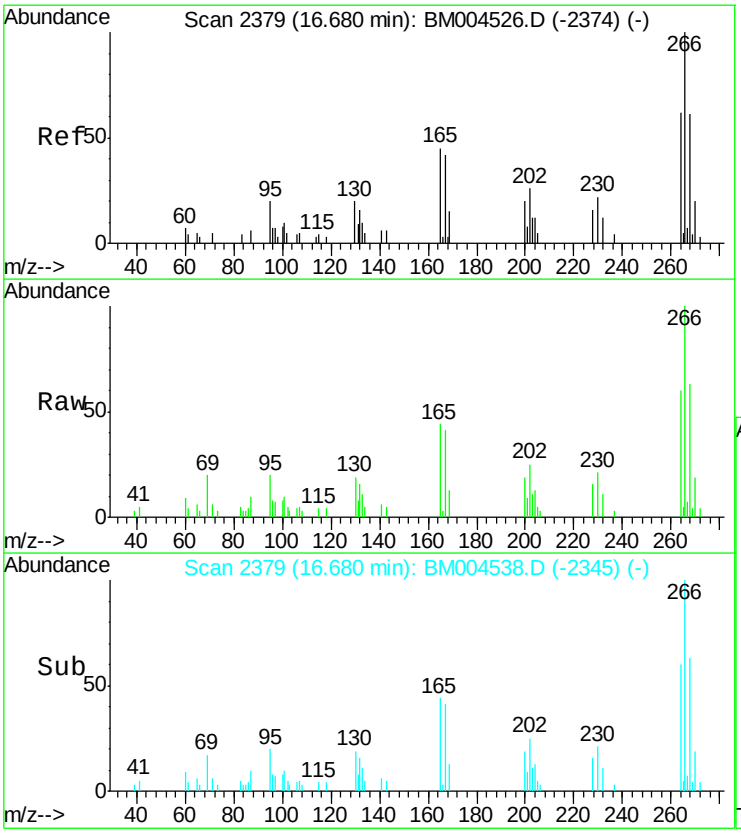
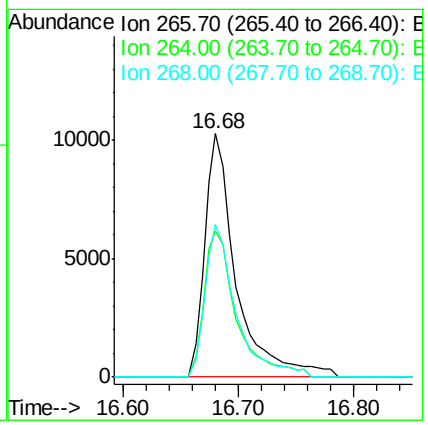
3/4/2016 4:20:59 PM

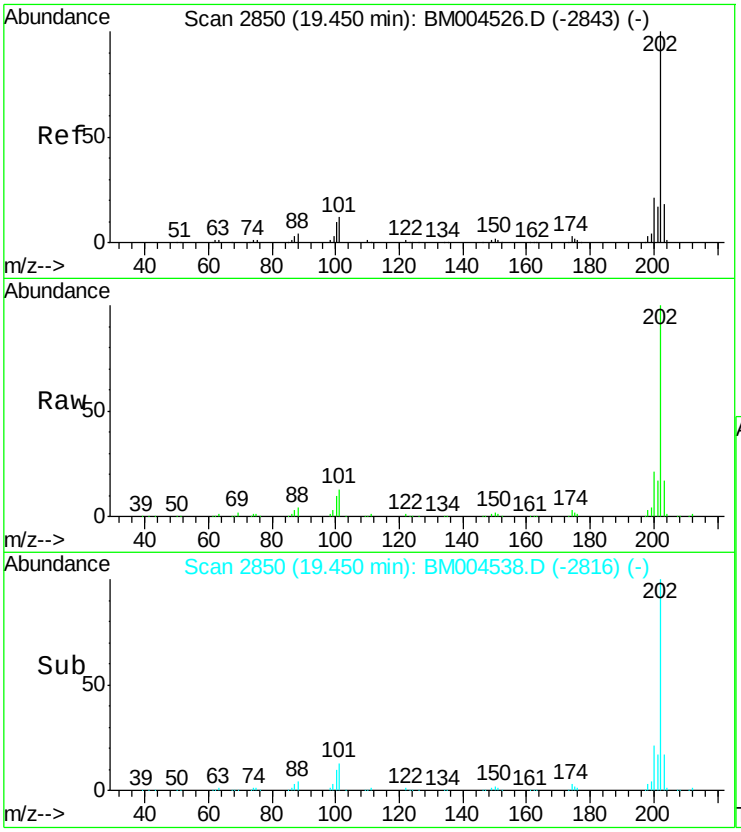


#69
Pentachlorophenol
Concen: 34.98 ng/ul
RT: 16.68 min Scan# 2379
Delta R.T. 0.00 min
Lab File: BM004538.D
Acq: 03 Mar 2016 18:25

Tgt Ion:266 Resp: 19512

Ion	Ratio	Lower	Upper
266	100		
264	60.3	50.5	75.7
268	62.6	50.9	76.3

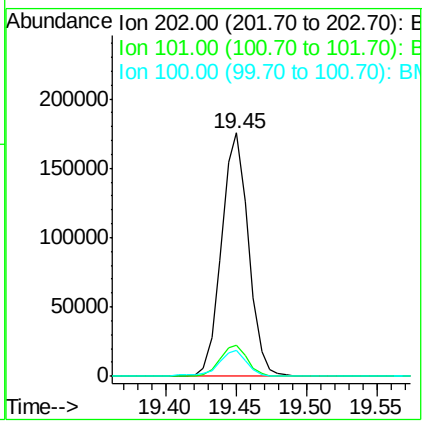




#80
Pyrene
Concen: 26.73 ng/ul
RT: 19.45 min Scan# 2850
Delta R.T. 0.00 min
Lab File: BM004538.D
Acq: 03 Mar 2016 18:25

Tgt Ion:202 Resp: 232403

Ion	Ratio	Lower	Upper
202	100		
101	12.6	10.2	15.2
100	10.4	8.5	12.7



Instrument :
BNA_M
ClientSampleId :
H0075MSD

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:59 PM

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004538.D
Acq On : 03 Mar 2016 18:25
Operator : SJ/UM
Sample : H1584-14MSD
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 04 04:25:42 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H0075MSD

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	19042	20.00	ng/ul	0.00
18) Naphthalene-d8	10.37	136	81060	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	46309	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.01	188	105301	20.00	ng/ul	0.00
78) Chrysene-d12	21.23	240	119808	20.00	ng/ul	0.00
86) Perylene-d12	23.44	264	116298	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0	0.00	ng/uL	
5) Phenol-d5	6.79	99	8322	5.42	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	6.93	67	21006	27.17	ng/ul	0.00
9) 2-Chlorophenol-d4	7.13	132	30306	22.15	ng/ul	0.00
13) 4-Methylphenol-d8	8.33	113	15582	11.52	ng/ul	0.00
19) Nitrobenzene-d5	8.76	128	18099	29.88	ng/ul	0.00
22) 2-Nitrophenol-d4	9.47	143	19965	28.79	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.02	165	31551	25.15	ng/ul	0.00
29) 4-Chloroaniline-d4	0.00	131	0	0.00	ng/ul	
44) Dimethylphthalate-d6	13.67	166	115933	30.10	ng/ul	0.00
47) Acenaphthylene-d8	13.94	160	137159	29.45	ng/ul	0.00
52) 4-Nitrophenol-d4	14.54	143	1847m	3.25	ng/ul	0.04
58) Fluorene-d10	15.26	176	101342	30.33	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	15.41	200	16581	24.25	ng/ul	0.00
71) Anthracene-d10	17.11	188	159452	30.95	ng/ul	0.00
79) Pyrene-d10	19.42	212	177518	27.55	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.30	264	183740	29.70	ng/ul	0.00
Target Compounds						Qvalue
6) Phenol	6.82	94	8806	5.43	ng/ul	95
10) 2-Chlorophenol	7.16	128	30469	21.33	ng/ul	97
15) N-Nitroso-di-n-propylamine	8.40	70	25076	25.14	ng/ul	93
33) 4-Chloro-3-methylphenol	11.70	107	30551	21.05	ng/ul	97
50) Acenaphthene	14.32	153	100363	29.35	ng/ul	98
53) 4-Nitrophenol	14.56	109	927	2.37	ng/ul	96
55) 2,4-Dinitrotoluene	14.66	165	34261	28.87	ng/ul	89
69) Pentachlorophenol	16.68	266	19512	34.98	ng/ul	98
80) Pyrene	19.45	202	232403	26.73	ng/ul	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004538.D
Acq On : 03 Mar 2016 18:25
Operator : SJ/UM
Sample : H1584-14MSD
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 04 04:25:42 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H0075MSD

Manual Integrations APPROVED
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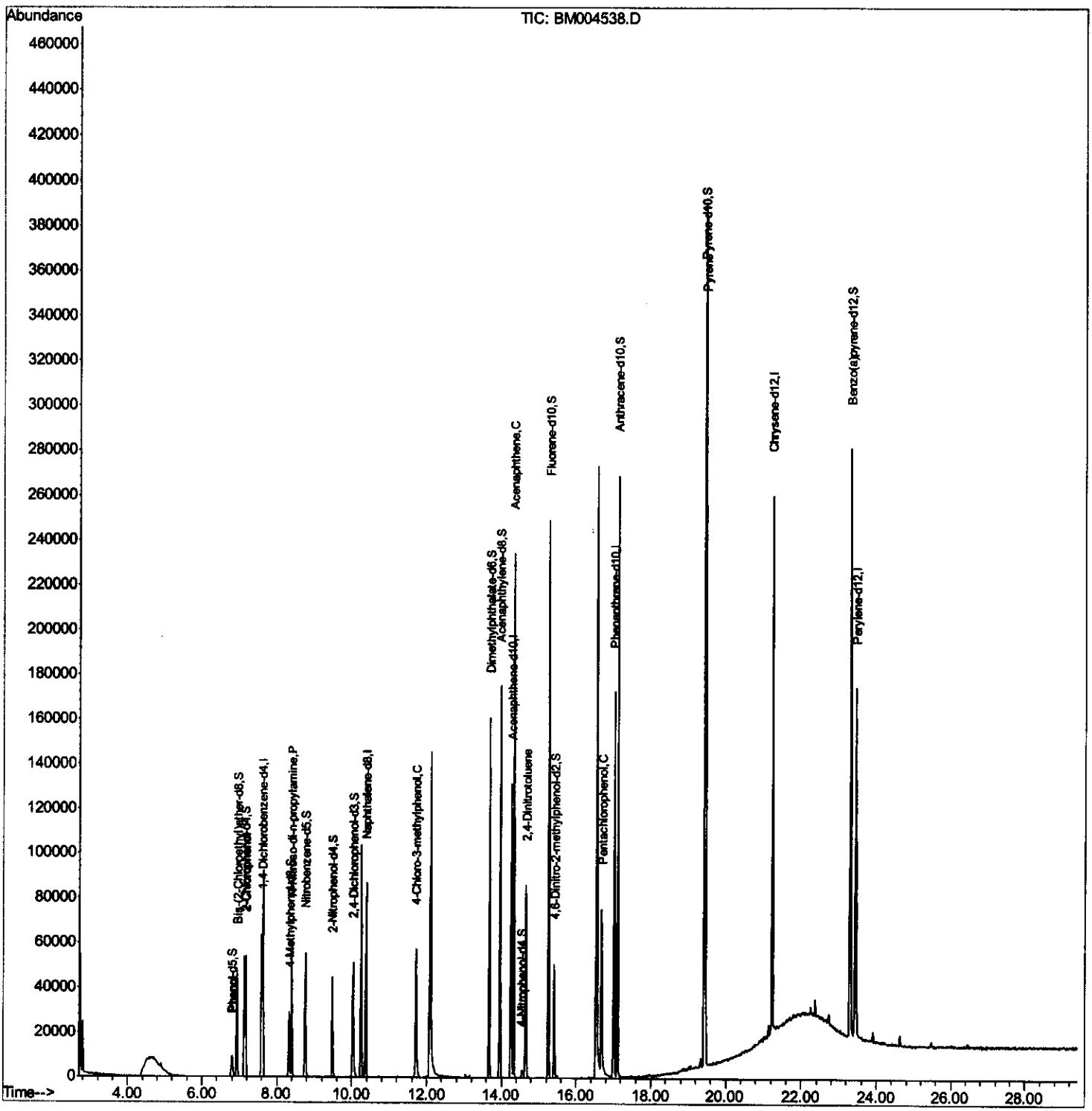
3/4/2016 4:20:59 PM



Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004538.D
Acq On : 03 Mar 2016 18:25
Operator : SJ/UM
Sample : H1584-14MSD
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 04 04:03:16 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H0075MSD

Manual Integrations APPROVED
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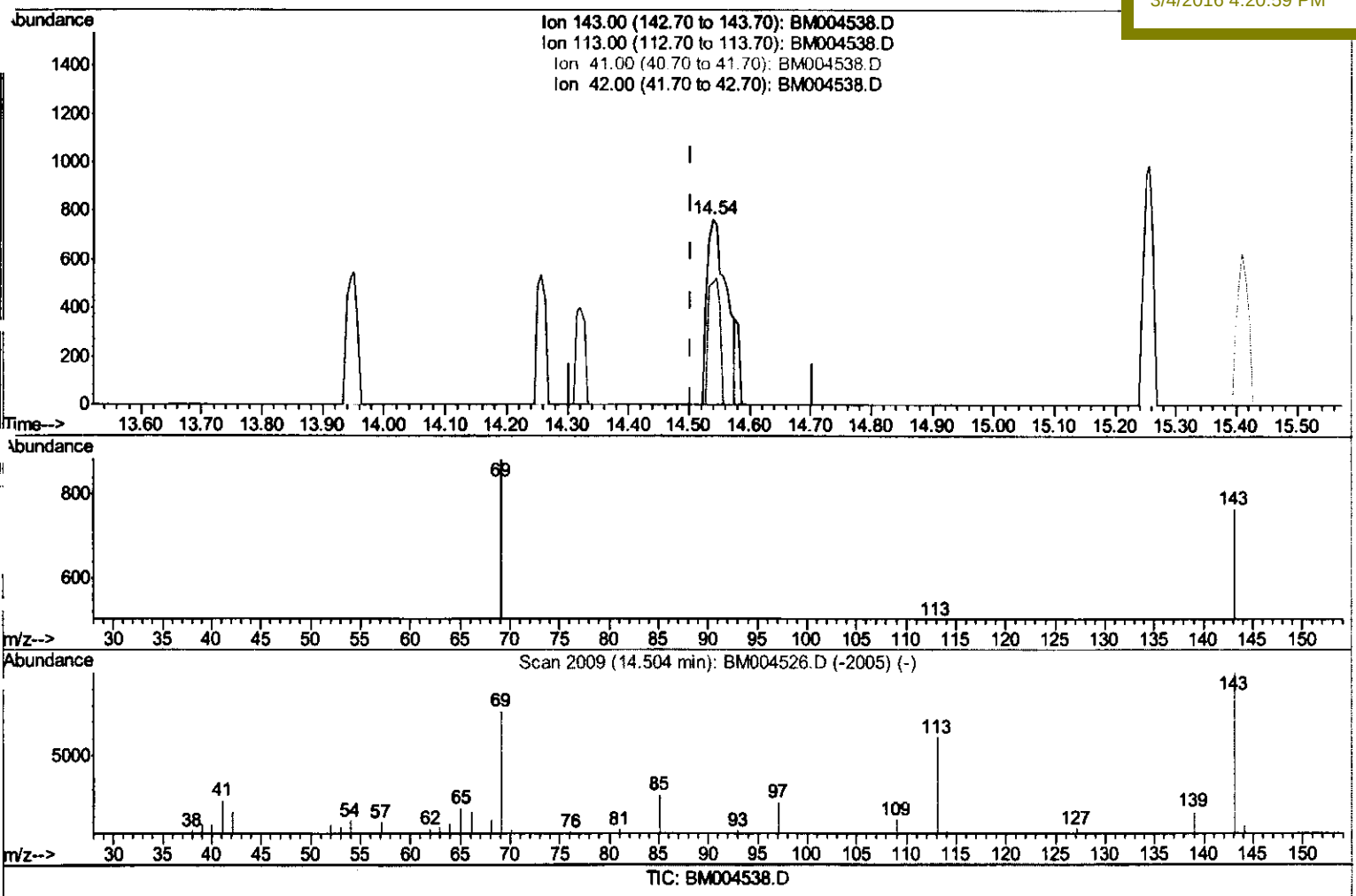
3/4/2016 4:20:59 PM



TIC: BM004538.D

(52) 4-Nitrophenol-d4 (S)

14.539min (+0.035) 3.04ng/ul

response 1728

Ion	Exp%	Act%
143.00	100	100
113.00	75.10	65.71
41.00	28.80	0.00#
42.00	19.10	0.00#

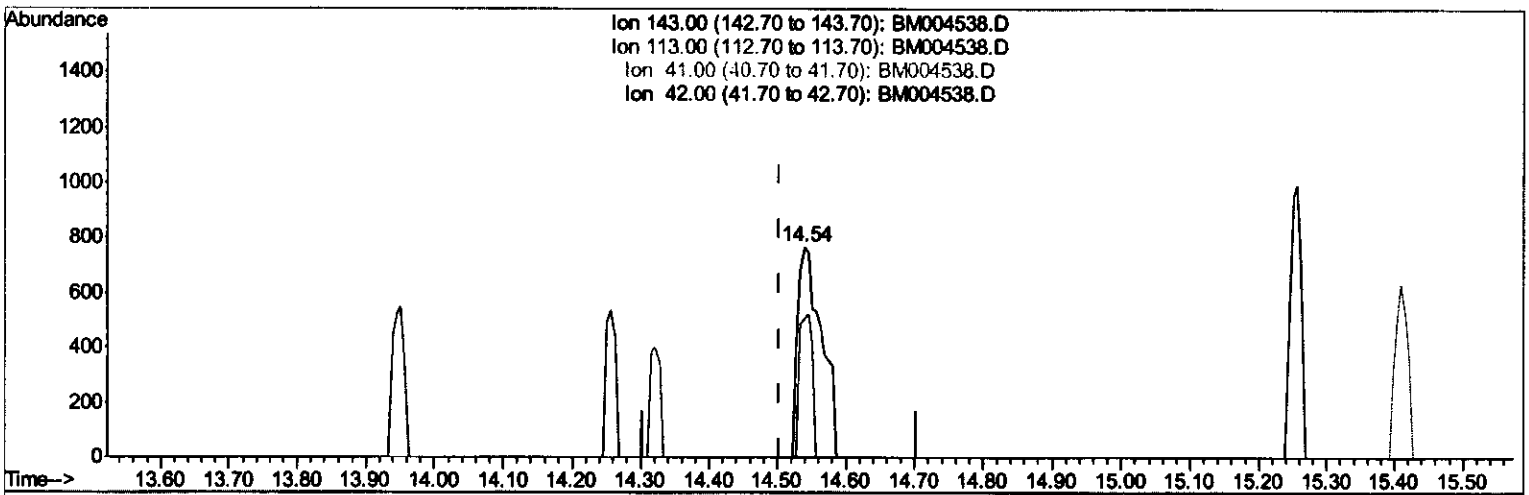
Quantitation Report (Qedit)

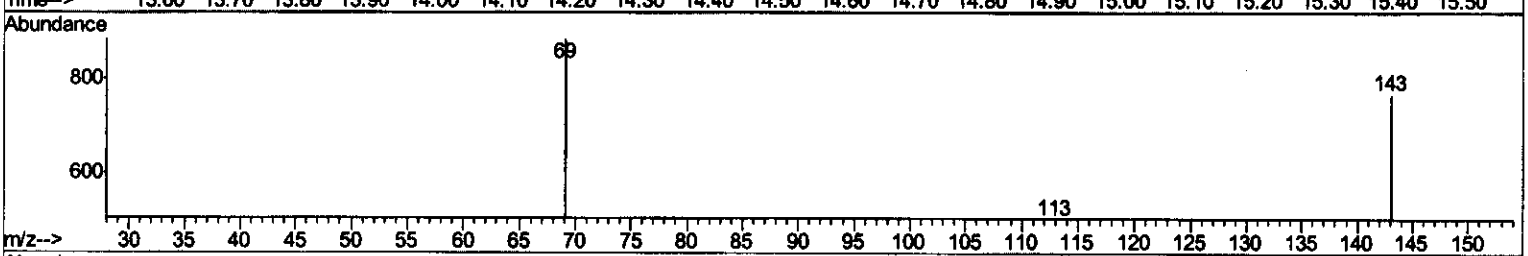
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004538.D
Acq On : 03 Mar 2016 18:25
Operator : SJ/UM
Sample : H1584-14MSD
Misc :
ALS Vial : 16 Sample Multiplier: 1

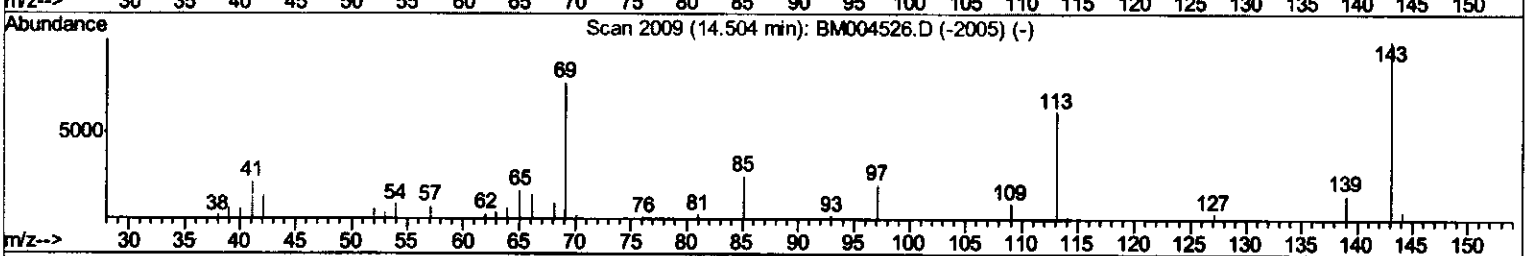
Quant Time: Mar 04 04:03:16 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H0075MSD

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:59 PM







TIC: BM004538.D

(52) 4-Nitrophenol-d4 (S)

14.539min (+0.035) 3.25ng/ul m

response 1847

SJ 03/07/16

Ion	Exp%	Act%
143.00	100	100
113.00	75.10	65.71
41.00	28.80	0.00#
42.00	19.10	0.00#

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM030316\
Data File : BM004538.D
Acq On : 03 Mar 2016 18:25
Operator : SJ/UM
Sample : H1584-14MSD
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 04 04:25:42 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM030316.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu Mar 03 13:26:11 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H0075MSD

Manual Integrations APPROVED
UMANGI
3/4/2016 4:20:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.59	152	19042	20.00	ng/ul	0.00
18) Naphthalene-d8	10.37	136	81060	20.00	ng/ul	0.00
36) Acenaphthene-d10	14.26	164	46309	20.00	ng/ul	0.00
62) Phenanthrene-d10	17.01	188	105301	20.00	ng/ul	0.00
78) Chrysene-d12	21.23	240	119808	20.00	ng/ul	0.00
86) Perylene-d12	23.44	264	116298	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0	0.00	ng/uL	
5) Phenol-d5	6.79	99	8322	5.42	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	6.93	67	21006	27.17	ng/ul	0.00
9) 2-Chlorophenol-d4	7.13	132	30306	22.15	ng/ul	0.00
13) 4-Methylphenol-d8	8.33	113	15582	11.52	ng/ul	0.00
19) Nitrobenzene-d5	8.76	128	18099	29.88	ng/ul	0.00
22) 2-Nitrophenol-d4	9.47	143	19965	28.79	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.02	165	31551	25.15	ng/ul	0.00
29) 4-Chloroaniline-d4	0.00	131	0	0.00	ng/ul	
44) Dimethylphthalate-d6	13.67	166	115933	30.10	ng/ul	0.00
47) Acenaphthylene-d8	13.94	160	137159	29.45	ng/ul	0.00
52) 4-Nitrophenol-d4	14.54	143	1847m	3.25	ng/ul	0.04
58) Fluorene-d10	15.26	176	101342	30.33	ng/ul	0.00
63) 4,6-Dinitro-2-methylphenol	15.41	200	16581	24.25	ng/ul	0.00
71) Anthracene-d10	17.11	188	159452	30.95	ng/ul	0.00
79) Pyrene-d10	19.42	212	177518	27.55	ng/ul	0.00
90) Benzo(a)pyrene-d12	23.30	264	183740	29.70	ng/ul	0.00
Target Compounds						Qvalue
6) Phenol	6.82	94	8806	5.43	ng/ul	95
10) 2-Chlorophenol	7.16	128	30469	21.33	ng/ul	97
15) N-Nitroso-di-n-propylamine	8.40	70	25076	25.14	ng/ul	93
33) 4-Chloro-3-methylphenol	11.70	107	30551	21.05	ng/ul	97
50) Acenaphthene	14.32	153	100363	29.35	ng/ul	98
53) 4-Nitrophenol	14.56	109	927	2.37	ng/ul	96
55) 2,4-Dinitrotoluene	14.66	165	34261	28.87	ng/ul	89
69) Pentachlorophenol	16.68	266	19512	34.98	ng/ul	98
80) Pyrene	19.45	202	232403	26.73	ng/ul	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

SJ 03/07/16

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Prep Standard - Chemical Standard Summary

Order ID : H1584

Test : VOC-Low Level -15

Prepbatch ID :

Sequence ID/Qc Batch ID: vi022916,VI030116,VR022516,VR022616,VR030116,VR030216,VI022616,VR022516,VR030116

Standard ID :
VP47998,VP50495,VP50497,VP50538,VP50539,VP50744,VP50745,VP50746,VP50747,VP50748,VP50749,VP50750,VP50751,VP50789,VP50790,VP50791,VP50792,VP50804,VP50806,VP50807,VP50808,VP50809,VP50810,VP50841,VP50842,VP50843,VP50853,VP50854,VP50855,VP50856,VP50857,VP50858,VP50859,VP50860,VP50861,VP50862,VP50863,VP50894,VP50897,VP50898,

Chemical ID :
MS,V1456,V4923,V5218,V5738,V5888,V5907,V5948,V6099,V6160,V6285,V6319,V6320,V6321,V6405,V6417,V6487,V6489,V6509,

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
218	BFB, 25PPM	VP47998	11/13/2015	05/13/2016	sam

FROM 0.500ml of V5218 + 49.500ml of V6285 = Final Quantity: 50.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1897	Trace surrogate mix 25 ppm	VP50495	02/11/2016	03/12/2016	sam

FROM 0.500ml of V6099 + 0.800ml of V6319 + 1.400ml of V6320 + 1.400ml of V6321 + 1.400ml of V6509 + 4.500ml of V6487 = Final Quantity: 10.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1896	Trace internal standard 50 ppm	VP50497	02/11/2016	03/12/2016	sam

FROM 0.100ml of V5738 + 4.900ml of V6487 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
2200	SOM01.2 trace MS intermediate std, 25PPM	VP50538	02/12/2016	03/14/2016	sam

FROM 0.050ml of V4923 + 4.950ml of V6487 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1721	SOM01.2 TRACE-Calibration Mix,25 PPM	VP50539	02/15/2016	03/16/2016	sam

FROM 0.125ml of V5888 + 0.125ml of V5948 + 0.125ml of V6160 + 0.250ml of V6405 + 0.250ml of V6417 + 0.500ml of V5907 + 8.625ml of V6489 = Final Quantity: 10.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1722	0.5 PPB ICC SOM01.2 Trace	VP50744	02/25/2016	02/26/2016	lisa

FROM 39.990ml of V1456 + 0.001ml of VP50495 + 0.001ml of VP50539 + 0.004ml of VP50497 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1723	1 PPB ICC SOM01.2 Trace	VP50745	02/25/2016	02/26/2016	lisa

FROM 39.990ml of V1456 + 0.002ml of VP50495 + 0.002ml of VP50539 + 0.004ml of VP50497 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1724	5 PPB ICC SOM01.2 Trace	VP50746	02/25/2016	02/26/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1725	10 PPB ICC SOM01.2 Trace	VP50747	02/25/2016	02/26/2016	lisa

FROM 39.960ml of V1456 + 0.004ml of VP50497 + 0.016ml of VP50495 + 0.016ml of VP50539 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1726	20 PPB ICC SOM01.2 Trace	VP50748	02/25/2016	02/26/2016	lisa

FROM 39.930ml of V1456 + 0.004ml of VP50497 + 0.032ml of VP50495 + 0.032ml of VP50539 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP50749	02/25/2016	02/26/2016	lisa

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP50750	02/25/2016	02/26/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP50751	02/25/2016	02/26/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP50789	02/26/2016	02/27/2016	sam

FROM 39.990ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP50790	02/26/2016	02/27/2016	sam

FROM 39.990ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP50791	02/26/2016	02/27/2016	sam

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP50792	02/26/2016	02/27/2016	sam

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3315	MS/MSD for Trace Method	VP50804	02/26/2016	02/27/2016	sam

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50538 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1722	0.5 PPB ICC SOM01.2 Trace	VP50806	02/26/2016	02/27/2016	sam

FROM 39.990ml of V1456 + 0.001ml of VP50495 + 0.001ml of VP50539 + 0.004ml of VP50497 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1723	1 PPB ICC SOM01.2 Trace	VP50807	02/26/2016	02/27/2016	sam

FROM 39.990ml of V1456 + 0.002ml of VP50495 + 0.002ml of VP50539 + 0.004ml of VP50497 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1724	5 PPB ICC SOM01.2 Trace	VP50808	02/26/2016	02/27/2016	sam

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1725	10 PPB ICC SOM01.2 Trace	VP50809	02/26/2016	02/27/2016	sam

FROM 39.960ml of V1456 + 0.004ml of VP50497 + 0.016ml of VP50495 + 0.016ml of VP50539 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1726	20 PPB ICC SOM01.2 Trace	VP50810	02/26/2016	02/27/2016	sam

FROM 39.930ml of V1456 + 0.004ml of VP50497 + 0.032ml of VP50495 + 0.032ml of VP50539 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP50841	02/29/2016	03/01/2016	sam

FROM 39.990ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP50842	02/29/2016	03/01/2016	sam

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP50843	02/29/2016	03/01/2016	sam

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP50853	03/01/2016	03/02/2016	lisa

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP50854	03/01/2016	03/02/2016	lisa

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP50855	03/01/2016	03/02/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP50856	03/01/2016	03/02/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP50857	03/01/2016	03/02/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP50858	03/01/2016	03/02/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1722	0.5 PPB ICC SOM01.2 Trace	VP50859	03/01/2016	03/02/2016	lisa

FROM 39.990ml of V1456 + 0.001ml of VP50495 + 0.001ml of VP50539 + 0.004ml of VP50497 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1723	1 PPB ICC SOM01.2 Trace	VP50860	03/01/2016	03/02/2016	lisa

FROM 39.990ml of V1456 + 0.002ml of VP50495 + 0.002ml of VP50539 + 0.004ml of VP50497 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1724	5 PPB ICC SOM01.2 Trace	VP50861	03/01/2016	03/02/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1725	10 PPB ICC SOM01.2 Trace	VP50862	03/01/2016	03/02/2016	lisa

FROM 39.960ml of V1456 + 0.004ml of VP50497 + 0.016ml of VP50495 + 0.016ml of VP50539 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1726	20 PPB ICC SOM01.2 Trace	VP50863	03/01/2016	03/12/2016	lisa

FROM 39.930ml of V1456 + 0.004ml of VP50497 + 0.032ml of VP50495 + 0.032ml of VP50539 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP50894	03/02/2016	03/03/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP50897	03/02/2016	03/03/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP50898	03/02/2016	03/03/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP50497 + 0.008ml of VP50495 + 0.008ml of VP50539 = Final Quantity: 40.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	DIW / DI Water	DAILY	12/31/2019	03/01/2010 / apatel	03/02/2010 / apatel	V1456

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30005 / VOA Mix, CLP method Matrix Spike Std 2500uq/ml PTM, 1ml	A099332	11/30/2018	12/09/2015 / sam	03/06/2014 / sam	V4923

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30067 / BFB tuneing solution	A0102518	04/30/2019	11/13/2015 / sam	07/14/2014 / sam	V5218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30091 / VOA Mix, CLP method L/C Internal Std 2500uq/ml, PT&M, 1ml/ampul	A099377	10/31/2018	02/02/2016 / sam	03/27/2015 / sam	V5738

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30042 / VOA Mix,500 series method 502.2 Calibration Std #1 gases, 2000uq/ml, PTM, 1ml	A0110441	11/30/2021	02/15/2016 / sam	05/28/2015 / sam	V5888

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A0104748	07/31/2018	02/15/2016 / sam	05/28/2015 / sam	V5907

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30429 / 1,2,3-Trichloropropane Standard, 2,000 ug/ml	A0108463	01/31/2020	12/11/2015 / sam	06/04/2015 / sam	V5948

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30624 / VOA Stock Standard, OLC 3.2 VOA non-ketone, deuterated monitoring compounds, 1mL, 500ug/mL, Methanol-d	A0113615	08/31/2018	02/11/2016 / sam	09/11/2015 / sam	V6099

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30492 / VOA Mix, OLC 03.2 VOA Mega Mix, 1mL, 2000ug/mL, P&TM	A0102833	04/30/2017	02/15/2016 / sam	09/24/2015 / sam	V6160

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	118655	07/13/2017	11/13/2015 / sam	11/04/2015 / sam	V6285

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	03/31/2017	02/09/2016 / sam	11/04/2015 / sam	V6319

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	03/31/2017	02/11/2016 / sam	11/04/2015 / sam	V6320

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	03/31/2017	02/11/2016 / sam	11/04/2015 / sam	V6321

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31280 / Naphthalene, 1000 PPM in Methanol	A0111730	05/31/2021	02/10/2016 / sam	11/17/2015 / sam	V6405

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31081 / 1,3,5-Trichlorobenzene	A0109767	03/31/2020	02/15/2016 / sam	11/19/2015 / sam	V6417

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	127999	10/27/2017	02/04/2016 / sam	01/13/2016 / sam	V6487

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	127999	10/27/2017	02/15/2016 / sam	01/13/2016 / sam	V6489

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	03/31/2017	02/11/2016 / sam	01/14/2016 / sam	V6509

RESTEK CERTIFIED REFERENCE MATERIAL

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30492 **Lot No.:** A0102833

Description : OLC 03.2 VOA Mega Mix

OLC 03.2 VOA Mega Mix 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2017 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.: K=2)		
1	1,1,2-Trichlorotrifluoroethane (CFC-113)	2,006.1 µg/mL	+/- 11.7727	µg/mL	Gravimetric
	CAS # 76-13-1 (Lot Q9B-87)		+/- 106.7701	µg/mL	Unstressed
	Purity 98%		+/- 106.8878	µg/mL	Stressed
2	1,1-dichloroethene	2,001.3 µg/mL	+/- 15.4296	µg/mL	Gravimetric
	CAS # 75-35-4 (Lot 33096BKV)		+/- 106.9831	µg/mL	Unstressed
	Purity 99%		+/- 107.1000	µg/mL	Stressed
3	Methyl acetate	2,001.5 µg/mL	+/- 11.7459	µg/mL	Gravimetric
	CAS # 79-20-9 (Lot 56696JMV)		+/- 106.5274	µg/mL	Unstressed
	Purity 99%		+/- 106.6448	µg/mL	Stressed
4	Methylene chloride (dichloromethane)	2,001.8 µg/mL	+/- 15.4334	µg/mL	Gravimetric
	CAS # 75-09-2 (Lot SHBC7917V)		+/- 107.0098	µg/mL	Unstressed
	Purity 99%		+/- 107.1268	µg/mL	Stressed
5	Carbon disulfide	2,003.6 µg/mL	+/- 11.7583	µg/mL	Gravimetric
	CAS # 75-15-0 (Lot C30Y997)		+/- 106.6397	µg/mL	Unstressed
	Purity 98%		+/- 106.7573	µg/mL	Stressed
6	Methyl-tert-butyl ether (MTBE)	2,001.0 µg/mL	+/- 11.7430	µg/mL	Gravimetric
	CAS # 1634-04-4 (Lot SHBD2980V)		+/- 106.5008	µg/mL	Unstressed
	Purity 99%		+/- 106.6182	µg/mL	Stressed
7	trans-1,2-Dichloroethene	2,005.0 µg/mL	+/- 15.4585	µg/mL	Gravimetric
	CAS # 156-60-5 (Lot 09431AEV)		+/- 107.1836	µg/mL	Unstressed
	Purity 99%		+/- 107.3007	µg/mL	Stressed
8	1,1-Dichloroethane	2,003.0 µg/mL	+/- 15.4429	µg/mL	Gravimetric
	CAS # 75-34-3 (Lot Q179-33)		+/- 107.0752	µg/mL	Unstressed
	Purity 98%		+/- 107.1923	µg/mL	Stressed

25	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBD2073V)	2,000.2	µg/mL	+/- +/- +/-	15.4213 106.9257 107.0425	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	dibromochloromethane **CAS #** 124-48-1 **Purity** 98%	(Lot MKBP0459V)	2,000.4	µg/mL	+/- +/- +/-	15.4234 106.9403 107.0572	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	1,2-Dibromoethane (EDB) **CAS #** 106-93-4 **Purity** 99%	(Lot BCBH3877V)	2,004.0	µg/mL	+/- +/- +/-	11.7606 106.6604 106.7780	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Chlorobenzene **CAS #** 108-90-7 **Purity** 99%	(Lot SHBD3200V)	2,002.3	µg/mL	+/- +/- +/-	15.4373 107.0366 107.1536	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Ethylbenzene **CAS #** 100-41-4 **Purity** 99%	(Lot SHBC9001V)	2,005.0	µg/mL	+/- +/- +/-	11.7665 106.7137 106.8313	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot H08Y016)	1,005.5	µg/mL	+/- +/- +/-	5.9008 53.5165 53.5755	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	p-Xylene **CAS #** 106-42-3 **Purity** 99%	(Lot SHBC6261V)	1,004.0	µg/mL	+/- +/- +/-	5.8920 53.4367 53.4956	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	o-Xylene **CAS #** 95-47-6 **Purity** 99%	(Lot SHBC4667V)	2,000.0	µg/mL	+/- +/- +/-	11.7371 106.4475 106.5649	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	Styrene **CAS #** 100-42-5 **Purity** 99%	(Lot 10174567)	2,002.5	µg/mL	+/- +/- +/-	11.7518 106.5806 106.6981	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Isopropylbenzene (cumene) **CAS #** 98-82-8 **Purity** 99%	(Lot 10169400)	2,006.5	µg/mL	+/- +/- +/-	11.7753 106.7935 106.9112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	bromoform **CAS #** 75-25-2 **Purity** 99%	(Lot SHBC3410V)	2,005.1	µg/mL	+/- +/- +/-	15.4593 107.1889 107.3061	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	1,1,2,2-Tetrachloroethane **CAS #** 79-34-5 **Purity** 99%	(Lot I29W026)	2,001.9	µg/mL	+/- +/- +/-	15.4342 107.0152 107.1322	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBC1891V)	2,003.2	µg/mL	+/- +/- +/-	15.4448 107.0887 107.2057	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBL3891V)	2,007.4	µg/mL	+/- +/- +/-	15.4766 107.3092 107.4265	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot 68996CMV)	2,002.6	µg/mL	+/- +/- +/-	15.4400 107.0553 107.1723	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
40	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8 **Purity** 99%	(Lot FBL01)	2,000.5	µg/mL	+/- +/- +/-	11.7401 106.4742 106.5916	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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Catalog No. : 30006 **Lot No.:** A0104748

Description : VOA Calibration Mix #1

VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2017 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1 **Purity** 99%	(Lot SHBD6258V)	5,020.2 µg/mL	+/- 29.1879 µg/mL +/- 267.1640 µg/mL +/- 267.4586 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 **Purity** 99%	(Lot BCBH7802V)	5,019.2 µg/mL	+/- 29.1821 µg/mL +/- 267.1108 µg/mL +/- 267.4053 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 **Purity** 99%	(Lot SHBD0462V)	5,019.2 µg/mL	+/- 29.1821 µg/mL +/- 267.1108 µg/mL +/- 267.4053 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 **Purity** 99%	(Lot MKBK8325V)	5,020.1 µg/mL	+/- 29.1873 µg/mL +/- 267.1586 µg/mL +/- 267.4533 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

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Catalog No. : 30625 **Lot No.:** A0114355

Description : OLC 3.2 VOA Deuterated Monitoring Compounds

OLC 3.2 VOA Ketone Deuterated Monitoring Compounds 500µg/mL, Deuterium Oxide, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Butanone-d5 **CAS #** 24313-50-6 (Lot M276P24) **Purity** 99%	501.0 µg/mL	+/- 2.9758 +/- 26.6691 +/- 26.6985	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Hexanone-d5 **CAS #** 4840-82-8 (Lot I500P2) **Purity** 99%	501.0 µg/mL	+/- 2.9758 +/- 26.6691 +/- 26.6985	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Deuterium Oxide
CAS # 7789-20-0
Purity 99%

Methanol
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Material No.:9077-02
Batch No.: 0000118655
Manufactured Date:2015/07/16
Expiration Date:2017/07/13

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Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.3000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	0.1
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

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Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
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Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India. 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

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Methanol
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For Purge and Trap Analysis

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Material No.: 9077-02
Batch No.: 0000127999
Manufactured Date: 2015/10/30
Expiration Date: 2017/10/27

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.7000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	<0.01
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

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Performance Tested for Use in EPA Methods
500 Series for Drinking Water
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846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 11485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 11485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James T Ethier
Jamie Ethier
Vice President Global Quality

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Catalog No. : 30429 **Lot No.:** A0108463

Description : 1,2,3-Trichloropropane Standard

1,2,3-Trichloropropane 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2,3-Trichloropropane **CAS #** 96-18-4 (Lot 1428739V) **Purity** 99%	2,012.0 µg/mL	+/- 18.7105 µg/mL +/- 26.9814 µg/mL +/- 29.9140 µg/mL		Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 30624 **Lot No.:** A0113615

Description : SOM 01.1 VOA DMC Non-Ketones Standard

OLC 3.2 VOA Non-Ketone Deuterated Monitoring Compounds
500µg/mL, Methanol-OD, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Vinyl Chloride-d3 **CAS #** 6745-35-3 **Purity** 98%	(Lot PR-21820)	523.4 µg/mL	+/- 35.2305 +/- 35.5916 +/- 35.7499	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Chloroethane-d5 **CAS #** 19199-91-8 **Purity** 99%	(Lot F243P15)	509.0 µg/mL	+/- 19.1030 +/- 19.7259 +/- 19.9947	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethylene-d2 **CAS #** 22280-73-5 **Purity** 99%	(Lot PR-21050)	501.0 µg/mL	+/- 2.9758 +/- 5.6822 +/- 6.5294	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Chloroform-d **CAS #** 865-49-6 **Purity** 99%	(Lot A021968500I)	503.0 µg/mL	+/- 2.9877 +/- 5.7049 +/- 6.5554	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 **Purity** 99%	(Lot 14C-191)	504.0 µg/mL	+/- 2.9936 +/- 5.7162 +/- 6.5685	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Benzene-d6 **CAS #** 1076-43-3 **Purity** 99%	(Lot 14G-554)	500.0 µg/mL	+/- 2.9698 +/- 5.6709 +/- 6.5163	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	1,2-Dichloropropane-d6 **CAS #** 93952-08-0 **Purity** 99%	(Lot Z322P8)	502.0 µg/mL	+/- 2.9817 +/- 5.6935 +/- 6.5424	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	1,3-Dichloropropene-d4 (cis/ trans mixture)		504.4	µg/mL	+/-	2.9960	µg/mL	Gravimetric
	CAS # 202656-23-3	(Lot Z181P11)			+/-	5.7208	µg/mL	Unstressed
	Purity 97%	58% cis isomer; 42% trans isomer			+/-	6.5737	µg/mL	Stressed
9	Toluene-d8		503.0	µg/mL	+/-	2.9877	µg/mL	Gravimetric
	CAS # 2037-26-5	(Lot PR-26282)			+/-	5.7049	µg/mL	Unstressed
	Purity 99%				+/-	6.5554	µg/mL	Stressed
10	1,1,2,2-Tetrachloroethane-d2		504.0	µg/mL	+/-	2.9936	µg/mL	Gravimetric
	CAS # 33685-54-0	(Lot F465P1)			+/-	5.7162	µg/mL	Unstressed
	Purity 99%				+/-	6.5685	µg/mL	Stressed
11	1,2-Dichlorobenzene-d4		500.0	µg/mL	+/-	2.9698	µg/mL	Gravimetric
	CAS # 2199-69-1	(Lot PR-24501/04193DB1)			+/-	5.6709	µg/mL	Unstressed
	Purity 99%				+/-	6.5163	µg/mL	Stressed

Solvent: Methanol-OD
CAS # 1455-13-6
Purity 99%

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Catalog No. : 30005 **Lot No.:** A099332

Description : VOA Matrix Spike Mix

Matrix Spike Std 2500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,1-dichloroethene **CAS #** 75-35-4 (Lot 33096BKV) **Purity** 99%	2,507.0 µg/mL	+/- 14.7125 µg/mL +/- 26.6101 µg/mL +/- 30.9443 µg/mL	Gravimetric Unstressed Stressed
2	Benzene **CAS #** 71-43-2 (Lot SHBD2798V) **Purity** 99%	2,511.0 µg/mL	+/- 14.7360 µg/mL +/- 26.6525 µg/mL +/- 30.9937 µg/mL	Gravimetric Unstressed Stressed
3	Trichloroethene **CAS #** 79-01-6 (Lot SHBB1959V) **Purity** 99%	2,500.0 µg/mL	+/- 14.6714 µg/mL +/- 26.5358 µg/mL +/- 30.8579 µg/mL	Gravimetric Unstressed Stressed
4	Toluene **CAS #** 108-88-3 (Lot SHBC7558V) **Purity** 99%	2,508.0 µg/mL	+/- 14.7183 µg/mL +/- 26.6207 µg/mL +/- 30.9567 µg/mL	Gravimetric Unstressed Stressed
5	Chlorobenzene **CAS #** 108-90-7 (Lot 00533KE) **Purity** 99%	2,512.0 µg/mL	+/- 14.7418 µg/mL +/- 26.6632 µg/mL +/- 31.0060 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No.: 30067 **Lot No.:** A0102518

Description: 4-Bromofluorobenzene Standard

4-Bromofluorobenzene Standard 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size: 2 mL **Pkg Amt:** > 1 mL

Expiration Date: April 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	1-Bromo-4-fluorobenzene (BFB)	2,506.0 µg/mL	+/- 14.7066	µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 01127COV)		+/- 28.3294	µg/mL	Unstressed
	Purity 99%		+/- 32.5790	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 31081 **Lot No.:** A0109767

Description : 1,3,5-Trichlorobenzene Standard

1,3,5-Trichlorobenzene Standard 1,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,3,5-Trichlorobenzene	1,008.0 µg/mL	+/- 5.9872	µg/mL Gravimetric
	CAS # 108-70-3 (Lot 11319AS)		+/- 11.4324	µg/mL Unstressed
	Purity 99%		+/- 13.1369	µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 30042 **Lot No.:** A0110441

Description : 502.2 Calibration Mix #1

502.2 Calibration Mix #1 2,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12)	2,001.3 µg/mL	+/- 14.0188	µg/mL	Gravimetric
	CAS # 75-71-8 (Lot Q167-08)		+/- 23.8837	µg/mL	Unstressed
	Purity 99%		+/- 27.1204	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,001.2 µg/mL	+/- 15.8611	µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBC8470V)		+/- 25.0088	µg/mL	Unstressed
	Purity 99%		+/- 28.1158	µg/mL	Stressed
3	Vinyl chloride	2,002.0 µg/mL	+/- 16.3209	µg/mL	Gravimetric
	CAS # 75-01-4 (Lot E2890)		+/- 25.3088	µg/mL	Unstressed
	Purity 99%		+/- 28.3854	µg/mL	Stressed
4	Bromomethane (methyl bromide)	2,003.2 µg/mL	+/- 15.7090	µg/mL	Gravimetric
	CAS # 74-83-9 (Lot 101604)		+/- 24.9279	µg/mL	Unstressed
	Purity 99%		+/- 28.0500	µg/mL	Stressed
5	Chloroethane (ethyl chloride)	2,001.1 µg/mL	+/- 16.0581	µg/mL	Gravimetric
	CAS # 75-00-3 (Lot SHBD1717V)		+/- 25.1336	µg/mL	Unstressed
	Purity 99%		+/- 28.2267	µg/mL	Stressed
6	Trichlorofluoromethane (CFC-11)	2,003.6 µg/mL	+/- 16.2499	µg/mL	Gravimetric
	CAS # 75-69-4 (Lot SHBD5121V)		+/- 25.2745	µg/mL	Unstressed
	Purity 99%		+/- 28.3594	µg/mL	Stressed

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Catalog No. : 31280 **Lot No.:** A0111730

Description : Naphthalene Standard

Naphthalene Standard 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2021 **Storage:** 25°C nominal

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L. ; K=2)		
1	Naphthalene **CAS #** 91-20-3 **Purity** 99% (Lot MKBH4351V)	1,004.0 µg/mL	+/- 5.9635 +/- 44.6249 +/- 49.0256	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 30625 **Lot No.:** A0114355

Description : OLC 3.2 VOA Deuterated Monitoring Compounds

OLC 3.2 VOA Ketone Deuterated Monitoring Compounds 500µg/mL, Deuterium Oxide, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Butanone-d5 **CAS #** 24313-50-6 (Lot M276P24) **Purity** 99%	501.0 µg/mL	+/- 2.9758 +/- 26.6691 +/- 26.6985	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Hexanone-d5 **CAS #** 4840-82-8 (Lot I500P2) **Purity** 99%	501.0 µg/mL	+/- 2.9758 +/- 26.6691 +/- 26.6985	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Deuterium Oxide
CAS # 7789-20-0
Purity 99%

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Catalog No. : 30091 **Lot No.:** A099377

Description : L/C VOA Internal Standard Mix

L/C Internal Std 2500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Difluorobenzene	2,500.5 µg/mL	+/- 14.6743 µg/mL	Gravimetric
	CAS # 540-36-3 (Lot 13105AO)		+/- 26.5411 µg/mL	Unstressed
	Purity 99%		+/- 30.8641 µg/mL	Stressed
2	Chlorobenzene-d5	2,499.0 µg/mL	+/- 14.6655 µg/mL	Gravimetric
	CAS # 3114-55-4 (Lot PR-22736)		+/- 26.5252 µg/mL	Unstressed
	Purity 99%		+/- 30.8456 µg/mL	Stressed
3	1,4-Dichlorobenzene-d4	2,504.5 µg/mL	+/- 14.6978 µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/- 26.5836 µg/mL	Unstressed
	Purity 99%		+/- 30.9135 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Prep Standard - Chemical Standard Summary

Order ID : H1584

Test : SVOC-TCL BNA -20

Prepbatch ID : PB88601,

Sequence ID/Qc Batch ID: BM030316,BM030316

Standard ID :
EP1631,EP1646,SP3515,SP3516,SP3517,SP3518,SP3519,SP3520,SP3521,SP3536,SP3592,SP3593,

Chemical ID :
E2036,E2040,E2072,H1268,H1316,M3284,S3852,S3957,S4093,S4227,S4228,S4244,S4495,S4610,S4612,S4616,S4617,S4622,S4623,S4655,S4662,S4703,S4809,S4810,S4811,S4812,S4982,S4983,S4984,S4987,S4990,S5005,V4294,

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
314	1.1 H2SO4 SOLN	EP1631	12/02/2015	06/02/2016	rajesh

FROM 1000.000ml of M3284 + 1000.000ml of V4294 = Final Quantity: 2000.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
256	BAKED SODIUM SULPHATE	EP1646	02/01/2016	08/01/2016	rajesh

FROM 4000.000ml of E2036 = Final Quantity: 4000.000 gram

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3243	SOM02.2 STOCK 160 PPM	SP3515	12/02/2015	05/16/2016	Sohil

FROM 0.160ml of S4612 + 0.160ml of S4622 + 0.160ml of S4662 + 0.160ml of S4703 + 0.400ml of S4093 + 0.400ml of S4495 + 0.400ml of S4655 + 0.400ml of S4809 + 0.800ml of S4244 + 0.800ml of S4610 + 1.160ml of E2040 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3244	SSTD160 PPM	SP3516	12/02/2015	05/16/2016	Sohil

FROM 0.010ml of S4623 + 1.000ml of SP3515 = Final Quantity: 1.010 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3245	SSTD80 PPM	SP3517	12/02/2015	05/16/2016	Sohil

FROM 0.010ml of S4623 + 0.500ml of E2040 + 0.500ml of SP3515 = Final Quantity: 1.010 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3246	SSTD40 PPM	SP3518	12/02/2015	05/16/2016	Sohil

FROM 0.010ml of S4623 + 0.750ml of E2040 + 0.250ml of SP3515 = Final Quantity: 1.010 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3247	SSTD20 PPM	SP3519	12/02/2015	05/16/2016	Sohil

FROM 0.010ml of S4623 + 0.875ml of E2040 + 0.125ml of SP3515 = Final Quantity: 1.010 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3248	SSTD10 PPM	SP3520	12/02/2015	05/16/2016	Sohil

FROM 0.500ml of E2040 + 1.010ml of S4623 + 0.500ml of SP3519 = Final Quantity: 1.010 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3249	SSTD005 PPM	SP3521	12/02/2015	05/16/2016	Sohil

FROM 0.010ml of S4623 + 0.750ml of E2040 + 0.250ml of SP3519 = Final Quantity: 1.010 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3116	SOM02.2 Spike Solution, 80PPM	SP3536	12/17/2015	06/17/2016	Sohil

FROM 0.400ml of S3852 + 0.800ml of S4228 + 48.800ml of H1268 = Final Quantity: 50.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3334	50ug/ml SOM DFTPP	SP3592	02/08/2016	08/08/2016	UMANGI

FROM 0.200ml of S3957 + 9.800ml of E2072 = Final Quantity: 10.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
2562	SOM02.1 Surrogate solution 80 ppm	SP3593	02/23/2016	08/23/2016	umangi

FROM 0.080ml of S4227 + 0.400ml of S4616 + 0.400ml of S4810 + 0.800ml of S4811 + 0.800ml of S4812 + 1.200ml of S4617 + 1.200ml of S4982 + 1.200ml of S4983 + 1.200ml of S4984 + 1.200ml of S4987 + 1.200ml of S4990 + 190.320ml of H1316 = Final Quantity: 200.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	/ Sodium sulfate (anhyhdrous)	433101	10/05/2020	10/30/2015 / rajesh	10/05/2015 / rajesh	E2036

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	0000124946	05/16/2016	11/16/2015 / rajesh	11/12/2015 / rajesh	E2040

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	0000131014	08/08/2016	02/09/2016 / rajesh	01/22/2016 / rajesh	E2072

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9093-03 / Methanol, HPLC (cs/4x4L)	0000064689	01/14/2018	03/10/2015 / TEJASKUMAR	01/14/2015 / IWONA	H1268

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9093-03 / Methanol, HPLC (cs/4x4L)	0000119840	08/16/2020	02/23/2016 / umangi	01/22/2016 / UMANGI	H1316

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	0000036761	02/17/2018	01/12/2015 / mohan	12/10/2014 / mohan	M3284

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31071 / SV Mix,8000 series method, acid matrix spike, 10,000ug/mL, methanol, 5mL/ampul	A0103147	06/30/2021	10/03/2015 / TEJASKUMAR	10/03/2014 / TEJASKUMAR	S3852

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31001 / SV Tuning Compound Standard, 2500 ug/ml,	A0103386	05/31/2017	01/22/2015 / TEJASKUMAR	10/30/2014 / TEJASKUMAR	S3957

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31833 / caprolactam, 2,000 µg/mL in methylene chloride, 1 mL/ampul	A0108272	01/31/2017	08/24/2015 / ugo	01/16/2015 / TEJASKUMAR	S4093

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	33913 / SOM01.0 SIM Analysis Standard (Surrogate), 2000 PPM	A0106668	09/30/2020	12/14/2015 / Sohil	02/12/2015 / TEJASKUMAR	S4227

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31084 / SV Mix,8000 series method, Base Neutral Matrix Spike, 5000ug/mL, MeOH, 5mL/ampul	A0108368	01/31/2018	06/16/2015 / TEJASKUMAR	02/12/2015 / TEJASKUMAR	S4228

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32208 / atrazine, 1,000 µg/mL in acetone, 1 mL/ampul	A0108119	09/30/2018	07/09/2015 / TEJASKUMAR	03/12/2015 / TEJASKUMAR	S4244

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	33017 / Benzaldehyde, 2000 ug/ml	A0111289	05/31/2018	08/24/2015 / ugo	05/28/2015 / TEJASKUMAR	S4495

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31900 / SOM01.1 Mega Mix, 500-1000 ug/ml	A0108223	07/31/2016	07/22/2015 / TEJASKUMAR	07/17/2015 / TEJASKUMAR	S4610

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31853 / 1,4-Dioxane, 2000 ug/ml , Solvent: Methylene Chloride	A0110448	04/30/2020	08/14/2015 / ugo	07/17/2015 / TEJASKUMAR	S4612

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30614 / 1,4-Dioxane-D8 Standard	A0111152	05/31/2018	01/11/2016 / Sohil	07/17/2015 / TEJASKUMAR	S4616

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30614 / 1,4-Dioxane-D8 Standard	A0111152	05/31/2018	02/23/2016 / umangi	07/17/2015 / TEJASKUMAR	S4617

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30614 / 1,4-Dioxane-D8 Standard	A0111152	05/31/2018	09/25/2015 / ugo	07/17/2015 / TEJASKUMAR	S4622

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31206 / SV Mix, CLP method, Internal Std, 2000ug/mL, CH2Cl2, 1mL	A0111889	05/31/2021	12/02/2015 / UMANGI	07/17/2015 / TEJASKUMAR	S4623

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	90494 / 1-Methylnaphthalene, 2000 ug/mL, in methylene chloride	070314	07/03/2019	11/17/2015 / Sohil	07/21/2015 / TEJASKUMAR	S4655

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	98496 / 1,2,3,4-Tetrachlorobenzene, 5000 ug/mL, in MeCl2	061115	06/11/2020	08/14/2015 / ugo	08/12/2015 / umangi	S4662

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	98495 / Pentachlorobenzene, 5000 ug/mL, in MeCl2	061115	06/02/2016	12/02/2015 / Sohil	08/31/2015 / umangi	S4703

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0112586	04/30/2019	11/09/2015 / UMANGI	10/09/2015 / UMANGI	S4809

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0112586	04/30/2019	12/14/2015 / Sohil	10/09/2015 / UMANGI	S4810

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0112586	04/30/2019	12/14/2015 / Sohil	10/09/2015 / UMANGI	S4811

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0112586	04/30/2019	12/14/2015 / Sohil	10/09/2015 / UMANGI	S4812

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0112586	04/30/2019	01/11/2016 / Sohil	11/13/2015 / Sohil	S4982

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0112586	04/30/2019	02/23/2016 / umangi	11/13/2015 / Sohil	S4983

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0112586	04/30/2019	02/23/2016 / umangi	11/13/2015 / Sohil	S4984

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0112586	04/30/2019	02/23/2016 / umangi	11/13/2015 / Sohil	S4987

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0112586	04/30/2019	02/23/2016 / umangi	11/13/2015 / Sohil	S4990

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31206 / SV Mix, CLP method, Internal Std, 2000ug/mL, CH2Cl2, 1mL	A0115444	10/31/2021	/	12/18/2015 / Sohil	S5005

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	200111-SCB-R2 / DI Water, Res-Kem	VOC-DailyChecke	12/31/2020	07/01/2013 / apatel	07/01/2013 / apatel	V4294

Methanol
HPLC
For use in Liquid Chromatography (HPLC & UHPLC) & Spectrophotometry
(methyl alcohol)

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9093-03
Batch No.: 0000064689
Manufactured Date: 2013/11/15
Retest Date: 2018/11/14

SEIDLER CHEMICAL COMPANY
537 Raymond Boulevard
Newark, NJ 07105

Rec: 1/14/15

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Ultraviolet Absorbance (1.00-cm cell vs. water) - 400-254 nm	<= 0.01	< 0.01
Ultraviolet Absorbance (1.00-cm cell vs. water) - 225 nm	<= 0.15	0.12
Ultraviolet Absorbance (1.00-cm cell vs. water) - UV Cut-off, nm	<= 205	204
Gradient Elution Test (a.u.) - 254 nm	<= 0.002	< 0.001
Fluorescence Trace Impurities, measured as Quinine Base - at 450 nm Emission	<= 0.3 ppb	< 0.1
Fluorescence Trace Impurities, measured as Quinine Base - at Emission Maximum for Impurities	<= 1.0 ppb	0.1
Acetone	<= 0.001 %	< 0.001
Residue after Evaporation	<= 1.0000 ppm	0.1000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	<0.01
Water (by KF, coulometric)	<= 0.05 %	< 0.01

For Laboratory, Research or Manufacturing Use

H1268
H1269
H1270
H1271

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & QC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008, 17025:2005
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

Richard M Siberski
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number: 98495
Lot Number: 061115
Description: Pentachlorobenzene

Expiration Date: 061120
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000

Solvent(s):	Lot#
Methylene chloride	72062

S4703
S4704
S4705
S4706

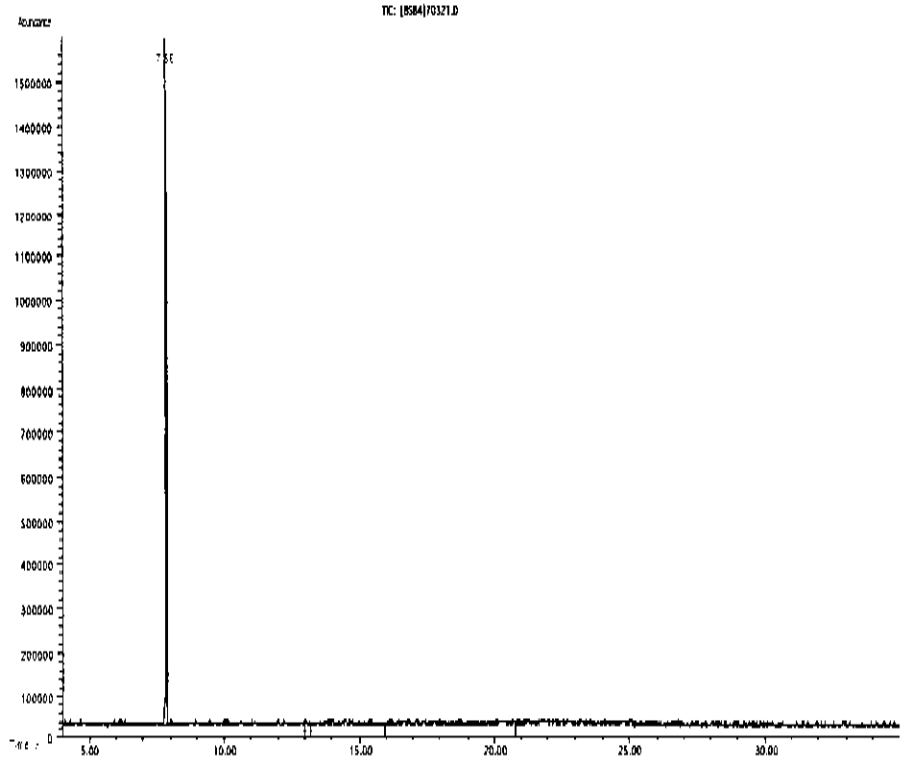
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.002 Flask Uncertainty

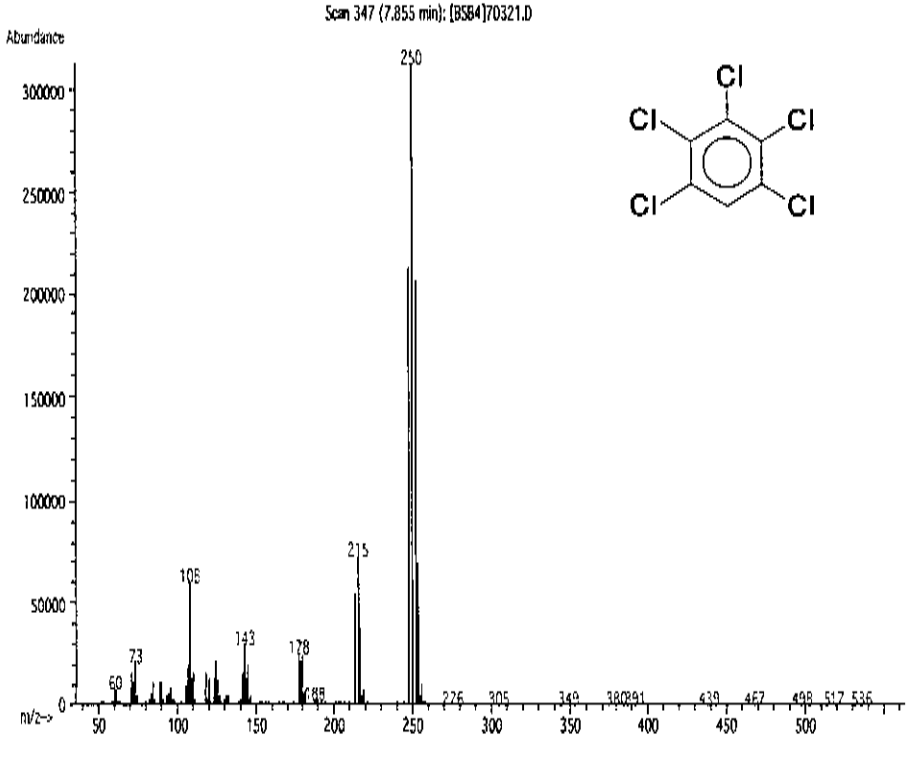
Paul Barron	061115
Formulated By: Paul Barron	DATE
Pedro L. Rentas	061115
Reviewed By: Pedro L. Rentas	DATE

MSDS Information
(Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. Pentachlorobenzene	321	2705100	5000	99.5	0.5	0.05024	0.05038	5013.7	0.0102	00608-93-5	N/A	orl-rat 1080mg/kg

Method GC7MSD-1.M: Column: SPB-608 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 150°C (4min.), Temp 2 = 290°C (13.5 min.), Rate = 8°C/min., Injector B= 200°C, Detector B = 290°C. Split Ratio = 100:1, Scan Rate = 2. Analysis performed by Candice Warren.





605

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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited Testing Laboratory
Certificate #3222.02

RCA 7/17/15

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Materiel is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30614 **Lot No.:** A0111152

Description : 1,4-dioxane-d8 Standard

1,4-dioxane-d8 Standard 2000 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.I.; K=2)		
1	1,4-Dioxane-d8	2,004.0 µg/mL	+/- 11.7606	µg/mL	Gravimetric
	CAS # 17647-74-4 (Lot 1-19073)		+/- 42.5297	µg/mL	Unstressed
	Purity 99%		+/- 42.7181	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

54614
54615
54616
54617

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

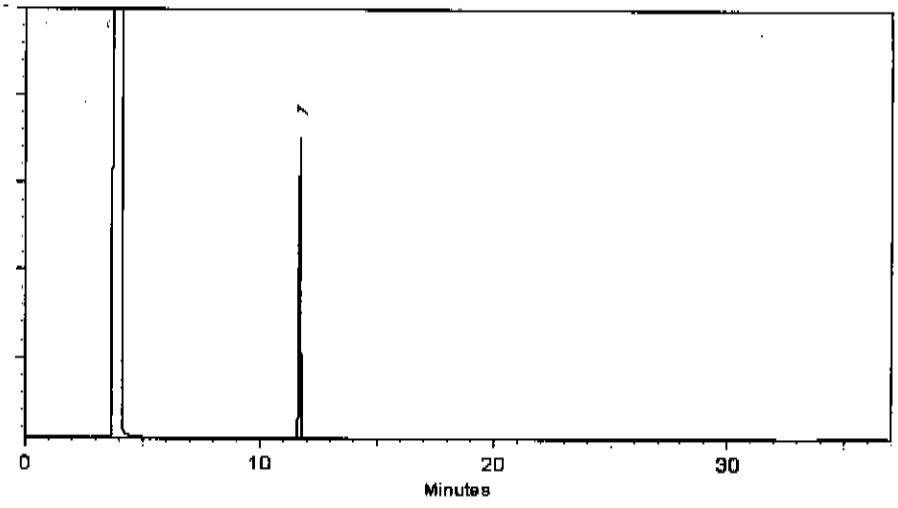
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Valerie S. Strohm - ARM R&D Chemist

Date Mixed: 15-May-2015 **Balance:** 1125113331

Jennifer L. Pollino - QC Analyst

Date Passed: 19-May-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommendad condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentretion of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes grevimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certifiad combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncartainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restak will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative fer details.
- If eny undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

Rec: 7/17/18

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30614 **Lot No.:** A0111152

Description : 1,4-dioxane-d8 Standard

1,4-dioxane-d8 Standard 2000 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.: K=2)		
1	1,4-Dioxane-d8	2,004.0 µg/mL	+/- 11.7606	µg/mL	Gravimetric
	CAS # 17647-74-4 (Lot 1-19073)		+/- 42.5297	µg/mL	Unstressed
	Purity 99%		+/- 42.7181	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

54618
54619
54620
54621
54622

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

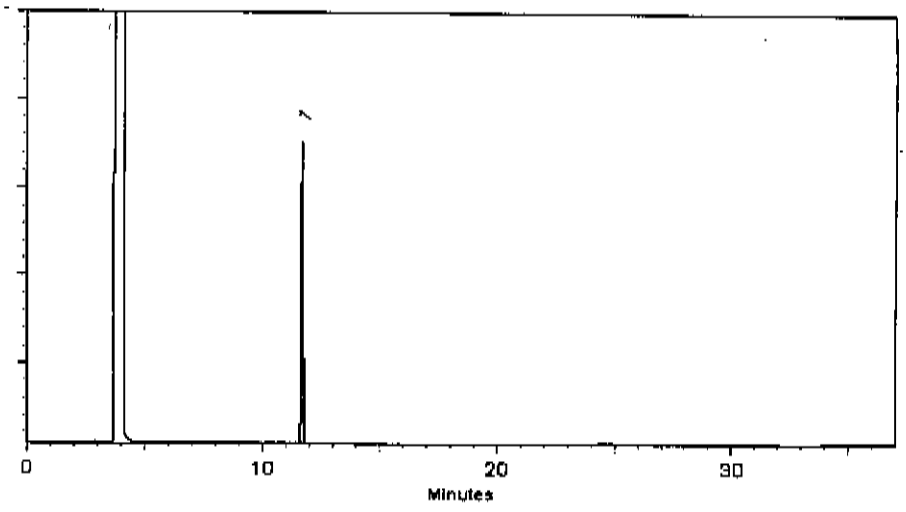
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Valerie S. Strohm - ARM R&D Chemist

Date Mixed: 15-May-2015 **Balance:** 1125113331

Jennifer L. Pollino - QC Analyst

Date Passed: 19-May-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the preduct if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days et non-standard temperature conditions.
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25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

02/19/15

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31084 **Lot No.:** A0108368

Description : B/N Matrix Spike Mix

Base Neutral Matrix Spike 5000µg/mL, Methanol, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2018 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.I., K=2)		
1	1,4-Dichlorobenzene		5,001.3	µg/mL	+/- 29.3506	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBL3891V)			+/- 138.0486	µg/mL	Unstressed
	Purity 99%				+/- 138.0486	µg/mL	Stressed
2	N-Nitroso-di-n-propylamine		5,002.7	µg/mL	+/- 29.3585	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/- 138.0854	µg/mL	Unstressed
	Purity 99%				+/- 138.0854	µg/mL	Stressed
3	1,2,4-Trichlorobenzene		5,001.3	µg/mL	+/- 29.3502	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBC5541V)			+/- 138.0467	µg/mL	Unstressed
	Purity 98%				+/- 138.0467	µg/mL	Stressed
4	Acenaphthene		5,000.7	µg/mL	+/- 29.3467	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBJ4871V)			+/- 138.0302	µg/mL	Unstressed
	Purity 99%				+/- 138.0302	µg/mL	Stressed
5	2,4-Dinitrotoluene		5,001.3	µg/mL	+/- 29.3506	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/- 138.0486	µg/mL	Unstressed
	Purity 99%				+/- 138.0486	µg/mL	Stressed
6	Pyrene		5,000.3	µg/mL	+/- 29.3445	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBJ0984V)			+/- 138.0197	µg/mL	Unstressed
	Purity 98%				+/- 138.0197	µg/mL	Stressed

54228
54229

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

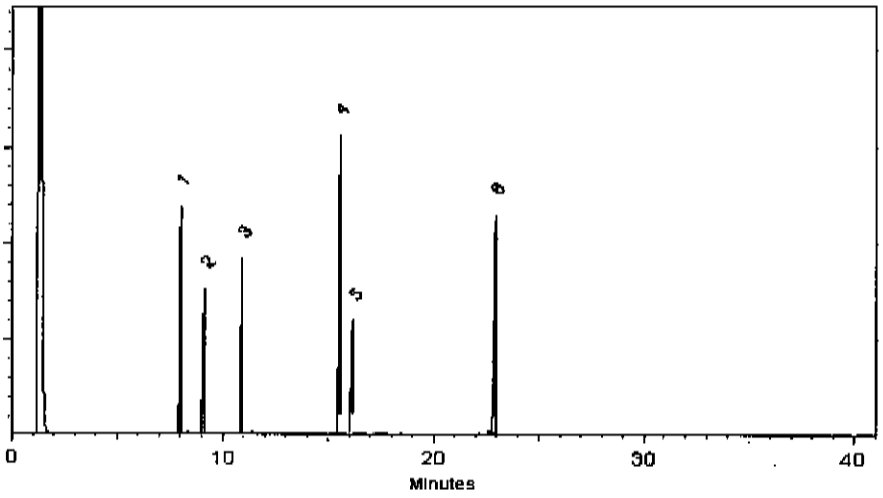
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Connor Flannery - Mix Technician

Date Mixed: 18-Jan-2015 **Balance:** 1128360905

Tyler Brown - QA Analyst

Date Passed: 21-Jan-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

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Manufacturing Notes:

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Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constreints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
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Certificate of Analysis

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ISO Guide 34 Accredited Reference Material Producer
Certificate #3223.01

ACCREDITED
ISO/IEC 17025 Accredited Testing Laboratory
Certificate #3222.02

RoC 7/17/15

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31206 **Lot No.:** A0111889

Description : SV Internal Standard Mix 2mg/ml

SV Internal Standard Mix 2mg/ml 2,000 µg/ml, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2021 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 **Purity** 99%	(Lot PR-18488)	2,007.1 µg/mL	+/- 11.6695 +/- 89.1765 +/- 97.9769	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 **Purity** 99%	(Lot M-1452)	2,001.7 µg/mL	+/- 11.6381 +/- 88.9366 +/- 97.7133	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 **Purity** 99%	(Lot PR-25444)	2,006.8 µg/mL	+/- 11.6677 +/- 89.1632 +/- 97.9623	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 **Purity** 99%	(Lot PR-23065)	2,006.4 µg/mL	+/- 11.6654 +/- 89.1454 +/- 97.9427	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 **Purity** 99%	(Lot I-19260)	2,003.6 µg/mL	+/- 11.6491 +/- 89.0210 +/- 97.8060	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 **Purity** 99%	(Lot PR-24113)	2,002.7 µg/mL	+/- 11.6439 +/- 88.9810 +/- 97.7621	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

54623 54628 54633 54639 54644 54649
54624 54629 54634 54640 54645 54650
54625 54630 54635 54641 54646 54651
54626 54631 54636 54642 54647 54652
54627 54632 54637 54643 54648

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

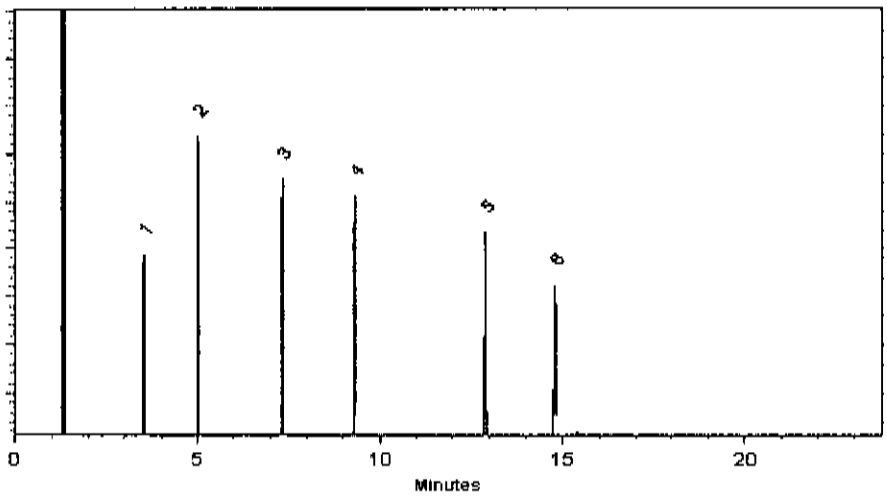
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 18-Jun-2015 **Balance:** B345965662

Amanda Miller - QC Analyst

Date Passed: 22-Jun-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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01/16/15

Catalog No. : 31833 **Lot No.:** A0108272

Description : Epsilon-Caprolactam Standard

Epsilon-caprolactam Std 2000µg/mL, Methylene Chloride(Methanol free), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.: K=2)		
1	epsilon-Caprolactam		2,000.0 µg/mL	+/- 18.5989	µg/mL	Gravimetric
	CAS # 105-60-2	(Lot 10000218)		+/- 26.2717	µg/mL	Unstressed
	Purity 99%			+/- 39.8773	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

S4091
S4092
S4093

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

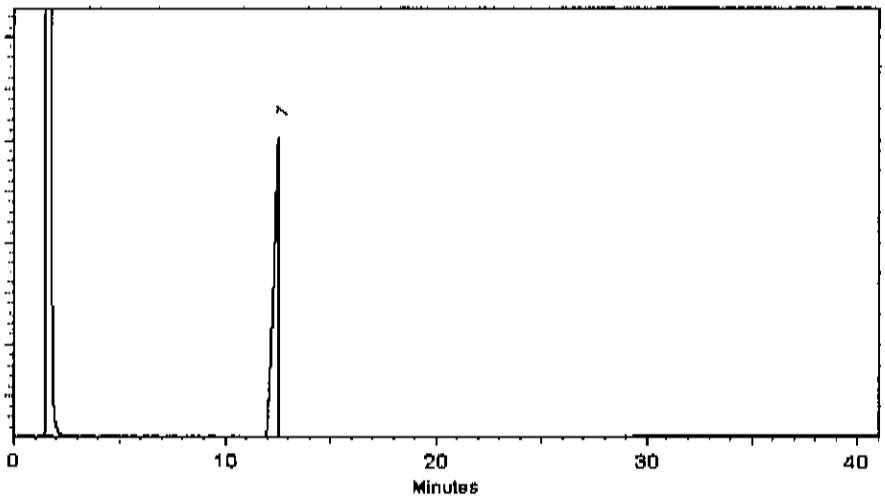
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Connor Flannery - Mix Technician

Date Mixed: 13-Jan-2015 **Balance:** 1128360905

Amanda Miller - QC Analyst

Date Passed: 15-Jan-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

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- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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Manufacturing Notes:

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Handling Notes:

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Certificate of Analysis

Rec 7/17/15

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31900 **Lot No.:** A0108223

Description : OLM 01.1 Revised SV MegaMix

OLM 01.1 Revised SV MegaMix 500-1000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2016 **Storage:** 0°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.: K=2)		
1	Phenol		1,000.2 µg/mL	+/- 6.6856 µg/mL		Gravimetric
	CAS # 108-95-2	(Lot SHBC6998V)		+/- 11.4365 µg/mL		Unstressed
	Purity 99%			+/- 18.8643 µg/mL		Stressed
2	Bis(2-chloroethyl)ether		1,001.6 µg/mL	+/- 6.6949 µg/mL		Gravimetric
	CAS # 111-44-4	(Lot 45296HKV)		+/- 11.4525 µg/mL		Unstressed
	Purity 99%			+/- 18.8907 µg/mL		Stressed
3	2-Chlorophenol		1,000.1 µg/mL	+/- 6.6852 µg/mL		Gravimetric
	CAS # 95-57-8	(Lot MKBD3900V)		+/- 11.4359 µg/mL		Unstressed
	Purity 99%			+/- 18.8633 µg/mL		Stressed
4	2,2'-oxybis(1-chloropropane)		1,001.4 µg/mL	+/- 6.6936 µg/mL		Gravimetric
	CAS # 108-60-1	(Lot 7-XDD-199-6)		+/- 11.4502 µg/mL		Unstressed
	Purity 99%			+/- 18.8869 µg/mL		Stressed
5	2-Methylphenol (o-cresol)		1,002.4 µg/mL	+/- 6.7003 µg/mL		Gravimetric
	CAS # 95-48-7	(Lot SHBC1479V)		+/- 11.4616 µg/mL		Unstressed
	Purity 99%			+/- 18.9058 µg/mL		Stressed
6	Acetophenone		1,000.0 µg/mL	+/- 5.9397 µg/mL		Gravimetric
	CAS # 98-86-2	(Lot MKBR7156V)		+/- 11.0159 µg/mL		Unstressed
	Purity 99%			+/- 18.6105 µg/mL		Stressed
7	Hexachloroethane		1,003.0 µg/mL	+/- 6.7043 µg/mL		Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)		+/- 11.4685 µg/mL		Unstressed
	Purity 99%			+/- 18.9171 µg/mL		Stressed

54606 54609
54607 54610
54608

8	N-Nitroso-di-n-propylamine		1,004.5	µg/mL	+/- 6.7623	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/- 11.5141	µg/mL	Unstressed
	Purity 99%				+/- 18.9633	µg/mL	Stressed
9	4-Methylphenol (p-cresol)		501.2	µg/mL	+/- 3.3503	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/- 5.7311	µg/mL	Unstressed
	Purity 99%				+/- 9.4534	µg/mL	Stressed
10	3-Methylphenol (m-cresol)		500.0	µg/mL	+/- 3.3423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/- 5.7174	µg/mL	Unstressed
	Purity 99%				+/- 9.4307	µg/mL	Stressed
11	Nitrobenzene		1,003.8	µg/mL	+/- 6.7100	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot 65096APV)			+/- 11.4782	µg/mL	Unstressed
	Purity 99%				+/- 18.9331	µg/mL	Stressed
12	Isophorone		1,001.4	µg/mL	+/- 6.6936	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/- 11.4502	µg/mL	Unstressed
	Purity 99%				+/- 18.8869	µg/mL	Stressed
13	2-Nitrophenol		1,001.1	µg/mL	+/- 6.6916	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/- 11.4468	µg/mL	Unstressed
	Purity 99%				+/- 18.8812	µg/mL	Stressed
14	2,4-Dimethylphenol		1,000.6	µg/mL	+/- 6.6883	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/- 11.4411	µg/mL	Unstressed
	Purity 99%				+/- 18.8718	µg/mL	Stressed
15	Bis(2-chloroethoxy)methane		1,005.3	µg/mL	+/- 6.7200	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 2238100)			+/- 11.4954	µg/mL	Unstressed
	Purity 99%				+/- 18.9614	µg/mL	Stressed
16	2,4-Dichlorophenol		1,000.8	µg/mL	+/- 6.6896	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/- 11.4433	µg/mL	Unstressed
	Purity 99%				+/- 18.8756	µg/mL	Stressed
17	Naphthalene		1,003.5	µg/mL	+/- 6.7080	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBH4351V)			+/- 11.4748	µg/mL	Unstressed
	Purity 99%				+/- 18.9275	µg/mL	Stressed
18	4-Chloroaniline		1,004.0	µg/mL	+/- 6.7590	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot 12528PH)			+/- 11.5085	µg/mL	Unstressed
	Purity 98%				+/- 18.9540	µg/mL	Stressed
19	Hexachlorobutadiene		1,001.4	µg/mL	+/- 6.6940	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/- 11.4509	µg/mL	Unstressed
	Purity 98%				+/- 18.8881	µg/mL	Stressed
20	2-Methylnaphthalene		998.9	µg/mL	+/- 6.7245	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot 19399MJV)			+/- 11.4497	µg/mL	Unstressed
	Purity 96%				+/- 18.8572	µg/mL	Stressed
21	4-Chloro-3-methylphenol		1,000.3	µg/mL	+/- 6.6866	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC0769V)			+/- 11.4382	µg/mL	Unstressed
	Purity 99%				+/- 18.8671	µg/mL	Stressed
22	1,2,4,5-Tetrachlorobenzene		1,005.0	µg/mL	+/- 6.7657	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot 06024AIV)			+/- 11.5199	µg/mL	Unstressed
	Purity 99%				+/- 18.9727	µg/mL	Stressed
23	Hexachlorocyclopentadiene		1,003.7	µg/mL	+/- 6.7090	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 3140300)			+/- 11.4765	µg/mL	Unstressed
	Purity 99%				+/- 18.9303	µg/mL	Stressed

24	2,4,6-Trichlorophenol		1,000.3	µg/mL	+/-	6.6866	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot MKBH7393V)			+/-	11.4382	µg/mL	Unstressed
	Purity 99%				+/-	18.8671	µg/mL	Stressed
25	2,4,5-Trichlorophenol		1,000.1	µg/mL	+/-	6.6852	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHM01)			+/-	11.4359	µg/mL	Unstressed
	Purity 99%				+/-	18.8633	µg/mL	Stressed
26	2-Chloronaphthalene		1,001.8	µg/mL	+/-	6.6963	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot FIJ01)			+/-	11.4548	µg/mL	Unstressed
	Purity 99%				+/-	18.8944	µg/mL	Stressed
27	Biphenyl		1,000.0	µg/mL	+/-	5.9397	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot 1277976)			+/-	11.0159	µg/mL	Unstressed
	Purity 99%				+/-	18.6105	µg/mL	Stressed
28	2-Nitroaniline		1,000.5	µg/mL	+/-	6.7354	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	11.4683	µg/mL	Unstressed
	Purity 99%				+/-	18.8877	µg/mL	Stressed
29	Acenaphthylene		1,000.9	µg/mL	+/-	6.6906	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot ER030707-01)			+/-	11.4451	µg/mL	Unstressed
	Purity 99%				+/-	18.8784	µg/mL	Stressed
30	Dimethylphthalate		1,000.8	µg/mL	+/-	6.6896	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.4433	µg/mL	Unstressed
	Purity 99%				+/-	18.8756	µg/mL	Stressed
31	2,6-Dinitrotoluene		1,000.5	µg/mL	+/-	6.6879	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/-	11.4405	µg/mL	Unstressed
	Purity 99%				+/-	18.8709	µg/mL	Stressed
32	Acenaphthene		1,002.9	µg/mL	+/-	6.7040	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBJ4871V)			+/-	11.4679	µg/mL	Unstressed
	Purity 99%				+/-	18.9161	µg/mL	Stressed
33	3-Nitroaniline		1,002.5	µg/mL	+/-	6.7488	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBH5131V)			+/-	11.4912	µg/mL	Unstressed
	Purity 99%				+/-	18.9255	µg/mL	Stressed
34	2,4-Dinitrophenol		1,001.0	µg/mL	+/-	6.6909	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot MKBP5833V)			+/-	11.4456	µg/mL	Unstressed
	Purity 99%				+/-	18.8794	µg/mL	Stressed
35	Dibenzofuran		1,000.0	µg/mL	+/-	5.9397	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBK2375V)			+/-	11.0159	µg/mL	Unstressed
	Purity 99%				+/-	18.6105	µg/mL	Stressed
36	2,4-Dinitrotoluene		1,002.5	µg/mL	+/-	6.7013	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	11.4634	µg/mL	Unstressed
	Purity 99%				+/-	18.9086	µg/mL	Stressed
37	4-Nitrophenol		1,000.3	µg/mL	+/-	6.6863	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)			+/-	11.4376	µg/mL	Unstressed
	Purity 99%				+/-	18.8662	µg/mL	Stressed
38	2,3,4,6-Tetrachlorophenol		1,001.5	µg/mL	+/-	6.7421	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot FN10221307)			+/-	11.4798	µg/mL	Unstressed
	Purity 99%				+/-	18.9066	µg/mL	Stressed
39	Fluorene		1,000.9	µg/mL	+/-	6.6907	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)			+/-	11.4453	µg/mL	Unstressed
	Purity 98%				+/-	18.8789	µg/mL	Stressed

40	4-Chlorophenyl phenyl ether		1,006.7	µg/mL	+/-	6.7290	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBM4925V)			+/-	11.5108	µg/mL	Unstressed
	Purity 99%				+/-	18.9869	µg/mL	Stressed
41	Diethylphthalate		1,000.9	µg/mL	+/-	6.6906	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBJ3578V)			+/-	11.4451	µg/mL	Unstressed
	Purity 99%				+/-	18.8784	µg/mL	Stressed
42	4-Nitroaniline		1,006.0	µg/mL	+/-	6.7724	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.5313	µg/mL	Unstressed
	Purity 99%				+/-	18.9916	µg/mL	Stressed
43	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		1,001.3	µg/mL	+/-	6.6933	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC06195V)			+/-	11.4496	µg/mL	Unstressed
	Purity 99%				+/-	18.8860	µg/mL	Stressed
44	Diphenylamine		1,001.5	µg/mL	+/-	6.7421	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot 07525MF)			+/-	11.4798	µg/mL	Unstressed
	Purity 99%				+/-	18.9066	µg/mL	Stressed
45	4-Bromophenyl phenyl ether		1,005.6	µg/mL	+/-	6.7217	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	11.4982	µg/mL	Unstressed
	Purity 99%				+/-	18.9661	µg/mL	Stressed
46	Hexachlorobenzene		1,000.2	µg/mL	+/-	6.6858	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LC04221V)			+/-	11.4369	µg/mL	Unstressed
	Purity 98%				+/-	18.8650	µg/mL	Stressed
47	Pentachlorophenol		1,000.7	µg/mL	+/-	6.6889	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 140226JLM)			+/-	11.4422	µg/mL	Unstressed
	Purity 99%				+/-	18.8737	µg/mL	Stressed
48	Phenanthrene		1,003.0	µg/mL	+/-	6.7048	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKBL6906V)			+/-	11.4694	µg/mL	Unstressed
	Purity 98%				+/-	18.9186	µg/mL	Stressed
49	Anthracene		1,001.4	µg/mL	+/-	6.6936	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBK5208V)			+/-	11.4502	µg/mL	Unstressed
	Purity 99%				+/-	18.8869	µg/mL	Stressed
50	Carbazole		1,000.0	µg/mL	+/-	6.7320	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 3118500)			+/-	11.4626	µg/mL	Unstressed
	Purity 99%				+/-	18.8783	µg/mL	Stressed
51	Di-n-butylphthalate		1,002.7	µg/mL	+/-	6.7026	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBL8501V)			+/-	11.4656	µg/mL	Unstressed
	Purity 99%				+/-	18.9124	µg/mL	Stressed
52	Fluoranthene		1,002.1	µg/mL	+/-	6.6983	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot 00828AJ)			+/-	11.4582	µg/mL	Unstressed
	Purity 98%				+/-	18.9001	µg/mL	Stressed
53	Pyrene		1,000.7	µg/mL	+/-	6.6894	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBJ0984V)			+/-	11.4431	µg/mL	Unstressed
	Purity 98%				+/-	18.8752	µg/mL	Stressed
54	Benzyl butyl phthalate		1,003.0	µg/mL	+/-	6.7043	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot 03027HV)			+/-	11.4685	µg/mL	Unstressed
	Purity 99%				+/-	18.9171	µg/mL	Stressed
55	Benz(a)anthracene		1,003.3	µg/mL	+/-	6.7063	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/-	11.4719	µg/mL	Unstressed
	Purity 99%				+/-	18.9227	µg/mL	Stressed

56	Chrysene		1,001.5	µg/mL	+/-	6.6943	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot PR121912-01)			+/-	11.4514	µg/mL	Unstressed
	Purity 99%				+/-	18.8888	µg/mL	Stressed
57	3,3'-Dichlorobenzidine		1,002.5	µg/mL	+/-	6.7488	µg/mL	Gravimetric
	CAS # 91-94-1	(Lot 141205JLM)			+/-	11.4912	µg/mL	Unstressed
	Purity 99%				+/-	18.9255	µg/mL	Stressed
58	Bis(2-ethylhexyl)phthalate		1,006.9	µg/mL	+/-	6.7304	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBK2695V)			+/-	11.5131	µg/mL	Unstressed
	Purity 99%				+/-	18.9906	µg/mL	Stressed
59	Di-n-octyl phthalate		1,003.2	µg/mL	+/-	6.7060	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 3128600)			+/-	11.4714	µg/mL	Unstressed
	Purity 99%				+/-	18.9218	µg/mL	Stressed
60	Benzo(b)fluoranthene		1,003.8	µg/mL	+/-	6.7100	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot ER022008-02)			+/-	11.4782	µg/mL	Unstressed
	Purity 99%				+/-	18.9331	µg/mL	Stressed
61	Benzo(k)fluoranthene		1,004.3	µg/mL	+/-	6.7130	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot ER041513-01)			+/-	11.4834	µg/mL	Unstressed
	Purity 99%				+/-	18.9416	µg/mL	Stressed
62	Benzo(a)pyrene		1,002.7	µg/mL	+/-	6.7026	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	11.4656	µg/mL	Unstressed
	Purity 99%				+/-	18.9124	µg/mL	Stressed
63	Indeno(1,2,3-cd)pyrene		1,002.9	µg/mL	+/-	6.7036	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	11.4674	µg/mL	Unstressed
	Purity 99%				+/-	18.9152	µg/mL	Stressed
64	Dibenz(a,h)anthracene		1,001.5	µg/mL	+/-	6.6943	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	11.4514	µg/mL	Unstressed
	Purity 99%				+/-	18.8888	µg/mL	Stressed
65	Benzo(g,h,i)perylene		1,004.3	µg/mL	+/-	6.7130	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER020708-08)			+/-	11.4834	µg/mL	Unstressed
	Purity 99%				+/-	18.9416	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

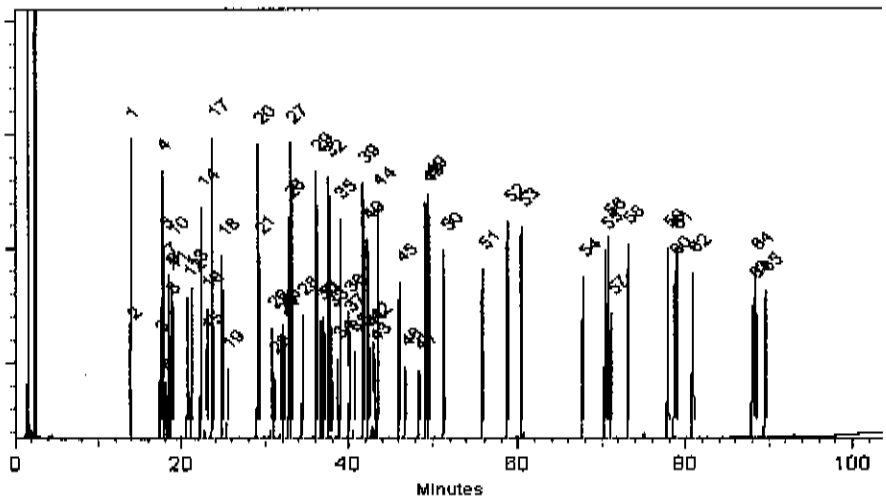
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Lauren

Diane Shaffer - QA Analyst

Date Mixed: 09-Jan-2015 **Balance:** 1128360905

Date Passed: 13-Jan-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK
110 Benner Circle
Bellefonte, PA 16823-6812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

Rec 7/17/15

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31853 **Lot No.:** A0110448

Description : 1,4-dioxane

1,4-Dioxane 2,000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane	2,005.0 µg/mL	+/- 11.7665	µg/mL	Gravimetric
	CAS # 123-91-1 (Lot SHBF2002V)		+/- 42.5509	µg/mL	Unstressed
	Purity 99%		+/- 42.7394	µg/mL	Stressed

Solvent: Methylene Chloride (MEOH FREE)
CAS # 75-09-2
Purity 99%

54611
~~54612~~ TP
54612
54613

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

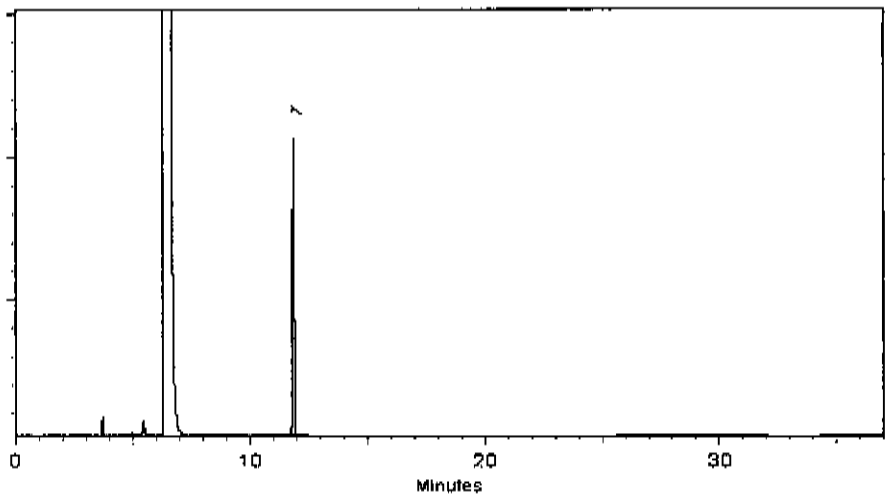
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Date Mixed: 16-Apr-2015 **Balance:** 1128360905

Amanda Miller - QC Analyst

Date Passed: 20-Apr-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Rastek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

Rec 5/14/15

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32208 **Lot No.:** A0108119

Description : Atrazine Standard

Atrazine Standard 1000 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2018 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Atrazine		1,009.4 µg/mL	+/- 5.9955	µg/mL	Gravimetric
	CAS # 1912-24-9	(Lot TZ8ED)		+/- 39.4963	µg/mL	Unstressed
	Purity 98%			+/- 62.6664	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

54488
54489
54490
54491

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

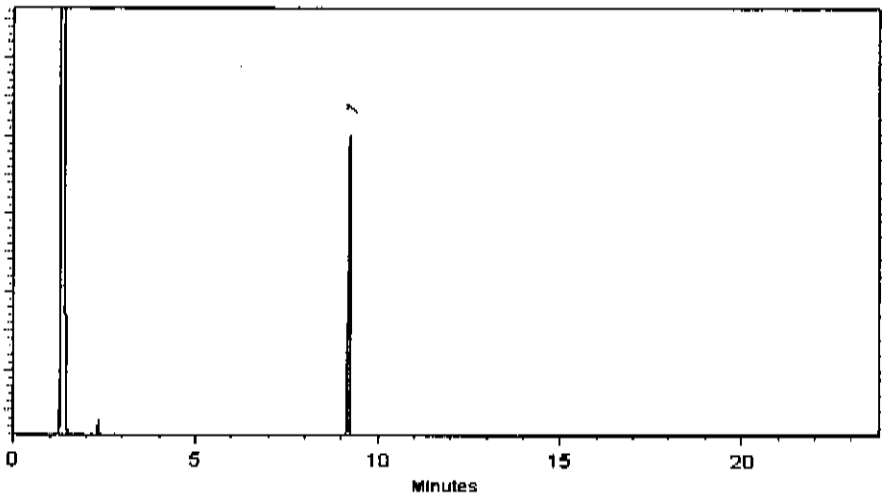
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician **Date Mixed:** 06-Jan-2015 **Balance:** 1125113331

Jodi E. Breon - QA Analyst **Date Passed:** 07-Jan-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being storod according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

Rec 5/28/15

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33017 **Lot No.:** A0111289

Description : Benzaldehyde Standard

Benzaldehyde 2000µg/mL Methylene Chloride (Methanol free), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Benzaldehyde	2,012.0 µg/mL	+/- 11.8075	µg/mL	Gravimetric
	CAS # 100-52-7 (Lot SHBD3510V)		+/- 64.5160	µg/mL	Unstressed
	Purity 99%		+/- 74.9913	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

54492
54493
54494
54495

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

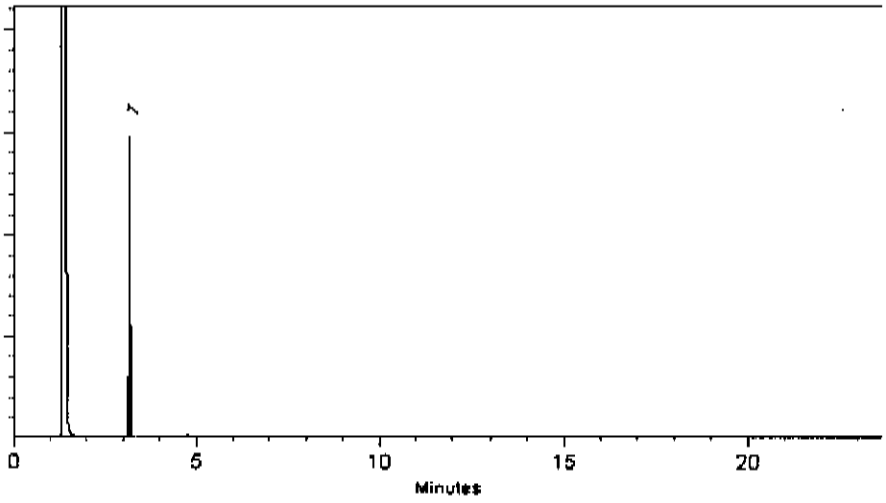
Carrier Gas:
hydrogen-constant pressure 10 psi,

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min, (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Lane Kibe - Mix Technician

Date Mixed: 22-May-2015 **Balance:** 1128360905

Diane Shaffer - QAAnalyst

Date Passed: 26-May-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

02/19/15

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33913 **Lot No.:** A0106668

Description : SOM01.0 SIM Analysis Standard

SOM01.1 Deuterated Monitoring Compound Mix SIM Compounds
2000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2020 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.I., K=2)		
1	2-Methylnaphthalene-d10	2,003.1 µg/mL	+/- 18.6279	µg/mL	Gravimetric
	CAS # 7297-45-2 (Lot P364P4)		+/- 90.1793	µg/mL	Unstressed
	Purity 98%		+/- 98.8575	µg/mL	Stressed
2	Fluoranthene-d10	1,999.2 µg/mL	+/- 18.5915	µg/mL	Gravimetric
	CAS # 93951-69-0 (Lot PR-20668)		+/- 90.0028	µg/mL	Unstressed
	Purity 98%		+/- 98.6640	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

S 4226
S 4227

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

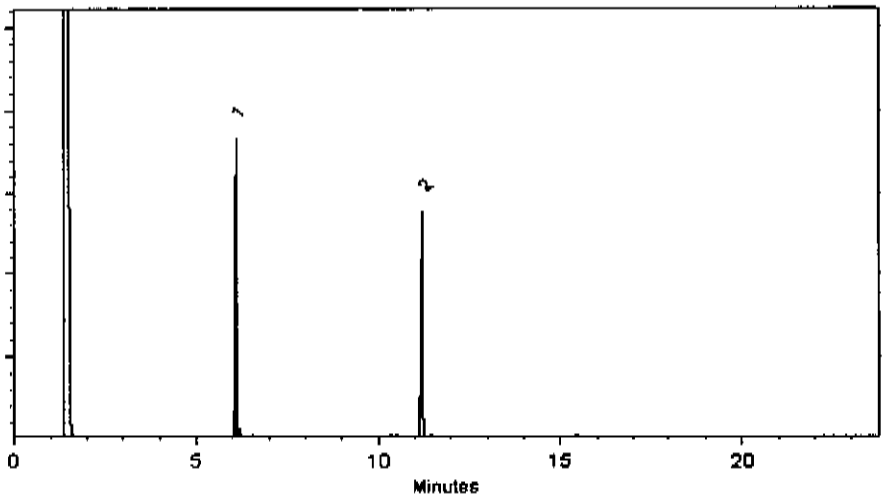
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 17-Oct-2014 **Balance:** 1128353505

Jennifer L Pollino

Jennifer L. Pollino - QC Analyst

Date Passed: 21-Oct-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigarete)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

7/21/15

Part Number:	90494
Lot Number:	070314
Description:	1-Methylnaphthalene
Expiration Date:	070319
Recommended Storage:	Refrigerate (4 °C)
Nominal Concentration (µg/mL):	2000

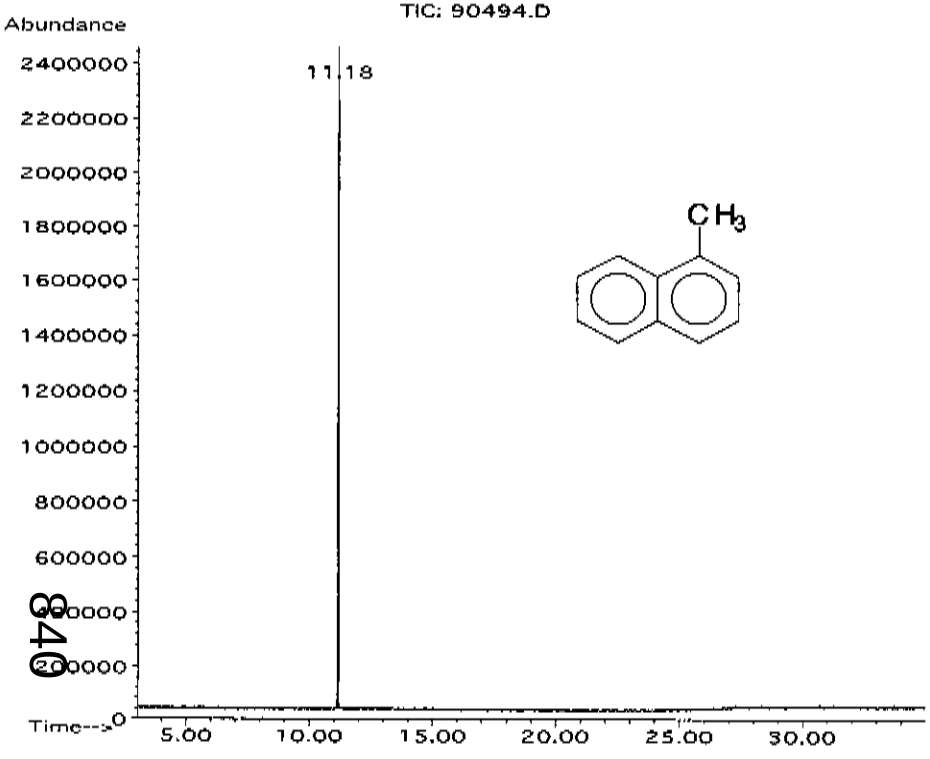
Solvent(s):	**Lot#**
Methylene chloride	74359

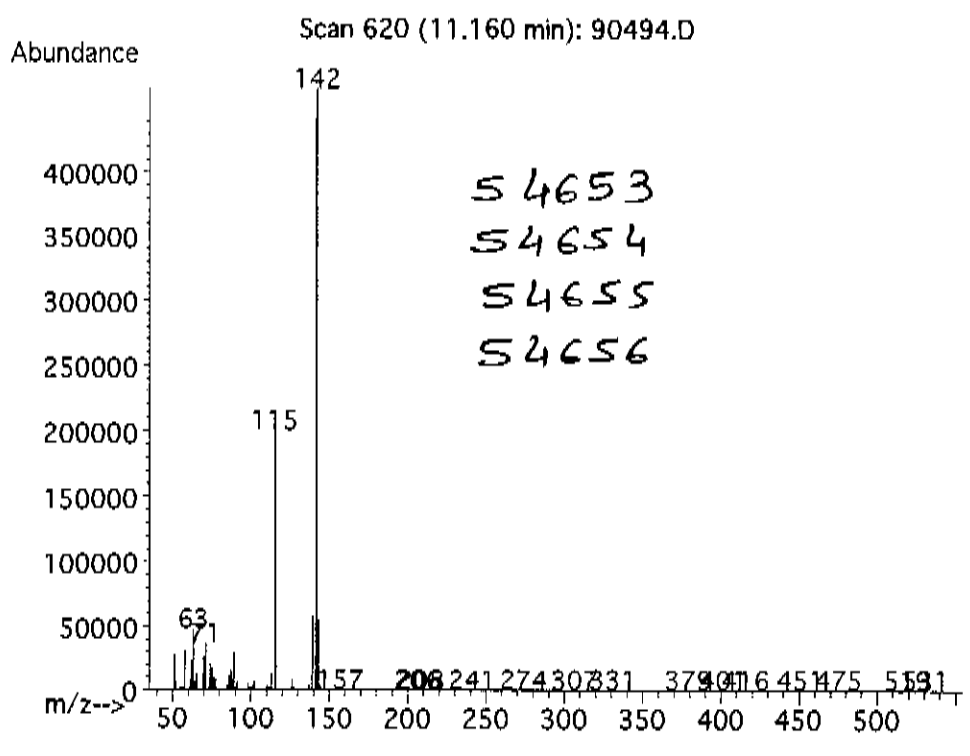
Weight(s) shown below were combined and diluted to: 100.0 | 5E-05 Balance Uncertainty | 0.003 Flask Uncertainty

Paul Barron	070314	
Formulated By: Paul Barron	DATE	
Pedro Rentas	070314	
Reviewed By: Pedro L. Rentas	DATE	

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 1-Methylnaphthalene	313	04413BX	2000	98	0.2	0.20410	0.20420	2001.0	0.0041	00090-12-0	N/A	orl-rat 1840mg/kg

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Gina McLane.





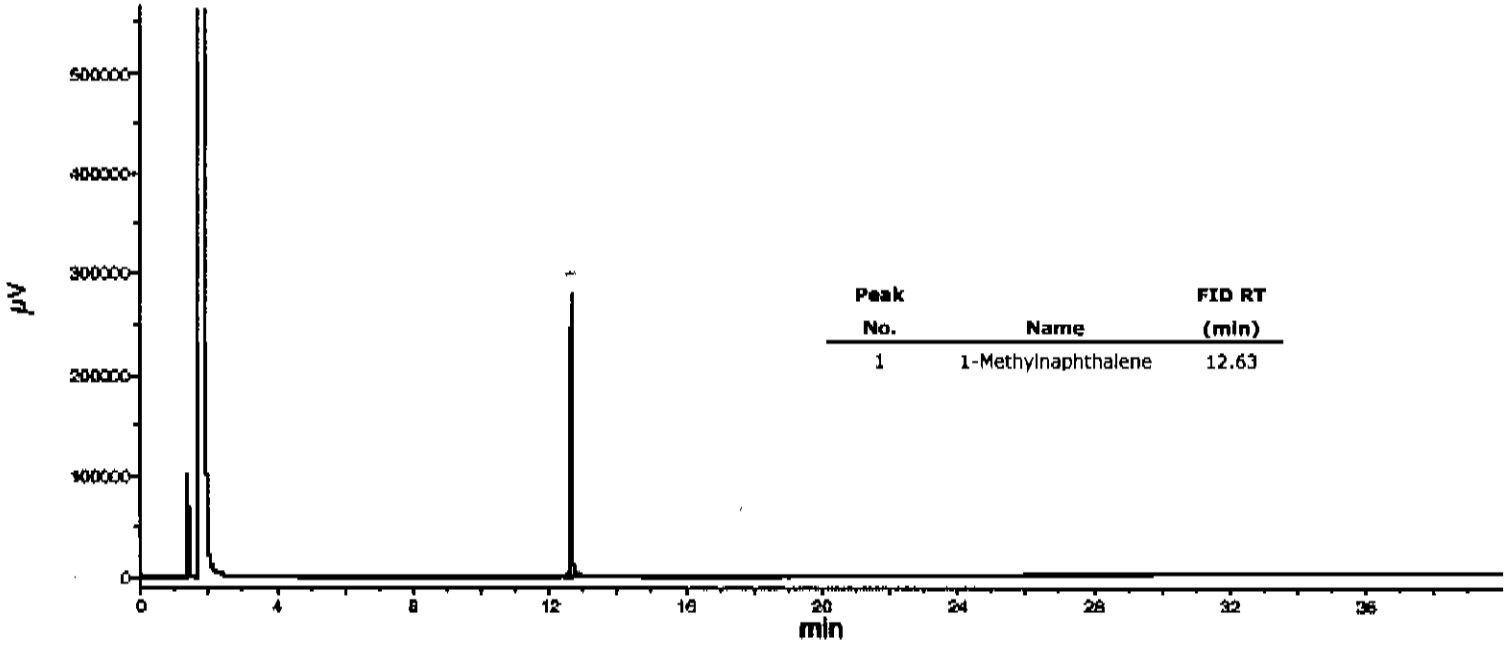
54653
54654
54655
54656

8409

Run 49, "P90494 L070314 [2000µg/mL in MeCl2]"

Run Length: 39.99 min, 23997 points at 10 points/second.
Created: Thu, Jul 10, 2014 at 12:38:44 AM.
Sampled: Sequence "070614-GC9M2", Method "GC9-M2".
Analyzed using Method "GC9-M2".

Comments
GC9M2 Analysis by Melissa Stonier
SPB-5 30 meter x 0.53 µm x 1.5 df
Flow Rates: Total Flow = 300 mL/min, Helium (carrier)=6mL, Helium (makeup)=25mL, Hydrogen (detector)=30, Air (detector)=360
Oven Temp 1 = 50 C (1 min), Rate = 10 C/min, Oven Temp 2 = 300 (14 min), Total Run Time=40 min.
Injector Temp = 250 C, FID Temp = 300 C, FID Signal = Edaq Channel 1
Gas Chromatograph = HP5890, Inejector = HP7673A, Standard Injection = 0.5 uL, Range = 4



Peak No.	Name	FID RT (min)
1	1-Methylnaphthalene	12.63

841

RESTEK CERTIFIED REFERENCE MATERIAL

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Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited Reference Material Producer
Certificate #3223.01

ACCREDITED
ISO/IEC 17025 Accredited Testing Laboratory
Certificate #3223.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31071 **Lot No.:** A0103147

Description : Acid Matrix Spike Mix (SW-846)

Acid Matrix Spike 10,000µg/mL, Methanol, 5mL/ampul

10/03/14

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Phenol		10,003.0	µg/mL	+/- 58.5698	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBC6998V)			+/- 249.3405	µg/mL	Unstressed
	Purity 99%				+/- 313.5161	µg/mL	Stressed
2	2-Chlorophenol		10,002.0	µg/mL	+/- 58.5639	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot MKBD3900V)			+/- 249.3156	µg/mL	Unstressed
	Purity 99%				+/- 313.4848	µg/mL	Stressed
3	4-Chloro-3-methylphenol		10,004.0	µg/mL	+/- 58.5756	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC0769V)			+/- 249.3654	µg/mL	Unstressed
	Purity 99%				+/- 313.5474	µg/mL	Stressed
4	4-Nitrophenol		10,003.0	µg/mL	+/- 58.5698	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)			+/- 249.3405	µg/mL	Unstressed
	Purity 99%				+/- 313.5161	µg/mL	Stressed
5	Pentachlorophenol		10,003.0	µg/mL	+/- 58.5698	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 140226JLM)			+/- 249.3405	µg/mL	Unstressed
	Purity 99%				+/- 313.5161	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

53852
53853

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

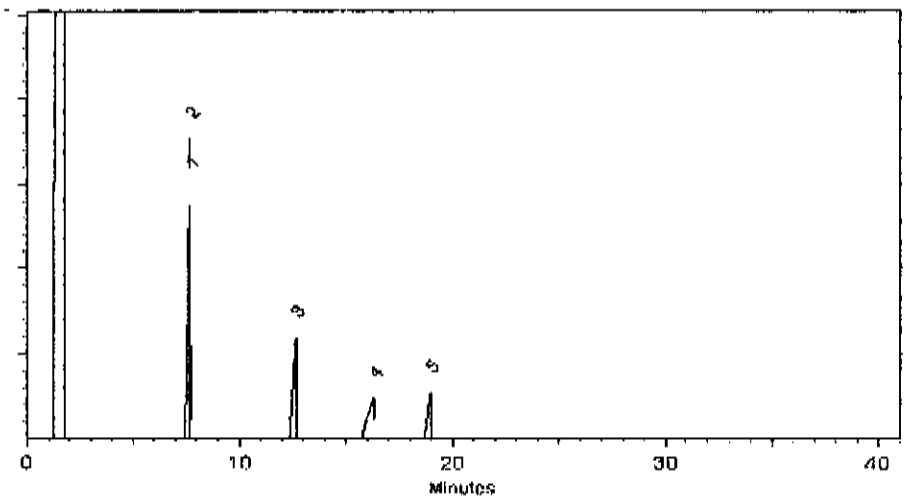
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 05-May-2014 **Balance:** 1125113331

Amanda Miller - QC Analyst

Date Passed: 07-May-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard cenditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncortainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Rec. 10/30/14

Catalog No. : 31001 **Lot No.:** A0103386

Description : SV Tuning Compound Standard

Tuning Std Decafluorotriphenylphosphine 2500µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.: K=2)		
1	DFTPP (Decafluorotriphenylphosphine)	2,500.0 µg/mL	+/- 14.8492	µg/mL	Gravimetric
	CAS # 5074-71-5 (Lot 10109917)		+/- 111.1178	µg/mL	Unstressed
	Purity 99%		+/- 122.0757	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

S 3957

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

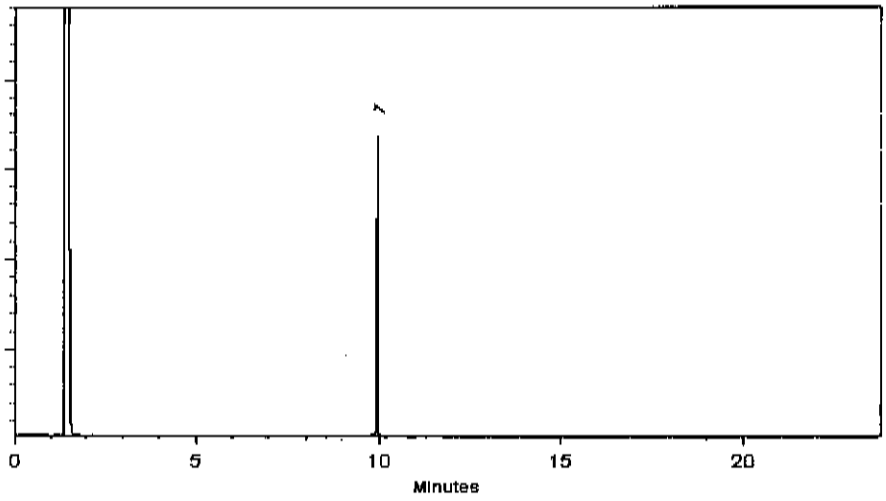
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 15-May-2014 **Balance:** 1128342313

Jennifer L. Pollino - QC Analyst

Date Passed: 19-May-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordanco with ISO Guides 34 and 35. The certified combined stressed uncortainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technicel Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space censtraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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54976 – 54990

SJ
11/16/2015

Catalog No. : 31810 **Lot No.:** A0112586

Description : OLC03.2 SVOA Deuterated Monitoring Compounds Mix

OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL/ampul, Methylene Chloride, 2000µg/mL

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2019 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Phenol-d5	2,003.3 µg/mL	+/- 11.7567 µg/mL	Gravimetric
	CAS # 4165-62-2 (Lot X479P8)		+/- 49.9425 µg/mL	Unstressed
	Purity 99%		+/- 62.7939 µg/mL	Stressed
2	bis(2-Chloroethyl) ether-d8	2,005.3 µg/mL	+/- 11.7683 µg/mL	Gravimetric
	CAS # 93952-02-4 (Lot X485P12)		+/- 49.9919 µg/mL	Unstressed
	Purity 97%		+/- 62.8559 µg/mL	Stressed
3	2-Chlorophenol-d4	2,004.7 µg/mL	+/- 11.7645 µg/mL	Gravimetric
	CAS # 93951-73-6 (Lot PR-20630)		+/- 49.9758 µg/mL	Unstressed
	Purity 99%		+/- 62.8357 µg/mL	Stressed
4	4-Methylphenol-d8	2,004.0 µg/mL	+/- 11.7606 µg/mL	Gravimetric
	CAS # 190780-66-6 (Lot W519P30)		+/- 49.9591 µg/mL	Unstressed
	Purity 99%		+/- 62.8148 µg/mL	Stressed
5	Nitrobenzene-d5	2,005.3 µg/mL	+/- 11.7684 µg/mL	Gravimetric
	CAS # 4165-60-0 (Lot PR-24042)		+/- 49.9924 µg/mL	Unstressed
	Purity 99%		+/- 62.8566 µg/mL	Stressed
6	2-Nitrophenol-d4	2,002.0 µg/mL	+/- 11.7489 µg/mL	Gravimetric
	CAS # 93951-78-1 (Lot L184P31)		+/- 49.9093 µg/mL	Unstressed
	Purity 99%		+/- 62.7521 µg/mL	Stressed
7	2,4-Dichlorophenol-d3	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 93951-74-7 (Lot AB210P9)		+/- 49.8594 µg/mL	Unstressed
	Purity 99%		+/- 62.6894 µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

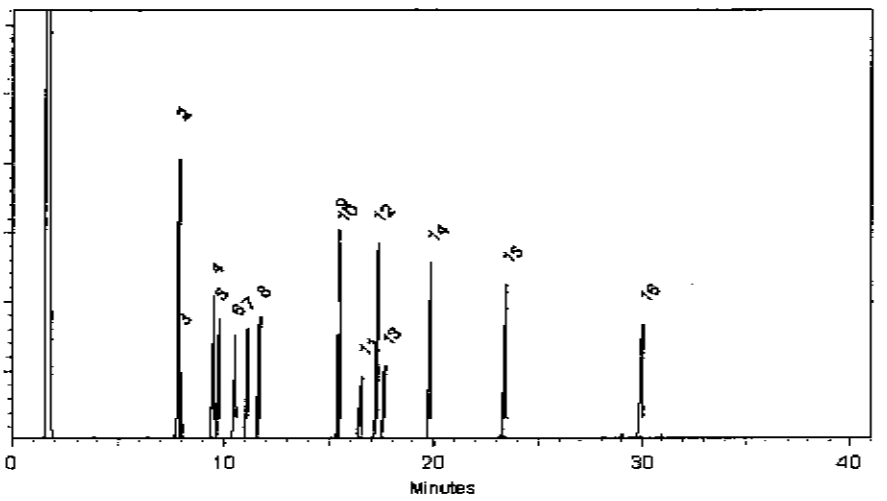
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Jennifer L. Pollino - QC Analyst

Date Mixed: 16-Jul-2015 **Balance:** 1128353505

Date Passed: 20-Jul-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

RESTEK CERTIFIED REFERENCE MATERIAL

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S 5001
/
S 5030

SJ
12/14/15

Catalog No. : 31206 **Lot No.:** A0115444

Description : SV Internal Standard Mix 2mg/ml

SV Internal Standard Mix 2mg/ml 2,000 µg/ml, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2021 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav Conc. (weight/volume)	Expanded Uncertainty (95% C.L. K=2)		
1	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 **Purity** 99% (Lot PR-18488)	2,000.2 µg/mL	+/- 11.6293 +/- 90.0902 +/- 99.9662	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 **Purity** 99% (Lot M-1452)	2,000.3 µg/mL	+/- 11.6299 +/- 90.0947 +/- 99.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 **Purity** 99% (Lot PR-25444)	2,000.3 µg/mL	+/- 11.6299 +/- 90.0947 +/- 99.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 **Purity** 99% (Lot PR-23065)	2,000.2 µg/mL	+/- 11.6293 +/- 90.0902 +/- 99.9662	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 **Purity** 99% (Lot I-19260)	2,000.9 µg/mL	+/- 11.6334 +/- 90.1217 +/- 100.0012	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 **Purity** 99% (Lot PR-24113)	2,000.3 µg/mL	+/- 11.6299 +/- 90.0947 +/- 99.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

PCI SCIENTIFIC SUPPLY, INC.

41 PLYMOUTH STREET
FAIRFIELD, NJ 07004
P# (973) 244-9002
F# (973) 244-9448

CERTIFICATE OF ANALYSIS

PRODUCT :	**SODIUM SULFATE ANHYDROUS**		
QUALITY :	**ACS**	**FORMULA :**	**Na_2SO_4**
SPECIFICATION NUMBER :	**6390**	**RELEASE DATE:**	**AGO/25/2014**
LOT NUMBER :	**433101**		

TEST	SPECIFICATIONS	LOT VALUES
Insoluble matter	Max. 0.01%	0.006 %
Loss on ignition	Max. 0.5%	0.3 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.1
Chloride (Cl)	Max. 0.001%	<0.001 %
Nitrogen compounds (como N)	Max. 5 ppm	<5 ppm
Assay (Na_2SO_4)	Min. 99.0%	99.5 %
Iron (Fe)	Max. 0.001%	<0.001 %
Heavy metals (como Pb)	Max. 5 ppm	<5 ppm
Potassium (K)	Max. 0.008%	0.001 %
Calcium (Ca)	Max. 0.01%	0.001 %
Magnesium (Mg)	Max. 0.005%	0.002 %
Phosphate (PO_4)	Max. 0.001%	<0.001 %
Appearance	Crystals	Crystals
Retained on US Standard No. 10 sieve	Max. 1.0%	0.0 %
Retained on US Standard No. 60 sieve	Min. 80.0%	98.3 %
Through US Standard No. 60 sieve	Max. 19.0%	1.5 %
Through US Standard No. 100 sieve	Max. 10.0%	0.2 %

E 2036

Methylene Chloride
ULTRA RESI-ANALYZED
For Organic Residue Analysis
(dichloromethane)

Material No.: 9266-A4
Batch No.: 0000124946
Manufactured Date: 2015/10/09
Expiration Date: 2017/01/07

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	4
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	>= 99.8 %	100.0
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0000 ppm	0.3000
Titrable Acid (µeq/g)	<= 0.3	< 0.1
Chloride (Cl)	<= 10 ppm	< 5
Water (by KF, coulometric)	<= 0.02 %	< 0.01

For Laboratory, Research or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

E 2040

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, FR 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, FSSC 22000
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Bahrain, Kingdom of Bahrain 9001:2008, 14001:2004, FSSC 22000
Mumbai, India 9001:2008, 17025:2005
Pune, India 9001:2008

James T. Peters
James T. Peters
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Methylene Chloride
ULTRA RESI-ANALYZED
For Organic Residue Analysis
(dichloromethane)

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9266-A4
Batch No.: 0000131014
Manufactured Date: 2015/11/25
Expiration Date: 2017/02/23

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	2
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	>= 99.8 %	100.0
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0000 ppm	0.1000
Titrable Acid (µeq/g)	<= 0.3	< 0.1
Chloride (Cl)	<= 10 ppm	< 5
Water (by KF, coulometric)	<= 0.02 %	< 0.01

For Laboratory, Research or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

E2072

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Debradun, India. 9001:2008 14001:2004, 13485:2003
Mumbai, India. 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600

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Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M3284
Received on
12/10/2014
MB

Material No.: 9673-33
Batch No.: 0000036761
Manufactured Date: 2013/02/18
Retest Date: 2018/02/17

Certificate of Analysis

Test	Specification	Result
ACS - Assay (H_2SO_4)	95.0 - 98.0 %	96.0
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	6
ACS - Residue after Ignition	<= 3 ppm	3
ACS - Substances Reducing Permanganate (as SO_2)	<= 2 ppm	< 2
Ammonium (NH_4)	<= 1 ppm	<1
Chloride (Cl)	<= 0.1 ppm	<0.1
Nitrate (NO_3)	<= 0.2 ppm	<0.1
Phosphate (PO_4)	<= 0.5 ppm	<0.1
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	9.3
Arsenic and Antimony (as As)	<= 4 ppb	< 3
Trace Impurities - Barium (Ba)	<= 10.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 10.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 10.0 ppb	< 0.7
Trace Impurities - Cadmium (Cd)	<= 2.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	16.9
Trace Impurities - Chromium (Cr)	<= 6.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 0.5 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	<0.1
Trace Impurities - Gallium (Ga)	<= 10.0 ppb	< 0.2
Trace Impurities - Germanium (Ge)	<= 10.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 10.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 500 ppb	< 100

SEIDLER CHEMICAL COMPANY
537 Raymond Boulevard
Newark, NJ 07105

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
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3477 Corporate Parkway, Suite #200, Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9673-33
Batch No.: 0000036761

Test	Specification	Result
Trace Impurities - Iron (Fe)	<= 50.0 ppb	1.9
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 10.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	0.5
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	<0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 3.0
Trace Impurities - Nickel (Ni)	<= 2.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 10.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 500.0 ppb	6.0
Trace Impurities - Selenium (Se)	<= 50.0 ppb	< 10.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 0.4
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 500.0 ppb	50.0
Trace Impurities - Strontium (Sr)	<= 5.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 10.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 20.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 10.0 ppb	0.7
Trace Impurities - Vanadium (V)	<= 10.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.6
Trace Impurities - Zirconium (Zr)	<= 10.0 ppb	<0.1

For Laboratory, Research or Manufacturing Use

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008, 17025:2005
Selangor, Malaysia 9001:2008
Cheruvakur, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Pune, India 9001:2008

Richard M Silberski
Global Director of Quality Assurance

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600

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3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

CHEMTECH **EXTRACTION LOGPAGE**

PB88601

SOP ID: M SOM02.2

Matrix : Water

Clean Up SOP #: N/A

Weigh By: N/A **Extraction By:** RP

Balance check: N/A

Balance ID: 2 **Weight 1:** (2) 2 **Weight 2:** (2) 2

Batch# PB88601

Extraction Date : 02/26/16

Extraction Start Time : 8:20

Extraction End Time : 16:25

Review By :

Filter By: RP **Concentration By:**

Method of Extraction

☐ Seperatory Funne ☑ Continious Liquid/Liquid ☐ Sonication ☐ Waste Dilution ☐ Soxhlet

Standared Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike	0.5ML	80 PPM	SP3536
Surrogate	0.5ML	80 + 0.8 PPM	SP3593

Chemical Used	ML/SAMPLE USED	Lot Number
Methylene Chloride		E2072
Baked Na2SO4		EP1646
H2SO4 1:1		EP1631

2/26

2/26

Extraction Conformance/Non-Conformance Comments:

PH Strip Lot NO. E 2056

Extraction End Time: 16:25

KD Bath Temperature: 60.1 c

Received Date: 02/26/16

Delivered Date: 02/26/16

Delivered Time: 16:30

Envap Temperature: 40 c

Received By: SJ

Delivered By:

Analysis Group:

Extraction Group: , RS, SJ, MM, UA, RP, JP, NP, UM

CHEMTECH **EXTRACTION LOGPAGE** **PrepBatch ID** **PB88601**

Analytical Method: SOM02.2 S10C **Extraction Date:** 02/26/2016-08:20 **Concentration Date:** 02/26/16

Lab Sample ID	Client Sample ID	Test	g / mL	PH	Surr/Spike By:		Final Vol.(mL)	Comments	Prep Pos
	2	2			Added By	Verified By			
PB88601BL	SBLK01	SVOC-TCL BNA -20	1000	6	RS	HA	1		
H1584-12	H0075	SVOC-TCL BNA -20	1000	6	↓	↓	1		
H1584-13	H0075MS	SVOC-TCL BNA -20	1000	6	↓	↓	1		
H1584-14	H0075MSD	SVOC-TCL BNA -20	1000	6	↓	↓	1		

PH adjusted for Acid L2

* Extracts relinquished on the same date as received.

2/26

CHEMTECH **EXTRACTION LOGPAGE** **PrepBatch ID : PB88601**

Analytical Method: 2 **Extraction Date:** 02/26/2016-08:20 **Concentration Date:** __/__/__

Lab Sample ID	Client Sample ID	Test	g / (mL)	PH	Surr/Spike By:		Final Vol.(mL)	Comments	Prep Bas
		2	2		Added By	Verified By			
PB886016L	SBLK01	SVOC-TCL BNA -20	1000.0	6	RUPESH	rajesh	1		
H1584-12	H0075	SVOC-TCL BNA -20	1000.0	6	RUPESH	rajesh	1		
H1584-13	H0075MS	SVOC-TCL BNA -20	1000.0	6	RUPESH	rajesh	1		
H1584-14	H0075MSD	SVOC-TCL BNA -20	1000.0	6	RUPESH	rajesh	1		

PH adjusted for Acid < 2

2/26

2/26

* Extracts relinquished on the same date as received.

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI022616

Review By	MMdadoda	Review On	2/29/2016 2:33:10 PM		
SubDirectory	VI022616	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR022616W.M

STD. NAME	STD REF.#
Tune/Reschk	VP50790
Initial Calibration Stds	VP50806,VP50807,VP50808,VP50809,VP50810
CCC	N/A
Internal Standard/PEM	VP50497,VP50495
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB26	VI047386.D	26 Feb 2016 15:32	FY/SY	Ok
2	VSTD0.526	VI047387.D	26 Feb 2016 16:20	FY/SY	Ok,M
3	VSTD00127	VI047388.D	26 Feb 2016 16:52	FY/SY	Ok,M
4	VSTD00528	VI047389.D	26 Feb 2016 17:24	FY/SY	Ok
5	VSTD01029	VI047390.D	26 Feb 2016 17:56	FY/SY	Ok
6	VSTD02030	VI047391.D	26 Feb 2016 18:27	FY/SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI022916

Review By	feifei	Review On	3/1/2016 12:27:52 PM		
SubDirectory	VI022916	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR022616W.M

STD. NAME	STD REF.#
Tune/Reschk	VP50841
Initial Calibration Stds	VP50806,VP50807,VP50808,VP50809,VP50810
CCC	VP50842,VP50843
Internal Standard/PEM	VP50497,VP50495
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB27	VI047392.D	29 Feb 2016 10:13	FY/SY	Ok
2	VSTDCCC005	VI047393.D	29 Feb 2016 12:31	FY/SY	Ok
3	VI0229WBL01	VI047394.D	29 Feb 2016 13:11	FY/SY	Ok,M
4	H1598-16	VI047395.D	29 Feb 2016 13:50	FY/SY	Ok,M
5	H1598-17	VI047396.D	29 Feb 2016 14:22	FY/SY	Ok,M
6	H1598-18	VI047397.D	29 Feb 2016 14:53	FY/SY	Ok
7	H1598-19	VI047398.D	29 Feb 2016 15:25	FY/SY	Ok,M
8	H1598-20	VI047399.D	29 Feb 2016 15:57	FY/SY	Ok,M
9	H1584-07	VI047400.D	29 Feb 2016 16:29	FY/SY	Ok,M
10	H1584-08	VI047401.D	29 Feb 2016 17:00	FY/SY	Ok
11	H1563-04	VI047402.D	29 Feb 2016 17:32	FY/SY	Ok,M
12	H1563-06	VI047403.D	29 Feb 2016 18:04	FY/SY	Ok
13	H1563-07	VI047404.D	29 Feb 2016 18:35	FY/SY	Ok
14	H1563-01	VI047405.D	29 Feb 2016 19:08	FY/SY	Ok
15	H1563-02	VI047406.D	29 Feb 2016 19:39	FY/SY	Ok,M
16	H1563-03	VI047407.D	29 Feb 2016 20:11	FY/SY	Ok,M
17	VSTDCCC005EC	VI047408.D	29 Feb 2016 21:15	FY/SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI030116

Review By	MMDadoda	Review On	3/2/2016 5:48:02 PM		
SubDirectory	VI030116	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR022616W.M

STD. NAME	STD REF.#
Tune/Reschk	VP50854
Initial Calibration Stds	VP50806,VP50807,VP50808,VP50809,VP50810
CCC	VP50855,VP50856
Internal Standard/PEM	VP50497,VP50495
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB28	VI047409.D	1 Mar 2016 9:28	FY/SY	Ok
2	VSTDCCC005	VI047410.D	1 Mar 2016 10:11	FY/SY	Ok
3	VI0301WBL01	VI047411.D	1 Mar 2016 10:55	FY/SY	Ok,M
4	H1584-09	VI047412.D	1 Mar 2016 11:39	FY/SY	Ok
5	H1584-10	VI047413.D	1 Mar 2016 12:11	FY/SY	Ok
6	H1584-11	VI047414.D	1 Mar 2016 12:43	FY/SY	Ok
7	H1573-11	VI047415.D	1 Mar 2016 13:15	FY/SY	Dilution
8	H1573-11DL	VI047416.D	1 Mar 2016 14:05	FY/SY	Not Ok
9	H1573-01DL2	VI047417.D	1 Mar 2016 14:45	FY/SY	Ok
10	H1573-07DL2	VI047418.D	1 Mar 2016 15:16	FY/SY	Ok
11	H1573-08DL2	VI047419.D	1 Mar 2016 15:48	FY/SY	Ok,M
12	H1573-09DL	VI047420.D	1 Mar 2016 16:21	FY/SY	Ok
13	H1573-10DL	VI047421.D	1 Mar 2016 16:52	FY/SY	Ok,M
14	H1573-12	VI047422.D	1 Mar 2016 17:24	FY/SY	ReRun
15	H1573-11DL	VI047423.D	1 Mar 2016 17:56	FY/SY	Ok
16	H1573-07DL2	VI047424.D	1 Mar 2016 18:28	FY/SY	Not Ok
17	H1573-16	VI047425.D	1 Mar 2016 19:00	FY/SY	Not Ok
18	VSTDCCC005EC	VI047426.D	1 Mar 2016 19:31	FY/SY	Ok,M

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR022516

Review By	sam	Review On	2/25/2016 7:16:36 PM		
SubDirectory	VR022516	HP Acquire Method	MOONMOON	HP Processing Method	SOMRTR022516W.M

STD. NAME	STD REF.#
Tune/Reschk	VP50749
Initial Calibration Stds	VP50744,VP50745,VP50746,VP50747,VP50748
CCC	VP50750,VP50751
Internal Standard/PEM	VP50497,VP50495
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB51	VR018139.D	25 Feb 2016 13:02	MD\SY	Ok
2	VSTD0.551	VR018140.D	25 Feb 2016 13:49	MD\SY	Ok,M
3	VSTD00152	VR018141.D	25 Feb 2016 14:20	MD\SY	Ok,M
4	VSTD00553	VR018142.D	25 Feb 2016 14:52	MD\SY	Ok,M
5	VSTD01054	VR018143.D	25 Feb 2016 15:23	MD\SY	Ok,M
6	VSTD02055	VR018144.D	25 Feb 2016 15:54	MD\SY	Ok,M
7	VSTDCCC005	VR018145.D	25 Feb 2016 18:44	MD\SY	Ok,M
8	VR0225WBL01	VR018146.D	25 Feb 2016 19:53	MD\SY	Ok
9	H1588-01	VR018147.D	25 Feb 2016 20:24	MD\SY	Ok
10	H1584-05	VR018148.D	25 Feb 2016 20:55	MD\SY	Ok
11	H1584-04	VR018149.D	25 Feb 2016 21:26	MD\SY	Ok
12	H1598-01	VR018150.D	25 Feb 2016 21:58	MD\SY	Ok
13	H1598-02	VR018151.D	25 Feb 2016 22:29	MD\SY	Ok
14	H1598-03	VR018152.D	25 Feb 2016 23:00	MD\SY	Ok
15	H1598-04	VR018153.D	25 Feb 2016 23:31	MD\SY	Ok
16	H1598-05	VR018154.D	26 Feb 2016 00:02	MD\SY	Ok
17	H1598-06	VR018155.D	26 Feb 2016 00:33	MD\SY	Ok
18	H1598-07	VR018156.D	26 Feb 2016 1:04	MD\SY	Ok
19	H1598-08	VR018157.D	26 Feb 2016 1:35	MD\SY	Ok
20	H1598-09	VR018158.D	26 Feb 2016 2:06	MD\SY	Ok,M
21	H1598-10	VR018159.D	26 Feb 2016 2:38	MD\SY	Ok
22	H1598-11	VR018160.D	26 Feb 2016 3:09	MD\SY	Ok
23	H1598-12	VR018161.D	26 Feb 2016 3:40	MD\SY	Ok
24	VSTDCCC005EC	VR018162.D	26 Feb 2016 4:11	MD\SY	Ok,M

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR022616

Review By	sam	Review On	2/29/2016 5:15:24 PM		
SubDirectory	VR022616	HP Acquire Method	MOONMOON	HP Processing Method	SOMRTR022516W.M

STD. NAME	STD REF.#
Tune/Reschk	VP50789
Initial Calibration Stds	VP50744,VP50745,VP50746,VP50747,VP50748
CCC	VP50791,VP50792
Internal Standard/PEM	VP50497,VP50495
ICV/I.BLK	MS VP50804

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB52	VR018163.D	26 Feb 2016 8:48	MD\SY	Ok
2	VSTDCCC005	VR018164.D	26 Feb 2016 9:27	MD\SY	Ok,M
3	VR0226WBL01	VR018165.D	26 Feb 2016 10:09	MD\SY	Ok
4	H1584-01	VR018166.D	26 Feb 2016 10:59	MD\SY	Ok
5	H1584-02MS	VR018167.D	26 Feb 2016 11:31	MD\SY	Ok
6	H1584-03MSD	VR018168.D	26 Feb 2016 12:02	MD\SY	Ok
7	H1517-13	VR018169.D	26 Feb 2016 12:33	MD\SY	Ok,M
8	H1525-04	VR018170.D	26 Feb 2016 13:04	MD\SY	Ok
9	H1517-05	VR018171.D	26 Feb 2016 13:35	MD\SY	Ok
10	H1598-13	VR018172.D	26 Feb 2016 14:06	MD\SY	Ok
11	H1598-14	VR018173.D	26 Feb 2016 14:37	MD\SY	Ok
12	H1598-15	VR018174.D	26 Feb 2016 15:08	MD\SY	Ok
13	VSTDCCC005EC	VR018175.D	26 Feb 2016 15:39	MD\SY	Ok,M

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR030116

Review By	sam	Review On	3/2/2016 9:09:00 AM		
SubDirectory	VR030116	HP Acquire Method	MOONMOON	HP Processing Method	somrtr030116w.m

STD. NAME	STD REF.#
Tune/Reschk	VP50853
Initial Calibration Stds	VP50859,VP50860,VP50861,VP50862,VP50863
CCC	VP50857,VP50858
Internal Standard/PEM	VP50495,VP50497
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB53	VR018176.D	1 Mar 2016 12:21	MD\SY	Ok
2	VSTD0.560	VR018177.D	1 Mar 2016 12:59	MD\SY	Ok
3	VSTD00161	VR018178.D	1 Mar 2016 13:47	MD\SY	Ok
4	VSTD00562	VR018179.D	1 Mar 2016 14:18	MD\SY	Ok
5	VSTD01063	VR018180.D	1 Mar 2016 14:50	MD\SY	Ok
6	VSTD02064	VR018181.D	1 Mar 2016 15:21	MD\SY	Ok
7	VSTDCCC005	VR018182.D	1 Mar 2016 16:18	MD\SY	Ok
8	VR0301WBL01	VR018183.D	1 Mar 2016 17:26	MD\SY	Ok
9	H1563-05	VR018184.D	1 Mar 2016 17:57	MD\SY	Not Ok
10	H1584-15	VR018185.D	1 Mar 2016 18:28	MD\SY	Ok
11	H1584-16	VR018186.D	1 Mar 2016 18:59	MD\SY	Ok
12	H1584-17	VR018187.D	1 Mar 2016 19:31	MD\SY	Ok
13	H1584-18	VR018188.D	1 Mar 2016 20:02	MD\SY	Ok
14	H1584-19	VR018189.D	1 Mar 2016 20:33	MD\SY	Ok
15	H1584-20	VR018190.D	1 Mar 2016 21:04	MD\SY	Ok
16	H1584-21	VR018191.D	1 Mar 2016 21:35	MD\SY	Ok
17	H1608-02	VR018192.D	1 Mar 2016 22:06	MD\SY	Ok
18	H1608-03	VR018193.D	1 Mar 2016 22:37	MD\SY	Ok
19	H1608-04	VR018194.D	1 Mar 2016 23:08	MD\SY	Ok
20	H1608-06	VR018195.D	1 Mar 2016 23:39	MD\SY	Ok
21	H1608-10	VR018196.D	2 Mar 2016 00:10	MD\SY	Ok
22	H1610-01	VR018197.D	2 Mar 2016 00:42	MD\SY	Ok
23	H1610-02	VR018198.D	2 Mar 2016 1:13	MD\SY	Ok
24	H1610-03	VR018199.D	2 Mar 2016 1:44	MD\SY	Ok
25	H1610-04	VR018200.D	2 Mar 2016 2:15	MD\SY	Ok
26	VSTDCCC005EC	VR018201.D	2 Mar 2016 2:46	MD\SY	Ok

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR030216

Review By	feifei	Review On	3/3/2016 11:01:26 AM		
SubDirectory	VR030216	HP Acquire Method	MOONMOON	HP Processing Method	somrtr030116w.m

STD. NAME	STD REF.#
Tune/Reschk	VP50894
Initial Calibration Stds	VP50859,VP50860,VP50861,VP50862,VP50863
CCC	VP50897,VP50898
Internal Standard/PEM	VP50495,VP50497
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB54	VR018202.D	2 Mar 2016 10:43	MD\SY	Ok
2	VSTDCCC005	VR018203.D	2 Mar 2016 11:27	MD\SY	Ok,M
3	VR0302WBL01	VR018204.D	2 Mar 2016 12:15	MD\SY	Ok
4	H1588-02	VR018205.D	2 Mar 2016 13:08	MD\SY	Ok
5	H1584-06	VR018206.D	2 Mar 2016 13:39	MD\SY	Ok
6	H1598-21	VR018207.D	2 Mar 2016 14:10	MD\SY	Ok
7	H1608-11	VR018208.D	2 Mar 2016 14:42	MD\SY	Ok
8	H1610-05	VR018209.D	2 Mar 2016 15:15	MD\SY	Ok
9	H1610-06	VR018210.D	2 Mar 2016 16:17	MD\SY	Ok
10	H1610-07	VR018211.D	2 Mar 2016 16:53	MD\SY	Ok
11	H1610-08	VR018212.D	2 Mar 2016 17:24	MD\SY	Ok
12	H1610-09	VR018213.D	2 Mar 2016 17:56	MD\SY	Dilution
13	H1610-10	VR018214.D	2 Mar 2016 18:27	MD\SY	Ok
14	H1563-05	VR018215.D	2 Mar 2016 18:58	MD\SY	Ok
15	H1610-11	VR018216.D	2 Mar 2016 19:29	MD\SY	Not Ok
16	VSTDCCC005EC	VR018217.D	2 Mar 2016 20:00	MD\SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI022616

Review By	MMdadoda	Review On	2/29/2016 2:33:10 PM		
SubDirectory	VI022616	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR022616W.M

STD. NAME	STD REF.#
Tune/Reschk	VP50790
Initial Calibration Stds	VP50806,VP50807,VP50808,VP50809,VP50810
CCC	N/A
Internal Standard/PEM	VP50497,VP50495
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB26	BFB26	VI047386.D		Ok
2	VSTD0.526	VSTD0.526	VI047387.D		Ok,M
3	VSTD00127	VSTD00127	VI047388.D		Ok,M
4	VSTD00528	VSTD00528	VI047389.D		Ok
5	VSTD01029	VSTD01029	VI047390.D		Ok
6	VSTD02030	VSTD02030	VI047391.D		Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI022916

Review By	feifei	Review On	3/1/2016 12:27:52 PM		
SubDirectory	VI022916	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR022616W.M

STD. NAME	STD REF.#
Tune/Reschk	VP50841
Initial Calibration Stds	VP50806,VP50807,VP50808,VP50809,VP50810
CCC	VP50842,VP50843
Internal Standard/PEM	VP50497,VP50495
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB27	BFB27	VI047392.D		Ok
2	VSTDCCC005	VSTD00531	VI047393.D		Ok
3	VI0229WBL01	VBLK26	VI047394.D		Ok,M
4	H1598-16	C0EZ4	VI047395.D	pH#1.0 vial A (V6390)	Ok,M
5	H1598-17	C0EZ6	VI047396.D	pH#1.0 vial A	Ok,M
6	H1598-18	C0EZ7	VI047397.D	pH#1.0 vial A	Ok
7	H1598-19	C0EZ8	VI047398.D	pH#1.0 vial A	Ok,M
8	H1598-20	C0F03	VI047399.D	pH#1.0 vial A	Ok,M
9	H1584-07	H0002	VI047400.D	pH#1.0 vial A	Ok,M
10	H1584-08	H0007	VI047401.D	pH#7.0 vial A (W2038)	Ok
11	H1563-04	YA4J3	VI047402.D	pH#1.0 vial A	Ok,M
12	H1563-06	YA4J4	VI047403.D	pH#1.0 vial A	Ok
13	H1563-07	YA4J5	VI047404.D	pH#1.0 vial A	Ok
14	H1563-01	YA4J0	VI047405.D	pH#1.0 vial A	Ok
15	H1563-02	YA4J1	VI047406.D	pH#1.0 vial A	Ok,M
16	H1563-03	YA4J2	VI047407.D	pH#1.0 vial A	Ok,M
17	VSTDCCC005EC	VSTD00532	VI047408.D		Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI030116

Review By	MMDadoda	Review On	3/2/2016 5:48:02 PM		
SubDirectory	VI030116	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR022616W.M

STD. NAME	STD REF.#
Tune/Reschk	VP50854
Initial Calibration Stds	VP50806,VP50807,VP50808,VP50809,VP50810
CCC	VP50855,VP50856
Internal Standard/PEM	VP50497,VP50495
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB28	BFB28	VI047409.D		Ok
2	VSTDCCC005	VSTD00533	VI047410.D	(V#6390)	Ok
3	VI0301WBL01	VBLK27	VI047411.D		Ok,M
4	H1584-09	H0013	VI047412.D	pH#1.0 vial A	Ok
5	H1584-10	H0051	VI047413.D	pH#1.0 vial A	Ok
6	H1584-11	H0061	VI047414.D	pH#1.0 vial A	Ok
7	H1573-11	C0AF3	VI047415.D	pH#1.0 B Need 40X	Dilution
8	H1573-11DL	C0AF3DL	VI047416.D	pH#1.0 C ,run at 40x	Not Ok
9	H1573-01DL2	C0AD4DL2	VI047417.D	pH#1.3 vial B	Ok
10	H1573-07DL2	C0AE4DL2	VI047418.D	pH#1.3 vial B	Ok
11	H1573-08DL2	C0AE5DL2	VI047419.D	pH#1.3 vial B	Ok,M
12	H1573-09DL	C0AE7DL	VI047420.D	pH#1.3 vial B	Ok
13	H1573-10DL	C0AF0DL	VI047421.D	pH#1.3 vial B	Ok,M
14	H1573-12	C0AF4	VI047422.D	pH#1.3 B Concentration Confirmation	ReRun
15	H1573-11DL	C0AF3DL	VI047423.D	pH#1.0 C	Ok
16	H1573-07DL2	C0AE4DL2	VI047424.D	All Ready run	Not Ok
17	H1573-16	VHBLK01	VI047425.D	pH#1.6 vial A ,will be reanalysed	Not Ok
18	VSTDCCC005EC	VSTD00534	VI047426.D		Ok,M

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR022516

Review By	sam	Review On	2/25/2016 7:16:36 PM		
SubDirectory	VR022516	HP Acquire Method	MOONMOON	HP Processing Method	SOMRTR022516W.M

STD. NAME	STD REF.#
Tune/Reschk	VP50749
Initial Calibration Stds	VP50744,VP50745,VP50746,VP50747,VP50748
CCC	VP50750,VP50751
Internal Standard/PEM	VP50497,VP50495
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB51	BFB51	VR018139.D		Ok
2	VSTD0.551	VSTD0.551	VR018140.D		Ok,M
3	VSTD00152	VSTD00152	VR018141.D		Ok,M
4	VSTD00553	VSTD00553	VR018142.D		Ok,M
5	VSTD01054	VSTD01054	VR018143.D		Ok,M
6	VSTD02055	VSTD02055	VR018144.D		Ok,M
7	VSTDCCC005	VSTD00556	VR018145.D		Ok,M
8	VR0225WBL01	VBLK51	VR018146.D	pH#V6390)	Ok
9	H1588-01	C0696	VR018147.D	pH#1.0 vial A	Ok
10	H1584-05	H0060	VR018148.D	pH#1.0 vial A	Ok
11	H1584-04	H0003	VR018149.D	pH#1.0 vial A	Ok
12	H1598-01	C0ES0	VR018150.D	pH#1.0 vial A	Ok
13	H1598-02	C0ET1	VR018151.D	pH#1.0 vial A	Ok
14	H1598-03	C0ET5	VR018152.D	pH#1.0 vial A	Ok
15	H1598-04	C0ET6	VR018153.D	pH#1.0 vial A	Ok
16	H1598-05	C0ET9	VR018154.D	pH#1.0 vial A	Ok
17	H1598-06	C0EW0	VR018155.D	pH#1.0 vial A	Ok
18	H1598-07	C0EW1	VR018156.D	pH#1.0 vial A	Ok
19	H1598-08	C0EY0	VR018157.D	pH#1.0 vial A	Ok
20	H1598-09	C0EY3	VR018158.D	pH#1.0 vial A	Ok,M
21	H1598-10	C0EY4	VR018159.D	pH#1.0 vial A	Ok
22	H1598-11	C0EY7	VR018160.D	pH#1.0 vial A	Ok

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR022516

Review By	sam	Review On	2/25/2016 7:16:36 PM		
SubDirectory	VR022516	HP Acquire Method	MOONMOON	HP Processing Method	SOMRTR022516W.M

STD. NAME	STD REF.#
Tune/Reschk	VP50749
Initial Calibration Stds	VP50744,VP50745,VP50746,VP50747,VP50748
CCC	VP50750,VP50751
Internal Standard/PEM	VP50497,VP50495
ICV/I.BLK	N/A

23	H1598-12	C0EY8	VR018161.D	pH#1.0 vial A	Ok
24	VSTDCCC005EC	VSTD00557	VR018162.D		Ok,M

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR022616

Review By	sam	Review On	2/29/2016 5:15:24 PM		
SubDirectory	VR022616	HP Acquire Method	MOONMOON	HP Processing Method	SOMRTR022516W.M

STD. NAME	STD REF.#
Tune/Reschk	VP50789
Initial Calibration Stds	VP50744,VP50745,VP50746,VP50747,VP50748
CCC	VP50791,VP50792
Internal Standard/PEM	VP50497,VP50495
ICV/I.BLK	MS VP50804

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB52	BFB52	VR018163.D		Ok
2	VSTDCCC005	VSTD00558	VR018164.D		Ok,M
3	VR0226WBL01	VBLK52	VR018165.D		Ok
4	H1584-01	H0001	VR018166.D	pH#1.0 vial A(V6390)	Ok
5	H1584-02MS	H0001MS	VR018167.D	pH#1.0 vial A	Ok
6	H1584-03MSD	H0001MSD	VR018168.D	pH#1.0 vial A	Ok
7	H1517-13	YA4C1	VR018169.D	pH#7.0 vial A +B+C (W2038)	Ok,M
8	H1525-04	VHBLK01	VR018170.D	pH#1.6A SB	Ok
9	H1517-05	VHBLK01	VR018171.D	pH#1.6 vial A	Ok
10	H1598-13	C0EY9	VR018172.D	pH#1.0 vial A	Ok
11	H1598-14	C0EZ0	VR018173.D	pH#1.0 vial A	Ok
12	H1598-15	C0EZ1	VR018174.D	pH#1.6 vial A	Ok
13	VSTDCCC005EC	VSTD00559	VR018175.D		Ok,M

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR030116

Review By	sam	Review On	3/2/2016 9:09:00 AM		
SubDirectory	VR030116	HP Acquire Method	MOONMOON	HP Processing Method	somrtr030116w.m

STD. NAME	STD REF.#
Tune/Reschk	VP50853
Initial Calibration Stds	VP50859,VP50860,VP50861,VP50862,VP50863
CCC	VP50857,VP50858
Internal Standard/PEM	VP50495,VP50497
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB53	BFB53	VR018176.D		Ok
2	VSTD0.560	VSTD0.560	VR018177.D		Ok
3	VSTD00161	VSTD00161	VR018178.D		Ok
4	VSTD00562	VSTD00562	VR018179.D		Ok
5	VSTD01063	VSTD01063	VR018180.D		Ok
6	VSTD02064	VSTD02064	VR018181.D		Ok
7	VSTDCCC005	VSTD00565	VR018182.D	(V#6390)	Ok
8	VR0301WBL01	VBLK53	VR018183.D		Ok
9	H1563-05	VHBLK01	VR018184.D	pH#1.6 vial A Surr Fail.	Not Ok
10	H1584-15	H0011	VR018185.D	pH#1.0 vial A	Ok
11	H1584-16	H0012	VR018186.D	pH#1.0 vial A	Ok
12	H1584-17	H0014	VR018187.D	pH#1.0 vial A	Ok
13	H1584-18	H0015	VR018188.D	pH#1.0 vial A	Ok
14	H1584-19	H0019	VR018189.D	pH#1.0 vial A	Ok
15	H1584-20	H0062	VR018190.D	pH#1.0 vial A	Ok
16	H1584-21	H0901	VR018191.D	pH#1.0 vial A	Ok
17	H1608-02	C0L23	VR018192.D	pH#1.0 vial A	Ok
18	H1608-03	C0L24	VR018193.D	pH#1.0 vial A	Ok
19	H1608-04	C0L25	VR018194.D	pH#1.0 vial A	Ok
20	H1608-06	C0L27	VR018195.D	pH#1.0 vial A	Ok
21	H1608-10	C0L31	VR018196.D	pH#1.0 vial A	Ok
22	H1610-01	C0ET7	VR018197.D	pH#1.6 vial A	Ok

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR030116

Review By	sam	Review On	3/2/2016 9:09:00 AM		
SubDirectory	VR030116	HP Acquire Method	MOONMOON	HP Processing Method	somrtr030116w.m

STD. NAME	STD REF.#
Tune/Reschk	VP50853
Initial Calibration Stds	VP50859,VP50860,VP50861,VP50862,VP50863
CCC	VP50857,VP50858
Internal Standard/PEM	VP50495,VP50497
ICV/I.BLK	N/A

23	H1610-02	C0ET8	VR018198.D	pH#1.6 vial A	Ok
24	H1610-03	C0EX8	VR018199.D	pH#1.6 vial A	Ok
25	H1610-04	C0EX9	VR018200.D	pH#1.6 vial A	Ok
26	VSTDCCC005EC	VSTD00566	VR018201.D		Ok

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR030216

Review By	feifei	Review On	3/3/2016 11:01:26 AM		
SubDirectory	VR030216	HP Acquire Method	MOONMOON	HP Processing Method	somrtr030116w.m

STD. NAME	STD REF.#
Tune/Reschk	VP50894
Initial Calibration Stds	VP50859,VP50860,VP50861,VP50862,VP50863
CCC	VP50897,VP50898
Internal Standard/PEM	VP50495,VP50497
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB54	BFB54	VR018202.D		Ok
2	VSTDCCC005	VSTD00567	VR018203.D	(V#6390)	Ok,M
3	VR0302WBL01	VBLK54	VR018204.D		Ok
4	H1588-02	VHBLK01	VR018205.D	pH#1.6A SB	Ok
5	H1584-06	VHBLK01	VR018206.D	pH#1.6A SB	Ok
6	H1598-21	VHBLK01	VR018207.D	pH#1.6A SB	Ok
7	H1608-11	VHBLK01	VR018208.D	pH#1.6A SB	Ok
8	H1610-05	C0EY1	VR018209.D	pH#1.0 vial A	Ok
9	H1610-06	C0EY5	VR018210.D	pH#1.0 vial A	Ok
10	H1610-07	C0EY6	VR018211.D	pH#1.0 vial A	Ok
11	H1610-08	C0EZ5	VR018212.D	pH#1.0 vial A	Ok
12	H1610-09	C0F01	VR018213.D	pH#1.0A Need 5x	Dilution
13	H1610-10	C0F13	VR018214.D	pH#1.0 vial A	Ok
14	H1563-05	VHBLK01	VR018215.D	pH#1.6A SB	Ok
15	H1610-11	VHBLK01	VR018216.D	pH#1.6A SB,Need to run H1610-09DL	Not Ok
16	VSTDCCC005EC	VSTD00568	VR018217.D		Ok

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM030316

Review By	Sohil	Review On	3/4/2016 3:24:57 PM		
SubDirectory	BM030316	HP Acquire Method	BNA_M	HP Processing Method	BM030316

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3516,SP3517,SP3518,SP3519,SP3520,SP3521
CCC	SP3519
Internal Standard/PEM	S5005
ICV/I.BLK	NA

Sr #	SampleId	Data File Name	Date-Time	Operator	Status
1	DFTPP34	BM004523.D	03 Mar 2016 09:17	SJ/UM	Ok
2	SSTD00534	BM004524.D	03 Mar 2016 09:53	SJ/UM	Ok
3	SSTD01035	BM004525.D	03 Mar 2016 10:29	SJ/UM	Ok
4	SSTD02036	BM004526.D	03 Mar 2016 11:05	SJ/UM	Ok,M
5	SSTD04037	BM004527.D	03 Mar 2016 11:41	SJ/UM	Ok,M
6	SSTD08038	BM004528.D	03 Mar 2016 12:17	SJ/UM	Ok,M
7	SSTD16039	BM004529.D	03 Mar 2016 12:53	SJ/UM	Ok,M
8	PB88586BL	BM004530.D	03 Mar 2016 13:36	SJ/UM	Ok
9	H1564-13MS	BM004531.D	03 Mar 2016 14:12	SJ/UM	Ok
10	H1564-14MSD	BM004532.D	03 Mar 2016 14:48	SJ/UM	Ok
11	H1607-05	BM004533.D	03 Mar 2016 15:24	SJ/UM	Ok
12	H1607-10	BM004534.D	03 Mar 2016 16:00	SJ/UM	Ok
13	PB88601BL	BM004535.D	03 Mar 2016 16:36	SJ/UM	Ok
14	H1584-12	BM004536.D	03 Mar 2016 17:13	SJ/UM	Ok,M
15	H1584-13MS	BM004537.D	03 Mar 2016 17:49	SJ/UM	Ok
16	H1584-14MSD	BM004538.D	03 Mar 2016 18:25	SJ/UM	Ok,M
17	SSTDCCC020	BM004539.D	03 Mar 2016 19:37	SJ/UM	Ok
18	H1616-01	BM004540.D	03 Mar 2016 20:13	SJ/UM	ReRun
19	H1616-02MS	BM004541.D	03 Mar 2016 20:49	SJ/UM	ReRun
20	H1616-03MSD	BM004542.D	03 Mar 2016 21:25	SJ/UM	ReRun
21	H1616-04	BM004543.D	03 Mar 2016 22:01	SJ/UM	ReRun
22	H1616-05	BM004544.D	03 Mar 2016 22:37	SJ/UM	ReRun
23	H1616-06	BM004545.D	03 Mar 2016 23:13	SJ/UM	ReRun
24	H1616-07	BM004546.D	03 Mar 2016 23:49	SJ/UM	ReRun
25	H1616-08	BM004547.D	04 Mar 2016 00:25	SJ/UM	ReRun
26	H1616-09	BM004548.D	04 Mar 2016 01:01	SJ/UM	ReRun

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM030316

Review By	Sohil	Review On	3/4/2016 3:24:57 PM		
SubDirectory	BM030316	HP Acquire Method	BNA_M	HP Processing Method	BM030316

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3516,SP3517,SP3518,SP3519,SP3520,SP3521
CCC	SP3519
Internal Standard/PEM	S5005
ICV/I.BLK	NA

27	H1616-10	BM004549.D	04 Mar 2016 01:37	SJ/UM	ReRun
28	H1616-11	BM004550.D	04 Mar 2016 02:13	SJ/UM	ReRun
29	H1616-12	BM004551.D	04 Mar 2016 02:49	SJ/UM	ReRun
30	H1616-13	BM004552.D	04 Mar 2016 03:25	SJ/UM	ReRun
31	H1616-14	BM004553.D	04 Mar 2016 04:01	SJ/UM	ReRun
32	H1616-15	BM004554.D	04 Mar 2016 04:36	SJ/UM	ReRun
33	SSTDCCC020EC	BM004555.D	04 Mar 2016 06:24	SJ/UM	ReRun

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM030316

Review By	Sohil	Review On	3/4/2016 3:24:57 PM		
SubDirectory	BM030316	HP Acquire Method	BNA_M	HP Processing Method	BM030316

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3516,SP3517,SP3518,SP3519,SP3520,SP3521
CCC	SP3519
Internal Standard/PEM	S5005
ICV/I.BLK	NA

Sr #	SampleId	ClientID	Data File Name	Comment	Status
1	DFTPP34	DFTPP34	BM004523.D		Ok
2	SSTD00534	SSTD00534	BM004524.D		Ok
3	SSTD01035	SSTD01035	BM004525.D		Ok
4	SSTD02036	SSTD02036	BM004526.D		Ok,M
5	SSTD04037	SSTD04037	BM004527.D		Ok,M
6	SSTD08038	SSTD08038	BM004528.D		Ok,M
7	SSTD16039	SSTD16039	BM004529.D		Ok,M
8	PB88586BL	SBLK86	BM004530.D		Ok
9	H1564-13MS	D9R26MS	BM004531.D		Ok
10	H1564-14MSD	D9R26MSD	BM004532.D		Ok
11	H1607-05	SVOC-GPC-BLANK	BM004533.D		Ok
12	H1607-10	SVOC-GPC2-BLANK	BM004534.D		Ok
13	PB88601BL	SBLK01	BM004535.D		Ok
14	H1584-12	H0075	BM004536.D		Ok,M
15	H1584-13MS	H0075MS	BM004537.D		Ok
16	H1584-14MSD	H0075MSD	BM004538.D		Ok,M
17	SSTDCCC020	SSTD02040	BM004539.D		Ok
18	H1616-01	BLDG06-P001-SS001-01	BM004540.D	END CCC fail	ReRun
19	H1616-02MS	BLDG06-P001-SS001-01M	BM004541.D	END CCC fail, Internal std fail	ReRun
20	H1616-03MSD	BLDG06-P001-SS001-01M	BM004542.D	END CCC fail, Internal std fail	ReRun
21	H1616-04	BLDG06-P001-SS001-02	BM004543.D	END CCC fail, Need 5X	ReRun
22	H1616-05	BLDG06-P002-SS001-01	BM004544.D	END CCC fail, Internal std fail	ReRun

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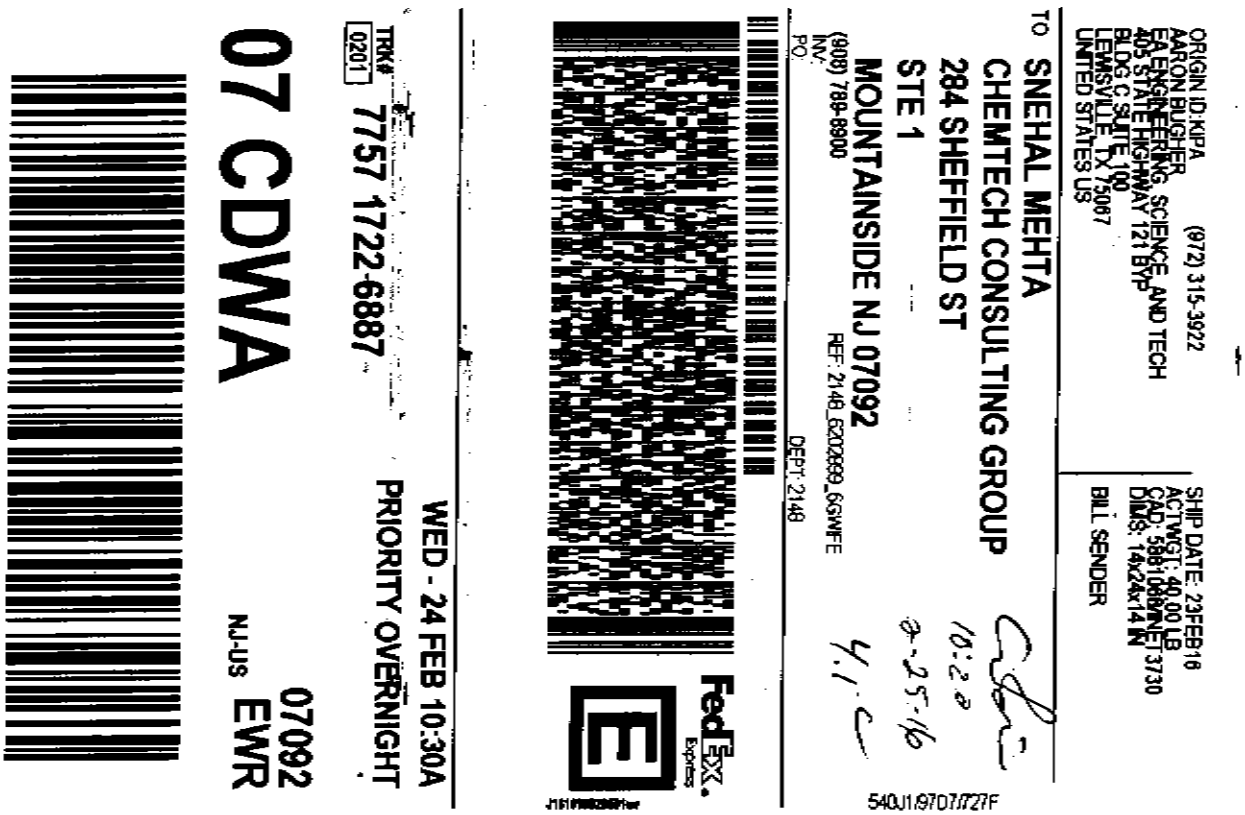
Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM030316

Review By	Sohil	Review On	3/4/2016 3:24:57 PM		
SubDirectory	BM030316	HP Acquire Method	BNA_M	HP Processing Method	BM030316

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3516,SP3517,SP3518,SP3519,SP3520,SP3521
CCC	SP3519
Internal Standard/PEM	S5005
ICV/I.BLK	NA

23	H1616-06	BLDG06-P003-SS001-01	BM004545.D	END CCC fail	ReRun
24	H1616-07	BLDG06-P004-SS001-01	BM004546.D	END CCC fail	ReRun
25	H1616-08	P009-SS001-01	BM004547.D	END CCC fail	ReRun
26	H1616-09	P009-SS002-01	BM004548.D	END CCC fail	ReRun
27	H1616-10	P009-SS003-01	BM004549.D	END CCC fail	ReRun
28	H1616-11	P009-SS004-01	BM004550.D	END CCC fail	ReRun
29	H1616-12	P010-SS001-01	BM004551.D	END CCC fail	ReRun
30	H1616-13	P010-SS002-01	BM004552.D	END CCC fail	ReRun
31	H1616-14	P010-SS003-01	BM004553.D	END CCC fail	ReRun
32	H1616-15	P010-SS004-01	BM004554.D	END CCC fail	ReRun
33	SSTDCCC020EC	SSTD02041	BM004555.D		ReRun



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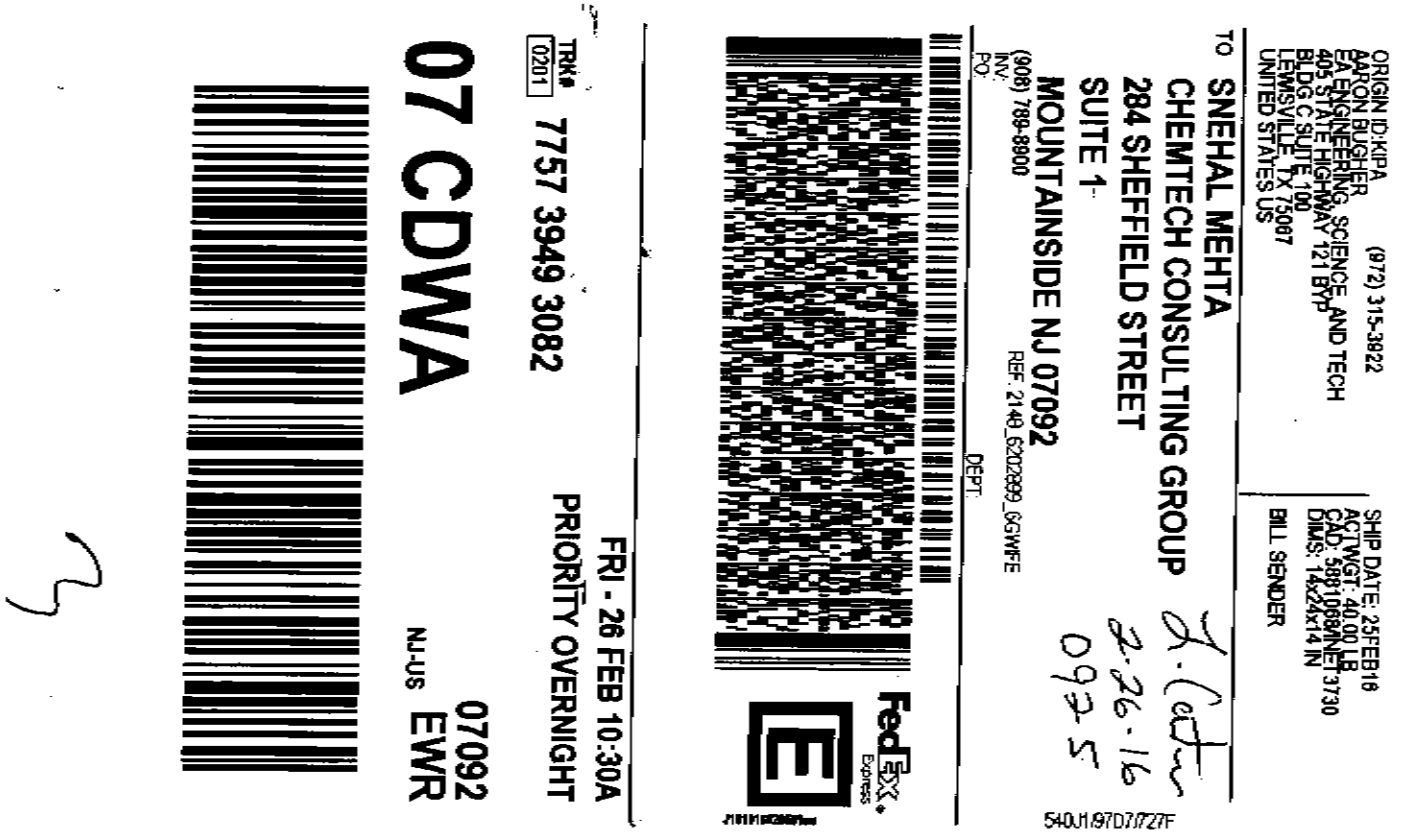

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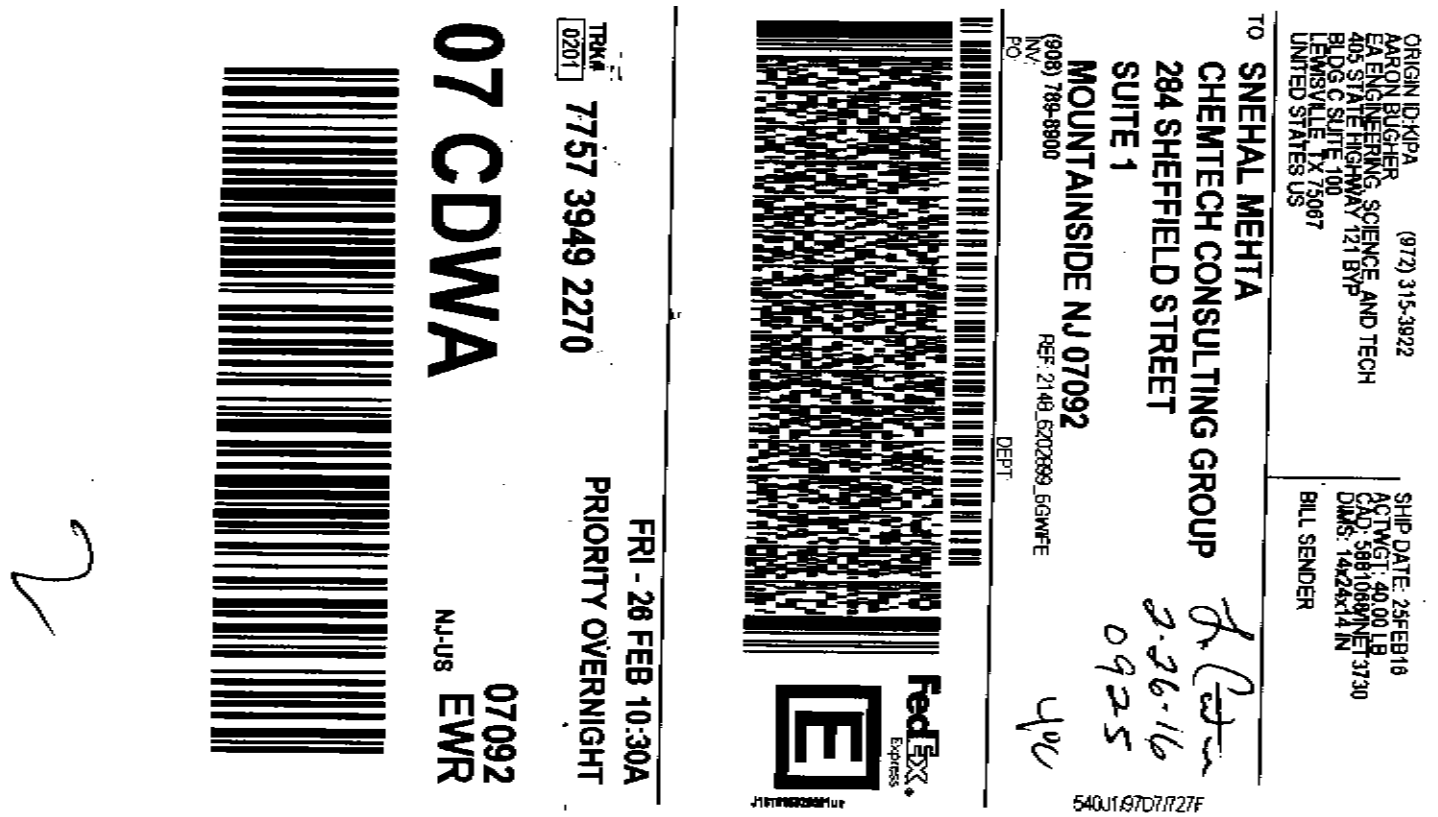

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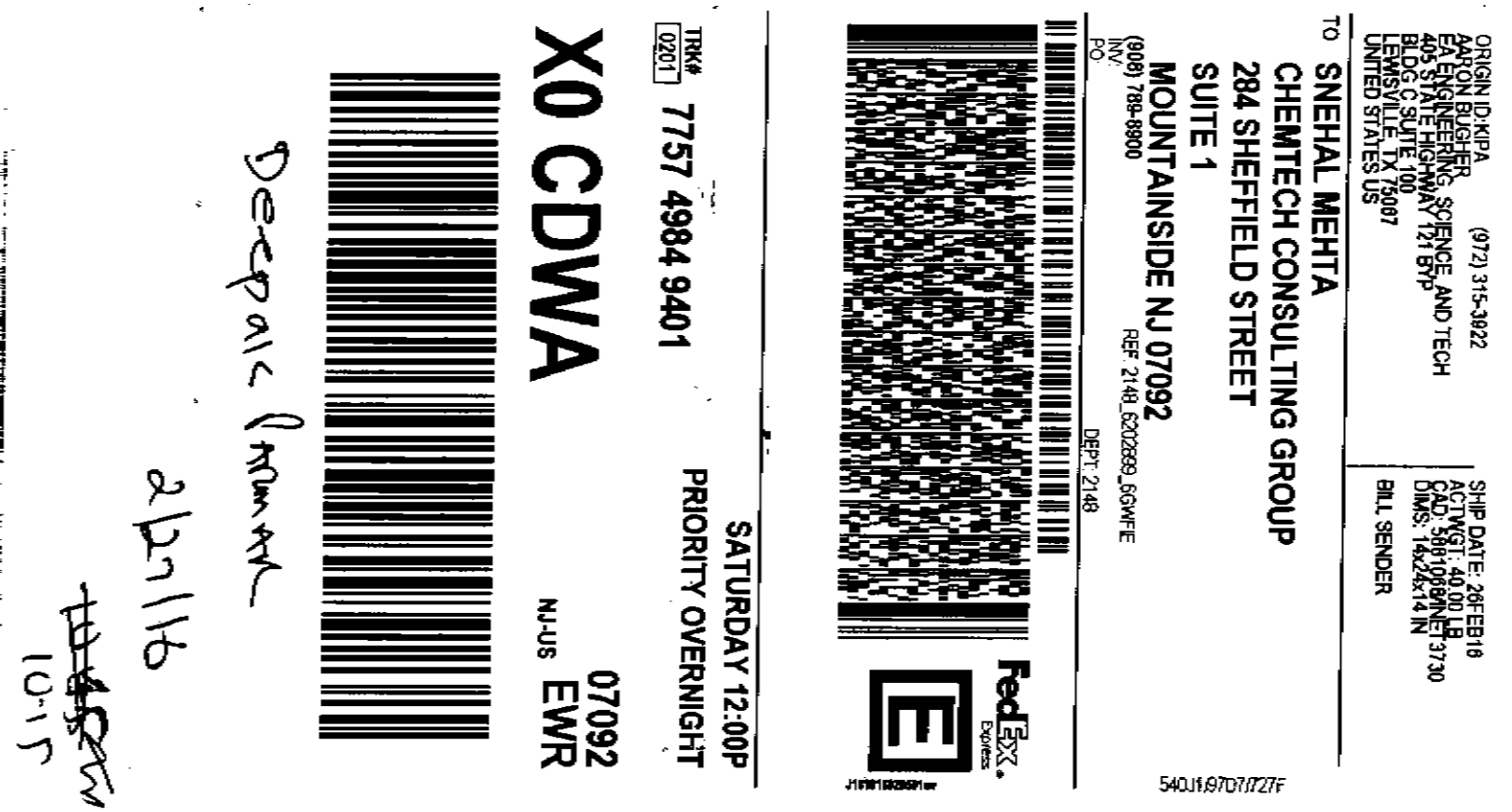

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Login Summary Report

Order ID :	H1584	Order Date :	2/25/2016 10:20:00 AM	Project Mgr :	Corey
Client :	USEPA CLP Organics	Project :	46018	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	2/25/2016 10:20:00 AM	EDD Type :	EPA CLP
Date Sign Off :	2/25/2016 2:02:14 PM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
H1584-01	H0001	Water	02/22/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	03/17/2016	03/17/2016
H1584-02	H0001MS	Water	02/22/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	03/17/2016	03/17/2016
H1584-03	H0001MSD	Water	02/22/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	03/17/2016	03/17/2016
H1584-04	H0003	Water	02/23/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	03/17/2016	03/17/2016
H1584-05	H0060	Water	02/23/2016		TB				
				VOC-Low Level -15		SOM02.2_Trace	15	03/17/2016	03/17/2016
H1584-06	VHBLK01	Water	02/23/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	03/17/2016	03/17/2016

LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H1584 USEP04	**Order Date:**	2/25/2016	**Project Mgr:**	Corey
Client Name:	USEPA CLP Organics	**Project Name:**	46018	**Report Type:**	USEPA CLP
Client Contact:	Anita Kapadia	**Rec DateTime**	2/25/2016 10:20:00 AM	**EDD:**	EPA CLP
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	1
Invoice Contact:	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	2/25/2016 2:02:14 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates
H1584-01	H0001	Water	2/22/2016	14:25	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201
H1584-02	H0001MS	Water	2/22/2016	14:25	1	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201
H1584-03	H0001MSD	Water	2/22/2016	14:25	1	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201
H1584-04	H0003	Water	2/23/2016	11:15	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201
H1584-05	H0060	Water	2/23/2016	8:00	3	VOC-Low Level -15		SOM02.2_Trace	TB 15 Bus.	3/8/2016	3/8/201
H1584-06	VHBLK01	Water	2/23/2016	0:00	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201
H1584-07	H0002	Water	2/25/2016	9:20	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201
H1584-08	H0007	Water	2/24/2016	15:20	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201

LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H1584 USEP04	**Order Date:**	2/25/2016	**Project Mgr:**	Corey
Client Name:	USEPA CLP Organics	**Project Name:**	46018	**Report Type:**	
Client Contact:	Anita Kapadia	**Rec DateTime**	2/26/2016 9:25:00 AM	**EDD:**	
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	1
Invoice Contact:	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	2/25/2016 2:02:14 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates
H1584-09	H0013	Water	2/25/2016	13:25	3		VOC-Low Level -15	SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201
H1584-10	H0051	Water	2/25/2016	13:25	3		VOC-Low Level -15	SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201
H1584-11	H0061	Water	2/24/2016	8:00	3		VOC-Low Level -15	SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201
H1584-15	H0011	Water	2/26/2016	10:10	3		VOC-Low Level -15	SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201
H1584-16	H0012	Water	2/26/2016	11:20	3		VOC-Low Level -15	SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201
H1584-17	H0014	Water	2/26/2016	12:05	3		VOC-Low Level -15	SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201
H1584-18	H0015	Water	2/26/2016	15:00	3		VOC-Low Level -15	SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201
H1584-19	H0019	Weter	2/26/2016	16:20	3		VOC-Low Level -15	SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201

LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H1584 USEP04	**Order Date:**	2/25/2016	**Project Mgr:**	Corey
Client Name:	USEPA CLP Organics	**Project Name:**	46018	**Report Type:**	
Client Contact:	Anita Kapadia	**Rec DateTime**	2/27/2016 10:15:00 AM	**EDD:**	
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	
Invoice Contact:	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	2/25/2016 2:02:14 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates
H1584-20	H0062	Water	2/26/2016	8:00	3						
							VOC-Low Level -15	SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201
H1584-21	H0901	Water	2/26/2016	15:15	3						
							VOC-Low Level -15	SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201

SAMPLE CONDITION RECORD

Are samples submitted with a chain of custody?	Yes
Are the number of samples the same as stated on the chain of custody?	Yes
Are bottle caps tight and securely in place?	Yes
Were all containers intact when received?	Yes
Were samples submitted in an ice chest?	Yes
Were samples received cold?	Yes
Were samples within the holding time for the requested test(s)?	Yes
Is the volume of sample submitted sufficient for the requested test(s)?	Yes
Are all samples for volatile organic analyses free of headspace?	Yes

Relinquished By: CP

Date / Time: 2/29/16 10:30

Received By:

Date / Time: 2/29/16 10:30

Storage Area: VOA Refridgerator Room

ORDER COMMENT

Case#: 46018, SDG#: H0001, Water by TRACE Volatiles & SemiVolatiles MA#: NONE, SOL#: NONE-----

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H1584 USEP04	**Order Date:**	2/25/2016	**Project Mgr:**	Corey
Client Name:	USEPA CLP Organics	**Project Name:**	46018	**Report Type:**	USEPA CLP
Client Contact:	Anita Kapadia	**Rec DateTime**	2/25/2016 10:20:00 AM	**EDD:**	EPA CLP
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	1
Invoice Contact:	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	2/25/2016 2:02:14 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates
H1584-01	H0001	Water	2/22/2016	14:25	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201
H1584-02	H0001MS	Water	2/22/2016	14:25	1	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201
H1584-03	H0001MSD	Water	2/22/2016	14:25	1	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201
H1584-04	H0003	Water	2/23/2016	11:15	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201
H1584-05	H0060	Water	2/23/2016	8:00	3	VOC-Low Level -15		SOM02.2_Trace TB	15 Bus.	3/6/2016	3/8/201
H1584-06	VHBLK01	Water	2/23/2016	0:00	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201
H1584-07	H0002	Water	2/25/2016	9:20	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201
H1584-08	H0007	Water	2/24/2016	15:20	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201

LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H1584 USEP04	**Order Date:**	2/25/2016	**Project Mgr:**	Corey
Client Name:	USEPA CLP Organics	**Project Name:**	46018	**Report Type:**	
Client Contact:	Anita Kapadia	**Rec DateTime**	2/26/2016 9:25:00 AM	**EDD:**	
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	
Invoice Contact:	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	2/25/2016 2:02:14 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates
H1584-09	H0013	Water	2/25/2016	13:25	3						
							VOC-Low Level -15	SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201
H1584-10	H0051	Water	2/25/2016	13:25	3						
							VOC-Low Level -15	SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201
H1584-11	H0061	Water	2/24/2016	8:00	3						
							VOC-Low Level -15	SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201

SAMPLE CONDITION RECORD

Are samples submitted with a chain of custody?	Yes
Are the number of samples the same as stated on the chain of custody?	Yes
Are bottle caps tight and securely in place?	Yes
Were all containers intact when received?	Yes
Were samples submitted in an ice chest?	Yes
Were samples received cold?	Yes
Were samples within the holding time for the requested test(s)?	Yes
Is the volume of sample submitted sufficient for the requested test(s)?	Yes
Are all samples for volatile organic analyses free of headspace?	Yes

ORDER COMMENT

Case#: 46018, SDG#: H0001, Water by TRACE Volatiles, MA#: NONE, SOL#: NONE------

Relinquished By: CP

Date / Time: 2/26/16 11:45

Received By:

Date / Time: 2/26/16 11:45

Storage Area: VOA Refridgerator Room

LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H1584 USEP04	**Order Date:**	2/25/2016	**Project Mgr:**	Corey
Client Name:	USEPA CLP Organics	**Project Name:**	46018	**Report Type:**	USEPA CLP
Client Contact:	Anita Kapadia	**Rec DateTime**	2/25/2016 10:20:00 AM	**EDD:**	EPA CLP
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	
Invoice Contact:	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	2/25/2016 2:02:14 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates
H1584-01	H0001	Water	2/22/2016	14:25	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201
H1584-02	H0001MS	Water	2/22/2016	14:25	1	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201
H1584-03	H0001MSD	Water	2/22/2016	14:25	1	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/7/2016	3/7/201
H1584-04	H0003	Water	2/23/2016	11:15	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201
H1584-05	H0060	Water	2/23/2016	8:00	3	VOC-Low Level -15		SOM02.2_Trace TB	15 Bus.	3/8/2016	3/8/201
H1584-06	VHBLK01	Water	2/23/2016	0:00	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	3/8/2016	3/8/201

LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H1584 USEP04	**Order Date:**	2/25/2016	**Project Mgr:**	Corey
Client Name:	USEPA CLP Organics	**Project Name:**	46018	**Report Type:**	USEPA CLP
Client Contact:	Anita Kapadia	**Rec DataTime**	2/25/2016 10:20:00 AM	**EDD:**	EPA CLP
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	
Invoice Contact:	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	2/25/2016 2:02:14 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates

SAMPLE CONDITION RECORD

Are samples submitted with a chain of custody?	Yes
Are the number of samples the same as stated on the chain of custody?	Yes
Are bottle caps tight and securely in place?	Yes
Were all containers intact when received?	Yes
Were samples submitted in an ice chest?	Yes
Were samples received cold?	Yes
Were samples within the holding time for the requested test(s)?	Yes
Is the volume of sample submitted sufficient for the requested test(s)?	Yes
Are all samples for volatile organic analyses free of headspace?	Yes

Relinquished By: CR

Date / Time: 2/25/16 14:30

Received By: JC

Date / Time: 2/25/16 14:30

Storage Area: VOA Refridgerator Room

ORDER COMMENT

Case#: 46018, SDG#: H0001, Water by TRACE Volatiles, MA#: NONE, SOL#: NONE------

WORKLIST(Hardcopy Internal Chain)

WorkList Name : H1584 SVOC 2.2 W WorkList ID : 84414 Date : 2/26/2016 8:02:54 AM

Due Date	Matrix	Sample	Test	Preservative	Customer	Storage Location	Customer Sample	Collect Date	Method
03/03/2016	Water	H1584-12	SVOC-TCL BNA -20	Cool 4 deg C	USEP04		H0075	02/25/2016	SOM02.2_SVC
03/03/2016	Water	H1584-13	SVOC-TCL BNA -20	Cool 4 deg C	USEP04		H0075MS	02/25/2016	SOM02.2_SVC
03/03/2016	Water	H1584-14	SVOC-TCL BNA -20	Cool 4 deg C	USEP04		H0075MSD	02/25/2016	SOM02.2_SVC

Date/Time 02/26/16
Received by:
Relinquished by:

Date/Time 02/26/16
Received by:
Relinquished by:

mildred V. Reyes

From: Alexandra Vanaman <Alexandra.Vanaman@csra.com>
Sent: Thursday, February 25, 2016 12:35 PM
To: Corey@chemtech.net; epa@chemtech.net
Cc: goodrich.donald@epa.gov; pmoss@eaest.com
Subject: Region 08 | Case 46018 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC | FINAL

Flag Status: Flagged

Good afternoon,

Issue: The laboratory received three organic water samples 2/23 for Case 46018. Organic samples for this Case are scheduled for TVOA and SVOA; however, COC lists the analysis as VOA.
Resolution: Per Region 8, the laboratory will analyze the three samples as scheduled for TVOA. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Please let me know if you have any questions. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8
CSC Government Solutions LLC, A CSRA Company

6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 | Alexandra.Vanaman@csra.com
www.csra.com

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----- Forwarded by Alexandra Vanaman/AMER/CSGov on 02/25/2016 12:31 PM -----

From: "Goodrich, Donald" <Goodrich.Donald@epa.gov>
To: avanaman@csgov.com
Cc: "pmoss@eaest.com" <pmoss@eaest.com>
Date: 02/25/2016 12:20 PM
Subject: RE: Region 08 | Case 46018 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Ali, please inform the lab to analyze the three samples as scheduled for TVOA.
Thanks,
Don

Don Goodrich
US EPA Region 8

office: 303-312-6687
cell: 303-905-4024

From: Alexandra Vanaman [mailto:Alexandra.Vanaman@csra.com]
Sent: Thursday, February 25, 2016 10:07 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Cc: pmoss@eaest.com
Subject: Region 08 | Case 46018 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Good afternoon,

CHM is reporting the following issue regarding Case 46018. Please advise.

Issue: The laboratory received three organic water samples 2/23 for Case 46018. Organic samples for this Case are scheduled for TVOA and SVOA; however, COC lists the analysis as VOA.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8
CSC Government Solutions LLC, A CSRA Company

6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 | Alexandra.Vanaman@csra.com
www.csra.com

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----- Forwarded by Alexandra Vanaman/AMER/CSGov on 02/25/2016 11:51 AM -----

From: "Corey J. Petitt" <Corey@chemtech.net>
To: avanaman@csgov.com
Date: 02/25/2016 11:38 AM
Subject: Region 08 | Case 46018 | Lab CHM | Analysis Confirmation | FINAL

Hi Alexandra,

Issue: The laboratory received (3) organic water samples Today, 2/23 for Case 46018, As per ASR, samples are scheduled for TRACE Volatiles; however, COC states VOA. Please advise how the laboratory would proceed.

Regards,

Corey J. Petitt
Project Manager
CHEMTECH
284 Sheffield St, Mountainside, NJ 07092
Direct Phone: (908) 728 3148

From: smoportal@csgov.com [mailto:smoportal@csgov.com]
Sent: Tuesday, February 23, 2016 10:27 PM
To: snehal@chemtech.net; aafrose2@fedcsc.com; blowe3@csc.com; hzaman@csc.com; ckramer5@csgov.com; jlanham3@csc.com; Deepak@chemtech.net; epa@chemtech.net; STRSched@csgov.com; corey@chemtech.net; Kristin.Hoddinott@csra.com; leila.balali@csra.com; emcglone@csc.com; srangar@fedcsc.com; dpatel29@fedcsc.com; jshazier@csc.com; valerie.smith@csra.com; aalvarez2@csc.com; Himanshu@chemtech.net; kbaciocco@csgov.com; bracyr@gmail.com; rharmon5@csc.com; achinyavong@csc.com; dnguyen68@fedcsc.com; jhwang4@csc.com; sohil@chemtech.net; khoddinott@csgov.com; ademeke2@csgov.com; heather.bauer@csra.gov; Edgardo.david@csra.com; masinero@csc.com; akapadia@chemtech.net; skolb4@csc.com; rread@csgov.com; margaret.jarosz@csra.com
Cc: avanaman@csgov.com
Subject: Shipping Information.

Shipping information for the following Case(s) have been uploaded to the SMO Portal:

Org Name	Case Number	Lab Name	Ship Date	Airbill Number	# of Samples	Matrix	Analysis - TAT	COC Identifier
EPA Region 8	46018	Chemtech Consulting Group -CHM	2/23/2016	7757 1722 6887	2	Groundwater	CLP Volatiles - 21	8-022316-173016-0001
EPA Region 8	46018	Chemtech Consulting Group -CHM	2/23/2016	7757 1722 6887	1	Water	CLP Volatiles - 21	8-022316-173016-0001

This is an automated message, please do not reply.

SDG COVER PAGE

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Cas No.: 46114 MA No. : SDG No.: H4002

SOW No. : SOM02.3

EPA Sample No.	Lab Sample ID	Analysis Method: Trace VOA	Low Med VOA	SVOA	SVOA SIM	PEST	ARO
H4002	H2834-01	X		X			
H4002MS	H2834-02	X		X			
H4002MSD	H2834-03	X		X			
H4006	H2834-04	X					
H4094	H2834-05	X					
H4121	H2834-06	X					
H4123	H2834-07	X					
H4124	H2834-08	X					
H4132	H2834-09	X					
H4133	H2834-10	X					
VHBLK01	H2834-11	X					
H4004	H2834-12	X					
H4061	H2834-13		X	X			
H4061MS	H2834-14		X	X			
H4061MSD	H2834-15		X	X			
H4076	H2834-16		X	X			
VHBLK02	H2834-17		X				
H4102	H2834-18	X		X			
H4116	H2834-19	X		X			
H4117	H2834-20	X		X			
H4118	H2834-21	X		X			

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative.Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee,as verified by the following signature.

Signature: [illegible] Name: [illegible]

Date: 6/12/2016 Title: [illegible]

SDG# H4002

USEPA CLP COC (LAB COPY)

DateShipped: 5/2/2016
CarrierName: FedEx
AirbillNo: 776245708347

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050216-163402-0010

Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-GW-MTO	H4002	Ground Water/ Ned Lundvall	Grab	VOC(21)	1116 (HCL), 1117 (HCL), 1118 (HCL) (3)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MS	H4002MS	Ground Water/ Ned Lundvall	Grab	VOC(21)	1324 (HCL), 1325 (HCL), 1326 (HCL) (3)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MSD	H4002MSD	Ground Water/ Ned Lundvall	Grab	VOC(21)	1332 (HCL), 1333 (HCL), 1334 (HCL) (3)	Mt Olivet	05/02/2016 09:00	
A-TB-005	H4006	Water/ Ned Lundvall		VOC(21)	1339 (HCL), 1340 (HCL), 1341 (HCL) (3)	A-TB-005	05/02/2016 07:00	
A-SW-004	H4094	Surface Water/ Ned Lundvall	Grab	VOC(21)	1141 (HCL), 1142 (HCL), 1143 (HCL) (3)	A-SW-04	05/02/2016 13:40	
A-SW-031	H4121	Surface Water/ Ned Lundvall	Grab	VOC(21)	1222 (HCL), 1223 (HCL), 1224 (HCL) (3)	A-SW-31	05/02/2016 15:10	
A-SW-033	H4123	Surface Water/ Ned Lundvall	Grab	VOC(21)	1228 (HCL), 1229 (HCL), 1230 (HCL) (3)	A-SW-33	05/02/2016 14:00	
A-SW-034	H4124	Surface Water/ Ned Lundvall	Grab	VOC(21)	1231 (HCL), 1232 (HCL), 1233 (HCL) (3)	A-SW-34	05/02/2016 14:30	
A-SW-042	H4132	Surface Water/ Ned Lundvall	Grab	VOC(21)	1255 (HCL), 1256 (HCL), 1257 (HCL) (3)	A-SW-42	05/02/2016 14:20	
A-SW-043	H4133	Surface Water/ Ned Lundvall	Grab	VOC(21)	1258 (HCL), 1259 (HCL), 1260 (HCL) (3)	A-SW-43	05/02/2016 13:15	

Sample(s) to be used for Lab QC: A-GW-MTO-MS Tag 1324, A-GW-MTO-MS Tag 1325, A-GW-MTO-MS Tag 1326, A-GW-MTO-MSD Tag 1332, A-GW-MTO-MSD Tag 1333, A-GW-MTO-MSD Tag 1334

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
			George McGwn	5/3/16 920	4.9° C

2

SDG# H4002

USEPA CLP COC (LAB COPY)

DateShipped: 5/2/2016
CarrierName: FedEx
AirbillNo: 776245148907

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050216-102658-0009

Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-GW-MTO	H4002	Ground Water/ Ned Lundvall	Grab	SVOC(21)	1119 (6 C), 1120 (6 C) (2)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MS	H4002MS	Ground Water/ Ned Lundvall	Grab	SVOC(21)	1327 (6 C), 1328 (6 C) (2)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MSD	H4002MSD	Ground Water/ Ned Lundvall	Grab	SVOC(21)	1335 (6 C), 1336 (6 C) (2)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO	MH4001	Ground Water/ Ned Lundvall	Grab	DMet(21)	1121 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MSD	MH4001D	Ground Water/ Ned Lundvall	Grab	DMet(21)	1337 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MS	MH4001S	Ground Water/ Ned Lundvall	Grab	DMet(21)	1329 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO	MH4002	Ground Water/ Ned Lundvall	Grab	TMet(21)	1122 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MSD	MH4002D	Ground Water/ Ned Lundvall	Grab	TMet(21)	1338 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MS	MH4002S	Ground Water/ Ned Lundvall	Grab	TMet(21)	1330 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	

Sample(s) to be used for Lab QC: A-GW-MTO-MS Tag 1327, A-GW-MTO-MS Tag 1328, A-GW-MTO-MSD Tag 1335, A-GW-MTO-MSD Tag 1336, A-GW-MTO-MSD Tag 1337, A-GW-MTO-MS Tag 1329, A-GW-MTO-MSD Tag 1338, A-GW-MTO-MS Tag 1330

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: SVOC=TCL SVOCs by CLP, DMet=Dissolved Metals, TMet=Total Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
			George Negyesy	5/3/16 1120	4°C

3

SDG# H4002

USEPA CLP COC (LAB COPY)
DateShipped: 5/2/2016
CarrierName: FedEx
AirbillNo: 776245148907

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050216-102658-0009
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-GW-MTO-MS	H4001	Ground Water/ Ned Lundvall	Grab	SVOC(21)	1327 (6 C), 1328 (6 C) (2)	Mt Olivet	05/02/2016 09:00	1
A-GW-MTO	H4002	Ground Water/ Ned Lundvall	Grab	SVOC(21)	1119 (6 C), 1120 (6 C) (2)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MSD	H4004	Ground Water/ Ned Lundvall	Grab	SVOC(21)	1335 (6 C), 1336 (6 C) (2)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO	MH4001	Ground Water/ Ned Lundvall	Grab	DMet(21)	1121 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO	MH4002	Ground Water/ Ned Lundvall	Grab	TMet(21)	1122 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MS	MH4005	Ground Water/ Ned Lundvall	Grab	DMet(21)	1329 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MS	MH4014	Ground Water/ Ned Lundvall	Grab	TMet(21)	1330 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MSD	MH4016	Ground Water/ Ned Lundvall	Grab	DMet(21)	1337 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MSD	MH4017	Ground Water/ Ned Lundvall	Grab	TMet(21)	1338 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	

Sample(s) to be used for Lab QC: A-GW-MTO-MS Tag 1327, A-GW-MTO-MS Tag 1328, A-GW-MTO-MSD Tag 1335, A-GW-MTO-MSD Tag 1336, A-GW-MTO-MS Tag 1329, A-GW-MTO-MS Tag 1330, A-GW-MTO-MSD Tag 1337, A-GW-MTO-MSD Tag 1338

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: SVOC=TCL SVOCs by CLP, DMet=Dissolved Metals, TMet=Total Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/2/16	FedEx		

SDG # H4002

USEPA CLP COC (LAB COPY)
DateShipped: 5/2/2016
CarrierName: FedEx
AirbillNo: 776245708347

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050216-163402-0010
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-GW-MTO-MS	H4001	Ground Water/ Ned Lundvall	Grab	VOC(21)	1324 (HCL), 1325 (HCL), 1326 (HCL) (3)	Mt Olivet	05/02/2016 09:00	2
A-GW-MTO	H4002	Ground Water/ Ned Lundvall	Grab	VOC(21)	1116 (HCL), 1117 (HCL), 1118 (HCL) (3)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MSD	H4004	Ground Water/ Ned Lundvall	Grab	VOC(21)	1332 (HCL), 1333 (HCL), 1334 (HCL) (3)	Mt Olivet	05/02/2016 09:00	
A-TB-005	H4006	Water/ Ned Lundvall		VOC(21)	1339 (HCL), 1340 (HCL), 1341 (HCL) (3)	A-TB-005	05/02/2016 07:00	
A-SW-004	H4094	Surface Water/ Ned Lundvall	Grab	VOC(21)	1141 (HCL), 1142 (HCL), 1143 (HCL) (3)	A-SW-04	05/02/2016 13:40	
A-SW-031	H4121	Surface Water/ Ned Lundvall	Grab	VOC(21)	1222 (HCL), 1223 (HCL), 1224 (HCL) (3)	A-SW-31	05/02/2016 15:10	
A-SW-033	H4123	Surface Water/ Ned Lundvall	Grab	VOC(21)	1228 (HCL), 1229 (HCL), 1230 (HCL) (3)	A-SW-33	05/02/2016 14:00	
A-SW-034	H4124	Surface Water/ Ned Lundvall	Grab	VOC(21)	1231 (HCL), 1232 (HCL), 1233 (HCL) (3)	A-SW-34	05/02/2016 14:30	
A-SW-042	H4132	Surface Water/ Ned Lundvall	Grab	VOC(21)	1255 (HCL), 1256 (HCL), 1257 (HCL) (3)	A-SW-42	05/02/2016 14:20	
A-SW-043	H4133	Surface Water/ Ned Lundvall	Grab	VOC(21)	1258 (HCL), 1259 (HCL), 1260 (HCL) (3)	A-SW-43	05/02/2016 13:15	

Sample(s) to be used for Lab QC: A-GW-MTO-MS Tag 1324, A-GW-MTO-MS Tag 1325, A-GW-MTO-MS Tag 1326, A-GW-MTO-MSD Tag 1332, A-GW-MTO-MSD Tag 1333, A-GW-MTO-MSD Tag 1334	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: VOC=TCL VOCs by CLP	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/2/16 1700	Fedex		
			Garage Vaglio	5/3/16 9:30	5.3°C

5

SDG# H4002

USEPA CLP COC (LAB COPY)
DateShipped: 5/3/2016
CarrierName: FedEx
AirbillNo: 776255658133

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050316-160550-0012
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-TB-006	H4004	Water/ Ned Lundvall		VOC(21)	1458 (HCL), 1459 (HCL), 1460 (HCL) (3)	A-TB-006	05/03/2016 07:30	
A-SS-09	H4061	Soil/ Ned Lundvall	Grab	SVOC(21), VOC(21)	1004 (6 C), 1012 (6 C), 1013 (6 C), 1014 (6 C), 1018 (6 C) (5)	A-SW-09	05/03/2016 08:55	
A-SS-09-MS	H4061MS	Soil/ Ned Lundvall	Grab	SVOC(21), VOC(21)	1352 (6 C), 1354 (6 C), 1355 (6 C), 1356 (6 C), 1357 (6 C) (5)	A-SW-09	05/03/2016 08:55	
A-SS-09-MSD	H4061MSD	Soil/ Ned Lundvall	Grab	SVOC(21), VOC(21)	1358 (6 C), 1360 (6 C), 1361 (6 C), 1362 (6 C), 1363 (6 C) (5)	A-SW-09	05/03/2016 08:55	
A-SS-26	H4076	Soil/ Ned Lundvall	Grab	VOC(21), SVOC(21)	1006 (6 C), 1007 (6 C), 1015 (6 C), 1016 (6 C), 1017 (6 C) (5)	A-SW-26	05/03/2016 13:45	
A-SS-09	MH4025	Soil/ Ned Lundvall	Grab	TMet(21)	1005 (6 C) (1)	A-SW-09	05/03/2016 08:55	
A-SS-09-MSD	MH4025D	Soil/ Ned Lundvall	Grab	TMet(21)	1359 (6 C) (1)	A-SW-09	05/03/2016 08:55	
A-SS-09-MS	MH4025S	Soil/ Ned Lundvall	Grab	TMet(21)	1353 (6 C) (1)	A-SW-09	05/03/2016 08:55	
A-SS-26	MH4028	Soil/ Ned Lundvall	Grab	TMet(21)	1008 (HNO3 pH<2) (1)	A-SW-26	05/03/2016 13:45	

Sample(s) to be used for Lab QC: A-SS-09-MS Tag 1352, A-SS-09-MS Tag 1354, A-SS-09-MS Tag 1355, A-SS-09-MS Tag 1356, A-SS-09-MS Tag 1357, A-SS-09-MSD Tag 1358, A-SS-09-MSD Tag 1360, A-SS-09-MSD Tag 1361, A-SS-09-MSD Tag 1362, A-SS-09-MSD Tag 1363, A-SS-09-MSD Tag 1359, A-SS-09-MS Tag 1353

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP, SVOC=TCL SVOCs by CLP, TMet=Total Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/3/16 1700	Fedex		
	Fedex	9:25 5-4-16		9:25 5-4-16	16°C

SDG# H4002

USEPA CLP COC (LAB COPY)

DateShipped: 5/4/2016

CarrierName: FedEx

AirbillNo: 776257380633

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050416-122017-0019

Lab: Chemtech Consulting Group

Lab Contact: Divya Mehta

Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-TB-008	H4010	Water/ Ned Lundvall		VOC(21)	1473 (HCL), 1474 (HCL), 1475 (HCL) (3)	A-TB-008	05/04/2016 07:45	
A-SS-01-D	H4082	Soil/ Ned Lundvall	Grab	VOC(21), SVOC(21)	1033 (6 C), 1034 (6 C), 1035 (6 C), 1036 (6 C), 1037 (6 C) (5)	A-SW-16	05/04/2016 13:40	
A-SS-01	H4086	Soil/ Ned Lundvall	Grab	VOC(21), SVOC(21)	1000 (6 C), 1001 (6 C), 1009 (6 C), 1010 (6 C), 1011 (6 C) (5)	A-SW-16	05/04/2016 13:40	
A-SW-009	H4099	Surface Water/ Ned Lundvall	Grab	VOC(21)	1156 (HCL), 1157 (HCL), 1158 (HCL) (3)	A-SW-09	05/03/2016 08:55	
A-SW-011	H4101	Surface Water/ Ned Lundvall	Grab	VOC(21)	1162 (HCL), 1163 (HCL), 1164 (HCL) (3)	A-SW-11	05/03/2016 12:30	
A-SW-012	H4102	Surface Water/ Ned Lundvall	Grab	VOC(21)	1165 (HCL), 1166 (HCL), 1167 (HCL) (3)	A-SW-12	05/03/2016 10:30	
A-SW-013	H4103	Surface Water/ Ned Lundvall	Grab	VOC(21)	1168 (HCL), 1169 (HCL), 1170 (HCL) (3)	A-SW-13	05/03/2016 14:30	
A-SW-021	H4111	Surface Water/ Ned Lundvall	Grab	VOC(21)	1192 (HCL), 1193 (HCL), 1194 (HCL) (3)	A-SW-21	05/03/2016 13:20	
A-SW-022	H4112	Surface Water/ Ned Lundvall	Grab	VOC(21)	1195 (HCL), 1196 (HCL), 1197 (HCL) (3)	A-SW-22	05/03/2016 15:50	
A-SW-023	H4113	Surface Water/ Ned Lundvall	Grab	VOC(21)	1198 (HCL), 1199 (HCL), 1200 (HCL) (3)	A-SW-23	05/03/2016 09:30	

Sample(s) to be used for Lab QC: A-SW-023-MS Tag 1376, A-SW-023-MS Tag 1377, A-SW-023-MS Tag 1378

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP, SVOC=TCL SVOCs by CLP

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/4/16 1600	Fedex		
			George Nguyen	5/5/16 925	3.1°C

SDG# H4002

USEPA CLP COC (LAB COPY)

DateShipped: 5/4/2016

CarrierName: FedEx

AirbillNo: 776257380633

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050416-122017-0019

Lab: Chemtech Consulting Group

Lab Contact: Divya Mehta

Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-023-MS	H4113MS	Surface Water/ Ned Lundvall	Grab	VOC(21)	1376 (HCL), 1377 (HCL), 1378 (HCL) (3)	A-SW-23	05/03/2016 09:30	
A-SW-023-MSD	H4113MSD	Surface Water/ Ned Lundvall	Grab	VOC(21)	1391 (HCL), 1392 (HCL), 1393 (HCL) (3)	A-SW-23	05/03/2016 09:30	
A-SW-026	H4116	Surface Water/ Ned Lundvall	Grab	VOC(21)	1207 (HCL), 1208 (HCL), 1209 (HCL) (3)	A-SW-26	05/03/2016 13:45	
A-SW-027	H4117	Surface Water/ Ned Lundvall	Grab	VOC(21)	1210 (HCL), 1211 (HCL), 1212 (HCL) (3)	A-SW-27	05/03/2016 11:20	
A-SW-028	H4118	Surface Water/ Ned Lundvall	Grab	VOC(21)	1213 (HCL), 1214 (HCL), 1215 (HCL) (3)	A-SW-28	05/03/2016 12:00	
A-SW-030	H4120	Surface Water/ Ned Lundvall	Grab	VOC(21)	1219 (HCL), 1220 (HCL), 1221 (HCL) (3)	A-SW-30	05/03/2016 16:30	
A-SW-036	H4126	Surface Water/ Ned Lundvall	Grab	VOC(21)	1237 (HCL), 1238 (HCL), ~~1239 (HCL)~~ (3)	A-SW-36	05/03/2016 17:30	
A-SW-039	H4129	Surface Water/ Ned Lundvall	Grab	VOC(21)	1246 (HCL), 1247 (HCL), 1248 (HCL) (3)	A-SW-39	05/03/2016 17:00	
A-SS-01-D	MH4029	Soil/ Ned Lundvall	Grab	TMet(21)	1038 (6 C) (1)	A-SW-~~18~~01	05/04/2016 13:40	
A-SS-01	MH4030	Soil/ Ned Lundvall	Grab	TMet(21)	1002 (6 C) (1)	A-SW-~~18~~01	05/04/2016 13:40	

Sample(s) to be used for Lab QC: A-SW-023-MS Tag 1376, A-SW-023-MSD Tag 1391, A-SW-023-MSD Tag 1392, A-SW-023-MSD Tag 1393

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP, SVOC=TCL SVOCs by CLP, TMet=Total Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/4/16 kw Fedex			
			Gorge Negron	5/5/16 925	31°C

SDG# H4002

USEPA CLP COC (LAB COPY)

DateShipped: 5/4/2016
CarrierName: FedEx
AirbillNo: 776257387329

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050416-110649-0018

Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-012	H4102	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1406 (6 C), 1407 (6 C) (2)	A-SW-12	05/03/2016 10:30	
A-SW-026	H4116	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1446 (6 C) (1)	A-SW-26	05/03/2016 13:45	
A-SW-027	H4117	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1416 (6 C), 1417 (6 C) (2)	A-SW-27	05/03/2016 11:20	
A-SW-028	H4118	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1425 (6 C), 1426 (6 C) (2)	A-SW-28	05/03/2016 12:00	

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: SVOC=TCL SVOCs by CLP

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/4/16 1200	FedEx		
			George Nielsen	5/5/16 925	2-9° C

Sample Delivery Group (SDG) Cover Sheet

SDG Number	H4002	Case Number	46114	Contract Number	EP-W-14-030
Lab Code	CHM	SDG Turnaround	21 DAYS	Delivery CLIN(s)	

First Sample Received in SDG	H4002	Last Sample Received in SDG	H4118
First Sample Receipt Date	5/3/2016 9:20:00 AM	Last Sample Receipt Date	5/5/2016 9:25:00 AM

USEPA Sample Numbers in SDG (Listed in Numerical Order)

CLP Sample ID	Sample Type	Requested Analytical CLIN(s)/SubCLIN(s)	Solicitation Number	MA Number(s)
H4002	Field Sample	0014AB,0011AB	N/A	N/A
H4002MS	Field Sample	0011AB,0014AB	N/A	N/A
H4002MSD	Field Sample	0014AB,0011AB	N/A	N/A
H4006	Field Sample	0011AB	N/A	N/A
H4094	Field Sample	0011AB	N/A	N/A
H4121	Field Sample	0011AB	N/A	N/A
H4123	Field Sample	0011AB	N/A	N/A
H4124	Field Sample	0011AB	N/A	N/A
H4132	Field Sample	0011AB	N/A	N/A
H4133	Field Sample	0011AB	N/A	N/A
H4004	Field Blank	0011AB	N/A	N/A
H4061	Field Sample	0012AB,0014AB	N/A	N/A
H4061MS	Field Sample	0012AB,0014AB	N/A	N/A
H4061MSD	Field Sample	0012AB,0014AB	N/A	N/A
H4076	Field Sample	0012AB,0014AB	N/A	N/A
H4102	Field Sample	0011AB,0014AB	N/A	N/A
H4116	Field Sample	0014AB,0011AB	N/A	N/A
H4117	Field Sample	0011AB,0014AB	N/A	N/A
H4118	Field Sample	0011AB,0014AB	N/A	N/A

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature E.M. Jodlowski Date 5/9/16

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 1 of 5
Received By (Print Name) DEEPAK PARMAR		Log-in Date **5/3/2016**
Received By (Signature)		
Case Number 46114	SDG No. H4002	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776245148907
6. Sample Tags Sample Tag #	N/A Yes
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	4.9 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/03/2016
12. Time Received	09:20

	EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H4002	1119,20,1116,17,18	H2834-01	Intact
2	H4002MS	1327,28,1324,25,26	H2834-02	
3	H4002MSD	1335,36,1332,33,34	H2834-03	

* Contact SMO and attach record of resolution

Reviewed By S. M. Jadhav	Logbook No.
Date 5/4/16	Logbook Page No.

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 2 of 5
Received By (Print Name) DEEPAK PARMAR		Log-in Date **5/3/2016**
Received By (Signature)		
Case Number 46114	SDG No. H4002	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776245708347
6. Sample Tags Sample Tag #	N/A Yes
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	5.3 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/03/2016
12.Time Received	09:20

	EPA Sample #	Corresponding: Sample Tag #	Corresponding: Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H4002	1119,20,1116,17,18	H2834-01	Intact
2	H4002MS	1327,28,1324,25,26	H2834-02	
3	H4002MSD	1335,36.1332,33,34	H2834-03	
4	H4006	1339,40,41	H2834-04	
5	H4094	1141,42,43	H2834-05	
6	H4121	1222,23,24	H2834-06	
7	H4123	1228,29,30	H2834-07	
8	H4124	1231,32,33	H2834-08	
9	H4132	1255,56,57	H2834-09	
10	H4133	1258,59,60	H2834-10	
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22				
23				
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25				
26				

* Contact SMO and attach record of resolution

Reviewed By S.M. Tatheer	Logbook No.
Date 5/4/16	Logbook Page No.

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 3 of 5
Received By (Print Name) DEEPAK PANWAR		Log-in Date **5/4/2016**
Received By (Signature)		
Case Number 46114	SDG No. H4002	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776255658133
6. Sample Tags Sample Tag #	N/A Yes
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	3.6 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/04/2016 ~~05/05/2016~~
12. Time Received	09:25

	EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H4004	1458,59,60	H2834-12	Intact
2	H4061	1004,1012,13,14,18	H2834-13	
3	H4061MS	1352,54,55,56,57	H2834-14	
4	H4061MSD	1358,60,61,62,63	H2834-15	
5	H4076	1006,07,15,16,17	H2834-16	
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				

* Contact SMO and attach record of resolution

Reviewed By S.M. Jadhav	Logbook No.
Date 5/9/16	Logbook Page No.

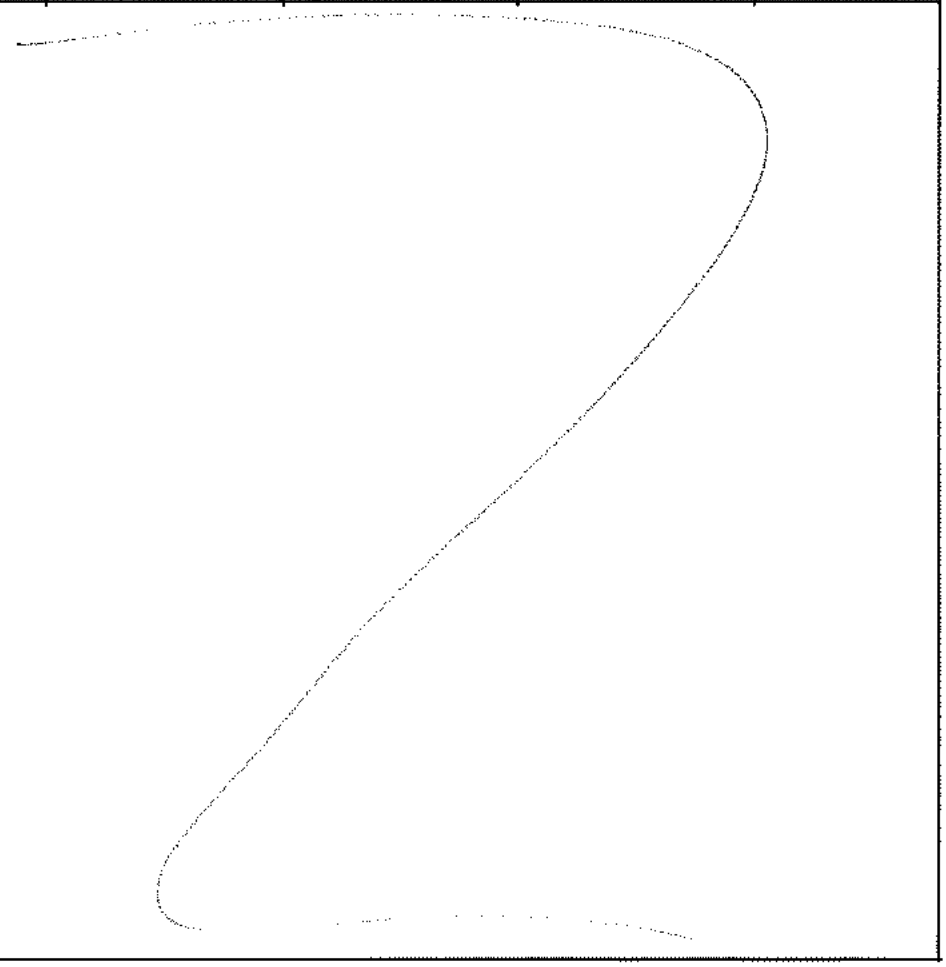
FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 4 of 5
Received By (Print Name) DEEPAK LAHMAN		Log-in Date **5/5/2016**
Received By (Signature)		
Case Number 46114	SDG No. H4002	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776257380633
6. Sample Tags Sample Tag #	N/A Yes
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	3.1 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/05/2016
12.Time Received	09:25

	EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H4102	1165,66,67,1406,07	H2834-18	Intact
2	H4116	1207,08,09,1446	H2834-19	
3	H4117	1210,11,12,1416,17	H2834-20	
4	H4118	1213,14,15,1425,26	H2834-21	



* Contact SMO and attach record of resolution

Reviewed By	S. M. Tolliver	Logbook No.	
Date	5/9/16	Logbook Page No.	

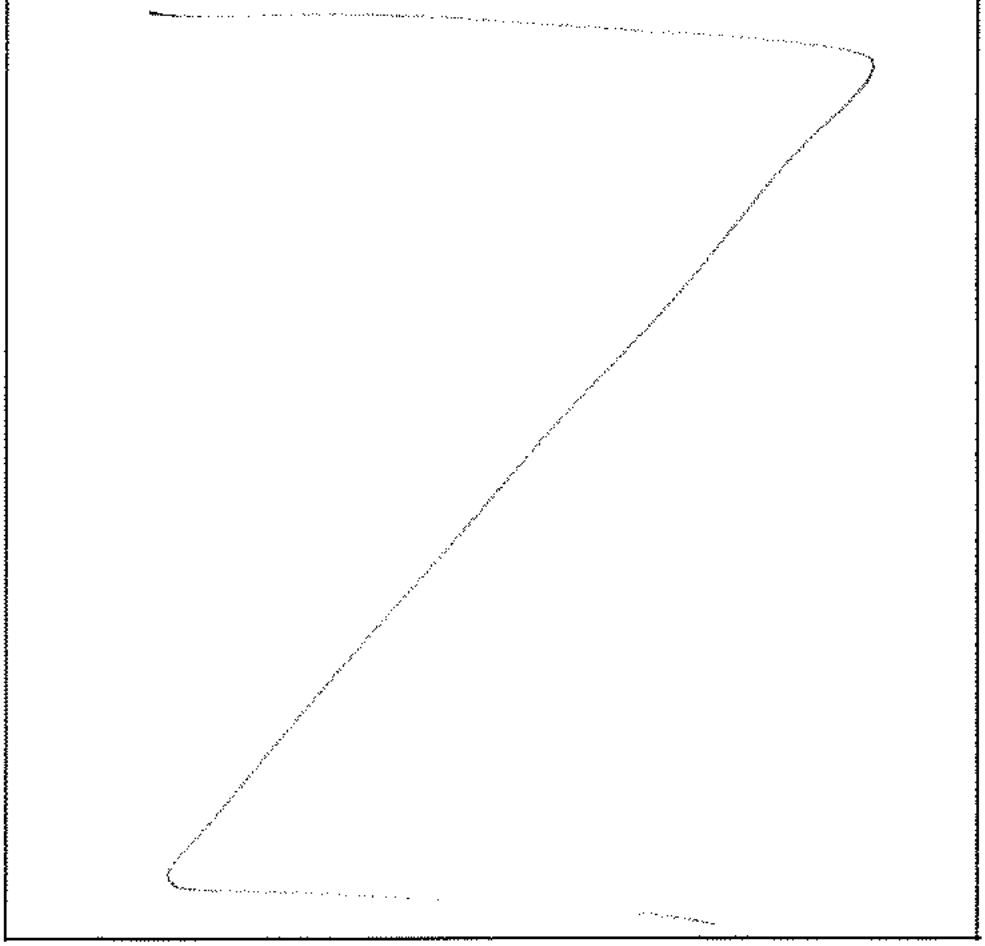
FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 5 of 5
Received By (Print Name) DEEPAK PARMAR		Log-in Date 5/5/2016
Received By (Signature)		
Case Number 46114	SDG No. H4002	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776257387329
6. Sample Tags Sample Tag #	N/A Yes
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	2.9 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/05/2016
12. Time Received	09:25

	EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H4102	1165,66,67,1406,07	H2834-18	Intact
2	H4116	1207,08,09,1446	H2834-19	
3	H4117	1210,11,12,1416,17	H2834-20	
4	H4118	1213,14,15,1425,26	H2834-21	



* Contact SMO and attach record of resolution

Reviewed By	S. M. Jonkman	Logbook No.	
Date	5/9/16	Logbook Page No.	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME CHEMTECH CONSULTING GROUP
LAB CODE CHM
CONTRACT NO. EPW14030
CASE NO. 46114 SDG NO. H4002
MA NO.
SOW NO. SOM02.3

All documents delivered in the complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.4)

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
1. SDG Cover Page	1	1	✓	
2. Traffic Report/Chain of Custody Record(s)	2	10	✓	
3. Sample Log-In Sheet (DC-1)	11	15	✓	
4. CSF Inventory Sheet (DC-2)	16	22	✓	
5. SDG Narrative	23	43	✓	
Organic Analysis				
Trace Volatiles				
Quality Control Summary				
6. Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	44	45	✓	
7. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR)(if requeste by the EPA Region)	46	46	✓	
8. Method Blank Summary (Form 4-OR)	47	50	✓	
9. GC/MS Instrument Performance Check (Form 5-OR)	51	53	✓	
10. Internal Standard Area and Retention Summary (Form 8A-OR)	54	57	✓	
Sample Data				
11. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	58	385	✓	
12. Tentatively Identified Compounds (Form 1B-OR)			✓	
13. Raw Data for each sample:			✓	
Reconstructed total ion chromatograms (RICs) for each sample			✓	
Raw Spectra and bacground-subtracted mass spectra of target analytes identified			✓	
Quantitation Reports			✓	
Mass Spectra of all reported TICs with three best library matches			✓	
Standards Data (All Instruments)				
14. GC/MS Initial Calibration Data (Form 6A-OR)	386	402	✓	
15. RICs and Quantitation Reports for all Standards			✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
16. Continuing Calibration Verification for GC/MS (Form 7-OR)	403	449	✓	
17. RICs and Quantitation Reports for all Standards				
Quality Control Data				
18. Performance Check	450	472	✓	
19. Blank Data	473	542	✓	
20. Matrix Spike/Matrix Spike Duplicate Data (Form 3A-OR) (if requested by EPA Region)	543	563	✓	
21. Original Preparation and analysis forms or copies of preparation and analysis logbook pages (including screening records if applicable)	1310	1519	✓	
Low-Medium Volatiles				
Quality Control Summary				
22. Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	564	565	✓	
23. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by EPA Region)	566	566	✓	
24. Method Blank Summary (Form 4-OR)	567	569	✓	
25. GC/MS Instrument Performance Check (Form 5-OR)	570	573	✓	
26. Internal Standard Area and Retention Time Summary (Form 8A-OR)	574	576	✓	
Sample Data				
27. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	577	606	✓	
28. Tentatively Identified Compounds (Form 1B-OR)				
29. Raw Data for Each Sample:				
Reconstructed total ion chromatograms (RICs) for each sample				
Raw Spectra and background-subtracted mass spectra of target analytes identified				
Quantitation Reports				
Mass Spectra of all reported TICs with three best library matches				
Standards Data (All Instruments)				
30. GC/MS Initial Calibration Data (Form 6A-OR)	607	698	✓	
31. RICs and Quantitation Reports for all Standards				
32. Continuing Calibration Verification for GC/MS (Form 7A-OR)	699	782	✓	
33. RICs and Quantitation Reports for all Standards				
Quality Control Data				
34. Performance Check	783	812	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
35. Blank Data	813	879	✓	
36. Matrix Spike/Matrix Spike Duplicate Data (if requested by EPA Region)	880	905	✓	
37. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	1310	1519	✓	
Semivolatiles				
Quality Control Summary				
38. Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	906	909	✓	
39. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by EPA Region)	910	911	✓	
40. Method Blank Summary (Form 4-OR)	912	913	✓	
41. GC/MS Instrument Performance Check (Form 5-OR)	914	916	✓	
42. Internal Standard Area and Retention Time Summary (Form 8A-OR)	917	920	✓	
Sample Data				
43. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	921	1055	✓	
44. Tentatively Identified Compounds (Form 1B-OR)				
45. Raw Data for Each sample:				
Reconstructed total ion chromatograms (RICs) for each sample	NA	NA	✓	
Raw Spectra and background-subtracted mass spectra of target analytes identified				
Quantitation Reports				
Mass Spectra of all reported TICs with three best library matches				
GPC chromatograms (if GPC is required)				
Standards Data (All Instruments)				
46. GC/MS Initial Calibration Data (Form 6A-OR)	1056	1098	✓	
47. RICs and Quantitation Reports for all Standards				
48. Continuing Calibration Verification for GC/MS (Form 7A-OR)	1099	1171	✓	
49. RICs and Quantitation Reports for all Standards				
Quality Control Data				
50. Performance Check	1172	1204	✓	
51. Blank Data	1205	1228	✓	
52. Matrix Spike/Matrix Spike Duplicate Data (if requested by EPA Region)	1229	1296	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
53. Raw GPC Data	1297	1309	✓	
54. For SIM analysis (if requested), at the same sequence as listed above, except for that Form 1B-OR and TIC spectra data which are not required for SIM method.	NA	NA	✓	
55. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	1310	1519	✓	
Pesticides				
Quality Control Summary				
56. Surrogate Recovery (Form 2C-OR)	NA	NA	✓	
57. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR each columns)	NA	NA	✓	
58. Laboratory Control Sample Recovery (Form 3B-OR each column)	NA	NA	✓	
59. Method Blank Summary (Form 4-OR)	NA	NA	✓	
Sample Data				
60. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	
61. Raw Data for Each Sample:				
Chromatograms (Primary Column)				
Chromatograms (Secondary Column)				
Quantitation Reports				
Manual Worksheets				
62. For Pesticides by GC/MS Confirmation:				
Copies of raw spectra and copies of background-subtracted mass spectra of target analytes (samples & standards)				
Standards Data				
63. Initial Calibration of Single Component Analytes (Form 6B-OR and 6C-OR)	NA	NA	✓	
64. Initial Calibration of Multicomponent Analytes (Form 6D-OR and 6E-OR)	NA	NA	✓	
65. Analyte Resolution Summary (Form 6G-OR)	NA	NA	✓	
66. Pesticide Performance Evaluation Mixture Calibration Verification Summary (Form 7B-OR)	NA	NA	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
67. Continuing Calibration Verification Summary (Form 7C-OR)	NA	NA	✓	
68. Multicomponent Coninuing Calibration Verification Summary (Form 7D-OR)	NA	NA	✓	
69. Analytical Sequence (Form 8B-OR)	NA	NA	✓	
70. Florisil Cartridge Check (Form 9A-OR)	NA	NA	✓	
71. GPC Calibration Verification (Form 9B-OR)	NA	NA	✓	
72. Identification Summary for Single Component Analytes (Form 10A-OR)	NA	NA	✓	
73. Identification Summary for Multicomponent Analytes (Form 10B-OR)				
74. Chromatograms and Quantitation Reports:	NA	NA	✓	
A printout of Retention Times and corresponding peak areas or peak heights				
Quality Control Data				
75. Blank Data	NA	NA	✓	
76. Matrix Spike/Matrix Spike Duplicate Data	NA	NA	✓	
77. Laboratory Control Sample	NA	NA	✓	
78. Raw GPC Data	NA	NA	✓	
79. Raw Florisil Data	NA	NA	✓	
80. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	NA	NA	✓	
Aroclor Data				
Quality Control Summary				
81. Surrogate Recovery (Form 2C-OR)	NA	NA	✓	
82. Matrix Spike/Matrix Spike Duplicate Summary (Form 3A-OR)	NA	NA	✓	
83. Laboratory Control Sample Recovery (Form 3B-OR for each column)	NA	NA	✓	
84. Method Blank Summary (Form 4-OR)	NA	NA	✓	
Sample Data				
85. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
86. Raw Data for Each Sample:	NA	NA	✓	
Chromatograms (Primary Column)	NA	NA	✓	
Chromatograms (Secondary Column)	NA	NA	✓	
Quantitation Reports	NA	NA	✓	
Manual Worksheets	NA	NA	✓	
87. For Aroclors by GC/MS Confirmation:	NA	NA	✓	
Copies of raw spectra and copies of background-subtracted mass spectra of target analytes (samples & standards)	NA	NA	✓	
Standards Data				
88. Initial Calibration of Multicomponent Analytes(Form 6D-OR, Form 6E-OR, and Form 6F-OR)	NA	NA	✓	
89. Multicomponent Continuing Calibration Verification Summary (Form 7D-OR)	NA	NA	✓	
90. Analytical Sequence (Form 8B-OR)	NA	NA	✓	
91. Identification Summary for Multicomponent Analytes (Form 10B-OR)	NA	NA	✓	
92. Chromatograms and data system printouts:	NA	NA	✓	
A printout of Retention Times and corresponding peak areas or peak heights				
Qaulity Control Data				
93. Blank Data	NA	NA	✓	
94. Matrix Spike/Matrix Spike Duplicate Data	NA	NA	✓	
95. Laboratory Control Sample (LCS) Data	NA	NA	✓	
96. Raw GPC Data (if performed)	NA	NA	✓	
97. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including Percent Solid Determinations logs and screening records if applicable)	NA	NA	✓	
Additional				
98. EPA Shipping/Receiving Documents Airbills (No. of shipments 5)	1520	1524	✓	
Sample Tags	NA	NA		
Sample Log-In Sheet (Lab)	1525	1526	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
99. Misc. Shipping/Receiving Records (list all individual records) Communication Logs	NA	NA	✓	
100. Internal Lab Sample Transfer Records & Tracking Sheets (describe or list)	1527	1532	✓	
101. PE/PT Instruction Forms	NA	NA	✓	
102. Other Records (describe or list)				
Communication Log	1533	1543	✓	

103. Comments

Completed by:
(CLP Lab) [signature] (Signature) [illegible] (Printed Name/Title) [illegible] (Date)

Audited by:
(EPA) (Signature) (Printed Name/Title) (Date)

SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE# 46114
SDG# H4002
CONTRACT# EPW14030
LAB CODE: CHM
CHEMTECH PROJECT # H2834
MODIFICATION REF. NUMBER: N/A

Sample ID	Test	EPA ID	pH
H2834-01		H4002	1.0
H2834-01DL	VOC	H4002DL	1.0
H2834-02		H4002MS	1.0
H2834-03		H4002MSD	1.0
H2834-04		H4006	1.0
H2834-05		H4094	1.0
H2834-05DL	VOC	H4094DL	1.0
H2834-06		H4121	1.0
H2834-06DL	VOC	H4121DL	1.0
H2834-07		H4123	1.0
H2834-07DL	VOC	H4123DL	1.0
H2834-08		H4124	1.0
H2834-08RE	VOC	H4124RE	1.0
H2834-09		H4132	1.0
H2834-10		H4133	1.0
H2834-12		H4004	1.0
H2834-13		H4061	
H2834-14		H4061MS	
H2834-15		H4061MSD	
H2834-16		H4076	
H2834-18		H4102	
H2834-18DL	VOC	H4102DL	1.0
H2834-19		H4116	1.0
H2834-19DL	VOC	H4116DL	1.0
H2834-20		H4117	1.0
H2834-21		H4118	1.0

10 Water samples were delivered to the laboratory intact on 05/03/2016.
1 Water and 4 soil samples were delivered to the laboratory intact on 05/04/2016.
4 Water samples were delivered to the laboratory intact on 05/05/2016.

Test requested on the Chain of Custody was Volatile Organic and Semi Volatile Organic by Method SOM02.3.

Samples for Volatile Organic analyses were transferred unopened to the Volatile Laboratory. Sample Tags were not received with the samples.

The temperature of the samples was measured using an I R Gun. The samples temperature was 4.9 and 5.3 degrees Celsius for the samples received on 05/03/2016, 3.6 degrees Celsius for the samples received on 05/04/2016 and 3.1 and 2.9 degrees Celsius for the samples received on 05/05/2016.

Shipping Discrepancies and/or QC issues:

Incorrect/duplicated sample IDs
Issue 1: The COC lists individual sample for each laboratory QC sample (MS/MSD), instead of including them under one sample ID. The laboratory is requesting to use the sample IDs as listed below for each parent sample and laboratory QC sample.

Sample Identifier	CLP No.	Location	Sample Type	Lab will use
A-GW-MTO-MS	H4001	Mt Olivet	Lab QC	H4002, H4002MS, H4002MSD
A-GW-MTO	H4002	Mt Olivet	Parent Sample	
A-GW-MTO-MSD	H4003	Mt Olivet	Lab QC	
A-GW-MTO	MH4001	Mt Olivet	Parent Sample	MH4001 MH4001D MH1001S
A-GW-MTO-MS	MH4005	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4016	Mt Olivet	Lab QC	
A-GW-MTO	MH4002	Mt Olivet	Parent Sample	MH4002 MH4002D MH1002S
A-GW-MTO-MS	MH4014	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4017	Mt Olivet	Lab QC	

Resolution 1: Per Region 8, the laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples using the attached revised COCs.

pH outside allowable limit
Issue 2: The samples listed below appear to be received unpreserved. The laboratory like to preserve these samples in-house.
MH4001
MH4002
MH4005

Resolution 2: Per Region 8, the laboratory shall preserve the unpreserved samples to an acceptable pH level of <2. This resolution applies to the remainder of the samples associated with this Case when the pH exceeds acceptable levels. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Issue 3: The water samples for this Case are scheduled for 86 TVOA and 17 SVOA analysis; however, the COCs list VOA=TCL VOCs by CLP.

Resolution 3: Per Region 8, the samples in question shall be analyzed as scheduled for TVOA. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples. This resolution may be applied to all COCs received for this Case with this issue.

Issue 4 : Sample tags were not received with samples at the laboratory. Sample tag numbers may or may not be listed on the TR/COC.

Resolution 4: In accordance with previous direction from Region 8, the laboratory will note the issue in the SDG Narrative, and proceed with the analysis of the sample. The Resolution will be applied to all samples received for this Case.

Trace Volatiles:

The analysis performed on instrument MSVOA_I were done using C column RXI-624 30m 0.25mm 1.4um 872456. The Trap was supplied by OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.

The analysis of VOC-Low Level -15 was based on method SOM02.3_Trace.

Surrogate recoveries met the criteria except for the followings:
H4121DL [1,1-Dichloroethene-d2 - 40%],
H4094DL [1,1-Dichloroethene-d2 - 49%],,
H4123DL [1,1-Dichloroethene-d2- 44%]
As per method, up to 3 surrogates are allowed to fail; therefore no corrective action was required for above mention sample.
Holding Times were met.
Instrument Performance Check met requirements.
Retention Times met requirements.
The MS { H4002MS } recoveries met the requirements.
The MSD { H4002 MSD} recoveries met the acceptable requirements.
The RPD recoveries met criteria
The Internal Standards Areas met requirements.
The initial Calibration met the requirements.

The Continuing Calibration met the requirements.
The Blank analysis did not indicate the presence of lab contamination.
The Storage Blank did not indicate the presence of lab contamination.

Samples H4002, H4094, H4102, H4116, H4121 and H4123 were diluted due to high concentrations.

Sample H4124 was analyzed following the analysis of H4002, H4094,. H4121, H4123. All these samples have concentration above calibration levels for Tetrachloroethene. Sample H4124 was considered to have a carryover of those compounds (from H4002, H4094, H4121, H4123.) and was reanalyzed. The reanalysis confirmed the hit is from H4124.

The end closing calibration VSTD00542 (VI049274.D) was analyzed following the analysis of H4102, H4116. These samples had common hit of compound with concentration above calibration levels for Tetrachloroethene. Therefore, it was re-analyzed diluted and that calibration is passing for this compound therefore no instrument blank was required.

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Calculation:

$$\text{Concentration in ug/L} = \frac{(Ax)\,(Is)\,(DF)}{(Ais)\,(\overline{RRF})\,(Vo)}$$

Where,

Ax = Area of the characteristic ion (EICP) for the compound to be measured.
Ais = Area of the characteristic ion (EICP) for the internal standard.
Is = Amount of internal standard added in ng.
RRF = Mean Relative Response Factor from the initial calibration standard.
Vo = Total volume of water purged, in mL.
DF = Dilution Factor.

Example Calculation for sample # H4002 for Tetrachloroethene:

Ax= 3043159
Is= 250
RRF= 0.390
DF=1
Ais=842773
VO.= 50

$$\text{Concentration in ug/L} = \frac{(3043159)\ \ (250\ )\ (1_)}{(842773)(\ 0.390)\ (50\ )}$$

= 46.29 ug/L

Reported Result = 46 ug/L

Relative Response Factor = Tetrachloroethene: RUN # VI050416 for 5 ppb

$$RRF = \frac{\text{Area of compound}}{\text{Area of Internal Standard}} \times \frac{\text{Conc. of Internal Standard}}{\text{Conc. of Compound}}$$

$$RRF = \frac{374867}{966164} \times \frac{5.0}{5.0} = 0.3879$$

RRF = 0.388

Low Volatiles:

The analyses for Low Volatile Organics soil sample was performed on instrument MSVOA_T using GC column RXI-624SIL MS 30m 0.25mm 1.4um 872456. The Trap was supplied by OI Analytical, OI #10 Trap, OI Eclipse 4660 Concentrator.

The analysis of VOC-Low Level -10 was based on method SOM02.3_Low

Surrogate recoveries met the criteria.
Holding Times were met.
Instrument Performance Check met requirements.
Retention Times met requirements.
The Internal Standards Areas met requirements.
The MS { H4061MS } recoveries met the requirements.
The MSD { H4061 MSD} recoveries met the acceptable requirements.
The RPD recoveries met criteria

Trans-1, 3-Dichloropropene-d4 fails to meet criteria for the minimum RRF in the run dated 04/12/2016 and 05/06/2016 with T instrument.
As per the method up to two compounds are allow to fail to meet the minimum criteria for the RRF as long as the compound meets the maximum of 40% RSD. No further corrective action was required.

The Continuing Calibration in file id VT013897.D, VT013907.D, VT013929.D, VT013987.D, VT013999.D, VT014021.D, which is fail to meet the minimum RRF of 0.200 for Trans-1, 3-Dichloropropene-d4.
As per method, the % D of 2 compounds can be fail, therefore no correction required.

The Blank analysis indicated presence of Methylene chloride[1.6 ug/Kg] FileID: VT013908.D{ VBLK98} due to possible lab contamination.

The Blank analysis indicated presence of Methylene chloride[1.1 ug/Kg] FileID: VT014000.D{ VBLK79} due to possible lab contamination.

The Storage Blank indicated presence of Methylene chloride[1.4 ug/Kg] FileID: VT014001.D{ VHBLK01 H2834-17} due to possible lab contamination. and the concentration of this compound is below CRQL ,therefore as per method no corrective action was taken.

See **Manual Integration** report for the manual integration information at the end of the case narrative.

Calculation for soil samples:

Low/Med Level Soil/Sediment Calculation

(Concentration in ug/Kg dry Weight basis) $\frac{(A_x)(I_s)(Df)}{(Ais)(\overline{RRF})(Ws)(D)}$

Where,

Ax = Area for the compound to be measured
Ais = Area for the specific internal standard
Is = Amount of internal standard added in nanograms (ng)
RRF = Relative response factor of the calibration standard.
Df = Dilution factor
Ws= Weight of sample
D= $\frac{100 - \%moisture}{100}$

Example Calculation for sample # H4061 for Methylene chloride:
Ax=30112
Is= 250
RRF= 0.339
DF=1
Ais= 904385
Ws= 3.75
D= 0.638

Concentration in ug/KG = $\frac{(30112)(250)(1)}{(904385)(0.339)(3.75)(0.638)}$

= 10.26 ug/Kg

Reported Results = 10 ug/Kg

Relative Response Factor = Vinyl chloride RUN # VT041216 for 25 ppb

$$RRF = \frac{\text{Area of compound}}{\text{Area of Internal Standard}} \times \frac{\text{Conc. of Internal Standard}}{\text{Conc. of Compound}}$$

$$RRF = \frac{705010}{1387721} \times \frac{25}{25} = 0.508$$

RRF= 0.508

Semivolatiles

The samples were analyzed on instrument BNA_M using GC Column ZB-Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

Semi volatile Organic samples for Water and Soil were extracted by Method SOM02.3 on 05/05/16.

The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for H4002 [1,4-Dioxane-d8 - 19%], H4002MS [1,4-Dioxane-d8 - 16%], H4002MSD [1,4-Dioxane-d8 - 17%], H4076 [1,4-Dioxane-d8 - 37%], H4102 [1,4-Dioxane-d8 - 18%, 4-Nitrophenol-d4 - 9%], H4116 [1,4-Dioxane-d8 - 15%, 4-Nitrophenol-d4 - 7%], H4117 [1,4-Dioxane-d8 - 17%, 4-Nitrophenol-d4 - 8%], H4118 [1,4-Dioxane-d8 - 20% and 4-Nitrophenol-d4 - 9%]. As per method four surrogates are allowed to fail. No further corrective action was taken.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds.
The MSD recoveries met the acceptable requirements.
The RPD recoveries met criteria.
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements.
The Continuous Calibration (SSTD02036) compound Hexachlorocyclopentadiene is over 50%D but according to SOM02.3, section 9.4.5.3. Compound Hexachlorocyclopentadiene in closing CCV RRF %D requirement is advisory. No further corrective action was taken.
The Tuning criteria met requirements.

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Concentration of Water Sample:

$$\text{Concentration ug/L} = \frac{(Ax)\,(Is)\,(Vt)\,(DF)\,(GPC)}{(Ais)\,(\overline{RRF})\,(Vo)\,(Vi)}$$

Where,
Ax = Area of the characteristic ion for the compound to be measured.
Ais = Area of the characteristic ion for the internal standard.
Is = Amount of internal standard injected in ng.
Vo = Volume of water extracted in mL.
Vi = Volume of extract injected in uL.
Vt = Volume of the concentrated extract in uL

$\overline{RRF}$ = Mean Relative Response Factor determined from the initial calibration standard.
GPC = $\frac{Vin}{Vout}$ = GPC factor (If no GPC is performed, GPC=1)

Concentration of SOIL Sample:

$$\text{Concentration ug/Kg, (dry weight basis)} = \frac{(Ax)\,(Is)\,(Vt)\,(DF)\,(GPC)}{(Ais)\,(\overline{RRF})\,(Vi)\,(Wt)\,(D)}$$

Where,

Ax = Area of the characteristic ion for the compound to be measured.
Ais = Area of the characteristic ion for the internal standard.
Is = Amount of internal standard injected in ng.
V_i = Volume of extract injected in microliters (uL)
V_t = Volume of concentrated extract in microliters (uL)
W_t = Weight of the original sample extracted in g
Df = Dilution factor

$\overline{RRF}$ = Mean Relative Response Factor determined from the initial calibration standard.
GPC = $\frac{Vin}{Vout}$ = GPC factor (If no GPC is performed, GPC=1)
Vout = Volume of extract collected after GPC cleanup.
D = % dry weight or $\frac{100 - \%Moisture}{100}$

Example calculation of H4061 for Dimethylphthalate:

Ax = 165781
Ais = 292129
Is = 20
V_i = 500
V_t = 1
W_t = 30.1
Df = 1

RRF = 1.602
GPC = 2
D= 0.638

$$\text{Concentration ug/L} = \frac{(165781)\,(20)\,(500)\,(1)\,(2)}{(292129)\,(1.602)\,(1)\,(30.1)\,(0.638)}$$

= 370 ug/Kg

RRF Calculation of standard 20 ppb for Dimethylphthalate with M instrument for method 05/05/16

RRF = Area of compound / Area of Internal Standard X Conc. of Internal Standard / Conc. of Compound

= 434026/ 259664 X 20/20

= 1.671 (Reported RRF)

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V. Reyes Name: Mildred V. Reyes

Date: 5/23/16 Title: Document Control Officer

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Manual Integration Report

Sequence:	VI050416	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
H2834-04/ H4006	VI049233.D	Chloroethane-d5	lisa	5/5/2016 8:52:28 AM	mohammad	5/5/2016 9:01:35 AM	Peak Integrated by Software incorrectly
H2834-06/ H4121	VI049238.D	1,2-Dichloroethane-d4	lisa	5/5/2016 8:52:32 AM	mohammad	5/5/2016 9:01:28 AM	Peak Integrated by Software incorrectly
H2834-07/ H4123	VI049239.D	1,2-Dichloroethane-d4	lisa	5/5/2016 8:52:34 AM	mohammad	5/5/2016 9:01:26 AM	Peak Integrated by Software incorrectly
H2834-10/ H4133	VI049242.D	Chloroethane-d5	lisa	5/5/2016 8:52:35 AM	mohammad	5/5/2016 9:01:20 AM	Peak Integrated by Software incorrectly
VSTDCCC005E C/ VSTD00539	VI049243.D	cis-1,2-Dichloroethene	lisa	5/5/2016 8:52:38 AM	mohammad	5/5/2016 9:01:16 AM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VI050516	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VI0505WBL01/ VBLK28	VI049246.D	1,2-Dichloroethane-d4	apatel	5/6/2016 9:10:10 AM	feifei	5/6/2016 11:43:42 AM	Peak Integrated by Software incorrectly
VI0505WBL01/ VBLK28	VI049246.D	Chloroethane-d5	apatel	5/6/2016 9:10:10 AM	feifei	5/6/2016 11:43:42 AM	Peak Integrated by Software incorrectly
H2834-12/ H4004	VI049249.D	1,2-Dichloroethane-d4	apatel	5/6/2016 9:10:15 AM	feifei	5/6/2016 11:43:29 AM	Peak Integrated by Software incorrectly
H2834-12/ H4004	VI049249.D	Chloroethane-d5	apatel	5/6/2016 9:10:15 AM	feifei	5/6/2016 11:43:29 AM	Peak Integrated by Software incorrectly
H2834-08RE/ H4124RE	VI049251.D	1,2-Dichloroethane-d4	apatel	5/6/2016 9:10:26 AM	feifei	5/6/2016 11:43:37 AM	Peak Integrated by Software incorrectly
H2834-08RE/ H4124RE	VI049251.D	Chloroethane-d5	apatel	5/6/2016 9:10:26 AM	feifei	5/6/2016 11:43:37 AM	Peak Integrated by Software incorrectly
H2834-01DL/ H4002DL	VI049252.D	Chloroethane-d5	apatel	5/6/2016 9:10:31 AM	feifei	5/6/2016 11:44:13 AM	Peak Integrated by Software incorrectly
VI0505WBL02/ VBLK29	VI049256.D	1,1-Dichloroethene-d2	apatel	5/6/2016 9:10:37 AM	feifei	5/6/2016 11:44:14 AM	Peak Integrated by Software incorrectly
H2834-07DL/ H4123DL	VI049259.D	1,2-Dichloroethane-d4	apatel	5/6/2016 9:10:41 AM	feifei	5/6/2016 11:44:16 AM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VI050616	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
H2834-18DL/ H4102DL	VI049281.D	1,2-Dichloroethane-d4	lisa	5/9/2016 10:23:56 AM	feifei	5/9/2016 12:05:12 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VT041216	Instrument	MSVOA_t

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTD2.585/ VSTD2.585	VT013544.D	Trichlorofluoromethane	feifei	4/13/2016 9:54:05 AM	MMdadoda	4/13/2016 2:36:22 PM	Peak Integrated by Software incorrectly
VSTD00586/ VSTD00586	VT013545.D	Trichlorofluoromethane	feifei	4/13/2016 9:54:06 AM	MMdadoda	4/13/2016 2:36:20 PM	Peak Integrated by Software incorrectly
VSTD02587/ VSTD02587	VT013546.D	Trichlorofluoromethane	feifei	4/13/2016 9:54:08 AM	MMdadoda	4/13/2016 2:36:21 PM	Peak Integrated by Software incorrectly
VSTD05088/ VSTD05088	VT013547.D	1,1-Dichloroethene	feifei	4/13/2016 9:54:10 AM	MMdadoda	4/13/2016 2:36:21 PM	Peak Integrated by Software incorrectly
VSTD05088/ VSTD05088	VT013547.D	Trichlorofluoromethane	feifei	4/13/2016 9:54:10 AM	MMdadoda	4/13/2016 2:36:21 PM	Peak Integrated by Software incorrectly
VSTD10089/ VSTD10089	VT013548.D	1,1-Dichloroethene	feifei	4/13/2016 9:54:11 AM	MMdadoda	4/13/2016 2:36:25 PM	Peak Integrated by Software incorrectly
VSTD10089/ VSTD10089	VT013548.D	Carbon disulfide	feifei	4/13/2016 9:54:11 AM	MMdadoda	4/13/2016 2:36:25 PM	Peak Integrated by Software incorrectly
VSTD10089/ VSTD10089	VT013548.D	Trichlorofluoromethane	feifei	4/13/2016 9:54:11 AM	MMdadoda	4/13/2016 2:36:25 PM	Peak Integrated by Software incorrectly
VSTDCCC025EC/ VSTD02590	VT013558.D	1,1-Dichloroethene	feifei	4/13/2016 9:54:18 AM	MMdadoda	4/13/2016 2:36:29 PM	Peak Integrated by Software incorrectly
VSTDCCC025EC/ VSTD02590	VT013558.D	1,1-Dichloroethene-d2	feifei	4/13/2016 9:54:18 AM	MMdadoda	4/13/2016 2:36:29 PM	Peak Integrated by Software incorrectly
VSTDCCC025EC/ VSTD02590	VT013558.D	Trichlorofluoromethane	feifei	4/13/2016 9:54:18 AM	MMdadoda	4/13/2016 2:36:29 PM	Peak Integrated by Software incorrectly

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Sequence:	VT050516	Instrument	MSVOA_t

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC025/ VSTD02579	VT013897.D	Trichlorofluoromethane	feifei	5/6/2016 9:49:49 AM	MMDadoda	5/9/2016 6:52:00 PM	Peak Integrated by Software incorrectly
VSTDCCC025/ VSTD02580	VT013907.D	1,1-Dichloroethene	feifei	5/6/2016 9:50:11 AM	MMDadoda	5/9/2016 6:52:57 PM	Peak Integrated by Software incorrectly
VSTDCCC025/ VSTD02580	VT013907.D	Methylene chloride	feifei	5/6/2016 9:50:11 AM	MMDadoda	5/9/2016 6:52:57 PM	Peak Integrated by Software incorrectly
VSTDCCC025/ VSTD02580	VT013907.D	Trichlorofluoromethane	feifei	5/6/2016 9:50:11 AM	MMDadoda	5/9/2016 6:52:57 PM	Peak Integrated by Software incorrectly
VT0505SBL02/ VBLK98	VT013908.D	Chloroform-d	feifei	5/6/2016 9:50:13 AM	MMDadoda	5/9/2016 6:53:03 PM	Peak Integrated by Software incorrectly
H2834-13/ H4061	VT013913.D	Methylene chloride	feifei	5/6/2016 9:50:16 AM	MMDadoda	5/9/2016 6:52:33 PM	Peak Integrated by Software incorrectly
VSTDCCC025EC/ VSTD02581	VT013929.D	Trichlorofluoromethane	feifei	5/6/2016 9:50:19 AM	MMDadoda	5/9/2016 6:52:46 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VT050616	Instrument	MSVOA_t

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTD2.582/ VSTD2.582	VT013931.D	Carbon disulfide	feifei	5/9/2016 11:32:00 AM	MMDadoda	5/9/2016 6:53:39 PM	Peak Integrated by Software incorrectly
VSTD2.582/ VSTD2.582	VT013931.D	Trichlorofluoromethane	feifei	5/9/2016 11:32:00 AM	MMDadoda	5/9/2016 6:53:39 PM	Peak Integrated by Software incorrectly
VSTD00583/ VSTD00583	VT013932.D	Trichlorofluoromethane	feifei	5/9/2016 11:32:02 AM	MMDadoda	5/9/2016 6:53:45 PM	Peak Integrated by Software incorrectly
VSTD02584/ VSTD02584	VT013933.D	Trichlorofluoromethane	feifei	5/9/2016 11:32:03 AM	MMDadoda	5/9/2016 6:53:50 PM	Peak Integrated by Software incorrectly
VSTD05085/ VSTD05085	VT013934.D	Trichlorofluoromethane	feifei	5/9/2016 11:32:05 AM	MMDadoda	5/9/2016 6:53:56 PM	Peak Integrated by Software incorrectly
VSTD10086/ VSTD10086	VT013935.D	Trichlorofluoromethane	feifei	5/9/2016 11:32:06 AM	MMDadoda	5/9/2016 6:54:02 PM	Peak Integrated by Software incorrectly
VSTDCCC025/ VSTD02596	VT013941.D	Trichlorofluoromethane	feifei	5/9/2016 11:32:08 AM	MMDadoda	5/9/2016 6:54:09 PM	Peak Integrated by Software incorrectly
VSTDCCC025/ VSTD02588	VT013963.D	Trichlorofluoromethane	feifei	5/9/2016 11:32:22 AM	MMDadoda	5/9/2016 6:55:09 PM	Peak Integrated by Software incorrectly
VSTDCCC025EC/ VSTD02589	VT013985.D	Trichlorofluoromethane	feifei	5/9/2016 11:32:28 AM	MMDadoda	5/9/2016 6:55:30 PM	Peak Integrated by Software incorrectly

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Sequence:	VT050916	Instrument	MSVOA_t

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC025/ VSTD02590	VT013987.D	Trichlorofluoromethane	feifei	5/10/2016 10:53:01 AM	mmdadoda	5/10/2016 7:40:43 PM	Peak Integrated by Software incorrectly
H2834-14MS/ H4061MS	VT013990.D	Methylene chloride	feifei	5/10/2016 10:53:03 AM	mmdadoda	5/10/2016 7:40:46 PM	Peak Integrated by Software incorrectly
H2834-15MSD/ H4061MSD	VT013991.D	Methylene chloride	feifei	5/10/2016 10:53:05 AM	mmdadoda	5/10/2016 7:40:48 PM	Peak Integrated by Software incorrectly
VSTDCCC025/ VSTD02591	VT013999.D	1,1-Dichloroethene	feifei	5/10/2016 10:53:22 AM	mmdadoda	5/10/2016 7:41:13 PM	Peak Integrated by Software incorrectly
VSTDCCC025/ VSTD02591	VT013999.D	1,1-Dichloroethene-d2	feifei	5/10/2016 10:53:22 AM	mmdadoda	5/10/2016 7:41:13 PM	Peak Integrated by Software incorrectly
VSTDCCC025/ VSTD02591	VT013999.D	Carbon disulfide	feifei	5/10/2016 10:53:22 AM	mmdadoda	5/10/2016 7:41:13 PM	Peak Integrated by Software incorrectly
VSTDCCC025/ VSTD02591	VT013999.D	Methylene chloride	feifei	5/10/2016 10:53:22 AM	mmdadoda	5/10/2016 7:41:13 PM	Peak Integrated by Software incorrectly
VSTDCCC025/ VSTD02591	VT013999.D	Trichlorofluoromethane	feifei	5/10/2016 10:53:22 AM	mmdadoda	5/10/2016 7:41:13 PM	Peak Integrated by Software incorrectly
VT0509SBL02/ VBLK79	VT014000.D	1,1-Dichloroethene-d2	feifei	5/10/2016 10:53:23 AM	mmdadoda	5/10/2016 7:41:18 PM	Peak Integrated by Software incorrectly
VT0509SBL02/ VBLK79	VT014000.D	Methylene chloride	feifei	5/10/2016 10:53:23 AM	mmdadoda	5/10/2016 7:41:18 PM	Peak Integrated by Software incorrectly
H2834-17/ VHBLK02	VT014001.D	1,1-Dichloroethene-d2	feifei	5/10/2016 10:53:25 AM	mmdadoda	5/10/2016 7:42:39 PM	Peak Integrated by Software incorrectly
H2834-17/ VHBLK02	VT014001.D	Methylene chloride	feifei	5/10/2016 10:53:25 AM	mmdadoda	5/10/2016 7:42:39 PM	Peak Integrated by Software incorrectly
VSTDCCC025EC/ VSTD02592	VT014021.D	1,1-Dichloroethene	feifei	5/10/2016 10:53:56 AM	mmdadoda	5/10/2016 7:43:44 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VT050916	Instrument	MSVOA_t

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC025EC/ VSTD02592	VT014021.D	1,1-Dichloroethene-d2	feifei	5/10/2016 10:53:56 AM	mmdadoda	5/10/2016 7:43:44 PM	Peak Integrated by Software incorrectly
VSTDCCC025EC/ VSTD02592	VT014021.D	Carbon disulfide	feifei	5/10/2016 10:53:56 AM	mmdadoda	5/10/2016 7:43:44 PM	Peak Integrated by Software incorrectly
VSTDCCC025EC/ VSTD02592	VT014021.D	Trichlorofluoromethane	feifei	5/10/2016 10:53:56 AM	mmdadoda	5/10/2016 7:43:44 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	BM050516	Instrument	BNA_m

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTD02042/ SSTD02042	BM005233.D	Caprolactam	umangi	5/6/2016 7:10:46 PM	sohil	5/6/2016 7:14:59 PM	Peak Integrated by Software incorrectly
SSTD04043/ SSTD04043	BM005234.D	Caprolactam	umangi	5/6/2016 7:10:47 PM	sohil	5/6/2016 7:15:02 PM	Peak Integrated by Software incorrectly
SSTD08044/ SSTD08044	BM005235.D	Caprolactam	umangi	5/6/2016 7:10:48 PM	sohil	5/6/2016 7:15:03 PM	Peak Integrated by Software incorrectly
SSTD16045/ SSTD16045	BM005236.D	Benzaldehyde	umangi	5/6/2016 7:10:52 PM	sohil	5/6/2016 7:15:04 PM	Peak Integrated by Software incorrectly
SSTD16045/ SSTD16045	BM005236.D	Caprolactam	umangi	5/6/2016 7:10:52 PM	sohil	5/6/2016 7:15:04 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02046	BM005237.D	Caprolactam	umangi	5/6/2016 7:10:49 PM	sohil	5/6/2016 7:15:05 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02047	BM005251.D	Caprolactam	umangi	5/6/2016 7:11:03 PM	sohil	5/6/2016 7:15:20 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02048	BM005263.D	Caprolactam	umangi	5/6/2016 7:11:14 PM	sohil	5/6/2016 7:15:24 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02049	BM005274.D	Caprolactam	umangi	5/6/2016 7:11:10 PM	sohil	5/6/2016 7:15:25 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	bm051116	Instrument	BNA_m

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTDCCC020/ SSTD02061	BM005380.D	Caprolactam	umangi	5/12/2016 10:12:29 AM	sohil	5/12/2016 7:01:17 PM	Peak Integrated by Software incorrectly
H2834-13/ H4061	BM005389.D	4-Nitrophenol-d4	umangi	5/12/2016 10:12:31 AM	sohil	5/12/2016 7:01:40 PM	Peak Integrated by Software incorrectly
H2834-16/ H4076	BM005392.D	4-Chloroaniline-d4	umangi	5/12/2016 10:12:37 AM	sohil	5/12/2016 7:06:50 PM	Peak Integrated by Software incorrectly
H2834-16/ H4076	BM005392.D	4-Nitrophenol-d4	umangi	5/12/2016 10:12:37 AM	sohil	5/12/2016 7:06:50 PM	Peak Integrated by Software incorrectly
H2834-16/ H4076	BM005392.D	Chrysene	umangi	5/12/2016 10:12:37 AM	sohil	5/12/2016 7:06:50 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02062	BM005393.D	4-Nitroaniline	umangi	5/12/2016 10:12:34 AM	sohil	5/12/2016 7:07:51 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02062	BM005393.D	Caprolactam	umangi	5/12/2016 10:12:34 AM	sohil	5/12/2016 7:07:51 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02063	BM005409.D	4-Nitroaniline	umangi	5/12/2016 10:12:44 AM	sohil	5/12/2016 7:20:59 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02063	BM005409.D	Caprolactam	umangi	5/12/2016 10:12:44 AM	sohil	5/12/2016 7:20:59 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	bm051316	Instrument	BNA_m

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTDCCC020/ SSTD02066	BM005427.D	4-Nitroaniline	umangi	5/14/2016 9:57:14 AM	sohil	5/14/2016 9:58:31 AM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02066	BM005427.D	Caprolactam	umangi	5/14/2016 9:57:14 AM	sohil	5/14/2016 9:58:31 AM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02034	BM005435.D	4-Nitroaniline	umangi	5/14/2016 9:56:40 AM	sohil	5/14/2016 9:58:48 AM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02034	BM005435.D	Caprolactam	umangi	5/14/2016 9:56:40 AM	sohil	5/14/2016 9:58:48 AM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02035	BM005449.D	4-Nitroaniline	umangi	5/14/2016 9:57:11 AM	sohil	5/14/2016 9:59:30 AM	Peak Integrated by Software incorrectly
PB90330BL/ SBLK30	BM005450.D	4-Nitrophenol-d4	umangi	5/16/2016 5:05:43 PM	sohil	5/16/2016 7:01:38 PM	Peak Integrated by Software incorrectly
H2834-01/ H4002	BM005451.D	4-Chloroaniline-d4	umangi	5/16/2016 5:05:44 PM	sohil	5/16/2016 7:01:40 PM	Peak Integrated by Software incorrectly
H2834-01/ H4002	BM005451.D	4-Nitrophenol-d4	umangi	5/16/2016 5:05:44 PM	sohil	5/16/2016 7:01:40 PM	Peak Integrated by Software incorrectly
H2834-02MS/ H4002MS	BM005452.D	4-Nitrophenol	umangi	5/16/2016 5:05:45 PM	sohil	5/16/2016 7:01:43 PM	Peak Integrated by Software incorrectly
H2834-02MS/ H4002MS	BM005452.D	4-Nitrophenol-d4	umangi	5/16/2016 5:05:45 PM	sohil	5/16/2016 7:01:43 PM	Peak Integrated by Software incorrectly
H2834-03MSD/ H4002MSD	BM005453.D	4-Nitrophenol-d4	umangi	5/16/2016 5:05:46 PM	sohil	5/16/2016 7:01:45 PM	Peak Integrated by Software incorrectly
H2834-18/ H4102	BM005454.D	4-Nitrophenol-d4	umangi	5/16/2016 5:05:47 PM	sohil	5/16/2016 7:01:49 PM	Peak Integrated by Software incorrectly
H2834-19/ H4116	BM005455.D	4-Nitrophenol-d4	umangi	5/16/2016 5:05:48 PM	sohil	5/16/2016 7:01:52 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	bm051316	Instrument	BNA_m

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
H2834-20/ H4117	BM005456.D	4-Nitrophenol-d4	umangi	5/16/2016 5:05:49 PM	sohil	5/16/2016 7:01:54 PM	Peak Integrated by Software incorrectly
H2834-21/ H4118	BM005457.D	4-Nitrophenol-d4	umangi	5/16/2016 5:05:50 PM	sohil	5/16/2016 7:01:57 PM	Peak Integrated by Software incorrectly
H2834-14MS/ H4061MS	BM005459.D	4-Chloroaniline-d4	umangi	5/16/2016 5:05:53 PM	sohil	5/16/2016 7:02:02 PM	Peak Integrated by Software incorrectly
H2834-14MS/ H4061MS	BM005459.D	4-Nitrophenol	umangi	5/16/2016 5:05:53 PM	sohil	5/16/2016 7:02:02 PM	Peak Integrated by Software incorrectly
H2834-14MS/ H4061MS	BM005459.D	4-Nitrophenol-d4	umangi	5/16/2016 5:05:53 PM	sohil	5/16/2016 7:02:02 PM	Peak Integrated by Software incorrectly
H2834-14MS/ H4061MS	BM005459.D	Pentachlorophenol	umangi	5/16/2016 5:05:53 PM	sohil	5/16/2016 7:02:02 PM	Peak Integrated by Software incorrectly
H2834-15MSD/ H4061MSD	BM005460.D	4-Nitrophenol	umangi	5/16/2016 5:05:54 PM	sohil	5/16/2016 7:02:04 PM	Peak Integrated by Software incorrectly
H2834-15MSD/ H4061MSD	BM005460.D	4-Nitrophenol-d4	umangi	5/16/2016 5:05:54 PM	sohil	5/16/2016 7:02:04 PM	Peak Integrated by Software incorrectly

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4002

Analytical Method : Trace VOA Level : _____

Matrix : Water

EPA Sample No .	DMC1 (VCL)	DMC2 (CLA)	DMC3 (DCE)	DMC4 (BUT)	DMC5 (CLF)	DMC6 (DCA)	DMC7 (BEN)	DMC8 (DPA)
VBLK27	104	114	75	98	96	104	102	101
H4006	94	106	72	88	87	100	98	98
H4002	105	112	79	105	100	108	109	107
H4094	99	106	74	103	97	105	104	103
H4121	101	108	76	110	102	109	105	107
H4123	104	118	79	106	104	112	116	115
H4124	106	115	79	112	106	114	111	111
H4132	95	102	69	101	90	98	99	98
H4133	99	111	74	106	99	106	104	103
VBLK28	93	106	67	87	86	94	97	96
H4004	94	109	69	97	88	100	99	99
H4124RE	99	110	73	110	98	107	108	107
H4002DL	96	104	71	106	96	106	105	103
H4002MS	100	101	101	101	98	108	108	106
H4002MSD	97	94	97	101	96	103	104	104
VBLK29	95	114	71	97	95	104	107	108
H4121DL	94	40 D	63	105	90	99	95	97
H4094DL	94	49 D	66	105	92	102	100	100
H4123DL	93	44 D	62	105	90	102	96	97
H4102	85	110	66	110	93	103	98	99
H4116	91	109	69	112	98	105	103	105
VBLK30	82	102	61	102	87	95	93	94
H4118	84	102	64	104	91	99	99	98
H4117	90	111	68	111	98	105	103	102
H4102DL	86	98	65	110	94	107	104	104
H4116DL	85	103	64	107	92	103	98	101
VHBLK01	86	103	64	108	88	101	98	98

	QC LIMITS
DMC1 (VCL) = Vinyl Chloride-d3	(40-130)
DMC2 (CLA) = Chloroethane-d5	(65-130)
DMC3 (DCE) = 1,1-Dichloroethene-d2	(60-125)
DMC4 (BUT) = 2-Butanone-d5	(40-130)
DMC5 (CLF) = Chloroform-d	(70-125)
DMC6 (DCA) = 1,2-Dichloroethane-d4	(70-130)
DMC7 (BEN) = Benzene-d6	(70-125)
DMC8 (DPA) = 1,2-Dichloropropane-d6	(60-140)

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4002
Analytical Method : Trace VOA Level : _____
Matrix : Water

EPA Sample No .	DMC9 (TOL)	DMC10 (TDP)	DMC11 (HEX)	DMC12 (TCA)	DMC13 (DCZ)	DMC14	DMC15	DMC16	TOT OUT
VBLK27	102	99	98	97	101				0
H4006	98	89	95	92	95				0
H4002	107	103	107	99	103				0
H4094	101	95	101	94	97				0
H4121	102	100	104	96	101				0
H4123	110	107	109	95	95				0
H4124	108	102	108	101	104				0
H4132	96	92	97	89	95				0
H4133	100	95	102	95	99				0
VBLK28	94	92	91	80	83				0
H4004	95	89	94	89	96				0
H4124RE	103	101	104	96	98				0
H4002DL	99	96	101	92	98				0
H4002MS	103	97	105	99	102				0
H4002MSD	99	93	104	93	97				0
VBLK29	99	99	99	89	90				0
H4121DL	91	90	99	88	90				1
H4094DL	97	97	105	94	94				1
H4123DL	93	93	103	92	90				1
H4102	90	89	100	90	93				0
H4116	97	90	105	95	96				0
VBLK30	88	88	96	86	86				0
H4118	93	90	103	92	91				0
H4117	97	90	104	95	94				0
H4102DL	96	96	108	98	95				0
H4116DL	93	88	100	94	93				0
VHBLK01	91	90	101	92	92				0

	QC LIMITS
DMC9 (TOL) = Toluene-d8	(70-130)
DMC10 (TDP) = trans-1,3-Dichloropropene-d4	(55-130)
DMC11 (HEX) = 2-Hexanone-d5	(45-130)
DMC12 (TCA) = 1,1,2,2-Tetrachloroethane-d2	(65-120)
DMC13 (DCZ) = 1,2-Dichlorobenzene-d4	(80-120)

FORM 3A-OR
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No. : 46114 MA No .: SDG No. : H4002

Analytical Method : Trace VOA Level :

Matrix Water

EPA Sample No.(Matrix Spike/Metrix Spike Duplicate): H4002

Instrument ID : MSVOA_I GC Column RXI-624 ID : 0.25 (mm)

Concentration Units (ug/L,mg/L ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %R #	QC Limits %R
1,1-Dichloroethene	5	0	4.6	92	61 - 145
Benzene	5	0	5.2	104	76 - 127
Trichloroethene	5	0.56	5.7	103	71 - 120
Toluene	5	0	5.2	104	76 - 125
Chlorobenzene	5	0	5	100	75 - 130

ANALYTE	SPIKE AADDED	MSD CONCENTRATION	MSD %R #	RPD	QC Limits	
					RPD	%R
1,1-Dichloroethene	5	4.5	90	2	14	61 - 145
Benzene	5	5	100	4	11	76 - 127
Trichloroethene	5	5.4	97	6	14	71 - 120
Toluene	5	5	100	4	13	76 - 125
Chlorobenzene	5	4.9	98	2	13	75 - 130

EPA SAMPLE NO.

VBLK27

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4002
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0504WBL01
Instrument ID: MSVOA_I
Lab File ID : VI049226.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/04/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 15:13
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4006	H2834-04	VI049233.D	05/04/2016 18:55
H4002	H2834-01	VI049234.D	05/04/2016 19:27
H4094	H2834-05	VI049237.D	05/04/2016 21:02
H4121	H2834-06	VI049238.D	05/04/2016 21:33
H4123	H2834-07	VI049239.D	05/04/2016 22:05
H4124	H2834-08	VI049240.D	05/04/2016 22:37
H4132	H2834-09	VI049241.D	05/04/2016 23:08
H4133	H2834-10	VI049242.D	05/04/2016 23:40

EPA SAMPLE NO.

VBLK28

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4002
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0505WBL01
Instrument ID: MSVOA_I
Lab File ID : VI049246.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/05/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 10:59
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4004	H2834-12	VI049249.D	05/05/2016 12:34
H4124RE	H2834-08RE	VI049251.D	05/05/2016 13:38
H4002DL	H2834-01DL	VI049252.D	05/05/2016 14:09
H4002MS	H2834-02MS	VI049253.D	05/05/2016 15:13
H4002MSD	H2834-03MSD	VI049254.D	05/05/2016 15:44

EPA SAMPLE NO.

VBLK29

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4002
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0505WBL02
Instrument ID: MSVOA_I
Lab File ID : VI049256.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/05/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 16:54
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4121DL	H2834-06DL	VI049257.D	05/05/2016 17:59
H4094DL	H2834-05DL	VI049258.D	05/05/2016 18:31
H4123DL	H2834-07DL	VI049259.D	05/05/2016 19:02
H4102	H2834-18	VI049270.D	05/06/2016 00:50
H4116	H2834-19	VI049271.D	05/06/2016 01:22

EPA SAMPLE NO.

VBLK30

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4002
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0506WBL01
Instrument ID: MSVOA_I
Lab File ID : VI049277.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/06/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 11:45
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4118	H2834-21	VI049278.D	05/06/2016 12:17
H4117	H2834-20	VI049280.D	05/06/2016 13:20
H4102DL	H2834-18DL	VI049281.D	05/06/2016 13:52
H4116DL	H2834-19DL	VI049286.D	05/06/2016 17:09
VHBLK01	H2834-11	VI049288.D	05/06/2016 18:12

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB32

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method : Trace VOA Lab File ID : VI049219.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/04/2016 Injection Time: 08:57

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	29.8	
75	30.0 - 80.0% of mass 95	62.3	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.6	
173	Less than 2.0% of mass 174	0.3(0.4)	1
174	50.0 - 120% of mass 95	77.4	
175	5.0 - 9.0% of mass 174	5.5(7.1)	1
176	95.0 - 101% of mass 174	73.5(95)	1
177	5.0 - 9.0% of mass 176	4.9(6.7)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD0.533	VSTD0.533	VI049220.D	05/04/2016	11:27
VSTD00134	VSTD00134	VI049221.D	05/04/2016	11:58
VSTD00535	VSTD00535	VI049222.D	05/04/2016	12:30
VSTD01036	VSTD01036	VI049223.D	05/04/2016	13:02
VSTD02037	VSTD02037	VI049224.D	05/04/2016	13:33
VSTD00538	VSTDCCC005	VI049225.D	05/04/2016	14:05
VBLK27	VI0504WBL01	VI049226.D	05/04/2016	15:13
H4006	H2834-04	VI049233.D	05/04/2016	18:55
H4002	H2834-01	VI049234.D	05/04/2016	19:27
H4094	H2834-05	VI049237.D	05/04/2016	21:02
H4121	H2834-06	VI049238.D	05/04/2016	21:33
H4123	H2834-07	VI049239.D	05/04/2016	22:05
H4124	H2834-08	VI049240.D	05/04/2016	22:37
H4132	H2834-09	VI049241.D	05/04/2016	23:08
H4133	H2834-10	VI049242.D	05/04/2016	23:40
VSTD00539	VSTDCCC005EC	VI049243.D	05/05/2016	00:11

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB33

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method : Trace VOA Lab File ID : VI049244.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/05/2016 Injection Time: 09:34

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	31.1	
75	30.0 - 80.0% of mass 95	62.8	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	7.2	
173	Less than 2.0% of mass 174	0.4(0.5)	1
174	50.0 - 120% of mass 95	77.8	
175	5.0 - 9.0% of mass 174	5.4(7)	1
176	95.0 - 101% of mass 174	76.2(98)	1
177	5.0 - 9.0% of mass 176	4.9(6.4)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00540	VSTDCCC005	VI049245.D	05/05/2016	10:15
VBLK28	VI0505WBL01	VI049246.D	05/05/2016	10:59
H4004	H2834-12	VI049249.D	05/05/2016	12:34
H4124RE	H2834-08RE	VI049251.D	05/05/2016	13:38
H4002DL	H2834-01DL	VI049252.D	05/05/2016	14:09
H4002MS	H2834-02MS	VI049253.D	05/05/2016	15:13
H4002MSD	H2834-03MSD	VI049254.D	05/05/2016	15:44
VSTD00541	VSTDCCC005	VI049255.D	05/05/2016	16:16
VBLK29	VI0505WBL02	VI049256.D	05/05/2016	16:54
H4121DL	H2834-06DL	VI049257.D	05/05/2016	17:59
H4094DL	H2834-05DL	VI049258.D	05/05/2016	18:31
H4123DL	H2834-07DL	VI049259.D	05/05/2016	19:02
H4102	H2834-18	VI049270.D	05/06/2016	00:50
H4116	H2834-19	VI049271.D	05/06/2016	01:22
VSTD00542	VSTDCCC005EC	VI049274.D	05/06/2016	02:57

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB34

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method : Trace VOA Lab File ID : VI049275.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/06/2016 Injection Time: 09:02

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	31	
75	30.0 - 80.0% of mass 95	65.2	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	7.2	
173	Less than 2.0% of mass 174	0.0(0.0)	1
174	50.0 - 120% of mass 95	75.4	
175	5.0 - 9.0% of mass 174	6.5(8.6)	1
176	95.0 - 101% of mass 174	73(96.8)	1
177	5.0 - 9.0% of mass 176	5(6.9)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00543	VSTDCCC005	VI049276.D	05/06/2016	10:21
VBLK30	VI0506WBL01	VI049277.D	05/06/2016	11:45
H4118	H2834-21	VI049278.D	05/06/2016	12:17
H4117	H2834-20	VI049280.D	05/06/2016	13:20
H4102DL	H2834-18DL	VI049281.D	05/06/2016	13:52
H4116DL	H2834-19DL	VI049286.D	05/06/2016	17:09
VHBLK01	H2834-11	VI049288.D	05/06/2016	18:12
VSTD00544	VSTDCCC005EC	VI049289.D	05/06/2016	19:15

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4002
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00538 | Lab File ID (Standard) : VI049225.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 05/04/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/04/2016
Heated Purge: (Y/N) N | Time Analyzed : 14:05

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1354320	7.94	1001730	11.22	409038	13.43
UPPER LIMIT	2708630	8.11	2003460	11.39	818076	13.6
LOWER LIMIT	677158	7.77	500864	11.05	204519	13.26
EPA SAMPLE NO.						
VBLK27	1471992	7.93	1023504	11.22	378551	13.44
H4006	1309272	7.93	874832	11.22	314361	13.43
H4002	1264369	7.94	842773	11.22	306766	13.43
H4094	1238765	7.93	828120	11.22	303293	13.43
H4121	1273049	7.93	848972	11.22	309434	13.43
H4123	1242119	7.93	780602	11.22	244069	13.43
H4124	1223488	7.93	817280	11.22	299035	13.43
H4132	1288236	7.93	845376	11.22	307484	13.43
H4133	1212193	7.93	802516	11.22	282267	13.44

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4002
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00540 | Lab File ID (Standard) : VI049245.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 05/04/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/05/2016
Heated Purge: (Y/N) N | Time Analyzed : 10:15

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1400840	7.94	948431	11.22	368197	13.44
UPPER LIMIT	2801680	8.11	1896860	11.39	736394	13.61
LOWER LIMIT	700421	7.77	474216	11.05	184099	13.27
EPA SAMPLE NO.						
VBLK28	1422886	7.94	911067	11.23	296478	13.44
H4004	1272879	7.94	841746	11.22	301318	13.43
H4124RE	1227605	7.94	789169	11.23	288629	13.44
H4002DL	1264417	7.94	838639	11.23	298705	13.43
H4002MS	1197205	7.94	784211	11.23	283482	13.44
H4002MSD	1236775	7.94	814270	11.23	293377	13.44

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4002
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00541 | Lab File ID (Standard) : VI049255.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 05/04/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/05/2016
Heated Purge: (Y/N) N | Time Analyzed : 16:16

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1235300	7.95	831818	11.22	319065	13.44
UPPER LIMIT	2470600	8.12	1663640	11.39	638130	13.61
LOWER LIMIT	617650	7.78	415909	11.05	159533	13.27
EPA SAMPLE NO.						
VBLK29	1193553	7.93	762181	11.23	241848	13.43
H4121DL	1269772	7.94	839822	11.23	302518	13.44
H4094DL	1222187	7.94	807048	11.23	297649	13.44
H4123DL	1328744	7.94	898593	11.23	339174	13.43
H4102	1194366	7.94	784610	11.23	283029	13.44
H4116	1164003	7.94	760683	11.23	269617	13.43

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4002
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00543 | Lab File ID (Standard) : VI049276.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 05/04/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/06/2016
Heated Purge: (Y/N) N | Time Analyzed : 10:21

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1457810	7.94	978595	11.22	385883	13.44
UPPER LIMIT	2915620	8.11	1957190	11.39	771766	13.61
LOWER LIMIT	728905	7.77	489298	11.05	192942	13.27
EPA SAMPLE NO.						
VBLK30	1307874	7.94	851739	11.23	307505	13.44
H4118	1232391	7.94	782569	11.23	286122	13.43
H4117	1176009	7.94	772722	11.23	283431	13.43
H4102DL	1200218	7.93	767967	11.22	282692	13.44
H4116DL	1179943	7.94	763648	11.22	276848	13.44
VHBLK01	1159555	7.93	753453	11.22	273005	13.43

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049234.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.070	J
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.26	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.0	
71-55-6	1,1,1-Trichloroethane	0.66	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.56	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049234.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.24	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	46	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049234.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049234.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/04/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

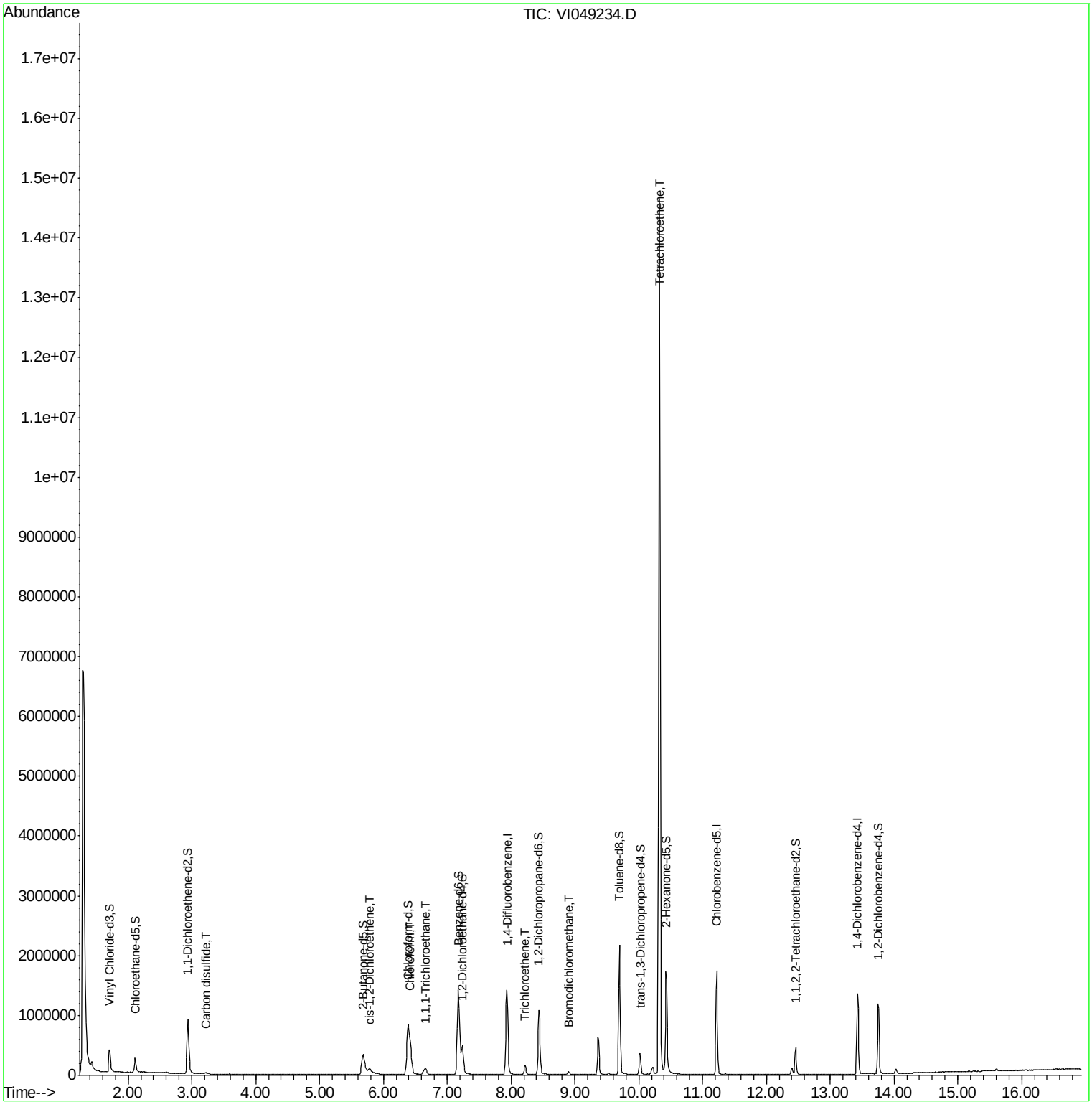
EPA-designated Registry Number.

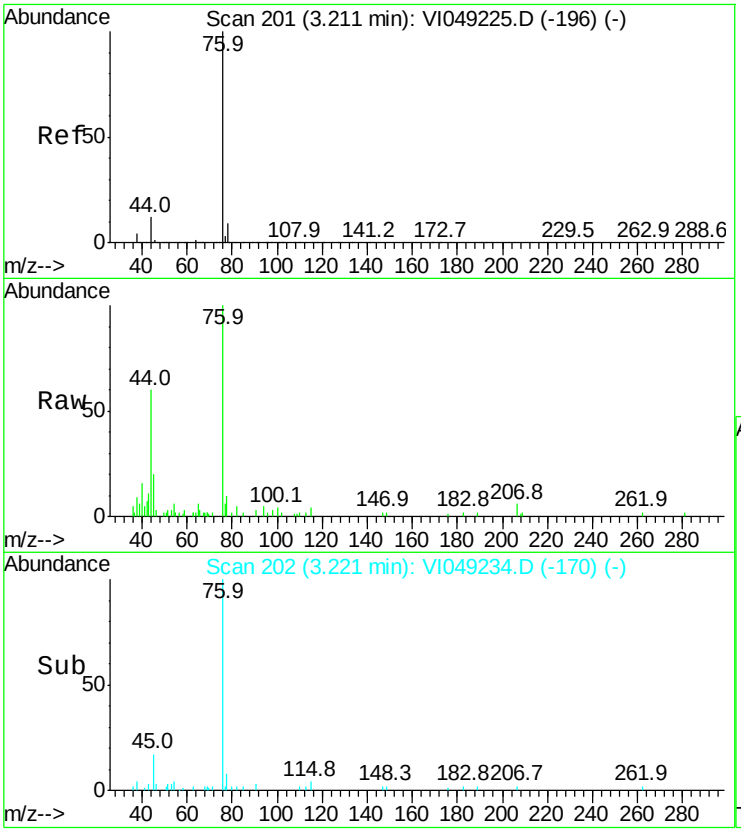
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049234.D
Acq On : 4 May 2016 19:27
Operator : FY/SY
Sample : H2834-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002

Quant Time: May 05 06:01:35 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration



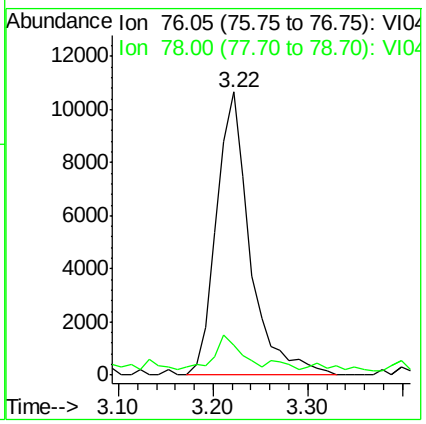


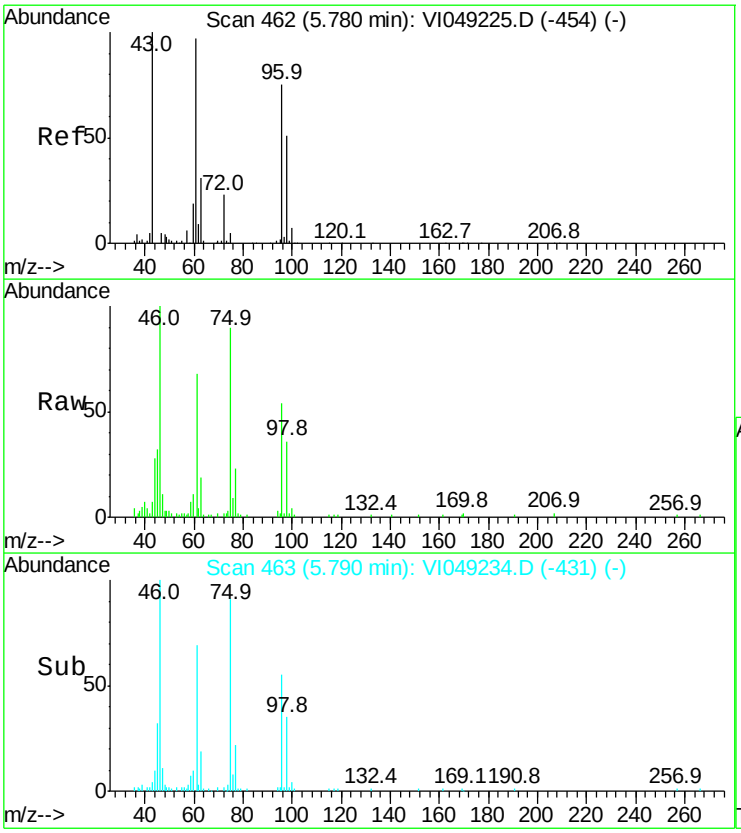
#14
Carbon disulfide
Concen: 0.07 ug/L
RT: 3.22 min Scan# 202
Delta R.T. 0.01 min
Lab File: VI049234.D
Acq: 4 May 2016 19:27

Instrument : MSVOA_I
ClientSampleId : H4002

Tgt Ion: 76 Resp: 26194

Ion	Ratio	Lower	Upper
76	100		
78	10.5	7.4	11.0

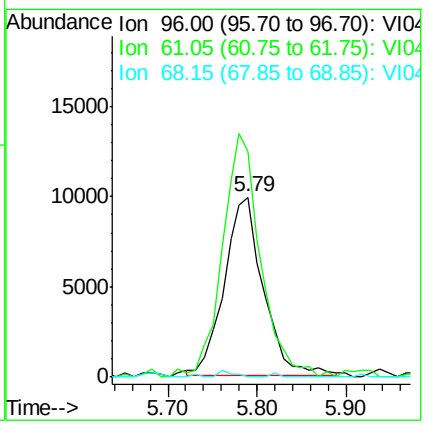


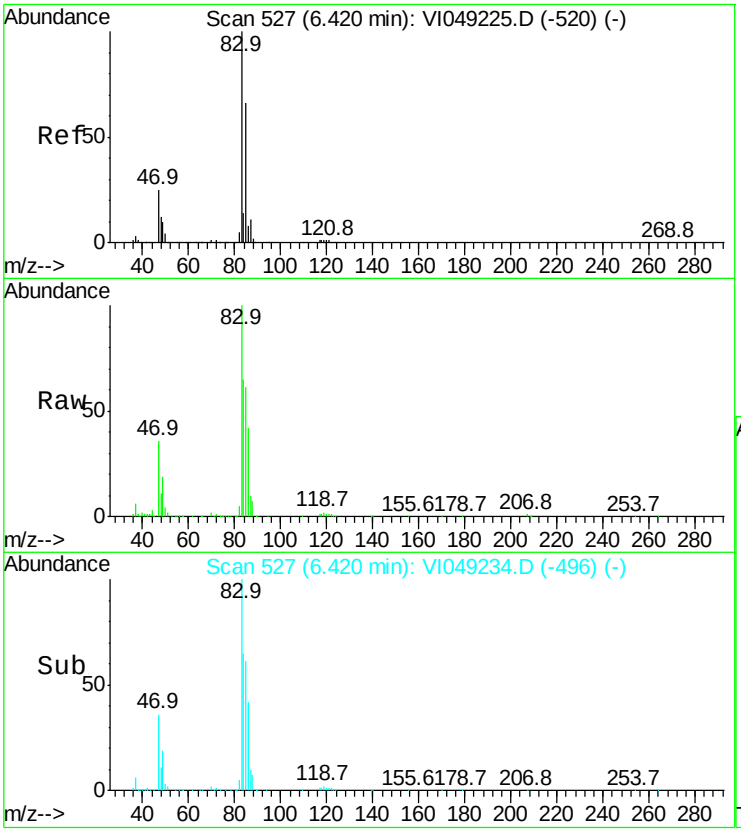


#22
cis-1,2-Dichloroethene
Concen: 0.26 ug/L
RT: 5.79 min Scan# 463
Delta R.T. 0.01 min
Lab File: VI049234.D
Acq: 4 May 2016 19:27

Tgt Ion: 96 Resp: 30086

Ion	Ratio	Lower	Upper
96	100		
61	125.6	82.1	152.5
68	0.0	0.0	0.0



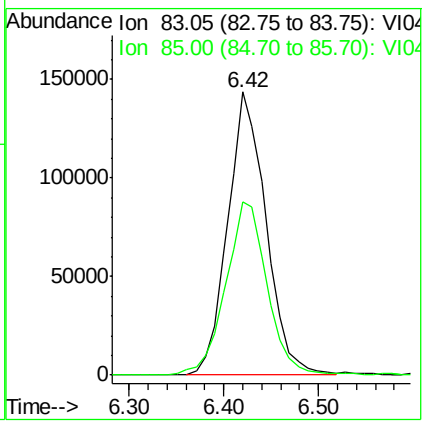


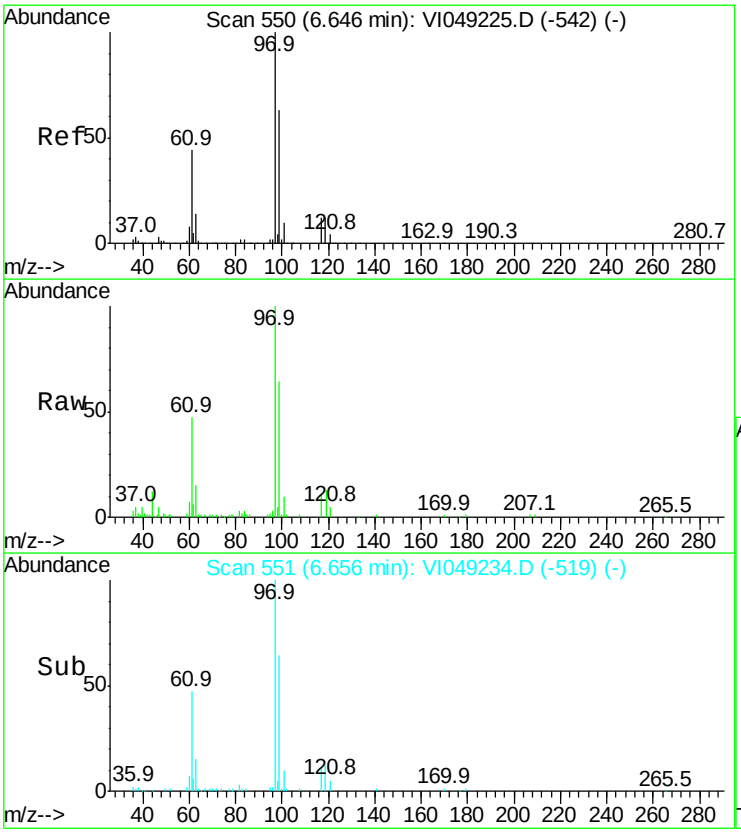
#25
Chloroform
Concen: 1.98 ug/L
RT: 6.42 min Scan# 527
Delta R.T. 0.00 min
Lab File: VI049234.D
Acq: 4 May 2016 19:27

Instrument :
MSVOA_I
ClientSampleId :
H4002

Tgt Ion: 83 Resp: 402304

Ion	Ratio	Lower	Upper
83	100		
85	61.2	47.3	87.8

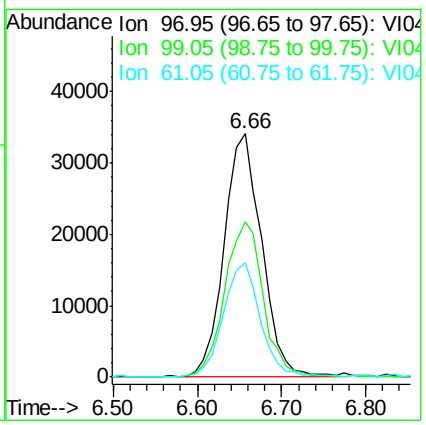


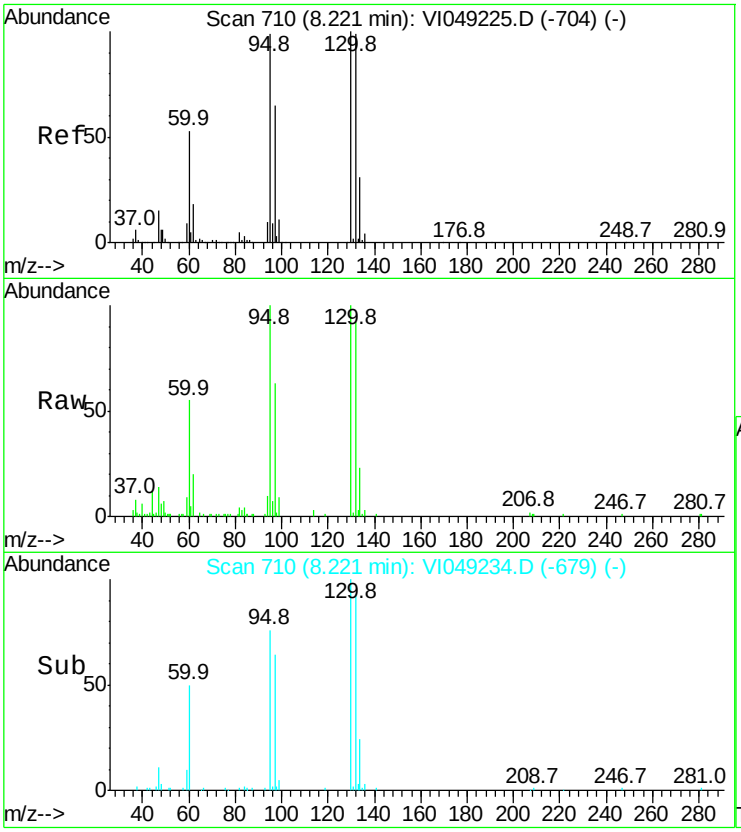


#29
1,1,1-Trichloroethane
Concen: 0.66 ug/L
RT: 6.66 min Scan# 551
Delta R.T. 0.01 min
Lab File: VI049234.D
Acq: 4 May 2016 19:27

Tgt Ion: 97 Resp: 105929

Ion	Ratio	Lower	Upper
97	100		
99	65.0	51.1	76.7
61	46.5	33.3	49.9



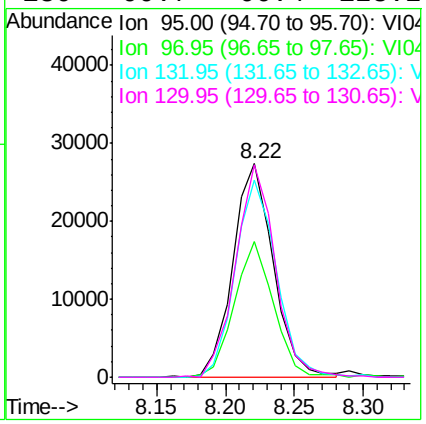


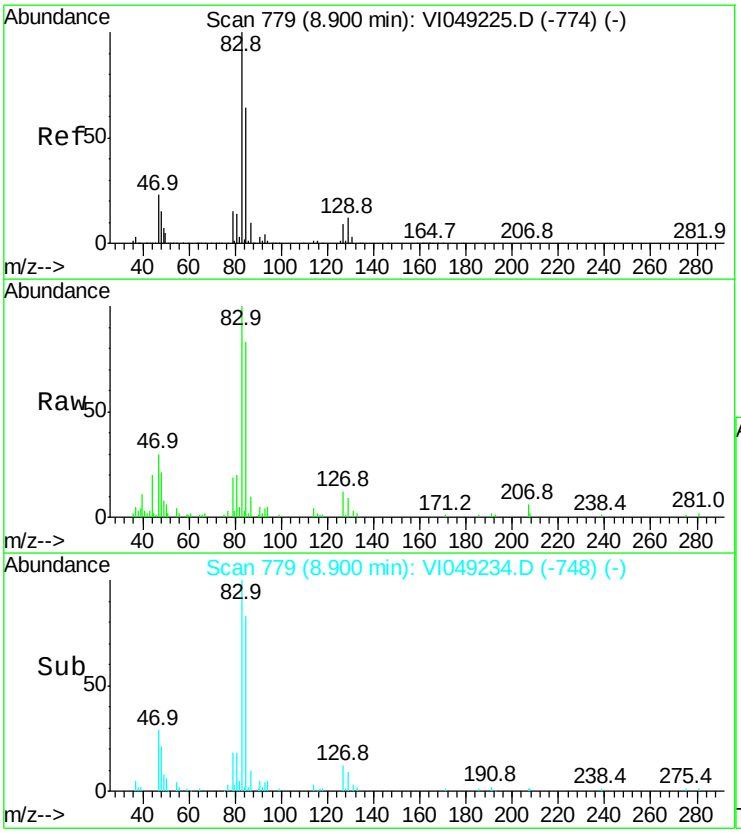
#34
Trichloroethene
Concen: 0.56 ug/L
RT: 8.22 min Scan# 710
Delta R.T. 0.00 min
Lab File: VI049234.D
Acq: 4 May 2016 19:27

Instrument :
MSVOA_I
ClientSampleId :
H4002

Tgt Ion: 95 Resp: 56111

Ion	Ratio	Lower	Upper
95	100		
97	63.5	45.8	85.2
132	92.4	63.9	118.7
130	99.7	66.4	123.2

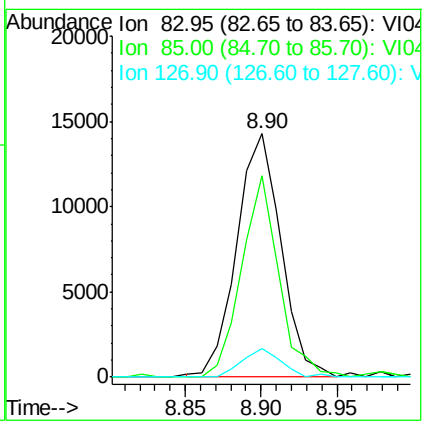


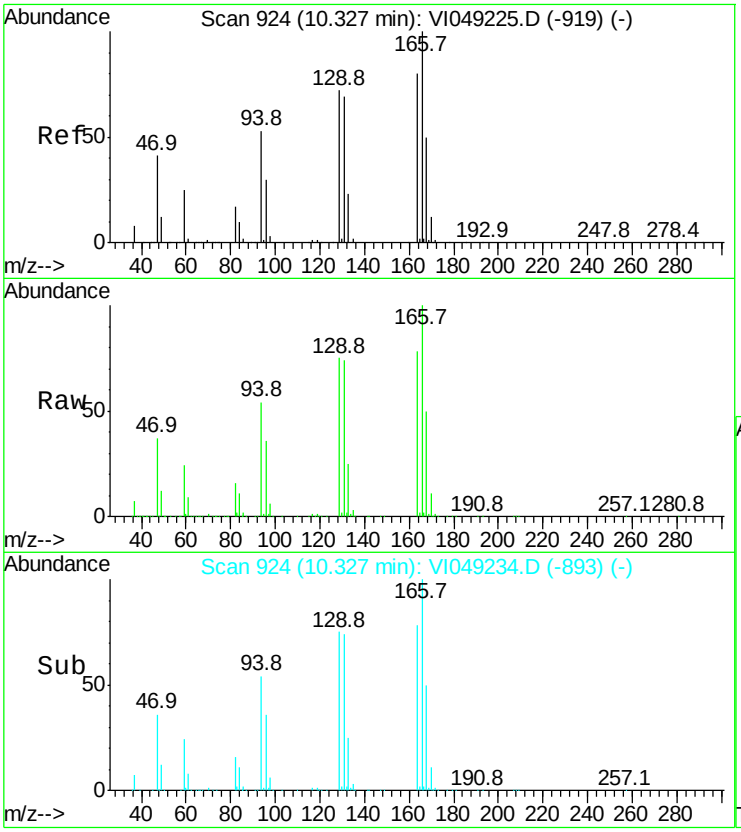


#38
Bromodichloromethane
Concen: 0.24 ug/L
RT: 8.90 min Scan# 779
Delta R.T. 0.00 min
Lab File: VI049234.D
Acq: 4 May 2016 19:27

Tgt Ion: 83 Resp: 29078

Ion	Ratio	Lower	Upper
83	100		
85	82.8	44.7	83.1
127	11.7	6.6	9.8#



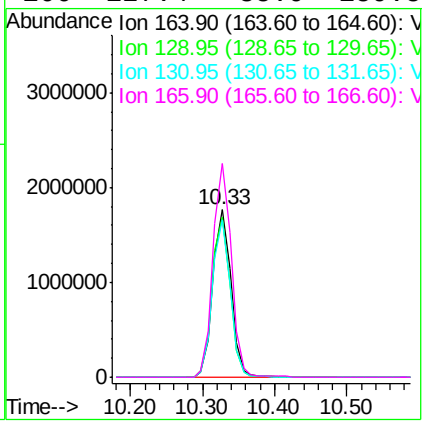


#47
Tetrachloroethene
Concen: 46.27 ug/L
RT: 10.33 min Scan# 924
Delta R.T. 0.00 min
Lab File: VI049234.D
Acq: 4 May 2016 19:27

Instrument :
MSVOA_I
ClientSampleId :
H4002

Tgt Ion:164 Resp: 3043159

Ion	Ratio	Lower	Upper
164	100		
129	95.6	62.1	115.3
131	93.7	60.6	112.6
166	127.4	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049234.D
Acq On : 4 May 2016 19:27
Operator : FY/SY
Sample : H2834-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002

Quant Time: May 05 06:01:35 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1264369	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	842773	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	306766	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	406968	5.23	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 104.60%			
7) Chloroethane-d5	2.11	69	241084	5.59	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 111.80%			
11) 1,1-Dichloroethene-d2	2.94	63	721695	3.94	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 78.80%			
20) 2-Butanone-d5	5.68	46	888820	52.74	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 105.48%			
24) Chloroform-d	6.39	84	988135	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.80%			
26) 1,2-Dichloroethane-d4	7.24	65	436090	5.38	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.60%			
32) Benzene-d6	7.18	84	1789176	5.45	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 109.00%			
36) 1,2-Dichloropropane-d6	8.44	67	494131	5.35	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.00%			
41) Toluene-d8	9.70	98	1290476	5.33	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 106.60%			
43) trans-1,3-Dichloropropene-	10.02	79	187074	5.14	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 102.80%			
46) 2-Hexanone-d5	10.43	63	615809	53.68	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 107.36%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	206947	4.93	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	277531	5.16	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 103.20%			
Target Compounds						Qvalue
14) Carbon disulfide	3.22	76	26194	0.07	ug/L	97
22) cis-1,2-Dichloroethene	5.79	96	30086	0.26	ug/L	92
25) Chloroform	6.42	83	402304	1.98	ug/L	92
29) 1,1,1-Trichloroethane	6.66	97	105929	0.66	ug/L	96
34) Trichloroethene	8.22	95	56111	0.56	ug/L	97
38) Bromodichloromethane	8.90	83	29078	0.24	ug/L #	77
47) Tetrachloroethene	10.33	164	3043159	46.27	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049234.D
Acq On : 4 May 2016 19:27
Operator : FY/SY
Sample : H2834-01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.292	3	6	19	rBV	6601471	17706862	69.11%	21.770%
2	1.430	19	20	37	rVB	171121	468127	1.83%	0.576%
3	1.706	45	48	57	rBV	368152	644013	2.51%	0.792%
4	2.109	85	89	98	rBV	235291	446891	1.74%	0.549%
5	2.385	115	117	120	rBV4	6775	12625	0.05%	0.016%
6	2.473	124	126	127	rBV2	5583	9489	0.04%	0.012%
7	2.601	136	139	141	rBV4	15695	20030	0.08%	0.025%
8	2.818	159	161	164	rVB4	8722	17666	0.07%	0.022%
9	2.867	164	166	168	rBV3	4943	9629	0.04%	0.012%
10	2.936	168	173	188	rVV	911083	2127949	8.31%	2.616%
11	3.123	190	192	194	rVV3	7120	7757	0.03%	0.010%
12	3.221	198	202	205	rVB2	15149	31104	0.12%	0.038%
13	3.428	221	223	226	rVB4	4795	4621	0.02%	0.006%
14	3.595	236	240	243	rBV6	7312	13960	0.05%	0.017%
15	3.645	243	245	247	rVB3	3565	4716	0.02%	0.006%
16	3.861	264	267	270	rBV5	2673	6808	0.03%	0.008%
17	3.910	270	272	275	rVB3	6529	12030	0.05%	0.015%
18	3.969	275	278	279	rBV3	5055	8974	0.04%	0.011%
19	4.146	293	296	299	rVB3	3717	6501	0.03%	0.008%
20	4.255	304	307	309	rBV3	4039	6281	0.02%	0.008%
21	4.461	327	328	331	rBV3	5262	8127	0.03%	0.010%
22	4.629	343	345	347	rVB2	6161	7345	0.03%	0.009%
23	4.698	347	352	355	rBV5	4302	13667	0.05%	0.017%
24	4.747	355	357	360	rVB3	3382	5504	0.02%	0.007%
25	4.816	362	364	368	rVB3	4146	8060	0.03%	0.010%
26	4.885	368	371	372	rBV2	3697	4770	0.02%	0.006%
27	4.973	379	380	382	rVB2	4331	4957	0.02%	0.006%
28	5.022	382	385	386	rBV3	3357	5892	0.02%	0.007%
29	5.062	386	389	392	rVB3	4545	8203	0.03%	0.010%
30	5.121	392	395	396	rBV3	4411	6755	0.03%	0.008%
31	5.298	411	413	417	rVB4	4808	6847	0.03%	0.008%
32	5.377	417	421	424	rBV4	3774	11674	0.05%	0.014%
33	5.505	431	434	436	rBV3	5087	6626	0.03%	0.008%
34	5.682	443	452	459	rBV	343375	1227978	4.79%	1.510%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049234.D
Acq On : 4 May 2016 19:27
Operator : FY/SY
Sample : H2834-01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	5.780	459	462	474	rVB3	86175	343619	1.34%	0.422%
36	6.390	516	524	538	rBV2	840441	3288986	12.84%	4.044%
37	6.538	538	539	541	rVB2	7499	8493	0.03%	0.010%
38	6.656	541	551	558	rBV2	107104	345593	1.35%	0.425%
39	6.833	566	569	573	rBV4	2893	7871	0.03%	0.010%
40	6.902	573	576	579	rBV5	4541	9205	0.04%	0.011%
41	7.178	596	604	608	rBV	1414486	3805931	14.85%	4.679%
42	7.237	608	610	619	rVV	484567	1063939	4.15%	1.308%
43	7.542	640	641	644	rBV2	2778	4513	0.02%	0.006%
44	7.650	648	652	653	rBV4	3383	6869	0.03%	0.008%
45	7.778	662	665	667	rVB4	3532	6578	0.03%	0.008%
46	7.808	667	668	671	rVB3	3688	5454	0.02%	0.007%
47	7.857	671	673	675	rBV3	4053	5495	0.02%	0.007%
48	7.936	675	681	689	rBV	1416127	3095941	12.08%	3.806%
49	8.103	697	698	699	rBV	6900	4830	0.02%	0.006%
50	8.152	699	703	704	rVB2	5673	7108	0.03%	0.009%
51	8.221	705	710	716	rVB	153956	320691	1.25%	0.394%
52	8.300	716	718	720	rVB3	4169	5633	0.02%	0.007%
53	8.339	720	722	724	rBV2	3408	6033	0.02%	0.007%
54	8.438	726	732	741	rBV	1070098	2348490	9.17%	2.887%
55	8.625	749	751	757	rVB6	5816	12862	0.05%	0.016%
56	8.900	775	779	789	rVB	52327	119887	0.47%	0.147%
57	9.018	789	791	792	rBV2	3035	4524	0.02%	0.006%
58	9.235	811	813	816	rVB4	3316	4620	0.02%	0.006%
59	9.363	822	826	835	rBV	634383	1186153	4.63%	1.458%
60	9.530	840	843	846	rVB3	12499	26671	0.10%	0.033%
61	9.579	846	848	851	rBV4	4912	5132	0.02%	0.006%
62	9.697	855	860	873	rBV	2162766	3789546	14.79%	4.659%
63	9.875	875	878	879	rVB3	4307	6644	0.03%	0.008%
64	9.894	879	880	883	rVB3	3711	4422	0.02%	0.005%
65	9.963	883	887	889	rVB5	4244	6413	0.03%	0.008%
66	10.022	889	893	898	rBV	360778	650338	2.54%	0.800%
67	10.140	902	905	907	rBV4	5609	9424	0.04%	0.012%
68	10.219	907	913	919	rBV	120370	250006	0.98%	0.307%
69	10.327	919	924	931	rVV	14634533	25621478	100.00%	31.501%
70	10.426	931	934	947	rVB	1701409	3298614	12.87%	4.056%
71	10.977	987	990	992	rBV4	3452	4760	0.02%	0.006%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049234.D
Acq On : 4 May 2016 19:27
Operator : FY/SY
Sample : H2834-01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.016	992	994	998	rVB2	2916	6362	0.02%	0.008%
73	11.065	998	999	1002	rBV2	3610	5028	0.02%	0.006%
74	11.223	1010	1015	1023	rBV	1739216	2953932	11.53%	3.632%
75	11.351	1025	1028	1032	rVB4	12474	25420	0.10%	0.031%
76	11.469	1037	1040	1043	rBV4	7719	11162	0.04%	0.014%
77	11.587	1050	1052	1054	rBV3	4340	6956	0.03%	0.009%
78	11.853	1076	1079	1084	rBV7	5306	13314	0.05%	0.016%
79	12.030	1093	1097	1100	rVB4	3240	6280	0.02%	0.008%
80	12.079	1100	1102	1104	rBV3	3131	5478	0.02%	0.007%
81	12.158	1107	1110	1111	rBV2	2864	5228	0.02%	0.006%
82	12.197	1111	1114	1116	rVB3	3842	6204	0.02%	0.008%
83	12.404	1129	1135	1138	rBV2	108902	218959	0.85%	0.269%
84	12.463	1138	1141	1148	rVB	463146	767369	3.00%	0.943%
85	12.748	1165	1170	1171	rBV4	2259	4527	0.02%	0.006%
86	12.916	1184	1187	1190	rBV5	5278	9116	0.04%	0.011%
87	13.024	1197	1198	1200	rBV2	3418	5385	0.02%	0.007%
88	13.231	1216	1219	1220	rBV3	3216	4875	0.02%	0.006%
89	13.270	1220	1223	1224	rBV3	4446	6902	0.03%	0.008%
90	13.290	1224	1225	1227	rVB2	4305	4644	0.02%	0.006%
91	13.329	1227	1229	1231	rBV2	3715	7567	0.03%	0.009%
92	13.428	1235	1239	1246	rBV	1346689	2279839	8.90%	2.803%
93	13.615	1255	1258	1261	rBV4	3935	10659	0.04%	0.013%
94	13.664	1261	1263	1266	rVB4	4464	8000	0.03%	0.010%
95	13.752	1268	1272	1281	rVV	1165884	2110017	8.24%	2.594%
96	13.949	1290	1292	1294	rVB3	6908	8098	0.03%	0.010%
97	14.028	1294	1300	1307	rBV2	75382	170320	0.66%	0.209%
98	14.313	1327	1329	1330	rBV2	8737	8581	0.03%	0.011%
99	14.609	1357	1359	1362	rBV4	6087	14755	0.06%	0.018%
100	15.612	1457	1461	1463	rBV	33897	65560	0.26%	0.081%

Sum of corrected areas: 81335741

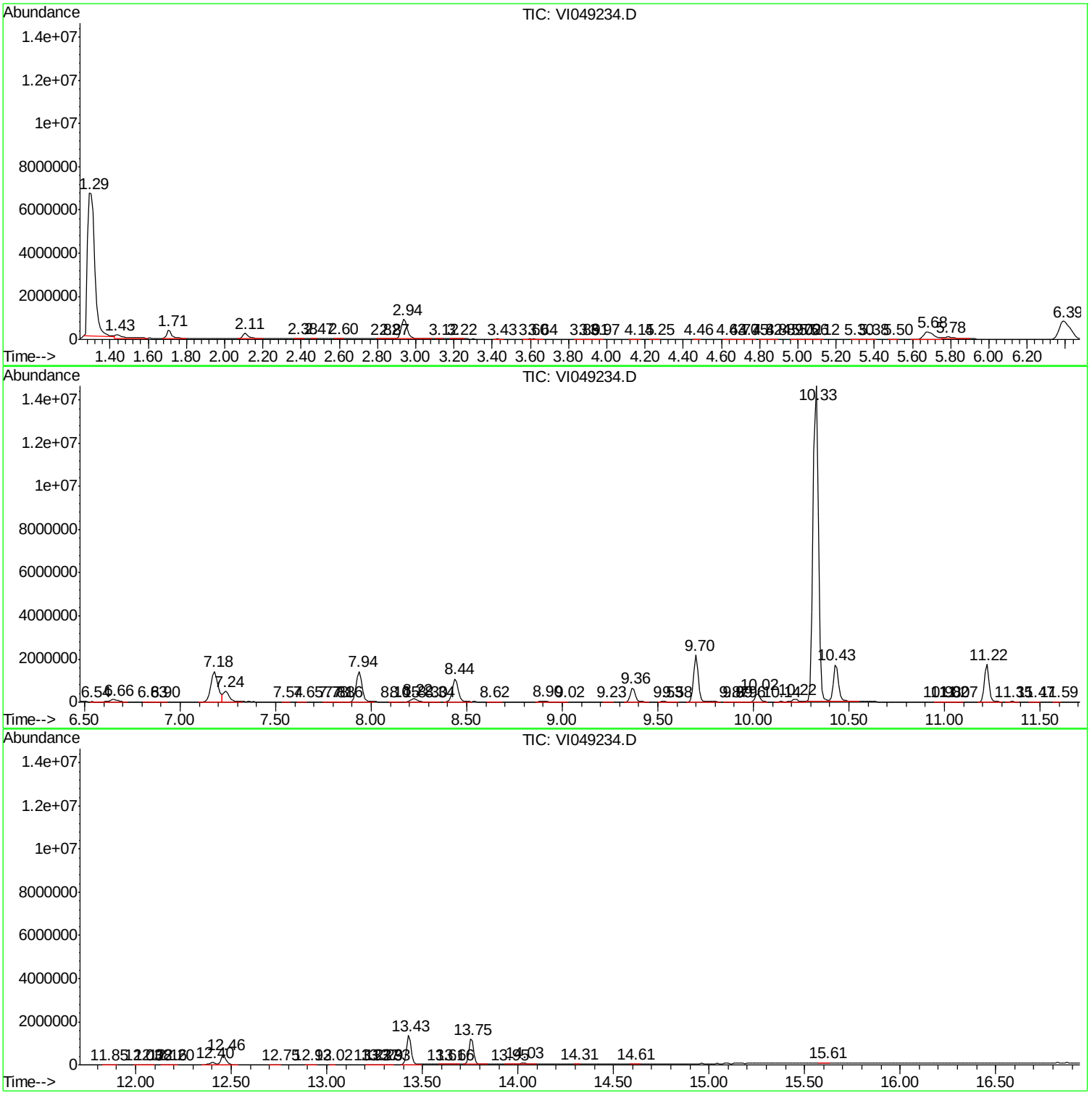
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049234.D
Acq On : 4 May 2016 19:27
Operator : FY/SY
Sample : H2834-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049234.D
Acq On : 4 May 2016 19:27
Operator : FY/SY
Sample : H2834-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049234.D
Acq On : 4 May 2016 19:27
Operator : FY/SY
Sample : H2834-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-01DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049252.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-01DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049252.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	40	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-01DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049252.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4002DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-01DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049252.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 5.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

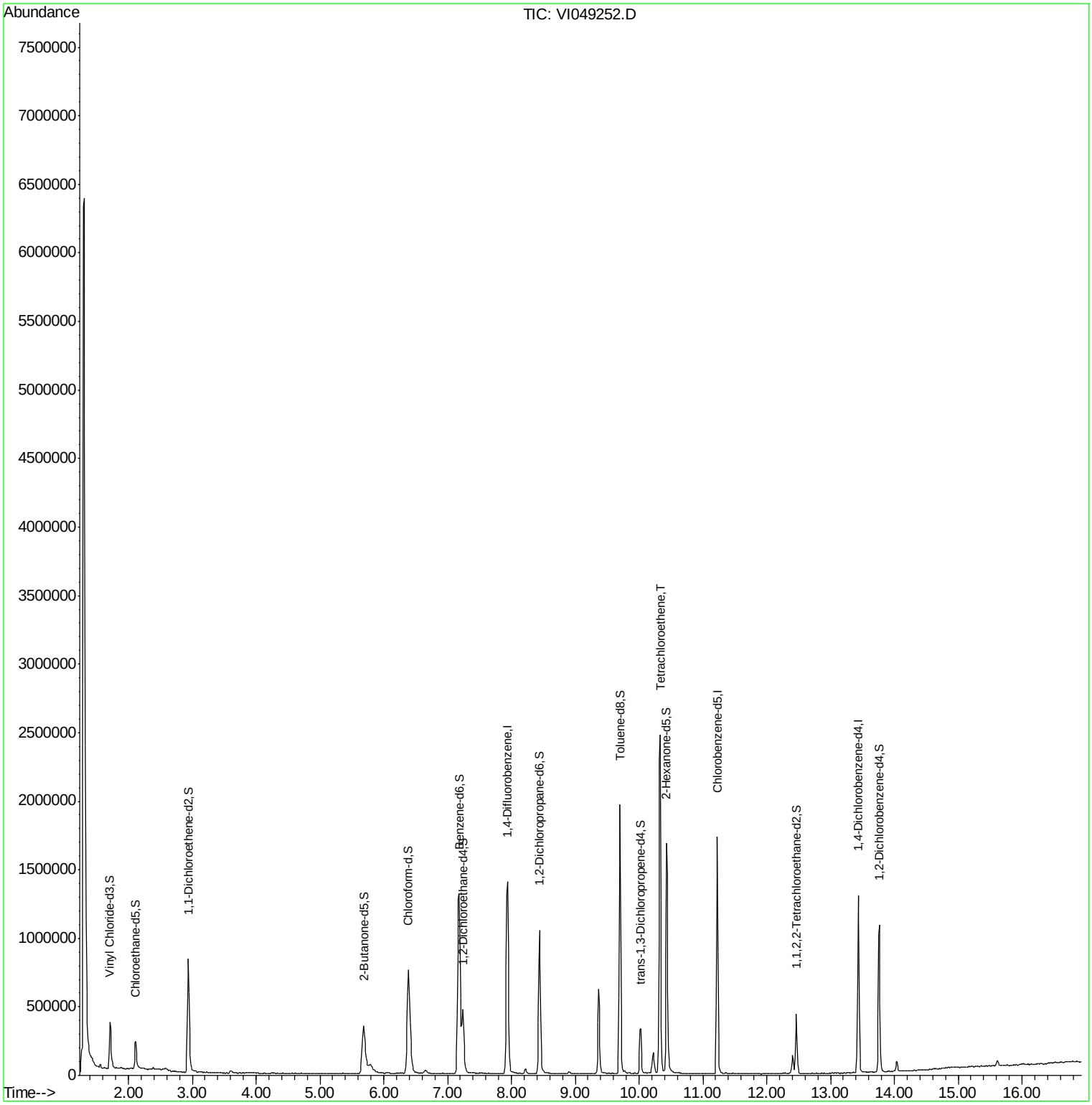
Quantitation Report (QT/LSC Reviewed)

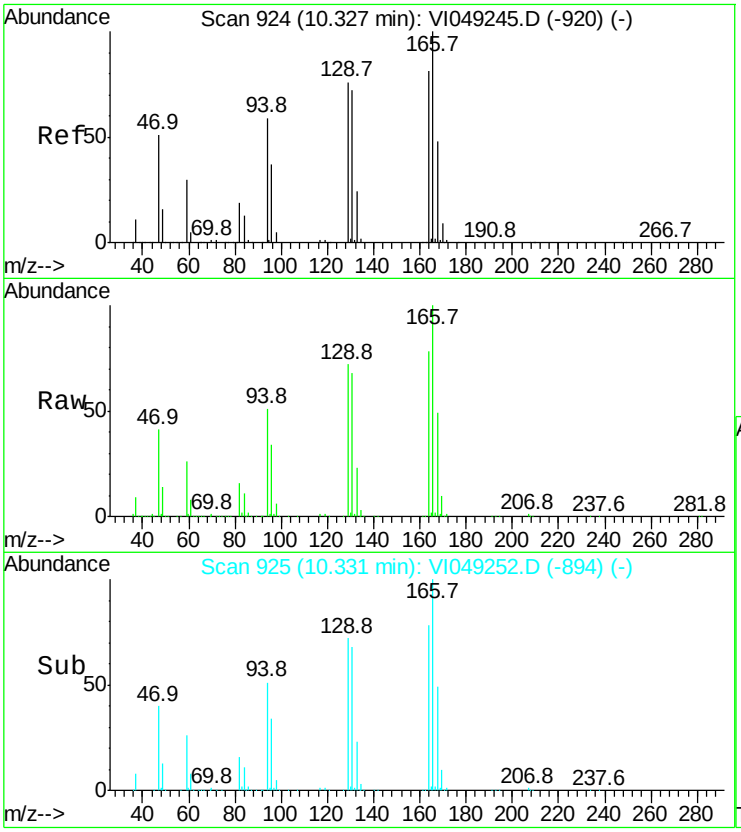
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049252.D
Acq On : 5 May 2016 14:09
Operator : FY/SY
Sample : H2834-01DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 06 05:04:36 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4002DL

Manual Integrations APPROVED
feifei
5/6/2016 11:44:13 AM

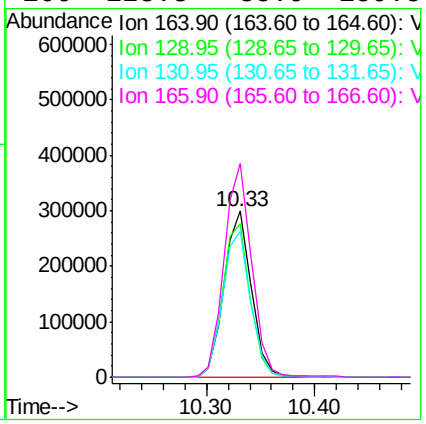




#47
Tetrachloroethene
Concen: 8.02 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.00 min
Lab File: VI049252.D
Acq: 5 May 2016 14:09

Tgt Ion:164 Resp: 525029

Ion	Ratio	Lower	Upper
164	100		
129	92.3	62.1	115.3
131	88.0	60.6	112.6
166	128.8	85.9	159.5



Instrument :
MSVOA_I
ClientSampleId :
H4002DL

Manual Integrations APPROVED
feifei
5/6/2016 11:44:13 AM

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049252.D
Acq On : 5 May 2016 14:09
Operator : FY/SY
Sample : H2834-01DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002DL

Manual Integrations APPROVED
feifei
5/6/2016 11:44:13 AM

Quant Time: May 06 05:04:36 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1264417	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	838639	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	298705	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	371766	4.78	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 95.60%			
7) Chloroethane-d5	2.11	69	223433m	5.18	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 103.60%			
11) 1,1-Dichloroethene-d2	2.94	63	649934	3.54	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 70.80%			
20) 2-Butanone-d5	5.68	46	891469	52.90	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 105.80%			
24) Chloroform-d	6.38	84	945852	4.78	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.60%			
26) 1,2-Dichloroethane-d4	7.24	65	427431	5.28	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.60%			
32) Benzene-d6	7.18	84	1709131	5.23	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.60%			
36) 1,2-Dichloropropane-d6	8.44	67	471903	5.14	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 102.80%			
41) Toluene-d8	9.70	98	1189086	4.93	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.60%			
43) trans-1,3-Dichloropropene-	10.03	79	172972	4.78	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 95.60%			
46) 2-Hexanone-d5	10.43	63	574172	50.30	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 100.60%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	192915	4.62	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 92.40%			
63) 1,2-Dichlorobenzene-d4	13.77	152	256383	4.90	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.00%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.33	164	525029	8.02	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049252.D
Acq On : 5 May 2016 14:09
Operator : FY/SY
Sample : H2834-01DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.306	4	8	31	rVB	6337031	14706107	100.00%	27.458%
2	1.552	31	33	36	rVB2	30535	47324	0.32%	0.088%
3	1.709	46	49	57	rBV	338288	586540	3.99%	1.095%
4	2.113	86	90	101	rBV	197981	422014	2.87%	0.788%
5	2.388	116	118	120	rBV2	12200	10164	0.07%	0.019%
6	2.526	131	132	133	rBV	7963	6635	0.05%	0.012%
7	2.585	136	138	146	rVB3	25718	73645	0.50%	0.138%
8	2.831	159	163	165	rVB5	6004	13266	0.09%	0.025%
9	2.861	165	166	168	rVB2	5135	5479	0.04%	0.010%
10	2.940	168	174	182	rBV	828526	1858841	12.64%	3.471%
11	3.038	182	184	188	rVV5	13812	30116	0.20%	0.056%
12	3.117	188	192	194	rVV5	8730	19742	0.13%	0.037%
13	3.186	197	199	200	rVV2	4256	4874	0.03%	0.009%
14	3.215	200	202	208	rVB7	8895	16712	0.11%	0.031%
15	3.609	238	242	247	rBV4	16363	46796	0.32%	0.087%
16	3.747	253	256	258	rVB4	3711	5994	0.04%	0.011%
17	3.796	258	261	263	rBV3	4666	7799	0.05%	0.015%
18	3.875	264	269	270	rBV5	4451	10725	0.07%	0.020%
19	4.032	282	285	287	rVB4	7365	12486	0.08%	0.023%
20	4.062	287	288	293	rBV5	2513	6218	0.04%	0.012%
21	4.130	293	295	297	rVB3	4323	5872	0.04%	0.011%
22	4.249	305	307	309	rBV2	4305	6984	0.05%	0.013%
23	4.278	309	310	314	rBV4	3983	7679	0.05%	0.014%
24	4.367	317	319	323	rBV5	2828	5483	0.04%	0.010%
25	4.563	337	339	340	rBV2	4916	4797	0.03%	0.009%
26	4.711	352	354	357	rBV4	3560	5758	0.04%	0.011%
27	4.780	359	361	362	rBV2	4128	4863	0.03%	0.009%
28	4.888	370	372	374	rBV3	3663	5360	0.04%	0.010%
29	5.292	410	413	415	rVB4	2993	4827	0.03%	0.009%
30	5.518	434	436	440	rBV4	2524	6135	0.04%	0.011%
31	5.685	445	453	459	rBV	350206	1258716	8.56%	2.350%
32	5.892	473	474	479	rVB5	7291	10338	0.07%	0.019%
33	6.059	489	491	493	rVV3	4062	7820	0.05%	0.015%
34	6.197	502	505	506	rBV3	3620	4548	0.03%	0.008%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049252.D
Acq On : 5 May 2016 14:09
Operator : FY/SY
Sample : H2834-01DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.384	517	524	543	rBV	752377	2455835	16.70%	4.585%
36	6.650	546	551	557	rVB4	22364	67834	0.46%	0.127%
37	6.886	571	575	576	rVB4	3649	6130	0.04%	0.011%
38	6.926	576	579	584	rBV7	3934	10648	0.07%	0.020%
39	7.073	593	594	597	rBV3	2792	5283	0.04%	0.010%
40	7.181	597	605	608	rBV	1311634	3492629	23.75%	6.521%
41	7.241	608	611	620	rVV	459376	1155587	7.86%	2.158%
42	7.939	676	682	690	rBV	1399746	3102953	21.10%	5.794%
43	8.215	706	710	716	rVB4	30774	63110	0.43%	0.118%
44	8.441	727	733	742	rBV	1045520	2245391	15.27%	4.192%
45	8.540	742	743	748	rVV5	7289	14079	0.10%	0.026%
46	8.658	752	755	758	rVB4	2892	5971	0.04%	0.011%
47	8.756	764	765	768	rBV2	4243	7137	0.05%	0.013%
48	8.855	771	775	777	rBV5	3158	7880	0.05%	0.015%
49	8.904	777	780	784	rBV4	10478	24018	0.16%	0.045%
50	8.992	787	789	791	rVB3	4594	6208	0.04%	0.012%
51	9.022	791	792	796	rBV4	2788	4594	0.03%	0.009%
52	9.120	798	802	804	rVB6	3198	7604	0.05%	0.014%
53	9.219	809	812	815	rBV5	2658	5000	0.03%	0.009%
54	9.366	823	827	836	rVB	610044	1095885	7.45%	2.046%
55	9.583	847	849	854	rVB6	3931	6608	0.04%	0.012%
56	9.701	856	861	867	rBV	1963390	3476799	23.64%	6.492%
57	9.858	876	877	879	rVB2	6569	4605	0.03%	0.009%
58	9.937	883	885	887	rVB3	5643	7593	0.05%	0.014%
59	10.026	889	894	901	rBV	327353	601454	4.09%	1.123%
60	10.105	901	902	904	rVB2	4331	4702	0.03%	0.009%
61	10.144	904	906	907	rBV2	6592	10011	0.07%	0.019%
62	10.223	909	914	920	rVV2	151843	327561	2.23%	0.612%
63	10.331	920	925	931	rVV	2467477	4501445	30.61%	8.405%
64	10.429	931	935	950	rVB	1675326	3053060	20.76%	5.700%
65	10.764	967	969	973	rVB4	4302	9811	0.07%	0.018%
66	10.921	982	985	989	rVB5	3529	8613	0.06%	0.016%
67	11.148	1007	1008	1011	rBV3	3575	5199	0.04%	0.010%
68	11.227	1011	1016	1025	rBV	1728627	2954434	20.09%	5.516%
69	11.354	1025	1029	1033	rVV6	9407	20350	0.14%	0.038%
70	11.473	1039	1041	1044	rVB4	4827	8867	0.06%	0.017%
71	11.522	1044	1046	1051	rVB4	4323	7572	0.05%	0.014%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049252.D
Acq On : 5 May 2016 14:09
Operator : FY/SY
Sample : H2834-01DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.591	1051	1053	1056	rBV3	2477	5308	0.04%	0.010%
73	11.640	1056	1058	1062	rVB5	2738	4720	0.03%	0.009%
74	11.856	1075	1080	1086	rVB8	6398	26432	0.18%	0.049%
75	11.965	1088	1091	1094	rBV3	2811	4521	0.03%	0.008%
76	12.063	1097	1101	1105	rBV6	4328	9327	0.06%	0.017%
77	12.122	1105	1107	1109	rBV2	4044	4759	0.03%	0.009%
78	12.201	1111	1115	1117	rBV5	3867	6458	0.04%	0.012%
79	12.260	1119	1121	1122	rBV	3575	4556	0.03%	0.009%
80	12.289	1122	1124	1126	rVB3	5526	7094	0.05%	0.013%
81	12.408	1128	1136	1139	rVV	135168	266365	1.81%	0.497%
82	12.467	1139	1142	1150	rVB	438167	723812	4.92%	1.351%
83	12.585	1153	1154	1157	rBV3	4621	7623	0.05%	0.014%
84	12.713	1166	1167	1171	rBV3	3270	6395	0.04%	0.012%
85	12.860	1179	1182	1183	rBV3	3837	5641	0.04%	0.011%
86	12.900	1183	1186	1189	rVB5	4390	6141	0.04%	0.011%
87	12.988	1191	1195	1197	rBV4	2797	4831	0.03%	0.009%
88	13.018	1197	1198	1201	rBV3	5848	8710	0.06%	0.016%
89	13.067	1201	1203	1205	rBV3	4511	6632	0.05%	0.012%
90	13.215	1216	1218	1220	rVB3	5445	7544	0.05%	0.014%
91	13.244	1220	1221	1224	rBV3	4838	9234	0.06%	0.017%
92	13.303	1224	1227	1228	rVB3	3104	5115	0.03%	0.010%
93	13.333	1228	1230	1231	rBV2	5622	7281	0.05%	0.014%
94	13.362	1231	1233	1236	rBV3	5797	9705	0.07%	0.018%
95	13.431	1236	1240	1248	rBV	1294661	2209104	15.02%	4.125%
96	13.766	1269	1274	1279	rBV	1074081	1945279	13.23%	3.632%
97	14.032	1295	1301	1305	rBV2	74519	150391	1.02%	0.281%
98	14.317	1328	1330	1331	rBV2	6404	6003	0.04%	0.011%
99	14.356	1332	1334	1335	rBV2	4801	5181	0.04%	0.010%
100	15.616	1459	1462	1465	rVB	37195	71882	0.49%	0.134%

Sum of corrected areas: 53559161

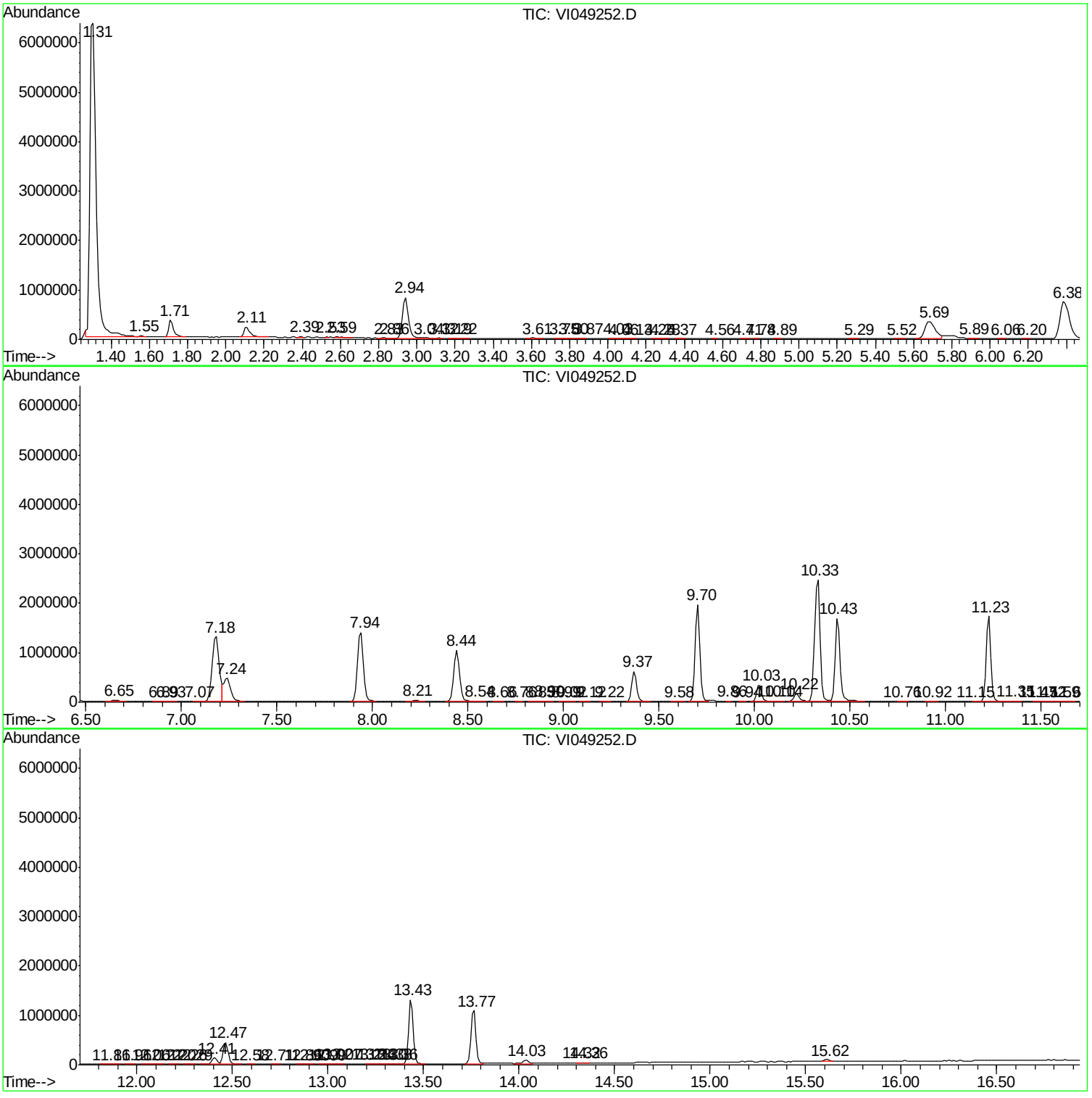
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049252.D
Acq On : 5 May 2016 14:09
Operator : FY/SY
Sample : H2834-01DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049252.D
Acq On : 5 May 2016 14:09
Operator : FY/SY
Sample : H2834-01DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4002DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049252.D
Acq On : 5 May 2016 14:09
Operator : FY/SY
Sample : H2834-01DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

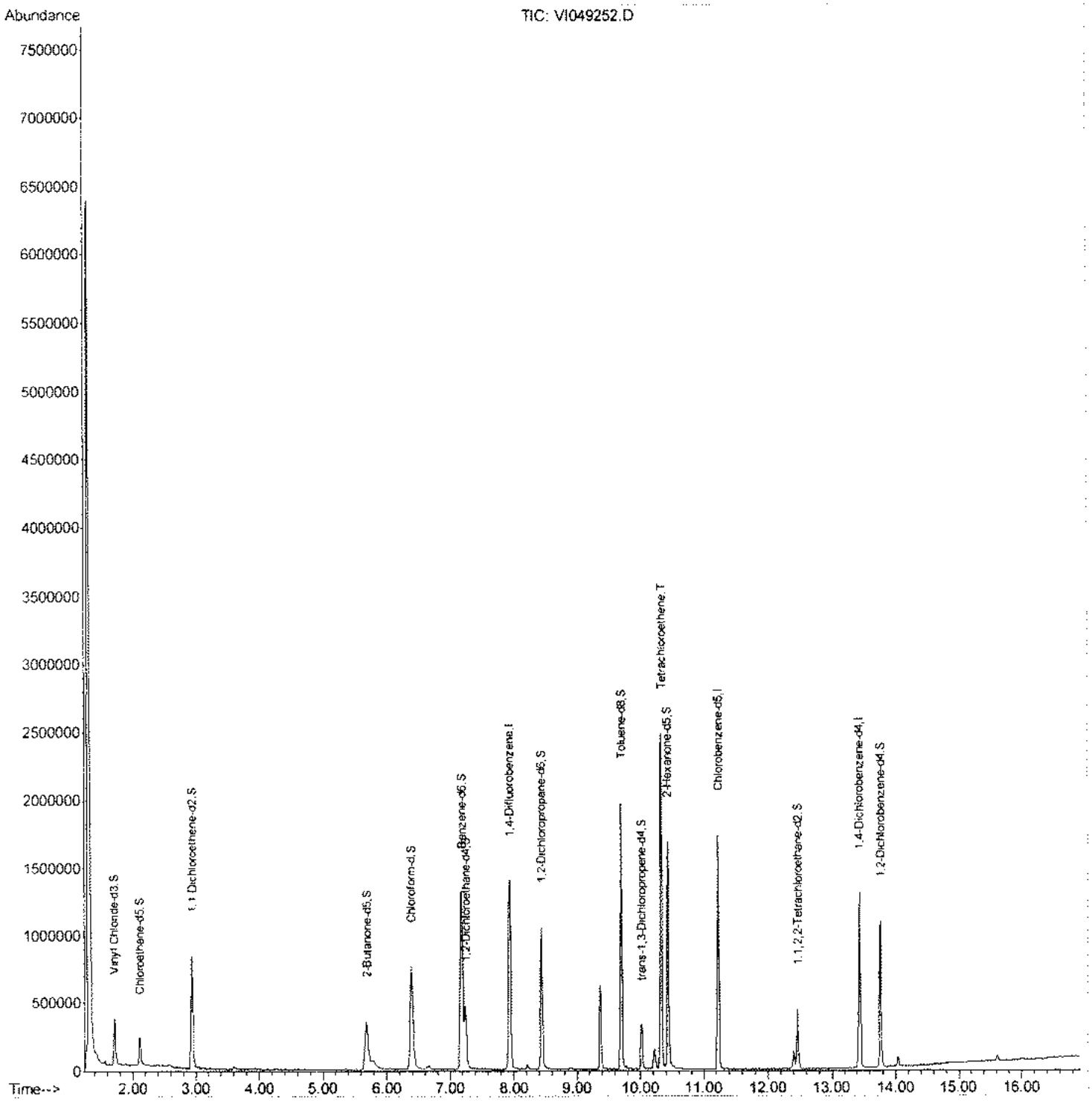
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049252.D
Acq On : 5 May 2016 14:09
Operator : FY/SY
Sample : H2834-01DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 06 05:04:36 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4002DL

Manual Integrations APPROVED
feifei
5/6/2016 11:44:13 AM



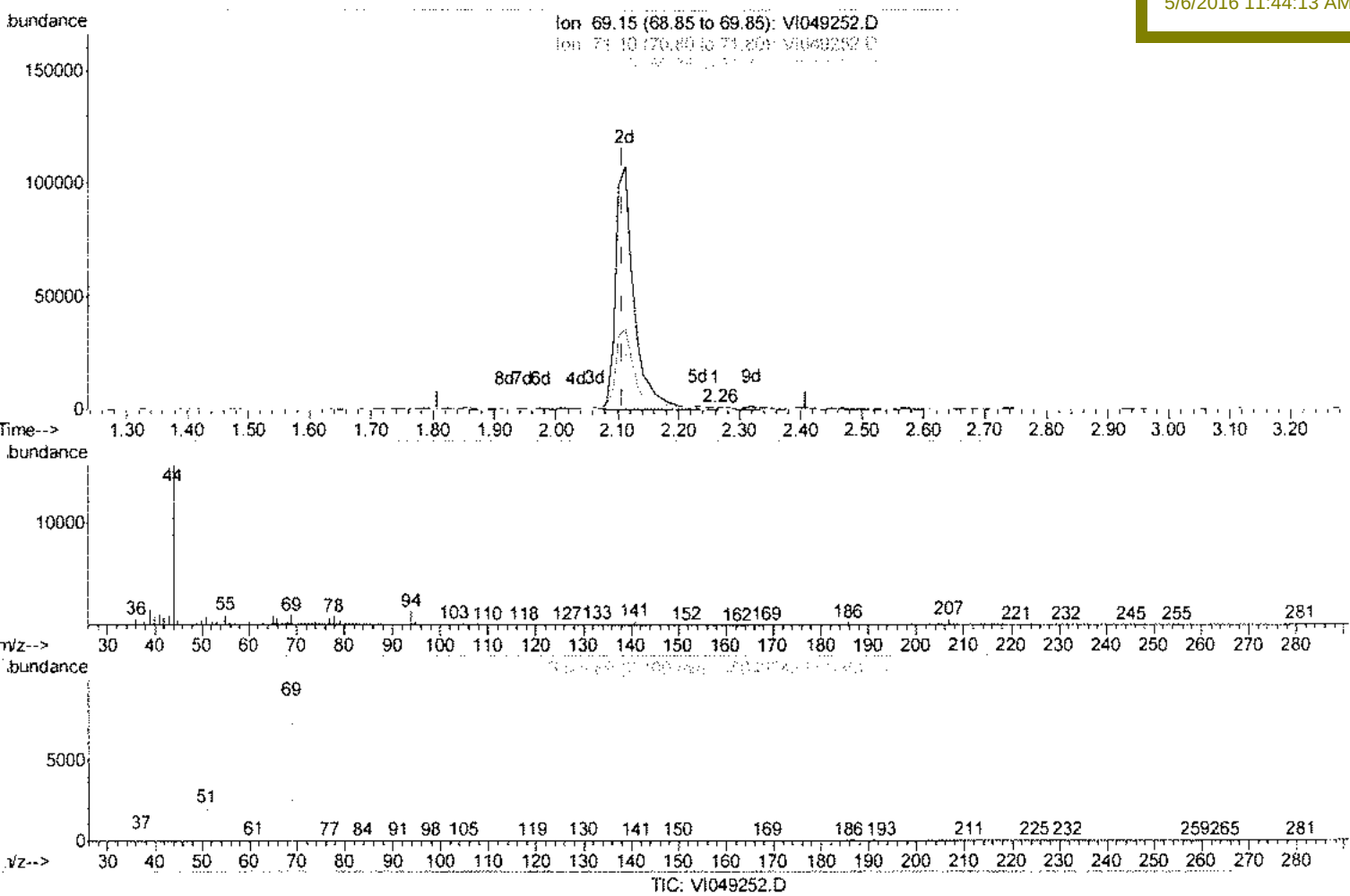
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049252.D
Acq On : 5 May 2016 14:09
Operator : FY/SY
Sample : H2834-01DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 06 04:43:59 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4002DL

Manual Integrations APPROVED
feifei
5/6/2016 11:44:13 AM



(7) Chloroethane-d5 (S)

2.260min (+0.151) 0.05ug/L

response 2012

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	27.34
51.05	32.70	36.28
0.00	0.00	0.00

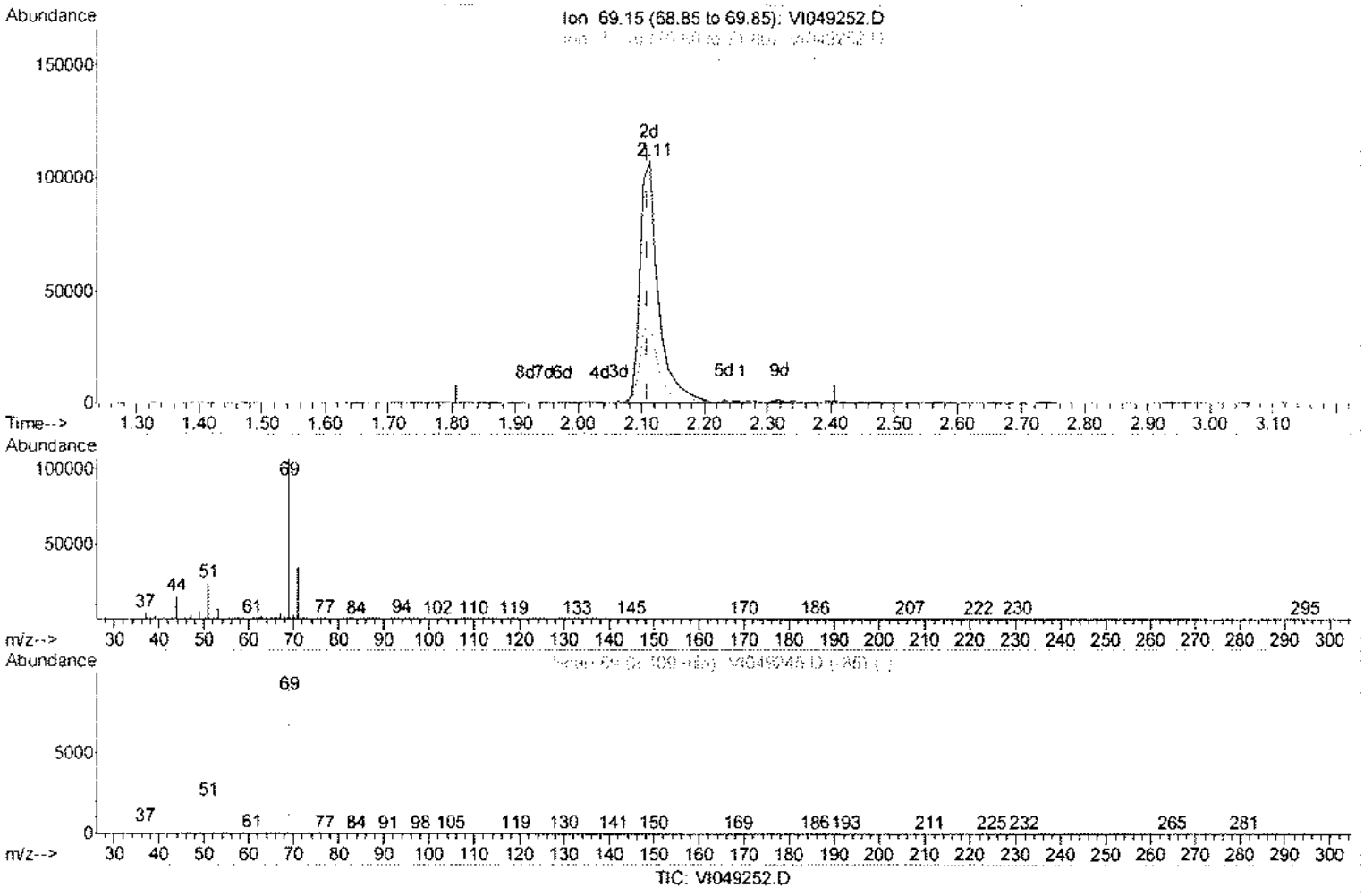
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049252.D
Acq On : 5 May 2016 14:09
Operator : FY/SY
Sample : H2834-01DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 06 04:43:59 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4002DL

Manual Integrations APPROVED
feifei
5/6/2016 11:44:13 AM



TIC: VI049252.D

(7) Chloroethane-d5 (S)

2.113min (+0.004) 5.18ug/L m MD 05/09/16

response 223433

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.25#
51.05	32.70	0.33#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049252.D
Acq On : 5 May 2016 14:09
Operator : FY/SY
Sample : H2834-01DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 06 05:04:36 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4002DL

Manual Integrations APPROVED
feifei
5/6/2016 11:44:13 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1264417	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	838639	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	298705	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	371766	4.78	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 95.60%			
7) Chloroethane-d5	2.11	69	223433m	5.18	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 103.60%			
11) 1,1-Dichloroethene-d2	2.94	63	649934	3.54	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 70.80%			
20) 2-Butanone-d5	5.68	46	891469	52.90	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 105.80%			
24) Chloroform-d	6.38	84	945852	4.78	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.60%			
26) 1,2-Dichloroethane-d4	7.24	65	427431	5.28	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.60%			
32) Benzene-d6	7.18	84	1709131	5.23	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.60%			
36) 1,2-Dichloropropane-d6	8.44	67	471903	5.14	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 102.80%			
41) Toluene-d8	9.70	98	1189086	4.93	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.60%			
43) trans-1,3-Dichloropropene-	10.03	79	172972	4.78	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 95.60%			
46) 2-Hexanone-d5	10.43	63	574172	50.30	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 100.60%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	192915	4.62	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 92.40%			
63) 1,2-Dichlorobenzene-d4	13.77	152	256383	4.90	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.00%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.33	164	525029	8.02	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

M.D 05/09/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4004

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049249.D
% Solids :
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4004

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049249.D
% Solids :
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4004

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049249.D
% Solids :
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4004

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049249.D
% Solids :
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.24	0.41	JN
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

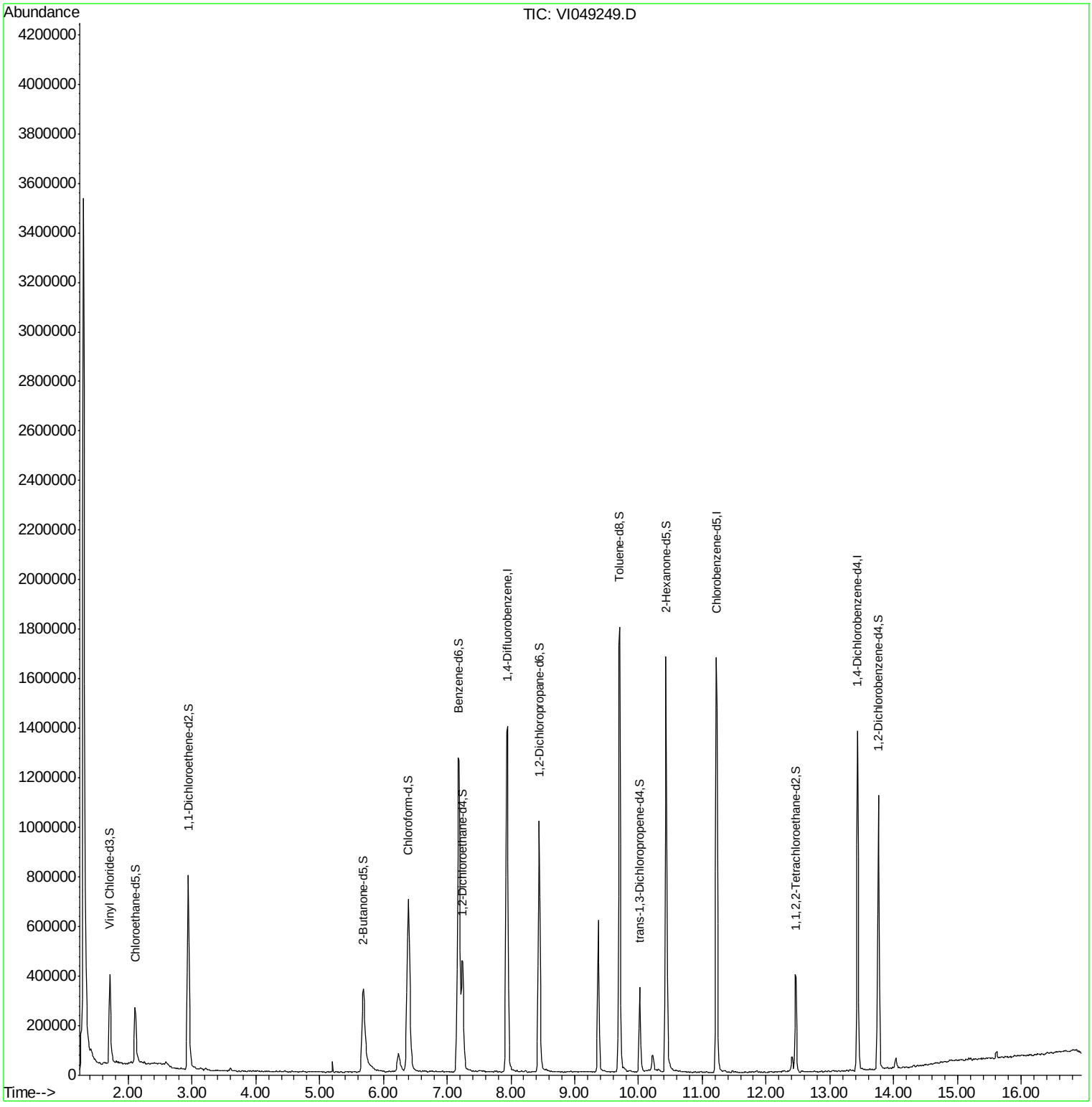
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049249.D
Acq On : 5 May 2016 12:34
Operator : FY/SY
Sample : H2834-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 04:53:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4004

Manual Integrations APPROVED
feifei
5/6/2016 11:43:29 AM



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049249.D
Acq On : 5 May 2016 12:34
Operator : FY/SY
Sample : H2834-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 04:53:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4004

Manual Integrations APPROVED
feifei
5/6/2016 11:43:29 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1272879	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	841746	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	301318	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	367555	4.69	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 93.80%			
7) Chloroethane-d5	2.11	69	236853m	5.46	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 109.20%			
11) 1,1-Dichloroethene-d2	2.94	63	641469	3.47	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 69.40%			
20) 2-Butanone-d5	5.69	46	818728	48.26	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 96.52%			
24) Chloroform-d	6.39	84	880663	4.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 88.40%			
26) 1,2-Dichloroethane-d4	7.24	65	409642m	5.02	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.40%			
32) Benzene-d6	7.18	84	1621210	4.94	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.80%			
36) 1,2-Dichloropropane-d6	8.44	67	454502	4.93	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 98.60%			
41) Toluene-d8	9.70	98	1154341	4.77	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.40%			
43) trans-1,3-Dichloropropene-	10.02	79	162115	4.46	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 89.20%			
46) 2-Hexanone-d5	10.43	63	537655	46.92	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 93.84%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	186862	4.46	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 89.20%			
63) 1,2-Dichlorobenzene-d4	13.76	152	252968	4.79	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 95.80%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049249.D
Acq On : 5 May 2016 12:34
Operator : FY/SY
Sample : H2834-12
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4004

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.299	4	7	17	rVB	3438152	6675708	100.00%	16.734%
2	1.633	37	41	42	rBV4	8756	17257	0.26%	0.043%
3	1.712	46	49	57	rVV	359880	585555	8.77%	1.468%
4	2.106	86	89	97	rVB	224261	422994	6.34%	1.060%
5	2.588	136	138	145	rVB3	22306	60379	0.90%	0.151%
6	2.834	161	163	166	rVB3	6889	10641	0.16%	0.027%
7	2.942	169	174	182	rBV	783819	1785002	26.74%	4.474%
8	3.218	198	202	206	rBV3	9075	21660	0.32%	0.054%
9	3.375	216	218	220	rVB2	4087	5120	0.08%	0.013%
10	3.602	237	241	245	rBV4	12505	28569	0.43%	0.072%
11	3.661	245	247	253	rVB7	5023	11650	0.17%	0.029%
12	3.740	253	255	258	rBV4	5023	5654	0.08%	0.014%
13	3.799	258	261	262	rVB3	4093	5863	0.09%	0.015%
14	3.838	262	265	266	rBV3	4472	4852	0.07%	0.012%
15	3.877	266	269	271	rBV3	2697	4559	0.07%	0.011%
16	4.704	349	353	356	rBV3	3687	7817	0.12%	0.020%
17	4.832	363	366	367	rBV3	3110	5774	0.09%	0.014%
18	5.058	388	389	392	rVB3	3994	5002	0.07%	0.013%
19	5.206	403	404	406	rVB	44329	27161	0.41%	0.068%
20	5.334	414	417	419	rBV4	3633	6224	0.09%	0.016%
21	5.423	422	426	429	rBV4	3674	6453	0.10%	0.016%
22	5.482	429	432	434	rVB4	3882	6706	0.10%	0.017%
23	5.531	434	437	439	rBV3	3768	6226	0.09%	0.016%
24	5.688	445	453	474	rBV	334452	1373549	20.58%	3.443%
25	5.905	474	475	477	rVB2	5223	5557	0.08%	0.014%
26	6.092	488	494	498	rBV8	4319	15437	0.23%	0.039%
27	6.141	498	499	501	rVV2	4381	5210	0.08%	0.013%
28	6.239	503	509	517	rVV	76697	258279	3.87%	0.647%
29	6.387	517	524	538	rVV	694582	2200346	32.96%	5.515%
30	6.771	558	563	564	rVV4	4794	11261	0.17%	0.028%
31	6.889	573	575	578	rBV4	2495	4652	0.07%	0.012%
32	6.958	581	582	586	rBV3	3650	5657	0.08%	0.014%
33	7.174	596	604	608	rBV	1269185	3361199	50.35%	8.425%
34	7.233	608	610	620	rVB	442314	1099717	16.47%	2.757%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049249.D
Acq On : 5 May 2016 12:34
Operator : FY/SY
Sample : H2834-12
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4004

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.450	630	632	635	rVB4	4268	6182	0.09%	0.015%
36	7.657	651	653	660	rVB7	2936	8933	0.13%	0.022%
37	7.745	660	662	664	rBV3	4124	6765	0.10%	0.017%
38	7.873	673	675	676	rBV2	3144	4532	0.07%	0.011%
39	7.942	676	682	696	rBV	1394389	3127571	46.85%	7.840%
40	8.100	696	698	702	rVB5	6638	8898	0.13%	0.022%
41	8.168	702	705	706	rBV2	4832	6429	0.10%	0.016%
42	8.227	709	711	715	rVB4	6379	10825	0.16%	0.027%
43	8.326	719	721	724	rBV4	4247	8894	0.13%	0.022%
44	8.444	727	733	742	rBV	1012730	2180765	32.67%	5.466%
45	8.552	742	744	745	rVB2	6140	7018	0.11%	0.018%
46	8.631	751	752	755	rVB3	3692	4704	0.07%	0.012%
47	8.788	767	768	771	rVB2	3646	5385	0.08%	0.013%
48	8.867	775	776	778	rBV2	3065	4895	0.07%	0.012%
49	8.936	780	783	786	rVB5	5634	10266	0.15%	0.026%
50	8.975	786	787	790	rBV3	4129	7940	0.12%	0.020%
51	9.074	795	797	801	rBV3	2590	5420	0.08%	0.014%
52	9.369	822	827	841	rVV	611996	1103416	16.53%	2.766%
53	9.536	841	844	846	rVB4	4105	6932	0.10%	0.017%
54	9.704	856	861	866	rBV	1793700	3332908	49.93%	8.354%
55	10.019	888	893	900	rBV	344243	607106	9.09%	1.522%
56	10.117	900	903	906	rVV5	3938	11287	0.17%	0.028%
57	10.166	906	908	909	rVV2	5214	7722	0.12%	0.019%
58	10.225	909	914	918	rVV2	63787	148625	2.23%	0.373%
59	10.284	918	920	921	rVV2	7741	9975	0.15%	0.025%
60	10.304	921	922	931	rVB8	10037	15785	0.24%	0.040%
61	10.432	931	935	949	rBV	1673878	2851565	42.72%	7.148%
62	10.590	949	951	955	rVV3	5301	7647	0.11%	0.019%
63	10.639	955	956	960	rVB4	5364	8239	0.12%	0.021%
64	10.885	980	981	983	rVB2	4386	4688	0.07%	0.012%
65	10.934	983	986	987	rBV3	4348	6394	0.10%	0.016%
66	11.062	996	999	1002	rBV3	2850	5415	0.08%	0.014%
67	11.170	1007	1010	1011	rBV2	2488	4550	0.07%	0.011%
68	11.219	1011	1015	1025	rBV	1675091	2933299	43.94%	7.353%
69	11.475	1038	1041	1043	rBV4	5109	7152	0.11%	0.018%
70	11.682	1061	1062	1064	rBV2	4384	5111	0.08%	0.013%
71	11.741	1064	1068	1069	rVB4	3376	4538	0.07%	0.011%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049249.D
Acq On : 5 May 2016 12:34
Operator : FY/SY
Sample : H2834-12
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4004

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.780	1069	1072	1075	rBV4	3118	6467	0.10%	0.016%
73	11.859	1075	1080	1082	rBV5	5066	14042	0.21%	0.035%
74	11.977	1088	1092	1093	rBV4	3079	5021	0.08%	0.013%
75	12.056	1097	1100	1103	rBV3	4283	10958	0.16%	0.027%
76	12.154	1108	1110	1112	rVB2	4477	6611	0.10%	0.017%
77	12.214	1114	1116	1119	rVB4	4569	7144	0.11%	0.018%
78	12.292	1119	1124	1125	rBV5	7022	19422	0.29%	0.049%
79	12.410	1130	1136	1138	rBV	59925	117028	1.75%	0.293%
80	12.460	1138	1141	1148	rVB	394710	726345	10.88%	1.821%
81	12.558	1148	1151	1152	rBV3	4964	5341	0.08%	0.013%
82	12.696	1163	1165	1167	rVB3	3563	5478	0.08%	0.014%
83	12.784	1172	1174	1177	rVB4	3622	7381	0.11%	0.019%
84	12.824	1177	1178	1181	rBV3	3415	6608	0.10%	0.017%
85	12.873	1181	1183	1185	rVB3	4810	5618	0.08%	0.014%
86	13.030	1196	1199	1200	rBV3	3194	5039	0.08%	0.013%
87	13.267	1220	1223	1226	rBV4	5508	10357	0.16%	0.026%
88	13.306	1226	1227	1230	rBV3	5993	11506	0.17%	0.029%
89	13.355	1230	1232	1235	rVB4	6295	10133	0.15%	0.025%
90	13.434	1235	1240	1246	rBV	1371890	2259147	33.84%	5.663%
91	13.503	1246	1247	1252	rVB5	6374	11273	0.17%	0.028%
92	13.759	1269	1273	1280	rVV	1104401	1898255	28.44%	4.758%
93	13.906	1286	1288	1290	rVB2	4742	5315	0.08%	0.013%
94	13.975	1294	1295	1297	rBV2	6729	8230	0.12%	0.021%
95	14.034	1297	1301	1305	rVV	42365	80437	1.20%	0.202%
96	14.162	1310	1314	1315	rBV4	4567	8669	0.13%	0.022%
97	14.310	1327	1329	1332	rBV3	8569	15693	0.24%	0.039%
98	14.487	1345	1347	1348	rBV2	5988	5802	0.09%	0.015%
99	14.733	1370	1372	1373	rBV2	6794	8881	0.13%	0.022%
100	15.619	1458	1462	1465	rBV3	27724	56422	0.85%	0.141%

Sum of corrected areas: 39894089

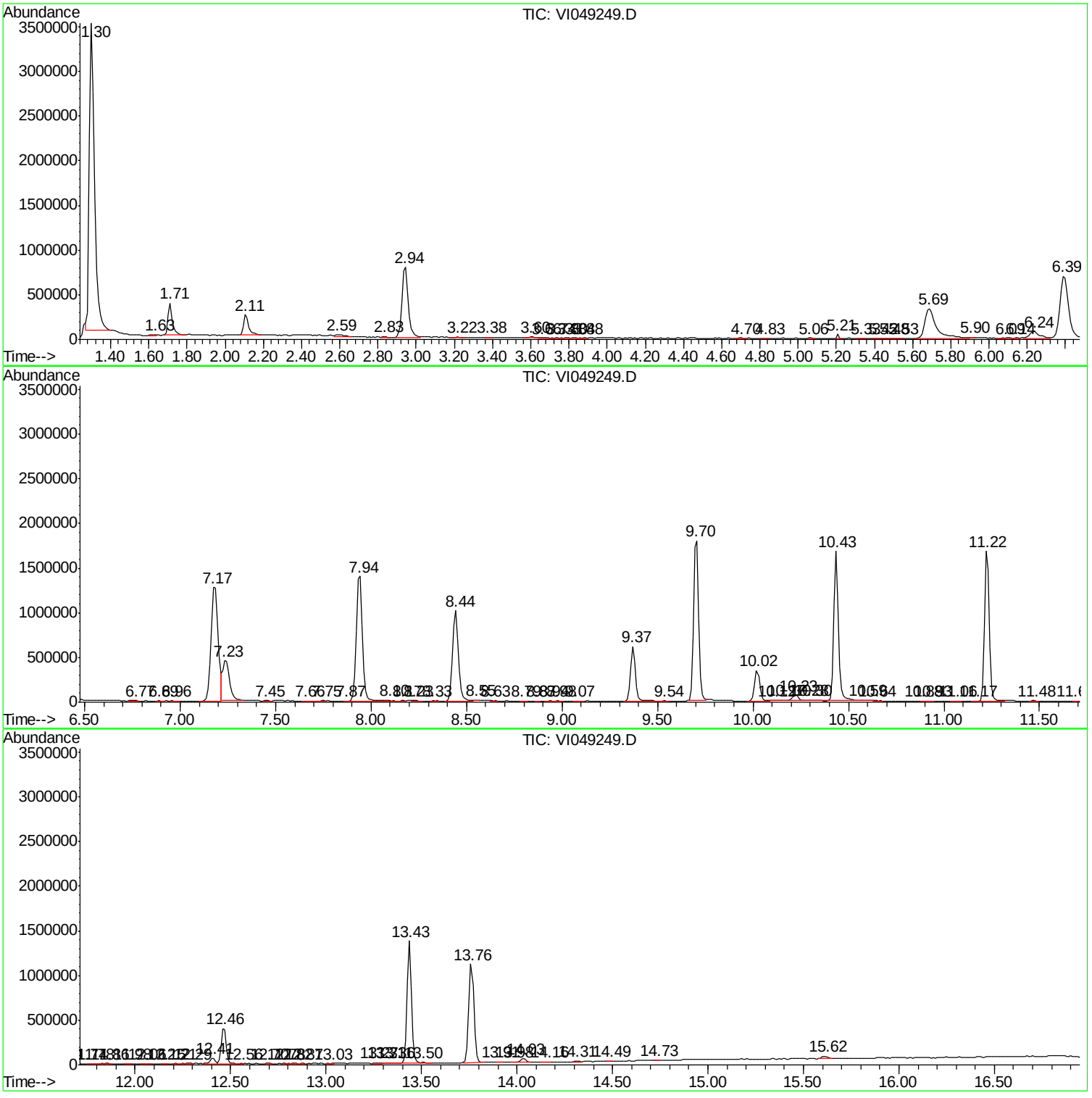
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049249.D
Acq On : 5 May 2016 12:34
Operator : FY/SY
Sample : H2834-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4004

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049249.D
Acq On : 5 May 2016 12:34
Operator : FY/SY
Sample : H2834-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4004

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

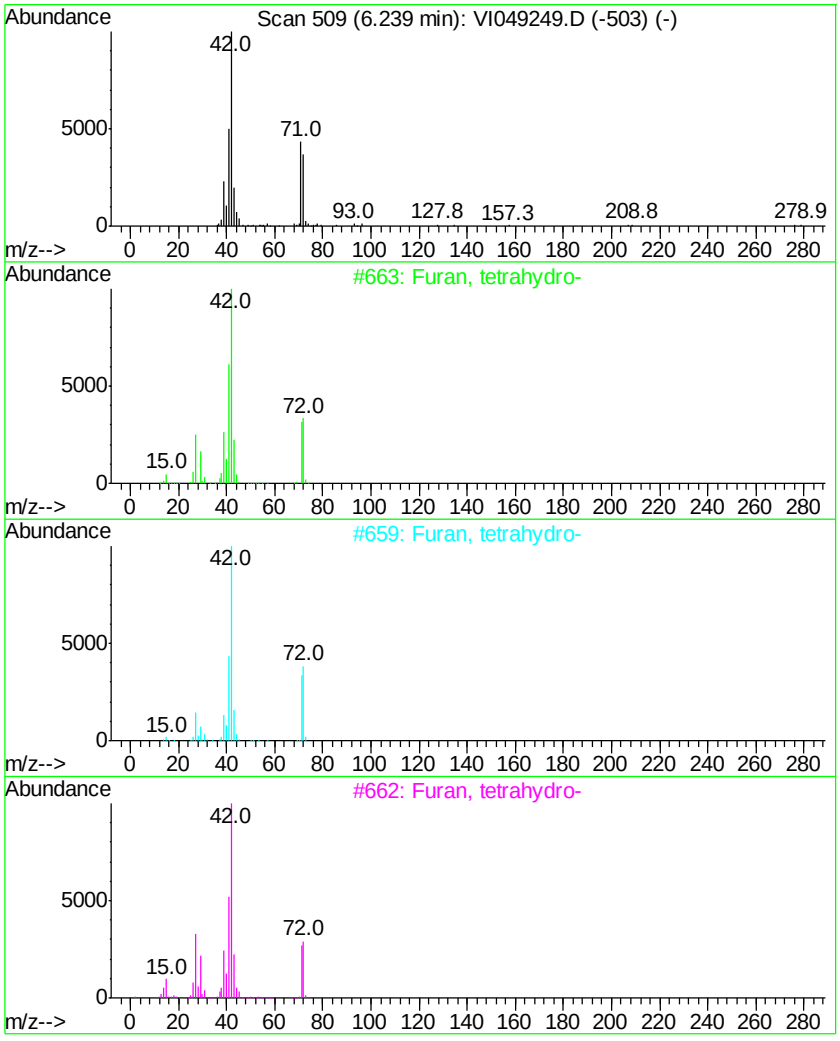
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

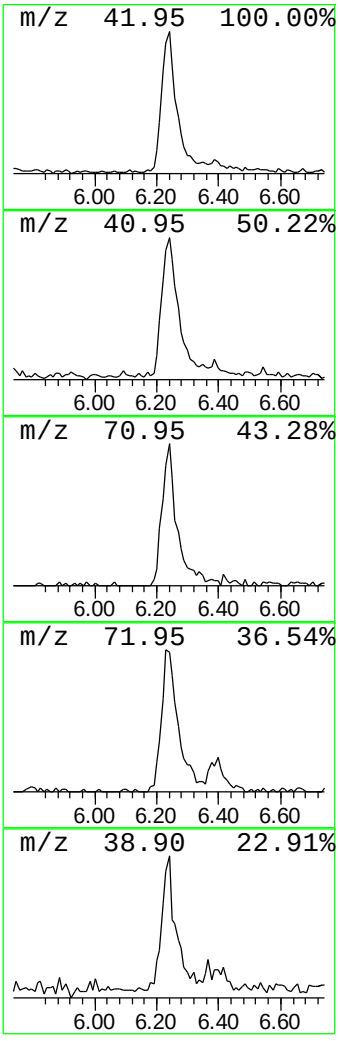
****

Peak Number 2 Furan, tetrahydro- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.24	0.41 ug/L	258279	1,4-Difluorobenzene	7.94

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Furan, tetrahydro-	72	C4H8O	000109-99-9	90
2	Furan, tetrahydro-	72	C4H8O	000109-99-9	86
3	Furan, tetrahydro-	72	C4H8O	000109-99-9	78
4	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	50
5	Oxirane, ethyl-	72	C4H8O	000106-88-7	46





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049249.D
Acq On : 5 May 2016 12:34
Operator : FY/SY
Sample : H2834-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4004

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Furan, tetrahydro-	6.24	0.4	ug/L	258279	1	7.94	3127570	5.0

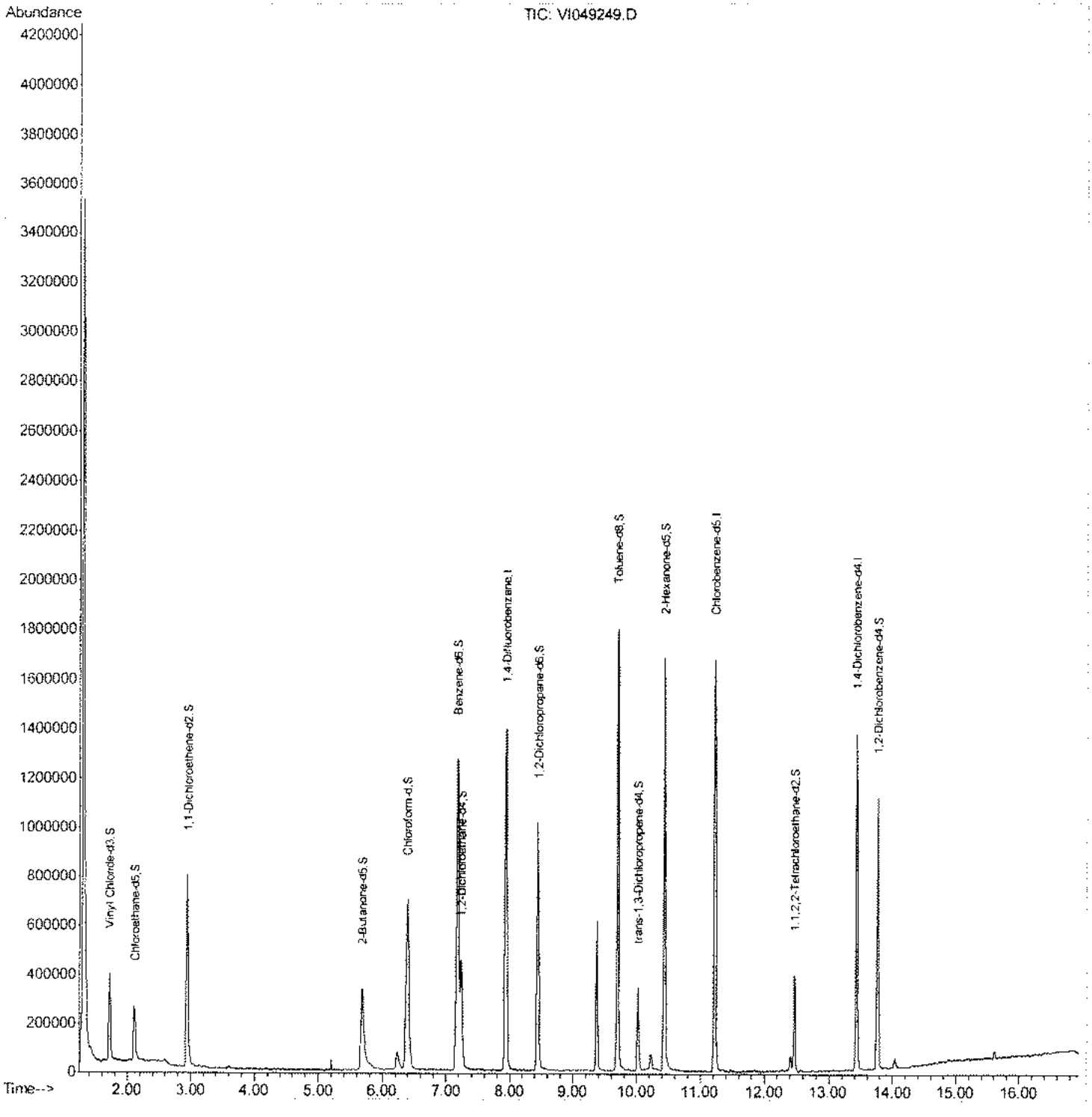
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049249.D
Acq On : 5 May 2016 12:34
Operator : FY/SY
Sample : H2834-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 04:53:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4004

Manual Integrations APPROVED
feifei
5/6/2016 11:43:29 AM



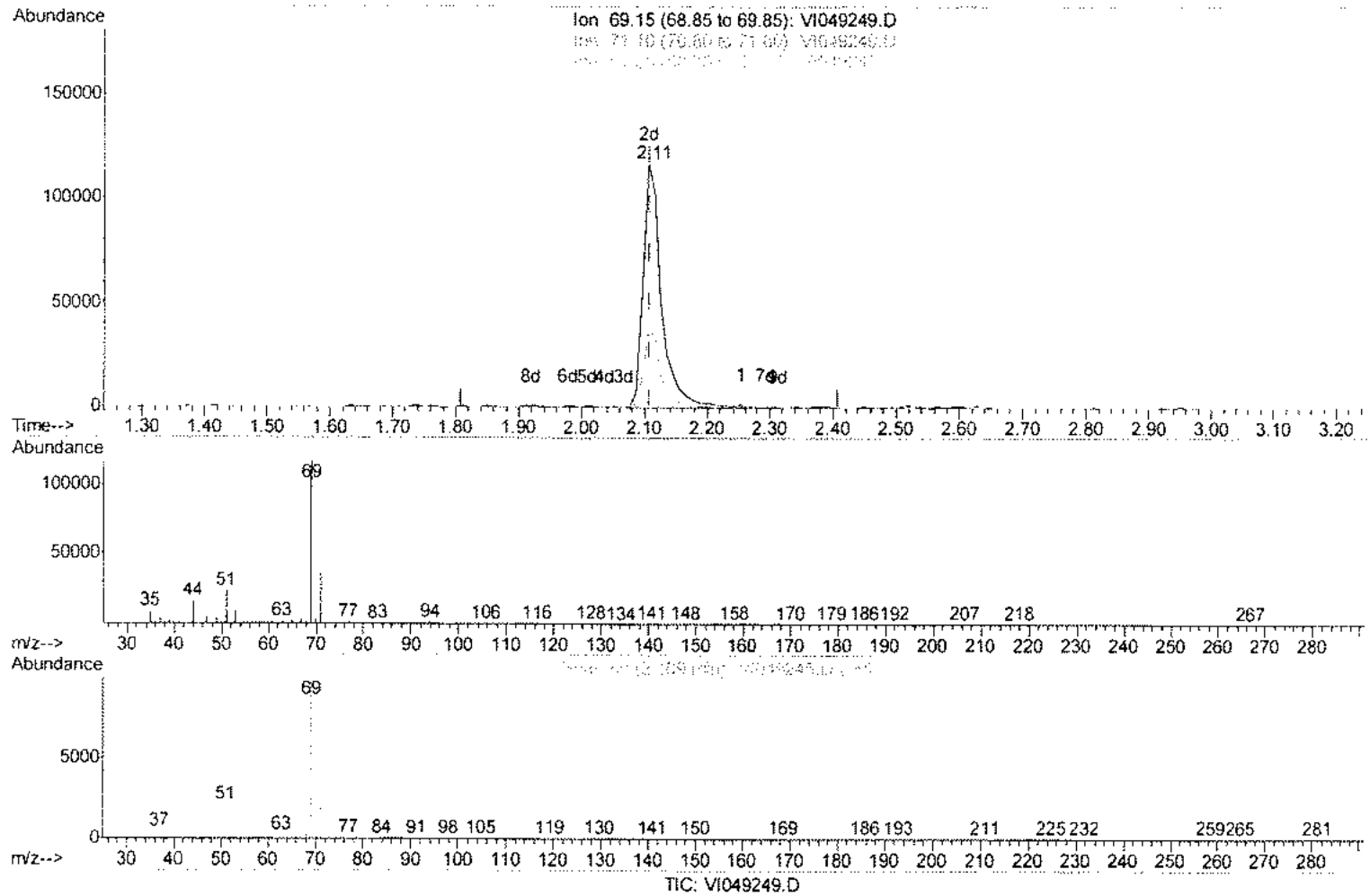
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049249.D
Acq On : 5 May 2016 12:34
Operator : FY/SY
Sample : H2834-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 04:43:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4004

Manual Integrations APPROVED
feifei
5/6/2016 11:43:29 AM



TIC: VI049249.D

(7) Chloroethane-d5 (S)

2.106min (-0.003) 5.46ug/L m M.D 05/09/16

response 236853

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.10#
51.05	32.70	0.10#
0.00	0.00	0.00

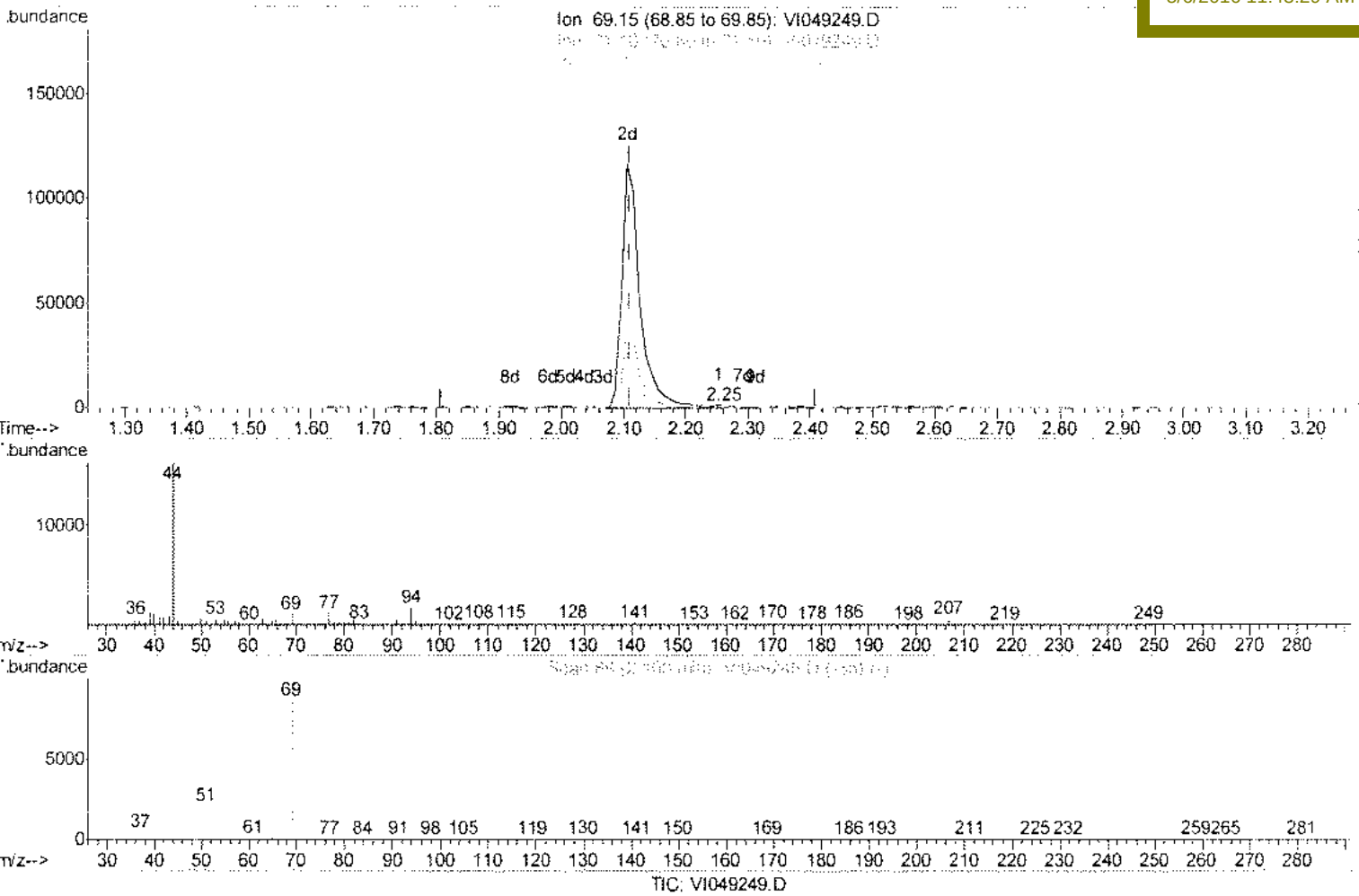
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049249.D
Acq On : 5 May 2016 12:34
Operator : FY/SY
Sample : H2834-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 04:43:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4004

Manual Integrations APPROVED
feifei
5/6/2016 11:43:29 AM



(7) Chloroethane-d5 (S)

2.253min (+0.144) 0.02ug/L

response 878

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	26.99
51.05	32.70	27.56
0.00	0.00	0.00

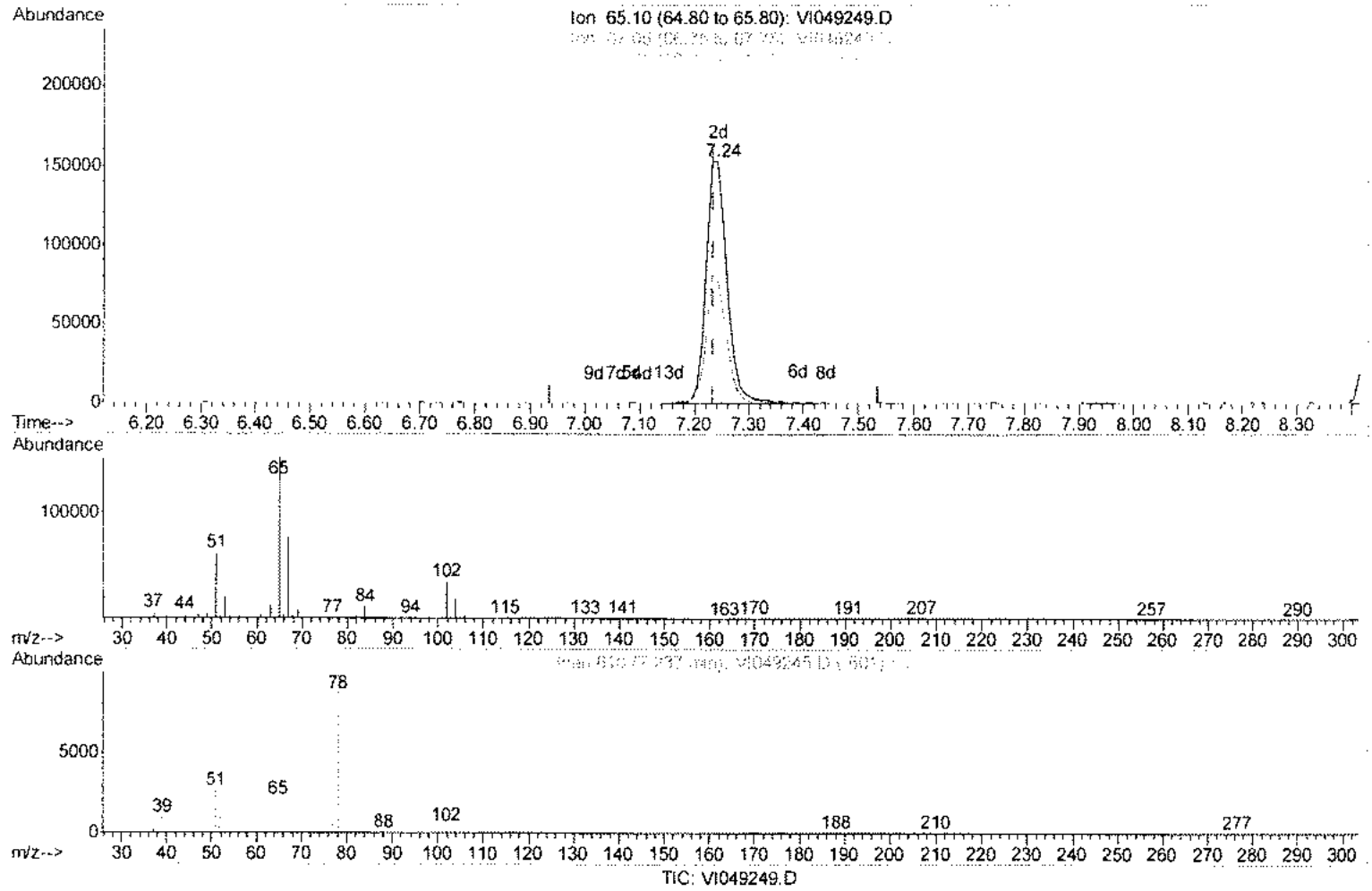
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049249.D
Acq On : 5 May 2016 12:34
Operator : FY/SY
Sample : H2834-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 04:43:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4004

Manual Integrations APPROVED
feifei
5/6/2016 11:43:29 AM



TIC: VI049249.D

(26) 1,2-Dichloroethane-d4 (S)

7.243min (+0.007) 5.02ug/L m M.D 05/09/16

response 409642

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.04#
51.05	123.20	0.08#
0.00	0.00	0.00

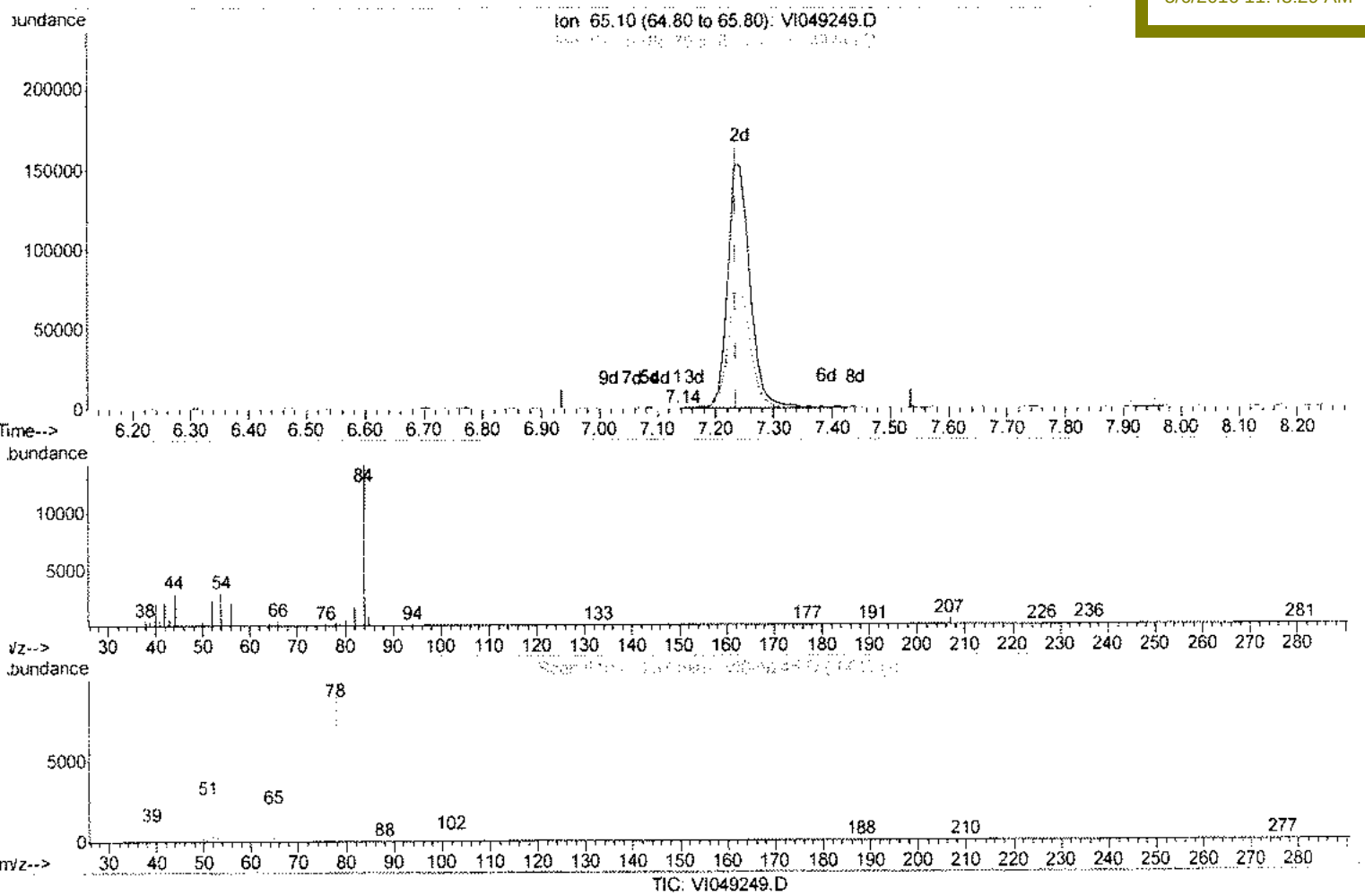
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049249.D
Acq On : 5 May 2016 12:34
Operator : FY/SY
Sample : H2834-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 04:43:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4004

Manual Integrations APPROVED
feifei
5/6/2016 11:43:29 AM



(26) 1,2-Dichloroethane-d4 (S)

7.135min (-0.102) 0.00ug/L

response 327

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	44.65
51.05	123.20	100.31
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049249.D
Acq On : 5 May 2016 12:34
Operator : FY/SY
Sample : H2834-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 04:53:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4004

Manual Integrations APPROVED
feifei
5/6/2016 11:43:29 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1272879	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	841746	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	301318	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	367555	4.69	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 93.80%			
7) Chloroethane-d5	2.11	69	236853m	5.46	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 109.20%			
11) 1,1-Dichloroethene-d2	2.94	63	641469	3.47	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 69.40%			
20) 2-Butanone-d5	5.69	46	818728	48.26	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 96.52%			
24) Chloroform-d	6.39	84	880663	4.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 88.40%			
26) 1,2-Dichloroethane-d4	7.24	65	409642m	5.02	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.40%			
32) Benzene-d6	7.18	84	1621210	4.94	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.80%			
36) 1,2-Dichloropropane-d6	8.44	67	454502	4.93	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 98.60%			
41) Toluene-d8	9.70	98	1154341	4.77	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.40%			
43) trans-1,3-Dichloropropene-	10.02	79	162115	4.46	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 89.20%			
46) 2-Hexanone-d5	10.43	63	537655	46.92	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 93.84%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	186862	4.46	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 89.20%			
63) 1,2-Dichlorobenzene-d4	13.76	152	252968	4.79	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 95.80%			

M.J 05/09/16

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4006

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049233.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4006

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049233.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4006

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049233.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4006

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049233.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/04/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.23	0.39	JN
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

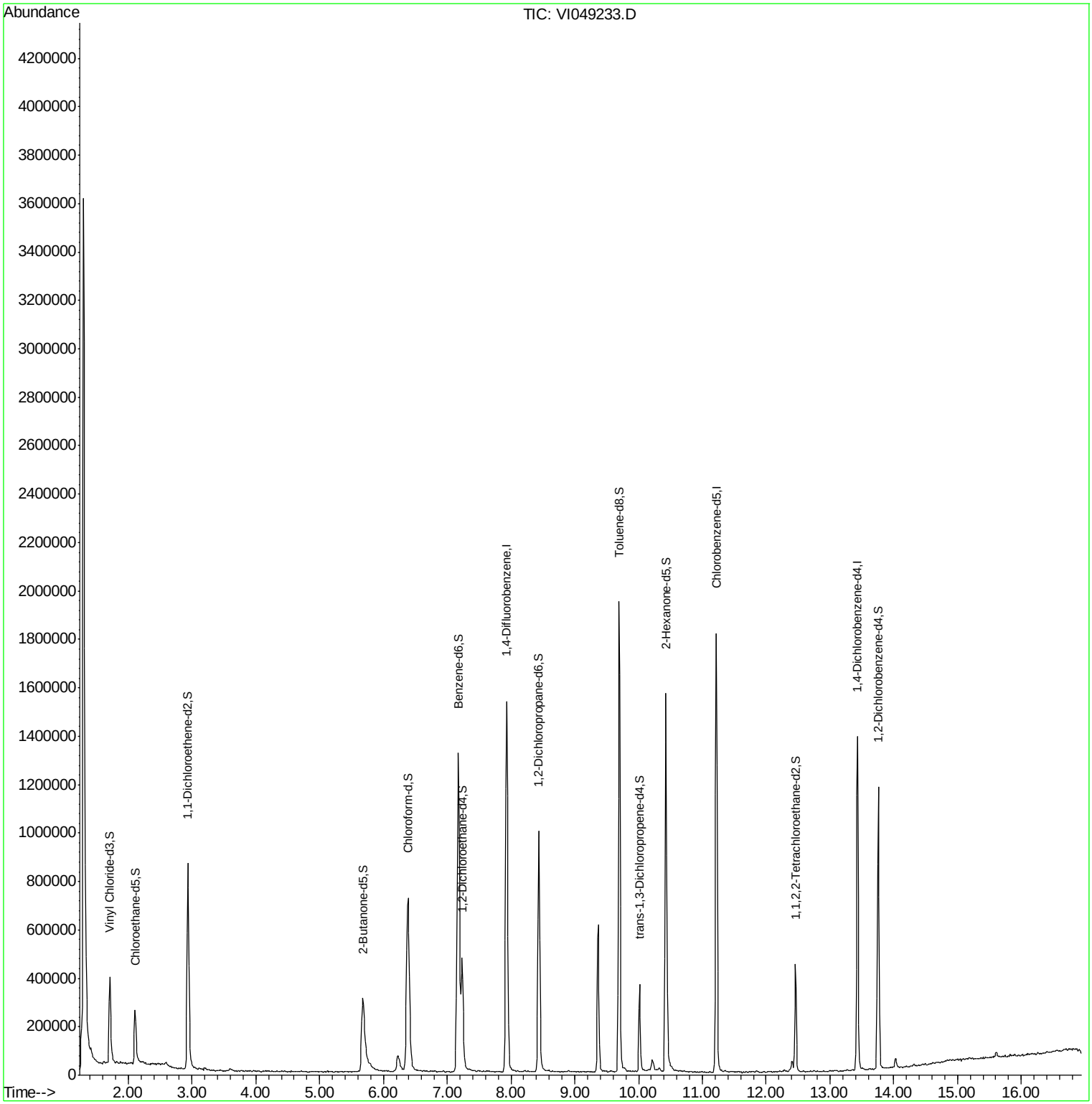
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049233.D
Acq On : 4 May 2016 18:55
Operator : FY/SY
Sample : H2834-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 05 05:58:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4006

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:35 AM



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049233.D
Acq On : 4 May 2016 18:55
Operator : FY/SY
Sample : H2834-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 05 05:58:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4006

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:35 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1309272	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	874832	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	314361	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	379958	4.71	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 94.20%			
7) Chloroethane-d5	2.11	69	236105m	5.29	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 105.80%			
11) 1,1-Dichloroethene-d2	2.93	63	684353	3.60	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 72.00%			
20) 2-Butanone-d5	5.68	46	772086	44.24	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 88.48%			
24) Chloroform-d	6.39	84	893408	4.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 87.20%			
26) 1,2-Dichloroethane-d4	7.23	65	418236	4.98	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.60%			
32) Benzene-d6	7.17	84	1672887	4.91	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.20%			
36) 1,2-Dichloropropane-d6	8.43	67	468377	4.89	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.80%			
41) Toluene-d8	9.69	98	1227143	4.88	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 97.60%			
43) trans-1,3-Dichloropropene-	10.02	79	167653	4.44	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 88.80%			
46) 2-Hexanone-d5	10.43	63	564233	47.38	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 94.76%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	199458	4.58	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	262548	4.76	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 95.20%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049233.D
Acq On : 4 May 2016 18:55
Operator : FY/SY
Sample : H2834-04
Misc : 25mL/MSVOA I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4006

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.298	4	7	18	rVB	3516543	6966276	100.00%	16.844%
2	1.613	37	39	42	rBV3	11640	21231	0.30%	0.051%
3	1.712	46	49	58	rVV	357063	631805	9.07%	1.528%
4	1.820	58	60	64	rVB4	9497	14761	0.21%	0.036%
5	2.105	86	89	99	rBV	221512	461863	6.63%	1.117%
6	2.460	123	125	127	rBV3	6189	10308	0.15%	0.025%
7	2.588	136	138	141	rVB	10845	15274	0.22%	0.037%
8	2.932	168	173	183	rBV	851135	1913477	27.47%	4.627%
9	3.109	189	191	192	rBV	4932	5092	0.07%	0.012%
10	3.198	198	200	201	rBV	8666	14279	0.20%	0.035%
11	3.257	205	206	210	rVB4	5552	7858	0.11%	0.019%
12	3.601	235	241	248	rVB5	10740	38247	0.55%	0.092%
13	3.680	248	249	251	rVB	4574	5089	0.07%	0.012%
14	3.778	255	259	261	rBV5	4797	11263	0.16%	0.027%
15	3.916	271	273	275	rVB2	3967	4748	0.07%	0.011%
16	3.965	275	278	280	rBV4	3261	6409	0.09%	0.015%
17	4.113	290	293	294	rBV3	4205	6569	0.09%	0.016%
18	4.143	294	296	298	rVB3	3567	5419	0.08%	0.013%
19	4.408	321	323	326	rBV4	3636	6684	0.10%	0.016%
20	4.517	332	334	337	rVB2	4132	7835	0.11%	0.019%
21	4.556	337	338	341	rBV3	4692	6118	0.09%	0.015%
22	4.605	341	343	347	rBV5	2592	7665	0.11%	0.019%
23	4.713	352	354	357	rVB4	3815	4734	0.07%	0.011%
24	5.127	393	396	397	rVB3	5255	6010	0.09%	0.015%
25	5.166	397	400	401	rBV3	3351	5710	0.08%	0.014%
26	5.186	401	402	406	rVB4	3759	7047	0.10%	0.017%
27	5.235	406	407	408	rBV	4902	4842	0.07%	0.012%
28	5.324	414	416	419	rBV4	4256	7323	0.11%	0.018%
29	5.383	421	422	424	rBV2	3311	5087	0.07%	0.012%
30	5.520	434	436	437	rBV2	3232	5142	0.07%	0.012%
31	5.609	439	445	446	rVV4	3787	7409	0.11%	0.018%
32	5.678	446	452	474	rVV2	304751	1369717	19.66%	3.312%
33	5.914	474	476	481	rVV6	8429	22948	0.33%	0.055%
34	5.973	481	482	484	rVV2	4226	5348	0.08%	0.013%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049233.D
Acq On : 4 May 2016 18:55
Operator : FY/SY
Sample : H2834-04
Misc : 25mL/MSVOA I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4006

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.229	501	508	517	rBV2	64940	251044	3.60%	0.607%
36	6.387	517	524	535	rVB	711138	2204858	31.65%	5.331%
37	6.633	546	549	553	rBV6	2722	6473	0.09%	0.016%
38	6.741	559	560	564	rVB3	3649	4881	0.07%	0.012%
39	6.810	564	567	568	rBV3	2501	4896	0.07%	0.012%
40	6.859	570	572	575	rBV4	3739	7807	0.11%	0.019%
41	6.918	575	578	579	rBV3	2619	5442	0.08%	0.013%
42	6.938	579	580	584	rVB3	6029	6605	0.09%	0.016%
43	6.987	584	585	592	rBV7	3058	8064	0.12%	0.019%
44	7.174	597	604	608	rBV	1315317	3592819	51.57%	8.687%
45	7.233	608	610	627	rVV	472273	1077160	15.46%	2.604%
46	7.410	627	628	630	rVV2	4318	5802	0.08%	0.014%
47	7.489	634	636	638	rVV2	3256	5423	0.08%	0.013%
48	7.774	662	665	666	rBV3	2518	5420	0.08%	0.013%
49	7.804	666	668	674	rVB4	3816	10721	0.15%	0.026%
50	7.932	674	681	691	rBV	1532633	3248069	46.63%	7.853%
51	8.099	696	698	700	rVB3	3443	5276	0.08%	0.013%
52	8.217	708	710	714	rVB4	5458	9230	0.13%	0.022%
53	8.434	727	732	742	rBV	991175	2232986	32.05%	5.399%
54	8.601	748	749	752	rVB3	6508	6459	0.09%	0.016%
55	8.650	752	754	757	rVB4	3462	5759	0.08%	0.014%
56	8.847	771	774	777	rBV5	2901	5147	0.07%	0.012%
57	8.896	777	779	783	rBV5	4338	10434	0.15%	0.025%
58	9.014	788	791	792	rVB3	4365	6613	0.09%	0.016%
59	9.054	792	795	797	rBV3	3605	6524	0.09%	0.016%
60	9.142	802	804	806	rVB4	3751	5425	0.08%	0.013%
61	9.221	808	812	814	rBV5	4260	8526	0.12%	0.021%
62	9.369	822	827	834	rBV	607504	1148936	16.49%	2.778%
63	9.447	834	835	837	rVV2	4416	5310	0.08%	0.013%
64	9.556	842	846	847	rBV3	3984	6486	0.09%	0.016%
65	9.693	856	860	873	rVV	1940684	3569439	51.24%	8.630%
66	10.018	889	893	898	rBV	360949	606382	8.70%	1.466%
67	10.146	905	906	908	rBV2	4318	4943	0.07%	0.012%
68	10.215	909	913	918	rVV	46140	103598	1.49%	0.250%
69	10.323	922	924	928	rVB5	13395	26621	0.38%	0.064%
70	10.432	930	935	949	rBV	1563147	2977631	42.74%	7.200%
71	10.579	949	950	955	rVB4	6022	9769	0.14%	0.024%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049233.D
Acq On : 4 May 2016 18:55
Operator : FY/SY
Sample : H2834-04
Misc : 25mL/MSVOA I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4006

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	10.648	955	957	959	rVB2	4001	4972	0.07%	0.012%
73	10.707	961	963	967	rVB5	4490	8431	0.12%	0.020%
74	11.111	1001	1004	1007	rBV4	4196	6579	0.09%	0.016%
75	11.219	1011	1015	1025	rBV	1810507	3023255	43.40%	7.310%
76	11.357	1027	1029	1032	rVB4	6474	8382	0.12%	0.020%
77	11.475	1038	1041	1044	rVB5	3980	7969	0.11%	0.019%
78	11.563	1048	1050	1056	rVB6	6205	19003	0.27%	0.046%
79	11.642	1056	1058	1059	rBV2	5495	6145	0.09%	0.015%
80	11.682	1059	1062	1066	rBV6	3114	6703	0.10%	0.016%
81	11.731	1066	1067	1070	rBV3	3289	4998	0.07%	0.012%
82	11.849	1076	1079	1081	rBV4	5528	11334	0.16%	0.027%
83	12.144	1108	1109	1112	rBV3	3883	5447	0.08%	0.013%
84	12.282	1122	1123	1126	rBV3	5415	6680	0.10%	0.016%
85	12.400	1129	1135	1138	rBV2	43277	98652	1.42%	0.239%
86	12.459	1138	1141	1146	rVB	437463	730261	10.48%	1.766%
87	12.587	1152	1154	1157	rVB5	5017	9479	0.14%	0.023%
88	12.744	1166	1170	1172	rBV2	5069	9199	0.13%	0.022%
89	12.863	1181	1182	1185	rBV3	2900	5352	0.08%	0.013%
90	12.991	1194	1195	1198	rVB3	4363	6151	0.09%	0.015%
91	13.276	1221	1224	1227	rVV5	5627	9820	0.14%	0.024%
92	13.345	1227	1231	1235	rVV5	5038	14083	0.20%	0.034%
93	13.433	1235	1240	1246	rVV	1377210	2346988	33.69%	5.675%
94	13.512	1246	1248	1252	rVB5	7060	14350	0.21%	0.035%
95	13.758	1268	1273	1279	rBV	1166472	1996986	28.67%	4.828%
96	14.034	1295	1301	1305	rBV2	40490	91682	1.32%	0.222%
97	14.201	1312	1318	1321	rBV6	8258	23912	0.34%	0.058%
98	14.319	1327	1330	1332	rBV4	8083	11452	0.16%	0.028%
99	14.496	1346	1348	1351	rVB3	9005	9344	0.13%	0.023%
100	15.609	1458	1461	1463	rBV	19739	34584	0.50%	0.084%

Sum of corrected areas: 41358758

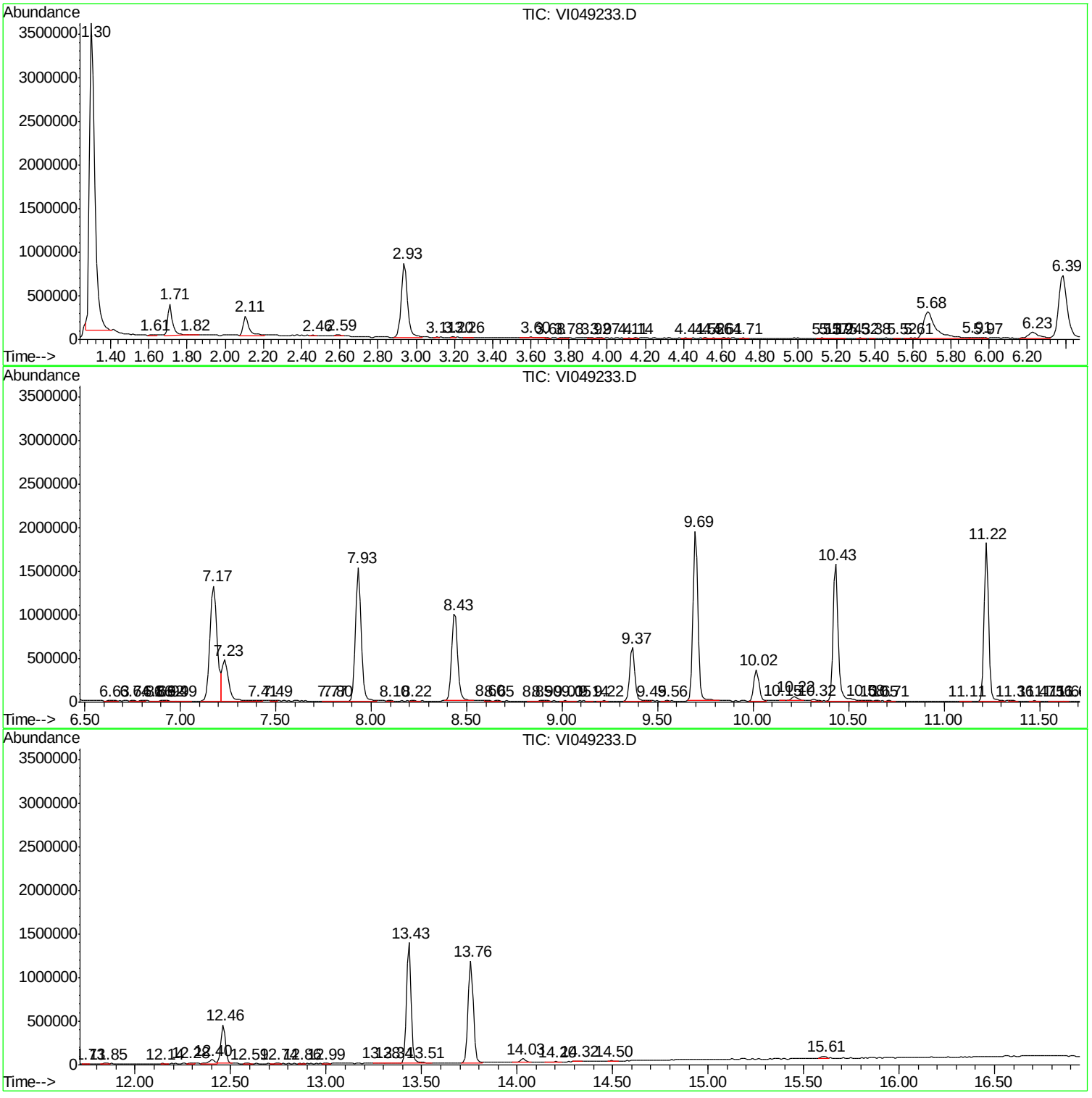
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049233.D
Acq On : 4 May 2016 18:55
Operator : FY/SY
Sample : H2834-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4006

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049233.D
Acq On : 4 May 2016 18:55
Operator : FY/SY
Sample : H2834-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4006

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

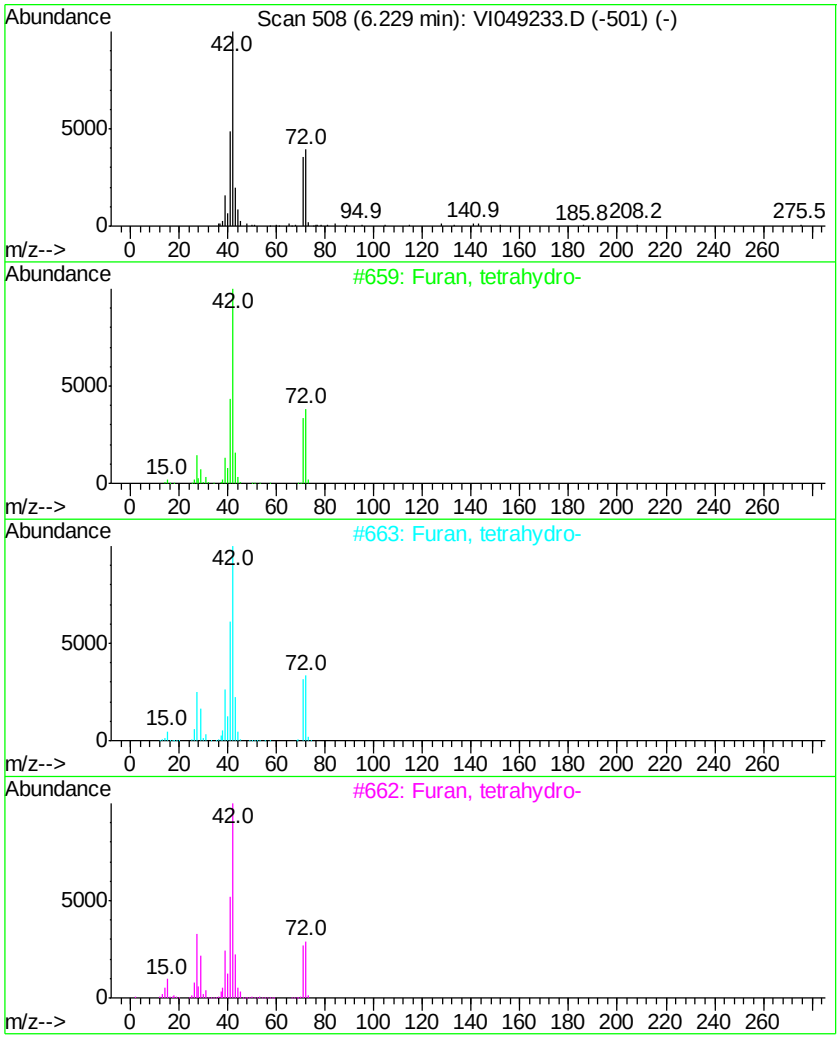
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

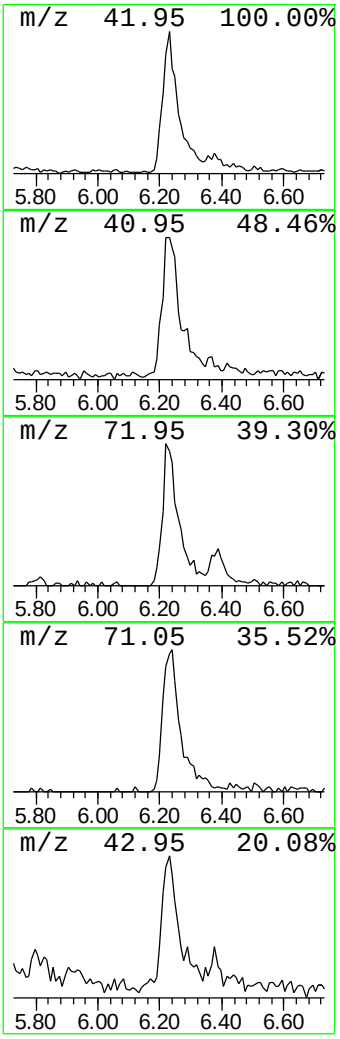
****

Peak Number 2 Furan, tetrahydro- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.23	0.39 ug/L	251044	1,4-Difluorobenzene	7.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Furan, tetrahydro-	72	C4H8O	000109-99-9	80
2	Furan, tetrahydro-	72	C4H8O	000109-99-9	72
3	Furan, tetrahydro-	72	C4H8O	000109-99-9	72
4	Oxirane, ethyl-	72	C4H8O	000106-88-7	49
5	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	45





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049233.D
Acq On : 4 May 2016 18:55
Operator : FY/SY
Sample : H2834-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4006

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Furan, tetrahydro-	6.23	0.4	ug/L	251044	1	7.93	3248070	5.0

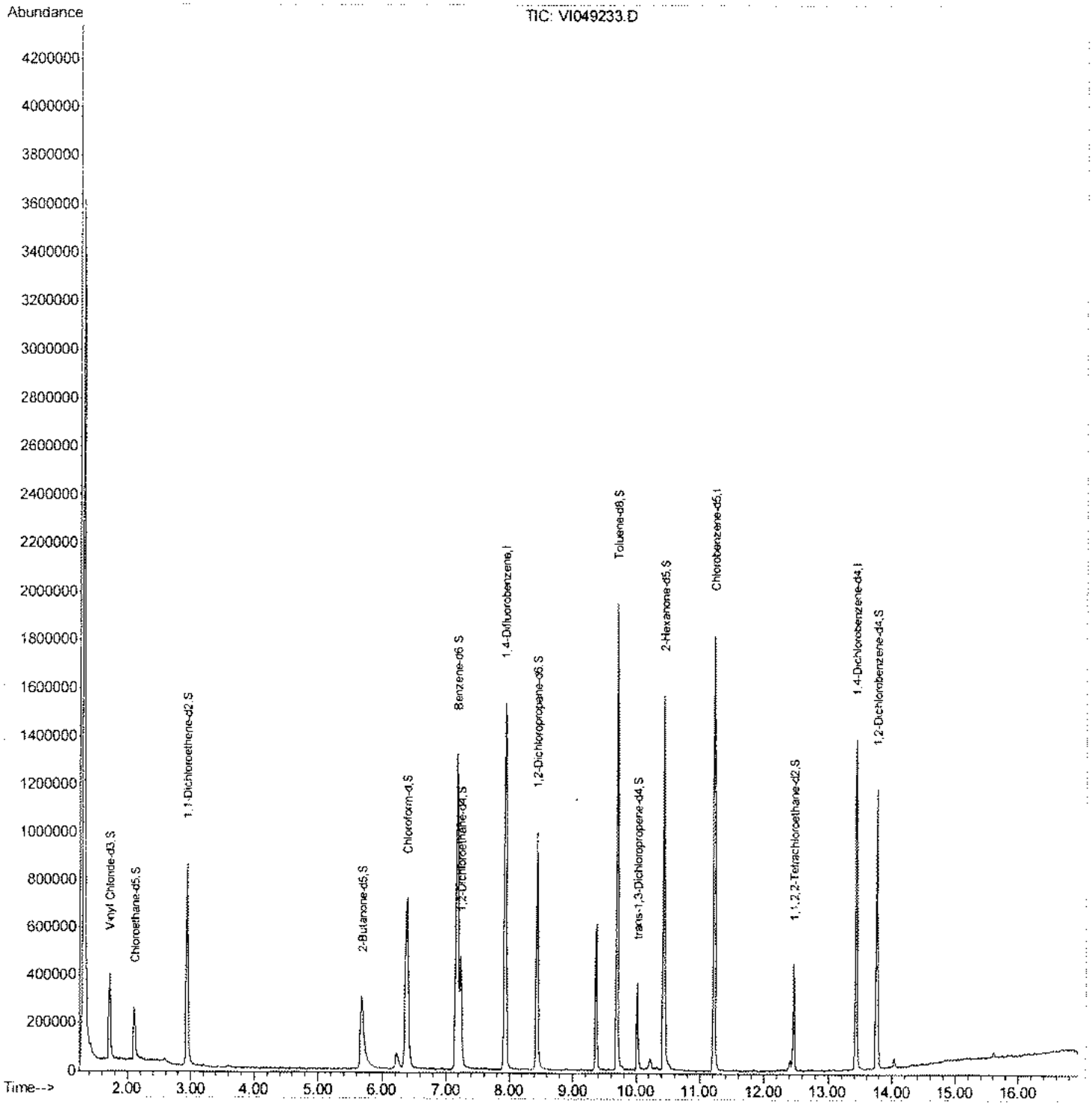
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049233.D
Acq On : 4 May 2016 18:55
Operator : FY/SY
Sample : H2834-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 05 05:58:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4006

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:35 AM



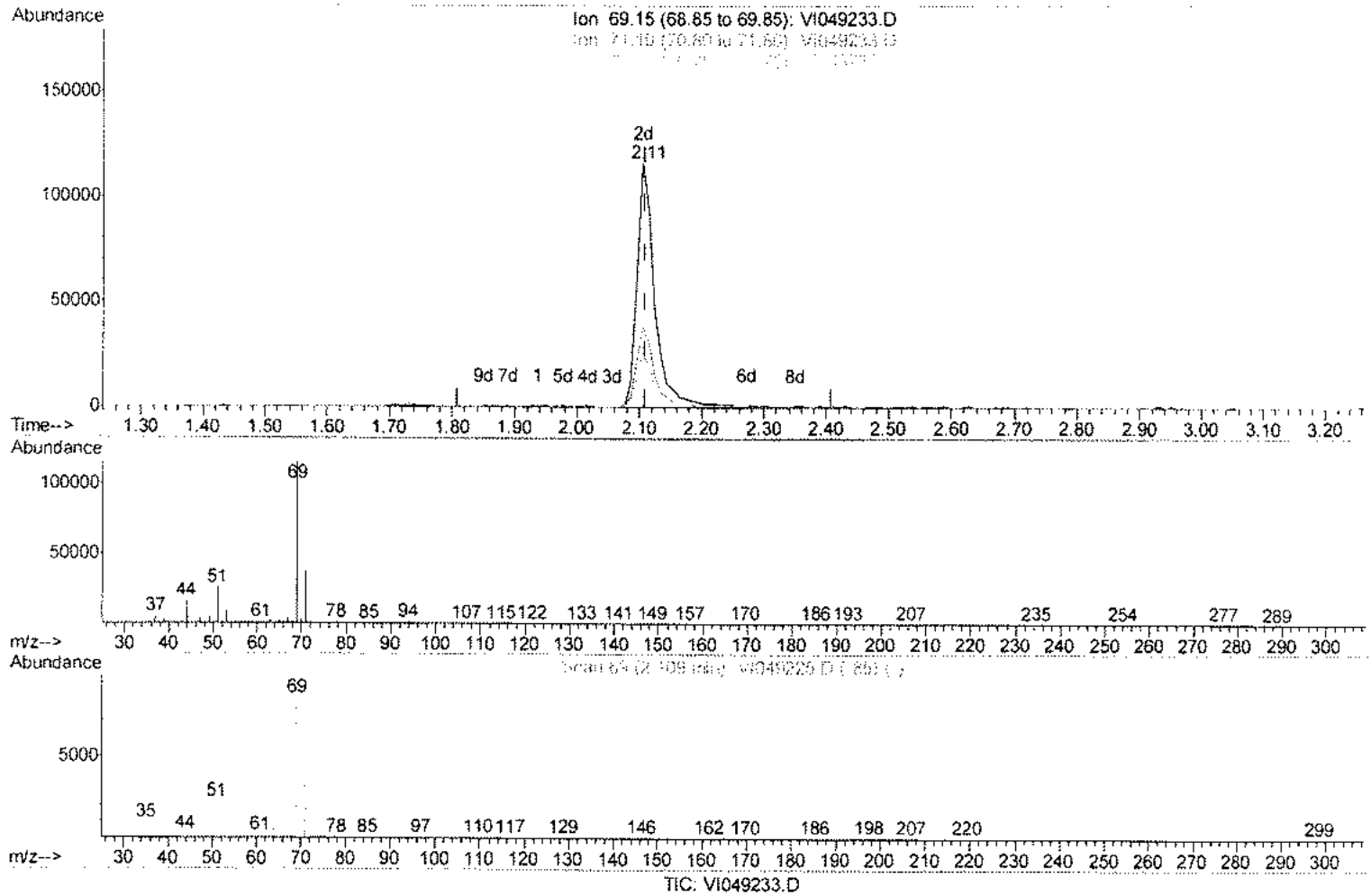
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049233.D
Acq On : 4 May 2016 18:55
Operator : FY/SY
Sample : H2834-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 05 05:23:47 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4006

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:35 AM



TIC: VI049233.D

(7) Chloroethane-d5 (S)

2.105min (-0.003) 5.29ug/L m

M.D 05/07/16

response 236105

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.11#
51.05	32.70	0.14#
0.00	0.00	0.00

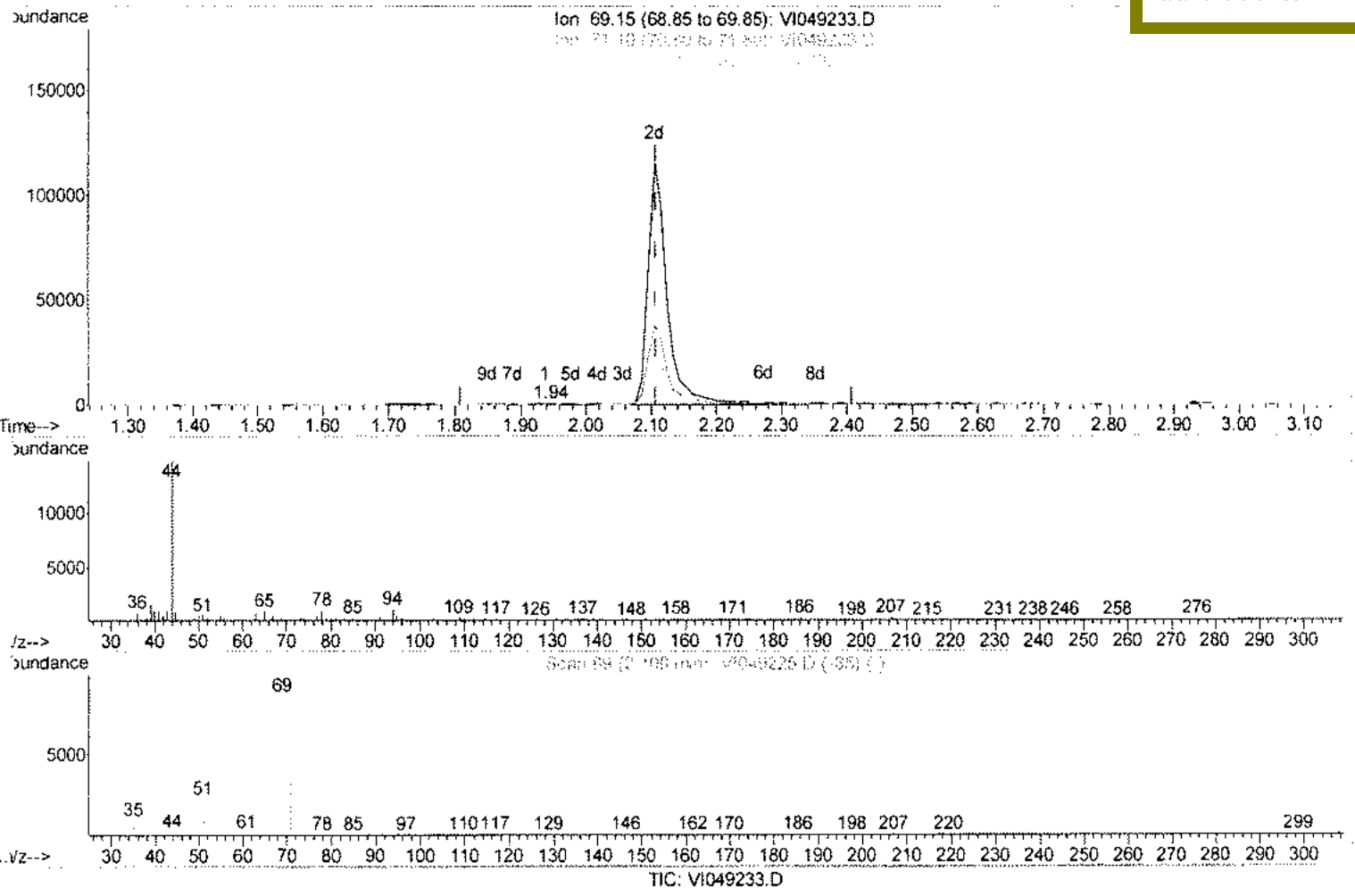
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049233.D
Acq On : 4 May 2016 18:55
Operator : FY/SY
Sample : H2834-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 05 05:23:47 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4006

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:35 AM



TIC: VI049233.D

(7) Chloroethane-d5 (S)

1.938min (-0.171) 0.02ug/L

response 862

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	31.21
51.05	32.70	37.24
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049233.D
Acq On : 4 May 2016 18:55
Operator : FY/SY
Sample : H2834-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 05 05:58:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4006

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:35 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1309272	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	874832	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	314361	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	379958	4.71	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 94.20%			
7) Chloroethane-d5	2.11	69	236105m	5.29	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 105.80%			
11) 1,1-Dichloroethene-d2	2.93	63	684353	3.60	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 72.00%			
20) 2-Butanone-d5	5.68	46	772086	44.24	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 88.48%			
24) Chloroform-d	6.39	84	893408	4.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 87.20%			
26) 1,2-Dichloroethane-d4	7.23	65	418236	4.98	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.60%			
32) Benzene-d6	7.17	84	1672887	4.91	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.20%			
36) 1,2-Dichloropropane-d6	8.43	67	468377	4.89	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.80%			
41) Toluene-d8	9.69	98	1227143	4.88	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 97.60%			
43) trans-1,3-Dichloropropene-	10.02	79	167653	4.44	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 88.80%			
46) 2-Hexanone-d5	10.43	63	564233	47.38	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 94.76%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	199458	4.58	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	262548	4.76	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 95.20%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

M.D 05/07/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4094

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049237.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.19	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.2	
71-55-6	1,1,1-Trichloroethane	0.34	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.34	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4094

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049237.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.24	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	30	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4094

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049237.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4094

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049237.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/04/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

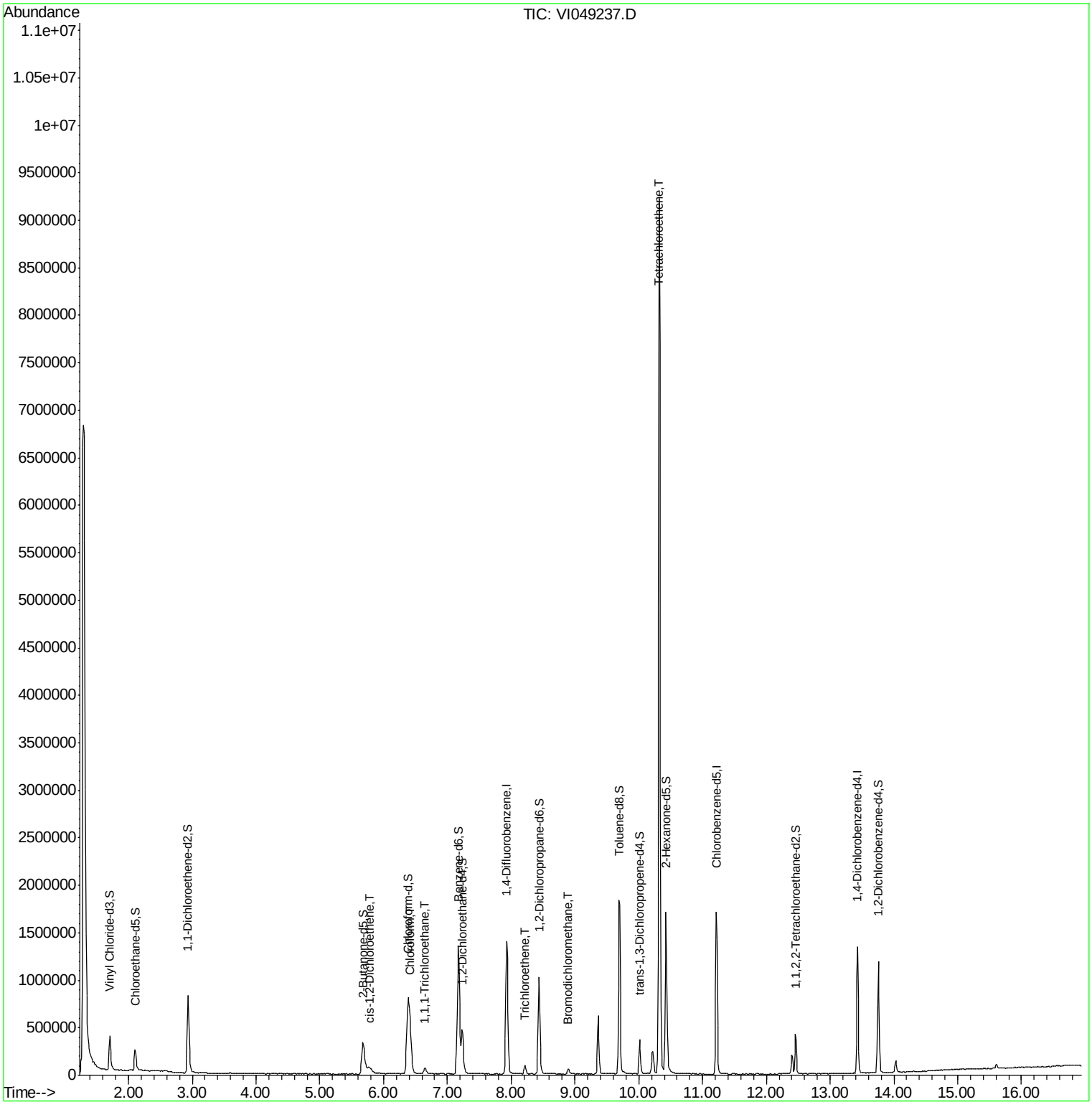
EPA-designated Registry Number.

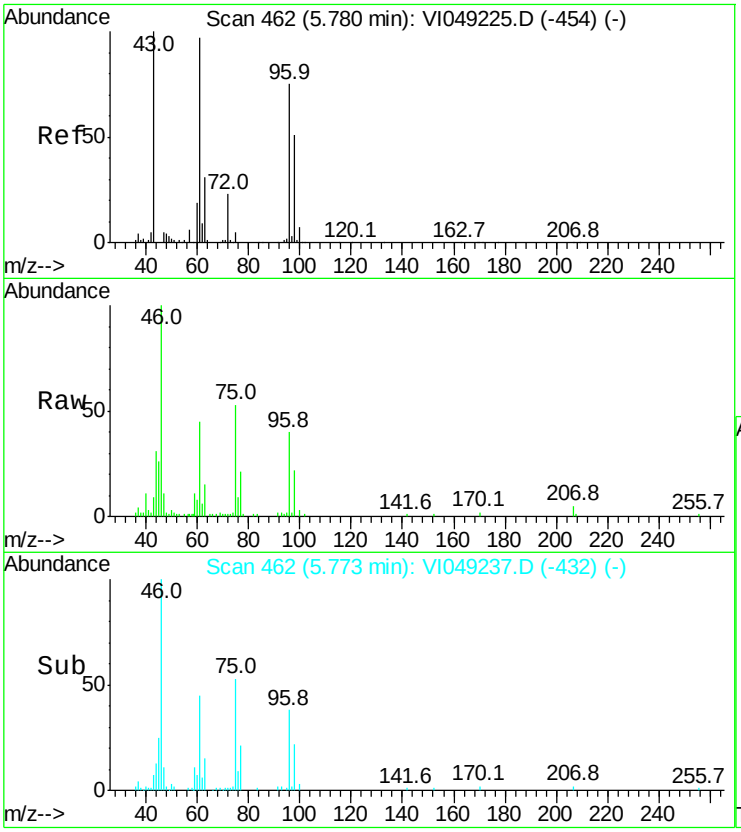
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049237.D
Acq On : 4 May 2016 21:02
Operator : FY/SY
Sample : H2834-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4094

Quant Time: May 05 06:38:03 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration



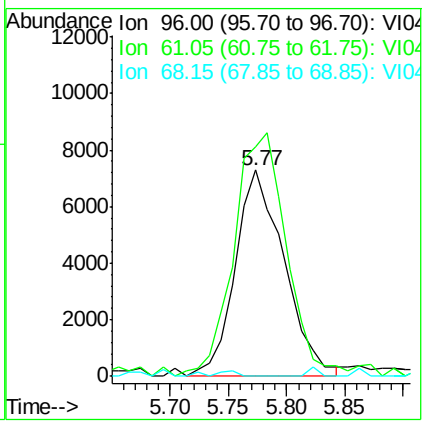


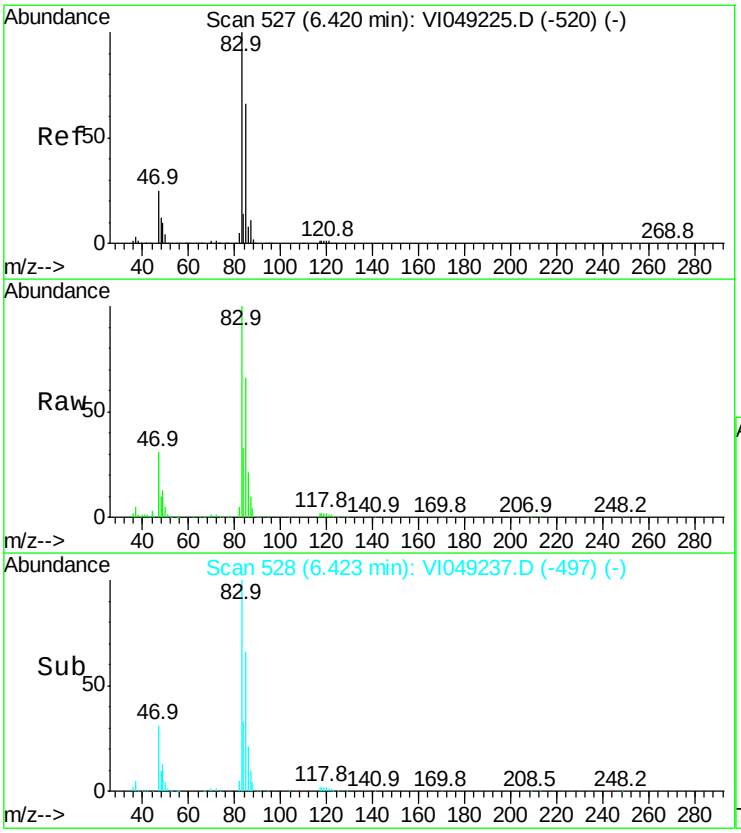
#22
cis-1,2-Dichloroethene
Concen: 0.19 ug/L
RT: 5.77 min Scan# 462
Delta R.T. -0.01 min
Lab File: VI049237.D
Acq: 4 May 2016 21:02

Instrument :
MSVOA_I
ClientSampleId :
H4094

Tgt Ion: 96 Resp: 21239

Ion	Ratio	Lower	Upper
96	100		
61	111.6	82.1	152.5
68	0.0	0.0	0.0

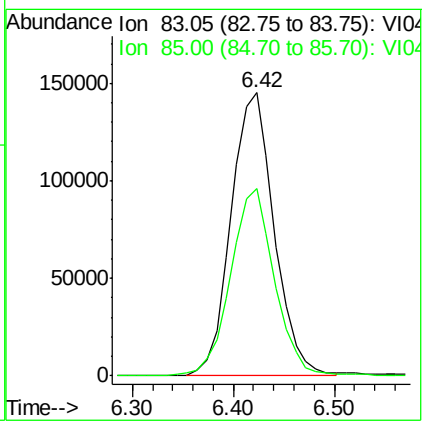


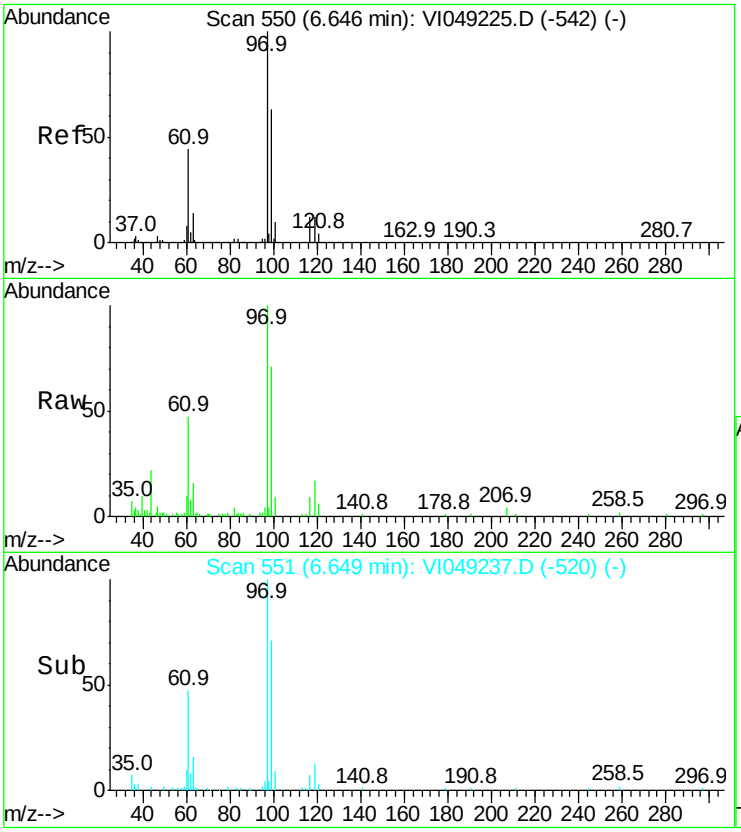


#25
Chloroform
Concen: 2.17 ug/L
RT: 6.42 min Scan# 528
Delta R.T. 0.00 min
Lab File: VI049237.D
Acq: 4 May 2016 21:02

Tgt Ion: 83 Resp: 431418

Ion	Ratio	Lower	Upper
83	100		
85	66.1	47.3	87.8



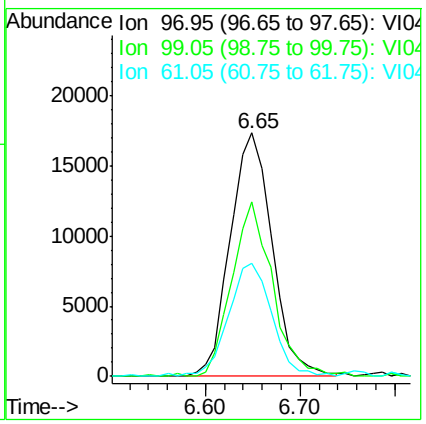


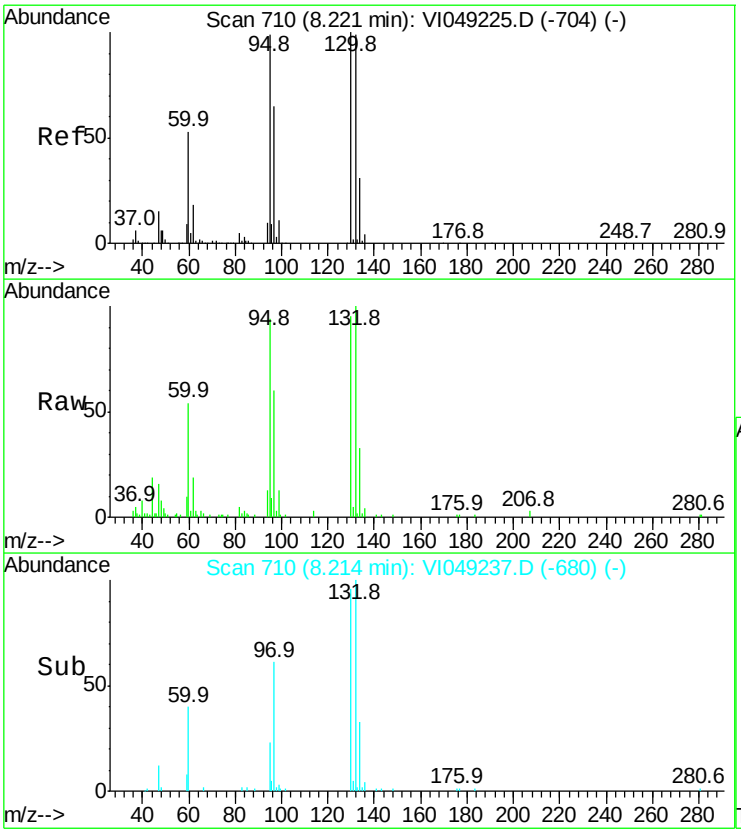
#29
1,1,1-Trichloroethane
Concen: 0.34 ug/L
RT: 6.65 min Scan# 551
Delta R.T. 0.00 min
Lab File: VI049237.D
Acq: 4 May 2016 21:02

Instrument : MSVOA_I
ClientSampleId : H4094

Tgt Ion: 97 Resp: 53384

Ion	Ratio	Lower	Upper
97	100		
99	68.9	51.1	76.7
61	47.9	33.3	49.9

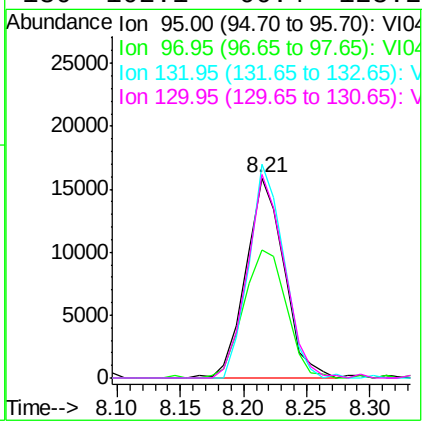


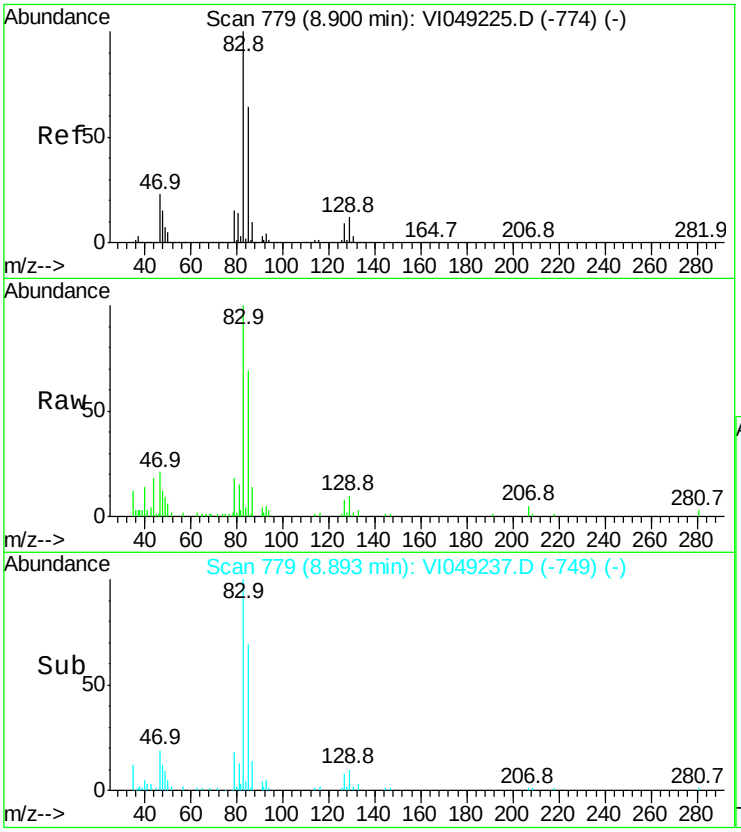


#34
Trichloroethene
Concen: 0.34 ug/L
RT: 8.21 min Scan# 710
Delta R.T. -0.01 min
Lab File: VI049237.D
Acq: 4 May 2016 21:02

Tgt Ion: 95 Resp: 33462

Ion	Ratio	Lower	Upper
95	100		
97	64.1	45.8	85.2
132	106.9	63.9	118.7
130	102.1	66.4	123.2



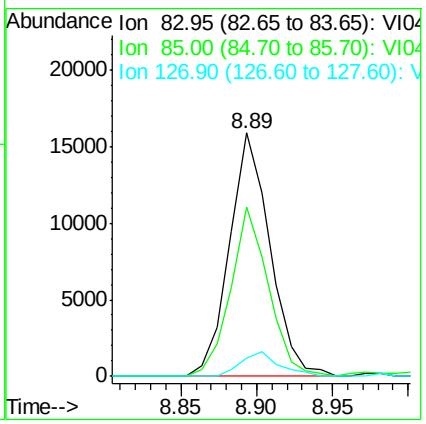


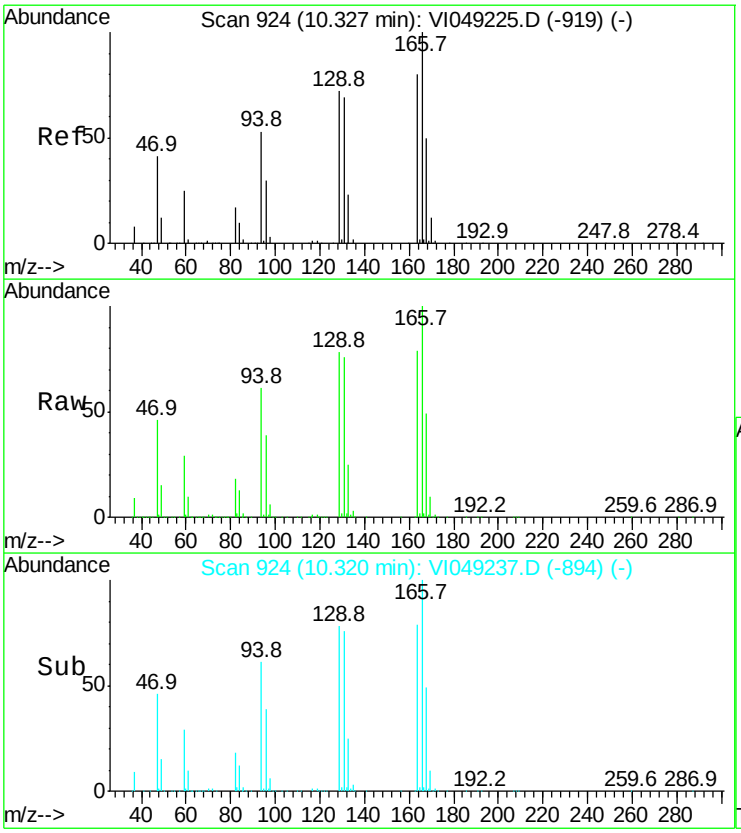
#38
Bromodichloromethane
Concen: 0.24 ug/L
RT: 8.89 min Scan# 779
Delta R.T. -0.01 min
Lab File: VI049237.D
Acq: 4 May 2016 21:02

Instrument : MSVOA_I
ClientSampleId : H4094

Tgt Ion: 83 Resp: 29623

Ion	Ratio	Lower	Upper
83	100		
85	69.4	44.7	83.1
127	7.5	6.6	9.8

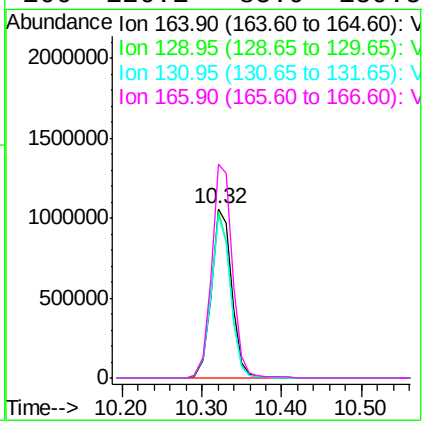




#47
Tetrachloroethene
Concen: 29.58 ug/L
RT: 10.32 min Scan# 924
Delta R.T. -0.01 min
Lab File: VI049237.D
Acq: 4 May 2016 21:02

Tgt Ion:164 Resp: 1911765

Ion	Ratio	Lower	Upper
164	100		
129	98.3	62.1	115.3
131	95.9	60.6	112.6
166	126.1	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049237.D
Acq On : 4 May 2016 21:02
Operator : FY/SY
Sample : H2834-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4094

Quant Time: May 05 06:38:03 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1238765	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	828120	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	303293	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	376032	4.93	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 98.60%			
7) Chloroethane-d5	2.10	69	224059	5.30	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 106.00%			
11) 1,1-Dichloroethene-d2	2.93	63	668595	3.72	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 74.40%			
20) 2-Butanone-d5	5.67	46	848670	51.40	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 102.80%			
24) Chloroform-d	6.38	84	938711	4.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.80%			
26) 1,2-Dichloroethane-d4	7.23	65	417296	5.26	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.20%			
32) Benzene-d6	7.17	84	1682621	5.22	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.40%			
36) 1,2-Dichloropropane-d6	8.44	67	468051	5.16	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 103.20%			
41) Toluene-d8	9.70	98	1204876	5.06	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.20%			
43) trans-1,3-Dichloropropene-	10.02	79	169287	4.74	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 94.80%			
46) 2-Hexanone-d5	10.43	63	568355	50.42	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 100.84%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	194628	4.72	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 94.40%			
63) 1,2-Dichlorobenzene-d4	13.76	152	258178	4.86	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 97.20%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.77	96	21239	0.19	ug/L	95
25) Chloroform	6.42	83	431418	2.17	ug/L	98
29) 1,1,1-Trichloroethane	6.65	97	53384	0.34	ug/L	92
34) Trichloroethene	8.21	95	33462	0.34	ug/L	91
38) Bromodichloromethane	8.89	83	29623	0.24	ug/L	94
47) Tetrachloroethene	10.32	164	1911765	29.58	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049237.D
Acq On : 4 May 2016 21:02
Operator : FY/SY
Sample : H2834-05
Misc : 25mL/MSVOA I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4094

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.295	3	7	35	rVB	6775147	20232691	100.00%	28.026%
2	1.708	46	49	58	rVB	360069	601705	2.97%	0.833%
3	2.102	86	89	98	rBV	214384	415467	2.05%	0.576%
4	2.545	133	134	135	rBV	7735	6025	0.03%	0.008%
5	2.584	136	138	144	rVB5	18074	41876	0.21%	0.058%
6	2.712	149	151	153	rVB3	4592	4737	0.02%	0.007%
7	2.929	167	173	187	rBV	816388	1925172	9.52%	2.667%
8	3.116	190	192	193	rBV2	3898	5760	0.03%	0.008%
9	3.293	209	210	213	rBV3	3878	5802	0.03%	0.008%
10	3.588	236	240	245	rVB5	12395	32445	0.16%	0.045%
11	3.667	245	248	252	rBV5	3066	8841	0.04%	0.012%
12	3.815	261	263	265	rVV3	3349	4952	0.02%	0.007%
13	3.893	269	271	272	rVV2	3327	4384	0.02%	0.006%
14	3.913	272	273	275	rVB2	4494	4563	0.02%	0.006%
15	4.002	280	282	288	rVB7	4177	10190	0.05%	0.014%
16	4.100	288	292	293	rBV3	2547	5127	0.03%	0.007%
17	4.208	301	303	304	rVB2	4009	4038	0.02%	0.006%
18	4.297	309	312	314	rBV2	2969	4534	0.02%	0.006%
19	4.917	371	375	377	rVB3	3041	6378	0.03%	0.009%
20	5.163	399	400	403	rVB2	4834	5883	0.03%	0.008%
21	5.212	403	405	407	rBV3	5042	6858	0.03%	0.009%
22	5.271	407	411	413	rVB5	1939	4919	0.02%	0.007%
23	5.419	424	426	429	rVB4	3041	4749	0.02%	0.007%
24	5.498	432	434	437	rBV3	4824	7889	0.04%	0.011%
25	5.675	446	452	460	rBV	335318	1233995	6.10%	1.709%
26	5.773	460	462	472	rVB3	63113	209385	1.03%	0.290%
27	6.019	485	487	488	rVB2	6185	5144	0.03%	0.007%
28	6.275	512	513	516	rBV3	4265	6083	0.03%	0.008%
29	6.383	516	524	537	rBV2	805592	3227714	15.95%	4.471%
30	6.649	545	551	560	rVB	58166	177770	0.88%	0.246%
31	6.807	565	567	570	rBV3	4535	5767	0.03%	0.008%
32	6.876	573	574	578	rBV4	3310	5800	0.03%	0.008%
33	7.171	597	604	608	rBV	1348276	3528672	17.44%	4.888%
34	7.230	608	610	620	rVB	463916	1079188	5.33%	1.495%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049237.D
Acq On : 4 May 2016 21:02
Operator : FY/SY
Sample : H2834-05
Misc : 25mL/MSVOA I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4094

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.515	636	639	643	rBV6	2958	6333	0.03%	0.009%
36	7.614	646	649	650	rBV3	2702	5231	0.03%	0.007%
37	7.653	650	653	656	rVB5	5846	8890	0.04%	0.012%
38	7.761	663	664	668	rVB3	3569	5552	0.03%	0.008%
39	7.820	668	670	672	rVB3	3623	4573	0.02%	0.006%
40	7.870	672	675	676	rBV2	2682	5030	0.02%	0.007%
41	7.929	676	681	692	rBV	1400796	3048606	15.07%	4.223%
42	8.214	706	710	716	rBV	95969	204880	1.01%	0.284%
43	8.312	718	720	724	rVB5	2947	6067	0.03%	0.008%
44	8.440	726	733	741	rBV	1027105	2258149	11.16%	3.128%
45	8.696	757	759	762	rVB4	2852	4030	0.02%	0.006%
46	8.893	775	779	787	rBV2	51513	106336	0.53%	0.147%
47	8.982	787	788	791	rVB3	4199	4660	0.02%	0.006%
48	9.257	814	816	817	rVB	5183	4096	0.02%	0.006%
49	9.366	822	827	834	rBV	611317	1091331	5.39%	1.512%
50	9.523	841	843	846	rVB3	7354	12169	0.06%	0.017%
51	9.592	849	850	854	rVB4	4367	5255	0.03%	0.007%
52	9.690	856	860	866	rBV	1831874	3497808	17.29%	4.845%
53	9.858	875	877	881	rVB5	5235	13084	0.06%	0.018%
54	10.015	889	893	900	rBV	364775	615438	3.04%	0.853%
55	10.143	903	906	909	rVV4	8035	20912	0.10%	0.029%
56	10.222	909	914	920	rVV	232310	516134	2.55%	0.715%
57	10.320	920	924	931	rVV	9211957	16107306	79.61%	22.312%
58	10.429	931	935	949	rVB	1697108	3091709	15.28%	4.283%
59	10.645	955	957	958	rBV2	3988	4719	0.02%	0.007%
60	10.714	962	964	967	rVB3	5445	7885	0.04%	0.011%
61	10.763	967	969	972	rVB3	3296	6167	0.03%	0.009%
62	10.842	975	977	981	rVB5	9297	17958	0.09%	0.025%
63	10.901	981	983	986	rVB3	3577	5312	0.03%	0.007%
64	10.960	986	989	992	rBV4	3871	7763	0.04%	0.011%
65	11.009	992	994	996	rVB3	4984	5664	0.03%	0.008%
66	11.216	1011	1015	1026	rBV	1708281	2875923	14.21%	3.984%
67	11.354	1026	1029	1036	rVB8	9581	23806	0.12%	0.033%
68	11.472	1038	1041	1045	rVB5	8517	17297	0.09%	0.024%
69	11.531	1045	1047	1049	rVB3	3840	4541	0.02%	0.006%
70	11.590	1049	1053	1055	rBV5	1741	4516	0.02%	0.006%
71	11.678	1060	1062	1064	rVB3	4011	4516	0.02%	0.006%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049237.D
Acq On : 4 May 2016 21:02
Operator : FY/SY
Sample : H2834-05
Misc : 25mL/MSVOA I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4094

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.738	1064	1068	1070	rVB4	3637	7733	0.04%	0.011%
73	11.767	1070	1071	1073	rBV2	3752	5297	0.03%	0.007%
74	11.846	1075	1079	1083	rBV6	5653	15091	0.07%	0.021%
75	11.915	1085	1086	1087	rBV	4874	4668	0.02%	0.006%
76	11.944	1087	1089	1091	rVB3	3983	5382	0.03%	0.007%
77	12.062	1098	1101	1103	rVB4	4989	7450	0.04%	0.010%
78	12.190	1112	1114	1115	rBV	5150	7121	0.04%	0.010%
79	12.259	1118	1121	1122	rBV3	4471	6749	0.03%	0.009%
80	12.279	1122	1123	1126	rVB3	6434	6085	0.03%	0.008%
81	12.397	1129	1135	1138	rBV2	193367	371789	1.84%	0.515%
82	12.456	1138	1141	1147	rVB	419591	726266	3.59%	1.006%
83	12.604	1153	1156	1161	rVB7	3896	8396	0.04%	0.012%
84	12.663	1161	1162	1165	rBV3	3303	5231	0.03%	0.007%
85	12.712	1165	1167	1171	rBV4	2763	5942	0.03%	0.008%
86	12.879	1181	1184	1186	rBV3	4267	9003	0.04%	0.012%
87	12.987	1193	1195	1197	rBV2	5073	7526	0.04%	0.010%
88	13.056	1200	1202	1204	rBV3	3485	5427	0.03%	0.008%
89	13.155	1211	1212	1216	rVB4	3463	4517	0.02%	0.006%
90	13.233	1216	1220	1221	rBV4	2991	4906	0.02%	0.007%
91	13.273	1222	1224	1226	rVB3	3824	5027	0.02%	0.007%
92	13.371	1230	1234	1235	rBV4	5727	8149	0.04%	0.011%
93	13.430	1236	1240	1248	rBV	1337270	2229156	11.02%	3.088%
94	13.755	1269	1273	1281	rVB	1173257	1940694	9.59%	2.688%
95	13.922	1288	1290	1293	rBV4	4716	8203	0.04%	0.011%
96	14.031	1296	1301	1305	rBV2	121063	229027	1.13%	0.317%
97	14.149	1311	1313	1316	rBV4	4958	9419	0.05%	0.013%
98	14.198	1316	1318	1320	rBV3	4513	6461	0.03%	0.009%
99	14.306	1327	1329	1332	rBV3	6743	10005	0.05%	0.014%
100	15.605	1458	1461	1465	rVB	38608	67042	0.33%	0.093%

Sum of corrected areas: 72191911

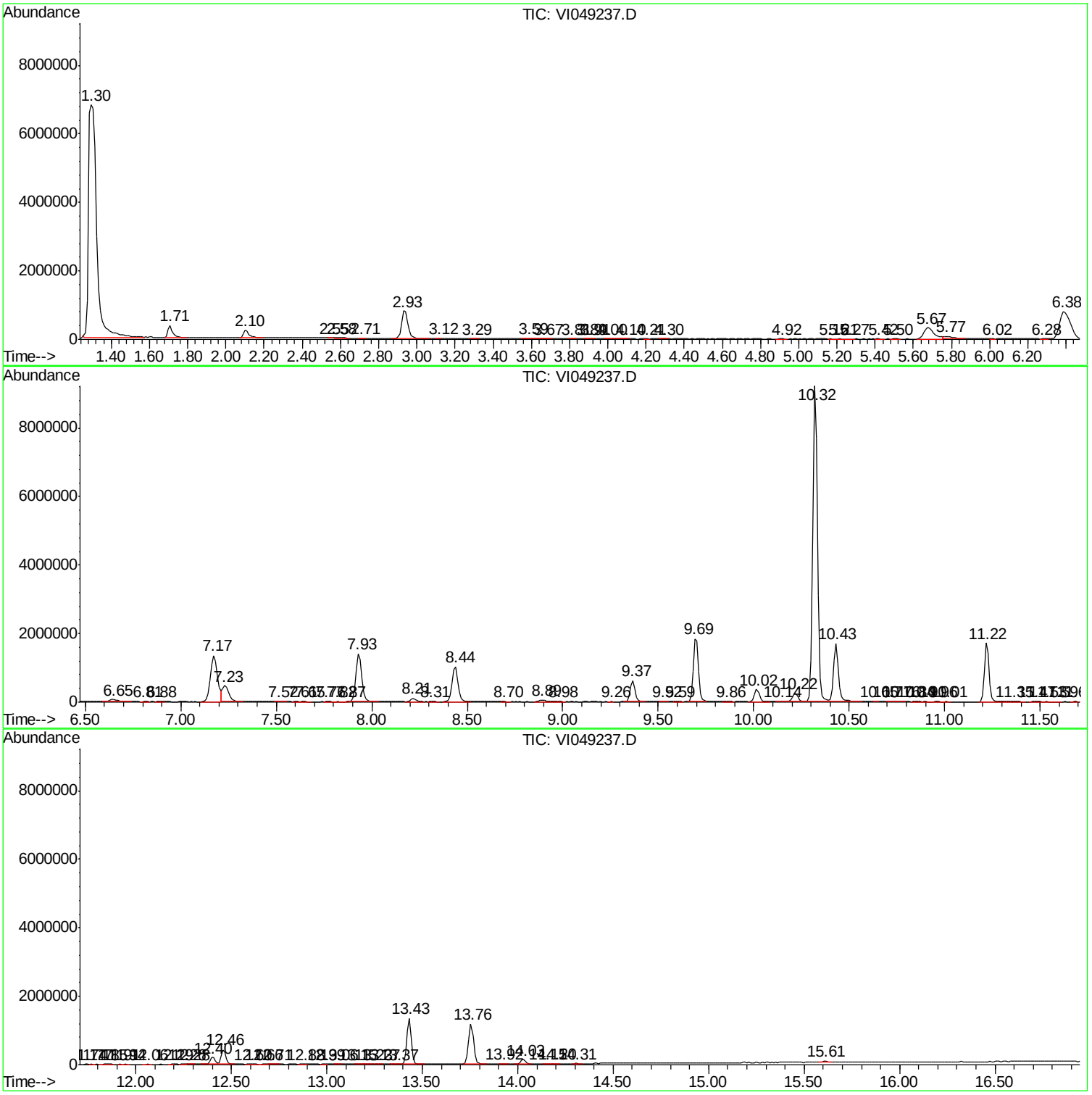
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049237.D
Acq On : 4 May 2016 21:02
Operator : FY/SY
Sample : H2834-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4094

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049237.D
Acq On : 4 May 2016 21:02
Operator : FY/SY
Sample : H2834-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4094

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049237.D
Acq On : 4 May 2016 21:02
Operator : FY/SY
Sample : H2834-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4094

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4094DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-05DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049258.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4094DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-05DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049258.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	27	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4094DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-05DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049258.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4094DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-05DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049258.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 5.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

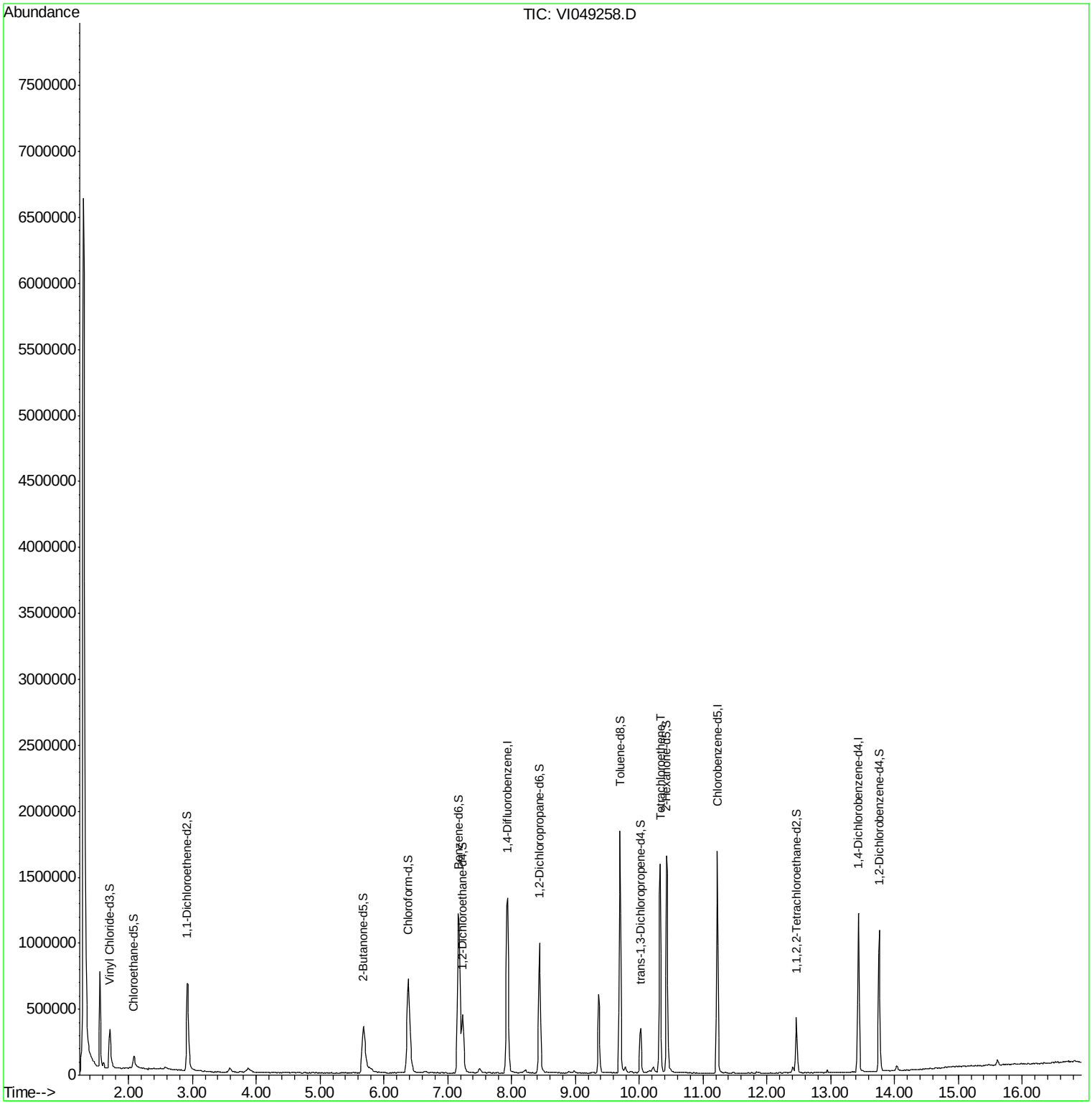
EPA-designated Registry Number.

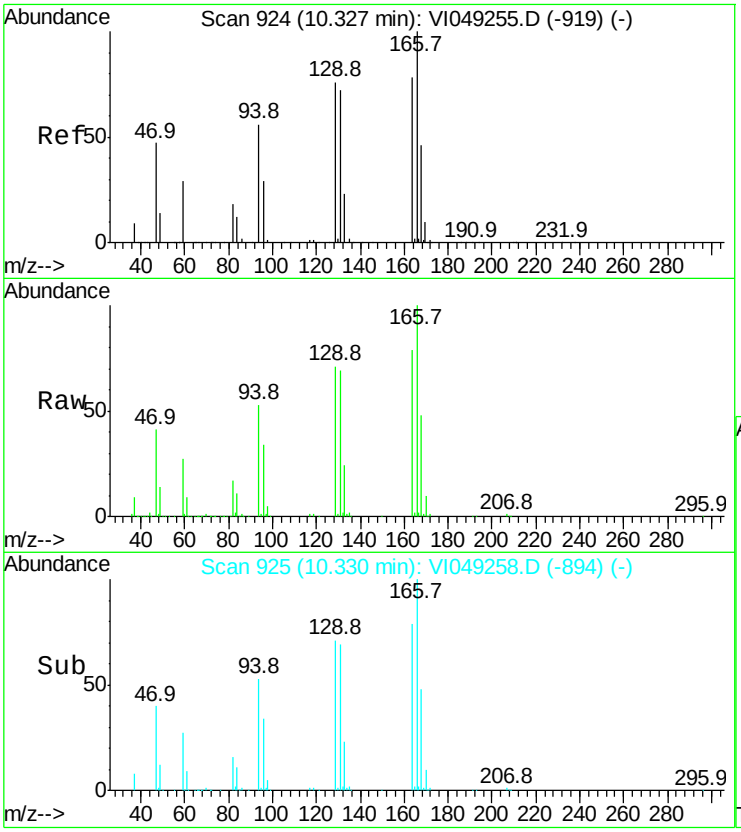
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049258.D
Acq On : 5 May 2016 18:31
Operator : FY/SY
Sample : H2834-05DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4094DL

Quant Time: May 06 10:19:10 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration



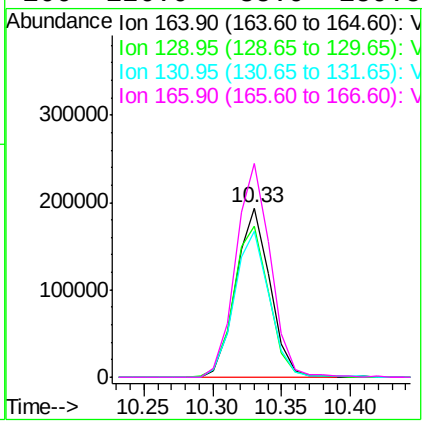


#47
Tetrachloroethene
Concen: 5.32 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.00 min
Lab File: VI049258.D
Acq: 5 May 2016 18:31

Instrument :
MSVOA_I
ClientSampleId :
H4094DL

Tgt Ion:164 Resp: 334876

Ion	Ratio	Lower	Upper
164	100		
129	89.5	62.1	115.3
131	86.3	60.6	112.6
166	126.0	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049258.D
Acq On : 5 May 2016 18:31
Operator : FY/SY
Sample : H2834-05DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4094DL

Quant Time: May 06 10:19:10 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1222187	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	807048	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	297649	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	354998	4.72	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 94.40%			
7) Chloroethane-d5	2.08	69	101281	2.43	ug/L	-0.03
Spiked Amount 5.000	Range 65 - 130		Recovery = 48.60%#			
11) 1,1-Dichloroethene-d2	2.92	63	582704	3.29	ug/L	-0.03
Spiked Amount 5.000	Range 60 - 125		Recovery = 65.80%			
20) 2-Butanone-d5	5.68	46	858554	52.70	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 105.40%			
24) Chloroform-d	6.38	84	885254	4.62	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 92.40%			
26) 1,2-Dichloroethane-d4	7.23	65	398440	5.09	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.80%			
32) Benzene-d6	7.17	84	1564908	4.98	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.60%			
36) 1,2-Dichloropropane-d6	8.44	67	443506	5.02	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 100.40%			
41) Toluene-d8	9.70	98	1122084	4.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.80%			
43) trans-1,3-Dichloropropene-	10.03	79	168904	4.85	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 97.00%			
46) 2-Hexanone-d5	10.43	63	578712	52.68	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 105.36%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	188232	4.68	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 93.60%			
63) 1,2-Dichlorobenzene-d4	13.77	152	244267	4.68	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.60%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.33	164	334876	5.32	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049258.D
Acq On : 5 May 2016 18:31
Operator : FY/SY
Sample : H2834-05DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4094DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.295	4	7	30	rVB	6577181	15301043	100.00%	29.495%
2	1.551	30	33	37	rVV	725056	876495	5.73%	1.690%
3	1.610	37	39	42	rVV2	42132	53468	0.35%	0.103%
4	1.709	45	49	59	rVB	293416	555113	3.63%	1.070%
5	1.915	68	70	72	rBV3	10171	16494	0.11%	0.032%
6	2.024	78	81	82	rBV3	12837	22474	0.15%	0.043%
7	2.083	84	87	94	rVB	87144	187915	1.23%	0.362%
8	2.319	109	111	112	rBV2	9138	8005	0.05%	0.015%
9	2.575	135	137	138	rBV2	15371	16395	0.11%	0.032%
10	2.919	168	172	187	rBV	666427	1641839	10.73%	3.165%
11	3.352	213	216	219	rVB4	4304	8359	0.05%	0.016%
12	3.411	219	222	223	rVB3	4104	6421	0.04%	0.012%
13	3.431	223	224	227	rVB3	4403	6395	0.04%	0.012%
14	3.588	236	240	251	rVB	32061	95698	0.63%	0.184%
15	3.736	253	255	256	rBV2	3162	5284	0.03%	0.010%
16	3.874	262	269	277	rBV3	29443	126039	0.82%	0.243%
17	4.238	304	306	307	rBV2	3949	6375	0.04%	0.012%
18	4.337	315	316	319	rVB3	4407	5356	0.04%	0.010%
19	4.415	322	324	325	rBV2	5196	6880	0.04%	0.013%
20	4.445	325	327	331	rVV5	4221	7793	0.05%	0.015%
21	4.494	331	332	336	rVB3	3724	5533	0.04%	0.011%
22	4.553	336	338	341	rBV4	2817	6829	0.04%	0.013%
23	4.760	354	359	362	rBV7	2022	7388	0.05%	0.014%
24	4.888	368	372	373	rBV3	3580	6717	0.04%	0.013%
25	4.947	375	378	380	rVB4	3328	6260	0.04%	0.012%
26	4.996	382	383	386	rBV3	4211	5547	0.04%	0.011%
27	5.232	406	407	409	rVB2	4791	5023	0.03%	0.010%
28	5.350	417	419	420	rBV	4956	5698	0.04%	0.011%
29	5.439	426	428	430	rBV3	3637	5121	0.03%	0.010%
30	5.518	434	436	439	rBV3	4298	7609	0.05%	0.015%
31	5.675	446	452	472	rBV	353894	1468214	9.60%	2.830%
32	5.921	475	477	479	rVV3	8138	12601	0.08%	0.024%
33	5.990	482	484	489	rVB6	3907	8312	0.05%	0.016%
34	6.167	500	502	504	rBV3	3965	5346	0.03%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049258.D
Acq On : 5 May 2016 18:31
Operator : FY/SY
Sample : H2834-05DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4094DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.256	508	511	513	rBV4	4132	6373	0.04%	0.012%
36	6.384	517	524	534	rBV	713193	2275763	14.87%	4.387%
37	6.640	546	550	557	rVB7	14321	46533	0.30%	0.090%
38	6.895	574	576	580	rBV5	4991	10141	0.07%	0.020%
39	6.974	582	584	587	rVB4	4610	6691	0.04%	0.013%
40	7.171	597	604	608	rBV	1208936	3252713	21.26%	6.270%
41	7.230	608	610	621	rVB	439327	1047144	6.84%	2.018%
42	7.506	634	638	649	rVB3	31604	93426	0.61%	0.180%
43	7.712	658	659	662	rBV2	3953	7127	0.05%	0.014%
44	7.850	671	673	675	rVB2	4266	5209	0.03%	0.010%
45	7.939	675	682	689	rBV	1331509	3003850	19.63%	5.790%
46	8.145	700	703	704	rBV3	3595	6362	0.04%	0.012%
47	8.224	704	711	714	rVV5	22868	64787	0.42%	0.125%
48	8.263	714	715	720	rVB4	7140	10865	0.07%	0.021%
49	8.441	728	733	741	rBV	987906	2114385	13.82%	4.076%
50	8.549	741	744	745	rVB2	4716	6481	0.04%	0.012%
51	8.716	757	761	762	rVB4	3786	8097	0.05%	0.016%
52	8.746	762	764	766	rVB2	5250	7587	0.05%	0.015%
53	8.785	766	768	770	rVB3	3849	5144	0.03%	0.010%
54	8.893	776	779	782	rBV4	11979	25837	0.17%	0.050%
55	8.982	784	788	793	rVB5	15929	33880	0.22%	0.065%
56	9.366	823	827	837	rBV	593665	1073667	7.02%	2.070%
57	9.484	837	839	840	rVV2	4958	4985	0.03%	0.010%
58	9.700	856	861	867	rBV	1838238	3289062	21.50%	6.340%
59	9.779	867	869	876	rVV3	48396	106171	0.69%	0.205%
60	9.868	876	878	883	rVB3	14040	34681	0.23%	0.067%
61	9.927	883	884	888	rBV4	4138	8728	0.06%	0.017%
62	10.025	889	894	899	rVV	338123	587197	3.84%	1.132%
63	10.084	899	900	902	rVV2	5127	6514	0.04%	0.013%
64	10.163	902	908	910	rVV5	16554	49352	0.32%	0.095%
65	10.222	910	914	920	rVV	46701	122221	0.80%	0.236%
66	10.330	920	925	931	rVV	1581785	2848933	18.62%	5.492%
67	10.429	931	935	947	rVV	1645364	3020568	19.74%	5.823%
68	10.606	951	953	956	rVV4	7214	11793	0.08%	0.023%
69	10.793	971	972	976	rVB4	4773	8776	0.06%	0.017%
70	10.862	976	979	980	rBV3	4419	8262	0.05%	0.016%
71	10.970	986	990	991	rVB3	2457	5337	0.03%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049258.D
Acq On : 5 May 2016 18:31
Operator : FY/SY
Sample : H2834-05DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4094DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.226	1011	1016	1026	rBV	1684375	2839954	18.56%	5.474%
73	11.354	1026	1029	1035	rVB5	7226	16825	0.11%	0.032%
74	11.472	1039	1041	1049	rVB9	7996	18590	0.12%	0.036%
75	11.580	1051	1052	1054	rBV	4571	5890	0.04%	0.011%
76	11.767	1067	1071	1073	rBV5	3954	8891	0.06%	0.017%
77	11.836	1076	1078	1082	rBV2	11897	19503	0.13%	0.038%
78	11.994	1092	1094	1098	rBV5	3483	7351	0.05%	0.014%
79	12.062	1098	1101	1103	rBV4	3419	5223	0.03%	0.010%
80	12.200	1111	1115	1120	rBV7	8869	25381	0.17%	0.049%
81	12.269	1120	1122	1126	rBV5	4399	12353	0.08%	0.024%
82	12.407	1128	1136	1138	rBV2	46018	93581	0.61%	0.180%
83	12.466	1138	1142	1151	rVB	421933	726927	4.75%	1.401%
84	12.584	1153	1154	1158	rBV4	4597	5793	0.04%	0.011%
85	12.751	1168	1171	1173	rBV3	6832	11329	0.07%	0.022%
86	12.929	1185	1189	1190	rBV4	4570	7950	0.05%	0.015%
87	12.948	1190	1191	1192	rVB	23712	13990	0.09%	0.027%
88	13.096	1205	1206	1209	rVB3	4158	6038	0.04%	0.012%
89	13.135	1209	1210	1213	rBV3	3461	6472	0.04%	0.012%
90	13.332	1229	1230	1232	rBV2	7108	8557	0.06%	0.016%
91	13.431	1236	1240	1247	rBV	1205846	2205131	14.41%	4.251%
92	13.657	1262	1263	1269	rBV6	4094	10299	0.07%	0.020%
93	13.765	1269	1274	1281	rBV	1074449	1861932	12.17%	3.589%
94	13.992	1294	1297	1298	rVV3	6149	9316	0.06%	0.018%
95	14.041	1298	1302	1306	rVV2	37657	84381	0.55%	0.163%
96	14.139	1308	1312	1313	rBV4	5448	8894	0.06%	0.017%
97	14.198	1315	1318	1321	rBV5	6710	16014	0.10%	0.031%
98	14.247	1321	1323	1324	rBV2	5673	6079	0.04%	0.012%
99	14.740	1371	1373	1374	rBV2	5954	8140	0.05%	0.016%
100	15.615	1459	1462	1468	rVB	44911	91959	0.60%	0.177%

Sum of corrected areas: 51877424

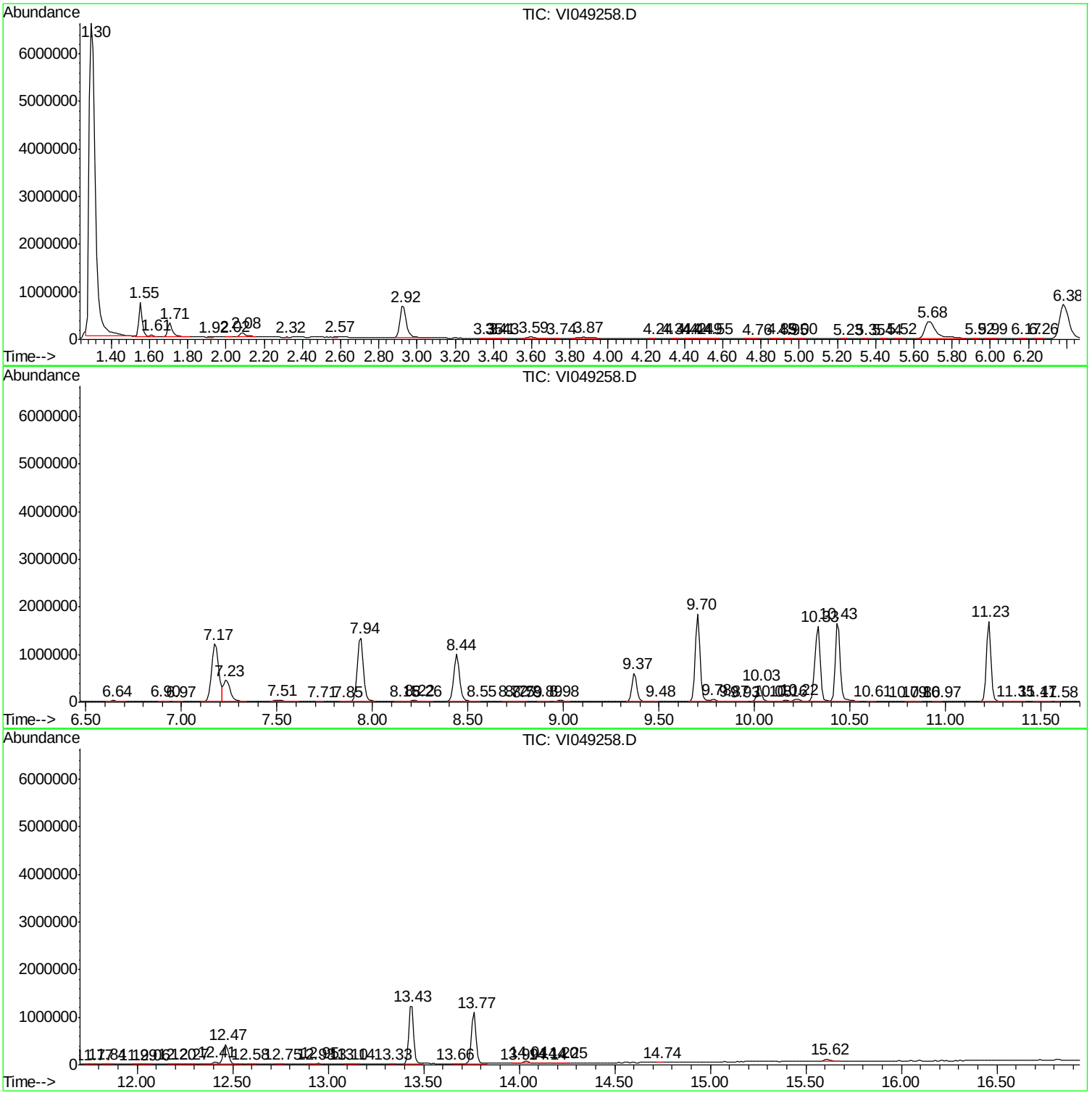
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049258.D
Acq On : 5 May 2016 18:31
Operator : FY/SY
Sample : H2834-05DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4094DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049258.D
Acq On : 5 May 2016 18:31
Operator : FY/SY
Sample : H2834-05DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4094DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049258.D
Acq On : 5 May 2016 18:31
Operator : FY/SY
Sample : H2834-05DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4094DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4102

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049270.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.12	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.5	
71-55-6	1,1,1-Trichloroethane	0.40	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.39	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4102

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049270.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	24	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4102

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049270.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4102

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049270.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

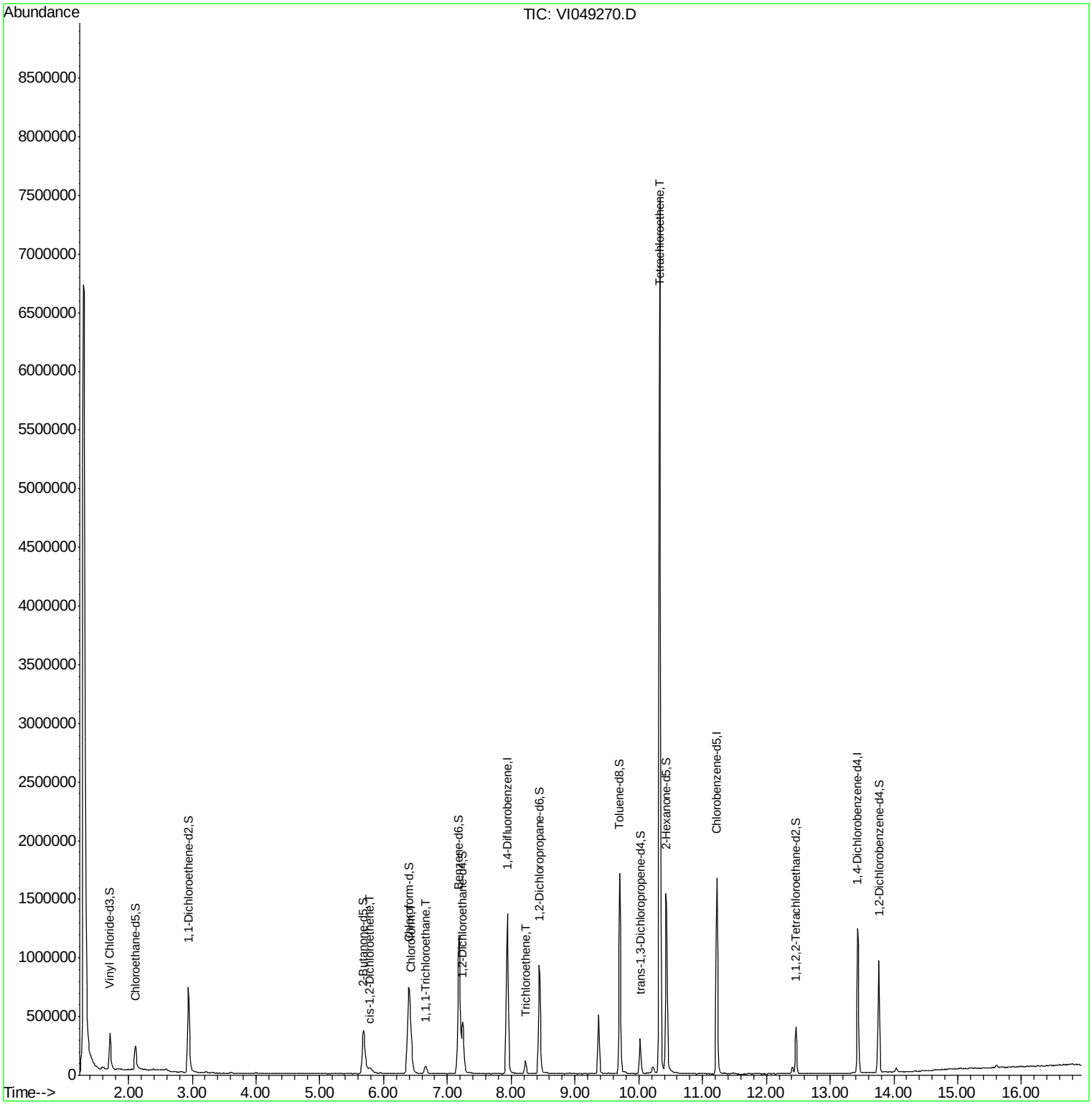
EPA-designated Registry Number.

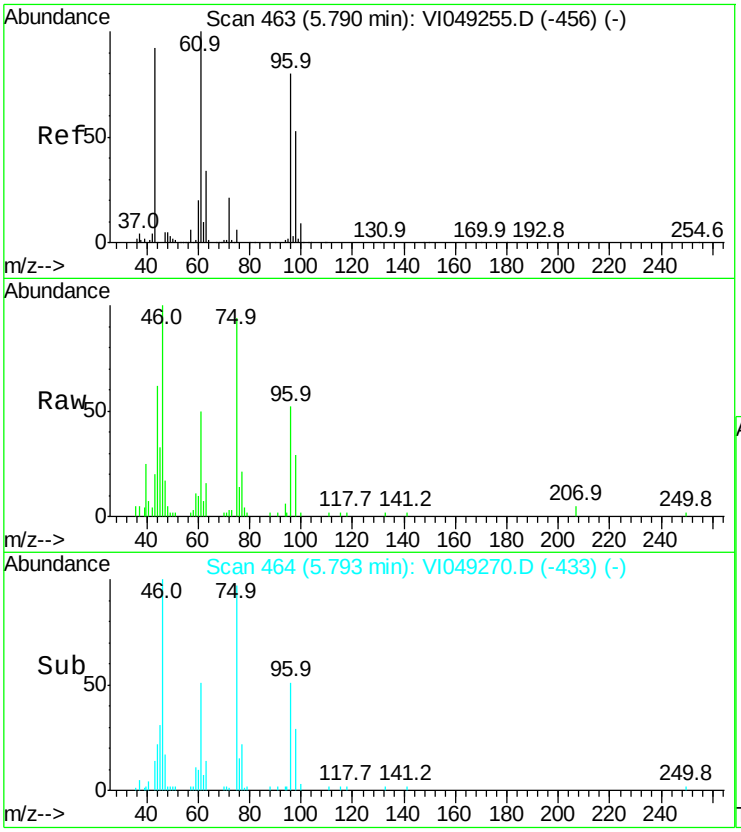
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049270.D
Acq On : 6 May 2016 00:50
Operator : FY/SY
Sample : H2834-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 28 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4102

Quant Time: May 06 06:55:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration



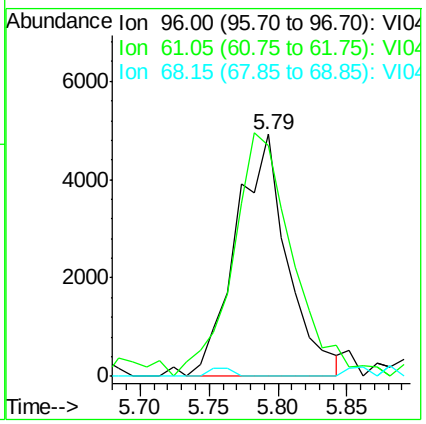


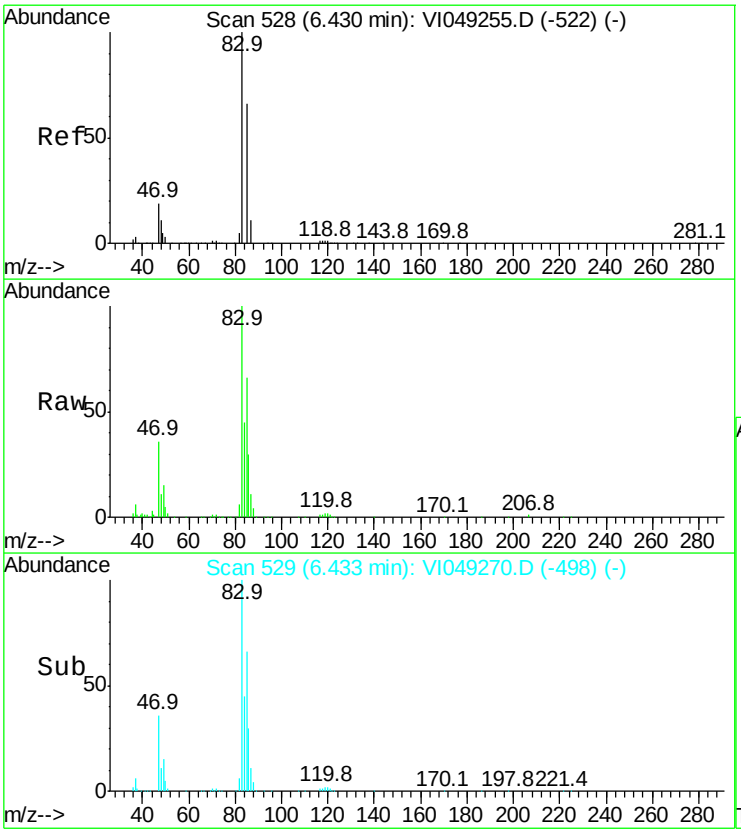
#22
cis-1,2-Dichloroethene
Concen: 0.12 ug/L
RT: 5.79 min Scan# 464
Delta R.T. 0.00 min
Lab File: VI049270.D
Acq: 6 May 2016 00:50

Instrument : MSVOA_I
ClientSampleId : H4102

Tgt Ion: 96 Resp: 12830

Ion	Ratio	Lower	Upper
96	100		
61	95.5	82.1	152.5
68	0.0	0.0	0.0

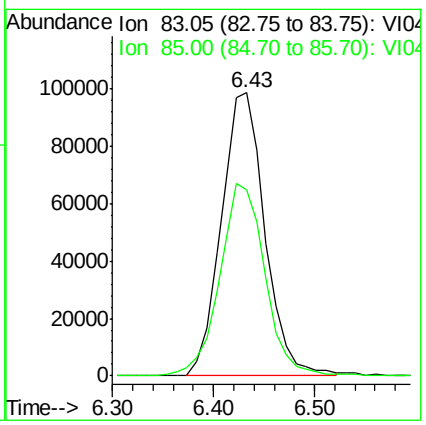


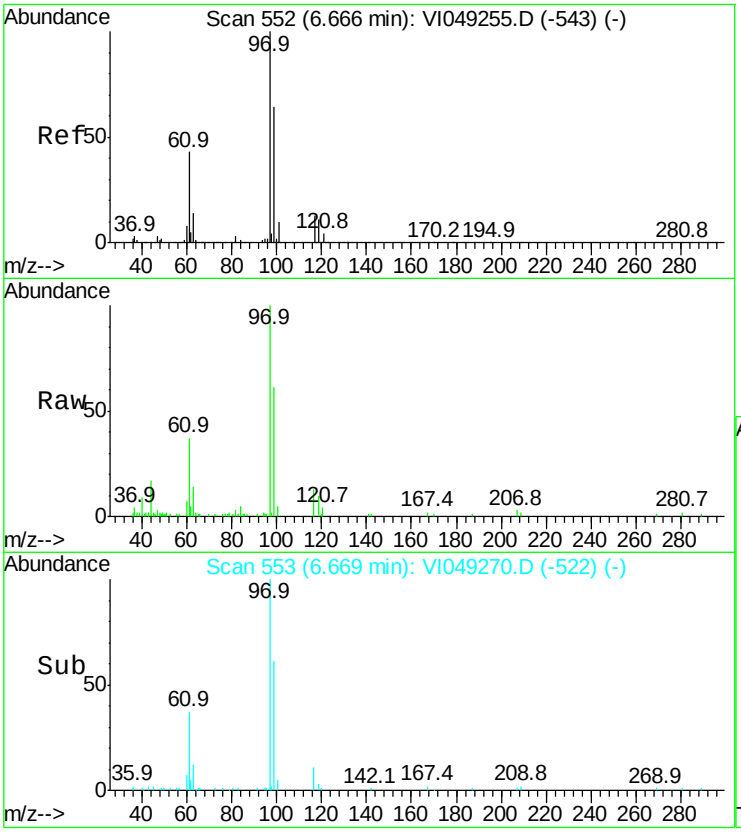


#25
Chloroform
Concen: 1.54 ug/L
RT: 6.43 min Scan# 529
Delta R.T. 0.00 min
Lab File: VI049270.D
Acq: 6 May 2016 00:50

Tgt Ion: 83 Resp: 295075

Ion	Ratio	Lower	Upper
83	100		
85	65.6	47.3	87.8



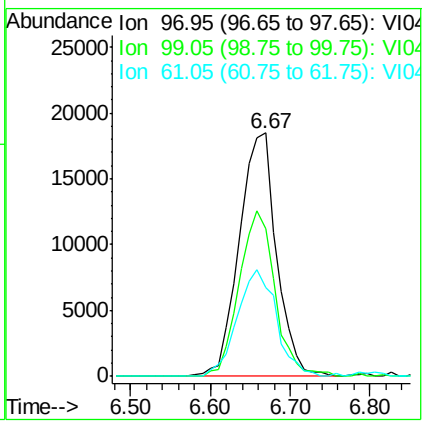


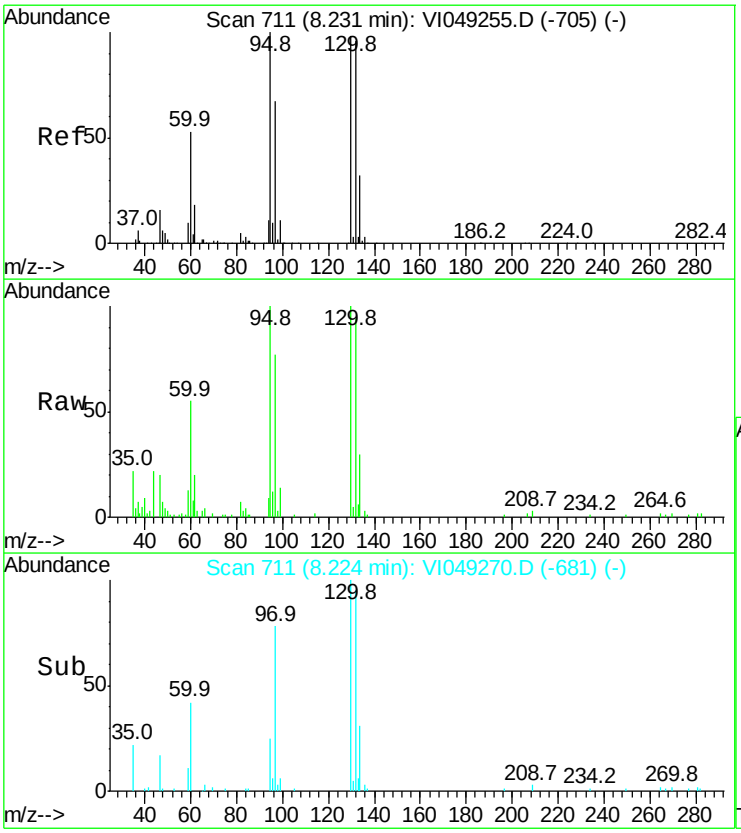
#29
1,1,1-Trichloroethane
Concen: 0.40 ug/L
RT: 6.67 min Scan# 553
Delta R.T. 0.00 min
Lab File: VI049270.D
Acq: 6 May 2016 00:50

Instrument : MSVOA_I
ClientSampleId : H4102

Tgt Ion: 97 Resp: 59588

Ion	Ratio	Lower	Upper
97	100		
99	65.6	51.1	76.7
61	46.0	33.3	49.9

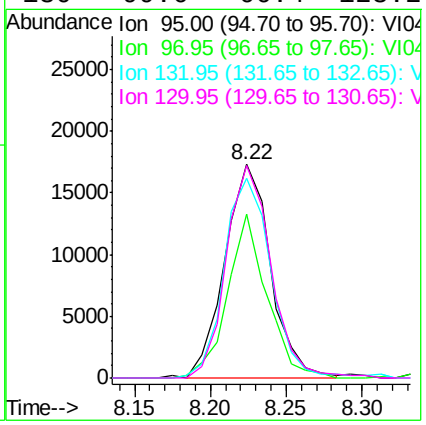


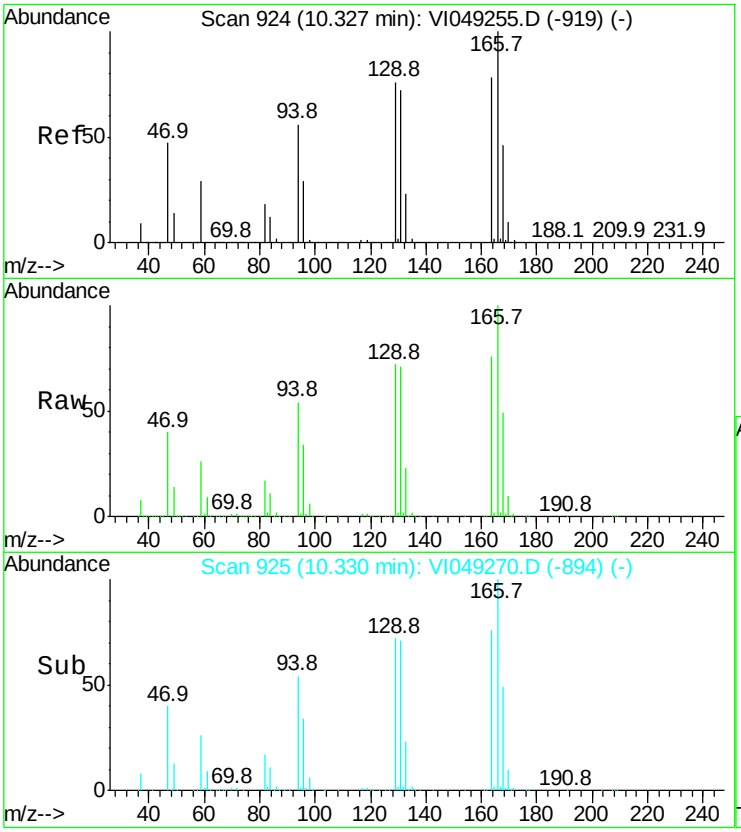


#34
Trichloroethene
Concen: 0.39 ug/L
RT: 8.22 min Scan# 711
Delta R.T. -0.01 min
Lab File: VI049270.D
Acq: 6 May 2016 00:50

Tgt Ion: 95 Resp: 36304

Ion	Ratio	Lower	Upper
95	100		
97	76.8	45.8	85.2
132	93.6	63.9	118.7
130	99.6	66.4	123.2



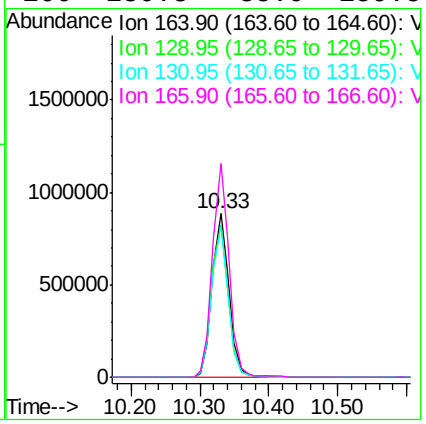


#47
Tetrachloroethene
Concen: 24.44 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.00 min
Lab File: VI049270.D
Acq: 6 May 2016 00:50

Instrument :
MSVOA_I
ClientSampleId :
H4102

Tgt Ion:164 Resp: 1496369

Ion	Ratio	Lower	Upper
164	100		
129	93.6	62.1	115.3
131	92.3	60.6	112.6
166	130.8	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049270.D
Acq On : 6 May 2016 00:50
Operator : FY/SY
Sample : H2834-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 28 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4102

Quant Time: May 06 06:55:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1194366	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	784610	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	283029	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	313222	4.26	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 85.20%			
7) Chloroethane-d5	2.11	69	223740	5.49	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 109.80%			
11) 1,1-Dichloroethene-d2	2.94	63	574704	3.32	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 66.40%			
20) 2-Butanone-d5	5.68	46	871716	54.76	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 109.52%			
24) Chloroform-d	6.39	84	873636	4.67	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.40%			
26) 1,2-Dichloroethane-d4	7.24	65	395455	5.17	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.40%			
32) Benzene-d6	7.18	84	1490717	4.88	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.60%			
36) 1,2-Dichloropropane-d6	8.44	67	427402	4.97	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 99.40%			
41) Toluene-d8	9.70	98	1019078	4.52	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.40%			
43) trans-1,3-Dichloropropene-	10.02	79	150745	4.45	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 89.00%			
46) 2-Hexanone-d5	10.43	63	533507	49.95	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 99.90%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	176672	4.52	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 90.40%			
63) 1,2-Dichlorobenzene-d4	13.76	152	230891	4.65	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.00%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.79	96	12830	0.12	ug/L	80
25) Chloroform	6.43	83	295075	1.54	ug/L	98
29) 1,1,1-Trichloroethane	6.67	97	59588	0.40	ug/L	96
34) Trichloroethene	8.22	95	36304	0.39	ug/L	94
47) Tetrachloroethene	10.33	164	1496369	24.44	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049270.D
Acq On : 6 May 2016 00:50
Operator : FY/SY
Sample : H2834-18
Misc : 25mL/MSVOA I/WATER
ALS Vial : 28 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4102

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.295	4	7	32	rVB	6682131	18288259	100.00%	29.017%
2	1.580	34	36	42	rBV3	21193	50786	0.28%	0.081%
3	1.708	46	49	56	rVB	308533	498699	2.73%	0.791%
4	1.994	76	78	81	rBV4	6736	10886	0.06%	0.017%
5	2.112	86	90	96	rBV	202404	407956	2.23%	0.647%
6	2.388	116	118	120	rVB3	9992	12034	0.07%	0.019%
7	2.584	136	138	143	rVB2	15374	32038	0.18%	0.051%
8	2.821	158	162	163	rBV3	4188	8793	0.05%	0.014%
9	2.939	169	174	191	rVB	728958	1659439	9.07%	2.633%
10	3.116	191	192	195	rVV2	4848	5361	0.03%	0.009%
11	3.224	198	203	208	rVB5	14153	40619	0.22%	0.064%
12	3.608	237	242	247	rVB8	6652	19236	0.11%	0.031%
13	3.706	249	252	254	rBV4	3938	6736	0.04%	0.011%
14	3.756	254	257	258	rBV3	3170	5785	0.03%	0.009%
15	3.815	260	263	264	rBV3	3610	5024	0.03%	0.008%
16	3.992	279	281	283	rBV3	6252	12146	0.07%	0.019%
17	4.110	291	293	295	rVB3	4551	6915	0.04%	0.011%
18	4.169	295	299	300	rBV3	4282	8374	0.05%	0.013%
19	4.218	303	304	306	rBV2	5213	5377	0.03%	0.009%
20	4.297	309	312	317	rBV6	3191	7881	0.04%	0.013%
21	4.376	317	320	323	rVB4	3565	6974	0.04%	0.011%
22	4.454	325	328	329	rBV2	3291	5420	0.03%	0.009%
23	4.740	350	357	362	rBV5	5955	27245	0.15%	0.043%
24	4.907	372	374	376	rBV2	3411	5043	0.03%	0.008%
25	5.419	422	426	427	rBV4	3116	8247	0.05%	0.013%
26	5.488	432	433	436	rVB3	4177	7244	0.04%	0.011%
27	5.606	444	445	447	rBV2	3051	5122	0.03%	0.008%
28	5.685	447	453	461	rBV	368938	1264721	6.92%	2.007%
29	5.940	478	479	484	rVB4	5472	12007	0.07%	0.019%
30	6.009	484	486	488	rVB3	3832	5861	0.03%	0.009%
31	6.393	517	525	537	rBV2	739082	2800555	15.31%	4.444%
32	6.659	545	552	559	rVB3	59579	184538	1.01%	0.293%
33	6.974	582	584	586	rVB3	5203	7656	0.04%	0.012%
34	7.033	586	590	592	rBV5	3320	7775	0.04%	0.012%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049270.D
Acq On : 6 May 2016 00:50
Operator : FY/SY
Sample : H2834-18
Misc : 25mL/MSVOA I/WATER
ALS Vial : 28 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4102

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.181	598	605	609	rBV	1187793	3180039	17.39%	5.046%
36	7.240	609	611	621	rVB	435624	976042	5.34%	1.549%
37	7.486	633	636	637	rBV3	3924	5021	0.03%	0.008%
38	7.623	648	650	651	rBV2	3543	5866	0.03%	0.009%
39	7.653	651	653	656	rVB3	5461	8362	0.05%	0.013%
40	7.722	656	660	663	rBV4	3001	6919	0.04%	0.011%
41	7.830	669	671	674	rVB4	3439	6533	0.04%	0.010%
42	7.938	676	682	689	rBV	1365985	2926804	16.00%	4.644%
43	8.224	706	711	719	rVB	109229	217540	1.19%	0.345%
44	8.440	725	733	740	rBV	925972	2043181	11.17%	3.242%
45	8.617	750	751	757	rBV5	5488	15936	0.09%	0.025%
46	8.686	757	758	762	rVV4	4212	9323	0.05%	0.015%
47	8.854	773	775	776	rBV2	3324	5095	0.03%	0.008%
48	8.913	776	781	786	rVV8	7689	19878	0.11%	0.032%
49	9.070	794	797	798	rBV3	3000	5068	0.03%	0.008%
50	9.178	804	808	810	rVB4	3671	8011	0.04%	0.013%
51	9.366	823	827	834	rBV	506120	967363	5.29%	1.535%
52	9.523	839	843	846	rVB6	7614	11928	0.07%	0.019%
53	9.700	856	861	867	rBV	1707622	2992615	16.36%	4.748%
54	9.769	867	868	874	rVV2	18853	40071	0.22%	0.064%
55	10.025	890	894	899	rVV	297567	525398	2.87%	0.834%
56	10.094	899	901	902	rVV2	5076	6597	0.04%	0.010%
57	10.123	902	904	907	rVV4	7904	17431	0.10%	0.028%
58	10.222	907	914	920	rVV	57418	159809	0.87%	0.254%
59	10.330	920	925	932	rVV	7459786	12728645	69.60%	20.196%
60	10.428	932	935	948	rVV	1534885	2889252	15.80%	4.584%
61	10.596	950	952	955	rVV4	5015	11228	0.06%	0.018%
62	10.921	984	985	988	rBV3	2814	5216	0.03%	0.008%
63	11.226	1011	1016	1024	rBV	1669079	2742959	15.00%	4.352%
64	11.344	1026	1028	1033	rVB6	9169	20935	0.11%	0.033%
65	11.482	1036	1042	1045	rBV6	8495	20371	0.11%	0.032%
66	11.649	1054	1059	1060	rBV3	2473	5419	0.03%	0.009%
67	11.806	1074	1075	1077	rBV2	3746	5370	0.03%	0.009%
68	11.856	1077	1080	1082	rBV3	6049	7909	0.04%	0.013%
69	12.072	1098	1102	1103	rVB4	3392	5855	0.03%	0.009%
70	12.121	1103	1107	1109	rVB5	3583	8157	0.04%	0.013%
71	12.161	1109	1111	1113	rBV3	4422	7436	0.04%	0.012%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049270.D
Acq On : 6 May 2016 00:50
Operator : FY/SY
Sample : H2834-18
Misc : 25mL/MSVOA I/WATER
ALS Vial : 28 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4102

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	12.279	1116	1123	1125	rBV8	5344	14300	0.08%	0.023%
73	12.407	1131	1136	1138	rBV2	53739	96705	0.53%	0.153%
74	12.466	1138	1142	1150	rVB	403949	685141	3.75%	1.087%
75	12.584	1150	1154	1155	rVB4	4362	5721	0.03%	0.009%
76	12.604	1155	1156	1161	rVB4	3810	6671	0.04%	0.011%
77	12.692	1161	1165	1168	rBV5	3627	10093	0.06%	0.016%
78	12.751	1168	1171	1173	rVB4	3523	5749	0.03%	0.009%
79	12.850	1176	1181	1185	rBV7	4520	14159	0.08%	0.022%
80	13.046	1198	1201	1204	rVB5	4042	6802	0.04%	0.011%
81	13.086	1204	1205	1209	rBV4	4601	10071	0.06%	0.016%
82	13.194	1213	1216	1218	rVB3	3542	4973	0.03%	0.008%
83	13.263	1218	1223	1224	rBV4	3391	9281	0.05%	0.015%
84	13.361	1229	1233	1236	rBV4	6401	15068	0.08%	0.024%
85	13.430	1236	1240	1246	rBV	1228436	2114761	11.56%	3.355%
86	13.607	1255	1258	1260	rVB3	4625	8786	0.05%	0.014%
87	13.657	1260	1263	1265	rBV3	4832	9696	0.05%	0.015%
88	13.765	1269	1274	1280	rVV	952048	1733019	9.48%	2.750%
89	13.863	1282	1284	1285	rVV2	5557	7794	0.04%	0.012%
90	13.893	1285	1287	1289	rVB3	7732	8356	0.05%	0.013%
91	13.981	1294	1296	1297	rBV2	7192	8133	0.04%	0.013%
92	14.031	1297	1301	1305	rBV2	35239	69331	0.38%	0.110%
93	14.139	1310	1312	1314	rVB3	6419	8889	0.05%	0.014%
94	14.168	1314	1315	1316	rBV	5263	5279	0.03%	0.008%
95	14.247	1321	1323	1325	rBV3	5723	8033	0.04%	0.013%
96	14.287	1325	1327	1328	rBV2	4986	7747	0.04%	0.012%
97	14.316	1328	1330	1333	rVV4	5566	8391	0.05%	0.013%
98	15.025	1400	1402	1403	rBV2	7145	7743	0.04%	0.012%
99	15.615	1458	1462	1466	rBV2	25545	64788	0.35%	0.103%
100	16.255	1525	1527	1528	rBV2	10569	9419	0.05%	0.015%

Sum of corrected areas: 63025233

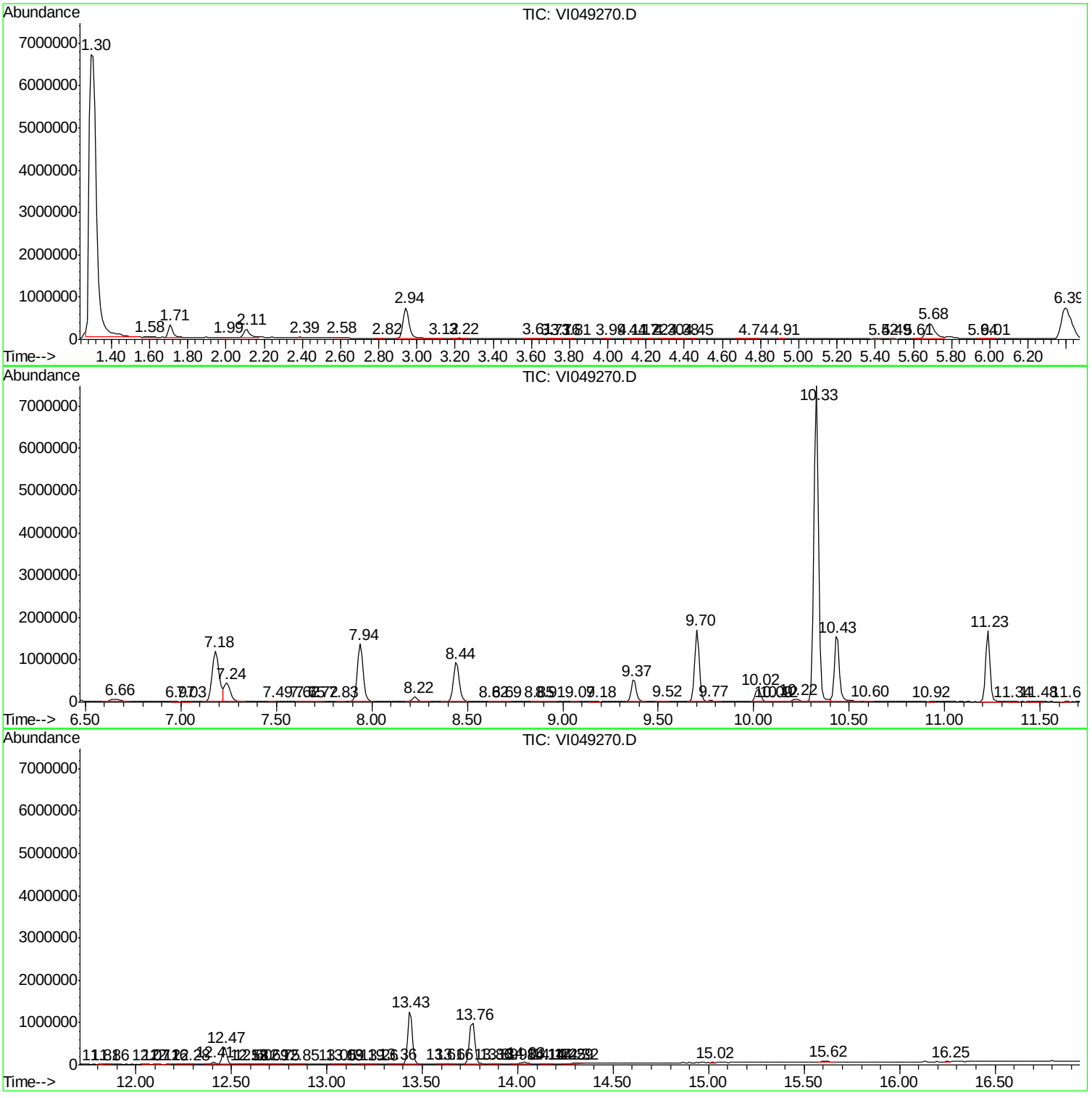
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049270.D
Acq On : 6 May 2016 00:50
Operator : FY/SY
Sample : H2834-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 28 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4102

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049270.D
Acq On : 6 May 2016 00:50
Operator : FY/SY
Sample : H2834-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 28 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4102

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049270.D
Acq On : 6 May 2016 00:50
Operator : FY/SY
Sample : H2834-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 28 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4102

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4102DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-18DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049281.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4102DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-18DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049281.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	23	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4102DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-18DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049281.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H4102DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-18DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049281.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 5.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

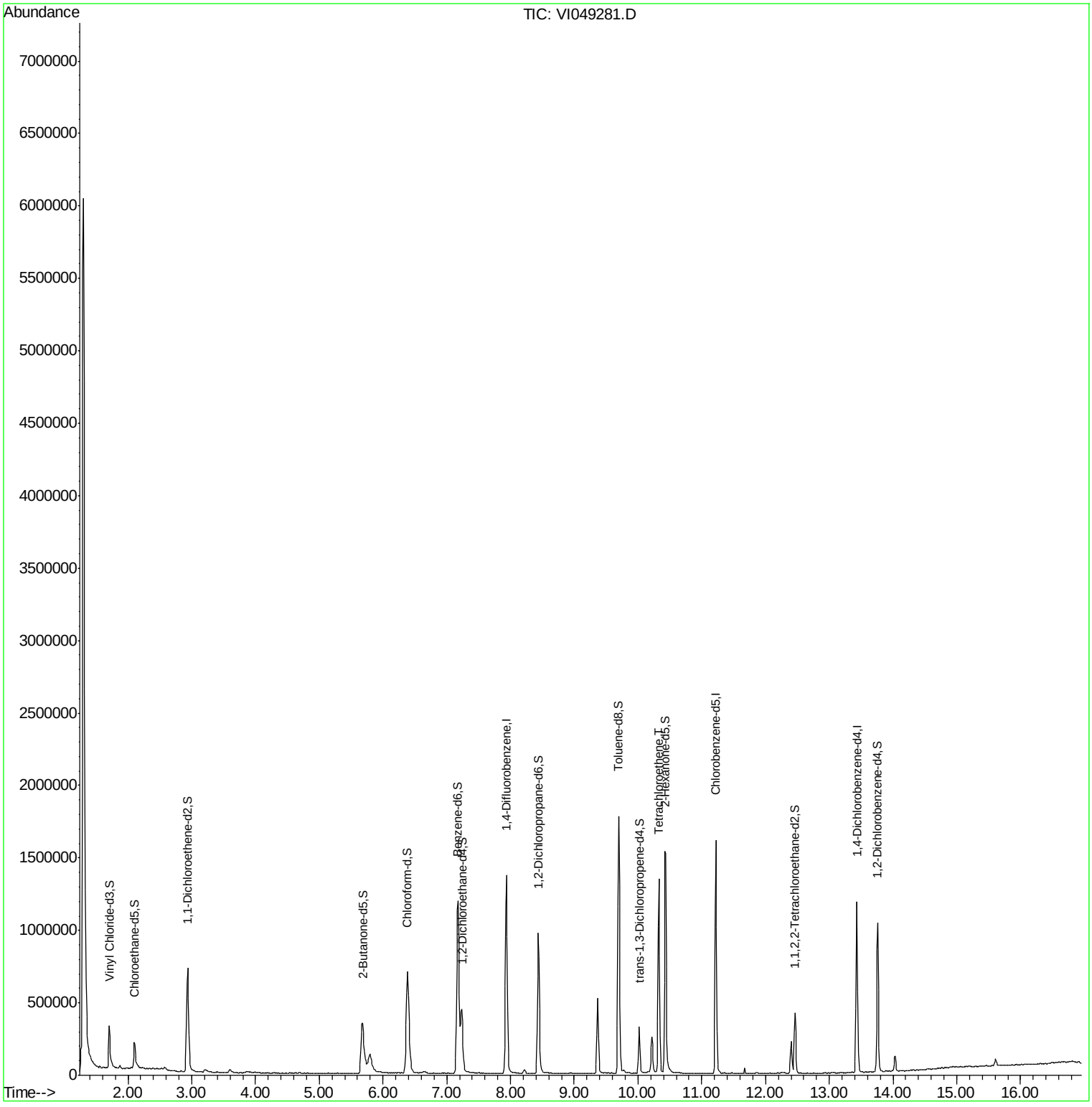
Quantitation Report (LSC Reviewed)

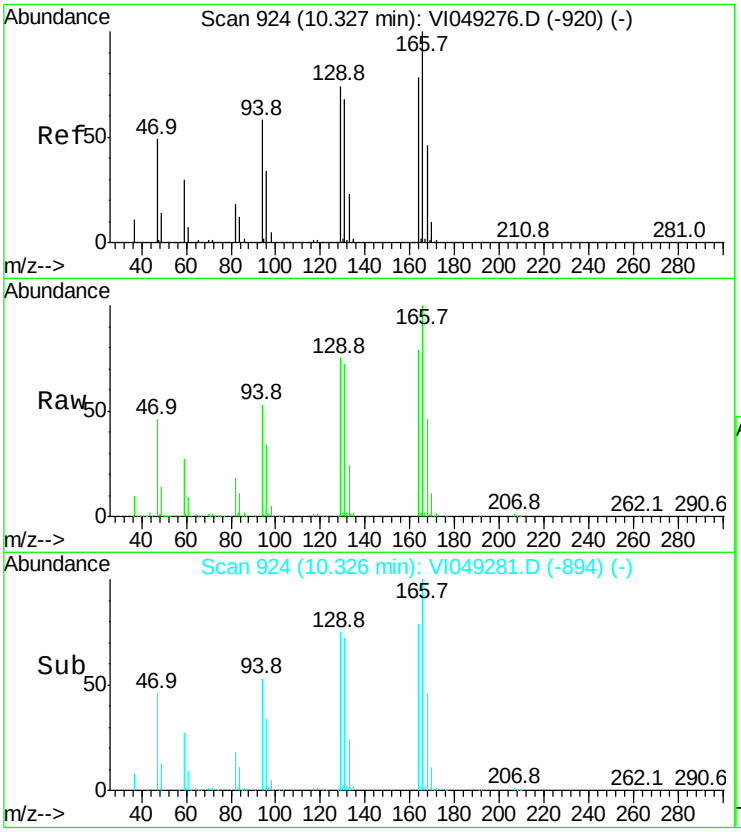
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049281.D
Acq On : 6 May 2016 13:52
Operator : FY/SY
Sample : H2834-18DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 07 04:37:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4102DL

Manual Integrations APPROVED
feifei
5/9/2016 12:05:12 PM

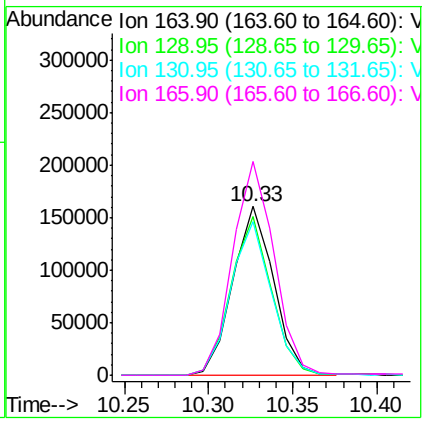




#47
Tetrachloroethene
Concen: 4.52 ug/L
RT: 10.33 min Scan# 924
Delta R.T. -0.00 min
Lab File: VI049281.D
Acq: 6 May 2016 13:52

Tgt Ion:164 Resp: 270682

Ion	Ratio	Lower	Upper
164	100		
129	94.5	62.1	115.3
131	90.9	60.6	112.6
166	126.7	85.9	159.5



Instrument :
MSVOA_I
ClientSampleId :
H4102DL

Manual Integrations APPROVED
feifei
5/9/2016 12:05:12 PM

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049281.D
Acq On : 6 May 2016 13:52
Operator : FY/SY
Sample : H2834-18DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4102DL

Manual Integrations APPROVED
feifei
5/9/2016 12:05:12 PM

Quant Time: May 07 04:37:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1200218	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	767967	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	282692	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	317423	4.30	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 86.00%			
7) Chloroethane-d5	2.11	69	200132	4.89	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 97.80%			
11) 1,1-Dichloroethene-d2	2.94	63	569404	3.27	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 65.40%			
20) 2-Butanone-d5	5.68	46	879445	54.97	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 109.94%			
24) Chloroform-d	6.38	84	885950	4.71	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.20%			
26) 1,2-Dichloroethane-d4	7.24	65	413037m	5.37	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.40%			
32) Benzene-d6	7.18	84	1550586	5.18	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.60%			
36) 1,2-Dichloropropane-d6	8.44	67	435455	5.18	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 103.60%			
41) Toluene-d8	9.70	98	1061452	4.81	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.20%			
43) trans-1,3-Dichloropropene-	10.02	79	159612	4.82	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 96.40%			
46) 2-Hexanone-d5	10.42	63	564470	54.00	ug/L	-0.01
Spiked Amount 50.000	Range 45 - 130		Recovery = 108.00%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	187613	4.90	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.00%			
63) 1,2-Dichlorobenzene-d4	13.76	152	235455	4.75	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 95.00%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.33	164	270682	4.52	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049281.D
Acq On : 6 May 2016 13:52
Operator : FY/SY
Sample : H2834-18DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4102DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.301	3	7	31	rVB	5998648	14354415	100.00%	28.849%
2	1.557	31	33	36	rVB	16669	24987	0.17%	0.050%
3	1.606	36	38	40	rBV3	7750	8523	0.06%	0.017%
4	1.705	45	48	58	rBV	288827	504842	3.52%	1.015%
5	1.872	63	65	69	rVB	24730	39024	0.27%	0.078%
6	1.931	69	71	72	rVB	6939	5905	0.04%	0.012%
7	1.971	72	75	76	rBV3	7053	10548	0.07%	0.021%
8	2.049	81	83	85	rBV2	9484	10820	0.08%	0.022%
9	2.099	85	88	96	rBV	182949	392003	2.73%	0.788%
10	2.295	106	108	111	rBV4	6040	12421	0.09%	0.025%
11	2.453	123	124	127	rVB3	6309	5770	0.04%	0.012%
12	2.571	134	136	149	rVB5	26520	89073	0.62%	0.179%
13	2.719	149	151	154	rVB4	5252	7728	0.05%	0.016%
14	2.837	160	163	165	rVB3	5043	8959	0.06%	0.018%
15	2.935	167	173	187	rBV	718862	1644557	11.46%	3.305%
16	3.201	197	200	208	rBV3	18375	63709	0.44%	0.128%
17	3.329	212	213	217	rVB4	3660	6578	0.05%	0.013%
18	3.595	235	240	248	rBV	24296	75365	0.53%	0.151%
19	3.703	248	251	254	rVB3	4938	9548	0.07%	0.019%
20	3.762	254	257	260	rVB4	3487	6472	0.05%	0.013%
21	3.890	263	270	272	rBV6	10319	35148	0.24%	0.071%
22	4.057	284	287	290	rVB4	3529	7313	0.05%	0.015%
23	4.126	293	294	297	rBV3	3543	5309	0.04%	0.011%
24	4.283	304	310	313	rBV3	5722	15768	0.11%	0.032%
25	4.480	328	330	334	rVB4	4102	5443	0.04%	0.011%
26	4.529	334	335	337	rVB2	4650	5408	0.04%	0.011%
27	4.569	337	339	341	rBV3	4036	6177	0.04%	0.012%
28	4.687	349	351	357	rVB7	3621	10250	0.07%	0.021%
29	5.140	394	397	400	rVB3	4229	6089	0.04%	0.012%
30	5.228	400	406	408	rVB6	3446	8182	0.06%	0.016%
31	5.327	414	416	419	rVB3	4415	7213	0.05%	0.014%
32	5.386	419	422	423	rBV3	3386	5678	0.04%	0.011%
33	5.435	423	427	429	rBV4	3823	8816	0.06%	0.018%
34	5.563	436	440	443	rVB5	3024	7847	0.05%	0.016%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049281.D
Acq On : 6 May 2016 13:52
Operator : FY/SY
Sample : H2834-18DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4102DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	5.681	443	452	458	rBV	348756	1257326	8.76%	2.527%
36	5.789	458	463	479	rVB	124370	561424	3.91%	1.128%
37	6.203	502	505	506	rBV3	4523	5402	0.04%	0.011%
38	6.380	516	523	536	rBV	699542	2275730	15.85%	4.574%
39	6.527	536	538	541	rVB4	3732	7293	0.05%	0.015%
40	6.655	546	551	557	rVB4	14368	49765	0.35%	0.100%
41	6.764	557	562	563	rBV4	2224	5061	0.04%	0.010%
42	6.823	566	568	572	rVB5	3006	5158	0.04%	0.010%
43	6.960	581	582	585	rVB3	5092	5143	0.04%	0.010%
44	7.020	585	588	589	rBV3	5637	6212	0.04%	0.012%
45	7.177	597	604	607	rBV	1189683	3151642	21.96%	6.334%
46	7.236	607	610	619	rVB	434053	1095024	7.63%	2.201%
47	7.492	635	636	640	rBV4	3764	5464	0.04%	0.011%
48	7.758	662	663	666	rBV3	3230	5053	0.04%	0.010%
49	7.935	675	681	691	rBV	1369470	2956052	20.59%	5.941%
50	8.220	705	710	713	rBV3	25169	57342	0.40%	0.115%
51	8.338	720	722	724	rVB3	3307	5453	0.04%	0.011%
52	8.368	724	725	727	rBV2	5231	7566	0.05%	0.015%
53	8.437	727	732	741	rBV	966621	2078012	14.48%	4.176%
54	8.614	749	750	754	rVB3	4514	6943	0.05%	0.014%
55	8.732	758	762	765	rVB6	3855	8732	0.06%	0.018%
56	8.791	765	768	769	rBV3	3276	6236	0.04%	0.013%
57	8.929	777	782	785	rVB7	3496	10229	0.07%	0.021%
58	9.254	812	815	816	rBV3	5205	8333	0.06%	0.017%
59	9.362	822	826	834	rBV	521823	1025954	7.15%	2.062%
60	9.539	842	844	847	rVB4	4681	6893	0.05%	0.014%
61	9.578	847	848	850	rBV2	4165	5465	0.04%	0.011%
62	9.697	855	860	866	rBV	1777439	3118189	21.72%	6.267%
63	9.775	866	868	874	rVB4	18424	37922	0.26%	0.076%
64	10.021	889	893	899	rBV	322513	553196	3.85%	1.112%
65	10.130	902	904	905	rVV2	6765	9541	0.07%	0.019%
66	10.169	905	908	909	rVV3	8027	17520	0.12%	0.035%
67	10.218	909	913	919	rVV	247722	506914	3.53%	1.019%
68	10.326	919	924	931	rVV	1339524	2321600	16.17%	4.666%
69	10.425	931	934	948	rVB	1526293	2924052	20.37%	5.877%
70	10.720	961	964	969	rVB7	3602	11648	0.08%	0.023%
71	11.222	1011	1015	1023	rVV	1611330	2681601	18.68%	5.389%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049281.D
Acq On : 6 May 2016 13:52
Operator : FY/SY
Sample : H2834-18DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4102DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.350	1027	1028	1034	rVB6	7878	10743	0.07%	0.022%
73	11.468	1038	1040	1046	rBV4	5364	14208	0.10%	0.029%
74	11.576	1047	1051	1053	rVB4	3346	6873	0.05%	0.014%
75	11.675	1059	1061	1062	rVB	38075	22636	0.16%	0.045%
76	11.734	1065	1067	1070	rVB4	2845	5025	0.04%	0.010%
77	11.852	1074	1079	1084	rVB9	8931	28724	0.20%	0.058%
78	11.941	1086	1088	1091	rBV3	2886	5671	0.04%	0.011%
79	12.068	1098	1101	1102	rVB2	6056	7227	0.05%	0.015%
80	12.118	1104	1106	1108	rBV3	3145	5498	0.04%	0.011%
81	12.196	1112	1114	1116	rBV2	7079	9084	0.06%	0.018%
82	12.285	1119	1123	1130	rVB9	7065	12146	0.08%	0.024%
83	12.403	1130	1135	1138	rBV	220362	402386	2.80%	0.809%
84	12.462	1138	1141	1147	rVB	417847	693465	4.83%	1.394%
85	12.551	1147	1150	1152	rVB4	3548	5294	0.04%	0.011%
86	12.935	1187	1189	1191	rVB3	3346	5378	0.04%	0.011%
87	12.984	1193	1194	1197	rBV3	4856	5537	0.04%	0.011%
88	13.063	1197	1202	1203	rBV5	4951	11844	0.08%	0.024%
89	13.181	1211	1214	1216	rBV3	2730	5459	0.04%	0.011%
90	13.358	1227	1232	1235	rBV7	5750	14890	0.10%	0.030%
91	13.437	1235	1240	1250	rBV	1180908	2120441	14.77%	4.262%
92	13.761	1268	1273	1279	rBV	1029735	1779231	12.40%	3.576%
93	14.037	1296	1301	1306	rVB	108080	208787	1.45%	0.420%
94	14.106	1306	1308	1309	rBV2	4658	6735	0.05%	0.014%
95	14.194	1316	1317	1320	rBV3	5446	8040	0.06%	0.016%
96	14.283	1323	1326	1327	rBV2	4952	9343	0.07%	0.019%
97	14.421	1338	1340	1341	rBV2	4988	7356	0.05%	0.015%
98	14.765	1373	1375	1378	rVB3	8126	15272	0.11%	0.031%
99	14.814	1378	1380	1382	rBV3	8731	13910	0.10%	0.028%
100	15.612	1457	1461	1465	rBV	52209	98461	0.69%	0.198%

Sum of corrected areas: 49756642

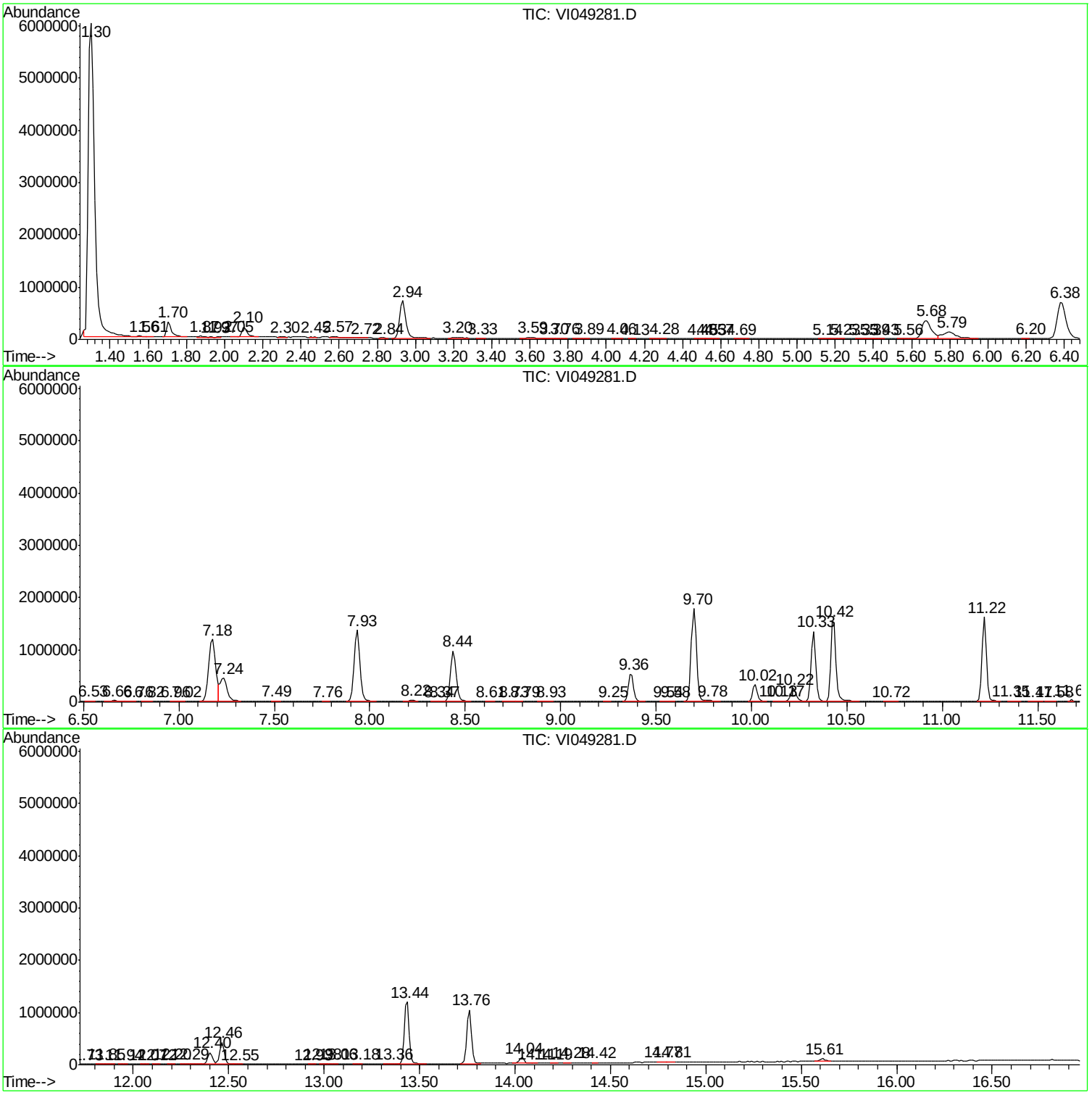
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049281.D
Acq On : 6 May 2016 13:52
Operator : FY/SY
Sample : H2834-18DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4102DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049281.D
Acq On : 6 May 2016 13:52
Operator : FY/SY
Sample : H2834-18DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4102DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049281.D
Acq On : 6 May 2016 13:52
Operator : FY/SY
Sample : H2834-18DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4102DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

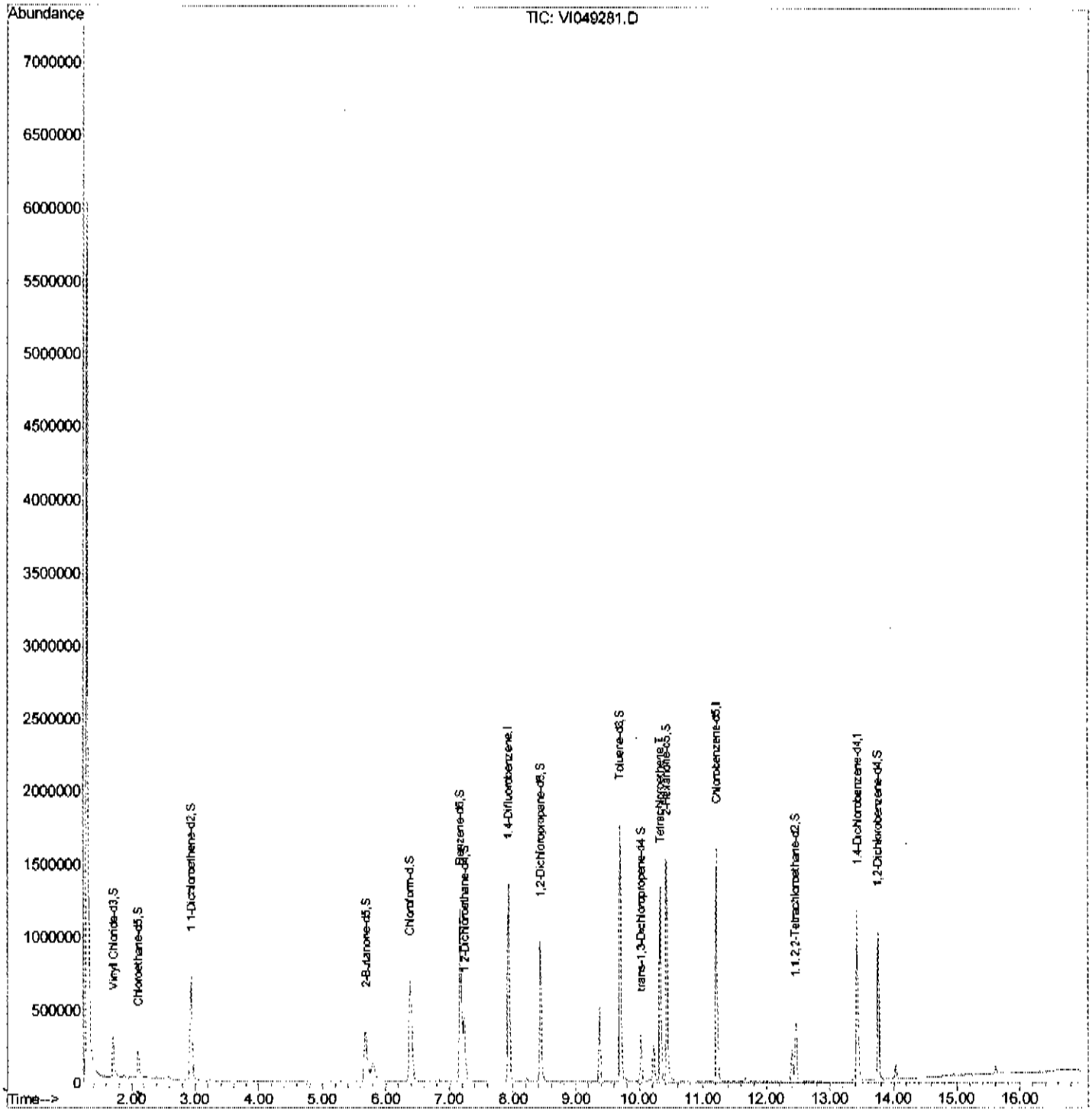
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049281.D
Acq On : 6 May 2016 13:52
Operator : FY/SY
Sample : H2834-18DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 07 04:37:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4102DL

Manual Integrations APPROVED
feifei
5/9/2016 12:05:12 PM



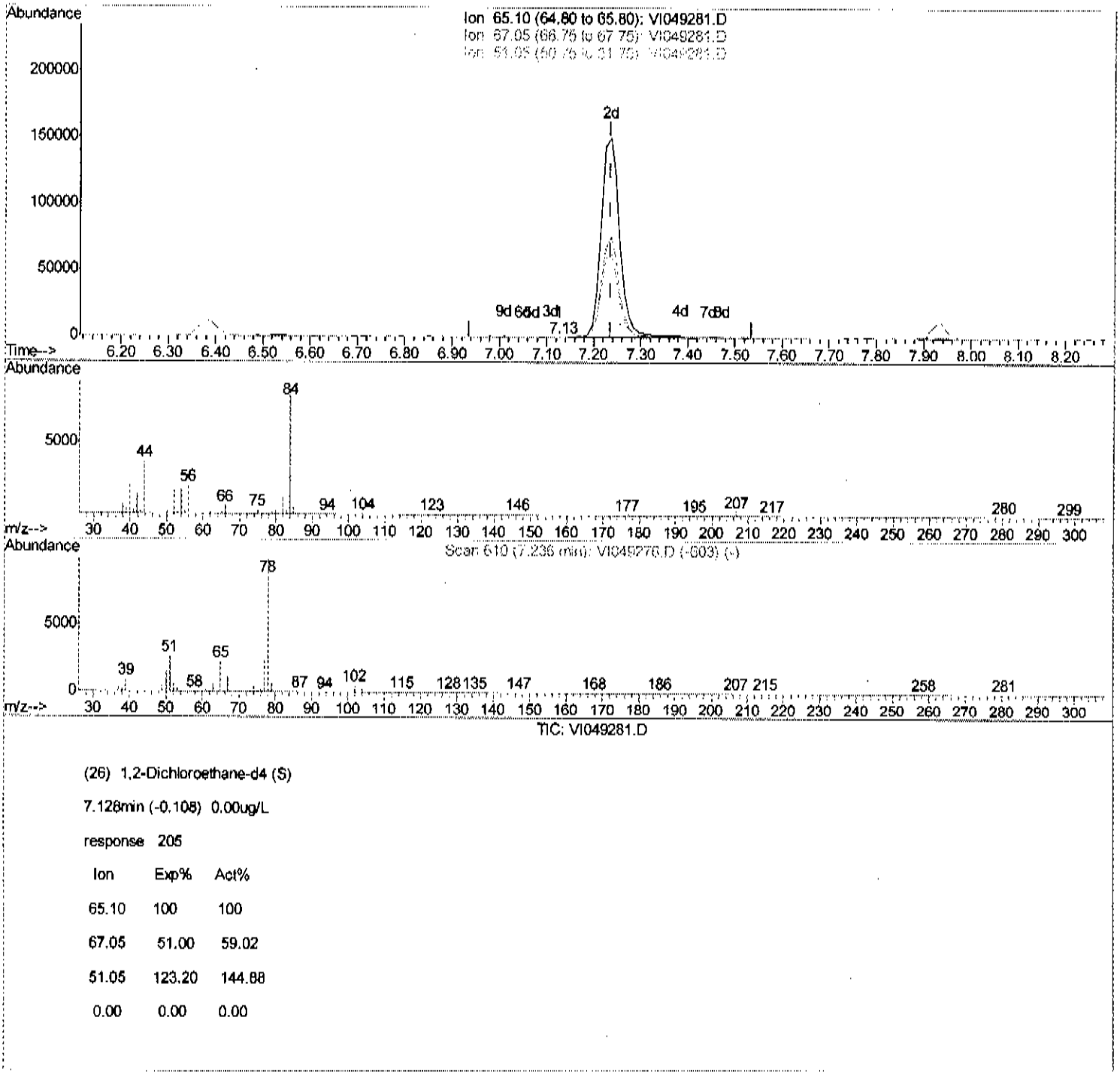
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049281.D
Acq On : 6 May 2016 13:52
Operator : FY/SY
Sample : H2834-18DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 07 04:13:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4102DL

Manual Integrations APPROVED
feifei
5/9/2016 12:05:12 PM



(26) 1,2-Dichloroethane-d4 (S)

7.128min (-0.108) 0.00ug/L

response 205

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	59.02
51.05	123.20	144.88
0.00	0.00	0.00

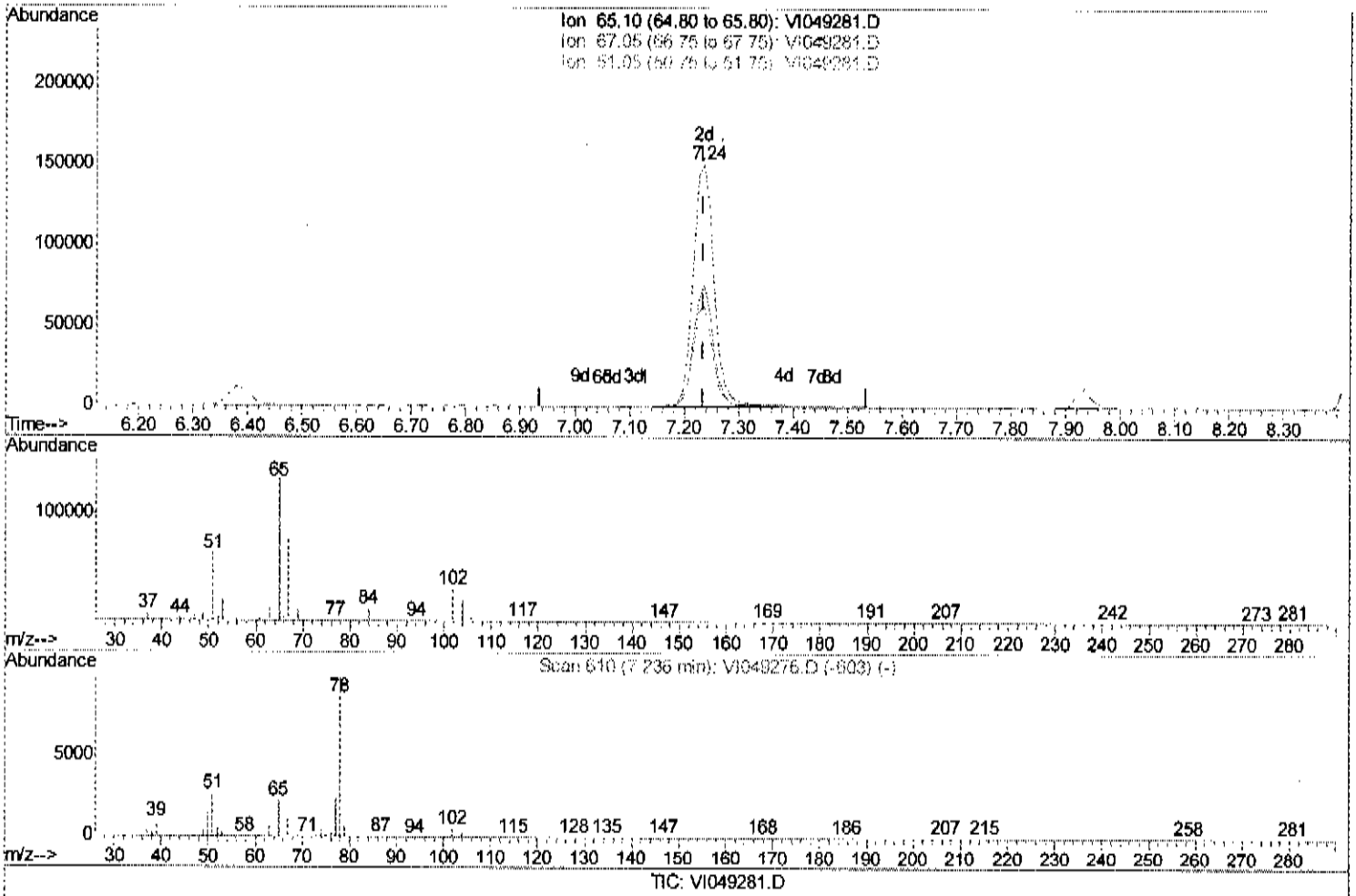
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049281.D
Acq On : 6 May 2016 13:52
Operator : FY/SY
Sample : H2834-18DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 07 04:13:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4102DL

Manual Integrations APPROVED
feifei
5/9/2016 12:05:12 PM



(26) 1,2-Dichloroethane-d4 (S)

7.236min (-0.000) 5.37ug/L m

response 413037

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.03#
51.05	123.20	0.07#
0.00	0.00	0.00

FT
5/16/2016

Quantitation Report (QT Reviewed)

Instrument :
MSVOA_I
ClientSampleId :
H4102DL

Manual Integrations APPROVED
feifei
5/9/2016 12:05:12 PM

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049281.D
Acq On : 6 May 2016 13:52
Operator : FY/SY
Sample : H2834-18DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 07 04:37:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1200218	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	767967	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	282692	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	317423	4.30	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 86.00%			
7) Chloroethane-d5	2.11	69	200132	4.89	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 97.80%			
11) 1,1-Dichloroethene-d2	2.94	63	569404	3.27	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 65.40%			
20) 2-Butanone-d5	5.68	46	879445	54.97	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 109.94%			
24) Chloroform-d	6.38	84	885950	4.71	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.20%			
26) 1,2-Dichloroethane-d4	7.24	65	413037m	5.37	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.40%			
32) Benzene-d6	7.18	84	1550586	5.18	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.60%			
36) 1,2-Dichloropropane-d6	8.44	67	435455	5.18	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 103.60%			
41) Toluene-d8	9.70	98	1061452	4.81	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.20%			
43) trans-1,3-Dichloropropene-	10.02	79	159612	4.82	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 96.40%			
46) 2-Hexanone-d5	10.42	43	564470	54.00	ug/L	-0.01
Spiked Amount 50.000	Range 45 - 130		Recovery = 108.00%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	187613	4.90	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.00%			
63) 1,2-Dichlorobenzene-d4	13.76	152	235455	4.75	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 95.00%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.33	164	270682	4.52	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FY 5/16/2016

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049271.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	2.8	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.6	
71-55-6	1,1,1-Trichloroethane	0.57	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.30	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049271.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.12	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	34	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049271.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049271.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	5.79	0.31	J
2	E966796	Total Alkanes	N/A	0.0	

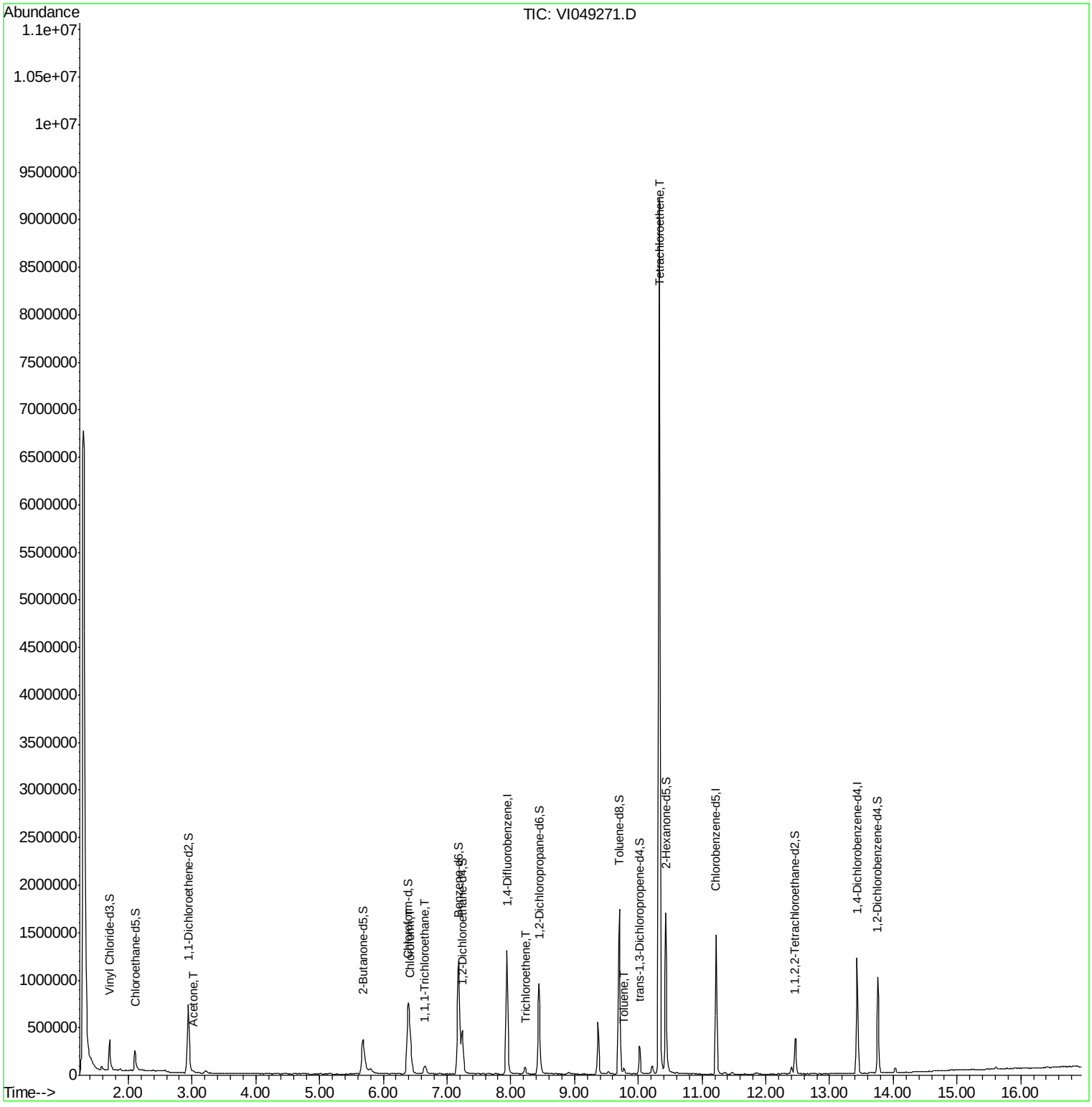
EPA-designated Registry Number.

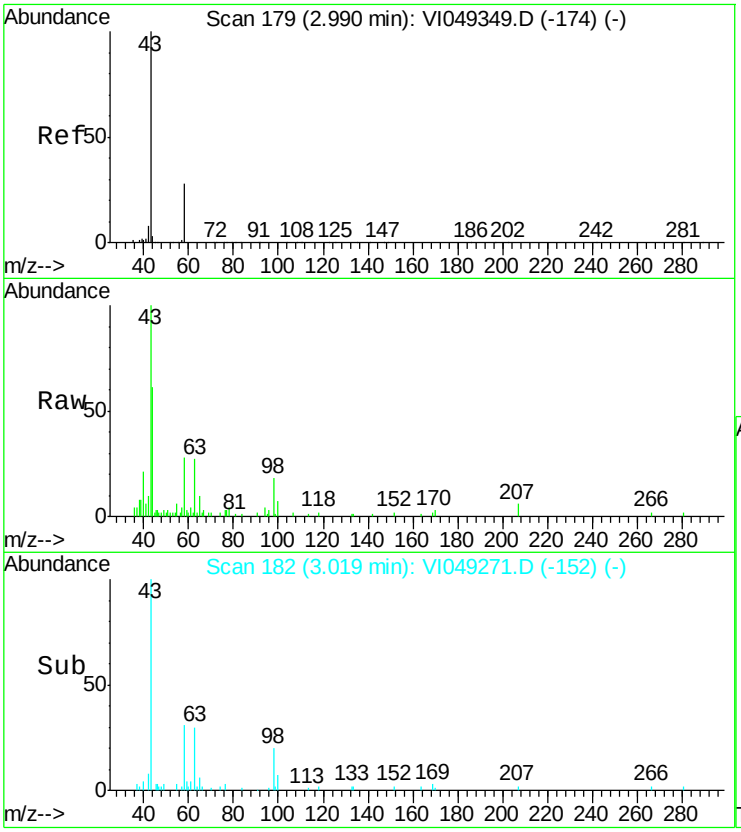
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049271.D
Acq On : 6 May 2016 1:22
Operator : FY/SY
Sample : H2834-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 29 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116

Quant Time: May 18 18:04:56 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration



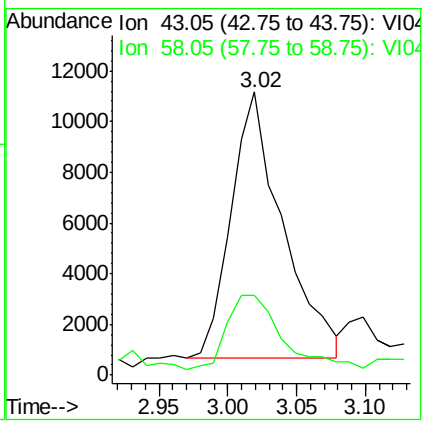


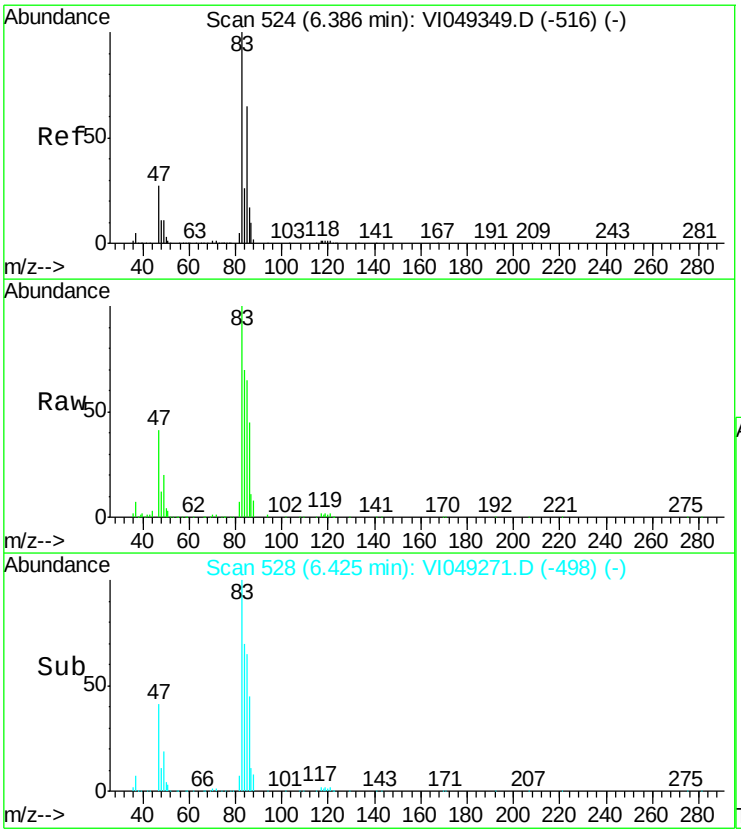
#13
Acetone
Concen: 2.83 ug/L
RT: 3.02 min Scan# 182
Delta R.T. -0.00 min
Lab File: VI049271.D
Acq: 6 May 2016 1:22

Instrument : MSVOA_I
ClientSampleId : H4116

Tgt Ion: 43 Resp: 27189

Ion	Ratio	Lower	Upper
43	100		
58	35.9	0.0	62.0

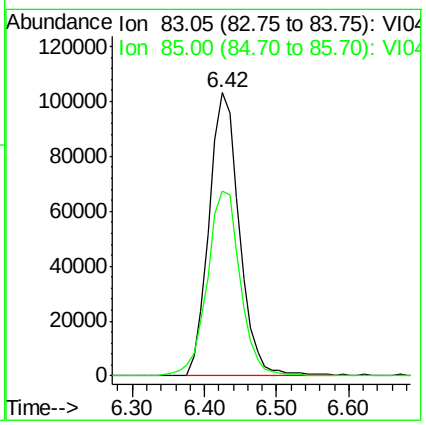


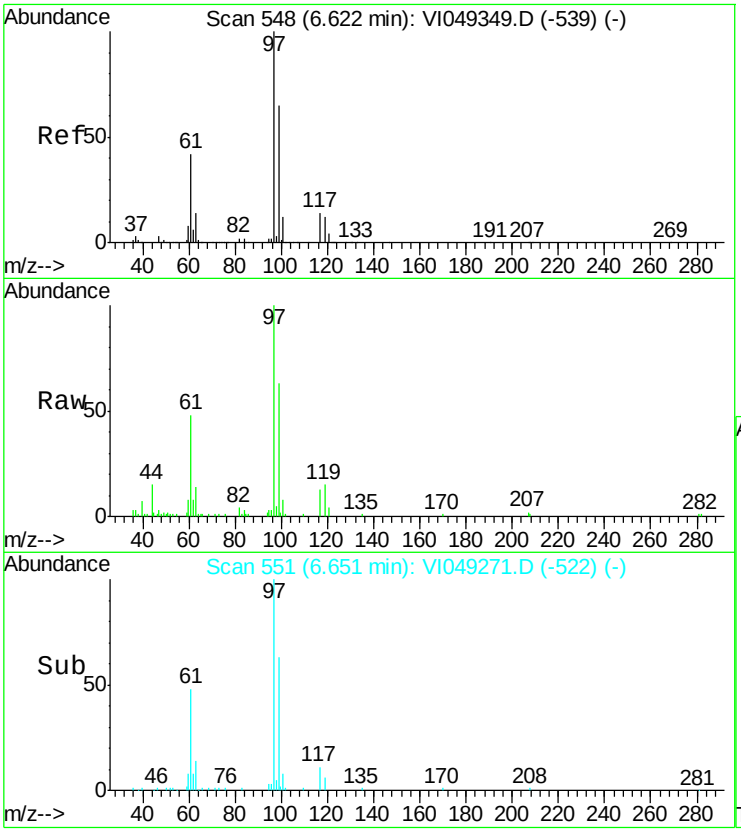


#25
Chloroform
Concen: 1.60 ug/L
RT: 6.42 min Scan# 528
Delta R.T. -0.00 min
Lab File: VI049271.D
Acq: 6 May 2016 1:22

Tgt Ion: 83 Resp: 299469

Ion	Ratio	Lower	Upper
83	100		
85	65.2	47.3	87.8



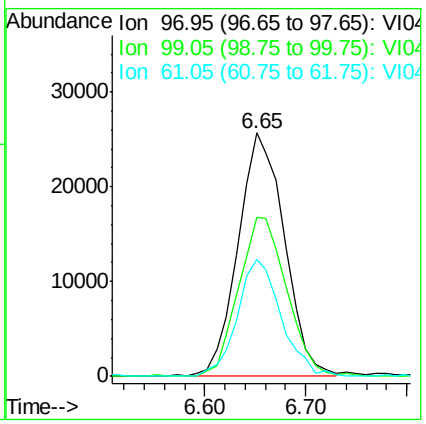


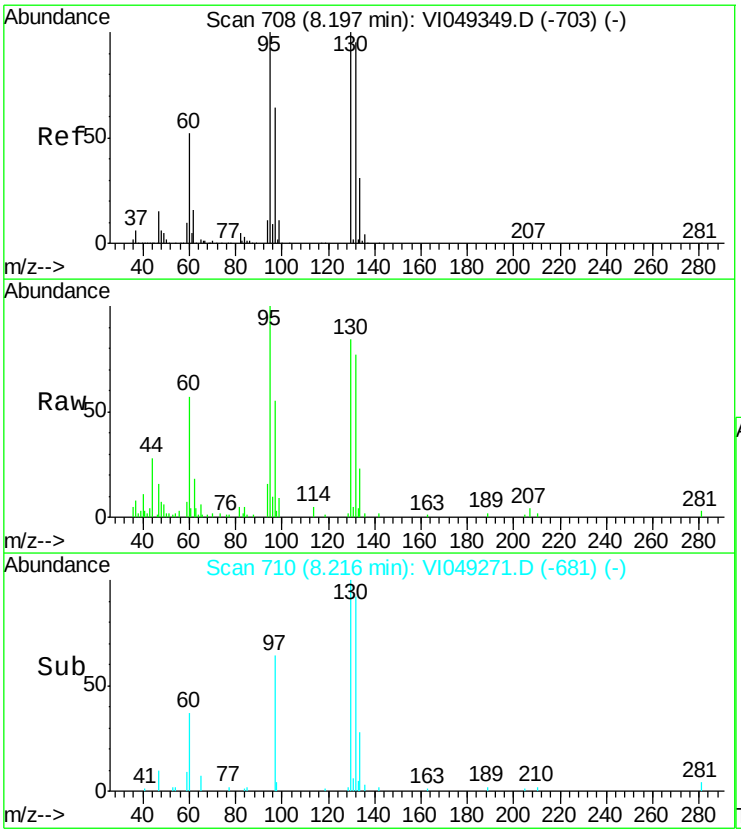
#29
1,1,1-Trichloroethane
Concen: 0.57 ug/L
RT: 6.65 min Scan# 551
Delta R.T. -0.01 min
Lab File: VI049271.D
Acq: 6 May 2016 1:22

Instrument : MSVOA_I
ClientSampleId : H4116

Tgt Ion: 97 Resp: 81947

Ion	Ratio	Lower	Upper
97	100		
99	67.6	51.1	76.7
61	45.0	33.3	49.9

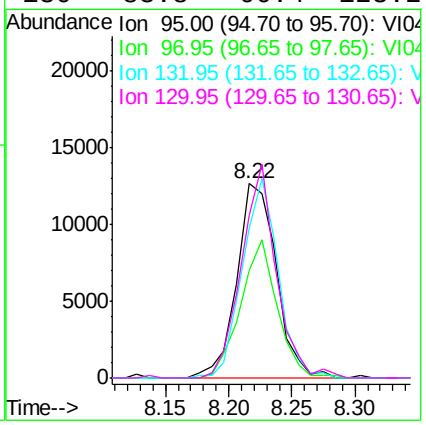


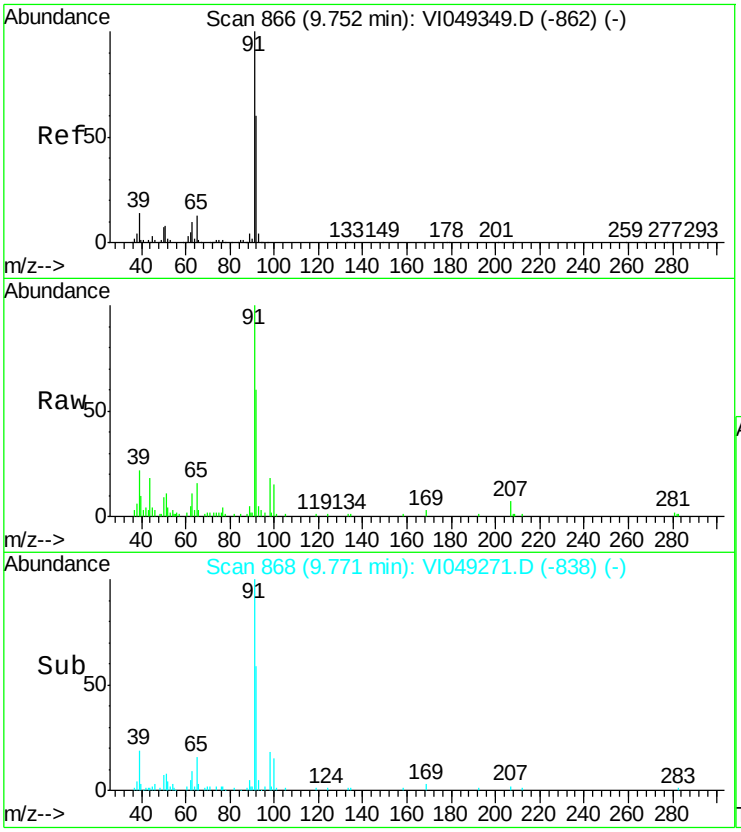


#34
Trichloroethene
Concen: 0.30 ug/L
RT: 8.22 min Scan# 710
Delta R.T. -0.01 min
Lab File: VI049271.D
Acq: 6 May 2016 1:22

Tgt Ion: 95 Resp: 27546

Ion	Ratio	Lower	Upper
95	100		
97	55.2	45.8	85.2
132	77.1	63.9	118.7
130	83.8	66.4	123.2



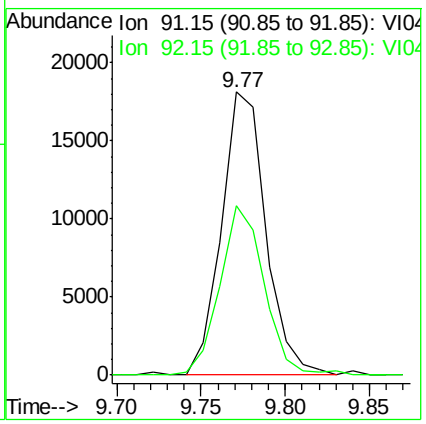


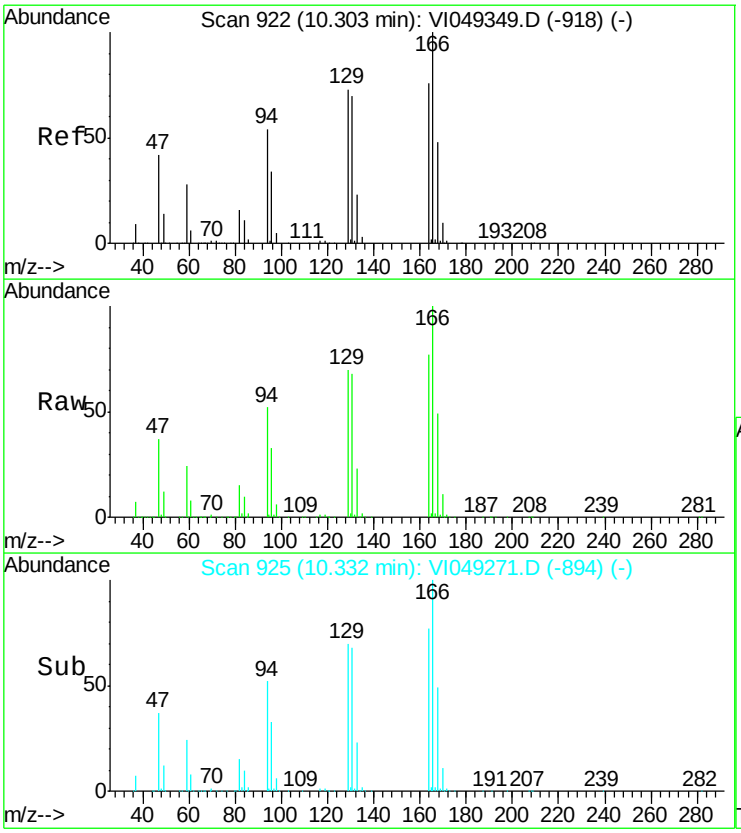
#42
Toluene
Concen: 0.12 ug/L
RT: 9.77 min Scan# 868
Delta R.T. -0.00 min
Lab File: VI049271.D
Acq: 6 May 2016 1:22

Instrument : MSVOA_I
ClientSampleId : H4116

Tgt Ion: 91 Resp: 33112

Ion	Ratio	Lower	Upper
91	100		
92	59.8	41.2	76.4

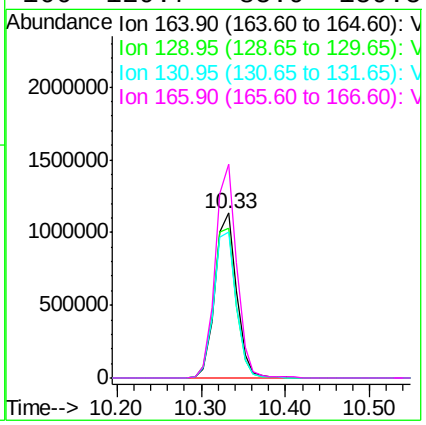




#47
Tetrachloroethene
Concen: 34.15 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.00 min
Lab File: VI049271.D
Acq: 6 May 2016 1:22

Tgt Ion:164 Resp: 2027476

Ion	Ratio	Lower	Upper
164	100		
129	91.1	62.1	115.3
131	88.6	60.6	112.6
166	129.7	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049271.D
Acq On : 6 May 2016 1:22
Operator : FY/SY
Sample : H2834-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 29 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116

Quant Time: May 18 18:04:56 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1164003	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	760683	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	269617	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	327540	4.57	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 91.40%			
7) Chloroethane-d5	2.10	69	216109	5.44	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 108.80%			
11) 1,1-Dichloroethene-d2	2.94	63	578263	3.43	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 68.60%			
20) 2-Butanone-d5	5.68	46	866783	55.87	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 111.74%			
24) Chloroform-d	6.40	84	897778	4.92	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.40%			
26) 1,2-Dichloroethane-d4	7.24	65	392227	5.26	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.20%			
32) Benzene-d6	7.18	84	1523831	5.14	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.80%			
36) 1,2-Dichloropropane-d6	8.44	67	435867	5.23	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.60%			
41) Toluene-d8	9.70	98	1058032	4.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.80%			
43) trans-1,3-Dichloropropene-	10.02	79	148184	4.51	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 90.20%			
46) 2-Hexanone-d5	10.43	63	541983	52.34	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 104.68%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	180671	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.40%			
63) 1,2-Dichlorobenzene-d4	13.76	152	226328	4.79	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 95.80%			
Target Compounds						Qvalue
13) Acetone	3.02	43	27189	2.83	ug/L	91
25) Chloroform	6.42	83	299469	1.60	ug/L	97
29) 1,1,1-Trichloroethane	6.65	97	81947	0.57	ug/L	95
34) Trichloroethene	8.22	95	27546	0.30	ug/L	87
42) Toluene	9.77	91	33112	0.12	ug/L	99
47) Tetrachloroethene	10.33	164	2027476	34.15	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049271.D
Acq On : 6 May 2016 1:22
Operator : FY/SY
Sample : H2834-19
Misc : 25mL/MSVOA I/WATER
ALS Vial : 29 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.297	3	7	18	rBV	6611264	17639929	100.00%	26.113%
2	1.582	33	36	38	rBV2	40615	59022	0.33%	0.087%
3	1.710	46	49	58	rBV	322623	535012	3.03%	0.792%
4	1.878	64	66	70	rVB2	28067	45018	0.26%	0.067%
5	1.956	73	74	75	rVB	9119	5629	0.03%	0.008%
6	2.104	86	89	96	rBV	210506	410266	2.33%	0.607%
7	2.390	115	118	120	rBV4	8803	20352	0.12%	0.030%
8	2.576	135	137	142	rVB	18564	26004	0.15%	0.038%
9	2.941	168	174	188	rBV	723780	1727221	9.79%	2.557%
10	3.128	191	193	196	rVV4	9214	13885	0.08%	0.021%
11	3.216	196	202	207	rVV2	25400	85393	0.48%	0.126%
12	3.285	207	209	213	rVV5	7117	14558	0.08%	0.022%
13	3.413	221	222	224	rBV2	4407	5592	0.03%	0.008%
14	3.580	237	239	240	rBV2	6352	7750	0.04%	0.011%
15	3.610	240	242	243	rVV	8023	10368	0.06%	0.015%
16	3.689	247	250	253	rVV4	3304	8348	0.05%	0.012%
17	3.748	254	256	258	rVB3	2934	4213	0.02%	0.006%
18	3.954	275	277	279	rBV3	2424	4935	0.03%	0.007%
19	3.994	279	281	286	rVV6	3079	6554	0.04%	0.010%
20	4.141	294	296	297	rBV	4013	4283	0.02%	0.006%
21	4.309	309	313	315	rBV5	6574	12625	0.07%	0.019%
22	4.368	317	319	321	rVB3	4067	5062	0.03%	0.007%
23	4.397	321	322	324	rBV2	4122	5772	0.03%	0.009%
24	4.446	324	327	328	rBV3	3355	5812	0.03%	0.009%
25	4.594	340	342	343	rBV2	3217	5020	0.03%	0.007%
26	4.722	353	355	358	rBV3	3364	6039	0.03%	0.009%
27	4.811	362	364	368	rBV3	4225	7331	0.04%	0.011%
28	5.145	396	398	403	rVB4	3913	9591	0.05%	0.014%
29	5.273	407	411	414	rVB6	2776	7663	0.04%	0.011%
30	5.480	429	432	433	rBV2	4216	5066	0.03%	0.007%
31	5.687	446	453	460	rBV	366469	1260170	7.14%	1.865%
32	5.795	461	464	473	rVB3	49501	176396	1.00%	0.261%
33	6.070	491	492	495	rVB2	5555	6601	0.04%	0.010%
34	6.110	495	496	497	rBV	6628	5422	0.03%	0.008%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049271.D
Acq On : 6 May 2016 1:22
Operator : FY/SY
Sample : H2834-19
Misc : 25mL/MSVOA I/WATER
ALS Vial : 29 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.208	505	506	509	rBV3	4154	6512	0.04%	0.010%
36	6.257	509	511	513	rVB3	3368	5052	0.03%	0.007%
37	6.395	518	525	539	rBV2	751060	2856999	16.20%	4.229%
38	6.651	544	551	558	rVV2	79239	263425	1.49%	0.390%
39	6.818	566	568	571	rBV4	2940	4551	0.03%	0.007%
40	7.045	589	591	594	rBV4	4241	7908	0.04%	0.012%
41	7.183	598	605	608	rBV	1184465	3125224	17.72%	4.626%
42	7.242	608	611	619	rVB	452593	1104082	6.26%	1.634%
43	7.576	641	645	648	rVB5	5612	12884	0.07%	0.019%
44	7.655	648	653	660	rVB10	5352	18799	0.11%	0.028%
45	7.753	660	663	667	rBV5	6472	13529	0.08%	0.020%
46	7.940	676	682	695	rBV	1297056	2873814	16.29%	4.254%
47	8.226	705	711	718	rVB	74867	162412	0.92%	0.240%
48	8.344	721	723	725	rBV3	2907	4552	0.03%	0.007%
49	8.442	727	733	743	rBV	951392	2096339	11.88%	3.103%
50	8.560	743	745	749	rVV4	10034	19125	0.11%	0.028%
51	8.639	749	753	756	rVV6	4123	9518	0.05%	0.014%
52	8.708	758	760	762	rVB3	3196	4790	0.03%	0.007%
53	8.915	776	781	786	rBV7	16925	51755	0.29%	0.077%
54	9.053	794	795	799	rVB5	3330	5119	0.03%	0.008%
55	9.131	799	803	805	rVB4	3797	6765	0.04%	0.010%
56	9.367	822	827	833	rBV	545517	961828	5.45%	1.424%
57	9.525	839	843	847	rVV2	24998	47200	0.27%	0.070%
58	9.702	856	861	866	rBV	1732323	3063719	17.37%	4.535%
59	9.771	866	868	875	rVV	59388	112526	0.64%	0.167%
60	10.017	889	893	901	rBV	292331	524384	2.97%	0.776%
61	10.165	904	908	909	rVV4	4854	11760	0.07%	0.017%
62	10.224	909	914	920	rVV	82613	191653	1.09%	0.284%
63	10.332	920	925	931	rVV	9207587	17181771	97.40%	25.435%
64	10.430	931	935	946	rVV	1692632	2963537	16.80%	4.387%
65	10.598	949	952	958	rVB6	7741	23188	0.13%	0.034%
66	10.814	971	974	976	rBV3	3797	6936	0.04%	0.010%
67	10.952	986	988	989	rVB2	4428	4337	0.02%	0.006%
68	11.139	1003	1007	1009	rVB5	4557	7507	0.04%	0.011%
69	11.218	1011	1015	1022	rBV	1465988	2659092	15.07%	3.936%
70	11.356	1025	1029	1035	rVB2	18573	48424	0.27%	0.072%
71	11.474	1037	1041	1044	rBV4	20273	39812	0.23%	0.059%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049271.D
Acq On : 6 May 2016 1:22
Operator : FY/SY
Sample : H2834-19
Misc : 25mL/MSVOA I/WATER
ALS Vial : 29 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.562	1048	1050	1053	rVB4	2814	5043	0.03%	0.007%
73	11.720	1062	1066	1069	rVB5	3629	8013	0.05%	0.012%
74	11.759	1069	1070	1072	rBV2	3868	5956	0.03%	0.009%
75	11.858	1074	1080	1085	rBV7	14907	45153	0.26%	0.067%
76	11.917	1085	1086	1090	rVB4	5398	7446	0.04%	0.011%
77	12.113	1103	1106	1107	rBV3	4920	6530	0.04%	0.010%
78	12.192	1113	1114	1118	rBV3	3298	4777	0.03%	0.007%
79	12.271	1118	1122	1123	rBV3	3840	7791	0.04%	0.012%
80	12.409	1132	1136	1138	rBV2	74167	140038	0.79%	0.207%
81	12.458	1138	1141	1148	rVB	371752	676748	3.84%	1.002%
82	12.655	1158	1161	1163	rVB3	5841	7271	0.04%	0.011%
83	12.911	1185	1187	1189	rVB3	3760	5723	0.03%	0.008%
84	12.940	1189	1190	1193	rBV3	3195	4936	0.03%	0.007%
85	13.088	1201	1205	1208	rVB5	4402	11263	0.06%	0.017%
86	13.235	1216	1220	1221	rBV4	3896	5569	0.03%	0.008%
87	13.275	1221	1224	1227	rBV5	5164	11887	0.07%	0.018%
88	13.334	1227	1230	1231	rBV3	5162	7941	0.05%	0.012%
89	13.373	1231	1234	1236	rBV4	5273	10057	0.06%	0.015%
90	13.432	1236	1240	1247	rBV	1215872	1993985	11.30%	2.952%
91	13.659	1262	1263	1268	rVB5	5554	8758	0.05%	0.013%
92	13.757	1268	1273	1280	rBV	1007726	1719190	9.75%	2.545%
93	14.033	1297	1301	1307	rVB	50643	99877	0.57%	0.148%
94	14.200	1316	1318	1322	rVB5	8539	17516	0.10%	0.026%
95	14.269	1322	1325	1326	rBV3	4996	11233	0.06%	0.017%
96	14.318	1326	1330	1331	rBV4	7824	14033	0.08%	0.021%
97	14.416	1339	1340	1343	rBV3	5355	8413	0.05%	0.012%
98	14.466	1343	1345	1346	rBV2	4363	5878	0.03%	0.009%
99	14.564	1354	1355	1356	rBV	8951	6741	0.04%	0.010%
100	15.607	1459	1461	1465	rVB3	21124	40449	0.23%	0.060%

Sum of corrected areas: 67551945

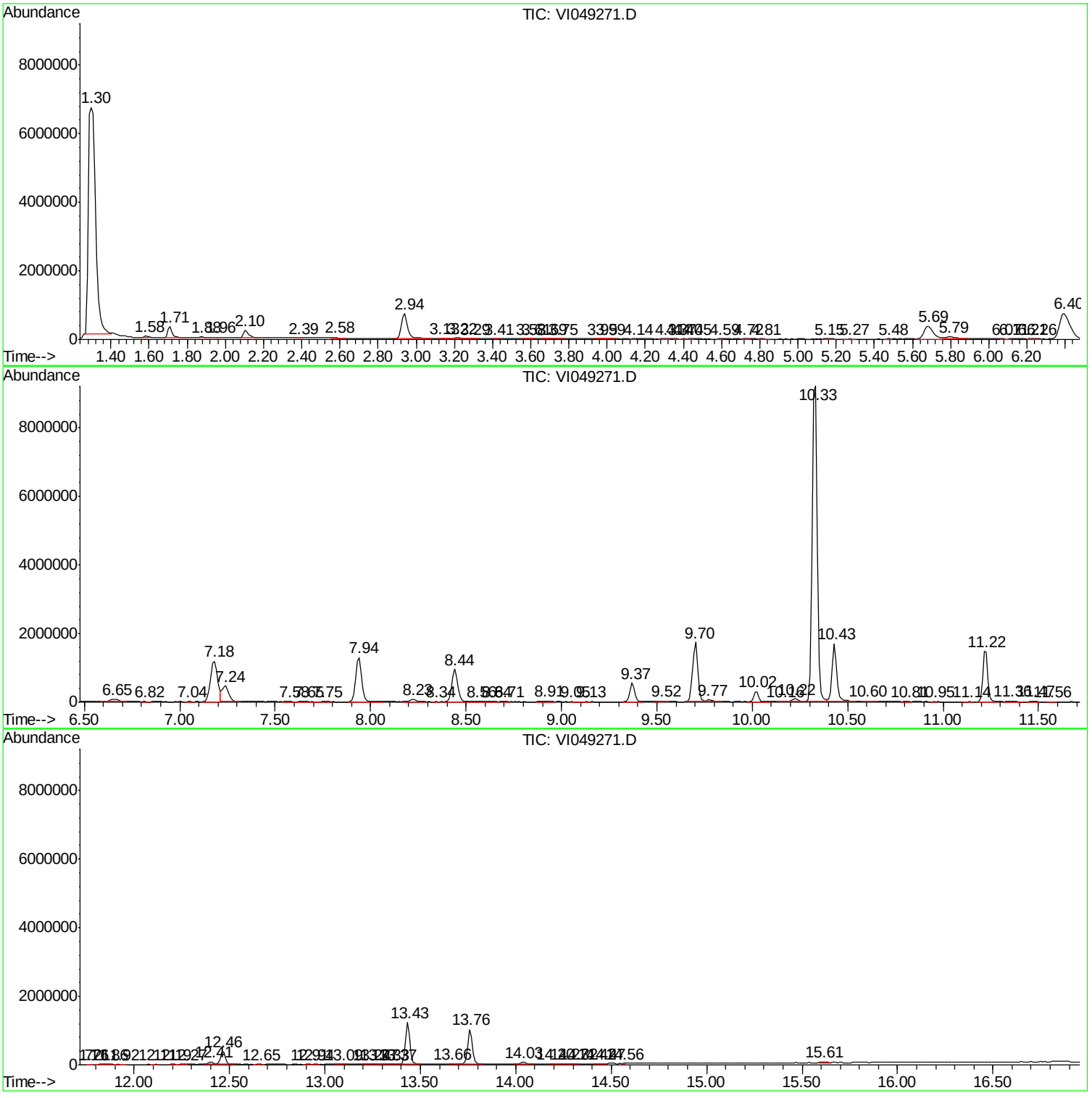
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049271.D
Acq On : 6 May 2016 1:22
Operator : FY/SY
Sample : H2834-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 29 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049271.D
Acq On : 6 May 2016 1:22
Operator : FY/SY
Sample : H2834-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 29 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

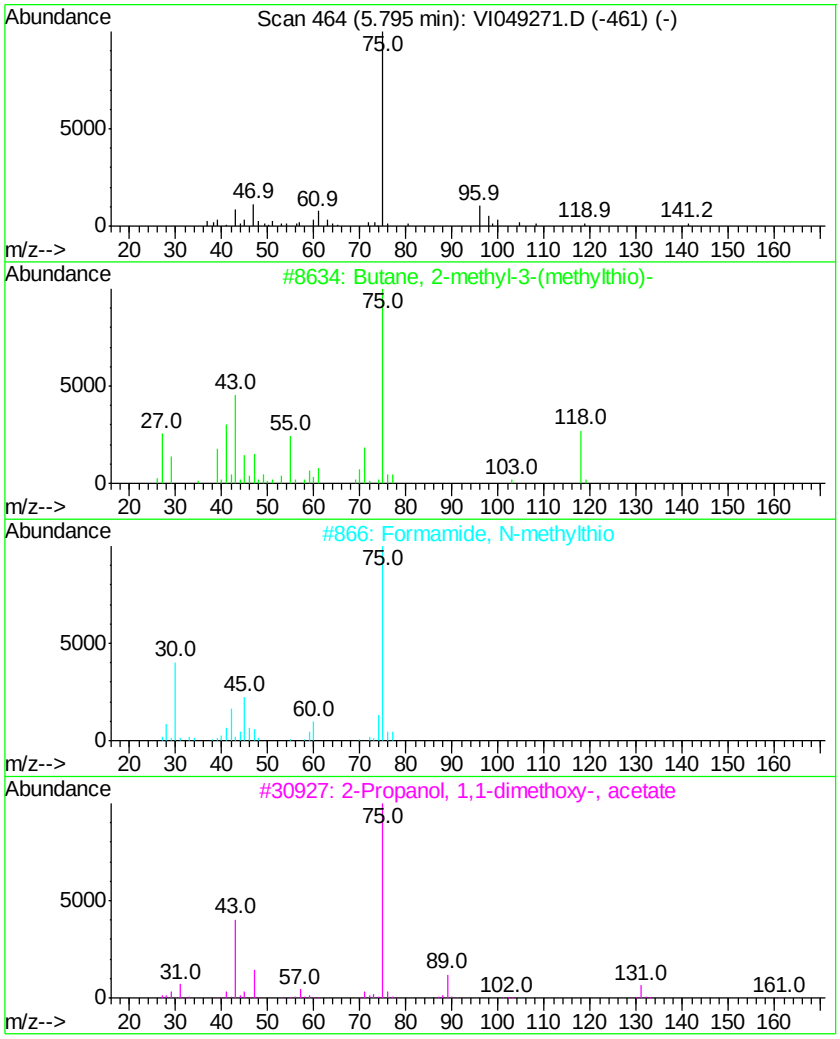
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

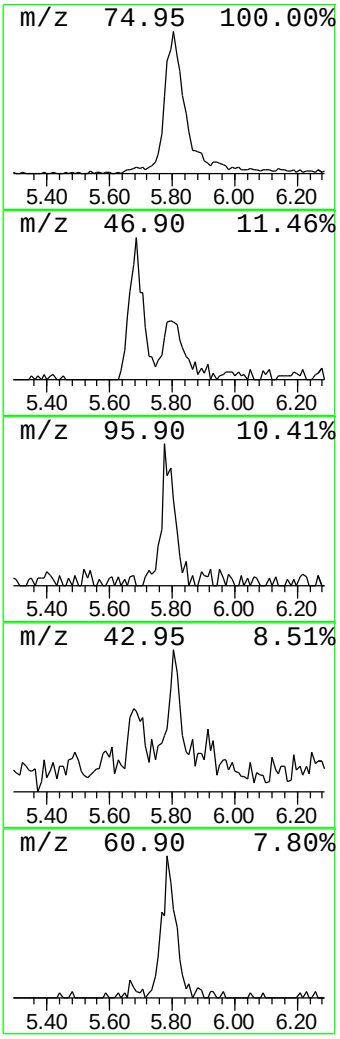
****

Peak Number 2 unknown-01 Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.79	0.31 ug/L	176396	1,4-Difluorobenzene	7.94

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-3-(methylthio)-	118	C6H14S	053897-51-1	39
2	Formamide, N-methylthio	75	C2H5NS	018952-41-5	9
3	2-Propanol, 1,1-dimethoxy-, acetate	162	C7H14O4	074495-37-7	9
4	Silane, trimethyl(1-methylethoxy)-	132	C6H16OSi	001825-64-5	9
5	2-Octanol, 8,8-dimethoxy-2,6-dim...	218	C12H26O3	000141-92-4	9





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049271.D
Acq On : 6 May 2016 1:22
Operator : FY/SY
Sample : H2834-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 29 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
unknown-01	5.79	0.3	ug/L	176396	1	7.94	2873810	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4116DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049286.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4116DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049286.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	23	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4116DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049286.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4116DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049286.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 5.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

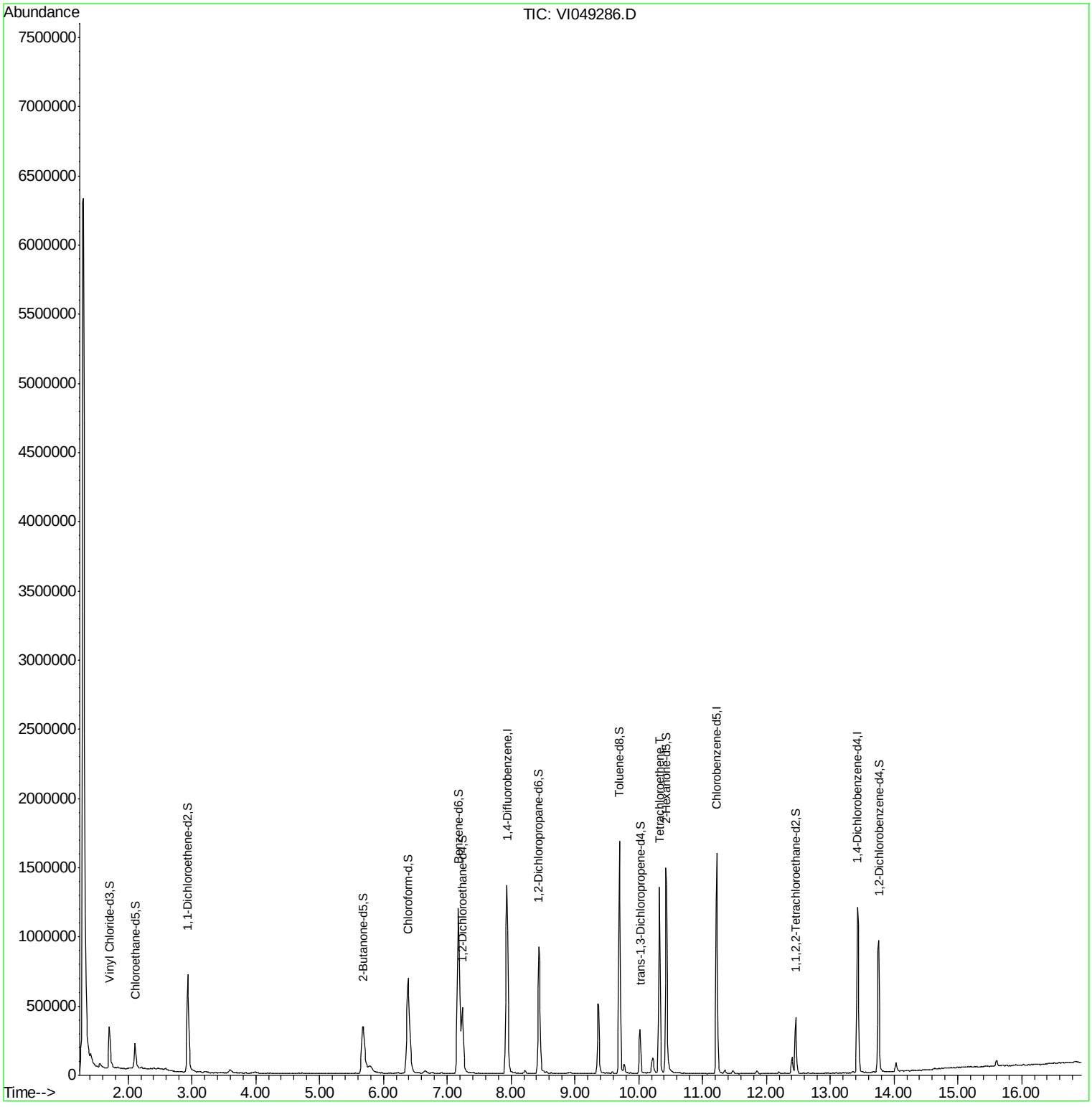
EPA-designated Registry Number.

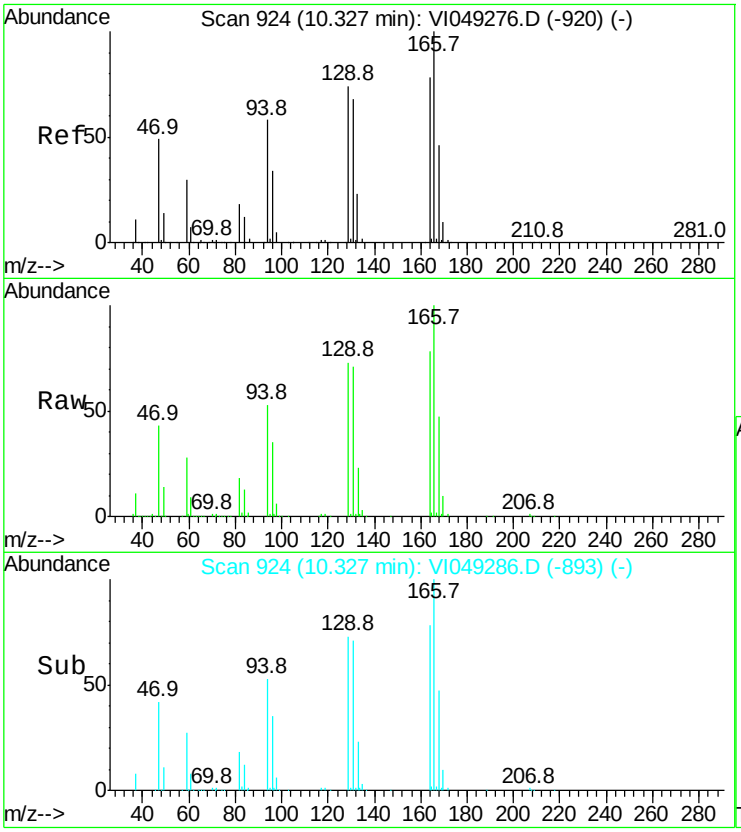
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049286.D
Acq On : 6 May 2016 17:09
Operator : FY/SY
Sample : H2834-19DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116DL

Quant Time: May 07 05:05:29 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration



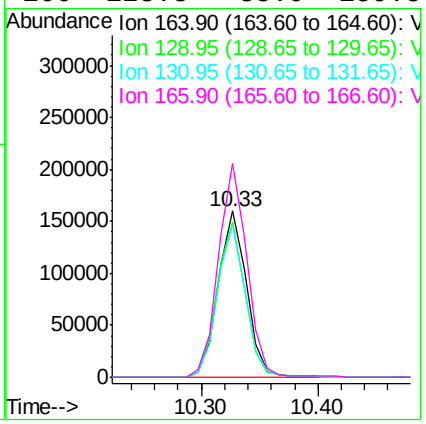


#47
Tetrachloroethene
Concen: 4.52 ug/L
RT: 10.33 min Scan# 924
Delta R.T. 0.00 min
Lab File: VI049286.D
Acq: 6 May 2016 17:09

Instrument :
MSVOA_I
ClientSampleId :
H4116DL

Tgt Ion:164 Resp: 269266

Ion	Ratio	Lower	Upper
164	100		
129	93.5	62.1	115.3
131	92.1	60.6	112.6
166	128.8	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049286.D
Acq On : 6 May 2016 17:09
Operator : FY/SY
Sample : H2834-19DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116DL

Quant Time: May 07 05:05:29 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1179943	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	763648	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	276848	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	308480	4.25	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 85.00%			
7) Chloroethane-d5	2.11	69	207332	5.15	ug/L	0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 103.00%			
11) 1,1-Dichloroethene-d2	2.94	63	549655	3.21	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 64.20%			
20) 2-Butanone-d5	5.67	46	838699	53.33	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 106.66%			
24) Chloroform-d	6.39	84	848433	4.59	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 91.80%			
26) 1,2-Dichloroethane-d4	7.24	65	388170	5.13	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.60%			
32) Benzene-d6	7.18	84	1463331	4.92	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.40%			
36) 1,2-Dichloropropane-d6	8.44	67	423647	5.06	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.20%			
41) Toluene-d8	9.70	98	1023270	4.66	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.20%			
43) trans-1,3-Dichloropropene-	10.02	79	145673	4.42	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 88.40%			
46) 2-Hexanone-d5	10.43	63	520865	50.11	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 100.22%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	178835	4.70	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 94.00%			
63) 1,2-Dichlorobenzene-d4	13.76	152	225908	4.65	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.00%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.33	164	269266	4.52	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049286.D
Acq On : 6 May 2016 17:09
Operator : FY/SY
Sample : H2834-19DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.302	3	7	17	rVB	6196678	14590670	100.00%	30.159%
2	1.558	30	33	37	rBV3	30649	50812	0.35%	0.105%
3	1.705	45	48	57	rBV	297950	494787	3.39%	1.023%
4	2.109	85	89	97	rVB	179865	361989	2.48%	0.748%
5	2.463	123	125	131	rVV7	8323	26097	0.18%	0.054%
6	2.591	134	138	146	rVB3	22893	72800	0.50%	0.150%
7	2.936	168	173	187	rVB	705555	1588871	10.89%	3.284%
8	3.221	198	202	204	rVV3	6435	13944	0.10%	0.029%
9	3.280	206	208	209	rVB2	6354	6183	0.04%	0.013%
10	3.428	221	223	226	rBV4	3879	7458	0.05%	0.015%
11	3.595	236	240	251	rVB4	23204	71790	0.49%	0.148%
12	3.851	263	266	267	rBV2	4169	6844	0.05%	0.014%
13	3.989	278	280	284	rVV5	5797	10577	0.07%	0.022%
14	4.589	337	341	344	rBV6	3606	6945	0.05%	0.014%
15	4.727	353	355	358	rVB3	3792	6556	0.04%	0.014%
16	5.150	396	398	400	rVB3	3908	5870	0.04%	0.012%
17	5.681	445	452	460	rBV	340296	1226891	8.41%	2.536%
18	5.927	476	477	480	rVB3	5805	5856	0.04%	0.012%
19	5.977	480	482	488	rVB6	4967	14092	0.10%	0.029%
20	6.114	494	496	500	rVB4	3370	7963	0.05%	0.016%
21	6.203	502	505	506	rBV2	4377	7169	0.05%	0.015%
22	6.233	506	508	514	rVB6	4326	10863	0.07%	0.022%
23	6.390	516	524	538	rBV	685395	2177616	14.92%	4.501%
24	6.656	544	551	554	rBV4	19015	61667	0.42%	0.127%
25	6.744	558	560	561	rBV2	4692	5815	0.04%	0.012%
26	6.912	572	577	579	rBV4	6318	15449	0.11%	0.032%
27	6.941	579	580	584	rVB4	5117	9299	0.06%	0.019%
28	7.010	584	587	590	rBV4	3980	10060	0.07%	0.021%
29	7.059	590	592	596	rBV4	2861	6443	0.04%	0.013%
30	7.177	597	604	608	rVV	1194429	3176904	21.77%	6.567%
31	7.236	608	610	620	rVV	480708	1039458	7.12%	2.149%
32	7.355	620	622	625	rVV4	10287	24459	0.17%	0.051%
33	7.404	625	627	630	rVV4	6456	14893	0.10%	0.031%
34	7.463	630	633	634	rVV3	2935	6056	0.04%	0.013%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049286.D
Acq On : 6 May 2016 17:09
Operator : FY/SY
Sample : H2834-19DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.492	634	636	637	rVV	4678	6288	0.04%	0.013%
36	7.522	637	639	640	rVV2	4173	5590	0.04%	0.012%
37	7.847	670	672	675	rBV4	2727	5729	0.04%	0.012%
38	7.935	675	681	692	rVV	1359926	2920007	20.01%	6.036%
39	8.053	692	693	694	rVV	7553	7666	0.05%	0.016%
40	8.112	697	699	702	rVV3	4686	8372	0.06%	0.017%
41	8.221	705	710	716	rVV4	20685	52681	0.36%	0.109%
42	8.329	718	721	723	rVB4	4204	6970	0.05%	0.014%
43	8.437	727	732	741	rVV	916647	2035892	13.95%	4.208%
44	8.555	742	744	748	rVV5	13912	28126	0.19%	0.058%
45	8.624	750	751	754	rVV3	5764	10291	0.07%	0.021%
46	8.831	769	772	775	rBV4	3648	9709	0.07%	0.020%
47	8.900	775	779	780	rVV4	7378	13116	0.09%	0.027%
48	8.998	787	789	792	rVB4	4232	6882	0.05%	0.014%
49	9.047	792	794	796	rVB3	4783	6754	0.05%	0.014%
50	9.077	796	797	800	rBV3	3226	5475	0.04%	0.011%
51	9.126	800	802	806	rBV5	2575	6324	0.04%	0.013%
52	9.362	822	826	833	rBV	503474	961804	6.59%	1.988%
53	9.490	838	839	842	rVV3	3898	6901	0.05%	0.014%
54	9.589	845	849	852	rVB3	11914	21590	0.15%	0.045%
55	9.697	855	860	865	rBV	1680323	2930920	20.09%	6.058%
56	9.776	865	868	872	rVV	66241	129714	0.89%	0.268%
57	9.835	872	874	876	rVV3	5235	8315	0.06%	0.017%
58	9.874	876	878	884	rVB6	5045	13393	0.09%	0.028%
59	10.022	888	893	900	rBV	317351	539282	3.70%	1.115%
60	10.110	900	902	903	rVV2	6750	8193	0.06%	0.017%
61	10.130	903	904	907	rVV3	8042	17202	0.12%	0.036%
62	10.219	909	913	919	rVV	115445	267286	1.83%	0.552%
63	10.327	919	924	930	rVV	1345710	2322345	15.92%	4.800%
64	10.425	930	934	948	rVV	1486034	2814161	19.29%	5.817%
65	10.573	948	949	950	rVV	8569	7903	0.05%	0.016%
66	10.602	950	952	954	rVV3	7661	14961	0.10%	0.031%
67	10.632	954	955	960	rVV5	7255	13215	0.09%	0.027%
68	10.858	977	978	982	rVB4	4871	7684	0.05%	0.016%
69	10.976	985	990	991	rBV4	3500	6371	0.04%	0.013%
70	11.134	1002	1006	1008	rBV5	2456	5713	0.04%	0.012%
71	11.222	1011	1015	1024	rBV	1591002	2696048	18.48%	5.573%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049286.D
Acq On : 6 May 2016 17:09
Operator : FY/SY
Sample : H2834-19DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.350	1025	1028	1034	rVB2	26466	47980	0.33%	0.099%
73	11.469	1034	1040	1044	rBV2	21377	51998	0.36%	0.107%
74	11.518	1044	1045	1050	rVB5	4655	8411	0.06%	0.017%
75	11.852	1074	1079	1084	rVB4	20800	56948	0.39%	0.118%
76	12.049	1096	1099	1102	rBV4	4353	9585	0.07%	0.020%
77	12.197	1108	1114	1117	rBV3	14667	31795	0.22%	0.066%
78	12.285	1121	1123	1127	rVB4	5480	9702	0.07%	0.020%
79	12.403	1131	1135	1138	rBV	117617	219963	1.51%	0.455%
80	12.463	1138	1141	1146	rVB	405562	682706	4.68%	1.411%
81	12.581	1151	1153	1155	rVB3	4581	5896	0.04%	0.012%
82	12.659	1155	1161	1163	rBV7	6501	14300	0.10%	0.030%
83	12.955	1190	1191	1196	rBV4	3677	8866	0.06%	0.018%
84	13.083	1203	1204	1209	rVB5	5441	10729	0.07%	0.022%
85	13.161	1209	1212	1214	rBV4	4122	7909	0.05%	0.016%
86	13.201	1214	1216	1218	rBV3	3020	5467	0.04%	0.011%
87	13.230	1218	1219	1221	rVB2	5981	6155	0.04%	0.013%
88	13.358	1228	1232	1235	rBV5	12005	29308	0.20%	0.061%
89	13.427	1235	1239	1250	rVV	1193205	2097239	14.37%	4.335%
90	13.555	1250	1252	1255	rVB3	3923	5957	0.04%	0.012%
91	13.673	1263	1264	1268	rBV4	4872	9903	0.07%	0.020%
92	13.762	1268	1273	1279	rBV	947895	1700474	11.65%	3.515%
93	14.027	1297	1300	1306	rBV2	66060	127518	0.87%	0.264%
94	14.096	1306	1307	1311	rBV4	4376	8986	0.06%	0.019%
95	14.185	1314	1316	1318	rBV3	5066	6599	0.05%	0.014%
96	14.283	1322	1326	1327	rBV4	10108	18661	0.13%	0.039%
97	14.303	1327	1328	1330	rBV2	7301	9710	0.07%	0.020%
98	14.480	1344	1346	1347	rBV2	5019	6172	0.04%	0.013%
99	15.612	1457	1461	1466	rBV	42994	92390	0.63%	0.191%
100	16.104	1509	1511	1514	rBV4	10100	15667	0.11%	0.032%

Sum of corrected areas: 48379013

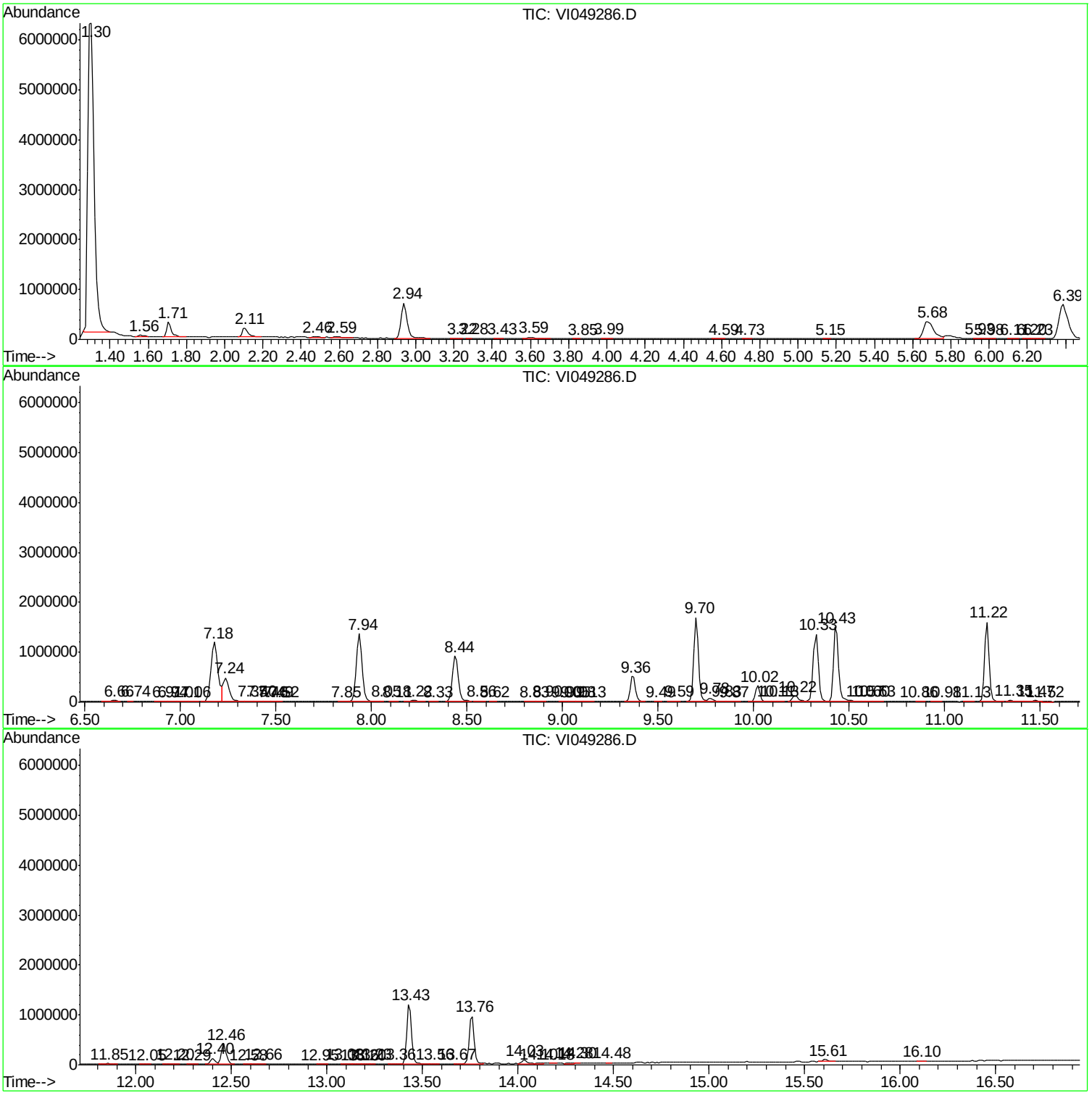
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049286.D
Acq On : 6 May 2016 17:09
Operator : FY/SY
Sample : H2834-19DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049286.D
Acq On : 6 May 2016 17:09
Operator : FY/SY
Sample : H2834-19DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4116DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049286.D
Acq On : 6 May 2016 17:09
Operator : FY/SY
Sample : H2834-19DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4116DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4117

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049280.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	4.8	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.57	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.8	
71-55-6	1,1,1-Trichloroethane	0.37	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.61	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4117

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049280.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	19	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4117

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049280.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4117

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049280.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000067-63-0	Isopropyl Alcohol	3.22	0.26	JN
2	E966796	Total Alkanes	N/A	0.0	

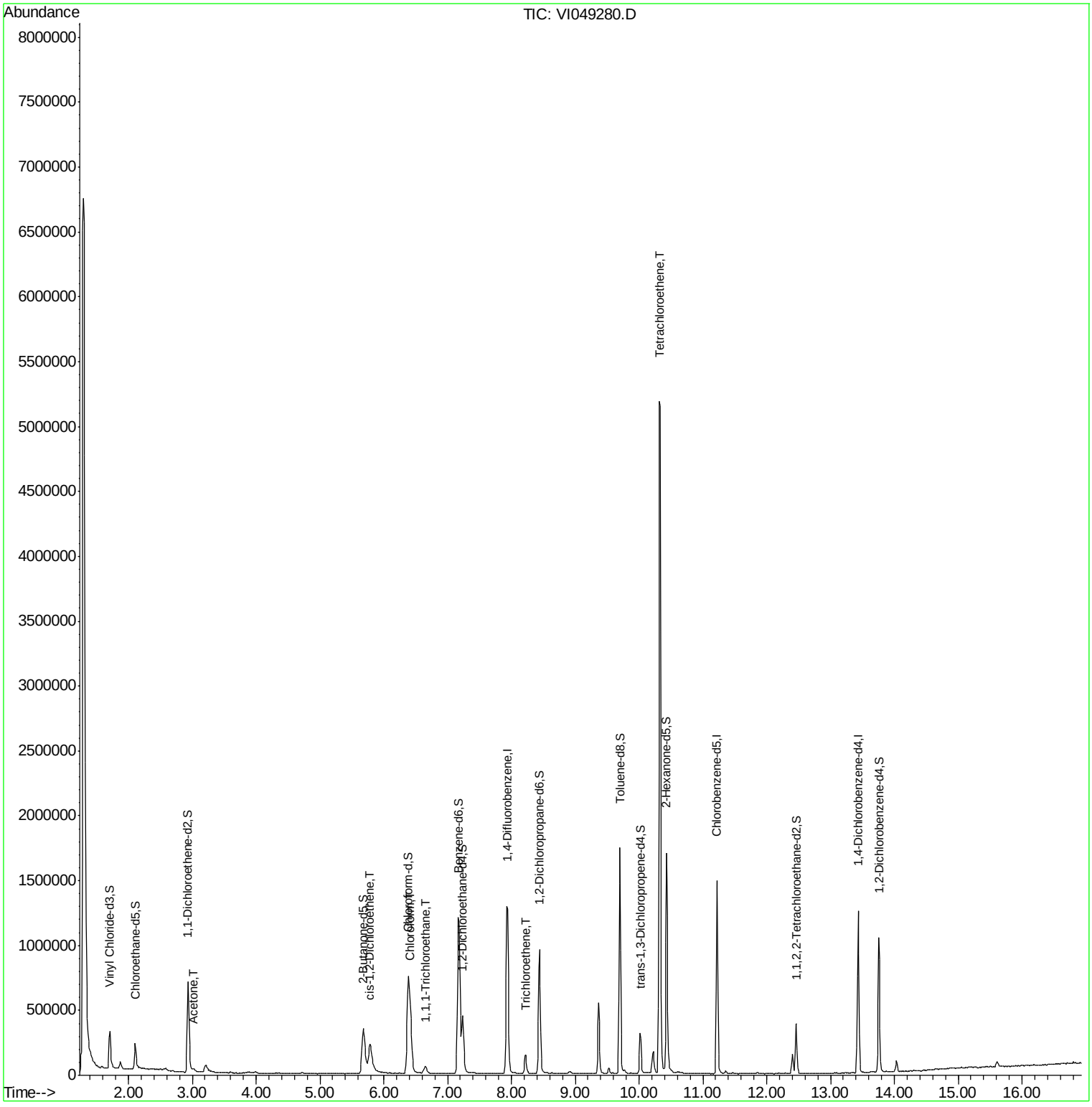
EPA-designated Registry Number.

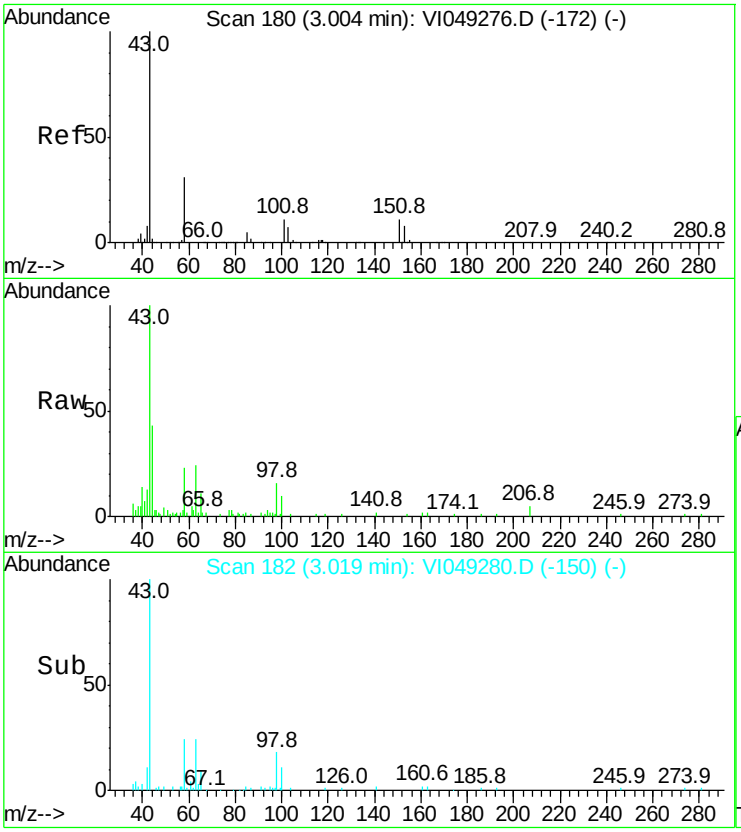
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049280.D
Acq On : 6 May 2016 13:20
Operator : FY/SY
Sample : H2834-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4117

Quant Time: May 07 04:32:13 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration



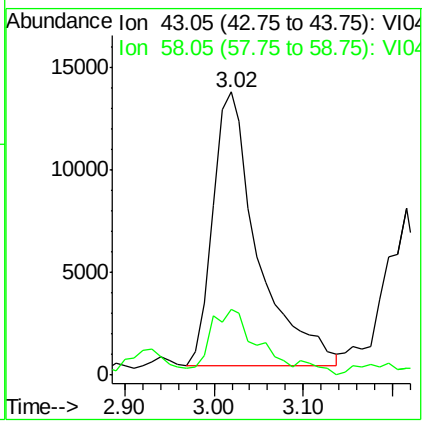


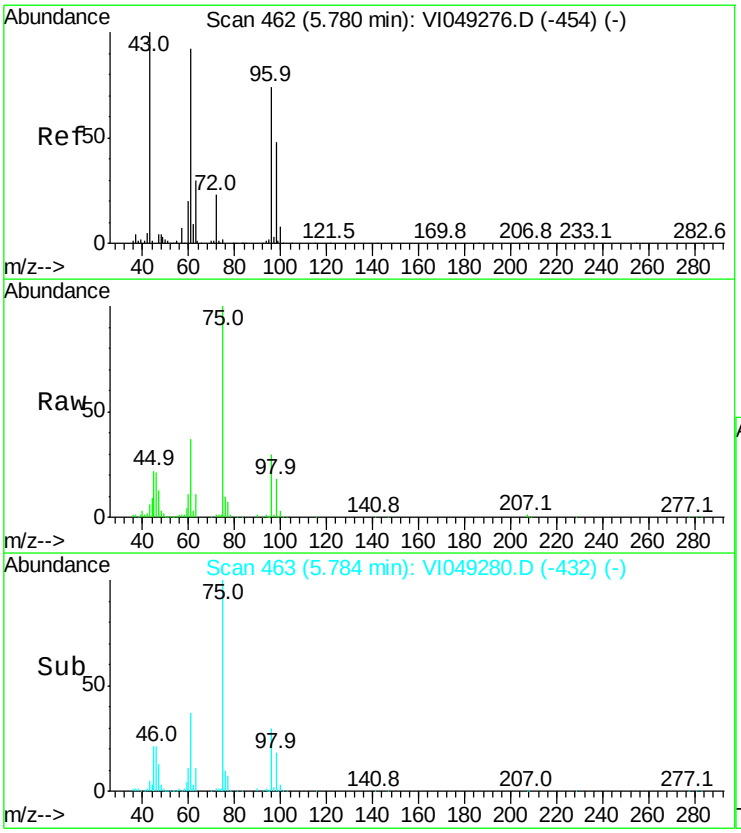
#13
Acetone
Concen: 4.81 ug/L
RT: 3.02 min Scan# 182
Delta R.T. 0.01 min
Lab File: VI049280.D
Acq: 6 May 2016 13:20

Instrument : MSVOA_I
ClientSampleId : H4117

Tgt Ion: 43 Resp: 46749

Ion	Ratio	Lower	Upper
43	100		
58	19.4	0.0	62.0

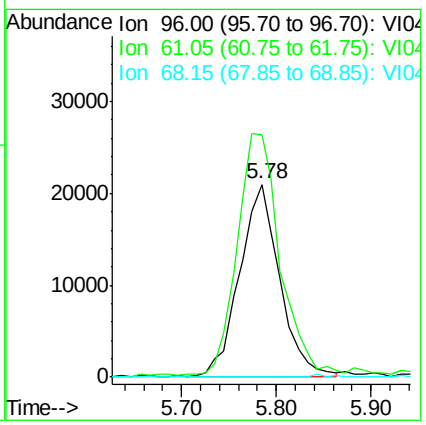


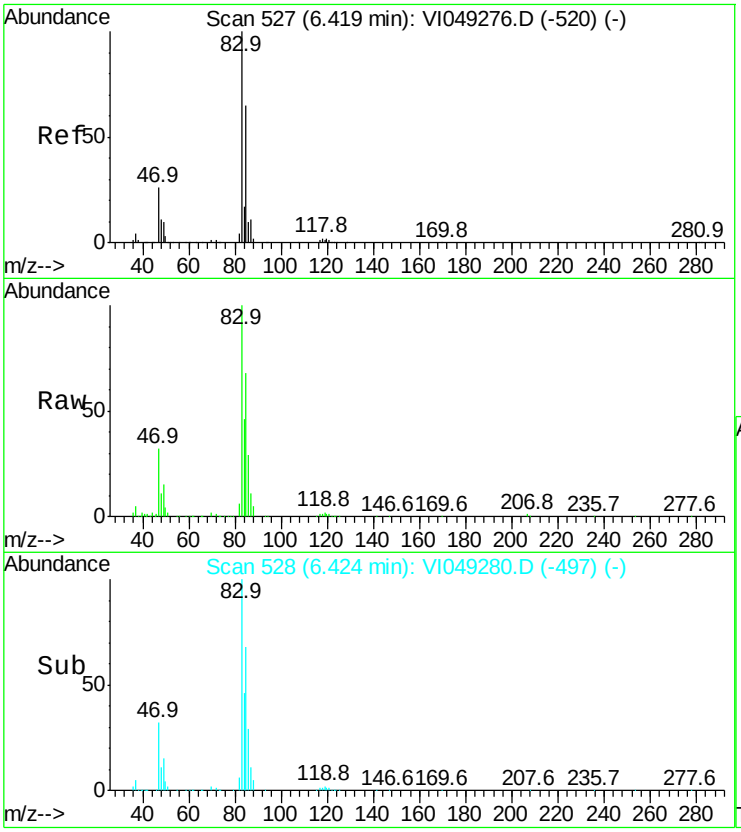


#22
cis-1,2-Dichloroethene
Concen: 0.57 ug/L
RT: 5.78 min Scan# 463
Delta R.T. 0.00 min
Lab File: VI049280.D
Acq: 6 May 2016 13:20

Tgt Ion: 96 Resp: 61750

Ion	Ratio	Lower	Upper
96	100		
61	125.7	82.1	152.5
68	0.0	0.0	0.0



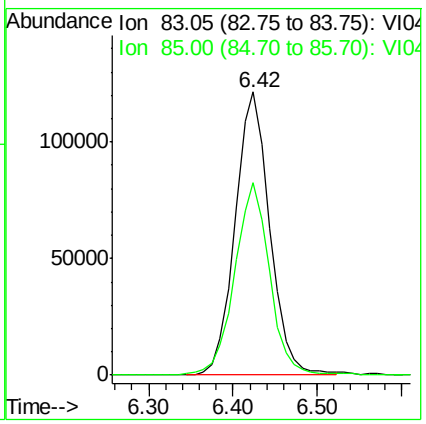


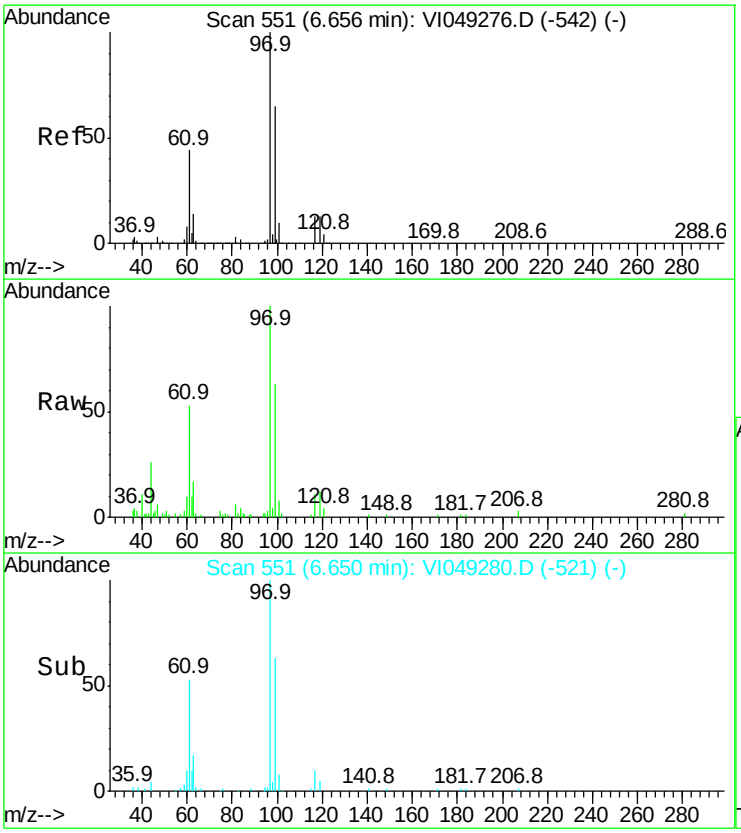
#25
Chloroform
Concen: 1.84 ug/L
RT: 6.42 min Scan# 528
Delta R.T. 0.00 min
Lab File: VI049280.D
Acq: 6 May 2016 13:20

Instrument :
MSVOA_I
ClientSampleId :
H4117

Tgt Ion: 83 Resp: 348289

Ion	Ratio	Lower	Upper
83	100		
85	68.1	47.3	87.8

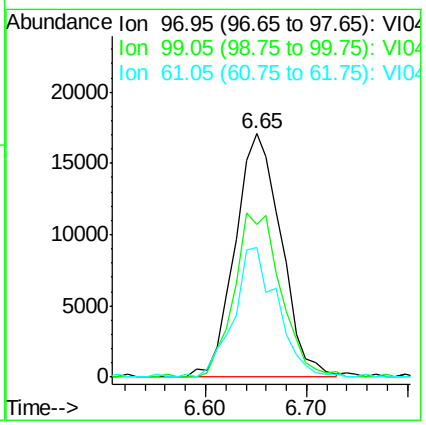


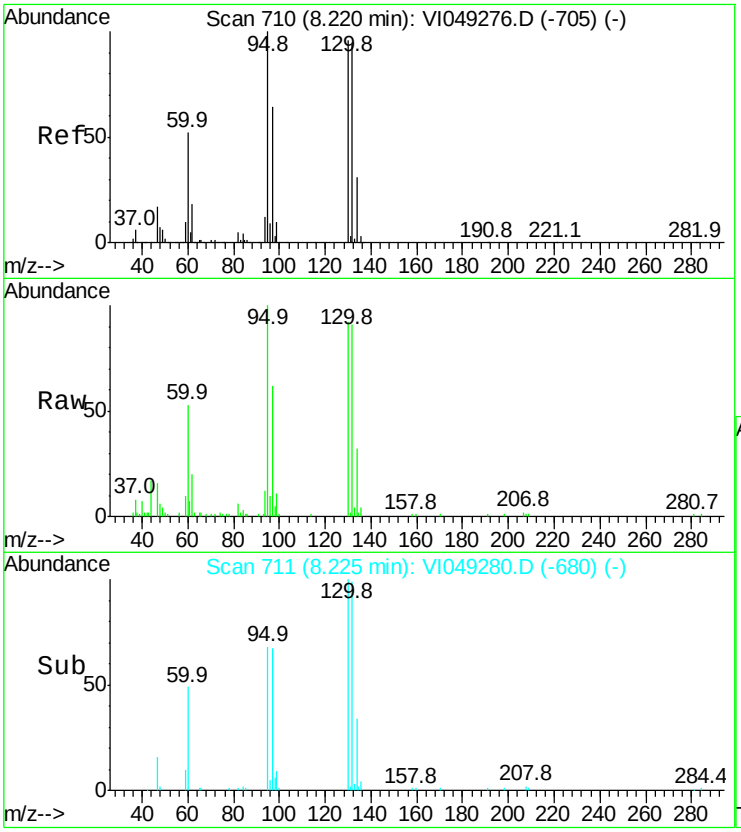


#29
1,1,1-Trichloroethane
Concen: 0.37 ug/L
RT: 6.65 min Scan# 551
Delta R.T. -0.01 min
Lab File: VI049280.D
Acq: 6 May 2016 13:20

Tgt Ion: 97 Resp: 54148

Ion	Ratio	Lower	Upper
97	100		
99	68.4	51.1	76.7
61	50.1	33.3	49.9#



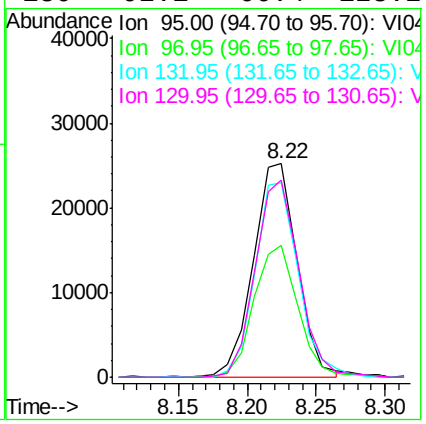


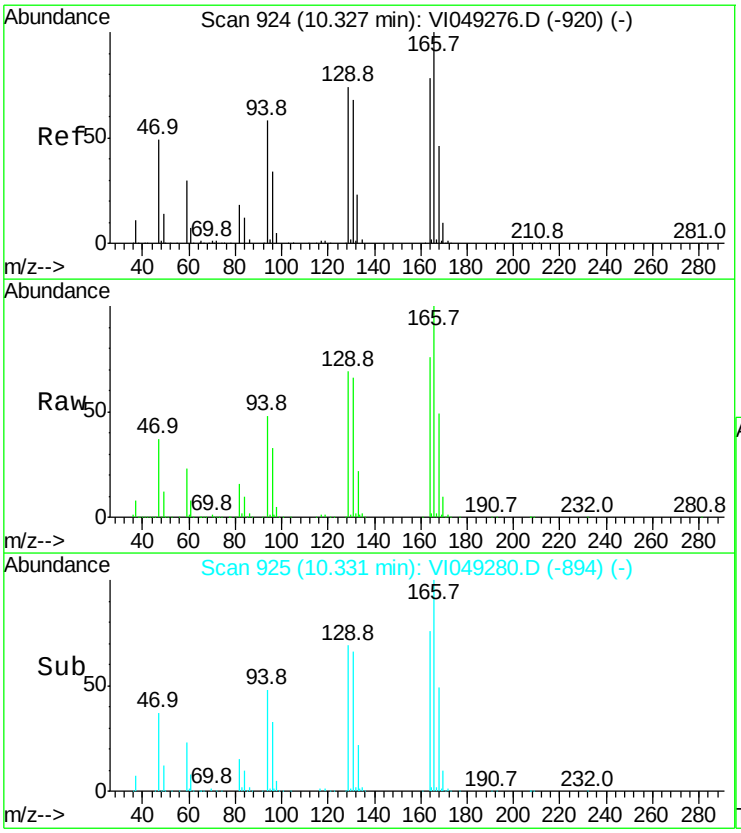
#34
Trichloroethene
Concen: 0.61 ug/L
RT: 8.22 min Scan# 711
Delta R.T. 0.00 min
Lab File: VI049280.D
Acq: 6 May 2016 13:20

Instrument :
MSVOA_I
ClientSampleId :
H4117

Tgt Ion: 95 Resp: 55769

Ion	Ratio	Lower	Upper
95	100		
97	61.6	45.8	85.2
132	91.4	63.9	118.7
130	92.1	66.4	123.2

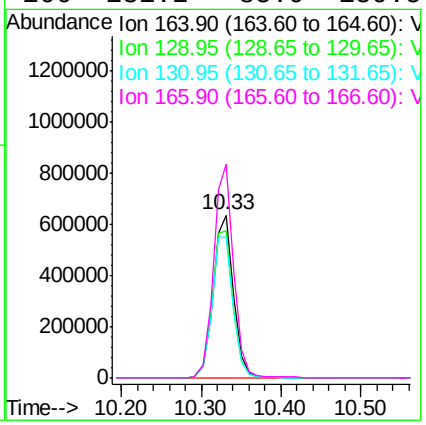




#47
Tetrachloroethene
Concen: 18.94 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.00 min
Lab File: VI049280.D
Acq: 6 May 2016 13:20

Tgt Ion:164 Resp: 1141954

Ion	Ratio	Lower	Upper
164	100		
129	90.4	62.1	115.3
131	86.6	60.6	112.6
166	131.2	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049280.D
Acq On : 6 May 2016 13:20
Operator : FY/SY
Sample : H2834-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4117

Quant Time: May 07 04:32:13 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1176009	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	772722	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	283431	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	326239	4.51	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 90.20%			
7) Chloroethane-d5	2.10	69	221858	5.53	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 110.60%			
11) 1,1-Dichloroethene-d2	2.93	63	575855	3.38	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 67.60%			
20) 2-Butanone-d5	5.68	46	871451	55.60	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 111.20%			
24) Chloroform-d	6.38	84	900211	4.89	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.80%			
26) 1,2-Dichloroethane-d4	7.24	65	394771	5.24	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.80%			
32) Benzene-d6	7.17	84	1549546	5.15	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.00%			
36) 1,2-Dichloropropane-d6	8.44	67	431422	5.10	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 102.00%			
41) Toluene-d8	9.70	98	1081605	4.87	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 97.40%			
43) trans-1,3-Dichloropropene-	10.02	79	150046	4.50	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 90.00%			
46) 2-Hexanone-d5	10.43	63	546353	51.94	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 103.88%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	183776	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.40%			
63) 1,2-Dichlorobenzene-d4	13.76	152	233830	4.71	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 94.20%			
Target Compounds						Qvalue
13) Acetone	3.02	43	46749	4.81	ug/L	79
22) cis-1,2-Dichloroethene	5.78	96	61750	0.57	ug/L	92
25) Chloroform	6.42	83	348289	1.84	ug/L	99
29) 1,1,1-Trichloroethane	6.65	97	54148	0.37	ug/L #	91
34) Trichloroethene	8.22	95	55769	0.61	ug/L	98
47) Tetrachloroethene	10.33	164	1141954	18.94	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049280.D
Acq On : 6 May 2016 13:20
Operator : FY/SY
Sample : H2834-20
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4117

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.296	3	7	28	rVB	6687103	18685629	100.00%	29.812%
2	1.582	34	36	40	rBV2	17382	28373	0.15%	0.045%
3	1.710	46	49	60	rVV	282340	515939	2.76%	0.823%
4	1.877	63	66	71	rVB	59822	109096	0.58%	0.174%
5	2.103	85	89	95	rBV	200001	402187	2.15%	0.642%
6	2.487	126	128	129	rBV2	6885	9589	0.05%	0.015%
7	2.556	133	135	136	rVV2	13131	18893	0.10%	0.030%
8	2.586	136	138	146	rVB2	24183	54644	0.29%	0.087%
9	2.930	168	173	181	rBV	695389	1641915	8.79%	2.620%
10	3.215	197	202	206	rBV2	50089	150921	0.81%	0.241%
11	3.540	233	235	238	rVB3	4709	8544	0.05%	0.014%
12	3.599	238	241	245	rBV5	9300	23719	0.13%	0.038%
13	3.875	263	269	270	rBV5	8966	20462	0.11%	0.033%
14	3.993	276	281	285	rVB5	11172	30059	0.16%	0.048%
15	4.259	305	308	309	rBV2	3720	5125	0.03%	0.008%
16	4.308	309	313	316	rBV3	7079	13360	0.07%	0.021%
17	4.357	316	318	319	rVB2	4888	4471	0.02%	0.007%
18	4.534	334	336	339	rVB4	3173	6313	0.03%	0.010%
19	4.574	339	340	343	rBV3	3200	6346	0.03%	0.010%
20	4.633	343	346	348	rVB3	3320	5770	0.03%	0.009%
21	4.721	351	355	360	rBV5	5808	14497	0.08%	0.023%
22	4.820	364	365	370	rVB4	4467	7242	0.04%	0.012%
23	4.918	373	375	377	rBV3	2818	5217	0.03%	0.008%
24	4.967	379	380	382	rBV	4199	5665	0.03%	0.009%
25	5.184	399	402	403	rVB2	2778	4435	0.02%	0.007%
26	5.223	403	406	409	rVB5	2254	4401	0.02%	0.007%
27	5.272	409	411	414	rBV4	3475	4740	0.03%	0.008%
28	5.341	416	418	420	rBV2	3680	5032	0.03%	0.008%
29	5.371	420	421	423	rVB	3982	4587	0.02%	0.007%
30	5.420	423	426	428	rBV4	5305	11145	0.06%	0.018%
31	5.489	429	433	435	rVB4	4852	11057	0.06%	0.018%
32	5.518	435	436	438	rBV2	4278	6018	0.03%	0.010%
33	5.676	446	452	459	rBV	347293	1236299	6.62%	1.972%
34	5.784	459	463	477	rVV3	217533	914210	4.89%	1.459%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049280.D
Acq On : 6 May 2016 13:20
Operator : FY/SY
Sample : H2834-20
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4117

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	5.932	477	478	481	rVV3	8532	12946	0.07%	0.021%
36	6.089	492	494	498	rVB5	3010	5463	0.03%	0.009%
37	6.247	506	510	511	rVB4	3197	6337	0.03%	0.010%
38	6.385	517	524	545	rVV2	747376	2960696	15.84%	4.724%
39	6.650	545	551	559	rVB	56211	183212	0.98%	0.292%
40	6.739	559	560	563	rBV3	3255	6043	0.03%	0.010%
41	6.916	576	578	581	rVB3	4592	6790	0.04%	0.011%
42	7.014	586	588	592	rVB5	2855	4232	0.02%	0.007%
43	7.172	597	604	608	rBV	1205924	3199026	17.12%	5.104%
44	7.231	608	610	620	rVB	434831	1044818	5.59%	1.667%
45	7.487	633	636	638	rBV4	3162	6486	0.03%	0.010%
46	7.762	660	664	667	rVB5	4278	8565	0.05%	0.014%
47	7.930	675	681	691	rBV	1294360	2911911	15.58%	4.646%
48	8.058	693	694	696	rVB2	4429	4812	0.03%	0.008%
49	8.225	703	711	719	rVB2	145573	341210	1.83%	0.544%
50	8.441	727	733	742	rBV	956633	2076031	11.11%	3.312%
51	8.629	750	752	754	rVB3	5561	8297	0.04%	0.013%
52	8.914	776	781	785	rBV5	16333	56611	0.30%	0.090%
53	8.973	785	787	789	rVB2	3817	5526	0.03%	0.009%
54	9.189	805	809	810	rVB3	4986	7537	0.04%	0.012%
55	9.258	812	816	818	rVB4	3265	6015	0.03%	0.010%
56	9.367	823	827	836	rBV	546489	982439	5.26%	1.567%
57	9.524	840	843	848	rVB	37673	70991	0.38%	0.113%
58	9.583	848	849	853	rVB4	8568	14070	0.08%	0.022%
59	9.701	856	861	867	rBV	1741026	3101700	16.60%	4.949%
60	9.770	867	868	877	rVB4	24728	43525	0.23%	0.069%
61	9.869	877	878	880	rVB2	4435	4939	0.03%	0.008%
62	10.016	888	893	899	rBV	310392	549037	2.94%	0.876%
63	10.124	902	904	905	rBV2	3211	4018	0.02%	0.006%
64	10.223	909	914	920	rVV	163220	353155	1.89%	0.563%
65	10.321	920	924	931	rVV	5174814	9684073	51.83%	15.450%
66	10.430	931	935	948	rVV	1696670	2976298	15.93%	4.748%
67	10.607	951	953	957	rVB5	8556	18200	0.10%	0.029%
68	10.981	987	991	992	rBV4	3774	5895	0.03%	0.009%
69	11.217	1011	1015	1025	rBV	1484947	2693753	14.42%	4.298%
70	11.355	1025	1029	1033	rVB2	23964	47957	0.26%	0.077%
71	11.473	1038	1041	1044	rVB4	8583	13078	0.07%	0.021%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049280.D
Acq On : 6 May 2016 13:20
Operator : FY/SY
Sample : H2834-20
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4117

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.591	1049	1053	1054	rBV3	2014	4768	0.03%	0.008%
73	11.680	1060	1062	1065	rBV3	3226	5877	0.03%	0.009%
74	11.788	1072	1073	1076	rBV3	3498	5737	0.03%	0.009%
75	11.857	1076	1080	1084	rVB7	7945	21146	0.11%	0.034%
76	11.935	1084	1088	1091	rVB6	2536	6930	0.04%	0.011%
77	11.994	1091	1094	1096	rBV2	3319	5434	0.03%	0.009%
78	12.132	1106	1108	1109	rBV2	3816	5085	0.03%	0.008%
79	12.191	1109	1114	1116	rBV5	7470	11577	0.06%	0.018%
80	12.260	1120	1121	1123	rVV2	2602	4481	0.02%	0.007%
81	12.408	1131	1136	1138	rBV2	150746	281964	1.51%	0.450%
82	12.467	1138	1142	1150	rVB	383424	708732	3.79%	1.131%
83	12.575	1150	1153	1157	rVB4	3240	7614	0.04%	0.012%
84	12.713	1163	1167	1169	rBV5	3799	9396	0.05%	0.015%
85	13.057	1201	1202	1204	rBV2	5253	6601	0.04%	0.011%
86	13.097	1204	1206	1209	rVB4	3919	5348	0.03%	0.009%
87	13.274	1222	1224	1225	rVB2	3570	4038	0.02%	0.006%
88	13.303	1225	1227	1228	rBV2	3429	4816	0.03%	0.008%
89	13.363	1231	1233	1235	rVB3	5614	6993	0.04%	0.011%
90	13.431	1236	1240	1247	rBV	1247789	2071532	11.09%	3.305%
91	13.628	1257	1260	1261	rBV3	5900	9638	0.05%	0.015%
92	13.756	1269	1273	1282	rBV	1033208	1784317	9.55%	2.847%
93	13.874	1283	1285	1290	rVB6	8394	17222	0.09%	0.027%
94	13.973	1292	1295	1296	rBV3	6508	10008	0.05%	0.016%
95	14.032	1297	1301	1305	rVV2	84161	154050	0.82%	0.246%
96	14.091	1305	1307	1309	rVB3	4638	5339	0.03%	0.009%
97	14.307	1327	1329	1331	rBV2	6266	10156	0.05%	0.016%
98	14.425	1340	1341	1342	rBV	6092	7018	0.04%	0.011%
99	14.514	1349	1350	1354	rBV4	6986	14527	0.08%	0.023%
100	15.606	1458	1461	1465	rBV	37432	87216	0.47%	0.139%

Sum of corrected areas: 62679152

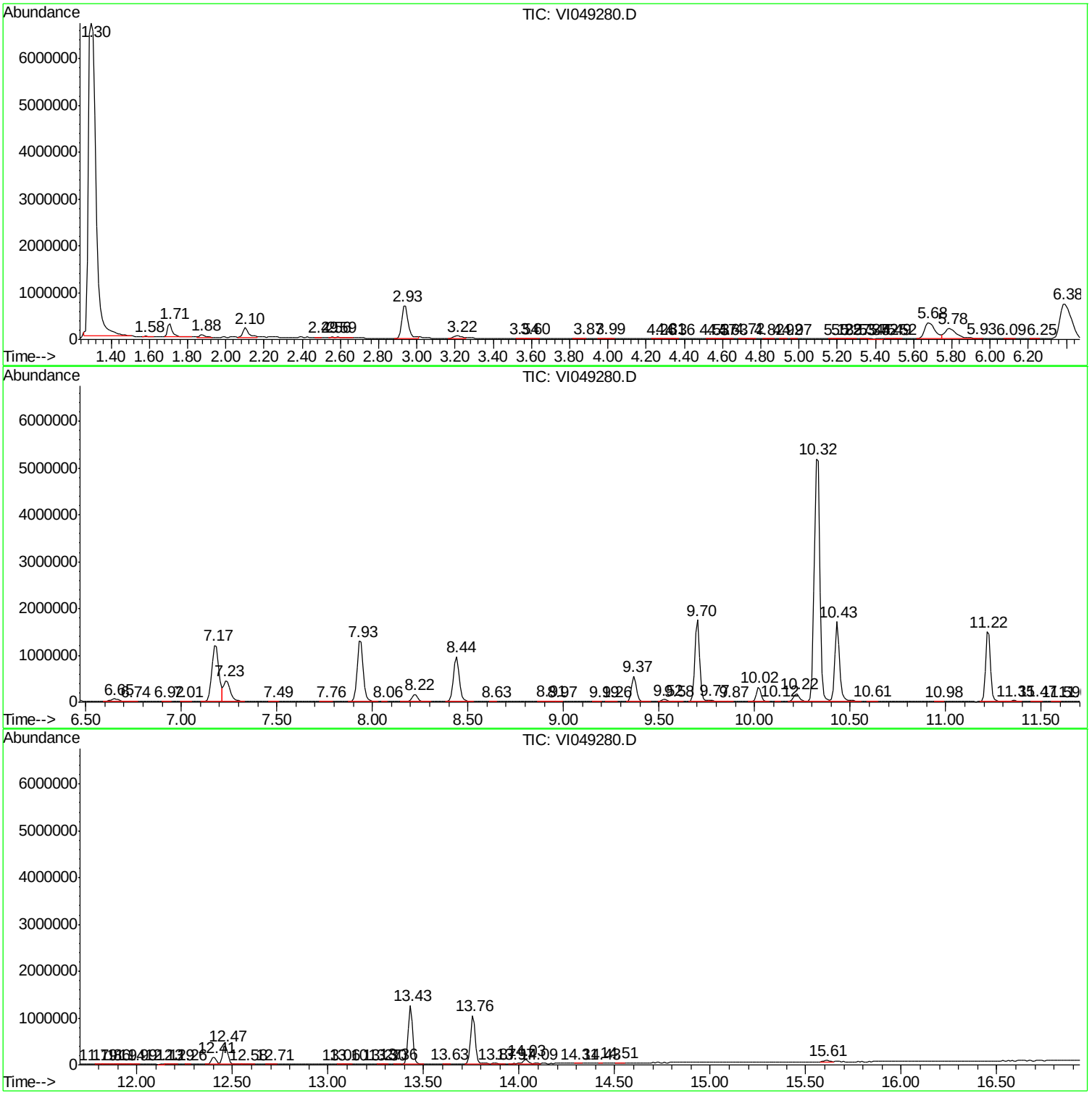
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049280.D
Acq On : 6 May 2016 13:20
Operator : FY/SY
Sample : H2834-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4117

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049280.D
Acq On : 6 May 2016 13:20
Operator : FY/SY
Sample : H2834-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4117

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

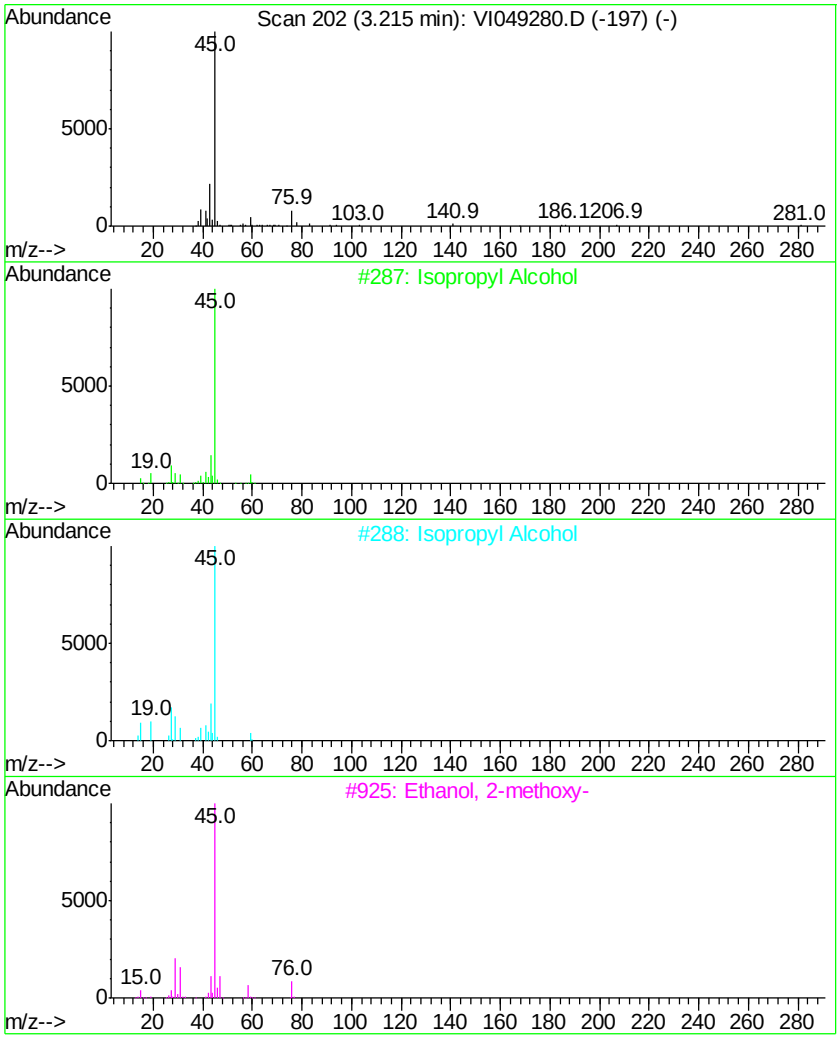
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

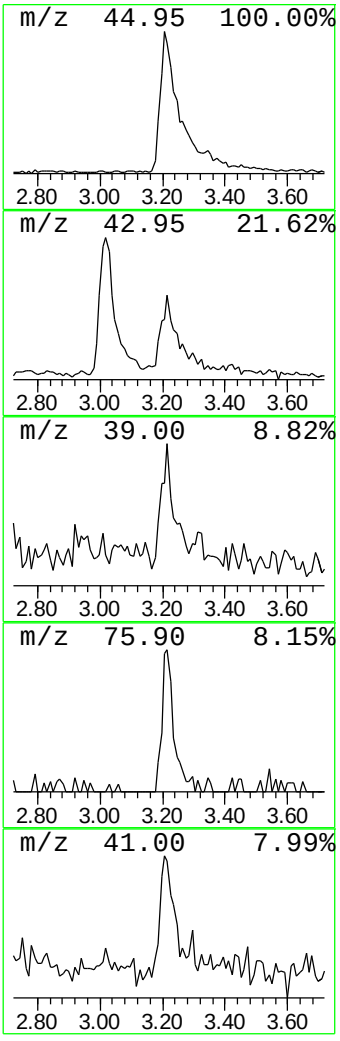
****

Peak Number 2 Isopropyl Alcohol Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.22	0.26 ug/L	150921	1,4-Difluorobenzene	7.94

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isopropyl Alcohol	60	C3H8O	000067-63-0	80
2	Isopropyl Alcohol	60	C3H8O	000067-63-0	72
3	Ethanol, 2-methoxy-	76	C3H8O2	000109-86-4	56
4	Propane, 2-ethoxy-	88	C5H12O	000625-54-7	40
5	2-Pentanol	88	C5H12O	006032-29-7	40





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049280.D
Acq On : 6 May 2016 13:20
Operator : FY/SY
Sample : H2834-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4117

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Isopropyl Alcohol	3.22	0.3	ug/L	150921	1	7.94	2911910	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4118

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049278.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.56	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.3	
71-55-6	1,1,1-Trichloroethane	0.29	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.66	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4118

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049278.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	16	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4118

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049278.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4118

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049278.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

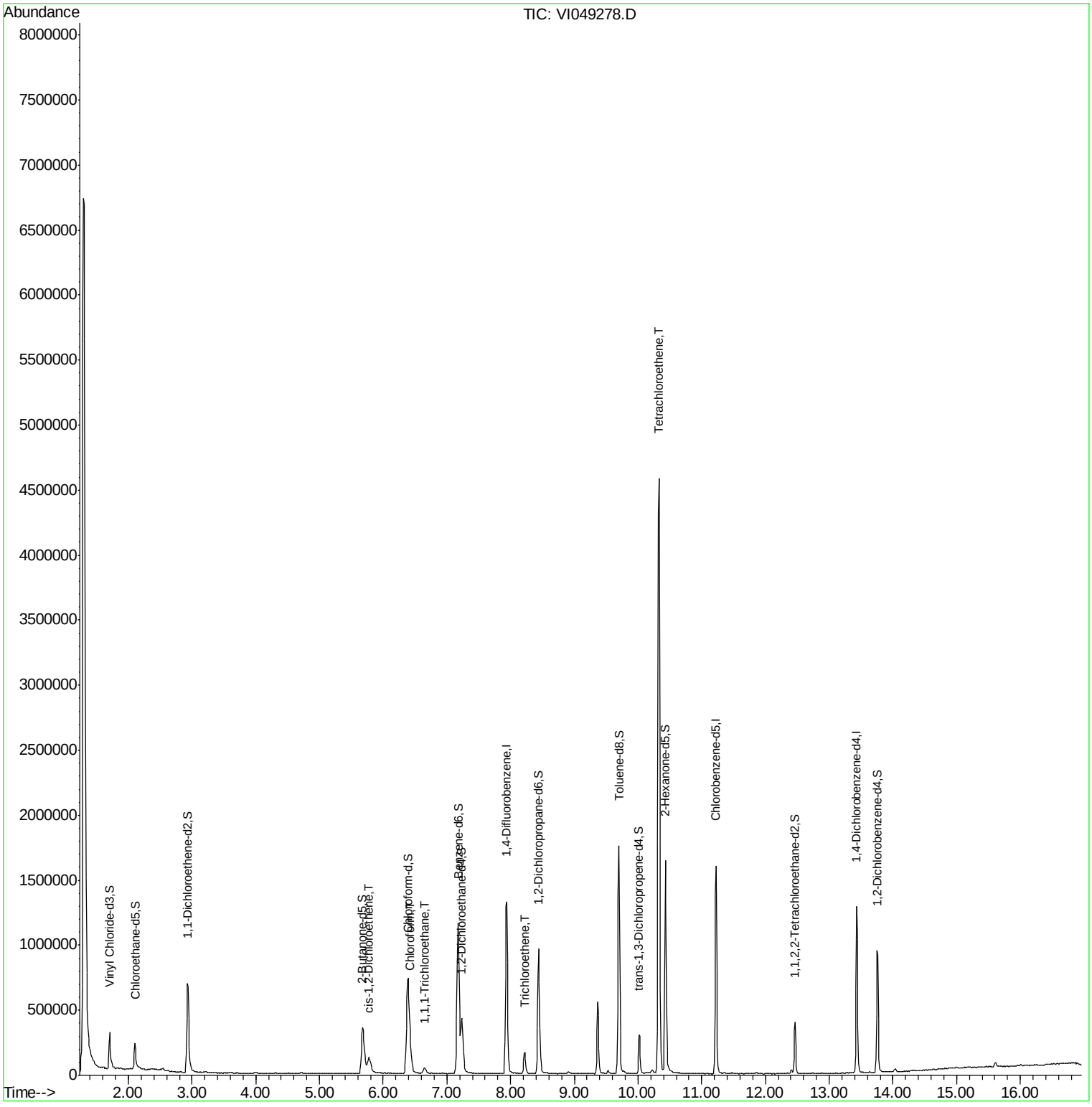
EPA-designated Registry Number.

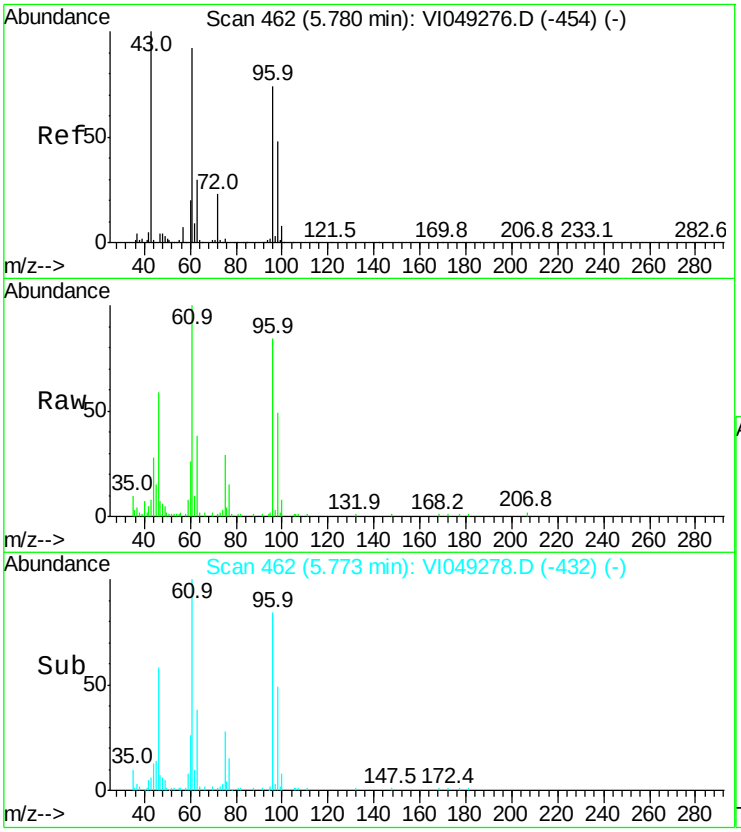
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049278.D
Acq On : 6 May 2016 12:17
Operator : FY/SY
Sample : H2834-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4118

Quant Time: May 07 04:22:24 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration



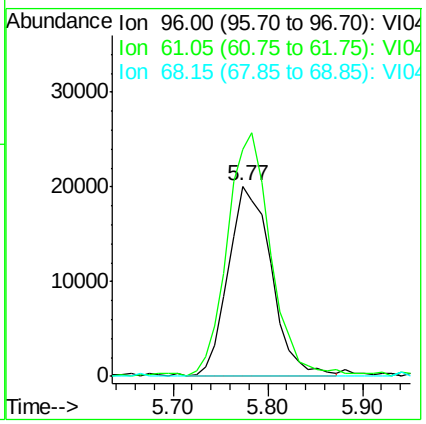


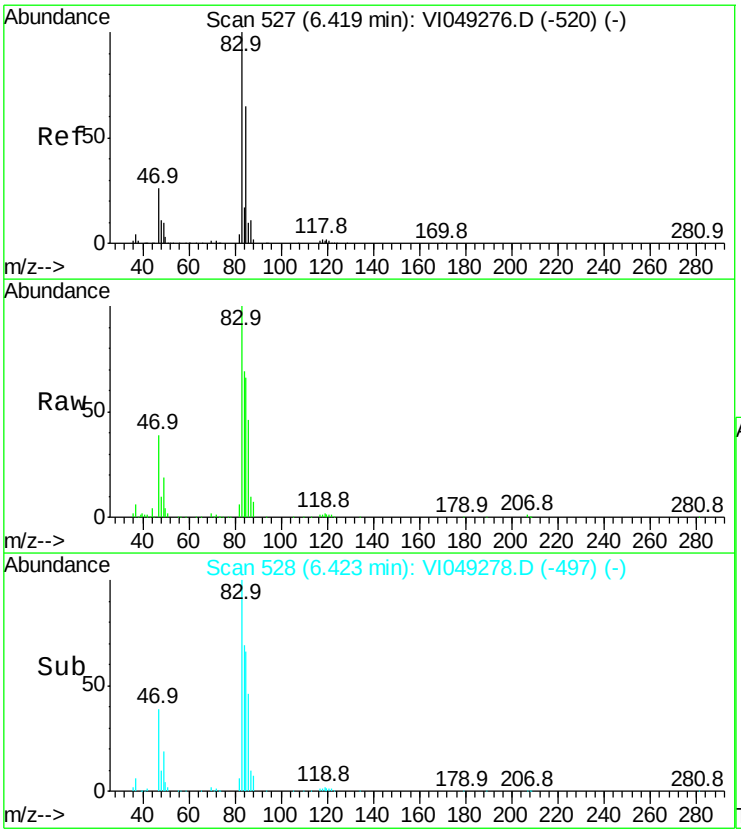
#22
cis-1,2-Dichloroethene
Concen: 0.56 ug/L
RT: 5.77 min Scan# 462
Delta R.T. -0.01 min
Lab File: VI049278.D
Acq: 6 May 2016 12:17

Instrument :
MSVOA_I
ClientSampleId :
H4118

Tgt Ion: 96 Resp: 63427

Ion	Ratio	Lower	Upper
96	100		
61	119.4	82.1	152.5
68	0.0	0.0	0.0

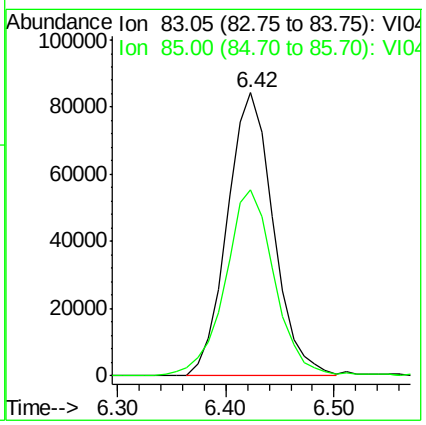


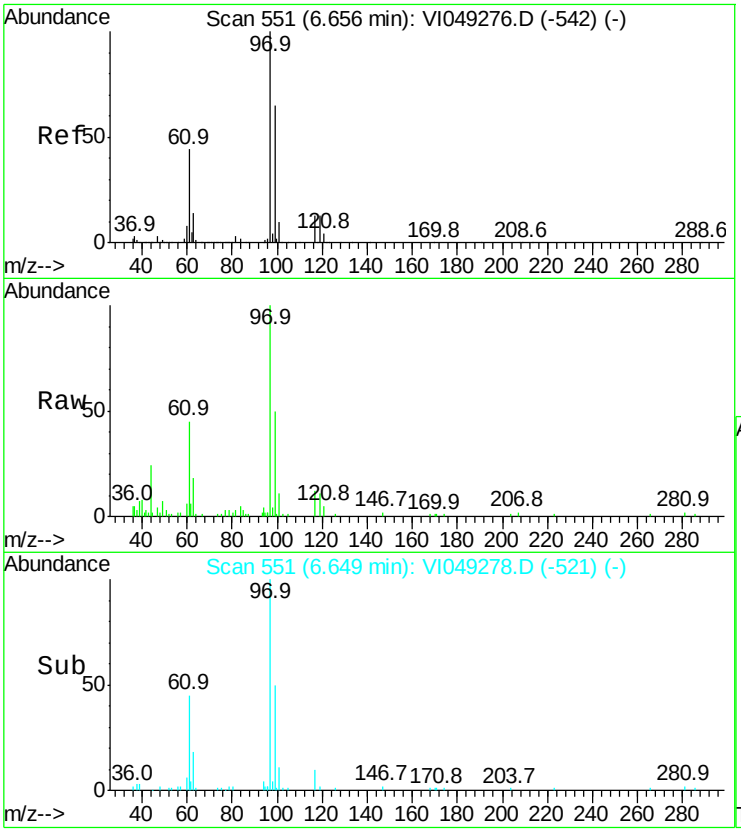


#25
Chloroform
Concen: 1.26 ug/L
RT: 6.42 min Scan# 528
Delta R.T. 0.00 min
Lab File: VI049278.D
Acq: 6 May 2016 12:17

Tgt Ion: 83 Resp: 249131

Ion	Ratio	Lower	Upper
83	100		
85	65.9	47.3	87.8



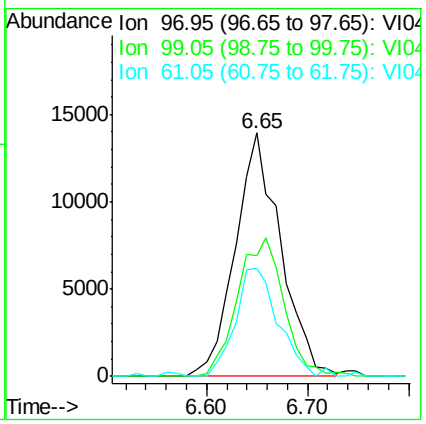


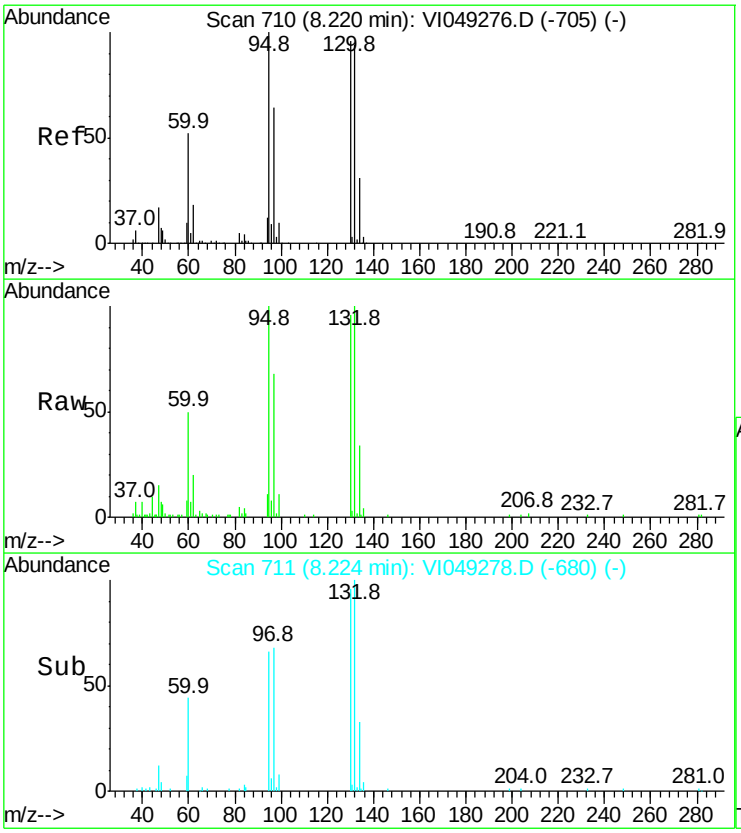
#29
1,1,1-Trichloroethane
Concen: 0.29 ug/L
RT: 6.65 min Scan# 551
Delta R.T. -0.01 min
Lab File: VI049278.D
Acq: 6 May 2016 12:17

Instrument : MSVOA_I
ClientSampleId : H4118

Tgt Ion: 97 Resp: 43392

Ion	Ratio	Lower	Upper
97	100		
99	57.8	51.1	76.7
61	41.8	33.3	49.9

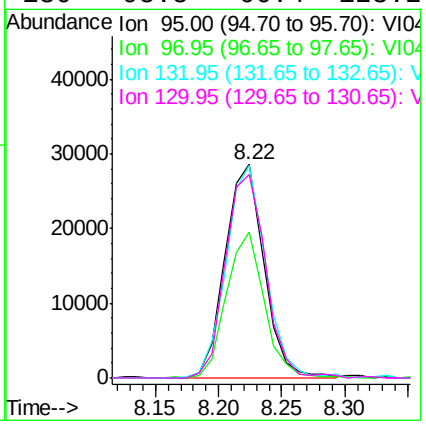


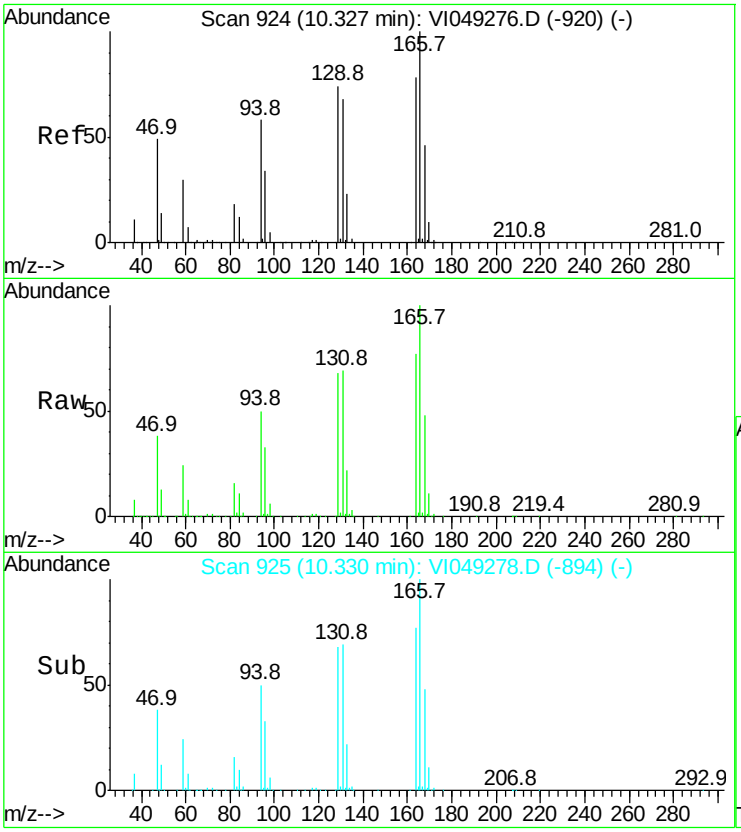


#34
Trichloroethene
Concen: 0.66 ug/L
RT: 8.22 min Scan# 711
Delta R.T. 0.00 min
Lab File: VI049278.D
Acq: 6 May 2016 12:17

Tgt Ion: 95 Resp: 61058

Ion	Ratio	Lower	Upper
95	100		
97	68.5	45.8	85.2
132	99.7	63.9	118.7
130	95.5	66.4	123.2



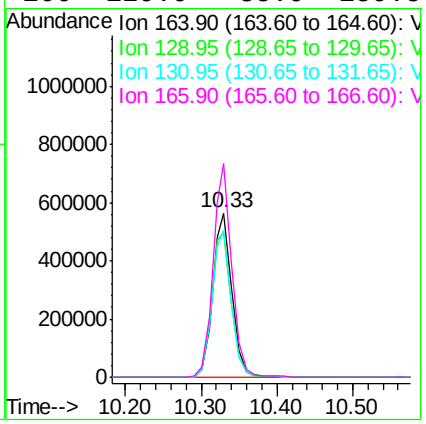


#47
Tetrachloroethene
Concen: 16.37 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.00 min
Lab File: VI049278.D
Acq: 6 May 2016 12:17

Instrument :
MSVOA_I
ClientSampleId :
H4118

Tgt Ion:164 Resp: 999583

Ion	Ratio	Lower	Upper
164	100		
129	88.2	62.1	115.3
131	89.3	60.6	112.6
166	129.9	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049278.D
Acq On : 6 May 2016 12:17
Operator : FY/SY
Sample : H2834-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4118

Quant Time: May 07 04:22:24 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1232391	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	782569	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	286122	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	317279	4.18	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 83.60%			
7) Chloroethane-d5	2.10	69	214701	5.11	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 102.20%			
11) 1,1-Dichloroethene-d2	2.93	63	571493	3.20	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 64.00%			
20) 2-Butanone-d5	5.67	46	853164	51.94	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 103.88%			
24) Chloroform-d	6.38	84	880124	4.56	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 91.20%			
26) 1,2-Dichloroethane-d4	7.24	65	390729	4.95	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.00%			
32) Benzene-d6	7.18	84	1505604	4.94	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.80%			
36) 1,2-Dichloropropane-d6	8.44	67	418910	4.89	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.80%			
41) Toluene-d8	9.70	98	1044302	4.64	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.80%			
43) trans-1,3-Dichloropropene-	10.03	79	152814	4.52	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 90.40%			
46) 2-Hexanone-d5	10.43	63	547135	51.36	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 102.72%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	178437	4.58	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.60%			
63) 1,2-Dichlorobenzene-d4	13.77	152	227541	4.54	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 90.80%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.77	96	63427	0.56	ug/L	98
25) Chloroform	6.42	83	249131	1.26	ug/L	98
29) 1,1,1-Trichloroethane	6.65	97	43392	0.29	ug/L	95
34) Trichloroethene	8.22	95	61058	0.66	ug/L	96
47) Tetrachloroethene	10.33	164	999583	16.37	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049278.D
Acq On : 6 May 2016 12:17
Operator : FY/SY
Sample : H2834-21
Misc : 25mL/MSVOA I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4118

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.295	4	7	34	rVB	6684316	19103638	100.00%	31.655%
2	1.650	41	43	45	rVB3	8090	10066	0.05%	0.017%
3	1.709	46	49	58	rVB	282648	500081	2.62%	0.829%
4	2.102	85	89	100	rVB	195482	394358	2.06%	0.653%
5	2.506	128	130	131	rBV2	6315	6775	0.04%	0.011%
6	2.545	132	134	139	rVB3	20206	33829	0.18%	0.056%
7	2.673	145	147	150	rVB4	5168	5484	0.03%	0.009%
8	2.811	159	161	168	rVB6	6006	15322	0.08%	0.025%
9	2.929	168	173	188	rVV	686722	1655257	8.66%	2.743%
10	3.116	191	192	193	rVV	6934	6086	0.03%	0.010%
11	3.175	196	198	199	rVV2	5411	7566	0.04%	0.013%
12	3.205	199	201	205	rVV4	10993	24164	0.13%	0.040%
13	3.293	209	210	212	rVB2	7056	6026	0.03%	0.010%
14	3.342	212	215	221	rVB5	3519	10909	0.06%	0.018%
15	3.500	229	231	234	rVB3	2688	5250	0.03%	0.009%
16	3.588	237	240	248	rBV5	7941	31678	0.17%	0.052%
17	3.992	277	281	288	rBV8	9764	31666	0.17%	0.052%
18	4.149	293	297	298	rBV3	3877	8058	0.04%	0.013%
19	4.307	312	313	316	rVV3	4671	7098	0.04%	0.012%
20	4.356	316	318	322	rVB3	3749	5291	0.03%	0.009%
21	4.455	325	328	330	rVB4	4833	8859	0.05%	0.015%
22	4.514	330	334	335	rBV3	5503	9538	0.05%	0.016%
23	4.612	342	344	346	rBV3	6027	10367	0.05%	0.017%
24	4.710	352	354	360	rVB5	8556	22917	0.12%	0.038%
25	4.976	377	381	383	rBV4	3565	8432	0.04%	0.014%
26	5.449	426	429	432	rBV5	2354	5659	0.03%	0.009%
27	5.508	432	435	438	rBV4	3607	7026	0.04%	0.012%
28	5.675	442	452	458	rBV	353716	1203676	6.30%	1.995%
29	5.773	458	462	476	rVV3	123626	494609	2.59%	0.820%
30	5.931	476	478	482	rVV5	6213	14646	0.08%	0.024%
31	5.980	482	483	485	rVB2	5305	5195	0.03%	0.009%
32	6.029	485	488	491	rBV5	4151	8010	0.04%	0.013%
33	6.393	516	525	538	rVV2	737930	2703962	14.15%	4.481%
34	6.541	538	540	544	rVV4	8109	18467	0.10%	0.031%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049278.D
Acq On : 6 May 2016 12:17
Operator : FY/SY
Sample : H2834-21
Misc : 25mL/MSVOA I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4118

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.649	544	551	560	rVV3	43401	153725	0.80%	0.255%
36	6.758	560	562	565	rVV4	4779	8172	0.04%	0.014%
37	6.895	572	576	578	rBV6	4408	10850	0.06%	0.018%
38	6.925	578	579	583	rVB3	6017	7410	0.04%	0.012%
39	6.974	583	584	587	rVB3	4762	5978	0.03%	0.010%
40	7.033	587	590	592	rBV4	4571	10464	0.05%	0.017%
41	7.181	598	605	608	rVV	1160400	3144881	16.46%	5.211%
42	7.230	608	610	621	rVV	424757	1105913	5.79%	1.833%
43	7.348	621	622	627	rVV4	11301	21890	0.11%	0.036%
44	7.417	627	629	632	rVB4	7124	11944	0.06%	0.020%
45	7.574	644	645	647	rBV2	4169	5632	0.03%	0.009%
46	7.653	650	653	655	rBV3	3550	7017	0.04%	0.012%
47	7.939	676	682	693	rVV	1323227	3017985	15.80%	5.001%
48	8.067	693	695	698	rVV4	4486	10580	0.06%	0.018%
49	8.106	698	699	702	rVB3	5099	5906	0.03%	0.010%
50	8.224	705	711	716	rBV	166970	377321	1.98%	0.625%
51	8.293	716	718	721	rVV3	2768	5193	0.03%	0.009%
52	8.441	725	733	742	rBV	961348	2064916	10.81%	3.422%
53	8.539	742	743	749	rVV6	10258	25552	0.13%	0.042%
54	8.696	758	759	763	rVB3	4746	7998	0.04%	0.013%
55	8.903	776	780	785	rVB5	11896	31694	0.17%	0.053%
56	8.962	785	786	790	rVB4	3604	5967	0.03%	0.010%
57	9.041	790	794	795	rBV3	5767	8644	0.05%	0.014%
58	9.130	799	803	804	rVB3	3893	6560	0.03%	0.011%
59	9.238	809	814	817	rBV5	2205	6243	0.03%	0.010%
60	9.277	817	818	822	rVB2	4042	7215	0.04%	0.012%
61	9.366	822	827	834	rBV	555050	1025848	5.37%	1.700%
62	9.454	834	836	838	rVB2	5207	7158	0.04%	0.012%
63	9.533	840	844	847	rVV2	18261	36890	0.19%	0.061%
64	9.700	856	861	867	rBV	1752438	3047460	15.95%	5.050%
65	10.015	888	893	902	rBV	295465	569286	2.98%	0.943%
66	10.153	902	907	908	rVV5	8105	23879	0.12%	0.040%
67	10.222	910	914	920	rVV	28475	85493	0.45%	0.142%
68	10.330	920	925	931	rVV	4580052	8419312	44.07%	13.951%
69	10.429	931	935	949	rVV	1636893	2970886	15.55%	4.923%
70	10.576	949	950	951	rVV	6975	7767	0.04%	0.013%
71	10.606	951	953	956	rVV4	8700	18968	0.10%	0.031%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049278.D
Acq On : 6 May 2016 12:17
Operator : FY/SY
Sample : H2834-21
Misc : 25mL/MSVOA I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4118

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	10.655	956	958	961	rVV4	7207	11935	0.06%	0.020%
73	10.704	961	963	965	rVV3	3777	5077	0.03%	0.008%
74	10.862	975	979	981	rBV3	3302	5798	0.03%	0.010%
75	11.226	1011	1016	1026	rBV	1602046	2783551	14.57%	4.612%
76	11.354	1026	1029	1033	rVB3	10098	18910	0.10%	0.031%
77	11.472	1038	1041	1045	rVB5	6914	16957	0.09%	0.028%
78	11.551	1045	1049	1052	rVB4	3109	8888	0.05%	0.015%
79	11.856	1076	1080	1084	rBV6	12524	24555	0.13%	0.041%
80	12.121	1105	1107	1110	rBV3	2828	5224	0.03%	0.009%
81	12.200	1110	1115	1118	rBV5	6647	19166	0.10%	0.032%
82	12.348	1129	1130	1132	rBV2	5035	6069	0.03%	0.010%
83	12.407	1132	1136	1138	rBV2	24026	42938	0.22%	0.071%
84	12.466	1138	1142	1146	rVB	390520	656873	3.44%	1.088%
85	12.545	1149	1150	1155	rVB4	3498	5646	0.03%	0.009%
86	12.742	1167	1170	1171	rBV2	4515	6517	0.03%	0.011%
87	12.771	1171	1173	1174	rVB2	5287	5305	0.03%	0.009%
88	12.801	1174	1176	1177	rBV2	4940	6182	0.03%	0.010%
89	12.889	1182	1185	1187	rBV3	6064	7573	0.04%	0.013%
90	12.958	1189	1192	1193	rBV3	3553	5076	0.03%	0.008%
91	13.017	1196	1198	1200	rBV3	3480	5407	0.03%	0.009%
92	13.273	1221	1224	1227	rBV5	4206	7126	0.04%	0.012%
93	13.371	1229	1234	1235	rBV4	4548	7945	0.04%	0.013%
94	13.430	1236	1240	1247	rBV	1278614	2110143	11.05%	3.497%
95	13.755	1269	1273	1283	rBV	934285	1758334	9.20%	2.914%
96	14.031	1297	1301	1307	rVB	22080	42834	0.22%	0.071%
97	14.277	1324	1326	1328	rBV3	4110	8480	0.04%	0.014%
98	14.326	1328	1331	1332	rVV3	6786	10969	0.06%	0.018%
99	14.877	1385	1387	1388	rBV2	7512	11161	0.06%	0.018%
100	15.606	1458	1461	1465	rBV2	29535	65554	0.34%	0.109%

Sum of corrected areas: 60348755

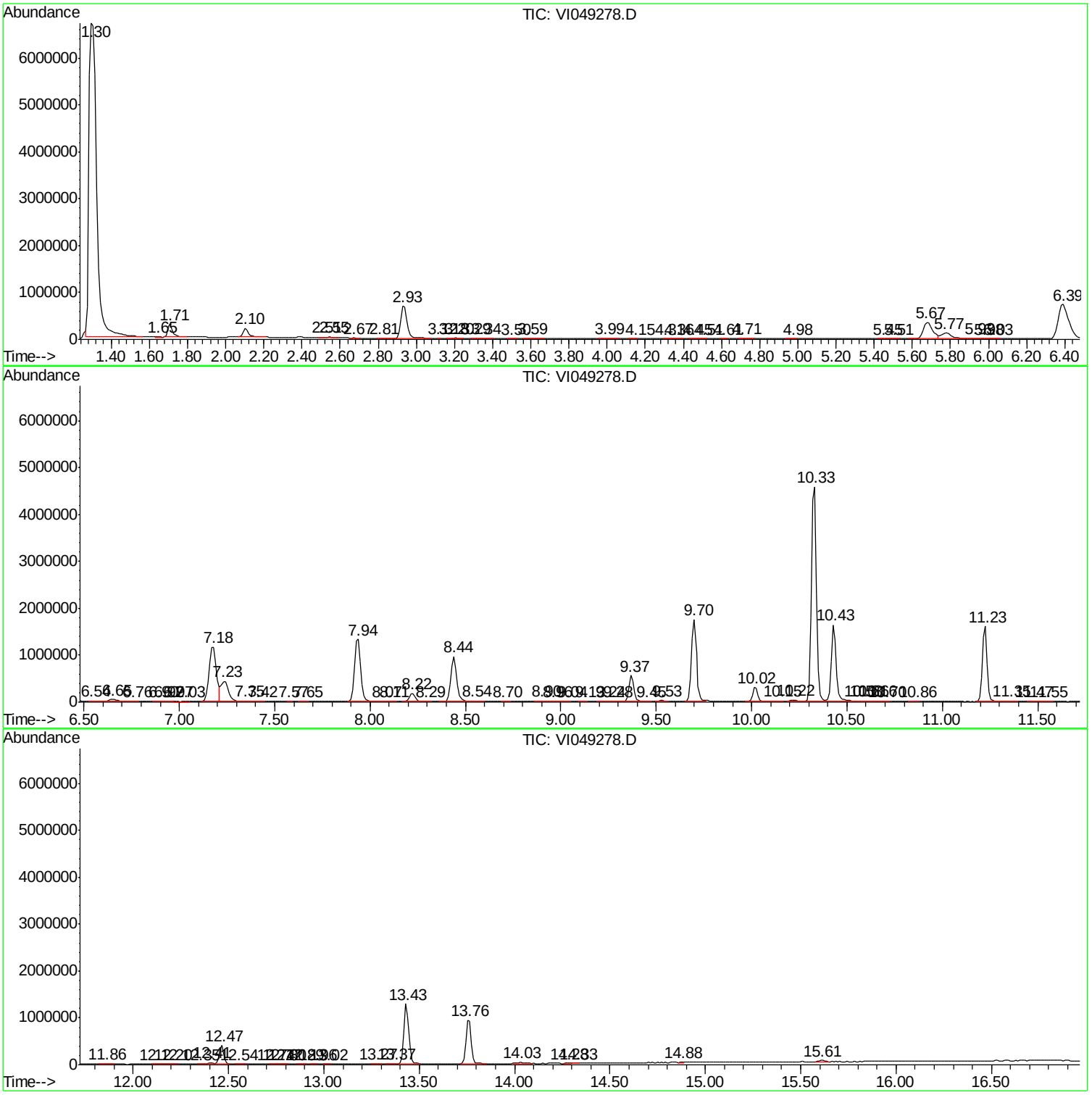
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049278.D
Acq On : 6 May 2016 12:17
Operator : FY/SY
Sample : H2834-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4118

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049278.D
Acq On : 6 May 2016 12:17
Operator : FY/SY
Sample : H2834-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4118

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049278.D
Acq On : 6 May 2016 12:17
Operator : FY/SY
Sample : H2834-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4118

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4121

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049238.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.27	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.97	
71-55-6	1,1,1-Trichloroethane	0.31	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.20	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.48	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4121

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049238.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.34	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	21	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.080	J
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.12	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4121

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049238.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4121

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049238.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/04/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000067-63-0	Isopropyl Alcohol	3.21	0.35	JN
2	E966796	Total Alkanes	N/A	0.28	

EPA-designated Registry Number.

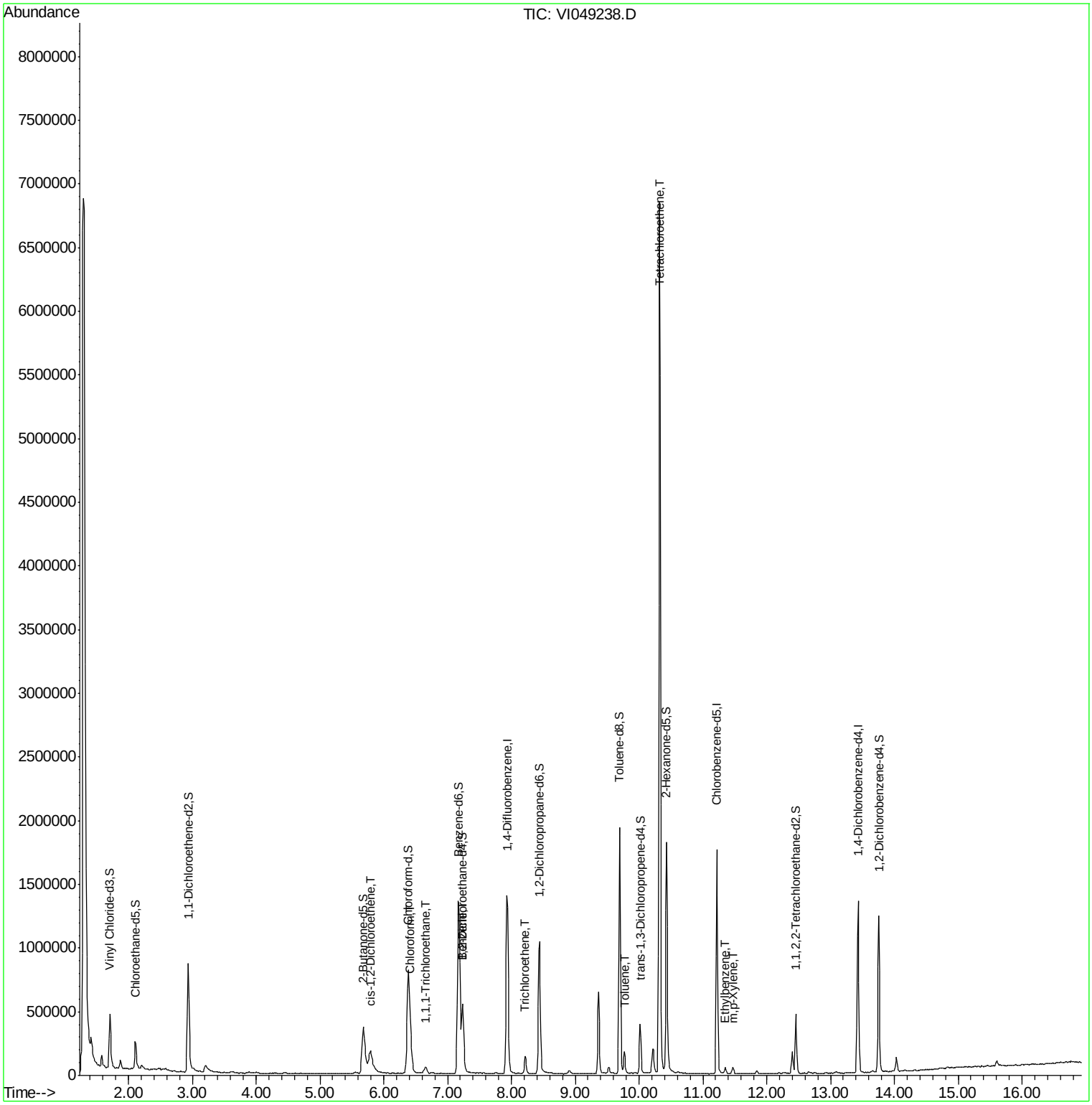
Quantitation Report (QT/LSC Reviewed)

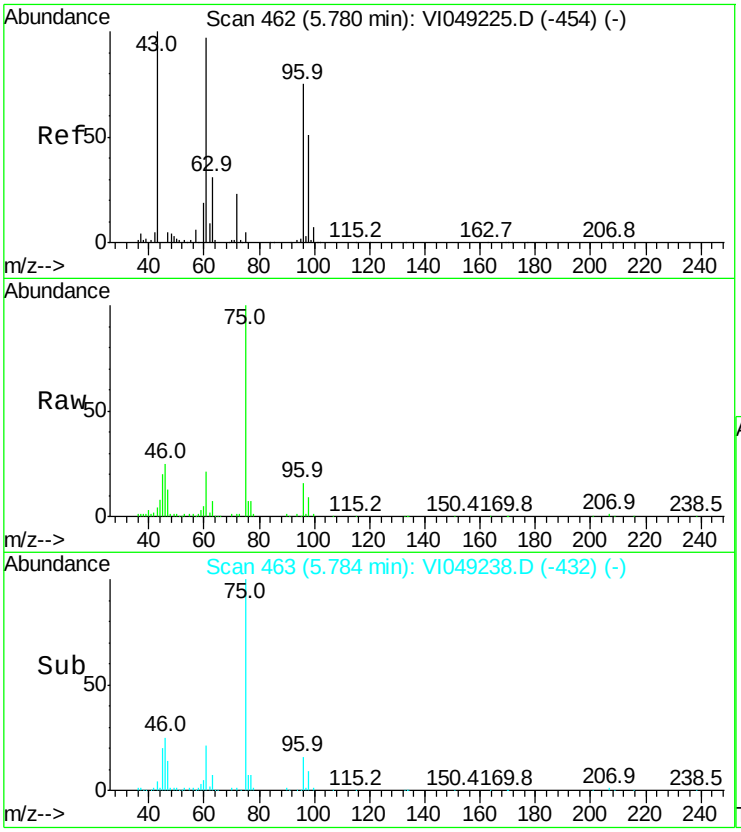
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049238.D
Acq On : 4 May 2016 21:33
Operator : FY/SY
Sample : H2834-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 05 06:42:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4121

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:28 AM

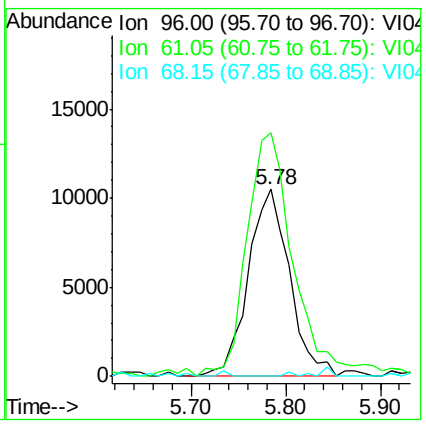




#22
cis-1,2-Dichloroethene
Concen: 0.27 ug/L
RT: 5.78 min Scan# 463
Delta R.T. 0.00 min
Lab File: VI049238.D
Acq: 4 May 2016 21:33

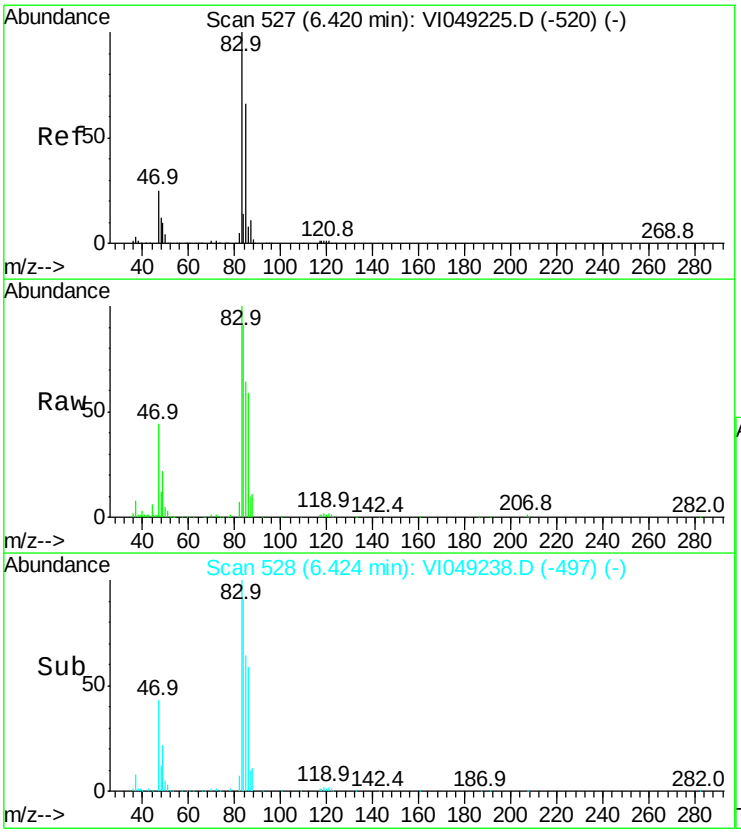
Tgt Ion: 96 Resp: 31742

Ion	Ratio	Lower	Upper
96	100		
61	130.1	82.1	152.5
68	0.0	0.0	0.0



Instrument :
MSVOA_I
ClientSampleId :
H4121

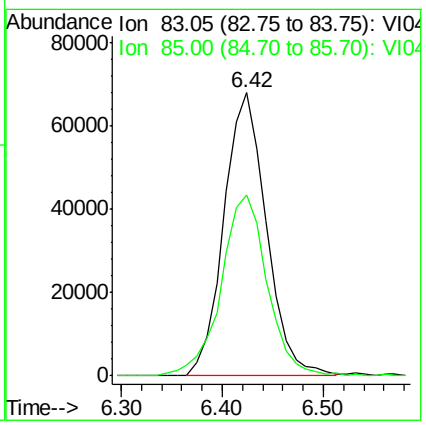
Manual Integrations APPROVED
mohammad
5/5/2016 9:01:28 AM

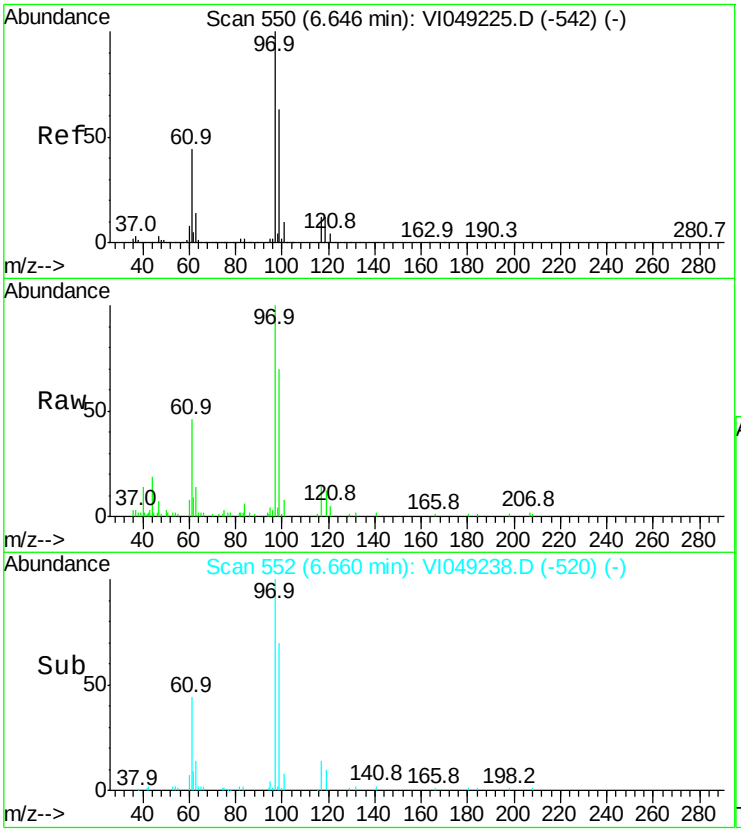


#25
Chloroform
Concen: 0.97 ug/L
RT: 6.42 min Scan# 528
Delta R.T. 0.00 min
Lab File: VI049238.D
Acq: 4 May 2016 21:33

Tgt Ion: 83 Resp: 198998

Ion	Ratio	Lower	Upper
83	100		
85	64.0	47.3	87.8

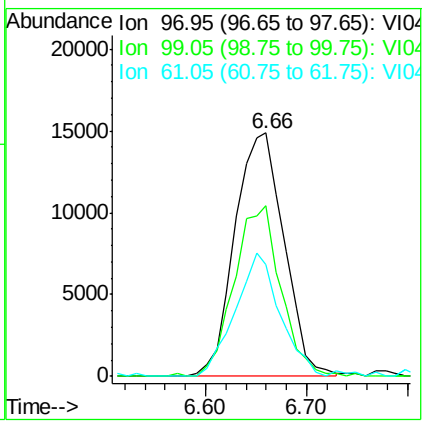




#29
1,1,1-Trichloroethane
Concen: 0.31 ug/L
RT: 6.66 min Scan# 552
Delta R.T. 0.01 min
Lab File: VI049238.D
Acq: 4 May 2016 21:33

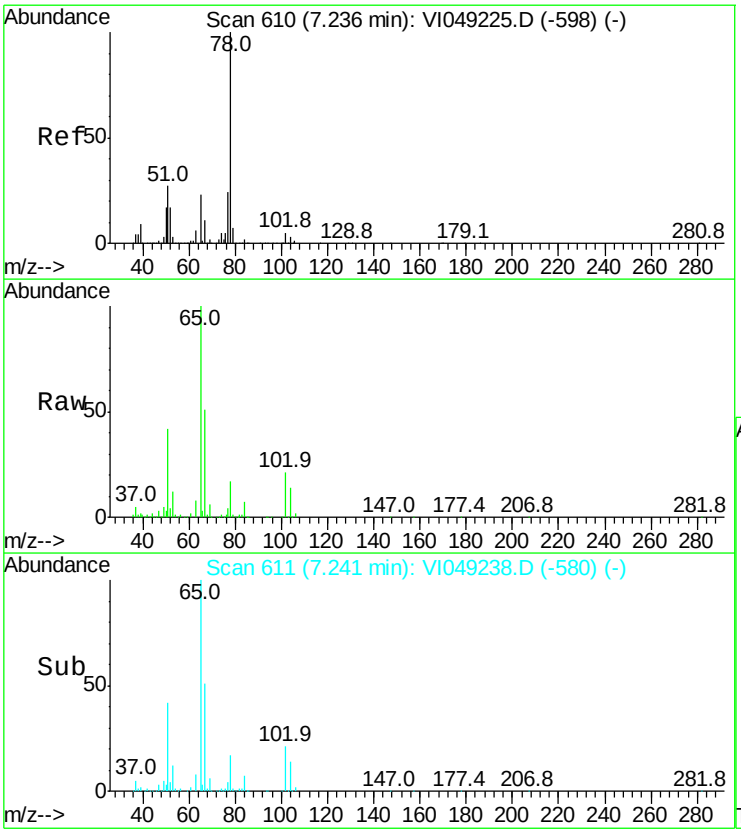
Tgt Ion: 97 Resp: 50314

Ion	Ratio	Lower	Upper
97	100		
99	66.3	51.1	76.7
61	46.3	33.3	49.9



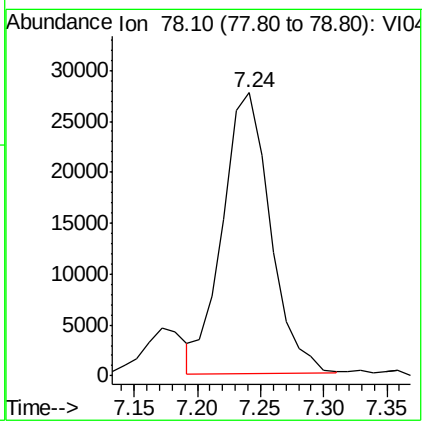
Instrument :
MSVOA_I
ClientSampleId :
H4121

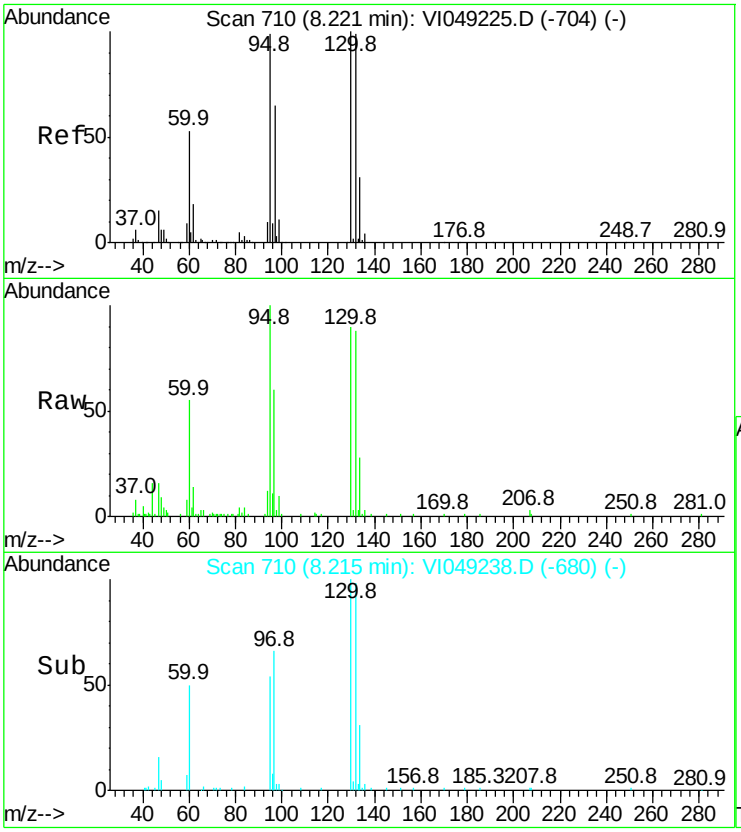
Manual Integrations APPROVED
mohammad
5/5/2016 9:01:28 AM



#33
Benzene
Concen: 0.20 ug/L
RT: 7.24 min Scan# 611
Delta R.T. 0.00 min
Lab File: VI049238.D
Acq: 4 May 2016 21:33

Tgt Ion: 78 Resp: 72575

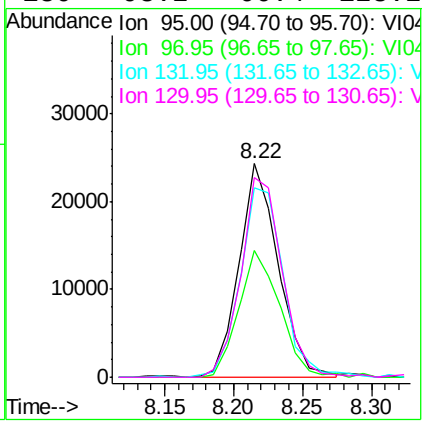




#34
Trichloroethene
Concen: 0.48 ug/L
RT: 8.22 min Scan# 710
Delta R.T. -0.01 min
Lab File: VI049238.D
Acq: 4 May 2016 21:33

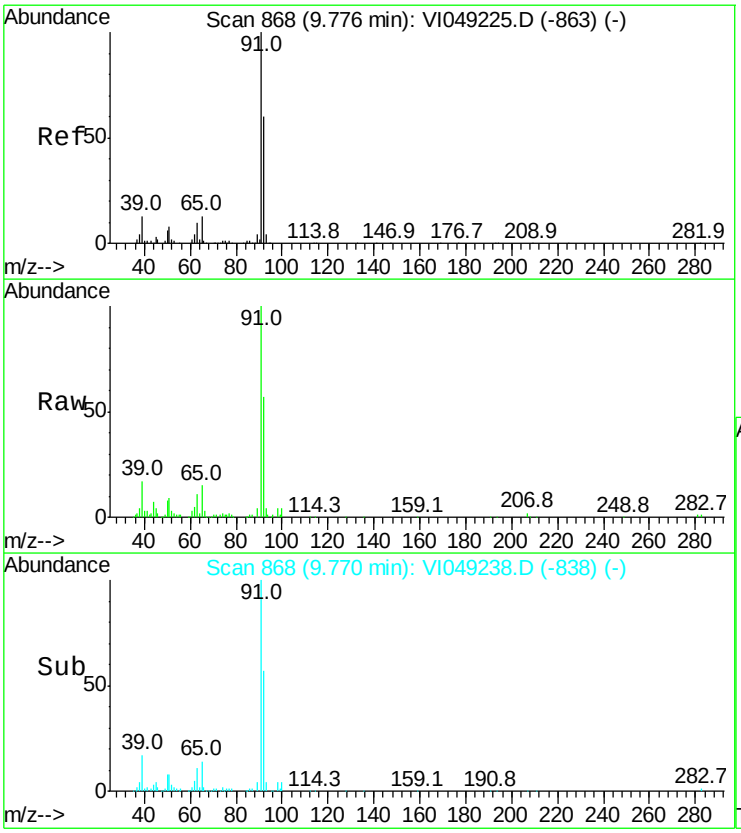
Tgt Ion: 95 Resp: 48349

Ion	Ratio	Lower	Upper
95	100		
97	59.5	45.8	85.2
132	88.4	63.9	118.7
130	93.2	66.4	123.2



Instrument :
MSVOA_I
ClientSampleId :
H4121

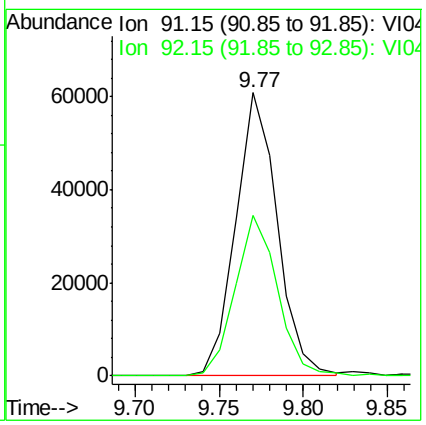
Manual Integrations APPROVED
mohammad
5/5/2016 9:01:28 AM

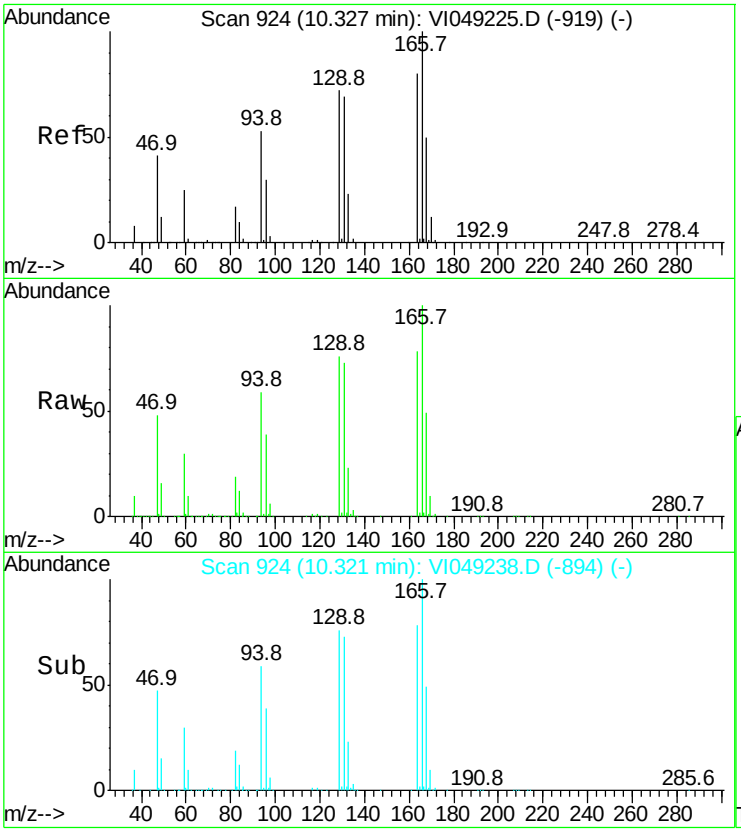


#42
Toluene
Concen: 0.34 ug/L
RT: 9.77 min Scan# 868
Delta R.T. -0.01 min
Lab File: VI049238.D
Acq: 4 May 2016 21:33

Tgt Ion: 91 Resp: 104314

Ion	Ratio	Lower	Upper
91	100		
92	56.5	41.2	76.4

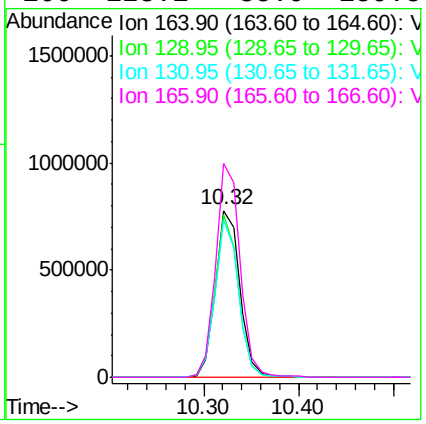




#47
Tetrachloroethene
Concen: 20.99 ug/L
RT: 10.32 min Scan# 924
Delta R.T. -0.01 min
Lab File: VI049238.D
Acq: 4 May 2016 21:33

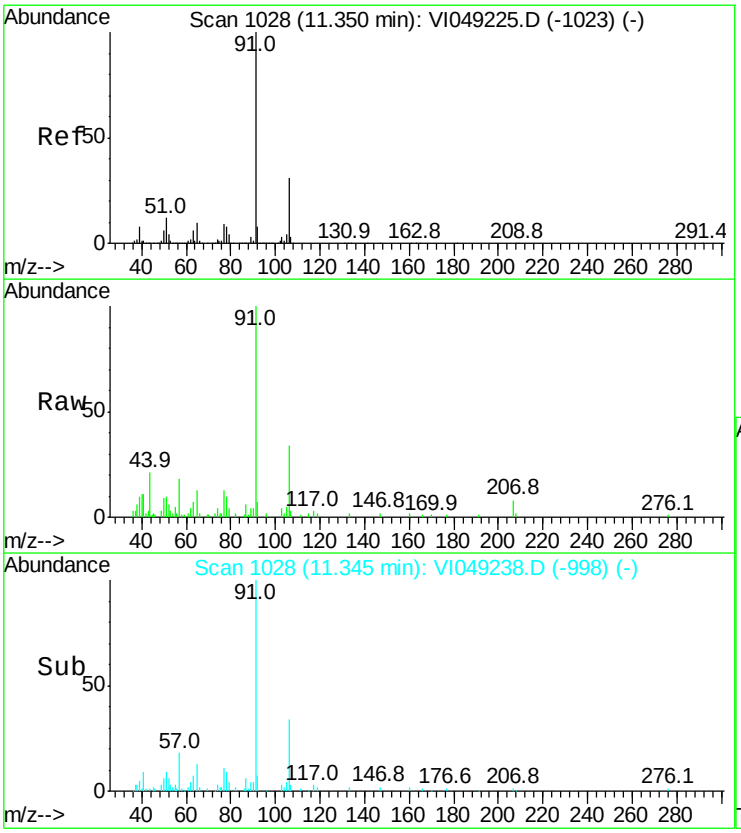
Tgt Ion:164 Resp: 1390839

Ion	Ratio	Lower	Upper
164	100		
129	97.5	62.1	115.3
131	94.1	60.6	112.6
166	128.1	85.9	159.5



Instrument :
MSVOA_I
ClientSampleId :
H4121

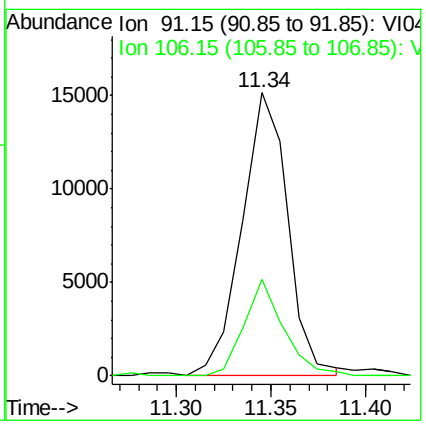
Manual Integrations APPROVED
mohammad
5/5/2016 9:01:28 AM

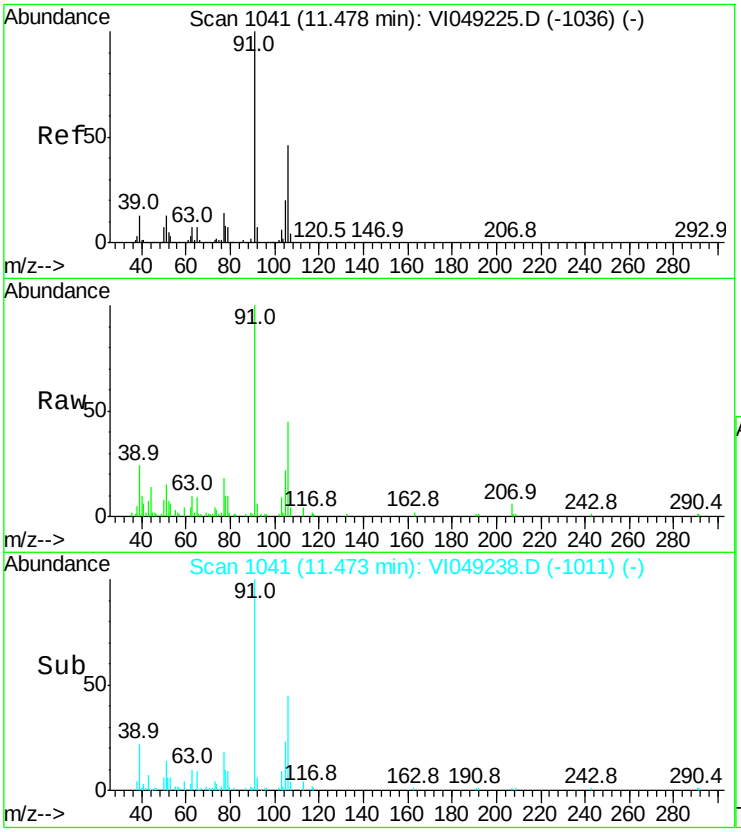


#52
Ethylbenzene
Concen: 0.08 ug/L
RT: 11.34 min Scan# 1028
Delta R.T. -0.01 min
Lab File: VI049238.D
Acq: 4 May 2016 21:33

Tgt Ion: 91 Resp: 25501

Ion	Ratio	Lower	Upper
91	100		
106	34.0	20.5	38.1

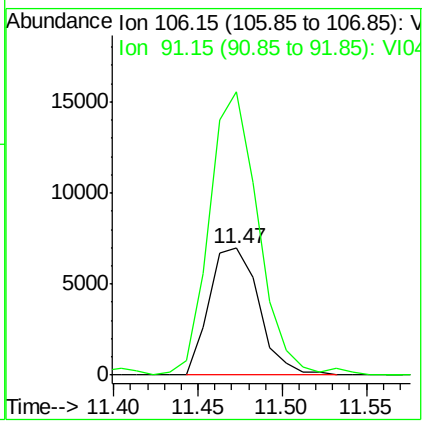




#53
m,p-Xylene
Concen: 0.12 ug/L
RT: 11.47 min Scan# 1041
Delta R.T. -0.01 min
Lab File: VI049238.D
Acq: 4 May 2016 21:33

Tgt Ion:106 Resp: 14314

Ion	Ratio	Lower	Upper
106	100		
91	223.1	155.0	287.9



Instrument :
MSVOA_I
ClientSampleId :
H4121

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:28 AM

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049238.D
Acq On : 4 May 2016 21:33
Operator : FY/SY
Sample : H2834-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 05 06:42:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4121

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:28 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1273049	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	848972	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	309434	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	397332	5.07	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 101.40%			
7) Chloroethane-d5	2.10	69	234802	5.41	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 108.20%			
11) 1,1-Dichloroethene-d2	2.94	63	699003	3.79	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 75.80%			
20) 2-Butanone-d5	5.68	46	935555	55.14	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 110.28%			
24) Chloroform-d	6.38	84	1013253	5.08	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.60%			
26) 1,2-Dichloroethane-d4	7.23	65	446328m	5.47	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.40%			
32) Benzene-d6	7.17	84	1738940	5.26	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 105.20%			
36) 1,2-Dichloropropane-d6	8.44	67	497480	5.35	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.00%			
41) Toluene-d8	9.69	98	1241763	5.09	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.80%			
43) trans-1,3-Dichloropropene-	10.02	79	183791	5.02	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 100.40%			
46) 2-Hexanone-d5	10.43	63	600515	51.96	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 103.92%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	203052	4.80	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 96.00%			
63) 1,2-Dichlorobenzene-d4	13.76	152	274271	5.06	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.20%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.78	96	31742	0.27	ug/L	88
25) Chloroform	6.42	83	198998	0.97	ug/L	96
29) 1,1,1-Trichloroethane	6.66	97	50314	0.31	ug/L	95
33) Benzene	7.24	78	72575	0.20	ug/L	100
34) Trichloroethene	8.22	95	48349	0.48	ug/L	96
42) Toluene	9.77	91	104314	0.34	ug/L	97
47) Tetrachloroethene	10.32	164	1390839	20.99	ug/L	93
52) Ethylbenzene	11.34	91	25501	0.08	ug/L	91
53) m,p-Xylene	11.47	106	14314	0.12	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049238.D
Acq On : 4 May 2016 21:33
Operator : FY/SY
Sample : H2834-06
Misc : 25mL/MSVOA I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4121

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.296	4	7	18	rBV	6702457	19406668	100.00%	27.566%
2	1.414	18	19	33	rVB2	227554	562976	2.90%	0.800%
3	1.582	33	36	43	rVB2	95566	177249	0.91%	0.252%
4	1.710	46	49	57	rVB	421784	693768	3.57%	0.985%
5	1.877	63	66	70	rVB	69038	123379	0.64%	0.175%
6	2.103	86	89	97	rVV	208229	422258	2.18%	0.600%
7	2.202	97	99	108	rVB2	28889	78206	0.40%	0.111%
8	2.359	113	115	116	rBV2	8050	9149	0.05%	0.013%
9	2.477	125	127	131	rVB3	17399	35147	0.18%	0.050%
10	2.586	137	138	148	rVB8	24903	68127	0.35%	0.097%
11	2.822	158	162	168	rVB9	9594	22956	0.12%	0.033%
12	2.940	168	174	180	rBV	851572	1982977	10.22%	2.817%
13	3.206	197	201	217	rVB2	51598	220891	1.14%	0.314%
14	3.501	227	231	232	rVB4	6067	9824	0.05%	0.014%
15	3.619	236	243	245	rVV8	10927	35786	0.18%	0.051%
16	3.678	247	249	255	rVB6	9074	21068	0.11%	0.030%
17	3.776	258	259	262	rVB2	5453	6558	0.03%	0.009%
18	3.855	262	267	268	rBV5	10061	20778	0.11%	0.030%
19	3.885	268	270	275	rVV5	9640	27668	0.14%	0.039%
20	4.003	279	282	288	rVB7	10691	23882	0.12%	0.034%
21	4.436	324	326	327	rBV2	4184	6154	0.03%	0.009%
22	4.702	349	353	355	rBV4	4150	6515	0.03%	0.009%
23	4.839	364	367	370	rVB3	3307	5794	0.03%	0.008%
24	4.889	370	372	376	rBV4	3927	5622	0.03%	0.008%
25	5.016	381	385	386	rBV3	2608	5574	0.03%	0.008%
26	5.115	391	395	397	rBV4	2521	7437	0.04%	0.011%
27	5.371	418	421	424	rVB5	3506	5251	0.03%	0.007%
28	5.558	436	440	446	rBV6	13639	39096	0.20%	0.056%
29	5.676	446	452	459	rBV	366234	1278156	6.59%	1.816%
30	5.794	459	464	477	rVB2	169261	731602	3.77%	1.039%
31	6.060	489	491	494	rBV4	3345	5886	0.03%	0.008%
32	6.306	514	516	517	rBV2	4601	5929	0.03%	0.008%
33	6.385	517	524	537	rVV2	814081	2817027	14.52%	4.001%
34	6.522	537	538	541	rVB3	4997	5720	0.03%	0.008%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049238.D
Acq On : 4 May 2016 21:33
Operator : FY/SY
Sample : H2834-06
Misc : 25mL/MSVOA I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4121

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.650	545	551	558	rVB2	48576	155985	0.80%	0.222%
36	6.749	558	561	567	rVB7	8073	25577	0.13%	0.036%
37	7.054	587	592	596	rBV8	4252	8443	0.04%	0.012%
38	7.172	596	604	608	rBV	1355041	3643454	18.77%	5.175%
39	7.231	608	610	619	rVB	532529	1276498	6.58%	1.813%
40	7.556	642	643	649	rVB6	6538	15316	0.08%	0.022%
41	7.664	651	654	657	rVB4	2698	5122	0.03%	0.007%
42	7.762	661	664	667	rBV3	8349	16206	0.08%	0.023%
43	7.930	676	681	696	rBV	1397256	3138425	16.17%	4.458%
44	8.215	704	710	717	rBV	133634	285881	1.47%	0.406%
45	8.441	726	733	743	rBV	1036220	2368769	12.21%	3.365%
46	8.619	749	751	755	rVB5	6031	11460	0.06%	0.016%
47	8.707	759	760	762	rBV2	3477	4980	0.03%	0.007%
48	8.776	765	767	771	rVB5	6215	15987	0.08%	0.023%
49	8.845	771	774	776	rBV4	6092	14899	0.08%	0.021%
50	8.904	776	780	786	rVB8	22765	63098	0.33%	0.090%
51	9.170	804	807	809	rBV4	3562	5838	0.03%	0.008%
52	9.268	812	817	818	rVB3	4269	9107	0.05%	0.013%
53	9.288	818	819	822	rBV3	3544	5685	0.03%	0.008%
54	9.367	822	827	835	rBV	644850	1169991	6.03%	1.662%
55	9.524	838	843	847	rBV2	49465	98639	0.51%	0.140%
56	9.593	848	850	852	rVB3	6139	9881	0.05%	0.014%
57	9.691	856	860	865	rBV	1932869	3619405	18.65%	5.141%
58	9.770	865	868	875	rVB	169347	313620	1.62%	0.445%
59	9.869	877	878	882	rBV4	4166	6839	0.04%	0.010%
60	10.016	889	893	900	rBV	384850	623393	3.21%	0.885%
61	10.213	909	913	920	rBV	184634	410206	2.11%	0.583%
62	10.321	920	924	931	rVV	6832585	11704639	60.31%	16.626%
63	10.430	931	935	950	rVV	1806492	3221440	16.60%	4.576%
64	10.607	950	953	955	rVB3	8130	11593	0.06%	0.016%
65	10.971	986	990	992	rBV4	3794	8062	0.04%	0.011%
66	11.128	1003	1006	1008	rBV4	5044	10203	0.05%	0.014%
67	11.217	1011	1015	1025	rBV	1757514	2960386	15.25%	4.205%
68	11.345	1025	1028	1032	rVB3	46643	88590	0.46%	0.126%
69	11.473	1036	1041	1045	rBV	51604	100487	0.52%	0.143%
70	11.532	1045	1047	1048	rVB2	5747	6368	0.03%	0.009%
71	11.630	1054	1057	1059	rVB3	2900	5733	0.03%	0.008%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049238.D
Acq On : 4 May 2016 21:33
Operator : FY/SY
Sample : H2834-06
Misc : 25mL/MSVOA I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4121

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.748	1066	1069	1070	rBV3	4545	5183	0.03%	0.007%
73	11.837	1075	1078	1083	rVB4	25629	53147	0.27%	0.075%
74	12.063	1095	1101	1103	rBV5	4621	12217	0.06%	0.017%
75	12.191	1110	1114	1118	rBV5	9835	22797	0.12%	0.032%
76	12.250	1118	1120	1121	rBV	4628	5312	0.03%	0.008%
77	12.339	1128	1129	1130	rBV	6100	5143	0.03%	0.007%
78	12.398	1131	1135	1138	rVV	170496	320047	1.65%	0.455%
79	12.457	1138	1141	1148	rVV	467668	790285	4.07%	1.123%
80	12.654	1157	1161	1163	rBV4	16033	28188	0.15%	0.040%
81	12.683	1163	1164	1167	rVB2	9130	14781	0.08%	0.021%
82	12.742	1167	1170	1175	rBV7	6111	16483	0.08%	0.023%
83	12.920	1185	1188	1190	rBV3	7050	11581	0.06%	0.016%
84	12.979	1192	1194	1196	rVB2	4420	5250	0.03%	0.007%
85	13.018	1196	1198	1199	rBV	4662	7033	0.04%	0.010%
86	13.087	1199	1205	1208	rBV2	14889	30391	0.16%	0.043%
87	13.126	1208	1209	1217	rVB7	4146	10379	0.05%	0.015%
88	13.254	1217	1222	1226	rBV6	5265	16863	0.09%	0.024%
89	13.353	1229	1232	1233	rBV3	4344	8036	0.04%	0.011%
90	13.431	1235	1240	1246	rBV	1355112	2276619	11.73%	3.234%
91	13.648	1258	1262	1266	rBV5	15369	37723	0.19%	0.054%
92	13.697	1266	1267	1269	rBV2	3451	5071	0.03%	0.007%
93	13.756	1269	1273	1278	rVV	1223640	2045138	10.54%	2.905%
94	13.933	1287	1291	1292	rBV4	4332	7968	0.04%	0.011%
95	14.032	1297	1301	1306	rVB	110952	205890	1.06%	0.292%
96	14.101	1306	1308	1310	rBV3	4818	7510	0.04%	0.011%
97	14.170	1312	1315	1316	rVV2	6524	9982	0.05%	0.014%
98	14.307	1327	1329	1334	rBV6	9100	17782	0.09%	0.025%
99	15.360	1435	1436	1438	rBV2	10523	10714	0.06%	0.015%
100	15.607	1457	1461	1465	rBV2	43235	98526	0.51%	0.140%

Sum of corrected areas: 70401322

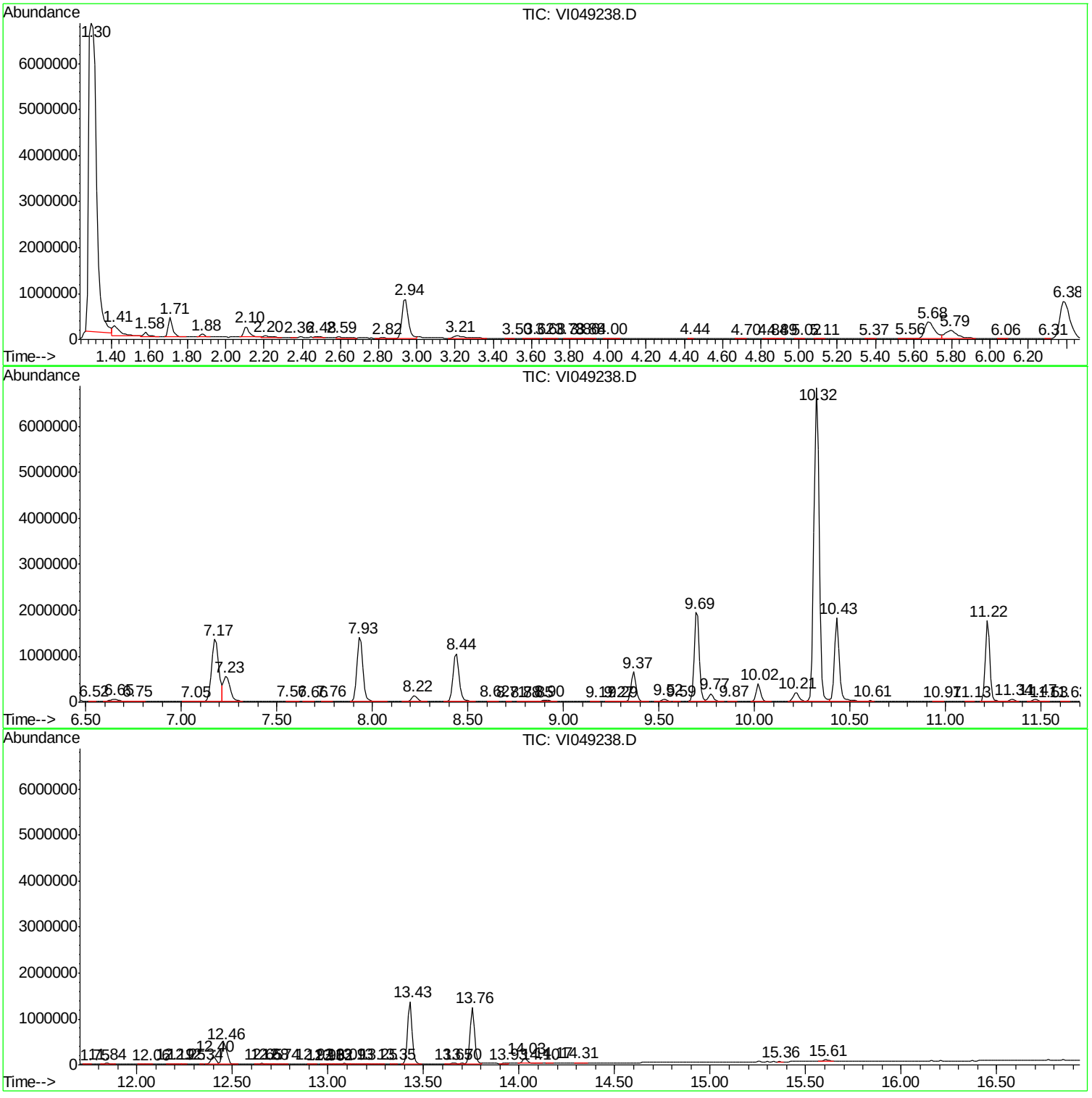
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049238.D
Acq On : 4 May 2016 21:33
Operator : FY/SY
Sample : H2834-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4121

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049238.D
Acq On : 4 May 2016 21:33
Operator : FY/SY
Sample : H2834-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4121

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

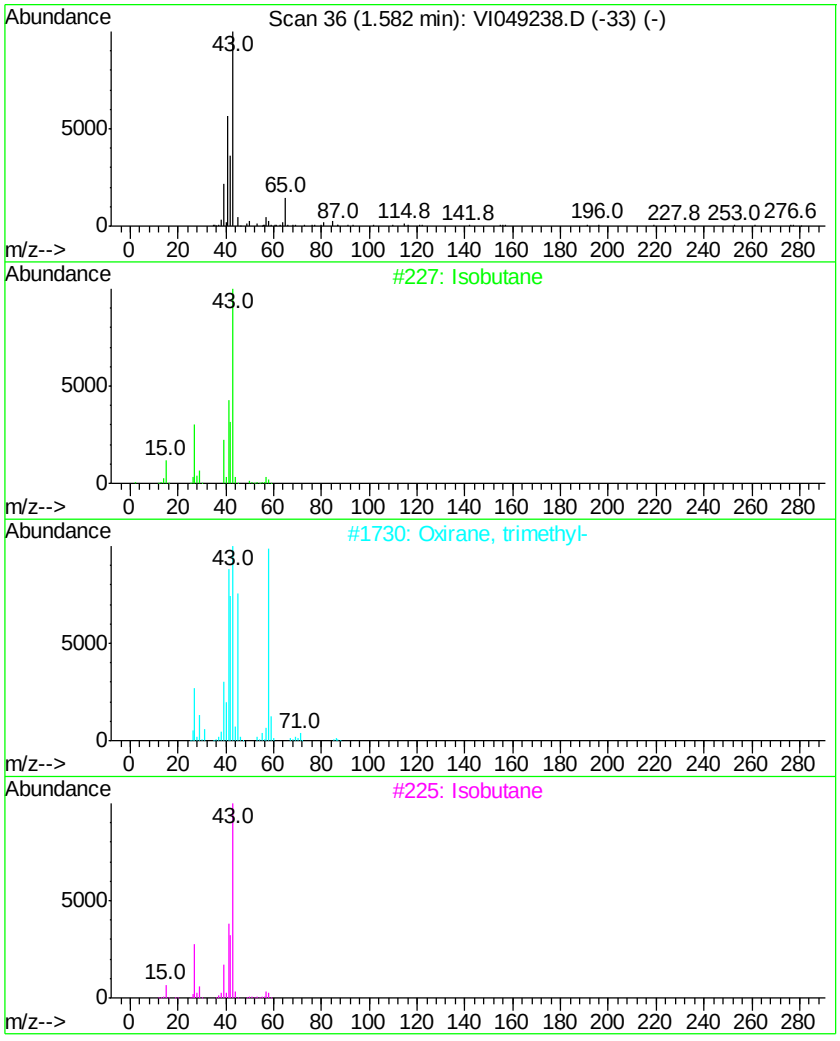
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

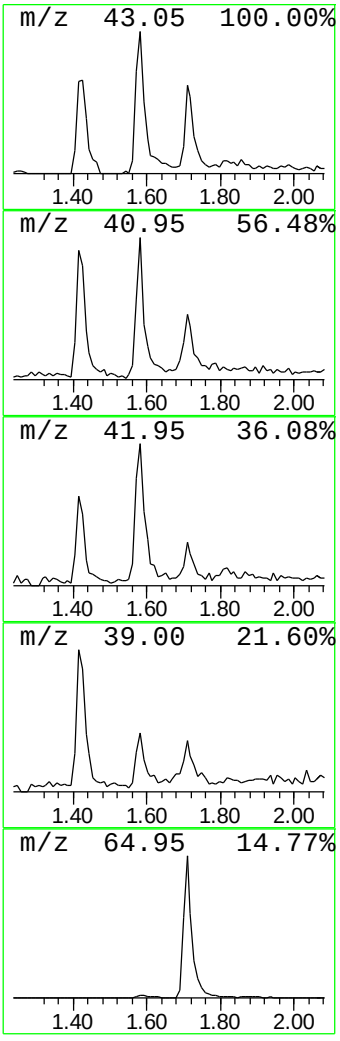
****

Peak Number 3 (DEL) Alkane: Straight-Chai... Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.58	0.28 ug/L	177249	1,4-Difluorobenzene	7.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	38
2	Oxirane, trimethyl-	86	C5H10O	005076-19-7	9
3	Isobutane	58	C4H10	000075-28-5	9
4	Isobutane	58	C4H10	000075-28-5	9
5	Propane, 1-chloro-2-methyl-	92	C4H9Cl	000513-36-0	9





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049238.D
Acq On : 4 May 2016 21:33
Operator : FY/SY
Sample : H2834-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4121

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

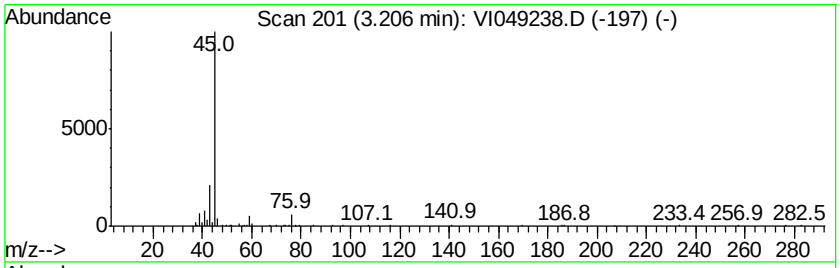
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

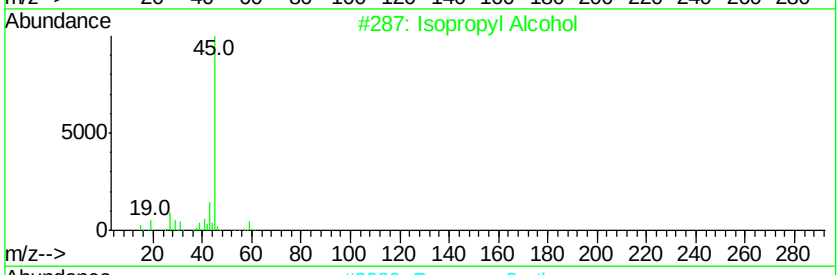
****

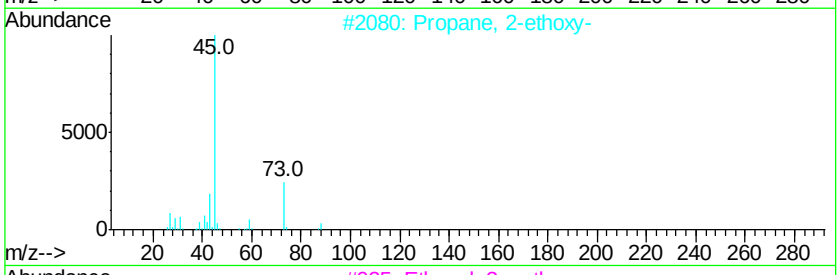
Peak Number 4 Isopropyl Alcohol Concentration Rank 7

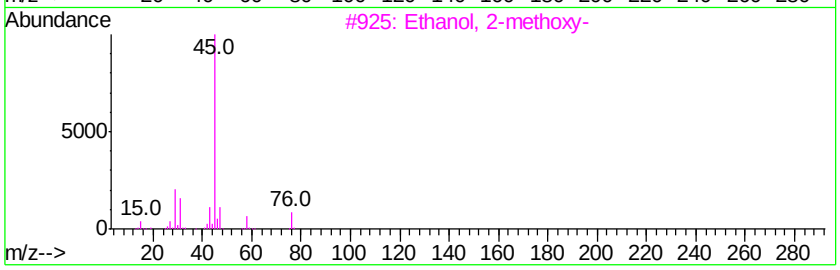
R.T.	EstConc	Area	Relative to ISTD	R.T.
3.21	0.35 ug/L	220891	1,4-Difluorobenzene	7.93

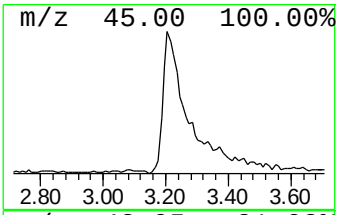
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isopropyl Alcohol	60	C3H8O	000067-63-0	64
2	Propane, 2-ethoxy-	88	C5H12O	000625-54-7	50
3	Ethanol, 2-methoxy-	76	C3H8O2	000109-86-4	50
4	Ethanol, 2-methoxy-	76	C3H8O2	000109-86-4	50
5	Ethanol, 2-methoxy-	76	C3H8O2	000109-86-4	9

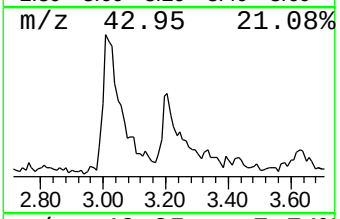


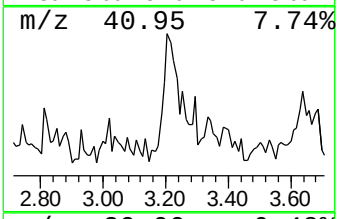


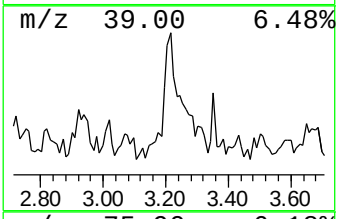


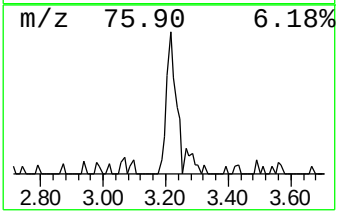












Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049238.D
Acq On : 4 May 2016 21:33
Operator : FY/SY
Sample : H2834-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4121

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
(DEL) Alkane: Str...	1.58	0.3	ug/L	177249	1	7.93	3138430	5.0
Isopropyl Alcohol	3.21	0.3	ug/L	220891	1	7.93	3138430	5.0

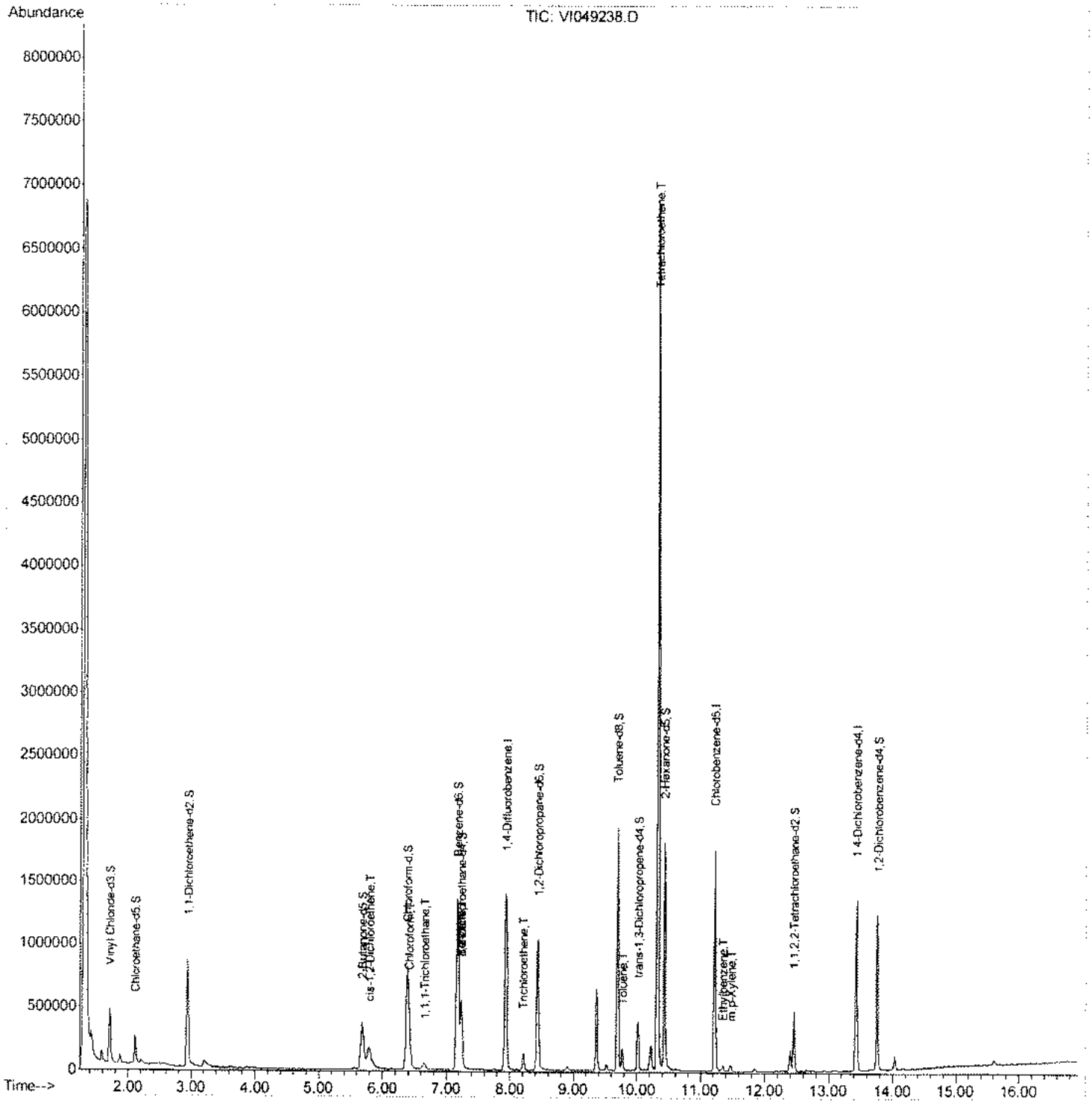
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049238.D
Acq On : 4 May 2016 21:33
Operator : FY/SY
Sample : H2834-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 05 06:42:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4121

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:28 AM



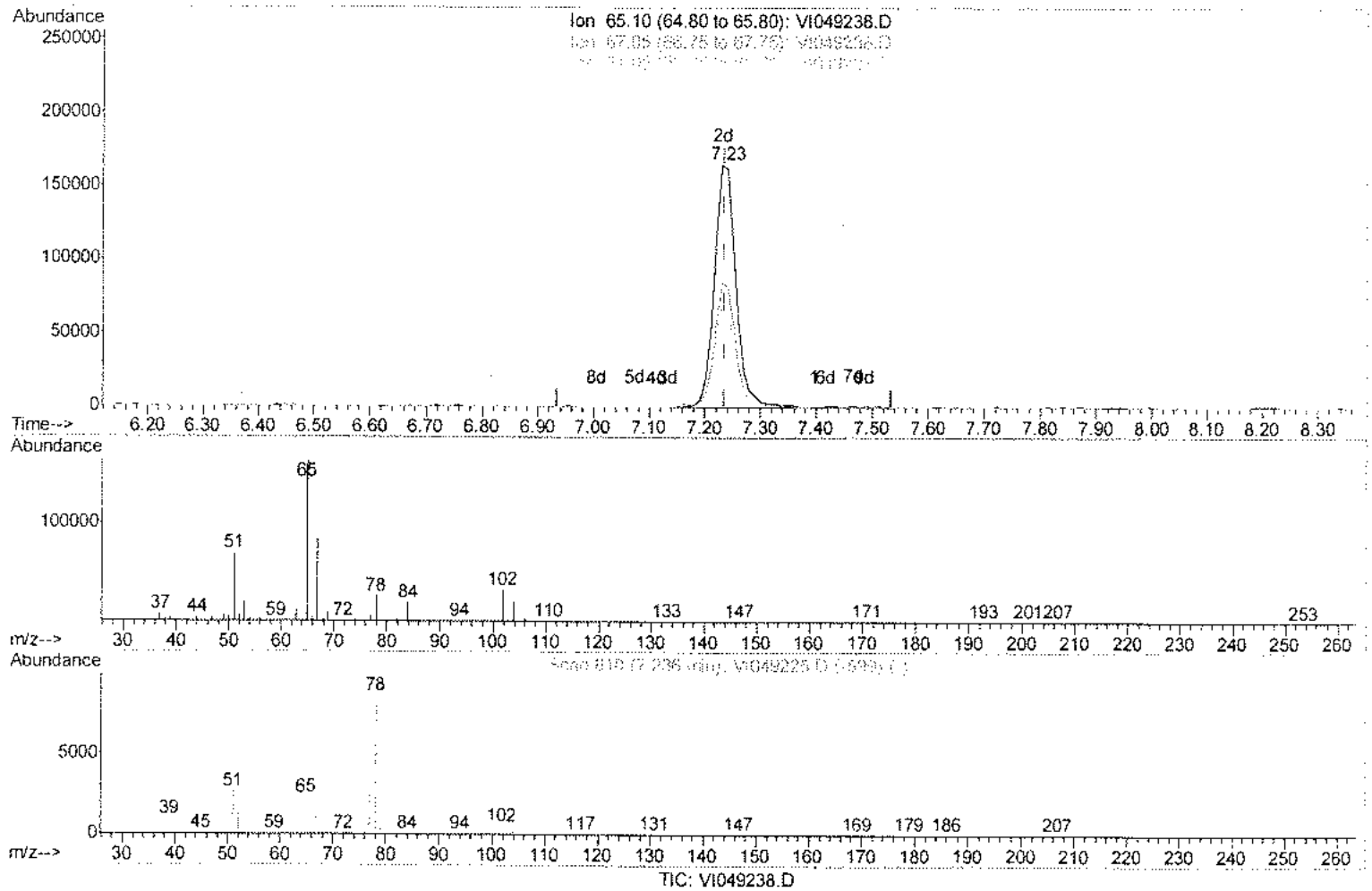
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049238.D
Acq On : 4 May 2016 21:33
Operator : FY/SY
Sample : H2834-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 05 05:24:27 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4121

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:28 AM



TIC: VI049238.D

(26) 1,2-Dichloroethane-d4 (S)

7.231min (-0.006) 5.47ug/L m

M.D 05/07/16

response 446328

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.10#
51.05	123.20	0.20#
0.00	0.00	0.00

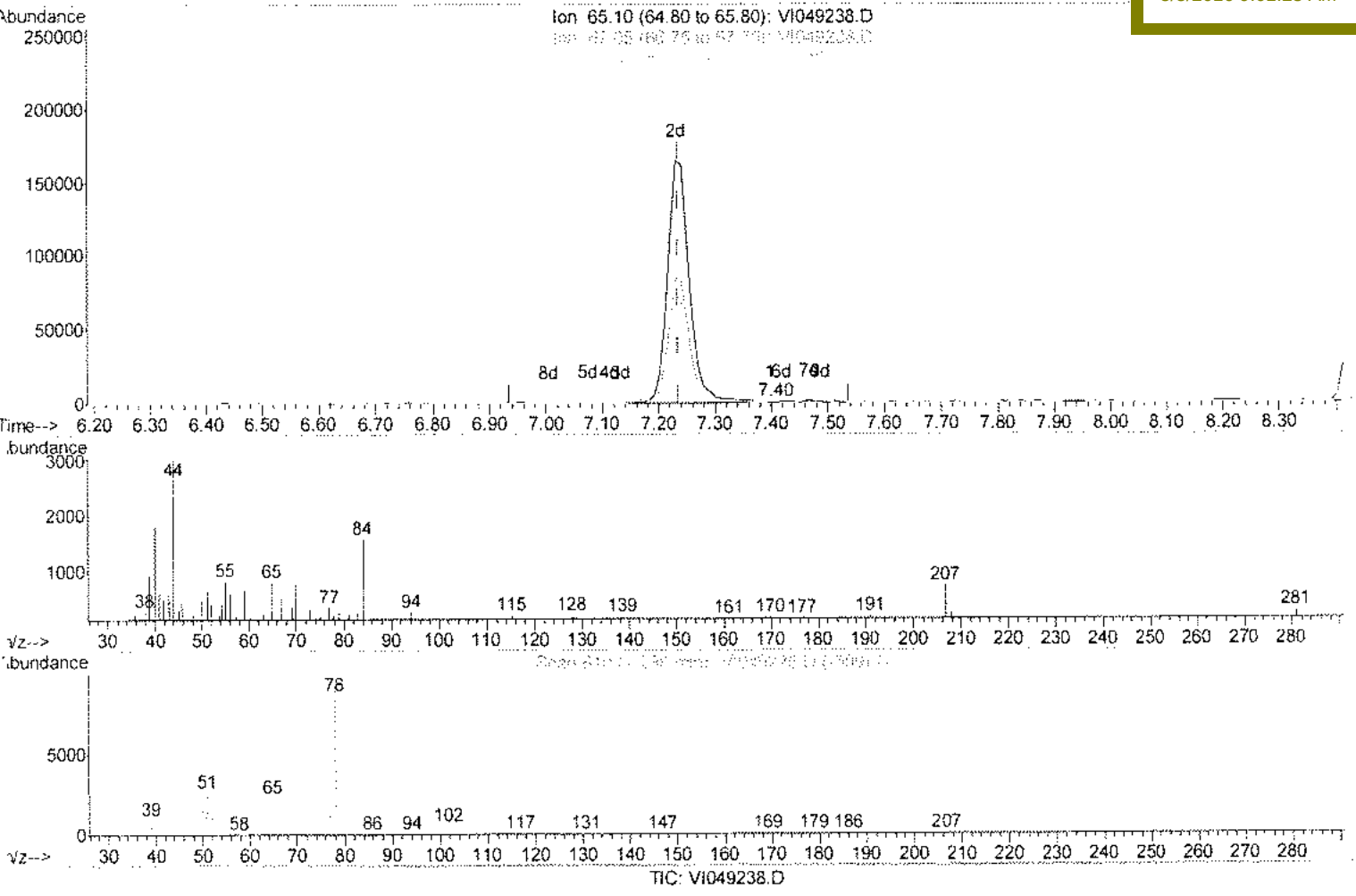
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049238.D
Acq On : 4 May 2016 21:33
Operator : FY/SY
Sample : H2834-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 05 05:24:27 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4121

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:28 AM



TIC: VI049238.D

(26) 1,2-Dichloroethane-d4 (S)

7.398min (+0.162) 0.01ug/L

response 669

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	65.62
51.05	123.20	130.49
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049238.D
Acq On : 4 May 2016 21:33
Operator : FY/SY
Sample : H2834-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 05 06:42:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4121

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:28 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1273049	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	848972	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	309434	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	397332	5.07	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 101.40%			
7) Chloroethane-d5	2.10	69	234802	5.41	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 108.20%			
11) 1,1-Dichloroethene-d2	2.94	63	699003	3.79	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 75.80%			
20) 2-Butanone-d5	5.68	46	935555	55.14	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 110.28%			
24) Chloroform-d	6.38	84	1013253	5.08	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.60%			
26) 1,2-Dichloroethane-d4	7.23	65	446328m	5.47	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.40%			
32) Benzene-d6	7.17	84	1738940	5.26	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 105.20%			
36) 1,2-Dichloropropane-d6	8.44	67	497480	5.35	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.00%			
41) Toluene-d8	9.69	98	1241763	5.09	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.80%			
43) trans-1,3-Dichloropropene-	10.02	79	183791	5.02	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 100.40%			
46) 2-Hexanone-d5	10.43	63	600515	51.96	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 103.92%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	203052	4.80	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 96.00%			
63) 1,2-Dichlorobenzene-d4	13.76	152	274271	5.06	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.20%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.78	96	31742	0.27	ug/L	88
25) Chloroform	6.42	83	198998	0.97	ug/L	96
29) 1,1,1-Trichloroethane	6.66	97	50314	0.31	ug/L	95
33) Benzene	7.24	78	72575	0.20	ug/L	100
34) Trichloroethene	8.22	95	48349	0.48	ug/L	96
42) Toluene	9.77	91	104314	0.34	ug/L	97
47) Tetrachloroethene	10.32	164	1390839	20.99	ug/L	93
52) Ethylbenzene	11.34	91	25501	0.08	ug/L	91
53) m,p-Xylene	11.47	106	14314	0.12	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

M.D 05/07/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4121DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049257.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 2.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	1.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	1.0	U
79-20-9	Methyl Acetate	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
1634-04-4	Methyl tert-butyl Ether	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	1.0	U
67-66-3	Chloroform	1.0	D
71-55-6	1,1,1-Trichloroethane	0.34	JD
110-82-7	Cyclohexane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	0.48	JD

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4121DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049257.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 2.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	20	D
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
95-47-6	o-Xylene	1.0	U
179601-23-1	m,p-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-trichlorobenzene	1.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4121DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049257.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 2.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	1.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4121DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-06DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049257.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

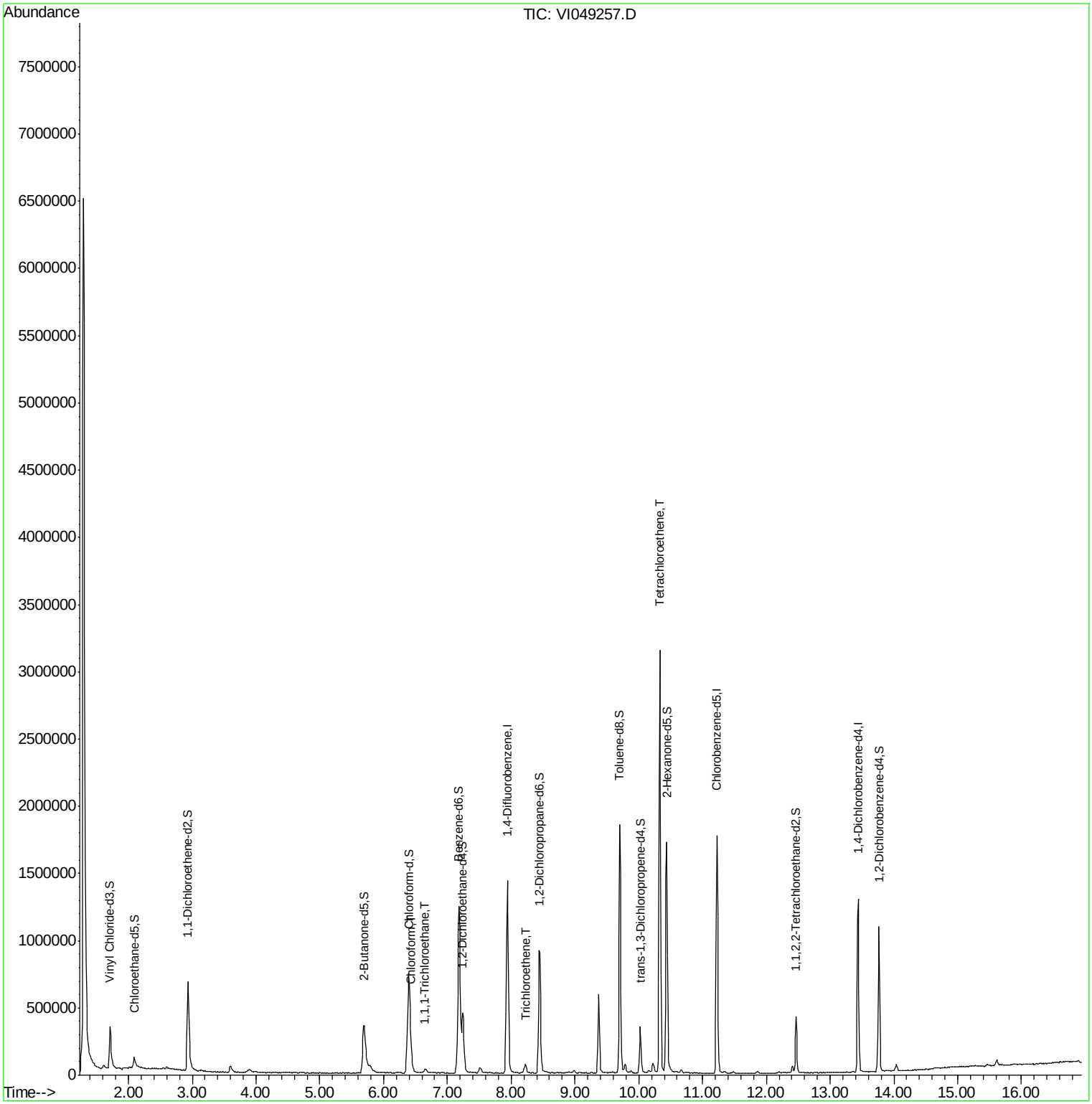
EPA-designated Registry Number.

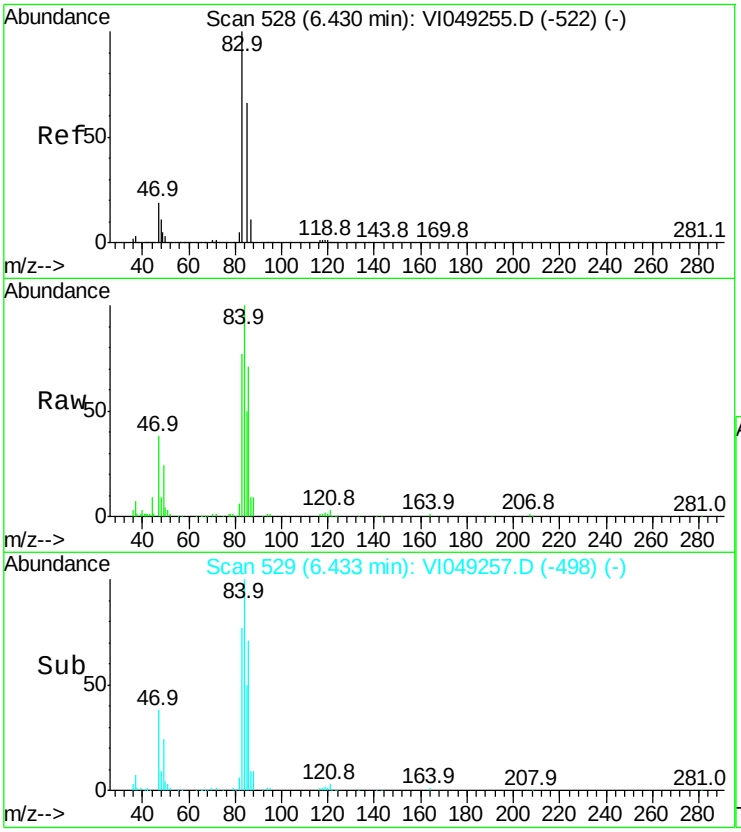
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049257.D
Acq On : 5 May 2016 17:59
Operator : FY/SY
Sample : H2834-06DL 2X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4121DL

Quant Time: May 06 10:17:17 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration



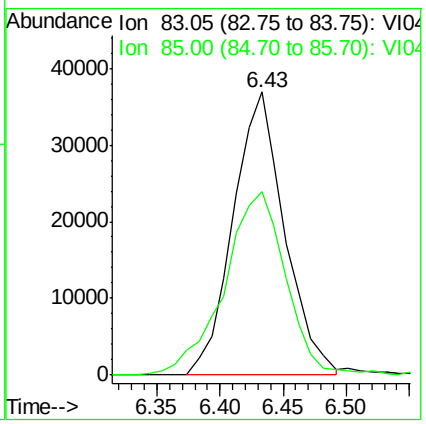


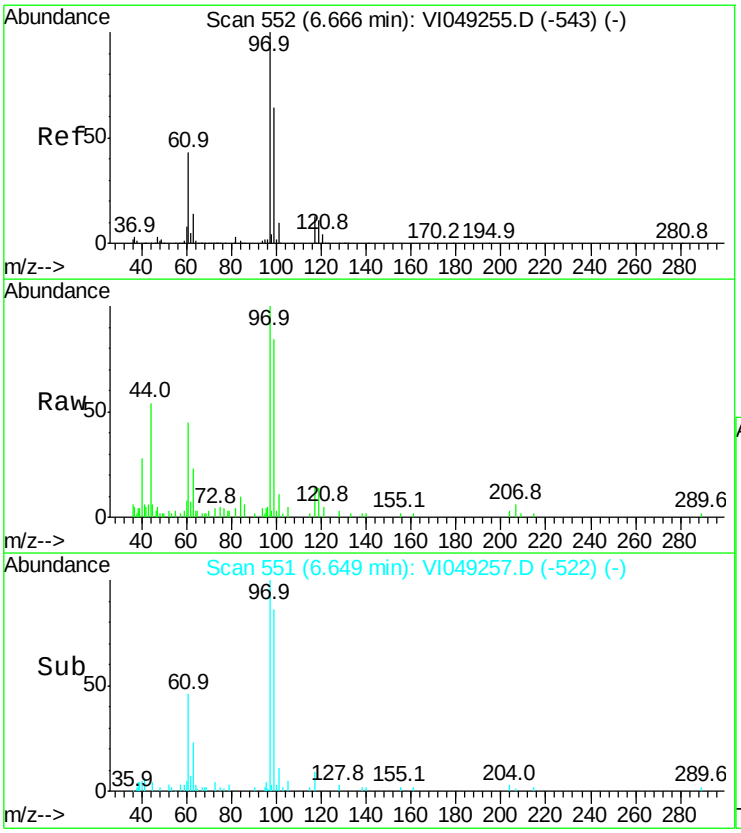
#25
Chloroform
Concen: 0.51 ug/L
RT: 6.43 min Scan# 529
Delta R.T. 0.00 min
Lab File: VI049257.D
Acq: 5 May 2016 17:59

Instrument : MSVOA_I
ClientSampleId : H4121DL

Tgt Ion: 83 Resp: 104227

Ion	Ratio	Lower	Upper
83	100		
85	64.7	47.3	87.8

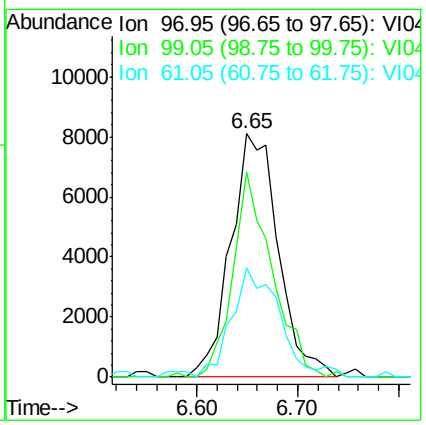


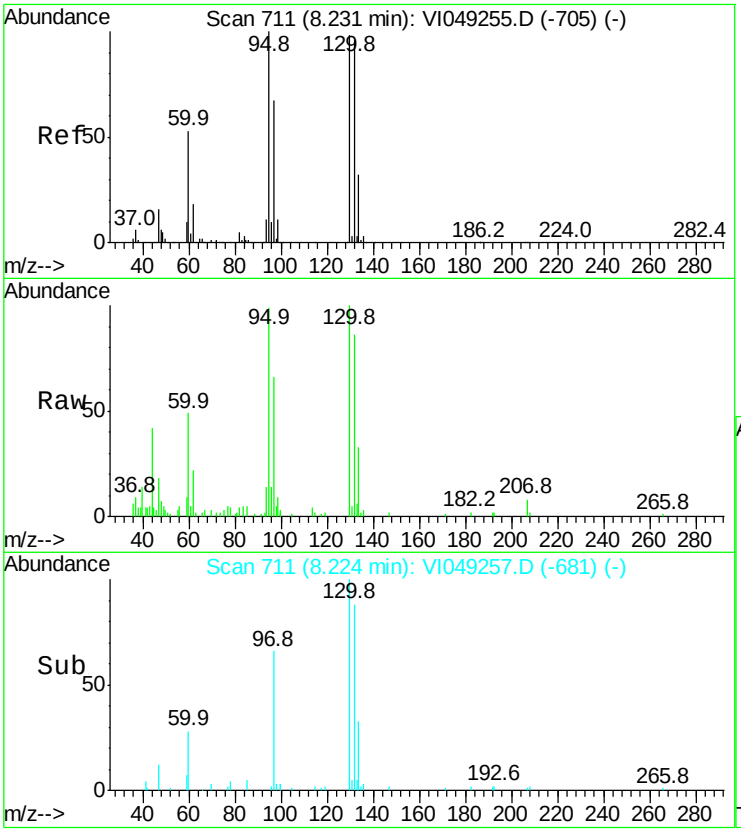


#29
1,1,1-Trichloroethane
Concen: 0.17 ug/L
RT: 6.65 min Scan# 551
Delta R.T. -0.02 min
Lab File: VI049257.D
Acq: 5 May 2016 17:59

Tgt Ion: 97 Resp: 26586

Ion	Ratio	Lower	Upper
97	100		
99	69.1	51.1	76.7
61	43.7	33.3	49.9



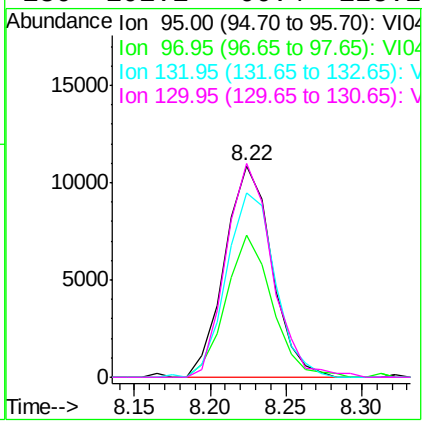


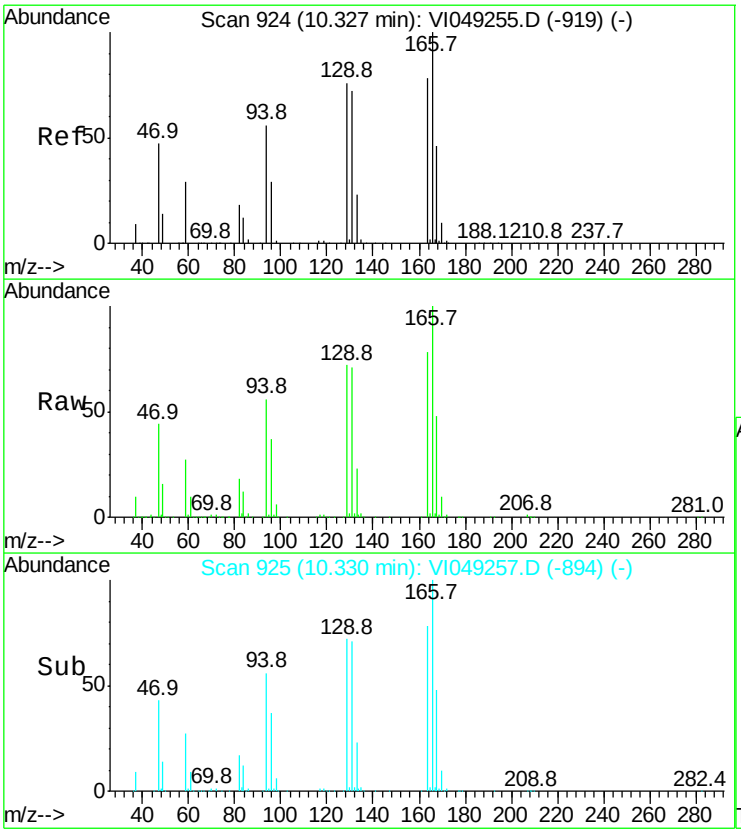
#34
Trichloroethene
Concen: 0.24 ug/L
RT: 8.22 min Scan# 711
Delta R.T. -0.01 min
Lab File: VI049257.D
Acq: 5 May 2016 17:59

Instrument : MSVOA_I
ClientSampleId : H4121DL

Tgt Ion: 95 Resp: 23547

Ion	Ratio	Lower	Upper
95	100		
97	67.2	45.8	85.2
132	87.4	63.9	118.7
130	101.1	66.4	123.2

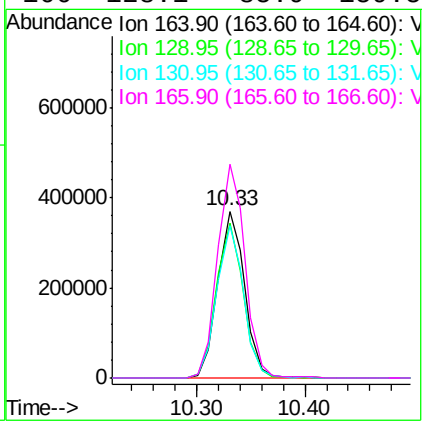




#47
Tetrachloroethene
Concen: 9.78 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.00 min
Lab File: VI049257.D
Acq: 5 May 2016 17:59

Tgt Ion:164 Resp: 641296

Ion	Ratio	Lower	Upper
164	100		
129	92.7	62.1	115.3
131	91.0	60.6	112.6
166	128.1	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049257.D
Acq On : 5 May 2016 17:59
Operator : FY/SY
Sample : H2834-06DL 2X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4121DL

Quant Time: May 06 10:17:17 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1269772	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	839822	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	302518	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	368222	4.71	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 94.20%			
7) Chloroethane-d5	2.09	69	87297	2.02	ug/L	-0.02
Spiked Amount 5.000	Range 65 - 130		Recovery = 40.40%#			
11) 1,1-Dichloroethene-d2	2.93	63	583023	3.17	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.40%			
20) 2-Butanone-d5	5.69	46	885820	52.34	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 104.68%			
24) Chloroform-d	6.39	84	894771	4.50	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.00%			
26) 1,2-Dichloroethane-d4	7.24	65	400959	4.93	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.60%			
32) Benzene-d6	7.18	84	1555185	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
36) 1,2-Dichloropropane-d6	8.44	67	446987	4.86	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.20%			
41) Toluene-d8	9.70	98	1098519	4.55	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 91.00%			
43) trans-1,3-Dichloropropene-	10.03	79	163582	4.51	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 90.20%			
46) 2-Hexanone-d5	10.44	63	565963	49.51	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 99.02%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	184006	4.40	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 88.00%			
63) 1,2-Dichlorobenzene-d4	13.76	152	237917	4.49	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 89.80%			
Target Compounds						Qvalue
25) Chloroform	6.43	83	104227	0.51	ug/L	97
29) 1,1,1-Trichloroethane	6.65	97	26586	0.17	ug/L	95
34) Trichloroethene	8.22	95	23547	0.24	ug/L	96
47) Tetrachloroethene	10.33	164	641296	9.78	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049257.D
Acq On : 5 May 2016 17:59
Operator : FY/SY
Sample : H2834-06DL 2X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4121DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.295	4	7	28	rVB	6460704	14389713	100.00%	26.980%
2	1.610	37	39	44	rVV	26584	42789	0.30%	0.080%
3	1.708	46	49	60	rVB	314037	593510	4.12%	1.113%
4	1.915	68	70	72	rBV3	14780	24647	0.17%	0.046%
5	2.014	78	80	82	rBV3	10940	15546	0.11%	0.029%
6	2.043	82	83	84	rBV	7447	5810	0.04%	0.011%
7	2.092	84	88	92	rBV	78842	168578	1.17%	0.316%
8	2.368	114	116	118	rBV2	8409	10504	0.07%	0.020%
9	2.594	137	139	142	rBV2	11862	21043	0.15%	0.039%
10	2.752	153	155	156	rVB2	6257	7079	0.05%	0.013%
11	2.929	168	173	187	rBV	662520	1632585	11.35%	3.061%
12	3.116	189	192	193	rBV2	6829	11501	0.08%	0.022%
13	3.264	205	207	211	rVB5	5105	7861	0.05%	0.015%
14	3.332	213	214	219	rVB5	4620	8904	0.06%	0.017%
15	3.480	226	229	231	rBV4	4056	4911	0.03%	0.009%
16	3.519	231	233	235	rVB3	5189	5472	0.04%	0.010%
17	3.598	237	241	248	rVV2	45165	125287	0.87%	0.235%
18	3.677	248	249	251	rVV2	5500	5383	0.04%	0.010%
19	3.884	264	270	278	rBV3	19288	83672	0.58%	0.157%
20	3.992	278	281	286	rVB6	9332	25937	0.18%	0.049%
21	4.149	295	297	298	rVB2	4655	4990	0.03%	0.009%
22	4.199	298	302	306	rBV6	4683	16699	0.12%	0.031%
23	4.267	306	309	311	rBV3	4236	6410	0.04%	0.012%
24	4.356	317	318	321	rBV3	4168	6198	0.04%	0.012%
25	4.533	335	336	339	rVB3	4153	5500	0.04%	0.010%
26	4.730	352	356	357	rBV4	4236	7453	0.05%	0.014%
27	4.996	382	383	385	rBV2	5272	5112	0.04%	0.010%
28	5.370	419	421	423	rVB2	4096	6163	0.04%	0.012%
29	5.409	423	425	427	rBV3	5038	6565	0.05%	0.012%
30	5.695	448	454	462	rBV	353468	1309296	9.10%	2.455%
31	5.931	476	478	481	rVB3	5760	10054	0.07%	0.019%
32	6.187	502	504	506	rBV3	4734	6498	0.05%	0.012%
33	6.256	509	511	516	rVB4	8385	17328	0.12%	0.032%
34	6.393	518	525	538	rBV	742624	2355029	16.37%	4.416%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049257.D
Acq On : 5 May 2016 17:59
Operator : FY/SY
Sample : H2834-06DL 2X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4121DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.649	545	551	557	rBV3	27357	80865	0.56%	0.152%
36	6.846	570	571	575	rBV4	2666	6660	0.05%	0.012%
37	6.915	575	578	585	rVB8	3952	9907	0.07%	0.019%
38	7.181	598	605	609	rBV	1243069	3304706	22.97%	6.196%
39	7.240	609	611	620	rVV	445356	1017757	7.07%	1.908%
40	7.358	622	623	626	rVB3	6689	8988	0.06%	0.017%
41	7.515	633	639	648	rBV2	41976	122661	0.85%	0.230%
42	7.683	654	656	659	rVB4	3673	5533	0.04%	0.010%
43	7.939	675	682	696	rBV	1431896	3120142	21.68%	5.850%
44	8.224	701	711	720	rBV5	66216	187962	1.31%	0.352%
45	8.322	720	721	724	rVB3	3217	5421	0.04%	0.010%
46	8.440	728	733	742	rBV	914033	2120392	14.74%	3.976%
47	8.716	759	761	764	rVV4	3182	5544	0.04%	0.010%
48	8.854	774	775	778	rBV2	2660	5769	0.04%	0.011%
49	8.903	778	780	785	rVV3	14013	24652	0.17%	0.046%
50	8.982	785	788	795	rVB5	21987	47829	0.33%	0.090%
51	9.070	795	797	800	rBV3	3789	8634	0.06%	0.016%
52	9.307	819	821	823	rVB2	3969	5156	0.04%	0.010%
53	9.375	823	828	839	rBV	589015	1106404	7.69%	2.074%
54	9.494	839	840	842	rVB2	4608	4564	0.03%	0.009%
55	9.543	842	845	846	rBV3	4495	7134	0.05%	0.013%
56	9.592	846	850	854	rVV4	9220	19251	0.13%	0.036%
57	9.700	857	861	867	rVV	1846375	3225515	22.42%	6.048%
58	9.789	867	870	875	rVV2	65178	140673	0.98%	0.264%
59	9.877	877	879	883	rVV2	20633	34061	0.24%	0.064%
60	9.966	886	888	890	rVV3	4277	5723	0.04%	0.011%
61	10.025	890	894	899	rVV	344617	590566	4.10%	1.107%
62	10.104	901	902	904	rVV2	7070	10347	0.07%	0.019%
63	10.153	904	907	911	rVV3	19217	56959	0.40%	0.107%
64	10.222	911	914	920	rVV	71355	169942	1.18%	0.319%
65	10.330	920	925	932	rVV	3146726	5471526	38.02%	10.259%
66	10.438	932	936	948	rVV	1716959	3059930	21.26%	5.737%
67	10.576	948	950	951	rVV2	11440	18502	0.13%	0.035%
68	10.665	954	959	963	rVV5	26075	70508	0.49%	0.132%
69	10.724	963	965	966	rVV2	7557	9863	0.07%	0.018%
70	10.753	966	968	970	rVV3	5634	10079	0.07%	0.019%
71	10.862	977	979	981	rVV3	3599	5559	0.04%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049257.D
Acq On : 5 May 2016 17:59
Operator : FY/SY
Sample : H2834-06DL 2X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4121DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.009	993	994	998	rVB4	4767	6095	0.04%	0.011%
73	11.068	998	1000	1004	rBV5	4418	10427	0.07%	0.020%
74	11.226	1012	1016	1026	rBV	1769143	2929081	20.36%	5.492%
75	11.354	1026	1029	1035	rVB5	13732	30691	0.21%	0.058%
76	11.482	1035	1042	1045	rVB4	11044	27943	0.19%	0.052%
77	11.590	1051	1053	1056	rVB4	3561	5437	0.04%	0.010%
78	11.738	1067	1068	1071	rBV2	3033	5473	0.04%	0.010%
79	11.865	1077	1081	1086	rBV6	10174	25523	0.18%	0.048%
80	11.984	1088	1093	1095	rVB5	2712	5601	0.04%	0.011%
81	12.200	1112	1115	1118	rBV4	9255	15899	0.11%	0.030%
82	12.407	1131	1136	1139	rBV	49225	97262	0.68%	0.182%
83	12.466	1139	1142	1148	rVB	421024	687165	4.78%	1.288%
84	12.574	1150	1153	1156	rVB5	2467	6421	0.04%	0.012%
85	12.771	1168	1173	1174	rBV4	4565	9516	0.07%	0.018%
86	12.889	1183	1185	1188	rBV4	3184	4823	0.03%	0.009%
87	12.958	1188	1192	1193	rBV3	2362	5005	0.03%	0.009%
88	13.056	1200	1202	1204	rBV3	4399	4924	0.03%	0.009%
89	13.234	1215	1220	1221	rBV5	4266	9537	0.07%	0.018%
90	13.263	1221	1223	1228	rVB6	5792	11950	0.08%	0.022%
91	13.361	1228	1233	1236	rBV7	12203	27641	0.19%	0.052%
92	13.440	1236	1241	1246	rBV	1294050	2245654	15.61%	4.211%
93	13.637	1258	1261	1262	rBV3	6937	10110	0.07%	0.019%
94	13.765	1269	1274	1281	rBV	1081637	1853004	12.88%	3.474%
95	13.972	1293	1295	1296	rBV2	6385	6656	0.05%	0.012%
96	14.041	1296	1302	1305	rVV2	49208	101476	0.71%	0.190%
97	14.641	1358	1363	1367	rBV7	9353	35743	0.25%	0.067%
98	14.749	1372	1374	1375	rBV2	6867	8288	0.06%	0.016%
99	14.848	1383	1384	1386	rBV	8036	9966	0.07%	0.019%
100	15.615	1459	1462	1466	rVB	42513	76983	0.53%	0.144%

Sum of corrected areas: 53334005

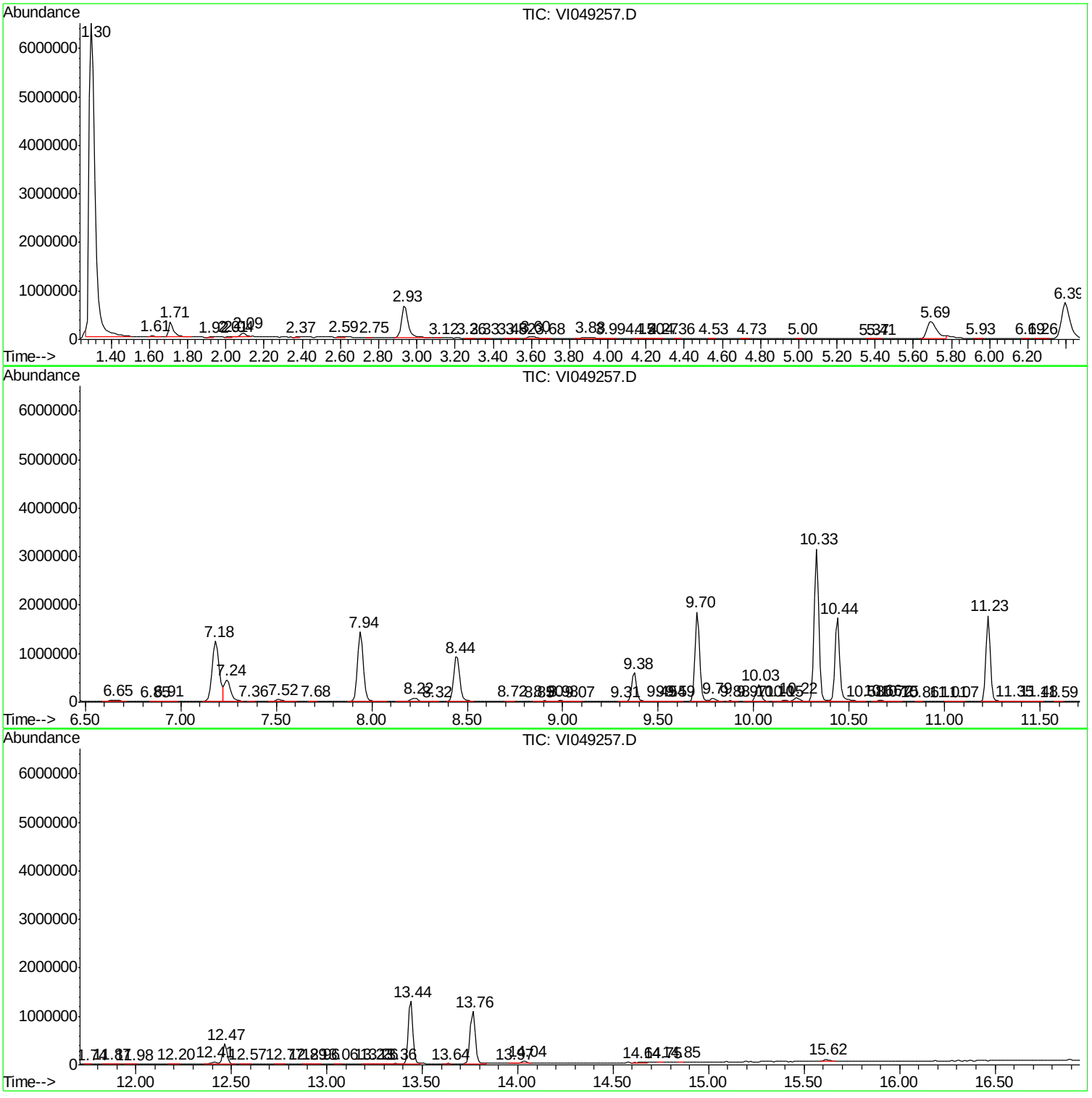
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049257.D
Acq On : 5 May 2016 17:59
Operator : FY/SY
Sample : H2834-06DL 2X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4121DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049257.D
Acq On : 5 May 2016 17:59
Operator : FY/SY
Sample : H2834-06DL 2X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4121DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049257.D
Acq On : 5 May 2016 17:59
Operator : FY/SY
Sample : H2834-06DL 2X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4121DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4123

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049239.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.15	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.1	
71-55-6	1,1,1-Trichloroethane	0.61	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.78	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4123

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049239.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.11	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	42	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4123

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049239.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4123

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049239.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/04/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000066-25-1	Hexanal	10.6	0.85	JN
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

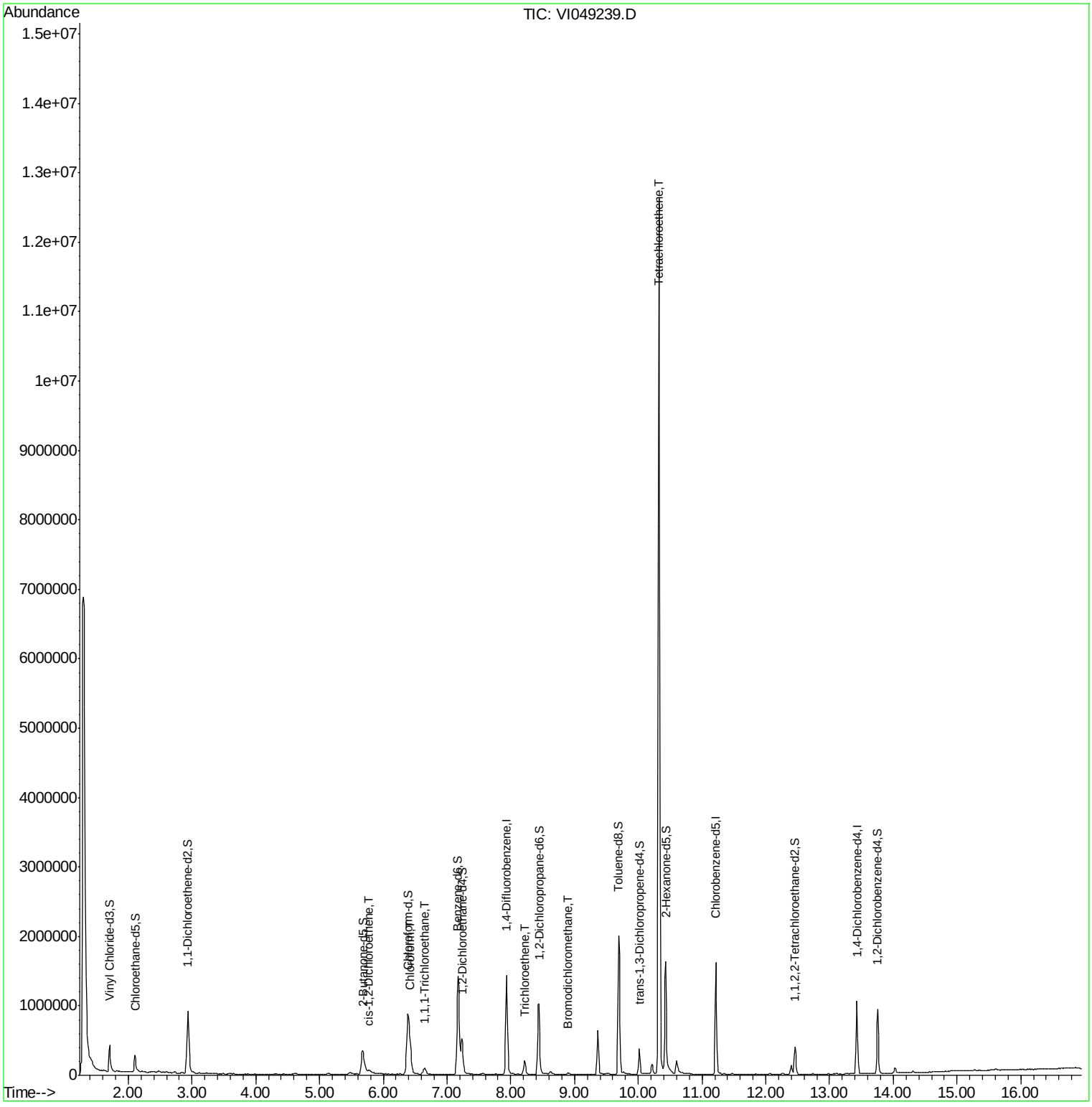
Quantitation Report (QT/LSC Reviewed)

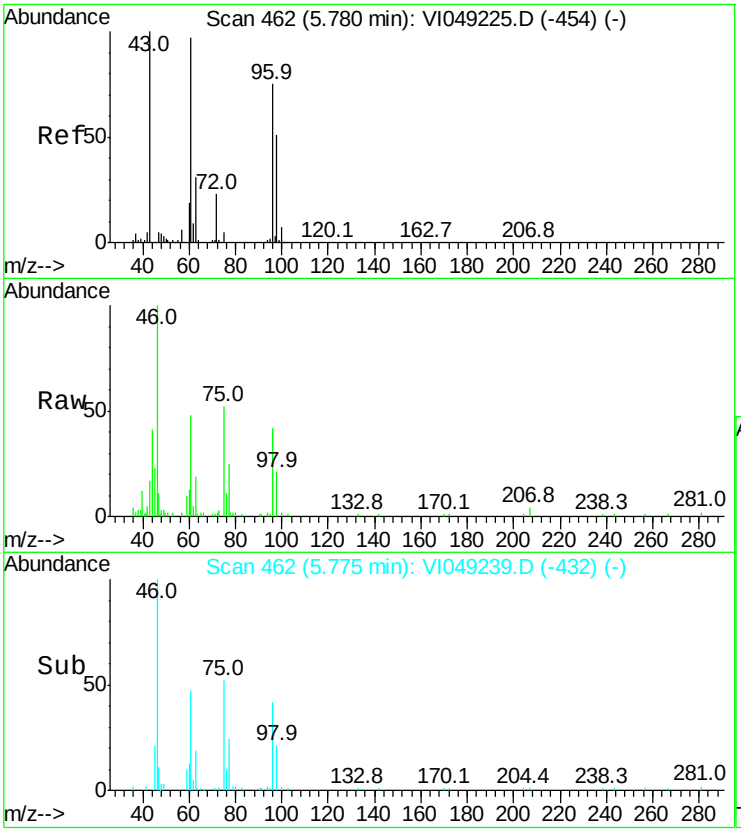
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049239.D
Acq On : 4 May 2016 22:05
Operator : FY/SY
Sample : H2834-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: May 05 06:46:46 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4123

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:26 AM

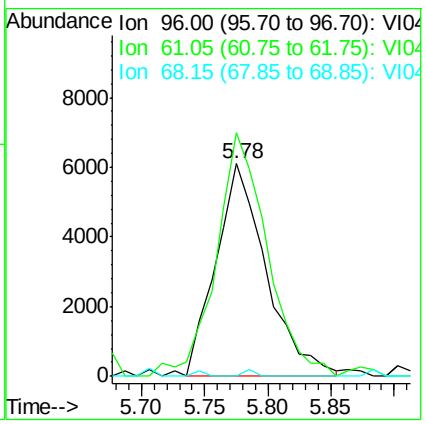




#22
cis-1,2-Dichloroethene
Concen: 0.15 ug/L
RT: 5.78 min Scan# 462
Delta R.T. -0.00 min
Lab File: VI049239.D
Acq: 4 May 2016 22:05

Tgt Ion: 96 Resp: 16883

Ion	Ratio	Lower	Upper
96	100		
61	114.4	82.1	152.5
68	0.0	0.0	0.0



Instrument :
MSVOA_I
ClientSampleId :
H4123

Manual Integrations APPROVED
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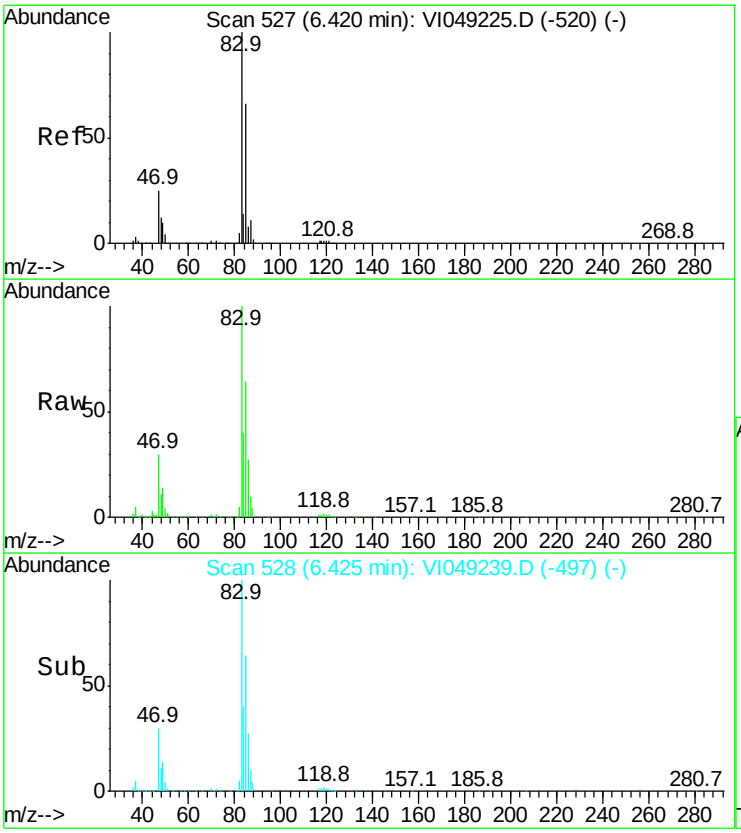
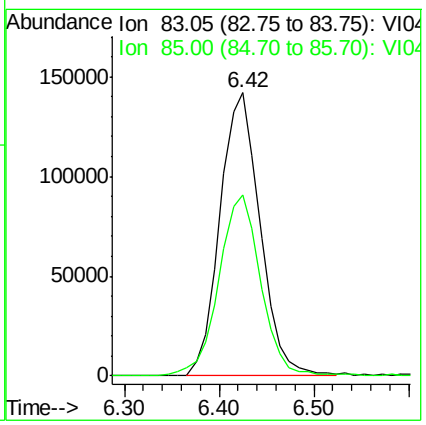
5/5/2016 9:01:26 AM

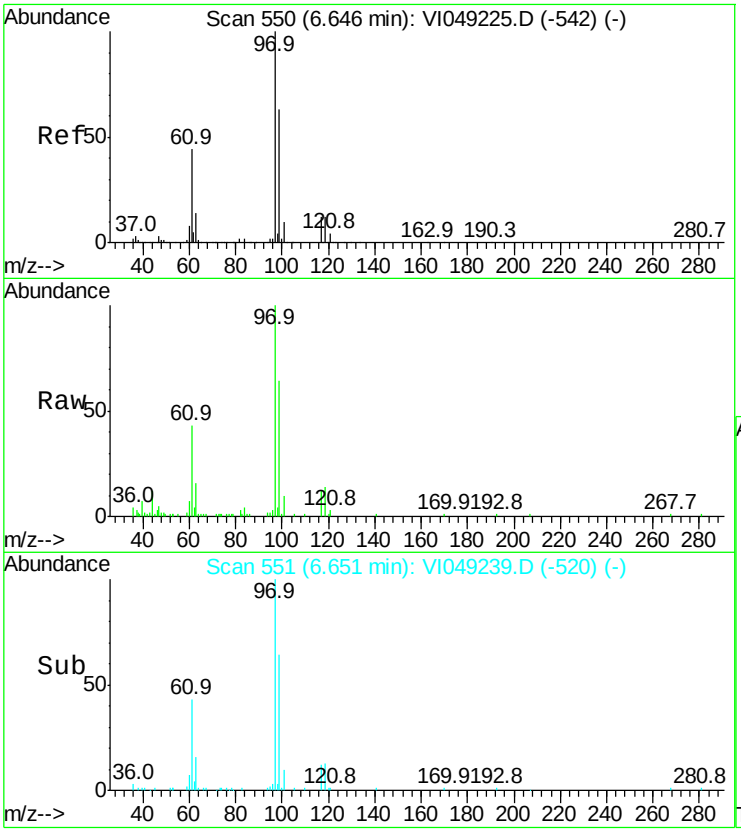


#25
Chloroform
Concen: 2.08 ug/L
RT: 6.42 min Scan# 528
Delta R.T. 0.01 min
Lab File: VI049239.D
Acq: 4 May 2016 22:05

Tgt Ion: 83 Resp: 416286

Ion	Ratio	Lower	Upper
83	100		
85	64.1	47.3	87.8

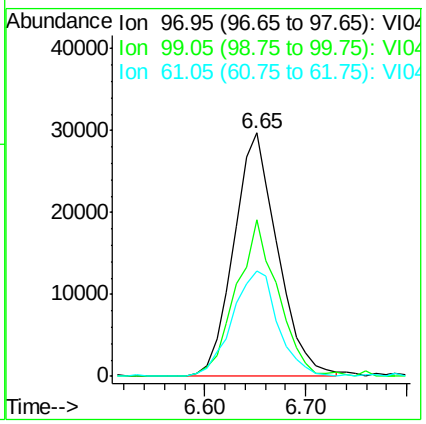




#29
1,1,1-Trichloroethane
Concen: 0.61 ug/L
RT: 6.65 min Scan# 551
Delta R.T. 0.01 min
Lab File: VI049239.D
Acq: 4 May 2016 22:05

Tgt Ion: 97 Resp: 89707

Ion	Ratio	Lower	Upper
97	100		
99	60.6	51.1	76.7
61	45.1	33.3	49.9



Instrument :
MSVOA_I
ClientSampleId :
H4123

Manual Integrations APPROVED
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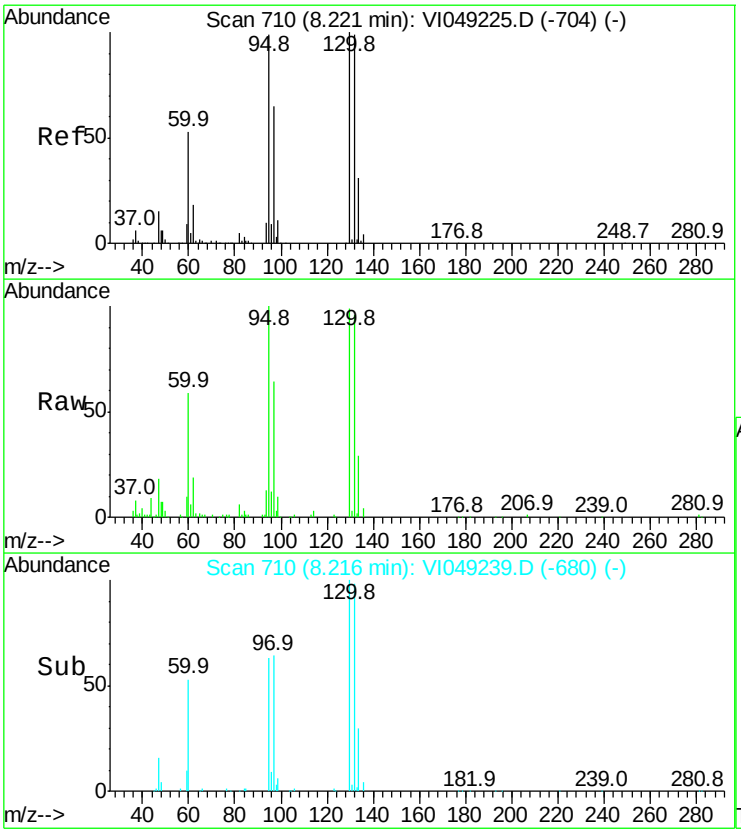
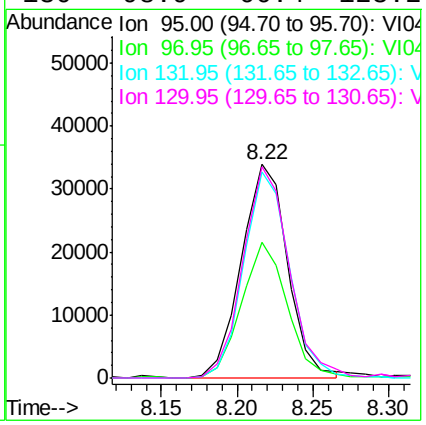
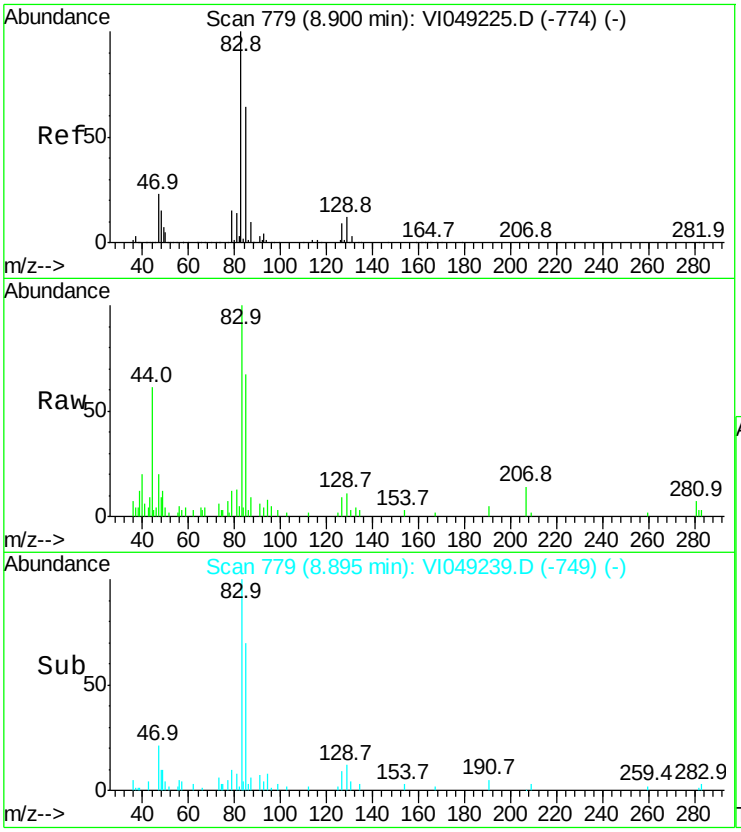


#34
Trichloroethene
Concen: 0.78 ug/L
RT: 8.22 min Scan# 710
Delta R.T. -0.00 min
Lab File: VI049239.D
Acq: 4 May 2016 22:05

Tgt Ion: 95 Resp: 72035

Ion	Ratio	Lower	Upper
95	100		
97	63.6	45.8	85.2
132	96.5	63.9	118.7
130	98.9	66.4	123.2

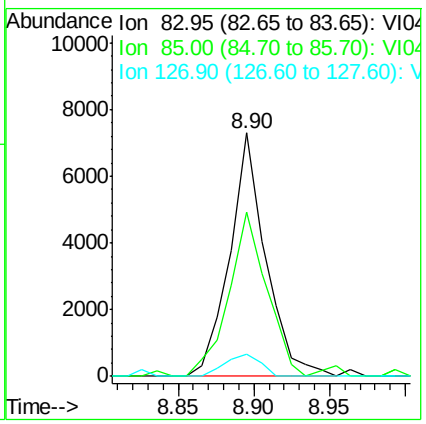




#38
Bromodichloromethane
Concen: 0.11 ug/L
RT: 8.90 min Scan# 779
Delta R.T. -0.00 min
Lab File: VI049239.D
Acq: 4 May 2016 22:05

Tgt Ion: 83 Resp: 12084

Ion	Ratio	Lower	Upper
83	100		
85	67.5	44.7	83.1
127	9.1	6.6	9.8



Instrument :
MSVOA_I
ClientSampleId :
H4123

Manual Integrations APPROVED
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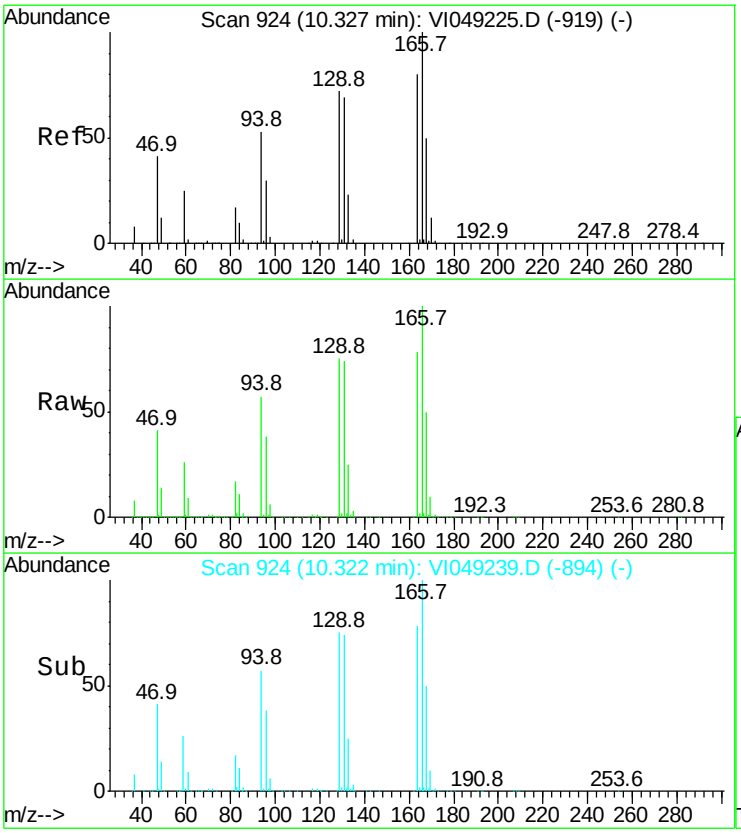
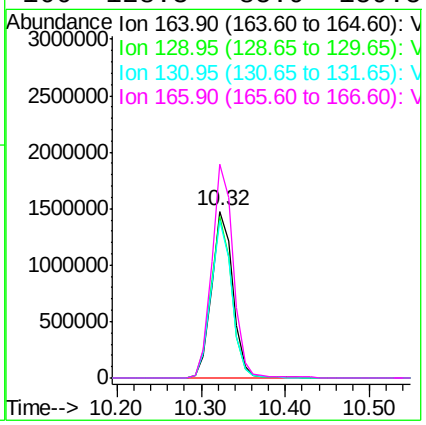
5/5/2016 9:01:26 AM



#47
Tetrachloroethene
Concen: 42.39 ug/L
RT: 10.32 min Scan# 924
Delta R.T. -0.00 min
Lab File: VI049239.D
Acq: 4 May 2016 22:05

Tgt Ion:164 Resp: 2582290

Ion	Ratio	Lower	Upper
164	100		
129	96.7	62.1	115.3
131	94.3	60.6	112.6
166	128.3	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049239.D
Acq On : 4 May 2016 22:05
Operator : FY/SY
Sample : H2834-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: May 05 06:46:46 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4123

Manual Integrations APPROVED
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5/5/2016 9:01:26 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1242119	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	780602	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	244069	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	397862	5.20	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 104.00%			
7) Chloroethane-d5	2.10	69	249900	5.90	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 118.00%			
11) 1,1-Dichloroethene-d2	2.93	63	712316	3.95	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 79.00%			
20) 2-Butanone-d5	5.68	46	873611	52.77	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 105.54%			
24) Chloroform-d	6.39	84	1009805	5.19	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.80%			
26) 1,2-Dichloroethane-d4	7.23	65	446928m	5.61	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 112.20%			
32) Benzene-d6	7.17	84	1765809	5.81	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 116.20%			
36) 1,2-Dichloropropane-d6	8.44	67	491403	5.75	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 115.00%			
41) Toluene-d8	9.69	98	1234739	5.50	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 110.00%			
43) trans-1,3-Dichloropropene-	10.02	79	180120	5.35	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 107.00%			
46) 2-Hexanone-d5	10.43	63	579921	54.58	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 109.16%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	185040	4.76	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.20%			
63) 1,2-Dichlorobenzene-d4	13.76	152	203678	4.76	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 95.20%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.78	96	16883	0.15	ug/L	97
25) Chloroform	6.42	83	416286	2.08	ug/L	96
29) 1,1,1-Trichloroethane	6.65	97	89707	0.61	ug/L	95
34) Trichloroethene	8.22	95	72035	0.78	ug/L	96
38) Bromodichloromethane	8.90	83	12084	0.11	ug/L	96
47) Tetrachloroethene	10.32	164	2582290	42.39	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049239.D
Acq On : 4 May 2016 22:05
Operator : FY/SY
Sample : H2834-07
Misc : 25mL/MSVOA I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4123

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.297	3	7	33	rVB	6827941	20896954	95.43%	26.204%
2	1.710	46	49	56	rVV	376961	645462	2.95%	0.809%
3	1.819	57	60	62	rVB	12848	18045	0.08%	0.023%
4	2.104	86	89	97	rBV	237438	467021	2.13%	0.586%
5	2.478	123	127	132	rBV3	19771	50112	0.23%	0.063%
6	2.537	132	133	134	rVV	8803	5247	0.02%	0.007%
7	2.596	136	139	145	rVB3	17970	50633	0.23%	0.063%
8	2.714	148	151	160	rVB2	26494	62717	0.29%	0.079%
9	2.852	160	165	168	rBV3	14612	32901	0.15%	0.041%
10	2.931	168	173	180	rBV	895832	2100157	9.59%	2.633%
11	3.118	190	192	196	rVB4	11798	19279	0.09%	0.024%
12	3.226	199	203	206	rBV3	9775	23824	0.11%	0.030%
13	3.472	227	228	229	rBV	5847	5333	0.02%	0.007%
14	3.600	237	241	242	rVV3	9538	19896	0.09%	0.025%
15	3.649	244	246	248	rVV3	4817	8473	0.04%	0.011%
16	3.836	261	265	268	rBV4	5168	11363	0.05%	0.014%
17	3.984	277	280	284	rBV6	4948	12813	0.06%	0.016%
18	4.161	296	298	302	rVB3	4566	9041	0.04%	0.011%
19	4.279	308	310	311	rBV2	4122	6646	0.03%	0.008%
20	4.299	311	312	319	rVB7	7944	19424	0.09%	0.024%
21	4.397	319	322	324	rBV4	3026	7150	0.03%	0.009%
22	4.437	324	326	327	rBV2	5665	7567	0.03%	0.009%
23	4.515	332	334	338	rVB5	5457	7946	0.04%	0.010%
24	4.574	338	340	341	rBV	8152	10192	0.05%	0.013%
25	4.614	341	344	349	rBV8	8823	21048	0.10%	0.026%
26	4.722	353	355	359	rVB4	4320	9212	0.04%	0.012%
27	4.919	372	375	377	rBV3	4062	7686	0.04%	0.010%
28	4.948	377	378	382	rVB4	3601	6042	0.03%	0.008%
29	5.027	382	386	387	rBV4	3028	6081	0.03%	0.008%
30	5.135	392	397	402	rBV5	15299	46096	0.21%	0.058%
31	5.401	422	424	427	rBV3	3902	7820	0.04%	0.010%
32	5.470	427	431	439	rBV4	27440	95973	0.44%	0.120%
33	5.677	446	452	460	rBV	342196	1209659	5.52%	1.517%
34	5.775	460	462	471	rVB4	49746	164119	0.75%	0.206%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049239.D
Acq On : 4 May 2016 22:05
Operator : FY/SY
Sample : H2834-07
Misc : 25mL/MSVOA I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4123

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.267	508	512	515	rBV6	5269	14080	0.06%	0.018%
36	6.385	517	524	543	rVV2	863007	3356618	15.33%	4.209%
37	6.651	543	551	558	rVV	91119	274792	1.25%	0.345%
38	6.799	564	566	570	rVB4	3235	6366	0.03%	0.008%
39	7.025	588	589	592	rVB3	3997	5098	0.02%	0.006%
40	7.173	598	604	608	rBV	1419696	3712905	16.96%	4.656%
41	7.232	608	610	621	rVB	502776	1156058	5.28%	1.450%
42	7.566	638	644	650	rVB9	11489	31786	0.15%	0.040%
43	7.655	652	653	659	rVB4	6963	15162	0.07%	0.019%
44	7.763	659	664	670	rBV8	10113	36108	0.16%	0.045%
45	7.931	675	681	689	rBV	1422139	3032974	13.85%	3.803%
46	8.108	697	699	701	rVB3	6114	7255	0.03%	0.009%
47	8.216	704	710	726	rVB	201419	470775	2.15%	0.590%
48	8.442	726	733	742	rBV	1017216	2373722	10.84%	2.977%
49	8.551	742	744	747	rVV4	9226	17677	0.08%	0.022%
50	8.629	747	752	759	rVB2	39940	104060	0.48%	0.130%
51	8.728	759	762	767	rVB7	5852	17300	0.08%	0.022%
52	8.836	769	773	775	rBV4	2081	6085	0.03%	0.008%
53	8.895	775	779	785	rVB3	25463	55756	0.25%	0.070%
54	8.974	785	787	790	rVB4	2803	5565	0.03%	0.007%
55	9.368	822	827	835	rBV	639705	1177228	5.38%	1.476%
56	9.495	838	840	841	rBV2	4762	7085	0.03%	0.009%
57	9.525	841	843	846	rVB2	17330	29278	0.13%	0.037%
58	9.594	846	850	853	rVB4	6119	14623	0.07%	0.018%
59	9.692	856	860	866	rBV	1990936	3579102	16.34%	4.488%
60	9.771	866	868	874	rVB2	28006	60662	0.28%	0.076%
61	10.017	889	893	900	rBV	364077	645412	2.95%	0.809%
62	10.145	902	906	909	rBV7	4919	10806	0.05%	0.014%
63	10.214	909	913	920	rBV	137768	296891	1.36%	0.372%
64	10.322	920	924	931	rVV	12606483	21898455	100.00%	27.459%
65	10.430	931	935	949	rVV	1615594	3179141	14.52%	3.986%
66	10.598	949	952	965	rVB	190024	459705	2.10%	0.576%
67	10.795	970	972	975	rVB3	4270	6993	0.03%	0.009%
68	11.041	996	997	1002	rVB4	2689	4905	0.02%	0.006%
69	11.159	1006	1009	1011	rBV4	2428	4910	0.02%	0.006%
70	11.218	1011	1015	1024	rBV	1612811	2707247	12.36%	3.395%
71	11.346	1024	1028	1034	rVB7	9228	27227	0.12%	0.034%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049239.D
Acq On : 4 May 2016 22:05
Operator : FY/SY
Sample : H2834-07
Misc : 25mL/MSVOA I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4123

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.434	1034	1037	1038	rBV3	2550	4754	0.02%	0.006%
73	11.474	1038	1041	1045	rVB4	11956	23677	0.11%	0.030%
74	11.523	1045	1046	1050	rVB4	4439	9813	0.04%	0.012%
75	11.621	1050	1056	1058	rBV7	7249	22698	0.10%	0.028%
76	11.848	1075	1079	1083	rBV6	9517	24419	0.11%	0.031%
77	11.907	1083	1085	1088	rBV4	2143	5124	0.02%	0.006%
78	12.064	1097	1101	1103	rBV4	13401	32159	0.15%	0.040%
79	12.153	1107	1110	1111	rBV3	3246	5160	0.02%	0.006%
80	12.202	1111	1115	1116	rVB3	3523	4962	0.02%	0.006%
81	12.261	1116	1121	1127	rBV10	9078	27809	0.13%	0.035%
82	12.399	1130	1135	1138	rBV	127098	236832	1.08%	0.297%
83	12.458	1138	1141	1150	rVB	399613	711209	3.25%	0.892%
84	12.566	1150	1152	1155	rVB3	3673	7021	0.03%	0.009%
85	12.743	1166	1170	1173	rBV4	10753	21675	0.10%	0.027%
86	12.871	1180	1183	1186	rBV5	6093	15549	0.07%	0.019%
87	12.920	1186	1188	1191	rBV4	3751	6666	0.03%	0.008%
88	12.980	1193	1194	1197	rVB3	5114	7861	0.04%	0.010%
89	13.058	1199	1202	1204	rBV4	4917	9349	0.04%	0.012%
90	13.265	1220	1223	1227	rVB4	12064	22882	0.10%	0.029%
91	13.432	1235	1240	1245	rVV	1048075	1771713	8.09%	2.222%
92	13.600	1255	1257	1258	rVB2	6396	5928	0.03%	0.007%
93	13.619	1258	1259	1262	rBV3	6163	11411	0.05%	0.014%
94	13.757	1268	1273	1281	rBV	920382	1591235	7.27%	1.995%
95	13.885	1284	1286	1288	rBV3	3881	7017	0.03%	0.009%
96	13.964	1292	1294	1296	rBV3	4632	8418	0.04%	0.011%
97	14.033	1296	1301	1304	rBV2	80434	168835	0.77%	0.212%
98	14.308	1325	1329	1333	rBV5	25092	53672	0.25%	0.067%
99	14.397	1336	1338	1339	rVB2	5250	5314	0.02%	0.007%
100	15.607	1458	1461	1466	rVB	21242	43710	0.20%	0.055%

Sum of corrected areas: 79748616

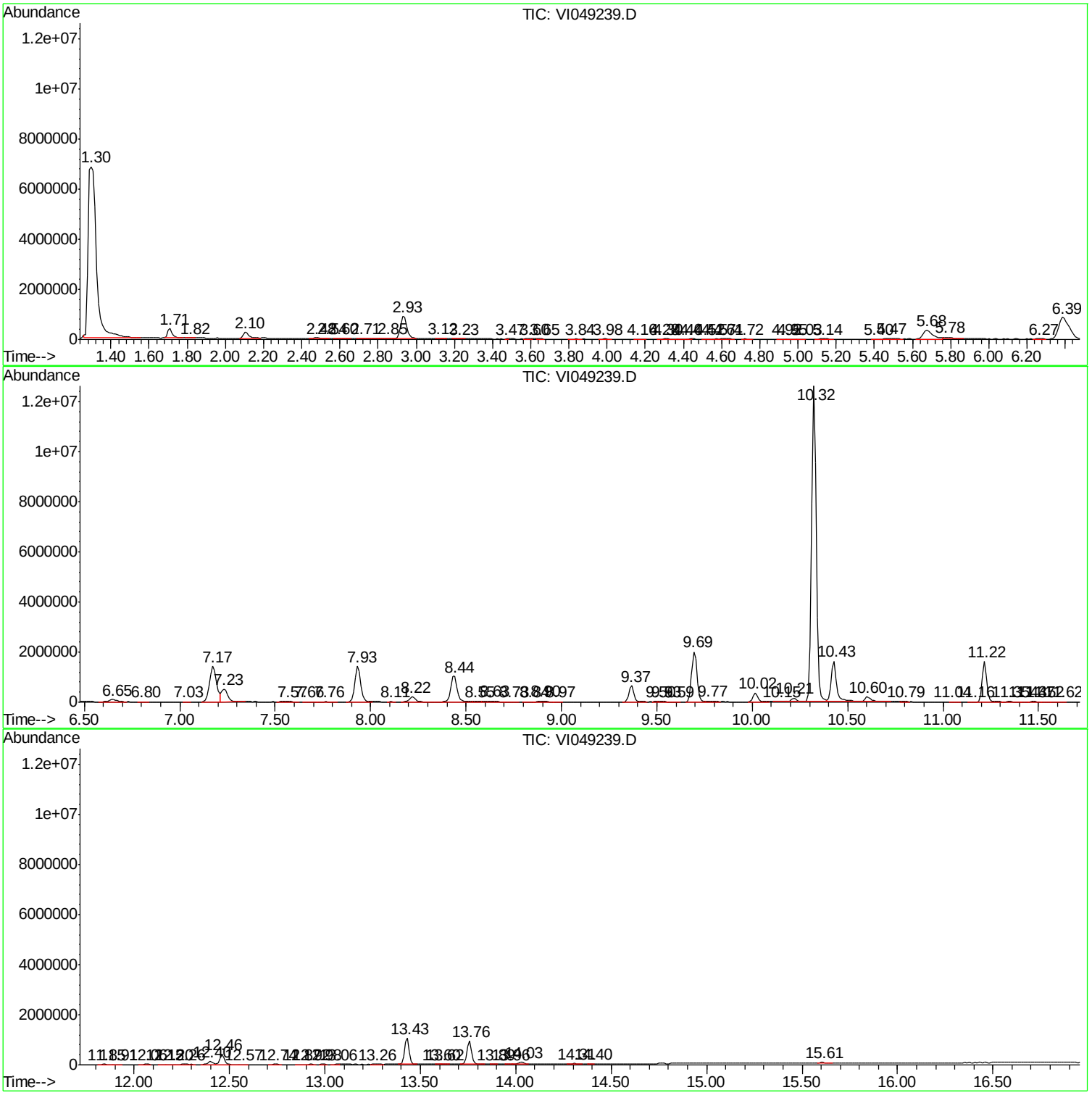
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049239.D
Acq On : 4 May 2016 22:05
Operator : FY/SY
Sample : H2834-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4123

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049239.D
Acq On : 4 May 2016 22:05
Operator : FY/SY
Sample : H2834-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4123

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

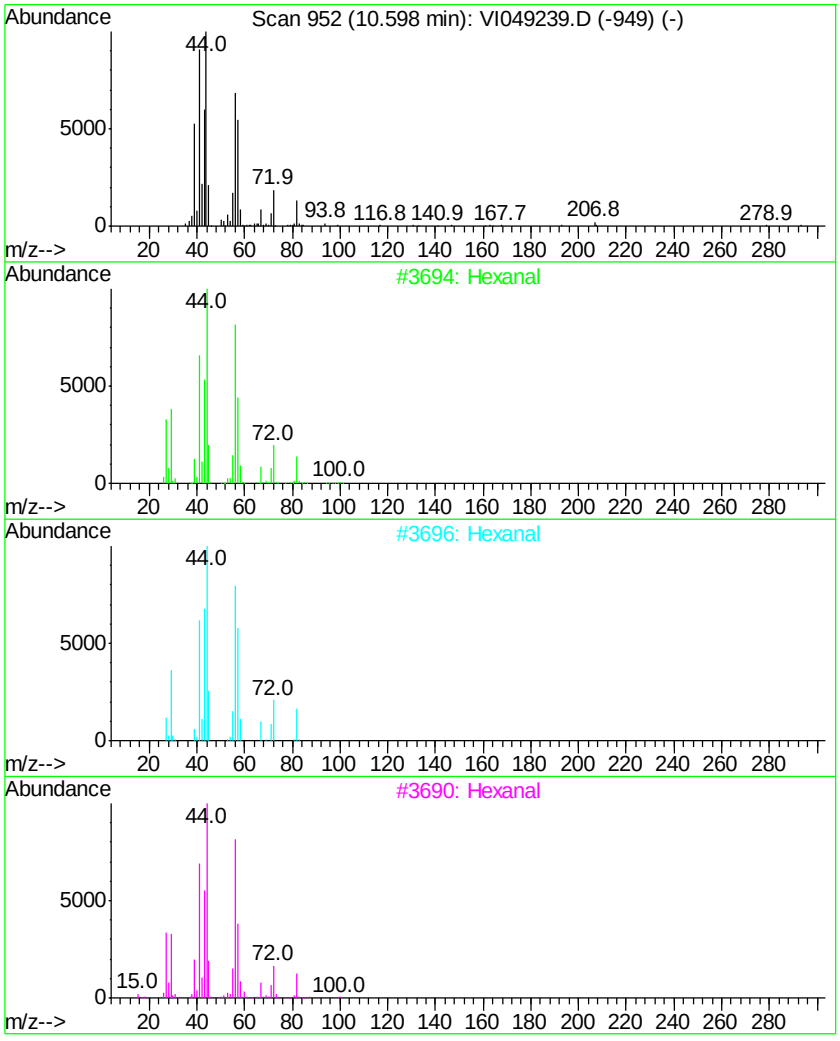
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

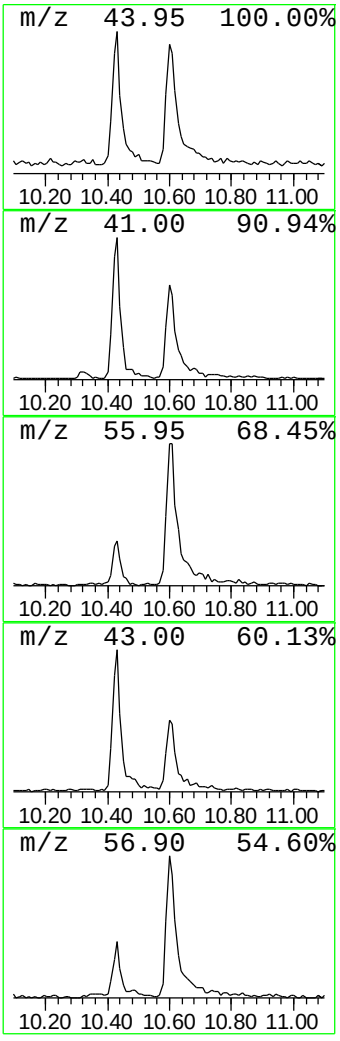
****

Peak Number 4 Hexanal Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.60	0.85 ug/L	459705	Chlorobenzene-d5	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexanal	100	C6H12O	000066-25-1	59
2	Hexanal	100	C6H12O	000066-25-1	58
3	Hexanal	100	C6H12O	000066-25-1	50
4	Cyclobutanol, 2-ethyl-	100	C6H12O	035301-43-0	42
5	Hexanal	100	C6H12O	000066-25-1	37





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049239.D
Acq On : 4 May 2016 22:05
Operator : FY/SY
Sample : H2834-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4123

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Hexanal	10.60	0.8	ug/L	459705	2	11.22	2707250	5.0

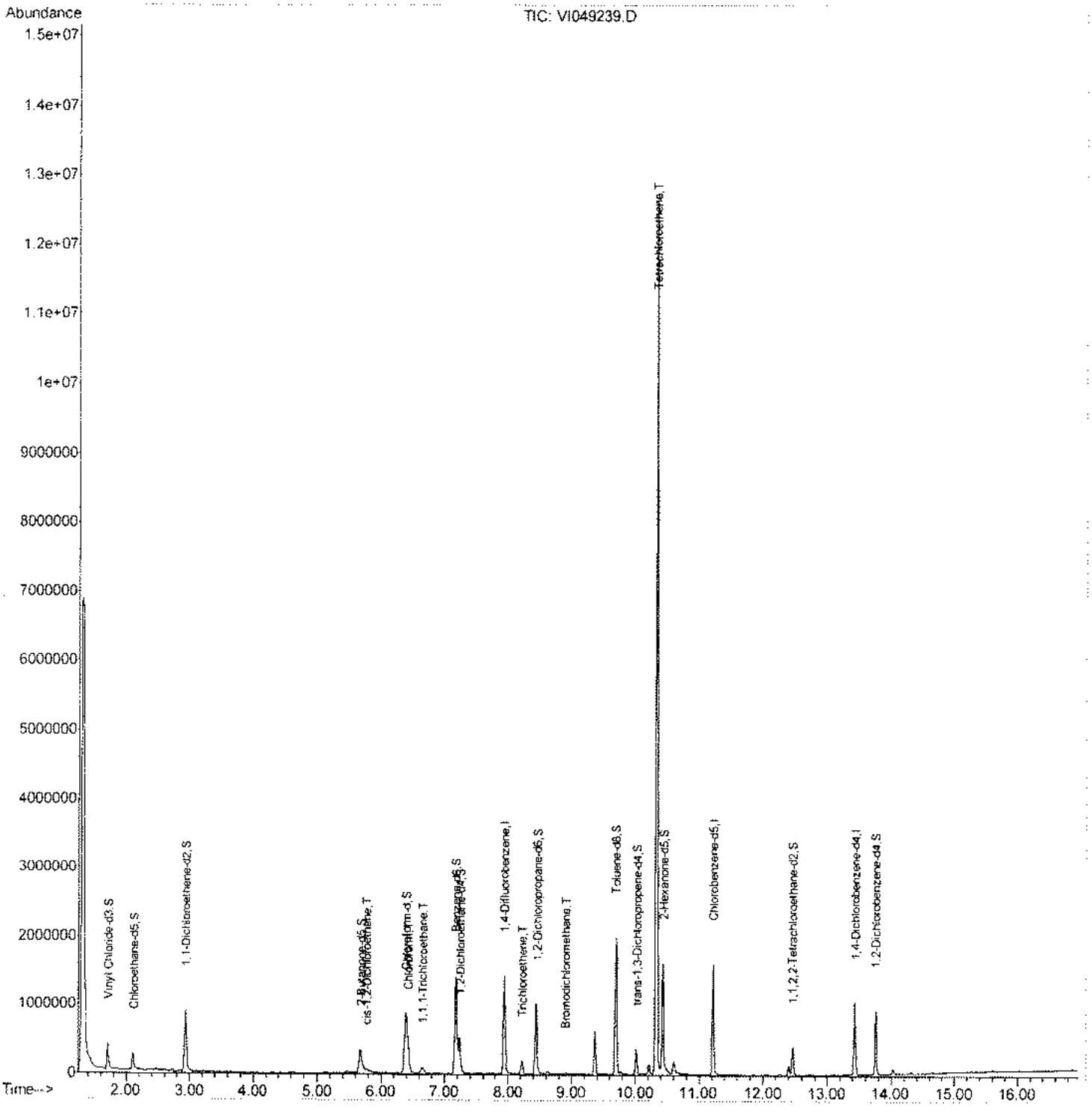
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049239.D
Acq On : 4 May 2016 22:05
Operator : FY/SY
Sample : H2834-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: May 05 06:46:46 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4123

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:26 AM



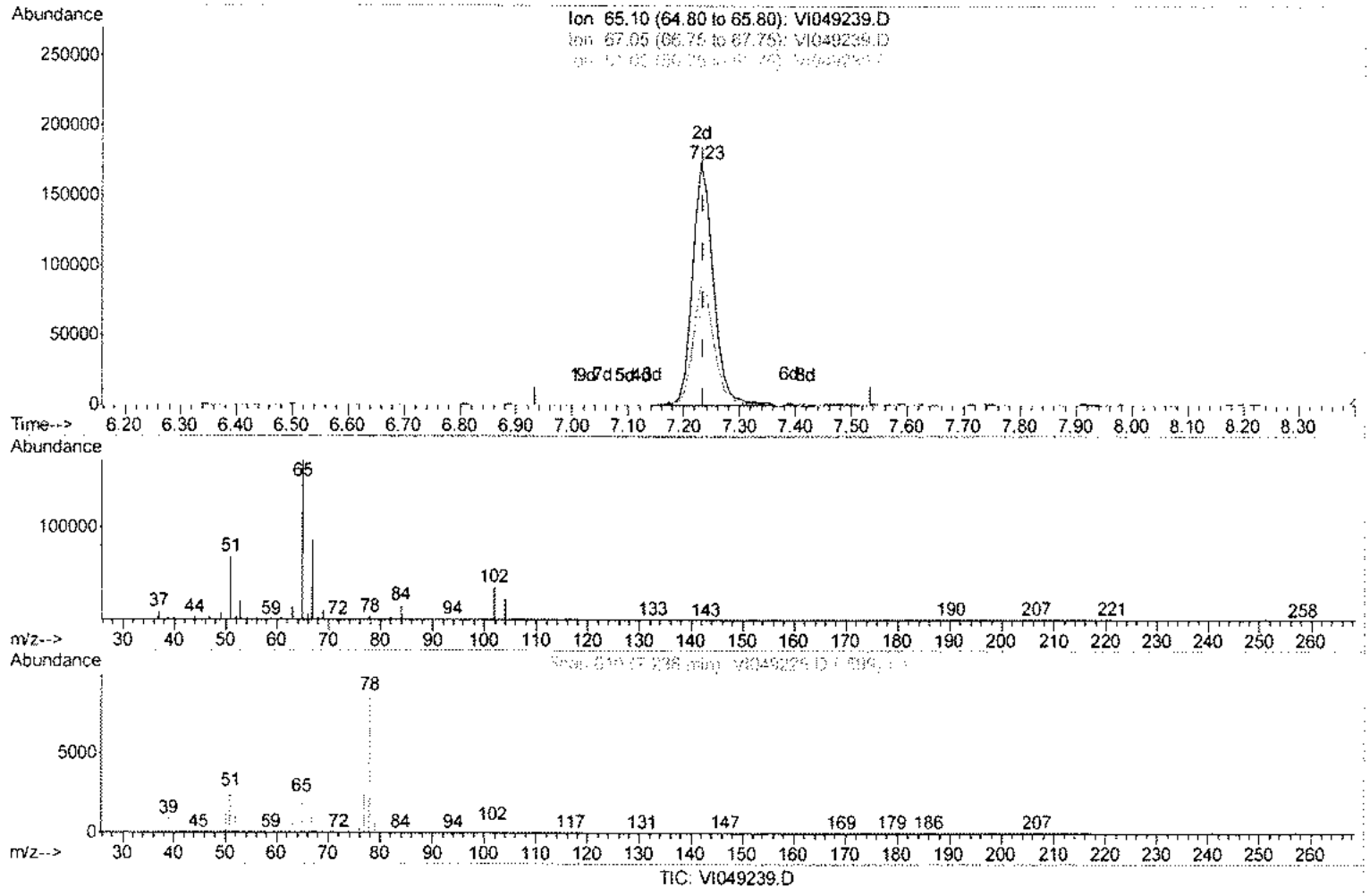
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049239.D
Acq On : 4 May 2016 22:05
Operator : FY/SY
Sample : H2834-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: May 05 05:24:36 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4123

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:26 AM



(26) 1,2-Dichloroethane-d4 (S)

7.232min (-0.005) 5.61ug/L m M.D 05/07/16

response 446928

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.05#
51.05	123.20	0.08#
0.00	0.00	0.00

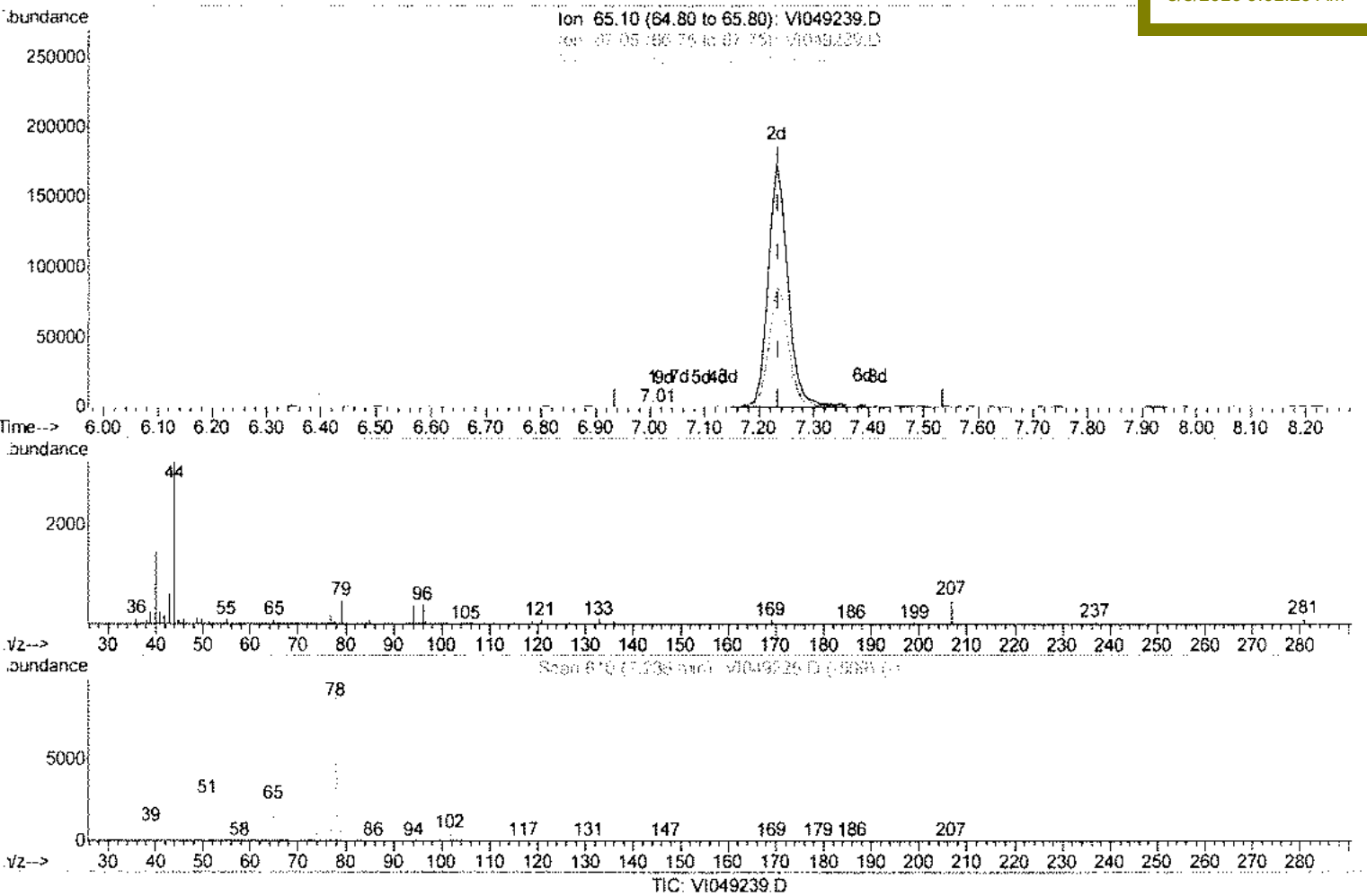
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049239.D
Acq On : 4 May 2016 22:05
Operator : FY/SY
Sample : H2834-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: May 05 05:24:36 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4123

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:26 AM



TIC: VI049239.D

(26) 1,2-Dichloroethane-d4 (S)

7.005min (-0.231) 0.00ug/L

response 361

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	65.65
51.05	123.20	94.18
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049239.D
Acq On : 4 May 2016 22:05
Operator : FY/SY
Sample : H2834-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: May 05 06:46:46 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4123

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:26 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1242119	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	780602	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	244069	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	397862	5.20	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 104.00%			
7) Chloroethane-d5	2.10	69	249900	5.90	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 118.00%			
11) 1,1-Dichloroethene-d2	2.93	63	712316	3.95	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 79.00%			
20) 2-Butanone-d5	5.68	46	873611	52.77	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 105.54%			
24) Chloroform-d	6.39	84	1009805	5.19	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.80%			
26) 1,2-Dichloroethane-d4	7.23	65	446928m	5.61	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 112.20%			
32) Benzene-d6	7.17	84	1765809	5.81	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 116.20%			
36) 1,2-Dichloropropane-d6	8.44	67	491403	5.75	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 115.00%			
41) Toluene-d8	9.69	98	1234739	5.50	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 110.00%			
43) trans-1,3-Dichloropropene-	10.02	79	180120	5.35	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 107.00%			
46) 2-Hexanone-d5	10.43	63	579921	54.58	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 109.16%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	185040	4.76	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.20%			
63) 1,2-Dichlorobenzene-d4	13.76	152	203678	4.76	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 95.20%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.78	96	16883	0.15	ug/L	97
25) Chloroform	6.42	83	416286	2.08	ug/L	96
29) 1,1,1-Trichloroethane	6.65	97	89707	0.61	ug/L	95
34) Trichloroethene	8.22	95	72035	0.78	ug/L	96
38) Bromodichloromethane	8.90	83	12084	0.11	ug/L	96
47) Tetrachloroethene	10.32	164	2582290	42.39	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

(M.J) 505/07/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4123DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049259.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	D
71-55-6	1,1,1-Trichloroethane	0.55	JD
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	0.75	JD

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4123DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049259.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	35	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4123DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049259.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H4123DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-07DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049259.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 5.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	1.55	8.7	J
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

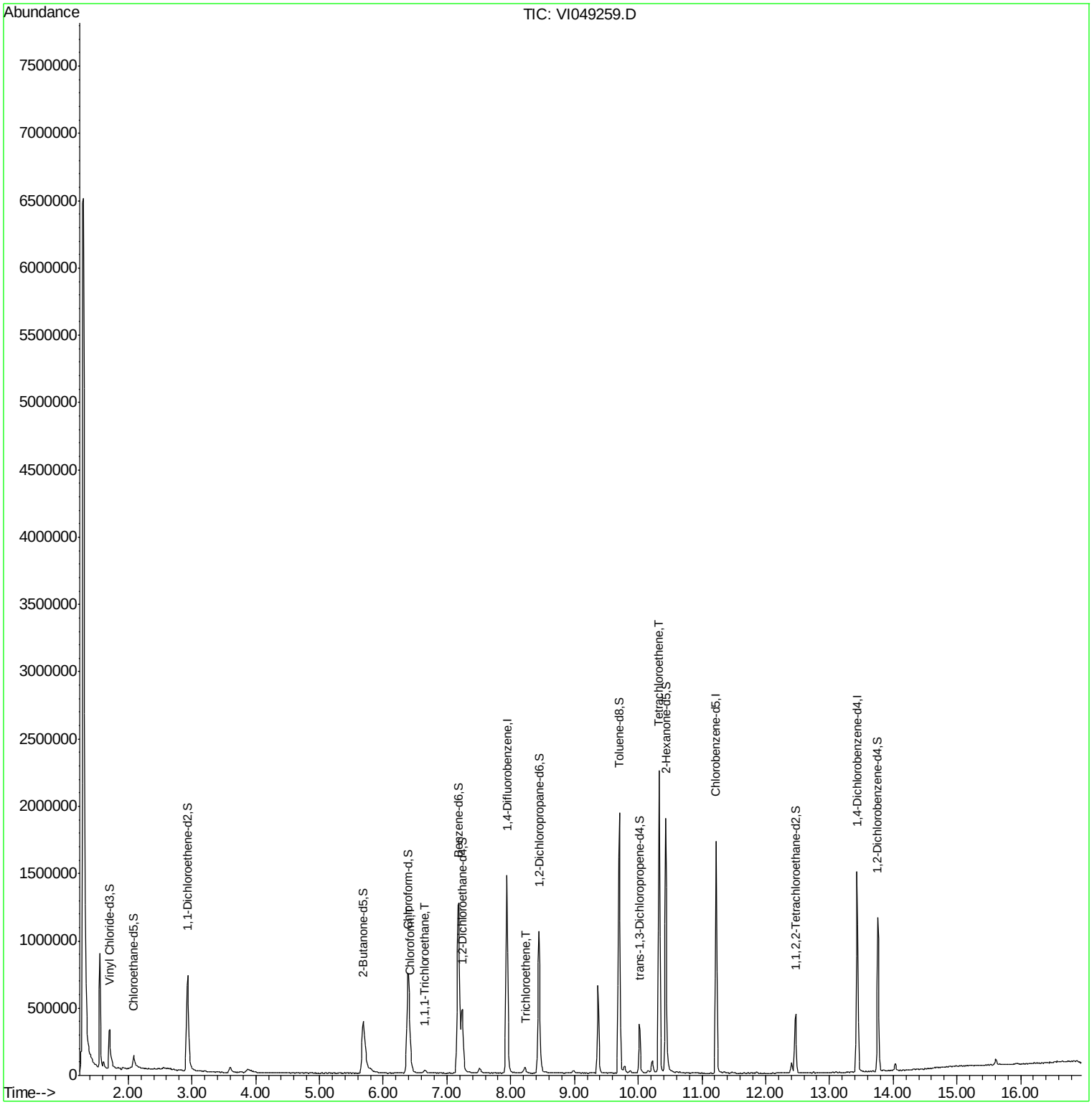
Quantitation Report (QT/LSC Reviewed)

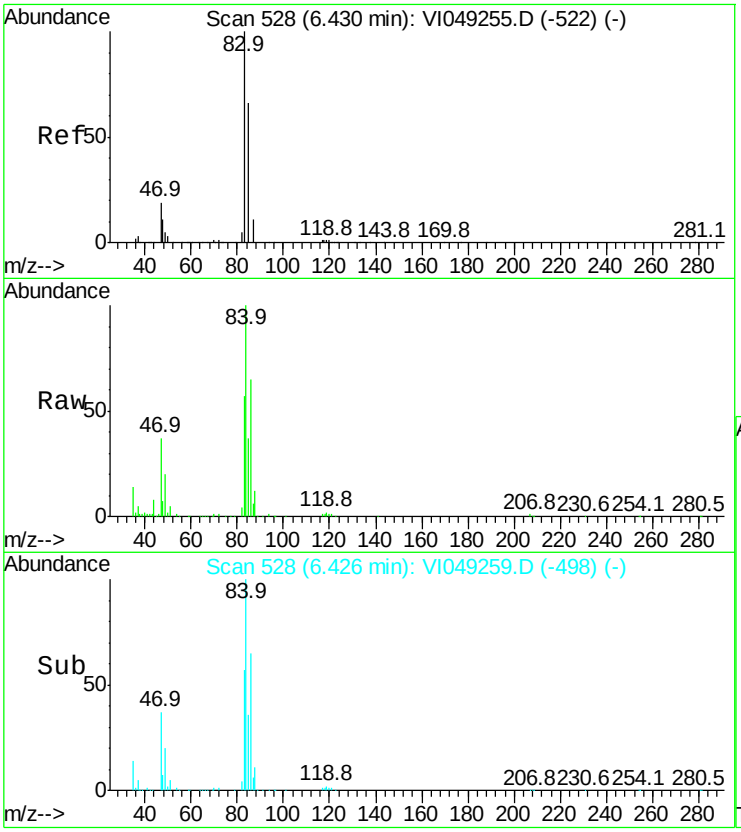
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049259.D
Acq On : 5 May 2016 19:02
Operator : FY/SY
Sample : H2834-07DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 06 05:41:22 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4123DL

Manual Integrations APPROVED
feifei
5/6/2016 11:44:16 AM

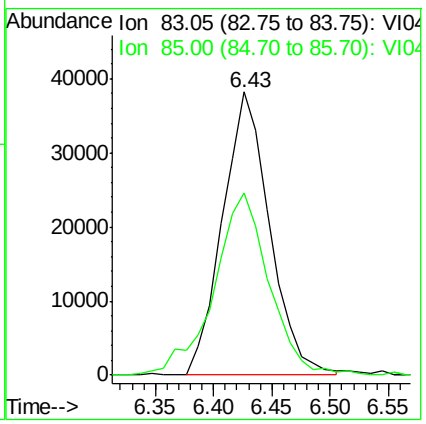




#25
Chloroform
Concen: 0.50 ug/L
RT: 6.43 min Scan# 528
Delta R.T. -0.00 min
Lab File: VI049259.D
Acq: 5 May 2016 19:02

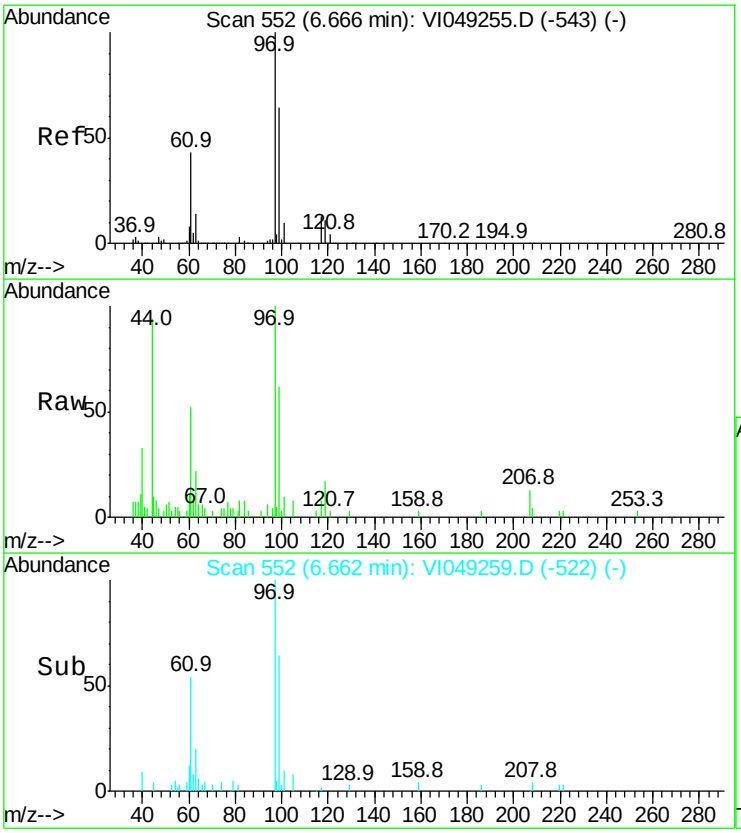
Tgt Ion: 83 Resp: 106918

Ion	Ratio	Lower	Upper
83	100		
85	64.6	47.3	87.8



Instrument :
MSVOA_I
ClientSampleId :
H4123DL

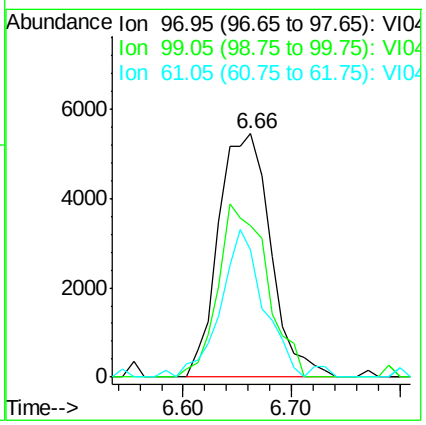
Manual Integrations APPROVED
feifei
5/6/2016 11:44:16 AM

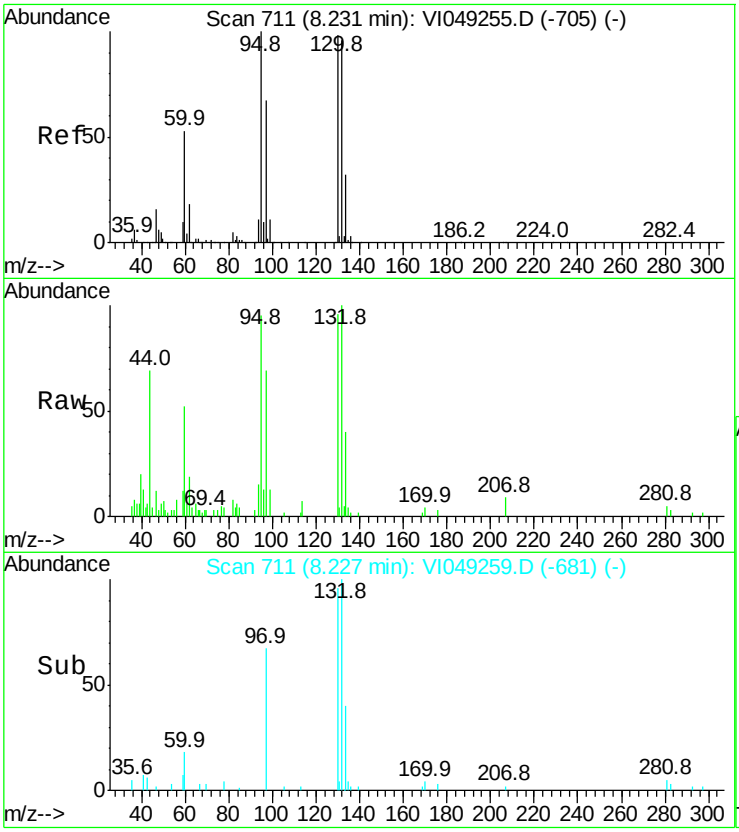


#29
1,1,1-Trichloroethane
Concen: 0.11 ug/L
RT: 6.66 min Scan# 552
Delta R.T. -0.00 min
Lab File: VI049259.D
Acq: 5 May 2016 19:02

Tgt Ion: 97 Resp: 18243

Ion	Ratio	Lower	Upper
97	100		
99	66.6	51.1	76.7
61	49.7	33.3	49.9

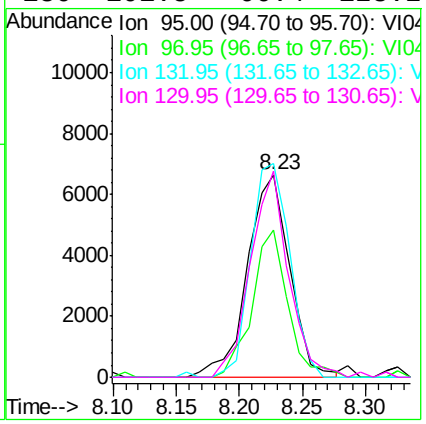




#34
Trichloroethene
Concen: 0.15 ug/L
RT: 8.23 min Scan# 711
Delta R.T. -0.00 min
Lab File: VI049259.D
Acq: 5 May 2016 19:02

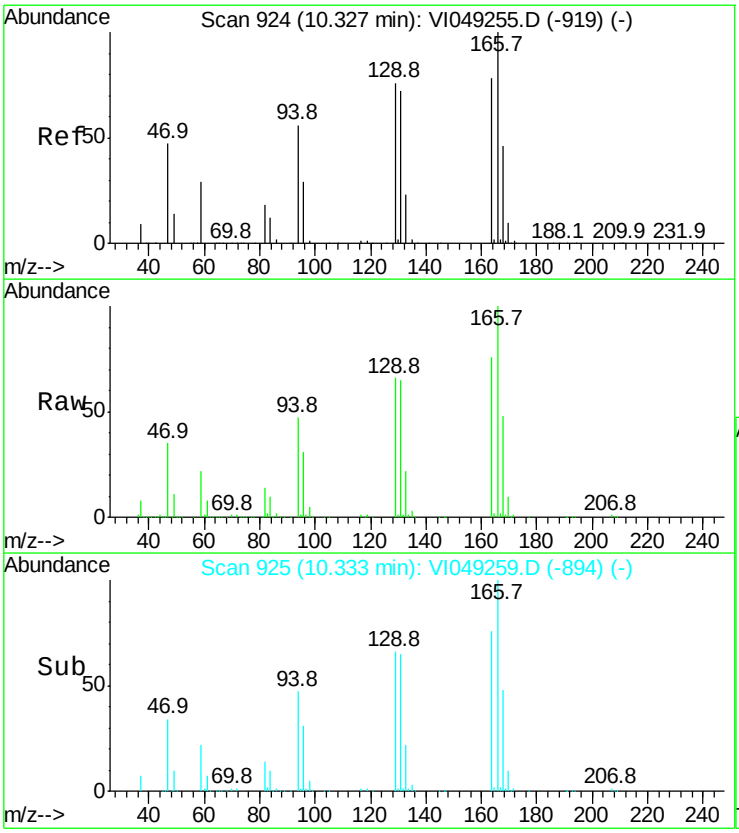
Tgt Ion: 95 Resp: 15519

Ion	Ratio	Lower	Upper
95	100		
97	72.6	45.8	85.2
132	105.3	63.9	118.7
130	101.5	66.4	123.2



Instrument :
MSVOA_I
ClientSampleId :
H4123DL

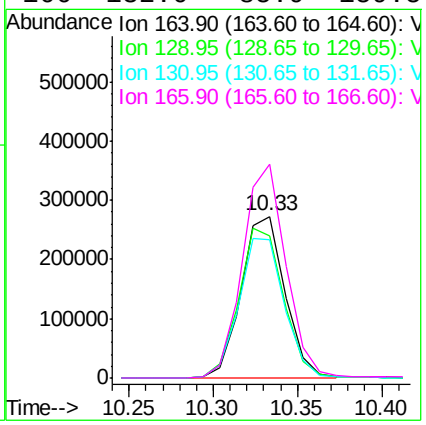
Manual Integrations APPROVED
feifei
5/6/2016 11:44:16 AM



#47
Tetrachloroethene
Concen: 7.00 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.01 min
Lab File: VI049259.D
Acq: 5 May 2016 19:02

Tgt Ion:164 Resp: 491225

Ion	Ratio	Lower	Upper
164	100		
129	87.6	62.1	115.3
131	85.2	60.6	112.6
166	132.0	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049259.D
Acq On : 5 May 2016 19:02
Operator : FY/SY
Sample : H2834-07DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 17 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4123DL

Manual Integrations APPROVED
feifei
5/6/2016 11:44:16 AM

Quant Time: May 06 05:41:22 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1328744	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	898593	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	339174	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	378653	4.63	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 92.60%			
7) Chloroethane-d5	2.09	69	99787	2.20	ug/L	-0.02
Spiked Amount 5.000	Range 65 - 130		Recovery = 44.00%#			
11) 1,1-Dichloroethene-d2	2.93	63	598673	3.11	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 62.20%			
20) 2-Butanone-d5	5.69	46	927020	52.34	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 104.68%			
24) Chloroform-d	6.39	84	936609	4.50	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.00%			
26) 1,2-Dichloroethane-d4	7.24	65	435369m	5.11	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.20%			
32) Benzene-d6	7.18	84	1675919	4.79	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.80%			
36) 1,2-Dichloropropane-d6	8.44	67	477715	4.85	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.00%			
41) Toluene-d8	9.70	98	1203499	4.66	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.20%			
43) trans-1,3-Dichloropropene-	10.02	79	180862	4.66	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 93.20%			
46) 2-Hexanone-d5	10.43	63	627352	51.29	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 102.58%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	204879	4.58	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	266821	4.49	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 89.80%			
Target Compounds						Qvalue
25) Chloroform	6.43	83	106918	0.50	ug/L	96
29) 1,1,1-Trichloroethane	6.66	97	18243	0.11	ug/L	93
34) Trichloroethene	8.23	95	15519	0.15	ug/L	90
47) Tetrachloroethene	10.33	164	491225	7.00	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049259.D
Acq On : 5 May 2016 19:02
Operator : FY/SY
Sample : H2834-07DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 17 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4123DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.298	3	7	30	rVB	6453293	15457889	100.00%	27.390%
2	1.554	30	33	37	rVV	846310	1123685	7.27%	1.991%
3	1.613	37	39	45	rVB	51494	79860	0.52%	0.142%
4	1.712	45	49	60	rVB	286601	601550	3.89%	1.066%
5	1.919	67	70	71	rBV2	16119	22001	0.14%	0.039%
6	2.086	84	87	98	rVB	92411	209149	1.35%	0.371%
7	2.548	133	134	135	rBV	9745	7697	0.05%	0.014%
8	2.716	149	151	152	rVB	8906	8955	0.06%	0.016%
9	2.745	152	154	156	rVB2	5247	7332	0.05%	0.013%
10	2.785	156	158	159	rBV2	6154	6740	0.04%	0.012%
11	2.932	168	173	190	rBV	714079	1694978	10.97%	3.003%
12	3.208	199	201	204	rVB4	9476	15761	0.10%	0.028%
13	3.602	237	241	249	rBV	39876	119872	0.78%	0.212%
14	3.759	254	257	258	rBV3	4847	7742	0.05%	0.014%
15	3.877	263	269	273	rBV3	22037	81620	0.53%	0.145%
16	4.261	304	308	309	rBV4	3265	5041	0.03%	0.009%
17	4.438	324	326	328	rBV3	4347	8543	0.06%	0.015%
18	4.527	333	335	337	rVB3	6177	6147	0.04%	0.011%
19	4.596	339	342	344	rVB3	3517	6606	0.04%	0.012%
20	4.625	344	345	348	rBV3	4133	6690	0.04%	0.012%
21	4.891	370	372	374	rVB3	3754	5368	0.03%	0.010%
22	5.098	390	393	395	rBV4	2321	5187	0.03%	0.009%
23	5.166	395	400	401	rVB4	2720	5605	0.04%	0.010%
24	5.688	444	453	471	rBV	388320	1566308	10.13%	2.775%
25	5.954	479	480	484	rVB4	4031	6801	0.04%	0.012%
26	6.032	487	488	492	rVB4	5652	9372	0.06%	0.017%
27	6.101	492	495	497	rBV4	3664	6982	0.05%	0.012%
28	6.180	501	503	504	rBV2	4855	6547	0.04%	0.012%
29	6.279	511	513	517	rVB5	5310	8752	0.06%	0.016%
30	6.387	517	524	539	rBV	740964	2489783	16.11%	4.412%
31	6.653	546	551	555	rBV4	20244	52864	0.34%	0.094%
32	6.918	574	578	579	rVB4	4249	6827	0.04%	0.012%
33	7.184	597	605	608	rBV	1269322	3431474	22.20%	6.080%
34	7.243	608	611	620	rVB	470131	1164772	7.54%	2.064%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049259.D
Acq On : 5 May 2016 19:02
Operator : FY/SY
Sample : H2834-07DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 17 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4123DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.509	633	638	643	rVV2	36879	86192	0.56%	0.153%
36	7.765	662	664	666	rVB3	3174	4988	0.03%	0.009%
37	7.942	676	682	691	rBV	1471539	3238707	20.95%	5.739%
38	8.227	703	711	714	rBV4	40814	111000	0.72%	0.197%
39	8.444	727	733	740	rVV	1053295	2286803	14.79%	4.052%
40	8.532	740	742	743	rVV2	11381	18342	0.12%	0.033%
41	8.601	747	749	750	rVV2	4287	6830	0.04%	0.012%
42	8.650	753	754	757	rVV3	3443	5739	0.04%	0.010%
43	8.749	762	764	767	rVV4	4274	6073	0.04%	0.011%
44	8.818	767	771	774	rVB5	4927	11328	0.07%	0.020%
45	8.877	774	777	778	rBV2	2796	5121	0.03%	0.009%
46	8.906	778	780	784	rVB4	5777	12320	0.08%	0.022%
47	8.985	784	788	794	rVB3	20164	41838	0.27%	0.074%
48	9.064	794	796	800	rVB5	4174	8858	0.06%	0.016%
49	9.241	810	814	815	rBV4	6254	8198	0.05%	0.015%
50	9.290	817	819	823	rVB5	3908	8933	0.06%	0.016%
51	9.369	823	827	837	rBV	650695	1165208	7.54%	2.065%
52	9.585	848	849	853	rVB3	3370	5623	0.04%	0.010%
53	9.704	856	861	867	rBV	1937945	3519359	22.77%	6.236%
54	9.782	867	869	875	rVV2	53035	115243	0.75%	0.204%
55	9.871	875	878	881	rVV3	16374	30861	0.20%	0.055%
56	9.920	881	883	886	rVV3	3383	6983	0.05%	0.012%
57	10.019	889	893	902	rVV	362765	647534	4.19%	1.147%
58	10.156	903	907	910	rVV5	16846	45681	0.30%	0.081%
59	10.225	910	914	920	rVV	93417	216715	1.40%	0.384%
60	10.324	920	924	931	rVV	2248467	4194828	27.14%	7.433%
61	10.432	931	935	950	rVV	1894963	3286239	21.26%	5.823%
62	10.599	950	952	955	rVV4	8557	17773	0.11%	0.031%
63	10.658	955	958	959	rVB3	7059	11828	0.08%	0.021%
64	10.688	959	961	963	rBV3	6117	7176	0.05%	0.013%
65	10.835	973	976	978	rBV4	3151	6516	0.04%	0.012%
66	10.914	981	984	988	rVB6	2818	6591	0.04%	0.012%
67	11.131	1003	1006	1009	rVB5	4981	9284	0.06%	0.016%
68	11.219	1011	1015	1025	rBV	1727945	3148789	20.37%	5.579%
69	11.347	1025	1028	1032	rVB6	10771	24892	0.16%	0.044%
70	11.475	1036	1041	1044	rBV4	12763	22739	0.15%	0.040%
71	11.652	1056	1059	1063	rVB5	3490	6184	0.04%	0.011%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049259.D
Acq On : 5 May 2016 19:02
Operator : FY/SY
Sample : H2834-07DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 17 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4123DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.711	1063	1065	1069	rBV4	3556	7506	0.05%	0.013%
73	11.859	1077	1080	1085	rVB5	8497	17360	0.11%	0.031%
74	11.977	1087	1092	1096	rVB7	3361	9230	0.06%	0.016%
75	12.046	1096	1099	1103	rVB5	3158	8169	0.05%	0.014%
76	12.115	1103	1106	1108	rBV4	3877	7413	0.05%	0.013%
77	12.164	1108	1111	1112	rBV3	4551	6252	0.04%	0.011%
78	12.282	1118	1123	1126	rBV6	5452	15166	0.10%	0.027%
79	12.410	1130	1136	1138	rBV2	75491	152497	0.99%	0.270%
80	12.469	1138	1142	1148	rVB	439386	777730	5.03%	1.378%
81	12.597	1151	1155	1158	rVB5	4088	7461	0.05%	0.013%
82	12.656	1158	1161	1163	rBV4	3896	6035	0.04%	0.011%
83	12.705	1165	1166	1168	rVB2	5601	6446	0.04%	0.011%
84	12.755	1168	1171	1173	rBV4	10815	19662	0.13%	0.035%
85	12.823	1175	1178	1181	rBV5	2212	5221	0.03%	0.009%
86	13.050	1194	1201	1202	rBV6	5891	16897	0.11%	0.030%
87	13.099	1202	1206	1211	rBV8	6372	17074	0.11%	0.030%
88	13.158	1211	1212	1215	rBV3	3322	5307	0.03%	0.009%
89	13.266	1220	1223	1224	rBV3	5753	7129	0.05%	0.013%
90	13.355	1230	1232	1234	rVB3	4783	7128	0.05%	0.013%
91	13.434	1236	1240	1247	rBV	1491187	2463425	15.94%	4.365%
92	13.758	1269	1273	1279	rBV	1143678	2019673	13.07%	3.579%
93	14.034	1297	1301	1307	rVB2	53535	92674	0.60%	0.164%
94	14.103	1307	1308	1310	rVB2	5813	5463	0.04%	0.010%
95	14.152	1310	1313	1316	rBV5	4653	13045	0.08%	0.023%
96	14.497	1346	1348	1350	rBV3	9401	13296	0.09%	0.024%
97	14.556	1350	1354	1355	rBV4	8223	14346	0.09%	0.025%
98	14.644	1361	1363	1365	rBV3	6886	10418	0.07%	0.018%
99	15.569	1455	1457	1458	rBV2	10035	11370	0.07%	0.020%
100	15.609	1458	1461	1465	rVV	45290	91133	0.59%	0.161%

Sum of corrected areas: 56436342

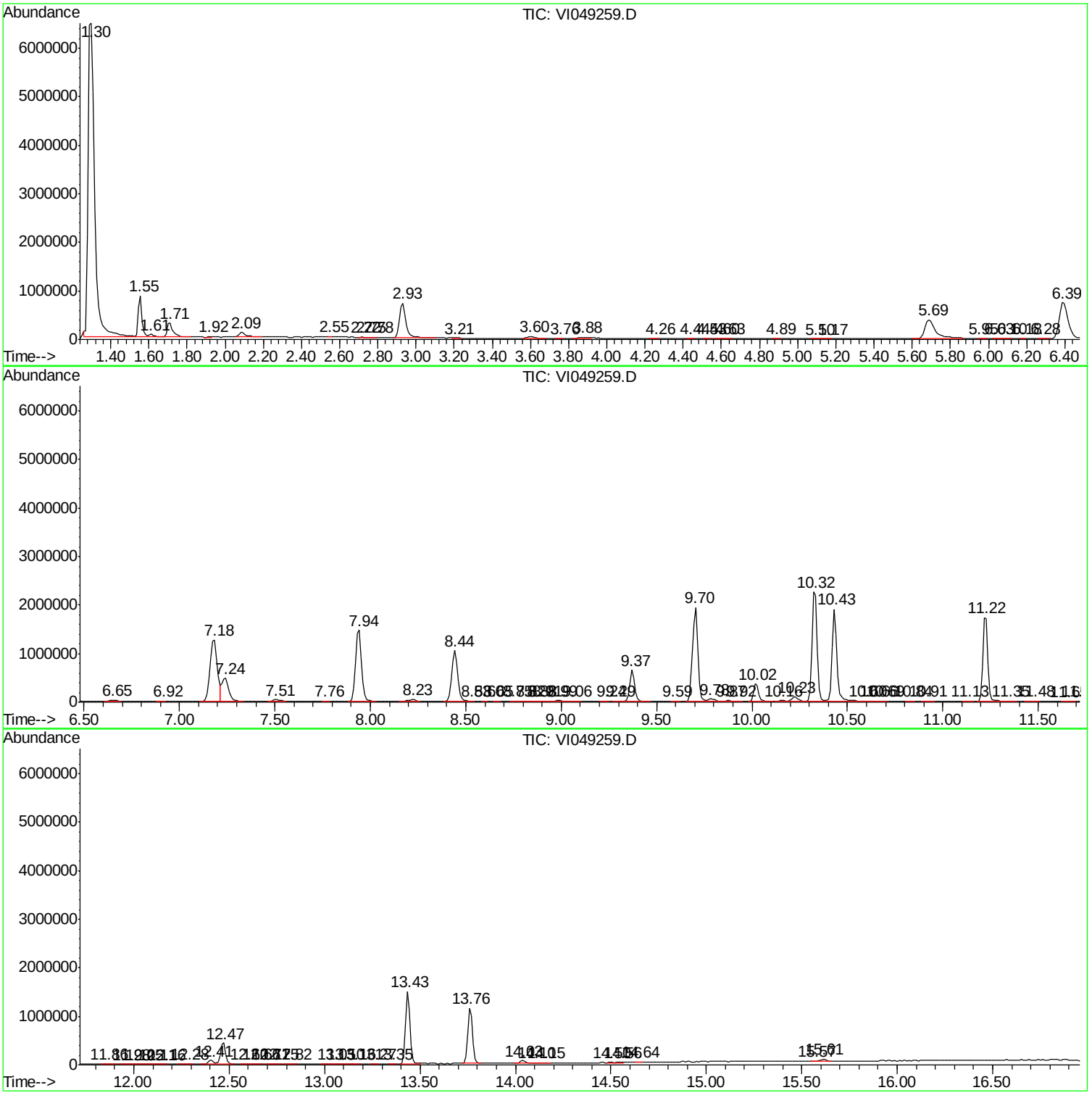
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049259.D
Acq On : 5 May 2016 19:02
Operator : FY/SY
Sample : H2834-07DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 17 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4123DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049259.D
Acq On : 5 May 2016 19:02
Operator : FY/SY
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Misc : 25mL/MSVOA_I/WATER
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Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

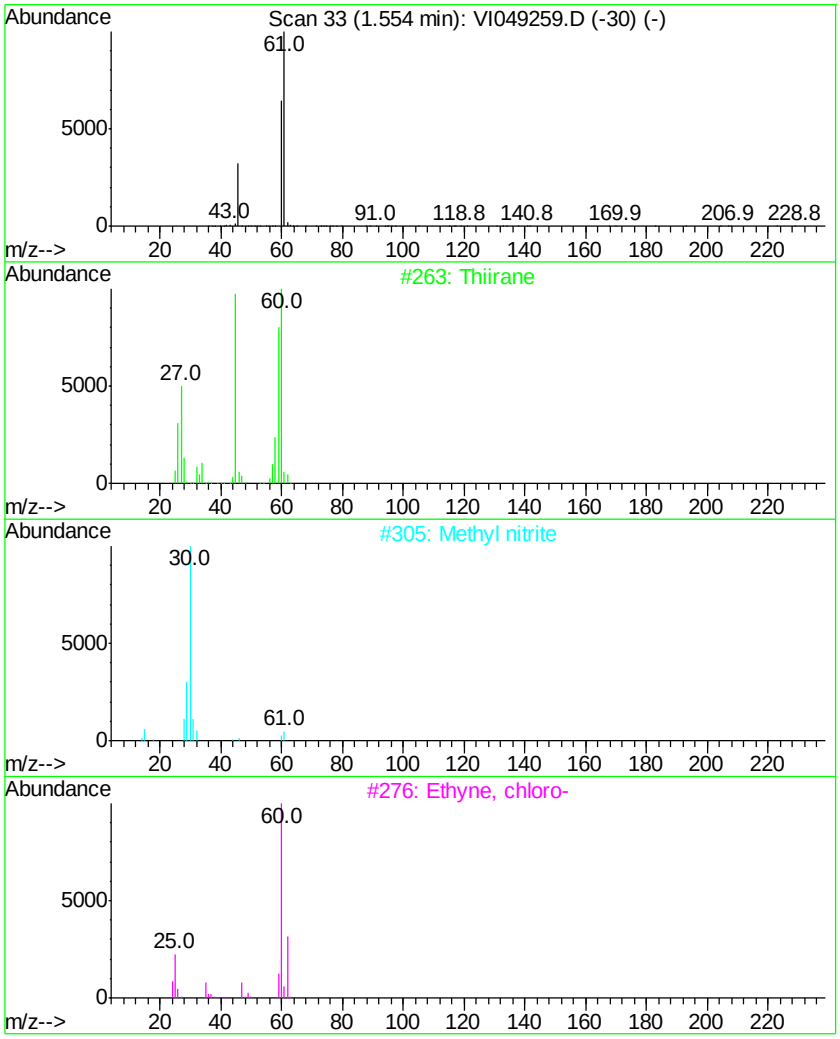
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

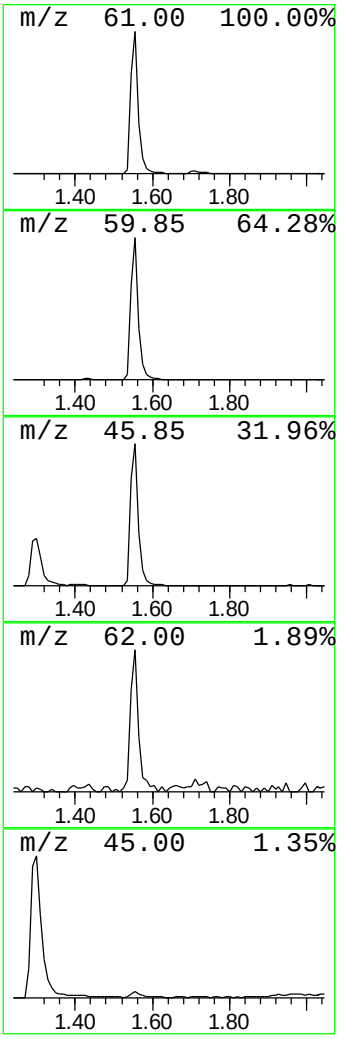
****

Peak Number 2 unknown-01 Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.55	1.73 ug/L	1123690	1,4-Difluorobenzene	7.94

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Thiirane	60	C2H4S	000420-12-2	5
2	Methyl nitrite	61	CH3NO2	000624-91-9	5
3	Ethyne, chloro-	60	C2HCl	000593-63-5	4
4	Cyanogen chloride	61	CClN	000506-77-4	4
5	Cyanogen chloride	61	CClN	000506-77-4	4





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049259.D
Acq On : 5 May 2016 19:02
Operator : FY/SY
Sample : H2834-07DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 17 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4123DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
unknown-01	1.55	1.7	ug/L	1123690	1	7.94	3238710	5.0

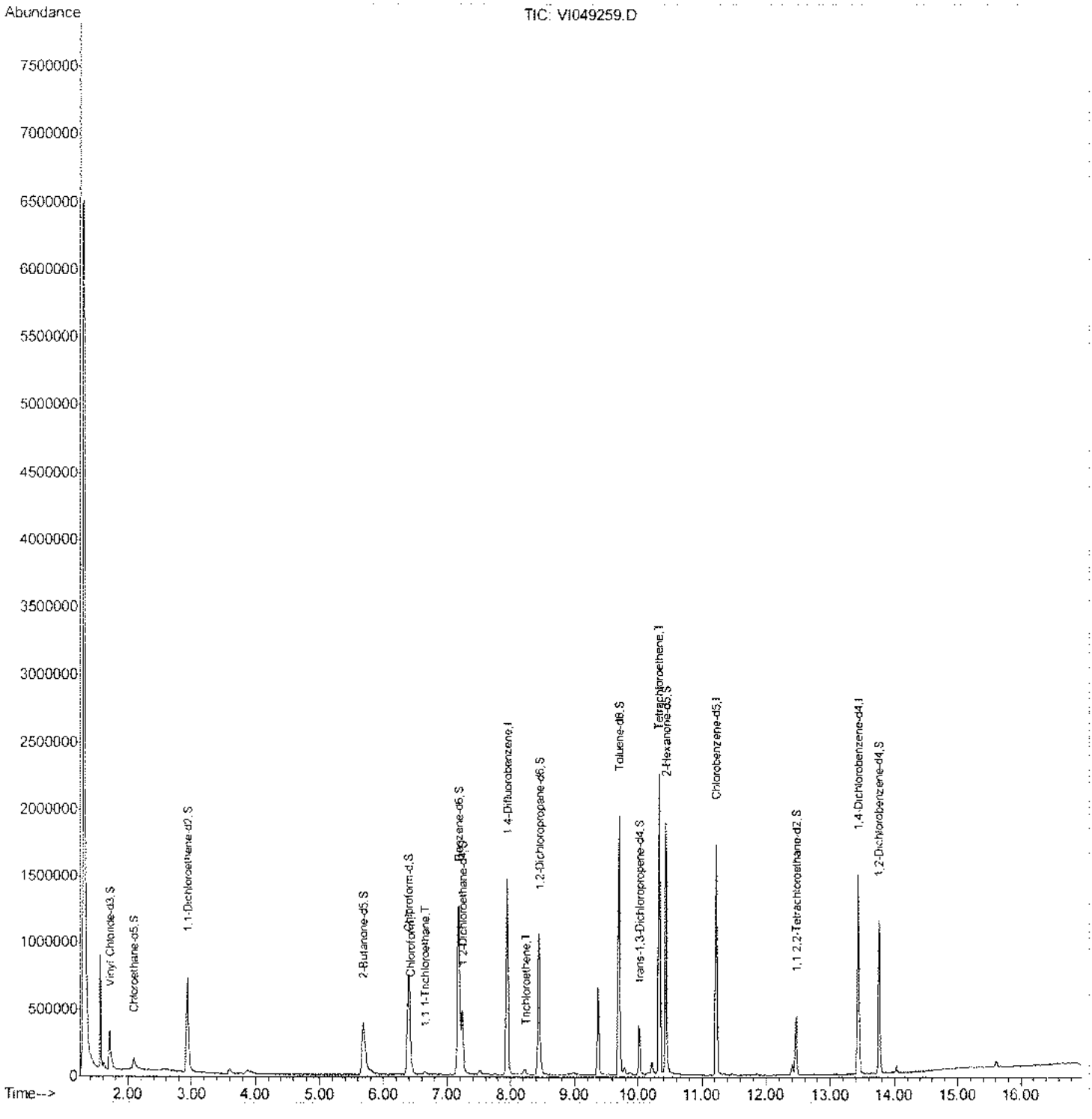
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049259.D
Acq On : 5 May 2016 19:02
Operator : FY/SY
Sample : H2834-07DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 06 05:41:22 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4123DL

Manual Integrations APPROVED
feifei
5/6/2016 11:44:16 AM



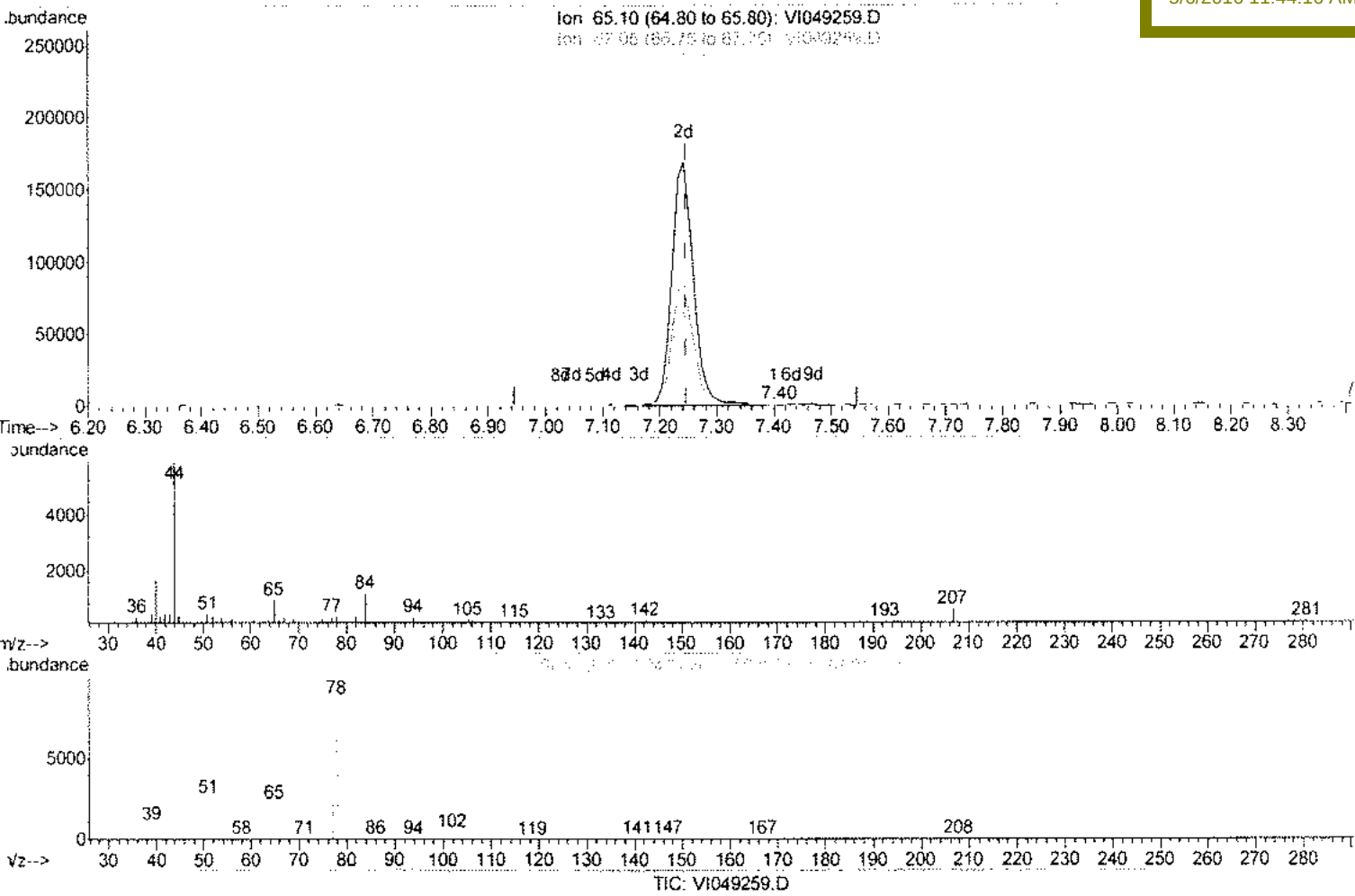
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049259.D
Acq On : 5 May 2016 19:02
Operator : FY/SY
Sample : H2834-07DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 06 05:22:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4123DL

Manual Integrations APPROVED
feifei
5/6/2016 11:44:16 AM



(26) 1,2-Dichloroethane-d4 (S)

7.401min (+0.154) 0.01ug/L

response 976

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	37.81
51.05	123.20	103.59
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
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Instrument : MSVOA_I
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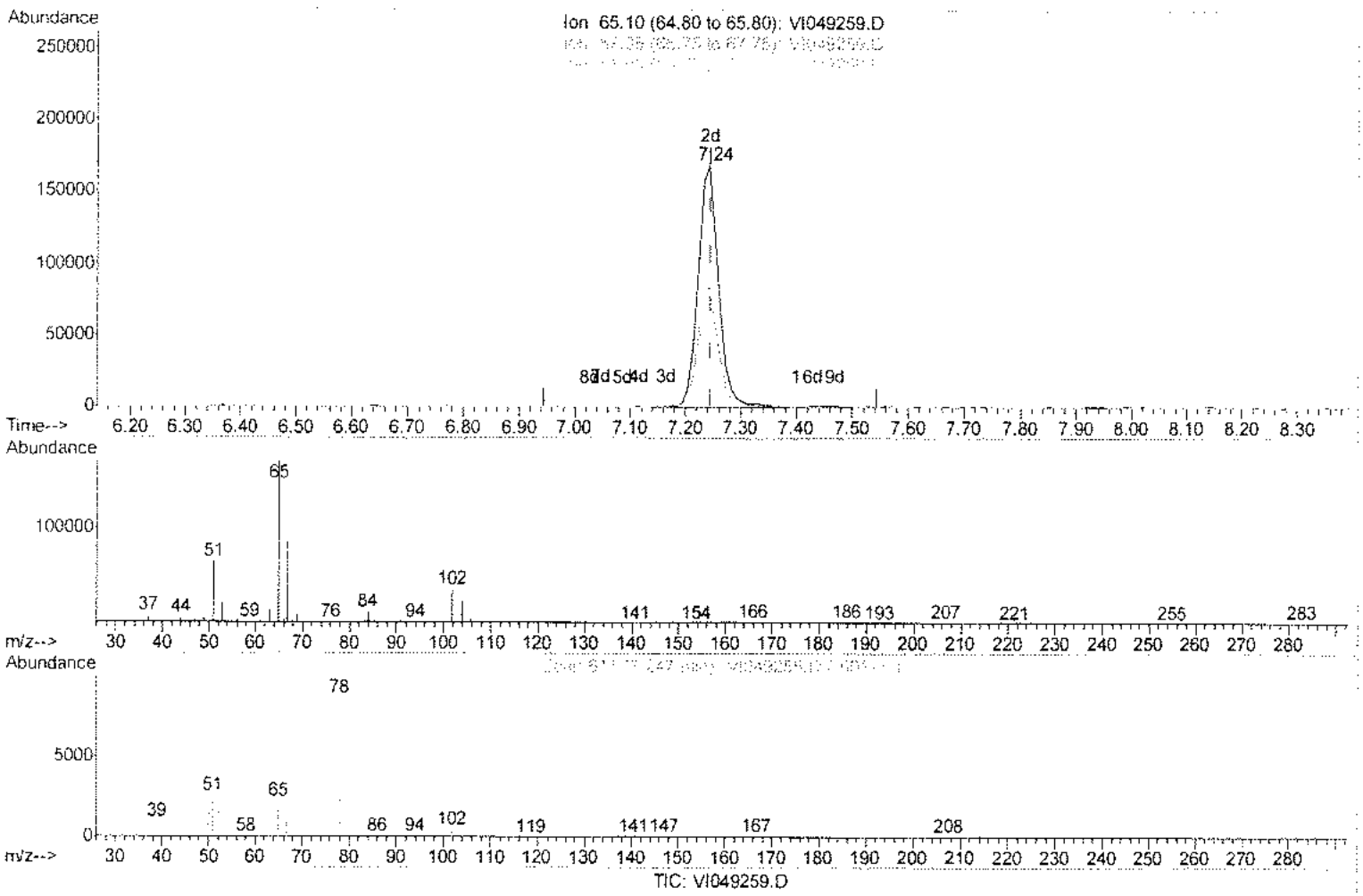
Manual Integrations APPROVED
feifei
5/6/2016 11:44:16 AM



TIC: VI049259.D

(26) 1,2-Dichloroethane-d4 (S)

7.243min (-0.003) 5.11ug/L m

M.D 05/09/16

response 435369

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.08#
51.05	123.20	0.23#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049259.D
Acq On : 5 May 2016 19:02
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Misc : 25mL/MSVOA_I/WATER
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QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4123DL

Manual Integrations APPROVED
feifei
5/6/2016 11:44:16 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1328744	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	898593	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	339174	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	378653	4.63	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 92.60%			
7) Chloroethane-d5	2.09	69	99787	2.20	ug/L	-0.02
Spiked Amount 5.000	Range 65 - 130		Recovery = 44.00%#			
11) 1,1-Dichloroethene-d2	2.93	63	598673	3.11	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 62.20%			
20) 2-Butanone-d5	5.69	46	927020	52.34	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 104.68%			
24) Chloroform-d	6.39	84	936609	4.50	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.00%			
26) 1,2-Dichloroethane-d4	7.24	65	435369m	5.11	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.20%			
32) Benzene-d6	7.18	84	1675919	4.79	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.80%			
36) 1,2-Dichloropropane-d6	8.44	67	477715	4.85	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.00%			
41) Toluene-d8	9.70	98	1203499	4.66	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.20%			
43) trans-1,3-Dichloropropene-	10.02	79	180862	4.66	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 93.20%			
46) 2-Hexanone-d5	10.43	63	627352	51.29	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 102.58%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	204879	4.58	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	266821	4.49	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 89.80%			
Target Compounds						Qvalue
25) Chloroform	6.43	83	106918	0.50	ug/L	96
29) 1,1,1-Trichloroethane	6.66	97	18243	0.11	ug/L	93
34) Trichloroethene	8.23	95	15519	0.15	ug/L	90
47) Tetrachloroethene	10.33	164	491225	7.00	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

M.D 05/09/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4124

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049240.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.13	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.9	
71-55-6	1,1,1-Trichloroethane	0.20	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.26	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4124

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Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049240.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.22	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	13	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4124

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049240.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4124

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049240.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/04/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

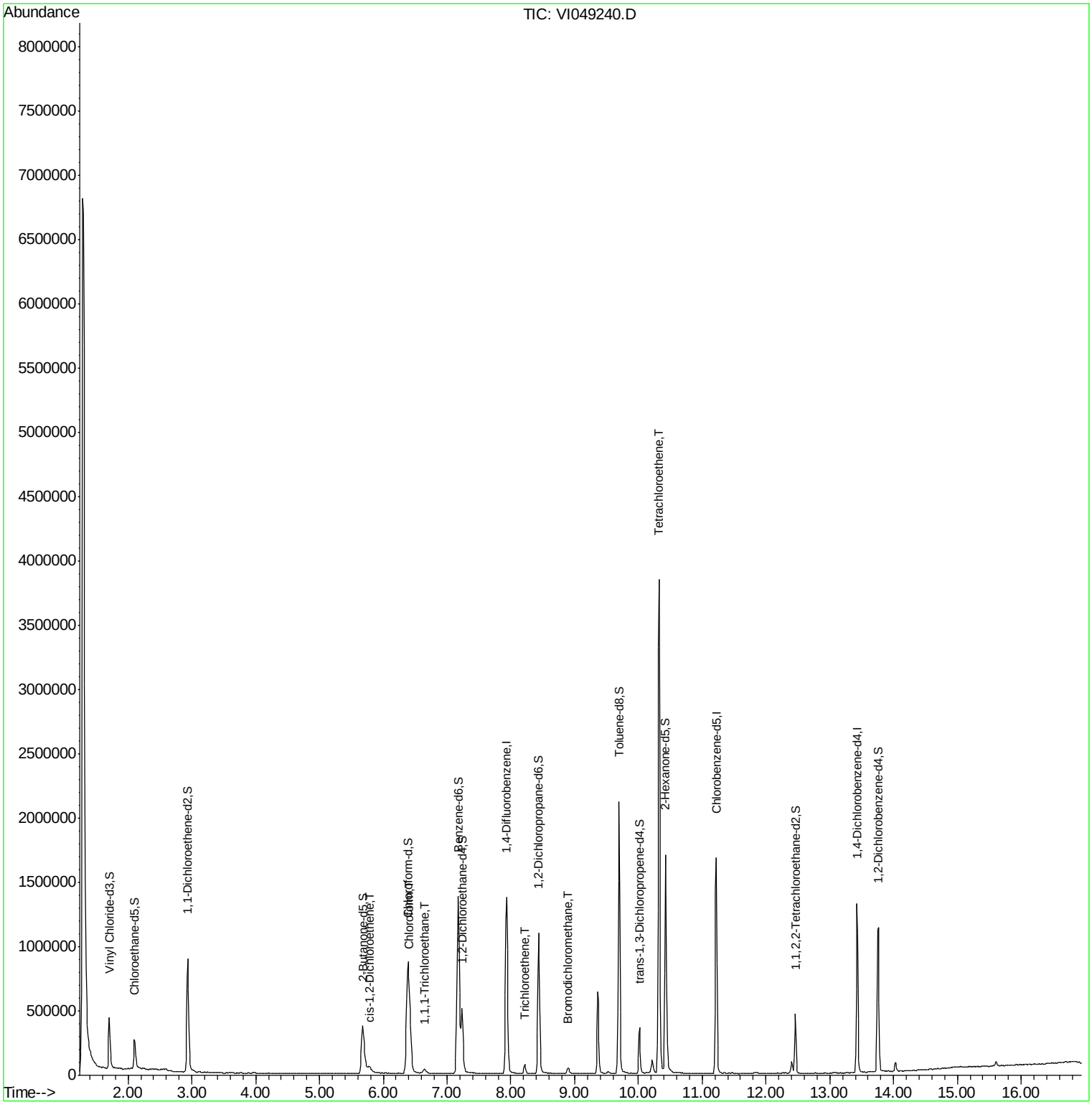
EPA-designated Registry Number.

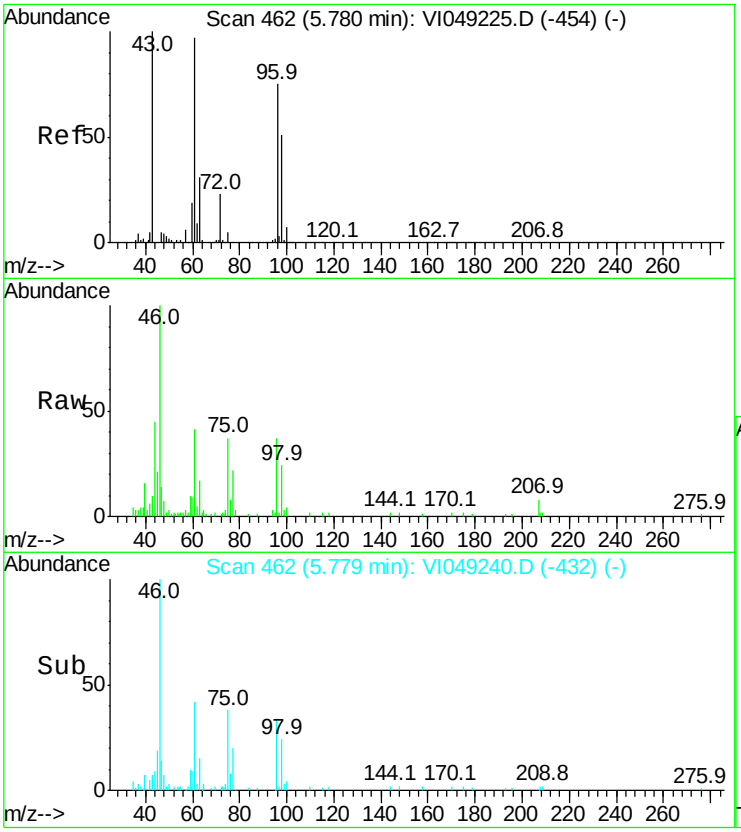
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049240.D
Acq On : 4 May 2016 22:37
Operator : FY/SY
Sample : H2834-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4124

Quant Time: May 05 06:50:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration



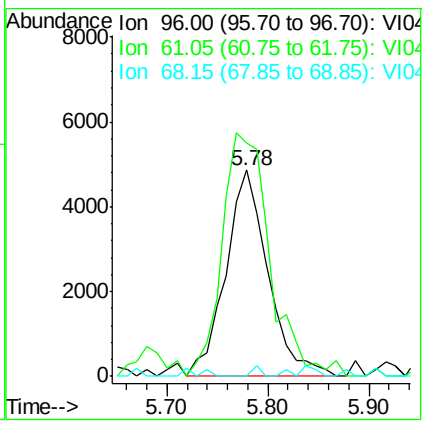


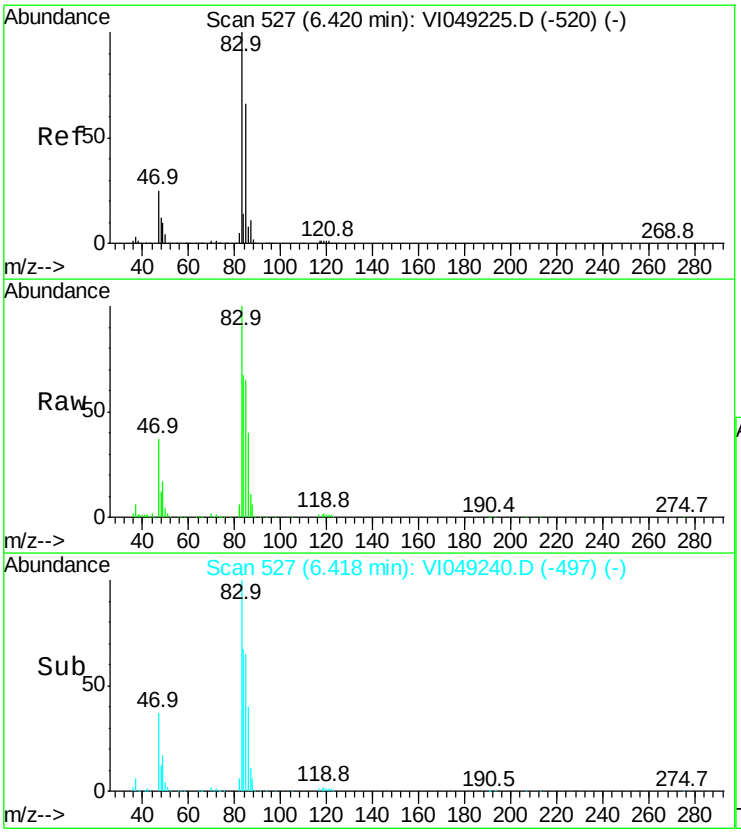
#22
cis-1,2-Dichloroethene
Concen: 0.13 ug/L
RT: 5.78 min Scan# 462
Delta R.T. -0.00 min
Lab File: VI049240.D
Acq: 4 May 2016 22:37

Instrument :
MSVOA_I
ClientSampleId :
H4124

Tgt Ion: 96 Resp: 14154

Ion	Ratio	Lower	Upper
96	100		
61	113.4	82.1	152.5
68	0.0	0.0	0.0

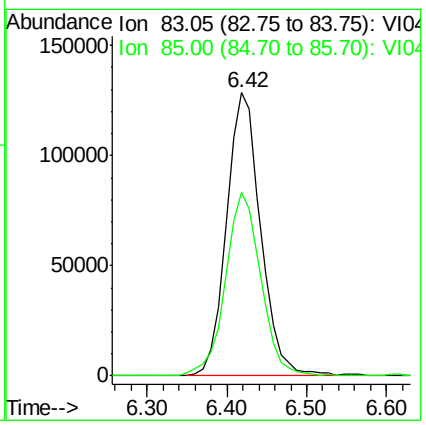


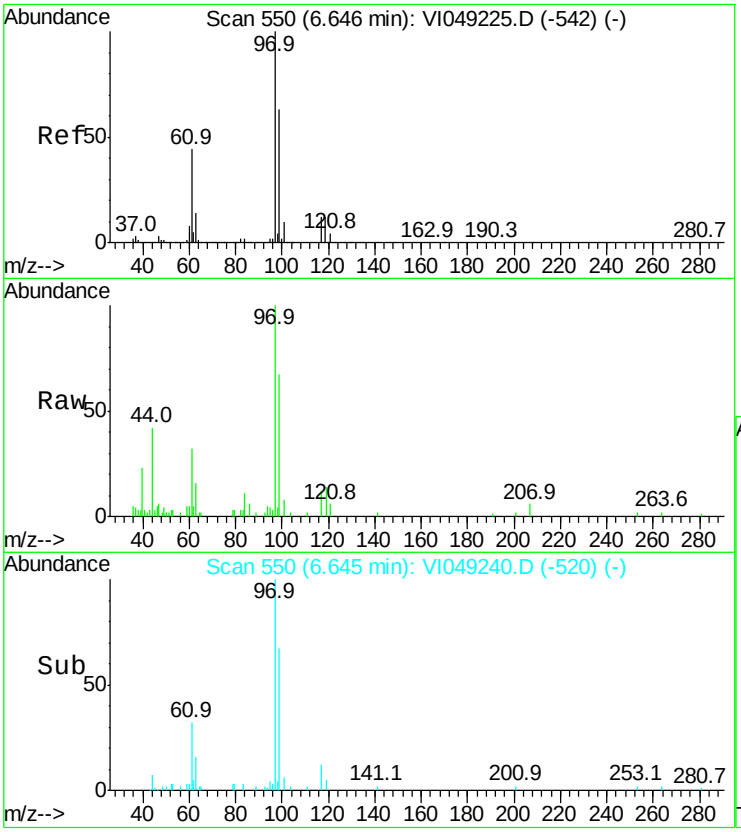


#25
Chloroform
Concen: 1.94 ug/L
RT: 6.42 min Scan# 527
Delta R.T. -0.00 min
Lab File: VI049240.D
Acq: 4 May 2016 22:37

Tgt Ion: 83 Resp: 382607

Ion	Ratio	Lower	Upper
83	100		
85	64.7	47.3	87.8



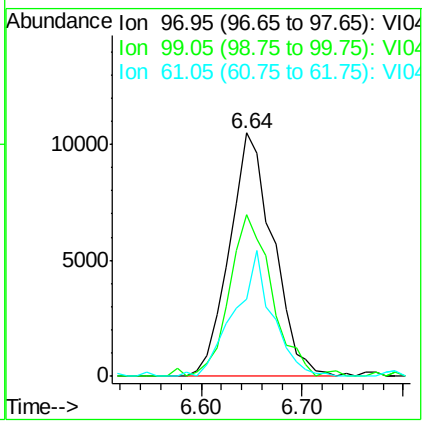


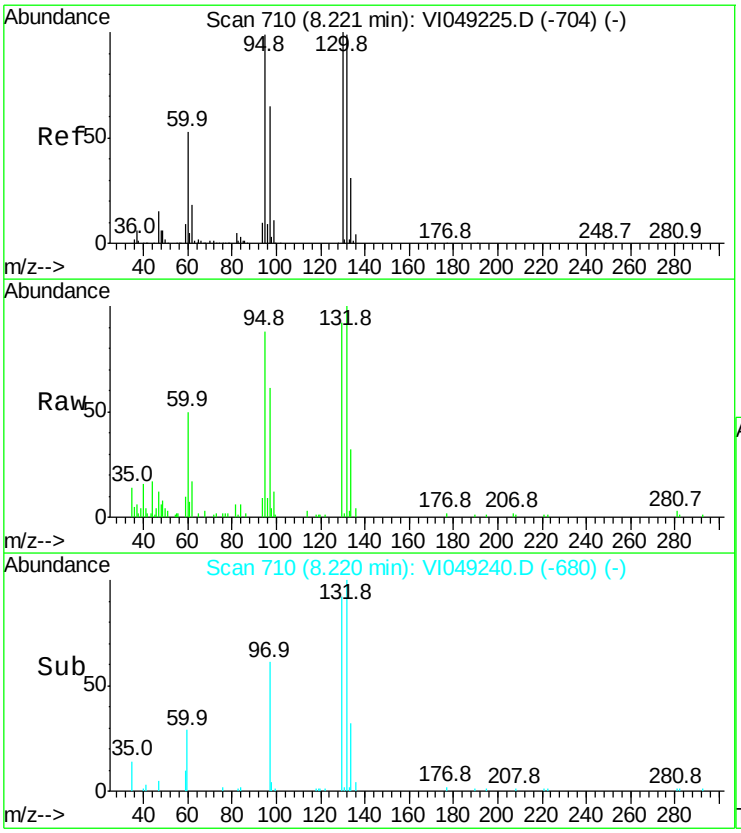
#29
1,1,1-Trichloroethane
Concen: 0.20 ug/L
RT: 6.64 min Scan# 550
Delta R.T. -0.00 min
Lab File: VI049240.D
Acq: 4 May 2016 22:37

Instrument :
MSVOA_I
ClientSampleId :
H4124

Tgt Ion: 97 Resp: 31555

Ion	Ratio	Lower	Upper
97	100		
99	64.0	51.1	76.7
61	44.6	33.3	49.9

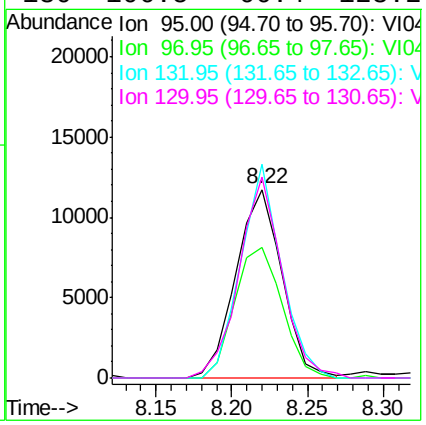


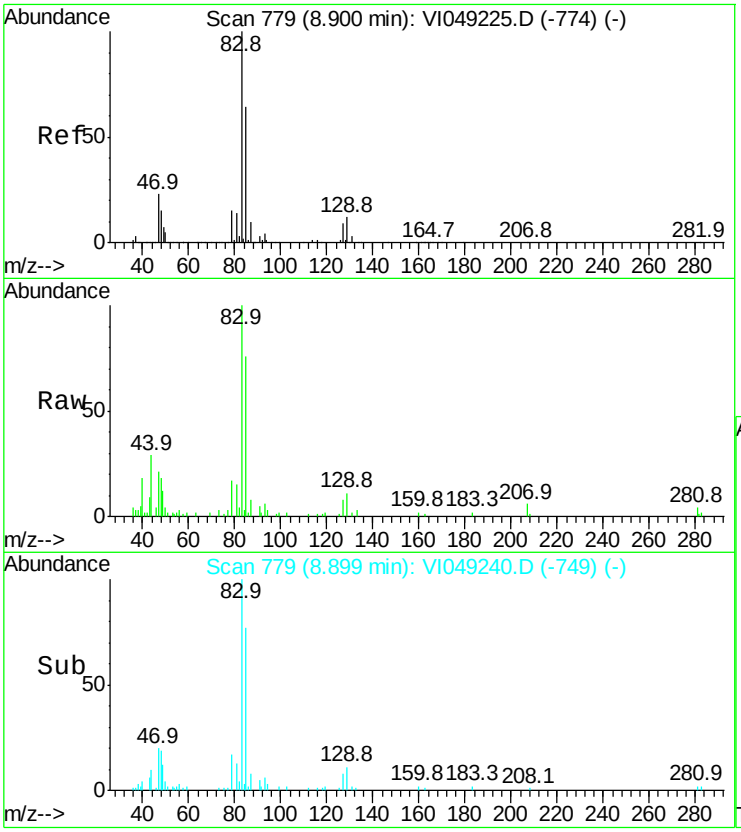


#34
Trichloroethene
Concen: 0.26 ug/L
RT: 8.22 min Scan# 710
Delta R.T. -0.00 min
Lab File: VI049240.D
Acq: 4 May 2016 22:37

Tgt Ion: 95 Resp: 24816

Ion	Ratio	Lower	Upper
95	100		
97	69.6	45.8	85.2
132	113.4	63.9	118.7
130	106.5	66.4	123.2



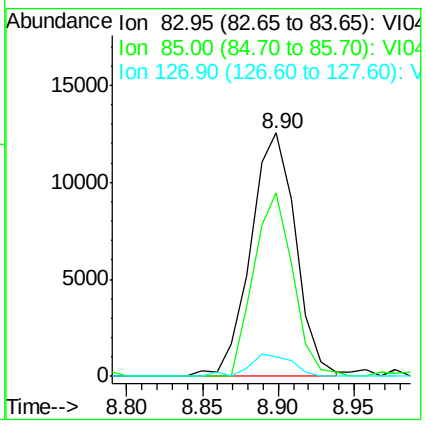


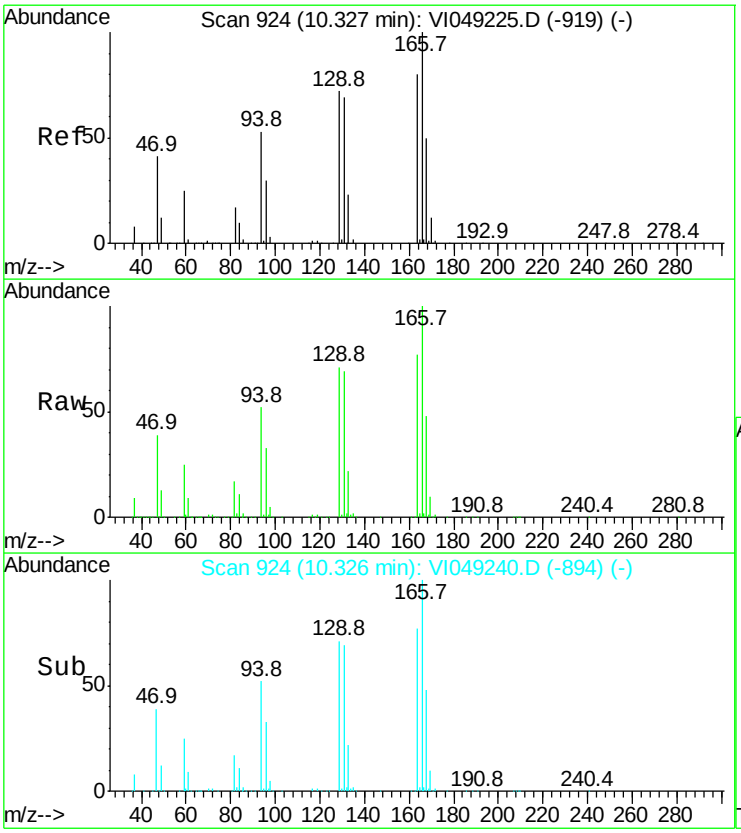
#38
Bromodichloromethane
Concen: 0.22 ug/L
RT: 8.90 min Scan# 779
Delta R.T. -0.00 min
Lab File: VI049240.D
Acq: 4 May 2016 22:37

Instrument : MSVOA_I
ClientSampleId : H4124

Tgt Ion: 83 Resp: 26005

Ion	Ratio	Lower	Upper
83	100		
85	75.6	44.7	83.1
127	8.3	6.6	9.8

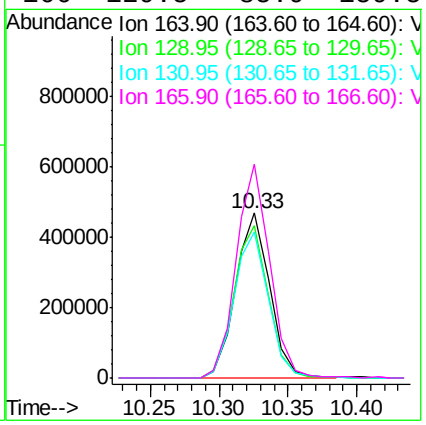




#47
Tetrachloroethene
Concen: 12.65 ug/L
RT: 10.33 min Scan# 924
Delta R.T. -0.00 min
Lab File: VI049240.D
Acq: 4 May 2016 22:37

Tgt Ion:164 Resp: 806559

Ion	Ratio	Lower	Upper
164	100		
129	92.1	62.1	115.3
131	88.7	60.6	112.6
166	129.5	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049240.D
Acq On : 4 May 2016 22:37
Operator : FY/SY
Sample : H2834-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4124

Quant Time: May 05 06:50:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1223488	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	817280	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	299035	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	400312	5.31	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 106.20%			
7) Chloroethane-d5	2.10	69	238974	5.73	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 114.60%			
11) 1,1-Dichloroethene-d2	2.93	63	701306	3.95	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 79.00%			
20) 2-Butanone-d5	5.67	46	911457	55.89	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 111.78%			
24) Chloroform-d	6.39	84	1011861	5.28	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 105.60%			
26) 1,2-Dichloroethane-d4	7.24	65	445625	5.68	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 113.60%			
32) Benzene-d6	7.18	84	1774862	5.57	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 111.40%			
36) 1,2-Dichloropropane-d6	8.44	67	495325	5.53	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 110.60%			
41) Toluene-d8	9.70	98	1269091	5.40	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 108.00%			
43) trans-1,3-Dichloropropene-	10.02	79	179339	5.08	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 101.60%			
46) 2-Hexanone-d5	10.42	63	599363	53.87	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 107.74%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	206387	5.07	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 101.40%			
63) 1,2-Dichlorobenzene-d4	13.76	152	272368	5.19	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 103.80%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.78	96	14154	0.13	ug/L	96
25) Chloroform	6.42	83	382607	1.94	ug/L	97
29) 1,1,1-Trichloroethane	6.64	97	31555	0.20	ug/L	98
34) Trichloroethene	8.22	95	24816	0.26	ug/L	86
38) Bromodichloromethane	8.90	83	26005	0.22	ug/L	87
47) Tetrachloroethene	10.33	164	806559	12.65	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049240.D
Acq On : 4 May 2016 22:37
Operator : FY/SY
Sample : H2834-08
Misc : 25mL/MSVOA I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4124

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.291	3	6	36	rVB	6759418	19780749	100.00%	31.377%
2	1.704	45	48	58	rBV	396457	644478	3.26%	1.022%
3	2.098	85	88	99	rBV	228652	484400	2.45%	0.768%
4	2.816	159	161	166	rVB6	8232	20349	0.10%	0.032%
5	2.875	166	167	168	rBV	5163	5671	0.03%	0.009%
6	2.934	168	173	188	rVB	885710	2012468	10.17%	3.192%
7	3.092	188	189	191	rBV2	2742	4289	0.02%	0.007%
8	3.200	197	200	201	rBV3	6677	6839	0.03%	0.011%
9	3.328	211	213	216	rVB4	3678	5201	0.03%	0.008%
10	3.407	216	221	222	rVB5	2714	5236	0.03%	0.008%
11	3.594	237	240	242	rBV4	6180	11926	0.06%	0.019%
12	3.722	250	253	255	rVB3	5461	6988	0.04%	0.011%
13	3.761	255	257	258	rBV2	4634	6771	0.03%	0.011%
14	3.840	260	265	268	rVB6	2526	5329	0.03%	0.008%
15	3.879	268	269	272	rBV3	4095	5899	0.03%	0.009%
16	4.106	289	292	293	rVB3	3422	5336	0.03%	0.008%
17	4.135	293	295	296	rBV2	3153	4452	0.02%	0.007%
18	4.165	296	298	301	rVV4	4345	8516	0.04%	0.014%
19	4.283	306	310	312	rBV4	3471	5319	0.03%	0.008%
20	4.470	326	329	330	rVV3	3435	4703	0.02%	0.007%
21	4.499	330	332	336	rVB5	3885	9640	0.05%	0.015%
22	4.686	347	351	353	rBV5	3343	8850	0.04%	0.014%
23	4.726	353	355	359	rVV5	3654	7956	0.04%	0.013%
24	4.883	368	371	373	rBV3	3612	5861	0.03%	0.009%
25	4.962	376	379	383	rBV6	3192	7206	0.04%	0.011%
26	5.021	383	385	387	rVB2	3442	5073	0.03%	0.008%
27	5.523	433	436	437	rVB2	3900	4401	0.02%	0.007%
28	5.680	445	452	460	rBV	370669	1355158	6.85%	2.150%
29	6.044	487	489	492	rVB4	2812	5065	0.03%	0.008%
30	6.182	499	503	504	rBV4	4606	7394	0.04%	0.012%
31	6.389	516	524	538	rBV2	867670	3284561	16.60%	5.210%
32	6.586	542	544	545	rVV2	4622	5874	0.03%	0.009%
33	6.645	545	550	558	rVB4	32697	110350	0.56%	0.175%
34	6.792	562	565	570	rVB6	3218	8426	0.04%	0.013%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049240.D
Acq On : 4 May 2016 22:37
Operator : FY/SY
Sample : H2834-08
Misc : 25mL/MSVOA I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4124

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.871	570	573	574	rBV3	2761	5006	0.03%	0.008%
36	7.088	592	595	596	rVB2	3911	4811	0.02%	0.008%
37	7.176	596	604	608	rBV	1377020	3840164	19.41%	6.091%
38	7.235	608	610	618	rVB	501265	1031790	5.22%	1.637%
39	7.422	628	629	631	rVB2	4011	4402	0.02%	0.007%
40	7.786	665	666	668	rBV2	5277	5727	0.03%	0.009%
41	7.934	675	681	694	rBV	1371287	3008962	15.21%	4.773%
42	8.072	694	695	697	rVB2	4701	5105	0.03%	0.008%
43	8.121	697	700	704	rBV5	4070	11136	0.06%	0.018%
44	8.220	704	710	717	rBV3	75481	165084	0.83%	0.262%
45	8.308	717	719	722	rVB3	3441	5298	0.03%	0.008%
46	8.436	727	732	741	rBV	1090133	2343797	11.85%	3.718%
47	8.731	761	762	765	rBV3	2461	4458	0.02%	0.007%
48	8.771	765	766	769	rBV3	4262	5366	0.03%	0.009%
49	8.899	774	779	784	rBV	43384	99740	0.50%	0.158%
50	9.036	790	793	795	rVB4	2685	5077	0.03%	0.008%
51	9.105	799	800	803	rVB2	2747	4565	0.02%	0.007%
52	9.174	803	807	811	rBV4	3233	10466	0.05%	0.017%
53	9.361	821	826	833	rBV	640143	1177660	5.95%	1.868%
54	9.529	839	843	846	rBV3	15773	30196	0.15%	0.048%
55	9.696	855	860	867	rBV	2116005	3710831	18.76%	5.886%
56	10.021	888	893	900	rBV	357142	635715	3.21%	1.008%
57	10.109	900	902	904	rVV3	5253	10438	0.05%	0.017%
58	10.149	904	906	907	rVV	8124	12560	0.06%	0.020%
59	10.217	907	913	919	rVV	105000	247081	1.25%	0.392%
60	10.326	919	924	930	rVV	3840189	6909452	34.93%	10.960%
61	10.424	930	934	949	rVV	1702388	3264529	16.50%	5.178%
62	10.591	949	951	954	rVV3	7589	16603	0.08%	0.026%
63	10.631	954	955	956	rVV	6426	5511	0.03%	0.009%
64	10.680	959	960	964	rVB4	5802	8367	0.04%	0.013%
65	10.838	973	976	979	rVB4	4263	7331	0.04%	0.012%
66	10.887	979	981	984	rVB4	4091	6429	0.03%	0.010%
67	10.926	984	985	989	rBV4	2873	5412	0.03%	0.009%
68	10.985	989	991	995	rBV4	3315	8478	0.04%	0.013%
69	11.103	999	1003	1005	rBV5	3371	6945	0.04%	0.011%
70	11.221	1010	1015	1025	rBV	1677972	2862636	14.47%	4.541%
71	11.349	1025	1028	1033	rVB6	6822	17253	0.09%	0.027%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049240.D
Acq On : 4 May 2016 22:37
Operator : FY/SY
Sample : H2834-08
Misc : 25mL/MSVOA I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4124

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.418	1033	1035	1037	rVB3	5017	4396	0.02%	0.007%
73	11.467	1037	1040	1045	rVB6	8990	21690	0.11%	0.034%
74	11.536	1045	1047	1049	rBV2	5442	7113	0.04%	0.011%
75	11.605	1051	1054	1055	rBV3	4557	7264	0.04%	0.012%
76	11.763	1068	1070	1073	rBV4	3489	6637	0.03%	0.011%
77	11.812	1073	1075	1076	rBV2	6016	6820	0.03%	0.011%
78	11.841	1076	1078	1084	rVB6	10278	26396	0.13%	0.042%
79	12.107	1102	1105	1108	rBV5	2990	7136	0.04%	0.011%
80	12.235	1115	1118	1119	rBV3	3112	4711	0.02%	0.007%
81	12.402	1128	1135	1138	rBV2	93651	191383	0.97%	0.304%
82	12.461	1138	1141	1146	rVB	460215	769863	3.89%	1.221%
83	12.560	1148	1151	1154	rVB4	2964	6330	0.03%	0.010%
84	12.767	1170	1172	1174	rVB3	3921	5149	0.03%	0.008%
85	12.914	1184	1187	1188	rBV2	3880	5399	0.03%	0.009%
86	13.013	1193	1197	1198	rBV4	3414	5357	0.03%	0.008%
87	13.052	1198	1201	1205	rBV5	3763	6904	0.03%	0.011%
88	13.357	1227	1232	1235	rBV6	5849	17436	0.09%	0.028%
89	13.426	1235	1239	1249	rVV	1317231	2224370	11.25%	3.528%
90	13.544	1249	1251	1254	rBV3	3595	7730	0.04%	0.012%
91	13.642	1254	1261	1262	rBV5	7664	25602	0.13%	0.041%
92	13.761	1268	1273	1280	rBV	1120578	2063989	10.43%	3.274%
93	14.026	1295	1300	1306	rBV2	67326	144231	0.73%	0.229%
94	14.174	1313	1315	1317	rBV3	6145	8807	0.04%	0.014%
95	14.243	1320	1322	1323	rVB2	4559	5298	0.03%	0.008%
96	14.292	1323	1327	1328	rBV4	6063	15233	0.08%	0.024%
97	14.312	1328	1329	1332	rVB3	7740	8441	0.04%	0.013%
98	14.696	1366	1368	1370	rBV2	7987	6957	0.04%	0.011%
99	15.611	1458	1461	1466	rVB	29661	52579	0.27%	0.083%
100	15.749	1473	1475	1476	rBV2	10257	13320	0.07%	0.021%

Sum of corrected areas: 63041656

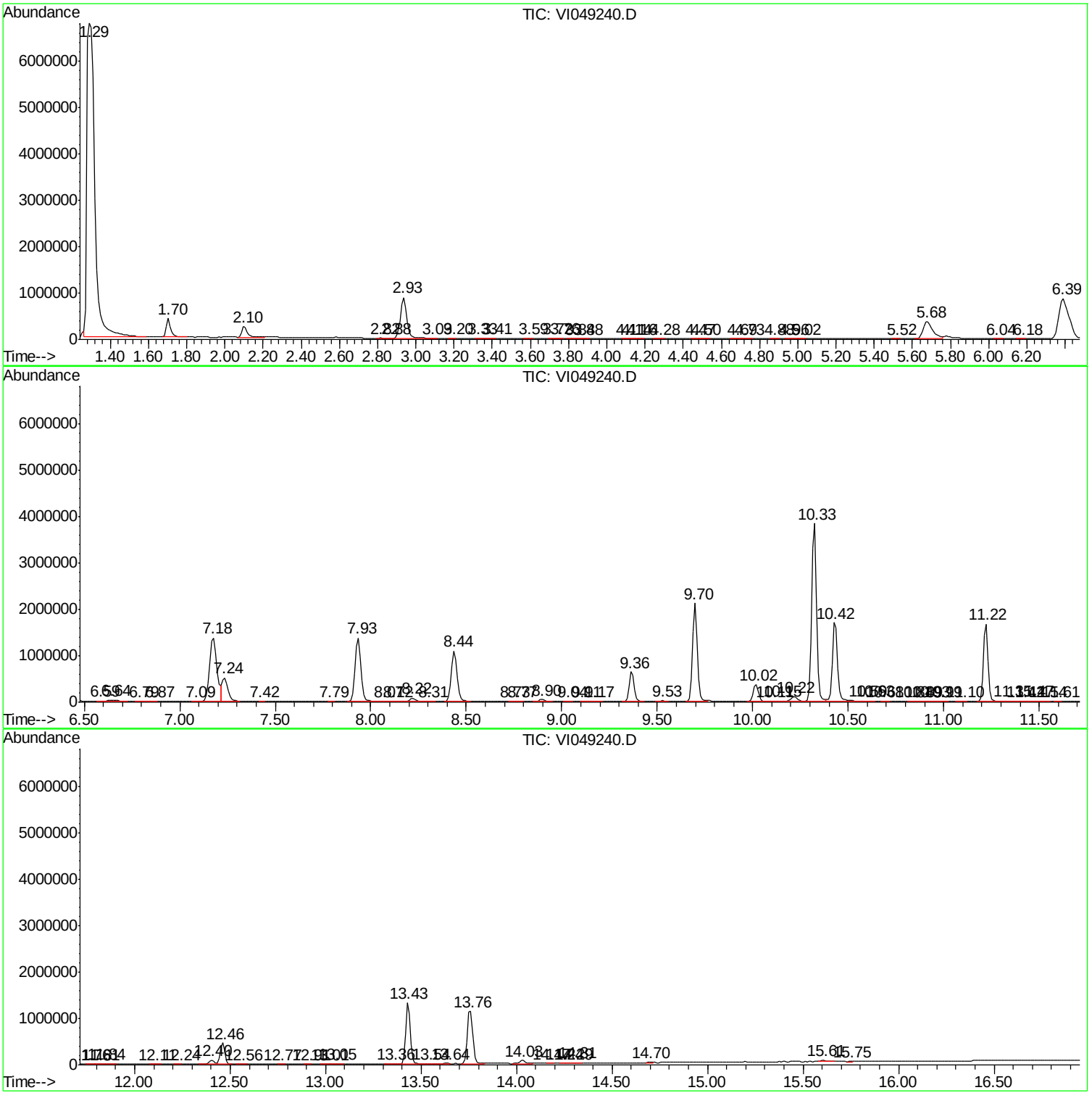
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049240.D
Acq On : 4 May 2016 22:37
Operator : FY/SY
Sample : H2834-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4124

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049240.D
Acq On : 4 May 2016 22:37
Operator : FY/SY
Sample : H2834-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4124

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049240.D
Acq On : 4 May 2016 22:37
Operator : FY/SY
Sample : H2834-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4124

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4124RE

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-08RE
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049251.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	3.9	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.13	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.9	
71-55-6	1,1,1-Trichloroethane	0.20	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.27	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4124RE

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-08RE
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049251.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.22	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	13	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4124RE

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-08RE
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049251.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4124RE

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-08RE
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049251.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	14.04	0.30	J
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

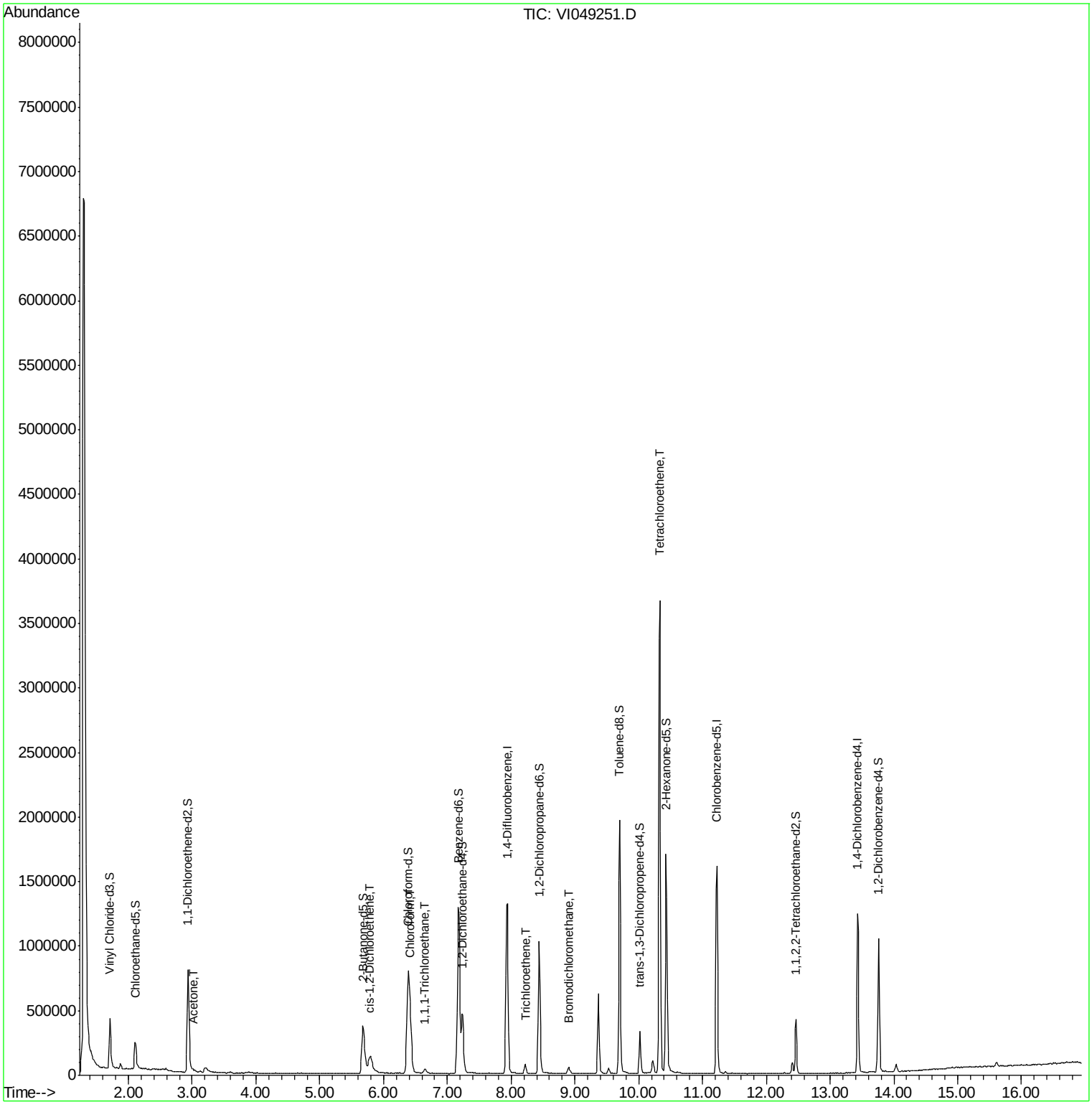
Quantitation Report (QT/LSC Reviewed)

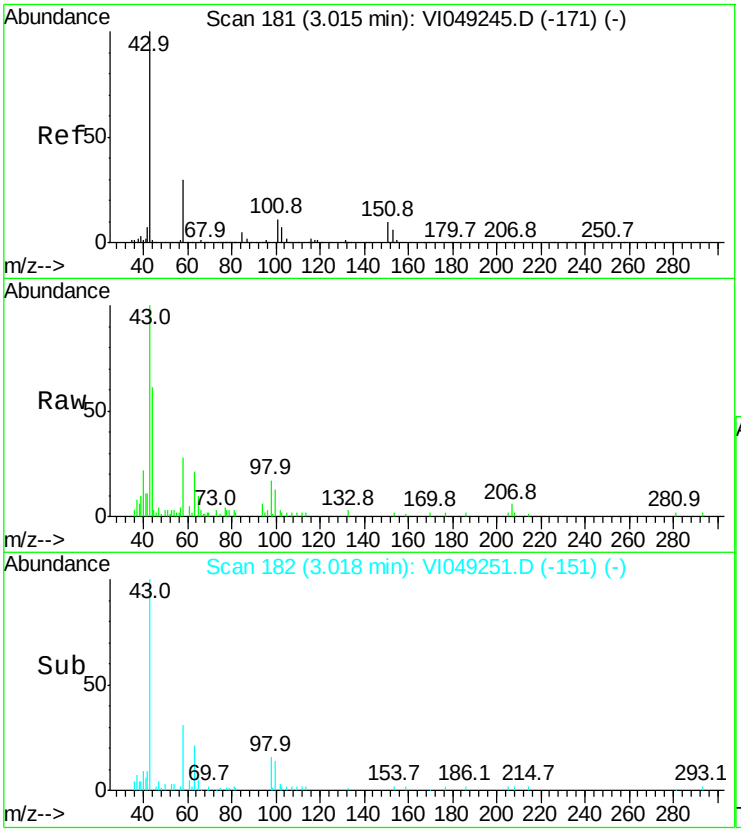
Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049251.D
Acq On : 5 May 2016 13:38
Operator : FY/SY
Sample : H2834-08RE
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 06 05:00:05 2016
Quant Method : W:\HPCHEM1\MSVOA I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4124RE

Manual Integrations APPROVED
feifei
5/6/2016 11:43:37 AM

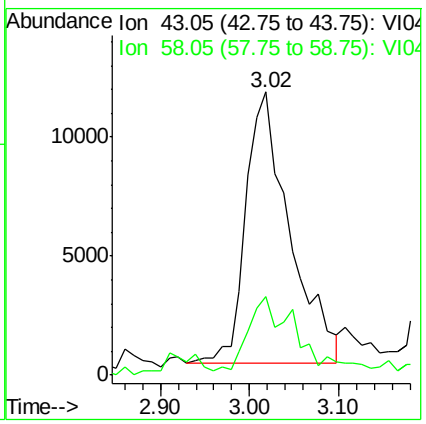




#13
Acetone
Concen: 3.85 ug/L
RT: 3.02 min Scan# 182
Delta R.T. 0.00 min
Lab File: VI049251.D
Acq: 5 May 2016 13:38

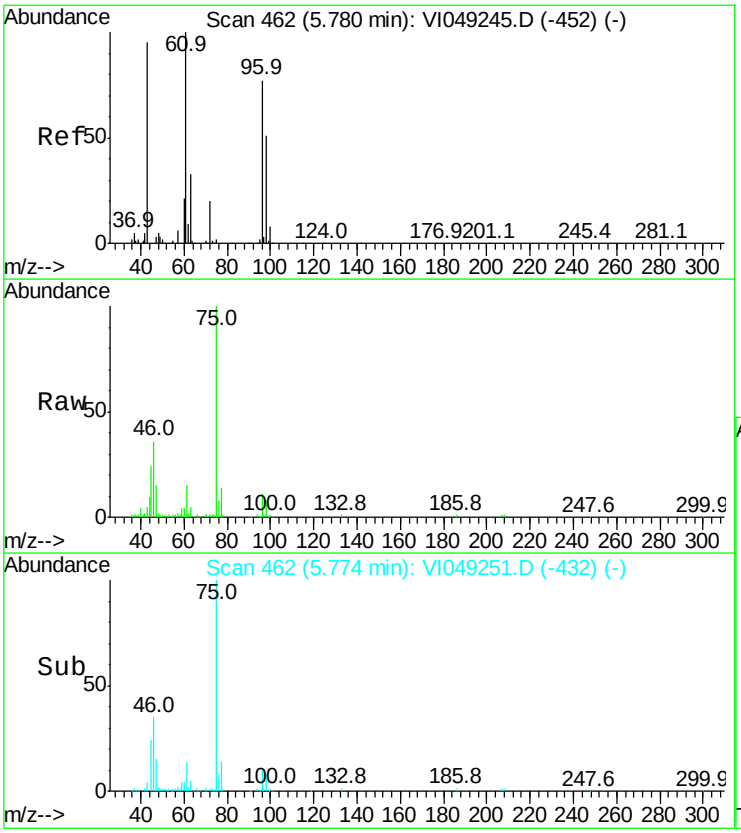
Tgt Ion: 43 Resp: 39090

Ion	Ratio	Lower	Upper
43	100		
58	15.6	0.0	62.0



Instrument :
MSVOA_I
ClientSampleId :
H4124RE

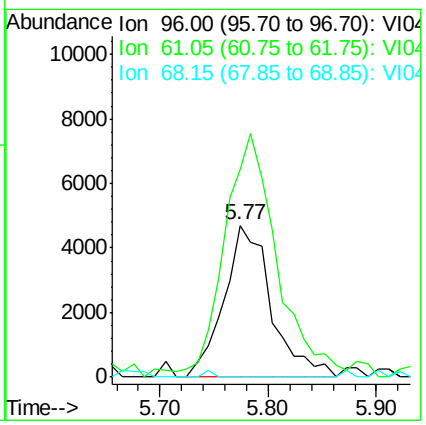
Manual Integrations APPROVED
feifei
5/6/2016 11:43:37 AM

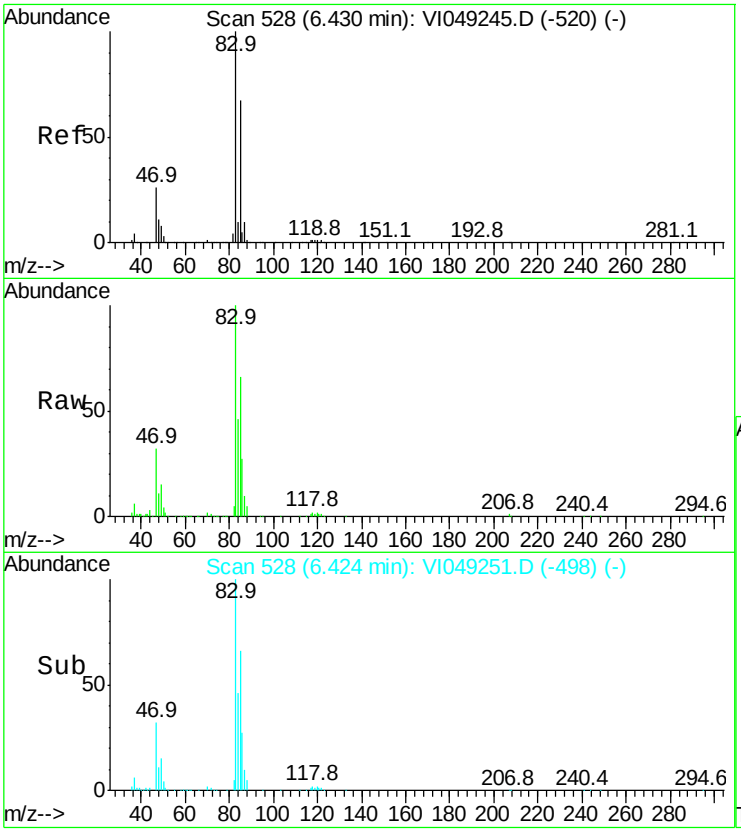


#22
cis-1,2-Dichloroethene
Concen: 0.13 ug/L
RT: 5.77 min Scan# 462
Delta R.T. -0.01 min
Lab File: VI049251.D
Acq: 5 May 2016 13:38

Tgt Ion: 96 Resp: 14311

Ion	Ratio	Lower	Upper
96	100		
61	136.4	82.1	152.5
68	0.0	0.0	0.0

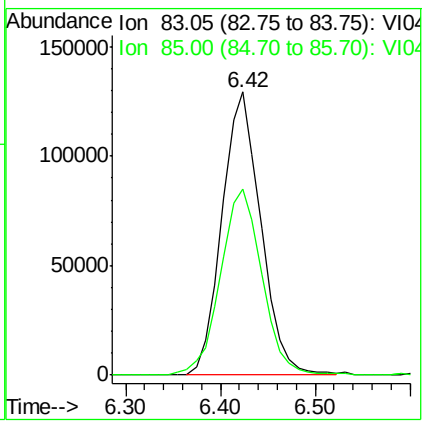




#25
Chloroform
Concen: 1.86 ug/L
RT: 6.42 min Scan# 528
Delta R.T. -0.01 min
Lab File: VI049251.D
Acq: 5 May 2016 13:38

Tgt Ion: 83 Resp: 367916

Ion	Ratio	Lower	Upper
83	100		
85	65.6	47.3	87.8



Instrument :
MSVOA_I
ClientSampleId :
H4124RE

Manual Integrations APPROVED
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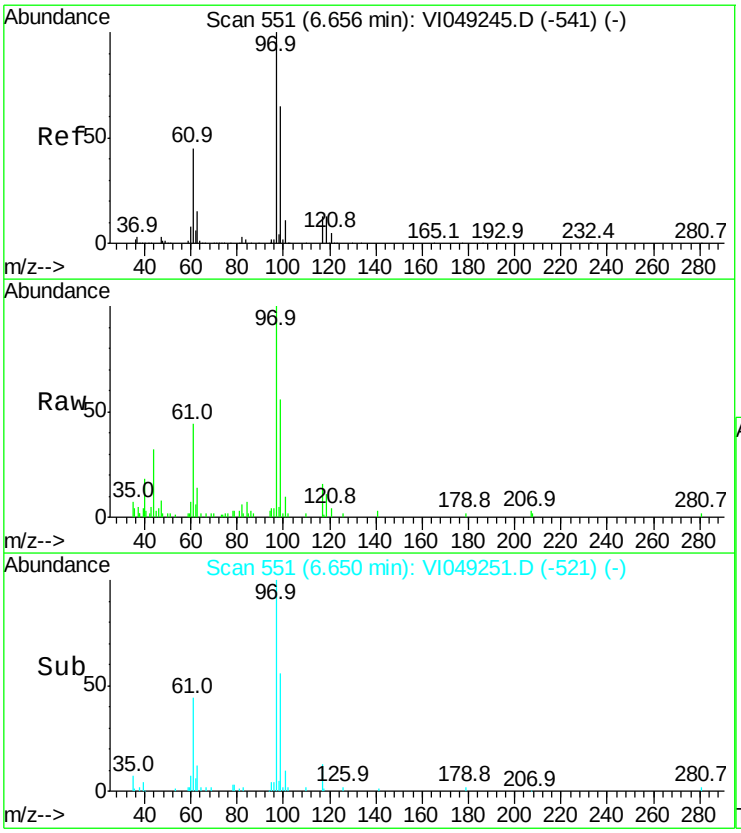
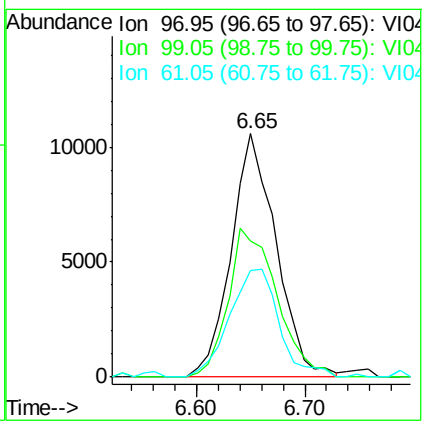
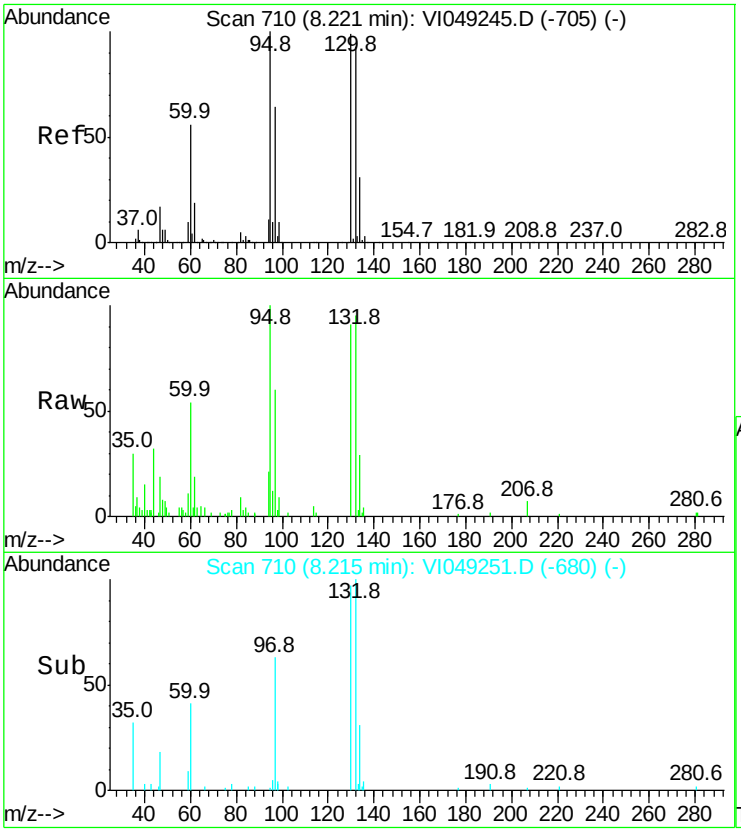


#29
1,1,1-Trichloroethane
Concen: 0.20 ug/L
RT: 6.65 min Scan# 551
Delta R.T. -0.01 min
Lab File: VI049251.D
Acq: 5 May 2016 13:38

Tgt Ion: 97 Resp: 30394

Ion	Ratio	Lower	Upper
97	100		
99	66.5	51.1	76.7
61	49.0	33.3	49.9

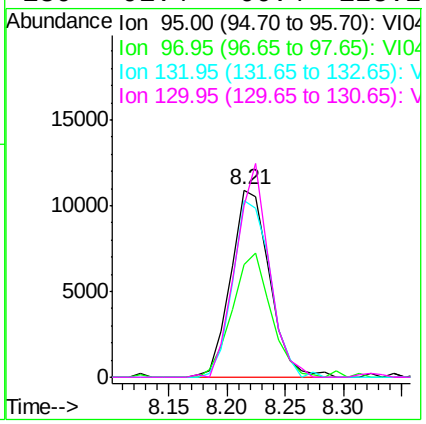




#34
Trichloroethene
Concen: 0.27 ug/L
RT: 8.21 min Scan# 710
Delta R.T. -0.01 min
Lab File: VI049251.D
Acq: 5 May 2016 13:38

Tgt Ion: 95 Resp: 25184

Ion	Ratio	Lower	Upper
95	100		
97	59.9	45.8	85.2
132	94.7	63.9	118.7
130	91.4	66.4	123.2



Instrument :
MSVOA_I
ClientSampleId :
H4124RE

Manual Integrations APPROVED
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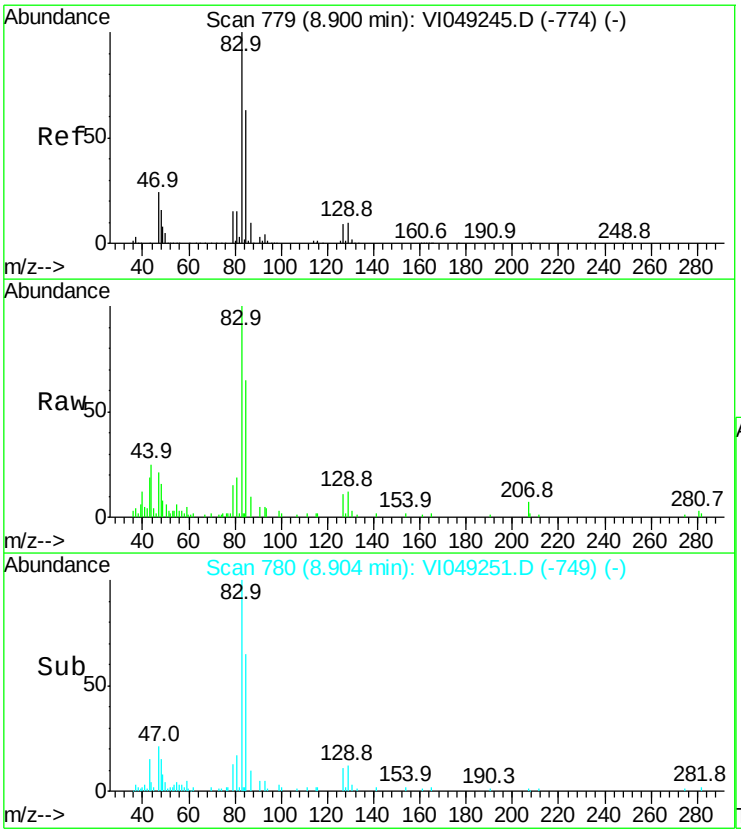
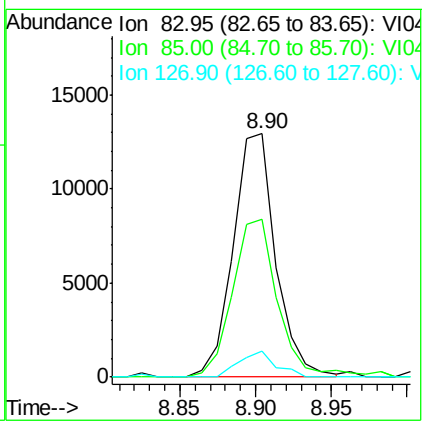
5/6/2016 11:43:37 AM

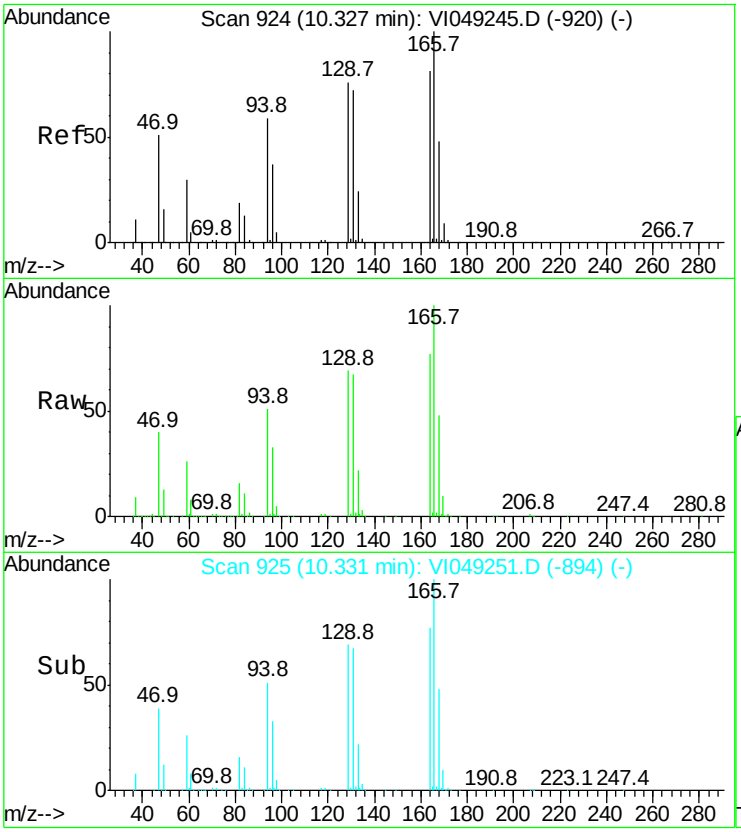


#38
Bromodichloromethane
Concen: 0.22 ug/L
RT: 8.90 min Scan# 780
Delta R.T. 0.00 min
Lab File: VI049251.D
Acq: 5 May 2016 13:38

Tgt Ion: 83 Resp: 25289

Ion	Ratio	Lower	Upper
83	100		
85	65.0	44.7	83.1
127	10.6	6.6	9.8#

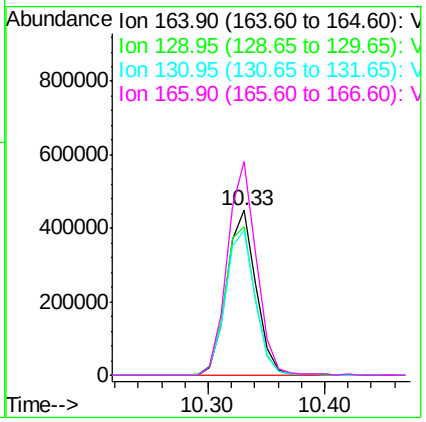




#47
Tetrachloroethene
Concen: 12.69 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.00 min
Lab File: VI049251.D
Acq: 5 May 2016 13:38

Tgt Ion:164 Resp: 781651

Ion	Ratio	Lower	Upper
164	100		
129	89.7	62.1	115.3
131	87.3	60.6	112.6
166	129.4	85.9	159.5



Instrument :
MSVOA_I
ClientSampleId :
H4124RE

Manual Integrations APPROVED
feifei
5/6/2016 11:43:37 AM

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049251.D
Acq On : 5 May 2016 13:38
Operator : FY/SY
Sample : H2834-08RE
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 06 05:00:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4124RE

Manual Integrations APPROVED
feifei
5/6/2016 11:43:37 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1227605	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	789169	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	288629	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	375855	4.97	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 99.40%			
7) Chloroethane-d5	2.10	69	230228m	5.50	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 110.00%			
11) 1,1-Dichloroethene-d2	2.93	63	650262	3.65	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 73.00%			
20) 2-Butanone-d5	5.68	46	896534	54.79	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 109.58%			
24) Chloroform-d	6.38	84	943350	4.91	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.20%			
26) 1,2-Dichloroethane-d4	7.24	65	420035m	5.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 106.80%			
32) Benzene-d6	7.17	84	1666766	5.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 108.40%			
36) 1,2-Dichloropropane-d6	8.44	67	461722	5.34	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 106.80%			
41) Toluene-d8	9.70	98	1167554	5.15	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.00%			
43) trans-1,3-Dichloropropene-	10.03	79	171165	5.03	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 100.60%			
46) 2-Hexanone-d5	10.43	63	559936	52.12	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 104.24%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	188553	4.80	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 96.00%			
63) 1,2-Dichlorobenzene-d4	13.77	152	248535	4.91	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.20%			
Target Compounds						Qvalue
13) Acetone	3.02	43	39090	3.85	ug/L	72
22) cis-1,2-Dichloroethene	5.77	96	14311	0.13	ug/L	83
25) Chloroform	6.42	83	367916	1.86	ug/L	98
29) 1,1,1-Trichloroethane	6.65	97	30394	0.20	ug/L	93
34) Trichloroethene	8.21	95	25184	0.27	ug/L	96
38) Bromodichloromethane	8.90	83	25289	0.22	ug/L #	98
47) Tetrachloroethene	10.33	164	781651	12.69	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049251.D
Acq On : 5 May 2016 13:38
Operator : FY/SY
Sample : H2834-08RE
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4124RE

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.296	4	7	35	rVB	6733112	19254596	100.00%	31.445%
2	1.611	37	39	46	rVV5	10629	17302	0.09%	0.028%
3	1.709	46	49	57	rVB	386133	607840	3.16%	0.993%
4	1.877	63	66	70	rVB	47511	79165	0.41%	0.129%
5	2.103	86	89	99	rVB	200194	406228	2.11%	0.663%
6	2.319	109	111	114	rVB4	8859	14208	0.07%	0.023%
7	2.388	114	118	122	rBV6	10183	33203	0.17%	0.054%
8	2.585	137	138	143	rVB	19434	27913	0.14%	0.046%
9	2.821	159	162	165	rVB5	7003	12420	0.06%	0.020%
10	2.930	167	173	181	rBV	795383	1864333	9.68%	3.045%
11	3.126	189	193	196	rVB4	9758	23656	0.12%	0.039%
12	3.205	196	201	206	rBV	37421	132575	0.69%	0.217%
13	3.451	224	226	228	rVB3	3245	4939	0.03%	0.008%
14	3.599	238	241	246	rVB6	8151	17899	0.09%	0.029%
15	3.707	248	252	253	rVB4	2990	5618	0.03%	0.009%
16	3.884	262	270	273	rBV5	8334	26997	0.14%	0.044%
17	4.012	281	283	285	rVB3	4296	5900	0.03%	0.010%
18	4.170	295	299	300	rVB4	3474	5924	0.03%	0.010%
19	4.347	314	317	319	rVB4	3102	5333	0.03%	0.009%
20	4.426	323	325	328	rVB4	2582	5100	0.03%	0.008%
21	4.593	340	342	344	rVB2	4923	6831	0.04%	0.011%
22	4.622	344	345	346	rBV	4544	4532	0.02%	0.007%
23	4.711	353	354	356	rBV2	4092	4907	0.03%	0.008%
24	4.898	370	373	376	rBV5	4654	11851	0.06%	0.019%
25	5.036	386	387	391	rVB4	3925	8397	0.04%	0.014%
26	5.144	396	398	400	rVB3	6003	8385	0.04%	0.014%
27	5.203	400	404	406	rBV3	4180	9933	0.05%	0.016%
28	5.469	429	431	433	rBV2	3804	6941	0.04%	0.011%
29	5.676	444	452	459	rBV	367885	1275009	6.62%	2.082%
30	5.794	459	464	481	rVV	136054	630007	3.27%	1.029%
31	5.971	481	482	486	rVV4	6451	7736	0.04%	0.013%
32	6.040	488	489	491	rBV2	4301	5357	0.03%	0.009%
33	6.118	496	497	499	rVB2	6383	5121	0.03%	0.008%
34	6.256	508	511	515	rVB6	4066	9532	0.05%	0.016%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049251.D
Acq On : 5 May 2016 13:38
Operator : FY/SY
Sample : H2834-08RE
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4124RE

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.384	517	524	537	rBV2	794411	3122964	16.22%	5.100%
36	6.650	545	551	559	rVB2	32039	103825	0.54%	0.170%
37	6.758	559	562	563	rVB3	4193	5184	0.03%	0.008%
38	6.896	574	576	577	rBV2	4243	5655	0.03%	0.009%
39	7.034	589	590	592	rBV	4418	6826	0.04%	0.011%
40	7.172	597	604	608	rBV	1285190	3436382	17.85%	5.612%
41	7.231	608	610	618	rVB	455131	1098840	5.71%	1.795%
42	7.496	636	637	641	rVB4	3563	6623	0.03%	0.011%
43	7.555	641	643	647	rVB5	3851	5502	0.03%	0.009%
44	7.654	651	653	658	rVB6	5353	11345	0.06%	0.019%
45	7.762	661	664	667	rBV4	4797	10634	0.06%	0.017%
46	7.939	676	682	688	rBV	1320302	2977583	15.46%	4.863%
47	8.126	700	701	704	rVB3	3855	4575	0.02%	0.007%
48	8.175	704	706	707	rBV2	4022	5613	0.03%	0.009%
49	8.225	707	711	715	rVB	69568	150686	0.78%	0.246%
50	8.294	717	718	722	rVB4	3315	5738	0.03%	0.009%
51	8.441	727	733	742	rBV	1023096	2216409	11.51%	3.620%
52	8.628	749	752	755	rBV4	4368	7315	0.04%	0.012%
53	8.766	763	766	769	rVB4	3395	6936	0.04%	0.011%
54	8.805	769	770	773	rBV3	2720	4776	0.02%	0.008%
55	8.904	776	780	787	rVV2	49500	123253	0.64%	0.201%
56	8.982	787	788	790	rVB2	4684	4671	0.02%	0.008%
57	9.051	793	795	798	rVB4	4525	8215	0.04%	0.013%
58	9.317	818	822	823	rBV4	2953	5340	0.03%	0.009%
59	9.366	823	827	837	rVV	617693	1122148	5.83%	1.833%
60	9.524	839	843	847	rVV	44221	93564	0.49%	0.153%
61	9.583	847	849	855	rVB6	5287	11809	0.06%	0.019%
62	9.701	856	861	876	rVV	1964060	3461020	17.98%	5.652%
63	9.858	876	877	880	rVB3	4000	6363	0.03%	0.010%
64	10.016	889	893	901	rBV	327939	599575	3.11%	0.979%
65	10.114	901	903	904	rVV2	3694	5965	0.03%	0.010%
66	10.144	904	906	907	rVV	8313	10550	0.05%	0.017%
67	10.223	907	914	920	rVV	100699	233158	1.21%	0.381%
68	10.331	920	925	931	rVV	3664509	6661921	34.60%	10.880%
69	10.429	931	935	949	rVV	1699114	3028338	15.73%	4.946%
70	10.606	951	953	955	rVV3	10479	15965	0.08%	0.026%
71	10.636	955	956	959	rVV3	6945	9931	0.05%	0.016%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049251.D
Acq On : 5 May 2016 13:38
Operator : FY/SY
Sample : H2834-08RE
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4124RE

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.059	995	999	1000	rVB4	4067	5311	0.03%	0.009%
73	11.148	1004	1008	1011	rVB5	3106	4956	0.03%	0.008%
74	11.226	1011	1016	1026	rBV	1607733	2810940	14.60%	4.591%
75	11.364	1026	1030	1033	rVB3	14470	24917	0.13%	0.041%
76	11.463	1037	1040	1044	rBV6	5765	12368	0.06%	0.020%
77	11.551	1048	1049	1053	rVB4	3239	5168	0.03%	0.008%
78	11.640	1055	1058	1060	rVB3	3394	4532	0.02%	0.007%
79	11.669	1060	1061	1064	rVB3	4409	4879	0.03%	0.008%
80	11.748	1066	1069	1072	rBV4	1732	4755	0.02%	0.008%
81	11.866	1080	1081	1085	rVB3	4630	5628	0.03%	0.009%
82	11.925	1085	1087	1089	rBV2	3480	4593	0.02%	0.008%
83	12.240	1117	1119	1121	rBV3	4867	6712	0.03%	0.011%
84	12.289	1121	1124	1128	rBV7	6750	12601	0.07%	0.021%
85	12.408	1131	1136	1139	rBV	83618	165214	0.86%	0.270%
86	12.467	1139	1142	1147	rVB	415593	695706	3.61%	1.136%
87	13.008	1195	1197	1200	rBV3	3928	5825	0.03%	0.010%
88	13.116	1207	1208	1211	rBV3	3160	4734	0.02%	0.008%
89	13.244	1219	1221	1224	rBV4	2937	4850	0.03%	0.008%
90	13.303	1224	1227	1228	rVB2	3929	5226	0.03%	0.009%
91	13.352	1230	1232	1236	rBV5	4003	4580	0.02%	0.007%
92	13.431	1236	1240	1247	rBV	1231749	2137912	11.10%	3.491%
93	13.657	1256	1263	1264	rBV7	8871	31072	0.16%	0.051%
94	13.756	1269	1273	1280	rBV	1033869	1898298	9.86%	3.100%
95	13.972	1293	1295	1297	rBV2	4113	7878	0.04%	0.013%
96	14.041	1297	1302	1308	rVV2	56126	129896	0.67%	0.212%
97	14.287	1323	1327	1328	rBV4	5963	13221	0.07%	0.022%
98	14.671	1364	1366	1368	rBV3	7139	10827	0.06%	0.018%
99	14.917	1389	1391	1392	rBV2	9918	9911	0.05%	0.016%
100	15.616	1458	1462	1465	rVB	29799	58628	0.30%	0.096%

Sum of corrected areas: 61232023

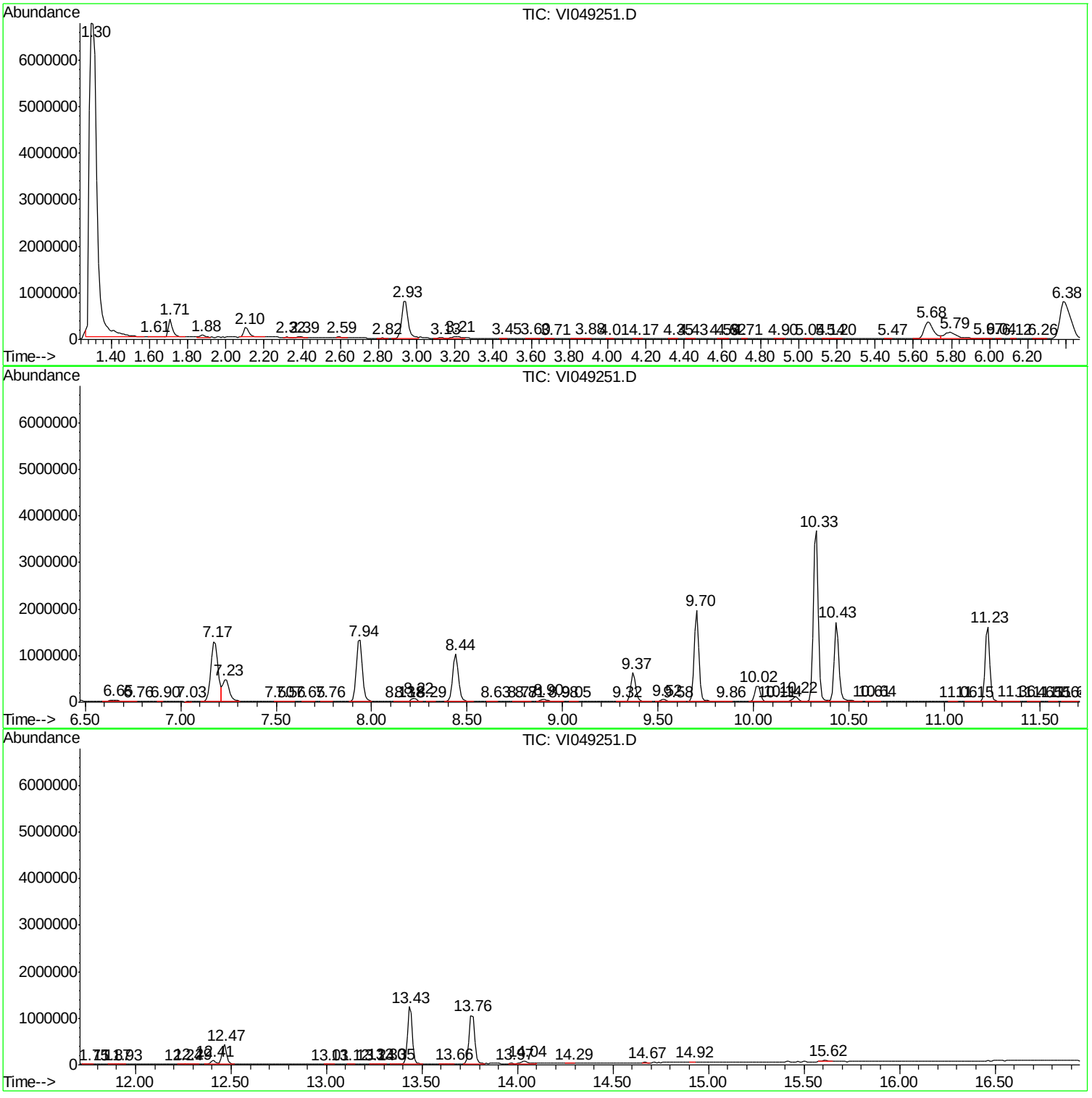
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049251.D
Acq On : 5 May 2016 13:38
Operator : FY/SY
Sample : H2834-08RE
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4124RE

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049251.D
Acq On : 5 May 2016 13:38
Operator : FY/SY
Sample : H2834-08RE
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4124RE

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

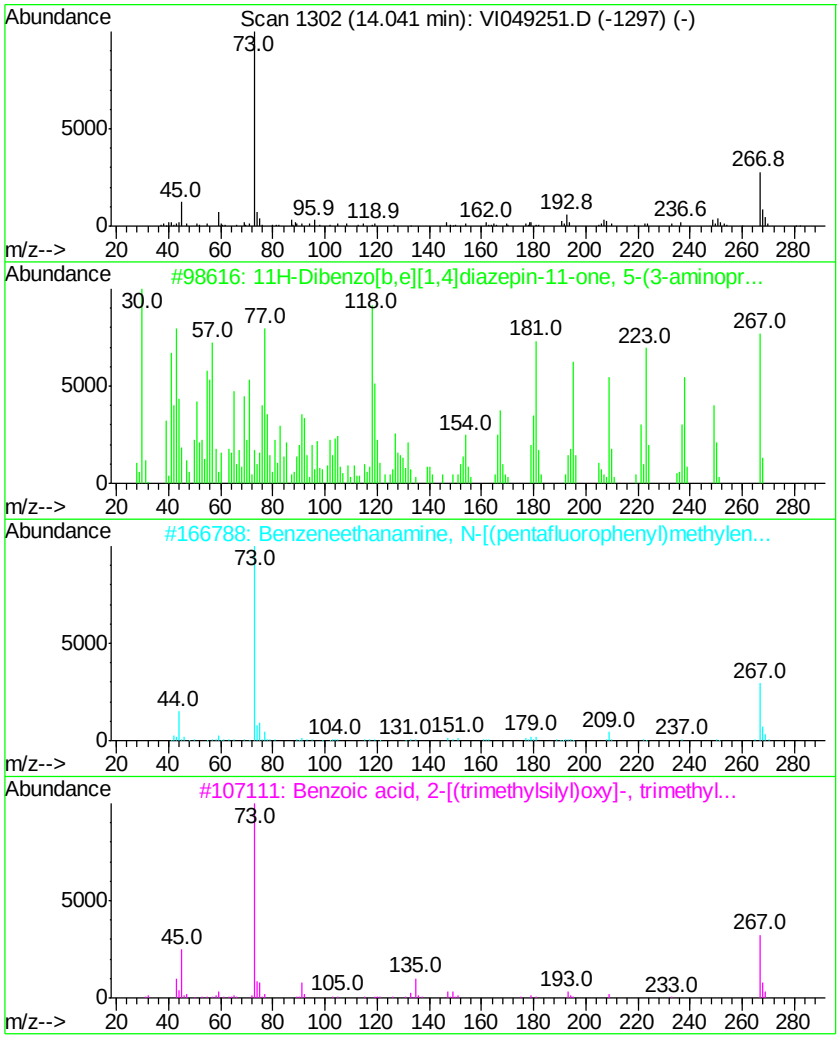
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

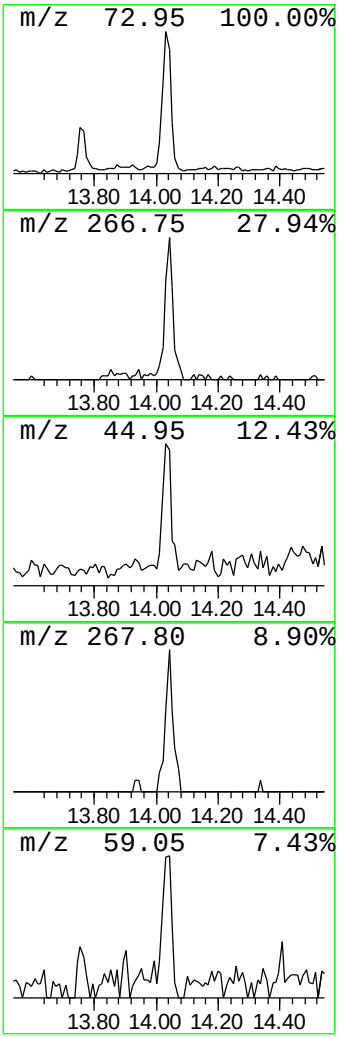
****

Peak Number 5 unknown-01 Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.04	0.30 ug/L	129896	1,4-Dichlorobenzene-d4	13.44

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	11H-Dibenzo[b,e][1,4]diazepin-11...	267	C16H17N3O	013450-73-2	46
2	Benzeneethanamine, N-[(pentafluo...	475	C21H26F5NO2Si2	055429-85-1	42
3	Benzoic acid, 2-[(trimethylsilyl...	282	C13H22O3Si2	003789-85-3	42
4	Benzoic acid, 2-[(trimethylsilyl...	282	C13H22O3Si2	003789-85-3	38
5	Benzoic acid, 2-[(trimethylsilyl...	282	C13H22O3Si2	003789-85-3	36





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049251.D
Acq On : 5 May 2016 13:38
Operator : FY/SY
Sample : H2834-08RE
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4124RE

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
unknown-01	14.04	0.3	ug/L	129896	3	13.44	2137910	5.0

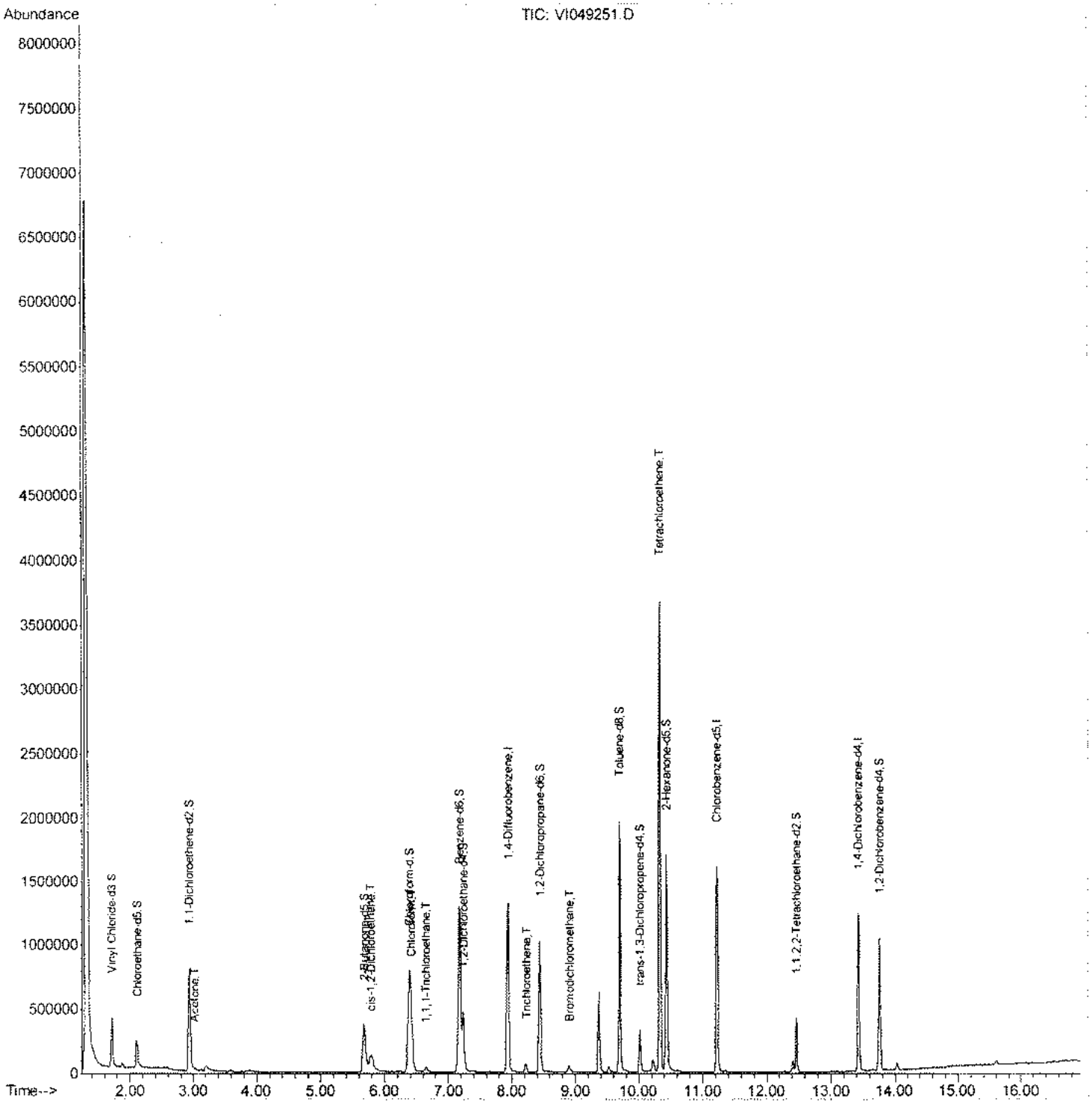
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049251.D
Acq On : 5 May 2016 13:38
Operator : FY/SY
Sample : H2834-08RE
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 06 05:00:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4124RE

Manual Integrations APPROVED
feifei
5/6/2016 11:43:37 AM



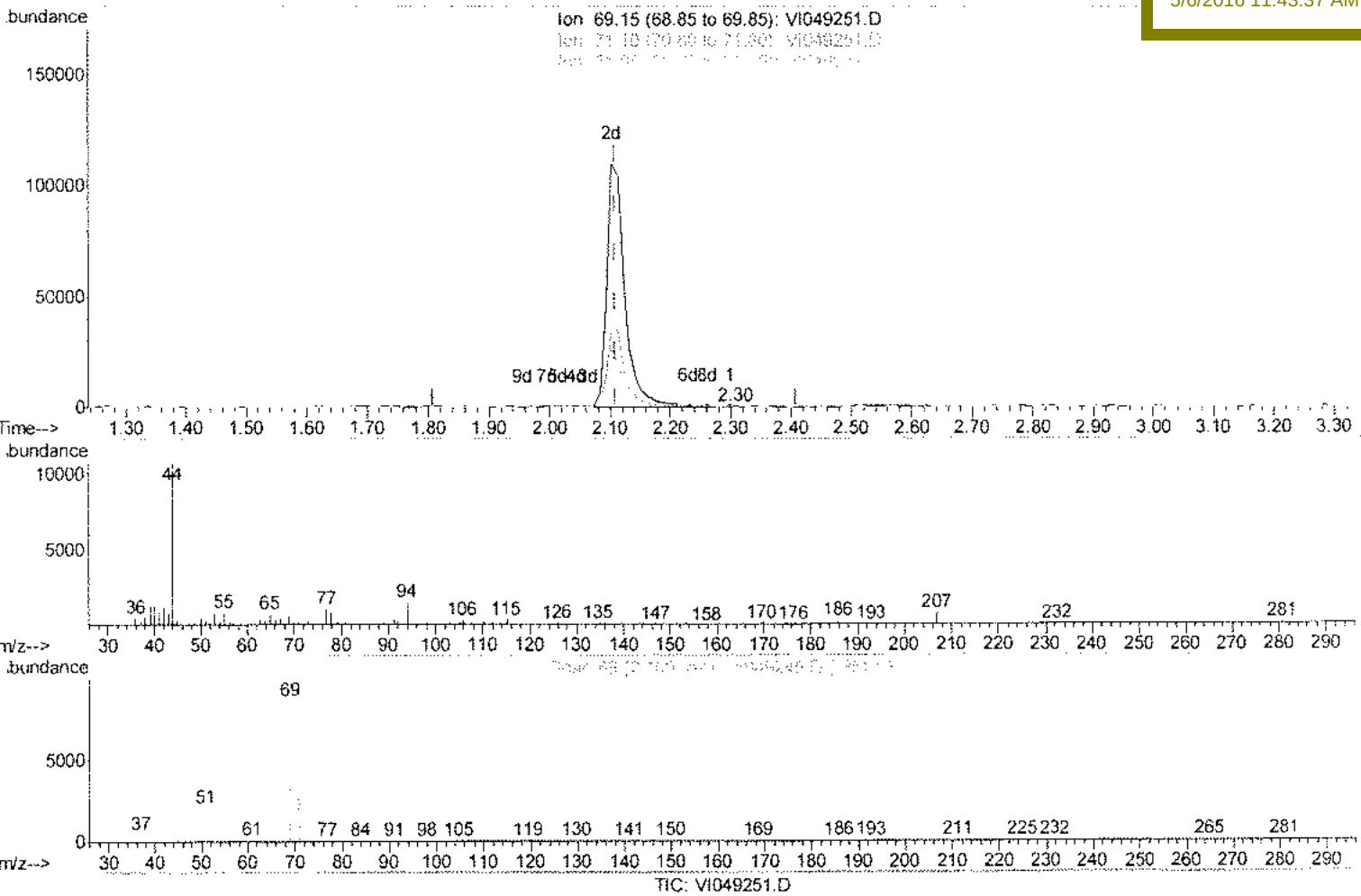
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049251.D
Acq On : 5 May 2016 13:38
Operator : FY/SY
Sample : H2834-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 06 04:58:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4124RE

Manual Integrations APPROVED
feifei
5/6/2016 11:43:37 AM



TIC: VI049251.D

(7) Chloroethane-d5 (S)

2.300min (+0.191) 0.04ug/L

response 1740

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	30.57
51.05	32.70	25.75
0.00	0.00	0.00

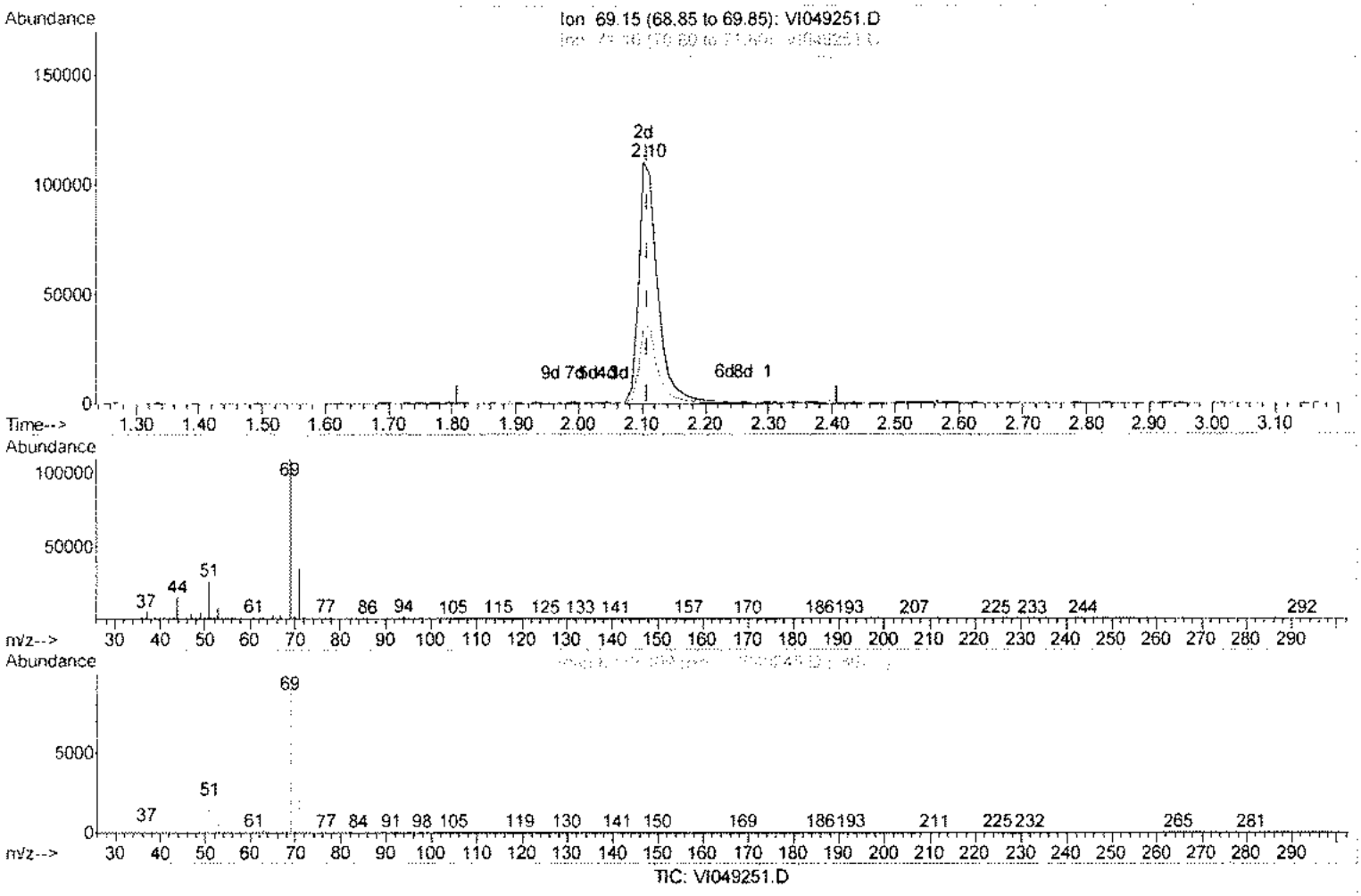
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049251.D
Acq On : 5 May 2016 13:38
Operator : FY/SY
Sample : H2834-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 06 04:58:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4124RE

Manual Integrations APPROVED
feifei
5/6/2016 11:43:37 AM



(7) Chloroethane-d5 (S)

2.103min (-0.006) 5.50ug/L m M.D 05/09/16

response 230228

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.23#
51.05	32.70	0.19#
0.00	0.00	0.00

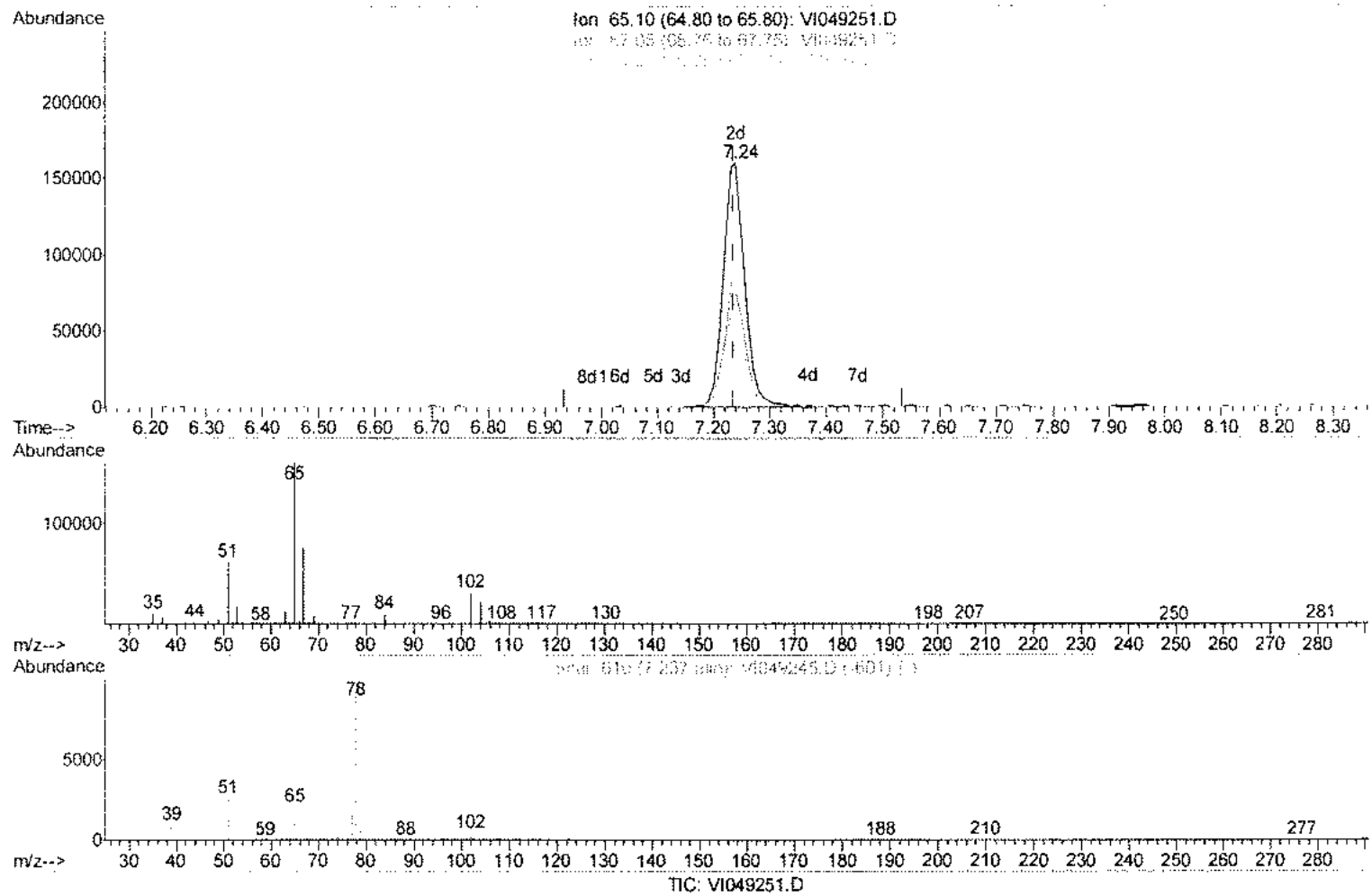
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049251.D
Acq On : 5 May 2016 13:38
Operator : FY/SY
Sample : H2834-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 06 04:58:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4124RE

Manual Integrations APPROVED
feifei
5/6/2016 11:43:37 AM



TIC: VI049251.D

(26) 1,2-Dichloroethane-d4 (S)

7.240min (+0.004) 5.34ug/L m

response 420035

M.D 05/09/16

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.02#
51.05	123.20	0.05#
0.00	0.00	0.00

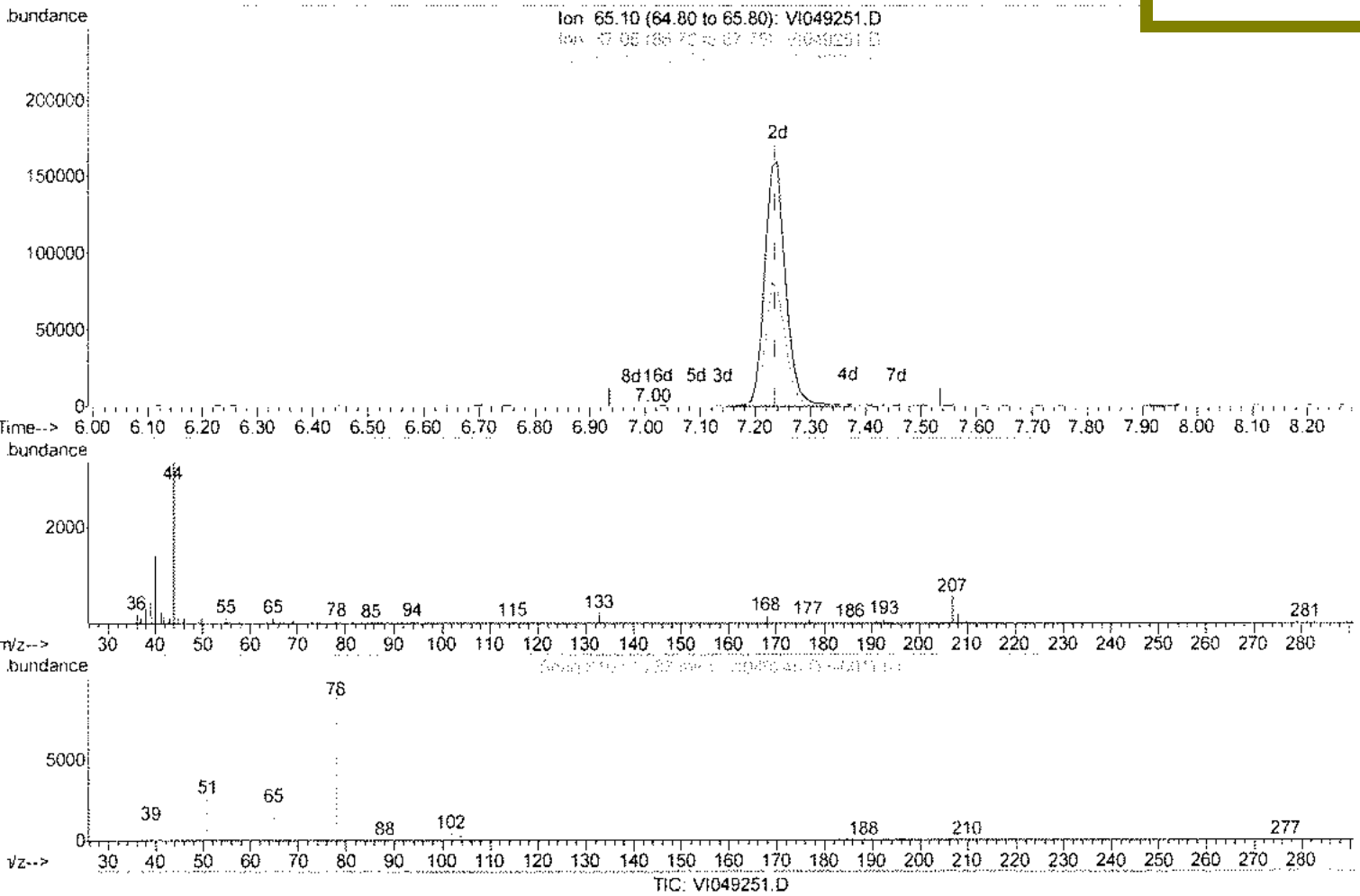
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049251.D
Acq On : 5 May 2016 13:38
Operator : FY/SY
Sample : H2834-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 06 04:58:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4124RE

Manual Integrations APPROVED
feifei
5/6/2016 11:43:37 AM



TIC: VI049251.D

(26) 1,2-Dichloroethane-d4 (S)

7.004min (-0.232) 0.00ug/L

response 153

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	65.36
51.05	123.20	139.22
0.00	0.00	0.00

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049251.D
Acq On : 5 May 2016 13:38
Operator : FY/SY
Sample : H2834-08RE
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 06 05:00:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4124RE

Manual Integrations APPROVED
feifei
5/6/2016 11:43:37 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1227605	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	789169	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	288629	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	375855	4.97	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 99.40%			
7) Chloroethane-d5	2.10	69	230228m	5.50	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 110.00%			
11) 1,1-Dichloroethene-d2	2.93	63	650262	3.65	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 73.00%			
20) 2-Butanone-d5	5.68	46	896534	54.79	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 109.58%			
24) Chloroform-d	6.38	84	943350	4.91	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.20%			
26) 1,2-Dichloroethane-d4	7.24	65	420035m	5.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 106.80%			
32) Benzene-d6	7.17	84	1666766	5.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 108.40%			
36) 1,2-Dichloropropane-d6	8.44	67	461722	5.34	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 106.80%			
41) Toluene-d8	9.70	98	1167554	5.15	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.00%			
43) trans-1,3-Dichloropropene-	10.03	79	171165	5.03	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 100.60%			
46) 2-Hexanone-d5	10.43	63	559936	52.12	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 104.24%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	188553	4.80	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 96.00%			
63) 1,2-Dichlorobenzene-d4	13.77	152	248535	4.91	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.20%			
Target Compounds						Qvalue
13) Acetone	3.02	43	39090	3.85	ug/L	72
22) cis-1,2-Dichloroethene	5.77	96	14311	0.13	ug/L	83
25) Chloroform	6.42	83	367916	1.86	ug/L	98
29) 1,1,1-Trichloroethane	6.65	97	30394	0.20	ug/L	93
34) Trichloroethene	8.21	95	25184	0.27	ug/L	96
38) Bromodichloromethane	8.90	83	25289	0.22	ug/L #	98
47) Tetrachloroethene	10.33	164	781651	12.69	ug/L	97

M.D 05/09/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4132

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049241.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.0	
71-55-6	1,1,1-Trichloroethane	0.19	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.19	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4132

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049241.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.10	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	16	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4132

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049241.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4132

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049241.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/04/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	9.37	1.7	J
2	E966796	Total Alkanes	N/A	0.0	

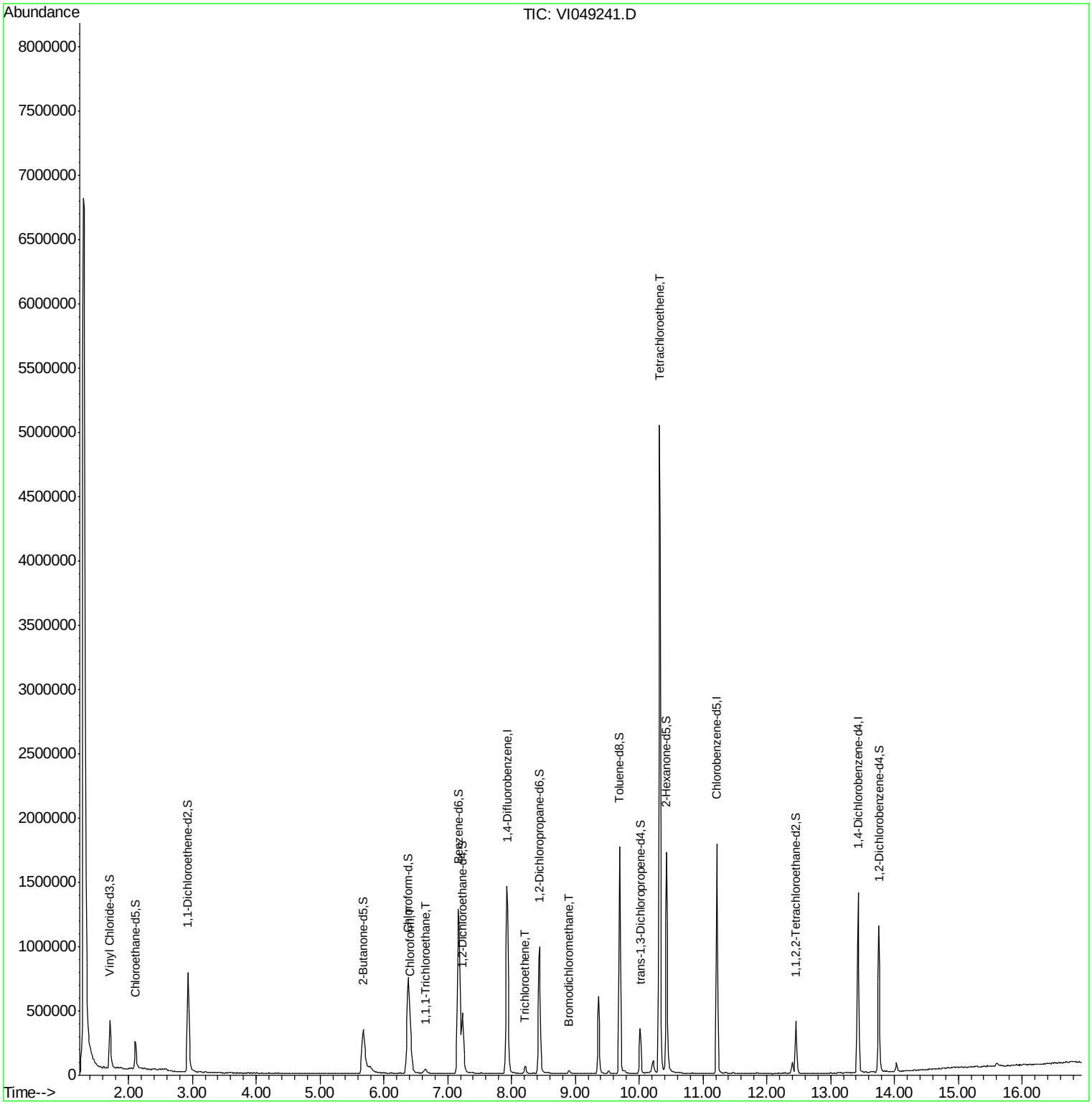
EPA-designated Registry Number.

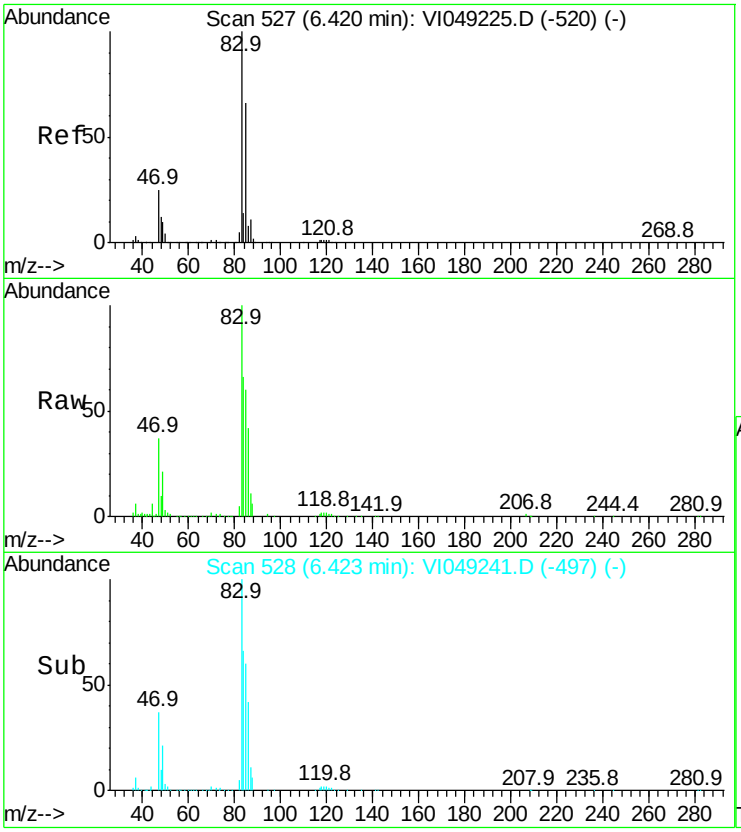
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049241.D
Acq On : 4 May 2016 23:08
Operator : FY/SY
Sample : H2834-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4132

Quant Time: May 05 06:52:49 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration



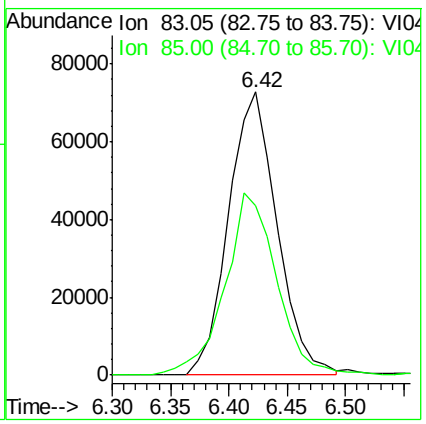


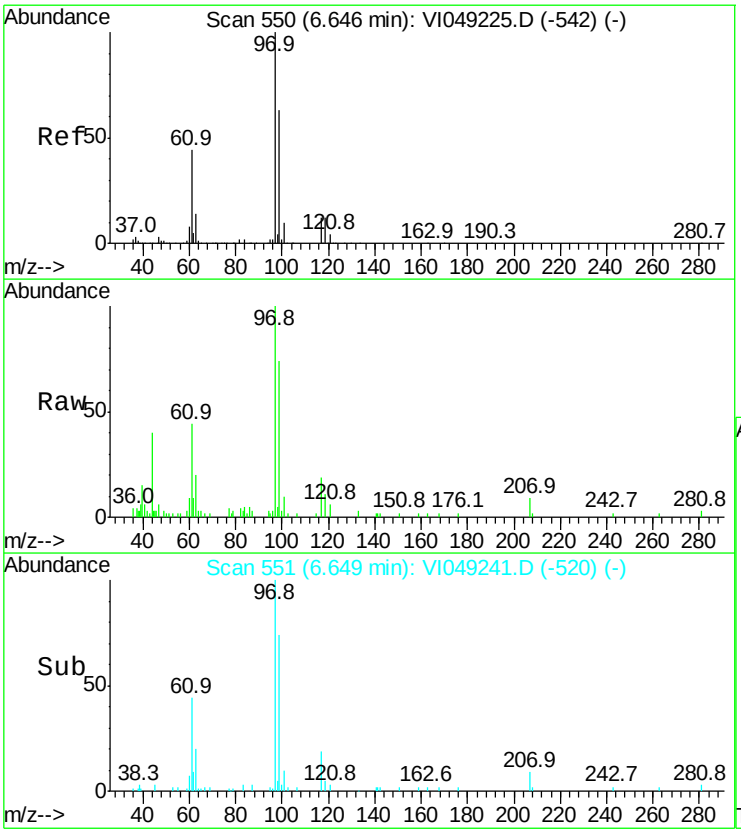
#25
Chloroform
Concen: 1.01 ug/L
RT: 6.42 min Scan# 528
Delta R.T. 0.00 min
Lab File: VI049241.D
Acq: 4 May 2016 23:08

Instrument :
MSVOA_I
ClientSampleId :
H4132

Tgt Ion: 83 Resp: 209670

Ion	Ratio	Lower	Upper
83	100		
85	60.1	47.3	87.8

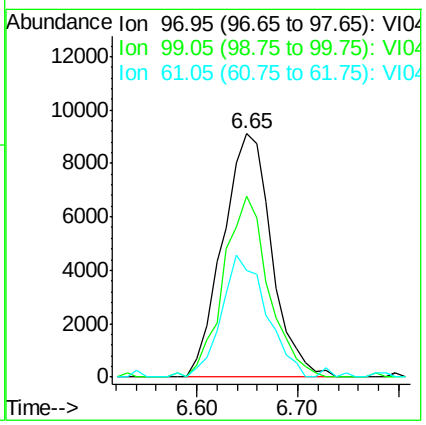


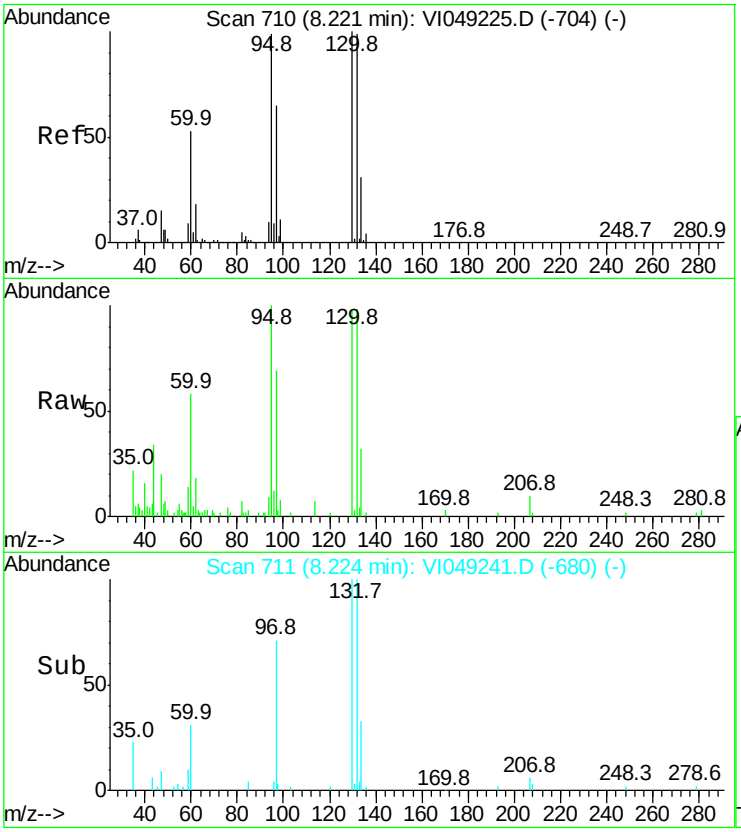


#29
1,1,1-Trichloroethane
Concen: 0.19 ug/L
RT: 6.65 min Scan# 551
Delta R.T. 0.00 min
Lab File: VI049241.D
Acq: 4 May 2016 23:08

Tgt Ion: 97 Resp: 30742

Ion	Ratio	Lower	Upper
97	100		
99	68.3	51.1	76.7
61	45.5	33.3	49.9



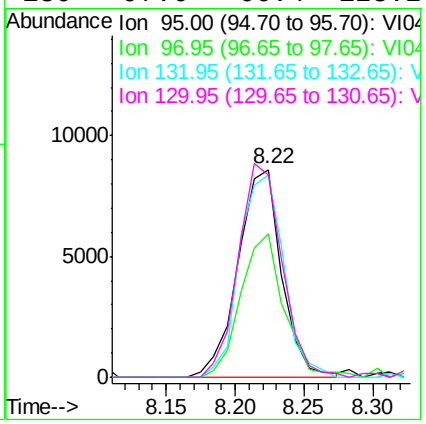


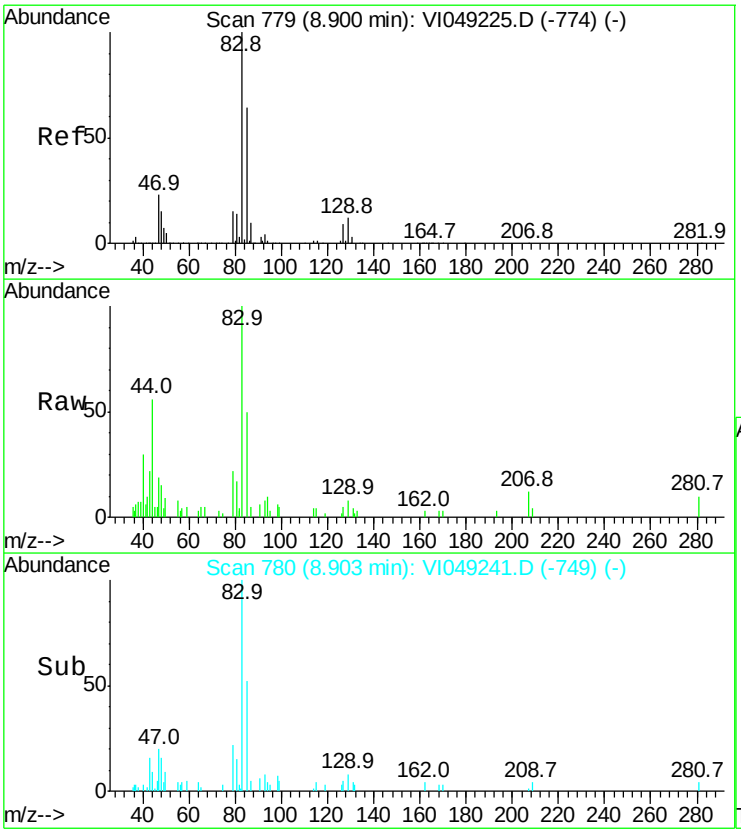
#34
Trichloroethene
Concen: 0.19 ug/L
RT: 8.22 min Scan# 711
Delta R.T. 0.00 min
Lab File: VI049241.D
Acq: 4 May 2016 23:08

Instrument : MSVOA_I
ClientSampleId : H4132

Tgt Ion: 95 Resp: 19003

Ion	Ratio	Lower	Upper
95	100		
97	69.1	45.8	85.2
132	97.6	63.9	118.7
130	97.6	66.4	123.2

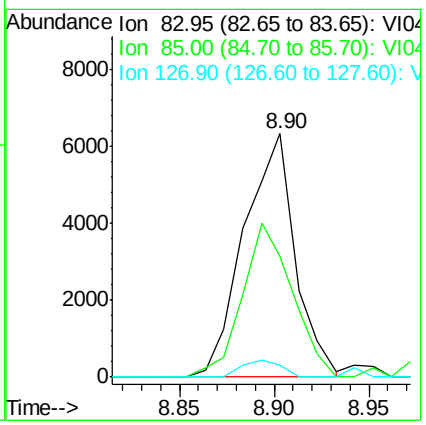


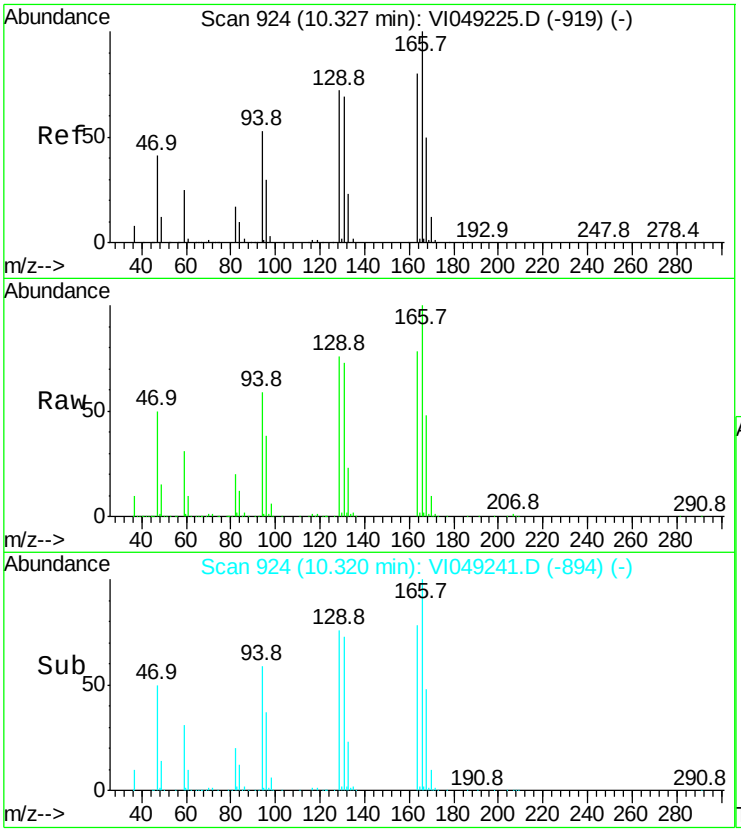


#38
Bromodichloromethane
Concen: 0.10 ug/L
RT: 8.90 min Scan# 780
Delta R.T. 0.00 min
Lab File: VI049241.D
Acq: 4 May 2016 23:08

Tgt Ion: 83 Resp: 11864

Ion	Ratio	Lower	Upper
83	100		
85	49.7	44.7	83.1
127	4.8	6.6	9.8#



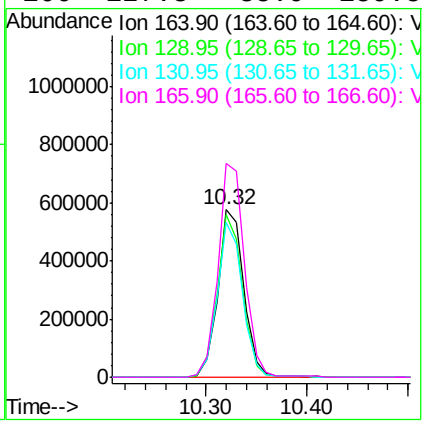


#47
Tetrachloroethene
Concen: 15.64 ug/L
RT: 10.32 min Scan# 924
Delta R.T. -0.01 min
Lab File: VI049241.D
Acq: 4 May 2016 23:08

Instrument :
MSVOA_I
ClientSampleId :
H4132

Tgt Ion:164 Resp: 1031805

Ion	Ratio	Lower	Upper
164	100		
129	97.3	62.1	115.3
131	92.9	60.6	112.6
166	127.8	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049241.D
Acq On : 4 May 2016 23:08
Operator : FY/SY
Sample : H2834-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4132

Quant Time: May 05 06:52:49 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1288236	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	845376	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	307484	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	374891	4.73	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 94.60%			
7) Chloroethane-d5	2.10	69	224415	5.11	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 102.20%			
11) 1,1-Dichloroethene-d2	2.93	63	642853	3.44	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 68.80%			
20) 2-Butanone-d5	5.67	46	864589	50.35	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 100.70%			
24) Chloroform-d	6.38	84	910903	4.51	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.20%			
26) 1,2-Dichloroethane-d4	7.23	65	406094	4.92	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.40%			
32) Benzene-d6	7.17	84	1631033	4.95	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.00%			
36) 1,2-Dichloropropane-d6	8.44	67	453575	4.90	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 98.00%			
41) Toluene-d8	9.70	98	1163244	4.79	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.80%			
43) trans-1,3-Dichloropropene-	10.02	79	167544	4.59	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.80%			
46) 2-Hexanone-d5	10.43	63	558999	48.58	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 97.16%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	186504	4.43	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 88.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	255242	4.73	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 94.60%			
Target Compounds						Qvalue
25) Chloroform	6.42	83	209670	1.01	ug/L	91
29) 1,1,1-Trichloroethane	6.65	97	30742	0.19	ug/L	94
34) Trichloroethene	8.22	95	19003	0.19	ug/L	95
38) Bromodichloromethane	8.90	83	11864	0.10	ug/L #	83
47) Tetrachloroethene	10.32	164	1031805	15.64	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049241.D
Acq On : 4 May 2016 23:08
Operator : FY/SY
Sample : H2834-09
Misc : 25mL/MSVOA I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4132

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.295	4	7	37	rVB	6765170	19223794	100.00%	30.891%
2	1.610	37	39	43	rVB	13256	20027	0.10%	0.032%
3	1.709	46	49	57	rBV	370340	599626	3.12%	0.964%
4	1.876	64	66	72	rVB5	18748	36323	0.19%	0.058%
5	2.102	86	89	103	rBV	211478	437924	2.28%	0.704%
6	2.486	125	128	130	rBV3	8186	14104	0.07%	0.023%
7	2.811	159	161	167	rBV7	3892	11017	0.06%	0.018%
8	2.929	169	173	182	rBV	776863	1797588	9.35%	2.889%
9	3.116	188	192	196	rVB6	8535	23207	0.12%	0.037%
10	3.214	198	202	203	rBV4	4162	7921	0.04%	0.013%
11	3.451	223	226	228	rVB3	4811	9497	0.05%	0.015%
12	3.529	231	234	236	rBV4	4352	7599	0.04%	0.012%
13	3.598	238	241	247	rVB6	6419	14817	0.08%	0.024%
14	3.884	267	270	271	rBV2	3257	4575	0.02%	0.007%
15	3.972	277	279	281	rVB3	5427	6554	0.03%	0.011%
16	4.002	281	282	287	rVB4	5663	7748	0.04%	0.012%
17	4.120	292	294	297	rVB4	3411	5288	0.03%	0.008%
18	4.199	299	302	304	rVB4	4031	4918	0.03%	0.008%
19	4.267	306	309	311	rVB3	4172	6439	0.03%	0.010%
20	4.346	314	317	320	rBV4	4522	8716	0.05%	0.014%
21	4.454	326	328	332	rVB4	3064	6259	0.03%	0.010%
22	4.602	340	343	344	rBV3	3329	4682	0.02%	0.008%
23	4.760	357	359	361	rVB3	4882	6255	0.03%	0.010%
24	4.809	361	364	367	rBV4	4376	10843	0.06%	0.017%
25	4.848	367	368	372	rVB2	3332	4951	0.03%	0.008%
26	5.153	395	399	401	rBV5	4267	10982	0.06%	0.018%
27	5.281	408	412	414	rBV4	3903	9130	0.05%	0.015%
28	5.350	416	419	420	rBV3	2826	4976	0.03%	0.008%
29	5.557	437	440	442	rVB4	3284	4920	0.03%	0.008%
30	5.675	444	452	461	rBV	343464	1280375	6.66%	2.057%
31	5.941	477	479	483	rVB5	4127	7116	0.04%	0.011%
32	6.128	495	498	501	rVB3	6062	12647	0.07%	0.020%
33	6.226	504	508	509	rBV3	3814	7106	0.04%	0.011%
34	6.383	515	524	540	rBV2	748557	2694044	14.01%	4.329%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049241.D
Acq On : 4 May 2016 23:08
Operator : FY/SY
Sample : H2834-09
Misc : 25mL/MSVOA I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4132

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.649	545	551	560	rVB3	34873	134447	0.70%	0.216%
36	6.748	560	561	564	rBV3	5781	10684	0.06%	0.017%
37	6.885	573	575	577	rBV3	2115	4637	0.02%	0.007%
38	6.984	583	585	588	rBV4	3299	5476	0.03%	0.009%
39	7.082	593	595	598	rBV3	2528	5377	0.03%	0.009%
40	7.171	598	604	608	rBV	1282351	3420679	17.79%	5.497%
41	7.230	608	610	619	rVB	467342	1056959	5.50%	1.698%
42	7.535	639	641	644	rVB4	5537	9033	0.05%	0.015%
43	7.604	644	648	649	rBV4	2875	4854	0.03%	0.008%
44	7.643	650	652	656	rVB4	5062	7884	0.04%	0.013%
45	7.830	668	671	675	rBV5	4017	9289	0.05%	0.015%
46	7.929	675	681	693	rBV	1459042	3168132	16.48%	5.091%
47	8.214	706	710	715	rBV2	55212	122861	0.64%	0.197%
48	8.440	727	733	741	rBV	984314	2168152	11.28%	3.484%
49	8.637	752	753	755	rVB2	4865	4754	0.02%	0.008%
50	8.677	755	757	760	rBV3	4367	9121	0.05%	0.015%
51	8.893	775	779	786	rBV4	22813	60799	0.32%	0.098%
52	8.972	786	787	790	rVB3	3385	4742	0.02%	0.008%
53	9.159	804	806	809	rVB3	2728	4758	0.02%	0.008%
54	9.366	821	827	836	rBV	599790	1095052	5.70%	1.760%
55	9.523	839	843	847	rVB	19817	35294	0.18%	0.057%
56	9.582	847	849	851	rVB3	4352	5685	0.03%	0.009%
57	9.690	856	860	866	rVV	1762498	3333950	17.34%	5.357%
58	9.769	866	868	873	rVB3	19335	38369	0.20%	0.062%
59	9.858	876	877	879	rBV2	4186	5686	0.03%	0.009%
60	9.936	882	885	889	rVB5	3841	6819	0.04%	0.011%
61	10.015	889	893	900	rBV	349404	599667	3.12%	0.964%
62	10.143	903	906	908	rBV3	4759	8583	0.04%	0.014%
63	10.222	908	914	920	rVV	95300	220613	1.15%	0.355%
64	10.320	920	924	931	rVV	5041362	8830921	45.94%	14.191%
65	10.429	931	935	951	rVB	1717664	2990248	15.55%	4.805%
66	10.655	956	958	960	rVB3	4368	7745	0.04%	0.012%
67	10.763	968	969	974	rVB5	4859	9701	0.05%	0.016%
68	10.832	974	976	981	rBV6	5715	16319	0.08%	0.026%
69	11.157	1005	1009	1011	rBV5	2834	7126	0.04%	0.011%
70	11.216	1011	1015	1026	rBV	1789563	2985278	15.53%	4.797%
71	11.354	1026	1029	1033	rVB4	11032	23674	0.12%	0.038%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049241.D
Acq On : 4 May 2016 23:08
Operator : FY/SY
Sample : H2834-09
Misc : 25mL/MSVOA I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4132

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.472	1038	1041	1046	rVB6	8702	18228	0.09%	0.029%
73	11.560	1048	1050	1052	rBV3	3495	4546	0.02%	0.007%
74	11.797	1070	1074	1076	rBV5	5305	12798	0.07%	0.021%
75	11.846	1076	1079	1085	rVB7	6995	18653	0.10%	0.030%
76	12.082	1100	1103	1104	rVB2	5279	8568	0.04%	0.014%
77	12.102	1104	1105	1107	rBV2	3331	4754	0.02%	0.008%
78	12.190	1111	1114	1115	rBV2	4479	5766	0.03%	0.009%
79	12.289	1122	1124	1126	rVB3	4433	6086	0.03%	0.010%
80	12.407	1131	1136	1138	rBV2	82795	165687	0.86%	0.266%
81	12.456	1138	1141	1148	rVB	405796	729454	3.79%	1.172%
82	12.633	1156	1159	1160	rBV3	3603	5860	0.03%	0.009%
83	12.741	1166	1170	1174	rVB7	3870	11225	0.06%	0.018%
84	12.860	1177	1182	1184	rBV5	4039	8104	0.04%	0.013%
85	12.948	1188	1191	1194	rBV5	3226	7369	0.04%	0.012%
86	13.007	1194	1197	1198	rBV3	3991	6320	0.03%	0.010%
87	13.115	1204	1208	1210	rBV4	5167	9491	0.05%	0.015%
88	13.224	1217	1219	1222	rBV4	4020	5589	0.03%	0.009%
89	13.361	1229	1233	1235	rBV4	6686	17423	0.09%	0.028%
90	13.430	1235	1240	1249	rBV	1402466	2303193	11.98%	3.701%
91	13.548	1250	1252	1256	rVB5	4215	6703	0.03%	0.011%
92	13.617	1257	1259	1262	rBV4	4444	7274	0.04%	0.012%
93	13.667	1262	1264	1268	rVB5	4448	6805	0.04%	0.011%
94	13.755	1269	1273	1280	rBV	1134486	1911703	9.94%	3.072%
95	13.962	1292	1294	1297	rBV4	3511	7761	0.04%	0.012%
96	14.031	1297	1301	1308	rVV	66834	120607	0.63%	0.194%
97	14.129	1310	1311	1313	rBV2	4524	6211	0.03%	0.010%
98	14.562	1353	1355	1357	rVV3	5884	9231	0.05%	0.015%
99	14.818	1379	1381	1382	rBV2	7749	9750	0.05%	0.016%
100	15.605	1458	1461	1466	rBV	21280	50438	0.26%	0.081%

Sum of corrected areas: 62230933

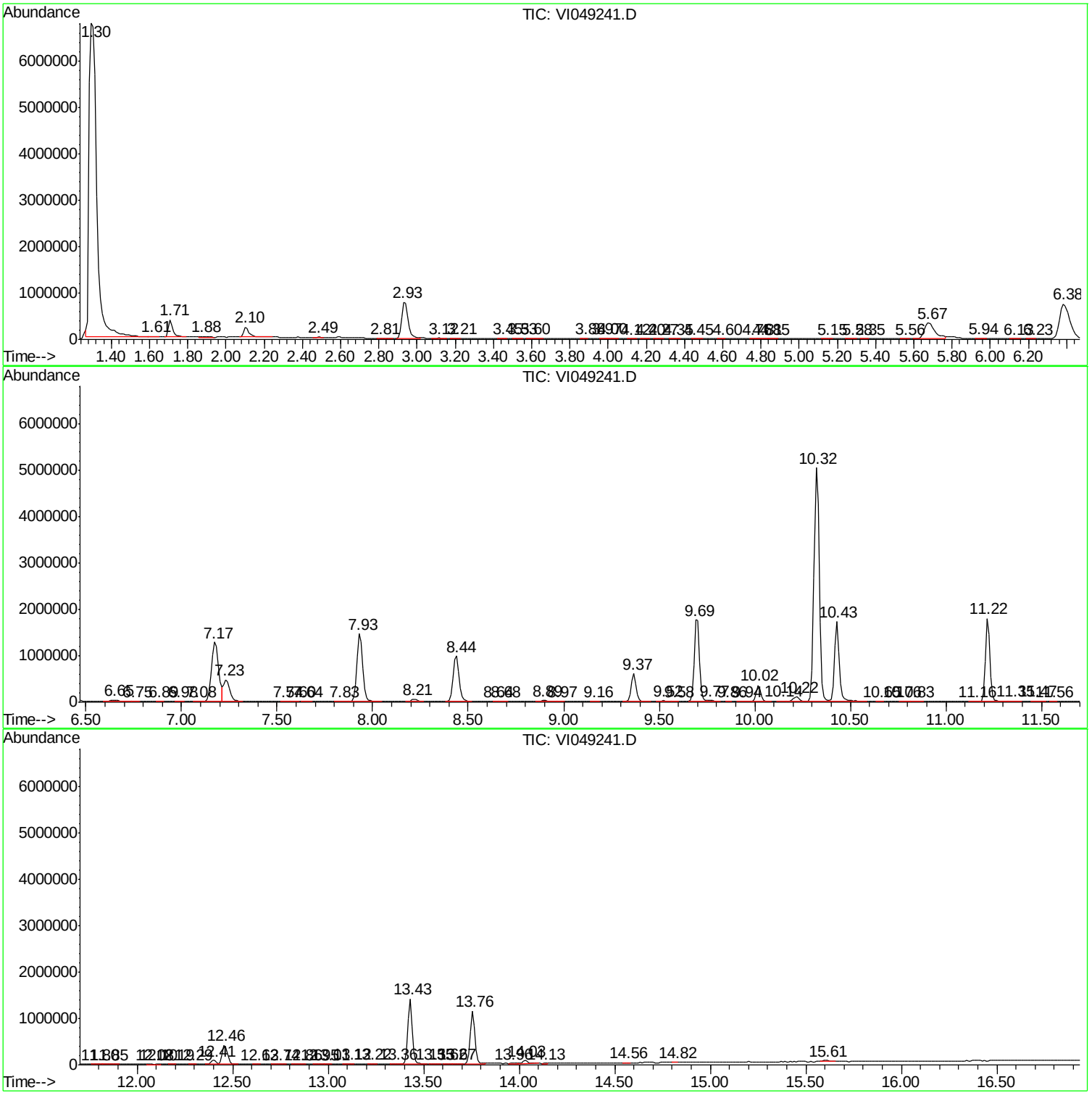
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049241.D
Acq On : 4 May 2016 23:08
Operator : FY/SY
Sample : H2834-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4132

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049241.D
Acq On : 4 May 2016 23:08
Operator : FY/SY
Sample : H2834-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4132

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

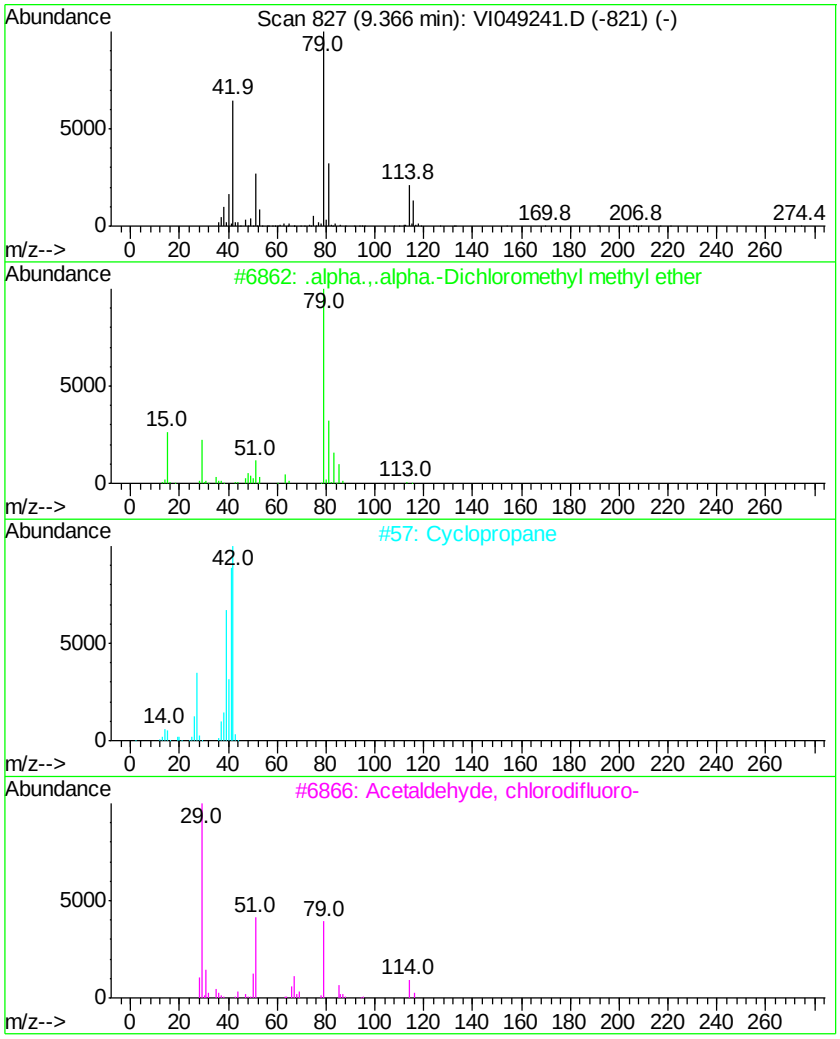
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

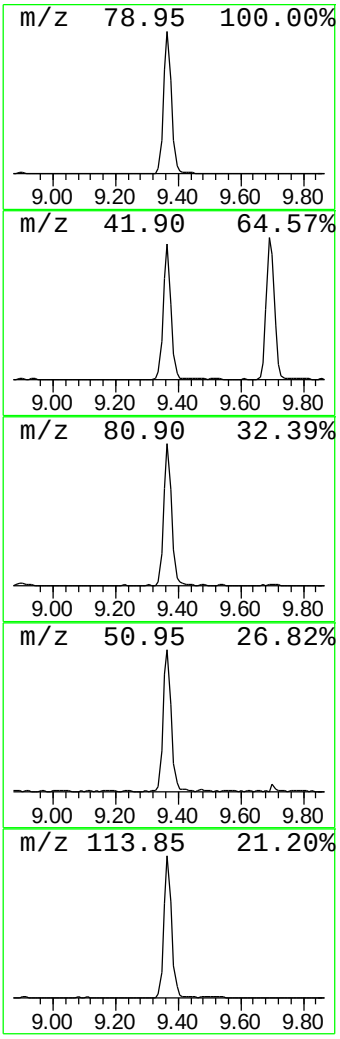
****

Peak Number 2 unknown-01 Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.37	1.73 ug/L	1095050	1,4-Difluorobenzene	7.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	.alpha.,.alpha.-Dichloromethyl m...	114	C2H4Cl2O	004885-02-3	17
2	Cyclopropane	42	C3H6	000075-19-4	9
3	Acetaldehyde, chlorodifluoro-	114	C2HClF2O	000811-96-1	7
4	2,3-Butanedione, dioxime	116	C4H8N2O2	000095-45-4	7
5	Cyclopropane	42	C3H6	000075-19-4	7





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049241.D
Acq On : 4 May 2016 23:08
Operator : FY/SY
Sample : H2834-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4132

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
unknown-01	9.37	1.7	ug/L	1095050	1	7.93	3168130	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4133

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049242.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.89	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.10	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4133

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049242.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.10	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	4.1	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4133

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049242.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4133

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049242.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/04/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	9.36	1.8	J
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

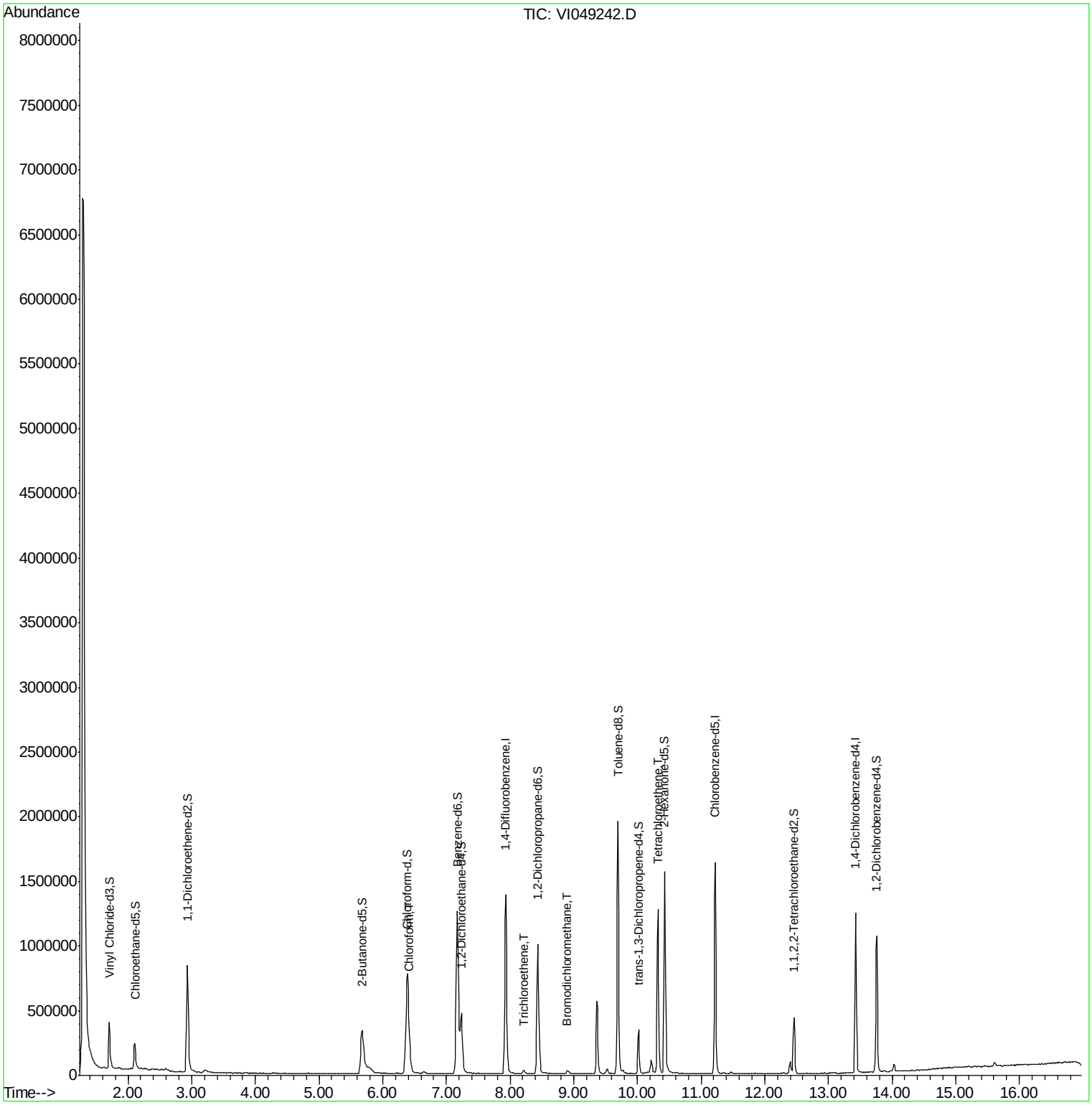
Quantitation Report (QT/LSC Reviewed)

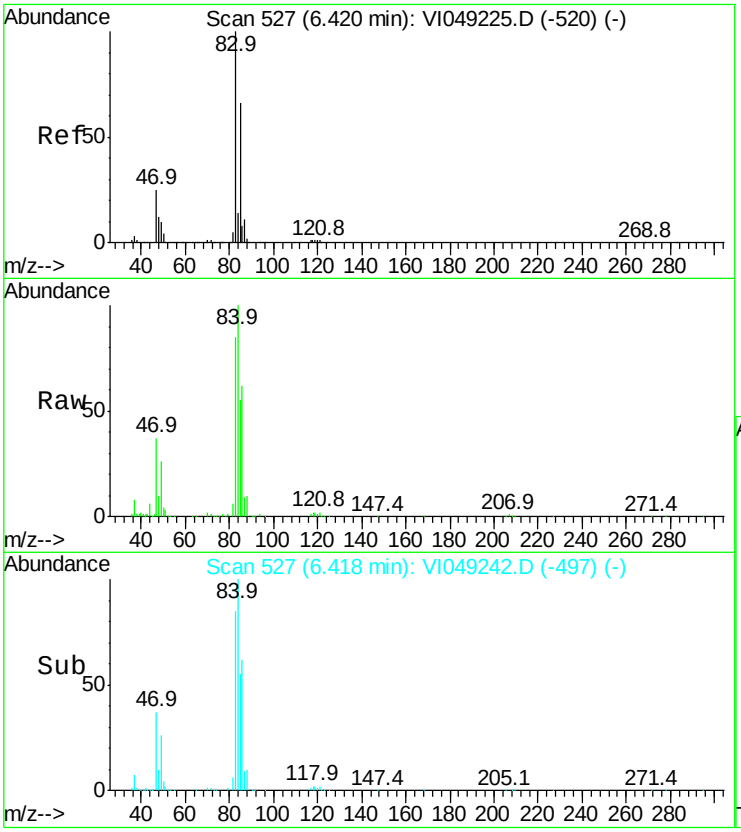
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049242.D
Acq On : 4 May 2016 23:40
Operator : FY/SY
Sample : H2834-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 05 06:55:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4133

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:20 AM

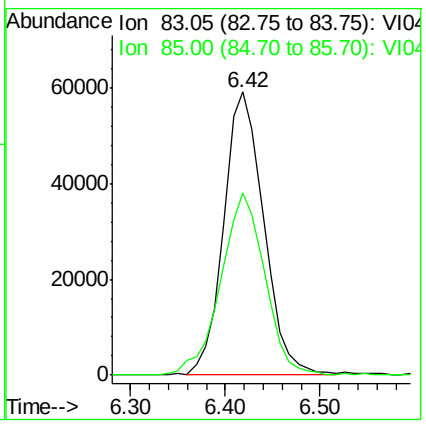




#25
Chloroform
Concen: 0.89 ug/L
RT: 6.42 min Scan# 527
Delta R.T. -0.00 min
Lab File: VI049242.D
Acq: 4 May 2016 23:40

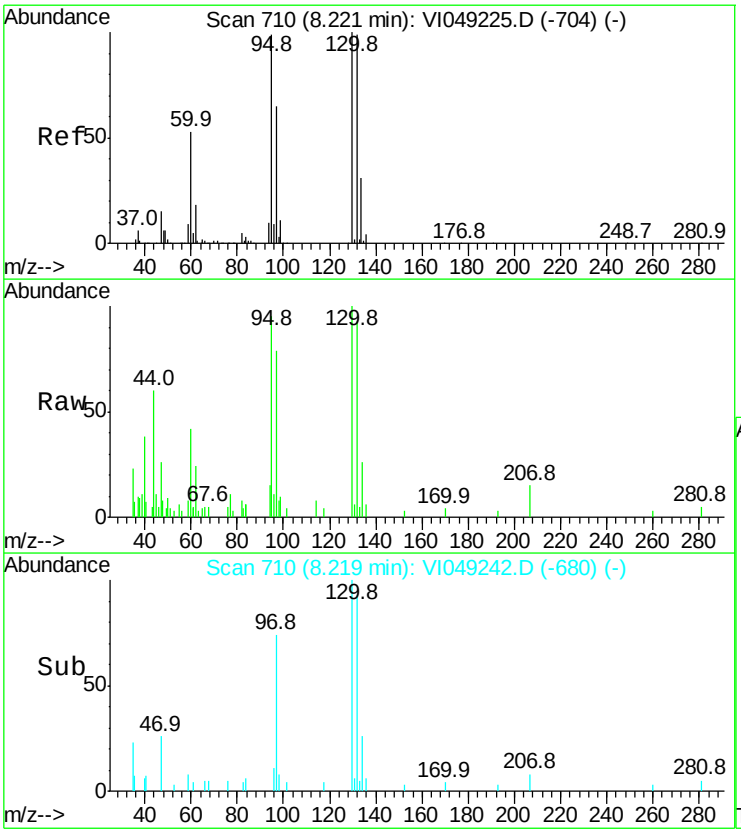
Tgt Ion: 83 Resp: 173197

Ion	Ratio	Lower	Upper
83	100		
85	64.2	47.3	87.8



Instrument :
MSVOA_I
ClientSampleId :
H4133

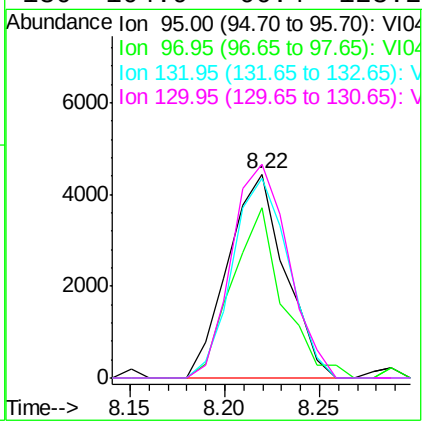
Manual Integrations APPROVED
mohammad
5/5/2016 9:01:20 AM

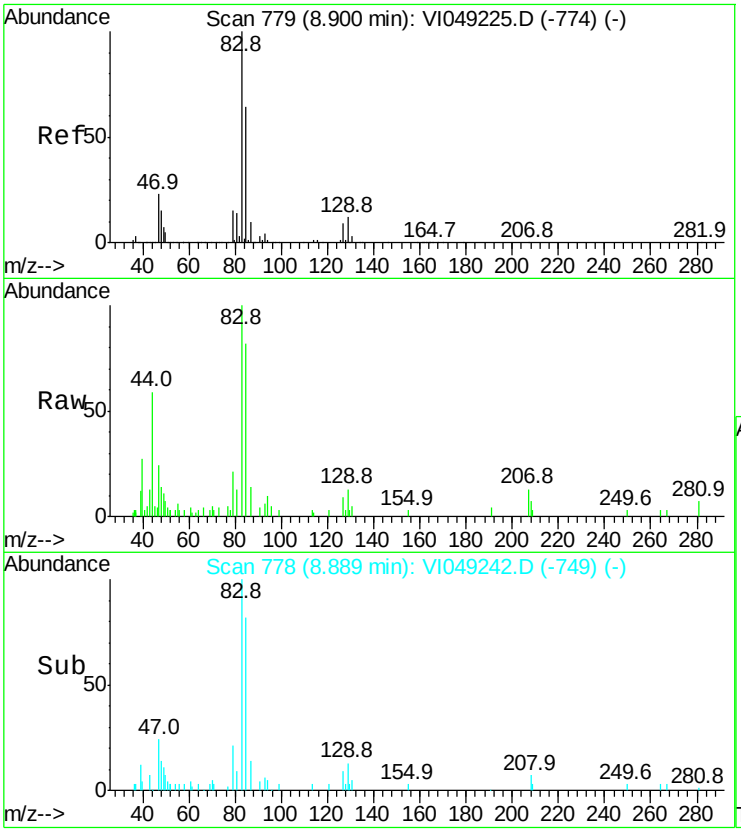


#34
Trichloroethene
Concen: 0.10 ug/L
RT: 8.22 min Scan# 710
Delta R.T. -0.00 min
Lab File: VI049242.D
Acq: 4 May 2016 23:40

Tgt Ion: 95 Resp: 9257

Ion	Ratio	Lower	Upper
95	100		
97	83.3	45.8	85.2
132	98.0	63.9	118.7
130	104.9	66.4	123.2

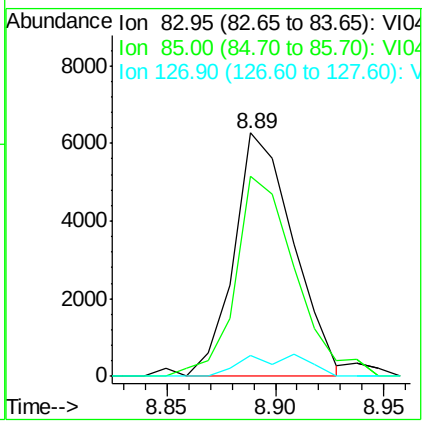




#38
Bromodichloromethane
Concen: 0.10 ug/L
RT: 8.89 min Scan# 778
Delta R.T. -0.01 min
Lab File: VI049242.D
Acq: 4 May 2016 23:40

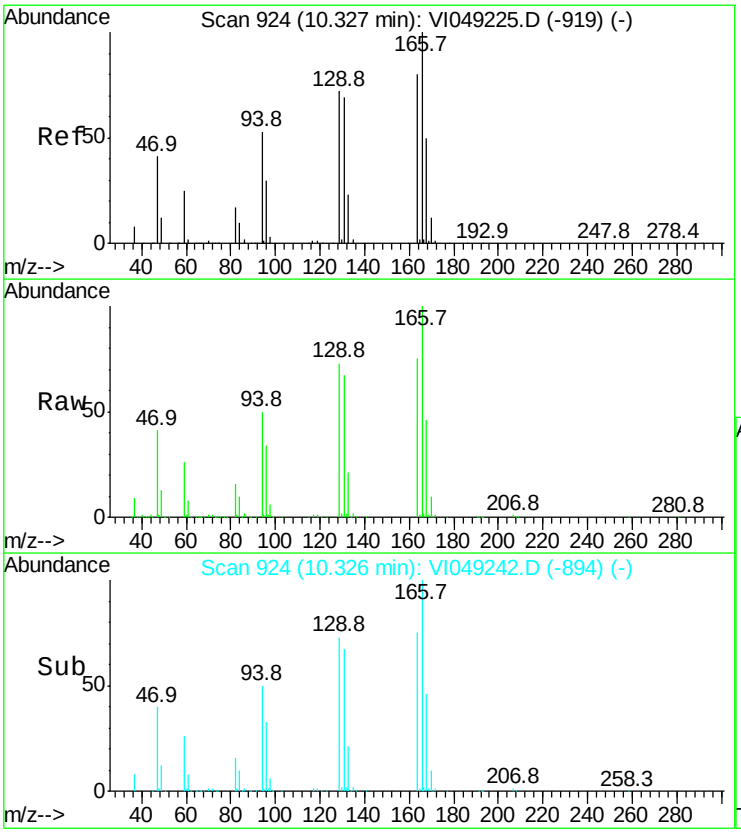
Tgt Ion: 83 Resp: 11941

Ion	Ratio	Lower	Upper
83	100		
85	82.3	44.7	83.1
127	8.5	6.6	9.8



Instrument :
MSVOA_I
ClientSampleId :
H4133

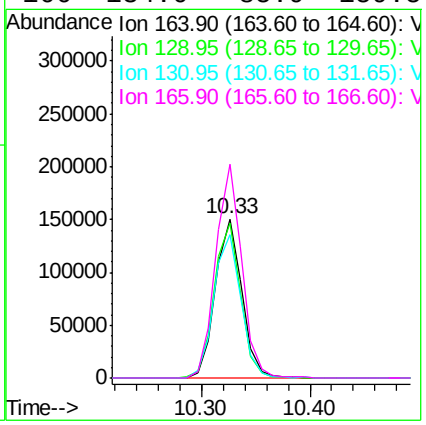
Manual Integrations APPROVED
mohammad
5/5/2016 9:01:20 AM



#47
Tetrachloroethene
Concen: 4.10 ug/L
RT: 10.33 min Scan# 924
Delta R.T. -0.00 min
Lab File: VI049242.D
Acq: 4 May 2016 23:40

Tgt Ion:164 Resp: 257031

Ion	Ratio	Lower	Upper
164	100		
129	97.2	62.1	115.3
131	90.0	60.6	112.6
166	134.0	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049242.D
Acq On : 4 May 2016 23:40
Operator : FY/SY
Sample : H2834-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 05 06:55:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4133

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:20 AM

Internal Standards		R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene		7.93	114	1212193	5.00	ug/L	0.00
28) Chlorobenzene-d5		11.22	117	802516	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4		13.44	152	282267	5.00	ug/L	0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3		1.70	65	370935	4.97	ug/L	0.00
Spiked Amount	5.000	Range	40 - 130	Recovery	=	99.40%	
7) Chloroethane-d5		2.11	69	229046m	5.54	ug/L	0.00
Spiked Amount	5.000	Range	65 - 130	Recovery	=	110.80%	
11) 1,1-Dichloroethene-d2		2.93	63	654302	3.72	ug/L	0.00
Spiked Amount	5.000	Range	60 - 125	Recovery	=	74.40%	
20) 2-Butanone-d5		5.68	46	854033	52.86	ug/L	0.00
Spiked Amount	50.000	Range	40 - 130	Recovery	=	105.72%	
24) Chloroform-d		6.38	84	937435	4.94	ug/L	-0.01
Spiked Amount	5.000	Range	70 - 125	Recovery	=	98.80%	
26) 1,2-Dichloroethane-d4		7.24	65	413028	5.32	ug/L	0.00
Spiked Amount	5.000	Range	70 - 130	Recovery	=	106.40%	
32) Benzene-d6		7.18	84	1629164	5.21	ug/L	0.00
Spiked Amount	5.000	Range	70 - 125	Recovery	=	104.20%	
36) 1,2-Dichloropropane-d6		8.44	67	454199	5.17	ug/L	0.00
Spiked Amount	5.000	Range	60 - 140	Recovery	=	103.40%	
41) Toluene-d8		9.70	98	1155830	5.01	ug/L	0.00
Spiked Amount	5.000	Range	70 - 130	Recovery	=	100.20%	
43) trans-1,3-Dichloropropene-		10.02	79	164043	4.74	ug/L	0.00
Spiked Amount	5.000	Range	55 - 130	Recovery	=	94.80%	
46) 2-Hexanone-d5		10.42	63	558375	51.11	ug/L	0.00
Spiked Amount	50.000	Range	45 - 130	Recovery	=	102.22%	
57) 1,1,2,2-Tetrachloroethane-		12.46	84	190718	4.77	ug/L	0.00
Spiked Amount	5.000	Range	65 - 120	Recovery	=	95.40%	
63) 1,2-Dichlorobenzene-d4		13.76	152	245887	4.97	ug/L	0.00
Spiked Amount	5.000	Range	80 - 120	Recovery	=	99.40%	
Target Compounds							Qvalue
25) Chloroform		6.42	83	173197	0.89	ug/L	96
34) Trichloroethene		8.22	95	9257	0.10	ug/L	88
38) Bromodichloromethane		8.89	83	11941	0.10	ug/L	79
47) Tetrachloroethene		10.33	164	257031	4.10	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049242.D
Acq On : 4 May 2016 23:40
Operator : FY/SY
Sample : H2834-10
Misc : 25mL/MSVOA I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4133

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.291	3	6	31	rVB	6717118	19150830	100.00%	34.828%
2	1.704	45	48	58	rBV	353433	591008	3.09%	1.075%
3	2.107	85	89	97	rBV	197647	414691	2.17%	0.754%
4	2.521	129	131	132	rVV2	6761	7397	0.04%	0.013%
5	2.590	136	138	146	rVB4	24898	66589	0.35%	0.121%
6	2.806	158	160	163	rVB3	7533	12016	0.06%	0.022%
7	2.934	168	173	188	rVB	824420	1857519	9.70%	3.378%
8	3.210	195	201	207	rBV2	17741	62016	0.32%	0.113%
9	3.328	212	213	216	rVB3	4902	6198	0.03%	0.011%
10	3.594	237	240	242	rVV3	5020	10220	0.05%	0.019%
11	3.682	246	249	251	rVB4	3266	6445	0.03%	0.012%
12	3.761	254	257	258	rBV3	4712	7202	0.04%	0.013%
13	3.840	261	265	266	rBV4	2938	5353	0.03%	0.010%
14	3.869	266	268	270	rVB3	4906	6949	0.04%	0.013%
15	3.948	273	276	278	rVB4	3395	5689	0.03%	0.010%
16	4.086	286	290	293	rBV5	2648	4419	0.02%	0.008%
17	4.125	293	294	298	rVB3	4744	6299	0.03%	0.011%
18	4.312	311	313	316	rVV4	2522	4403	0.02%	0.008%
19	4.460	325	328	331	rBV5	5002	7268	0.04%	0.013%
20	4.538	334	336	337	rBV2	5283	7182	0.04%	0.013%
21	4.834	364	366	368	rBV2	4668	5757	0.03%	0.010%
22	4.893	369	372	375	rVB4	5192	9320	0.05%	0.017%
23	4.971	377	380	383	rBV5	4147	6705	0.04%	0.012%
24	5.473	429	431	433	rBV3	2531	4345	0.02%	0.008%
25	5.542	435	438	439	rVB2	3173	4441	0.02%	0.008%
26	5.680	444	452	460	rBV	335171	1281806	6.69%	2.331%
27	6.143	496	499	501	rVB3	4035	7493	0.04%	0.014%
28	6.221	501	507	508	rBV4	4941	12808	0.07%	0.023%
29	6.389	516	524	545	rBV2	772085	2646136	13.82%	4.812%
30	6.645	547	550	558	rVB6	14324	45777	0.24%	0.083%
31	6.753	558	561	563	rBV4	2686	5092	0.03%	0.009%
32	6.812	565	567	568	rVB2	4716	4334	0.02%	0.008%
33	7.038	587	590	591	rBV	3414	5672	0.03%	0.010%
34	7.176	597	604	608	rBV	1255460	3530405	18.43%	6.421%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049242.D
Acq On : 4 May 2016 23:40
Operator : FY/SY
Sample : H2834-10
Misc : 25mL/MSVOA I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4133

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.235	608	610	620	rVB	460243	944286	4.93%	1.717%
36	7.501	635	637	639	rVB3	3669	5220	0.03%	0.009%
37	7.560	641	643	644	rVB2	3905	4322	0.02%	0.008%
38	7.619	646	649	650	rBV4	3956	5547	0.03%	0.010%
39	7.757	661	663	668	rVB4	4325	10059	0.05%	0.018%
40	7.826	668	670	675	rBV4	2289	5349	0.03%	0.010%
41	7.934	675	681	691	rBV	1384211	2949614	15.40%	5.364%
42	8.219	704	710	715	rVB3	27971	67444	0.35%	0.123%
43	8.357	723	724	726	rBV2	3816	5408	0.03%	0.010%
44	8.436	726	732	741	rBV	998793	2178129	11.37%	3.961%
45	8.544	741	743	745	rVV3	8778	16022	0.08%	0.029%
46	8.623	749	751	757	rVB7	4530	10592	0.06%	0.019%
47	8.711	757	760	762	rVB3	4458	7941	0.04%	0.014%
48	8.839	771	773	775	rVB3	4951	6728	0.04%	0.012%
49	8.898	775	779	785	rBV5	26737	84281	0.44%	0.153%
50	9.056	794	795	797	rBV2	3987	5629	0.03%	0.010%
51	9.223	810	812	815	rBV3	5136	7700	0.04%	0.014%
52	9.361	822	826	834	rVV	559000	1061783	5.54%	1.931%
53	9.528	838	843	846	rVV	37697	76907	0.40%	0.140%
54	9.578	846	848	851	rVV3	4230	6426	0.03%	0.012%
55	9.696	855	860	865	rVV	1955283	3361771	17.55%	6.114%
56	9.774	866	868	873	rVV2	25005	50566	0.26%	0.092%
57	9.892	877	880	881	rVV3	4918	6485	0.03%	0.012%
58	10.020	888	893	900	rBV	340117	602870	3.15%	1.096%
59	10.119	900	903	904	rVV3	6086	9785	0.05%	0.018%
60	10.217	904	913	917	rVV	103094	251755	1.31%	0.458%
61	10.326	919	924	930	rVV	1272649	2245165	11.72%	4.083%
62	10.424	930	934	949	rVV	1558467	3000294	15.67%	5.456%
63	10.601	951	952	954	rVV2	7293	10057	0.05%	0.018%
64	10.640	954	956	958	rVB3	4885	6757	0.04%	0.012%
65	10.700	960	962	964	rVB3	3397	4466	0.02%	0.008%
66	10.955	986	988	991	rVB4	3565	5833	0.03%	0.011%
67	11.014	991	994	996	rBV3	2344	4382	0.02%	0.008%
68	11.142	1005	1007	1010	rVB4	2447	5121	0.03%	0.009%
69	11.221	1010	1015	1024	rBV	1638226	2808998	14.67%	5.109%
70	11.359	1026	1029	1031	rVB3	9867	17914	0.09%	0.033%
71	11.467	1037	1040	1045	rBV5	13587	24734	0.13%	0.045%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049242.D
Acq On : 4 May 2016 23:40
Operator : FY/SY
Sample : H2834-10
Misc : 25mL/MSVOA I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4133

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.605	1052	1054	1057	rVB4	3490	5988	0.03%	0.011%
73	11.822	1073	1076	1077	rBV3	5067	7882	0.04%	0.014%
74	11.851	1077	1079	1086	rVB5	6870	18710	0.10%	0.034%
75	12.058	1096	1100	1102	rBV4	3591	8323	0.04%	0.015%
76	12.097	1102	1104	1106	rVB3	4421	4750	0.02%	0.009%
77	12.136	1106	1108	1111	rBV3	3940	7116	0.04%	0.013%
78	12.195	1111	1114	1118	rBV4	3794	8009	0.04%	0.015%
79	12.255	1118	1120	1122	rBV3	4806	8165	0.04%	0.015%
80	12.284	1122	1123	1128	rVB5	7638	14695	0.08%	0.027%
81	12.402	1128	1135	1138	rBV2	95126	195055	1.02%	0.355%
82	12.461	1138	1141	1148	rVB	433773	705234	3.68%	1.283%
83	12.609	1152	1156	1158	rVB5	3396	6293	0.03%	0.011%
84	12.658	1158	1161	1162	rBV3	3848	5027	0.03%	0.009%
85	12.894	1182	1185	1188	rVB3	5326	7356	0.04%	0.013%
86	12.943	1188	1190	1192	rBV3	3868	7054	0.04%	0.013%
87	13.052	1199	1201	1202	rBV2	3239	5045	0.03%	0.009%
88	13.121	1207	1208	1212	rVB4	4346	4477	0.02%	0.008%
89	13.367	1230	1233	1235	rBV4	3731	10182	0.05%	0.019%
90	13.426	1235	1239	1245	rBV	1232941	2109247	11.01%	3.836%
91	13.623	1255	1259	1260	rVB3	4849	9093	0.05%	0.017%
92	13.652	1260	1262	1263	rBV2	5454	7442	0.04%	0.014%
93	13.682	1263	1265	1267	rVB3	4684	6211	0.03%	0.011%
94	13.760	1268	1273	1280	rVV	1050324	1912324	9.99%	3.478%
95	13.869	1282	1284	1285	rBV2	4814	7387	0.04%	0.013%
96	13.977	1293	1295	1297	rBV3	6737	14518	0.08%	0.026%
97	14.026	1297	1300	1304	rVB2	56427	113335	0.59%	0.206%
98	14.312	1327	1329	1332	rBV4	7222	12308	0.06%	0.022%
99	15.611	1457	1461	1464	rBV2	28128	56871	0.30%	0.103%
100	15.965	1494	1497	1498	rBV3	12615	22091	0.12%	0.040%

Sum of corrected areas: 54986312

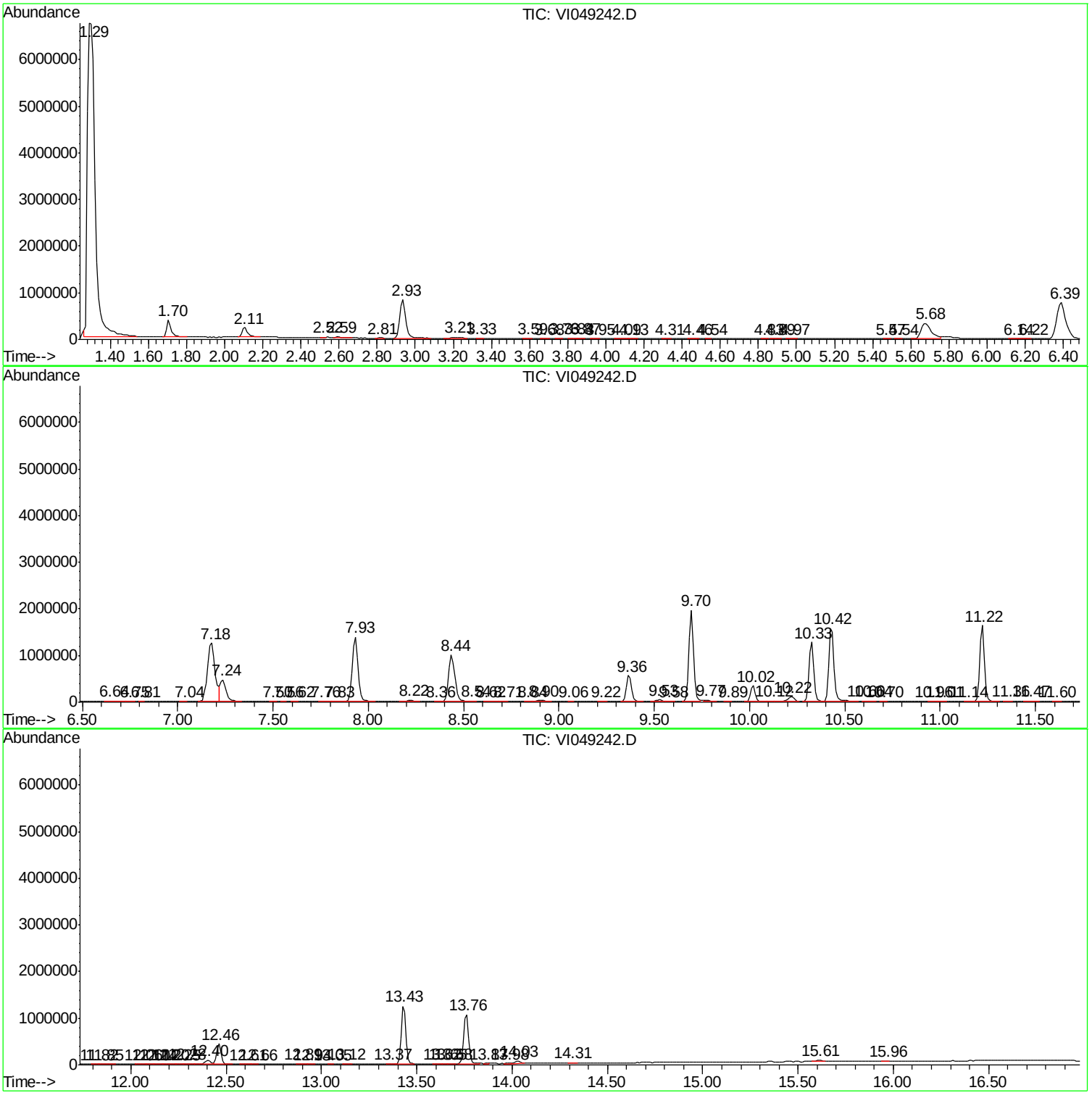
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049242.D
Acq On : 4 May 2016 23:40
Operator : FY/SY
Sample : H2834-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4133

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049242.D
Acq On : 4 May 2016 23:40
Operator : FY/SY
Sample : H2834-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4133

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

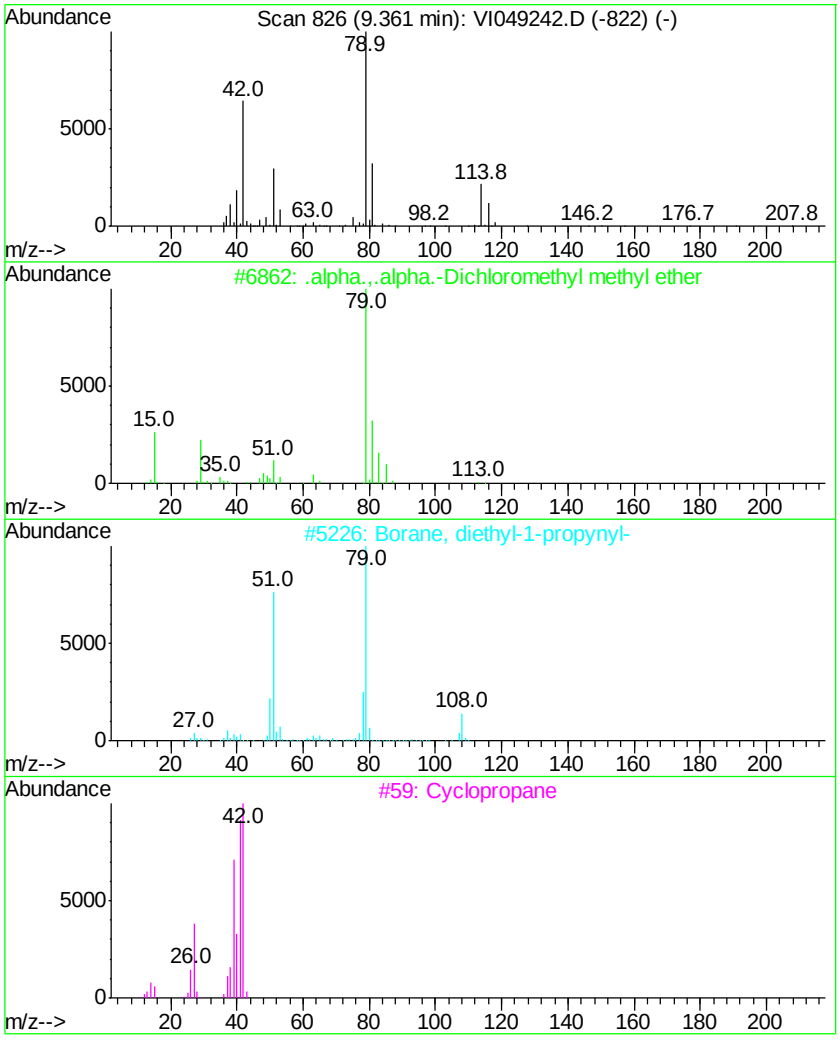
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

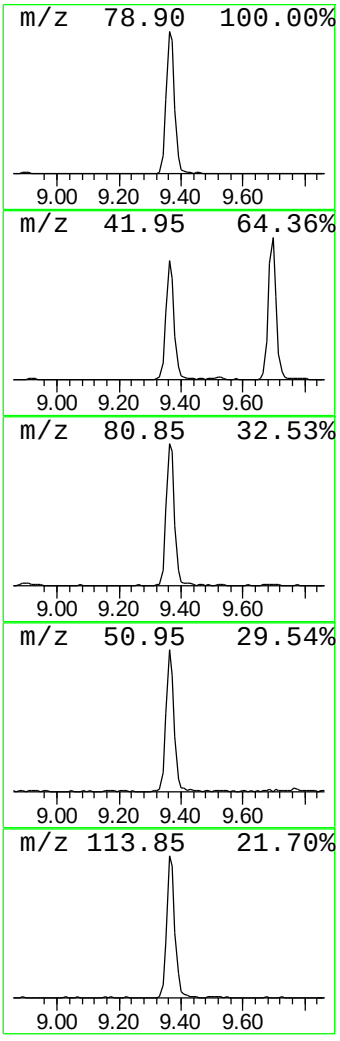
****

Peak Number 2 unknown-01 Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.36	1.80 ug/L	1061780	1,4-Difluorobenzene	7.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	.alpha.,.alpha.-Dichloromethyl m...	114	C2H4Cl2O	004885-02-3	9
2	Borane, diethyl-1-propynyl-	108	C7H13B	022405-32-9	9
3	Cyclopropane	42	C3H6	000075-19-4	9
4	Cyclopropane	42	C3H6	000075-19-4	9
5	.beta.-Butyrolactone	86	C4H6O2	003068-88-0	7





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049242.D
Acq On : 4 May 2016 23:40
Operator : FY/SY
Sample : H2834-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4133

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
unknown-01	9.36	1.8	ug/L	1061780	1	7.93	2949610	5.0

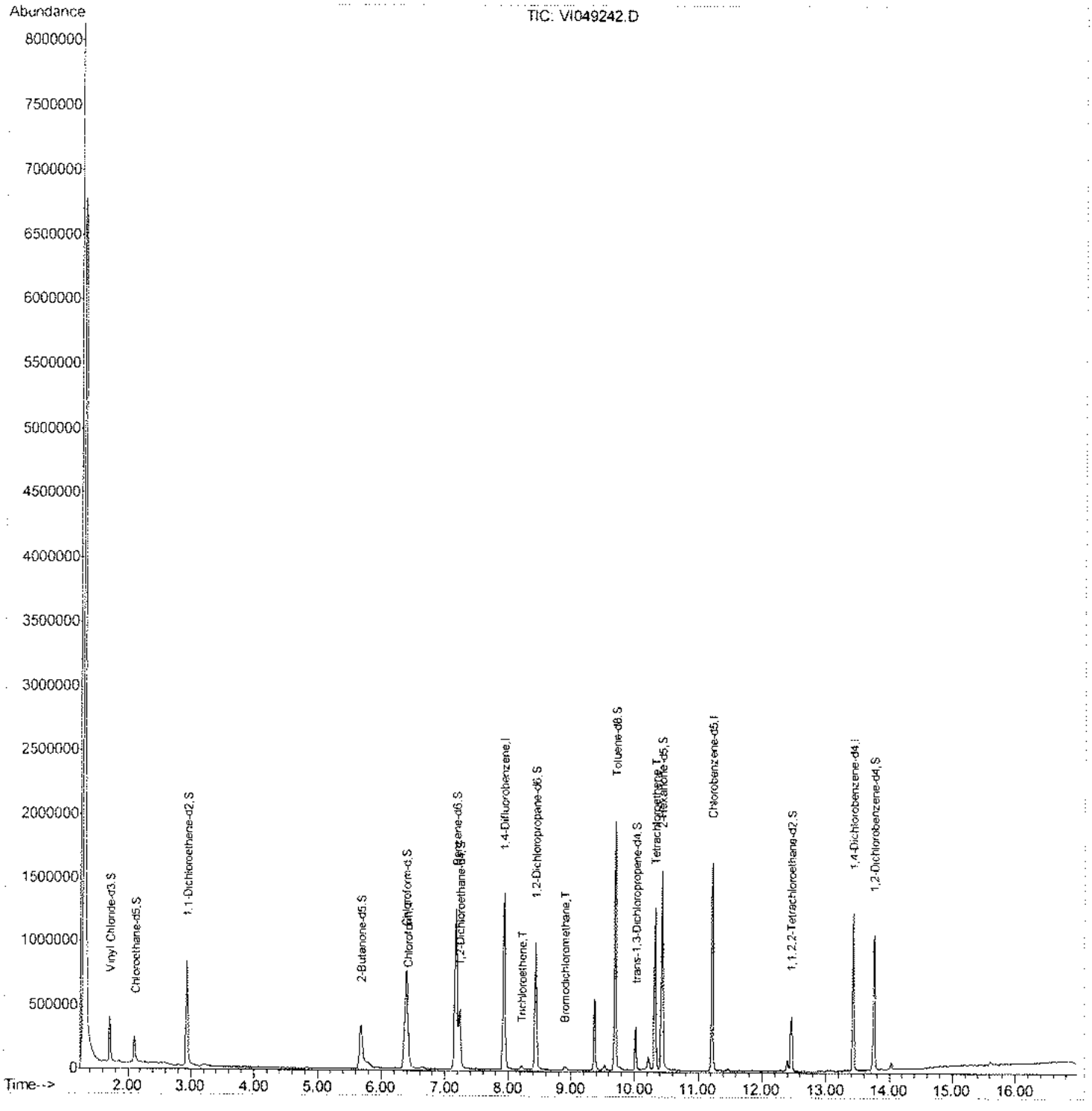
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049242.D
Acq On : 4 May 2016 23:40
Operator : FY/SY
Sample : H2834-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 05 06:55:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4133

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:20 AM



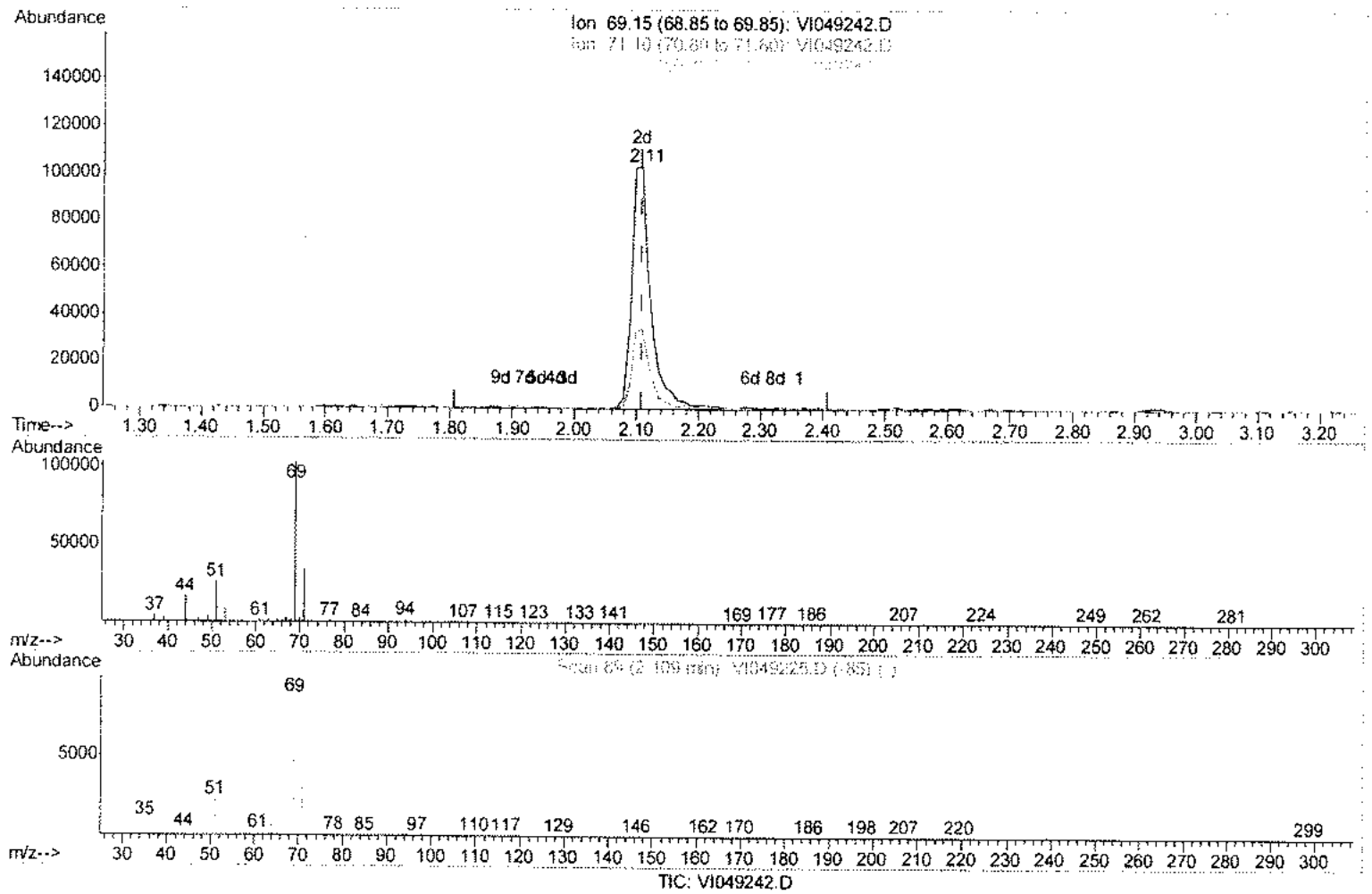
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049242.D
Acq On : 4 May 2016 23:40
Operator : FY/SY
Sample : H2834-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 05 05:25:01 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4133

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:20 AM



TIC: VI049242.D

(7) Chloroethane-d5 (S)

2.107min (-0.001) 5.54ug/L m

response 229046

M.D 05/07/16

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.18#
51.05	32.70	0.14#
0.00	0.00	0.00

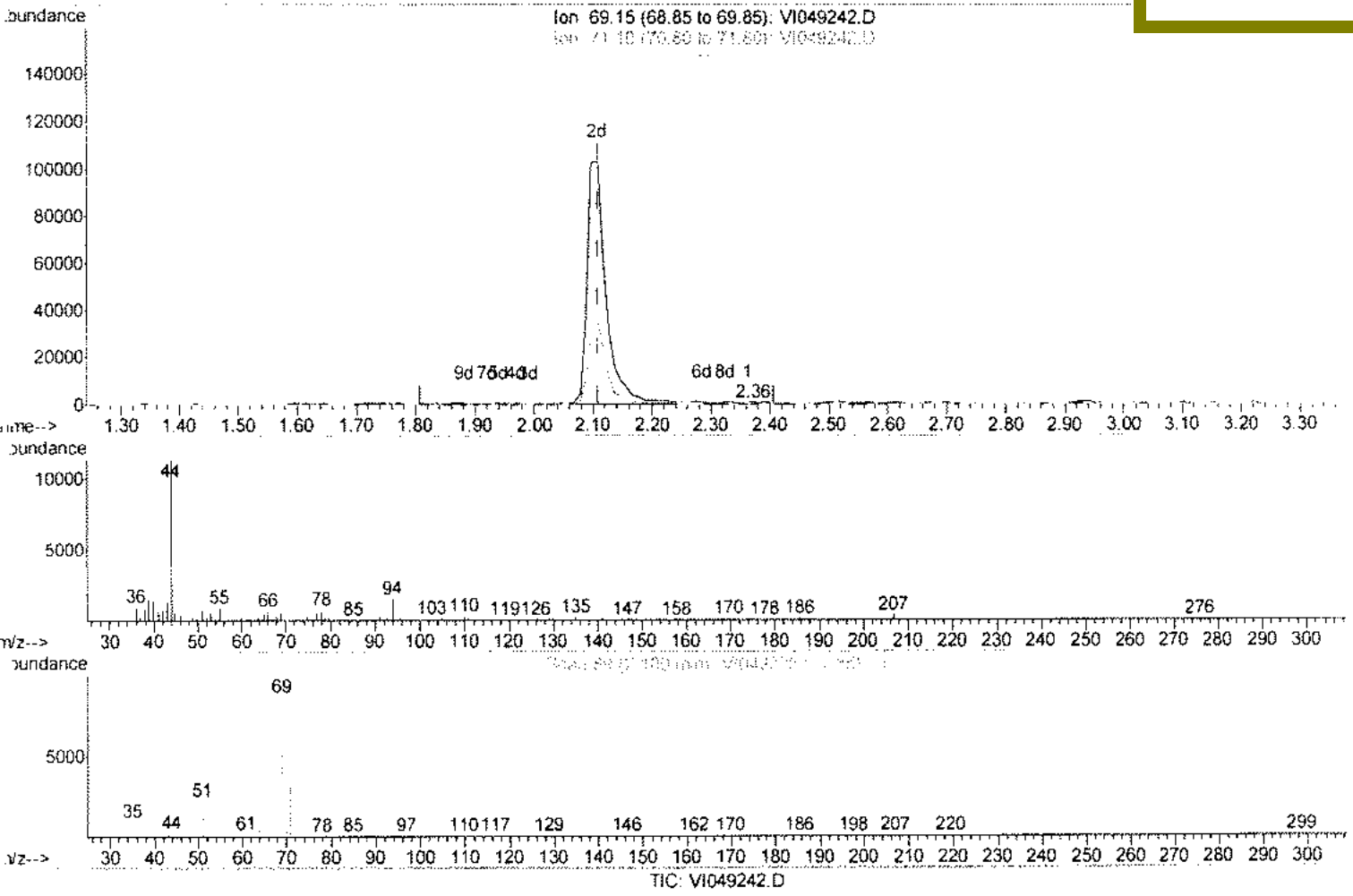
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049242.D
Acq On : 4 May 2016 23:40
Operator : FY/SY
Sample : H2834-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 05 05:25:01 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4133

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:20 AM



(7) Chloroethane-d5 (S)

2.363min (+0.255) 0.02ug/L

response 1016

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	41.24
51.05	32.70	30.61
0.00	0.00	0.00

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049242.D
Acq On : 4 May 2016 23:40
Operator : FY/SY
Sample : H2834-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 05 06:55:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4133

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:20 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1212193	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	802516	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	282267	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	370935	4.97	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 99.40%			
7) Chloroethane-d5	2.11	69	229046m	5.54	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 110.80%			
11) 1,1-Dichloroethene-d2	2.93	63	654302	3.72	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 74.40%			
20) 2-Butanone-d5	5.68	46	854033	52.86	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 105.72%			
24) Chloroform-d	6.38	84	937435	4.94	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.80%			
26) 1,2-Dichloroethane-d4	7.24	65	413028	5.32	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 106.40%			
32) Benzene-d6	7.18	84	1629164	5.21	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.20%			
36) 1,2-Dichloropropane-d6	8.44	67	454199	5.17	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 103.40%			
41) Toluene-d8	9.70	98	1155830	5.01	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.20%			
43) trans-1,3-Dichloropropene-	10.02	79	164043	4.74	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 94.80%			
46) 2-Hexanone-d5	10.42	63	558375	51.11	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 102.22%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	190718	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.40%			
63) 1,2-Dichlorobenzene-d4	13.76	152	245887	4.97	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 99.40%			
Target Compounds						Qvalue
25) Chloroform	6.42	83	173197	0.89	ug/L	96
34) Trichloroethene	8.22	95	9257	0.10	ug/L	88
38) Bromodichloromethane	8.89	83	11941	0.10	ug/L	79
47) Tetrachloroethene	10.33	164	257031	4.10	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FM.D 05/07/16

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method : Trace VOA Level :

Instrument ID: MSVOA_I Calibration Date(s): 05/04/2016 05/04/2016

GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 11:27 13:33

Length : 30 (m)

Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VI049220.D RRF1.0 = VI049221.D
RRF5.0 = VI049222.D RRF10 = VI049223.D RRF20 = VI049224.D

ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.538	0.547	0.574	0.556	0.601	0.563	4.4
Chloromethane	0.493	0.504	0.475	0.470	0.469	0.482	3.2
Vinyl chloride	0.321	0.358	0.339	0.328	0.340	0.337	4.1
Bromomethane	0.200	0.198	0.157	0.144	0.117	0.163	22
Chloroethane	0.146	0.171	0.149	0.134	0.120	0.144	13.2
Trichlorofluoromethane	0.468	0.496	0.470	0.459	0.462	0.471	3.1
1,1-Dichloroethene	0.384	0.433	0.405	0.395	0.401	0.404	4.6
1,1,2-Trichloro-1,2,2-trifluoroetha	0.416	0.419	0.439	0.421	0.461	0.431	4.4
Acetone	0.042	0.036	0.041	0.043	0.045	0.041	8.1
Carbon disulfide	1.391	1.508	1.497	1.445	1.477	1.463	3.2
Methyl Acetate	0.106	0.118	0.119	0.120	0.127	0.118	6.6
Methylene chloride	0.439	0.475	0.440	0.425	0.446	0.445	4.1
trans-1,2-Dichloroethene	0.423	0.465	0.449	0.431	0.462	0.446	4.2
Methyl tert-butyl Ether	0.679	0.759	0.754	0.720	0.775	0.737	5.2
1,1-Dichloroethane	0.720	0.797	0.761	0.728	0.775	0.756	4.2
cis-1,2-Dichloroethene	0.440	0.472	0.458	0.444	0.480	0.459	3.8
2-Butanone	0.066	0.070	0.079	0.077	0.082	0.075	8.8
Bromochloromethane	0.181	0.188	0.184	0.178	0.189	0.184	2.6
Chloroform	0.778	0.854	0.803	0.771	0.815	0.804	4.1
1,1,1-Trichloroethane	0.896	1.076	0.958	0.890	0.926	0.949	8
Cyclohexane	0.783	0.891	0.849	0.799	0.865	0.837	5.4
Carbon tetrachloride	0.773	0.908	0.846	0.793	0.827	0.829	6.3
Benzene	2.033	2.369	2.170	2.042	2.090	2.141	6.5
1,2-Dichloroethane	0.386	0.427	0.406	0.391	0.417	0.405	4.2
Trichloroethene	0.569	0.665	0.592	0.553	0.591	0.594	7.3
Methylcyclohexane	0.681	0.714	0.757	0.722	0.791	0.733	5.8
1,2-Dichloropropane	0.476	0.549	0.505	0.480	0.500	0.502	5.8
Bromodichloromethane	0.669	0.810	0.737	0.698	0.744	0.732	7.3
cis-1,3-Dichloropropene	0.669	0.828	0.743	0.702	0.757	0.740	8.1
4-Methyl-2-pentanone	0.240	0.286	0.271	0.250	0.245	0.258	7.4
Toluene	1.676	1.953	1.825	1.770	1.806	1.806	5.6
trans-1,3-Dichloropropene	0.505	0.582	0.575	0.564	0.609	0.567	6.8

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method : Trace VOA Level :

Instrument ID: MSVOA_I Calibration Date(s): 05/04/2016 05/04/2016

GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 11:27 13:33

Length : 30 (m)

Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VI049220.D RRF1.0 = VI049221.D
RRF5.0 = VI049222.D RRF10 = VI049223.D RRF20 = VI049224.D

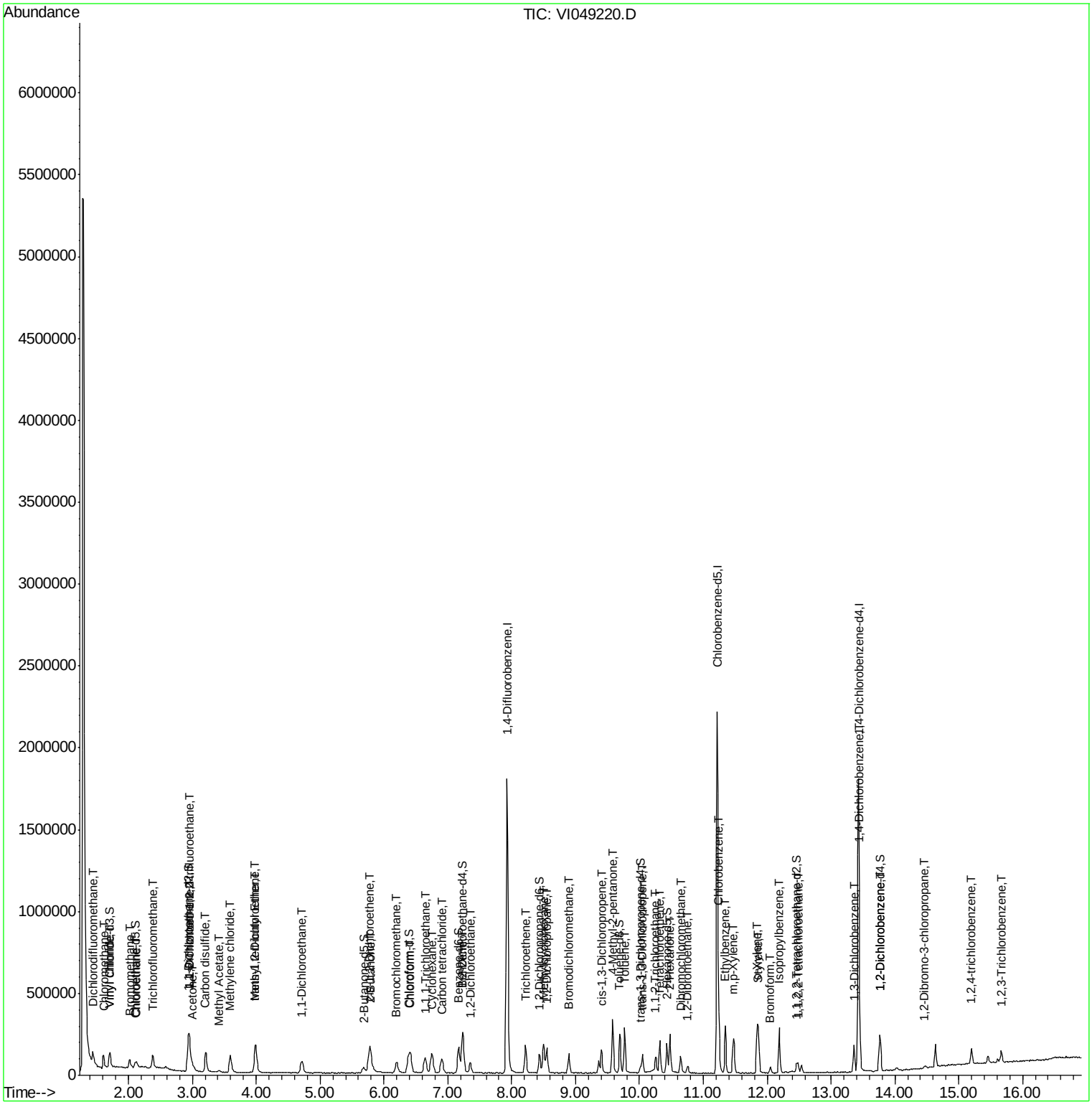
ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
1,1,2-Trichloroethane	0.231	0.272	0.264	0.256	0.281	0.261	7.3
Tetrachloroethene	0.370	0.406	0.388	0.379	0.408	0.390	4.3
2-Hexanone	0.152	0.188	0.178	0.170	0.176	0.173	7.6
Dibromochloromethane	0.329	0.406	0.402	0.395	0.436	0.393	10
1,2-Dibromoethane	0.238	0.287	0.280	0.264	0.292	0.272	8.1
Chlorobenzene	1.011	1.096	1.100	1.067	1.142	1.083	4.5
Ethylbenzene	1.706	1.812	1.947	1.894	1.973	1.866	5.8
o-Xylene	0.558	0.568	0.655	0.656	0.742	0.636	11.9
m,p-Xylene	0.591	0.626	0.704	0.699	0.780	0.680	10.8
Styrene	0.868	0.950	1.112	1.111	1.232	1.055	13.7
Bromoform	0.390	0.501	0.470	0.466	0.504	0.466	9.9
Isopropylbenzene	1.439	1.487	1.741	1.740	1.833	1.648	10.6
1,1,2,2-Tetrachloroethane	0.238	0.235	0.251	0.248	0.287	0.252	8.2
1,3-Dichlorobenzene	1.574	1.685	1.711	1.692	1.820	1.696	5.1
1,4-Dichlorobenzene	1.707	1.775	1.689	1.715	1.825	1.742	3.2
1,2-Dichlorobenzene	1.294	1.371	1.411	1.406	1.545	1.405	6.5
1,2-Dibromo-3-chloropropane	0.065	0.110	0.078	0.082	0.092	0.086	19.7
1,2,4-trichlorobenzene	0.732	0.603	0.766	0.760	0.892	0.751	13.7
1,2,3-Trichlorobenzene	0.568	0.460	0.549	0.552	0.649	0.556	12.1
Vinyl Chloride-d3	0.303	0.324	0.307	0.316	0.289	0.308	4.3
Chloroethane-d5	0.188	0.202	0.174	0.164	0.124	0.170	17.4
1,1-Dichloroethene-d2	0.713	0.755	0.738	0.729	0.691	0.725	3.4
2-Butanone-d5	0.051	0.066	0.072	0.074	0.071	0.067	13.8
Chloroform-d	0.737	0.815	0.799	0.802	0.761	0.783	4.2
1,2-Dichloroethane-d4	0.312	0.337	0.329	0.325	0.299	0.320	4.7
Benzene-d6	1.834	2.173	2.000	1.949	1.783	1.948	7.9
1,2-Dichloropropane-d6	0.519	0.607	0.558	0.545	0.509	0.548	7
Toluene-d8	1.341	1.543	1.488	1.459	1.354	1.437	6.1
trans-1,3-Dichloropropene-d4	0.181	0.227	0.226	0.226	0.219	0.216	9.2
2-Hexanone-d5	0.055	0.072	0.071	0.071	0.071	0.068	10.6
1,1,2,2-Tetrachloroethane-d2	0.218	0.235	0.256	0.263	0.274	0.249	9
1,2-Dichlorobenzene-d4	0.859	0.849	0.869	0.912	0.893	0.877	2.9

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049220.D
Acq On : 4 May 2016 11:27
Operator : FY/SY
Sample : VSTD0.533
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD0.533

Quant Time: May 04 12:54:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049220.D
Acq On : 4 May 2016 11:27
Operator : FY/SY
Sample : VSTD0.533
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD0.533

Quant Time: May 04 12:54:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1583520	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.22	117	1071757	5.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	393159	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	1.70	65	47940	0.56	ug/L		-0.01
7) Chloroethane-d5	2.09	69	29838	0.59	ug/L		-0.01
11) 1,1-Dichloroethene-d2	2.93	63	112957	0.52	ug/L		0.00
20) 2-Butanone-d5	5.69	46	80851	4.28	ug/L		0.02
24) Chloroform-d	6.38	84	116714	0.48	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.23	65	49329	0.51	ug/L		0.00
32) Benzene-d6	7.17	84	196516	0.49	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.44	67	55574	0.48	ug/L		0.00
41) Toluene-d8	9.69	98	143683	0.46	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.02	79	19375	0.41	ug/L		0.00
46) 2-Hexanone-d5	10.43	63	59088	3.89	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	23375	0.38	ug/L		0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	33778	0.45	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.44	85	85244	0.57	ug/L		97
3) Chloromethane	1.61	50	78014	0.61	ug/L		98
5) Vinyl chloride	1.71	62	50865	0.57	ug/L		94
6) Bromomethane	2.02	94	31645	0.69	ug/L		99
8) Chloroethane	2.12	64	23186	0.57	ug/L		95
9) Trichlorofluoromethane	2.38	101	74151	0.61	ug/L		99
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	65845	0.57	ug/L		97
12) 1,1-Dichloroethene	2.95	96	60731	0.51	ug/L		95
13) Acetone	3.01	43	65787	6.14	ug/L		92
14) Carbon disulfide	3.21	76	220279	0.50	ug/L		97
15) Methyl Acetate	3.41	43	16711	0.50	ug/L		94
16) Methylene chloride	3.59	84	69501	0.53	ug/L		92
17) Methyl tert-butyl Ether	3.98	73	107503	0.50	ug/L		99
18) trans-1,2-Dichloroethene	3.99	96	66984	0.50	ug/L		92
19) 1,1-Dichloroethane	4.71	63	113985	0.52	ug/L		96
21) 2-Butanone	5.79	43	105165	5.28	ug/L		95
22) cis-1,2-Dichloroethene	5.77	96	69641	0.49	ug/L		82
23) Bromochloromethane	6.21	128	28643	0.53	ug/L		92
25) Chloroform	6.41	83	123168	0.51	ug/L		95
27) 1,2-Dichloroethane	7.36	62	61137	0.51	ug/L	#	92
29) 1,1,1-Trichloroethane	6.64	97	96055	0.54	ug/L		97
30) Cyclohexane	6.75	56	83902	0.58	ug/L		100
31) Carbon tetrachloride	6.91	117	82897	0.55	ug/L		96
33) Benzene	7.23	78	217861	0.52	ug/L		100
34) Trichloroethene	8.22	95	60940	0.52	ug/L		92
35) Methylcyclohexane	8.50	83	72953	0.54	ug/L		96
37) 1,2-Dichloropropane	8.55	63	51040	0.50	ug/L	#	97
38) Bromodichloromethane	8.89	83	71718	0.49	ug/L		98
39) cis-1,3-Dichloropropene	9.41	75	71745	0.48	ug/L		99
40) 4-Methyl-2-pentanone	9.58	43	257723	4.99	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049220.D
Acq On : 4 May 2016 11:27
Operator : FY/SY
Sample : VSTD0.533
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD0.533

Quant Time: May 04 12:54:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.77	91	179579	0.47	ug/L		98
44) trans-1,3-Dichloropropene	10.05	75	54124	0.45	ug/L		94
45) 1,1,2-Trichloroethane	10.25	97	24736	0.43	ug/L		92
47) Tetrachloroethene	10.32	164	39614	0.49	ug/L		93
48) 2-Hexanone	10.48	43	163129	4.52	ug/L		99
49) Dibromochloromethane	10.65	129	35222	0.43	ug/L		99
50) 1,2-Dibromoethane	10.75	107	25463	0.43	ug/L		99
51) Chlorobenzene	11.25	112	108303	0.46	ug/L		99
52) Ethylbenzene	11.34	91	182792	0.45	ug/L		98
53) m,p-Xylene	11.47	106	63389	0.42	ug/L		95
54) o-Xylene	11.85	106	59773	0.42	ug/L		100
55) Styrene	11.87	104	93024	0.39	ug/L		92
56) Isopropylbenzene	12.19	105	154217	0.42	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.49	83	25473	0.43	ug/L		86
60) Bromoform	12.05	173	15337	0.44	ug/L	#	97
61) 1,3-Dichlorobenzene	13.36	146	61886	0.46	ug/L		95
62) 1,4-Dichlorobenzene	13.45	146	67101	0.48	ug/L		94
64) 1,2-Dichlorobenzene	13.78	146	50866	0.44	ug/L		90
65) 1,2-Dibromo-3-chloropropan	14.47	75	2575	0.38	ug/L	#	76
66) 1,2,4-trichlorobenzene	15.20	180	28774	0.43	ug/L		98
67) 1,2,3-Trichlorobenzene	15.67	180	22326	0.44	ug/L		94

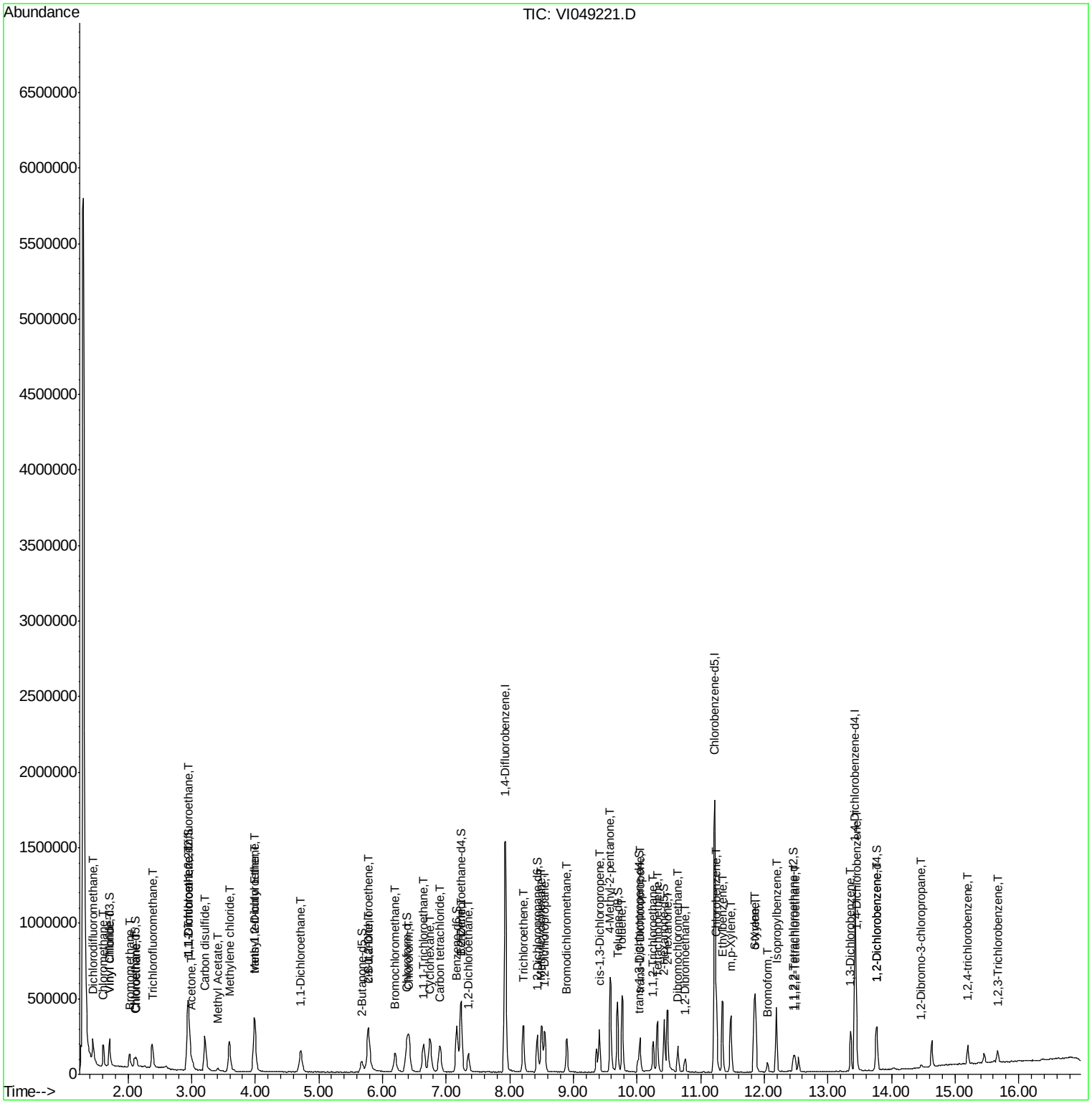
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049221.D
Acq On : 4 May 2016 11:58
Operator : FY/SY
Sample : VSTD00134
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00134

Quant Time: May 04 12:54:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049221.D
Acq On : 4 May 2016 11:58
Operator : FY/SY
Sample : VSTD00134
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00134

Quant Time: May 04 12:54:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1425657	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	907600	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	278770	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	92417	1.21	ug/L	0.00
7) Chloroethane-d5	2.11	69	57615	1.26	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	215352	1.11	ug/L	0.00
20) 2-Butanone-d5	5.67	46	187185	11.00	ug/L	0.00
24) Chloroform-d	6.38	84	232456	1.06	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.24	65	96053	1.10	ug/L	0.00
32) Benzene-d6	7.17	84	394446	1.16	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.44	67	110173	1.13	ug/L	0.00
41) Toluene-d8	9.70	98	280045	1.05	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	41222	1.03	ug/L	0.00
46) 2-Hexanone-d5	10.42	63	130255	10.11	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	42601	0.83	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	47353	0.90	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	156022	1.16	ug/L	96
3) Chloromethane	1.61	50	143674	1.25	ug/L	98
5) Vinyl chloride	1.71	62	101996	1.27	ug/L	99
6) Bromomethane	2.03	94	56541	1.37	ug/L	98
8) Chloroethane	2.13	64	48739	1.34	ug/L	99
9) Trichlorofluoromethane	2.38	101	141354	1.29	ug/L	97
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	119467	1.15	ug/L	97
12) 1,1-Dichloroethene	2.95	96	123513	1.15	ug/L	91
13) Acetone	3.00	43	103310	10.71	ug/L	90
14) Carbon disulfide	3.21	76	429844	1.08	ug/L	100
15) Methyl Acetate	3.42	43	33612	1.12	ug/L	97
16) Methylene chloride	3.59	84	135396	1.14	ug/L	96
17) Methyl tert-butyl Ether	3.99	73	216315	1.13	ug/L	99
18) trans-1,2-Dichloroethene	3.99	96	132532	1.09	ug/L	94
19) 1,1-Dichloroethane	4.72	63	227155	1.15	ug/L	100
21) 2-Butanone	5.79	43	198667	11.09	ug/L	99
22) cis-1,2-Dichloroethene	5.77	96	134700	1.06	ug/L	98
23) Bromochloromethane	6.20	128	53734	1.11	ug/L	94
25) Chloroform	6.42	83	243369	1.12	ug/L	95
27) 1,2-Dichloroethane	7.35	62	121724	1.14	ug/L	99
29) 1,1,1-Trichloroethane	6.64	97	195365	1.29	ug/L	98
30) Cyclohexane	6.75	56	161808	1.32	ug/L	97
31) Carbon tetrachloride	6.90	117	164739	1.30	ug/L	99
33) Benzene	7.24	78	429953	1.21	ug/L	100
34) Trichloroethene	8.21	95	120761	1.21	ug/L	98
35) Methylcyclohexane	8.49	83	129531	1.14	ug/L	95
37) 1,2-Dichloropropane	8.54	63	99691	1.15	ug/L	98
38) Bromodichloromethane	8.90	83	147018	1.18	ug/L	95
39) cis-1,3-Dichloropropene	9.41	75	150303	1.18	ug/L	99
40) 4-Methyl-2-pentanone	9.58	43	518603	11.86	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049221.D
Acq On : 4 May 2016 11:58
Operator : FY/SY
Sample : VSTD00134
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00134

Quant Time: May 04 12:54:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.76	91	354465	1.11	ug/L		98
44) trans-1,3-Dichloropropene	10.05	75	105643	1.04	ug/L		98
45) 1,1,2-Trichloroethane	10.26	97	49376	1.00	ug/L		96
47) Tetrachloroethene	10.33	164	73746	1.08	ug/L		97
48) 2-Hexanone	10.47	43	341156	11.16	ug/L		93
49) Dibromochloromethane	10.64	129	73641	1.05	ug/L		94
50) 1,2-Dibromoethane	10.76	107	52051	1.03	ug/L		94
51) Chlorobenzene	11.25	112	198885	1.00	ug/L		97
52) Ethylbenzene	11.35	91	328935	0.95	ug/L		97
53) m,p-Xylene	11.48	106	113672	0.89	ug/L		100
54) o-Xylene	11.84	106	103152	0.86	ug/L		92
55) Styrene	11.86	104	172395	0.86	ug/L		98
56) Isopropylbenzene	12.20	105	269919	0.87	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.48	83	42726	0.85	ug/L		96
60) Bromoform	12.05	173	27954	1.14	ug/L		98
61) 1,3-Dichlorobenzene	13.36	146	93938	0.98	ug/L		95
62) 1,4-Dichlorobenzene	13.46	146	98975	1.00	ug/L		95
64) 1,2-Dichlorobenzene	13.78	146	76464	0.93	ug/L		95
65) 1,2-Dibromo-3-chloropropan	14.47	75	6160	1.27	ug/L	#	77
66) 1,2,4-trichlorobenzene	15.20	180	33635	0.70	ug/L		99
67) 1,2,3-Trichlorobenzene	15.67	180	25667	0.72	ug/L		99

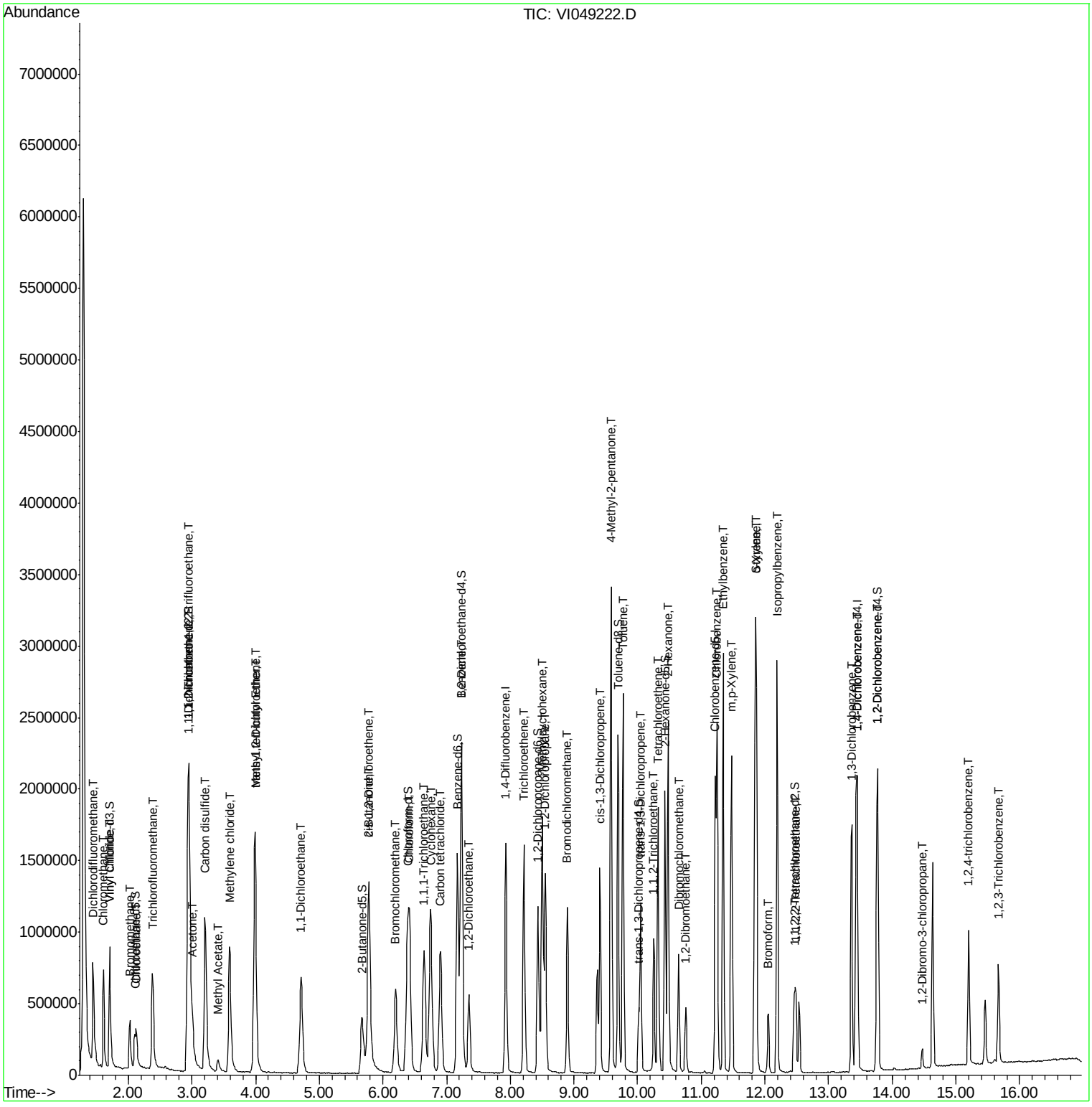
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049222.D
Acq On : 4 May 2016 12:30
Operator : FY/SY
Sample : VSTD00535
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00535

Quant Time: May 04 12:54:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049222.D
Acq On : 4 May 2016 12:30
Operator : FY/SY
Sample : VSTD00535
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00535

Quant Time: May 04 12:54:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1387511	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	966164	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	378132	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	425291	5.71	ug/L	0.00
7) Chloroethane-d5	2.10	69	241187	5.42	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	1024075	5.42	ug/L	0.00
20) 2-Butanone-d5	5.67	46	995120	60.10	ug/L	0.00
24) Chloroform-d	6.38	84	1109276	5.18	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.23	65	457025	5.37	ug/L	0.00
32) Benzene-d6	7.17	84	1932549	5.33	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.43	67	539585	5.18	ug/L	0.00
41) Toluene-d8	9.69	98	1438042	5.08	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	218683	5.13	ug/L	0.00
46) 2-Hexanone-d5	10.43	63	686533	50.08	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	247288	4.50	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	328714	4.58	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	796877	6.06	ug/L	98
3) Chloromethane	1.61	50	659513	5.88	ug/L	98
5) Vinyl chloride	1.71	62	470430	6.01	ug/L	99
6) Bromomethane	2.02	94	217759	5.41	ug/L	100
8) Chloroethane	2.12	64	206953	5.84	ug/L	93
9) Trichlorofluoromethane	2.38	101	652640	6.12	ug/L	97
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	609280	6.02	ug/L	99
12) 1,1-Dichloroethene	2.95	96	561763	5.39	ug/L	95
13) Acetone	3.01	43	564267	60.13	ug/L	98
14) Carbon disulfide	3.21	76	2076484	5.35	ug/L	100
15) Methyl Acetate	3.41	43	165335	5.67	ug/L	98
16) Methylene chloride	3.59	84	610472	5.27	ug/L	96
17) Methyl tert-butyl Ether	3.98	73	1046212	5.61	ug/L	99
18) trans-1,2-Dichloroethene	3.99	96	623257	5.28	ug/L	95
19) 1,1-Dichloroethane	4.71	63	1055265	5.49	ug/L	97
21) 2-Butanone	5.78	43	1090421	62.52	ug/L	97
22) cis-1,2-Dichloroethene	5.77	96	634938	5.14	ug/L	98
23) Bromochloromethane	6.20	128	255349	5.40	ug/L	92
25) Chloroform	6.41	83	1114407	5.29	ug/L	97
27) 1,2-Dichloroethane	7.35	62	563870	5.41	ug/L	100
29) 1,1,1-Trichloroethane	6.65	97	925756	5.76	ug/L	98
30) Cyclohexane	6.75	56	820242	6.27	ug/L	98
31) Carbon tetrachloride	6.91	117	817207	6.06	ug/L	100
33) Benzene	7.23	78	2096710	5.54	ug/L	100
34) Trichloroethene	8.22	95	571727	5.39	ug/L	96
35) Methylcyclohexane	8.50	83	731179	6.04	ug/L	99
37) 1,2-Dichloropropane	8.55	63	488269	5.31	ug/L	98
38) Bromodichloromethane	8.89	83	712248	5.38	ug/L	100
39) cis-1,3-Dichloropropene	9.41	75	717788	5.29	ug/L	100
40) 4-Methyl-2-pentanone	9.58	43	2615758	56.21	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049222.D
Acq On : 4 May 2016 12:30
Operator : FY/SY
Sample : VSTD00535
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00535

Quant Time: May 04 12:54:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.77	91	1763408	5.17	ug/L	100
44) trans-1,3-Dichloropropene	10.05	75	555982	5.12	ug/L	100
45) 1,1,2-Trichloroethane	10.25	97	255422	4.88	ug/L	98
47) Tetrachloroethene	10.32	164	374867	5.15	ug/L	96
48) 2-Hexanone	10.48	43	1718206	52.79	ug/L	100
49) Dibromochloromethane	10.65	129	387930	5.19	ug/L	98
50) 1,2-Dibromoethane	10.75	107	270504	5.03	ug/L	94
51) Chlorobenzene	11.25	112	1063006	5.03	ug/L	98
52) Ethylbenzene	11.35	91	1881376	5.08	ug/L	100
53) m,p-Xylene	11.47	106	679743	5.00	ug/L	98
54) o-Xylene	11.85	106	632711	4.94	ug/L	96
55) Styrene	11.87	104	1074496	5.04	ug/L	100
56) Isopropylbenzene	12.19	105	1682173	5.11	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.49	83	242821	4.56	ug/L	96
60) Bromoform	12.05	173	177627	5.35	ug/L	99
61) 1,3-Dichlorobenzene	13.36	146	646942	4.97	ug/L	98
62) 1,4-Dichlorobenzene	13.45	146	638743	4.76	ug/L	98
64) 1,2-Dichlorobenzene	13.78	146	533683	4.80	ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.47	75	29452	4.47	ug/L	88
66) 1,2,4-trichlorobenzene	15.20	180	289805	4.48	ug/L	96
67) 1,2,3-Trichlorobenzene	15.67	180	207658	4.29	ug/L	98

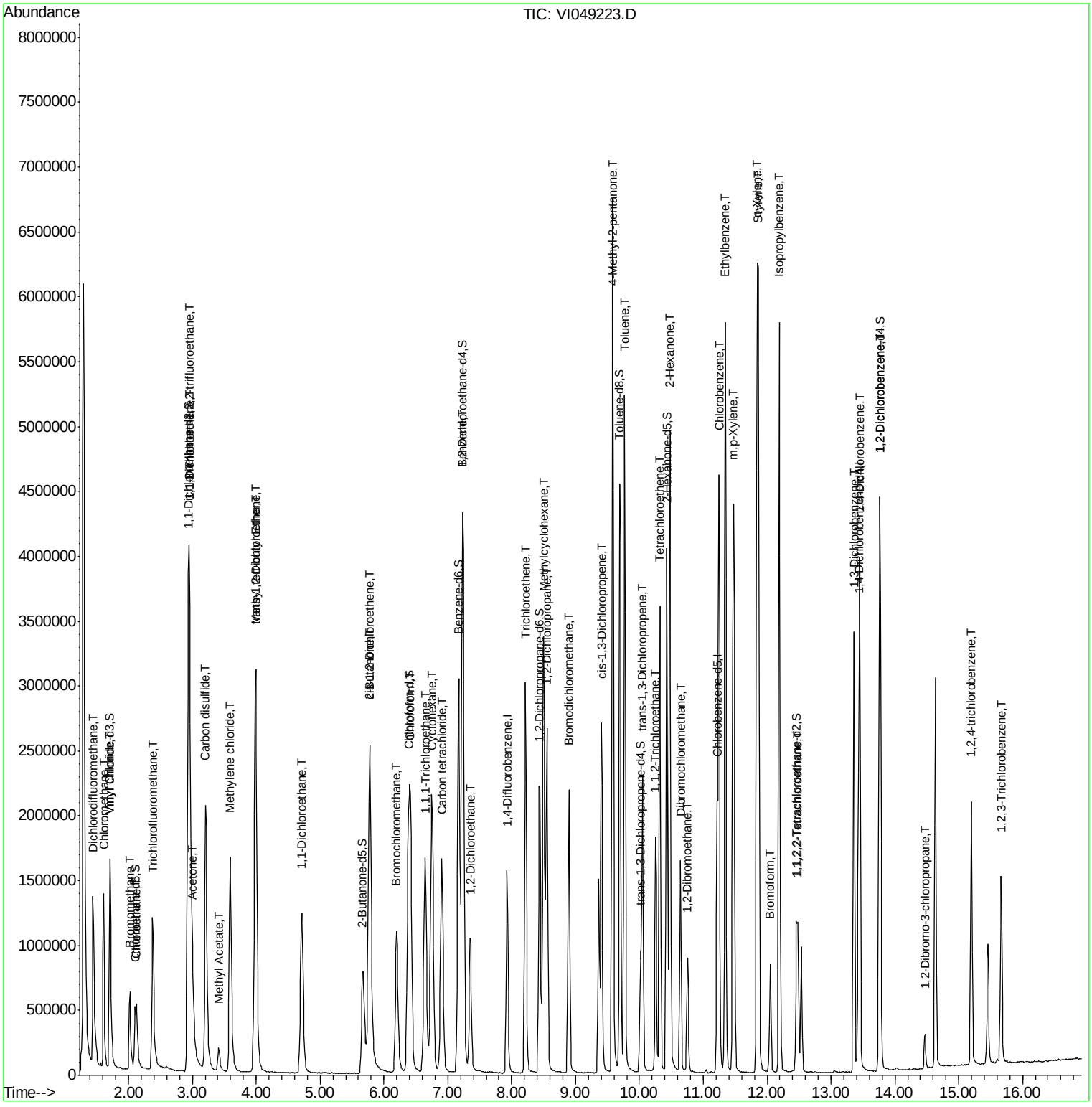
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049223.D
Acq On : 4 May 2016 13:02
Operator : FY/SY
Sample : VSTD01036
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01036

Quant Time: May 04 13:22:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:02:09 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049223.D
Acq On : 4 May 2016 13:02
Operator : FY/SY
Sample : VSTD01036
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01036

Quant Time: May 04 13:22:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:02:09 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1346932	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	978979	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	391643	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	852545	10.17	ug/L	0.00
7) Chloroethane-d5	2.10	69	441331	8.71	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	1962568	9.90	ug/L	0.00
20) 2-Butanone-d5	5.67	46	1983326	117.22	ug/L	0.00
24) Chloroform-d	6.38	84	2161653	10.24	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.23	65	876015	9.98	ug/L	0.00
32) Benzene-d6	7.17	84	3815591	9.73	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.43	67	1067054	9.71	ug/L	0.00
41) Toluene-d8	9.69	98	2856146	10.01	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	441531	10.67	ug/L	0.00
46) 2-Hexanone-d5	10.43	63	1398322	108.24	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	515068	11.14	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	714609	10.62	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	1496448	10.04	ug/L	98
3) Chloromethane	1.61	50	1264869	9.57	ug/L	97
5) Vinyl chloride	1.71	62	882275	9.65	ug/L	99
6) Bromomethane	2.02	94	387232	7.77	ug/L	97
8) Chloroethane	2.12	64	361250	8.62	ug/L	96
9) Trichlorofluoromethane	2.38	101	1236936	9.60	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	1132918	9.90	ug/L	99
12) 1,1-Dichloroethene	2.95	96	1065279	9.71	ug/L	99
13) Acetone	3.01	43	1154285	108.53	ug/L	94
14) Carbon disulfide	3.21	76	3891847	9.86	ug/L	99
15) Methyl Acetate	3.41	43	324256	10.54	ug/L	95
16) Methylene chloride	3.59	84	1144292	9.41	ug/L	96
17) Methyl tert-butyl Ether	3.98	73	1940115	9.86	ug/L	99
18) trans-1,2-Dichloroethene	3.99	96	1161176	9.67	ug/L	97
19) 1,1-Dichloroethane	4.71	63	1961074	9.59	ug/L	100
21) 2-Butanone	5.78	43	2069517	107.36	ug/L	100
22) cis-1,2-Dichloroethene	5.77	96	1197407	9.73	ug/L	96
23) Bromochloromethane	6.20	128	479204	9.64	ug/L	95
25) Chloroform	6.41	83	2076321	9.50	ug/L	98
27) 1,2-Dichloroethane	7.35	62	1054465	9.63	ug/L	98
29) 1,1,1-Trichloroethane	6.65	97	1742986	9.11	ug/L	98
30) Cyclohexane	6.75	56	1563911	9.50	ug/L	97
31) Carbon tetrachloride	6.91	117	1553503	9.42	ug/L	99
33) Benzene	7.23	78	3997279	9.32	ug/L	100
34) Trichloroethene	8.22	95	1082122	9.08	ug/L	98
35) Methylcyclohexane	8.50	83	1414618	10.08	ug/L	99
37) 1,2-Dichloropropane	8.55	63	940352	9.41	ug/L	99
38) Bromodichloromethane	8.89	83	1366909	9.45	ug/L	98
39) cis-1,3-Dichloropropene	9.41	75	1374976	9.40	ug/L	99
40) 4-Methyl-2-pentanone	9.58	43	4902699	94.26	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049223.D
Acq On : 4 May 2016 13:02
Operator : FY/SY
Sample : VSTD01036
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01036

Quant Time: May 04 13:22:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:02:09 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.77	91	3465077	9.74	ug/L	98
44) trans-1,3-Dichloropropene	10.05	75	1105184	10.19	ug/L	99
45) 1,1,2-Trichloroethane	10.25	97	500341	9.99	ug/L	98
47) Tetrachloroethene	10.32	164	742833	9.78	ug/L	95
48) 2-Hexanone	10.48	43	3335204	98.66	ug/L	98
49) Dibromochloromethane	10.65	129	773201	10.43	ug/L	99
50) 1,2-Dibromoethane	10.75	107	516165	9.83	ug/L	100
51) Chlorobenzene	11.25	112	2088636	9.98	ug/L	98
52) Ethylbenzene	11.34	91	3709193	10.40	ug/L	98
53) m,p-Xylene	11.47	106	1367664	10.91	ug/L	96
54) o-Xylene	11.85	106	1284417	11.05	ug/L	94
55) Styrene	11.87	104	2175319	11.38	ug/L	100
56) Isopropylbenzene	12.19	105	3406235	11.18	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.49	83	486520	10.29	ug/L	99
60) Bromoform	12.05	173	364966	10.27	ug/L	100
61) 1,3-Dichlorobenzene	13.36	146	1325420	10.21	ug/L	99
62) 1,4-Dichlorobenzene	13.45	146	1343241	9.95	ug/L	98
64) 1,2-Dichlorobenzene	13.78	146	1101321	10.35	ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.46	75	64450	9.72	ug/L	89
66) 1,2,4-trichlorobenzene	15.20	180	595041	10.84	ug/L	99
67) 1,2,3-Trichlorobenzene	15.67	180	432037	10.49	ug/L	97

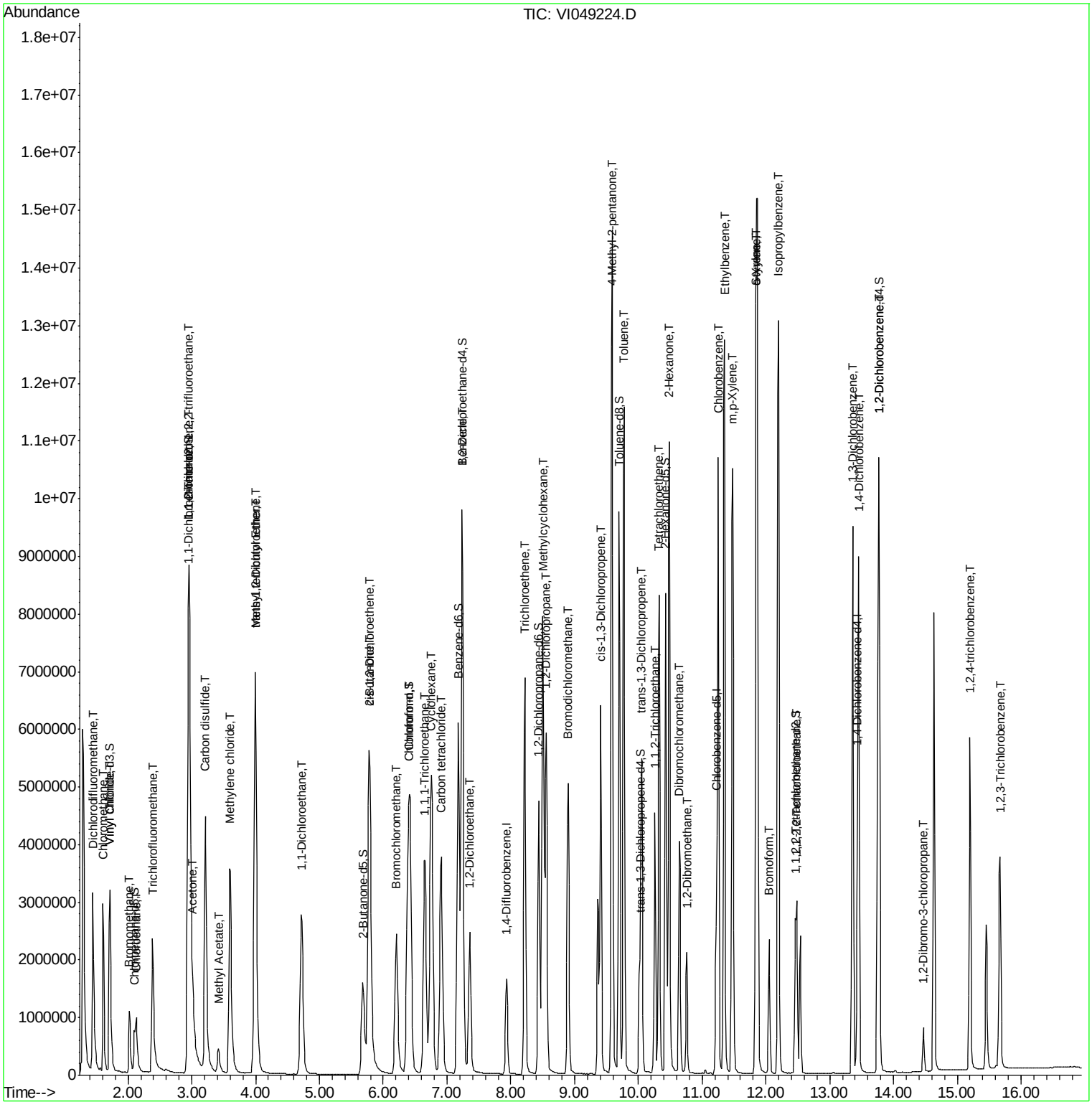
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049224.D
Acq On : 4 May 2016 13:33
Operator : FY/SY
Sample : VSTD02037
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02037

Quant Time: May 04 13:56:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:27:51 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049224.D
Acq On : 4 May 2016 13:33
Operator : FY/SY
Sample : VSTD02037
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02037

Quant Time: May 04 13:56:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:27:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1461579	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	1086543	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	471623	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	1691207	18.52	ug/L	0.00
7) Chloroethane-d5	2.10	69	726792	13.66	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	4036999	18.82	ug/L	0.00
20) 2-Butanone-d5	5.68	46	4160883	217.27	ug/L	0.01
24) Chloroform-d	6.39	84	4451409	19.31	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.24	65	1748807	18.37	ug/L	0.00
32) Benzene-d6	7.18	84	7749910	17.93	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.44	67	2214284	18.29	ug/L	0.00
41) Toluene-d8	9.70	98	5885440	18.58	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	952520	20.39	ug/L	0.00
46) 2-Hexanone-d5	10.42	63	3083599	210.72	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	1189030	22.52	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	1684802	20.47	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	3513178	21.70	ug/L	99
3) Chloromethane	1.61	50	2740270	19.31	ug/L	97
5) Vinyl chloride	1.71	62	1989115	20.23	ug/L	99
6) Bromomethane	2.02	94	681315	13.34	ug/L	95
8) Chloroethane	2.13	64	699614	15.94	ug/L	96
9) Trichlorofluoromethane	2.38	101	2703301	19.54	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	2693766	21.75	ug/L	99
12) 1,1-Dichloroethene	2.95	96	2344375	19.84	ug/L	98
13) Acetone	3.01	43	2651705	224.97	ug/L	96
14) Carbon disulfide	3.21	76	8635675	20.23	ug/L	98
15) Methyl Acetate	3.42	43	742482	21.95	ug/L	94
16) Methylene chloride	3.60	84	2605444	20.05	ug/L	99
17) Methyl tert-butyl Ether	3.99	73	4528073	21.28	ug/L	99
18) trans-1,2-Dichloroethene	4.00	96	2702539	20.92	ug/L	98
19) 1,1-Dichloroethane	4.72	63	4528793	20.62	ug/L	99
21) 2-Butanone	5.79	43	4815478	226.05	ug/L	99
22) cis-1,2-Dichloroethene	5.78	96	2805467	21.16	ug/L	97
23) Bromochloromethane	6.20	128	1105137	20.68	ug/L	92
25) Chloroform	6.42	83	4766471	20.35	ug/L	99
27) 1,2-Dichloroethane	7.35	62	2435376	20.69	ug/L	98
29) 1,1,1-Trichloroethane	6.65	97	4024599	19.39	ug/L	98
30) Cyclohexane	6.75	56	3759993	20.83	ug/L	99
31) Carbon tetrachloride	6.91	117	3593861	19.92	ug/L	98
33) Benzene	7.24	78	9083823	19.41	ug/L	100
34) Trichloroethene	8.22	95	2570250	19.89	ug/L	96
35) Methylcyclohexane	8.51	83	3435954	22.01	ug/L	99
37) 1,2-Dichloropropane	8.55	63	2175167	19.91	ug/L	100
38) Bromodichloromethane	8.90	83	3234934	20.43	ug/L	97
39) cis-1,3-Dichloropropene	9.41	75	3290905	20.59	ug/L	97
40) 4-Methyl-2-pentanone	9.59	43	10638557	186.98	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049224.D
Acq On : 4 May 2016 13:33
Operator : FY/SY
Sample : VSTD02037
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02037

Quant Time: May 04 13:56:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:27:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.77	91	7848741	20.00	ug/L	91
44) trans-1,3-Dichloropropene	10.05	75	2646058	21.87	ug/L	96
45) 1,1,2-Trichloroethane	10.26	97	1219815	21.95	ug/L	98
47) Tetrachloroethene	10.33	164	1772171	21.14	ug/L	95
48) 2-Hexanone	10.48	43	7635735	204.19	ug/L	96
49) Dibromochloromethane	10.64	129	1894342	22.78	ug/L	98
50) 1,2-Dibromoethane	10.76	107	1270502	21.90	ug/L	99
51) Chlorobenzene	11.25	112	4962671	21.38	ug/L	97
52) Ethylbenzene	11.35	91	8575376	21.45	ug/L	90
53) m,p-Xylene	11.48	106	3390654	23.82	ug/L	89
54) o-Xylene	11.84	106	3225706	24.37	ug/L	93
55) Styrene	11.86	104	5354222	24.39	ug/L	90
56) Isopropylbenzene	12.20	105	7966938	22.89	ug/L	95
58) 1,1,2,2-Tetrachloroethane	12.48	83	1245644	23.57	ug/L	99
60) Bromoform	12.05	173	949899	22.05	ug/L	100
61) 1,3-Dichlorobenzene	13.36	146	3432822	21.85	ug/L	96
62) 1,4-Dichlorobenzene	13.46	146	3442102	21.20	ug/L	98
64) 1,2-Dichlorobenzene	13.77	146	2913858	22.54	ug/L	96
65) 1,2-Dibromo-3-chloropropan	14.47	75	173184	21.85	ug/L	89
66) 1,2,4-trichlorobenzene	15.20	180	1682098	24.93	ug/L	99
67) 1,2,3-Trichlorobenzene	15.67	180	1223545	24.37	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/04/2016 Time: 14:05

Lab File ID: VI049225.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00538 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.564	0.01	0.0	± 40.0
Chloromethane	0.482	0.456	0.01	-5.4	± 30.0
Vinyl chloride	0.337	0.315	0.01	-6.6	± 30.0
Bromomethane	0.163	0.148	0.01	-9.4	± 30.0
Chloroethane	0.144	0.144	0.01	0.1	± 30.0
Trichlorofluoromethane	0.471	0.457	0.01	-2.9	± 30.0
1,1-Dichloroethene	0.404	0.377	0.02	-6.7	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.428	0.01	-0.7	± 30.0
Acetone	0.041	0.040	0.01	-3.1	± 40.0
Carbon disulfide	1.463	1.378	0.01	-5.8	± 25.0
Methyl Acetate	0.118	0.117	0.01	-1.2	± 40.0
Methylene chloride	0.445	0.407	0.01	-8.4	± 30.0
trans-1,2-Dichloroethene	0.446	0.416	0.07	-6.7	± 20.0
Methyl tert-butyl Ether	0.737	0.697	0.01	-5.5	± 30.0
1,1-Dichloroethane	0.756	0.698	0.1	-7.6	± 20.0
cis-1,2-Dichloroethene	0.459	0.426	0.1	-7.1	± 20.0
2-Butanone	0.075	0.074	0.01	-1.6	± 40.0
Bromochloromethane	0.184	0.170	0.02	-7.7	± 20.0
Chloroform	0.804	0.734	0.04	-8.7	± 20.0
1,1,1-Trichloroethane	0.949	0.844	0.05	-11.1	± 20.0
Cyclohexane	0.837	0.781	0.1	-6.7	± 25.0
Carbon tetrachloride	0.829	0.745	0.02	-10.2	± 25.0
Benzene	2.141	1.913	0.3	-10.6	± 20.0
1,2-Dichloroethane	0.405	0.369	0.01	-9	± 25.0
Trichloroethene	0.594	0.518	0.1	-12.7	± 20.0
Methylcyclohexane	0.733	0.718	0.2	-2	± 25.0
1,2-Dichloropropane	0.502	0.444	0.1	-11.6	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/04/2016 Time: 14:05

Lab File ID: VI049225.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00538 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.653	0.09	-10.7	± 20.0
cis-1,3-Dichloropropene	0.740	0.668	0.1	-9.8	± 20.0
4-Methyl-2-pentanone	0.258	0.242	0.01	-6.2	± 30.0
Toluene	1.806	1.702	0.4	-5.7	± 20.0
trans-1,3-Dichloropropene	0.567	0.533	0.01	-5.9	± 20.0
1,1,2-Trichloroethane	0.261	0.247	0.04	-5.1	± 20.0
Tetrachloroethene	0.390	0.362	0.1	-7.1	± 20.0
2-Hexanone	0.173	0.167	0.01	-3.2	± 40.0
Dibromochloromethane	0.393	0.375	0.05	-4.8	± 20.0
1,2-Dibromoethane	0.272	0.254	0.01	-6.8	± 20.0
Chlorobenzene	1.083	1.047	0.4	-3.3	± 20.0
Ethylbenzene	1.866	1.873	0.5	0.3	± 20.0
o-Xylene	0.636	0.626	0.3	-1.6	± 20.0
m,p-Xylene	0.680	0.666	0.2	-2	± 20.0
Styrene	1.055	1.032	0.2	-2.1	± 20.0
Bromoform	0.466	0.431	0.01	-7.5	± 30.0
Isopropylbenzene	1.648	1.654	0.7	0.4	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.245	0.05	-2.8	± 25.0
1,3-Dichlorobenzene	1.696	1.682	0.5	-0.8	± 20.0
1,4-Dichlorobenzene	1.742	1.675	0.7	-3.9	± 20.0
1,2-Dichlorobenzene	1.405	1.370	0.4	-2.5	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.082	0.01	-4.7	± 40.0
1,2,4-trichlorobenzene	0.751	0.774	0.3	3.1	± 30.0
1,2,3-Trichlorobenzene	0.556	0.559	0.2	0.6	± 40.0
Vinyl Chloride-d3	0.308	0.293	0.01	-4.7	± 30.0
Chloroethane-d5	0.170	0.166	0.01	-2.8	± 30.0
1,1-Dichloroethene-d2	0.725	0.699	0.01	-3.7	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/04/2016 Time: 14:05

Lab File ID: VI049225.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00538 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.070	0.01	4.7	± 40.0
Chloroform-d	0.783	0.752	0.01	-3.9	± 20.0
1,2-Dichloroethane-d4	0.320	0.320	0.01	-0.3	± 25.0
Benzene-d6	1.948	1.787	0.03	-8.2	± 20.0
1,2-Dichloropropane-d6	0.548	0.514	0.1	-6.1	± 20.0
Toluene-d8	1.437	1.383	0.2	-3.8	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.211	0.01	-2.2	± 25.0
2-Hexanone-d5	0.068	0.068	0.01	-0.3	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.252	0.01	1.3	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.863	0.06	-1.6	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 00:11

Lab File ID: VI049243.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00539 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.554	0.01	-1.6	± 50.0
Chloromethane	0.482	0.503	0.01	4.4	± 50.0
Vinyl chloride	0.337	0.353	0.01	4.6	± 50.0
Bromomethane	0.163	0.154	0.01	-5.5	± 50.0
Chloroethane	0.144	0.147	0.01	2.3	± 50.0
Trichlorofluoromethane	0.471	0.492	0.01	4.4	± 50.0
1,1-Dichloroethene	0.404	0.404	0.02	0.1	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.421	0.01	-2.4	± 50.0
Acetone	0.041	0.043	0.01	4.6	± 50.0
Carbon disulfide	1.463	1.461	0.01	-0.2	± 25.0
Methyl Acetate	0.118	0.118	0.01	-0.3	± 50.0
Methylene chloride	0.445	0.446	0.01	0.3	± 50.0
trans-1,2-Dichloroethene	0.446	0.458	0.07	2.6	± 25.0
Methyl tert-butyl Ether	0.737	0.752	0.01	2.1	± 50.0
1,1-Dichloroethane	0.756	0.765	0.1	1.2	± 25.0
cis-1,2-Dichloroethene	0.459	0.467	0.1	1.8	± 25.0
2-Butanone	0.075	0.079	0.01	5.6	± 50.0
Bromochloromethane	0.184	0.181	0.02	-1.5	± 25.0
Chloroform	0.804	0.814	0.04	1.2	± 25.0
1,1,1-Trichloroethane	0.949	0.979	0.05	3.1	± 25.0
Cyclohexane	0.837	0.848	0.1	1.2	± 50.0
Carbon tetrachloride	0.829	0.851	0.02	2.6	± 50.0
Benzene	2.141	2.177	0.3	1.7	± 25.0
1,2-Dichloroethane	0.405	0.412	0.01	1.7	± 50.0
Trichloroethene	0.594	0.579	0.1	-2.4	± 25.0
Methylcyclohexane	0.733	0.697	0.2	-4.9	± 50.0
1,2-Dichloropropane	0.502	0.514	0.1	2.3	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 00:11

Lab File ID: VI049243.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00539 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.722	0.09	-1.3	± 25.0
cis-1,3-Dichloropropene	0.740	0.694	0.1	-6.2	± 25.0
4-Methyl-2-pentanone	0.258	0.268	0.01	3.7	± 50.0
Toluene	1.806	1.827	0.4	1.2	± 25.0
trans-1,3-Dichloropropene	0.567	0.545	0.01	-3.9	± 25.0
1,1,2-Trichloroethane	0.261	0.263	0.04	0.8	± 25.0
Tetrachloroethene	0.390	0.373	0.1	-4.4	± 25.0
2-Hexanone	0.173	0.178	0.01	2.8	± 50.0
Dibromochloromethane	0.393	0.380	0.05	-3.4	± 25.0
1,2-Dibromoethane	0.272	0.271	0.01	-0.6	± 25.0
Chlorobenzene	1.083	1.085	0.4	0.1	± 25.0
Ethylbenzene	1.866	1.901	0.5	1.9	± 25.0
o-Xylene	0.636	0.637	0.3	0.2	± 25.0
m,p-Xylene	0.680	0.677	0.2	-0.4	± 25.0
Styrene	1.055	1.064	0.2	0.9	± 25.0
Bromoform	0.466	0.463	0.01	-0.8	± 50.0
Isopropylbenzene	1.648	1.690	0.7	2.6	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.244	0.05	-3.1	± 25.0
1,3-Dichlorobenzene	1.696	1.715	0.5	1.1	± 25.0
1,4-Dichlorobenzene	1.742	1.721	0.7	-1.2	± 25.0
1,2-Dichlorobenzene	1.405	1.413	0.4	0.5	± 25.0
1,2-Dibromo-3-chloropropane	0.086	0.076	0.01	-10.9	± 50.0
1,2,4-trichlorobenzene	0.751	0.730	0.3	-2.8	± 50.0
1,2,3-Trichlorobenzene	0.556	0.545	0.2	-2	± 50.0
Vinyl Chloride-d3	0.308	0.285	0.01	-7.3	± 50.0
Chloroethane-d5	0.170	0.160	0.01	-6	± 50.0
1,1-Dichloroethene-d2	0.725	0.696	0.01	-4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 00:11

Lab File ID: VI049243.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00539 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.069	0.01	3.5	± 50.0
Chloroform-d	0.783	0.753	0.01	-3.8	± 25.0
1,2-Dichloroethane-d4	0.320	0.310	0.01	-3.2	± 25.0
Benzene-d6	1.948	1.884	0.03	-3.3	± 25.0
1,2-Dichloropropane-d6	0.548	0.517	0.1	-5.6	± 25.0
Toluene-d8	1.437	1.383	0.2	-3.7	± 25.0
trans-1,3-Dichloropropene-d4	0.216	0.194	0.01	-10.2	± 25.0
2-Hexanone-d5	0.068	0.067	0.01	-2.2	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.238	0.01	-4.5	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.822	0.06	-6.2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 10:15

Lab File ID: VI049245.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00540 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.625	0.01	10.9	± 40.0
Chloromethane	0.482	0.510	0.01	5.8	± 30.0
Vinyl chloride	0.337	0.378	0.01	12.1	± 30.0
Bromomethane	0.163	0.178	0.01	8.8	± 30.0
Chloroethane	0.144	0.169	0.01	17.2	± 30.0
Trichlorofluoromethane	0.471	0.544	0.01	15.3	± 30.0
1,1-Dichloroethene	0.404	0.421	0.02	4.4	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.483	0.01	12.1	± 30.0
Acetone	0.041	0.047	0.01	14.5	± 40.0
Carbon disulfide	1.463	1.515	0.01	3.5	± 25.0
Methyl Acetate	0.118	0.127	0.01	8.0	± 40.0
Methylene chloride	0.445	0.448	0.01	0.7	± 30.0
trans-1,2-Dichloroethene	0.446	0.467	0.07	4.8	± 20.0
Methyl tert-butyl Ether	0.737	0.791	0.01	7.3	± 30.0
1,1-Dichloroethane	0.756	0.780	0.1	3.2	± 20.0
cis-1,2-Dichloroethene	0.459	0.471	0.1	2.7	± 20.0
2-Butanone	0.075	0.084	0.01	12.3	± 40.0
Bromochloromethane	0.184	0.189	0.02	2.6	± 20.0
Chloroform	0.804	0.836	0.04	4.0	± 20.0
1,1,1-Trichloroethane	0.949	1.025	0.05	7.9	± 20.0
Cyclohexane	0.837	0.951	0.1	13.5	± 25.0
Carbon tetrachloride	0.829	0.911	0.02	9.8	± 25.0
Benzene	2.141	2.315	0.3	8.1	± 20.0
1,2-Dichloroethane	0.405	0.433	0.01	6.8	± 25.0
Trichloroethene	0.594	0.634	0.1	6.7	± 20.0
Methylcyclohexane	0.733	0.866	0.2	18.2	± 25.0
1,2-Dichloropropane	0.502	0.536	0.1	6.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 10:15

Lab File ID: VI049245.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00540 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.787	0.09	7.6	± 20.0
cis-1,3-Dichloropropene	0.740	0.790	0.1	6.8	± 20.0
4-Methyl-2-pentanone	0.258	0.292	0.01	13	± 30.0
Toluene	1.806	1.937	0.4	7.3	± 20.0
trans-1,3-Dichloropropene	0.567	0.618	0.01	8.9	± 20.0
1,1,2-Trichloroethane	0.261	0.282	0.04	8.0	± 20.0
Tetrachloroethene	0.390	0.420	0.1	7.7	± 20.0
2-Hexanone	0.173	0.194	0.01	12	± 40.0
Dibromochloromethane	0.393	0.429	0.05	9.2	± 20.0
1,2-Dibromoethane	0.272	0.294	0.01	8.1	± 20.0
Chlorobenzene	1.083	1.157	0.4	6.8	± 20.0
Ethylbenzene	1.866	2.048	0.5	9.7	± 20.0
o-Xylene	0.636	0.684	0.3	7.5	± 20.0
m,p-Xylene	0.680	0.730	0.2	7.3	± 20.0
Styrene	1.055	1.150	0.2	9.1	± 20.0
Bromoform	0.466	0.521	0.01	11.7	± 30.0
Isopropylbenzene	1.648	1.838	0.7	11.5	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.268	0.05	6.3	± 25.0
1,3-Dichlorobenzene	1.696	1.809	0.5	6.6	± 20.0
1,4-Dichlorobenzene	1.742	1.796	0.7	3.1	± 20.0
1,2-Dichlorobenzene	1.405	1.513	0.4	7.6	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.085	0.01	-0.1	± 40.0
1,2,4-trichlorobenzene	0.751	0.830	0.3	10.6	± 30.0
1,2,3-Trichlorobenzene	0.556	0.604	0.2	8.8	± 40.0
Vinyl Chloride-d3	0.308	0.279	0.01	-9.5	± 30.0
Chloroethane-d5	0.170	0.159	0.01	-6.7	± 30.0
1,1-Dichloroethene-d2	0.725	0.666	0.01	-8.2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 10:15

Lab File ID: VI049245.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00540 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.064	0.01	-3.6	± 40.0
Chloroform-d	0.783	0.705	0.01	-9.9	± 20.0
1,2-Dichloroethane-d4	0.320	0.291	0.01	-9.3	± 25.0
Benzene-d6	1.948	1.788	0.03	-8.2	± 20.0
1,2-Dichloropropane-d6	0.548	0.505	0.1	-7.8	± 20.0
Toluene-d8	1.437	1.305	0.2	-9.2	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.197	0.01	-8.6	± 25.0
2-Hexanone-d5	0.068	0.065	0.01	-4.3	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.233	0.01	-6.5	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.775	0.06	-11.6	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 16:16

Lab File ID: VI049255.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00541 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.578	0.01	2.6	± 40.0
Chloromethane	0.482	0.490	0.01	1.7	± 30.0
Vinyl chloride	0.337	0.350	0.01	3.7	± 30.0
Bromomethane	0.163	0.162	0.01	-0.5	± 30.0
Chloroethane	0.144	0.150	0.01	4.3	± 30.0
Trichlorofluoromethane	0.471	0.479	0.01	1.6	± 30.0
1,1-Dichloroethene	0.404	0.400	0.02	-1	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.437	0.01	1.5	± 30.0
Acetone	0.041	0.045	0.01	8.7	± 40.0
Carbon disulfide	1.463	1.435	0.01	-2	± 25.0
Methyl Acetate	0.118	0.122	0.01	3.3	± 40.0
Methylene chloride	0.445	0.441	0.01	-0.8	± 30.0
trans-1,2-Dichloroethene	0.446	0.443	0.07	-0.7	± 20.0
Methyl tert-butyl Ether	0.737	0.758	0.01	2.8	± 30.0
1,1-Dichloroethane	0.756	0.773	0.1	2.2	± 20.0
cis-1,2-Dichloroethene	0.459	0.454	0.1	-1	± 20.0
2-Butanone	0.075	0.078	0.01	4.7	± 40.0
Bromochloromethane	0.184	0.182	0.02	-1.2	± 20.0
Chloroform	0.804	0.813	0.04	1.1	± 20.0
1,1,1-Trichloroethane	0.949	0.976	0.05	2.8	± 20.0
Cyclohexane	0.837	0.872	0.1	4.2	± 25.0
Carbon tetrachloride	0.829	0.846	0.02	2.0	± 25.0
Benzene	2.141	2.219	0.3	3.7	± 20.0
1,2-Dichloroethane	0.405	0.418	0.01	3.1	± 25.0
Trichloroethene	0.594	0.588	0.1	-0.9	± 20.0
Methylcyclohexane	0.733	0.759	0.2	3.6	± 25.0
1,2-Dichloropropane	0.502	0.527	0.1	5.0	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 16:16

Lab File ID: VI049255.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00541 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.723	0.09	-1.2	± 20.0
cis-1,3-Dichloropropene	0.740	0.742	0.1	0.2	± 20.0
4-Methyl-2-pentanone	0.258	0.276	0.01	6.7	± 30.0
Toluene	1.806	1.819	0.4	0.7	± 20.0
trans-1,3-Dichloropropene	0.567	0.555	0.01	-2.2	± 20.0
1,1,2-Trichloroethane	0.261	0.267	0.04	2.5	± 20.0
Tetrachloroethene	0.390	0.382	0.1	-2.2	± 20.0
2-Hexanone	0.173	0.181	0.01	4.9	± 40.0
Dibromochloromethane	0.393	0.392	0.05	-0.2	± 20.0
1,2-Dibromoethane	0.272	0.271	0.01	-0.2	± 20.0
Chlorobenzene	1.083	1.070	0.4	-1.2	± 20.0
Ethylbenzene	1.866	1.867	0.5	0.0	± 20.0
o-Xylene	0.636	0.624	0.3	-1.9	± 20.0
m,p-Xylene	0.680	0.672	0.2	-1.2	± 20.0
Styrene	1.055	1.054	0.2	-0.1	± 20.0
Bromoform	0.466	0.438	0.01	-6	± 30.0
Isopropylbenzene	1.648	1.647	0.7	-0.1	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.255	0.05	1.0	± 25.0
1,3-Dichlorobenzene	1.696	1.665	0.5	-1.9	± 20.0
1,4-Dichlorobenzene	1.742	1.693	0.7	-2.8	± 20.0
1,2-Dichlorobenzene	1.405	1.409	0.4	0.2	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.086	0.01	0.8	± 40.0
1,2,4-trichlorobenzene	0.751	0.732	0.3	-2.4	± 30.0
1,2,3-Trichlorobenzene	0.556	0.538	0.2	-3.2	± 40.0
Vinyl Chloride-d3	0.308	0.299	0.01	-2.7	± 30.0
Chloroethane-d5	0.170	0.172	0.01	1.0	± 30.0
1,1-Dichloroethene-d2	0.725	0.711	0.01	-2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 16:16

Lab File ID: VI049255.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00541 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.075	0.01	12.2	± 40.0
Chloroform-d	0.783	0.787	0.01	0.5	± 20.0
1,2-Dichloroethane-d4	0.320	0.339	0.01	5.7	± 25.0
Benzene-d6	1.948	2.005	0.03	2.9	± 20.0
1,2-Dichloropropane-d6	0.548	0.563	0.1	2.7	± 20.0
Toluene-d8	1.437	1.435	0.2	-0.1	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.211	0.01	-2.3	± 25.0
2-Hexanone-d5	0.068	0.072	0.01	5.6	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.256	0.01	2.9	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.849	0.06	-3.1	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 02:57

Lab File ID: VI049274.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00542 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.513	0.01	-8.9	± 50.0
Chloromethane	0.482	0.454	0.01	-5.7	± 50.0
Vinyl chloride	0.337	0.340	0.01	0.9	± 50.0
Bromomethane	0.163	0.102	0.01	-37.7	± 50.0
Chloroethane	0.144	0.157	0.01	9.1	± 50.0
Trichlorofluoromethane	0.471	0.451	0.01	-4.4	± 50.0
1,1-Dichloroethene	0.404	0.383	0.02	-5	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.379	0.01	-12.1	± 50.0
Acetone	0.041	0.043	0.01	4.1	± 50.0
Carbon disulfide	1.463	1.354	0.01	-7.5	± 25.0
Methyl Acetate	0.118	0.132	0.01	12.1	± 50.0
Methylene chloride	0.445	0.441	0.01	-0.8	± 50.0
trans-1,2-Dichloroethene	0.446	0.432	0.07	-3.1	± 25.0
Methyl tert-butyl Ether	0.737	0.751	0.01	1.8	± 50.0
1,1-Dichloroethane	0.756	0.756	0.1	0.1	± 25.0
cis-1,2-Dichloroethene	0.459	0.451	0.1	-1.6	± 25.0
2-Butanone	0.075	0.081	0.01	7.8	± 50.0
Bromochloromethane	0.184	0.182	0.02	-1.4	± 25.0
Chloroform	0.804	0.807	0.04	0.4	± 25.0
1,1,1-Trichloroethane	0.949	0.964	0.05	1.6	± 25.0
Cyclohexane	0.837	0.741	0.1	-11.5	± 50.0
Carbon tetrachloride	0.829	0.809	0.02	-2.5	± 50.0
Benzene	2.141	2.212	0.3	3.3	± 25.0
1,2-Dichloroethane	0.405	0.411	0.01	1.3	± 50.0
Trichloroethene	0.594	0.575	0.1	-3.2	± 25.0
Methylcyclohexane	0.733	0.619	0.2	-15.5	± 50.0
1,2-Dichloropropane	0.502	0.513	0.1	2.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 02:57

Lab File ID: VI049274.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00542 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.738	0.09	0.8	± 25.0
cis-1,3-Dichloropropene	0.740	0.696	0.1	-6	± 25.0
4-Methyl-2-pentanone	0.258	0.280	0.01	8.2	± 50.0
Toluene	1.806	1.788	0.4	-1	± 25.0
trans-1,3-Dichloropropene	0.567	0.541	0.01	-4.7	± 25.0
1,1,2-Trichloroethane	0.261	0.274	0.04	4.9	± 25.0
Tetrachloroethene	0.390	0.354	0.1	-9.2	± 25.0
2-Hexanone	0.173	0.187	0.01	8.3	± 50.0
Dibromochloromethane	0.393	0.393	0.05	-0.1	± 25.0
1,2-Dibromoethane	0.272	0.273	0.01	0.4	± 25.0
Chlorobenzene	1.083	1.053	0.4	-2.8	± 25.0
Ethylbenzene	1.866	1.761	0.5	-5.7	± 25.0
o-Xylene	0.636	0.607	0.3	-4.6	± 25.0
m,p-Xylene	0.680	0.634	0.2	-6.7	± 25.0
Styrene	1.055	1.013	0.2	-4	± 25.0
Bromoform	0.466	0.459	0.01	-1.6	± 50.0
Isopropylbenzene	1.648	1.497	0.7	-9.2	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.253	0.05	0.2	± 25.0
1,3-Dichlorobenzene	1.696	1.690	0.5	-0.4	± 25.0
1,4-Dichlorobenzene	1.742	1.715	0.7	-1.6	± 25.0
1,2-Dichlorobenzene	1.405	1.412	0.4	0.5	± 25.0
1,2-Dibromo-3-chloropropane	0.086	0.094	0.01	9.3	± 50.0
1,2,4-trichlorobenzene	0.751	0.756	0.3	0.7	± 50.0
1,2,3-Trichlorobenzene	0.556	0.562	0.2	1.1	± 50.0
Vinyl Chloride-d3	0.308	0.289	0.01	-6	± 50.0
Chloroethane-d5	0.170	0.183	0.01	7.5	± 50.0
1,1-Dichloroethene-d2	0.725	0.680	0.01	-6.3	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 02:57

Lab File ID: VI049274.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00542 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.073	0.01	9.3	± 50.0
Chloroform-d	0.783	0.773	0.01	-1.2	± 25.0
1,2-Dichloroethane-d4	0.320	0.325	0.01	1.5	± 25.0
Benzene-d6	1.948	1.970	0.03	1.2	± 25.0
1,2-Dichloropropane-d6	0.548	0.565	0.1	3.1	± 25.0
Toluene-d8	1.437	1.357	0.2	-5.5	± 25.0
trans-1,3-Dichloropropene-d4	0.216	0.198	0.01	-8.1	± 25.0
2-Hexanone-d5	0.068	0.072	0.01	5.9	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.253	0.01	1.4	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.832	0.06	-5.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 10:21

Lab File ID: VI049276.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00543 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.527	0.01	-6.4	± 40.0
Chloromethane	0.482	0.430	0.01	-10.8	± 30.0
Vinyl chloride	0.337	0.330	0.01	-2.2	± 30.0
Bromomethane	0.163	0.129	0.01	-21	± 30.0
Chloroethane	0.144	0.149	0.01	3.3	± 30.0
Trichlorofluoromethane	0.471	0.468	0.01	-0.7	± 30.0
1,1-Dichloroethene	0.404	0.377	0.02	-6.5	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.412	0.01	-4.5	± 30.0
Acetone	0.041	0.043	0.01	5.1	± 40.0
Carbon disulfide	1.463	1.361	0.01	-7	± 25.0
Methyl Acetate	0.118	0.117	0.01	-0.7	± 40.0
Methylene chloride	0.445	0.408	0.01	-8.4	± 30.0
trans-1,2-Dichloroethene	0.446	0.422	0.07	-5.5	± 20.0
Methyl tert-butyl Ether	0.737	0.693	0.01	-6	± 30.0
1,1-Dichloroethane	0.756	0.713	0.1	-5.7	± 20.0
cis-1,2-Dichloroethene	0.459	0.425	0.1	-7.4	± 20.0
2-Butanone	0.075	0.074	0.01	-1.7	± 40.0
Bromochloromethane	0.184	0.169	0.02	-8.3	± 20.0
Chloroform	0.804	0.757	0.04	-5.9	± 20.0
1,1,1-Trichloroethane	0.949	0.925	0.05	-2.5	± 20.0
Cyclohexane	0.837	0.804	0.1	-4	± 25.0
Carbon tetrachloride	0.829	0.791	0.02	-4.6	± 25.0
Benzene	2.141	2.065	0.3	-3.5	± 20.0
1,2-Dichloroethane	0.405	0.385	0.01	-5.1	± 25.0
Trichloroethene	0.594	0.556	0.1	-6.4	± 20.0
Methylcyclohexane	0.733	0.711	0.2	-2.9	± 25.0
1,2-Dichloropropane	0.502	0.476	0.1	-5.3	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 10:21

Lab File ID: VI049276.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00543 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.695	0.09	-5	± 20.0
cis-1,3-Dichloropropene	0.740	0.673	0.1	-9	± 20.0
4-Methyl-2-pentanone	0.258	0.256	0.01	-0.7	± 30.0
Toluene	1.806	1.723	0.4	-4.6	± 20.0
trans-1,3-Dichloropropene	0.567	0.546	0.01	-3.7	± 20.0
1,1,2-Trichloroethane	0.261	0.246	0.04	-5.6	± 20.0
Tetrachloroethene	0.390	0.365	0.1	-6.4	± 20.0
2-Hexanone	0.173	0.172	0.01	-0.4	± 40.0
Dibromochloromethane	0.393	0.382	0.05	-2.8	± 20.0
1,2-Dibromoethane	0.272	0.254	0.01	-6.7	± 20.0
Chlorobenzene	1.083	1.027	0.4	-5.2	± 20.0
Ethylbenzene	1.866	1.780	0.5	-4.6	± 20.0
o-Xylene	0.636	0.595	0.3	-6.4	± 20.0
m,p-Xylene	0.680	0.641	0.2	-5.7	± 20.0
Styrene	1.055	1.016	0.2	-3.7	± 20.0
Bromoform	0.466	0.434	0.01	-6.9	± 30.0
Isopropylbenzene	1.648	1.584	0.7	-3.9	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.232	0.05	-7.7	± 25.0
1,3-Dichlorobenzene	1.696	1.550	0.5	-8.6	± 20.0
1,4-Dichlorobenzene	1.742	1.582	0.7	-9.2	± 20.0
1,2-Dichlorobenzene	1.405	1.270	0.4	-9.6	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.074	0.01	-14.1	± 40.0
1,2,4-trichlorobenzene	0.751	0.710	0.3	-5.4	± 30.0
1,2,3-Trichlorobenzene	0.556	0.517	0.2	-6.8	± 40.0
Vinyl Chloride-d3	0.308	0.246	0.01	-20.2	± 30.0
Chloroethane-d5	0.170	0.156	0.01	-8.6	± 30.0
1,1-Dichloroethene-d2	0.725	0.607	0.01	-16.2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 10:21

Lab File ID: VI049276.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00543 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.067	0.01	-0.2	± 40.0
Chloroform-d	0.783	0.692	0.01	-11.6	± 20.0
1,2-Dichloroethane-d4	0.320	0.290	0.01	-9.4	± 25.0
Benzene-d6	1.948	1.734	0.03	-11	± 20.0
1,2-Dichloropropane-d6	0.548	0.495	0.1	-9.6	± 20.0
Toluene-d8	1.437	1.229	0.2	-14.4	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.184	0.01	-14.6	± 25.0
2-Hexanone-d5	0.068	0.063	0.01	-7.6	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.227	0.01	-9	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.726	0.06	-17.2	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 19:15

Lab File ID: VI049289.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00544 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.535	0.01	-5	± 50.0
Chloromethane	0.482	0.451	0.01	-6.5	± 50.0
Vinyl chloride	0.337	0.354	0.01	5.1	± 50.0
Bromomethane	0.163	0.149	0.01	-8.4	± 50.0
Chloroethane	0.144	0.159	0.01	10.7	± 50.0
Trichlorofluoromethane	0.471	0.484	0.01	2.6	± 50.0
1,1-Dichloroethene	0.404	0.416	0.02	3.0	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.418	0.01	-2.9	± 50.0
Acetone	0.041	0.043	0.01	2.9	± 50.0
Carbon disulfide	1.463	1.484	0.01	1.4	± 25.0
Methyl Acetate	0.118	0.122	0.01	3.3	± 50.0
Methylene chloride	0.445	0.450	0.01	1.2	± 50.0
trans-1,2-Dichloroethene	0.446	0.460	0.07	3.1	± 25.0
Methyl tert-butyl Ether	0.737	0.772	0.01	4.7	± 50.0
1,1-Dichloroethane	0.756	0.781	0.1	3.4	± 25.0
cis-1,2-Dichloroethene	0.459	0.469	0.1	2.2	± 25.0
2-Butanone	0.075	0.080	0.01	7.5	± 50.0
Bromochloromethane	0.184	0.176	0.02	-4.4	± 25.0
Chloroform	0.804	0.836	0.04	4.0	± 25.0
1,1,1-Trichloroethane	0.949	1.000	0.05	5.4	± 25.0
Cyclohexane	0.837	0.824	0.1	-1.6	± 50.0
Carbon tetrachloride	0.829	0.869	0.02	4.8	± 50.0
Benzene	2.141	2.260	0.3	5.6	± 25.0
1,2-Dichloroethane	0.405	0.416	0.01	2.5	± 50.0
Trichloroethene	0.594	0.610	0.1	2.7	± 25.0
Methylcyclohexane	0.733	0.702	0.2	-4.1	± 50.0
1,2-Dichloropropane	0.502	0.527	0.1	5.0	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 19:15

Lab File ID: VI049289.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00544 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.764	0.09	4.4	± 25.0
cis-1,3-Dichloropropene	0.740	0.738	0.1	-0.3	± 25.0
4-Methyl-2-pentanone	0.258	0.274	0.01	6.0	± 50.0
Toluene	1.806	1.891	0.4	4.7	± 25.0
trans-1,3-Dichloropropene	0.567	0.574	0.01	1.2	± 25.0
1,1,2-Trichloroethane	0.261	0.274	0.04	5.2	± 25.0
Tetrachloroethene	0.390	0.403	0.1	3.3	± 25.0
2-Hexanone	0.173	0.183	0.01	5.6	± 50.0
Dibromochloromethane	0.393	0.399	0.05	1.6	± 25.0
1,2-Dibromoethane	0.272	0.276	0.01	1.5	± 25.0
Chlorobenzene	1.083	1.126	0.4	4.0	± 25.0
Ethylbenzene	1.866	1.984	0.5	6.3	± 25.0
o-Xylene	0.636	0.661	0.3	4.0	± 25.0
m,p-Xylene	0.680	0.707	0.2	4.0	± 25.0
Styrene	1.055	1.100	0.2	4.3	± 25.0
Bromoform	0.466	0.458	0.01	-1.8	± 50.0
Isopropylbenzene	1.648	1.743	0.7	5.8	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.252	0.05	0.1	± 25.0
1,3-Dichlorobenzene	1.696	1.786	0.5	5.3	± 25.0
1,4-Dichlorobenzene	1.742	1.787	0.7	2.6	± 25.0
1,2-Dichlorobenzene	1.405	1.457	0.4	3.7	± 25.0
1,2-Dibromo-3-chloropropane	0.086	0.086	0.01	0.1	± 50.0
1,2,4-trichlorobenzene	0.751	0.773	0.3	3.0	± 50.0
1,2,3-Trichlorobenzene	0.556	0.570	0.2	2.7	± 50.0
Vinyl Chloride-d3	0.308	0.253	0.01	-17.7	± 50.0
Chloroethane-d5	0.170	0.159	0.01	-6.5	± 50.0
1,1-Dichloroethene-d2	0.725	0.647	0.01	-10.7	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 19:15

Lab File ID: VI049289.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00544 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

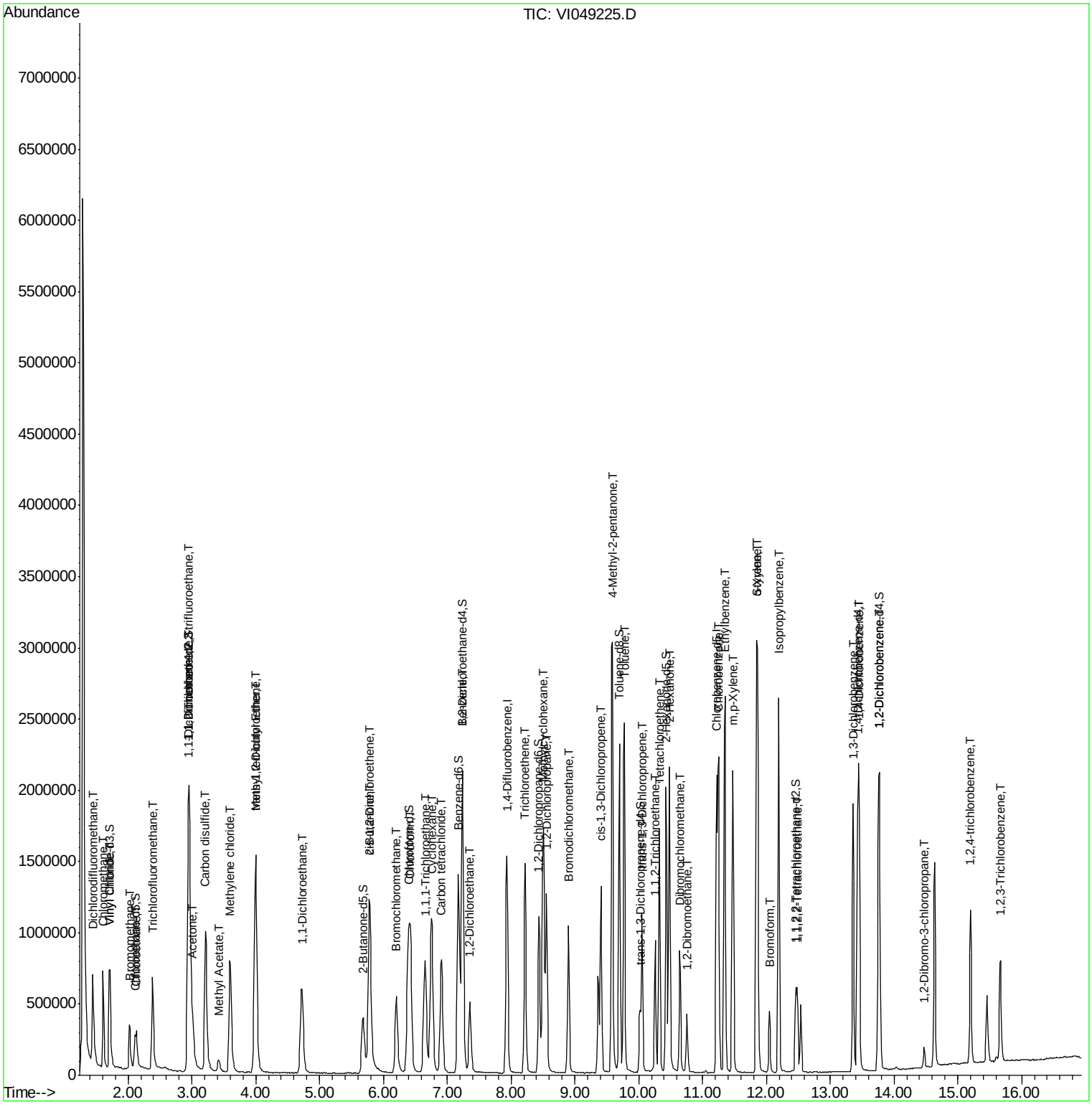
ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.072	0.01	8.3	± 50.0
Chloroform-d	0.783	0.744	0.01	-5	± 25.0
1,2-Dichloroethane-d4	0.320	0.318	0.01	-0.8	± 25.0
Benzene-d6	1.948	1.851	0.03	-5	± 25.0
1,2-Dichloropropane-d6	0.548	0.524	0.1	-4.2	± 25.0
Toluene-d8	1.437	1.305	0.2	-9.2	± 25.0
trans-1,3-Dichloropropene-d4	0.216	0.197	0.01	-8.7	± 25.0
2-Hexanone-d5	0.068	0.070	0.01	3.1	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.238	0.01	-4.4	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.815	0.06	-7	± 25.0

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049225.D
Acq On : 4 May 2016 14:05
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00538

Quant Time: May 05 05:11:59 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 14:21:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049225.D
Acq On : 4 May 2016 14:05
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00538

Quant Time: May 05 05:11:59 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 14:21:29 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1354316	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	1001728	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	409038	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	397271	4.76	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 95.20%			
7) Chloroethane-d5	2.11	69	224462	4.86	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 97.20%			
11) 1,1-Dichloroethene-d2	2.94	63	946099	4.82	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 96.40%			
20) 2-Butanone-d5	5.68	46	944087	52.30	ug/L	0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 104.60%			
24) Chloroform-d	6.39	84	1018915	4.80	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.00%			
26) 1,2-Dichloroethane-d4	7.24	65	432777	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.80%			
32) Benzene-d6	7.18	84	1790473	4.59	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 91.80%			
36) 1,2-Dichloropropane-d6	8.44	67	514982	4.69	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 93.80%			
41) Toluene-d8	9.70	98	1385417	4.81	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.20%			
43) trans-1,3-Dichloropropene-	10.02	79	211364	4.89	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 97.80%			
46) 2-Hexanone-d5	10.43	63	680195	49.88	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 99.76%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	252883	5.07	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 101.40%			
63) 1,2-Dichlorobenzene-d4	13.76	152	352807	4.92	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	763188	5.00	ug/L	98
3) Chloromethane	1.61	50	617344	4.73	ug/L	99
5) Vinyl chloride	1.72	62	426351	4.67	ug/L	99
6) Bromomethane	2.02	94	200163	4.53	ug/L	99
8) Chloroethane	2.13	64	195287	5.00	ug/L	99
9) Trichlorofluoromethane	2.38	101	619448	4.85	ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.97	101	579383	4.96	ug/L	99
12) 1,1-Dichloroethene	2.96	96	509957	4.66	ug/L	95
13) Acetone	3.01	43	541995	48.41	ug/L	98
14) Carbon disulfide	3.21	76	1865997	4.71	ug/L	100
15) Methyl Acetate	3.42	43	157956	4.94	ug/L	96
16) Methylene chloride	3.59	84	551626	4.58	ug/L	95
17) Methyl tert-butyl Ether	4.00	73	943871	4.73	ug/L	99
18) trans-1,2-Dichloroethene	4.00	96	563346	4.66	ug/L	94
19) 1,1-Dichloroethane	4.72	63	945620	4.62	ug/L	98
21) 2-Butanone	5.79	43	997378	49.25	ug/L	99
22) cis-1,2-Dichloroethene	5.78	96	577425	4.65	ug/L	90

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049225.D
Acq On : 4 May 2016 14:05
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00538

Quant Time: May 05 05:11:59 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 14:21:29 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.20	128	230269	4.62	ug/L	90
25) Chloroform	6.42	83	993954	4.56	ug/L	98
27) 1,2-Dichloroethane	7.35	62	500045	4.55	ug/L	98
29) 1,1,1-Trichloroethane	6.65	97	845456	4.44	ug/L	99
30) Cyclohexane	6.75	56	782523	4.66	ug/L	99
31) Carbon tetrachloride	6.91	117	746290	4.49	ug/L	99
33) Benzene	7.24	78	1916120	4.47	ug/L	100
34) Trichloroethene	8.22	95	519197	4.36	ug/L	94
35) Methylcyclohexane	8.51	83	719177	4.90	ug/L	99
37) 1,2-Dichloropropane	8.56	63	444820	4.42	ug/L	99
38) Bromodichloromethane	8.90	83	654224	4.46	ug/L	100
39) cis-1,3-Dichloropropene	9.41	75	668890	4.51	ug/L	98
40) 4-Methyl-2-pentanone	9.58	43	2427372	46.89	ug/L	99
42) Toluene	9.78	91	1705027	4.71	ug/L	98
44) trans-1,3-Dichloropropene	10.05	75	534360	4.70	ug/L	98
45) 1,1,2-Trichloroethane	10.26	97	247730	4.74	ug/L	97
47) Tetrachloroethene	10.33	164	363096	4.64	ug/L	99
48) 2-Hexanone	10.48	43	1675728	48.40	ug/L	99
49) Dibromochloromethane	10.64	129	375270	4.76	ug/L	98
50) 1,2-Dibromoethane	10.76	107	253972	4.66	ug/L	95
51) Chlorobenzene	11.25	112	1048779	4.83	ug/L	98
52) Ethylbenzene	11.35	91	1875948	5.02	ug/L	98
53) m,p-Xylene	11.48	106	667328	4.90	ug/L	96
54) o-Xylene	11.84	106	626974	4.92	ug/L	98
55) Styrene	11.86	104	1034154	4.89	ug/L	93
56) Isopropylbenzene	12.20	105	1657142	5.02	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.48	83	245183	4.86	ug/L	98
60) Bromoform	12.05	173	176351	4.62	ug/L	98
61) 1,3-Dichlorobenzene	13.36	146	688120	4.96	ug/L	98
62) 1,4-Dichlorobenzene	13.46	146	684982	4.81	ug/L	97
64) 1,2-Dichlorobenzene	13.77	146	560222	4.87	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.47	75	33386	4.77	ug/L	99
66) 1,2,4-trichlorobenzene	15.20	180	316668	5.16	ug/L	97
67) 1,2,3-Trichlorobenzene	15.67	180	228556	5.03	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

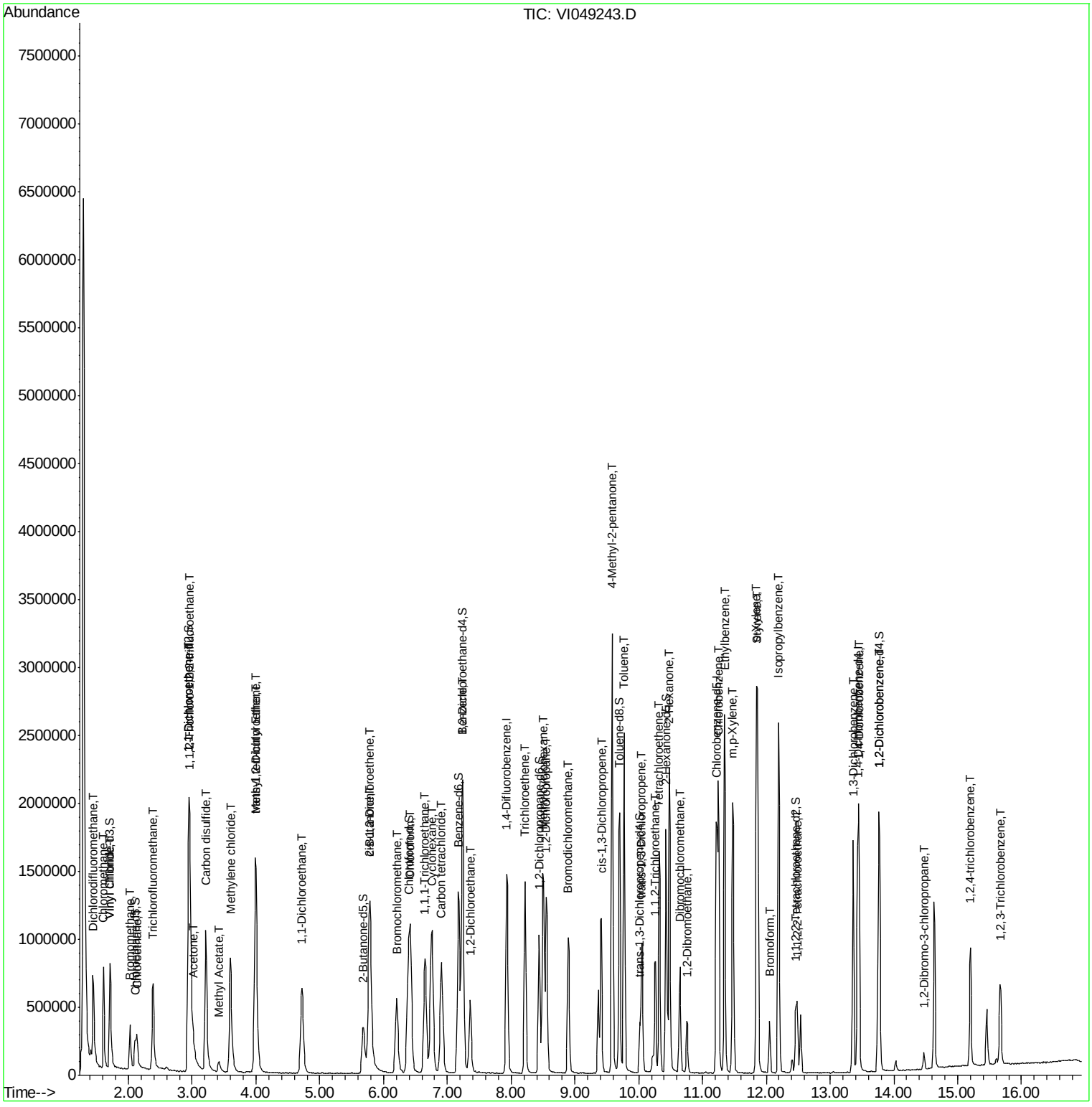
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049243.D
Acq On : 5 May 2016 00:11
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 05 06:57:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00539

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:16 AM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049243.D
Acq On : 5 May 2016 00:11
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00539

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:16 AM

Quant Time: May 05 06:57:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1317114	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	903674	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	344676	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	375612	4.63	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 92.60%			
7) Chloroethane-d5	2.10	69	211101	4.70	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 94.00%			
11) 1,1-Dichloroethene-d2	2.94	63	917267	4.80	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 96.00%			
20) 2-Butanone-d5	5.68	46	908119	51.73	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 103.46%			
24) Chloroform-d	6.38	84	992001	4.81	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.20%			
26) 1,2-Dichloroethane-d4	7.24	65	408304	4.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.80%			
32) Benzene-d6	7.17	84	1702259	4.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.80%			
36) 1,2-Dichloropropane-d6	8.44	67	467140	4.72	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 94.40%			
41) Toluene-d8	9.70	98	1249830	4.81	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.20%			
43) trans-1,3-Dichloropropene-	10.02	79	175111	4.49	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 89.80%			
46) 2-Hexanone-d5	10.43	63	601544	48.90	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 97.80%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	214910	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.40%			
63) 1,2-Dichlorobenzene-d4	13.76	152	283272	4.69	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	730307	4.92	ug/L	99
3) Chloromethane	1.61	50	662664	5.22	ug/L	98
5) Vinyl chloride	1.72	62	464376	5.23	ug/L	99
6) Bromomethane	2.02	94	203027	4.73	ug/L	92
8) Chloroethane	2.13	64	194177	5.12	ug/L	96
9) Trichlorofluoromethane	2.39	101	647991	5.22	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.97	101	553936	4.88	ug/L	99
12) 1,1-Dichloroethene	2.95	96	531833	5.00	ug/L	86
13) Acetone	3.02	43	568406	52.21	ug/L	91
14) Carbon disulfide	3.21	76	1924204	4.99	ug/L	99
15) Methyl Acetate	3.42	43	155033	4.99	ug/L	94
16) Methylene chloride	3.60	84	587506	5.01	ug/L	97
17) Methyl tert-butyl Ether	3.99	73	991106	5.10	ug/L	99
18) trans-1,2-Dichloroethene	3.99	96	602862	5.13	ug/L	95
19) 1,1-Dichloroethane	4.72	63	1007828	5.06	ug/L	99
21) 2-Butanone	5.79	43	1040091	52.80	ug/L	98
22) cis-1,2-Dichloroethene	5.78	96	615224m	5.09	ug/L	

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049243.D
Acq On : 5 May 2016 00:11
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00539

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:16 AM

Quant Time: May 05 06:57:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.21	128	238872	4.93	ug/L		95
25) Chloroform	6.42	83	1071712	5.06	ug/L		97
27) 1,2-Dichloroethane	7.36	62	543049	5.08	ug/L		98
29) 1,1,1-Trichloroethane	6.65	97	884456	5.15	ug/L		98
30) Cyclohexane	6.75	56	765931	5.06	ug/L		97
31) Carbon tetrachloride	6.91	117	768881	5.13	ug/L		100
33) Benzene	7.24	78	1967238	5.08	ug/L		100
34) Trichloroethene	8.21	95	523671	4.88	ug/L		97
35) Methylcyclohexane	8.50	83	629499	4.75	ug/L		98
37) 1,2-Dichloropropane	8.55	63	464556	5.12	ug/L		98
38) Bromodichloromethane	8.89	83	652416	4.93	ug/L		99
39) cis-1,3-Dichloropropene	9.42	75	627078	4.69	ug/L		97
40) 4-Methyl-2-pentanone	9.58	43	2422228	51.86	ug/L		99
42) Toluene	9.77	91	1650735	5.06	ug/L		99
44) trans-1,3-Dichloropropene	10.05	75	492669	4.81	ug/L		100
45) 1,1,2-Trichloroethane	10.26	97	237571	5.04	ug/L		98
47) Tetrachloroethene	10.32	164	337058	4.78	ug/L		93
48) 2-Hexanone	10.48	43	1605058	51.39	ug/L		98
49) Dibromochloromethane	10.65	129	343497	4.83	ug/L		99
50) 1,2-Dibromoethane	10.75	107	244522	4.97	ug/L		94
51) Chlorobenzene	11.25	112	980060	5.01	ug/L		98
52) Ethylbenzene	11.34	91	1718244	5.09	ug/L		100
53) m,p-Xylene	11.47	106	611980	4.98	ug/L		99
54) o-Xylene	11.85	106	575654	5.01	ug/L		100
55) Styrene	11.87	104	961627	5.05	ug/L		96
56) Isopropylbenzene	12.19	105	1527488	5.13	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.49	83	220528	4.84	ug/L		98
60) Bromoform	12.05	173	159428	4.96	ug/L		97
61) 1,3-Dichlorobenzene	13.36	146	591219	5.06	ug/L		98
62) 1,4-Dichlorobenzene	13.45	146	593246	4.94	ug/L		98
64) 1,2-Dichlorobenzene	13.78	146	487024	5.03	ug/L		98
65) 1,2-Dibromo-3-chloropropan	14.47	75	26285	4.45	ug/L	#	78
66) 1,2,4-trichlorobenzene	15.20	180	251543	4.86	ug/L		98
67) 1,2,3-Trichlorobenzene	15.67	180	187720	4.90	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

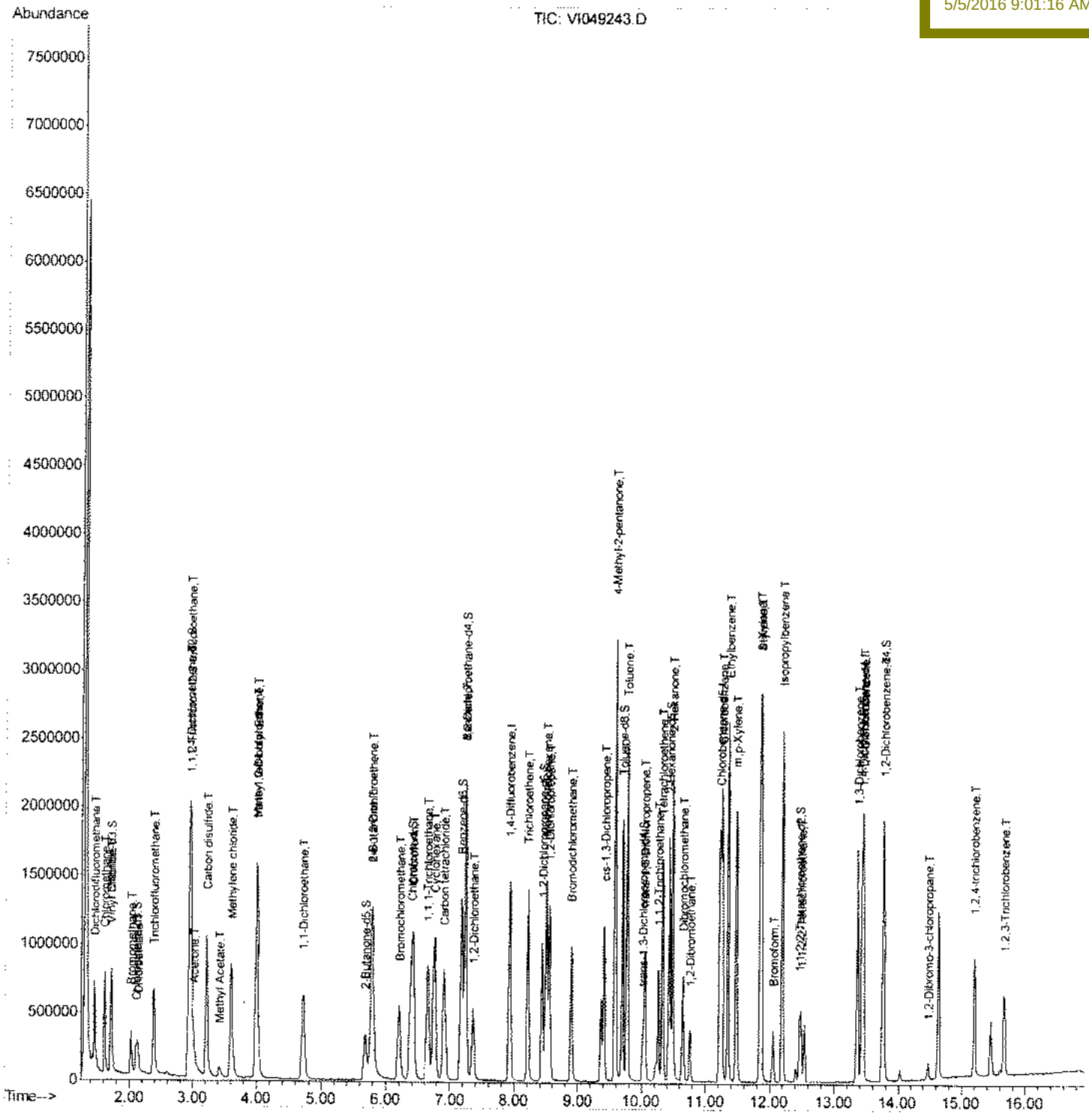
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049243.D
Acq On : 5 May 2016 00:11
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 05 06:57:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00539

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:16 AM



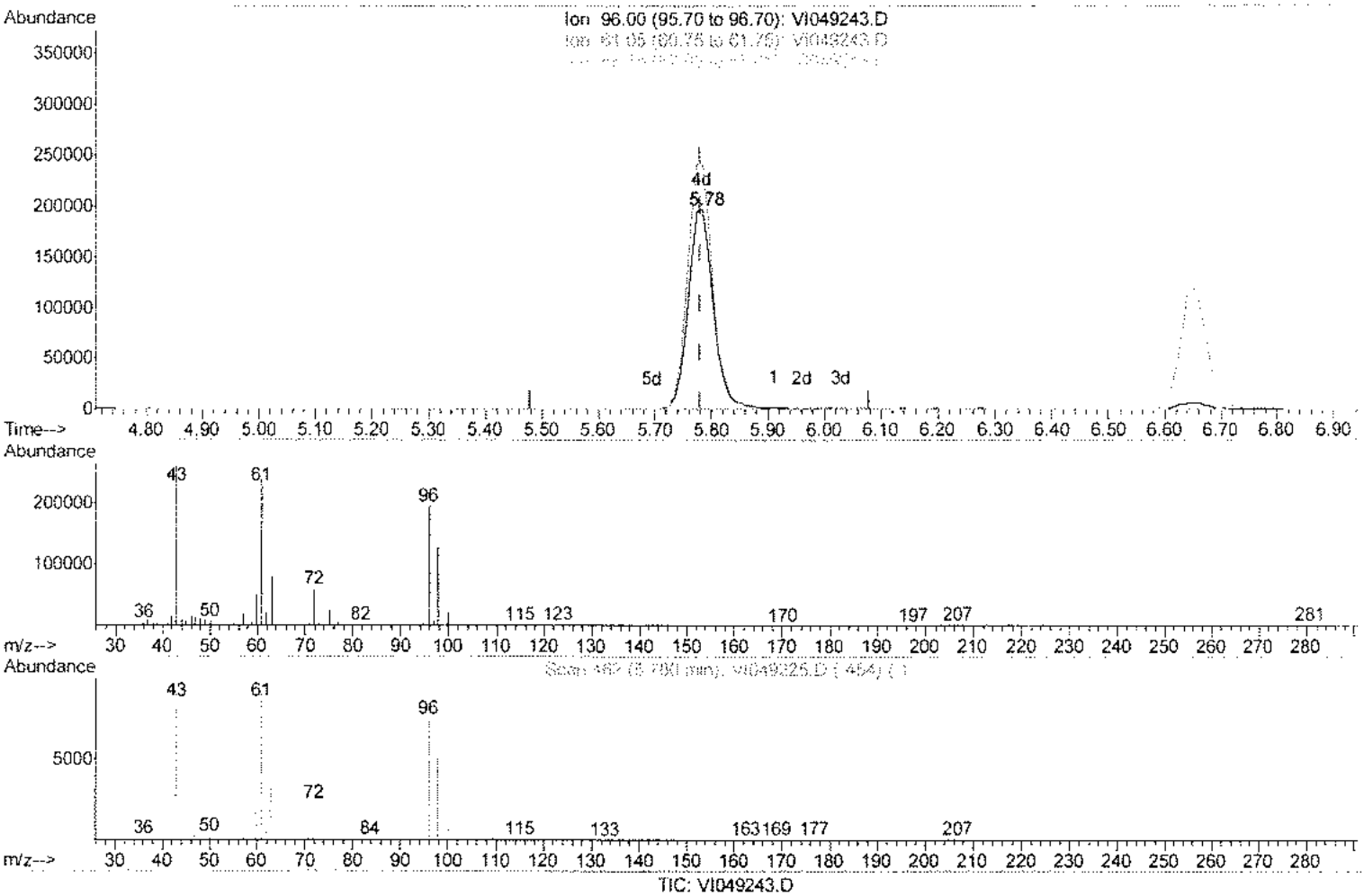
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049243.D
Acq On : 5 May 2016 00:11
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 05 05:25:09 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00539

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:16 AM



TIC: VI049243.D

(22) cis-1,2-Dichloroethene (T)

5.783min (+0.004) 5.09ug/L m M.D 05/07/16

response 615224

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	122.29
68.15	0.00	0.10#
0.00	0.00	0.00

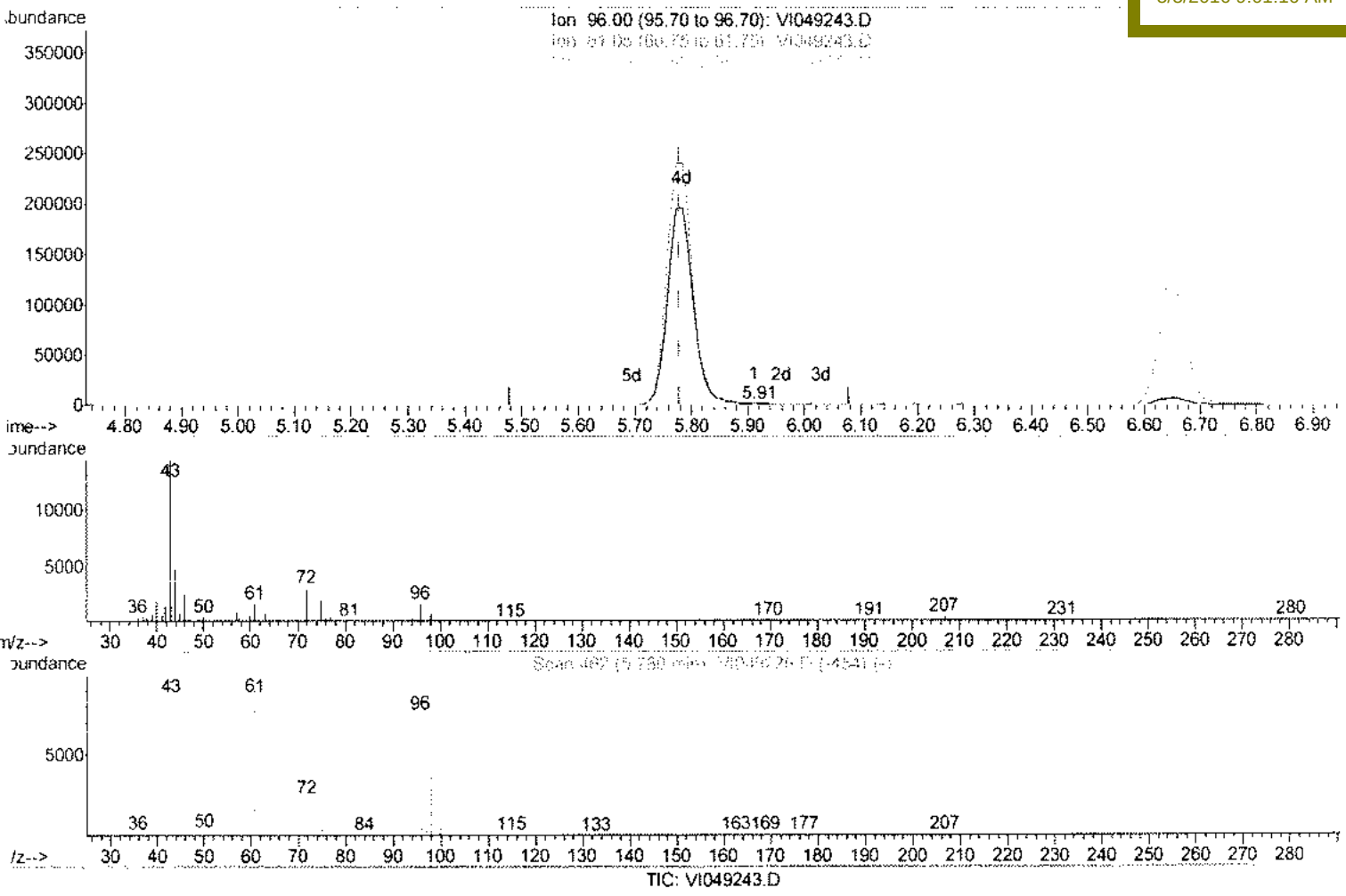
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049243.D
Acq On : 5 May 2016 00:11
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 05 05:25:09 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00539

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:16 AM



(22) cis-1,2-Dichloroethene (T)

5.911min (+0.131) 0.02ug/L

response 2608

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	99.18
68.15	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049243.D
Acq On : 5 May 2016 00:11
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 05 06:57:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00539

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:16 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1317114	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	903674	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	344676	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	375612	4.63	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 92.60%			
7) Chloroethane-d5	2.10	69	211101	4.70	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 94.00%			
11) 1,1-Dichloroethene-d2	2.94	63	917267	4.80	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 96.00%			
20) 2-Butanone-d5	5.68	46	908119	51.73	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 103.46%			
24) Chloroform-d	6.38	84	992001	4.81	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.20%			
26) 1,2-Dichloroethane-d4	7.24	65	408304	4.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.80%			
32) Benzene-d6	7.17	84	1702259	4.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.80%			
36) 1,2-Dichloropropane-d6	8.44	67	467140	4.72	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 94.40%			
41) Toluene-d8	9.70	98	1249830	4.81	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.20%			
43) trans-1,3-Dichloropropene-	10.02	79	175111	4.49	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 89.80%			
46) 2-Hexanone-d5	10.43	63	601544	48.90	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 97.80%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	214910	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.40%			
63) 1,2-Dichlorobenzene-d4	13.76	152	283272	4.69	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.80%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	730307	4.92	ug/L	99
3) Chloromethane	1.61	50	662664	5.22	ug/L	98
5) Vinyl chloride	1.72	62	464376	5.23	ug/L	99
6) Bromomethane	2.02	94	203027	4.73	ug/L	92
8) Chloroethane	2.13	64	194177	5.12	ug/L	96
9) Trichlorofluoromethane	2.39	101	647991	5.22	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.97	101	553936	4.88	ug/L	99
12) 1,1-Dichloroethene	2.95	96	531833	5.00	ug/L	86
13) Acetone	3.02	43	568406	52.21	ug/L	91
14) Carbon disulfide	3.21	76	1924204	4.99	ug/L	99
15) Methyl Acetate	3.42	43	155033	4.99	ug/L	94
16) Methylene chloride	3.60	84	587506	5.01	ug/L	97
17) Methyl tert-butyl Ether	3.99	73	991106	5.10	ug/L	99
18) trans-1,2-Dichloroethene	3.99	96	602862	5.13	ug/L	95
19) 1,1-Dichloroethane	4.72	63	1007828	5.06	ug/L	99
21) 2-Butanone	5.79	43	1040091	52.80	ug/L	98
22) cis-1,2-Dichloroethene	5.78	96	615224m	5.09	ug/L	

M.D 05/07/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049243.D
Acq On : 5 May 2016 00:11
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 05 06:57:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00539

Manual Integrations APPROVED
mohammad
5/5/2016 9:01:16 AM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.21	128	238872	4.93	ug/L		95
25) Chloroform	6.42	83	1071712	5.06	ug/L		97
27) 1,2-Dichloroethane	7.36	62	543049	5.08	ug/L		98
29) 1,1,1-Trichloroethane	6.65	97	884456	5.15	ug/L		98
30) Cyclohexane	6.75	56	765931	5.06	ug/L		97
31) Carbon tetrachloride	6.91	117	768881	5.13	ug/L		100
33) Benzene	7.24	78	1967238	5.08	ug/L		100
34) Trichloroethene	8.21	95	523671	4.88	ug/L		97
35) Methylcyclohexane	8.50	83	629499	4.75	ug/L		98
37) 1,2-Dichloropropane	8.55	63	464556	5.12	ug/L		98
38) Bromodichloromethane	8.89	83	652416	4.93	ug/L		99
39) cis-1,3-Dichloropropene	9.42	75	627078	4.69	ug/L		97
40) 4-Methyl-2-pentanone	9.58	43	2422228	51.86	ug/L		99
42) Toluene	9.77	91	1650735	5.06	ug/L		99
44) trans-1,3-Dichloropropene	10.05	75	492669	4.81	ug/L		100
45) 1,1,2-Trichloroethane	10.26	97	237571	5.04	ug/L		98
47) Tetrachloroethene	10.32	164	337058	4.78	ug/L		93
48) 2-Hexanone	10.48	43	1605058	51.39	ug/L		98
49) Dibromochloromethane	10.65	129	343497	4.83	ug/L		99
50) 1,2-Dibromoethane	10.75	107	244522	4.97	ug/L		94
51) Chlorobenzene	11.25	112	980060	5.01	ug/L		98
52) Ethylbenzene	11.34	91	1718244	5.09	ug/L		100
53) m,p-Xylene	11.47	106	611980	4.98	ug/L		99
54) o-Xylene	11.85	106	575654	5.01	ug/L		100
55) Styrene	11.87	104	961627	5.05	ug/L		96
56) Isopropylbenzene	12.19	105	1527488	5.13	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.49	83	220528	4.84	ug/L		98
60) Bromoform	12.05	173	159428	4.96	ug/L		97
61) 1,3-Dichlorobenzene	13.36	146	591219	5.06	ug/L		98
62) 1,4-Dichlorobenzene	13.45	146	593246	4.94	ug/L		98
64) 1,2-Dichlorobenzene	13.78	146	487024	5.03	ug/L		98
65) 1,2-Dibromo-3-chloropropan	14.47	75	26285	4.45	ug/L	#	78
66) 1,2,4-trichlorobenzene	15.20	180	251543	4.86	ug/L		98
67) 1,2,3-Trichlorobenzene	15.67	180	187720	4.90	ug/L		97

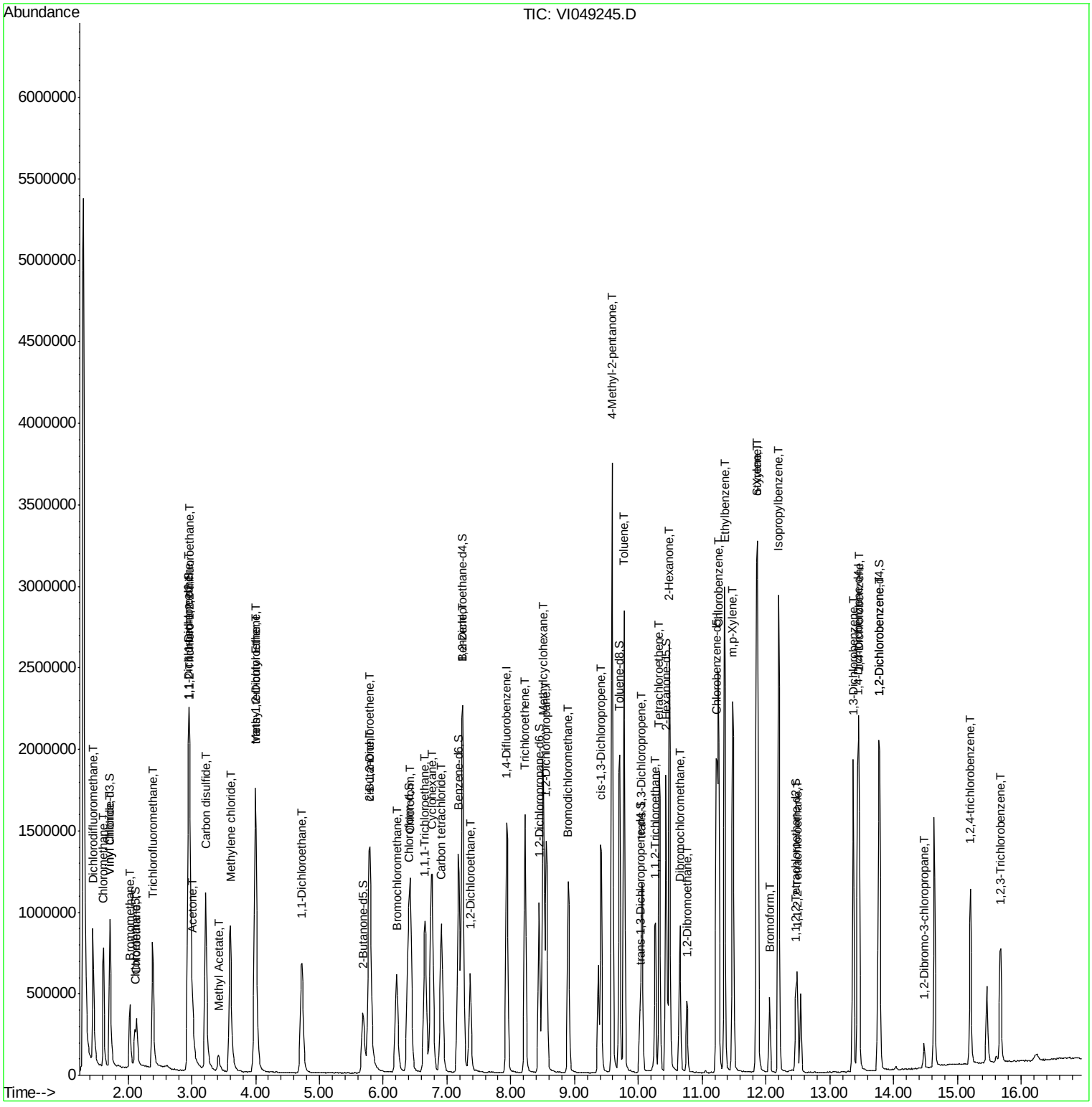
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050516\
Data File : VI049245.D
Acq On : 5 May 2016 10:15
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00540

Quant Time: May 06 04:36:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050516\
Data File : VI049245.D
Acq On : 5 May 2016 10:15
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00540

Quant Time: May 06 04:36:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1400841	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	948431	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	368197	5.00	ug/L	0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.72	65	390336	4.53	ug/L	0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 90.60%			
7) Chloroethane-d5	2.11	69	222774	4.66	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.20%			
11) 1,1-Dichloroethene-d2	2.94	63	932804	4.59	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 91.80%			
20) 2-Butanone-d5	5.68	46	899951	48.20	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 96.40%			
24) Chloroform-d	6.39	84	987828	4.50	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.00%			
26) 1,2-Dichloroethane-d4	7.24	65	407190	4.54	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.80%			
32) Benzene-d6	7.18	84	1695967	4.59	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 91.80%			
36) 1,2-Dichloropropane-d6	8.45	67	478823	4.61	ug/L	0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 92.20%			
41) Toluene-d8	9.71	98	1237704	4.54	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.80%			
43) trans-1,3-Dichloropropene-	10.02	79	187030	4.57	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.40%			
46) 2-Hexanone-d5	10.44	63	617924	47.86	ug/L	0.01
Spiked Amount 50.000	Range 45 - 130		Recovery = 95.72%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	220938	4.68	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 93.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	285343	4.42	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	874839	5.54	ug/L	98
3) Chloromethane	1.62	50	714612	5.29	ug/L	98
5) Vinyl chloride	1.72	62	529506	5.61	ug/L	96
6) Bromomethane	2.03	94	248668	5.44	ug/L	99
8) Chloroethane	2.14	64	236620	5.86	ug/L	91
9) Trichlorofluoromethane	2.38	101	761388	5.77	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.98	101	676868	5.60	ug/L	99
12) 1,1-Dichloroethene	2.96	96	590388	5.22	ug/L	92
13) Acetone	3.01	43	662078	57.18	ug/L	96
14) Carbon disulfide	3.22	76	2121868	5.18	ug/L	100
15) Methyl Acetate	3.42	43	178458	5.40	ug/L	96
16) Methylene chloride	3.61	84	627648	5.04	ug/L	95
17) Methyl tert-butyl Ether	4.00	73	1108616	5.37	ug/L	99
18) trans-1,2-Dichloroethene	4.00	96	654759	5.24	ug/L	96
19) 1,1-Dichloroethane	4.73	63	1092395	5.16	ug/L	100
21) 2-Butanone	5.79	43	1176798	56.17	ug/L	99
22) cis-1,2-Dichloroethene	5.78	96	660236	5.14	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050516\
Data File : VI049245.D
Acq On : 5 May 2016 10:15
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00540

Quant Time: May 06 04:36:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.21	128	264512	5.13	ug/L	93
25) Chloroform	6.43	83	1171280	5.20	ug/L	100
27) 1,2-Dichloroethane	7.36	62	606547	5.34	ug/L	100
29) 1,1,1-Trichloroethane	6.66	97	971956	5.40	ug/L	97
30) Cyclohexane	6.76	56	901595	5.68	ug/L	98
31) Carbon tetrachloride	6.91	117	864104	5.49	ug/L	98
33) Benzene	7.25	78	2195225	5.41	ug/L	100
34) Trichloroethene	8.22	95	600950	5.33	ug/L	97
35) Methylcyclohexane	8.51	83	821210	5.91	ug/L	100
37) 1,2-Dichloropropane	8.56	63	508548	5.34	ug/L	99
38) Bromodichloromethane	8.90	83	746639	5.38	ug/L	99
39) cis-1,3-Dichloropropene	9.41	75	749431	5.34	ug/L	99
40) 4-Methyl-2-pentanone	9.59	43	2769733	56.50	ug/L	99
42) Toluene	9.78	91	1837161	5.36	ug/L	98
44) trans-1,3-Dichloropropene	10.06	75	585853	5.45	ug/L	97
45) 1,1,2-Trichloroethane	10.27	97	267001	5.40	ug/L	98
47) Tetrachloroethene	10.33	164	398726	5.39	ug/L	98
48) 2-Hexanone	10.48	43	1836447	56.03	ug/L	99
49) Dibromochloromethane	10.65	129	407336	5.46	ug/L	97
50) 1,2-Dibromoethane	10.76	107	279070	5.41	ug/L	97
51) Chlorobenzene	11.25	112	1097413	5.34	ug/L	97
52) Ethylbenzene	11.35	91	1942037	5.49	ug/L	100
53) m,p-Xylene	11.48	106	692185	5.37	ug/L	99
54) o-Xylene	11.85	106	648446	5.38	ug/L	99
55) Styrene	11.87	104	1090889	5.45	ug/L	97
56) Isopropylbenzene	12.20	105	1742953	5.58	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.49	83	254023	5.32	ug/L	99
60) Bromoform	12.06	173	191745	5.59	ug/L	97
61) 1,3-Dichlorobenzene	13.37	146	666033	5.33	ug/L	98
62) 1,4-Dichlorobenzene	13.46	146	661270	5.15	ug/L	98
64) 1,2-Dichlorobenzene	13.78	146	556914	5.38	ug/L	96
65) 1,2-Dibromo-3-chloropropan	14.48	75	31467	4.99	ug/L	95
66) 1,2,4-trichlorobenzene	15.21	180	305542	5.53	ug/L	99
67) 1,2,3-Trichlorobenzene	15.68	180	222470	5.44	ug/L	98

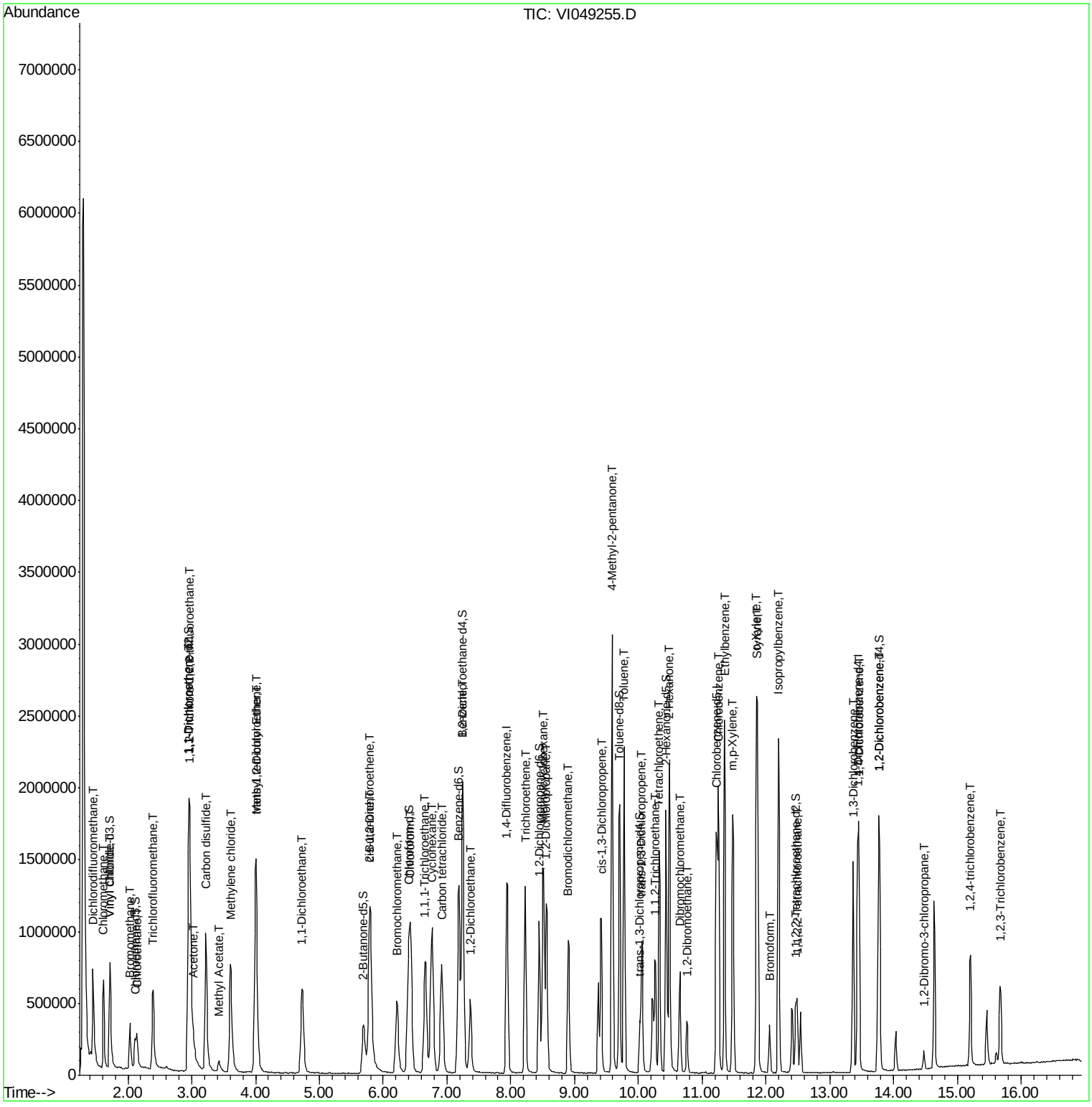
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049255.D
Acq On : 5 May 2016 16:16
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00541

Quant Time: May 06 04:44:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049255.D
Acq On : 5 May 2016 16:16
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00541

Quant Time: May 06 04:44:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.95	114	1235299	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	831818	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	319065	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.72	65	369908	4.86	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 97.20%			
7) Chloroethane-d5	2.11	69	212761	5.05	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.00%			
11) 1,1-Dichloroethene-d2	2.95	63	878013	4.90	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 98.00%			
20) 2-Butanone-d5	5.69	46	922328	56.02	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 112.04%			
24) Chloroform-d	6.40	84	971856	5.02	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.40%			
26) 1,2-Dichloroethane-d4	7.25	65	418229	5.28	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.60%			
32) Benzene-d6	7.19	84	1667844	5.15	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.00%			
36) 1,2-Dichloropropane-d6	8.45	67	468018	5.14	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 102.80%			
41) Toluene-d8	9.71	98	1193987	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.80%			
43) trans-1,3-Dichloropropene-	10.02	79	175391	4.89	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 97.80%			
46) 2-Hexanone-d5	10.44	63	598214	52.83	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 105.66%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	213248	5.15	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 103.00%			
63) 1,2-Dichlorobenzene-d4	13.76	152	271041	4.85	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 97.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	714152	5.13	ug/L	100
3) Chloromethane	1.62	50	605465	5.08	ug/L	98
5) Vinyl chloride	1.72	62	432005	5.19	ug/L	96
6) Bromomethane	2.03	94	200448	4.98	ug/L	95
8) Chloroethane	2.14	64	185632	5.22	ug/L	97
9) Trichlorofluoromethane	2.39	101	591418	5.08	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.98	101	540291	5.07	ug/L	98
12) 1,1-Dichloroethene	2.96	96	493581	4.95	ug/L	82
13) Acetone	3.02	43	554215	54.28	ug/L	91
14) Carbon disulfide	3.22	76	1772136	4.90	ug/L	99
15) Methyl Acetate	3.43	43	150578	5.17	ug/L	95
16) Methylene chloride	3.61	84	545239	4.96	ug/L	95
17) Methyl tert-butyl Ether	4.00	73	936466	5.14	ug/L	99
18) trans-1,2-Dichloroethene	4.01	96	547189	4.97	ug/L	96
19) 1,1-Dichloroethane	4.73	63	954530	5.11	ug/L	97
21) 2-Butanone	5.80	43	966983	52.34	ug/L	97
22) cis-1,2-Dichloroethene	5.79	96	560927	4.95	ug/L #	93

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049255.D
Acq On : 5 May 2016 16:16
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00541

Quant Time: May 06 04:44:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

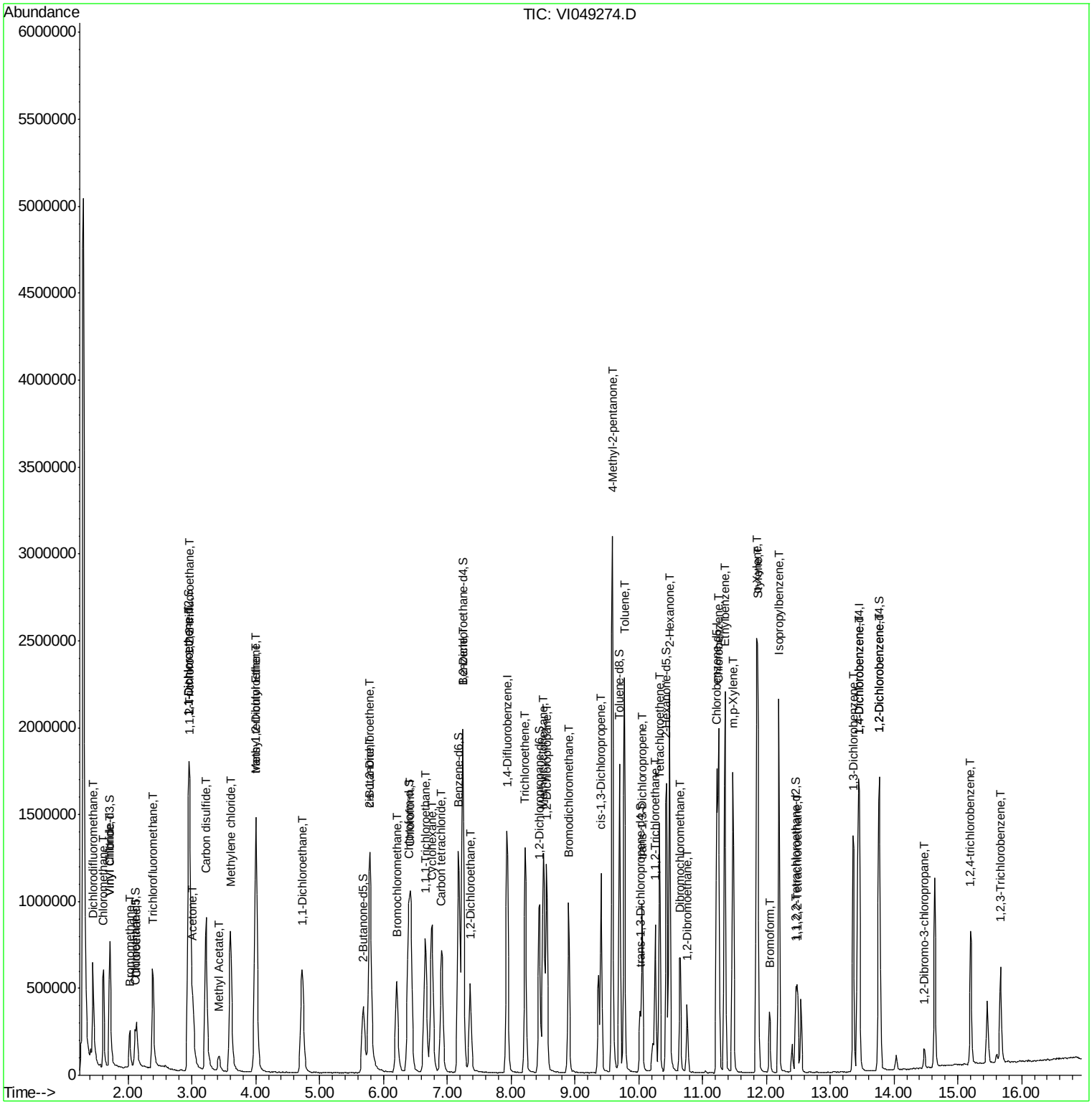
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.21	128	224701	4.94	ug/L	87
25) Chloroform	6.43	83	1004724	5.06	ug/L	99
27) 1,2-Dichloroethane	7.36	62	516238	5.15	ug/L	99
29) 1,1,1-Trichloroethane	6.67	97	812100	5.14	ug/L	97
30) Cyclohexane	6.76	56	725551	5.21	ug/L	96
31) Carbon tetrachloride	6.92	117	703969	5.10	ug/L	98
33) Benzene	7.25	78	1845852	5.18	ug/L	100
34) Trichloroethene	8.23	95	489375	4.95	ug/L	96
35) Methylcyclohexane	8.52	83	631757	5.18	ug/L	99
37) 1,2-Dichloropropane	8.57	63	438556	5.25	ug/L	98
38) Bromodichloromethane	8.90	83	601241	4.94	ug/L	97
39) cis-1,3-Dichloropropene	9.42	75	616876	5.01	ug/L	98
40) 4-Methyl-2-pentanone	9.59	43	2293928	53.36	ug/L	98
42) Toluene	9.78	91	1513251	5.04	ug/L	99
44) trans-1,3-Dichloropropene	10.06	75	461257	4.89	ug/L	98
45) 1,1,2-Trichloroethane	10.27	97	222286	5.13	ug/L	96
47) Tetrachloroethene	10.33	164	317508	4.89	ug/L	93
48) 2-Hexanone	10.48	43	1508416	52.47	ug/L	99
49) Dibromochloromethane	10.65	129	326411	4.99	ug/L	96
50) 1,2-Dibromoethane	10.76	107	225798	4.99	ug/L	97
51) Chlorobenzene	11.25	112	889821	4.94	ug/L	98
52) Ethylbenzene	11.35	91	1553128	5.00	ug/L	100
53) m,p-Xylene	11.48	106	558818	4.94	ug/L	97
54) o-Xylene	11.85	106	518776	4.90	ug/L	99
55) Styrene	11.87	104	876554	5.00	ug/L	99
56) Isopropylbenzene	12.20	105	1370095	5.00	ug/L	98
58) 1,1,2,2-Tetrachloroethane	12.49	83	211712	5.05	ug/L	99
60) Bromoform	12.06	173	139853	4.70	ug/L	100
61) 1,3-Dichlorobenzene	13.37	146	531089	4.91	ug/L	99
62) 1,4-Dichlorobenzene	13.46	146	540227	4.86	ug/L	99
64) 1,2-Dichlorobenzene	13.78	146	449518	5.01	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.48	75	27546	5.04	ug/L	94
66) 1,2,4-trichlorobenzene	15.21	180	233697	4.88	ug/L	98
67) 1,2,3-Trichlorobenzene	15.68	180	171609	4.84	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049274.D
Acq On : 6 May 2016 2:57
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 32 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00542

Quant Time: May 06 05:24:16 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049274.D
Acq On : 6 May 2016 2:57
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 32 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00542

Quant Time: May 06 05:24:16 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1253214	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.22	117	819708	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	302969	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	362555	4.70	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 94.00%			
7) Chloroethane-d5	2.11	69	229752	5.38	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 107.60%			
11) 1,1-Dichloroethene-d2	2.95	63	851851	4.69	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 93.80%			
20) 2-Butanone-d5	5.68	46	911979	54.60	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 109.20%			
24) Chloroform-d	6.39	84	969209	4.94	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.80%			
26) 1,2-Dichloroethane-d4	7.24	65	407665	5.08	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.60%			
32) Benzene-d6	7.18	84	1615167	5.06	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.20%			
36) 1,2-Dichloropropane-d6	8.45	67	462962	5.16	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 103.20%			
41) Toluene-d8	9.70	98	1112652	4.72	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.40%			
43) trans-1,3-Dichloropropene-	10.02	79	162620	4.60	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.00%			
46) 2-Hexanone-d5	10.44	63	590745	52.94	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 105.88%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	207124	5.07	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 101.40%			
63) 1,2-Dichlorobenzene-d4	13.76	152	252018	4.74	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 94.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	643426	4.56	ug/L	98
3) Chloromethane	1.62	50	569284	4.71	ug/L	96
5) Vinyl chloride	1.72	62	426331	5.05	ug/L	100
6) Bromomethane	2.03	94	127363	3.12	ug/L	94
8) Chloroethane	2.14	64	197052	5.46	ug/L	99
9) Trichlorofluoromethane	2.38	101	564786	4.78	ug/L	96
10) 1,1,2-Trichloro-1,2,2-trif	2.97	101	474642	4.39	ug/L	99
12) 1,1-Dichloroethene	2.96	96	480589	4.75	ug/L	91
13) Acetone	3.01	43	538629	52.00	ug/L	98
14) Carbon disulfide	3.22	76	1696882	4.63	ug/L	99
15) Methyl Acetate	3.43	43	165758	5.61	ug/L	98
16) Methylene chloride	3.60	84	553026	4.96	ug/L	97
17) Methyl tert-butyl Ether	4.00	73	940893	5.09	ug/L	99
18) trans-1,2-Dichloroethene	4.00	96	541908	4.85	ug/L	93
19) 1,1-Dichloroethane	4.73	63	947895	5.00	ug/L	99
21) 2-Butanone	5.79	43	1009482	53.86	ug/L	97
22) cis-1,2-Dichloroethene	5.78	96	565702	4.92	ug/L	91

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049274.D
Acq On : 6 May 2016 2:57
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 32 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00542

Quant Time: May 06 05:24:16 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.20	128	227586	4.93	ug/L		91
25) Chloroform	6.43	83	1011554	5.02	ug/L		96
27) 1,2-Dichloroethane	7.36	62	514516	5.06	ug/L		100
29) 1,1,1-Trichloroethane	6.66	97	790607	5.08	ug/L		98
30) Cyclohexane	6.76	56	607812	4.43	ug/L		98
31) Carbon tetrachloride	6.91	117	662862	4.87	ug/L		99
33) Benzene	7.25	78	1812822	5.17	ug/L		100
34) Trichloroethene	8.22	95	471339	4.84	ug/L		98
35) Methylcyclohexane	8.51	83	507713	4.23	ug/L		98
37) 1,2-Dichloropropane	8.56	63	420191	5.10	ug/L		99
38) Bromodichloromethane	8.90	83	604854	5.04	ug/L		100
39) cis-1,3-Dichloropropene	9.41	75	570123	4.70	ug/L		100
40) 4-Methyl-2-pentanone	9.59	43	2293121	54.13	ug/L		99
42) Toluene	9.78	91	1465753	4.95	ug/L		98
44) trans-1,3-Dichloropropene	10.05	75	443082	4.77	ug/L		100
45) 1,1,2-Trichloroethane	10.26	97	224304	5.25	ug/L		98
47) Tetrachloroethene	10.33	164	290410	4.54	ug/L		94
48) 2-Hexanone	10.48	43	1534157	54.15	ug/L		98
49) Dibromochloromethane	10.65	129	322130	5.00	ug/L		100
50) 1,2-Dibromoethane	10.76	107	223987	5.02	ug/L	#	98
51) Chlorobenzene	11.25	112	863141	4.86	ug/L		99
52) Ethylbenzene	11.35	91	1443111	4.72	ug/L		99
53) m,p-Xylene	11.48	106	520081	4.67	ug/L		98
54) o-Xylene	11.85	106	497295	4.77	ug/L		99
55) Styrene	11.87	104	830187	4.80	ug/L		100
56) Isopropylbenzene	12.20	105	1226751	4.54	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.48	83	207012	5.01	ug/L		99
60) Bromoform	12.05	173	138937	4.92	ug/L		99
61) 1,3-Dichlorobenzene	13.37	146	511928	4.98	ug/L		98
62) 1,4-Dichlorobenzene	13.46	146	519477	4.92	ug/L		99
64) 1,2-Dichlorobenzene	13.78	146	427901	5.02	ug/L		99
65) 1,2-Dibromo-3-chloropropan	14.47	75	28348	5.47	ug/L		91
66) 1,2,4-trichlorobenzene	15.20	180	228948	5.03	ug/L		95
67) 1,2,3-Trichlorobenzene	15.67	180	170204	5.06	ug/L		97

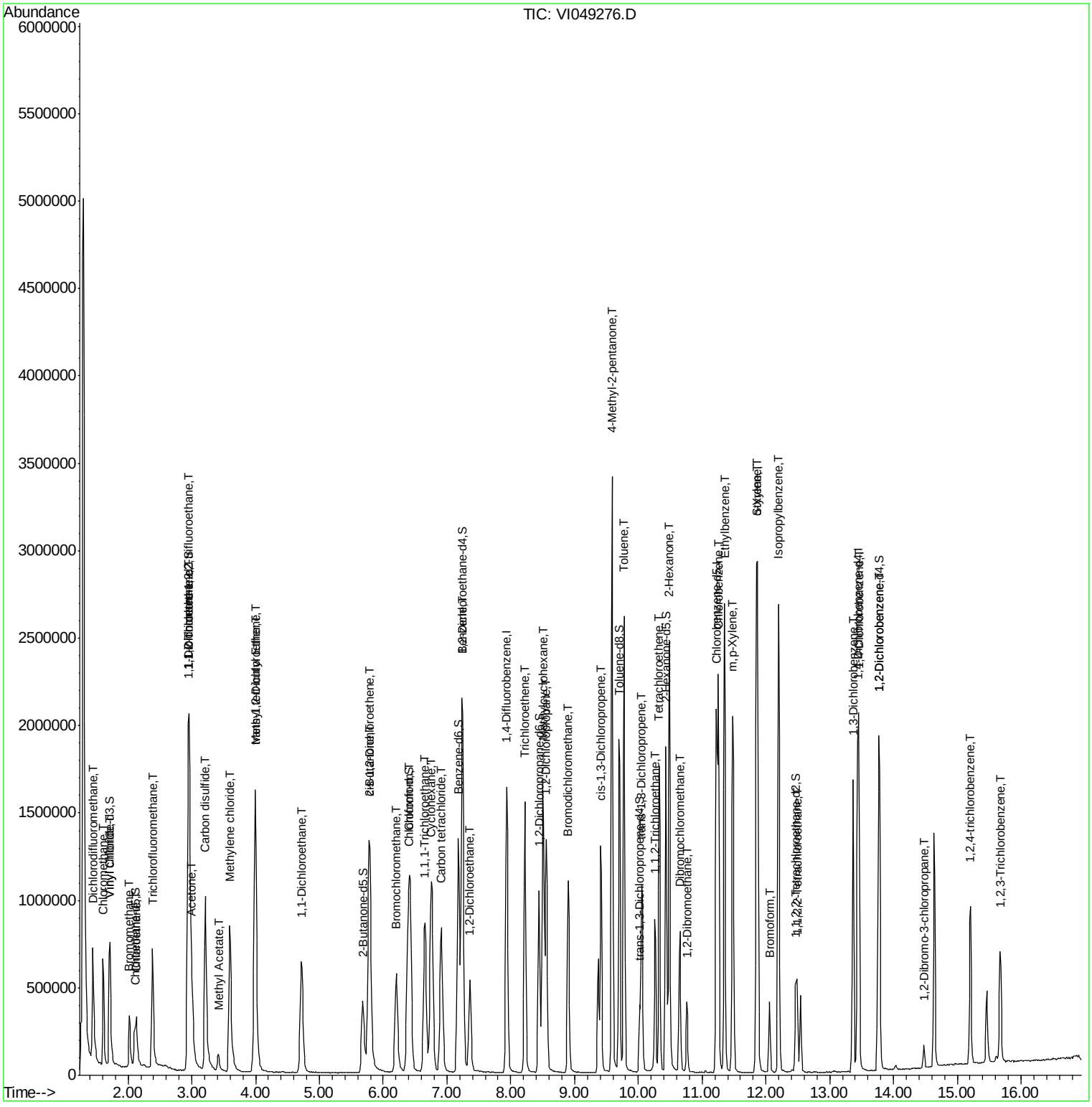
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050616\
Data File : VI049276.D
Acq On : 6 May 2016 10:21
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00543

Quant Time: May 07 04:01:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050616\
Data File : VI049276.D
Acq On : 6 May 2016 10:21
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00543

Quant Time: May 07 04:01:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1457810	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.22	117	978595	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	385883	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	357956	3.99	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 79.80%			
7) Chloroethane-d5	2.10	69	227142	4.57	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 91.40%			
11) 1,1-Dichloroethene-d2	2.94	63	885353	4.19	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 83.80%			
20) 2-Butanone-d5	5.68	46	969877	49.91	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 99.82%			
24) Chloroform-d	6.39	84	1009082	4.42	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 88.40%			
26) 1,2-Dichloroethane-d4	7.24	65	423180	4.53	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.60%			
32) Benzene-d6	7.18	84	1697006	4.45	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.00%			
36) 1,2-Dichloropropane-d6	8.45	67	484322	4.52	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 90.40%			
41) Toluene-d8	9.70	98	1203152	4.28	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 85.60%			
43) trans-1,3-Dichloropropene-	10.02	79	180403	4.27	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 85.40%			
46) 2-Hexanone-d5	10.43	63	615291	46.19	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 92.38%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	221823	4.55	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.00%			
63) 1,2-Dichlorobenzene-d4	13.76	152	280133	4.14	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 82.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	768665	4.68	ug/L	99
3) Chloromethane	1.61	50	627026	4.46	ug/L	100
5) Vinyl chloride	1.71	62	480547	4.89	ug/L	99
6) Bromomethane	2.02	94	187937	3.95	ug/L	94
8) Chloroethane	2.13	64	216902	5.16	ug/L	97
9) Trichlorofluoromethane	2.38	101	681837	4.96	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	600097	4.77	ug/L	99
12) 1,1-Dichloroethene	2.95	96	550063	4.67	ug/L	92
13) Acetone	3.00	43	633400	52.56	ug/L	97
14) Carbon disulfide	3.21	76	1984629	4.65	ug/L	99
15) Methyl Acetate	3.42	43	170853	4.97	ug/L	100
16) Methylene chloride	3.59	84	594079	4.58	ug/L	96
17) Methyl tert-butyl Ether	4.00	73	1010102	4.70	ug/L	99
18) trans-1,2-Dichloroethene	4.00	96	614508	4.72	ug/L	98
19) 1,1-Dichloroethane	4.72	63	1039081	4.71	ug/L	99
21) 2-Butanone	5.79	43	1071932	49.17	ug/L	98
22) cis-1,2-Dichloroethene	5.78	96	619319	4.63	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050616\
Data File : VI049276.D
Acq On : 6 May 2016 10:21
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00543

Quant Time: May 07 04:01:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.20	128	246281	4.59	ug/L	92
25) Chloroform	6.42	83	1103309	4.71	ug/L	97
27) 1,2-Dichloroethane	7.35	62	560850	4.74	ug/L	99
29) 1,1,1-Trichloroethane	6.66	97	905451	4.87	ug/L	99
30) Cyclohexane	6.75	56	786429	4.80	ug/L	96
31) Carbon tetrachloride	6.91	117	774042	4.77	ug/L	97
33) Benzene	7.24	78	2020683	4.82	ug/L	100
34) Trichloroethene	8.22	95	543970	4.68	ug/L	98
35) Methylcyclohexane	8.51	83	696201	4.85	ug/L	99
37) 1,2-Dichloropropane	8.56	63	465393	4.73	ug/L	99
38) Bromodichloromethane	8.90	83	680100	4.75	ug/L	97
39) cis-1,3-Dichloropropene	9.41	75	658901	4.55	ug/L	100
40) 4-Methyl-2-pentanone	9.59	43	2510029	49.63	ug/L	99
42) Toluene	9.78	91	1686286	4.77	ug/L	98
44) trans-1,3-Dichloropropene	10.05	75	534620	4.82	ug/L	97
45) 1,1,2-Trichloroethane	10.26	97	240895	4.72	ug/L	99
47) Tetrachloroethene	10.33	164	357307	4.68	ug/L	96
48) 2-Hexanone	10.48	43	1684573	49.81	ug/L	96
49) Dibromochloromethane	10.65	129	374003	4.86	ug/L	98
50) 1,2-Dibromoethane	10.76	107	248593	4.67	ug/L	94
51) Chlorobenzene	11.25	112	1004732	4.74	ug/L	99
52) Ethylbenzene	11.35	91	1741844	4.77	ug/L	100
53) m,p-Xylene	11.48	106	627273	4.71	ug/L	100
54) o-Xylene	11.85	106	582077	4.68	ug/L	99
55) Styrene	11.87	104	993985	4.82	ug/L	98
56) Isopropylbenzene	12.20	105	1549928	4.81	ug/L	98
58) 1,1,2,2-Tetrachloroethane	12.49	83	227442	4.61	ug/L	99
60) Bromoform	12.06	173	167531	4.66	ug/L	98
61) 1,3-Dichlorobenzene	13.37	146	598140	4.57	ug/L	99
62) 1,4-Dichlorobenzene	13.46	146	610441	4.54	ug/L	98
64) 1,2-Dichlorobenzene	13.78	146	489976	4.52	ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.48	75	28372	4.30	ug/L	93
66) 1,2,4-trichlorobenzene	15.21	180	274011	4.73	ug/L	98
67) 1,2,3-Trichlorobenzene	15.67	180	199688	4.66	ug/L	97

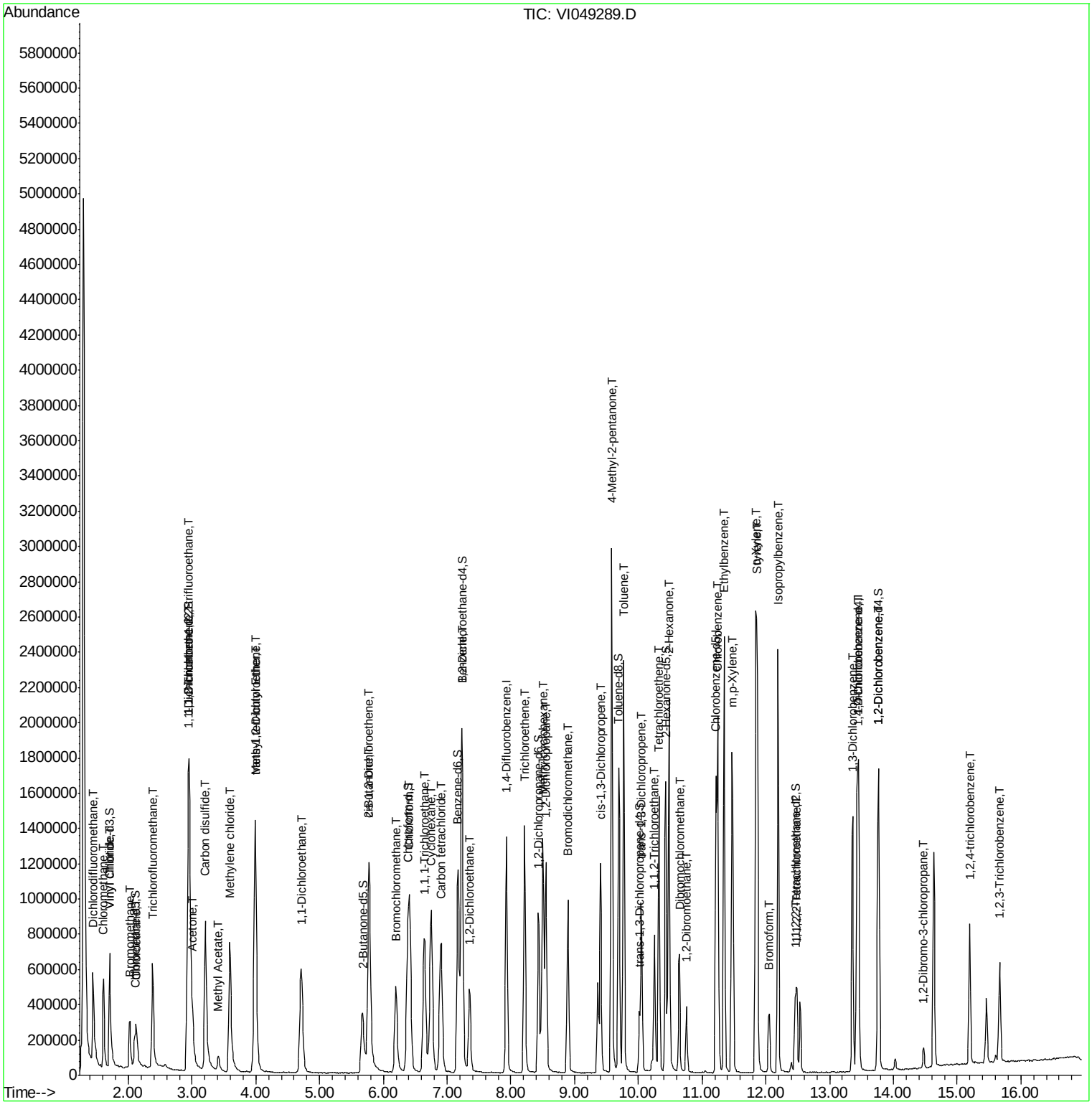
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049289.D
Acq On : 6 May 2016 19:15
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00544

Quant Time: May 09 13:22:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Mon May 09 13:17:11 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049289.D
Acq On : 6 May 2016 19:15
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00544

Quant Time: May 09 13:22:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Mon May 09 13:17:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1181131	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	797532	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	306691	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	299273	4.12	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.40%			
7) Chloroethane-d5	2.10	69	188275	4.67	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.40%			
11) 1,1-Dichloroethene-d2	2.93	63	764726	4.46	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 89.20%			
20) 2-Butanone-d5	5.67	46	851617	54.09	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 108.18%			
24) Chloroform-d	6.38	84	878846	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
26) 1,2-Dichloroethane-d4	7.23	65	375365	4.96	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.20%			
32) Benzene-d6	7.17	84	1476029	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
36) 1,2-Dichloropropane-d6	8.43	67	418300	4.79	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 140		Recovery = 95.80%			
41) Toluene-d8	9.69	98	1040675	4.54	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.80%			
43) trans-1,3-Dichloropropene-	10.02	79	157185	4.57	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.40%			
46) 2-Hexanone-d5	10.43	63	560035	51.59	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 103.18%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	189967	4.78	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	250014	4.65	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	632358	4.75	ug/L	98
3) Chloromethane	1.61	50	532307	4.67	ug/L	100
5) Vinyl chloride	1.71	62	418612	5.26	ug/L	96
6) Bromomethane	2.02	94	176511	4.58	ug/L	95
8) Chloroethane	2.12	64	188340	5.53	ug/L	100
9) Trichlorofluoromethane	2.38	101	571163	5.13	ug/L	96
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	494186	4.85	ug/L	99
12) 1,1-Dichloroethene	2.95	96	491141	5.15	ug/L	92
13) Acetone	3.01	43	502025	51.42	ug/L	99
14) Carbon disulfide	3.20	76	1752802	5.07	ug/L	99
15) Methyl Acetate	3.41	43	143975	5.17	ug/L	96
16) Methylene chloride	3.59	84	531801	5.06	ug/L	97
17) Methyl tert-butyl Ether	3.98	73	911659	5.23	ug/L	97
18) trans-1,2-Dichloroethene	3.99	96	543415	5.16	ug/L	96
19) 1,1-Dichloroethane	4.71	63	922864	5.17	ug/L	98
21) 2-Butanone	5.78	43	949535	53.76	ug/L	100
22) cis-1,2-Dichloroethene	5.77	96	553914	5.11	ug/L	92

Quantitation Report (Not Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049289.D
Acq On : 6 May 2016 19:15
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00544

Quant Time: May 09 13:22:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Mon May 09 13:17:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.20	128	207900	4.78	ug/L		85
25) Chloroform	6.41	83	987783	5.20	ug/L		100
27) 1,2-Dichloroethane	7.35	62	490815	5.12	ug/L		99
29) 1,1,1-Trichloroethane	6.64	97	797768	5.27	ug/L		97
30) Cyclohexane	6.75	56	657512	4.92	ug/L		98
31) Carbon tetrachloride	6.91	117	693050	5.24	ug/L		98
33) Benzene	7.23	78	1802745	5.28	ug/L		100
34) Trichloroethene	8.21	95	486364	5.13	ug/L		96
35) Methylcyclohexane	8.50	83	560168	4.79	ug/L		100
37) 1,2-Dichloropropane	8.55	63	420697	5.25	ug/L		99
38) Bromodichloromethane	8.89	83	608996	5.22	ug/L		97
39) cis-1,3-Dichloropropene	9.41	75	588180	4.98	ug/L		99
40) 4-Methyl-2-pentanone	9.58	43	2184299	52.99	ug/L		99
42) Toluene	9.77	91	1507871	5.23	ug/L		99
44) trans-1,3-Dichloropropene	10.04	75	457834	5.06	ug/L		97
45) 1,1,2-Trichloroethane	10.25	97	218787	5.26	ug/L		96
47) Tetrachloroethene	10.32	164	321446	5.16	ug/L		96
48) 2-Hexanone	10.48	43	1455744	52.81	ug/L		99
49) Dibromochloromethane	10.65	129	318584	5.08	ug/L		99
50) 1,2-Dibromoethane	10.75	107	220339	5.08	ug/L		97
51) Chlorobenzene	11.25	112	898345	5.20	ug/L		99
52) Ethylbenzene	11.34	91	1582569	5.32	ug/L		100
53) m,p-Xylene	11.47	106	563966	5.20	ug/L		94
54) o-Xylene	11.85	106	527501	5.20	ug/L		95
55) Styrene	11.87	104	877245	5.22	ug/L		97
56) Isopropylbenzene	12.19	105	1390422	5.29	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.49	83	201110	5.01	ug/L		93
60) Bromoform	12.05	173	140448	4.91	ug/L		98
61) 1,3-Dichlorobenzene	13.36	146	547733	5.26	ug/L		99
62) 1,4-Dichlorobenzene	13.45	146	547981	5.13	ug/L		99
64) 1,2-Dichlorobenzene	13.78	146	446909	5.18	ug/L		99
65) 1,2-Dibromo-3-chloropropan	14.46	75	26273	5.00	ug/L	#	82
66) 1,2,4-trichlorobenzene	15.20	180	237152	5.15	ug/L		98
67) 1,2,3-Trichlorobenzene	15.66	180	174894	5.13	ug/L		96

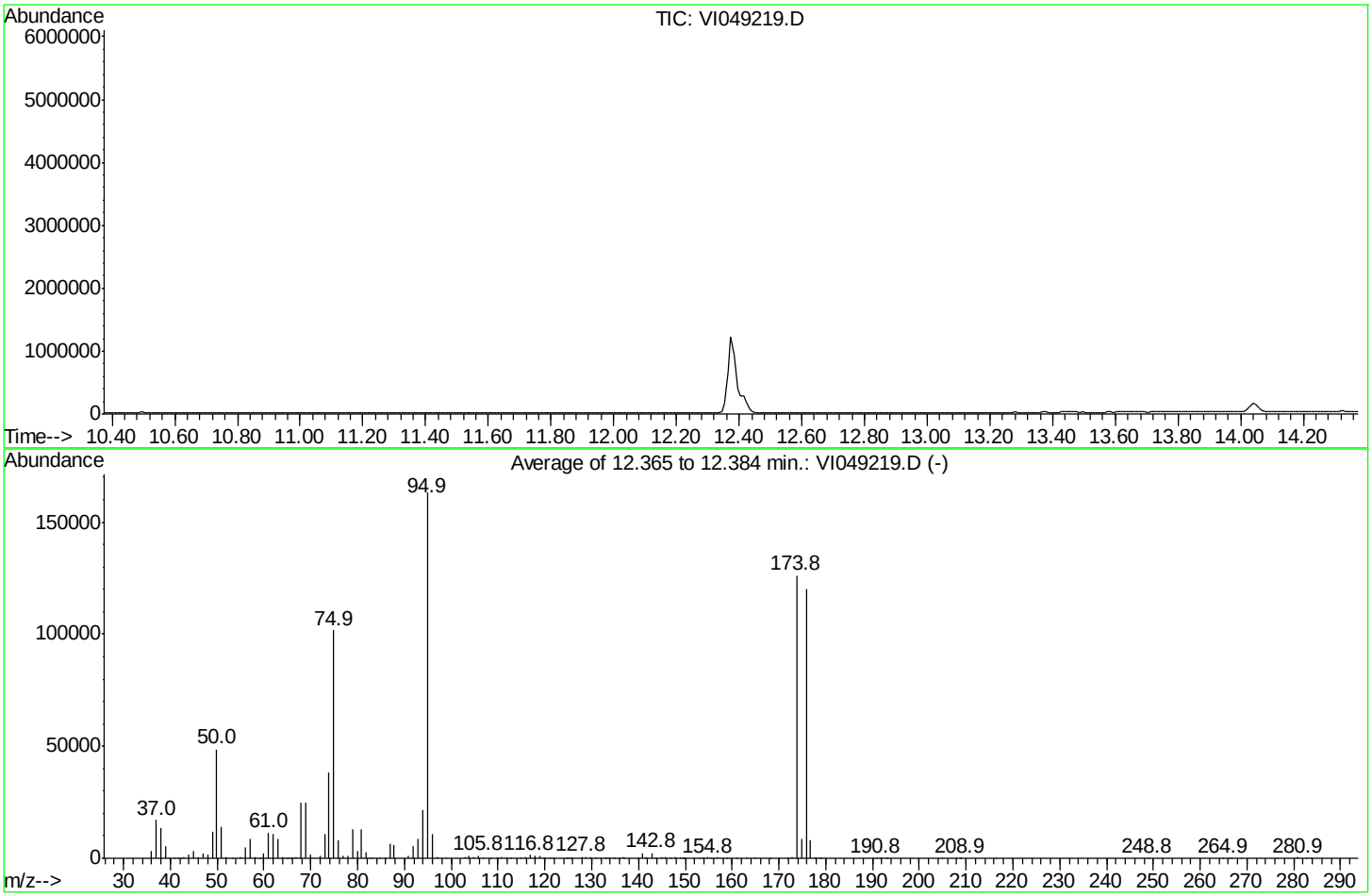
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049219.D
Acq On : 4 May 2016 8:57
Operator : FY/SY
Sample : BFB32
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB32

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Thu May 05 05:21:45 2016



AutoFind: Scans 1131, 1132, 1133; Background Corrected with Scan 1127

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	29.8	48658	PASS
75	95	30	80	62.3	101623	PASS
95	95	100	100	100.0	163138	PASS
96	95	5	9	6.6	10709	PASS
173	174	0.00	2	0.4	466	PASS
174	95	50	120	77.4	126261	PASS
175	174	5	9	7.1	8907	PASS
176	174	95	101	95.0	119986	PASS
177	176	5	9	6.7	8043	PASS

Scan 1127 (12.325 min): VI049219.D
BFB32

m/z	Abundance
35.95	298.0
39.00	695.0
39.90	1003.0
40.90	193.0
41.85	163.0
42.95	315.0
43.95	3257.0
44.75	335.0
50.95	353.0
51.85	155.0
52.30	169.0
55.00	175.0
58.95	188.0
59.80	152.0
60.70	181.0
62.60	204.0
63.85	210.0
64.95	244.0
69.70	179.0
70.65	165.0
72.95	1105.0
74.90	318.0
77.15	237.0
78.15	292.0
90.50	157.0
93.95	184.0
95.90	208.0
96.20	201.0
103.90	168.0
118.60	197.0
128.25	182.0
132.90	470.0
170.15	200.0
190.95	569.0
192.65	240.0
192.85	237.0
193.85	188.0
196.80	210.0
206.85	2279.0
207.95	227.0
208.80	215.0
248.45	210.0
259.70	198.0
260.10	177.0
266.70	256.0
279.30	193.0
280.90	939.0
282.00	618.0
282.70	217.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

Scan 1131 (12.365 min): VI049219.D
BFB32

Instrument :
MSVOA_I
ClientSampleId :
BFB32

m/z	Abundance
35.95	3387.0
36.95	16400.0
37.90	12574.0
39.00	5397.0
39.90	994.0
40.90	333.0
41.45	151.0
42.85	382.0
43.95	4353.0
44.90	2396.0
45.90	430.0
47.00	1397.0
48.00	1273.0
48.95	10427.0
49.95	40832.0
50.95	11832.0
51.95	573.0
54.90	696.0
55.95	4145.0
56.95	6496.0
57.95	425.0
58.85	195.0
59.05	204.0
60.00	1842.0
60.90	7636.0
61.90	8896.0
62.95	6635.0
63.75	777.0
65.35	189.0
65.85	161.0
66.90	732.0
67.90	19888.0
69.00	18984.0
69.95	2323.0
70.65	184.0
71.85	883.0
72.95	8029.0
73.90	31672.0
74.90	80968.0
75.90	5440.0
76.85	924.0
77.85	1029.0
78.85	10120.0
79.85	2196.0
80.80	10141.0
81.90	1487.0
83.00	323.0
86.85	4766.0
87.80	4132.0
90.80	743.0
91.85	4453.0
92.85	6191.0
93.95	15779.0
94.90	117320.0
95.90	9075.0
97.00	340.0
102.90	379.0
103.80	1179.0
104.90	343.0
105.75	930.0
109.70	471.0
111.70	194.0
114.85	216.0
115.90	472.0
116.80	1033.0
117.80	685.0
118.70	565.0
121.85	154.0
124.70	208.0
125.80	199.0
127.95	490.0
128.85	436.0
129.75	354.0
130.90	334.0
132.90	615.0
134.65	235.0
135.85	367.0
136.75	256.0
140.85	1126.0
141.65	217.0
142.75	1473.0
145.00	166.0
145.80	362.0
147.70	268.0
149.45	160.0
151.60	170.0
152.90	200.0
154.80	391.0
156.85	237.0
160.90	222.0
169.85	307.0
171.85	202.0

173.80	65312.0
174.80	4793.0
175.80	65368.0
176.75	4902.0
178.65	172.0
190.10	160.0
190.75	566.0
191.65	190.0
192.95	236.0
193.15	214.0
206.85	1761.0
207.95	262.0
208.70	271.0
266.70	442.0
276.55	157.0
280.90	946.0
282.75	152.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

Scan 1132 (12.374 min): VI049219.D
BFB32

Instrument :
MSVOA_I
ClientSampleId :
BFB32

m/z	Abundance
35.85	4655.0
36.95	19600.0
37.90	18296.0
39.00	7284.0
39.90	1195.0
40.90	673.0
42.45	214.0
42.95	431.0
43.95	6160.0
44.90	4370.0
45.90	515.0
46.90	3092.0
48.00	1961.0
48.95	15554.0
49.95	65416.0
50.95	18432.0
52.10	1007.0
53.30	154.0
54.90	840.0
55.85	6955.0
56.95	11209.0
57.95	647.0
58.85	350.0
59.90	3284.0
61.00	16251.0
61.90	13481.0
62.95	12315.0
63.95	1166.0
64.65	165.0
65.05	173.0
66.15	164.0
66.80	661.0
67.90	31992.0
68.90	35312.0
69.85	2042.0
71.95	1466.0
72.95	14442.0
73.90	49128.0
74.90	133120.0
76.00	12095.0
76.85	1193.0
77.85	926.0
78.85	17856.0
79.95	4684.0
80.80	17176.0
81.90	3445.0
82.60	238.0
86.85	8701.0
87.80	7453.0
90.80	1627.0
91.95	6924.0
92.95	12441.0
93.95	29432.0
94.90	210944.0
95.90	14756.0
96.90	329.0
102.90	365.0
103.80	1365.0
104.80	518.0
105.85	1424.0
106.95	382.0
108.35	158.0
109.90	192.0
110.80	350.0
111.80	275.0
112.65	399.0
114.95	211.0
115.85	936.0
116.80	1561.0
117.80	1332.0
118.90	1283.0
119.65	245.0
124.90	184.0
125.40	293.0
127.85	934.0
128.85	838.0
129.75	638.0
130.90	272.0
131.70	158.0
132.80	366.0
133.10	385.0
133.75	238.0
134.85	484.0
136.85	631.0
139.70	193.0
140.75	2515.0
141.75	473.0
142.85	2401.0
144.80	347.0
145.90	426.0
146.90	225.0
147.70	484.0

149.65	210.0
149.95	198.0
151.50	193.0
152.70	183.0
154.95	407.0
156.85	439.0
158.90	235.0
160.90	226.0
172.80	783.0
173.80	161024.0
174.80	10973.0
175.80	150400.0
176.85	10045.0
177.95	425.0
190.95	483.0
192.75	305.0
206.85	2070.0
207.85	328.0
208.70	384.0
248.85	277.0
266.60	313.0
268.85	298.0
281.00	1268.0
282.00	427.0
282.85	313.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

Scan 1133 (12.384 min): VI049219.D
BFB32

Instrument :
MSVOA_I
ClientSampleId :
BFB32

m/z	Abundance
35.95	2668.0
36.95	15616.0
37.90	9791.0
39.00	5131.0
39.80	1471.0
40.90	413.0
41.95	173.0
42.95	1060.0
43.85	4958.0
44.90	3509.0
45.70	203.0
47.00	1887.0
47.90	1572.0
48.95	10424.0
49.95	39728.0
50.95	12734.0
51.85	482.0
55.00	825.0
55.95	4090.0
56.95	7627.0
58.05	189.0
59.05	544.0
59.80	1876.0
60.90	10057.0
62.00	9237.0
62.95	6707.0
64.05	455.0
64.95	465.0
65.65	211.0
67.90	23032.0
69.00	19328.0
69.85	1535.0
70.75	158.0
71.85	765.0
72.95	12688.0
73.90	33488.0
74.90	91736.0
76.00	6961.0
76.85	1161.0
77.85	572.0
78.85	11286.0
79.85	3582.0
80.80	12245.0
81.80	3778.0
83.10	300.0
84.65	198.0
85.85	249.0
86.85	6705.0
87.80	6129.0
90.90	1207.0
91.95	5420.0
92.95	7957.0
93.95	20096.0
94.90	161152.0
95.90	8922.0
97.00	250.0
98.75	175.0
102.90	577.0
103.80	857.0
104.80	535.0
105.95	967.0
106.75	254.0
109.80	206.0
110.70	638.0
111.90	289.0
112.75	263.0
114.75	168.0
115.90	645.0
116.90	1655.0
117.90	808.0
118.90	1711.0
119.95	235.0
120.95	174.0
124.60	243.0
125.70	210.0
127.75	467.0
128.75	347.0
129.75	843.0
130.70	179.0
132.90	1031.0
133.65	316.0
134.65	393.0
137.05	551.0
140.85	2300.0
141.75	353.0
142.75	2711.0
143.75	213.0
144.80	378.0
145.70	203.0
146.70	398.0
147.80	307.0
148.95	199.0

149.55	179.0
152.90	192.0
153.80	185.0
154.80	521.0
155.45	210.0
156.85	276.0
157.75	173.0
158.70	174.0
160.90	394.0
163.05	258.0
164.75	183.0
168.20	153.0
172.70	615.0
173.80	152448.0
174.80	10955.0
175.80	144192.0
176.85	9184.0
177.65	362.0
178.95	221.0
190.85	691.0
191.95	296.0
192.95	678.0
204.85	357.0
206.95	2760.0
207.95	341.0
208.90	487.0
216.40	277.0
248.85	248.0
264.95	512.0
266.10	240.0
266.80	222.0
280.90	2231.0
281.80	453.0
282.95	438.0
283.75	210.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

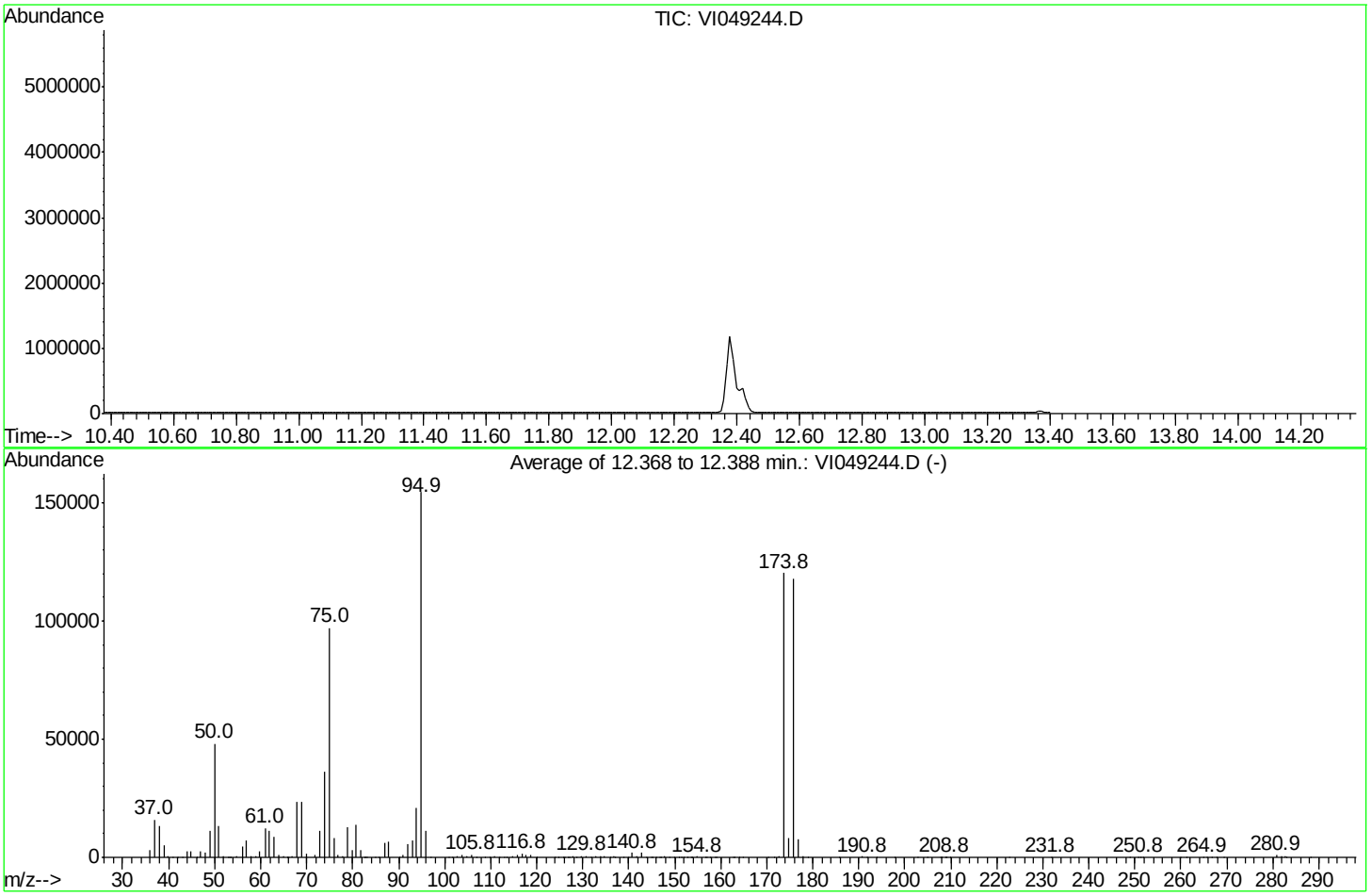
BFB

Data Path : W:\HPCHEM1\MSVOA I\Data\VI050516\
Data File : VI049244.D
Acq On : 5 May 2016 9:34
Operator : FY/SY
Sample : BFB33
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB33

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Fri May 06 05:16:54 2016



AutoFind: Scans 1132, 1133, 1134; Background Corrected with Scan 1128

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	31.1	48040	PASS
75	95	30	80	62.8	96938	PASS
95	95	100	100	100.0	154458	PASS
96	95	5	9	7.2	11123	PASS
173	174	0.00	2	0.5	634	PASS
174	95	50	120	77.8	120165	PASS
175	174	5	9	7.0	8383	PASS
176	174	95	101	98.0	117768	PASS
177	176	5	9	6.4	7560	PASS

Scan 1128 (12.329 min): VI049244.D
BFB33

m/z	Abundance
35.35	154.0
35.55	159.0
36.15	223.0
38.90	413.0
39.90	530.0
41.10	317.0
41.95	162.0
42.95	621.0
43.85	2027.0
44.85	479.0
45.70	198.0
51.05	395.0
53.80	180.0
54.80	209.0
56.15	242.0
56.85	240.0
58.75	227.0
59.60	218.0
71.05	320.0
72.95	1782.0
75.00	259.0
78.05	211.0
80.80	232.0
84.65	186.0
87.05	169.0
92.85	211.0
93.75	202.0
95.90	372.0
96.50	168.0
96.80	159.0
104.00	168.0
105.10	209.0
114.65	163.0
118.80	180.0
132.90	393.0
160.70	221.0
165.25	160.0
168.10	181.0
169.95	373.0
189.70	164.0
190.85	218.0
191.75	174.0
192.85	675.0
206.85	1917.0
207.75	208.0
208.90	169.0
223.60	151.0
260.10	178.0
266.80	188.0
269.75	190.0
280.80	1159.0
281.80	344.0

Instrument :
MSVOA_I
ClientSampleId :
BFB33

Scan 1132 (12.368 min): VI049244.D
BFB33

Instrument :
MSVOA_I
ClientSampleId :
BFB33

m/z	Abundance
35.95	3638.0
36.95	16028.0
38.00	13826.0
39.00	5577.0
39.90	1058.0
40.90	213.0
41.75	312.0
42.85	674.0
43.95	4353.0
45.00	2536.0
46.00	314.0
47.00	2598.0
47.90	2079.0
48.95	10265.0
49.95	45528.0
50.95	12316.0
52.00	468.0
53.50	191.0
54.90	1145.0
55.95	4795.0
56.95	6959.0
58.05	484.0
59.05	399.0
59.90	2250.0
61.00	11389.0
62.00	11178.0
62.95	8623.0
63.95	995.0
64.85	285.0
67.00	335.0
67.90	20888.0
68.90	22704.0
69.95	1731.0
71.95	1489.0
72.95	10380.0
73.90	31160.0
75.00	85880.0
76.00	8510.0
76.85	1277.0
77.85	703.0
78.85	10914.0
79.85	2342.0
80.80	11639.0
81.90	2517.0
82.70	389.0
85.95	225.0
86.85	5694.0
87.80	5186.0
90.00	151.0
90.80	741.0
91.85	5275.0
92.95	7243.0
93.95	18416.0
94.90	127632.0
95.90	9938.0
97.00	316.0
102.90	402.0
103.80	982.0
104.80	336.0
105.75	956.0
109.80	282.0
110.70	269.0
111.80	225.0
114.75	286.0
115.75	765.0
116.90	939.0
117.80	749.0
118.80	1452.0
126.75	183.0
127.65	490.0
129.75	659.0
130.80	235.0
132.90	394.0
134.75	382.0
136.65	221.0
140.70	1327.0
142.75	1511.0
143.75	160.0
145.20	195.0
146.70	288.0
147.70	154.0
148.75	159.0
153.90	164.0
154.95	251.0
156.95	224.0
158.70	219.0
162.65	172.0
164.85	161.0
165.05	156.0
171.65	164.0
172.80	403.0
173.80	78664.0

174.80	5737.0
175.80	75632.0
176.75	5226.0
177.95	225.0
185.75	208.0
190.75	186.0
192.85	215.0
197.75	162.0
206.85	1644.0
207.85	665.0
208.80	261.0
209.90	154.0
222.60	154.0
266.70	396.0
267.90	173.0
280.90	495.0
281.80	218.0

Instrument :
MSVOA_I
ClientSampleId :
BFB33

Scan 1133 (12.378 min): VI049244.D
BFB33

Instrument :
MSVOA_I
ClientSampleId :
BFB33

m/z	Abundance
35.95	4385.0
36.95	19200.0
38.00	17120.0
39.00	6918.0
39.90	1394.0
41.20	323.0
42.05	278.0
42.95	805.0
43.95	5823.0
45.00	3719.0
46.00	290.0
46.90	3359.0
47.90	2241.0
48.95	14683.0
49.95	64144.0
50.95	17912.0
51.95	638.0
52.90	168.0
54.90	1041.0
55.95	5395.0
56.95	9348.0
57.95	211.0
58.95	265.0
59.90	2911.0
61.00	16232.0
62.00	14198.0
62.95	11113.0
63.95	1167.0
64.95	352.0
65.85	640.0
66.80	615.0
67.90	31664.0
68.90	30320.0
69.95	2219.0
71.05	212.0
71.95	1338.0
72.95	15287.0
73.90	47720.0
74.90	130312.0
75.90	9787.0
76.85	1369.0
77.95	880.0
78.85	16832.0
79.85	4481.0
80.80	19296.0
81.90	3731.0
82.90	494.0
84.85	199.0
85.75	229.0
86.95	8350.0
87.80	9061.0
90.80	1412.0
91.95	6957.0
92.95	9708.0
93.95	26936.0
94.90	200640.0
95.90	15133.0
96.90	435.0
102.80	153.0
103.80	1790.0
104.80	357.0
105.75	1261.0
106.85	288.0
109.90	182.0
110.80	503.0
111.70	217.0
112.75	369.0
113.45	171.0
114.85	579.0
115.85	1166.0
116.80	2152.0
117.70	1190.0
118.80	1601.0
123.80	406.0
125.70	186.0
127.05	210.0
127.75	791.0
128.75	322.0
129.85	859.0
130.90	321.0
132.70	285.0
133.65	161.0
134.65	455.0
135.95	227.0
136.75	803.0
138.70	189.0
140.75	2188.0
141.95	400.0
142.85	2023.0
143.85	351.0
144.90	475.0
145.80	229.0

146.90	171.0
147.80	524.0
148.85	173.0
149.95	482.0
151.40	156.0
152.00	167.0
152.80	250.0
153.60	262.0
154.90	266.0
156.85	477.0
158.60	388.0
160.70	335.0
162.85	271.0
172.80	741.0
173.80	155392.0
174.80	10465.0
175.80	151424.0
176.75	8953.0
177.85	332.0
178.85	193.0
190.85	473.0
191.65	200.0
192.75	169.0
206.85	1548.0
208.05	475.0
208.90	467.0
231.80	264.0
250.75	221.0
259.80	177.0
266.60	217.0
280.90	1403.0
281.90	263.0
283.05	191.0

Instrument :
MSVOA_I
ClientSampleId :
BFB33

Scan 1134 (12.388 min): VI049244.D
BFB33

Instrument :
MSVOA_I
ClientSampleId :
BFB33

m/z	Abundance
35.85	2120.0
36.95	12447.0
38.00	9496.0
39.00	3702.0
40.00	1140.0
40.90	399.0
41.85	334.0
42.95	874.0
43.95	3558.0
44.90	3183.0
46.10	211.0
47.00	1603.0
47.80	1265.0
48.95	8301.0
49.95	34448.0
50.95	10260.0
52.00	325.0
53.10	176.0
54.80	677.0
55.95	3871.0
56.95	5150.0
57.95	522.0
59.10	567.0
59.80	1994.0
60.90	9153.0
61.90	8555.0
62.95	6496.0
63.85	894.0
64.95	220.0
66.05	334.0
66.80	487.0
67.90	18152.0
69.00	16704.0
70.05	1000.0
71.85	978.0
72.95	12637.0
73.90	30064.0
74.90	75400.0
76.00	6009.0
76.85	535.0
77.85	552.0
78.85	10628.0
79.85	2809.0
80.80	11837.0
81.80	3306.0
82.60	175.0
83.10	208.0
84.95	151.0
85.65	188.0
86.85	5404.0
87.90	4973.0
90.90	945.0
91.95	4360.0
92.95	5892.0
93.95	18520.0
94.90	135104.0
95.90	9415.0
96.90	335.0
100.95	175.0
101.65	247.0
102.70	486.0
103.80	991.0
104.70	387.0
105.75	891.0
106.85	391.0
108.75	165.0
110.90	448.0
111.70	193.0
112.85	295.0
114.75	529.0
115.85	788.0
116.80	1527.0
117.70	1098.0
118.90	1088.0
119.95	169.0
123.90	266.0
124.70	679.0
125.90	210.0
127.85	544.0
128.75	490.0
129.85	825.0
130.70	300.0
131.70	154.0
132.80	2461.0
133.75	782.0
134.65	628.0
137.05	238.0
138.80	187.0
140.00	195.0
140.75	2246.0
141.75	573.0
142.85	1996.0

145.90	187.0
146.80	417.0
147.95	627.0
148.75	300.0
149.75	256.0
150.95	158.0
152.00	217.0
154.80	708.0
156.65	405.0
157.75	195.0
158.90	282.0
160.80	323.0
162.85	331.0
163.95	271.0
164.85	268.0
170.35	165.0
172.70	759.0
173.80	126440.0
174.80	8949.0
175.80	126248.0
176.85	8503.0
177.85	384.0
178.85	516.0
190.85	1469.0
191.85	404.0
192.95	1487.0
193.85	374.0
202.70	315.0
204.85	218.0
206.85	1651.0
207.75	309.0
208.70	290.0
209.10	215.0
248.85	375.0
250.90	228.0
251.30	175.0
251.80	158.0
261.20	156.0
264.85	508.0
265.70	156.0
266.70	429.0
267.80	164.0
269.25	167.0
280.90	4536.0
281.90	1395.0
282.75	959.0
288.20	178.0

Instrument :
MSVOA_I
ClientSampleId :
BFB33

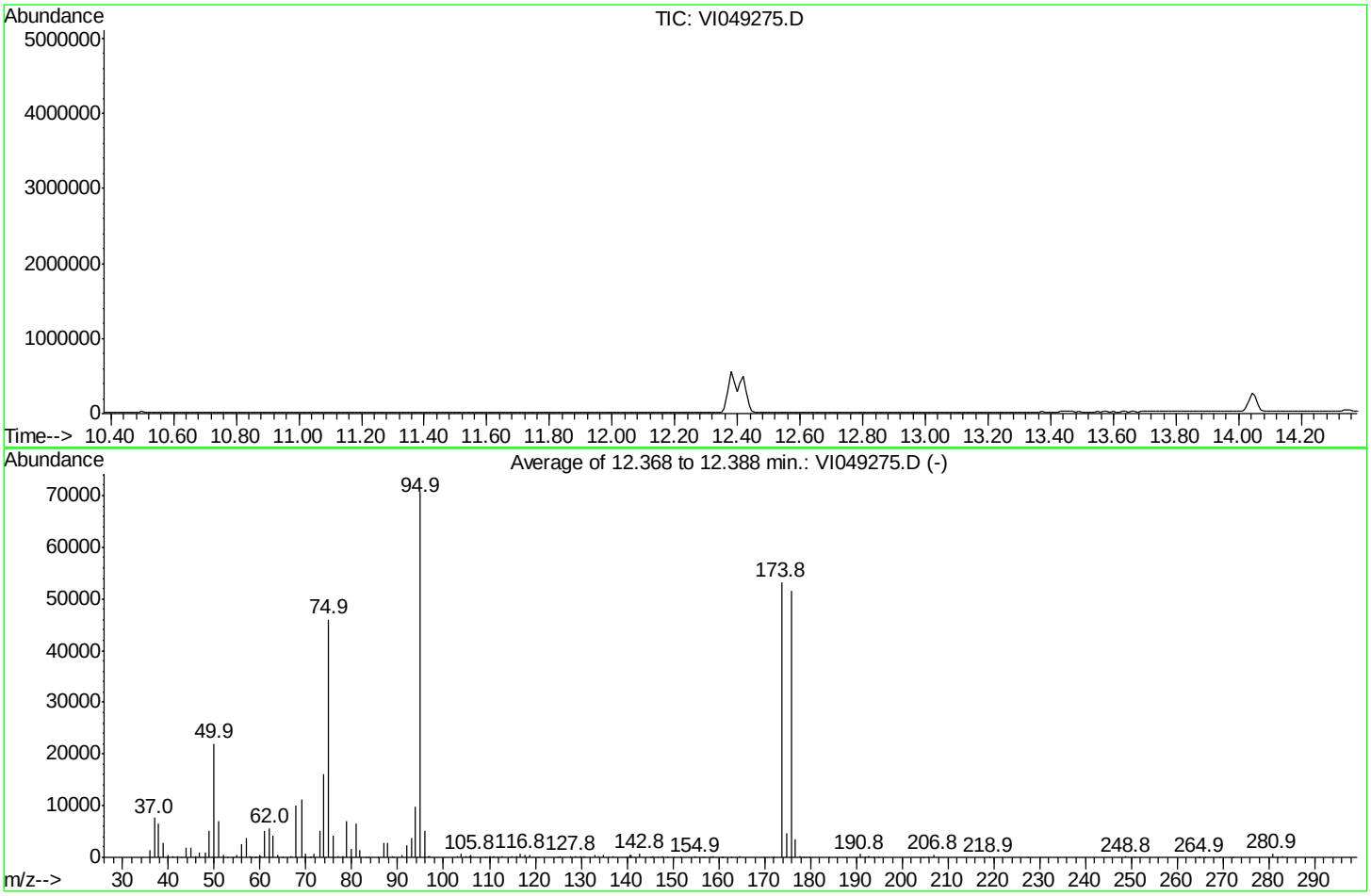
BFB

Data Path : W:\HPCHEM1\MSVOA I\Data\VI050616\
Data File : VI049275.D
Acq On : 6 May 2016 9:02
Operator : FY/SY
Sample : BFB34
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB34

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Sat May 07 04:11:41 2016



AutoFind: Scans 1132, 1133, 1134; Background Corrected with Scan 1128

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	31.0	21937	PASS
75	95	30	80	65.2	46069	PASS
95	95	100	100	100.0	70666	PASS
96	95	5	9	7.2	5058	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	75.4	53282	PASS
175	174	5	9	8.6	4561	PASS
176	174	95	101	96.8	51565	PASS
177	176	5	9	6.9	3537	PASS

Scan 1128 (12.329 min): VI049275.D
BFB34

m/z	Abundance
35.95	170.0
37.90	378.0
38.90	268.0
39.90	522.0
41.10	332.0
42.75	256.0
43.85	1734.0
44.75	171.0
49.75	151.0
50.85	274.0
54.70	154.0
58.95	386.0
60.50	182.0
61.10	226.0
64.75	152.0
65.95	168.0
72.95	394.0
73.90	339.0
76.85	201.0
77.95	195.0
85.25	225.0
93.85	244.0
102.70	164.0
107.85	178.0
124.80	232.0
126.85	253.0
133.00	469.0
141.95	202.0
146.80	263.0
170.15	176.0
192.95	233.0
206.85	1073.0
207.75	154.0
208.15	201.0
208.80	227.0
249.65	198.0
280.80	1059.0
281.80	543.0
292.75	170.0

Instrument :
MSVOA_I
ClientSampleId :
BFB34

Scan 1132 (12.368 min): VI049275.D
BFB34

Instrument :
MSVOA_I
ClientSampleId :
BFB34

m/z	Abundance
35.95	1375.0
36.95	5943.0
38.00	5763.0
39.00	2026.0
39.90	889.0
40.80	502.0
42.05	166.0
43.95	2804.0
44.90	1537.0
46.00	258.0
47.00	869.0
48.00	1043.0
48.95	3949.0
49.95	17256.0
51.05	5443.0
52.00	283.0
54.00	183.0
55.10	388.0
55.95	2036.0
56.95	2962.0
57.75	247.0
58.75	190.0
59.20	154.0
59.90	261.0
60.90	4834.0
62.00	4647.0
62.95	3745.0
63.85	284.0
66.80	370.0
67.90	7710.0
69.00	7653.0
69.85	301.0
71.85	287.0
72.95	2818.0
73.90	11870.0
74.90	32584.0
75.90	3762.0
76.80	279.0
78.05	648.0
78.85	5363.0
79.85	1192.0
80.80	4149.0
81.80	926.0
86.85	2051.0
87.90	1720.0
88.80	219.0
90.80	616.0
91.85	2228.0
92.95	2528.0
93.95	7823.0
94.90	47600.0
95.90	4089.0
97.10	179.0
103.00	227.0
103.90	769.0
105.65	468.0
109.10	212.0
110.80	176.0
111.70	184.0
115.90	252.0
116.80	581.0
117.80	428.0
118.80	207.0
127.95	169.0
129.95	260.0
130.80	216.0
132.90	468.0
134.85	373.0
140.70	210.0
140.95	187.0
141.75	164.0
142.95	398.0
147.85	209.0
150.25	205.0
158.15	167.0
173.80	28104.0
174.80	2927.0
175.80	25744.0
176.75	1658.0
177.95	245.0
184.15	306.0
190.85	164.0
192.65	213.0
206.95	1555.0
207.95	404.0
264.75	211.0
272.10	155.0
280.80	372.0
281.80	224.0
282.95	172.0

Scan 1133 (12.378 min): VI049275.D
BFB34

Instrument :
MSVOA_I
ClientSampleId :
BFB34

m/z	Abundance
36.05	1808.0
36.95	10778.0
37.90	10141.0
39.00	3913.0
39.90	1078.0
40.90	172.0
41.85	171.0
42.95	360.0
43.95	3367.0
44.90	1948.0
46.00	210.0
46.80	948.0
48.00	1218.0
48.95	6688.0
49.95	30288.0
50.95	10081.0
52.00	562.0
54.90	609.0
55.95	3566.0
56.95	4941.0
57.85	612.0
58.95	186.0
59.90	1457.0
60.90	6119.0
62.00	7489.0
62.85	4626.0
63.95	782.0
64.95	194.0
67.90	13564.0
69.00	16369.0
69.85	1005.0
70.85	355.0
71.85	1130.0
72.95	7206.0
73.90	20936.0
74.90	60936.0
76.00	5500.0
76.85	751.0
77.85	507.0
78.85	9232.0
79.95	2215.0
80.90	8762.0
81.80	1498.0
86.95	3367.0
87.80	4145.0
89.00	235.0
90.90	506.0
91.95	3417.0
92.95	4925.0
93.95	12084.0
94.90	96776.0
95.90	6313.0
96.80	431.0
102.90	488.0
103.80	611.0
104.90	298.0
105.85	1124.0
108.05	151.0
110.80	314.0
112.85	390.0
114.95	321.0
115.85	397.0
116.80	752.0
117.80	573.0
118.80	626.0
127.85	370.0
128.95	183.0
129.75	232.0
130.70	263.0
133.00	388.0
133.85	175.0
134.75	320.0
135.85	265.0
136.85	445.0
139.80	213.0
140.85	1164.0
142.75	919.0
145.70	389.0
146.60	178.0
147.80	240.0
151.80	211.0
154.90	312.0
158.80	279.0
161.00	160.0
169.85	219.0
171.95	229.0
173.80	66512.0
174.80	5737.0
175.80	64192.0
176.75	4529.0
190.85	436.0
192.55	215.0

192.75	215.0
204.50	150.0
205.55	176.0
206.85	1558.0
207.95	250.0
208.90	151.0
218.95	166.0
266.10	152.0
280.80	798.0
282.00	229.0

Instrument :
MSVOA_I
ClientSampleId :
BFB34

Scan 1134 (12.388 min): VI049275.D
BFB34

Instrument :
MSVOA_I
ClientSampleId :
BFB34

m/z	Abundance
35.95	1333.0
36.95	6070.0
38.00	4739.0
38.90	3081.0
39.80	1204.0
41.95	278.0
42.85	649.0
43.95	4311.0
44.90	2717.0
46.10	595.0
46.80	772.0
48.00	764.0
48.85	5119.0
49.95	18720.0
50.95	6579.0
51.95	383.0
52.90	201.0
55.00	420.0
55.85	1810.0
56.95	3161.0
58.05	194.0
58.95	825.0
60.10	813.0
60.90	5392.0
62.00	4676.0
62.95	4311.0
63.95	310.0
64.75	290.0
65.85	268.0
66.70	329.0
67.90	9087.0
69.00	9654.0
69.95	1103.0
71.05	343.0
71.75	408.0
72.95	6911.0
73.90	16608.0
74.90	44688.0
76.00	3473.0
76.85	447.0
78.85	6476.0
79.95	1646.0
80.80	6584.0
81.80	1568.0
83.00	182.0
83.60	235.0
85.65	198.0
86.95	3241.0
87.80	2300.0
88.70	248.0
90.90	561.0
91.85	1715.0
92.95	3743.0
93.95	10167.0
94.90	67624.0
96.00	4774.0
97.00	244.0
102.70	406.0
104.00	711.0
104.80	260.0
105.95	338.0
110.10	485.0
111.70	151.0
114.85	518.0
115.75	309.0
116.80	1023.0
117.70	413.0
118.80	854.0
120.65	174.0
124.90	713.0
125.50	422.0
127.75	407.0
128.75	404.0
129.75	385.0
132.90	1902.0
133.65	463.0
134.65	425.0
136.85	184.0
140.75	1126.0
142.75	1095.0
145.10	183.0
145.80	216.0
146.80	482.0
147.70	209.0
148.75	254.0
154.90	194.0
156.75	294.0
158.90	212.0
160.70	261.0
162.85	196.0
164.65	378.0
173.80	65232.0

174.80	5019.0
175.80	64760.0
176.75	4425.0
177.75	436.0
178.65	310.0
178.95	302.0
179.75	162.0
190.85	1367.0
191.85	330.0
192.85	1123.0
193.75	326.0
194.80	185.0
206.85	1630.0
208.05	298.0
208.90	258.0
227.35	166.0
248.85	427.0
250.75	225.0
264.95	268.0
269.25	161.0
280.90	4461.0
281.80	1072.0
282.85	432.0
289.30	180.0

Instrument :
MSVOA_I
ClientSampleId :
BFB34

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK27

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0504WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049226.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK27

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0504WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049226.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK27

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0504WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049226.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/04/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK27

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0504WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049226.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/04/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

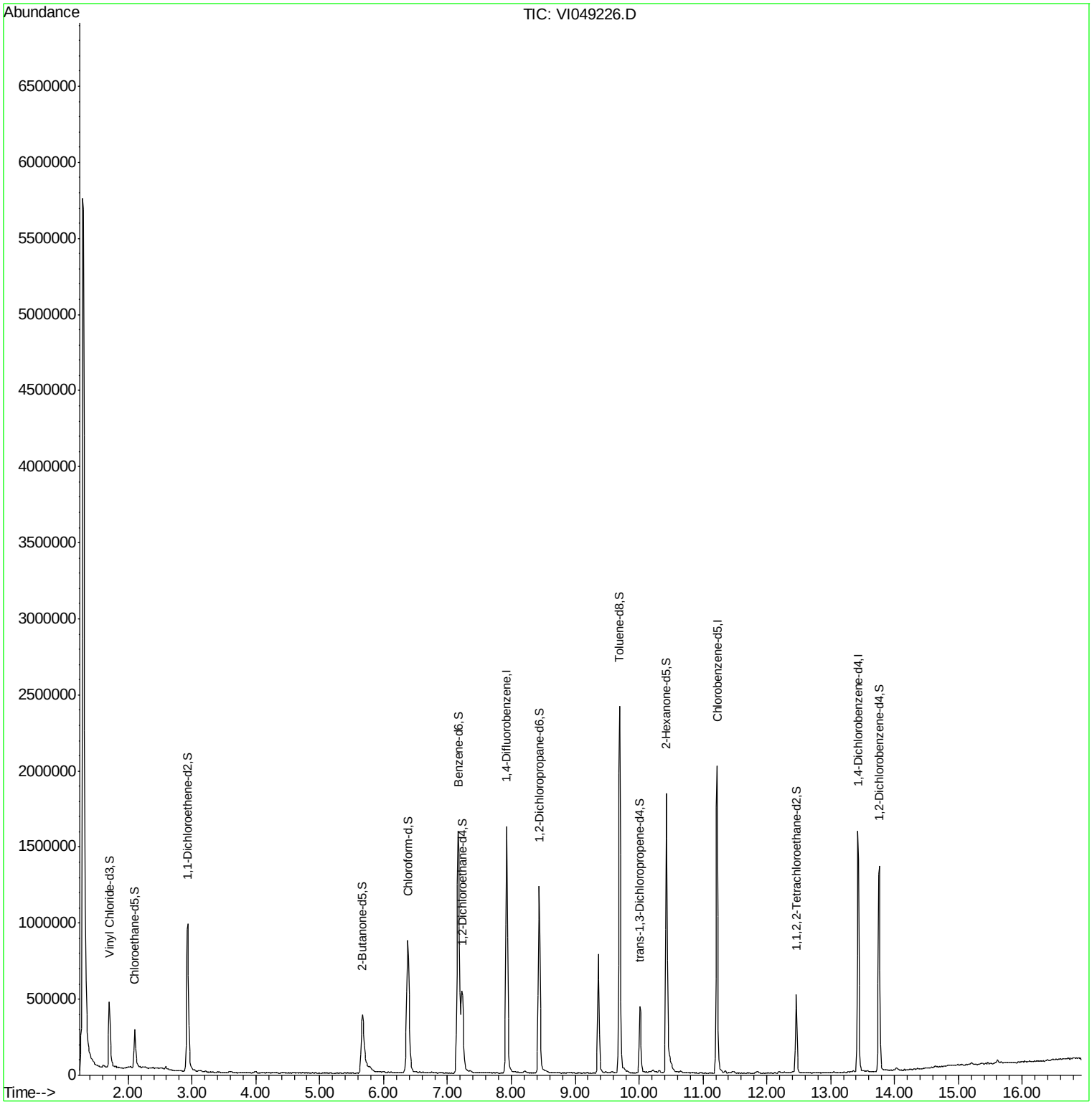
EPA-designated Registry Number.

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049226.D
Acq On : 4 May 2016 15:13
Operator : FY/SY
Sample : VI0504WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK27

Quant Time: May 05 05:26:42 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049226.D
Acq On : 4 May 2016 15:13
Operator : FY/SY
Sample : VI0504WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK27

Quant Time: May 05 05:26:42 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1471992	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	1023504	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	378551	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	469399	5.18	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 103.60%			
7) Chloroethane-d5	2.10	69	285432	5.69	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 113.80%			
11) 1,1-Dichloroethene-d2	2.94	63	803745	3.76	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 75.20%			
20) 2-Butanone-d5	5.67	46	957667	48.81	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 97.62%			
24) Chloroform-d	6.38	84	1105169	4.79	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.80%			
26) 1,2-Dichloroethane-d4	7.23	65	488924	5.18	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.60%			
32) Benzene-d6	7.17	84	2034134	5.10	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.00%			
36) 1,2-Dichloropropane-d6	8.44	67	564194	5.03	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 100.60%			
41) Toluene-d8	9.70	98	1493565	5.08	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.60%			
43) trans-1,3-Dichloropropene-	10.01	79	217829	4.93	ug/L	-0.01
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.60%			
46) 2-Hexanone-d5	10.42	63	680487	48.84	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 97.68%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	246267	4.83	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 96.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	335292	5.05	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.00%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049226.D
Acq On : 4 May 2016 15:13
Operator : FY/SY
Sample : VI0504WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK27

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.291	3	6	27	rVB	5699400	13944498	100.00%	25.549%
2	1.616	36	39	43	rVB3	14142	26537	0.19%	0.049%
3	1.705	45	48	57	rVV	427322	749607	5.38%	1.373%
4	1.990	73	77	78	rBV4	7874	16937	0.12%	0.031%
5	2.098	85	88	96	rBV	250526	500479	3.59%	0.917%
6	2.433	120	122	123	rBV2	7264	9908	0.07%	0.018%
7	2.591	136	138	141	rVB2	17850	22358	0.16%	0.041%
8	2.935	168	173	186	rVB	970850	2277280	16.33%	4.172%
9	3.122	189	192	199	rVV7	7157	24529	0.18%	0.045%
10	3.211	199	201	206	rVB3	8319	16773	0.12%	0.031%
11	3.594	233	240	250	rBV7	10030	41130	0.29%	0.075%
12	3.732	252	254	255	rBV2	3748	5191	0.04%	0.010%
13	3.988	276	280	284	rVB6	9212	23046	0.17%	0.042%
14	4.155	296	297	300	rBV3	3797	5695	0.04%	0.010%
15	4.205	300	302	305	rVB4	2872	5406	0.04%	0.010%
16	4.333	313	315	317	rVB3	4986	6533	0.05%	0.012%
17	4.402	320	322	326	rBV4	4126	7029	0.05%	0.013%
18	4.500	329	332	334	rBV3	4742	7696	0.06%	0.014%
19	4.589	338	341	345	rBV6	3367	9702	0.07%	0.018%
20	4.736	353	356	357	rBV3	2998	4743	0.03%	0.009%
21	4.825	363	365	369	rVB3	3790	6268	0.04%	0.011%
22	4.874	369	370	374	rVB3	4123	7109	0.05%	0.013%
23	4.923	374	375	380	rBV3	4475	9348	0.07%	0.017%
24	5.061	388	389	391	rBV2	3552	5005	0.04%	0.009%
25	5.396	421	423	425	rBV3	6394	9394	0.07%	0.017%
26	5.514	434	435	440	rBV4	3429	5417	0.04%	0.010%
27	5.671	444	451	461	rBV	384900	1442495	10.34%	2.643%
28	5.976	481	482	488	rVB5	3123	7837	0.06%	0.014%
29	6.114	495	496	498	rVB2	4995	5016	0.04%	0.009%
30	6.380	515	523	540	rBV	870305	2641864	18.95%	4.840%
31	6.567	540	542	544	rVB3	4096	5431	0.04%	0.010%
32	6.675	552	553	555	rVB2	5567	5092	0.04%	0.009%
33	6.754	559	561	567	rVB5	7089	15081	0.11%	0.028%
34	6.901	570	576	582	rVB7	7054	23867	0.17%	0.044%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049226.D
Acq On : 4 May 2016 15:13
Operator : FY/SY
Sample : VI0504WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK27

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.059	590	592	593	rBV	3631	4940	0.04%	0.009%
36	7.167	596	603	607	rBV	1593248	4220030	30.26%	7.732%
37	7.226	607	609	620	rVV	538118	1317788	9.45%	2.414%
38	7.354	620	622	627	rVV6	10295	24676	0.18%	0.045%
39	7.472	632	634	636	rVB3	5001	7491	0.05%	0.014%
40	7.502	636	637	639	rBV2	4835	6408	0.05%	0.012%
41	7.659	651	653	657	rVB5	5466	10050	0.07%	0.018%
42	7.708	657	658	662	rVB4	2957	5568	0.04%	0.010%
43	7.777	662	665	667	rBV4	3572	6094	0.04%	0.011%
44	7.925	674	680	694	rBV	1620561	3603623	25.84%	6.603%
45	8.210	705	709	714	rVB7	13813	36379	0.26%	0.067%
46	8.437	725	732	749	rBV	1225854	2753725	19.75%	5.045%
47	8.673	755	756	762	rVB5	4813	7051	0.05%	0.013%
48	8.742	762	763	767	rVB4	6059	9013	0.06%	0.017%
49	8.811	767	770	771	rBV2	3895	6009	0.04%	0.011%
50	8.830	771	772	774	rBV3	4304	4857	0.03%	0.009%
51	8.889	774	778	779	rBV3	4437	9773	0.07%	0.018%
52	9.362	821	826	834	rBV	780526	1427783	10.24%	2.616%
53	9.470	836	837	839	rVB2	4273	5000	0.04%	0.009%
54	9.578	846	848	852	rVB3	7656	16836	0.12%	0.031%
55	9.697	855	860	866	rBV	2409331	4326407	31.03%	7.927%
56	9.952	883	886	888	rBV4	3470	7874	0.06%	0.014%
57	10.011	888	892	901	rVV	434916	778455	5.58%	1.426%
58	10.159	904	907	908	rVV3	6224	12031	0.09%	0.022%
59	10.218	908	913	916	rVV3	16673	52810	0.38%	0.097%
60	10.317	920	923	930	rVB8	15105	37983	0.27%	0.070%
61	10.425	930	934	949	rBV	1834018	3691339	26.47%	6.763%
62	10.651	954	957	961	rVV5	13138	27922	0.20%	0.051%
63	10.710	961	963	965	rVV3	3223	4854	0.03%	0.009%
64	10.887	980	981	985	rVB4	4549	6713	0.05%	0.012%
65	10.966	985	989	991	rVB4	6398	12435	0.09%	0.023%
66	11.035	993	996	999	rVB5	3935	7914	0.06%	0.015%
67	11.104	999	1003	1004	rBV4	3556	7116	0.05%	0.013%
68	11.222	1010	1015	1024	rBV	2019447	3558252	25.52%	6.519%
69	11.350	1024	1028	1031	rVB3	16123	32159	0.23%	0.059%
70	11.399	1031	1033	1035	rBV3	2982	5535	0.04%	0.010%
71	11.468	1037	1040	1046	rVB5	12939	33513	0.24%	0.061%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049226.D
Acq On : 4 May 2016 15:13
Operator : FY/SY
Sample : VI0504WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK27

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.645	1055	1058	1060	rVB3	5017	6472	0.05%	0.012%
73	11.694	1060	1063	1065	rBV4	3834	7766	0.06%	0.014%
74	11.842	1074	1078	1084	rVB7	14373	39908	0.29%	0.073%
75	11.950	1087	1089	1092	rVB3	5380	8835	0.06%	0.016%
76	12.009	1092	1095	1096	rBV3	6051	10914	0.08%	0.020%
77	12.118	1105	1106	1110	rVB4	3180	4879	0.03%	0.009%
78	12.187	1110	1113	1117	rBV2	11255	25490	0.18%	0.047%
79	12.374	1129	1132	1133	rVV3	4004	5405	0.04%	0.010%
80	12.403	1133	1135	1137	rVV3	9920	19555	0.14%	0.036%
81	12.462	1137	1141	1150	rVB	513542	910402	6.53%	1.668%
82	12.649	1157	1160	1163	rBV5	3071	5003	0.04%	0.009%
83	12.738	1166	1169	1174	rBV6	4063	11302	0.08%	0.021%
84	12.826	1176	1178	1180	rVB2	4671	6425	0.05%	0.012%
85	12.876	1180	1183	1186	rBV5	4960	10862	0.08%	0.020%
86	12.954	1186	1191	1194	rBV6	4913	12080	0.09%	0.022%
87	13.053	1197	1201	1204	rBV6	4009	10432	0.07%	0.019%
88	13.102	1204	1206	1209	rVB4	4724	8903	0.06%	0.016%
89	13.141	1209	1210	1213	rBV2	4189	7621	0.05%	0.014%
90	13.289	1221	1225	1226	rVB3	4732	8295	0.06%	0.015%
91	13.318	1226	1228	1229	rBV2	3865	6642	0.05%	0.012%
92	13.358	1229	1232	1235	rBV4	8907	14530	0.10%	0.027%
93	13.427	1235	1239	1246	rBV	1584713	2775740	19.91%	5.086%
94	13.761	1268	1273	1283	rBV	1352331	2556294	18.33%	4.684%
95	14.037	1298	1301	1306	rVB2	16354	37721	0.27%	0.069%
96	14.194	1314	1317	1320	rBV5	5689	15874	0.11%	0.029%
97	14.293	1325	1327	1328	rBV2	4298	4903	0.04%	0.009%
98	14.362	1331	1334	1335	rBV3	9369	15390	0.11%	0.028%
99	14.637	1359	1362	1364	rBV4	11136	20111	0.14%	0.037%
100	15.612	1459	1461	1465	rVB	21803	30847	0.22%	0.057%

Sum of corrected areas: 54579308

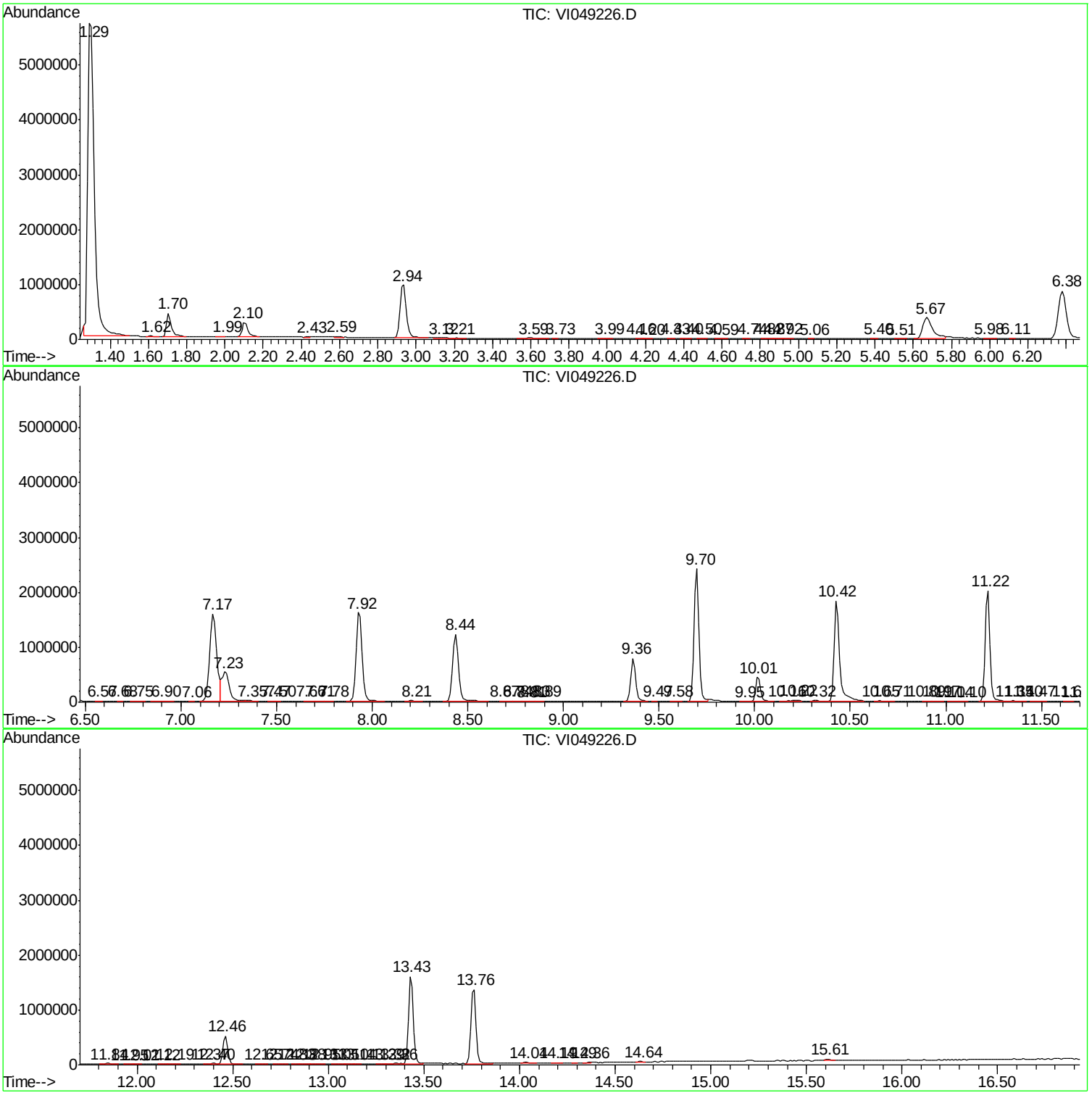
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049226.D
Acq On : 4 May 2016 15:13
Operator : FY/SY
Sample : VI0504WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK27

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049226.D
Acq On : 4 May 2016 15:13
Operator : FY/SY
Sample : VI0504WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK27

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049226.D
Acq On : 4 May 2016 15:13
Operator : FY/SY
Sample : VI0504WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK27

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK28

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0505WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049246.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK28

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0505WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049246.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK28

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0505WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049246.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK28

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0505WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049246.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

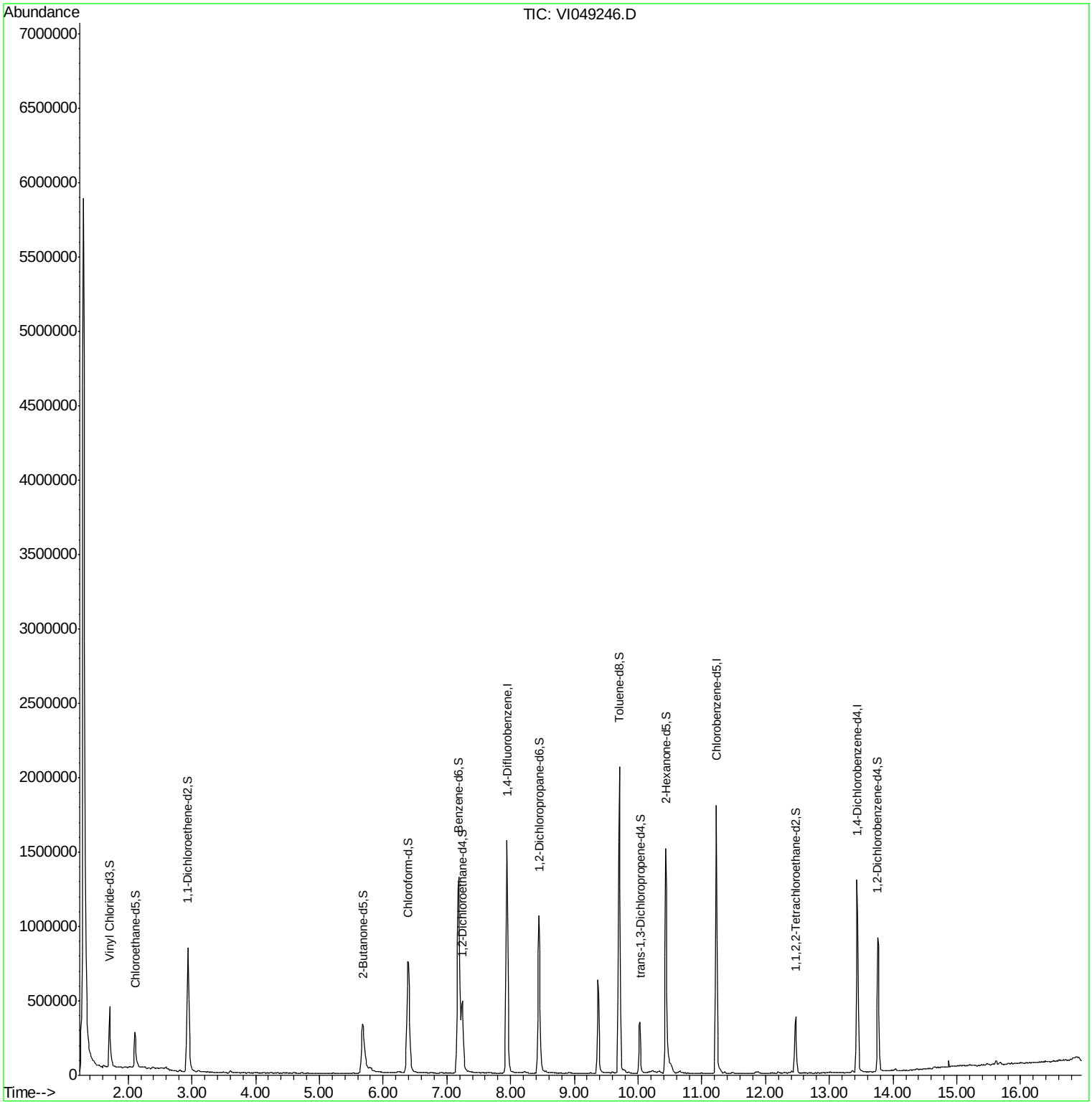
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049246.D
Acq On : 5 May 2016 10:59
Operator : FY/SY
Sample : VI0505WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 04:46:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK28

Manual Integrations APPROVED
feifei
5/6/2016 11:43:42 AM



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049246.D
Acq On : 5 May 2016 10:59
Operator : FY/SY
Sample : VI0505WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK28

Manual Integrations APPROVED
feifei
5/6/2016 11:43:42 AM

Quant Time: May 06 04:46:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1422886	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	911067	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	296478	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	406172	4.64	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 92.80%			
7) Chloroethane-d5	2.11	69	257325m	5.30	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 106.00%			
11) 1,1-Dichloroethene-d2	2.93	63	692773	3.36	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 67.20%			
20) 2-Butanone-d5	5.68	46	820176	43.25	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 86.50%			
24) Chloroform-d	6.39	84	959767	4.31	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 86.20%			
26) 1,2-Dichloroethane-d4	7.25	65	426402m	4.68	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.60%			
32) Benzene-d6	7.19	84	1717559	4.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.80%			
36) 1,2-Dichloropropane-d6	8.45	67	480377	4.81	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 96.20%			
41) Toluene-d8	9.71	98	1225965	4.68	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.60%			
43) trans-1,3-Dichloropropene-	10.03	79	181436	4.61	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.20%			
46) 2-Hexanone-d5	10.43	63	564831	45.54	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 91.08%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	181170	3.99	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 79.80%			
63) 1,2-Dichlorobenzene-d4	13.77	152	214629	4.13	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 82.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049246.D
Acq On : 5 May 2016 10:59
Operator : FY/SY
Sample : VI0505WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK28

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.301	4	7	28	rVB	5824759	13239051	100.00%	27.836%
2	1.615	37	39	41	rBV3	18070	27102	0.20%	0.057%
3	1.714	46	49	59	rVB	411067	667070	5.04%	1.403%
4	2.029	79	81	85	rBV4	10278	14205	0.11%	0.030%
5	2.108	86	89	97	rVB	234134	445116	3.36%	0.936%
6	2.590	137	138	144	rVB3	24148	45184	0.34%	0.095%
7	2.669	144	146	149	rVB4	7694	12891	0.10%	0.027%
8	2.816	160	161	163	rVB2	7614	5283	0.04%	0.011%
9	2.934	168	173	183	rBV	833459	1933316	14.60%	4.065%
10	3.111	188	191	198	rVB5	9252	28104	0.21%	0.059%
11	3.210	200	201	203	rVB2	4583	5246	0.04%	0.011%
12	3.289	207	209	211	rBV3	5743	7274	0.05%	0.015%
13	3.495	228	230	234	rVB5	5033	7648	0.06%	0.016%
14	3.604	236	241	244	rBV6	16889	41861	0.32%	0.088%
15	3.722	250	253	257	rVB5	4972	9863	0.07%	0.021%
16	3.869	266	268	270	rBV3	5348	7080	0.05%	0.015%
17	3.978	277	279	281	rBV3	4033	8365	0.06%	0.018%
18	4.145	292	296	298	rBV4	2905	6389	0.05%	0.013%
19	4.263	305	308	309	rVV3	2444	4255	0.03%	0.009%
20	4.332	312	315	318	rBV4	2796	6522	0.05%	0.014%
21	4.440	324	326	328	rBV3	2407	4230	0.03%	0.009%
22	4.499	330	332	334	rVB3	2976	4250	0.03%	0.009%
23	4.598	338	342	345	rBV6	4296	13891	0.10%	0.029%
24	4.716	352	354	357	rBV4	3487	5728	0.04%	0.012%
25	4.814	361	364	367	rBV4	4384	6320	0.05%	0.013%
26	4.913	372	374	376	rVB3	3506	4879	0.04%	0.010%
27	5.277	408	411	413	rBV4	2663	4078	0.03%	0.009%
28	5.326	415	416	418	rBV2	4507	4228	0.03%	0.009%
29	5.464	429	430	434	rVB4	2548	5172	0.04%	0.011%
30	5.680	441	452	461	rBV	335830	1203746	9.09%	2.531%
31	6.015	484	486	488	rVB3	3661	4989	0.04%	0.010%
32	6.231	506	508	509	rBV2	3244	5233	0.04%	0.011%
33	6.389	518	524	534	rBV	744876	2289403	17.29%	4.814%
34	6.763	561	562	565	rVB2	4052	4910	0.04%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049246.D
Acq On : 5 May 2016 10:59
Operator : FY/SY
Sample : VI0505WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK28

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.910	574	577	583	rVB7	6220	18613	0.14%	0.039%
36	7.186	598	605	608	rBV	1316673	3502107	26.45%	7.363%
37	7.245	608	611	619	rVB	475123	1184433	8.95%	2.490%
38	7.511	636	638	640	rVB3	4679	6699	0.05%	0.014%
39	7.540	640	641	644	rBV3	3757	4568	0.03%	0.010%
40	7.944	673	682	695	rBV	1568063	3493791	26.39%	7.346%
41	8.229	706	711	718	rVB9	11855	43226	0.33%	0.091%
42	8.446	728	733	743	rBV	1061392	2333216	17.62%	4.906%
43	8.712	758	760	761	rVB2	6120	6096	0.05%	0.013%
44	8.771	765	766	771	rVB5	2888	6328	0.05%	0.013%
45	8.908	778	780	784	rBV4	3675	7225	0.05%	0.015%
46	9.066	793	796	798	rBV2	3682	7382	0.06%	0.016%
47	9.174	804	807	809	rVB3	2831	5603	0.04%	0.012%
48	9.223	809	812	814	rBV4	3443	7487	0.06%	0.016%
49	9.253	814	815	818	rBV3	2661	4557	0.03%	0.010%
50	9.371	823	827	836	rBV	630136	1187056	8.97%	2.496%
51	9.597	847	850	854	rVB4	7556	13515	0.10%	0.028%
52	9.706	856	861	867	rBV	2054716	3555045	26.85%	7.475%
53	9.853	875	876	881	rVB4	10322	15380	0.12%	0.032%
54	10.030	889	894	900	rVV	343947	648306	4.90%	1.363%
55	10.099	900	901	903	rVV2	7647	10411	0.08%	0.022%
56	10.139	903	905	906	rVV2	8124	12824	0.10%	0.027%
57	10.227	908	914	917	rVV3	20124	69381	0.52%	0.146%
58	10.336	921	925	927	rVV5	15154	37347	0.28%	0.079%
59	10.434	931	935	951	rBV	1513095	2976385	22.48%	6.258%
60	10.660	954	958	964	rVB6	14156	38406	0.29%	0.081%
61	10.778	967	970	974	rVB6	4588	6603	0.05%	0.014%
62	10.857	976	978	981	rVB4	3146	4868	0.04%	0.010%
63	10.995	991	992	994	rBV2	4358	4192	0.03%	0.009%
64	11.152	1005	1008	1009	rVB3	3554	5738	0.04%	0.012%
65	11.231	1011	1016	1026	rBV	1805331	3185922	24.06%	6.699%
66	11.359	1026	1029	1033	rVB3	12969	23179	0.18%	0.049%
67	11.487	1036	1042	1045	rBV5	8950	26354	0.20%	0.055%
68	11.684	1060	1062	1063	rBV2	3590	4159	0.03%	0.009%
69	11.851	1076	1079	1080	rBV3	10794	15745	0.12%	0.033%
70	12.097	1103	1104	1106	rBV2	3791	5036	0.04%	0.011%
71	12.196	1111	1114	1118	rBV3	10525	20253	0.15%	0.043%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049246.D
Acq On : 5 May 2016 10:59
Operator : FY/SY
Sample : VI0505WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK28

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	12.294	1120	1124	1126	rBV4	3329	7808	0.06%	0.016%
73	12.373	1129	1132	1134	rBV4	7136	15133	0.11%	0.032%
74	12.412	1134	1136	1138	rVV2	14161	21964	0.17%	0.046%
75	12.471	1138	1142	1148	rVB	383622	701447	5.30%	1.475%
76	12.560	1148	1151	1154	rVB5	3912	8928	0.07%	0.019%
77	12.599	1154	1155	1157	rBV2	3955	5279	0.04%	0.011%
78	12.963	1189	1192	1193	rBV3	3244	5169	0.04%	0.011%
79	13.013	1195	1197	1199	rVV3	6083	7881	0.06%	0.017%
80	13.170	1209	1213	1214	rBV4	2389	5801	0.04%	0.012%
81	13.229	1217	1219	1220	rVB2	5974	4838	0.04%	0.010%
82	13.259	1220	1222	1223	rBV	4927	6089	0.05%	0.013%
83	13.298	1223	1226	1228	rVB4	4127	7089	0.05%	0.015%
84	13.367	1228	1233	1236	rBV7	11319	27202	0.21%	0.057%
85	13.436	1236	1240	1255	rBV	1296362	2250724	17.00%	4.732%
86	13.603	1255	1257	1258	rBV2	3936	4777	0.04%	0.010%
87	13.642	1258	1261	1264	rVB5	5597	10075	0.08%	0.021%
88	13.682	1264	1265	1266	rBV	6055	5378	0.04%	0.011%
89	13.761	1269	1273	1283	rBV	898847	1681546	12.70%	3.536%
90	13.977	1293	1295	1296	rBV2	3553	4569	0.03%	0.010%
91	14.046	1298	1302	1304	rBV2	14282	29726	0.22%	0.063%
92	14.135	1309	1311	1313	rBV3	4621	8415	0.06%	0.018%
93	14.361	1333	1334	1335	rBV	6612	6726	0.05%	0.014%
94	14.469	1343	1345	1348	rBV4	4962	10656	0.08%	0.022%
95	14.548	1351	1353	1355	rVV3	8089	10317	0.08%	0.022%
96	14.646	1360	1363	1366	rBV5	11584	26597	0.20%	0.056%
97	14.873	1384	1386	1387	rVB	43326	28566	0.22%	0.060%
98	14.912	1387	1390	1391	rBV3	10890	16247	0.12%	0.034%
99	15.621	1459	1462	1465	rVB2	23294	43647	0.33%	0.092%
100	15.857	1484	1486	1488	rBV3	11224	17849	0.13%	0.038%

Sum of corrected areas: 47560761

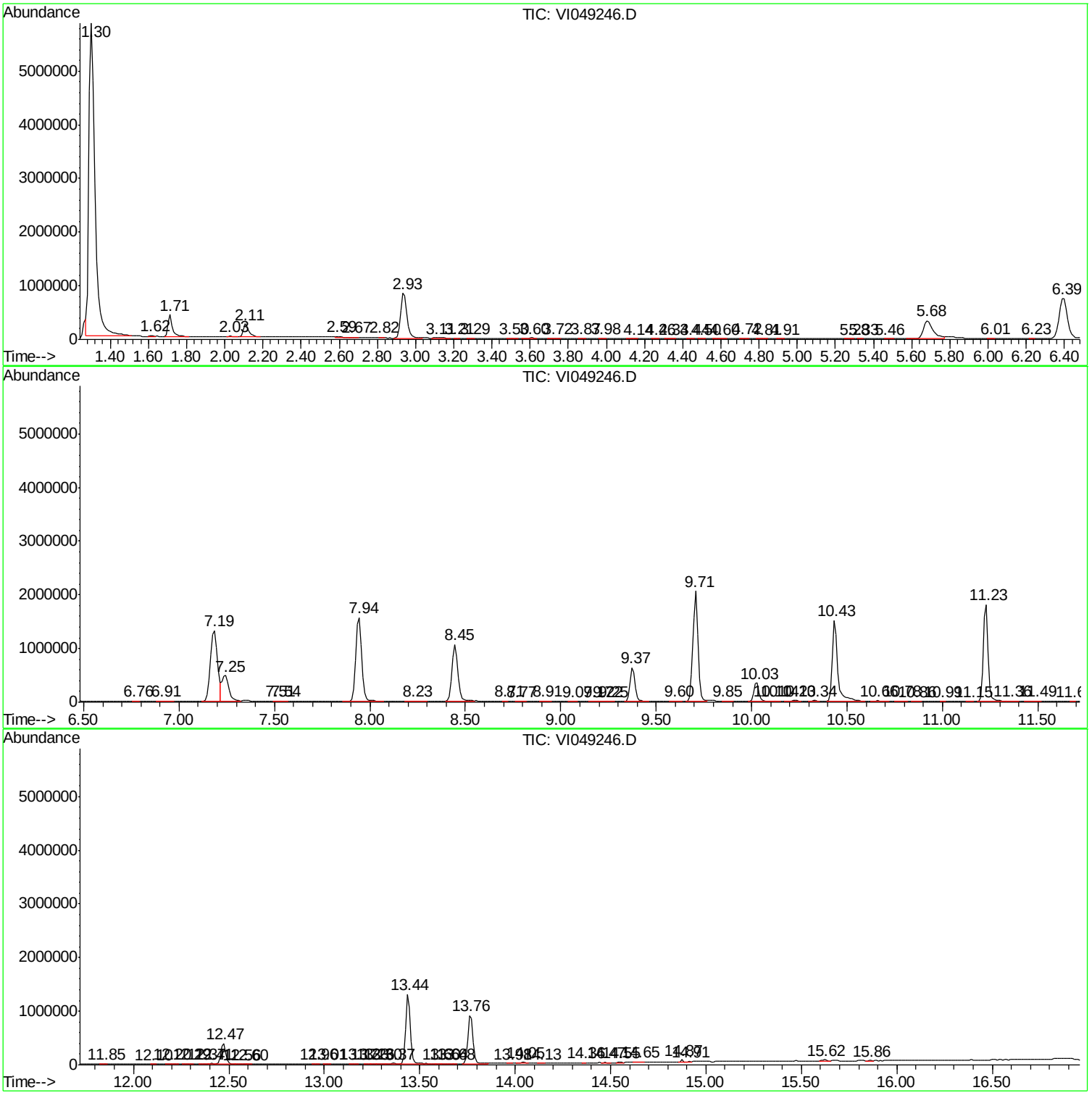
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049246.D
Acq On : 5 May 2016 10:59
Operator : FY/SY
Sample : VI0505WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK28

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049246.D
Acq On : 5 May 2016 10:59
Operator : FY/SY
Sample : VI0505WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK28

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049246.D
Acq On : 5 May 2016 10:59
Operator : FY/SY
Sample : VI0505WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK28

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

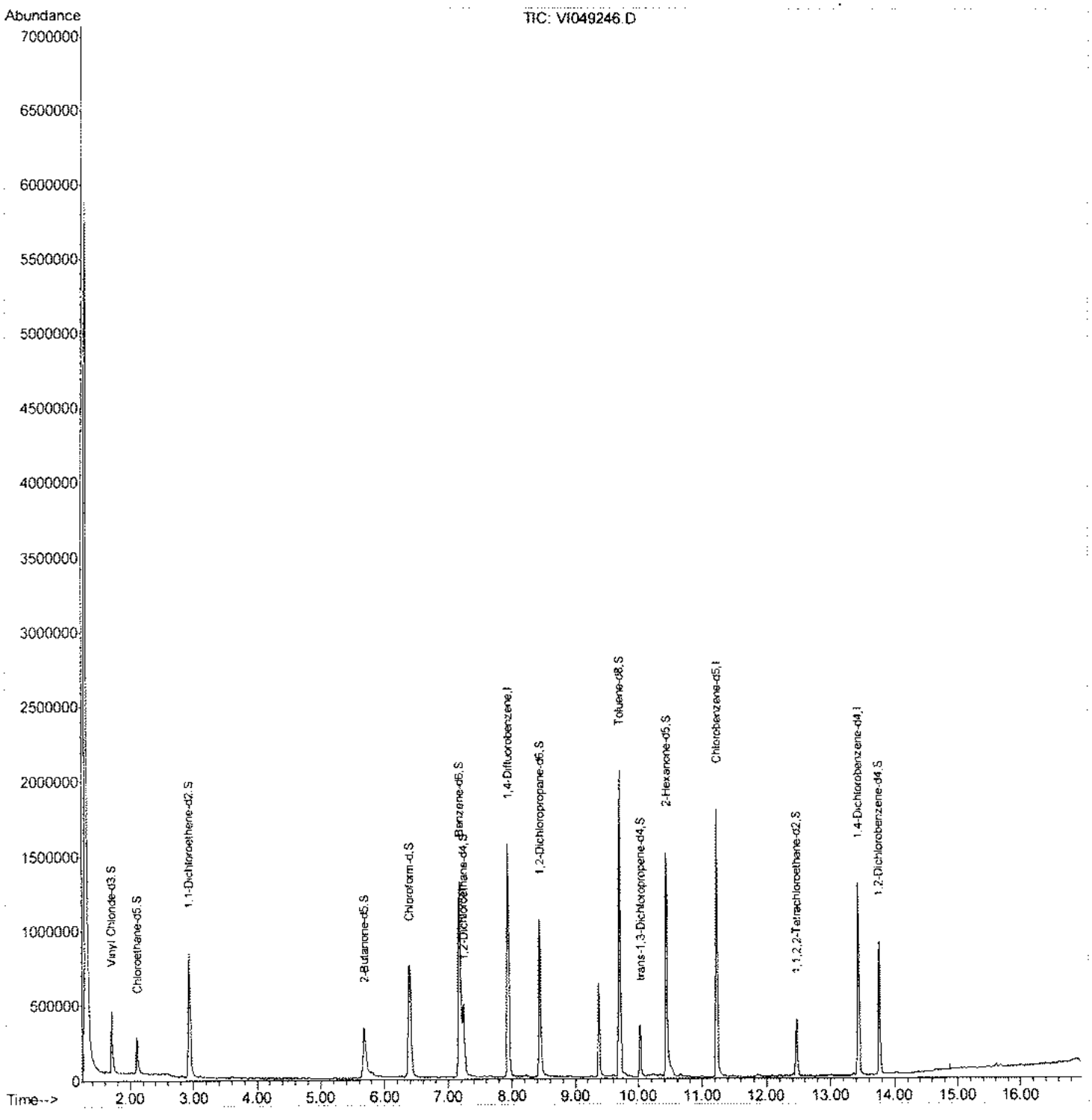
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049246.D
Acq On : 5 May 2016 10:59
Operator : FY/SY
Sample : VI0505WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 04:46:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK28

Manual Integrations APPROVED
feifei
5/6/2016 11:43:42 AM



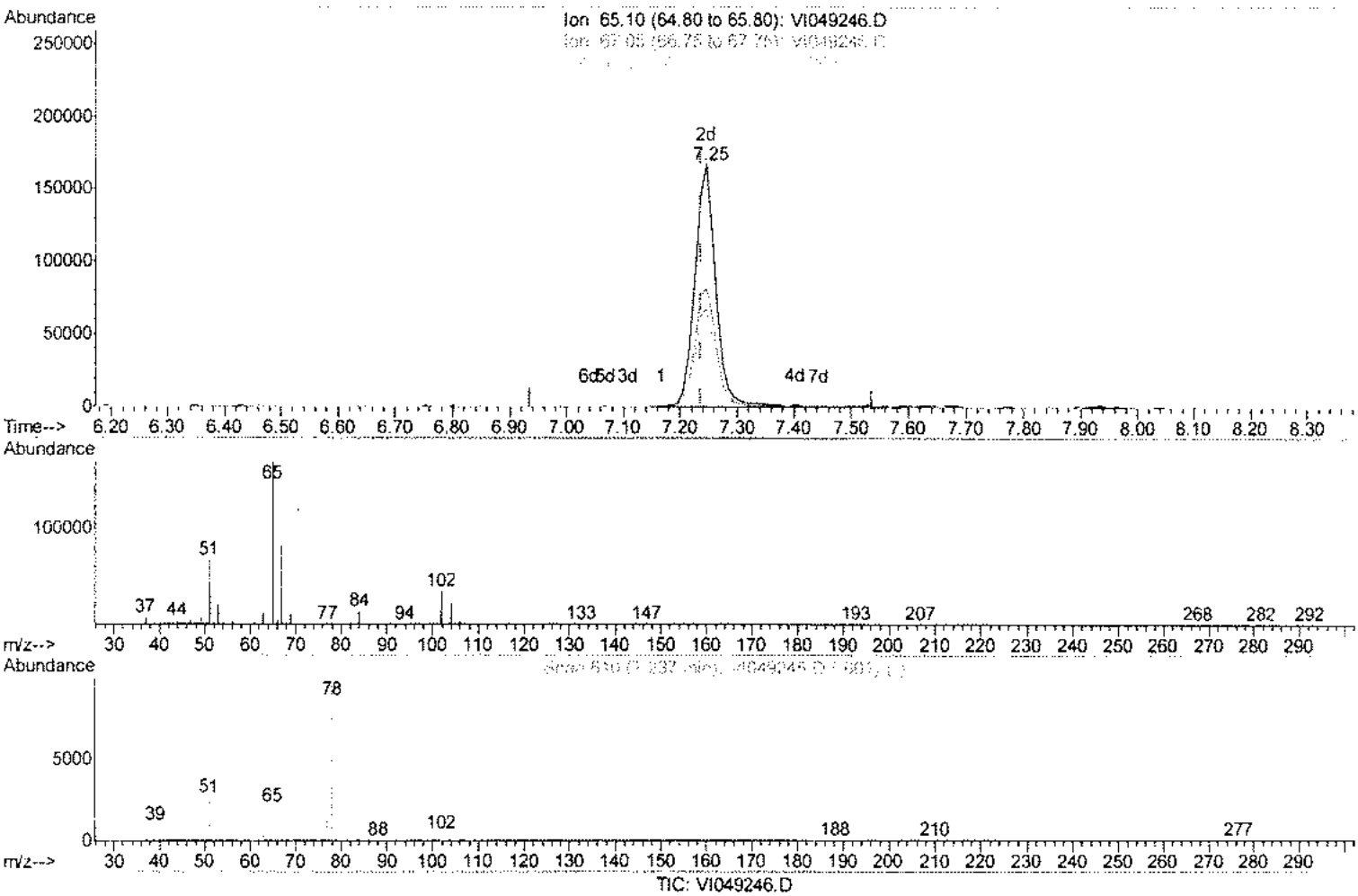
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049246.D
Acq On : 5 May 2016 10:59
Operator : FY/SY
Sample : VI0505WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 04:43:13 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK28

Manual Integrations APPROVED
feifei
5/6/2016 11:43:42 AM



TIC: VI049246.D

(26) 1,2-Dichloroethane-d4 (S)

7.245min (+0.008) 4.68ug/L m

response 426402

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.08#
51.05	123.20	0.13#
0.00	0.00	0.00

M.P
05/06/16

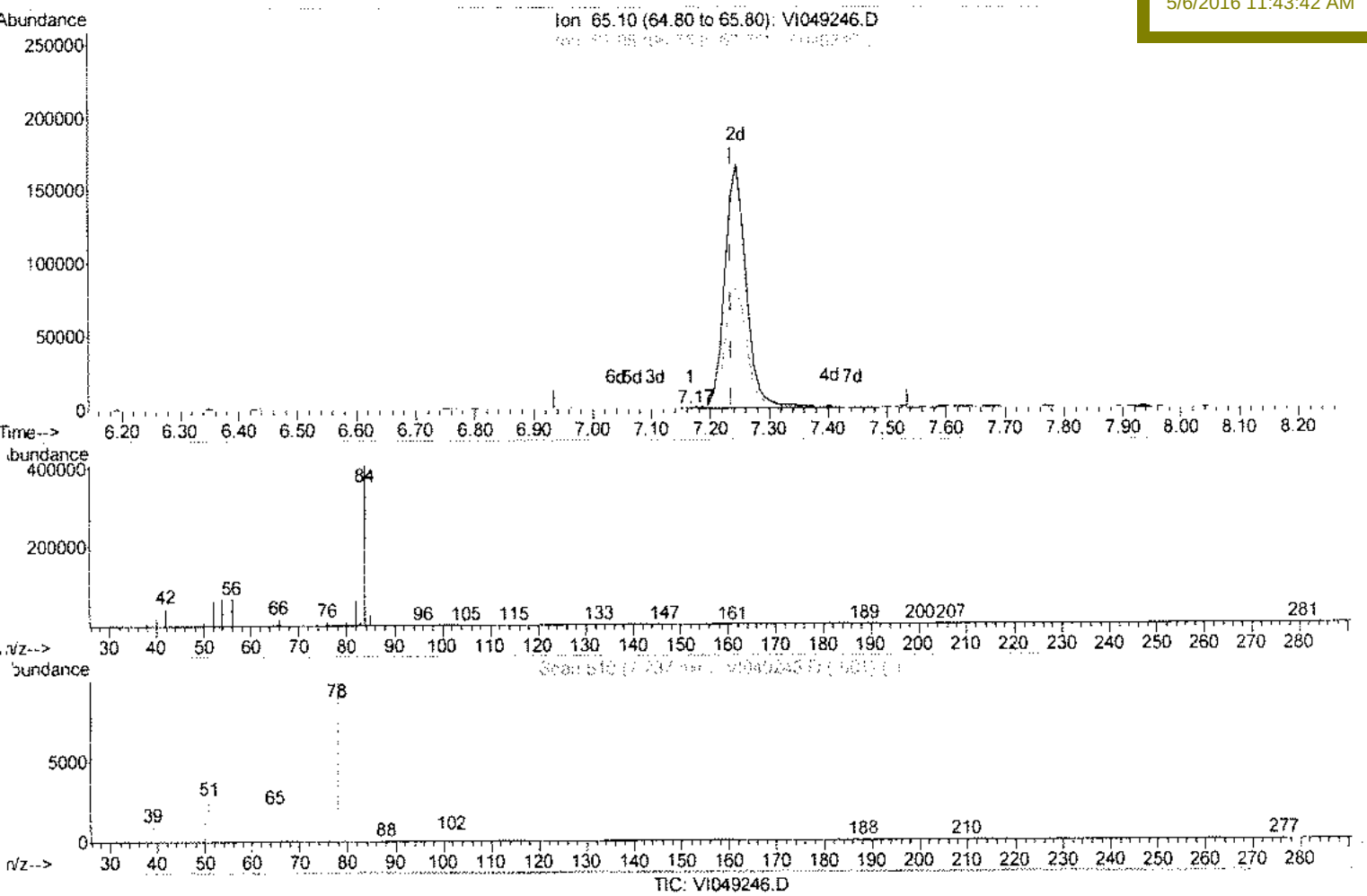
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049246.D
Acq On : 5 May 2016 10:59
Operator : FY/SY
Sample : VI0505WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 04:43:13 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK28

Manual Integrations APPROVED
feifei
5/6/2016 11:43:42 AM



(26) 1,2-Dichloroethane-d4 (S)

7.166min (-0.070) 0.01ug/L

response 565

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	57.52
51.05	123.20	98.94
0.00	0.00	0.00

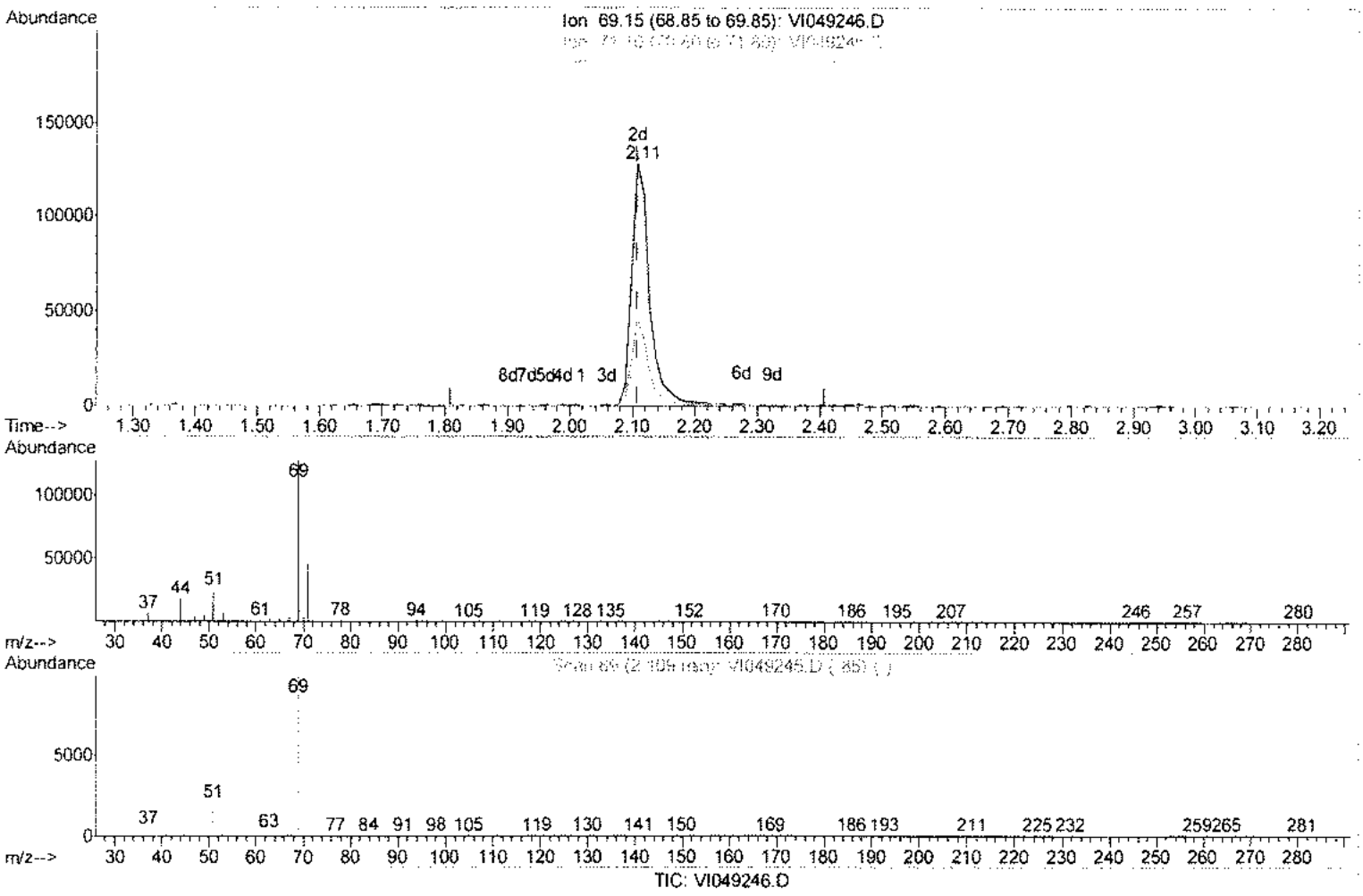
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049246.D
Acq On : 5 May 2016 10:59
Operator : FY/SY
Sample : VI0505WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 04:43:13 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VBLK28

Manual Integrations APPROVED
feifei
5/6/2016 11:43:42 AM



TIC: VI049246.D

(7) Chloroethane-d5 (S)

2.108min (-0.001) 5.30ug/L m

response 257325

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.10#
51.05	32.70	0.11#
0.00	0.00	0.00

XA.D
05/06/16

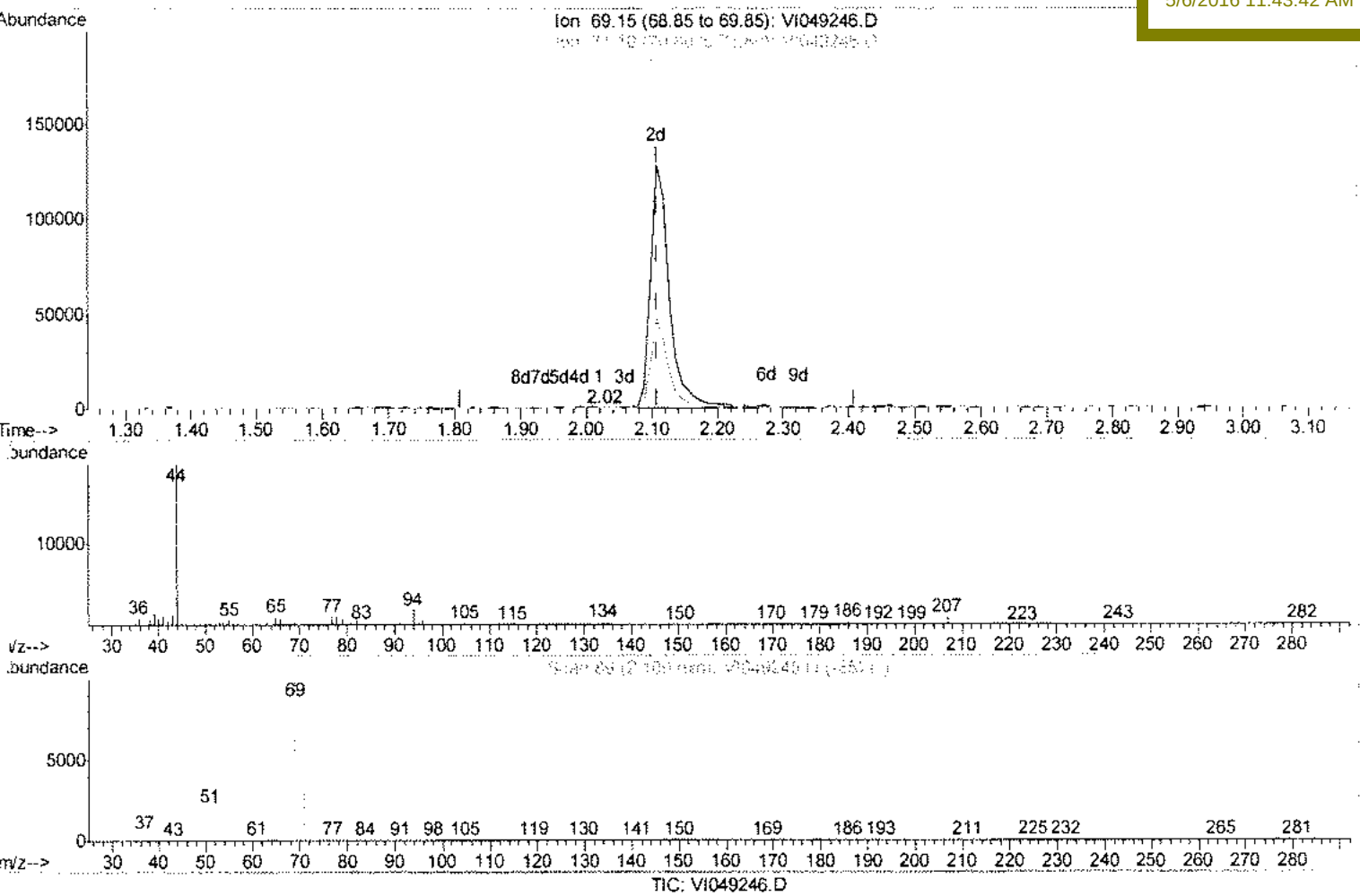
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049246.D
Acq On : 5 May 2016 10:59
Operator : FY/SY
Sample : VI0505WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 04:43:13 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK28

Manual Integrations APPROVED
feifei
5/6/2016 11:43:42 AM



(7) Chloroethane-d5 (S)

2.019min (-0.090) 0.01ug/L

response 727

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	36.04
51.05	32.70	39.89
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049246.D
Acq On : 5 May 2016 10:59
Operator : FY/SY
Sample : VI0505WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 04:46:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VBLK28

Manual Integrations APPROVED
feifei
5/6/2016 11:43:42 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1422886	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	911067	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	296478	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	406172	4.64	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 92.80%			
7) Chloroethane-d5	2.11	69	257325m	5.30	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 106.00%			
11) 1,1-Dichloroethene-d2	2.93	63	692773	3.36	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 67.20%			
20) 2-Butanone-d5	5.68	46	820176	43.25	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 86.50%			
24) Chloroform-d	6.39	84	959767	4.31	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 86.20%			
26) 1,2-Dichloroethane-d4	7.25	65	426402m	4.68	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.60%			
32) Benzene-d6	7.19	84	1717559	4.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.80%			
36) 1,2-Dichloropropane-d6	8.45	67	480377	4.81	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 96.20%			
41) Toluene-d8	9.71	98	1225965	4.68	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.60%			
43) trans-1,3-Dichloropropene-	10.03	79	181436	4.61	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.20%			
46) 2-Hexanone-d5	10.43	63	564831	45.54	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 91.08%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	181170	3.99	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 79.80%			
63) 1,2-Dichlorobenzene-d4	13.77	152	214629	4.13	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 82.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

D.D 05/06/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK29

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0505WBL02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049256.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK29

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0505WBL02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049256.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK29

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0505WBL02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049256.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLK29

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0505WBL02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049256.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

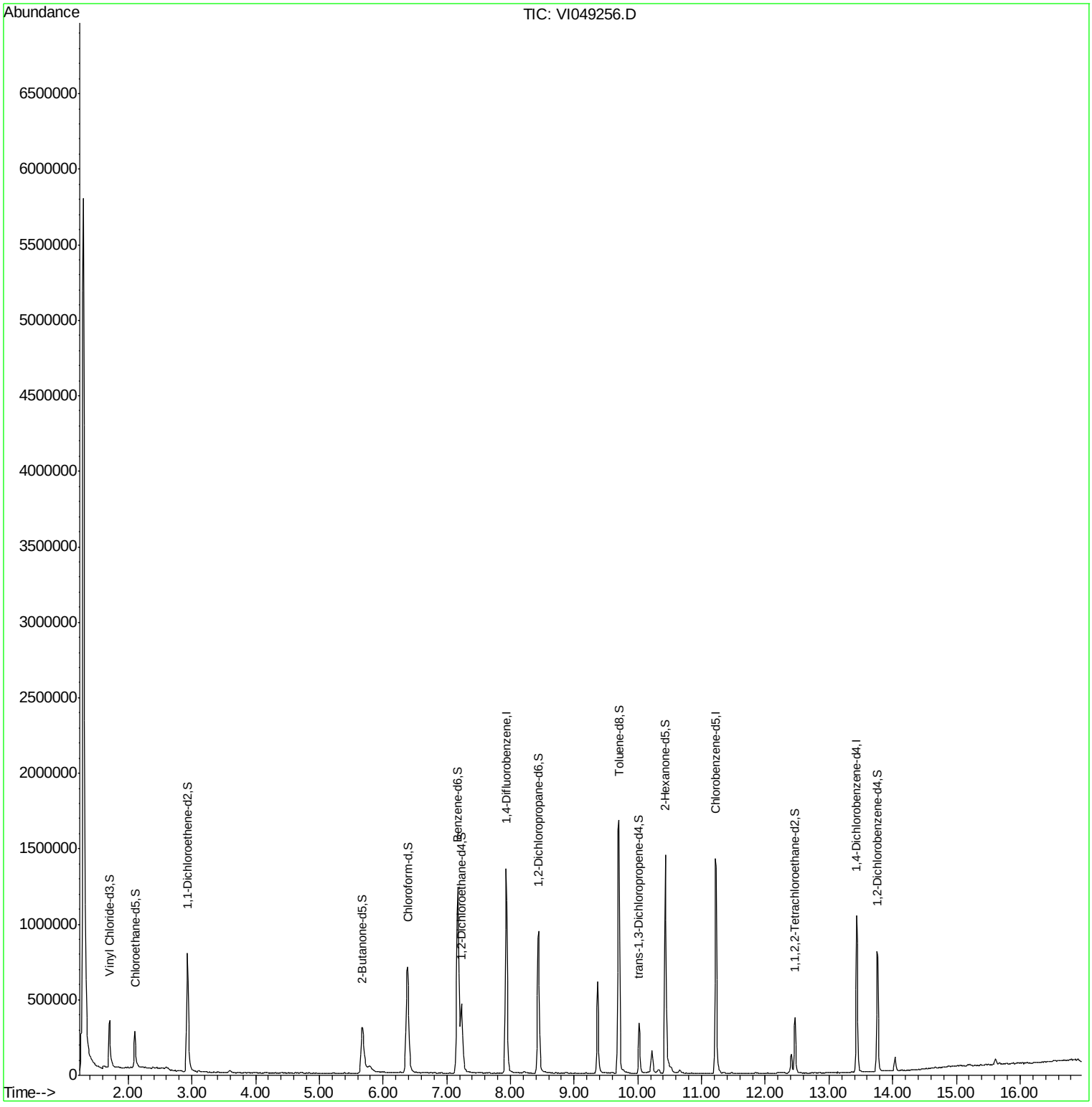
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 06 05:30:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK29

Manual Integrations APPROVED
feifei
5/6/2016 11:44:14 AM



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK29

Manual Integrations APPROVED
feifei
5/6/2016 11:44:14 AM

Quant Time: May 06 05:30:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1193553	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.23	117	762181	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	241848	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	350184	4.77	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 95.40%			
7) Chloroethane-d5	2.11	69	232207	5.71	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 114.20%			
11) 1,1-Dichloroethene-d2	2.93	63	615715m	3.56	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 71.20%			
20) 2-Butanone-d5	5.67	46	773513	48.62	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 97.24%			
24) Chloroform-d	6.39	84	891507	4.77	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.40%			
26) 1,2-Dichloroethane-d4	7.23	65	398378	5.21	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.20%			
32) Benzene-d6	7.17	84	1591671	5.36	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 107.20%			
36) 1,2-Dichloropropane-d6	8.44	67	450379	5.39	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.80%			
41) Toluene-d8	9.70	98	1085476	4.96	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.20%			
43) trans-1,3-Dichloropropene-	10.02	79	162296	4.93	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.60%			
46) 2-Hexanone-d5	10.43	63	512237	49.37	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 98.74%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	168251	4.43	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 88.60%			
63) 1,2-Dichlorobenzene-d4	13.77	152	189866	4.48	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 89.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK29

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.298	3	7	35	rVB	5761016	12988236	100.00%	29.228%
2	1.613	37	39	42	rBV4	15360	39787	0.31%	0.090%
3	1.712	46	49	57	rVB	312445	567882	4.37%	1.278%
4	1.958	72	74	75	rBV	6686	6609	0.05%	0.015%
5	2.105	86	89	98	rVB	237644	424585	3.27%	0.955%
6	2.381	115	117	119	rBV3	10690	13633	0.10%	0.031%
7	2.597	136	139	141	rBV4	11986	18809	0.14%	0.042%
8	2.775	155	157	159	rBV3	2989	4445	0.03%	0.010%
9	2.932	168	173	182	rBV	782895	1706565	13.14%	3.840%
10	3.030	182	183	185	rVV2	8246	10346	0.08%	0.023%
11	3.109	188	191	197	rBV8	10448	28011	0.22%	0.063%
12	3.208	199	201	206	rVB3	5800	13388	0.10%	0.030%
13	3.523	230	233	235	rVB4	3608	5345	0.04%	0.012%
14	3.591	235	240	244	rBV5	16400	44260	0.34%	0.100%
15	3.719	250	253	254	rBV3	4139	6429	0.05%	0.014%
16	3.818	261	263	267	rVB5	3604	8110	0.06%	0.018%
17	3.877	267	269	273	rVV4	4559	10285	0.08%	0.023%
18	3.936	273	275	276	rVB2	4832	4483	0.03%	0.010%
19	3.995	276	281	285	rBV6	6155	22121	0.17%	0.050%
20	4.074	287	289	291	rVB3	3958	5174	0.04%	0.012%
21	4.152	294	297	298	rVV3	4120	6350	0.05%	0.014%
22	4.221	302	304	306	rBV2	3614	4402	0.03%	0.010%
23	4.408	321	323	324	rBV	3365	4923	0.04%	0.011%
24	4.625	342	345	347	rBV3	3293	6058	0.05%	0.014%
25	4.841	364	367	368	rVB3	5824	9026	0.07%	0.020%
26	4.871	368	370	372	rBV3	4176	7229	0.06%	0.016%
27	4.979	379	381	384	rVB4	3000	4630	0.04%	0.010%
28	5.235	404	407	409	rBV3	6448	11855	0.09%	0.027%
29	5.324	413	416	418	rBV4	3166	6396	0.05%	0.014%
30	5.402	422	424	426	rBV2	3354	4768	0.04%	0.011%
31	5.678	445	452	460	rBV	303378	1105586	8.51%	2.488%
32	5.786	461	463	473	rVB2	37223	121366	0.93%	0.273%
33	5.993	482	484	485	rBV2	3824	5553	0.04%	0.012%
34	6.062	489	491	493	rVB3	3104	4908	0.04%	0.011%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK29

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.101	493	495	498	rVB4	3203	5415	0.04%	0.012%
36	6.268	511	512	515	rVB2	6171	6515	0.05%	0.015%
37	6.387	515	524	536	rBV	704669	2189213	16.86%	4.927%
38	6.515	536	537	540	rVB3	4089	4743	0.04%	0.011%
39	6.613	545	547	549	rBV3	4827	10131	0.08%	0.023%
40	7.174	595	604	608	rBV	1236026	3356853	25.85%	7.554%
41	7.233	608	610	620	rVV	456699	1043395	8.03%	2.348%
42	7.341	620	621	627	rVV6	9459	22951	0.18%	0.052%
43	7.420	627	629	630	rVV2	3387	4626	0.04%	0.010%
44	7.469	633	634	637	rBV3	3738	6024	0.05%	0.014%
45	7.509	637	638	641	rVB3	3387	4499	0.03%	0.010%
46	7.656	652	653	661	rVB7	6004	10866	0.08%	0.024%
47	7.794	666	667	669	rBV2	4130	5538	0.04%	0.012%
48	7.932	674	681	694	rBV	1357669	2962577	22.81%	6.667%
49	8.099	696	698	700	rVB3	4495	4475	0.03%	0.010%
50	8.227	706	711	713	rBV5	8787	22105	0.17%	0.050%
51	8.444	727	733	742	rBV	937070	2114031	16.28%	4.757%
52	8.650	753	754	758	rVB4	6167	9213	0.07%	0.021%
53	8.719	758	761	762	rBV3	4623	8527	0.07%	0.019%
54	8.749	762	764	767	rVB4	4371	5429	0.04%	0.012%
55	8.798	767	769	771	rBV2	3704	5388	0.04%	0.012%
56	9.192	807	809	810	rVB3	5311	5875	0.05%	0.013%
57	9.231	810	813	814	rBV3	2653	4798	0.04%	0.011%
58	9.320	819	822	823	rBV3	3476	4801	0.04%	0.011%
59	9.369	823	827	838	rBV	603704	1081800	8.33%	2.434%
60	9.595	847	850	853	rBV4	4232	9651	0.07%	0.022%
61	9.703	856	861	866	rBV	1674504	3159796	24.33%	7.111%
62	10.018	889	893	900	rVV	333820	579052	4.46%	1.303%
63	10.117	901	903	905	rVV2	7038	13473	0.10%	0.030%
64	10.156	905	907	908	rVV2	8604	12375	0.10%	0.028%
65	10.225	909	914	919	rVV	151337	341164	2.63%	0.768%
66	10.323	919	924	928	rVV7	24891	59925	0.46%	0.135%
67	10.432	931	935	951	rBV	1442646	2751714	21.19%	6.192%
68	10.609	951	953	954	rVV2	5995	6326	0.05%	0.014%
69	10.658	954	958	966	rVB3	20239	51592	0.40%	0.116%
70	10.865	978	979	982	rVB3	2867	4393	0.03%	0.010%
71	11.071	996	1000	1002	rVB4	3243	6872	0.05%	0.015%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK29

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.219	1011	1015	1025	rBV	1425360	2646043	20.37%	5.955%
73	11.357	1025	1029	1033	rVB6	8785	21156	0.16%	0.048%
74	11.475	1038	1041	1044	rVB2	5229	8053	0.06%	0.018%
75	11.623	1053	1056	1058	rBV4	3918	6836	0.05%	0.015%
76	11.859	1075	1080	1084	rVB6	6701	18801	0.14%	0.042%
77	12.036	1095	1098	1099	rBV3	4383	6189	0.05%	0.014%
78	12.203	1109	1115	1118	rBV8	8583	25866	0.20%	0.058%
79	12.410	1129	1136	1139	rBV	129031	257123	1.98%	0.579%
80	12.469	1139	1142	1147	rVV	371114	643483	4.95%	1.448%
81	12.548	1147	1150	1153	rVB5	6727	15221	0.12%	0.034%
82	12.597	1153	1155	1157	rBV2	3715	5737	0.04%	0.013%
83	12.705	1163	1166	1167	rBV2	3866	4853	0.04%	0.011%
84	12.764	1171	1172	1176	rBV3	3390	5803	0.04%	0.013%
85	12.951	1187	1191	1193	rBV4	4687	11574	0.09%	0.026%
86	12.991	1193	1195	1197	rVV3	2898	4474	0.03%	0.010%
87	13.089	1203	1205	1207	rVV3	2774	5428	0.04%	0.012%
88	13.138	1209	1210	1213	rBV3	7018	9489	0.07%	0.021%
89	13.276	1222	1224	1225	rBV2	4061	4738	0.04%	0.011%
90	13.365	1228	1233	1236	rBV7	7105	18337	0.14%	0.041%
91	13.433	1236	1240	1248	rVV	1037779	1801418	13.87%	4.054%
92	13.552	1250	1252	1255	rVB3	4951	8263	0.06%	0.019%
93	13.699	1264	1267	1269	rBV4	2809	6108	0.05%	0.014%
94	13.758	1269	1273	1280	rBV	800431	1506877	11.60%	3.391%
95	13.847	1280	1282	1284	rVV3	6309	9476	0.07%	0.021%
96	13.876	1284	1285	1288	rVV3	5348	6304	0.05%	0.014%
97	14.034	1297	1301	1308	rVV2	92172	174637	1.34%	0.393%
98	14.477	1345	1346	1349	rBV3	4750	6429	0.05%	0.014%
99	14.526	1349	1351	1352	rBV2	6522	6939	0.05%	0.016%
100	15.618	1459	1462	1465	rBV	34295	63688	0.49%	0.143%

Sum of corrected areas: 44437017

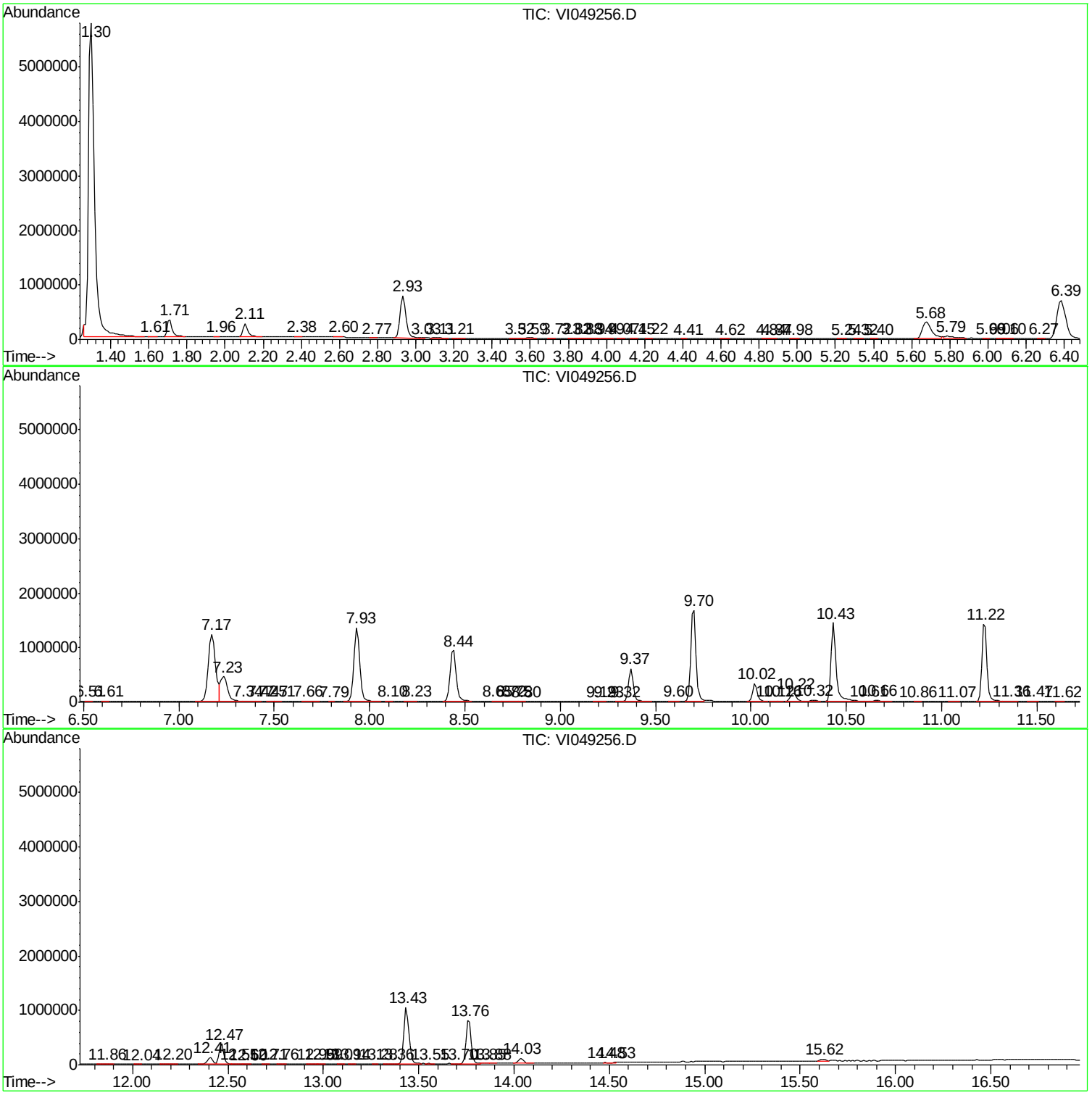
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK29

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK29

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK29

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

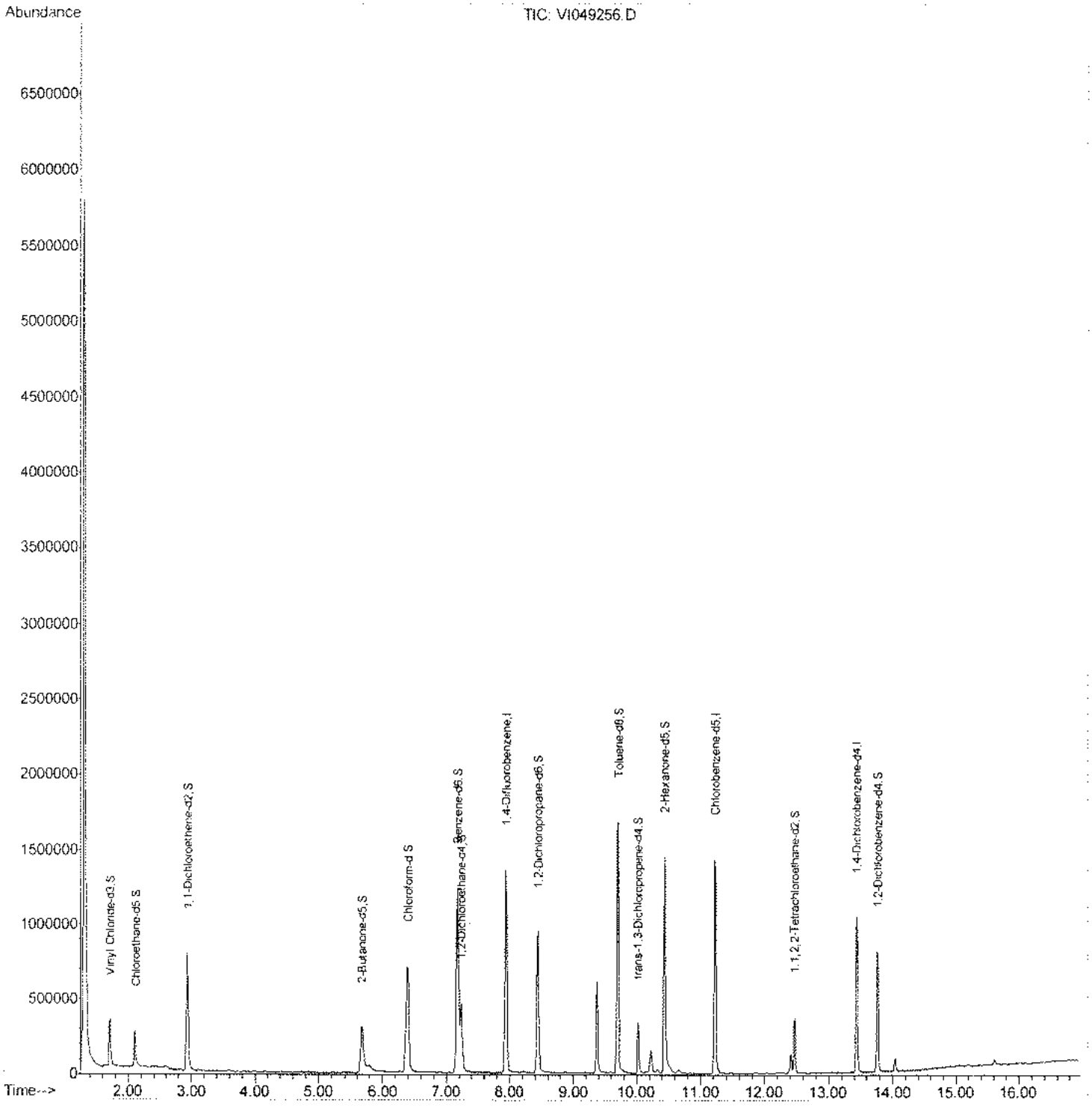
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 06 05:30:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK29

Manual Integrations APPROVED
feifei
5/6/2016 11:44:14 AM



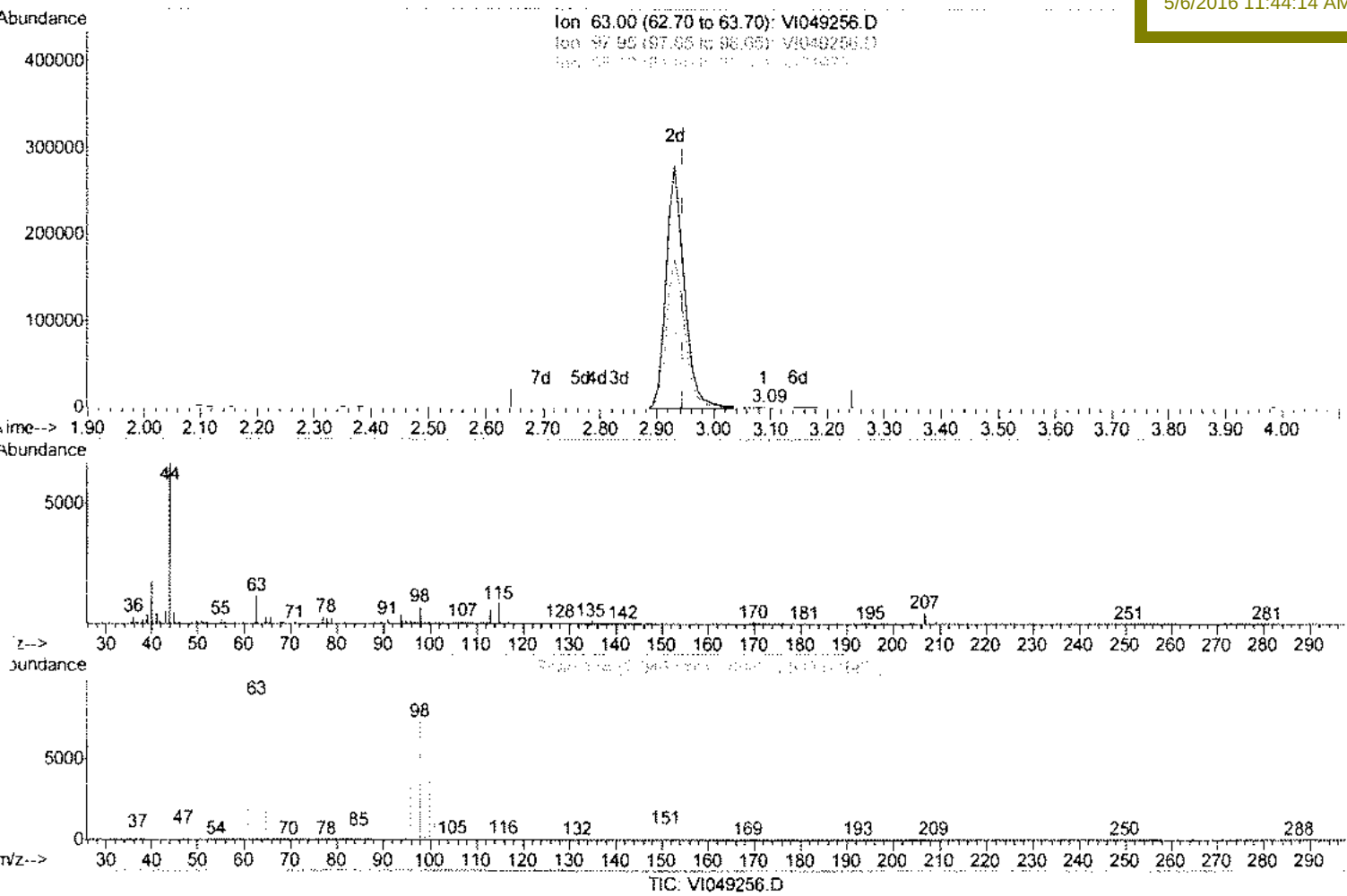
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 06 05:21:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK29

Manual Integrations APPROVED
feifei
5/6/2016 11:44:14 AM



TIC: VI049256.D

(11) 1,1-Dichloroethene-d2 (S)

3.090min (+0.144) 0.01ug/L

response 1056

Ion	Exp%	Act%
63.00	100	100
97.95	85.40	82.39
65.10	23.80	20.17
0.00	0.00	0.00

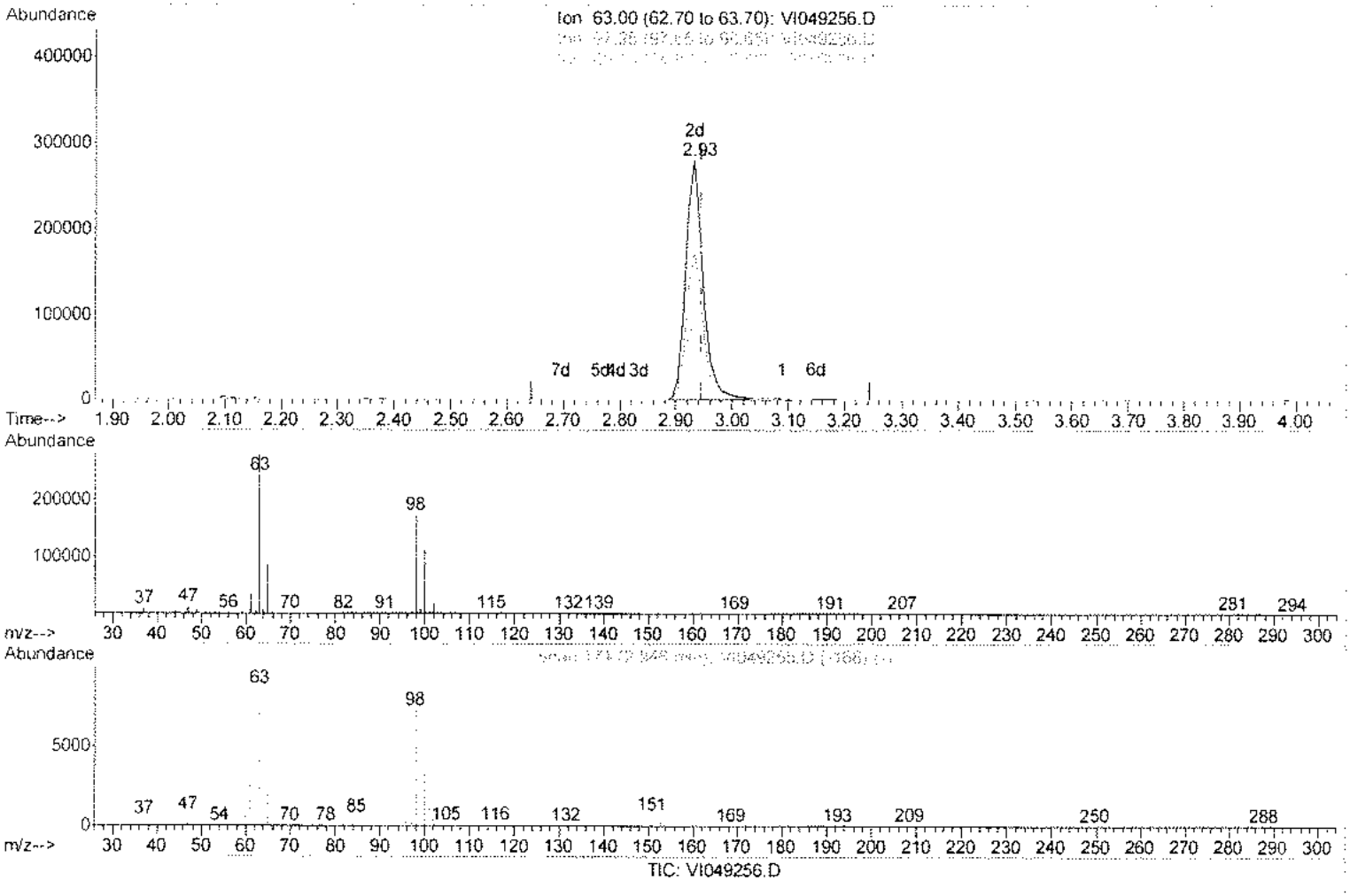
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 06 05:21:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK29

Manual Integrations APPROVED
feifei
5/6/2016 11:44:14 AM



(11) 1,1-Dichloroethene-d2 (S)

2.932min (-0.014) 3.56ug/L m M.D 05/09/16

response 615715

Ion	Exp%	Act%
63.00	100	100
97.95	85.40	0.14#
65.10	23.80	0.03#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 06 05:30:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VBLK29

Manual Integrations APPROVED
feifei
5/6/2016 11:44:14 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1193553	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.23	117	762181	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	241848	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	350184	4.77	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 95.40%			
7) Chloroethane-d5	2.11	69	232207	5.71	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 114.20%			
11) 1,1-Dichloroethene-d2	2.93	63	615715m	3.56	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 71.20%			
20) 2-Butanone-d5	5.67	46	773513	48.62	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 97.24%			
24) Chloroform-d	6.39	84	891507	4.77	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.40%			
26) 1,2-Dichloroethane-d4	7.23	65	398378	5.21	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.20%			
32) Benzene-d6	7.17	84	1591671	5.36	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 107.20%			
36) 1,2-Dichloropropane-d6	8.44	67	450379	5.39	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.80%			
41) Toluene-d8	9.70	98	1085476	4.96	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.20%			
43) trans-1,3-Dichloropropene-	10.02	79	162296	4.93	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.60%			
46) 2-Hexanone-d5	10.43	63	512237	49.37	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 98.74%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	168251	4.43	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 88.60%			
63) 1,2-Dichlorobenzene-d4	13.77	152	189866	4.48	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 89.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

M.D 05/09/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK30

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0506WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049277.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK30

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0506WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049277.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK30

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0506WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049277.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLK30

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0506WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049277.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

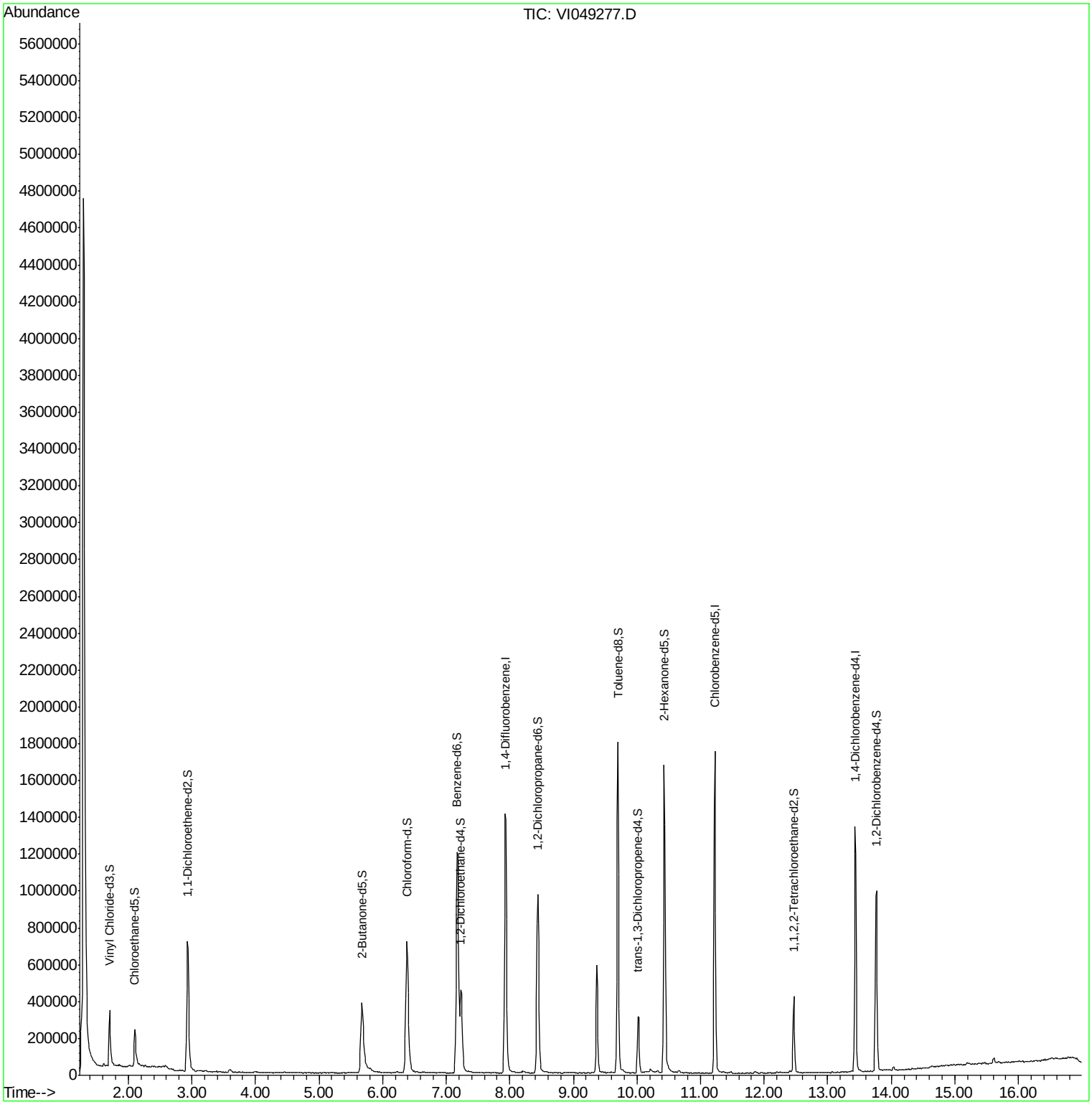
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK30

Quant Time: May 07 04:18:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK30

Quant Time: May 07 04:18:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1307874	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	851739	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	307505	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	328161	4.08	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 81.60%			
7) Chloroethane-d5	2.10	69	226389	5.08	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.60%			
11) 1,1-Dichloroethene-d2	2.93	63	582944	3.07	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 61.40%			
20) 2-Butanone-d5	5.68	46	886506	50.85	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 101.70%			
24) Chloroform-d	6.38	84	889889	4.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 86.80%			
26) 1,2-Dichloroethane-d4	7.23	65	399023	4.76	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.20%			
32) Benzene-d6	7.17	84	1546049	4.66	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.20%			
36) 1,2-Dichloropropane-d6	8.44	67	437564	4.69	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 93.80%			
41) Toluene-d8	9.70	98	1075811	4.40	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.00%			
43) trans-1,3-Dichloropropene-	10.03	79	162047	4.41	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 88.20%			
46) 2-Hexanone-d5	10.43	63	553577	47.75	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 95.50%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	181995	4.29	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 85.80%			
63) 1,2-Dichlorobenzene-d4	13.77	152	231762	4.30	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 86.00%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK30

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.296	4	7	33	rVB	4713433	10979095	100.00%	25.425%
2	1.611	37	39	42	rBV4	14359	21533	0.20%	0.050%
3	1.709	46	49	57	rBV	302119	523217	4.77%	1.212%
4	2.103	86	89	95	rBV	200274	410517	3.74%	0.951%
5	2.260	103	105	108	rVB	9898	18779	0.17%	0.043%
6	2.930	168	173	187	rVB	705615	1653298	15.06%	3.829%
7	3.077	187	188	190	rBV2	4389	4938	0.04%	0.011%
8	3.205	199	201	206	rVB4	6429	17089	0.16%	0.040%
9	3.343	213	215	217	rBV3	4346	6505	0.06%	0.015%
10	3.392	219	220	221	rVB	7860	4641	0.04%	0.011%
11	3.422	221	223	224	rBV	4438	5865	0.05%	0.014%
12	3.451	224	226	228	rVB3	3763	5777	0.05%	0.013%
13	3.589	236	240	247	rVB4	15540	47550	0.43%	0.110%
14	3.796	259	261	264	rVB4	4286	6934	0.06%	0.016%
15	3.855	264	267	270	rBV2	3160	7762	0.07%	0.018%
16	4.002	278	282	284	rVB4	4941	10278	0.09%	0.024%
17	4.032	284	285	290	rVB5	5071	4404	0.04%	0.010%
18	4.189	298	301	306	rBV5	4534	12467	0.11%	0.029%
19	4.268	306	309	310	rVB2	3499	5160	0.05%	0.012%
20	4.721	353	355	357	rVB3	3778	6051	0.06%	0.014%
21	4.780	357	361	363	rBV4	3745	7182	0.07%	0.017%
22	4.888	371	372	376	rVB3	5089	7858	0.07%	0.018%
23	5.026	383	386	388	rBV4	3711	6491	0.06%	0.015%
24	5.370	420	421	423	rBV2	3802	4651	0.04%	0.011%
25	5.459	427	430	431	rBV3	2972	4618	0.04%	0.011%
26	5.676	444	452	471	rBV	378917	1420836	12.94%	3.290%
27	5.912	475	476	478	rVV2	4864	6863	0.06%	0.016%
28	5.951	478	480	483	rVB4	3223	5460	0.05%	0.013%
29	6.119	496	497	499	rVB2	3989	4426	0.04%	0.010%
30	6.227	501	508	510	rBV5	5738	16753	0.15%	0.039%
31	6.384	516	524	534	rBV	714424	2142429	19.51%	4.961%
32	6.522	537	538	544	rVB5	5088	9754	0.09%	0.023%
33	6.758	558	562	564	rVB5	3536	7366	0.07%	0.017%
34	6.857	571	572	574	rBV2	2850	4372	0.04%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK30

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.172	598	604	608	rBV	1200414	3222821	29.35%	7.463%
36	7.231	608	610	621	rVV	447235	1088396	9.91%	2.521%
37	7.349	621	622	626	rVB4	5816	7304	0.07%	0.017%
38	7.575	644	645	647	rVB2	4398	4930	0.04%	0.011%
39	7.605	647	648	651	rBV3	3963	5906	0.05%	0.014%
40	7.644	651	652	658	rVB4	3984	8458	0.08%	0.020%
41	7.929	676	681	694	rBV	1406691	3192302	29.08%	7.393%
42	8.185	705	707	708	rVV2	3502	5116	0.05%	0.012%
43	8.205	708	709	713	rVB4	9751	18779	0.17%	0.043%
44	8.264	713	715	721	rVB5	4042	9759	0.09%	0.023%
45	8.441	726	733	744	rBV	969440	2144005	19.53%	4.965%
46	8.717	757	761	762	rBV4	3372	7056	0.06%	0.016%
47	8.766	765	766	770	rVB4	3966	7057	0.06%	0.016%
48	8.845	773	774	777	rBV2	2578	5516	0.05%	0.013%
49	9.051	794	795	797	rBV2	5165	4559	0.04%	0.011%
50	9.091	797	799	802	rBV4	3021	6027	0.05%	0.014%
51	9.160	804	806	809	rVB4	2841	4958	0.05%	0.011%
52	9.238	811	814	816	rVB3	2416	4740	0.04%	0.011%
53	9.366	823	827	833	rBV	583669	1041705	9.49%	2.412%
54	9.534	842	844	847	rBV4	3992	9110	0.08%	0.021%
55	9.593	847	850	853	rBV5	5623	10545	0.10%	0.024%
56	9.701	856	861	868	rBV	1797850	3159587	28.78%	7.317%
57	9.868	877	878	882	rVB3	4337	5628	0.05%	0.013%
58	10.016	889	893	900	rBV	306602	582872	5.31%	1.350%
59	10.095	900	901	902	rVV	5602	4733	0.04%	0.011%
60	10.144	902	906	907	rVV4	6630	15271	0.14%	0.035%
61	10.213	910	913	917	rVV2	18766	49202	0.45%	0.114%
62	10.301	920	922	923	rVV2	5490	9390	0.09%	0.022%
63	10.331	923	925	931	rVB5	12098	19468	0.18%	0.045%
64	10.429	931	935	948	rBV	1671225	2938547	26.76%	6.805%
65	10.616	952	954	956	rVV3	5518	8888	0.08%	0.021%
66	10.656	956	958	966	rVB8	10464	28197	0.26%	0.065%
67	11.079	999	1001	1002	rBV2	4002	5076	0.05%	0.012%
68	11.099	1002	1003	1007	rVB3	3482	4862	0.04%	0.011%
69	11.227	1011	1016	1026	rBV	1745276	2967634	27.03%	6.872%
70	11.354	1026	1029	1032	rVB4	7697	14672	0.13%	0.034%
71	11.394	1032	1033	1036	rVB3	4679	6107	0.06%	0.014%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK30

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.473	1039	1041	1044	rVB4	7104	12210	0.11%	0.028%
73	11.601	1052	1054	1057	rVB4	3871	5431	0.05%	0.013%
74	11.660	1057	1060	1061	rBV3	4662	6229	0.06%	0.014%
75	11.778	1070	1072	1074	rVB3	3204	4501	0.04%	0.010%
76	11.856	1077	1080	1088	rVB7	9662	28277	0.26%	0.065%
77	12.083	1102	1103	1106	rBV3	2941	4765	0.04%	0.011%
78	12.201	1111	1115	1118	rBV5	7383	19838	0.18%	0.046%
79	12.250	1118	1120	1122	rVB2	3680	4709	0.04%	0.011%
80	12.309	1124	1126	1131	rVB6	4554	9854	0.09%	0.023%
81	12.408	1133	1136	1138	rVV3	9842	16125	0.15%	0.037%
82	12.467	1138	1142	1146	rVV	411876	687786	6.26%	1.593%
83	12.585	1151	1154	1156	rVB4	3549	5588	0.05%	0.013%
84	12.624	1156	1158	1163	rBV6	3056	7904	0.07%	0.018%
85	13.008	1191	1197	1198	rBV5	3490	9207	0.08%	0.021%
86	13.077	1201	1204	1207	rBV4	5747	15198	0.14%	0.035%
87	13.156	1211	1212	1214	rBV2	5283	6766	0.06%	0.016%
88	13.244	1218	1221	1222	rBV3	2446	4393	0.04%	0.010%
89	13.372	1228	1234	1236	rBV7	7597	21432	0.20%	0.050%
90	13.431	1236	1240	1255	rVV	1332880	2321510	21.14%	5.376%
91	13.667	1262	1264	1268	rBV5	2979	6569	0.06%	0.015%
92	13.766	1269	1274	1280	rBV	979298	1803982	16.43%	4.178%
93	14.031	1298	1301	1304	rBV3	19237	34581	0.31%	0.080%
94	14.130	1308	1311	1312	rBV3	4631	7235	0.07%	0.017%
95	14.228	1319	1321	1323	rBV3	3591	4504	0.04%	0.010%
96	14.268	1323	1325	1326	rVV2	4943	4845	0.04%	0.011%
97	14.327	1329	1331	1332	rBV2	5637	5701	0.05%	0.013%
98	14.711	1368	1370	1373	rBV4	7282	9273	0.08%	0.021%
99	15.193	1416	1419	1421	rBV4	12421	25260	0.23%	0.058%
100	15.616	1458	1462	1465	rBV2	27881	57809	0.53%	0.134%

Sum of corrected areas: 43181584

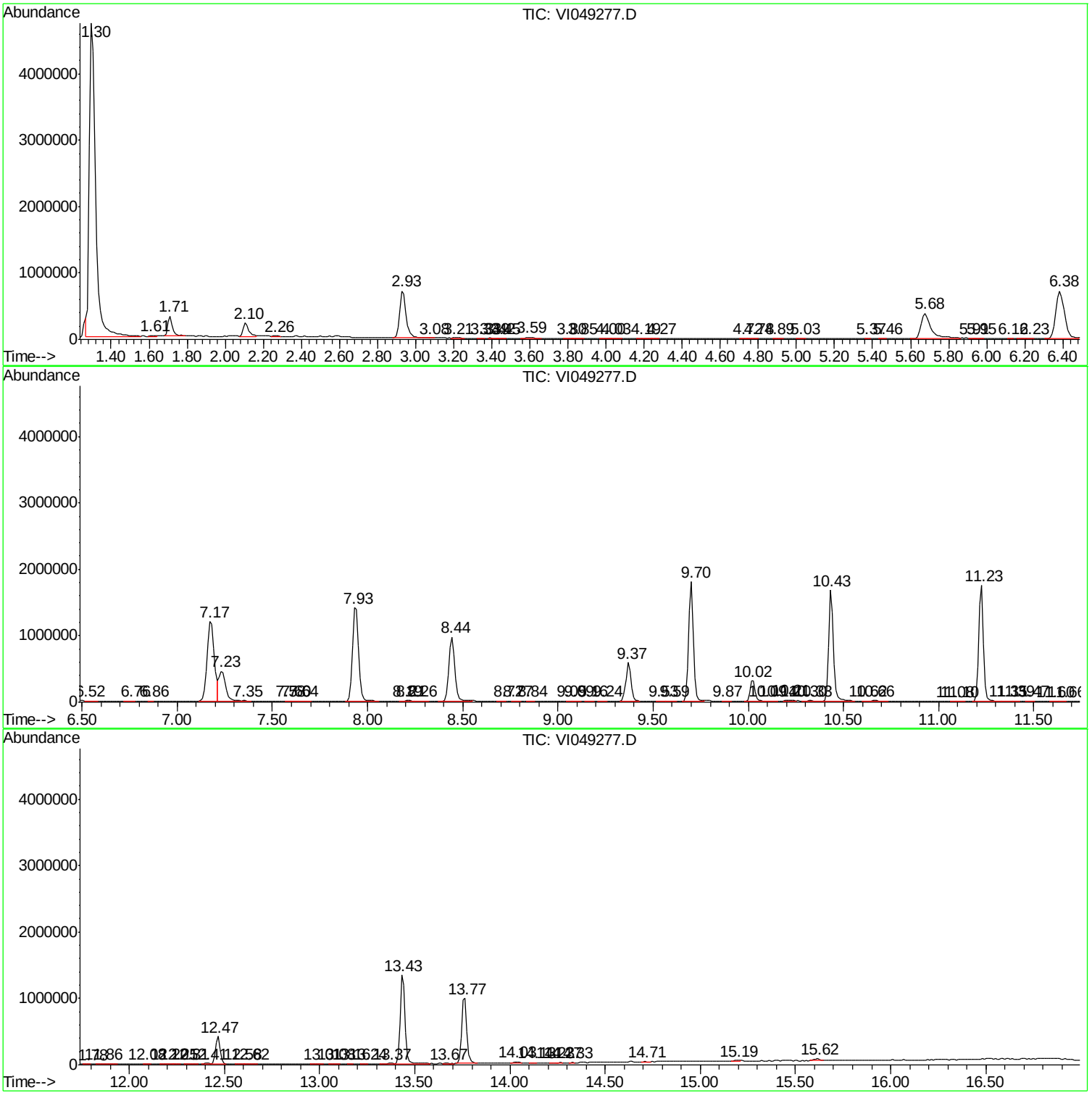
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK30

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK30

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK30

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049288.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049288.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049288.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049288.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

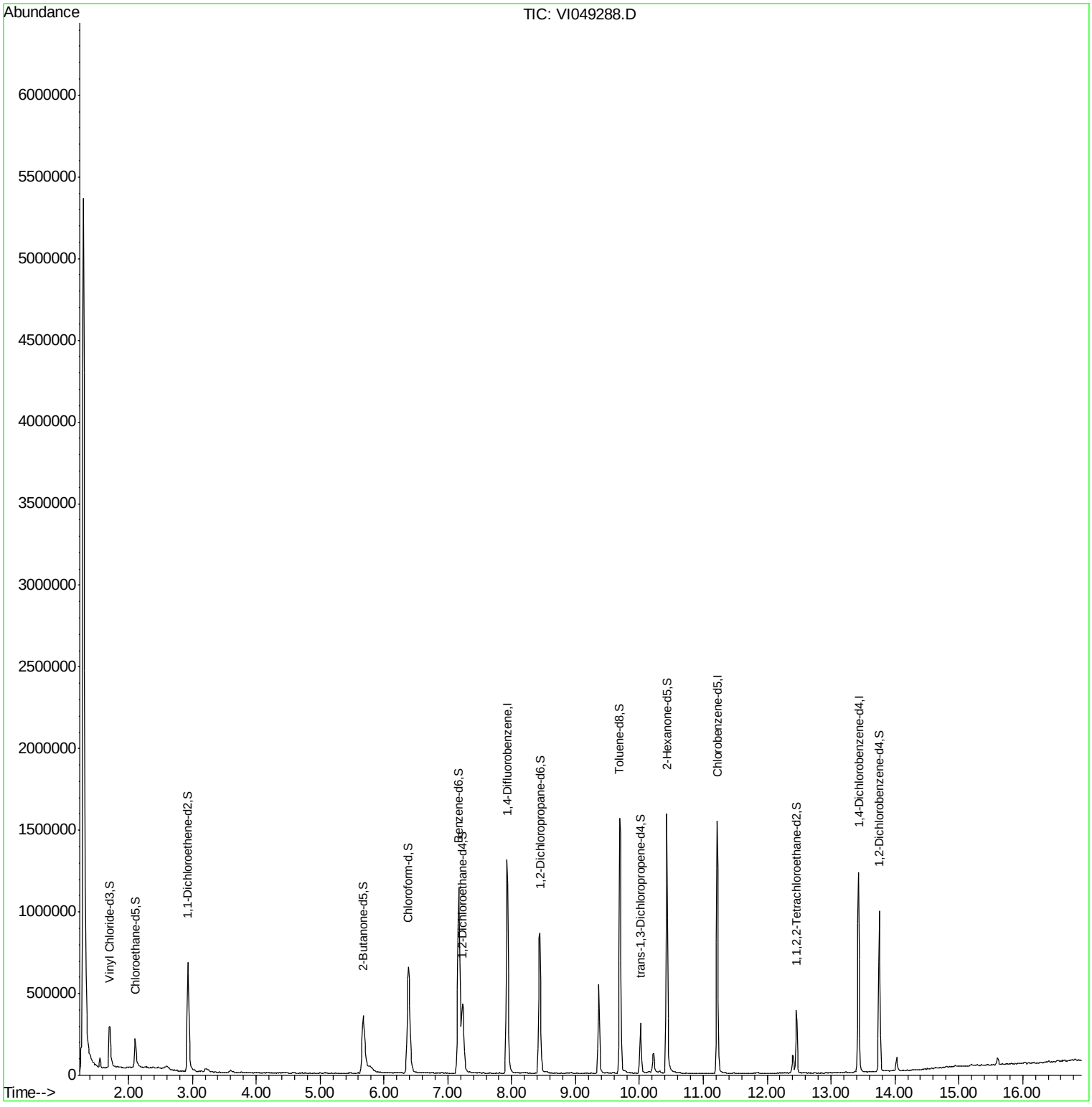
EPA-designated Registry Number.

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049288.D
Acq On : 6 May 2016 18:12
Operator : FY/SY
Sample : H2834-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Quant Time: May 07 05:12:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049288.D
Acq On : 6 May 2016 18:12
Operator : FY/SY
Sample : H2834-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Quant Time: May 07 05:12:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1159555	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	753453	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	273005	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	305597	4.28	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 85.60%			
7) Chloroethane-d5	2.10	69	204007	5.16	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 103.20%			
11) 1,1-Dichloroethene-d2	2.93	63	540658	3.21	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 64.20%			
20) 2-Butanone-d5	5.68	46	836903	54.15	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 108.30%			
24) Chloroform-d	6.38	84	803304	4.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 88.40%			
26) 1,2-Dichloroethane-d4	7.23	65	375434	5.05	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.00%			
32) Benzene-d6	7.17	84	1436805	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.00%			
36) 1,2-Dichloropropane-d6	8.44	67	404608	4.90	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 98.00%			
41) Toluene-d8	9.69	98	981265	4.53	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.60%			
43) trans-1,3-Dichloropropene-	10.02	79	145559	4.48	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 89.60%			
46) 2-Hexanone-d5	10.43	63	518206	50.52	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 101.04%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	172494	4.60	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 92.00%			
63) 1,2-Dichlorobenzene-d4	13.76	152	219864	4.59	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 91.80%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049288.D
Acq On : 6 May 2016 18:12
Operator : FY/SY
Sample : H2834-11
Misc : 25mL/MSVOA I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.296	3	7	31	rVB	5318596	12011431	100.00%	28.458%
2	1.551	31	33	37	rVB2	61588	85082	0.71%	0.202%
3	1.610	37	39	40	rBV	7025	7804	0.06%	0.018%
4	1.699	45	48	56	rBV	250644	487457	4.06%	1.155%
5	2.103	86	89	98	rBV	175072	372737	3.10%	0.883%
6	2.565	134	136	138	rBV3	8715	14515	0.12%	0.034%
7	2.762	155	156	158	rVB2	7619	6205	0.05%	0.015%
8	2.929	169	173	181	rBV	668210	1511430	12.58%	3.581%
9	3.136	192	194	196	rVB3	3931	5891	0.05%	0.014%
10	3.205	198	201	209	rVV3	20671	72642	0.60%	0.172%
11	3.303	209	211	214	rVB4	5387	9276	0.08%	0.022%
12	3.362	215	217	220	rVB3	4459	7127	0.06%	0.017%
13	3.421	220	223	225	rBV4	3339	4834	0.04%	0.011%
14	3.599	237	241	251	rVB3	16291	56356	0.47%	0.134%
15	3.874	266	269	272	rVB3	3513	5000	0.04%	0.012%
16	3.914	272	273	277	rVB3	4061	6839	0.06%	0.016%
17	3.982	279	280	285	rBV5	4153	8686	0.07%	0.021%
18	4.051	285	287	290	rVB3	3021	4231	0.04%	0.010%
19	4.120	292	294	296	rVB3	3146	4370	0.04%	0.010%
20	4.238	304	306	311	rVB6	5053	11754	0.10%	0.028%
21	4.327	313	315	317	rVB3	5426	5426	0.05%	0.013%
22	4.376	317	320	321	rBV3	4256	7388	0.06%	0.018%
23	4.612	337	344	348	rVB8	5016	14265	0.12%	0.034%
24	4.711	352	354	358	rVB4	3601	5512	0.05%	0.013%
25	4.780	358	361	363	rVB3	2743	4646	0.04%	0.011%
26	4.908	369	374	376	rVB4	3822	10325	0.09%	0.024%
27	4.967	376	380	381	rBV3	2574	5793	0.05%	0.014%
28	4.996	381	383	385	rBV3	3076	5077	0.04%	0.012%
29	5.075	388	391	393	rBV4	4039	7426	0.06%	0.018%
30	5.587	442	443	446	rBV3	3389	6819	0.06%	0.016%
31	5.675	446	452	462	rBV	353283	1260880	10.50%	2.987%
32	5.941	477	479	481	rVB2	5532	7613	0.06%	0.018%
33	5.971	481	482	485	rBV3	2813	4512	0.04%	0.011%
34	6.039	487	489	493	rVB3	2712	4991	0.04%	0.012%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049288.D
Acq On : 6 May 2016 18:12
Operator : FY/SY
Sample : H2834-11
Misc : 25mL/MSVOA I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.236	505	509	514	rVB7	2956	8753	0.07%	0.021%
36	6.384	517	524	535	rBV	650479	2014508	16.77%	4.773%
37	6.738	558	560	563	rBV4	3982	8104	0.07%	0.019%
38	6.925	574	579	580	rBV5	3818	10044	0.08%	0.024%
39	7.171	598	604	608	rBV	1137211	3054215	25.43%	7.236%
40	7.230	608	610	620	rVV	425833	1004902	8.37%	2.381%
41	7.348	620	622	627	rVV6	8776	20738	0.17%	0.049%
42	7.407	627	628	631	rVV3	3699	4889	0.04%	0.012%
43	7.496	636	637	641	rVB3	4421	6045	0.05%	0.014%
44	7.663	649	654	657	rBV6	3780	8581	0.07%	0.020%
45	7.811	665	669	670	rVB3	3339	5064	0.04%	0.012%
46	7.929	676	681	690	rBV	1308138	2813498	23.42%	6.666%
47	8.165	703	705	706	rBV2	3950	6520	0.05%	0.015%
48	8.224	708	711	715	rVB6	5180	11113	0.09%	0.026%
49	8.441	727	733	740	rBV	859638	1962765	16.34%	4.650%
50	8.726	760	762	764	rVB3	4921	7080	0.06%	0.017%
51	8.775	764	767	768	rBV3	4968	9164	0.08%	0.022%
52	8.825	768	772	773	rBV2	2432	5578	0.05%	0.013%
53	8.874	773	777	778	rBV3	2829	4235	0.04%	0.010%
54	8.923	780	782	786	rVB4	4647	8627	0.07%	0.020%
55	8.992	788	789	791	rBV	3158	4700	0.04%	0.011%
56	9.090	795	799	803	rBV5	2578	7782	0.06%	0.018%
57	9.248	814	815	819	rVB4	3234	6008	0.05%	0.014%
58	9.366	822	827	836	rBV	545006	971422	8.09%	2.302%
59	9.484	836	839	842	rVB5	3531	9401	0.08%	0.022%
60	9.523	842	843	846	rVB3	3281	4341	0.04%	0.010%
61	9.602	846	851	854	rVB7	5499	17423	0.15%	0.041%
62	9.691	856	860	867	rBV	1558967	2883579	24.01%	6.832%
63	10.016	888	893	899	rBV	312225	526583	4.38%	1.248%
64	10.094	899	901	902	rVV2	5321	7442	0.06%	0.018%
65	10.134	902	905	906	rVV3	7166	15231	0.13%	0.036%
66	10.163	906	908	909	rVV2	8321	12619	0.11%	0.030%
67	10.222	909	914	921	rVV	119970	288556	2.40%	0.684%
68	10.321	923	924	931	rVV6	13846	22392	0.19%	0.053%
69	10.429	931	935	952	rVV	1586045	2785981	23.19%	6.601%
70	10.606	952	953	956	rVV3	5848	6766	0.06%	0.016%
71	11.118	1003	1005	1009	rVB5	3296	6288	0.05%	0.015%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049288.D
Acq On : 6 May 2016 18:12
Operator : FY/SY
Sample : H2834-11
Misc : 25mL/MSVOA I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.216	1011	1015	1025	rBV	1544452	2602791	21.67%	6.167%
73	11.354	1025	1029	1032	rVB6	6429	15772	0.13%	0.037%
74	11.443	1035	1038	1039	rVB3	3465	5631	0.05%	0.013%
75	11.472	1039	1041	1044	rBV3	5529	9149	0.08%	0.022%
76	11.669	1058	1061	1064	rBV4	2530	4976	0.04%	0.012%
77	11.846	1075	1079	1082	rBV5	5430	14127	0.12%	0.033%
78	12.102	1104	1105	1106	rBV	4681	4500	0.04%	0.011%
79	12.191	1112	1114	1116	rBV3	4863	7114	0.06%	0.017%
80	12.250	1118	1120	1121	rVB2	6869	5871	0.05%	0.014%
81	12.289	1121	1124	1125	rBV3	5397	9321	0.08%	0.022%
82	12.397	1131	1135	1138	rBV	111837	213592	1.78%	0.506%
83	12.456	1138	1141	1146	rVB	382442	640900	5.34%	1.518%
84	12.515	1146	1147	1150	rVB3	3124	4538	0.04%	0.011%
85	12.604	1155	1156	1159	rVB3	3369	4526	0.04%	0.011%
86	12.643	1159	1160	1163	rVB3	4839	5179	0.04%	0.012%
87	12.742	1167	1170	1175	rVB6	3305	5522	0.05%	0.013%
88	13.234	1217	1220	1222	rBV4	4799	8977	0.07%	0.021%
89	13.362	1229	1233	1235	rBV4	4569	9883	0.08%	0.023%
90	13.431	1235	1240	1252	rVV	1225056	2018269	16.80%	4.782%
91	13.677	1262	1265	1267	rVB4	4063	4739	0.04%	0.011%
92	13.756	1267	1273	1279	rBV	987211	1690922	14.08%	4.006%
93	13.854	1281	1283	1285	rVV3	3903	4356	0.04%	0.010%
94	14.031	1295	1301	1306	rBV2	83481	155016	1.29%	0.367%
95	14.267	1323	1325	1327	rBV3	4376	6727	0.06%	0.016%
96	14.307	1327	1329	1332	rVV4	4138	7821	0.07%	0.019%
97	14.641	1358	1363	1365	rBV6	11474	33733	0.28%	0.080%
98	14.710	1369	1370	1373	rVV3	7002	9821	0.08%	0.023%
99	15.350	1433	1435	1436	rBV	9153	9838	0.08%	0.023%
100	15.606	1457	1461	1465	rBV	43555	98035	0.82%	0.232%

Sum of corrected areas: 42206923

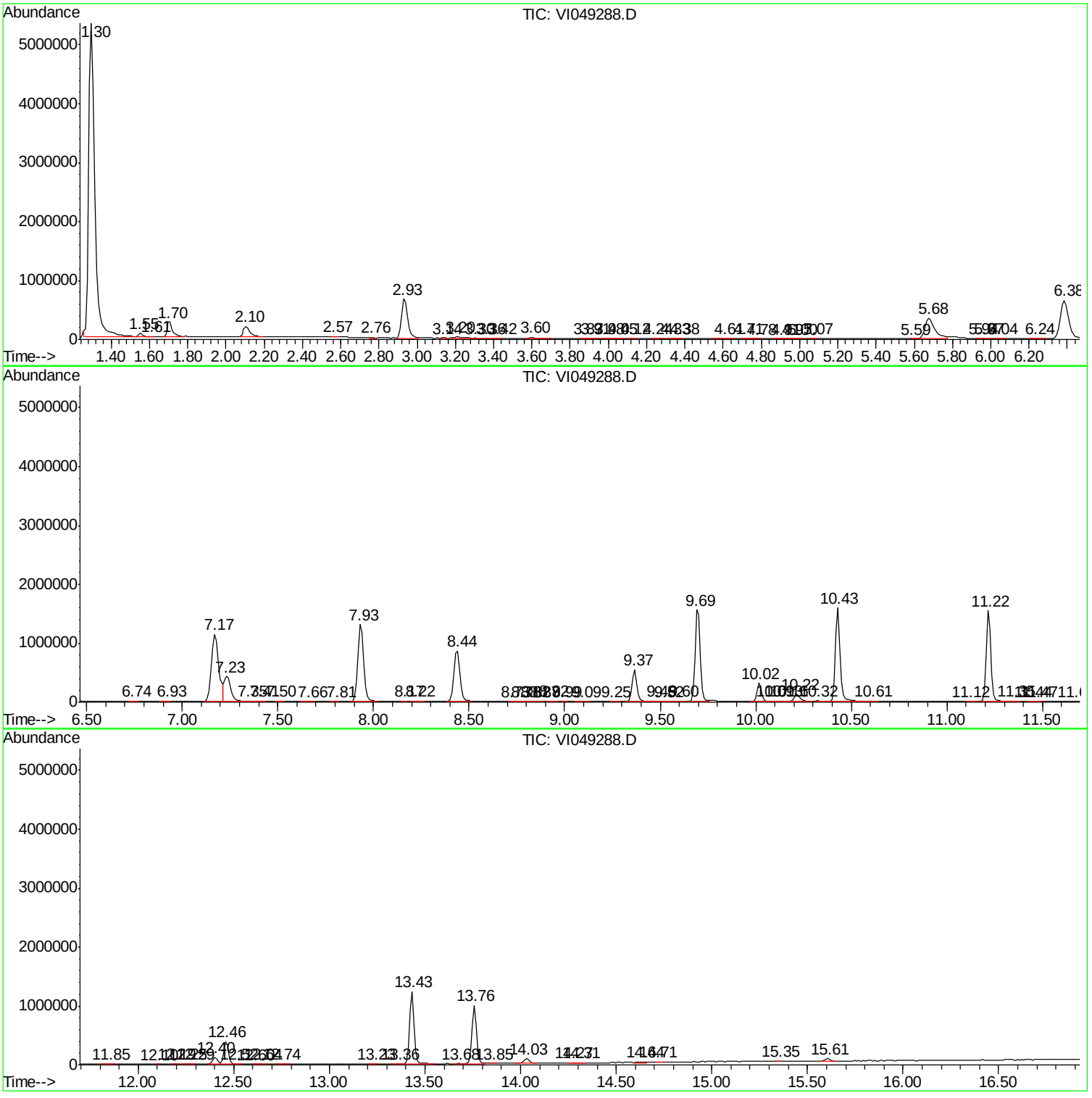
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049288.D
Acq On : 6 May 2016 18:12
Operator : FY/SY
Sample : H2834-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049288.D
Acq On : 6 May 2016 18:12
Operator : FY/SY
Sample : H2834-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049288.D
Acq On : 6 May 2016 18:12
Operator : FY/SY
Sample : H2834-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-02MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049253.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	4.6	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.070	J
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.31	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.1	
71-55-6	1,1,1-Trichloroethane	0.70	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	5.2	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	5.7	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-02MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049253.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.25	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.2	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	49	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	5.0	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-02MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049253.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

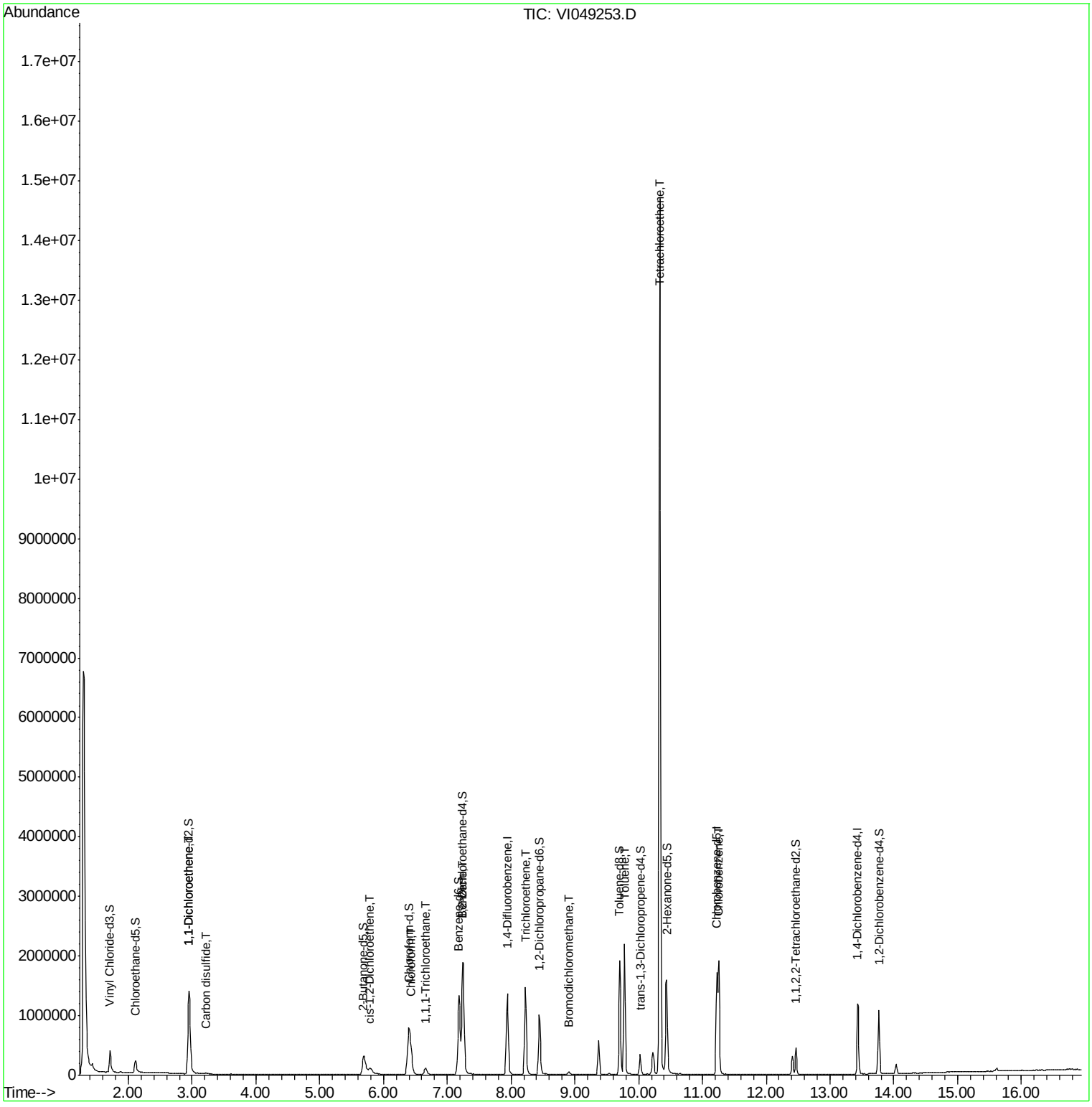
CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

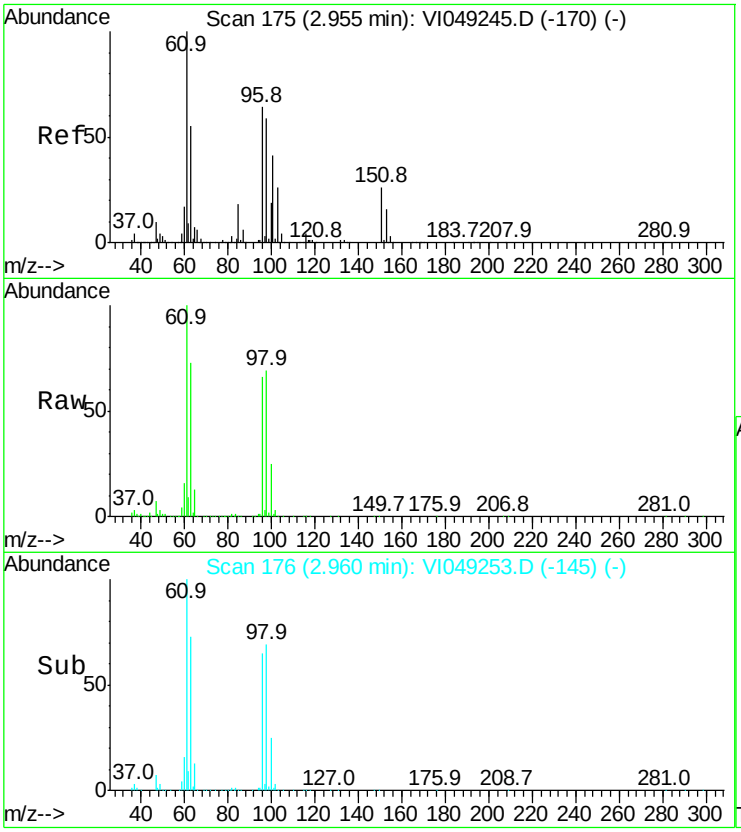
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049253.D
Acq On : 5 May 2016 15:13
Operator : FY/SY
Sample : H2834-02MS
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002MS

Quant Time: May 06 05:09:40 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration



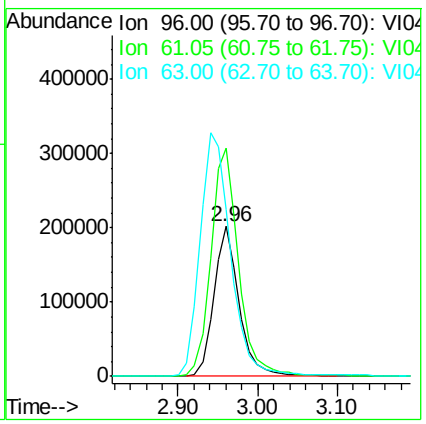


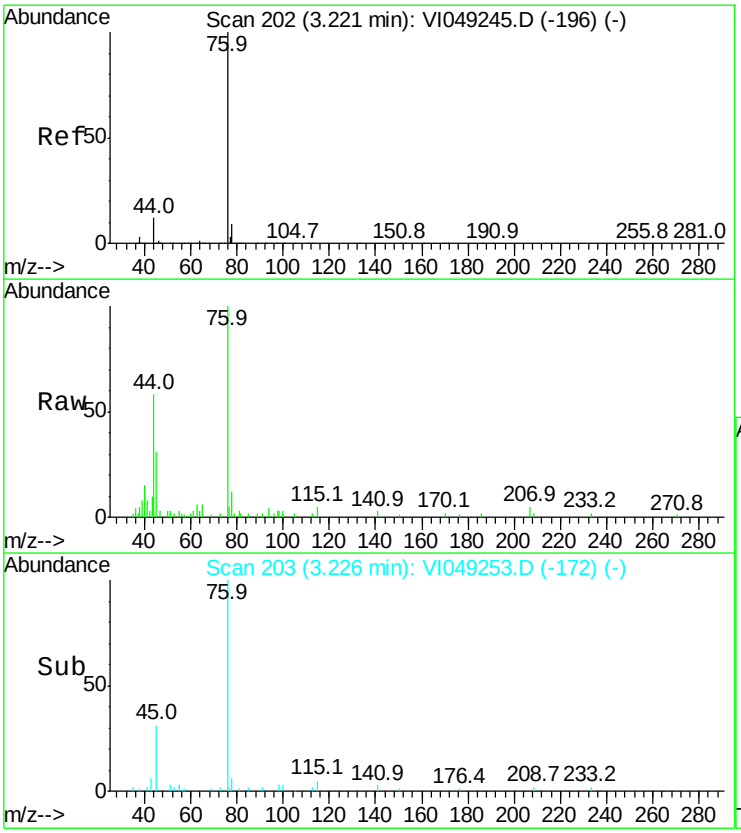
#12
1,1-Dichloroethene
Concen: 4.62 ug/L
RT: 2.96 min Scan# 176
Delta R.T. 0.00 min
Lab File: VI049253.D
Acq: 5 May 2016 15:13

Instrument : MSVOA_I
ClientSampleId : H4002MS

Tgt Ion: 96 Resp: 446489

Ion	Ratio	Lower	Upper
96	100		
61	152.4	104.6	194.2
63	111.0	73.0	135.6

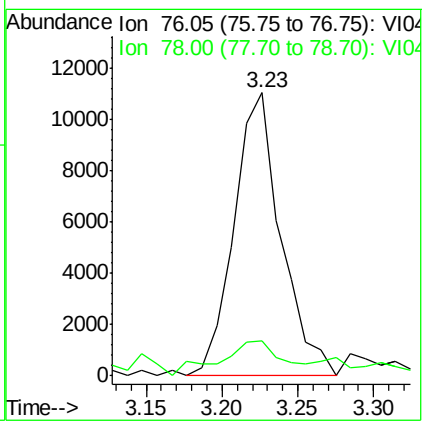


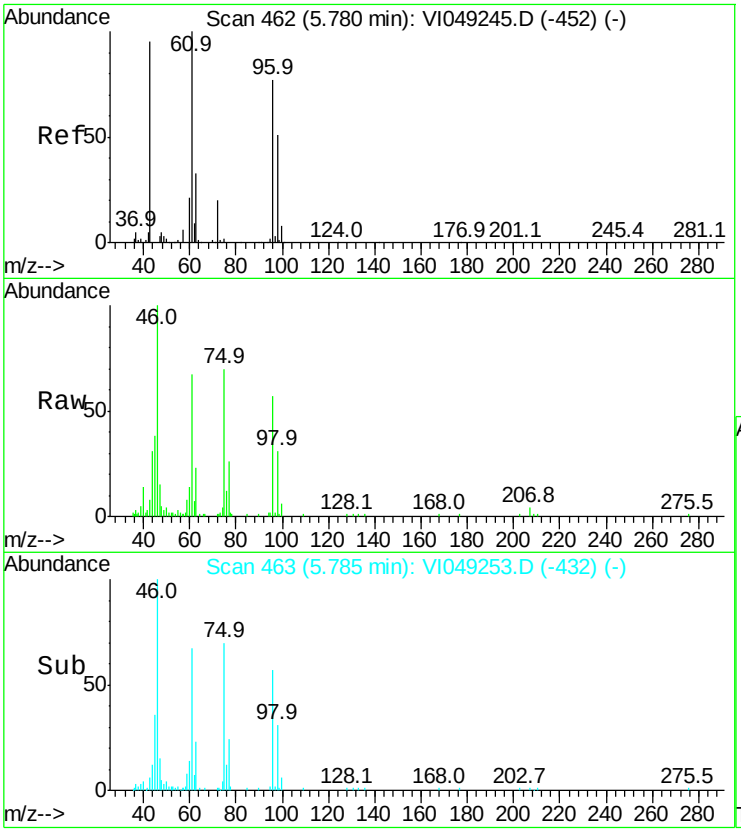


#14
Carbon disulfide
Concen: 0.07 ug/L
RT: 3.23 min Scan# 203
Delta R.T. 0.00 min
Lab File: VI049253.D
Acq: 5 May 2016 15:13

Tgt Ion: 76 Resp: 23776

Ion	Ratio	Lower	Upper
76	100		
78	12.3	7.4	11.0#



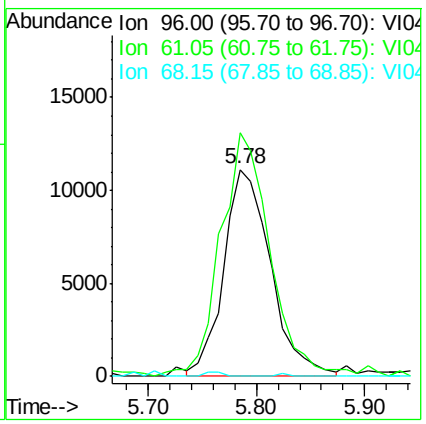


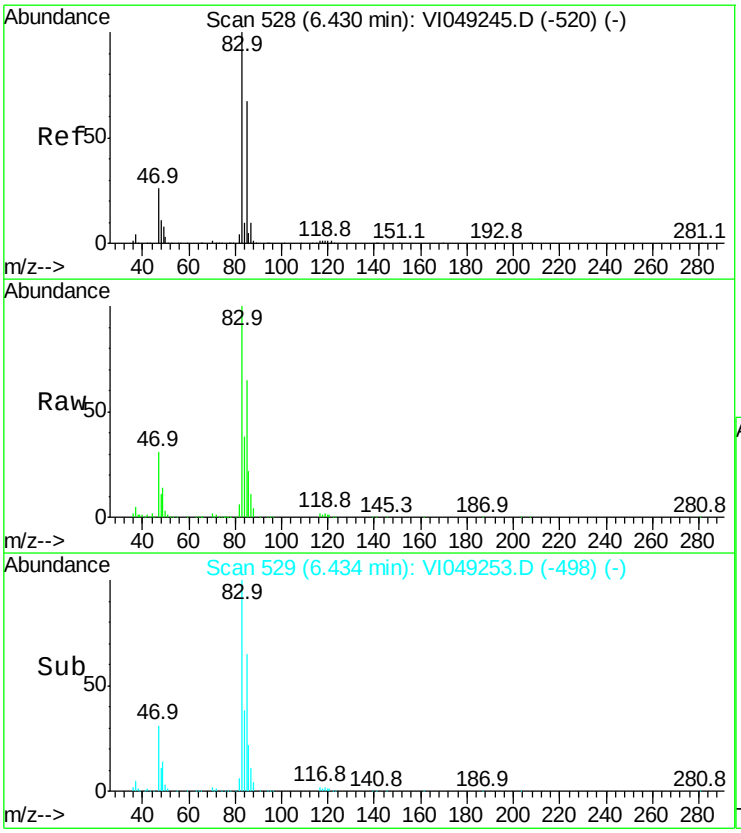
#22
cis-1,2-Dichloroethene
Concen: 0.31 ug/L
RT: 5.78 min Scan# 463
Delta R.T. 0.00 min
Lab File: VI049253.D
Acq: 5 May 2016 15:13

Instrument : MSVOA_I
ClientSampleId : H4002MS

Tgt Ion: 96 Resp: 33518

Ion	Ratio	Lower	Upper
96	100		
61	117.6	82.1	152.5
68	0.0	0.0	0.0

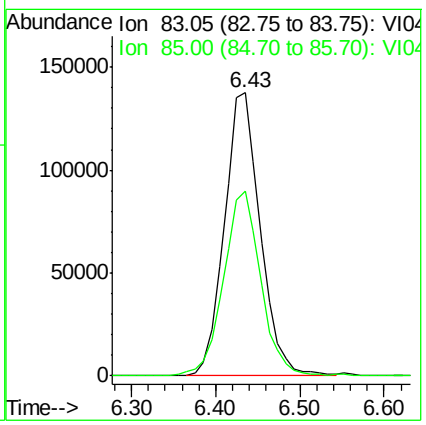


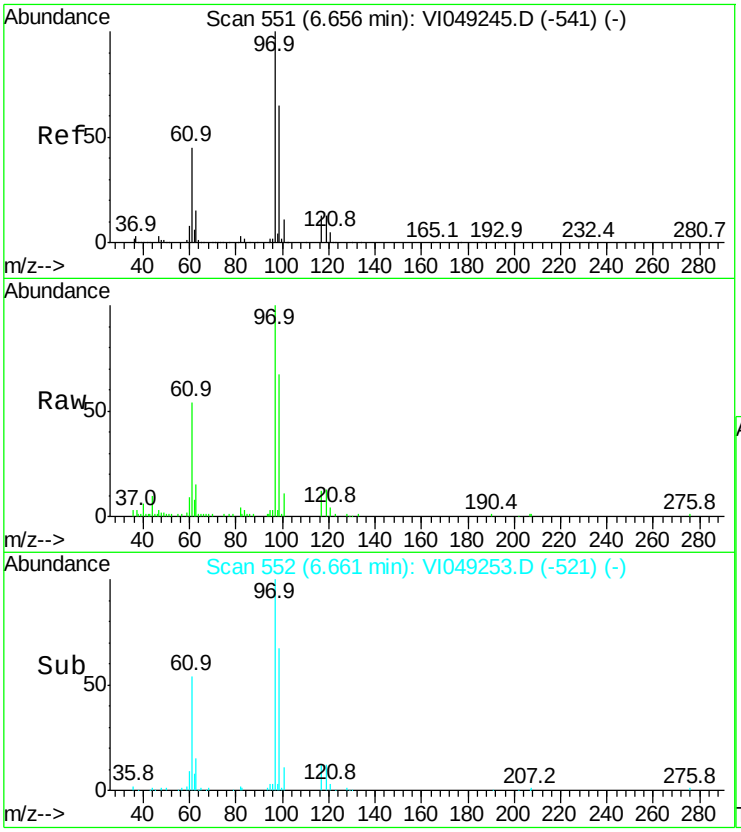


#25
Chloroform
Concen: 2.11 ug/L
RT: 6.43 min Scan# 529
Delta R.T. 0.00 min
Lab File: VI049253.D
Acq: 5 May 2016 15:13

Tgt Ion: 83 Resp: 407141

Ion	Ratio	Lower	Upper
83	100		
85	65.4	47.3	87.8



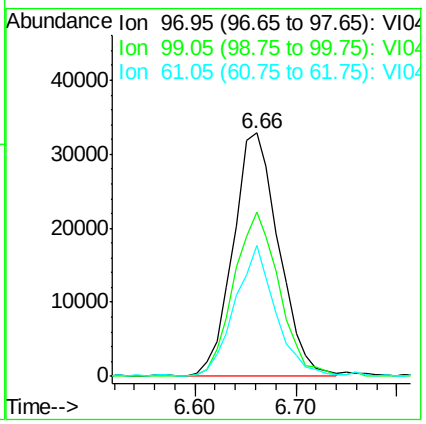


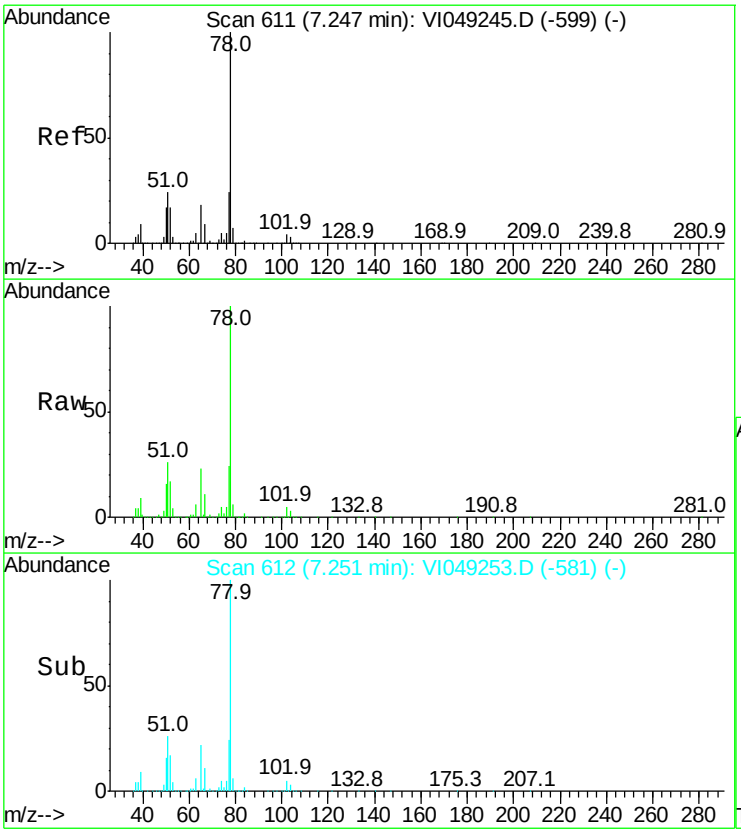
#29
1,1,1-Trichloroethane
Concen: 0.70 ug/L
RT: 6.66 min Scan# 552
Delta R.T. 0.00 min
Lab File: VI049253.D
Acq: 5 May 2016 15:13

Instrument :
MSVOA_I
ClientSampleId :
H4002MS

Tgt Ion: 97 Resp: 103559

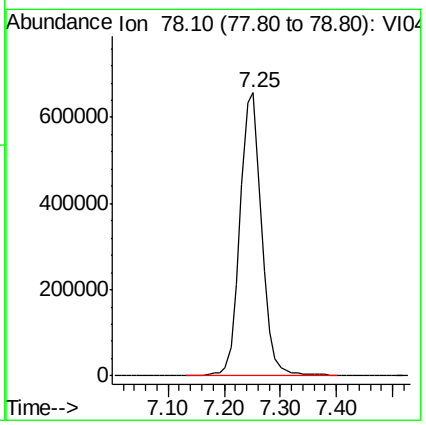
Ion	Ratio	Lower	Upper
97	100		
99	66.8	51.1	76.7
61	48.0	33.3	49.9

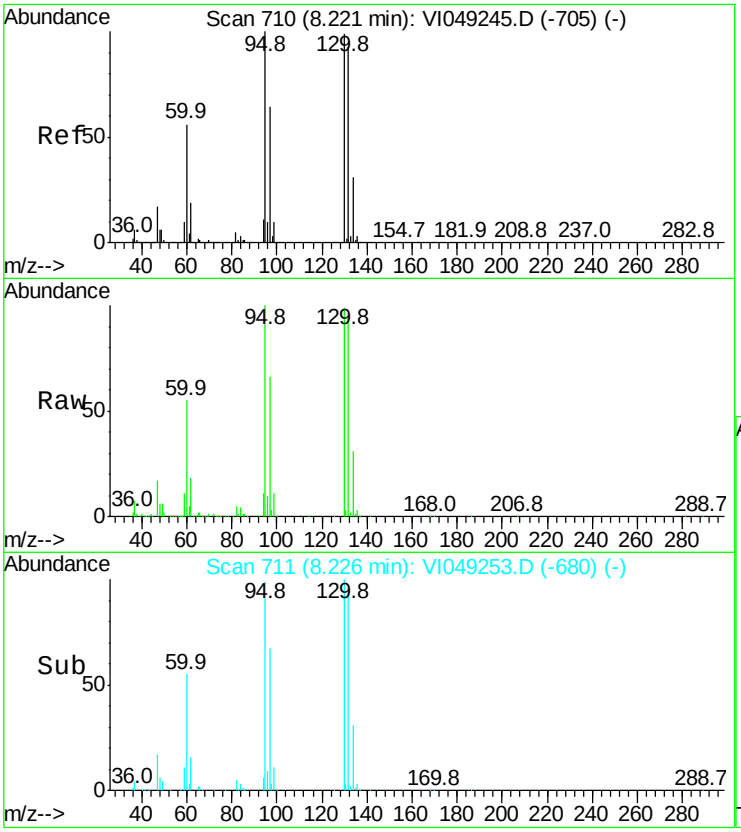




#33
Benzene
Concen: 5.24 ug/L
RT: 7.25 min Scan# 612
Delta R.T. 0.00 min
Lab File: VI049253.D
Acq: 5 May 2016 15:13

Tgt Ion: 78 Resp: 1759510



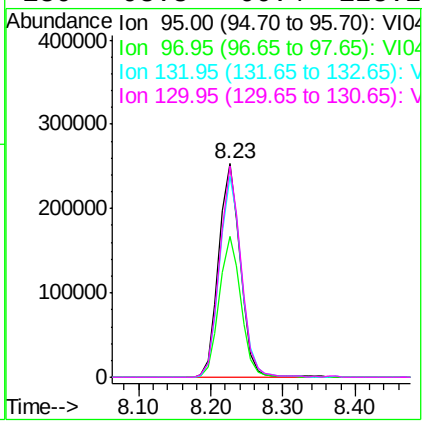


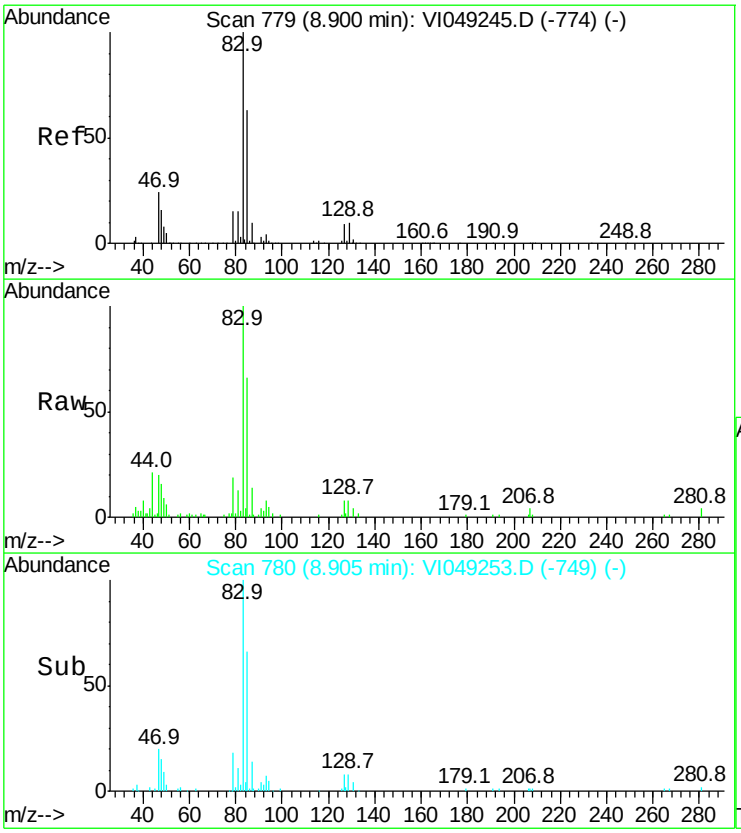
#34
Trichloroethene
Concen: 5.65 ug/L
RT: 8.23 min Scan# 711
Delta R.T. 0.00 min
Lab File: VI049253.D
Acq: 5 May 2016 15:13

Instrument : MSVOA_I
ClientSampleId : H4002MS

Tgt Ion: 95 Resp: 526287

Ion	Ratio	Lower	Upper
95	100		
97	66.0	45.8	85.2
132	94.1	63.9	118.7
130	98.8	66.4	123.2

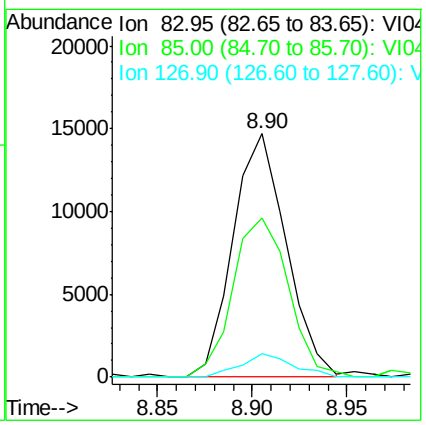


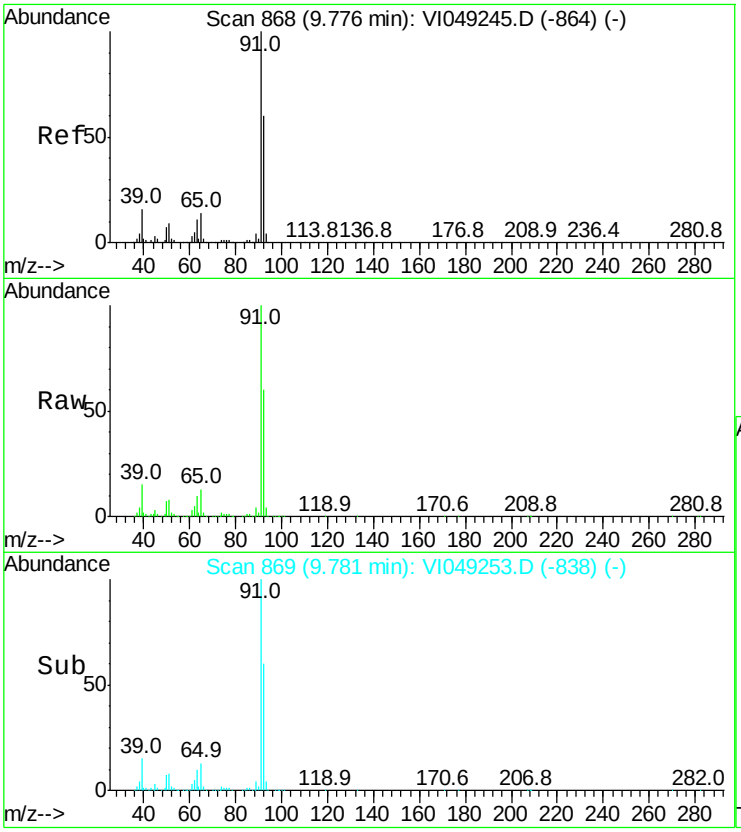


#38
Bromodichloromethane
Concen: 0.25 ug/L
RT: 8.90 min Scan# 780
Delta R.T. 0.00 min
Lab File: VI049253.D
Acq: 5 May 2016 15:13

Tgt Ion: 83 Resp: 28634

Ion	Ratio	Lower	Upper
83	100		
85	65.5	44.7	83.1
127	9.8	6.6	9.8



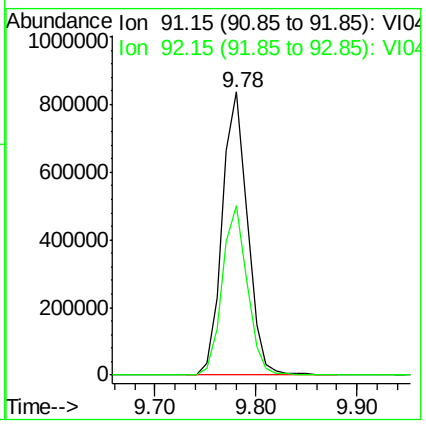


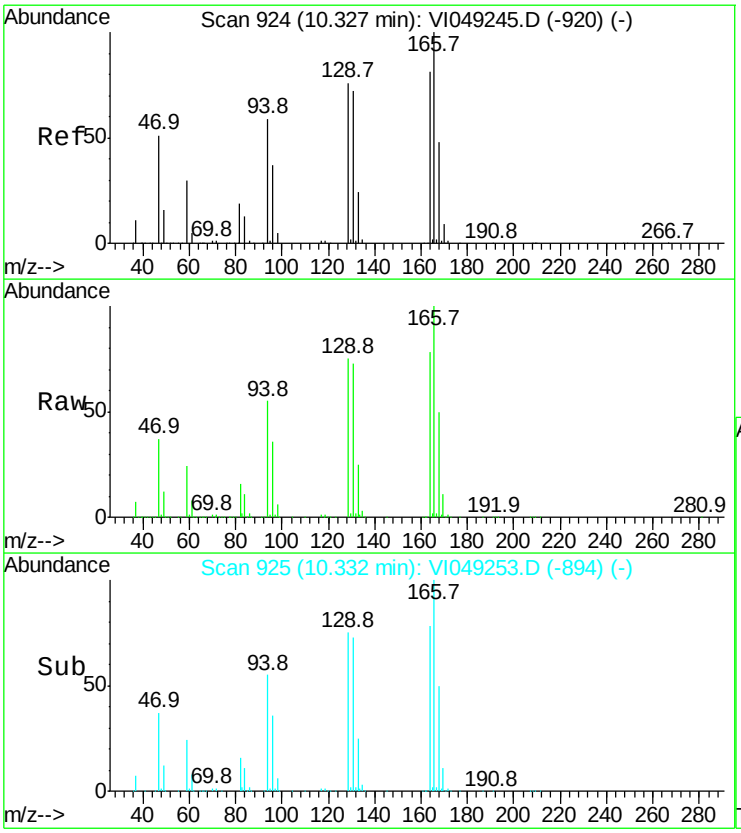
#42
Toluene
Concen: 5.15 ug/L
RT: 9.78 min Scan# 869
Delta R.T. 0.00 min
Lab File: VI049253.D
Acq: 5 May 2016 15:13

Instrument : MSVOA_I
ClientSampleId : H4002MS

Tgt Ion: 91 Resp: 1458933

Ion	Ratio	Lower	Upper
91	100		
92	59.7	41.2	76.4

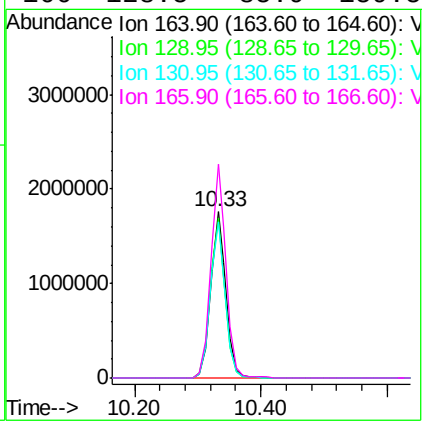


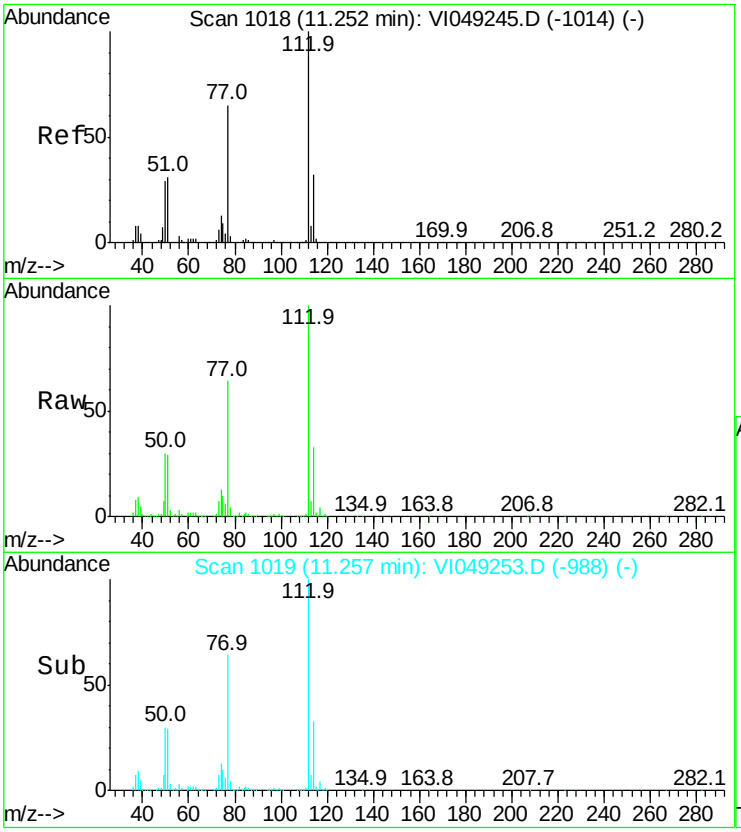


#47
Tetrachloroethene
Concen: 48.83 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.00 min
Lab File: VI049253.D
Acq: 5 May 2016 15:13

Tgt Ion:164 Resp: 2988131

Ion	Ratio	Lower	Upper
164	100		
129	96.5	62.1	115.3
131	93.8	60.6	112.6
166	128.5	85.9	159.5



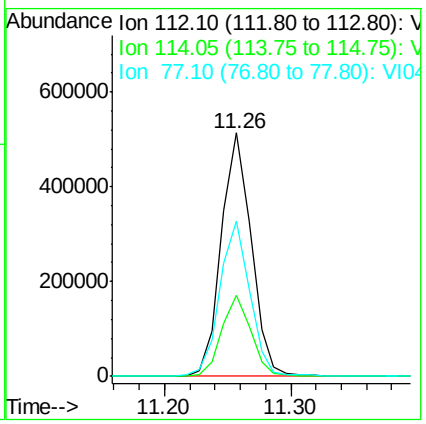


#51
Chlorobenzene
Concen: 4.96 ug/L
RT: 11.26 min Scan# 1019
Delta R.T. 0.00 min
Lab File: VI049253.D
Acq: 5 May 2016 15:13

Instrument :
MSVOA_I
ClientSampleId :
H4002MS

Tgt Ion:112 Resp: 842694

Ion	Ratio	Lower	Upper
112	100		
114	33.2	23.2	43.2
77	63.6	50.3	75.5



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049253.D
Acq On : 5 May 2016 15:13
Operator : FY/SY
Sample : H2834-02MS
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002MS

Quant Time: May 06 05:09:40 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1197205	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	784211	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	283482	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	368855	5.00	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 100.00%			
7) Chloroethane-d5	2.11	69	206439	5.06	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.20%			
11) 1,1-Dichloroethene-d2	2.94	63	873027	5.03	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 100.60%			
20) 2-Butanone-d5	5.69	46	806941	50.57	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 101.14%			
24) Chloroform-d	6.40	84	918731	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.00%			
26) 1,2-Dichloroethane-d4	7.24	65	412944	5.38	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.60%			
32) Benzene-d6	7.18	84	1645502	5.39	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 107.80%			
36) 1,2-Dichloropropane-d6	8.44	67	456928	5.32	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 106.40%			
41) Toluene-d8	9.70	98	1163062	5.16	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.20%			
43) trans-1,3-Dichloropropene-	10.03	79	163575	4.83	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 96.60%			
46) 2-Hexanone-d5	10.44	63	560083	52.47	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 104.94%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	193548	4.95	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 99.00%			
63) 1,2-Dichlorobenzene-d4	13.77	152	253228	5.09	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.80%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	2.96	96	446489	4.62	ug/L	96
14) Carbon disulfide	3.23	76	23776	0.07	ug/L #	91
22) cis-1,2-Dichloroethene	5.78	96	33518	0.31	ug/L	100
25) Chloroform	6.43	83	407141	2.11	ug/L	97
29) 1,1,1-Trichloroethane	6.66	97	103559	0.70	ug/L	94
33) Benzene	7.25	78	1759510	5.24	ug/L	100
34) Trichloroethene	8.23	95	526287	5.65	ug/L	97
38) Bromodichloromethane	8.90	83	28634	0.25	ug/L	98
42) Toluene	9.78	91	1458933	5.15	ug/L	99
47) Tetrachloroethene	10.33	164	2988131	48.83	ug/L	93
51) Chlorobenzene	11.26	112	842694	4.96	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-03MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049254.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	4.5	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.28	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.9	
71-55-6	1,1,1-Trichloroethane	0.69	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	5.0	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	5.4	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-03MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049254.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.23	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	45	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	4.9	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2834-03MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049254.D
% Solids :
Date Received : 05/03/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

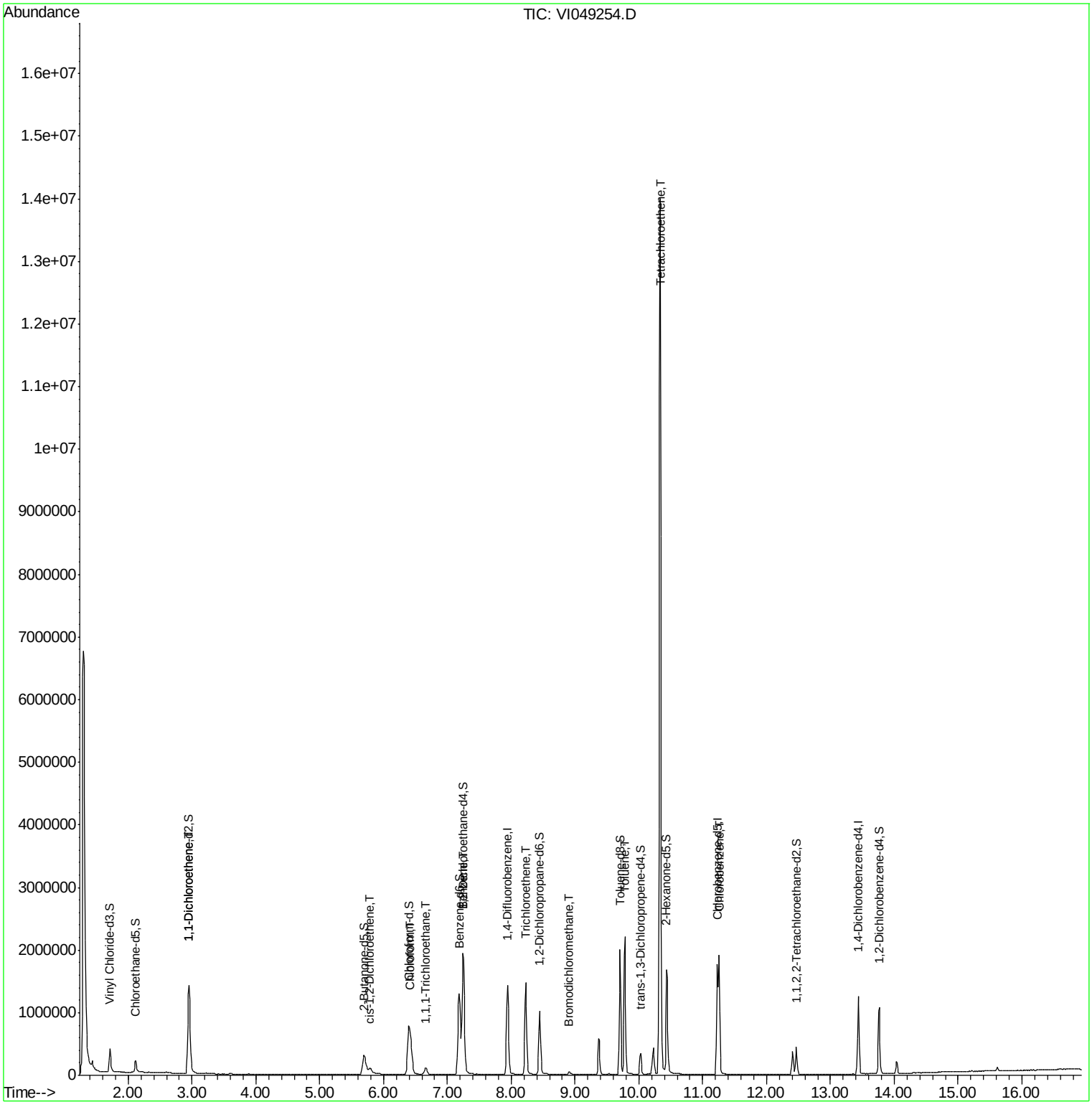
CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

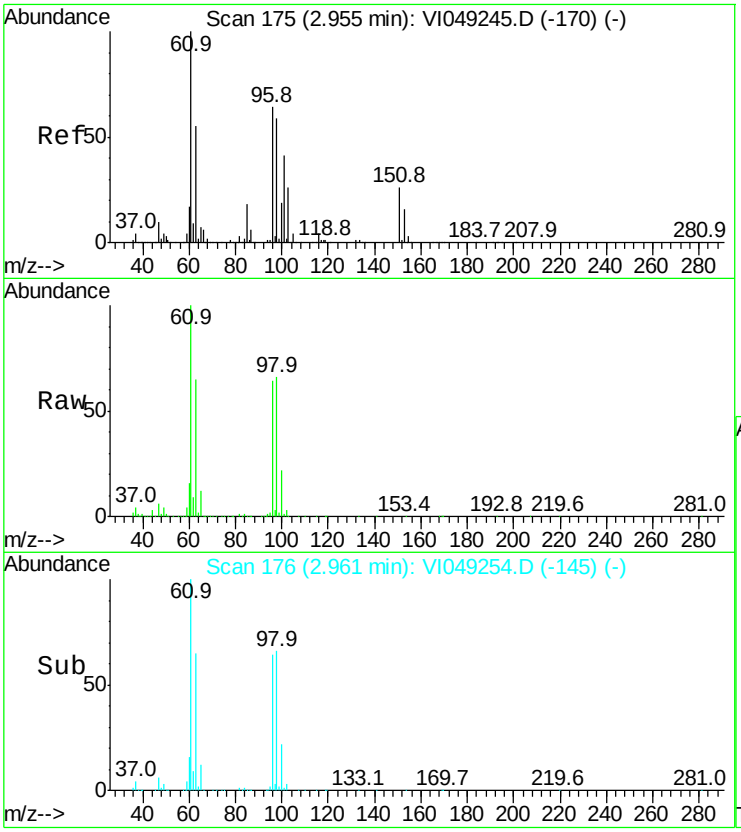
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049254.D
Acq On : 5 May 2016 15:44
Operator : FY/SY
Sample : H2834-03MSD
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002MSD

Quant Time: May 06 05:12:14 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration



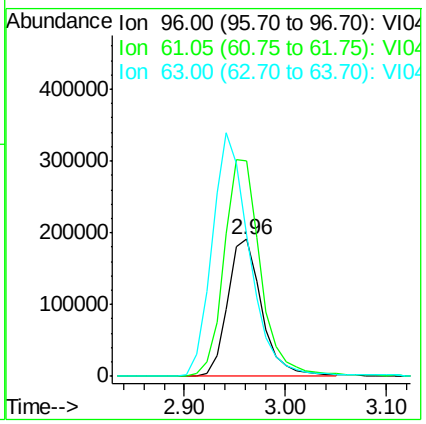


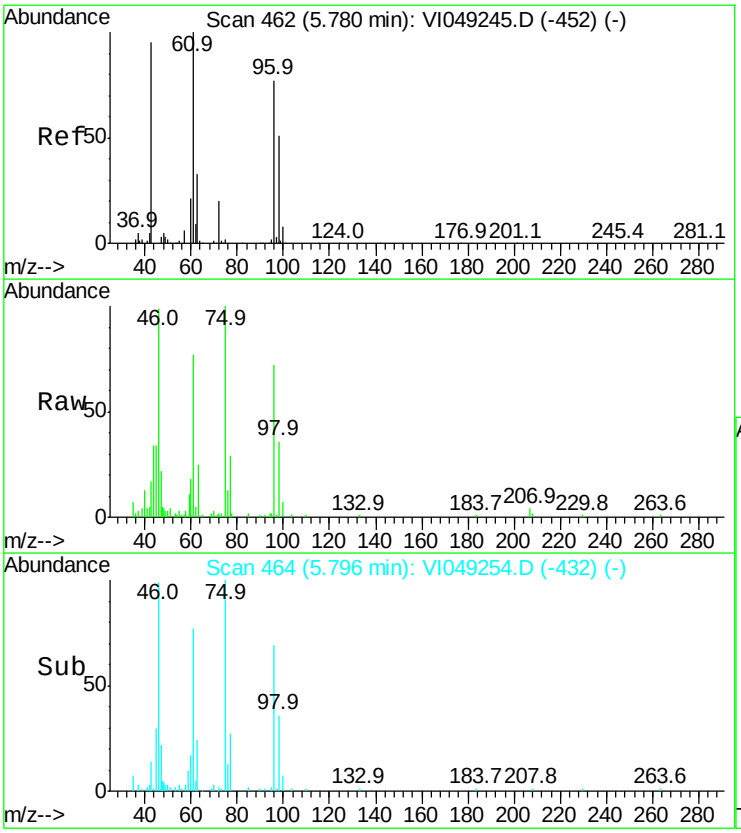
#12
1,1-Dichloroethene
Concen: 4.48 ug/L
RT: 2.96 min Scan# 176
Delta R.T. 0.01 min
Lab File: VI049254.D
Acq: 5 May 2016 15:44

Instrument : MSVOA_I
ClientSampleId : H4002MSD

Tgt Ion: 96 Resp: 447128

Ion	Ratio	Lower	Upper
96	100		
61	157.3	104.6	194.2
63	102.7	73.0	135.6

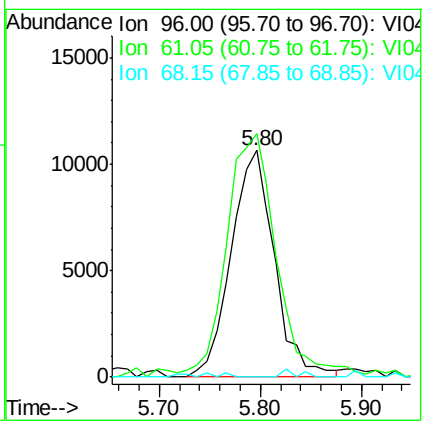


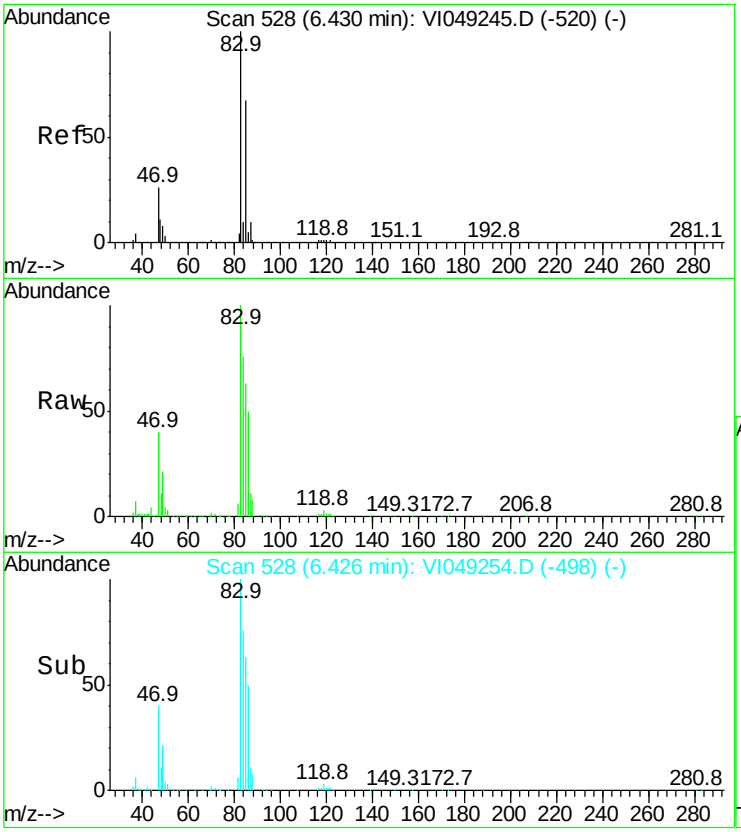


#22
cis-1,2-Dichloroethene
Concen: 0.28 ug/L
RT: 5.80 min Scan# 464
Delta R.T. 0.02 min
Lab File: VI049254.D
Acq: 5 May 2016 15:44

Tgt Ion: 96 Resp: 31828

Ion	Ratio	Lower	Upper
96	100		
61	107.5	82.1	152.5
68	0.0	0.0	0.0



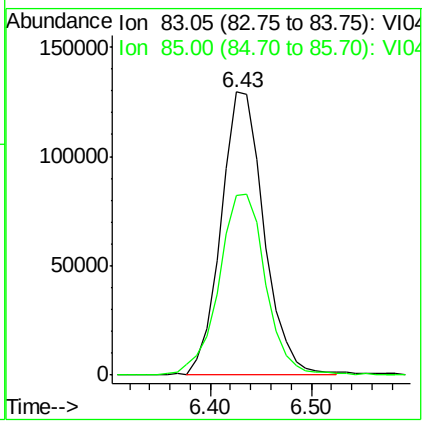


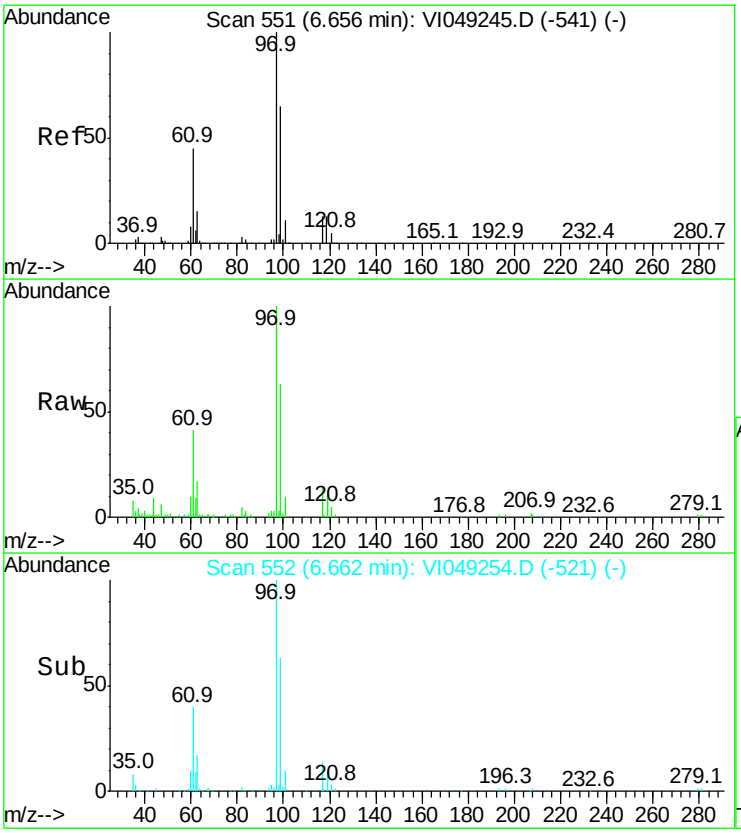
#25
Chloroform
Concen: 1.92 ug/L
RT: 6.43 min Scan# 528
Delta R.T. -0.00 min
Lab File: VI049254.D
Acq: 5 May 2016 15:44

Instrument :
MSVOA_I
ClientSampleId :
H4002MSD

Tgt Ion: 83 Resp: 382839

Ion	Ratio	Lower	Upper
83	100		
85	63.3	47.3	87.8

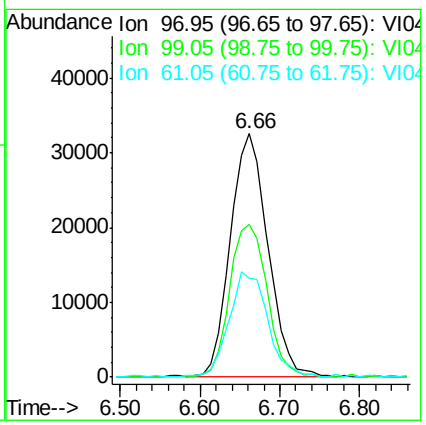


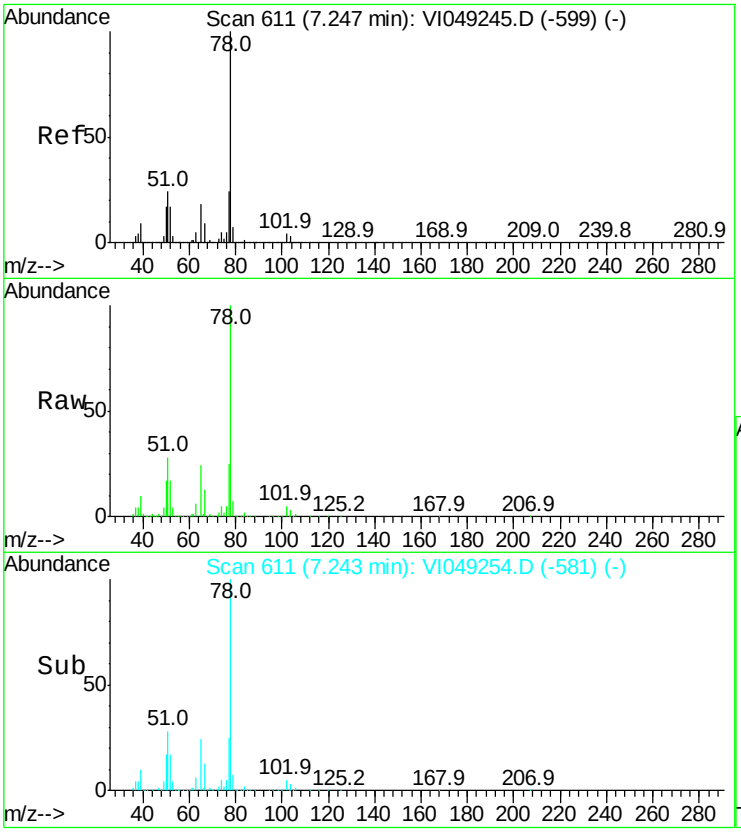


#29
1,1,1-Trichloroethane
Concen: 0.69 ug/L
RT: 6.66 min Scan# 552
Delta R.T. 0.01 min
Lab File: VI049254.D
Acq: 5 May 2016 15:44

Tgt Ion: 97 Resp: 106777

Ion	Ratio	Lower	Upper
97	100		
99	62.3	51.1	76.7
61	44.1	33.3	49.9

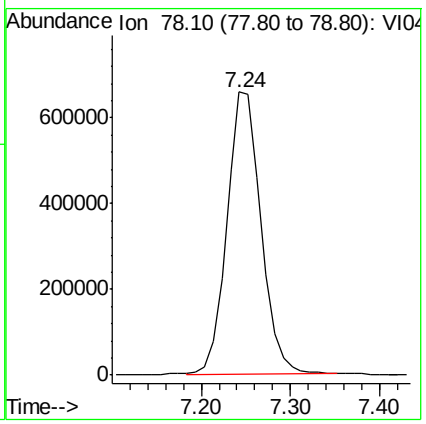


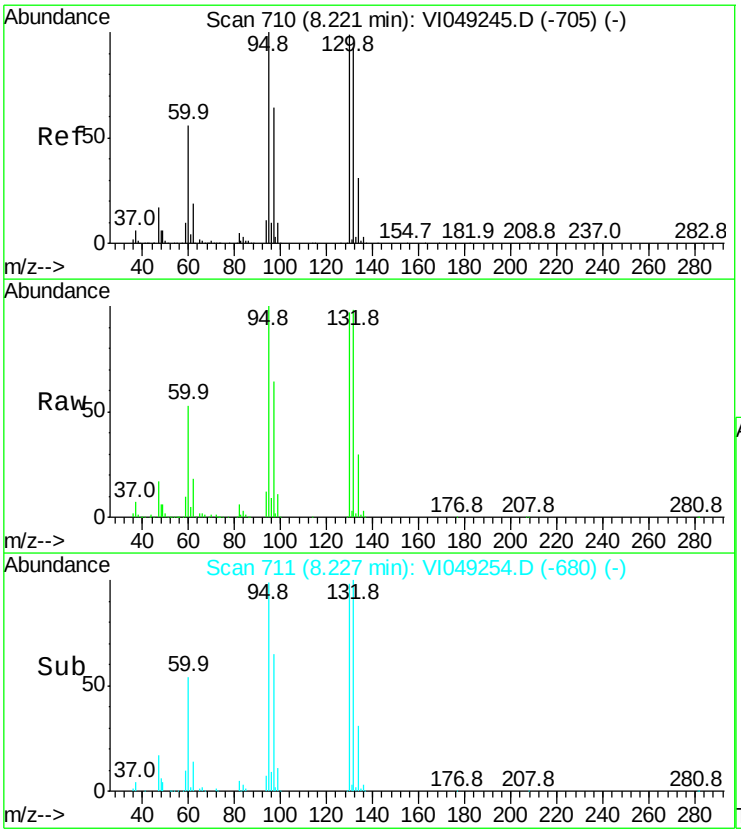


#33
Benzene
Concen: 5.00 ug/L
RT: 7.24 min Scan# 611
Delta R.T. -0.00 min
Lab File: VI049254.D
Acq: 5 May 2016 15:44

Instrument :
MSVOA_I
ClientSampleId :
H4002MSD

Tgt Ion: 78 Resp: 1741729

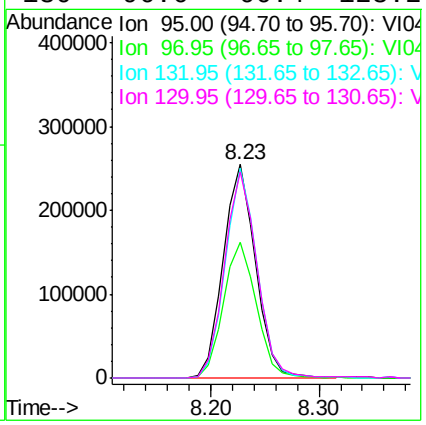


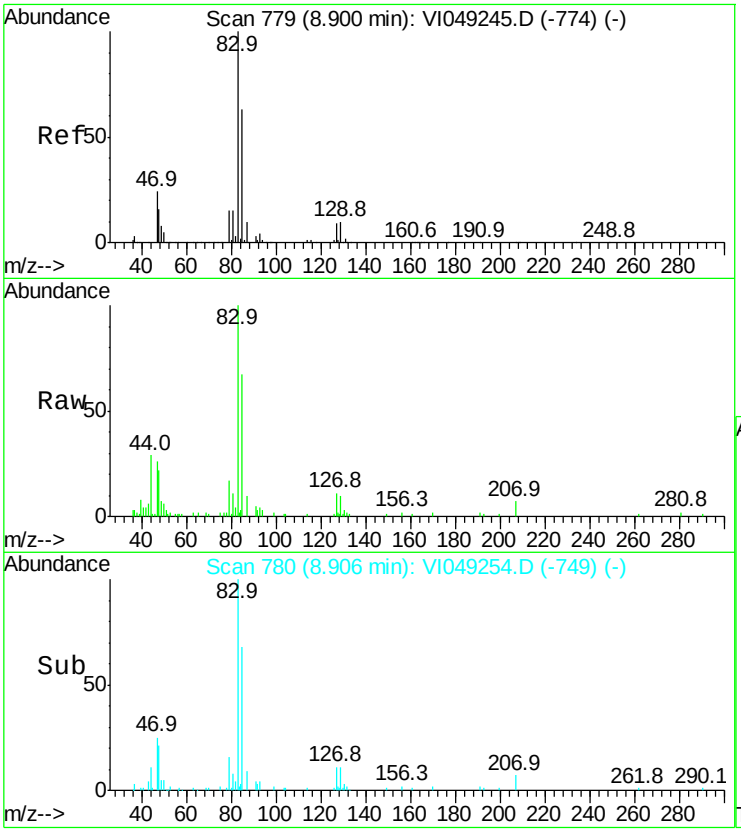


#34
Trichloroethene
Concen: 5.44 ug/L
RT: 8.23 min Scan# 711
Delta R.T. 0.01 min
Lab File: VI049254.D
Acq: 5 May 2016 15:44

Tgt Ion: 95 Resp: 526160

Ion	Ratio	Lower	Upper
95	100		
97	63.6	45.8	85.2
132	98.3	63.9	118.7
130	96.6	66.4	123.2



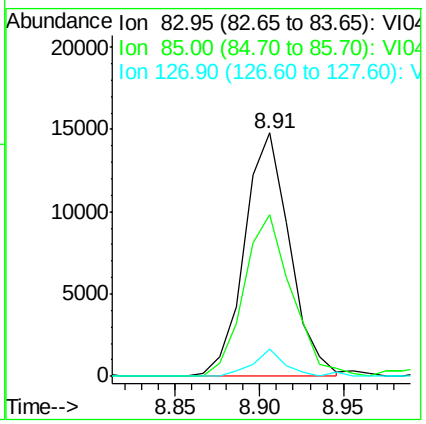


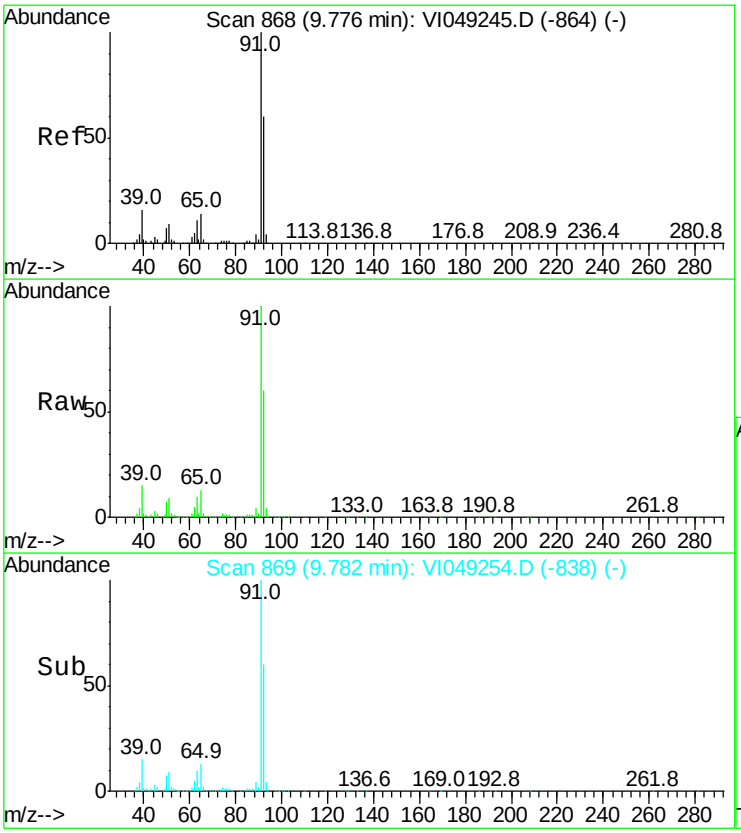
#38
Bromodichloromethane
Concen: 0.23 ug/L
RT: 8.91 min Scan# 780
Delta R.T. 0.01 min
Lab File: VI049254.D
Acq: 5 May 2016 15:44

Instrument : MSVOA_I
ClientSampleId : H4002MSD

Tgt Ion: 83 Resp: 27568

Ion	Ratio	Lower	Upper
83	100		
85	66.6	44.7	83.1
127	10.9	6.6	9.8#

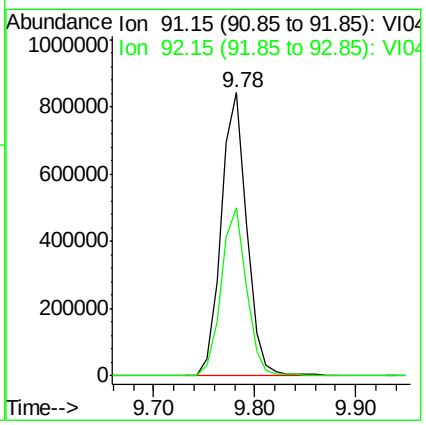


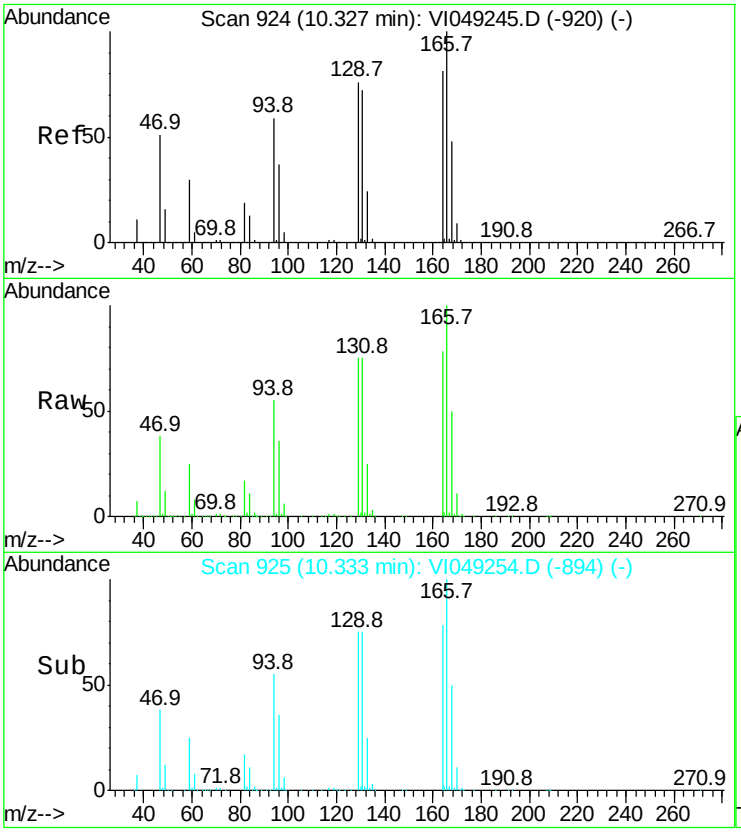


#42
Toluene
Concen: 5.02 ug/L
RT: 9.78 min Scan# 869
Delta R.T. 0.01 min
Lab File: VI049254.D
Acq: 5 May 2016 15:44

Tgt Ion: 91 Resp: 1477204

Ion	Ratio	Lower	Upper
91	100		
92	59.6	41.2	76.4



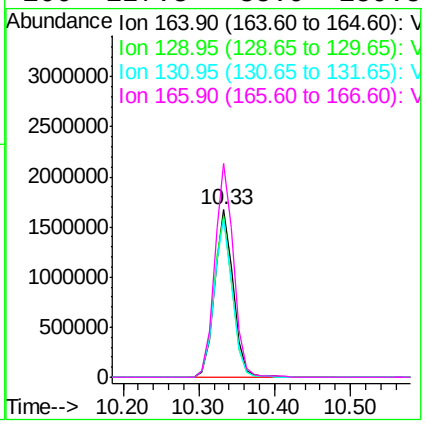


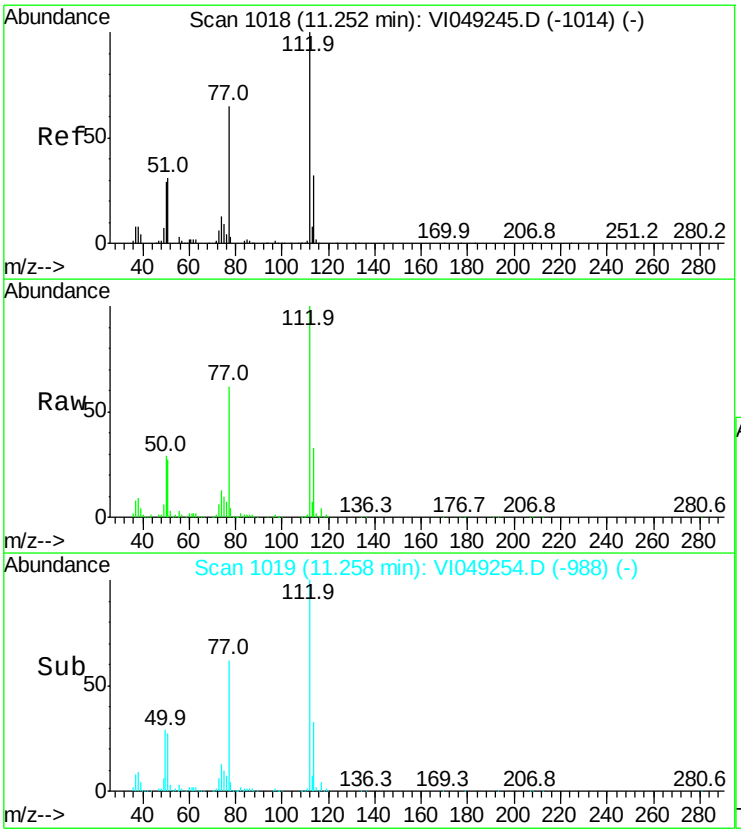
#47
Tetrachloroethene
Concen: 45.40 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.01 min
Lab File: VI049254.D
Acq: 5 May 2016 15:44

Instrument : MSVOA_I
ClientSampleId : H4002MSD

Tgt Ion:164 Resp: 2884877

Ion	Ratio	Lower	Upper
164	100		
129	96.3	62.1	115.3
131	95.2	60.6	112.6
166	127.8	85.9	159.5

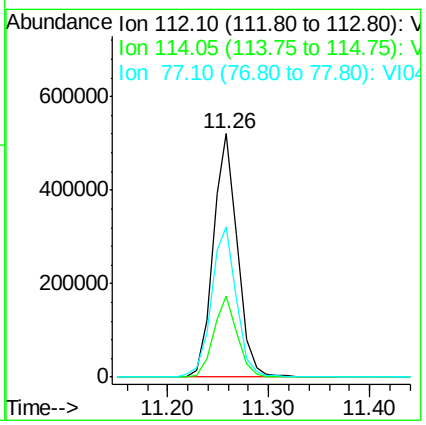




#51
Chlorobenzene
Concen: 4.91 ug/L
RT: 11.26 min Scan# 1019
Delta R.T. 0.01 min
Lab File: VI049254.D
Acq: 5 May 2016 15:44

Tgt Ion:112 Resp: 866097

Ion	Ratio	Lower	Upper
112	100		
114	33.3	23.2	43.2
77	61.8	50.3	75.5



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049254.D
Acq On : 5 May 2016 15:44
Operator : FY/SY
Sample : H2834-03MSD
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4002MSD

Quant Time: May 06 05:12:14 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1236775	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.23	117	814270	5.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	293377	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	1.71	65	368796	4.84	ug/L		0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 96.80%				
7) Chloroethane-d5	2.11	69	198962	4.72	ug/L		0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 94.40%				
11) 1,1-Dichloroethene-d2	2.94	63	869606	4.85	ug/L		0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 97.00%				
20) 2-Butanone-d5	5.69	46	835235	50.67	ug/L		0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 101.34%				
24) Chloroform-d	6.40	84	925779	4.78	ug/L		0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.60%				
26) 1,2-Dichloroethane-d4	7.24	65	408147	5.15	ug/L		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.00%				
32) Benzene-d6	7.18	84	1643744	5.18	ug/L		0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.60%				
36) 1,2-Dichloropropane-d6	8.44	67	464007	5.20	ug/L		0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.00%				
41) Toluene-d8	9.70	98	1160924	4.96	ug/L		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.20%				
43) trans-1,3-Dichloropropene-	10.03	79	163741	4.66	ug/L		0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 93.20%				
46) 2-Hexanone-d5	10.43	63	573804	51.77	ug/L		0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 103.54%				
57) 1,1,2,2-Tetrachloroethane-	12.47	84	189225	4.66	ug/L		0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 93.20%				
63) 1,2-Dichlorobenzene-d4	13.77	152	250585	4.87	ug/L		0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 97.40%				
Target Compounds							Qvalue
12) 1,1-Dichloroethene	2.96	96	447128	4.48	ug/L		96
22) cis-1,2-Dichloroethene	5.80	96	31828	0.28	ug/L		91
25) Chloroform	6.43	83	382839	1.92	ug/L		95
29) 1,1,1-Trichloroethane	6.66	97	106777	0.69	ug/L		97
33) Benzene	7.24	78	1741729	5.00	ug/L		100
34) Trichloroethene	8.23	95	526160	5.44	ug/L		96
38) Bromodichloromethane	8.91	83	27568	0.23	ug/L	#	96
42) Toluene	9.78	91	1477204	5.02	ug/L		99
47) Tetrachloroethene	10.33	164	2884877	45.40	ug/L		93
51) Chlorobenzene	11.26	112	866097	4.91	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4002

Analytical Method : VOA Level : LOW

Matrix : Soil

EPA Sample No .	DMC1 (VCL)	DMC2 (CLA)	DMC3 (DCE)	DMC4 (BUT)	DMC5 (CLF)	DMC6 (DCA)	DMC7 (BEN)	DMC8 (DPA)
VBLK98	74	86	63	99	92	102	84	87
H4061	73	89	66	67	92	99	86	92
VBLK78	105	106	73	105	95	101	100	101
H4076	98	99	65	78	85	92	98	101
H4061MS	111	115	103	87	101	108	113	119
H4061MSD	118	122	108	85	104	109	116	119
VBLK79	111	111	78	97	99	105	103	102
VHBLK02	114	117	79	106	103	110	106	107

	QC LIMITS
DMC1 (VCL) = Vinyl Chloride-d3	(30-150)
DMC2 (CLA) = Chloroethane-d5	(30-150)
DMC3 (DCE) = 1,1-Dichloroethene-d2	(45-110)
DMC4 (BUT) = 2-Butanone-d5	(20-135)
DMC5 (CLF) = Chloroform-d	(40-150)
DMC6 (DCA) = 1,2-Dichloroethane-d4	(70-130)
DMC7 (BEN) = Benzene-d6	(20-135)
DMC8 (DPA) = 1,2-Dichloropropane-d6	(70-120)

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4002
Analytical Method : VOA Level : LOW
Matrix : Soil

EPA Sample No .	DMC9 (TOL)	DMC10 (TDP)	DMC11 (HEX)	DMC12 (TCA)	DMC13 (DCZ)	DMC14	DMC15	DMC16	TOT OUT
VBLK98	83	80	98	90	89				0
H4061	84	75	73	80	80				0
VBLK78	96	99	112	95	97				0
H4076	90	92	96	81	79				0
H4061MS	105	104	102	97	96				0
H4061MSD	109	102	102	98	102				0
VBLK79	103	95	106	95	103				0
VHBLK02	104	101	113	101	105				0

	QC LIMITS
DMC9 (TOL) = Toluene-d8	(30-130)
DMC10 (TDP) = trans-1,3-Dichloropropene-d4	(30-135)
DMC11 (HEX) = 2-Hexanone-d5	(20-135)
DMC12 (TCA) = 1,1,2,2-Tetrachloroethane-d2	(45-120)
DMC13 (DCZ) = 1,2-Dichlorobenzene-d4	(75-120)

FORM 3A-OR
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No. : 46114 MA No .: SDG No. : H4002

Analytical Method : VOA Level : LOW

Matrix Soil

EPA Sample No.(Matrix Spike/Metrix Spike Duplicate): H4061

Instrument ID : MSVOA_T GC Column RXI-624 ID : 0.25 (mm)

Concentration Units (ug/L,mg/L ug/kg): ug/Kg

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %R #	QC Limits %R
1,1-Dichloroethene	84.5	0	79	93	59 - 172
Benzene	84.5	0	91	108	66 - 142
Trichloroethene	84.5	0	87	103	62 - 137
Toluene	84.5	0	85	101	59 - 139
Chlorobenzene	84.5	0	78	92	60 - 133

ANALYTE	SPIKE AADDED	MSD CONCENTRATION	MSD %R #	RPD	QC Limits	
					RPD	%R
1,1-Dichloroethene	110	100	91	3	22	59 - 172
Benzene	110	110	100	7	21	66 - 142
Trichloroethene	110	110	100	3	24	62 - 137
Toluene	110	110	100	1	21	59 - 139
Chlorobenzene	110	98	89	4	21	60 - 133

EPA SAMPLE NO.

VBLK98

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4002
Analytical Method: VOA
Level : LOW
Matrix : Soil
Lab Sample ID: VT0505SBL02
Instrument ID: MSVOA_T
Lab File ID : VT013908.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/05/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 16:51
Heated Purge: (Y/N) Y
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4061	H2834-13	VT013913.D	05/05/2016 19:01

EPA SAMPLE NO.

VBLK78

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4002
Analytical Method: VOA
Level : LOW
Matrix : Soil
Lab Sample ID: VT0509SBL01
Instrument ID: MSVOA_T
Lab File ID : VT013988.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/09/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 11:22
Heated Purge: (Y/N) Y
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4076	H2834-16	VT013989.D	05/09/2016 11:48
H4061MS	H2834-14MS	VT013990.D	05/09/2016 12:14
H4061MSD	H2834-15MSD	VT013991.D	05/09/2016 12:41

EPA SAMPLE NO.

VBLK79

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4002
Analytical Method: VOA
Level : LOW
Matrix : Soil
Lab Sample ID: VT0509SBL02
Instrument ID: MSVOA_T
Lab File ID : VT014000.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/09/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 17:05
Heated Purge: (Y/N) Y
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
VHBLK02	H2834-17	VT014001.D	05/09/2016 17:32

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB96

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method : VOA Lab File ID : VT013543.D

Instrument ID: MSVOA_T BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 04/12/2016 Injection Time: 12:19

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	25.1	
75	30.0 - 80.0% of mass 95	56.9	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.8	
173	Less than 2.0% of mass 174	0.0(0.0)	1
174	50.0 - 120% of mass 95	73.4	
175	5.0 - 9.0% of mass 174	6(8.1)	1
176	95.0 - 101% of mass 174	70.9(96.6)	1
177	5.0 - 9.0% of mass 176	4.7(6.6)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD2.585	VSTD2.585	VT013544.D	04/12/2016	12:45
VSTD00586	VSTD00586	VT013545.D	04/12/2016	13:11
VSTD02587	VSTD02587	VT013546.D	04/12/2016	13:37
VSTD05088	VSTD05088	VT013547.D	04/12/2016	14:03
VSTD10089	VSTD10089	VT013548.D	04/12/2016	14:29

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB87

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method : VOA Lab File ID : VT013896.D

Instrument ID: MSVOA_T BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/05/2016 Injection Time: 09:36

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	26.7	
75	30.0 - 80.0% of mass 95	59.6	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.9	
173	Less than 2.0% of mass 174	0.0(0.0)	1
174	50.0 - 120% of mass 95	71.1	
175	5.0 - 9.0% of mass 174	6(8.5)	1
176	95.0 - 101% of mass 174	68.5(96.3)	1
177	5.0 - 9.0% of mass 176	4.8(7)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD02579	VSTDCCC025	VT013897.D	05/05/2016	10:40
VSTD02580	VSTDCCC025	VT013907.D	05/05/2016	15:50
VBLK98	VT0505SBL02	VT013908.D	05/05/2016	16:51
H4061	H2834-13	VT013913.D	05/05/2016	19:01
VSTD02581	VSTDCCC025EC	VT013929.D	05/06/2016	02:23

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB88

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method : VOA Lab File ID : VT013930.D

Instrument ID: MSVOA_T BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/06/2016 Injection Time: 09:01

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	27.4	
75	30.0 - 80.0% of mass 95	60.6	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.4	
173	Less than 2.0% of mass 174	0.0(0.0)	1
174	50.0 - 120% of mass 95	69.2	
175	5.0 - 9.0% of mass 174	5.8(8.4)	1
176	95.0 - 101% of mass 174	66.9(96.7)	1
177	5.0 - 9.0% of mass 176	4.4(6.6)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD2.582	VSTD2.582	VT013931.D	05/06/2016	09:38
VSTD00583	VSTD00583	VT013932.D	05/06/2016	10:05
VSTD02584	VSTD02584	VT013933.D	05/06/2016	10:31
VSTD05085	VSTD05085	VT013934.D	05/06/2016	10:57
VSTD10086	VSTD10086	VT013935.D	05/06/2016	11:23

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB89

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method : VOA Lab File ID : VT013986.D

Instrument ID: MSVOA_T BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/09/2016 Injection Time: 09:40

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	27.1	
75	30.0 - 80.0% of mass 95	62	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.5	
173	Less than 2.0% of mass 174	0.0(0.0)	1
174	50.0 - 120% of mass 95	71.1	
175	5.0 - 9.0% of mass 174	6.1(8.6)	1
176	95.0 - 101% of mass 174	68.9(97)	1
177	5.0 - 9.0% of mass 176	4.9(7.1)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD02590	VSTDCCC025	VT013987.D	05/09/2016	10:07
VBLK78	VT0509SBL01	VT013988.D	05/09/2016	11:22
H4076	H2834-16	VT013989.D	05/09/2016	11:48
H4061MS	H2834-14MS	VT013990.D	05/09/2016	12:14
H4061MSD	H2834-15MSD	VT013991.D	05/09/2016	12:41
VSTD02591	VSTDCCC025	VT013999.D	05/09/2016	16:11
VBLK79	VT0509SBL02	VT014000.D	05/09/2016	17:05
VHBLK02	H2834-17	VT014001.D	05/09/2016	17:32
VSTD02592	VSTDCCC025EC	VT014021.D	05/10/2016	02:38

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4002
Analytical Method: VOA | Level : LOW
EPA Sample No. : VSTD02580 | Lab File ID (Standard) : VT013907.D
Instrument ID : MSVOA_T | Init.Calib.Date(s): 04/12/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/05/2016
Heated Purge: (Y/N) Y | Time Analyzed : 15:50

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1121340	8.36	920328	11.19	461203	13.12
UPPER LIMIT	2242690	8.53	1840660	11.36	922406	13.29
LOWER LIMIT	560672	8.19	460164	11.02	230602	12.95
EPA SAMPLE NO.						
VBLK98	1057725	8.36	864060	11.19	402304	13.12
H4061	904385	8.36	679626	11.19	281160	13.12

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4002
Analytical Method: VOA | Level : LOW
EPA Sample No. : VSTD02590 | Lab File ID (Standard) : VT013987.D
Instrument ID : MSVOA_T | Init.Calib.Date(s): 05/06/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/09/2016
Heated Purge: (Y/N) Y | Time Analyzed : 10:07

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1070370	8.36	871792	11.19	428182	13.12
UPPER LIMIT	2140740	8.53	1743580	11.36	856364	13.29
LOWER LIMIT	535185	8.19	435896	11.02	214091	12.95
EPA SAMPLE NO.						
VBLK78	1167681	8.36	942590	11.19	460685	13.12
H4076	1026436	8.36	732121	11.19	245304	13.12
H4061MS	881436	8.36	650608	11.19	242136	13.12
H4061MSD	920276	8.36	682901	11.19	237621	13.12

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4002
Analytical Method: VOA | Level : LOW
EPA Sample No. : VSTD02591 | Lab File ID (Standard) : VT013999.D
Instrument ID : MSVOA_T | Init.Calib.Date(s): 05/06/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/09/2016
Heated Purge: (Y/N) Y | Time Analyzed : 16:11

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1035710	8.36	861159	11.19	439055	13.12
UPPER LIMIT	2071430	8.53	1722320	11.36	878110	13.29
LOWER LIMIT	517857	8.19	430580	11.02	219528	12.95
EPA SAMPLE NO.						
VBLK79	1052009	8.36	856289	11.19	404277	13.12
VHBLK02	990013	8.36	807452	11.19	399212	13.12

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-13
Sample wt/vol : 3.75 (g/mL): g
Lab File ID : VT013913.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	51	
75-15-0	Carbon disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene chloride	10	B
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	21	U
74-97-5	Bromochloromethane	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-13
Sample wt/vol : 3.75 (g/mL): g
Lab File ID : VT013913.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	21	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	21	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
95-47-6	o-xylene	10	U
179601-23-1	m,p-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-trichlorobenzene	10	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-13
Sample wt/vol : 3.75 (g/mL): g
Lab File ID : VT013913.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	10	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-13
Sample wt/vol : 3.75 (g/mL): g
Lab File ID : VT013913.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) Y
Extraction Type : PT
Purge Volume : 10 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

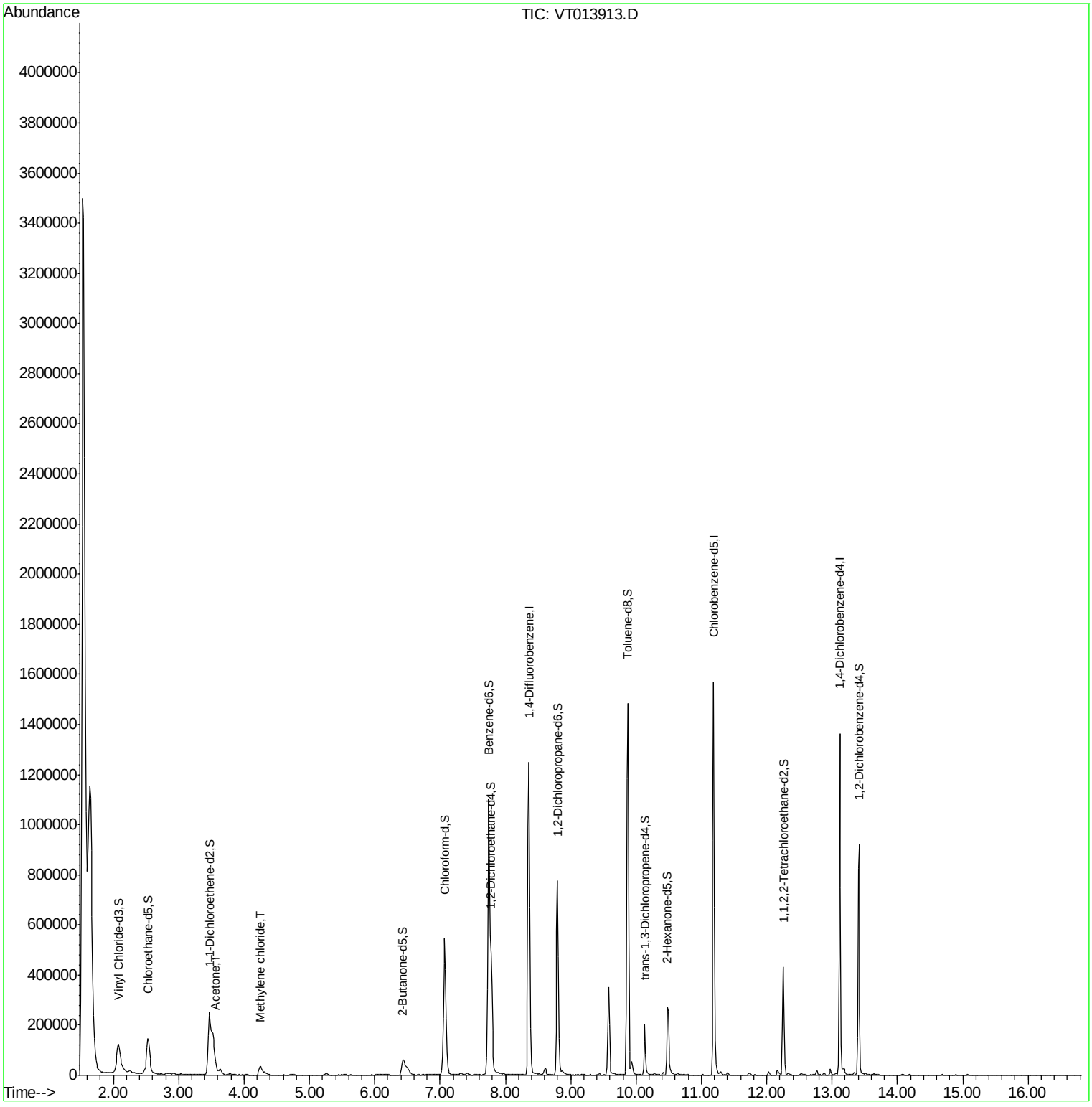
Quantitation Report (LSC Reviewed)

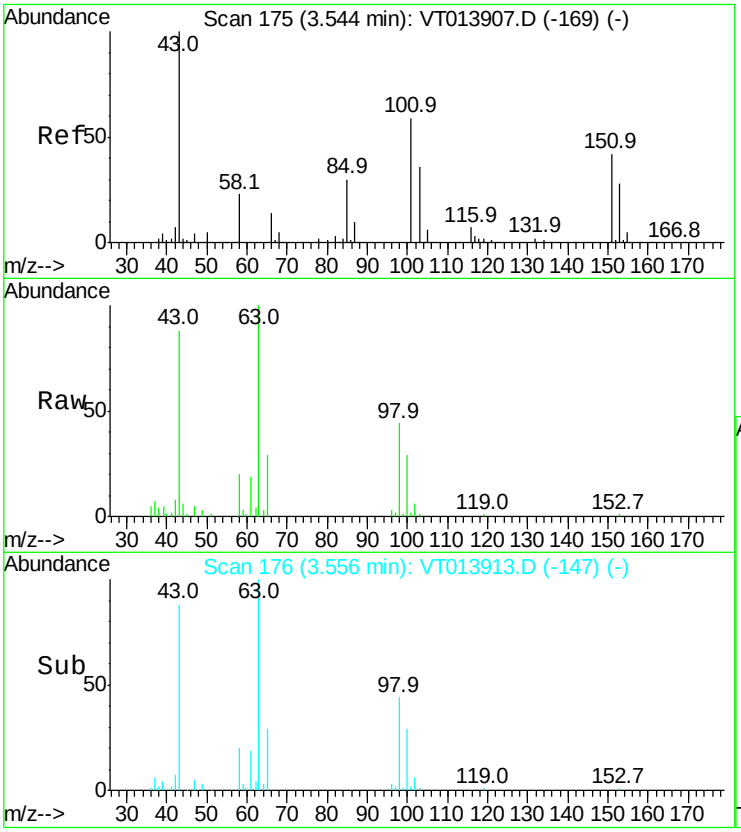
Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013913.D
Acq On : 5 May 2016 19:01
Operator : FY/SY
Sample : H2834-13
Misc : 3.75g/10mL/MSVOA_T/SOIL
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 06 03:06:53 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
H4061

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:33 PM

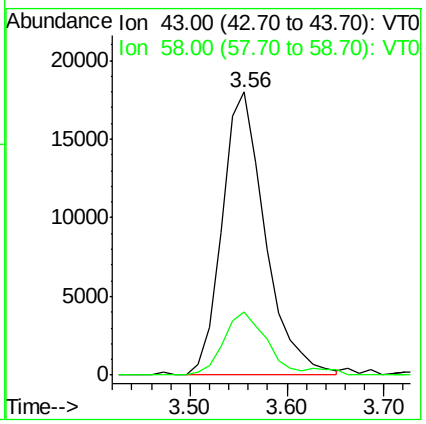




#13
Acetone
Concen: 12.29 ug/L
RT: 3.56 min Scan# 176
Delta R.T. 0.01 min
Lab File: VT013913.D
Acq: 5 May 2016 19:01

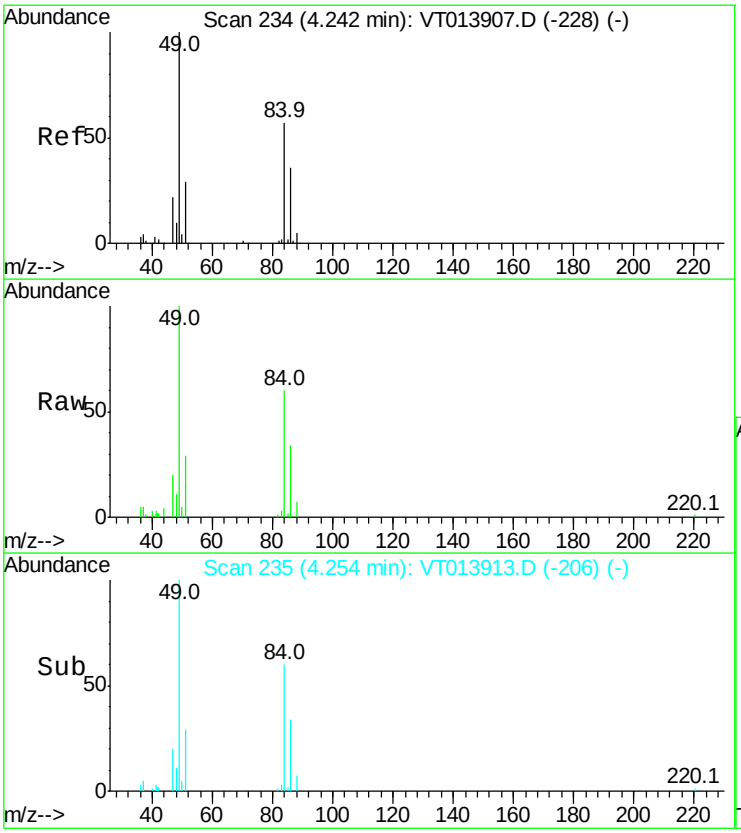
Tgt Ion: 43 Resp: 55164

Ion	Ratio	Lower	Upper
43	100		
58	22.2	0.0	50.2



Instrument :
MSVOA_T
ClientSampleId :
H4061

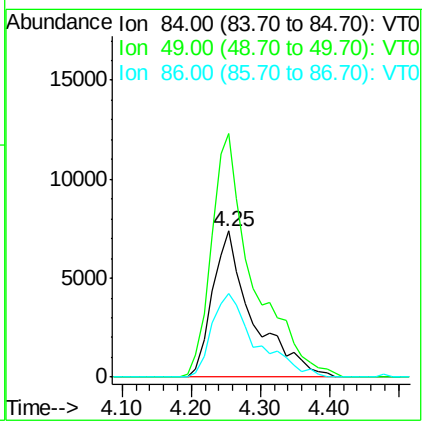
Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:33 PM



#16
Methylene chloride
Concen: 2.46 ug/L m
RT: 4.25 min Scan# 235
Delta R.T. 0.01 min
Lab File: VT013913.D
Acq: 5 May 2016 19:01

Tgt Ion: 84 Resp: 30112

Ion	Ratio	Lower	Upper
84	100		
49	166.6	116.8	216.8
86	57.2	44.9	83.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013913.D
Acq On : 5 May 2016 19:01
Operator : FY/SY
Sample : H2834-13
Misc : 3.75g/10mL/MSVOA_T/SOIL
ALS Vial : 18 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
H4061

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:33 PM

Quant Time: May 06 03:06:53 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	904385	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	679626	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	281160	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	321889	18.14	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 72.56%			
7) Chloroethane-d5	2.53	69	265017	22.28	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 89.12%			
10) 1,1-Dichloroethene-d2	3.47	63	502077	16.39	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 65.56%			
20) 2-Butanone-d5	6.43	46	122015	33.64	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 67.28%			
24) Chloroform-d	7.07	84	585517	22.99	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 91.96%			
26) 1,2-Dichloroethane-d4	7.78	65	339292	24.64	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 98.56%			
29) Benzene-d6	7.74	84	1062837	21.39	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 85.56%			
33) 1,2-Dichloropropane-d6	8.80	67	328719	22.92	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 91.68%			
37) Toluene-d8	9.87	98	894972	20.88	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 83.52%			
38) trans-1,3-Dichloropropene-	10.13	79	95043	18.66	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 74.64%			
39) 2-Hexanone-d5	10.48	63	79482	36.48	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 72.96%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	179250	19.92	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 79.68%			
60) 1,2-Dichlorobenzene-d4	13.41	152	214958	20.10	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 80.40%			
Target Compounds						Qvalue
13) Acetone	3.56	43	55164	12.29	ug/L	94
16) Methylene chloride	4.25	84	30112m	2.46	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013913.D
Acq On : 5 May 2016 19:01
Operator : FY/SY
Sample : H2834-13
Misc : 3.75g/10mL/MSVOA_T/SOIL
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : H4061

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Title : VOC Analysis

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.532	3	5	11	rVV	2688240	6773343	100.00%	19.334%
2	1.639	11	14	29	rVB	1140154	4704194	69.45%	13.428%
3	2.077	43	51	63	rBV	113738	528477	7.80%	1.509%
4	2.254	63	66	75	rVB7	11344	46760	0.69%	0.133%
5	2.432	77	81	82	rBV3	2857	8066	0.12%	0.023%
6	2.526	82	89	99	rVB	141758	504574	7.45%	1.440%
7	2.834	110	115	116	rBV3	1873	5500	0.08%	0.016%
8	2.917	120	122	126	rVV3	3601	10305	0.15%	0.029%
9	3.035	128	132	133	rVV3	1627	3189	0.05%	0.009%
10	3.225	145	148	149	rVB2	1695	2808	0.04%	0.008%
11	3.343	154	158	161	rBV3	2409	5830	0.09%	0.017%
12	3.473	163	169	181	rVV2	251169	1344504	19.85%	3.838%
13	3.639	181	183	190	rVB	22271	54329	0.80%	0.155%
14	3.793	190	196	200	rBV5	4284	14568	0.22%	0.042%
15	3.982	209	212	214	rBV2	1495	2604	0.04%	0.007%
16	4.017	214	215	221	rVB2	1554	4460	0.07%	0.013%
17	4.254	227	235	239	rBV	35836	123468	1.82%	0.352%
18	4.609	262	265	266	rVV	871	1750	0.03%	0.005%
19	4.727	271	275	281	rVV5	3788	12654	0.19%	0.036%
20	5.070	298	304	305	rBV3	688	2464	0.04%	0.007%
21	5.248	314	319	326	rBV4	6085	24727	0.37%	0.071%
22	5.556	344	345	349	rVB3	1513	2601	0.04%	0.007%
23	5.627	349	351	358	rVB	1558	4235	0.06%	0.012%
24	5.911	372	375	377	rBV2	799	1805	0.03%	0.005%
25	6.029	380	385	387	rBV2	1577	5047	0.07%	0.014%
26	6.124	389	393	394	rVV3	1084	2373	0.04%	0.007%
27	6.147	394	395	399	rVB3	834	1851	0.03%	0.005%
28	6.431	414	419	437	rVV4	59446	322043	4.75%	0.919%
29	6.810	447	451	453	rBV3	2232	5354	0.08%	0.015%
30	6.845	453	454	456	rVV2	2700	4654	0.07%	0.013%
31	6.940	456	462	467	rVV4	3225	15677	0.23%	0.045%
32	7.070	467	473	484	rVV	543749	1488449	21.98%	4.249%
33	7.319	488	494	498	rVV6	4361	17034	0.25%	0.049%
34	7.413	498	502	508	rVB4	6015	19445	0.29%	0.056%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013913.D
Acq On : 5 May 2016 19:01
Operator : FY/SY
Sample : H2834-13
Misc : 3.75g/10mL/MSVOA_T/SOIL
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : H4061

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Title : VOC Analysis

35	7.532	508	512	516	rBV4	2432	7811	0.12%	0.022%
36	7.745	525	530	544	rBV2	1100922	3514521	51.89%	10.032%
37	7.970	547	549	552	rVV3	2513	6382	0.09%	0.018%
38	8.218	565	570	572	rBV3	2503	5734	0.08%	0.016%
39	8.277	572	575	577	rVB2	972	1891	0.03%	0.005%
40	8.360	578	582	592	rBV	1245468	2471688	36.49%	7.055%
41	8.490	592	593	597	rVB3	2124	3503	0.05%	0.010%
42	8.608	600	603	611	rVB4	25782	61865	0.91%	0.177%
43	8.798	615	619	624	rBV	773692	1570990	23.19%	4.484%
44	9.200	647	653	658	rVB5	2782	10048	0.15%	0.029%
45	9.307	658	662	664	rBV2	2338	4628	0.07%	0.013%
46	9.437	670	673	676	rVB2	4656	9127	0.13%	0.026%
47	9.579	681	685	691	rBV	349183	590625	8.72%	1.686%
48	9.673	691	693	698	rVV5	4992	12703	0.19%	0.036%
49	9.756	698	700	702	rVV3	2666	4352	0.06%	0.012%
50	9.804	702	704	706	rVV3	2447	3881	0.06%	0.011%
51	9.875	706	710	713	rVV	1482146	2547051	37.60%	7.271%
52	9.934	713	715	721	rVV	53364	106291	1.57%	0.303%
53	10.028	721	723	724	rVV	1555	2897	0.04%	0.008%
54	10.064	724	726	728	rVV3	2240	3765	0.06%	0.011%
55	10.135	728	732	742	rVV	204333	348428	5.14%	0.995%
56	10.277	742	744	747	rVV	7046	14277	0.21%	0.041%
57	10.348	747	750	753	rVB4	3915	6833	0.10%	0.020%
58	10.419	753	756	758	rBV	9406	16408	0.24%	0.047%
59	10.478	758	761	772	rVV	267794	557912	8.24%	1.593%
60	10.632	772	774	777	rVV3	7054	13200	0.19%	0.038%
61	10.738	781	783	785	rVB2	2304	3153	0.05%	0.009%
62	10.786	785	787	789	rVB2	1715	2227	0.03%	0.006%
63	11.011	805	806	809	rVB2	3279	5318	0.08%	0.015%
64	11.188	817	821	828	rBV	1569368	2505485	36.99%	7.152%
65	11.295	828	830	834	rVB2	13297	21132	0.31%	0.060%
66	11.401	836	839	844	rVB2	10759	21311	0.31%	0.061%
67	11.732	864	867	871	rVB2	7635	17066	0.25%	0.049%
68	11.815	871	874	879	rBV4	1654	4156	0.06%	0.012%
69	11.898	879	881	885	rVB3	823	1753	0.03%	0.005%
70	12.028	890	892	895	rVB2	12380	17370	0.26%	0.050%
71	12.099	895	898	901	rBV2	797	2577	0.04%	0.007%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA T\DATA\VT050516\
Data File : VT013913.D
Acq On : 5 May 2016 19:01
Operator : FY/SY
Sample : H2834-13
Misc : 3.75g/10mL/MSVOA T/SOIL
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : H4061

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Title : VOC Analysis

72	12.158	901	903	908	rBV3	17791	41846	0.62%	0.119%
73	12.253	908	911	915	rVV	429349	636872	9.40%	1.818%
74	12.324	915	917	922	rVB3	7179	18622	0.27%	0.053%
75	12.431	922	926	927	rBV2	1086	2369	0.03%	0.007%
76	12.537	931	935	937	rBV2	6738	16980	0.25%	0.048%
77	12.584	937	939	943	rVB3	2937	6286	0.09%	0.018%
78	12.667	943	946	947	rBV3	1585	3003	0.04%	0.009%
79	12.726	950	951	952	rBV	2435	3145	0.05%	0.009%
80	12.774	952	955	957	rVB	14849	24876	0.37%	0.071%
81	12.868	960	963	966	rVB	6082	11082	0.16%	0.032%
82	12.975	966	972	976	rBV	23697	41977	0.62%	0.120%
83	13.058	976	979	981	rBV2	7032	16515	0.24%	0.047%
84	13.117	981	984	987	rVV	1362273	1965752	29.02%	5.611%
85	13.188	987	990	994	rVB2	24328	60797	0.90%	0.174%
86	13.271	994	997	999	rBV4	1089	2685	0.04%	0.008%
87	13.342	999	1003	1005	rVV	8204	15205	0.22%	0.043%
88	13.413	1005	1009	1012	rVV	920096	1544255	22.80%	4.408%
89	13.507	1016	1017	1020	rVB	3975	6717	0.10%	0.019%
90	13.637	1023	1028	1031	rBV3	3829	11372	0.17%	0.032%
91	13.850	1045	1046	1049	rBV3	1292	2031	0.03%	0.006%
92	13.921	1049	1052	1055	rVV2	674	1798	0.03%	0.005%
93	14.075	1060	1065	1066	rBV3	1495	4433	0.07%	0.013%
94	14.194	1071	1075	1078	rVV3	4162	7117	0.11%	0.020%
95	14.679	1114	1116	1120	rVV2	3579	5705	0.08%	0.016%
96	14.892	1132	1134	1137	rVB2	1680	3260	0.05%	0.009%
97	15.034	1144	1146	1147	rBV	1152	1968	0.03%	0.006%
98	15.069	1147	1149	1151	rVB	2769	3762	0.06%	0.011%
99	15.460	1179	1182	1186	rBV2	726	2716	0.04%	0.008%
100	16.466	1264	1267	1269	rBV	821	1989	0.03%	0.006%

Sum of corrected areas: 35032636

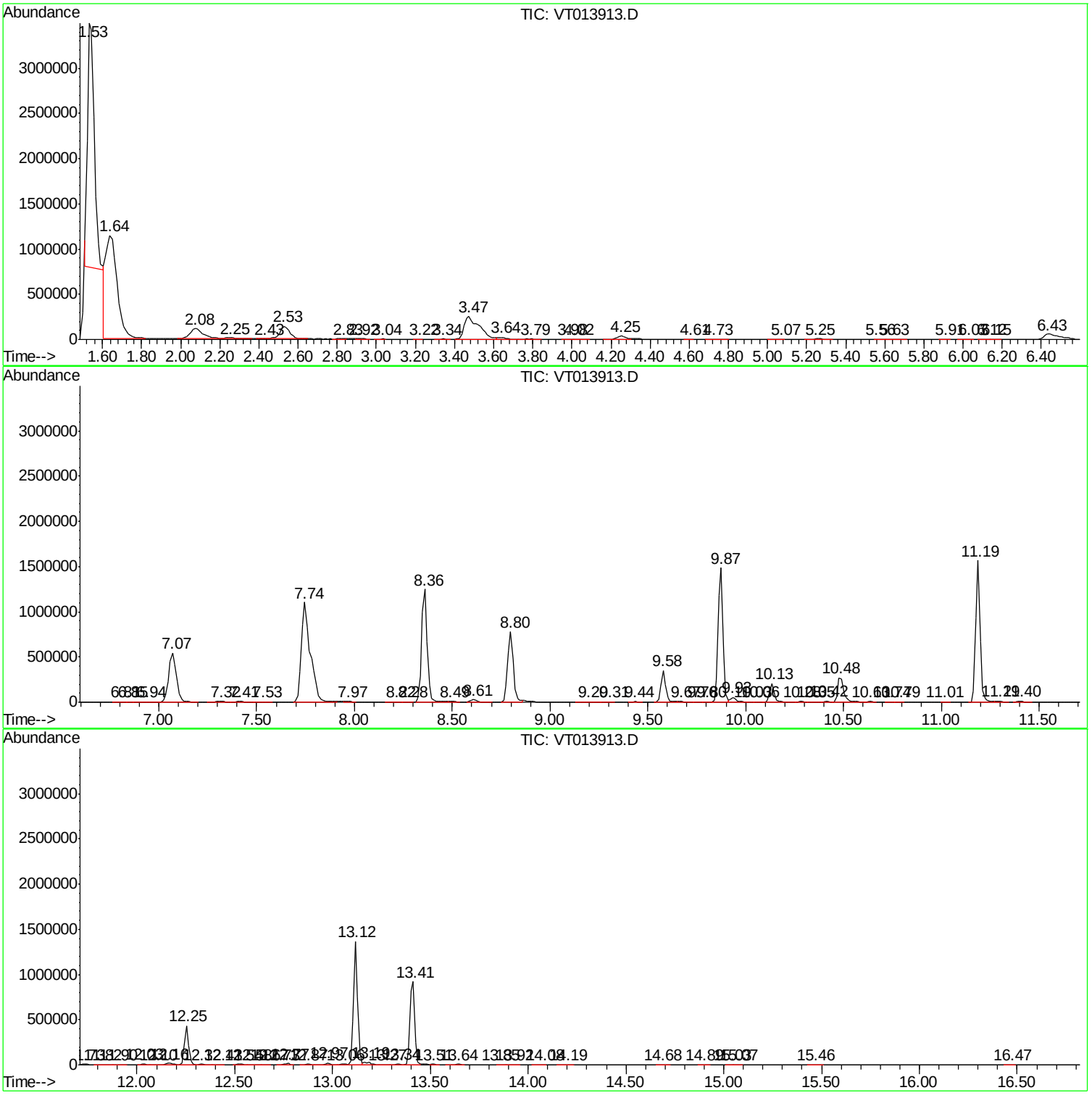
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA T\DATA\VT050516\
Data File : VT013913.D
Acq On : 5 May 2016 19:01
Operator : FY/SY
Sample : H2834-13
Misc : 3.75g/10mL/MSVOA T/SOIL
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : H4061

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013913.D
Acq On : 5 May 2016 19:01
Operator : FY/SY
Sample : H2834-13
Misc : 3.75g/10mL/MSVOA_T/SOIL
ALS Vial : 18 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
H4061

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013913.D
Acq On : 5 May 2016 19:01
Operator : FY/SY
Sample : H2834-13
Misc : 3.75g/10mL/MSVOA_T/SOIL
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : H4061

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

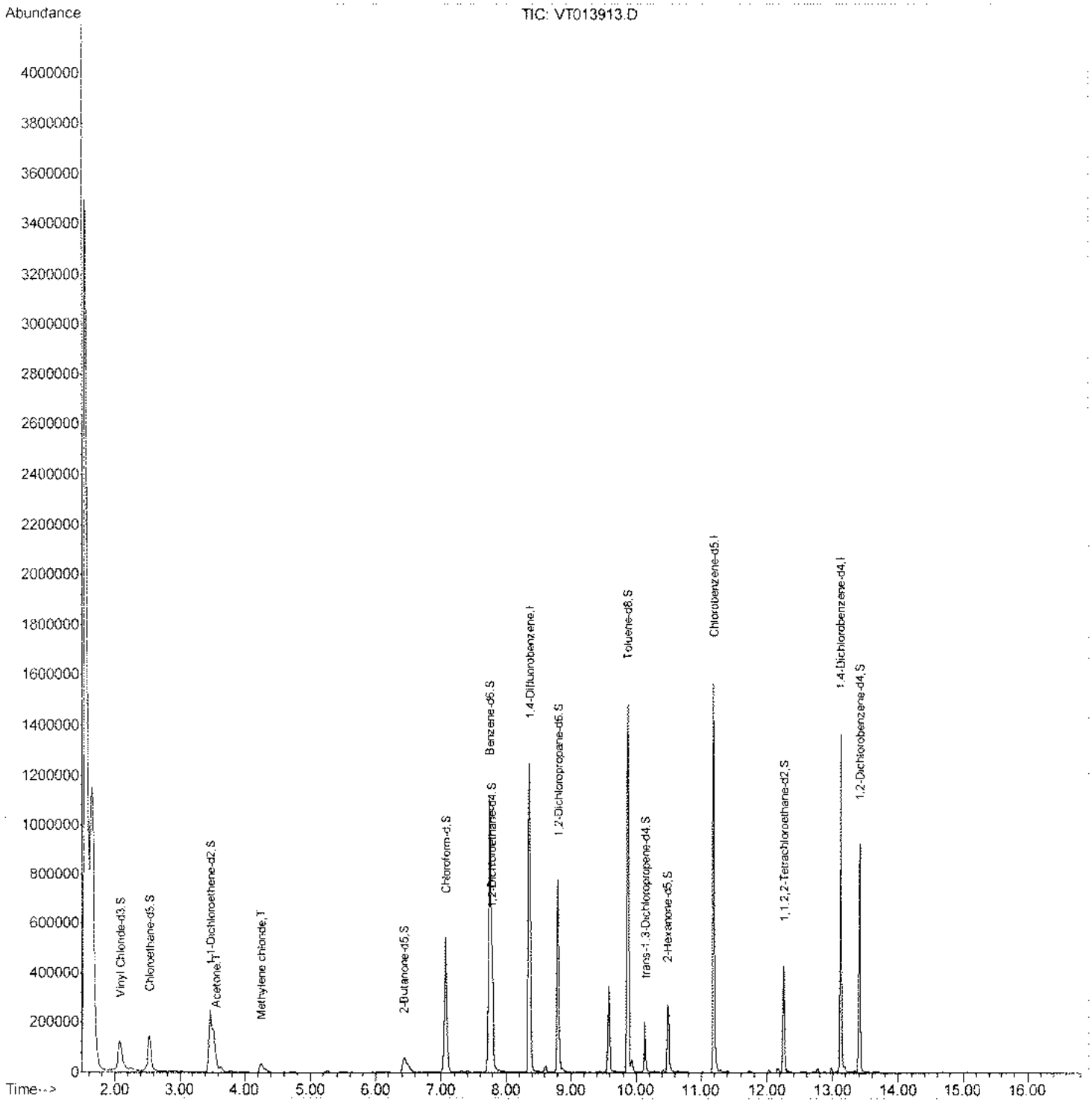
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013913.D
Acq On : 5 May 2016 19:01
Operator : FY/SY
Sample : H2834-13
Misc : 3.75g/10mL/MSVOA_T/SOIL
ALS Vial : 18 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
H4061

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:33 PM

Quant Time: May 06 03:06:53 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration



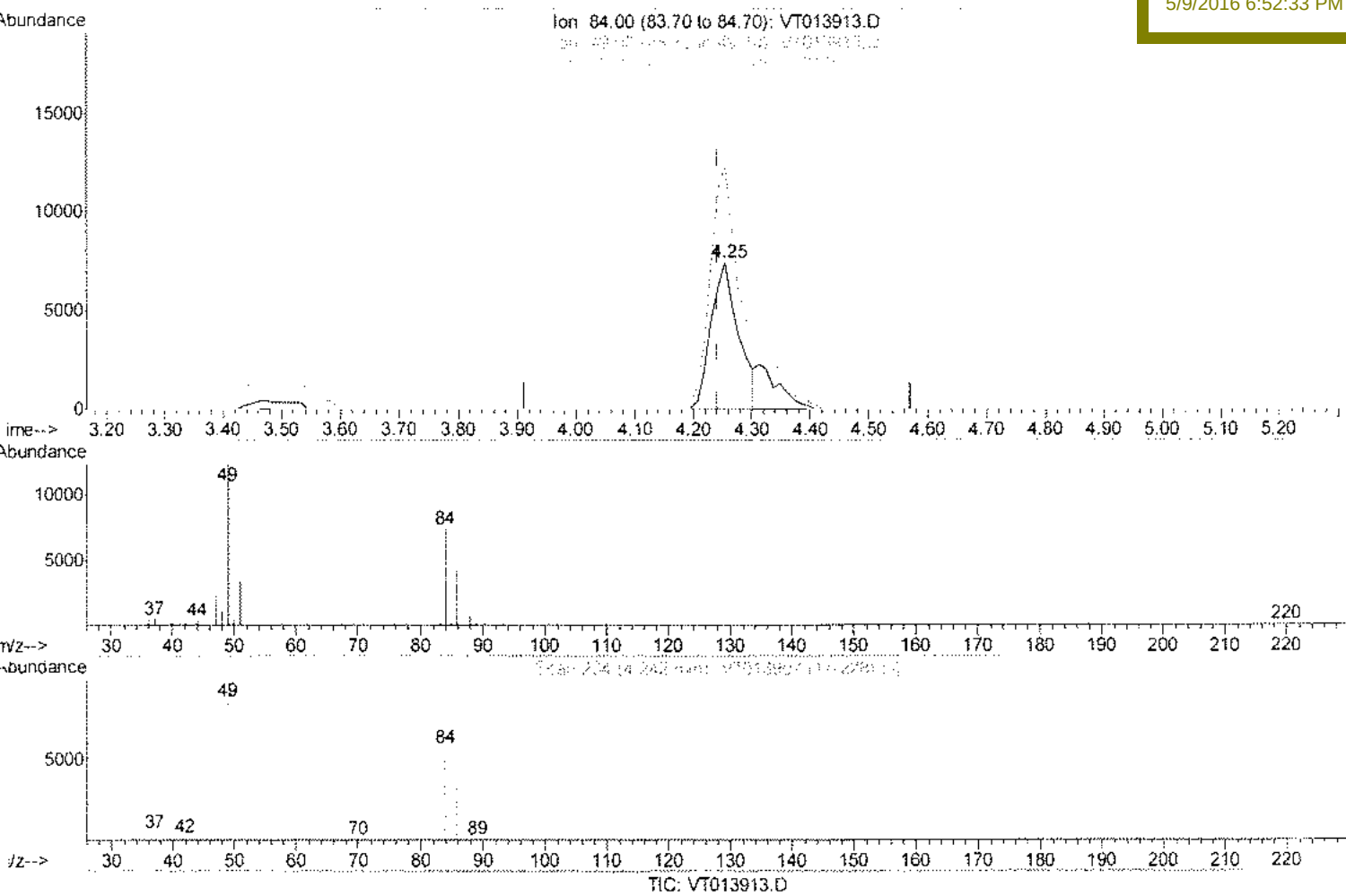
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013913.D
Acq On : 5 May 2016 19:01
Operator : FY/SY
Sample : H2834-13
Misc : 3.75g/10mL/MSVOA_T/SOIL
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 06 02:19:42 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
H4061

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:33 PM



(16) Methylene chloride (T)

4.254min (+0.012) 1.97ug/L

response 24133

Ion	Exp%	Act%
84.00	100	100
49.00	166.80	166.56
86.00	64.20	57.15
0.00	0.00	0.00

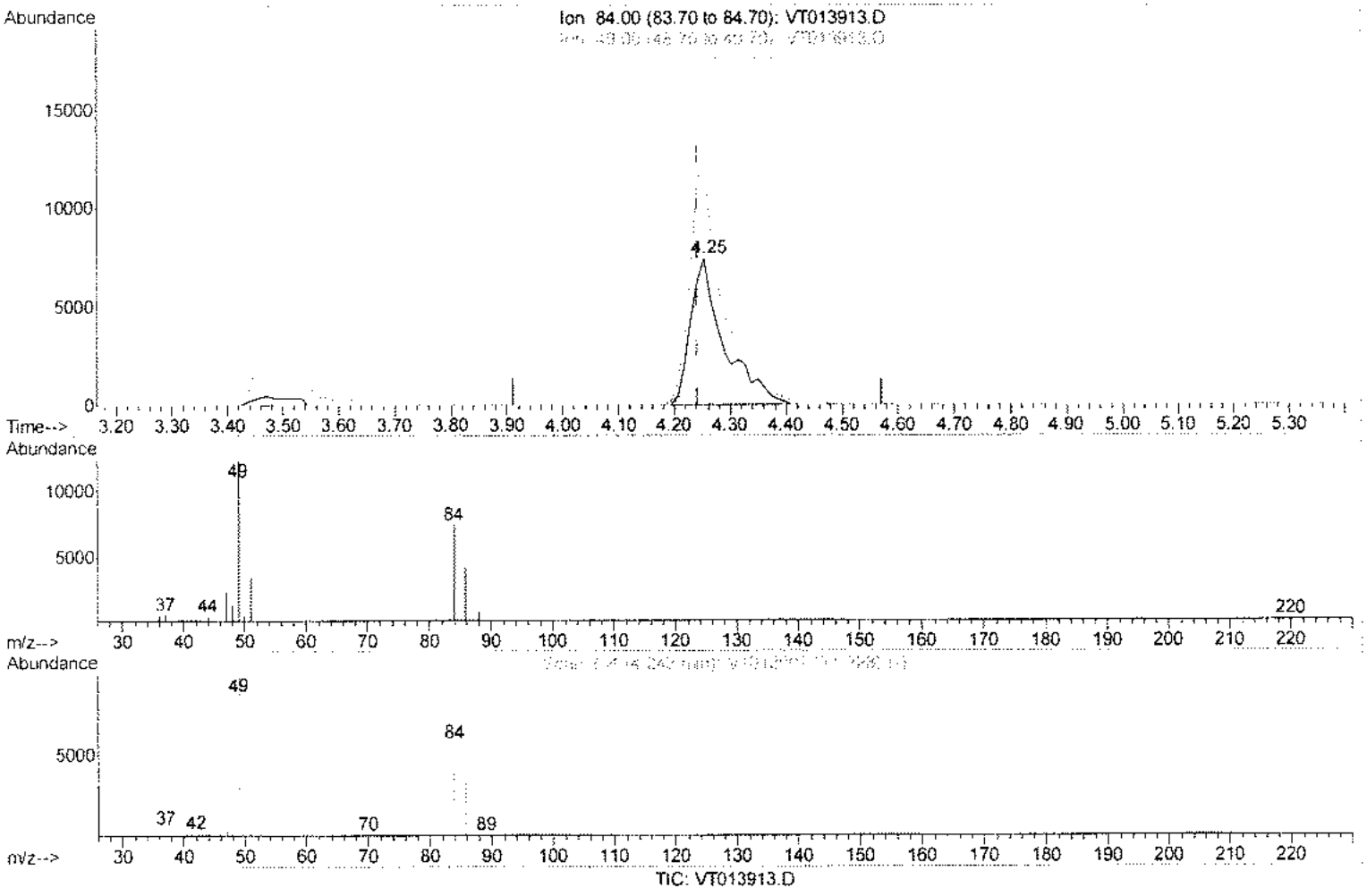
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013913.D
Acq On : 5 May 2016 19:01
Operator : FY/SY
Sample : H2834-13
Misc : 3.75g/10mL/MSVOA_T/SOIL
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 06 02:19:42 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : H4061

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:33 PM



(16) Methylene chloride (T)

4.254min (+0.012) 2.46ug/L m M D 05/09/16

response 30112

Ion	Exp%	Act%
84.00	100	100
49.00	166.80	166.56
86.00	64.20	57.15
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013913.D
Acq On : 5 May 2016 19:01
Operator : FY/SY
Sample : H2834-13
Misc : 3.75g/10mL/MSVOA_T/SOIL
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 06 03:06:53 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : H4061

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:33 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	904385	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	679626	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	281160	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	321889	18.14	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 72.56%			
7) Chloroethane-d5	2.53	69	265017	22.28	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 89.12%			
10) 1,1-Dichloroethene-d2	3.47	63	502077	16.39	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 65.56%			
20) 2-Butanone-d5	6.43	46	122015	33.64	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 67.28%			
24) Chloroform-d	7.07	84	585517	22.99	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 91.96%			
26) 1,2-Dichloroethane-d4	7.78	65	339292	24.64	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 98.56%			
29) Benzene-d6	7.74	84	1062837	21.39	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 85.56%			
33) 1,2-Dichloropropane-d6	8.80	67	328719	22.92	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 91.68%			
37) Toluene-d8	9.87	98	894972	20.88	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 83.52%			
38) trans-1,3-Dichloropropene-	10.13	79	95043	18.66	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 74.64%			
39) 2-Hexanone-d5	10.48	63	79482	36.48	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 72.96%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	179250	19.92	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 79.68%			
60) 1,2-Dichlorobenzene-d4	13.41	152	214958	20.10	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 80.40%			
Target Compounds						Qvalue
13) Acetone	3.56	43	55164	12.29	ug/L	94
16) Methylene chloride	4.25	84	30112m	2.46	ug/L	

M.D 5/05/09/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4076

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-16
Sample wt/vol : 4.45 (g/mL): g
Lab File ID : VT013989.D
% Solids : 56.3
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	20	U
75-15-0	Carbon disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	20	U
74-97-5	Bromochloromethane	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4076

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-16
Sample wt/vol : 4.45 (g/mL): g
Lab File ID : VT013989.D
% Solids : 56.3
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	20	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	22	
591-78-6	2-Hexanone	20	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
95-47-6	o-xylene	10	U
179601-23-1	m,p-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-trichlorobenzene	10	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4076

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-16
Sample wt/vol : 4.45 (g/mL): g
Lab File ID : VT013989.D
% Solids : 56.3
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	10	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4076

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-16
Sample wt/vol : 4.45 (g/mL): g
Lab File ID : VT013989.D
% Solids : 56.3
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) Y
Extraction Type : PT
Purge Volume : 10 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

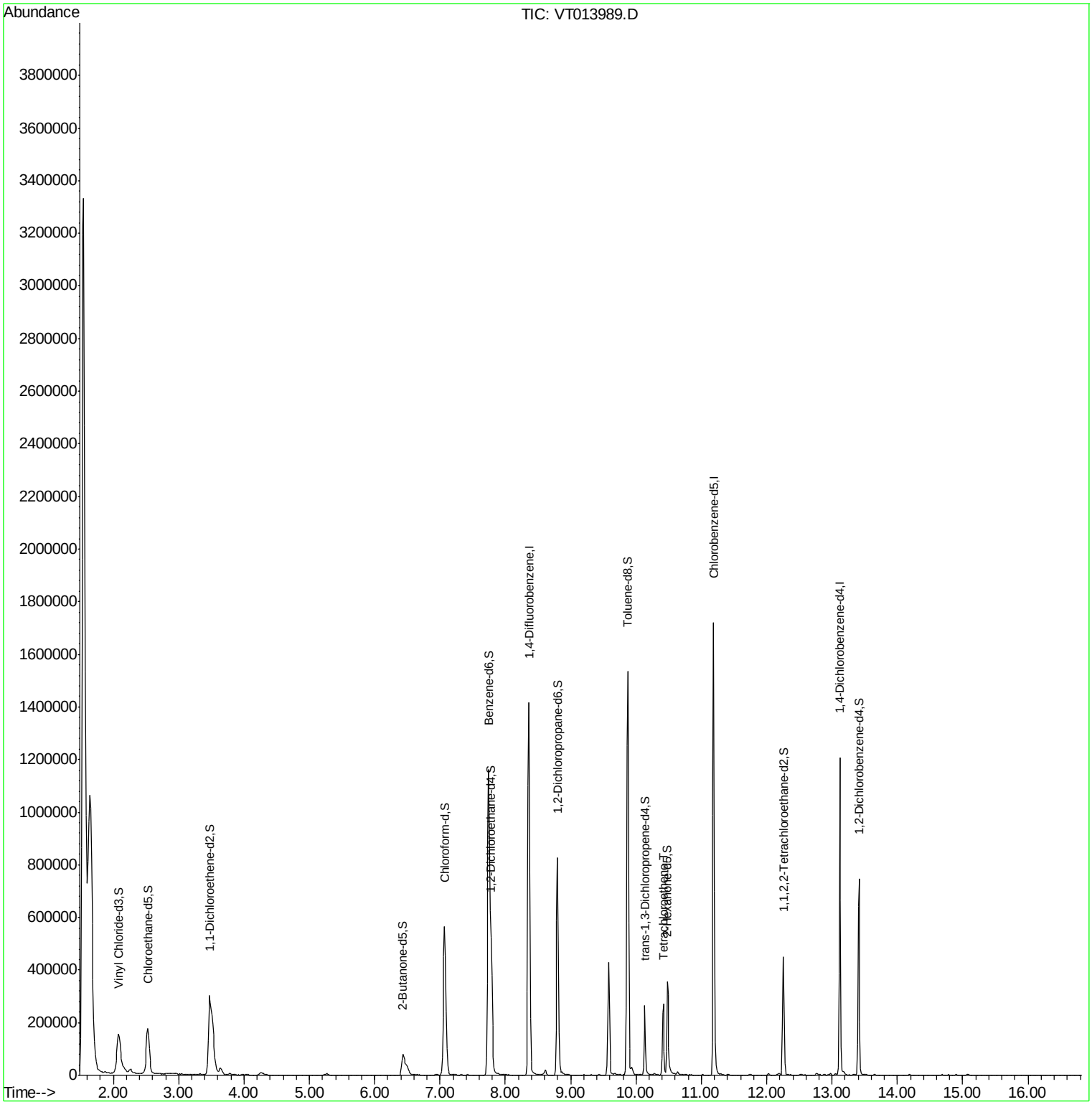
EPA-designated Registry Number.

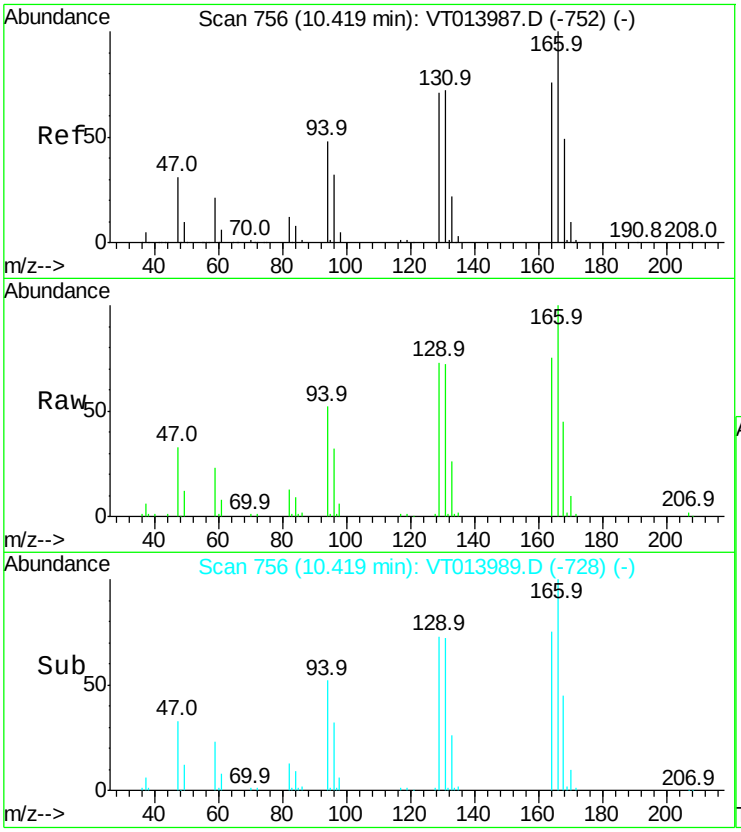
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013989.D
Acq On : 9 May 2016 11:48
Operator : FY/SY
Sample : H2834-16
Misc : 4.45g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : H4076

Quant Time: May 10 01:29:01 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration



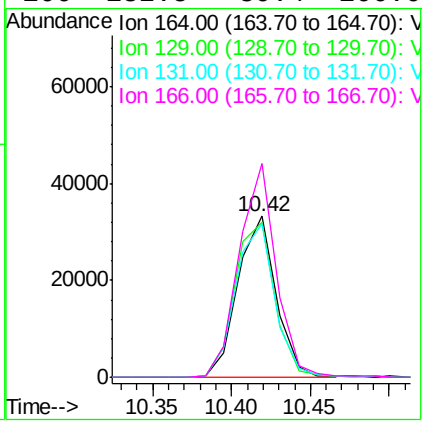


#47
Tetrachloroethene
Concen: 5.47 ug/L
RT: 10.42 min Scan# 756
Delta R.T. -0.00 min
Lab File: VT013989.D
Acq: 9 May 2016 11:48

Instrument :
MSVOA_T
ClientSampleId :
H4076

Tgt Ion:164 Resp: 55950

Ion	Ratio	Lower	Upper
164	100		
129	96.4	63.1	117.3
131	95.6	61.7	114.5
166	132.5	89.4	166.0



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013989.D
Acq On : 9 May 2016 11:48
Operator : FY/SY
Sample : H2834-16
Misc : 4.45g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : H4076

Quant Time: May 10 01:29:01 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1026436	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	732121	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	245304	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	414794	24.39	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 97.56%			
7) Chloroethane-d5	2.53	69	303161	24.65	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 98.60%			
10) 1,1-Dichloroethene-d2	3.47	63	571177	16.33	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 65.32%			
20) 2-Butanone-d5	6.43	46	157502	38.92	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 77.84%			
24) Chloroform-d	7.07	84	605782	21.15	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 84.60%			
26) 1,2-Dichloroethane-d4	7.78	65	385124	22.94	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 91.76%			
29) Benzene-d6	7.74	84	1124400	24.55	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 98.20%			
33) 1,2-Dichloropropane-d6	8.80	67	340224	25.18	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 100.72%			
37) Toluene-d8	9.87	98	931193	22.59	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 90.36%			
38) trans-1,3-Dichloropropene-	10.13	79	120497	23.00	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 92.00%			
39) 2-Hexanone-d5	10.48	63	103939	48.13	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 96.26%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	188938	20.30	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 81.20%			
60) 1,2-Dichlorobenzene-d4	13.41	152	170074	19.75	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 79.00%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.42	164	55950	5.47	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013989.D
Acq On : 9 May 2016 11:48
Operator : FY/SY
Sample : H2834-16
Misc : 4.45g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : H4076

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Title : VOC Analysis

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.544	3	6	11	rVV	2614034	6778362	100.00%	18.918%
2	1.639	11	14	31	rVB	1052134	4281747	63.17%	11.950%
3	2.077	43	51	63	rBV	149465	682142	10.06%	1.904%
4	2.266	63	67	77	rVB4	17583	65522	0.97%	0.183%
5	2.526	82	89	101	rVB	173980	594734	8.77%	1.660%
6	2.692	101	103	104	rBV	878	1272	0.02%	0.004%
7	2.858	116	117	120	rVB3	2392	3346	0.05%	0.009%
8	2.929	120	123	126	rBV3	2340	4538	0.07%	0.013%
9	3.224	145	148	151	rVB4	2137	5338	0.08%	0.015%
10	3.307	153	155	156	rVV	1196	2534	0.04%	0.007%
11	3.331	156	157	158	rVV	2658	3041	0.04%	0.008%
12	3.366	158	160	161	rVV2	2243	3803	0.06%	0.011%
13	3.473	164	169	180	rVV	301768	1478501	21.81%	4.126%
14	3.639	180	183	190	rVV	26464	84011	1.24%	0.234%
15	3.781	190	195	200	rVV3	6239	20597	0.30%	0.057%
16	3.982	208	212	214	rBV2	1412	3232	0.05%	0.009%
17	4.041	214	217	223	rVB3	1818	5634	0.08%	0.016%
18	4.254	230	235	246	rBV2	8955	41942	0.62%	0.117%
19	4.431	248	250	255	rVB3	1048	3037	0.04%	0.008%
20	4.597	261	264	266	rBV	815	1691	0.02%	0.005%
21	5.082	300	305	315	rBV4	1288	6157	0.09%	0.017%
22	5.260	315	320	329	rVB3	6852	23516	0.35%	0.066%
23	5.508	337	341	343	rVB2	494	1216	0.02%	0.003%
24	5.603	348	349	354	rBV3	1128	2920	0.04%	0.008%
25	6.431	414	419	433	rBV2	78520	357018	5.27%	0.996%
26	6.751	444	446	449	rVB2	634	1571	0.02%	0.004%
27	6.798	449	450	456	rVB2	680	1807	0.03%	0.005%
28	6.940	459	462	467	rVB3	2899	7753	0.11%	0.022%
29	7.070	467	473	486	rBV	565005	1556340	22.96%	4.344%
30	7.236	486	487	491	rVB3	1043	1339	0.02%	0.004%
31	7.319	491	494	497	rVB3	1004	2704	0.04%	0.008%
32	7.425	499	503	506	rVB4	1571	4085	0.06%	0.011%
33	7.543	510	513	515	rBV2	855	1923	0.03%	0.005%
34	7.745	525	530	545	rBV2	1160270	3711490	54.75%	10.358%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013989.D
Acq On : 9 May 2016 11:48
Operator : FY/SY
Sample : H2834-16
Misc : 4.45g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : H4076

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Title : VOC Analysis

35	8.005	550	552	555	rVB4	2544	4208	0.06%	0.012%
36	8.052	555	556	559	rVB2	1009	1495	0.02%	0.004%
37	8.123	561	562	568	rBV2	967	3046	0.04%	0.009%
38	8.206	568	569	572	rBV2	805	1338	0.02%	0.004%
39	8.360	578	582	594	rVV	1415255	2814936	41.53%	7.856%
40	8.549	597	598	599	rVV	1447	1710	0.03%	0.005%
41	8.608	599	603	608	rVB2	18072	37242	0.55%	0.104%
42	8.798	615	619	624	rBV	824942	1651852	24.37%	4.610%
43	9.200	651	653	655	rVB2	1530	2403	0.04%	0.007%
44	9.236	655	656	658	rBV	929	1237	0.02%	0.003%
45	9.318	658	663	664	rVB2	1474	2784	0.04%	0.008%
46	9.378	664	668	670	rBV2	640	2295	0.03%	0.006%
47	9.437	670	673	676	rVB3	2357	3823	0.06%	0.011%
48	9.579	681	685	691	rVV	428155	710234	10.48%	1.982%
49	9.673	691	693	698	rVV	7533	17121	0.25%	0.048%
50	9.768	698	701	703	rVV3	1644	3551	0.05%	0.010%
51	9.804	703	704	706	rVV	2076	2864	0.04%	0.008%
52	9.875	706	710	714	rVV	1533745	2685664	39.62%	7.495%
53	9.934	714	715	722	rVV	29338	53661	0.79%	0.150%
54	10.076	725	727	728	rVV	2503	4473	0.07%	0.012%
55	10.135	728	732	738	rVV	265887	437320	6.45%	1.221%
56	10.277	741	744	748	rVV2	7591	18274	0.27%	0.051%
57	10.419	752	756	759	rVV	271631	488119	7.20%	1.362%
58	10.478	759	761	769	rVV	356044	673735	9.94%	1.880%
59	10.632	772	774	779	rVV4	11735	24414	0.36%	0.068%
60	10.750	782	784	787	rVV3	1288	3232	0.05%	0.009%
61	10.845	789	792	794	rVB2	1139	2405	0.04%	0.007%
62	11.022	804	807	810	rVB	2050	3444	0.05%	0.010%
63	11.188	817	821	829	rBV	1719045	2647488	39.06%	7.389%
64	11.401	837	839	844	rVB2	4334	8886	0.13%	0.025%
65	11.732	863	867	870	rBV3	2516	5729	0.08%	0.016%
66	12.028	889	892	894	rVB	4680	7123	0.11%	0.020%
67	12.194	898	906	908	rBV4	5160	16135	0.24%	0.045%
68	12.253	908	911	916	rBV	449829	674567	9.95%	1.883%
69	12.336	916	918	919	rVB2	1172	1654	0.02%	0.005%
70	12.371	919	921	923	rVB2	2470	3191	0.05%	0.009%
71	12.454	926	928	929	rBV	951	1492	0.02%	0.004%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013989.D
Acq On : 9 May 2016 11:48
Operator : FY/SY
Sample : H2834-16
Misc : 4.45g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : H4076

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Title : VOC Analysis

72	12.513	931	933	937	rVB4	3659	8849	0.13%	0.025%
73	12.584	937	939	942	rVB	1532	2054	0.03%	0.006%
74	12.774	949	955	957	rBV	7617	14772	0.22%	0.041%
75	12.809	957	958	961	rVB	1341	2453	0.04%	0.007%
76	12.868	961	963	967	rVB3	2118	3999	0.06%	0.011%
77	12.975	967	972	975	rBV3	8088	15981	0.24%	0.045%
78	13.058	975	979	981	rBV3	5383	9878	0.15%	0.028%
79	13.117	981	984	988	rBV	1203591	1710400	25.23%	4.774%
80	13.342	1000	1003	1005	rVB2	3569	5768	0.09%	0.016%
81	13.413	1005	1009	1012	rBV	746447	1236569	18.24%	3.451%
82	13.531	1017	1019	1021	rVV	2332	3699	0.05%	0.010%
83	13.649	1025	1029	1035	rVB4	2420	5982	0.09%	0.017%
84	14.099	1064	1067	1069	rVB2	777	1314	0.02%	0.004%
85	14.194	1071	1075	1079	rVB	2722	4947	0.07%	0.014%
86	14.430	1093	1095	1098	rVB2	766	1336	0.02%	0.004%
87	14.679	1112	1116	1118	rBV4	4105	6258	0.09%	0.017%
88	14.785	1121	1125	1128	rVB2	2338	3634	0.05%	0.010%
89	14.904	1132	1135	1139	rBV	2689	5816	0.09%	0.016%
90	14.963	1139	1140	1143	rBV	597	1418	0.02%	0.004%
91	15.069	1146	1149	1153	rVV3	2195	4643	0.07%	0.013%
92	15.389	1175	1176	1180	rVB2	774	1380	0.02%	0.004%
93	15.507	1184	1186	1188	rBV	906	1375	0.02%	0.004%
94	15.815	1211	1212	1216	rVB2	530	1213	0.02%	0.003%
95	15.945	1222	1223	1226	rBV3	505	1205	0.02%	0.003%
96	16.075	1232	1234	1235	rVB	822	1144	0.02%	0.003%
97	16.122	1235	1238	1240	rBV2	1118	2437	0.04%	0.007%
98	16.241	1245	1248	1249	rBV	844	1414	0.02%	0.004%
99	16.418	1261	1263	1266	rVB2	717	1635	0.02%	0.005%
100	16.607	1275	1279	1280	rVV	486	1324	0.02%	0.004%

Sum of corrected areas: 35830905

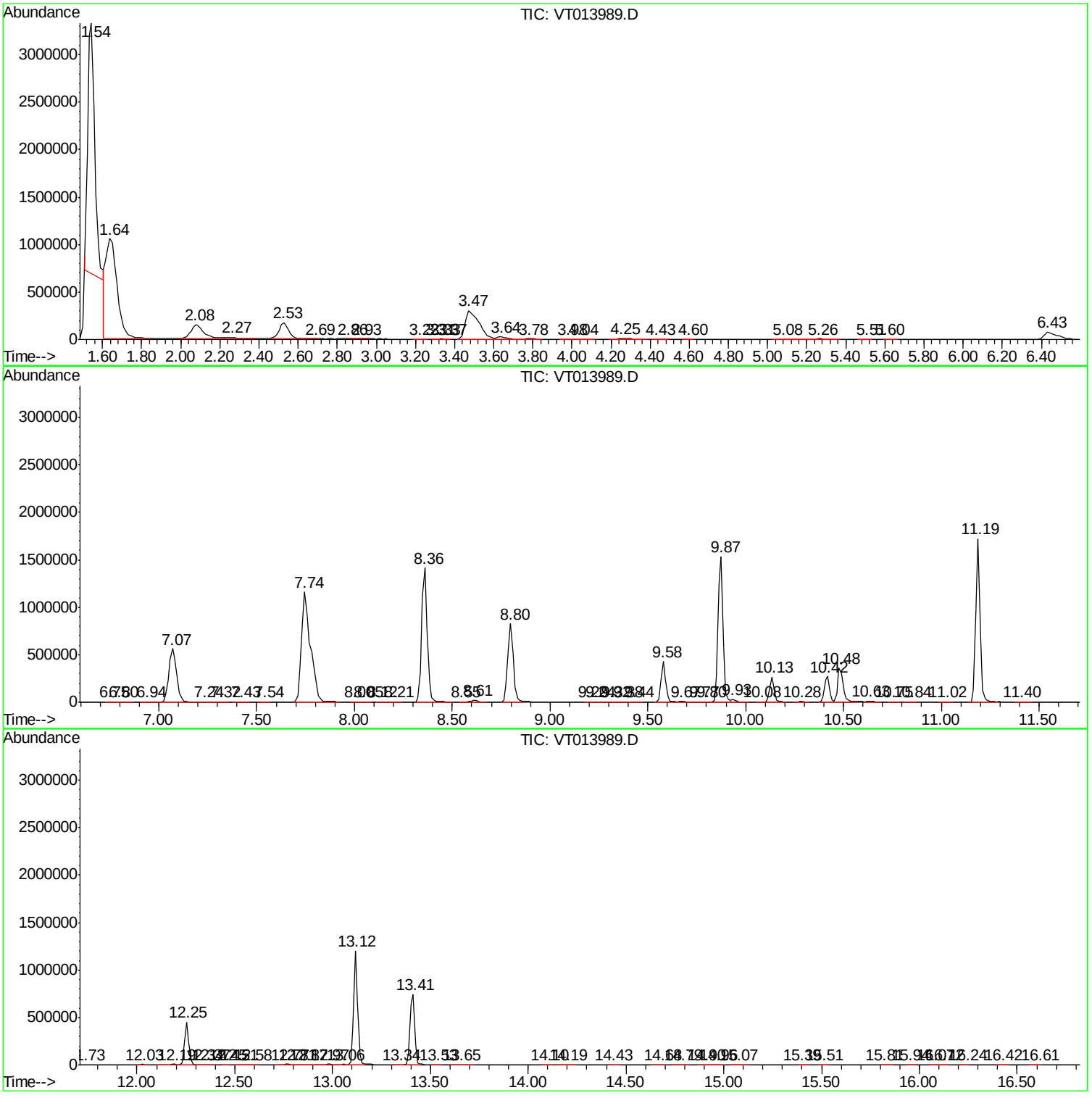
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013989.D
Acq On : 9 May 2016 11:48
Operator : FY/SY
Sample : H2834-16
Misc : 4.45g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : H4076

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013989.D
Acq On : 9 May 2016 11:48
Operator : FY/SY
Sample : H2834-16
Misc : 4.45g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
H4076

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013989.D
Acq On : 9 May 2016 11:48
Operator : FY/SY
Sample : H2834-16
Misc : 4.45g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : H4076

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002
Analytical Method : VOA Level : LOW
Instrument ID: MSVOA_T Calibration Date(s): 04/12/2016 04/12/2016
GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 12:45 14:29
Length : 20 (m)
Heated Purge: (Y/N): Y Purge Volume : 10 (mL)

LAB FILE ID: RRF2.5 = VT013544.D RRF5.0 = VT013545.D
RRF25 = VT013546.D RRF50 = VT013547.D RRF100 = VT013548.D

ANALYTE	RRF2.5	RRF5.0	RRF25	RRF50	RRF100	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.488	0.492	0.531	0.450	0.416	0.475	9.3
Chloromethane	0.570	0.587	0.557	0.507	0.492	0.543	7.6
Vinyl chloride	0.526	0.537	0.508	0.465	0.451	0.497	7.6
Bromomethane	0.254	0.272	0.250	0.228	0.223	0.245	8.2
Chloroethane	0.299	0.302	0.276	0.255	0.252	0.277	8.4
Trichlorofluoromethane	0.600	0.643	0.597	0.586	0.540	0.593	6.2
1,1-Dichloroethene	0.339	0.360	0.321	0.335	0.308	0.333	5.9
1,1,2-Trichloro-1,2,2-trifluoroetha	0.376	0.399	0.349	0.359	0.332	0.363	7.1
Acetone	0.124	0.130	0.143	0.119	0.104	0.124	11.3
Carbon disulfide	1.144	1.223	1.199	1.229	1.150	1.189	3.4
Methyl Acetate	0.188	0.216	0.183	0.195	0.195	0.196	6.4
Methylene chloride	0.370	0.375	0.313	0.328	0.308	0.339	9.3
trans-1,2-Dichloroethene	0.351	0.379	0.348	0.368	0.344	0.358	4.2
Methyl tert-butyl Ether	0.561	0.632	0.594	0.655	0.648	0.618	6.4
1,1-Dichloroethane	0.754	0.801	0.741	0.783	0.730	0.762	3.9
cis-1,2-Dichloroethene	0.350	0.366	0.369	0.358	0.335	0.356	3.9
2-Butanone	0.137	0.146	0.165	0.140	0.137	0.145	8.1
Bromochloromethane	0.131	0.134	0.132	0.128	0.122	0.130	3.5
Chloroform	0.679	0.668	0.663	0.635	0.598	0.649	5
1,1,1-Trichloroethane	0.724	0.722	0.764	0.726	0.686	0.724	3.8
Cyclohexane	1.034	1.072	1.143	1.083	1.021	1.071	4.5
Carbon tetrachloride	0.672	0.662	0.704	0.672	0.637	0.669	3.6
Benzene	1.985	1.909	1.981	1.938	1.858	1.934	2.7
1,2-Dichloroethane	0.471	0.470	0.462	0.453	0.432	0.458	3.4
Trichloroethene	0.480	0.478	0.498	0.479	0.460	0.479	2.8
Methylcyclohexane	0.960	0.959	1.020	0.987	0.938	0.973	3.3
1,2-Dichloropropane	0.485	0.473	0.497	0.492	0.465	0.482	2.8
Bromodichloromethane	0.519	0.531	0.565	0.554	0.534	0.541	3.5
cis-1,3-Dichloropropene	0.545	0.598	0.682	0.673	0.635	0.627	9.1
4-Methyl-2-pentanone	0.309	0.331	0.336	0.324	0.324	0.325	3.1
Toluene	1.961	1.875	1.936	1.927	1.903	1.920	1.7
trans-1,3-Dichloropropene	0.419	0.472	0.548	0.554	0.544	0.508	11.7

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002
Analytical Method : VOA Level : LOW
Instrument ID: MSVOA_T Calibration Date(s): 04/12/2016 04/12/2016
GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 12:45 14:29
Length : 20 (m)
Heated Purge: (Y/N): Y Purge Volume : 10 (mL)

LAB FILE ID: RRF2.5 = VT013544.D RRF5.0 = VT013545.D
RRF25 = VT013546.D RRF50 = VT013547.D RRF100 = VT013548.D

ANALYTE	RRF2.5	RRF5.0	RRF25	RRF50	RRF100	$\overline{RRF}$	% RSD
1,1,2-Trichloroethane	0.247	0.249	0.257	0.253	0.249	0.251	1.6
Tetrachloroethene	0.348	0.331	0.358	0.358	0.352	0.349	3.1
2-Hexanone	0.249	0.248	0.314	0.257	0.254	0.264	10.6
Dibromochloromethane	0.285	0.297	0.319	0.324	0.319	0.309	5.5
1,2-Dibromoethane	0.226	0.240	0.247	0.240	0.236	0.238	3.2
Chlorobenzene	1.107	1.084	1.094	1.075	1.052	1.082	1.9
Ethylbenzene	2.160	2.149	2.245	2.227	2.199	2.196	1.9
o-xylene	0.706	0.740	0.787	0.798	0.784	0.763	5
m,p-Xylene	0.786	0.767	0.825	0.818	0.806	0.801	3
Styrene	1.134	1.140	1.228	1.234	1.211	1.190	4.1
Bromoform	0.274	0.294	0.331	0.341	0.349	0.318	10.2
Isopropylbenzene	2.035	2.084	2.224	2.250	2.223	2.163	4.5
1,1,2,2-Tetrachloroethane	0.318	0.328	0.319	0.312	0.312	0.318	2
1,3-Dichlorobenzene	1.617	1.636	1.650	1.628	1.604	1.627	1.1
1,4-Dichlorobenzene	1.616	1.608	1.588	1.595	1.583	1.598	0.8
1,2-Dichlorobenzene	1.468	1.383	1.418	1.424	1.419	1.423	2.1
1,2-Dibromo-3-chloropropane	0.093	0.095	0.107	0.110	0.108	0.103	7.7
1,2,4-trichlorobenzene	0.842	0.850	0.910	0.926	0.879	0.881	4.2
1,2,3-Trichlorobenzene	0.763	0.739	0.736	0.723	0.672	0.726	4.7
Vinyl Chloride-d3	0.497	0.504	0.491	0.484	0.478	0.491	2.1
Chloroethane-d5	0.332	0.346	0.323	0.320	0.323	0.329	3.1
1,1-Dichloroethene-d2	0.855	0.904	0.816	0.870	0.789	0.847	5.3
2-Butanone-d5	0.085	0.097	0.102	0.108	0.110	0.100	10
Chloroform-d	0.728	0.718	0.704	0.702	0.668	0.704	3.2
1,2-Dichloroethane-d4	0.385	0.383	0.380	0.381	0.373	0.381	1.2
Benzene-d6	1.831	1.782	1.842	1.864	1.819	1.828	1.6
1,2-Dichloropropane-d6	0.506	0.511	0.544	0.545	0.532	0.528	3.4
Toluene-d8	1.469	1.529	1.597	1.638	1.650	1.577	4.8
trans-1,3-Dichloropropene-d4	0.153	0.154	0.205	0.209	0.216	0.187	16.8
2-Hexanone-d5	0.061	0.072	0.086	0.090	0.092	0.080	16.5
1,1,2,2-Tetrachloroethane-d2	0.309	0.332	0.339	0.335	0.341	0.331	3.9
1,2-Dichlorobenzene-d4	0.971	0.918	0.936	0.961	0.969	0.951	2.4

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method : VOA Level : LOW

Instrument ID: MSVOA_T Calibration Date(s): 05/06/2016 05/06/2016

GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 09:38 11:23

Length : 20 (m)

Heated Purge: (Y/N): Y Purge Volume : 10 (mL)

LAB FILE ID: RRF2.5 = VT013931.D RRF5.0 = VT013932.D
RRF25 = VT013933.D RRF50 = VT013934.D RRF100 = VT013935.D

ANALYTE	RRF2.5	RRF5.0	RRF25	RRF50	RRF100	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.496	0.496	0.532	0.552	0.476	0.511	6
Chloromethane	0.609	0.606	0.618	0.624	0.547	0.601	5.2
Vinyl chloride	0.567	0.599	0.596	0.594	0.516	0.574	6.1
Bromomethane	0.302	0.314	0.296	0.284	0.264	0.292	6.4
Chloroethane	0.309	0.343	0.334	0.318	0.282	0.317	7.4
Trichlorofluoromethane	0.716	0.742	0.759	0.729	0.641	0.718	6.3
1,1-Dichloroethene	0.373	0.385	0.388	0.366	0.323	0.367	7.1
1,1,2-Trichloro-1,2,2-trifluoroetha	0.415	0.430	0.421	0.394	0.348	0.402	8.1
Acetone	0.195	0.166	0.175	0.140	0.117	0.158	19.3
Carbon disulfide	1.077	1.240	1.318	1.310	1.181	1.225	8.2
Methyl Acetate	0.229	0.202	0.233	0.200	0.189	0.210	9.2
Methylene chloride	0.409	0.369	0.355	0.334	0.299	0.353	11.6
trans-1,2-Dichloroethene	0.359	0.372	0.398	0.382	0.338	0.370	6.2
Methyl tert-butyl Ether	0.605	0.608	0.742	0.688	0.647	0.658	8.8
1,1-Dichloroethane	0.807	0.832	0.876	0.845	0.740	0.820	6.2
cis-1,2-Dichloroethene	0.330	0.352	0.387	0.369	0.325	0.353	7.4
2-Butanone	0.169	0.153	0.182	0.146	0.129	0.156	13.2
Bromochloromethane	0.127	0.133	0.140	0.131	0.118	0.130	6.3
Chloroform	0.718	0.730	0.739	0.689	0.606	0.697	7.8
1,1,1-Trichloroethane	0.764	0.817	0.820	0.801	0.710	0.783	5.9
Cyclohexane	0.902	1.001	1.096	1.086	0.967	1.010	8.1
Carbon tetrachloride	0.673	0.736	0.751	0.733	0.654	0.709	6
Benzene	1.885	1.865	1.896	1.871	1.717	1.847	4
1,2-Dichloroethane	0.558	0.543	0.559	0.521	0.471	0.530	6.9
Trichloroethene	0.473	0.480	0.504	0.495	0.446	0.480	4.7
Methylcyclohexane	0.867	0.931	0.991	0.996	0.889	0.935	6.2
1,2-Dichloropropane	0.471	0.481	0.476	0.468	0.429	0.465	4.4
Bromodichloromethane	0.520	0.549	0.585	0.573	0.522	0.550	5.3
cis-1,3-Dichloropropene	0.509	0.570	0.695	0.648	0.598	0.604	11.9
4-Methyl-2-pentanone	0.315	0.303	0.365	0.321	0.300	0.321	8.1
Toluene	1.784	1.823	1.886	1.863	1.747	1.821	3.1
trans-1,3-Dichloropropene	0.402	0.494	0.594	0.569	0.534	0.519	14.5

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method : VOA Level : LOW

Instrument ID: MSVOA_T Calibration Date(s): 05/06/2016 05/06/2016

GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 09:38 11:23

Length : 20 (m)

Heated Purge: (Y/N): Y Purge Volume : 10 (mL)

LAB FILE ID: RRF2.5 = VT013931.D RRF5.0 = VT013932.D
RRF25 = VT013933.D RRF50 = VT013934.D RRF100 = VT013935.D

ANALYTE	RRF2.5	RRF5.0	RRF25	RRF50	RRF100	$\overline{RRF}$	% RSD
1,1,2-Trichloroethane	0.254	0.259	0.264	0.250	0.230	0.251	5.2
Tetrachloroethene	0.333	0.347	0.364	0.368	0.336	0.349	4.5
2-Hexanone	0.274	0.250	0.315	0.264	0.242	0.269	10.7
Dibromochloromethane	0.265	0.286	0.332	0.326	0.307	0.303	9.3
1,2-Dibromoethane	0.241	0.228	0.258	0.244	0.228	0.240	5.3
Chlorobenzene	1.078	1.051	1.116	1.079	0.994	1.064	4.2
Ethylbenzene	2.093	2.132	2.247	2.224	2.067	2.153	3.7
o-xylene	0.634	0.696	0.794	0.799	0.746	0.734	9.5
m,p-Xylene	0.703	0.767	0.818	0.819	0.756	0.773	6.2
Styrene	1.129	1.130	1.214	1.219	1.154	1.169	3.8
Bromoform	0.328	0.289	0.332	0.336	0.338	0.324	6.2
Isopropylbenzene	1.904	2.085	2.295	2.296	2.129	2.142	7.6
1,1,2,2-Tetrachloroethane	0.332	0.320	0.346	0.311	0.287	0.319	7
1,3-Dichlorobenzene	1.469	1.536	1.677	1.687	1.551	1.584	6
1,4-Dichlorobenzene	1.726	1.640	1.651	1.632	1.525	1.635	4.4
1,2-Dichlorobenzene	1.399	1.410	1.481	1.434	1.356	1.416	3.2
1,2-Dibromo-3-chloropropane	0.122	0.094	0.122	0.111	0.111	0.112	10.3
1,2,4-trichlorobenzene	0.727	0.779	0.947	0.951	0.882	0.857	11.7
1,2,3-Trichlorobenzene	0.713	0.719	0.783	0.746	0.678	0.728	5.4
Vinyl Chloride-d3	0.310	0.345	0.503	0.472	0.441	0.414	20
Chloroethane-d5	0.246	0.273	0.349	0.323	0.306	0.299	13.5
1,1-Dichloroethene-d2	0.784	0.830	0.953	0.899	0.794	0.852	8.5
2-Butanone-d5	0.095	0.092	0.111	0.097	0.098	0.099	7.2
Chloroform-d	0.706	0.734	0.745	0.678	0.624	0.698	6.9
1,2-Dichloroethane-d4	0.448	0.417	0.435	0.380	0.364	0.409	8.7
Benzene-d6	1.500	1.581	1.649	1.560	1.529	1.564	3.6
1,2-Dichloropropane-d6	0.444	0.458	0.487	0.465	0.453	0.461	3.5
Toluene-d8	1.325	1.412	1.490	1.419	1.392	1.408	4.2
trans-1,3-Dichloropropene-d4	0.147	0.166	0.196	0.188	0.198	0.179	12.2
2-Hexanone-d5	0.061	0.068	0.088	0.075	0.078	0.074	13.8
1,1,2,2-Tetrachloroethane-d2	0.334	0.326	0.339	0.295	0.295	0.318	6.7
1,2-Dichlorobenzene-d4	0.885	0.874	0.899	0.859	0.872	0.878	1.7

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013544.D
Acq On : 12 Apr 2016 12:45
Operator : FY/SY
Sample : VSTD2.585
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 12 14:01:04 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 12:27:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD2.585

Manual Integrations APPROVED
MMdadoda
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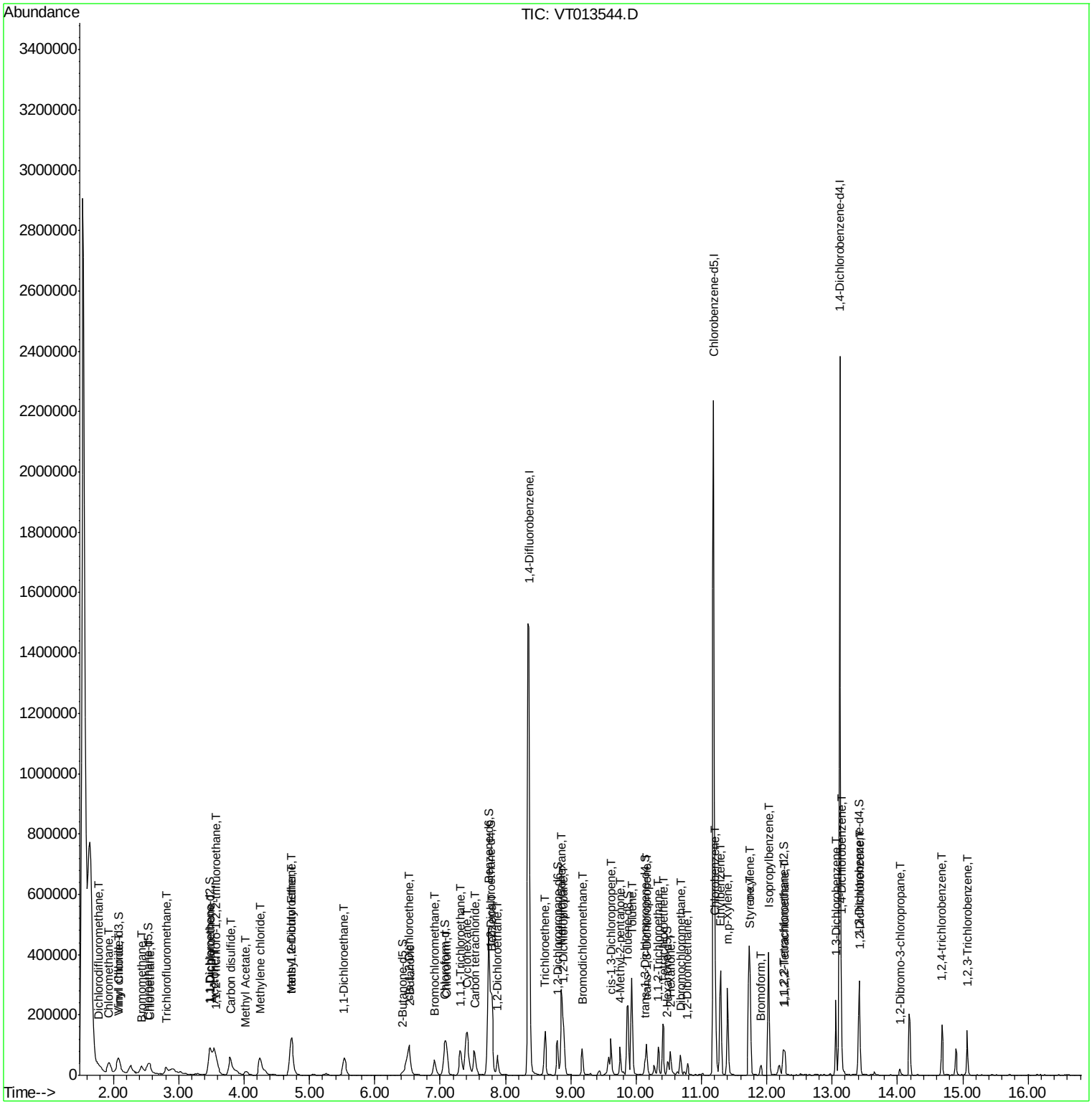

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013544.D
Acq On : 12 Apr 2016 12:45
Operator : FY/SY
Sample : VSTD2.585
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 12 14:01:04 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 12:27:43 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD2.585

Manual Integrations APPROVED
MMdadoda
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Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1293291	25.00	ug/L		0.00
28) Chlorobenzene-d5	11.19	117	1033720	25.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	507731	25.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.08	65	64216	3.18	ug/L		0.00
7) Chloroethane-d5	2.53	69	42889	2.84	ug/L		0.00
10) 1,1-Dichloroethene-d2	3.47	63	110593	2.79	ug/L		0.00
20) 2-Butanone-d5	6.43	46	21894	4.75	ug/L		0.00
24) Chloroform-d	7.07	84	94162	2.88	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.78	65	49851	2.83	ug/L		0.00
29) Benzene-d6	7.74	84	189285	2.89	ug/L		0.00
33) 1,2-Dichloropropane-d6	8.80	67	52353	2.72	ug/L		0.00
37) Toluene-d8	9.87	98	151898	2.69	ug/L		0.00
38) trans-1,3-Dichloropropene-	10.13	79	15794	2.45	ug/L		0.00
39) 2-Hexanone-d5	10.48	63	12662	4.32	ug/L		0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	31902	2.62	ug/L		0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	49290	2.86	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.77	85	63052	2.24	ug/L		98
3) Chloromethane	1.93	50	73752	2.47	ug/L		98
5) Vinyl chloride	2.09	62	67980	2.49	ug/L		100
6) Bromomethane	2.43	94	32903	2.46	ug/L		98
8) Chloroethane	2.56	64	38615	2.54	ug/L		97
9) Trichlorofluoromethane	2.81	101	77609m	2.49	ug/L		
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	48660	2.52	ug/L		99
12) 1,1-Dichloroethene	3.48	96	43896	2.44	ug/L		94
13) Acetone	3.54	43	32180	5.60	ug/L		97
14) Carbon disulfide	3.79	76	147926	2.46	ug/L		98
15) Methyl Acetate	4.03	43	24349	2.56	ug/L		99
16) Methylene chloride	4.24	84	47814	2.63	ug/L		99
17) Methyl tert-butyl Ether	4.73	73	72616	2.36	ug/L		98
18) trans-1,2-Dichloroethene	4.73	96	45412	2.42	ug/L		96
19) 1,1-Dichloroethane	5.53	63	97472	2.49	ug/L		99
21) 2-Butanone	6.54	43	35524	5.50	ug/L		100
22) cis-1,2-Dichloroethene	6.53	96	45292	2.55	ug/L		84
23) Bromochloromethane	6.92	128	17001	2.64	ug/L		89
25) Chloroform	7.09	83	87833	2.68	ug/L		98
27) 1,2-Dichloroethane	7.87	62	60863	2.70	ug/L		100
30) Cyclohexane	7.41	56	106925	2.54	ug/L		99
31) 1,1,1-Trichloroethane	7.31	97	74839	2.61	ug/L		98
32) Carbon tetrachloride	7.53	117	69478	2.61	ug/L		99
34) Benzene	7.79	78	205192	2.63	ug/L		100
35) Trichloroethene	8.61	95	49636	2.56	ug/L		98
36) Methylcyclohexane	8.86	83	99186	2.66	ug/L		97
40) 1,2-Dichloropropane	8.89	63	50133	2.62	ug/L	#	98
41) Bromodichloromethane	9.18	83	53608	2.60	ug/L		100
42) cis-1,3-Dichloropropene	9.61	75	56319	2.36	ug/L		99
43) 4-Methyl-2-pentanone	9.76	43	63955	5.45	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013544.D
Acq On : 12 Apr 2016 12:45
Operator : FY/SY
Sample : VSTD2.585
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 12 14:01:04 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 12:27:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD2.585

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
44) Toluene	9.93	91	202702	2.67 ug/L	98
45) trans-1,3-Dichloropropene	10.16	75	43355	2.25 ug/L	98
46) 1,1,2-Trichloroethane	10.34	97	25581	2.60 ug/L	98
47) Tetrachloroethene	10.42	164	35991	2.53 ug/L	96
49) 2-Hexanone	10.53	43	51553	5.50 ug/L	96
50) Dibromochloromethane	10.68	129	29427	2.52 ug/L	99
51) 1,2-Dibromoethane	10.79	107	23387	2.56 ug/L	93
52) Chlorobenzene	11.21	112	114394	2.65 ug/L	97
53) Ethylbenzene	11.29	91	223259	2.55 ug/L	99
54) m,p-Xylene	11.40	106	81288	2.54 ug/L	98
55) o-xylene	11.73	106	73031	2.44 ug/L	91
56) Styrene	11.74	104	117245	2.51 ug/L	98
57) Isopropylbenzene	12.03	105	210345	2.46 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	32850	2.75 ug/L	99
61) Bromoform	11.91	173	13907	2.47 ug/L	99
62) 1,3-Dichlorobenzene	13.06	146	82104	2.58 ug/L	99
63) 1,4-Dichlorobenzene	13.14	146	82033	2.53 ug/L	99
64) 1,2-Dichlorobenzene	13.42	146	74546	2.67 ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.04	75	4722	2.68 ug/L	95
66) 1,2,4-trichlorobenzene	14.68	180	42733	2.53 ug/L	100
67) 1,2,3-Trichlorobenzene	15.07	180	38734	2.77 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013544.D
Acq On : 12 Apr 2016 12:45
Operator : FY/SY
Sample : VSTD2.585
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 12 14:01:04 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 12:27:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD2.585

Manual Integrations APPROVED
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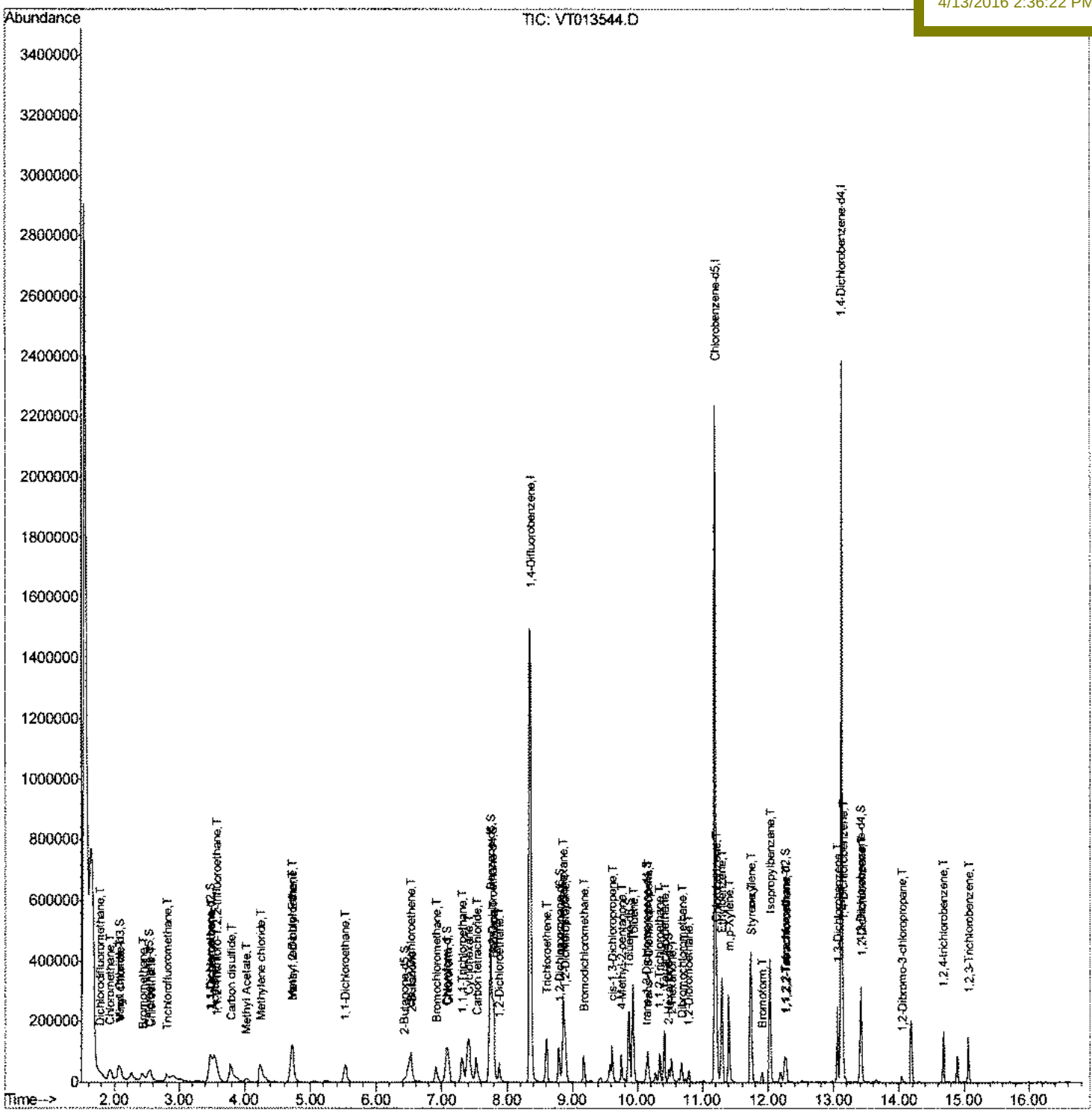
4/13/2016 2:36:22 PM



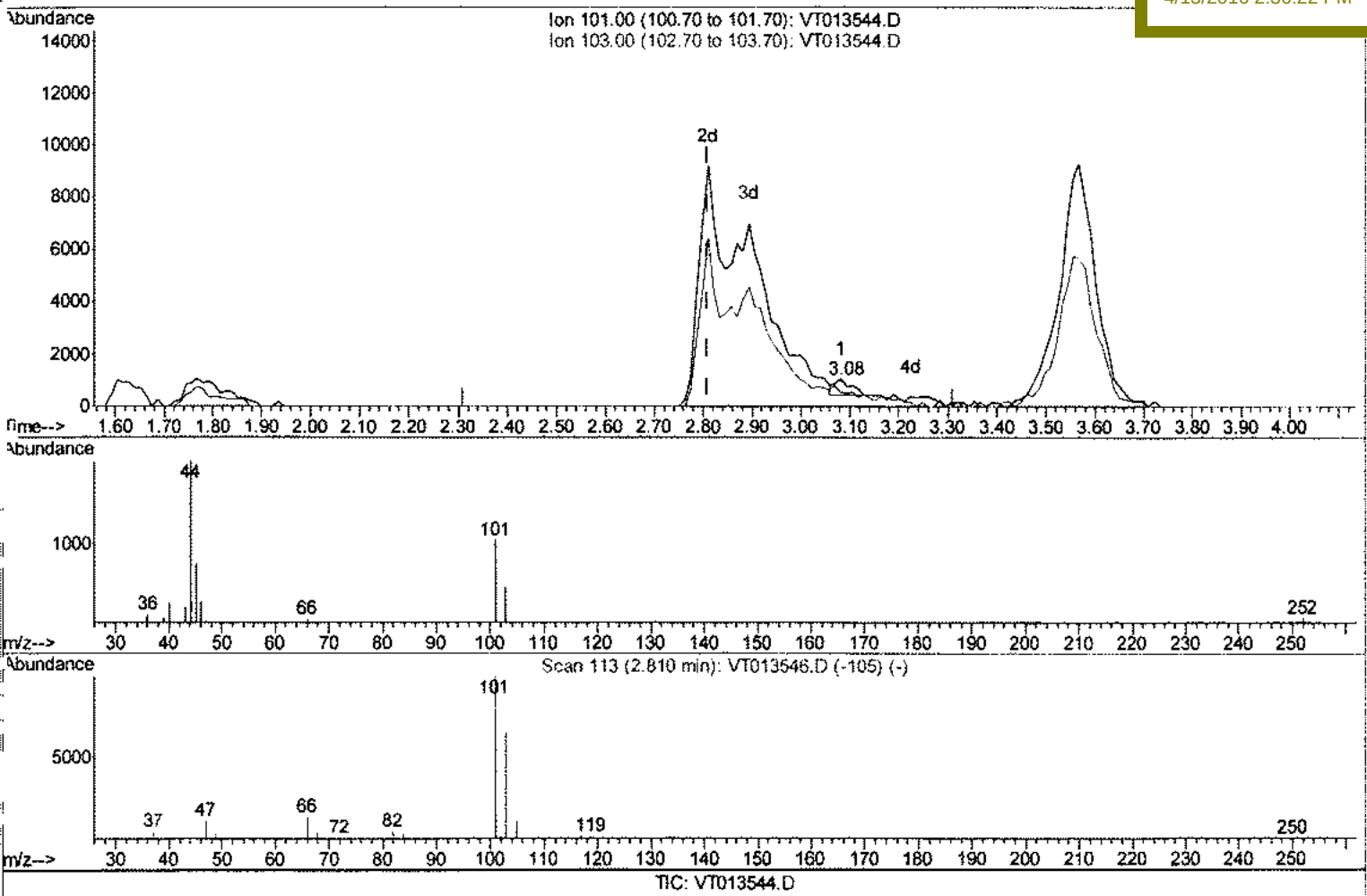
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013544.D
Acq On : 12 Apr 2016 12:45
Operator : FY/SY
Sample : VSTD2.585
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 12 13:28:04 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 12:27:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD2.585

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:22 PM



TIC: VT013544.D

(9) Trichlorofluoromethane (T)

3.082min (+0.272) 0.05ug/L

response 1485

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	21.21
0.00	0.00	0.00
0.00	0.00	0.00

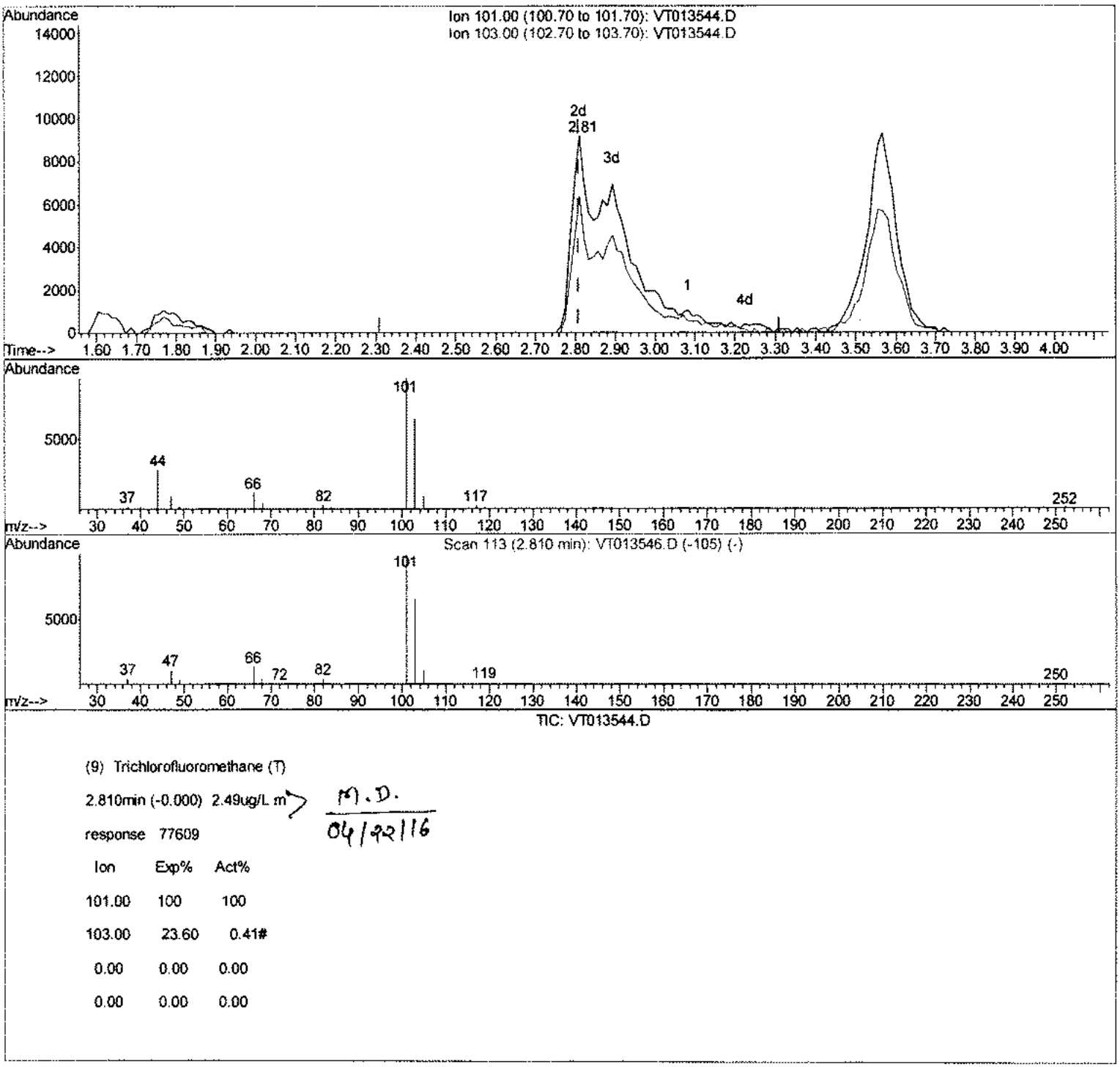
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013544.D
Acq On : 12 Apr 2016 12:45
Operator : FY/SY
Sample : VSTD2.585
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 12 13:28:04 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 12:27:43 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD2.585

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:22 PM



TIC: VT013544.D

(9) Trichlorofluoromethane (T)

2.810min (-0.000) 2.49ug/L m

response 77609

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	0.41#
0.00	0.00	0.00
0.00	0.00	0.00

M.D. 04/22/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013544.D
Acq On : 12 Apr 2016 12:45
Operator : FY/SY
Sample : VSTD2.585
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 12 14:01:04 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 12:27:43 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD2.585

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:22 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1293291	25.00	ug/L		0.00
28) Chlorobenzene-d5	11.19	117	1033720	25.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	507731	25.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.08	65	64216	3.18	ug/L		0.00
7) Chloroethane-d5	2.53	69	42889	2.84	ug/L		0.00
10) 1,1-Dichloroethene-d2	3.47	63	110593	2.79	ug/L		0.00
20) 2-Butanone-d5	6.43	46	21894	4.75	ug/L		0.00
24) Chloroform-d	7.07	84	94162	2.88	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.78	65	49851	2.83	ug/L		0.00
29) Benzene-d6	7.74	84	189285	2.89	ug/L		0.00
33) 1,2-Dichloropropane-d6	8.80	67	52353	2.72	ug/L		0.00
37) Toluene-d8	9.87	98	151898	2.69	ug/L		0.00
38) trans-1,3-Dichloropropene-	10.13	79	15794	2.45	ug/L		0.00
39) 2-Hexanone-d5	10.48	63	12662	4.32	ug/L		0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	31902	2.62	ug/L		0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	49290	2.86	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.77	85	63052	2.24	ug/L		98
3) Chloromethane	1.93	50	73752	2.47	ug/L		98
5) Vinyl chloride	2.09	62	67980	2.49	ug/L		100
6) Bromomethane	2.43	94	32903	2.46	ug/L		98
8) Chloroethane	2.56	64	38615	2.54	ug/L		97
9) Trichlorofluoromethane	2.81	101	77609m	2.49	ug/L		
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	48660	2.52	ug/L		99
12) 1,1-Dichloroethene	3.48	96	43896	2.44	ug/L		94
13) Acetone	3.54	43	32180	5.60	ug/L		97
14) Carbon disulfide	3.79	76	147926	2.46	ug/L		98
15) Methyl Acetate	4.03	43	24349	2.56	ug/L		99
16) Methylene chloride	4.24	84	47814	2.63	ug/L		99
17) Methyl tert-butyl Ether	4.73	73	72616	2.36	ug/L		98
18) trans-1,2-Dichloroethene	4.73	96	45412	2.42	ug/L		96
19) 1,1-Dichloroethane	5.53	63	97472	2.49	ug/L		99
21) 2-Butanone	6.54	43	35524	5.50	ug/L		100
22) cis-1,2-Dichloroethene	6.53	96	45292	2.55	ug/L		84
23) Bromochloromethane	6.92	128	17001	2.64	ug/L		89
25) Chloroform	7.09	83	87833	2.68	ug/L		98
27) 1,2-Dichloroethane	7.87	62	60863	2.70	ug/L		100
30) Cyclohexane	7.41	56	106925	2.54	ug/L		99
31) 1,1,1-Trichloroethane	7.31	97	74839	2.61	ug/L		98
32) Carbon tetrachloride	7.53	117	69478	2.61	ug/L		99
34) Benzene	7.79	78	205192	2.63	ug/L		100
35) Trichloroethene	8.61	95	49636	2.56	ug/L		98
36) Methylcyclohexane	8.86	83	99186	2.66	ug/L		97
40) 1,2-Dichloropropane	8.89	63	50133	2.62	ug/L	#	98
41) Bromodichloromethane	9.18	83	53608	2.60	ug/L		100
42) cis-1,3-Dichloropropene	9.61	75	56319	2.36	ug/L		99
43) 4-Methyl-2-pentanone	9.76	43	63955	5.45	ug/L		99

M.D. 04/22/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013544.D
Acq On : 12 Apr 2016 12:45
Operator : FY/SY
Sample : VSTD2.585
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD2.585

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:22 PM

Quant Time: Apr 12 14:01:04 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 12:27:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
44) Toluene	9.93	91	202702	2.67 ug/L	98
45) trans-1,3-Dichloropropene	10.16	75	43355	2.25 ug/L	98
46) 1,1,2-Trichloroethane	10.34	97	25581	2.60 ug/L	98
47) Tetrachloroethene	10.42	164	35991	2.53 ug/L	96
49) 2-Hexanone	10.53	43	51553	5.50 ug/L	96
50) Dibromochloromethane	10.68	129	29427	2.52 ug/L	99
51) 1,2-Dibromoethane	10.79	107	23387	2.56 ug/L	93
52) Chlorobenzene	11.21	112	114394	2.65 ug/L	97
53) Ethylbenzene	11.29	91	223259	2.55 ug/L	99
54) m,p-Xylene	11.40	106	81288	2.54 ug/L	98
55) o-xylene	11.73	106	73031	2.44 ug/L	91
56) Styrene	11.74	104	117245	2.51 ug/L	98
57) Isopropylbenzene	12.03	105	210345	2.46 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	32850	2.75 ug/L	99
61) Bromoform	11.91	173	13907	2.47 ug/L	99
62) 1,3-Dichlorobenzene	13.06	146	82104	2.58 ug/L	99
63) 1,4-Dichlorobenzene	13.14	146	82033	2.53 ug/L	99
64) 1,2-Dichlorobenzene	13.42	146	74546	2.67 ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.04	75	4722	2.68 ug/L	95
66) 1,2,4-trichlorobenzene	14.68	180	42733	2.53 ug/L	100
67) 1,2,3-Trichlorobenzene	15.07	180	38734	2.77 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

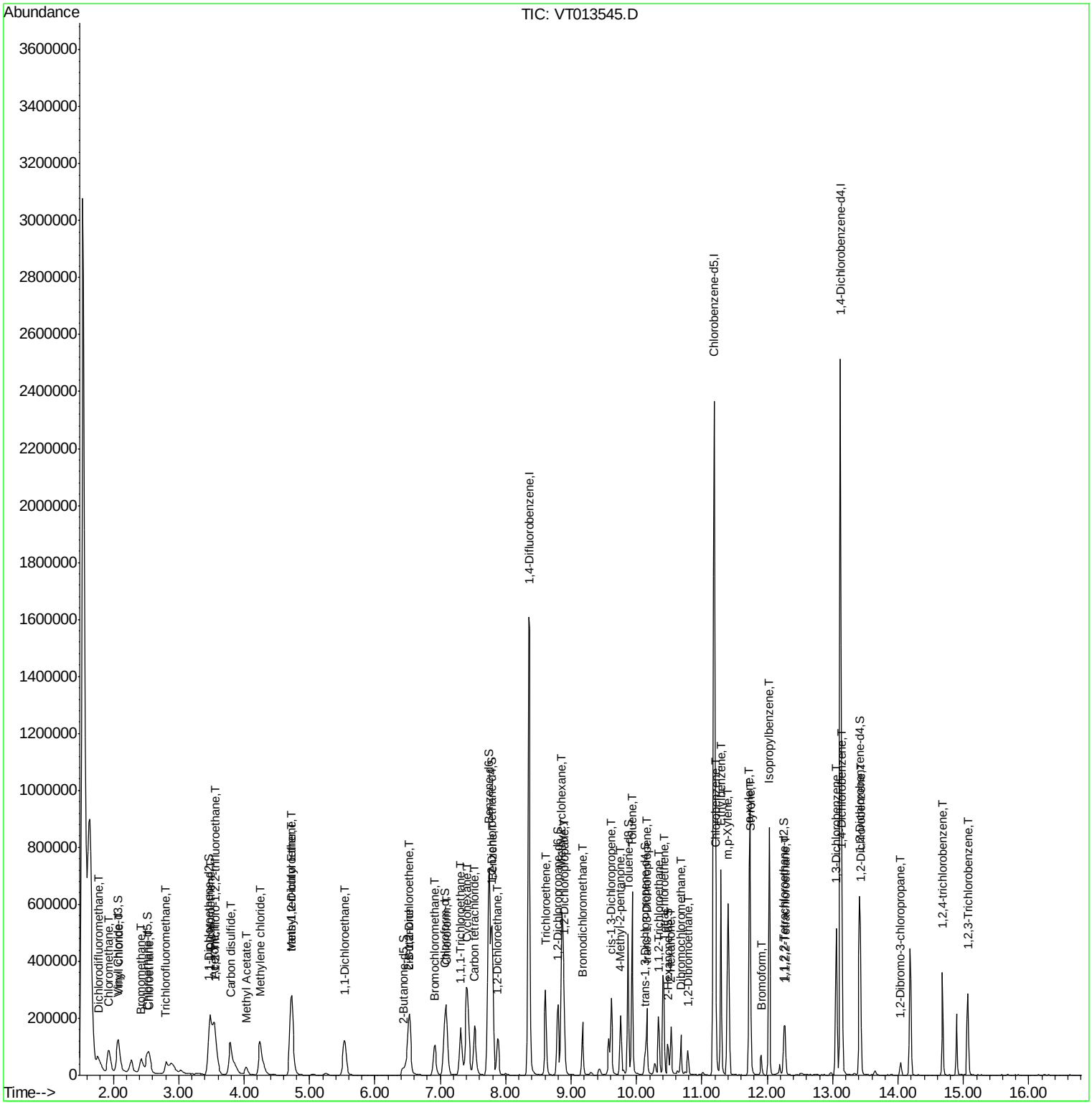
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013545.D
Acq On : 12 Apr 2016 13:11
Operator : FY/SY
Sample : VSTD00586
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 12 14:03:19 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 13:31:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD00586

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:20 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013545.D
Acq On : 12 Apr 2016 13:11
Operator : FY/SY
Sample : VSTD00586
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 12 14:03:19 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 13:31:25 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD00586

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:20 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1350243	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	1093553	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	531440	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.06	65	135977	6.45	ug/L	-0.01
7) Chloroethane-d5	2.51	69	93325	5.93	ug/L	-0.01
10) 1,1-Dichloroethene-d2	3.46	63	244125	5.91	ug/L	-0.01
20) 2-Butanone-d5	6.43	46	52479	10.91	ug/L	0.00
24) Chloroform-d	7.07	84	193821	5.68	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	103478	5.63	ug/L	0.00
29) Benzene-d6	7.74	84	389843	5.62	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	111784	5.50	ug/L	0.00
37) Toluene-d8	9.87	98	334485	5.59	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.14	79	33591	4.92	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	31302	10.09	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	72592	5.65	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	97549	5.40	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	132854	4.52	ug/L	100
3) Chloromethane	1.92	50	158522	5.09	ug/L	100
5) Vinyl chloride	2.08	62	144983	5.08	ug/L	96
6) Bromomethane	2.42	94	73442	5.26	ug/L	98
8) Chloroethane	2.55	64	81423	5.14	ug/L	95
9) Trichlorofluoromethane	2.80	101	173708m	5.33	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.56	101	107849	5.36	ug/L	98
12) 1,1-Dichloroethene	3.48	96	97131	5.17	ug/L	89
13) Acetone	3.54	43	70172	11.69	ug/L	98
14) Carbon disulfide	3.79	76	330229	5.26	ug/L	98
15) Methyl Acetate	4.03	43	58418	5.87	ug/L	96
16) Methylene chloride	4.24	84	101215	5.34	ug/L	100
17) Methyl tert-butyl Ether	4.73	73	170538	5.31	ug/L	98
18) trans-1,2-Dichloroethene	4.73	96	102449	5.23	ug/L	96
19) 1,1-Dichloroethane	5.53	63	216208	5.29	ug/L	97
21) 2-Butanone	6.53	43	79112	11.72	ug/L	97
22) cis-1,2-Dichloroethene	6.53	96	98921	5.34	ug/L	96
23) Bromochloromethane	6.92	128	36063	5.37	ug/L	94
25) Chloroform	7.09	83	180483	5.28	ug/L	97
27) 1,2-Dichloroethane	7.87	62	126834	5.39	ug/L	99
30) Cyclohexane	7.40	56	234356	5.26	ug/L	99
31) 1,1,1-Trichloroethane	7.31	97	157887	5.21	ug/L	98
32) Carbon tetrachloride	7.52	117	144705	5.13	ug/L	100
34) Benzene	7.79	78	417603	5.07	ug/L	100
35) Trichloroethene	8.61	95	104535	5.10	ug/L	98
36) Methylcyclohexane	8.86	83	209717	5.32	ug/L	99
40) 1,2-Dichloropropane	8.89	63	103441	5.11	ug/L	100
41) Bromodichloromethane	9.18	83	116183	5.32	ug/L	98
42) cis-1,3-Dichloropropene	9.61	75	130701	5.17	ug/L	97
43) 4-Methyl-2-pentanone	9.76	43	144679	11.65	ug/L	99

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013545.D
Acq On : 12 Apr 2016 13:11
Operator : FY/SY
Sample : VSTD00586
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD00586

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:20 PM

Quant Time: Apr 12 14:03:19 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 13:31:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) Toluene	9.93	91	410136	5.11	ug/L	100
45) trans-1,3-Dichloropropene	10.16	75	103266	5.07	ug/L	98
46) 1,1,2-Trichloroethane	10.34	97	54426	5.23	ug/L	98
47) Tetrachloroethene	10.42	164	72465	4.82	ug/L	97
49) 2-Hexanone	10.53	43	108288	10.91	ug/L	100
50) Dibromochloromethane	10.68	129	64925	5.25	ug/L	96
51) 1,2-Dibromoethane	10.79	107	52550	5.44	ug/L	95
52) Chlorobenzene	11.21	112	237043	5.19	ug/L	100
53) Ethylbenzene	11.29	91	469993	5.07	ug/L	100
54) m,p-Xylene	11.40	106	167782	4.95	ug/L	97
55) o-xylene	11.72	106	161944	5.11	ug/L	95
56) Styrene	11.74	104	249263	5.05	ug/L	100
57) Isopropylbenzene	12.03	105	455823	5.04	ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.28	83	71714	5.68	ug/L	97
61) Bromoform	11.91	173	31270	5.30	ug/L	97
62) 1,3-Dichlorobenzene	13.06	146	173848	5.23	ug/L	99
63) 1,4-Dichlorobenzene	13.14	146	170874	5.03	ug/L	98
64) 1,2-Dichlorobenzene	13.42	146	147048	5.02	ug/L	96
65) 1,2-Dibromo-3-chloropropan	14.04	75	10142	5.49	ug/L	95
66) 1,2,4-trichlorobenzene	14.68	180	90325	5.10	ug/L	98
67) 1,2,3-Trichlorobenzene	15.07	180	78539	5.37	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013545.D
Acq On : 12 Apr 2016 13:11
Operator : FY/SY
Sample : VSTD00586
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 12 14:03:19 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 13:31:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD00586

Manual Integrations APPROVED
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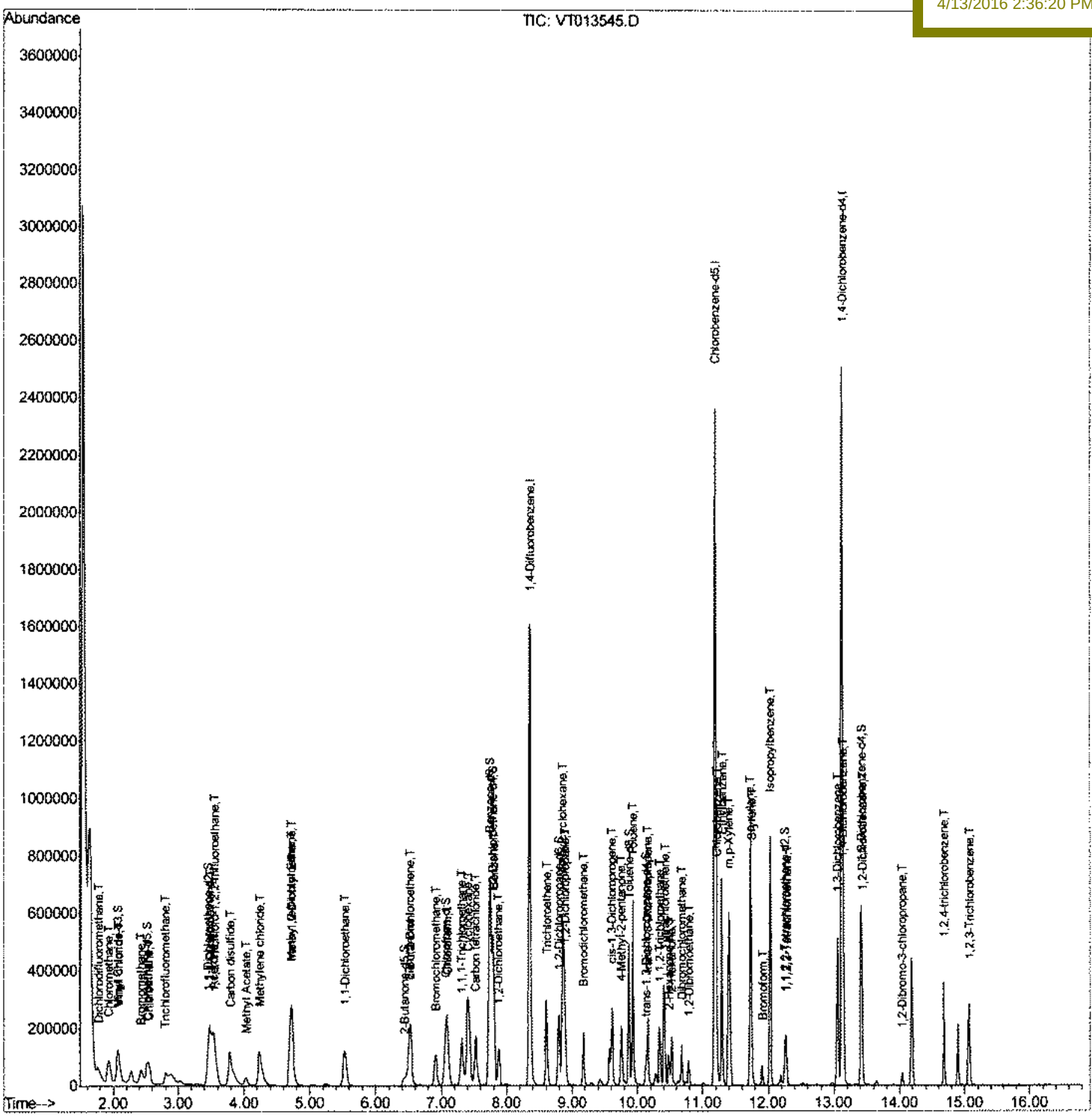


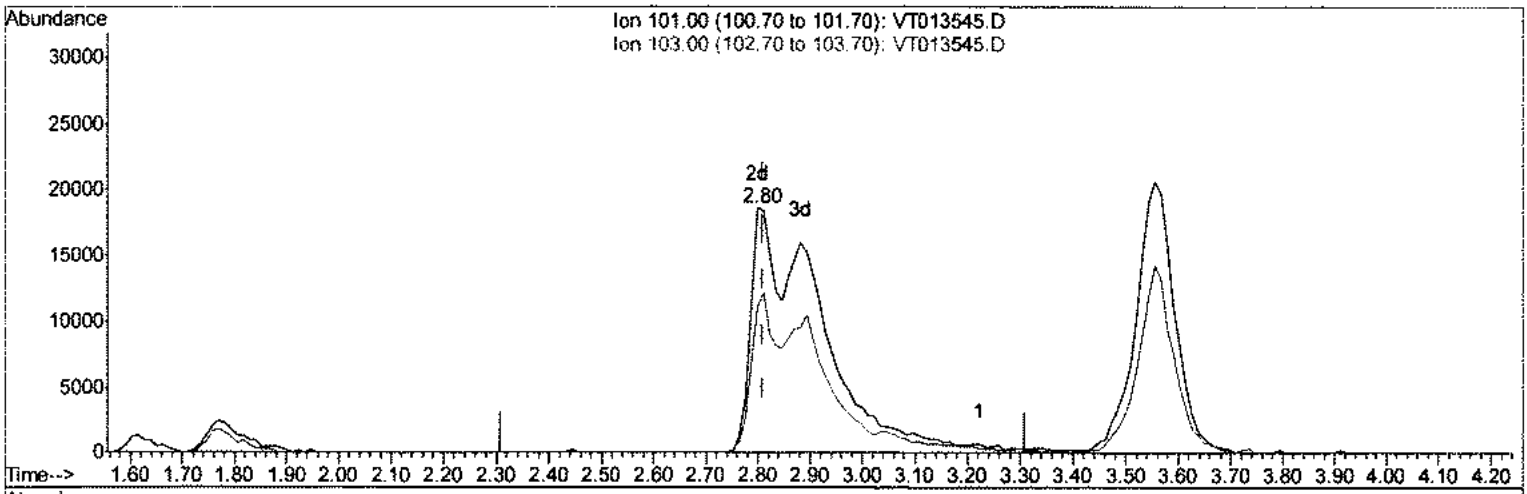
Quantitation Report (Qedit)

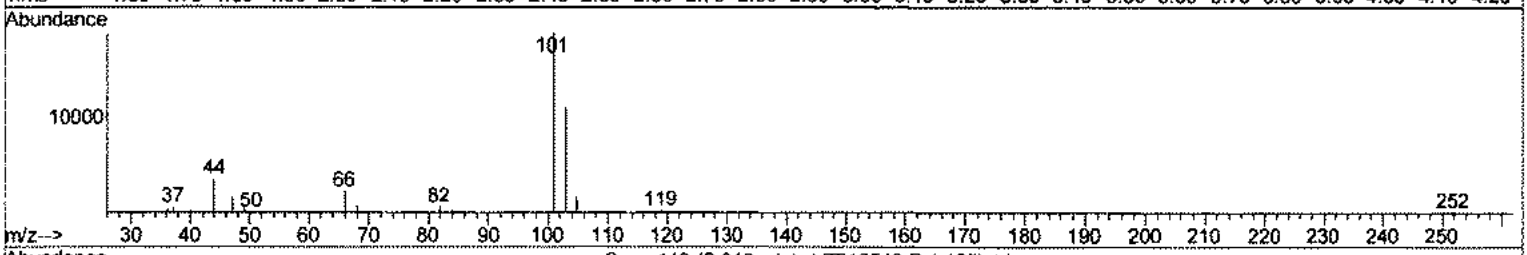
Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013545.D
Acq On : 12 Apr 2016 13:11
Operator : FY/SY
Sample : VSTD00586
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

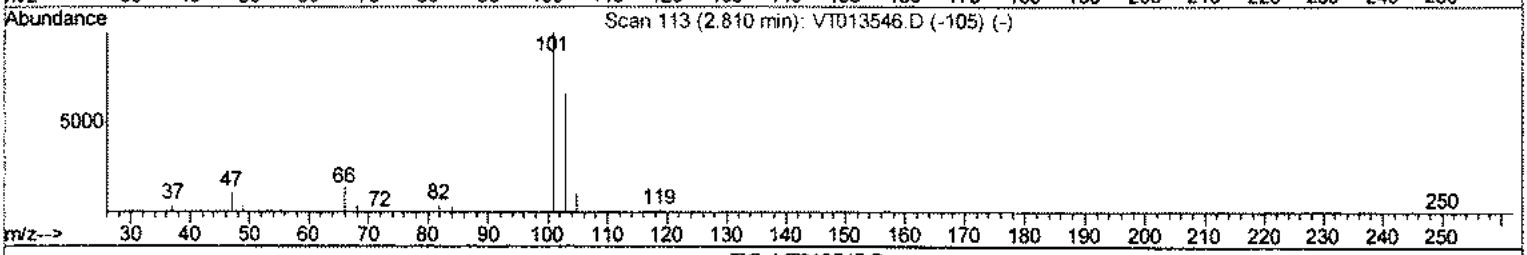
Quant Time: Apr 12 13:34:32 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 13:31:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD00586

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:20 PM







TIC: VT013545.D

(9) Trichlorofluoromethane (T)

2.799min (-0.012) 5.33ug/L m

response 173708

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	0.04#
0.00	0.00	0.00
0.00	0.00	0.00

m. D.
04/22/16

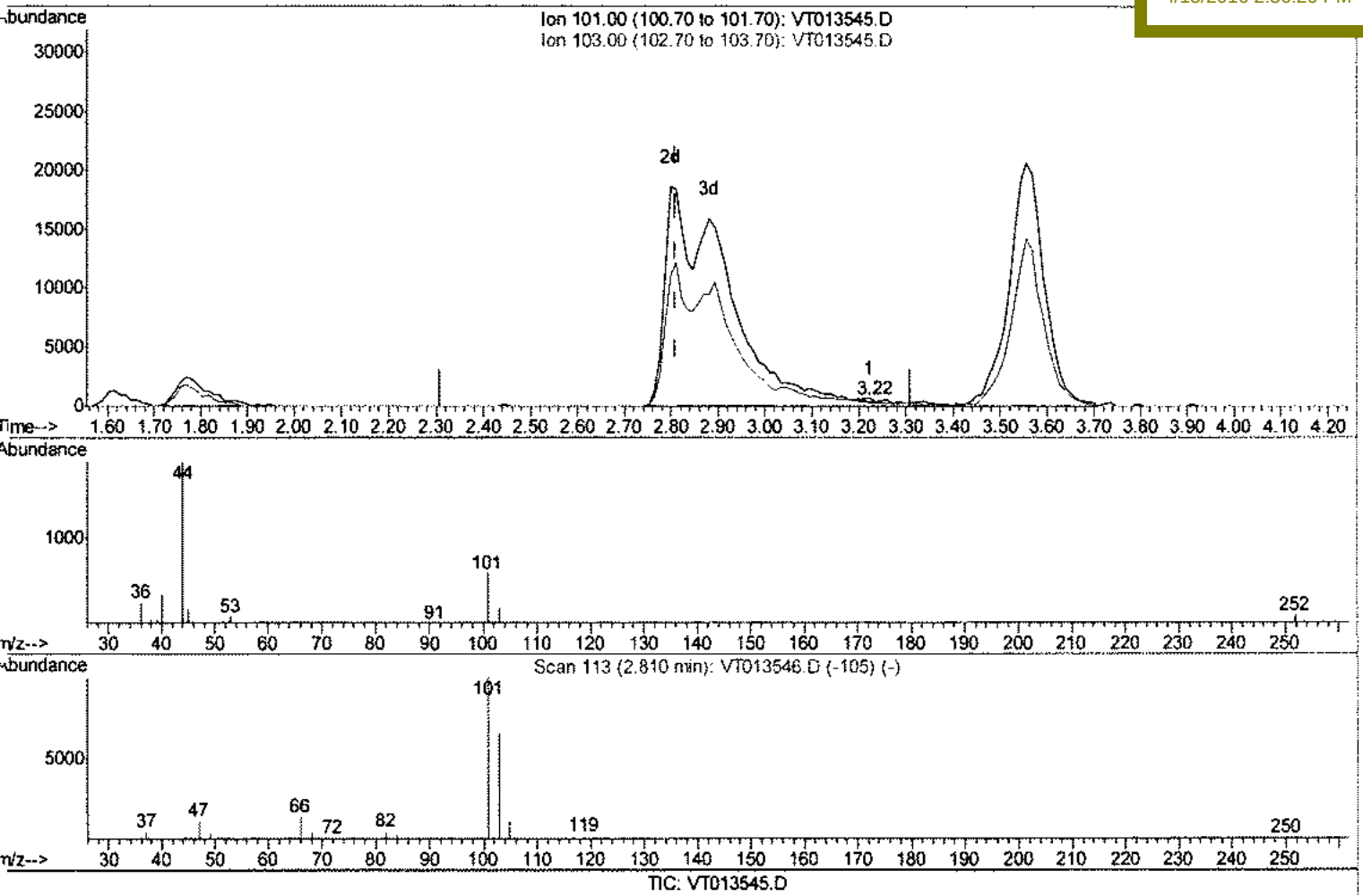
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013545.D
Acq On : 12 Apr 2016 13:11
Operator : FY/SY
Sample : VSTD00586
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 12 13:34:32 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 13:31:25 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD00586

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:20 PM



TIC: VT013545.D

(9) Trichlorofluoromethane (T)

3.225min (+0.414) 0.01ug/L

response 307

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	25.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013545.D
Acq On : 12 Apr 2016 13:11
Operator : FY/SY
Sample : VSTD00586
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 12 14:03:19 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 13:31:25 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD00586

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:20 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1350243	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	1093553	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	531440	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.06	65	135977	6.45	ug/L	-0.01
7) Chloroethane-d5	2.51	69	93325	5.93	ug/L	-0.01
10) 1,1-Dichloroethene-d2	3.46	63	244125	5.91	ug/L	-0.01
20) 2-Butanone-d5	6.43	46	52479	10.91	ug/L	0.00
24) Chloroform-d	7.07	84	193821	5.68	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	103478	5.63	ug/L	0.00
29) Benzene-d6	7.74	84	389843	5.62	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	111784	5.50	ug/L	0.00
37) Toluene-d8	9.87	98	334485	5.59	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.14	79	33591	4.92	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	31302	10.09	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	72592	5.65	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	97549	5.40	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	132854	4.52	ug/L	100
3) Chloromethane	1.92	50	158522	5.09	ug/L	100
5) Vinyl chloride	2.08	62	144983	5.08	ug/L	96
6) Bromomethane	2.42	94	73442	5.26	ug/L	98
8) Chloroethane	2.55	64	81423	5.14	ug/L	95
9) Trichlorofluoromethane	2.80	101	173708m	5.33	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.56	101	107849	5.36	ug/L	98
12) 1,1-Dichloroethene	3.48	96	97131	5.17	ug/L	89
13) Acetone	3.54	43	70172	11.69	ug/L	98
14) Carbon disulfide	3.79	76	330229	5.26	ug/L	98
15) Methyl Acetate	4.03	43	58418	5.87	ug/L	96
16) Methylene chloride	4.24	84	101215	5.34	ug/L	100
17) Methyl tert-butyl Ether	4.73	73	170538	5.31	ug/L	98
18) trans-1,2-Dichloroethene	4.73	96	102449	5.23	ug/L	96
19) 1,1-Dichloroethane	5.53	63	216208	5.29	ug/L	97
21) 2-Butanone	6.53	43	79112	11.72	ug/L	97
22) cis-1,2-Dichloroethene	6.53	96	98921	5.34	ug/L	96
23) Bromochloromethane	6.92	128	36063	5.37	ug/L	94
25) Chloroform	7.09	83	180483	5.28	ug/L	97
27) 1,2-Dichloroethane	7.87	62	126834	5.39	ug/L	99
30) Cyclohexane	7.40	56	234356	5.26	ug/L	99
31) 1,1,1-Trichloroethane	7.31	97	157887	5.21	ug/L	98
32) Carbon tetrachloride	7.52	117	144705	5.13	ug/L	100
34) Benzene	7.79	78	417603	5.07	ug/L	100
35) Trichloroethene	8.61	95	104535	5.10	ug/L	98
36) Methylcyclohexane	8.86	83	209717	5.32	ug/L	99
40) 1,2-Dichloropropane	8.89	63	103441	5.11	ug/L	100
41) Bromodichloromethane	9.18	83	116183	5.32	ug/L	98
42) cis-1,3-Dichloropropene	9.61	75	130701	5.17	ug/L	97
43) 4-Methyl-2-pentanone	9.76	43	144679	11.65	ug/L	99

M.D. 04/22/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013545.D
Acq On : 12 Apr 2016 13:11
Operator : FY/SY
Sample : VSTD00586
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD00586

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:20 PM

Quant Time: Apr 12 14:03:19 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 13:31:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
44) Toluene	9.93	91	410136	5.11 ug/L	100
45) trans-1,3-Dichloropropene	10.16	75	103266	5.07 ug/L	98
46) 1,1,2-Trichloroethane	10.34	97	54426	5.23 ug/L	98
47) Tetrachloroethene	10.42	164	72465	4.82 ug/L	97
49) 2-Hexanone	10.53	43	108288	10.91 ug/L	100
50) Dibromochloromethane	10.68	129	64925	5.25 ug/L	96
51) 1,2-Dibromoethane	10.79	107	52550	5.44 ug/L	95
52) Chlorobenzene	11.21	112	237043	5.19 ug/L	100
53) Ethylbenzene	11.29	91	469993	5.07 ug/L	100
54) m,p-Xylene	11.40	106	167782	4.95 ug/L	97
55) o-xylene	11.72	106	161944	5.11 ug/L	95
56) Styrene	11.74	104	249263	5.05 ug/L	100
57) Isopropylbenzene	12.03	105	455823	5.04 ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.28	83	71714	5.68 ug/L	97
61) Bromoform	11.91	173	31270	5.30 ug/L	97
62) 1,3-Dichlorobenzene	13.06	146	173848	5.23 ug/L	99
63) 1,4-Dichlorobenzene	13.14	146	170874	5.03 ug/L	98
64) 1,2-Dichlorobenzene	13.42	146	147048	5.02 ug/L	96
65) 1,2-Dibromo-3-chloropropan	14.04	75	10142	5.49 ug/L	95
66) 1,2,4-trichlorobenzene	14.68	180	90325	5.10 ug/L	98
67) 1,2,3-Trichlorobenzene	15.07	180	78539	5.37 ug/L	99

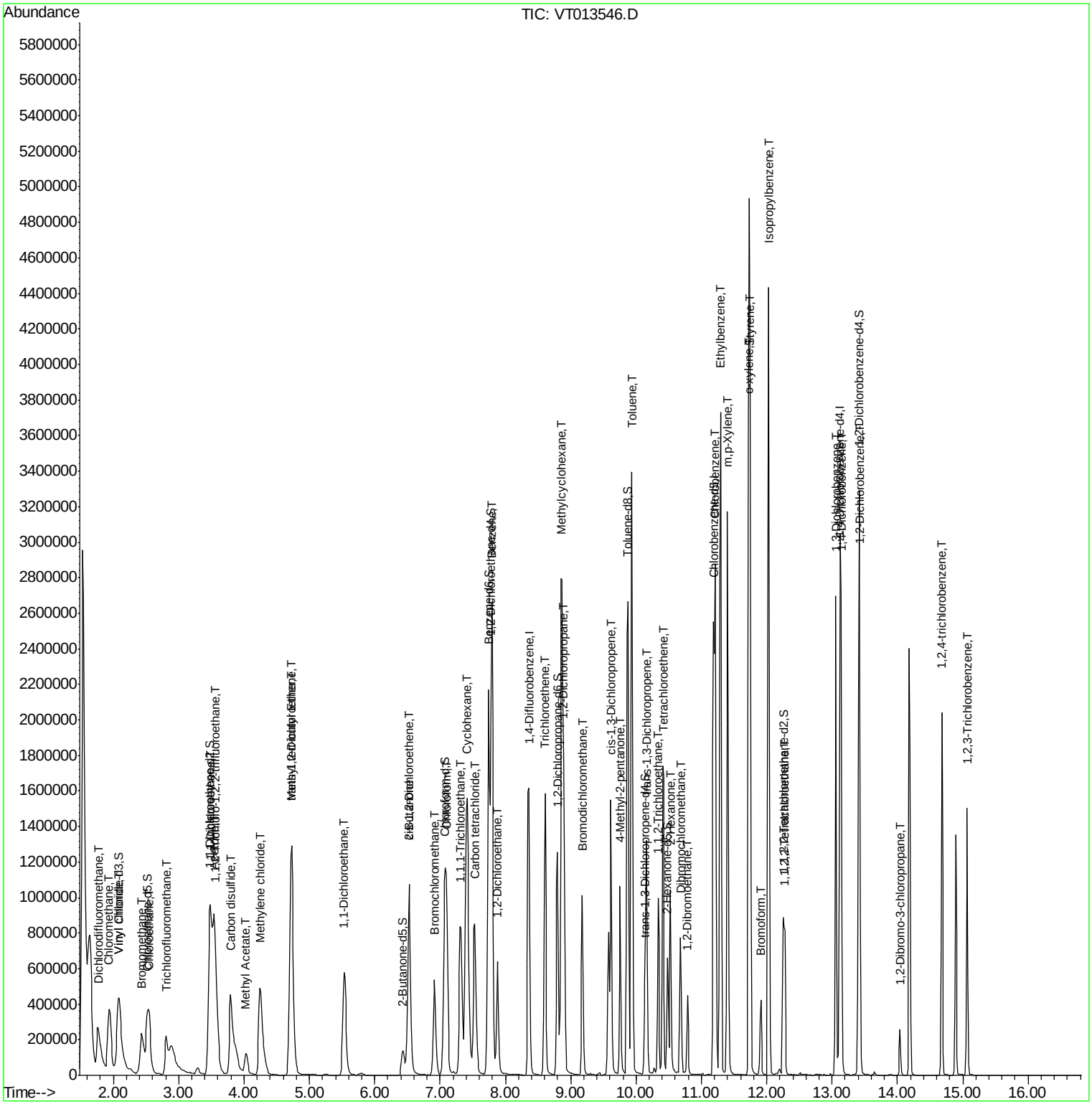
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013546.D
Acq On : 12 Apr 2016 13:37
Operator : FY/SY
Sample : VSTD02587
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 12 14:04:26 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:01:20 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02587

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:21 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013546.D
Acq On : 12 Apr 2016 13:37
Operator : FY/SY
Sample : VSTD02587
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 12 14:04:26 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:01:20 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02587

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:21 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1387721	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	1092901	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	554247	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	681272	31.43	ug/L	0.00
7) Chloroethane-d5	2.51	69	448695	27.73	ug/L	0.00
10) 1,1-Dichloroethene-d2	3.47	63	1132798	26.68	ug/L	0.00
20) 2-Butanone-d5	6.43	46	283729	57.40	ug/L	0.00
24) Chloroform-d	7.07	84	976831	27.84	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	527211	27.91	ug/L	0.00
29) Benzene-d6	7.74	84	2013411	29.06	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	594509	29.26	ug/L	0.00
37) Toluene-d8	9.87	98	1745011	29.18	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.13	79	223778	32.78	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	188038	60.67	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	370561	28.84	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	518787	27.56	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	737166	24.39	ug/L	98
3) Chloromethane	1.93	50	772554	24.13	ug/L	100
5) Vinyl chloride	2.09	62	705010	24.02	ug/L	98
6) Bromomethane	2.43	94	346443	24.12	ug/L	98
8) Chloroethane	2.55	64	382718	23.49	ug/L	97
9) Trichlorofluoromethane	2.81	101	829133m	24.75	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.56	101	483932	23.40	ug/L	100
12) 1,1-Dichloroethene	3.48	96	446117	23.10	ug/L	86
13) Acetone	3.54	43	395601	64.14	ug/L	100
14) Carbon disulfide	3.79	76	1663233	25.77	ug/L	100
15) Methyl Acetate	4.03	43	254620	24.90	ug/L	98
16) Methylene chloride	4.24	84	434144	22.28	ug/L	98
17) Methyl tert-butyl Ether	4.73	73	824367	24.99	ug/L	99
18) trans-1,2-Dichloroethene	4.73	96	482592	23.96	ug/L	99
19) 1,1-Dichloroethane	5.53	63	1027998	24.46	ug/L	99
21) 2-Butanone	6.53	43	457869	66.01	ug/L	97
22) cis-1,2-Dichloroethene	6.53	96	512703	26.94	ug/L	99
23) Bromochloromethane	6.92	128	183805	26.63	ug/L	98
25) Chloroform	7.09	83	920676	26.21	ug/L	99
27) 1,2-Dichloroethane	7.87	62	641359	26.52	ug/L	98
30) Cyclohexane	7.41	56	1249352	28.04	ug/L	99
31) 1,1,1-Trichloroethane	7.31	97	835320	27.59	ug/L	99
32) Carbon tetrachloride	7.53	117	769687	27.30	ug/L	98
34) Benzene	7.79	78	2165048	26.30	ug/L	100
35) Trichloroethene	8.61	95	544656	26.61	ug/L	100
36) Methylcyclohexane	8.86	83	1115048	28.29	ug/L	99
40) 1,2-Dichloropropane	8.89	63	543331	26.88	ug/L	99
41) Bromodichloromethane	9.18	83	617900	28.32	ug/L	98
42) cis-1,3-Dichloropropene	9.61	75	745630	29.54	ug/L	99
43) 4-Methyl-2-pentanone	9.76	43	735226	59.23	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013546.D
Acq On : 12 Apr 2016 13:37
Operator : FY/SY
Sample : VSTD02587
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 12 14:04:26 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:01:20 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02587

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) Toluene	9.93	91	2116243	26.39	ug/L	99
45) trans-1,3-Dichloropropene	10.16	75	598623	29.39	ug/L	99
46) 1,1,2-Trichloroethane	10.34	97	281353	27.07	ug/L	100
47) Tetrachloroethene	10.42	164	391767	26.07	ug/L	98
49) 2-Hexanone	10.53	43	686341	69.22	ug/L	100
50) Dibromochloromethane	10.68	129	348597	28.22	ug/L	93
51) 1,2-Dibromoethane	10.79	107	270222	27.99	ug/L	98
52) Chlorobenzene	11.21	112	1195094	26.16	ug/L	98
53) Ethylbenzene	11.29	91	2453203	26.49	ug/L	99
54) m,p-Xylene	11.40	106	901966	26.62	ug/L	97
55) o-xylene	11.72	106	859586	27.14	ug/L	99
56) Styrene	11.74	104	1342516	27.21	ug/L	98
57) Isopropylbenzene	12.03	105	2431022	26.91	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	348245	27.60	ug/L	99
61) Bromoform	11.91	173	183726	29.88	ug/L	99
62) 1,3-Dichlorobenzene	13.06	146	914256	26.37	ug/L	100
63) 1,4-Dichlorobenzene	13.14	146	880423	24.86	ug/L	99
64) 1,2-Dichlorobenzene	13.42	146	785788	25.75	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.04	75	59563	30.93	ug/L	96
66) 1,2,4-trichlorobenzene	14.68	180	504369	27.33	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	407723	26.73	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013546.D
Acq On : 12 Apr 2016 13:37
Operator : FY/SY
Sample : VSTD02587
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 12 14:04:26 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:01:20 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02587

Manual Integrations APPROVED
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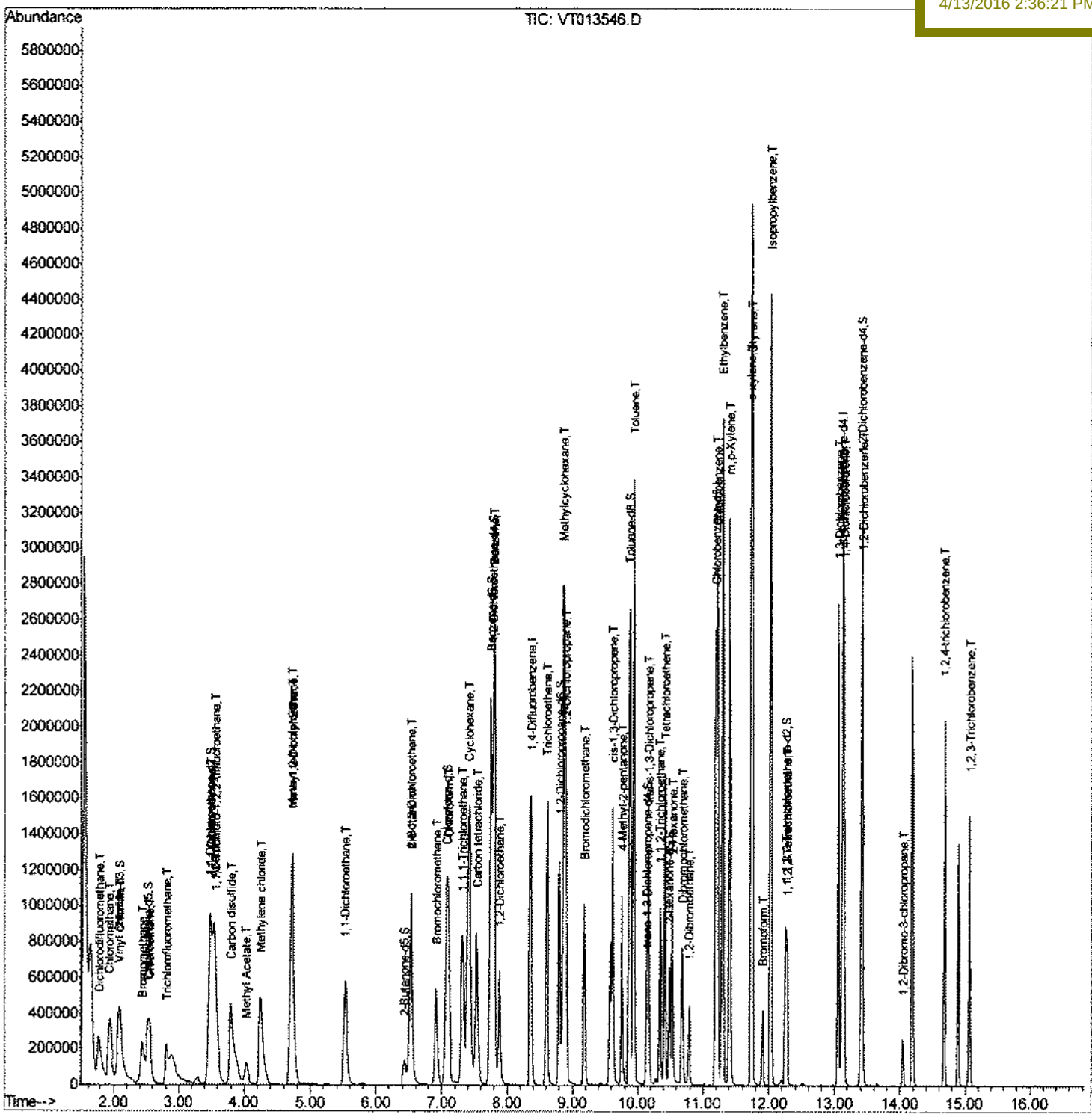


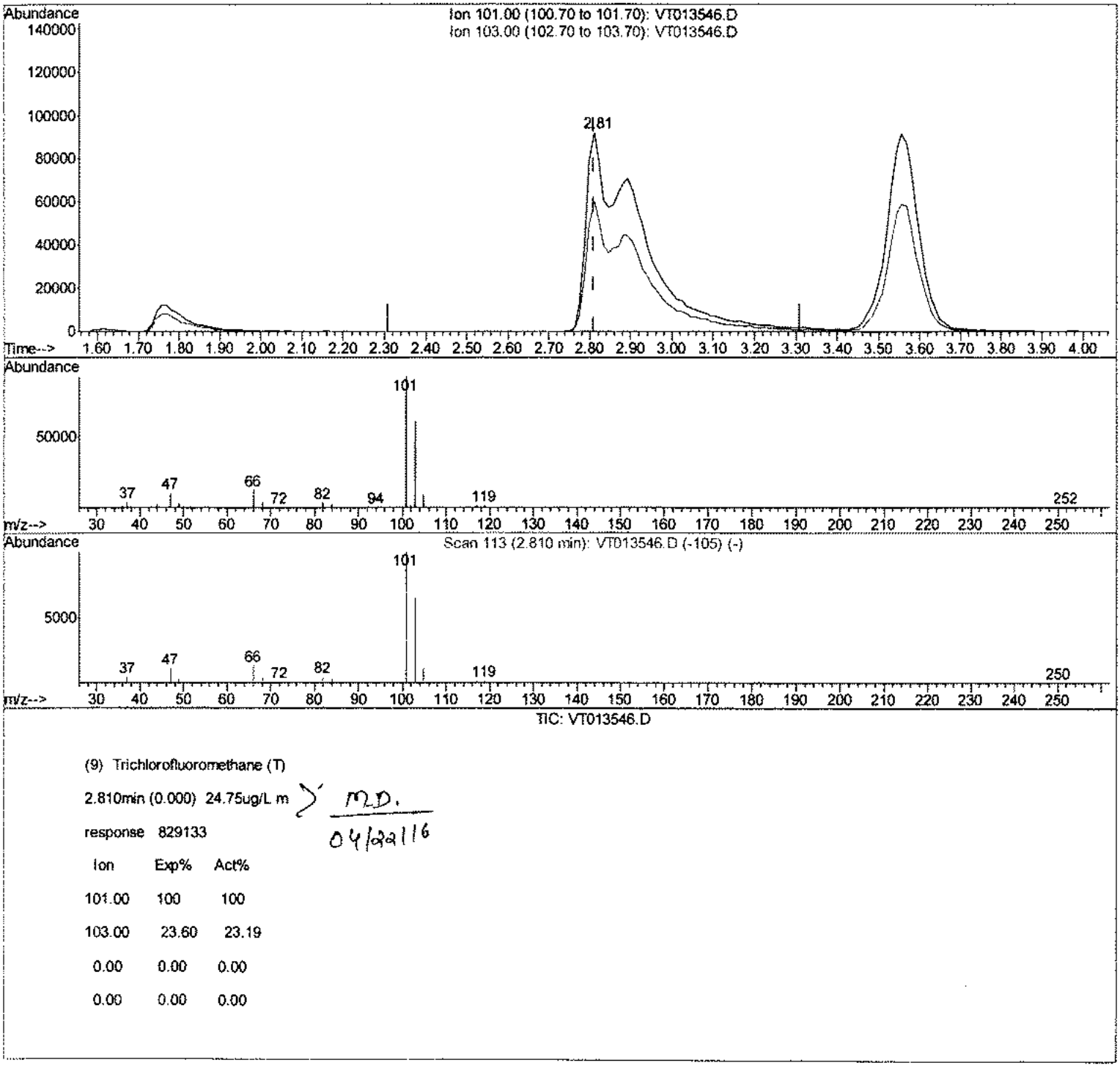
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013546.D
Acq On : 12 Apr 2016 13:37
Operator : FY/SY
Sample : VSTD02587
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 12 14:04:01 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:01:20 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02587

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:21 PM



TIC: VT013546.D

(9) Trichlorofluoromethane (T)

2.810min (0.000) 24.75ug/L m

response 829133

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	23.19
0.00	0.00	0.00
0.00	0.00	0.00

MD.
04/22/16

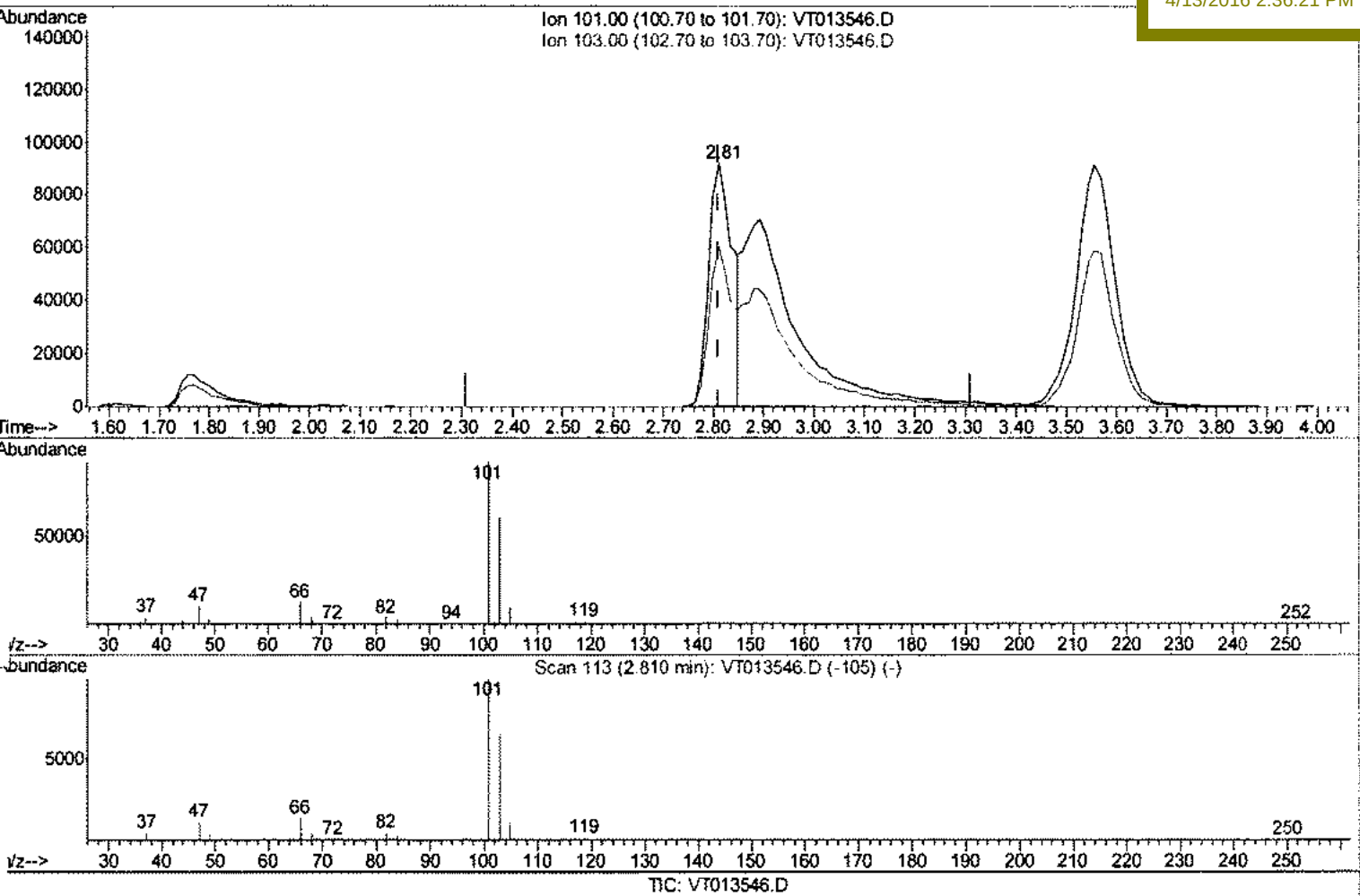
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013546.D
Acq On : 12 Apr 2016 13:37
Operator : FY/SY
Sample : VSTD02587
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 12 14:04:01 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:01:20 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02587

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:21 PM



TIC: VT013546.D

(9) Trichlorofluoromethane (T)

2.810min (0.000) 8.93ug/L

response 299089

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	64.29#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013546.D
Acq On : 12 Apr 2016 13:37
Operator : FY/SY
Sample : VSTD02587
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 12 14:04:26 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:01:20 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02587

Manual Integrations APPROVED
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4/13/2016 2:36:21 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1387721	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	1092901	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	554247	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	681272	31.43	ug/L	0.00
7) Chloroethane-d5	2.51	69	448695	27.73	ug/L	0.00
10) 1,1-Dichloroethene-d2	3.47	63	1132798	26.68	ug/L	0.00
20) 2-Butanone-d5	6.43	46	283729	57.40	ug/L	0.00
24) Chloroform-d	7.07	84	976831	27.84	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	527211	27.91	ug/L	0.00
29) Benzene-d6	7.74	84	2013411	29.06	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	594509	29.26	ug/L	0.00
37) Toluene-d8	9.87	98	1745011	29.18	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.13	79	223778	32.78	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	188038	60.67	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	370561	28.84	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	518787	27.56	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	737166	24.39	ug/L	98
3) Chloromethane	1.93	50	772554	24.13	ug/L	100
5) Vinyl chloride	2.09	62	705010	24.02	ug/L	98
6) Bromomethane	2.43	94	346443	24.12	ug/L	98
8) Chloroethane	2.55	64	382718	23.49	ug/L	97
9) Trichlorofluoromethane	2.81	101	829133m	24.75	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.56	101	483932	23.40	ug/L	100
12) 1,1-Dichloroethene	3.48	96	446117	23.10	ug/L	86
13) Acetone	3.54	43	395601	64.14	ug/L	100
14) Carbon disulfide	3.79	76	1663233	25.77	ug/L	100
15) Methyl Acetate	4.03	43	254620	24.90	ug/L	98
16) Methylene chloride	4.24	84	434144	22.28	ug/L	98
17) Methyl tert-butyl Ether	4.73	73	824367	24.99	ug/L	99
18) trans-1,2-Dichloroethene	4.73	96	482592	23.96	ug/L	99
19) 1,1-Dichloroethane	5.53	63	1027998	24.46	ug/L	99
21) 2-Butanone	6.53	43	457869	66.01	ug/L	97
22) cis-1,2-Dichloroethene	6.53	96	512703	26.94	ug/L	99
23) Bromochloromethane	6.92	128	183805	26.63	ug/L	98
25) Chloroform	7.09	83	920676	26.21	ug/L	99
27) 1,2-Dichloroethane	7.87	62	641359	26.52	ug/L	98
30) Cyclohexane	7.41	56	1249352	28.04	ug/L	99
31) 1,1,1-Trichloroethane	7.31	97	835320	27.59	ug/L	99
32) Carbon tetrachloride	7.53	117	769687	27.30	ug/L	98
34) Benzene	7.79	78	2165048	26.30	ug/L	100
35) Trichloroethene	8.61	95	544656	26.61	ug/L	100
36) Methylcyclohexane	8.86	83	1115048	28.29	ug/L	99
40) 1,2-Dichloropropane	8.89	63	543331	26.88	ug/L	99
41) Bromodichloromethane	9.18	83	617900	28.32	ug/L	98
42) cis-1,3-Dichloropropene	9.61	75	745630	29.54	ug/L	99
43) 4-Methyl-2-pentanone	9.76	43	735226	59.23	ug/L	99

M.D. 04/22/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013546.D
Acq On : 12 Apr 2016 13:37
Operator : FY/SY
Sample : VSTD02587
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD02587

Manual Integrations APPROVED
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4/13/2016 2:36:21 PM

Quant Time: Apr 12 14:04:26 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:01:20 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) Toluene	9.93	91	2116243	26.39	ug/L	99
45) trans-1,3-Dichloropropene	10.16	75	598623	29.39	ug/L	99
46) 1,1,2-Trichloroethane	10.34	97	281353	27.07	ug/L	100
47) Tetrachloroethene	10.42	164	391767	26.07	ug/L	98
49) 2-Hexanone	10.53	43	686341	69.22	ug/L	100
50) Dibromochloromethane	10.68	129	348597	28.22	ug/L	93
51) 1,2-Dibromoethane	10.79	107	270222	27.99	ug/L	98
52) Chlorobenzene	11.21	112	1195094	26.16	ug/L	98
53) Ethylbenzene	11.29	91	2453203	26.49	ug/L	99
54) m,p-Xylene	11.40	106	901966	26.62	ug/L	97
55) o-xylene	11.72	106	859586	27.14	ug/L	99
56) Styrene	11.74	104	1342516	27.21	ug/L	98
57) Isopropylbenzene	12.03	105	2431022	26.91	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	348245	27.60	ug/L	99
61) Bromoform	11.91	173	183726	29.88	ug/L	99
62) 1,3-Dichlorobenzene	13.06	146	914256	26.37	ug/L	100
63) 1,4-Dichlorobenzene	13.14	146	880423	24.86	ug/L	99
64) 1,2-Dichlorobenzene	13.42	146	785788	25.75	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.04	75	59563	30.93	ug/L	96
66) 1,2,4-trichlorobenzene	14.68	180	504369	27.33	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	407723	26.73	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013547.D
Acq On : 12 Apr 2016 14:03
Operator : FY/SY
Sample : VSTD05088
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 12 14:25:06 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:08:37 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD05088

Manual Integrations APPROVED
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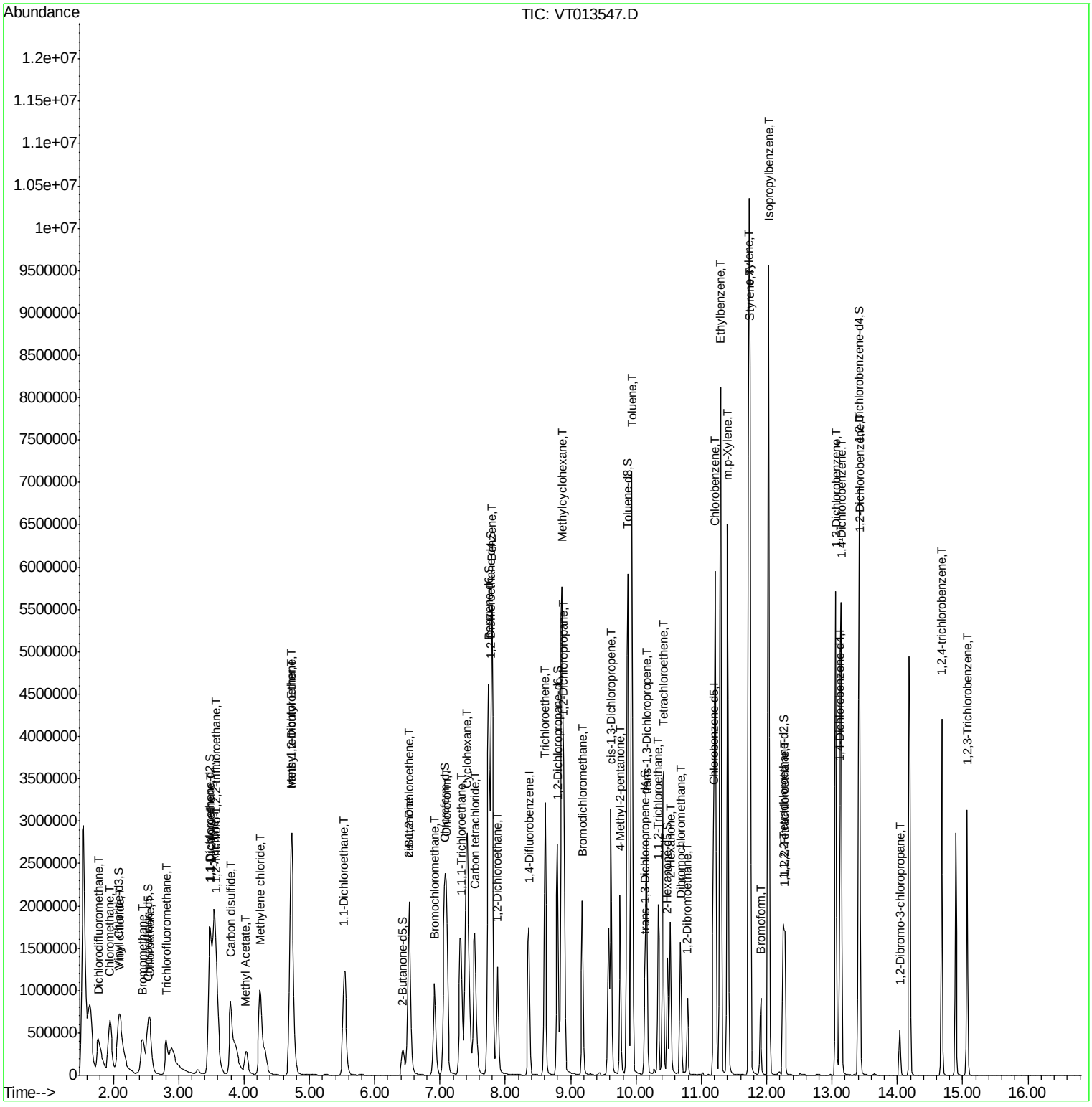
4/13/2016 2:36:21 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013547.D
Acq On : 12 Apr 2016 14:03
Operator : FY/SY
Sample : VSTD05088
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD05088

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:21 PM

Quant Time: Apr 12 14:25:06 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:08:37 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1437169	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	1147620	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	583686	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.09	65	1392262	48.73	ug/L	0.01
7) Chloroethane-d5	2.53	69	920244	48.00	ug/L	0.01
10) 1,1-Dichloroethene-d2	3.47	63	2500641	50.67	ug/L	0.00
20) 2-Butanone-d5	6.43	46	619079	113.74	ug/L	0.00
24) Chloroform-d	7.07	84	2017706	48.98	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	1096196	49.81	ug/L	0.00
29) Benzene-d6	7.74	84	4277521	51.24	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	1250204	52.32	ug/L	0.00
37) Toluene-d8	9.87	98	3759250	53.46	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.13	79	480559	61.44	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	414161	123.69	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	767827	51.23	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	1122301	51.05	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	1293523	44.68	ug/L	100
3) Chloromethane	1.95	50	1457287	44.37	ug/L	100
5) Vinyl chloride	2.10	62	1336546	44.41	ug/L	98
6) Bromomethane	2.44	94	655177	44.06	ug/L	99
8) Chloroethane	2.56	64	734299	43.75	ug/L	99
9) Trichlorofluoromethane	2.81	101	1684801m	47.76	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	1033091	47.95	ug/L	100
12) 1,1-Dichloroethene	3.48	96	962937m	49.24	ug/L	
13) Acetone	3.54	43	685337	90.12	ug/L	100
14) Carbon disulfide	3.79	76	3531932	51.70	ug/L	100
15) Methyl Acetate	4.03	43	560495	49.74	ug/L	99
16) Methylene chloride	4.24	84	943348	46.56	ug/L	99
17) Methyl tert-butyl Ether	4.73	73	1882624	54.98	ug/L	99
18) trans-1,2-Dichloroethene	4.73	96	1056331	51.12	ug/L	97
19) 1,1-Dichloroethane	5.53	63	2251080	51.19	ug/L	99
21) 2-Butanone	6.53	43	805232	93.63	ug/L	100
22) cis-1,2-Dichloroethene	6.53	96	1028275	49.41	ug/L	100
23) Bromochloromethane	6.92	128	367727	48.28	ug/L	98
25) Chloroform	7.09	83	1826113	47.39	ug/L	99
27) 1,2-Dichloroethane	7.87	62	1303475	48.50	ug/L	100
30) Cyclohexane	7.41	56	2484835	49.98	ug/L	99
31) 1,1,1-Trichloroethane	7.32	97	1667406	49.30	ug/L	99
32) Carbon tetrachloride	7.53	117	1543035	49.48	ug/L	97
34) Benzene	7.79	78	4449304	49.49	ug/L	100
35) Trichloroethene	8.61	95	1099352	49.33	ug/L	99
36) Methylcyclohexane	8.87	83	2266181	50.40	ug/L	99
40) 1,2-Dichloropropane	8.89	63	1129107	50.71	ug/L	100
41) Bromodichloromethane	9.18	83	1272367	51.48	ug/L	100
42) cis-1,3-Dichloropropene	9.61	75	1545292	55.35	ug/L	97
43) 4-Methyl-2-pentanone	9.76	43	1488997	99.66	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013547.D
Acq On : 12 Apr 2016 14:03
Operator : FY/SY
Sample : VSTD05088
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 12 14:25:06 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:08:37 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD05088

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) Toluene	9.93	91	4422050	50.06	ug/L	98
45) trans-1,3-Dichloropropene	10.16	75	1271278	57.72	ug/L	100
46) 1,1,2-Trichloroethane	10.34	97	581100	50.38	ug/L	99
47) Tetrachloroethene	10.42	164	820663	51.67	ug/L	99
49) 2-Hexanone	10.53	43	1181071	95.18	ug/L	98
50) Dibromochloromethane	10.68	129	743648	53.97	ug/L	96
51) 1,2-Dibromoethane	10.79	107	551668	50.51	ug/L	98
52) Chlorobenzene	11.21	112	2467409	49.10	ug/L	99
53) Ethylbenzene	11.29	91	5110951	50.97	ug/L	99
54) m,p-Xylene	11.40	106	1877990	51.59	ug/L	97
55) o-xylene	11.73	106	1832346	53.62	ug/L	90
56) Styrene	11.74	104	2832994	52.86	ug/L	100
57) Isopropylbenzene	12.03	105	5163298	53.20	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	717074	48.60	ug/L	97
61) Bromoform	11.91	173	398026	56.85	ug/L	99
62) 1,3-Dichlorobenzene	13.06	146	1901012	49.83	ug/L	99
63) 1,4-Dichlorobenzene	13.14	146	1862370	49.73	ug/L	98
64) 1,2-Dichlorobenzene	13.42	146	1662677	50.04	ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.04	75	127857	55.52	ug/L	99
66) 1,2,4-trichlorobenzene	14.68	180	1080965	53.39	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	844176	48.48	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

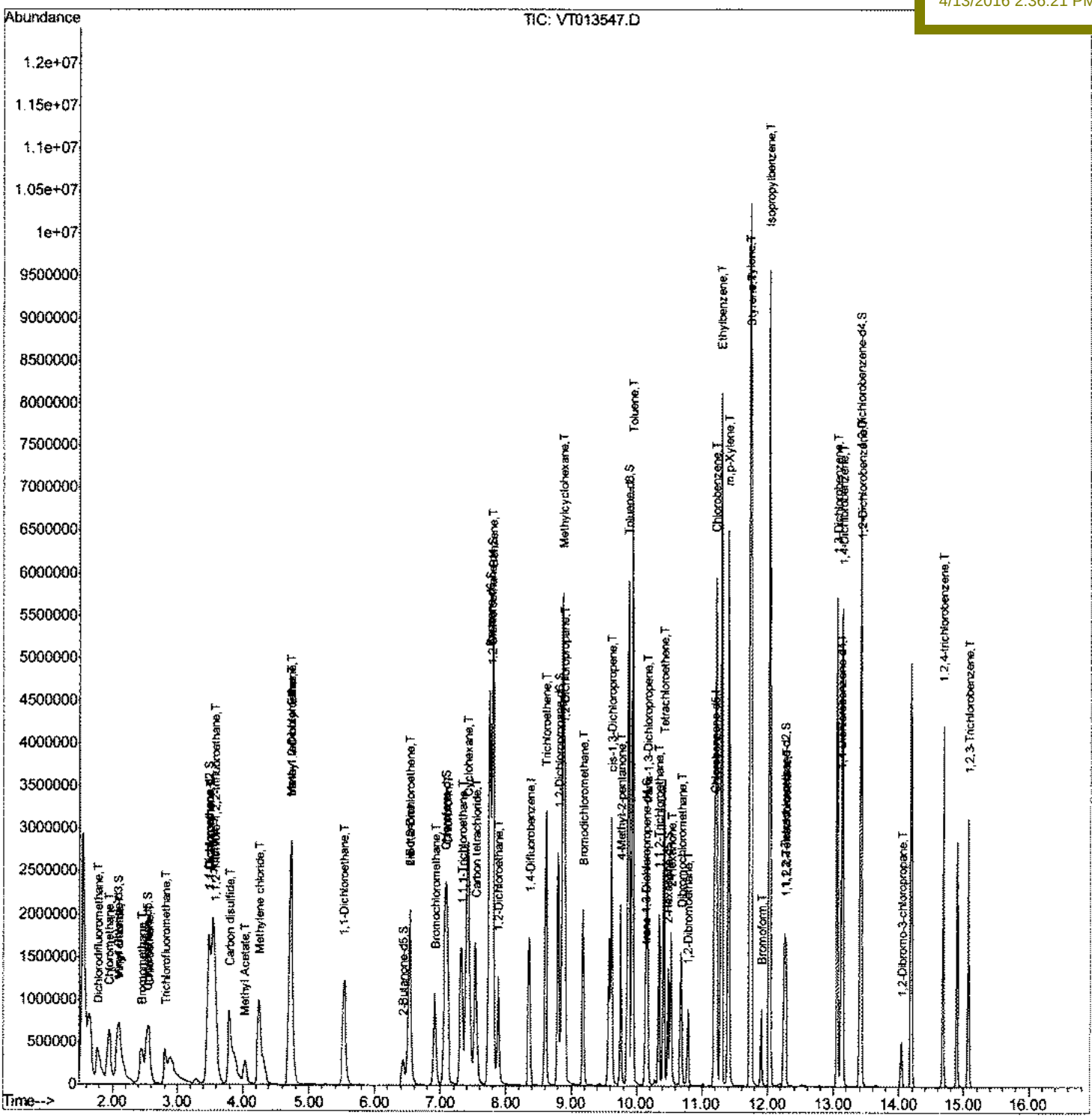
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013547.D
Acq On : 12 Apr 2016 14:03
Operator : FY/SY
Sample : VSTD05088
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 12 14:25:06 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:08:37 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD05088

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:21 PM



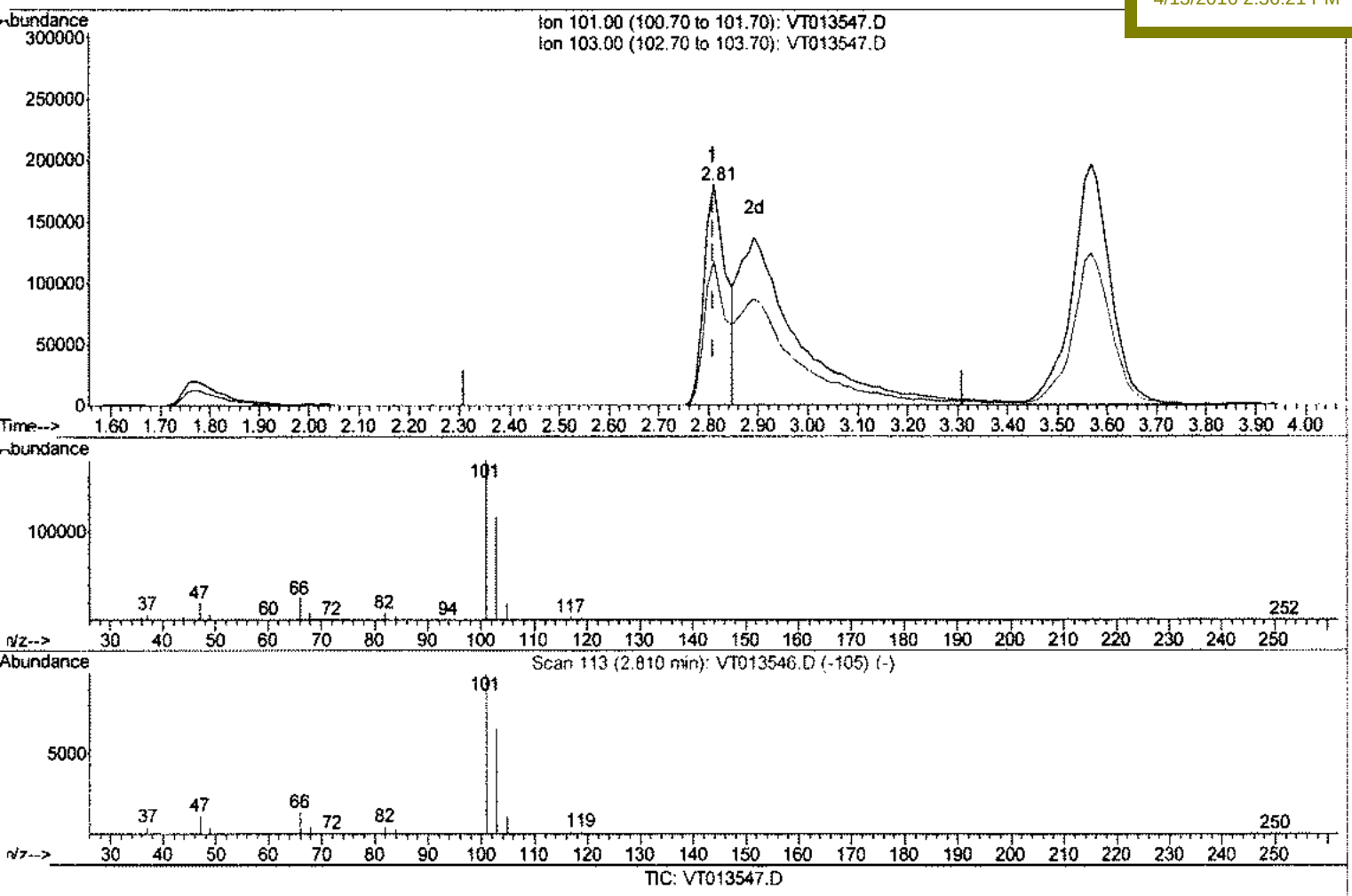
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013547.D
Acq On : 12 Apr 2016 14:03
Operator : FY/SY
Sample : VSTD05088
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 12 14:23:21 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:08:37 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD05088

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:21 PM



(9) Trichlorofluoromethane (T)

2.810min (-0.000) 15.60ug/L

response 550155

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	64.98#
0.00	0.00	0.00
0.00	0.00	0.00

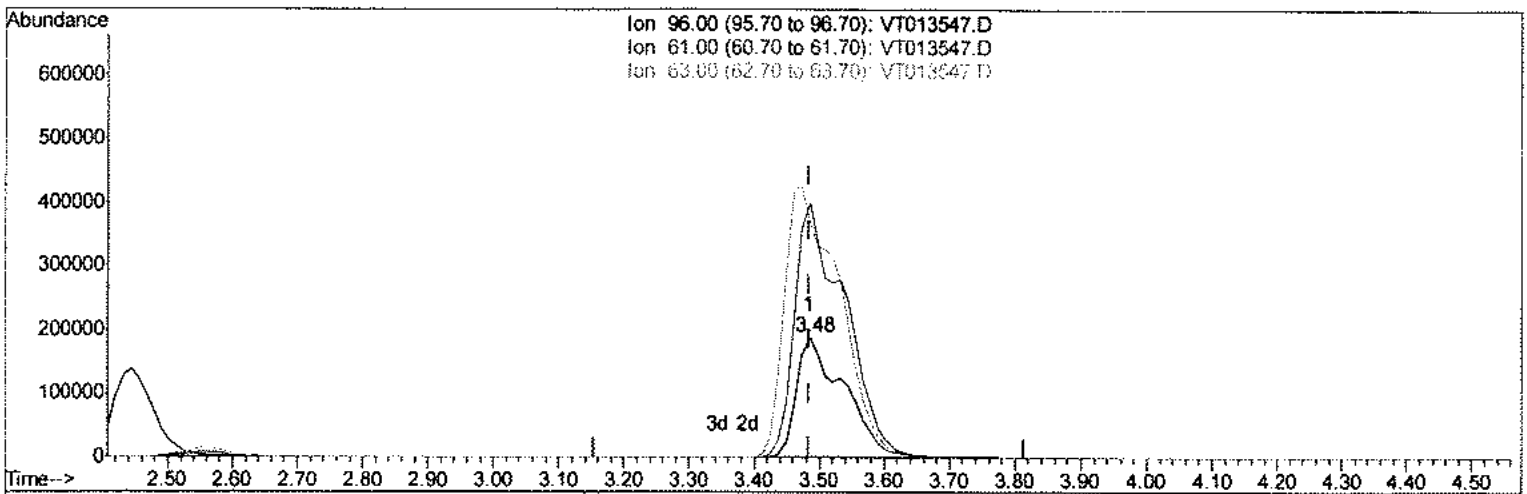
Quantitation Report (Qedit)

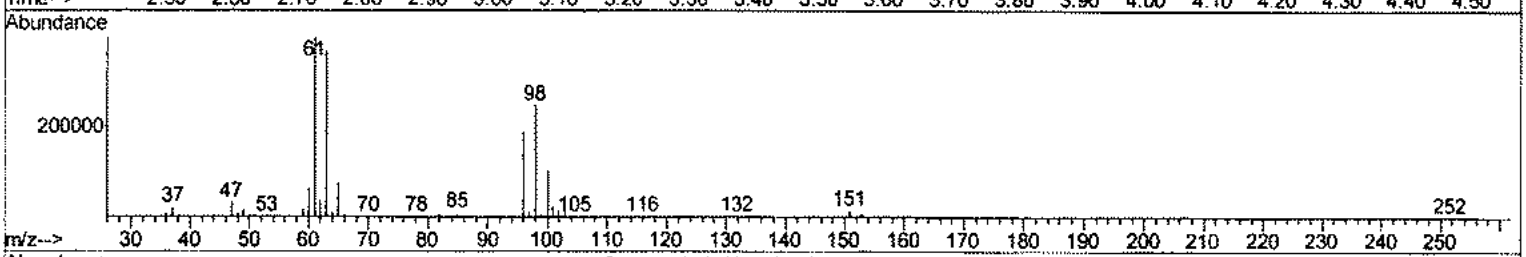
Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013547.D
Acq On : 12 Apr 2016 14:03
Operator : FY/SY
Sample : VSTD05088
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

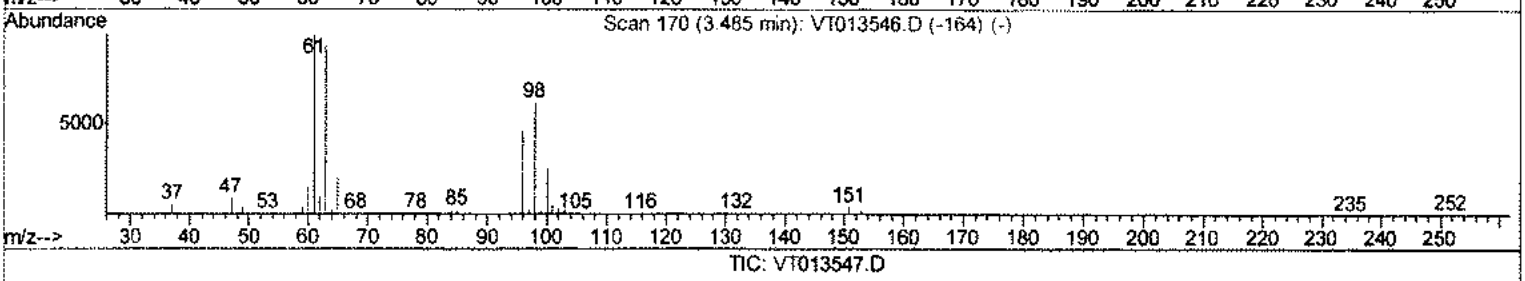
Quant Time: Apr 12 14:23:21 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:08:37 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD05088

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:21 PM







(12) 1,1-Dichloroethene (T)

3.485min (-0.000) 49.24ug/L m

response 962937

M.D. 04/22/16

Ion	Exp%	Act%
96.00	100	100
61.00	211.90	211.79
63.00	170.40	195.62
0.00	0.00	0.00

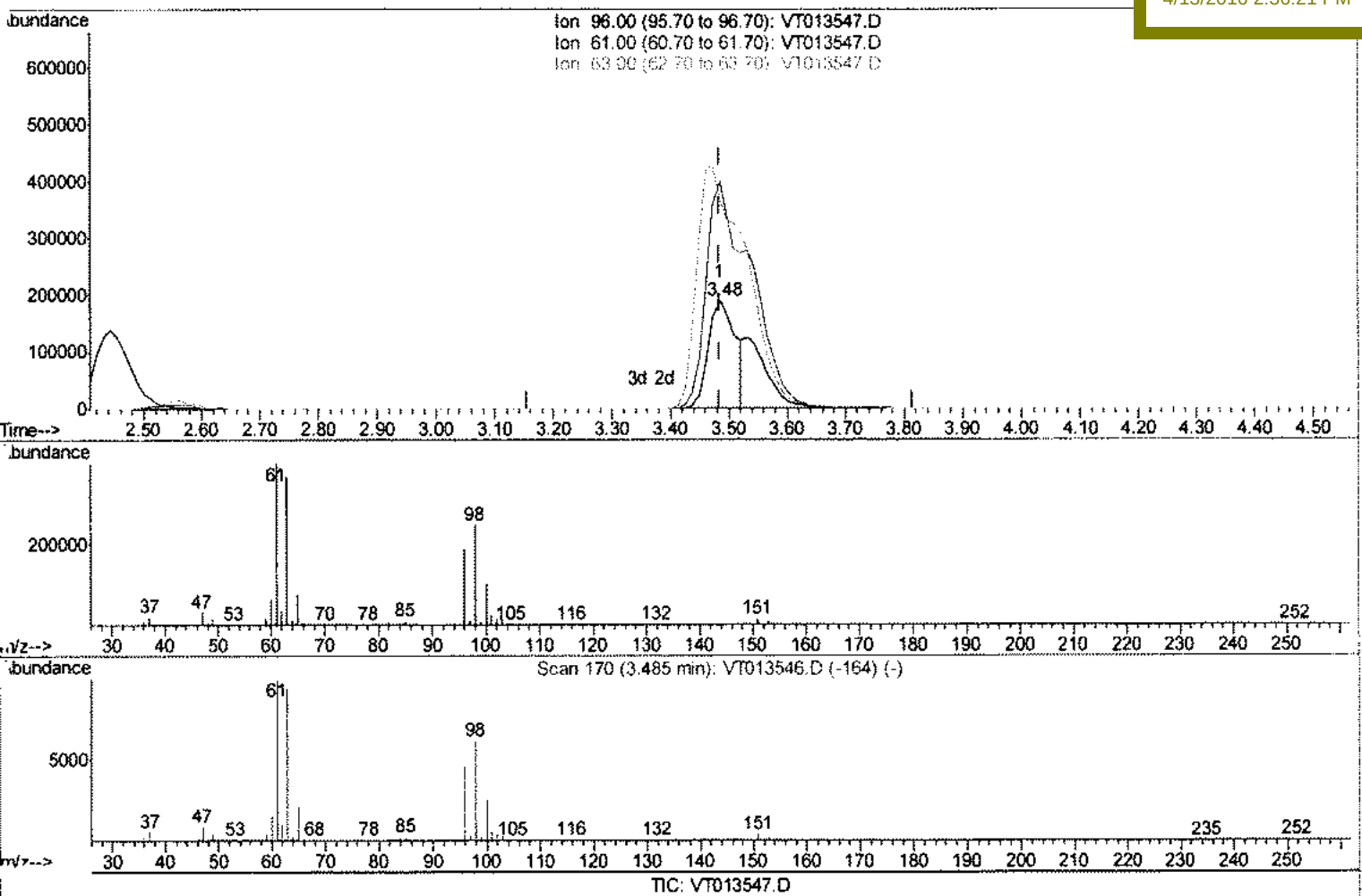
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013547.D
Acq On : 12 Apr 2016 14:03
Operator : FY/SY
Sample : VSTD05088
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 12 14:23:21 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:08:37 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD05088

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:21 PM



TIC: VT013547.D

(12) 1,1-Dichloroethene (T)

3.485min (-0.000) 31.50ug/L

response 616019

Ion	Exp%	Act%
96.00	100	100
61.00	211.90	211.79
63.00	170.40	195.62
0.00	0.00	0.00

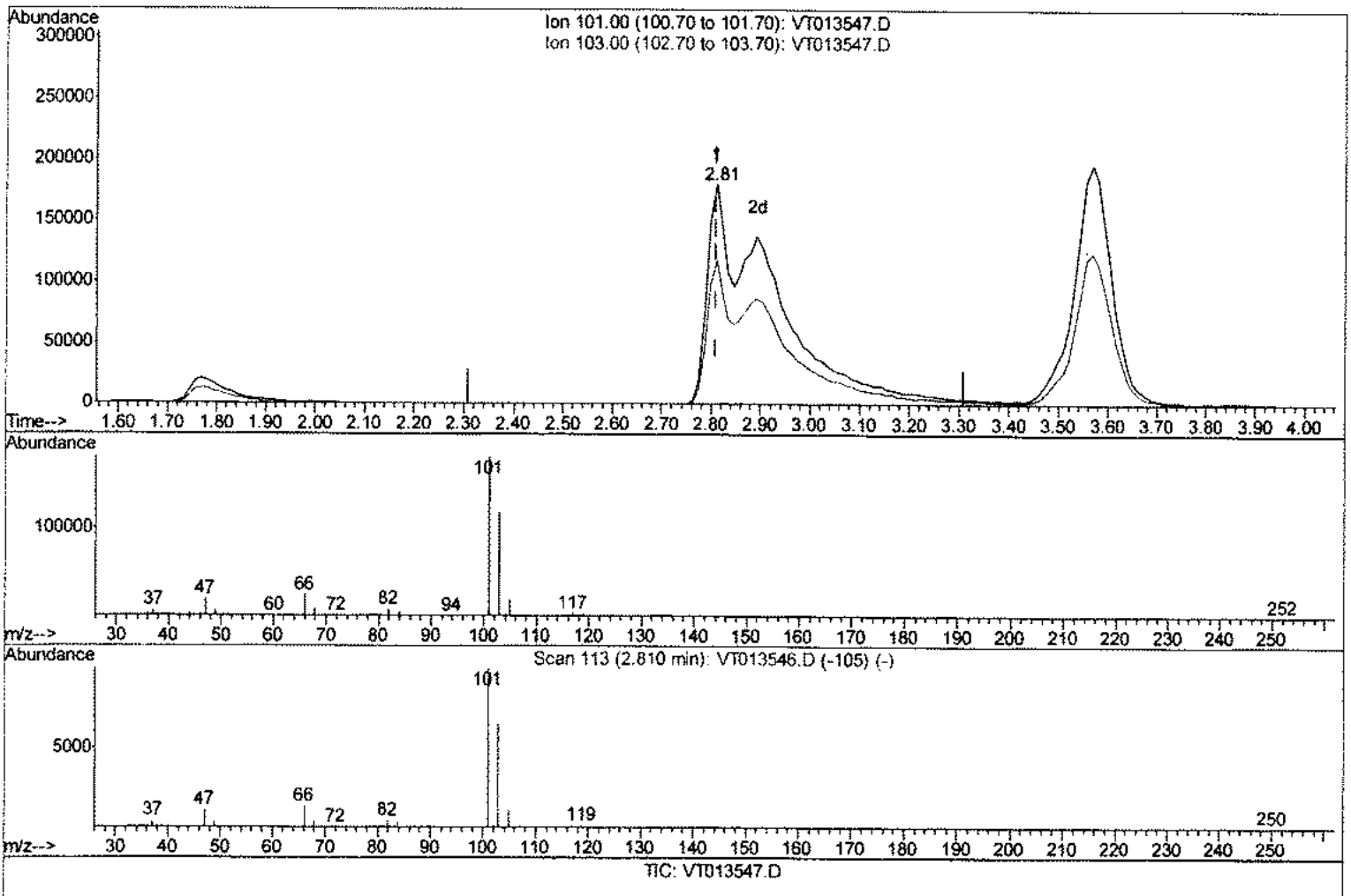
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013547.D
Acq On : 12 Apr 2016 14:03
Operator : FY/SY
Sample : VSTD05088
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 12 14:23:21 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:08:37 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD05088

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:21 PM



TIC: VT013547.D

(9) Trichlorofluoromethane (T)

2.810min (-0.000) 47.76ug/L m

M.D. 04/22/16

response 1684801

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	21.22
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013547.D
Acq On : 12 Apr 2016 14:03
Operator : FY/SY
Sample : VSTD05088
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 12 14:25:06 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:08:37 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD05088

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1437169	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	1147620	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	583686	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.09	65	1392262	48.73	ug/L	0.01
7) Chloroethane-d5	2.53	69	920244	48.00	ug/L	0.01
10) 1,1-Dichloroethene-d2	3.47	63	2500641	50.67	ug/L	0.00
20) 2-Butanone-d5	6.43	46	619079	113.74	ug/L	0.00
24) Chloroform-d	7.07	84	2017706	48.98	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	1096196	49.81	ug/L	0.00
29) Benzene-d6	7.74	84	4277521	51.24	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	1250204	52.32	ug/L	0.00
37) Toluene-d8	9.87	98	3759250	53.46	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.13	79	480559	61.44	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	414161	123.69	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	767827	51.23	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	1122301	51.05	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	1293523	44.68	ug/L	100
3) Chloromethane	1.95	50	1457287	44.37	ug/L	100
5) Vinyl chloride	2.10	62	1336546	44.41	ug/L	98
6) Bromomethane	2.44	94	655177	44.06	ug/L	99
8) Chloroethane	2.56	64	734299	43.75	ug/L	99
9) Trichlorofluoromethane	2.81	101	1684801m	47.76	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	1033091	47.95	ug/L	100
12) 1,1-Dichloroethene	3.48	96	962937m	49.24	ug/L	
13) Acetone	3.54	43	685337	90.12	ug/L	100
14) Carbon disulfide	3.79	76	3531932	51.70	ug/L	100
15) Methyl Acetate	4.03	43	560495	49.74	ug/L	99
16) Methylene chloride	4.24	84	943348	46.56	ug/L	99
17) Methyl tert-butyl Ether	4.73	73	1882624	54.98	ug/L	99
18) trans-1,2-Dichloroethene	4.73	96	1056331	51.12	ug/L	97
19) 1,1-Dichloroethane	5.53	63	2251080	51.19	ug/L	99
21) 2-Butanone	6.53	43	805232	93.63	ug/L	100
22) cis-1,2-Dichloroethene	6.53	96	1028275	49.41	ug/L	100
23) Bromochloromethane	6.92	128	367727	48.28	ug/L	98
25) Chloroform	7.09	83	1826113	47.39	ug/L	99
27) 1,2-Dichloroethane	7.87	62	1303475	48.50	ug/L	100
30) Cyclohexane	7.41	56	2484835	49.98	ug/L	99
31) 1,1,1-Trichloroethane	7.32	97	1667406	49.30	ug/L	99
32) Carbon tetrachloride	7.53	117	1543035	49.48	ug/L	97
34) Benzene	7.79	78	4449304	49.49	ug/L	100
35) Trichloroethene	8.61	95	1099352	49.33	ug/L	99
36) Methylcyclohexane	8.87	83	2266181	50.40	ug/L	99
40) 1,2-Dichloropropane	8.89	63	1129107	50.71	ug/L	100
41) Bromodichloromethane	9.18	83	1272367	51.48	ug/L	100
42) cis-1,3-Dichloropropene	9.61	75	1545292	55.35	ug/L	97
43) 4-Methyl-2-pentanone	9.76	43	1488997	99.66	ug/L	99

M.D. 04/22/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013547.D
Acq On : 12 Apr 2016 14:03
Operator : FY/SY
Sample : VSTD05088
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD05088

Manual Integrations APPROVED
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4/13/2016 2:36:21 PM

Quant Time: Apr 12 14:25:06 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:08:37 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
44) Toluene	9.93	91	4422050	50.06 ug/L	98
45) trans-1,3-Dichloropropene	10.16	75	1271278	57.72 ug/L	100
46) 1,1,2-Trichloroethane	10.34	97	581100	50.38 ug/L	99
47) Tetrachloroethene	10.42	164	820663	51.67 ug/L	99
49) 2-Hexanone	10.53	43	1181071	95.18 ug/L	98
50) Dibromochloromethane	10.68	129	743648	53.97 ug/L	96
51) 1,2-Dibromoethane	10.79	107	551668	50.51 ug/L	98
52) Chlorobenzene	11.21	112	2467409	49.10 ug/L	99
53) Ethylbenzene	11.29	91	5110951	50.97 ug/L	99
54) m,p-Xylene	11.40	106	1877990	51.59 ug/L	97
55) o-xylene	11.73	106	1832346	53.62 ug/L	90
56) Styrene	11.74	104	2832994	52.86 ug/L	100
57) Isopropylbenzene	12.03	105	5163298	53.20 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	717074	48.60 ug/L	97
61) Bromoform	11.91	173	398026	56.85 ug/L	99
62) 1,3-Dichlorobenzene	13.06	146	1901012	49.83 ug/L	99
63) 1,4-Dichlorobenzene	13.14	146	1862370	49.73 ug/L	98
64) 1,2-Dichlorobenzene	13.42	146	1662677	50.04 ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.04	75	127857	55.52 ug/L	99
66) 1,2,4-trichlorobenzene	14.68	180	1080965	53.39 ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	844176	48.48 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013548.D
Acq On : 12 Apr 2016 14:29
Operator : FY/SY
Sample : VSTD10089
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 12 14:50:33 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:29:35 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD10089

Manual Integrations APPROVED
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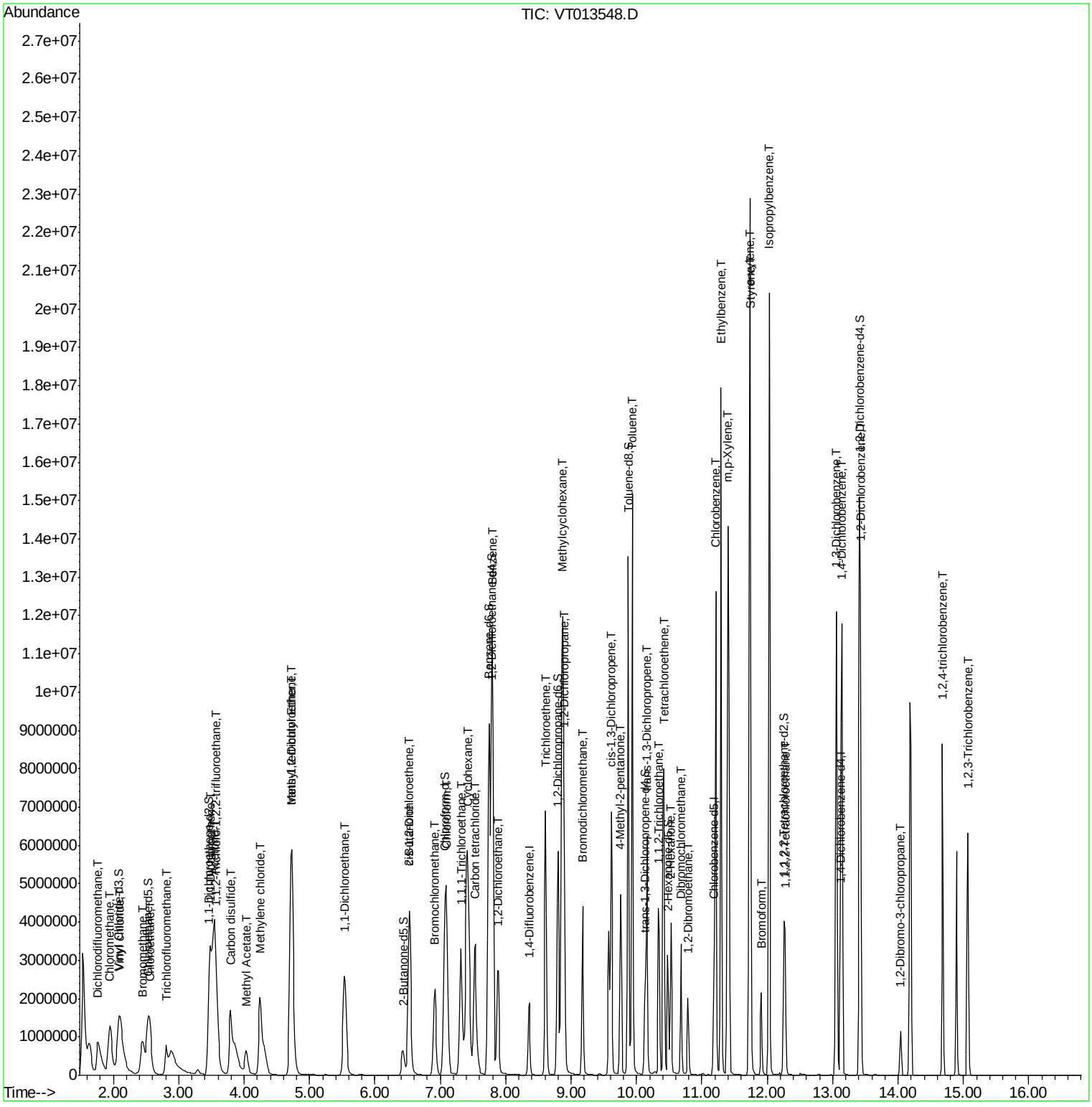
4/13/2016 2:36:25 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013548.D
Acq On : 12 Apr 2016 14:29
Operator : FY/SY
Sample : VSTD10089
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 12 14:50:33 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:29:35 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD10089

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:25 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1586737	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	1271075	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	637157	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.09	65	3031377	96.71	ug/L	0.01
7) Chloroethane-d5	2.53	69	2051633	97.90	ug/L	0.01
10) 1,1-Dichloroethene-d2	3.46	63	5007367	91.59	ug/L	-0.01
20) 2-Butanone-d5	6.43	46	1390529	223.71	ug/L	0.00
24) Chloroform-d	7.07	84	4238374	93.67	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	2368401	97.56	ug/L	0.00
29) Benzene-d6	7.74	84	9250780	99.43	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	2704031	101.00	ug/L	0.00
37) Toluene-d8	9.87	98	8391416	105.91	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.14	79	1099146	120.02	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	932432	237.36	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	1732371	103.71	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	2470451	102.41	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.76	85	2638852	84.82	ug/L	100
3) Chloromethane	1.95	50	3122952	88.62	ug/L	99
5) Vinyl chloride	2.10	62	2863691	88.66	ug/L	99
6) Bromomethane	2.44	94	1414890	88.82	ug/L	99
8) Chloroethane	2.56	64	1598084	89.02	ug/L	98
9) Trichlorofluoromethane	2.81	101	3428564m	89.03	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	2105763	89.44	ug/L	98
12) 1,1-Dichloroethene	3.48	96	1953859m	90.84	ug/L	
13) Acetone	3.54	43	1324770	161.77	ug/L	99
14) Carbon disulfide	3.79	76	7297511m	95.93	ug/L	
15) Methyl Acetate	4.03	43	1236478	99.51	ug/L	98
16) Methylene chloride	4.24	84	1957699	89.05	ug/L	98
17) Methyl tert-butyl Ether	4.73	73	4110587	106.08	ug/L	99
18) trans-1,2-Dichloroethene	4.73	96	2181929	95.11	ug/L	97
19) 1,1-Dichloroethane	5.53	63	4633404	94.86	ug/L	98
21) 2-Butanone	6.53	43	1733492	185.53	ug/L	100
22) cis-1,2-Dichloroethene	6.53	96	2125732	92.79	ug/L	99
23) Bromochloromethane	6.92	128	776384	93.13	ug/L	98
25) Chloroform	7.09	83	3795127	90.38	ug/L	99
27) 1,2-Dichloroethane	7.89	62	2744497	93.20	ug/L	99
30) Cyclohexane	7.41	56	5191991	94.30	ug/L	99
31) 1,1,1-Trichloroethane	7.32	97	3486574	93.41	ug/L	98
32) Carbon tetrachloride	7.53	117	3236382	93.95	ug/L	97
34) Benzene	7.79	78	9446909	95.12	ug/L	100
35) Trichloroethene	8.61	95	2340420	95.13	ug/L	99
36) Methylcyclohexane	8.87	83	4769608	95.58	ug/L	98
40) 1,2-Dichloropropane	8.89	63	2364598	95.55	ug/L	100
41) Bromodichloromethane	9.18	83	2716877	98.52	ug/L	98
42) cis-1,3-Dichloropropene	9.61	75	3228465	101.68	ug/L	98
43) 4-Methyl-2-pentanone	9.76	43	3295590	199.32	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013548.D
Acq On : 12 Apr 2016 14:29
Operator : FY/SY
Sample : VSTD10089
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD10089

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:25 PM

Quant Time: Apr 12 14:50:33 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:29:35 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) Toluene	9.93	91	9674561	98.86	ug/L	100
45) trans-1,3-Dichloropropene	10.16	75	2768401	109.27	ug/L	100
46) 1,1,2-Trichloroethane	10.34	97	1267461	99.03	ug/L	98
47) Tetrachloroethene	10.42	164	1789128	100.86	ug/L	99
49) 2-Hexanone	10.53	43	2583445	190.27	ug/L	100
50) Dibromochloromethane	10.68	129	1623889	104.34	ug/L	95
51) 1,2-Dibromoethane	10.79	107	1201453	99.07	ug/L	99
52) Chlorobenzene	11.21	112	5349680	96.55	ug/L	100
53) Ethylbenzene	11.29	91	11178258	100.16	ug/L	99
54) m,p-Xylene	11.40	106	4099092	100.87	ug/L	100
55) o-xylene	11.73	106	3983889	103.38	ug/L	93
56) Styrene	11.74	104	6157285	102.27	ug/L	99
57) Isopropylbenzene	12.03	105	11304553	103.50	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	1586797	97.78	ug/L	99
61) Bromoform	11.91	173	890429	112.65	ug/L	98
62) 1,3-Dichlorobenzene	13.06	146	4088331	98.25	ug/L	100
63) 1,4-Dichlorobenzene	13.14	146	4035383	98.85	ug/L	100
64) 1,2-Dichlorobenzene	13.42	146	3617339	99.71	ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.04	75	276333	106.98	ug/L	95
66) 1,2,4-trichlorobenzene	14.68	180	2239480	99.64	ug/L	100
67) 1,2,3-Trichlorobenzene	15.07	180	1711696	90.74	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

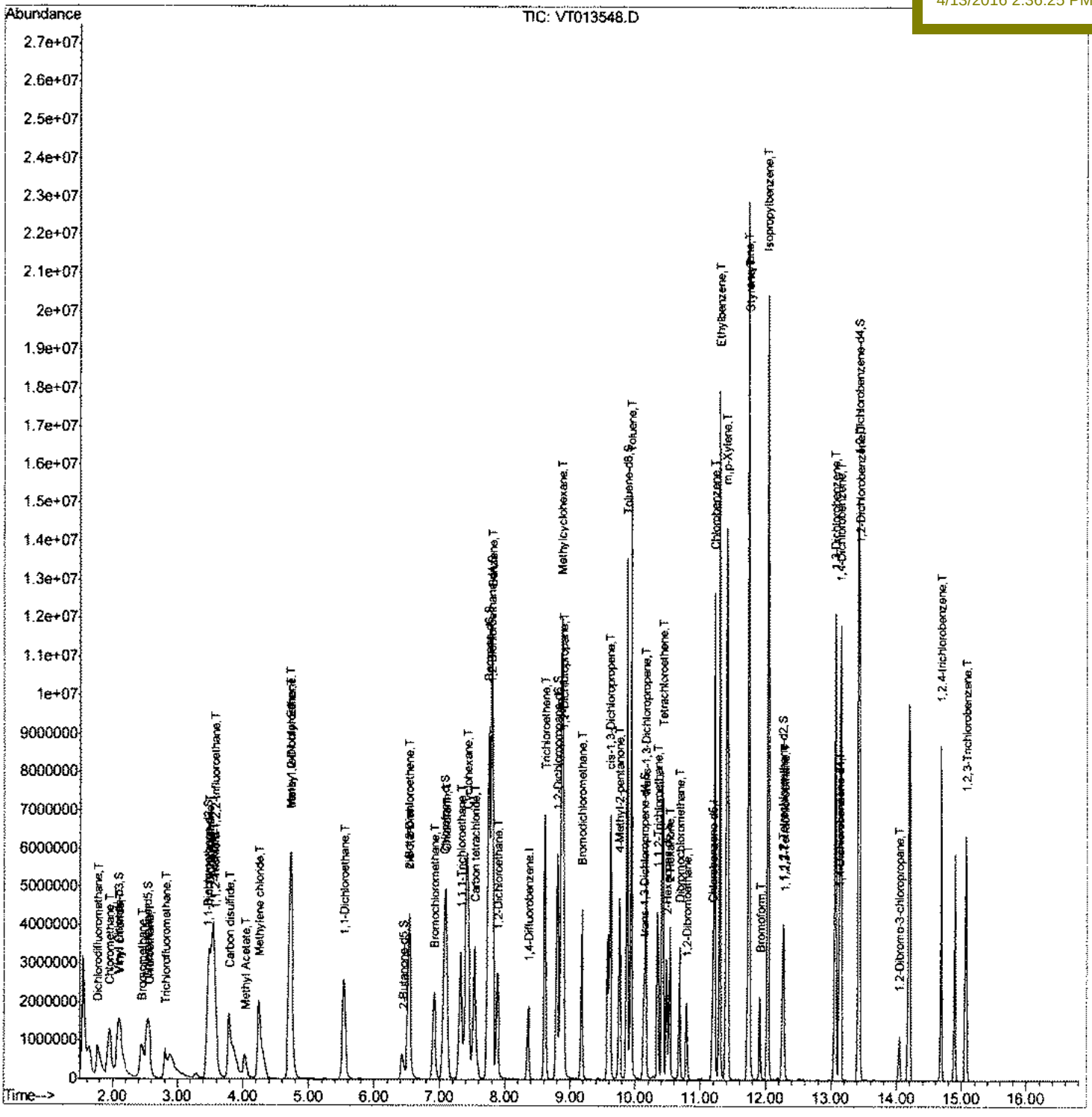
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013548.D
Acq On : 12 Apr 2016 14:29
Operator : FY/SY
Sample : VSTD10089
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 12 14:50:33 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:29:35 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD10089

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:25 PM



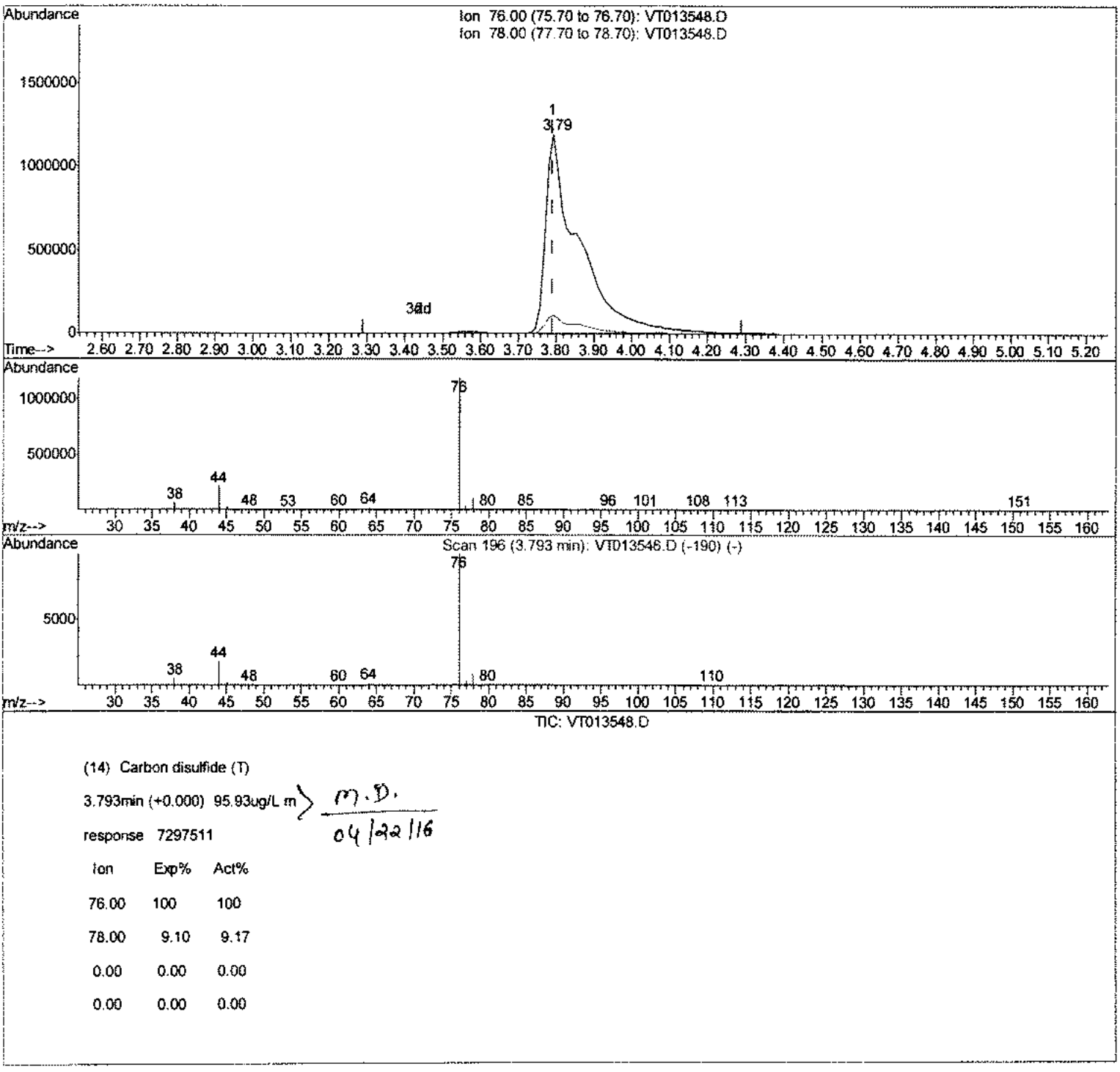
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013548.D
Acq On : 12 Apr 2016 14:29
Operator : FY/SY
Sample : VSTD10089
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 12 14:48:10 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:29:35 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD10089

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:25 PM



(14) Carbon disulfide (T)

3.793min (+0.000) 95.93ug/L m

response 7297511

M.D. 04/22/16

Ion	Exp%	Act%
76.00	100	100
78.00	9.10	9.17
0.00	0.00	0.00
0.00	0.00	0.00

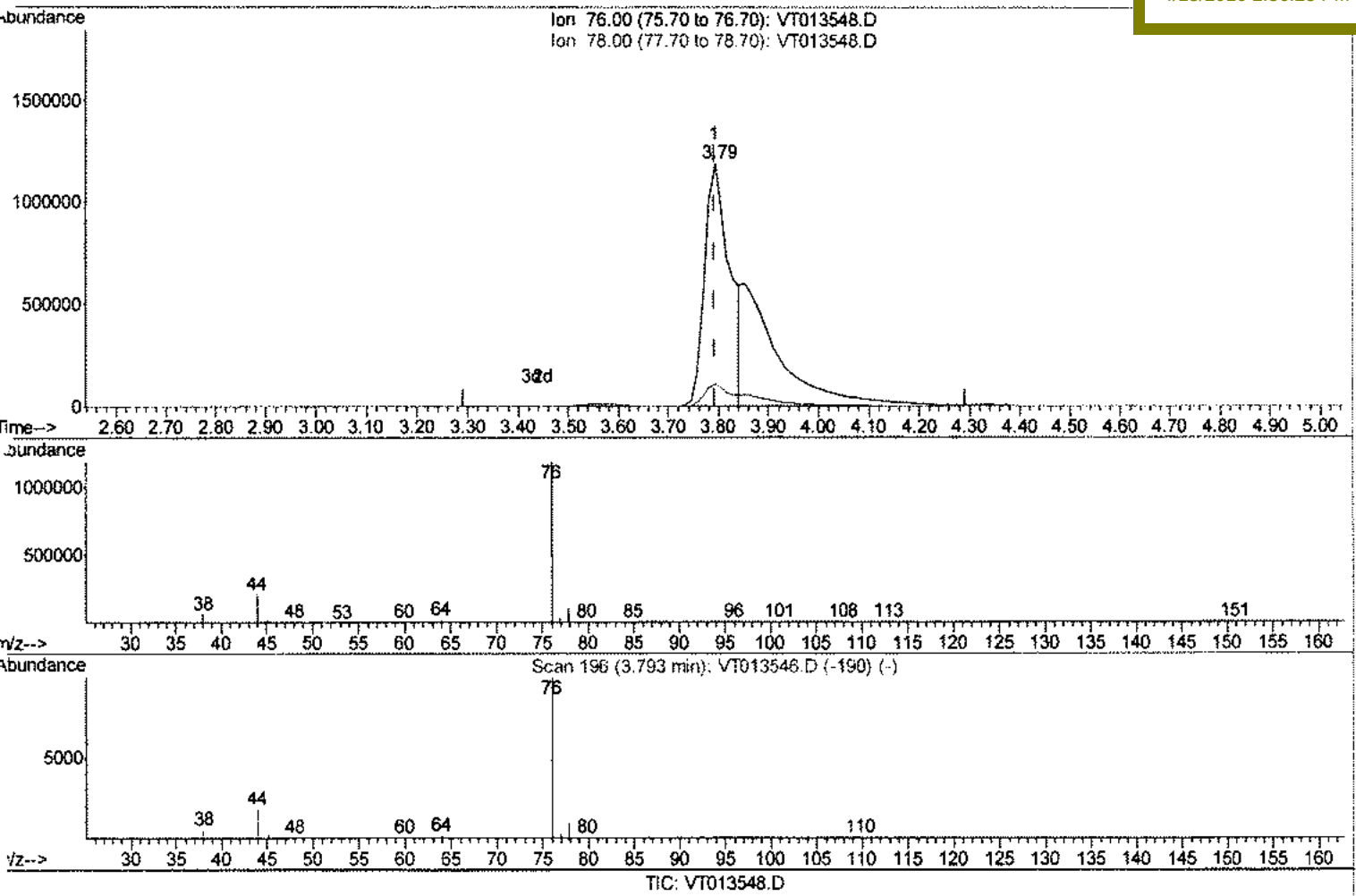
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013548.D
Acq On : 12 Apr 2016 14:29
Operator : FY/SY
Sample : VSTD10089
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 12 14:48:10 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:29:35 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD10089

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:25 PM



TIC: VT013548.D

(14) Carbon disulfide (T)

3.793min (+0.000) 54.63ug/L

response 4155542

Ion	Exp%	Act%
76.00	100	100
78.00	9.10	9.17
0.00	0.00	0.00
0.00	0.00	0.00

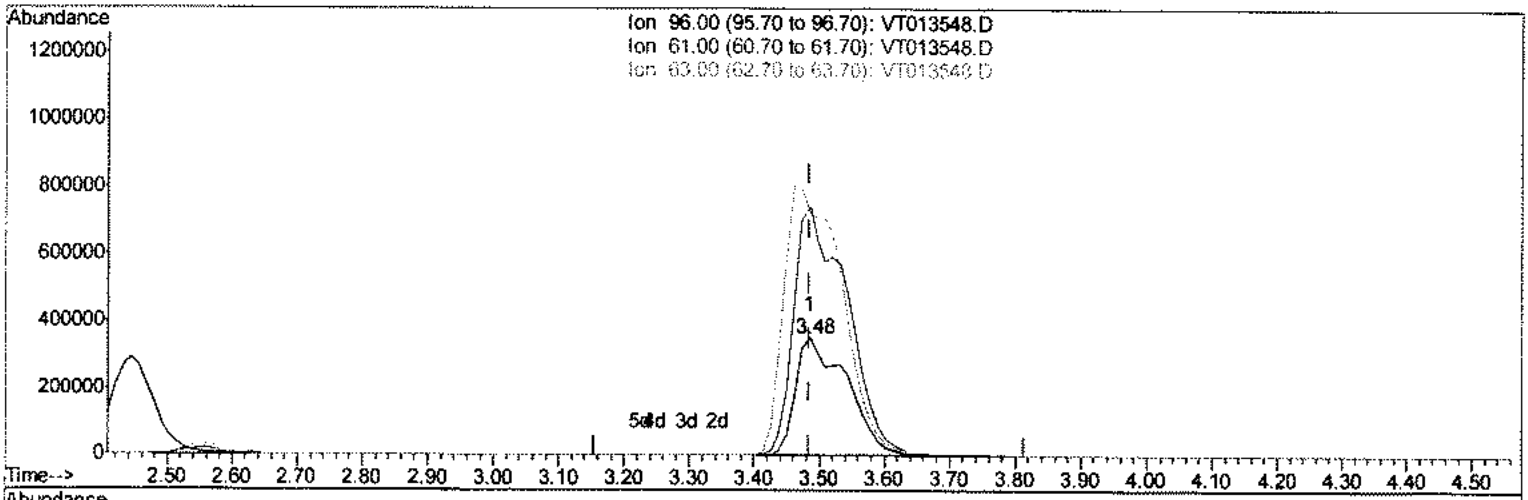
Quantitation Report (Qedit)

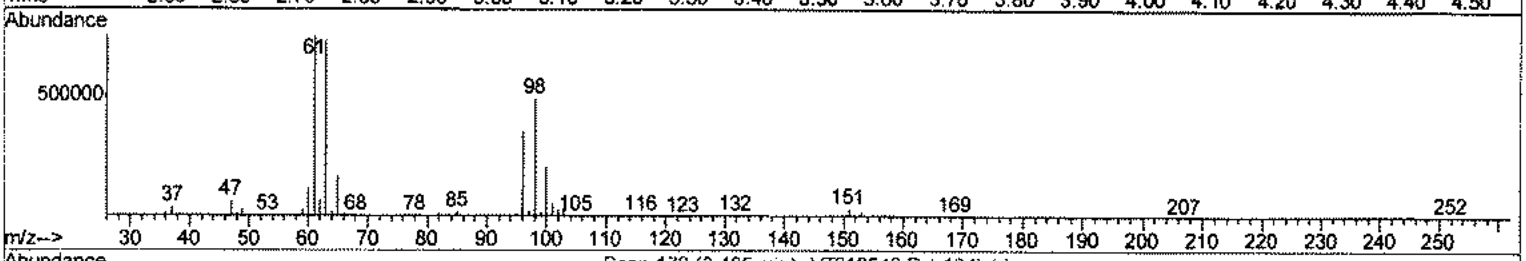
Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013548.D
Acq On : 12 Apr 2016 14:29
Operator : FY/SY
Sample : VSTD10089
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

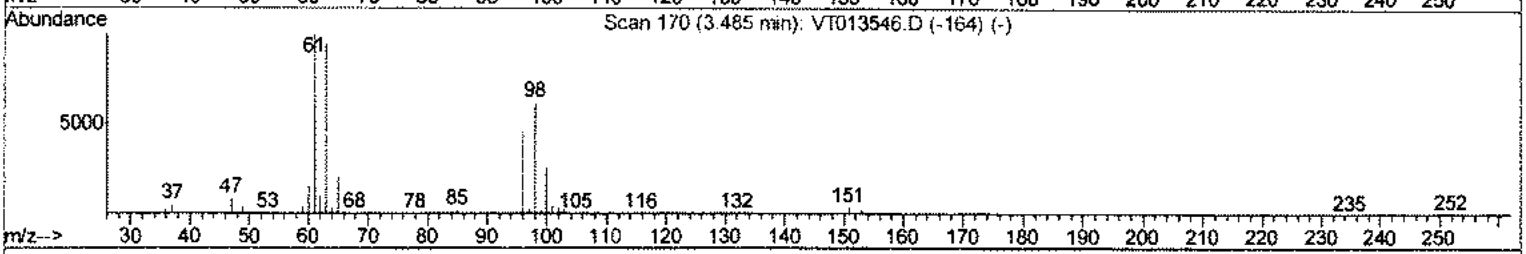
Quant Time: Apr 12 14:48:10 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:29:35 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD10089

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:25 PM







TIC: VT013548.D

(12) 1,1-Dichloroethene (T)

3.485min (+0.000) 90.84ug/L m M.D. 04/20/16

response 1953859

Ion	Exp%	Act%
96.00	100	100
61.00	211.90	210.73
63.00	170.40	205.70
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013548.D
Acq On : 12 Apr 2016 14:29
Operator : FY/SY
Sample : VSTD10089
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 12 14:48:10 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:29:35 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD10089

Manual Integrations APPROVED
MMdadoda
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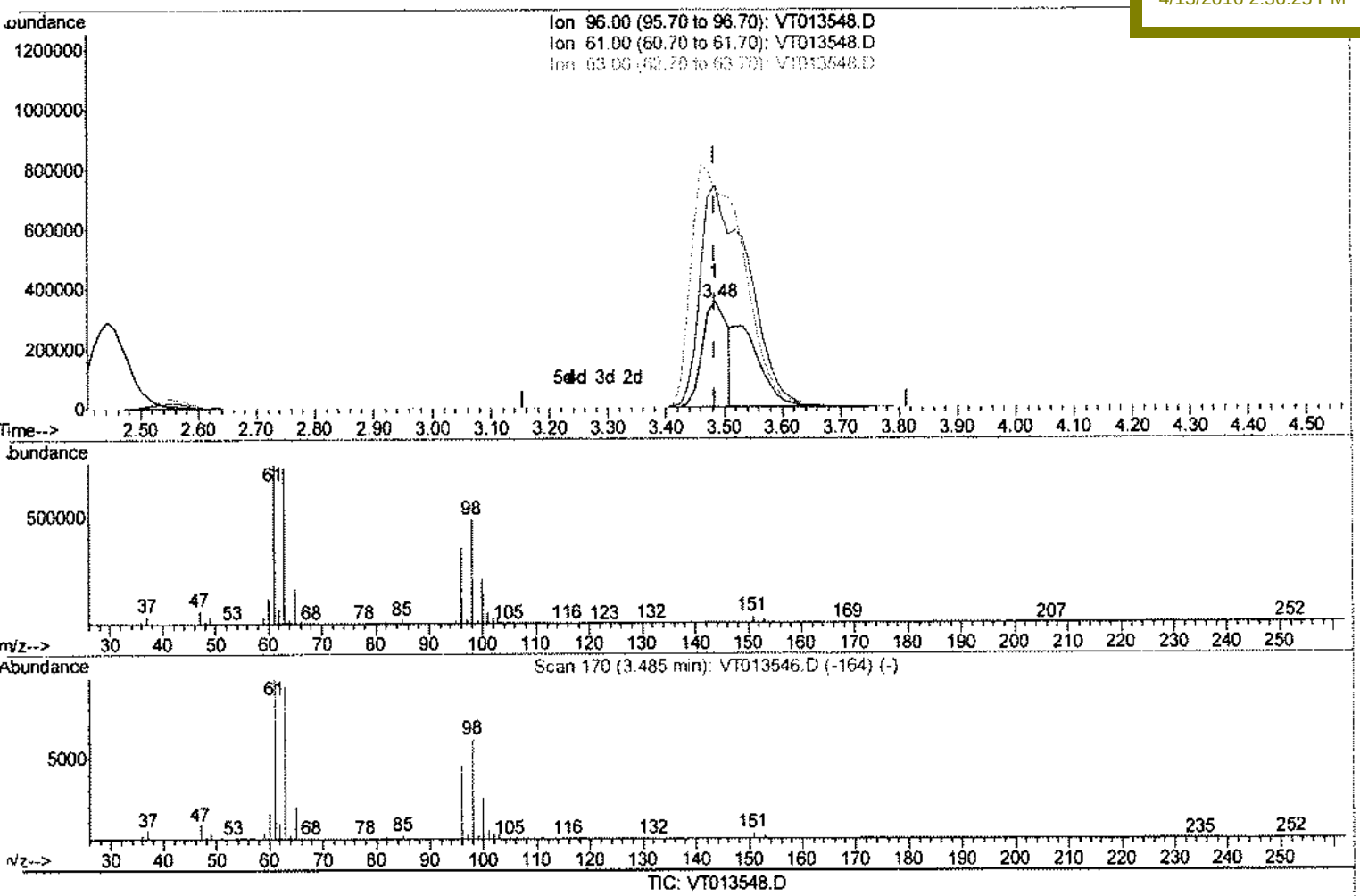

TIC: VT013548.D

(12) 1,1-Dichloroethene (T)

3.485min (+0.000) 48.95ug/L

response 1052831

Ion	Exp%	Act%
96.00	100	100
61.00	211.90	210.73
63.00	170.40	205.70
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013548.D
Acq On : 12 Apr 2016 14:29
Operator : FY/SY
Sample : VSTD10089
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 12 14:48:10 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:29:35 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD10089

Manual Integrations APPROVED
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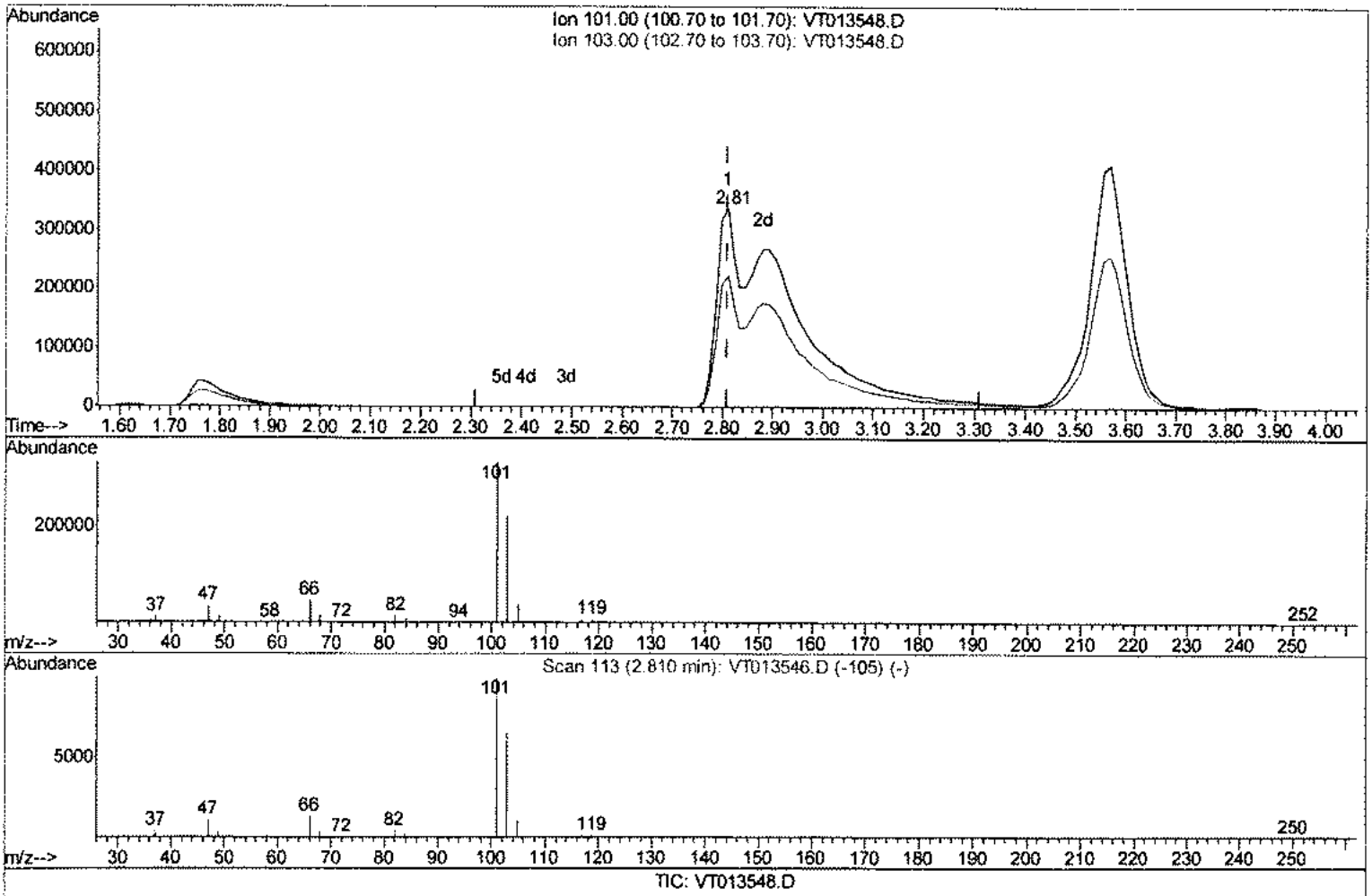


TIC: VT013548.D

(9) Trichlorofluoromethane (T)

2.810min (+0.000) 89.03ug/L m

M.D. 04/22/16

response 3428564

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	18.46
0.00	0.00	0.00
0.00	0.00	0.00

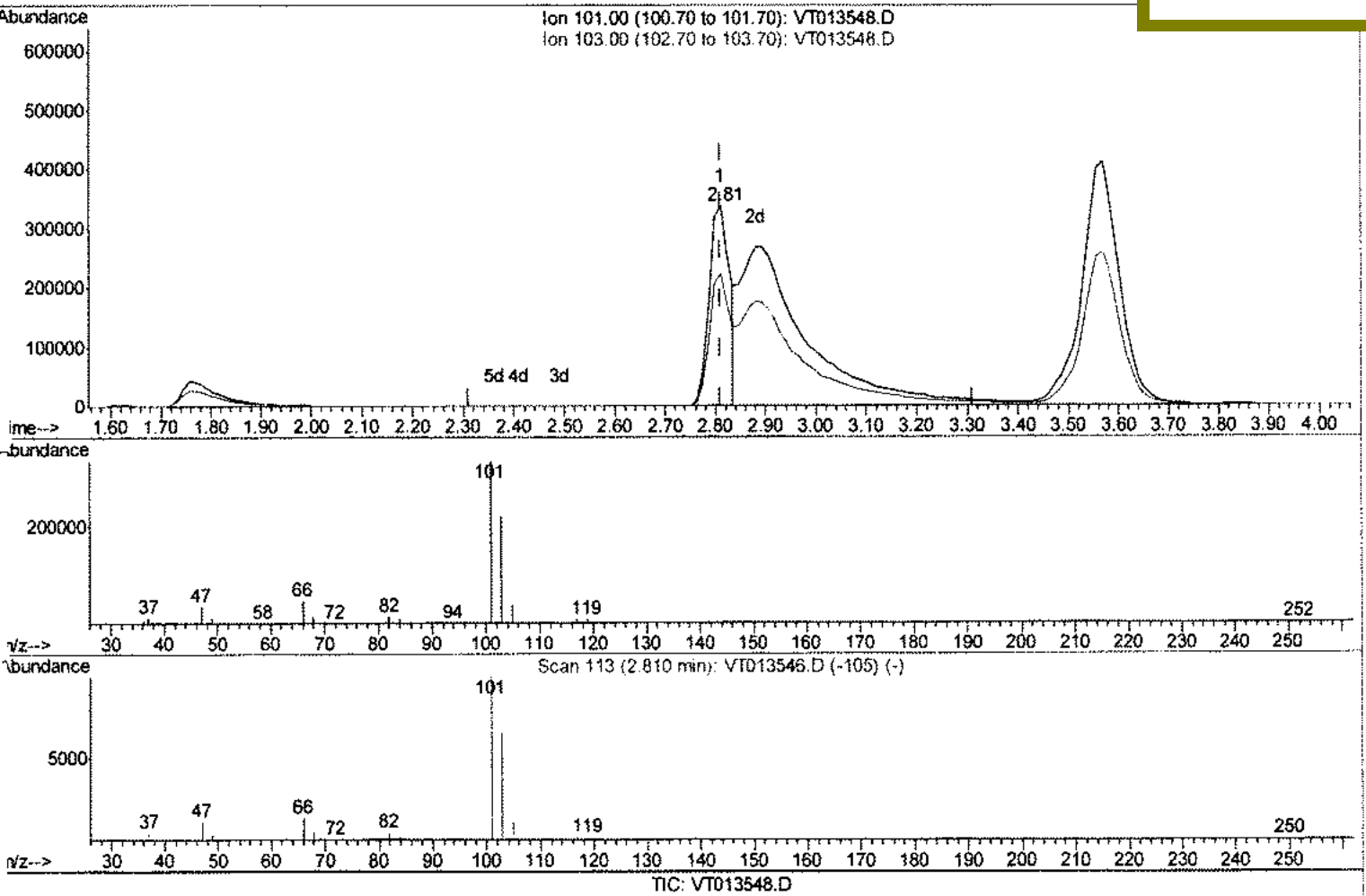
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013548.D
Acq On : 12 Apr 2016 14:29
Operator : FY/SY
Sample : VSTD10089
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 12 14:48:10 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:29:35 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD10089

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:25 PM



(9) Trichlorofluoromethane (T)

2.810min (+0.000) 25.07ug/L

response 965310

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	65.57#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013548.D
Acq On : 12 Apr 2016 14:29
Operator : FY/SY
Sample : VSTD10089
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 12 14:50:33 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:29:35 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD10089

Manual Integrations APPROVED
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4/13/2016 2:36:25 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1586737	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	1271075	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	637157	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.09	65	3031377	96.71	ug/L	0.01
7) Chloroethane-d5	2.53	69	2051633	97.90	ug/L	0.01
10) 1,1-Dichloroethene-d2	3.46	63	5007367	91.59	ug/L	-0.01
20) 2-Butanone-d5	6.43	46	1390529	223.71	ug/L	0.00
24) Chloroform-d	7.07	84	4238374	93.67	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	2368401	97.56	ug/L	0.00
29) Benzene-d6	7.74	84	9250780	99.43	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	2704031	101.00	ug/L	0.00
37) Toluene-d8	9.87	98	8391416	105.91	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.14	79	1099146	120.02	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	932432	237.36	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	1732371	103.71	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	2470451	102.41	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.76	85	2638852	84.82	ug/L	100
3) Chloromethane	1.95	50	3122952	88.62	ug/L	99
5) Vinyl chloride	2.10	62	2863691	88.66	ug/L	99
6) Bromomethane	2.44	94	1414890	88.82	ug/L	99
8) Chloroethane	2.56	64	1598084	89.02	ug/L	98
9) Trichlorofluoromethane	2.81	101	3428564m	89.03	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	2105763	89.44	ug/L	98
12) 1,1-Dichloroethene	3.48	96	1953859m	90.84	ug/L	
13) Acetone	3.54	43	1324770	161.77	ug/L	99
14) Carbon disulfide	3.79	76	7297511m	95.93	ug/L	
15) Methyl Acetate	4.03	43	1236478	99.51	ug/L	98
16) Methylene chloride	4.24	84	1957699	89.05	ug/L	98
17) Methyl tert-butyl Ether	4.73	73	4110587	106.08	ug/L	99
18) trans-1,2-Dichloroethene	4.73	96	2181929	95.11	ug/L	97
19) 1,1-Dichloroethane	5.53	63	4633404	94.86	ug/L	98
21) 2-Butanone	6.53	43	1733492	185.53	ug/L	100
22) cis-1,2-Dichloroethene	6.53	96	2125732	92.79	ug/L	99
23) Bromochloromethane	6.92	128	776384	93.13	ug/L	98
25) Chloroform	7.09	83	3795127	90.38	ug/L	99
27) 1,2-Dichloroethane	7.89	62	2744497	93.20	ug/L	99
30) Cyclohexane	7.41	56	5191991	94.30	ug/L	99
31) 1,1,1-Trichloroethane	7.32	97	3486574	93.41	ug/L	98
32) Carbon tetrachloride	7.53	117	3236382	93.95	ug/L	97
34) Benzene	7.79	78	9446909	95.12	ug/L	100
35) Trichloroethene	8.61	95	2340420	95.13	ug/L	99
36) Methylcyclohexane	8.87	83	4769608	95.58	ug/L	98
40) 1,2-Dichloropropane	8.89	63	2364598	95.55	ug/L	100
41) Bromodichloromethane	9.18	83	2716877	98.52	ug/L	98
42) cis-1,3-Dichloropropene	9.61	75	3228465	101.68	ug/L	98
43) 4-Methyl-2-pentanone	9.76	43	3295590	199.32	ug/L	98

M.D. 04/22/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT041216\
Data File : VT013548.D
Acq On : 12 Apr 2016 14:29
Operator : FY/SY
Sample : VSTD10089
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD10089

Manual Integrations APPROVED
MMdadoda
4/13/2016 2:36:25 PM

Quant Time: Apr 12 14:50:33 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Tue Apr 12 14:29:35 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) Toluene	9.93	91	9674561	98.86	ug/L	100
45) trans-1,3-Dichloropropene	10.16	75	2768401	109.27	ug/L	100
46) 1,1,2-Trichloroethane	10.34	97	1267461	99.03	ug/L	98
47) Tetrachloroethene	10.42	164	1789128	100.86	ug/L	99
49) 2-Hexanone	10.53	43	2583445	190.27	ug/L	100
50) Dibromochloromethane	10.68	129	1623889	104.34	ug/L	95
51) 1,2-Dibromoethane	10.79	107	1201453	99.07	ug/L	99
52) Chlorobenzene	11.21	112	5349680	96.55	ug/L	100
53) Ethylbenzene	11.29	91	11178258	100.16	ug/L	99
54) m,p-Xylene	11.40	106	4099092	100.87	ug/L	100
55) o-xylene	11.73	106	3983889	103.38	ug/L	93
56) Styrene	11.74	104	6157285	102.27	ug/L	99
57) Isopropylbenzene	12.03	105	11304553	103.50	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	1586797	97.78	ug/L	99
61) Bromoform	11.91	173	890429	112.65	ug/L	98
62) 1,3-Dichlorobenzene	13.06	146	4088331	98.25	ug/L	100
63) 1,4-Dichlorobenzene	13.14	146	4035383	98.85	ug/L	100
64) 1,2-Dichlorobenzene	13.42	146	3617339	99.71	ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.04	75	276333	106.98	ug/L	95
66) 1,2,4-trichlorobenzene	14.68	180	2239480	99.64	ug/L	100
67) 1,2,3-Trichlorobenzene	15.07	180	1711696	90.74	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

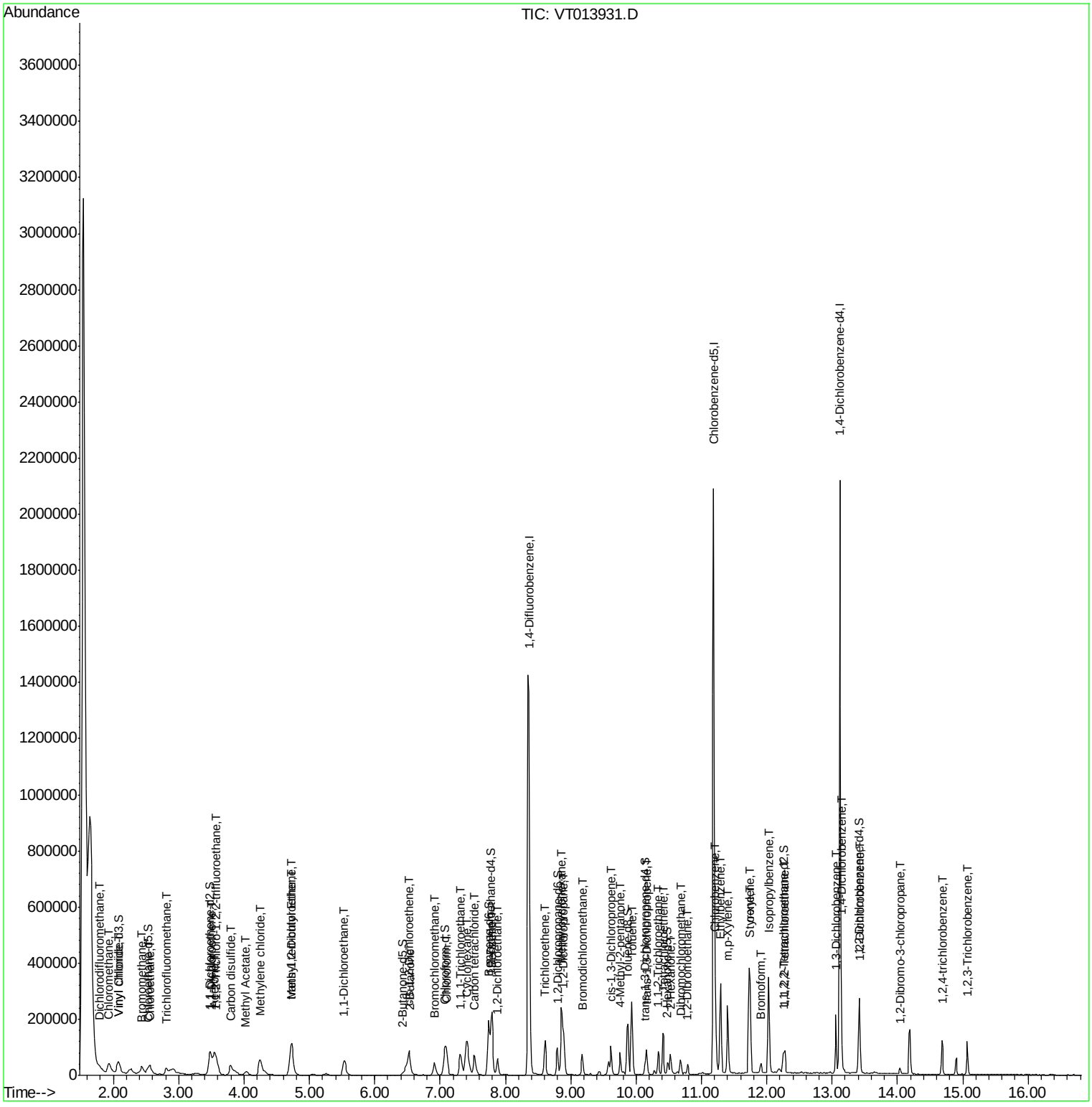
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013931.D
Acq On : 6 May 2016 9:38
Operator : FY/SY
Sample : VSTD2.582
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 11:13:58 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD2.582

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:39 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013931.D
Acq On : 6 May 2016 9:38
Operator : FY/SY
Sample : VSTD2.582
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 11:13:58 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD2.582

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:39 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1111448	25.00	ug/L		0.00
28) Chlorobenzene-d5	11.19	117	893398	25.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	433491	25.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.08	65	34499	2.01	ug/L		0.00
7) Chloroethane-d5	2.54	69	27381	2.13	ug/L		0.01
10) 1,1-Dichloroethene-d2	3.47	63	87116	2.29	ug/L		0.00
20) 2-Butanone-d5	6.43	46	21134	4.78	ug/L		0.00
24) Chloroform-d	7.07	84	78478	2.42	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.78	65	49761	2.58	ug/L		0.00
29) Benzene-d6	7.74	84	134044	2.38	ug/L		0.00
33) 1,2-Dichloropropane-d6	8.80	67	39674	2.40	ug/L		0.00
37) Toluene-d8	9.87	98	118363	2.35	ug/L		0.00
38) trans-1,3-Dichloropropene-	10.13	79	13149	2.17	ug/L		0.00
39) 2-Hexanone-d5	10.48	63	10869	4.22	ug/L		0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	29806	2.51	ug/L		0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	38351	2.50	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.78	85	55146	2.44	ug/L		87
3) Chloromethane	1.93	50	67674	2.49	ug/L		96
5) Vinyl chloride	2.08	62	62982	2.41	ug/L		95
6) Bromomethane	2.43	94	33595	2.49	ug/L		92
8) Chloroethane	2.56	64	34381	2.35	ug/L		95
9) Trichlorofluoromethane	2.81	101	79618m	4.07	ug/L		
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	46180	2.46	ug/L		99
12) 1,1-Dichloroethene	3.50	96	41497	2.44	ug/L		78
13) Acetone	3.54	43	43368	5.46	ug/L		97
14) Carbon disulfide	3.79	76	119687m	2.49	ug/L		
15) Methyl Acetate	4.03	43	25405	2.58	ug/L		96
16) Methylene chloride	4.24	84	45441	2.71	ug/L		96
17) Methyl tert-butyl Ether	4.73	73	67200	2.32	ug/L		96
18) trans-1,2-Dichloroethene	4.73	96	39952	2.39	ug/L		89
19) 1,1-Dichloroethane	5.53	63	89663	2.41	ug/L		98
21) 2-Butanone	6.54	43	37515	5.03	ug/L		96
22) cis-1,2-Dichloroethene	6.53	96	36666	2.31	ug/L		90
23) Bromochloromethane	6.92	128	14084	2.38	ug/L		96
25) Chloroform	7.09	83	79821	2.46	ug/L		98
27) 1,2-Dichloroethane	7.87	62	61989	2.52	ug/L	#	94
30) Cyclohexane	7.41	56	80569	2.26	ug/L		98
31) 1,1,1-Trichloroethane	7.31	97	68296	2.39	ug/L		97
32) Carbon tetrachloride	7.52	117	60143	2.34	ug/L		99
34) Benzene	7.79	78	168449	2.50	ug/L		100
35) Trichloroethene	8.61	95	42224	2.43	ug/L		96
36) Methylcyclohexane	8.86	83	77487	2.33	ug/L		93
40) 1,2-Dichloropropane	8.89	63	42065	2.47	ug/L	#	96
41) Bromodichloromethane	9.18	83	46455	2.36	ug/L		96
42) cis-1,3-Dichloropropene	9.61	75	45478	2.15	ug/L		96
43) 4-Methyl-2-pentanone	9.76	43	56359	4.81	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013931.D
Acq On : 6 May 2016 9:38
Operator : FY/SY
Sample : VSTD2.582
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 11:13:58 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD2.582

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:39 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
44) Toluene	9.93	91	159417	2.44	ug/L		100
45) trans-1,3-Dichloropropene	10.16	75	35934	2.02	ug/L		98
46) 1,1,2-Trichloroethane	10.34	97	22680	2.45	ug/L		98
47) Tetrachloroethene	10.42	164	29791	2.40	ug/L		94
49) 2-Hexanone	10.53	43	48879	4.89	ug/L		94
50) Dibromochloromethane	10.68	129	23647	2.25	ug/L		95
51) 1,2-Dibromoethane	10.79	107	21551	2.49	ug/L		99
52) Chlorobenzene	11.21	112	96287	2.49	ug/L		93
53) Ethylbenzene	11.29	91	186993	2.43	ug/L		95
54) m,p-Xylene	11.40	106	62817	2.30	ug/L		95
55) o-xylene	11.73	106	56681	2.24	ug/L		98
56) Styrene	11.74	104	100873	2.44	ug/L		90
57) Isopropylbenzene	12.03	105	170100	2.27	ug/L		97
58) 1,1,2,2-Tetrachloroethane	12.28	83	29656	2.50	ug/L		96
61) Bromoform	11.91	173	14228	2.59	ug/L		99
62) 1,3-Dichlorobenzene	13.06	146	63700	2.35	ug/L		95
63) 1,4-Dichlorobenzene	13.14	146	74806	2.58	ug/L		98
64) 1,2-Dichlorobenzene	13.42	146	60657	2.45	ug/L		94
65) 1,2-Dibromo-3-chloropropan	14.04	75	5270	2.70	ug/L	#	74
66) 1,2,4-trichlorobenzene	14.69	180	31521	2.22	ug/L		97
67) 1,2,3-Trichlorobenzene	15.07	180	30914	2.41	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

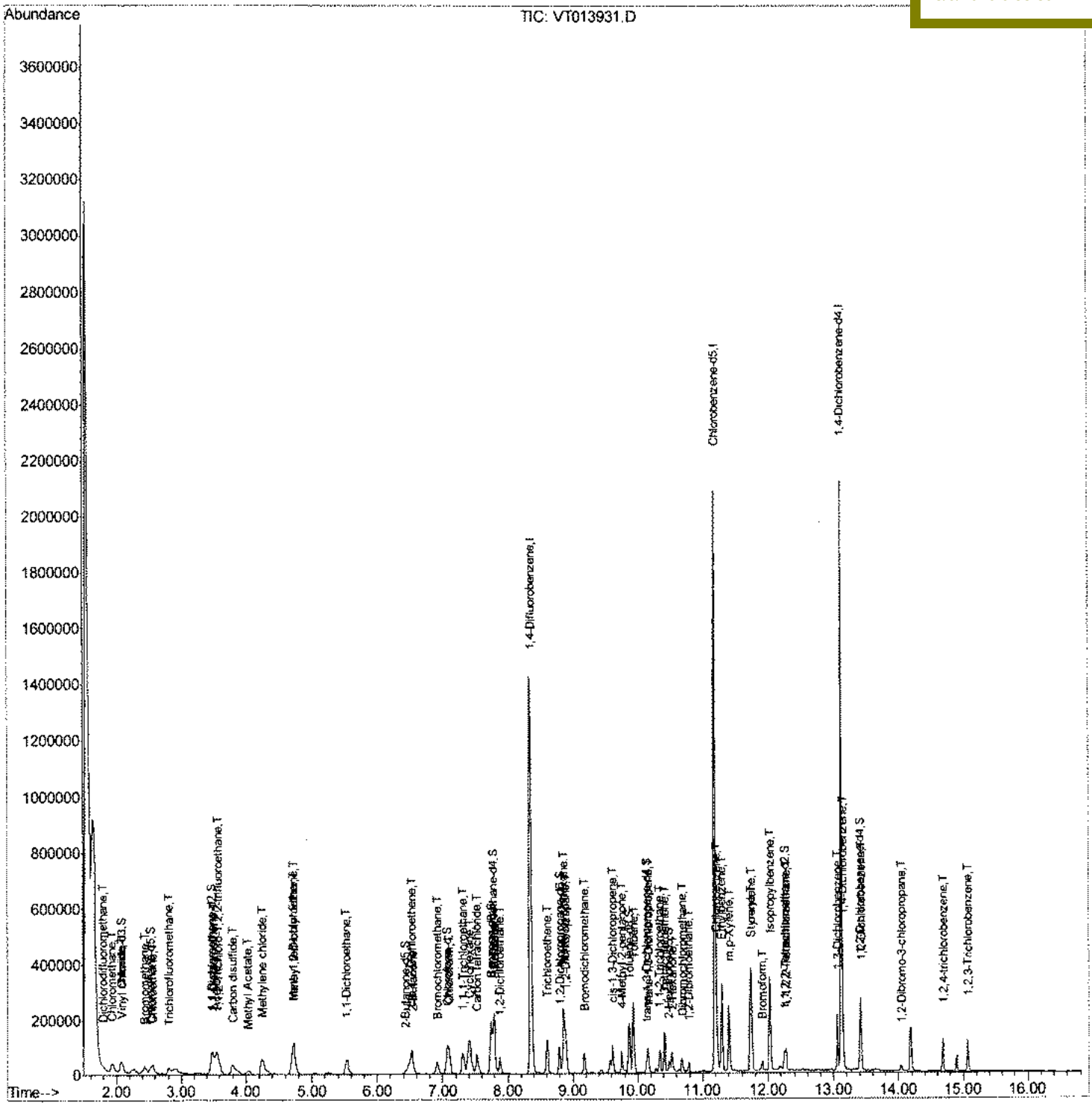
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013931.D
Acq On : 6 May 2016 9:38
Operator : FY/SY
Sample : VSTD2.582
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 11:13:58 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD2.582

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:39 PM



Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013931.D
Acq On : 6 May 2016 9:38
Operator : FY/SY
Sample : VSTD2.582
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 11:10:39 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD2.582

Manual Integrations APPROVED
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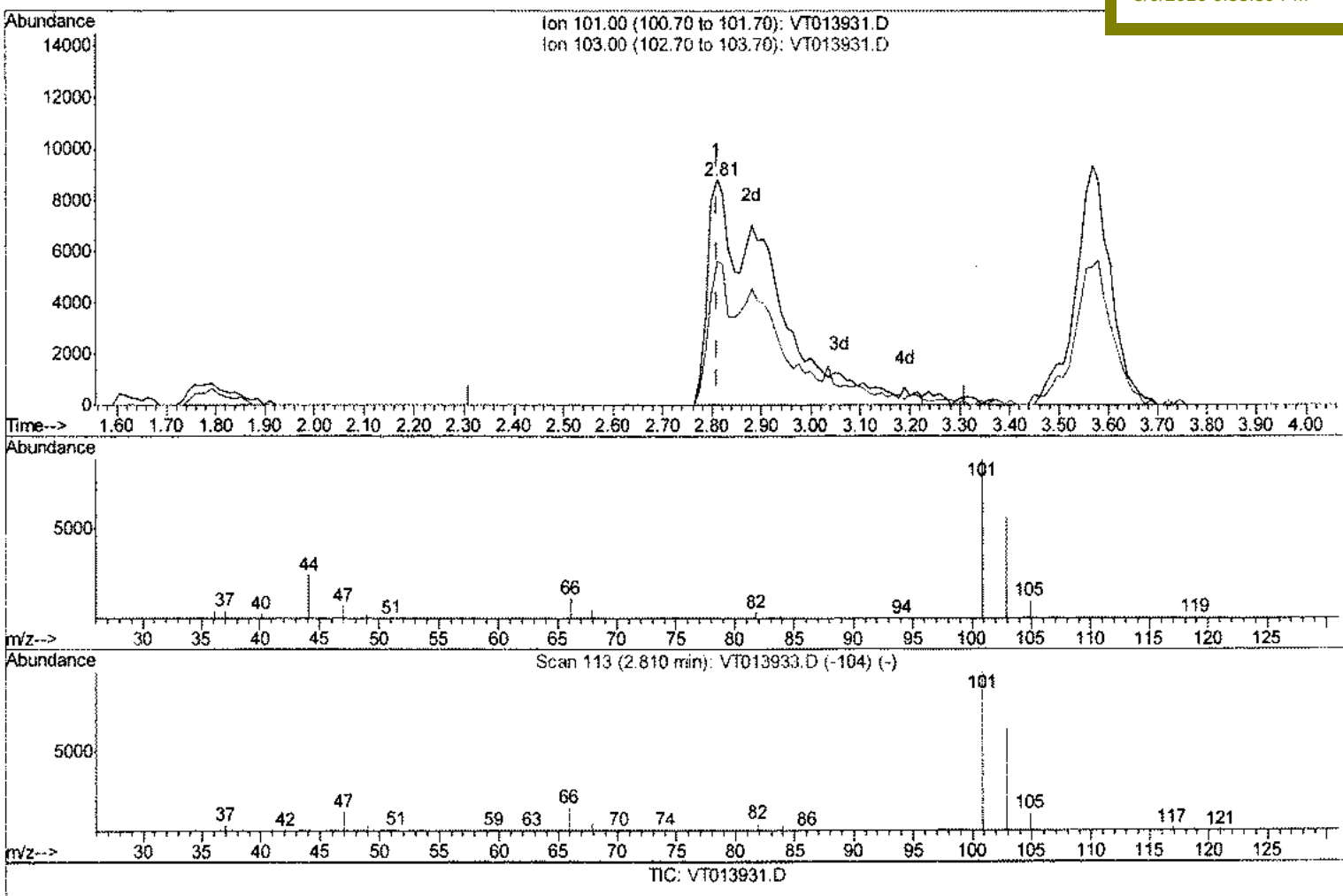
5/9/2016 6:53:39 PM



TIC: VT013931.D

(9) Trichlorofluoromethane (T)

2.810min (-0.000) 4.07ug/L m

response 79618

M.D 05/13/16

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	22.14
0.00	0.00	0.00
0.00	0.00	0.00

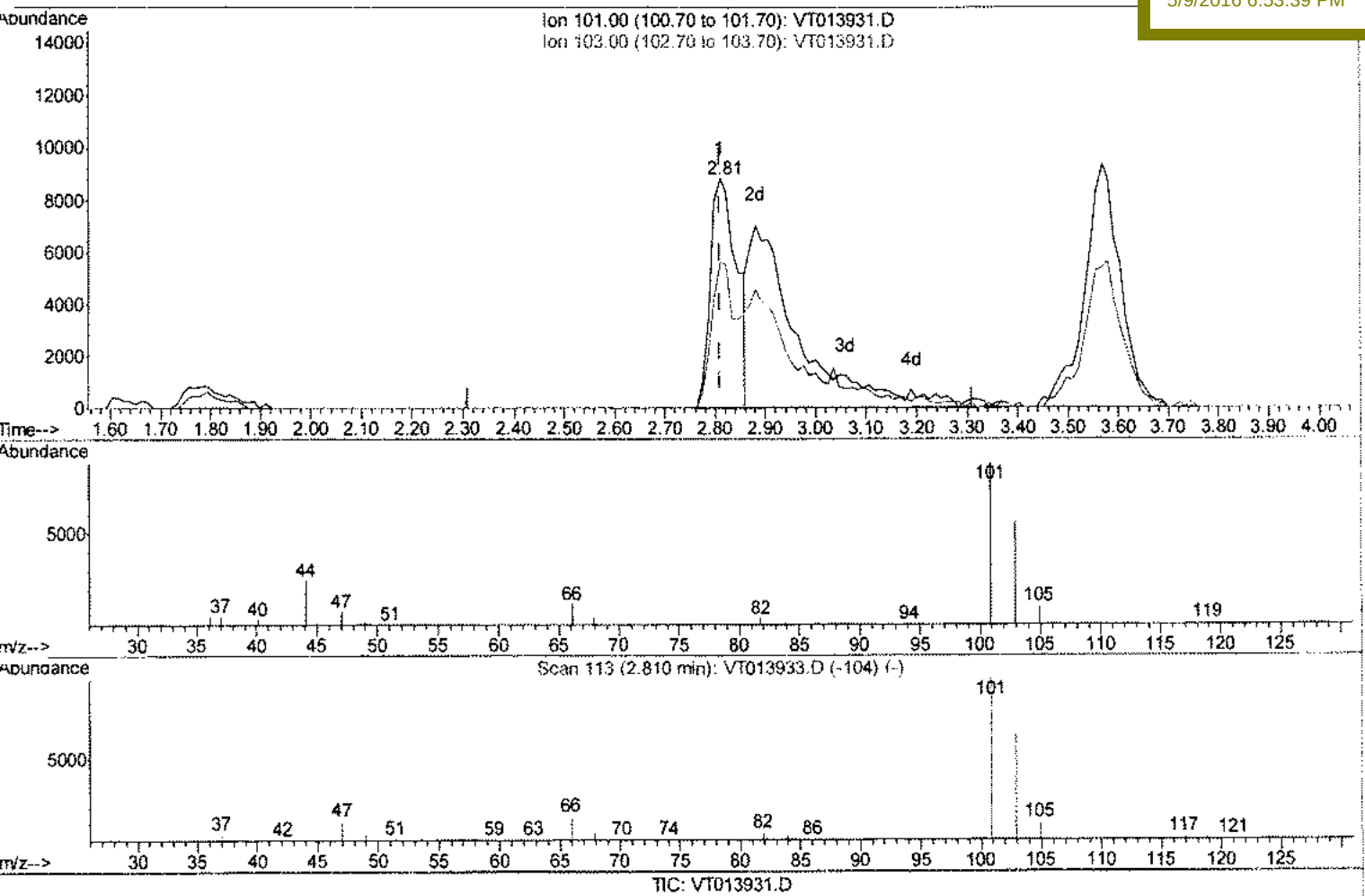
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013931.D
Acq On : 6 May 2016 9:38
Operator : FY/SY
Sample : VSTD2.582
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 11:10:39 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD2.582

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:39 PM



(9) Trichlorofluoromethane (T)

2.810min (-0.000) 1.66ug/L

response 32432

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	54.36#
0.00	0.00	0.00
0.00	0.00	0.00

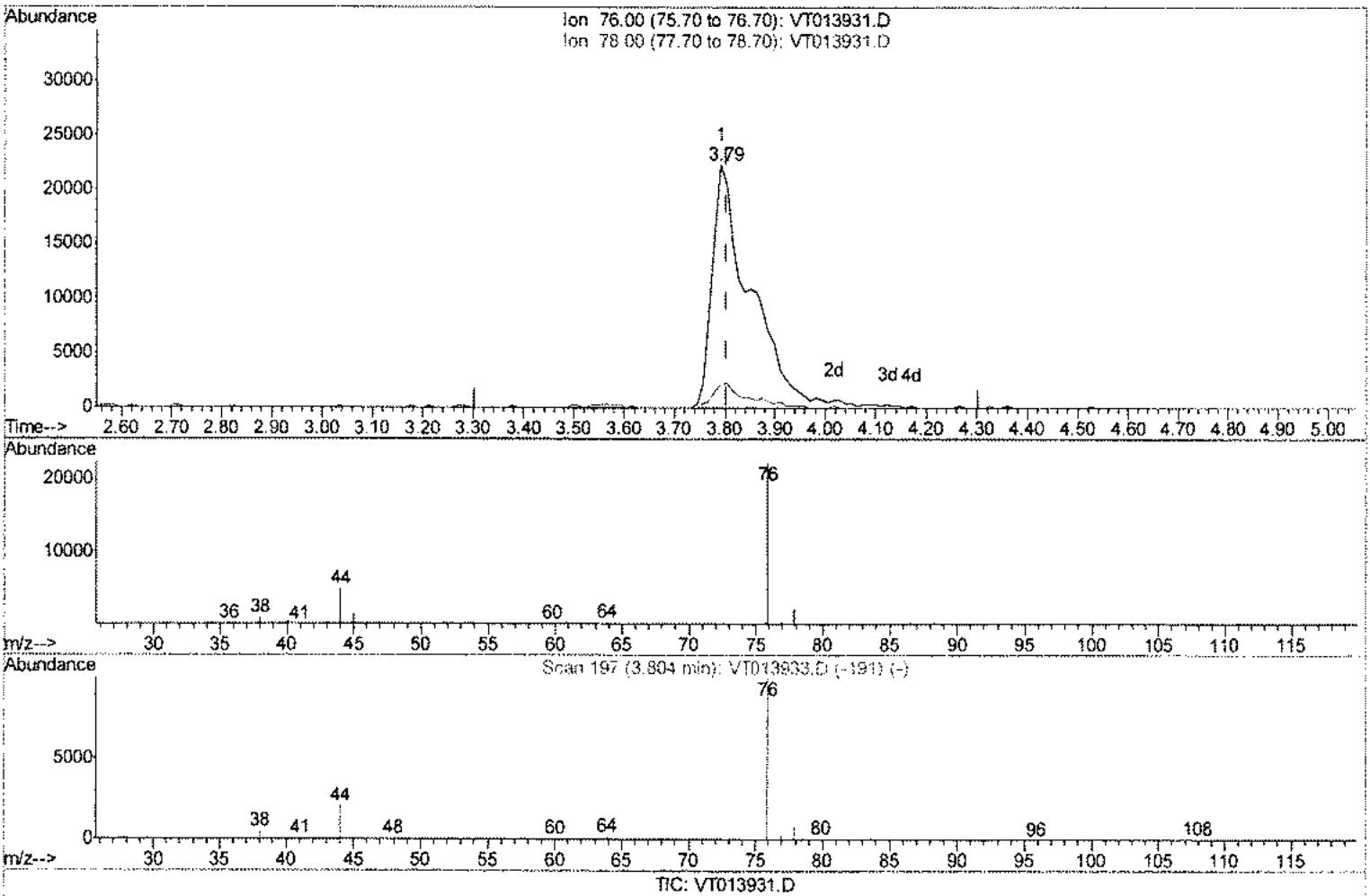
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013931.D
Acq On : 6 May 2016 9:38
Operator : FY/SY
Sample : VSTD2.582
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 11:10:39 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD2.582

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:39 PM



TIC: VT013931.D

(14) Carbon disulfide (T)

3.792min (-0.012) 2.49ug/L m M.D 05/13/16

response 119687

Ion	Exp%	Act%
76.00	100	100
78.00	9.10	9.56
0.00	0.00	0.00
0.00	0.00	0.00

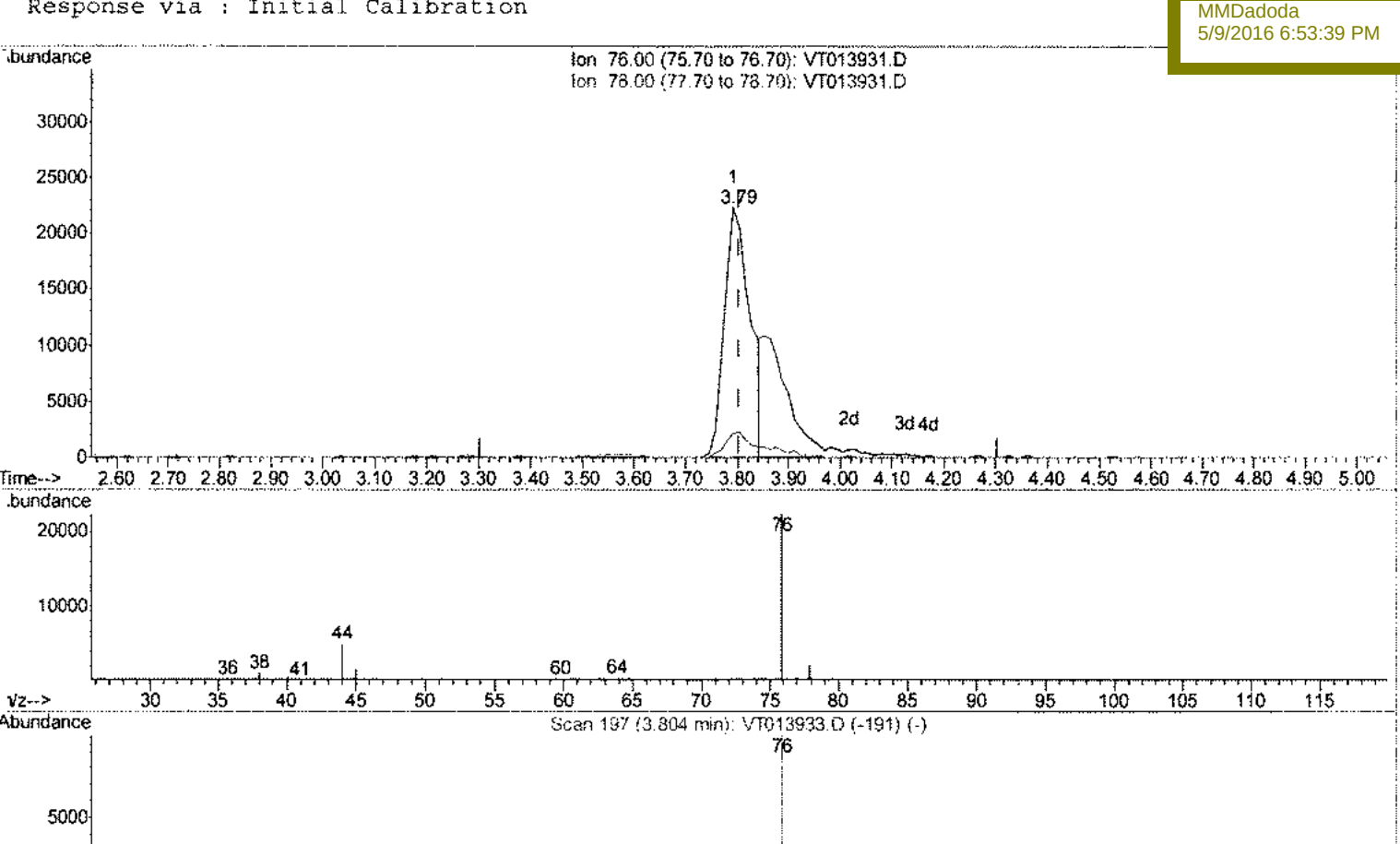
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013931.D
Acq On : 6 May 2016 9:38
Operator : FY/SY
Sample : VSTD2.582
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 11:10:39 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD2.582

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:39 PM



(14) Carbon disulfide (T)

3.792min (-0.012) 1.59ug/L

response 76414

Ion	Exp%	Act%
76.00	100	100
78.00	9.10	9.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013931.D
Acq On : 6 May 2016 9:38
Operator : FY/SY
Sample : VSTD2.582
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 11:13:58 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD2.582

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:39 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1111448	25.00	ug/L		0.00
28) Chlorobenzene-d5	11.19	117	893398	25.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	433491	25.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.08	65	34499	2.01	ug/L		0.00
7) Chloroethane-d5	2.54	69	27381	2.13	ug/L		0.01
10) 1,1-Dichloroethene-d2	3.47	63	87116	2.29	ug/L		0.00
20) 2-Butanone-d5	6.43	46	21134	4.78	ug/L		0.00
24) Chloroform-d	7.07	84	78478	2.42	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.78	65	49761	2.58	ug/L		0.00
29) Benzene-d6	7.74	84	134044	2.38	ug/L		0.00
33) 1,2-Dichloropropane-d6	8.80	67	39674	2.40	ug/L		0.00
37) Toluene-d8	9.87	98	118363	2.35	ug/L		0.00
38) trans-1,3-Dichloropropene-	10.13	79	13149	2.17	ug/L		0.00
39) 2-Hexanone-d5	10.48	63	10869	4.22	ug/L		0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	29806	2.51	ug/L		0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	38351	2.50	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.78	85	55146	2.44	ug/L		87
3) Chloromethane	1.93	50	67674	2.49	ug/L		96
5) Vinyl chloride	2.08	62	62982	2.41	ug/L		95
6) Bromomethane	2.43	94	33595	2.49	ug/L		92
8) Chloroethane	2.56	64	34381	2.35	ug/L		95
9) Trichlorofluoromethane	2.81	101	79618m	4.07	ug/L		
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	46180	2.46	ug/L		99
12) 1,1-Dichloroethene	3.50	96	41497	2.44	ug/L		78
13) Acetone	3.54	43	43368	5.46	ug/L		97
14) Carbon disulfide	3.79	76	119687m	2.49	ug/L		
15) Methyl Acetate	4.03	43	25405	2.58	ug/L		96
16) Methylene chloride	4.24	84	45441	2.71	ug/L		96
17) Methyl tert-butyl Ether	4.73	73	67200	2.32	ug/L		96
18) trans-1,2-Dichloroethene	4.73	96	39952	2.39	ug/L		89
19) 1,1-Dichloroethane	5.53	63	89663	2.41	ug/L		98
21) 2-Butanone	6.54	43	37515	5.03	ug/L		96
22) cis-1,2-Dichloroethene	6.53	96	36666	2.31	ug/L		90
23) Bromochloromethane	6.92	128	14084	2.38	ug/L		96
25) Chloroform	7.09	83	79821	2.46	ug/L		98
27) 1,2-Dichloroethane	7.87	62	61989	2.52	ug/L	#	94
30) Cyclohexane	7.41	56	80569	2.26	ug/L		98
31) 1,1,1-Trichloroethane	7.31	97	68296	2.39	ug/L		97
32) Carbon tetrachloride	7.52	117	60143	2.34	ug/L		99
34) Benzene	7.79	78	168449	2.50	ug/L		100
35) Trichloroethene	8.61	95	42224	2.43	ug/L		96
36) Methylcyclohexane	8.86	83	77487	2.33	ug/L		93
40) 1,2-Dichloropropane	8.89	63	42065	2.47	ug/L	#	96
41) Bromodichloromethane	9.18	83	46455	2.36	ug/L		96
42) cis-1,3-Dichloropropene	9.61	75	45478	2.15	ug/L		96
43) 4-Methyl-2-pentanone	9.76	43	56359	4.81	ug/L		97

M.D 05/13/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013931.D
Acq On : 6 May 2016 9:38
Operator : FY/SY
Sample : VSTD2.582
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 11:13:58 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD2.582

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:39 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
44) Toluene	9.93	91	159417	2.44	ug/L		100
45) trans-1,3-Dichloropropene	10.16	75	35934	2.02	ug/L		98
46) 1,1,2-Trichloroethane	10.34	97	22680	2.45	ug/L		98
47) Tetrachloroethene	10.42	164	29791	2.40	ug/L		94
49) 2-Hexanone	10.53	43	48879	4.89	ug/L		94
50) Dibromochloromethane	10.68	129	23647	2.25	ug/L		95
51) 1,2-Dibromoethane	10.79	107	21551	2.49	ug/L		99
52) Chlorobenzene	11.21	112	96287	2.49	ug/L		93
53) Ethylbenzene	11.29	91	186993	2.43	ug/L		95
54) m,p-Xylene	11.40	106	62817	2.30	ug/L		95
55) o-xylene	11.73	106	56681	2.24	ug/L		98
56) Styrene	11.74	104	100873	2.44	ug/L		90
57) Isopropylbenzene	12.03	105	170100	2.27	ug/L		97
58) 1,1,2,2-Tetrachloroethane	12.28	83	29656	2.50	ug/L		96
61) Bromoform	11.91	173	14228	2.59	ug/L		99
62) 1,3-Dichlorobenzene	13.06	146	63700	2.35	ug/L		95
63) 1,4-Dichlorobenzene	13.14	146	74806	2.58	ug/L		98
64) 1,2-Dichlorobenzene	13.42	146	60657	2.45	ug/L		94
65) 1,2-Dibromo-3-chloropropan	14.04	75	5270	2.70	ug/L	#	74
66) 1,2,4-trichlorobenzene	14.69	180	31521	2.22	ug/L		97
67) 1,2,3-Trichlorobenzene	15.07	180	30914	2.41	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013932.D
Acq On : 6 May 2016 10:05
Operator : FY/SY
Sample : VSTD00583
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 11:15:50 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD00583

Manual Integrations APPROVED
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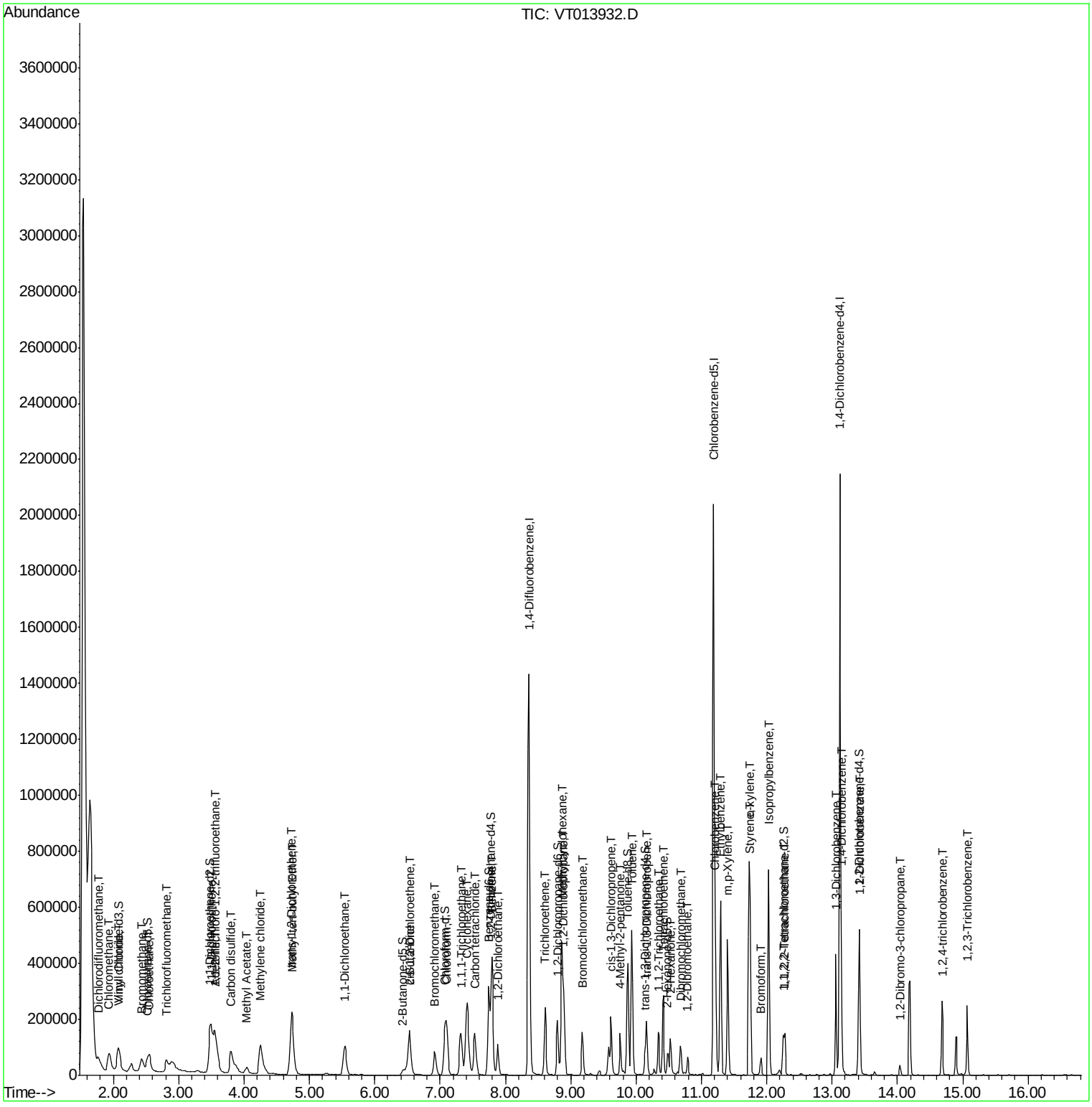
5/9/2016 6:53:45 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013932.D
Acq On : 6 May 2016 10:05
Operator : FY/SY
Sample : VSTD00583
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 11:15:50 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD00583

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:45 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1050755	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	861113	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	435064	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	72489	4.47	ug/L	0.00
7) Chloroethane-d5	2.51	69	57426	4.72	ug/L	-0.01
10) 1,1-Dichloroethene-d2	3.47	63	174434	4.85	ug/L	0.00
20) 2-Butanone-d5	6.43	46	38797	9.29	ug/L	0.00
24) Chloroform-d	7.07	84	154266	5.04	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	87618	4.81	ug/L	0.00
29) Benzene-d6	7.74	84	272326	5.01	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	78947	4.95	ug/L	0.00
37) Toluene-d8	9.87	98	243232	5.01	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.13	79	28516	4.88	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	23275	9.39	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	56127	4.89	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	76038	4.93	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	104308	4.88	ug/L	97
3) Chloromethane	1.93	50	127300	4.95	ug/L	99
5) Vinyl chloride	2.09	62	125905	5.10	ug/L	96
6) Bromomethane	2.43	94	65914	5.16	ug/L	97
8) Chloroethane	2.55	64	71977	5.21	ug/L	96
9) Trichlorofluoromethane	2.81	101	156011m	8.44	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.56	101	90389	5.10	ug/L	98
12) 1,1-Dichloroethene	3.50	96	80813	5.03	ug/L	94
13) Acetone	3.56	43	69610	9.27	ug/L	96
14) Carbon disulfide	3.80	76	260514	5.73	ug/L	99
15) Methyl Acetate	4.04	43	42406	4.56	ug/L	98
16) Methylene chloride	4.25	84	77522	4.89	ug/L	93
17) Methyl tert-butyl Ether	4.74	73	127852	4.67	ug/L	95
18) trans-1,2-Dichloroethene	4.73	96	78124	4.94	ug/L	92
19) 1,1-Dichloroethane	5.54	63	174942	4.97	ug/L	97
21) 2-Butanone	6.54	43	64161	9.10	ug/L	99
22) cis-1,2-Dichloroethene	6.54	96	74078	4.94	ug/L	98
23) Bromochloromethane	6.92	128	27985	5.00	ug/L	93
25) Chloroform	7.11	83	153496	5.01	ug/L	99
27) 1,2-Dichloroethane	7.89	62	114038	4.91	ug/L	97
30) Cyclohexane	7.41	56	172379	5.01	ug/L	99
31) 1,1,1-Trichloroethane	7.32	97	140778	5.10	ug/L	98
32) Carbon tetrachloride	7.53	117	126830	5.11	ug/L	99
34) Benzene	7.79	78	321243	4.95	ug/L	100
35) Trichloroethene	8.61	95	82707	4.94	ug/L	96
36) Methylcyclohexane	8.87	83	160383	5.01	ug/L	96
40) 1,2-Dichloropropane	8.89	63	82888	5.06	ug/L	99
41) Bromodichloromethane	9.18	83	94492	4.98	ug/L	99
42) cis-1,3-Dichloropropene	9.61	75	98192	4.82	ug/L	99
43) 4-Methyl-2-pentanone	9.76	43	104240	9.24	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013932.D
Acq On : 6 May 2016 10:05
Operator : FY/SY
Sample : VSTD00583
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 11:15:50 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD00583

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:45 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
44) Toluene	9.93	91	313971	4.98	ug/L		99
45) trans-1,3-Dichloropropene	10.16	75	85044	4.97	ug/L		99
46) 1,1,2-Trichloroethane	10.35	97	44558	5.00	ug/L		91
47) Tetrachloroethene	10.42	164	59693	4.98	ug/L		99
49) 2-Hexanone	10.53	43	86248	8.95	ug/L		96
50) Dibromochloromethane	10.68	129	49217	4.86	ug/L		99
51) 1,2-Dibromoethane	10.79	107	39194	4.69	ug/L		96
52) Chlorobenzene	11.21	112	181037	4.86	ug/L		95
53) Ethylbenzene	11.29	91	367254	4.94	ug/L		98
54) m,p-Xylene	11.40	106	132170	5.03	ug/L		97
55) o-xylene	11.73	106	119917	4.92	ug/L		100
56) Styrene	11.74	104	194570	4.88	ug/L		93
57) Isopropylbenzene	12.03	105	359161	4.98	ug/L		97
58) 1,1,2,2-Tetrachloroethane	12.28	83	55088	4.81	ug/L		98
61) Bromoform	11.91	173	25145	4.57	ug/L		99
62) 1,3-Dichlorobenzene	13.06	146	133622	4.92	ug/L		97
63) 1,4-Dichlorobenzene	13.14	146	142660	4.90	ug/L		97
64) 1,2-Dichlorobenzene	13.42	146	122695	4.93	ug/L		95
65) 1,2-Dibromo-3-chloropropan	14.04	75	8159	4.16	ug/L	#	84
66) 1,2,4-trichlorobenzene	14.69	180	67821	4.76	ug/L		98
67) 1,2,3-Trichlorobenzene	15.07	180	62538	4.87	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013932.D
Acq On : 6 May 2016 10:05
Operator : FY/SY
Sample : VSTD00583
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 11:15:50 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD00583

Manual Integrations APPROVED
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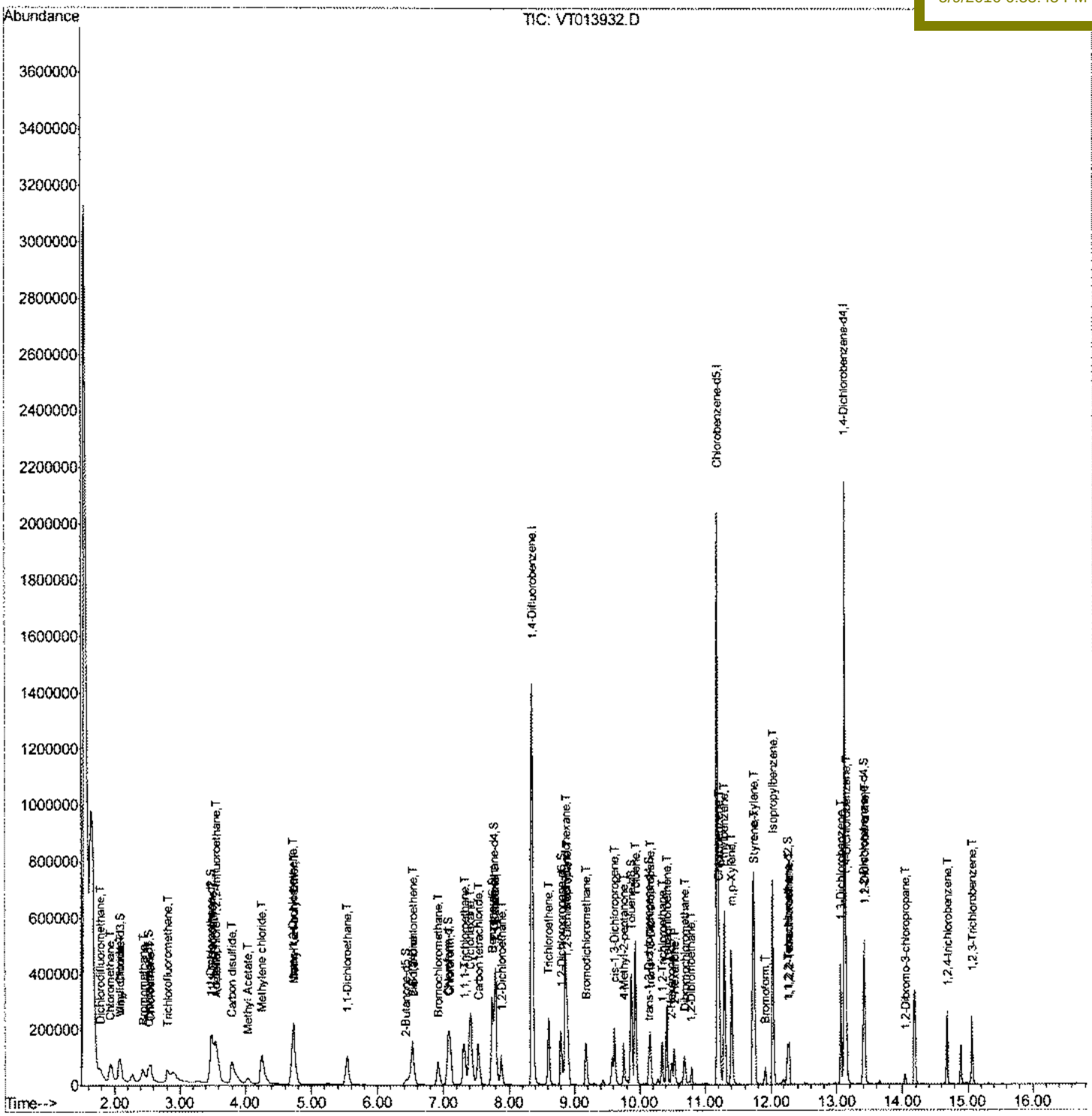
5/9/2016 6:53:45 PM



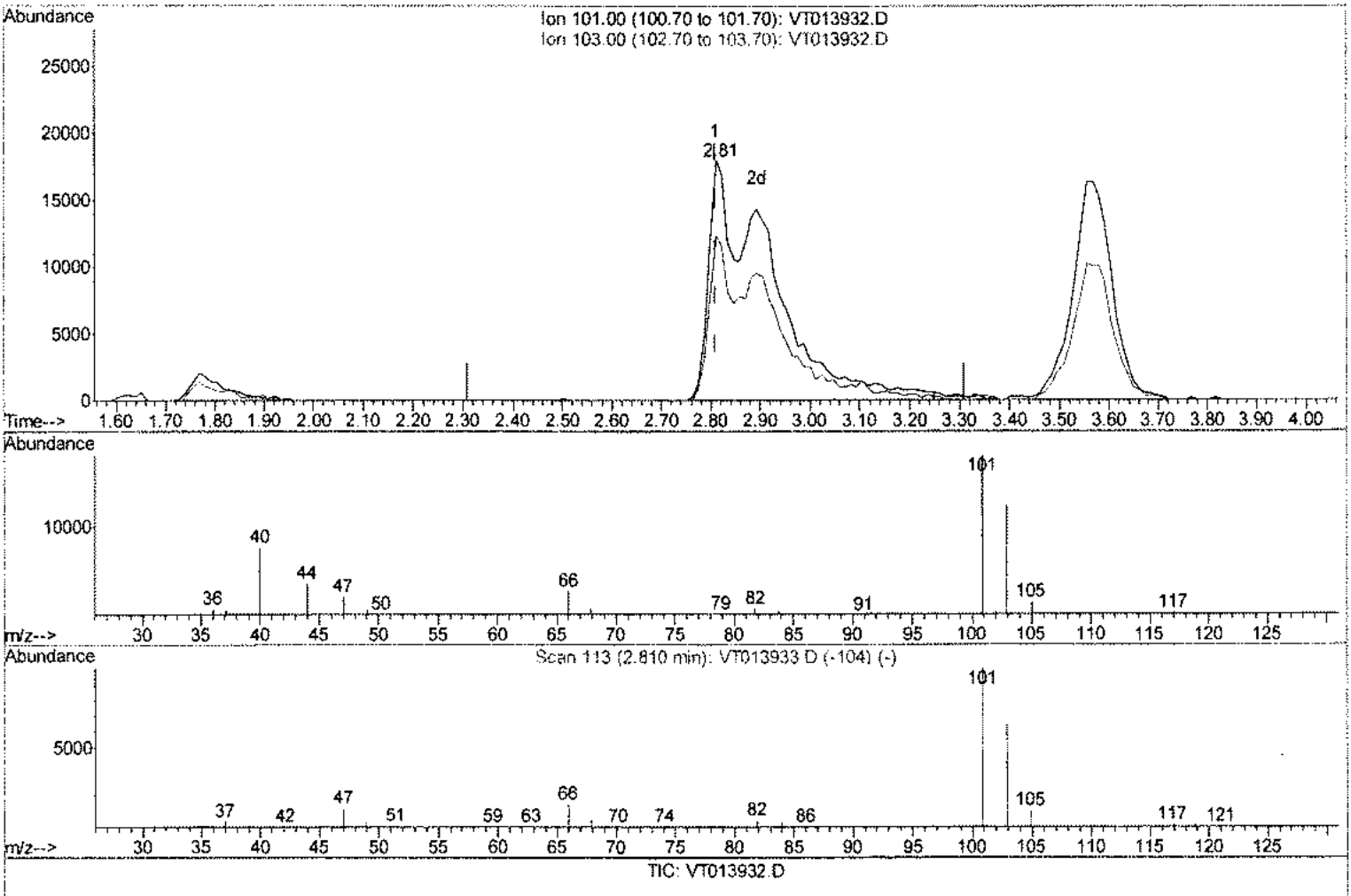
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013932.D
Acq On : 6 May 2016 10:05
Operator : FY/SY
Sample : VSTD00583
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 11:10:41 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD00583

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:45 PM



TIC: VT013932.D

(9) Trichlorofluoromethane (T)

2.810min (-0.000) 8.44ug/L m

response 156011

M.D 05/13/16

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	23.34
0.00	0.00	0.00
0.00	0.00	0.00

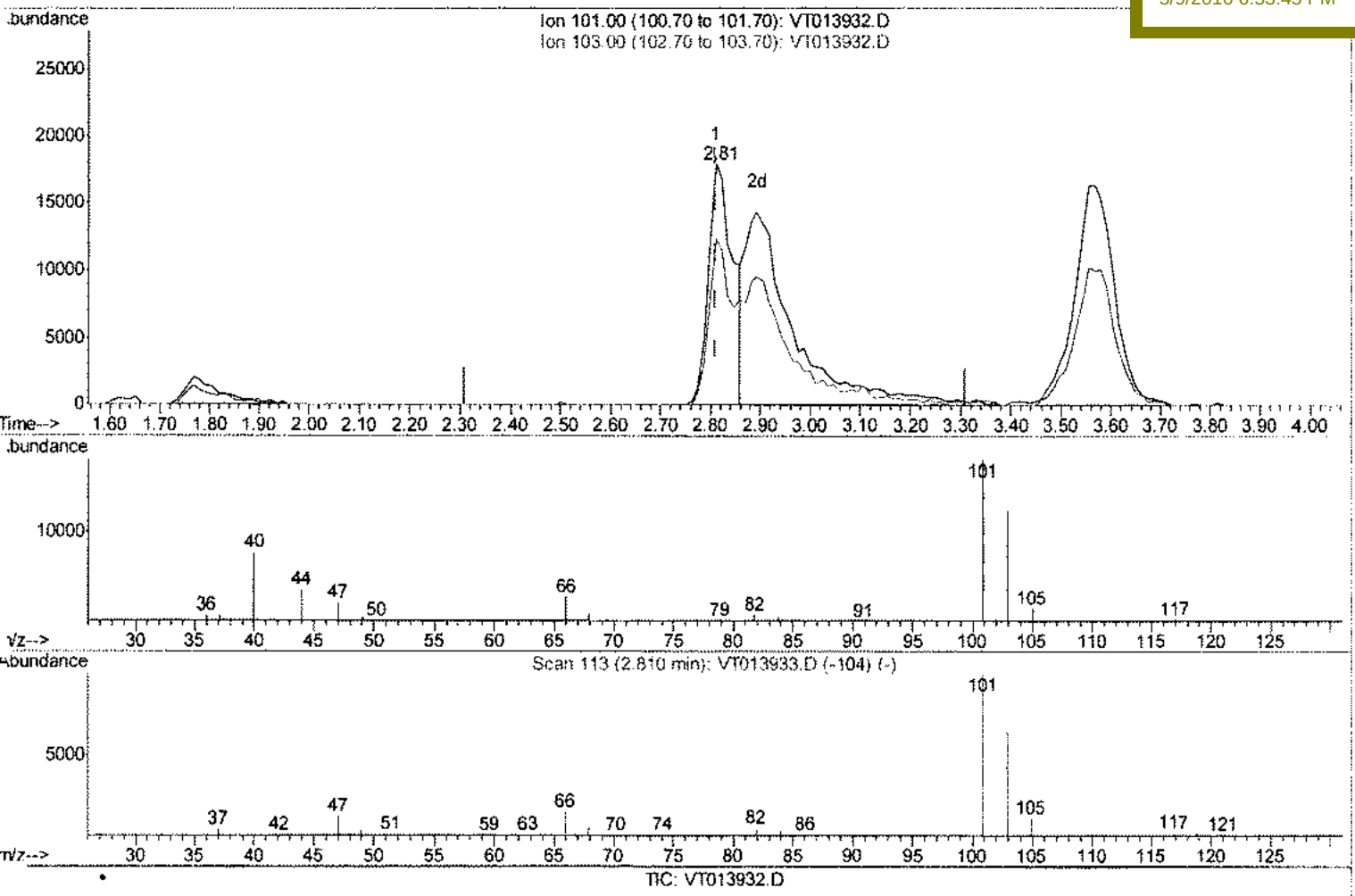
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013932.D
Acq On : 6 May 2016 10:05
Operator : FY/SY
Sample : VSTD00583
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 11:10:41 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD00583

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:45 PM



(9) Trichlorofluoromethane (T)

2.810min (-0.000) 3.30ug/L

response 61034

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	59.67#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013932.D
Acq On : 6 May 2016 10:05
Operator : FY/SY
Sample : VSTD00583
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD00583

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:45 PM

Quant Time: May 06 11:15:50 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1050755	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	861113	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	435064	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	72489	4.47	ug/L	0.00
7) Chloroethane-d5	2.51	69	57426	4.72	ug/L	-0.01
10) 1,1-Dichloroethene-d2	3.47	63	174434	4.85	ug/L	0.00
20) 2-Butanone-d5	6.43	46	38797	9.29	ug/L	0.00
24) Chloroform-d	7.07	84	154266	5.04	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	87618	4.81	ug/L	0.00
29) Benzene-d6	7.74	84	272326	5.01	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	78947	4.95	ug/L	0.00
37) Toluene-d8	9.87	98	243232	5.01	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.13	79	28516	4.88	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	23275	9.39	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	56127	4.89	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	76038	4.93	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	104308	4.88	ug/L	97
3) Chloromethane	1.93	50	127300	4.95	ug/L	99
5) Vinyl chloride	2.09	62	125905	5.10	ug/L	96
6) Bromomethane	2.43	94	65914	5.16	ug/L	97
8) Chloroethane	2.55	64	71977	5.21	ug/L	96
9) Trichlorofluoromethane	2.81	101	156011m	8.44	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.56	101	90389	5.10	ug/L	98
12) 1,1-Dichloroethene	3.50	96	80813	5.03	ug/L	94
13) Acetone	3.56	43	69610	9.27	ug/L	96
14) Carbon disulfide	3.80	76	260514	5.73	ug/L	99
15) Methyl Acetate	4.04	43	42406	4.56	ug/L	98
16) Methylene chloride	4.25	84	77522	4.89	ug/L	93
17) Methyl tert-butyl Ether	4.74	73	127852	4.67	ug/L	95
18) trans-1,2-Dichloroethene	4.73	96	78124	4.94	ug/L	92
19) 1,1-Dichloroethane	5.54	63	174942	4.97	ug/L	97
21) 2-Butanone	6.54	43	64161	9.10	ug/L	99
22) cis-1,2-Dichloroethene	6.54	96	74078	4.94	ug/L	98
23) Bromochloromethane	6.92	128	27985	5.00	ug/L	93
25) Chloroform	7.11	83	153496	5.01	ug/L	99
27) 1,2-Dichloroethane	7.89	62	114038	4.91	ug/L	97
30) Cyclohexane	7.41	56	172379	5.01	ug/L	99
31) 1,1,1-Trichloroethane	7.32	97	140778	5.10	ug/L	98
32) Carbon tetrachloride	7.53	117	126830	5.11	ug/L	99
34) Benzene	7.79	78	321243	4.95	ug/L	100
35) Trichloroethene	8.61	95	82707	4.94	ug/L	96
36) Methylcyclohexane	8.87	83	160383	5.01	ug/L	96
40) 1,2-Dichloropropane	8.89	63	82888	5.06	ug/L	99
41) Bromodichloromethane	9.18	83	94492	4.98	ug/L	99
42) cis-1,3-Dichloropropene	9.61	75	98192	4.82	ug/L	99
43) 4-Methyl-2-pentanone	9.76	43	104240	9.24	ug/L	97

M.D 05/13/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013932.D
Acq On : 6 May 2016 10:05
Operator : FY/SY
Sample : VSTD00583
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 11:15:50 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD00583

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:45 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
44) Toluene	9.93	91	313971	4.98	ug/L		99
45) trans-1,3-Dichloropropene	10.16	75	85044	4.97	ug/L		99
46) 1,1,2-Trichloroethane	10.35	97	44558	5.00	ug/L		91
47) Tetrachloroethene	10.42	164	59693	4.98	ug/L		99
49) 2-Hexanone	10.53	43	86248	8.95	ug/L		96
50) Dibromochloromethane	10.68	129	49217	4.86	ug/L		99
51) 1,2-Dibromoethane	10.79	107	39194	4.69	ug/L		96
52) Chlorobenzene	11.21	112	181037	4.86	ug/L		95
53) Ethylbenzene	11.29	91	367254	4.94	ug/L		98
54) m,p-Xylene	11.40	106	132170	5.03	ug/L		97
55) o-xylene	11.73	106	119917	4.92	ug/L		100
56) Styrene	11.74	104	194570	4.88	ug/L		93
57) Isopropylbenzene	12.03	105	359161	4.98	ug/L		97
58) 1,1,2,2-Tetrachloroethane	12.28	83	55088	4.81	ug/L		98
61) Bromoform	11.91	173	25145	4.57	ug/L		99
62) 1,3-Dichlorobenzene	13.06	146	133622	4.92	ug/L		97
63) 1,4-Dichlorobenzene	13.14	146	142660	4.90	ug/L		97
64) 1,2-Dichlorobenzene	13.42	146	122695	4.93	ug/L		95
65) 1,2-Dibromo-3-chloropropan	14.04	75	8159	4.16	ug/L	#	84
66) 1,2,4-trichlorobenzene	14.69	180	67821	4.76	ug/L		98
67) 1,2,3-Trichlorobenzene	15.07	180	62538	4.87	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

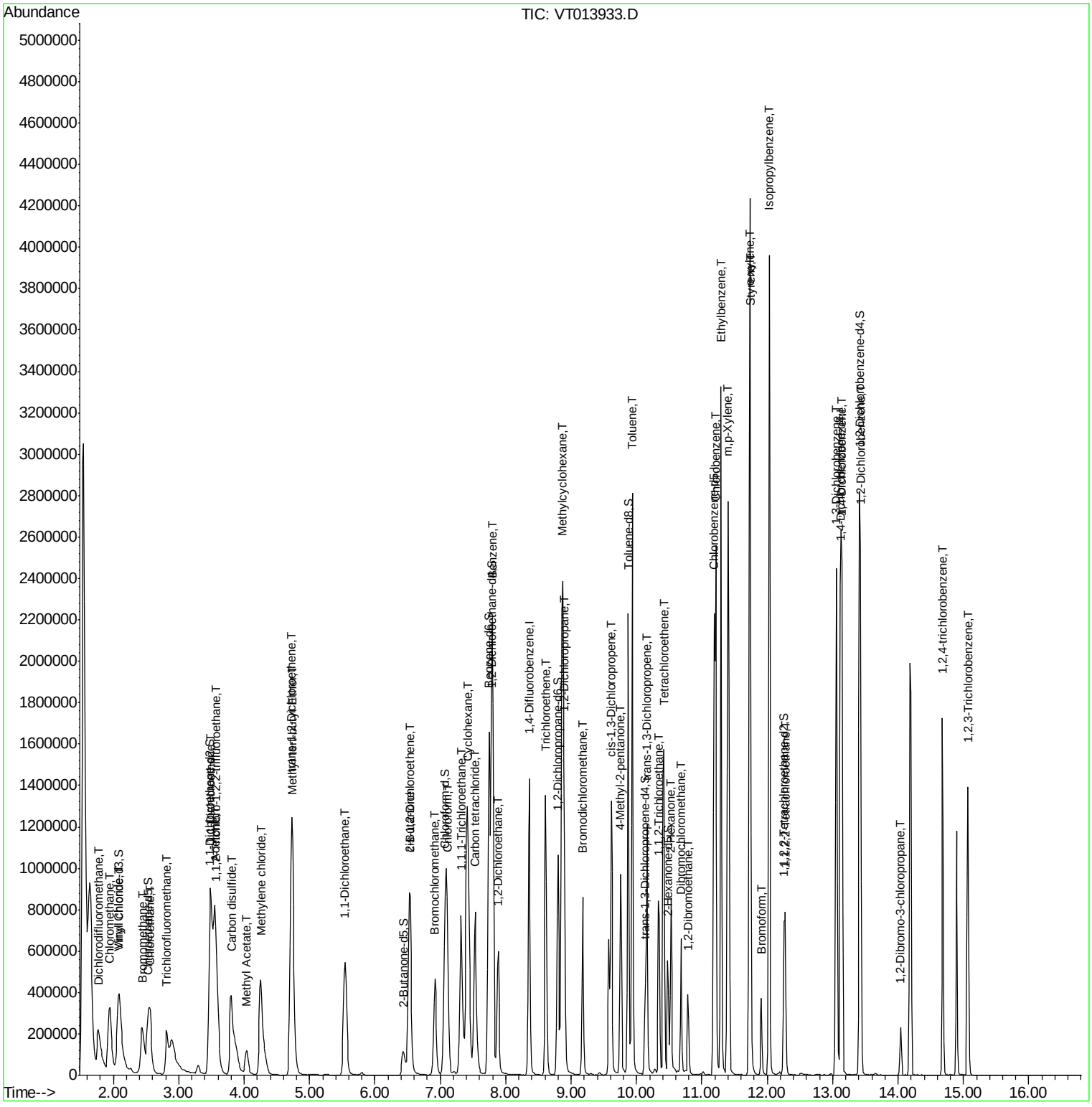
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013933.D
Acq On : 6 May 2016 10:31
Operator : FY/SY
Sample : VSTD02584
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 11:17:29 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02584

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:50 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013933.D
Acq On : 6 May 2016 10:31
Operator : FY/SY
Sample : VSTD02584
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 11:17:29 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02584

Manual Integrations APPROVED
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5/9/2016 6:53:50 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1067476	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	901702	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	456257	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	537009	32.57	ug/L	0.00
7) Chloroethane-d5	2.53	69	372350	30.12	ug/L	0.00
10) 1,1-Dichloroethene-d2	3.47	63	1017018	27.84	ug/L	0.00
20) 2-Butanone-d5	6.43	46	236369	55.71	ug/L	0.00
24) Chloroform-d	7.07	84	795035	25.57	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	464858	25.12	ug/L	0.00
29) Benzene-d6	7.74	84	1487217	26.15	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	438765	26.27	ug/L	0.00
37) Toluene-d8	9.87	98	1343158	26.43	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.14	79	176564	28.88	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	157923	60.82	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	305960	25.48	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	410185	25.37	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	567995	26.18	ug/L	100
3) Chloromethane	1.95	50	659551	25.22	ug/L	99
5) Vinyl chloride	2.09	62	636163	25.38	ug/L	99
6) Bromomethane	2.44	94	315891	24.34	ug/L	99
8) Chloroethane	2.56	64	356621	25.41	ug/L	98
9) Trichlorofluoromethane	2.81	101	810588m	43.19	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	448956	24.91	ug/L	98
12) 1,1-Dichloroethene	3.48	96	414156	25.39	ug/L	80
13) Acetone	3.56	43	373593	49.00	ug/L	94
14) Carbon disulfide	3.80	76	1406673	30.46	ug/L	100
15) Methyl Acetate	4.04	43	248633	26.34	ug/L	96
16) Methylene chloride	4.25	84	378583	23.49	ug/L	94
17) Methyl tert-butyl Ether	4.74	73	792569	28.48	ug/L	98
18) trans-1,2-Dichloroethene	4.73	96	424686	26.43	ug/L	96
19) 1,1-Dichloroethane	5.54	63	934699	26.11	ug/L	99
21) 2-Butanone	6.54	43	387961	54.18	ug/L	99
22) cis-1,2-Dichloroethene	6.54	96	413366	27.15	ug/L	97
23) Bromochloromethane	6.92	128	149170	26.23	ug/L	94
25) Chloroform	7.11	83	789395	25.35	ug/L	98
27) 1,2-Dichloroethane	7.89	62	596208	25.25	ug/L	97
30) Cyclohexane	7.41	56	988118	27.41	ug/L	99
31) 1,1,1-Trichloroethane	7.32	97	739375	25.60	ug/L	99
32) Carbon tetrachloride	7.53	117	676760	26.06	ug/L	99
34) Benzene	7.79	78	1709578	25.18	ug/L	100
35) Trichloroethene	8.61	95	454894	25.96	ug/L	98
36) Methylcyclohexane	8.87	83	893480	26.64	ug/L	98
40) 1,2-Dichloropropane	8.89	63	428918	24.99	ug/L	99
41) Bromodichloromethane	9.18	83	527288	26.53	ug/L	99
42) cis-1,3-Dichloropropene	9.61	75	627081	29.39	ug/L	100
43) 4-Methyl-2-pentanone	9.76	43	657584	55.66	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013933.D
Acq On : 6 May 2016 10:31
Operator : FY/SY
Sample : VSTD02584
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 11:17:29 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02584

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:50 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
44) Toluene	9.93	91	1700862	25.75	ug/L		99
45) trans-1,3-Dichloropropene	10.16	75	535559	29.90	ug/L		100
46) 1,1,2-Trichloroethane	10.34	97	238165	25.50	ug/L		97
47) Tetrachloroethene	10.42	164	327817	26.13	ug/L		98
49) 2-Hexanone	10.53	43	568544	56.35	ug/L		99
50) Dibromochloromethane	10.68	129	299748	28.24	ug/L		95
51) 1,2-Dibromoethane	10.79	107	232991	26.65	ug/L		98
52) Chlorobenzene	11.21	112	1006303	25.79	ug/L		97
53) Ethylbenzene	11.29	91	2025777	26.03	ug/L		100
54) m,p-Xylene	11.40	106	737812	26.81	ug/L		100
55) o-xylene	11.73	106	715637	28.02	ug/L		91
56) Styrene	11.74	104	1094700	26.22	ug/L		96
57) Isopropylbenzene	12.03	105	2069520	27.39	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	311950	26.00	ug/L		97
61) Bromoform	11.91	173	151481	26.23	ug/L		99
62) 1,3-Dichlorobenzene	13.06	146	765151	26.86	ug/L		97
63) 1,4-Dichlorobenzene	13.14	146	753373	24.69	ug/L		98
64) 1,2-Dichlorobenzene	13.42	146	675723	25.89	ug/L		97
65) 1,2-Dibromo-3-chloropropan	14.04	75	55878	27.19	ug/L	#	82
66) 1,2,4-trichlorobenzene	14.68	180	432227	28.95	ug/L		98
67) 1,2,3-Trichlorobenzene	15.07	180	357304	26.52	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

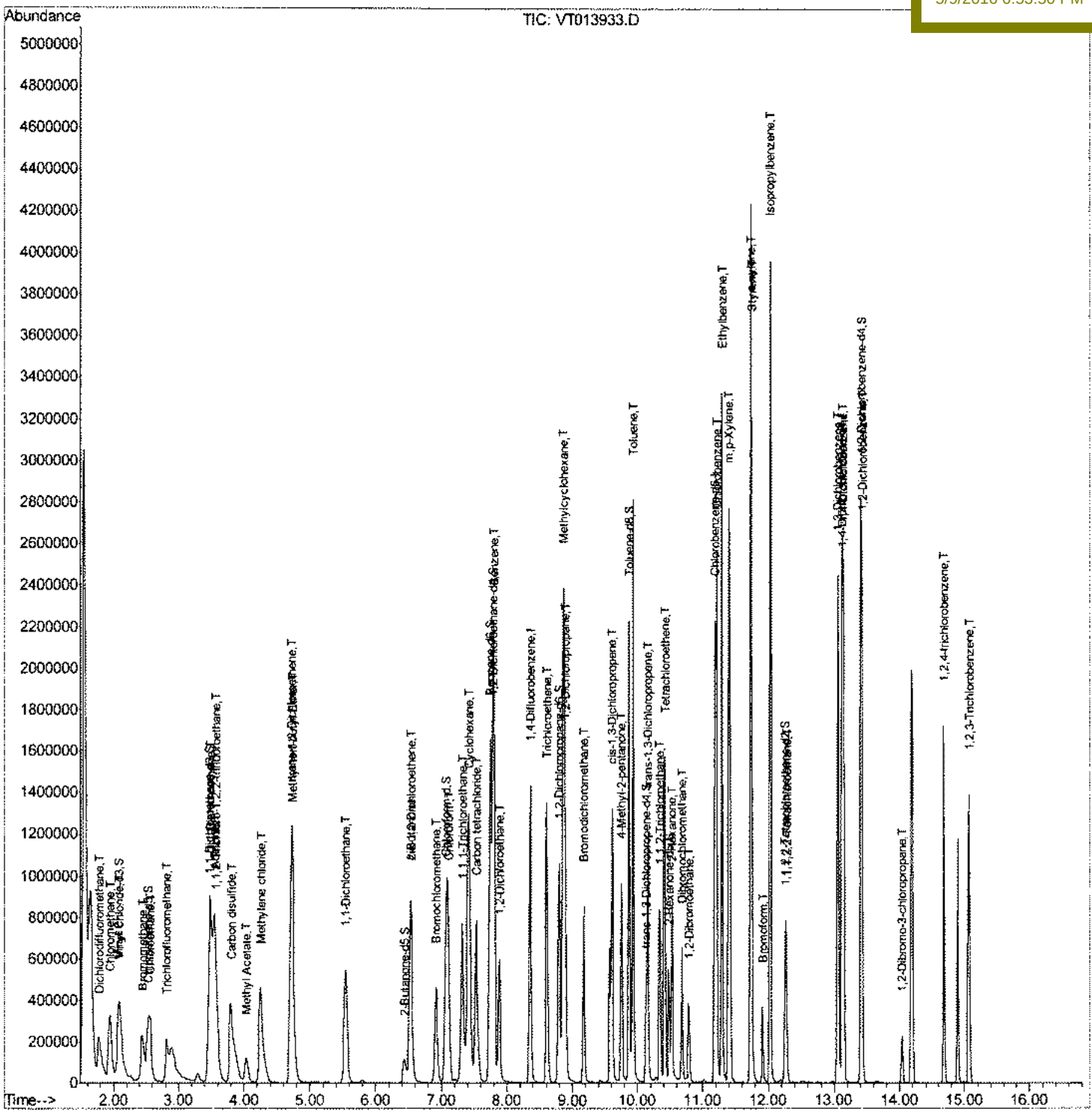
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013933.D
Acq On : 6 May 2016 10:31
Operator : FY/SY
Sample : VSTD02584
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 11:17:29 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02584

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:50 PM



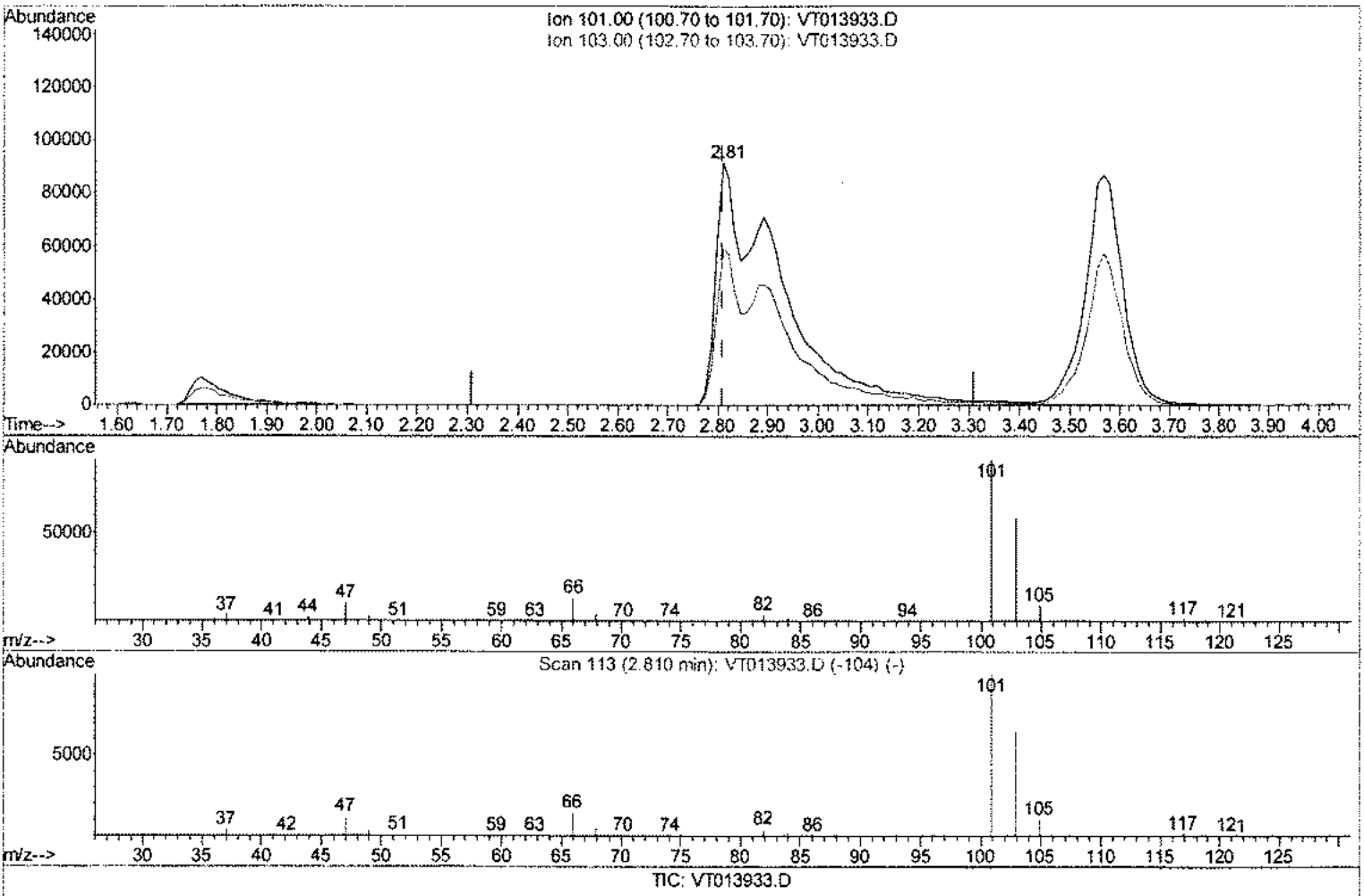
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013933.D
Acq On : 6 May 2016 10:31
Operator : FY/SY
Sample : VSTD02584
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 11:10:43 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02584

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:50 PM



TIC: VT013933.D

(9) Trichlorofluoromethane (T)

2.810min (0.000) 43.19ug/L m M.D 05/13/16

response 810588

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	21.77
0.00	0.00	0.00
0.00	0.00	0.00

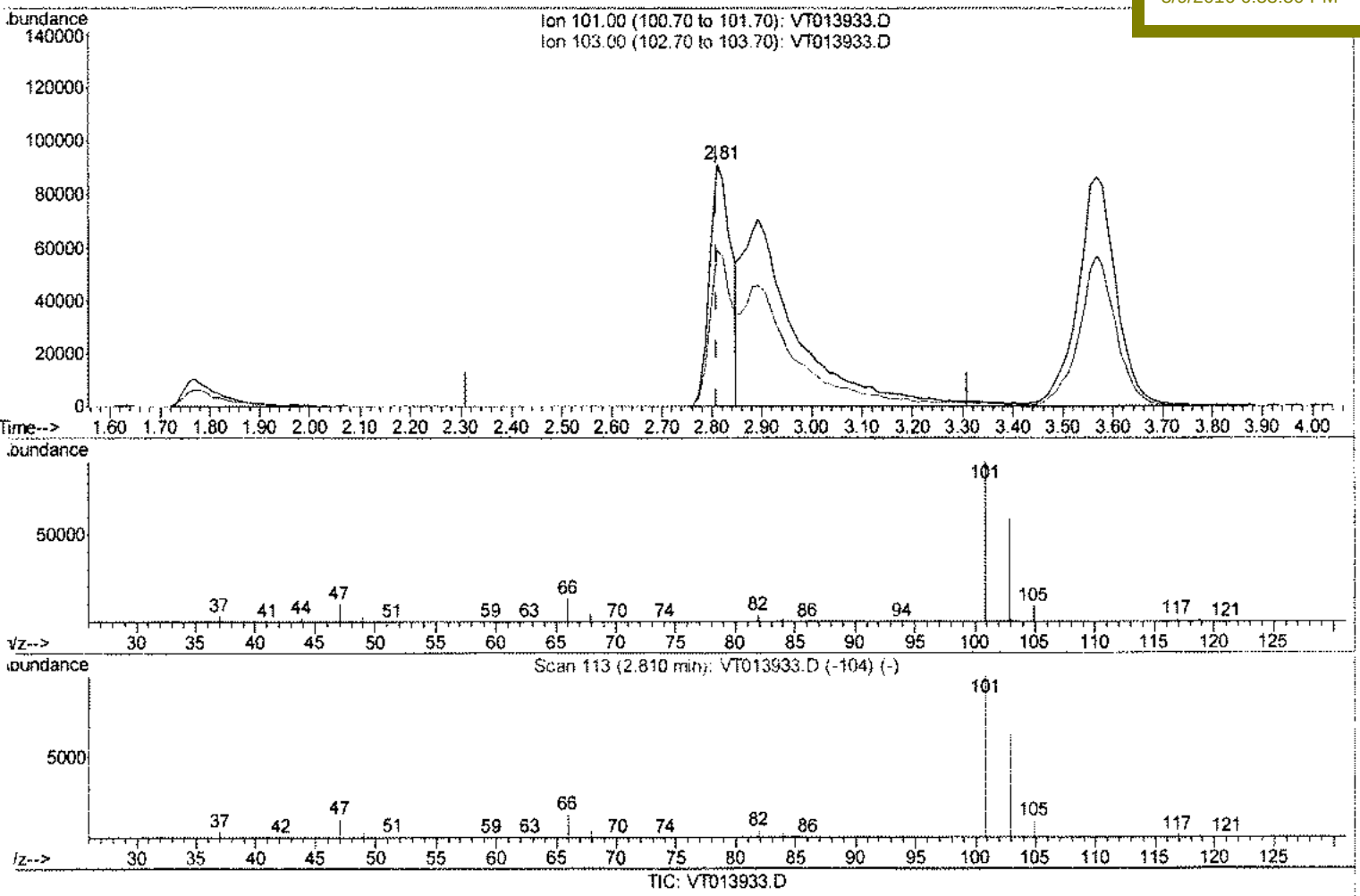
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013933.D
Acq On : 6 May 2016 10:31
Operator : FY/SY
Sample : VSTD02584
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 11:10:43 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02584

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:50 PM



(9) Trichlorofluoromethane (T)

2.810min (0.000) 14.57ug/L

response 273381

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	64.55#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013933.D
Acq On : 6 May 2016 10:31
Operator : FY/SY
Sample : VSTD02584
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD02584

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:50 PM

Quant Time: May 06 11:17:29 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1067476	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	901702	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	456257	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	537009	32.57	ug/L	0.00
7) Chloroethane-d5	2.53	69	372350	30.12	ug/L	0.00
10) 1,1-Dichloroethene-d2	3.47	63	1017018	27.84	ug/L	0.00
20) 2-Butanone-d5	6.43	46	236369	55.71	ug/L	0.00
24) Chloroform-d	7.07	84	795035	25.57	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	464858	25.12	ug/L	0.00
29) Benzene-d6	7.74	84	1487217	26.15	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	438765	26.27	ug/L	0.00
37) Toluene-d8	9.87	98	1343158	26.43	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.14	79	176564	28.88	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	157923	60.82	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	305960	25.48	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	410185	25.37	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	567995	26.18	ug/L	100
3) Chloromethane	1.95	50	659551	25.22	ug/L	99
5) Vinyl chloride	2.09	62	636163	25.38	ug/L	99
6) Bromomethane	2.44	94	315891	24.34	ug/L	99
8) Chloroethane	2.56	64	356621	25.41	ug/L	98
9) Trichlorofluoromethane	2.81	101	810588m	43.19	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	448956	24.91	ug/L	98
12) 1,1-Dichloroethene	3.48	96	414156	25.39	ug/L	80
13) Acetone	3.56	43	373593	49.00	ug/L	94
14) Carbon disulfide	3.80	76	1406673	30.46	ug/L	100
15) Methyl Acetate	4.04	43	248633	26.34	ug/L	96
16) Methylene chloride	4.25	84	378583	23.49	ug/L	94
17) Methyl tert-butyl Ether	4.74	73	792569	28.48	ug/L	98
18) trans-1,2-Dichloroethene	4.73	96	424686	26.43	ug/L	96
19) 1,1-Dichloroethane	5.54	63	934699	26.11	ug/L	99
21) 2-Butanone	6.54	43	387961	54.18	ug/L	99
22) cis-1,2-Dichloroethene	6.54	96	413366	27.15	ug/L	97
23) Bromochloromethane	6.92	128	149170	26.23	ug/L	94
25) Chloroform	7.11	83	789395	25.35	ug/L	98
27) 1,2-Dichloroethane	7.89	62	596208	25.25	ug/L	97
30) Cyclohexane	7.41	56	988118	27.41	ug/L	99
31) 1,1,1-Trichloroethane	7.32	97	739375	25.60	ug/L	99
32) Carbon tetrachloride	7.53	117	676760	26.06	ug/L	99
34) Benzene	7.79	78	1709578	25.18	ug/L	100
35) Trichloroethene	8.61	95	454894	25.96	ug/L	98
36) Methylcyclohexane	8.87	83	893480	26.64	ug/L	98
40) 1,2-Dichloropropane	8.89	63	428918	24.99	ug/L	99
41) Bromodichloromethane	9.18	83	527288	26.53	ug/L	99
42) cis-1,3-Dichloropropene	9.61	75	627081	29.39	ug/L	100
43) 4-Methyl-2-pentanone	9.76	43	657584	55.66	ug/L	98

M.D 05/13/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013933.D
Acq On : 6 May 2016 10:31
Operator : FY/SY
Sample : VSTD02584
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 11:17:29 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:11:36 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02584

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:50 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
44) Toluene	9.93	91	1700862	25.75	ug/L		99
45) trans-1,3-Dichloropropene	10.16	75	535559	29.90	ug/L		100
46) 1,1,2-Trichloroethane	10.34	97	238165	25.50	ug/L		97
47) Tetrachloroethene	10.42	164	327817	26.13	ug/L		98
49) 2-Hexanone	10.53	43	568544	56.35	ug/L		99
50) Dibromochloromethane	10.68	129	299748	28.24	ug/L		95
51) 1,2-Dibromoethane	10.79	107	232991	26.65	ug/L		98
52) Chlorobenzene	11.21	112	1006303	25.79	ug/L		97
53) Ethylbenzene	11.29	91	2025777	26.03	ug/L		100
54) m,p-Xylene	11.40	106	737812	26.81	ug/L		100
55) o-xylene	11.73	106	715637	28.02	ug/L		91
56) Styrene	11.74	104	1094700	26.22	ug/L		96
57) Isopropylbenzene	12.03	105	2069520	27.39	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	311950	26.00	ug/L		97
61) Bromoform	11.91	173	151481	26.23	ug/L		99
62) 1,3-Dichlorobenzene	13.06	146	765151	26.86	ug/L		97
63) 1,4-Dichlorobenzene	13.14	146	753373	24.69	ug/L		98
64) 1,2-Dichlorobenzene	13.42	146	675723	25.89	ug/L		97
65) 1,2-Dibromo-3-chloropropan	14.04	75	55878	27.19	ug/L	#	82
66) 1,2,4-trichlorobenzene	14.68	180	432227	28.95	ug/L		98
67) 1,2,3-Trichlorobenzene	15.07	180	357304	26.52	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

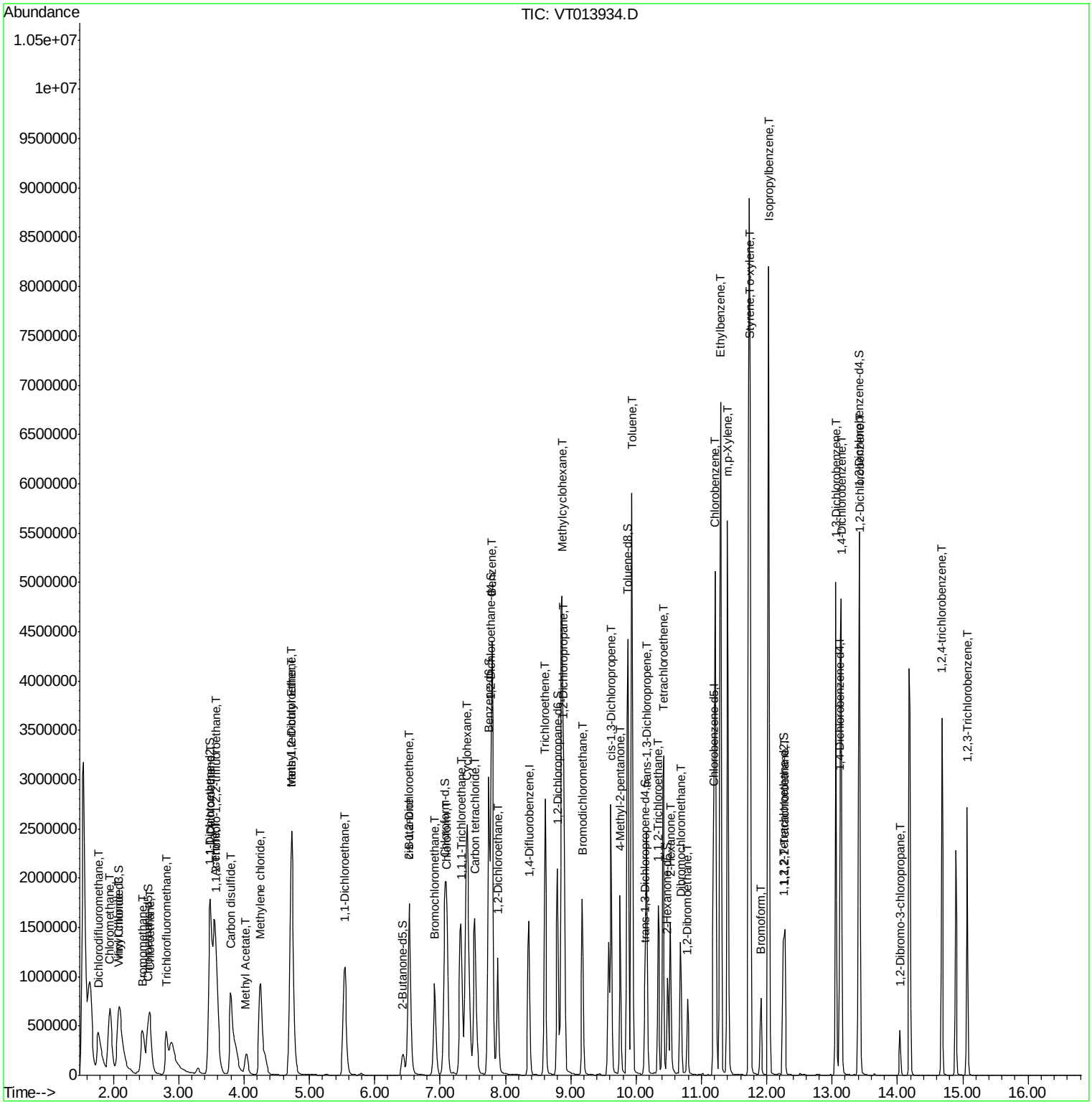
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013934.D
Acq On : 6 May 2016 10:57
Operator : FY/SY
Sample : VSTD05085
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 06 11:23:27 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:22:32 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD05085

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:56 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013934.D
Acq On : 6 May 2016 10:57
Operator : FY/SY
Sample : VSTD05085
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 06 11:23:27 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:22:32 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD05085

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:56 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1146446	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	952823	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	473629	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	1083010	61.16	ug/L	0.00
7) Chloroethane-d5	2.53	69	741050	55.82	ug/L	0.00
10) 1,1-Dichloroethene-d2	3.47	63	2061200	52.54	ug/L	0.00
20) 2-Butanone-d5	6.43	46	443982	97.44	ug/L	0.00
24) Chloroform-d	7.07	84	1555308	46.57	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	872207	43.89	ug/L	0.00
29) Benzene-d6	7.74	84	2972057	49.45	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	885547	50.18	ug/L	0.00
37) Toluene-d8	9.87	98	2703931	50.35	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.13	79	358283	55.45	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	284863	103.82	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	562844	44.35	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	813392	48.47	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	1264813	54.27	ug/L	99
3) Chloromethane	1.95	50	1431076	51.09	ug/L	99
5) Vinyl chloride	2.09	62	1361894	50.57	ug/L	98
6) Bromomethane	2.44	94	652162	46.79	ug/L	100
8) Chloroethane	2.56	64	728077	48.31	ug/L	100
9) Trichlorofluoromethane	2.81	101	1670608m	49.27	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	904160	46.71	ug/L	97
12) 1,1-Dichloroethene	3.48	96	839055	47.90	ug/L	84
13) Acetone	3.56	43	641194	78.30	ug/L	95
14) Carbon disulfide	3.79	76	3004825	54.09	ug/L	100
15) Methyl Acetate	4.03	43	457852	45.16	ug/L	97
16) Methylene chloride	4.25	84	765988	44.25	ug/L	95
17) Methyl tert-butyl Ether	4.73	73	1576929	52.76	ug/L	98
18) trans-1,2-Dichloroethene	4.73	96	875943	50.75	ug/L	96
19) 1,1-Dichloroethane	5.54	63	1936920	50.39	ug/L	99
21) 2-Butanone	6.53	43	669252	87.02	ug/L	100
22) cis-1,2-Dichloroethene	6.53	96	846175	51.75	ug/L	94
23) Bromochloromethane	6.92	128	301382	49.34	ug/L	95
25) Chloroform	7.11	83	1580025	47.24	ug/L	98
27) 1,2-Dichloroethane	7.89	62	1193620	47.07	ug/L	98
30) Cyclohexane	7.41	56	2070231	54.34	ug/L	100
31) 1,1,1-Trichloroethane	7.32	97	1526618	50.03	ug/L	100
32) Carbon tetrachloride	7.53	117	1396340	50.88	ug/L	97
34) Benzene	7.79	78	3565908	49.71	ug/L	100
35) Trichloroethene	8.61	95	942820	50.92	ug/L	98
36) Methylcyclohexane	8.87	83	1897425	53.54	ug/L	99
40) 1,2-Dichloropropane	8.89	63	891984	49.17	ug/L	100
41) Bromodichloromethane	9.18	83	1092257	52.00	ug/L	98
42) cis-1,3-Dichloropropene	9.61	75	1235765	54.81	ug/L	97
43) 4-Methyl-2-pentanone	9.76	43	1222392	97.91	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013934.D
Acq On : 6 May 2016 10:57
Operator : FY/SY
Sample : VSTD05085
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 06 11:23:27 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:22:32 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD05085

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:56 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) Toluene	9.93	91	3550790	50.88	ug/L	97
45) trans-1,3-Dichloropropene	10.16	75	1084356	57.29	ug/L	99
46) 1,1,2-Trichloroethane	10.34	97	476348	48.27	ug/L	99
47) Tetrachloroethene	10.42	164	701263	52.89	ug/L	98
49) 2-Hexanone	10.53	43	1004746	94.24	ug/L	99
50) Dibromochloromethane	10.68	129	621699	55.43	ug/L	95
51) 1,2-Dibromoethane	10.79	107	465071	50.34	ug/L	98
52) Chlorobenzene	11.21	112	2057046	49.90	ug/L	97
53) Ethylbenzene	11.29	91	4239069	51.56	ug/L	100
54) m,p-Xylene	11.40	106	1560033	53.65	ug/L	95
55) o-xylene	11.73	106	1522933	56.43	ug/L	91
56) Styrene	11.74	104	2323757	52.67	ug/L	98
57) Isopropylbenzene	12.03	105	4375200	54.80	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	592588	46.75	ug/L	98
61) Bromoform	11.91	173	317853	53.03	ug/L	100
62) 1,3-Dichlorobenzene	13.06	146	1598086	54.05	ug/L	97
63) 1,4-Dichlorobenzene	13.14	146	1546053	48.80	ug/L	99
64) 1,2-Dichlorobenzene	13.42	146	1358114	50.13	ug/L	97
65) 1,2-Dibromo-3-chloropropan	14.04	75	104765	49.11	ug/L	89
66) 1,2,4-trichlorobenzene	14.68	180	901062	58.15	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	707040	50.55	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

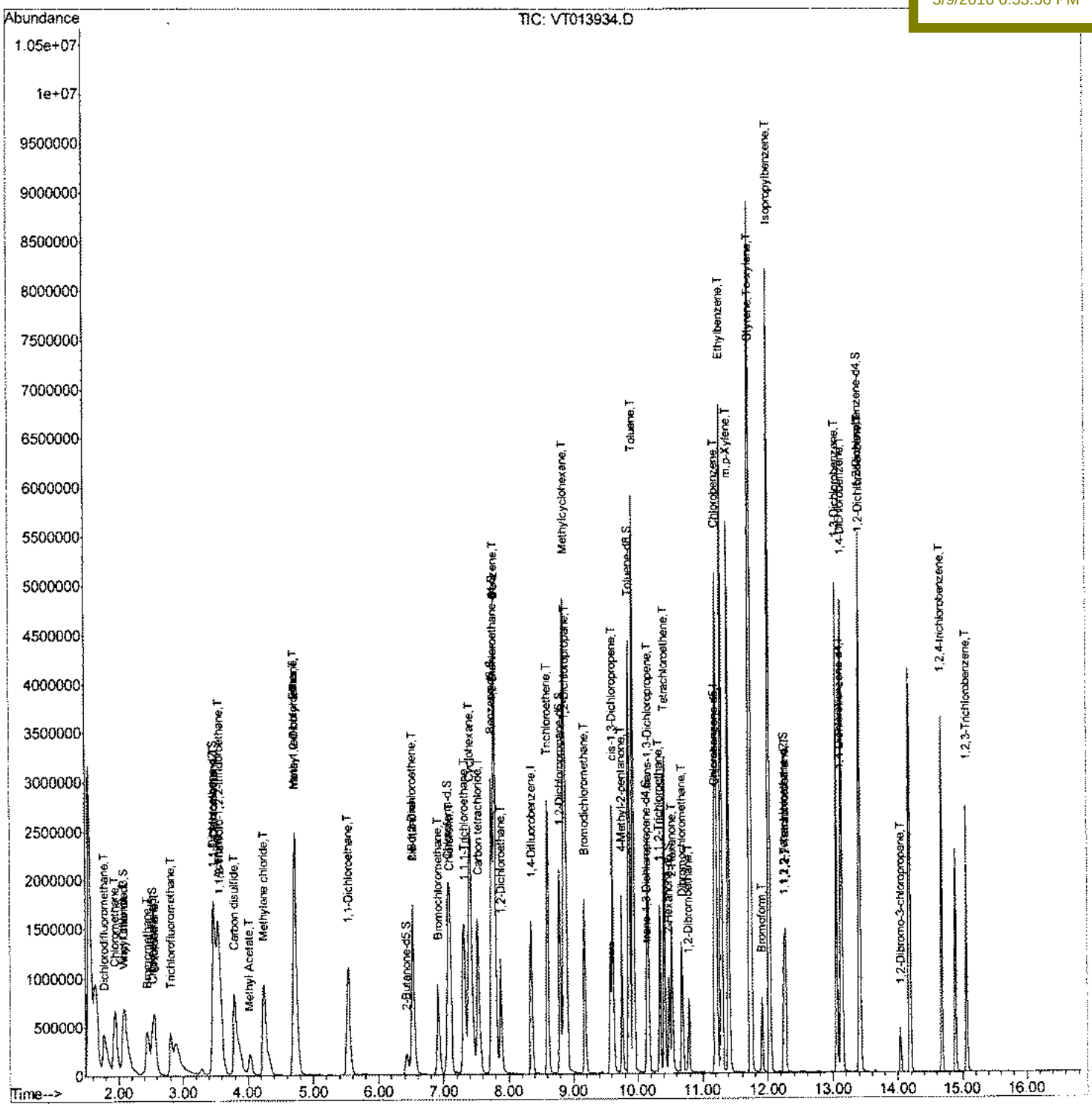
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013934.D
Acq On : 6 May 2016 10:57
Operator : FY/SY
Sample : VSTD05085
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 06 11:23:27 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:22:32 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD05085

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:56 PM



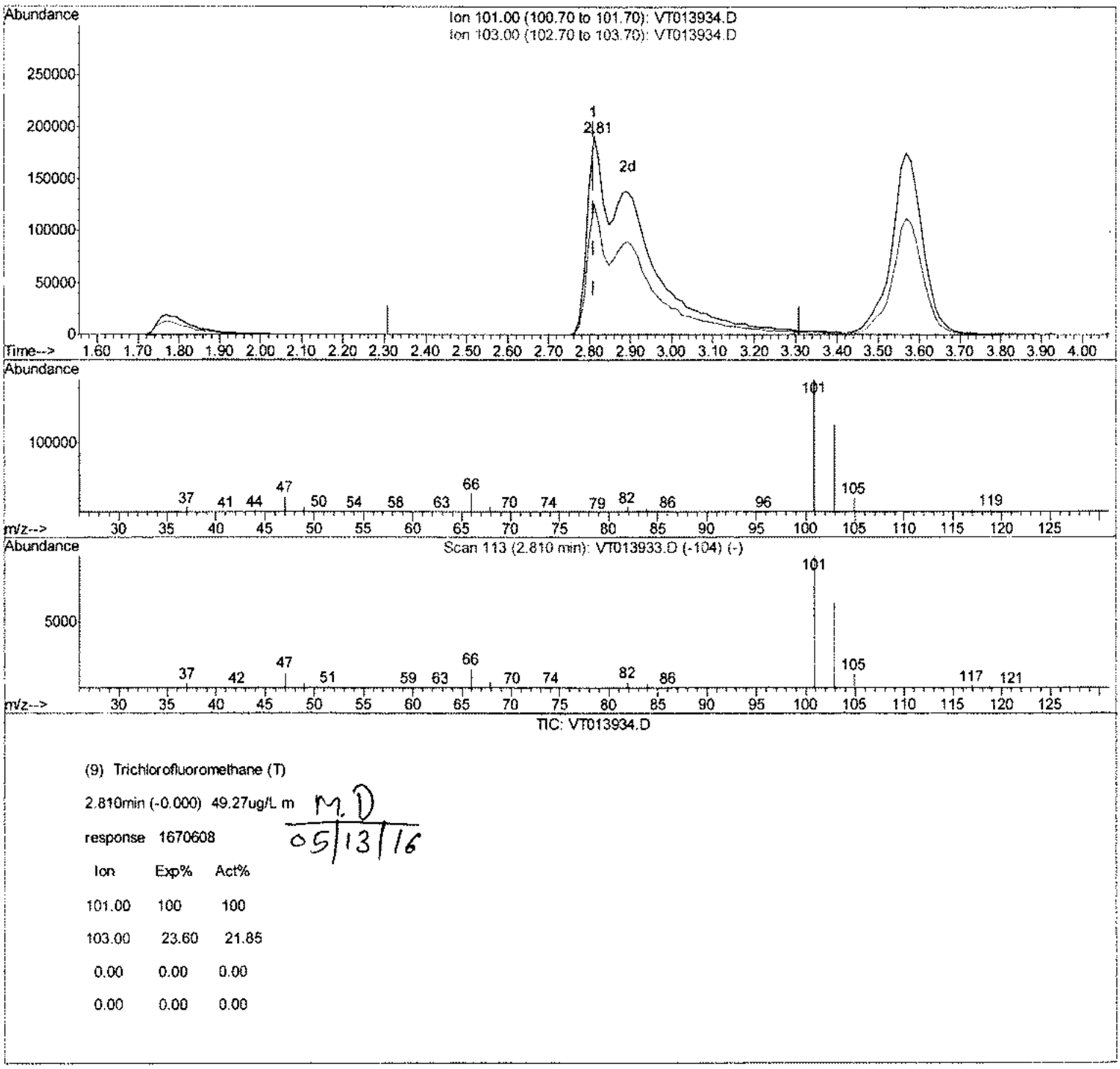
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013934.D
Acq On : 6 May 2016 10:57
Operator : FY/SY
Sample : VSTD05085
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 06 11:22:25 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:22:32 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD05085

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:56 PM



(9) Trichlorofluoromethane (T)

2.810min (-0.000) 49.27ug/L m M.D 05/13/16

response 1670608

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	21.85
0.00	0.00	0.00
0.00	0.00	0.00

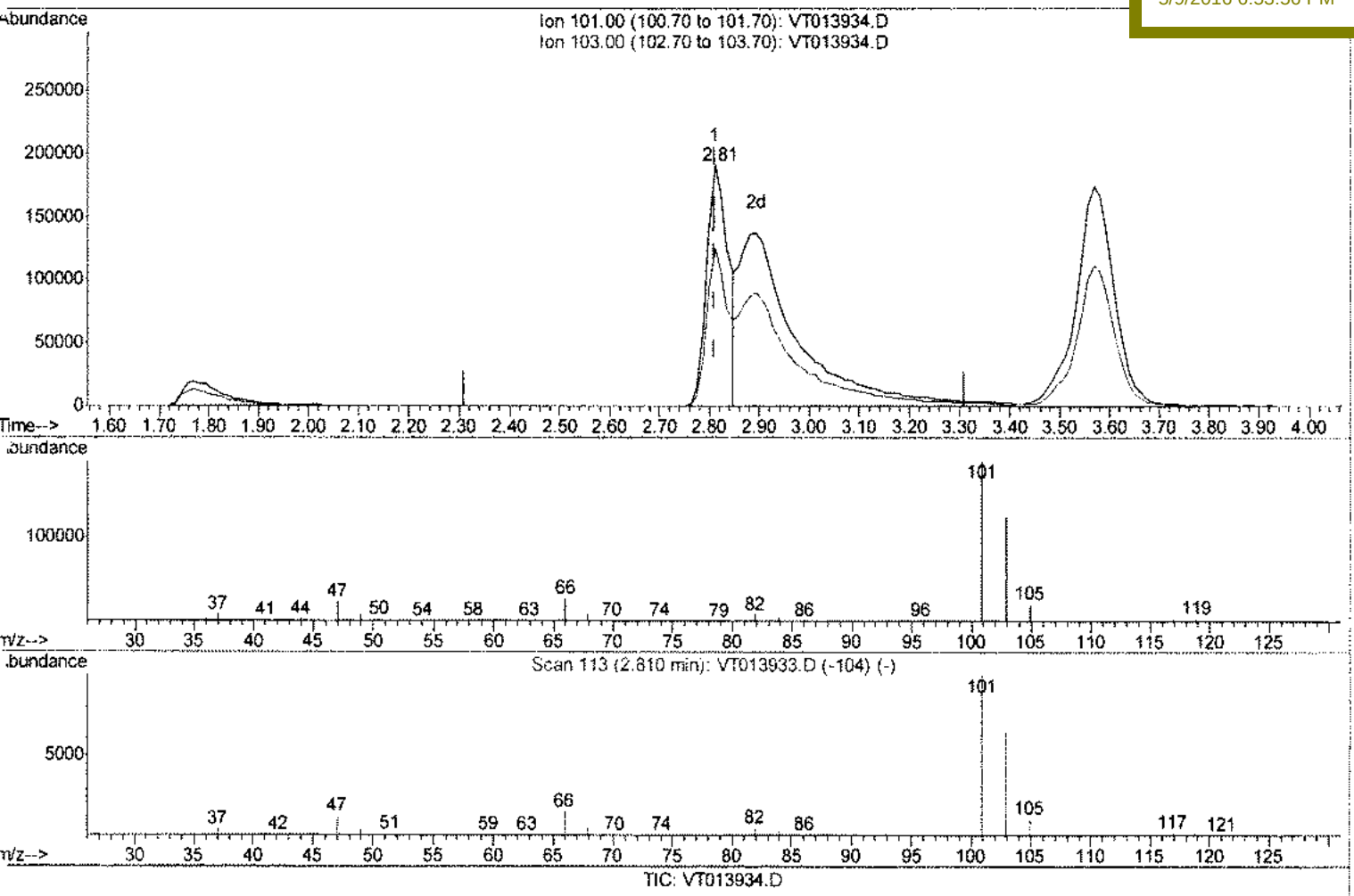
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013934.D
Acq On : 6 May 2016 10:57
Operator : FY/SY
Sample : VSTD05085
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 06 11:22:25 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:22:32 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD05085

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:56 PM



(9) Trichlorofluoromethane (T)

2.810min (-0.000) 16.85ug/L

response 571238

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	63.91#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013934.D
Acq On : 6 May 2016 10:57
Operator : FY/SY
Sample : VSTD05085
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD05085

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:56 PM

Quant Time: May 06 11:23:27 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:22:32 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1146446	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	952823	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	473629	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	1083010	61.16	ug/L	0.00
7) Chloroethane-d5	2.53	69	741050	55.82	ug/L	0.00
10) 1,1-Dichloroethene-d2	3.47	63	2061200	52.54	ug/L	0.00
20) 2-Butanone-d5	6.43	46	443982	97.44	ug/L	0.00
24) Chloroform-d	7.07	84	1555308	46.57	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	872207	43.89	ug/L	0.00
29) Benzene-d6	7.74	84	2972057	49.45	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	885547	50.18	ug/L	0.00
37) Toluene-d8	9.87	98	2703931	50.35	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.13	79	358283	55.45	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	284863	103.82	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	562844	44.35	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	813392	48.47	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	1264813	54.27	ug/L	99
3) Chloromethane	1.95	50	1431076	51.09	ug/L	99
5) Vinyl chloride	2.09	62	1361894	50.57	ug/L	98
6) Bromomethane	2.44	94	652162	46.79	ug/L	100
8) Chloroethane	2.56	64	728077	48.31	ug/L	100
9) Trichlorofluoromethane	2.81	101	1670608m	49.27	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	904160	46.71	ug/L	97
12) 1,1-Dichloroethene	3.48	96	839055	47.90	ug/L	84
13) Acetone	3.56	43	641194	78.30	ug/L	95
14) Carbon disulfide	3.79	76	3004825	54.09	ug/L	100
15) Methyl Acetate	4.03	43	457852	45.16	ug/L	97
16) Methylene chloride	4.25	84	765988	44.25	ug/L	95
17) Methyl tert-butyl Ether	4.73	73	1576929	52.76	ug/L	98
18) trans-1,2-Dichloroethene	4.73	96	875943	50.75	ug/L	96
19) 1,1-Dichloroethane	5.54	63	1936920	50.39	ug/L	99
21) 2-Butanone	6.53	43	669252	87.02	ug/L	100
22) cis-1,2-Dichloroethene	6.53	96	846175	51.75	ug/L	94
23) Bromochloromethane	6.92	128	301382	49.34	ug/L	95
25) Chloroform	7.11	83	1580025	47.24	ug/L	98
27) 1,2-Dichloroethane	7.89	62	1193620	47.07	ug/L	98
30) Cyclohexane	7.41	56	2070231	54.34	ug/L	100
31) 1,1,1-Trichloroethane	7.32	97	1526618	50.03	ug/L	100
32) Carbon tetrachloride	7.53	117	1396340	50.88	ug/L	97
34) Benzene	7.79	78	3565908	49.71	ug/L	100
35) Trichloroethene	8.61	95	942820	50.92	ug/L	98
36) Methylcyclohexane	8.87	83	1897425	53.54	ug/L	99
40) 1,2-Dichloropropane	8.89	63	891984	49.17	ug/L	100
41) Bromodichloromethane	9.18	83	1092257	52.00	ug/L	98
42) cis-1,3-Dichloropropene	9.61	75	1235765	54.81	ug/L	97
43) 4-Methyl-2-pentanone	9.76	43	1222392	97.91	ug/L	100

MD 05/13/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013934.D
Acq On : 6 May 2016 10:57
Operator : FY/SY
Sample : VSTD05085
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD05085

Manual Integrations APPROVED
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5/9/2016 6:53:56 PM

Quant Time: May 06 11:23:27 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:22:32 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) Toluene	9.93	91	3550790	50.88	ug/L	97
45) trans-1,3-Dichloropropene	10.16	75	1084356	57.29	ug/L	99
46) 1,1,2-Trichloroethane	10.34	97	476348	48.27	ug/L	99
47) Tetrachloroethene	10.42	164	701263	52.89	ug/L	98
49) 2-Hexanone	10.53	43	1004746	94.24	ug/L	99
50) Dibromochloromethane	10.68	129	621699	55.43	ug/L	95
51) 1,2-Dibromoethane	10.79	107	465071	50.34	ug/L	98
52) Chlorobenzene	11.21	112	2057046	49.90	ug/L	97
53) Ethylbenzene	11.29	91	4239069	51.56	ug/L	100
54) m,p-Xylene	11.40	106	1560033	53.65	ug/L	95
55) o-xylene	11.73	106	1522933	56.43	ug/L	91
56) Styrene	11.74	104	2323757	52.67	ug/L	98
57) Isopropylbenzene	12.03	105	4375200	54.80	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	592588	46.75	ug/L	98
61) Bromoform	11.91	173	317853	53.03	ug/L	100
62) 1,3-Dichlorobenzene	13.06	146	1598086	54.05	ug/L	97
63) 1,4-Dichlorobenzene	13.14	146	1546053	48.80	ug/L	99
64) 1,2-Dichlorobenzene	13.42	146	1358114	50.13	ug/L	97
65) 1,2-Dibromo-3-chloropropan	14.04	75	104765	49.11	ug/L	89
66) 1,2,4-trichlorobenzene	14.68	180	901062	58.15	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	707040	50.55	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013935.D
Acq On : 6 May 2016 11:23
Operator : FY/SY
Sample : VSTD10086
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 11:47:12 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:28:10 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD10086

Manual Integrations APPROVED
MMDadoda
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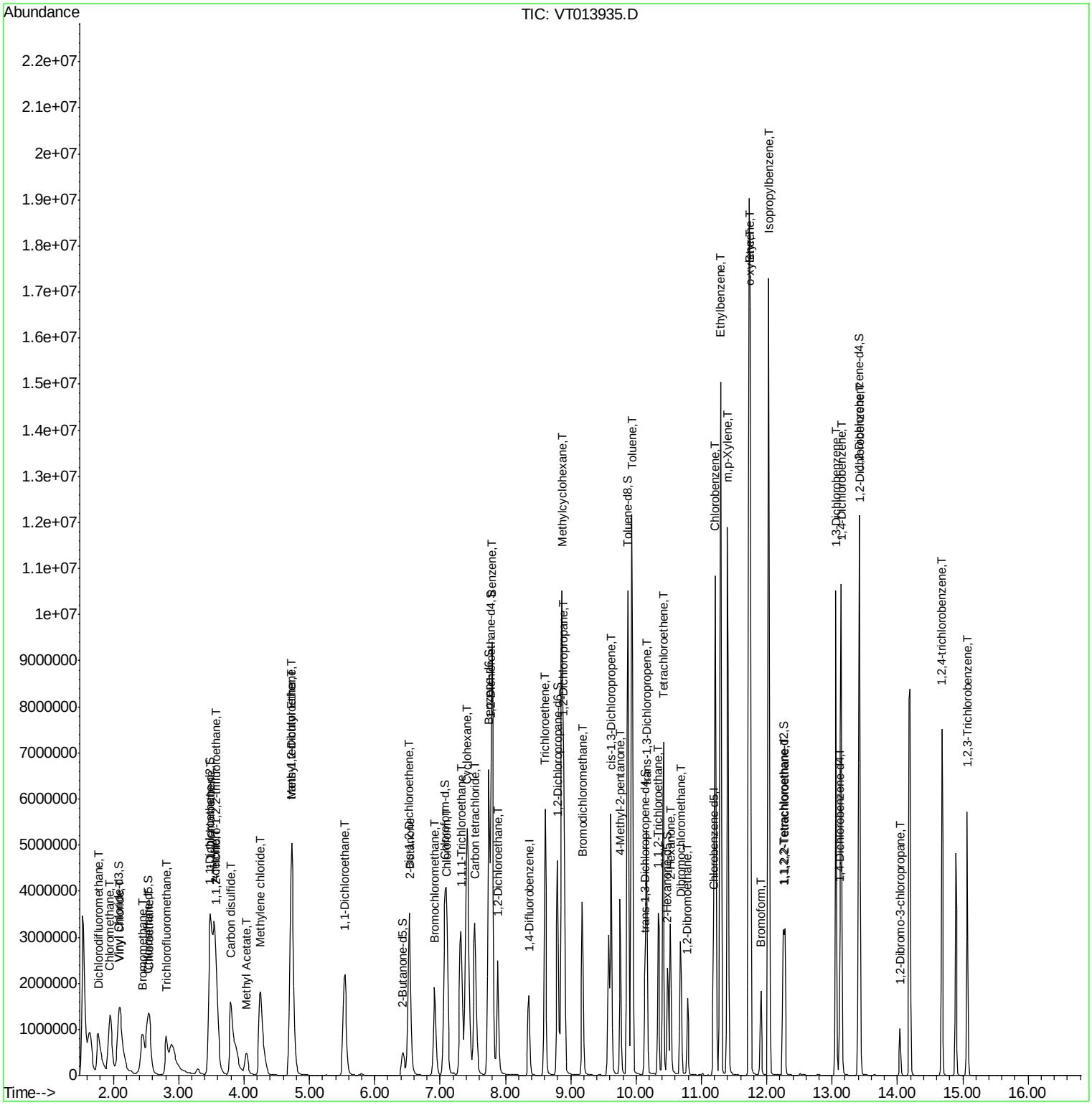

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013935.D
Acq On : 6 May 2016 11:23
Operator : FY/SY
Sample : VSTD10086
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 11:47:12 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:28:10 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD10086

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:54:02 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1324034	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	1102253	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	549584	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.09	65	2333607	108.08	ug/L	0.01
7) Chloroethane-d5	2.53	69	1619894	102.67	ug/L	0.00
10) 1,1-Dichloroethene-d2	3.47	63	4203104	91.60	ug/L	0.00
20) 2-Butanone-d5	6.43	46	1037066	198.34	ug/L	0.00
24) Chloroform-d	7.07	84	3307216	87.24	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	1929078	86.70	ug/L	0.00
29) Benzene-d6	7.74	84	6741235	97.22	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	1998670	97.81	ug/L	0.00
37) Toluene-d8	9.87	98	6138331	98.64	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.13	79	873181	113.72	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	687515	214.55	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	1301500	91.24	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	1916657	99.18	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	2522866	91.77	ug/L	100
3) Chloromethane	1.95	50	2895622	89.02	ug/L	99
5) Vinyl chloride	2.10	62	2734767	87.68	ug/L	99
6) Bromomethane	2.44	94	1399331	88.35	ug/L	100
8) Chloroethane	2.55	64	1496031	86.69	ug/L	99
9) Trichlorofluoromethane	2.81	101	3396460m	87.06	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	1843752	83.86	ug/L	100
12) 1,1-Dichloroethene	3.48	96	1711342	85.49	ug/L	84
13) Acetone	3.56	43	1237464	138.35	ug/L	97
14) Carbon disulfide	3.79	76	6254472	95.53	ug/L	100
15) Methyl Acetate	4.04	43	1000169	87.53	ug/L	97
16) Methylene chloride	4.25	84	1582700	81.51	ug/L	96
17) Methyl tert-butyl Ether	4.73	73	3425673	97.88	ug/L	98
18) trans-1,2-Dichloroethene	4.73	96	1788996	89.42	ug/L	96
19) 1,1-Dichloroethane	5.54	63	3918051	88.08	ug/L	98
21) 2-Butanone	6.54	43	1362188	158.50	ug/L	99
22) cis-1,2-Dichloroethene	6.53	96	1721856	90.39	ug/L	97
23) Bromochloromethane	6.92	128	623656	88.69	ug/L	96
25) Chloroform	7.11	83	3209642	84.25	ug/L	98
27) 1,2-Dichloroethane	7.89	62	2496043	86.50	ug/L	98
30) Cyclohexane	7.41	56	4265081	94.72	ug/L	99
31) 1,1,1-Trichloroethane	7.32	97	3128991	88.63	ug/L	99
32) Carbon tetrachloride	7.53	117	2884830	90.47	ug/L	97
34) Benzene	7.79	78	7571881	91.37	ug/L	100
35) Trichloroethene	8.61	95	1964642	91.31	ug/L	99
36) Methylcyclohexane	8.87	83	3919867	93.95	ug/L	99
40) 1,2-Dichloropropane	8.89	63	1893017	90.59	ug/L	100
41) Bromodichloromethane	9.18	83	2300026	93.72	ug/L	97
42) cis-1,3-Dichloropropene	9.61	75	2637622	98.75	ug/L	98
43) 4-Methyl-2-pentanone	9.76	43	2643701	184.01	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013935.D
Acq On : 6 May 2016 11:23
Operator : FY/SY
Sample : VSTD10086
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 11:47:12 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:28:10 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD10086

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:54:02 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) Toluene	9.93	91	7701297	94.97	ug/L	98
45) trans-1,3-Dichloropropene	10.16	75	2354529	103.75	ug/L	99
46) 1,1,2-Trichloroethane	10.34	97	1012861	89.50	ug/L	98
47) Tetrachloroethene	10.42	164	1480368	95.14	ug/L	98
49) 2-Hexanone	10.53	43	2130935	175.30	ug/L	100
50) Dibromochloromethane	10.68	129	1354025	101.60	ug/L	97
51) 1,2-Dibromoethane	10.79	107	1005316	93.91	ug/L	99
52) Chlorobenzene	11.21	112	4383571	91.96	ug/L	98
53) Ethylbenzene	11.29	91	9112597	95.06	ug/L	99
54) m,p-Xylene	11.40	106	3334365	97.35	ug/L	99
55) o-xylene	11.73	106	3290691	102.12	ug/L	93
56) Styrene	11.74	104	5089761	98.41	ug/L	98
57) Isopropylbenzene	12.03	105	9384617	99.23	ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.28	83	1264703	87.67	ug/L	98
61) Bromoform	11.91	173	742188	105.11	ug/L	99
62) 1,3-Dichlorobenzene	13.06	146	3410564	97.43	ug/L	99
63) 1,4-Dichlorobenzene	13.14	146	3351555	91.72	ug/L	99
64) 1,2-Dichlorobenzene	13.42	146	2981377	94.77	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.04	75	244976	99.41	ug/L	90
66) 1,2,4-trichlorobenzene	14.68	180	1938279	103.57	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	1489638	91.53	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013935.D
Acq On : 6 May 2016 11:23
Operator : FY/SY
Sample : VSTD10086
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 11:47:12 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:28:10 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD10086

Manual Integrations APPROVED
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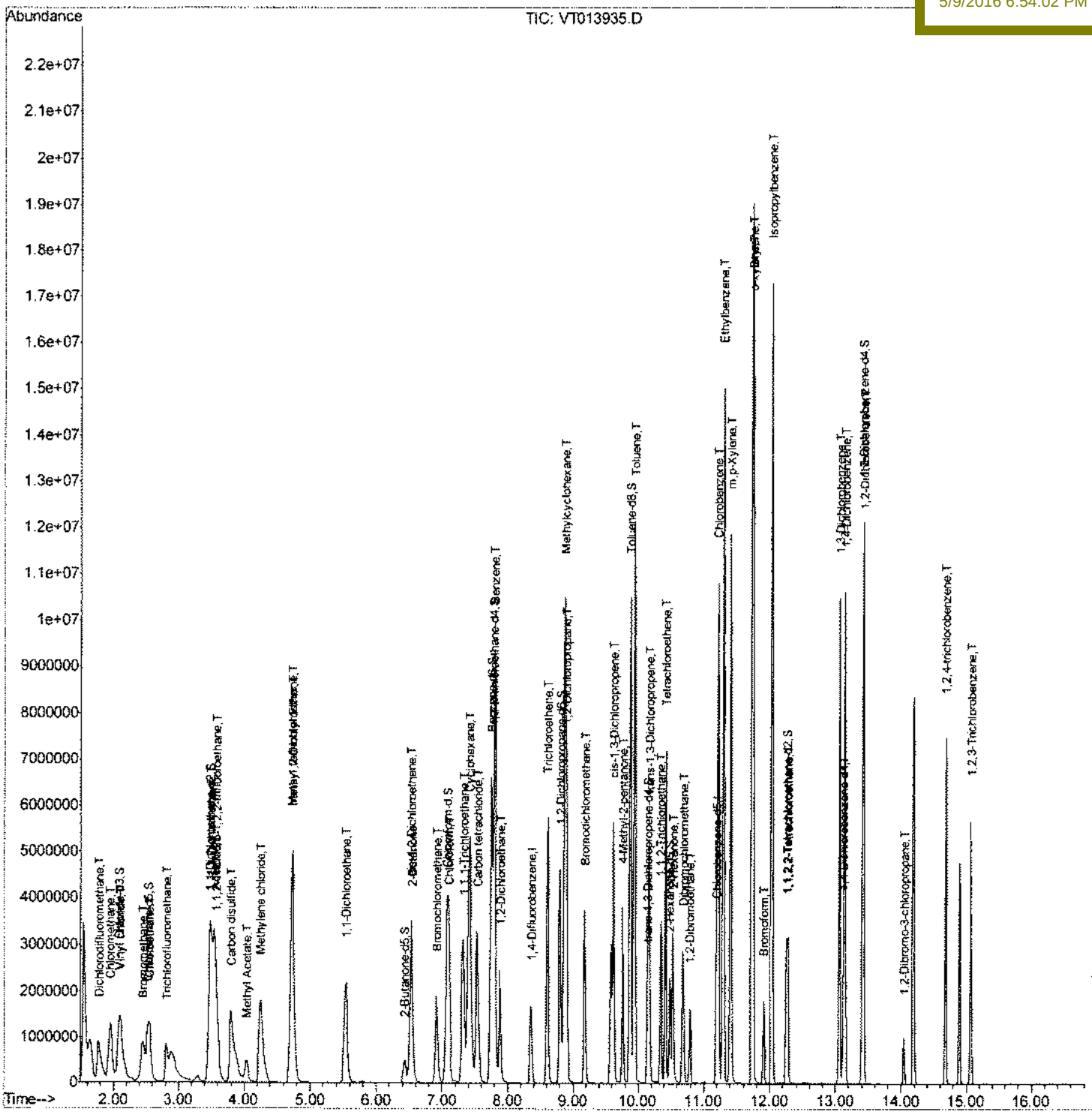
5/9/2016 6:54:02 PM



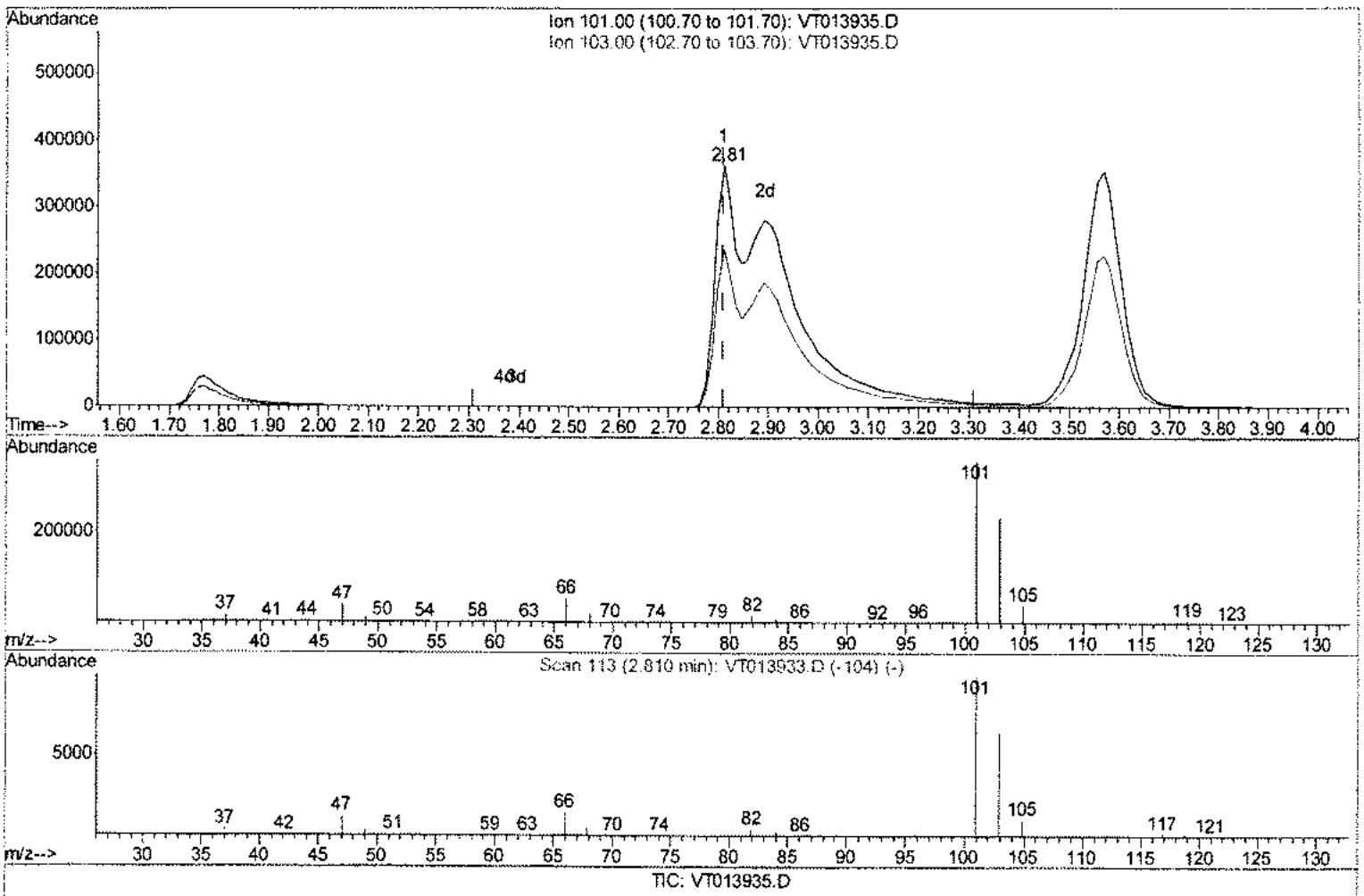
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013935.D
Acq On : 6 May 2016 11:23
Operator : FY/SY
Sample : VSTD10086
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 11:45:12 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:28:10 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD10086

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:54:02 PM



TIC: VT013935.D

(9) Trichlorofluoromethane (T)

2.810min (-0.000) 87.06ug/L m

response 3396460

M.D 05/13/16

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	21.10
0.00	0.00	0.00
0.00	0.00	0.00

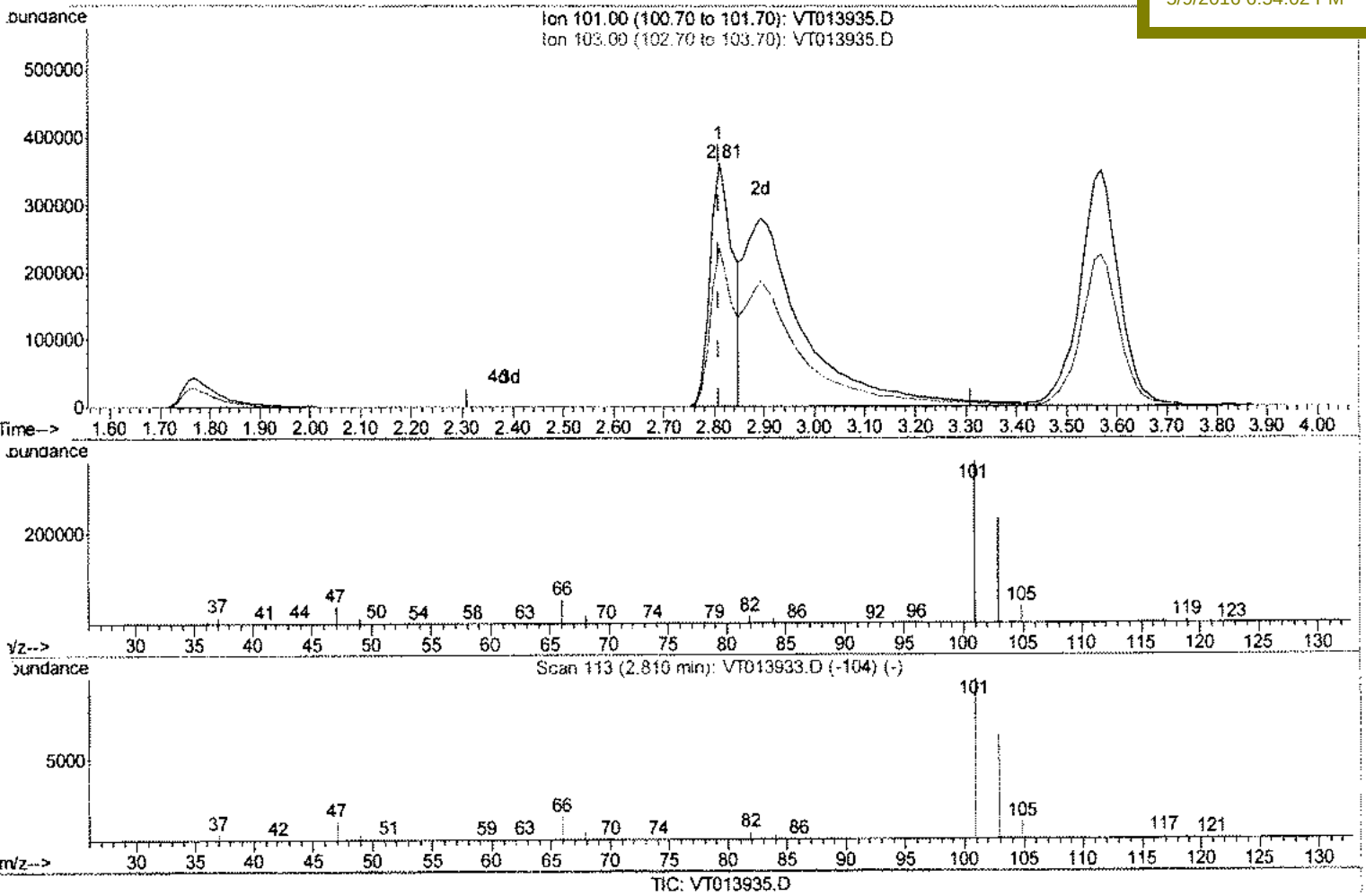
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013935.D
Acq On : 6 May 2016 11:23
Operator : FY/SY
Sample : VSTD10086
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 11:45:12 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:28:10 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD10086

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:54:02 PM



(9) Trichlorofluoromethane (T)

2.810min (-0.000) 28.74ug/L

response 1121098

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	63.91#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013935.D
Acq On : 6 May 2016 11:23
Operator : FY/SY
Sample : VSTD10086
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 11:47:12 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:28:10 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD10086

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:54:02 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1324034	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	1102253	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	549584	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.09	65	2333607	108.08	ug/L	0.01
7) Chloroethane-d5	2.53	69	1619894	102.67	ug/L	0.00
10) 1,1-Dichloroethene-d2	3.47	63	4203104	91.60	ug/L	0.00
20) 2-Butanone-d5	6.43	46	1037066	198.34	ug/L	0.00
24) Chloroform-d	7.07	84	3307216	87.24	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.78	65	1929078	86.70	ug/L	0.00
29) Benzene-d6	7.74	84	6741235	97.22	ug/L	0.00
33) 1,2-Dichloropropane-d6	8.80	67	1998670	97.81	ug/L	0.00
37) Toluene-d8	9.87	98	6138331	98.64	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.13	79	873181	113.72	ug/L	0.00
39) 2-Hexanone-d5	10.48	63	687515	214.55	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.25	84	1301500	91.24	ug/L	0.00
60) 1,2-Dichlorobenzene-d4	13.41	152	1916657	99.18	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	2522866	91.77	ug/L	100
3) Chloromethane	1.95	50	2895622	89.02	ug/L	99
5) Vinyl chloride	2.10	62	2734767	87.68	ug/L	99
6) Bromomethane	2.44	94	1399331	88.35	ug/L	100
8) Chloroethane	2.55	64	1496031	86.69	ug/L	99
9) Trichlorofluoromethane	2.81	101	3396460m	87.06	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	1843752	83.86	ug/L	100
12) 1,1-Dichloroethene	3.48	96	1711342	85.49	ug/L	84
13) Acetone	3.56	43	1237464	138.35	ug/L	97
14) Carbon disulfide	3.79	76	6254472	95.53	ug/L	100
15) Methyl Acetate	4.04	43	1000169	87.53	ug/L	97
16) Methylene chloride	4.25	84	1582700	81.51	ug/L	96
17) Methyl tert-butyl Ether	4.73	73	3425673	97.88	ug/L	98
18) trans-1,2-Dichloroethene	4.73	96	1788996	89.42	ug/L	96
19) 1,1-Dichloroethane	5.54	63	3918051	88.08	ug/L	98
21) 2-Butanone	6.54	43	1362188	158.50	ug/L	99
22) cis-1,2-Dichloroethene	6.53	96	1721856	90.39	ug/L	97
23) Bromochloromethane	6.92	128	623656	88.69	ug/L	96
25) Chloroform	7.11	83	3209642	84.25	ug/L	98
27) 1,2-Dichloroethane	7.89	62	2496043	86.50	ug/L	98
30) Cyclohexane	7.41	56	4265081	94.72	ug/L	99
31) 1,1,1-Trichloroethane	7.32	97	3128991	88.63	ug/L	99
32) Carbon tetrachloride	7.53	117	2884830	90.47	ug/L	97
34) Benzene	7.79	78	7571881	91.37	ug/L	100
35) Trichloroethene	8.61	95	1964642	91.31	ug/L	99
36) Methylcyclohexane	8.87	83	3919867	93.95	ug/L	99
40) 1,2-Dichloropropane	8.89	63	1893017	90.59	ug/L	100
41) Bromodichloromethane	9.18	83	2300026	93.72	ug/L	97
42) cis-1,3-Dichloropropene	9.61	75	2637622	98.75	ug/L	98
43) 4-Methyl-2-pentanone	9.76	43	2643701	184.01	ug/L	99

M.D 05/13/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050616\
Data File : VT013935.D
Acq On : 6 May 2016 11:23
Operator : FY/SY
Sample : VSTD10086
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD10086

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:54:02 PM

Quant Time: May 06 11:47:12 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 11:28:10 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) Toluene	9.93	91	7701297	94.97	ug/L	98
45) trans-1,3-Dichloropropene	10.16	75	2354529	103.75	ug/L	99
46) 1,1,2-Trichloroethane	10.34	97	1012861	89.50	ug/L	98
47) Tetrachloroethene	10.42	164	1480368	95.14	ug/L	98
49) 2-Hexanone	10.53	43	2130935	175.30	ug/L	100
50) Dibromochloromethane	10.68	129	1354025	101.60	ug/L	97
51) 1,2-Dibromoethane	10.79	107	1005316	93.91	ug/L	99
52) Chlorobenzene	11.21	112	4383571	91.96	ug/L	98
53) Ethylbenzene	11.29	91	9112597	95.06	ug/L	99
54) m,p-Xylene	11.40	106	3334365	97.35	ug/L	99
55) o-xylene	11.73	106	3290691	102.12	ug/L	93
56) Styrene	11.74	104	5089761	98.41	ug/L	98
57) Isopropylbenzene	12.03	105	9384617	99.23	ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.28	83	1264703	87.67	ug/L	98
61) Bromoform	11.91	173	742188	105.11	ug/L	99
62) 1,3-Dichlorobenzene	13.06	146	3410564	97.43	ug/L	99
63) 1,4-Dichlorobenzene	13.14	146	3351555	91.72	ug/L	99
64) 1,2-Dichlorobenzene	13.42	146	2981377	94.77	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.04	75	244976	99.41	ug/L	90
66) 1,2,4-trichlorobenzene	14.68	180	1938279	103.57	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	1489638	91.53	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/05/2016 Time: 10:40

Lab File ID: VT013897.D Init. Calib Date(s): 04/12/2016 04/12/2016

EPA Sample No.: VSTD02579 Init. Calib Time(s): 12:45 14:29

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{RRF}$	RRF25	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.475	0.537	0.01	12.9	± 40.0
Chloromethane	0.543	0.548	0.01	0.9	± 30.0
Vinyl chloride	0.497	0.537	0.01	8.0	± 25.0
Bromomethane	0.245	0.254	0.01	3.7	± 30.0
Chloroethane	0.277	0.296	0.01	6.9	± 25.0
Trichlorofluoromethane	0.593	0.663	0.01	11.6	± 30.0
1,1-Dichloroethene	0.333	0.330	0.06	-0.8	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.363	0.374	0.05	3.0	± 25.0
Acetone	0.124	0.139	0.01	11.8	± 40.0
Carbon disulfide	1.189	1.038	0.1	-12.7	± 25.0
Methyl Acetate	0.196	0.201	0.01	2.6	± 40.0
Methylene chloride	0.339	0.325	0.01	-4.1	± 30.0
trans-1,2-Dichloroethene	0.358	0.351	0.1	-1.9	± 20.0
Methyl tert-butyl Ether	0.618	0.667	0.1	7.9	± 25.0
1,1-Dichloroethane	0.762	0.796	0.3	4.5	± 20.0
cis-1,2-Dichloroethene	0.356	0.348	0.2	-2.2	± 20.0
2-Butanone	0.145	0.147	0.01	1.6	± 40.0
Bromochloromethane	0.130	0.125	0.1	-3.2	± 20.0
Chloroform	0.649	0.675	0.3	4.0	± 20.0
1,1,1-Trichloroethane	0.724	0.760	0.05	4.9	± 25.0
Cyclohexane	1.071	0.963	0.01	-10.1	± 25.0
Carbon tetrachloride	0.669	0.672	0.1	0.3	± 25.0
Benzene	1.934	1.751	0.2	-9.5	± 20.0
1,2-Dichloroethane	0.458	0.491	0.07	7.3	± 20.0
Trichloroethene	0.479	0.455	0.2	-5.1	± 20.0
Methylcyclohexane	0.973	0.857	0.05	-11.9	± 25.0
1,2-Dichloropropane	0.482	0.456	0.2	-5.5	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/05/2016 Time: 10:40

Lab File ID: VT013897.D Init. Calib Date(s): 04/12/2016 04/12/2016

EPA Sample No.: VSTD02579 Init. Calib Time(s): 12:45 14:29

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{RRF}$	RRF25	MIN RRF	%D	MAX %D
Bromodichloromethane	0.541	0.549	0.3	1.6	± 20.0
cis-1,3-Dichloropropene	0.627	0.642	0.3	2.4	± 20.0
4-Methyl-2-pentanone	0.325	0.330	0.03	1.6	± 30.0
Toluene	1.920	1.728	0.3	-10	± 20.0
trans-1,3-Dichloropropene	0.508	0.541	0.2	6.5	± 20.0
1,1,2-Trichloroethane	0.251	0.242	0.2	-3.8	± 20.0
Tetrachloroethene	0.349	0.322	0.1	-7.8	± 20.0
2-Hexanone	0.264	0.264	0.01	-0.1	± 40.0
Dibromochloromethane	0.309	0.309	0.2	0.0	± 20.0
1,2-Dibromoethane	0.238	0.235	0.2	-1.5	± 20.0
Chlorobenzene	1.082	1.022	0.4	-5.6	± 20.0
Ethylbenzene	2.196	2.092	0.4	-4.7	± 20.0
o-xylene	0.763	0.733	0.2	-3.9	± 20.0
m,p-Xylene	0.801	0.747	0.2	-6.8	± 20.0
Styrene	1.190	1.153	0.2	-3.1	± 20.0
Bromoform	0.318	0.304	0.1	-4.3	± 25.0
Isopropylbenzene	2.163	2.115	0.4	-2.2	± 25.0
1,1,2,2-Tetrachloroethane	0.318	0.314	0.2	-1.3	± 25.0
1,3-Dichlorobenzene	1.627	1.608	0.5	-1.1	± 20.0
1,4-Dichlorobenzene	1.598	1.562	0.6	-2.3	± 20.0
1,2-Dichlorobenzene	1.423	1.368	0.6	-3.9	± 20.0
1,2-Dibromo-3-chloropropane	0.103	0.108	0.01	5.1	± 30.0
1,2,4-trichlorobenzene	0.881	0.912	0.4	3.5	± 30.0
1,2,3-Trichlorobenzene	0.726	0.743	0.4	2.3	± 30.0
Vinyl Chloride-d3	0.491	0.361	0.01	-26.4	± 30.0
Chloroethane-d5	0.329	0.281	0.01	-14.6	± 30.0
1,1-Dichloroethene-d2	0.847	0.778	0.05	-8.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/05/2016 Time: 10:40

Lab File ID: VT013897.D Init. Calib Date(s): 04/12/2016 04/12/2016

EPA Sample No.: VSTD02579 Init. Calib Time(s): 12:45 14:29

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF25	MIN RRF	%D	MAX %D
2-Butanone-d5	0.100	0.104	0.01	4.1	± 40.0
Chloroform-d	0.704	0.649	0.3	-7.8	± 20.0
1,2-Dichloroethane-d4	0.381	0.378	0.06	-0.7	± 25.0
Benzene-d6	1.828	1.466	0.3	-19.8	± 20.0
1,2-Dichloropropane-d6	0.528	0.450	0.2	-14.7	± 20.0
Toluene-d8	1.577	1.286	0.3	-18.5	± 20.0
trans-1,3-Dichloropropene-d4	0.187	0.172	0.2	-8.2	± 20.0
2-Hexanone-d5	0.080	0.080	0.01	0.2	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.331	0.304	0.2	-8.1	± 25.0
1,2-Dichlorobenzene-d4	0.951	0.819	0.4	-13.8	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/05/2016 Time: 15:50

Lab File ID: VT013907.D Init. Calib Date(s): 04/12/2016 04/12/2016

EPA Sample No.: VSTD02580 Init. Calib Time(s): 12:45 14:29

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{RRF}$	RRF25	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.475	0.517	0.01	8.7	± 40.0
Chloromethane	0.543	0.556	0.01	2.4	± 30.0
Vinyl chloride	0.497	0.529	0.01	6.3	± 25.0
Bromomethane	0.245	0.248	0.01	1.1	± 30.0
Chloroethane	0.277	0.295	0.01	6.6	± 25.0
Trichlorofluoromethane	0.593	0.662	0.01	11.6	± 30.0
1,1-Dichloroethene	0.333	0.338	0.06	1.5	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.363	0.379	0.05	4.3	± 25.0
Acetone	0.124	0.130	0.01	4.5	± 40.0
Carbon disulfide	1.189	1.002	0.1	-15.7	± 25.0
Methyl Acetate	0.196	0.210	0.01	7.2	± 40.0
Methylene chloride	0.339	0.331	0.01	-2.2	± 30.0
trans-1,2-Dichloroethene	0.358	0.349	0.1	-2.4	± 20.0
Methyl tert-butyl Ether	0.618	0.710	0.1	14.8	± 25.0
1,1-Dichloroethane	0.762	0.810	0.3	6.3	± 20.0
cis-1,2-Dichloroethene	0.356	0.354	0.2	-0.5	± 20.0
2-Butanone	0.145	0.144	0.01	-0.5	± 40.0
Bromochloromethane	0.130	0.128	0.1	-0.9	± 20.0
Chloroform	0.649	0.692	0.3	6.7	± 20.0
1,1,1-Trichloroethane	0.724	0.758	0.05	4.6	± 25.0
Cyclohexane	1.071	0.977	0.01	-8.8	± 25.0
Carbon tetrachloride	0.669	0.684	0.1	2.2	± 25.0
Benzene	1.934	1.822	0.2	-5.8	± 20.0
1,2-Dichloroethane	0.458	0.524	0.07	14.4	± 20.0
Trichloroethene	0.479	0.476	0.2	-0.6	± 20.0
Methylcyclohexane	0.973	0.894	0.05	-8.1	± 25.0
1,2-Dichloropropane	0.482	0.475	0.2	-1.5	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/05/2016 Time: 15:50

Lab File ID: VT013907.D Init. Calib Date(s): 04/12/2016 04/12/2016

EPA Sample No.: VSTD02580 Init. Calib Time(s): 12:45 14:29

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{RRF}$	RRF25	MIN RRF	%D	MAX %D
Bromodichloromethane	0.541	0.567	0.3	4.9	± 20.0
cis-1,3-Dichloropropene	0.627	0.671	0.3	7.0	± 20.0
4-Methyl-2-pentanone	0.325	0.358	0.03	10.2	± 30.0
Toluene	1.920	1.796	0.3	-6.5	± 20.0
trans-1,3-Dichloropropene	0.508	0.557	0.2	9.7	± 20.0
1,1,2-Trichloroethane	0.251	0.258	0.2	2.7	± 20.0
Tetrachloroethene	0.349	0.334	0.1	-4.5	± 20.0
2-Hexanone	0.264	0.269	0.01	1.8	± 40.0
Dibromochloromethane	0.309	0.316	0.2	2.3	± 20.0
1,2-Dibromoethane	0.238	0.250	0.2	4.9	± 20.0
Chlorobenzene	1.082	1.057	0.4	-2.3	± 20.0
Ethylbenzene	2.196	2.142	0.4	-2.4	± 20.0
o-xylene	0.763	0.753	0.2	-1.3	± 20.0
m,p-Xylene	0.801	0.766	0.2	-4.3	± 20.0
Styrene	1.190	1.151	0.2	-3.3	± 20.0
Bromoform	0.318	0.323	0.1	1.5	± 25.0
Isopropylbenzene	2.163	2.159	0.4	-0.2	± 25.0
1,1,2,2-Tetrachloroethane	0.318	0.341	0.2	7.4	± 25.0
1,3-Dichlorobenzene	1.627	1.625	0.5	-0.1	± 20.0
1,4-Dichlorobenzene	1.598	1.556	0.6	-2.6	± 20.0
1,2-Dichlorobenzene	1.423	1.410	0.6	-0.9	± 20.0
1,2-Dibromo-3-chloropropane	0.103	0.110	0.01	6.6	± 30.0
1,2,4-trichlorobenzene	0.881	0.875	0.4	-0.7	± 30.0
1,2,3-Trichlorobenzene	0.726	0.723	0.4	-0.4	± 30.0
Vinyl Chloride-d3	0.491	0.349	0.01	-28.8	± 30.0
Chloroethane-d5	0.329	0.270	0.01	-17.8	± 30.0
1,1-Dichloroethene-d2	0.847	0.758	0.05	-10.4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/05/2016 Time: 15:50

Lab File ID: VT013907.D Init. Calib Date(s): 04/12/2016 04/12/2016

EPA Sample No.: VSTD02580 Init. Calib Time(s): 12:45 14:29

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF25	MIN RRF	%D	MAX %D
2-Butanone-d5	0.100	0.105	0.01	4.9	± 40.0
Chloroform-d	0.704	0.653	0.3	-7.3	± 20.0
1,2-Dichloroethane-d4	0.381	0.384	0.06	0.8	± 25.0
Benzene-d6	1.828	1.489	0.3	-18.5	± 20.0
1,2-Dichloropropane-d6	0.528	0.456	0.2	-13.5	± 20.0
Toluene-d8	1.577	1.310	0.3	-16.9	± 20.0
trans-1,3-Dichloropropene-d4	0.187	0.167	0.2	-10.9	± 20.0
2-Hexanone-d5	0.080	0.086	0.01	7.1	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.331	0.320	0.2	-3.4	± 25.0
1,2-Dichlorobenzene-d4	0.951	0.822	0.4	-13.6	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/06/2016 Time: 02:23

Lab File ID: VT013929.D Init. Calib Date(s): 04/12/2016 04/12/2016

EPA Sample No.: VSTD02581 Init. Calib Time(s): 12:45 14:29

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{RRF}$	RRF25	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.475	0.514	0.01	8.2	± 50.0
Chloromethane	0.543	0.518	0.01	-4.6	± 50.0
Vinyl chloride	0.497	0.513	0.01	3.1	± 50.0
Bromomethane	0.245	0.254	0.01	3.3	± 50.0
Chloroethane	0.277	0.292	0.01	5.6	± 50.0
Trichlorofluoromethane	0.593	0.678	0.01	14.3	± 50.0
1,1-Dichloroethene	0.333	0.340	0.06	2.1	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.363	0.390	0.05	7.5	± 50.0
Acetone	0.124	0.096	0.01	-22.6	± 50.0
Carbon disulfide	1.189	0.978	0.1	-17.8	± 25.0
Methyl Acetate	0.196	0.182	0.01	-6.7	± 50.0
Methylene chloride	0.339	0.322	0.01	-5	± 50.0
trans-1,2-Dichloroethene	0.358	0.339	0.1	-5.3	± 25.0
Methyl tert-butyl Ether	0.618	0.638	0.1	3.2	± 50.0
1,1-Dichloroethane	0.762	0.783	0.3	2.8	± 25.0
cis-1,2-Dichloroethene	0.356	0.345	0.2	-3.1	± 25.0
2-Butanone	0.145	0.121	0.01	-16.4	± 50.0
Bromochloromethane	0.130	0.121	0.1	-6.9	± 25.0
Chloroform	0.649	0.682	0.3	5.1	± 25.0
1,1,1-Trichloroethane	0.724	0.778	0.05	7.4	± 25.0
Cyclohexane	1.071	0.991	0.01	-7.4	± 50.0
Carbon tetrachloride	0.669	0.711	0.1	6.3	± 25.0
Benzene	1.934	1.780	0.2	-8	± 25.0
1,2-Dichloroethane	0.458	0.509	0.07	11.2	± 25.0
Trichloroethene	0.479	0.475	0.2	-0.9	± 25.0
Methylcyclohexane	0.973	0.920	0.05	-5.5	± 50.0
1,2-Dichloropropane	0.482	0.444	0.2	-8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/06/2016 Time: 02:23

Lab File ID: VT013929.D Init. Calib Date(s): 04/12/2016 04/12/2016

EPA Sample No.: VSTD02581 Init. Calib Time(s): 12:45 14:29

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{RRF}$	RRF25	MIN RRF	%D	MAX %D
Bromodichloromethane	0.541	0.550	0.3	1.7	± 25.0
cis-1,3-Dichloropropene	0.627	0.604	0.3	-3.6	± 25.0
4-Methyl-2-pentanone	0.325	0.309	0.03	-5	± 50.0
Toluene	1.920	1.737	0.3	-9.6	± 25.0
trans-1,3-Dichloropropene	0.508	0.491	0.2	-3.2	± 25.0
1,1,2-Trichloroethane	0.251	0.238	0.2	-5.5	± 25.0
Tetrachloroethene	0.349	0.330	0.1	-5.6	± 25.0
2-Hexanone	0.264	0.215	0.01	-18.8	± 50.0
Dibromochloromethane	0.309	0.295	0.2	-4.5	± 25.0
1,2-Dibromoethane	0.238	0.229	0.2	-3.8	± 25.0
Chlorobenzene	1.082	1.012	0.4	-6.5	± 25.0
Ethylbenzene	2.196	2.049	0.4	-6.7	± 25.0
o-xylene	0.763	0.722	0.2	-5.3	± 25.0
m,p-Xylene	0.801	0.733	0.2	-8.4	± 25.0
Styrene	1.190	1.103	0.2	-7.3	± 25.0
Bromoform	0.318	0.292	0.1	-8.2	± 50.0
Isopropylbenzene	2.163	2.132	0.4	-1.4	± 25.0
1,1,2,2-Tetrachloroethane	0.318	0.308	0.2	-3	± 25.0
1,3-Dichlorobenzene	1.627	1.512	0.5	-7.1	± 25.0
1,4-Dichlorobenzene	1.598	1.487	0.6	-6.9	± 25.0
1,2-Dichlorobenzene	1.423	1.363	0.6	-4.2	± 25.0
1,2-Dibromo-3-chloropropane	0.103	0.099	0.01	-3.3	± 50.0
1,2,4-trichlorobenzene	0.881	0.788	0.4	-10.5	± 50.0
1,2,3-Trichlorobenzene	0.726	0.683	0.4	-5.9	± 50.0
Vinyl Chloride-d3	0.491	0.351	0.01	-28.4	± 50.0
Chloroethane-d5	0.329	0.277	0.01	-15.7	± 50.0
1,1-Dichloroethene-d2	0.847	0.767	0.05	-9.4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/06/2016 Time: 02:23

Lab File ID: VT013929.D Init. Calib Date(s): 04/12/2016 04/12/2016

EPA Sample No.: VSTD02581 Init. Calib Time(s): 12:45 14:29

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF25	MIN RRF	%D	MAX %D
2-Butanone-d5	0.100	0.094	0.01	-5.9	± 50.0
Chloroform-d	0.704	0.663	0.3	-5.8	± 25.0
1,2-Dichloroethane-d4	0.381	0.385	0.06	1.1	± 25.0
Benzene-d6	1.828	1.501	0.3	-17.9	± 25.0
1,2-Dichloropropane-d6	0.528	0.446	0.2	-15.5	± 25.0
Toluene-d8	1.577	1.290	0.3	-18.2	± 25.0
trans-1,3-Dichloropropene-d4	0.187	0.158	0.2	-15.4	± 25.0
2-Hexanone-d5	0.080	0.077	0.01	-4.1	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.331	0.307	0.2	-7.2	± 25.0
1,2-Dichlorobenzene-d4	0.951	0.804	0.4	-15.4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/09/2016 Time: 10:07

Lab File ID: VT013987.D Init. Calib Date(s): 05/06/2016 05/06/2016

EPA Sample No.: VSTD02590 Init. Calib Time(s): 09:38 11:23

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{RRF}$	RRF25	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.511	0.510	0.01	-0.1	± 40.0
Chloromethane	0.601	0.590	0.01	-1.9	± 30.0
Vinyl chloride	0.574	0.585	0.01	1.9	± 25.0
Bromomethane	0.292	0.288	0.01	-1.3	± 30.0
Chloroethane	0.317	0.321	0.01	1.3	± 25.0
Trichlorofluoromethane	0.718	0.749	0.01	4.4	± 30.0
1,1-Dichloroethene	0.367	0.375	0.06	2.2	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.402	0.405	0.05	0.8	± 25.0
Acetone	0.158	0.151	0.01	-4.9	± 40.0
Carbon disulfide	1.225	1.263	0.1	3.1	± 25.0
Methyl Acetate	0.210	0.191	0.01	-9.3	± 40.0
Methylene chloride	0.353	0.344	0.01	-2.7	± 30.0
trans-1,2-Dichloroethene	0.370	0.386	0.1	4.5	± 20.0
Methyl tert-butyl Ether	0.658	0.702	0.1	6.7	± 25.0
1,1-Dichloroethane	0.820	0.843	0.3	2.8	± 20.0
cis-1,2-Dichloroethene	0.353	0.376	0.2	6.6	± 20.0
2-Butanone	0.156	0.147	0.01	-5.5	± 40.0
Bromochloromethane	0.130	0.131	0.1	0.8	± 20.0
Chloroform	0.697	0.714	0.3	2.5	± 20.0
1,1,1-Trichloroethane	0.783	0.842	0.05	7.6	± 25.0
Cyclohexane	1.010	1.093	0.01	8.1	± 25.0
Carbon tetrachloride	0.709	0.764	0.1	7.8	± 25.0
Benzene	1.847	1.906	0.2	3.2	± 20.0
1,2-Dichloroethane	0.530	0.526	0.07	-0.8	± 20.0
Trichloroethene	0.480	0.505	0.2	5.2	± 20.0
Methylcyclohexane	0.935	0.985	0.05	5.4	± 25.0
1,2-Dichloropropane	0.465	0.474	0.2	1.9	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/09/2016 Time: 10:07

Lab File ID: VT013987.D Init. Calib Date(s): 05/06/2016 05/06/2016

EPA Sample No.: VSTD02590 Init. Calib Time(s): 09:38 11:23

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{RRF}$	RRF25	MIN RRF	%D	MAX %D
Bromodichloromethane	0.550	0.580	0.3	5.4	± 20.0
cis-1,3-Dichloropropene	0.604	0.644	0.3	6.6	± 20.0
4-Methyl-2-pentanone	0.321	0.316	0.03	-1.4	± 30.0
Toluene	1.821	1.897	0.3	4.2	± 20.0
trans-1,3-Dichloropropene	0.519	0.556	0.2	7.1	± 20.0
1,1,2-Trichloroethane	0.251	0.244	0.2	-2.7	± 20.0
Tetrachloroethene	0.349	0.359	0.1	2.6	± 20.0
2-Hexanone	0.269	0.272	0.01	1.2	± 40.0
Dibromochloromethane	0.303	0.318	0.2	4.8	± 20.0
1,2-Dibromoethane	0.240	0.234	0.2	-2.7	± 20.0
Chlorobenzene	1.064	1.078	0.4	1.4	± 20.0
Ethylbenzene	2.153	2.240	0.4	4.1	± 20.0
o-xylene	0.734	0.769	0.2	4.8	± 20.0
m,p-Xylene	0.773	0.818	0.2	5.9	± 20.0
Styrene	1.169	1.170	0.2	0.1	± 20.0
Bromoform	0.324	0.305	0.1	-6.1	± 25.0
Isopropylbenzene	2.142	2.280	0.4	6.4	± 25.0
1,1,2,2-Tetrachloroethane	0.319	0.305	0.2	-4.5	± 25.0
1,3-Dichlorobenzene	1.584	1.699	0.5	7.3	± 20.0
1,4-Dichlorobenzene	1.635	1.653	0.6	1.1	± 20.0
1,2-Dichlorobenzene	1.416	1.435	0.6	1.4	± 20.0
1,2-Dibromo-3-chloropropane	0.112	0.102	0.01	-9.4	± 30.0
1,2,4-trichlorobenzene	0.857	0.929	0.4	8.3	± 30.0
1,2,3-Trichlorobenzene	0.728	0.762	0.4	4.7	± 30.0
Vinyl Chloride-d3	0.414	0.486	0.01	17.2	± 30.0
Chloroethane-d5	0.299	0.348	0.01	16.2	± 30.0
1,1-Dichloroethene-d2	0.852	0.954	0.05	12	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/09/2016 Time: 10:07

Lab File ID: VT013987.D Init. Calib Date(s): 05/06/2016 05/06/2016

EPA Sample No.: VSTD02590 Init. Calib Time(s): 09:38 11:23

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF25	MIN RRF	%D	MAX %D
2-Butanone-d5	0.099	0.091	0.01	-7.8	± 40.0
Chloroform-d	0.698	0.747	0.3	7.1	± 20.0
1,2-Dichloroethane-d4	0.409	0.416	0.06	1.7	± 25.0
Benzene-d6	1.564	1.684	0.3	7.7	± 20.0
1,2-Dichloropropane-d6	0.461	0.491	0.2	6.4	± 20.0
Toluene-d8	1.408	1.523	0.3	8.2	± 20.0
trans-1,3-Dichloropropene-d4	0.179	0.189	0.2	5.5	± 20.0
2-Hexanone-d5	0.074	0.074	0.01	0.5	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.318	0.302	0.2	-4.9	± 25.0
1,2-Dichlorobenzene-d4	0.878	0.903	0.4	2.9	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/09/2016 Time: 16:11

Lab File ID: VT013999.D Init. Calib Date(s): 05/06/2016 05/06/2016

EPA Sample No.: VSTD02591 Init. Calib Time(s): 09:38 11:23

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{RRF}$	RRF25	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.511	0.489	0.01	-4.3	± 40.0
Chloromethane	0.601	0.545	0.01	-9.2	± 30.0
Vinyl chloride	0.574	0.542	0.01	-5.6	± 25.0
Bromomethane	0.292	0.267	0.01	-8.7	± 30.0
Chloroethane	0.317	0.306	0.01	-3.5	± 25.0
Trichlorofluoromethane	0.718	0.698	0.01	-2.8	± 30.0
1,1-Dichloroethene	0.367	0.344	0.06	-6.4	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.402	0.387	0.05	-3.7	± 25.0
Acetone	0.158	0.112	0.01	-29.1	± 40.0
Carbon disulfide	1.225	1.134	0.1	-7.4	± 25.0
Methyl Acetate	0.210	0.185	0.01	-12.1	± 40.0
Methylene chloride	0.353	0.319	0.01	-9.5	± 30.0
trans-1,2-Dichloroethene	0.370	0.358	0.1	-3.3	± 20.0
Methyl tert-butyl Ether	0.658	0.640	0.1	-2.8	± 25.0
1,1-Dichloroethane	0.820	0.786	0.3	-4.2	± 20.0
cis-1,2-Dichloroethene	0.353	0.345	0.2	-2.2	± 20.0
2-Butanone	0.156	0.123	0.01	-20.8	± 40.0
Bromochloromethane	0.130	0.123	0.1	-5.4	± 20.0
Chloroform	0.697	0.681	0.3	-2.3	± 20.0
1,1,1-Trichloroethane	0.783	0.760	0.05	-2.8	± 25.0
Cyclohexane	1.010	0.994	0.01	-1.6	± 25.0
Carbon tetrachloride	0.709	0.706	0.1	-0.5	± 25.0
Benzene	1.847	1.756	0.2	-5	± 20.0
1,2-Dichloroethane	0.530	0.514	0.07	-3.1	± 20.0
Trichloroethene	0.480	0.465	0.2	-3	± 20.0
Methylcyclohexane	0.935	0.899	0.05	-3.9	± 25.0
1,2-Dichloropropane	0.465	0.437	0.2	-6.1	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/09/2016 Time: 16:11

Lab File ID: VT013999.D Init. Calib Date(s): 05/06/2016 05/06/2016

EPA Sample No.: VSTD02591 Init. Calib Time(s): 09:38 11:23

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{RRF}$	RRF25	MIN RRF	%D	MAX %D
Bromodichloromethane	0.550	0.546	0.3	-0.7	± 20.0
cis-1,3-Dichloropropene	0.604	0.597	0.3	-1.3	± 20.0
4-Methyl-2-pentanone	0.321	0.300	0.03	-6.4	± 30.0
Toluene	1.821	1.764	0.3	-3.1	± 20.0
trans-1,3-Dichloropropene	0.519	0.522	0.2	0.6	± 20.0
1,1,2-Trichloroethane	0.251	0.236	0.2	-6.2	± 20.0
Tetrachloroethene	0.349	0.333	0.1	-4.7	± 20.0
2-Hexanone	0.269	0.230	0.01	-14.6	± 40.0
Dibromochloromethane	0.303	0.296	0.2	-2.2	± 20.0
1,2-Dibromoethane	0.240	0.230	0.2	-4	± 20.0
Chlorobenzene	1.064	1.027	0.4	-3.5	± 20.0
Ethylbenzene	2.153	2.094	0.4	-2.7	± 20.0
o-xylene	0.734	0.726	0.2	-1.1	± 20.0
m,p-Xylene	0.773	0.750	0.2	-2.9	± 20.0
Styrene	1.169	1.134	0.2	-3	± 20.0
Bromoform	0.324	0.282	0.1	-13.2	± 25.0
Isopropylbenzene	2.142	2.133	0.4	-0.4	± 25.0
1,1,2,2-Tetrachloroethane	0.319	0.301	0.2	-5.7	± 25.0
1,3-Dichlorobenzene	1.584	1.545	0.5	-2.5	± 20.0
1,4-Dichlorobenzene	1.635	1.501	0.6	-8.2	± 20.0
1,2-Dichlorobenzene	1.416	1.361	0.6	-3.9	± 20.0
1,2-Dibromo-3-chloropropane	0.112	0.101	0.01	-9.7	± 30.0
1,2,4-trichlorobenzene	0.857	0.861	0.4	0.4	± 30.0
1,2,3-Trichlorobenzene	0.728	0.729	0.4	0.1	± 30.0
Vinyl Chloride-d3	0.414	0.467	0.01	12.6	± 30.0
Chloroethane-d5	0.299	0.333	0.01	11.1	± 30.0
1,1-Dichloroethene-d2	0.852	0.901	0.05	5.8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/09/2016 Time: 16:11

Lab File ID: VT013999.D Init. Calib Date(s): 05/06/2016 05/06/2016

EPA Sample No.: VSTD02591 Init. Calib Time(s): 09:38 11:23

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF25	MIN RRF	%D	MAX %D
2-Butanone-d5	0.099	0.089	0.01	-10	± 40.0
Chloroform-d	0.698	0.722	0.3	3.5	± 20.0
1,2-Dichloroethane-d4	0.409	0.407	0.06	-0.5	± 25.0
Benzene-d6	1.564	1.588	0.3	1.5	± 20.0
1,2-Dichloropropane-d6	0.461	0.475	0.2	2.9	± 20.0
Toluene-d8	1.408	1.447	0.3	2.8	± 20.0
trans-1,3-Dichloropropene-d4	0.179	0.176	0.2	-1.3	± 20.0
2-Hexanone-d5	0.074	0.074	0.01	0.4	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.318	0.306	0.2	-3.7	± 25.0
1,2-Dichlorobenzene-d4	0.878	0.861	0.4	-1.9	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/10/2016 Time: 02:38

Lab File ID: VT014021.D Init. Calib Date(s): 05/06/2016 05/06/2016

EPA Sample No.: VSTD02592 Init. Calib Time(s): 09:38 11:23

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{RRF}$	RRF25	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.511	0.421	0.01	-17.5	± 50.0
Chloromethane	0.601	0.506	0.01	-15.7	± 50.0
Vinyl chloride	0.574	0.499	0.01	-13.1	± 50.0
Bromomethane	0.292	0.247	0.01	-15.4	± 50.0
Chloroethane	0.317	0.283	0.01	-10.9	± 50.0
Trichlorofluoromethane	0.718	0.566	0.01	-21.1	± 50.0
1,1-Dichloroethene	0.367	0.332	0.06	-9.4	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.402	0.368	0.05	-8.5	± 50.0
Acetone	0.158	0.084	0.01	-47.1	± 50.0
Carbon disulfide	1.225	1.104	0.1	-9.9	± 25.0
Methyl Acetate	0.210	0.197	0.01	-6.2	± 50.0
Methylene chloride	0.353	0.322	0.01	-8.8	± 50.0
trans-1,2-Dichloroethene	0.370	0.357	0.1	-3.5	± 25.0
Methyl tert-butyl Ether	0.658	0.637	0.1	-3.2	± 50.0
1,1-Dichloroethane	0.820	0.751	0.3	-8.4	± 25.0
cis-1,2-Dichloroethene	0.353	0.345	0.2	-2.2	± 25.0
2-Butanone	0.156	0.115	0.01	-26	± 50.0
Bromochloromethane	0.130	0.122	0.1	-5.8	± 25.0
Chloroform	0.697	0.590	0.3	-15.3	± 25.0
1,1,1-Trichloroethane	0.783	0.683	0.05	-12.8	± 25.0
Cyclohexane	1.010	1.101	0.01	8.9	± 50.0
Carbon tetrachloride	0.709	0.609	0.1	-14.2	± 25.0
Benzene	1.847	1.870	0.2	1.3	± 25.0
1,2-Dichloroethane	0.530	0.407	0.07	-23.3	± 25.0
Trichloroethene	0.480	0.468	0.2	-2.4	± 25.0
Methylcyclohexane	0.935	0.972	0.05	4.0	± 50.0
1,2-Dichloropropane	0.465	0.474	0.2	2.0	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/10/2016 Time: 02:38

Lab File ID: VT014021.D Init. Calib Date(s): 05/06/2016 05/06/2016

EPA Sample No.: VSTD02592 Init. Calib Time(s): 09:38 11:23

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

ANALYTE	$\overline{RRF}$	RRF25	MIN RRF	%D	MAX %D
Bromodichloromethane	0.550	0.486	0.3	-11.6	± 25.0
cis-1,3-Dichloropropene	0.604	0.570	0.3	-5.6	± 25.0
4-Methyl-2-pentanone	0.321	0.313	0.03	-2.3	± 50.0
Toluene	1.821	1.788	0.3	-1.8	± 25.0
trans-1,3-Dichloropropene	0.519	0.470	0.2	-9.3	± 25.0
1,1,2-Trichloroethane	0.251	0.240	0.2	-4.4	± 25.0
Tetrachloroethene	0.349	0.332	0.1	-4.9	± 25.0
2-Hexanone	0.269	0.221	0.01	-17.7	± 50.0
Dibromochloromethane	0.303	0.272	0.2	-10.3	± 25.0
1,2-Dibromoethane	0.240	0.228	0.2	-5	± 25.0
Chlorobenzene	1.064	1.017	0.4	-4.4	± 25.0
Ethylbenzene	2.153	2.033	0.4	-5.6	± 25.0
o-xylene	0.734	0.714	0.2	-2.7	± 25.0
m,p-Xylene	0.773	0.739	0.2	-4.4	± 25.0
Styrene	1.169	1.088	0.2	-7	± 25.0
Bromoform	0.324	0.295	0.1	-9	± 50.0
Isopropylbenzene	2.142	2.036	0.4	-4.9	± 25.0
1,1,2,2-Tetrachloroethane	0.319	0.296	0.2	-7.3	± 25.0
1,3-Dichlorobenzene	1.584	1.548	0.5	-2.3	± 25.0
1,4-Dichlorobenzene	1.635	1.488	0.6	-9	± 25.0
1,2-Dichlorobenzene	1.416	1.352	0.6	-4.5	± 25.0
1,2-Dibromo-3-chloropropane	0.112	0.096	0.01	-14.4	± 50.0
1,2,4-trichlorobenzene	0.857	0.846	0.4	-1.3	± 50.0
1,2,3-Trichlorobenzene	0.728	0.707	0.4	-2.8	± 50.0
Vinyl Chloride-d3	0.414	0.409	0.01	-1.3	± 50.0
Chloroethane-d5	0.299	0.295	0.01	-1.6	± 50.0
1,1-Dichloroethene-d2	0.852	0.716	0.05	-15.9	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: VOA Level: LOW

Instrument ID: MSVOA_T Date Analyzed: 05/10/2016 Time: 02:38

Lab File ID: VT014021.D Init. Calib Date(s): 05/06/2016 05/06/2016

EPA Sample No.: VSTD02592 Init. Calib Time(s): 09:38 11:23

GC Column: RXI-624 ID: 0.25 (mm) Length: 20 (m)

Heated Purge: (Y/N) Y Purge Volume: 10 (mL)

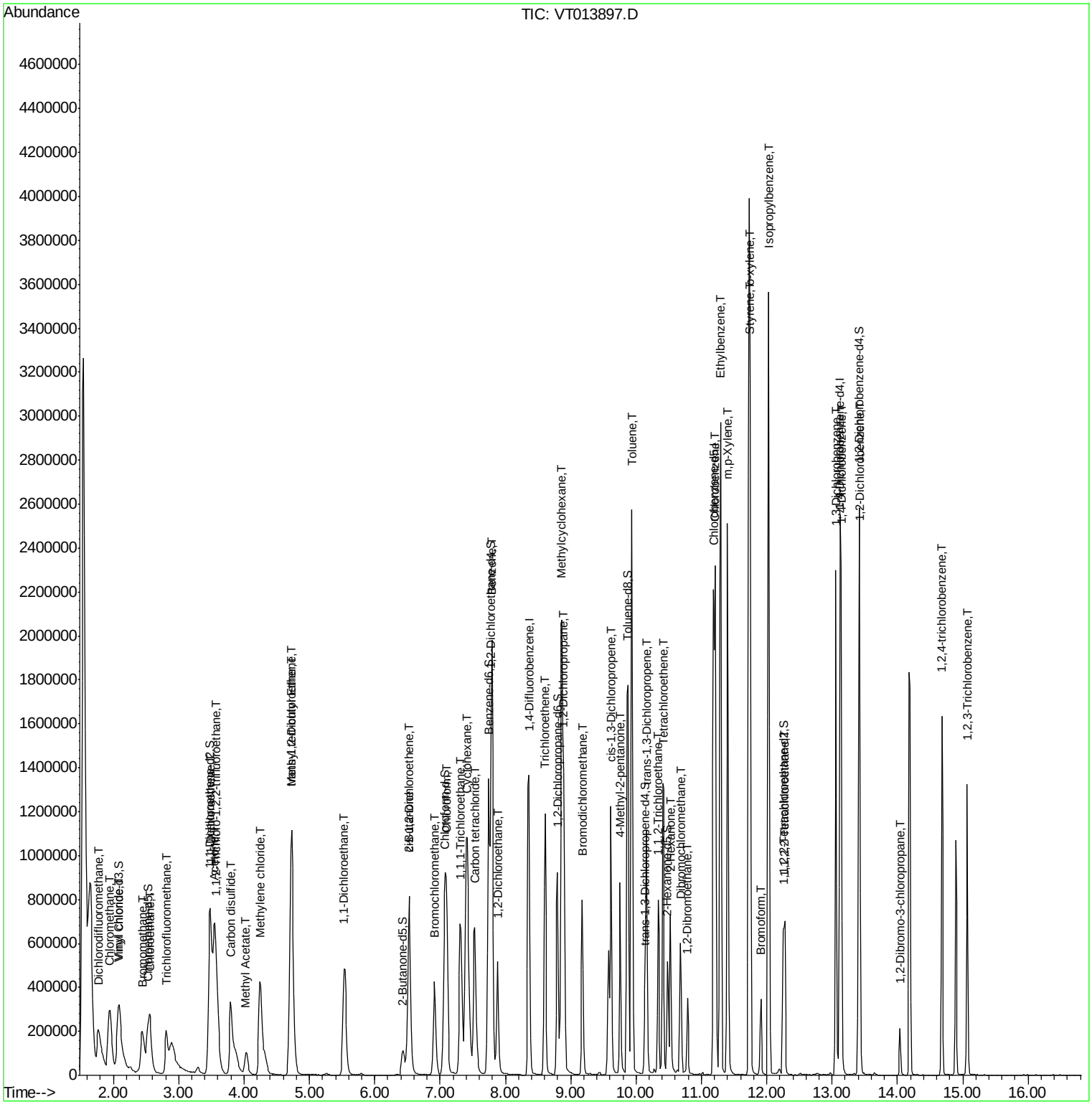
ANALYTE	$\overline{RRF}$	RRF25	MIN RRF	%D	MAX %D
2-Butanone-d5	0.099	0.094	0.01	-4.3	± 50.0
Chloroform-d	0.698	0.588	0.3	-15.7	± 25.0
1,2-Dichloroethane-d4	0.409	0.315	0.06	-22.9	± 25.0
Benzene-d6	1.564	1.596	0.3	2.1	± 25.0
1,2-Dichloropropane-d6	0.461	0.480	0.2	4.0	± 25.0
Toluene-d8	1.408	1.393	0.3	-1	± 25.0
trans-1,3-Dichloropropene-d4	0.179	0.161	0.2	-10	± 25.0
2-Hexanone-d5	0.074	0.084	0.01	13.6	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.318	0.293	0.2	-8	± 25.0
1,2-Dichlorobenzene-d4	0.878	0.843	0.4	-4	± 25.0

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050516\
Data File : VT013897.D
Acq On : 5 May 2016 10:40
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 01:07:48 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Thu May 05 04:11:49 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02579

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:00 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050516\
Data File : VT013897.D
Acq On : 5 May 2016 10:40
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 01:07:48 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Thu May 05 04:11:49 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02579

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:00 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1096176	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	899470	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	455366	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	395833	18.40	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 73.60%			
7) Chloroethane-d5	2.53	69	307905	21.36	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 85.44%			
10) 1,1-Dichloroethene-d2	3.47	63	852677	22.96	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 91.84%			
20) 2-Butanone-d5	6.43	46	228991	52.09	ug/L	0.01
Spiked Amount 50.000	Range 20 - 135		Recovery = 104.18%			
24) Chloroform-d	7.07	84	711420	23.05	ug/L	0.01
Spiked Amount 25.000	Range 40 - 150		Recovery = 92.20%			
26) 1,2-Dichloroethane-d4	7.78	65	414227	24.82	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 99.28%			
29) Benzene-d6	7.74	84	1318480	20.05	ug/L	0.01
Spiked Amount 25.000	Range 20 - 135		Recovery = 80.20%			
33) 1,2-Dichloropropane-d6	8.80	67	404638	21.32	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 85.28%			
37) Toluene-d8	9.87	98	1156558	20.39	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 81.56%			
38) trans-1,3-Dichloropropene-	10.13	79	154746	22.96	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 91.84%			
39) 2-Hexanone-d5	10.48	63	144682	50.17	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 100.34%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	273586	22.98	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 91.92%			
60) 1,2-Dichlorobenzene-d4	13.41	152	373128	21.54	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 86.16%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	588272	28.23	ug/L	99
3) Chloromethane	1.95	50	600423	25.24	ug/L	99
5) Vinyl chloride	2.09	62	588606	26.99	ug/L	98
6) Bromomethane	2.44	94	278960	25.93	ug/L	98
8) Chloroethane	2.56	64	324026	26.71	ug/L	99
9) Trichlorofluoromethane	2.81	101	726273m	27.91	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	410088	25.76	ug/L	98
12) 1,1-Dichloroethene	3.48	96	361773	24.80	ug/L	90
13) Acetone	3.54	43	304354	55.94	ug/L	96
14) Carbon disulfide	3.79	76	1137685	21.83	ug/L	99
15) Methyl Acetate	4.03	43	219977	25.65	ug/L	97
16) Methylene chloride	4.24	84	356077	23.97	ug/L	93
17) Methyl tert-butyl Ether	4.73	73	730650	26.97	ug/L	98
18) trans-1,2-Dichloroethene	4.73	96	384747	24.52	ug/L	98
19) 1,1-Dichloroethane	5.53	63	872939	26.14	ug/L	98
21) 2-Butanone	6.53	43	323204	50.81	ug/L	99
22) cis-1,2-Dichloroethene	6.53	96	381224	24.44	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050516\
Data File : VT013897.D
Acq On : 5 May 2016 10:40
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 01:07:48 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Thu May 05 04:11:49 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02579

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:00 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.92	128	137428	24.20	ug/L	95
25) Chloroform	7.09	83	739970	26.01	ug/L	100
27) 1,2-Dichloroethane	7.89	62	538419	26.83	ug/L	97
30) Cyclohexane	7.41	56	865813	22.48	ug/L	100
31) 1,1,1-Trichloroethane	7.31	97	683775	26.23	ug/L	99
32) Carbon tetrachloride	7.53	117	604082	25.08	ug/L	98
34) Benzene	7.79	78	1574817	22.63	ug/L	100
35) Trichloroethene	8.61	95	408961	23.72	ug/L	98
36) Methylcyclohexane	8.86	83	771086	22.03	ug/L	95
40) 1,2-Dichloropropane	8.89	63	410156	23.63	ug/L	100
41) Bromodichloromethane	9.18	83	494035	25.39	ug/L	100
42) cis-1,3-Dichloropropene	9.61	75	577169	25.60	ug/L	99
43) 4-Methyl-2-pentanone	9.76	43	593826	50.79	ug/L	98
44) Toluene	9.93	91	1554706	22.50	ug/L	98
45) trans-1,3-Dichloropropene	10.16	75	486229	26.63	ug/L	99
46) 1,1,2-Trichloroethane	10.34	97	217429	24.05	ug/L	98
47) Tetrachloroethene	10.42	164	289875	23.05	ug/L	96
49) 2-Hexanone	10.53	43	475491	49.97	ug/L	99
50) Dibromochloromethane	10.68	129	277773	25.00	ug/L	97
51) 1,2-Dibromoethane	10.79	107	210972	24.63	ug/L	99
52) Chlorobenzene	11.21	112	918831	23.60	ug/L	97
53) Ethylbenzene	11.29	91	1881755	23.82	ug/L	98
54) m,p-Xylene	11.40	106	671464	23.31	ug/L	97
55) o-xylene	11.73	106	659397	24.02	ug/L	94
56) Styrene	11.74	104	1037181	24.23	ug/L	97
57) Isopropylbenzene	12.03	105	1902128	24.44	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	282029	24.67	ug/L	98
61) Bromoform	11.91	173	138603	23.93	ug/L	98
62) 1,3-Dichlorobenzene	13.06	146	732352	24.71	ug/L	98
63) 1,4-Dichlorobenzene	13.14	146	711200	24.43	ug/L	99
64) 1,2-Dichlorobenzene	13.42	146	622751	24.03	ug/L	96
65) 1,2-Dibromo-3-chloropropan	14.04	75	49199	26.28	ug/L	88
66) 1,2,4-trichlorobenzene	14.68	180	415412	25.88	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	338348	25.57	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

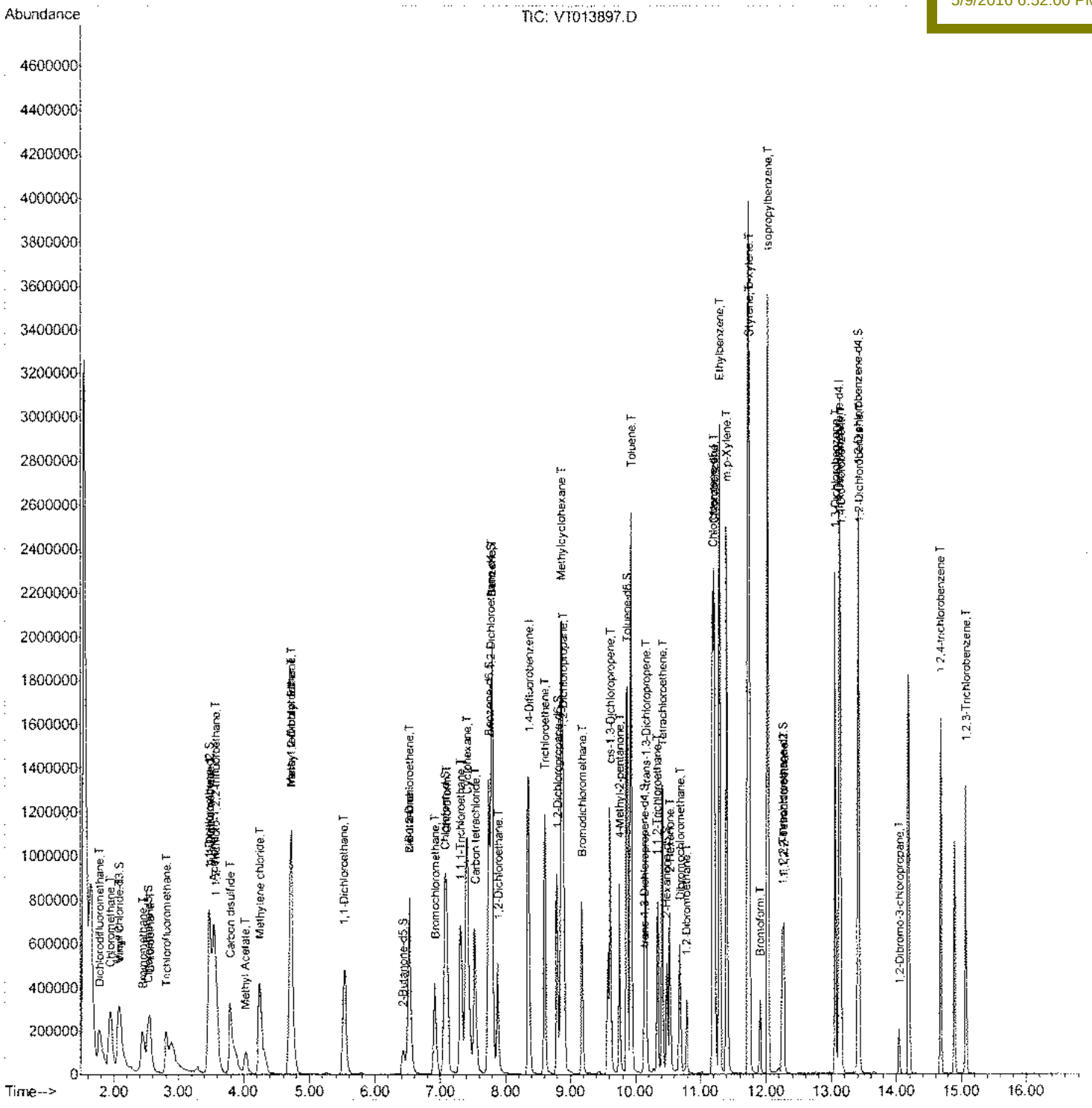
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013897.D
Acq On : 5 May 2016 10:40
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 01:07:48 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Thu May 05 04:11:49 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02579

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:00 PM



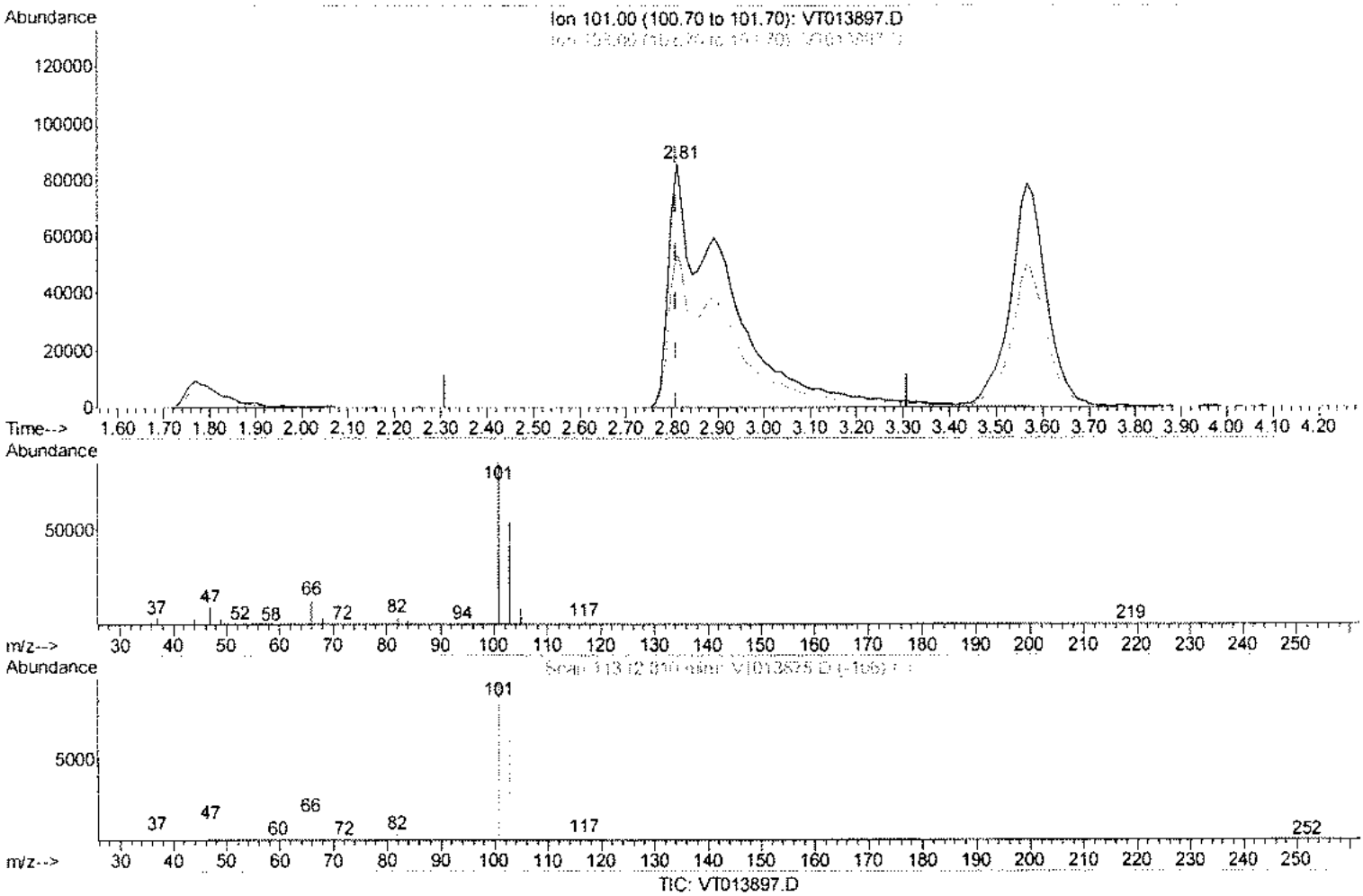
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013897.D
Acq On : 5 May 2016 10:40
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 01:04:50 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Thu May 05 04:11:49 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02579

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:00 PM



(9) Trichlorofluoromethane (T)

2.810min (-0.000) 27.91ug/L m M.D 05/09/16

response 726273

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	22.75
0.00	0.00	0.00
0.00	0.00	0.00

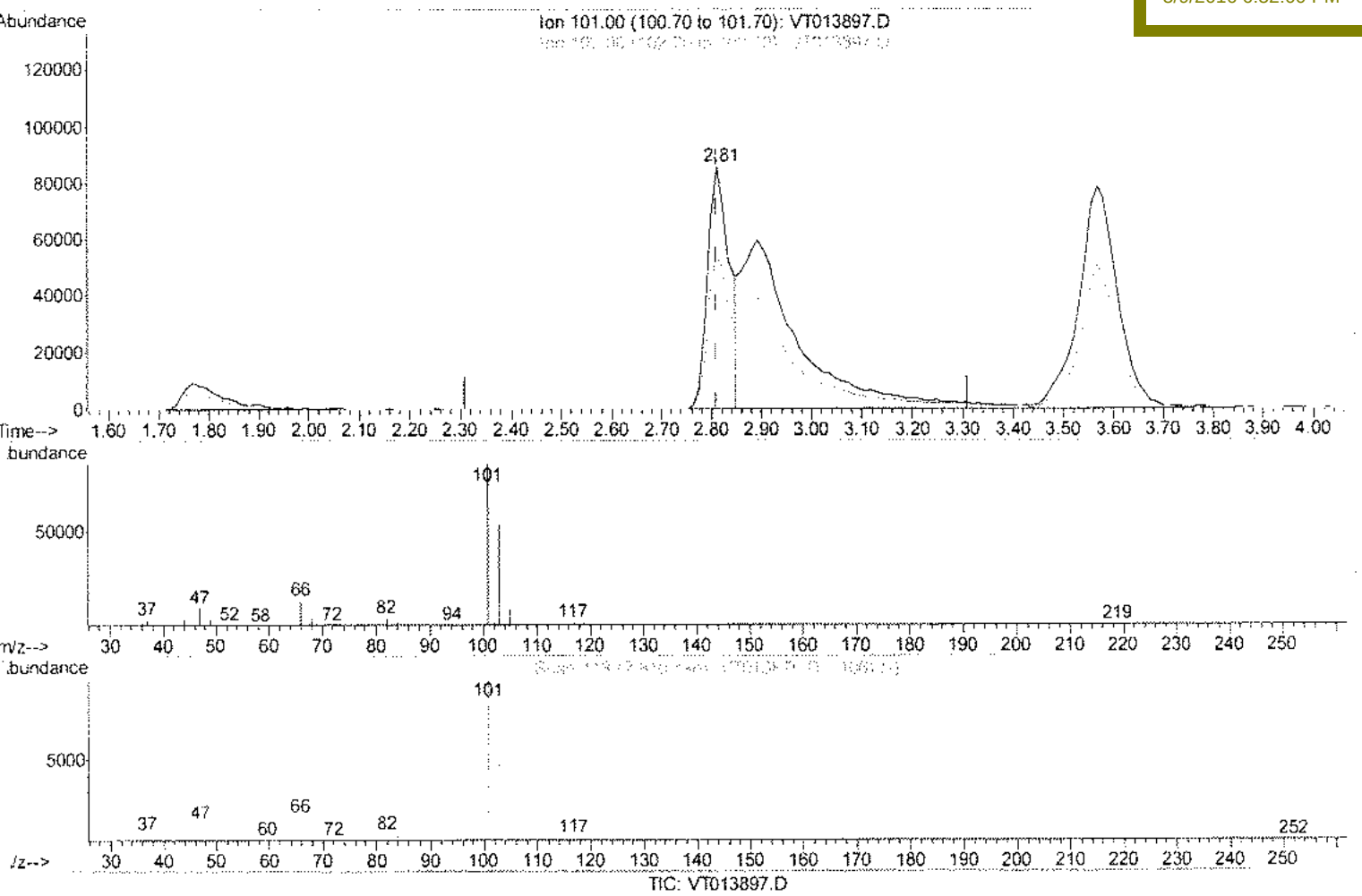
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013897.D
Acq On : 5 May 2016 10:40
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 01:04:50 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Thu May 05 04:11:49 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02579

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:00 PM



TIC: VT013897.D

(9) Trichlorofluoromethane (T)

2.810min (-0.000) 9.90ug/L

response 257692

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	64.11#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013897.D
Acq On : 5 May 2016 10:40
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 01:07:48 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Thu May 05 04:11:49 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02579

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:00 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1096176	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	899470	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	455366	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	395833	18.40	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 73.60%			
7) Chloroethane-d5	2.53	69	307905	21.36	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 85.44%			
10) 1,1-Dichloroethene-d2	3.47	63	852677	22.96	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 91.84%			
20) 2-Butanone-d5	6.43	46	228991	52.09	ug/L	0.01
Spiked Amount 50.000	Range 20 - 135		Recovery = 104.18%			
24) Chloroform-d	7.07	84	711420	23.05	ug/L	0.01
Spiked Amount 25.000	Range 40 - 150		Recovery = 92.20%			
26) 1,2-Dichloroethane-d4	7.78	65	414227	24.82	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 99.28%			
29) Benzene-d6	7.74	84	1318480	20.05	ug/L	0.01
Spiked Amount 25.000	Range 20 - 135		Recovery = 80.20%			
33) 1,2-Dichloropropane-d6	8.80	67	404638	21.32	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 85.28%			
37) Toluene-d8	9.87	98	1156558	20.39	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 81.56%			
38) trans-1,3-Dichloropropene-	10.13	79	154746	22.96	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 91.84%			
39) 2-Hexanone-d5	10.48	63	144682	50.17	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 100.34%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	273586	22.98	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 91.92%			
60) 1,2-Dichlorobenzene-d4	13.41	152	373128	21.54	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 86.16%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	588272	28.23	ug/L	99
3) Chloromethane	1.95	50	600423	25.24	ug/L	99
5) Vinyl chloride	2.09	62	588606	26.99	ug/L	98
6) Bromomethane	2.44	94	278960	25.93	ug/L	98
8) Chloroethane	2.56	64	324026	26.71	ug/L	99
9) Trichlorofluoromethane	2.81	101	726273m	27.91	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	410088	25.76	ug/L	98
12) 1,1-Dichloroethene	3.48	96	361773	24.80	ug/L	90
13) Acetone	3.54	43	304354	55.94	ug/L	96
14) Carbon disulfide	3.79	76	1137685	21.83	ug/L	99
15) Methyl Acetate	4.03	43	219977	25.65	ug/L	97
16) Methylene chloride	4.24	84	356077	23.97	ug/L	93
17) Methyl tert-butyl Ether	4.73	73	730650	26.97	ug/L	98
18) trans-1,2-Dichloroethene	4.73	96	384747	24.52	ug/L	98
19) 1,1-Dichloroethane	5.53	63	872939	26.14	ug/L	98
21) 2-Butanone	6.53	43	323204	50.81	ug/L	99
22) cis-1,2-Dichloroethene	6.53	96	381224	24.44	ug/L	94

M.D 05/09/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013897.D
Acq On : 5 May 2016 10:40
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 01:07:48 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Thu May 05 04:11:49 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02579

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:00 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.92	128	137428	24.20	ug/L	95
25) Chloroform	7.09	83	739970	26.01	ug/L	100
27) 1,2-Dichloroethane	7.89	62	538419	26.83	ug/L	97
30) Cyclohexane	7.41	56	865813	22.48	ug/L	100
31) 1,1,1-Trichloroethane	7.31	97	683775	26.23	ug/L	99
32) Carbon tetrachloride	7.53	117	604082	25.08	ug/L	98
34) Benzene	7.79	78	1574817	22.63	ug/L	100
35) Trichloroethene	8.61	95	408961	23.72	ug/L	98
36) Methylcyclohexane	8.86	83	771086	22.03	ug/L	95
40) 1,2-Dichloropropane	8.89	63	410156	23.63	ug/L	100
41) Bromodichloromethane	9.18	83	494035	25.39	ug/L	100
42) cis-1,3-Dichloropropene	9.61	75	577169	25.60	ug/L	99
43) 4-Methyl-2-pentanone	9.76	43	593826	50.79	ug/L	98
44) Toluene	9.93	91	1554706	22.50	ug/L	98
45) trans-1,3-Dichloropropene	10.16	75	486229	26.63	ug/L	99
46) 1,1,2-Trichloroethane	10.34	97	217429	24.05	ug/L	98
47) Tetrachloroethene	10.42	164	289875	23.05	ug/L	96
49) 2-Hexanone	10.53	43	475491	49.97	ug/L	99
50) Dibromochloromethane	10.68	129	277773	25.00	ug/L	97
51) 1,2-Dibromoethane	10.79	107	210972	24.63	ug/L	99
52) Chlorobenzene	11.21	112	918831	23.60	ug/L	97
53) Ethylbenzene	11.29	91	1881755	23.82	ug/L	98
54) m,p-Xylene	11.40	106	671464	23.31	ug/L	97
55) o-xylene	11.73	106	659397	24.02	ug/L	94
56) Styrene	11.74	104	1037181	24.23	ug/L	97
57) Isopropylbenzene	12.03	105	1902128	24.44	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	282029	24.67	ug/L	98
61) Bromoform	11.91	173	138603	23.93	ug/L	98
62) 1,3-Dichlorobenzene	13.06	146	732352	24.71	ug/L	98
63) 1,4-Dichlorobenzene	13.14	146	711200	24.43	ug/L	99
64) 1,2-Dichlorobenzene	13.42	146	622751	24.03	ug/L	96
65) 1,2-Dibromo-3-chloropropan	14.04	75	49199	26.28	ug/L	88
66) 1,2,4-trichlorobenzene	14.68	180	415412	25.88	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	338348	25.57	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

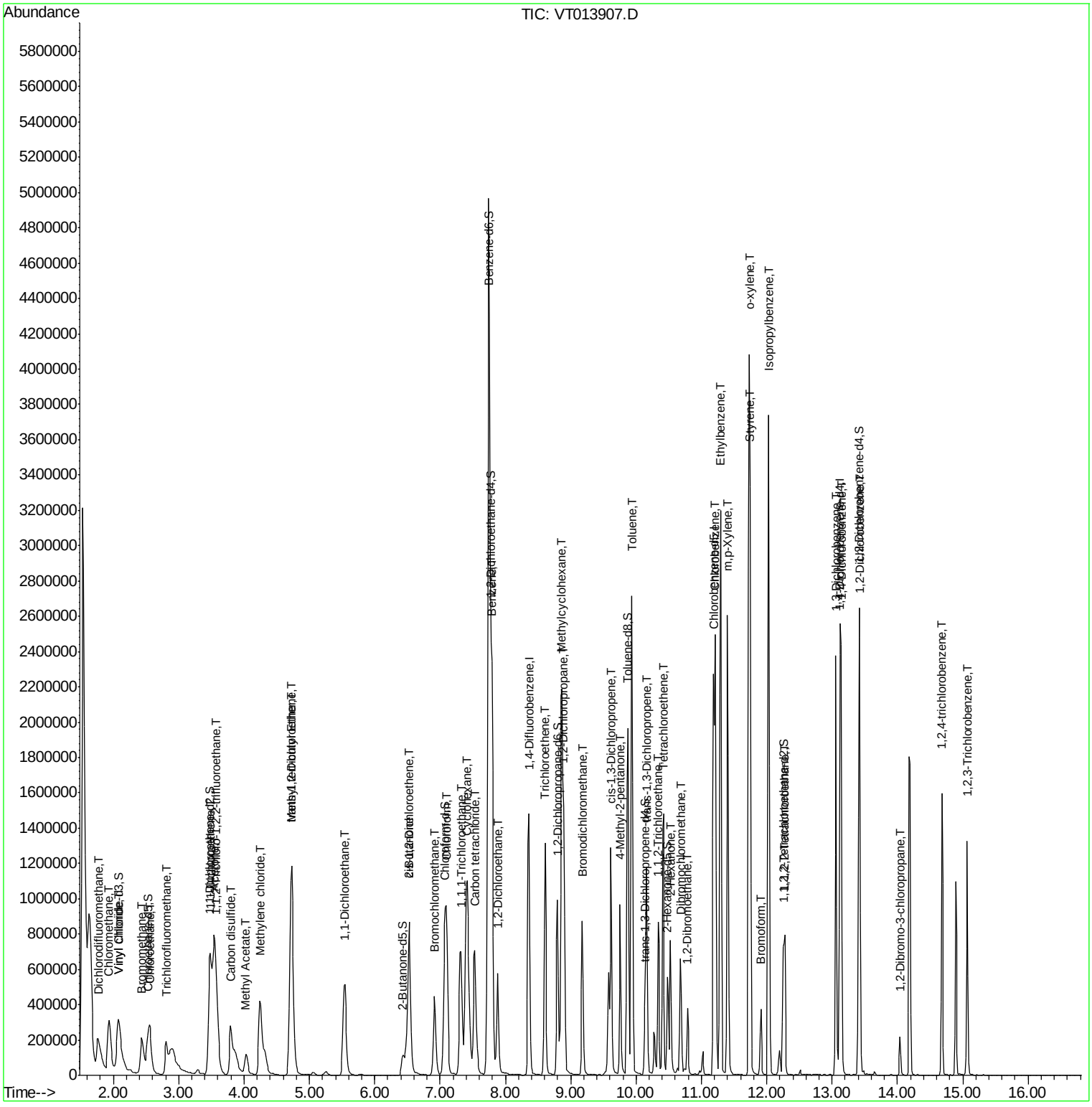
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013907.D
Acq On : 5 May 2016 15:50
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 02:14:43 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 01:14:05 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02580

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:57 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013907.D
Acq On : 5 May 2016 15:50
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 02:14:43 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 01:14:05 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02580

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:57 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1121344	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	920328	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	461203	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	391559	17.79	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 71.16%			
7) Chloroethane-d5	2.53	69	303242	20.56	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 82.24%			
10) 1,1-Dichloroethene-d2	3.47	63	850505	22.39	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 89.56%			
20) 2-Butanone-d5	6.43	46	235901	52.46	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 104.92%			
24) Chloroform-d	7.07	84	731709	23.18	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 92.72%			
26) 1,2-Dichloroethane-d4	7.78	65	430276	25.20	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 100.80%			
29) Benzene-d6	7.74	84	1370269	20.36	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 81.44%			
33) 1,2-Dichloropropane-d6	8.80	67	419826	21.61	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 86.44%			
37) Toluene-d8	9.87	98	1205797	20.77	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 83.08%			
38) trans-1,3-Dichloropropene-	10.13	79	153574	22.27	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 89.08%			
39) 2-Hexanone-d5	10.48	63	158057	53.57	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 107.14%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	294118	24.14	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 96.56%			
60) 1,2-Dichlorobenzene-d4	13.41	152	379123	21.61	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 86.44%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	579350	27.18	ug/L	98
3) Chloromethane	1.93	50	623204	25.61	ug/L	99
5) Vinyl chloride	2.08	62	592798	26.57	ug/L	98
6) Bromomethane	2.43	94	278223	25.28	ug/L	99
8) Chloroethane	2.56	64	330640	26.65	ug/L	99
9) Trichlorofluoromethane	2.81	101	742380m	27.89	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	424527	26.07	ug/L	97
12) 1,1-Dichloroethene	3.48	96	378687m	25.38	ug/L	
13) Acetone	3.54	43	290906	52.27	ug/L	95
14) Carbon disulfide	3.79	76	1123922	21.08	ug/L	100
15) Methyl Acetate	4.03	43	235066	26.80	ug/L	97
16) Methylene chloride	4.24	84	371632m	24.46	ug/L	
17) Methyl tert-butyl Ether	4.73	73	795688	28.71	ug/L	97
18) trans-1,2-Dichloroethene	4.73	96	391557	24.39	ug/L	94
19) 1,1-Dichloroethane	5.54	63	908090	26.58	ug/L	99
21) 2-Butanone	6.53	43	323916	49.78	ug/L	99
22) cis-1,2-Dichloroethene	6.53	96	396853	24.87	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013907.D
Acq On : 5 May 2016 15:50
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD02580

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:57 PM

Quant Time: May 06 02:14:43 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 01:14:05 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.92	128	143847	24.76	ug/L	94
25) Chloroform	7.09	83	775931	26.66	ug/L	99
27) 1,2-Dichloroethane	7.89	62	587382	28.61	ug/L	98
30) Cyclohexane	7.41	56	898905	22.81	ug/L	99
31) 1,1,1-Trichloroethane	7.32	97	697512	26.15	ug/L	100
32) Carbon tetrachloride	7.53	117	629760	25.56	ug/L	98
34) Benzene	7.79	78	1677031	23.55	ug/L	100
35) Trichloroethene	8.61	95	438127	24.84	ug/L	98
36) Methylcyclohexane	8.86	83	822675	22.97	ug/L	97
40) 1,2-Dichloropropane	8.89	63	437550	24.64	ug/L	100
41) Bromodichloromethane	9.18	83	522220	26.23	ug/L	100
42) cis-1,3-Dichloropropene	9.61	75	617308	26.76	ug/L	98
43) 4-Methyl-2-pentanone	9.76	43	658898	55.07	ug/L	98
44) Toluene	9.93	91	1653040	23.38	ug/L	98
45) trans-1,3-Dichloropropene	10.16	75	512457	27.43	ug/L	100
46) 1,1,2-Trichloroethane	10.34	97	237427	25.67	ug/L	98
47) Tetrachloroethene	10.42	164	307253	23.88	ug/L	96
49) 2-Hexanone	10.53	43	495450	50.89	ug/L	98
50) Dibromochloromethane	10.68	129	290619	25.57	ug/L	92
51) 1,2-Dibromoethane	10.79	107	229830	26.22	ug/L	95
52) Chlorobenzene	11.21	112	973111	24.43	ug/L	97
53) Ethylbenzene	11.29	91	1971797	24.39	ug/L	100
54) m,p-Xylene	11.40	106	704888	23.92	ug/L	99
55) o-xylene	11.73	106	692959	24.67	ug/L	92
56) Styrene	11.74	104	1058921	24.18	ug/L	95
57) Isopropylbenzene	12.03	105	1986696	24.95	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	314140	26.85	ug/L	98
61) Bromoform	11.91	173	148921	25.39	ug/L	99
62) 1,3-Dichlorobenzene	13.06	146	749362	24.97	ug/L	98
63) 1,4-Dichlorobenzene	13.14	146	717755	24.35	ug/L	97
64) 1,2-Dichlorobenzene	13.42	146	650438	24.78	ug/L	96
65) 1,2-Dibromo-3-chloropropan	14.04	75	50555	26.67	ug/L	89
66) 1,2,4-trichlorobenzene	14.68	180	403644	24.83	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	333658	24.90	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

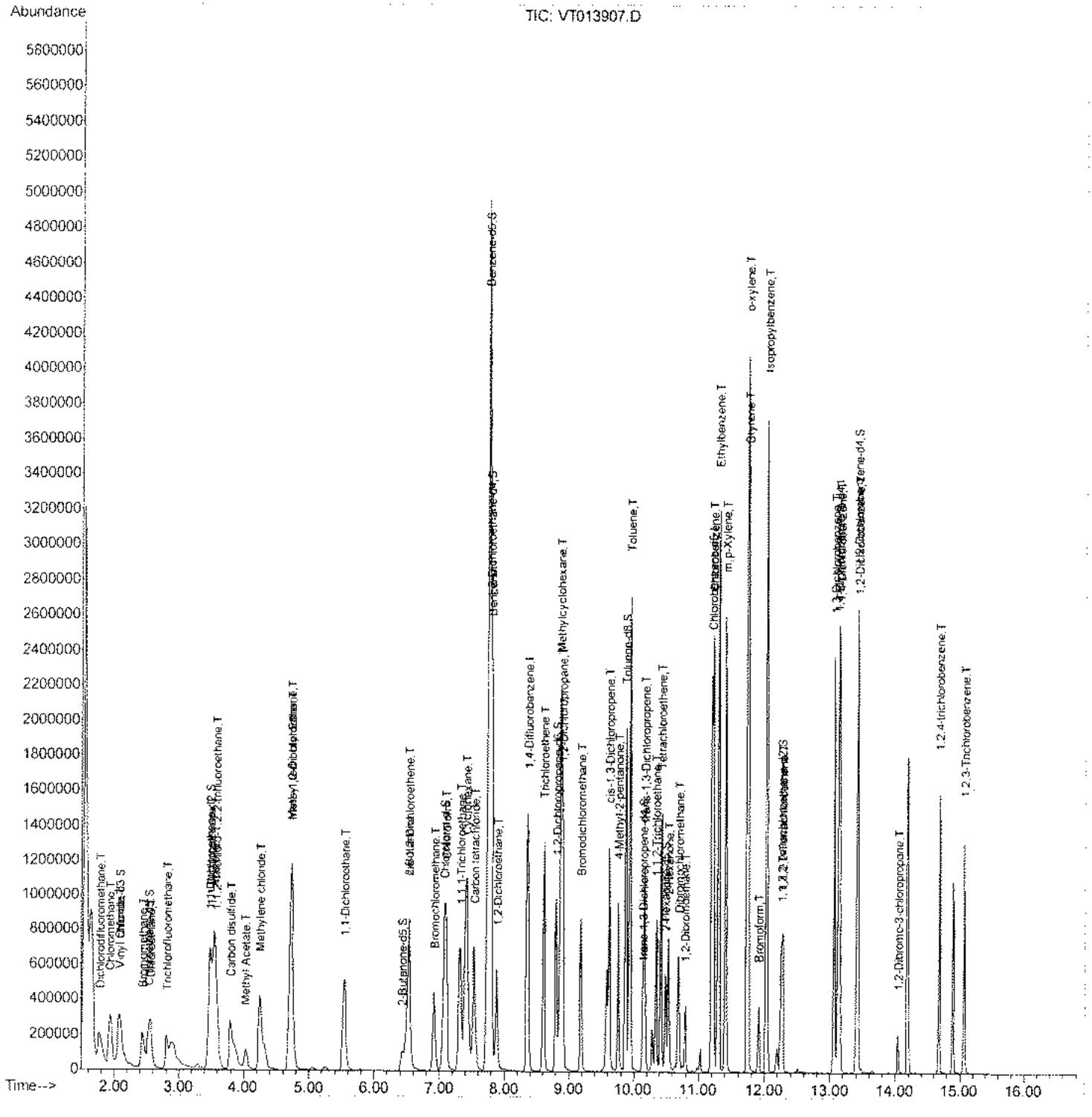
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050516\
Data File : VT013907.D
Acq On : 5 May 2016 15:50
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 02:14:43 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 01:14:05 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02580

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:57 PM



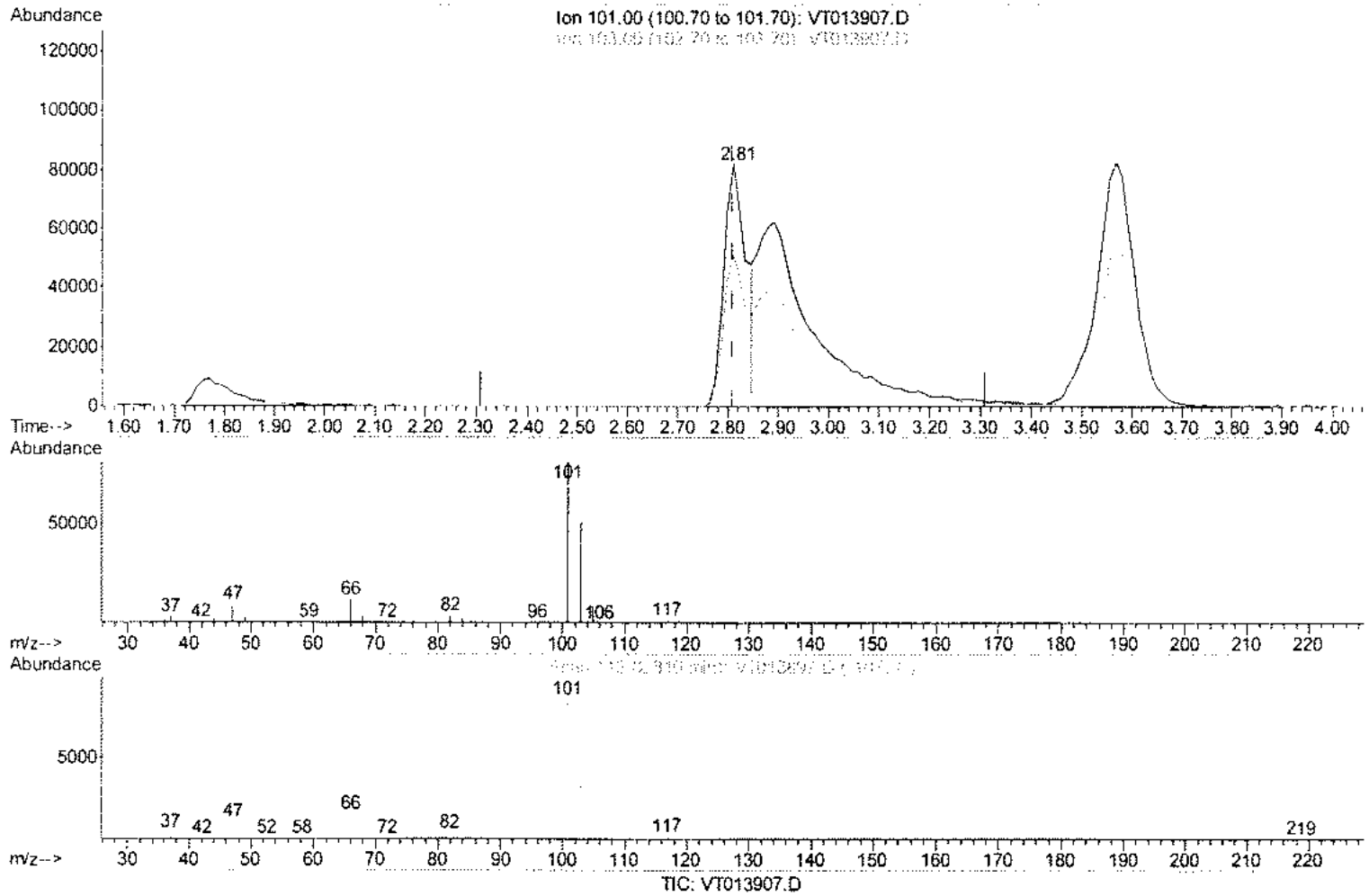
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050516\
Data File : VT013907.D
Acq On : 5 May 2016 15:50
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 01:16:19 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 01:14:05 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02580

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:57 PM



TIC: VT013907.D

(9) Trichlorofluoromethane (T)

2.810min (-0.000) 9.47ug/L

response 251981

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	64.49#
0.00	0.00	0.00
0.00	0.00	0.00

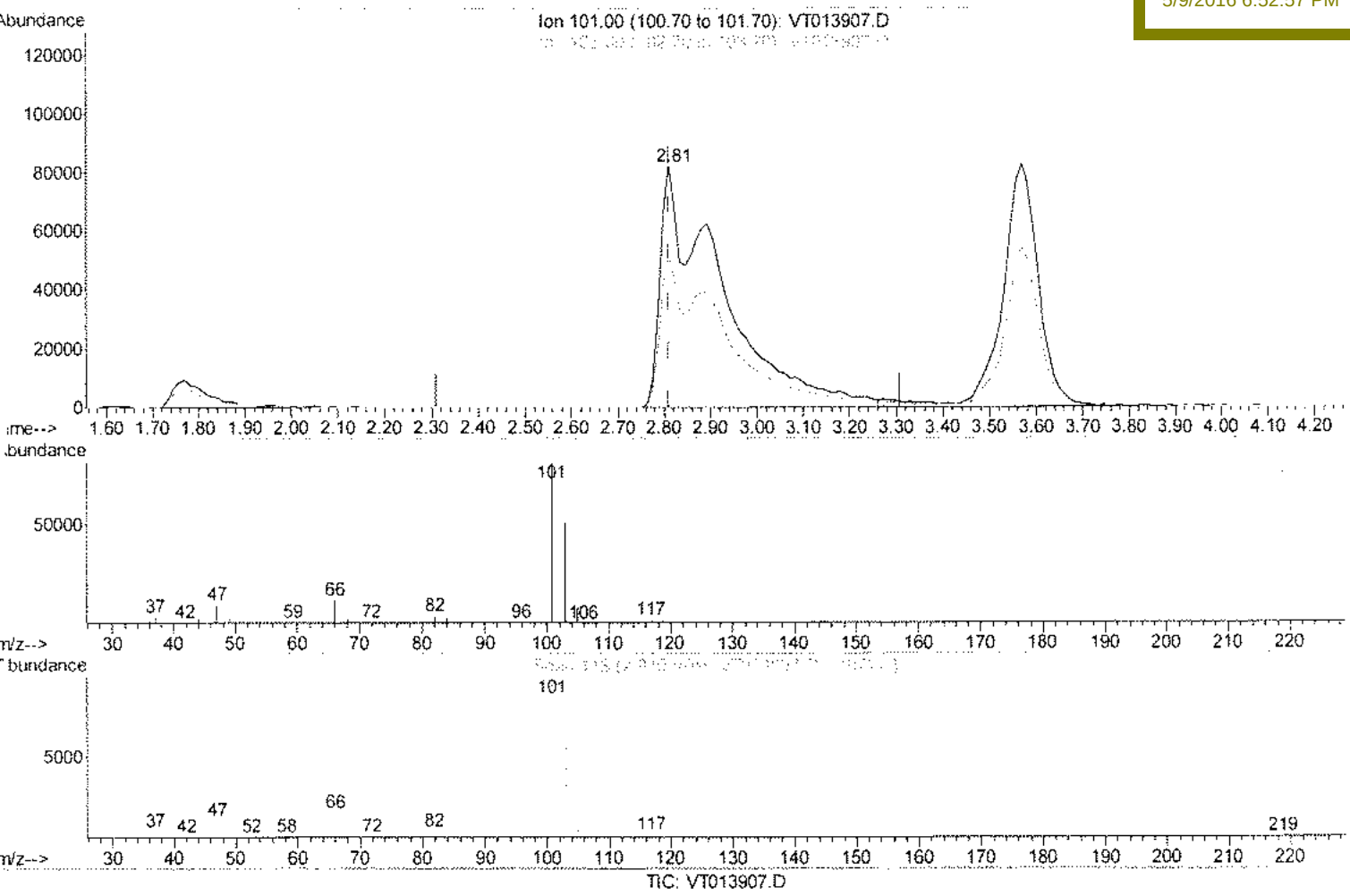
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050516\
Data File : VT013907.D
Acq On : 5 May 2016 15:50
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 01:16:19 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 01:14:05 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02580

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:57 PM



(9) Trichlorofluoromethane (T)

2.810min (-0.000) 27.89ug/L m M.D 05/09/16

response 742380

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	21.89
0.00	0.00	0.00
0.00	0.00	0.00

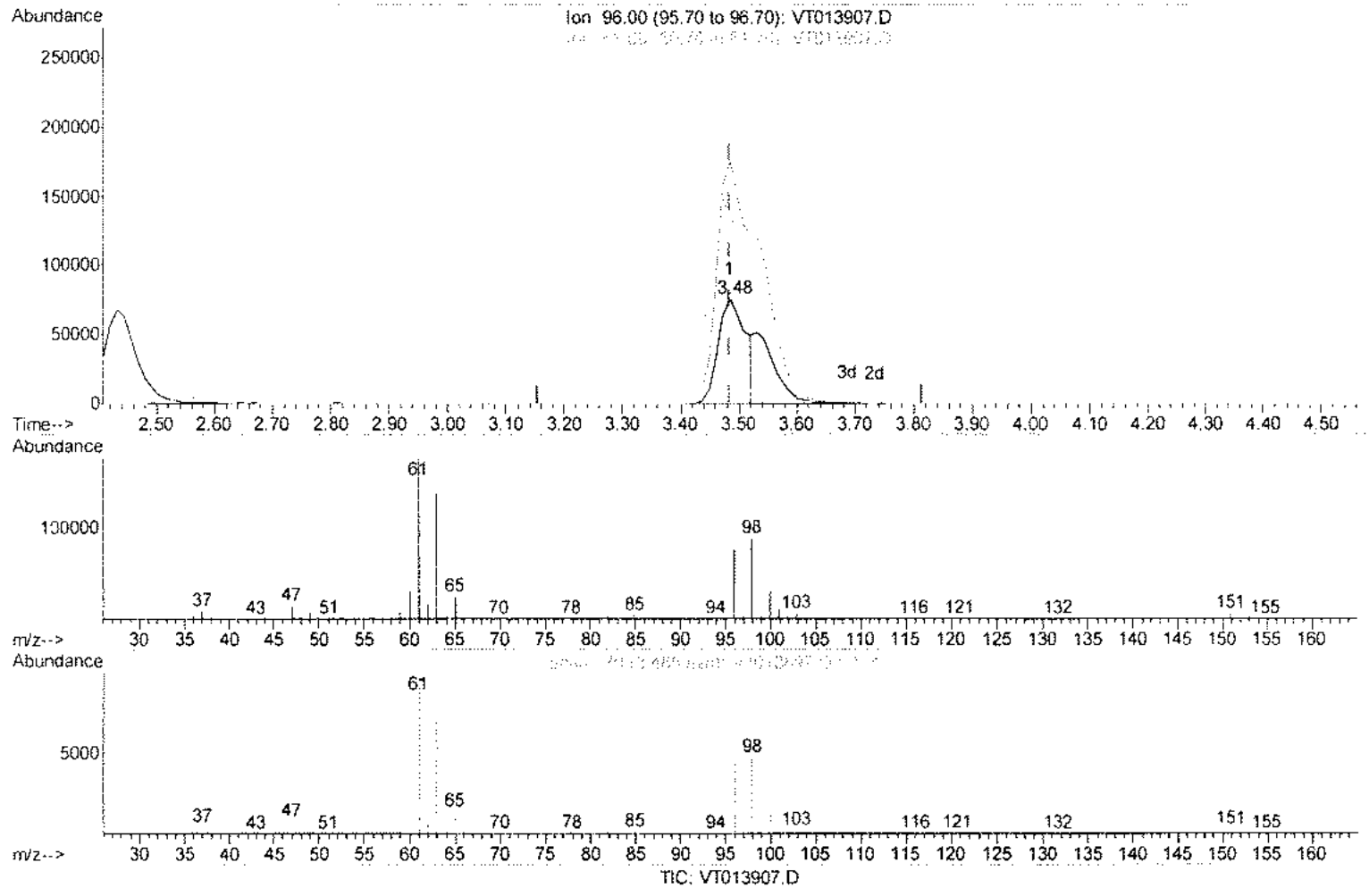
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050516\
Data File : VT013907.D
Acq On : 5 May 2016 15:50
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 01:16:19 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 01:14:05 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02580

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:57 PM



(12) 1,1-Dichloroethene (T)

3.485min (-0.000) 16.68ug/L

response 248962

Ion	Exp%	Act%
96.00	100	100
61.00	211.90	231.36
63.00	170.40	180.30
0.00	0.00	0.00

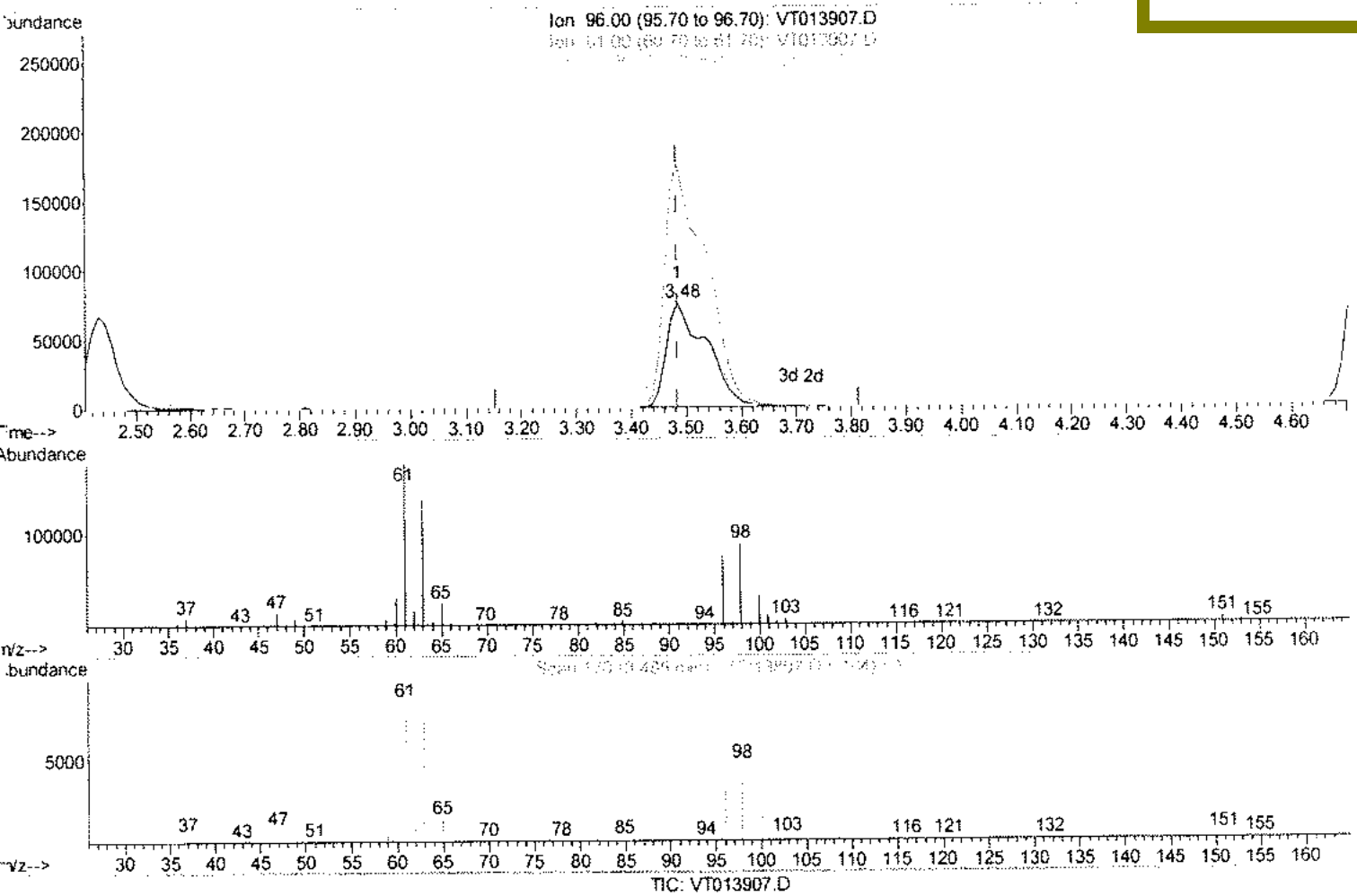
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050516\
Data File : VT013907.D
Acq On : 5 May 2016 15:50
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 01:16:19 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 01:14:05 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02580

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:57 PM



(12) 1,1-Dichloroethene (T)

3.485min (-0.000) 25.38ug/L m M.D 05/09/16

response 378687

Ion	Exp%	Act%
96.00	100	100
61.00	211.90	231.36
63.00	170.40	180.30
0.00	0.00	0.00

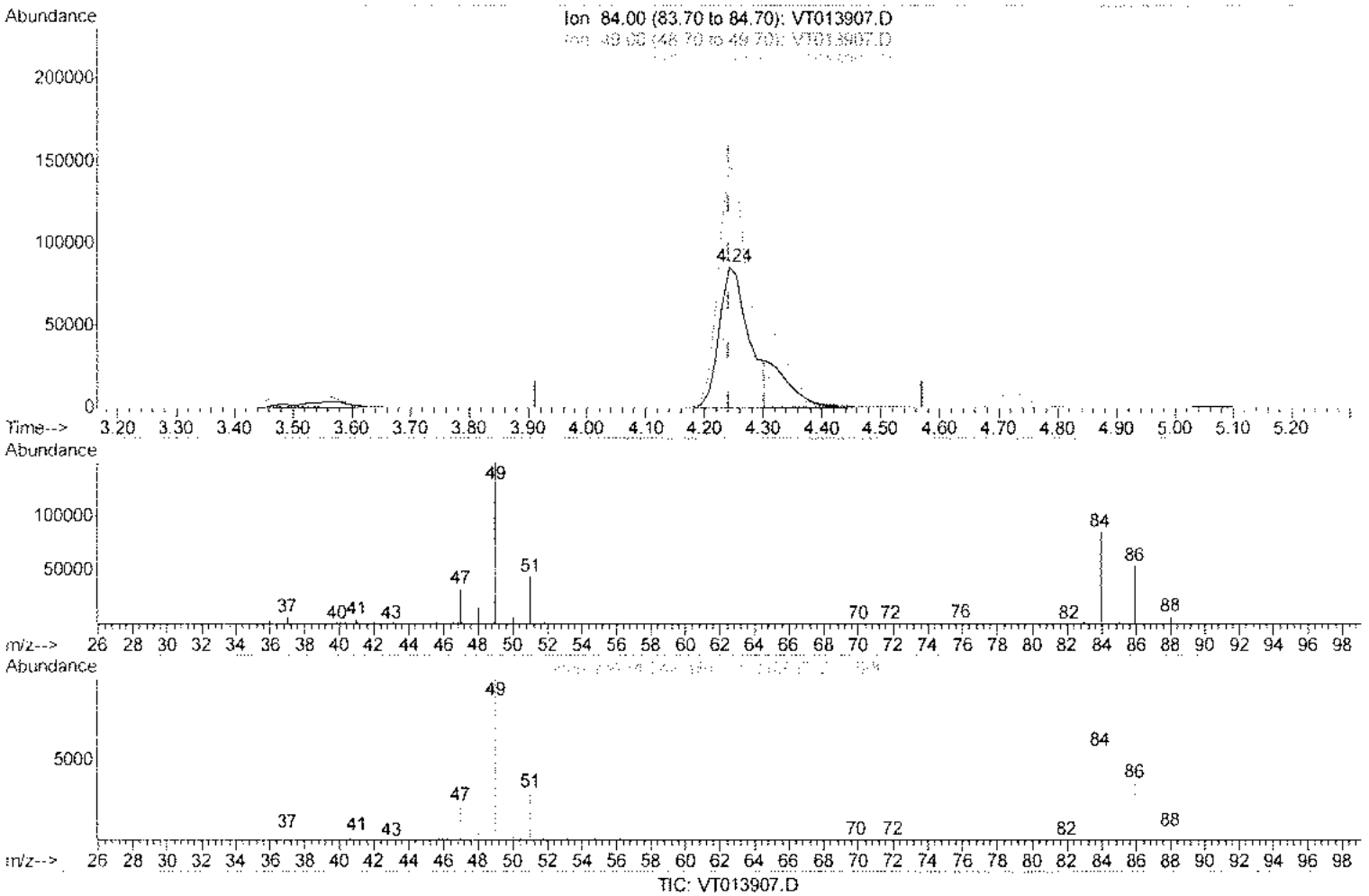
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050516\
Data File : VT013907.D
Acq On : 5 May 2016 15:50
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 01:16:19 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 01:14:05 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02580

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:57 PM



TIC: VT013907.D

(16) Methylene chloride (T)

4.242min (-0.000) 19.61ug/L

response 297994

Ion	Exp%	Act%
84.00	100	100
49.00	166.80	174.60
86.00	64.20	62.97
0.00	0.00	0.00

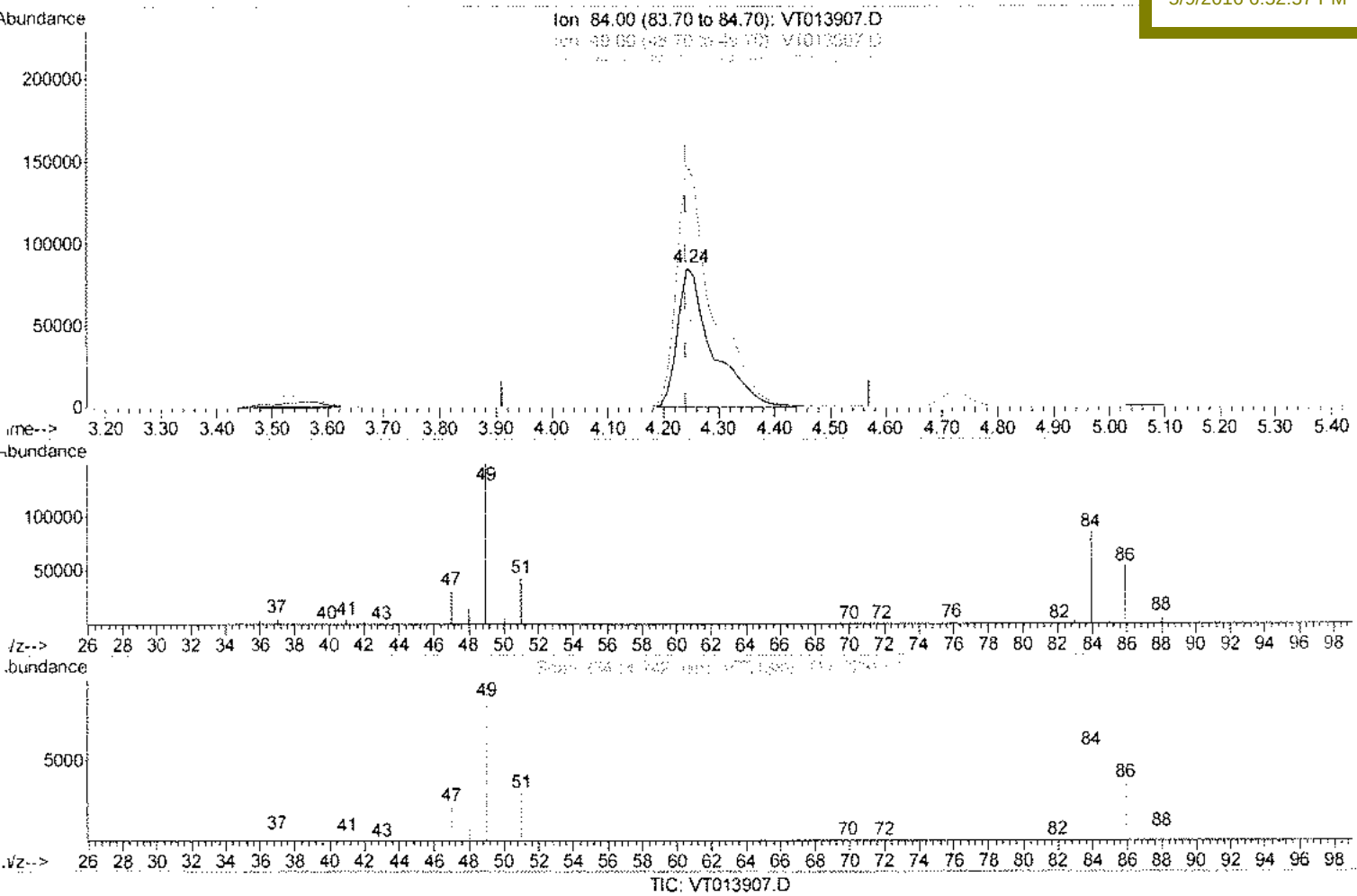
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050516\
Data File : VT013907.D
Acq On : 5 May 2016 15:50
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 01:16:19 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 01:14:05 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02580

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:57 PM



(16) Methylene chloride (T)

4.242min (-0.000) 24.46ug/L m M.D 05/09/16

response 371632

Ion	Exp%	Act%
84.00	100	100
49.00	166.80	174.60
86.00	64.20	62.97
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050516\
Data File : VT013907.D
Acq On : 5 May 2016 15:50
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 02:14:43 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 01:14:05 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02580

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:57 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1121344	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	920328	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	461203	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	391559	17.79	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 71.16%			
7) Chloroethane-d5	2.53	69	303242	20.56	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 82.24%			
10) 1,1-Dichloroethene-d2	3.47	63	850505	22.39	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 89.56%			
20) 2-Butanone-d5	6.43	46	235901	52.46	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 104.92%			
24) Chloroform-d	7.07	84	731709	23.18	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 92.72%			
26) 1,2-Dichloroethane-d4	7.78	65	430276	25.20	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 100.80%			
29) Benzene-d6	7.74	84	1370269	20.36	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 81.44%			
33) 1,2-Dichloropropane-d6	8.80	67	419826	21.61	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 86.44%			
37) Toluene-d8	9.87	98	1205797	20.77	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 83.08%			
38) trans-1,3-Dichloropropene-	10.13	79	153574	22.27	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 89.08%			
39) 2-Hexanone-d5	10.48	63	158057	53.57	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 107.14%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	294118	24.14	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 96.56%			
60) 1,2-Dichlorobenzene-d4	13.41	152	379123	21.61	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 86.44%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	579350	27.18	ug/L	98
3) Chloromethane	1.93	50	623204	25.61	ug/L	99
5) Vinyl chloride	2.08	62	592798	26.57	ug/L	98
6) Bromomethane	2.43	94	278223	25.28	ug/L	99
8) Chloroethane	2.56	64	330640	26.65	ug/L	99
9) Trichlorofluoromethane	2.81	101	742380m	27.89	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	424527	26.07	ug/L	97
12) 1,1-Dichloroethene	3.48	96	378687m	25.38	ug/L	
13) Acetone	3.54	43	290906	52.27	ug/L	95
14) Carbon disulfide	3.79	76	1123922	21.08	ug/L	100
15) Methyl Acetate	4.03	43	235066	26.80	ug/L	97
16) Methylene chloride	4.24	84	371632m	24.46	ug/L	
17) Methyl tert-butyl Ether	4.73	73	795688	28.71	ug/L	97
18) trans-1,2-Dichloroethene	4.73	96	391557	24.39	ug/L	94
19) 1,1-Dichloroethane	5.54	63	908090	26.58	ug/L	99
21) 2-Butanone	6.53	43	323916	49.78	ug/L	99
22) cis-1,2-Dichloroethene	6.53	96	396853	24.87	ug/L	95

JM.D 05/09/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050516\
Data File : VT013907.D
Acq On : 5 May 2016 15:50
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 02:14:43 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 01:14:05 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02580

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:57 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.92	128	143847	24.76	ug/L	94
25) Chloroform	7.09	83	775931	26.66	ug/L	99
27) 1,2-Dichloroethane	7.89	62	587382	28.61	ug/L	98
30) Cyclohexane	7.41	56	898905	22.81	ug/L	99
31) 1,1,1-Trichloroethane	7.32	97	697512	26.15	ug/L	100
32) Carbon tetrachloride	7.53	117	629760	25.56	ug/L	98
34) Benzene	7.79	78	1677031	23.55	ug/L	100
35) Trichloroethene	8.61	95	438127	24.84	ug/L	98
36) Methylcyclohexane	8.86	83	822675	22.97	ug/L	97
40) 1,2-Dichloropropane	8.89	63	437550	24.64	ug/L	100
41) Bromodichloromethane	9.18	83	522220	26.23	ug/L	100
42) cis-1,3-Dichloropropene	9.61	75	617308	26.76	ug/L	98
43) 4-Methyl-2-pentanone	9.76	43	658898	55.07	ug/L	98
44) Toluene	9.93	91	1653040	23.38	ug/L	98
45) trans-1,3-Dichloropropene	10.16	75	512457	27.43	ug/L	100
46) 1,1,2-Trichloroethane	10.34	97	237427	25.67	ug/L	98
47) Tetrachloroethene	10.42	164	307253	23.88	ug/L	96
49) 2-Hexanone	10.53	43	495450	50.89	ug/L	98
50) Dibromochloromethane	10.68	129	290619	25.57	ug/L	92
51) 1,2-Dibromoethane	10.79	107	229830	26.22	ug/L	95
52) Chlorobenzene	11.21	112	973111	24.43	ug/L	97
53) Ethylbenzene	11.29	91	1971797	24.39	ug/L	100
54) m,p-Xylene	11.40	106	704888	23.92	ug/L	99
55) o-xylene	11.73	106	692959	24.67	ug/L	92
56) Styrene	11.74	104	1058921	24.18	ug/L	95
57) Isopropylbenzene	12.03	105	1986696	24.95	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	314140	26.85	ug/L	98
61) Bromoform	11.91	173	148921	25.39	ug/L	99
62) 1,3-Dichlorobenzene	13.06	146	749362	24.97	ug/L	98
63) 1,4-Dichlorobenzene	13.14	146	717755	24.35	ug/L	97
64) 1,2-Dichlorobenzene	13.42	146	650438	24.78	ug/L	96
65) 1,2-Dibromo-3-chloropropan	14.04	75	50555	26.67	ug/L	89
66) 1,2,4-trichlorobenzene	14.68	180	403644	24.83	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	333658	24.90	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

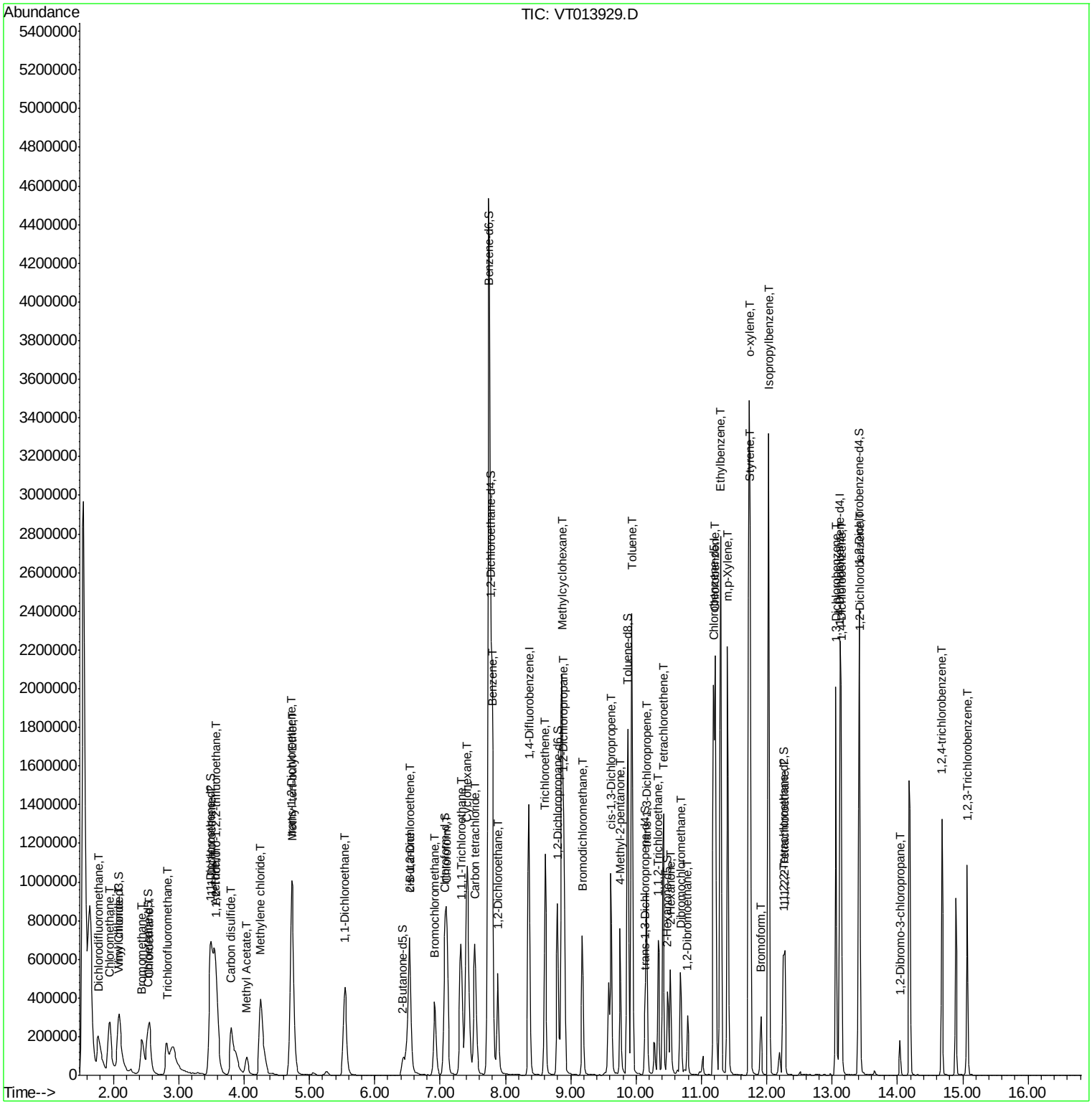
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013929.D
Acq On : 6 May 2016 2:23
Operator : FY/SY
Sample : VSTDCCC025EC
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 06 03:43:58 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02581

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:46 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013929.D
Acq On : 6 May 2016 2:23
Operator : FY/SY
Sample : VSTDCCC025EC
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 06 03:43:58 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02581

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:46 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1007956	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	820497	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	410550	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	354189	17.91	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 71.64%			
7) Chloroethane-d5	2.53	69	279422	21.08	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 84.32%			
10) 1,1-Dichloroethene-d2	3.48	63	773399	22.65	ug/L	0.01
Spiked Amount 25.000	Range 45 - 110		Recovery = 90.60%			
20) 2-Butanone-d5	6.43	46	190318	47.08	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 94.16%			
24) Chloroform-d	7.07	84	668226	23.55	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 94.20%			
26) 1,2-Dichloroethane-d4	7.78	65	387994	25.28	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 101.12%			
29) Benzene-d6	7.74	84	1231575	20.53	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 82.12%			
33) 1,2-Dichloropropane-d6	8.80	67	365753	21.12	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 84.48%			
37) Toluene-d8	9.87	98	1058555	20.46	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 81.84%			
38) trans-1,3-Dichloropropene-	10.13	79	129936	21.13	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 84.52%			
39) 2-Hexanone-d5	10.48	63	126267	48.00	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 96.00%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	251985	23.20	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 92.80%			
60) 1,2-Dichlorobenzene-d4	13.41	152	330200	21.14	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 84.56%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	518408	27.05	ug/L	98
3) Chloromethane	1.95	50	521960	23.86	ug/L	100
5) Vinyl chloride	2.09	62	516717	25.77	ug/L	98
6) Bromomethane	2.43	94	255538	25.83	ug/L	99
8) Chloroethane	2.55	64	294302	26.39	ug/L	99
9) Trichlorofluoromethane	2.82	101	683570m	28.57	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	393589	26.88	ug/L	98
12) 1,1-Dichloroethene	3.50	96	342270	25.52	ug/L	88
13) Acetone	3.56	43	193679	38.71	ug/L	95
14) Carbon disulfide	3.80	76	985448	20.56	ug/L	99
15) Methyl Acetate	4.04	43	183914	23.32	ug/L	99
16) Methylene chloride	4.25	84	324511	23.76	ug/L	94
17) Methyl tert-butyl Ether	4.74	73	642630	25.79	ug/L	97
18) trans-1,2-Dichloroethene	4.73	96	341627	23.67	ug/L	92
19) 1,1-Dichloroethane	5.54	63	788971	25.69	ug/L	99
21) 2-Butanone	6.54	43	244489	41.80	ug/L	99
22) cis-1,2-Dichloroethene	6.54	96	347589	24.24	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013929.D
Acq On : 6 May 2016 2:23
Operator : FY/SY
Sample : VSTDCCC025EC
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 34 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD02581

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:46 PM

Quant Time: May 06 03:43:58 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.92	128	121588	23.28	ug/L	91
25) Chloroform	7.11	83	687273	26.27	ug/L	100
27) 1,2-Dichloroethane	7.89	62	512925	27.80	ug/L	97
30) Cyclohexane	7.41	56	813500	23.15	ug/L	100
31) 1,1,1-Trichloroethane	7.32	97	638279	26.84	ug/L	99
32) Carbon tetrachloride	7.53	117	583730	26.57	ug/L	99
34) Benzene	7.80	78	1460318	23.00	ug/L	100
35) Trichloroethene	8.61	95	389768	24.79	ug/L	97
36) Methylcyclohexane	8.87	83	754547	23.63	ug/L	97
40) 1,2-Dichloropropane	8.89	63	364158	23.00	ug/L	100
41) Bromodichloromethane	9.18	83	451190	25.42	ug/L	98
42) cis-1,3-Dichloropropene	9.61	75	495559	24.10	ug/L	99
43) 4-Methyl-2-pentanone	9.76	43	506619	47.50	ug/L	98
44) Toluene	9.93	91	1424965	22.61	ug/L	98
45) trans-1,3-Dichloropropene	10.16	75	402907	24.19	ug/L	100
46) 1,1,2-Trichloroethane	10.34	97	194883	23.63	ug/L	98
47) Tetrachloroethene	10.42	164	270836	23.61	ug/L	98
49) 2-Hexanone	10.53	43	352503	40.61	ug/L	98
50) Dibromochloromethane	10.68	129	241964	23.88	ug/L	94
51) 1,2-Dibromoethane	10.79	107	187886	24.05	ug/L	100
52) Chlorobenzene	11.21	112	830610	23.39	ug/L	96
53) Ethylbenzene	11.29	91	1681563	23.33	ug/L	99
54) m,p-Xylene	11.40	106	601763	22.90	ug/L	98
55) o-xylene	11.73	106	592785	23.67	ug/L	91
56) Styrene	11.74	104	904791	23.18	ug/L	95
57) Isopropylbenzene	12.03	105	1749366	24.64	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	252896	24.25	ug/L	99
61) Bromoform	11.91	173	119817	22.94	ug/L	98
62) 1,3-Dichlorobenzene	13.06	146	620664	23.23	ug/L	97
63) 1,4-Dichlorobenzene	13.14	146	610562	23.26	ug/L	98
64) 1,2-Dichlorobenzene	13.42	146	559479	23.95	ug/L	97
65) 1,2-Dibromo-3-chloropropan	14.04	75	40802	24.18	ug/L	85
66) 1,2,4-trichlorobenzene	14.68	180	323627	22.36	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	280594	23.52	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

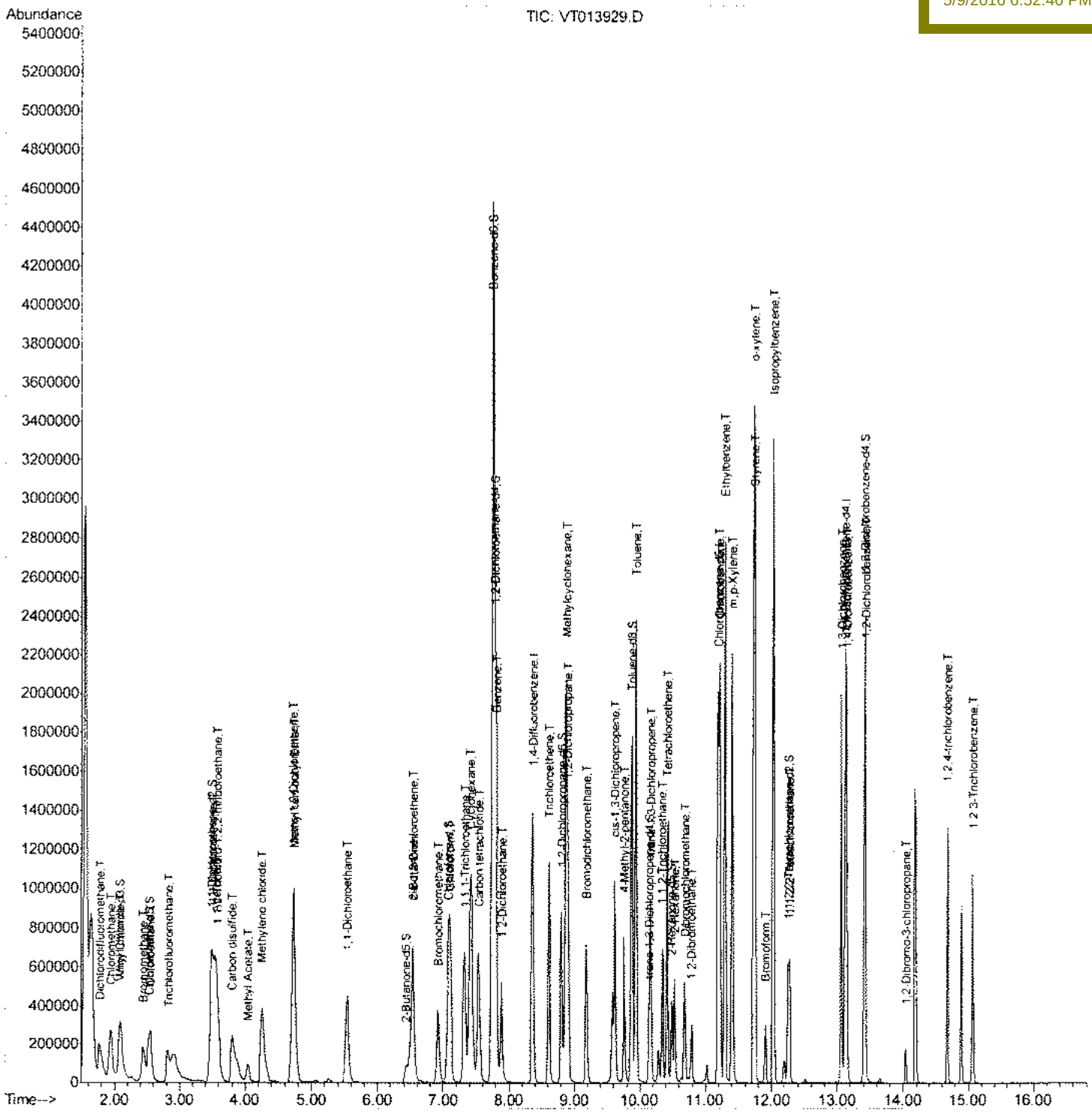
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013929.D
Acq On : 6 May 2016 2:23
Operator : FY/SY
Sample : VSTDCCC025EC
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 06 03:43:58 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02581

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:46 PM



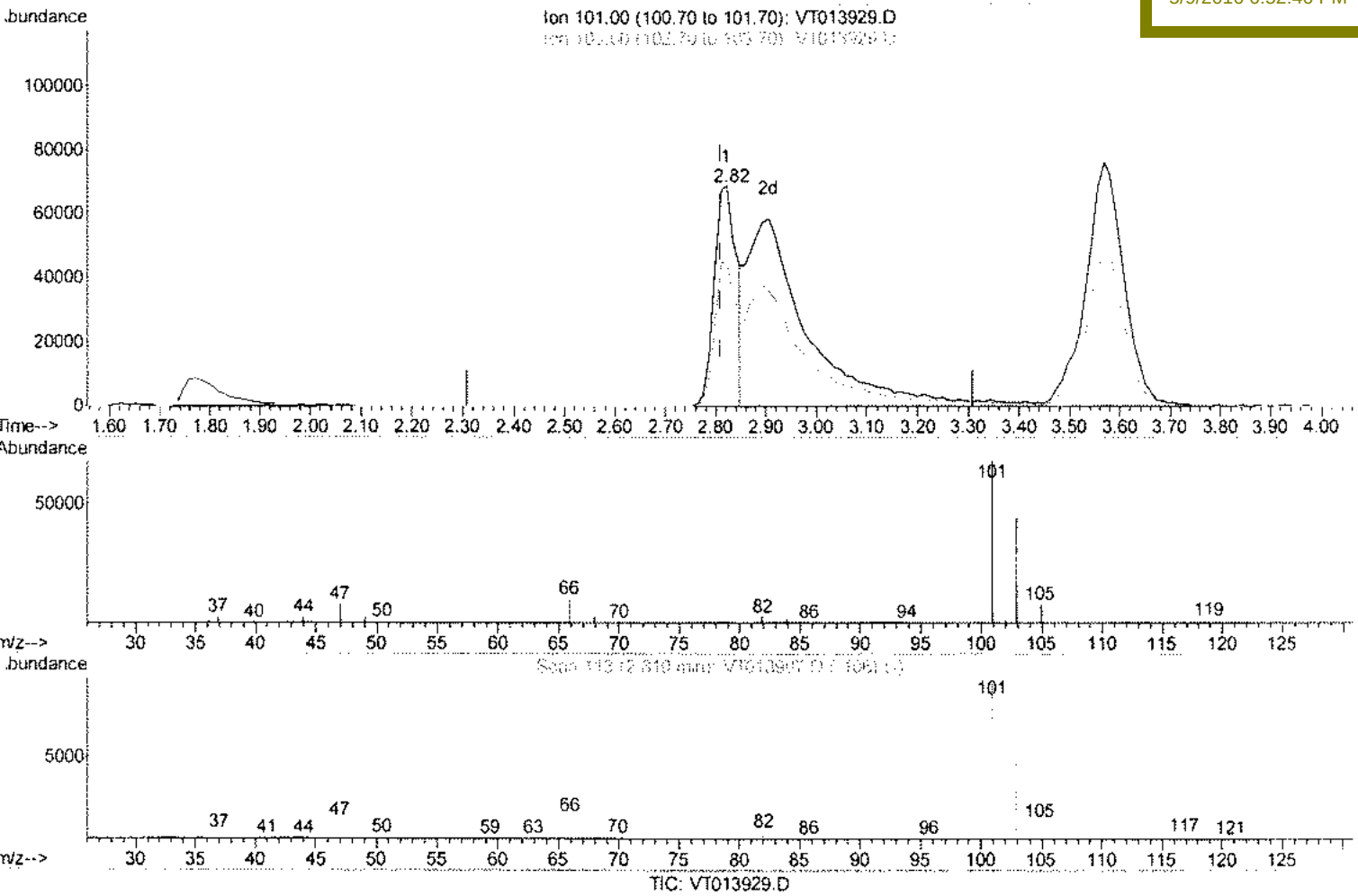
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013929.D
Acq On : 6 May 2016 2:23
Operator : FY/SY
Sample : VSTDCCC025EC
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 06 03:43:06 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02581

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:46 PM



TIC: VT013929.D

(9) Trichlorofluoromethane (T)

2.822min (+0.012) 8.72ug/L

response 208687

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	73.72#
0.00	0.00	0.00
0.00	0.00	0.00

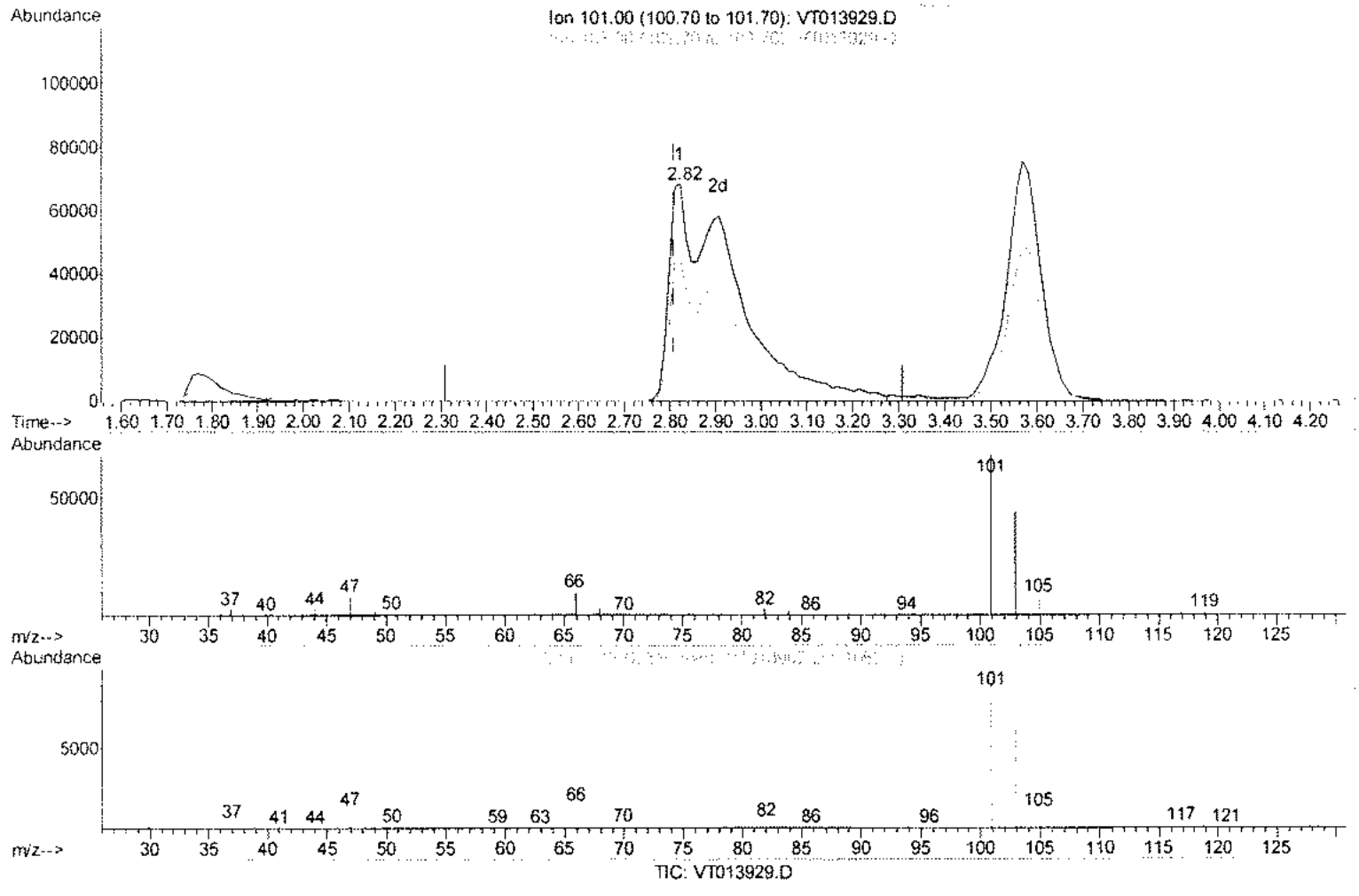
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013929.D
Acq On : 6 May 2016 2:23
Operator : FY/SY
Sample : VSTDCCC025EC
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 06 03:43:06 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02581

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:46 PM



(9) Trichlorofluoromethane (T)

2.822min (+0.012) 28.57ug/L m M. D 05/09/16

response 683570

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	22.51
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013929.D
Acq On : 6 May 2016 2:23
Operator : FY/SY
Sample : VSTDCCC025EC
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 06 03:43:58 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02581

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:52:46 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1007956	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	820497	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	410550	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	354189	17.91	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 71.64%			
7) Chloroethane-d5	2.53	69	279422	21.08	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 84.32%			
10) 1,1-Dichloroethene-d2	3.48	63	773399	22.65	ug/L	0.01
Spiked Amount 25.000	Range 45 - 110		Recovery = 90.60%			
20) 2-Butanone-d5	6.43	46	190318	47.08	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 94.16%			
24) Chloroform-d	7.07	84	668226	23.55	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 94.20%			
26) 1,2-Dichloroethane-d4	7.78	65	387994	25.28	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 101.12%			
29) Benzene-d6	7.74	84	1231575	20.53	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 82.12%			
33) 1,2-Dichloropropane-d6	8.80	67	365753	21.12	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 84.48%			
37) Toluene-d8	9.87	98	1058555	20.46	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 81.84%			
38) trans-1,3-Dichloropropene-	10.13	79	129936	21.13	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 84.52%			
39) 2-Hexanone-d5	10.48	63	126267	48.00	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 96.00%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	251985	23.20	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 92.80%			
60) 1,2-Dichlorobenzene-d4	13.41	152	330200	21.14	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 84.56%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	518408	27.05	ug/L	98
3) Chloromethane	1.95	50	521960	23.86	ug/L	100
5) Vinyl chloride	2.09	62	516717	25.77	ug/L	98
6) Bromomethane	2.43	94	255538	25.83	ug/L	99
8) Chloroethane	2.55	64	294302	26.39	ug/L	99
9) Trichlorofluoromethane	2.82	101	683570m	28.57	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	393589	26.88	ug/L	98
12) 1,1-Dichloroethene	3.50	96	342270	25.52	ug/L	88
13) Acetone	3.56	43	193679	38.71	ug/L	95
14) Carbon disulfide	3.80	76	985448	20.56	ug/L	99
15) Methyl Acetate	4.04	43	183914	23.32	ug/L	99
16) Methylene chloride	4.25	84	324511	23.76	ug/L	94
17) Methyl tert-butyl Ether	4.74	73	642630	25.79	ug/L	97
18) trans-1,2-Dichloroethene	4.73	96	341627	23.67	ug/L	92
19) 1,1-Dichloroethane	5.54	63	788971	25.69	ug/L	99
21) 2-Butanone	6.54	43	244489	41.80	ug/L	99
22) cis-1,2-Dichloroethene	6.54	96	347589	24.24	ug/L	92

M.D 05/09/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013929.D
Acq On : 6 May 2016 2:23
Operator : FY/SY
Sample : VSTDCCC025EC
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 06 03:43:58 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02581

Manual Integrations APPROVED
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5/9/2016 6:52:46 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.92	128	121588	23.28	ug/L	91
25) Chloroform	7.11	83	687273	26.27	ug/L	100
27) 1,2-Dichloroethane	7.89	62	512925	27.80	ug/L	97
30) Cyclohexane	7.41	56	813500	23.15	ug/L	100
31) 1,1,1-Trichloroethane	7.32	97	638279	26.84	ug/L	99
32) Carbon tetrachloride	7.53	117	583730	26.57	ug/L	99
34) Benzene	7.80	78	1460318	23.00	ug/L	100
35) Trichloroethene	8.61	95	389768	24.79	ug/L	97
36) Methylcyclohexane	8.87	83	754547	23.63	ug/L	97
40) 1,2-Dichloropropane	8.89	63	364158	23.00	ug/L	100
41) Bromodichloromethane	9.18	83	451190	25.42	ug/L	98
42) cis-1,3-Dichloropropene	9.61	75	495559	24.10	ug/L	99
43) 4-Methyl-2-pentanone	9.76	43	506619	47.50	ug/L	98
44) Toluene	9.93	91	1424965	22.61	ug/L	98
45) trans-1,3-Dichloropropene	10.16	75	402907	24.19	ug/L	100
46) 1,1,2-Trichloroethane	10.34	97	194883	23.63	ug/L	98
47) Tetrachloroethene	10.42	164	270836	23.61	ug/L	98
49) 2-Hexanone	10.53	43	352503	40.61	ug/L	98
50) Dibromochloromethane	10.68	129	241964	23.88	ug/L	94
51) 1,2-Dibromoethane	10.79	107	187886	24.05	ug/L	100
52) Chlorobenzene	11.21	112	830610	23.39	ug/L	96
53) Ethylbenzene	11.29	91	1681563	23.33	ug/L	99
54) m,p-Xylene	11.40	106	601763	22.90	ug/L	98
55) o-xylene	11.73	106	592785	23.67	ug/L	91
56) Styrene	11.74	104	904791	23.18	ug/L	95
57) Isopropylbenzene	12.03	105	1749366	24.64	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	252896	24.25	ug/L	99
61) Bromoform	11.91	173	119817	22.94	ug/L	98
62) 1,3-Dichlorobenzene	13.06	146	620664	23.23	ug/L	97
63) 1,4-Dichlorobenzene	13.14	146	610562	23.26	ug/L	98
64) 1,2-Dichlorobenzene	13.42	146	559479	23.95	ug/L	97
65) 1,2-Dibromo-3-chloropropan	14.04	75	40802	24.18	ug/L	85
66) 1,2,4-trichlorobenzene	14.68	180	323627	22.36	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	280594	23.52	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050916\
Data File : VT013987.D
Acq On : 9 May 2016 10:07
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 01:17:10 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Sat May 07 06:03:15 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02590

Manual Integrations APPROVED
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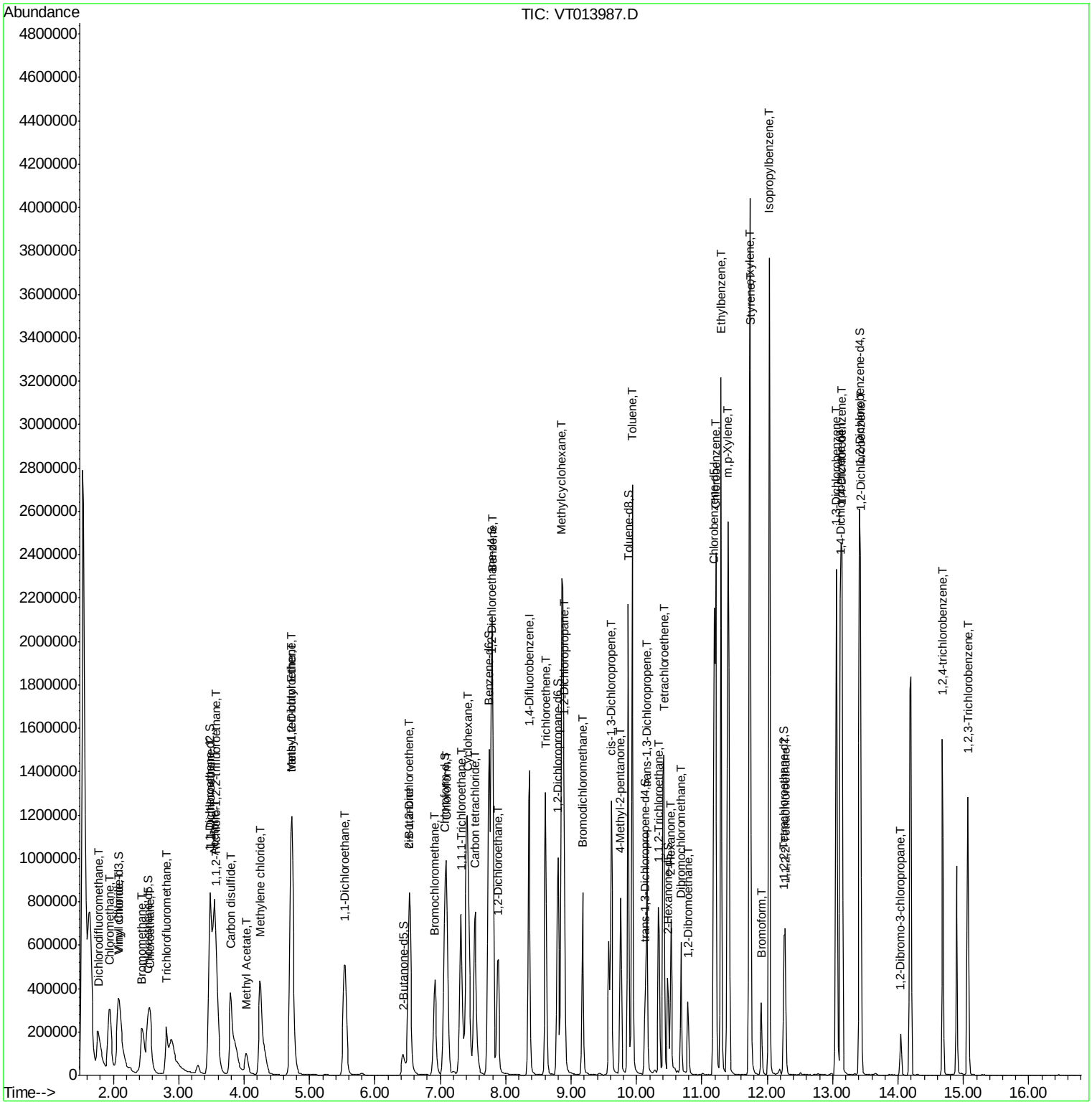
5/10/2016 7:40:43 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050916\
Data File : VT013987.D
Acq On : 9 May 2016 10:07
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VSTD02590

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:43 PM

Quant Time: May 10 01:17:10 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Sat May 07 06:03:15 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1070370	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	871792	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	428182	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	519800	29.31	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 117.24%			
7) Chloroethane-d5	2.53	69	372432	29.04	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 116.16%			
10) 1,1-Dichloroethene-d2	3.47	63	1020724	27.99	ug/L	-0.01
Spiked Amount 25.000	Range 45 - 110		Recovery = 111.96%#			
20) 2-Butanone-d5	6.43	46	194519	46.09	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 92.18%			
24) Chloroform-d	7.07	84	799930	26.78	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 107.12%			
26) 1,2-Dichloroethane-d4	7.78	65	445211	25.43	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 101.72%			
29) Benzene-d6	7.74	84	1468457	26.93	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 107.72%			
33) 1,2-Dichloropropane-d6	8.80	67	428171	26.61	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 106.44%			
37) Toluene-d8	9.87	98	1328000	27.06	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 108.24%			
38) trans-1,3-Dichloropropene-	10.14	79	164612	26.38	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 105.52%			
39) 2-Hexanone-d5	10.48	63	129153	50.23	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 100.46%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	263649	23.78	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 95.12%			
60) 1,2-Dichlorobenzene-d4	13.41	152	386771	25.73	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 102.92%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	545738	24.97	ug/L	99
3) Chloromethane	1.93	50	631028	24.54	ug/L	97
5) Vinyl chloride	2.09	62	626241	25.46	ug/L	100
6) Bromomethane	2.43	94	308559	24.67	ug/L	98
8) Chloroethane	2.56	64	344033	25.33	ug/L	98
9) Trichlorofluoromethane	2.81	101	801700m	26.09	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	433238	25.19	ug/L	98
12) 1,1-Dichloroethene	3.48	96	401284	25.54	ug/L	89
13) Acetone	3.54	43	322831	47.58	ug/L	96
14) Carbon disulfide	3.79	76	1351726	25.77	ug/L	100
15) Methyl Acetate	4.03	43	204208	22.67	ug/L	96
16) Methylene chloride	4.24	84	367700	24.32	ug/L	91
17) Methyl tert-butyl Ether	4.73	73	751461	26.67	ug/L	97
18) trans-1,2-Dichloroethene	4.73	96	413455	26.12	ug/L	95
19) 1,1-Dichloroethane	5.53	63	901968	25.70	ug/L	100
21) 2-Butanone	6.53	43	314401	47.21	ug/L	99
22) cis-1,2-Dichloroethene	6.53	96	402448	26.65	ug/L	91

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050916\
Data File : VT013987.D
Acq On : 9 May 2016 10:07
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 01:17:10 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Sat May 07 06:03:15 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02590

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:43 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.92	128	140041	25.21	ug/L		95
25) Chloroform	7.09	83	764449	25.63	ug/L		98
27) 1,2-Dichloroethane	7.89	62	562930	24.80	ug/L		97
30) Cyclohexane	7.41	56	952547	27.03	ug/L		100
31) 1,1,1-Trichloroethane	7.32	97	733743	26.89	ug/L		99
32) Carbon tetrachloride	7.53	117	666381	26.94	ug/L		98
34) Benzene	7.79	78	1661718	25.80	ug/L		100
35) Trichloroethene	8.61	95	439872	26.30	ug/L		98
36) Methylcyclohexane	8.86	83	858807	26.34	ug/L		97
40) 1,2-Dichloropropane	8.89	63	412947	25.46	ug/L		100
41) Bromodichloromethane	9.18	83	505240	26.36	ug/L		98
42) cis-1,3-Dichloropropene	9.61	75	561316	26.64	ug/L		99
43) 4-Methyl-2-pentanone	9.76	43	551084	49.29	ug/L		98
44) Toluene	9.93	91	1653429	26.04	ug/L		98
45) trans-1,3-Dichloropropene	10.16	75	484378	26.78	ug/L		99
46) 1,1,2-Trichloroethane	10.34	97	213037	24.31	ug/L		98
47) Tetrachloroethene	10.42	164	312665	25.66	ug/L		95
49) 2-Hexanone	10.53	43	474646	50.62	ug/L		98
50) Dibromochloromethane	10.68	129	276948	26.19	ug/L		93
51) 1,2-Dibromoethane	10.79	107	203607	24.34	ug/L		98
52) Chlorobenzene	11.21	112	939927	25.34	ug/L		96
53) Ethylbenzene	11.29	91	1952753	26.01	ug/L		99
54) m,p-Xylene	11.40	106	713108	26.46	ug/L		99
55) o-xylene	11.73	106	670812	26.21	ug/L		93
56) Styrene	11.74	104	1020211	25.02	ug/L		93
57) Isopropylbenzene	12.03	105	1987358	26.61	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	265721	23.88	ug/L		98
61) Bromoform	11.91	173	130516	23.49	ug/L		99
62) 1,3-Dichlorobenzene	13.06	146	727553	26.82	ug/L		97
63) 1,4-Dichlorobenzene	13.14	146	707626	25.28	ug/L		98
64) 1,2-Dichlorobenzene	13.42	146	614598	25.34	ug/L		97
65) 1,2-Dibromo-3-chloropropan	14.04	75	43475	22.67	ug/L	#	83
66) 1,2,4-trichlorobenzene	14.68	180	397605	27.08	ug/L		99
67) 1,2,3-Trichlorobenzene	15.07	180	326134	26.16	ug/L		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

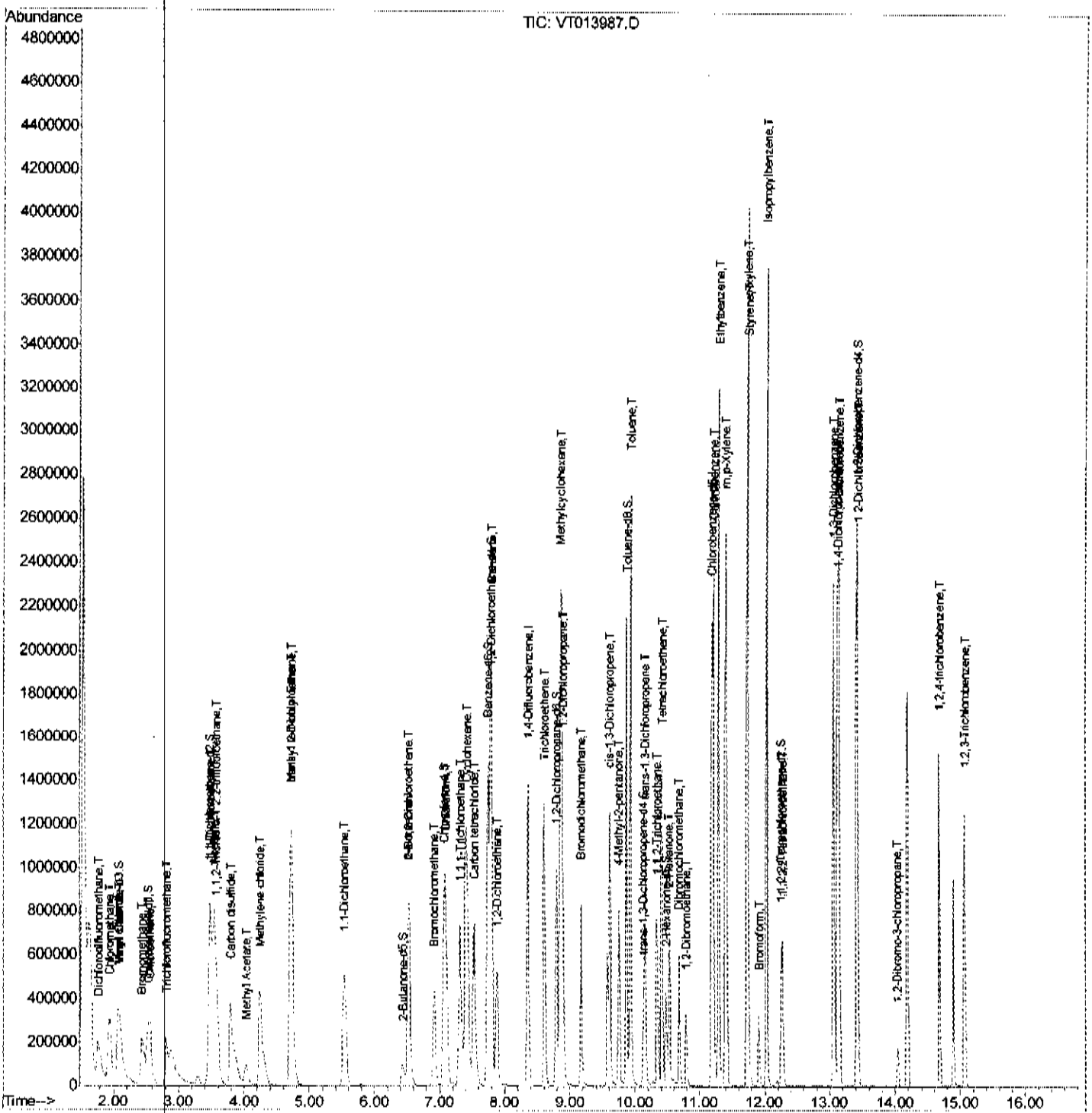
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013987.D
Acq On : 9 May 2016 10:07
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 01:17:10 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Titlc : VOC Analysis
QLast Update : Sat May 07 06:03:15 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02590

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:43 PM



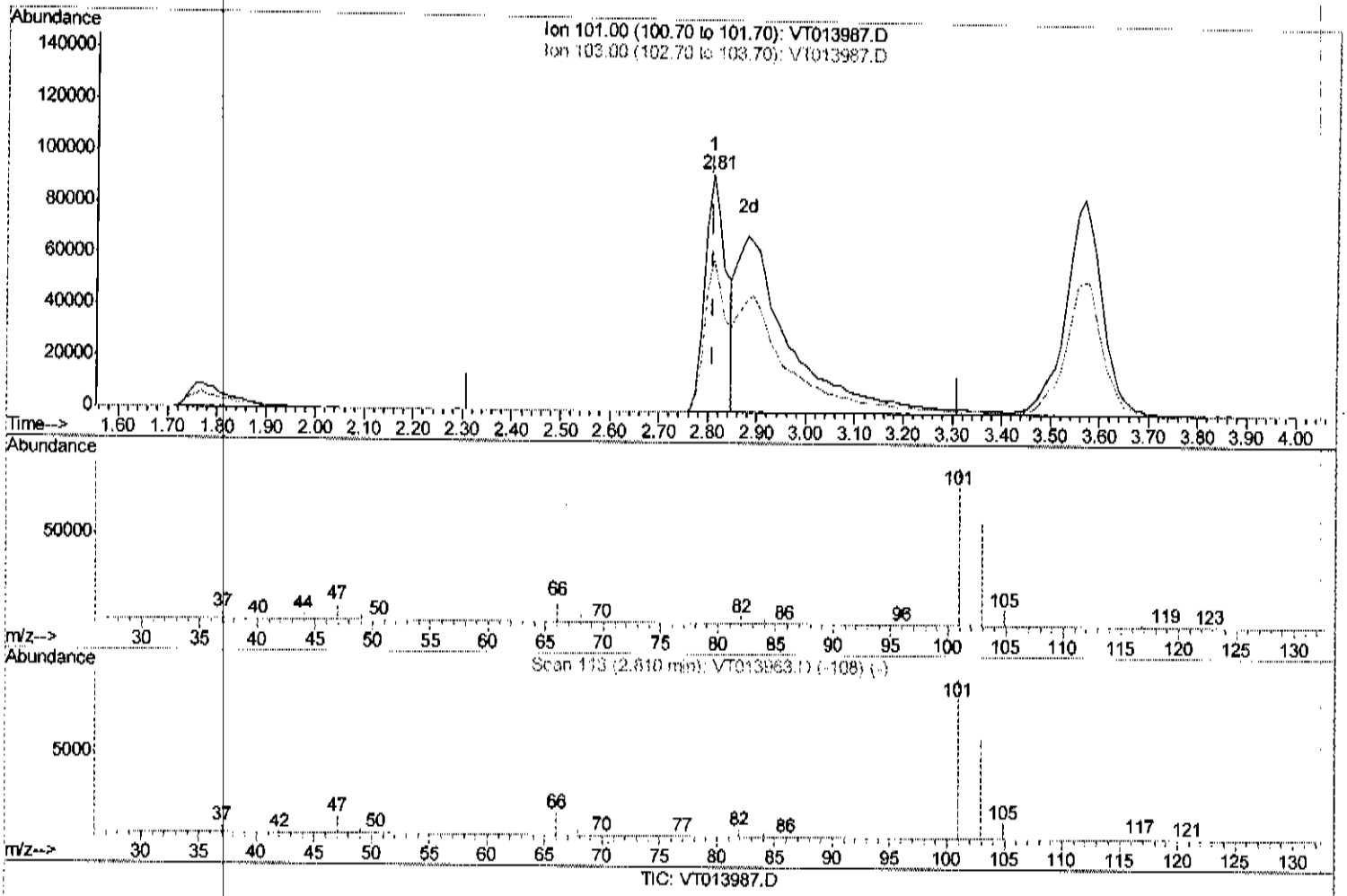
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013987.D
Acq On : 9 May 2016 10:07
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 01:16:26 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Sat May 07 06:03:15 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02590

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:43 PM



(9) Trichlorofluoromethane (T)

2.811min (+0.000) 9.03ug/L

response 277546

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	64.56#
0.00	0.00	0.00
0.00	0.00	0.00

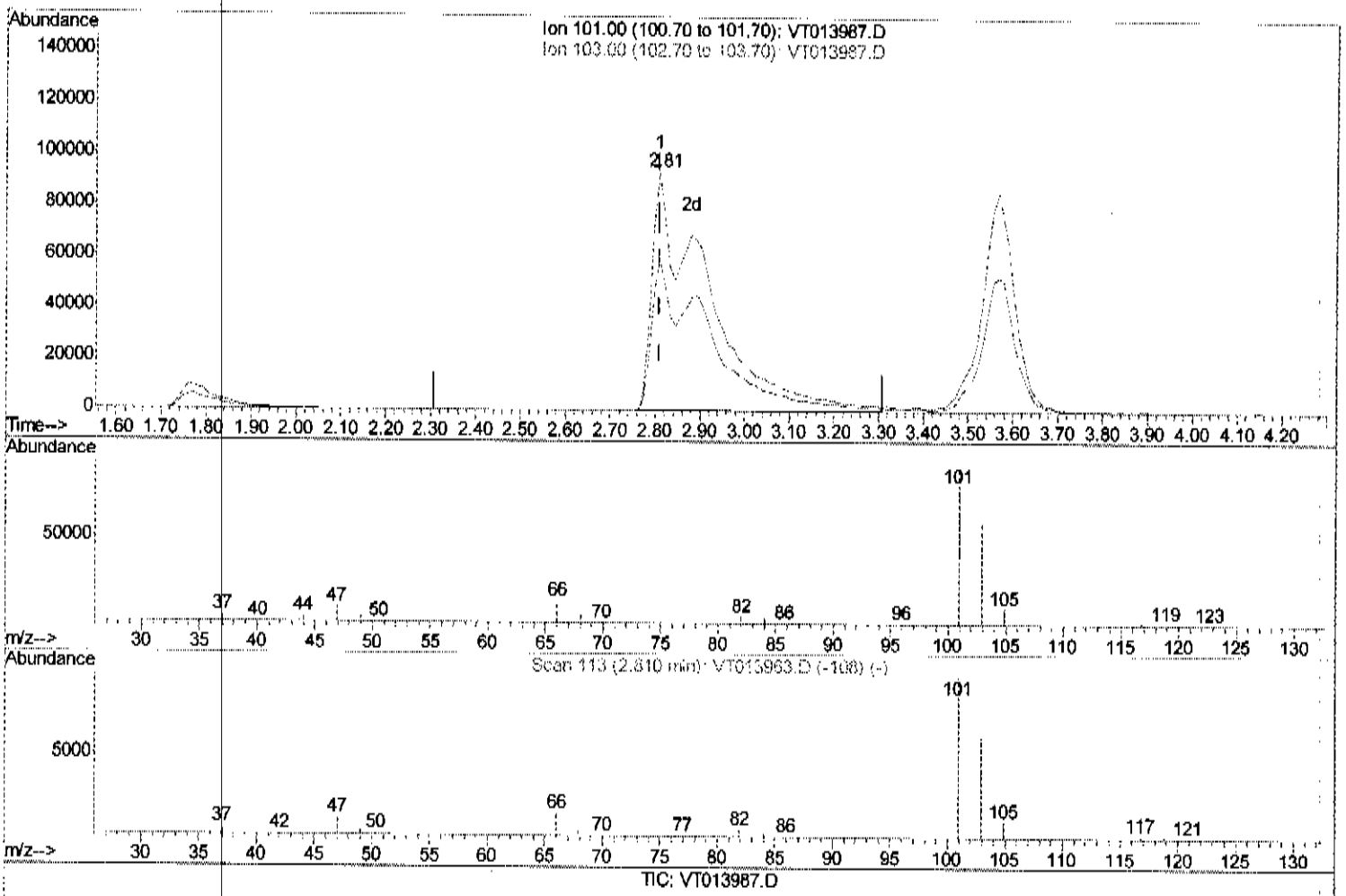
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013987.D
Acq On : 9 May 2016 10:07
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 01:16:26 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Sat May 07 06:03:15 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02590

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:43 PM



(9) Trichlorofluoromethane (T)

2.811min (+0.000) 26.09ug/L m

response 801700

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	22.35
0.00	0.00	0.00
0.00	0.00	0.00

FY 5/10/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013987.D
Acq On : 9 May 2016 10:07
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 01:17:10 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Sat May 07 06:03:15 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02590

Manual Integrations APPROVED
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5/10/2016 7:40:43 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1070370	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	871792	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	428182	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	519800	29.31	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 117.24%			
7) Chloroethane-d5	2.53	69	372432	29.04	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 116.16%			
10) 1,1-Dichloroethene-d2	3.47	63	1020724	27.99	ug/L	-0.01
Spiked Amount 25.000	Range 45 - 110		Recovery = 111.96%#			
20) 2-Butanone-d5	6.43	46	194519	46.09	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 92.18%			
24) Chloroform-d	7.07	84	799930	26.78	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 107.12%			
26) 1,2-Dichloroethane-d4	7.78	65	445211	25.43	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 101.72%			
29) Benzene-d6	7.74	84	1468457	26.93	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 107.72%			
33) 1,2-Dichloropropane-d6	8.80	67	428171	26.61	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 106.44%			
37) Toluene-d8	9.87	98	1328000	27.06	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 108.24%			
38) trans-1,3-Dichloropropene-	10.14	79	164612	26.38	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 105.52%			
39) 2-Hexanone-d5	10.48	63	129153	50.23	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 100.46%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	263649	23.78	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 95.12%			
60) 1,2-Dichlorobenzene-d4	13.41	152	386771	25.73	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 102.92%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	545738	24.97	ug/L	99
3) Chloromethane	1.93	50	631028	24.54	ug/L	97
5) Vinyl chloride	2.09	62	626241	25.46	ug/L	100
6) Bromomethane	2.43	94	308559	24.67	ug/L	98
8) Chloroethane	2.56	64	344033	25.33	ug/L	98
9) Trichlorofluoromethane	2.81	101	801700m	26.09	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	433238	25.19	ug/L	98
12) 1,1-Dichloroethene	3.48	96	401284	25.54	ug/L	89
13) Acetone	3.54	43	322831	47.58	ug/L	96
14) Carbon disulfide	3.79	76	1351726	25.77	ug/L	100
15) Methyl Acetate	4.03	43	204208	22.67	ug/L	96
16) Methylene chloride	4.24	84	367700	24.32	ug/L	91
17) Methyl tert-butyl Ether	4.73	73	751461	26.67	ug/L	97
18) trans-1,2-Dichloroethene	4.73	96	413455	26.12	ug/L	95
19) 1,1-Dichloroethane	5.53	63	901968	25.70	ug/L	100
21) 2-Butanone	6.53	43	314401	47.21	ug/L	99
22) cis-1,2-Dichloroethene	6.53	96	402448	26.65	ug/L	91

FT 5/10/2016

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013987.D
Acq On : 9 May 2016 10:07
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 01:17:10 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Sat May 07 06:03:15 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02590

Manual Integrations APPROVED
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5/10/2016 7:40:43 PM

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
23) Bromochloromethane	6.92	128	140041	25.21 ug/L	95
25) Chloroform	7.09	83	764449	25.63 ug/L	98
27) 1,2-Dichloroethane	7.89	62	562930	24.80 ug/L	97
30) Cyclohexane	7.41	56	952547	27.03 ug/L	100
31) 1,1,1-Trichloroethane	7.32	97	733743	26.89 ug/L	99
32) Carbon tetrachloride	7.53	117	666381	26.94 ug/L	98
34) Benzene	7.79	78	1661718	25.80 ug/L	100
35) Trichloroethene	8.61	95	439872	26.30 ug/L	98
36) Methylcyclohexane	8.86	83	858807	26.34 ug/L	97
40) 1,2-Dichloropropane	8.89	63	412947	25.46 ug/L	100
41) Bromodichloromethane	9.18	83	505240	26.36 ug/L	98
42) cis-1,3-Dichloropropene	9.61	75	561316	26.64 ug/L	99
43) 4-Methyl-2-pentanone	9.76	43	551084	49.29 ug/L	98
44) Toluene	9.93	91	1653429	26.04 ug/L	98
45) trans-1,3-Dichloropropene	10.16	75	484378	26.78 ug/L	99
46) 1,1,2-Trichloroethane	10.34	97	213037	24.31 ug/L	98
47) Tetrachloroethene	10.42	164	312665	25.66 ug/L	95
49) 2-Hexanone	10.53	43	474646	50.62 ug/L	98
50) Dibromochloromethane	10.68	129	276948	26.19 ug/L	93
51) 1,2-Dibromoethane	10.79	107	203607	24.34 ug/L	98
52) Chlorobenzene	11.21	112	939927	25.34 ug/L	96
53) Ethylbenzene	11.29	91	1952753	26.01 ug/L	99
54) m,p-Xylene	11.40	106	713108	26.46 ug/L	99
55) o-xylene	11.73	106	670812	26.21 ug/L	93
56) Styrene	11.74	104	1020211	25.02 ug/L	93
57) Isopropylbenzene	12.03	105	1987358	26.61 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.28	83	265721	23.88 ug/L	98
61) Bromoform	11.91	173	130516	23.49 ug/L	99
62) 1,3-Dichlorobenzene	13.06	146	727553	26.82 ug/L	97
63) 1,4-Dichlorobenzene	13.14	146	707626	25.28 ug/L	98
64) 1,2-Dichlorobenzene	13.42	146	614598	25.34 ug/L	97
65) 1,2-Dibromo-3-chloropropan	14.04	75	43475	22.67 ug/L #	83
66) 1,2,4-trichlorobenzene	14.68	180	397605	27.08 ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	326134	26.16 ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 10 01:57:46 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02591

Manual Integrations APPROVED
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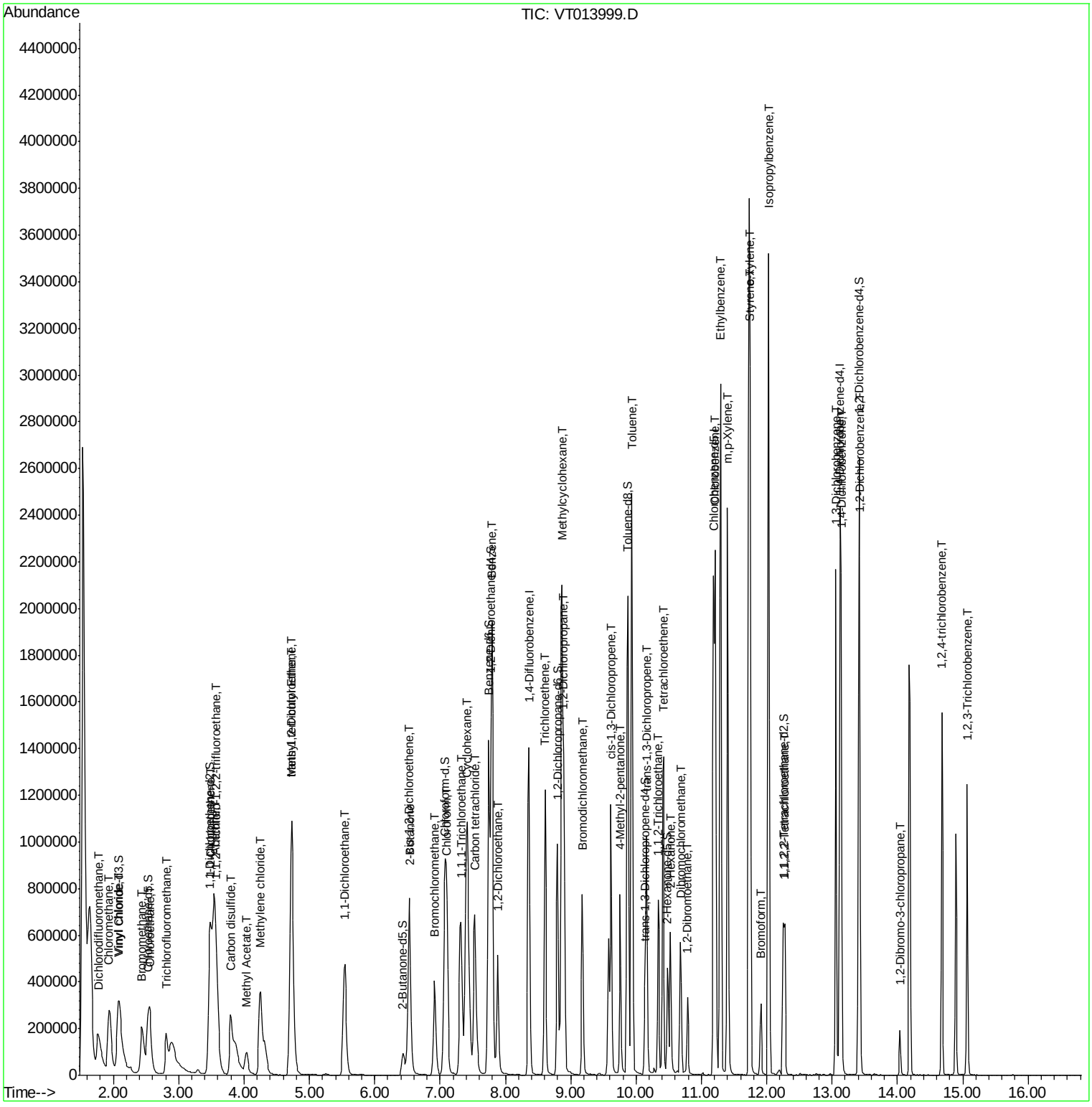

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 10 01:57:46 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02591

Manual Integrations APPROVED
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5/10/2016 7:41:13 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1035713	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	861159	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	439055	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	483389	28.17	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 112.68%			
7) Chloroethane-d5	2.53	69	344467	27.76	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 111.04%			
10) 1,1-Dichloroethene-d2	3.47	63	933242m	26.44	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 105.76%			
20) 2-Butanone-d5	6.43	46	183825	45.02	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 90.04%			
24) Chloroform-d	7.07	84	747619	25.87	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 103.48%			
26) 1,2-Dichloroethane-d4	7.78	65	421661	24.89	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 99.56%			
29) Benzene-d6	7.74	84	1367430	25.38	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 101.52%			
33) 1,2-Dichloropropane-d6	8.80	67	409013	25.73	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 102.92%			
37) Toluene-d8	9.87	98	1246246	25.70	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 102.80%			
38) trans-1,3-Dichloropropene-	10.13	79	151988	24.66	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 98.64%			
39) 2-Hexanone-d5	10.48	63	127442	50.18	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 100.36%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	263693	24.08	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 96.32%			
60) 1,2-Dichlorobenzene-d4	13.41	152	377961	24.52	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 98.08%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	506002	23.92	ug/L	99
3) Chloromethane	1.93	50	564967	22.70	ug/L	98
5) Vinyl chloride	2.09	62	561452	23.59	ug/L	100
6) Bromomethane	2.43	94	276331	22.84	ug/L	97
8) Chloroethane	2.56	64	316957	24.12	ug/L	97
9) Trichlorofluoromethane	2.81	101	722615m	24.31	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	400842	24.08	ug/L	98
12) 1,1-Dichloroethene	3.48	96	355786m	23.40	ug/L	
13) Acetone	3.56	43	232790	35.46	ug/L	94
14) Carbon disulfide	3.79	76	1174643m	23.14	ug/L	
15) Methyl Acetate	4.04	43	191488	21.97	ug/L	96
16) Methylene chloride	4.25	84	330828m	22.62	ug/L	
17) Methyl tert-butyl Ether	4.73	73	662795	24.31	ug/L	97
18) trans-1,2-Dichloroethene	4.73	96	370402	24.18	ug/L	95
19) 1,1-Dichloroethane	5.54	63	813735	23.96	ug/L	98
21) 2-Butanone	6.54	43	255053	39.58	ug/L	100
22) cis-1,2-Dichloroethene	6.53	96	357577	24.47	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD02591

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:41:13 PM

Quant Time: May 10 01:57:46 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.92	128	127201	23.66	ug/L		95
25) Chloroform	7.11	83	704913	24.42	ug/L		99
27) 1,2-Dichloroethane	7.89	62	531856	24.22	ug/L	#	96
30) Cyclohexane	7.41	56	856135	24.60	ug/L		99
31) 1,1,1-Trichloroethane	7.32	97	654846	24.29	ug/L		98
32) Carbon tetrachloride	7.53	117	607730	24.87	ug/L		99
34) Benzene	7.79	78	1511829	23.76	ug/L		100
35) Trichloroethene	8.61	95	400404	24.24	ug/L		98
36) Methylcyclohexane	8.87	83	773770	24.03	ug/L		97
40) 1,2-Dichloropropane	8.89	63	375940	23.47	ug/L		100
41) Bromodichloromethane	9.18	83	470081	24.83	ug/L		100
42) cis-1,3-Dichloropropene	9.61	75	513738	24.68	ug/L		100
43) 4-Methyl-2-pentanone	9.76	43	517065	46.81	ug/L		98
44) Toluene	9.93	91	1519092	24.22	ug/L		97
45) trans-1,3-Dichloropropene	10.16	75	449322	25.15	ug/L		100
46) 1,1,2-Trichloroethane	10.34	97	202848	23.44	ug/L		99
47) Tetrachloroethene	10.42	164	286913	23.83	ug/L		96
49) 2-Hexanone	10.53	43	395689	42.72	ug/L		98
50) Dibromochloromethane	10.68	129	255309	24.44	ug/L		95
51) 1,2-Dibromoethane	10.79	107	198411	24.01	ug/L		94
52) Chlorobenzene	11.21	112	884291	24.13	ug/L		97
53) Ethylbenzene	11.29	91	1803492	24.32	ug/L		100
54) m,p-Xylene	11.40	106	645993	24.27	ug/L		99
55) o-xylene	11.73	106	625029	24.72	ug/L		94
56) Styrene	11.74	104	976679	24.25	ug/L		96
57) Isopropylbenzene	12.03	105	1837021	24.90	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	259128	23.57	ug/L		100
61) Bromoform	11.91	173	123680	21.70	ug/L		98
62) 1,3-Dichlorobenzene	13.06	146	678187	24.38	ug/L		98
63) 1,4-Dichlorobenzene	13.14	146	658946	22.95	ug/L		98
64) 1,2-Dichlorobenzene	13.42	146	597655	24.03	ug/L		98
65) 1,2-Dibromo-3-chloropropan	14.04	75	44390	22.57	ug/L		87
66) 1,2,4-trichlorobenzene	14.68	180	378005	25.10	ug/L		99
67) 1,2,3-Trichlorobenzene	15.07	180	319919	25.03	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 10 01:57:46 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02591

Manual Integrations APPROVED
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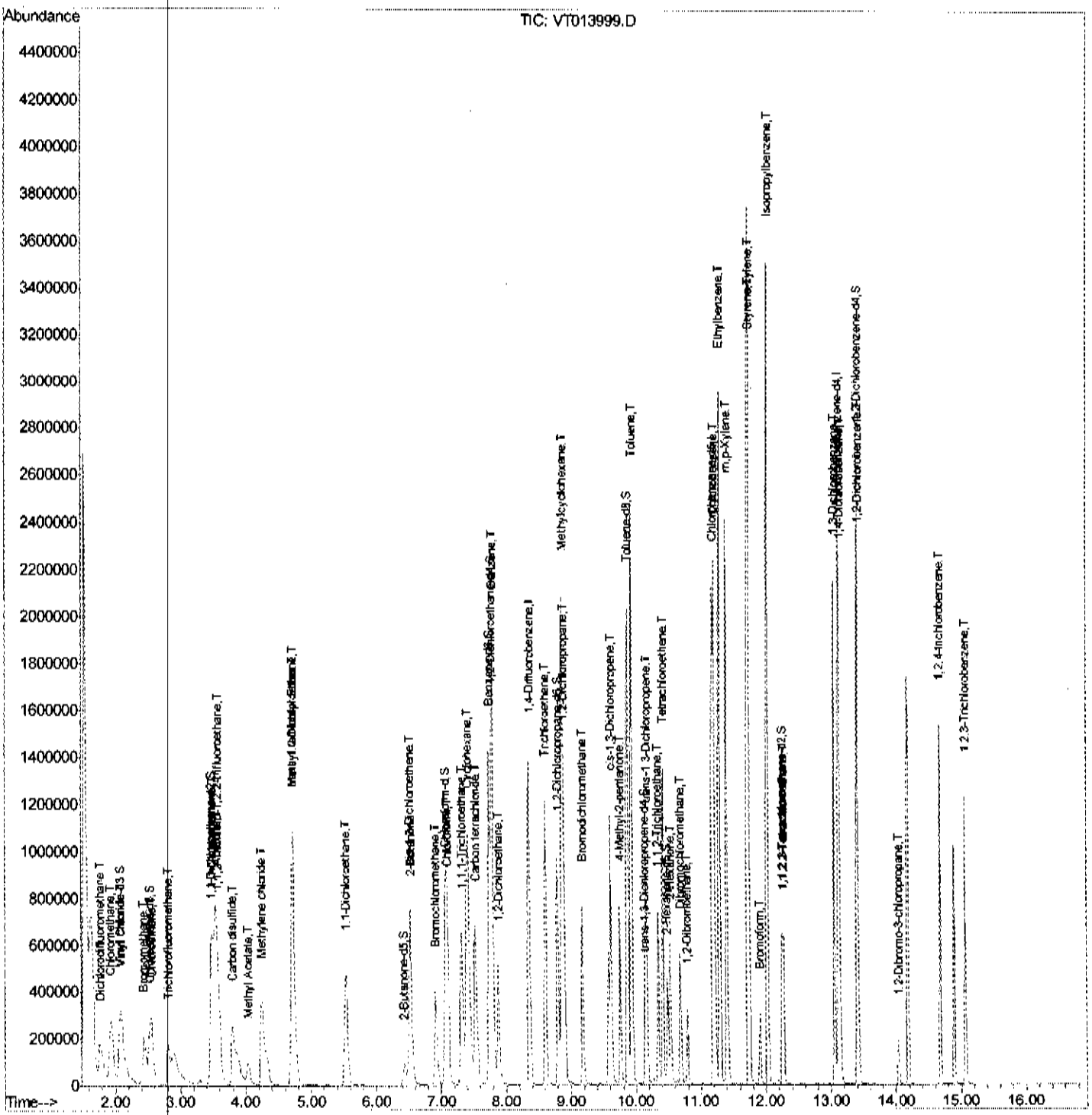
5/10/2016 7:41:13 PM



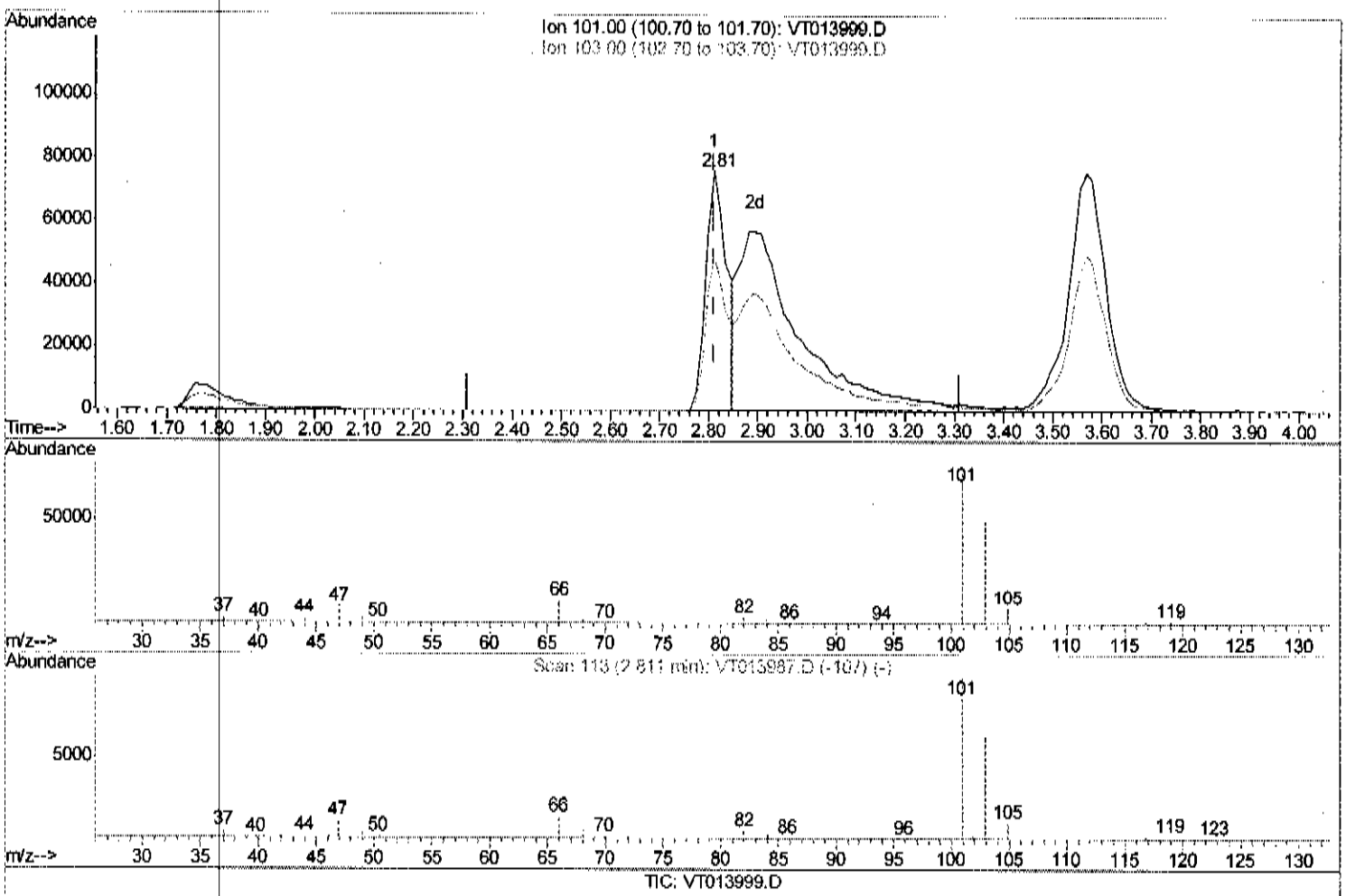
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 10 01:21:29 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02591

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:41:13 PM



(9) Trichlorofluoromethane (T)

2.810min (-0.000) 7.55ug/L

response 224493

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	65.65#
0.00	0.00	0.00
0.00	0.00	0.00

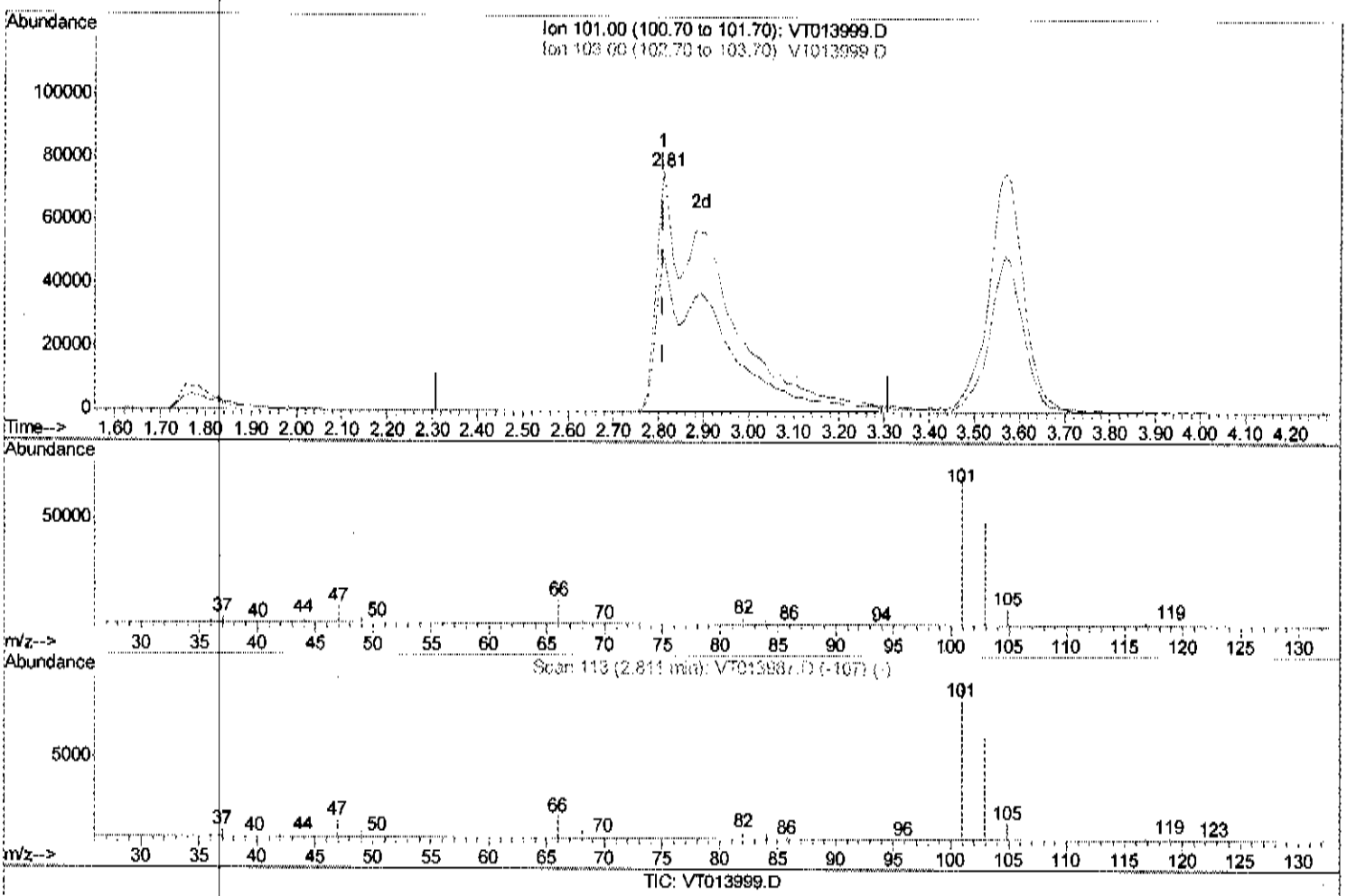
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 10 01:21:29 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02591

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:41:13 PM



(9) Trichlorofluoromethane (T)

2.810min (-0.000) 24.31ug/L m

response 722615

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	20.40
0.00	0.00	0.00
0.00	0.00	0.00

FY 5/10/2016

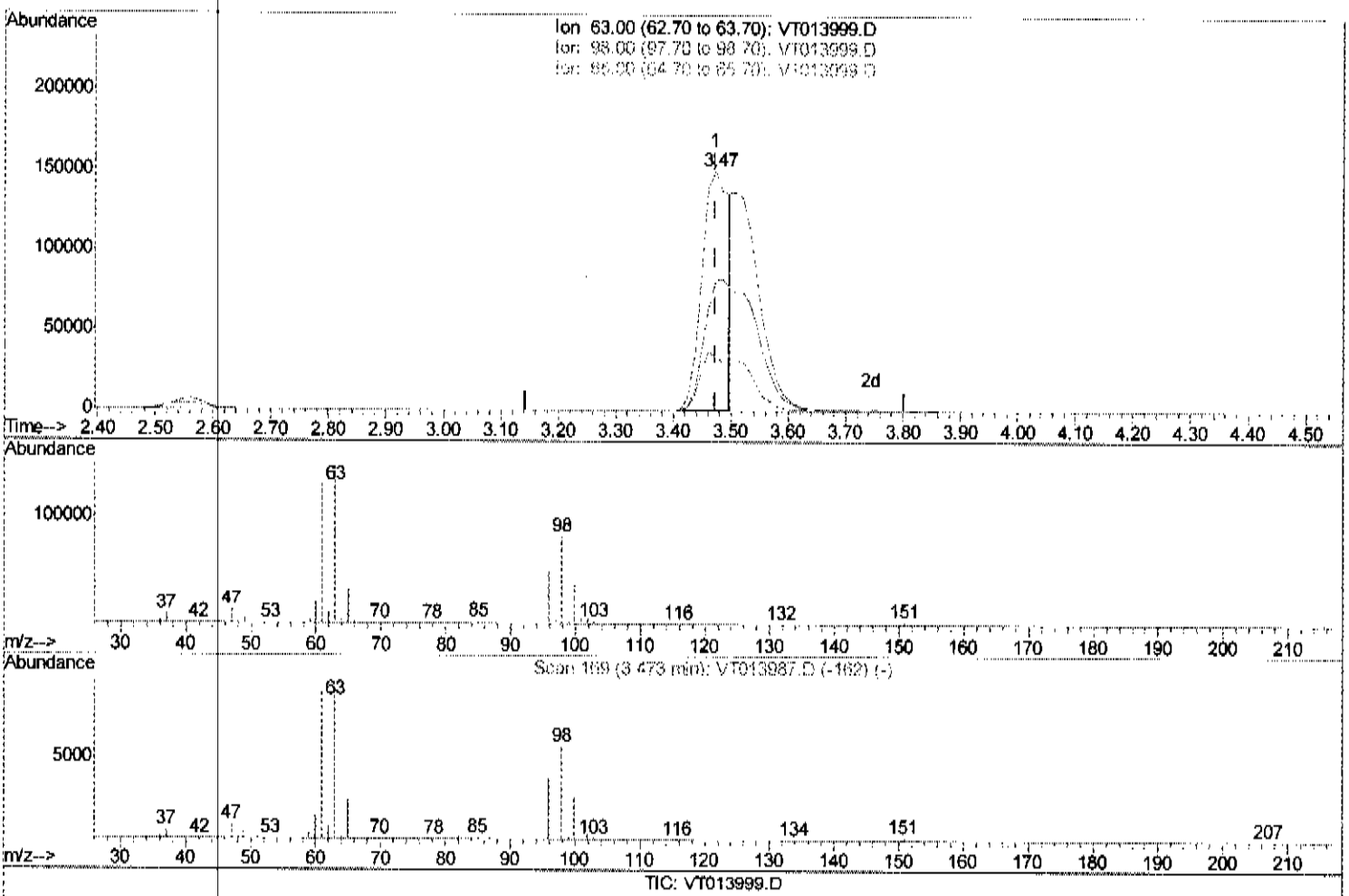
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 10 01:21:29 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02591

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:41:13 PM



(10) 1,1-Dichloroethene-d2 (S)

3.473min (-0.000) 14.09ug/L

response 497335

Ion	Exp%	Act%
63.00	100	100
98.00	62.90	104.00#
65.00	22.10	24.45
0.00	0.00	0.00

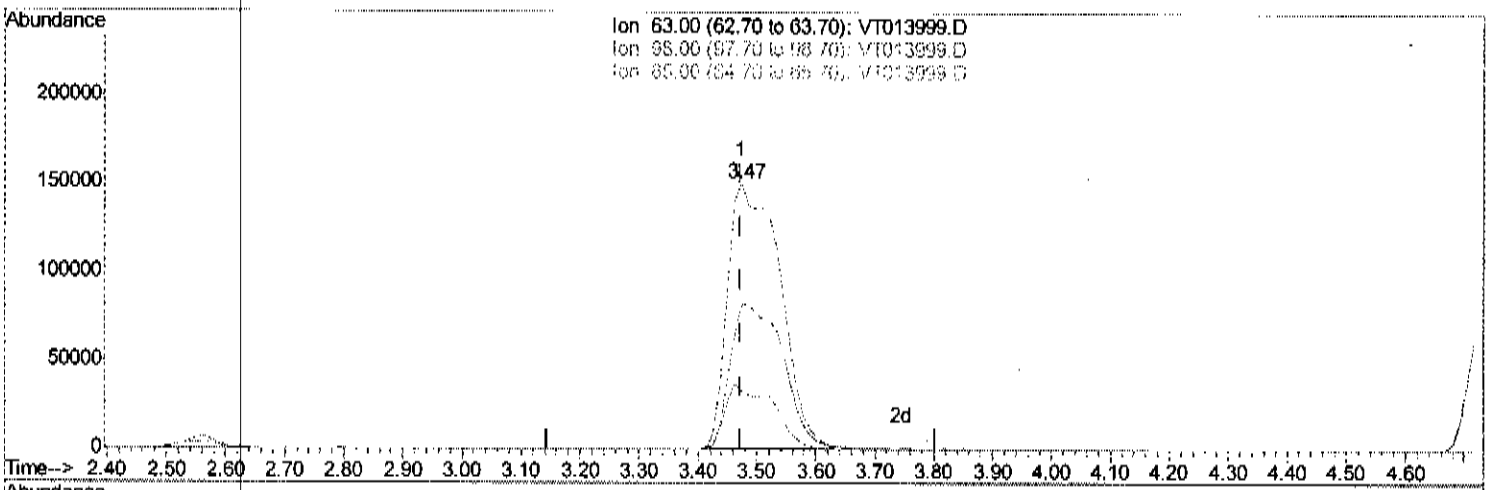
Quantitation Report (Qedit)

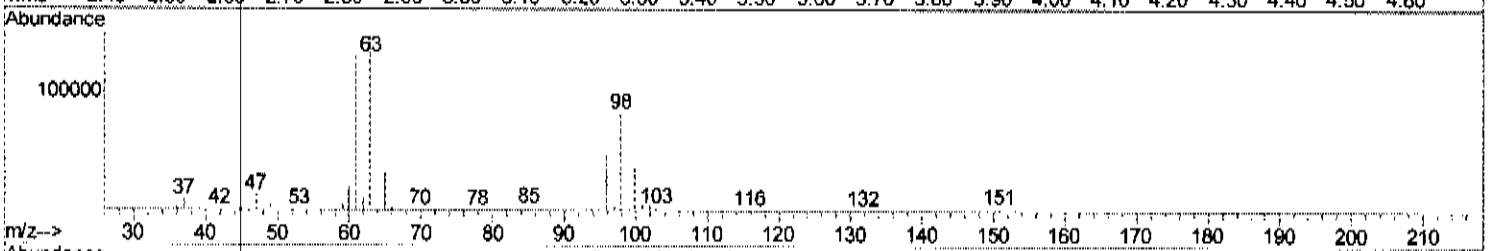
Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

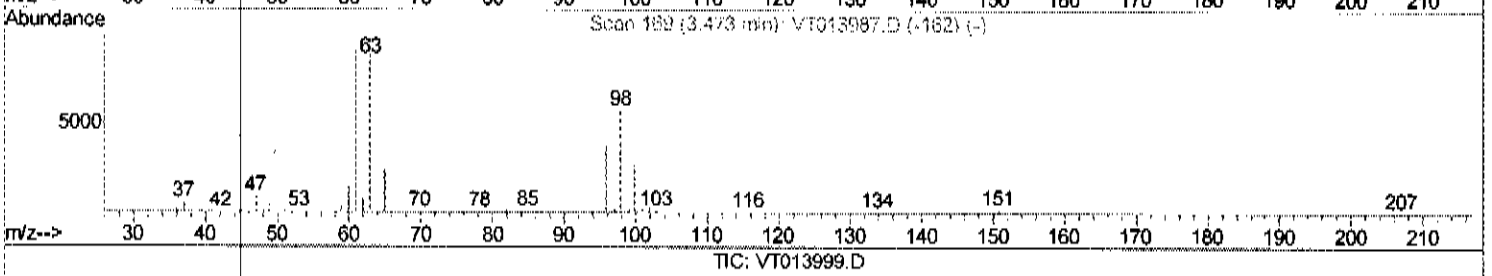
Quant Time: May 10 01:21:29 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02591

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:41:13 PM







TIC: VT013999.D

(10) 1,1-Dichloroethene-d2 (S)

3.473min (-0.000) 26.44ug/L m

response 933242

Ion	Exp%	Act%
63.00	100	100
98.00	62.90	55.42
65.00	22.10	13.03#
0.00	0.00	0.00

FT
5/10/2016

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 10 01:21:29 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02591

Manual Integrations APPROVED
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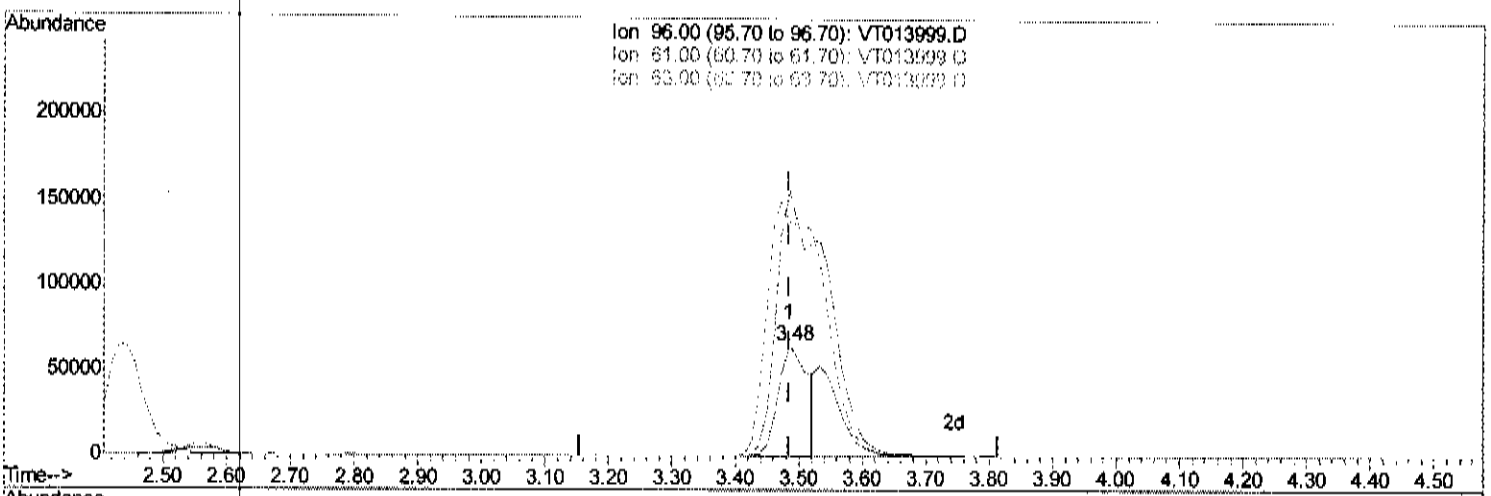
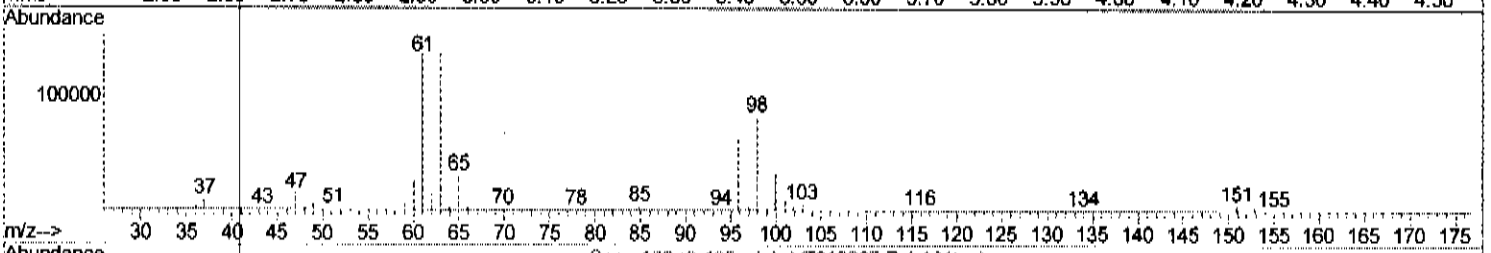
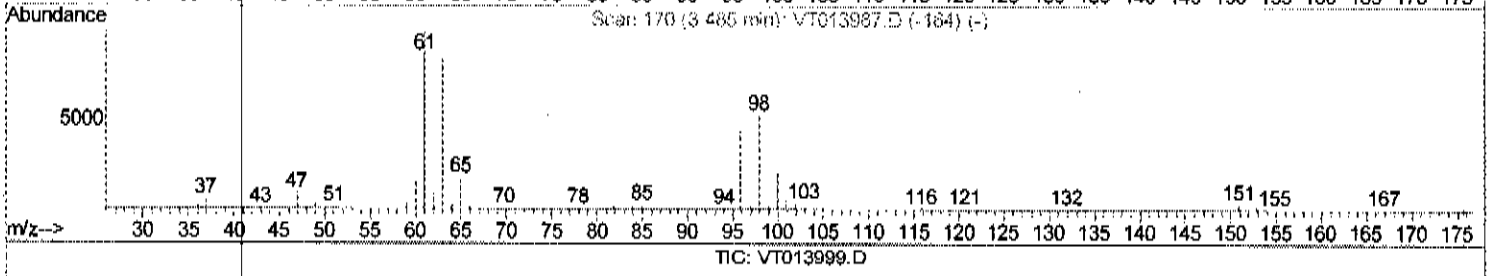
5/10/2016 7:41:13 PM







(12) 1,1-Dichloroethene (T)

3.485min (-0.000) 14.17ug/L

response 215494

Ion	Exp%	Act%
96.00	100	100
61.00	211.90	239.58
63.00	170.40	210.83
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 10 01:21:29 2016
Quant Method : W:\HPCHEM1\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02591

Manual Integrations APPROVED
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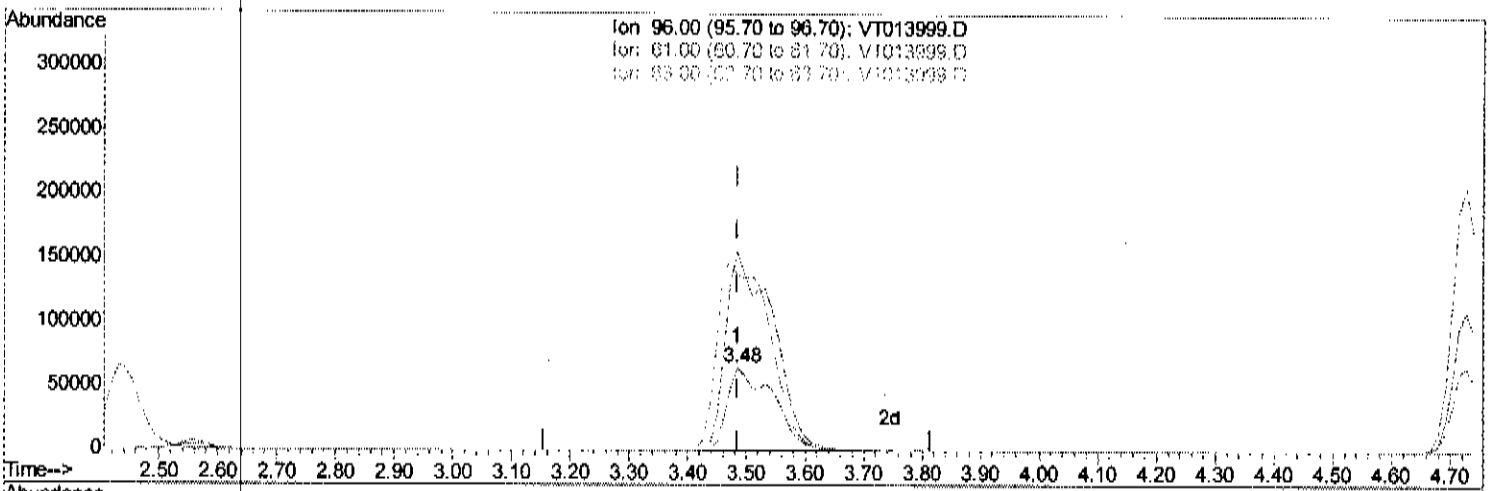

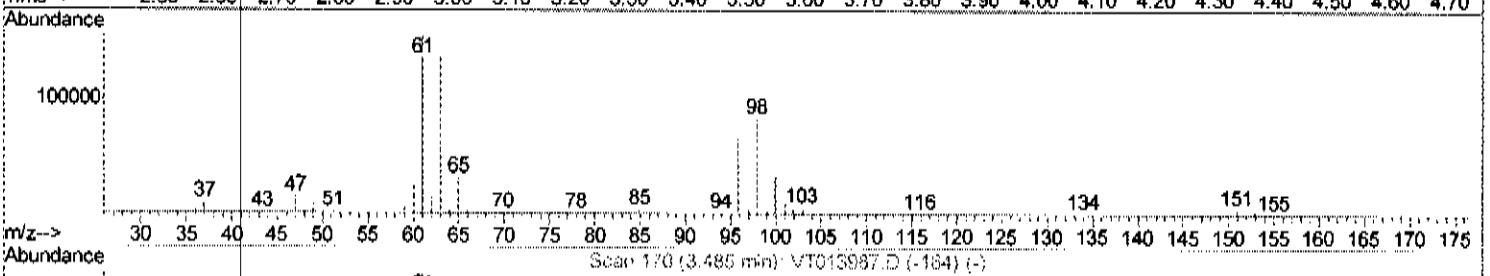

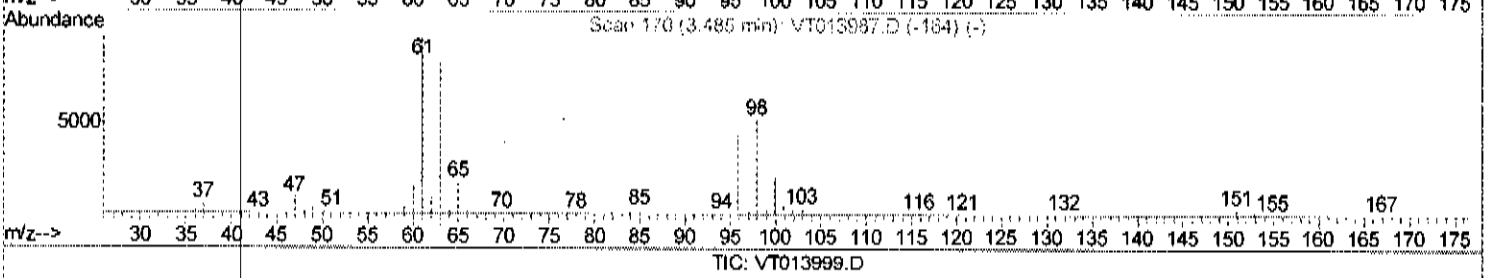

TIC: VT013999.D

(12) 1,1-Dichloroethene (T)

3.485min (-0.000) 23.40ug/L m

response 355786

Ion	Exp%	Act%
96.00	100	100
61.00	211.90	239.58
63.00	170.40	210.83
0.00	0.00	0.00

FY
5/10/2016

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 10 01:21:29 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02591

Manual Integrations APPROVED
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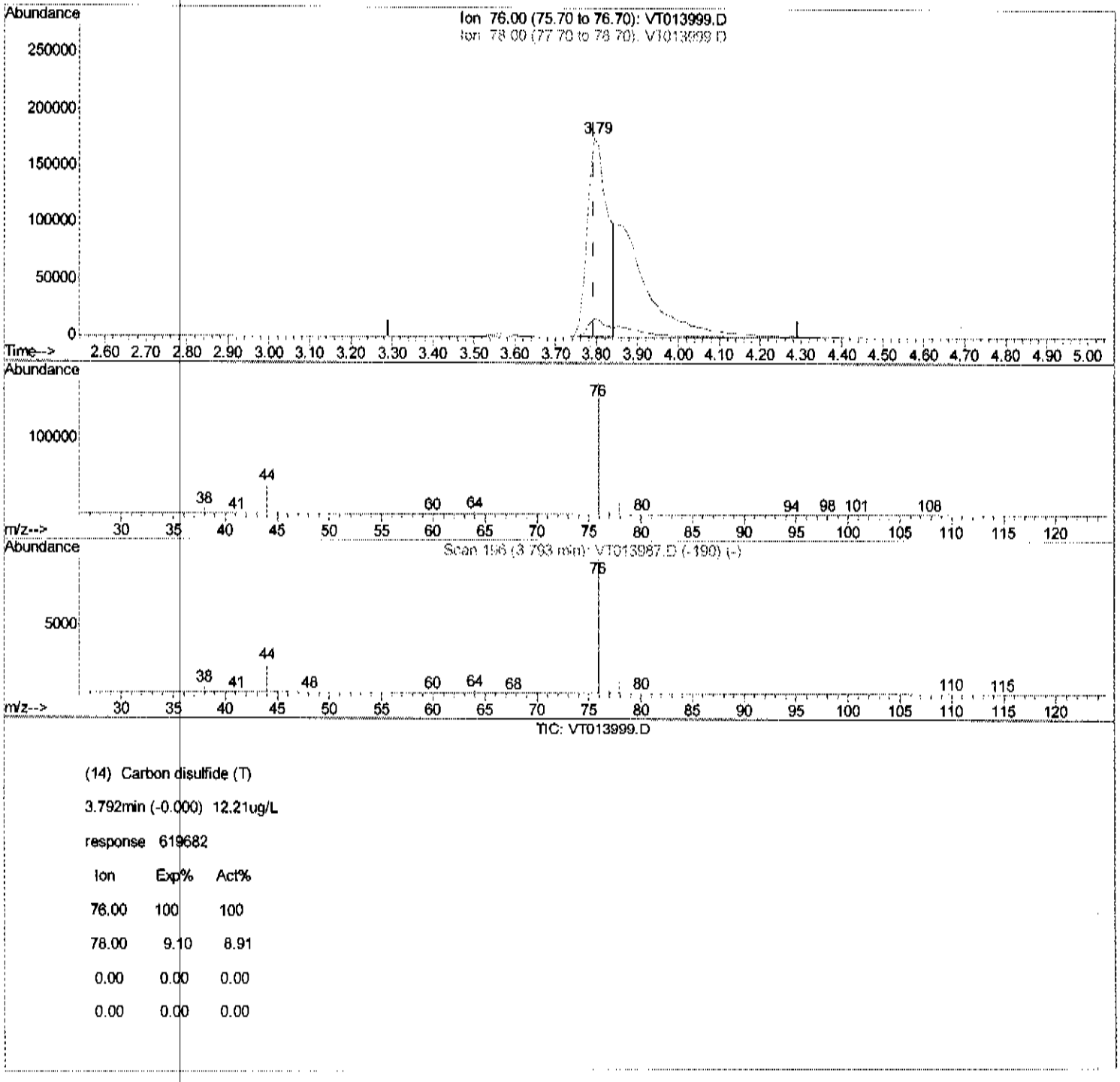

(14) Carbon disulfide (T)

3.792min (-0.000) 12.21ug/L

response 619682

Ion	Exp%	Act%
76.00	100	100
78.00	9.10	8.91
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : EY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 10 01:21:29 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02591

Manual Integrations APPROVED
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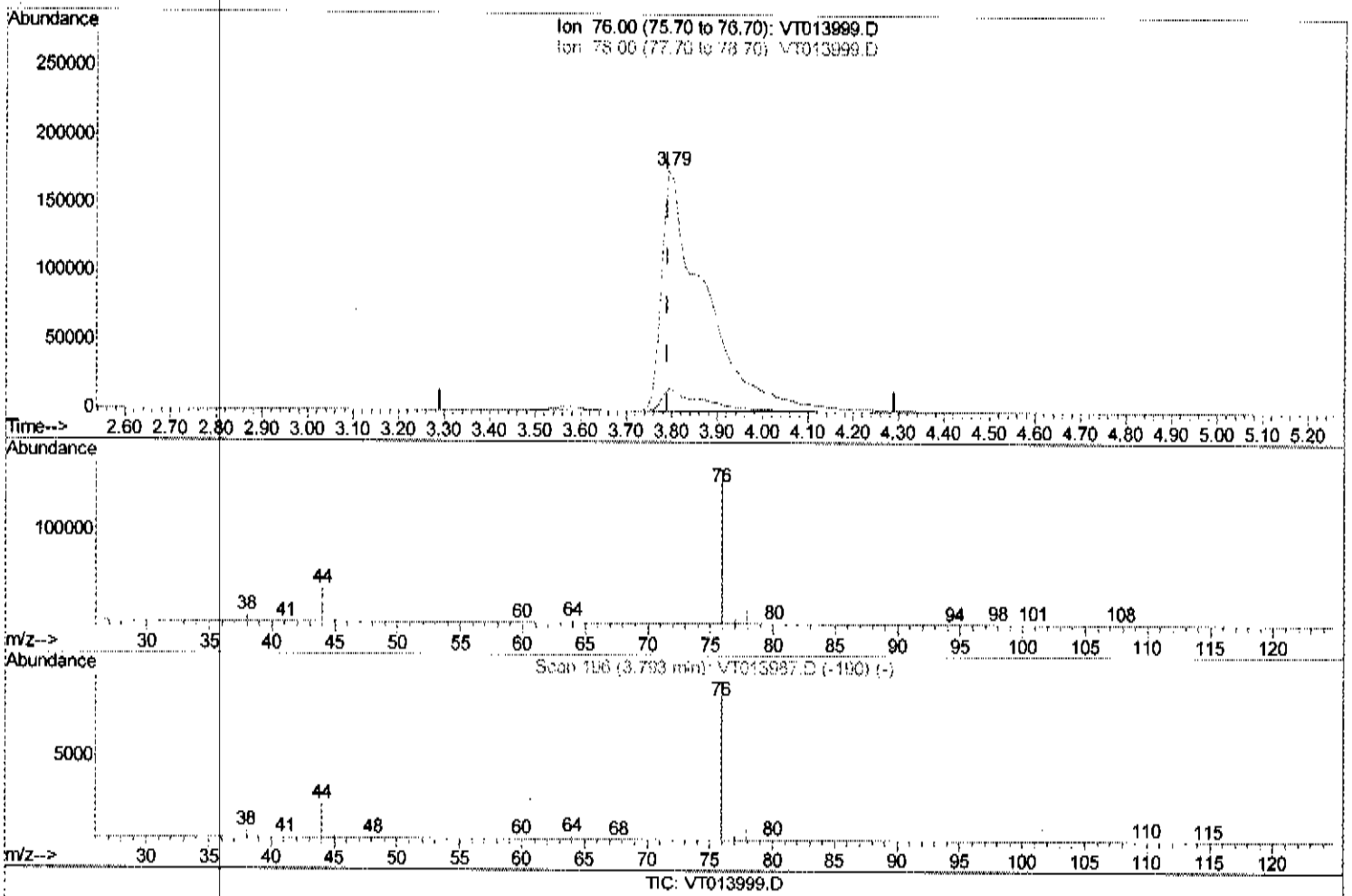

(14) Carbon disulfide (T)

3.792min (-0.000) 23.14ug/L m

response 1174643

Ion	Exp%	Act%
76.00	100	100
78.00	9.10	8.91
0.00	0.00	0.00
0.00	0.00	0.00

EY 5/10/2016

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 10 01:21:29 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02591

Manual Integrations APPROVED
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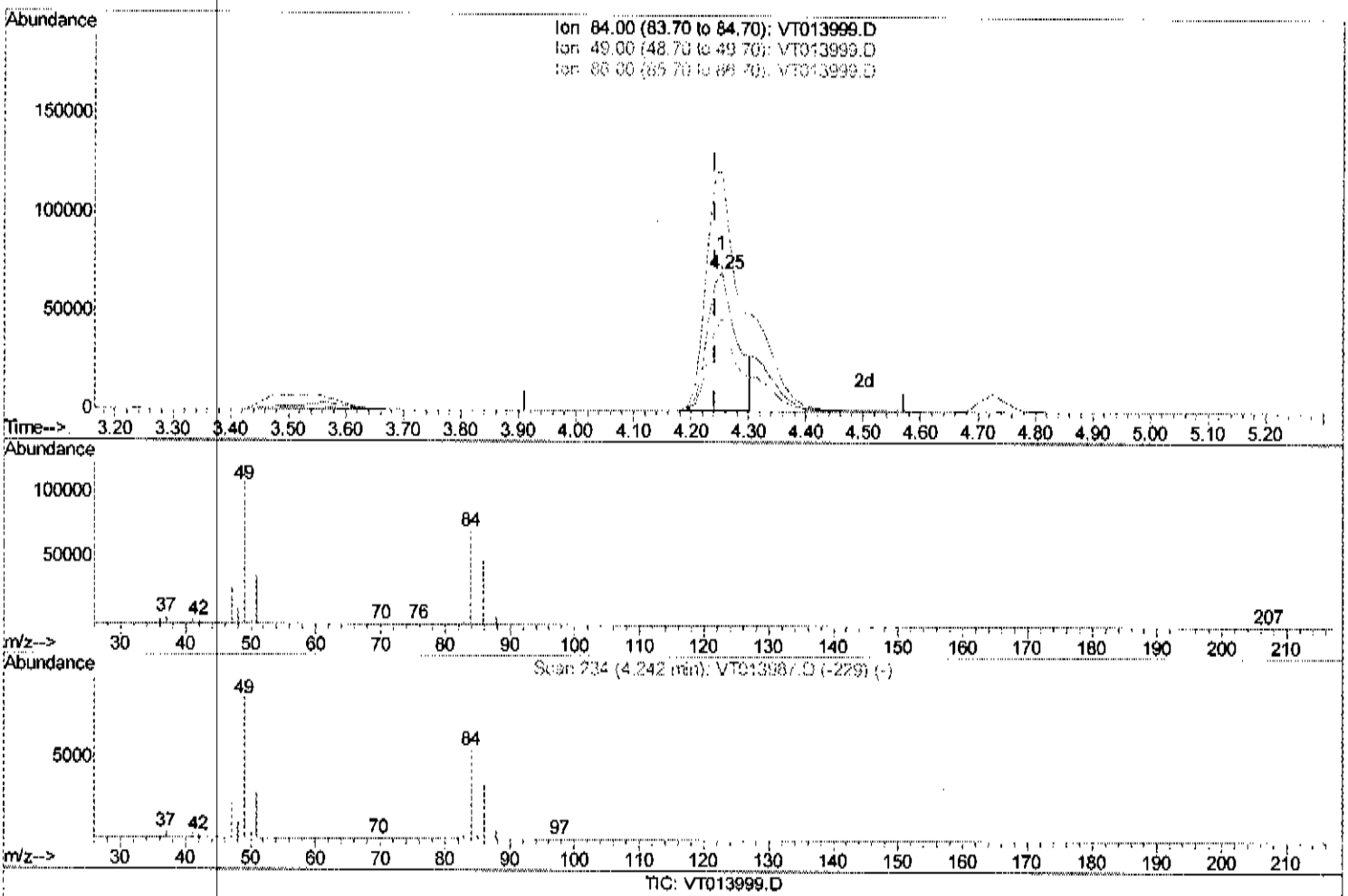

(16) Methylene chloride (T)

4.254min (+0.012) 17.41ug/L

response 254664

Ion	Exp%	Act%
84.00	100	100
49.00	166.80	172.02
86.00	64.20	66.90
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 10 01:21:29 2016
Quant Method : W:\HPCHEM1\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02591

Manual Integrations APPROVED
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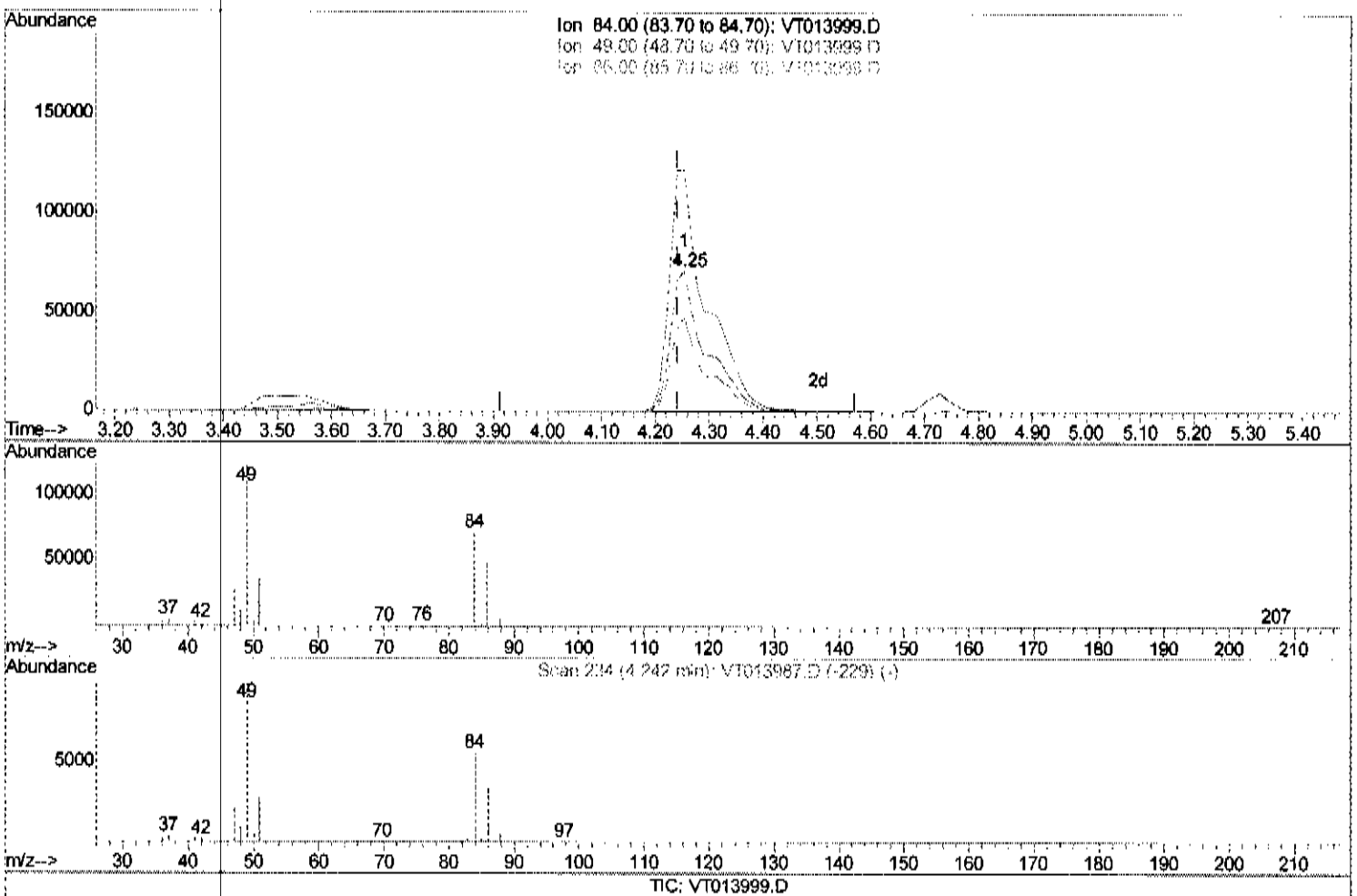

(16) Methylene chloride (T)

4.254min (+0.012) 22.62ug/L m

response 330828

Ion	Exp%	Act%
84.00	100	100
49.00	166.80	172.02
86.00	64.20	66.90
0.00	0.00	0.00

FY
5/10/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 10 01:57:46 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02591

Manual Integrations APPROVED
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5/10/2016 7:41:13 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1035713	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	861159	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	439055	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	483389	28.17	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 112.68%			
7) Chloroethane-d5	2.53	69	344467	27.76	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 111.04%			
10) 1,1-Dichloroethene-d2	3.47	63	933242m	26.44	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 105.76%			
20) 2-Butanone-d5	6.43	46	183825	45.02	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 90.04%			
24) Chloroform-d	7.07	84	747619	25.87	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 103.48%			
26) 1,2-Dichloroethane-d4	7.78	65	421661	24.89	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 99.56%			
29) Benzene-d6	7.74	84	1367430	25.38	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 101.52%			
33) 1,2-Dichloropropane-d6	8.80	67	409013	25.73	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 102.92%			
37) Toluene-d8	9.87	98	1246246	25.70	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 102.80%			
38) trans-1,3-Dichloropropene-	10.13	79	151988	24.66	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 98.64%			
39) 2-Hexanone-d5	10.48	63	127442	50.18	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 100.36%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	263693	24.08	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 96.32%			
60) 1,2-Dichlorobenzene-d4	13.41	152	377961	24.52	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 98.08%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	506002	23.92	ug/L	99
3) Chloromethane	1.93	50	564967	22.70	ug/L	98
5) Vinyl chloride	2.09	62	561452	23.59	ug/L	100
6) Bromomethane	2.43	94	276331	22.84	ug/L	97
8) Chloroethane	2.56	64	316957	24.12	ug/L	97
9) Trichlorofluoromethane	2.81	101	722615m	24.31	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	400842	24.08	ug/L	98
12) 1,1-Dichloroethene	3.48	96	355786m	23.40	ug/L	
13) Acetone	3.56	43	232790	35.46	ug/L	94
14) Carbon disulfide	3.79	76	1174643m	23.14	ug/L	
15) Methyl Acetate	4.04	43	191488	21.97	ug/L	96
16) Methylene chloride	4.25	84	330828m	22.62	ug/L	
17) Methyl tert-butyl Ether	4.73	73	662795	24.31	ug/L	97
18) trans-1,2-Dichloroethene	4.73	96	370402	24.18	ug/L	95
19) 1,1-Dichloroethane	5.54	63	813735	23.96	ug/L	98
21) 2-Butanone	6.54	43	255053	39.58	ug/L	100
22) cis-1,2-Dichloroethene	6.53	96	357577	24.47	ug/L	89

FY 5/10/2016

FY 5/10/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013999.D
Acq On : 9 May 2016 16:11
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 10 01:57:46 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02591

Manual Integrations APPROVED
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5/10/2016 7:41:13 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.92	128	127201	23.66	ug/L		95
25) Chloroform	7.11	83	704913	24.42	ug/L		99
27) 1,2-Dichloroethane	7.89	62	531856	24.22	ug/L	#	96
30) Cyclohexane	7.41	56	856135	24.60	ug/L		99
31) 1,1,1-Trichloroethane	7.32	97	654846	24.29	ug/L		98
32) Carbon tetrachloride	7.53	117	607730	24.87	ug/L		99
34) Benzene	7.79	78	1511829	23.76	ug/L		100
35) Trichloroethene	8.61	95	400404	24.24	ug/L		98
36) Methylcyclohexane	8.87	83	773770	24.03	ug/L		97
40) 1,2-Dichloropropane	8.89	63	375940	23.47	ug/L		100
41) Bromodichloromethane	9.18	83	470081	24.83	ug/L		100
42) cis-1,3-Dichloropropene	9.61	75	513730	24.68	ug/L		100
43) 4-Methyl-2-pentanone	9.76	43	517065	46.81	ug/L		98
44) Toluene	9.93	91	1519092	24.22	ug/L		97
45) trans-1,3-Dichloropropene	10.16	75	449322	25.15	ug/L		100
46) 1,1,2-Trichloroethane	10.34	97	202848	23.44	ug/L		99
47) Tetrachloroethene	10.42	164	286913	23.83	ug/L		96
49) 2-Hexanone	10.53	43	395689	42.72	ug/L		98
50) Dibromochloromethane	10.68	129	255309	24.44	ug/L		95
51) 1,2-Dibromoethane	10.79	107	198411	24.01	ug/L		94
52) Chlorobenzene	11.21	112	884291	24.13	ug/L		97
53) Ethylbenzene	11.29	91	1803492	24.32	ug/L		100
54) m,p-Xylene	11.40	106	645993	24.27	ug/L		99
55) o-xylene	11.73	106	625029	24.72	ug/L		94
56) Styrene	11.74	104	976679	24.25	ug/L		96
57) Isopropylbenzene	12.03	105	1837021	24.90	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	259128	23.57	ug/L		100
61) Bromoform	11.91	173	123680	21.70	ug/L		98
62) 1,3-Dichlorobenzene	13.06	146	678187	24.38	ug/L		98
63) 1,4-Dichlorobenzene	13.14	146	658946	22.95	ug/L		98
64) 1,2-Dichlorobenzene	13.42	146	597655	24.03	ug/L		98
65) 1,2-Dibromo-3-chloropropan	14.04	75	44390	22.57	ug/L		87
66) 1,2,4-trichlorobenzene	14.68	180	378005	25.10	ug/L		99
67) 1,2,3-Trichlorobenzene	15.07	180	319919	25.03	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

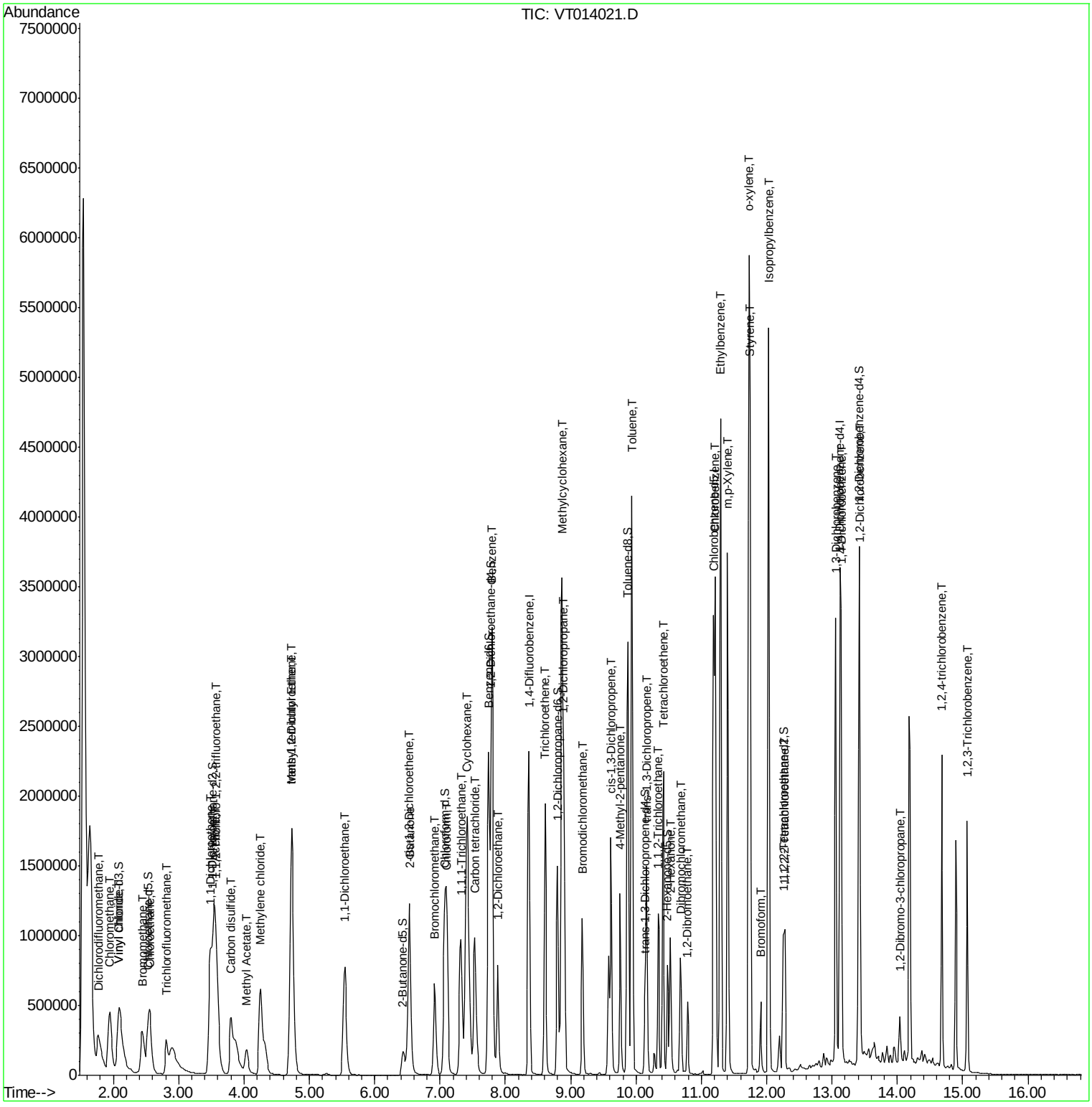
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014021.D
Acq On : 10 May 2016 2:38
Operator : FY/SY
Sample : VSTDCCC025EC
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 36 Sample Multiplier: 1

Quant Time: May 10 04:58:31 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02592

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:43:44 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014021.D
Acq On : 10 May 2016 2:38
Operator : FY/SY
Sample : VSTDCCC025EC
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 36 Sample Multiplier: 1

Quant Time: May 10 04:58:31 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02592

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:43:44 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1856434	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	1451862	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	696016	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.09	65	759235	24.68	ug/L	0.01
Spiked Amount 25.000	Range 30 - 150		Recovery = 98.72%			
7) Chloroethane-d5	2.54	69	546872	24.59	ug/L	0.01
Spiked Amount 25.000	Range 30 - 150		Recovery = 98.36%			
10) 1,1-Dichloroethene-d2	3.52	63	1329970m	21.03	ug/L	0.05
Spiked Amount 25.000	Range 45 - 110		Recovery = 84.12%			
20) 2-Butanone-d5	6.43	46	350543	47.89	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 95.78%			
24) Chloroform-d	7.07	84	1091237	21.07	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 84.28%			
26) 1,2-Dichloroethane-d4	7.78	65	585624	19.28	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 77.12%			
29) Benzene-d6	7.74	84	2317490	25.52	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 102.08%			
33) 1,2-Dichloropropane-d6	8.80	67	696613	26.00	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 104.00%			
37) Toluene-d8	9.87	98	2022639	24.74	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 98.96%			
38) trans-1,3-Dichloropropene-	10.13	79	233701	22.49	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 89.96%			
39) 2-Hexanone-d5	10.48	63	243042	56.76	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 113.52%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	424820	23.01	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 92.04%			
60) 1,2-Dichlorobenzene-d4	13.41	152	586604	24.01	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 96.04%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	782092	20.63	ug/L	99
3) Chloromethane	1.95	50	939494	21.06	ug/L	99
5) Vinyl chloride	2.09	62	926630	21.72	ug/L	99
6) Bromomethane	2.44	94	458823	21.15	ug/L	99
8) Chloroethane	2.56	64	524828	22.28	ug/L	99
9) Trichlorofluoromethane	2.81	101	1050597m	19.72	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	682488	22.88	ug/L	98
12) 1,1-Dichloroethene	3.48	96	617028m	22.64	ug/L	
13) Acetone	3.56	43	311647	26.48	ug/L	97
14) Carbon disulfide	3.80	76	2049455m	22.53	ug/L	
15) Methyl Acetate	4.04	43	366454	23.46	ug/L	99
16) Methylene chloride	4.25	84	597832	22.80	ug/L	99
17) Methyl tert-butyl Ether	4.73	73	1182584	24.20	ug/L	99
18) trans-1,2-Dichloroethene	4.73	96	662535	24.13	ug/L	98
19) 1,1-Dichloroethane	5.54	63	1394603	22.91	ug/L	99
21) 2-Butanone	6.54	43	427297	37.00	ug/L	99
22) cis-1,2-Dichloroethene	6.53	96	640342	24.45	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014021.D
Acq On : 10 May 2016 2:38
Operator : FY/SY
Sample : VSTDCCC025EC
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 36 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VSTD02592

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:43:44 PM

Quant Time: May 10 04:58:31 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.92	128	226965	23.55	ug/L	97
25) Chloroform	7.11	83	1094932	21.17	ug/L	99
27) 1,2-Dichloroethane	7.89	62	754810	19.17	ug/L	99
30) Cyclohexane	7.41	56	1598230	27.24	ug/L	99
31) 1,1,1-Trichloroethane	7.32	97	991221	21.81	ug/L	98
32) Carbon tetrachloride	7.53	117	883594	21.45	ug/L	99
34) Benzene	7.79	78	2715252	25.31	ug/L	100
35) Trichloroethene	8.61	95	679231	24.39	ug/L	99
36) Methylcyclohexane	8.87	83	1411389	26.00	ug/L	99
40) 1,2-Dichloropropane	8.89	63	688298	25.49	ug/L	100
41) Bromodichloromethane	9.18	83	705211	22.09	ug/L	100
42) cis-1,3-Dichloropropene	9.61	75	828038	23.60	ug/L	99
43) 4-Methyl-2-pentanone	9.76	43	909593	48.85	ug/L	98
44) Toluene	9.93	91	2596425	24.56	ug/L	97
45) trans-1,3-Dichloropropene	10.16	75	682670	22.67	ug/L	100
46) 1,1,2-Trichloroethane	10.34	97	348915	23.91	ug/L	99
47) Tetrachloroethene	10.42	164	482742	23.79	ug/L	97
49) 2-Hexanone	10.53	43	642503	41.14	ug/L	99
50) Dibromochloromethane	10.68	129	394893	22.42	ug/L	96
51) 1,2-Dibromoethane	10.79	107	330692	23.74	ug/L	95
52) Chlorobenzene	11.21	112	1477155	23.91	ug/L	99
53) Ethylbenzene	11.29	91	2951007	23.61	ug/L	99
54) m,p-Xylene	11.40	106	1072802	23.91	ug/L	98
55) o-xylene	11.73	106	1036893	24.33	ug/L	90
56) Styrene	11.74	104	1579142	23.25	ug/L	99
57) Isopropylbenzene	12.03	105	2955872	23.76	ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.28	83	429255	23.16	ug/L	99
61) Bromoform	11.91	173	205476	22.75	ug/L	98
62) 1,3-Dichlorobenzene	13.06	146	1077533	24.43	ug/L	98
63) 1,4-Dichlorobenzene	13.14	146	1035431	22.75	ug/L	97
64) 1,2-Dichlorobenzene	13.42	146	941184	23.87	ug/L	97
65) 1,2-Dibromo-3-chloropropan	14.04	75	66758	21.42	ug/L	99
66) 1,2,4-trichlorobenzene	14.68	180	588894	24.67	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	492323	24.30	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014021.D
Acq On : 10 May 2016 2:38
Operator : FY/SY
Sample : VSTDCCC025EC
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 36 Sample Multiplier: 1

Quant Time: May 10 04:58:31 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02592

Manual Integrations APPROVED
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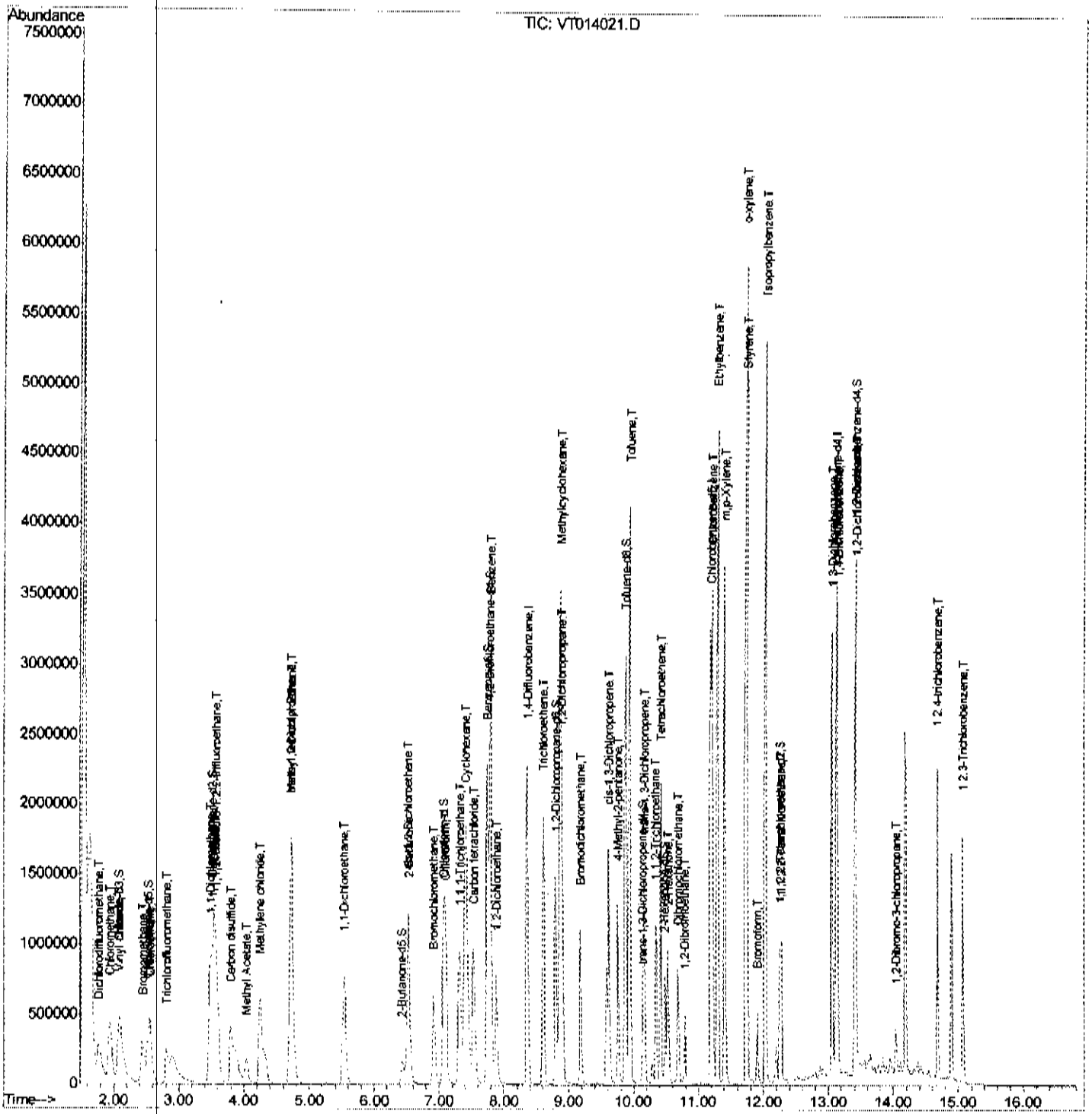

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014021.D
Acq On : 10 May 2016 2:38
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 36 Sample Multiplier: 1

Quant Time: May 10 04:29:42 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02592

Manual Integrations APPROVED
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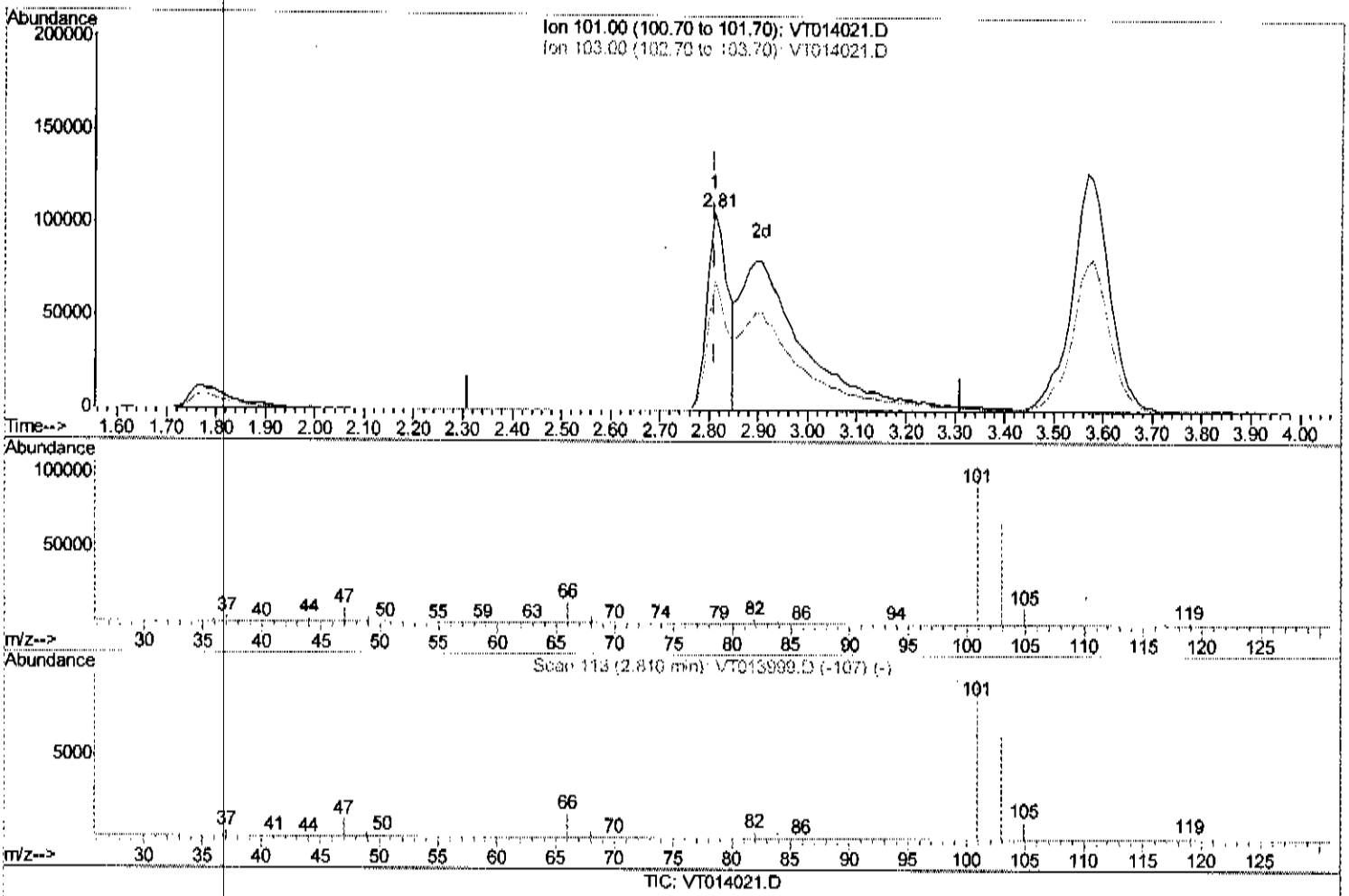

TIC: VT014021.D

(9) Trichlorofluoromethane (T)

2.810min (+0.000) 5.88ug/L

response 313562

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	64.17#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014021.D
Acq On : 10 May 2016 2:38
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 36 Sample Multiplier: 1

Quant Time: May 10 04:29:42 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02592

Manual Integrations APPROVED
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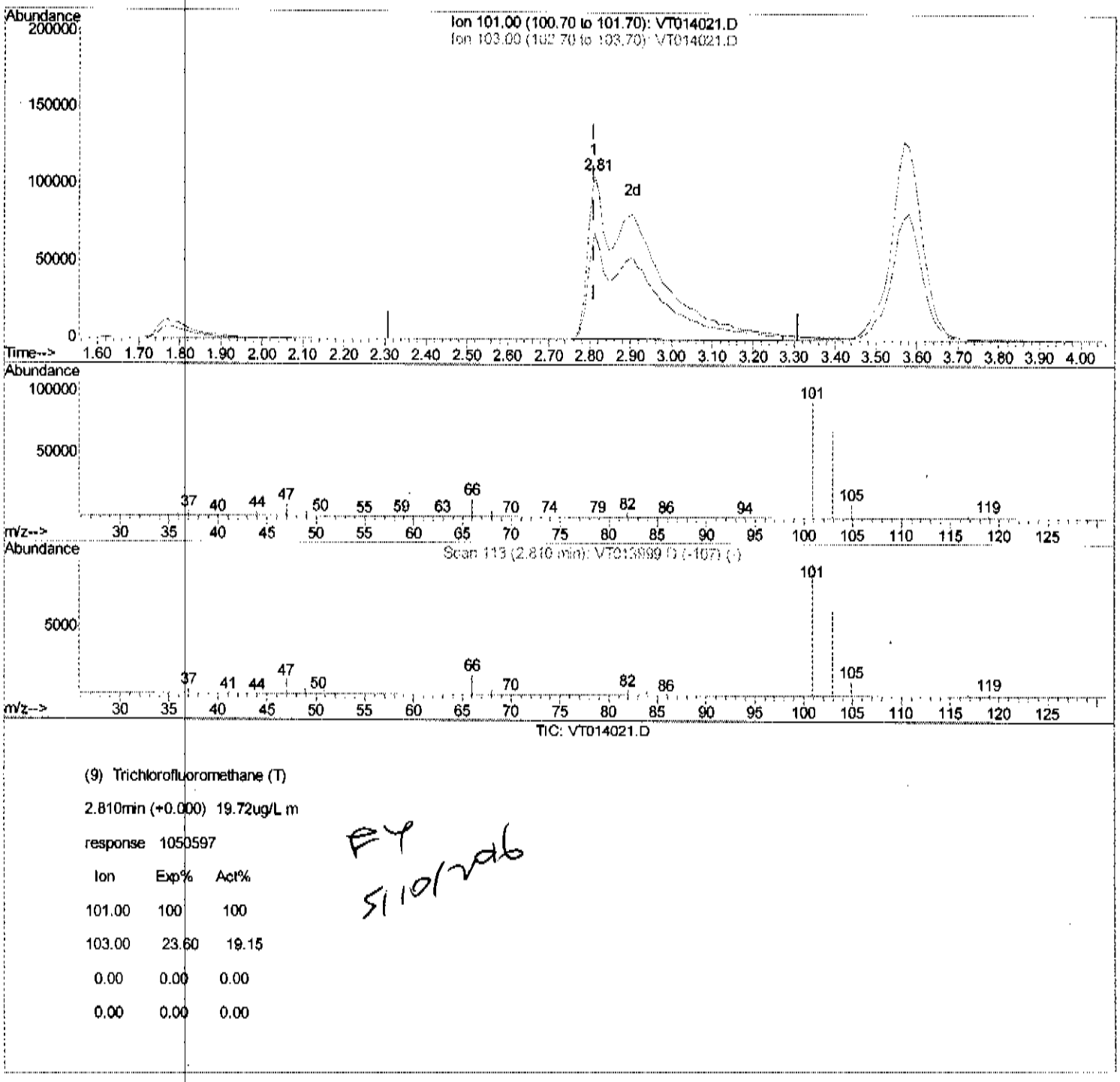

(9) Trichlorofluoromethane (T)

2.810min (+0.000) 19.72ug/L m

response 1050597

Ion	Exp%	Act%
101.00	100	100
103.00	23.60	19.15
0.00	0.00	0.00
0.00	0.00	0.00

FY
5/10/16

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014021.D
Acq On : 10 May 2016 2:38
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 36 Sample Multiplier: 1

Quant Time: May 10 04:29:42 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02592

Manual Integrations APPROVED
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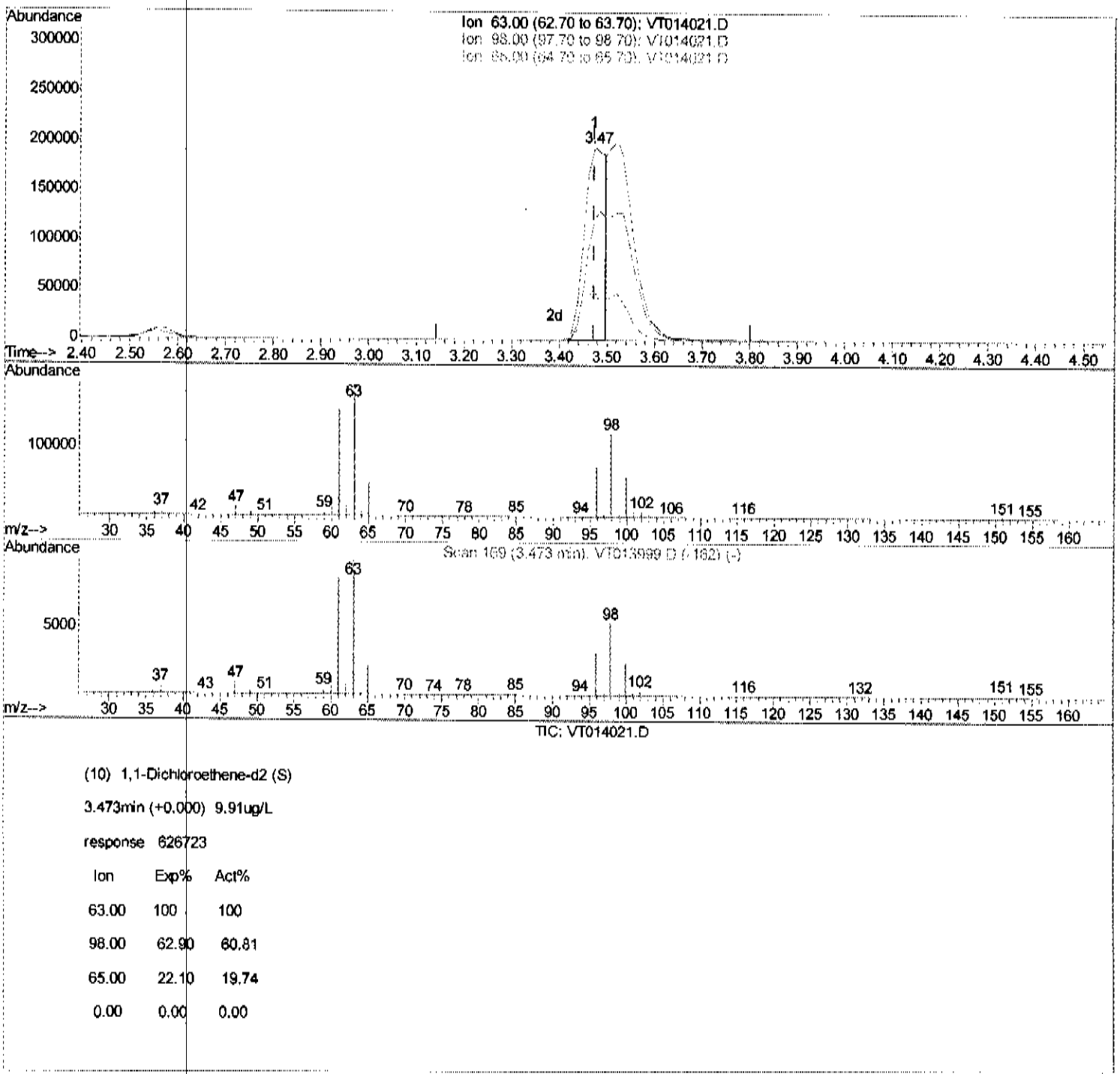
5/10/2016 7:43:44 PM



(10) 1,1-Dichloroethene-d2 (S)

3.473min (+0.000) 9.91ug/L

response 626723

Ion	Exp%	Act%
63.00	100	100
98.00	62.90	60.81
65.00	22.10	19.74
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014021.D
Acq On : 10 May 2016 2:38
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 36 Sample Multiplier: 1

Quant Time: May 10 04:29:42 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02592

Manual Integrations APPROVED
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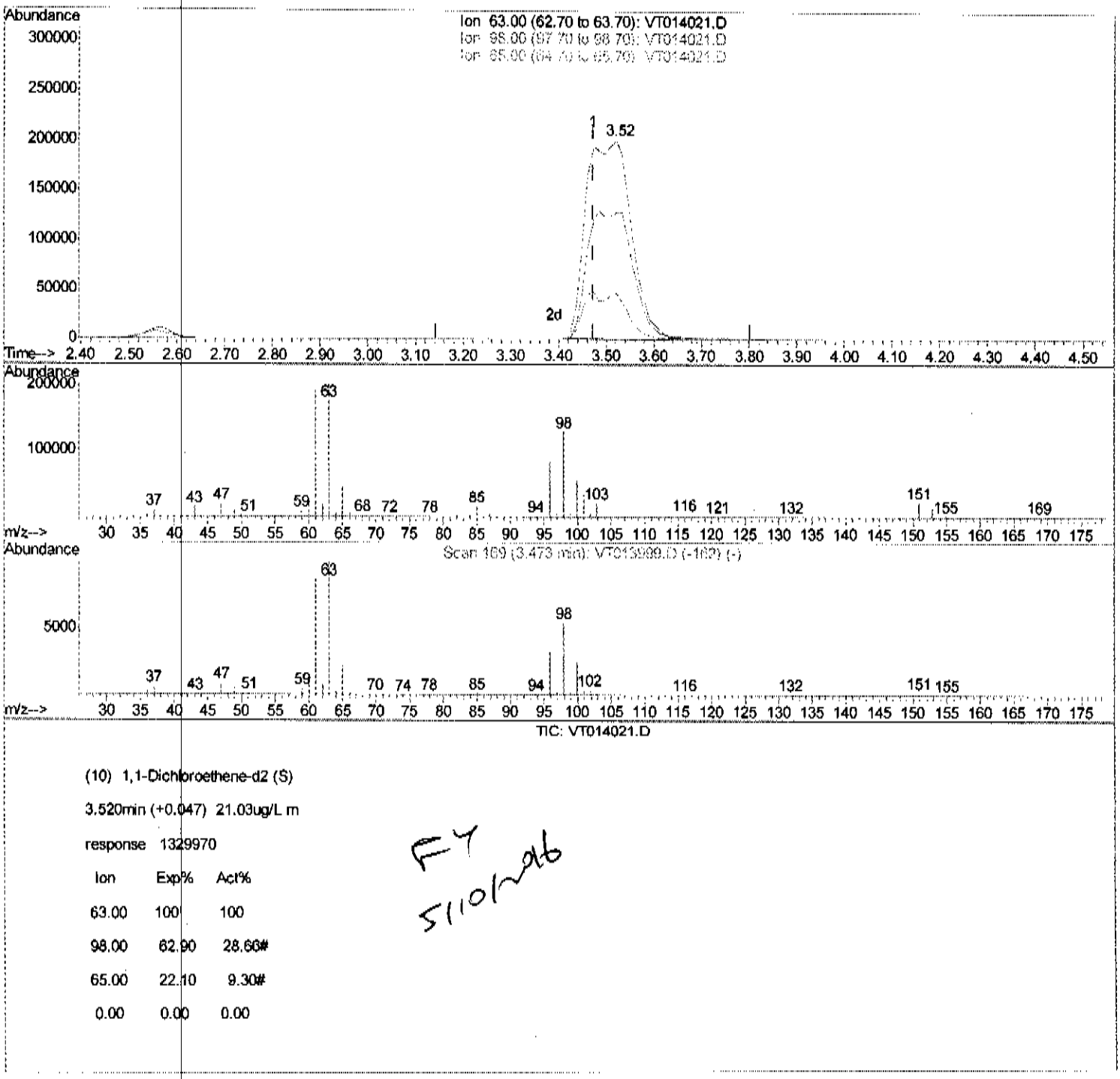

(10) 1,1-Dichloroethene-d2 (S)

3.520min (+0.047) 21.03ug/L m

response 1329970

Ion	Exp%	Act%
63.00	100	100
98.00	62.90	28.66#
65.00	22.10	9.30#
0.00	0.00	0.00

FY 5/10/16

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014021.D
Acq On : 10 May 2016 2:38
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 36 Sample Multiplier: 1

Quant Time: May 10 04:29:42 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02592

Manual Integrations APPROVED
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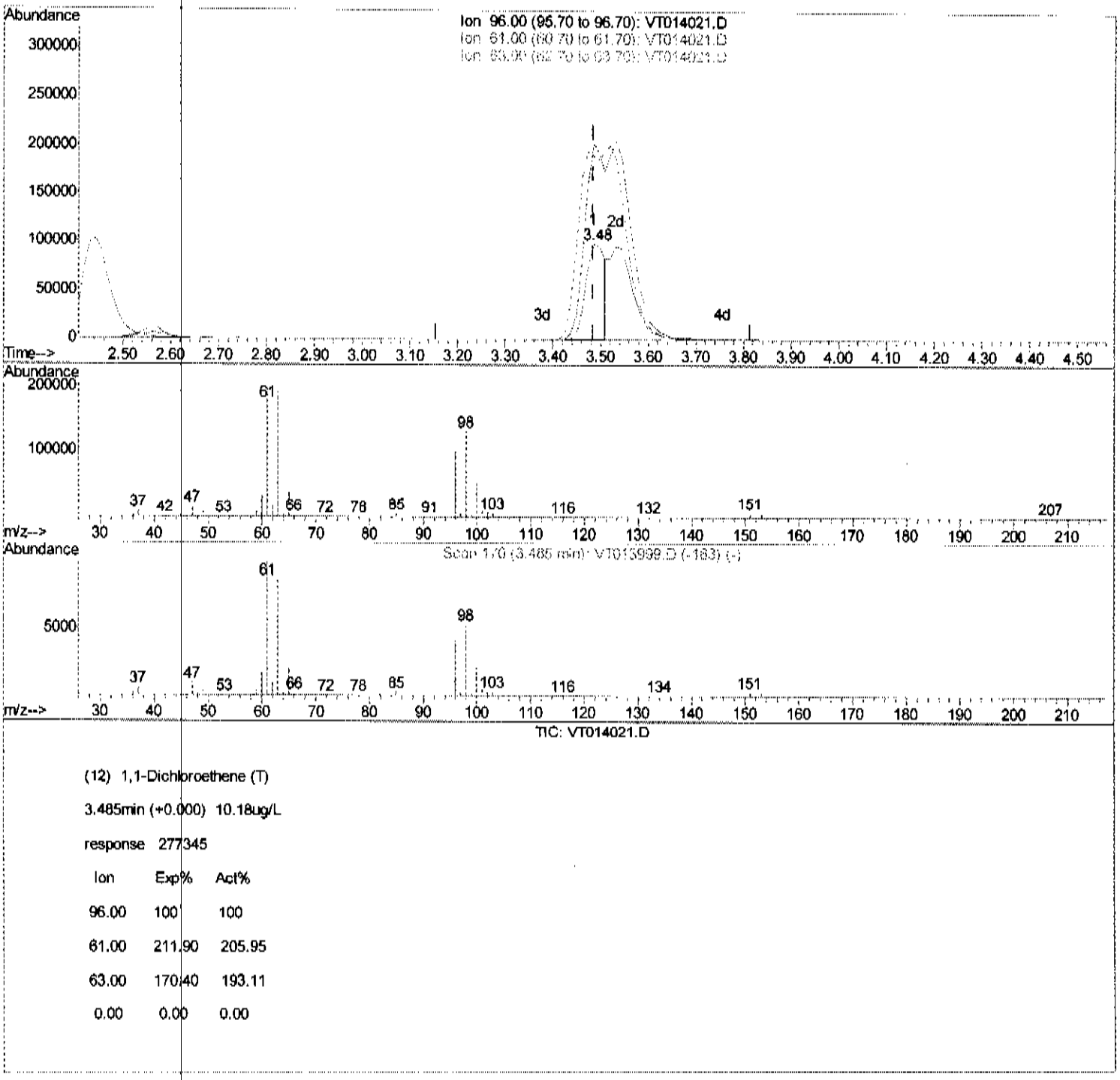
5/10/2016 7:43:44 PM



Scan 170 (3.485 min): VT013999.D (-183) (-)

TIC: VT014021.D

(12) 1,1-Dichloroethene (T)

3.485min (+0.000) 10.18ug/L

response 277345

Ion	Exp%	Act%
96.00	100	100
61.00	211.90	205.95
63.00	170.40	193.11
0.00	0.00	0.00

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014021.D
Acq On : 10 May 2016 2:38
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 36 Sample Multiplier: 1

Quant Time: May 10 04:29:42 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02592

Manual Integrations APPROVED
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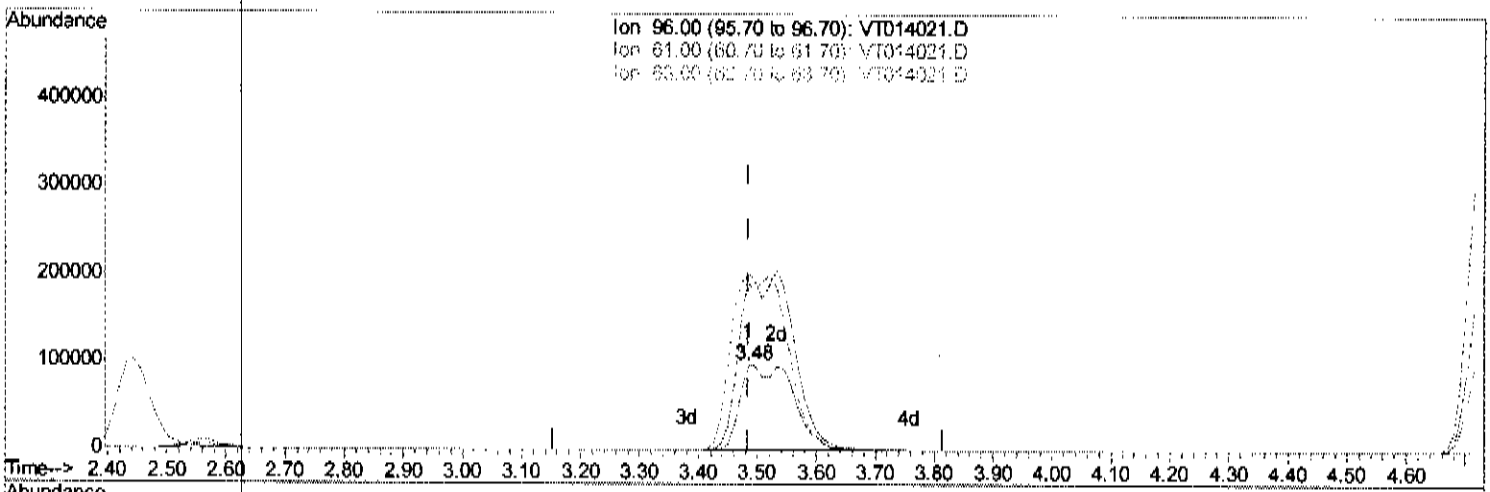
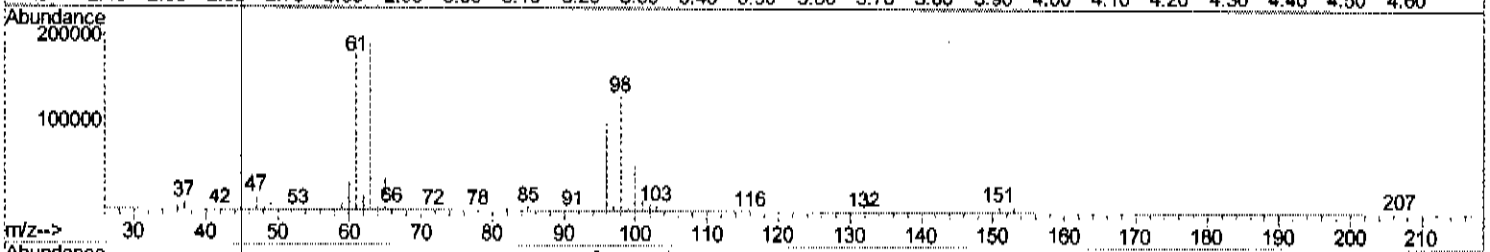
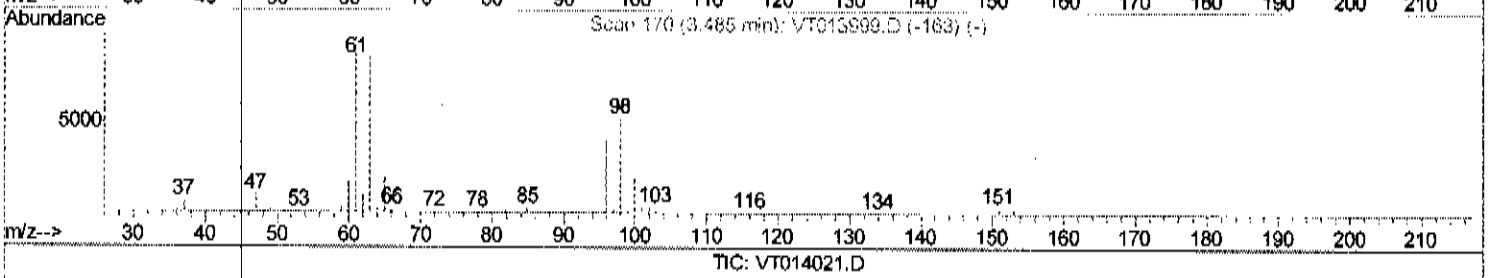
5/10/2016 7:43:44 PM







(12) 1,1-Dichloroethene (T)

3.485min (+0.000) 22.64ug/L m

response 617028

Ion	Exp%	Act%
96.00	100	100
61.00	211.90	205.95
63.00	170.40	193.11
0.00	0.00	0.00

ET
5/10/2016

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014021.D
Acq On : 10 May 2016 2:38
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 36 Sample Multiplier: 1

Quant Time: May 10 04:29:42 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02592

Manual Integrations APPROVED
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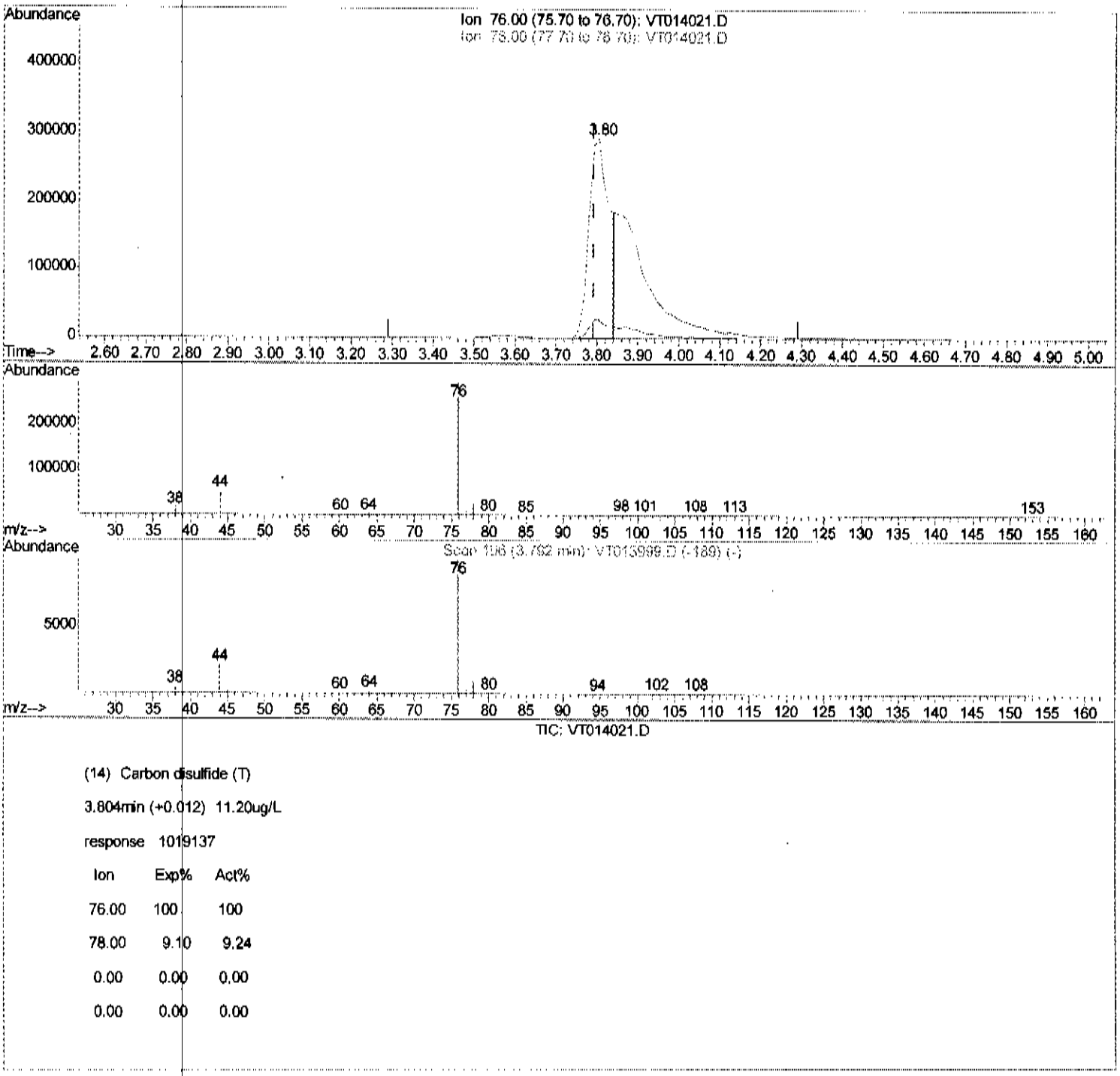
5/10/2016 7:43:44 PM



(14) Carbon disulfide (T)

3.804min (+0.012) 11.20ug/L

response 1019137

Ion	Exp%	Act%
76.00	100	100
78.00	9.10	9.24
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014021.D
Acq On : 10 May 2016 2:38
Operator : FY/SY
Sample : VSTDCCC025
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 36 Sample Multiplier: 1

Quant Time: May 10 04:29:42 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VSTD02592

Manual Integrations APPROVED
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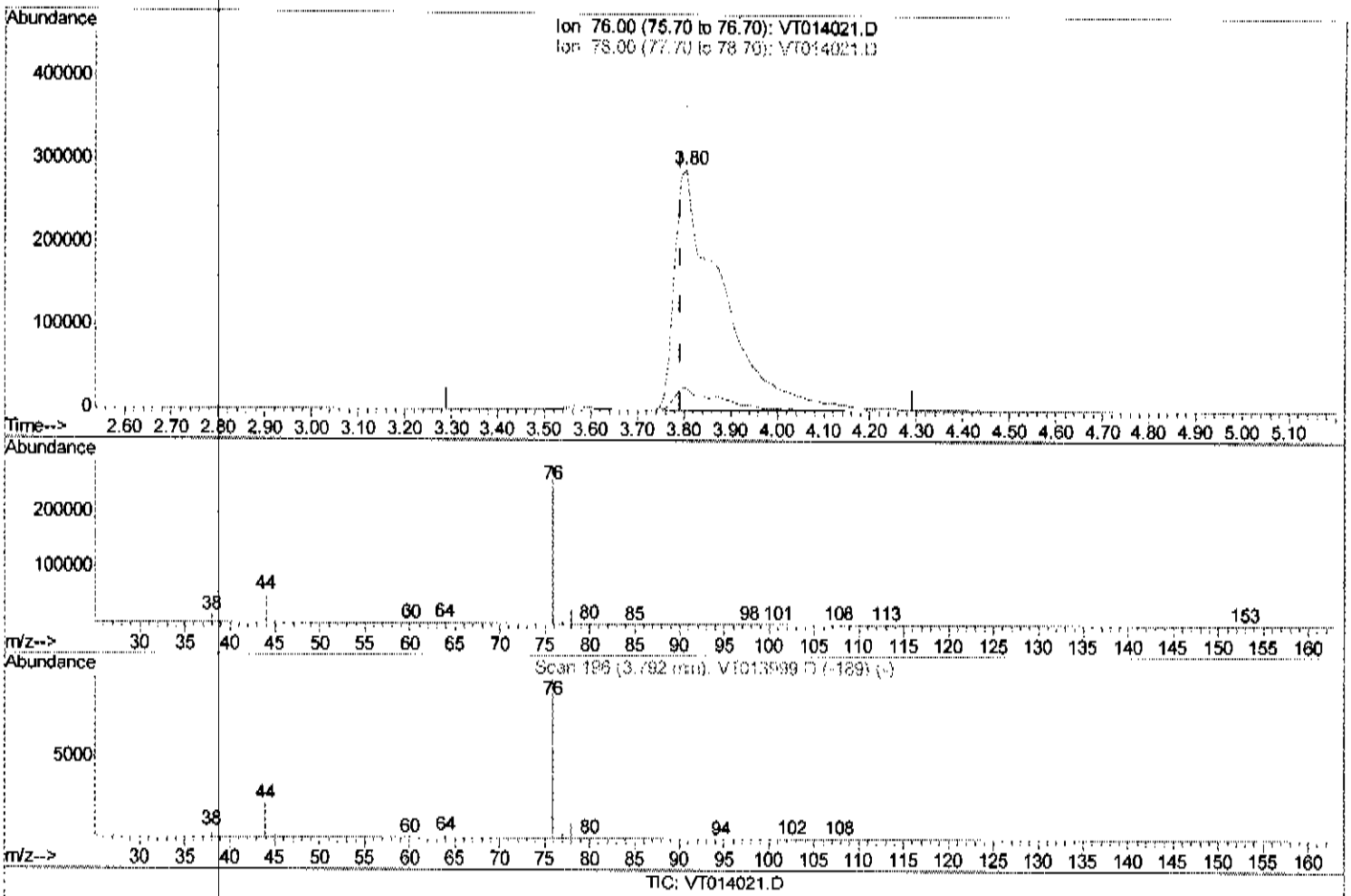
5/10/2016 7:43:44 PM



(14) Carbon disulfide (T)

3.804min (+0.012) 22.53ug/L m

response 2049455

Ion	Exp%	Act%
76.00	100	100
78.00	9.10	9.24
0.00	0.00	0.00
0.00	0.00	0.00

FY 5/10/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014021.D
Acq On : 10 May 2016 2:38
Operator : FY/SY
Sample : VSTDCCC025EC
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 36 Sample Multiplier: 1

Quant Time: May 10 04:58:31 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02592

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:43:44 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1856434	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	1451862	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	696016	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.09	65	759235	24.68	ug/L	0.01
Spiked Amount 25.000	Range 30 - 150		Recovery = 98.72%			
7) Chloroethane-d5	2.54	69	546872	24.59	ug/L	0.01
Spiked Amount 25.000	Range 30 - 150		Recovery = 98.36%			
10) 1,1-Dichloroethene-d2	3.52	63	1329970m	21.03	ug/L	0.05
Spiked Amount 25.000	Range 45 - 110		Recovery = 84.12%			
20) 2-Butanone-d5	6.43	46	350543	47.89	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 95.78%			
24) Chloroform-d	7.07	84	1091237	21.07	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 84.28%			
26) 1,2-Dichloroethane-d4	7.78	65	585624	19.28	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 77.12%			
29) Benzene-d6	7.74	84	2317490	25.52	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 102.08%			
33) 1,2-Dichloropropane-d6	8.80	67	696613	26.00	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 104.00%			
37) Toluene-d8	9.87	98	2022639	24.74	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 98.96%			
38) trans-1,3-Dichloropropene-	10.13	79	233701	22.49	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 89.96%			
39) 2-Hexanone-d5	10.48	63	243042	56.76	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 113.52%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	424820	23.01	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 92.04%			
60) 1,2-Dichlorobenzene-d4	13.41	152	586604	24.01	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 96.04%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.77	85	782092	20.63	ug/L	99
3) Chloromethane	1.95	50	939494	21.06	ug/L	99
5) Vinyl chloride	2.09	62	926630	21.72	ug/L	99
6) Bromomethane	2.44	94	458823	21.15	ug/L	99
8) Chloroethane	2.56	64	524828	22.28	ug/L	99
9) Trichlorofluoromethane	2.81	101	1050597m	19.72	ug/L	
11) 1,1,2-Trichloro-1,2,2-trif	3.57	101	682488	22.88	ug/L	98
12) 1,1-Dichloroethene	3.48	96	617028m	22.64	ug/L	
13) Acetone	3.56	43	311647	26.48	ug/L	97
14) Carbon disulfide	3.80	76	2049455m	22.53	ug/L	
15) Methyl Acetate	4.04	43	366454	23.46	ug/L	99
16) Methylene chloride	4.25	84	597832	22.80	ug/L	99
17) Methyl tert-butyl Ether	4.73	73	1182584	24.20	ug/L	99
18) trans-1,2-Dichloroethene	4.73	96	662535	24.13	ug/L	98
19) 1,1-Dichloroethane	5.54	63	1394603	22.91	ug/L	99
21) 2-Butanone	6.54	43	427297	37.00	ug/L	99
22) cis-1,2-Dichloroethene	6.53	96	640342	24.45	ug/L	99

FY 5/10/2016

FY 5/10/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014021.D
Acq On : 10 May 2016 2:30
Operator : FY/SY
Sample : VSTDCCC025EC
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 36 Sample Multiplier: 1

Quant Time: May 10 04:58:31 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VSTD02592

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:43:44 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.92	128	226965	23.55	ug/L	97
25) Chloroform	7.11	83	1094932	21.17	ug/L	99
27) 1,2-Dichloroethane	7.89	62	754810	19.17	ug/L	99
30) Cyclohexane	7.41	56	1598230	27.24	ug/L	99
31) 1,1,1-Trichloroethane	7.32	97	991221	21.81	ug/L	98
32) Carbon tetrachloride	7.53	117	883594	21.45	ug/L	99
34) Benzene	7.79	78	2715252	25.31	ug/L	100
35) Trichloroethene	8.61	95	679231	24.39	ug/L	99
36) Methylcyclohexane	8.87	83	1411389	26.00	ug/L	99
40) 1,2-Dichloropropane	8.89	63	688298	25.49	ug/L	100
41) Bromodichloromethane	9.18	83	705211	22.09	ug/L	100
42) cis-1,3-Dichloropropene	9.61	75	828038	23.60	ug/L	99
43) 4-Methyl-2-pentanone	9.76	43	909593	48.85	ug/L	98
44) Toluene	9.93	91	2596425	24.56	ug/L	97
45) trans-1,3-Dichloropropene	10.16	75	682670	22.67	ug/L	100
46) 1,1,2-Trichloroethane	10.34	97	348915	23.91	ug/L	99
47) Tetrachloroethene	10.42	164	482742	23.79	ug/L	97
49) 2-Hexanone	10.53	43	642503	41.14	ug/L	99
50) Dibromochloromethane	10.68	129	394893	22.42	ug/L	96
51) 1,2-Dibromoethane	10.79	107	330692	23.74	ug/L	95
52) Chlorobenzene	11.21	112	1477155	23.91	ug/L	99
53) Ethylbenzene	11.29	91	2951007	23.61	ug/L	99
54) m,p-Xylene	11.40	106	1072802	23.91	ug/L	98
55) o-xylene	11.73	106	1036893	24.33	ug/L	90
56) Styrene	11.74	104	1579142	23.25	ug/L	99
57) Isopropylbenzene	12.03	105	2955872	23.76	ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.28	83	429255	23.16	ug/L	99
61) Bromoform	11.91	173	205476	22.75	ug/L	98
62) 1,3-Dichlorobenzene	13.06	146	1077533	24.43	ug/L	98
63) 1,4-Dichlorobenzene	13.14	146	1035431	22.75	ug/L	97
64) 1,2-Dichlorobenzene	13.42	146	941184	23.87	ug/L	97
65) 1,2-Dibromo-3-chloropropan	14.04	75	66758	21.42	ug/L	99
66) 1,2,4-trichlorobenzene	14.68	180	588894	24.67	ug/L	99
67) 1,2,3-Trichlorobenzene	15.07	180	492323	24.30	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

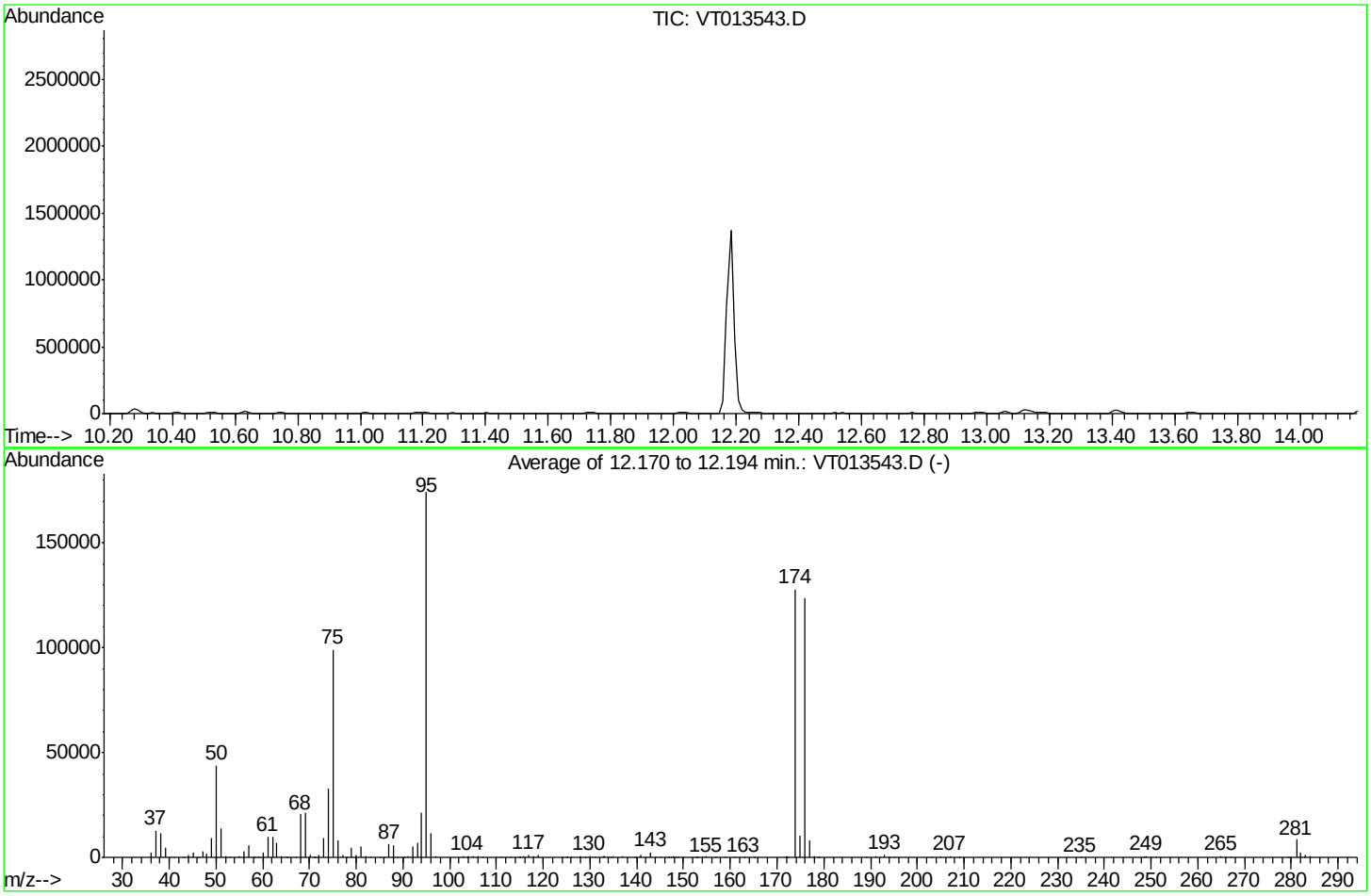
BFB

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT041216\
Data File : VT013543.D
Acq On : 12 Apr 2016 12:19
Operator : FY/SY
Sample : BFB96
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : BFB96

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Title : VOC Analysis
Last Update : Fri Apr 22 01:01:54 2016



AutoFind: Scans 904, 905, 906; Background Corrected with Scan 901

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.1	43739	PASS
75	95	30	80	56.9	99154	PASS
95	95	100	100	100.0	174258	PASS
96	95	5	9	6.8	11774	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	73.4	127880	PASS
175	174	5	9	8.1	10388	PASS
176	174	95	101	96.6	123586	PASS
177	176	5	9	6.6	8215	PASS

Scan 901 (12.135 min): VT013543.D
BFB96

m/z	Abundance
39.90	376.0
44.10	401.0
191.10	170.0
193.20	156.0
281.10	528.0
282.00	166.0

Instrument :
MSVOA_T
ClientSampleId :
BFB96

Scan 904 (12.170 min): VT013543.D
BFB96

Instrument :
MSVOA_T
ClientSampleId :
BFB96

m/z	Abundance
36.00	3040.0
37.10	16472.0
38.10	13747.0
39.10	5638.0
40.00	412.0
41.10	378.0
43.10	444.0
44.00	2099.0
45.10	2315.0
46.20	302.0
47.10	2930.0
48.00	1578.0
49.10	11283.0
50.00	50976.0
51.10	15808.0
52.00	683.0
53.00	172.0
55.10	642.0
56.00	3605.0
57.10	7252.0
58.00	431.0
59.00	166.0
60.10	2195.0
61.10	10752.0
62.10	11057.0
63.00	7788.0
64.00	949.0
65.00	570.0
68.00	22392.0
69.00	22800.0
70.10	1509.0
70.90	265.0
72.10	1003.0
73.00	9338.0
74.00	35440.0
75.00	104040.0
76.10	8247.0
77.00	1142.0
78.00	689.0
78.90	4957.0
80.00	1178.0
81.00	5190.0
81.90	1029.0
87.00	6210.0
88.00	5392.0
90.30	193.0
91.00	487.0
92.00	5323.0
93.00	6690.0
94.00	21248.0
95.00	168576.0
96.00	11837.0
97.00	468.0
103.00	185.0
103.80	627.0
104.00	631.0
104.90	349.0
105.90	757.0
107.00	220.0
110.00	156.0
110.90	184.0
111.90	152.0
113.00	226.0
114.90	312.0
115.80	645.0
117.00	917.0
117.90	455.0
119.00	1025.0
124.80	167.0
127.80	337.0
129.00	236.0
130.00	559.0
130.90	260.0
132.90	307.0
134.40	212.0
134.90	358.0
136.80	170.0
140.80	1482.0
142.90	1479.0
144.10	169.0
145.00	169.0
145.90	184.0
147.80	218.0
148.20	241.0
148.90	174.0
150.00	262.0
153.10	234.0
154.80	173.0
156.90	161.0
159.00	231.0
172.00	898.0
174.00	73936.0

174.90	6049.0
175.90	69456.0
177.00	4975.0
178.00	267.0
191.00	221.0
192.90	344.0
207.10	191.0
249.20	160.0
265.00	156.0
281.00	1534.0
282.10	377.0
282.80	226.0

Instrument :
MSVOA_T
ClientSampleId :
BFB96

Scan 905 (12.182 min): VT013543.D
BFB96

Instrument :
MSVOA_T
ClientSampleId :
BFB96

m/z	Abundance
36.10	3022.0
37.10	17984.0
38.10	16367.0
39.10	6043.0
40.00	370.0
41.00	166.0
41.20	167.0
43.10	221.0
44.10	1940.0
45.10	3107.0
47.10	4345.0
48.00	2083.0
49.00	12868.0
50.10	63984.0
51.10	19272.0
52.00	682.0
55.00	886.0
56.10	4647.0
57.10	8199.0
57.90	311.0
59.10	295.0
60.10	3082.0
61.00	14726.0
62.10	14077.0
63.10	10133.0
64.10	872.0
65.20	376.0
67.00	759.0
68.00	30480.0
69.00	31648.0
70.00	2136.0
71.20	190.0
72.00	1815.0
73.00	13626.0
74.00	48232.0
75.00	148032.0
76.10	12699.0
77.00	1517.0
78.90	6441.0
79.90	2056.0
80.90	7455.0
82.00	1139.0
83.00	206.0
85.00	193.0
86.00	342.0
87.00	9878.0
88.00	8776.0
90.90	1008.0
92.00	7563.0
93.00	9988.0
94.00	31888.0
95.00	268352.0
96.00	18072.0
96.90	465.0
102.90	422.0
103.90	1227.0
105.00	506.0
105.90	917.0
106.90	271.0
109.90	420.0
111.00	239.0
111.90	288.0
113.00	203.0
115.10	292.0
115.90	884.0
116.90	1954.0
118.00	927.0
119.00	1601.0
124.10	158.0
124.80	317.0
125.00	294.0
126.00	259.0
127.90	898.0
128.90	403.0
130.00	928.0
131.00	461.0
132.90	1185.0
133.90	294.0
135.00	629.0
136.90	561.0
139.90	276.0
141.00	2880.0
141.90	421.0
143.00	3117.0
143.90	184.0
145.00	221.0
146.00	313.0
146.70	279.0
147.90	593.0
148.90	245.0
149.90	296.0
152.80	204.0

153.00	192.0
153.90	151.0
154.90	894.0
156.90	521.0
158.80	283.0
160.90	482.0
163.00	366.0
165.00	158.0
172.20	917.0
174.00	206400.0
175.00	17640.0
176.00	202304.0
176.90	13490.0
178.00	553.0
178.90	272.0
191.10	1129.0
191.90	212.0
193.00	1880.0
193.80	563.0
195.00	231.0
205.00	153.0
207.10	835.0
235.00	189.0
248.30	171.0
249.00	581.0
250.10	219.0
250.90	326.0
265.00	803.0
266.00	267.0
267.00	260.0
279.40	169.0
281.10	8078.0
282.10	2396.0
283.10	1586.0
284.10	478.0

Instrument :
MSVOA_T
ClientSampleId :
BFB96

Scan 906 (12.194 min): VT013543.D
BFB96

m/z	Abundance
36.10	864.0
37.10	3880.0
38.10	4448.0
39.10	1928.0
40.00	350.0
42.90	235.0
44.00	888.0
45.00	1013.0
47.00	1187.0
48.00	737.0
49.10	3368.0
50.00	16257.0
51.10	5897.0
52.10	309.0
55.00	349.0
56.10	1099.0
57.00	2510.0
58.20	179.0
59.10	219.0
60.00	882.0
61.00	4008.0
62.10	3801.0
63.10	2889.0
64.10	371.0
64.90	230.0
65.10	210.0
68.10	8804.0
69.00	9118.0
70.00	627.0
72.10	516.0
73.00	5499.0
74.10	14959.0
75.10	45392.0
76.00	3768.0
76.90	659.0
77.80	216.0
79.00	2344.0
79.90	755.0
81.00	2429.0
81.80	460.0
87.00	2959.0
88.00	2984.0
88.70	151.0
91.00	368.0
92.00	2650.0
93.00	4126.0
94.10	10747.0
95.00	85848.0
96.10	5414.0
97.00	342.0
102.90	590.0
103.90	639.0
104.90	218.0
105.90	396.0
111.80	176.0
115.00	338.0
116.00	400.0
116.80	683.0
118.00	654.0
118.80	831.0
125.00	535.0
128.00	368.0
130.00	370.0
133.10	1132.0
133.80	295.0
135.00	338.0
136.90	230.0
139.50	155.0
140.90	1351.0
142.00	191.0
142.80	1212.0
143.00	1184.0
146.00	295.0
146.90	237.0
147.20	254.0
147.80	237.0
155.00	218.0
157.00	173.0
159.00	186.0
161.00	382.0
162.90	287.0
171.70	331.0
171.90	371.0
173.90	103304.0
175.00	7475.0
175.90	99000.0
177.00	6182.0
178.00	284.0
179.10	327.0
189.20	246.0
191.00	1245.0
192.00	350.0

Instrument :
MSVOA_T
ClientSampleId :
BFB96

193.00	2405.0
194.00	587.0
195.00	279.0
203.10	266.0
204.80	275.0
207.00	1263.0
209.00	238.0
235.00	189.0
249.00	1072.0
249.90	292.0
250.10	294.0
250.90	482.0
265.10	1002.0
266.10	364.0
267.10	279.0
279.40	314.0
280.00	372.0
281.10	17200.0
282.10	4877.0
283.10	2725.0
284.10	673.0

Instrument :
MSVOA_T
ClientSampleId :
BFB96

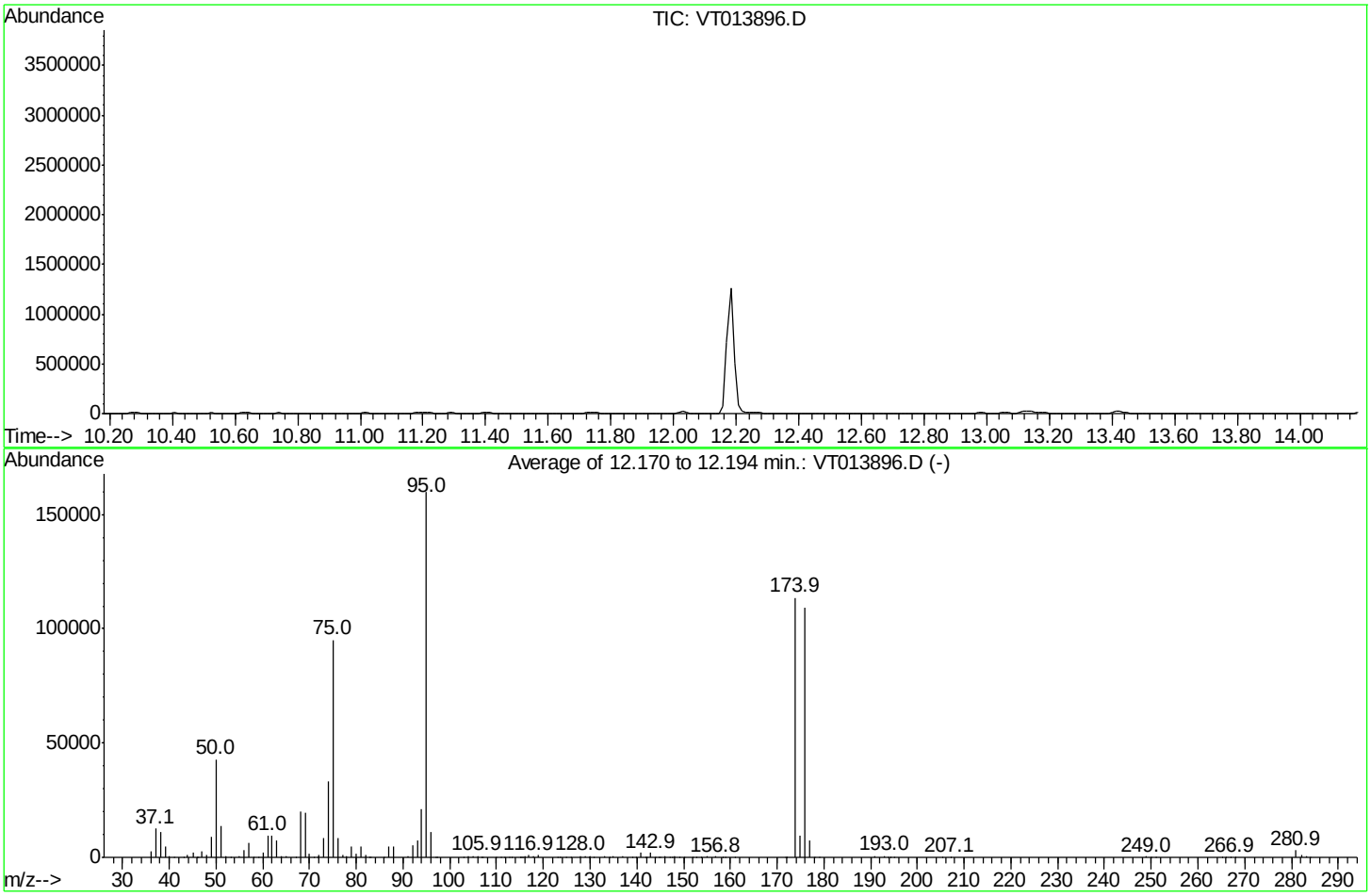
BFB

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050516\
Data File : VT013896.D
Acq On : 5 May 2016 9:36
Operator : FY/SY
Sample : BFB87
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : BFB87

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Title : VOC Analysis
Last Update : Fri May 06 02:17:21 2016



AutoFind: Scans 904, 905, 906; Background Corrected with Scan 901

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.7	42736	PASS
75	95	30	80	59.6	95234	PASS
95	95	100	100	100.0	159792	PASS
96	95	5	9	6.9	11071	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	71.1	113632	PASS
175	174	5	9	8.5	9663	PASS
176	174	95	101	96.3	109482	PASS
177	176	5	9	7.0	7645	PASS

Scan 901 (12.135 min): VT013896.D
BFB87

m/z	Abundance
40.00	220.0
43.90	287.0
73.00	267.0
207.10	184.0
265.10	170.0
280.90	510.0

Instrument :
MSVOA_T
ClientSampleId :
BFB87

Scan 904 (12.170 min): VT013896.D
BFB87

Instrument :
MSVOA_T
ClientSampleId :
BFB87

m/z	Abundance
36.00	3216.0
37.10	14937.0
38.10	12540.0
39.10	6024.0
40.10	735.0
41.10	331.0
43.00	491.0
44.00	1918.0
45.10	2236.0
46.00	246.0
46.20	222.0
47.00	2881.0
48.10	1447.0
49.00	10353.0
50.00	47104.0
51.00	15792.0
52.00	654.0
55.00	635.0
56.00	3547.0
57.00	7960.0
58.10	341.0
59.00	197.0
60.00	2064.0
61.00	10285.0
62.00	9929.0
63.10	8430.0
64.00	1028.0
65.10	929.0
67.00	670.0
68.00	21424.0
69.00	20032.0
70.00	1622.0
70.90	280.0
72.00	1161.0
73.10	8313.0
74.00	33256.0
75.00	97296.0
76.00	8846.0
77.00	1130.0
78.00	525.0
78.90	5238.0
80.00	1633.0
81.00	4618.0
81.90	1260.0
82.80	150.0
87.00	4565.0
87.90	4165.0
91.00	525.0
92.00	4390.0
93.00	6755.0
94.00	18632.0
95.00	143616.0
96.00	10899.0
97.00	331.0
102.80	167.0
104.00	563.0
105.10	439.0
105.90	535.0
106.80	223.0
112.80	164.0
115.00	157.0
115.30	176.0
115.60	208.0
116.10	400.0
116.90	754.0
117.90	624.0
119.00	828.0
125.90	203.0
127.90	441.0
129.00	269.0
129.80	415.0
130.80	301.0
134.90	291.0
136.90	190.0
141.00	1465.0
142.90	1374.0
145.00	303.0
145.90	306.0
147.60	182.0
148.00	211.0
154.90	241.0
156.90	216.0
172.00	838.0
173.90	62888.0
175.00	5702.0
175.90	56216.0
176.90	4017.0
178.00	206.0
191.10	157.0
192.90	172.0
265.20	172.0
281.10	999.0

Scan 905 (12.182 min): VT013896.D
BFB87

Instrument :
MSVOA_T
ClientSampleId :
BFB87

m/z	Abundance
36.10	3259.0
37.10	17224.0
38.00	16175.0
39.10	5900.0
40.10	586.0
40.90	178.0
43.00	246.0
44.00	1878.0
45.00	2935.0
46.00	324.0
47.10	3560.0
48.00	1672.0
49.00	12948.0
50.00	62760.0
51.10	19888.0
52.00	818.0
53.20	164.0
55.00	871.0
56.00	4934.0
57.00	8887.0
57.90	348.0
59.10	250.0
60.00	2877.0
61.00	14498.0
62.00	13675.0
63.00	10561.0
64.10	1011.0
65.00	518.0
68.00	30448.0
69.00	28816.0
70.00	2105.0
72.00	1510.0
73.00	12687.0
74.00	49880.0
75.00	142080.0
76.00	12275.0
77.00	1434.0
77.80	999.0
78.90	7022.0
79.90	2250.0
80.90	7692.0
82.00	1370.0
83.10	158.0
87.00	7675.0
88.00	7897.0
91.00	782.0
92.00	7946.0
93.00	11210.0
94.00	32008.0
95.00	249664.0
96.00	16656.0
97.00	451.0
102.90	217.0
103.90	1276.0
104.90	281.0
105.90	1138.0
107.00	322.0
109.90	232.0
110.90	172.0
113.10	195.0
115.00	270.0
115.90	903.0
116.90	1518.0
117.90	903.0
118.90	1283.0
122.90	151.0
123.60	150.0
125.90	172.0
128.00	897.0
128.90	521.0
130.00	890.0
130.80	339.0
133.00	583.0
134.00	168.0
134.90	585.0
136.90	487.0
139.10	155.0
140.90	3183.0
141.80	313.0
142.00	323.0
142.90	3159.0
144.00	188.0
144.70	327.0
145.00	307.0
146.00	293.0
147.00	277.0
147.90	591.0
149.00	224.0
150.00	186.0
151.90	179.0
152.80	208.0
153.80	266.0

154.90	501.0
156.90	645.0
158.40	182.0
159.00	583.0
161.00	331.0
173.90	180096.0
175.00	15650.0
175.90	174016.0
176.90	12822.0
177.90	330.0
179.00	162.0
191.00	642.0
193.00	738.0
194.10	153.0
194.90	181.0
205.40	196.0
207.20	420.0
249.00	344.0
250.00	154.0
251.00	154.0
265.00	351.0
265.80	180.0
267.00	283.0
281.00	3479.0
282.00	1247.0
283.10	484.0
284.00	197.0

Instrument :
MSVOA_T
ClientSampleId :
BFB87

Scan 906 (12.194 min): VT013896.D
BFB87

Instrument :
MSVOA_T
ClientSampleId :
BFB87

m/z	Abundance
36.10	1091.0
37.00	5478.0
38.00	4545.0
39.00	1796.0
39.90	504.0
44.10	822.0
45.10	958.0
46.90	628.0
47.10	674.0
48.00	602.0
49.00	3792.0
50.00	18344.0
51.00	5428.0
52.00	289.0
55.00	446.0
56.00	1346.0
57.00	2624.0
60.10	831.0
61.10	4297.0
62.00	4697.0
63.00	3416.0
64.10	339.0
65.00	164.0
67.00	152.0
68.00	8939.0
69.00	9393.0
70.00	582.0
71.70	299.0
72.00	392.0
73.00	4562.0
74.00	16592.0
75.00	46328.0
76.00	3686.0
77.10	603.0
77.90	425.0
79.00	2591.0
80.00	821.0
80.90	2744.0
82.00	466.0
85.90	202.0
87.00	2753.0
87.90	2371.0
90.80	201.0
91.10	311.0
92.00	2794.0
93.00	3644.0
94.00	12194.0
95.00	86096.0
96.00	5659.0
97.20	209.0
102.90	220.0
103.90	518.0
105.00	263.0
106.00	387.0
111.00	175.0
111.70	163.0
116.00	433.0
116.90	554.0
117.70	191.0
118.00	268.0
118.90	551.0
124.90	378.0
128.00	333.0
129.00	216.0
129.90	456.0
130.80	164.0
133.00	434.0
134.90	411.0
136.70	199.0
139.90	185.0
141.00	1115.0
141.80	230.0
143.00	1409.0
144.90	243.0
146.00	276.0
146.90	157.0
147.90	311.0
149.10	195.0
150.00	160.0
154.90	181.0
156.70	166.0
161.10	179.0
171.70	292.0
173.90	97912.0
175.00	7639.0
175.90	98216.0
177.00	6097.0
178.00	200.0
190.90	729.0
193.00	1034.0
193.70	208.0
194.90	220.0

207.00	572.0
249.00	527.0
250.80	251.0
265.10	442.0
266.80	301.0
267.90	184.0
281.00	6534.0
282.10	1734.0
283.10	1518.0
284.10	240.0

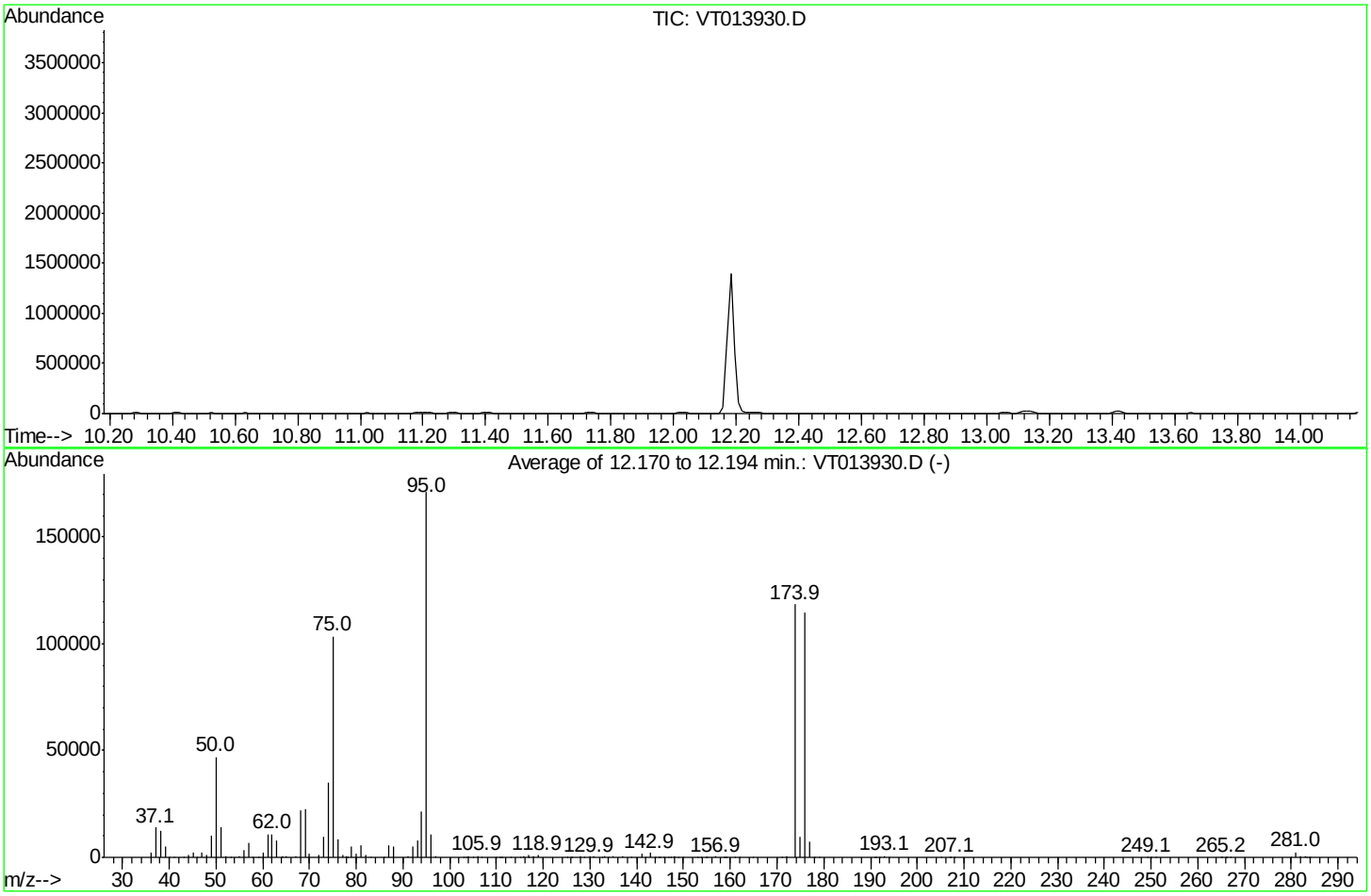
Instrument :
MSVOA_T
ClientSampleId :
BFB87

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050616\
Data File : VT013930.D
Acq On : 6 May 2016 9:01
Operator : FY/SY
Sample : BFB88
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : BFB88

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Title : VOC Analysis
Last Update : Sat May 07 06:03:15 2016



AutoFind: Scans 904, 905, 906; Background Corrected with Scan 901

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.4	46933	PASS
75	95	30	80	60.6	103634	PASS
95	95	100	100	100.0	171040	PASS
96	95	5	9	6.4	11000	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	69.2	118405	PASS
175	174	5	9	8.4	9895	PASS
176	174	95	101	96.7	114490	PASS
177	176	5	9	6.6	7580	PASS

Scan 901 (12.135 min): VT013930.D
BFB88

m/z	Abundance
40.10	229.0
44.10	321.0
208.30	162.0
281.10	638.0
282.00	247.0
282.90	227.0

Instrument :
MSVOA_T
ClientSampleId :
BFB88

Scan 904 (12.170 min): VT013930.D
BFB88

m/z	Abundance
36.00	2455.0
37.10	14889.0
38.10	13997.0
39.10	5774.0
40.00	486.0
41.10	253.0
43.00	319.0
44.10	1410.0
45.10	2718.0
46.00	223.0
47.00	2521.0
48.00	1241.0
49.00	10394.0
50.00	45376.0
51.00	13985.0
52.00	700.0
53.10	177.0
55.10	668.0
56.00	3626.0
57.00	7023.0
57.90	249.0
60.00	1945.0
61.00	9628.0
62.00	10418.0
63.00	7048.0
64.10	852.0
65.00	835.0
67.00	557.0
68.00	20672.0
69.00	20392.0
70.00	1261.0
72.00	1294.0
73.10	8337.0
74.00	31752.0
75.00	91232.0
76.00	7462.0
77.10	960.0
78.10	526.0
79.00	4452.0
80.00	1265.0
80.90	5114.0
81.90	1109.0
85.80	197.0
87.00	5460.0
87.90	4204.0
91.00	480.0
92.00	3842.0
93.00	6460.0
94.00	15897.0
95.00	130344.0
96.00	8997.0
97.10	332.0
104.00	542.0
105.00	218.0
105.90	570.0
110.80	193.0
114.90	239.0
115.90	529.0
116.80	507.0
117.10	524.0
117.90	470.0
118.90	715.0
126.10	151.0
128.00	418.0
129.00	169.0
130.00	279.0
130.80	241.0
134.90	253.0
137.00	228.0
141.00	1042.0
142.00	188.0
143.00	1011.0
144.10	224.0
144.90	401.0
145.80	163.0
154.80	267.0
156.90	242.0
172.00	790.0
174.00	51656.0
175.00	4834.0
175.90	51248.0
177.00	3683.0
193.10	263.0
281.00	810.0
281.90	305.0
283.00	246.0

Instrument :
MSVOA_T
ClientSampleId :
BFB88

Scan 905 (12.182 min): VT013930.D
BFB88

Instrument :
MSVOA_T
ClientSampleId :
BFB88

m/z	Abundance
36.10	3655.0
37.10	21352.0
38.00	18376.0
39.10	7447.0
40.00	611.0
43.10	315.0
44.00	1678.0
45.00	3315.0
46.00	372.0
47.10	3813.0
47.90	2101.0
49.00	15397.0
50.00	73568.0
51.10	21992.0
52.00	957.0
55.00	811.0
56.00	4943.0
57.00	9456.0
57.80	346.0
59.10	181.0
60.00	3234.0
61.00	16960.0
62.00	16608.0
63.10	12257.0
64.10	1212.0
65.10	545.0
67.00	1007.0
68.00	33456.0
69.00	35360.0
70.00	2245.0
72.00	1731.0
73.00	14415.0
74.00	54520.0
75.00	165568.0
76.00	13618.0
76.90	1503.0
77.80	1319.0
78.90	8533.0
79.90	2433.0
80.90	8503.0
81.90	1733.0
83.10	198.0
85.90	366.0
87.00	8992.0
88.00	7977.0
90.90	1137.0
92.00	8277.0
93.00	12407.0
94.00	34512.0
95.00	277056.0
96.00	17360.0
97.00	711.0
103.00	225.0
103.80	1183.0
105.00	452.0
105.90	1215.0
106.80	386.0
109.90	222.0
110.70	376.0
111.00	394.0
113.00	266.0
115.00	340.0
115.90	1233.0
117.00	1741.0
117.90	1582.0
118.90	1798.0
125.00	160.0
125.80	236.0
128.00	1037.0
128.80	546.0
129.90	970.0
130.90	600.0
132.70	368.0
133.10	571.0
133.90	222.0
134.90	522.0
136.80	487.0
138.90	189.0
141.00	3094.0
141.90	447.0
142.90	3676.0
143.90	461.0
145.00	416.0
145.90	463.0
148.00	701.0
148.80	191.0
149.90	270.0
152.90	158.0
153.80	170.0
155.00	599.0
156.90	549.0
158.80	429.0

160.90	471.0
164.80	178.0
171.00	195.0
171.90	871.0
173.90	191552.0
174.90	15886.0
175.90	184064.0
176.90	11809.0
178.00	332.0
179.00	184.0
191.20	297.0
193.00	615.0
206.80	283.0
207.10	238.0
249.10	276.0
250.00	155.0
251.00	174.0
264.90	377.0
281.10	2417.0
282.00	1009.0
282.80	407.0
283.20	338.0

Instrument :
MSVOA_T
ClientSampleId :
BFB88

Scan 906 (12.194 min): VT013930.D
BFB88

Instrument :
MSVOA_T
ClientSampleId :
BFB88

m/z	Abundance
35.90	1051.0
37.10	6101.0
38.00	5268.0
39.10	1965.0
40.00	398.0
43.00	258.0
44.00	609.0
45.00	960.0
47.00	1237.0
48.00	807.0
49.00	4669.0
50.00	21856.0
51.00	6460.0
52.10	253.0
55.00	342.0
56.00	1728.0
57.00	3094.0
58.90	223.0
60.10	1018.0
61.00	5334.0
62.00	5515.0
63.10	4310.0
64.10	471.0
65.10	275.0
66.90	270.0
68.00	11712.0
69.00	11908.0
70.10	1042.0
71.90	705.0
73.00	5537.0
74.00	19432.0
75.00	54104.0
76.00	4820.0
77.00	583.0
77.90	396.0
78.90	3165.0
80.00	653.0
80.80	3055.0
82.00	573.0
87.00	3261.0
88.00	3228.0
91.00	512.0
92.00	3825.0
93.00	4311.0
94.00	13625.0
95.00	105720.0
96.00	6644.0
97.00	231.0
102.90	273.0
103.40	173.0
104.00	479.0
105.90	514.0
106.90	176.0
110.70	214.0
111.20	154.0
112.80	163.0
114.90	152.0
115.90	473.0
116.90	763.0
118.00	364.0
118.90	864.0
125.20	215.0
128.00	519.0
128.90	195.0
130.00	412.0
131.00	209.0
132.90	442.0
134.90	264.0
136.80	384.0
141.00	1717.0
141.80	163.0
142.90	1620.0
143.80	184.0
144.70	185.0
146.70	198.0
147.20	184.0
147.90	470.0
150.00	230.0
154.80	320.0
156.80	196.0
158.70	192.0
159.00	165.0
159.20	161.0
160.80	356.0
162.10	177.0
172.10	608.0
173.90	112008.0
175.00	8965.0
175.90	108160.0
176.90	7248.0
177.80	211.0
178.90	256.0

190.90	627.0
191.80	262.0
193.10	849.0
193.90	280.0
205.00	158.0
207.00	637.0
207.90	206.0
249.10	407.0
250.90	207.0
265.20	660.0
265.90	193.0
266.20	185.0
267.10	186.0
279.90	156.0
281.00	6193.0
282.00	1515.0
282.90	1237.0
283.90	219.0
284.10	202.0

Instrument :
MSVOA_T
ClientSampleId :
BFB88

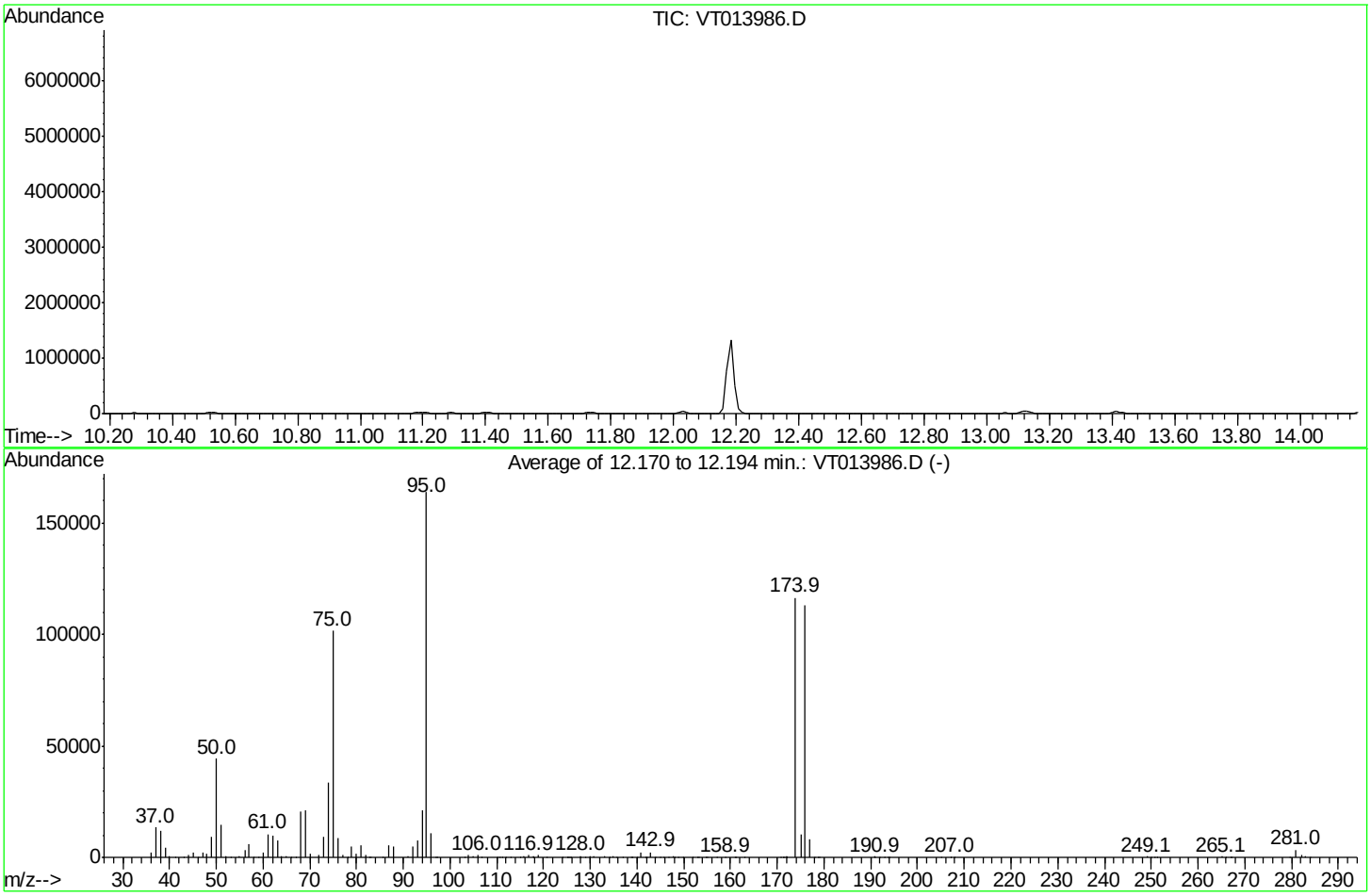
BFB

Data Path : W:\HPCHEM1\MSVOA_T\Data\VT050916\
Data File : VT013986.D
Acq On : 9 May 2016 9:40
Operator : FY/SY
Sample : BFB89
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : BFB89

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Title : VOC Analysis
Last Update : Tue May 10 02:00:56 2016



AutoFind: Scans 904, 905, 906; Background Corrected with Scan 901

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.1	44328	PASS
75	95	30	80	62.0	101458	PASS
95	95	100	100	100.0	163738	PASS
96	95	5	9	6.5	10704	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	71.1	116394	PASS
175	174	5	9	8.6	10027	PASS
176	174	95	101	97.0	112880	PASS
177	176	5	9	7.1	7989	PASS

Scan 901 (12.135 min): VT013986.D
BFB89

m/z	Abundance
39.80	240.0
44.10	347.0
73.00	469.0
192.70	197.0
192.90	209.0
206.90	204.0
281.10	611.0

Instrument :
MSVOA_T
ClientSampleId :
BFB89

Scan 904 (12.170 min): VT013986.D
BFB89

m/z	Abundance
36.00	3011.0
37.00	16816.0
38.10	14576.0
39.10	5745.0
40.10	448.0
41.10	424.0
42.90	253.0
43.90	1761.0
45.00	2616.0
47.10	2564.0
48.00	1680.0
49.00	11348.0
50.00	52248.0
51.00	16904.0
52.00	820.0
53.00	242.0
55.00	801.0
56.00	4356.0
57.00	7034.0
58.00	323.0
60.00	2199.0
61.00	11670.0
62.00	11118.0
63.00	8547.0
64.00	872.0
65.00	830.0
66.10	196.0
68.00	22424.0
69.00	22664.0
70.00	1882.0
71.90	941.0
73.00	10387.0
74.00	34592.0
75.00	103224.0
76.00	8717.0
77.10	909.0
78.00	654.0
78.90	5394.0
80.00	1522.0
80.90	5522.0
82.00	1128.0
85.70	172.0
87.00	4873.0
88.00	4486.0
90.90	656.0
92.00	5040.0
93.10	7171.0
94.00	19624.0
95.00	147968.0
96.00	10167.0
96.90	334.0
104.00	715.0
104.90	238.0
106.00	837.0
106.90	189.0
112.90	168.0
115.90	471.0
116.90	818.0
117.80	572.0
118.80	969.0
125.30	222.0
127.80	431.0
128.00	458.0
128.90	280.0
129.80	450.0
130.80	152.0
132.90	235.0
134.80	298.0
136.90	192.0
139.10	218.0
140.90	1500.0
142.00	172.0
142.90	1797.0
145.00	359.0
145.90	199.0
146.90	150.0
147.70	252.0
148.00	257.0
154.70	280.0
158.90	209.0
161.10	245.0
171.20	173.0
171.90	749.0
173.90	65880.0
175.00	6135.0
175.90	62040.0
176.90	4478.0
177.80	179.0
192.90	231.0
207.10	285.0
267.20	163.0
281.10	822.0

Instrument :
MSVOA_T
ClientSampleId :
BFB89

282.10	268.0
283.20	170.0

Instrument :
MSVOA_T
ClientSampleId :
BFB89

Scan 905 (12.182 min): VT013986.D
BFB89

Instrument :
MSVOA_T
ClientSampleId :
BFB89

m/z	Abundance
36.00	3230.0
37.10	18936.0
38.10	16656.0
39.10	6328.0
40.00	524.0
42.90	182.0
44.00	1982.0
45.00	3426.0
46.00	338.0
47.10	2943.0
47.90	1913.0
49.00	12986.0
50.00	62624.0
51.00	21224.0
51.90	760.0
54.90	946.0
56.10	4215.0
57.00	8483.0
58.10	279.0
58.90	258.0
60.00	2959.0
61.00	15114.0
62.00	13908.0
63.10	11039.0
64.00	1100.0
65.10	586.0
66.90	549.0
68.00	30232.0
69.00	30624.0
70.00	2532.0
72.00	1666.0
73.00	14306.0
74.00	49984.0
75.00	156032.0
76.00	12457.0
77.00	1208.0
79.00	7316.0
80.00	2311.0
80.90	7688.0
81.80	1344.0
82.80	282.0
87.00	8401.0
88.00	7919.0
90.90	987.0
92.00	7923.0
93.00	11672.0
94.00	32528.0
95.00	257280.0
96.00	16848.0
97.10	532.0
103.10	347.0
103.80	1406.0
104.90	525.0
105.90	1136.0
106.80	203.0
110.00	169.0
110.70	265.0
112.00	258.0
112.90	334.0
115.00	403.0
115.90	928.0
117.00	1740.0
118.00	1032.0
118.90	1445.0
120.70	157.0
123.90	290.0
125.00	194.0
125.20	179.0
125.60	159.0
125.90	164.0
127.90	949.0
129.00	472.0
129.90	875.0
130.80	514.0
132.90	406.0
134.90	579.0
136.90	484.0
138.80	212.0
139.90	359.0
140.90	3311.0
141.70	559.0
142.90	3460.0
143.80	211.0
145.00	326.0
145.70	355.0
146.80	246.0
147.80	709.0
148.80	280.0
149.90	377.0
151.90	195.0
152.90	194.0
153.10	191.0

155.00	574.0
157.00	396.0
159.00	334.0
161.00	406.0
163.00	225.0
170.80	282.0
172.10	930.0
173.90	188672.0
175.00	16616.0
175.90	184576.0
176.90	13316.0
177.90	399.0
178.80	224.0
190.80	368.0
191.00	347.0
191.90	191.0
192.90	776.0
194.10	187.0
207.10	409.0
249.10	442.0
249.90	168.0
251.10	204.0
265.20	375.0
266.90	307.0
281.00	4222.0
282.10	1325.0
283.10	882.0
284.10	263.0

Instrument :
MSVOA_T
ClientSampleId :
BFB89

Scan 906 (12.194 min): VT013986.D
BFB89

m/z	Abundance
36.00	976.0
37.00	4775.0
38.10	4562.0
39.10	1631.0
40.00	415.0
43.90	963.0
45.00	1025.0
46.90	712.0
47.20	671.0
47.90	776.0
49.00	3488.0
50.00	18112.0
51.10	5447.0
51.90	190.0
52.10	195.0
55.00	292.0
56.00	1465.0
57.10	2784.0
60.10	1007.0
61.10	4398.0
62.00	4187.0
63.00	3008.0
64.00	369.0
65.10	398.0
68.00	8419.0
69.00	9455.0
70.10	758.0
72.00	675.0
73.00	4947.0
74.00	16277.0
75.00	45120.0
76.00	4026.0
77.10	492.0
77.90	205.0
79.00	2655.0
79.90	846.0
81.00	2404.0
82.00	527.0
83.00	172.0
87.00	2236.0
88.00	2169.0
90.90	268.0
92.00	2138.0
93.00	4044.0
94.00	10541.0
95.00	85968.0
96.00	5099.0
102.90	173.0
103.90	591.0
105.00	159.0
106.00	624.0
111.00	191.0
112.80	184.0
115.10	187.0
115.90	311.0
116.80	588.0
117.90	456.0
119.00	707.0
125.30	270.0
127.90	620.0
129.90	452.0
130.80	217.0
133.00	508.0
134.10	159.0
135.00	435.0
135.60	224.0
141.00	1361.0
142.90	1826.0
148.00	389.0
149.80	190.0
154.80	152.0
156.80	234.0
158.90	238.0
160.80	179.0
162.90	189.0
171.60	358.0
173.90	94632.0
175.00	7332.0
175.90	92024.0
176.90	6175.0
178.00	222.0
179.00	171.0
190.90	736.0
191.90	248.0
192.90	1058.0
193.80	212.0
194.00	253.0
205.10	247.0
207.00	622.0
207.90	162.0
249.00	719.0
250.80	231.0

Instrument :
MSVOA_T
ClientSampleId :
BFB89

265.00	537.0
265.90	223.0
266.80	361.0
279.70	322.0
281.00	7158.0
282.00	2034.0
283.00	1184.0
284.00	316.0

Instrument :
MSVOA_T
ClientSampleId :
BFB89

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK98

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : VT0505SBL02
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT013908.D
% Solids : 100
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene chloride	1.6	J
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK98

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : VT0505SBL02
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT013908.D
% Solids : 100
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-trichlorobenzene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK98

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : VT0505SBL02
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT013908.D
% Solids : 100
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK98

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : VT0505SBL02
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT013908.D
% Solids : 100
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) Y
Extraction Type : PT
Purge Volume : 10 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

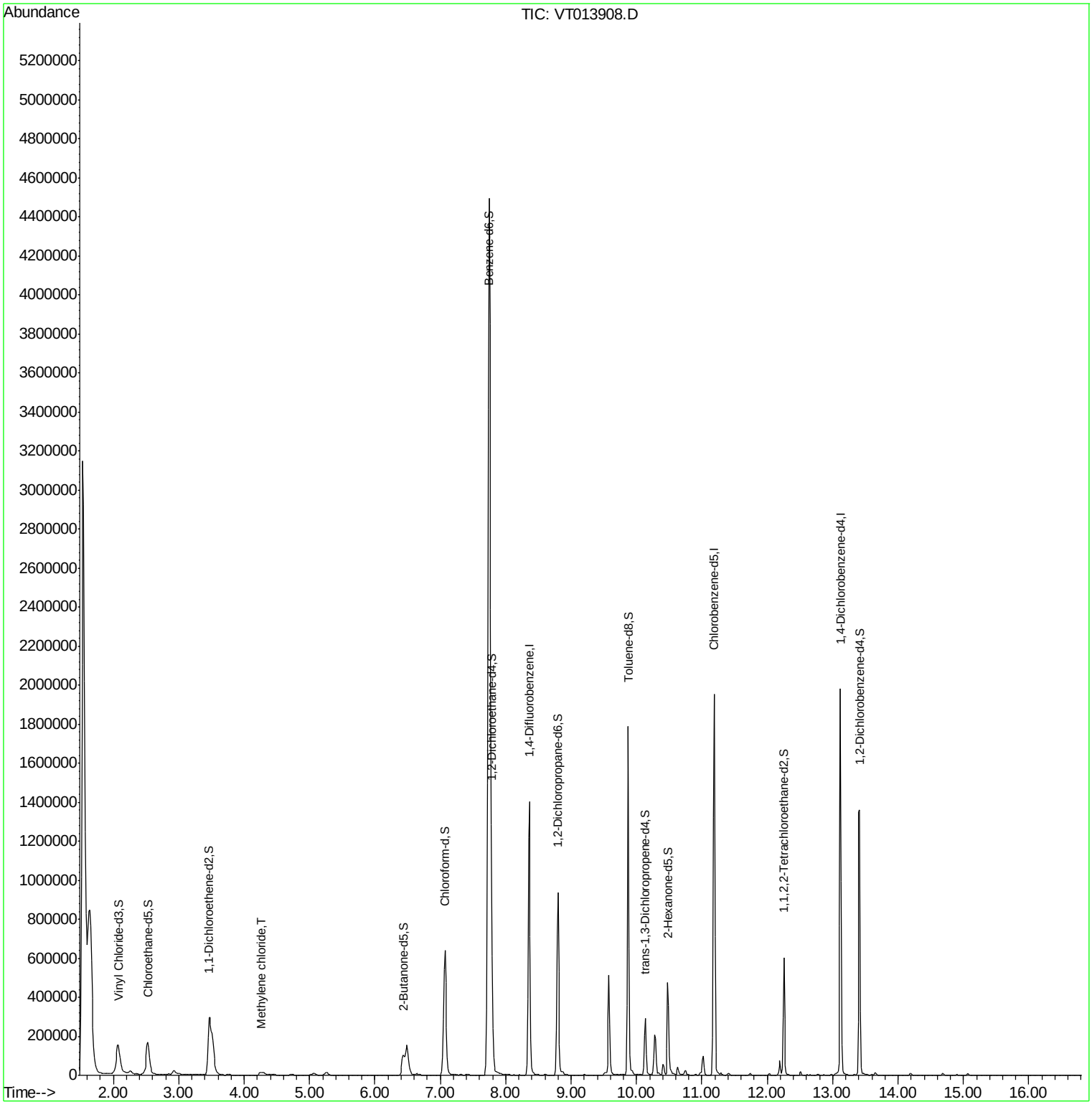
Quantitation Report (LSC Reviewed)

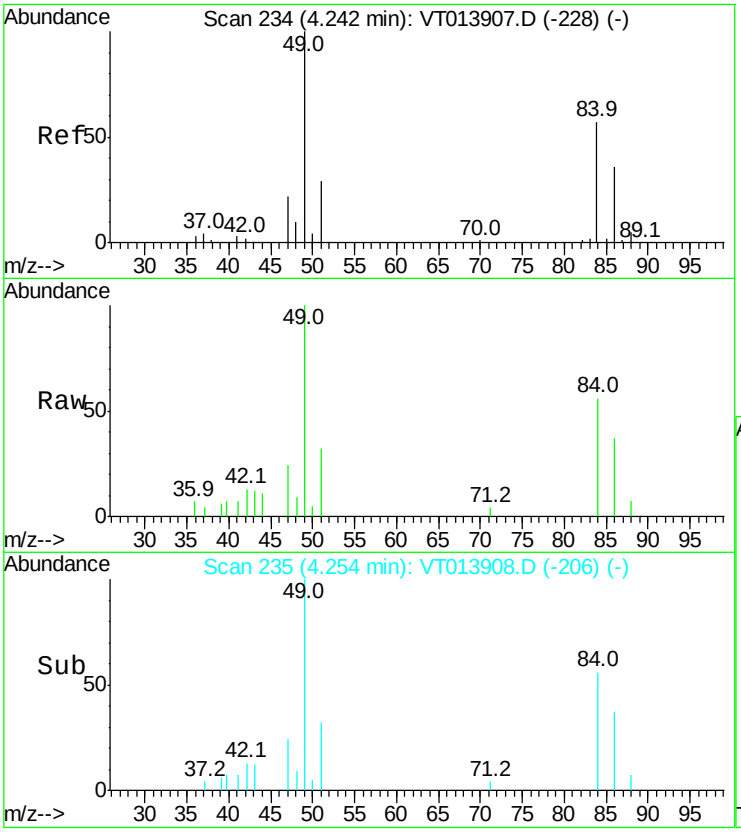
Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013908.D
Acq On : 5 May 2016 16:51
Operator : FY/SY
Sample : VT0505SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 06 02:23:27 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VBLK98

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:03 PM

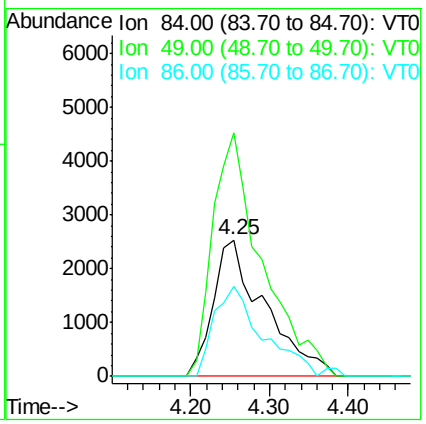




#16
Methylene chloride
Concen: 0.80 ug/L
RT: 4.25 min Scan# 235
Delta R.T. 0.01 min
Lab File: VT013908.D
Acq: 5 May 2016 16:51

Tgt Ion: 84 Resp: 11496

Ion	Ratio	Lower	Upper
84	100		
49	178.9	116.8	216.8
86	66.0	44.9	83.5



Instrument :
MSVOA_T
ClientSampleId :
VBLK98

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:03 PM

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013908.D
Acq On : 5 May 2016 16:51
Operator : FY/SY
Sample : VT0505SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VBLK98

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:03 PM

Quant Time: May 06 02:23:27 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1057725	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	864060	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	402304	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	382928	18.45	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 73.80%			
7) Chloroethane-d5	2.53	69	299328	21.52	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 86.08%			
10) 1,1-Dichloroethene-d2	3.46	63	566629	15.81	ug/L	-0.01
Spiked Amount 25.000	Range 45 - 110		Recovery = 63.24%			
20) 2-Butanone-d5	6.43	46	209721	49.44	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 98.88%			
24) Chloroform-d	7.07	84	686872m	23.06	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 92.24%			
26) 1,2-Dichloroethane-d4	7.78	65	411911	25.58	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 102.32%			
29) Benzene-d6	7.74	84	1320445	20.90	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 83.60%			
33) 1,2-Dichloropropane-d6	8.80	67	395652	21.70	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 86.80%			
37) Toluene-d8	9.87	98	1125914	20.66	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 82.64%			
38) trans-1,3-Dichloropropene-	10.14	79	130291	20.12	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 80.48%			
39) 2-Hexanone-d5	10.48	63	135792	49.02	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 98.04%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	256823	22.45	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 89.80%			
60) 1,2-Dichlorobenzene-d4	13.41	152	340168	22.23	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 88.92%			
Target Compounds						Qvalue
16) Methylene chloride	4.25	84	11496	0.80	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA T\DATA\VT050516\
Data File : VT013908.D
Acq On : 5 May 2016 16:51
Operator : FY/SY
Sample : VT0505SBL02
Misc : 5.00g/10mL/MSVOA T/SOIL
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK98

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Title : VOC Analysis

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.533	3	5	11	rVB	2480482	5860888	44.81%	12.023%
2	1.639	11	14	35	rVB	840947	3380118	25.84%	6.934%
3	1.899	35	36	42	rBV3	1665	5690	0.04%	0.012%
4	2.065	43	50	62	rBV	145765	625530	4.78%	1.283%
5	2.254	63	66	72	rVB3	16735	51875	0.40%	0.106%
6	2.349	72	74	75	rVB	2133	2229	0.02%	0.005%
7	2.527	80	89	100	rBV	165097	573156	4.38%	1.176%
8	2.810	111	113	114	rBV2	1571	2166	0.02%	0.004%
9	2.846	114	116	118	rVV	3273	5686	0.04%	0.012%
10	2.929	119	123	132	rVB	21540	80414	0.61%	0.165%
11	3.213	146	147	151	rVB4	1699	3610	0.03%	0.007%
12	3.307	151	155	156	rVV2	2041	3025	0.02%	0.006%
13	3.367	158	160	161	rVV2	2095	3877	0.03%	0.008%
14	3.473	163	169	187	rVB	294316	1481588	11.33%	3.039%
15	3.733	190	191	193	rBV2	804	1435	0.01%	0.003%
16	4.041	213	217	221	rVB3	1199	4052	0.03%	0.008%
17	4.124	221	224	226	rVB3	708	1424	0.01%	0.003%
18	4.254	228	235	236	rBV	14411	38775	0.30%	0.080%
19	4.443	246	251	259	rVB3	6280	23410	0.18%	0.048%
20	4.716	271	274	275	rBV	3092	5913	0.05%	0.012%
21	5.059	297	303	309	rBV2	10279	37295	0.29%	0.077%
22	5.153	309	311	314	rVB2	565	1274	0.01%	0.003%
23	5.260	314	320	327	rBV	14823	53820	0.41%	0.110%
24	5.556	339	345	347	rBV3	1334	4370	0.03%	0.009%
25	6.278	405	406	410	rVB2	804	1240	0.01%	0.003%
26	6.431	412	419	421	rBV	103528	312796	2.39%	0.642%
27	6.491	421	424	434	rVV	154038	506930	3.88%	1.040%
28	6.644	434	437	446	rVB2	7654	24352	0.19%	0.050%
29	6.928	455	461	467	rBV5	1265	5312	0.04%	0.011%
30	7.070	467	473	483	rBV	637650	1746579	13.35%	3.583%
31	7.319	490	494	497	rVB3	2465	6157	0.05%	0.013%
32	7.413	497	502	506	rVB4	2083	7182	0.05%	0.015%
33	7.532	509	512	517	rBV3	1786	5658	0.04%	0.012%
34	7.638	517	521	523	rVB2	672	1951	0.01%	0.004%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013908.D
Acq On : 5 May 2016 16:51
Operator : FY/SY
Sample : VT0505SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK98

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Title : VOC Analysis

35	7.745	523	530	549	rBV	4493780	13080380	100.00%	26.833%
36	7.993	549	551	556	rVB4	3891	9069	0.07%	0.019%
37	8.123	561	562	565	rVB	1777	2569	0.02%	0.005%
38	8.206	567	569	573	rVB2	2399	3854	0.03%	0.008%
39	8.360	577	582	597	rBV	1402924	2887078	22.07%	5.923%
40	8.609	599	603	607	rVB3	4985	13668	0.10%	0.028%
41	8.798	615	619	624	rBV	936187	1896616	14.50%	3.891%
42	9.058	639	641	643	rVB3	1042	1299	0.01%	0.003%
43	9.200	649	653	655	rVB3	2203	6364	0.05%	0.013%
44	9.259	655	658	661	rBV3	421	1456	0.01%	0.003%
45	9.319	661	663	668	rVB3	810	1553	0.01%	0.003%
46	9.390	668	669	672	rBV2	628	1228	0.01%	0.003%
47	9.437	672	673	677	rBV2	1180	2002	0.02%	0.004%
48	9.520	677	680	681	rBV	13275	24180	0.18%	0.050%
49	9.579	681	685	698	rVV	511115	877908	6.71%	1.801%
50	9.756	698	700	702	rVV2	4921	10256	0.08%	0.021%
51	9.804	702	704	706	rVV	4717	8289	0.06%	0.017%
52	9.875	706	710	714	rVV	1785920	3216166	24.59%	6.598%
53	9.934	714	715	725	rVV	23512	50898	0.39%	0.104%
54	10.135	728	732	741	rVV	289366	495567	3.79%	1.017%
55	10.277	741	744	748	rVV	206094	410973	3.14%	0.843%
56	10.336	748	749	752	rVV2	14823	19022	0.15%	0.039%
57	10.407	752	755	758	rVV	53680	94289	0.72%	0.193%
58	10.478	758	761	771	rVV	474363	834976	6.38%	1.713%
59	10.632	771	774	781	rVV	39778	81770	0.63%	0.168%
60	10.739	781	783	790	rVV	23364	45755	0.35%	0.094%
61	10.904	793	797	800	rBV2	3922	7238	0.06%	0.015%
62	11.023	800	807	811	rBV2	99631	203170	1.55%	0.417%
63	11.117	813	815	817	rVB2	1228	2148	0.02%	0.004%
64	11.188	817	821	828	rBV	1950513	3107550	23.76%	6.375%
65	11.295	828	830	834	rVV	12732	22371	0.17%	0.046%
66	11.401	836	839	842	rBV	9666	18623	0.14%	0.038%
67	11.733	864	867	873	rVB3	7859	17974	0.14%	0.037%
68	11.910	880	882	883	rBV2	946	1244	0.01%	0.003%
69	12.028	889	892	894	rBV	8526	12585	0.10%	0.026%
70	12.194	900	906	908	rVV	73520	128636	0.98%	0.264%
71	12.253	908	911	926	rVB	603548	917653	7.02%	1.882%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA T\DATA\VT050516\
Data File : VT013908.D
Acq On : 5 May 2016 16:51
Operator : FY/SY
Sample : VT0505SBL02
Misc : 5.00g/10mL/MSVOA T/SOIL
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK98

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Title : VOC Analysis

72	12.513	930	933	936	rVB	15987	24080	0.18%	0.049%
73	12.608	939	941	943	rBV	2632	3297	0.03%	0.007%
74	12.655	943	945	947	rVB2	2258	3303	0.03%	0.007%
75	12.774	950	955	958	rVV	2560	6472	0.05%	0.013%
76	12.868	961	963	967	rVB3	1891	4665	0.04%	0.010%
77	12.975	970	972	975	rVB2	3549	5365	0.04%	0.011%
78	13.117	981	984	988	rVB	1969878	2781595	21.27%	5.706%
79	13.294	997	999	1000	rBV	928	1801	0.01%	0.004%
80	13.330	1000	1002	1005	rVV3	3907	7963	0.06%	0.016%
81	13.413	1005	1009	1012	rVV	1360623	2396115	18.32%	4.915%
82	13.484	1012	1015	1017	rVV2	10896	25641	0.20%	0.053%
83	13.531	1017	1019	1020	rVV2	4560	6402	0.05%	0.013%
84	13.555	1020	1021	1023	rVV	1404	2408	0.02%	0.005%
85	13.602	1023	1025	1026	rVV2	2227	2906	0.02%	0.006%
86	13.649	1026	1029	1033	rVB	12463	20968	0.16%	0.043%
87	13.839	1043	1045	1047	rBV2	670	1285	0.01%	0.003%
88	13.910	1050	1051	1052	rBV	1206	1220	0.01%	0.003%
89	13.945	1052	1054	1057	rVB2	542	1217	0.01%	0.002%
90	14.194	1071	1075	1079	rVB	9272	15759	0.12%	0.032%
91	14.300	1082	1084	1086	rVB	1479	2036	0.02%	0.004%
92	14.359	1086	1089	1092	rBV3	586	1645	0.01%	0.003%
93	14.561	1103	1106	1109	rVB2	754	1689	0.01%	0.003%
94	14.679	1113	1116	1121	rVB	9161	15665	0.12%	0.032%
95	14.892	1131	1134	1136	rBV2	4510	8191	0.06%	0.017%
96	14.951	1136	1139	1141	rVB3	741	1312	0.01%	0.003%
97	15.034	1143	1146	1147	rBV2	1248	2380	0.02%	0.005%
98	15.069	1147	1149	1152	rVV	7579	11477	0.09%	0.024%
99	16.205	1243	1245	1248	rVB2	611	1249	0.01%	0.003%
100	16.477	1264	1268	1272	rBB3	776	2361	0.02%	0.005%

Sum of corrected areas: 48746621

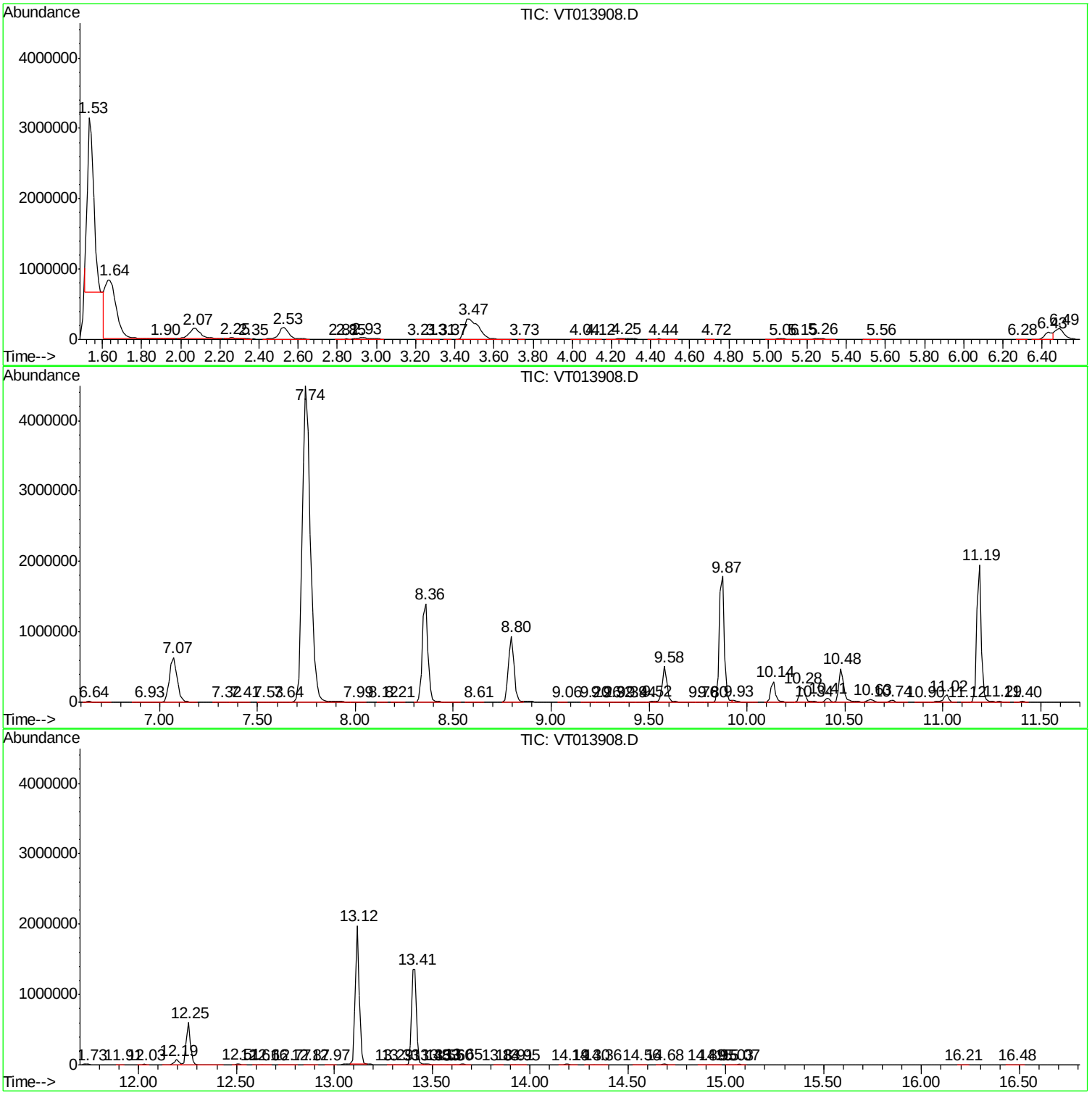
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013908.D
Acq On : 5 May 2016 16:51
Operator : FY/SY
Sample : VT0505SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK98

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013908.D
Acq On : 5 May 2016 16:51
Operator : FY/SY
Sample : VT0505SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VBLK98

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013908.D
Acq On : 5 May 2016 16:51
Operator : FY/SY
Sample : VT0505SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK98

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

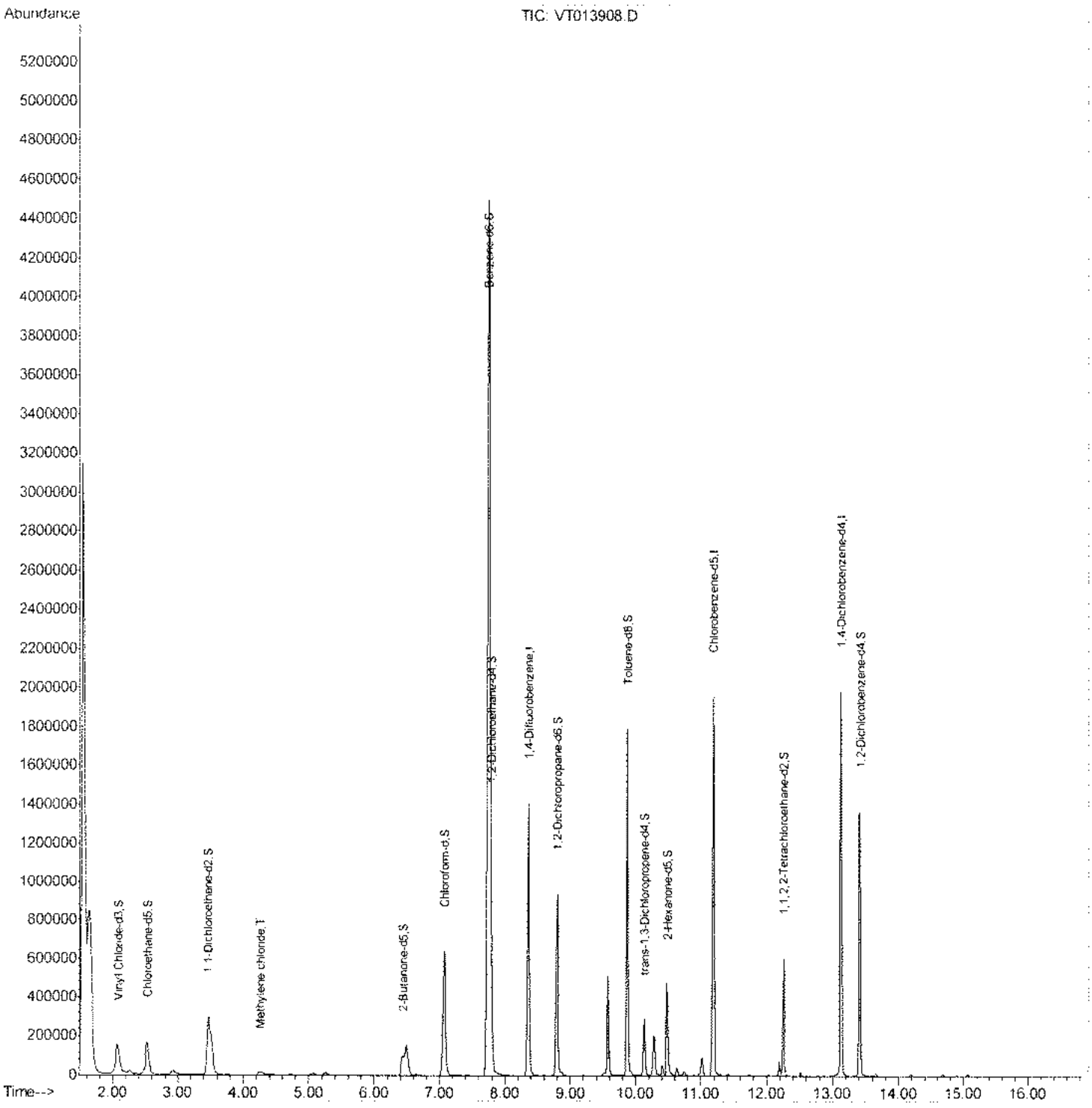
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013908.D
Acq On : 5 May 2016 16:51
Operator : FY/SY
Sample : VT0505SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 06 02:23:27 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VBLK98

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:03 PM



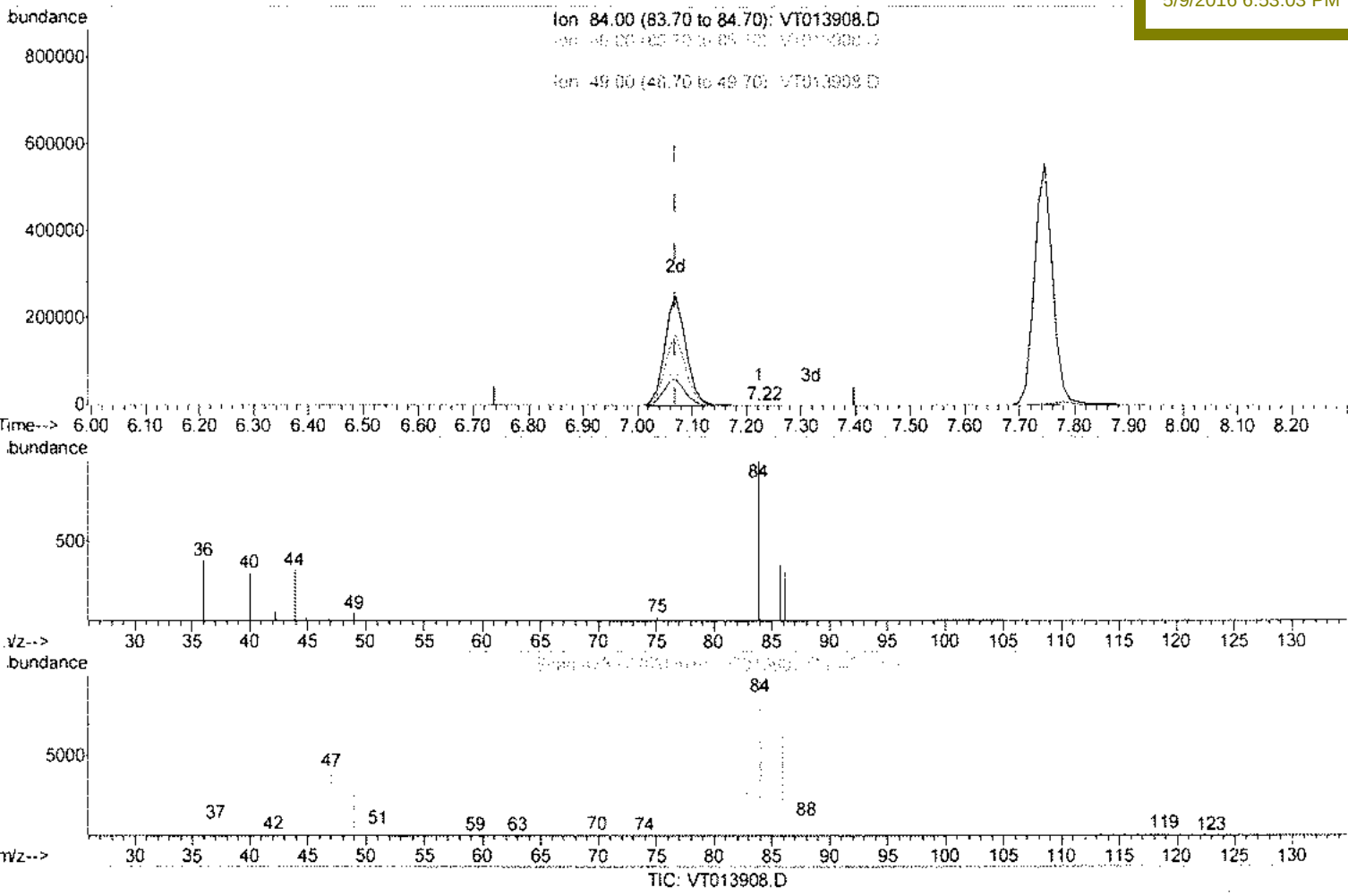
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013908.D
Acq On : 5 May 2016 16:51
Operator : FY/SY
Sample : VT0505SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 06 02:19:13 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VBLK98

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:03 PM



TIC: VT013908.D

(24) Chloroform-d (S)

7.224min (+0.154) 0.06ug/L

response 1680

Ion	Exp%	Act%
84.00	100	100
86.00	62.40	62.14
47.00	58.40	42.20
49.00	32.10	33.10

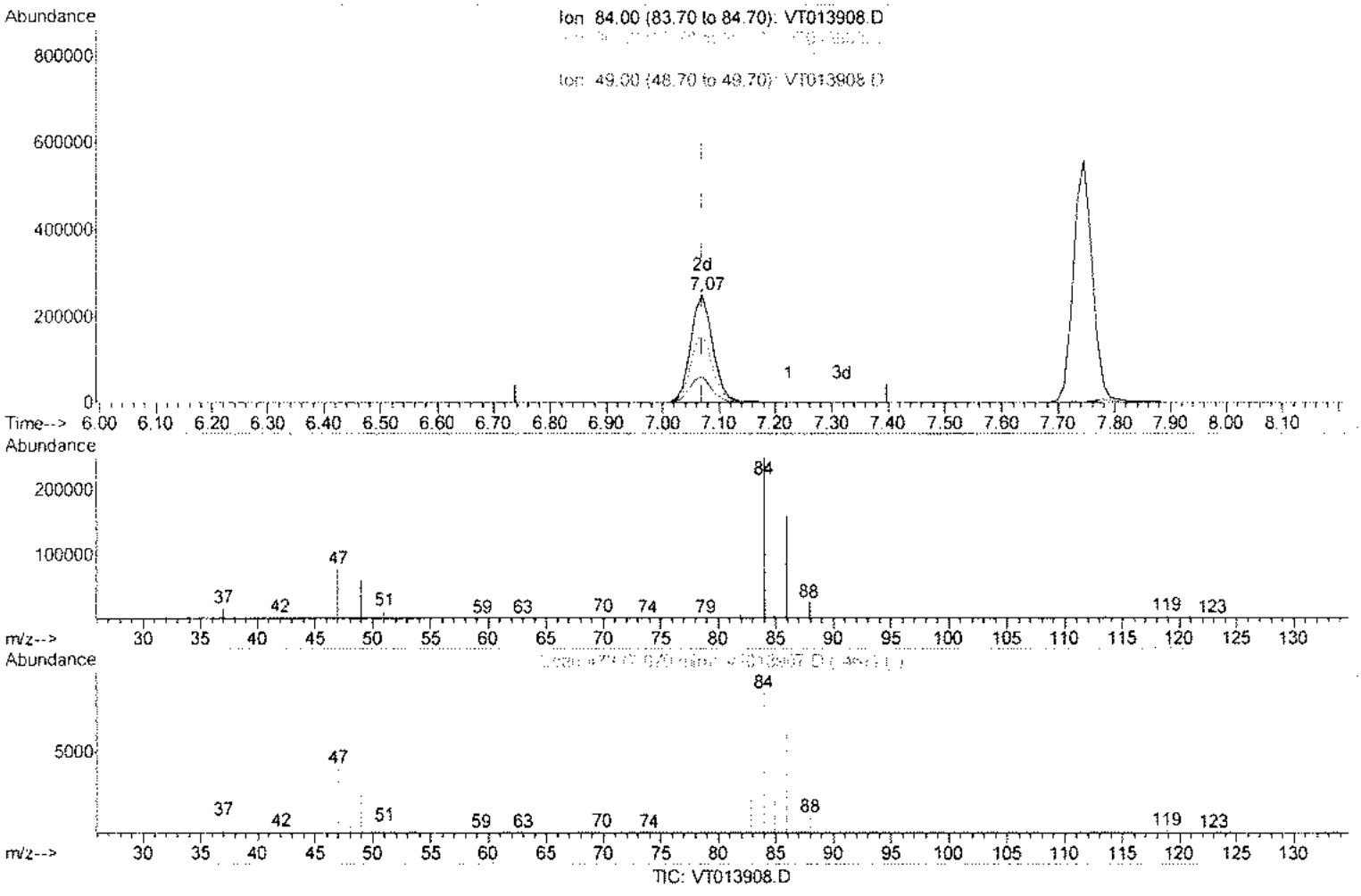
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013908.D
Acq On : 5 May 2016 16:51
Operator : FY/SY
Sample : VT0505SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 06 02:19:13 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VBLK98

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:03 PM



TIC: VT013908.D

(24) Chloroform-d (S)

7.070min (+0.000) 23.06ug/L m

response 686872

M.D 05/09/16

Ion	Exp%	Act%
84.00	100	100
86.00	62.40	0.15#
47.00	58.40	0.10#
49.00	32.10	0.08#

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050516\
Data File : VT013908.D
Acq On : 5 May 2016 16:51
Operator : FY/SY
Sample : VT0505SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 06 02:23:27 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM041216S.M
Quant Title : VOC Analysis
QLast Update : Fri May 06 02:17:21 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VBLK98

Manual Integrations APPROVED
MMDadoda
5/9/2016 6:53:03 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1057725	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	864060	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	402304	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	382928	18.45	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 73.80%			
7) Chloroethane-d5	2.53	69	299328	21.52	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 86.08%			
10) 1,1-Dichloroethene-d2	3.46	63	566629	15.81	ug/L	-0.01
Spiked Amount 25.000	Range 45 - 110		Recovery = 63.24%			
20) 2-Butanone-d5	6.43	46	209721	49.44	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 98.88%			
24) Chloroform-d	7.07	84	686872m	23.06	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 92.24%			
26) 1,2-Dichloroethane-d4	7.78	65	411911	25.58	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 102.32%			
29) Benzene-d6	7.74	84	1320445	20.90	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 83.60%			
33) 1,2-Dichloropropane-d6	8.80	67	395652	21.70	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 86.80%			
37) Toluene-d8	9.87	98	1125914	20.66	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 82.64%			
38) trans-1,3-Dichloropropene-	10.14	79	130291	20.12	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 80.48%			
39) 2-Hexanone-d5	10.48	63	135792	49.02	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 98.04%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	256823	22.45	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 89.80%			
60) 1,2-Dichlorobenzene-d4	13.41	152	340168	22.23	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 88.92%			
Target Compounds						Qvalue
16) Methylene chloride	4.25	84	11496	0.80	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

M.D 05/09/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK78

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : VT0509SBL01
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT013988.D
% Solids : 100
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK78

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : VT0509SBL01
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT013988.D
% Solids : 100
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-trichlorobenzene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK78

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : VT0509SBL01
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT013988.D
% Solids : 100
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK78

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : VT0509SBL01
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT013988.D
% Solids : 100
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) Y
Extraction Type : PT
Purge Volume : 10 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

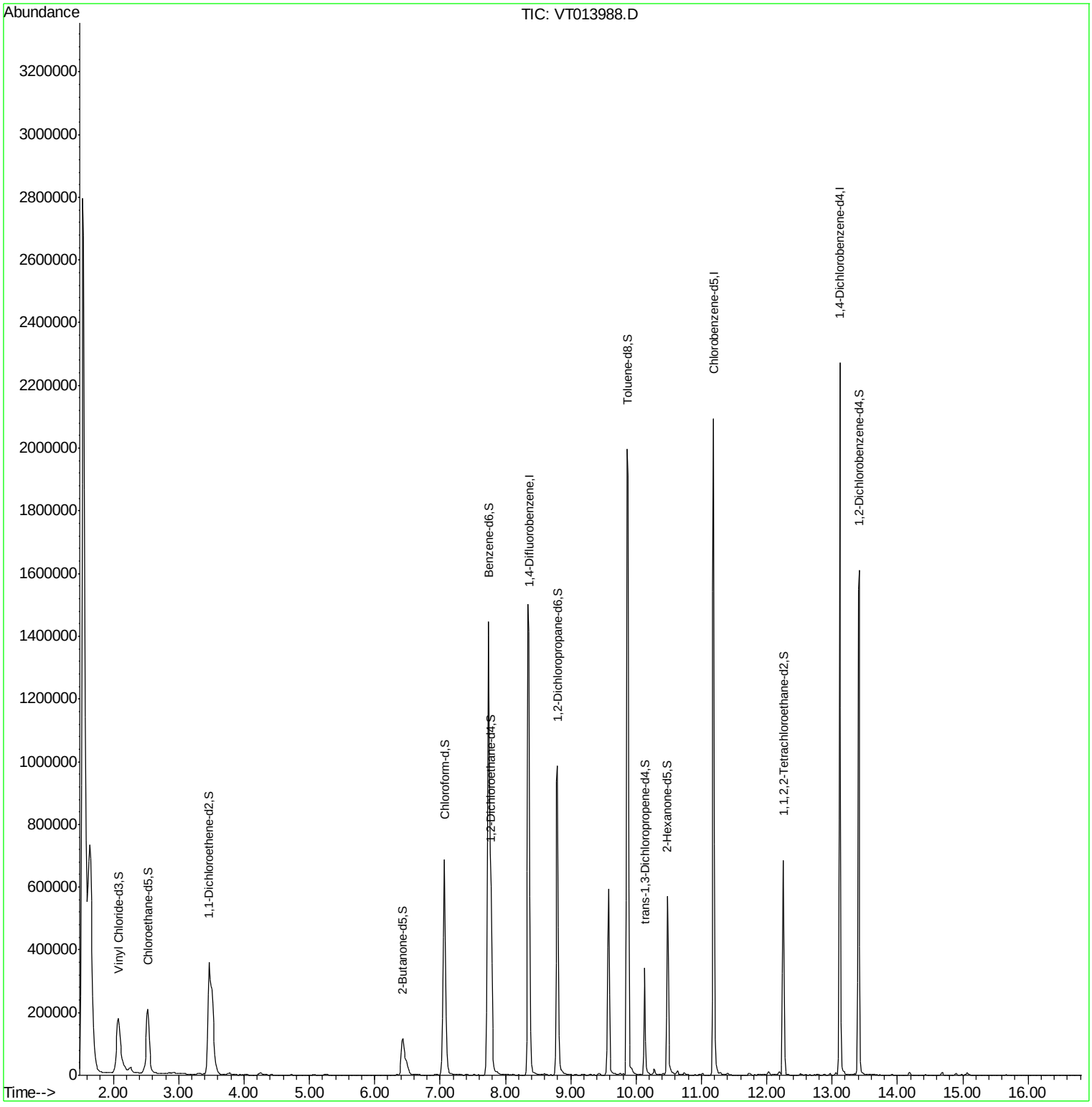
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013988.D
Acq On : 9 May 2016 11:22
Operator : FY/SY
Sample : VT0509SBL01
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK78

Quant Time: May 10 01:23:11 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013988.D
Acq On : 9 May 2016 11:22
Operator : FY/SY
Sample : VT0509SBL01
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK78

Quant Time: May 10 01:23:11 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1167681	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	942590	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	460685	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	509965	26.36	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 105.44%			
7) Chloroethane-d5	2.53	69	372347	26.62	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 106.48%			
10) 1,1-Dichloroethene-d2	3.46	63	722492	18.16	ug/L	-0.01
Spiked Amount 25.000	Range 45 - 110		Recovery = 72.64%			
20) 2-Butanone-d5	6.43	46	241820	52.53	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 105.06%			
24) Chloroform-d	7.07	84	772911	23.72	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 94.88%			
26) 1,2-Dichloroethane-d4	7.78	65	484302	25.35	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 101.40%			
29) Benzene-d6	7.74	84	1472269	24.97	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 99.88%			
33) 1,2-Dichloropropane-d6	8.80	67	437491	25.15	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 100.60%			
37) Toluene-d8	9.86	98	1279460	24.11	ug/L	-0.01
Spiked Amount 25.000	Range 30 - 130		Recovery = 96.44%			
38) trans-1,3-Dichloropropene-	10.13	79	166298	24.65	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 98.60%			
39) 2-Hexanone-d5	10.48	63	155631	55.98	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 111.96%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	285294	23.80	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 95.20%			
60) 1,2-Dichlorobenzene-d4	13.41	152	392543	24.27	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 97.08%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013988.D
Acq On : 9 May 2016 11:22
Operator : FY/SY
Sample : VT0509SBL01
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK78

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Title : VOC Analysis

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.532	3	5	11	rVB	2241875	5548779	100.00%	13.285%
2	1.639	11	14	33	rVB	728584	3014619	54.33%	7.218%
3	2.077	43	51	63	rBV	173678	811539	14.63%	1.943%
4	2.266	63	67	74	rVB3	17263	60750	1.09%	0.145%
5	2.526	81	89	97	rBV	202042	695273	12.53%	1.665%
6	2.775	108	110	111	rBV2	1000	1228	0.02%	0.003%
7	2.846	114	116	118	rVV2	1564	2586	0.05%	0.006%
8	3.201	144	146	151	rVB3	1294	2958	0.05%	0.007%
9	3.284	151	153	154	rVV	1809	3145	0.06%	0.008%
10	3.343	157	158	159	rVV	2868	3125	0.06%	0.007%
11	3.378	159	161	163	rVV4	3072	5724	0.10%	0.014%
12	3.461	163	168	188	rVV	356737	1856259	33.45%	4.444%
13	3.781	190	195	201	rVB3	6214	21847	0.39%	0.052%
14	4.017	212	215	220	rVB2	1568	5018	0.09%	0.012%
15	4.254	230	235	237	rBV3	6754	21188	0.38%	0.051%
16	4.431	246	250	252	rBV3	1475	3749	0.07%	0.009%
17	4.574	259	262	264	rBV2	813	1604	0.03%	0.004%
18	4.727	270	275	280	rBV5	1417	4210	0.08%	0.010%
19	4.964	293	295	298	rVB	786	1358	0.02%	0.003%
20	5.059	298	303	304	rBV3	1102	3731	0.07%	0.009%
21	5.236	315	318	323	rBV5	3275	12294	0.22%	0.029%
22	5.532	339	343	346	rVB3	787	1989	0.04%	0.005%
23	5.875	369	372	376	rBV2	726	1274	0.02%	0.003%
24	6.337	408	411	413	rBV	1116	2134	0.04%	0.005%
25	6.431	413	419	432	rVV2	114883	504770	9.10%	1.209%
26	6.644	433	437	442	rVB3	2301	7295	0.13%	0.017%
27	6.940	457	462	467	rBV3	3431	8953	0.16%	0.021%
28	7.058	467	472	489	rBV	688398	1976034	35.61%	4.731%
29	7.307	492	493	497	rVB3	1667	2504	0.05%	0.006%
30	7.402	498	501	506	rVB3	1540	4856	0.09%	0.012%
31	7.520	509	511	514	rBV3	1708	3941	0.07%	0.009%
32	7.591	514	517	519	rVB	865	1348	0.02%	0.003%
33	7.745	524	530	539	rBV2	1446070	4765650	85.89%	11.410%
34	8.005	547	552	554	rVB4	2285	5909	0.11%	0.014%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013988.D
Acq On : 9 May 2016 11:22
Operator : FY/SY
Sample : VT0509SBL01
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK78

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Title : VOC Analysis

35	8.348	577	581	592	rBV	1500651	3186311	57.42%	7.629%
36	8.597	598	602	607	rVB3	3253	8433	0.15%	0.020%
37	8.798	614	619	635	rBV	985456	2163777	39.00%	5.181%
38	9.011	635	637	640	rVB	1294	2280	0.04%	0.005%
39	9.082	642	643	646	rBV	863	1390	0.03%	0.003%
40	9.188	649	652	658	rVB3	1595	5608	0.10%	0.013%
41	9.295	658	661	665	rBV3	2623	6898	0.12%	0.017%
42	9.437	669	673	678	rVB2	6472	15184	0.27%	0.036%
43	9.579	681	685	697	rVB	593324	1017496	18.34%	2.436%
44	9.756	697	700	702	rBV3	4213	8617	0.16%	0.021%
45	9.804	702	704	706	rVB2	1921	2541	0.05%	0.006%
46	9.863	706	709	714	rBV	1994569	3715287	66.96%	8.895%
47	10.040	722	724	728	rVB3	1239	1664	0.03%	0.004%
48	10.135	728	732	741	rVV	340509	593499	10.70%	1.421%
49	10.277	741	744	748	rVV2	18421	35408	0.64%	0.085%
50	10.336	748	749	753	rVB3	2702	3791	0.07%	0.009%
51	10.407	753	755	758	rVB3	5531	9581	0.17%	0.023%
52	10.478	758	761	771	rBV	569411	941357	16.97%	2.254%
53	10.632	771	774	777	rVV	12285	23916	0.43%	0.057%
54	10.738	781	783	786	rBV3	6382	10335	0.19%	0.025%
55	10.786	786	787	791	rVB4	1364	2410	0.04%	0.006%
56	10.963	800	802	805	rBV2	1980	4223	0.08%	0.010%
57	11.011	805	806	809	rVB2	4548	7213	0.13%	0.017%
58	11.188	817	821	828	rBV	2094175	3414954	61.54%	8.176%
59	11.295	828	830	834	rVB	7979	13328	0.24%	0.032%
60	11.401	835	839	846	rVB3	6227	15534	0.28%	0.037%
61	11.732	864	867	871	rVB3	6020	13619	0.25%	0.033%
62	11.886	877	880	883	rBV2	674	2166	0.04%	0.005%
63	11.945	883	885	889	rBV3	930	1823	0.03%	0.004%
64	12.028	889	892	895	rVB2	9397	15425	0.28%	0.037%
65	12.111	895	899	900	rBV3	795	1334	0.02%	0.003%
66	12.194	900	906	908	rBV2	9116	18856	0.34%	0.045%
67	12.253	908	911	917	rVB	684434	1010200	18.21%	2.419%
68	12.336	917	918	922	rVB3	1884	2145	0.04%	0.005%
69	12.513	930	933	937	rVB2	4426	10544	0.19%	0.025%
70	12.726	948	951	953	rBV2	1333	2238	0.04%	0.005%
71	12.774	953	955	959	rBV3	3364	7128	0.13%	0.017%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013988.D
Acq On : 9 May 2016 11:22
Operator : FY/SY
Sample : VT0509SBL01
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK78

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Title : VOC Analysis

72	12.880	962	964	967	rBV2	1462	3223	0.06%	0.008%
73	12.975	967	972	976	rBV2	5874	9865	0.18%	0.024%
74	13.058	976	979	981	rBV3	6974	14167	0.26%	0.034%
75	13.117	981	984	988	rBV	2270549	3196370	57.60%	7.653%
76	13.247	994	995	997	rVB2	1919	1821	0.03%	0.004%
77	13.342	1000	1003	1005	rBV2	2813	3586	0.06%	0.009%
78	13.413	1005	1009	1012	rBV	1608274	2781454	50.13%	6.660%
79	13.590	1021	1024	1027	rBV3	1538	4233	0.08%	0.010%
80	13.649	1027	1029	1033	rVB2	2873	6241	0.11%	0.015%
81	13.732	1033	1036	1038	rBV2	1051	1222	0.02%	0.003%
82	13.945	1053	1054	1058	rVB2	589	1348	0.02%	0.003%
83	14.123	1067	1069	1072	rBV	610	1441	0.03%	0.003%
84	14.194	1072	1075	1079	rBV2	8608	14142	0.25%	0.034%
85	14.430	1093	1095	1098	rVB2	1043	1306	0.02%	0.003%
86	14.679	1113	1116	1119	rVB2	8928	16503	0.30%	0.040%
87	14.726	1119	1120	1123	rVB2	755	1178	0.02%	0.003%
88	14.773	1123	1124	1127	rBV2	611	1250	0.02%	0.003%
89	14.821	1127	1128	1132	rBV2	703	1585	0.03%	0.004%
90	14.892	1132	1134	1138	rVB	4851	9010	0.16%	0.022%
91	14.975	1138	1141	1143	rBV	1239	2289	0.04%	0.005%
92	15.069	1143	1149	1154	rVB5	7548	17483	0.32%	0.042%
93	15.164	1154	1157	1159	rBV2	812	1339	0.02%	0.003%
94	15.353	1169	1173	1176	rBV3	556	1302	0.02%	0.003%
95	15.661	1198	1199	1202	rVB	1084	1422	0.03%	0.003%
96	15.732	1202	1205	1207	rBV	873	1910	0.03%	0.005%
97	16.241	1245	1248	1250	rVB2	621	1535	0.03%	0.004%
98	16.359	1254	1258	1260	rVB3	826	2256	0.04%	0.005%
99	16.442	1262	1265	1268	rBV2	544	1146	0.02%	0.003%
100	16.596	1276	1278	1281	rVB2	815	1656	0.03%	0.004%

Sum of corrected areas: 41766437

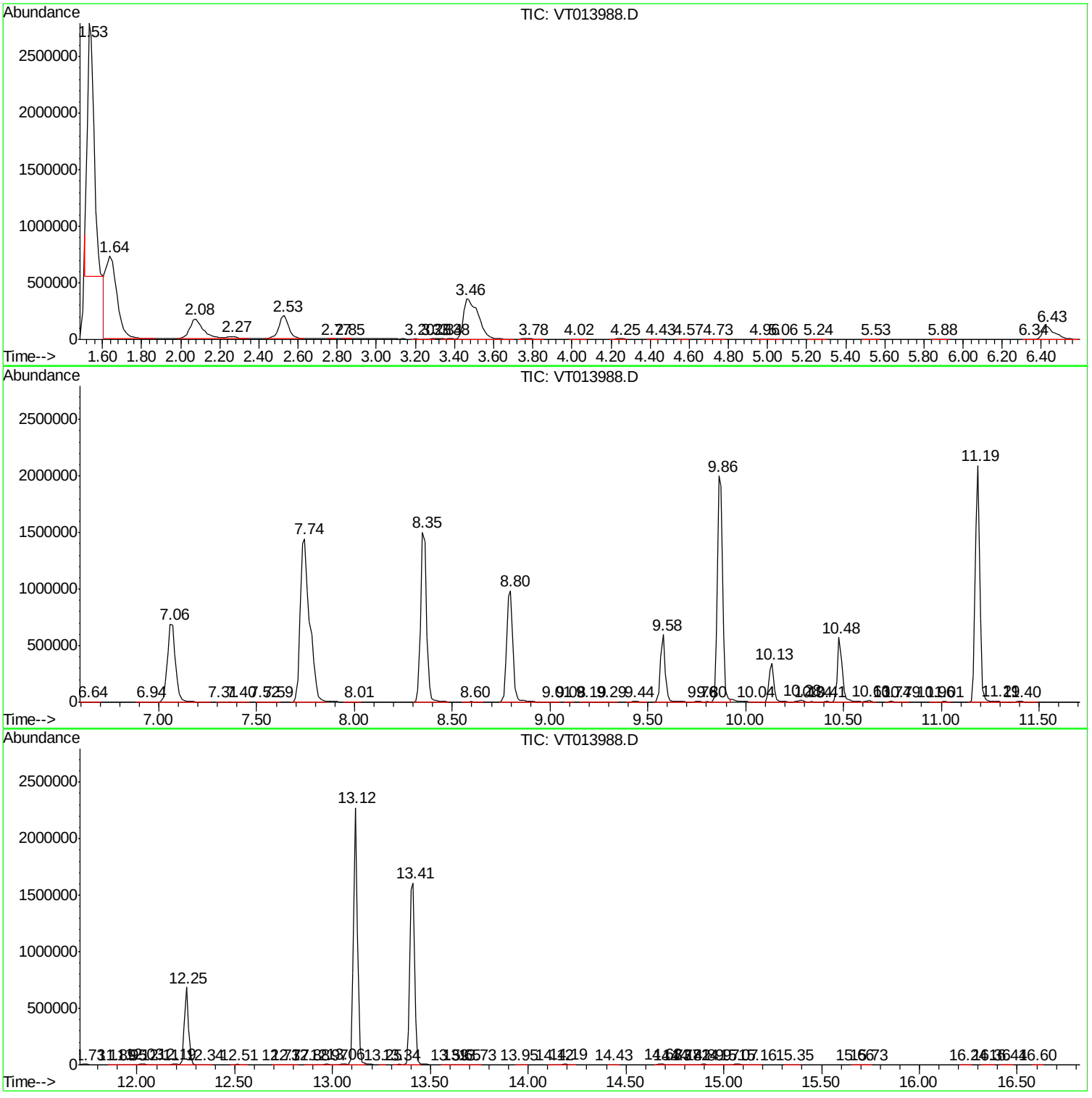
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013988.D
Acq On : 9 May 2016 11:22
Operator : FY/SY
Sample : VT0509SBL01
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK78

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013988.D
Acq On : 9 May 2016 11:22
Operator : FY/SY
Sample : VT0509SBL01
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VBLK78

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013988.D
Acq On : 9 May 2016 11:22
Operator : FY/SY
Sample : VT0509SBL01
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK78

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK79

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : VT0509SBL02
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT014000.D
% Solids : 100
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene chloride	1.1	J
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK79

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : VT0509SBL02
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT014000.D
% Solids : 100
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-trichlorobenzene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK79

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : VT0509SBL02
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT014000.D
% Solids : 100
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK79

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : VT0509SBL02
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT014000.D
% Solids : 100
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) Y
Extraction Type : PT
Purge Volume : 10 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

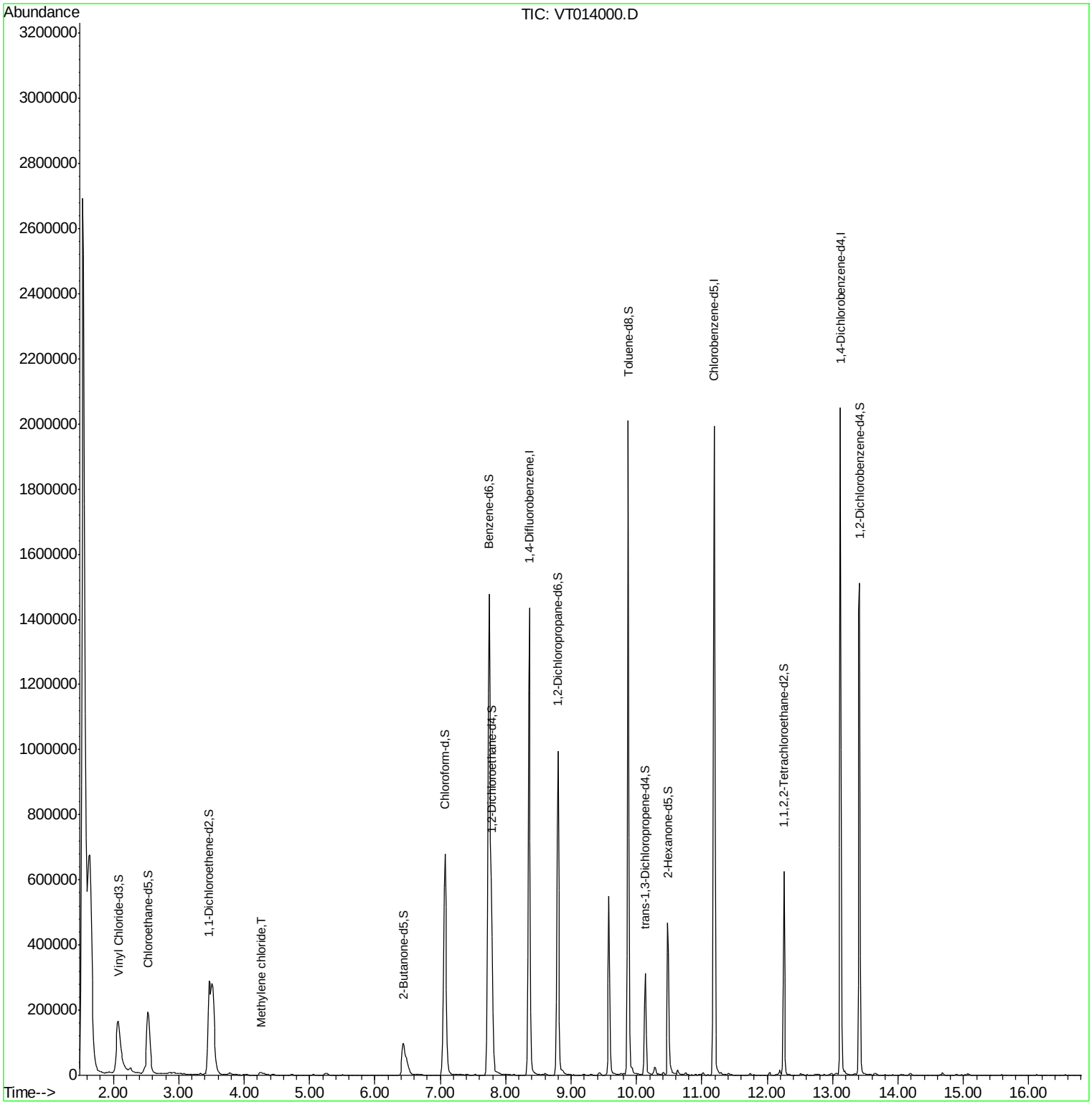
Quantitation Report (LSC Reviewed)

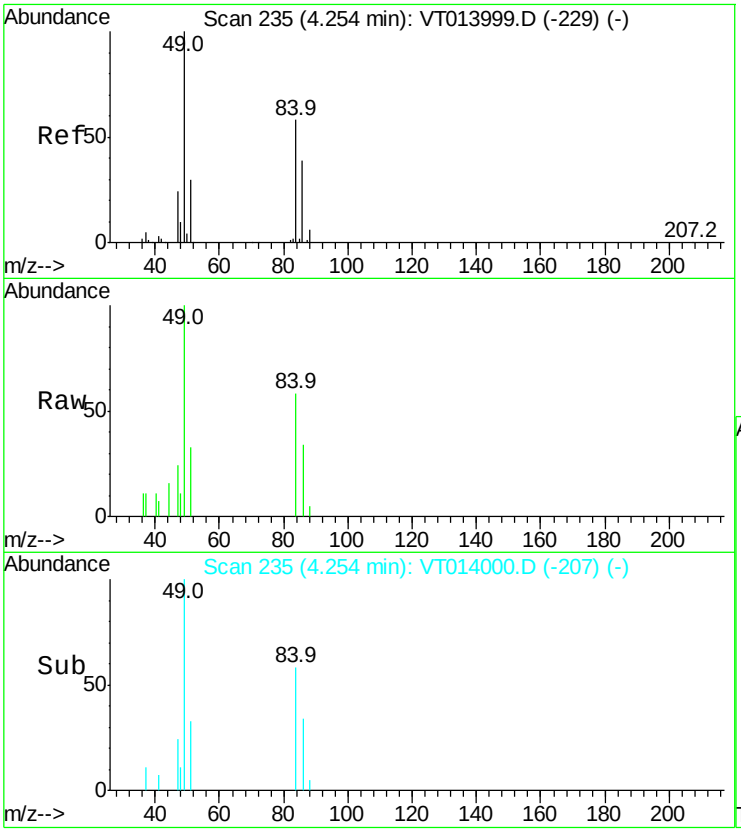
Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014000.D
Acq On : 9 May 2016 17:05
Operator : FY/SY
Sample : VT0509SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 10 02:06:46 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VBLK79

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:41:18 PM

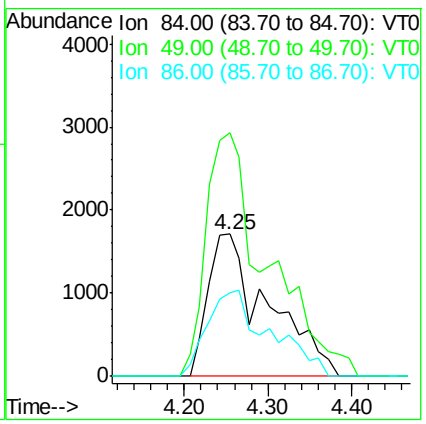




#16
Methylene chloride
Concen: 0.57 ug/L m
RT: 4.25 min Scan# 235
Delta R.T. 0.00 min
Lab File: VT014000.D
Acq: 9 May 2016 17:05

Tgt Ion: 84 Resp: 8531

Ion	Ratio	Lower	Upper
84	100		
49	171.5	116.8	216.8
86	58.8	44.9	83.5



Instrument :
MSVOA_T
ClientSampleId :
VBLK79

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:41:18 PM

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014000.D
Acq On : 9 May 2016 17:05
Operator : FY/SY
Sample : VT0509SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 15 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VBLK79

Manual Integrations APPROVED
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5/10/2016 7:41:18 PM

Quant Time: May 10 02:06:46 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1052009	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	856289	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	404277	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	482441	27.67	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 110.68%			
7) Chloroethane-d5	2.53	69	350835	27.84	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 111.36%			
10) 1,1-Dichloroethene-d2	3.46	63	696853m	19.44	ug/L	-0.01
Spiked Amount 25.000	Range 45 - 110		Recovery = 77.76%			
20) 2-Butanone-d5	6.43	46	200228	48.28	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 96.56%			
24) Chloroform-d	7.07	84	727147	24.77	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 99.08%			
26) 1,2-Dichloroethane-d4	7.78	65	450514	26.18	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 104.72%			
29) Benzene-d6	7.74	84	1385504	25.87	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 103.48%			
33) 1,2-Dichloropropane-d6	8.80	67	404356	25.59	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 102.36%			
37) Toluene-d8	9.87	98	1235738	25.63	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 102.52%			
38) trans-1,3-Dichloropropene-	10.14	79	144849	23.64	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 94.56%			
39) 2-Hexanone-d5	10.48	63	133766	52.96	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 105.92%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	258547	23.75	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 95.00%			
60) 1,2-Dichlorobenzene-d4	13.41	152	364731	25.70	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 102.80%			
Target Compounds						Qvalue
16) Methylene chloride	4.25	84	8531m	0.57	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA T\DATA\VT050916\
Data File : VT014000.D
Acq On : 9 May 2016 17:05
Operator : FY/SY
Sample : VT0509SBL02
Misc : 5.00g/10mL/MSVOA T/SOIL
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK79

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Title : VOC Analysis

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.533	3	5	11	rVB	2130218	5099640	100.00%	13.596%
2	1.639	11	14	33	rVB	669157	2626149	51.50%	7.002%
3	1.899	33	36	37	rBV	2056	3679	0.07%	0.010%
4	1.935	37	39	40	rBV	2160	1939	0.04%	0.005%
5	2.077	44	51	64	rBV	159103	774142	15.18%	2.064%
6	2.254	64	66	75	rVB4	14624	45861	0.90%	0.122%
7	2.526	81	89	101	rVV	188773	684940	13.43%	1.826%
8	2.680	101	102	106	rVB2	2361	4918	0.10%	0.013%
9	2.917	120	122	126	rVB3	2489	6287	0.12%	0.017%
10	3.083	134	136	138	rVB2	629	1061	0.02%	0.003%
11	3.331	154	157	160	rBV4	1670	3549	0.07%	0.009%
12	3.390	160	162	163	rBV	1163	1492	0.03%	0.004%
13	3.461	163	168	170	rBV	286214	781508	15.32%	2.084%
14	3.781	189	195	201	rVB2	6205	20055	0.39%	0.053%
15	4.053	214	218	219	rVB3	823	1874	0.04%	0.005%
16	4.254	228	235	237	rBV2	8458	26192	0.51%	0.070%
17	4.432	246	250	251	rBV2	918	2107	0.04%	0.006%
18	4.633	262	267	269	rBV	595	2134	0.04%	0.006%
19	4.680	269	271	272	rVV2	661	1002	0.02%	0.003%
20	4.727	272	275	278	rVB3	1407	3186	0.06%	0.008%
21	4.798	278	281	284	rVB	695	1349	0.03%	0.004%
22	5.059	300	303	308	rVB4	1695	4356	0.09%	0.012%
23	5.260	314	320	330	rBV5	4716	18403	0.36%	0.049%
24	5.508	338	341	343	rBV2	1018	1591	0.03%	0.004%
25	5.556	343	345	349	rVB3	564	1429	0.03%	0.004%
26	5.958	374	379	381	rVB2	380	1201	0.02%	0.003%
27	6.337	409	411	414	rBV2	874	2106	0.04%	0.006%
28	6.431	414	419	432	rBV2	98095	447078	8.77%	1.192%
29	6.632	435	436	442	rVB3	1676	5067	0.10%	0.014%
30	6.727	442	444	445	rVB2	878	1012	0.02%	0.003%
31	6.822	451	452	455	rVB	687	1085	0.02%	0.003%
32	7.070	467	473	491	rBV	679855	1876149	36.79%	5.002%
33	7.295	491	492	494	rBV2	784	1398	0.03%	0.004%
34	7.413	498	502	505	rBV3	1636	4371	0.09%	0.012%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014000.D
Acq On : 9 May 2016 17:05
Operator : FY/SY
Sample : VT0509SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK79

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Title : VOC Analysis

35	7.532	509	512	515	rVB3	1049	3128	0.06%	0.008%
36	7.579	515	516	519	rVB2	652	1030	0.02%	0.003%
37	7.745	525	530	546	rBV2	1477935	4570245	89.62%	12.185%
38	8.005	550	552	556	rVB3	2349	4724	0.09%	0.013%
39	8.112	559	561	566	rVB4	1090	2622	0.05%	0.007%
40	8.360	578	582	592	rBV	1434186	2846841	55.82%	7.590%
41	8.490	592	593	597	rVB3	2691	5036	0.10%	0.013%
42	8.597	597	602	606	rVB3	4757	11112	0.22%	0.030%
43	8.798	615	619	632	rVB	994216	1998709	39.19%	5.329%
44	8.987	634	635	638	rVB3	1296	1864	0.04%	0.005%
45	9.200	648	653	656	rVB3	1560	4623	0.09%	0.012%
46	9.248	656	657	659	rBV2	691	1007	0.02%	0.003%
47	9.307	659	662	665	rVB2	3009	5391	0.11%	0.014%
48	9.437	669	673	677	rBV	9303	17263	0.34%	0.046%
49	9.579	681	685	692	rBV	548174	902099	17.69%	2.405%
50	9.756	698	700	703	rBV2	3449	5653	0.11%	0.015%
51	9.804	703	704	706	rVV	4031	5199	0.10%	0.014%
52	9.875	706	710	714	rVV	2008951	3562269	69.85%	9.498%
53	9.934	714	715	722	rVV	21467	40923	0.80%	0.109%
54	10.076	726	727	728	rVV	1118	1162	0.02%	0.003%
55	10.135	728	732	741	rVV	310501	523512	10.27%	1.396%
56	10.277	741	744	748	rVV	24496	48193	0.95%	0.128%
57	10.336	748	749	752	rVB2	2856	3925	0.08%	0.010%
58	10.419	752	756	758	rBV	5898	11655	0.23%	0.031%
59	10.478	758	761	772	rVV	467139	820223	16.08%	2.187%
60	10.632	772	774	777	rVV2	13751	21901	0.43%	0.058%
61	10.679	777	778	780	rVB2	1115	1473	0.03%	0.004%
62	10.750	780	784	786	rVB3	5633	10334	0.20%	0.028%
63	10.786	786	787	790	rVB2	873	1364	0.03%	0.004%
64	10.916	795	798	799	rBV3	909	1522	0.03%	0.004%
65	10.975	799	803	804	rBV2	2278	3463	0.07%	0.009%
66	11.023	804	807	810	rVB2	6459	11235	0.22%	0.030%
67	11.093	812	813	817	rVB2	922	1010	0.02%	0.003%
68	11.188	817	821	828	rBV	1993658	3095934	60.71%	8.254%
69	11.295	828	830	834	rVV2	7312	12397	0.24%	0.033%
70	11.401	837	839	842	rVB2	5828	9746	0.19%	0.026%
71	11.448	842	843	846	rVB2	1168	1519	0.03%	0.004%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA T\DATA\VT050916\
Data File : VT014000.D
Acq On : 9 May 2016 17:05
Operator : FY/SY
Sample : VT0509SBL02
Misc : 5.00g/10mL/MSVOA T/SOIL
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK79

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Title : VOC Analysis

72	11.590	853	855	858	rBV3	796	1362	0.03%	0.004%
73	11.732	862	867	870	rBV2	4879	10386	0.20%	0.028%
74	12.028	890	892	896	rBV2	8345	14699	0.29%	0.039%
75	12.194	900	906	908	rBV	15509	32174	0.63%	0.086%
76	12.253	908	911	917	rVV	623671	915164	17.95%	2.440%
77	12.336	917	918	921	rVB2	1437	2166	0.04%	0.006%
78	12.513	931	933	938	rBV4	5042	11313	0.22%	0.030%
79	12.774	947	955	959	rVB3	3516	11839	0.23%	0.032%
80	12.880	959	964	967	rVB2	1492	3988	0.08%	0.011%
81	12.939	967	969	970	rBV2	977	1060	0.02%	0.003%
82	12.975	970	972	976	rBV3	5930	9183	0.18%	0.024%
83	13.058	976	979	981	rBV3	5612	12828	0.25%	0.034%
84	13.117	981	984	988	rBV	2045625	2811017	55.12%	7.495%
85	13.342	999	1003	1005	rBV5	4097	7324	0.14%	0.020%
86	13.413	1005	1009	1012	rBV	1509154	2572817	50.45%	6.860%
87	13.649	1026	1029	1034	rVB	5452	10346	0.20%	0.028%
88	13.922	1050	1052	1056	rVB3	781	1635	0.03%	0.004%
89	13.993	1056	1058	1061	rBV2	534	1311	0.03%	0.003%
90	14.040	1061	1062	1065	rBV2	725	1219	0.02%	0.003%
91	14.182	1071	1074	1078	rBV2	5374	10027	0.20%	0.027%
92	14.371	1088	1090	1093	rVB	621	1542	0.03%	0.004%
93	14.679	1114	1116	1120	rVB3	7266	12467	0.24%	0.033%
94	14.738	1120	1121	1123	rBV	831	1069	0.02%	0.003%
95	14.892	1129	1134	1137	rBV3	3409	6505	0.13%	0.017%
96	15.069	1146	1149	1154	rVB2	4832	9035	0.18%	0.024%
97	15.448	1180	1181	1184	rVB	635	1096	0.02%	0.003%
98	15.590	1191	1193	1198	rVB2	1018	2778	0.05%	0.007%
99	15.685	1198	1201	1202	rBV2	639	1025	0.02%	0.003%
100	16.122	1237	1238	1241	rVB2	762	1043	0.02%	0.003%

Sum of corrected areas: 37507034

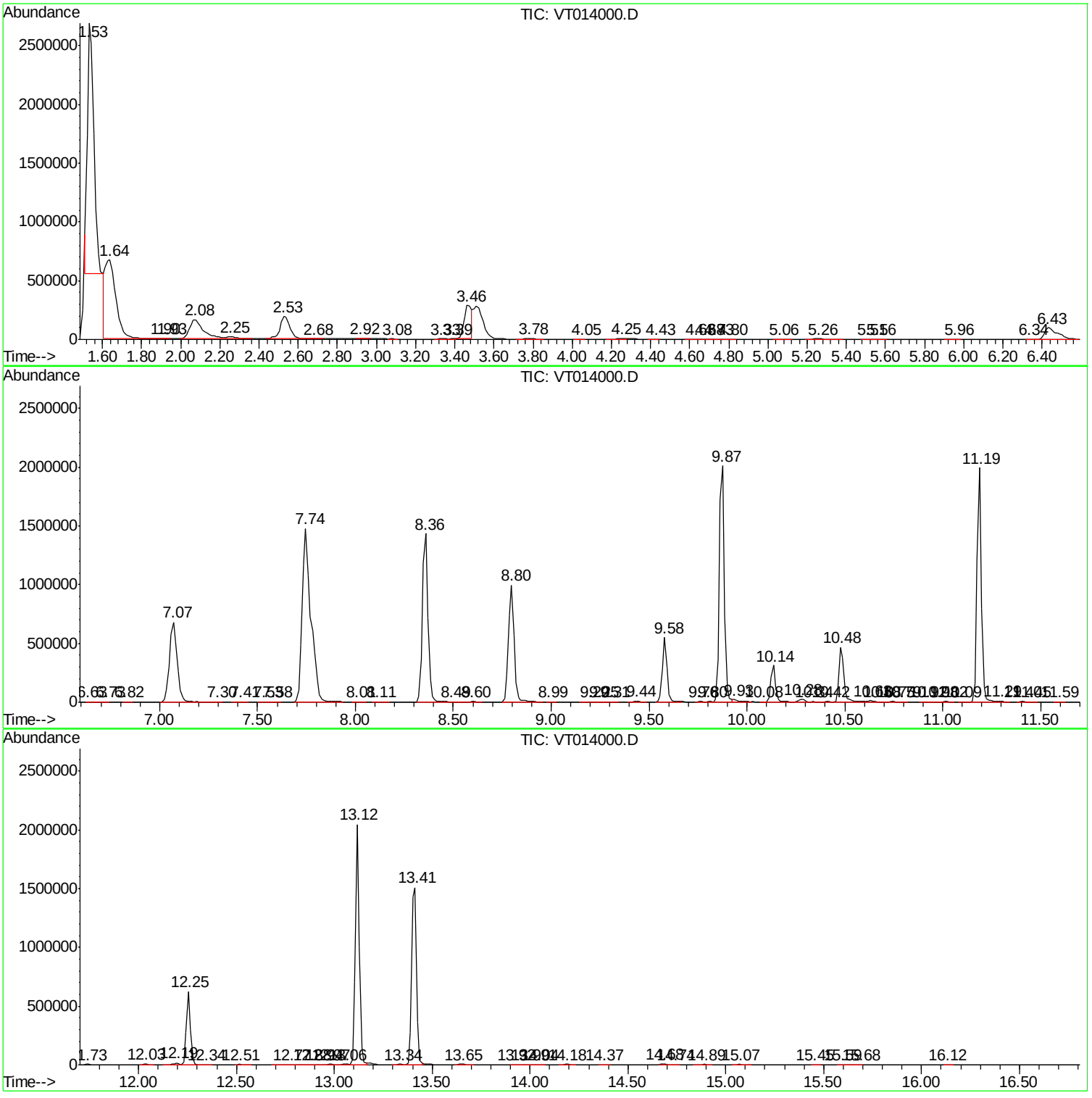
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014000.D
Acq On : 9 May 2016 17:05
Operator : FY/SY
Sample : VT0509SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK79

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014000.D
Acq On : 9 May 2016 17:05
Operator : FY/SY
Sample : VT0509SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 15 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VBLK79

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014000.D
Acq On : 9 May 2016 17:05
Operator : FY/SY
Sample : VT0509SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VBLK79

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014000.D
Acq On : 9 May 2016 17:05
Operator : FY/SY
Sample : VT0509SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 10 02:06:46 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VBLK79

Manual Integrations APPROVED
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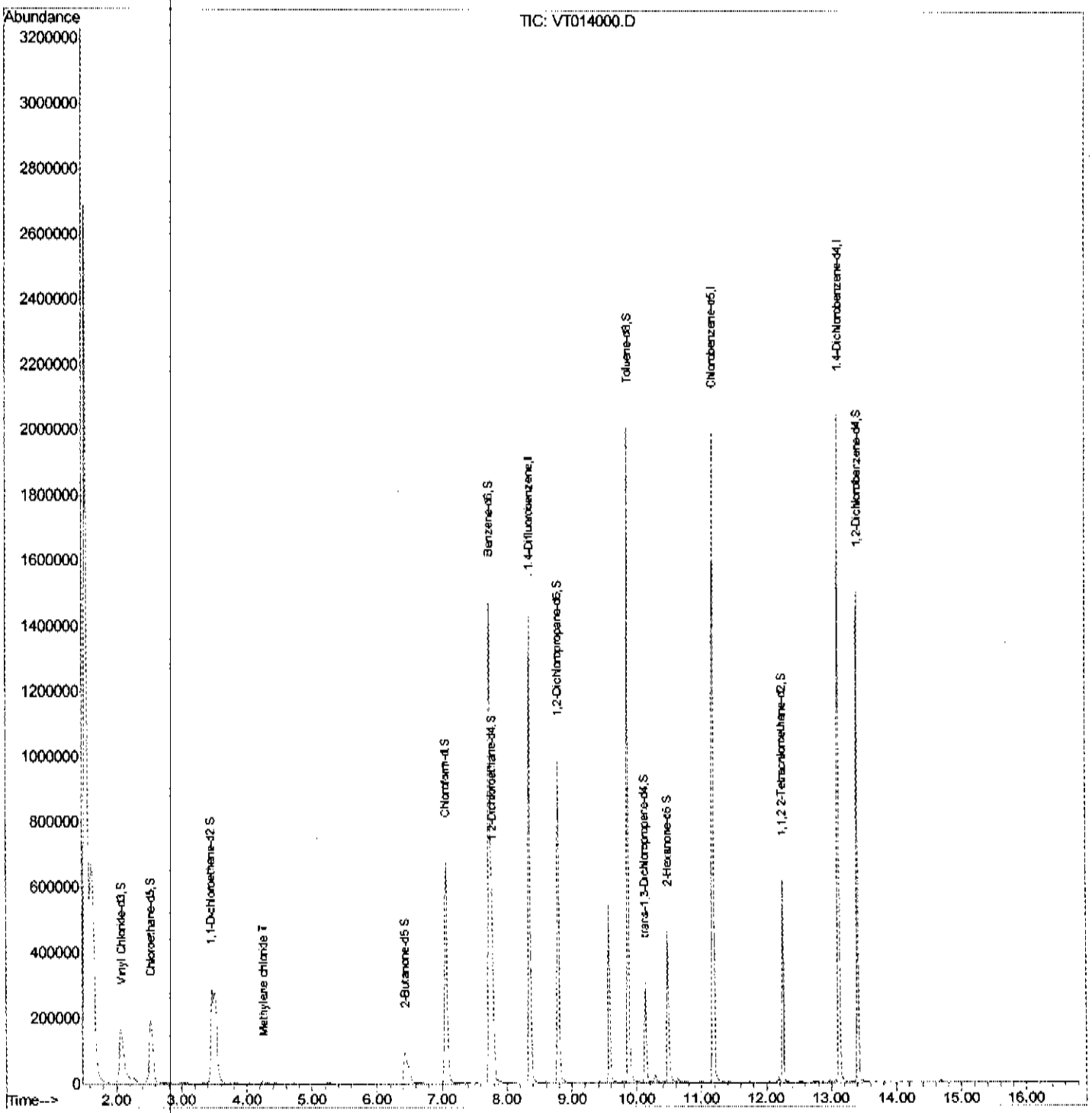
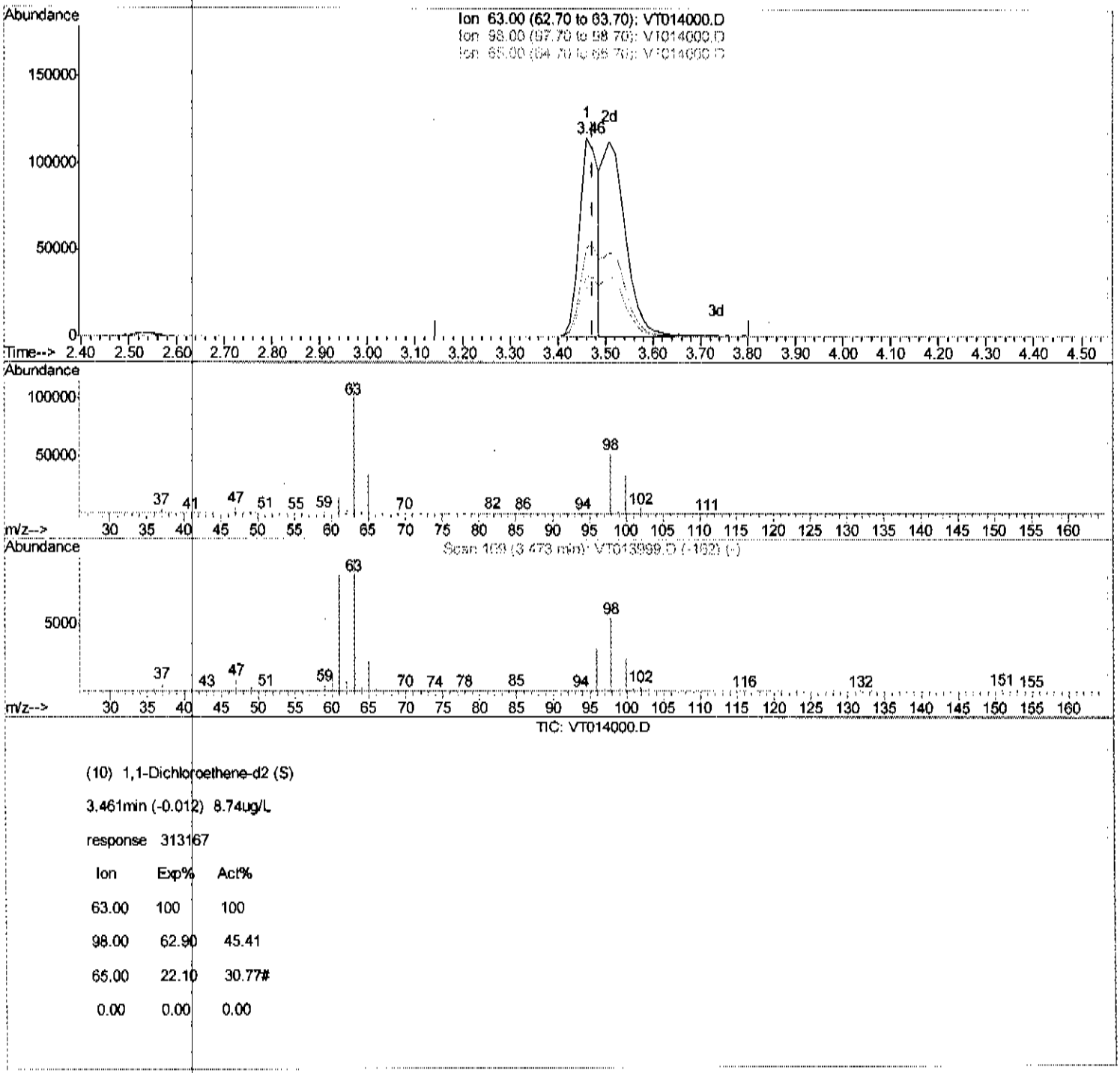


Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014000.D
Acq On : 9 May 2016 17:05
Operator : FY/SY
Sample : VT0509SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 10 02:02:09 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VBLK79

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:41:18 PM



(10) 1,1-Dichloroethene-d2 (S)

3.461min (-0.012) 8.74ug/L

response 313167

Ion	Exp%	Act%
63.00	100	100
98.00	62.90	45.41
65.00	22.10	30.77#
0.00	0.00	0.00

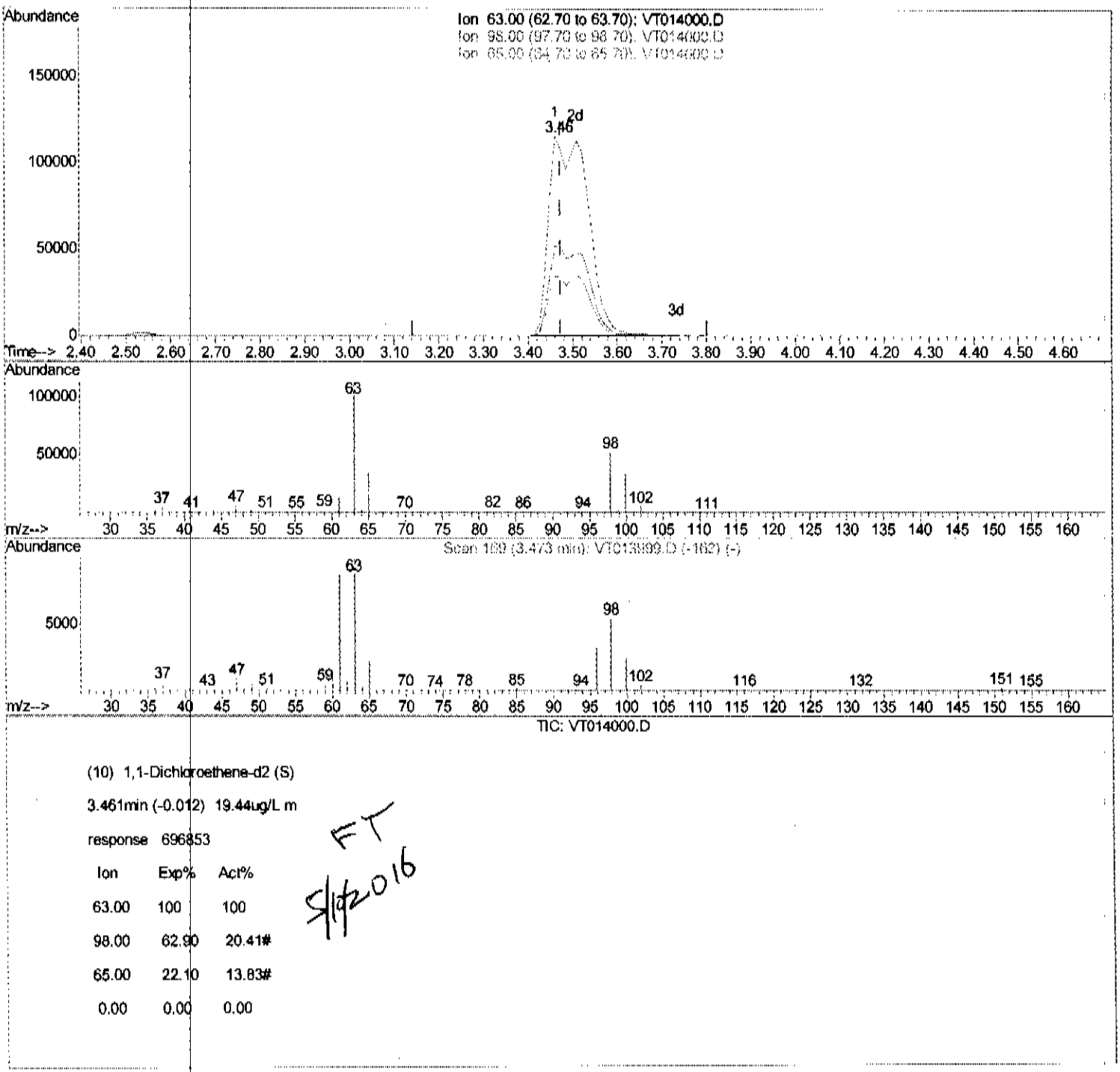
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014000.D
Acq On : 9 May 2016 17:05
Operator : FY/SY
Sample : VT0509SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 10 02:02:09 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VBLK79

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:41:18 PM



(10) 1,1-Dichloroethene-d2 (S)

3.461min (-0.012) 19.44ug/L m

response 696853

Ion	Exp%	Act%
63.00	100	100
98.00	62.90	20.41#
65.00	22.10	13.83#
0.00	0.00	0.00

FT
5/10/2016

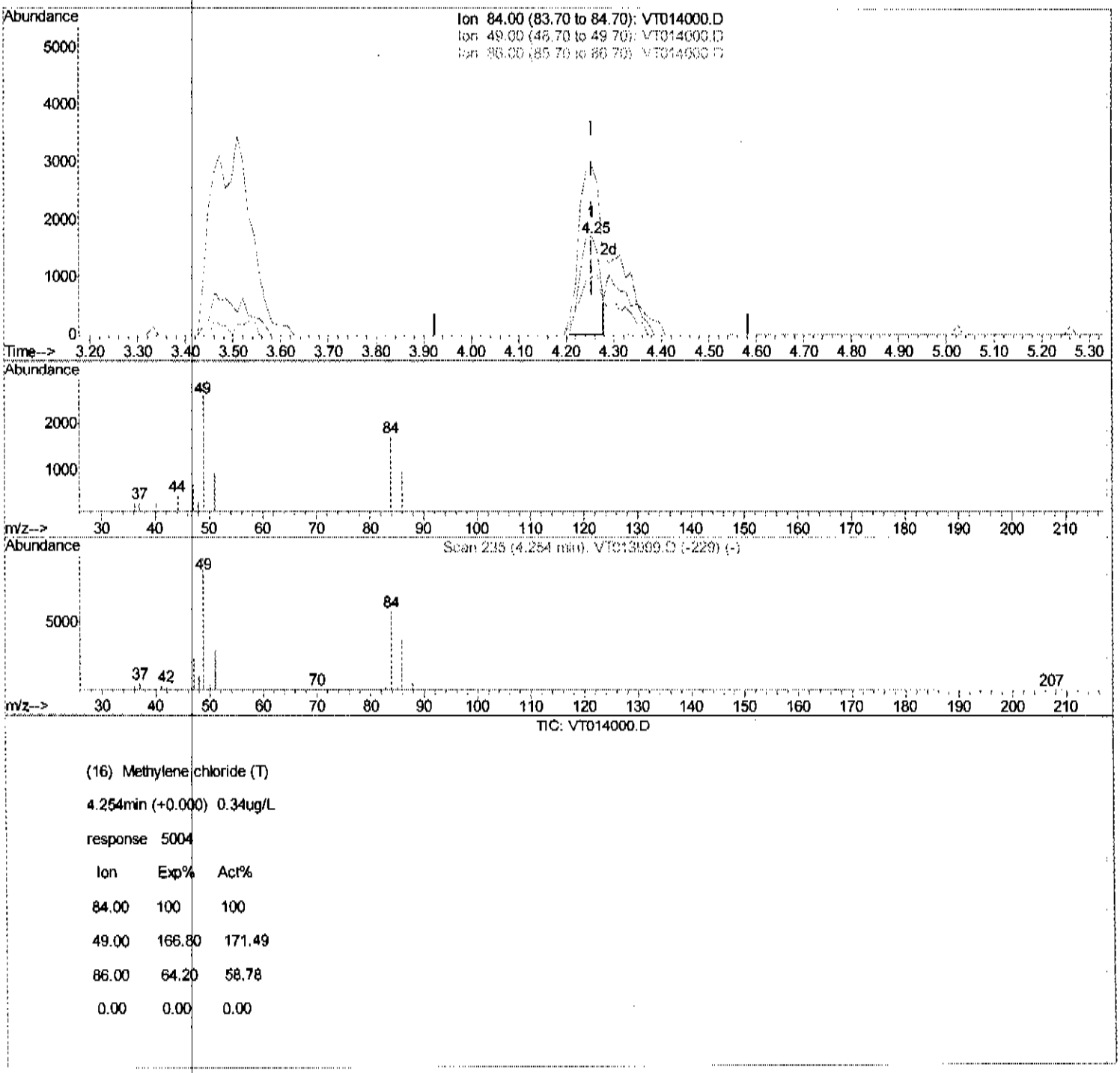
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014000.D
Acq On : 9 May 2016 17:05
Operator : FY/SY
Sample : VT0509SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 10 02:02:09 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VBLK79

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:41:18 PM



TIC: VT014000.D

(16) Methylene chloride (T)

4.254min (+0.000) 0.34ug/L

response 5004

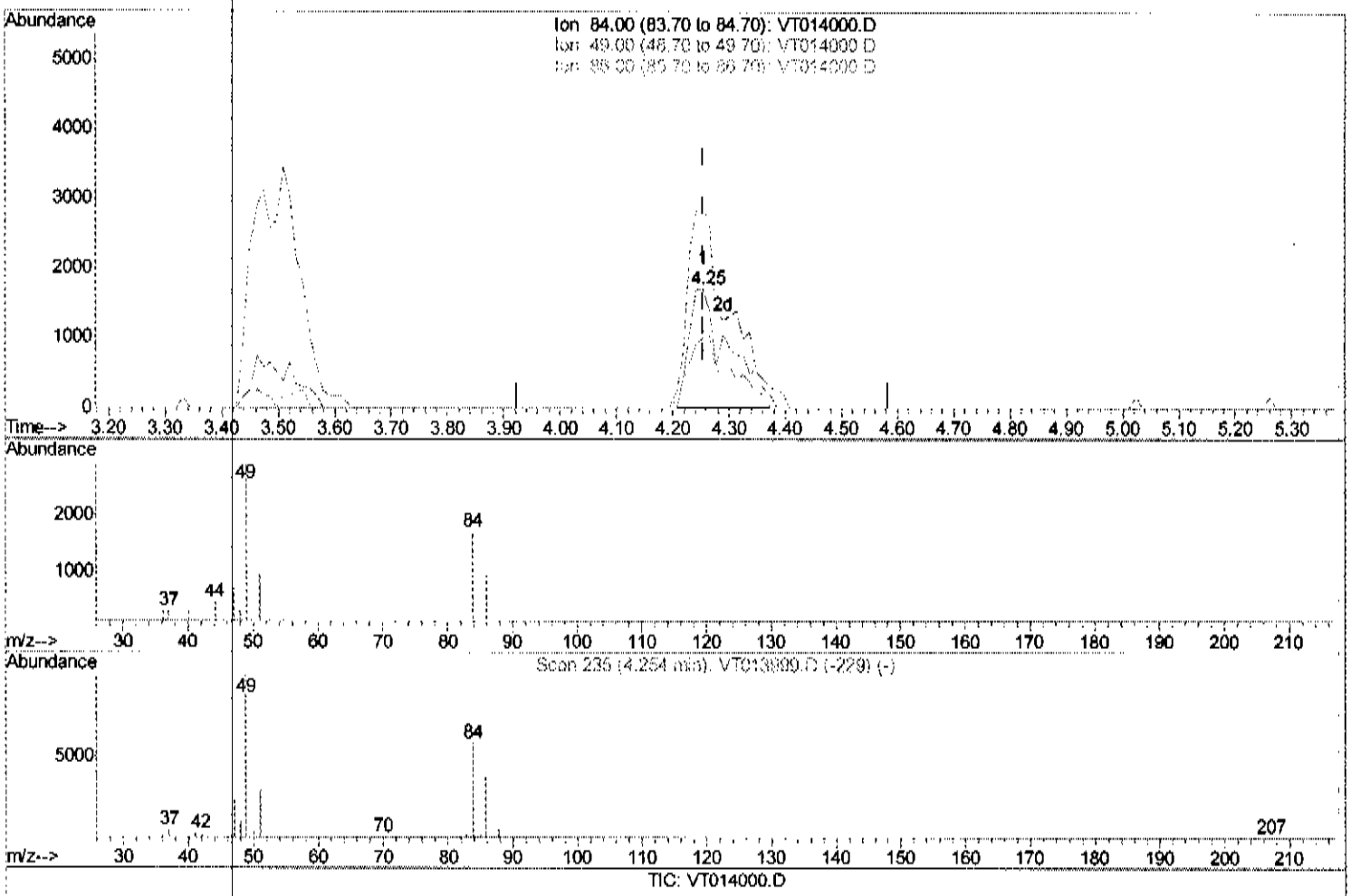
Ion	Exp%	Act%
84.00	100	100
49.00	166.80	171.49
86.00	64.20	58.78
0.00	0.00	0.00

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014000.D
Acq On : 9 May 2016 17:05
Operator : FY/SY
Sample : VT0509SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 10 02:02:09 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VBLK79

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:41:18 PM



TIC: VT014000.D

(16) Methylene chloride (T)

4.254min (+0.000) 0.57ug/L m

response 8531

Ion	Exp%	Act%
84.00	100	100
49.00	166.80	171.49
86.00	64.20	58.78
0.00	0.00	0.00

FT
5/10/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014000.D
Acq On : 9 May 2016 17:05
Operator : FY/SY
Sample : VT0509SBL02
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 10 02:06:46 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VBLK79

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:41:18 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	1052009	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	856289	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	404277	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	182441	27.67	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 110.68%			
7) Chloroethane-d5	2.53	69	350835	27.84	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 111.36%			
10) 1,1-Dichloroethene-d2	3.46	63	696853m	19.44	ug/L	-0.01
Spiked Amount 25.000	Range 45 - 110		Recovery = 77.76%			
20) 2-Butanone-d5	6.43	46	200228	48.28	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 96.56%			
24) Chloroform-d	7.07	84	727147	24.77	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 99.08%			
26) 1,2-Dichloroethane-d4	7.78	65	450514	26.18	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 104.72%			
29) Benzene-d6	7.74	84	1385504	25.87	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 103.48%			
33) 1,2-Dichloropropane-d6	8.80	67	404356	25.59	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 102.36%			
37) Toluene-d8	9.87	98	1235738	25.63	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 102.52%			
38) trans-1,3-Dichloropropene-	10.14	79	144849	23.64	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 94.56%			
39) 2-Hexanone-d5	10.48	63	133766	52.96	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 105.92%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	258547	23.75	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 95.00%			
60) 1,2-Dichlorobenzene-d4	13.41	152	364731	25.70	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 102.80%			
Target Compounds						Qvalue
16) Methylene chloride	4.25	84	8531m	0.57	ug/L	

FY 5/10/2016

FY 5/10/2016

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK02

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-17
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT014001.D
% Solids : 100
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene chloride	1.4	JB
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK02

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-17
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT014001.D
% Solids : 100
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-trichlorobenzene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK02

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-17
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT014001.D
% Solids : 100
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VHBLK02

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-17
Sample wt/vol : 5.0 (g/mL): g
Lab File ID : VT014001.D
% Solids : 100
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) Y
Extraction Type : PT
Purge Volume : 10 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

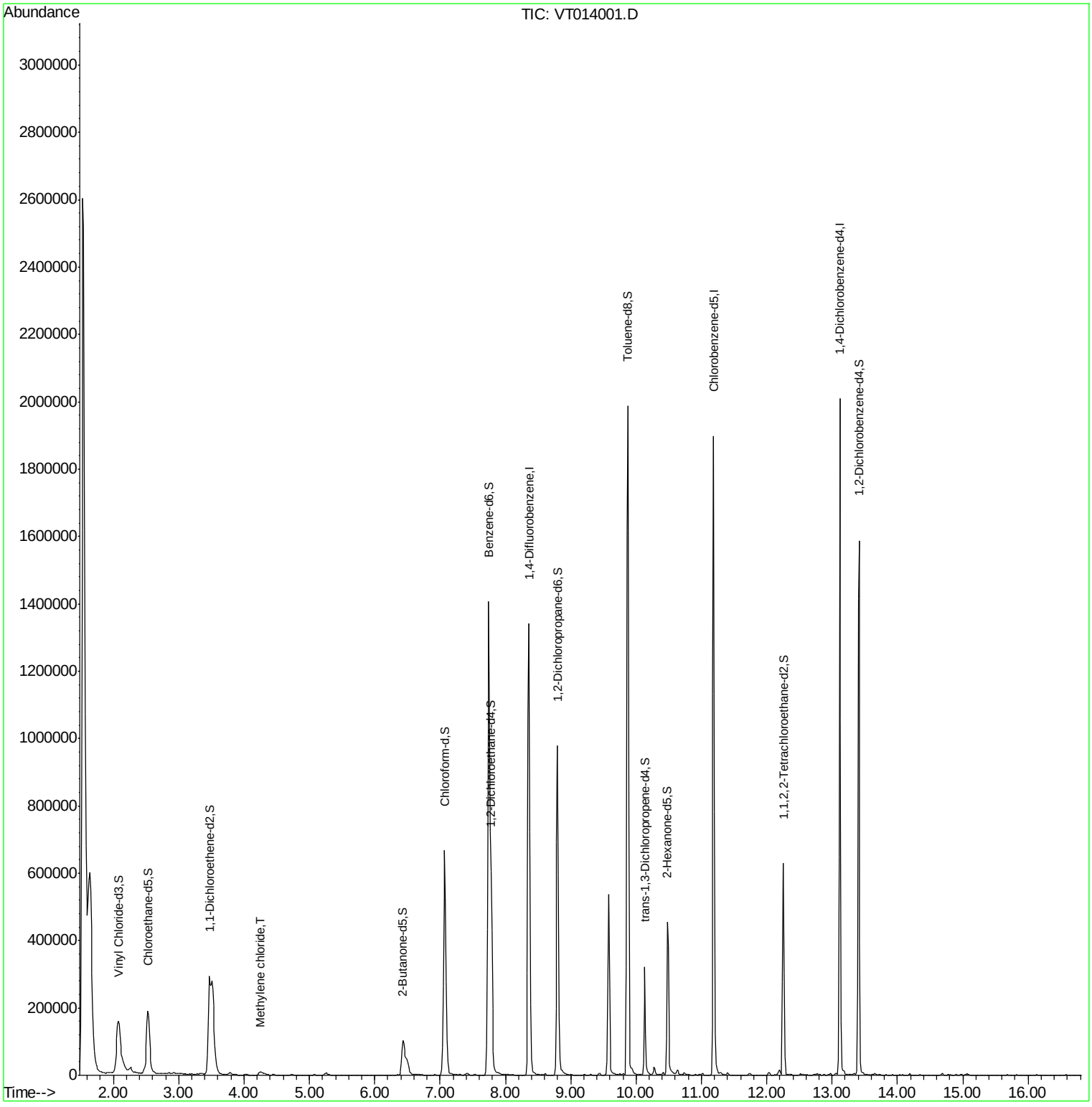
Quantitation Report (QT/LSC Reviewed)

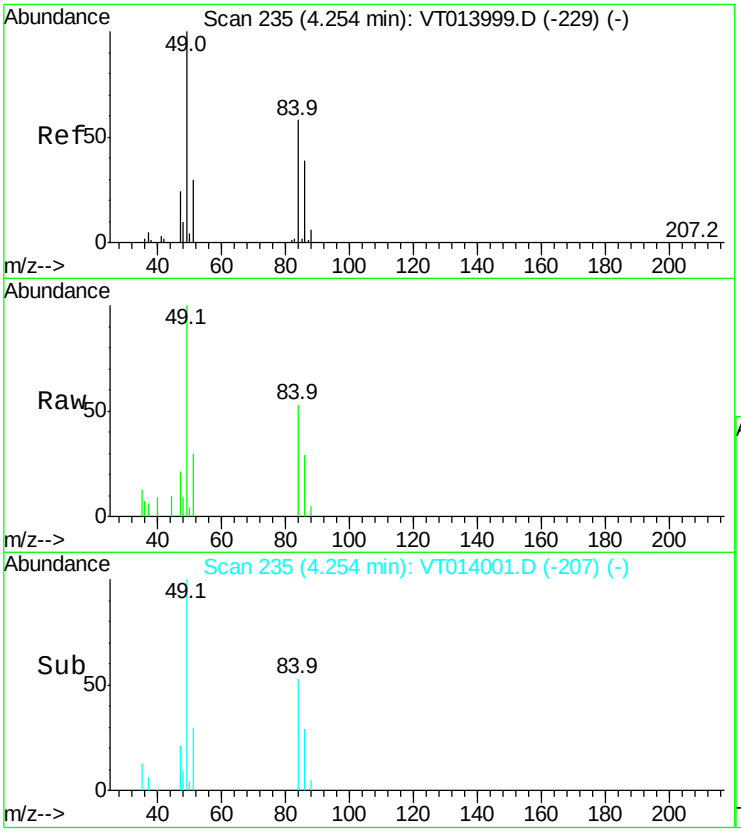
Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014001.D
Acq On : 9 May 2016 17:32
Operator : FY/SY
Sample : H2834-17
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 10 02:09:32 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VHBLK02

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:42:39 PM

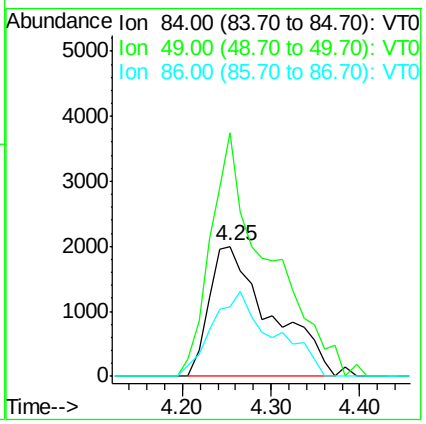




#16
Methylene chloride
Concen: 0.69 ug/L m
RT: 4.25 min Scan# 235
Delta R.T. 0.00 min
Lab File: VT014001.D
Acq: 9 May 2016 17:32

Tgt Ion: 84 Resp: 9609

Ion	Ratio	Lower	Upper
84	100		
49	187.3	116.8	216.8
86	53.8	44.9	83.5



Instrument :
MSVOA_T
ClientSampleId :
VHBLK02

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:42:39 PM

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014001.D
Acq On : 9 May 2016 17:32
Operator : FY/SY
Sample : H2834-17
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 16 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VHBLK02

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:42:39 PM

Quant Time: May 10 02:09:32 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	990013	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	807452	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	399212	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	469047	28.59	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 114.36%			
7) Chloroethane-d5	2.53	69	345864	29.16	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 116.64%			
10) 1,1-Dichloroethene-d2	3.47	63	665924m	19.74	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 78.96%			
20) 2-Butanone-d5	6.43	46	206795	52.98	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 105.96%			
24) Chloroform-d	7.07	84	710478	25.72	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 102.88%			
26) 1,2-Dichloroethane-d4	7.78	65	445556	27.51	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 110.04%			
29) Benzene-d6	7.74	84	1334891	26.43	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 105.72%			
33) 1,2-Dichloropropane-d6	8.80	67	398491	26.74	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 106.96%			
37) Toluene-d8	9.87	98	1181882	26.00	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 104.00%			
38) trans-1,3-Dichloropropene-	10.13	79	146180	25.30	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 101.20%			
39) 2-Hexanone-d5	10.48	63	134172	56.34	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 112.68%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	258155	25.14	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 100.56%			
60) 1,2-Dichlorobenzene-d4	13.41	152	369426	26.36	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 105.44%			
Target Compounds						Qvalue
16) Methylene chloride	4.25	84	9609m	0.69	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA T\DATA\VT050916\
Data File : VT014001.D
Acq On : 9 May 2016 17:32
Operator : FY/SY
Sample : H2834-17
Misc : 5.00g/10mL/MSVOA T/SOIL
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VHBLK02

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Title : VOC Analysis

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.532	3	5	11	rVB	2129342	5276742	100.00%	14.377%
2	1.639	11	14	35	rVB	595863	2441292	46.27%	6.651%
3	2.077	44	51	63	rBV	152531	744124	14.10%	2.027%
4	2.266	63	67	71	rVB2	16003	49336	0.93%	0.134%
5	2.432	79	81	82	rBV	1274	1284	0.02%	0.003%
6	2.526	82	89	100	rVB	186641	655355	12.42%	1.786%
7	2.810	111	113	114	rBV	1451	2584	0.05%	0.007%
8	2.858	114	117	121	rVV4	1834	6976	0.13%	0.019%
9	2.917	121	122	125	rVB2	1695	3208	0.06%	0.009%
10	3.201	144	146	147	rVB2	1473	1896	0.04%	0.005%
11	3.284	151	153	154	rVB2	2281	2487	0.05%	0.007%
12	3.319	154	156	158	rBV3	2512	6061	0.11%	0.017%
13	3.473	163	169	170	rBV	289772	744941	14.12%	2.030%
14	3.781	188	195	201	rVB3	5756	18979	0.36%	0.052%
15	4.005	212	214	215	rBV2	1039	1527	0.03%	0.004%
16	4.053	216	218	222	rVV2	1036	2271	0.04%	0.006%
17	4.254	230	235	238	rVV2	10261	34477	0.65%	0.094%
18	4.313	238	240	248	rVV4	5574	16774	0.32%	0.046%
19	4.431	248	250	255	rVV3	1244	3780	0.07%	0.010%
20	4.727	270	275	280	rVB2	1537	4853	0.09%	0.013%
21	5.070	301	304	308	rVB3	1231	3042	0.06%	0.008%
22	5.260	314	320	325	rBV4	6511	22096	0.42%	0.060%
23	5.556	342	345	349	rVB2	756	1960	0.04%	0.005%
24	6.171	394	397	400	rVB2	544	1154	0.02%	0.003%
25	6.348	408	412	413	rBV2	1392	2854	0.05%	0.008%
26	6.431	414	419	434	rVV2	103240	470062	8.91%	1.281%
27	6.632	434	436	438	rVV3	1778	4466	0.08%	0.012%
28	6.916	458	460	462	rBV2	1245	1951	0.04%	0.005%
29	7.070	467	473	485	rBV	665929	1808113	34.27%	4.926%
30	7.236	485	487	490	rVB4	1517	3899	0.07%	0.011%
31	7.283	490	491	497	rVB2	912	2152	0.04%	0.006%
32	7.413	497	502	507	rVB3	4693	13656	0.26%	0.037%
33	7.520	510	511	515	rVB3	1804	3762	0.07%	0.010%
34	7.745	525	530	550	rBV2	1405416	4425154	83.86%	12.057%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014001.D
Acq On : 9 May 2016 17:32
Operator : FY/SY
Sample : H2834-17
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VHBLK02

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Title : VOC Analysis

35	8.005	550	552	555	rVB4	1646	2506	0.05%	0.007%
36	8.218	567	570	571	rBV2	759	1137	0.02%	0.003%
37	8.360	578	582	597	rVB	1339645	2681040	50.81%	7.305%
38	8.608	600	603	608	rVB4	3809	8321	0.16%	0.023%
39	8.798	615	619	624	rBV	976638	1935342	36.68%	5.273%
40	8.952	631	632	634	rVB2	1264	1552	0.03%	0.004%
41	9.200	650	653	657	rVB2	1247	3040	0.06%	0.008%
42	9.307	659	662	666	rVB3	2726	5339	0.10%	0.015%
43	9.437	670	673	678	rVB	5636	10813	0.20%	0.029%
44	9.579	681	685	692	rBV	534158	886119	16.79%	2.414%
45	9.756	697	700	702	rBV2	2402	3769	0.07%	0.010%
46	9.804	702	704	706	rVB2	3083	3779	0.07%	0.010%
47	9.875	706	710	714	rBV	1984689	3437004	65.13%	9.364%
48	10.135	728	732	741	rBV	320722	527499	10.00%	1.437%
49	10.277	741	744	748	rVB	22393	44127	0.84%	0.120%
50	10.336	748	749	753	rVB3	1710	2108	0.04%	0.006%
51	10.419	753	756	758	rVB2	7521	11296	0.21%	0.031%
52	10.478	758	761	771	rBV	454028	819117	15.52%	2.232%
53	10.632	771	774	777	rVB2	13209	23801	0.45%	0.065%
54	10.738	781	783	786	rBV	5275	7988	0.15%	0.022%
55	10.798	786	788	789	rVB2	1040	1331	0.03%	0.004%
56	10.975	800	803	804	rBV	1563	2206	0.04%	0.006%
57	11.022	804	807	809	rVB	5900	10226	0.19%	0.028%
58	11.070	809	811	813	rBV3	540	1174	0.02%	0.003%
59	11.188	817	821	828	rBV	1896326	2946357	55.84%	8.027%
60	11.295	828	830	832	rVB	5968	9321	0.18%	0.025%
61	11.401	836	839	843	rVB4	5961	11911	0.23%	0.032%
62	11.484	844	846	852	rVB3	576	1558	0.03%	0.004%
63	11.732	864	867	871	rVB3	4606	9500	0.18%	0.026%
64	12.028	888	892	895	rBV	8309	14362	0.27%	0.039%
65	12.194	901	906	908	rBV2	15363	29373	0.56%	0.080%
66	12.253	908	911	916	rVB	626820	920474	17.44%	2.508%
67	12.324	916	917	919	rVB	1115	1536	0.03%	0.004%
68	12.359	919	920	925	rVB3	1310	2339	0.04%	0.006%
69	12.513	931	933	934	rBV	4589	6888	0.13%	0.019%
70	12.584	938	939	941	rBV	1124	1350	0.03%	0.004%
71	12.667	943	946	948	rVB	898	1668	0.03%	0.005%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA T\DATA\VT050916\
Data File : VT014001.D
Acq On : 9 May 2016 17:32
Operator : FY/SY
Sample : H2834-17
Misc : 5.00g/10mL/MSVOA T/SOIL
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VHBLK02

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Title : VOC Analysis

72	12.774	948	955	961	rBV5	4322	13772	0.26%	0.038%
73	12.868	961	963	967	rBV2	2328	4001	0.08%	0.011%
74	12.975	967	972	974	rBV3	5174	9698	0.18%	0.026%
75	13.058	974	979	981	rBV2	5617	12230	0.23%	0.033%
76	13.117	981	984	988	rBV	2005697	2792290	52.92%	7.608%
77	13.330	1000	1002	1005	rBV3	3450	6130	0.12%	0.017%
78	13.413	1005	1009	1012	rBV	1585370	2622455	49.70%	7.145%
79	13.602	1024	1025	1026	rVV	1023	1184	0.02%	0.003%
80	13.649	1026	1029	1033	rVB5	5069	10489	0.20%	0.029%
81	13.708	1033	1034	1036	rBV2	871	1240	0.02%	0.003%
82	13.886	1045	1049	1051	rBV2	565	1720	0.03%	0.005%
83	14.194	1073	1075	1078	rVB	3609	5277	0.10%	0.014%
84	14.276	1081	1082	1086	rVB2	691	1371	0.03%	0.004%
85	14.466	1096	1098	1101	rBV2	770	1519	0.03%	0.004%
86	14.572	1105	1107	1110	rBV2	632	1458	0.03%	0.004%
87	14.679	1110	1116	1119	rBV4	5867	9853	0.19%	0.027%
88	14.785	1121	1125	1129	rVB4	2154	5027	0.10%	0.014%
89	14.904	1131	1135	1138	rVB2	2836	5346	0.10%	0.015%
90	14.975	1138	1141	1144	rBV4	2118	4069	0.08%	0.011%
91	15.069	1144	1149	1154	rVB3	3640	8532	0.16%	0.023%
92	15.152	1154	1156	1159	rVB3	692	1465	0.03%	0.004%
93	15.223	1159	1162	1163	rBV2	891	1546	0.03%	0.004%
94	15.685	1198	1201	1205	rBV2	828	2511	0.05%	0.007%
95	15.827	1210	1213	1216	rVB3	835	1742	0.03%	0.005%
96	16.016	1226	1229	1231	rVB	807	1681	0.03%	0.005%
97	16.075	1231	1234	1238	rBV2	706	2230	0.04%	0.006%
98	16.134	1238	1239	1242	rVB	934	1353	0.03%	0.004%
99	16.205	1242	1245	1247	rBV2	729	1272	0.02%	0.003%
100	16.300	1247	1253	1254	rVB3	594	1419	0.03%	0.004%

Sum of corrected areas: 36703419

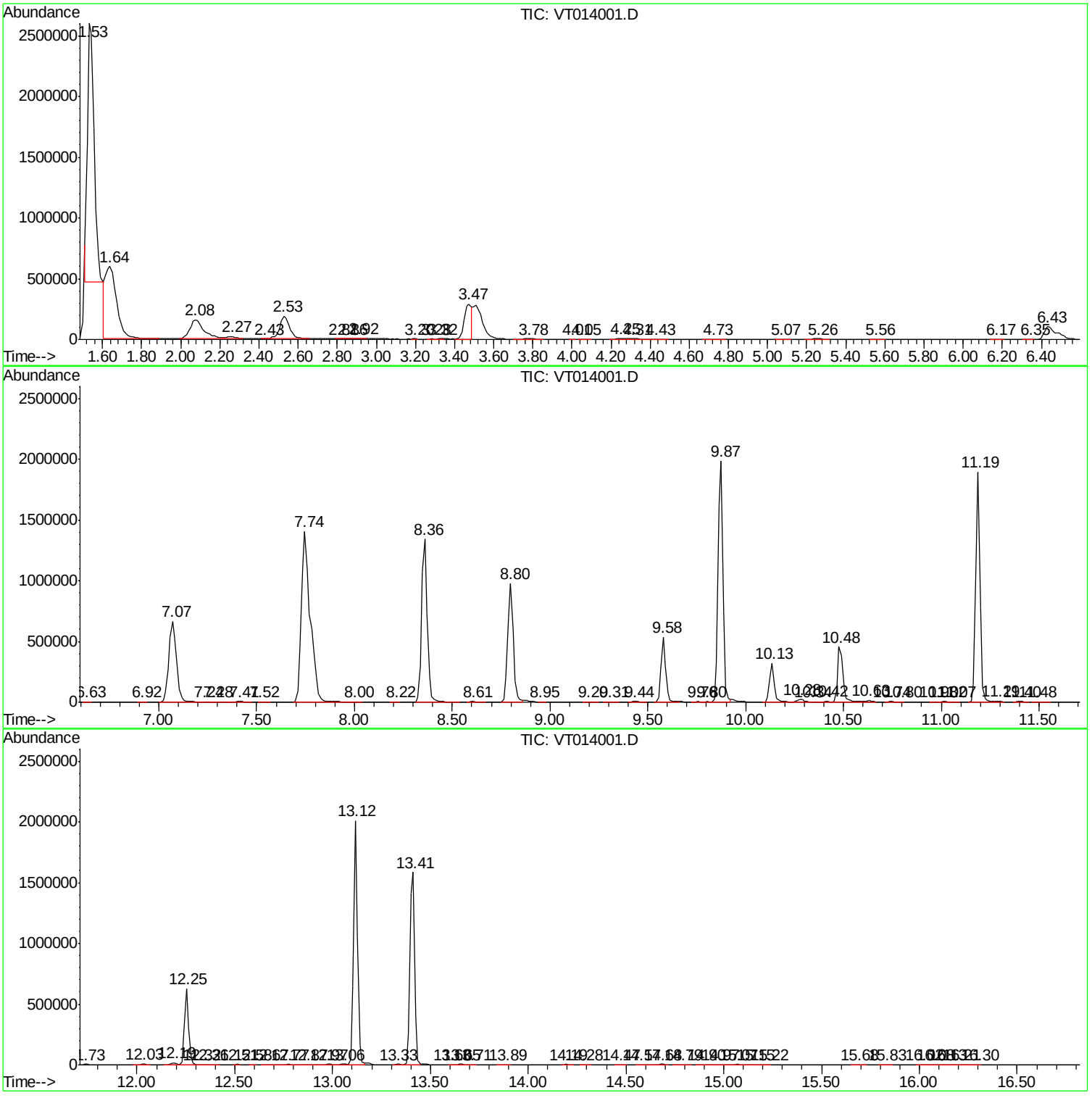
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014001.D
Acq On : 9 May 2016 17:32
Operator : FY/SY
Sample : H2834-17
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VHBLK02

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014001.D
Acq On : 9 May 2016 17:32
Operator : FY/SY
Sample : H2834-17
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 16 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
VHBLK02

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014001.D
Acq On : 9 May 2016 17:32
Operator : FY/SY
Sample : H2834-17
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_T
ClientSampleId : VHBLK02

Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

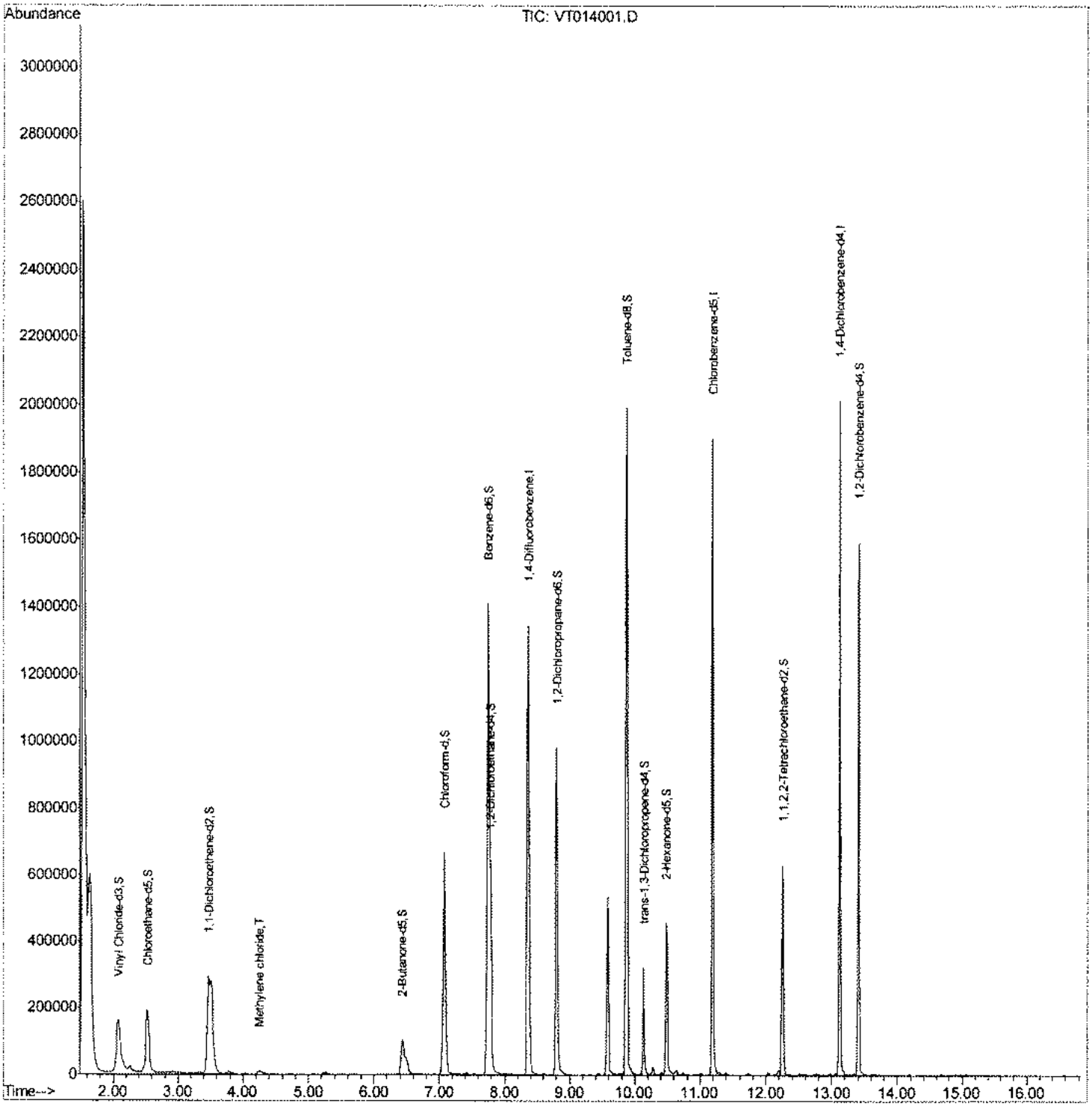
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014001.D
Acq On : 9 May 2016 17:32
Operator : FY/SY
Sample : H2834-17
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 10 02:09:32 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VHBLK02

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:42:39 PM



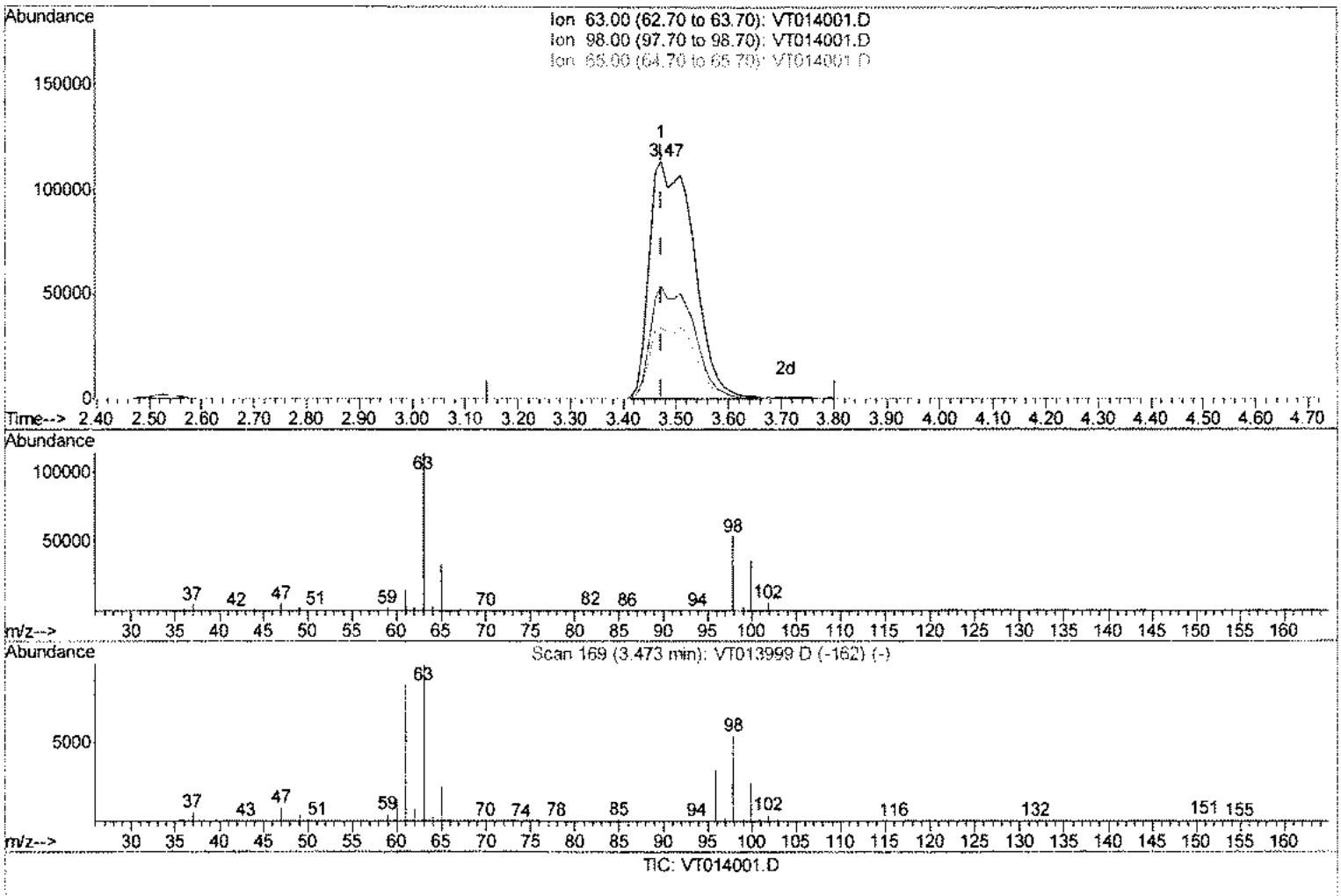
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014001.D
Acq On : 9 May 2016 17:32
Operator : FY/SY
Sample : H2834-17
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 10 02:02:14 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VHBLK02

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:42:39 PM



TIC: VT014001.D

(10) 1,1-Dichloroethene-d2 (S)

3.473min (0.000) 19.74ug/L m M.D 05/13/16

response 665924

Ion	Exp%	Act%
63.00	100	100
98.00	62.90	20.17#
65.00	22.10	17.01
0.00	0.00	0.00

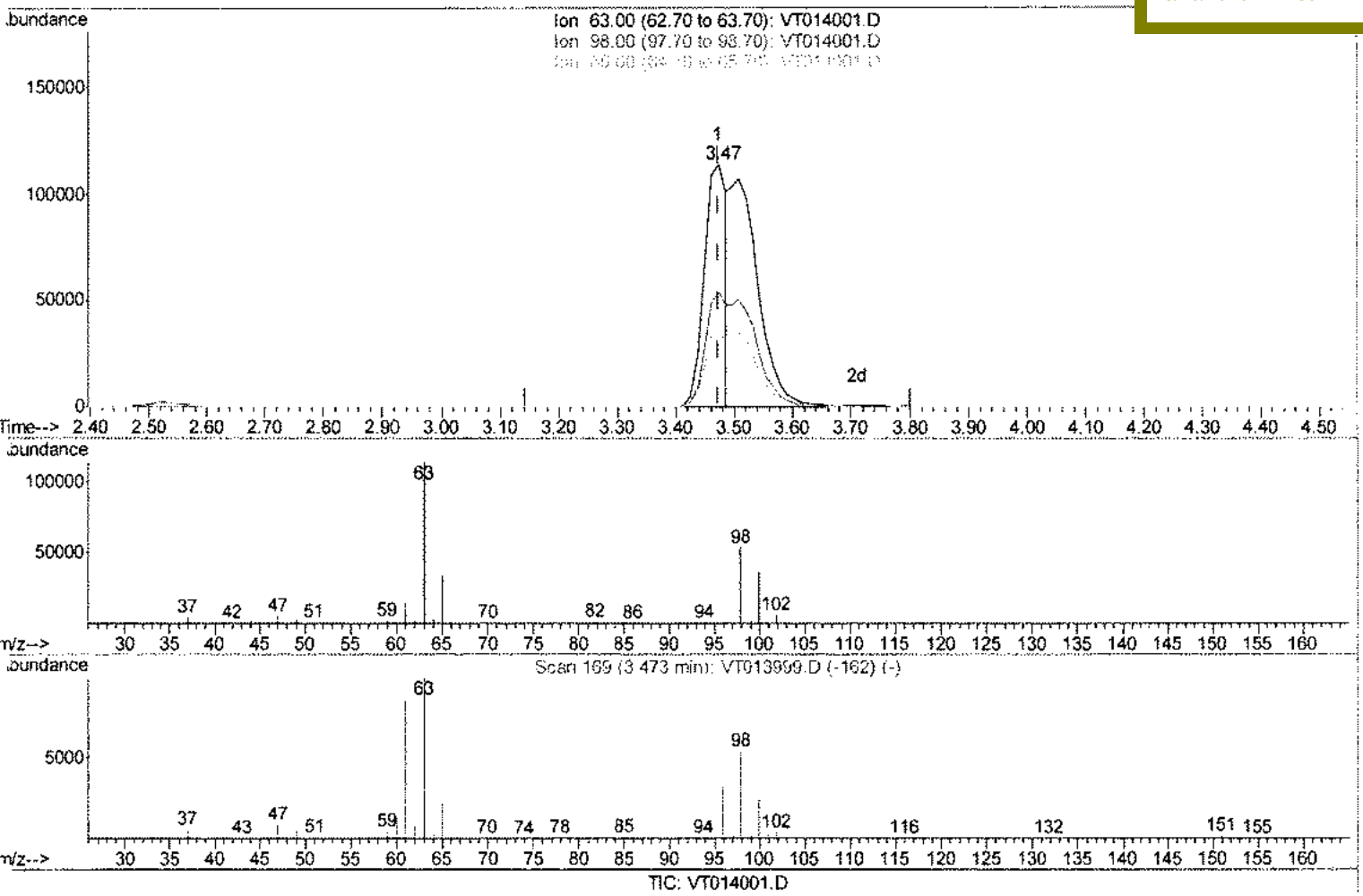
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014001.D
Acq On : 9 May 2016 17:32
Operator : FY/SY
Sample : H2834-17
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 10 02:02:14 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VHBLK02

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:42:39 PM



TIC: VT014001.D

(10) 1,1-Dichloroethene-d2 (S)

3.473min (0.000) 8.85ug/L

response 298434

Ion	Exp%	Act%
63.00	100	100
98.00	62.90	45.00
65.00	22.10	37.96#
0.00	0.00	0.00

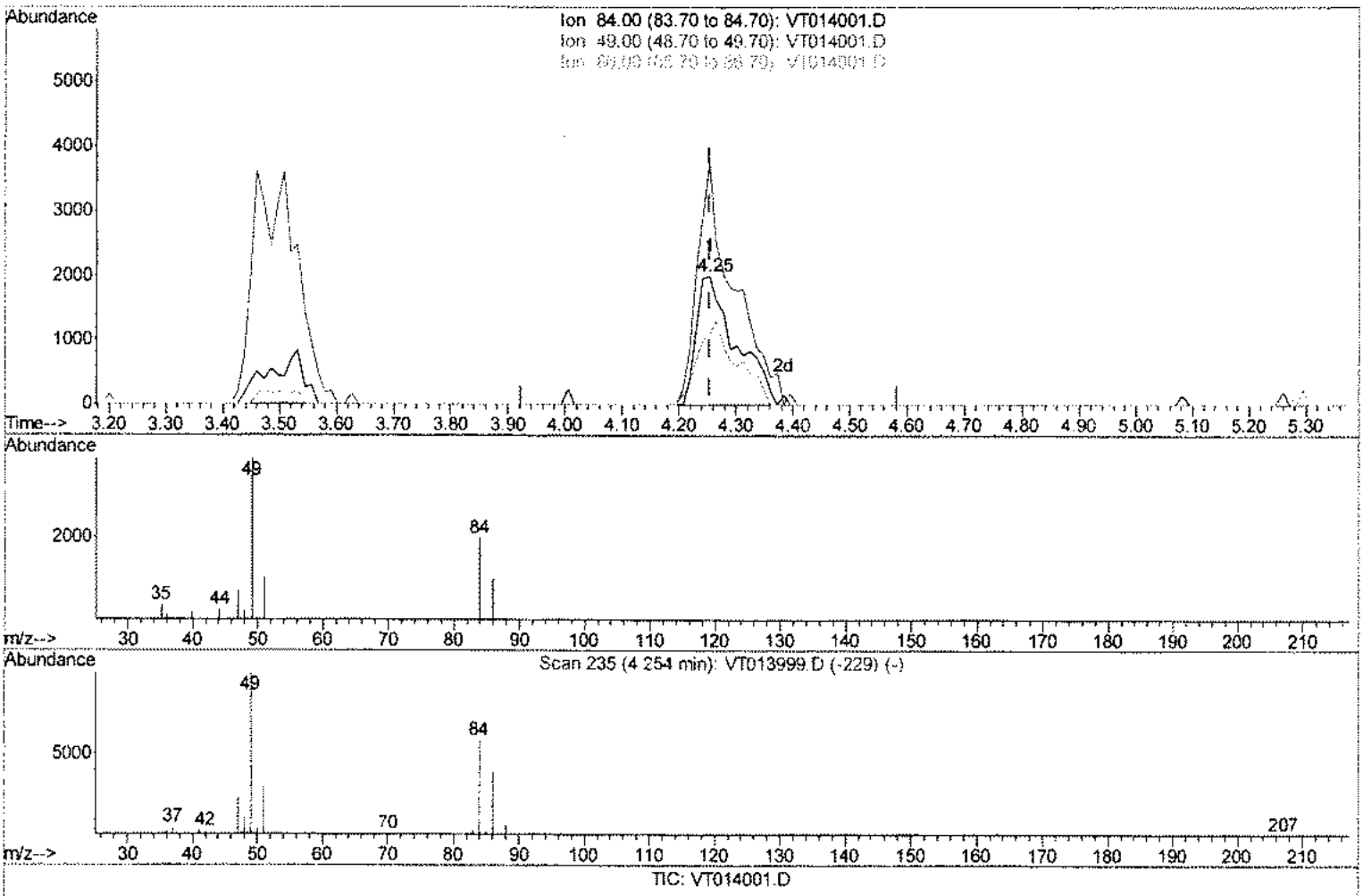
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014001.D
Acq On : 9 May 2016 17:32
Operator : FY/SY
Sample : H2834-17
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 10 02:02:14 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VHBLK02

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:42:39 PM



TIC: VT014001.D

(16) Methylene chloride (T)

4.254min (+0.000) 0.69ug/L m

response 9609

M.D 05/13/16

Ion	Exp%	Act%
84.00	100	100
49.00	166.80	187.25
86.00	64.20	53.80
0.00	0.00	0.00

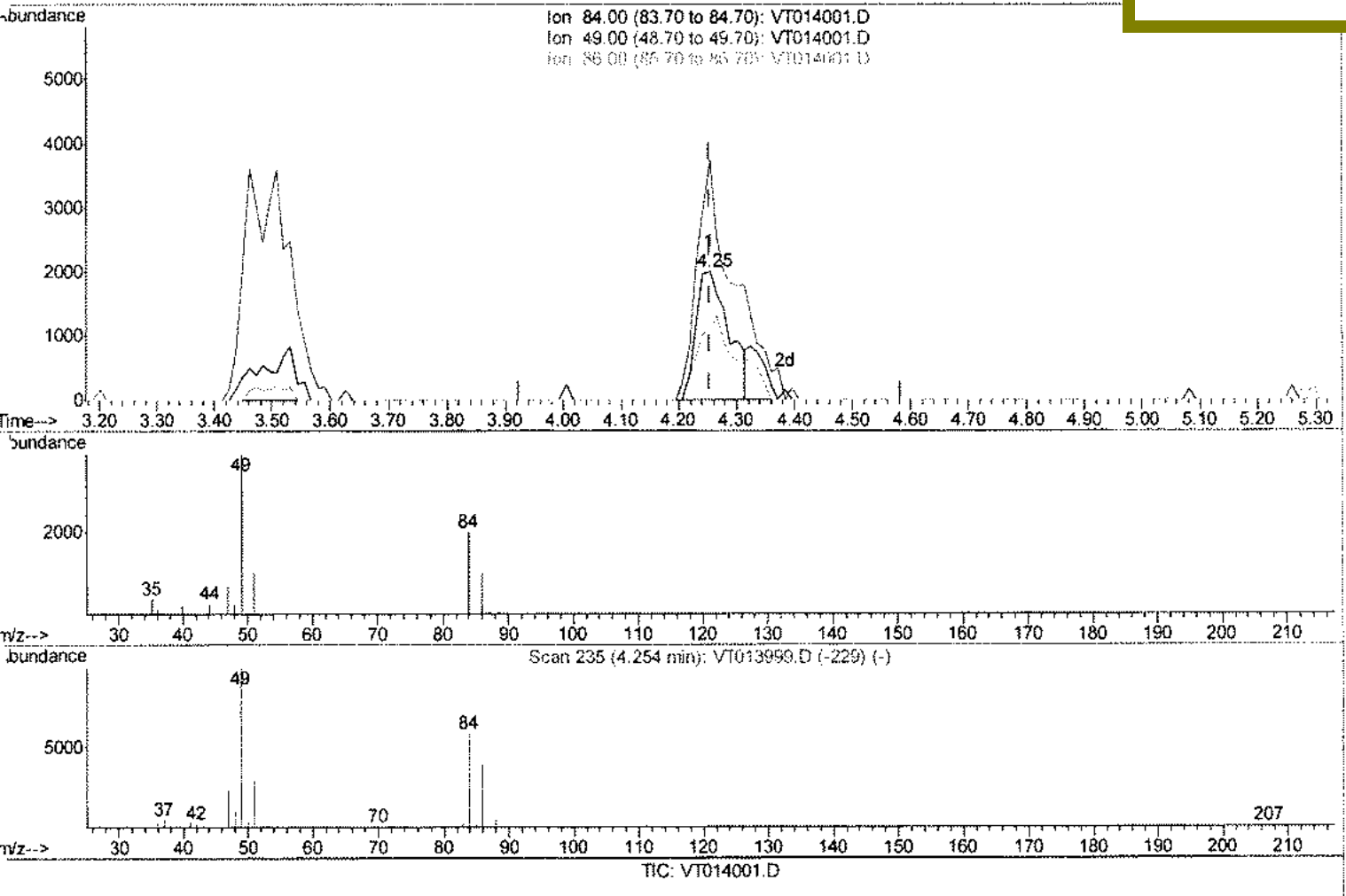
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014001.D
Acq On : 9 May 2016 17:32
Operator : FY/SY
Sample : H2834-17
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 10 02:02:14 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
VHBLK02

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:42:39 PM



(16) Methylene chloride (T)

4.254min (+0.000) 0.57ug/L

response 7935

Ion	Exp%	Act%
84.00	100	100
49.00	166.80	187.25
86.00	64.20	53.80
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT014001.D
Acq On : 9 May 2016 17:32
Operator : FY/SY
Sample : H2834-17
Misc : 5.00g/10mL/MSVOA_T/SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 10 02:09:32 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 02:00:56 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : VHBLK02

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:42:39 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	990013	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	807452	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	399212	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	469047	28.59	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 114.36%			
7) Chloroethane-d5	2.53	69	345864	29.16	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 116.64%			
10) 1,1-Dichloroethene-d2	3.47	63	665924m	19.74	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 78.96%			
20) 2-Butanone-d5	6.43	46	206795	52.98	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 105.96%			
24) Chloroform-d	7.07	84	710478	25.72	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 102.88%			
26) 1,2-Dichloroethane-d4	7.78	65	445556	27.51	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 110.04%			
29) Benzene-d6	7.74	84	1334891	26.43	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 105.72%			
33) 1,2-Dichloropropane-d6	8.80	67	398491	26.74	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 106.96%			
37) Toluene-d8	9.87	98	1181882	26.00	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 104.00%			
38) trans-1,3-Dichloropropene-	10.13	79	146180	25.30	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 101.20%			
39) 2-Hexanone-d5	10.48	63	134172	56.34	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 112.68%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	258155	25.14	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 100.56%			
60) 1,2-Dichlorobenzene-d4	13.41	152	369426	26.36	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 105.44%			
Target Compounds						Qvalue
16) Methylene chloride	4.25	84	9609m	0.69	ug/L	

M.D 05/13/16

M.D 05/13/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-14MS
Sample wt/vol : 4.64 (g/mL): g
Lab File ID : VT013990.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	8.4	U
74-87-3	Chloromethane	8.4	U
75-01-4	Vinyl chloride	8.4	U
74-83-9	Bromomethane	8.4	U
75-00-3	Chloroethane	8.4	U
75-69-4	Trichlorofluoromethane	8.4	U
75-35-4	1,1-Dichloroethene	79	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	8.4	U
67-64-1	Acetone	14	J
75-15-0	Carbon disulfide	8.4	U
79-20-9	Methyl Acetate	8.4	U
75-09-2	Methylene chloride	2.8	J
156-60-5	trans-1,2-Dichloroethene	8.4	U
1634-04-4	Methyl tert-butyl Ether	8.4	U
75-34-3	1,1-Dichloroethane	8.4	U
156-59-2	cis-1,2-Dichloroethene	8.4	U
78-93-3	2-Butanone	17	U
74-97-5	Bromochloromethane	8.4	U
67-66-3	Chloroform	8.4	U
71-55-6	1,1,1-Trichloroethane	8.4	U
110-82-7	Cyclohexane	8.4	U
56-23-5	Carbon tetrachloride	8.4	U
71-43-2	Benzene	91	
107-06-2	1,2-Dichloroethane	8.4	U
79-01-6	Trichloroethene	87	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-14MS
Sample wt/vol : 4.64 (g/mL): g
Lab File ID : VT013990.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	8.4	U
78-87-5	1,2-Dichloropropane	8.4	U
75-27-4	Bromodichloromethane	8.4	U
10061-01-5	cis-1,3-Dichloropropene	8.4	U
108-10-1	4-Methyl-2-pentanone	17	U
108-88-3	Toluene	85	
10061-02-6	trans-1,3-Dichloropropene	8.4	U
79-00-5	1,1,2-Trichloroethane	8.4	U
127-18-4	Tetrachloroethene	8.4	U
591-78-6	2-Hexanone	17	U
124-48-1	Dibromochloromethane	8.4	U
106-93-4	1,2-Dibromoethane	8.4	U
108-90-7	Chlorobenzene	78	
100-41-4	Ethylbenzene	8.4	U
95-47-6	o-xylene	8.4	U
179601-23-1	m,p-Xylene	8.4	U
100-42-5	Styrene	8.4	U
75-25-2	Bromoform	8.4	U
98-82-8	Isopropylbenzene	8.4	U
79-34-5	1,1,2,2-Tetrachloroethane	8.4	U
541-73-1	1,3-Dichlorobenzene	8.4	U
106-46-7	1,4-Dichlorobenzene	8.4	U
95-50-1	1,2-Dichlorobenzene	8.4	U
96-12-8	1,2-Dibromo-3-chloropropane	8.4	U
120-82-1	1,2,4-trichlorobenzene	8.4	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-14MS
Sample wt/vol : 4.64 (g/mL): g
Lab File ID : VT013990.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	8.4	U

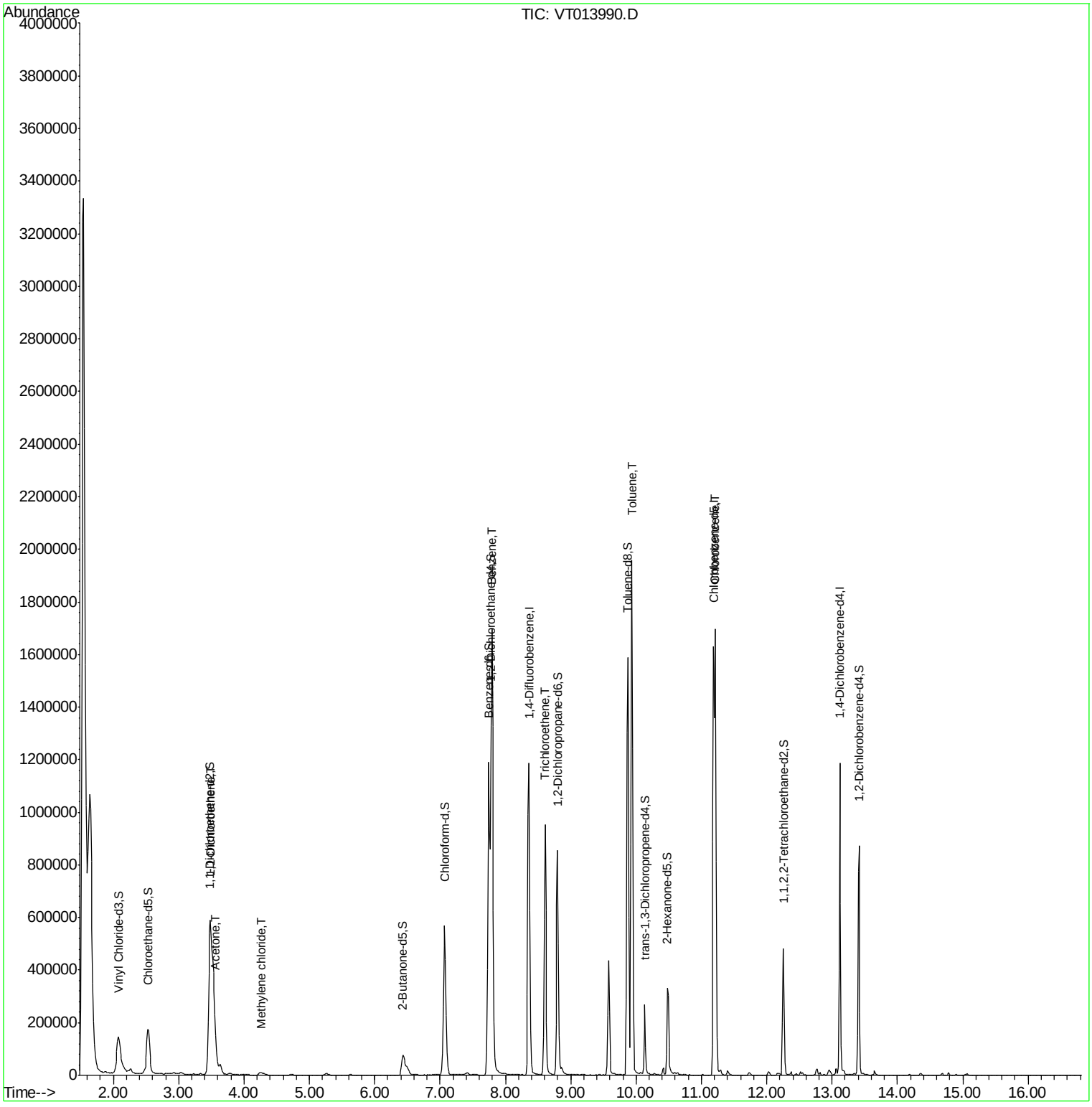
Quantitation Report (QT Reviewed)

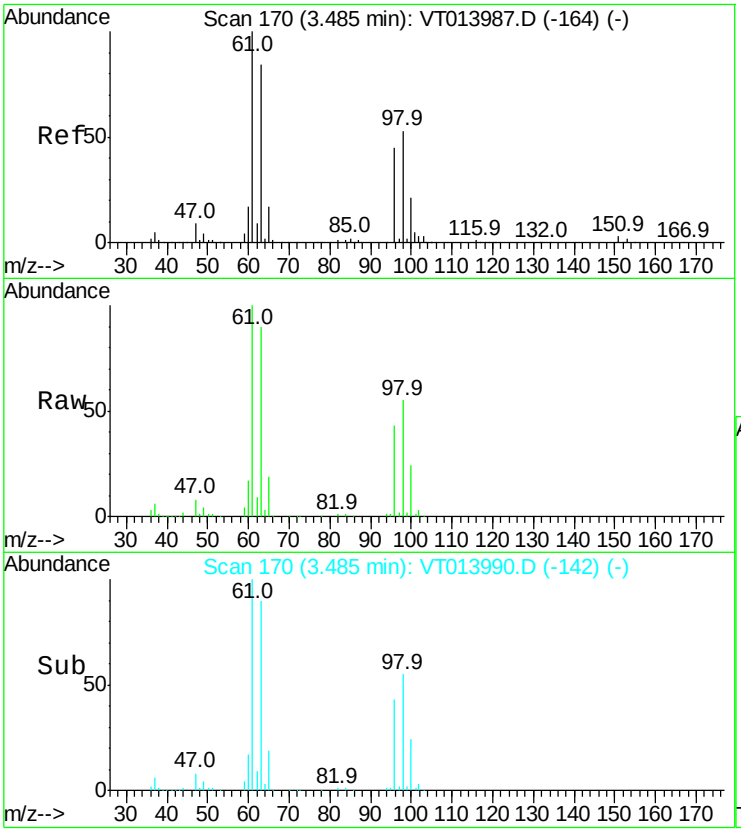
Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013990.D
Acq On : 9 May 2016 12:14
Operator : FY/SY
Sample : H2834-14MS
Misc : 4.64g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 10 01:32:44 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
H4061MS

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:46 PM

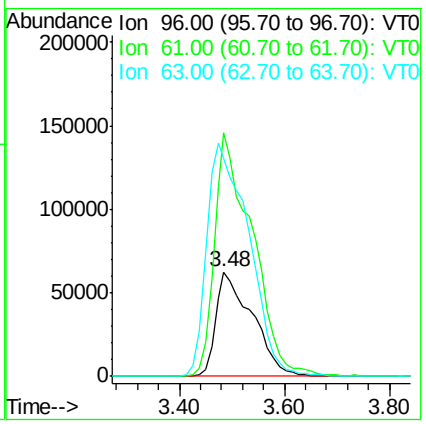




#12
1,1-Dichloroethene
Concen: 23.40 ug/L
RT: 3.48 min Scan# 170
Delta R.T. -0.00 min
Lab File: VT013990.D
Acq: 9 May 2016 12:14

Tgt Ion: 96 Resp: 302743

Ion	Ratio	Lower	Upper
96	100		
61	233.7	148.3	275.5
63	209.7	119.3	221.5



Instrument :
MSVOA_T
ClientSampleId :
H4061MS

Manual Integrations APPROVED
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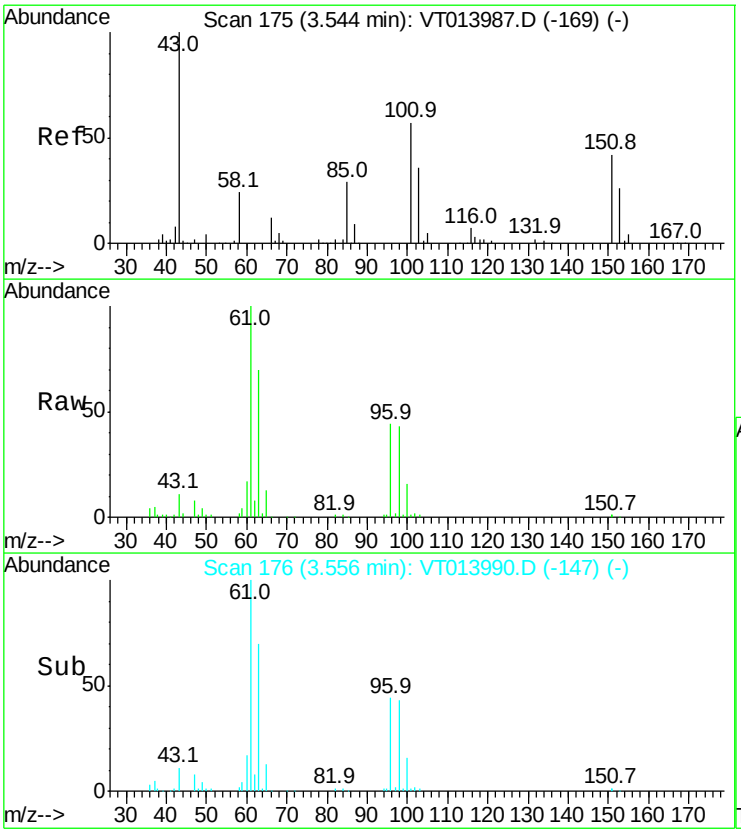
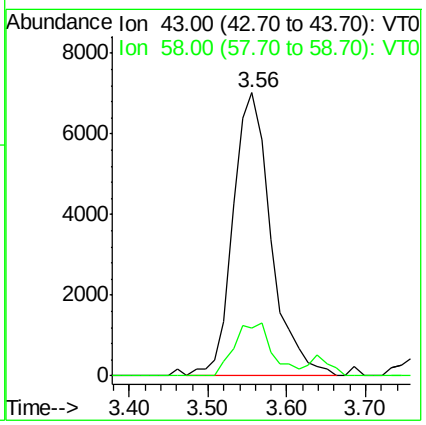
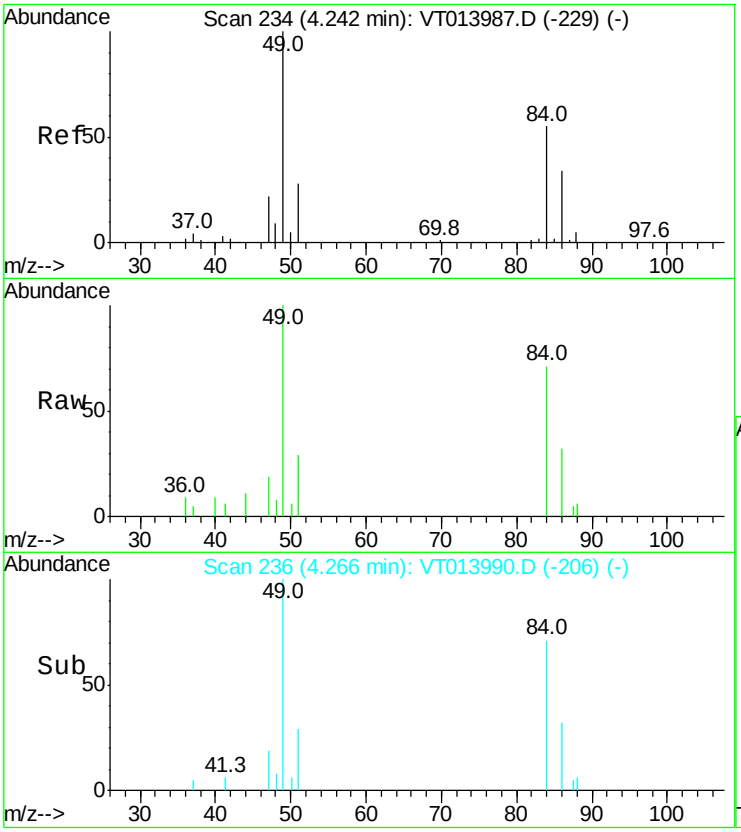


#13
Acetone
Concen: 4.20 ug/L
RT: 3.56 min Scan# 176
Delta R.T. 0.01 min
Lab File: VT013990.D
Acq: 9 May 2016 12:14

Tgt Ion: 43 Resp: 23490

Ion	Ratio	Lower	Upper
43	100		
58	18.7	0.0	50.2

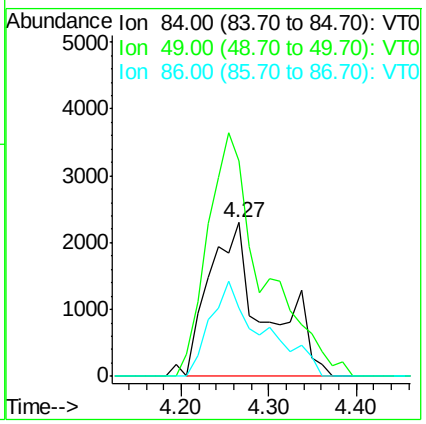




#16
Methylene chloride
Concen: 0.82 ug/L m
RT: 4.27 min Scan# 236
Delta R.T. 0.02 min
Lab File: VT013990.D
Acq: 9 May 2016 12:14

Tgt Ion: 84 Resp: 10186

Ion	Ratio	Lower	Upper
84	100		
49	140.3	116.8	216.8
86	44.8	44.9	83.5#



Instrument :
MSVOA_T
ClientSampleId :
H4061MS

Manual Integrations APPROVED
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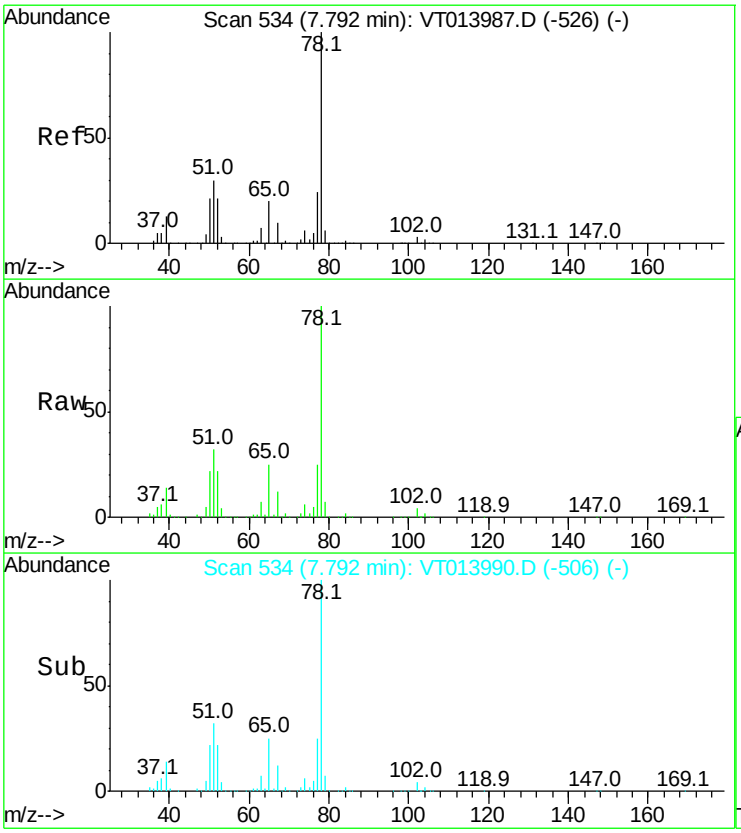
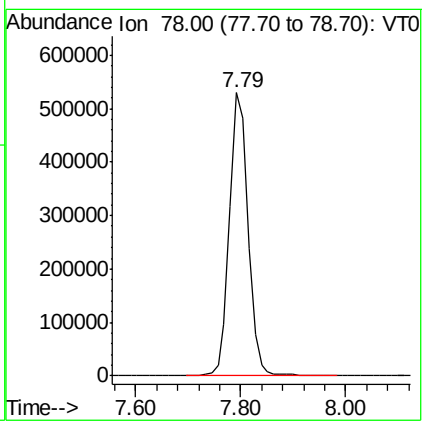
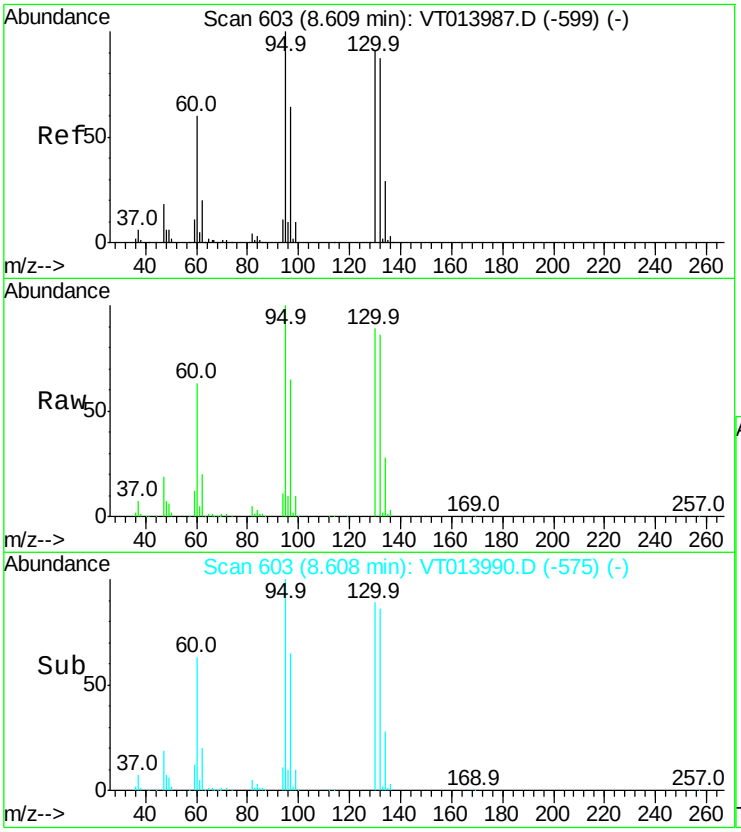


#34
Benzene
Concen: 26.89 ug/L
RT: 7.79 min Scan# 534
Delta R.T. -0.00 min
Lab File: VT013990.D
Acq: 9 May 2016 12:14

Tgt Ion: 78 Resp: 1292617

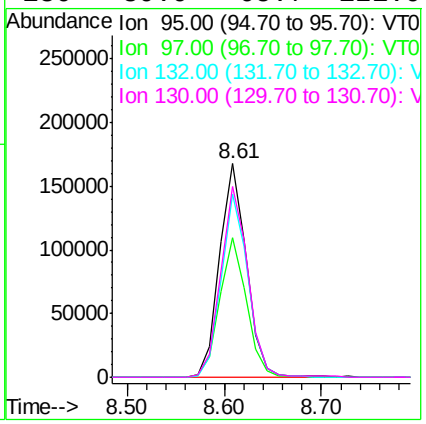




#35
Trichloroethene
Concen: 25.81 ug/L
RT: 8.61 min Scan# 603
Delta R.T. -0.00 min
Lab File: VT013990.D
Acq: 9 May 2016 12:14

Tgt Ion: 95 Resp: 322132

Ion	Ratio	Lower	Upper
95	100		
97	65.1	44.9	83.5
132	85.0	63.4	117.8
130	89.9	65.7	121.9



Instrument :
MSVOA_T
ClientSampleId :
H4061MS

Manual Integrations APPROVED
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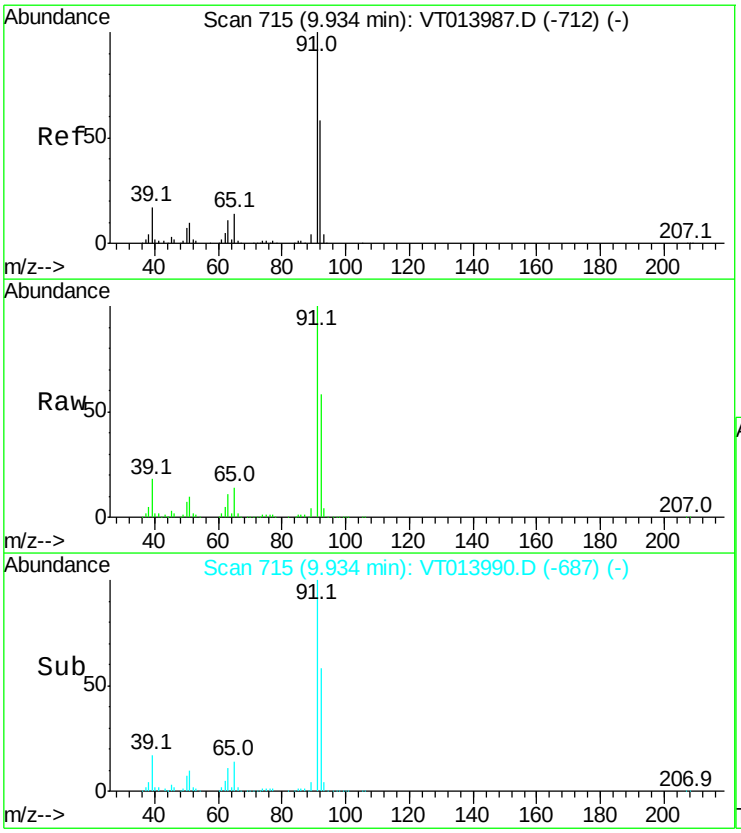
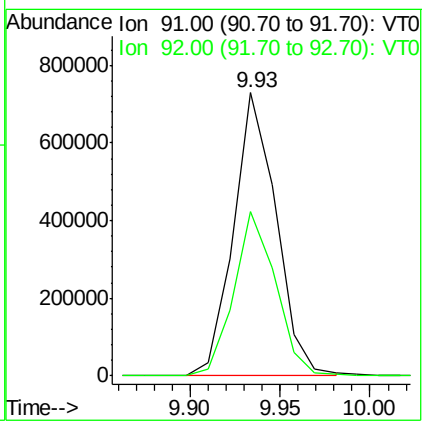
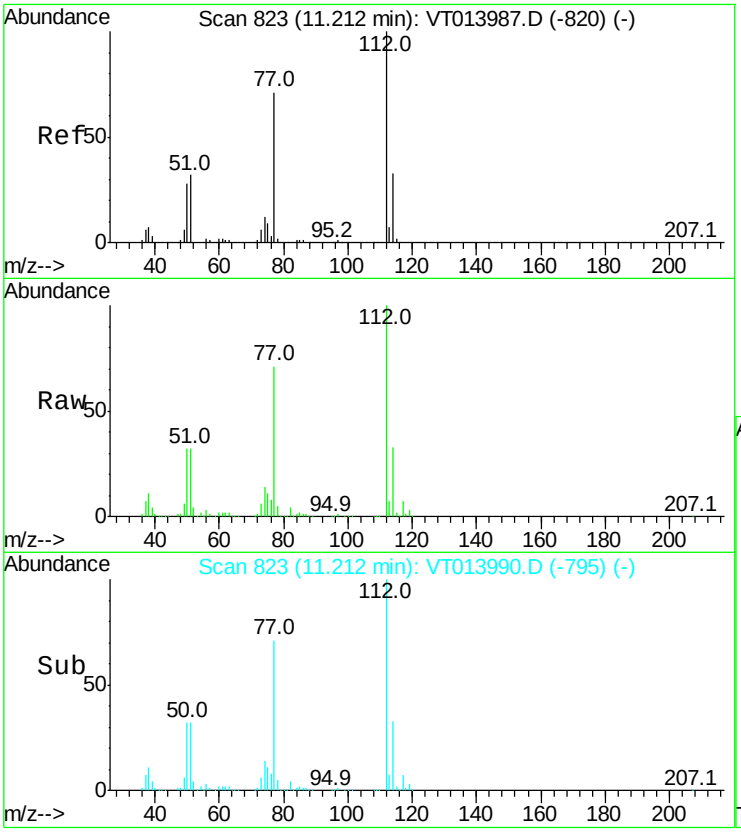


#44
Toluene
Concen: 25.21 ug/L
RT: 9.93 min Scan# 715
Delta R.T. -0.00 min
Lab File: VT013990.D
Acq: 9 May 2016 12:14

Tgt Ion: 91 Resp: 1194352

Ion	Ratio	Lower	Upper
91	100		
92	58.1	39.5	73.4

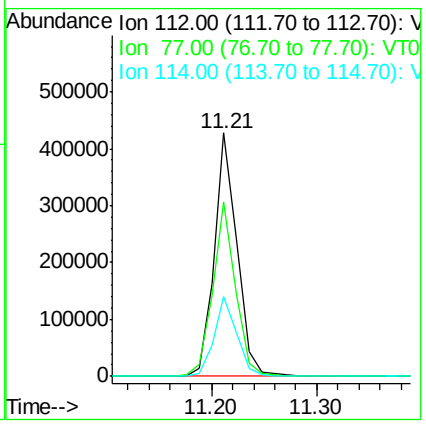




#52
Chlorobenzene
Concen: 23.19 ug/L
RT: 11.21 min Scan# 823
Delta R.T. -0.00 min
Lab File: VT013990.D
Acq: 9 May 2016 12:14

Tgt Ion:112 Resp: 642046

Ion	Ratio	Lower	Upper
112	100		
77	71.5	53.4	80.0
114	32.8	22.6	42.0



Instrument :
MSVOA_T
ClientSampleId :
H4061MS

Manual Integrations APPROVED
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Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013990.D
Acq On : 9 May 2016 12:14
Operator : FY/SY
Sample : H2834-14MS
Misc : 4.64g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
H4061MS

Manual Integrations APPROVED
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5/10/2016 7:40:46 PM

Quant Time: May 10 01:32:44 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	881436	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	650608	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	242136	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	404493	27.69	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 110.76%			
7) Chloroethane-d5	2.53	69	303604	28.75	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 115.00%			
10) 1,1-Dichloroethene-d2	3.47	63	776033	25.84	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 103.36%			
20) 2-Butanone-d5	6.43	46	151666	43.64	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 87.28%			
24) Chloroform-d	7.07	84	622121	25.30	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 101.20%			
26) 1,2-Dichloroethane-d4	7.78	65	389926	27.04	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 108.16%			
29) Benzene-d6	7.74	84	1152598	28.32	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 113.28%			
33) 1,2-Dichloropropane-d6	8.80	67	357338	29.76	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 119.04%			
37) Toluene-d8	9.87	98	962149	26.27	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 105.08%			
38) trans-1,3-Dichloropropene-	10.13	79	121350	26.06	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 104.24%			
39) 2-Hexanone-d5	10.48	63	98126	51.14	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 102.28%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	201026	24.30	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 97.20%			
60) 1,2-Dichlorobenzene-d4	13.41	152	203599	23.95	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 95.80%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	3.48	96	302743	23.40	ug/L	80
13) Acetone	3.56	43	23490	4.20	ug/L	87
16) Methylene chloride	4.27	84	10186m	0.82	ug/L	
34) Benzene	7.79	78	1292617	26.89	ug/L	100
35) Trichloroethene	8.61	95	322132	25.81	ug/L	96
44) Toluene	9.93	91	1194352	25.21	ug/L	98
52) Chlorobenzene	11.21	112	642046	23.19	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013990.D
Acq On : 9 May 2016 12:14
Operator : FY/SY
Sample : H2834-14MS
Misc : 4.64g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 10 01:32:44 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
H4061MS

Manual Integrations APPROVED
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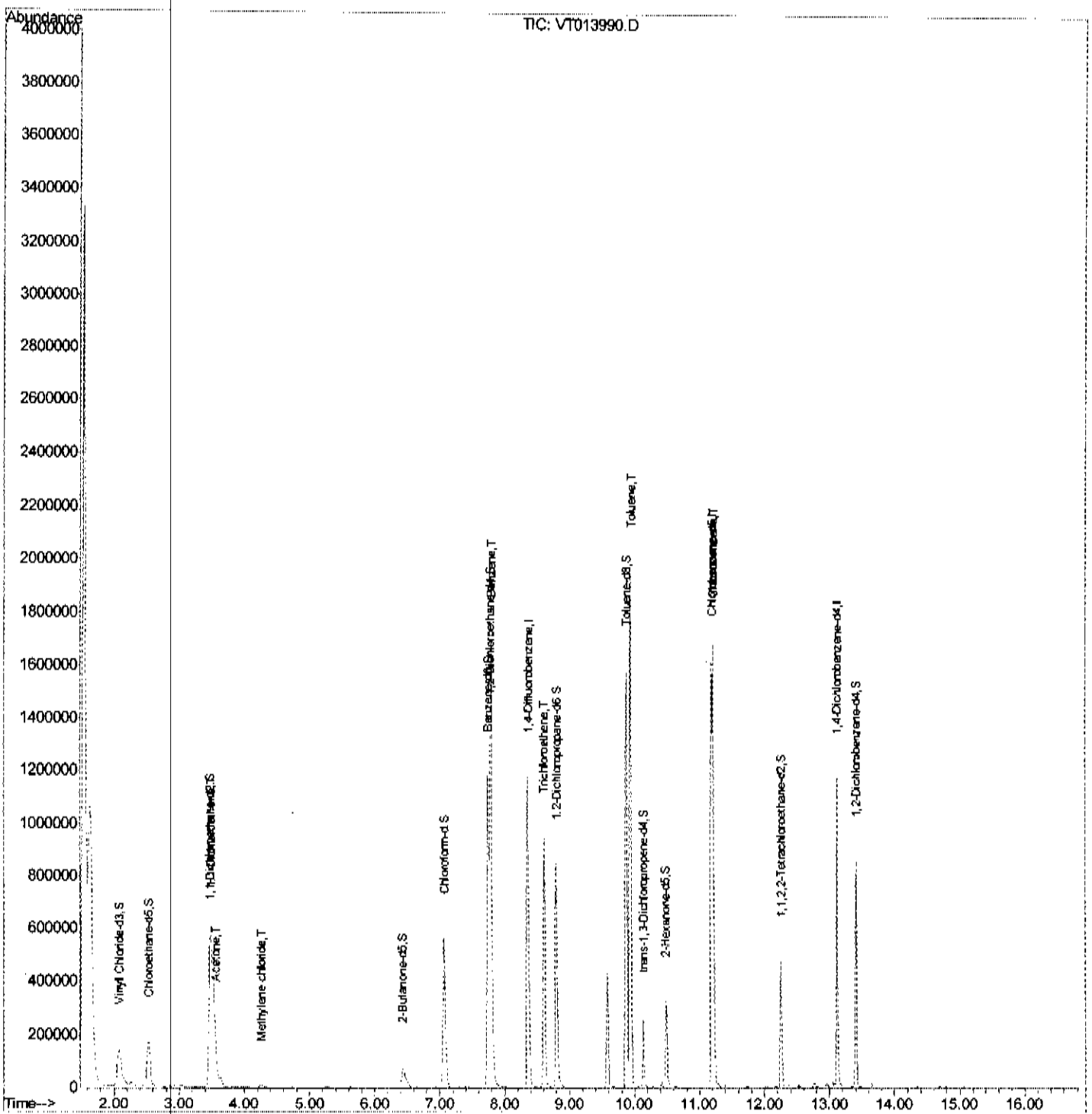
5/10/2016 7:40:46 PM



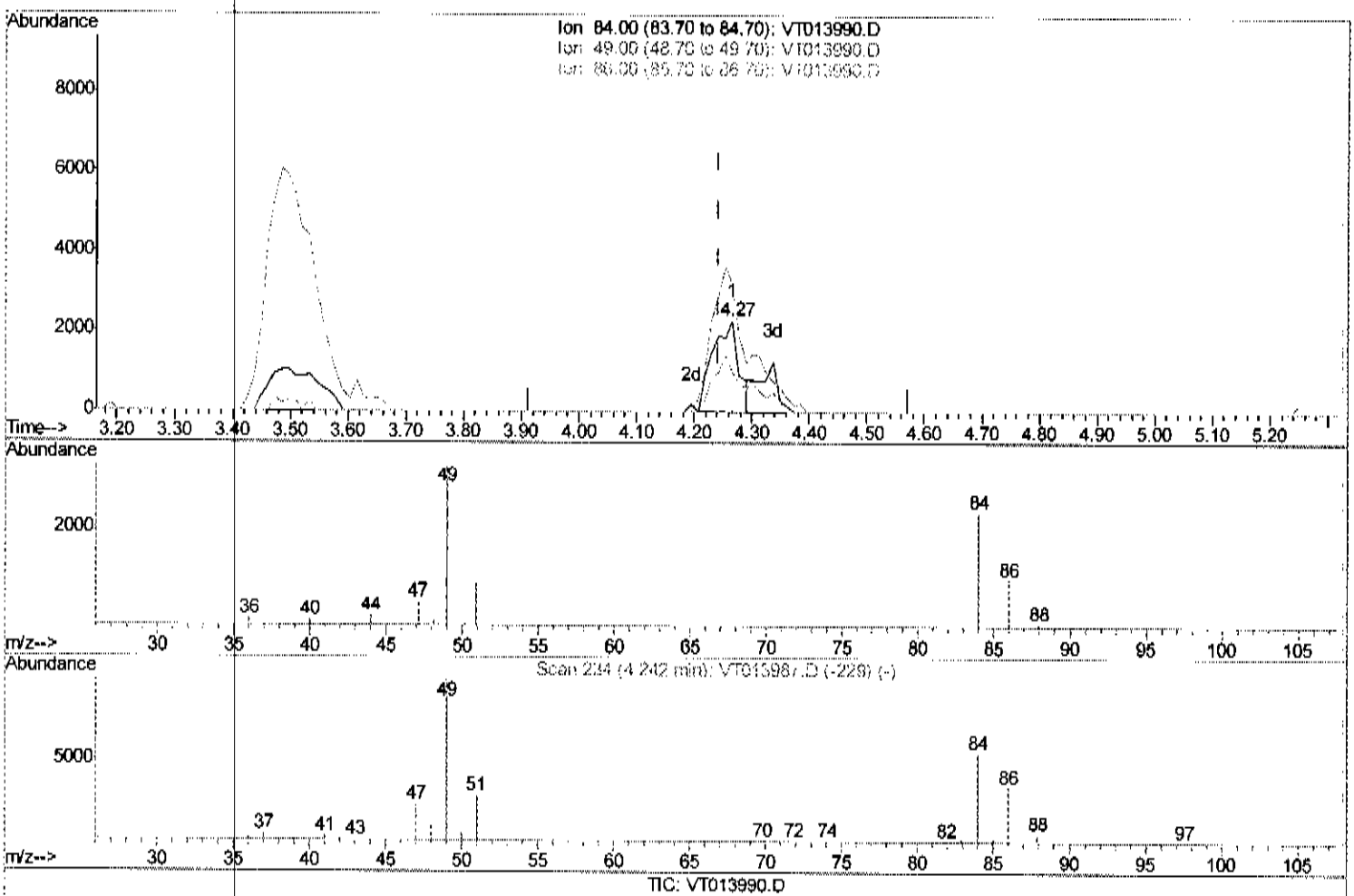
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013990.D
Acq On : 9 May 2016 12:14
Operator : FY/SY
Sample : H2834-14MS
Misc : 4.64g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 10 01:20:41 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
H4061MS

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:46 PM



TIC: VT013990.D

(16) Methylene chloride (T)

4.266min (+0.023) 0.58ug/L

response 7256

Ion	Exp%	Act%
84.00	100	100
49.00	166.80	140.29
86.00	64.20	44.77#
0.00	0.00	0.00

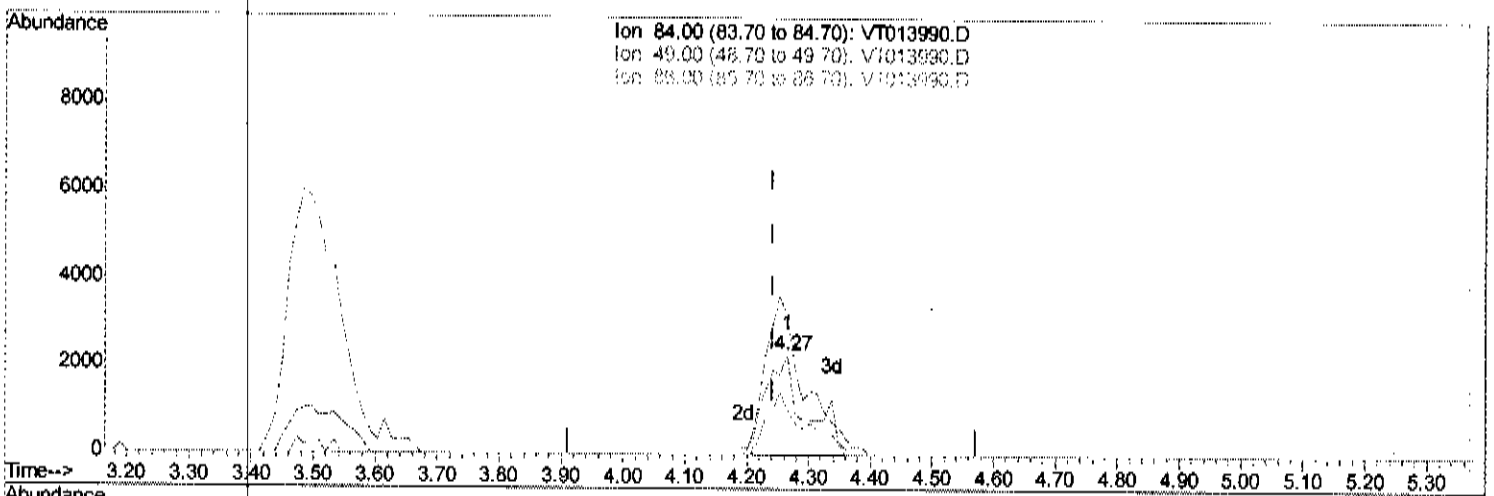
Quantitation Report (Qedit)

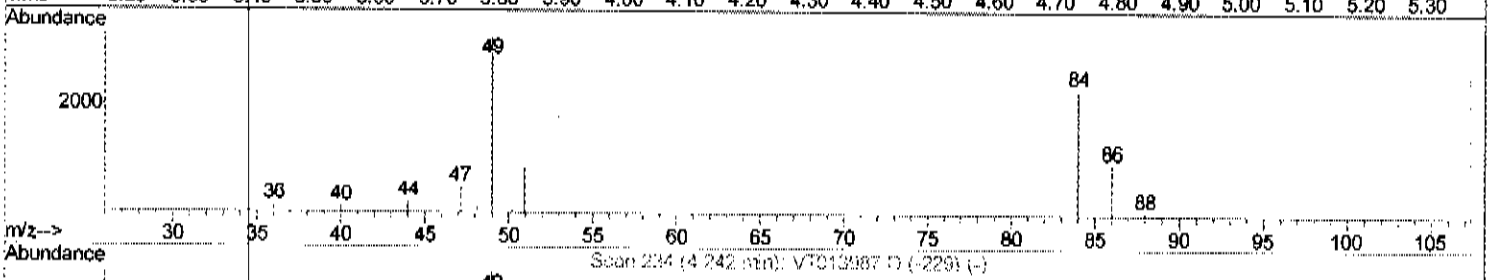
Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013990.D
Acq On : 9 May 2016 12:14
Operator : FY/SY
Sample : H2834-14MS
Misc : 4.64g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

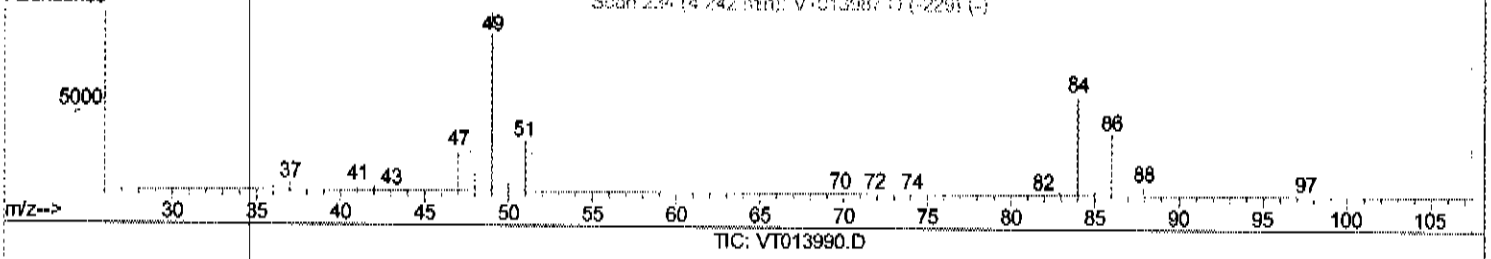
Quant Time: May 10 01:20:41 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
H4061MS

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:46 PM







(16) Methylene chloride (T)

4.266min (+0.023) 0.82ug/L m

response 10186

FY 5/10/2016

Ion	Exp%	Act%
84.00	100	100
49.00	166.80	140.29
86.00	64.20	44.77#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013990.D
Acq On : 9 May 2016 12:14
Operator : FY/SY
Sample : H2834-14MS
Misc : 4.64g/10mL/MSVOA_T/SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 10 01:32:44 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : H4061MS

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:46 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	881436	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	650608	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	242136	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	404493	27.69	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 110.76%			
7) Chloroethane-d5	2.53	69	303604	28.75	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 115.00%			
10) 1,1-Dichloroethene-d2	3.47	63	776033	25.84	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 103.36%			
20) 2-Butanone-d5	6.43	46	151666	43.64	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 87.28%			
24) Chloroform-d	7.07	84	622121	25.30	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 101.20%			
26) 1,2-Dichloroethane-d4	7.78	65	389926	27.04	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 108.16%			
29) Benzene-d6	7.74	84	1152598	28.32	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 113.28%			
33) 1,2-Dichloropropane-d6	8.80	67	357338	29.76	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 119.04%			
37) Toluene-d8	9.87	98	962149	26.27	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 105.08%			
38) trans-1,3-Dichloropropene-	10.13	79	121350	26.06	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 104.24%			
39) 2-Hexanone-d5	10.48	63	98126	51.14	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 102.28%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	201026	24.30	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 97.20%			
60) 1,2-Dichlorobenzene-d4	13.41	152	203599	23.95	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 95.80%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	3.48	96	302743	23.40	ug/L	80
13) Acetone	3.56	43	23490	4.20	ug/L	87
16) Methylene chloride	4.27	84	10186m	0.82	ug/L	
34) Benzene	7.79	78	1292617	26.89	ug/L	100
35) Trichloroethene	8.61	95	322132	25.81	ug/L	96
44) Toluene	9.93	91	1194352	25.21	ug/L	98
52) Chlorobenzene	11.21	112	642046	23.19	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FY 5/10/2016

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-15MSD
Sample wt/vol : 3.66 (g/mL): g
Lab File ID : VT013991.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	11	U
74-87-3	Chloromethane	11	U
75-01-4	Vinyl chloride	11	U
74-83-9	Bromomethane	11	U
75-00-3	Chloroethane	11	U
75-69-4	Trichlorofluoromethane	11	U
75-35-4	1,1-Dichloroethene	100	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	11	U
67-64-1	Acetone	40	
75-15-0	Carbon disulfide	11	U
79-20-9	Methyl Acetate	11	U
75-09-2	Methylene chloride	3.2	J
156-60-5	trans-1,2-Dichloroethene	11	U
1634-04-4	Methyl tert-butyl Ether	11	U
75-34-3	1,1-Dichloroethane	11	U
156-59-2	cis-1,2-Dichloroethene	11	U
78-93-3	2-Butanone	21	U
74-97-5	Bromochloromethane	11	U
67-66-3	Chloroform	11	U
71-55-6	1,1,1-Trichloroethane	11	U
110-82-7	Cyclohexane	11	U
56-23-5	Carbon tetrachloride	11	U
71-43-2	Benzene	110	
107-06-2	1,2-Dichloroethane	11	U
79-01-6	Trichloroethene	110	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-15MSD
Sample wt/vol : 3.66 (g/mL): g
Lab File ID : VT013991.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	11	U
78-87-5	1,2-Dichloropropane	11	U
75-27-4	Bromodichloromethane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
108-10-1	4-Methyl-2-pentanone	21	U
108-88-3	Toluene	110	
10061-02-6	trans-1,3-Dichloropropene	11	U
79-00-5	1,1,2-Trichloroethane	11	U
127-18-4	Tetrachloroethene	11	U
591-78-6	2-Hexanone	21	U
124-48-1	Dibromochloromethane	11	U
106-93-4	1,2-Dibromoethane	11	U
108-90-7	Chlorobenzene	98	
100-41-4	Ethylbenzene	11	U
95-47-6	o-xylene	11	U
179601-23-1	m,p-Xylene	11	U
100-42-5	Styrene	11	U
75-25-2	Bromoform	11	U
98-82-8	Isopropylbenzene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
96-12-8	1,2-Dibromo-3-chloropropane	11	U
120-82-1	1,2,4-trichlorobenzene	11	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : VOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-15MSD
Sample wt/vol : 3.66 (g/mL): g
Lab File ID : VT013991.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) Y
Injection Volume : (µL)
Purge Volume : 10 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	11	U

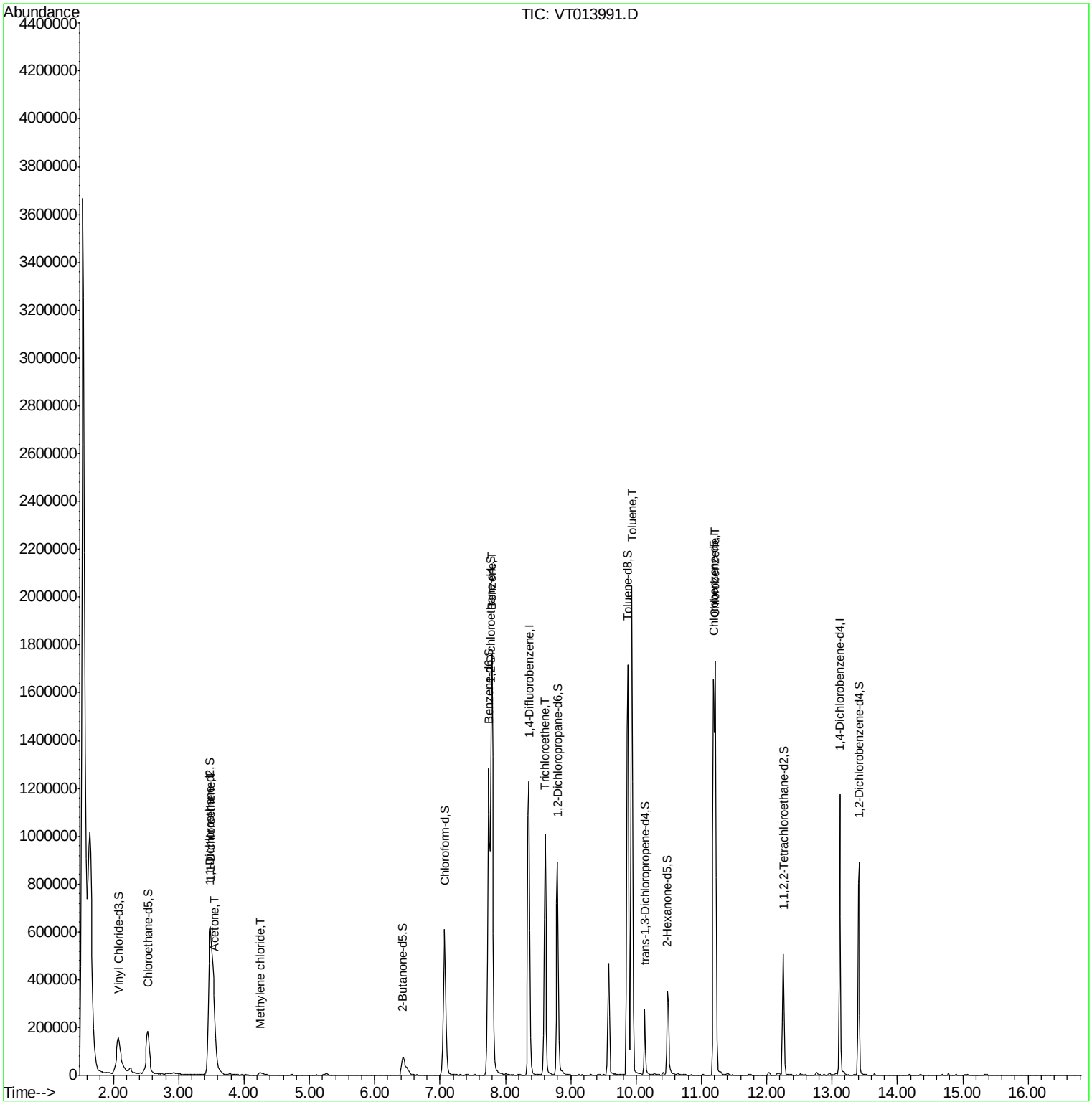
Quantitation Report (QT Reviewed)

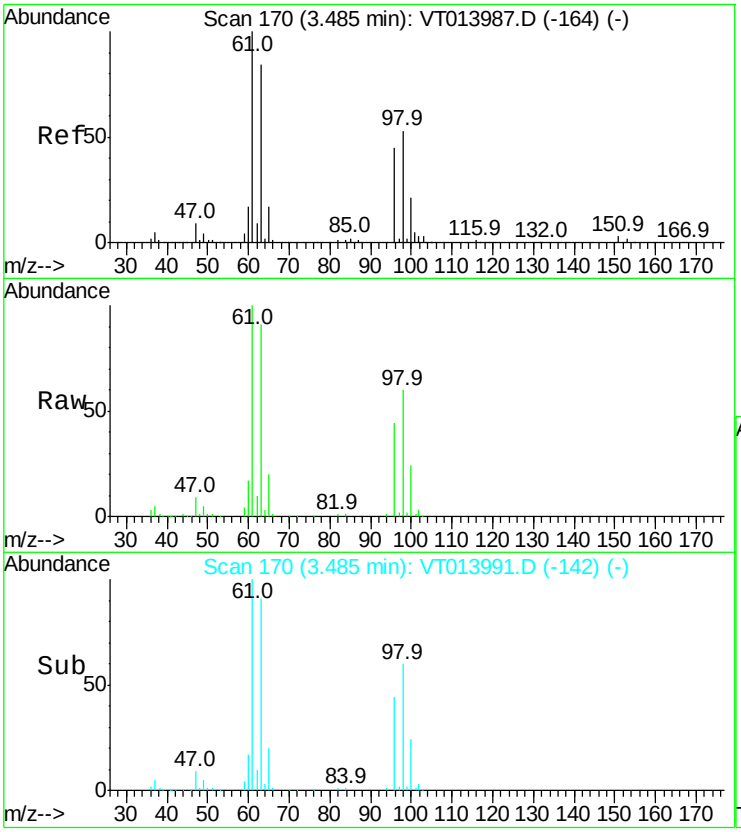
Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013991.D
Acq On : 9 May 2016 12:41
Operator : FY/SY
Sample : H2834-15MSD
Misc : 3.66g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 10 01:34:26 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:48 PM

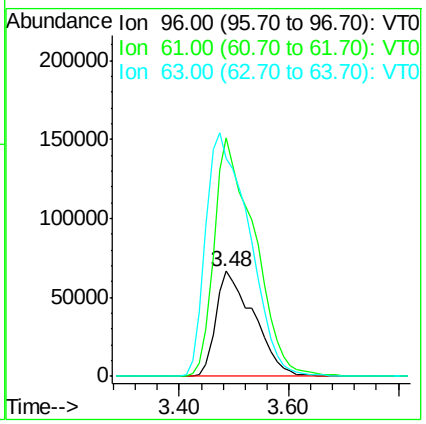




#12
1,1-Dichloroethene
Concen: 23.91 ug/L
RT: 3.48 min Scan# 170
Delta R.T. -0.00 min
Lab File: VT013991.D
Acq: 9 May 2016 12:41

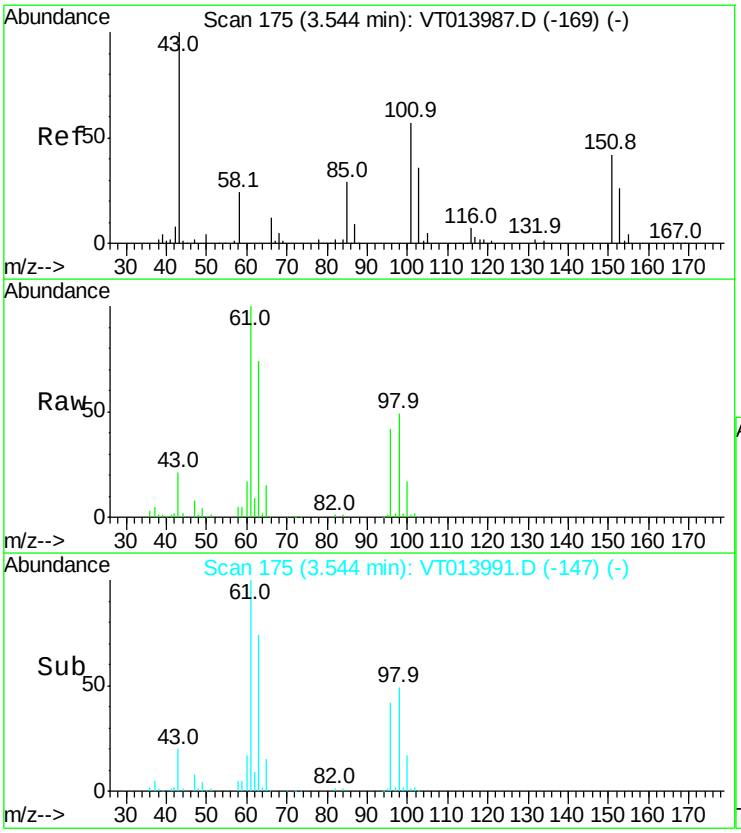
Tgt Ion: 96 Resp: 322956

Ion	Ratio	Lower	Upper
96	100		
61	226.9	148.3	275.5
63	207.3	119.3	221.5



Instrument :
MSVOA_T
ClientSampleId :
H4061MSD

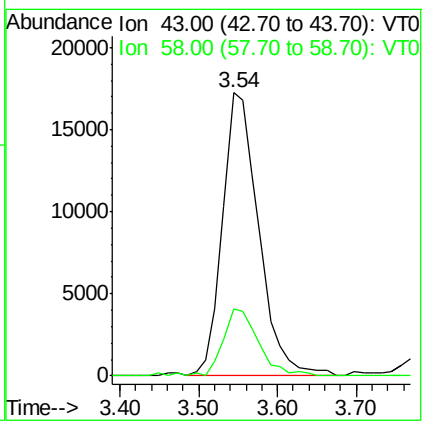
Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:48 PM

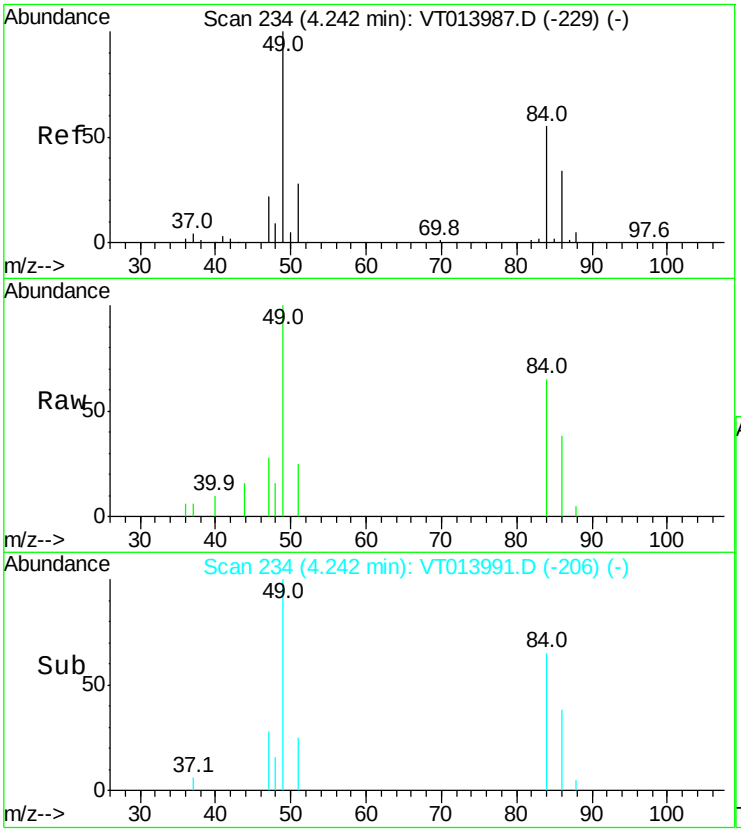


#13
Acetone
Concen: 9.40 ug/L
RT: 3.54 min Scan# 175
Delta R.T. -0.00 min
Lab File: VT013991.D
Acq: 9 May 2016 12:41

Tgt Ion: 43 Resp: 54841

Ion	Ratio	Lower	Upper
43	100		
58	22.2	0.0	50.2

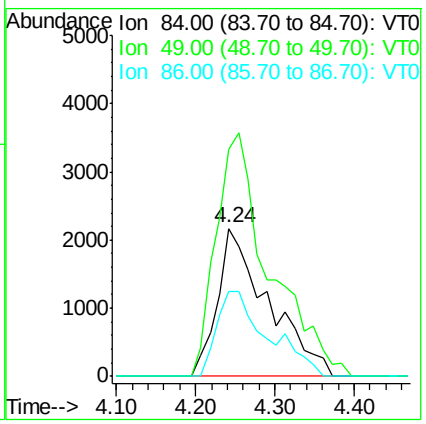




#16
Methylene chloride
Concen: 0.74 ug/L m
RT: 4.24 min Scan# 234
Delta R.T. -0.00 min
Lab File: VT013991.D
Acq: 9 May 2016 12:41

Tgt Ion: 84 Resp: 9606

Ion	Ratio	Lower	Upper
84	100		
49	153.7	116.8	216.8
86	57.8	44.9	83.5



Instrument :
MSVOA_T
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
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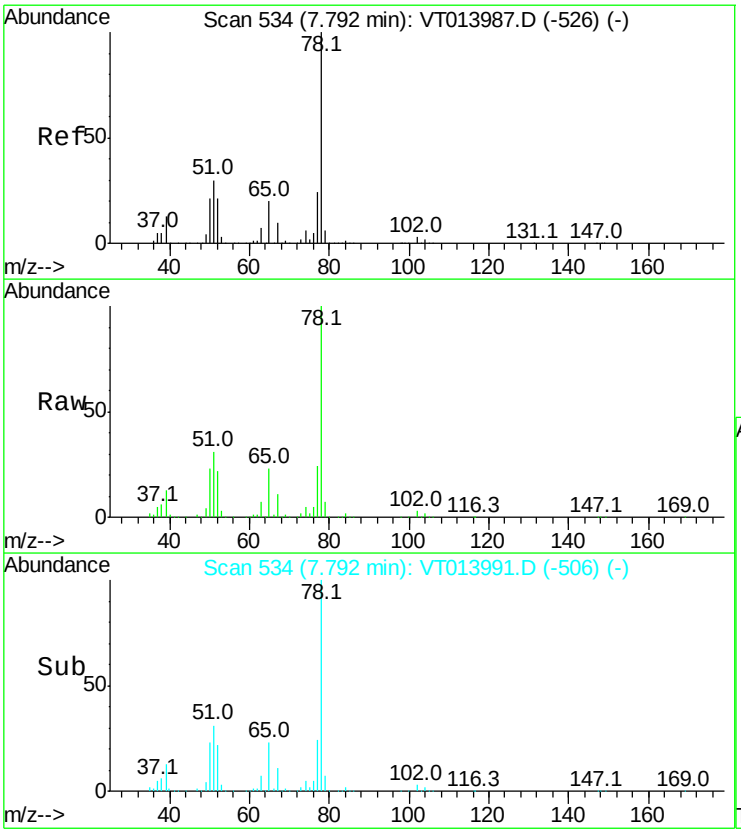
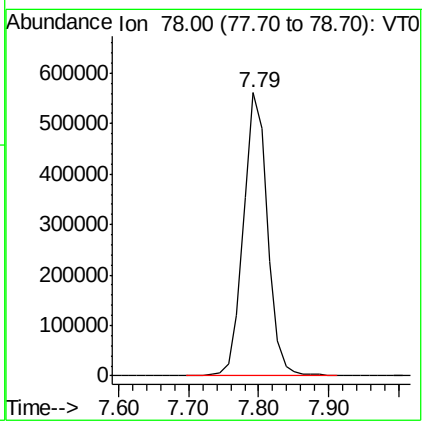
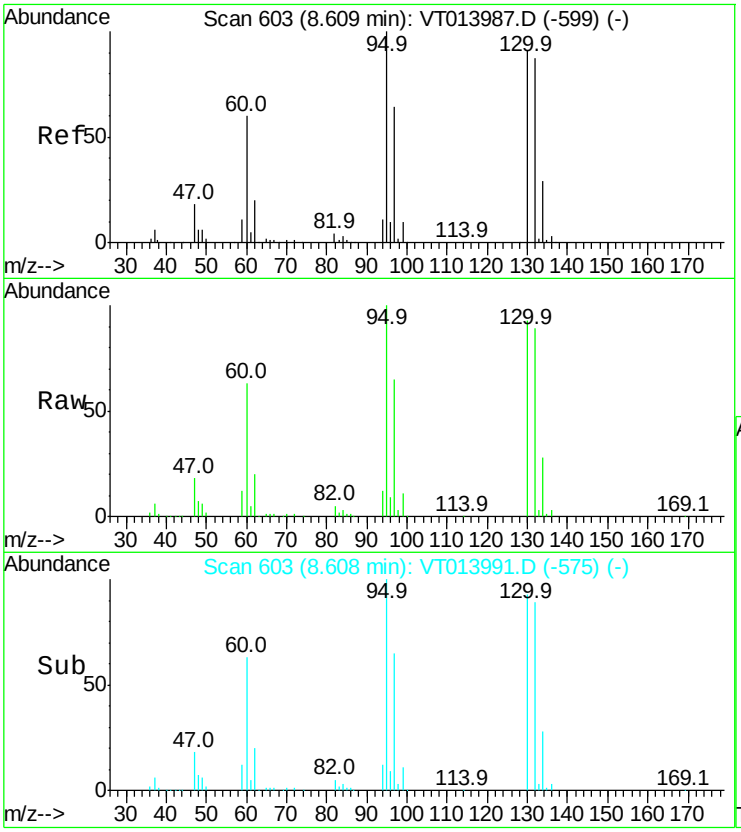


#34
Benzene
Concen: 26.71 ug/L
RT: 7.79 min Scan# 534
Delta R.T. -0.00 min
Lab File: VT013991.D
Acq: 9 May 2016 12:41

Tgt Ion: 78 Resp: 1347771

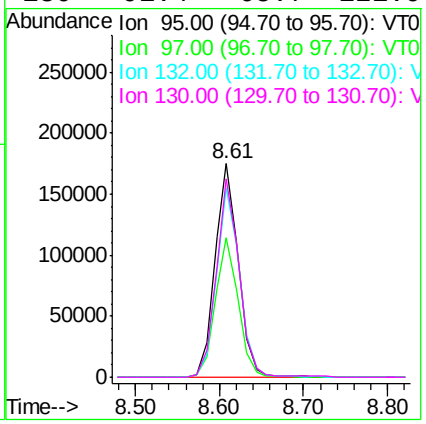




#35
Trichloroethene
Concen: 25.76 ug/L
RT: 8.61 min Scan# 603
Delta R.T. -0.00 min
Lab File: VT013991.D
Acq: 9 May 2016 12:41

Tgt Ion: 95 Resp: 337469

Ion	Ratio	Lower	Upper
95	100		
97	64.4	44.9	83.5
132	88.7	63.4	117.8
130	91.4	65.7	121.9



Instrument :
MSVOA_T
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
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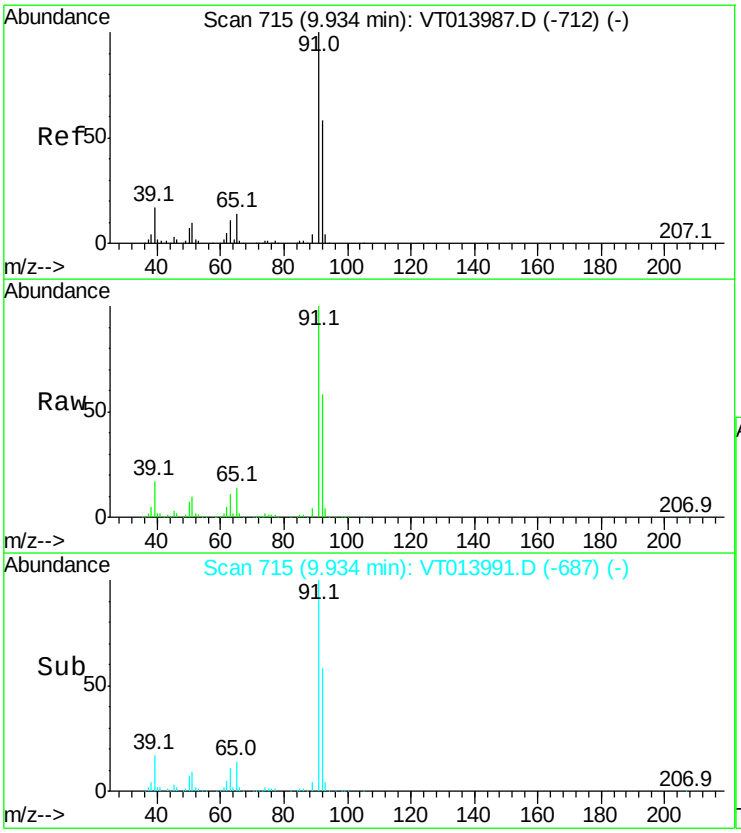
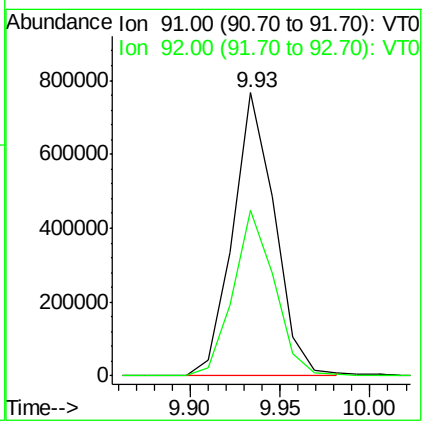
5/10/2016 7:40:48 PM

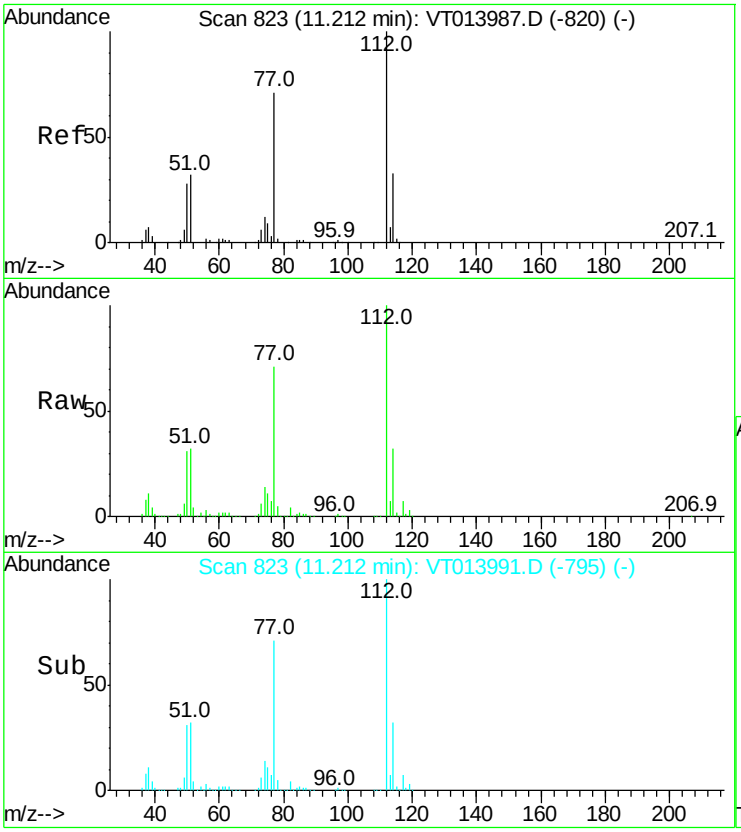


#44
Toluene
Concen: 24.96 ug/L
RT: 9.93 min Scan# 715
Delta R.T. -0.00 min
Lab File: VT013991.D
Acq: 9 May 2016 12:41

Tgt Ion: 91 Resp: 1241408

Ion	Ratio	Lower	Upper
91	100		
92	58.3	39.5	73.4

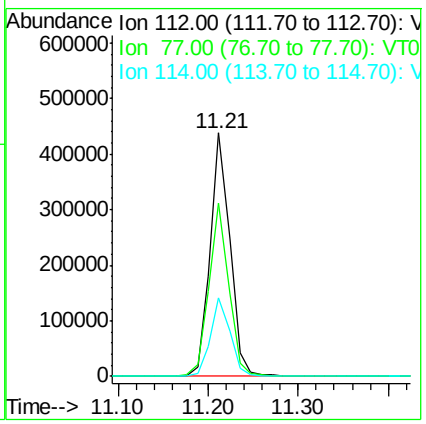




#52
Chlorobenzene
Concen: 22.94 ug/L
RT: 11.21 min Scan# 823
Delta R.T. -0.00 min
Lab File: VT013991.D
Acq: 9 May 2016 12:41

Tgt Ion:112 Resp: 666658

Ion	Ratio	Lower	Upper
112	100		
77	71.4	53.4	80.0
114	32.4	22.6	42.0



Instrument :
MSVOA_T
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:48 PM

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013991.D
Acq On : 9 May 2016 12:41
Operator : FY/SY
Sample : H2834-15MSD
Misc : 3.66g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_T
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:48 PM

Quant Time: May 10 01:34:26 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	920276	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	682901	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	237621	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	450163	29.52	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 118.08%			
7) Chloroethane-d5	2.53	69	335424	30.42	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 121.68%			
10) 1,1-Dichloroethene-d2	3.47	63	844470	26.93	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 107.72%			
20) 2-Butanone-d5	6.43	46	154301	42.53	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 85.06%			
24) Chloroform-d	7.07	84	665908	25.93	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 103.72%			
26) 1,2-Dichloroethane-d4	7.78	65	410363	27.26	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 109.04%			
29) Benzene-d6	7.74	84	1239344	29.01	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 116.04%			
33) 1,2-Dichloropropane-d6	8.80	67	375062	29.76	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 119.04%			
37) Toluene-d8	9.87	98	1048339	27.27	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 109.08%			
38) trans-1,3-Dichloropropene-	10.13	79	125007	25.58	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 102.32%			
39) 2-Hexanone-d5	10.48	63	102576	50.93	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 101.86%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	211656	24.38	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 97.52%			
60) 1,2-Dichlorobenzene-d4	13.41	152	211800	25.39	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 101.56%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	3.48	96	322956	23.91	ug/L	83
13) Acetone	3.54	43	54841	9.40	ug/L	94
16) Methylene chloride	4.24	84	9606m	0.74	ug/L	
34) Benzene	7.79	78	1347771	26.71	ug/L	100
35) Trichloroethene	8.61	95	337469	25.76	ug/L	98
44) Toluene	9.93	91	1241408	24.96	ug/L	97
52) Chlorobenzene	11.21	112	666658	22.94	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

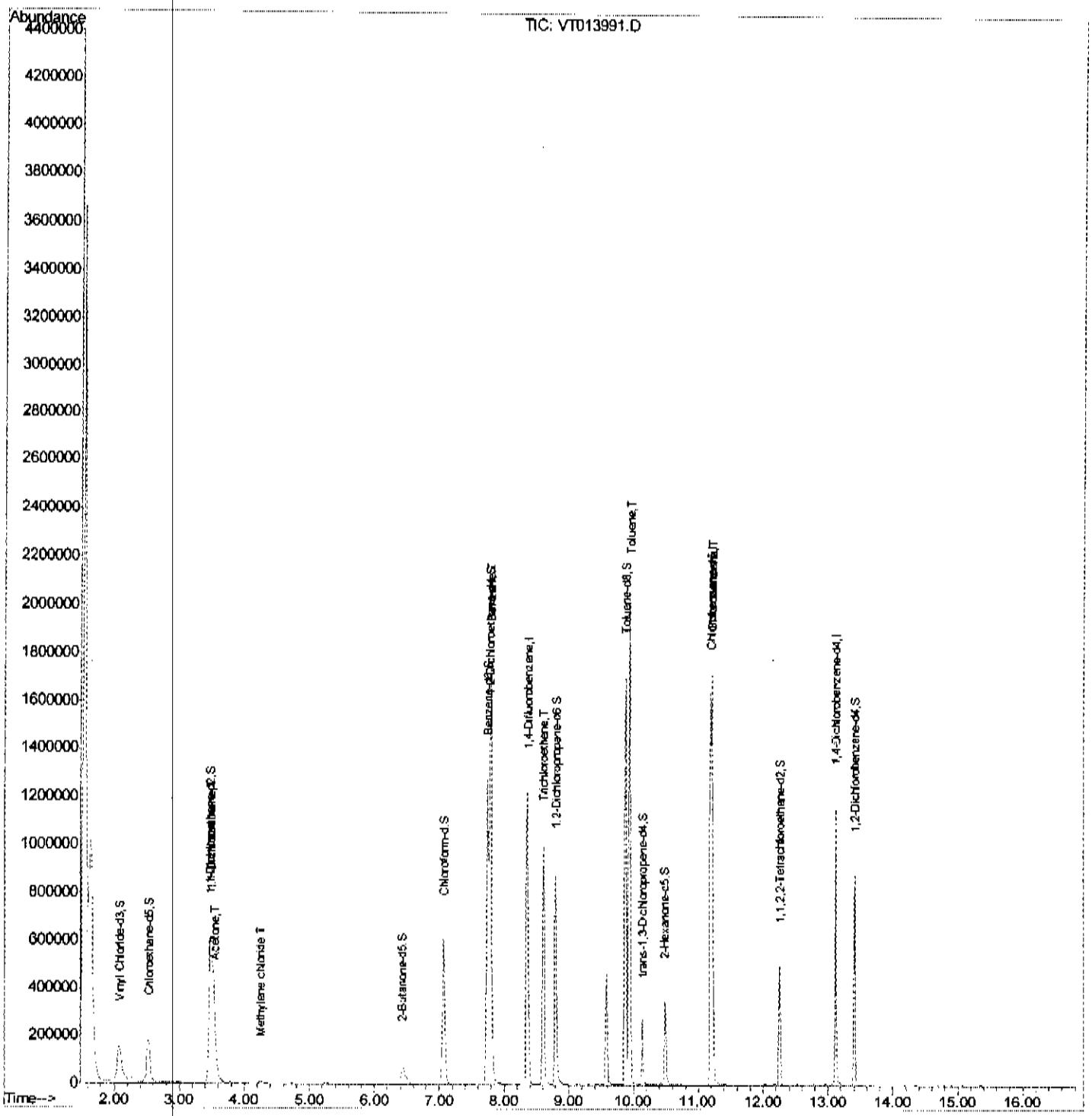
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013991.D
Acq On : 9 May 2016 12:41
Operator : FY/SY
Sample : H2834-15MSD
Misc : 3.66g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 10 01:34:26 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:48 PM



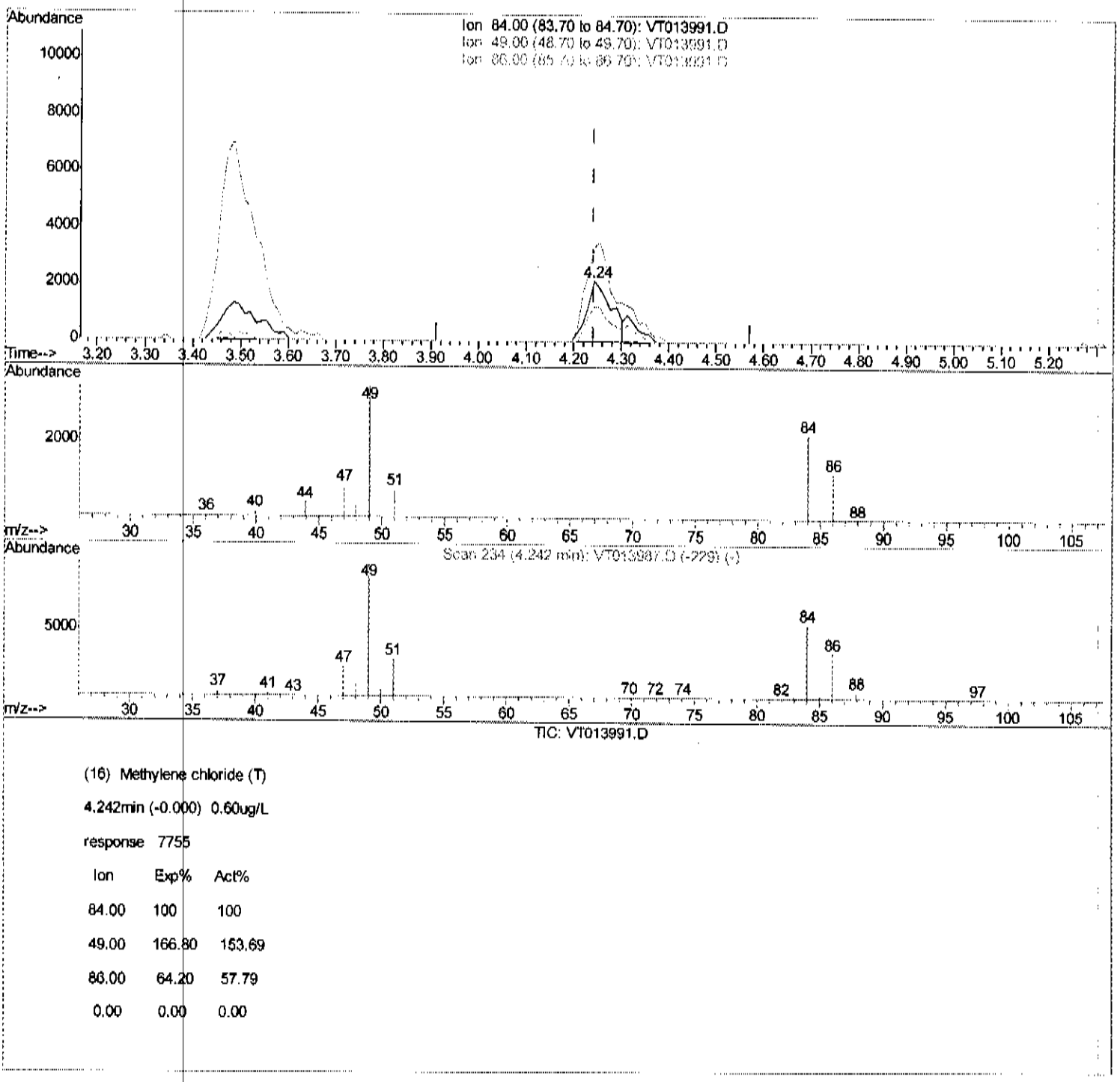
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013991.D
Acq On : 9 May 2016 12:41
Operator : FY/SY
Sample : H2834-15MSD
Misc : 3.66g/10mL/MSVOA_T/SO1L
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 10 01:20:48 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:48 PM



(16) Methylene chloride (T)

4.242min (-0.000) 0.60ug/L

response 7755

Ion	Exp%	Act%
84.00	100	100
49.00	166.80	153.69
86.00	64.20	57.79
0.00	0.00	0.00

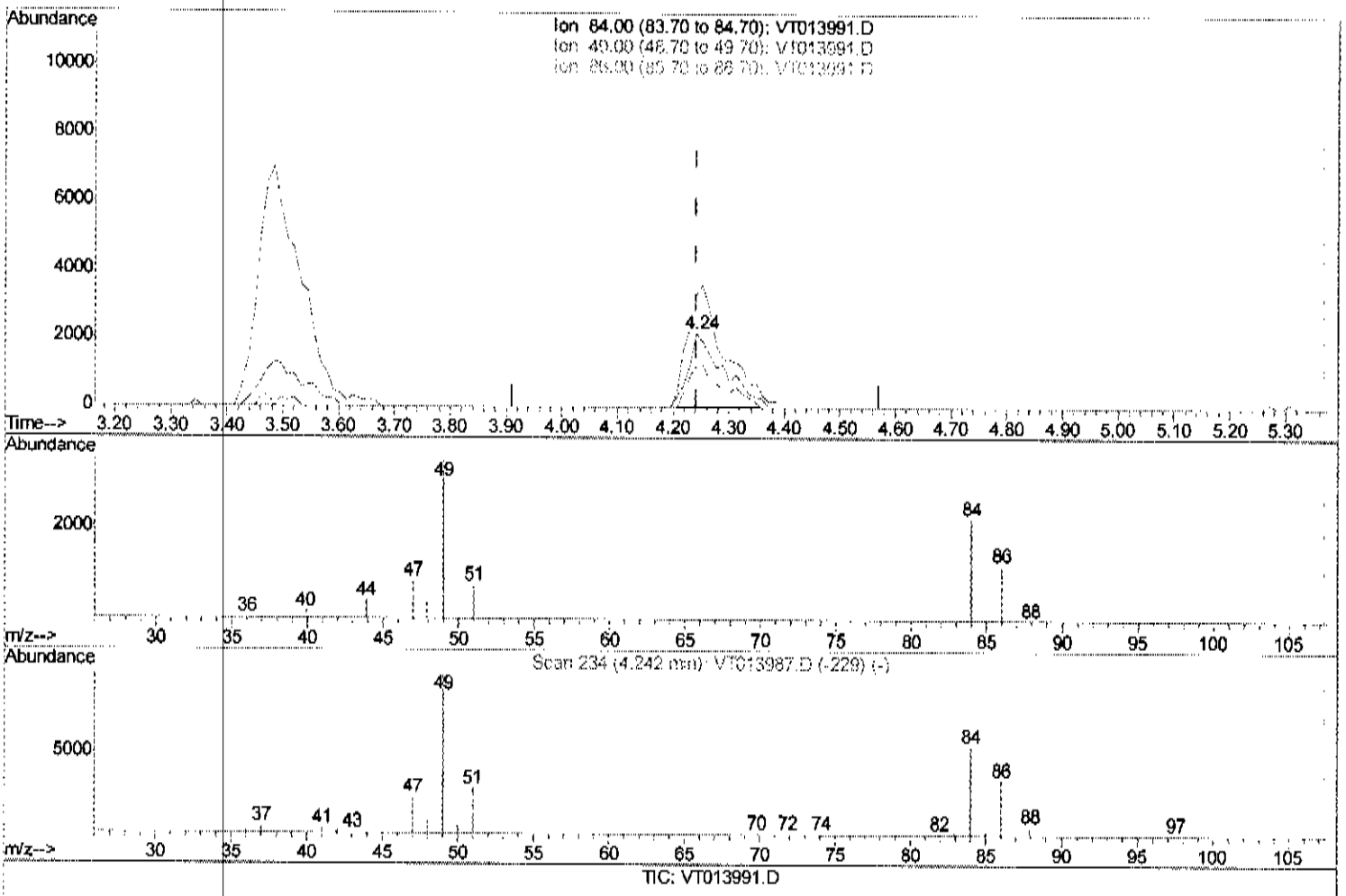
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013991.D
Acq On : 9 May 2016 12:41
Operator : FY/SY
Sample : H2834-15MSD
Misc : 3.66g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 10 01:20:48 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument :
MSVOA_T
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:48 PM



(16) Methylene chloride (T)

4.242min (-0.000) 0.74ug/L m

response 9606

Ion	Exp%	Act%
84.00	100	100
49.00	166.80	153.69
86.00	64.20	57.79
0.00	0.00	0.00

FY 5/10/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VT050916\
Data File : VT013991.D
Acq On : 9 May 2016 12:41
Operator : FY/SY
Sample : H2834-15MSD
Misc : 3.66g/10mL/MSVOA_T/SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 10 01:34:26 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOM2TLM050616S.M
Quant Title : VOC Analysis
QLast Update : Tue May 10 01:19:30 2016
Response via : Initial Calibration

Instrument : MSVOA_T
ClientSampleId : H4061MSD

Manual Integrations APPROVED
mmdadoda
5/10/2016 7:40:48 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.36	114	920276	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	682901	25.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	237621	25.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.08	65	450163	29.52	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 118.08%			
7) Chloroethane-d5	2.53	69	335424	30.42	ug/L	0.00
Spiked Amount 25.000	Range 30 - 150		Recovery = 121.68%			
10) 1,1-Dichloroethene-d2	3.47	63	844470	26.93	ug/L	0.00
Spiked Amount 25.000	Range 45 - 110		Recovery = 107.72%			
20) 2-Butanone-d5	6.43	46	154301	42.53	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 85.06%			
24) Chloroform-d	7.07	84	665908	25.93	ug/L	0.00
Spiked Amount 25.000	Range 40 - 150		Recovery = 103.72%			
26) 1,2-Dichloroethane-d4	7.78	65	410363	27.26	ug/L	0.00
Spiked Amount 25.000	Range 70 - 130		Recovery = 109.04%			
29) Benzene-d6	7.74	84	1239344	29.01	ug/L	0.00
Spiked Amount 25.000	Range 20 - 135		Recovery = 116.04%			
33) 1,2-Dichloropropane-d6	8.80	67	375062	29.76	ug/L	0.00
Spiked Amount 25.000	Range 70 - 120		Recovery = 119.04%			
37) Toluene-d8	9.87	98	1048339	27.27	ug/L	0.00
Spiked Amount 25.000	Range 30 - 130		Recovery = 109.08%			
38) trans-1,3-Dichloropropene-	10.13	79	125007	25.58	ug/L	0.00
Spiked Amount 25.000	Range 30 - 135		Recovery = 102.32%			
39) 2-Hexanone-d5	10.48	63	102576	50.93	ug/L	0.00
Spiked Amount 50.000	Range 20 - 135		Recovery = 101.86%			
48) 1,1,2,2-Tetrachloroethane-	12.25	84	211656	24.38	ug/L	0.00
Spiked Amount 25.000	Range 45 - 120		Recovery = 97.52%			
60) 1,2-Dichlorobenzene-d4	13.41	152	211800	25.39	ug/L	0.00
Spiked Amount 25.000	Range 75 - 120		Recovery = 101.56%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	3.48	96	322956	23.91	ug/L	83
13) Acetone	3.54	43	54841	9.40	ug/L	94
16) Methylene chloride	4.24	84	9606m	0.74	ug/L	
34) Benzene	7.79	78	1347771	26.71	ug/L	100
35) Trichloroethene	8.61	95	337469	25.76	ug/L	98
44) Toluene	9.93	91	1241408	24.96	ug/L	97
52) Chlorobenzene	11.21	112	666658	22.94	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FT 5/10/2016

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract: EPW14030

Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4002

Analytical Method : SVOA Level : Low

Matrix : Soil

EPA Sample No .	DMC1 (DXE)	DMC2 (PHL)	DMC3 (BCE)	DMC4 (2CP)	DMC5 (4MP)	DMC6 (NBZ)	DMC7 (2NP)	DMC8 (DCP)	DMC9 (4CA)
H4061	41	44	48	47	46	48	49	48	41
H4061MS	44	49	51	51	49	54	54	51	23
H4061MSD	49	56	57	58	56	62	63	60	33
H4076	37 *	45	48	47	42	52	54	50	19
SBLK32	61	61	67	64	64	66	68	61	80

	QC LIMITS
DMC1 (DXE) = 1,4-Dioxane-d8	40 - 110
DMC2 (PHL) = Phenol-d5	10 - 130
DMC3 (BCE) = Bis(2-Chloroethyl)ether-d8	10 - 150
DMC4 (2CP) = 2-Chlorophenol-d4	15 - 120
DMC5 (4MP) = 4-Methylphenol-d8	10 - 140
DMC6 (NBZ) = Nitrobenzene-d5	10 - 135
DMC7 (2NP) = 2-Nitrophenol-d4	10 - 120
DMC8 (DCP) = 2,4-Dichlorophenol-d3	10 - 140
DMC9 (4CA) = 4-Chloroaniline-d4	1 - 145

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4002
Analytical Method : SVOA Level : Low
Matrix : Soil

EPA Sample No .	DMC10 (DMP)	DMC11 ACY	DMC12 (4NP)	DMC13 (FLR)	DMC14 (NMP)	DMC15 (ANC)	DMC16 (PYR)	DMC17 (BAP)	Tot Out
H4061	51	51	31	52	34	54	57	56	0
H4061MS	54	53	32	52	29	54	54	54	0
H4061MSD	65	63	45	63	38	63	61	64	0
H4076	52	52	34	52	39	52	60	54	1
SBLK32	71	67	61	69	57	71	66	70	0

	QC LIMITS
DMC10 (DMP) = Dimethylphthalate-d6	10 - 145
DMC11 (ACY) = Acenaphthylene-d8	15 - 120
DMC12 (4NP) = 4-Nitrophenol-d4	10 - 150
DMC13 (FLR) = Fluorene-d10	20 - 140
DMC14 (NMP) = 4,6-Dinitro-2-methylphenol-d2	10 - 130
DMC15 (ANC) = Anthracene-d10	10 - 150
DMC16 (PYR) = Pyrene-d10	10 - 130
DMC17 (BAP) = Benzo(a)pyrene-d12	10 - 140

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract: EPW14030

Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4002

Analytical Method : SVOA Level : _____

Matrix : Water

EPA Sample No .	DMC1 (DXE)	DMC2 (PHL)	DMC3 (BCE)	DMC4 (2CP)	DMC5 (4MP)	DMC6 (NBZ)	DMC7 (2NP)	DMC8 (DCP)	DMC9 (4CA)
H4002	19 *	17	81	65	39	84	84	74	8
H4002MS	16 *	14	69	56	32	73	72	64	5
H4002MSD	17 *	15	73	60	34	77	74	66	5
H4102	18 *	16	75	61	36	77	78	67	4
H4116	15 *	14	70	56	32	72	72	65	2
H4117	17 *	16	78	64	36	81	82	69	5
H4118	20 *	15	78	63	36	81	83	71	4
SBLK30	69	62	68	67	63	69	69	62	85

	QC LIMITS
DMC1 (DXE) = 1,4-Dioxane-d8	40 - 110
DMC2 (PHL) = Phenol-d5	10 - 130
DMC3 (BCE) = Bis(2-Chloroethyl)ether-d8	25 - 120
DMC4 (2CP) = 2-Chlorophenol-d4	20 - 130
DMC5 (4MP) = 4-Methylphenol-d8	25 - 125
DMC6 (NBZ) = Nitrobenzene-d5	20 - 125
DMC7 (2NP) = 2-Nitrophenol-d4	20 - 130
DMC8 (DCP) = 2,4-Dichlorophenol-d3	20 - 120
DMC9 (4CA) = 4-Chloroaniline-d4	1 - 146

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4002
Analytical Method : SVOA Level : _____
Matrix : Water

EPA Sample No .	DMC10 (DMP)	DMC11 ACY	DMC12 (4NP)	DMC13 (FLR)	DMC14 (NMP)	DMC15 (ANC)	DMC16 (PYR)	DMC17 (BAP)	Tot Out
H4002	85	83	10	85	67	88	81	91	1
H4002MS	74	74	10	74	59	79	68	78	1
H4002MSD	79	78	11	81	62	84	72	84	1
H4102	78	79	9 *	79	61	80	71	81	2
H4116	72	73	7 *	74	56	75	68	77	2
H4117	80	81	8 *	81	62	81	74	82	2
H4118	81	81	9 *	82	65	82	75	85	2
SBLK30	71	70	52	71	52	73	66	74	0

	QC LIMITS
DMC10 (DMP) = Dimethylphthalate-d6	25 - 130
DMC11 (ACY) = Acenaphthylene-d8	10 - 130
DMC12 (4NP) = 4-Nitrophenol-d4	10 - 150
DMC13 (FLR) = Fluorene-d10	25 - 125
DMC14 (NMP) = 4,6-Dinitro-2-methylphenol-d2	10 - 130
DMC15 (ANC) = Anthracene-d10	25 - 130
DMC16 (PYR) = Pyrene-d10	15 - 130
DMC17 (BAP) = Benzo(a)pyrene-d12	20 - 130

FORM 3A-OR
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No. : 46114 MA No .: SDG No. : H4002

Analytical Method : SVOA Level :

Matrix Water

EPA Sample No.(Matrix Spike/Metrix Spike Duplicate): H4002

Instrument ID : BNA_M GC Column ZB-GR ID : 0.25 (mm)

Concentration Units (ug/L,mg/L ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %R #	QC Limits %R
Phenol	40	0	6.3	16	12 - 110
2-Chlorophenol	40	0	23	58	27 - 123
N-Nitroso-di-n-propylamine	40	0	30	75	41 - 116
4-Chloro-3-methylphenol	40	0	24	60	23 - 97
Acenaphthene	40	0	30	75	46 - 118
4-Nitrophenol	40	0	4.7	12	10 - 80
2,4-Dinitrotoluene	40	0	32	80	24 - 96
Pentachlorophenol	40	0	21	52	9 - 103
Pyrene	40	0	28	70	26 - 127

ANALYTE	SPIKE AADDED	MSD CONCENTRATION	MSD %R #	RPD	QC Limits	
					RPD	%R
Phenol	40	6.8	17	6	42	12 - 110
2-Chlorophenol	40	24	60	3	40	27 - 123
N-Nitroso-di-n-propylamine	40	32	80	6	38	41 - 116
4-Chloro-3-methylphenol	40	27	68	13	42	23 - 97
Acenaphthene	40	32	80	6	31	46 - 118
4-Nitrophenol	40	5.1	13	8	50	10 - 80
2,4-Dinitrotoluene	40	36	90	12	38	24 - 96
Pentachlorophenol	40	24	60	14	50	9 - 103
Pyrene	40	29	73	4	31	26 - 127

FORM 3A-OR
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No. : 46114 MA No .: SDG No. : H4002

Analytical Method : SVOA Level : LOW

Matrix Soil

EPA Sample No.(Matrix Spike/Metrix Spike Duplicate): H4061

Instrument ID : BNA_M GC Column ZB-GR ID : 0.25 (mm)

Concentration Units (ug/L,mg/L ug/kg): ug/Kg

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %R #	QC Limits %R
Phenol	2100	0	1000	48	26 - 90
2-Chlorophenol	2100	0	1000	48	25 - 102
N-Nitroso-di-n-propylamine	2100	0	1200	57	41 - 126
4-Chloro-3-methylphenol	2100	0	1100	52	26 - 103
Acenaphthene	2100	0	1100	52	31 - 137
4-Nitrophenol	2100	0	870	41	11 - 114
2,4-Dinitrotoluene	2100	0	1100	52	28 - 89
Pentachlorophenol	2100	0	950	45	17 - 109
Pyrene	2100	0	1100	52	35 - 142

ANALYTE	SPIKE AADDED	MSD CONCENTRATION	MSD %R #	RPD	QC Limits	
					RPD	%R
Phenol	2100	1200	57	17	35	26 - 90
2-Chlorophenol	2100	1200	57	17	50	25 - 102
N-Nitroso-di-n-propylamine	2100	1400	67	16	38	41 - 126
4-Chloro-3-methylphenol	2100	1300	62	18	33	26 - 103
Acenaphthene	2100	1300	62	18	19	31 - 137
4-Nitrophenol	2100	1100	52	24	50	11 - 114
2,4-Dinitrotoluene	2100	1400	67	25	47	28 - 89
Pentachlorophenol	2100	1200	57	24	47	17 - 109
Pyrene	2100	1300	62	18	36	35 - 142

EPA SAMPLE NO.

SBLK30

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : _____ sdg no.: H4002
Analytical Method: SVOA
Level : _____
Matrix : Water
Lab Sample ID: PB90330BL
Instrument ID: BNA_M
Lab File ID : BM005450.D
Extraction Type : CONH
Date Extracted : 05/05/2016
GC Column ( ) : ZB-GR ID : 0.25 (mm)
Date Analyzed : 05/14/2016
GC Column ( ) : _____ ID : _____ (mm)
Time Analyzed : 05:09
Heated Purge: (Y/N) _____ Cleanup(Y/N): N
Cleanup Types : _____

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
H4002	H2834-01	BM005451.D	05/14/2016 05:45
H4002MS	H2834-02MS	BM005452.D	05/14/2016 06:21
H4002MSD	H2834-03MSD	BM005453.D	05/14/2016 06:58
H4102	H2834-18	BM005454.D	05/14/2016 07:34
H4116	H2834-19	BM005455.D	05/14/2016 08:10
H4117	H2834-20	BM005456.D	05/14/2016 08:47
H4118	H2834-21	BM005457.D	05/14/2016 09:23

EPA SAMPLE NO.

SBLK32

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : _____ sdg no.: H4002
Analytical Method: SVOA
Level : Low
Matrix : Soil
Lab Sample ID: PB90332BL
Instrument ID: BNA_M
Lab File ID : BM005388.D
Extraction Type : SOXH
Date Extracted : 05/05/2016
GC Column ( ) : ZB-GR ID : 0.25 (mm)
Date Analyzed : 05/11/2016
GC Column ( ) : _____ ID : _____ (mm)
Time Analyzed : 15:49
Heated Purge: (Y/N) _____ Cleanup(Y/N): Y
Cleanup Types : GPC

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
H4061	H2834-13	BM005389.D	05/11/2016 16:25
H4076	H2834-16	BM005392.D	05/11/2016 18:15
H4061MS	H2834-14MS	BM005459.D	05/14/2016 10:36
H4061MSD	H2834-15MSD	BM005460.D	05/14/2016 11:12

FORM 5-OR
GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.
DFTPP64

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code: CHM Case No.: 46114 MA No. : SDG No.: H4002
Analytical Method : SVOA Lab File ID : BM005230.D
Instrument ID: BNA_M BFB / DFTPP : DFTPP
GC Column : ZB-GR ID : 0.25 (mm)
Injection Date : 05/05/2016 Injection Time : 10:23

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	31
68	Less than 2.0% of mass 69	0.6(1.8) 1
69	Present	32.4
70	Less than 2.0% of mass 69	0.0(0.0) 1
127	10.0 - 80.0% of mass 198	43.1
197	Less than 2.0% of mass 198	0.7
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	25.7
365	Greater than 1% of mass 198	3.2
441	Present, but less than mass 443	12.6
442	Greater than 50.0% of mass 198	81.3
443	15.0 - 24.0% of mass 442	15.9(19.5) 2

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD00540	SSTD00540	BM005231.D	05/05/2016	11:09
SSTD01041	SSTD01041	BM005232.D	05/05/2016	11:45
SSTD02042	SSTD02042	BM005233.D	05/05/2016	12:21
SSTD04043	SSTD04043	BM005234.D	05/05/2016	12:57
SSTD08044	SSTD08044	BM005235.D	05/05/2016	13:33
SSTD16045	SSTD16045	BM005236.D	05/05/2016	15:53

FORM 5-OR
GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.
DFTPP36

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Lab File ID : BM005379.D
Instrument ID: BNA_M
BFB / DFTPP : DFTPP
GC Column : ZB-GR ID : 0.25 (mm)
Injection Date : 05/11/2016
Injection Time : 08:24

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	28.4
68	Less than 2.0% of mass 69	0.6(1.9) 1
69	Present	29.9
70	Less than 2.0% of mass 69	0.2(0.6) 1
127	10.0 - 80.0% of mass 198	41.6
197	Less than 2.0% of mass 198	0.8
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	28.2
365	Greater than 1% of mass 198	3.7
441	Present, but less than mass 443	14.7
442	Greater than 50.0% of mass 198	95.4
443	15.0 - 24.0% of mass 442	18.2(19.1) 2

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD02061	SSTDCCC020	BM005380.D	05/11/2016	09:01
SBLK32	PB90332BL	BM005388.D	05/11/2016	15:49
H4061	H2834-13	BM005389.D	05/11/2016	16:25
H4076	H2834-16	BM005392.D	05/11/2016	18:15
SSTD02062	SSTDCCC020EC	BM005393.D	05/11/2016	18:52

FORM 5-OR
GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.
DFTPP38

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code: CHM Case No.: 46114 MA No. : SDG No.: H4002
Analytical Method : SVOA Lab File ID : BM005426.D
Instrument ID: BNA_M BFB / DFTPP : DFTPP
GC Column : ZB-GR ID : 0.25 (mm)
Injection Date : 05/13/2016 Injection Time : 11:10

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	27
68	Less than 2.0% of mass 69	0.6(2) 1
69	Present	29.9
70	Less than 2.0% of mass 69	0.2(0.6) 1
127	10.0 - 80.0% of mass 198	41.5
197	Less than 2.0% of mass 198	0.9
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	28.4
365	Greater than 1% of mass 198	3.8
441	Present, but less than mass 443	15.3
442	Greater than 50.0% of mass 198	98.6
443	15.0 - 24.0% of mass 442	19(19.3) 2

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD02066	SSTDCCC020	BM005427.D	05/13/2016	11:46
SSTD02034	SSTDCCC020	BM005435.D	05/13/2016	17:05
SSTD02035	SSTDCCC020	BM005449.D	05/14/2016	04:32
SBLK30	PB90330BL	BM005450.D	05/14/2016	05:09
H4002	H2834-01	BM005451.D	05/14/2016	05:45
H4002MS	H2834-02MS	BM005452.D	05/14/2016	06:21
H4002MSD	H2834-03MSD	BM005453.D	05/14/2016	06:58
H4102	H2834-18	BM005454.D	05/14/2016	07:34
H4116	H2834-19	BM005455.D	05/14/2016	08:10
H4117	H2834-20	BM005456.D	05/14/2016	08:47
H4118	H2834-21	BM005457.D	05/14/2016	09:23
H4061MS	H2834-14MS	BM005459.D	05/14/2016	10:36
H4061MSD	H2834-15MSD	BM005460.D	05/14/2016	11:12
SSTD02036	SSTDCCC020EC	BM005461.D	05/14/2016	13:09

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002
Analytical Method: SVOA Level : LOW
EPA Sample No. : SSTD02061 Lab File ID (Standard) : BM005380.D
Instrument ID : BNA_M Init.Calib.Date(s): 05/05/2016
GC Column : ZB-GR ID: 0.25 (mm) Date Analyzed : 05/11/2016
Heated Purge: Time Analyzed : 09:01

	IS1 (DCB) AREA	RT	IS2 (NPT) AREA	RT	IS3 (ANT) AREA	RT
12 HOUR STD	100625	7.76	477106	10.55	305317	14.40
UPPER LIMIT	201250	8.26	954212	11.05	610634	14.9
LOWER LIMIT	50312.5	7.26	238553	10.05	152659	13.9
EPA SAMPLE NO.						
H4061	88525	7.76	436762	10.55	292129	14.4
H4076	90930	7.76	437247	10.55	281342	14.4
SBLK32	67507	7.76	336886	10.55	229833	14.4

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

FORM 8B-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002
Analytical Method: SVOA Level : LOW
EPA Sample No. : SSTD02061 Lab File ID (Standard) : BM005380.D
Instrument ID : BNA_M Init.Calib.Date(s): 05/05/2016
GC Column : ZB-GR ID: 0.25 (mm) Date Analyzed : 05/11/2016
Heated Purge: Time Analyzed : 09:01

	IS4 (PHN) AREA	RT	IS5 (CRY) AREA	RT	IS6 (PRY) AREA	RT
12 HOUR STD	736650	17.15	814700	21.34	832126	23.61
UPPER LIMIT	1473300	17.6	1629400	21.84	1664250	24.11
LOWER LIMIT	368325	16.6	407350	20.84	416063	23.11
EPA SAMPLE NO.						
H4061	701614	17.15	767642	21.34	603585	23.61
H4076	666164	17.15	644821	21.34	486399	23.62
SBLK32	578080	17.15	716616	21.34	680658	23.61

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002
Analytical Method: SVOA Level :
EPA Sample No. : SSTD02035 Lab File ID (Standard) : BM005449.D
Instrument ID : BNA_M Init.Calib.Date(s): 05/05/2016
GC Column : ZB-GR ID: 0.25 (mm) Date Analyzed : 05/14/2016
Heated Purge: Time Analyzed : 04:32

	IS1 (DCB) AREA	RT	IS2 (NPT) AREA	RT	IS3 (ANT) AREA	RT
12 HOUR STD	51526	7.75	233474	10.53	144192	14.39
UPPER LIMIT	103052	8.25	466948	11.03	288384	14.89
LOWER LIMIT	25763	7.25	116737	10.03	72096	13.89
EPA SAMPLE NO.						
H4002	51866	7.75	247395	10.53	166462	14.39
H4002MS	56135	7.75	261561	10.53	169167	14.39
H4002MSD	43867	7.75	207205	10.53	139326	14.39
H4061MS	63562	7.75	296549	10.53	189197	14.39
H4061MSD	51562	7.75	238097	10.53	150598	14.39
H4102	59452	7.75	280477	10.53	183415	14.39
H4116	53059	7.75	244989	10.53	159834	14.39
H4117	59923	7.75	287489	10.53	188536	14.39
H4118	58954	7.75	277226	10.53	179000	14.39
SBLK30	57328	7.75	272738	10.53	178342	14.39

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

FORM 8B-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4002
Analytical Method: SVOA | Level :
EPA Sample No. : SSTD02035 | Lab File ID (Standard) : BM005449.D
Instrument ID : BNA_M | Init.Calib.Date(s): 05/05/2016
GC Column : ZB-GR | ID: 0.25 (mm) | Date Analyzed : 05/14/2016
Heated Purge: | Time Analyzed : 04:32

	IS4 (PHN) AREA	RT	IS5 (CRY) AREA	RT	IS6 (PRY) AREA	RT
12 HOUR STD	357486	17.14	439148	21.34	397039	23.6
UPPER LIMIT	714972	17.6	878296	21.84	794078	24.1
LOWER LIMIT	178743	16.6	219574	20.84	198520	23.1
EPA SAMPLE NO.						
H4002	417043	17.14	546706	21.33	500572	23.60
H4002MS	411145	17.14	570201	21.33	566295	23.60
H4002MSD	365368	17.14	539904	21.33	535616	23.60
H4061MS	444383	17.14	518205	21.34	436350	23.61
H4061MSD	383066	17.14	473564	21.34	401608	23.61
H4102	462833	17.14	624224	21.34	579206	23.61
H4116	405010	17.14	552511	21.34	508365	23.60
H4117	468918	17.14	600035	21.34	535962	23.61
H4118	454700	17.14	614788	21.34	582278	23.61
SBLK30	445752	17.14	589547	21.33	522602	23.60

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-01
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005451.D
% Solids :
Date Received : 05/03/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-01
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005451.D
% Solids :
Date Received : 05/03/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-01
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005451.D
% Solids :
Date Received : 05/03/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H4002

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-01
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005451.D
% Solids :
Date Received : 05/03/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/14/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : 6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

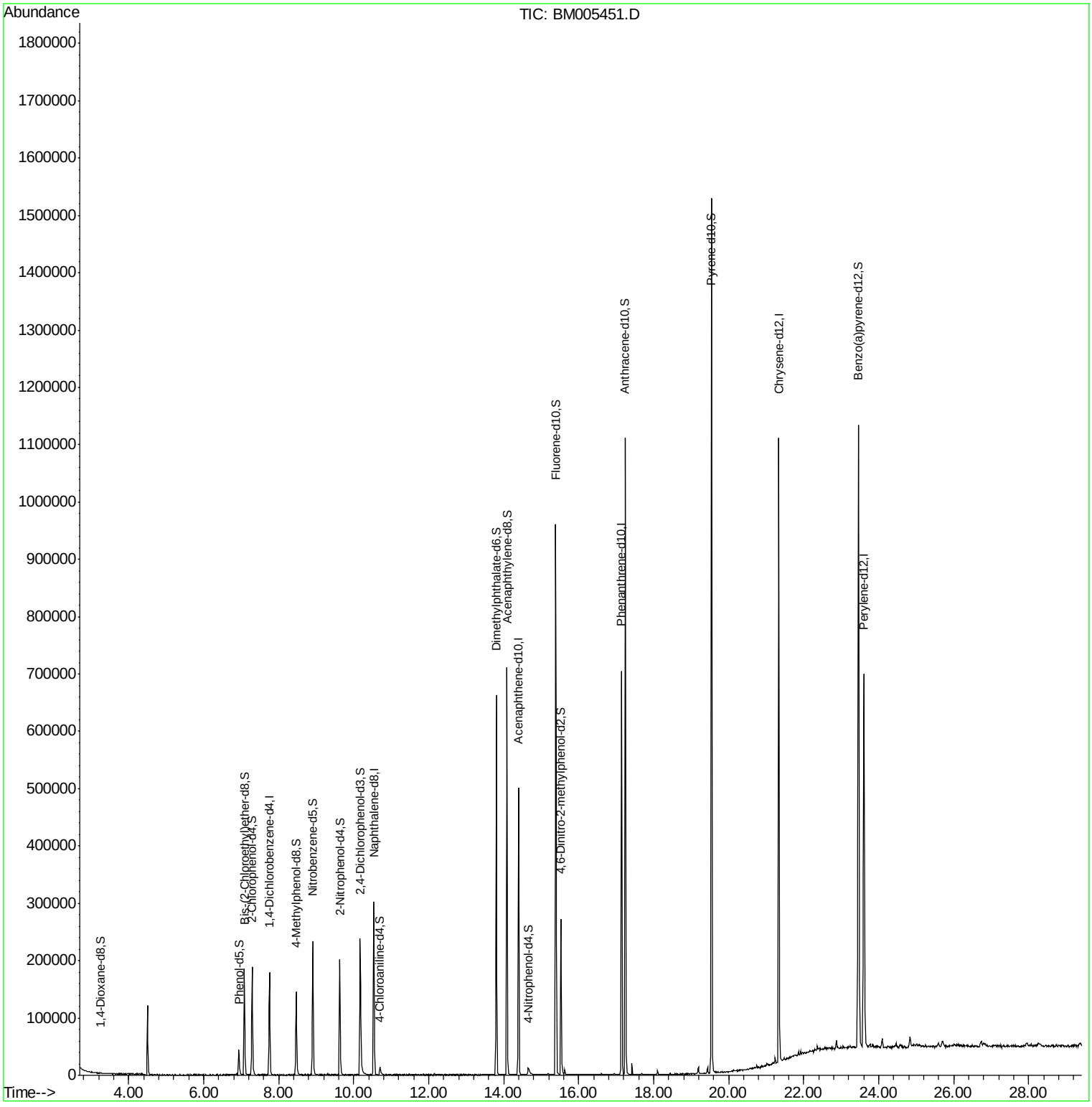
Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005451.D
Acq On : 14 May 2016 05:45
Operator : UM/SJ
Sample : H2834-01
Misc :
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 16 03:50:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002

Manual Integrations APPROVED
sohil
5/16/2016 7:01:40 PM



Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005451.D
Acq On : 14 May 2016 05:45
Operator : UM/SJ
Sample : H2834-01
Misc :
ALS Vial : 25 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4002

Manual Integrations APPROVED
sohil
5/16/2016 7:01:40 PM

Quant Time: May 16 03:50:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	51866	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	247395	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	166462	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	417043	20.00	ng/ul	0.00
75) Chrysene-d12	21.33	240	546706	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	500572	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1664	1.51	ng/uL	0.00
5) Phenol-d5	6.93	99	32450	6.90	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	86793	32.34	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	92174	25.94	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	60687	15.61	ng/ul	0.00
19) Nitrobenzene-d5	8.90	128	59072	33.44	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	67168	33.59	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	109832	29.55	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	15071m	3.37	ng/ul	0.02
43) Dimethylphthalate-d6	13.80	166	452555	33.92	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	522280	33.37	ng/ul	0.00
51) 4-Nitrophenol-d4	14.66	143	9303m	3.82	ng/ul	0.04
57) Fluorene-d10	15.39	176	391110	33.95	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	63277	26.97	ng/ul	0.00
70) Anthracene-d10	17.24	188	647448	35.12	ng/ul	0.00
76) Pyrene-d10	19.54	212	816304	32.35	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	807577	36.45	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005451.D
Acq On : 14 May 2016 05:45
Operator : UM/SJ
Sample : H2834-01
Misc :
ALS Vial : 25 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4002

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.499	303	308	319	rBV	121205	201902	9.24%	1.141%
2	6.934	717	722	737	rBV	45082	82539	3.78%	0.466%
3	7.081	741	747	757	rBV	184738	299842	13.72%	1.694%
4	7.287	776	782	797	rBV	188471	318003	14.55%	1.797%
5	7.751	852	861	871	rBV	179349	304315	13.92%	1.720%
6	8.463	977	982	998	rBV	144401	246624	11.28%	1.394%
7	8.904	1052	1057	1073	rBV	233678	402571	18.42%	2.275%
8	9.628	1174	1180	1192	rBV	200814	340969	15.60%	1.927%
9	10.169	1267	1272	1295	rBV	237527	478580	21.90%	2.704%
10	10.534	1327	1334	1342	rBV	301930	502645	23.00%	2.840%
11	10.692	1356	1361	1374	rBV2	14249	32837	1.50%	0.186%
12	13.798	1883	1889	1903	rBV	662028	952078	43.56%	5.380%
13	14.086	1931	1938	1949	rBV	709776	1086904	49.73%	6.141%
14	14.392	1983	1990	2001	rBV2	499732	764220	34.96%	4.318%
15	14.651	2030	2034	2046	rBV2	12490	38566	1.76%	0.218%
16	15.386	2153	2159	2171	rBV	959656	1436649	65.73%	8.118%
17	15.522	2177	2182	2197	rBV	271790	399277	18.27%	2.256%
18	17.139	2451	2457	2466	rBV2	704339	1020518	46.69%	5.766%
19	17.239	2468	2474	2487	rVV2	1108988	1653493	75.65%	9.343%
20	17.421	2501	2505	2510	rVB	19891	23495	1.07%	0.133%
21	19.539	2859	2865	2881	rBV2	1525782	2185753	100.00%	12.350%
22	21.333	3165	3170	3182	rBV	1087743	1469485	67.23%	8.303%
23	23.456	3524	3531	3546	rVB2	1084688	2145425	98.15%	12.123%
24	23.603	3549	3556	3567	rVB	648176	1311023	59.98%	7.408%

Sum of corrected areas: 17697713

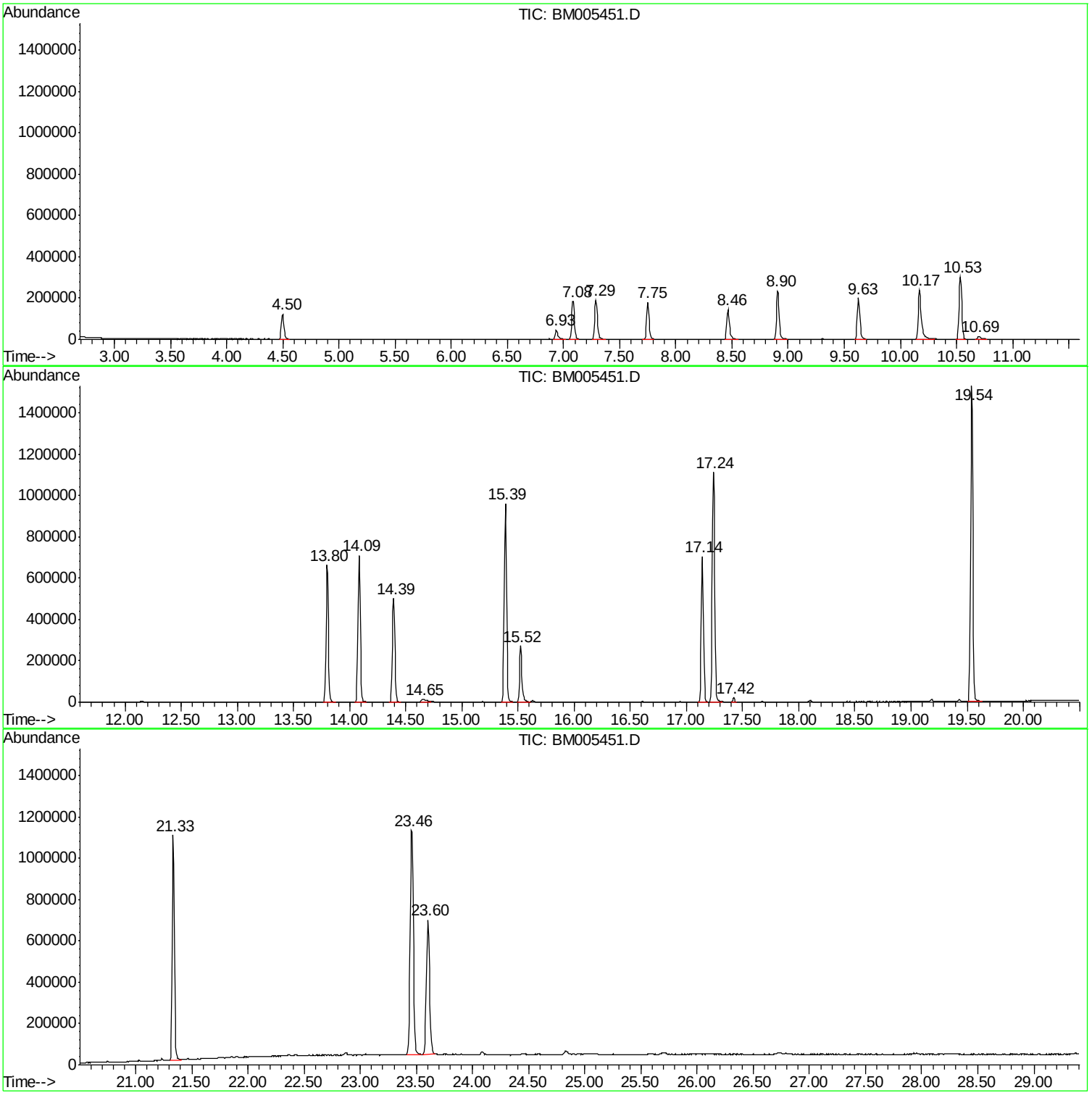
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005451.D
Acq On : 14 May 2016 05:45
Operator : UM/SJ
Sample : H2834-01
Misc :
ALS Vial : 25 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4002

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005451.D
Acq On : 14 May 2016 05:45
Operator : UM/SJ
Sample : H2834-01
Misc :
ALS Vial : 25 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H4002

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005451.D
Acq On : 14 May 2016 05:45
Operator : UM/SJ
Sample : H2834-01
Misc :
ALS Vial : 25 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4002

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

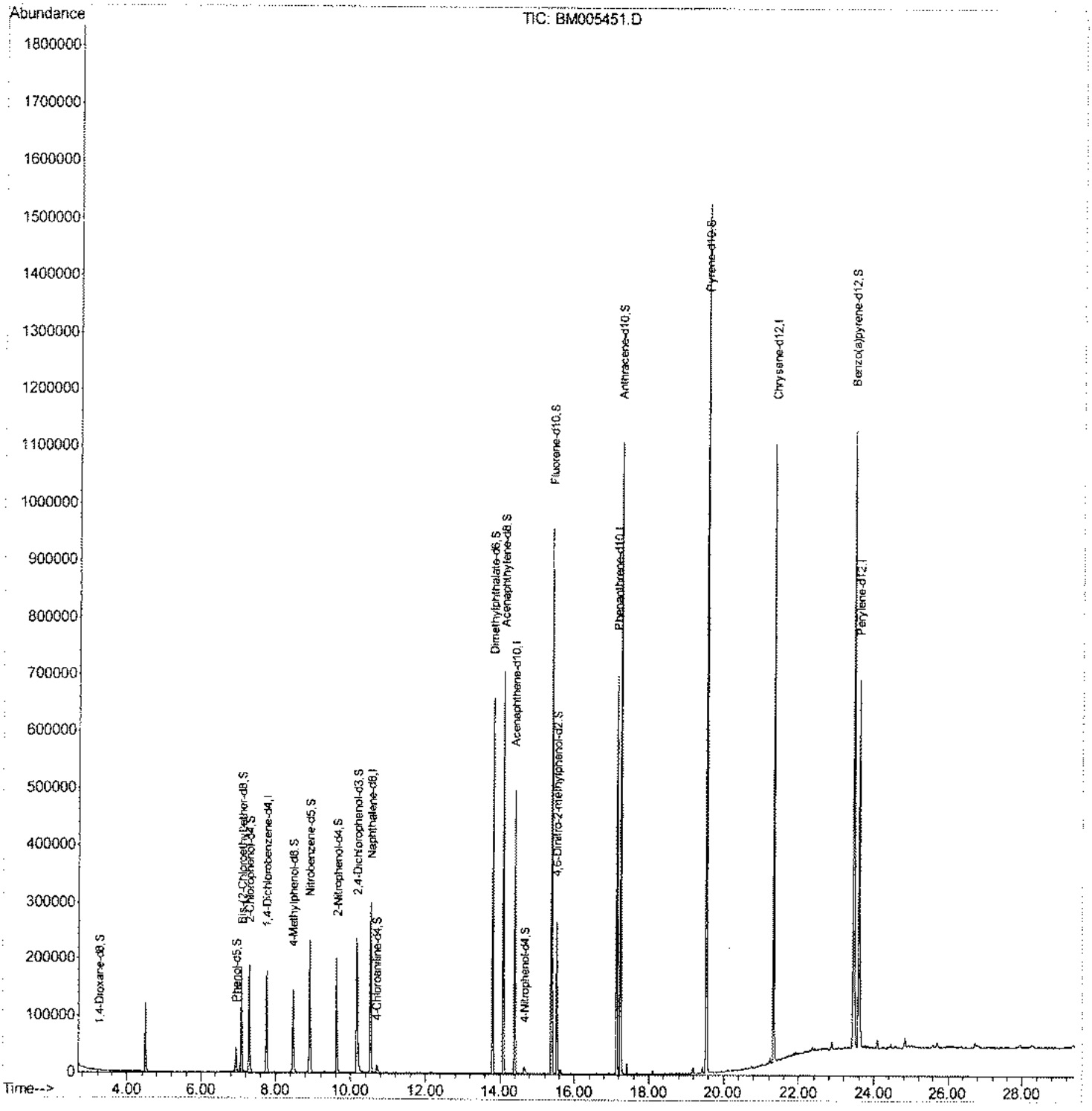
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005451.D
Acq On : 14 May 2016 05:45
Operator : UM/SJ
Sample : H2834-01
Misc :
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 16 03:50:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002

Manual Integrations APPROVED
sohil
5/16/2016 7:01:40 PM



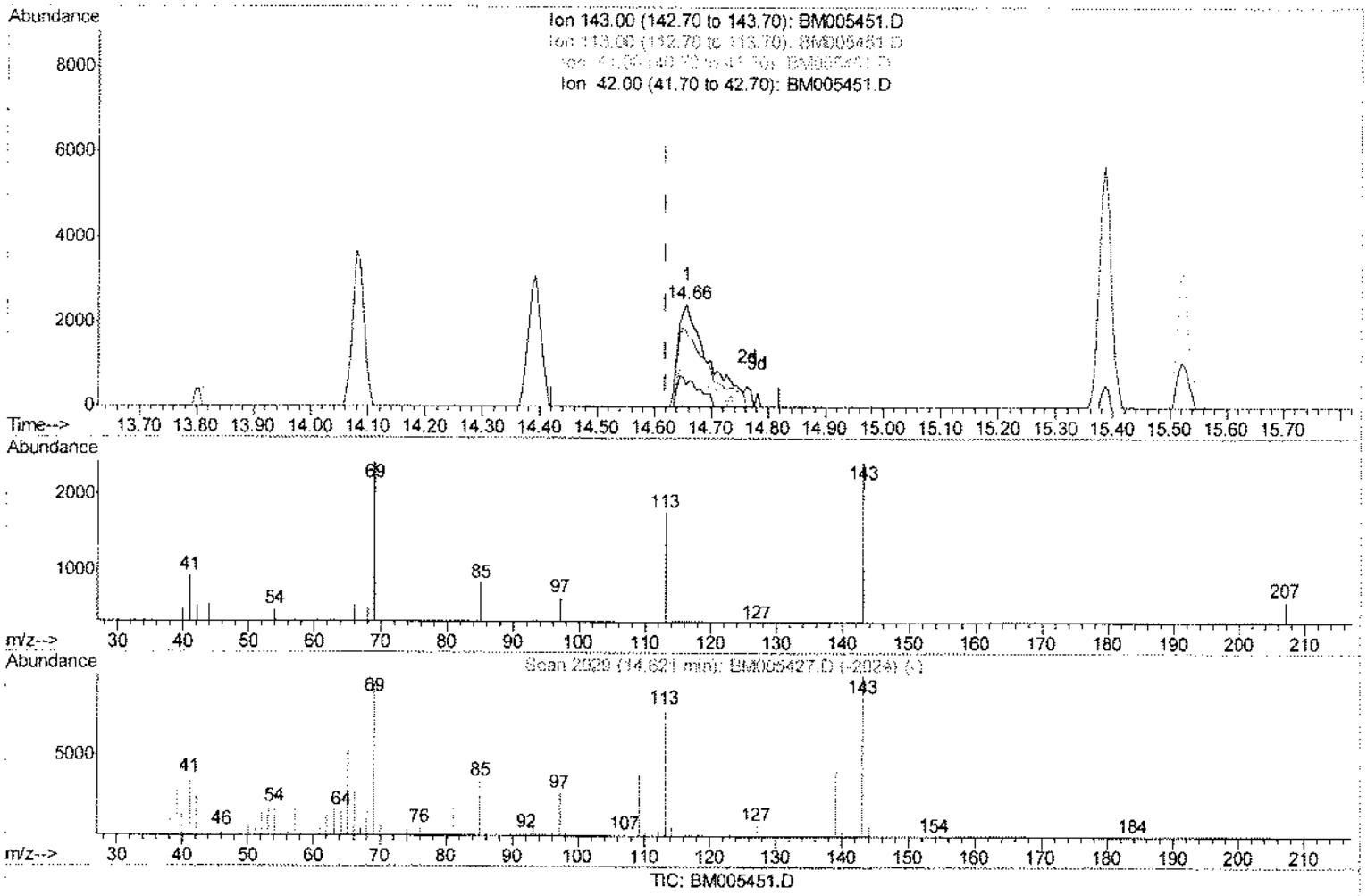
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005451.D
Acq On : 14 May 2016 05:45
Operator : UM/SJ
Sample : H2834-01
Misc :
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 16 03:39:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002

Manual Integrations APPROVED
sohil
5/16/2016 7:01:40 PM



(51) 4-Nitrophenol-d4 (S)

14.657min (+0.036) 3.82ng/ul m > U.M 05/14/16

response 9303

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	72.70
41.00	38.10	38.16
42.00	26.00	21.02

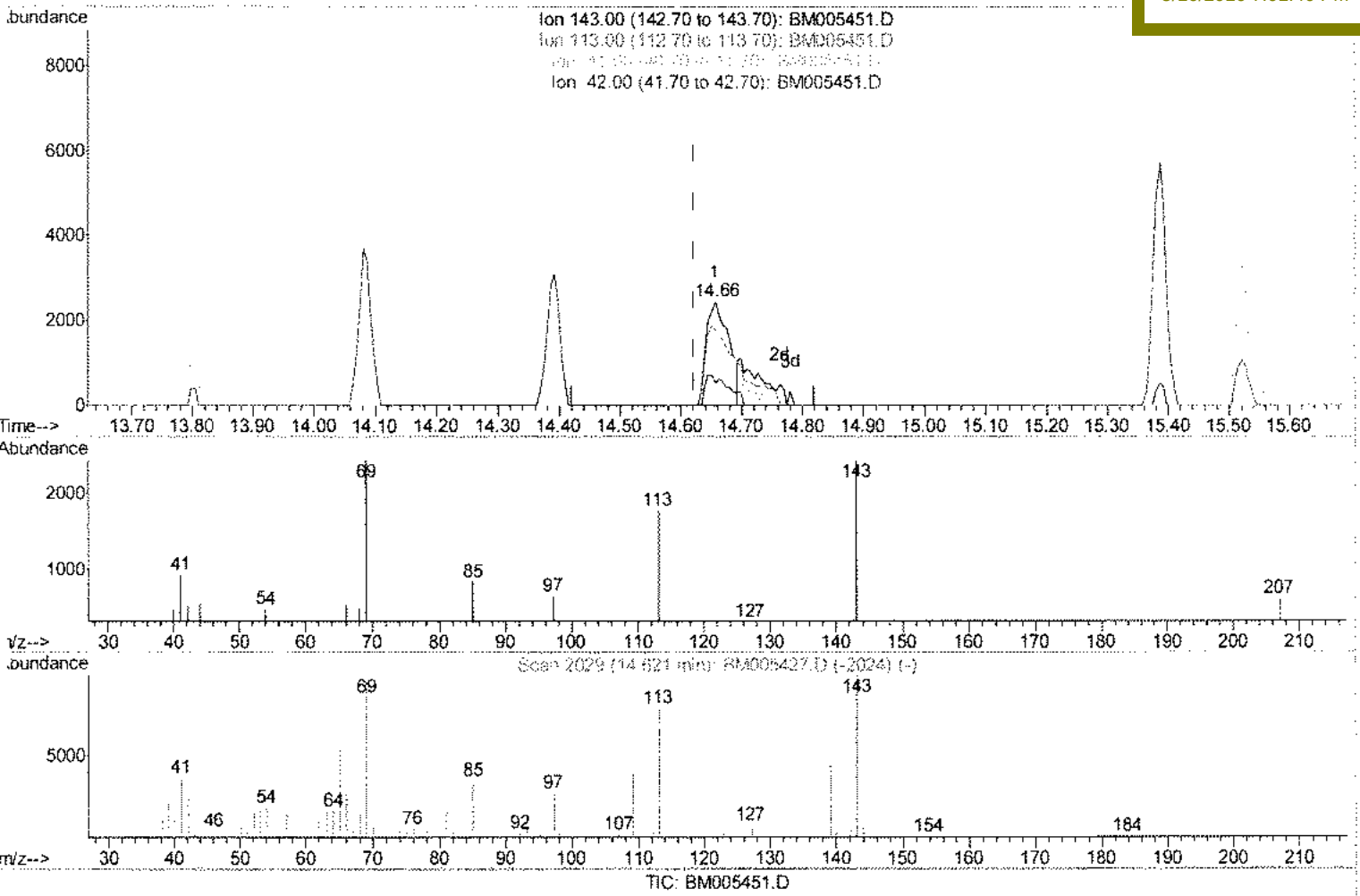
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005451.D
Acq On : 14 May 2016 05:45
Operator : UM/SJ
Sample : H2834-01
Misc :
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 16 03:39:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002

Manual Integrations APPROVED
sohil
5/16/2016 7:01:40 PM



TIC: BM005451.D

(51) 4-Nitrophenol-d4 (S)

14.657min (+0.036) 2.58ng/ul

response 6287

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	72.70
41.00	38.10	38.16
42.00	26.00	21.02

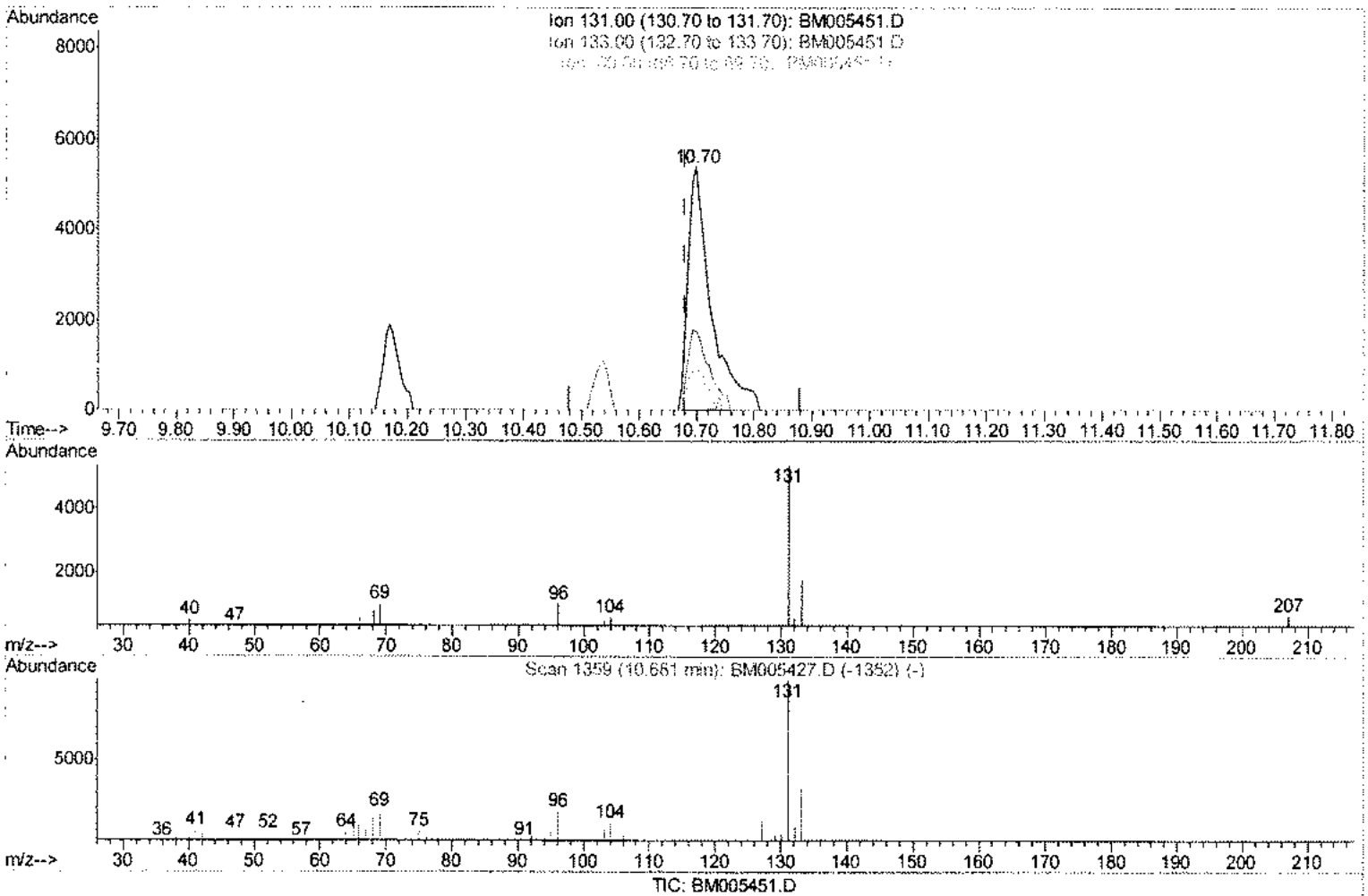
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005451.D
Acq On : 14 May 2016 05:45
Operator : UM/SJ
Sample : H2834-01
Misc :
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 16 03:39:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4002

Manual Integrations APPROVED
sohil
5/16/2016 7:01:40 PM



TIC: BM005451.D

(29) 4-Chloroaniline-d4 (S)

10.698min (+0.018) 3.37ng/ul m > U.M 05/17/16

response 15071

Ion	Exp%	Act%
131.00	100	100
133.00	32.30	32.70
69.00	19.20	18.18
0.00	0.00	0.00

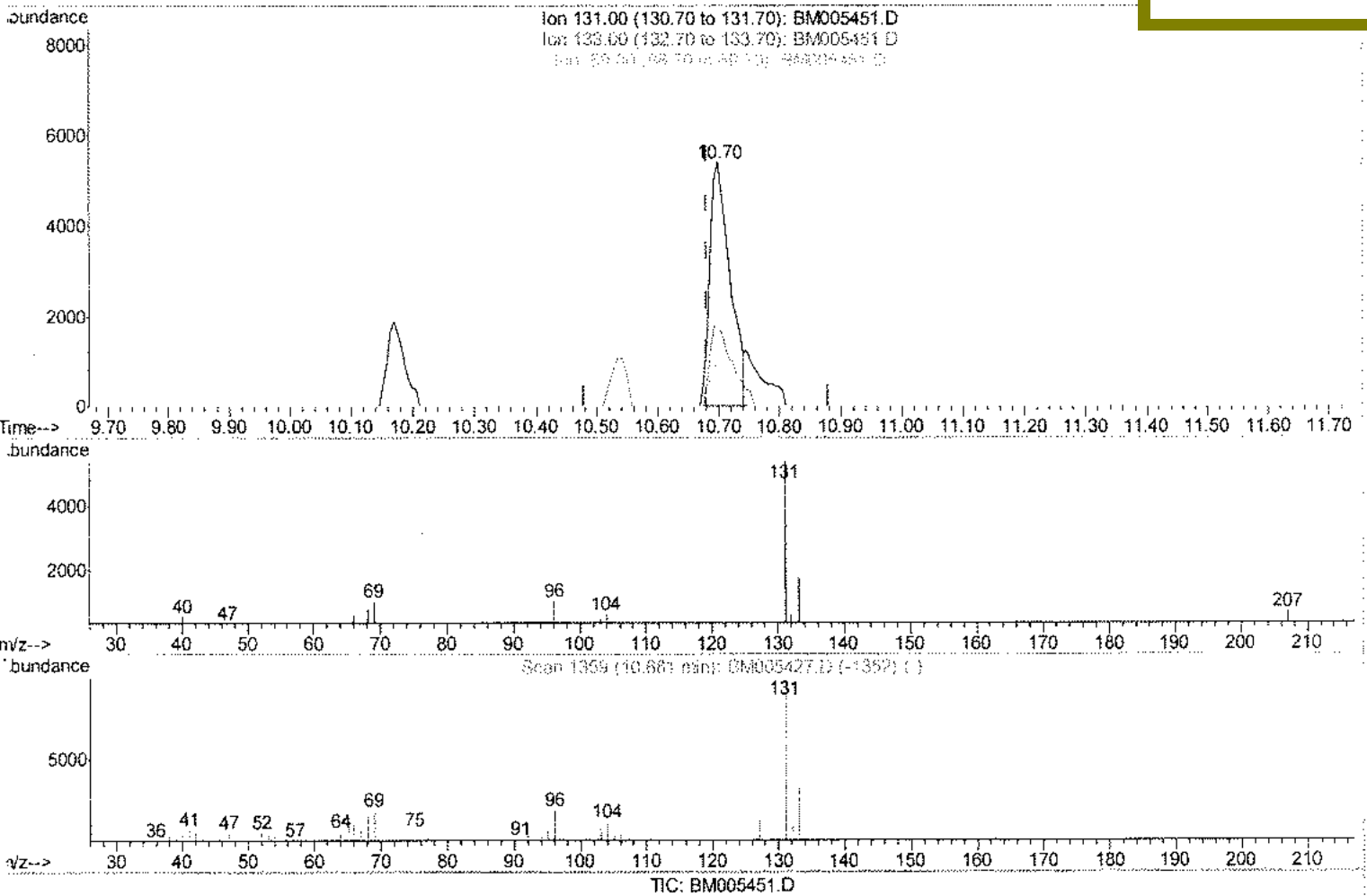
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005451.D
Acq On : 14 May 2016 05:45
Operator : UM/SJ
Sample : H2834-01
Misc :
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 16 03:39:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002

Manual Integrations APPROVED
sohil
5/16/2016 7:01:40 PM



TIC: BM005451.D

(29) 4-Chloroaniline-d4 (S)

10.698min (+0.018) 2.80ng/ul

response 12525

Ion	Exp%	Act%
131.00	100	100
133.00	32.30	32.70
69.00	19.20	18.18
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005451.D
Acq On : 14 May 2016 05:45
Operator : UM/SJ
Sample : H2834-01
Misc :
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 16 03:50:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4002

Manual Integrations APPROVED
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5/16/2016 7:01:40 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	51866	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	247395	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	166462	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	417043	20.00	ng/ul	0.00
75) Chrysene-d12	21.33	240	546706	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	500572	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1664	1.51	ng/uL	0.00
5) Phenol-d5	6.93	99	32450	6.90	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	86793	32.34	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	92174	25.94	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	60687	15.61	ng/ul	0.00
19) Nitrobenzene-d5	8.90	128	59072	33.44	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	67168	33.59	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	109832	29.55	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	15071m	3.37	ng/ul	0.02
43) Dimethylphthalate-d6	13.80	166	452555	33.92	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	522280	33.37	ng/ul	0.00
51) 4-Nitrophenol-d4	14.66	143	9303m	3.82	ng/ul	0.04
57) Fluorene-d10	15.39	176	391110	33.95	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	63277	26.97	ng/ul	0.00
70) Anthracene-d10	17.24	188	647448	35.12	ng/ul	0.00
76) Pyrene-d10	19.54	212	816304	32.35	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	807577	36.45	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

U.M
05/17/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-13
Sample wt/vol : 30.1 (g/mL): g
Lab File ID : BM005389.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	100	U
100-52-7	Benzaldehyde	520	U
108-95-2	Phenol	520	U
111-44-4	Bis(2-Chloroethyl)ether	520	U
95-57-8	2-Chlorophenol	270	U
95-48-7	2-Methylphenol	520	U
108-60-1	2,2-oxybis(1-Chloropropane)	520	U
98-86-2	Acetophenone	520	U
106-44-5	4-Methylphenol	520	U
621-64-7	N-Nitroso-di-n-propylamine	270	U
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-Chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	270	U
106-47-8	4-Chloroaniline	520	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	520	U
59-50-7	4-Chloro-3-methylphenol	270	U
91-57-6	2-Methylnaphthalene	270	U
77-47-4	Hexachlorocyclopentadiene	520	U
88-06-2	2,4,6-Trichlorophenol	270	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-13
Sample wt/vol : 30.1 (g/mL): g
Lab File ID : BM005389.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1-Biphenyl	270	U
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	270	U
131-11-3	Dimethylphthalate	370	
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	270	U
99-09-2	3-Nitroaniline	520	U
83-32-9	Acenaphthene	270	U
51-28-5	2,4-Dinitrophenol	520	U
100-02-7	4-Nitrophenol	520	U
132-64-9	Dibenzofuran	270	U
121-14-2	2,4-Dinitrotoluene	270	U
84-66-2	Diethylphthalate	270	U
86-73-7	Fluorene	270	U
7005-72-3	4-Chlorophenyl-phenylether	270	U
100-01-6	4-Nitroaniline	520	U
534-52-1	4,6-Dinitro-2-methylphenol	520	U
86-30-6	N-Nitrosodiphenylamine	270	U
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U
101-55-3	4-Bromophenyl-phenylether	270	U
118-74-1	Hexachlorobenzene	270	U
1912-24-9	Atrazine	520	U
87-86-5	Pentachlorophenol	520	U
85-01-8	Phenanthrene	270	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-13
Sample wt/vol : 30.1 (g/mL): g
Lab File ID : BM005389.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	270	U
86-74-8	Carbazole	520	U
84-74-2	Di-n-butylphthalate	270	U
206-44-0	Fluoranthene	270	U
129-00-0	Pyrene	270	U
85-68-7	Butylbenzylphthalate	270	U
91-94-1	3,3-Dichlorobenzidine	520	U
56-55-3	Benzo(a)anthracene	270	U
218-01-9	Chrysene	270	U
117-81-7	Bis(2-ethylhexyl)phthalate	270	U
117-84-0	Di-n-octyl phthalate	520	U
205-99-2	Benzo(b)fluoranthene	270	U
207-08-9	Benzo(k)fluoranthene	270	U
50-32-8	Benzo(a)pyrene	270	U
193-39-5	Indeno(1,2,3-cd)pyrene	270	U
53-70-3	Dibenzo(a,h)anthracene	270	U
191-24-2	Benzo(g,h,i)perylene	270	U
58-90-2	2,3,4,6-Tetrachlorophenol	270	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4061

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-13
Sample wt/vol : 30.1 (g/mL): g
Lab File ID : BM005389.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
Extract Concentrated : (Y / N) Y
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 500 (µL)
Heated Purge : (Y / N)
Extraction Type : SOXH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types : GPC
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg
Cleanup Factor : 2.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	002136-71-2	Ethanol, 2-(hexadecyloxy)-	21.04	120	JN
2	000083-47-6	.gamma.-Sitosterol	26.67	130	JN
3	E966796	Total Alkanes	N/A	1000	

EPA-designated Registry Number.

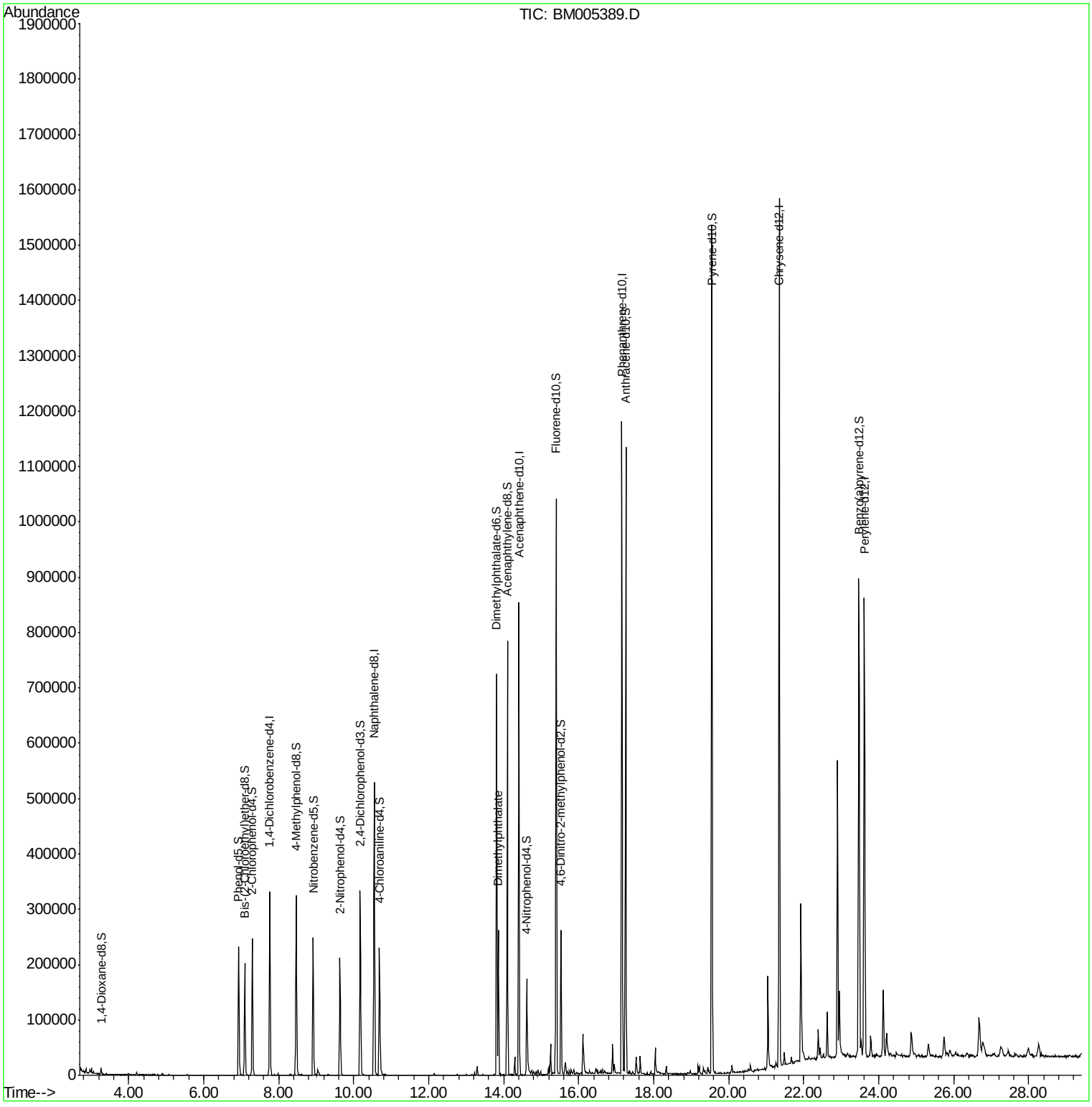
Quantitation Report (LSC Reviewed)

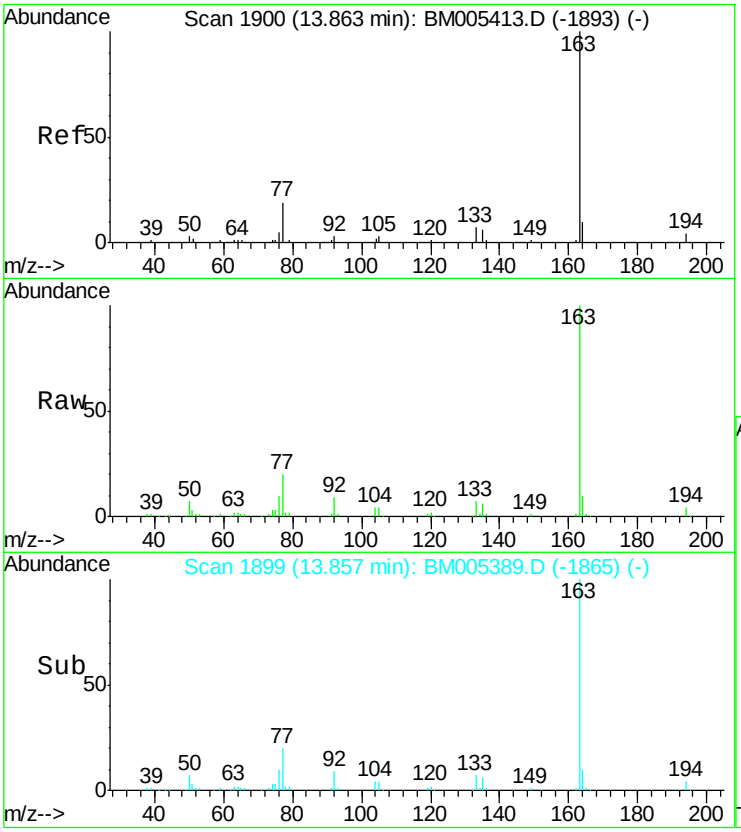
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Quant Time: May 12 03:54:37 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061

Manual Integrations APPROVED
sohil
5/12/2016 7:01:40 PM

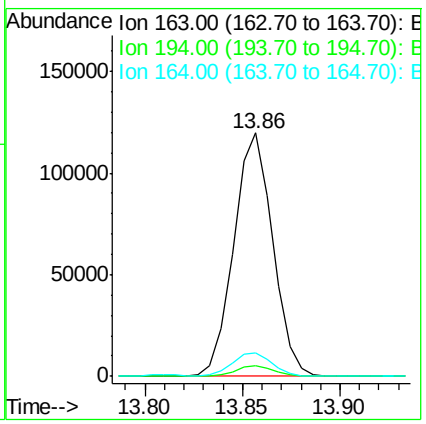




#44
Dimethylphthalate
Concen: 7.09 ng/ul
RT: 13.86 min Scan# 1899
Delta R.T. 0.00 min
Lab File: BM005389.D
Acq: 11 May 2016 16:25

Tgt Ion:163 Resp: 165781

Ion	Ratio	Lower	Upper
163	100		
194	4.4	3.4	5.0
164	9.8	7.9	11.9



Instrument :
BNA_M
ClientSampleId :
H4061

Manual Integrations APPROVED
sohil
5/12/2016 7:01:40 PM

Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4061

Manual Integrations APPROVED
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5/12/2016 7:01:40 PM

Quant Time: May 12 03:54:37 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	88525	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	436762	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	292129	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	701614	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	767642	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	603585	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	6112	3.25	ng/uL	0.00
5) Phenol-d5	6.93	99	142174	17.71	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	87906	19.19	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	113045	18.64	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	121438	18.30	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	59561	19.10	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	68856	19.50	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	125582	19.14	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	129632	16.41	ng/ul	0.00
43) Dimethylphthalate-d6	13.81	166	482023	20.59	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	555651	20.23	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	53701m	12.56	ng/ul	0.00
57) Fluorene-d10	15.40	176	421217	20.83	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	54162	13.72	ng/ul	0.00
70) Anthracene-d10	17.25	188	663926	21.41	ng/ul	0.00
76) Pyrene-d10	19.55	212	802214	22.64	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	596538	22.33	ng/ul	0.00
Target Compounds						Qvalue
44) Dimethylphthalate	13.86	163	165781	7.09	ng/ul	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4061

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.928	716	721	735	rBV	232807	386280	17.79%	1.531%
2	7.092	743	749	761	rBV	202605	307252	14.15%	1.218%
3	7.292	777	783	798	rVB	246806	391799	18.04%	1.553%
4	7.757	855	862	873	rBV	331697	533422	24.57%	2.114%
5	8.463	976	982	993	rBV	324300	515702	23.75%	2.044%
6	8.916	1053	1059	1073	rBV	248874	407561	18.77%	1.615%
7	9.633	1175	1181	1193	rVB	212256	353367	16.27%	1.400%
8	10.169	1266	1272	1288	rBV	332906	562112	25.89%	2.228%
9	10.545	1329	1336	1349	rBV	528033	893679	41.16%	3.542%
10	10.686	1354	1360	1379	rBV	229293	410879	18.92%	1.628%
11	13.810	1885	1891	1895	rBV	723227	1017746	46.87%	4.033%
12	13.857	1895	1899	1906	rVB	261173	364527	16.79%	1.445%
13	14.092	1932	1939	1955	rBV	785110	1160299	53.43%	4.598%
14	14.292	1968	1973	1978	rBV	31816	39812	1.83%	0.158%
15	14.404	1985	1992	2000	rVB2	854918	1357919	62.54%	5.381%
16	14.610	2022	2027	2044	rBV	173859	318116	14.65%	1.261%
17	15.245	2130	2135	2140	rVB	54946	68023	3.13%	0.270%
18	15.398	2154	2161	2170	rVB	1039707	1549534	71.36%	6.141%
19	15.521	2177	2182	2195	rVB	259835	371457	17.11%	1.472%
20	15.639	2195	2202	2209	rBV3	21285	48786	2.25%	0.193%
21	16.110	2277	2282	2290	rBV2	72169	137994	6.35%	0.547%
22	16.904	2412	2417	2420	rBV	53307	67282	3.10%	0.267%
23	16.951	2420	2425	2429	rVB3	15869	27086	1.25%	0.107%
24	17.151	2452	2459	2465	rBV2	1179451	1735394	79.92%	6.877%
25	17.251	2469	2476	2485	rVB2	1131164	1724101	79.40%	6.833%
26	17.527	2519	2523	2533	rVV2	29411	47909	2.21%	0.190%
27	17.639	2537	2542	2548	rBV	32521	38436	1.77%	0.152%
28	18.039	2605	2610	2616	rBV	47725	68044	3.13%	0.270%
29	19.180	2800	2804	2807	rBV	15970	21939	1.01%	0.087%
30	19.550	2860	2867	2877	rBV	1532423	2171431	100.00%	8.605%
31	21.044	3114	3121	3132	rBV	168646	236369	10.89%	0.937%
32	21.344	3166	3172	3182	rBV	1568442	2094927	96.48%	8.302%
33	21.486	3192	3196	3200	rVB	20905	25526	1.18%	0.101%
34	21.921	3265	3270	3280	rBV2	284136	465469	21.44%	1.845%

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4061

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

35	22.386	3344	3349	3353	rBV	50744	71788	3.31%	0.284%
36	22.433	3355	3357	3365	rVB4	18454	24520	1.13%	0.097%
37	22.621	3384	3389	3400	rBV	81503	112351	5.17%	0.445%
38	22.897	3430	3436	3441	rBV	533149	783839	36.10%	3.106%
39	22.944	3441	3444	3458	rVB2	113291	199928	9.21%	0.792%
40	23.468	3526	3533	3540	rBV2	860178	1654268	76.18%	6.556%
41	23.533	3541	3544	3549	rVV5	25166	38776	1.79%	0.154%
42	23.615	3550	3558	3570	rVB2	828521	1614615	74.36%	6.399%
43	23.785	3582	3587	3594	rVB3	38329	67211	3.10%	0.266%
44	24.115	3637	3643	3652	rBV	119139	227931	10.50%	0.903%
45	24.209	3653	3659	3668	rVV3	38865	88198	4.06%	0.350%
46	24.862	3765	3770	3780	rBV	41101	103795	4.78%	0.411%
47	25.321	3845	3848	3855	rVB4	21099	39713	1.83%	0.157%
48	25.744	3913	3920	3927	rBV3	33064	78686	3.62%	0.312%
49	26.674	4070	4078	4088	rBV7	68229	207596	9.56%	0.823%

Sum of corrected areas: 25233394

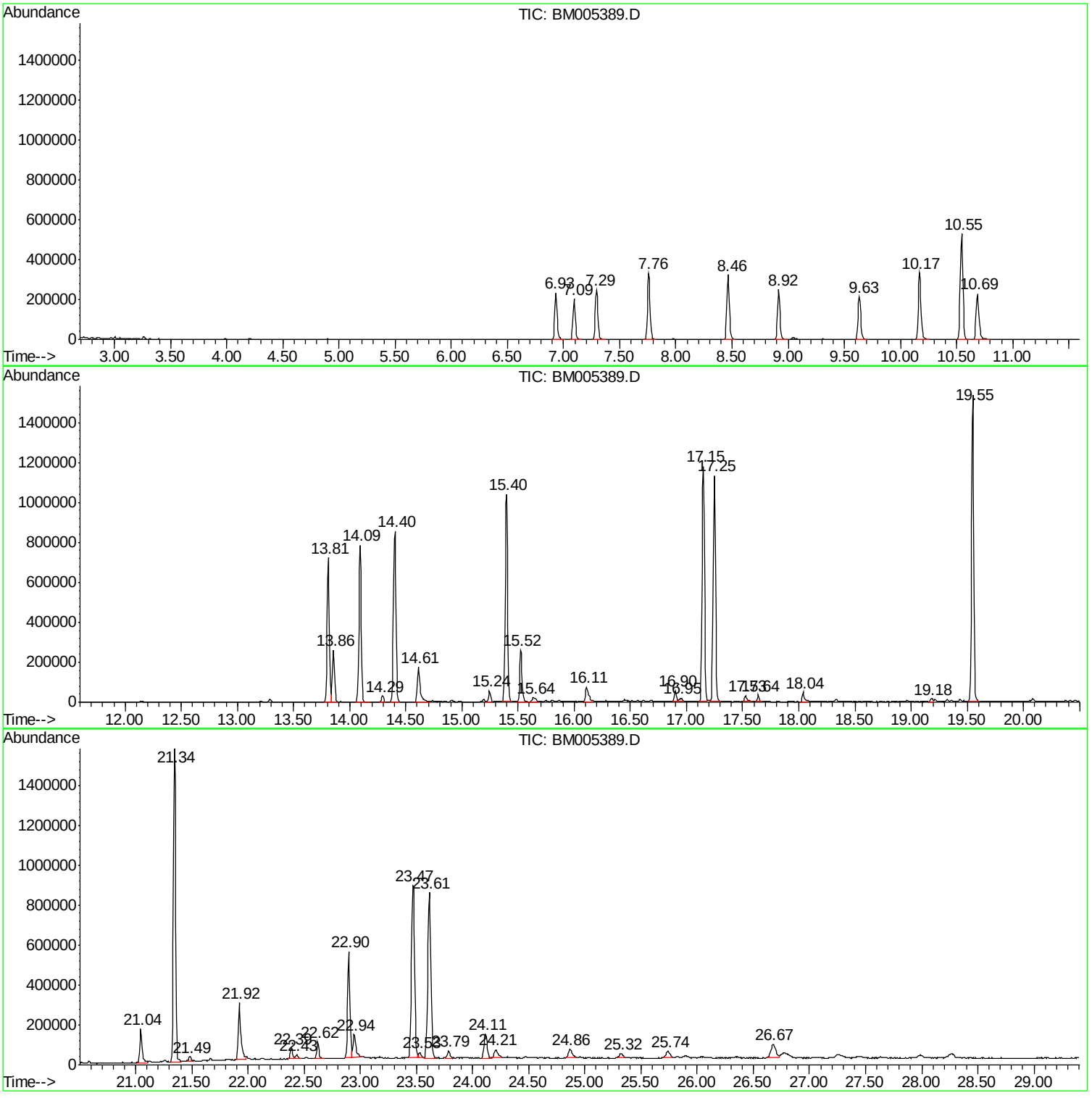
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4061

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4061

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

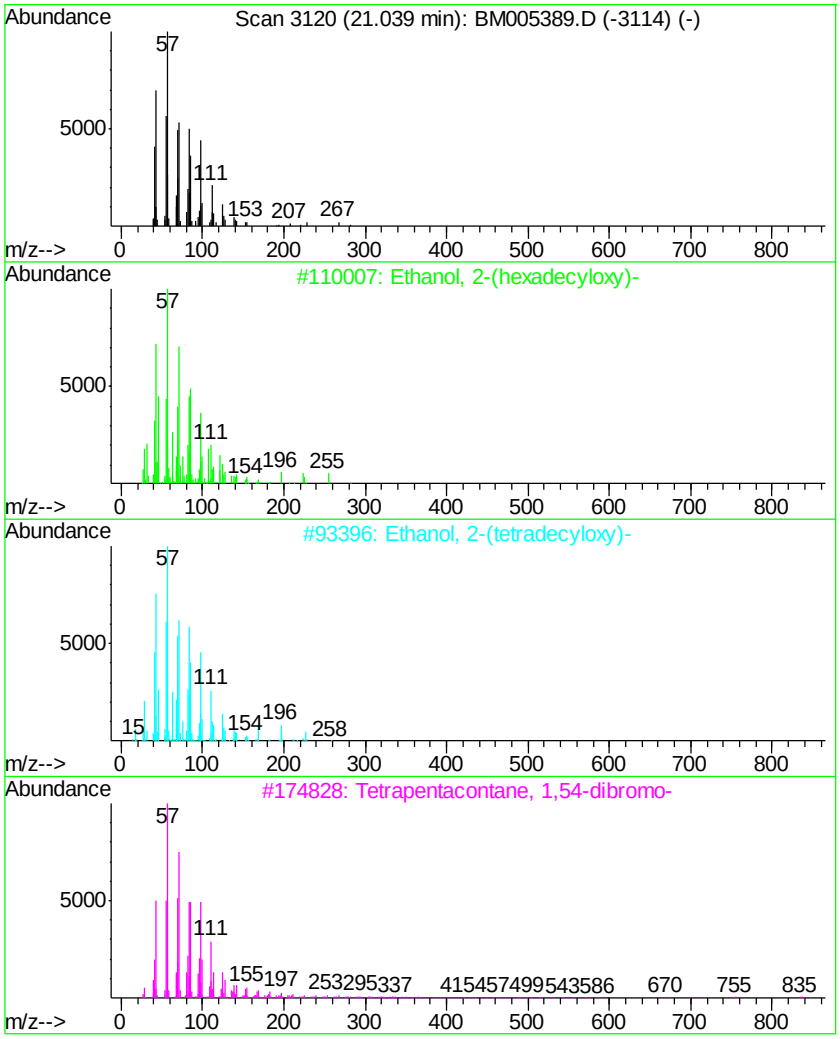
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

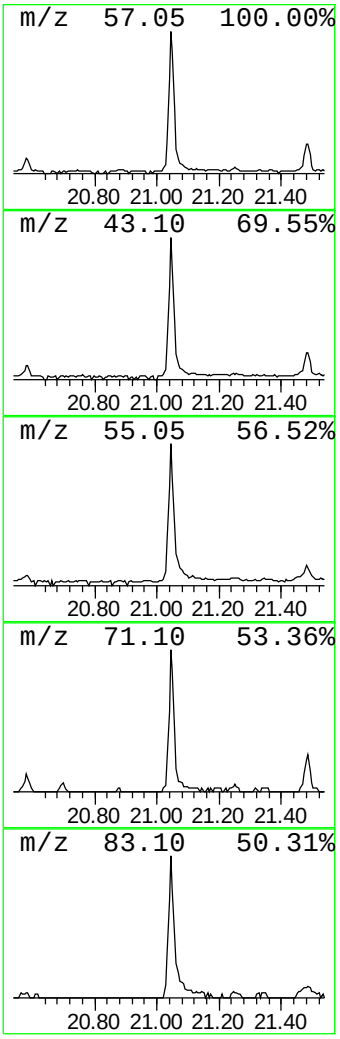
****

Peak Number 1 Ethanol, 2-(hexadecyloxy)- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.04	2.26 ng/ul	236369	Chrysene-d12	21.34

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethanol, 2-(hexadecyloxy)-	286	C18H38O2	002136-71-2	91
2	Ethanol, 2-(tetradecyloxy)-	258	C16H34O2	002136-70-1	87
3	Tetrapentacontane, 1,54-dibromo-	915	C54H108Br2	1000156-09-4	80
4	Heptafluorobutanoic acid, heptad...	452	C21H35F7O2	1000282-97-3	76
5	1-Octadecanol	270	C18H38O	000112-92-5	70





Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4061

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

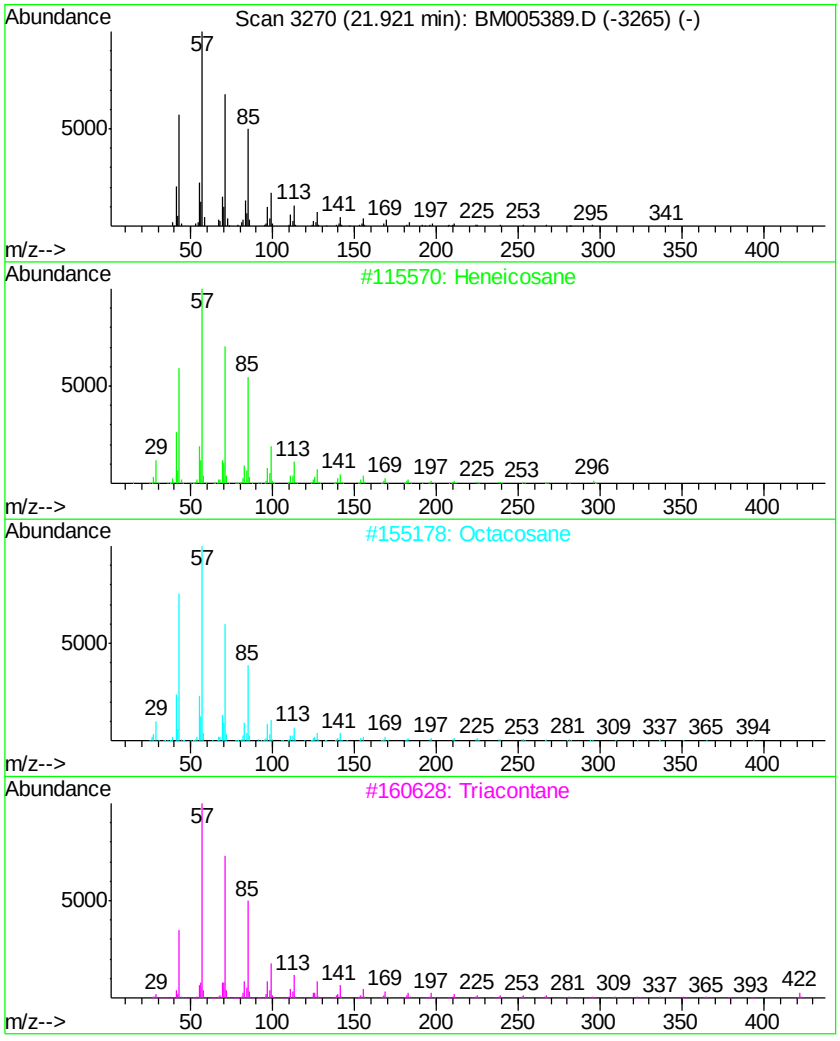
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

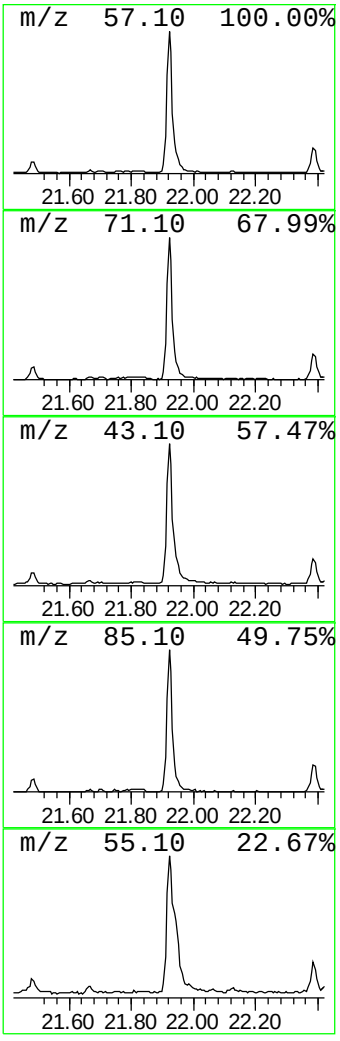
****

Peak Number 2 (DEL) Alkane: Straight-Chai... Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.92	4.44 ng/ul	465469	Chrysene-d12	21.34

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heneicosane	296	C21H44	000629-94-7	91
2	Octacosane	394	C28H58	000630-02-4	91
3	Triacontane	422	C30H62	000638-68-6	91
4	Heneicosane, 11-(1-ethylpropyl)-	366	C26H54	055282-11-6	91
5	Pentadecane, 8-heptyl-	310	C22H46	071005-15-7	91





Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4061

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

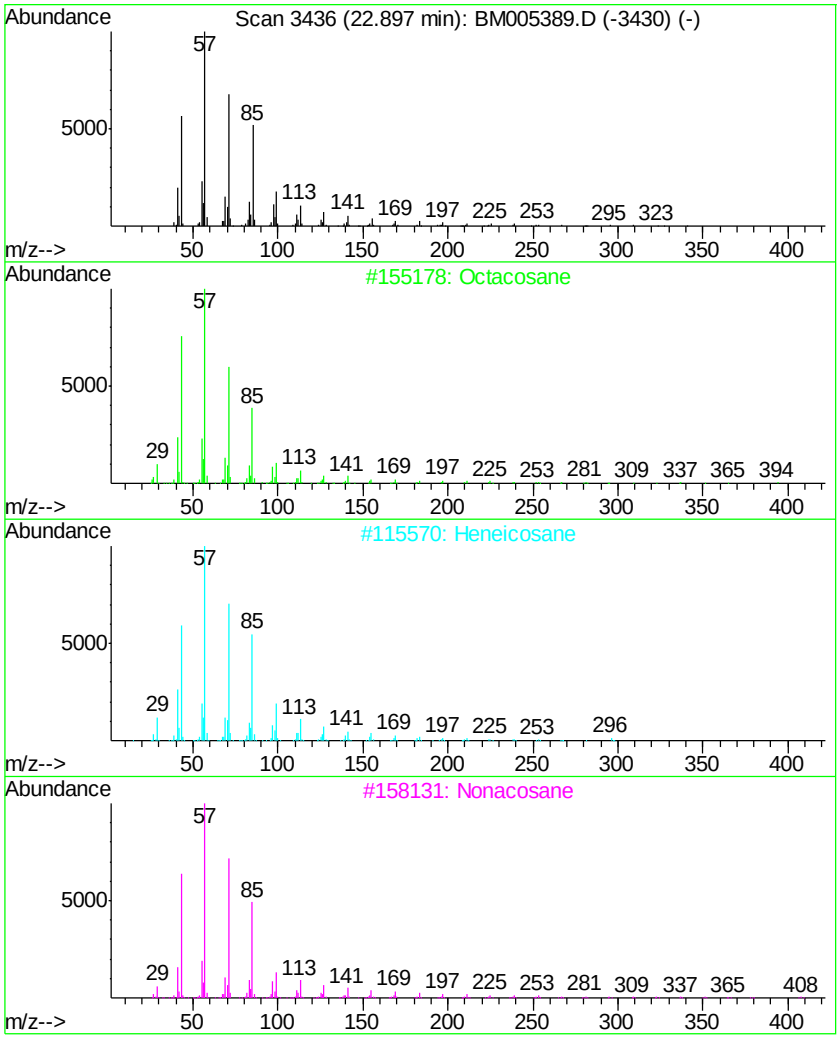
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

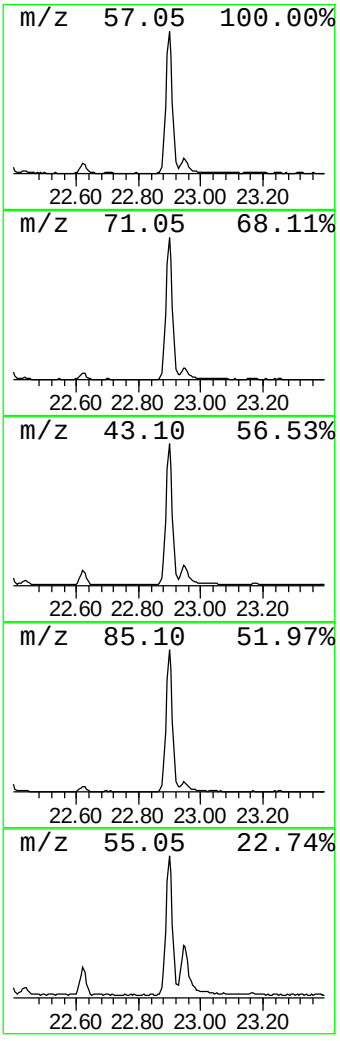
****

Peak Number 3 (DEL) Alkane: Straight-Chai... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
22.90	9.71 ng/ul	783839	Perylene-d12	23.61

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octacosane	394	C28H58	000630-02-4	91
2	Heneicosane	296	C21H44	000629-94-7	91
3	Nonacosane	408	C29H60	000630-03-5	91
4	Heptacosane	380	C27H56	000593-49-7	91
5	Octacosane	394	C28H58	000630-02-4	91





Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4061

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

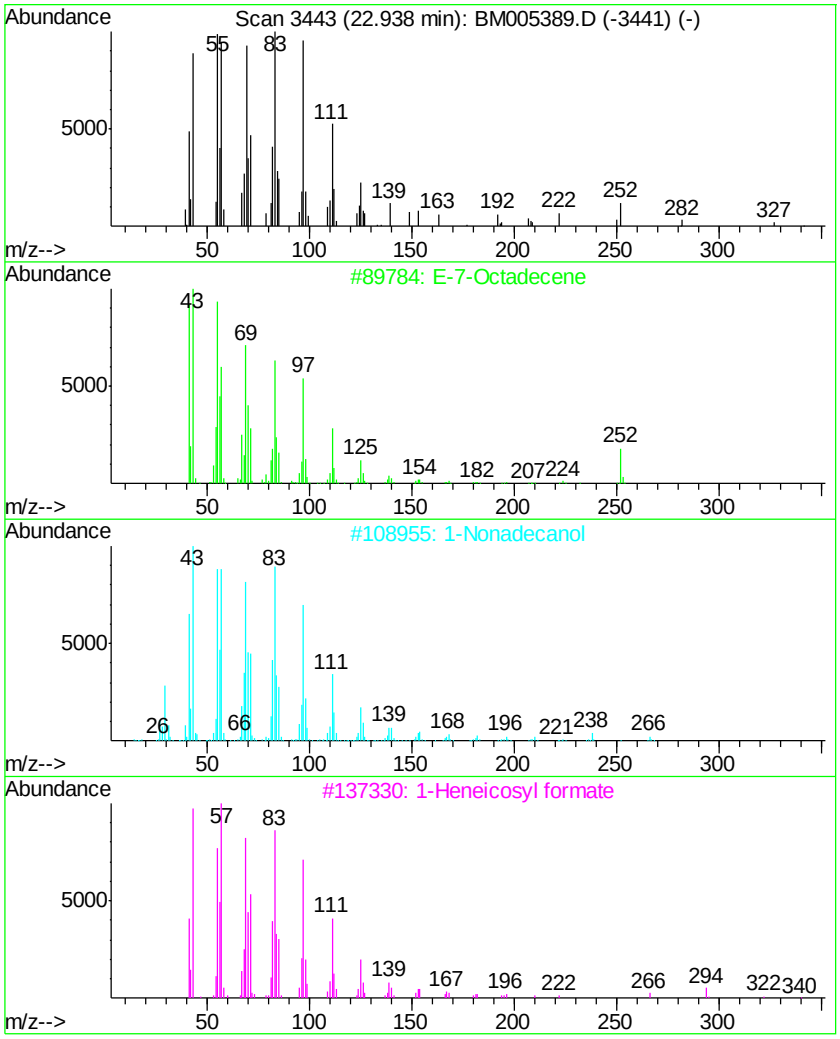
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

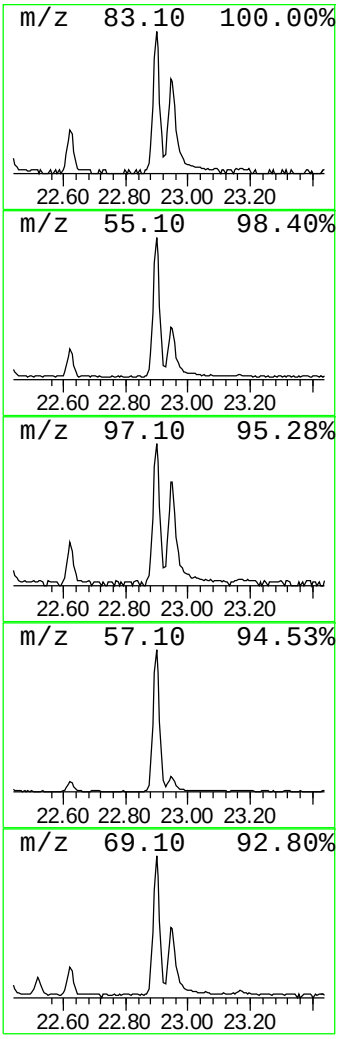
****

Peak Number 4 (DEL) Alkane: Cyclic-22.94 Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
22.94	2.48 ng/ul	199928	Perylene-d12	23.61

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	E-7-Octadecene	252	C18H36	1000130-92-0	91
2	1-Nonadecanol	284	C19H40O	001454-84-8	81
3	1-Heneicosyl formate	340	C22H44O2	077899-03-7	81
4	Trichloroacetic acid, hexadecyl ...	386	C18H33Cl3O2	074339-54-1	76
5	Bromoacetic acid, hexadecyl ester	362	C18H35BrO2	005454-48-8	74





Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4061

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

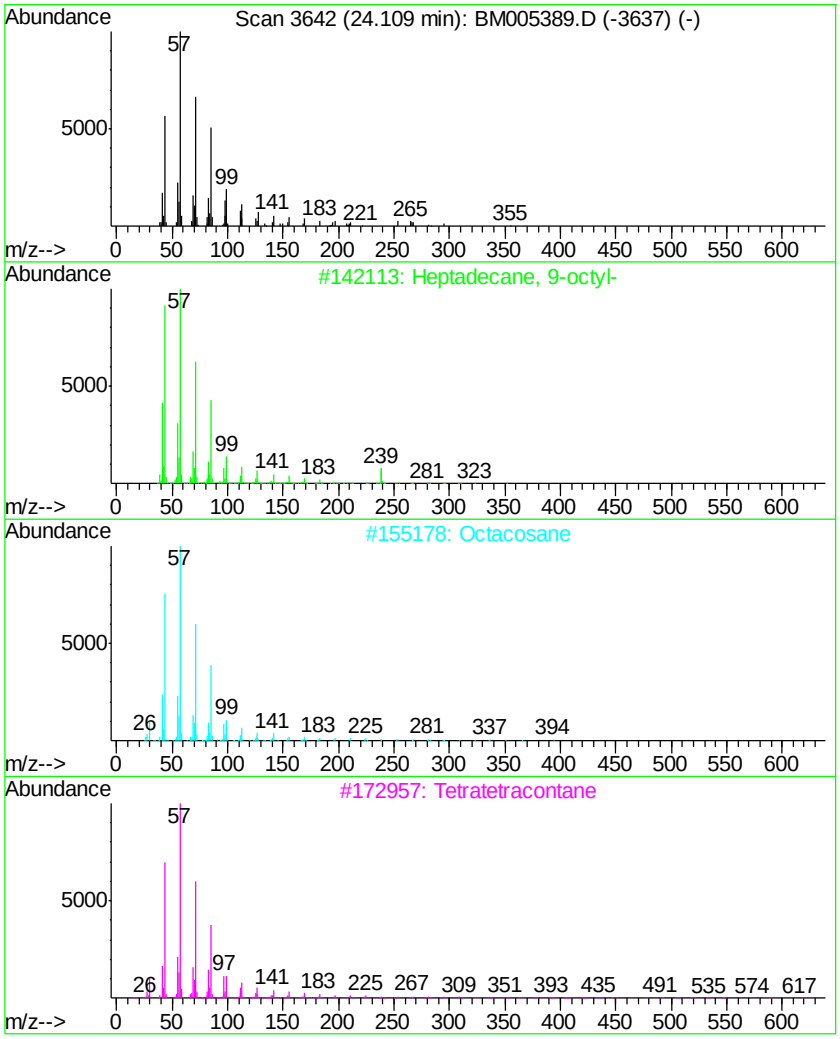
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

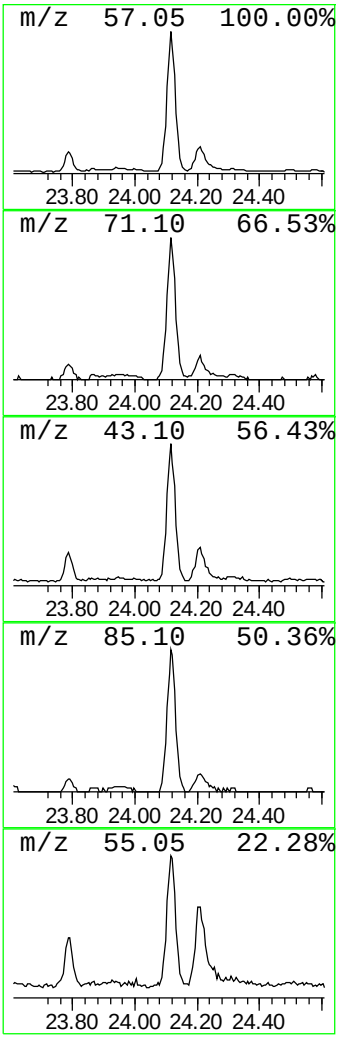
****

Peak Number 5 (DEL) Alkane: Straight-Chai... Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.11	2.82 ng/ul	227931	Perylene-d12	23.61

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptadecane, 9-octyl-	352	C25H52	007225-64-1	90
2	Octacosane	394	C28H58	000630-02-4	90
3	Tetratetracontane	619	C44H90	007098-22-8	90
4	Triacontane	422	C30H62	000638-68-6	90
5	Nonacosane	408	C29H60	000630-03-5	90





Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4061

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

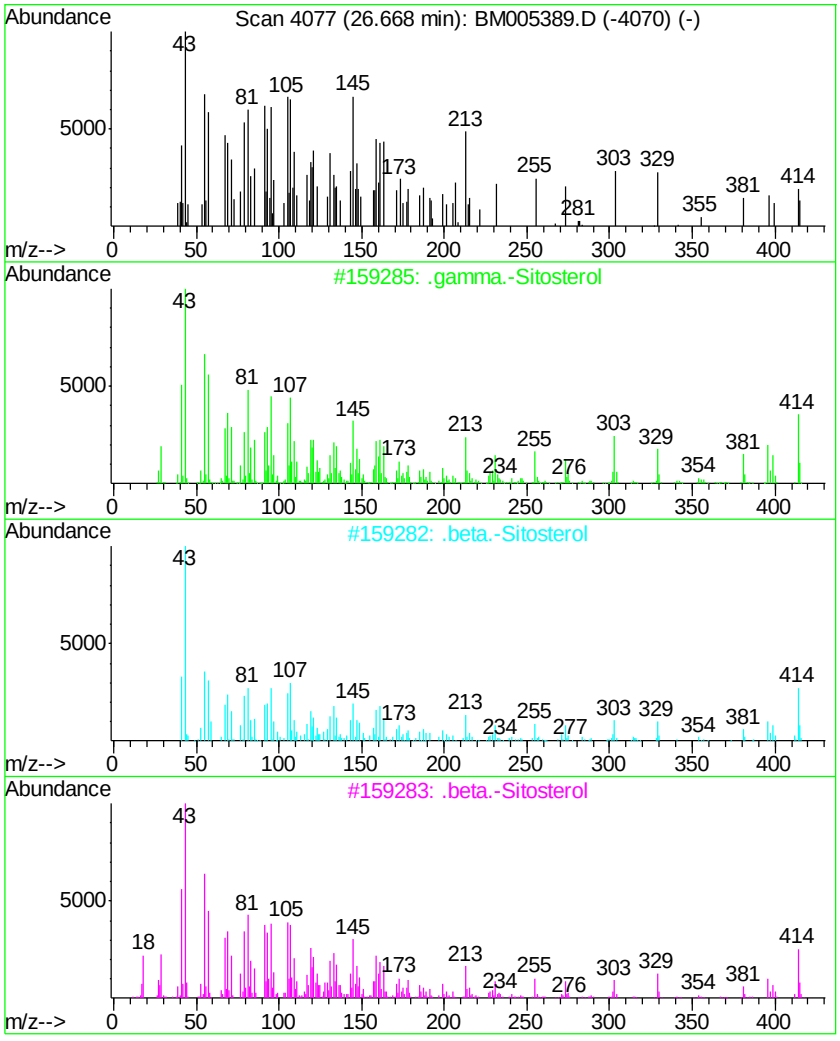
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

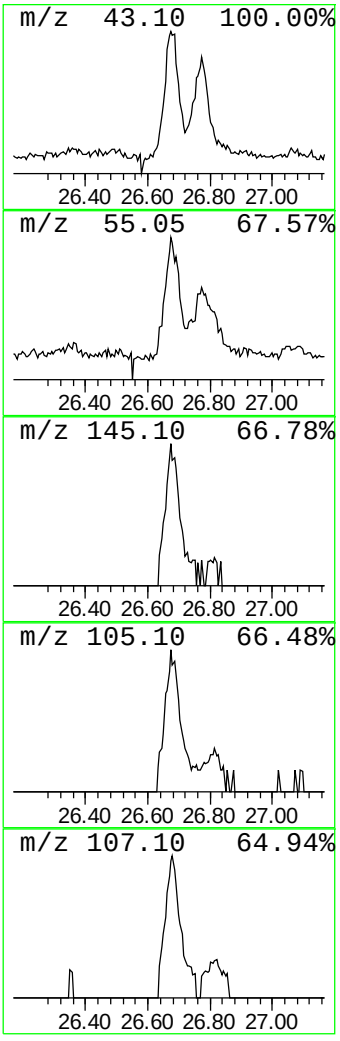
****

Peak Number 6 .gamma.-Sitosterol Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
26.67	2.57 ng/ul	207596	Perylene-d12	23.61

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	.gamma.-Sitosterol	414	C29H50O	000083-47-6	99
2	.beta.-Sitosterol	414	C29H50O	000083-46-5	95
3	.beta.-Sitosterol	414	C29H50O	000083-46-5	50
4	Stigmasterol, 22,23-dihydro-	414	C29H50O	1000214-20-7	42
5	Pregn-5-en-3-ol, 21-bromo-20-met...	394	C22H35BrO	055103-80-5	22





Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4061

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Ethanol, 2-(hexad...	21.04	2.3	ng/ul	236369	5	21.34	2094930	20.0
(DEL) Alkane: Str...	21.92	4.4	ng/ul	465469	5	21.34	2094930	20.0
(DEL) Alkane: Str...	22.90	9.7	ng/ul	783839	6	23.61	1614620	20.0
(DEL) Alkane: Cyc...	22.94	2.5	ng/ul	199928	6	23.61	1614620	20.0
(DEL) Alkane: Str...	24.11	2.8	ng/ul	227931	6	23.61	1614620	20.0
.gamma.-Sitosterol	26.67	2.6	ng/ul	207596	6	23.61	1614620	20.0

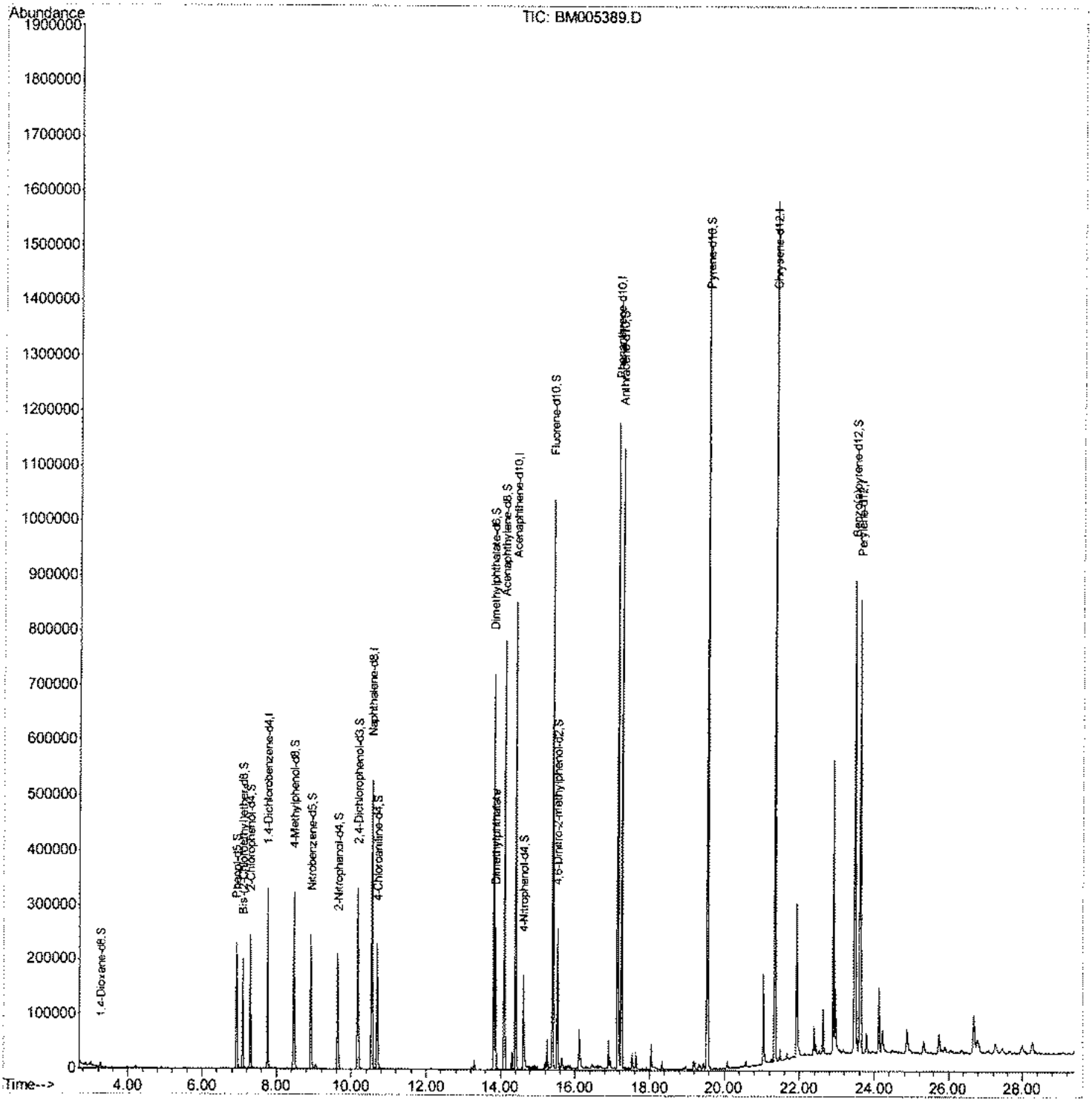
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Quant Time: May 12 03:54:37 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061

Manual Integrations APPROVED
sohil
5/12/2016 7:01:40 PM



Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Quant Time: May 12 03:32:24 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061

Manual Integrations APPROVED
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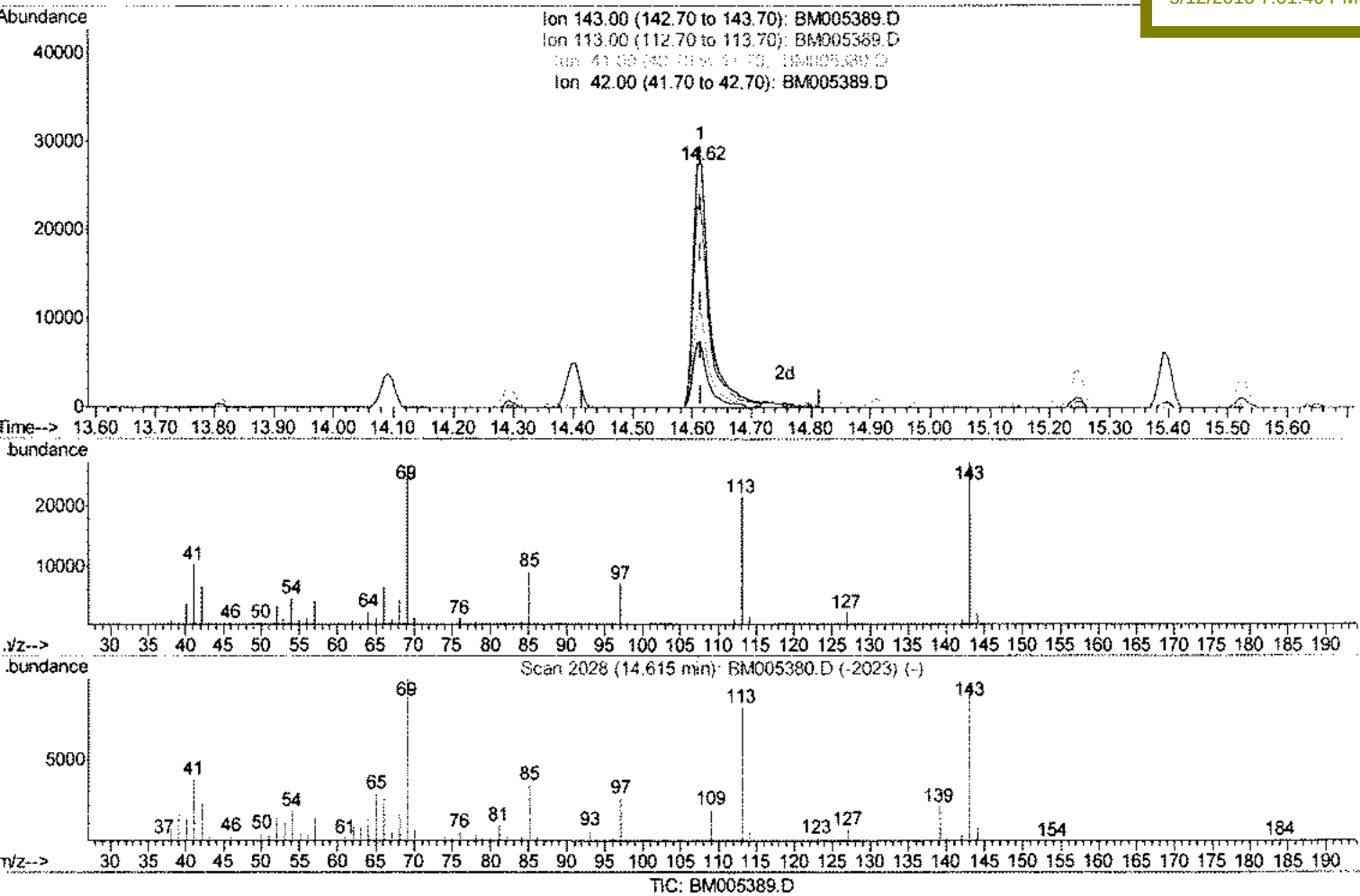

TIC: BM005389.D

(51) 4-Nitrophenol-d4 (S)

14.615min (+0.000) 12.29ng/ul

response 52519

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	78.80
41.00	38.10	37.68
42.00	26.00	23.89

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Quant Time: May 12 03:32:24 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061

Manual Integrations APPROVED
sohil
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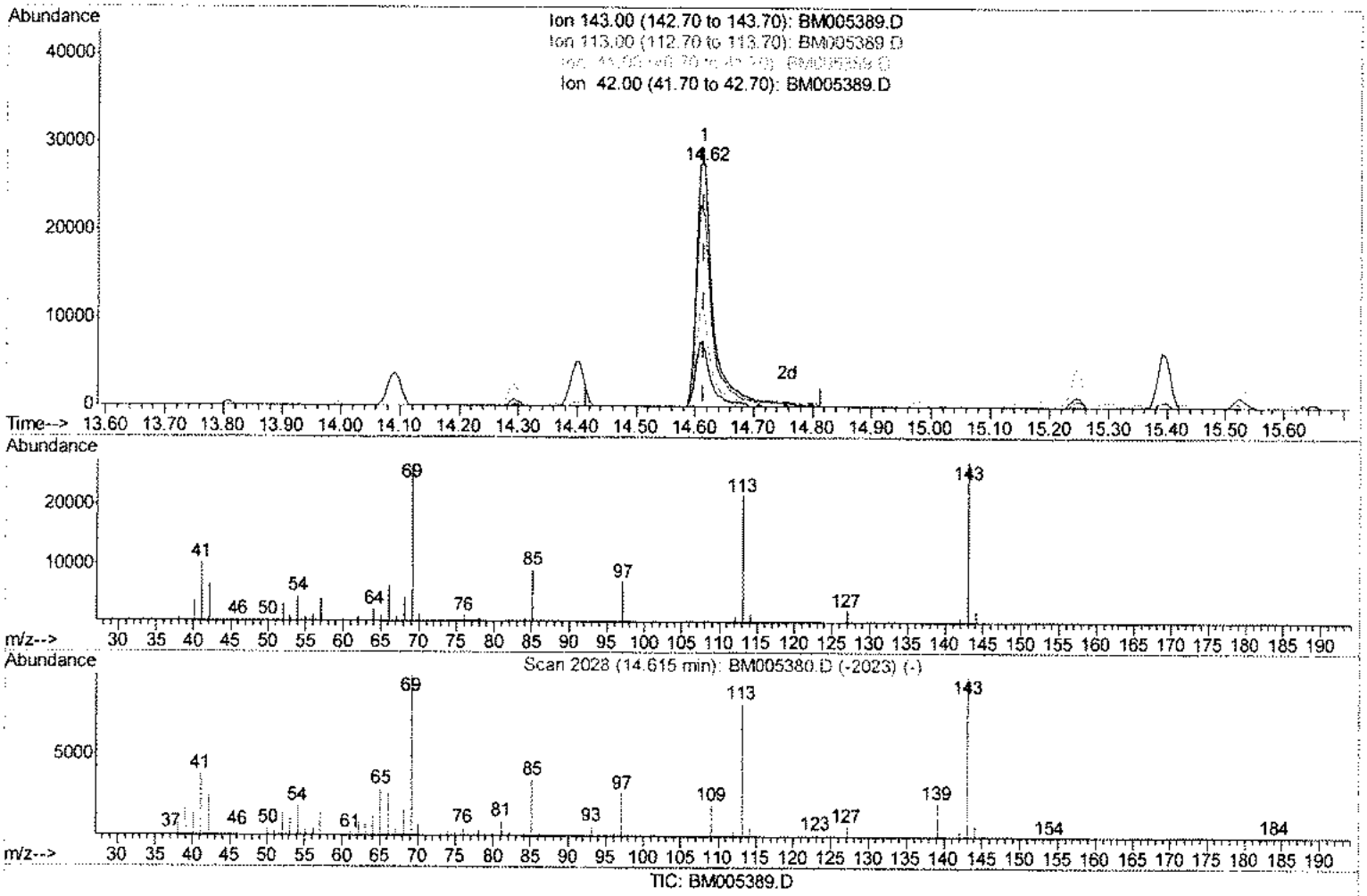

TIC: BM005389.D

(51) 4-Nitrophenol-d4 (S)

14.615min (+0.000) 12.56ng/ul m > U.M 05/16/16

response 53701

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	78.80
41.00	38.10	37.68
42.00	26.00	23.89

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005389.D
Acq On : 11 May 2016 16:25
Operator : UM/SJ
Sample : H2834-13
Misc :
ALS Vial : 30 Sample Multiplier: 1

Quant Time: May 12 03:54:37 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4061

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	88525	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	436762	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	292129	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	701614	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	767642	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	603585	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	6112	3.25	ng/uL	0.00
5) Phenol-d5	6.93	99	142174	17.71	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	87906	19.19	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	113045	18.64	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	121438	18.30	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	59561	19.10	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	68856	19.50	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	125582	19.14	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	129632	16.41	ng/ul	0.00
43) Dimethylphthalate-d6	13.81	166	482023	20.59	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	555651	20.23	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	53701m	12.56	ng/ul	0.00
57) Fluorene-d10	15.40	176	421217	20.83	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	54162	13.72	ng/ul	0.00
70) Anthracene-d10	17.25	188	663926	21.41	ng/ul	0.00
76) Pyrene-d10	19.55	212	802214	22.64	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	596538	22.33	ng/ul	0.00
Target Compounds						Qvalue
44) Dimethylphthalate	13.86	163	165781	7.09	ng/ul	100

U.M 05/16/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4076

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-16
Sample wt/vol : 30.1 (g/mL): g
Lab File ID : BM005392.D
% Solids : 56.3
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	120	U
100-52-7	Benzaldehyde	580	U
108-95-2	Phenol	580	U
111-44-4	Bis(2-Chloroethyl)ether	580	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	580	U
108-60-1	2,2-oxybis(1-Chloropropane)	580	U
98-86-2	Acetophenone	580	U
106-44-5	4-Methylphenol	580	U
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-Chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	300	U
106-47-8	4-Chloroaniline	580	U
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	580	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	300	U
77-47-4	Hexachlorocyclopentadiene	580	U
88-06-2	2,4,6-Trichlorophenol	300	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4076

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-16
Sample wt/vol : 30.1 (g/mL): g
Lab File ID : BM005392.D
% Solids : 56.3
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1-Biphenyl	300	U
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	300	U
131-11-3	Dimethylphthalate	400	
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	300	U
99-09-2	3-Nitroaniline	580	U
83-32-9	Acenaphthene	300	U
51-28-5	2,4-Dinitrophenol	580	U
100-02-7	4-Nitrophenol	580	U
132-64-9	Dibenzofuran	300	U
121-14-2	2,4-Dinitrotoluene	300	U
84-66-2	Diethylphthalate	300	U
86-73-7	Fluorene	300	U
7005-72-3	4-Chlorophenyl-phenylether	300	U
100-01-6	4-Nitroaniline	580	U
534-52-1	4,6-Dinitro-2-methylphenol	580	U
86-30-6	N-Nitrosodiphenylamine	300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	300	U
101-55-3	4-Bromophenyl-phenylether	300	U
118-74-1	Hexachlorobenzene	300	U
1912-24-9	Atrazine	580	U
87-86-5	Pentachlorophenol	580	U
85-01-8	Phenanthrene	300	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4076

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-16
Sample wt/vol : 30.1 (g/mL): g
Lab File ID : BM005392.D
% Solids : 56.3
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	300	U
86-74-8	Carbazole	580	U
84-74-2	Di-n-butylphthalate	300	U
206-44-0	Fluoranthene	78	J
129-00-0	Pyrene	93	J
85-68-7	Butylbenzylphthalate	300	U
91-94-1	3,3-Dichlorobenzidine	580	U
56-55-3	Benzo(a)anthracene	300	U
218-01-9	Chrysene	120	J
117-81-7	Bis(2-ethylhexyl)phthalate	300	U
117-84-0	Di-n-octyl phthalate	580	U
205-99-2	Benzo(b)fluoranthene	210	J
207-08-9	Benzo(k)fluoranthene	300	U
50-32-8	Benzo(a)pyrene	85	J
193-39-5	Indeno(1,2,3-cd)pyrene	62	J
53-70-3	Dibenzo(a,h)anthracene	300	U
191-24-2	Benzo(g,h,i)perylene	64	J
58-90-2	2,3,4,6-Tetrachlorophenol	300	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4076

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-16
Sample wt/vol : 30.1 (g/mL): g
Lab File ID : BM005392.D
% Solids : 56.3
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
Extract Concentrated : (Y / N) Y
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 500 (µL)
Heated Purge : (Y / N)
Extraction Type : SOXH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types : GPC
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg
Cleanup Factor : 2.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000057-10-3	n-Hexadecanoic acid	18.04	170	JN
2	007390-81-0	Oxirane, hexadecyl-	20.76	150	JN
3	000638-66-4	Octadecanal	21.66	240	JN
4	000520-28-5	4H-1-Benzopyran-4-one, 5-hydroxy-7	21.8	130	JN
5	067860-04-2	Oxirane, heptadecyl-	23.79	430	JN
6	081803-09-0	Thieno[2,3-d]-1,3-thiaselenol-2-th	25.67	120	JN
7	086917-79-5	6-Isopropenyl-4,8a-dimethyl-4a,5,6	26.34	130	JN
8	023707-65-5	Anthracene, 9-(2-propenyl)-	27.45	490	JN
9	000116-04-1	.beta.-Humulene	27.98	590	JN
10	E966796	Total Alkanes	N/A	3800	

EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 12 04:12:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4076

Manual Integrations APPROVED
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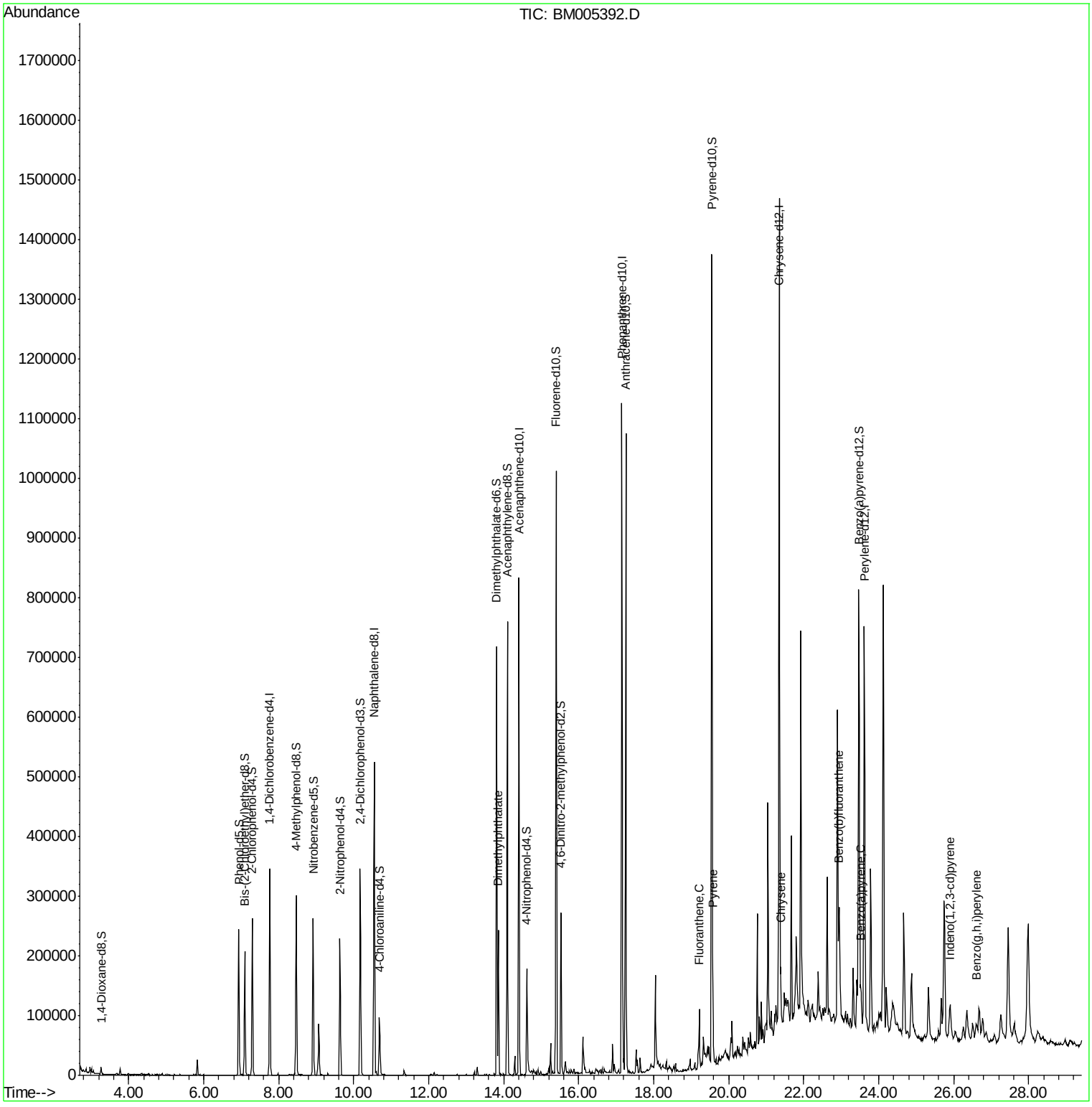
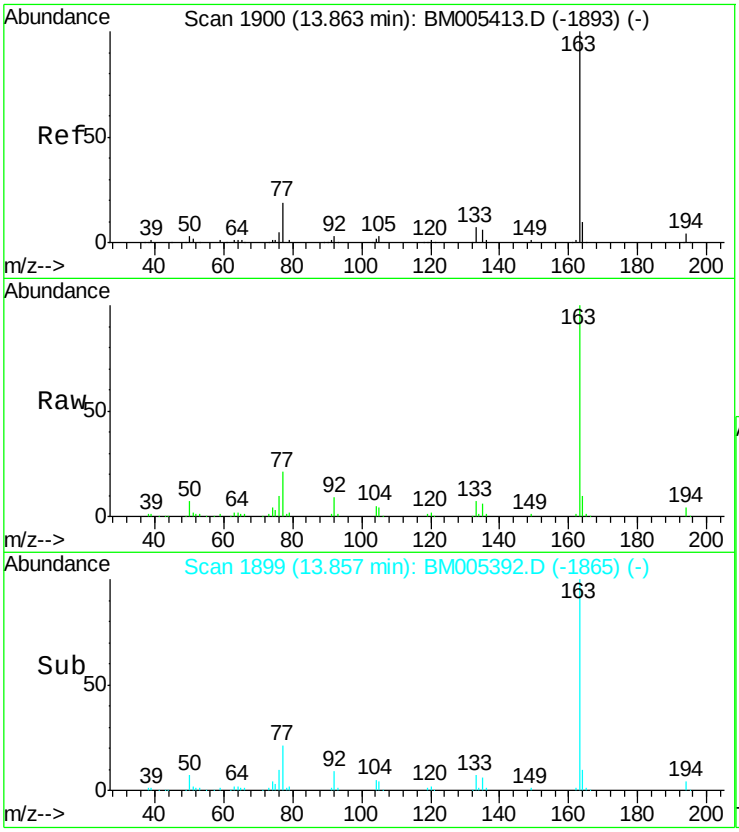
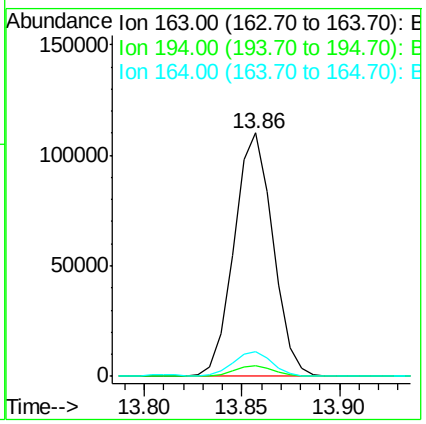




#44
Dimethylphthalate
Concen: 6.73 ng/ul
RT: 13.86 min Scan# 1899
Delta R.T. 0.00 min
Lab File: BM005392.D
Acq: 11 May 2016 18:15

Tgt Ion:163 Resp: 151628

Ion	Ratio	Lower	Upper
163	100		
194	4.2	3.4	5.0
164	10.1	7.9	11.9



Instrument :
BNA_M
ClientSampleId :
H4076

Manual Integrations APPROVED
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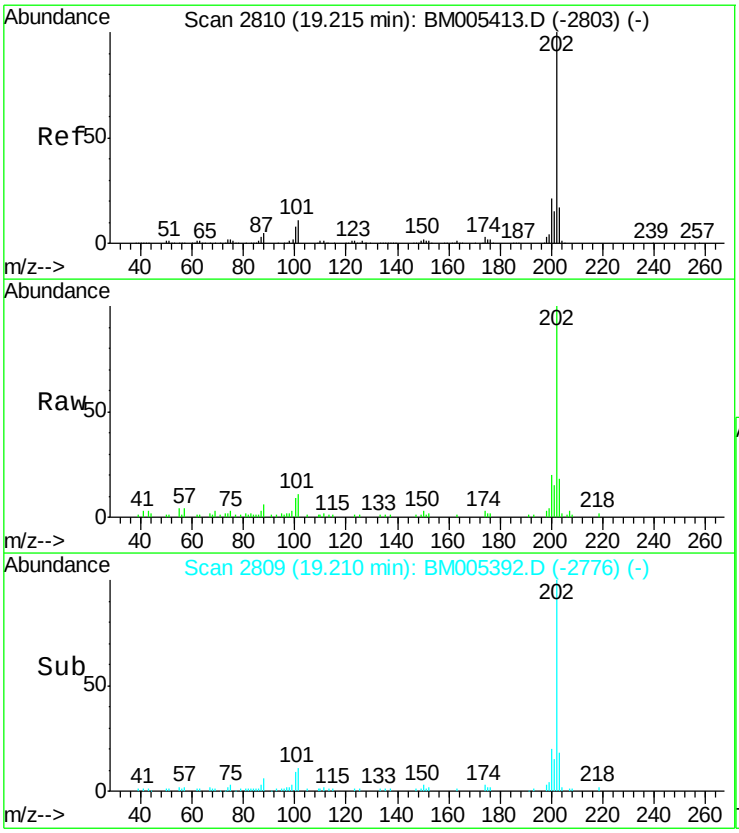
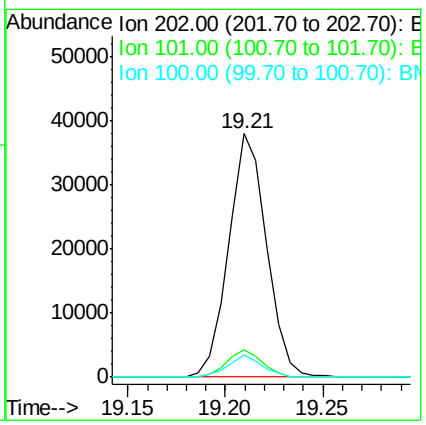
5/12/2016 7:06:50 PM

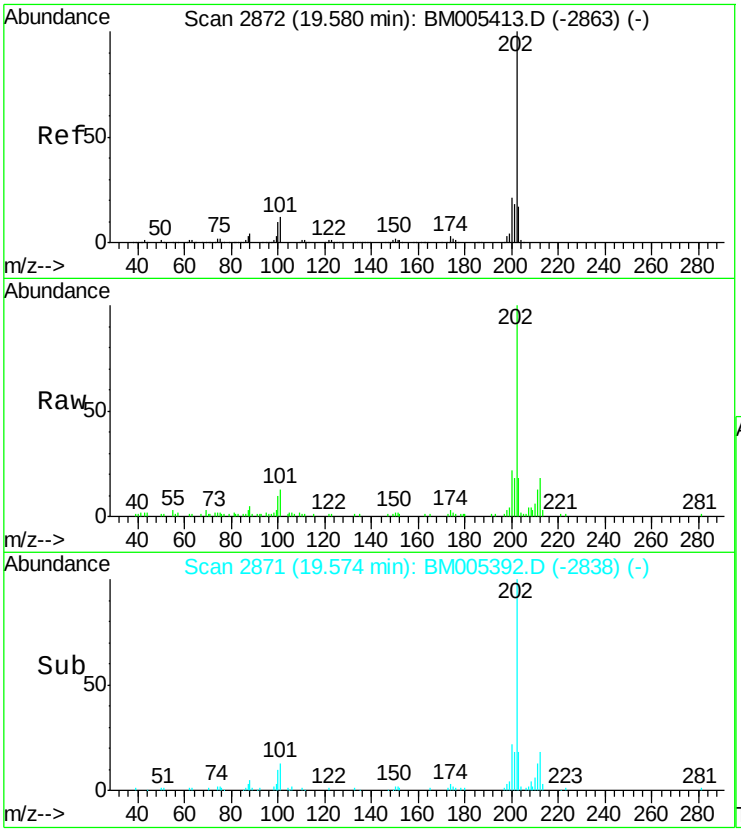


#74
Fluoranthene
Concen: 1.32 ng/ul
RT: 19.21 min Scan# 2809
Delta R.T. -0.01 min
Lab File: BM005392.D
Acq: 11 May 2016 18:15

Tgt Ion:202 Resp: 51091

Ion	Ratio	Lower	Upper
202	100		
101	11.3	9.2	13.8
100	8.9	7.1	10.7

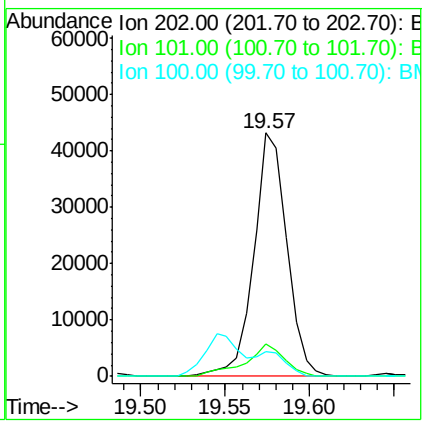




#77
Pyrene
Concen: 1.57 ng/ul
RT: 19.57 min Scan# 2871
Delta R.T. -0.01 min
Lab File: BM005392.D
Acq: 11 May 2016 18:15

Tgt Ion:202 Resp: 58681

Ion	Ratio	Lower	Upper
202	100		
101	13.2	10.8	16.2
100	10.2	8.4	12.6



Instrument :
BNA_M
ClientSampleId :
H4076

Manual Integrations APPROVED
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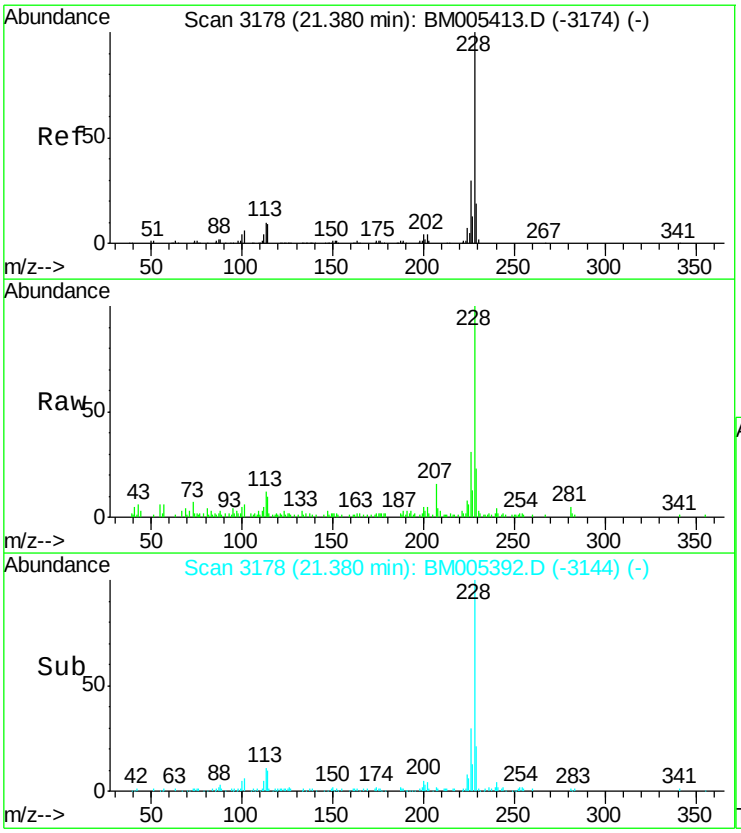
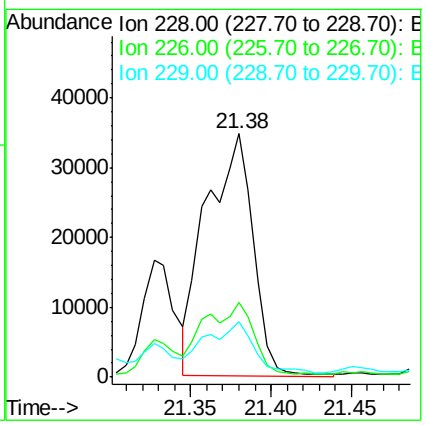
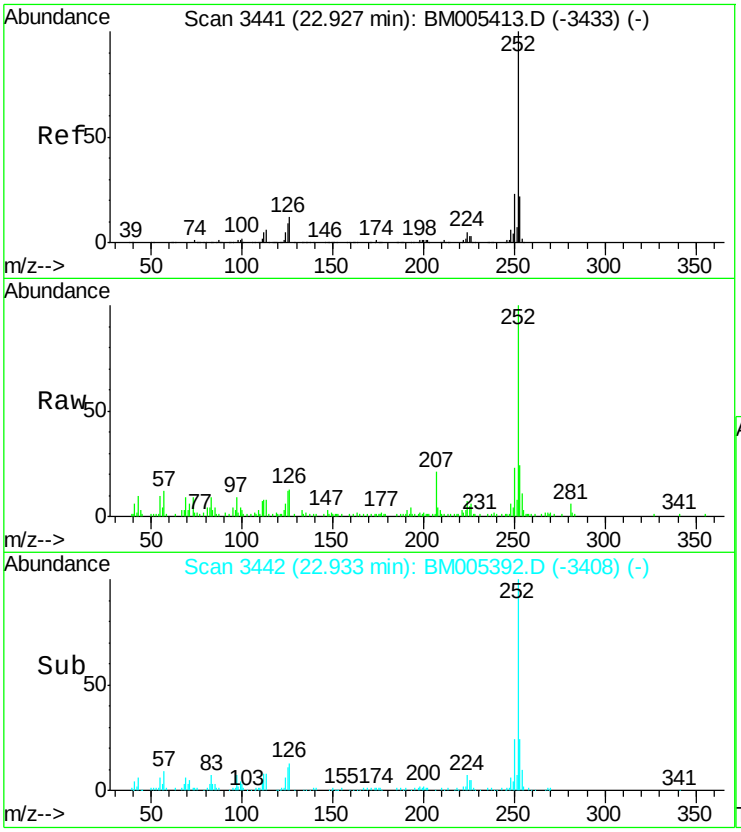


#82
Chrysene
Concen: 2.01 ng/ul m
RT: 21.38 min Scan# 3178
Delta R.T. 0.00 min
Lab File: BM005392.D
Acq: 11 May 2016 18:15

Tgt Ion:228 Resp: 70804

Ion	Ratio	Lower	Upper
228	100		
226	30.9	23.6	35.4
229	22.8	15.4	23.0

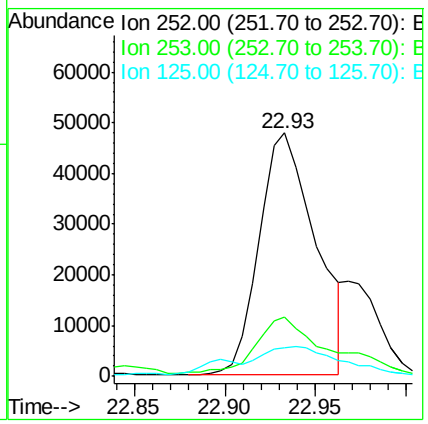




#85
Benzo(b)fluoranthene
Concen: 3.63 ng/ul
RT: 22.93 min Scan# 3442
Delta R.T. 0.00 min
Lab File: BM005392.D
Acq: 11 May 2016 18:15

Tgt Ion:252 Resp: 103329

Ion	Ratio	Lower	Upper
252	100		
253	24.3	17.4	26.2
125	11.6	8.4	12.6



Instrument :
BNA_M
ClientSampleId :
H4076

Manual Integrations APPROVED
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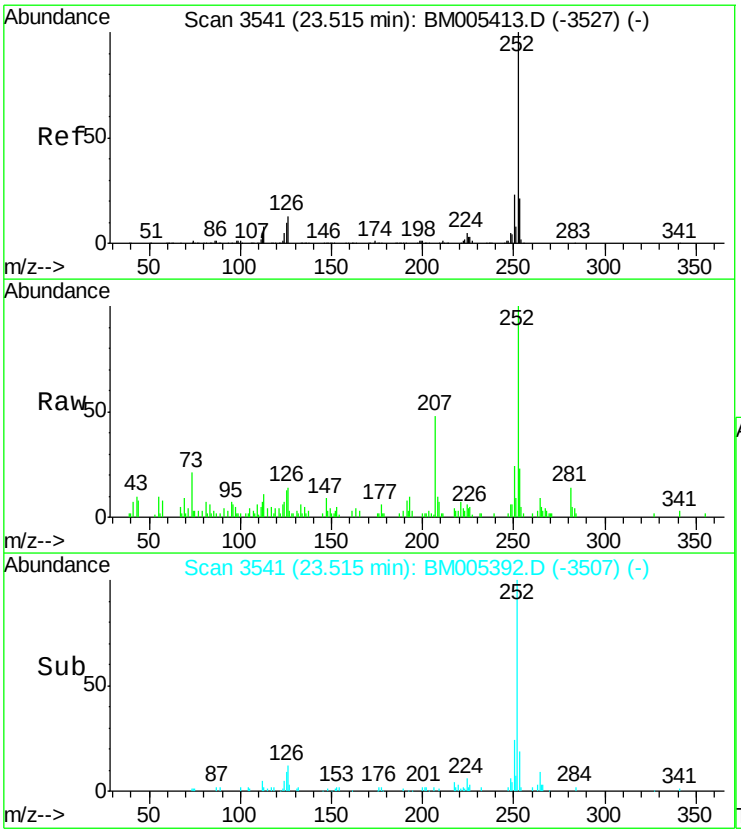
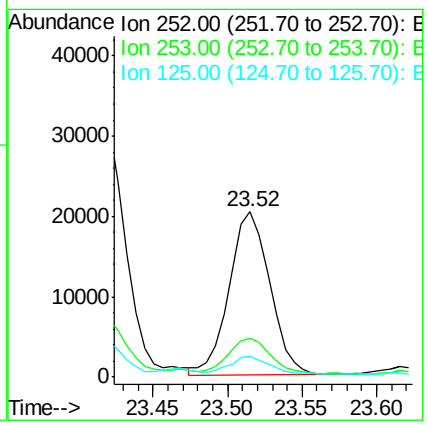
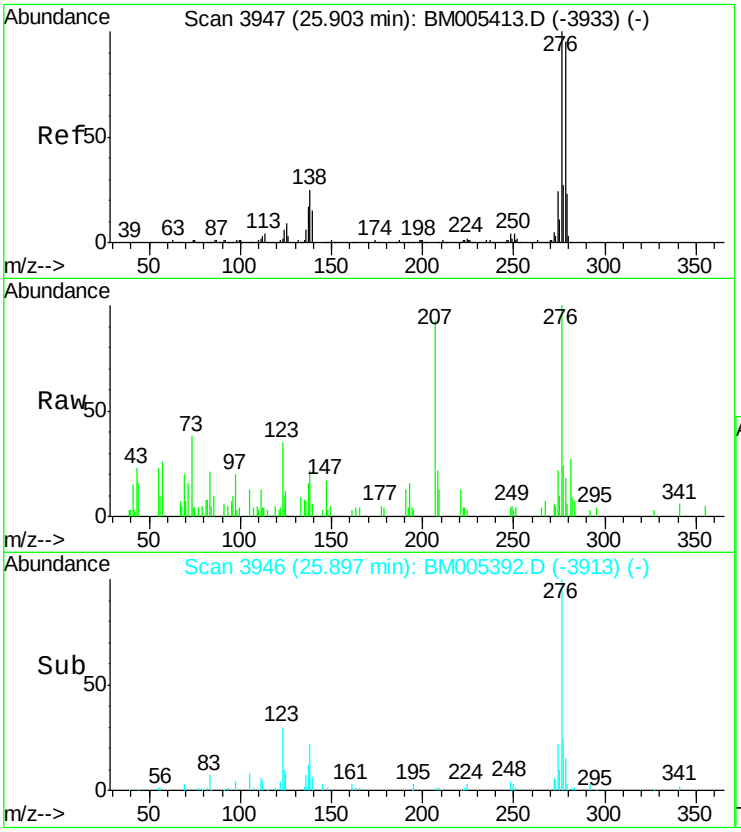


#88
Benzo(a)pyrene
Concen: 1.44 ng/ul
RT: 23.52 min Scan# 3541
Delta R.T. 0.00 min
Lab File: BM005392.D
Acq: 11 May 2016 18:15

Tgt Ion:252 Resp: 38691

Ion	Ratio	Lower	Upper
252	100		
253	23.5	17.5	26.3
125	12.7	8.7	13.1

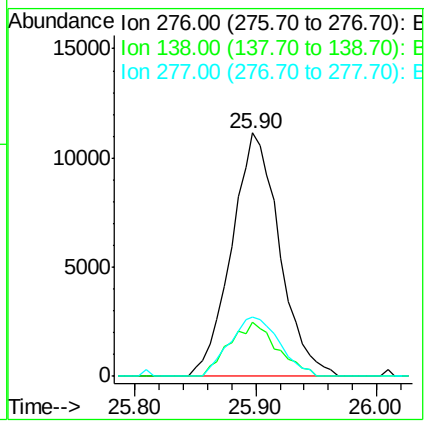




#89
Indeno(1,2,3-cd)pyrene
Concen: 1.05 ng/ul
RT: 25.90 min Scan# 3946
Delta R.T. -0.01 min
Lab File: BM005392.D
Acq: 11 May 2016 18:15

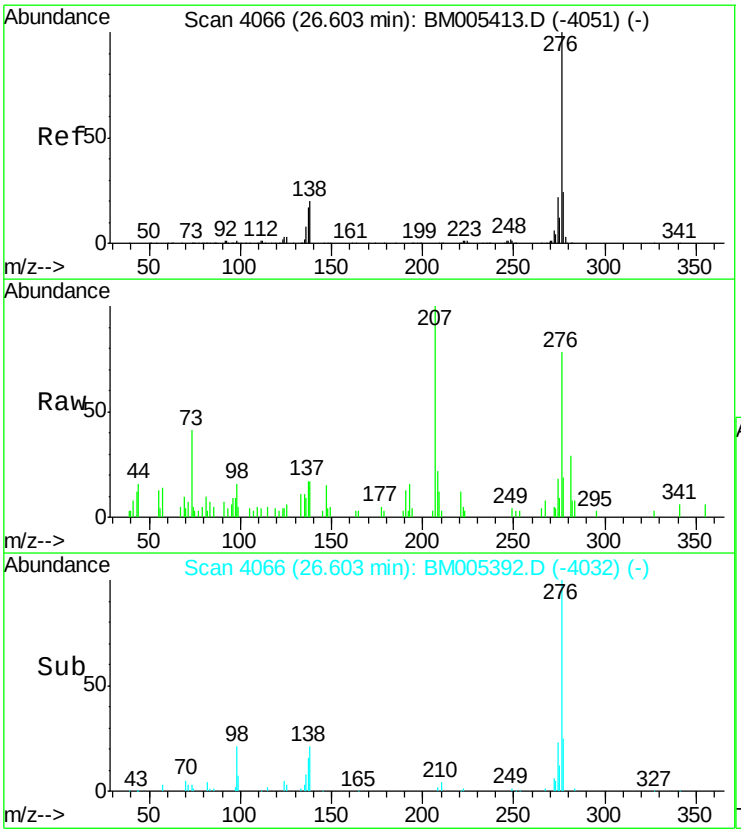
Tgt Ion:276 Resp: 30839

Ion	Ratio	Lower	Upper
276	100		
138	22.2	21.0	31.6
277	24.1	19.9	29.9



Instrument :
BNA_M
ClientSampleId :
H4076

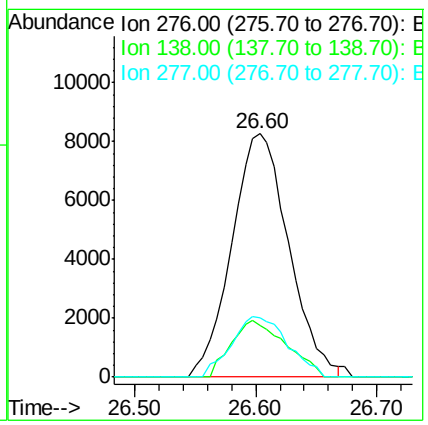
Manual Integrations APPROVED
sohil
5/12/2016 7:06:50 PM



#91
Benzo(g,h,i)perylene
Concen: 1.09 ng/ul
RT: 26.60 min Scan# 4066
Delta R.T. 0.00 min
Lab File: BM005392.D
Acq: 11 May 2016 18:15

Tgt Ion:276 Resp: 27054

Ion	Ratio	Lower	Upper
276	100		
138	21.4	18.2	27.4
277	24.5	19.4	29.2



Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Manual Integrations APPROVED
sohil
5/12/2016 7:06:50 PM

Quant Time: May 12 04:12:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	90930	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	437247	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	281342	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	666164	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	644821	20.00	ng/ul	0.00
83) Perylene-d12	23.62	264	486399	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	5766	2.98	ng/uL	0.00
5) Phenol-d5	6.93	99	147061	17.83	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	89802	19.09	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	118058	18.95	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	115078	16.88	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	64369	20.62	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	76092	21.53	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	130730	19.90	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	61410m	7.77	ng/ul	0.00
43) Dimethylphthalate-d6	13.81	166	467161	20.72	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	548212	20.73	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	55292m	13.43	ng/ul	0.00
57) Fluorene-d10	15.40	176	407141	20.91	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	58723	15.67	ng/ul	0.00
70) Anthracene-d10	17.25	188	615669	20.91	ng/ul	0.00
76) Pyrene-d10	19.55	212	714383	24.00	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	462414	21.48	ng/ul	0.00
Target Compounds						Qvalue
44) Dimethylphthalate	13.86	163	151628	6.73	ng/ul	100
74) Fluoranthene	19.21	202	51091	1.32	ng/ul	100
77) Pyrene	19.57	202	58681	1.57	ng/ul	99
82) Chrysene	21.38	228	70804m	2.01	ng/ul	
85) Benzo(b)fluoranthene	22.93	252	103329	3.63	ng/ul	95
88) Benzo(a)pyrene	23.52	252	38691	1.44	ng/ul	96
89) Indeno(1,2,3-cd)pyrene	25.90	276	30839	1.05	ng/ul	95
91) Benzo(g,h,i)perylene	26.60	276	27054	1.09	ng/ul	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.828	529	534	541	rBV	25689	36678	1.75%	0.115%
2	6.934	716	722	736	rVV	244547	401476	19.16%	1.257%
3	7.093	740	749	762	rBV	208444	316967	15.13%	0.992%
4	7.293	777	783	792	rBV	262532	408464	19.49%	1.278%
5	7.757	855	862	874	rVB	345228	545186	26.02%	1.706%
6	8.463	977	982	990	rBV	300496	482714	23.03%	1.511%
7	8.916	1053	1059	1071	rBV	262140	432917	20.66%	1.355%
8	9.069	1075	1085	1094	rVB2	86248	147851	7.06%	0.463%
9	9.634	1174	1181	1192	rBV	229058	381945	18.23%	1.195%
10	10.169	1266	1272	1286	rBV	345785	593793	28.33%	1.859%
11	10.545	1329	1336	1343	rBV	524603	900212	42.96%	2.818%
12	10.687	1352	1360	1372	rBV	97305	181700	8.67%	0.569%
13	13.810	1885	1891	1895	rBV	717678	983604	46.94%	3.079%
14	13.857	1895	1899	1906	rVB	242148	333532	15.92%	1.044%
15	14.092	1932	1939	1949	rBV	759715	1156860	55.20%	3.621%
16	14.292	1967	1973	1978	rVB	31320	39796	1.90%	0.125%
17	14.404	1982	1992	2000	rVB2	833294	1317273	62.86%	4.123%
18	14.616	2022	2028	2044	rBV	177585	330751	15.78%	1.035%
19	15.245	2131	2135	2141	rVB	51139	61859	2.95%	0.194%
20	15.398	2154	2161	2169	rVB	1008767	1492182	71.20%	4.670%
21	15.522	2177	2182	2193	rVB	270683	392019	18.71%	1.227%
22	15.639	2196	2202	2208	rBV3	20118	43062	2.05%	0.135%
23	16.110	2277	2282	2285	rBV	62236	86773	4.14%	0.272%
24	16.904	2411	2417	2420	rBV	47825	59578	2.84%	0.186%
25	16.951	2420	2425	2430	rVB3	13374	23389	1.12%	0.073%
26	17.151	2452	2459	2464	rBV	1121541	1654136	78.93%	5.177%
27	17.192	2464	2466	2470	rVV	22829	29014	1.38%	0.091%
28	17.251	2470	2476	2485	rVB	1069514	1620420	77.32%	5.072%
29	17.527	2515	2523	2526	rBV3	39710	59339	2.83%	0.186%
30	17.563	2526	2529	2534	rVV2	23046	35255	1.68%	0.110%
31	17.639	2538	2542	2547	rVV2	25103	30968	1.48%	0.097%
32	18.039	2605	2610	2620	rBV	153562	238478	11.38%	0.746%
33	18.968	2765	2768	2772	rVB2	19478	21489	1.03%	0.067%
34	19.180	2799	2804	2806	rBV	24209	35068	1.67%	0.110%

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

35	19.210	2806	2809	2815	rVB	95997	128794	6.15%	0.403%
36	19.321	2823	2828	2833	rBV4	47284	82324	3.93%	0.258%
37	19.433	2842	2847	2850	rBV3	18647	29901	1.43%	0.094%
38	19.468	2850	2853	2859	rVB4	24502	29740	1.42%	0.093%
39	19.551	2861	2867	2880	rVB2	1353622	2095640	100.00%	6.559%
40	19.727	2893	2897	2900	rBV4	13152	23369	1.12%	0.073%
41	20.057	2946	2953	2955	rBV5	36269	65052	3.10%	0.204%
42	20.086	2955	2958	2964	rVB	63053	74730	3.57%	0.234%
43	20.233	2976	2983	2986	rBV2	19476	36051	1.72%	0.113%
44	20.374	3003	3007	3011	rBV2	32675	50695	2.42%	0.159%
45	20.521	3028	3032	3037	rBV6	24411	43848	2.09%	0.137%
46	20.580	3039	3042	3047	rVB4	26472	34100	1.63%	0.107%
47	20.757	3068	3072	3078	rVB	218507	244999	11.69%	0.767%
48	20.821	3080	3083	3088	rBV	43391	60909	2.91%	0.191%
49	20.868	3088	3091	3096	rBV	63067	82502	3.94%	0.258%
50	20.909	3096	3098	3103	rVB2	22692	28623	1.37%	0.090%
51	20.968	3105	3108	3109	rBV2	20044	22202	1.06%	0.069%
52	21.045	3116	3121	3130	rBV2	381174	499630	23.84%	1.564%
53	21.127	3132	3135	3140	rVB	32489	45035	2.15%	0.141%
54	21.227	3149	3152	3154	rBV2	23077	26294	1.25%	0.082%
55	21.257	3154	3157	3162	rBV6	27013	38797	1.85%	0.121%
56	21.345	3166	3172	3177	rBV	1365092	1895602	90.45%	5.933%
57	21.486	3193	3196	3200	rBV3	30112	38387	1.83%	0.120%
58	21.662	3222	3226	3231	rBV3	310514	391588	18.69%	1.226%
59	21.804	3247	3250	3259	rVB3	121571	212212	10.13%	0.664%
60	21.921	3266	3270	3284	rVB	626600	854633	40.78%	2.675%
61	22.386	3345	3349	3353	rBV	69580	94248	4.50%	0.295%
62	22.621	3384	3389	3393	rVB	230178	310874	14.83%	0.973%
63	22.898	3430	3436	3440	rBV	511988	809005	38.60%	2.532%
64	22.939	3440	3443	3454	rVB2	182397	436340	20.82%	1.366%
65	23.315	3503	3507	3518	rVB	98237	175237	8.36%	0.548%
66	23.421	3520	3525	3527	rBV	71389	123030	5.87%	0.385%
67	23.468	3527	3533	3539	rVV2	682244	1251483	59.72%	3.917%
68	23.615	3551	3558	3577	rVB	677961	1388795	66.27%	4.347%
69	23.786	3581	3587	3596	rVB	270807	504582	24.08%	1.579%
70	24.003	3620	3624	3627	rBV6	19884	39913	1.90%	0.125%
71	24.121	3636	3644	3652	rVB	741374	1467083	70.01%	4.592%

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

72	24.203	3654	3658	3670	rVB	74088	163405	7.80%	0.511%
73	24.668	3731	3737	3747	rVB	202995	448185	21.39%	1.403%
74	24.868	3764	3771	3780	rBV	104442	268761	12.82%	0.841%
75	25.327	3842	3849	3857	rBV3	82727	195452	9.33%	0.612%
76	25.668	3901	3907	3912	rBV4	59547	143087	6.83%	0.448%
77	25.744	3913	3920	3929	rVB	225453	582784	27.81%	1.824%
78	26.344	4017	4022	4038	rVB8	48377	156923	7.49%	0.491%
79	26.674	4074	4078	4087	rVB8	41901	101247	4.83%	0.317%
80	27.450	4201	4210	4224	rVB	178717	581662	27.76%	1.821%
81	27.980	4290	4300	4317	rVB6	185848	697496	33.28%	2.183%

Sum of corrected areas: 31949997

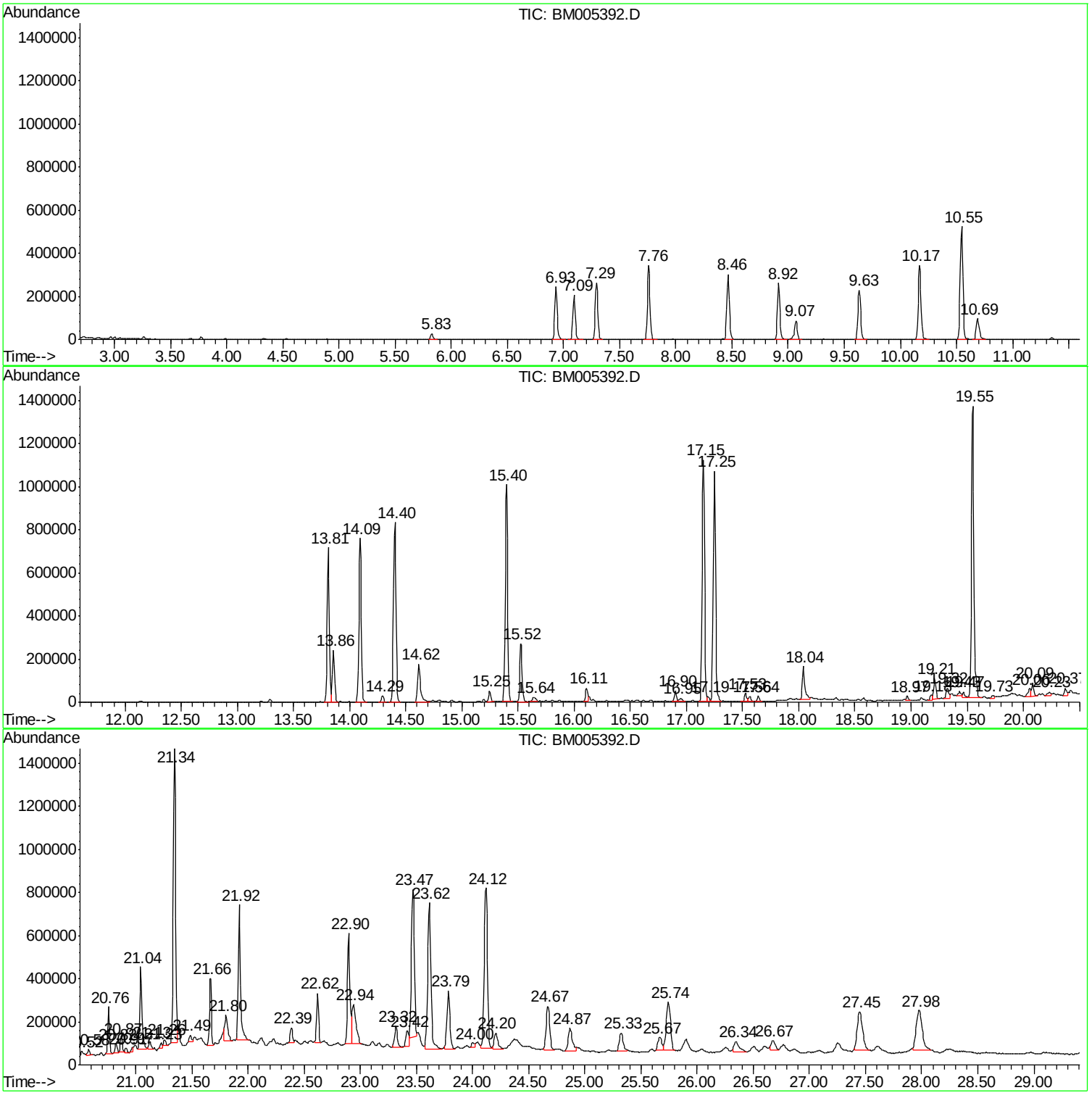
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

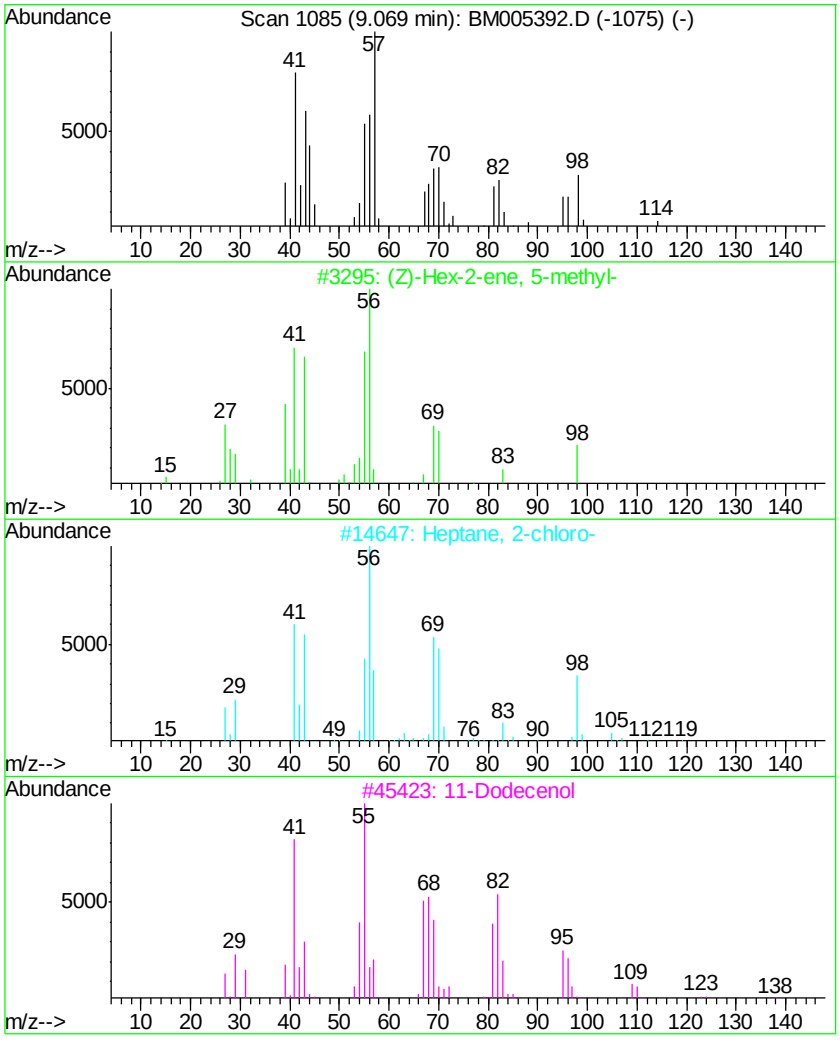
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

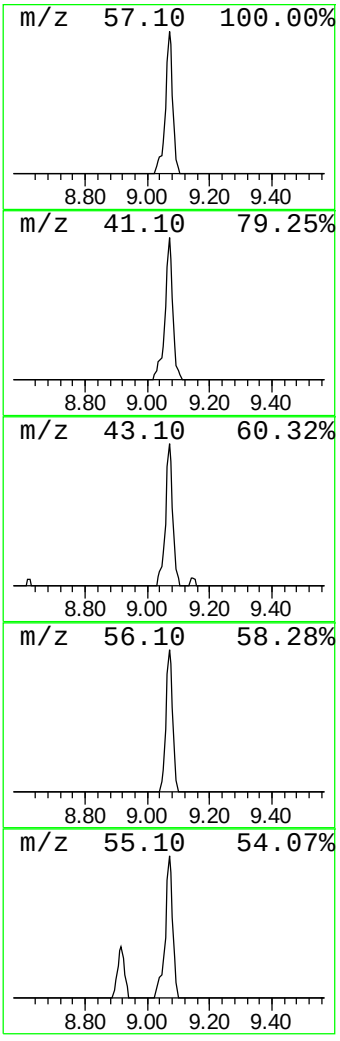
****

Peak Number 1 (DEL) Alkane: Cyclic-9.07 Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.07	5.42 ng/ul	147851	1,4-Dichlorobenzene-d4	7.76

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	(Z)-Hex-2-ene, 5-methyl-	98	C7H14	013151-17-2	27
2	Heptane, 2-chloro-	134	C7H15Cl	001001-89-4	27
3	11-Dodecenol	184	C12H24O	035289-31-7	27
4	(Z)-2-Heptene	98	C7H14	006443-92-1	25
5	2-Heptene	98	C7H14	000592-77-8	22





Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

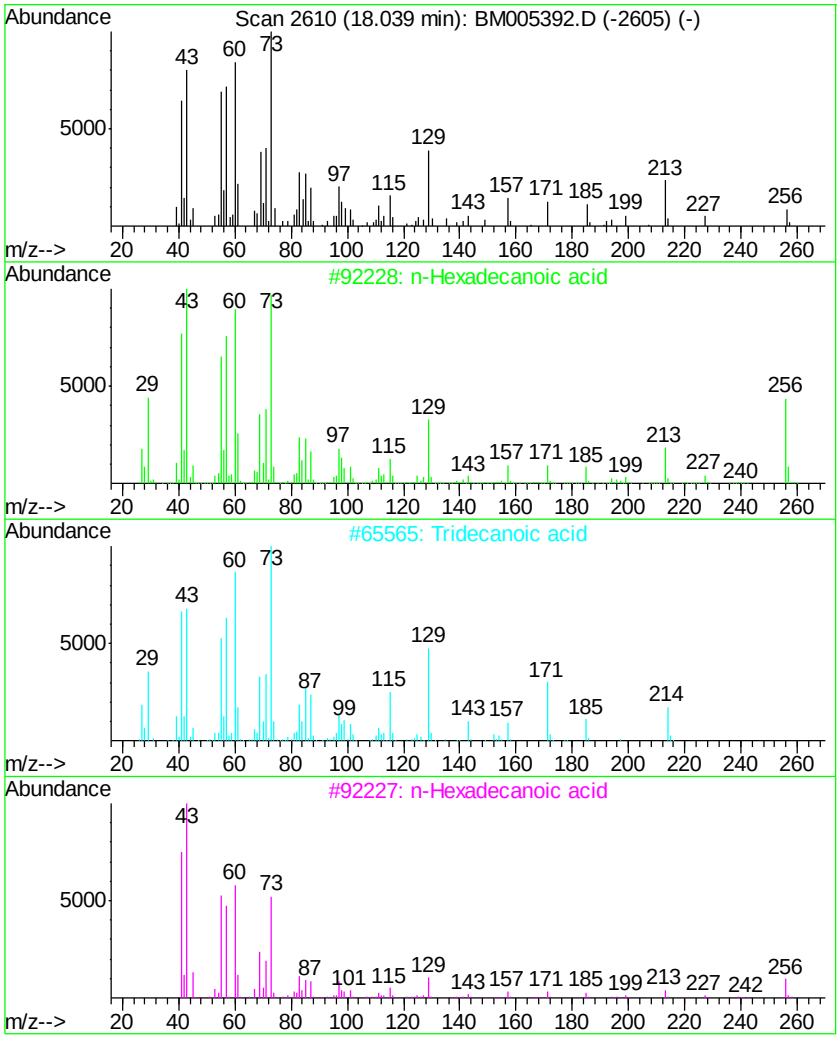
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

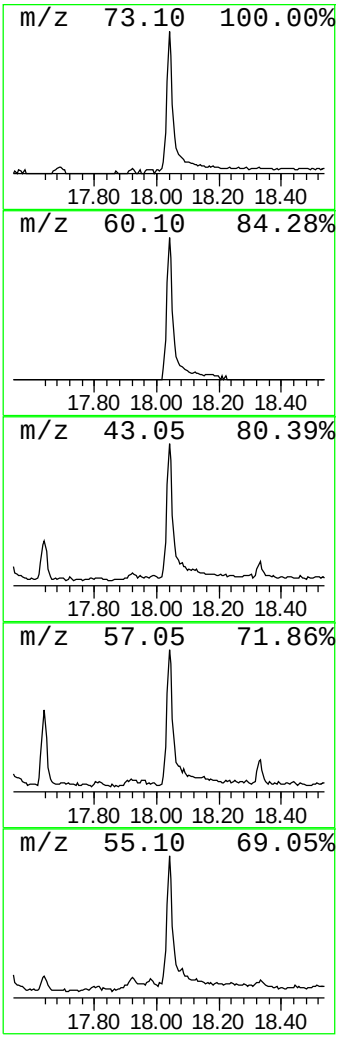
****

Peak Number 2 n-Hexadecanoic acid Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.04	2.88 ng/ul	238478	Phenanthrene-d10	17.15

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	98
2	Tridecanoic acid	214	C13H26O2	000638-53-9	95
3	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	95
4	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	91
5	Tridecanoic acid	214	C13H26O2	000638-53-9	90





Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

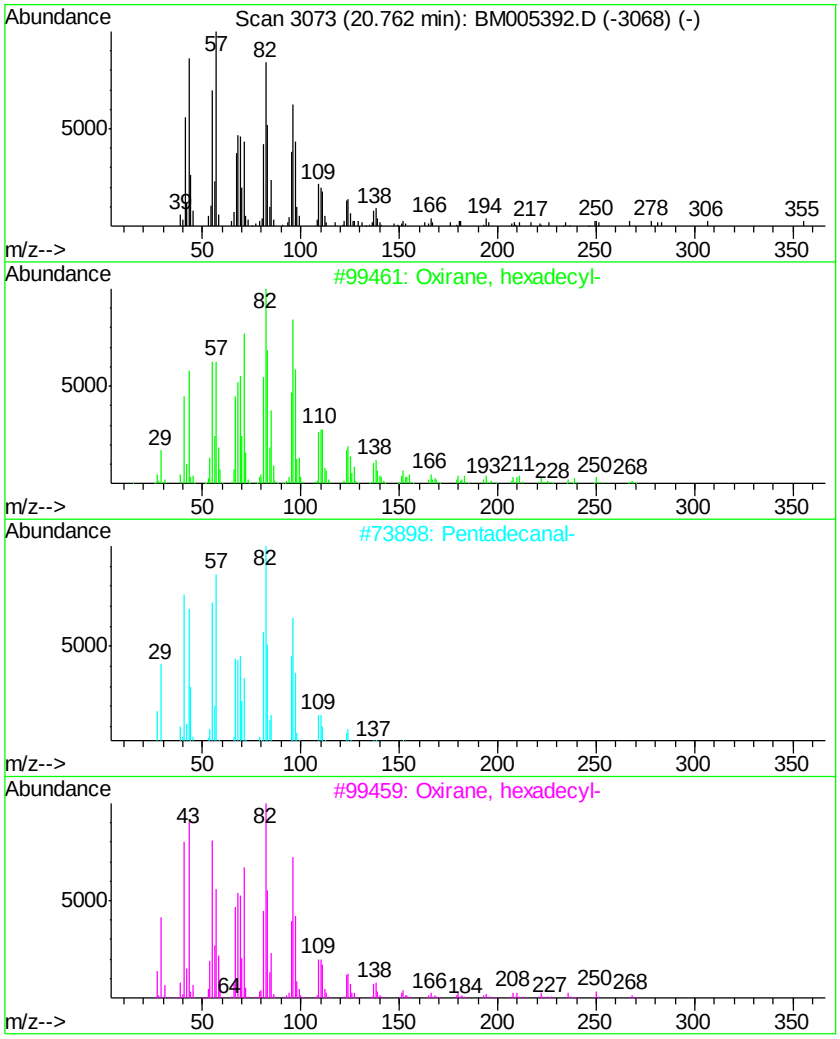
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

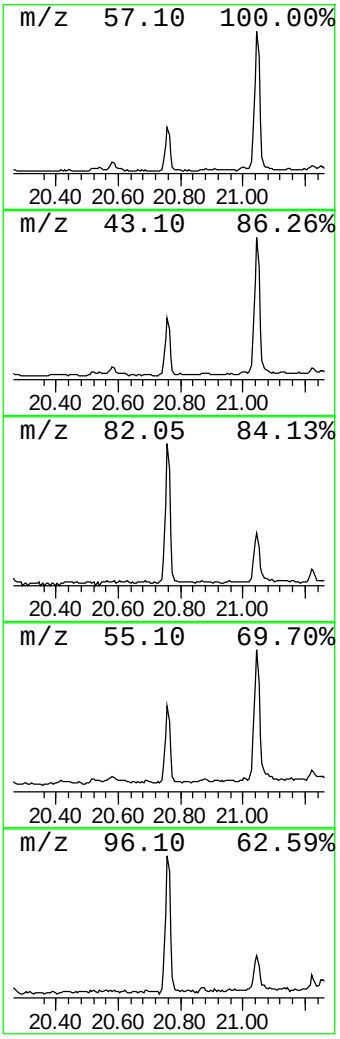
****

Peak Number 3 Oxirane, hexadecyl- Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
20.76	2.58 ng/ul	244999	Chrysene-d12	21.34

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Oxirane, hexadecyl-	268	C18H36O	007390-81-0	94
2	Pentadecanal-	226	C15H30O	002765-11-9	93
3	Oxirane, hexadecyl-	268	C18H36O	007390-81-0	91
4	17-Octadecenal	266	C18H34O	056554-86-0	91
5	Octadecanal	268	C18H36O	000638-66-4	91





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Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

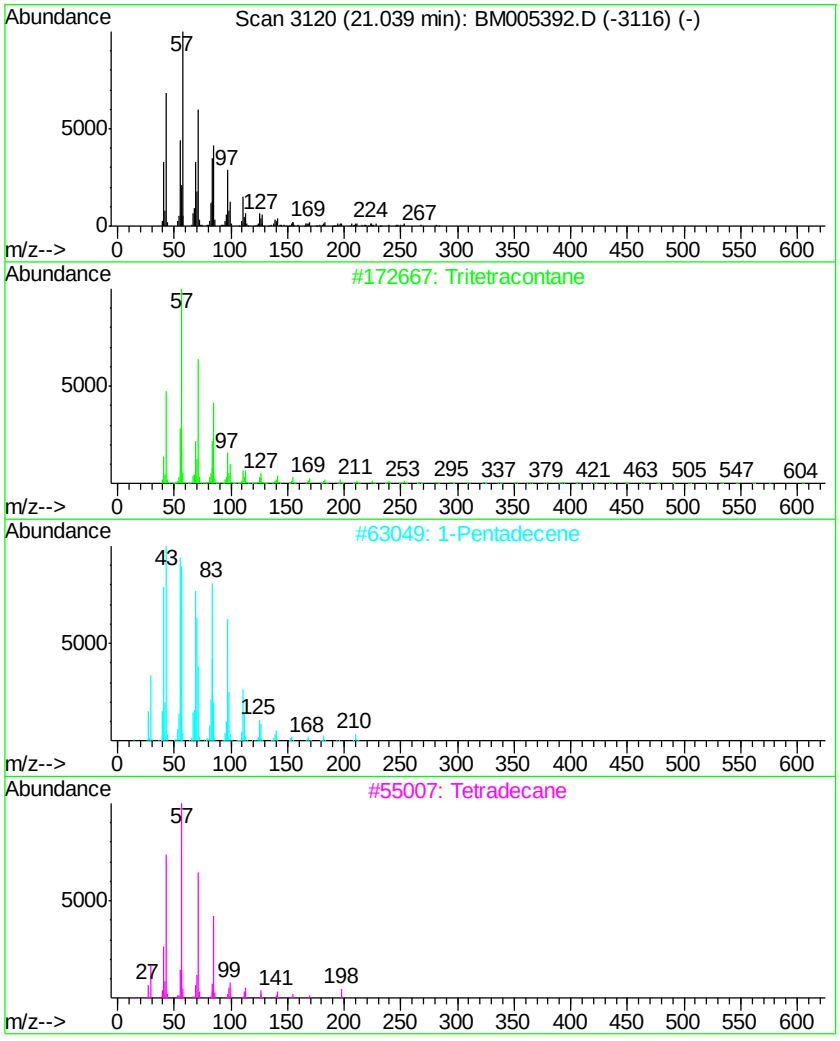
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

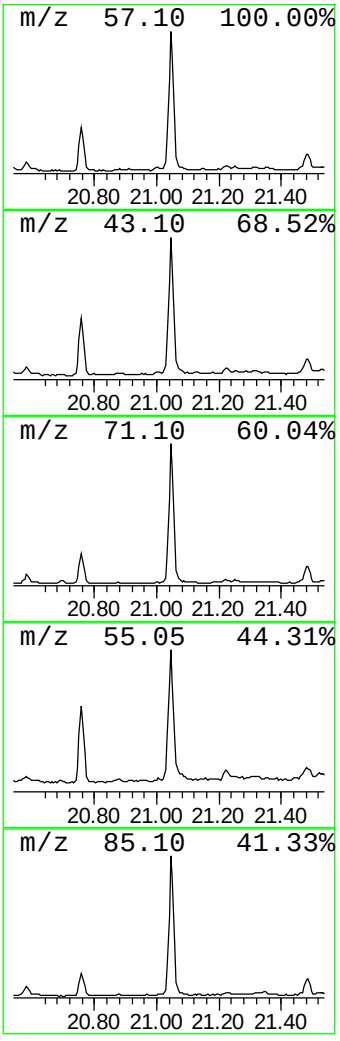
****

Peak Number 4 (DEL) Alkane: Straight-Chai... Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.04	5.27 ng/ul	499630	Chrysene-d12	21.34

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tritetracontane	605	C43H88	007098-21-7	91
2	1-Pentadecene	210	C15H30	013360-61-7	86
3	Tetradecane	198	C14H30	000629-59-4	62
4	Pentadecane	212	C15H32	000629-62-9	62
5	Hexadecane	226	C16H34	000544-76-3	62





Library Search Compound Report

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Instrument : BNA_M
ClientSampleId : H4076

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Quant Title : SVOA CALIBRATION

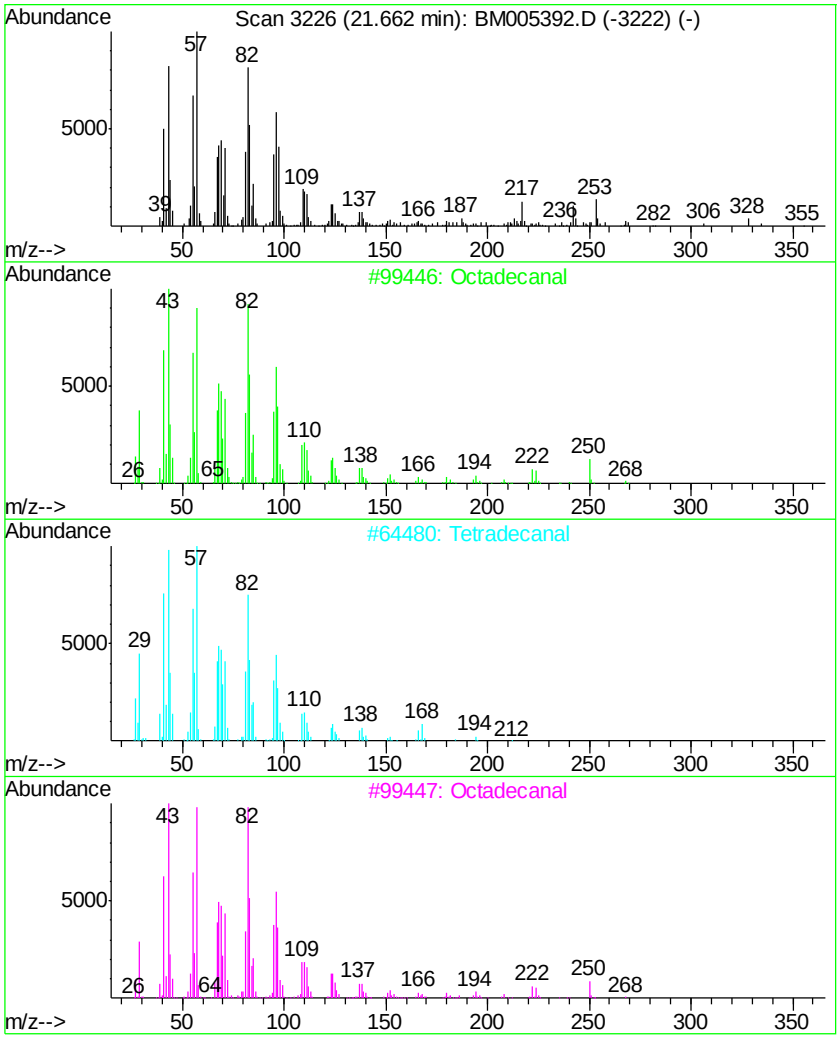
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

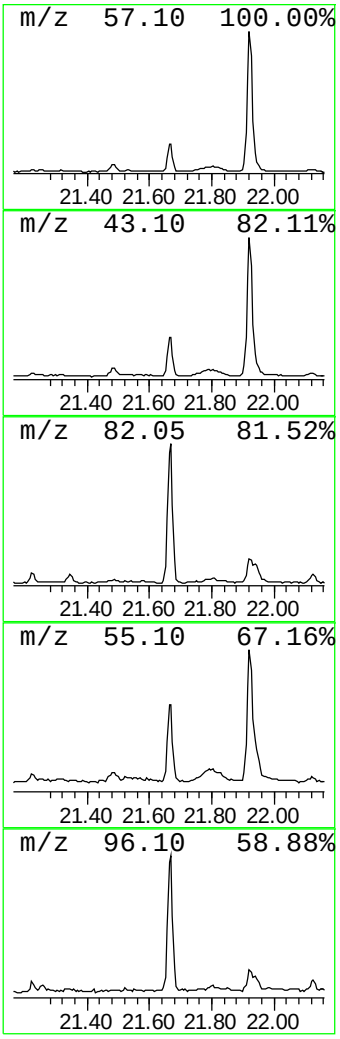
****

Peak Number 5 Octadecanal Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.66	4.13 ng/ul	391588	Chrysene-d12	21.34

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanal	268	C18H36O	000638-66-4	96
2	Tetradecanal	212	C14H28O	000124-25-4	94
3	Octadecanal	268	C18H36O	000638-66-4	91
4	Oxirane, hexadecyl-	268	C18H36O	007390-81-0	91
5	(Z)-14-Tricosenyl formate	366	C24H46O2	077899-10-6	89





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Instrument : BNA_M
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Quant Title : SVOA CALIBRATION

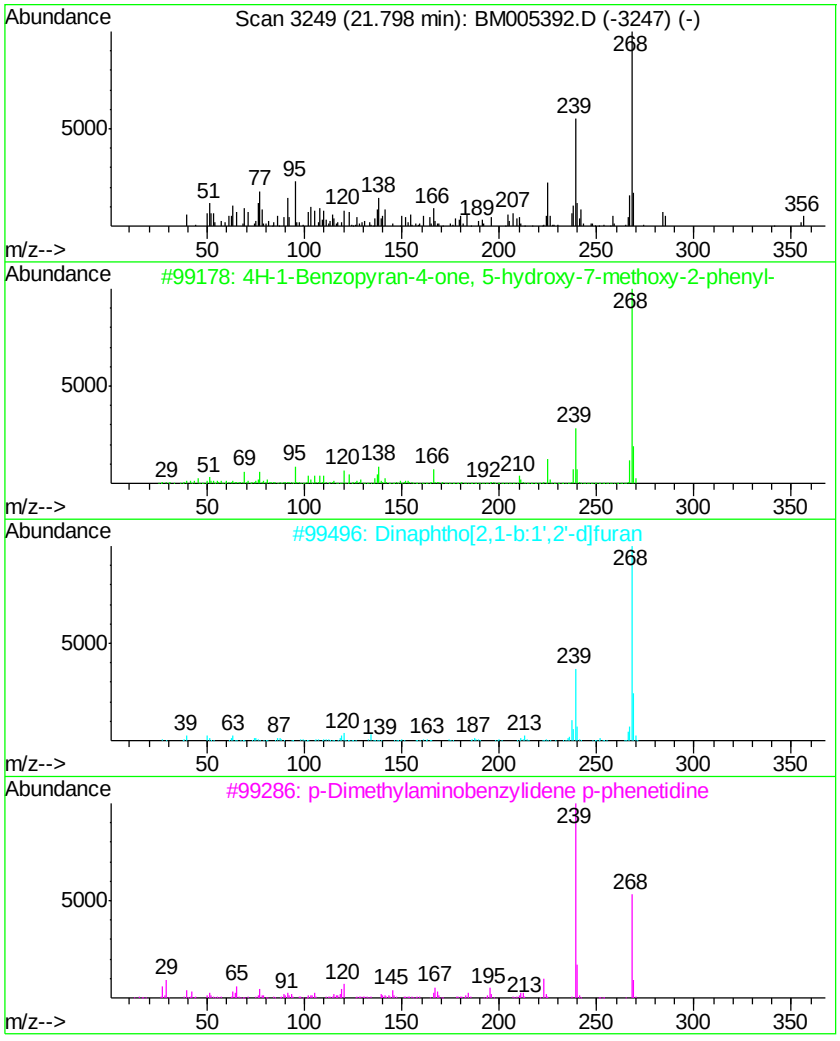
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

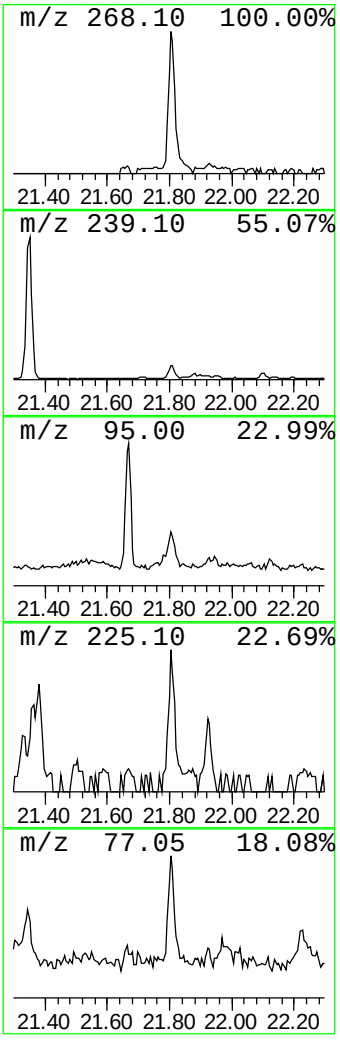
****

Peak Number 6 4H-1-Benzopyran-4-one, 5-hy... Concentration Rank 19

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.80	2.24 ng/ul	212212	Chrysene-d12	21.34

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4H-1-Benzopyran-4-one, 5-hydroxy...	268	C16H12O4	000520-28-5	95
2	Dinaphtho[2,1-b:1',2'-d]furan	268	C20H12O	000194-63-8	58
3	p-Dimethylaminobenzylidene p-phe...	268	C17H20N2O	015484-93-2	50
4	4H-1-Benzopyran-4-one, 3-hydroxy...	268	C16H12O4	007478-60-6	43
5	4H-1-Benzopyran-4-one, 3-hydroxy...	268	C16H12O4	007478-60-6	43





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Instrument : BNA_M
ClientSampleId : H4076

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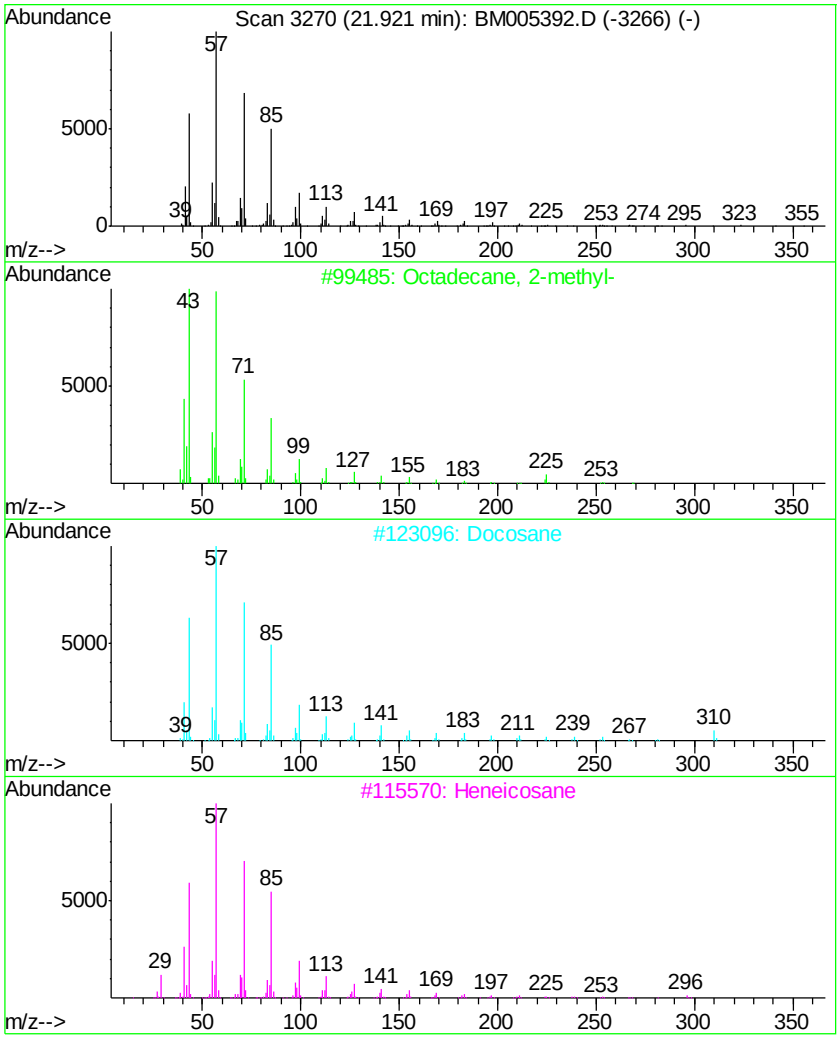
Quant Title : SVOA CALIBRATION

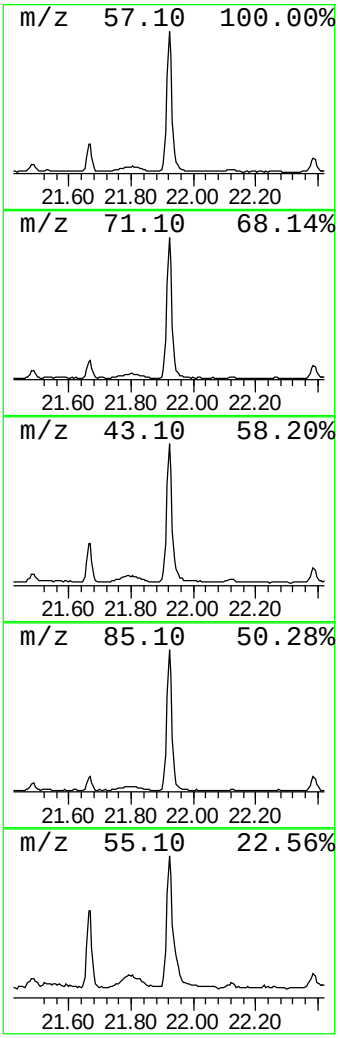
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 7 (DEL) Alkane: Straight-Chai... Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.92	9.02 ng/ul	854633	Chrysene-d12	21.34

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecane, 2-methyl-	268	C19H40	001560-88-9	94
2	Docosane	310	C22H46	000629-97-0	91
3	Heneicosane	296	C21H44	000629-94-7	91
4	Octacosane	394	C28H58	000630-02-4	91
5	Docosane, 7-hexyl-	394	C28H58	055373-86-9	91





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ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

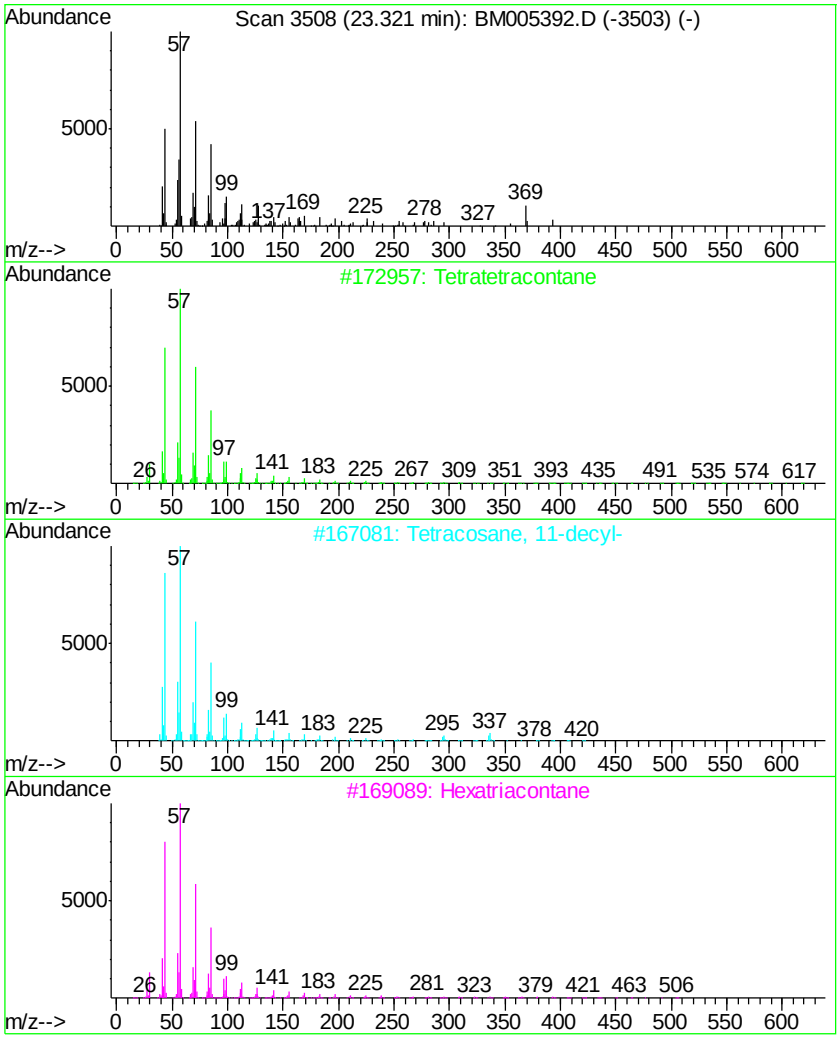
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

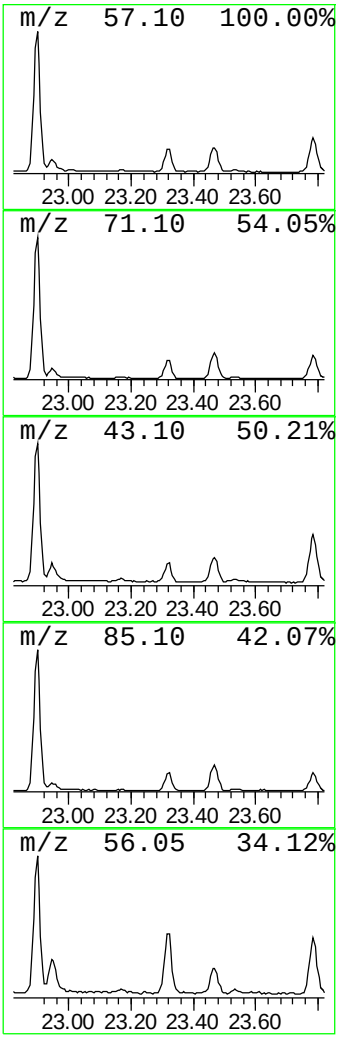
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 9 (DEL) Alkane: Straight-Chai... Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
23.32	2.52 ng/ul	175237	Perylene-d12	23.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetratetracontane	619	C44H90	007098-22-8	87
2	Tetracosane, 11-decyl-	479	C34H70	055429-84-0	83
3	Hexatriacontane	507	C36H74	000630-06-8	83
4	Heptadecane, 9-octyl-	352	C25H52	007225-64-1	83
5	Heneicosane, 11-decyl-	437	C31H64	055320-06-4	83





Library Search Compound Report

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Data File : BM005392.D
Acq On : 11 May 2016 18:15
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Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

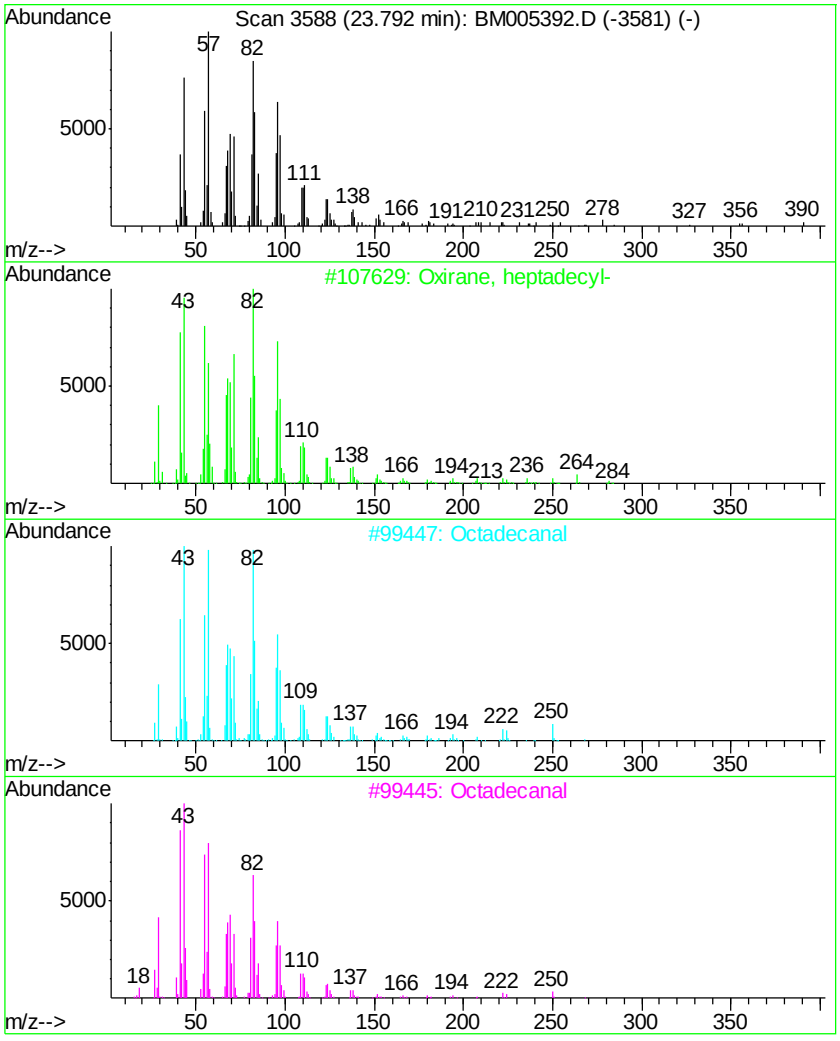
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

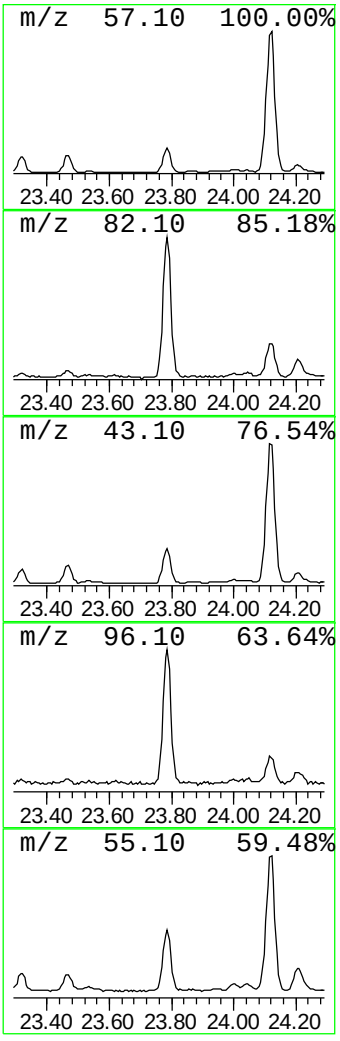
****

Peak Number 10 Oxirane, heptadecyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
23.79	7.27 ng/ul	504582	Perylene-d12	23.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Oxirane, heptadecyl-	282	C19H38O	067860-04-2	96
2	Octadecanal	268	C18H36O	000638-66-4	94
3	Octadecanal	268	C18H36O	000638-66-4	91
4	Oxirane, hexadecyl-	268	C18H36O	007390-81-0	90
5	17-Octadecenal	266	C18H34O	056554-86-0	90





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Sample : H2834-16
Misc :
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Instrument : BNA_M
ClientSampleId : H4076

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

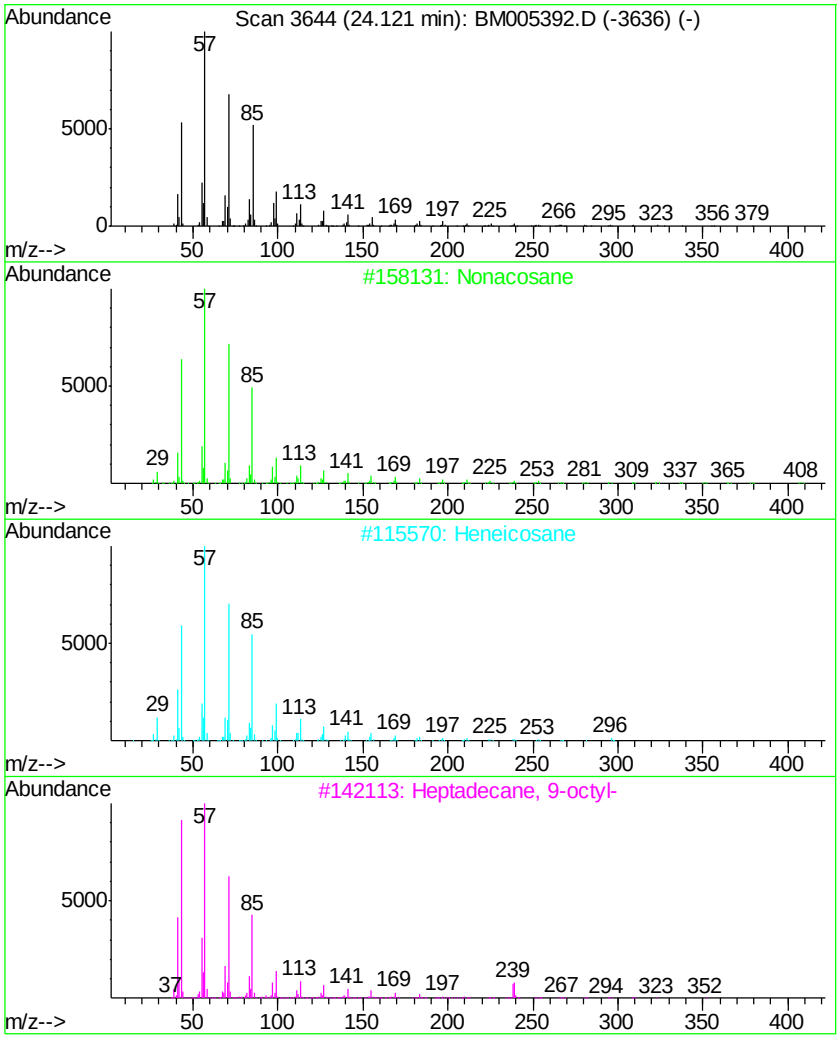
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

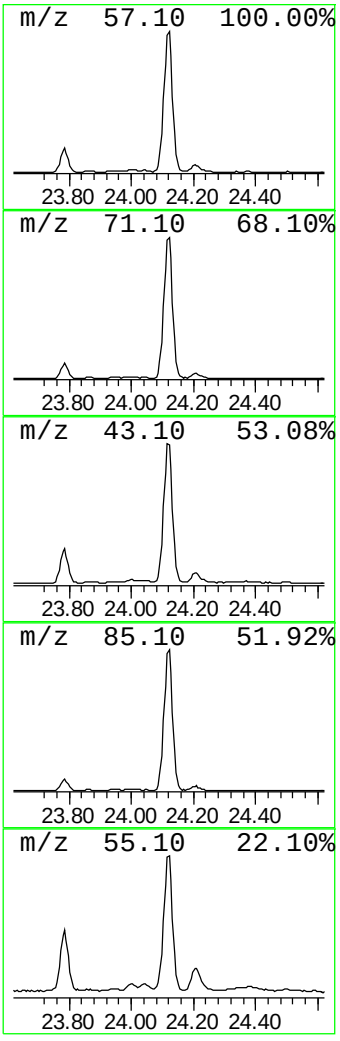
****

Peak Number 11 (DEL) Alkane: Straight-Chai... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.12	21.13 ng/ul	1467080	Perylene-d12	23.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonacosane	408	C29H60	000630-03-5	91
2	Heneicosane	296	C21H44	000629-94-7	91
3	Heptadecane, 9-octyl-	352	C25H52	007225-64-1	91
4	Octacosane	394	C28H58	000630-02-4	91
5	Tetratriacontane	479	C34H70	014167-59-0	91





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Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

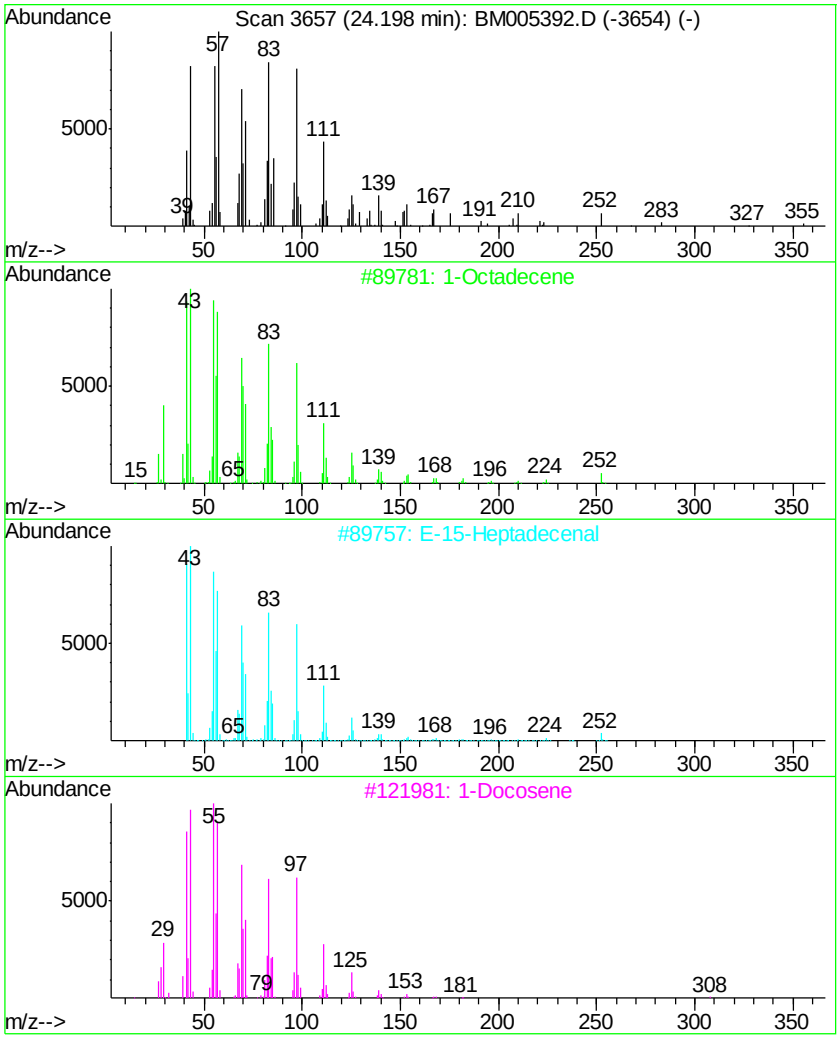
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

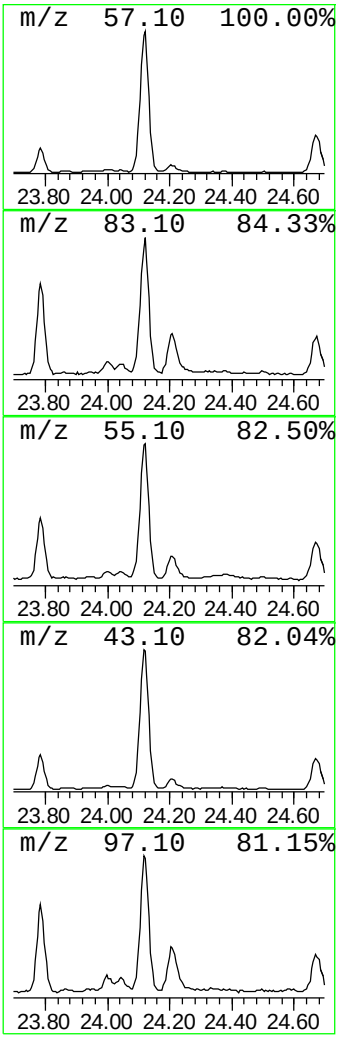
****

Peak Number 12 (DEL) Alkane: Cyclic-24.20 Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.20	2.35 ng/ul	163405	Perylene-d12	23.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Octadecene	252	C18H36	000112-88-9	93
2	E-15-Heptadecenal	252	C17H32O	1000130-97-9	91
3	1-Docosene	308	C22H44	001599-67-3	90
4	Bacteriochlorophyll-c-stearyl	841	C52H72MgN4O4	1000164-49-7	87
5	Acetic acid, octadecyl ester	312	C20H40O2	000822-23-1	87





Library Search Compound Report

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Sample : H2834-16
Misc :
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Instrument : BNA_M
ClientSampleId : H4076

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Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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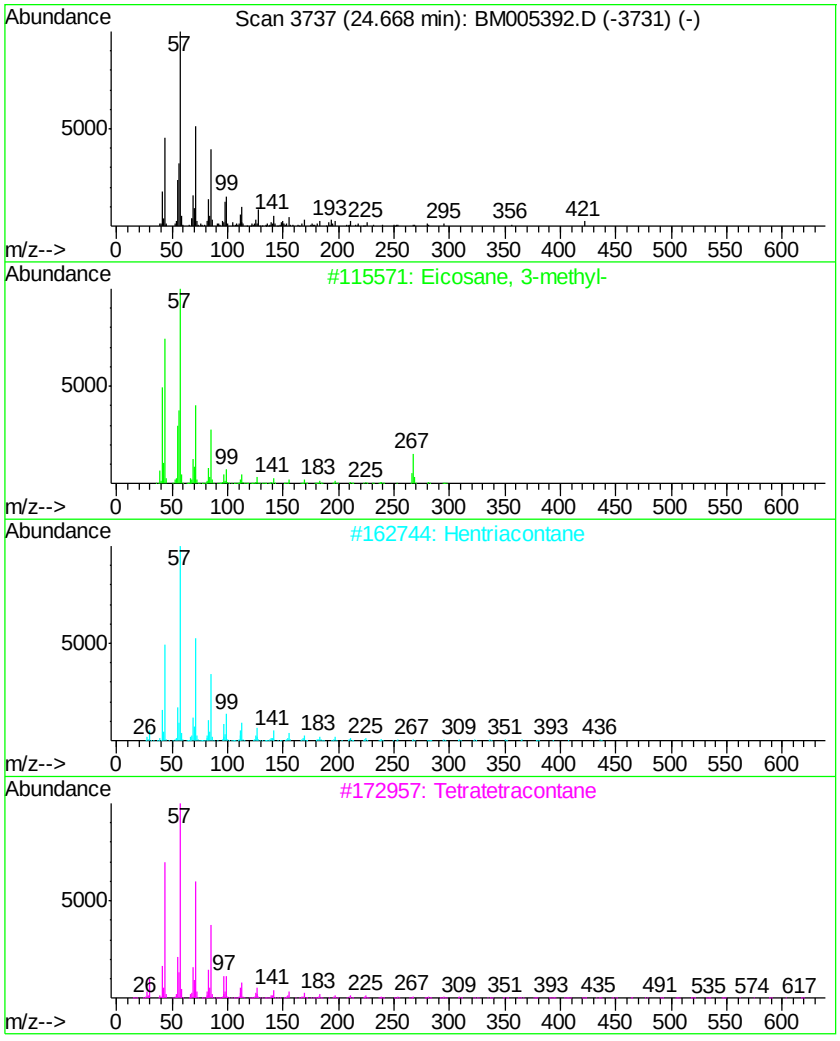
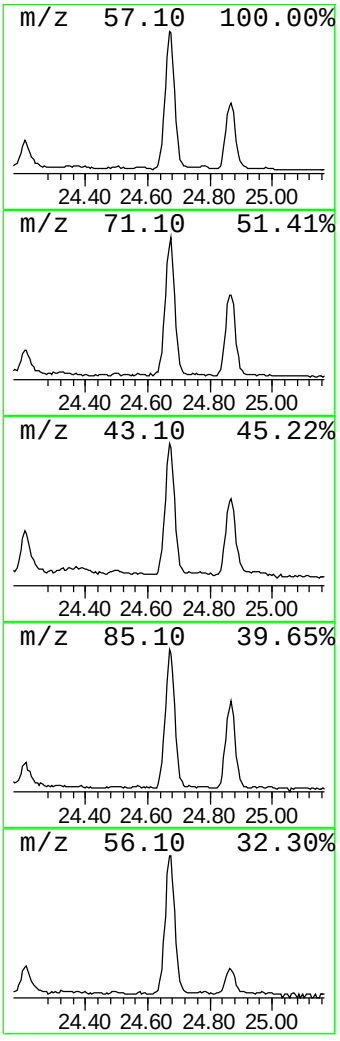
Peak Number 13 (DEL) Alkane: Straight-Chai... Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.67	6.45 ng/ul	448185	Perylene-d12	23.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Eicosane, 3-methyl-	296	C21H44	006418-46-8	90
2	Hentriacontane	437	C31H64	000630-04-6	87
3	Tetratetracontane	619	C44H90	007098-22-8	87
4	Pentacosane	352	C25H52	000629-99-2	87
5	Heptadecane, 3-methyl-	254	C18H38	006418-44-6	87





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Instrument : BNA_M
ClientSampleId : H4076

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Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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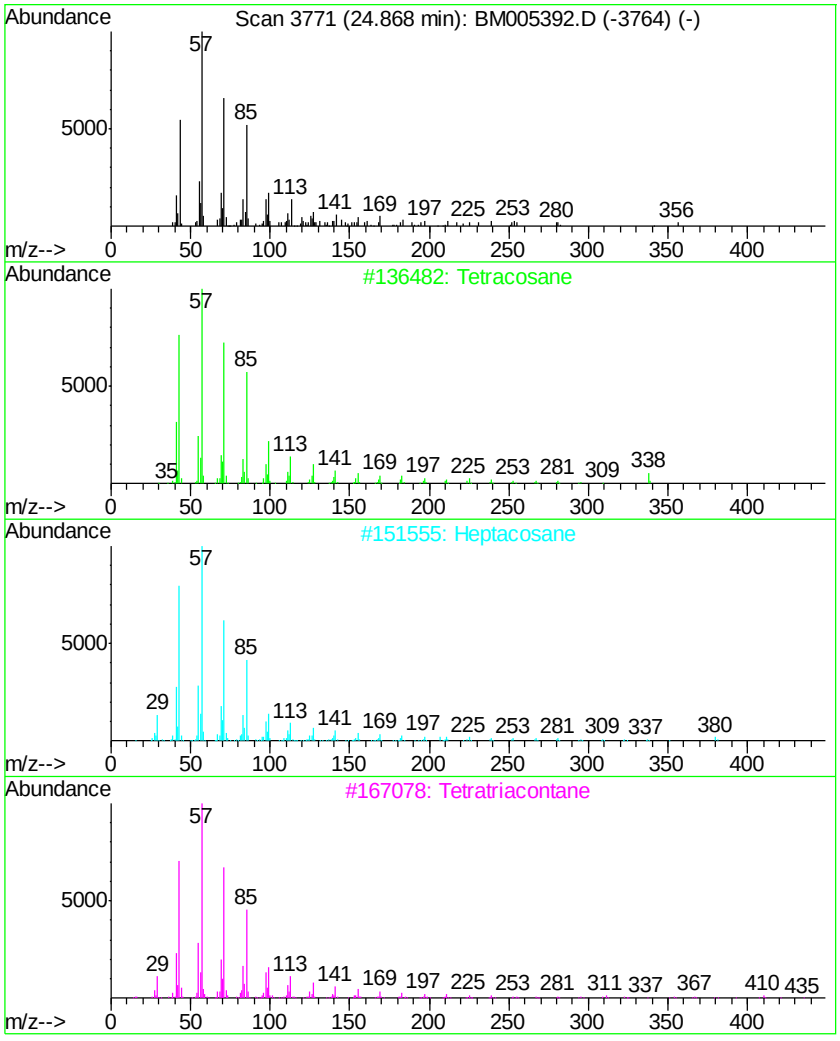
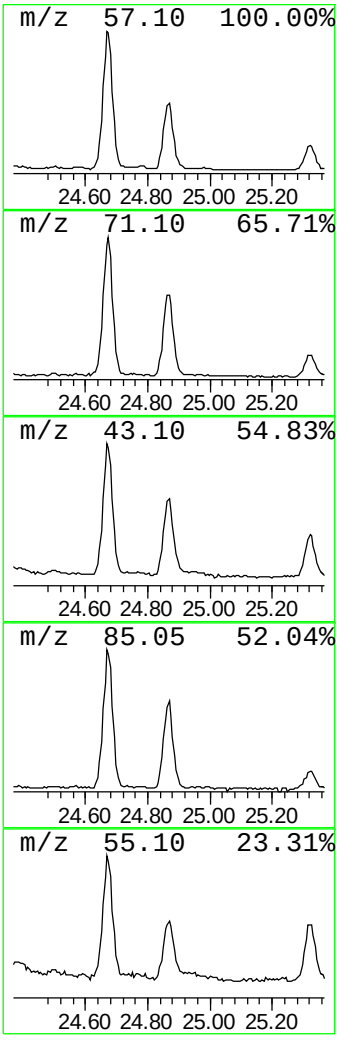
Peak Number 14 (DEL) Alkane: Straight-Chai... Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.87	3.87 ng/ul	268761	Perylene-d12	23.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetracosane	338	C24H50	000646-31-1	91
2	Heptacosane	380	C27H56	000593-49-7	91
3	Tetratriacontane	479	C34H70	014167-59-0	90
4	Nonacosane	408	C29H60	000630-03-5	90
5	Tetratetracontane	619	C44H90	007098-22-8	90





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Quant Title : SVOA CALIBRATION

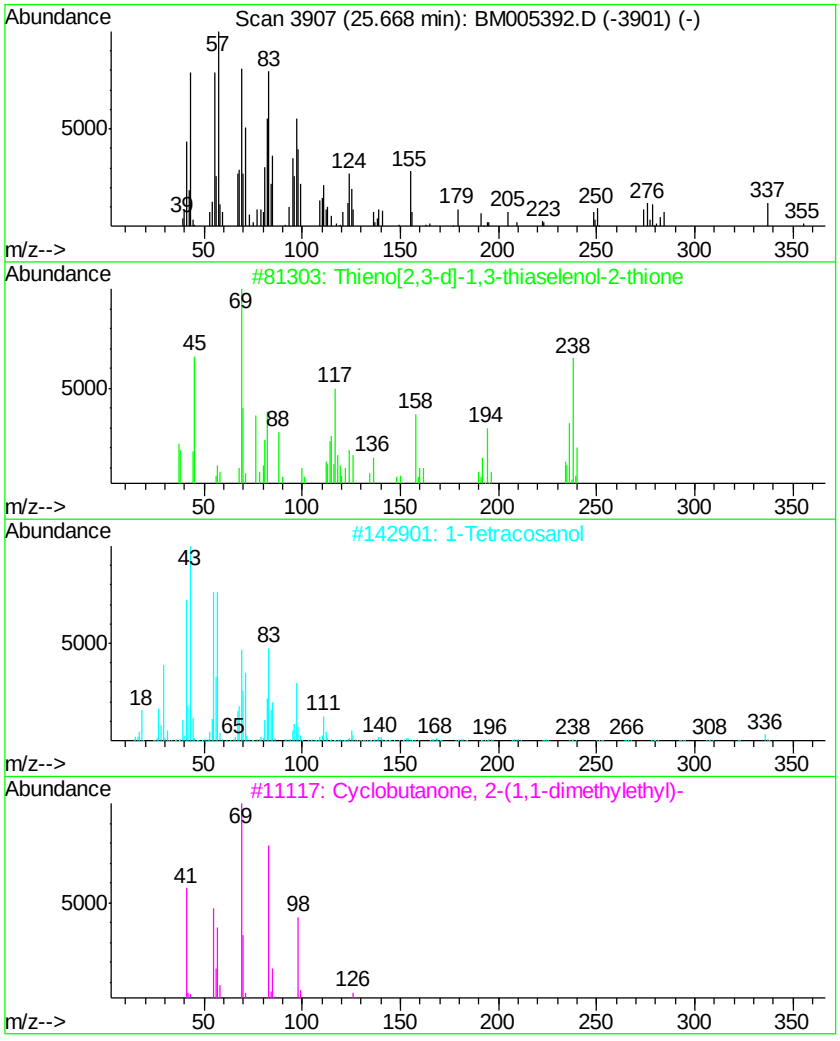
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

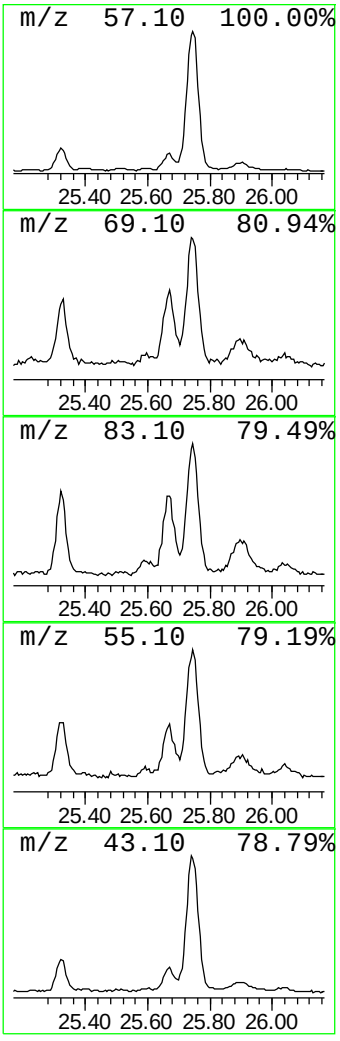
****

Peak Number 16 Thieno[2,3-d]-1,3-thiaselen... Concentration Rank 20

R.T.	EstConc	Area	Relative to ISTD	R.T.
25.67	2.06 ng/ul	143087	Perylene-d12	23.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Thieno[2,3-d]-1,3-thiaselenol-2-...	238	C5H2S3Se	081803-09-0	56
2	1-Tetracosanol	354	C24H50O	000506-51-4	52
3	Cyclobutanone, 2-(1,1-dimethylet...	126	C8H14O	004579-31-1	49
4	Cyclohexane, 1-(1,5-dimethylhexy...	280	C20H40	056009-20-2	45
5	6-Octadecenal	266	C18H34O	056554-97-3	43





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Misc :
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Instrument : BNA_M
ClientSampleId : H4076

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

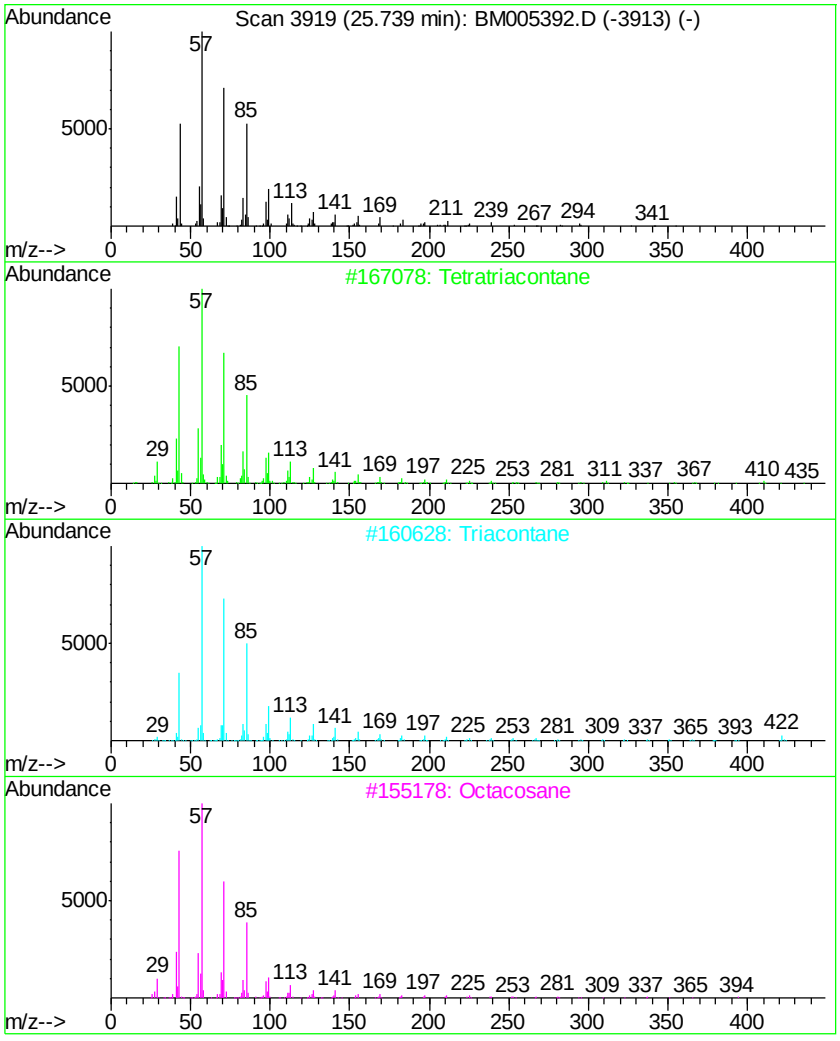
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

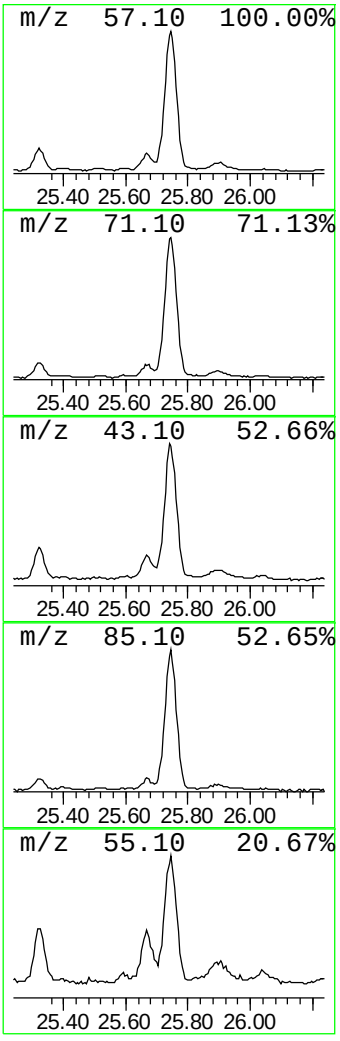
****

Peak Number 17 (DEL) Alkane: Straight-Chai... Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
25.74	8.39 ng/ul	582784	Perylene-d12	23.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetratriacontane	479	C34H70	014167-59-0	91
2	Triacontane	422	C30H62	000638-68-6	91
3	Octacosane	394	C28H58	000630-02-4	91
4	Tetracosane, 11-decyl-	479	C34H70	055429-84-0	91
5	Tetracosane	338	C24H50	000646-31-1	91





Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

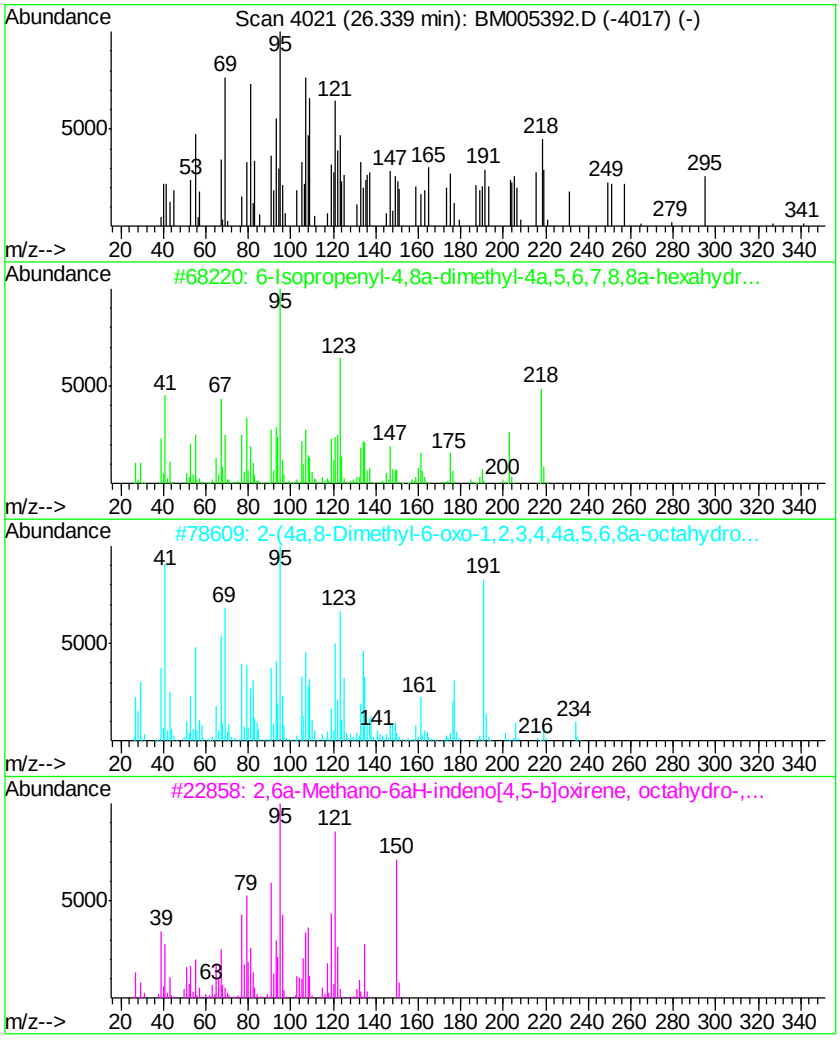
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

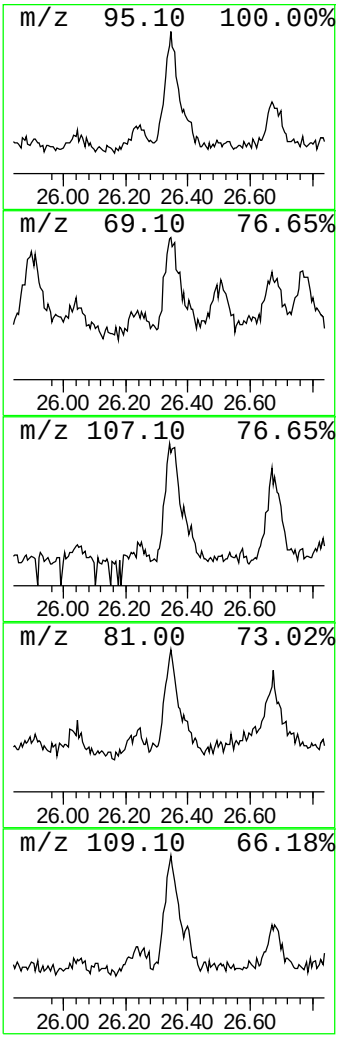
****

Peak Number 18 6-Isopropenyl-4,8a-dimethyl... Concentration Rank 18

R.T.	EstConc	Area	Relative to ISTD	R.T.
26.34	2.26 ng/ul	156923	Perylene-d12	23.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	6-Isopropenyl-4,8a-dimethyl-4a,5...	218	C15H22O	086917-79-5	66
2	2-(4a,8-Dimethyl-6-oxo-1,2,3,4,4...	234	C15H22O2	1000190-21-8	38
3	2,6a-Methano-6aH-indeno[4,5-b]ox...	150	C10H14O	016489-32-0	27
4	Cyclohexene, 1-methyl-3-(1-methy...	136	C10H16	000499-03-6	22
5	Bicyclo[2.2.1]heptan-2-ol, 1,7,7...	196	C12H20O2	005655-61-8	22





Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

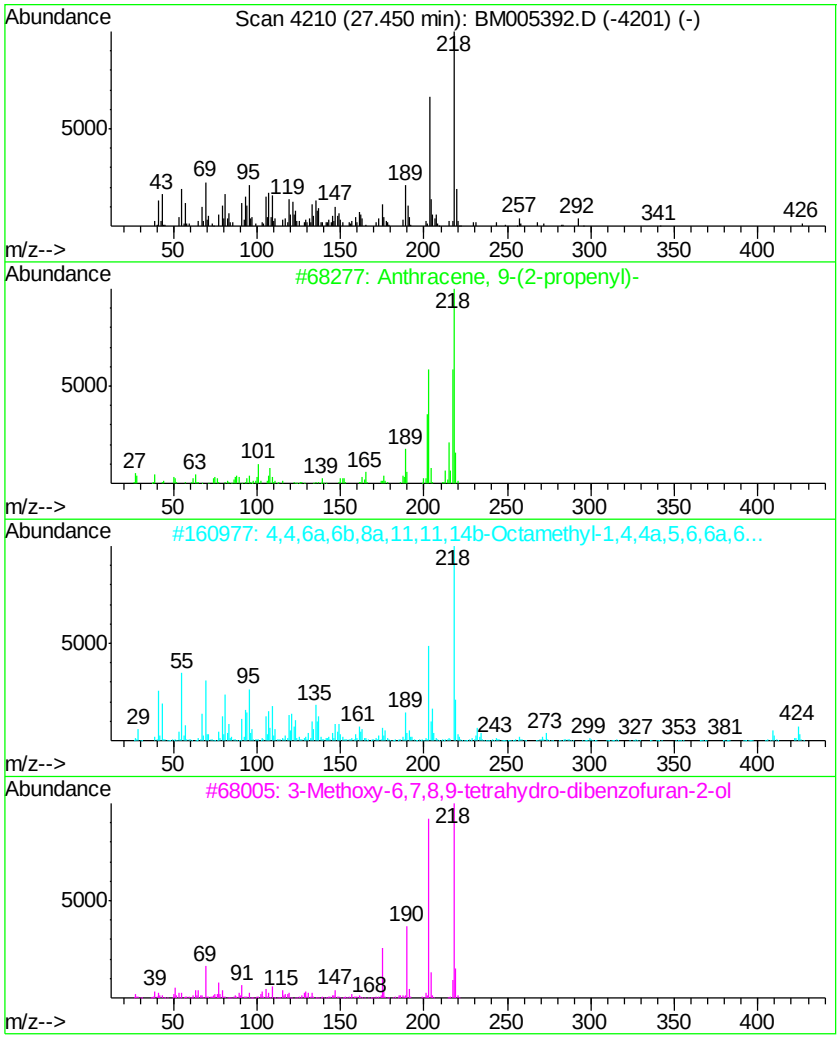
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

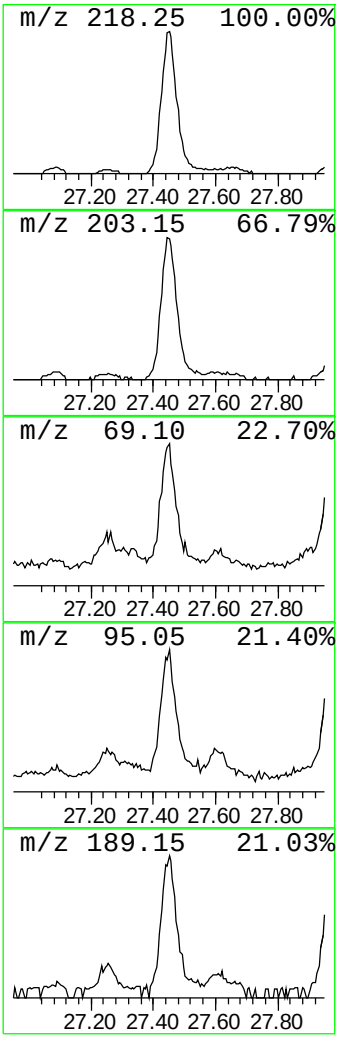
****

Peak Number 19 Anthracene, 9-(2-propenyl)- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
27.45	8.38 ng/ul	581662	Perylene-d12	23.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Anthracene, 9-(2-propenyl)-	218	C17H14	023707-65-5	74
2	4,4,6a,6b,8a,11,11,14b-Octamethy...	424	C30H48O	1000194-62-4	68
3	3-Methoxy-6,7,8,9-tetrahydro-dib...	218	C13H14O3	1000186-57-9	62
4	Neoisolongifolene, 8-bromo-	282	C15H23Br	1000151-64-8	53
5	Pyrene, hexadecahydro-	218	C16H26	002435-85-0	53





Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

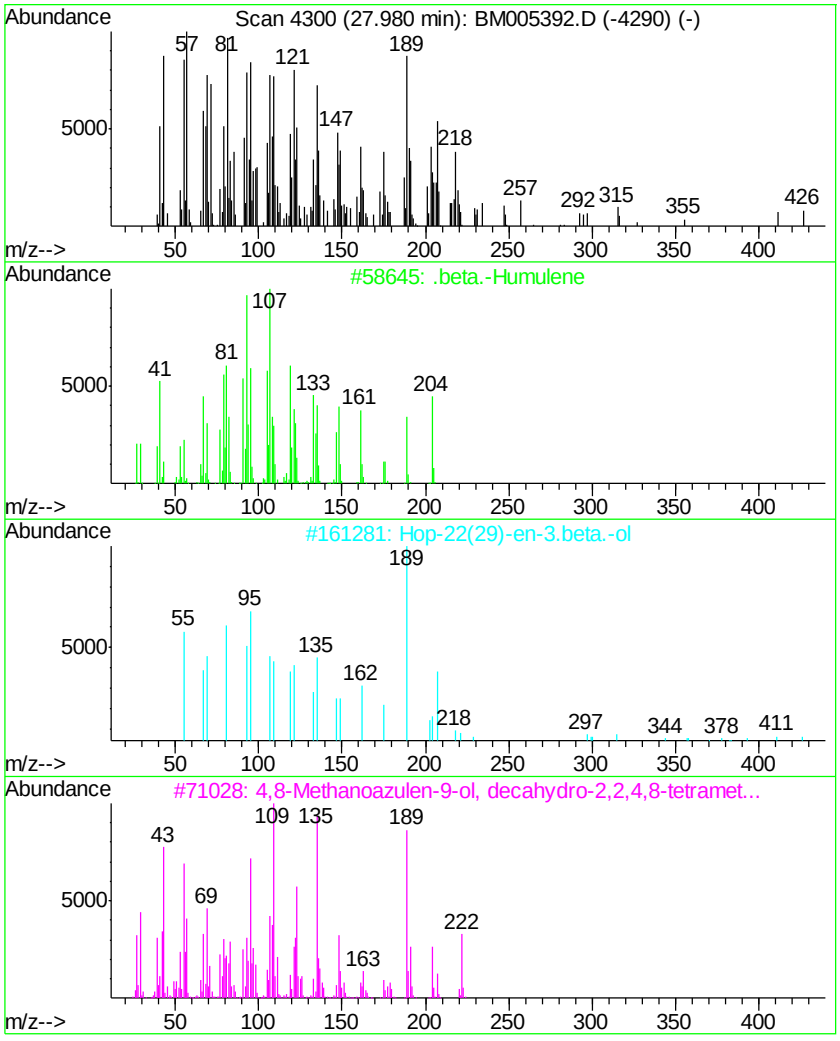
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

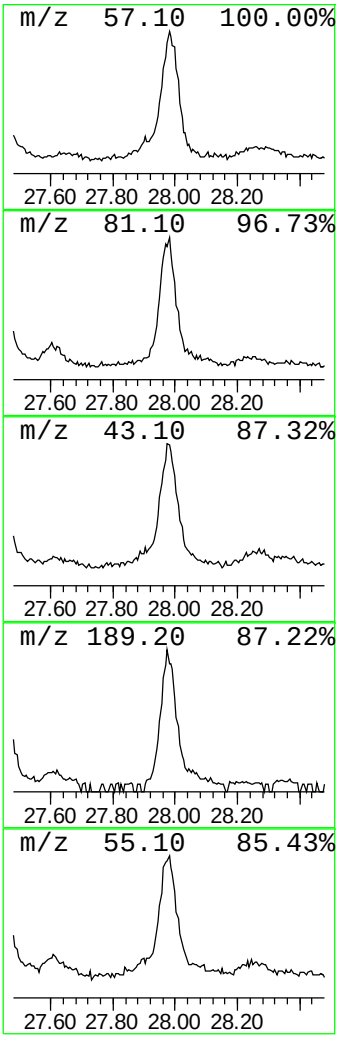
****

Peak Number 20 .beta.-Humulene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
27.98	10.04 ng/ul	697496	Perylene-d12	23.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	.beta.-Humulene	204	C15H24	000116-04-1	56
2	Hop-22(29)-en-3.beta.-ol	426	C30H50O	058801-23-3	50
3	4,8-Methanoazulen-9-ol, decahydr...	222	C15H26O	004586-22-5	38
4	1,5-Cycloundecadiene, 9-(1-methy...	190	C14H22	062338-55-0	38
5	2-Isopropenyl-4a,8-dimethyl-1,2,...	204	C15H24	1000193-57-0	38





Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4076

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
(DEL) Alkane: Cyc...	9.07	5.4	ng/ul	147851	1	7.76	545186	20.0
n-Hexadecanoic acid	18.04	2.9	ng/ul	238478	4	17.15	1654140	20.0
Oxirane, hexadecyl-	20.76	2.6	ng/ul	244999	5	21.34	1895600	20.0
(DEL) Alkane: Str...	21.04	5.3	ng/ul	499630	5	21.34	1895600	20.0
Octadecanal	21.66	4.1	ng/ul	391588	5	21.34	1895600	20.0
4H-1-Benzopyran-4...	21.80	2.2	ng/ul	212212	5	21.34	1895600	20.0
(DEL) Alkane: Str...	21.92	9.0	ng/ul	854633	5	21.34	1895600	20.0
(DEL) Alkane: Str...	23.32	2.5	ng/ul	175237	6	23.62	1388800	20.0
Oxirane, heptadecyl-	23.79	7.3	ng/ul	504582	6	23.62	1388800	20.0
(DEL) Alkane: Str...	24.12	21.1	ng/ul	1467080	6	23.62	1388800	20.0
(DEL) Alkane: Cyc...	24.20	2.4	ng/ul	163405	6	23.62	1388800	20.0
(DEL) Alkane: Str...	24.67	6.5	ng/ul	448185	6	23.62	1388800	20.0
(DEL) Alkane: Str...	24.87	3.9	ng/ul	268761	6	23.62	1388800	20.0
Thieno[2,3-d]-1,3...	25.67	2.1	ng/ul	143087	6	23.62	1388800	20.0
(DEL) Alkane: Str...	25.74	8.4	ng/ul	582784	6	23.62	1388800	20.0
6-Isopropenyl-4,8...	26.34	2.3	ng/ul	156923	6	23.62	1388800	20.0
Anthracene, 9-(2-...	27.45	8.4	ng/ul	581662	6	23.62	1388800	20.0
.beta.-Humulene	27.98	10.0	ng/ul	697496	6	23.62	1388800	20.0

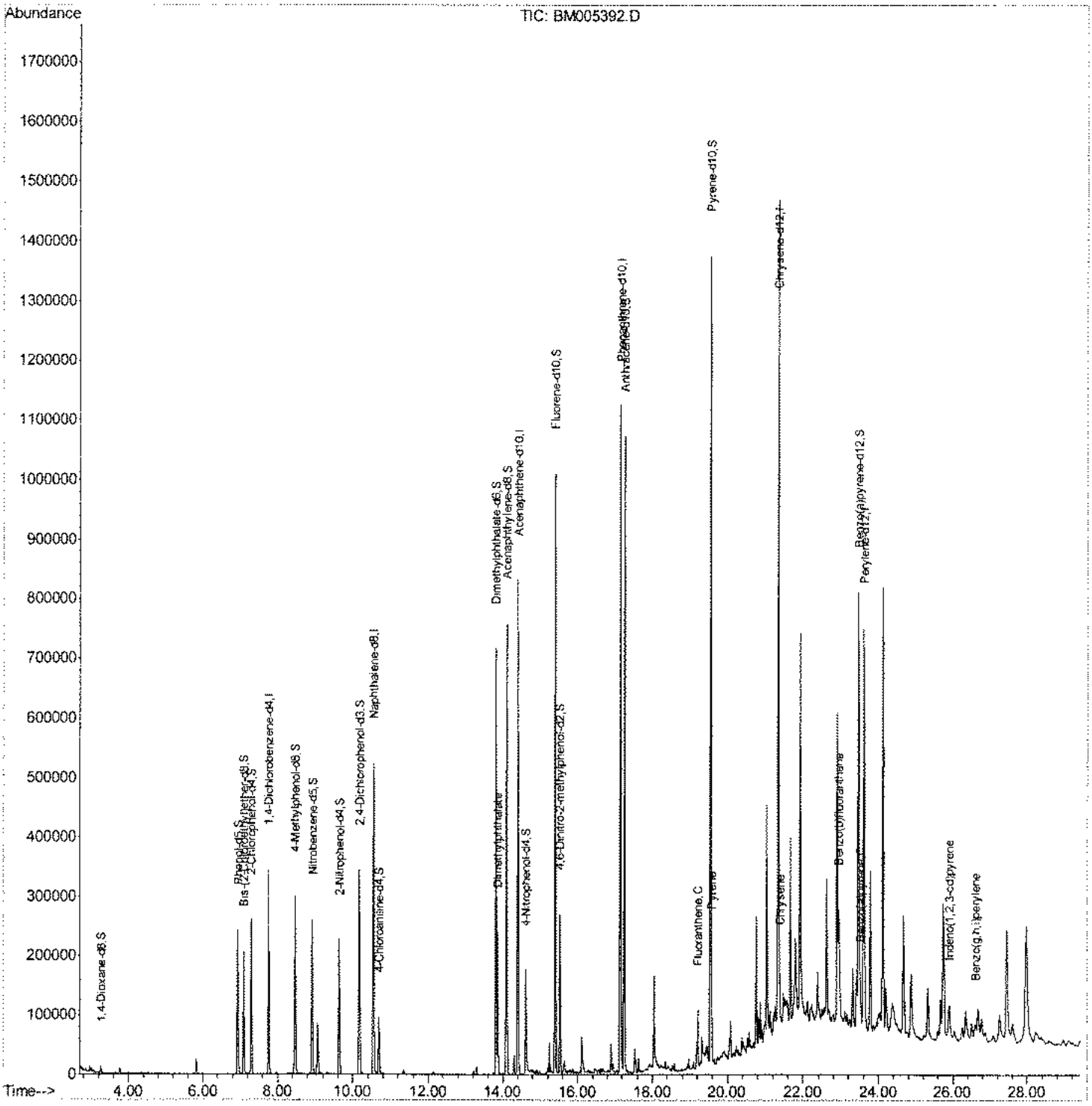
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 12 04:12:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4076

Manual Integrations APPROVED
sohil
5/12/2016 7:06:50 PM



Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 12 04:09:05 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4076

Manual Integrations APPROVED
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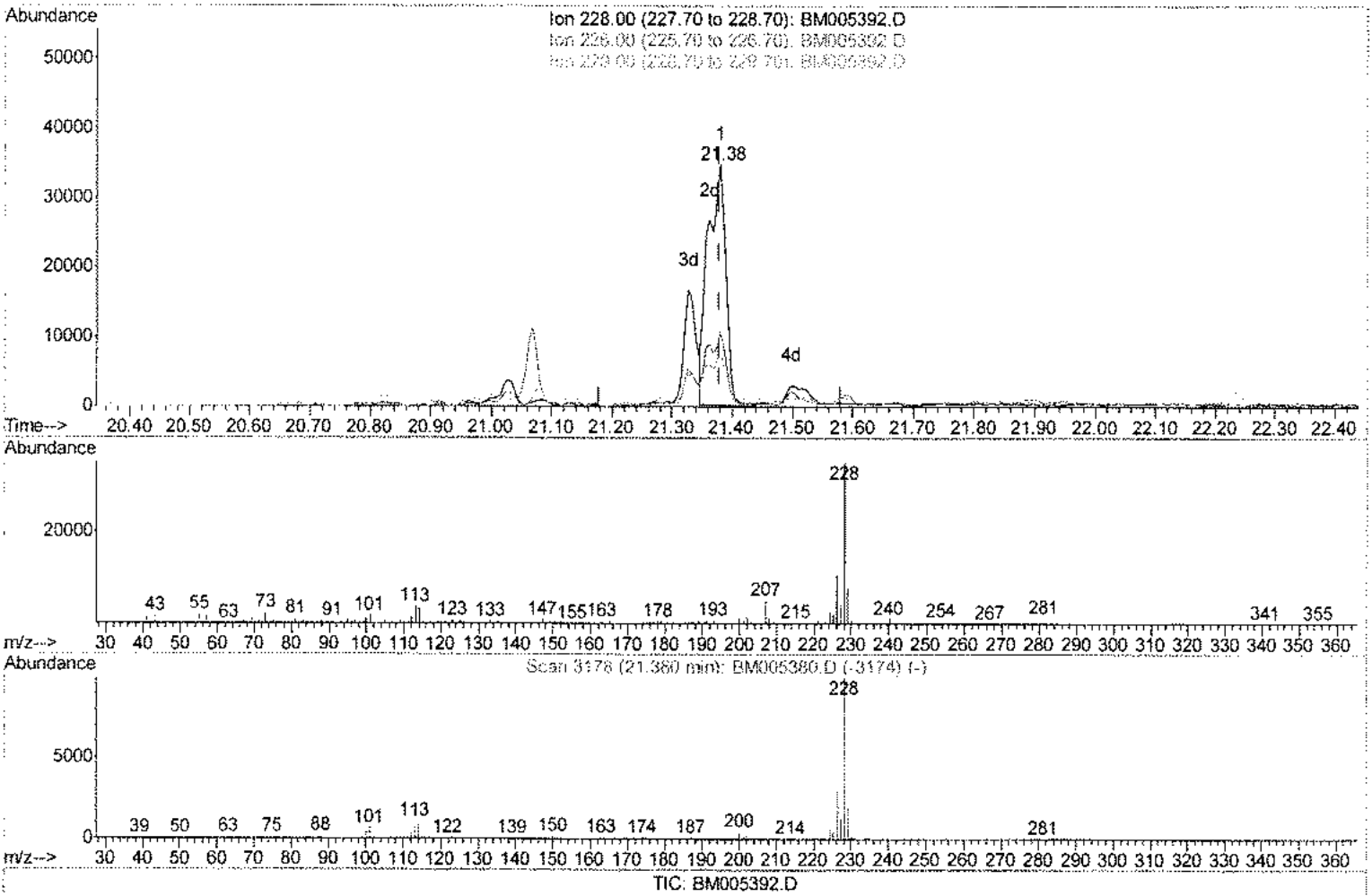

TIC: BM005392.D

(82) Chrysene

21.380min (+0.000) 2.01ng/ul m

response 70804

Ion	Exp%	Act%
228.00	100	100
226.00	29.50	30.92
229.00	19.20	22.77
0.00	0.00	0.00

U.M 05/16/16

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 12 04:09:05 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4076

Manual Integrations APPROVED
sohil
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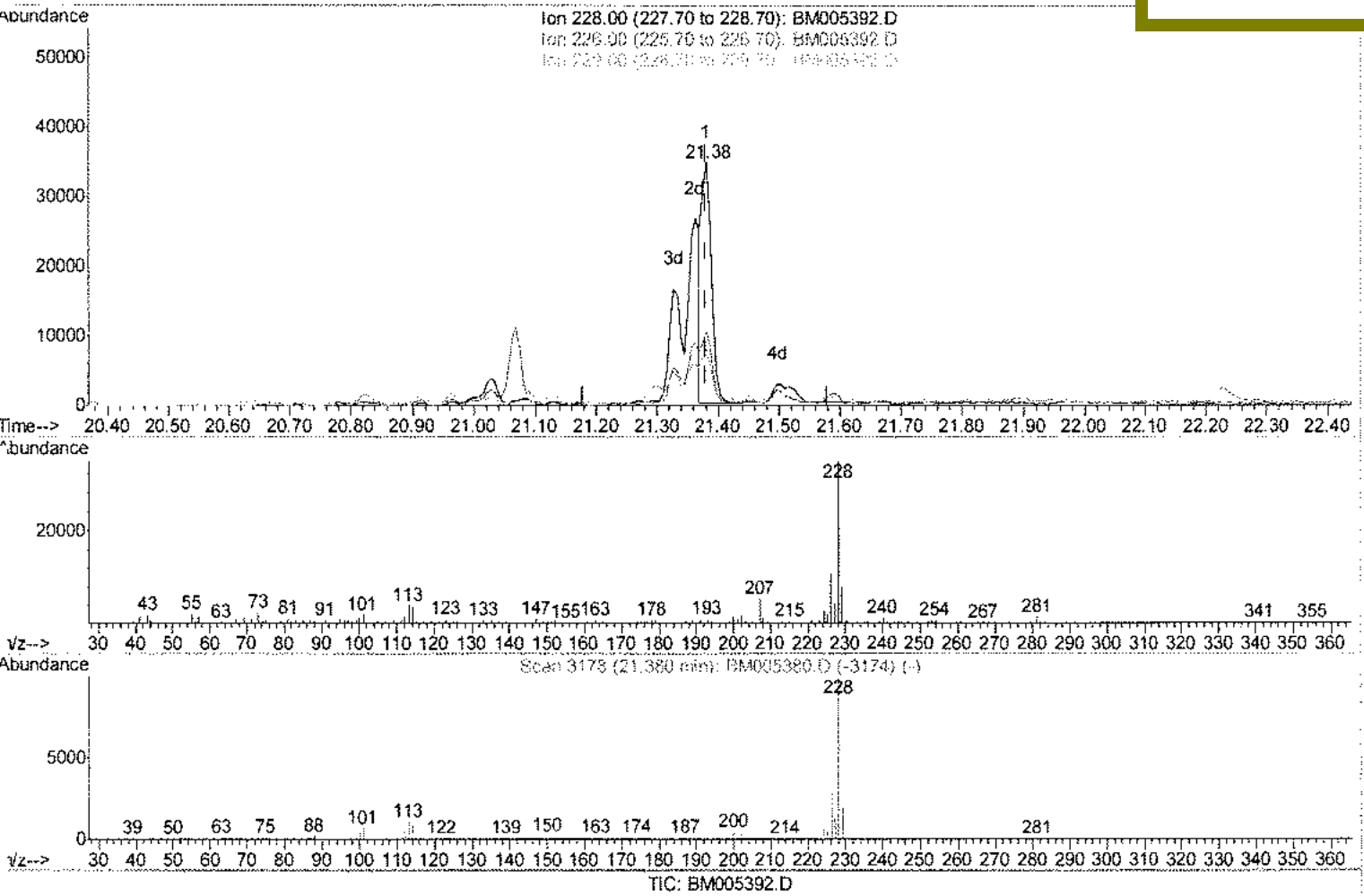

(82) Chrysene

21.380min (+0.000) 1.10ng/ul

response 38700

Ion	Exp%	Act%
228.00	100	100
226.00	29.50	30.92
229.00	19.20	22.77
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 12 03:32:53 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4076

Manual Integrations APPROVED
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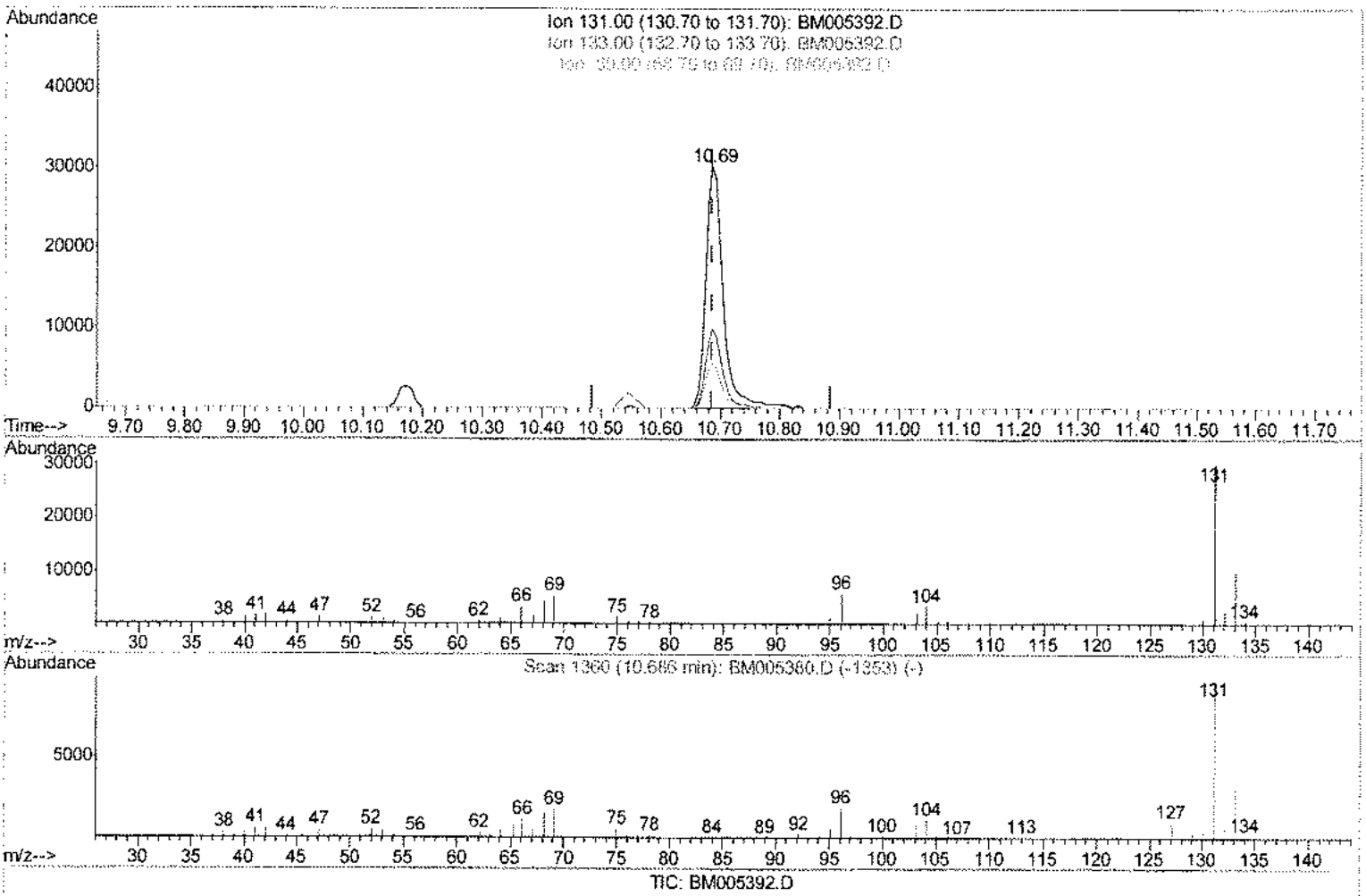

TIC: BM005392.D

(29) 4-Chloroaniline-d4 (S)

10.687min (+0.000) 7.77ng/ul m

response 61410

Ion	Exp%	Act%
131.00	100	100
133.00	32.30	32.62
69.00	19.20	18.27
0.00	0.00	0.00

U.M 05/16/2016

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 12 03:32:53 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
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Manual Integrations APPROVED
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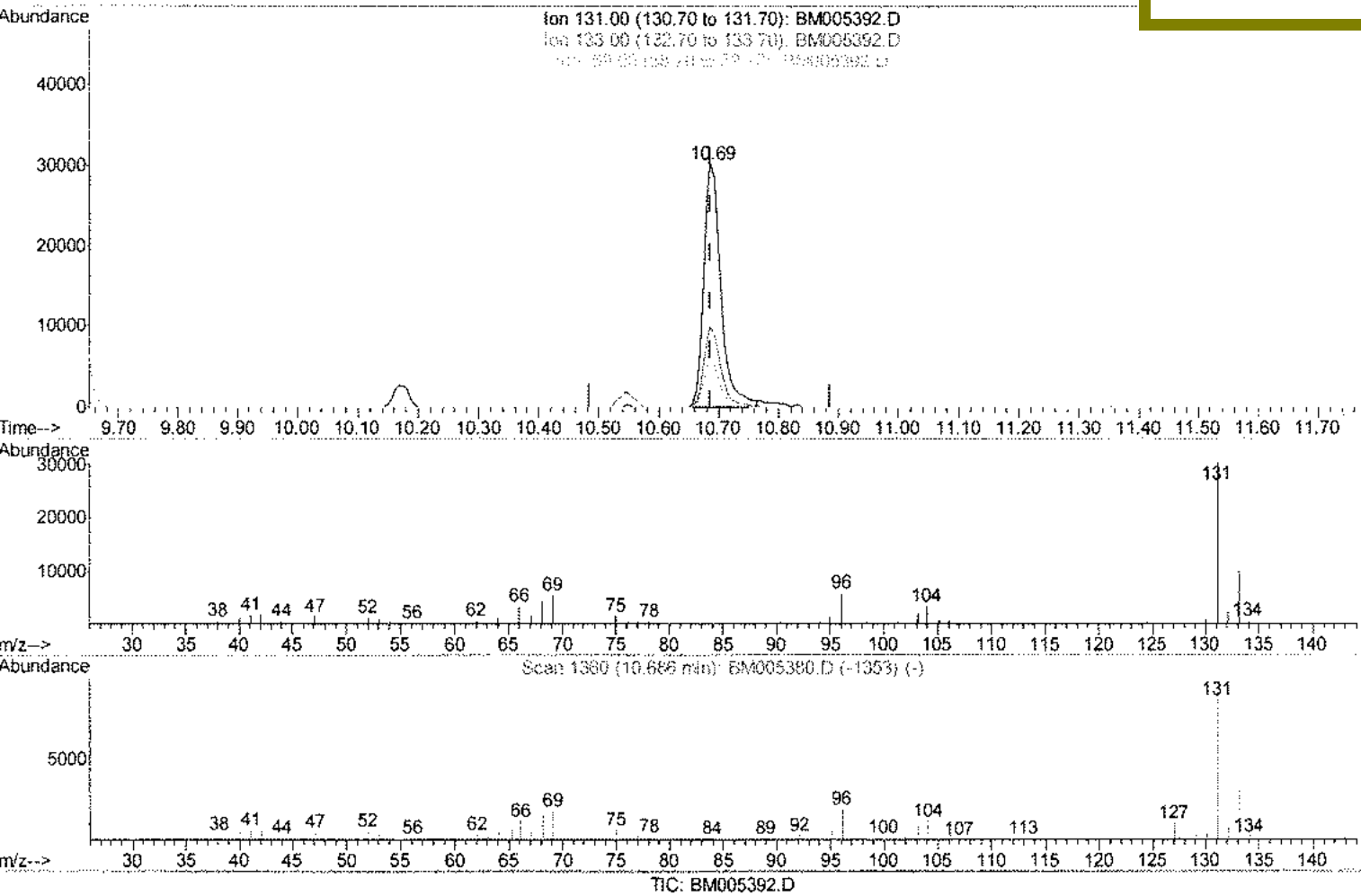
5/12/2016 7:06:50 PM



(29) 4-Chloroaniline-d4 (S)

10.687min (+0.000) 7.55ng/ul

response 59730

Ion	Exp%	Act%
131.00	100	100
133.00	32.30	32.62
69.00	19.20	18.27
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 12 03:32:53 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4076

Manual Integrations APPROVED
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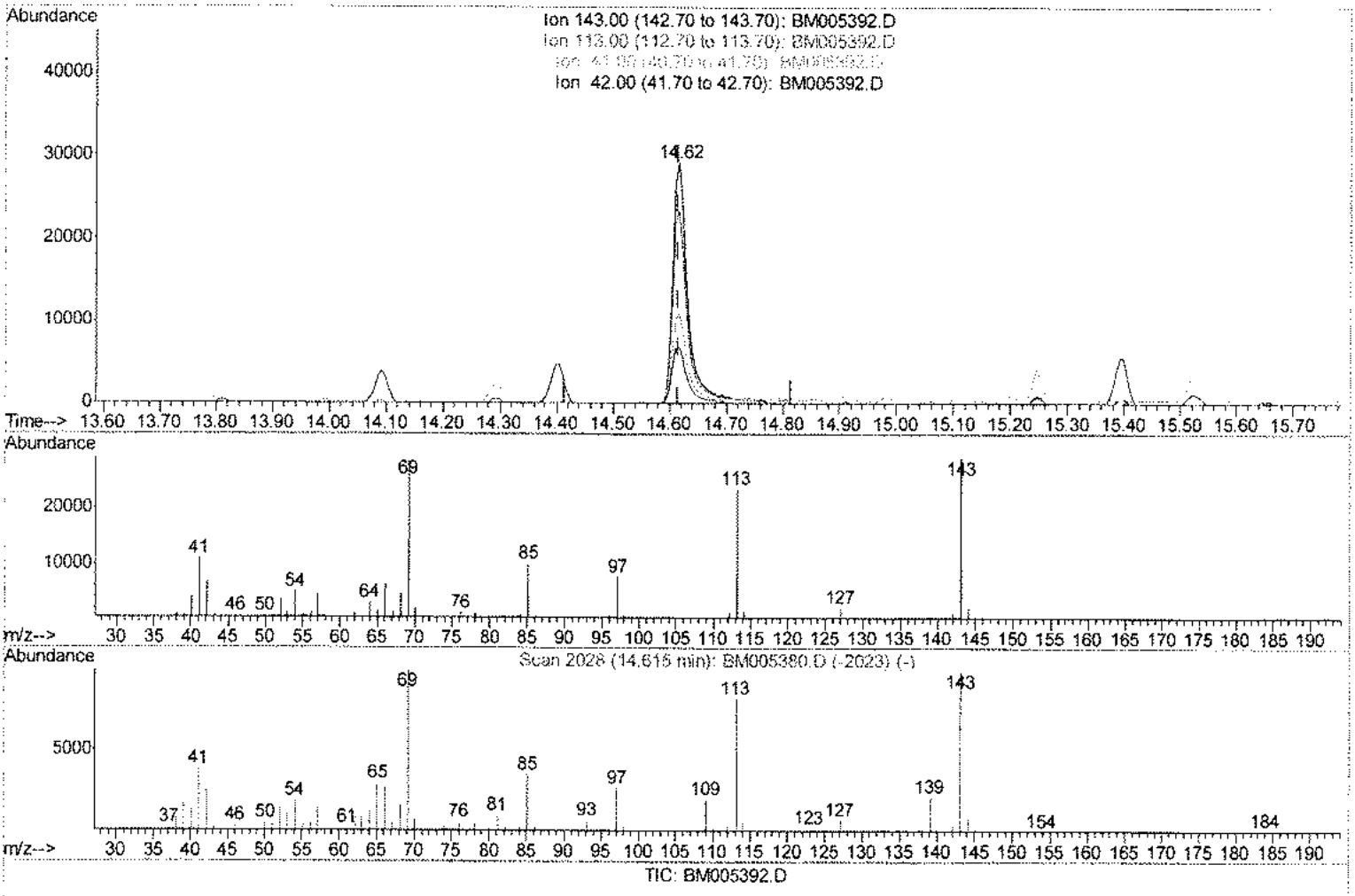

(51) 4-Nitrophenol-d4 (S)

14.616min (+0.000) 13.43ng/ul m

response 55292

> U.M
05/11/16

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	80.36
41.00	38.10	37.54
42.00	26.00	23.66

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 12 03:32:53 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4076

Manual Integrations APPROVED
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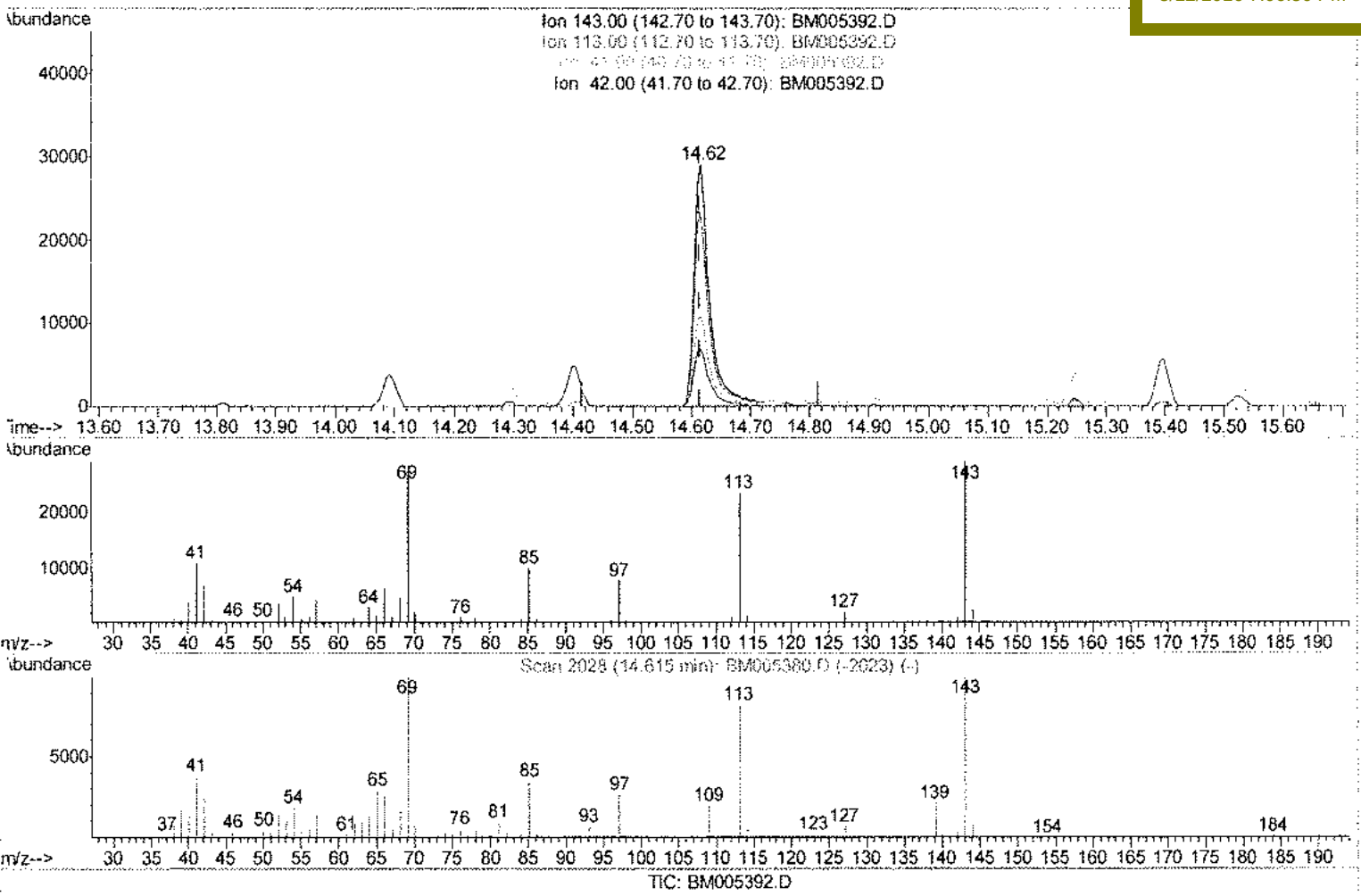

TIC: BM005392.D

(51) 4-Nitrophenol-d4 (S)

14.616min (+0.000) 13.07ng/ul

response 53810

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	80.36
41.00	38.10	37.54
42.00	26.00	23.66

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005392.D
Acq On : 11 May 2016 18:15
Operator : UM/SJ
Sample : H2834-16
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 12 04:12:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4076

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	90930	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	437247	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	281342	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	666164	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	644821	20.00	ng/ul	0.00
83) Perylene-d12	23.62	264	486399	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	5766	2.98	ng/uL	0.00
5) Phenol-d5	6.93	99	147061	17.83	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	89802	19.09	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	118058	18.95	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	115078	16.88	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	64369	20.62	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	76092	21.53	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	130730	19.90	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	61410m	7.77	ng/ul	0.00
43) Dimethylphthalate-d6	13.81	166	467161	20.72	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	548212	20.73	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	55292m	13.43	ng/ul	0.00
57) Fluorene-d10	15.40	176	407141	20.91	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	58723	15.67	ng/ul	0.00
70) Anthracene-d10	17.25	188	615669	20.91	ng/ul	0.00
76) Pyrene-d10	19.55	212	714383	24.00	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	462414	21.48	ng/ul	0.00
Target Compounds						Qvalue
44) Dimethylphthalate	13.86	163	151628	6.73	ng/ul	100
74) Fluoranthene	19.21	202	51091	1.32	ng/ul	100
77) Pyrene	19.57	202	58681	1.57	ng/ul	99
82) Chrysene	21.38	228	70804m	2.01	ng/ul	
85) Benzo(b)fluoranthene	22.93	252	103329	3.63	ng/ul	95
88) Benzo(a)pyrene	23.52	252	38691	1.44	ng/ul	96
89) Indeno(1,2,3-cd)pyrene	25.90	276	30839	1.05	ng/ul	95
91) Benzo(g,h,i)perylene	26.60	276	27054	1.09	ng/ul	98

U.M 05/16/16

U.M 05/16/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4102

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-18
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005454.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4102

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-18
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005454.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4102

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-18
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005454.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4102

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-18
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005454.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/14/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : 6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

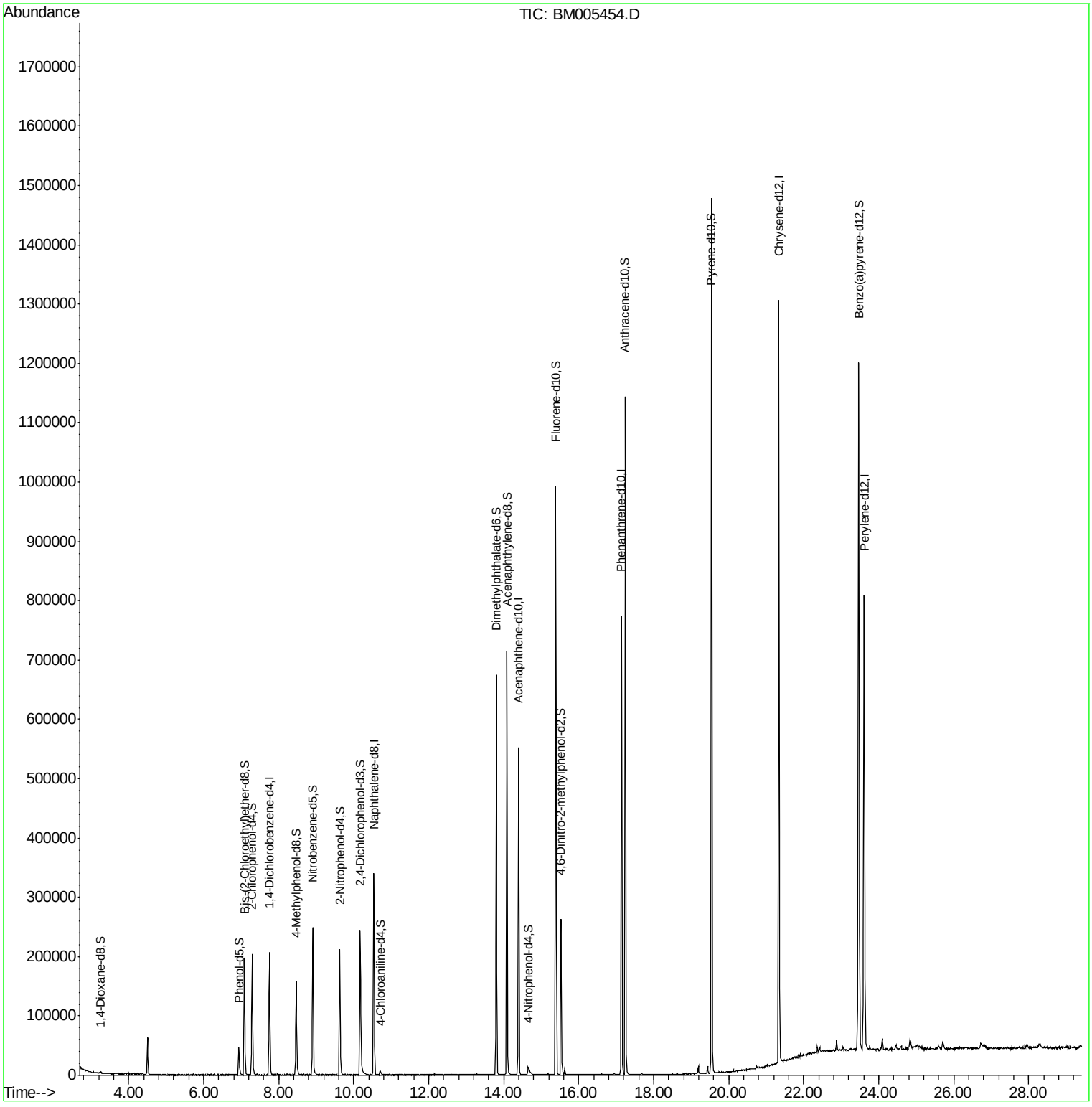
Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005454.D
Acq On : 14 May 2016 07:34
Operator : UM/SJ
Sample : H2834-18
Misc :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: May 16 03:58:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4102

Manual Integrations APPROVED
sohil
5/16/2016 7:01:49 PM



Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005454.D
Acq On : 14 May 2016 07:34
Operator : UM/SJ
Sample : H2834-18
Misc :
ALS Vial : 28 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H4102

Manual Integrations APPROVED
sohil
5/16/2016 7:01:49 PM

Quant Time: May 16 03:58:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	59452	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	280477	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	183415	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	462833	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	624224	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	579206	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1790	1.42	ng/uL	0.00
5) Phenol-d5	6.93	99	33726	6.25	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	92414	30.04	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	99811	24.51	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	63720	14.30	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	62054	30.99	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	71121	31.37	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	113495	26.93	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	8884	1.75	ng/ul	0.02
43) Dimethylphthalate-d6	13.80	166	457306	31.11	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	544128	31.56	ng/ul	0.00
51) 4-Nitrophenol-d4	14.66	143	9270m	3.45	ng/ul	0.04
57) Fluorene-d10	15.39	176	399202	31.45	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	63208	24.28	ng/ul	0.00
70) Anthracene-d10	17.24	188	653118	31.92	ng/ul	0.00
76) Pyrene-d10	19.54	212	816527	28.34	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	827381	32.27	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005454.D
Acq On : 14 May 2016 07:34
Operator : UM/SJ
Sample : H2834-18
Misc :
ALS Vial : 28 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4102

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.499	302	308	318	rVB	63163	102810	4.68%	0.553%
2	6.934	718	722	741	rVB	46995	85413	3.89%	0.459%
3	7.081	741	747	760	rBV	197001	322937	14.70%	1.736%
4	7.287	776	782	798	rBV	202798	343434	15.63%	1.846%
5	7.751	851	861	875	rVB	207219	351738	16.01%	1.891%
6	8.463	977	982	1000	rBV	157232	264310	12.03%	1.421%
7	8.904	1051	1057	1069	rBV	249336	430251	19.59%	2.313%
8	9.628	1174	1180	1191	rBV	212074	362158	16.49%	1.947%
9	10.169	1267	1272	1300	rBV	243491	490963	22.35%	2.639%
10	10.533	1326	1334	1343	rBV	340098	572959	26.08%	3.080%
11	13.798	1883	1889	1908	rBV	673795	966917	44.01%	5.197%
12	14.086	1931	1938	1946	rBV	714539	1128146	51.35%	6.064%
13	14.392	1983	1990	2000	rBV2	551022	850276	38.70%	4.570%
14	14.651	2029	2034	2057	rBV4	12707	44907	2.04%	0.241%
15	15.386	2153	2159	2168	rBV	991842	1466040	66.73%	7.880%
16	15.521	2178	2182	2197	rBV	261541	396582	18.05%	2.132%
17	17.139	2451	2457	2468	rBV2	772642	1131159	51.49%	6.080%
18	17.239	2468	2474	2494	rVV2	1141680	1673431	76.18%	8.995%
19	19.539	2859	2865	2879	rBV2	1474468	2188343	99.61%	11.762%
20	21.339	3165	3171	3182	rBV	1285137	1672930	76.15%	8.992%
21	22.874	3429	3432	3441	rVB4	17480	29325	1.33%	0.158%
22	23.462	3524	3532	3541	rBV2	1157652	2196823	100.00%	11.808%
23	23.609	3549	3557	3571	rBV2	765033	1532891	69.78%	8.239%

Sum of corrected areas: 18604743

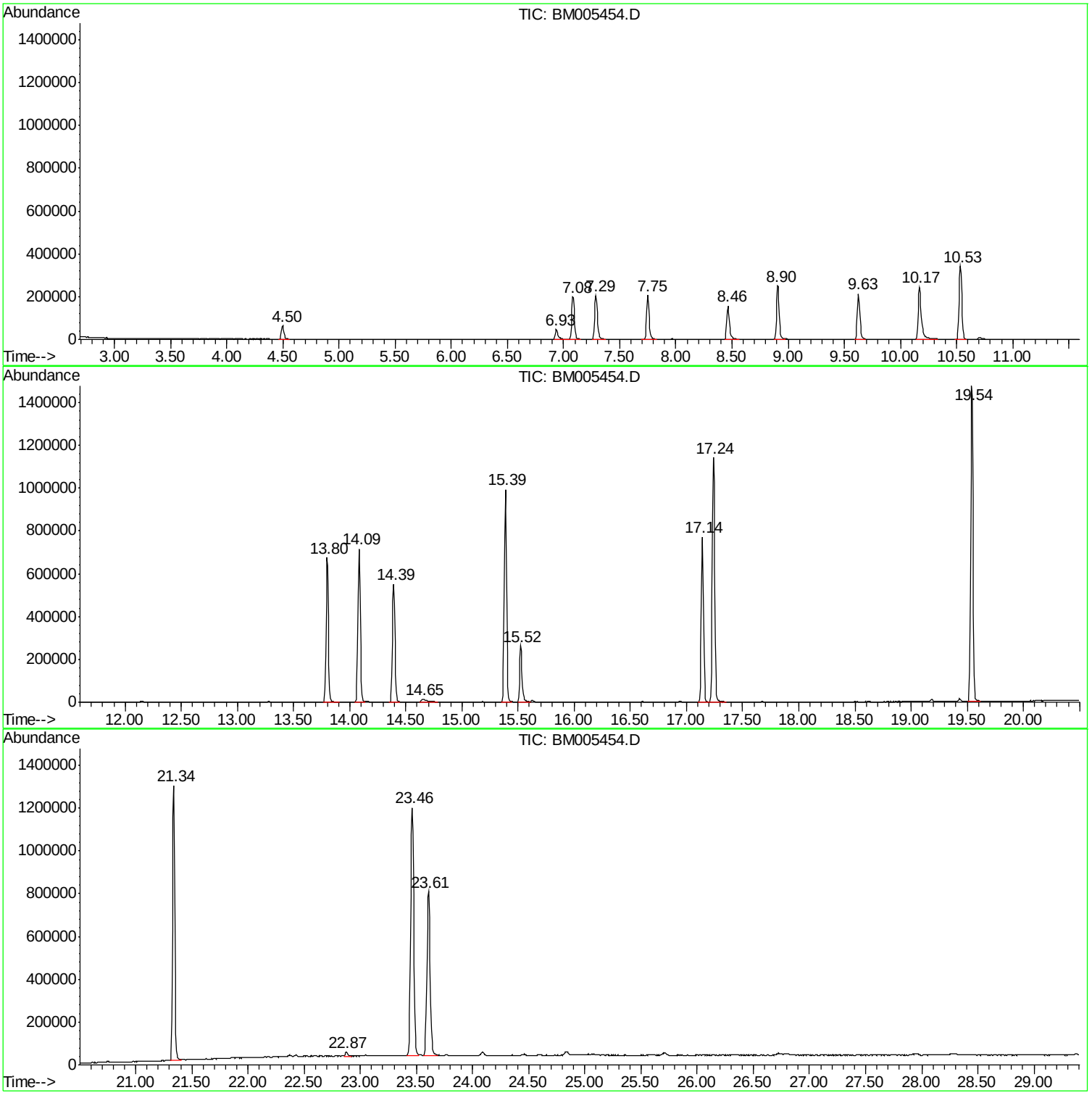
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005454.D
Acq On : 14 May 2016 07:34
Operator : UM/SJ
Sample : H2834-18
Misc :
ALS Vial : 28 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4102

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005454.D
Acq On : 14 May 2016 07:34
Operator : UM/SJ
Sample : H2834-18
Misc :
ALS Vial : 28 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H4102

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005454.D
Acq On : 14 May 2016 07:34
Operator : UM/SJ
Sample : H2834-18
Misc :
ALS Vial : 28 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4102

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005454.D
Acq On : 14 May 2016 07:34
Operator : UM/SJ
Sample : H2834-18
Misc :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: May 16 03:58:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4102

Manual Integrations APPROVED
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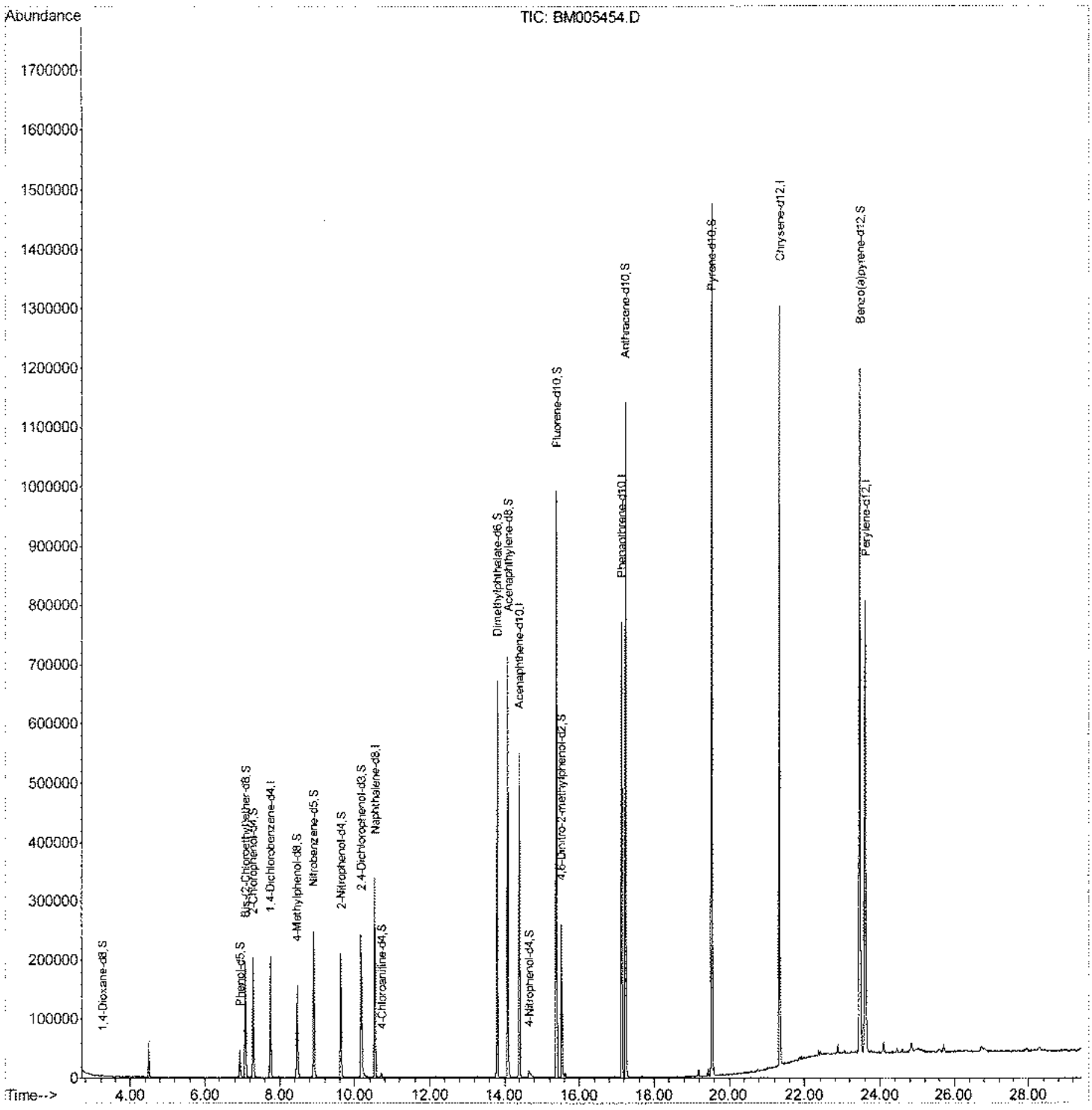
5/16/2016 7:01:49 PM



Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005454.D
Acq On : 14 May 2016 07:34
Operator : UM/SJ
Sample : H2834-18
Misc :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: May 16 03:39:58 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4102

Manual Integrations APPROVED
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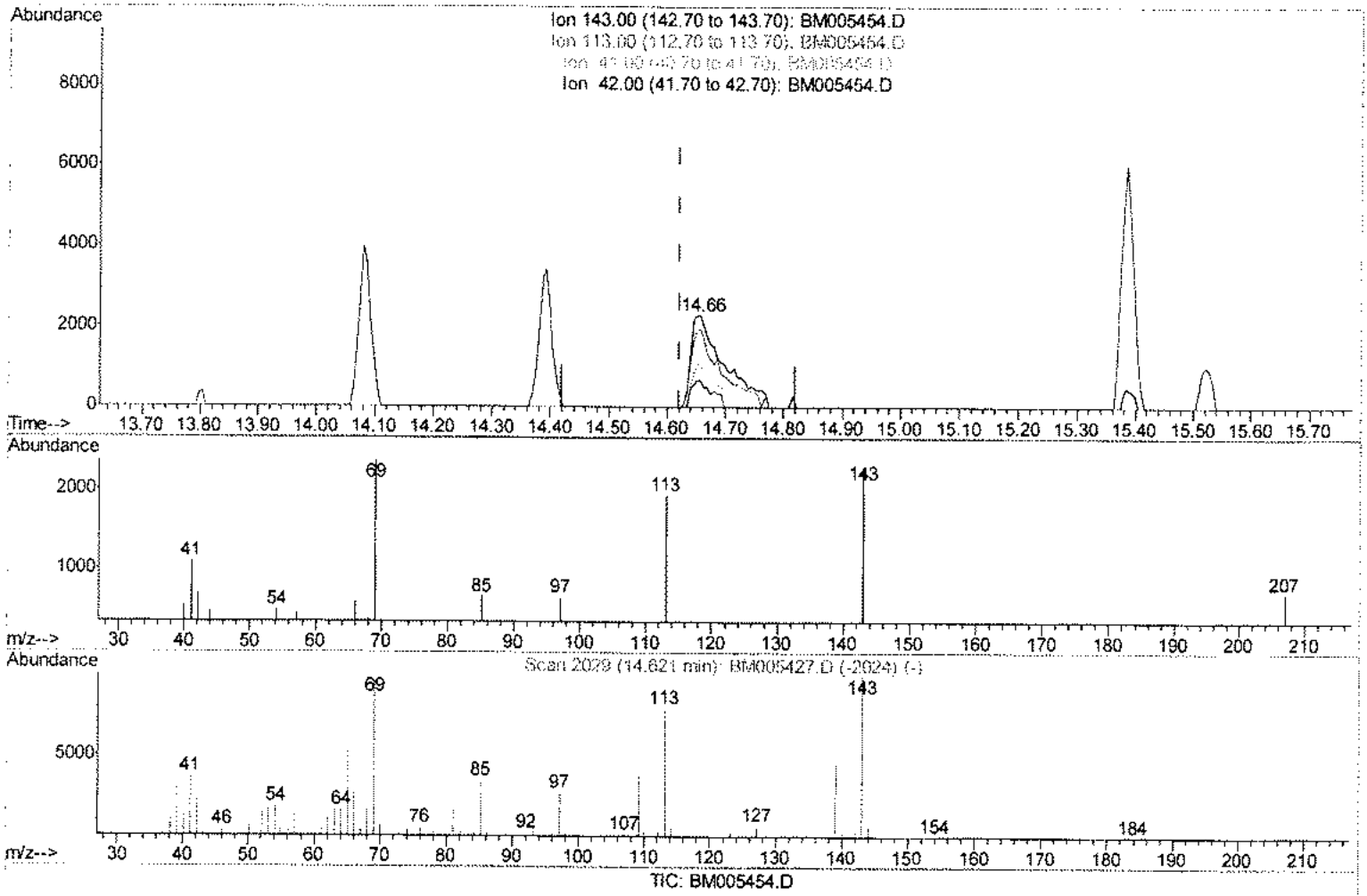
5/16/2016 7:01:49 PM



TIC: BM005454.D

(51) 4-Nitrophenol-d4 (S)

14.657min (+0.035) 3.45ng/ul m

response 9270

U · M
5/17/16

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	84.06
41.00	38.10	47.26#
42.00	26.00	29.58

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005454.D
Acq On : 14 May 2016 07:34
Operator : UM/SJ
Sample : H2834-18
Misc :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: May 16 03:39:58 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4102

Manual Integrations APPROVED
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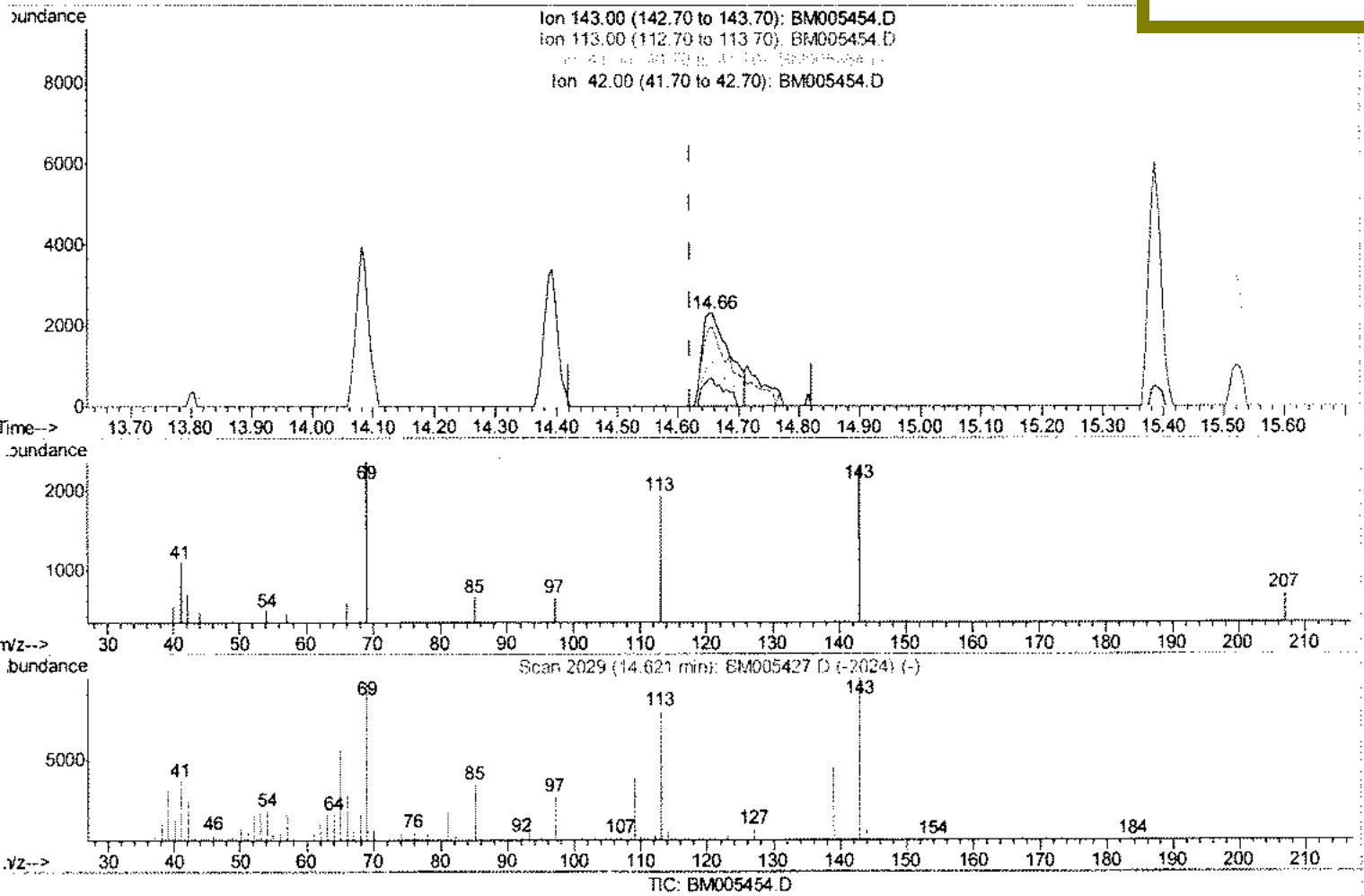
5/16/2016 7:01:49 PM



TIC: BM005454.D

(51) 4-Nitrophenol-d4 (S)

14.657min (+0.035) 2.70ng/ul

response 7244

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	84.06
41.00	38.10	47.26#
42.00	26.00	29.58

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005454.D
Acq On : 14 May 2016 07:34
Operator : UM/SJ
Sample : H2834-18
Misc :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: May 16 03:58:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4102

Manual Integrations APPROVED
sohil
5/16/2016 7:01:49 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	59452	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	280477	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	183415	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	462833	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	624224	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	579206	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1790	1.42	ng/uL	0.00
5) Phenol-d5	6.93	99	33726	6.25	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	92414	30.04	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	99811	24.51	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	63720	14.30	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	62054	30.99	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	71121	31.37	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	113495	26.93	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	8884	1.75	ng/ul	0.02
43) Dimethylphthalate-d6	13.80	166	457306	31.11	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	544128	31.56	ng/ul	0.00
51) 4-Nitrophenol-d4	14.66	143	9270m	3.45	ng/ul	0.04
57) Fluorene-d10	15.39	176	399202	31.45	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	63208	24.28	ng/ul	0.00
70) Anthracene-d10	17.24	188	653118	31.92	ng/ul	0.00
76) Pyrene-d10	19.54	212	816527	28.34	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	827381	32.27	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

U.M 05/17/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005455.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005455.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	43	
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005455.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4116

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-19
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005455.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/14/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : 6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

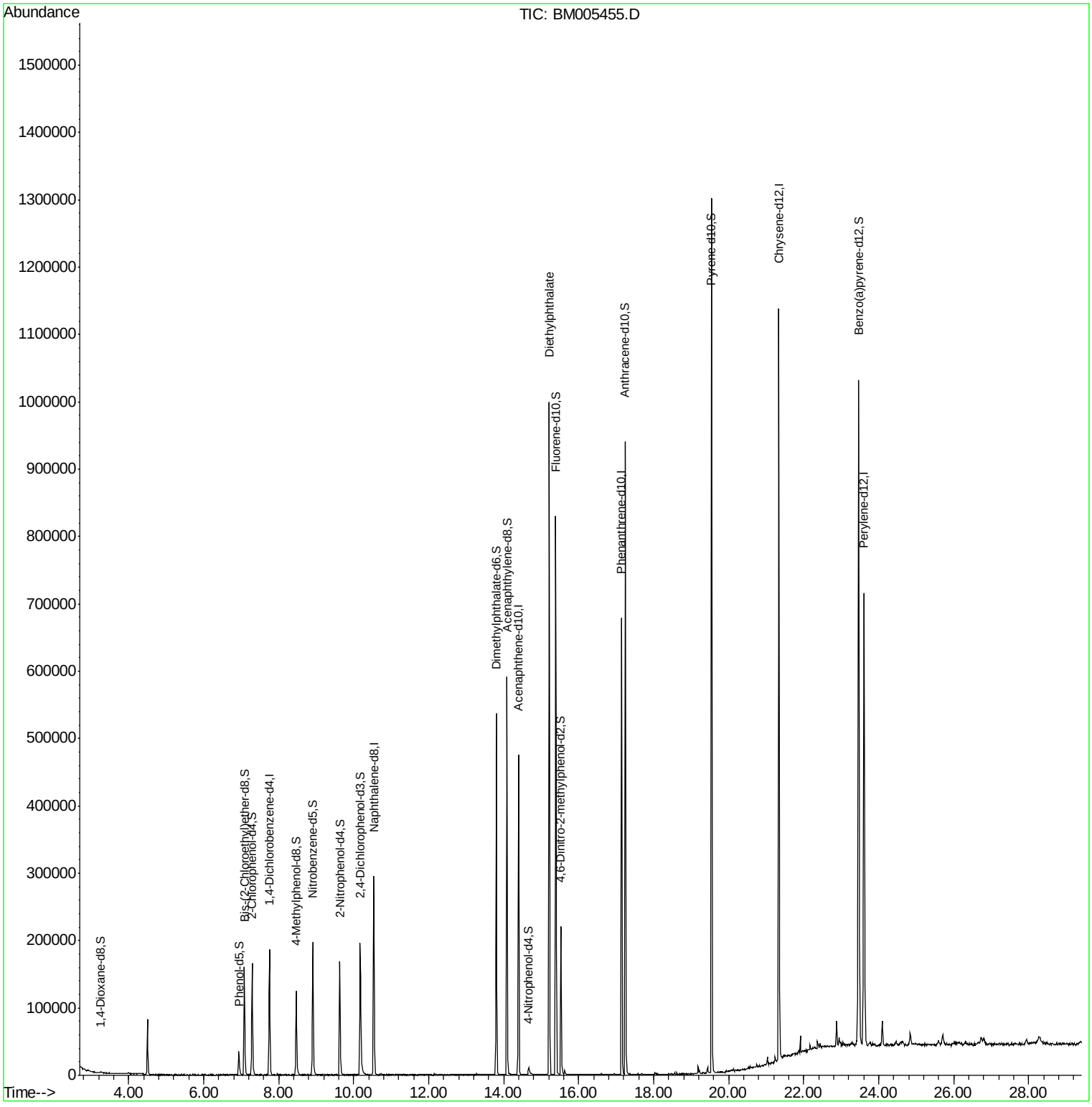
Quantitation Report (LSC Reviewed)

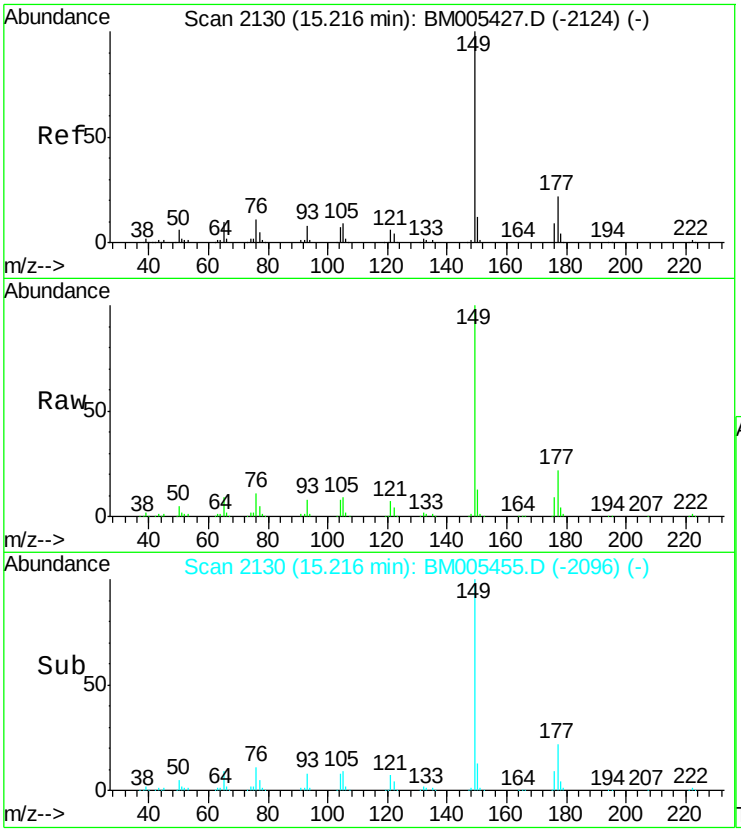
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005455.D
Acq On : 14 May 2016 08:10
Operator : UM/SJ
Sample : H2834-19
Misc :
ALS Vial : 29 Sample Multiplier: 1

Quant Time: May 16 04:02:11 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4116

Manual Integrations APPROVED
sohil
5/16/2016 7:01:52 PM

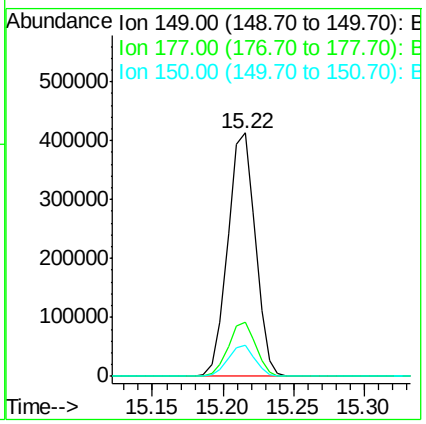




#56
Diethylphthalate
Concen: 43.45 ng/ul
RT: 15.22 min Scan# 2130
Delta R.T. 0.00 min
Lab File: BM005455.D
Acq: 14 May 2016 08:10

Tgt Ion:149 Resp: 561884

Ion	Ratio	Lower	Upper
149	100		
177	22.3	17.6	26.4
150	12.7	9.8	14.8



Instrument :
BNA_M
ClientSampleId :
H4116

Manual Integrations APPROVED
sohil
5/16/2016 7:01:52 PM

Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005455.D
Acq On : 14 May 2016 08:10
Operator : UM/SJ
Sample : H2834-19
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4116

Manual Integrations APPROVED
sohil
5/16/2016 7:01:52 PM

Quant Time: May 16 04:02:11 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	53059	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	244989	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	159834	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	405010	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	552511	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	508365	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1359	1.20	ng/uL	0.00
5) Phenol-d5	6.93	99	26652	5.54	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	76526	27.87	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	82125	22.60	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	51669	12.99	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	50585	28.92	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	57150	28.86	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	95958	26.07	ng/ul	0.00
29) 4-Chloroaniline-d4	10.72	131	3962	0.89	ng/ul	0.04
43) Dimethylphthalate-d6	13.80	166	369334	28.83	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	439478	29.25	ng/ul	0.00
51) 4-Nitrophenol-d4	14.66	143	6697m	2.86	ng/ul	0.04
57) Fluorene-d10	15.39	176	328727	29.71	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	51363	22.54	ng/ul	0.00
70) Anthracene-d10	17.24	188	540697	30.20	ng/ul	0.00
76) Pyrene-d10	19.54	212	690549	27.08	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	693696	30.83	ng/ul	0.00
Target Compounds						Qvalue
56) Diethylphthalate	15.22	149	561884	43.45	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005455.D
Acq On : 14 May 2016 08:10
Operator : UM/SJ
Sample : H2834-19
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4116

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.499	302	308	317	rVB	81888	134260	7.22%	0.779%
2	6.934	717	722	739	rBV	35366	67305	3.62%	0.391%
3	7.081	742	747	764	rVB	160927	264391	14.22%	1.535%
4	7.287	776	782	797	rBV	165477	282364	15.18%	1.639%
5	7.751	852	861	876	rVB	185940	315114	16.95%	1.829%
6	8.463	977	982	993	rBV	125126	211200	11.36%	1.226%
7	8.910	1051	1058	1072	rBV	197492	349172	18.78%	2.027%
8	9.628	1174	1180	1194	rBV	167603	289396	15.56%	1.680%
9	10.169	1267	1272	1298	rBV	195895	409400	22.02%	2.376%
10	10.533	1327	1334	1344	rBV	294682	498460	26.81%	2.893%
11	13.798	1883	1889	1904	rBV	535736	775432	41.70%	4.501%
12	14.086	1931	1938	1952	rBV	591337	917877	49.36%	5.328%
13	14.392	1984	1990	2004	rVB2	474427	733782	39.46%	4.259%
14	14.657	2031	2035	2046	rBV4	9720	28930	1.56%	0.168%
15	15.216	2122	2130	2139	rBV	999077	1356561	72.95%	7.874%
16	15.386	2153	2159	2171	rBV	829007	1197051	64.38%	6.948%
17	15.521	2177	2182	2194	rBV	219252	320818	17.25%	1.862%
18	17.139	2451	2457	2468	rBV2	677804	992102	53.35%	5.759%
19	17.239	2468	2474	2487	rVV2	938713	1381017	74.27%	8.016%
20	19.539	2859	2865	2880	rBV2	1298449	1859496	100.00%	10.793%
21	21.339	3165	3171	3182	rBV	1116312	1504454	80.91%	8.732%
22	21.903	3264	3267	3271	rBV	23346	25981	1.40%	0.151%
23	22.880	3428	3433	3438	rVB	34855	50557	2.72%	0.293%
24	23.462	3525	3532	3544	rVB2	985759	1854435	99.73%	10.764%
25	23.603	3549	3556	3570	rVB2	670827	1345548	72.36%	7.810%
26	24.086	3635	3638	3646	rVB	36276	63307	3.40%	0.367%

Sum of corrected areas: 17228410

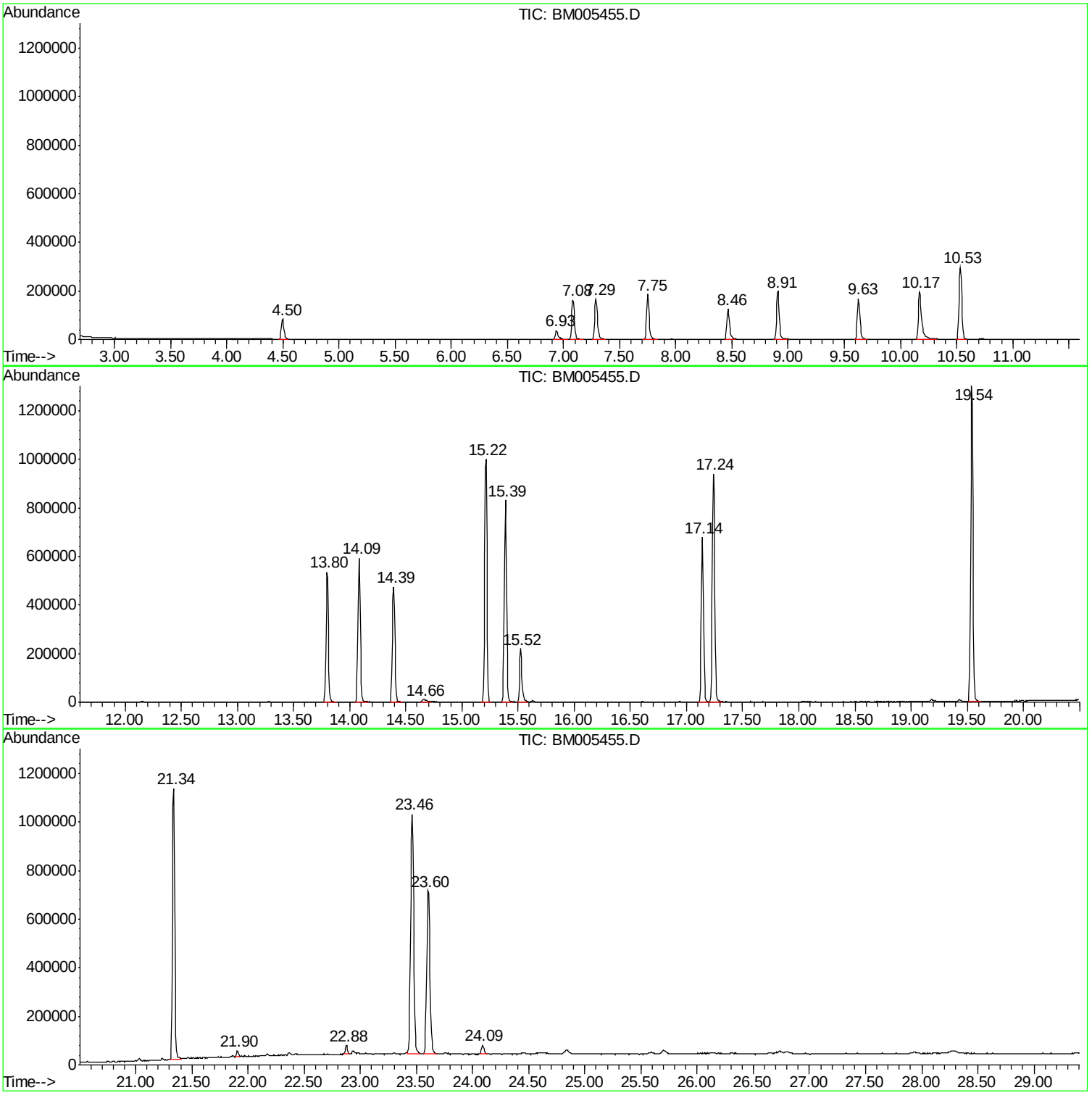
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005455.D
Acq On : 14 May 2016 08:10
Operator : UM/SJ
Sample : H2834-19
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4116

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005455.D
Acq On : 14 May 2016 08:10
Operator : UM/SJ
Sample : H2834-19
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H4116

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005455.D
Acq On : 14 May 2016 08:10
Operator : UM/SJ
Sample : H2834-19
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4116

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

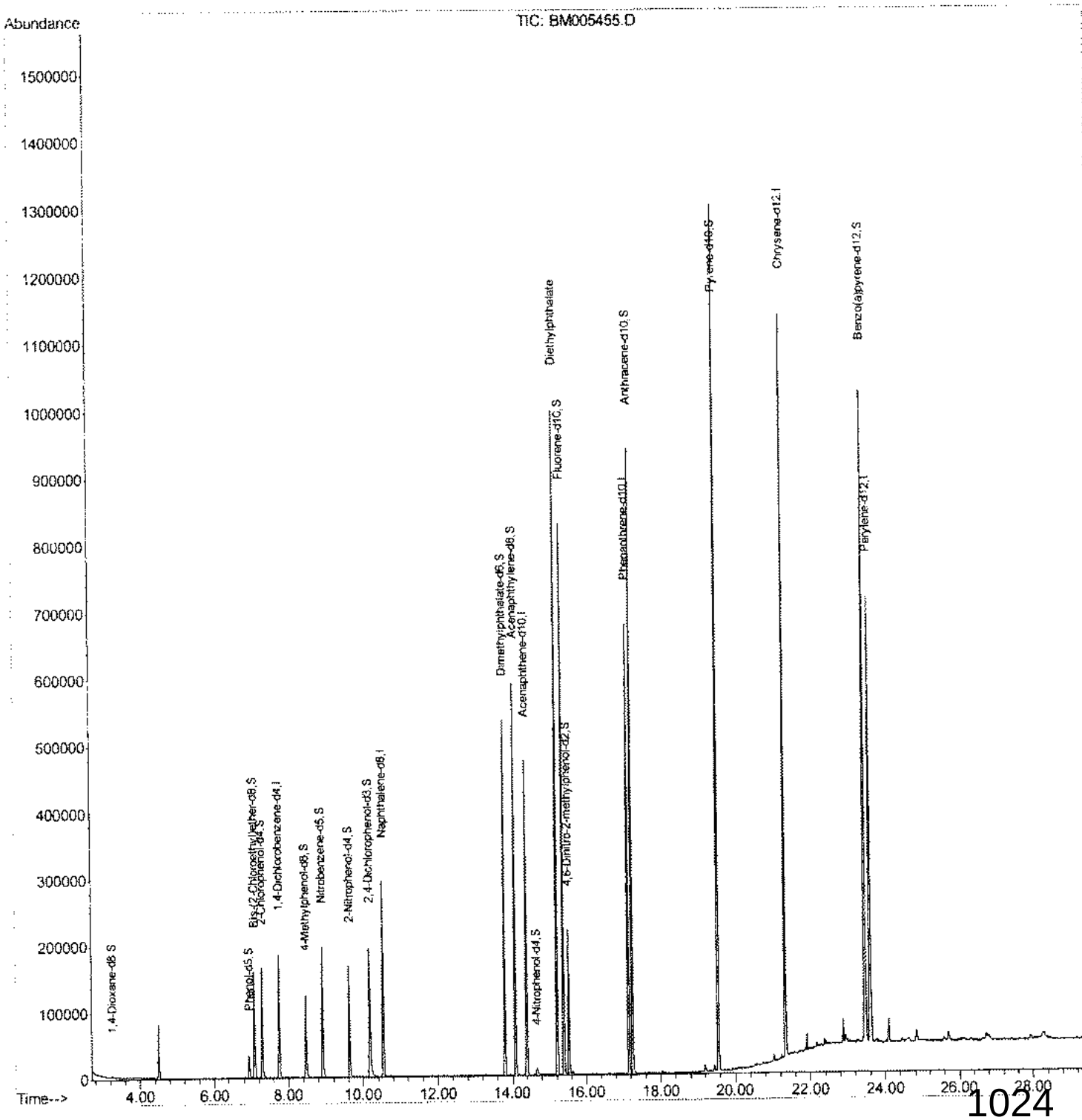
Quantitation Report (QT Reviewed)

Instrument :
BNA_M
ClientSampleId :
H4116

Manual Integrations APPROVED
sohil
5/16/2016 7:01:52 PM

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005455.D
Acq On : 14 May 2016 08:10
Operator : UM/SJ
Sample : H2834-19
Misc :
ALS Vial : 29 Sample Multiplier: 1

Quant Time: May 16 04:02:11 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration



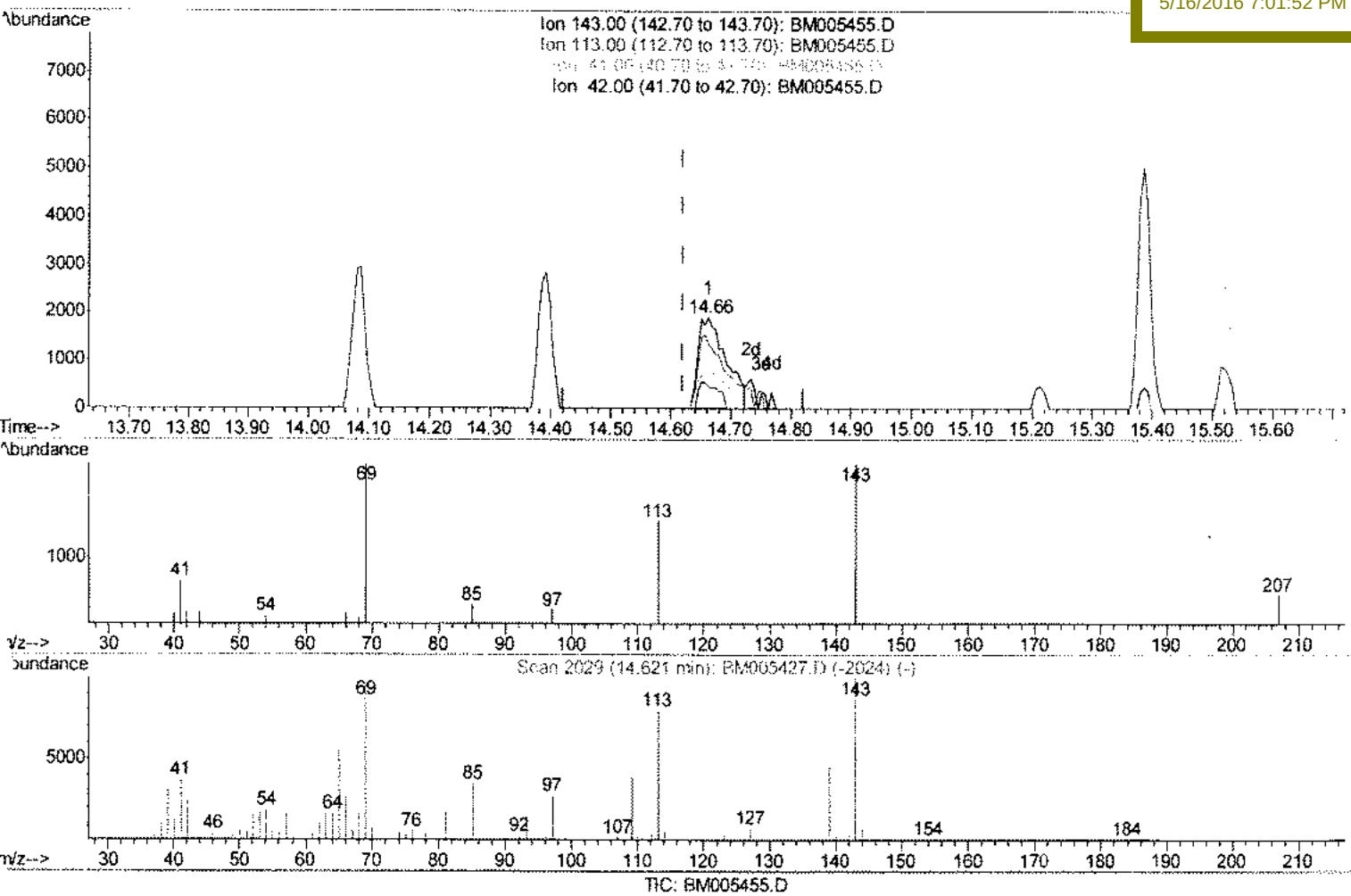
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005455.D
Acq On : 14 May 2016 08:10
Operator : UM/SJ
Sample : H2834-19
Misc :
ALS Vial : 29 Sample Multiplier: 1

Quant Time: May 16 03:40:08 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4116

Manual Integrations APPROVED
sohil
5/16/2016 7:01:52 PM



(51) 4-Nitrophenol-d4 (S)

14.663min (+0.041) 2.63ng/ul

response 6155

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	70.85
41.00	38.10	40.17
42.00	26.00	24.62

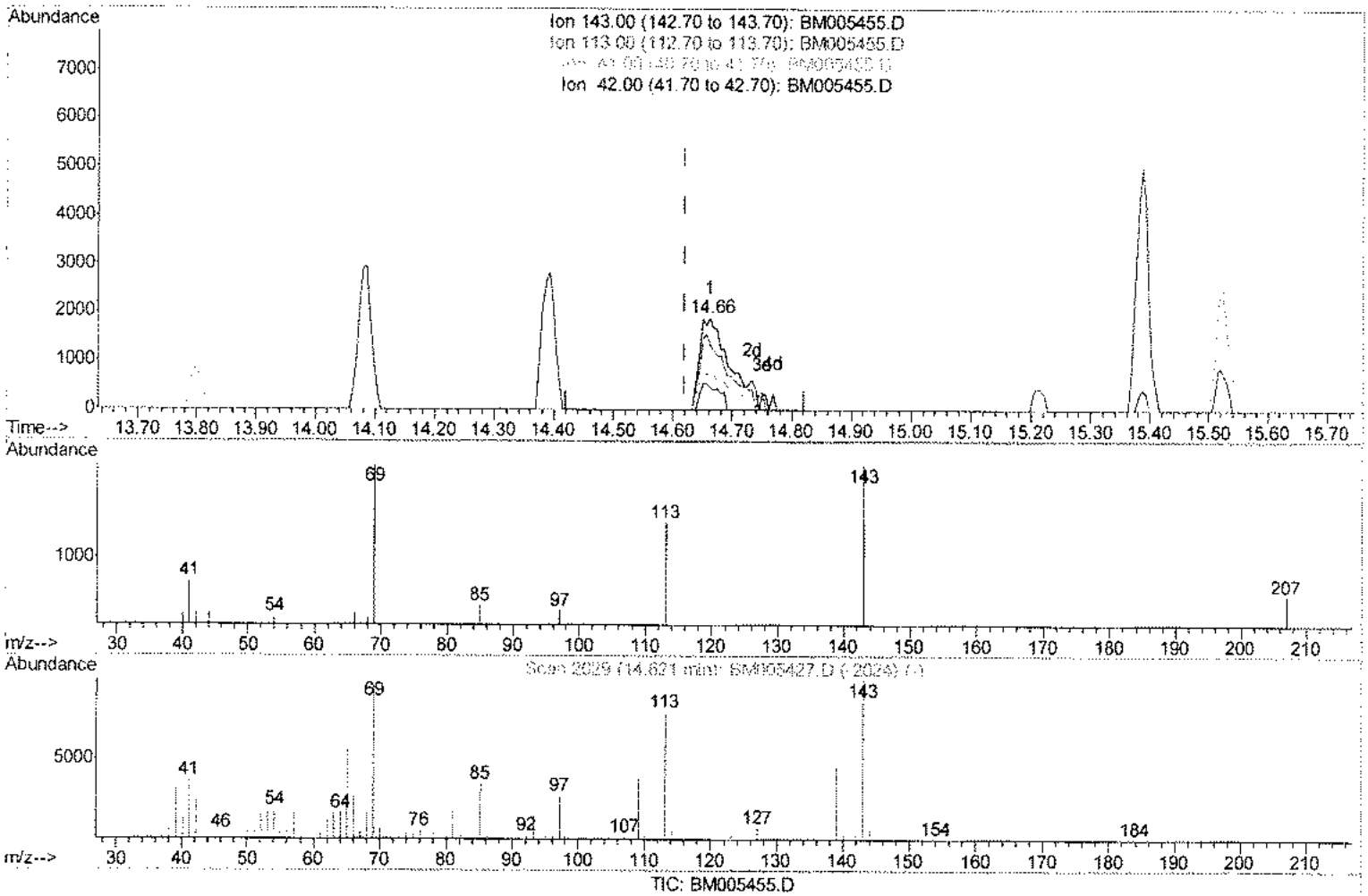
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005455.D
Acq On : 14 May 2016 08:10
Operator : UM/SJ
Sample : H2834-19
Misc :
ALS Vial : 29 Sample Multiplier: 1

Quant Time: May 16 03:40:08 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4116

Manual Integrations APPROVED
sohil
5/16/2016 7:01:52 PM



TIC: BM005455.D

(51) 4-Nitrophenol-d4 (S)

14.663min (+0.041) 2.86ng/ul m

response 6697

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	70.85
41.00	38.10	40.17
42.00	26.00	24.62

U.M
05/17/16

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005455.D
Acq On : 14 May 2016 08:10
Operator : UM/SJ
Sample : H2834-19
Misc :
ALS Vial : 29 Sample Multiplier: 1

Quant Time: May 16 04:02:11 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4116

Manual Integrations APPROVED
sohil
5/16/2016 7:01:52 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	53059	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	244989	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	159834	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	405010	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	552511	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	508365	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1359	1.20	ng/uL	0.00
5) Phenol-d5	6.93	99	26652	5.54	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	76526	27.87	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	82125	22.60	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	51669	12.99	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	50585	28.92	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	57150	28.86	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	95958	26.07	ng/ul	0.00
29) 4-Chloroaniline-d4	10.72	131	3962	0.89	ng/ul	0.04
43) Dimethylphthalate-d6	13.80	166	369334	28.83	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	439478	29.25	ng/ul	0.00
51) 4-Nitrophenol-d4	14.66	143	6697m	2.86	ng/ul	0.04
57) Fluorene-d10	15.39	176	328727	29.71	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	51363	22.54	ng/ul	0.00
70) Anthracene-d10	17.24	188	540697	30.20	ng/ul	0.00
76) Pyrene-d10	19.54	212	690549	27.08	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	693696	30.83	ng/ul	0.00
Target Compounds						Qvalue
56) Diethylphthalate	15.22	149	561884	43.45	ng/ul	99

U.M
05/17/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4117

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-20
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005456.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4117

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-20
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005456.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4117

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-20
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005456.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4117

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-20
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005456.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/14/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : 6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

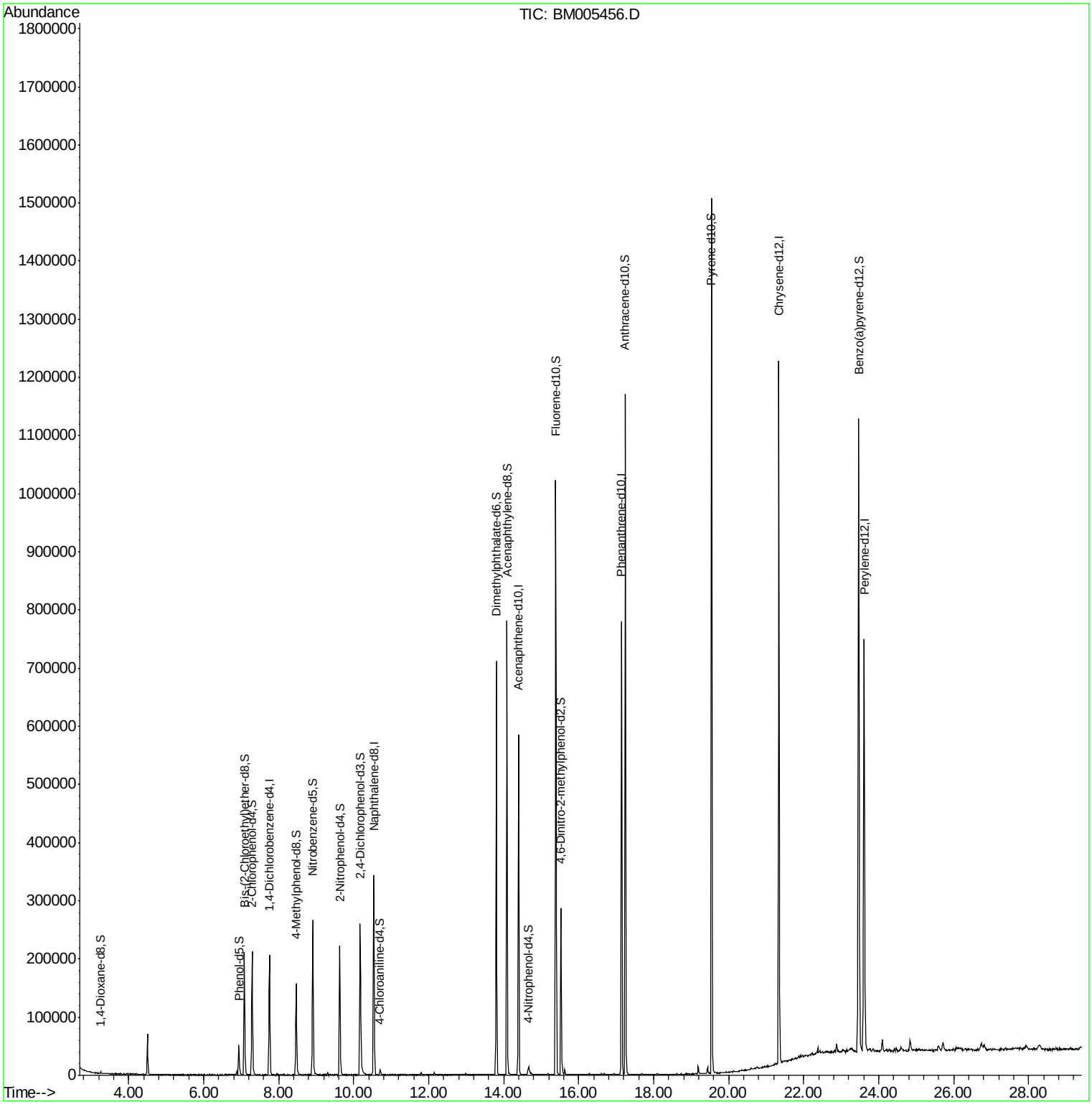
Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005456.D
Acq On : 14 May 2016 08:47
Operator : UM/SJ
Sample : H2834-20
Misc :
ALS Vial : 30 Sample Multiplier: 1

Quant Time: May 16 04:04:50 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4117

Manual Integrations APPROVED
sohil
5/16/2016 7:01:54 PM



Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005456.D
Acq On : 14 May 2016 08:47
Operator : UM/SJ
Sample : H2834-20
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4117

Manual Integrations APPROVED
sohil
5/16/2016 7:01:54 PM

Quant Time: May 16 04:04:50 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	59923	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	287489	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	188536	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	468918	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	600035	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	535962	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1763	1.38	ng/uL	0.00
5) Phenol-d5	6.93	99	34814	6.41	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	96883	31.25	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	105175	25.62	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	65277	14.53	ng/ul	0.00
19) Nitrobenzene-d5	8.90	128	66489	32.39	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	76348	32.85	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	119147	27.58	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	9889	1.90	ng/ul	0.02
43) Dimethylphthalate-d6	13.80	166	483566	32.00	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	575966	32.49	ng/ul	0.00
51) 4-Nitrophenol-d4	14.65	143	9009m	3.27	ng/ul	0.03
57) Fluorene-d10	15.39	176	420362	32.21	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	65350	24.77	ng/ul	0.00
70) Anthracene-d10	17.24	188	674626	32.55	ng/ul	0.00
76) Pyrene-d10	19.54	212	824229	29.76	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	782907	33.00	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005456.D
Acq On : 14 May 2016 08:47
Operator : UM/SJ
Sample : H2834-20
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4117

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.498	302	308	316	rVB	70157	113575	5.14%	0.604%
2	6.934	718	722	735	rBV	50640	87058	3.94%	0.463%
3	7.081	741	747	758	rBV	211285	334247	15.13%	1.777%
4	7.286	776	782	799	rBV	212802	362374	16.40%	1.926%
5	7.751	852	861	872	rBV	205498	354645	16.05%	1.885%
6	8.463	977	982	993	rBV	157568	270333	12.24%	1.437%
7	8.904	1051	1057	1074	rBV	266225	457972	20.73%	2.435%
8	9.627	1174	1180	1192	rBV	222164	388913	17.60%	2.068%
9	10.169	1265	1272	1292	rBV	260142	526428	23.83%	2.799%
10	10.533	1327	1334	1346	rBV	343080	581686	26.33%	3.092%
11	13.798	1883	1889	1900	rBV	711751	1019395	46.14%	5.419%
12	14.086	1931	1938	1949	rBV	780150	1201990	54.41%	6.390%
13	14.392	1984	1990	2001	rBV2	584218	867764	39.28%	4.613%
14	14.657	2030	2035	2054	rBV2	13107	45169	2.04%	0.240%
15	15.386	2152	2159	2177	rBV	1022016	1543673	69.87%	8.207%
16	15.521	2177	2182	2197	rBV	285681	418282	18.93%	2.224%
17	17.139	2451	2457	2468	rBV2	779399	1149170	52.02%	6.109%
18	17.239	2468	2474	2488	rVV2	1169782	1726118	78.13%	9.177%
19	19.539	2859	2865	2879	rBV2	1504487	2209269	100.00%	11.745%
20	21.338	3165	3171	3183	rBV	1208946	1606757	72.73%	8.542%
21	23.462	3524	3532	3547	rBV2	1087456	2102579	95.17%	11.178%
22	23.609	3549	3557	3568	rVV2	705089	1405999	63.64%	7.475%
23	24.091	3635	3639	3646	rVB2	19552	36773	1.66%	0.195%

Sum of corrected areas: 18810169

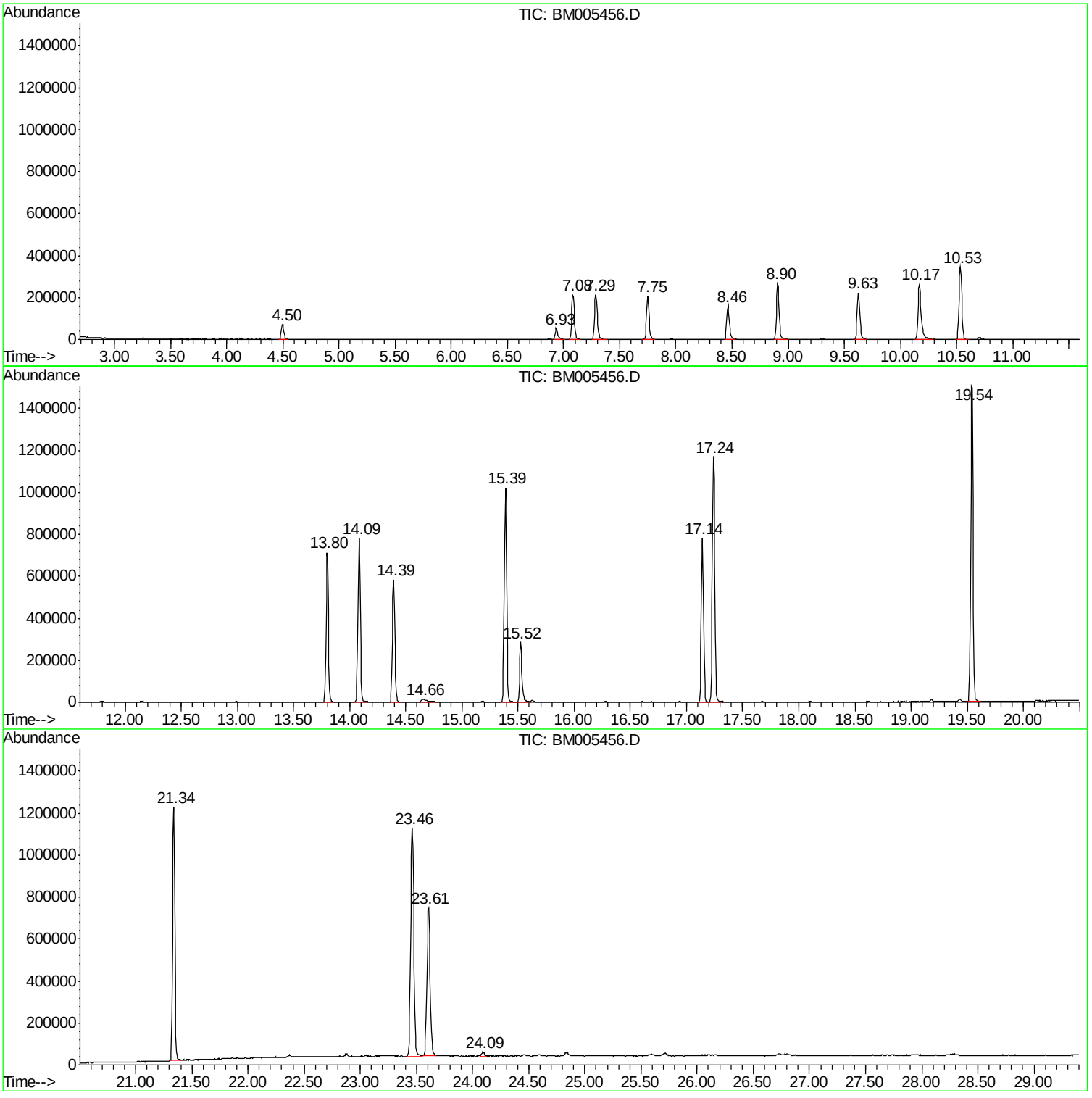
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005456.D
Acq On : 14 May 2016 08:47
Operator : UM/SJ
Sample : H2834-20
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4117

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005456.D
Acq On : 14 May 2016 08:47
Operator : UM/SJ
Sample : H2834-20
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H4117

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005456.D
Acq On : 14 May 2016 08:47
Operator : UM/SJ
Sample : H2834-20
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4117

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

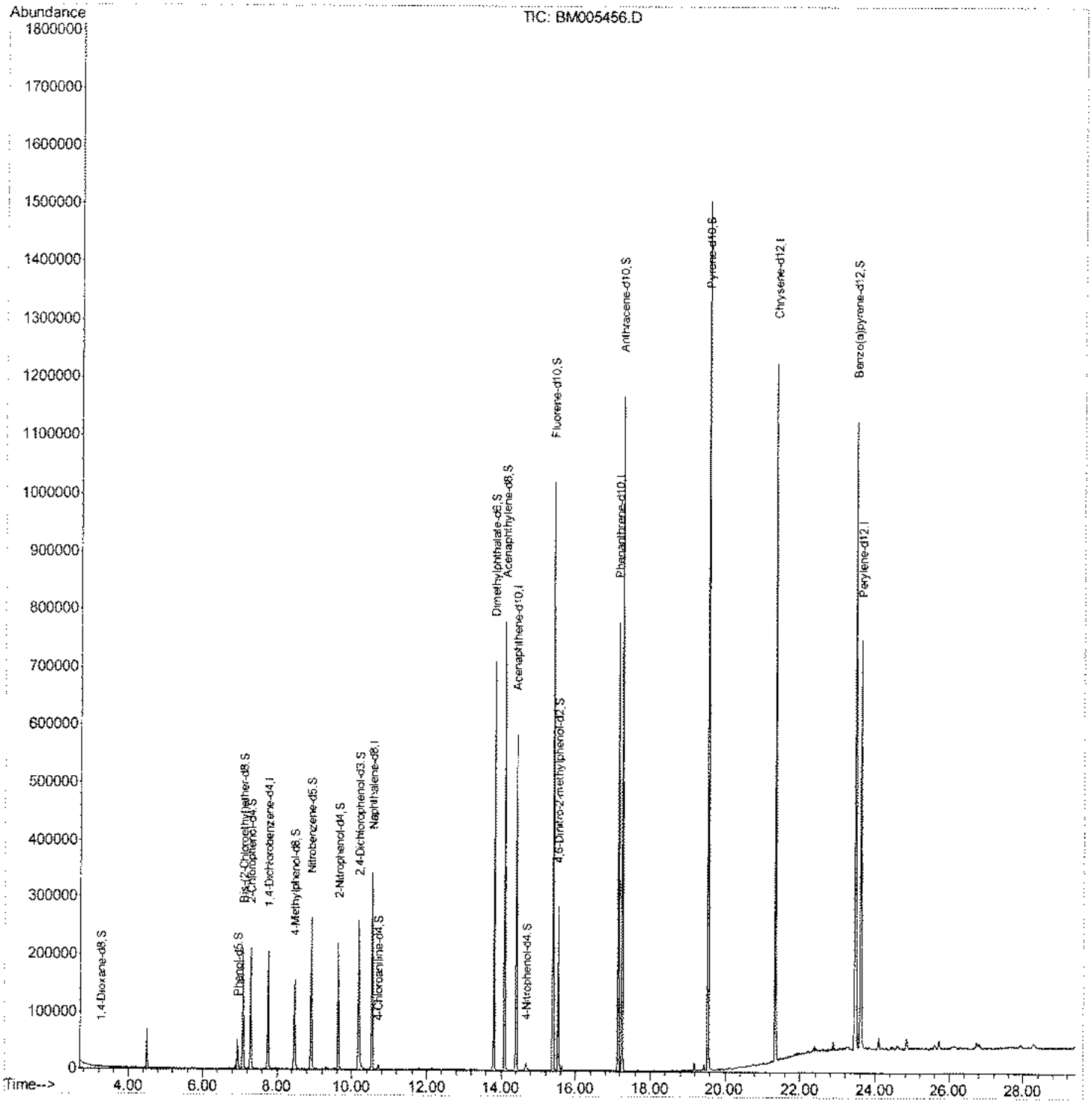
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005456.D
Acq On : 14 May 2016 08:47
Operator : UM/SJ
Sample : H2834-20
Misc :
ALS Vial : 30 Sample Multiplier: 1

Quant Time: May 16 04:04:50 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4117

Manual Integrations APPROVED
sohil
5/16/2016 7:01:54 PM



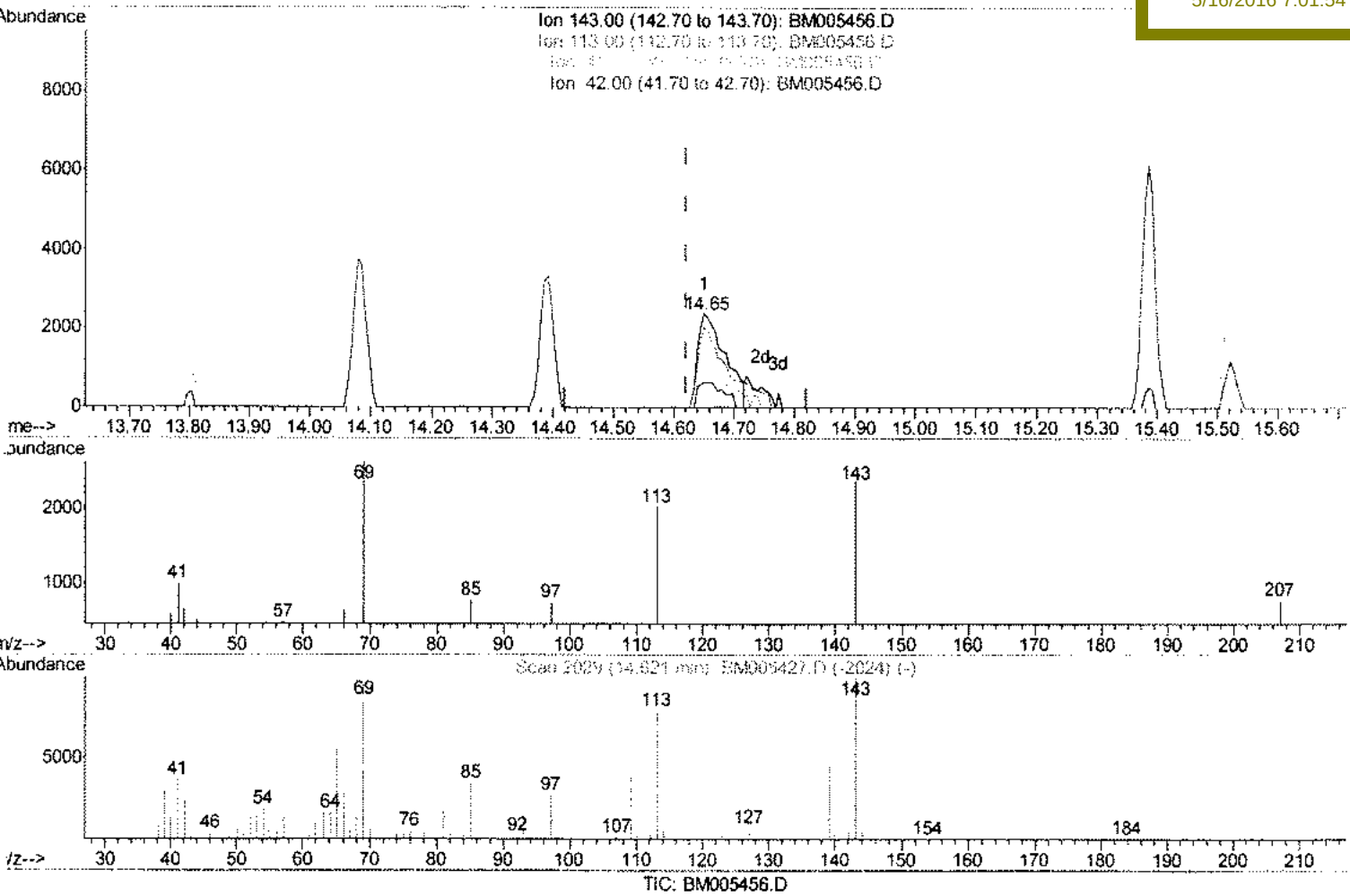
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005456.D
Acq On : 14 May 2016 08:47
Operator : UM/SJ
Sample : H2834-20
Misc :
ALS Vial : 30 Sample Multiplier: 1

Quant Time: May 16 03:40:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4117

Manual Integrations APPROVED
sohil
5/16/2016 7:01:54 PM



(51) 4-Nitrophenol-d4 (S)

14.651min (+0.029) 2.74ng/ul

response 7570

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	85.35
41.00	38.10	41.83
42.00	26.00	27.65

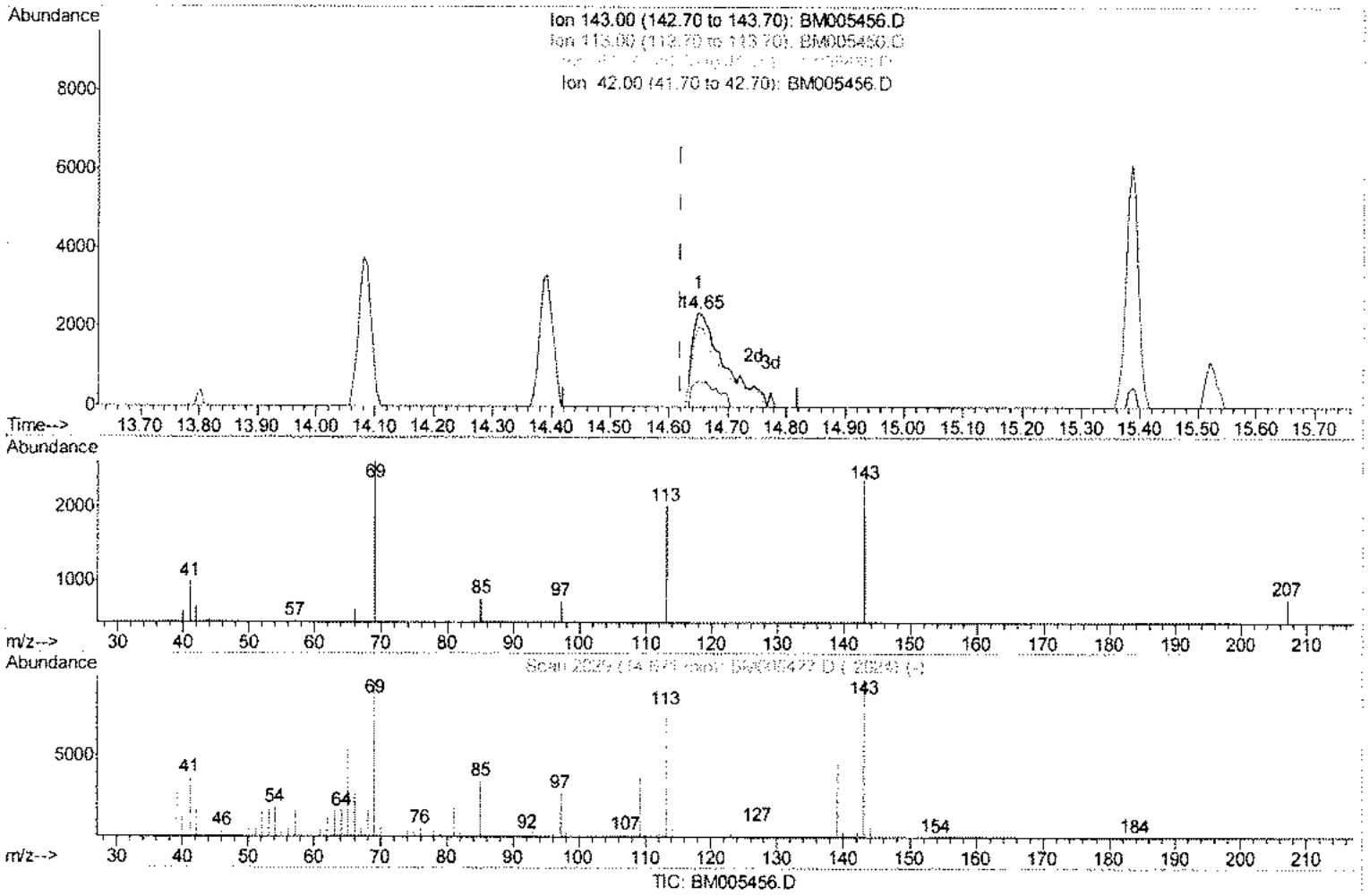
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005456.D
Acq On : 14 May 2016 08:47
Operator : UM/SJ
Sample : H2834-20
Misc :
ALS Vial : 30 Sample Multiplier: 1

Quant Time: May 16 03:40:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4117

Manual Integrations APPROVED
sohil
5/16/2016 7:01:54 PM



(51) 4-Nitrophenol-d4 (S)

14.651min (+0.029) 3.27ng/ul m

response 9009

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	85.35
41.00	38.10	41.83
42.00	26.00	27.65

U.M 05/17/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005456.D
Acq On : 14 May 2016 08:47
Operator : UM/SJ
Sample : H2834-20
Misc :
ALS Vial : 30 Sample Multiplier: 1

Quant Time: May 16 04:04:50 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4117

Manual Integrations APPROVED
sohil
5/16/2016 7:01:54 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	59923	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	287489	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	188536	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	468918	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	600035	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	535962	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1763	1.38	ng/uL	0.00
5) Phenol-d5	6.93	99	34814	6.41	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	96883	31.25	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	105175	25.62	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	65277	14.53	ng/ul	0.00
19) Nitrobenzene-d5	8.90	128	66489	32.39	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	76348	32.85	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	119147	27.58	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	9889	1.90	ng/ul	0.02
43) Dimethylphthalate-d6	13.80	166	483566	32.00	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	575966	32.49	ng/ul	0.00
51) 4-Nitrophenol-d4	14.65	143	9009m	3.27	ng/ul	0.03
57) Fluorene-d10	15.39	176	420362	32.21	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	65350	24.77	ng/ul	0.00
70) Anthracene-d10	17.24	188	674626	32.55	ng/ul	0.00
76) Pyrene-d10	19.54	212	824229	29.76	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	782907	33.00	ng/ul	0.00

U.M 05/17/16

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4118

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-21
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005457.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4118

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-21
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005457.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4118

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-21
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005457.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4118

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-21
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005457.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/14/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : 6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

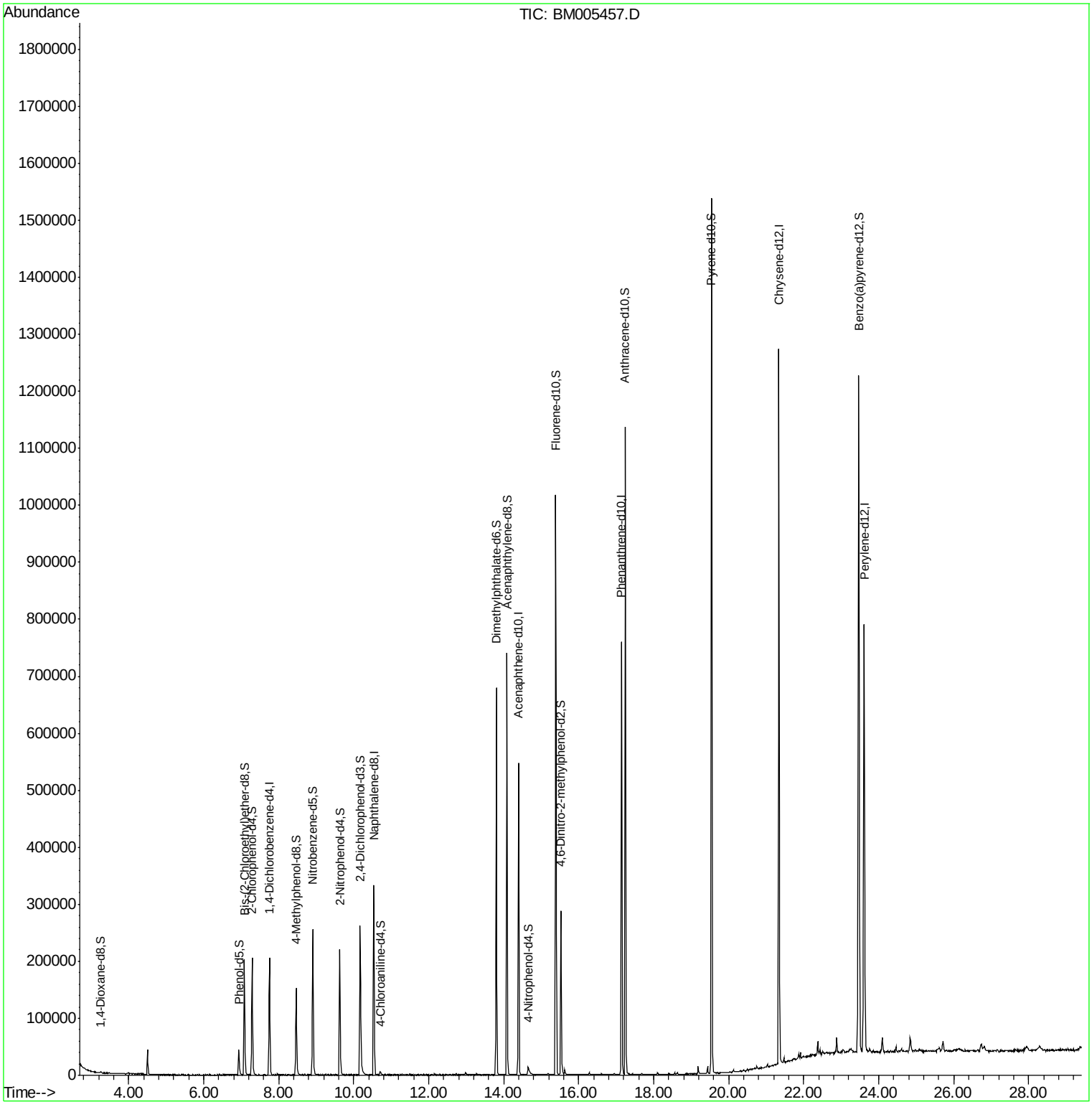
Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005457.D
Acq On : 14 May 2016 09:23
Operator : UM/SJ
Sample : H2834-21
Misc :
ALS Vial : 31 Sample Multiplier: 1

Quant Time: May 16 04:06:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4118

Manual Integrations APPROVED
sohil
5/16/2016 7:01:57 PM



Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005457.D
Acq On : 14 May 2016 09:23
Operator : UM/SJ
Sample : H2834-21
Misc :
ALS Vial : 31 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4118

Manual Integrations APPROVED
sohil
5/16/2016 7:01:57 PM

Quant Time: May 16 04:06:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	58954	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	277226	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	179000	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	454700	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	614788	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	582278	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1967	1.57	ng/uL	0.00
5) Phenol-d5	6.93	99	32625	6.10	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	95107	31.18	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	101421	25.11	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	64228	14.53	ng/ul	0.00
19) Nitrobenzene-d5	8.90	128	64041	32.36	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	74212	33.12	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	118599	28.47	ng/ul	0.00
29) 4-Chloroaniline-d4	10.71	131	8082	1.61	ng/ul	0.03
43) Dimethylphthalate-d6	13.80	166	467687	32.60	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	544919	32.38	ng/ul	0.00
51) 4-Nitrophenol-d4	14.65	143	9406m	3.59	ng/ul	0.03
57) Fluorene-d10	15.39	176	407738	32.91	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	66525	26.01	ng/ul	0.00
70) Anthracene-d10	17.24	188	659755	32.82	ng/ul	0.00
76) Pyrene-d10	19.54	212	848369	29.89	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	873385	33.89	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005457.D
Acq On : 14 May 2016 09:23
Operator : UM/SJ
Sample : H2834-21
Misc :
ALS Vial : 31 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4118

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.498	303	308	317	rVB	43194	69877	2.98%	0.367%
2	6.934	718	722	737	rBV	45304	81679	3.48%	0.429%
3	7.081	742	747	760	rBV	201906	327538	13.97%	1.722%
4	7.286	776	782	796	rBV	205185	350164	14.93%	1.841%
5	7.751	855	861	875	rVB	205553	350480	14.95%	1.842%
6	8.463	977	982	999	rBV	152073	265349	11.32%	1.395%
7	8.904	1051	1057	1071	rBV	256061	442487	18.87%	2.326%
8	9.627	1174	1180	1193	rVB	219890	375774	16.03%	1.975%
9	10.169	1266	1272	1295	rBV	261544	519777	22.17%	2.732%
10	10.533	1327	1334	1342	rBV	333554	566598	24.16%	2.978%
11	13.798	1883	1889	1904	rBV	678008	984511	41.99%	5.175%
12	14.086	1931	1938	1954	rBV	739946	1140814	48.65%	5.997%
13	14.392	1984	1990	2002	rBV2	547179	823503	35.12%	4.329%
14	14.651	2029	2034	2048	rBV2	14185	40829	1.74%	0.215%
15	15.386	2153	2159	2174	rVB	1016619	1496869	63.84%	7.869%
16	15.521	2177	2182	2196	rBV	286427	424064	18.08%	2.229%
17	17.139	2452	2457	2468	rBV2	758271	1114803	47.54%	5.860%
18	17.239	2468	2474	2489	rVV	1134767	1689437	72.05%	8.881%
19	19.539	2859	2865	2881	rBV2	1534786	2272238	96.90%	11.944%
20	21.338	3165	3171	3181	rBV	1254348	1658046	70.71%	8.716%
21	22.374	3343	3347	3351	rBV2	23273	28554	1.22%	0.150%
22	22.880	3429	3433	3438	rVB3	24822	31890	1.36%	0.168%
23	23.462	3524	3532	3543	rBV2	1186870	2344883	100.00%	12.326%
24	23.609	3549	3557	3567	rBV	749548	1526166	65.08%	8.023%
25	24.091	3635	3639	3646	rVB3	26587	46661	1.99%	0.245%
26	24.838	3762	3766	3775	rVB3	23643	50339	2.15%	0.265%

Sum of corrected areas: 19023330

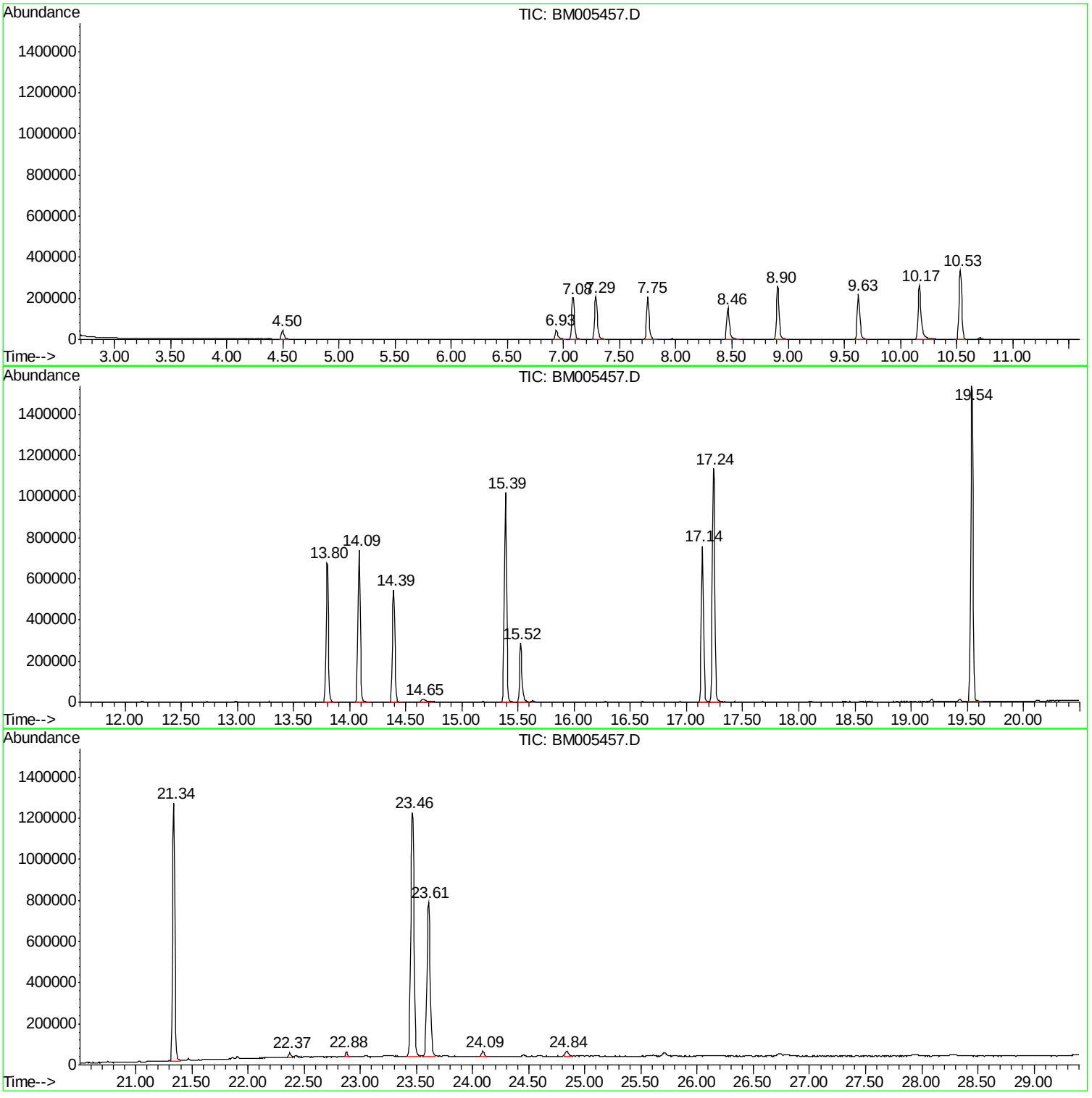
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005457.D
Acq On : 14 May 2016 09:23
Operator : UM/SJ
Sample : H2834-21
Misc :
ALS Vial : 31 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4118

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005457.D
Acq On : 14 May 2016 09:23
Operator : UM/SJ
Sample : H2834-21
Misc :
ALS Vial : 31 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H4118

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005457.D
Acq On : 14 May 2016 09:23
Operator : UM/SJ
Sample : H2834-21
Misc :
ALS Vial : 31 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4118

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

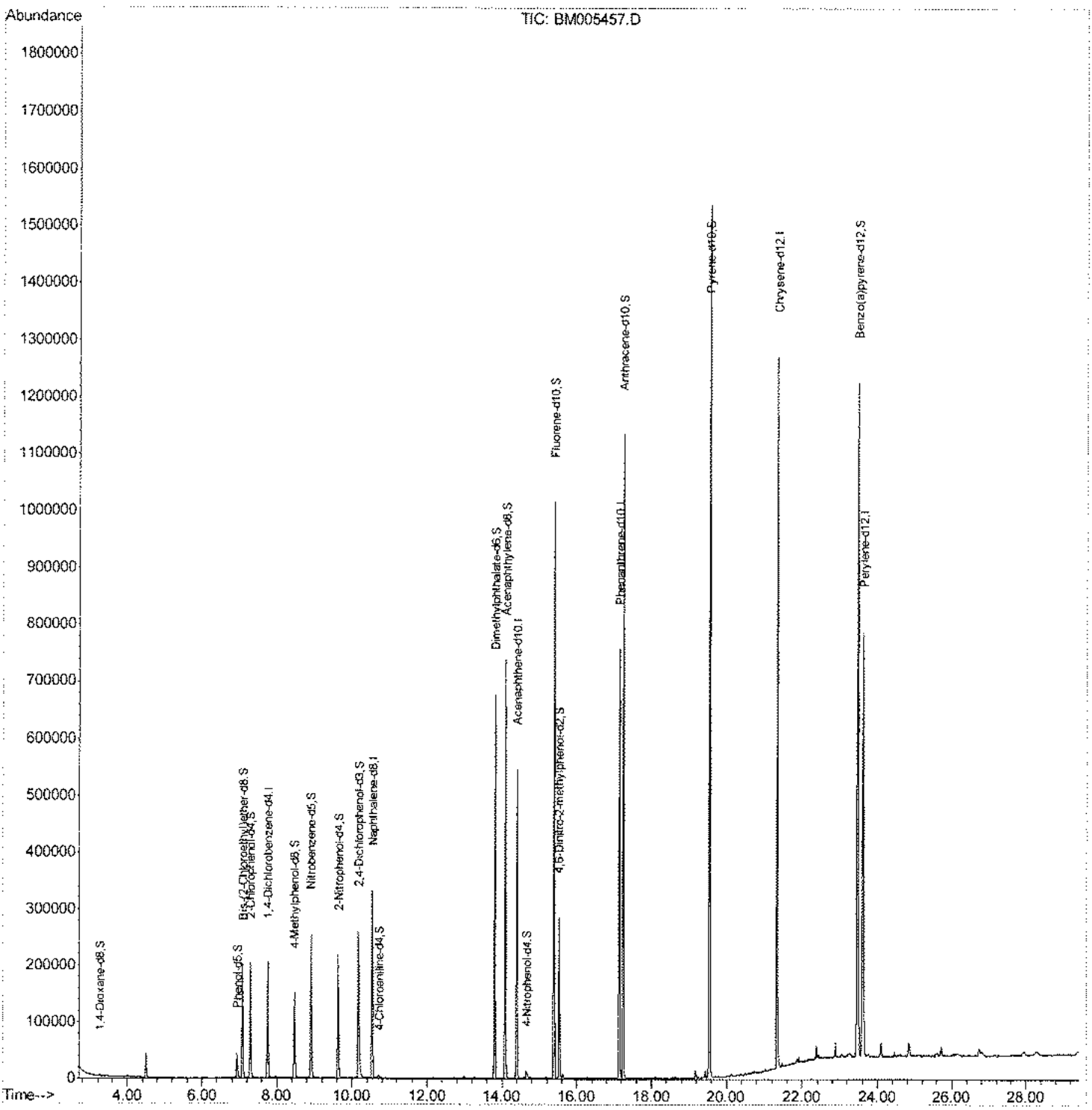
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005457.D
Acq On : 14 May 2016 09:23
Operator : UM/SJ
Sample : H2834-21
Misc :
ALS Vial : 31 Sample Multiplier: 1

Quant Time: May 16 04:06:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4118

Manual Integrations APPROVED
sohil
5/16/2016 7:01:57 PM



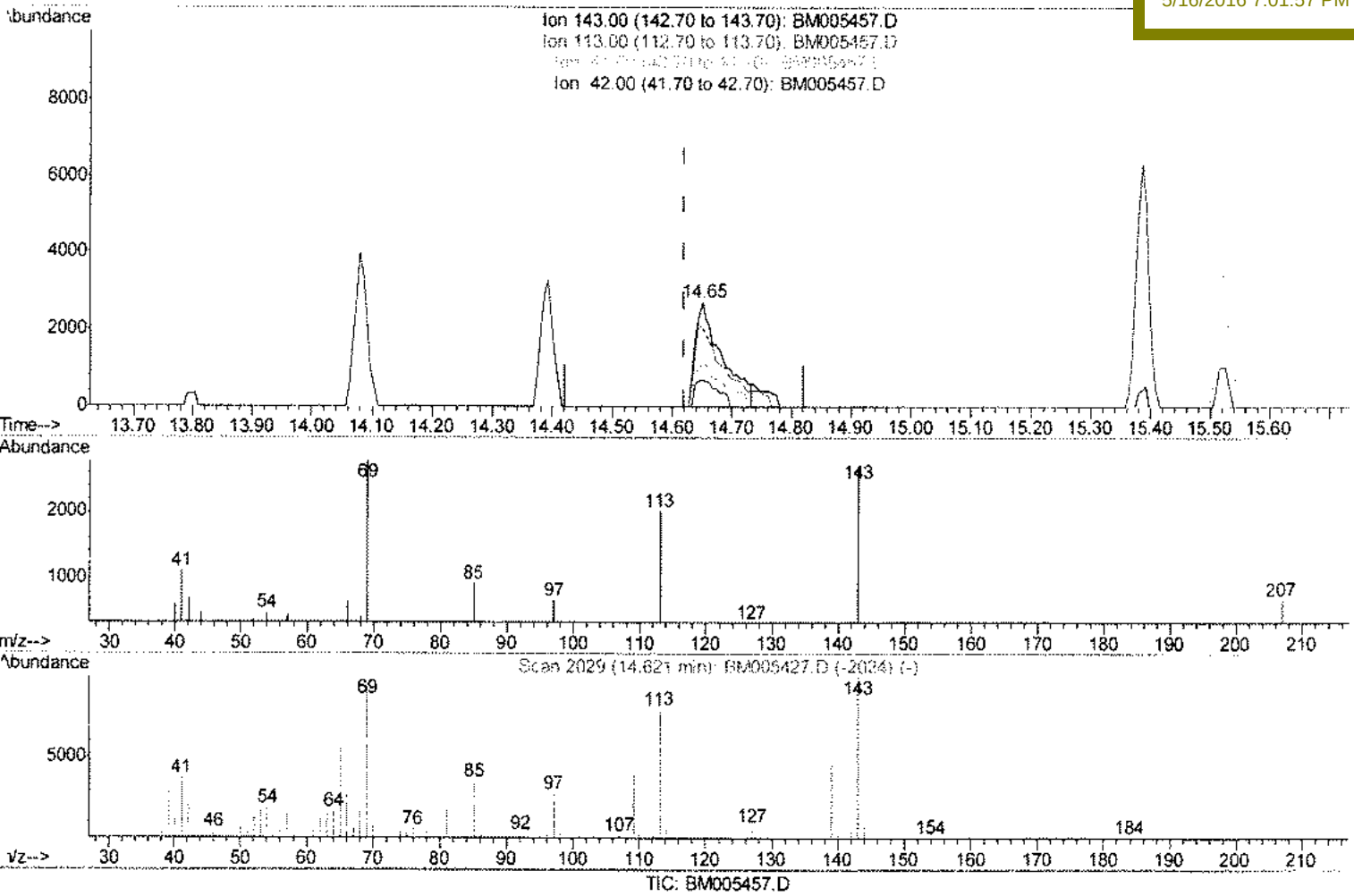
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005457.D
Acq On : 14 May 2016 09:23
Operator : UM/SJ
Sample : H2834-21
Misc :
ALS Vial : 31 Sample Multiplier: 1

Quant Time: May 16 03:40:31 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4118

Manual Integrations APPROVED
sohil
5/16/2016 7:01:57 PM



TIC: BM005457.D

(51) 4-Nitrophenol-d4 (S)

14.651min (+0.029) 3.21ng/ul

response 8401

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	75.02
41.00	38.10	40.66
42.00	26.00	25.32

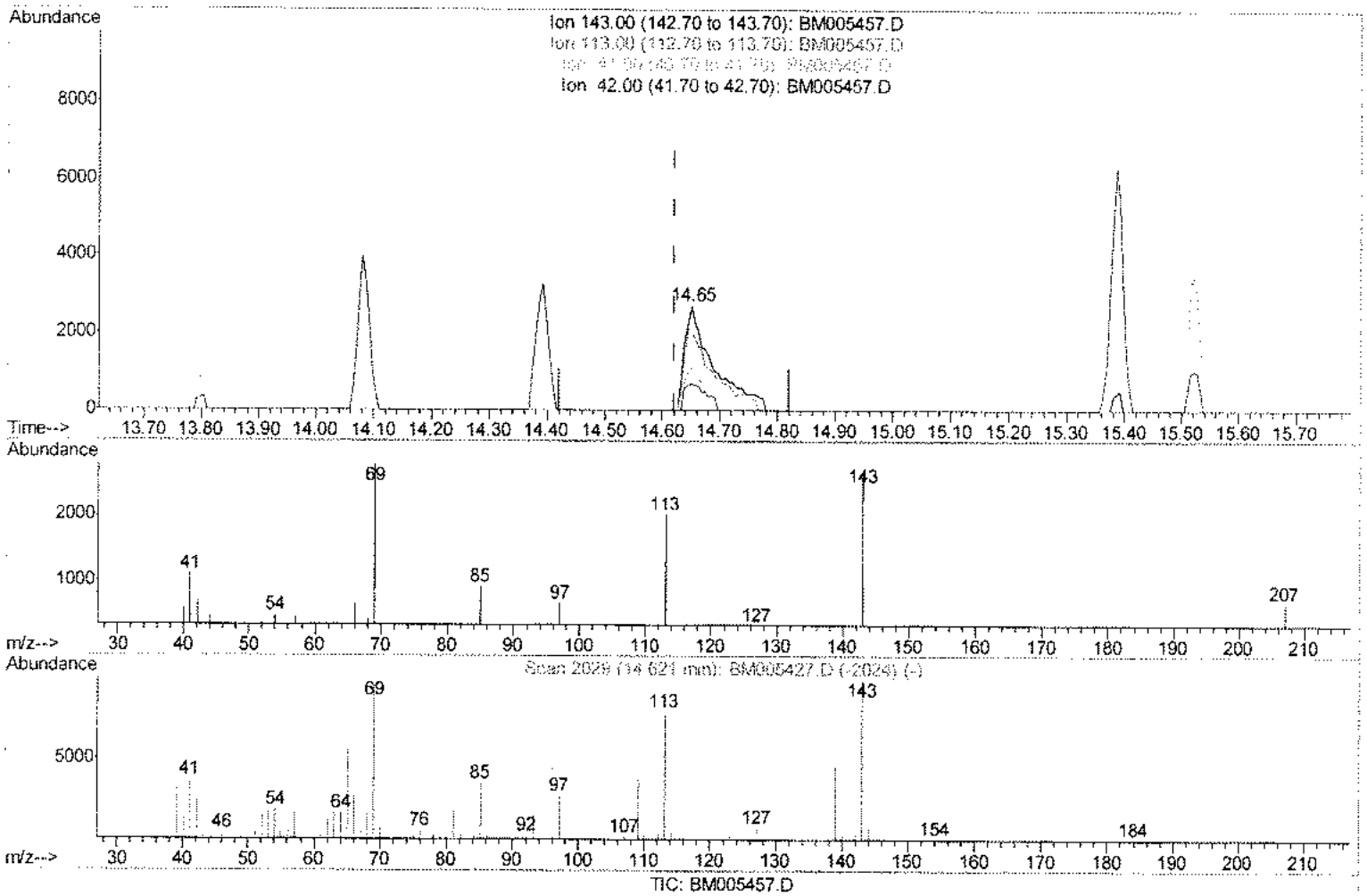
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005457.D
Acq On : 14 May 2016 09:23
Operator : UM/SJ
Sample : H2834-21
Misc :
ALS Vial : 31 Sample Multiplier: 1

Quant Time: May 16 03:40:31 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4118

Manual Integrations APPROVED
sohil
5/16/2016 7:01:57 PM



TIC: BM005457.D

(51) 4-Nitrophenol-d4 (S)

14.651min (+0.029) 3.59ng/ul m

response 9406

U.M 05/17/16

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	75.02
41.00	38.10	40.66
42.00	26.00	25.32

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005457.D
Acq On : 14 May 2016 09:23
Operator : UM/SJ
Sample : H2834-21
Misc :
ALS Vial : 31 Sample Multiplier: 1

Quant Time: May 16 04:06:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4118

Manual Integrations APPROVED
sohil
5/16/2016 7:01:57 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	58954	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	277226	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	179000	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	454700	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	614788	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	582278	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1967	1.57	ng/uL	0.00
5) Phenol-d5	6.93	99	32625	6.10	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	95107	31.18	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	101421	25.11	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	64228	14.53	ng/ul	0.00
19) Nitrobenzene-d5	8.90	128	64041	32.36	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	74212	33.12	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	118599	28.47	ng/ul	0.00
29) 4-Chloroaniline-d4	10.71	131	8082	1.61	ng/ul	0.03
43) Dimethylphthalate-d6	13.80	166	467687	32.60	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	544919	32.38	ng/ul	0.00
51) 4-Nitrophenol-d4	14.65	143	9406m	3.59	ng/ul	0.03
57) Fluorene-d10	15.39	176	407738	32.91	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	66525	26.01	ng/ul	0.00
70) Anthracene-d10	17.24	188	659755	32.82	ng/ul	0.00
76) Pyrene-d10	19.54	212	848369	29.89	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	873385	33.89	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

U.M
05/17/16

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group | Contract: EPW14030

Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4002

Analytical Method : SVOA | Level :

Instrument ID: BNA_M | Calibration Date(s): 05/05/2016 05/05/2016

GC Column: ZB-GR | ID: 0.25 (mm) | Calibration Time(s): 11:09 15:53

Length : 30 (m)

Heated Purge: (Y/N) | Purge Volume : (mL)

LAB FILE ID:	RRF005 =BM005231.D RRF040 =BM005234.D			RRF010= BM005232.D RRF080= BM005235.D			RRF020 =BM005233.D RRF160 =BM005236.D	
ANALYTE	RRF005	RRF010	RRF020	RRF040	RRF080	RRF160	$\overline{\text{RRF}}$	% RSD
1,4-Dioxane	0.797	0.789	0.828	0.752	0.710		0.776	5.8
Benzaldehyde		1.093	1.158	1.003	0.762	0.378	0.879	36.2
Phenol		1.841	1.952	1.887	1.887	1.807	1.875	2.9
Bis(2-Chloroethyl)ether		1.468	1.502	1.430	1.377	1.280	1.411	6.2
2-Chlorophenol	1.318	1.383	1.465	1.423	1.418		1.401	3.9
2-Methylphenol		1.394	1.492	1.483	1.475	1.401	1.449	3.3
2,2-oxybis(1-Chloropropane)		2.031	2.029	1.954	1.847	1.712	1.915	7.1
Acetophenone		2.412	2.419	2.193	2.125	1.958	2.221	8.9
4-Methylphenol		1.600	1.689	1.619	1.594	1.538	1.608	3.4
N-Nitroso-di-n-propylamine	1.134	1.218	1.227	1.144	1.080		1.161	5.3
Hexachloroethane	0.517	0.523	0.541	0.530	0.525		0.527	1.7
Nitrobenzene	0.340	0.354	0.369	0.362	0.363		0.357	3.1
Isophorone	0.643	0.681	0.723	0.716	0.708		0.694	4.7
2-Nitrophenol	0.155	0.169	0.181	0.182	0.183		0.174	7.0
2,4-Dimethylphenol	0.356	0.371	0.382	0.369	0.370		0.370	2.5
Bis(2-Chloroethoxy)methane	0.438	0.440	0.445	0.426	0.412		0.432	3.1
2,4-Dichlorophenol	0.290	0.301	0.320	0.316	0.311		0.308	4.0
Naphthalene	1.038	1.024	1.031	0.982	0.956		1.006	3.5
4-Chloroaniline		0.399	0.431	0.397	0.356	0.260	0.369	17.9
Hexachlorobutadiene	0.186	0.183	0.185	0.180	0.180		0.183	1.5
Caprolactam		0.097	0.114	0.121	0.122	0.120	0.115	9.0
4-Chloro-3-methylphenol	0.347	0.364	0.384	0.379	0.371		0.369	4.0
2-Methylnaphthalene	0.778	0.782	0.777	0.731	0.695		0.753	5.1
Hexachlorocyclopentadiene		0.237	0.296	0.330	0.356	0.335	0.311	15.0
2,4,6-Trichlorophenol	0.367	0.390	0.422	0.427	0.420		0.405	6.4
2,4,5-Trichlorophenol	0.408	0.440	0.462	0.477	0.461		0.450	5.9
1,1-Biphenyl	1.619	1.643	1.644	1.571	1.445		1.584	5.3
2-Chloronaphthalene	1.188	1.212	1.241	1.208	1.141		1.198	3.1
2-Nitroaniline	0.299	0.340	0.392	0.408	0.406		0.369	12.9
Dimethylphthalate	1.615	1.637	1.671	1.578	1.507		1.602	3.9
2,6-Dinitrotoluene	0.257	0.293	0.336	0.347	0.346		0.316	12.5
Acenaphthylene	2.003	2.081	2.082	1.949	1.832		1.989	5.2

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group | Contract: EPW14030

Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4002

Analytical Method : SVOA | Level :

Instrument ID: BNA_M | Calibration Date(s): 05/05/2016 05/05/2016

GC Column: ZB-GR | ID: 0.25 (mm) | Calibration Time(s): 11:09 15:53

Length : 30 (m)

Heated Purge: (Y/N) | Purge Volume : (mL)

LAB FILE ID:	RRF005 =BM005231.D RRF040 =BM005234.D			RRF010= BM005232.D RRF080= BM005235.D			RRF020 =BM005233.D RRF160 =BM005236.D	
ANALYTE	RRF005	RRF010	RRF020	RRF040	RRF080	RRF160	$\overline{RRF}$	% RSD
3-Nitroaniline		0.305	0.370	0.360	0.344	0.305	0.337	9.1
Acenaphthene	1.361	1.374	1.343	1.270	1.206		1.311	5.4
2,4-Dinitrophenol		0.106	0.155	0.192	0.226	0.229	0.182	28.5
4-Nitrophenol		0.221	0.246	0.252	0.259	0.239	0.243	6.0
Dibenzofuran	1.992	1.988	1.979	1.850	1.701		1.902	6.7
2,4-Dinitrotoluene	0.397	0.463	0.498	0.507	0.490		0.471	9.5
Diethylphthalate	1.599	1.636	1.685	1.626	1.546		1.618	3.2
Fluorene	1.642	1.613	1.525	1.411	1.244		1.487	11.0
4-Chlorophenyl-phenylether	0.807	0.795	0.756	0.701	0.626		0.737	10.1
4-Nitroaniline		0.337	0.374	0.370	0.361	0.342	0.357	4.6
4,6-Dinitro-2-methylphenol		0.103	0.119	0.126	0.126	0.116	0.118	8.1
N-Nitrosodiphenylamine	0.571	0.581	0.563	0.534	0.489		0.548	6.7
4-Bromophenyl-phenylether	0.194	0.198	0.199	0.190	0.179		0.192	4.2
1,2,4,5-Tetrachlorobenzene	0.600	0.609	0.633	0.614	0.586		0.608	2.9
Hexachlorobenzene	0.219	0.222	0.223	0.212	0.199		0.215	4.6
Atrazine		0.208	0.218	0.210	0.194	0.169	0.200	9.7
Pentachlorophenol		0.101	0.118	0.126	0.129	0.124	0.120	9.3
Phenanthrene	1.130	1.111	1.095	1.012	0.911		1.052	8.6
Anthracene	1.133	1.118	1.084	1.010	0.898		1.048	9.2
Carbazole		1.028	1.027	0.953	0.867	0.738	0.922	13.3
Di-n-butylphthalate	1.097	1.153	1.199	1.137	1.040		1.125	5.3
Fluoranthene		1.346	1.339	1.213	1.059	0.868	1.165	17.4
Pyrene	1.201	1.193	1.200	1.142	1.065		1.160	5.1
Butylbenzylphthalate	0.419	0.452	0.502	0.524	0.512		0.482	9.3
3,3-Dichlorobenzidine		0.348	0.403	0.376	0.347	0.324	0.360	8.5
Benzo(a)anthracene	1.188	1.175	1.194	1.132	1.062		1.150	4.8
Chrysene	1.145	1.105	1.138	1.077	0.992		1.091	5.7
Bis(2-ethylhexyl)phthalate	0.618	0.665	0.728	0.697	0.637		0.669	6.6
Di-n-octyl phthalate		1.202	1.271	1.264	1.143	0.960	1.168	10.9
Benzo(b)fluoranthene	1.218	1.200	1.181	1.175	1.072		1.169	4.8
Benzo(k)fluoranthene	1.124	1.152	1.162	1.069	0.996		1.101	6.2
Benzo(a)pyrene	1.144	1.148	1.145	1.083	1.008		1.106	5.5

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group
Contract: EPW14030
Lab Code: CHM Case No.: 46114
MA No.: SDG No.: H4002
Analytical Method : SVOA
Level :
Instrument ID: BNA_M
Calibration Date(s): 05/05/2016 05/05/2016
GC Column: ZB-GR ID: 0.25 (mm)
Calibration Time(s): 11:09 15:53
Length : 30 (m)
Heated Purge: (Y/N)
Purge Volume : (mL)

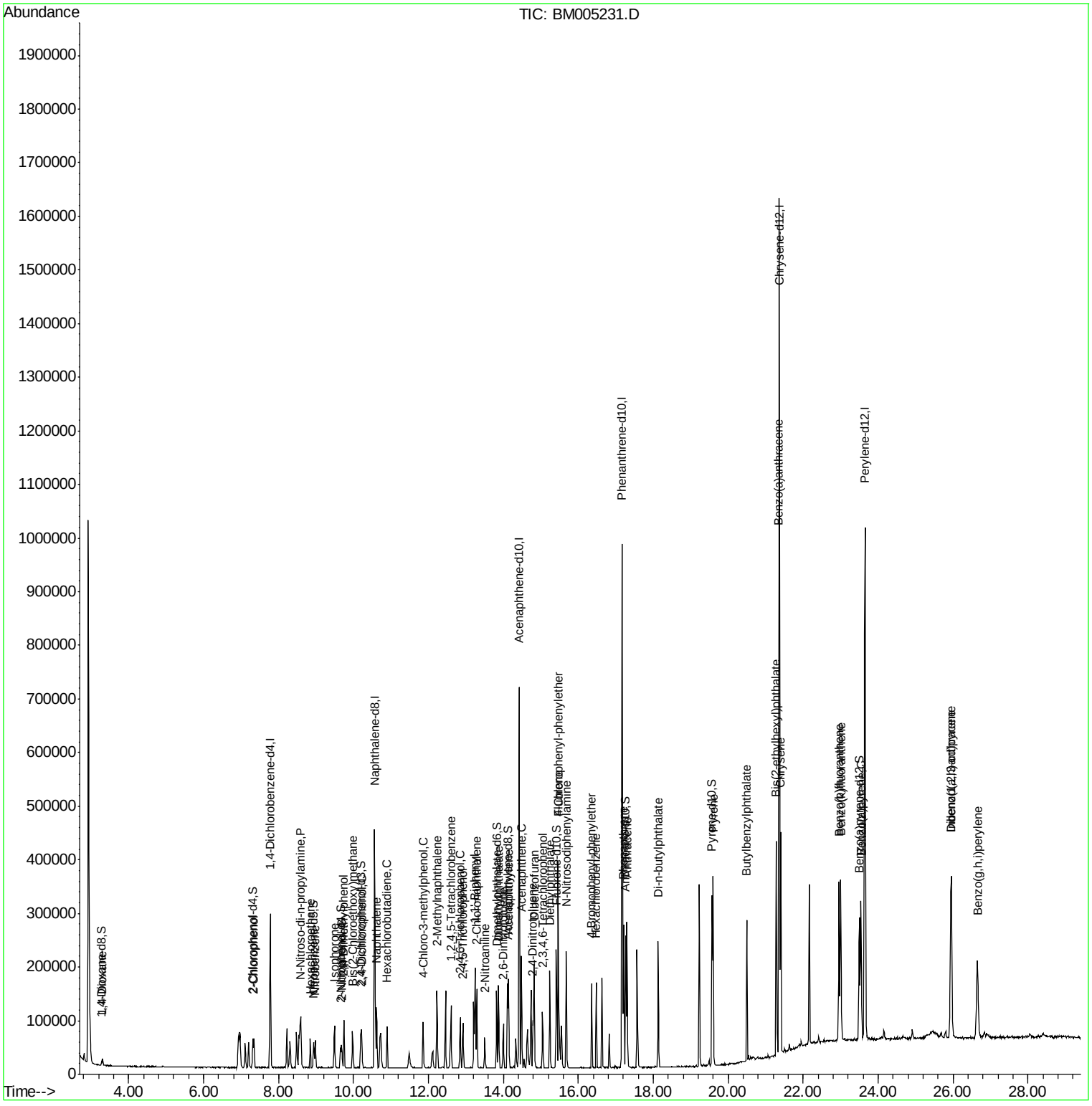
LAB FILE ID:	RRF005 =BM005231.D RRF040 =BM005234.D			RRF010= BM005232.D RRF080= BM005235.D			RRF020 =BM005233.D RRF160 =BM005236.D	
ANALYTE	RRF005	RRF010	RRF020	RRF040	RRF080	RRF160	$\overline{\text{RRF}}$	% RSD
Indeno(1,2,3-cd)pyrene	1.248	1.233	1.258	1.191	1.103		1.206	5.3
Dibenzo(a,h)anthracene	1.054	1.045	1.059	0.991	0.898		1.010	6.7
Benzo(g,h,i)perylene	1.040	1.020	1.050	1.032	0.968		1.022	3.2
2,3,4,6-Tetrachlorophenol	0.346	0.370	0.398	0.402	0.395		0.382	6.2
1,4-Dioxane-d8	0.444	0.437	0.438	0.413	0.395		0.425	4.8
Phenol-d5		1.743	1.864	1.843	1.830	1.791	1.814	2.6
Bis-(2-Chloroethyl)ether-d8		1.080	1.106	1.045	0.998	0.945	1.035	6.2
2-Chlorophenol-d4	1.275	1.328	1.426	1.408	1.413		1.370	4.8
4-Methylphenol-d8		1.440	1.536	1.531	1.513	1.476	1.499	2.7
Nitrobenzene-d5	0.126	0.135	0.147	0.151	0.154		0.143	8.4
2-Nitrophenol-d4	0.138	0.151	0.169	0.173	0.177		0.162	10.2
2,4-Dichlorophenol-d3	0.275	0.292	0.313	0.311	0.311		0.300	5.5
4-Chloroaniline-d4		0.383	0.426	0.396	0.351	0.252	0.362	18.5
Dimethylphthalate-d6	1.582	1.624	1.676	1.611	1.524		1.603	3.5
Acenaphthylene-d8	1.825	1.918	1.975	1.888	1.795		1.880	3.8
4-Nitrophenol-d4		0.254	0.303	0.308	0.311	0.288	0.293	7.9
Fluorene-d10	1.448	1.438	1.429	1.352	1.255		1.384	5.9
4,6-Dinitro-2-methylphenol-d2		0.095	0.111	0.120	0.123	0.113	0.113	9.6
Anthracene-d10	0.929	0.932	0.914	0.857	0.787		0.884	7.0
Pyrene-d10	0.912	0.934	0.954	0.929	0.886		0.923	2.8
Benzo(a)pyrene-d12	0.893	0.905	0.908	0.885	0.836		0.885	3.3

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005231.D
Acq On : 05 May 2016 11:09
Operator : UM/SJ
Sample : SSTD00540
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD00540

Quant Time: May 05 14:04:10 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005231.D
Acq On : 05 May 2016 11:09
Operator : UM/SJ
Sample : SSTD00540
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD00540

Quant Time: May 05 14:04:10 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	77482	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	367748	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	244001	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.16	188	591120	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	705171	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	699412	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	3441	2.27	ng/uL	0.00
5) Phenol-d5	0.00	99	0d	0.00	ng/ul	
7) Bis-(2-Chloroethyl)ether-d	0.00	67	0d	0.00	ng/ul	
9) 2-Chlorophenol-d4	7.31	132	24702	4.87	ng/ul	0.00
13) 4-Methylphenol-d8	0.00	113	0d	0.00	ng/ul	
19) Nitrobenzene-d5	8.93	128	11562	4.67	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	12686	4.63	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	25307	4.77	ng/ul	0.00
29) 4-Chloroaniline-d4	0.00	131	0d	0.00	ng/ul	
43) Dimethylphthalate-d6	13.82	166	96474	5.02	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	111352	4.91	ng/ul	0.00
51) 4-Nitrophenol-d4	0.00	143	0d	0.00	ng/ul	
57) Fluorene-d10	15.41	176	88310	5.18	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	0.00	200	0d	0.00	ng/ul	
70) Anthracene-d10	17.26	188	137322	5.18	ng/ul	0.00
76) Pyrene-d10	19.56	212	160760	5.15	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.50	264	156129	5.03	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	6177	2.19	ng/uL#	90
10) 2-Chlorophenol	7.34	128	25535	4.86	ng/ul	94
15) N-Nitroso-di-n-propylamine	8.57	70	21964	5.33	ng/ul	99
17) Hexachloroethane	8.85	117	10020	4.88	ng/ul	95
20) Nitrobenzene	8.97	77	31263	5.03	ng/ul	95
21) Isophorone	9.49	82	59080	5.02	ng/ul	96
23) 2-Nitrophenol	9.68	139	14268	4.76	ng/ul	96
24) 2,4-Dimethylphenol	9.74	107	32692	4.92	ng/ul	99
25) Bis(2-Chloroethoxy)methane	9.97	93	40257	5.44	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	26636	4.87	ng/ul	98
28) Naphthalene	10.62	128	95401	5.13	ng/ul	99
31) Hexachlorobutadiene	10.89	225	17113	4.80	ng/ul	99
33) 4-Chloro-3-methylphenol	11.86	107	31864	4.98	ng/ul	98
34) 2-Methylnaphthalene	12.23	142	71515	5.17	ng/ul	98
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	36606	4.93	ng/ul	97
38) 2,4,6-Trichlorophenol	12.85	196	22379	4.79	ng/ul	94
39) 2,4,5-Trichlorophenol	12.92	196	24890	4.74	ng/ul	95
40) 1,1'-Biphenyl	13.25	154	98762	5.18	ng/ul	98
41) 2-Chloronaphthalene	13.29	162	72471	4.97	ng/ul	99
42) 2-Nitroaniline	13.50	65	18246	4.68	ng/ul	89
44) Dimethylphthalate	13.87	163	98523	5.09	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	15678	4.33	ng/ul	97
47) Acenaphthylene	14.14	152	122204	5.05	ng/ul	100

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005231.D
Acq On : 05 May 2016 11:09
Operator : UM/SJ
Sample : SSTD00540
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD00540

Quant Time: May 05 14:04:10 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Acenaphthene	14.48	153	83035	5.18	ng/ul	99
53) Dibenzofuran	14.82	168	121528	5.13	ng/ul	98
54) 2,4-Dinitrotoluene	14.79	165	24205	4.28	ng/ul#	95
55) 2,3,4,6-Tetrachlorophenol	15.05	232	21133	4.59	ng/ul#	94
56) Diethylphthalate	15.24	149	97550	4.99	ng/ul	99
58) Fluorene	15.47	166	100154	5.37	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	49222	5.31	ng/ul	96
64) N-Nitrosodiphenylamine	15.67	169	84397	5.25	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	28617	5.08	ng/ul	96
66) Hexachlorobenzene	16.47	284	32365	5.03	ng/ul	97
69) Phenanthrene	17.21	178	166988	5.26	ng/ul	99
71) Anthracene	17.30	178	167417	5.25	ng/ul	99
73) Di-n-butylphthalate	18.13	149	162102	5.17	ng/ul	99
77) Pyrene	19.59	202	211675	5.32	ng/ul	99
78) Butylbenzylphthalate	20.49	149	73797	4.94	ng/ul	97
80) Benzo(a)anthracene	21.34	228	209481	5.21	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	108996	5.12	ng/ul	99
82) Chrysene	21.40	228	201866	5.22	ng/ul	99
85) Benzo(b)fluoranthene	22.96	252	212925	5.15	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	196555	4.88	ng/ul	98
88) Benzo(a)pyrene	23.54	252	200049	5.12	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.94	276	218199	5.55	ng/ul	99
90) Dibenzo(a,h)anthracene	25.95	278	184354	5.60	ng/ul	100
91) Benzo(g,h,i)perylene	26.64	276	181802	5.59	ng/ul	98

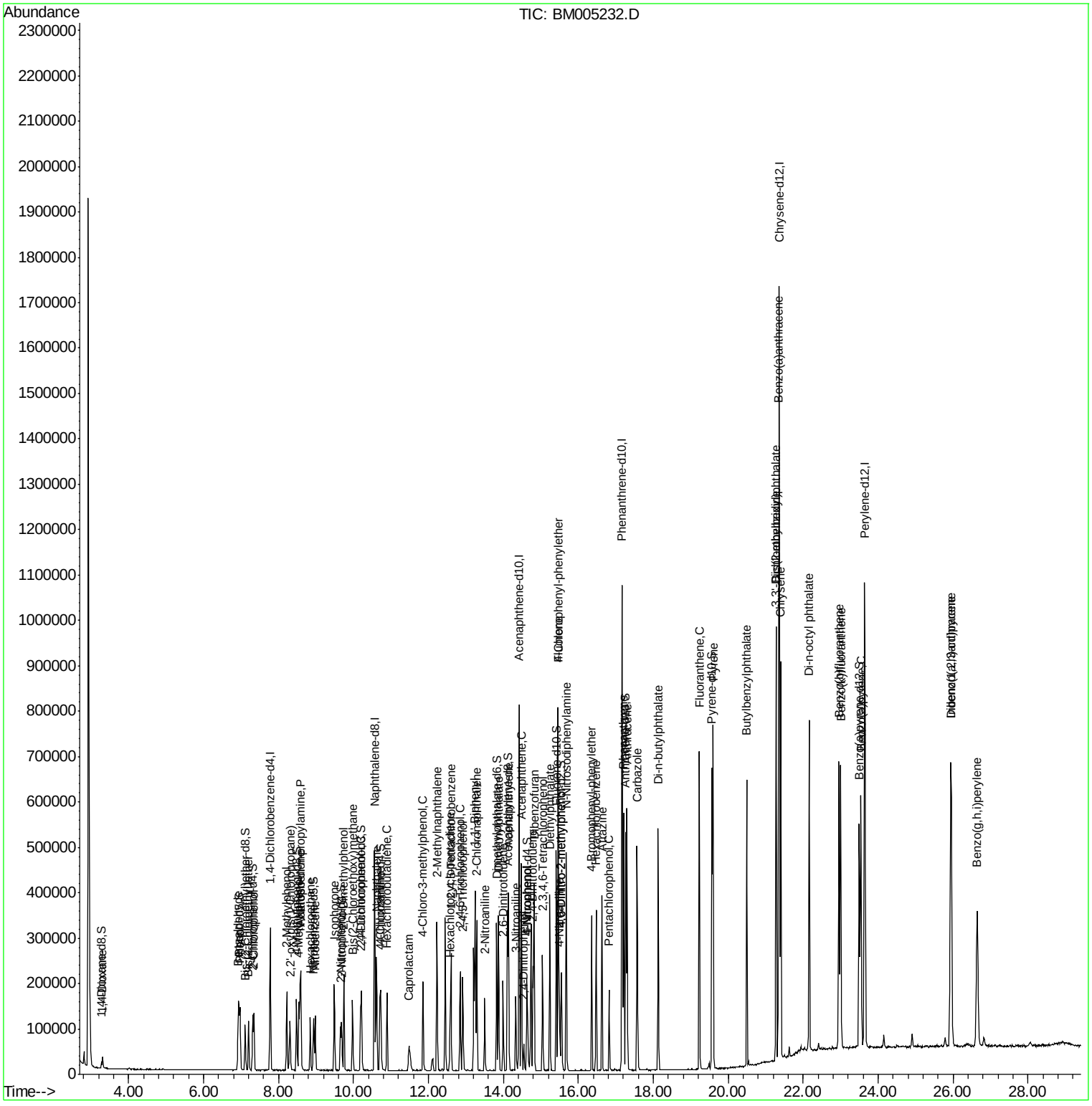
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005232.D
Acq On : 05 May 2016 11:45
Operator : UM/SJ
Sample : SSTD01041
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD01041

Quant Time: May 05 13:41:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005232.D
Acq On : 05 May 2016 11:45
Operator : UM/SJ
Sample : SSTD01041
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD01041

Quant Time: May 05 13:41:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	83684	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	405734	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	262777	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.16	188	633818	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	746308	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	730021	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	7315	4.47	ng/uL	0.00
5) Phenol-d5	6.95	99	72946	10.38	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	45177	11.23	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	55564	10.13	ng/ul	0.00
13) 4-Methylphenol-d8	8.48	113	60250	10.11	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	27391	10.04	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	30695	10.16	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	59213	10.12	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	77621	11.04	ng/ul	0.00
43) Dimethylphthalate-d6	13.82	166	213325	10.31	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	251940	10.31	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	33435	9.23	ng/ul	0.00
57) Fluorene-d10	15.41	176	188975	10.30	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.54	200	30123	8.66	ng/ul	0.00
70) Anthracene-d10	17.26	188	295453	10.40	ng/ul	0.00
76) Pyrene-d10	19.56	212	348652	10.56	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.49	264	330187	10.18	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	13212	4.35	ng/uL#	92
4) Benzaldehyde	6.92	77	45744	13.32	ng/ul	99
6) Phenol	6.97	94	77047	10.37	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.20	93	61411	10.91	ng/ul	99
10) 2-Chlorophenol	7.34	128	57858	10.19	ng/ul	98
11) 2-Methylphenol	8.22	108	58339	10.24	ng/ul	94
12) 2,2'-oxybis(1-Chloropropan	8.30	45	84980	11.55	ng/ul	99
14) Acetophenone	8.59	105	100927	11.12	ng/ul	98
15) N-Nitroso-di-n-propylamine	8.57	70	50947	11.44	ng/ul	100
16) 4-Methylphenol	8.54	108	66958	10.46	ng/ul	97
17) Hexachloroethane	8.85	117	21904	9.88	ng/ul	95
20) Nitrobenzene	8.97	77	71804	10.48	ng/ul	98
21) Isophorone	9.49	82	138221	10.64	ng/ul	99
23) 2-Nitrophenol	9.68	139	34272	10.36	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	75276	10.27	ng/ul	99
25) Bis(2-Chloroethoxy)methane	9.97	93	89304	10.93	ng/ul	99
27) 2,4-Dichlorophenol	10.21	162	61093	10.12	ng/ul	99
28) Naphthalene	10.61	128	207795	10.12	ng/ul	99
30) 4-Chloroaniline	10.73	127	80963	11.15	ng/ul	97
31) Hexachlorobutadiene	10.89	225	37051	9.42	ng/ul	98
32) Caprolactam	11.48	113	19669	9.33	ng/ul	91
33) 4-Chloro-3-methylphenol	11.85	107	73880	10.48	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	158715	10.41	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005232.D
Acq On : 05 May 2016 11:45
Operator : UM/SJ
Sample : SSTD01041
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD01041

Quant Time: May 05 13:41:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	80018	10.01 ng/ul	99
37) Hexachlorocyclopentadiene	12.57	237	31151	7.03 ng/ul	97
38) 2,4,6-Trichlorophenol	12.85	196	51267	10.19 ng/ul	94
39) 2,4,5-Trichlorophenol	12.92	196	57810	10.22 ng/ul	99
40) 1,1'-Biphenyl	13.25	154	215901	10.51 ng/ul	99
41) 2-Chloronaphthalene	13.29	162	159289	10.15 ng/ul	99
42) 2-Nitroaniline	13.50	65	44638	10.63 ng/ul	92
44) Dimethylphthalate	13.87	163	215050	10.32 ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	38538	9.89 ng/ul	93
47) Acenaphthylene	14.13	152	273373	10.48 ng/ul	99
48) 3-Nitroaniline	14.33	138	40021	9.83 ng/ul	91
49) Acenaphthene	14.48	153	180502	10.46 ng/ul	99
50) 2,4-Dinitrophenol	14.55	184	13948	6.39 ng/ul	91
52) 4-Nitrophenol	14.64	109	28996	8.91 ng/ul	100
53) Dibenzofuran	14.82	168	261146	10.23 ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	60850	9.99 ng/ul	98
55) 2,3,4,6-Tetrachlorophenol	15.04	232	48553	9.79 ng/ul#	96
56) Diethylphthalate	15.24	149	214890	10.20 ng/ul	99
58) Fluorene	15.47	166	211993	10.56 ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	104411	10.45 ng/ul	98
60) 4-Nitroaniline	15.49	138	44321	9.79 ng/ul	98
63) 4,6-Dinitro-2-methylphenol	15.55	198	32627	8.90 ng/ul#	91
64) N-Nitrosodiphenylamine	15.67	169	183981	10.68 ng/ul	100
65) 4-Bromophenyl-phenylether	16.36	248	62681	10.37 ng/ul	97
66) Hexachlorobenzene	16.47	284	70449	10.21 ng/ul	96
67) Atrazine	16.63	200	65970	10.50 ng/ul	97
68) Pentachlorophenol	16.82	266	31979	8.44 ng/ul	97
69) Phenanthrene	17.20	178	351982	10.35 ng/ul	100
71) Anthracene	17.30	178	354434	10.37 ng/ul	99
72) Carbazole	17.57	167	325779	10.96 ng/ul	100
73) Di-n-butylphthalate	18.13	149	365342	10.87 ng/ul	100
74) Fluoranthene	19.23	202	426671	11.23 ng/ul	100
77) Pyrene	19.59	202	445024	10.57 ng/ul	100
78) Butylbenzylphthalate	20.49	149	168630	10.66 ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	129782	9.86 ng/ul	99
80) Benzo(a)anthracene	21.34	228	438607	10.31 ng/ul	100
81) Bis(2-ethylhexyl)phthalate	21.27	149	248130	11.01 ng/ul	98
82) Chrysene	21.40	228	412472	10.08 ng/ul	99
84) Di-n-octyl phthalate	22.16	149	438661	10.14 ng/ul	99
85) Benzo(b)fluoranthene	22.95	252	437833	10.14 ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	420405	10.00 ng/ul	100
88) Benzo(a)pyrene	23.54	252	419087	10.27 ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.94	276	449896	10.96 ng/ul	99
90) Dibenzo(a,h)anthracene	25.94	278	381529	11.10 ng/ul	99
91) Benzo(g,h,i)perylene	26.64	276	372189	10.97 ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
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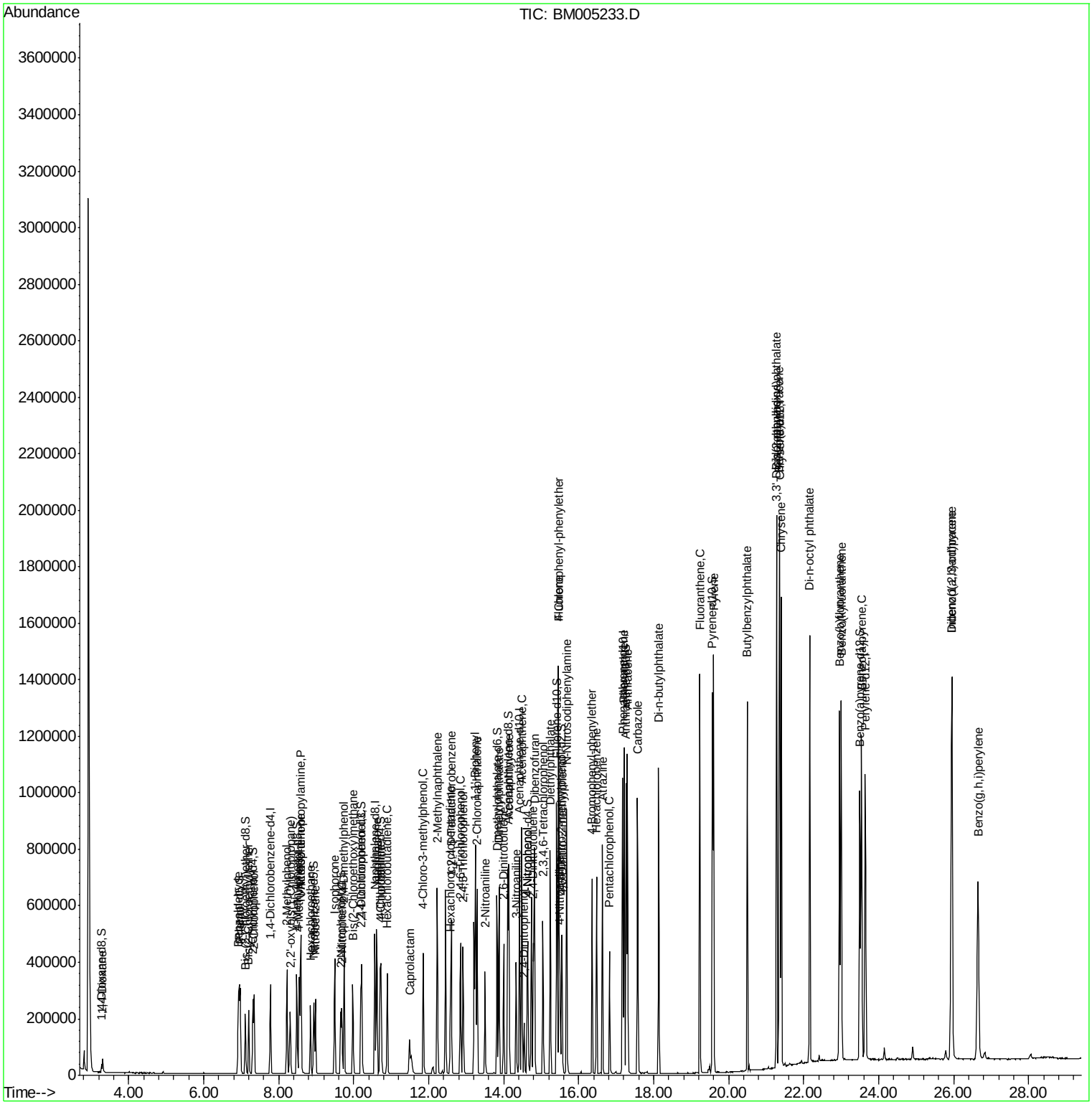
5/6/2016 7:14:59 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
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5/6/2016 7:14:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	85340	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	410502	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	259664	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	638987	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	725743	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	742303	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	14937	8.95	ng/uL	0.00
5) Phenol-d5	6.95	99	159033	22.19	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	94416	23.02	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	121697	21.76	ng/ul	0.00
13) 4-Methylphenol-d8	8.48	113	131095	21.57	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	60545	21.92	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	69418	22.71	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	128474	21.71	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	175012	24.61	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	435081	21.29	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	512945	21.24	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	78607	21.96	ng/ul	0.00
57) Fluorene-d10	15.41	176	371068	20.47	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.54	200	71168	20.29	ng/ul	0.00
70) Anthracene-d10	17.26	188	584211	20.39	ng/ul	0.00
76) Pyrene-d10	19.56	212	692650	21.58	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.49	264	674114	20.45	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	28273	9.12	ng/uL	98
4) Benzaldehyde	6.92	77	98828	28.22	ng/ul	97
6) Phenol	6.97	94	166572	21.98	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	128185	22.34	ng/ul	97
10) 2-Chlorophenol	7.34	128	125006	21.60	ng/ul	98
11) 2-Methylphenol	8.22	108	127313	21.90	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.30	45	173188	23.08	ng/ul	99
14) Acetophenone	8.59	105	206418	22.31	ng/ul	100
15) N-Nitroso-di-n-propylamine	8.57	70	104699	23.05	ng/ul	99
16) 4-Methylphenol	8.55	108	144160	22.09	ng/ul	96
17) Hexachloroethane	8.85	117	46148	20.40	ng/ul	99
20) Nitrobenzene	8.97	77	151589	21.86	ng/ul	97
21) Isophorone	9.49	82	296803	22.59	ng/ul	99
23) 2-Nitrophenol	9.68	139	74467	22.26	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	156683	21.12	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.97	93	182804	22.11	ng/ul	99
27) 2,4-Dichlorophenol	10.21	162	131526	21.54	ng/ul	99
28) Naphthalene	10.61	128	423115	20.37	ng/ul	99
30) 4-Chloroaniline	10.73	127	176934	24.08	ng/ul	98
31) Hexachlorobutadiene	10.89	225	75992	19.11	ng/ul	99
32) Caprolactam	11.48	113	46902m	22.00	ng/ul	
33) 4-Chloro-3-methylphenol	11.85	107	157685	22.10	ng/ul	98
34) 2-Methylnaphthalene	12.23	142	318952	20.67	ng/ul	100

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
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5/6/2016 7:14:59 PM

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	164451	20.82 ng/ul	99
37) Hexachlorocyclopentadiene	12.57	237	76874	17.55 ng/ul	93
38) 2,4,6-Trichlorophenol	12.84	196	109648	22.05 ng/ul	94
39) 2,4,5-Trichlorophenol	12.92	196	120034	21.48 ng/ul	100
40) 1,1'-Biphenyl	13.24	154	426795	21.03 ng/ul	100
41) 2-Chloronaphthalene	13.29	162	322157	20.78 ng/ul	99
42) 2-Nitroaniline	13.50	65	101733	24.51 ng/ul	95
44) Dimethylphthalate	13.87	163	434026	21.07 ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	87306	22.68 ng/ul	91
47) Acenaphthylene	14.14	152	540693	20.98 ng/ul	100
48) 3-Nitroaniline	14.33	138	96063	23.88 ng/ul	97
49) Acenaphthene	14.48	153	348839	20.46 ng/ul	98
50) 2,4-Dinitrophenol	14.54	184	40323	18.69 ng/ul	95
52) 4-Nitrophenol	14.64	109	63917	19.87 ng/ul	99
53) Dibenzofuran	14.82	168	513939	20.38 ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	129322	21.49 ng/ul	94
55) 2,3,4,6-Tetrachlorophenol	15.04	232	103385	21.09 ng/ul#	93
56) Diethylphthalate	15.24	149	437479	21.02 ng/ul	99
58) Fluorene	15.47	166	396021	19.96 ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	196258	19.88 ng/ul	99
60) 4-Nitroaniline	15.50	138	97225	21.74 ng/ul	98
63) 4,6-Dinitro-2-methylphenol	15.56	198	76247	20.64 ng/ul#	88
64) N-Nitrosodiphenylamine	15.67	169	359924	20.72 ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	126984	20.85 ng/ul	96
66) Hexachlorobenzene	16.47	284	142418	20.47 ng/ul	98
67) Atrazine	16.63	200	139465	22.03 ng/ul	99
68) Pentachlorophenol	16.82	266	75332	19.72 ng/ul	98
69) Phenanthrene	17.21	178	699634	20.40 ng/ul	99
71) Anthracene	17.30	178	692458	20.10 ng/ul	99
72) Carbazole	17.57	167	656169	21.91 ng/ul	99
73) Di-n-butylphthalate	18.13	149	766300	22.62 ng/ul	100
74) Fluoranthene	19.23	202	855338	22.33 ng/ul	100
77) Pyrene	19.59	202	871228	21.28 ng/ul	99
78) Butylbenzylphthalate	20.49	149	364649	23.71 ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	292510	22.85 ng/ul	98
80) Benzo(a)anthracene	21.34	228	866329	20.93 ng/ul	100
81) Bis(2-ethylhexyl)phthalate	21.27	149	528146	24.10 ng/ul	98
82) Chrysene	21.40	228	826013	20.76 ng/ul	99
84) Di-n-octyl phthalate	22.16	149	943740	21.45 ng/ul	100
85) Benzo(b)fluoranthene	22.96	252	876542	19.96 ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	862599	20.18 ng/ul	100
88) Benzo(a)pyrene	23.54	252	849948	20.48 ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.94	276	934142	22.37 ng/ul	98
90) Dibenzo(a,h)anthracene	25.95	278	785969	22.48 ng/ul	99
91) Benzo(g,h,i)perylene	26.64	276	779275	22.59 ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
sohil
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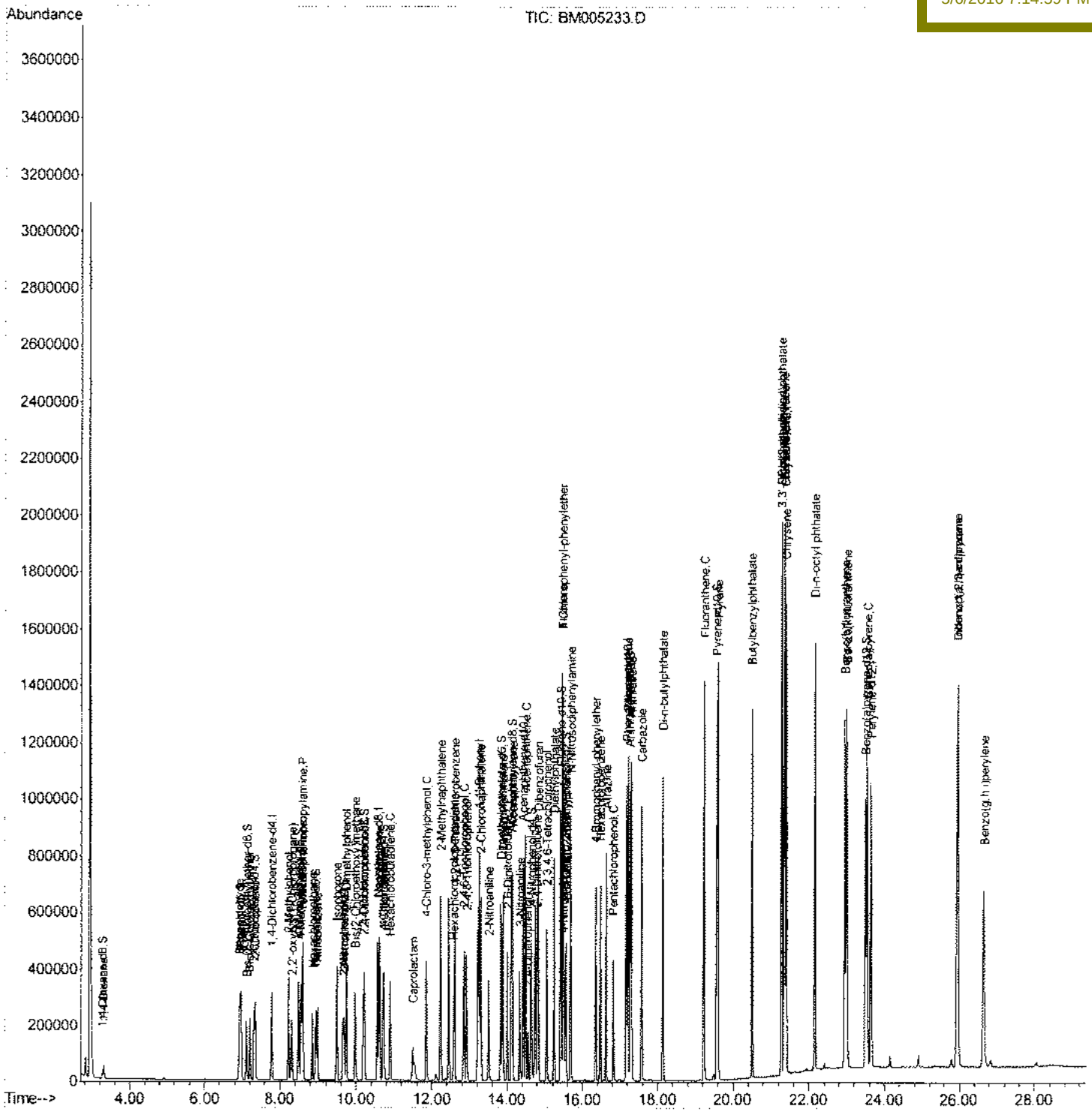

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:42:18 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
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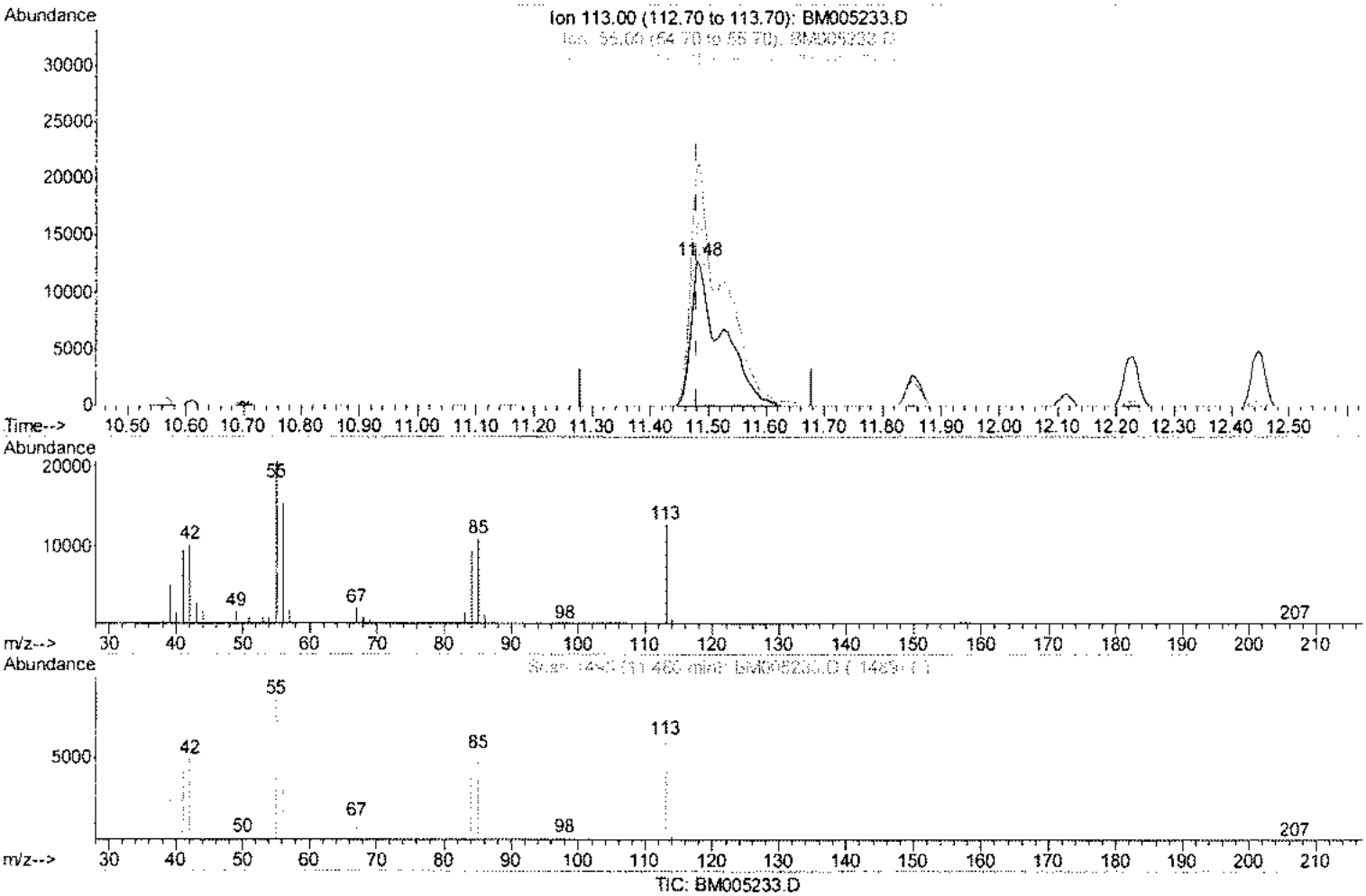
5/6/2016 7:14:59 PM



(32) Caprolactam

11.480min (0.000) 22.00ng/ul m UM 05/07/16

response 46902

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	161.31
56.00	120.80	120.84
0.00	0.00	0.00

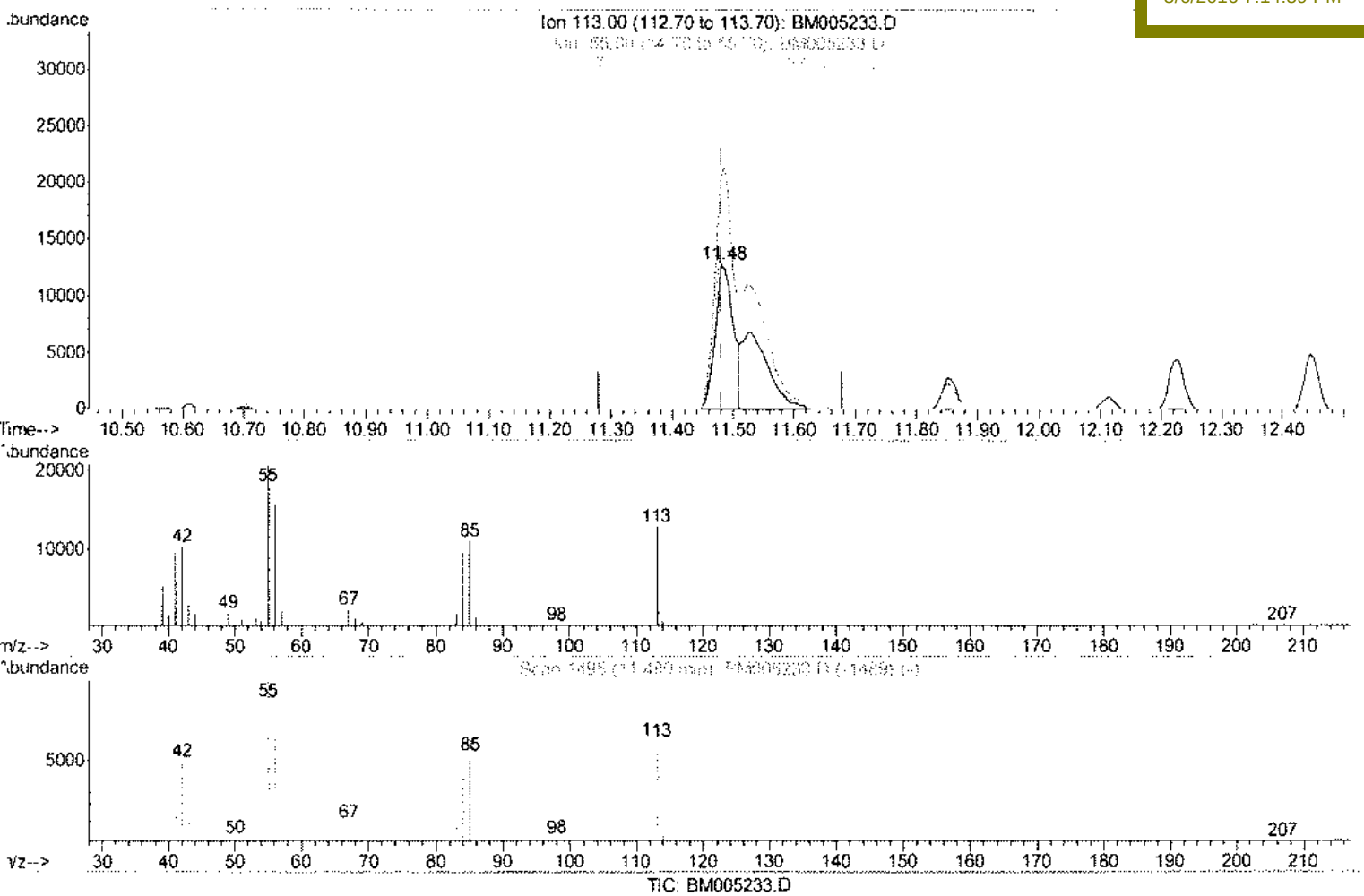
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:42:18 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
sohil
5/6/2016 7:14:59 PM



(32) Caprolactam

11.480min (0.000) 12.53ng/ul

response 26716

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	161.31
56.00	120.80	120.84
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02042

Manual Integrations APPROVED
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5/6/2016 7:14:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	85340	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	410502	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	259664	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	638987	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	725743	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	742303	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	14937	8.95	ng/uL	0.00
5) Phenol-d5	6.95	99	159033	22.19	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	94416	23.02	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	121697	21.76	ng/ul	0.00
13) 4-Methylphenol-d8	8.48	113	131095	21.57	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	60545	21.92	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	69418	22.71	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	128474	21.71	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	175012	24.61	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	435081	21.29	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	512945	21.24	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	78607	21.96	ng/ul	0.00
57) Fluorene-d10	15.41	176	371068	20.47	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.54	200	71168	20.29	ng/ul	0.00
70) Anthracene-d10	17.26	188	584211	20.39	ng/ul	0.00
76) Pyrene-d10	19.56	212	692650	21.58	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.49	264	674114	20.45	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	28273	9.12	ng/uL	98
4) Benzaldehyde	6.92	77	98828	28.22	ng/ul	97
6) Phenol	6.97	94	166572	21.98	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	128185	22.34	ng/ul	97
10) 2-Chlorophenol	7.34	128	125006	21.60	ng/ul	98
11) 2-Methylphenol	8.22	108	127313	21.90	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.30	45	173188	23.08	ng/ul	99
14) Acetophenone	8.59	105	206418	22.31	ng/ul	100
15) N-Nitroso-di-n-propylamine	8.57	70	104699	23.05	ng/ul	99
16) 4-Methylphenol	8.55	108	144160	22.09	ng/ul	96
17) Hexachloroethane	8.85	117	46148	20.40	ng/ul	99
20) Nitrobenzene	8.97	77	151589	21.86	ng/ul	97
21) Isophorone	9.49	82	296803	22.59	ng/ul	99
23) 2-Nitrophenol	9.68	139	74467	22.26	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	156683	21.12	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.97	93	182804	22.11	ng/ul	99
27) 2,4-Dichlorophenol	10.21	162	131526	21.54	ng/ul	99
28) Naphthalene	10.61	128	423115	20.37	ng/ul	99
30) 4-Chloroaniline	10.73	127	176934	24.08	ng/ul	98
31) Hexachlorobutadiene	10.89	225	75992	19.11	ng/ul	99
32) Caprolactam	11.48	113	46902m	22.00	ng/ul	
33) 4-Chloro-3-methylphenol	11.85	107	157685	22.10	ng/ul	98
34) 2-Methylnaphthalene	12.23	142	318952	20.67	ng/ul	100

U.M 05/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02042

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	164451	20.82	ng/ul	99
37) Hexachlorocyclopentadiene	12.57	237	76874	17.55	ng/ul	93
38) 2,4,6-Trichlorophenol	12.84	196	109648	22.05	ng/ul	94
39) 2,4,5-Trichlorophenol	12.92	196	120034	21.48	ng/ul	100
40) 1,1'-Biphenyl	13.24	154	426795	21.03	ng/ul	100
41) 2-Chloronaphthalene	13.29	162	322157	20.78	ng/ul	99
42) 2-Nitroaniline	13.50	65	101733	24.51	ng/ul	95
44) Dimethylphthalate	13.87	163	434026	21.07	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	87306	22.68	ng/ul	91
47) Acenaphthylene	14.14	152	540693	20.98	ng/ul	100
48) 3-Nitroaniline	14.33	138	96063	23.88	ng/ul	97
49) Acenaphthene	14.48	153	348839	20.46	ng/ul	98
50) 2,4-Dinitrophenol	14.54	184	40323	18.69	ng/ul	95
52) 4-Nitrophenol	14.64	109	63917	19.87	ng/ul	99
53) Dibenzofuran	14.82	168	513939	20.38	ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	129322	21.49	ng/ul	94
55) 2,3,4,6-Tetrachlorophenol	15.04	232	103385	21.09	ng/ul#	93
56) Diethylphthalate	15.24	149	437479	21.02	ng/ul	99
58) Fluorene	15.47	166	396021	19.96	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	196258	19.88	ng/ul	99
60) 4-Nitroaniline	15.50	138	97225	21.74	ng/ul	98
63) 4,6-Dinitro-2-methylphenol	15.56	198	76247	20.64	ng/ul#	88
64) N-Nitrosodiphenylamine	15.67	169	359924	20.72	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	126984	20.85	ng/ul	96
66) Hexachlorobenzene	16.47	284	142418	20.47	ng/ul	98
67) Atrazine	16.63	200	139465	22.03	ng/ul	99
68) Pentachlorophenol	16.82	266	75332	19.72	ng/ul	98
69) Phenanthrene	17.21	178	699634	20.40	ng/ul	99
71) Anthracene	17.30	178	692458	20.10	ng/ul	99
72) Carbazole	17.57	167	656169	21.91	ng/ul	99
73) Di-n-butylphthalate	18.13	149	766300	22.62	ng/ul	100
74) Fluoranthene	19.23	202	855338	22.33	ng/ul	100
77) Pyrene	19.59	202	871228	21.28	ng/ul	99
78) Butylbenzylphthalate	20.49	149	364649	23.71	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	292510	22.85	ng/ul	98
80) Benzo(a)anthracene	21.34	228	866329	20.93	ng/ul	100
81) Bis(2-ethylhexyl)phthalate	21.27	149	528146	24.10	ng/ul	98
82) Chrysene	21.40	228	826013	20.76	ng/ul	99
84) Di-n-octyl phthalate	22.16	149	943740	21.45	ng/ul	100
85) Benzo(b)fluoranthene	22.96	252	876542	19.96	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	862599	20.18	ng/ul	100
88) Benzo(a)pyrene	23.54	252	849948	20.48	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.94	276	934142	22.37	ng/ul	98
90) Dibenzo(a,h)anthracene	25.95	278	785969	22.48	ng/ul	99
91) Benzo(g,h,i)perylene	26.64	276	779275	22.59	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
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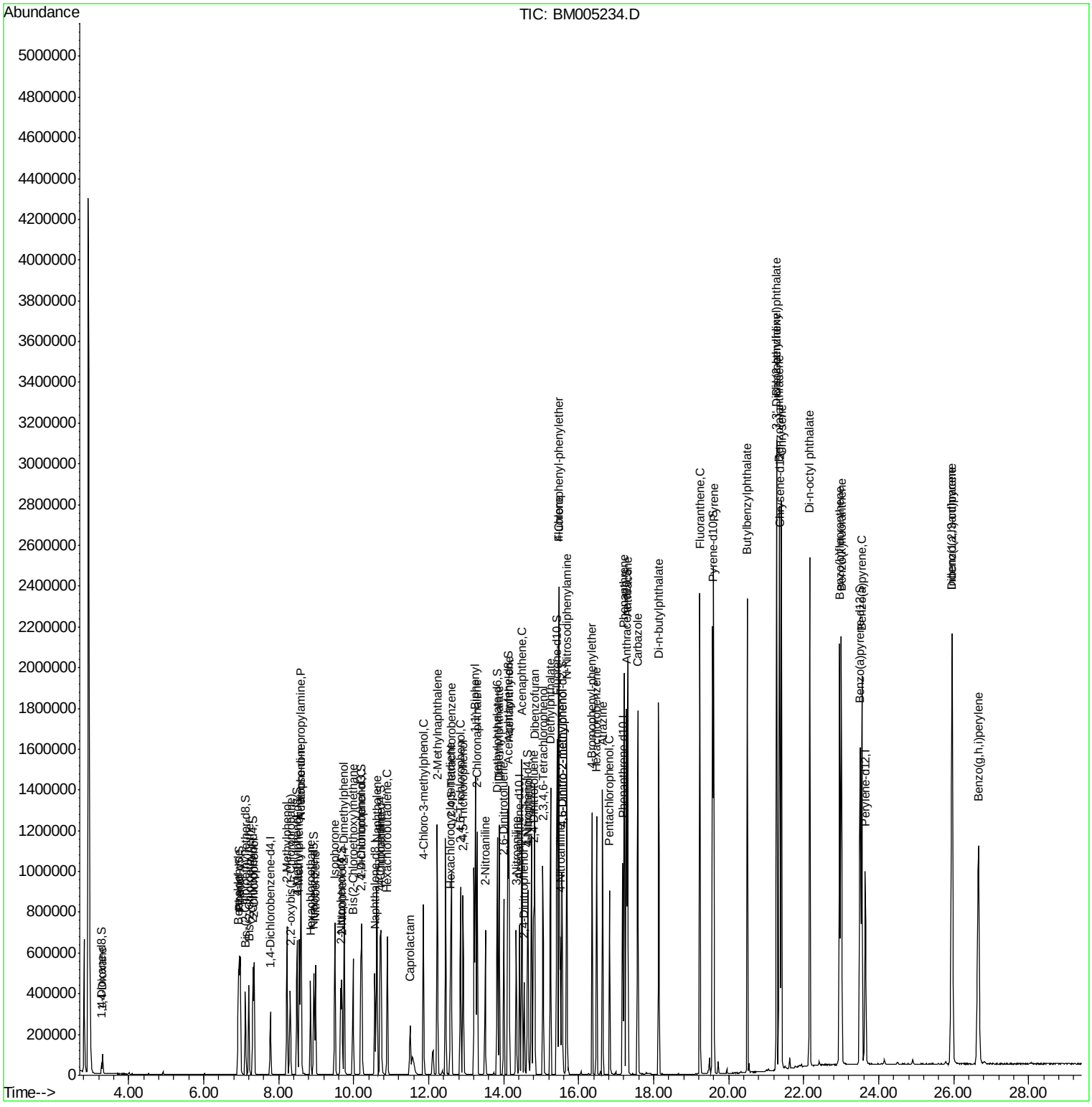
5/6/2016 7:15:02 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
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5/6/2016 7:15:02 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.78	152	84562	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	403635	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	251460	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	619996	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	654734	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	679108	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	27933	16.90	ng/uL	0.00
5) Phenol-d5	6.95	99	311622	43.88	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	176761	43.50	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	238066	42.96	ng/ul	0.00
13) 4-Methylphenol-d8	8.49	113	258926	43.00	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	122067	44.96	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	139600	46.44	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	251376	43.20	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	319946	45.75	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	810084	40.93	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	949365	40.60	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	154681	44.63	ng/ul	0.00
57) Fluorene-d10	15.42	176	679698	38.71	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.55	200	149006	43.78	ng/ul	0.00
70) Anthracene-d10	17.27	188	1063154	38.25	ng/ul	0.00
76) Pyrene-d10	19.57	212	1216425	42.00	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.50	264	1202409	39.87	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	50901	16.57	ng/uL	99
4) Benzaldehyde	6.92	77	169654	48.90	ng/ul	98
6) Phenol	6.98	94	319063	42.50	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	241856	42.53	ng/ul	99
10) 2-Chlorophenol	7.34	128	240670	41.96	ng/ul	97
11) 2-Methylphenol	8.22	108	250854	43.56	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.31	45	330391	44.43	ng/ul	98
14) Acetophenone	8.60	105	370892	40.45	ng/ul	100
15) N-Nitroso-di-n-propylamine	8.59	70	193546	43.00	ng/ul	97
16) 4-Methylphenol	8.55	108	273782	42.33	ng/ul	99
17) Hexachloroethane	8.85	117	89667	40.01	ng/ul	97
20) Nitrobenzene	8.97	77	291849	42.80	ng/ul	97
21) Isophorone	9.50	82	577750	44.71	ng/ul	99
23) 2-Nitrophenol	9.68	139	146919	44.66	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	297922	40.85	ng/ul	100
25) Bis(2-Chloroethoxy)methane	9.98	93	343635	42.27	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	254999	42.46	ng/ul	98
28) Naphthalene	10.62	128	792956	38.83	ng/ul	99
30) 4-Chloroaniline	10.73	127	320811	44.41	ng/ul	99
31) Hexachlorobutadiene	10.89	225	145369	37.17	ng/ul	99
32) Caprolactam	11.50	113	97338m	46.44	ng/ul	
33) 4-Chloro-3-methylphenol	11.86	107	305943	43.61	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	590164	38.89	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
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5/6/2016 7:15:02 PM

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	308575	40.34	ng/ul	98
37) Hexachlorocyclopentadiene	12.57	237	165875	39.11	ng/ul	96
38) 2,4,6-Trichlorophenol	12.85	196	214651	44.57	ng/ul	95
39) 2,4,5-Trichlorophenol	12.92	196	239902	44.34	ng/ul	98
40) 1,1'-Biphenyl	13.25	154	790207	40.21	ng/ul	99
41) 2-Chloronaphthalene	13.29	162	607593	40.47	ng/ul	98
42) 2-Nitroaniline	13.50	65	205060	51.01	ng/ul	96
44) Dimethylphthalate	13.87	163	793709	39.79	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	174443	46.79	ng/ul#	88
47) Acenaphthylene	14.14	152	979969	39.27	ng/ul	99
48) 3-Nitroaniline	14.33	138	181153	46.50	ng/ul	98
49) Acenaphthene	14.48	153	638866	38.70	ng/ul	99
50) 2,4-Dinitrophenol	14.54	184	96796	46.32	ng/ul	94
52) 4-Nitrophenol	14.65	109	126938	40.75	ng/ul	97
53) Dibenzofuran	14.82	168	930477	38.11	ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	255030	43.76	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.05	232	202175	42.59	ng/ul#	100
56) Diethylphthalate	15.25	149	817513	40.56	ng/ul	99
58) Fluorene	15.47	166	709743	36.94	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.46	204	352607	36.88	ng/ul	99
60) 4-Nitroaniline	15.50	138	186037	42.96	ng/ul	97
63) 4,6-Dinitro-2-methylphenol	15.56	198	156691	43.71	ng/ul#	92
64) N-Nitrosodiphenylamine	15.68	169	662167	39.28	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	235524	39.85	ng/ul	98
66) Hexachlorobenzene	16.47	284	263031	38.96	ng/ul	99
67) Atrazine	16.63	200	260164	42.35	ng/ul	97
68) Pentachlorophenol	16.82	266	155897	42.07	ng/ul	98
69) Phenanthrene	17.21	178	1254576	37.70	ng/ul	99
71) Anthracene	17.30	178	1252211	37.46	ng/ul	100
72) Carbazole	17.57	167	1181972	40.67	ng/ul	100
73) Di-n-butylphthalate	18.13	149	1409761	42.89	ng/ul	100
74) Fluoranthene	19.23	202	1504599	40.49	ng/ul	99
77) Pyrene	19.60	202	1495200	40.49	ng/ul	99
78) Butylbenzylphthalate	20.49	149	685781	49.43	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	492093	42.60	ng/ul	99
80) Benzo(a)anthracene	21.35	228	1482911	39.72	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	913304	46.20	ng/ul	97
82) Chrysene	21.40	228	1409938	39.28	ng/ul	99
84) Di-n-octyl phthalate	22.16	149	1717400	42.67	ng/ul	98
85) Benzo(b)fluoranthene	22.96	252	1595664	39.71	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	1451729	37.12	ng/ul	99
88) Benzo(a)pyrene	23.54	252	1471288	38.75	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.95	276	1617052	42.34	ng/ul	99
90) Dibenzo(a,h)anthracene	25.96	278	1346332	42.09	ng/ul	99
91) Benzo(g,h,i)perylene	26.66	276	1401939	44.41	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

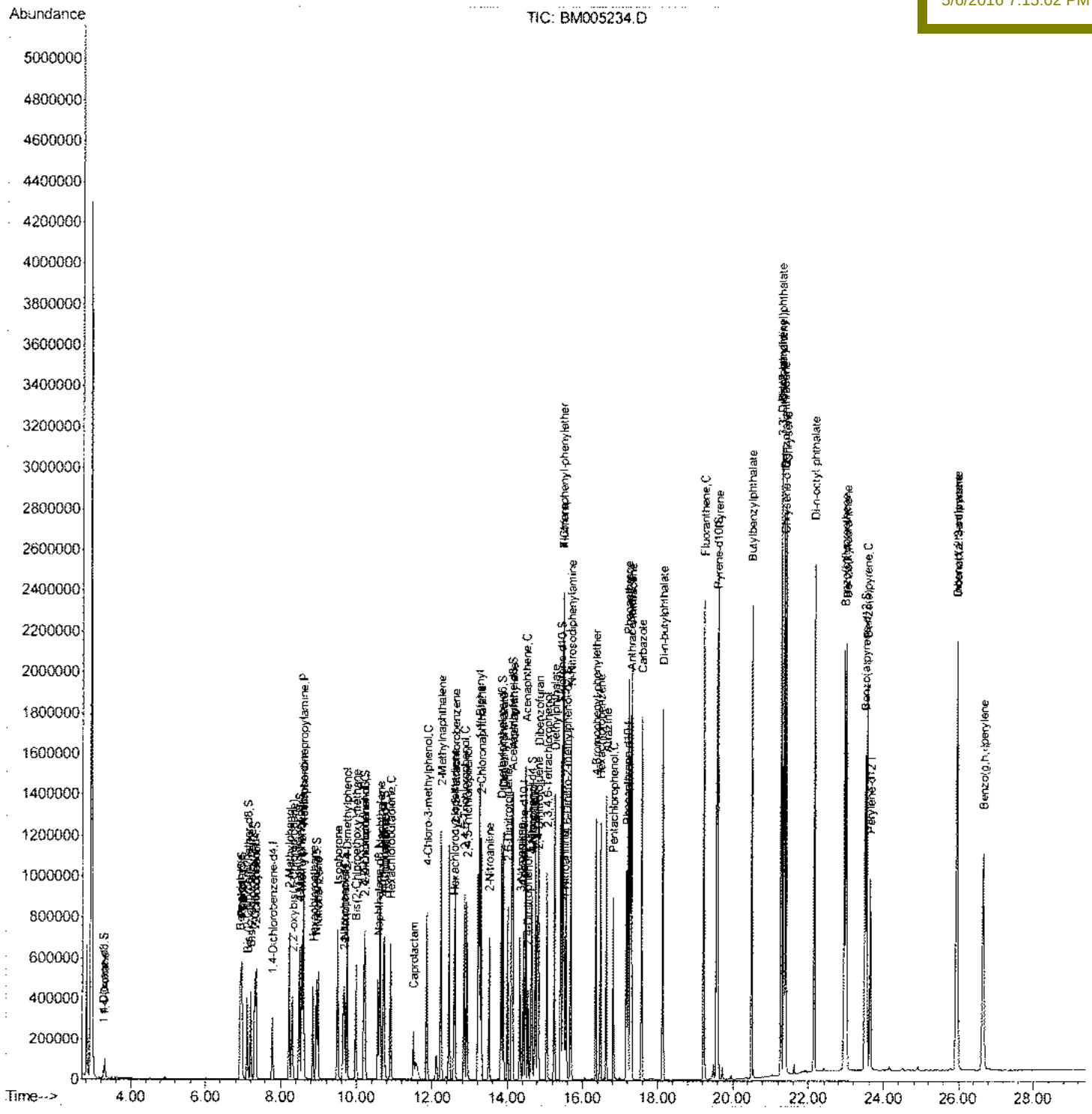
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
sohil
5/6/2016 7:15:02 PM



Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:42:38 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
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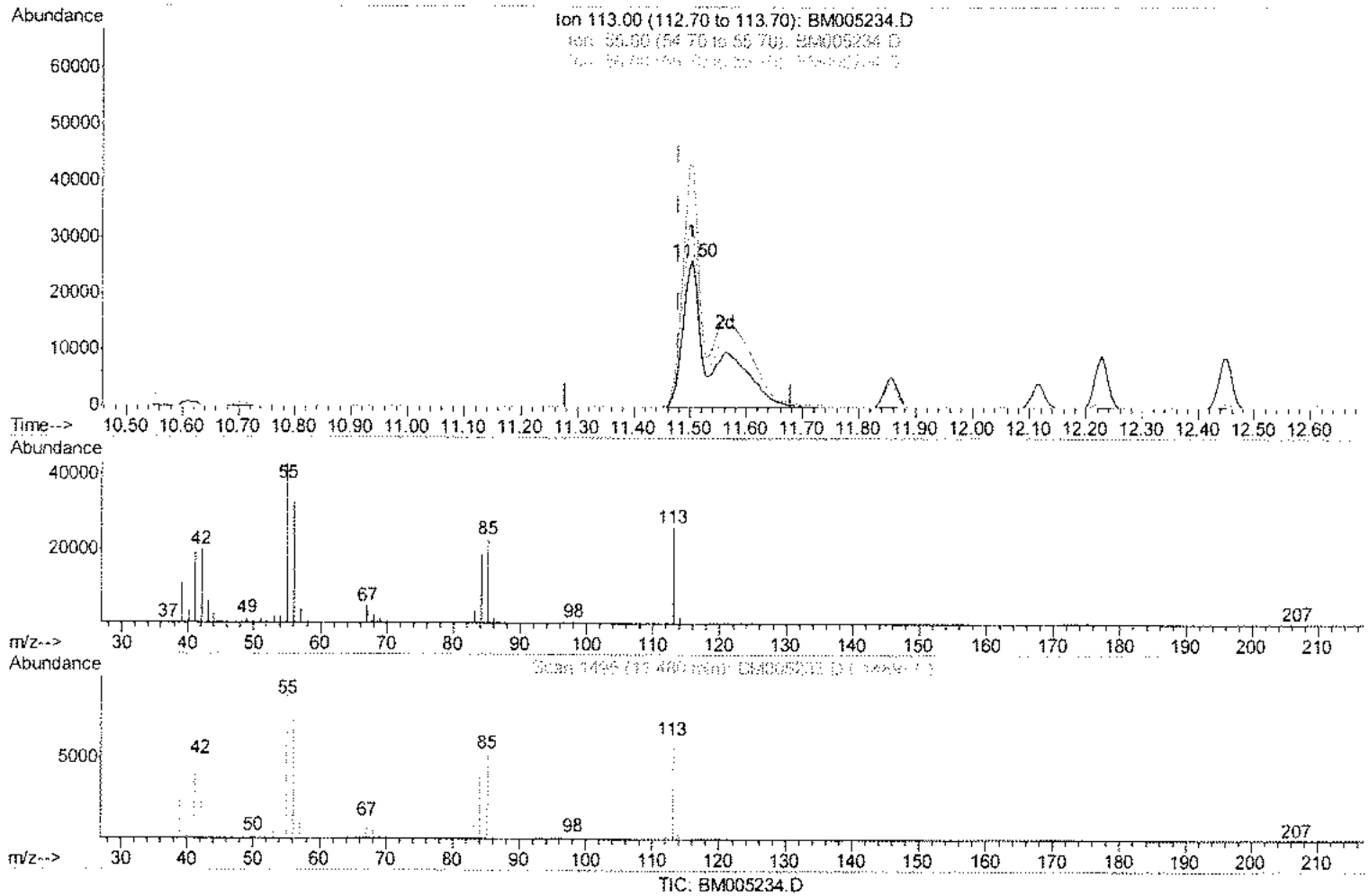
5/6/2016 7:15:02 PM



(32) Caprolactam

11.504min (+0.024) 46.44ng/ul m U.M 05/07/16

response 97338

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	165.66
56.00	120.80	125.31
0.00	0.00	0.00

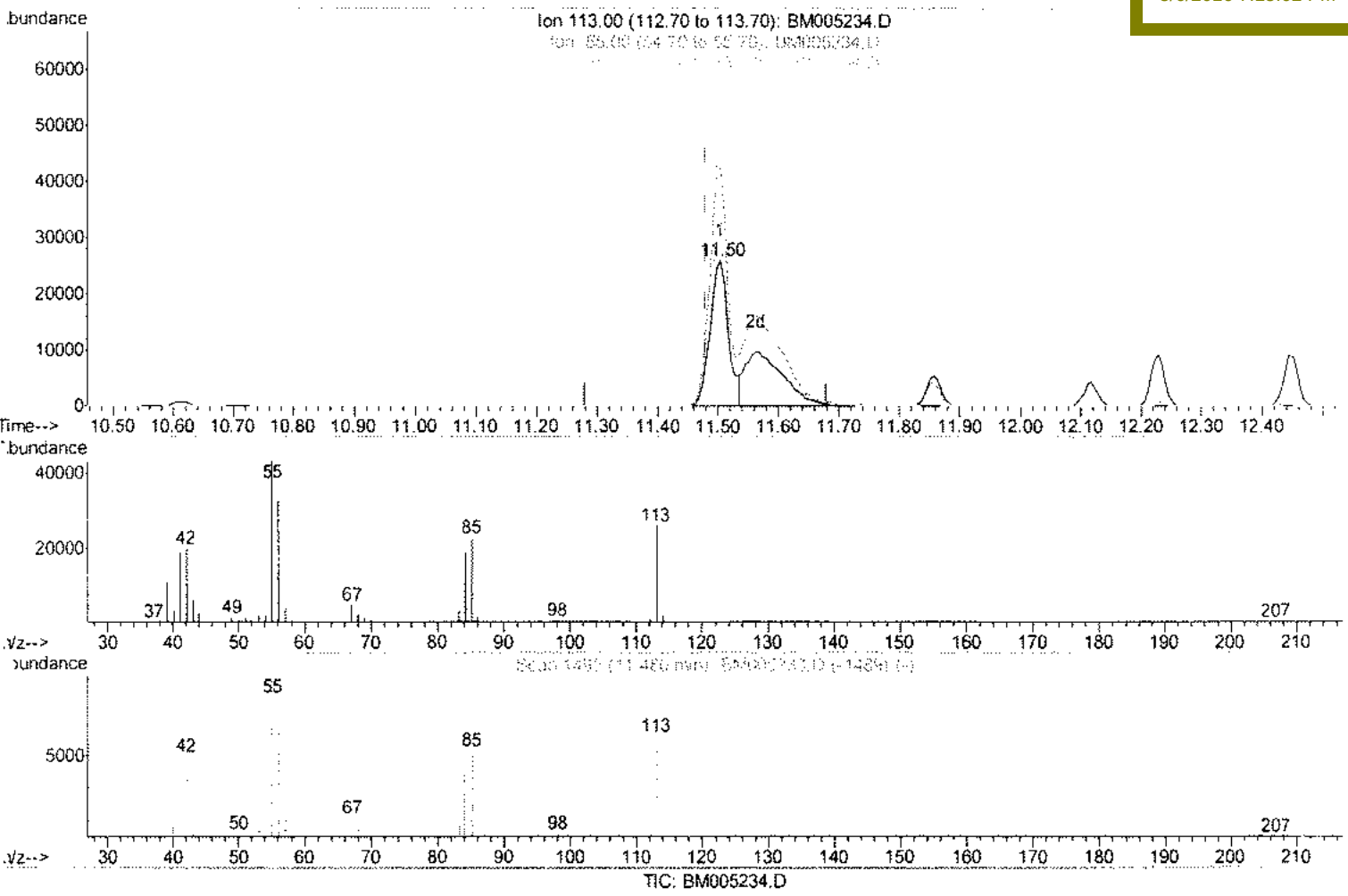
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:42:38 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
sohil
5/6/2016 7:15:02 PM



TIC: BM005234.D

(32) Caprolactam

11.504min (+0.024) 25.82ng/ul

response 54124

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	165.66
56.00	120.80	125.31
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD04043

Manual Integrations APPROVED
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5/6/2016 7:15:02 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.78	152	84562	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	403635	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	251460	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	619996	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	654734	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	679108	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	27933	16.90	ng/uL	0.00
5) Phenol-d5	6.95	99	311622	43.88	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	176761	43.50	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	238066	42.96	ng/ul	0.00
13) 4-Methylphenol-d8	8.49	113	258926	43.00	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	122067	44.96	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	139600	46.44	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	251376	43.20	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	319946	45.75	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	810084	40.93	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	949365	40.60	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	154681	44.63	ng/ul	0.00
57) Fluorene-d10	15.42	176	679698	38.71	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.55	200	149006	43.78	ng/ul	0.00
70) Anthracene-d10	17.27	188	1063154	38.25	ng/ul	0.00
76) Pyrene-d10	19.57	212	1216425	42.00	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.50	264	1202409	39.87	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	50901	16.57	ng/uL	99
4) Benzaldehyde	6.92	77	169654	48.90	ng/ul	98
6) Phenol	6.98	94	319063	42.50	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	241856	42.53	ng/ul	99
10) 2-Chlorophenol	7.34	128	240670	41.96	ng/ul	97
11) 2-Methylphenol	8.22	108	250854	43.56	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.31	45	330391	44.43	ng/ul	98
14) Acetophenone	8.60	105	370892	40.45	ng/ul	100
15) N-Nitroso-di-n-propylamine	8.59	70	193546	43.00	ng/ul	97
16) 4-Methylphenol	8.55	108	273782	42.33	ng/ul	99
17) Hexachloroethane	8.85	117	89667	40.01	ng/ul	97
20) Nitrobenzene	8.97	77	291849	42.80	ng/ul	97
21) Isophorone	9.50	82	577750	44.71	ng/ul	99
23) 2-Nitrophenol	9.68	139	146919	44.66	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	297922	40.85	ng/ul	100
25) Bis(2-Chloroethoxy)methane	9.98	93	343635	42.27	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	254999	42.46	ng/ul	98
28) Naphthalene	10.62	128	792956	38.83	ng/ul	99
30) 4-Chloroaniline	10.73	127	320811	44.41	ng/ul	99
31) Hexachlorobutadiene	10.89	225	145369	37.17	ng/ul	99
32) Caprolactam	11.50	113	97338m	46.44	ng/ul	
33) 4-Chloro-3-methylphenol	11.86	107	305943	43.61	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	590164	38.89	ng/ul	99

U.M 05/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD04043

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	308575	40.34	ng/ul	98
37) Hexachlorocyclopentadiene	12.57	237	165875	39.11	ng/ul	96
38) 2,4,6-Trichlorophenol	12.85	196	214651	44.57	ng/ul	95
39) 2,4,5-Trichlorophenol	12.92	196	239902	44.34	ng/ul	98
40) 1,1'-Biphenyl	13.25	154	790207	40.21	ng/ul	99
41) 2-Chloronaphthalene	13.29	162	607593	40.47	ng/ul	98
42) 2-Nitroaniline	13.50	65	205060	51.01	ng/ul	96
44) Dimethylphthalate	13.87	163	793709	39.79	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	174443	46.79	ng/ul#	88
47) Acenaphthylene	14.14	152	979969	39.27	ng/ul	99
48) 3-Nitroaniline	14.33	138	181153	46.50	ng/ul	98
49) Acenaphthene	14.48	153	638866	38.70	ng/ul	99
50) 2,4-Dinitrophenol	14.54	184	96796	46.32	ng/ul	94
52) 4-Nitrophenol	14.65	109	126938	40.75	ng/ul	97
53) Dibenzofuran	14.82	168	930477	38.11	ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	255030	43.76	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.05	232	202175	42.59	ng/ul#	100
56) Diethylphthalate	15.25	149	817513	40.56	ng/ul	99
58) Fluorene	15.47	166	709743	36.94	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.46	204	352607	36.88	ng/ul	99
60) 4-Nitroaniline	15.50	138	186037	42.96	ng/ul	97
63) 4,6-Dinitro-2-methylphenol	15.56	198	156691	43.71	ng/ul#	92
64) N-Nitrosodiphenylamine	15.68	169	662167	39.28	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	235524	39.85	ng/ul	98
66) Hexachlorobenzene	16.47	284	263031	38.96	ng/ul	99
67) Atrazine	16.63	200	260164	42.35	ng/ul	97
68) Pentachlorophenol	16.82	266	155897	42.07	ng/ul	98
69) Phenanthrene	17.21	178	1254576	37.70	ng/ul	99
71) Anthracene	17.30	178	1252211	37.46	ng/ul	100
72) Carbazole	17.57	167	1181972	40.67	ng/ul	100
73) Di-n-butylphthalate	18.13	149	1409761	42.89	ng/ul	100
74) Fluoranthene	19.23	202	1504599	40.49	ng/ul	99
77) Pyrene	19.60	202	1495200	40.49	ng/ul	99
78) Butylbenzylphthalate	20.49	149	685781	49.43	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	492093	42.60	ng/ul	99
80) Benzo(a)anthracene	21.35	228	1482911	39.72	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	913304	46.20	ng/ul	97
82) Chrysene	21.40	228	1409938	39.28	ng/ul	99
84) Di-n-octyl phthalate	22.16	149	1717400	42.67	ng/ul	98
85) Benzo(b)fluoranthene	22.96	252	1595664	39.71	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	1451729	37.12	ng/ul	99
88) Benzo(a)pyrene	23.54	252	1471288	38.75	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.95	276	1617052	42.34	ng/ul	99
90) Dibenzo(a,h)anthracene	25.96	278	1346332	42.09	ng/ul	99
91) Benzo(g,h,i)perylene	26.66	276	1401939	44.41	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

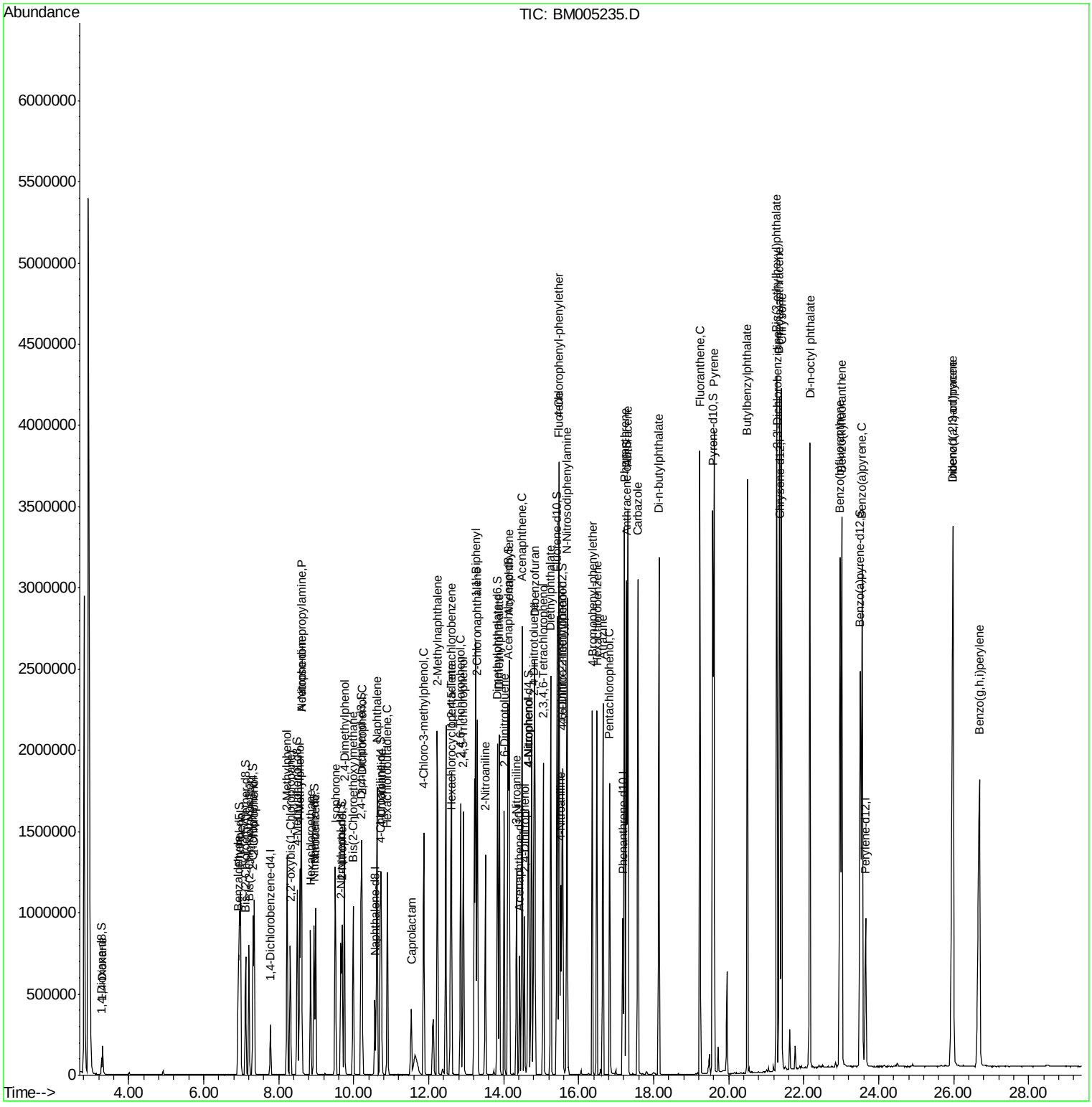
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
sohil
5/6/2016 7:15:03 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
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5/6/2016 7:15:03 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	83048	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	393148	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	246950	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	615677	20.00	ng/ul	0.00
75) Chrysene-d12	21.37	240	600527	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	644546	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	52514	32.35	ng/uL	0.00
5) Phenol-d5	6.95	99	607880	87.16	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.12	67	331598	83.08	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	469486	86.27	ng/ul	0.00
13) 4-Methylphenol-d8	8.49	113	502580	84.98	ng/ul	0.01
19) Nitrobenzene-d5	8.94	128	242925	91.85	ng/ul	0.00
22) 2-Nitrophenol-d4	9.66	143	278426	95.09	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	488977	86.28	ng/ul	0.00
29) 4-Chloroaniline-d4	10.71	131	552060	81.05	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	1505300	77.44	ng/ul	0.00
46) Acenaphthylene-d8	14.12	160	1773448	77.23	ng/ul	0.00
51) 4-Nitrophenol-d4	14.65	143	307075	90.22	ng/ul	0.02
57) Fluorene-d10	15.42	176	1239568	71.89	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.56	200	301685	89.26	ng/ul	0.02
70) Anthracene-d10	17.27	188	1938659	70.24	ng/ul	0.01
76) Pyrene-d10	19.57	212	2129410	80.16	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.51	264	2154188	75.25	ng/ul	0.02
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	94388	31.29	ng/uL	97
4) Benzaldehyde	6.92	77	253162	74.29	ng/ul	98
6) Phenol	6.98	94	626822	85.01	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	457552	81.93	ng/ul	99
10) 2-Chlorophenol	7.35	128	471091	83.63	ng/ul	99
11) 2-Methylphenol	8.22	108	489878	86.61	ng/ul	98
12) 2,2'-oxybis(1-Chloropropan	8.31	45	613586	84.03	ng/ul	99
14) Acetophenone	8.60	105	705900	78.40	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.60	70	358888	81.20	ng/ul	97
16) 4-Methylphenol	8.56	108	529578	83.38	ng/ul	95
17) Hexachloroethane	8.85	117	174404	79.24	ng/ul	96
20) Nitrobenzene	8.98	77	570370	85.88	ng/ul	96
21) Isophorone	9.51	82	1113543	88.47	ng/ul	98
23) 2-Nitrophenol	9.69	139	288558	90.06	ng/ul	99
24) 2,4-Dimethylphenol	9.75	107	582268	81.96	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.98	93	648690	81.93	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	489833	83.75	ng/ul	97
28) Naphthalene	10.62	128	1504056	75.61	ng/ul	99
30) 4-Chloroaniline	10.73	127	560036	79.59	ng/ul	98
31) Hexachlorobutadiene	10.90	225	283788	74.50	ng/ul	98
32) Caprolactam	11.54	113	191776m	93.93	ng/ul	
33) 4-Chloro-3-methylphenol	11.87	107	583313	85.36	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	1092687	73.93	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
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5/6/2016 7:15:03 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	578806	77.06	ng/ul	99
37) Hexachlorocyclopentadiene	12.58	237	351379	84.35	ng/ul	96
38) 2,4,6-Trichlorophenol	12.84	196	414809	87.70	ng/ul	95
39) 2,4,5-Trichlorophenol	12.93	196	455075	85.64	ng/ul	98
40) 1,1'-Biphenyl	13.25	154	1427149	73.94	ng/ul	99
41) 2-Chloronaphthalene	13.29	162	1126850	76.42	ng/ul	98
42) 2-Nitroaniline	13.51	65	400709	101.51	ng/ul	95
44) Dimethylphthalate	13.88	163	1488978	76.01	ng/ul	99
45) 2,6-Dinitrotoluene	14.01	165	341823	93.36	ng/ul#	88
47) Acenaphthylene	14.14	152	1809814	73.85	ng/ul	100
48) 3-Nitroaniline	14.34	138	339864	88.83	ng/ul	98
49) Acenaphthene	14.49	153	1191285	73.48	ng/ul	99
50) 2,4-Dinitrophenol	14.55	184	222750	108.54	ng/ul	92
52) 4-Nitrophenol	14.66	109	255508	83.53	ng/ul	96
53) Dibenzofuran	14.82	168	1680618	70.09	ng/ul	97
54) 2,4-Dinitrotoluene	14.80	165	484206	84.61	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.05	232	390197	83.71	ng/ul#	94
56) Diethylphthalate	15.25	149	1526647	77.12	ng/ul	99
58) Fluorene	15.48	166	1228930	65.13	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	618031	65.82	ng/ul	97
60) 4-Nitroaniline	15.52	138	356295	83.78	ng/ul	97
63) 4,6-Dinitro-2-methylphenol	15.57	198	310835	87.32	ng/ul#	86
64) N-Nitrosodiphenylamine	15.69	169	1205367	72.01	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	439906	74.95	ng/ul	97
66) Hexachlorobenzene	16.48	284	490128	73.10	ng/ul	97
67) Atrazine	16.64	200	478348	78.41	ng/ul	98
68) Pentachlorophenol	16.82	266	317223	86.20	ng/ul	98
69) Phenanthrene	17.22	178	2242657	67.87	ng/ul	99
71) Anthracene	17.31	178	2210378	66.58	ng/ul	100
72) Carbazole	17.58	167	2134031	73.94	ng/ul	99
73) Di-n-butylphthalate	18.13	149	2560656	78.45	ng/ul	100
74) Fluoranthene	19.23	202	2608839	70.70	ng/ul	98
77) Pyrene	19.60	202	2557222	75.49	ng/ul	98
78) Butylbenzylphthalate	20.49	149	1229136	96.59	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.29	252	833999	78.72	ng/ul	99
80) Benzo(a)anthracene	21.35	228	2552213	74.53	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	1530144	84.40	ng/ul#	98
82) Chrysene	21.41	228	2381747	72.34	ng/ul	98
84) Di-n-octyl phthalate	22.16	149	2946352	77.13	ng/ul#	96
85) Benzo(b)fluoranthene	22.97	252	2764613	72.49	ng/ul	99
86) Benzo(k)fluoranthene	23.01	252	2568479	69.20	ng/ul	99
88) Benzo(a)pyrene	23.56	252	2599043	72.13	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.97	276	2842888	78.42	ng/ul	97
90) Dibenzo(a,h)anthracene	25.98	278	2315960	76.29	ng/ul	98
91) Benzo(g,h,i)perylene	26.68	276	2494535	83.27	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

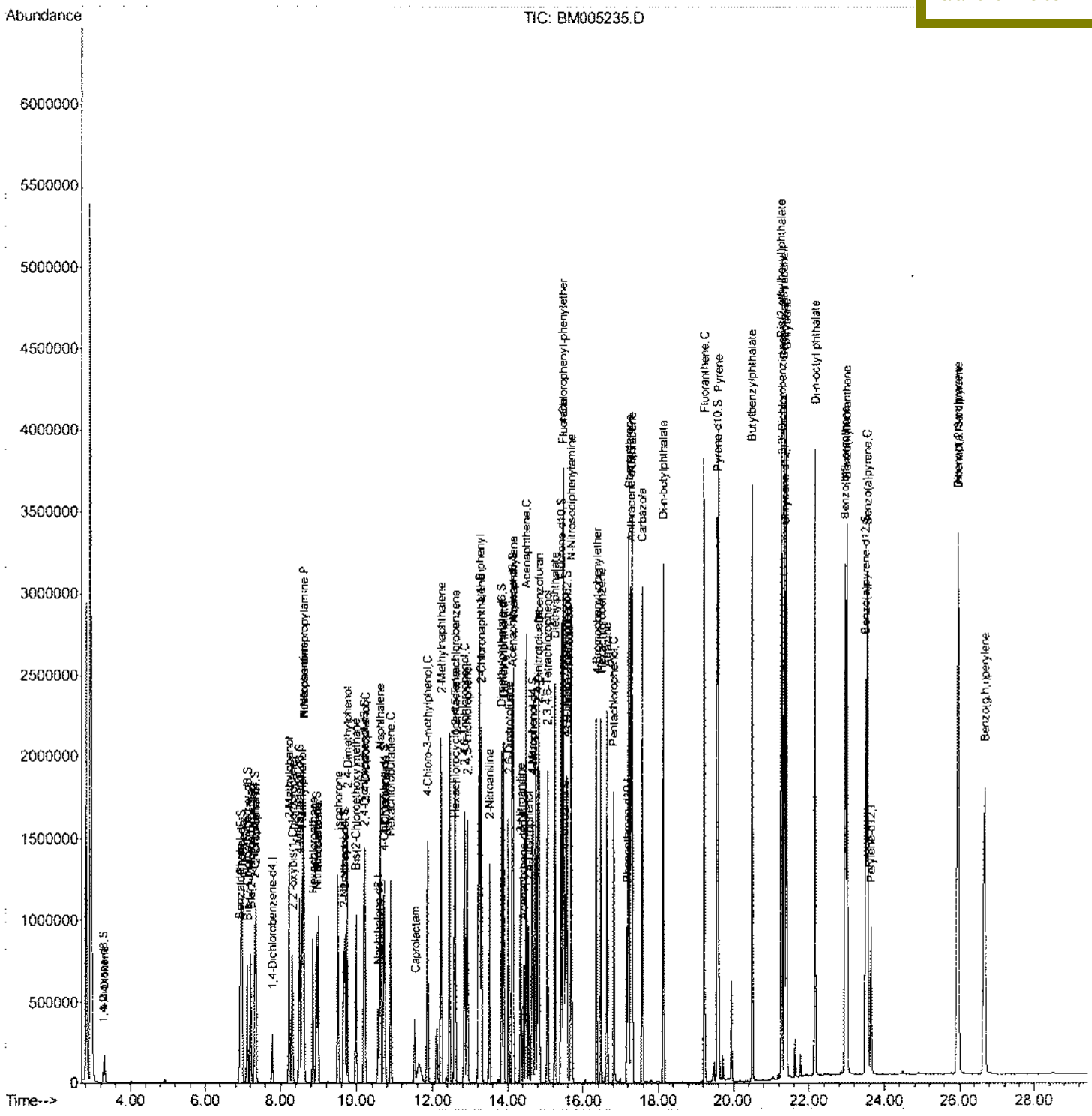
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
sohil
5/6/2016 7:15:03 PM



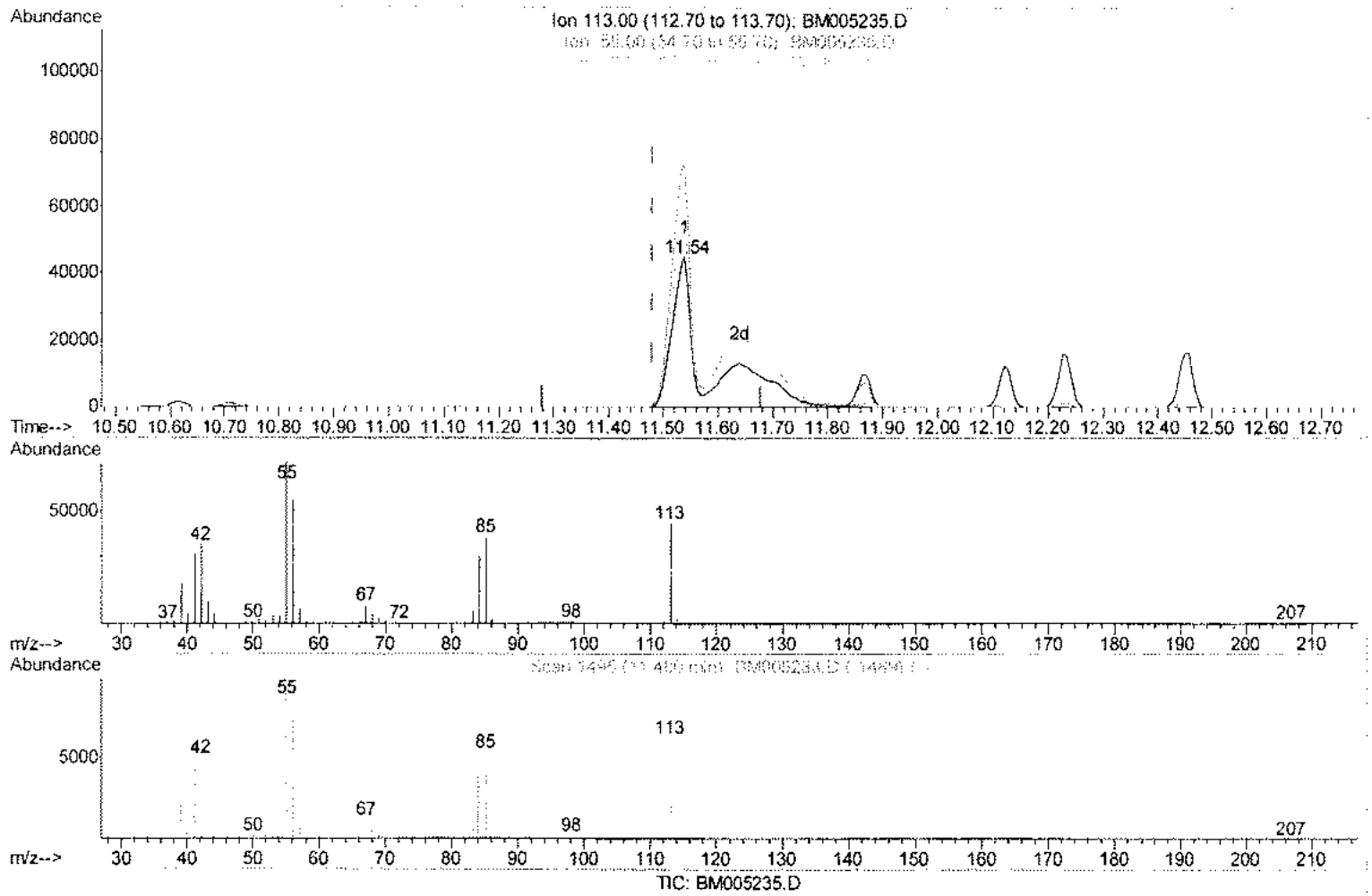
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:12:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
sohil
5/6/2016 7:15:03 PM



TIC: BM005235.D

(32) Caprolactam

11.539min (+0.059) 93.93ng/ul m U.M 05/07/16

response 191776

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	160.35
56.00	120.80	123.22
0.00	0.00	0.00

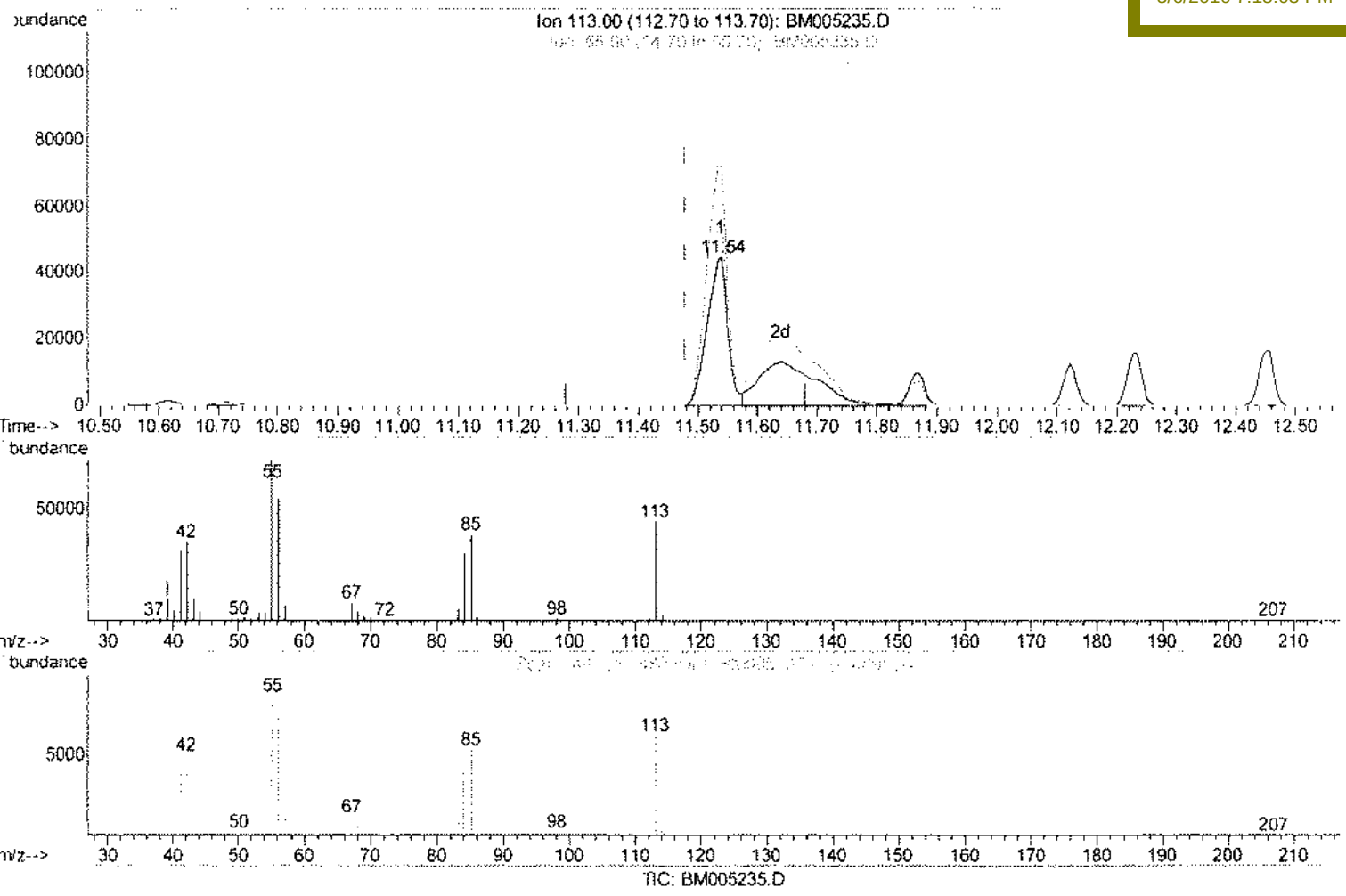
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:12:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
sohil
5/6/2016 7:15:03 PM



(32) Caprolactam

11.539min (+0.059) 51.75ng/ul

response 105649

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	160.35
56.00	120.80	123.22
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD08044

Manual Integrations APPROVED
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5/6/2016 7:15:03 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	83048	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	393148	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	246950	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	615677	20.00	ng/ul	0.00
75) Chrysene-d12	21.37	240	600527	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	644546	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	52514	32.35	ng/uL	0.00
5) Phenol-d5	6.95	99	607880	87.16	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.12	67	331598	83.08	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	469486	86.27	ng/ul	0.00
13) 4-Methylphenol-d8	8.49	113	502580	84.98	ng/ul	0.01
19) Nitrobenzene-d5	8.94	128	242925	91.85	ng/ul	0.00
22) 2-Nitrophenol-d4	9.66	143	278426	95.09	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	488977	86.28	ng/ul	0.00
29) 4-Chloroaniline-d4	10.71	131	552060	81.05	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	1505300	77.44	ng/ul	0.00
46) Acenaphthylene-d8	14.12	160	1773448	77.23	ng/ul	0.00
51) 4-Nitrophenol-d4	14.65	143	307075	90.22	ng/ul	0.02
57) Fluorene-d10	15.42	176	1239568	71.89	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.56	200	301685	89.26	ng/ul	0.02
70) Anthracene-d10	17.27	188	1938659	70.24	ng/ul	0.01
76) Pyrene-d10	19.57	212	2129410	80.16	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.51	264	2154188	75.25	ng/ul	0.02
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	94388	31.29	ng/uL	97
4) Benzaldehyde	6.92	77	253162	74.29	ng/ul	98
6) Phenol	6.98	94	626822	85.01	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	457552	81.93	ng/ul	99
10) 2-Chlorophenol	7.35	128	471091	83.63	ng/ul	99
11) 2-Methylphenol	8.22	108	489878	86.61	ng/ul	98
12) 2,2'-oxybis(1-Chloropropan	8.31	45	613586	84.03	ng/ul	99
14) Acetophenone	8.60	105	705900	78.40	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.60	70	358888	81.20	ng/ul	97
16) 4-Methylphenol	8.56	108	529578	83.38	ng/ul	95
17) Hexachloroethane	8.85	117	174404	79.24	ng/ul	96
20) Nitrobenzene	8.98	77	570370	85.88	ng/ul	96
21) Isophorone	9.51	82	1113543	88.47	ng/ul	98
23) 2-Nitrophenol	9.69	139	288558	90.06	ng/ul	99
24) 2,4-Dimethylphenol	9.75	107	582268	81.96	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.98	93	648690	81.93	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	489833	83.75	ng/ul	97
28) Naphthalene	10.62	128	1504056	75.61	ng/ul	99
30) 4-Chloroaniline	10.73	127	560036	79.59	ng/ul	98
31) Hexachlorobutadiene	10.90	225	283788	74.50	ng/ul	98
32) Caprolactam	11.54	113	191776m	93.93	ng/ul	
33) 4-Chloro-3-methylphenol	11.87	107	583313	85.36	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	1092687	73.93	ng/ul	99

U.M 05/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD08044

Manual Integrations APPROVED
sohil
5/6/2016 7:15:03 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	578806	77.06	ng/ul	99
37) Hexachlorocyclopentadiene	12.58	237	351379	84.35	ng/ul	96
38) 2,4,6-Trichlorophenol	12.84	196	414809	87.70	ng/ul	95
39) 2,4,5-Trichlorophenol	12.93	196	455075	85.64	ng/ul	98
40) 1,1'-Biphenyl	13.25	154	1427149	73.94	ng/ul	99
41) 2-Chloronaphthalene	13.29	162	1126850	76.42	ng/ul	98
42) 2-Nitroaniline	13.51	65	400709	101.51	ng/ul	95
44) Dimethylphthalate	13.88	163	1488978	76.01	ng/ul	99
45) 2,6-Dinitrotoluene	14.01	165	341823	93.36	ng/ul#	88
47) Acenaphthylene	14.14	152	1809814	73.85	ng/ul	100
48) 3-Nitroaniline	14.34	138	339864	88.83	ng/ul	98
49) Acenaphthene	14.49	153	1191285	73.48	ng/ul	99
50) 2,4-Dinitrophenol	14.55	184	222750	108.54	ng/ul	92
52) 4-Nitrophenol	14.66	109	255508	83.53	ng/ul	96
53) Dibenzofuran	14.82	168	1680618	70.09	ng/ul	97
54) 2,4-Dinitrotoluene	14.80	165	484206	84.61	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.05	232	390197	83.71	ng/ul#	94
56) Diethylphthalate	15.25	149	1526647	77.12	ng/ul	99
58) Fluorene	15.48	166	1228930	65.13	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	618031	65.82	ng/ul	97
60) 4-Nitroaniline	15.52	138	356295	83.78	ng/ul	97
63) 4,6-Dinitro-2-methylphenol	15.57	198	310835	87.32	ng/ul#	86
64) N-Nitrosodiphenylamine	15.69	169	1205367	72.01	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	439906	74.95	ng/ul	97
66) Hexachlorobenzene	16.48	284	490128	73.10	ng/ul	97
67) Atrazine	16.64	200	478348	78.41	ng/ul	98
68) Pentachlorophenol	16.82	266	317223	86.20	ng/ul	98
69) Phenanthrene	17.22	178	2242657	67.87	ng/ul	99
71) Anthracene	17.31	178	2210378	66.58	ng/ul	100
72) Carbazole	17.58	167	2134031	73.94	ng/ul	99
73) Di-n-butylphthalate	18.13	149	2560656	78.45	ng/ul	100
74) Fluoranthene	19.23	202	2608839	70.70	ng/ul	98
77) Pyrene	19.60	202	2557222	75.49	ng/ul	98
78) Butylbenzylphthalate	20.49	149	1229136	96.59	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.29	252	833999	78.72	ng/ul	99
80) Benzo(a)anthracene	21.35	228	2552213	74.53	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	1530144	84.40	ng/ul#	98
82) Chrysene	21.41	228	2381747	72.34	ng/ul	98
84) Di-n-octyl phthalate	22.16	149	2946352	77.13	ng/ul#	96
85) Benzo(b)fluoranthene	22.97	252	2764613	72.49	ng/ul	99
86) Benzo(k)fluoranthene	23.01	252	2568479	69.20	ng/ul	99
88) Benzo(a)pyrene	23.56	252	2599043	72.13	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.97	276	2842888	78.42	ng/ul	97
90) Dibenzo(a,h)anthracene	25.98	278	2315960	76.29	ng/ul	98
91) Benzo(g,h,i)perylene	26.68	276	2494535	83.27	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

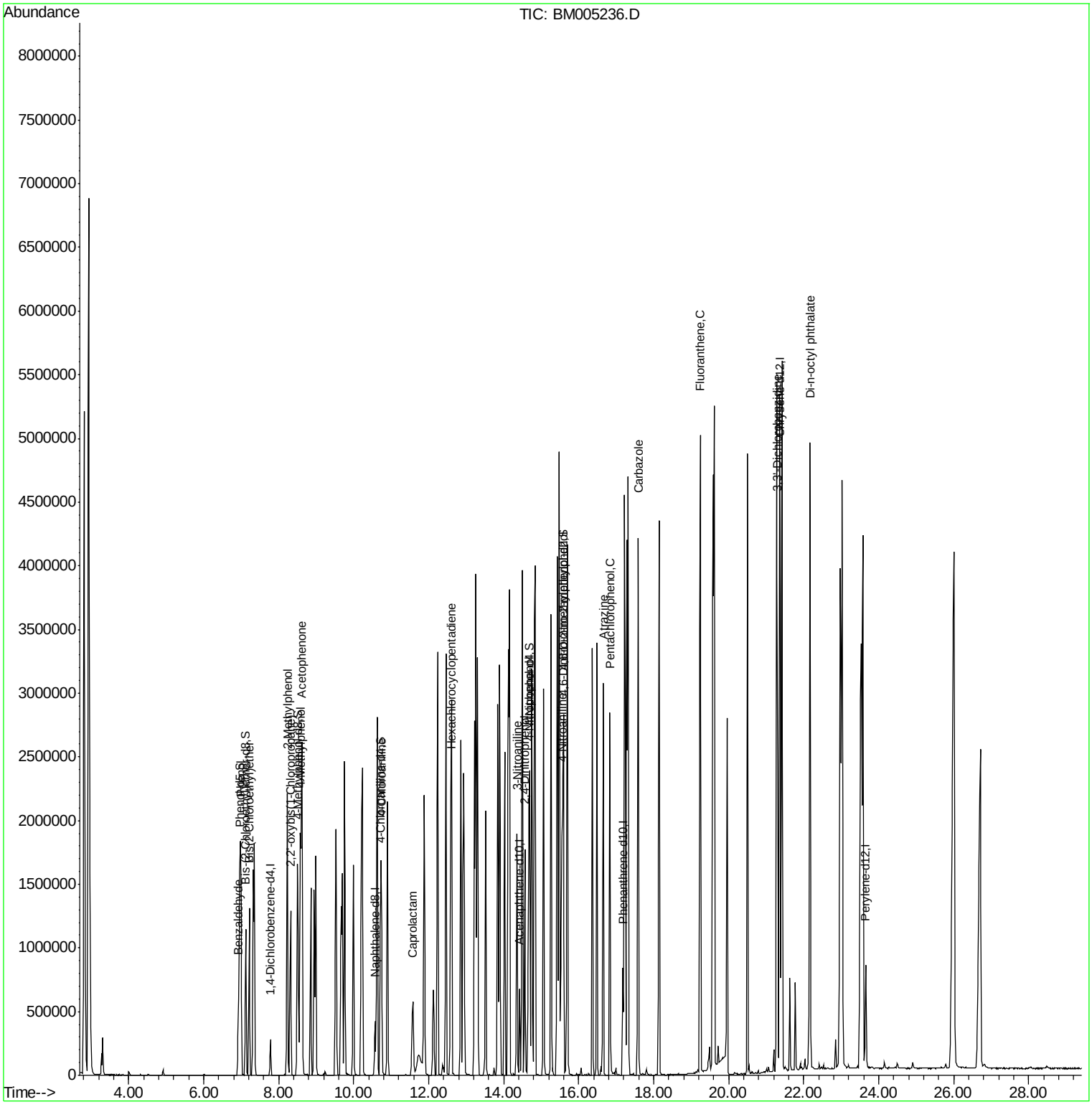
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	75056	20.00	ng/ul	0.00
18) Naphthalene-d8	10.57	136	363283	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	233509	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	561822	20.00	ng/ul	0.00
75) Chrysene-d12	21.37	240	497720	20.00	ng/ul	0.01
83) Perylene-d12	23.65	264	563686	20.00	ng/ul	0.01
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0d	0.00	ng/uL	
5) Phenol-d5	6.96	99	1075165	158.15	ng/ul	0.01
7) Bis-(2-Chloroethyl)ether-d	7.12	67	567293	146.18	ng/ul	0.01
9) 2-Chlorophenol-d4	0.00	132	0d	0.00	ng/ul	
13) 4-Methylphenol-d8	8.50	113	886525	157.84	ng/ul	0.02
19) Nitrobenzene-d5	0.00	128	0d	0.00	ng/ul	
22) 2-Nitrophenol-d4	0.00	143	0d	0.00	ng/ul	
26) 2,4-Dichlorophenol-d3	0.00	165	0d	0.00	ng/ul	
29) 4-Chloroaniline-d4	10.71	131	732409	111.84	ng/ul	0.00
43) Dimethylphthalate-d6	0.00	166	0d	0.00	ng/ul	
46) Acenaphthylene-d8	0.00	160	0d	0.00	ng/ul	
51) 4-Nitrophenol-d4	14.67	143	537109	157.83	ng/ul	0.04
57) Fluorene-d10	0.00	176	0d	0.00	ng/ul	
62) 4,6-Dinitro-2-methylphenol	15.57	200	509862	162.21	ng/ul	0.03
70) Anthracene-d10	0.00	188	0d	0.00	ng/ul	
76) Pyrene-d10	0.00	212	0d	0.00	ng/ul	
87) Benzo(a)pyrene-d12	0.00	264	0d	0.00	ng/ul	
Target Compounds						Qvalue
4) Benzaldehyde	6.92	77	226824m	70.51	ng/ul	
6) Phenol	6.99	94	1085067	154.48	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.22	93	768562	145.00	ng/ul	98
11) 2-Methylphenol	8.23	108	841458	155.00	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.32	45	1027856	143.11	ng/ul	98
14) Acetophenone	8.61	105	1175531	141.43	ng/ul	99
16) 4-Methylphenol	8.58	108	923518	153.36	ng/ul	94
30) 4-Chloroaniline	10.74	127	757005	113.61	ng/ul	98
32) Caprolactam	11.58	113	347344m	163.70	ng/ul	
37) Hexachlorocyclopentadiene	12.58	237	626609	173.01	ng/ul	95
48) 3-Nitroaniline	14.36	138	569448	145.96	ng/ul	99
50) 2,4-Dinitrophenol	14.56	184	428328	202.75	ng/ul	93
52) 4-Nitrophenol	14.69	109	445714	157.24	ng/ul	92
60) 4-Nitroaniline	15.54	138	639334	154.35	ng/ul	93
63) 4,6-Dinitro-2-methylphenol	15.59	198	522473	157.93	ng/ul#	87
67) Atrazine	16.66	200	758834	135.68	ng/ul	99
68) Pentachlorophenol	16.83	266	558124	166.98	ng/ul	97
72) Carbazole	17.59	167	3315288	128.31	ng/ul	98
74) Fluoranthene	19.24	202	3900552	119.85	ng/ul	96
79) 3,3'-Dichlorobenzidine	21.29	252	1289339	144.50	ng/ul	98
84) Di-n-octyl phthalate	22.17	149	4331133	131.76	ng/ul#	94

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

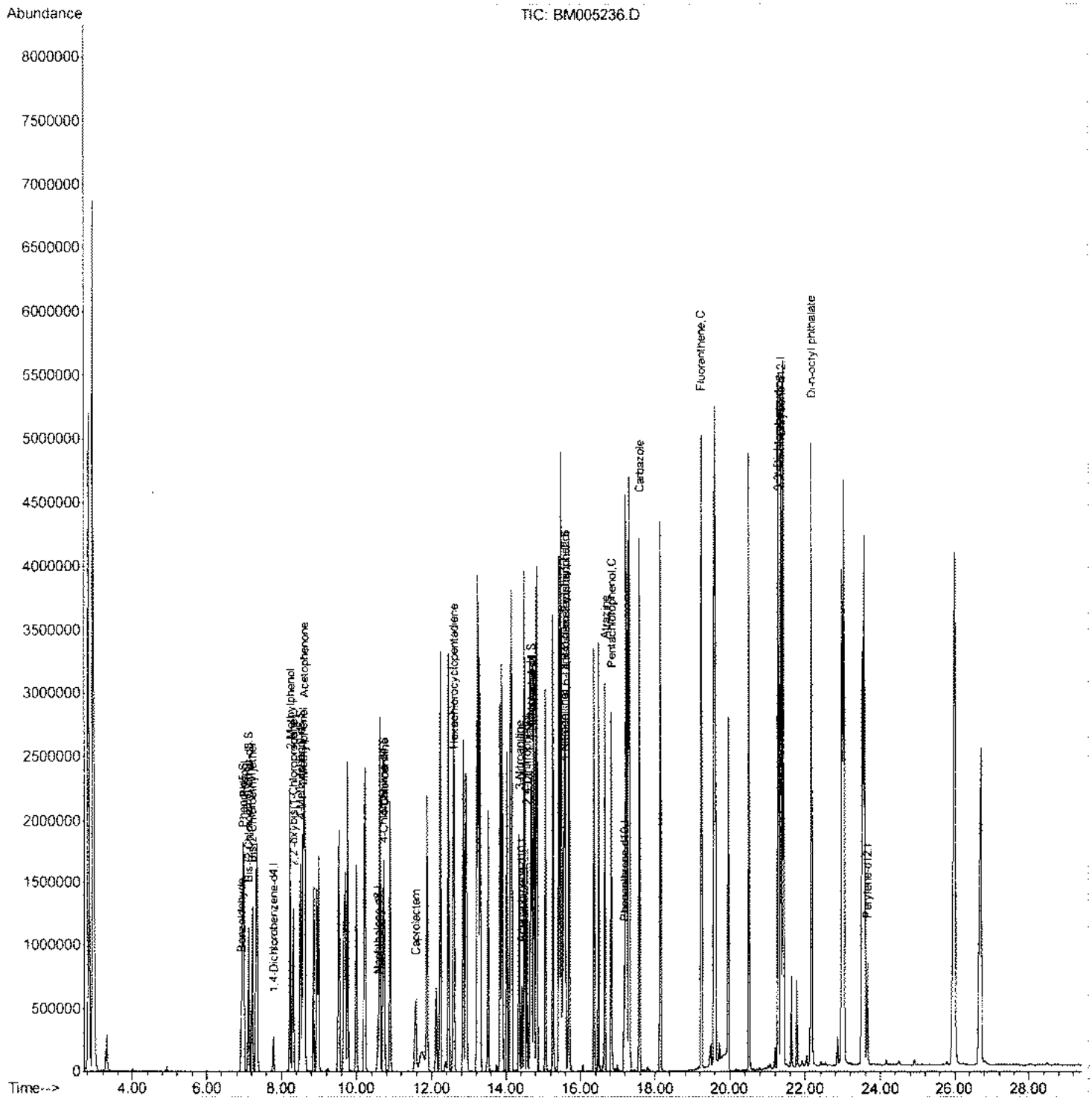
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM



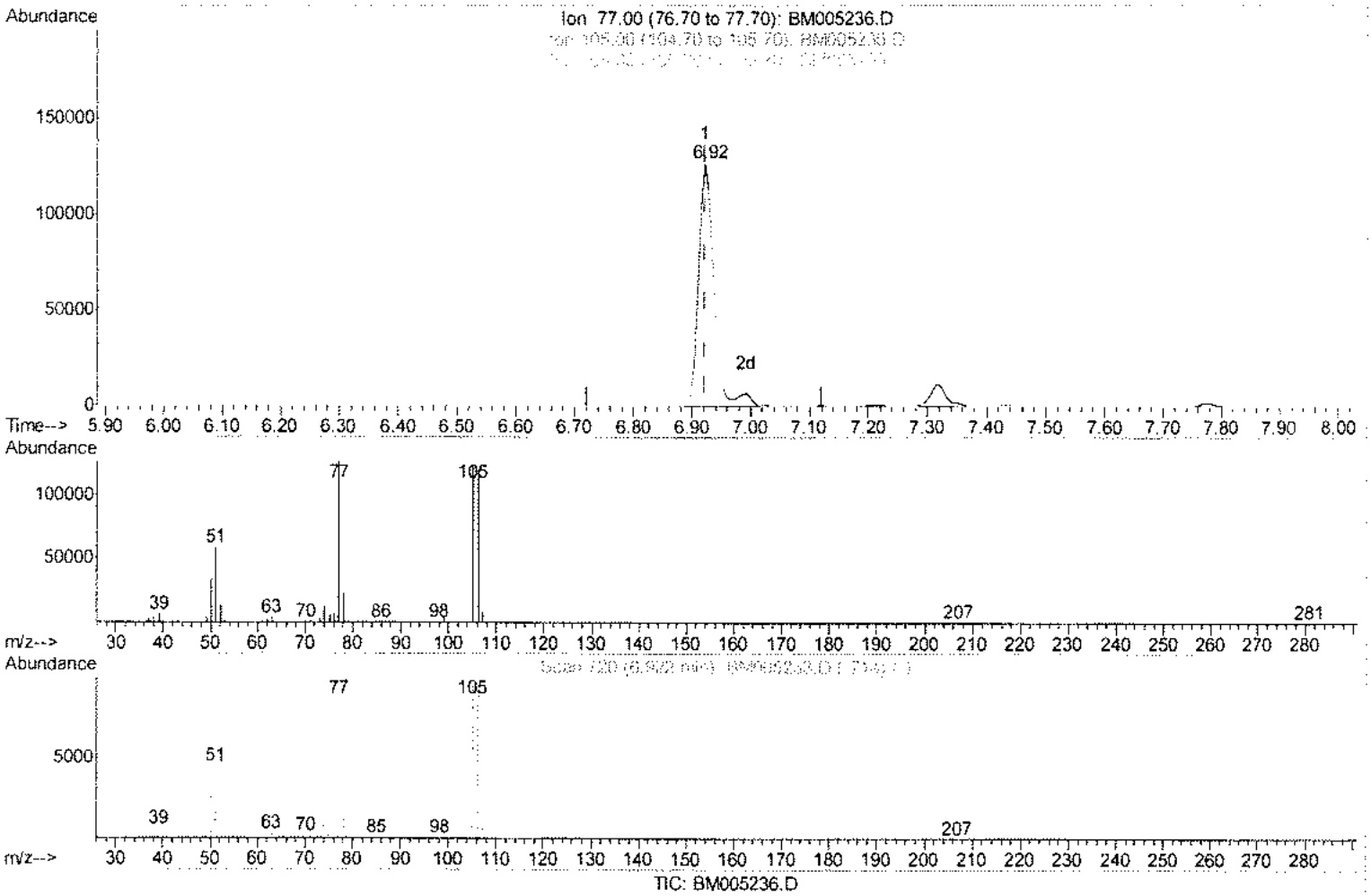
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:30:47 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM



TIC: BM005236.D

(4) Benzaldehyde

6.922min (+0.000) 70.51ng/ul m U.M 05/07/16

response 226824

Ion	Exp%	Act%
77.00	100	100
105.00	97.00	97.33
106.00	97.40	94.23
0.00	0.00	0.00

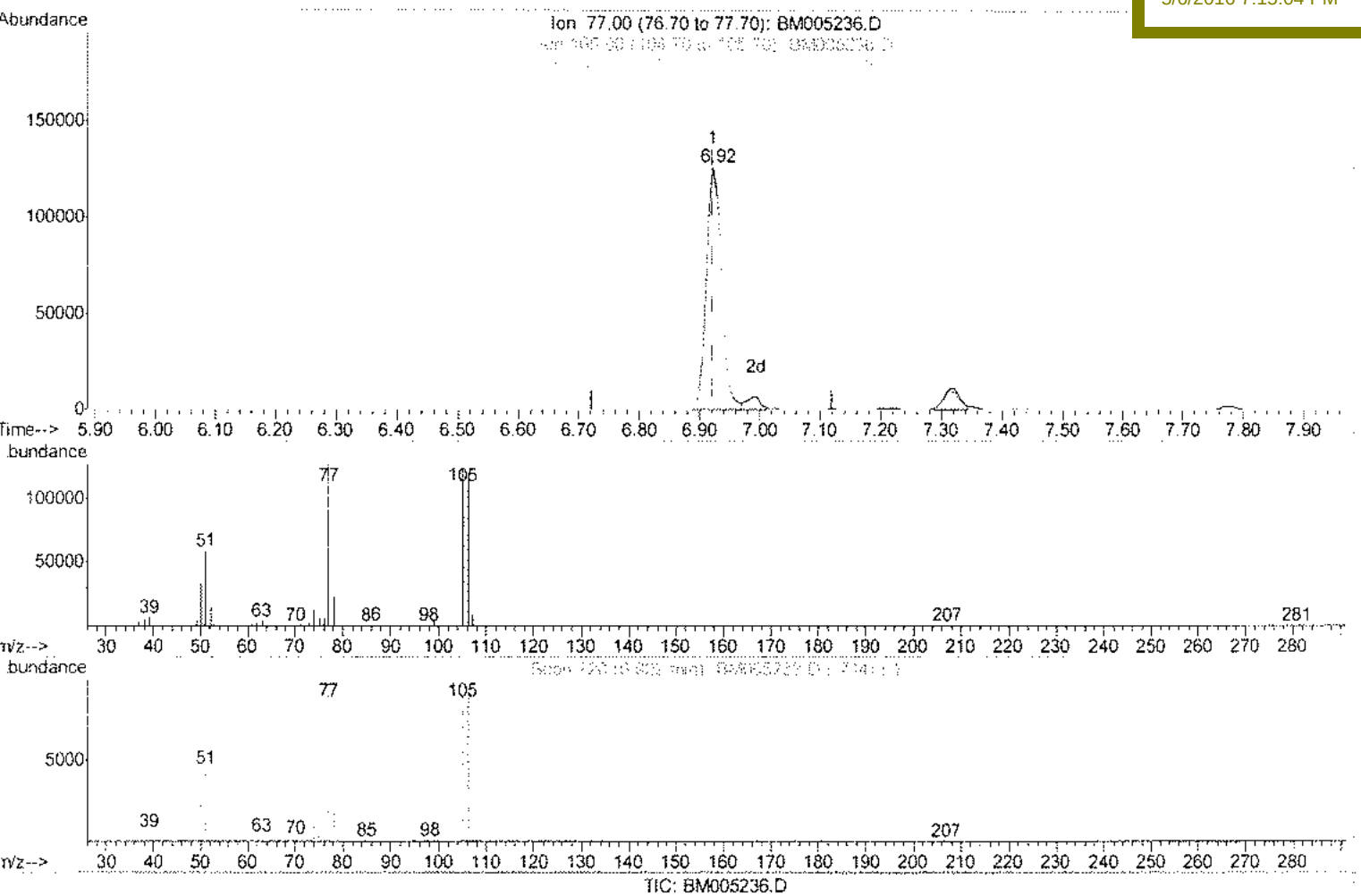
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:30:47 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM



TIC: BM005236.D

(4) Benzaldehyde

6.922min (+0.000) 66.89ng/ul

response 215195

Ion	Exp%	Act%
77.00	100	100
105.00	97.00	97.33
106.00	97.40	94.23
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:30:47 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
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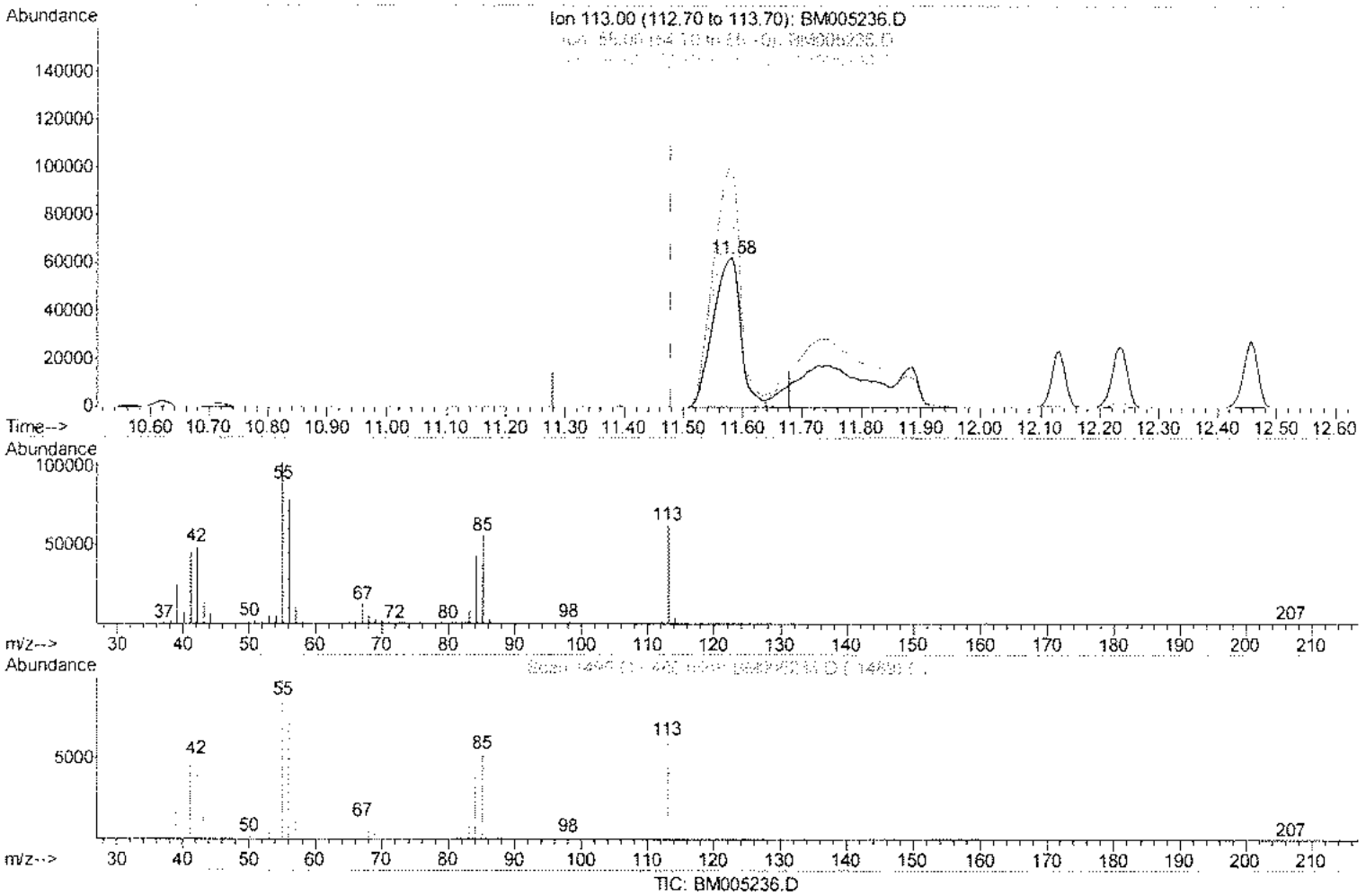

TIC: BM005236.D

(32) Caprolactam

11.581min (+0 100) 94.71ng/ul

response 200962

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	163.17
56.00	120.80	124.86
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:30:47 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
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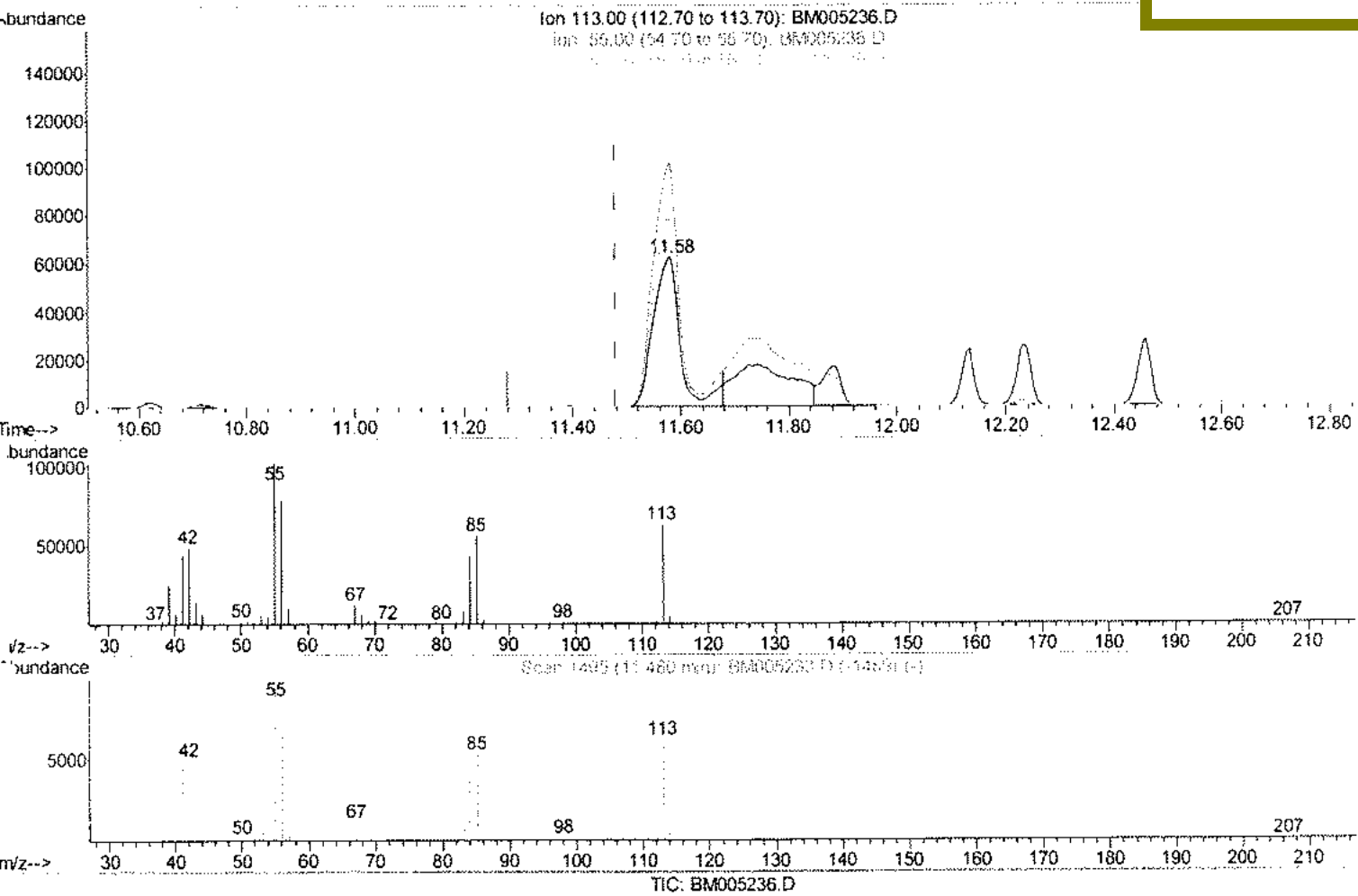

(32) Caprolactam

11.581min (+0.100) 163.70ng/ul m U.M 05/07/16

response 347344

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	163.17
56.00	120.80	124.86
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	75056	20.00	ng/ul	0.00
18) Naphthalene-d8	10.57	136	363283	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	233509	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	561822	20.00	ng/ul	0.00
75) Chrysene-d12	21.37	240	497720	20.00	ng/ul	0.01
83) Perylene-d12	23.65	264	563686	20.00	ng/ul	0.01
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0d	0.00	ng/uL	
5) Phenol-d5	6.96	99	1075165	158.15	ng/ul	0.01
7) Bis-(2-Chloroethyl)ether-d	7.12	67	567293	146.18	ng/ul	0.01
9) 2-Chlorophenol-d4	0.00	132	0d	0.00	ng/ul	
13) 4-Methylphenol-d8	8.50	113	886525	157.84	ng/ul	0.02
19) Nitrobenzene-d5	0.00	128	0d	0.00	ng/ul	
22) 2-Nitrophenol-d4	0.00	143	0d	0.00	ng/ul	
26) 2,4-Dichlorophenol-d3	0.00	165	0d	0.00	ng/ul	
29) 4-Chloroaniline-d4	10.71	131	732409	111.84	ng/ul	0.00
43) Dimethylphthalate-d6	0.00	166	0d	0.00	ng/ul	
46) Acenaphthylene-d8	0.00	160	0d	0.00	ng/ul	
51) 4-Nitrophenol-d4	14.67	143	537109	157.83	ng/ul	0.04
57) Fluorene-d10	0.00	176	0d	0.00	ng/ul	
62) 4,6-Dinitro-2-methylphenol	15.57	200	509862	162.21	ng/ul	0.03
70) Anthracene-d10	0.00	188	0d	0.00	ng/ul	
76) Pyrene-d10	0.00	212	0d	0.00	ng/ul	
87) Benzo(a)pyrene-d12	0.00	264	0d	0.00	ng/ul	
Target Compounds						Qvalue
4) Benzaldehyde	6.92	77	226824m	70.51	ng/ul	
6) Phenol	6.99	94	1085067	154.48	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.22	93	768562	145.00	ng/ul	98
11) 2-Methylphenol	8.23	108	841458	155.00	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.32	45	1027856	143.11	ng/ul	98
14) Acetophenone	8.61	105	1175531	141.43	ng/ul	99
16) 4-Methylphenol	8.58	108	923518	153.36	ng/ul	94
30) 4-Chloroaniline	10.74	127	757005	113.61	ng/ul	98
32) Caprolactam	11.58	113	347344m	163.70	ng/ul	
37) Hexachlorocyclopentadiene	12.58	237	626609	173.01	ng/ul	95
48) 3-Nitroaniline	14.36	138	569448	145.96	ng/ul	99
50) 2,4-Dinitrophenol	14.56	184	428328	202.75	ng/ul	93
52) 4-Nitrophenol	14.69	109	445714	157.24	ng/ul	92
60) 4-Nitroaniline	15.54	138	639334	154.35	ng/ul	93
63) 4,6-Dinitro-2-methylphenol	15.59	198	522473	157.93	ng/ul#	87
67) Atrazine	16.66	200	758834	135.68	ng/ul	99
68) Pentachlorophenol	16.83	266	558124	166.98	ng/ul	97
72) Carbazole	17.59	167	3315288	128.31	ng/ul	98
74) Fluoranthene	19.24	202	3900552	119.85	ng/ul	96
79) 3,3'-Dichlorobenzidine	21.29	252	1289339	144.50	ng/ul	98
84) Di-n-octyl phthalate	22.17	149	4331133	131.76	ng/ul#	94

U.M 05/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 09:01

Lab File ID: BM005380.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02061 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.776	0.723	0.01	-6.8	± 40.0
Benzaldehyde	0.879	1.149	0.10	30.7	± 40.0
Phenol	1.875	1.946	0.08	3.8	± 20.0
Bis(2-Chloroethyl)ether	1.411	1.412	0.10	0.1	± 20.0
2-Chlorophenol	1.401	1.431	0.20	2.1	± 20.0
2-Methylphenol	1.449	1.485	0.01	2.5	± 20.0
2,2-oxybis(1-Chloropropane)	1.915	1.953	0.01	2.0	± 25.0
Acetophenone	2.221	2.371	0.06	6.8	± 20.0
4-Methylphenol	1.608	1.650	0.01	2.6	± 20.0
N-Nitroso-di-n-propylamine	1.161	1.209	0.08	4.1	± 25.0
Hexachloroethane	0.527	0.553	0.10	4.9	± 20.0
Nitrobenzene	0.357	0.377	0.09	5.6	± 20.0
Isophorone	0.694	0.736	0.10	6.1	± 20.0
2-Nitrophenol	0.174	0.190	0.06	9.2	± 20.0
2,4-Dimethylphenol	0.370	0.398	0.05	7.6	± 25.0
Bis(2-Chloroethoxy)methane	0.432	0.428	0.08	-0.9	± 20.0
2,4-Dichlorophenol	0.308	0.325	0.06	5.5	± 20.0
Naphthalene	1.006	1.021	0.20	1.5	± 20.0
4-Chloroaniline	0.369	0.437	0.01	18.4	± 40.0
Hexachlorobutadiene	0.183	0.198	0.04	8.2	± 20.0
Caprolactam	0.115	0.118	0.01	2.6	± 30.0
4-Chloro-3-methylphenol	0.369	0.394	0.04	6.8	± 20.0
2-Methylnaphthalene	0.753	0.759	0.10	0.8	± 20.0
Hexachlorocyclopentadiene	0.311	0.304	0.01	-2.3	± 40.0
2,4,6-Trichlorophenol	0.405	0.426	0.09	5.2	± 20.0
2,4,5-Trichlorophenol	0.450	0.471	0.10	4.7	± 20.0
1,1-Biphenyl	1.584	1.580	0.20	-0.3	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 09:01

Lab File ID: BM005380.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02061 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
2-Chloronaphthalene	1.198	1.222	0.30	2.0	± 20.0
2-Nitroaniline	0.369	0.413	0.06	11.9	± 25.0
Dimethylphthalate	1.602	1.650	0.30	3.0	± 20.0
2,6-Dinitrotoluene	0.316	0.354	0.08	12.0	± 20.0
Acenaphthylene	1.989	2.058	0.40	3.5	± 20.0
3-Nitroaniline	0.337	0.384	0.01	13.9	± 25.0
Acenaphthene	1.311	1.341	0.20	2.3	± 20.0
2,4-Dinitrophenol	0.182	0.168	0.01	-7.7	± 50.0
4-Nitrophenol	0.243	0.267	0.01	9.9	± 40.0
Dibenzofuran	1.902	1.956	0.30	2.8	± 20.0
2,4-Dinitrotoluene	0.471	0.528	0.07	12.1	± 20.0
Diethylphthalate	1.618	1.685	0.30	4.1	± 20.0
Fluorene	1.487	1.517	0.20	2.0	± 20.0
4-Chlorophenyl-phenylether	0.737	0.755	0.10	2.4	± 20.0
4-Nitroaniline	0.357	0.408	0.01	14.3	± 40.0
4,6-Dinitro-2-methylphenol	0.118	0.129	0.01	9.3	± 30.0
N-Nitrosodiphenylamine	0.548	0.580	0.10	5.8	± 20.0
4-Bromophenyl-phenylether	0.192	0.208	0.07	8.3	± 20.0
1,2,4,5-Tetrachlorobenzene	0.608	0.633	0.10	4.1	± 20.0
Hexachlorobenzene	0.215	0.234	0.05	8.8	± 20.0
Atrazine	0.200	0.231	0.01	15.5	± 25.0
Pentachlorophenol	0.120	0.128	0.01	6.7	± 40.0
Phenanthrene	1.052	1.089	0.20	3.5	± 20.0
Anthracene	1.048	1.107	0.20	5.6	± 20.0
Carbazole	0.922	1.022	0.05	10.8	± 20.0
Di-n-butylphthalate	1.125	1.224	0.50	8.8	± 20.0
Fluoranthene	1.165	1.320	0.10	13.3	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 09:01

Lab File ID: BM005380.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02061 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
Pyrene	1.160	1.207	0.40	4.1	± 25.0
Butylbenzylphthalate	0.482	0.548	0.10	13.7	± 25.0
3,3-Dichlorobenzidine	0.360	0.397	0.01	10.3	± 40.0
Benzo(a)anthracene	1.150	1.202	0.30	4.5	± 20.0
Chrysene	1.091	1.159	0.20	6.2	± 20.0
Bis(2-ethylhexyl)phthalate	0.669	0.754	0.20	12.7	± 25.0
Di-n-octyl phthalate	1.168	1.355	0.01	16.0	± 40.0
Benzo(b)fluoranthene	1.169	1.204	0.01	3.0	± 25.0
Benzo(k)fluoranthene	1.101	1.187	0.01	7.8	± 25.0
Benzo(a)pyrene	1.106	1.153	0.01	4.3	± 20.0
Indeno(1,2,3-cd)pyrene	1.206	1.148	0.01	-4.8	± 25.0
Dibenzo(a,h)anthracene	1.010	0.964	0.01	-4.6	± 25.0
Benzo(g,h,i)perylene	1.022	0.944	0.01	-7.6	± 30.0
2,3,4,6-Tetrachlorophenol	0.382	0.416	0.04	8.9	± 20.0
1,4-Dioxane-d8	0.425	0.403	0.01	-5.2	± 25.0
Phenol-d5	1.814	1.855	0.01	2.3	± 25.0
Bis-(2-Chloroethyl)ether-d8	1.035	1.040	0.10	0.5	± 20.0
2-Chlorophenol-d4	1.370	1.426	0.20	4.1	± 20.0
4-Methylphenol-d8	1.499	1.546	0.01	3.1	± 20.0
Nitrobenzene-d5	0.143	0.155	0.05	8.4	± 20.0
2-Nitrophenol-d4	0.162	0.178	0.05	9.9	± 20.0
2,4-Dichlorophenol-d3	0.300	0.324	0.06	8.0	± 20.0
4-Chloroaniline-d4	0.362	0.434	0.01	19.9	± 40.0
Dimethylphthalate-d6	1.603	1.646	0.30	2.7	± 20.0
Acenaphthylene-d8	1.880	1.951	0.40	3.8	± 20.0
4-Nitrophenol-d4	0.293	0.298	0.01	1.7	± 40.0
Fluorene-d10	1.384	1.414	0.10	2.2	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 09:01

Lab File ID: BM005380.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02061 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
4,6-Dinitro-2-methylphenol-d2	0.113	0.124	0.01	9.7	± 30.0
Anthracene-d10	0.884	0.940	0.30	6.3	± 20.0
Pyrene-d10	0.923	0.970	0.30	5.1	± 25.0
Benzo(a)pyrene-d12	0.885	0.928	0.01	4.9	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 18:52

Lab File ID: BM005393.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02062 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.776	0.700	0.01	-9.8	± 50.0
Benzaldehyde	0.879	1.153	0.10	31.2	± 50.0
Phenol	1.875	1.906	0.08	1.7	± 25.0
Bis(2-Chloroethyl)ether	1.411	1.415	0.10	0.3	± 25.0
2-Chlorophenol	1.401	1.433	0.20	2.3	± 25.0
2-Methylphenol	1.449	1.478	0.01	2.0	± 25.0
2,2-oxybis(1-Chloropropane)	1.915	1.955	0.01	2.1	± 50.0
Acetophenone	2.221	2.353	0.06	5.9	± 25.0
4-Methylphenol	1.608	1.651	0.01	2.7	± 25.0
N-Nitroso-di-n-propylamine	1.161	1.229	0.08	5.9	± 25.0
Hexachloroethane	0.527	0.561	0.10	6.5	± 25.0
Nitrobenzene	0.357	0.378	0.09	5.9	± 25.0
Isophorone	0.694	0.752	0.10	8.4	± 25.0
2-Nitrophenol	0.174	0.193	0.06	10.9	± 25.0
2,4-Dimethylphenol	0.370	0.396	0.05	7.0	± 50.0
Bis(2-Chloroethoxy)methane	0.432	0.433	0.08	0.2	± 25.0
2,4-Dichlorophenol	0.308	0.328	0.06	6.5	± 25.0
Naphthalene	1.006	1.028	0.20	2.2	± 25.0
4-Chloroaniline	0.369	0.442	0.01	19.8	± 50.0
Hexachlorobutadiene	0.183	0.203	0.04	10.9	± 25.0
Caprolactam	0.115	0.125	0.01	8.7	± 50.0
4-Chloro-3-methylphenol	0.369	0.406	0.04	10.0	± 25.0
2-Methylnaphthalene	0.753	0.776	0.10	3.1	± 25.0
Hexachlorocyclopentadiene	0.311	0.308	0.01	-1.0	± 50.0
2,4,6-Trichlorophenol	0.405	0.449	0.09	10.9	± 25.0
2,4,5-Trichlorophenol	0.450	0.497	0.10	10.4	± 25.0
1,1-Biphenyl	1.584	1.615	0.20	2.0	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 18:52

Lab File ID: BM005393.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02062 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
2-Chloronaphthalene	1.198	1.248	0.30	4.2	± 25.0
2-Nitroaniline	0.369	0.427	0.06	15.7	± 25.0
Dimethylphthalate	1.602	1.674	0.30	4.5	± 25.0
2,6-Dinitrotoluene	0.316	0.366	0.08	15.8	± 25.0
Acenaphthylene	1.989	2.085	0.40	4.8	± 25.0
3-Nitroaniline	0.337	0.394	0.01	16.9	± 50.0
Acenaphthene	1.311	1.351	0.20	3.1	± 25.0
2,4-Dinitrophenol	0.182	0.201	0.01	10.4	± 50.0
4-Nitrophenol	0.243	0.267	0.01	9.9	± 50.0
Dibenzofuran	1.902	1.956	0.30	2.8	± 25.0
2,4-Dinitrotoluene	0.471	0.526	0.07	11.7	± 25.0
Diethylphthalate	1.618	1.700	0.30	5.1	± 25.0
Fluorene	1.487	1.504	0.20	1.1	± 25.0
4-Chlorophenyl-phenylether	0.737	0.761	0.10	3.3	± 25.0
4-Nitroaniline	0.357	0.409	0.01	14.6	± 50.0
4,6-Dinitro-2-methylphenol	0.118	0.139	0.01	17.8	± 50.0
N-Nitrosodiphenylamine	0.548	0.588	0.10	7.3	± 25.0
4-Bromophenyl-phenylether	0.192	0.212	0.07	10.4	± 25.0
1,2,4,5-Tetrachlorobenzene	0.608	0.642	0.10	5.6	± 25.0
Hexachlorobenzene	0.215	0.238	0.05	10.7	± 25.0
Atrazine	0.200	0.235	0.01	17.5	± 50.0
Pentachlorophenol	0.120	0.141	0.01	17.5	± 50.0
Phenanthrene	1.052	1.088	0.20	3.4	± 25.0
Anthracene	1.048	1.102	0.20	5.2	± 25.0
Carbazole	0.922	1.014	0.05	10.0	± 25.0
Di-n-butylphthalate	1.125	1.242	0.50	10.4	± 25.0
Fluoranthene	1.165	1.245	0.10	6.9	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 18:52

Lab File ID: BM005393.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02062 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
Pyrene	1.160	1.378	0.40	18.8	± 50.0
Butylbenzylphthalate	0.482	0.630	0.10	30.7	± 50.0
3,3-Dichlorobenzidine	0.360	0.396	0.01	10.0	± 50.0
Benzo(a)anthracene	1.150	1.207	0.30	5.0	± 25.0
Chrysene	1.091	1.151	0.20	5.5	± 50.0
Bis(2-ethylhexyl)phthalate	0.669	0.827	0.20	23.6	± 50.0
Di-n-octyl phthalate	1.168	1.614	0.01	38.2	± 50.0
Benzo(b)fluoranthene	1.169	1.305	0.01	11.6	± 50.0
Benzo(k)fluoranthene	1.101	1.161	0.01	5.4	± 50.0
Benzo(a)pyrene	1.106	1.162	0.01	5.1	± 50.0
Indeno(1,2,3-cd)pyrene	1.206	1.209	0.01	0.2	± 50.0
Dibenzo(a,h)anthracene	1.010	1.025	0.01	1.5	± 50.0
Benzo(g,h,i)perylene	1.022	1.023	0.01	0.1	± 50.0
2,3,4,6-Tetrachlorophenol	0.382	0.431	0.04	12.8	± 50.0
1,4-Dioxane-d8	0.425	0.382	0.01	-10.1	± 50.0
Phenol-d5	1.814	1.834	0.01	1.1	± 25.0
Bis-(2-Chloroethyl)ether-d8	1.035	1.034	0.10	-0.1	± 25.0
2-Chlorophenol-d4	1.370	1.421	0.20	3.7	± 25.0
4-Methylphenol-d8	1.499	1.554	0.01	3.7	± 25.0
Nitrobenzene-d5	0.143	0.157	0.05	9.8	± 25.0
2-Nitrophenol-d4	0.162	0.184	0.05	13.6	± 25.0
2,4-Dichlorophenol-d3	0.300	0.326	0.06	8.7	± 25.0
4-Chloroaniline-d4	0.362	0.441	0.01	21.8	± 50.0
Dimethylphthalate-d6	1.603	1.679	0.30	4.7	± 25.0
Acenaphthylene-d8	1.880	1.988	0.40	5.7	± 25.0
4-Nitrophenol-d4	0.293	0.303	0.01	3.4	± 50.0
Fluorene-d10	1.384	1.420	0.10	2.6	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 18:52

Lab File ID: BM005393.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02062 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
4,6-Dinitro-2-methylphenol-d2	0.113	0.133	0.01	17.7	± 50.0
Anthracene-d10	0.884	0.937	0.30	6.0	± 25.0
Pyrene-d10	0.923	1.097	0.30	18.9	± 50.0
Benzo(a)pyrene-d12	0.885	0.935	0.01	5.7	± 50.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 11:46

Lab File ID: BM005427.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02066 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.776	0.769	0.01	-0.9	± 40.0
Benzaldehyde	0.879	1.137	0.10	29.4	± 40.0
Phenol	1.875	1.893	0.08	1.0	± 20.0
Bis(2-Chloroethyl)ether	1.411	1.427	0.10	1.1	± 20.0
2-Chlorophenol	1.401	1.429	0.20	2.0	± 20.0
2-Methylphenol	1.449	1.474	0.01	1.7	± 20.0
2,2-oxybis(1-Chloropropane)	1.915	1.992	0.01	4.0	± 25.0
Acetophenone	2.221	2.421	0.06	9.0	± 20.0
4-Methylphenol	1.608	1.627	0.01	1.2	± 20.0
N-Nitroso-di-n-propylamine	1.161	1.245	0.08	7.2	± 25.0
Hexachloroethane	0.527	0.567	0.10	7.6	± 20.0
Nitrobenzene	0.357	0.374	0.09	4.8	± 20.0
Isophorone	0.694	0.741	0.10	6.8	± 20.0
2-Nitrophenol	0.174	0.187	0.06	7.5	± 20.0
2,4-Dimethylphenol	0.370	0.388	0.05	4.9	± 25.0
Bis(2-Chloroethoxy)methane	0.432	0.437	0.08	1.2	± 20.0
2,4-Dichlorophenol	0.308	0.326	0.06	5.8	± 20.0
Naphthalene	1.006	1.036	0.20	3.0	± 20.0
4-Chloroaniline	0.369	0.418	0.01	13.3	± 40.0
Hexachlorobutadiene	0.183	0.204	0.04	11.5	± 20.0
Caprolactam	0.115	0.123	0.01	7.0	± 30.0
4-Chloro-3-methylphenol	0.369	0.401	0.04	8.7	± 20.0
2-Methylnaphthalene	0.753	0.783	0.10	4.0	± 20.0
Hexachlorocyclopentadiene	0.311	0.194	0.01	-37.6	± 40.0
2,4,6-Trichlorophenol	0.405	0.429	0.09	5.9	± 20.0
2,4,5-Trichlorophenol	0.450	0.448	0.10	-0.4	± 20.0
1,1-Biphenyl	1.584	1.618	0.20	2.1	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 11:46

Lab File ID: BM005427.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02066 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
2-Chloronaphthalene	1.198	1.229	0.30	2.6	± 20.0
2-Nitroaniline	0.369	0.412	0.06	11.7	± 25.0
Dimethylphthalate	1.602	1.668	0.30	4.1	± 20.0
2,6-Dinitrotoluene	0.316	0.342	0.08	8.2	± 20.0
Acenaphthylene	1.989	2.072	0.40	4.2	± 20.0
3-Nitroaniline	0.337	0.370	0.01	9.8	± 25.0
Acenaphthene	1.311	1.355	0.20	3.4	± 20.0
2,4-Dinitrophenol	0.182	0.141	0.01	-22.5	± 50.0
4-Nitrophenol	0.243	0.238	0.01	-2.1	± 40.0
Dibenzofuran	1.902	1.960	0.30	3.0	± 20.0
2,4-Dinitrotoluene	0.471	0.510	0.07	8.3	± 20.0
Diethylphthalate	1.618	1.722	0.30	6.4	± 20.0
Fluorene	1.487	1.587	0.20	6.7	± 20.0
4-Chlorophenyl-phenylether	0.737	0.793	0.10	7.6	± 20.0
4-Nitroaniline	0.357	0.377	0.01	5.6	± 40.0
4,6-Dinitro-2-methylphenol	0.118	0.120	0.01	1.7	± 30.0
N-Nitrosodiphenylamine	0.548	0.586	0.10	6.9	± 20.0
4-Bromophenyl-phenylether	0.192	0.213	0.07	10.9	± 20.0
1,2,4,5-Tetrachlorobenzene	0.608	0.635	0.10	4.4	± 20.0
Hexachlorobenzene	0.215	0.235	0.05	9.3	± 20.0
Atrazine	0.200	0.234	0.01	17.0	± 25.0
Pentachlorophenol	0.120	0.110	0.01	-8.3	± 40.0
Phenanthrene	1.052	1.109	0.20	5.4	± 20.0
Anthracene	1.048	1.131	0.20	7.9	± 20.0
Carbazole	0.922	1.051	0.05	14.0	± 20.0
Di-n-butylphthalate	1.125	1.321	0.50	17.4	± 20.0
Fluoranthene	1.165	1.367	0.10	17.3	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 11:46

Lab File ID: BM005427.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02066 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
Pyrene	1.160	1.200	0.40	3.4	± 25.0
Butylbenzylphthalate	0.482	0.543	0.10	12.7	± 25.0
3,3-Dichlorobenzidine	0.360	0.390	0.01	8.3	± 40.0
Benzo(a)anthracene	1.150	1.201	0.30	4.4	± 20.0
Chrysene	1.091	1.145	0.20	4.9	± 20.0
Bis(2-ethylhexyl)phthalate	0.669	0.780	0.20	16.6	± 25.0
Di-n-octyl phthalate	1.168	1.515	0.01	29.7	± 40.0
Benzo(b)fluoranthene	1.169	1.298	0.01	11.0	± 25.0
Benzo(k)fluoranthene	1.101	1.205	0.01	9.4	± 25.0
Benzo(a)pyrene	1.106	1.173	0.01	6.1	± 20.0
Indeno(1,2,3-cd)pyrene	1.206	1.074	0.01	-10.9	± 25.0
Dibenzo(a,h)anthracene	1.010	0.900	0.01	-10.9	± 25.0
Benzo(g,h,i)perylene	1.022	0.867	0.01	-15.2	± 30.0
2,3,4,6-Tetrachlorophenol	0.382	0.392	0.04	2.6	± 20.0
1,4-Dioxane-d8	0.425	0.415	0.01	-2.4	± 25.0
Phenol-d5	1.814	1.808	0.01	-0.3	± 25.0
Bis-(2-Chloroethyl)ether-d8	1.035	1.053	0.10	1.7	± 20.0
2-Chlorophenol-d4	1.370	1.426	0.20	4.1	± 20.0
4-Methylphenol-d8	1.499	1.518	0.01	1.3	± 20.0
Nitrobenzene-d5	0.143	0.152	0.05	6.3	± 20.0
2-Nitrophenol-d4	0.162	0.177	0.05	9.3	± 20.0
2,4-Dichlorophenol-d3	0.300	0.319	0.06	6.3	± 20.0
4-Chloroaniline-d4	0.362	0.414	0.01	14.4	± 40.0
Dimethylphthalate-d6	1.603	1.678	0.30	4.7	± 20.0
Acenaphthylene-d8	1.880	1.961	0.40	4.3	± 20.0
4-Nitrophenol-d4	0.293	0.278	0.01	-5.1	± 40.0
Fluorene-d10	1.384	1.434	0.10	3.6	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 11:46

Lab File ID: BM005427.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02066 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
4,6-Dinitro-2-methylphenol-d2	0.113	0.116	0.01	2.7	± 30.0
Anthracene-d10	0.884	0.951	0.30	7.6	± 20.0
Pyrene-d10	0.923	0.950	0.30	2.9	± 25.0
Benzo(a)pyrene-d12	0.885	0.939	0.01	6.1	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 17:05

Lab File ID: BM005435.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02034 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.776	0.786	0.01	1.3	± 40.0
Benzaldehyde	0.879	1.146	0.10	30.4	± 40.0
Phenol	1.875	1.906	0.08	1.7	± 20.0
Bis(2-Chloroethyl)ether	1.411	1.435	0.10	1.7	± 20.0
2-Chlorophenol	1.401	1.432	0.20	2.2	± 20.0
2-Methylphenol	1.449	1.437	0.01	-0.8	± 20.0
2,2-oxybis(1-Chloropropane)	1.915	2.033	0.01	6.2	± 25.0
Acetophenone	2.221	2.338	0.06	5.3	± 20.0
4-Methylphenol	1.608	1.576	0.01	-2.0	± 20.0
N-Nitroso-di-n-propylamine	1.161	1.205	0.08	3.8	± 25.0
Hexachloroethane	0.527	0.555	0.10	5.3	± 20.0
Nitrobenzene	0.357	0.375	0.09	5.0	± 20.0
Isophorone	0.694	0.724	0.10	4.3	± 20.0
2-Nitrophenol	0.174	0.186	0.06	6.9	± 20.0
2,4-Dimethylphenol	0.370	0.385	0.05	4.1	± 25.0
Bis(2-Chloroethoxy)methane	0.432	0.434	0.08	0.5	± 20.0
2,4-Dichlorophenol	0.308	0.320	0.06	3.9	± 20.0
Naphthalene	1.006	1.034	0.20	2.8	± 20.0
4-Chloroaniline	0.369	0.409	0.01	10.8	± 40.0
Hexachlorobutadiene	0.183	0.204	0.04	11.5	± 20.0
Caprolactam	0.115	0.115	0.01	0.0	± 30.0
4-Chloro-3-methylphenol	0.369	0.388	0.04	5.1	± 20.0
2-Methylnaphthalene	0.753	0.777	0.10	3.2	± 20.0
Hexachlorocyclopentadiene	0.311	0.247	0.01	-20.6	± 40.0
2,4,6-Trichlorophenol	0.405	0.429	0.09	5.9	± 20.0
2,4,5-Trichlorophenol	0.450	0.477	0.10	6.0	± 20.0
1,1-Biphenyl	1.584	1.643	0.20	3.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 17:05

Lab File ID: BM005435.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02034 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
2-Chloronaphthalene	1.198	1.244	0.30	3.8	± 20.0
2-Nitroaniline	0.369	0.405	0.06	9.8	± 25.0
Dimethylphthalate	1.602	1.660	0.30	3.6	± 20.0
2,6-Dinitrotoluene	0.316	0.340	0.08	7.6	± 20.0
Acenaphthylene	1.989	2.072	0.40	4.2	± 20.0
3-Nitroaniline	0.337	0.368	0.01	9.2	± 25.0
Acenaphthene	1.311	1.358	0.20	3.6	± 20.0
2,4-Dinitrophenol	0.182	0.137	0.01	-24.7	± 50.0
4-Nitrophenol	0.243	0.229	0.01	-5.8	± 40.0
Dibenzofuran	1.902	1.966	0.30	3.4	± 20.0
2,4-Dinitrotoluene	0.471	0.509	0.07	8.1	± 20.0
Diethylphthalate	1.618	1.703	0.30	5.3	± 20.0
Fluorene	1.487	1.576	0.20	6.0	± 20.0
4-Chlorophenyl-phenylether	0.737	0.795	0.10	7.9	± 20.0
4-Nitroaniline	0.357	0.375	0.01	5.0	± 40.0
4,6-Dinitro-2-methylphenol	0.118	0.116	0.01	-1.7	± 30.0
N-Nitrosodiphenylamine	0.548	0.581	0.10	6.0	± 20.0
4-Bromophenyl-phenylether	0.192	0.212	0.07	10.4	± 20.0
1,2,4,5-Tetrachlorobenzene	0.608	0.646	0.10	6.3	± 20.0
Hexachlorobenzene	0.215	0.237	0.05	10.2	± 20.0
Atrazine	0.200	0.230	0.01	15.0	± 25.0
Pentachlorophenol	0.120	0.104	0.01	-13.3	± 40.0
Phenanthrene	1.052	1.105	0.20	5.0	± 20.0
Anthracene	1.048	1.113	0.20	6.2	± 20.0
Carbazole	0.922	1.038	0.05	12.6	± 20.0
Di-n-butylphthalate	1.125	1.246	0.50	10.8	± 20.0
Fluoranthene	1.165	1.357	0.10	16.5	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 17:05

Lab File ID: BM005435.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02034 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
Pyrene	1.160	1.227	0.40	5.8	± 25.0
Butylbenzylphthalate	0.482	0.540	0.10	12.0	± 25.0
3,3-Dichlorobenzidine	0.360	0.399	0.01	10.8	± 40.0
Benzo(a)anthracene	1.150	1.203	0.30	4.6	± 20.0
Chrysene	1.091	1.144	0.20	4.9	± 20.0
Bis(2-ethylhexyl)phthalate	0.669	0.765	0.20	14.4	± 25.0
Di-n-octyl phthalate	1.168	1.493	0.01	27.8	± 40.0
Benzo(b)fluoranthene	1.169	1.286	0.01	10.0	± 25.0
Benzo(k)fluoranthene	1.101	1.201	0.01	9.1	± 25.0
Benzo(a)pyrene	1.106	1.174	0.01	6.1	± 20.0
Indeno(1,2,3-cd)pyrene	1.206	1.079	0.01	-10.5	± 25.0
Dibenzo(a,h)anthracene	1.010	0.906	0.01	-10.3	± 25.0
Benzo(g,h,i)perylene	1.022	0.875	0.01	-14.4	± 30.0
2,3,4,6-Tetrachlorophenol	0.382	0.385	0.04	0.8	± 20.0
1,4-Dioxane-d8	0.425	0.438	0.01	3.1	± 25.0
Phenol-d5	1.814	1.819	0.01	0.3	± 25.0
Bis-(2-Chloroethyl)ether-d8	1.035	1.072	0.10	3.6	± 20.0
2-Chlorophenol-d4	1.370	1.402	0.20	2.3	± 20.0
4-Methylphenol-d8	1.499	1.475	0.01	-1.6	± 20.0
Nitrobenzene-d5	0.143	0.150	0.05	4.9	± 20.0
2-Nitrophenol-d4	0.162	0.175	0.05	8.0	± 20.0
2,4-Dichlorophenol-d3	0.300	0.320	0.06	6.7	± 20.0
4-Chloroaniline-d4	0.362	0.409	0.01	13.0	± 40.0
Dimethylphthalate-d6	1.603	1.675	0.30	4.5	± 20.0
Acenaphthylene-d8	1.880	1.970	0.40	4.8	± 20.0
4-Nitrophenol-d4	0.293	0.261	0.01	-10.9	± 40.0
Fluorene-d10	1.384	1.423	0.10	2.8	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 17:05

Lab File ID: BM005435.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02034 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
4,6-Dinitro-2-methylphenol-d2	0.113	0.111	0.01	-1.8	± 30.0
Anthracene-d10	0.884	0.941	0.30	6.4	± 20.0
Pyrene-d10	0.923	0.973	0.30	5.4	± 25.0
Benzo(a)pyrene-d12	0.885	0.940	0.01	6.2	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/14/2016 Time: 04:32

Lab File ID: BM005449.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02035 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.776	0.836	0.01	7.7	± 40.0
Benzaldehyde	0.879	1.119	0.10	27.3	± 40.0
Phenol	1.875	1.857	0.08	-1.0	± 20.0
Bis(2-Chloroethyl)ether	1.411	1.404	0.10	-0.5	± 20.0
2-Chlorophenol	1.401	1.419	0.20	1.3	± 20.0
2-Methylphenol	1.449	1.387	0.01	-4.3	± 20.0
2,2-oxybis(1-Chloropropane)	1.915	1.969	0.01	2.8	± 25.0
Acetophenone	2.221	2.300	0.06	3.6	± 20.0
4-Methylphenol	1.608	1.529	0.01	-4.9	± 20.0
N-Nitroso-di-n-propylamine	1.161	1.154	0.08	-0.6	± 25.0
Hexachloroethane	0.527	0.547	0.10	3.8	± 20.0
Nitrobenzene	0.357	0.373	0.09	4.5	± 20.0
Isophorone	0.694	0.710	0.10	2.3	± 20.0
2-Nitrophenol	0.174	0.184	0.06	5.7	± 20.0
2,4-Dimethylphenol	0.370	0.383	0.05	3.5	± 25.0
Bis(2-Chloroethoxy)methane	0.432	0.428	0.08	-0.9	± 20.0
2,4-Dichlorophenol	0.308	0.318	0.06	3.2	± 20.0
Naphthalene	1.006	1.031	0.20	2.5	± 20.0
4-Chloroaniline	0.369	0.412	0.01	11.7	± 40.0
Hexachlorobutadiene	0.183	0.203	0.04	10.9	± 20.0
Caprolactam	0.115	0.110	0.01	-4.3	± 30.0
4-Chloro-3-methylphenol	0.369	0.380	0.04	3.0	± 20.0
2-Methylnaphthalene	0.753	0.770	0.10	2.3	± 20.0
Hexachlorocyclopentadiene	0.311	0.198	0.01	-36.3	± 40.0
2,4,6-Trichlorophenol	0.405	0.413	0.09	2.0	± 20.0
2,4,5-Trichlorophenol	0.450	0.444	0.10	-1.3	± 20.0
1,1-Biphenyl	1.584	1.628	0.20	2.8	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/14/2016 Time: 04:32

Lab File ID: BM005449.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02035 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
2-Chloronaphthalene	1.198	1.240	0.30	3.5	± 20.0
2-Nitroaniline	0.369	0.397	0.06	7.6	± 25.0
Dimethylphthalate	1.602	1.668	0.30	4.1	± 20.0
2,6-Dinitrotoluene	0.316	0.340	0.08	7.6	± 20.0
Acenaphthylene	1.989	2.041	0.40	2.6	± 20.0
3-Nitroaniline	0.337	0.360	0.01	6.8	± 25.0
Acenaphthene	1.311	1.357	0.20	3.5	± 20.0
2,4-Dinitrophenol	0.182	0.111	0.01	-39.0	± 50.0
4-Nitrophenol	0.243	0.200	0.01	-17.7	± 40.0
Dibenzofuran	1.902	1.973	0.30	3.7	± 20.0
2,4-Dinitrotoluene	0.471	0.521	0.07	10.6	± 20.0
Diethylphthalate	1.618	1.699	0.30	5.0	± 20.0
Fluorene	1.487	1.581	0.20	6.3	± 20.0
4-Chlorophenyl-phenylether	0.737	0.790	0.10	7.2	± 20.0
4-Nitroaniline	0.357	0.382	0.01	7.0	± 40.0
4,6-Dinitro-2-methylphenol	0.118	0.109	0.01	-7.6	± 30.0
N-Nitrosodiphenylamine	0.548	0.568	0.10	3.7	± 20.0
4-Bromophenyl-phenylether	0.192	0.206	0.07	7.3	± 20.0
1,2,4,5-Tetrachlorobenzene	0.608	0.649	0.10	6.7	± 20.0
Hexachlorobenzene	0.215	0.232	0.05	7.9	± 20.0
Atrazine	0.200	0.225	0.01	12.5	± 25.0
Pentachlorophenol	0.120	0.085	0.01	-29.2	± 40.0
Phenanthrene	1.052	1.091	0.20	3.7	± 20.0
Anthracene	1.048	1.102	0.20	5.2	± 20.0
Carbazole	0.922	1.045	0.05	13.3	± 20.0
Di-n-butylphthalate	1.125	1.238	0.50	10.0	± 20.0
Fluoranthene	1.165	1.387	0.10	19.1	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/14/2016 Time: 04:32

Lab File ID: BM005449.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02035 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
Pyrene	1.160	1.161	0.40	0.1	± 25.0
Butylbenzylphthalate	0.482	0.512	0.10	6.2	± 25.0
3,3-Dichlorobenzidine	0.360	0.398	0.01	10.6	± 40.0
Benzo(a)anthracene	1.150	1.195	0.30	3.9	± 20.0
Chrysene	1.091	1.134	0.20	3.9	± 20.0
Bis(2-ethylhexyl)phthalate	0.669	0.756	0.20	13.0	± 25.0
Di-n-octyl phthalate	1.168	1.475	0.01	26.3	± 40.0
Benzo(b)fluoranthene	1.169	1.286	0.01	10.0	± 25.0
Benzo(k)fluoranthene	1.101	1.236	0.01	12.3	± 25.0
Benzo(a)pyrene	1.106	1.180	0.01	6.7	± 20.0
Indeno(1,2,3-cd)pyrene	1.206	1.130	0.01	-6.3	± 25.0
Dibenzo(a,h)anthracene	1.010	0.961	0.01	-4.9	± 25.0
Benzo(g,h,i)perylene	1.022	0.917	0.01	-10.3	± 30.0
2,3,4,6-Tetrachlorophenol	0.382	0.357	0.04	-6.5	± 20.0
1,4-Dioxane-d8	0.425	0.472	0.01	11.1	± 25.0
Phenol-d5	1.814	1.778	0.01	-2.0	± 25.0
Bis-(2-Chloroethyl)ether-d8	1.035	1.053	0.10	1.7	± 20.0
2-Chlorophenol-d4	1.370	1.382	0.20	0.9	± 20.0
4-Methylphenol-d8	1.499	1.401	0.01	-6.5	± 20.0
Nitrobenzene-d5	0.143	0.149	0.05	4.2	± 20.0
2-Nitrophenol-d4	0.162	0.172	0.05	6.2	± 20.0
2,4-Dichlorophenol-d3	0.300	0.314	0.06	4.7	± 20.0
4-Chloroaniline-d4	0.362	0.398	0.01	9.9	± 40.0
Dimethylphthalate-d6	1.603	1.662	0.30	3.7	± 20.0
Acenaphthylene-d8	1.880	1.950	0.40	3.7	± 20.0
4-Nitrophenol-d4	0.293	0.225	0.01	-23.2	± 40.0
Fluorene-d10	1.384	1.458	0.10	5.3	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/14/2016 Time: 04:32

Lab File ID: BM005449.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02035 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
4,6-Dinitro-2-methylphenol-d2	0.113	0.107	0.01	-5.3	± 30.0
Anthracene-d10	0.884	0.938	0.30	6.1	± 20.0
Pyrene-d10	0.923	0.920	0.30	-0.3	± 25.0
Benzo(a)pyrene-d12	0.885	0.941	0.01	6.3	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/14/2016 Time: 13:09

Lab File ID: BM005461.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02036 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.776	0.795	0.01	2.4	± 50.0
Benzaldehyde	0.879	1.099	0.10	25.0	± 50.0
Phenol	1.875	1.870	0.08	-0.3	± 25.0
Bis(2-Chloroethyl)ether	1.411	1.384	0.10	-1.9	± 25.0
2-Chlorophenol	1.401	1.411	0.20	0.7	± 25.0
2-Methylphenol	1.449	1.387	0.01	-4.3	± 25.0
2,2-oxybis(1-Chloropropane)	1.915	1.964	0.01	2.6	± 50.0
Acetophenone	2.221	2.291	0.06	3.2	± 25.0
4-Methylphenol	1.608	1.545	0.01	-3.9	± 25.0
N-Nitroso-di-n-propylamine	1.161	1.171	0.08	0.9	± 25.0
Hexachloroethane	0.527	0.542	0.10	2.8	± 25.0
Nitrobenzene	0.357	0.376	0.09	5.3	± 25.0
Isophorone	0.694	0.709	0.10	2.2	± 25.0
2-Nitrophenol	0.174	0.183	0.06	5.2	± 25.0
2,4-Dimethylphenol	0.370	0.387	0.05	4.6	± 50.0
Bis(2-Chloroethoxy)methane	0.432	0.422	0.08	-2.3	± 25.0
2,4-Dichlorophenol	0.308	0.316	0.06	2.6	± 25.0
Naphthalene	1.006	1.037	0.20	3.1	± 25.0
4-Chloroaniline	0.369	0.421	0.01	14.1	± 50.0
Hexachlorobutadiene	0.183	0.203	0.04	10.9	± 25.0
Caprolactam	0.115	0.110	0.01	-4.3	± 50.0
4-Chloro-3-methylphenol	0.369	0.380	0.04	3.0	± 25.0
2-Methylnaphthalene	0.753	0.764	0.10	1.5	± 25.0
Hexachlorocyclopentadiene	0.311	0.101	0.01	-67.5	± 50.0
2,4,6-Trichlorophenol	0.405	0.404	0.09	-0.2	± 25.0
2,4,5-Trichlorophenol	0.450	0.425	0.10	-5.6	± 25.0
1,1-Biphenyl	1.584	1.597	0.20	0.8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/14/2016 Time: 13:09

Lab File ID: BM005461.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02036 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
2-Chloronaphthalene	1.198	1.219	0.30	1.8	± 25.0
2-Nitroaniline	0.369	0.392	0.06	6.2	± 25.0
Dimethylphthalate	1.602	1.643	0.30	2.6	± 25.0
2,6-Dinitrotoluene	0.316	0.338	0.08	7.0	± 25.0
Acenaphthylene	1.989	2.068	0.40	4.0	± 25.0
3-Nitroaniline	0.337	0.366	0.01	8.6	± 50.0
Acenaphthene	1.311	1.360	0.20	3.7	± 25.0
2,4-Dinitrophenol	0.182	0.117	0.01	-35.7	± 50.0
4-Nitrophenol	0.243	0.206	0.01	-15.2	± 50.0
Dibenzofuran	1.902	1.981	0.30	4.2	± 25.0
2,4-Dinitrotoluene	0.471	0.516	0.07	9.6	± 25.0
Diethylphthalate	1.618	1.689	0.30	4.4	± 25.0
Fluorene	1.487	1.620	0.20	8.9	± 25.0
4-Chlorophenyl-phenylether	0.737	0.804	0.10	9.1	± 25.0
4-Nitroaniline	0.357	0.363	0.01	1.7	± 50.0
4,6-Dinitro-2-methylphenol	0.118	0.113	0.01	-4.2	± 50.0
N-Nitrosodiphenylamine	0.548	0.571	0.10	4.2	± 25.0
4-Bromophenyl-phenylether	0.192	0.204	0.07	6.3	± 25.0
1,2,4,5-Tetrachlorobenzene	0.608	0.632	0.10	3.9	± 25.0
Hexachlorobenzene	0.215	0.230	0.05	7.0	± 25.0
Atrazine	0.200	0.225	0.01	12.5	± 50.0
Pentachlorophenol	0.120	0.087	0.01	-27.5	± 50.0
Phenanthrene	1.052	1.116	0.20	6.1	± 25.0
Anthracene	1.048	1.147	0.20	9.4	± 25.0
Carbazole	0.922	1.082	0.05	17.4	± 25.0
Di-n-butylphthalate	1.125	1.291	0.50	14.8	± 25.0
Fluoranthene	1.165	1.442	0.10	23.8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/14/2016 Time: 13:09

Lab File ID: BM005461.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02036 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
Pyrene	1.160	1.114	0.40	-4.0	± 50.0
Butylbenzylphthalate	0.482	0.488	0.10	1.2	± 50.0
3,3-Dichlorobenzidine	0.360	0.408	0.01	13.3	± 50.0
Benzo(a)anthracene	1.150	1.171	0.30	1.8	± 25.0
Chrysene	1.091	1.133	0.20	3.8	± 50.0
Bis(2-ethylhexyl)phthalate	0.669	0.724	0.20	8.2	± 50.0
Di-n-octyl phthalate	1.168	1.332	0.01	14.0	± 50.0
Benzo(b)fluoranthene	1.169	1.229	0.01	5.1	± 50.0
Benzo(k)fluoranthene	1.101	1.172	0.01	6.4	± 50.0
Benzo(a)pyrene	1.106	1.169	0.01	5.7	± 50.0
Indeno(1,2,3-cd)pyrene	1.206	1.196	0.01	-0.8	± 50.0
Dibenzo(a,h)anthracene	1.010	1.016	0.01	0.6	± 50.0
Benzo(g,h,i)perylene	1.022	0.983	0.01	-3.8	± 50.0
2,3,4,6-Tetrachlorophenol	0.382	0.372	0.04	-2.6	± 50.0
1,4-Dioxane-d8	0.425	0.434	0.01	2.1	± 50.0
Phenol-d5	1.814	1.745	0.01	-3.8	± 25.0
Bis-(2-Chloroethyl)ether-d8	1.035	1.037	0.10	0.2	± 25.0
2-Chlorophenol-d4	1.370	1.373	0.20	0.2	± 25.0
4-Methylphenol-d8	1.499	1.414	0.01	-5.7	± 25.0
Nitrobenzene-d5	0.143	0.152	0.05	6.3	± 25.0
2-Nitrophenol-d4	0.162	0.166	0.05	2.5	± 25.0
2,4-Dichlorophenol-d3	0.300	0.313	0.06	4.3	± 25.0
4-Chloroaniline-d4	0.362	0.411	0.01	13.5	± 50.0
Dimethylphthalate-d6	1.603	1.639	0.30	2.2	± 25.0
Acenaphthylene-d8	1.880	1.942	0.40	3.3	± 25.0
4-Nitrophenol-d4	0.293	0.229	0.01	-21.8	± 50.0
Fluorene-d10	1.384	1.450	0.10	4.8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4002

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/14/2016 Time: 13:09

Lab File ID: BM005461.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02036 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
4,6-Dinitro-2-methylphenol-d2	0.113	0.109	0.01	-3.5	± 50.0
Anthracene-d10	0.884	0.952	0.30	7.7	± 25.0
Pyrene-d10	0.923	0.875	0.30	-5.2	± 50.0
Benzo(a)pyrene-d12	0.885	0.931	0.01	5.2	± 50.0

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:29:28 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02061

Manual Integrations APPROVED
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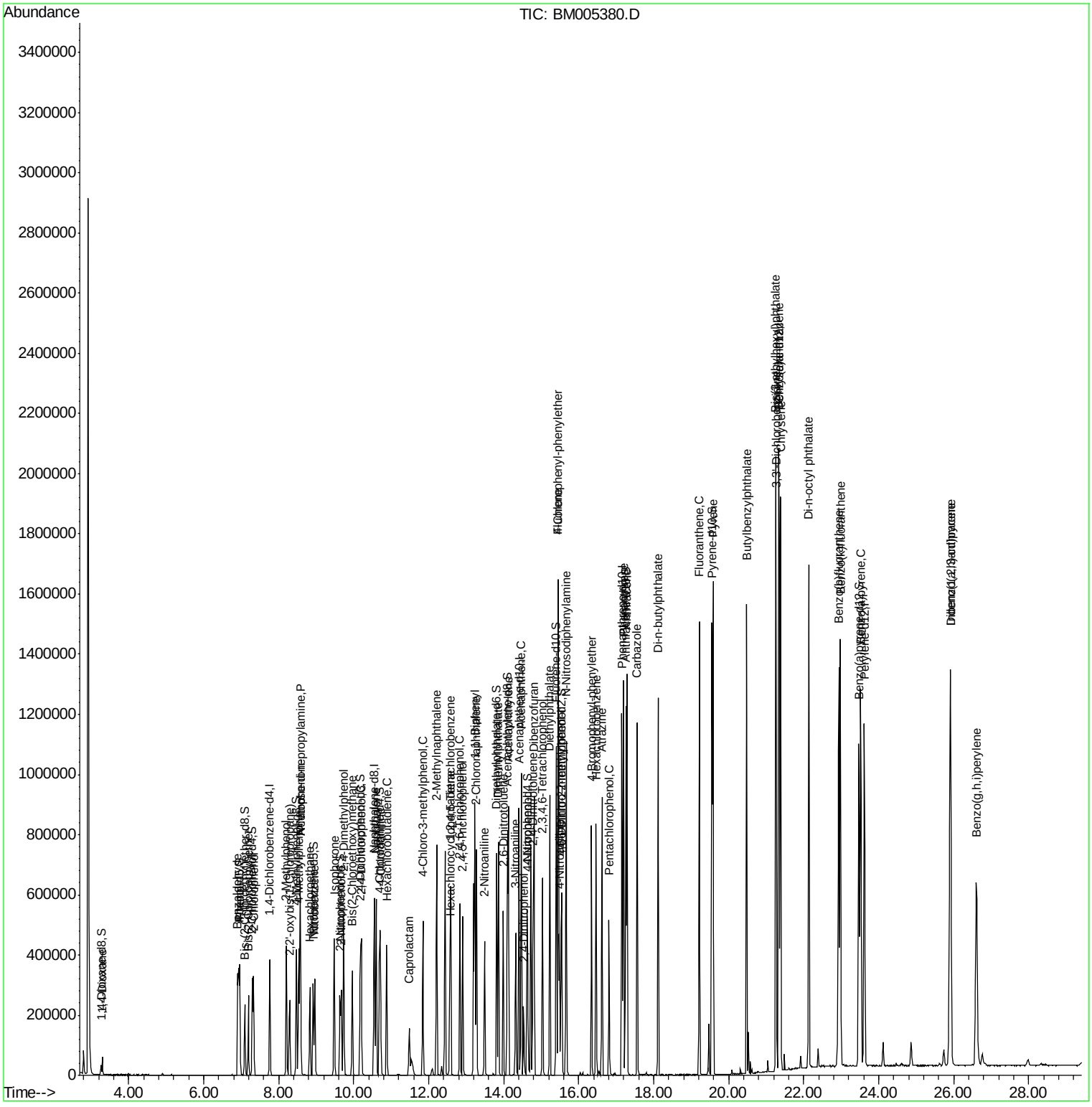
5/12/2016 7:01:17 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:29:28 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02061

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	100625	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	477106	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	305317	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	736650	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	814700	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	832126	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	16215	7.58	ng/uL	0.00
5) Phenol-d5	6.93	99	186678	20.45	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	104693	20.11	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	143532	20.82	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	155546	20.62	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	74037	21.74	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	85005	22.04	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	154380	21.54	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	207264	24.02	ng/ul	0.00
43) Dimethylphthalate-d6	13.81	166	502473	20.53	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	595621	20.75	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	90855	20.34	ng/ul	0.00
57) Fluorene-d10	15.40	176	431674	20.43	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	91455	22.07	ng/ul	0.00
70) Anthracene-d10	17.25	188	692797	21.28	ng/ul	0.00
76) Pyrene-d10	19.55	212	790515	21.02	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	772408	20.97	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	29090	7.46	ng/uL	95
4) Benzaldehyde	6.90	77	115615	26.15	ng/ul	98
6) Phenol	6.96	94	195767	20.75	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.19	93	142070	20.01	ng/ul	97
10) 2-Chlorophenol	7.33	128	144028	20.43	ng/ul	98
11) 2-Methylphenol	8.20	108	149383	20.49	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.29	45	196505	20.40	ng/ul	99
14) Acetophenone	8.58	105	238597	21.35	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.57	70	121666	20.84	ng/ul	98
16) 4-Methylphenol	8.53	108	166073	20.53	ng/ul	96
17) Hexachloroethane	8.83	117	55655	20.98	ng/ul	95
20) Nitrobenzene	8.96	77	179794	21.08	ng/ul	98
21) Isophorone	9.48	82	350989	21.20	ng/ul	99
23) 2-Nitrophenol	9.67	139	90715	21.83	ng/ul	97
24) 2,4-Dimethylphenol	9.73	107	189843	21.54	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.96	93	204117	19.79	ng/ul	99
27) 2,4-Dichlorophenol	10.20	162	155060	21.12	ng/ul	99
28) Naphthalene	10.60	128	487040	20.29	ng/ul	100
30) 4-Chloroaniline	10.71	127	208281	23.67	ng/ul	97
31) Hexachlorobutadiene	10.87	225	94273	21.61	ng/ul	98
32) Caprolactam	11.48	113	56270m	20.57	ng/ul	
33) 4-Chloro-3-methylphenol	11.84	107	187778	21.33	ng/ul	98
34) 2-Methylnaphthalene	12.21	142	362143	20.17	ng/ul	99

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Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:29:28 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02061

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.59	216	193304	20.81 ng/ul	98
37) Hexachlorocyclopentadiene	12.56	237	92798	19.56 ng/ul	95
38) 2,4,6-Trichlorophenol	12.83	196	130050	21.02 ng/ul	94
39) 2,4,5-Trichlorophenol	12.90	196	143782	20.95 ng/ul	97
40) 1,1'-Biphenyl	13.23	154	482410	19.95 ng/ul	99
41) 2-Chloronaphthalene	13.27	162	373119	20.40 ng/ul	98
42) 2-Nitroaniline	13.49	65	126152	22.41 ng/ul	97
44) Dimethylphthalate	13.86	163	503915	20.61 ng/ul	99
45) 2,6-Dinitrotoluene	13.99	165	107981	22.39 ng/ul#	90
47) Acenaphthylene	14.12	152	628221	20.69 ng/ul	99
48) 3-Nitroaniline	14.32	138	117243	22.81 ng/ul	96
49) Acenaphthene	14.47	153	409340	20.45 ng/ul	99
50) 2,4-Dinitrophenol	14.53	184	51232	18.47 ng/ul	98
52) 4-Nitrophenol	14.63	109	81532	21.95 ng/ul	92
53) Dibenzofuran	14.80	168	597341	20.57 ng/ul	98
54) 2,4-Dinitrotoluene	14.78	165	161123	22.41 ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.03	232	127003	21.77 ng/ul#	96
56) Diethylphthalate	15.23	149	514402	20.82 ng/ul	99
58) Fluorene	15.46	166	463176	20.40 ng/ul	100
59) 4-Chlorophenyl-phenylether	15.44	204	230521	20.49 ng/ul	97
60) 4-Nitroaniline	15.49	138	124597	22.87 ng/ul	94
63) 4,6-Dinitro-2-methylphenol	15.54	198	95203	21.86 ng/ul#	92
64) N-Nitrosodiphenylamine	15.66	169	427204	21.18 ng/ul	100
65) 4-Bromophenyl-phenylether	16.34	248	153425	21.72 ng/ul	98
66) Hexachlorobenzene	16.46	284	172269	21.75 ng/ul	100
67) Atrazine	16.62	200	169843	23.07 ng/ul	99
68) Pentachlorophenol	16.80	266	94299	21.42 ng/ul	97
69) Phenanthrene	17.19	178	801884	20.70 ng/ul	100
71) Anthracene	17.29	178	815155	21.11 ng/ul	99
72) Carbazole	17.56	167	752941	22.16 ng/ul	99
73) Di-n-butylphthalate	18.12	149	901317	21.75 ng/ul	100
74) Fluoranthene	19.22	202	972076	22.65 ng/ul	97
77) Pyrene	19.58	202	983485	20.81 ng/ul	98
78) Butylbenzylphthalate	20.47	149	446440	22.75 ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	323120	22.06 ng/ul	99
80) Benzo(a)anthracene	21.33	228	979327	20.90 ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.25	149	614678	22.55 ng/ul#	97
82) Chrysene	21.38	228	943969	21.23 ng/ul	99
84) Di-n-octyl phthalate	22.13	149	1127624	23.20 ng/ul	98
85) Benzo(b)fluoranthene	22.93	252	1001915	20.60 ng/ul	99
86) Benzo(k)fluoranthene	22.97	252	987950	21.57 ng/ul	99
88) Benzo(a)pyrene	23.51	252	959835	20.86 ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.90	276	955291	19.03 ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	802160	19.10 ng/ul	98
91) Benzo(g,h,i)perylene	26.60	276	785553	18.48 ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:29:28 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02061

Manual Integrations APPROVED
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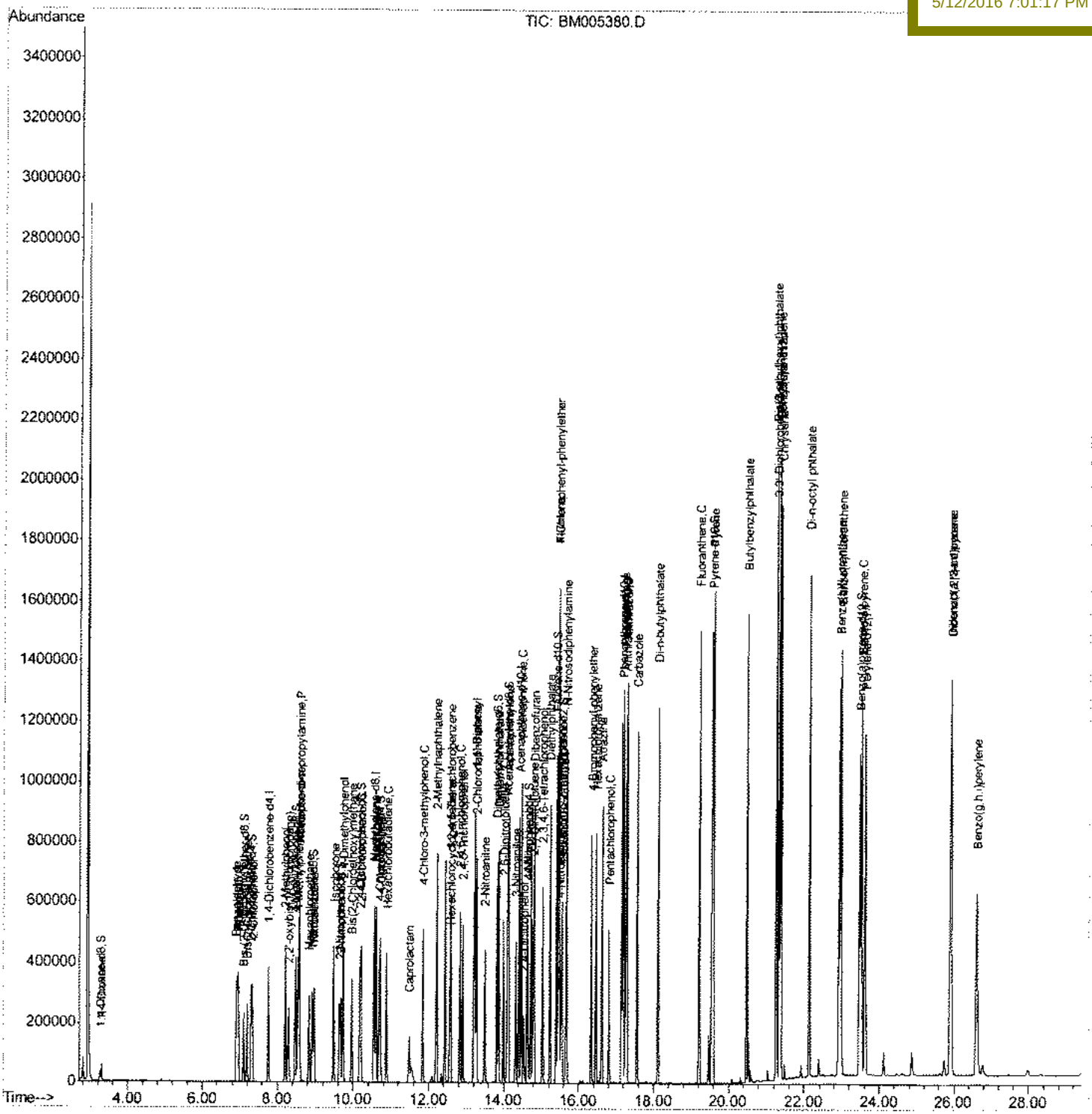

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:27:23 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02061

Manual Integrations APPROVED
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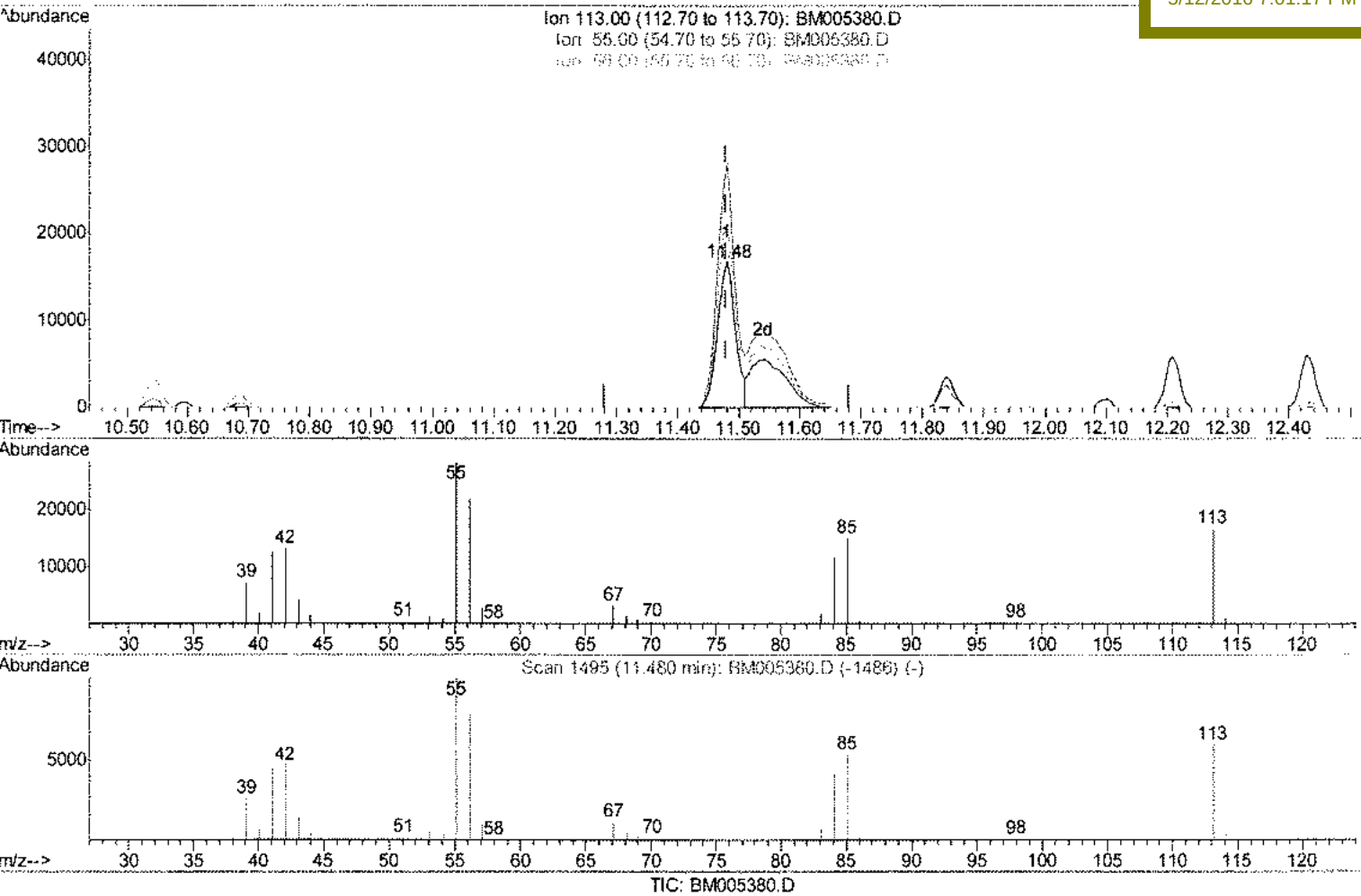
5/12/2016 7:01:17 PM



TIC: BM005380.D

(32) Caprolactam

11.480min (0.000) 12.36ng/ul

response 33808

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	168.01
56.00	120.80	130.03
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
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Quant Time: May 12 03:27:23 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
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Instrument :
BNA_M
ClientSampleId :
SSTD02061

Manual Integrations APPROVED
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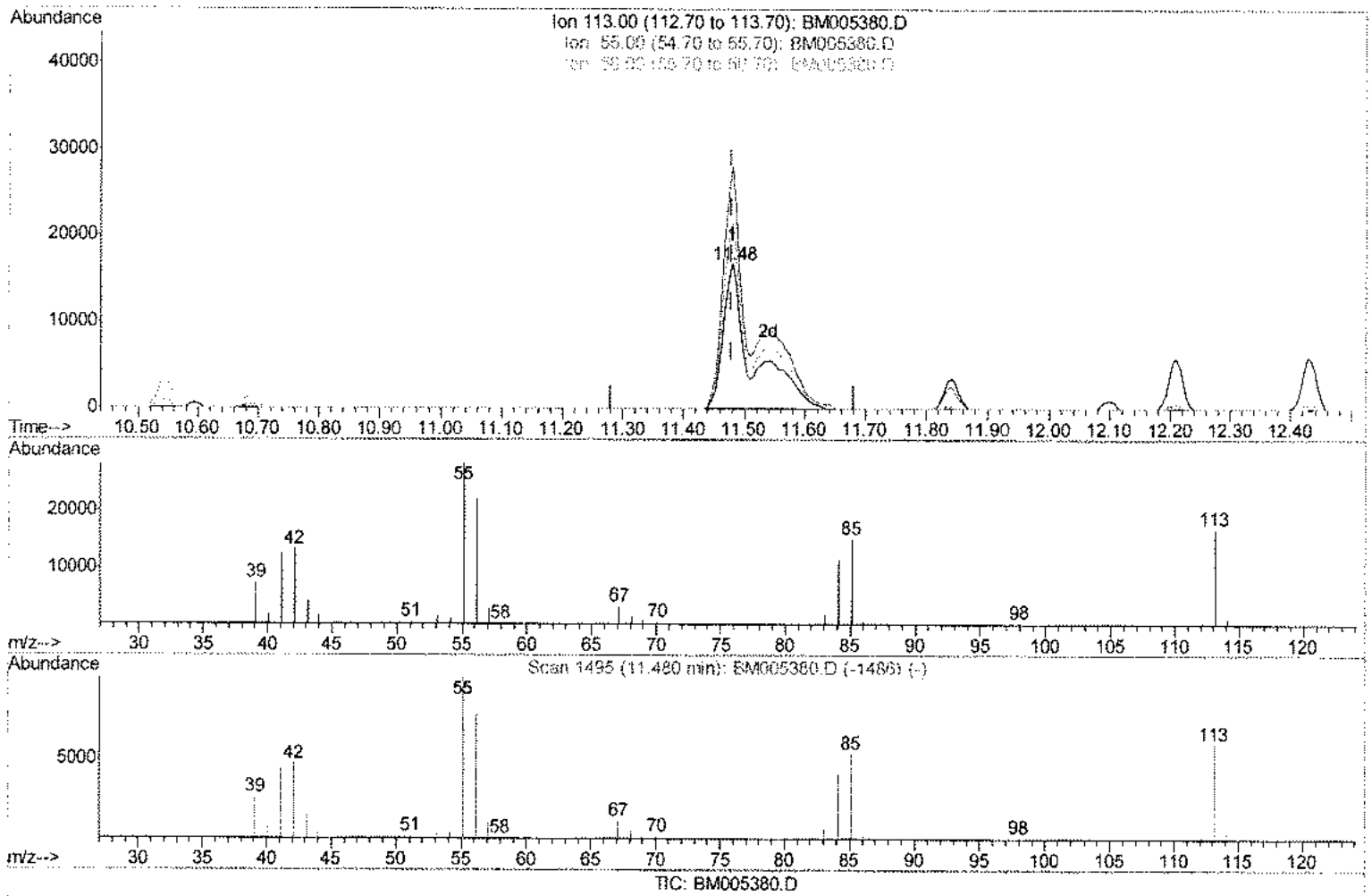
5/12/2016 7:01:17 PM



TIC: BM005380.D

(32) Caprolactam

11.480min (0.000) 20.57ng/ul m

response 56270

U.M 05/16/16

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	168.01
56.00	120.80	130.03
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051116\
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Manual Integrations APPROVED
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5/12/2016 7:01:17 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	100625	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	477106	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	305317	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	736650	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	814700	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	832126	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	16215	7.58	ng/uL	0.00
5) Phenol-d5	6.93	99	186678	20.45	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	104693	20.11	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	143532	20.82	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	155546	20.62	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	74037	21.74	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	85005	22.04	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	154380	21.54	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	207264	24.02	ng/ul	0.00
43) Dimethylphthalate-d6	13.81	166	502473	20.53	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	595621	20.75	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	90855	20.34	ng/ul	0.00
57) Fluorene-d10	15.40	176	431674	20.43	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	91455	22.07	ng/ul	0.00
70) Anthracene-d10	17.25	188	692797	21.28	ng/ul	0.00
76) Pyrene-d10	19.55	212	790515	21.02	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	772408	20.97	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	29090	7.46	ng/uL	95
4) Benzaldehyde	6.90	77	115615	26.15	ng/ul	98
6) Phenol	6.96	94	195767	20.75	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.19	93	142070	20.01	ng/ul	97
10) 2-Chlorophenol	7.33	128	144028	20.43	ng/ul	98
11) 2-Methylphenol	8.20	108	149383	20.49	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.29	45	196505	20.40	ng/ul	99
14) Acetophenone	8.58	105	238597	21.35	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.57	70	121666	20.84	ng/ul	98
16) 4-Methylphenol	8.53	108	166073	20.53	ng/ul	96
17) Hexachloroethane	8.83	117	55655	20.98	ng/ul	95
20) Nitrobenzene	8.96	77	179794	21.08	ng/ul	98
21) Isophorone	9.48	82	350989	21.20	ng/ul	99
23) 2-Nitrophenol	9.67	139	90715	21.83	ng/ul	97
24) 2,4-Dimethylphenol	9.73	107	189843	21.54	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.96	93	204117	19.79	ng/ul	99
27) 2,4-Dichlorophenol	10.20	162	155060	21.12	ng/ul	99
28) Naphthalene	10.60	128	487040	20.29	ng/ul	100
30) 4-Chloroaniline	10.71	127	208281	23.67	ng/ul	97
31) Hexachlorobutadiene	10.87	225	94273	21.61	ng/ul	98
32) Caprolactam	11.48	113	56270m	20.57	ng/ul	
33) 4-Chloro-3-methylphenol	11.84	107	187778	21.33	ng/ul	98
34) 2-Methylnaphthalene	12.21	142	362143	20.17	ng/ul	99

U. M
05/16/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
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Quant Time: May 12 03:29:28 2016
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Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02061

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.59	216	193304	20.81	ng/ul	98
37) Hexachlorocyclopentadiene	12.56	237	92798	19.56	ng/ul	95
38) 2,4,6-Trichlorophenol	12.83	196	130050	21.02	ng/ul	94
39) 2,4,5-Trichlorophenol	12.90	196	143782	20.95	ng/ul	97
40) 1,1'-Biphenyl	13.23	154	482410	19.95	ng/ul	99
41) 2-Chloronaphthalene	13.27	162	373119	20.40	ng/ul	98
42) 2-Nitroaniline	13.49	65	126152	22.41	ng/ul	97
44) Dimethylphthalate	13.86	163	503915	20.61	ng/ul	99
45) 2,6-Dinitrotoluene	13.99	165	107981	22.39	ng/ul#	90
47) Acenaphthylene	14.12	152	628221	20.69	ng/ul	99
48) 3-Nitroaniline	14.32	138	117243	22.81	ng/ul	96
49) Acenaphthene	14.47	153	409340	20.45	ng/ul	99
50) 2,4-Dinitrophenol	14.53	184	51232	18.47	ng/ul	98
52) 4-Nitrophenol	14.63	109	81532	21.95	ng/ul	92
53) Dibenzofuran	14.80	168	597341	20.57	ng/ul	98
54) 2,4-Dinitrotoluene	14.78	165	161123	22.41	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.03	232	127003	21.77	ng/ul#	96
56) Diethylphthalate	15.23	149	514402	20.82	ng/ul	99
58) Fluorene	15.46	166	463176	20.40	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.44	204	230521	20.49	ng/ul	97
60) 4-Nitroaniline	15.49	138	124597	22.87	ng/ul	94
63) 4,6-Dinitro-2-methylphenol	15.54	198	95203	21.86	ng/ul#	92
64) N-Nitrosodiphenylamine	15.66	169	427204	21.18	ng/ul	100
65) 4-Bromophenyl-phenylether	16.34	248	153425	21.72	ng/ul	98
66) Hexachlorobenzene	16.46	284	172269	21.75	ng/ul	100
67) Atrazine	16.62	200	169843	23.07	ng/ul	99
68) Pentachlorophenol	16.80	266	94299	21.42	ng/ul	97
69) Phenanthrene	17.19	178	801884	20.70	ng/ul	100
71) Anthracene	17.29	178	815155	21.11	ng/ul	99
72) Carbazole	17.56	167	752941	22.16	ng/ul	99
73) Di-n-butylphthalate	18.12	149	901317	21.75	ng/ul	100
74) Fluoranthene	19.22	202	972076	22.65	ng/ul	97
77) Pyrene	19.58	202	983485	20.81	ng/ul	98
78) Butylbenzylphthalate	20.47	149	446440	22.75	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	323120	22.06	ng/ul	99
80) Benzo(a)anthracene	21.33	228	979327	20.90	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.25	149	614678	22.55	ng/ul#	97
82) Chrysene	21.38	228	943969	21.23	ng/ul	99
84) Di-n-octyl phthalate	22.13	149	1127624	23.20	ng/ul	98
85) Benzo(b)fluoranthene	22.93	252	1001915	20.60	ng/ul	99
86) Benzo(k)fluoranthene	22.97	252	987950	21.57	ng/ul	99
88) Benzo(a)pyrene	23.51	252	959835	20.86	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.90	276	955291	19.03	ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	802160	19.10	ng/ul	98
91) Benzo(g,h,i)perylene	26.60	276	785553	18.48	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

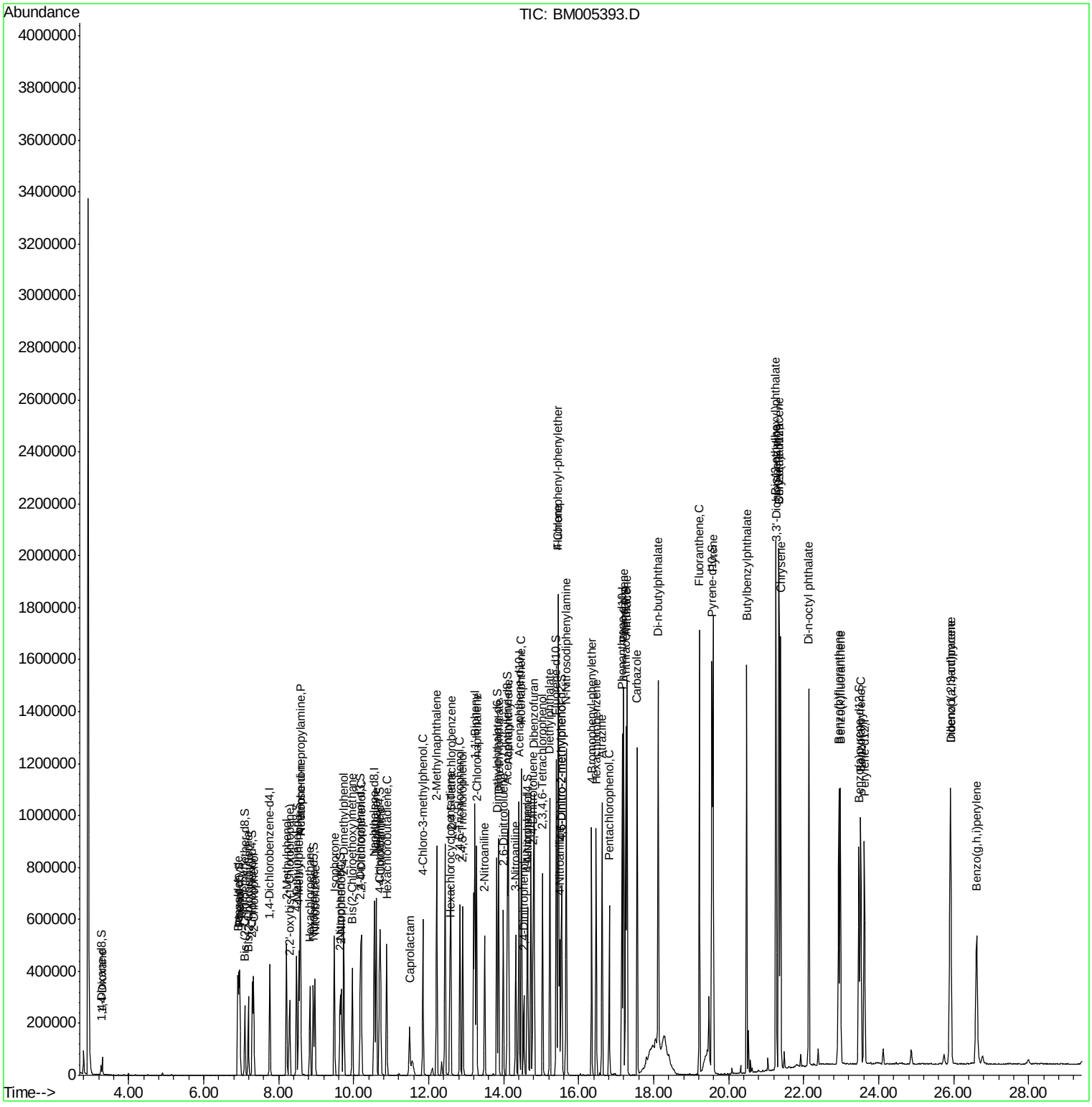
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020EC

Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 04:21:27 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02062

Manual Integrations APPROVED
sohil
5/12/2016 7:07:51 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
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QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02062

Manual Integrations APPROVED
sohil
5/12/2016 7:07:51 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	115496	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	551013	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	351891	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.16	188	834042	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	747722	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	612165	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	17639	7.18	ng/uL	0.00
5) Phenol-d5	6.93	99	211837	20.22	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	119408	19.98	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	164153	20.75	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	179457	20.73	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	86578	22.01	ng/ul	0.00
22) 2-Nitrophenol-d4	9.64	143	101628	22.82	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	179566	21.69	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	243116	24.40	ng/ul	0.00
43) Dimethylphthalate-d6	13.82	166	590999	20.95	ng/ul	0.00
46) Acenaphthylene-d8	14.10	160	699462	21.14	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	106522	20.69	ng/ul	0.00
57) Fluorene-d10	15.40	176	499714	20.52	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	111144	23.69	ng/ul	0.00
70) Anthracene-d10	17.25	188	781450	21.20	ng/ul	0.00
76) Pyrene-d10	19.55	212	819982	23.76	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	572408	21.12	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	32355	7.22	ng/uL	96
4) Benzaldehyde	6.90	77	133177	26.24	ng/ul	97
6) Phenol	6.96	94	220123	20.33	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.19	93	163401	20.05	ng/ul	98
10) 2-Chlorophenol	7.33	128	165457	20.45	ng/ul	98
11) 2-Methylphenol	8.20	108	170695	20.40	ng/ul	100
12) 2,2'-oxybis(1-Chloropropan	8.29	45	225840	20.43	ng/ul	99
14) Acetophenone	8.58	105	271815	21.19	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.57	70	141949	21.18	ng/ul	99
16) 4-Methylphenol	8.53	108	190667	20.53	ng/ul	98
17) Hexachloroethane	8.83	117	64846	21.29	ng/ul	95
20) Nitrobenzene	8.96	77	208054	21.12	ng/ul	96
21) Isophorone	9.48	82	414298	21.66	ng/ul	99
23) 2-Nitrophenol	9.67	139	106338	22.16	ng/ul	98
24) 2,4-Dimethylphenol	9.73	107	218114	21.42	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.96	93	238500	20.02	ng/ul	98
27) 2,4-Dichlorophenol	10.20	162	180937	21.34	ng/ul	99
28) Naphthalene	10.60	128	566276	20.43	ng/ul	99
30) 4-Chloroaniline	10.71	127	243797	23.99	ng/ul	99
31) Hexachlorobutadiene	10.87	225	111638	22.16	ng/ul	99
32) Caprolactam	11.49	113	68690m	21.75	ng/ul	
33) 4-Chloro-3-methylphenol	11.85	107	223786	22.02	ng/ul	98
34) 2-Methylnaphthalene	12.21	142	427632	20.62	ng/ul	97

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020EC

Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 04:21:27 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02062

Manual Integrations APPROVED
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5/12/2016 7:07:51 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.59	216	225772	21.09	ng/ul	99
37) Hexachlorocyclopentadiene	12.56	237	108491	19.84	ng/ul	95
38) 2,4,6-Trichlorophenol	12.83	196	157938	22.15	ng/ul	98
39) 2,4,5-Trichlorophenol	12.90	196	174804	22.10	ng/ul	98
40) 1,1'-Biphenyl	13.23	154	568347	20.39	ng/ul	99
41) 2-Chloronaphthalene	13.27	162	439321	20.84	ng/ul	98
42) 2-Nitroaniline	13.49	65	150308	23.16	ng/ul	97
44) Dimethylphthalate	13.86	163	589092	20.90	ng/ul	100
45) 2,6-Dinitrotoluene	13.99	165	128863	23.19	ng/ul#	91
47) Acenaphthylene	14.13	152	733838	20.97	ng/ul	100
48) 3-Nitroaniline	14.32	138	138540	23.38	ng/ul	100
49) Acenaphthene	14.47	153	475546	20.62	ng/ul	98
50) 2,4-Dinitrophenol	14.53	184	70755	22.13	ng/ul	94
52) 4-Nitrophenol	14.64	109	94059	21.97	ng/ul	92
53) Dibenzofuran	14.80	168	688234	20.56	ng/ul	99
54) 2,4-Dinitrotoluene	14.78	165	185080	22.33	ng/ul	98
55) 2,3,4,6-Tetrachlorophenol	15.03	232	151808	22.57	ng/ul#	96
56) Diethylphthalate	15.23	149	598250	21.01	ng/ul	99
58) Fluorene	15.46	166	529313	20.23	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.44	204	267712	20.65	ng/ul	97
60) 4-Nitroaniline	15.49	138	143799m	22.90	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	115843	23.50	ng/ul#	93
64) N-Nitrosodiphenylamine	15.66	169	490433	21.47	ng/ul	99
65) 4-Bromophenyl-phenylether	16.34	248	176874	22.12	ng/ul	97
66) Hexachlorobenzene	16.46	284	198623	22.15	ng/ul	97
67) Atrazine	16.62	200	195995	23.52	ng/ul	99
68) Pentachlorophenol	16.81	266	117927	23.66	ng/ul	98
69) Phenanthrene	17.20	178	907451	20.69	ng/ul	99
71) Anthracene	17.29	178	918853	21.02	ng/ul	100
72) Carbazole	17.56	167	845738	21.99	ng/ul	99
73) Di-n-butylphthalate	18.12	149	1035602	22.07	ng/ul	100
74) Fluoranthene	19.22	202	1038053	21.36	ng/ul	97
77) Pyrene	19.58	202	1030507	23.76	ng/ul	98
78) Butylbenzylphthalate	20.47	149	471289	26.17	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	296423	22.05	ng/ul	100
80) Benzo(a)anthracene	21.33	228	902530	20.98	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.25	149	618650	24.73	ng/ul#	98
82) Chrysene	21.39	228	860567	21.09	ng/ul	100
84) Di-n-octyl phthalate	22.13	149	988141	27.64	ng/ul	99
85) Benzo(b)fluoranthene	22.93	252	799128	22.33	ng/ul	99
86) Benzo(k)fluoranthene	22.98	252	710948	21.10	ng/ul	99
88) Benzo(a)pyrene	23.51	252	711425	21.02	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.91	276	740127	20.04	ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	627545	20.31	ng/ul	97
91) Benzo(g,h,i)perylene	26.61	276	626457	20.03	ng/ul	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020EC

Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 04:21:27 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId:
SSTD02062

Manual Integrations APPROVED
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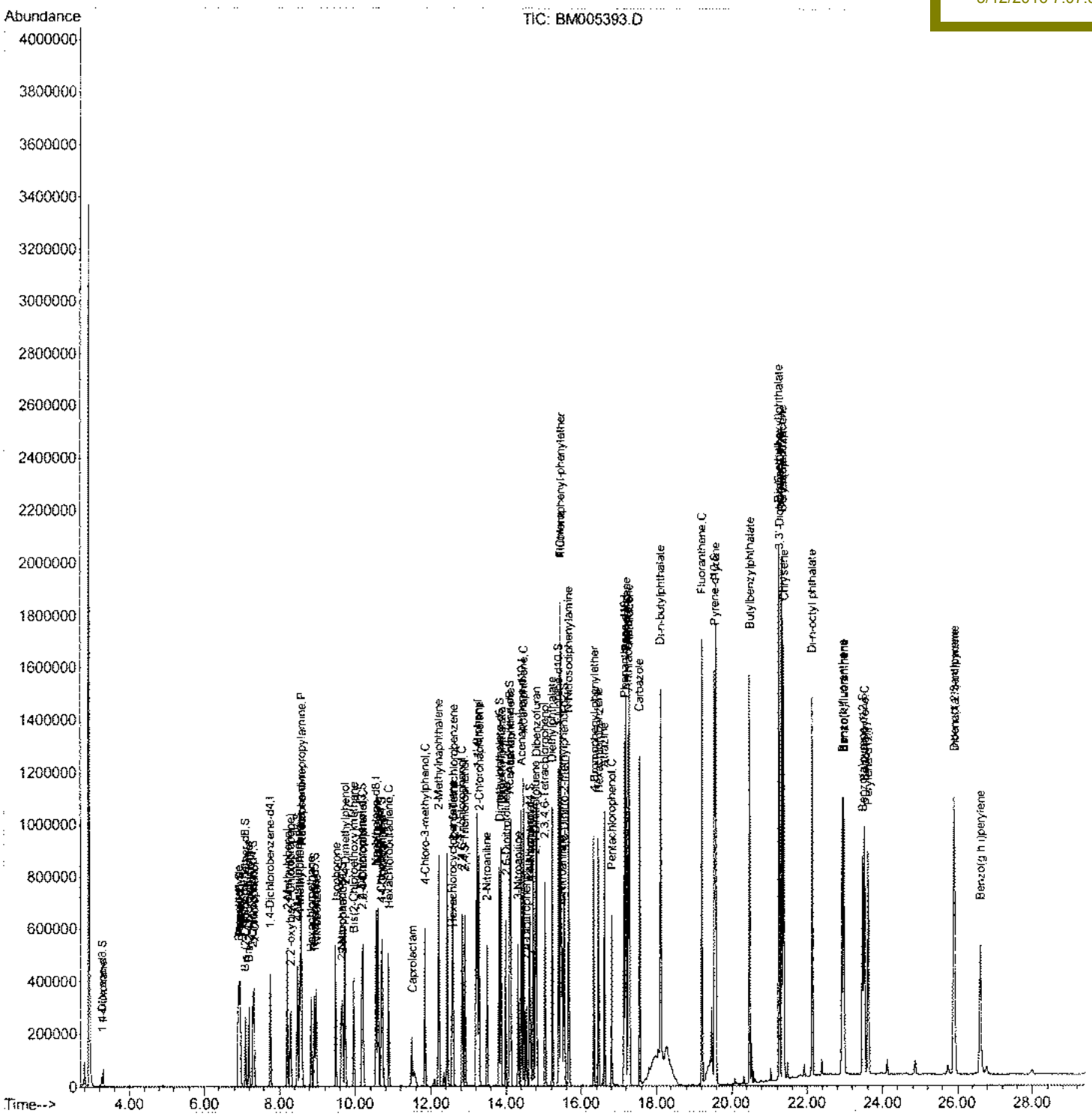

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020EC

Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:33:11 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02062

Manual Integrations APPROVED
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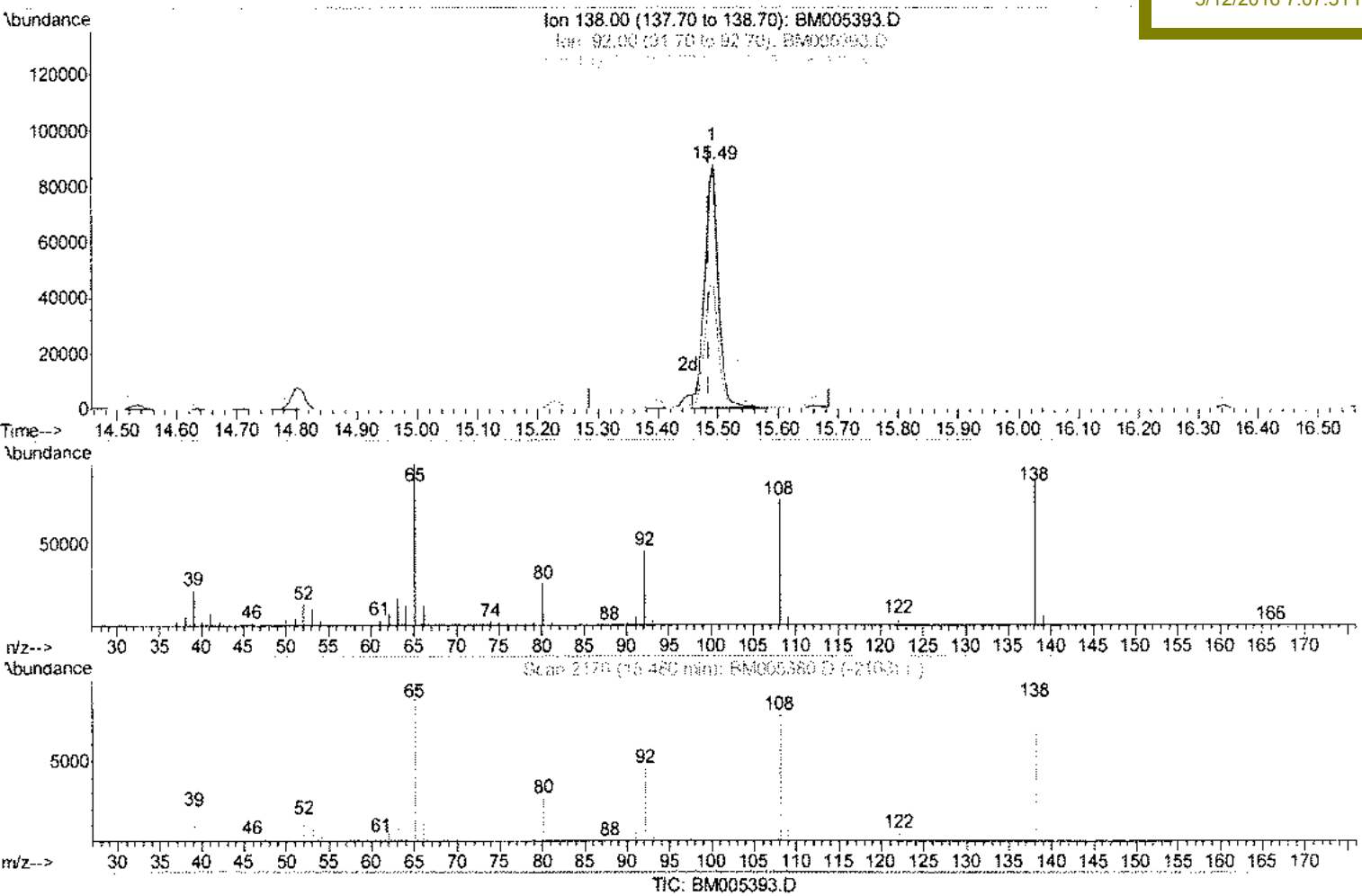
5/12/2016 7:07:51 PM



(60) 4-Nitroaniline

15.492min (+0.006) 21.56ng/ul

response 135421

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	52.22
108.00	82.90	87.48
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020EC

Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:33:11 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02062

Manual Integrations APPROVED
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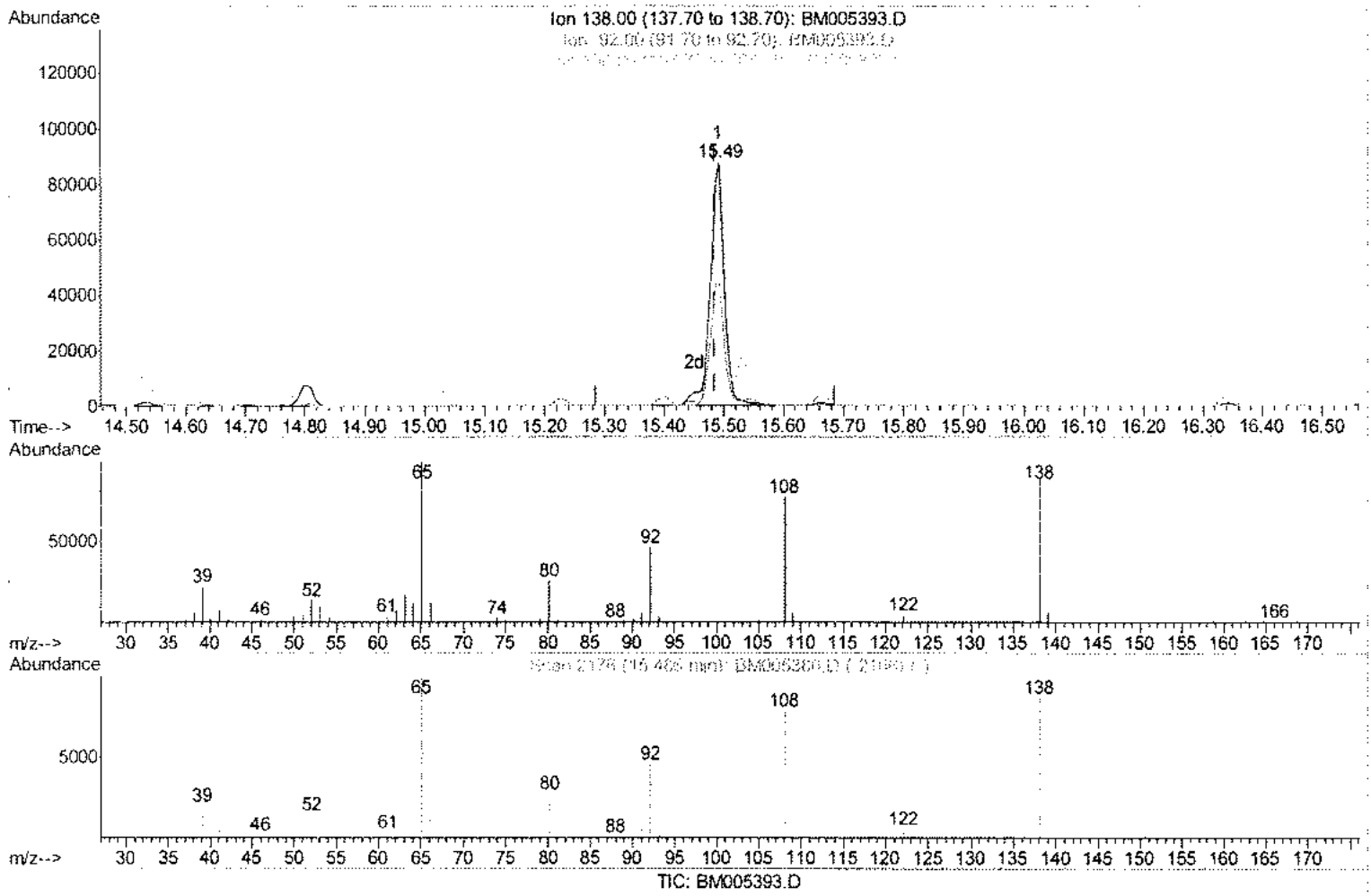
5/12/2016 7:07:51 PM



(60) 4-Nitroaniline

15.492min (+0.006) 22.90ng/ul m

U. M.
05/13/2016

response 143799

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	52.22
108.00	82.90	87.48
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
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Sample : SSTDCCC020EC

Misc :
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BNA_M
ClientSampleId :
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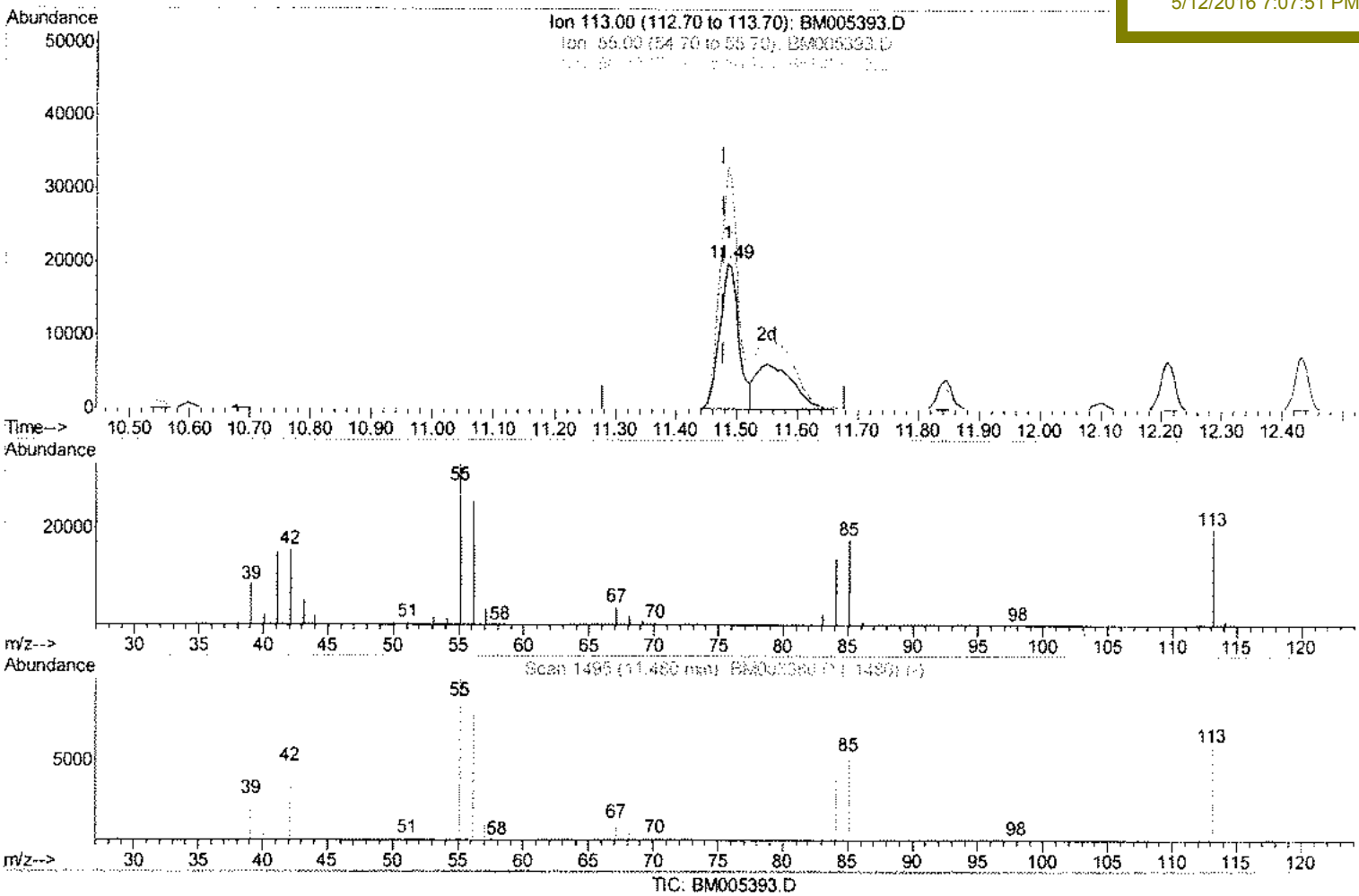
Manual Integrations APPROVED
sohil
5/12/2016 7:07:51 PM



(32) Caprolactam

11.486min (+0.006) 13.49ng/ul

response 42617

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	166.04
56.00	120.80	127.79
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
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Misc :
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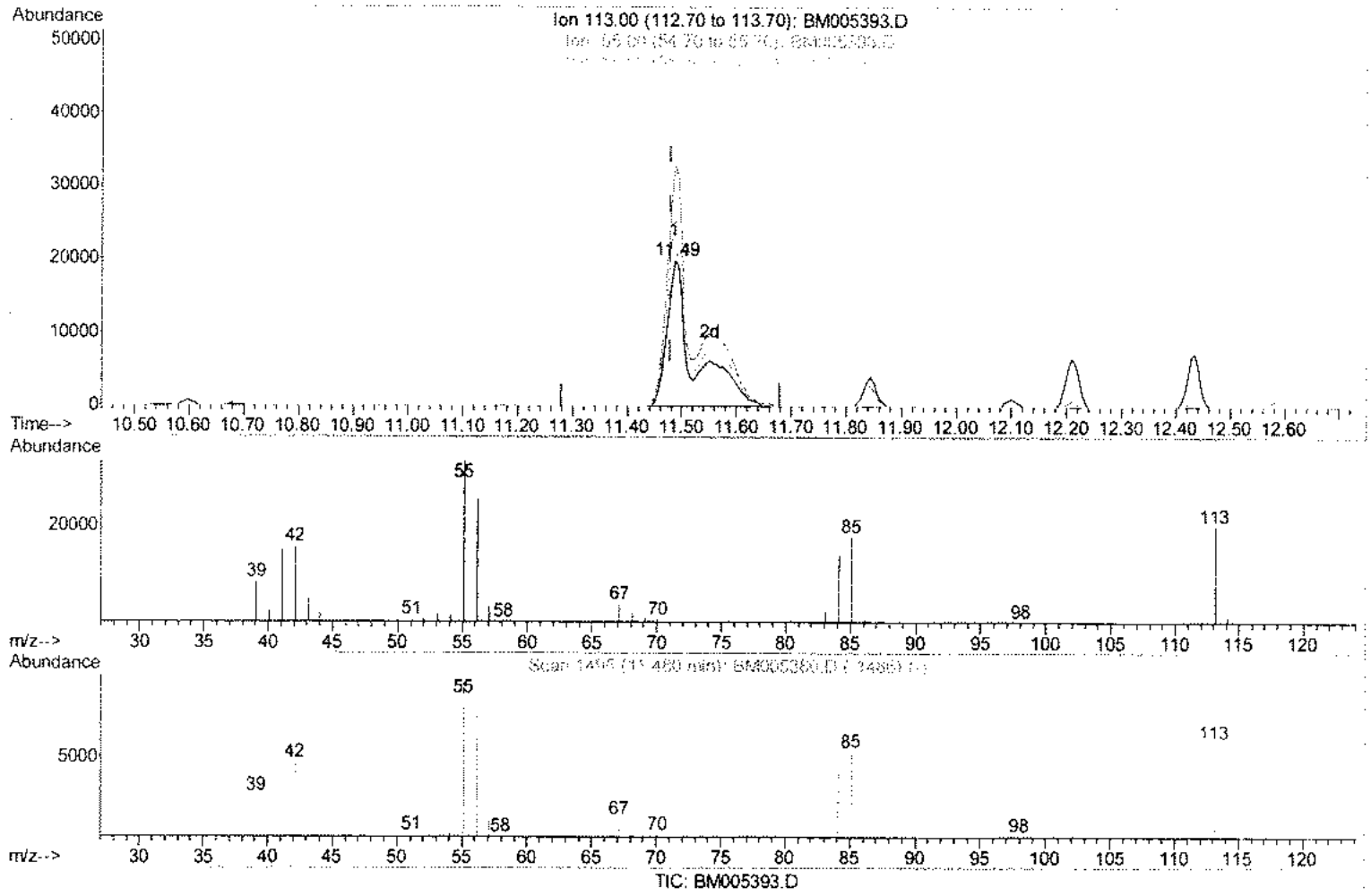
Instrument :
BNA_M
ClientSampleId :
SSTD02062

Manual Integrations APPROVED
sohil
5/12/2016 7:07:51 PM



(32) Caprolactam

11.486min (+0.006) 21.75ng/ul m

U.M. 05/13/2016

response 68690

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	166.04
56.00	120.80	127.79
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
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Instrument : BNA_M
ClientSampleId : SSTD02062

Manual Integrations APPROVED
sohil
5/12/2016 7:07:51 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	115496	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	551013	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	351891	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.16	188	834042	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	747722	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	612165	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	17639	7.18	ng/uL	0.00
5) Phenol-d5	6.93	99	211837	20.22	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	119408	19.98	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	164153	20.75	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	179457	20.73	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	86578	22.01	ng/ul	0.00
22) 2-Nitrophenol-d4	9.64	143	101628	22.82	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	179566	21.69	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	243116	24.40	ng/ul	0.00
43) Dimethylphthalate-d6	13.82	166	590999	20.95	ng/ul	0.00
46) Acenaphthylene-d8	14.10	160	699462	21.14	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	106522	20.69	ng/ul	0.00
57) Fluorene-d10	15.40	176	499714	20.52	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	111144	23.69	ng/ul	0.00
70) Anthracene-d10	17.25	188	781450	21.20	ng/ul	0.00
76) Pyrene-d10	19.55	212	819982	23.76	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	572408	21.12	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	32355	7.22	ng/uL	96
4) Benzaldehyde	6.90	77	133177	26.24	ng/ul	97
6) Phenol	6.96	94	220123	20.33	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.19	93	163401	20.05	ng/ul	98
10) 2-Chlorophenol	7.33	128	165457	20.45	ng/ul	98
11) 2-Methylphenol	8.20	108	170695	20.40	ng/ul	100
12) 2,2'-oxybis(1-Chloropropan	8.29	45	225840	20.43	ng/ul	99
14) Acetophenone	8.58	105	271815	21.19	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.57	70	141949	21.18	ng/ul	99
16) 4-Methylphenol	8.53	108	190667	20.53	ng/ul	98
17) Hexachloroethane	8.83	117	64846	21.29	ng/ul	95
20) Nitrobenzene	8.96	77	208054	21.12	ng/ul	96
21) Isophorone	9.48	82	414298	21.66	ng/ul	99
23) 2-Nitrophenol	9.67	139	106338	22.16	ng/ul	98
24) 2,4-Dimethylphenol	9.73	107	218114	21.42	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.96	93	238500	20.02	ng/ul	98
27) 2,4-Dichlorophenol	10.20	162	180937	21.34	ng/ul	99
28) Naphthalene	10.60	128	566276	20.43	ng/ul	99
30) 4-Chloroaniline	10.71	127	243797	23.99	ng/ul	99
31) Hexachlorobutadiene	10.87	225	111638	22.16	ng/ul	99
32) Caprolactam	11.49	113	68690m	21.75	ng/ul	
33) 4-Chloro-3-methylphenol	11.85	107	223786	22.02	ng/ul	98
34) 2-Methylnaphthalene	12.21	142	427632	20.62	ng/ul	97

U.M. 5/13/2016

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 04:21:27 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02062

Manual Integrations APPROVED
sohil
5/12/2016 7:07:51 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.59	216	225772	21.09	ng/ul	99
37) Hexachlorocyclopentadiene	12.56	237	108491	19.84	ng/ul	95
38) 2,4,6-Trichlorophenol	12.83	196	157938	22.15	ng/ul	98
39) 2,4,5-Trichlorophenol	12.90	196	174804	22.10	ng/ul	98
40) 1,1'-Biphenyl	13.23	154	568347	20.39	ng/ul	99
41) 2-Chloronaphthalene	13.27	162	439321	20.84	ng/ul	98
42) 2-Nitroaniline	13.49	65	150308	23.16	ng/ul	97
44) Dimethylphthalate	13.86	163	589092	20.90	ng/ul	100
45) 2,6-Dinitrotoluene	13.99	165	128863	23.19	ng/ul#	91
47) Acenaphthylene	14.13	152	733838	20.97	ng/ul	100
48) 3-Nitroaniline	14.32	138	138540	23.38	ng/ul	100
49) Acenaphthene	14.47	153	475546	20.62	ng/ul	98
50) 2,4-Dinitrophenol	14.53	184	70755	22.13	ng/ul	94
52) 4-Nitrophenol	14.64	109	94059	21.97	ng/ul	92
53) Dibenzofuran	14.80	168	688234	20.56	ng/ul	99
54) 2,4-Dinitrotoluene	14.78	165	185080	22.33	ng/ul	98
55) 2,3,4,6-Tetrachlorophenol	15.03	232	151808	22.57	ng/ul#	96
56) Diethylphthalate	15.23	149	598250	21.01	ng/ul	99
58) Fluorene	15.46	166	529313	20.23	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.44	204	267712	20.65	ng/ul	97
60) 4-Nitroaniline	15.49	138	143799m	22.90	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	115843	23.50	ng/ul#	93
64) N-Nitrosodiphenylamine	15.66	169	490433	21.47	ng/ul	99
65) 4-Bromophenyl-phenylether	16.34	248	176874	22.12	ng/ul	97
66) Hexachlorobenzene	16.46	284	198623	22.15	ng/ul	97
67) Atrazine	16.62	200	195995	23.52	ng/ul	99
68) Pentachlorophenol	16.81	266	117927	23.66	ng/ul	98
69) Phenanthrene	17.20	178	907451	20.69	ng/ul	99
71) Anthracene	17.29	178	918853	21.02	ng/ul	100
72) Carbazole	17.56	167	845738	21.99	ng/ul	99
73) Di-n-butylphthalate	18.12	149	1035602	22.07	ng/ul	100
74) Fluoranthene	19.22	202	1038053	21.36	ng/ul	97
77) Pyrene	19.58	202	1030507	23.76	ng/ul	98
78) Butylbenzylphthalate	20.47	149	471289	26.17	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	296423	22.05	ng/ul	100
80) Benzo(a)anthracene	21.33	228	902530	20.98	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.25	149	618650	24.73	ng/ul#	98
82) Chrysene	21.39	228	860567	21.09	ng/ul	100
84) Di-n-octyl phthalate	22.13	149	988141	27.64	ng/ul	99
85) Benzo(b)fluoranthene	22.93	252	799128	22.33	ng/ul	99
86) Benzo(k)fluoranthene	22.98	252	710948	21.10	ng/ul	99
88) Benzo(a)pyrene	23.51	252	711425	21.02	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.91	276	740127	20.04	ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	627545	20.31	ng/ul	97
91) Benzo(g,h,i)perylene	26.61	276	626457	20.03	ng/ul	98

U.M. 05/13/2016

(#) = qualifier out of range (m) = manual integration (+) = signals summed

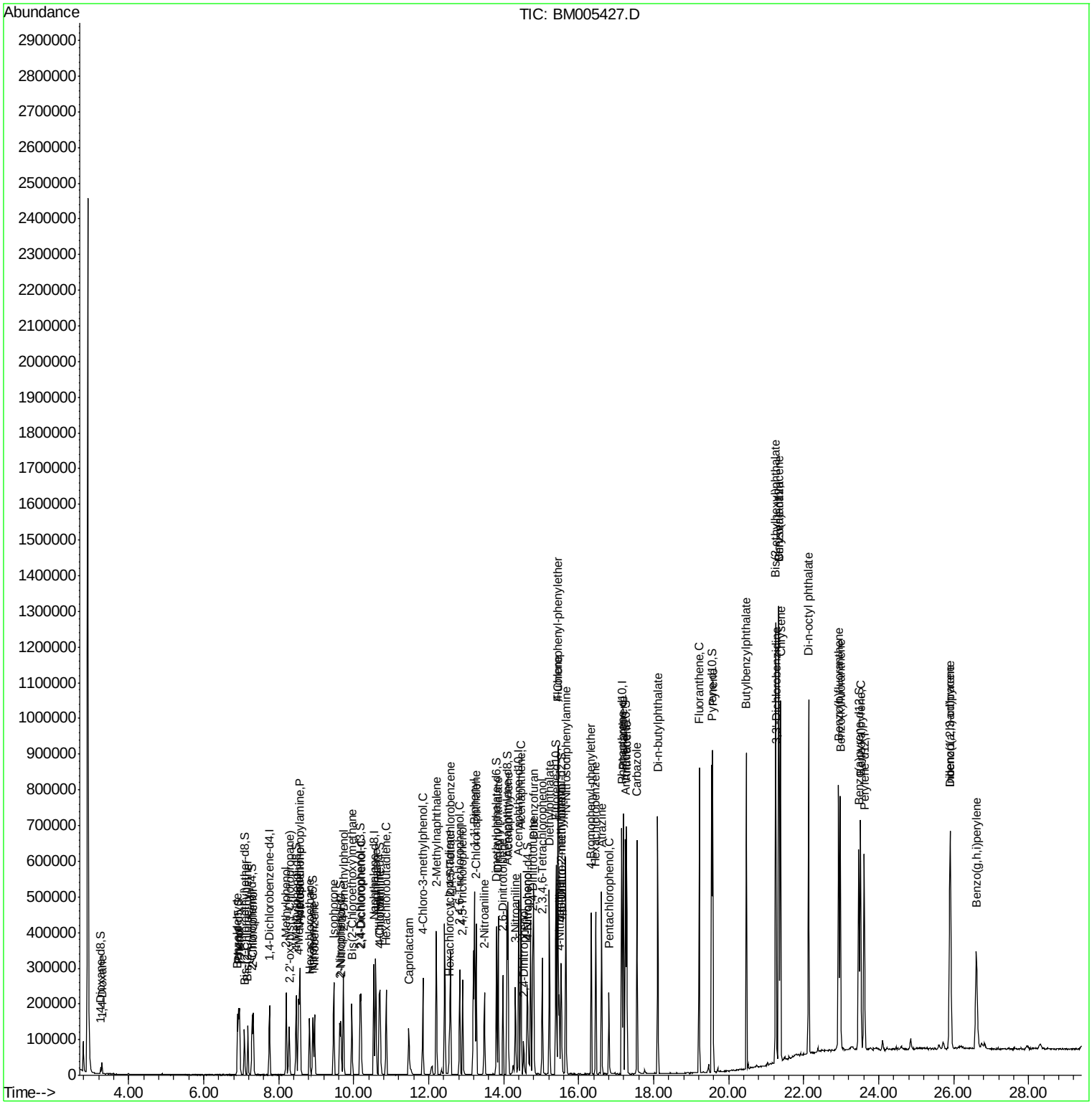
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:02:31 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02066

Manual Integrations APPROVED
sohil
5/14/2016 9:58:31 AM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:02:31 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02066

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	53315	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	252436	20.00	ng/ul	-0.01
35) Acenaphthene-d10	14.39	164	164238	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	396308	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	463039	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	411120	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	8859	7.81	ng/uL	0.00
5) Phenol-d5	6.93	99	96416	19.94	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	56125	20.35	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	76028	20.82	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	80945	20.25	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	38325	21.26	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	44679	21.89	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.16	165	80502	21.23	ng/ul	-0.01
29) 4-Chloroaniline-d4	10.68	131	104530	22.90	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	275564	20.93	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	322080	20.86	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	45699	19.02	ng/ul	0.00
57) Fluorene-d10	15.39	176	235590	20.72	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	46090	20.67	ng/ul	0.00
70) Anthracene-d10	17.24	188	376801	21.51	ng/ul	0.00
76) Pyrene-d10	19.54	212	439732	20.57	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	386140	21.22	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	16393	7.93	ng/uL	96
4) Benzaldehyde	6.90	77	60593	25.86	ng/ul	95
6) Phenol	6.96	94	100902	20.19	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.17	93	76091	20.22	ng/ul	99
10) 2-Chlorophenol	7.32	128	76161	20.39	ng/ul	97
11) 2-Methylphenol	8.20	108	78560	20.34	ng/ul	96
12) 2,2'-oxybis(1-Chloropropan	8.28	45	106184	20.81	ng/ul	98
14) Acetophenone	8.57	105	129101	21.80	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.55	70	66378	21.45	ng/ul	98
16) 4-Methylphenol	8.53	108	86735	20.23	ng/ul	96
17) Hexachloroethane	8.82	117	30204	21.49	ng/ul	93
20) Nitrobenzene	8.95	77	94401	20.92	ng/ul	97
21) Isophorone	9.47	82	187130	21.36	ng/ul#	97
23) 2-Nitrophenol	9.66	139	47326	21.52	ng/ul	95
24) 2,4-Dimethylphenol	9.72	107	97856	20.98	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.95	93	110363	20.23	ng/ul	98
27) 2,4-Dichlorophenol	10.19	162	82338	21.20	ng/ul	99
28) Naphthalene	10.59	128	261410	20.58	ng/ul	99
30) 4-Chloroaniline	10.70	127	105636	22.69	ng/ul	100
31) Hexachlorobutadiene	10.86	225	51505	22.31	ng/ul	99
32) Caprolactam	11.47	113	30960m	21.39	ng/ul	
33) 4-Chloro-3-methylphenol	11.84	107	101149	21.72	ng/ul	100
34) 2-Methylnaphthalene	12.20	142	197741	20.82	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:02:31 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02066

Manual Integrations APPROVED
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5/14/2016 9:58:31 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.57	216	104290	20.87	ng/ul	98
37) Hexachlorocyclopentadiene	12.55	237	31825	12.47	ng/ul	92
38) 2,4,6-Trichlorophenol	12.82	196	70456	21.17	ng/ul	97
39) 2,4,5-Trichlorophenol	12.90	196	73505	19.91	ng/ul	99
40) 1,1'-Biphenyl	13.22	154	265690	20.42	ng/ul	99
41) 2-Chloronaphthalene	13.26	162	201899	20.52	ng/ul	98
42) 2-Nitroaniline	13.48	65	67716	22.36	ng/ul	95
44) Dimethylphthalate	13.85	163	274000	20.83	ng/ul	100
45) 2,6-Dinitrotoluene	13.98	165	56243	21.68	ng/ul	93
47) Acenaphthylene	14.12	152	340260	20.83	ng/ul	100
48) 3-Nitroaniline	14.31	138	60765	21.97	ng/ul	98
49) Acenaphthene	14.46	153	222463	20.66	ng/ul	98
50) 2,4-Dinitrophenol	14.53	184	23173	15.53	ng/ul	96
52) 4-Nitrophenol	14.63	109	39155	19.60	ng/ul	94
53) Dibenzofuran	14.79	168	321854	20.61	ng/ul	98
54) 2,4-Dinitrotoluene	14.77	165	83698	21.64	ng/ul	98
55) 2,3,4,6-Tetrachlorophenol	15.03	232	64451	20.53	ng/ul#	97
56) Diethylphthalate	15.22	149	282821	21.28	ng/ul	100
58) Fluorene	15.44	166	260580	21.34	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.44	204	130170	21.51	ng/ul	98
60) 4-Nitroaniline	15.48	138	61854m	21.10	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	47551	20.30	ng/ul#	91
64) N-Nitrosodiphenylamine	15.66	169	232091	21.39	ng/ul	100
65) 4-Bromophenyl-phenylether	16.33	248	84237	22.17	ng/ul	97
66) Hexachlorobenzene	16.45	284	92988	21.82	ng/ul	98
67) Atrazine	16.61	200	92726	23.41	ng/ul	99
68) Pentachlorophenol	16.80	266	43748	18.47	ng/ul	95
69) Phenanthrene	17.19	178	439349	21.08	ng/ul	100
71) Anthracene	17.28	178	448327	21.58	ng/ul	100
72) Carbazole	17.55	167	416601	22.79	ng/ul	99
73) Di-n-butylphthalate	18.10	149	523702	23.49	ng/ul	100
74) Fluoranthene	19.21	202	541768	23.47	ng/ul	98
77) Pyrene	19.57	202	555431	20.68	ng/ul	98
78) Butylbenzylphthalate	20.47	149	251558	22.56	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	180426	21.68	ng/ul	98
80) Benzo(a)anthracene	21.33	228	555983	20.87	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.24	149	361347	23.33	ng/ul#	98
82) Chrysene	21.38	228	530087	20.98	ng/ul	100
84) Di-n-octyl phthalate	22.13	149	623019	25.95	ng/ul	100
85) Benzo(b)fluoranthene	22.93	252	533455	22.20	ng/ul	99
86) Benzo(k)fluoranthene	22.97	252	495326	21.89	ng/ul	99
88) Benzo(a)pyrene	23.51	252	482051	21.21	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.90	276	441555	17.81	ng/ul	97
90) Dibenzo(a,h)anthracene	25.90	278	370123	17.83	ng/ul	98
91) Benzo(g,h,i)perylene	26.60	276	356314	16.96	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

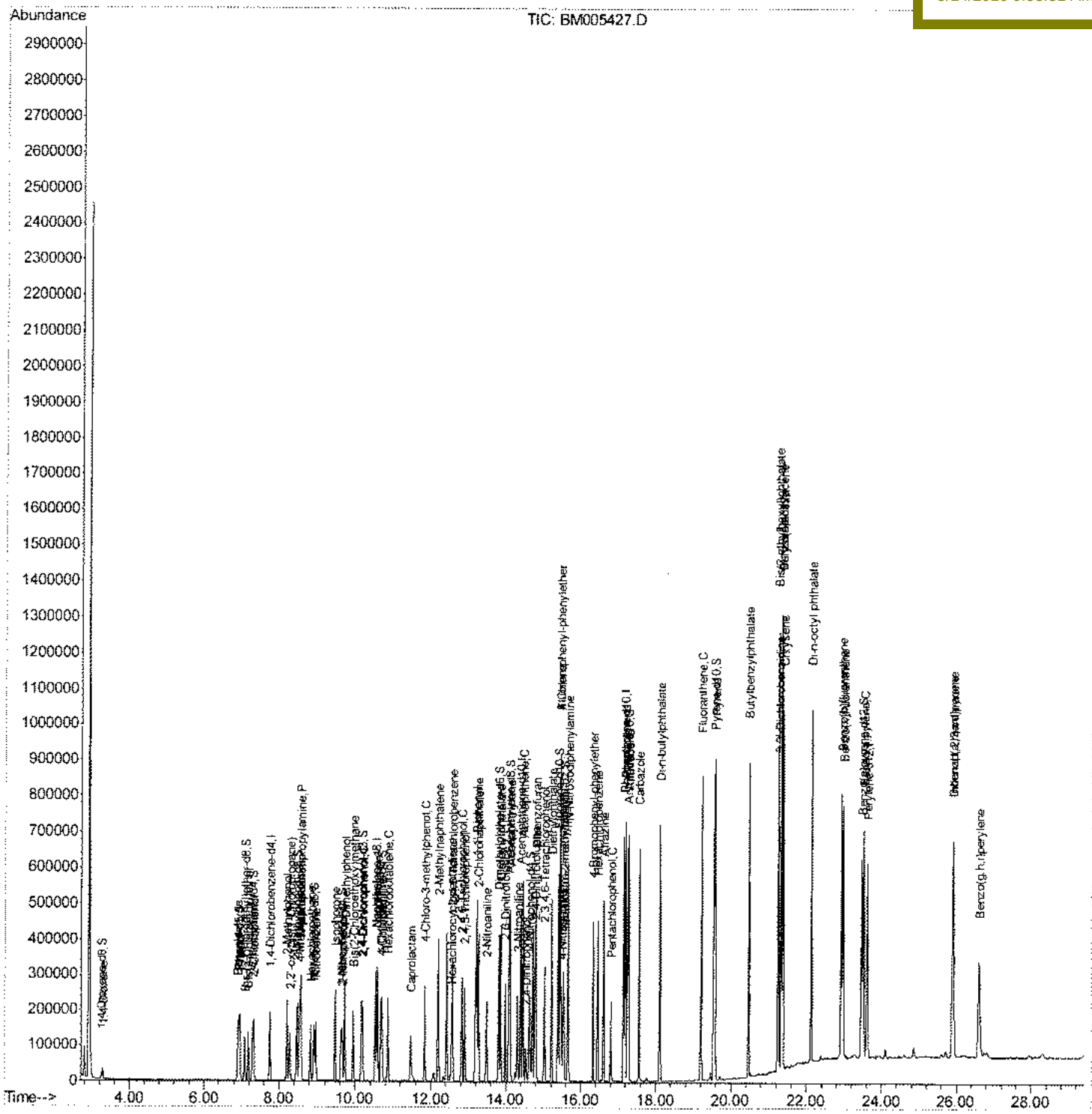
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:02:31 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02066

Manual Integrations APPROVED
sohil
5/14/2016 9:58:31 AM



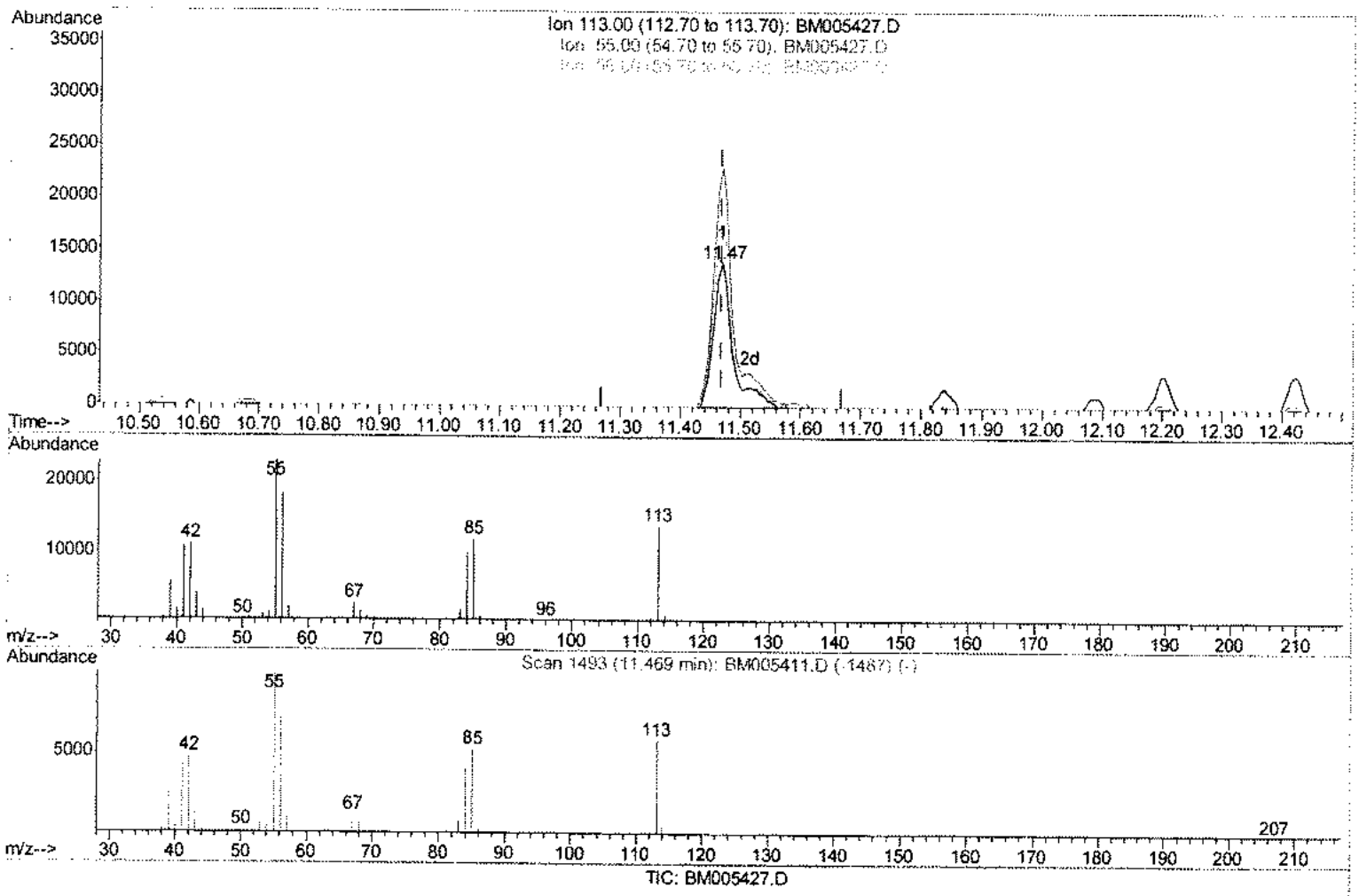
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 23:57:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02066

Manual Integrations APPROVED
sohil
5/14/2016 9:58:31 AM



TIC: BM005427.D

(32) Caprolactam

11.469min (-0.000) 21.39ng/ul m U.M 05/17/16

response 30960

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	165.88
56.00	120.80	131.29
0.00	0.00	0.00

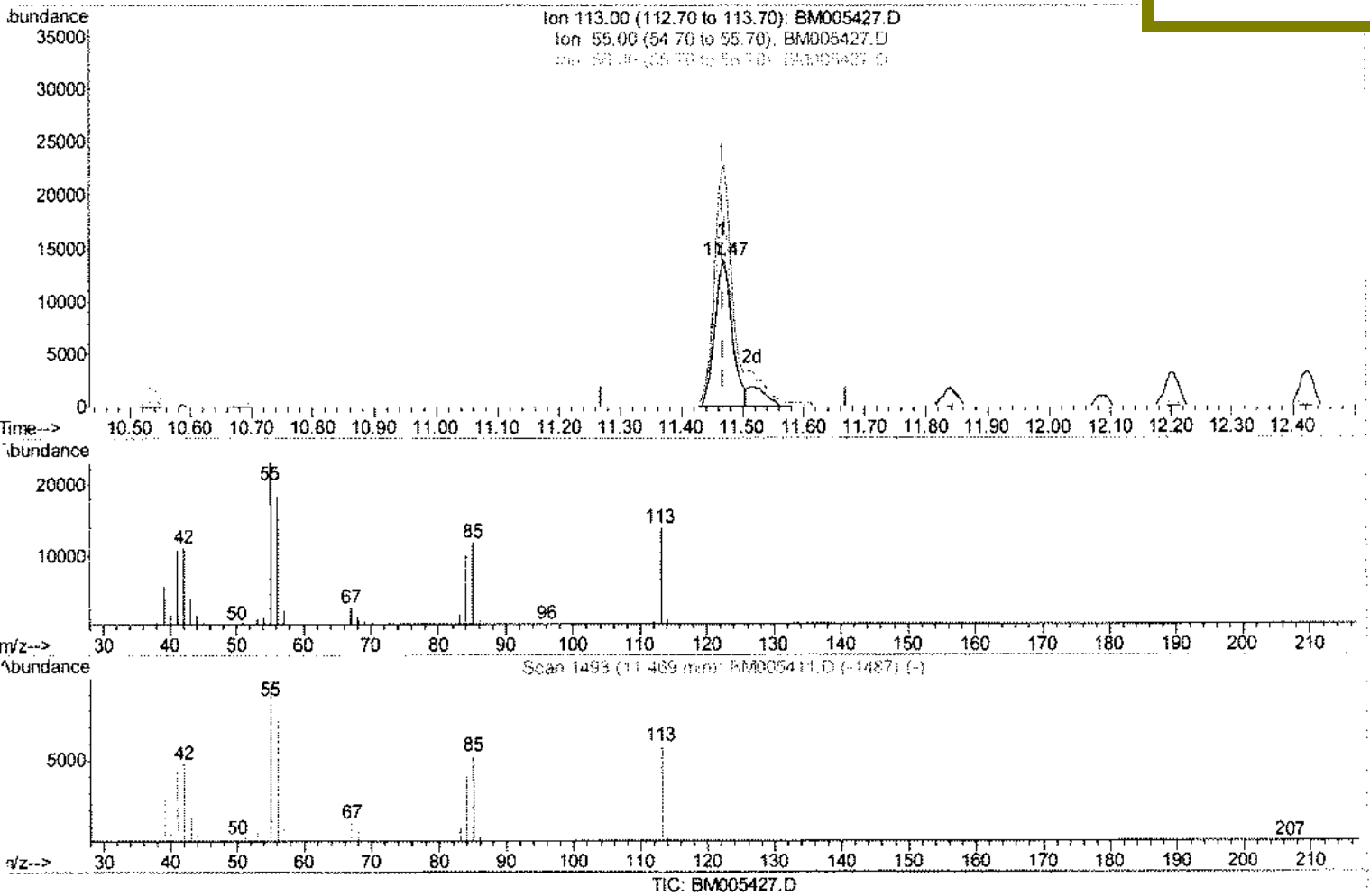
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 23:57:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02066

Manual Integrations APPROVED
sohil
5/14/2016 9:58:31 AM



TIC: BM005427.D

(32) Caprolactam

11.469min (-0.000) 18.77ng/ul

response 27162

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	165.88
56.00	120.80	131.29
0.00	0.00	0.00

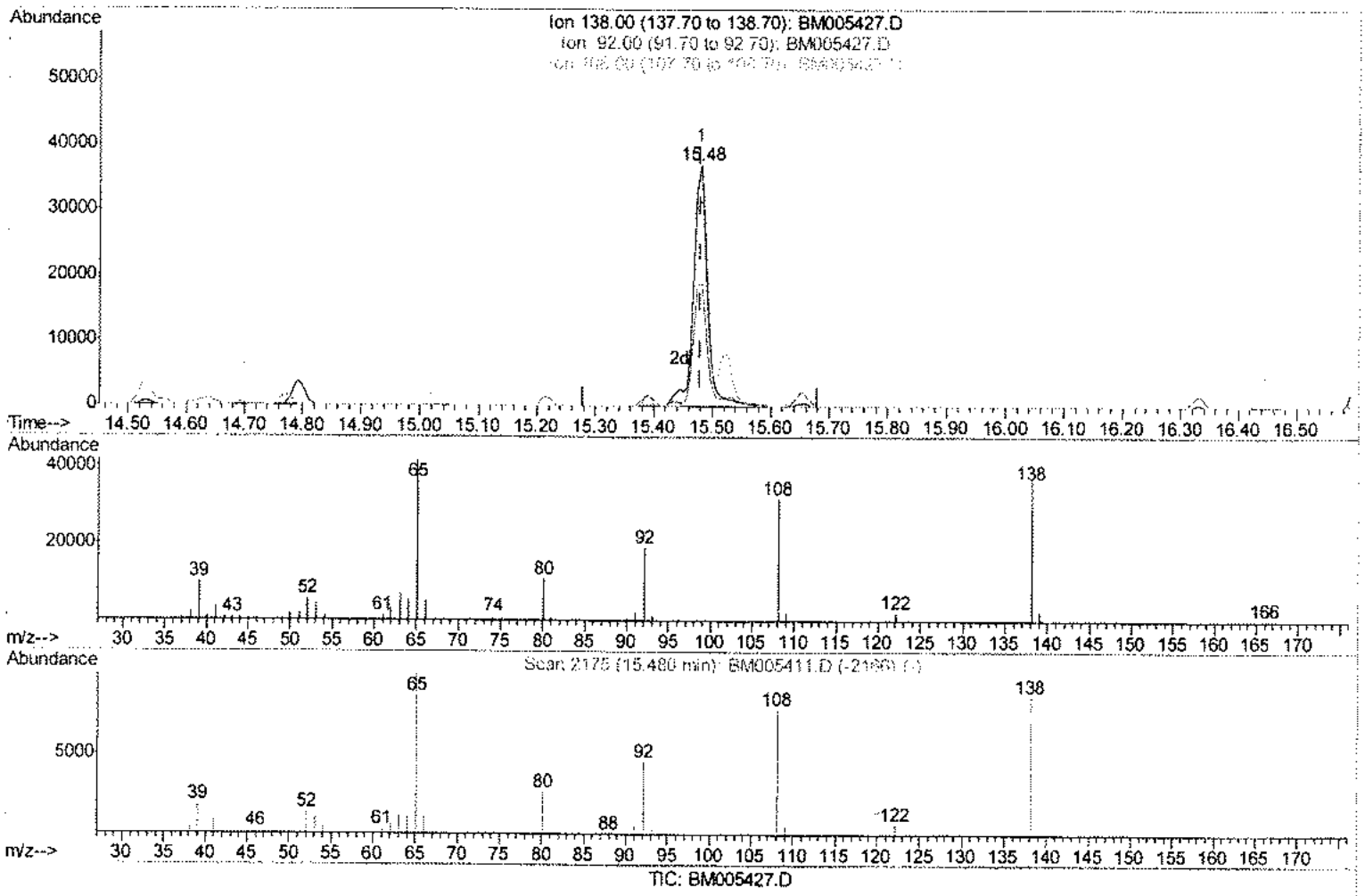
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 23:57:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02066

Manual Integrations APPROVED
sohil
5/14/2016 9:58:31 AM



TIC: BM005427.D

(60) 4-Nitroaniline

15.480min (-0.000) 21.10ng/ul m U.M 05/17/16

response 61854

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	51.94
108.00	82.90	86.01
0.00	0.00	0.00

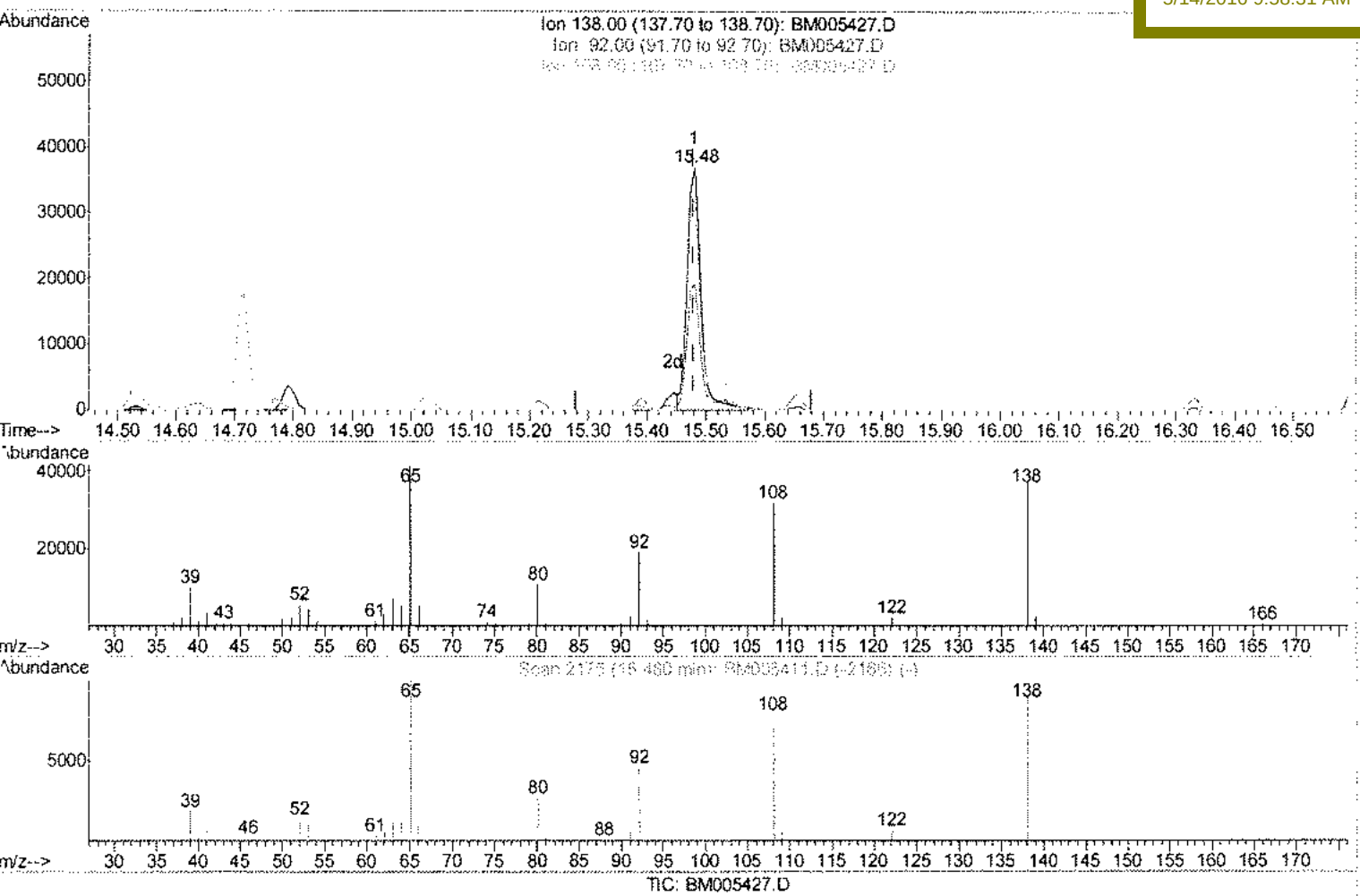
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 23:57:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02066

Manual Integrations APPROVED
sohil
5/14/2016 9:58:31 AM



(60) 4-Nitroaniline

15.480min (-0.000) 20.07ng/ul

response 58821

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	51.94
108.00	82.90	86.01
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:02:31 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02066

Manual Integrations APPROVED
sohil
5/14/2016 9:58:31 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.57	216	104290	20.87	ng/ul	98
37) Hexachlorocyclopentadiene	12.55	237	31825	12.47	ng/ul	92
38) 2,4,6-Trichlorophenol	12.82	196	70456	21.17	ng/ul	97
39) 2,4,5-Trichlorophenol	12.90	196	73505	19.91	ng/ul	99
40) 1,1'-Biphenyl	13.22	154	265690	20.42	ng/ul	99
41) 2-Chloronaphthalene	13.26	162	201899	20.52	ng/ul	98
42) 2-Nitroaniline	13.48	65	67716	22.36	ng/ul	95
44) Dimethylphthalate	13.85	163	274000	20.83	ng/ul	100
45) 2,6-Dinitrotoluene	13.98	165	56243	21.68	ng/ul	93
47) Acenaphthylene	14.12	152	340260	20.83	ng/ul	100
48) 3-Nitroaniline	14.31	138	60765	21.97	ng/ul	98
49) Acenaphthene	14.46	153	222463	20.66	ng/ul	98
50) 2,4-Dinitrophenol	14.53	184	23173	15.53	ng/ul	96
52) 4-Nitrophenol	14.63	109	39155	19.60	ng/ul	94
53) Dibenzofuran	14.79	168	321854	20.61	ng/ul	98
54) 2,4-Dinitrotoluene	14.77	165	83698	21.64	ng/ul	98
55) 2,3,4,6-Tetrachlorophenol	15.03	232	64451	20.53	ng/ul#	97
56) Diethylphthalate	15.22	149	282821	21.28	ng/ul	100
58) Fluorene	15.44	166	260580	21.34	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.44	204	130170	21.51	ng/ul	98
60) 4-Nitroaniline	15.48	138	61854m	21.10	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	47551	20.30	ng/ul#	91
64) N-Nitrosodiphenylamine	15.66	169	232091	21.39	ng/ul	100
65) 4-Bromophenyl-phenylether	16.33	248	84237	22.17	ng/ul	97
66) Hexachlorobenzene	16.45	284	92988	21.82	ng/ul	98
67) Atrazine	16.61	200	92726	23.41	ng/ul	99
68) Pentachlorophenol	16.80	266	43748	18.47	ng/ul	95
69) Phenanthrene	17.19	178	439349	21.08	ng/ul	100
71) Anthracene	17.28	178	448327	21.58	ng/ul	100
72) Carbazole	17.55	167	416601	22.79	ng/ul	99
73) Di-n-butylphthalate	18.10	149	523702	23.49	ng/ul	100
74) Fluoranthene	19.21	202	541768	23.47	ng/ul	98
77) Pyrene	19.57	202	555431	20.68	ng/ul	98
78) Butylbenzylphthalate	20.47	149	251558	22.56	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	180426	21.68	ng/ul	98
80) Benzo(a)anthracene	21.33	228	555983	20.87	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.24	149	361347	23.33	ng/ul#	98
82) Chrysene	21.38	228	530087	20.98	ng/ul	100
84) Di-n-octyl phthalate	22.13	149	623019	25.95	ng/ul	100
85) Benzo(b)fluoranthene	22.93	252	533455	22.20	ng/ul	99
86) Benzo(k)fluoranthene	22.97	252	495326	21.89	ng/ul	99
88) Benzo(a)pyrene	23.51	252	482051	21.21	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.90	276	441555	17.81	ng/ul	97
90) Dibenzo(a,h)anthracene	25.90	278	370123	17.83	ng/ul	98
91) Benzo(g,h,i)perylene	26.60	276	356314	16.96	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

U.M 05/17/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:02:31 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02066

Manual Integrations APPROVED
sohil
5/14/2016 9:58:31 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	53315	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	252436	20.00	ng/ul	-0.01
35) Acenaphthene-d10	14.39	164	164238	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	396308	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	463039	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	411120	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	8859	7.81	ng/uL	0.00
5) Phenol-d5	6.93	99	96416	19.94	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	56125	20.35	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	76028	20.82	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	80945	20.25	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	38325	21.26	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	44679	21.89	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.16	165	80502	21.23	ng/ul	-0.01
29) 4-Chloroaniline-d4	10.68	131	104530	22.90	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	275564	20.93	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	322080	20.86	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	45699	19.02	ng/ul	0.00
57) Fluorene-d10	15.39	176	235590	20.72	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	46090	20.67	ng/ul	0.00
70) Anthracene-d10	17.24	188	376801	21.51	ng/ul	0.00
76) Pyrene-d10	19.54	212	439732	20.57	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	386140	21.22	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	16393	7.93	ng/uL	96
4) Benzaldehyde	6.90	77	60593	25.86	ng/ul	95
6) Phenol	6.96	94	100902	20.19	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.17	93	76091	20.22	ng/ul	99
10) 2-Chlorophenol	7.32	128	76161	20.39	ng/ul	97
11) 2-Methylphenol	8.20	108	78560	20.34	ng/ul	96
12) 2,2'-oxybis(1-Chloropropan	8.28	45	106184	20.81	ng/ul	98
14) Acetophenone	8.57	105	129101	21.80	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.55	70	66378	21.45	ng/ul	98
16) 4-Methylphenol	8.53	108	86735	20.23	ng/ul	96
17) Hexachloroethane	8.82	117	30204	21.49	ng/ul	93
20) Nitrobenzene	8.95	77	94401	20.92	ng/ul	97
21) Isophorone	9.47	82	187130	21.36	ng/ul#	97
23) 2-Nitrophenol	9.66	139	47326	21.52	ng/ul	95
24) 2,4-Dimethylphenol	9.72	107	97856	20.98	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.95	93	110363	20.23	ng/ul	98
27) 2,4-Dichlorophenol	10.19	162	82338	21.20	ng/ul	99
28) Naphthalene	10.59	128	261410	20.58	ng/ul	99
30) 4-Chloroaniline	10.70	127	105636	22.69	ng/ul	100
31) Hexachlorobutadiene	10.86	225	51505	22.31	ng/ul	99
32) Caprolactam	11.47	113	30960m	21.39	ng/ul	
33) 4-Chloro-3-methylphenol	11.84	107	101149	21.72	ng/ul	100
34) 2-Methylnaphthalene	12.20	142	197741	20.82	ng/ul	99

U.M 05/17/16

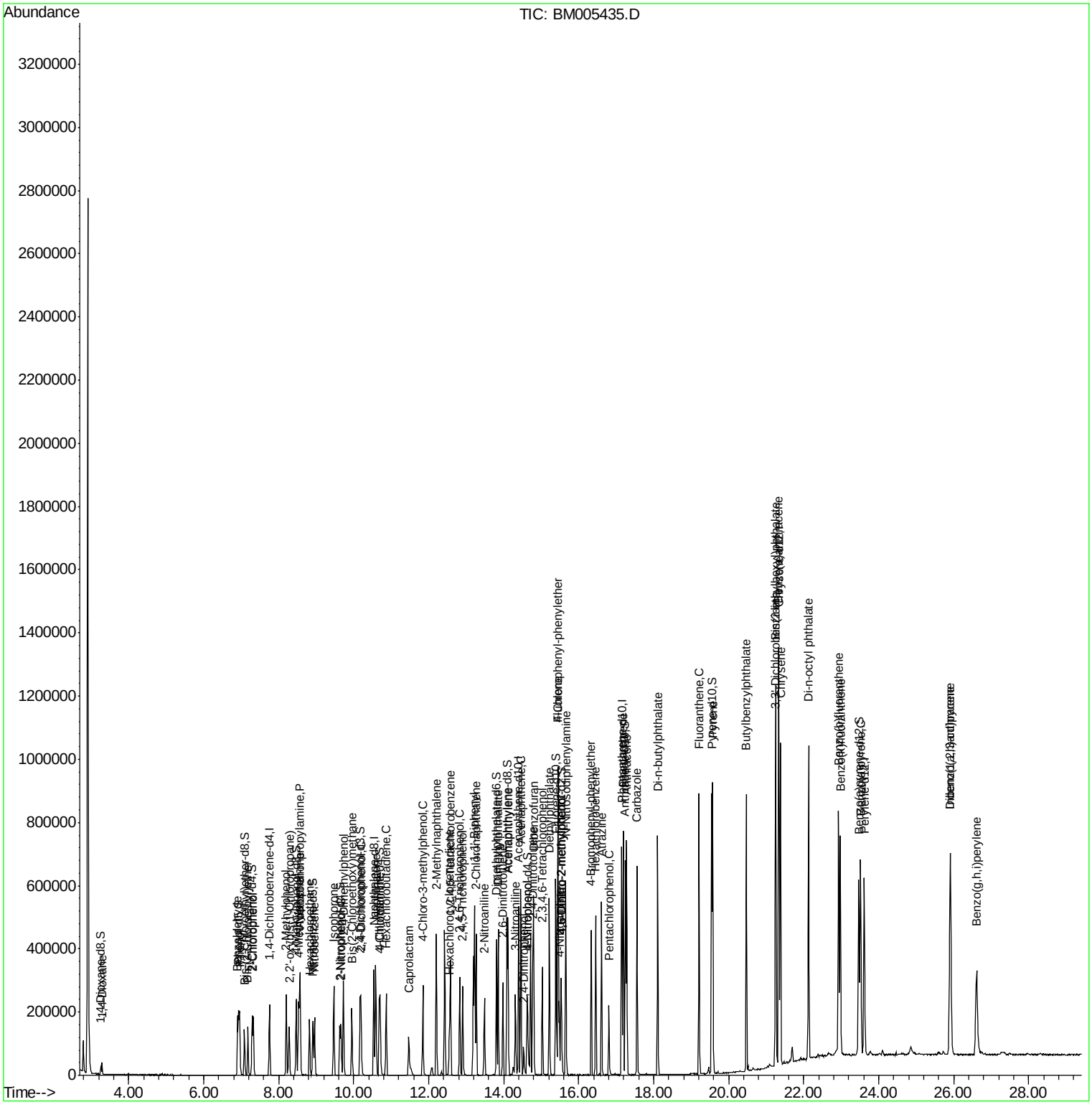
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:47:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:47:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02034

Manual Integrations APPROVED
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5/14/2016 9:58:48 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	59500	20.00	ng/ul	0.00
18) Naphthalene-d8	10.54	136	277888	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	174095	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	417314	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	470014	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	415334	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	10424	8.24	ng/uL	0.00
5) Phenol-d5	6.93	99	108211	20.05	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	63812	20.73	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	83431	20.47	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	87757	19.67	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	41680	21.01	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	48702	21.68	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	88800	21.27	ng/ul	0.00
29) 4-Chloroaniline-d4	10.68	131	113736	22.63	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	291682	20.90	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	342929	20.95	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	45520	17.87	ng/ul	0.00
57) Fluorene-d10	15.39	176	247746	20.56	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	46141	19.66	ng/ul	0.00
70) Anthracene-d10	17.24	188	392585	21.28	ng/ul	0.00
76) Pyrene-d10	19.54	212	457296	21.08	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	390208	21.22	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	18702	8.11	ng/uL#	93
4) Benzaldehyde	6.90	77	68199	26.08	ng/ul	97
6) Phenol	6.96	94	113435	20.34	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.17	93	85379	20.33	ng/ul	97
10) 2-Chlorophenol	7.32	128	85207	20.44	ng/ul	98
11) 2-Methylphenol	8.20	108	85497	19.83	ng/ul	100
12) 2,2'-oxybis(1-Chloropropan	8.28	45	120976	21.24	ng/ul	98
14) Acetophenone	8.57	105	139141	21.06	ng/ul	96
15) N-Nitroso-di-n-propylamine	8.55	70	71706	20.77	ng/ul	100
16) 4-Methylphenol	8.53	108	93794	19.61	ng/ul	100
17) Hexachloroethane	8.82	117	32996	21.03	ng/ul	94
20) Nitrobenzene	8.95	77	104295	21.00	ng/ul	96
21) Isophorone	9.47	82	201145	20.86	ng/ul	99
23) 2-Nitrophenol	9.66	139	51674	21.35	ng/ul	96
24) 2,4-Dimethylphenol	9.72	107	106957	20.83	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.95	93	120688	20.09	ng/ul	98
27) 2,4-Dichlorophenol	10.19	162	88930	20.80	ng/ul	100
28) Naphthalene	10.59	128	287252	20.54	ng/ul	99
30) 4-Chloroaniline	10.70	127	113782	22.20	ng/ul	99
31) Hexachlorobutadiene	10.86	225	56755	22.33	ng/ul	98
32) Caprolactam	11.47	113	31987m	20.08	ng/ul	
33) 4-Chloro-3-methylphenol	11.84	107	107902	21.05	ng/ul	98
34) 2-Methylnaphthalene	12.20	142	215843	20.64	ng/ul	98

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD02034

Manual Integrations APPROVED
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5/14/2016 9:58:48 AM

Quant Time: May 14 00:47:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.57	216	112506	21.24	ng/ul	98
37) Hexachlorocyclopentadiene	12.55	237	42927	15.87	ng/ul	98
38) 2,4,6-Trichlorophenol	12.82	196	74688	21.17	ng/ul	95
39) 2,4,5-Trichlorophenol	12.90	196	82983	21.20	ng/ul	97
40) 1,1'-Biphenyl	13.22	154	285955	20.73	ng/ul	99
41) 2-Chloronaphthalene	13.26	162	216607	20.77	ng/ul	99
42) 2-Nitroaniline	13.48	65	70564	21.98	ng/ul	95
44) Dimethylphthalate	13.85	163	289065	20.73	ng/ul	100
45) 2,6-Dinitrotoluene	13.98	165	59180	21.52	ng/ul#	88
47) Acenaphthylene	14.12	152	360748	20.83	ng/ul	100
48) 3-Nitroaniline	14.31	138	63989	21.83	ng/ul	93
49) Acenaphthene	14.46	153	236335	20.71	ng/ul	99
50) 2,4-Dinitrophenol	14.53	184	23933	15.13	ng/ul	99
52) 4-Nitrophenol	14.63	109	39795	18.79	ng/ul	97
53) Dibenzofuran	14.79	168	342310	20.67	ng/ul	100
54) 2,4-Dinitrotoluene	14.77	165	88569	21.60	ng/ul	99
55) 2,3,4,6-Tetrachlorophenol	15.03	232	67080	20.16	ng/ul#	96
56) Diethylphthalate	15.22	149	296405	21.04	ng/ul	99
58) Fluorene	15.44	166	274397	21.20	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.44	204	138348	21.57	ng/ul	98
60) 4-Nitroaniline	15.48	138	65233m	21.00	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	48563	19.69	ng/ul#	93
64) N-Nitrosodiphenylamine	15.66	169	242600	21.23	ng/ul	99
65) 4-Bromophenyl-phenylether	16.33	248	88368	22.09	ng/ul	96
66) Hexachlorobenzene	16.45	284	98745	22.00	ng/ul	96
67) Atrazine	16.60	200	96006	23.02	ng/ul	100
68) Pentachlorophenol	16.80	266	43436	17.42	ng/ul	99
69) Phenanthrene	17.19	178	461069	21.01	ng/ul	99
71) Anthracene	17.27	178	464292	21.22	ng/ul	99
72) Carbazole	17.55	167	433371	22.52	ng/ul	99
73) Di-n-butylphthalate	18.10	149	520162	22.16	ng/ul	100
74) Fluoranthene	19.21	202	566127	23.29	ng/ul	96
77) Pyrene	19.57	202	576547	21.15	ng/ul	97
78) Butylbenzylphthalate	20.47	149	253618	22.41	ng/ul	97
79) 3,3'-Dichlorobenzidine	21.26	252	187330	22.17	ng/ul	98
80) Benzo(a)anthracene	21.33	228	565341	20.91	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.24	149	359721	22.88	ng/ul#	97
82) Chrysene	21.38	228	537694	20.96	ng/ul	100
84) Di-n-octyl phthalate	22.13	149	619924	25.55	ng/ul	99
85) Benzo(b)fluoranthene	22.93	252	533943	21.99	ng/ul	98
86) Benzo(k)fluoranthene	22.97	252	498813	21.82	ng/ul	99
88) Benzo(a)pyrene	23.51	252	487738	21.24	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.90	276	447971	17.88	ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	376136	17.94	ng/ul	98
91) Benzo(g,h,i)perylene	26.61	276	363228	17.12	ng/ul	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

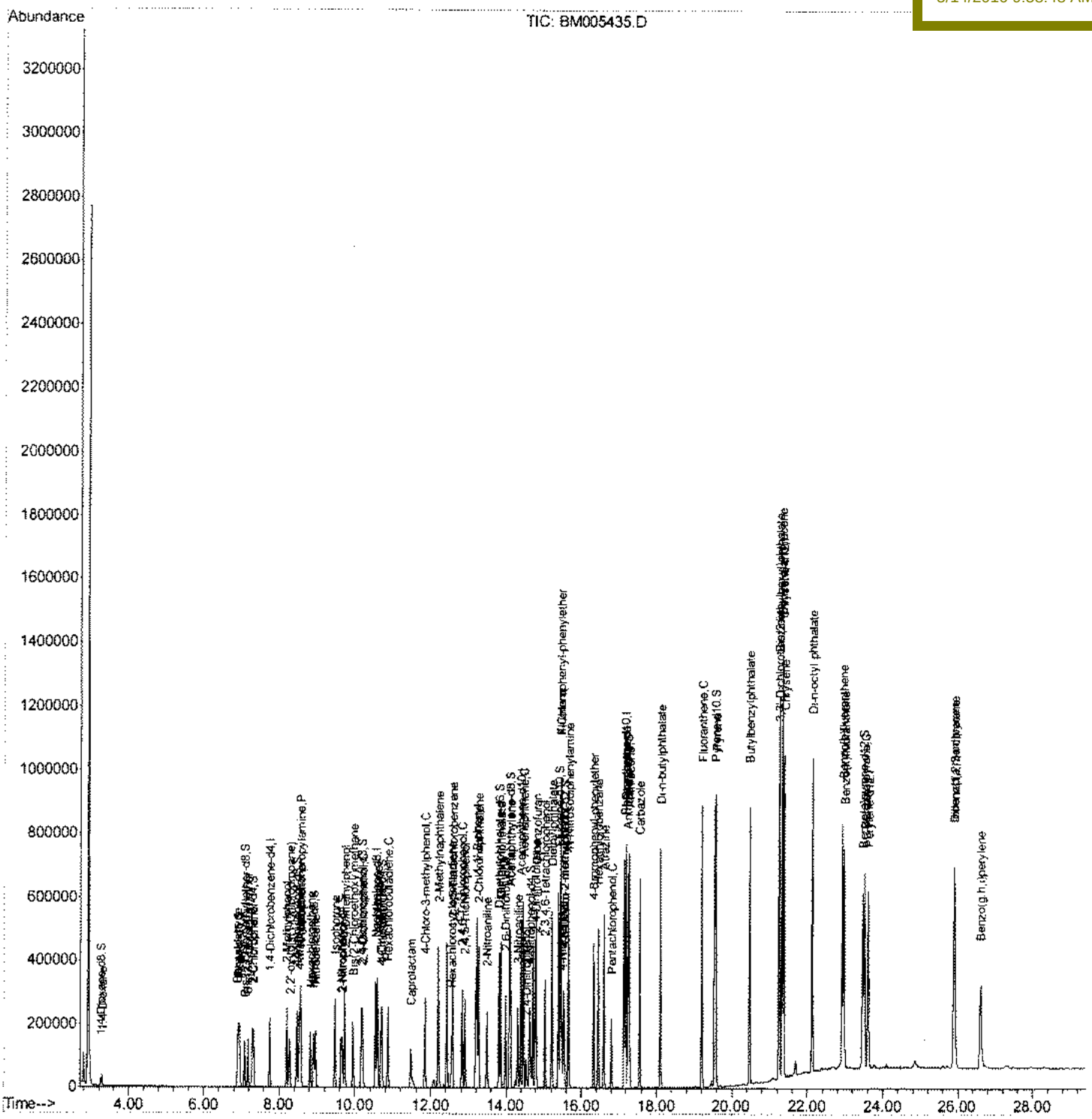
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:47:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM



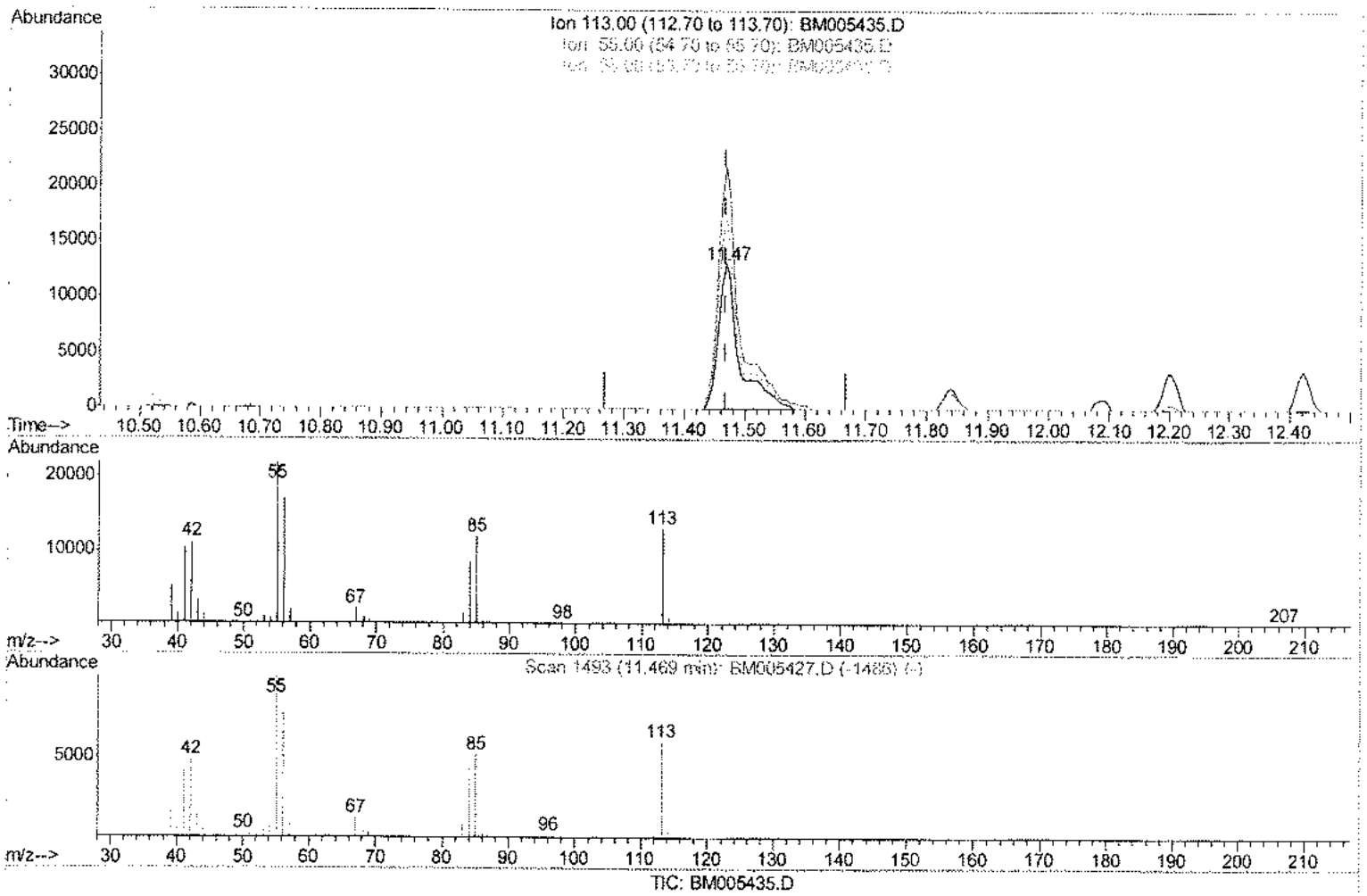
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:21:13 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM



TIC: BM005435.D

(32) Caprolactam

11.469min (+0.000) 20.08ng/ul m U.M 05/17/16

response 31987

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	167.14
56.00	120.80	130.40
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:21:13 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02034

Manual Integrations APPROVED
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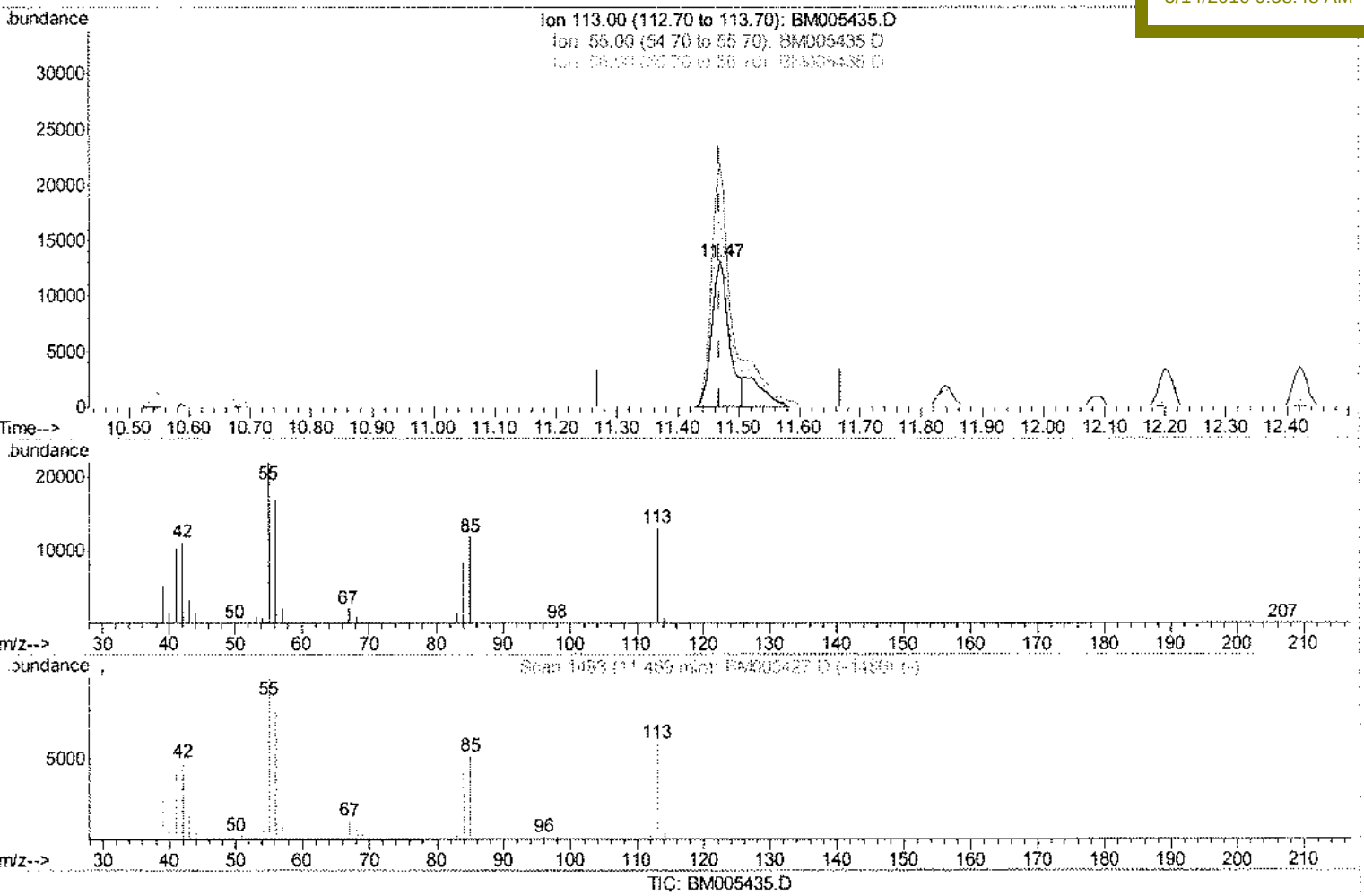
5/14/2016 9:58:48 AM



(32) Caprolactam

11.469min (+0.000) 16.17ng/ul

response 25766

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	167.14
56.00	120.80	130.40
0.00	0.00	0.00

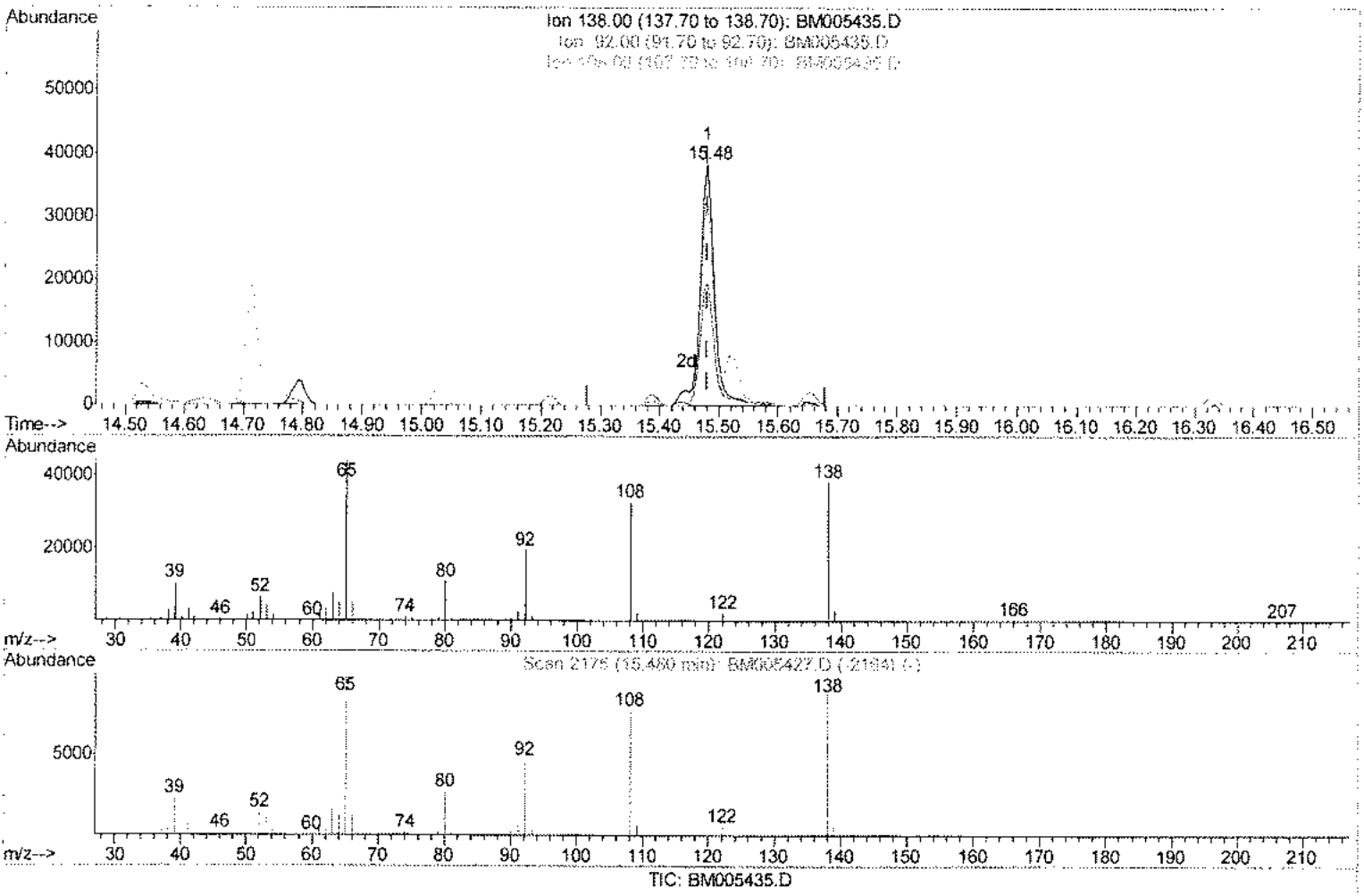
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:21:13 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM



(60) 4-Nitroaniline

15.480min (+0.000) 21.00ng/ul m U.M 05/17/16

response 65233

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	51.50
108.00	82.90	85.22
0.00	0.00	0.00

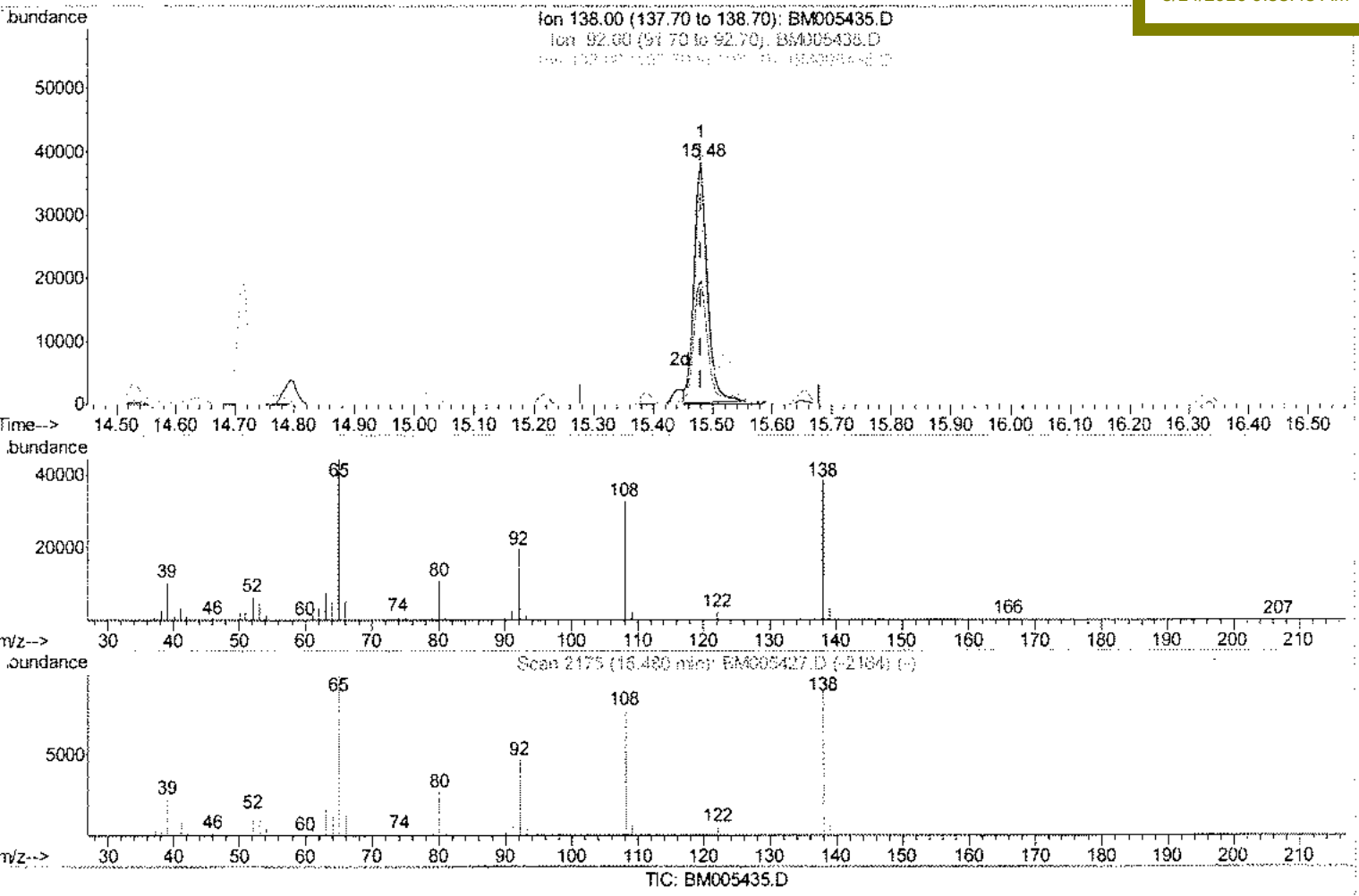
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:21:13 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM



TIC: BM005435.D

(60) 4-Nitroaniline

15.480min (+0.000) 19.11ng/ul

response 59387

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	51.50
108.00	82.90	85.22
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:47:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.57	216	112506	21.24	ng/ul	98
37) Hexachlorocyclopentadiene	12.55	237	42927	15.87	ng/ul	98
38) 2,4,6-Trichlorophenol	12.82	196	74688	21.17	ng/ul	95
39) 2,4,5-Trichlorophenol	12.90	196	82983	21.20	ng/ul	97
40) 1,1'-Biphenyl	13.22	154	285955	20.73	ng/ul	99
41) 2-Chloronaphthalene	13.26	162	216607	20.77	ng/ul	99
42) 2-Nitroaniline	13.48	65	70564	21.98	ng/ul	95
44) Dimethylphthalate	13.85	163	289065	20.73	ng/ul	100
45) 2,6-Dinitrotoluene	13.98	165	59180	21.52	ng/ul#	88
47) Acenaphthylene	14.12	152	360748	20.83	ng/ul	100
48) 3-Nitroaniline	14.31	138	63989	21.83	ng/ul	93
49) Acenaphthene	14.46	153	236335	20.71	ng/ul	99
50) 2,4-Dinitrophenol	14.53	184	23933	15.13	ng/ul	99
52) 4-Nitrophenol	14.63	109	39795	18.79	ng/ul	97
53) Dibenzofuran	14.79	168	342310	20.67	ng/ul	100
54) 2,4-Dinitrotoluene	14.77	165	88569	21.60	ng/ul	99
55) 2,3,4,6-Tetrachlorophenol	15.03	232	67080	20.16	ng/ul#	96
56) Diethylphthalate	15.22	149	296405	21.04	ng/ul	99
58) Fluorene	15.44	166	274397	21.20	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.44	204	138348	21.57	ng/ul	98
60) 4-Nitroaniline	15.48	138	65233m	21.00	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	48563	19.69	ng/ul#	93
64) N-Nitrosodiphenylamine	15.66	169	242600	21.23	ng/ul	99
65) 4-Bromophenyl-phenylether	16.33	248	88368	22.09	ng/ul	96
66) Hexachlorobenzene	16.45	284	98745	22.00	ng/ul	96
67) Atrazine	16.60	200	96006	23.02	ng/ul	100
68) Pentachlorophenol	16.80	266	43436	17.42	ng/ul	99
69) Phenanthrene	17.19	178	461069	21.01	ng/ul	99
71) Anthracene	17.27	178	464292	21.22	ng/ul	99
72) Carbazole	17.55	167	433371	22.52	ng/ul	99
73) Di-n-butylphthalate	18.10	149	520162	22.16	ng/ul	100
74) Fluoranthene	19.21	202	566127	23.29	ng/ul	96
77) Pyrene	19.57	202	576547	21.15	ng/ul	97
78) Butylbenzylphthalate	20.47	149	253618	22.41	ng/ul	97
79) 3,3'-Dichlorobenzidine	21.26	252	187330	22.17	ng/ul	98
80) Benzo(a)anthracene	21.33	228	565341	20.91	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.24	149	359721	22.88	ng/ul#	97
82) Chrysene	21.38	228	537694	20.96	ng/ul	100
84) Di-n-octyl phthalate	22.13	149	619924	25.55	ng/ul	99
85) Benzo(b)fluoranthene	22.93	252	533943	21.99	ng/ul	98
86) Benzo(k)fluoranthene	22.97	252	498813	21.82	ng/ul	99
88) Benzo(a)pyrene	23.51	252	487738	21.24	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.90	276	447971	17.88	ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	376136	17.94	ng/ul	98
91) Benzo(g,h,i)perylene	26.61	276	363228	17.12	ng/ul	98

U.M 05/17/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:47:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	59500	20.00	ng/ul	0.00
18) Naphthalene-d8	10.54	136	277888	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	174095	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	417314	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	470014	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	415334	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	10424	8.24	ng/uL	0.00
5) Phenol-d5	6.93	99	108211	20.05	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	63812	20.73	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	83431	20.47	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	87757	19.67	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	41680	21.01	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	48702	21.68	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	88800	21.27	ng/ul	0.00
29) 4-Chloroaniline-d4	10.68	131	113736	22.63	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	291682	20.90	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	342929	20.95	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	45520	17.87	ng/ul	0.00
57) Fluorene-d10	15.39	176	247746	20.56	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	46141	19.66	ng/ul	0.00
70) Anthracene-d10	17.24	188	392585	21.28	ng/ul	0.00
76) Pyrene-d10	19.54	212	457296	21.08	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	390208	21.22	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	18702	8.11	ng/uL#	93
4) Benzaldehyde	6.90	77	68199	26.08	ng/ul	97
6) Phenol	6.96	94	113435	20.34	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.17	93	85379	20.33	ng/ul	97
10) 2-Chlorophenol	7.32	128	85207	20.44	ng/ul	98
11) 2-Methylphenol	8.20	108	85497	19.83	ng/ul	100
12) 2,2'-oxybis(1-Chloropropan	8.28	45	120976	21.24	ng/ul	98
14) Acetophenone	8.57	105	139141	21.06	ng/ul	96
15) N-Nitroso-di-n-propylamine	8.55	70	71706	20.77	ng/ul	100
16) 4-Methylphenol	8.53	108	93794	19.61	ng/ul	100
17) Hexachloroethane	8.82	117	32996	21.03	ng/ul	94
20) Nitrobenzene	8.95	77	104295	21.00	ng/ul	96
21) Isophorone	9.47	82	201145	20.86	ng/ul	99
23) 2-Nitrophenol	9.66	139	51674	21.35	ng/ul	96
24) 2,4-Dimethylphenol	9.72	107	106957	20.83	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.95	93	120688	20.09	ng/ul	98
27) 2,4-Dichlorophenol	10.19	162	88930	20.80	ng/ul	100
28) Naphthalene	10.59	128	287252	20.54	ng/ul	99
30) 4-Chloroaniline	10.70	127	113782	22.20	ng/ul	99
31) Hexachlorobutadiene	10.86	225	56755	22.33	ng/ul	98
32) Caprolactam	11.47	113	31987m	20.08	ng/ul	
33) 4-Chloro-3-methylphenol	11.84	107	107902	21.05	ng/ul	98
34) 2-Methylnaphthalene	12.20	142	215843	20.64	ng/ul	98

U.M 05/17/16

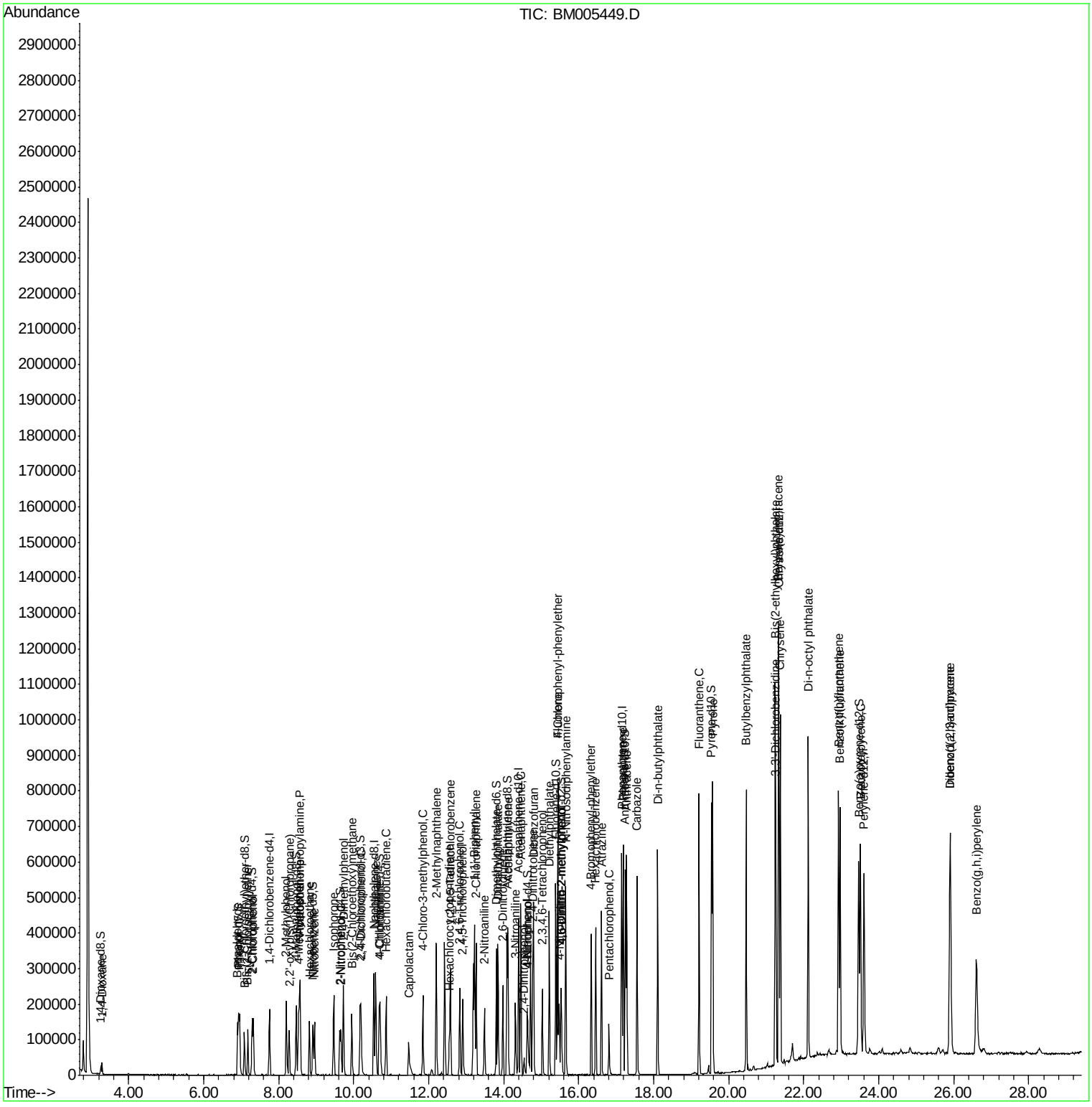
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005449.D
Acq On : 14 May 2016 04:32
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 05:30:42 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02035

Manual Integrations APPROVED
sohil
5/14/2016 9:59:30 AM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005449.D
Acq On : 14 May 2016 04:32
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 05:30:42 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02035

Manual Integrations APPROVED
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5/14/2016 9:59:30 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	51526	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	233474	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	144192	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	357486	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	439148	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	397039	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	9729	8.88	ng/uL	0.00
5) Phenol-d5	6.93	99	91595	19.60	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	54243	20.35	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	71227	20.18	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	72213	18.70	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	34901	20.94	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	40062	21.23	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	73301	20.90	ng/ul	0.00
29) 4-Chloroaniline-d4	10.68	131	93039	22.04	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	239697	20.74	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	281203	20.74	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	32480	15.40	ng/ul	0.00
57) Fluorene-d10	15.39	176	210170	21.06	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	38328	19.06	ng/ul	0.00
70) Anthracene-d10	17.24	188	335191	21.21	ng/ul	0.00
76) Pyrene-d10	19.54	212	404111	19.94	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	373709	21.26	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	17223	8.62	ng/uL#	94
4) Benzaldehyde	6.90	77	57653	25.46	ng/ul	97
6) Phenol	6.96	94	95669	19.81	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.17	93	72332	19.89	ng/ul	97
10) 2-Chlorophenol	7.32	128	73107	20.25	ng/ul	98
11) 2-Methylphenol	8.20	108	71491	19.15	ng/ul	94
12) 2,2'-oxybis(1-Chloropropan	8.28	45	101470	20.57	ng/ul	99
14) Acetophenone	8.57	105	118505	20.71	ng/ul	98
15) N-Nitroso-di-n-propylamine	8.55	70	59470	19.89	ng/ul	98
16) 4-Methylphenol	8.53	108	78761	19.01	ng/ul	100
17) Hexachloroethane	8.82	117	28209	20.76	ng/ul	89
20) Nitrobenzene	8.95	77	86989	20.84	ng/ul	97
21) Isophorone	9.47	82	165741	20.45	ng/ul	98
23) 2-Nitrophenol	9.66	139	43004	21.15	ng/ul	94
24) 2,4-Dimethylphenol	9.72	107	89411	20.73	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.95	93	99988	19.81	ng/ul	99
27) 2,4-Dichlorophenol	10.19	162	74266	20.67	ng/ul	99
28) Naphthalene	10.59	128	240809	20.50	ng/ul	99
30) 4-Chloroaniline	10.70	127	96075	22.31	ng/ul	97
31) Hexachlorobutadiene	10.86	225	47316	22.16	ng/ul	99
32) Caprolactam	11.47	113	25652	19.17	ng/ul	97
33) 4-Chloro-3-methylphenol	11.84	107	88700	20.59	ng/ul	98
34) 2-Methylnaphthalene	12.20	142	179834	20.47	ng/ul	98

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005449.D
Acq On : 14 May 2016 04:32
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 05:30:42 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02035

Manual Integrations APPROVED
sohil
5/14/2016 9:59:30 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.57	216	93522	21.32	ng/ul	98
37) Hexachlorocyclopentadiene	12.55	237	28620	12.77	ng/ul	94
38) 2,4,6-Trichlorophenol	12.82	196	59537	20.38	ng/ul	96
39) 2,4,5-Trichlorophenol	12.90	196	64047	19.76	ng/ul	96
40) 1,1'-Biphenyl	13.22	154	234764	20.55	ng/ul	99
41) 2-Chloronaphthalene	13.26	162	178858	20.71	ng/ul	98
42) 2-Nitroaniline	13.48	65	57295	21.55	ng/ul	97
44) Dimethylphthalate	13.85	163	240553	20.83	ng/ul	100
45) 2,6-Dinitrotoluene	13.97	165	48992	21.51	ng/ul	92
47) Acenaphthylene	14.12	152	294262	20.52	ng/ul	100
48) 3-Nitroaniline	14.31	138	51867	21.36	ng/ul	92
49) Acenaphthene	14.46	153	195609	20.70	ng/ul	99
50) 2,4-Dinitrophenol	14.53	184	16013	12.22	ng/ul	98
52) 4-Nitrophenol	14.64	109	28840	16.44	ng/ul	97
53) Dibenzofuran	14.79	168	284548	20.75	ng/ul	99
54) 2,4-Dinitrotoluene	14.77	165	75120	22.12	ng/ul	99
55) 2,3,4,6-Tetrachlorophenol	15.03	232	51448	18.67	ng/ul#	93
56) Diethylphthalate	15.22	149	245036	21.00	ng/ul	99
58) Fluorene	15.45	166	227902	21.26	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.43	204	113964	21.45	ng/ul	97
60) 4-Nitroaniline	15.48	138	55023m	21.38	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	38851	18.39	ng/ul#	92
64) N-Nitrosodiphenylamine	15.65	169	203081	20.75	ng/ul	99
65) 4-Bromophenyl-phenylether	16.33	248	73526	21.45	ng/ul	96
66) Hexachlorobenzene	16.45	284	82959	21.58	ng/ul	96
67) Atrazine	16.60	200	80488	22.53	ng/ul	99
68) Pentachlorophenol	16.80	266	30436	14.25	ng/ul	95
69) Phenanthrene	17.19	178	390092	20.75	ng/ul	100
71) Anthracene	17.27	178	393919	21.02	ng/ul	99
72) Carbazole	17.55	167	373723	22.67	ng/ul	99
73) Di-n-butylphthalate	18.10	149	442673	22.01	ng/ul	100
74) Fluoranthene	19.20	202	495696	23.80	ng/ul	99
77) Pyrene	19.57	202	509966	20.02	ng/ul	99
78) Butylbenzylphthalate	20.46	149	224692	21.24	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	174929	22.16	ng/ul	99
80) Benzo(a)anthracene	21.32	228	524901	20.78	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.24	149	331837	22.59	ng/ul#	97
82) Chrysene	21.37	228	498017	20.78	ng/ul	100
84) Di-n-octyl phthalate	22.12	149	585763	25.26	ng/ul	99
85) Benzo(b)fluoranthene	22.92	252	510606	22.00	ng/ul	98
86) Benzo(k)fluoranthene	22.97	252	490820	22.46	ng/ul	99
88) Benzo(a)pyrene	23.51	252	468436	21.34	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.90	276	448822	18.74	ng/ul	97
90) Dibenzo(a,h)anthracene	25.90	278	381581	19.04	ng/ul	98
91) Benzo(g,h,i)perylene	26.60	276	363938	17.94	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

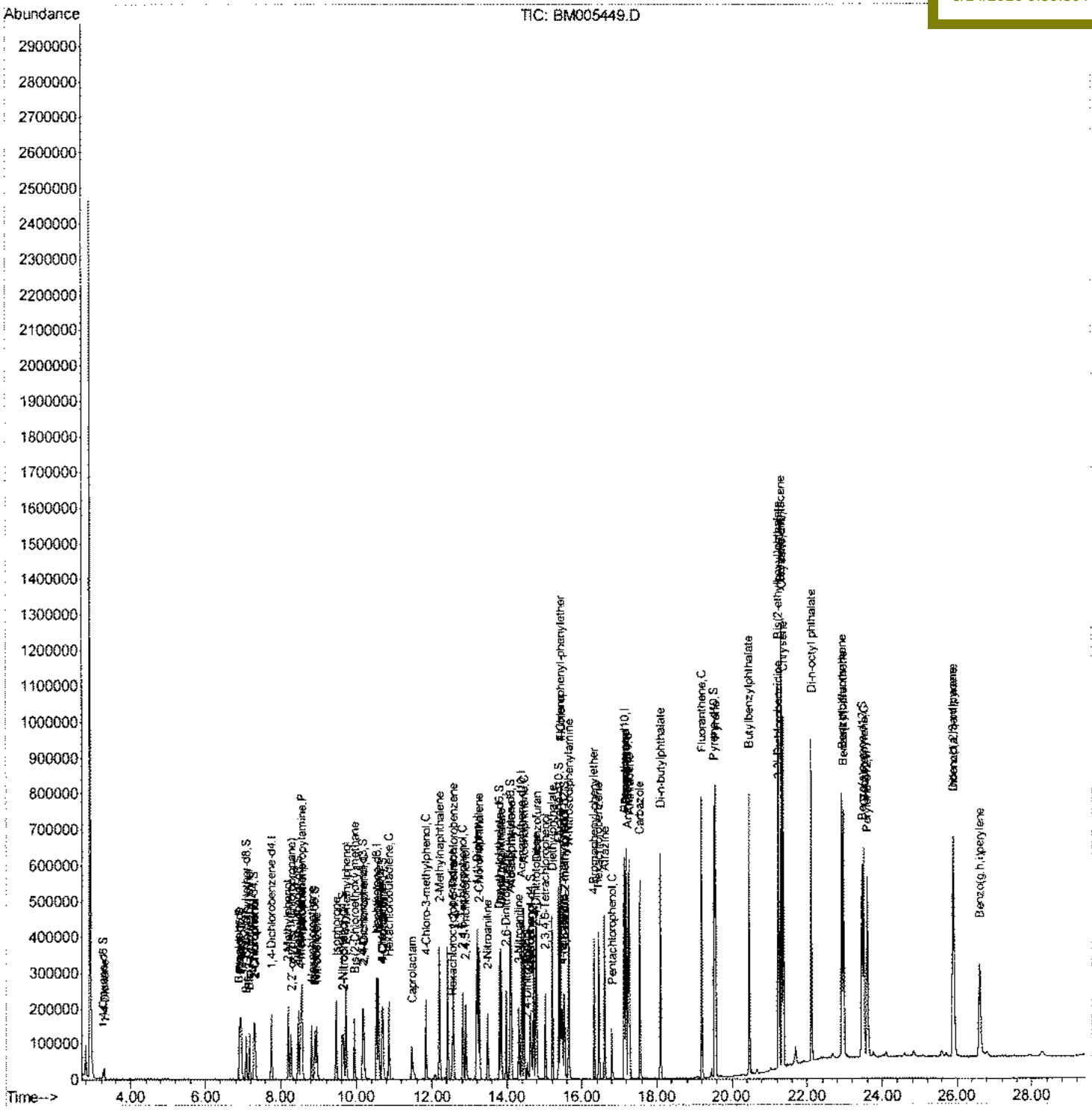
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005449.D
Acq On : 14 May 2016 04:32
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 05:30:42 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02035

Manual Integrations APPROVED
sohil
5/14/2016 9:59:30 AM



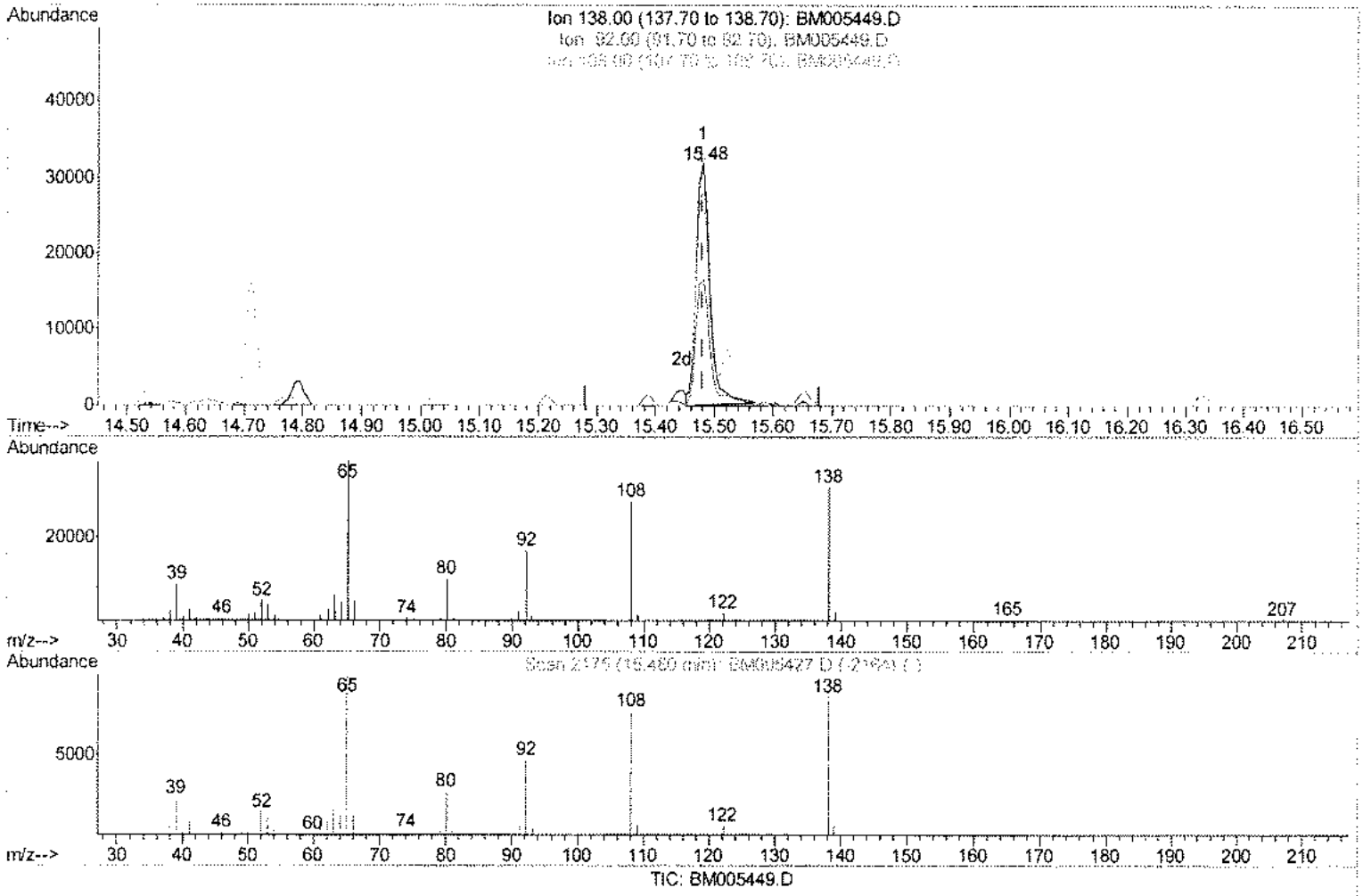
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005449.D
Acq On : 14 May 2016 04:32
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 05:19:30 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02035

Manual Integrations APPROVED
sohil
5/14/2016 9:59:30 AM



(60) 4-Nitroaniline

15.480min (+0.000) 19.58ng/ul

response 50381

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	52.95
108.00	82.90	89.28
0.00	0.00	0.00

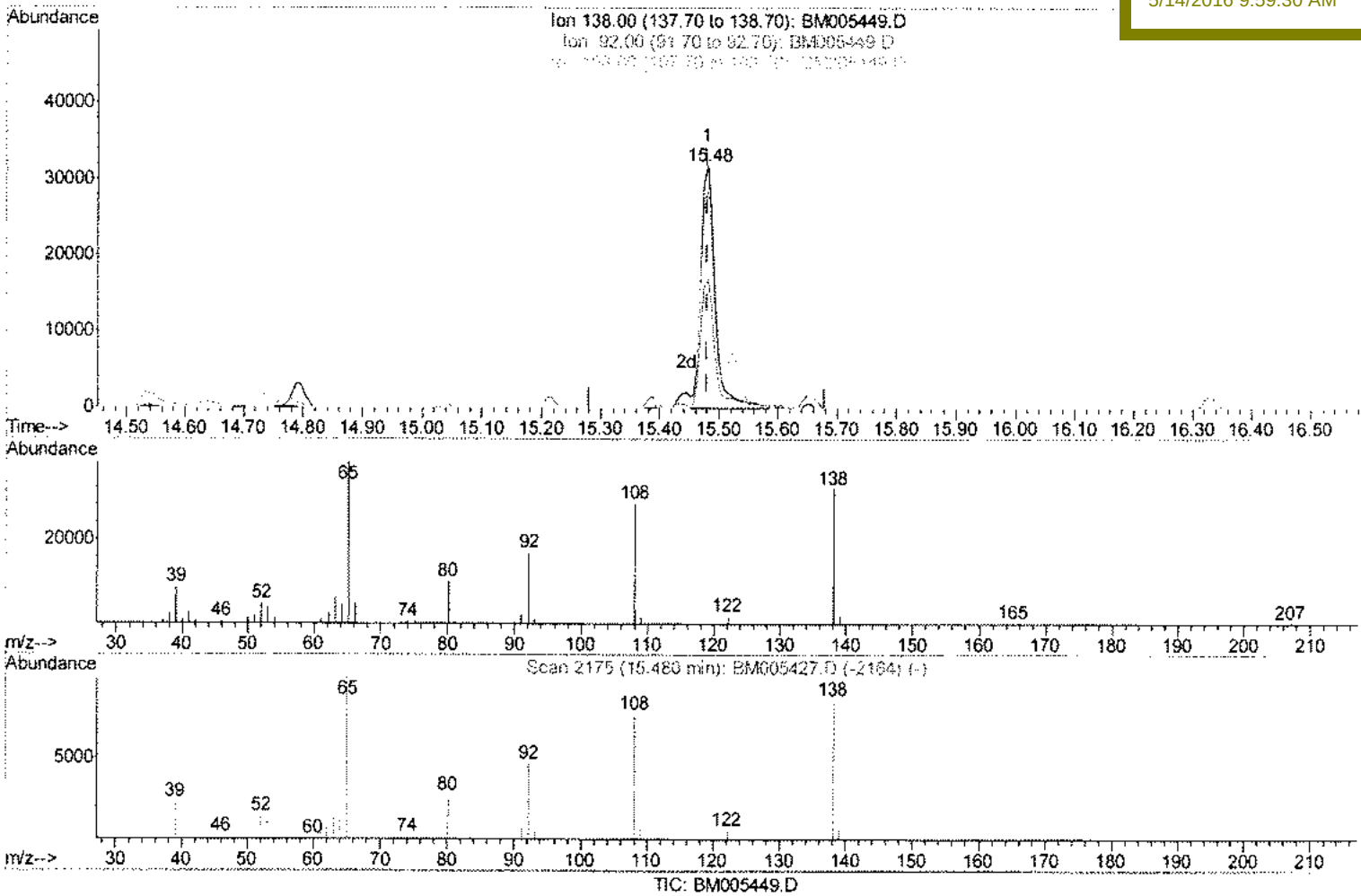
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005449.D
Acq On : 14 May 2016 04:32
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 05:19:30 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02035

Manual Integrations APPROVED
sohil
5/14/2016 9:59:30 AM



TIC: BM005449.D

(60) 4-Nitroaniline

15.480min (+0.000) 21.38ng/ul m

response 55023

U. M
05/17/16

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	52.95
108.00	82.90	89.28
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005449.D
Acq On : 14 May 2016 04:32
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 05:30:42 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02035

Manual Integrations APPROVED
sohil
5/14/2016 9:59:30 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	51526	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	233474	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	144192	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	357486	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	439148	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	397039	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	9729	8.88	ng/uL	0.00
5) Phenol-d5	6.93	99	91595	19.60	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	54243	20.35	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	71227	20.18	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	72213	18.70	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	34901	20.94	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	40062	21.23	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	73301	20.90	ng/ul	0.00
29) 4-Chloroaniline-d4	10.68	131	93039	22.04	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	239697	20.74	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	281203	20.74	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	32480	15.40	ng/ul	0.00
57) Fluorene-d10	15.39	176	210170	21.06	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	38328	19.06	ng/ul	0.00
70) Anthracene-d10	17.24	188	335191	21.21	ng/ul	0.00
76) Pyrene-d10	19.54	212	404111	19.94	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	373709	21.26	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	17223	8.62	ng/uL#	94
4) Benzaldehyde	6.90	77	57653	25.46	ng/ul	97
6) Phenol	6.96	94	95669	19.81	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.17	93	72332	19.89	ng/ul	97
10) 2-Chlorophenol	7.32	128	73107	20.25	ng/ul	98
11) 2-Methylphenol	8.20	108	71491	19.15	ng/ul	94
12) 2,2'-oxybis(1-Chloropropan	8.28	45	101470	20.57	ng/ul	99
14) Acetophenone	8.57	105	118505	20.71	ng/ul	98
15) N-Nitroso-di-n-propylamine	8.55	70	59470	19.89	ng/ul	98
16) 4-Methylphenol	8.53	108	78761	19.01	ng/ul	100
17) Hexachloroethane	8.82	117	28209	20.76	ng/ul	89
20) Nitrobenzene	8.95	77	86989	20.84	ng/ul	97
21) Isophorone	9.47	82	165741	20.45	ng/ul	98
23) 2-Nitrophenol	9.66	139	43004	21.15	ng/ul	94
24) 2,4-Dimethylphenol	9.72	107	89411	20.73	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.95	93	99988	19.81	ng/ul	99
27) 2,4-Dichlorophenol	10.19	162	74266	20.67	ng/ul	99
28) Naphthalene	10.59	128	240809	20.50	ng/ul	99
30) 4-Chloroaniline	10.70	127	96075	22.31	ng/ul	97
31) Hexachlorobutadiene	10.86	225	47316	22.16	ng/ul	99
32) Caprolactam	11.47	113	25652	19.17	ng/ul	97
33) 4-Chloro-3-methylphenol	11.84	107	88700	20.59	ng/ul	98
34) 2-Methylnaphthalene	12.20	142	179834	20.47	ng/ul	98

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005449.D
Acq On : 14 May 2016 04:32
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 05:30:42 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02035

Manual Integrations APPROVED
sohil
5/14/2016 9:59:30 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.57	216	93522	21.32	ng/ul	98
37) Hexachlorocyclopentadiene	12.55	237	28620	12.77	ng/ul	94
38) 2,4,6-Trichlorophenol	12.82	196	59537	20.38	ng/ul	96
39) 2,4,5-Trichlorophenol	12.90	196	64047	19.76	ng/ul	96
40) 1,1'-Biphenyl	13.22	154	234764	20.55	ng/ul	99
41) 2-Chloronaphthalene	13.26	162	178858	20.71	ng/ul	98
42) 2-Nitroaniline	13.48	65	57295	21.55	ng/ul	97
44) Dimethylphthalate	13.85	163	240553	20.83	ng/ul	100
45) 2,6-Dinitrotoluene	13.97	165	48992	21.51	ng/ul	92
47) Acenaphthylene	14.12	152	294262	20.52	ng/ul	100
48) 3-Nitroaniline	14.31	138	51867	21.36	ng/ul	92
49) Acenaphthene	14.46	153	195609	20.70	ng/ul	99
50) 2,4-Dinitrophenol	14.53	184	16013	12.22	ng/ul	98
52) 4-Nitrophenol	14.64	109	28840	16.44	ng/ul	97
53) Dibenzofuran	14.79	168	284548	20.75	ng/ul	99
54) 2,4-Dinitrotoluene	14.77	165	75120	22.12	ng/ul	99
55) 2,3,4,6-Tetrachlorophenol	15.03	232	51448	18.67	ng/ul#	93
56) Diethylphthalate	15.22	149	245036	21.00	ng/ul	99
58) Fluorene	15.45	166	227902	21.26	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.43	204	113964	21.45	ng/ul	97
60) 4-Nitroaniline	15.48	138	55023m	21.38	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	38851	18.39	ng/ul#	92
64) N-Nitrosodiphenylamine	15.65	169	203081	20.75	ng/ul	99
65) 4-Bromophenyl-phenylether	16.33	248	73526	21.45	ng/ul	96
66) Hexachlorobenzene	16.45	284	82959	21.58	ng/ul	96
67) Atrazine	16.60	200	80488	22.53	ng/ul	99
68) Pentachlorophenol	16.80	266	30436	14.25	ng/ul	95
69) Phenanthrene	17.19	178	390092	20.75	ng/ul	100
71) Anthracene	17.27	178	393919	21.02	ng/ul	99
72) Carbazole	17.55	167	373723	22.67	ng/ul	99
73) Di-n-butylphthalate	18.10	149	442673	22.01	ng/ul	100
74) Fluoranthene	19.20	202	495696	23.80	ng/ul	99
77) Pyrene	19.57	202	509966	20.02	ng/ul	99
78) Butylbenzylphthalate	20.46	149	224692	21.24	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	174929	22.16	ng/ul	99
80) Benzo(a)anthracene	21.32	228	524901	20.78	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.24	149	331837	22.59	ng/ul#	97
82) Chrysene	21.37	228	498017	20.78	ng/ul	100
84) Di-n-octyl phthalate	22.12	149	585763	25.26	ng/ul	99
85) Benzo(b)fluoranthene	22.92	252	510606	22.00	ng/ul	98
86) Benzo(k)fluoranthene	22.97	252	490820	22.46	ng/ul	99
88) Benzo(a)pyrene	23.51	252	468436	21.34	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.90	276	448822	18.74	ng/ul	97
90) Dibenzo(a,h)anthracene	25.90	278	381581	19.04	ng/ul	98
91) Benzo(g,h,i)perylene	26.60	276	363938	17.94	ng/ul	97

U.M 05/17/16

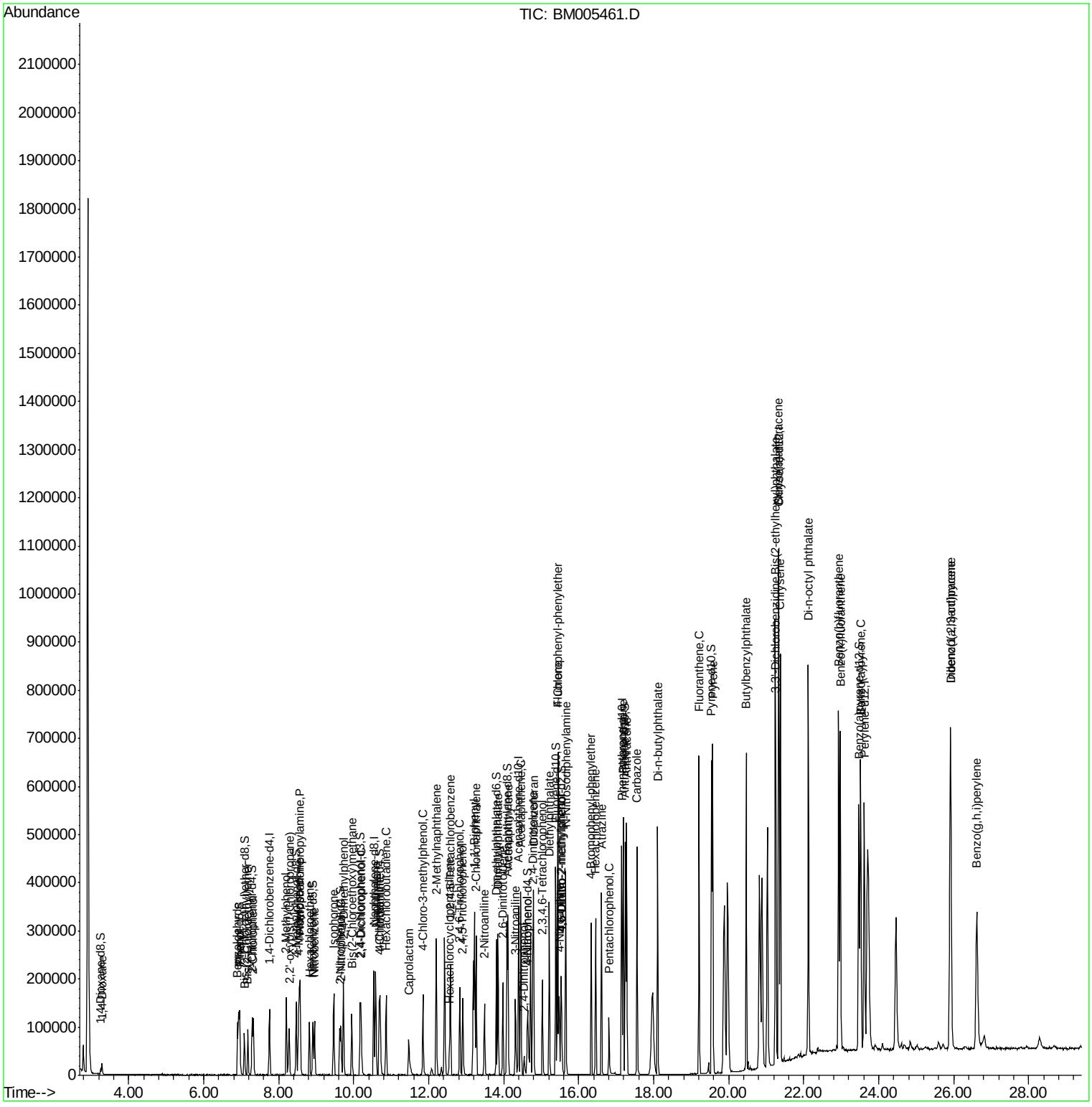
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005461.D
Acq On : 14 May 2016 13:09
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD02036

Quant Time: May 16 13:03:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005461.D
Acq On : 14 May 2016 13:09
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD02036

Quant Time: May 16 13:03:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	39461	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	178282	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	114488	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	286794	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	388346	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	394502	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	6849	8.16	ng/uL	0.00
5) Phenol-d5	6.93	99	68861	19.24	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	40904	20.03	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	54161	20.04	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	55814	18.87	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	27051	21.25	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	29571	20.52	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	55729	20.81	ng/ul	0.00
29) 4-Chloroaniline-d4	10.68	131	73313	22.74	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	187680	20.45	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	222321	20.66	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	26244	15.67	ng/ul	0.00
57) Fluorene-d10	15.39	176	166024	20.95	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	31299	19.40	ng/ul	0.00
70) Anthracene-d10	17.24	188	272923	21.53	ng/ul	0.00
76) Pyrene-d10	19.54	212	339743	18.95	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	367428	21.04	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	12541	8.20	ng/uL#	92
4) Benzaldehyde	6.90	77	43386	25.02	ng/ul	96
6) Phenol	6.96	94	73789	19.95	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.17	93	54612	19.61	ng/ul	97
10) 2-Chlorophenol	7.32	128	55670	20.13	ng/ul	98
11) 2-Methylphenol	8.20	108	54747	19.15	ng/ul	96
12) 2,2'-oxybis(1-Chloropropan	8.28	45	77504	20.52	ng/ul	99
14) Acetophenone	8.57	105	90396	20.63	ng/ul	95
15) N-Nitroso-di-n-propylamine	8.55	70	46217	20.18	ng/ul	99
16) 4-Methylphenol	8.53	108	60967	19.21	ng/ul	100
17) Hexachloroethane	8.82	117	21388	20.56	ng/ul	91
20) Nitrobenzene	8.95	77	67020	21.03	ng/ul	99
21) Isophorone	9.47	82	126315	20.41	ng/ul	99
23) 2-Nitrophenol	9.66	139	32683	21.05	ng/ul	98
24) 2,4-Dimethylphenol	9.72	107	69034	20.96	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.95	93	75244	19.53	ng/ul	98
27) 2,4-Dichlorophenol	10.20	162	56390	20.56	ng/ul	98
28) Naphthalene	10.58	128	184865	20.61	ng/ul	99
30) 4-Chloroaniline	10.70	127	75036	22.82	ng/ul	97
31) Hexachlorobutadiene	10.86	225	36252	22.24	ng/ul	98
32) Caprolactam	11.47	113	19574	19.15	ng/ul	90
33) 4-Chloro-3-methylphenol	11.84	107	67682	20.58	ng/ul	98
34) 2-Methylnaphthalene	12.20	142	136233	20.31	ng/ul	100

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005461.D
Acq On : 14 May 2016 13:09
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD02036

Quant Time: May 16 13:03:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.57	216	72370	20.78	ng/ul	98
37) Hexachlorocyclopentadiene	12.54	237	11562	6.50	ng/ul	99
38) 2,4,6-Trichlorophenol	12.83	196	46210	19.92	ng/ul	97
39) 2,4,5-Trichlorophenol	12.90	196	48656	18.91	ng/ul	97
40) 1,1'-Biphenyl	13.22	154	182851	20.16	ng/ul	100
41) 2-Chloronaphthalene	13.26	162	139615	20.36	ng/ul	99
42) 2-Nitroaniline	13.48	65	44835	21.24	ng/ul	96
44) Dimethylphthalate	13.84	163	188091	20.51	ng/ul	99
45) 2,6-Dinitrotoluene	13.97	165	38664	21.38	ng/ul	93
47) Acenaphthylene	14.11	152	236716	20.79	ng/ul	100
48) 3-Nitroaniline	14.32	138	41887	21.73	ng/ul	100
49) Acenaphthene	14.46	153	155707	20.75	ng/ul	98
50) 2,4-Dinitrophenol	14.54	184	13431	12.91	ng/ul	98
52) 4-Nitrophenol	14.64	109	23543	16.90	ng/ul	91
53) Dibenzofuran	14.79	168	226762	20.83	ng/ul	96
54) 2,4-Dinitrotoluene	14.77	165	59032	21.89	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.03	232	42619	19.48	ng/ul#	96
56) Diethylphthalate	15.22	149	193339	20.87	ng/ul	99
58) Fluorene	15.44	166	185511	21.79	ng/ul	98
59) 4-Chlorophenyl-phenylether	15.43	204	92102	21.84	ng/ul	98
60) 4-Nitroaniline	15.48	138	41503	20.31	ng/ul	96
63) 4,6-Dinitro-2-methylphenol	15.54	198	32460	19.15	ng/ul#	90
64) N-Nitrosodiphenylamine	15.65	169	163837	20.86	ng/ul	99
65) 4-Bromophenyl-phenylether	16.33	248	58456	21.26	ng/ul	97
66) Hexachlorobenzene	16.45	284	65911	21.37	ng/ul	96
67) Atrazine	16.60	200	64450	22.49	ng/ul	99
68) Pentachlorophenol	16.80	266	25003	14.59	ng/ul	96
69) Phenanthrene	17.19	178	319950	21.22	ng/ul	99
71) Anthracene	17.27	178	328914	21.88	ng/ul	100
72) Carbazole	17.55	167	310431	23.47	ng/ul	98
73) Di-n-butylphthalate	18.10	149	370236	22.95	ng/ul	99
74) Fluoranthene	19.20	202	413443	24.75	ng/ul	99
77) Pyrene	19.57	202	432440	19.20	ng/ul	99
78) Butylbenzylphthalate	20.46	149	189630	20.28	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	158588	22.72	ng/ul	98
80) Benzo(a)anthracene	21.33	228	454809	20.36	ng/ul	100
81) Bis(2-ethylhexyl)phthalate	21.24	149	281181	21.64	ng/ul	99
82) Chrysene	21.38	228	440155	20.77	ng/ul	99
84) Di-n-octyl phthalate	22.12	149	525329	22.80	ng/ul	100
85) Benzo(b)fluoranthene	22.93	252	484835	21.03	ng/ul	99
86) Benzo(k)fluoranthene	22.97	252	462375	21.30	ng/ul	99
88) Benzo(a)pyrene	23.51	252	461299	21.15	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.91	276	471912	19.83	ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	400766	20.12	ng/ul	98
91) Benzo(g,h,i)perylene	26.61	276	387727	19.24	ng/ul	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

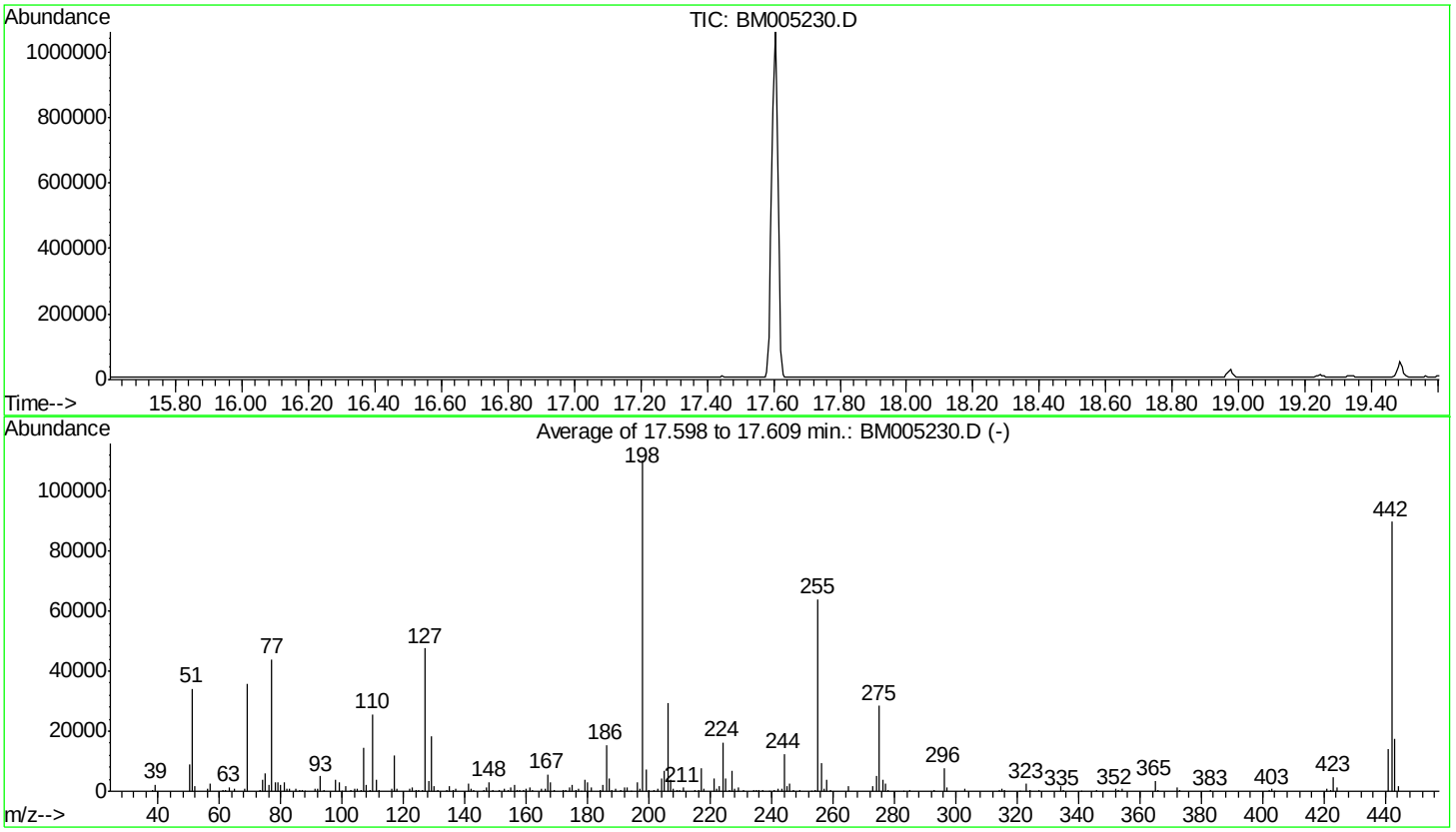
DFTPP

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005230.D
Acq On : 05 May 2016 10:23
Operator : UM/SJ
Sample : DFTPP64
Misc :
ALS Vial : 1 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : DFTPP64

Integration File: LSCINT.P

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION
Last Update : Sat May 07 07:05:19 2016



AutoFind: Scans 2535, 2536, 2537; Background Corrected with Scan 2530

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	31.0	34217	PASS
68	69	0.00	2	1.8	659	PASS
69	198	0.00	100	32.4	35757	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	43.1	47546	PASS
197	198	0.00	2	0.7	792	PASS
198	198	100	100	100.0	110320	PASS
199	198	5	9	6.7	7441	PASS
275	198	10	60	25.7	28354	PASS
365	198	1	100	3.2	3476	PASS
441	443	0.01	100	79.3	13888	PASS
442	198	50	100	81.3	89733	PASS
443	442	15	24	19.5	17511	PASS

Scan 2530 (17.568 min): BM005230.D
DFTPP64

m/z	Abundance
44.00	519.0
47.00	617.0
49.00	2627.0
51.00	900.0
84.00	2048.0
86.00	1264.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

Scan 2535 (17.598 min): BM005230.D
DFTPP64

Instrument :
BNA_M
ClientSampleId :
DFTPP64

m/z	Abundance
38.00	406.0
39.10	2380.0
44.00	354.0
47.00	345.0
49.00	2022.0
50.10	9141.0
51.10	36032.0
52.10	1876.0
56.00	1048.0
57.00	2579.0
61.00	451.0
62.00	500.0
63.00	1540.0
65.10	757.0
68.00	668.0
69.00	35840.0
73.00	405.0
74.10	3676.0
75.00	6149.0
76.10	2327.0
77.10	45112.0
78.10	3248.0
79.00	3053.0
80.00	2218.0
81.00	3242.0
82.00	790.0
83.00	823.0
84.00	1527.0
85.00	673.0
86.00	1887.0
87.00	423.0
87.90	327.0
91.00	611.0
92.00	752.0
93.00	5149.0
94.00	321.0
98.00	3964.0
99.00	3167.0
101.00	1833.0
103.00	496.0
104.00	1015.0
105.00	1090.0
106.10	351.0
107.00	13953.0
108.00	2163.0
109.10	387.0
110.00	25256.0
111.00	3942.0
112.00	505.0
116.00	742.0
117.00	11558.0
118.00	927.0
122.00	841.0
123.00	1346.0
124.00	594.0
124.90	662.0
126.20	322.0
127.10	46136.0
128.00	3539.0
129.00	17656.0
130.00	1569.0
134.00	527.0
135.00	1362.0
136.00	598.0
137.10	852.0
141.00	2457.0
142.00	837.0
143.00	495.0
146.00	405.0
147.00	1262.0
148.00	2869.0
149.00	595.0
151.00	303.0
153.00	823.0
154.00	542.0
155.00	1384.0
156.00	2064.0
157.10	395.0
158.00	465.0
159.00	309.0
160.00	736.0
161.00	1172.0
162.00	312.0
165.00	936.0
166.10	725.0
167.00	5242.0
168.00	2705.0
169.00	469.0
172.00	373.0
173.00	607.0
174.00	1029.0

175.10	1947.0
176.10	544.0
177.00	920.0
179.00	3586.0
180.10	2706.0
181.00	1174.0
184.10	331.0
185.00	1711.0
186.10	14171.0
187.00	4055.0
188.00	538.0
189.00	852.0
191.00	395.0
192.00	1174.0
193.00	1409.0
194.10	318.0
196.00	2657.0
197.20	710.0
198.00	101448.0
199.00	7050.0
200.00	595.0
201.50	438.0
203.00	730.0
204.10	3526.0
205.10	6507.0
206.10	26568.0
207.10	3747.0
208.00	887.0
209.00	326.0
210.10	376.0
211.10	1027.0
216.00	613.0
217.00	7204.0
218.00	910.0
221.10	4006.0
221.80	896.0
223.00	1489.0
224.10	14596.0
225.10	3736.0
226.10	419.0
227.00	6253.0
228.00	917.0
229.00	1294.0
231.00	504.0
234.00	349.0
235.00	398.0
236.00	313.0
237.00	675.0
242.00	739.0
243.10	801.0
244.10	10751.0
245.10	1396.0
246.00	2293.0
247.00	419.0
249.00	397.0
254.20	610.0
255.10	55232.0
256.10	8495.0
257.10	608.0
258.00	3267.0
259.00	545.0
265.00	1351.0
273.00	1582.0
274.10	4311.0
275.10	24848.0
276.10	3422.0
277.00	2159.0
278.00	367.0
285.00	384.0
293.00	477.0
296.10	6372.0
297.00	980.0
303.00	795.0
315.00	736.0
316.00	419.0
323.10	2082.0
324.00	383.0
327.00	355.0
334.00	1295.0
335.00	312.0
346.00	470.0
352.00	596.0
353.00	408.0
354.10	694.0
365.00	2620.0
366.00	410.0
372.00	1049.0
402.00	402.0
403.00	595.0
421.00	509.0
422.00	457.0
423.10	3403.0
424.00	1020.0
441.10	9920.0
442.10	65048.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

443.10 13117.0
444.10 1258.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

Scan 2536 (17.604 min): BM005230.D
DFTPP64

Instrument :
BNA_M
ClientSampleId :
DFTPP64

m/z	Abundance
38.00	419.0
39.10	2594.0
44.00	336.0
47.00	334.0
49.00	1974.0
50.10	9883.0
51.10	39344.0
52.10	2013.0
56.00	1141.0
57.00	2770.0
61.00	485.0
62.00	650.0
63.10	1559.0
65.10	786.0
68.10	794.0
69.00	41640.0
73.00	414.0
74.10	4578.0
75.00	6712.0
76.10	2430.0
77.10	50088.0
78.10	3595.0
79.00	3328.0
80.00	2425.0
81.00	3377.0
82.00	898.0
83.00	895.0
84.00	1530.0
85.00	747.0
86.00	1848.0
87.00	492.0
88.00	305.0
91.00	839.0
92.00	908.0
93.00	5722.0
94.00	359.0
98.00	4719.0
99.00	3525.0
100.00	344.0
101.00	1980.0
103.00	717.0
104.00	1127.0
105.00	1216.0
106.10	422.0
107.00	16848.0
108.00	2481.0
109.00	470.0
110.00	29520.0
111.00	4312.0
112.00	556.0
116.00	892.0
117.00	13797.0
118.00	1014.0
122.00	1057.0
123.00	1669.0
124.00	772.0
125.00	728.0
126.20	404.0
127.10	54592.0
128.10	4249.0
129.00	20968.0
130.00	1932.0
131.00	342.0
134.00	665.0
135.00	1813.0
136.00	668.0
137.00	929.0
141.00	2953.0
142.00	924.0
143.00	591.0
146.00	531.0
147.00	1549.0
148.00	3527.0
149.00	721.0
151.10	438.0
153.00	1016.0
154.00	704.0
155.00	1868.0
156.10	2431.0
157.10	515.0
158.00	489.0
159.00	380.0
160.00	932.0
161.00	1304.0
162.00	389.0
165.00	1146.0
166.00	923.0
167.00	6343.0
168.00	3390.0
169.10	587.0
171.90	524.0

173.00	671.0
174.00	1420.0
175.10	2581.0
176.00	653.0
177.00	1158.0
178.00	409.0
179.00	4619.0
180.00	3299.0
181.00	1383.0
184.00	361.0
185.10	2457.0
186.10	18096.0
187.10	5077.0
188.00	544.0
189.00	1158.0
191.00	554.0
192.00	1558.0
193.10	1730.0
194.00	359.0
196.10	3377.0
197.10	989.0
198.00	127632.0
199.00	8581.0
200.00	726.0
201.60	531.0
203.00	932.0
204.10	4975.0
205.10	8001.0
206.10	34160.0
207.10	4686.0
208.00	1157.0
209.00	387.0
210.10	484.0
211.00	1270.0
215.00	390.0
216.00	706.0
217.00	8852.0
218.00	1261.0
221.10	4774.0
221.90	1113.0
223.00	2088.0
224.10	18704.0
225.10	5011.0
226.10	515.0
227.10	7957.0
228.00	1073.0
229.00	1580.0
231.00	680.0
234.00	468.0
235.00	573.0
236.00	399.0
237.10	605.0
239.00	302.0
241.00	447.0
242.00	950.0
243.10	1044.0
244.10	14804.0
245.10	1847.0
246.00	2994.0
247.00	590.0
249.00	509.0
253.00	361.0
254.20	748.0
255.10	75072.0
256.10	10580.0
257.00	925.0
258.00	4270.0
259.10	657.0
265.00	1686.0
273.00	2137.0
274.10	5897.0
275.10	32728.0
276.10	4369.0
277.00	2956.0
278.00	569.0
283.00	348.0
285.10	525.0
293.00	678.0
296.10	9230.0
297.00	1238.0
303.00	1116.0
314.10	457.0
315.00	1120.0
316.10	607.0
321.00	333.0
323.10	2972.0
324.00	562.0
326.90	552.0
334.10	1936.0
335.00	476.0
341.00	321.0
346.00	691.0
352.10	843.0
353.00	692.0
354.10	1002.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

365.00	4035.0
366.00	594.0
372.10	1404.0
373.10	420.0
383.00	408.0
402.00	659.0
403.00	845.0
404.00	350.0
421.10	734.0
422.00	779.0
423.10	5572.0
424.10	1393.0
441.10	15921.0
442.10	103408.0
443.10	20496.0
444.10	1951.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

Scan 2537 (17.609 min): BM005230.D
DFTPP64

Instrument :
BNA_M
ClientSampleId :
DFTPP64

m/z	Abundance
38.00	319.0
39.10	2000.0
44.00	420.0
46.90	406.0
49.00	2212.0
50.10	7343.0
51.10	29976.0
52.00	1412.0
56.00	885.0
57.00	2082.0
61.00	342.0
62.00	421.0
63.00	1147.0
65.00	647.0
68.00	515.0
69.00	29792.0
73.10	326.0
74.00	3172.0
75.00	4965.0
76.10	1791.0
77.10	36880.0
78.10	2547.0
79.00	2255.0
80.00	1635.0
81.00	2507.0
82.00	672.0
83.00	619.0
84.00	1668.0
85.00	575.0
86.00	1808.0
87.00	402.0
91.00	554.0
92.00	732.0
93.00	4178.0
94.00	311.0
98.00	3409.0
99.00	2683.0
101.00	1587.0
103.00	503.0
104.00	965.0
105.00	888.0
107.00	12040.0
108.00	1880.0
109.10	351.0
110.00	22032.0
111.00	3360.0
112.00	330.0
116.00	663.0
117.00	10030.0
118.00	776.0
122.00	788.0
123.00	1223.0
124.00	555.0
125.00	508.0
127.00	41912.0
128.00	3049.0
129.00	15742.0
130.00	1214.0
131.00	348.0
134.00	466.0
135.00	1384.0
136.00	506.0
137.00	678.0
141.00	2211.0
142.00	631.0
143.00	487.0
146.00	380.0
147.00	1110.0
148.00	2698.0
149.00	505.0
153.00	707.0
154.00	506.0
155.10	1241.0
156.10	1989.0
157.10	372.0
157.90	398.0
160.00	691.0
161.00	1017.0
162.00	334.0
165.00	834.0
166.00	734.0
167.00	5097.0
168.00	2387.0
169.00	372.0
172.00	452.0
173.00	577.0
174.00	980.0
175.10	2055.0
176.00	499.0
177.00	846.0
179.00	3431.0

180.00	2437.0
181.00	1168.0
185.10	1653.0
186.10	14153.0
187.10	3905.0
188.00	431.0
189.00	865.0
190.90	364.0
192.00	1118.0
193.00	1372.0
196.10	2820.0
197.10	677.0
198.00	101880.0
199.00	6692.0
200.00	522.0
201.50	445.0
203.00	697.0
204.10	3922.0
205.10	6423.0
206.10	26904.0
207.10	3684.0
208.00	937.0
209.00	317.0
210.20	378.0
211.10	1021.0
214.90	342.0
216.00	607.0
217.00	6882.0
218.00	975.0
221.10	4335.0
221.80	962.0
223.10	1544.0
224.10	15397.0
225.10	3782.0
226.00	445.0
227.10	6428.0
228.00	786.0
229.00	1347.0
231.00	606.0
234.00	346.0
235.00	475.0
237.00	565.0
241.00	323.0
242.00	726.0
243.10	935.0
244.10	12006.0
245.10	1522.0
246.00	2335.0
247.00	498.0
249.00	435.0
253.10	303.0
254.20	595.0
255.10	61520.0
256.10	8655.0
257.10	663.0
258.10	3496.0
259.00	584.0
265.00	1504.0
273.00	1896.0
274.00	4973.0
275.10	27488.0
276.10	3632.0
277.00	2495.0
278.00	468.0
285.00	421.0
293.00	576.0
296.00	7914.0
297.00	1166.0
303.00	897.0
314.00	392.0
315.00	949.0
316.00	509.0
323.10	2548.0
324.10	534.0
327.00	528.0
334.00	1582.0
335.00	462.0
346.00	571.0
352.00	852.0
353.00	501.0
354.10	862.0
365.00	3775.0
366.00	553.0
372.10	1439.0
373.10	339.0
383.00	351.0
402.00	609.0
403.10	817.0
421.00	779.0
422.00	694.0
423.10	5280.0
424.10	1272.0
441.10	15824.0
442.10	100744.0
443.10	18920.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

444.10 1722.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

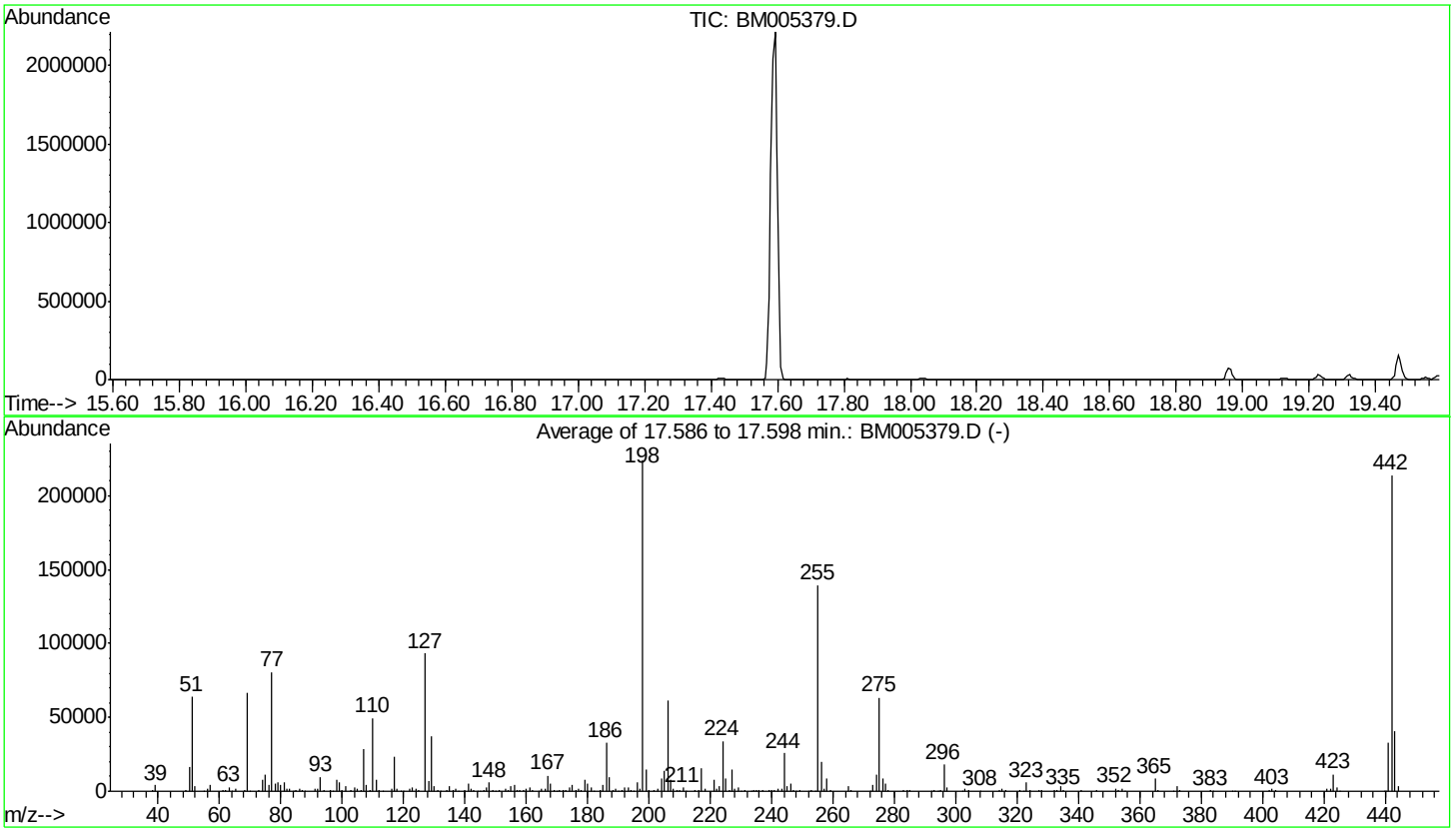
DFTPP

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005379.D
Acq On : 11 May 2016 08:24
Operator : UM/SJ
Sample : DFTPP36
Misc :
ALS Vial : 1 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : DFTPP36

Integration File: LSCINT.P

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION
Last Update : Thu May 12 02:20:05 2016



AutoFind: Scans 2533, 2534, 2535; Background Corrected with Scan 2527

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	28.4	63720	PASS
68	69	0.00	2	1.9	1278	PASS
69	198	0.00	100	29.9	66920	PASS
70	69	0.00	2	0.6	383	PASS
127	198	10	80	41.6	93237	PASS
197	198	0.00	2	0.8	1804	PASS
198	198	100	100	100.0	224170	PASS
199	198	5	9	6.6	14798	PASS
275	198	10	60	28.2	63258	PASS
365	198	1	100	3.7	8385	PASS
441	443	0.01	100	81.0	33034	PASS
442	198	50	100	95.4	213760	PASS
443	442	15	24	19.1	40762	PASS

Scan 2527 (17.551 min): BM005379.D
DFTPP36

m/z	Abundance
39.90	397.0
44.00	615.0
207.10	370.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

Scan 2533 (17.586 min): BM005379.D
DFTPP36

m/z	Abundance
38.00	812.0
39.10	4813.0
40.00	416.0
44.00	302.0
49.10	689.0
50.10	19376.0
51.10	74880.0
52.10	3875.0
55.00	462.0
56.00	2092.0
57.10	5201.0
61.00	1066.0
62.00	1039.0
63.10	3199.0
64.10	405.0
65.10	1720.0
68.10	1544.0
69.00	79752.0
70.00	409.0
73.00	747.0
74.10	8688.0
75.10	13347.0
76.10	4793.0
77.10	94456.0
78.10	6600.0
79.10	6798.0
80.00	4770.0
81.10	7211.0
82.00	1720.0
83.00	1747.0
84.00	314.0
85.00	1465.0
86.00	2255.0
87.00	973.0
91.00	1595.0
92.10	1778.0
93.00	11795.0
94.00	869.0
96.00	559.0
98.10	9353.0
99.00	6942.0
100.00	616.0
101.10	3949.0
103.00	1300.0
104.00	2625.0
105.00	2516.0
106.10	829.0
107.00	32736.0
108.00	4837.0
109.10	989.0
110.00	56576.0
111.10	8563.0
112.00	1059.0
113.10	411.0
116.00	1660.0
117.00	27576.0
118.00	1949.0
120.10	435.0
122.00	2052.0
123.00	3324.0
124.00	1584.0
125.00	1451.0
127.10	106480.0
128.10	7922.0
129.00	41696.0
130.00	3707.0
131.00	672.0
132.00	496.0
134.00	1300.0
135.10	3737.0
136.00	1432.0
137.10	1813.0
137.90	379.0
140.00	571.0
141.00	5789.0
142.00	1805.0
143.00	1353.0
144.00	362.0
145.00	331.0
146.10	1067.0
147.00	3111.0
148.00	7040.0
149.10	1482.0
150.00	371.0
151.00	683.0
152.10	445.0
153.10	1812.0
154.00	1354.0
155.10	3459.0
156.10	4608.0
157.10	837.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

158.00	895.0
159.00	910.0
160.00	1896.0
161.10	2876.0
162.10	742.0
165.00	2156.0
166.00	1736.0
167.10	12226.0
168.10	5907.0
169.10	983.0
170.00	376.0
170.90	505.0
172.00	1051.0
173.10	1386.0
174.10	2681.0
175.10	4731.0
176.00	1266.0
177.00	2363.0
178.10	677.0
179.00	8627.0
180.10	6240.0
181.10	2886.0
182.00	496.0
184.00	839.0
185.10	4401.0
186.10	35504.0
187.10	10083.0
188.10	1164.0
189.00	2189.0
189.90	351.0
191.10	884.0
192.00	2600.0
193.10	3109.0
194.10	936.0
195.10	390.0
196.10	6423.0
197.20	2118.0
198.00	243648.0
199.00	16544.0
200.00	1201.0
201.60	838.0
203.10	1828.0
204.10	9058.0
205.10	15434.0
206.10	65440.0
207.10	9461.0
208.10	2288.0
209.00	934.0
210.20	993.0
211.10	2494.0
211.80	531.0
215.00	752.0
216.10	1430.0
217.00	16960.0
218.10	2374.0
221.10	8270.0
222.00	2168.0
223.00	3744.0
224.10	35984.0
225.10	9973.0
226.10	1117.0
227.10	15859.0
228.00	2409.0
229.00	3024.0
230.00	442.0
231.00	1291.0
234.00	1003.0
235.00	1173.0
236.00	731.0
237.10	1252.0
239.00	685.0
240.10	547.0
241.00	968.0
242.10	1833.0
243.10	1946.0
244.10	26712.0
245.10	3326.0
246.00	5940.0
247.00	1165.0
249.00	934.0
252.10	319.0
253.10	604.0
255.10	145664.0
256.10	21496.0
257.00	1898.0
258.00	8346.0
259.10	1417.0
265.10	3537.0
266.00	510.0
272.10	433.0
273.00	4420.0
274.10	11397.0
275.10	65456.0
276.10	8937.0
277.10	5545.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

278.00	896.0
283.00	552.0
284.00	464.0
285.10	1044.0
293.00	1186.0
294.00	337.0
295.10	495.0
296.10	18120.0
297.10	2374.0
303.10	2153.0
304.10	560.0
314.10	865.0
315.10	2041.0
316.10	1145.0
321.00	541.0
323.10	5940.0
324.10	1044.0
327.00	1111.0
328.00	637.0
332.00	499.0
333.10	615.0
334.10	3612.0
335.00	995.0
341.00	643.0
346.10	1180.0
352.10	1631.0
353.00	1137.0
354.10	1756.0
355.10	423.0
365.00	7924.0
366.00	1147.0
371.00	391.0
372.10	2966.0
373.10	701.0
383.00	652.0
390.00	384.0
402.00	1059.0
403.10	1521.0
404.00	572.0
421.00	1549.0
422.10	1545.0
423.10	10338.0
424.10	2726.0
439.70	337.0
441.10	29200.0
442.10	191872.0
443.10	36688.0
444.10	3564.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

Scan 2534 (17.592 min): BM005379.D
DFTPP36

m/z	Abundance
38.00	802.0
39.10	4720.0
40.00	383.0
49.10	553.0
50.10	18320.0
51.10	72296.0
52.10	3377.0
55.00	510.0
56.00	2162.0
57.10	5177.0
61.00	993.0
62.10	1071.0
63.10	2997.0
64.10	454.0
65.10	1486.0
68.10	1452.0
69.00	75456.0
70.00	417.0
73.00	789.0
74.10	8604.0
75.00	13714.0
76.10	4555.0
77.10	92168.0
78.10	6175.0
79.00	6462.0
80.00	5025.0
81.00	6954.0
82.00	1563.0
83.00	1462.0
85.00	1483.0
86.00	2096.0
87.00	901.0
88.00	306.0
91.00	1591.0
92.00	1855.0
93.00	11419.0
94.00	875.0
96.10	541.0
97.00	310.0
98.00	9461.0
99.00	6740.0
100.00	498.0
101.00	4252.0
103.00	1378.0
104.00	2604.0
105.00	2344.0
106.20	838.0
107.00	32664.0
108.00	5060.0
109.00	998.0
110.00	57000.0
111.00	8708.0
112.00	999.0
113.10	359.0
116.10	1931.0
117.00	27176.0
118.00	1925.0
119.00	313.0
120.00	436.0
122.00	2282.0
123.00	3347.0
124.00	1517.0
125.00	1201.0
127.10	107680.0
128.10	8300.0
129.00	43624.0
130.00	3704.0
131.00	852.0
132.10	443.0
134.00	1305.0
135.00	3674.0
136.10	1464.0
137.10	1887.0
137.90	398.0
140.00	521.0
141.00	5847.0
142.10	1787.0
143.00	1384.0
144.00	327.0
145.00	359.0
146.00	1127.0
147.00	2998.0
148.00	6867.0
149.00	1528.0
150.00	374.0
151.10	708.0
151.80	427.0
153.00	1769.0
154.10	1385.0
155.10	3635.0
156.10	5231.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

157.10	960.0
158.00	1251.0
159.00	702.0
160.10	1917.0
161.10	2652.0
161.90	736.0
164.00	351.0
165.00	2620.0
166.00	1821.0
167.10	12355.0
168.00	6201.0
169.00	935.0
170.10	472.0
171.00	567.0
172.00	1344.0
173.00	1511.0
174.00	2743.0
175.10	5101.0
176.00	1362.0
177.00	2501.0
178.00	955.0
179.00	9263.0
180.10	6621.0
181.10	2981.0
182.10	458.0
184.00	809.0
185.10	4541.0
186.10	37920.0
187.10	10786.0
188.10	1106.0
189.00	2565.0
190.00	437.0
191.00	1044.0
192.10	2954.0
193.10	3643.0
194.10	705.0
195.10	349.0
196.10	6955.0
197.10	2104.0
198.00	257984.0
199.00	17144.0
200.10	1375.0
201.50	769.0
203.10	1957.0
204.10	10004.0
205.10	16568.0
206.10	71104.0
207.10	9650.0
208.00	2669.0
209.10	769.0
210.10	1098.0
211.10	2588.0
215.10	791.0
216.10	1619.0
217.00	18360.0
218.10	2207.0
221.10	9018.0
221.90	2560.0
223.00	4075.0
224.10	39280.0
225.10	10500.0
226.10	1248.0
227.10	17376.0
228.10	2518.0
229.00	3287.0
230.00	456.0
231.10	1448.0
233.10	328.0
234.10	1031.0
235.00	1219.0
236.00	781.0
237.10	1388.0
239.10	669.0
240.10	434.0
241.00	868.0
242.10	2017.0
243.10	2349.0
244.10	30408.0
245.10	3998.0
246.10	6511.0
247.10	1414.0
248.00	325.0
249.00	1091.0
253.10	824.0
255.10	161664.0
256.10	23808.0
257.00	2058.0
258.00	9883.0
259.10	1541.0
265.10	4081.0
266.00	557.0
272.00	369.0
273.00	4639.0
274.10	14039.0
275.10	73552.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

276.10	9861.0
277.10	6820.0
278.00	1220.0
283.00	691.0
284.00	521.0
285.10	1094.0
292.00	341.0
293.10	1442.0
294.10	396.0
295.10	612.0
296.10	21400.0
297.10	3034.0
302.00	390.0
303.10	2159.0
304.10	735.0
308.00	366.0
314.10	1068.0
315.10	2454.0
316.10	1294.0
321.00	792.0
322.10	380.0
323.10	6845.0
324.10	1245.0
327.00	1412.0
328.00	645.0
332.10	484.0
333.00	739.0
334.10	4499.0
335.10	1218.0
341.10	759.0
346.00	1417.0
352.10	2132.0
353.10	1549.0
354.10	2405.0
355.10	487.0
365.00	9775.0
366.10	1461.0
371.10	552.0
372.10	3811.0
373.10	832.0
383.10	987.0
384.00	309.0
390.10	418.0
391.00	324.0
402.10	1436.0
403.00	1998.0
404.00	865.0
421.10	1876.0
422.10	1844.0
423.10	13051.0
424.10	3209.0
425.20	356.0
441.10	39016.0
442.10	246528.0
443.10	47464.0
444.10	4136.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

Scan 2535 (17.598 min): BM005379.D
DFTPP36

m/z	Abundance
38.10	460.0
39.10	2780.0
40.00	344.0
44.00	402.0
49.00	393.0
50.10	10819.0
51.10	43984.0
52.10	2196.0
56.00	1339.0
57.00	3040.0
61.00	604.0
62.00	653.0
63.00	1703.0
65.10	862.0
68.10	840.0
69.00	45552.0
70.00	324.0
73.00	478.0
74.10	4892.0
75.10	7792.0
76.10	2932.0
77.10	55680.0
78.10	3719.0
79.10	3709.0
80.00	2761.0
81.00	3971.0
82.00	1072.0
83.00	925.0
85.00	871.0
86.00	1218.0
87.00	517.0
91.00	918.0
92.00	1078.0
93.00	6503.0
94.00	484.0
96.00	316.0
98.00	5293.0
99.00	4061.0
100.00	386.0
101.00	2668.0
103.00	825.0
104.00	1507.0
105.00	1491.0
106.10	485.0
107.10	19680.0
108.00	2708.0
109.00	542.0
110.00	34592.0
111.00	5249.0
112.00	731.0
116.10	1082.0
117.00	16383.0
118.00	1196.0
122.00	1285.0
123.10	2181.0
124.00	912.0
125.00	861.0
127.10	65552.0
128.10	5180.0
129.00	26200.0
130.00	2353.0
131.00	486.0
132.00	303.0
134.00	689.0
135.00	2290.0
136.00	808.0
137.10	1236.0
139.90	409.0
141.00	3782.0
142.00	991.0
143.10	783.0
146.00	618.0
147.00	1853.0
148.00	4175.0
149.00	781.0
151.00	443.0
151.80	312.0
153.00	1269.0
154.00	874.0
155.00	2241.0
156.10	3313.0
157.00	582.0
158.00	665.0
159.00	540.0
160.00	1202.0
161.00	1687.0
161.90	489.0
164.00	305.0
165.00	1547.0
166.00	1217.0
167.10	7847.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

168.00	3776.0
169.00	705.0
170.00	319.0
171.00	469.0
172.00	683.0
173.00	915.0
174.00	1764.0
175.10	3170.0
176.00	794.0
177.00	1470.0
178.00	472.0
179.00	6255.0
180.10	3950.0
181.10	1825.0
182.10	338.0
184.10	525.0
185.10	2886.0
186.10	24112.0
187.10	6997.0
188.10	811.0
189.10	1594.0
191.00	664.0
192.00	1875.0
193.10	2330.0
194.00	549.0
196.10	4919.0
197.20	1192.0
198.00	170880.0
199.00	10706.0
200.00	894.0
201.40	527.0
203.00	1285.0
204.10	6243.0
205.10	10814.0
206.10	47592.0
207.10	6556.0
208.10	1617.0
209.00	587.0
210.10	751.0
211.10	1818.0
211.90	303.0
215.00	585.0
216.00	870.0
217.00	12798.0
218.00	1499.0
221.10	5864.0
222.00	1623.0
223.10	2702.0
224.10	26272.0
225.10	6042.0
226.10	667.0
227.00	10915.0
228.10	1522.0
229.00	2433.0
230.00	384.0
231.10	788.0
234.00	749.0
235.00	859.0
236.00	499.0
237.00	912.0
239.00	550.0
240.00	419.0
241.00	555.0
242.00	1348.0
243.10	1318.0
244.10	20400.0
245.10	2721.0
246.00	4431.0
247.00	725.0
249.00	783.0
253.00	522.0
254.20	976.0
255.10	111096.0
256.10	15352.0
257.10	1182.0
258.00	6605.0
259.00	923.0
265.00	2680.0
266.00	358.0
273.10	3431.0
274.10	9145.0
275.10	50768.0
276.10	6338.0
277.00	4500.0
278.00	805.0
283.10	420.0
284.00	415.0
285.00	886.0
293.00	1065.0
295.20	374.0
296.10	14358.0
297.00	2056.0
302.00	323.0
303.10	1850.0
304.00	382.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

314.10	830.0
315.00	1741.0
316.10	772.0
321.00	425.0
323.10	5363.0
324.00	1082.0
327.00	912.0
328.00	425.0
332.00	427.0
333.00	454.0
334.10	3488.0
335.00	897.0
341.00	598.0
346.00	1132.0
352.00	1461.0
353.10	955.0
354.10	1619.0
365.00	7456.0
366.00	953.0
371.10	387.0
372.10	2861.0
373.10	602.0
383.10	808.0
390.10	412.0
391.10	330.0
402.10	1187.0
403.10	1583.0
404.10	684.0
421.00	1541.0
422.10	1497.0
423.10	10712.0
424.10	2495.0
425.00	306.0
440.20	551.0
441.10	30888.0
442.10	202880.0
443.10	38136.0
444.10	3356.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

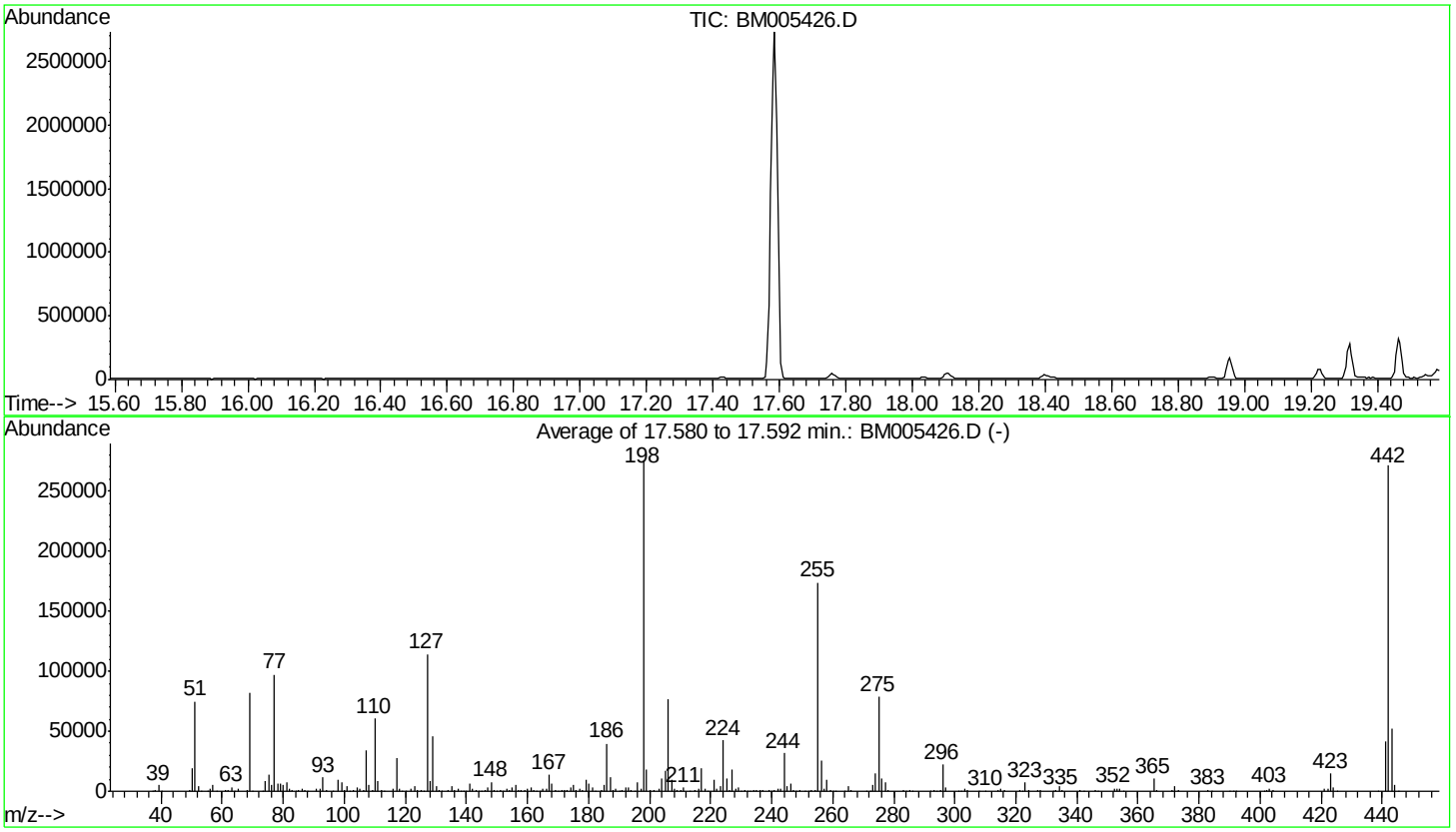
DFTPP

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005426.D
Acq On : 13 May 2016 11:10
Operator : UM/SJ
Sample : DFTPP38
Misc :
ALS Vial : 1 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : DFTPP38

Integration File: LSCINT.P

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION
Last Update : Sat May 14 00:15:57 2016



AutoFind: Scans 2532, 2533, 2534; Background Corrected with Scan 2526

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	27.0	74578	PASS
68	69	0.00	2	2.0	1627	PASS
69	198	0.00	100	29.9	82349	PASS
70	69	0.00	2	0.6	455	PASS
127	198	10	80	41.5	114381	PASS
197	198	0.00	2	0.9	2348	PASS
198	198	100	100	100.0	275840	PASS
199	198	5	9	6.7	18413	PASS
275	198	10	60	28.4	78309	PASS
365	198	1	100	3.8	10521	PASS
441	443	0.01	100	80.2	42074	PASS
442	198	50	100	98.6	272042	PASS
443	442	15	24	19.3	52474	PASS

Scan 2532 (17.580 min): BM005426.D
DFTPP38

m/z	Abundance
37.00	311.0
38.10	938.0
39.10	5496.0
40.00	430.0
41.10	446.0
43.00	791.0
44.00	520.0
45.00	621.0
49.10	664.0
50.10	21528.0
51.10	82720.0
52.10	4428.0
55.00	723.0
56.00	2506.0
57.00	5756.0
58.00	326.0
60.10	411.0
61.10	1209.0
62.10	1172.0
63.10	3786.0
64.10	555.0
65.10	1812.0
68.10	1831.0
69.00	91176.0
70.00	529.0
73.00	1017.0
74.10	9461.0
75.10	15820.0
76.10	5540.0
77.10	108496.0
78.10	7647.0
79.10	7500.0
80.00	5312.0
81.00	7965.0
82.00	1974.0
83.00	1908.0
85.00	1598.0
86.00	2411.0
87.00	1152.0
88.00	414.0
91.00	2029.0
92.10	2088.0
93.10	12860.0
94.00	909.0
96.00	575.0
97.00	375.0
98.00	10650.0
99.00	7926.0
100.00	763.0
101.00	4767.0
103.00	1503.0
104.00	2746.0
105.00	2801.0
106.10	1017.0
107.10	38048.0
108.10	5597.0
109.10	1200.0
110.00	64864.0
111.00	9712.0
112.00	1371.0
113.10	460.0
116.10	2051.0
117.00	30744.0
118.10	2319.0
119.00	367.0
120.00	459.0
122.00	2573.0
123.10	4133.0
124.00	1670.0
125.00	1493.0
127.10	123600.0
128.10	9725.0
129.00	49984.0
130.00	4228.0
131.00	833.0
132.00	426.0
134.00	1388.0
135.10	4334.0
136.00	1634.0
137.10	2126.0
137.90	387.0
139.00	313.0
140.00	687.0
141.00	6808.0
142.00	2207.0
143.00	1345.0
144.10	406.0
145.00	314.0
146.00	1046.0
147.00	3648.0
148.00	8299.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

149.00	1619.0
150.00	457.0
151.10	916.0
151.80	572.0
153.00	2173.0
154.00	1695.0
155.10	3595.0
156.10	5598.0
157.00	1100.0
158.00	1237.0
159.00	1095.0
160.00	2328.0
161.10	3295.0
162.00	811.0
163.00	302.0
165.00	2786.0
166.10	2275.0
167.10	14557.0
168.10	6476.0
169.00	1104.0
170.00	399.0
171.00	623.0
172.00	1302.0
173.10	1548.0
174.10	3051.0
175.10	5501.0
176.00	1430.0
177.10	2727.0
178.10	979.0
179.00	10342.0
180.10	7081.0
181.10	3275.0
182.10	564.0
184.00	922.0
185.10	5441.0
186.10	40784.0
187.10	11932.0
188.10	1372.0
189.00	2359.0
190.00	406.0
191.00	1256.0
192.10	3306.0
193.10	3513.0
194.00	893.0
195.00	491.0
196.10	7411.0
197.20	2407.0
198.00	282112.0
199.00	19472.0
200.10	1568.0
201.50	996.0
203.10	1901.0
204.10	10433.0
205.10	17720.0
206.10	76744.0
207.10	10693.0
208.00	2769.0
209.00	865.0
210.20	1060.0
211.10	2971.0
215.00	1068.0
216.00	1843.0
217.00	19696.0
218.00	2445.0
219.00	329.0
221.10	9752.0
222.00	2551.0
223.10	4483.0
224.10	41680.0
225.10	10838.0
226.10	1203.0
227.10	18400.0
228.10	2617.0
229.00	3751.0
230.00	492.0
231.10	1523.0
234.00	1069.0
235.00	1397.0
236.00	902.0
237.10	1522.0
239.00	901.0
240.00	539.0
241.00	913.0
242.00	2012.0
243.10	2393.0
244.10	31112.0
245.10	4416.0
246.10	7058.0
247.00	1502.0
248.10	315.0
249.00	1231.0
253.00	732.0
255.10	168896.0
256.10	24992.0
257.10	2012.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

258.10	9690.0
259.00	1604.0
260.00	323.0
265.10	3905.0
266.00	687.0
271.00	406.0
272.10	422.0
273.10	4858.0
274.10	13776.0
275.10	74552.0
276.10	10664.0
277.10	6588.0
278.10	1105.0
283.20	733.0
284.10	434.0
285.10	1224.0
293.00	1411.0
294.10	359.0
295.20	525.0
296.10	20784.0
297.10	3105.0
301.00	321.0
302.00	479.0
303.10	2492.0
304.10	885.0
314.00	861.0
315.10	2475.0
316.00	1303.0
321.00	670.0
322.00	413.0
323.10	6470.0
324.10	1051.0
327.00	1146.0
328.00	692.0
332.00	476.0
333.10	609.0
334.10	4191.0
335.00	1124.0
341.10	620.0
346.00	1377.0
352.10	1933.0
353.10	1528.0
354.10	2208.0
355.10	368.0
365.10	9683.0
366.10	1409.0
371.00	574.0
372.10	3525.0
373.10	880.0
383.00	1052.0
390.10	443.0
391.00	341.0
402.00	1364.0
403.10	2043.0
404.00	702.0
421.00	1664.0
422.10	1742.0
423.10	12308.0
424.10	3013.0
425.10	351.0
441.10	33832.0
442.10	224832.0
443.10	44264.0
444.10	4232.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

Scan 2533 (17.586 min): BM005426.D
DFTPP38

m/z	Abundance
37.00	386.0
38.00	903.0
39.10	5685.0
40.10	410.0
41.00	434.0
43.10	751.0
44.00	497.0
45.00	569.0
49.20	815.0
50.10	22104.0
51.10	83992.0
52.10	4316.0
53.00	307.0
55.00	590.0
56.00	2541.0
57.10	5812.0
58.00	302.0
60.10	526.0
61.00	1247.0
62.00	1440.0
63.10	3896.0
64.00	518.0
65.10	1799.0
68.10	1821.0
69.00	93480.0
70.00	475.0
73.10	1156.0
74.10	10122.0
75.10	15857.0
76.10	5553.0
77.10	109520.0
78.10	7422.0
79.10	7832.0
80.00	5619.0
81.00	8330.0
82.10	1984.0
83.00	1690.0
84.00	344.0
85.10	1431.0
86.00	2459.0
87.10	1281.0
88.00	463.0
91.00	2003.0
92.10	2166.0
93.10	13307.0
94.00	952.0
96.10	677.0
97.20	366.0
98.00	11136.0
99.00	8249.0
100.10	748.0
101.00	4590.0
101.90	309.0
103.00	1630.0
104.00	3150.0
105.00	3157.0
106.10	1066.0
107.10	39352.0
108.00	5899.0
109.20	1091.0
110.00	69072.0
111.00	10095.0
112.10	1340.0
113.00	434.0
116.10	2173.0
117.10	32136.0
118.00	2346.0
120.00	569.0
122.00	2650.0
123.00	4235.0
124.00	1907.0
125.00	1596.0
127.10	131456.0
128.10	10191.0
129.00	52760.0
130.00	4303.0
131.10	889.0
132.00	420.0
134.10	1584.0
135.00	4555.0
136.10	1867.0
137.10	2363.0
138.00	426.0
140.00	604.0
141.00	7212.0
142.00	2238.0
143.00	1521.0
144.00	371.0
145.10	339.0
146.00	1320.0
147.10	3821.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

148.00	8468.0
149.00	1782.0
150.00	533.0
151.10	912.0
151.80	632.0
153.10	2483.0
154.00	1800.0
155.10	4033.0
156.10	6265.0
157.00	1387.0
158.00	1373.0
159.00	1149.0
160.10	2366.0
161.10	3542.0
162.00	1096.0
164.00	325.0
165.00	2869.0
166.10	2346.0
167.10	15107.0
168.10	6946.0
169.00	1152.0
170.00	532.0
171.10	723.0
172.00	1402.0
173.00	1762.0
174.10	3218.0
175.10	5981.0
176.10	1734.0
177.00	2939.0
178.10	998.0
179.00	11164.0
180.10	8075.0
181.10	3752.0
182.00	670.0
184.00	1026.0
185.10	5694.0
186.10	45208.0
187.10	13296.0
188.10	1320.0
189.00	2919.0
190.00	519.0
191.00	1268.0
192.10	3558.0
193.10	4053.0
194.00	887.0
195.10	393.0
196.10	8349.0
197.20	2797.0
198.00	316864.0
199.00	21000.0
200.10	1752.0
201.50	1359.0
203.00	2269.0
204.10	12076.0
205.10	20456.0
206.10	88992.0
207.10	11618.0
208.10	3094.0
209.10	938.0
210.10	1413.0
211.10	3441.0
213.00	323.0
215.00	1036.0
216.10	1874.0
217.00	22848.0
218.00	3031.0
219.10	300.0
221.10	11535.0
221.90	2685.0
223.10	4905.0
224.10	49440.0
225.10	12684.0
226.10	1293.0
227.10	20696.0
228.10	2923.0
229.10	4297.0
230.00	676.0
231.10	1776.0
232.10	307.0
233.00	474.0
234.00	1203.0
235.00	1478.0
236.10	984.0
237.00	1466.0
239.00	766.0
240.00	596.0
241.00	1280.0
242.10	2446.0
243.10	2765.0
244.10	36760.0
245.10	4586.0
246.10	7560.0
247.10	1419.0
249.00	1256.0
251.00	346.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

252.00	474.0
253.00	896.0
254.20	2240.0
255.10	202368.0
256.10	29176.0
257.10	2299.0
258.10	11272.0
259.00	1981.0
260.00	423.0
261.00	300.0
264.00	376.0
265.10	4834.0
266.10	824.0
271.10	445.0
272.10	663.0
273.10	6127.0
274.10	16944.0
275.10	91576.0
276.10	12207.0
277.10	8215.0
278.10	1269.0
283.00	883.0
284.10	729.0
285.10	1333.0
286.00	350.0
292.10	356.0
293.00	1792.0
294.00	455.0
295.20	804.0
296.10	25904.0
297.10	3727.0
301.10	366.0
302.00	437.0
303.10	2928.0
304.10	894.0
308.00	345.0
310.10	432.0
314.10	1254.0
315.00	2829.0
316.10	1597.0
321.10	714.0
322.00	510.0
323.10	8622.0
324.10	1584.0
327.00	1586.0
328.10	916.0
332.10	639.0
333.00	943.0
334.10	5616.0
335.10	1361.0
341.00	839.0
346.00	1788.0
346.90	361.0
352.10	2761.0
353.10	1785.0
354.10	2904.0
355.10	543.0
365.00	11955.0
366.00	1736.0
371.10	681.0
372.10	4625.0
373.10	1138.0
383.10	1309.0
384.00	436.0
390.10	556.0
391.00	347.0
392.10	319.0
401.10	321.0
402.10	1950.0
403.10	2681.0
404.10	968.0
421.10	2510.0
422.10	1983.0
423.10	17032.0
424.10	3598.0
425.00	413.0
438.60	331.0
441.10	49448.0
442.10	315200.0
443.10	61040.0
444.10	5528.0
445.10	341.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

Scan 2534 (17.592 min): BM005426.D
DFTPP38

Instrument :
BNA_M
ClientSampleId :
DFTPP38

m/z	Abundance
38.10	732.0
39.10	3955.0
40.00	354.0
41.00	476.0
43.00	1010.0
44.00	730.0
45.00	691.0
49.10	537.0
50.10	14543.0
51.10	57024.0
52.10	2875.0
55.00	552.0
56.00	1741.0
57.00	4118.0
60.00	541.0
61.00	734.0
62.00	851.0
63.10	2410.0
64.00	363.0
65.10	1333.0
68.10	1229.0
69.00	62392.0
70.00	363.0
73.00	848.0
74.10	6457.0
75.00	10434.0
76.10	3752.0
77.10	74296.0
78.10	5266.0
79.00	5339.0
80.00	3744.0
81.00	5393.0
82.00	1337.0
83.00	1169.0
83.90	310.0
85.10	1047.0
86.00	1754.0
87.00	803.0
91.00	1423.0
92.00	1306.0
93.00	8763.0
94.00	605.0
96.00	386.0
97.00	307.0
98.00	7377.0
99.00	5455.0
100.10	455.0
101.00	3414.0
103.00	1088.0
104.00	2298.0
105.00	2024.0
106.00	643.0
107.00	25936.0
108.10	3993.0
109.10	829.0
110.00	47400.0
111.00	6917.0
112.00	868.0
116.10	1473.0
117.00	21064.0
118.10	1291.0
122.00	1784.0
123.10	3014.0
124.00	1253.0
125.10	1047.0
126.20	626.0
127.10	88088.0
128.10	7235.0
129.00	34616.0
130.00	3004.0
131.00	579.0
132.10	316.0
134.00	1067.0
135.00	3020.0
136.00	1192.0
137.00	1481.0
137.90	365.0
140.00	419.0
141.00	5087.0
142.00	1572.0
143.00	1074.0
145.00	334.0
146.00	877.0
147.00	2751.0
148.00	5757.0
149.00	1230.0
150.00	375.0
151.00	730.0
151.90	412.0
153.00	1410.0
154.00	1167.0

155.10	2711.0
156.10	4147.0
157.00	822.0
158.00	860.0
159.10	699.0
160.10	1494.0
161.00	2479.0
162.00	604.0
164.10	317.0
165.00	2045.0
166.00	1630.0
167.10	10643.0
168.10	4741.0
169.10	925.0
170.00	384.0
171.10	475.0
172.00	942.0
173.00	1254.0
174.00	2152.0
175.10	4099.0
176.10	1036.0
177.00	1953.0
178.00	822.0
179.00	7831.0
180.00	5649.0
181.10	2496.0
182.10	425.0
184.10	653.0
185.00	3808.0
186.10	32800.0
187.10	9462.0
188.10	939.0
189.00	2093.0
190.00	336.0
191.00	1103.0
192.00	2712.0
193.10	2893.0
194.00	643.0
195.10	449.0
196.00	6210.0
197.20	1842.0
198.00	228544.0
199.00	14769.0
200.00	1209.0
201.50	948.0
203.00	1660.0
204.10	8406.0
205.10	14311.0
206.10	62968.0
207.10	8413.0
208.00	2136.0
209.00	700.0
210.10	883.0
211.10	2555.0
215.00	717.0
216.10	1244.0
217.00	16338.0
218.00	2168.0
221.10	8810.0
221.90	2095.0
223.10	3690.0
224.10	35672.0
225.10	9094.0
226.10	952.0
227.10	15582.0
228.10	2252.0
229.10	3054.0
230.00	432.0
231.10	1089.0
233.00	317.0
234.00	1028.0
235.00	1135.0
236.00	732.0
237.00	1240.0
239.10	645.0
240.00	442.0
241.00	866.0
242.00	1844.0
243.10	2165.0
244.10	26824.0
245.10	3378.0
246.10	5742.0
247.00	1192.0
249.00	971.0
253.10	650.0
254.20	1704.0
255.10	149824.0
256.10	21072.0
257.10	1769.0
258.10	9048.0
259.10	1241.0
265.00	3616.0
266.00	605.0
272.00	451.0
273.10	4574.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

274.10	12809.0
275.10	68800.0
276.10	9429.0
277.00	6303.0
278.00	878.0
283.10	690.0
284.10	451.0
285.10	1252.0
293.00	1540.0
294.00	435.0
295.10	448.0
296.10	19776.0
297.10	2772.0
303.10	2281.0
304.00	656.0
314.00	941.0
315.00	2186.0
316.00	1222.0
321.10	714.0
322.10	349.0
323.10	6736.0
324.10	999.0
327.00	1264.0
328.10	696.0
332.10	553.0
333.10	660.0
334.10	4348.0
335.00	1199.0
341.00	871.0
342.10	302.0
346.00	1382.0
352.10	2289.0
353.10	1681.0
354.10	2403.0
355.10	426.0
365.00	9926.0
366.00	1286.0
371.10	572.0
372.10	3914.0
373.10	909.0
383.00	994.0
390.00	522.0
391.10	351.0
402.00	1512.0
403.10	2180.0
404.10	859.0
421.10	1894.0
422.10	2148.0
423.10	14633.0
424.10	2997.0
441.10	42944.0
442.10	276096.0
443.10	52120.0
444.10	4833.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

Scan 2526 (17.545 min): BM005426.D
DFTPP38

m/z	Abundance
40.00	329.0
41.00	525.0
42.10	332.0
43.10	1564.0
44.00	1100.0
45.00	1048.0
55.10	364.0
57.00	337.0
60.00	767.0
73.00	466.0
207.10	451.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK32

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : PB90332BL
Sample wt/vol : 30.0 (g/mL): g
Lab File ID : BM005388.D
% Solids : 100
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	67	U
100-52-7	Benzaldehyde	330	U
108-95-2	Phenol	330	U
111-44-4	Bis(2-Chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	170	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2-oxybis(1-Chloropropane)	330	U
98-86-2	Acetophenone	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	170	U
67-72-1	Hexachloroethane	170	U
98-95-3	Nitrobenzene	170	U
78-59-1	Isophorone	170	U
88-75-5	2-Nitrophenol	170	U
105-67-9	2,4-Dimethylphenol	170	U
111-91-1	Bis(2-Chloroethoxy)methane	170	U
120-83-2	2,4-Dichlorophenol	170	U
91-20-3	Naphthalene	170	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	170	U
105-60-2	Caprolactam	330	U
59-50-7	4-Chloro-3-methylphenol	170	U
91-57-6	2-Methylnaphthalene	170	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	170	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK32

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : PB90332BL
Sample wt/vol : 30.0 (g/mL): g
Lab File ID : BM005388.D
% Solids : 100
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	170	U
92-52-4	1,1-Biphenyl	170	U
91-58-7	2-Chloronaphthalene	170	U
88-74-4	2-Nitroaniline	170	U
131-11-3	Dimethylphthalate	170	U
606-20-2	2,6-Dinitrotoluene	170	U
208-96-8	Acenaphthylene	170	U
99-09-2	3-Nitroaniline	330	U
83-32-9	Acenaphthene	170	U
51-28-5	2,4-Dinitrophenol	330	U
100-02-7	4-Nitrophenol	330	U
132-64-9	Dibenzofuran	170	U
121-14-2	2,4-Dinitrotoluene	170	U
84-66-2	Diethylphthalate	170	U
86-73-7	Fluorene	170	U
7005-72-3	4-Chlorophenyl-phenylether	170	U
100-01-6	4-Nitroaniline	330	U
534-52-1	4,6-Dinitro-2-methylphenol	330	U
86-30-6	N-Nitrosodiphenylamine	170	U
95-94-3	1,2,4,5-Tetrachlorobenzene	170	U
101-55-3	4-Bromophenyl-phenylether	170	U
118-74-1	Hexachlorobenzene	170	U
1912-24-9	Atrazine	330	U
87-86-5	Pentachlorophenol	330	U
85-01-8	Phenanthrene	170	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK32

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : PB90332BL
Sample wt/vol : 30.0 (g/mL): g
Lab File ID : BM005388.D
% Solids : 100
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	170	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	170	U
206-44-0	Fluoranthene	170	U
129-00-0	Pyrene	170	U
85-68-7	Butylbenzylphthalate	170	U
91-94-1	3,3-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	170	U
218-01-9	Chrysene	170	U
117-81-7	Bis(2-ethylhexyl)phthalate	170	U
117-84-0	Di-n-octyl phthalate	330	U
205-99-2	Benzo(b)fluoranthene	170	U
207-08-9	Benzo(k)fluoranthene	170	U
50-32-8	Benzo(a)pyrene	170	U
193-39-5	Indeno(1,2,3-cd)pyrene	170	U
53-70-3	Dibenzo(a,h)anthracene	170	U
191-24-2	Benzo(g,h,i)perylene	170	U
58-90-2	2,3,4,6-Tetrachlorophenol	170	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK32

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : PB90332BL
Sample wt/vol : 30.0 (g/mL): g
Lab File ID : BM005388.D
% Solids : 100
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
Extract Concentrated : (Y / N) Y
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 500 (µL)
Heated Purge : (Y / N)
Extraction Type : SOXH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types : GPC
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg
Cleanup Factor : 2.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

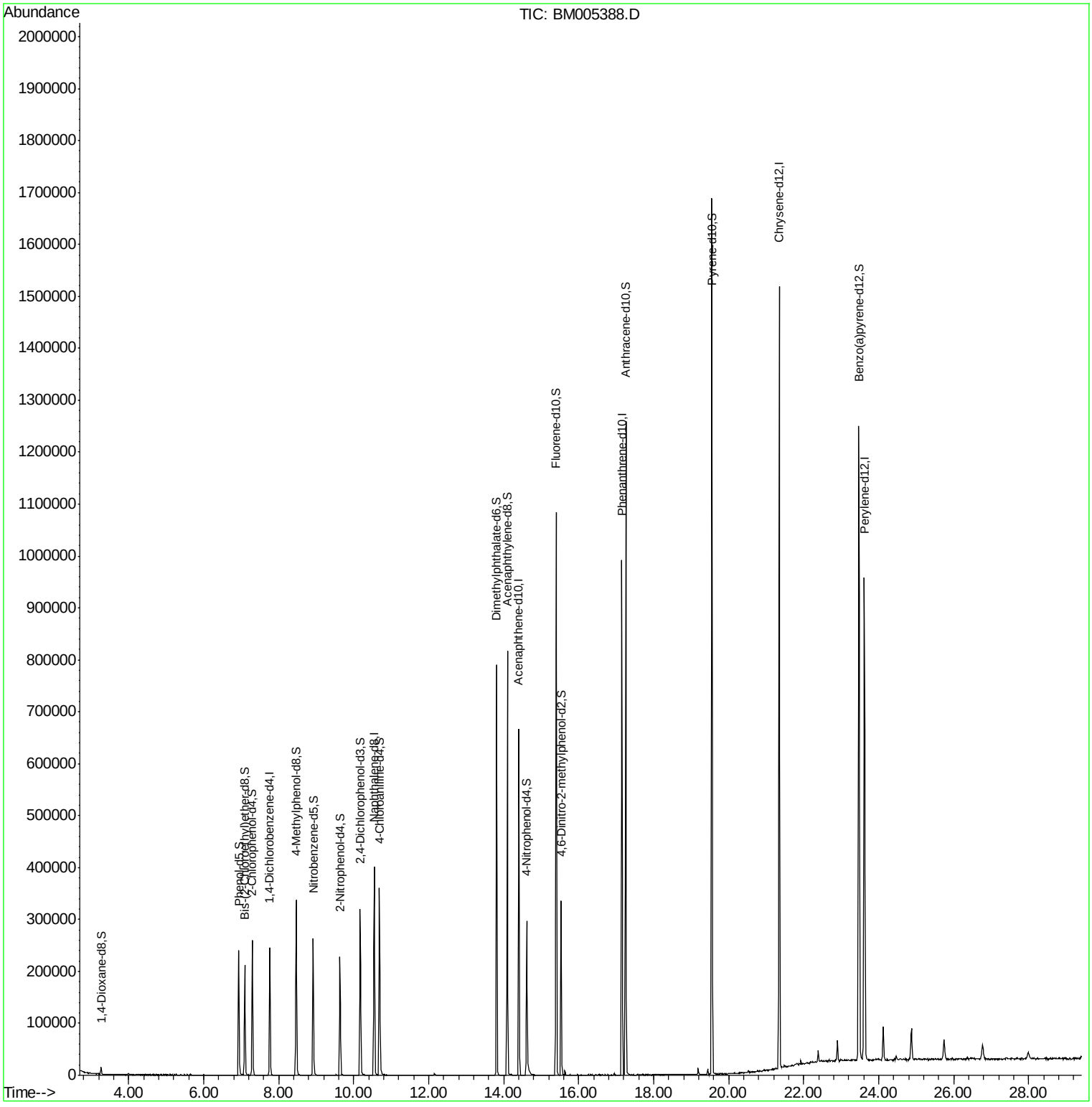
EPA-designated Registry Number.

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005388.D
Acq On : 11 May 2016 15:49
Operator : UM/SJ
Sample : PB90332BL
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SBLK32

Quant Time: May 12 03:52:28 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005388.D
Acq On : 11 May 2016 15:49
Operator : UM/SJ
Sample : PB90332BL
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK32

Quant Time: May 12 03:52:28 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	67507	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	336886	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	229833	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	578080	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	716616	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	680658	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	7049	4.91	ng/uL	0.00
5) Phenol-d5	6.93	99	149352	24.39	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	93500	26.77	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	119212	25.78	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	128944	25.48	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	63741	26.50	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	74185	27.24	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	124205	24.54	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	195798	32.14	ng/ul	0.00
43) Dimethylphthalate-d6	13.81	166	523876	28.44	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	577925	26.75	ng/ul	0.00
51) 4-Nitrophenol-d4	14.61	143	81417	24.21	ng/ul	0.00
57) Fluorene-d10	15.40	176	437672	27.51	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	74682	22.97	ng/ul	0.00
70) Anthracene-d10	17.25	188	725284	28.38	ng/ul	0.00
76) Pyrene-d10	19.55	212	875573	26.47	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	841615	27.93	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005388.D
Acq On : 11 May 2016 15:49
Operator : UM/SJ
Sample : PB90332BL
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK32

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.934	716	722	739	rBV	239869	403004	17.22%	1.764%
2	7.092	743	749	759	rBV	212645	325095	13.89%	1.423%
3	7.292	777	783	795	rBV	259729	410090	17.53%	1.795%
4	7.757	856	862	871	rBV	245266	399539	17.08%	1.749%
5	8.463	976	982	996	rBV	336729	546397	23.35%	2.392%
6	8.916	1051	1059	1072	rBV	263862	432361	18.48%	1.892%
7	9.633	1175	1181	1190	rBV	228258	371279	15.87%	1.625%
8	10.169	1266	1272	1286	rBV	320087	553082	23.64%	2.421%
9	10.545	1329	1336	1347	rBV	401671	684983	29.28%	2.998%
10	10.686	1353	1360	1378	rBV	360115	630670	26.95%	2.760%
11	13.810	1885	1891	1902	rBV	790167	1105556	47.25%	4.839%
12	14.092	1932	1939	1952	rBV	817262	1205083	51.51%	5.275%
13	14.398	1985	1991	2002	rVB2	665900	1063060	45.44%	4.653%
14	14.610	2022	2027	2049	rBV	297512	493297	21.08%	2.159%
15	15.398	2154	2161	2170	rBV	1083253	1603126	68.52%	7.017%
16	15.527	2178	2183	2198	rBV	335107	480776	20.55%	2.104%
17	17.151	2452	2459	2469	rBV2	991679	1414197	60.44%	6.190%
18	17.250	2469	2476	2488	rVV	1256959	1864335	79.68%	8.160%
19	19.550	2860	2867	2880	rBV	1686582	2339734	100.00%	10.241%
20	21.344	3167	3172	3183	rBV	1504554	1916259	81.90%	8.388%
21	22.385	3345	3349	3355	rVB	22959	30430	1.30%	0.133%
22	22.897	3431	3436	3444	rVB	39485	60203	2.57%	0.264%
23	23.468	3525	3533	3545	rBV2	1220316	2329375	99.56%	10.196%
24	23.615	3550	3558	3569	rVB2	926476	1801037	76.98%	7.883%
25	24.115	3638	3643	3653	rVB	65637	122536	5.24%	0.536%
26	24.868	3764	3771	3778	rVB2	59903	127087	5.43%	0.556%
27	25.738	3912	3919	3927	rBV2	37412	87200	3.73%	0.382%
28	26.768	4091	4094	4100	rVB4	23608	46765	2.00%	0.205%

Sum of corrected areas: 22846556

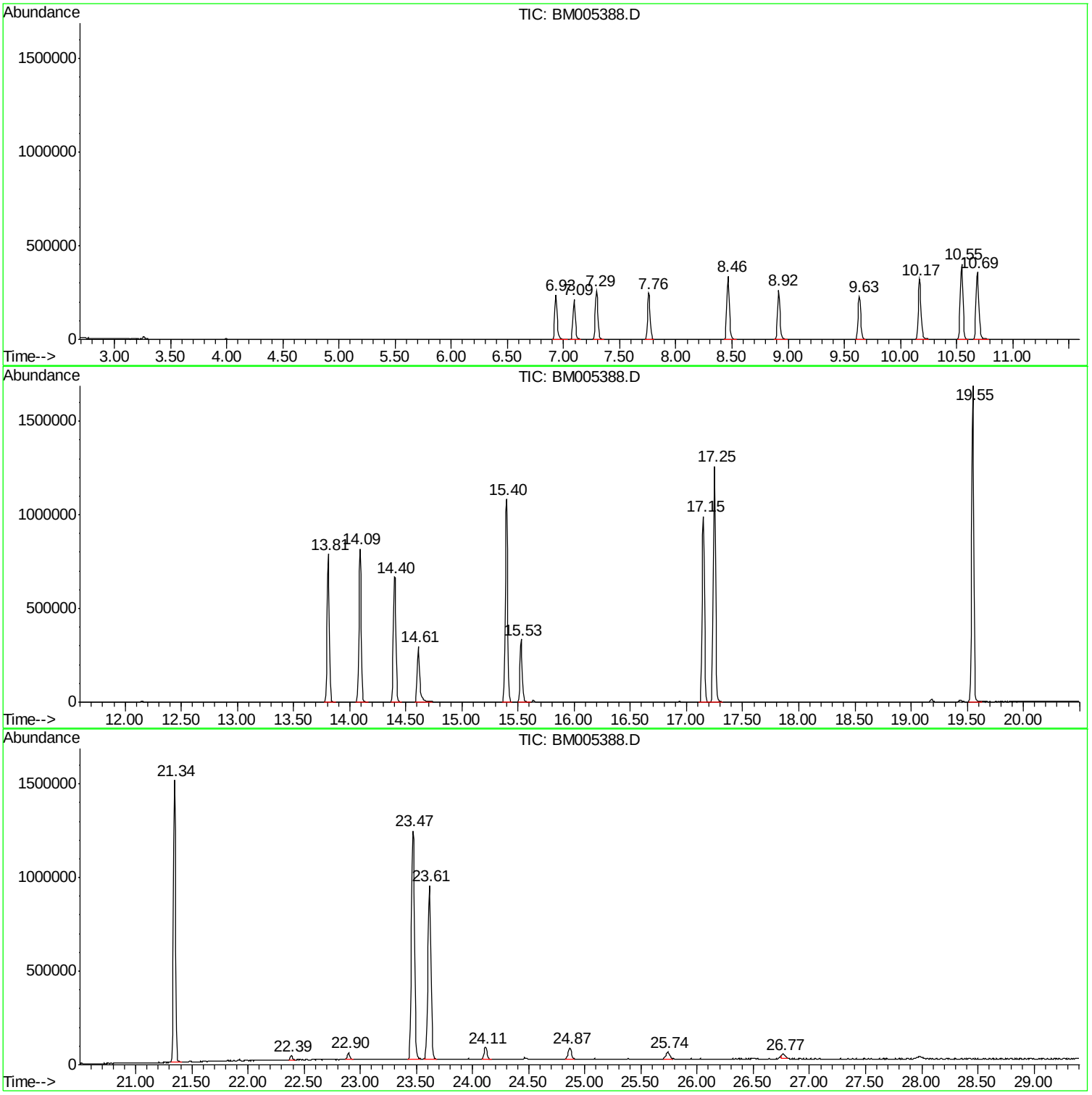
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005388.D
Acq On : 11 May 2016 15:49
Operator : UM/SJ
Sample : PB90332BL
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK32

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005388.D
Acq On : 11 May 2016 15:49
Operator : UM/SJ
Sample : PB90332BL
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SBLK32

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005388.D
Acq On : 11 May 2016 15:49
Operator : UM/SJ
Sample : PB90332BL
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK32

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK30

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB90330BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005450.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK30

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB90330BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005450.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK30

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB90330BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005450.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK30

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB90330BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005450.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/14/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

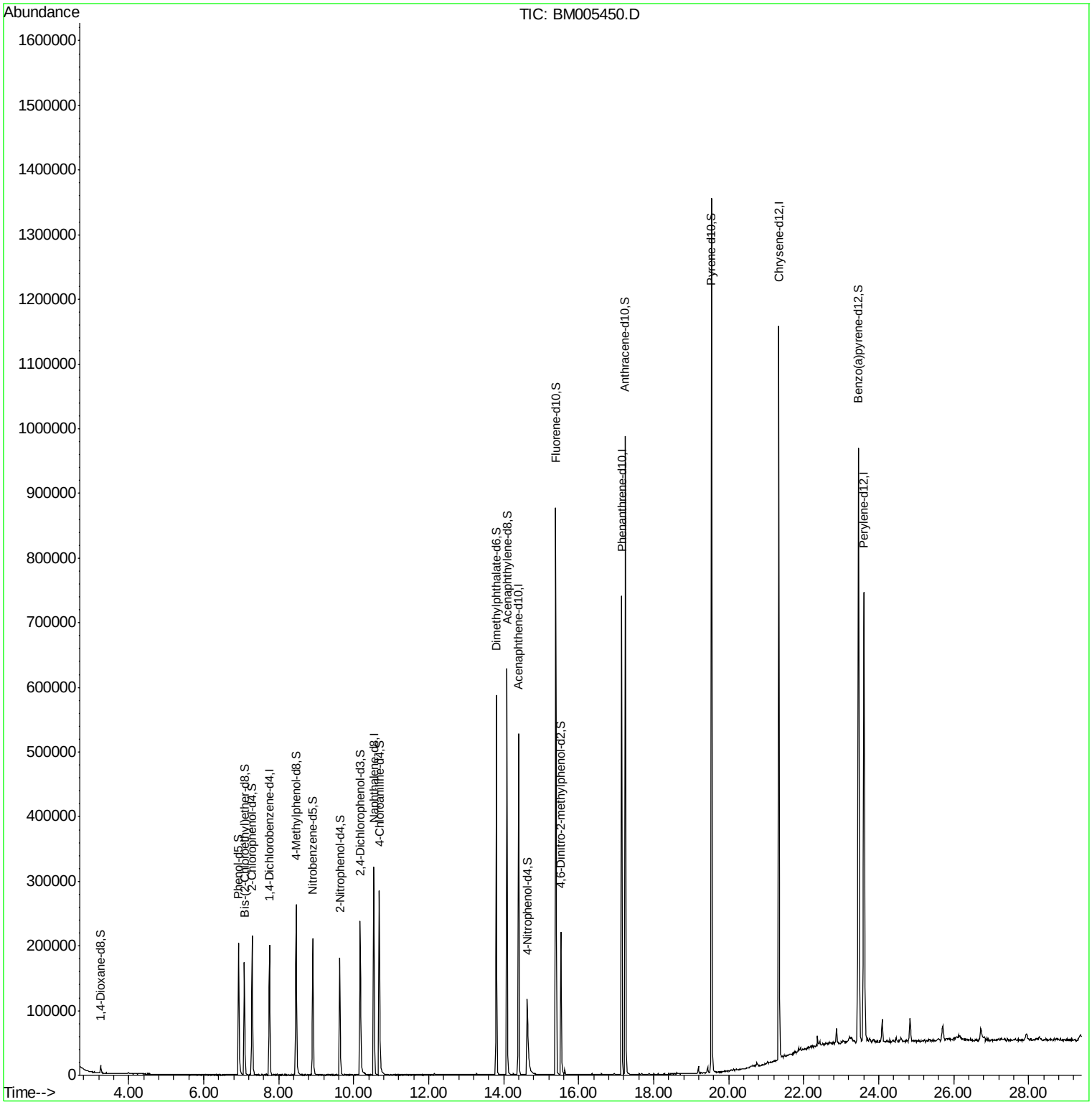
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005450.D
Acq On : 14 May 2016 05:09
Operator : UM/SJ
Sample : PB90330BL
Misc :
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 16 03:48:11 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SBLK30

Manual Integrations APPROVED
sohil
5/16/2016 7:01:38 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005450.D
Acq On : 14 May 2016 05:09
Operator : UM/SJ
Sample : PB90330BL
Misc :
ALS Vial : 24 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SBLK30

Manual Integrations APPROVED
sohil
5/16/2016 7:01:38 PM

Quant Time: May 16 03:48:11 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	57328	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	272738	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	178342	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	445752	20.00	ng/ul	0.00
75) Chrysene-d12	21.33	240	589547	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	522602	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	6741	5.53	ng/uL	0.00
5) Phenol-d5	6.93	99	129344	24.88	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	80175	27.03	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	104673	26.65	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	109071	25.38	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	53589	27.52	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	61062	27.70	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	101884	24.86	ng/ul	0.00
29) 4-Chloroaniline-d4	10.68	131	168619	34.19	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	404729	28.31	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	467924	27.91	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	54248m	20.79	ng/ul	0.00
57) Fluorene-d10	15.39	176	350633	28.41	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	51834	20.67	ng/ul	0.00
70) Anthracene-d10	17.24	188	578862	29.38	ng/ul	0.00
76) Pyrene-d10	19.54	212	718114	26.39	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	683493	29.55	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005450.D
Acq On : 14 May 2016 05:09
Operator : UM/SJ
Sample : PB90330BL
Misc :
ALS Vial : 24 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK30

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.928	716	721	733	rBV	203083	345950	18.13%	1.915%
2	7.081	742	747	757	rBV	173822	278015	14.57%	1.539%
3	7.286	776	782	794	rBV	215139	357986	18.76%	1.982%
4	7.751	854	861	871	rBV	200393	337494	17.68%	1.868%
5	8.463	976	982	997	rBV	263366	459648	24.08%	2.544%
6	8.910	1051	1058	1073	rBV	210446	369422	19.36%	2.045%
7	9.627	1174	1180	1191	rBV	181417	307665	16.12%	1.703%
8	10.169	1266	1272	1289	rBV	238271	446718	23.41%	2.473%
9	10.533	1327	1334	1344	rBV	321218	555304	29.10%	3.074%
10	10.680	1352	1359	1375	rBV	284621	542733	28.44%	3.004%
11	13.798	1883	1889	1902	rBV	586505	852137	44.65%	4.717%
12	14.086	1931	1938	1950	rBV	627741	971271	50.89%	5.377%
13	14.392	1984	1990	2002	rVB2	527563	828116	43.39%	4.584%
14	14.621	2025	2029	2053	rBV	117000	309609	16.22%	1.714%
15	15.386	2151	2159	2173	rBV	877298	1285448	67.35%	7.116%
16	15.521	2178	2182	2197	rBV	220103	327640	17.17%	1.814%
17	17.145	2452	2458	2468	rBV2	739250	1090843	57.16%	6.039%
18	17.239	2468	2474	2487	rVV2	986810	1473041	77.18%	8.154%
19	19.539	2859	2865	2881	rBV2	1351927	1908549	100.00%	10.565%
20	21.333	3165	3170	3182	rBV	1133577	1582124	82.90%	8.758%
21	22.874	3428	3432	3439	rVB4	23575	38712	2.03%	0.214%
22	23.456	3524	3531	3545	rVB2	917863	1874765	98.23%	10.378%
23	23.603	3549	3556	3570	rVB2	693170	1391282	72.90%	7.702%
24	24.085	3634	3638	3645	rVB	34921	60510	3.17%	0.335%
25	24.832	3761	3765	3772	rVB2	34858	69510	3.64%	0.385%

Sum of corrected areas: 18064492

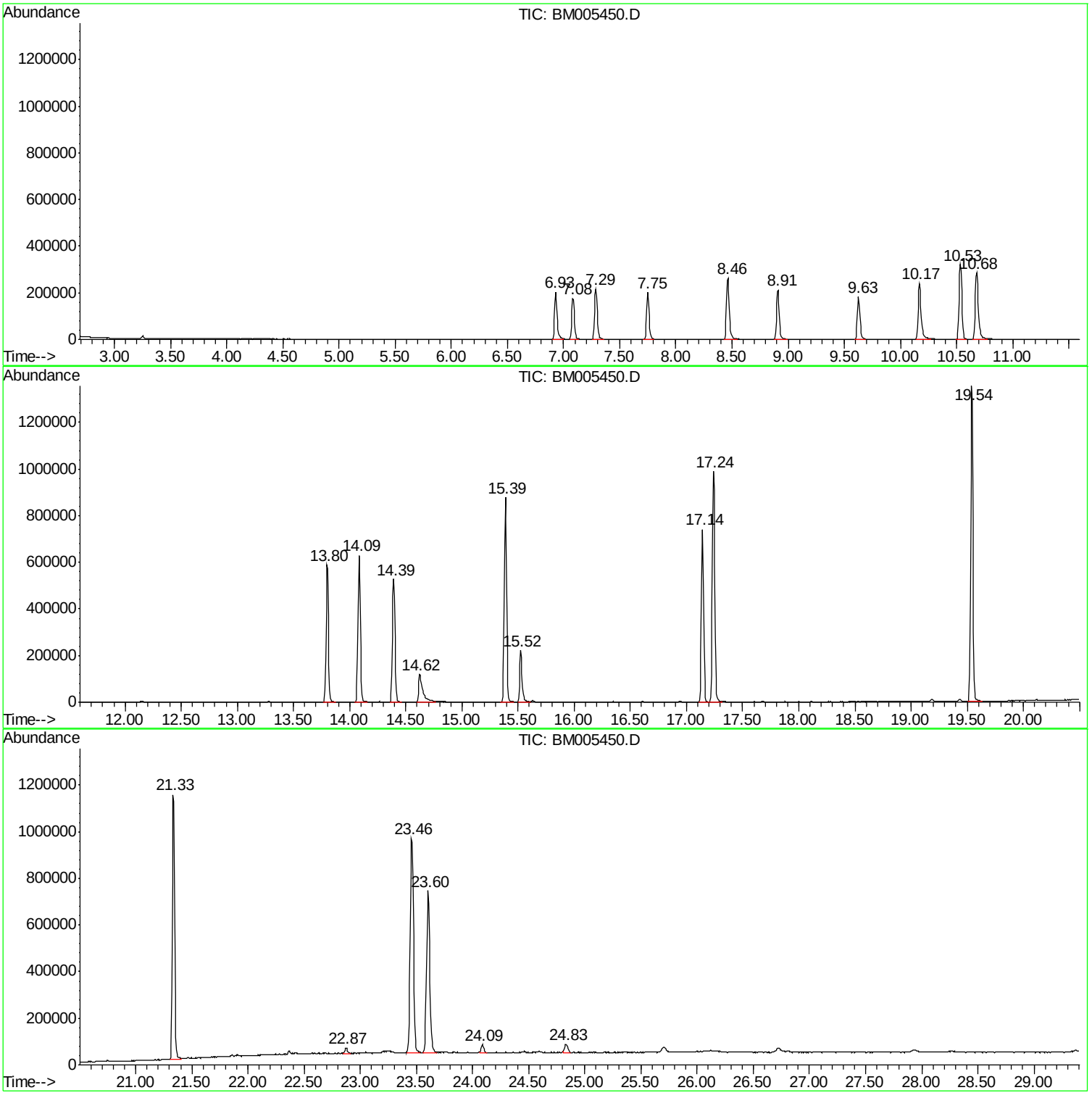
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005450.D
Acq On : 14 May 2016 05:09
Operator : UM/SJ
Sample : PB90330BL
Misc :
ALS Vial : 24 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK30

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005450.D
Acq On : 14 May 2016 05:09
Operator : UM/SJ
Sample : PB90330BL
Misc :
ALS Vial : 24 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SBLK30

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005450.D
Acq On : 14 May 2016 05:09
Operator : UM/SJ
Sample : PB90330BL
Misc :
ALS Vial : 24 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK30

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

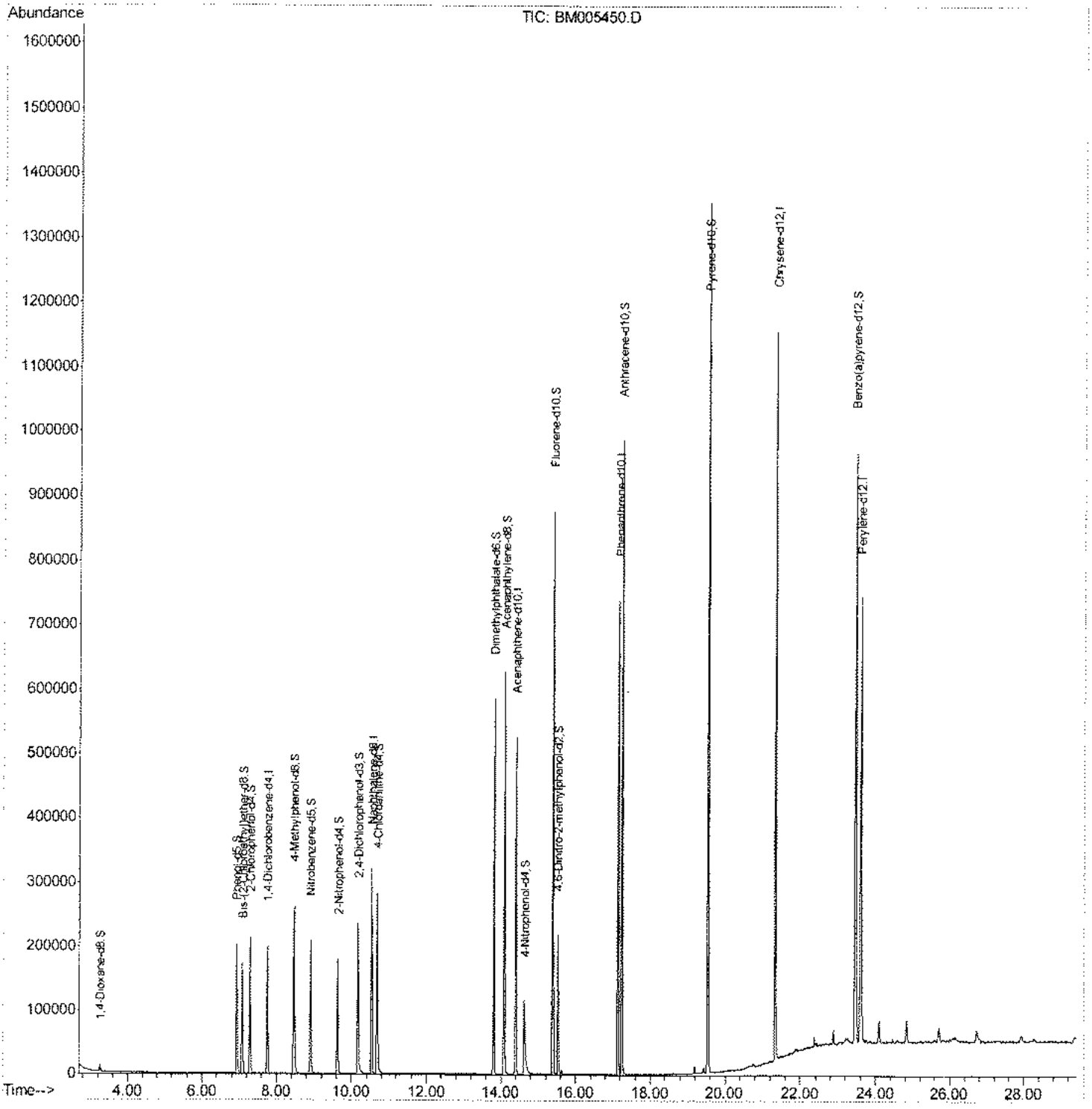
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005450.D
Acq On : 14 May 2016 05:09
Operator : UM/SJ
Sample : PB90330BL
Misc :
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 16 03:48:11 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SBLK30

Manual Integrations APPROVED
sohil
5/16/2016 7:01:38 PM



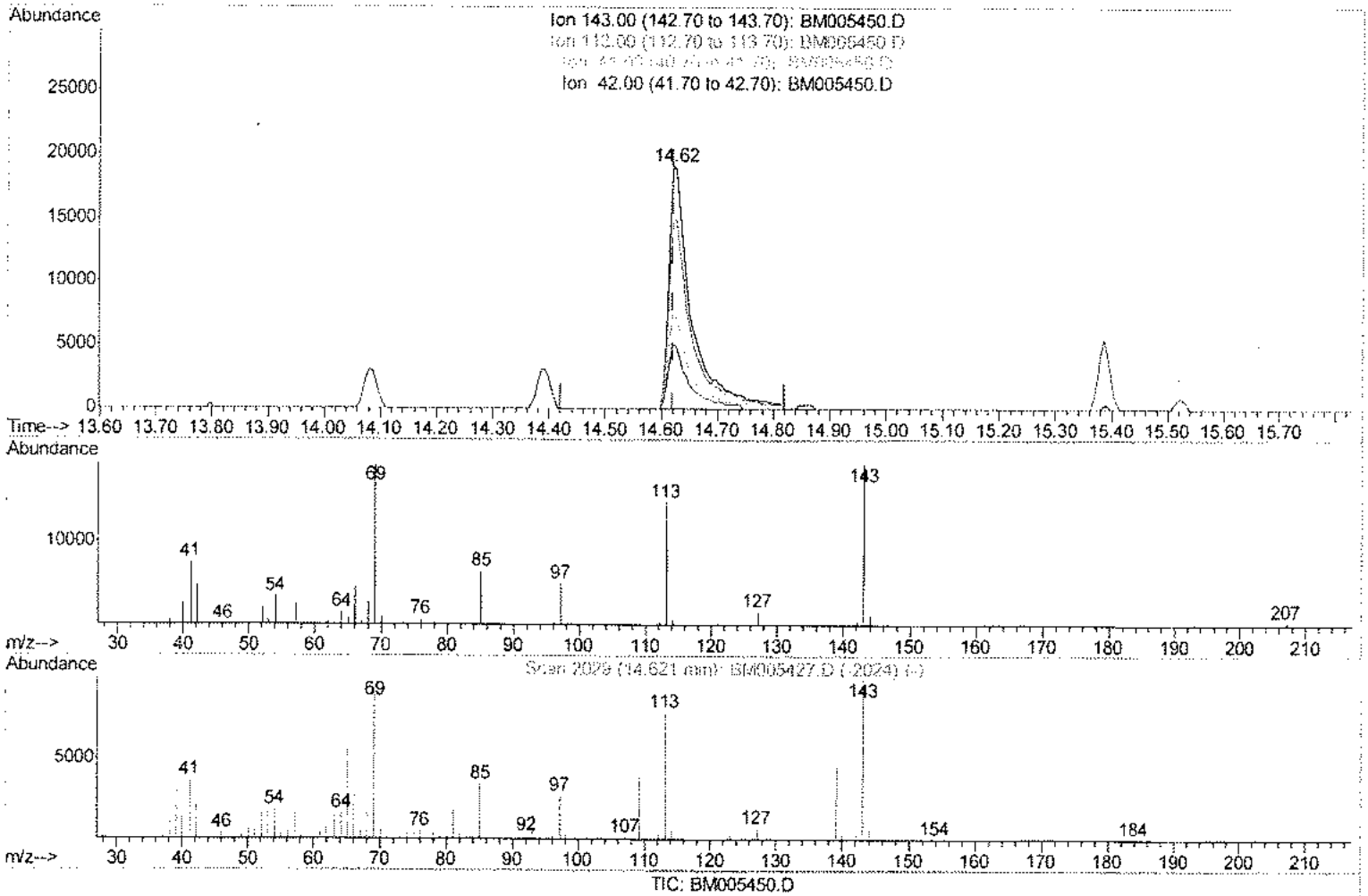
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005450.D
Acq On : 14 May 2016 05:09
Operator : UM/SJ
Sample : PB90330BL
Misc :
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 16 03:39:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SBLK30

Manual Integrations APPROVED
sohil
5/16/2016 7:01:38 PM



(51) 4-Nitrophenol-d4 (S)

14.621min (-0.000) 20.79ng/ul m

response 54248

> U.M 05/17/16

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	76.90
41.00	38.10	39.56
42.00	26.00	26.19

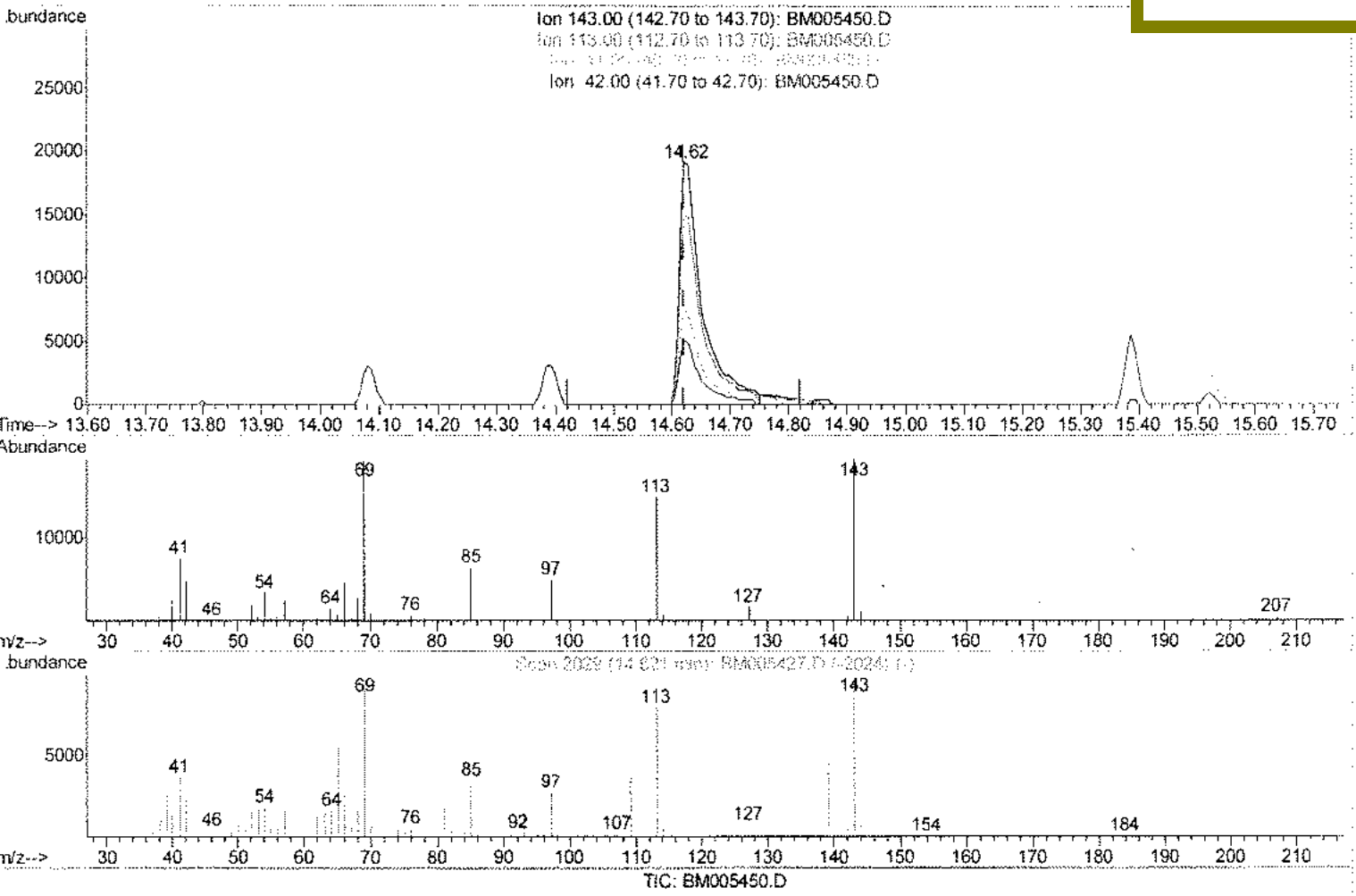
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005450.D
Acq On : 14 May 2016 05:09
Operator : UM/SJ
Sample : PB90330BL
Misc :
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 16 03:39:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SBLK30

Manual Integrations APPROVED
sohil
5/16/2016 7:01:38 PM



(51) 4-Nitrophenol-d4 (S)

14.621min (-0.000) 19.81ng/ul

response 51685

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	76.90
41.00	38.10	39.56
42.00	26.00	26.19

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005450.D
Acq On : 14 May 2016 05:09
Operator : UM/SJ
Sample : PB90330BL
Misc :
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 16 03:48:11 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SBLK30

Manual Integrations APPROVED
sohil
5/16/2016 7:01:38 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	57328	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	272738	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	178342	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	445752	20.00	ng/ul	0.00
75) Chrysene-d12	21.33	240	589547	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	522602	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	6741	5.53	ng/uL	0.00
5) Phenol-d5	6.93	99	129344	24.88	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	80175	27.03	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	104673	26.65	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	109071	25.38	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	53589	27.52	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	61062	27.70	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	101884	24.86	ng/ul	0.00
29) 4-Chloroaniline-d4	10.68	131	168619	34.19	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	404729	28.31	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	467924	27.91	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	54248m	20.79	ng/ul	0.00
57) Fluorene-d10	15.39	176	350633	28.41	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	51834	20.67	ng/ul	0.00
70) Anthracene-d10	17.24	188	578862	29.38	ng/ul	0.00
76) Pyrene-d10	19.54	212	718114	26.39	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	683493	29.55	ng/ul	0.00

U.M 05/17/16

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-02MS
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005452.D
% Solids :
Date Received : 05/03/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	6.3	J
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	23	
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	30	
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	24	
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-02MS
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005452.D
% Solids :
Date Received : 05/03/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	30	
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	4.7	J
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	32	
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	21	
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-02MS
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005452.D
% Solids :
Date Received : 05/03/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	28	
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

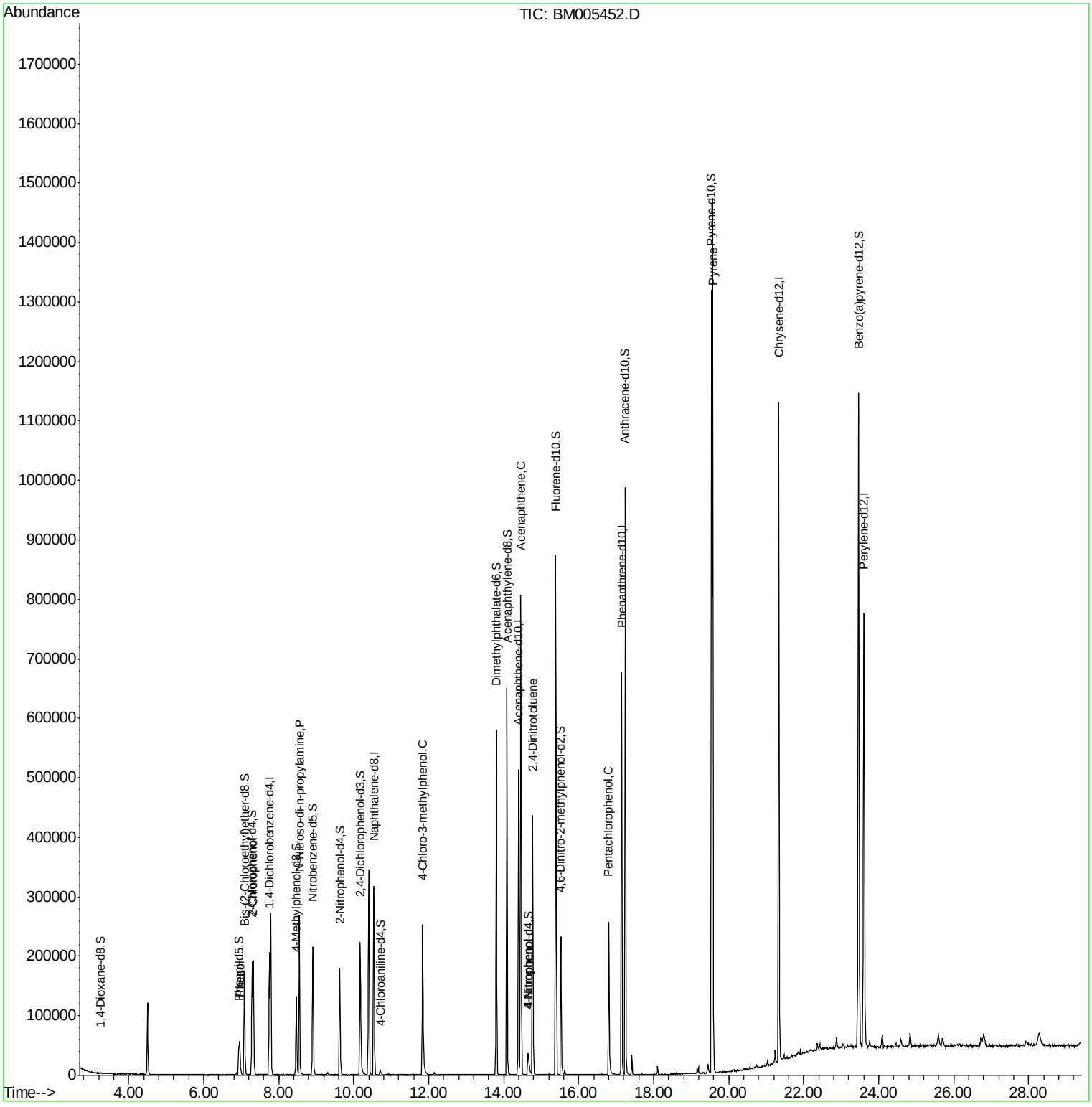
Quantitation Report (QT Reviewed)

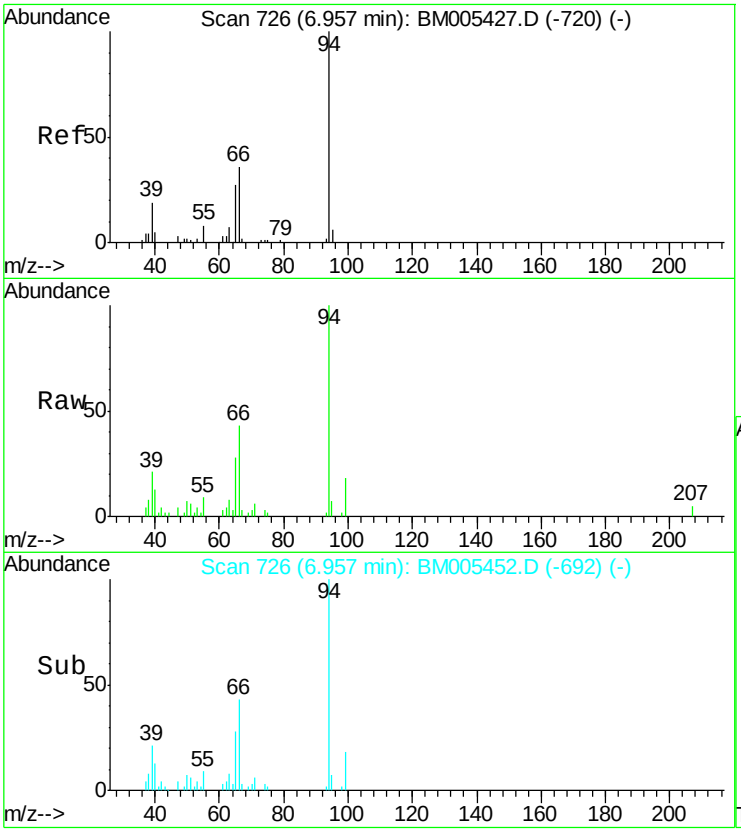
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005452.D
Acq On : 14 May 2016 06:21
Operator : UM/SJ
Sample : H2834-02MS
Misc :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: May 16 04:27:16 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002MS

Manual Integrations APPROVED
sohil
5/16/2016 7:01:43 PM

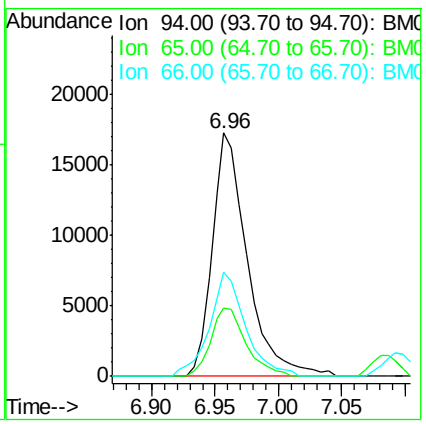




#6
Phenol
Concen: 6.30 ng/ul
RT: 6.96 min Scan# 726
Delta R.T. -0.00 min
Lab File: BM005452.D
Acq: 14 May 2016 06:21

Tgt Ion: 94 Resp: 33172

Ion	Ratio	Lower	Upper
94	100		
65	28.1	22.7	34.1
66	42.8	31.7	47.5



Instrument :
BNA_M
ClientSampleId :
H4002MS

Manual Integrations APPROVED
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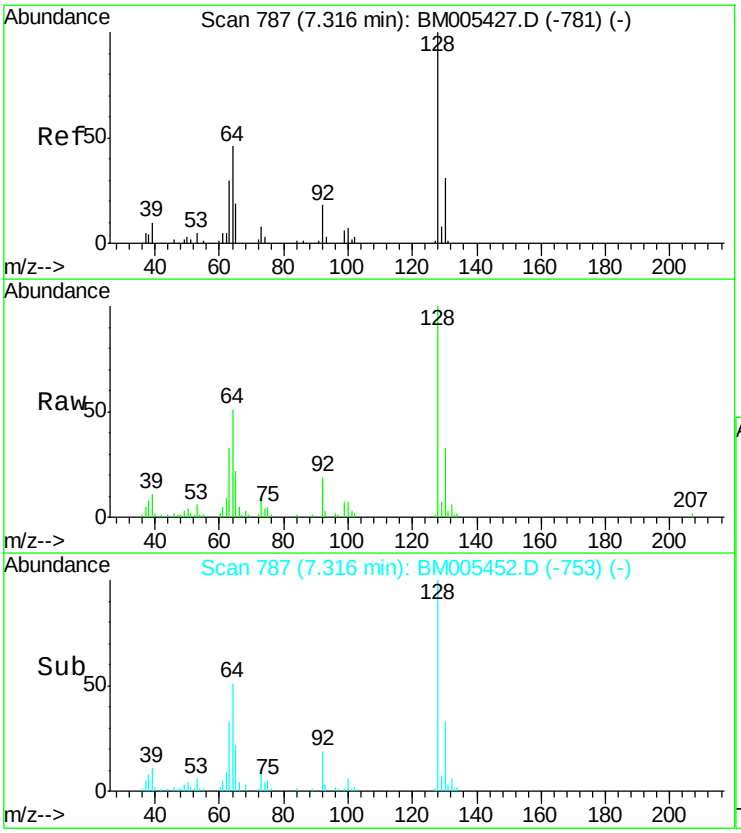
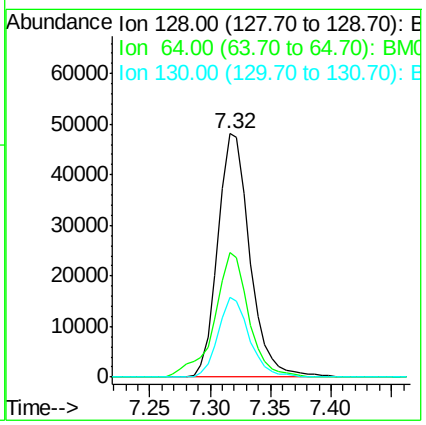
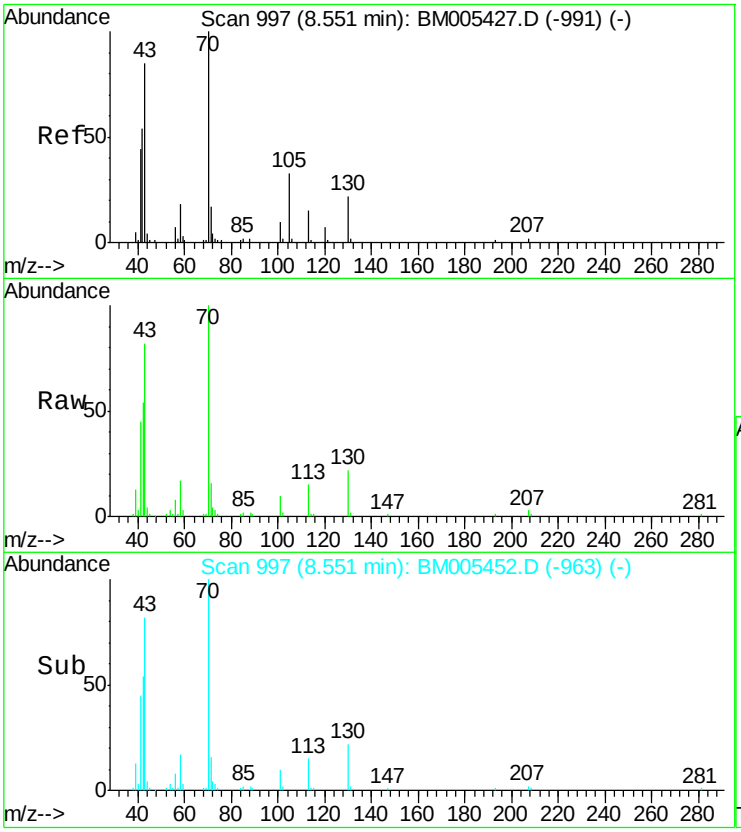


#10
2-Chlorophenol
Concen: 22.60 ng/ul
RT: 7.32 min Scan# 787
Delta R.T. -0.00 min
Lab File: BM005452.D
Acq: 14 May 2016 06:21

Tgt Ion:128 Resp: 88910

Ion	Ratio	Lower	Upper
128	100		
64	51.2	37.8	56.8
130	32.7	24.9	37.3

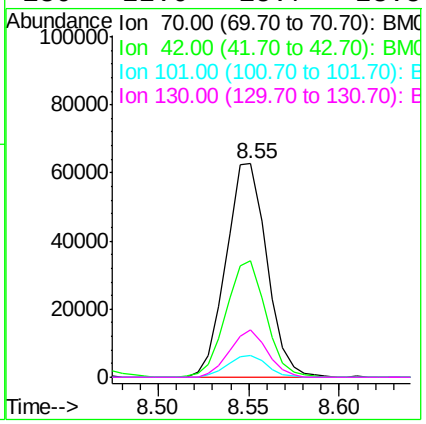




#15
N-Nitroso-di-n-propylamine
Concen: 30.08 ng/ul
RT: 8.55 min Scan# 997
Delta R.T. -0.00 min
Lab File: BM005452.D
Acq: 14 May 2016 06:21

Tgt Ion: 70 Resp: 97977

Ion	Ratio	Lower	Upper
70	100		
42	54.4	42.8	64.2
101	10.5	7.8	11.6
130	22.0	15.7	23.5



Instrument :
BNA_M
ClientSampleId :
H4002MS

Manual Integrations APPROVED
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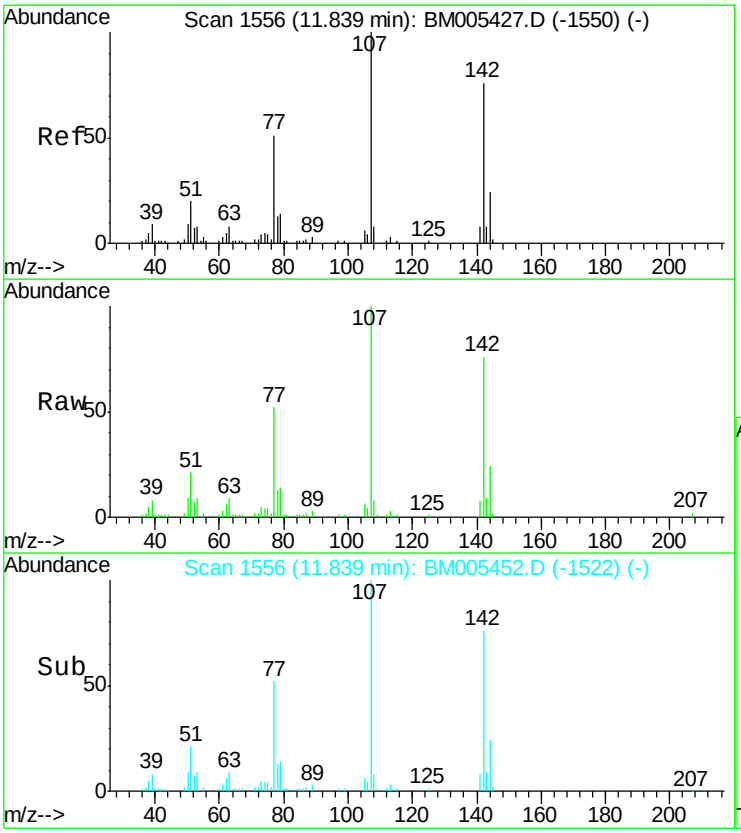
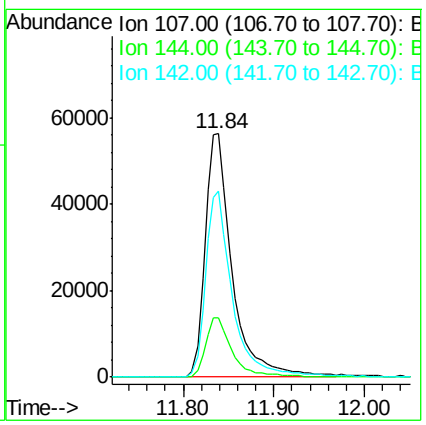
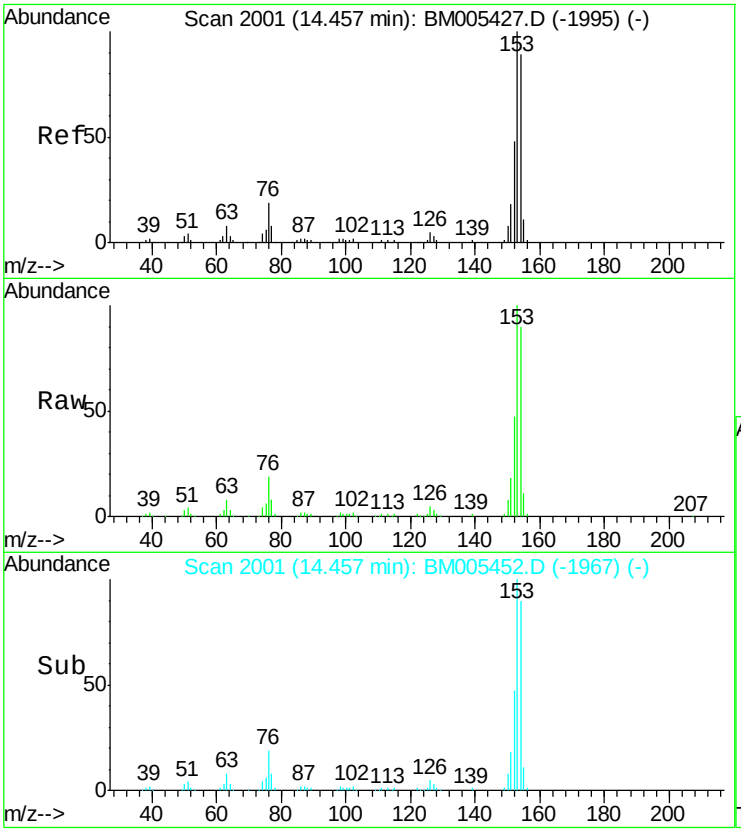


#33
4-Chloro-3-methylphenol
Concen: 24.26 ng/ul
RT: 11.84 min Scan# 1556
Delta R.T. -0.00 min
Lab File: BM005452.D
Acq: 14 May 2016 06:21

Tgt Ion:107 Resp: 117083

Ion	Ratio	Lower	Upper
107	100		
144	24.5	19.3	28.9
142	76.3	60.8	91.2

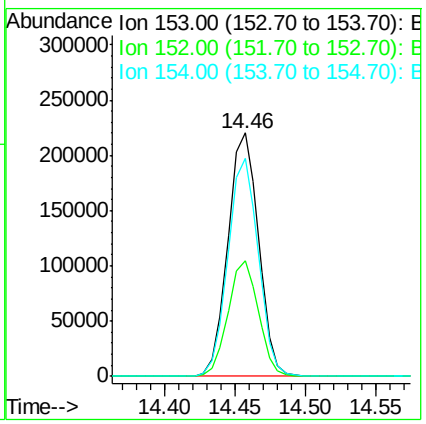




#49
Acenaphthene
Concen: 30.09 ng/ul
RT: 14.46 min Scan# 2001
Delta R.T. -0.00 min
Lab File: BM005452.D
Acq: 14 May 2016 06:21

Tgt Ion:153 Resp: 333704

Ion	Ratio	Lower	Upper
153	100		
152	47.3	38.9	58.3
154	89.7	70.3	105.5



Instrument :
BNA_M
ClientSampleId :
H4002MS

Manual Integrations APPROVED
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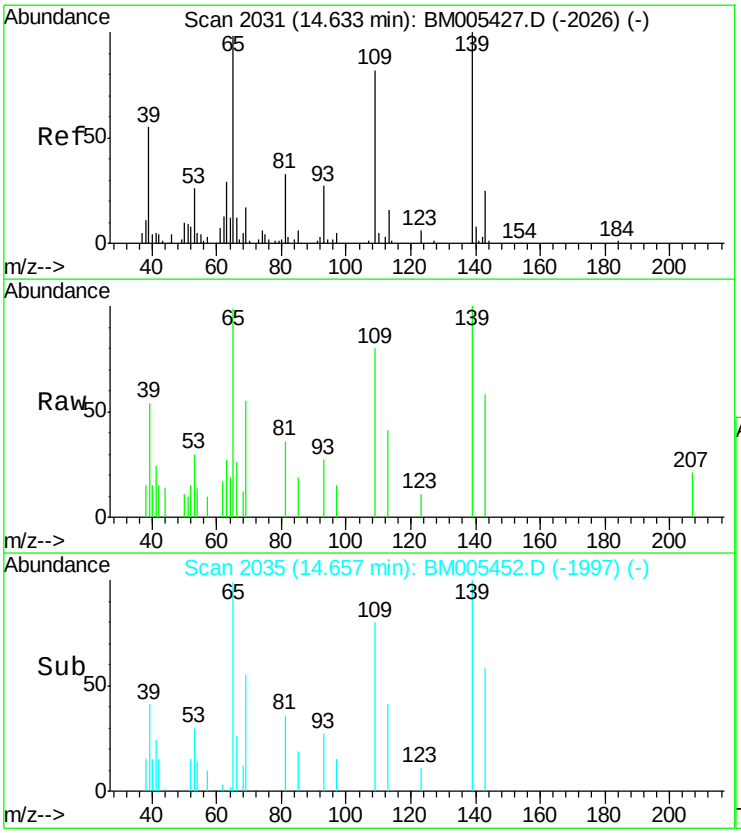
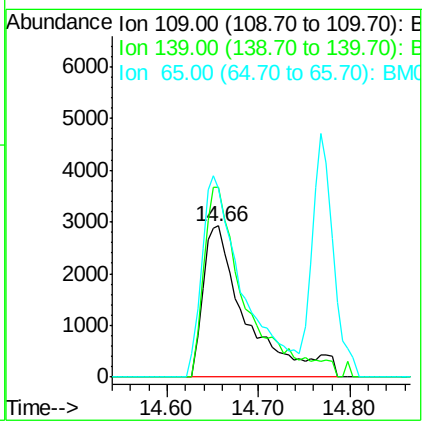
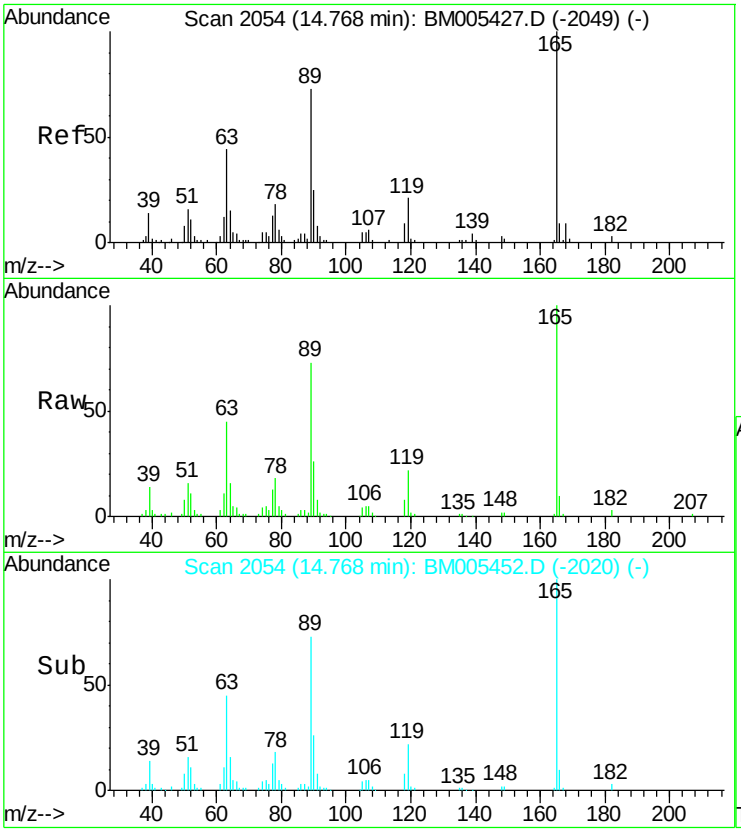


#52
4-Nitrophenol
Concen: 4.71 ng/ul m
RT: 14.66 min Scan# 2035
Delta R.T. 0.02 min
Lab File: BM005452.D
Acq: 14 May 2016 06:21

Tgt Ion:109 Resp: 9689

Ion	Ratio	Lower	Upper
109	100		
139	125.3	103.6	155.4
65	124.4	104.7	157.1

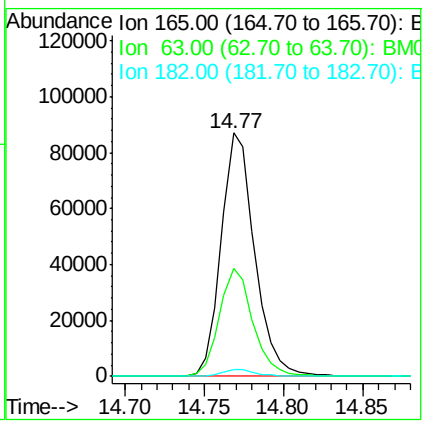




#54
2,4-Dinitrotoluene
Concen: 32.00 ng/ul
RT: 14.77 min Scan# 2054
Delta R.T. -0.00 min
Lab File: BM005452.D
Acq: 14 May 2016 06:21

Tgt Ion:165 Resp: 127484

Ion	Ratio	Lower	Upper
165	100		
63	44.5	36.2	54.4
182	3.0	2.5	3.7



Instrument :
BNA_M
ClientSampleId :
H4002MS

Manual Integrations APPROVED
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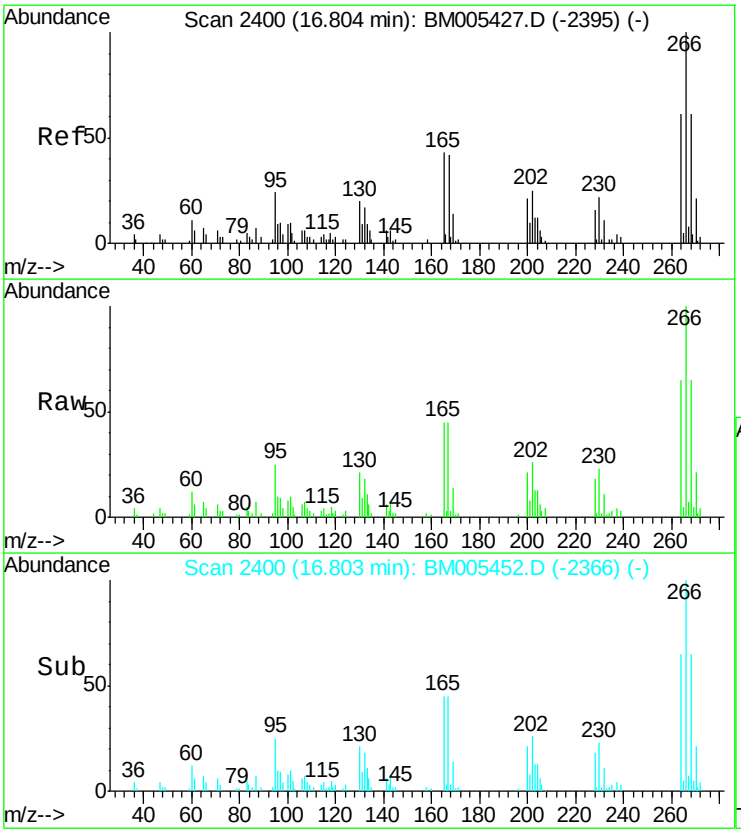
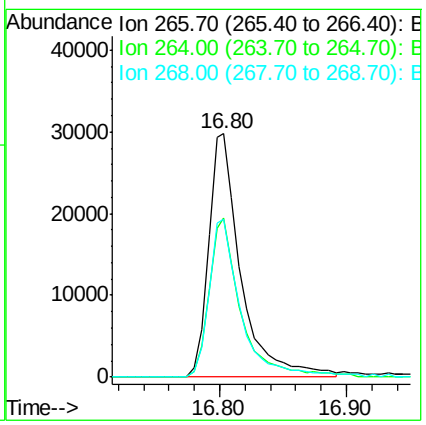
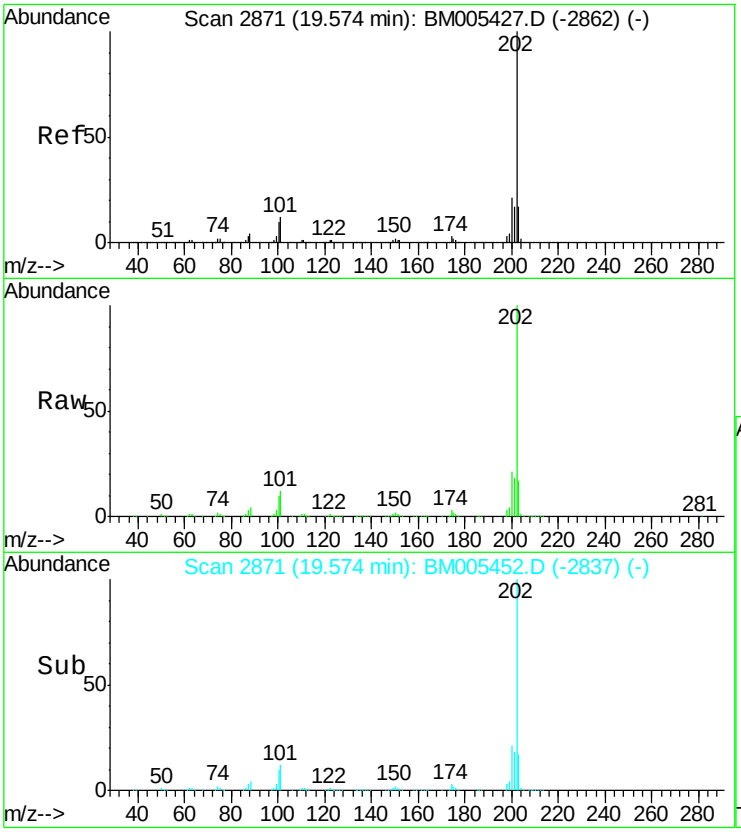


#68
Pentachlorophenol
Concen: 21.43 ng/ul
RT: 16.80 min Scan# 2400
Delta R.T. -0.00 min
Lab File: BM005452.D
Acq: 14 May 2016 06:21

Tgt Ion:266 Resp: 52638

Ion	Ratio	Lower	Upper
266	100		
264	65.4	52.0	78.0
268	64.9	53.0	79.6

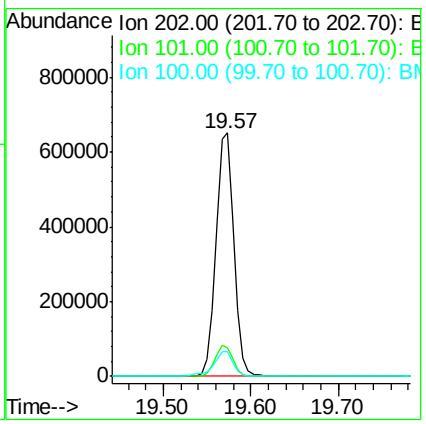




#77
Pyrene
Concen: 28.00 ng/ul
RT: 19.57 min Scan# 2871
Delta R.T. -0.00 min
Lab File: BM005452.D
Acq: 14 May 2016 06:21

Tgt Ion:202 Resp: 926016

Ion	Ratio	Lower	Upper
202	100		
101	11.7	10.8	16.2
100	10.1	8.4	12.6



Instrument :
BNA_M
ClientSampleId :
H4002MS

Manual Integrations APPROVED
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Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005452.D
Acq On : 14 May 2016 06:21
Operator : UM/SJ
Sample : H2834-02MS
Misc :
ALS Vial : 26 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4002MS

Manual Integrations APPROVED
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5/16/2016 7:01:43 PM

Quant Time: May 16 04:27:16 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	56135	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	261561	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	169167	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	411145	20.00	ng/ul	0.00
75) Chrysene-d12	21.33	240	570201	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	566295	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1504	1.26	ng/uL	0.00
5) Phenol-d5	6.93	99	29335	5.76	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	79841	27.49	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	86476	22.49	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	54253	12.89	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	54532	29.20	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	61154	28.92	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	100469	25.57	ng/ul	0.00
29) 4-Chloroaniline-d4	10.71	131	8692	1.84	ng/ul	0.03
43) Dimethylphthalate-d6	13.80	166	401936	29.64	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	469919	29.55	ng/ul	0.00
51) 4-Nitrophenol-d4	14.64	143	9655m	3.90	ng/ul	0.02
57) Fluorene-d10	15.39	176	345481	29.51	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	54354	23.50	ng/ul	0.00
70) Anthracene-d10	17.24	188	571164	31.43	ng/ul	0.00
76) Pyrene-d10	19.54	212	720107	27.36	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	779805	31.11	ng/ul	0.00
Target Compounds						Qvalue
6) Phenol	6.96	94	33172	6.30	ng/ul	97
10) 2-Chlorophenol	7.32	128	88910	22.60	ng/ul	95
15) N-Nitroso-di-n-propylamine	8.55	70	97977	30.08	ng/ul	98
33) 4-Chloro-3-methylphenol	11.84	107	117083	24.26	ng/ul	100
49) Acenaphthene	14.46	153	333704	30.09	ng/ul	98
52) 4-Nitrophenol	14.66	109	9689m	4.71	ng/ul	
54) 2,4-Dinitrotoluene	14.77	165	127484	32.00	ng/ul	99
68) Pentachlorophenol	16.80	266	52638	21.43	ng/ul	99
77) Pyrene	19.57	202	926016	28.00	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005452.D
Acq On : 14 May 2016 06:21
Operator : UM/SJ
Sample : H2834-02MS
Misc :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: May 16 04:27:16 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002MS

Manual Integrations APPROVED
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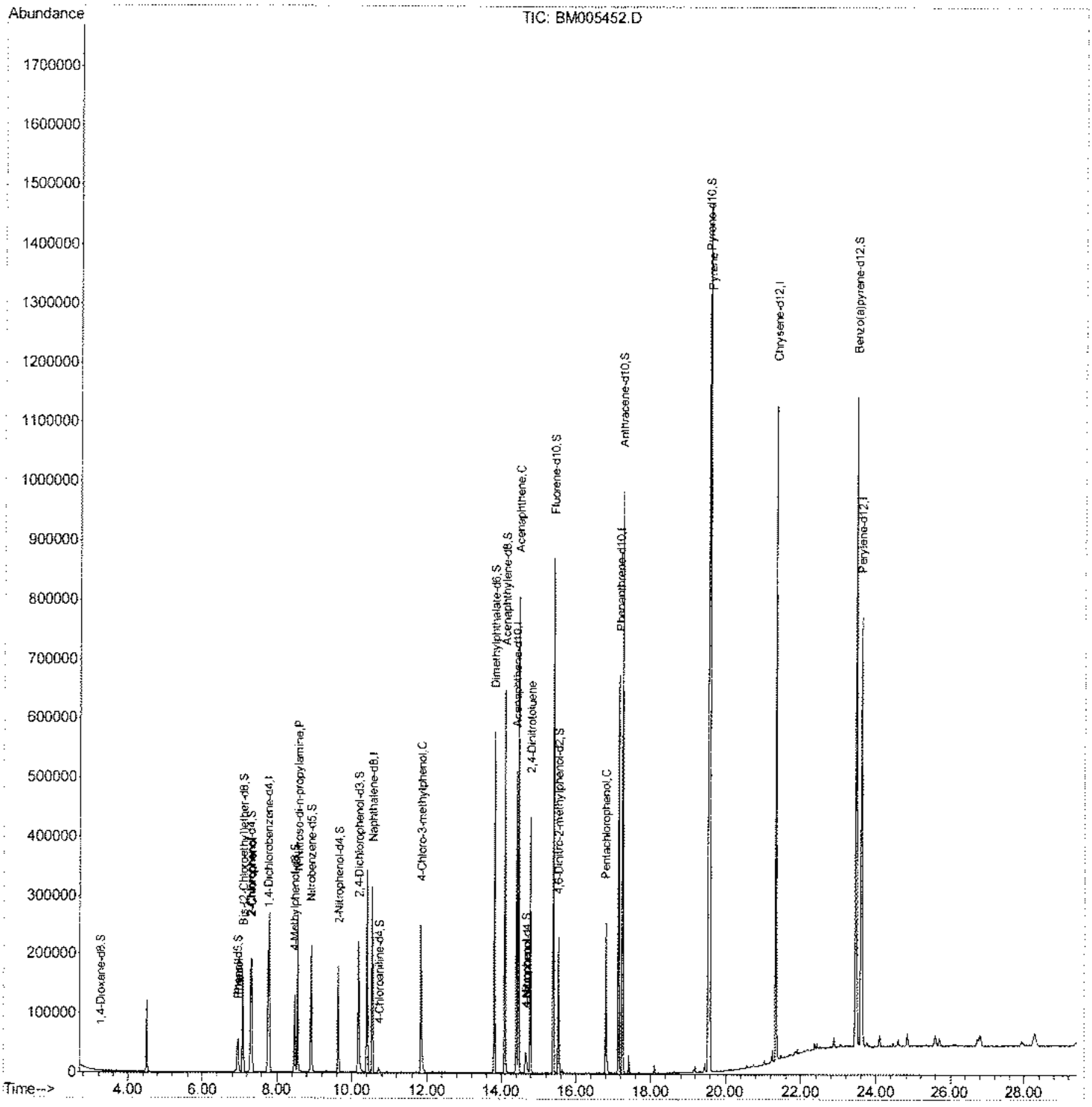
5/16/2016 7:01:43 PM



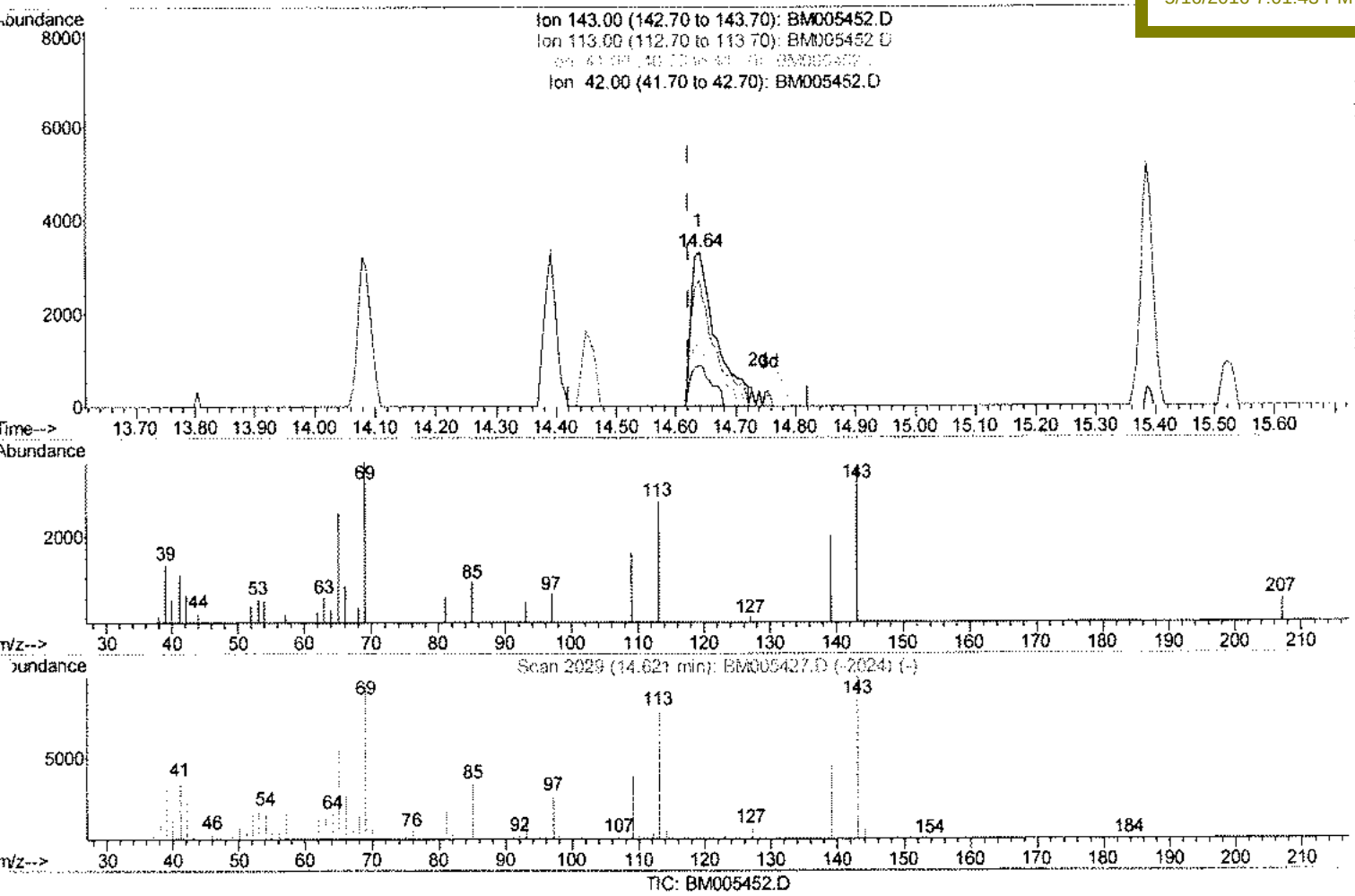
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005452.D
Acq On : 14 May 2016 06:21
Operator : UM/SJ
Sample : H2834-02MS
Misc :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: May 16 04:26:07 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002MS

Manual Integrations APPROVED
sohil
5/16/2016 7:01:43 PM



TIC: BM005452.D

(51) 4-Nitrophenol-d4 (S)

14.639min (+0.017) 3.84ng/ul

response 9517

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	81.27
41.00	38.10	37.90
42.00	26.00	26.33

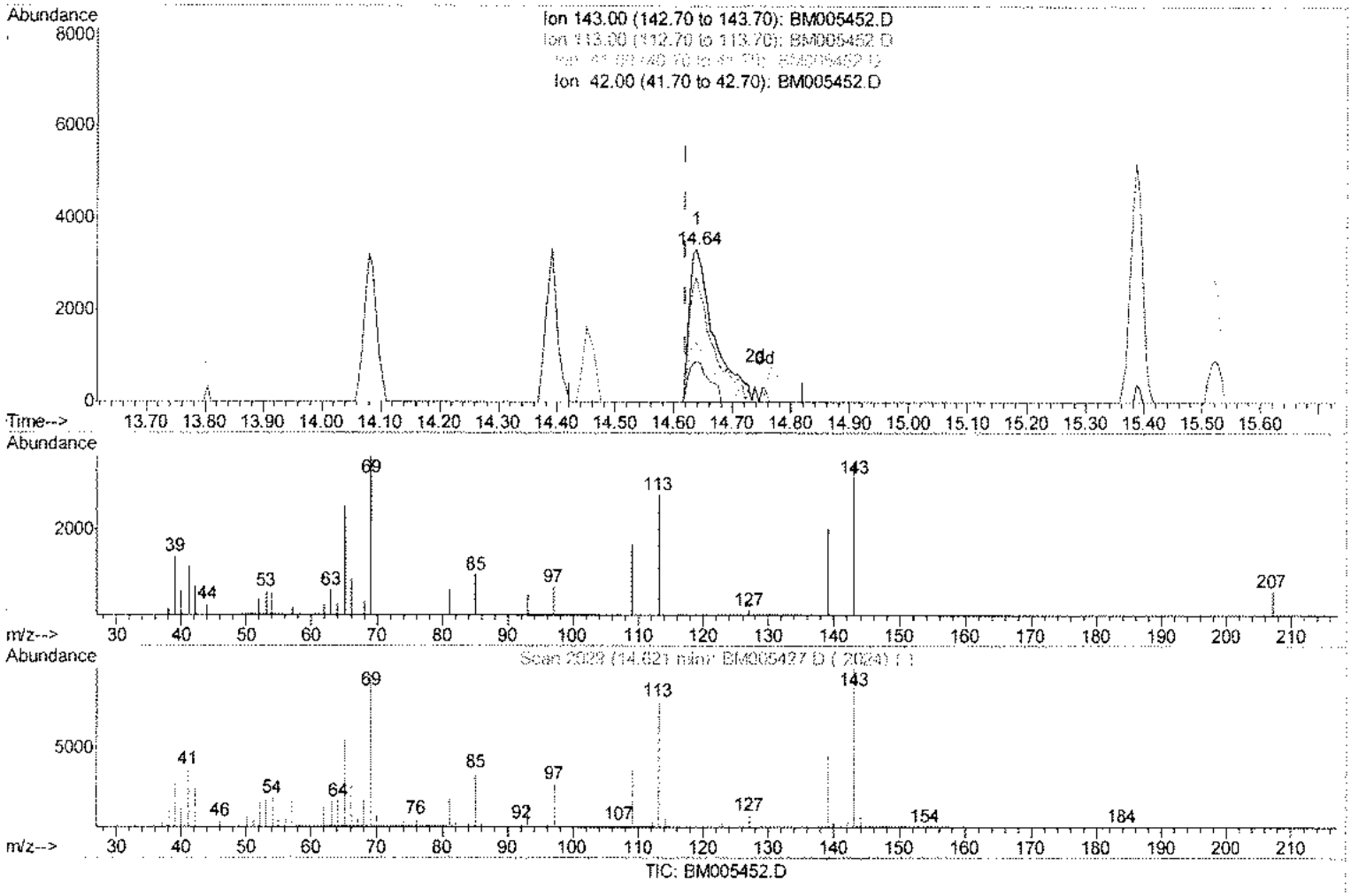
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005452.D
Acq On : 14 May 2016 06:21
Operator : UM/SJ
Sample : H2834-02MS
Misc :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: May 16 04:26:07 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002MS

Manual Integrations APPROVED
sohil
5/16/2016 7:01:43 PM



(51) 4-Nitrophenol-d4 (S)

14.639min (+0.017) 3.90ng/ul m

response 9655

U.M 05/17/16

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	81.27
41.00	38.10	37.90
42.00	26.00	26.33

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005452.D
Acq On : 14 May 2016 06:21
Operator : UM/SJ
Sample : H2834-02MS
Misc :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: May 16 04:26:07 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002MS

Manual Integrations APPROVED
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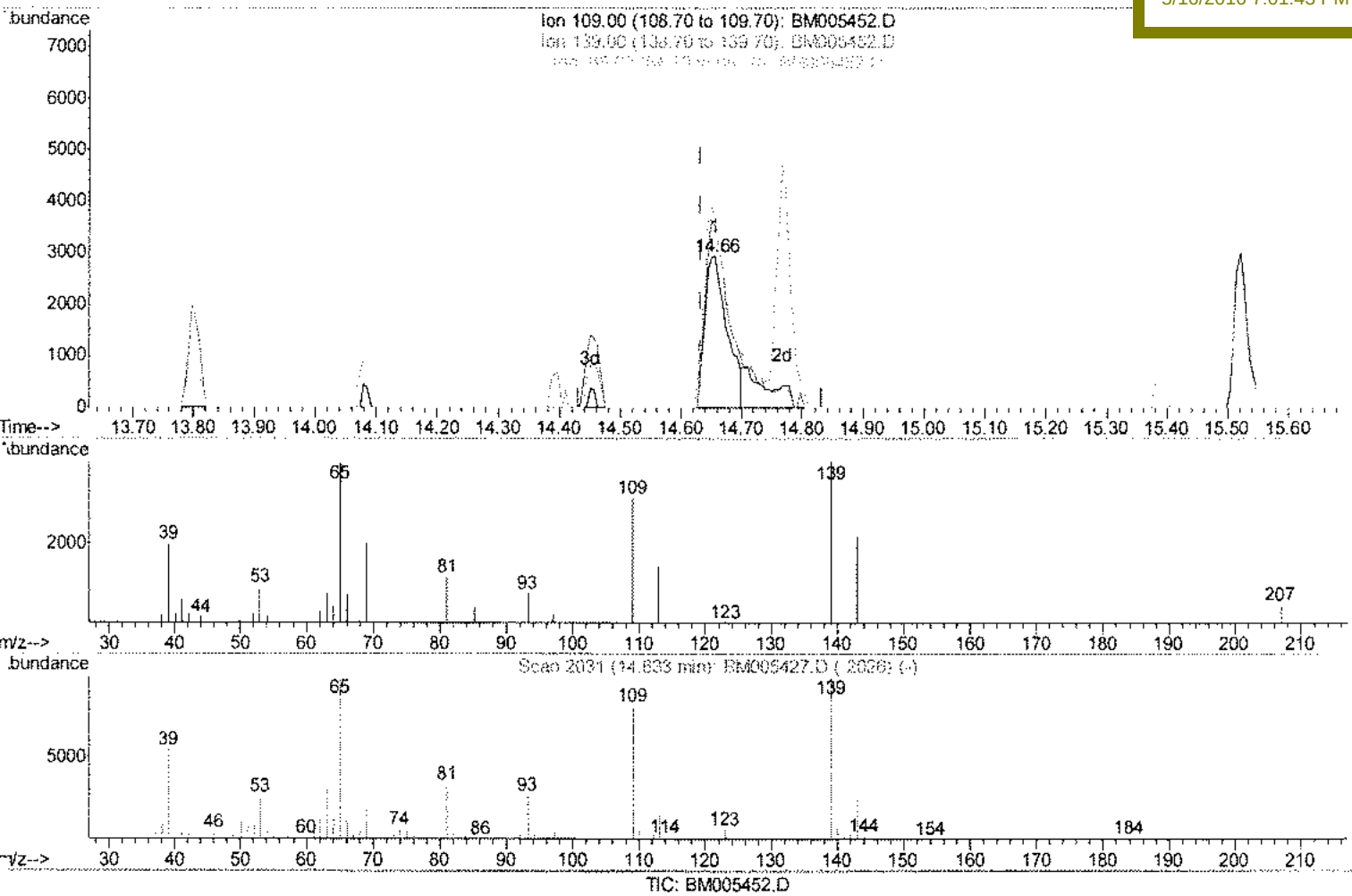
5/16/2016 7:01:43 PM



TIC: BM005452.D

(52) 4-Nitrophenol

14.657min (+0.023) 3.60ng/ul

response 7408

Ion	Exp%	Act%
109.00	100	100
139.00	129.50	125.28
65.00	130.90	124.36
0.00	0.00	0.00

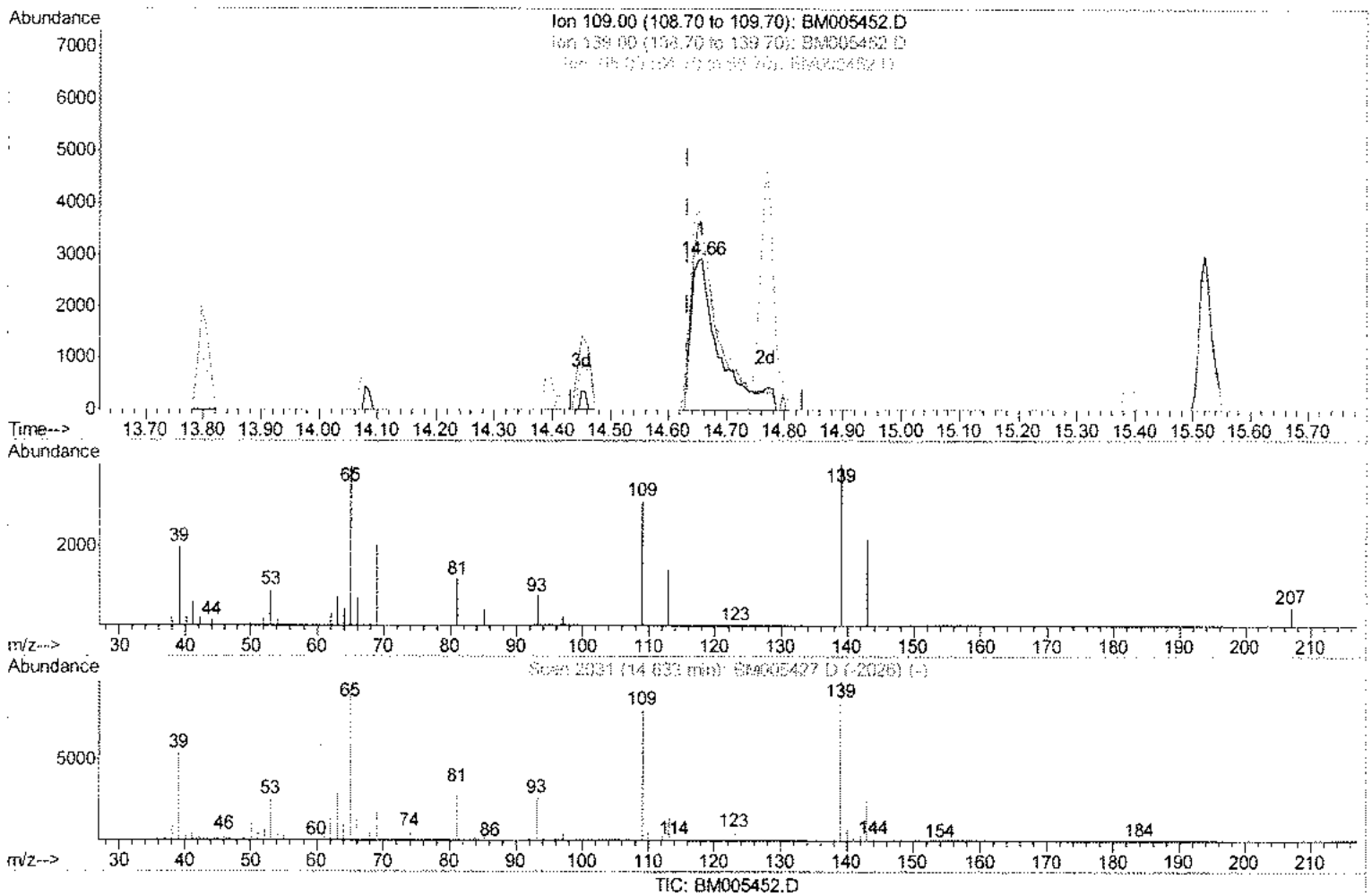
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005452.D
Acq On : 14 May 2016 06:21
Operator : UM/SJ
Sample : H2834-02MS
Misc :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: May 16 04:26:07 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002MS

Manual Integrations APPROVED
sohil
5/16/2016 7:01:43 PM



(52) 4-Nitrophenol

14.657min (+0.023) 4.71ng/ul m > U.M 05/17/16

response 9689

Ion	Exp%	Act%
109.00	100	100
139.00	129.50	125.28
65.00	130.90	124.36
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005452.D
Acq On : 14 May 2016 06:21
Operator : UM/SJ
Sample : H2834-02MS
Misc :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: May 16 04:27:16 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4002MS

Manual Integrations APPROVED
sohil
5/16/2016 7:01:43 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	56135	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	261561	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	169167	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	411145	20.00	ng/ul	0.00
75) Chrysene-d12	21.33	240	570201	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	566295	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1504	1.26	ng/uL	0.00
5) Phenol-d5	6.93	99	29335	5.76	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	79841	27.49	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	86476	22.49	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	54253	12.89	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	54532	29.20	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	61154	28.92	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	100469	25.57	ng/ul	0.00
29) 4-Chloroaniline-d4	10.71	131	8692	1.84	ng/ul	0.03
43) Dimethylphthalate-d6	13.80	166	401936	29.64	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	469919	29.55	ng/ul	0.00
51) 4-Nitrophenol-d4	14.64	143	9655m	3.90	ng/ul	0.02
57) Fluorene-d10	15.39	176	345481	29.51	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	54354	23.50	ng/ul	0.00
70) Anthracene-d10	17.24	188	571164	31.43	ng/ul	0.00
76) Pyrene-d10	19.54	212	720107	27.36	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	779805	31.11	ng/ul	0.00
Target Compounds						Qvalue
6) Phenol	6.96	94	33172	6.30	ng/ul	97
10) 2-Chlorophenol	7.32	128	88910	22.60	ng/ul	95
15) N-Nitroso-di-n-propylamine	8.55	70	97977	30.08	ng/ul	98
33) 4-Chloro-3-methylphenol	11.84	107	117083	24.26	ng/ul	100
49) Acenaphthene	14.46	153	333704	30.09	ng/ul	98
52) 4-Nitrophenol	14.66	109	9689m	4.71	ng/ul	
54) 2,4-Dinitrotoluene	14.77	165	127484	32.00	ng/ul	99
68) Pentachlorophenol	16.80	266	52638	21.43	ng/ul	99
77) Pyrene	19.57	202	926016	28.00	ng/ul	97

U.M 05/17/16

U.M 05/17/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-14MS
Sample wt/vol : 30.03 (g/mL): g
Lab File ID : BM005459.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	100	U
100-52-7	Benzaldehyde	520	U
108-95-2	Phenol	1000	
111-44-4	Bis(2-Chloroethyl)ether	520	U
95-57-8	2-Chlorophenol	1000	
95-48-7	2-Methylphenol	520	U
108-60-1	2,2-oxybis(1-Chloropropane)	520	U
98-86-2	Acetophenone	62	J
106-44-5	4-Methylphenol	520	U
621-64-7	N-Nitroso-di-n-propylamine	1200	
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-Chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	270	U
106-47-8	4-Chloroaniline	520	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	520	U
59-50-7	4-Chloro-3-methylphenol	1100	
91-57-6	2-Methylnaphthalene	270	U
77-47-4	Hexachlorocyclopentadiene	520	U
88-06-2	2,4,6-Trichlorophenol	270	U

FORM 1A-OR
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H4061MS

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Lab File ID : BM005459.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1-Biphenyl	270	U
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	270	U
131-11-3	Dimethylphthalate	360	
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	270	U
99-09-2	3-Nitroaniline	520	U
83-32-9	Acenaphthene	1100	
51-28-5	2,4-Dinitrophenol	520	U
100-02-7	4-Nitrophenol	870	
132-64-9	Dibenzofuran	270	U
121-14-2	2,4-Dinitrotoluene	1100	
84-66-2	Diethylphthalate	270	U
86-73-7	Fluorene	270	U
7005-72-3	4-Chlorophenyl-phenylether	270	U
100-01-6	4-Nitroaniline	520	U
534-52-1	4,6-Dinitro-2-methylphenol	520	U
86-30-6	N-Nitrosodiphenylamine	270	U
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U
101-55-3	4-Bromophenyl-phenylether	270	U
118-74-1	Hexachlorobenzene	270	U
1912-24-9	Atrazine	520	U
87-86-5	Pentachlorophenol	950	
85-01-8	Phenanthrene	270	U

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ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061MS

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Date Received : 05/04/2016
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Date Extracted : 05/05/2016
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Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	270	U
86-74-8	Carbazole	520	U
84-74-2	Di-n-butylphthalate	270	U
206-44-0	Fluoranthene	270	U
129-00-0	Pyrene	1100	
85-68-7	Butylbenzylphthalate	270	U
91-94-1	3,3-Dichlorobenzidine	520	U
56-55-3	Benzo(a)anthracene	270	U
218-01-9	Chrysene	270	U
117-81-7	Bis(2-ethylhexyl)phthalate	270	U
117-84-0	Di-n-octyl phthalate	520	U
205-99-2	Benzo(b)fluoranthene	270	U
207-08-9	Benzo(k)fluoranthene	270	U
50-32-8	Benzo(a)pyrene	270	U
193-39-5	Indeno(1,2,3-cd)pyrene	270	U
53-70-3	Dibenzo(a,h)anthracene	270	U
191-24-2	Benzo(g,h,i)perylene	270	U
58-90-2	2,3,4,6-Tetrachlorophenol	270	U

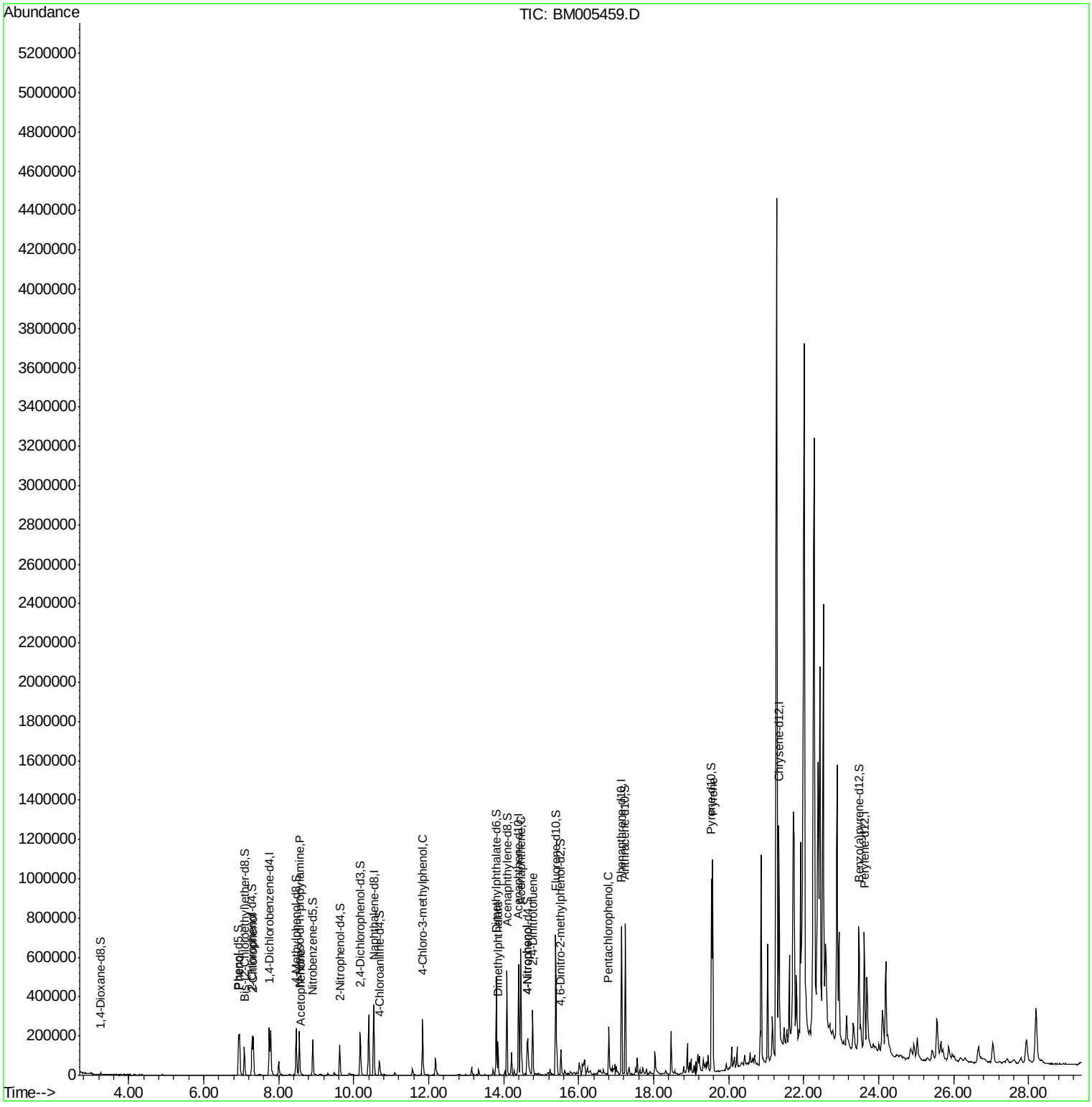
Quantitation Report (QT Reviewed)

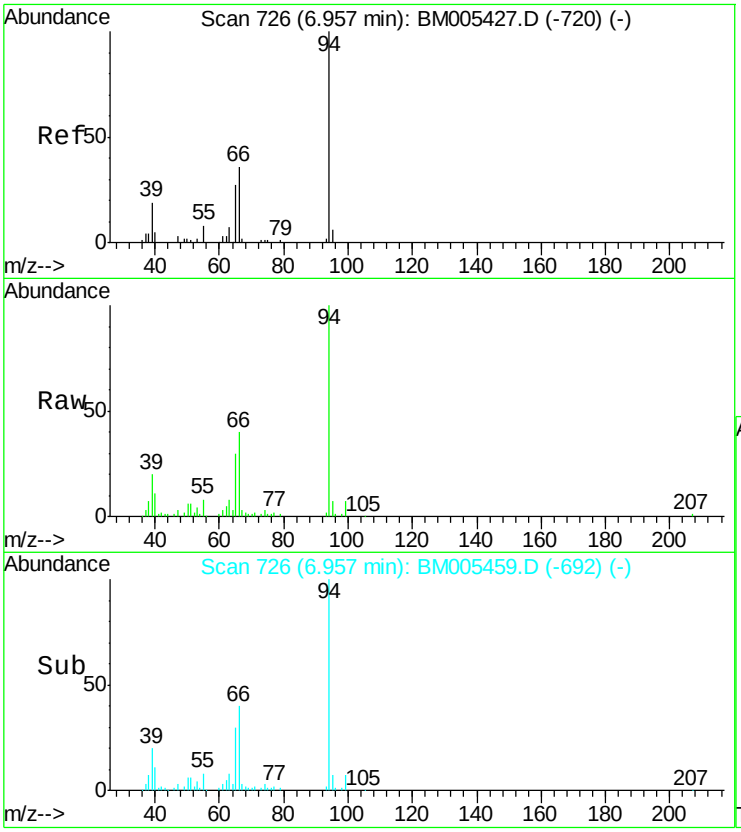
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005459.D
Acq On : 14 May 2016 10:36
Operator : UM/SJ
Sample : H2834-14MS
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 16 04:12:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MS

Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM

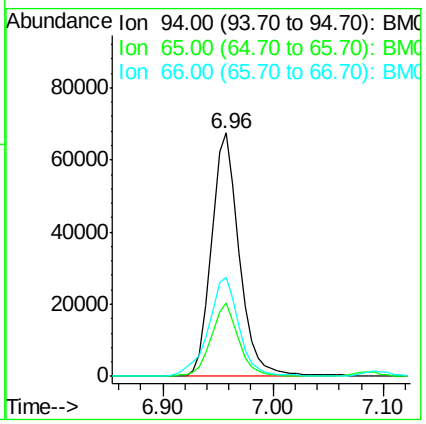




#6
Phenol
Concen: 19.74 ng/ul
RT: 6.96 min Scan# 726
Delta R.T. -0.00 min
Lab File: BM005459.D
Acq: 14 May 2016 10:36

Tgt Ion: 94 Resp: 117588

Ion	Ratio	Lower	Upper
94	100		
65	30.1	22.7	34.1
66	40.5	31.7	47.5



Instrument :
BNA_M
ClientSampleId :
H4061MS

Manual Integrations APPROVED
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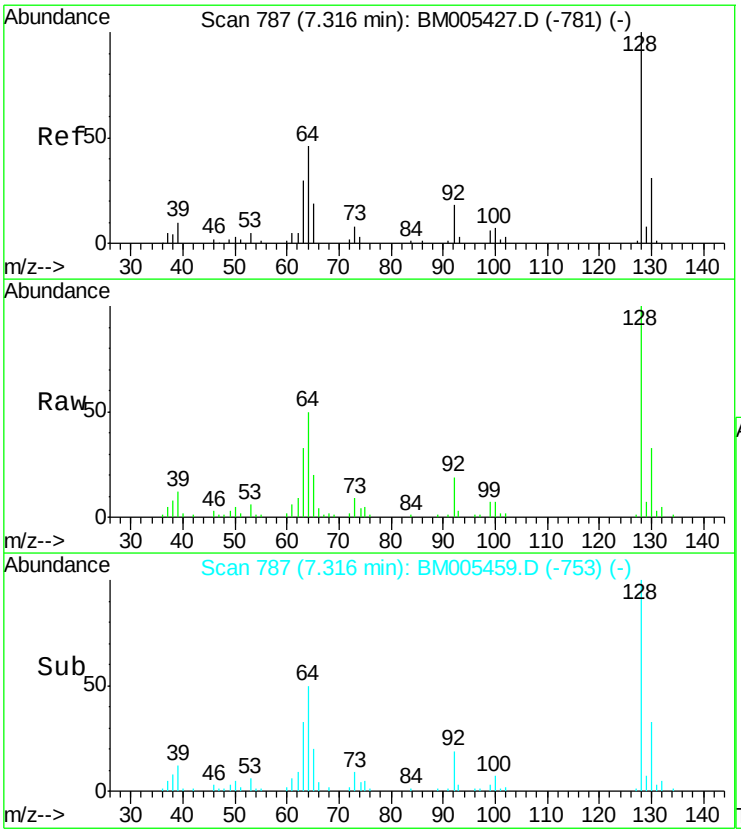
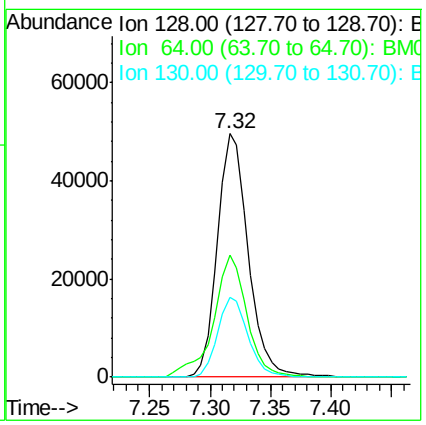
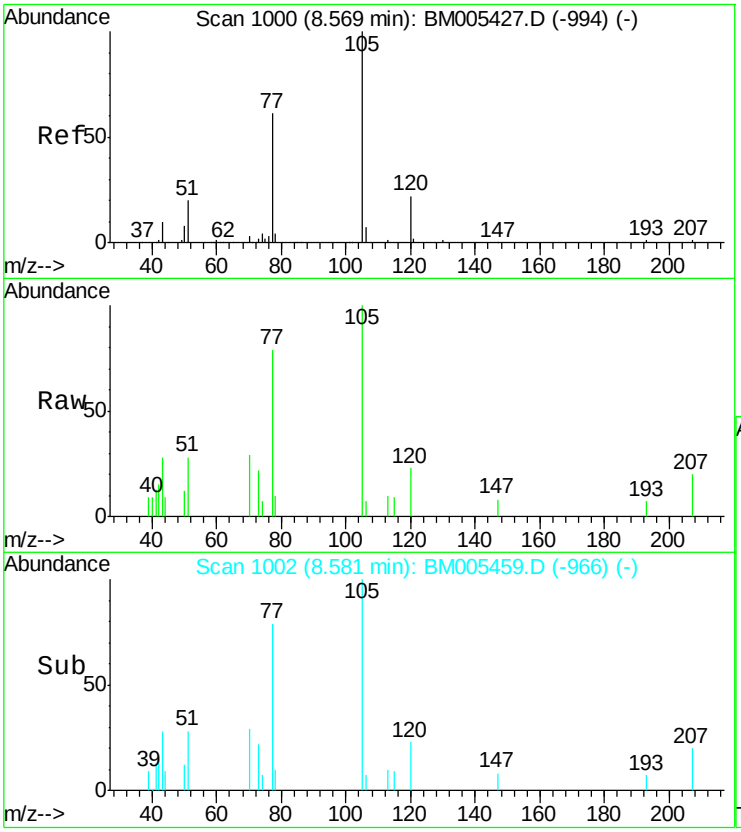


#10
2-Chlorophenol
Concen: 19.75 ng/ul
RT: 7.32 min Scan# 787
Delta R.T. -0.00 min
Lab File: BM005459.D
Acq: 14 May 2016 10:36

Tgt Ion:128 Resp: 87966

Ion	Ratio	Lower	Upper
128	100		
64	50.0	37.8	56.8
130	32.8	24.9	37.3

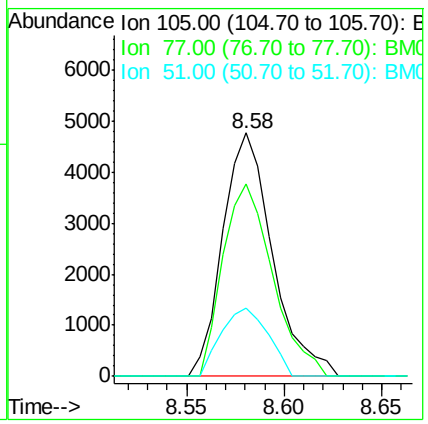




#14
Acetophenone
Concen: 1.19 ng/ul
RT: 8.58 min Scan# 1002
Delta R.T. 0.01 min
Lab File: BM005459.D
Acq: 14 May 2016 10:36

Tgt Ion:105 Resp: 8430

Ion	Ratio	Lower	Upper
105	100		
77	78.9	61.2	91.8
51	28.2	21.2	31.8



Instrument :
BNA_M
ClientSampleId :
H4061MS

Manual Integrations APPROVED
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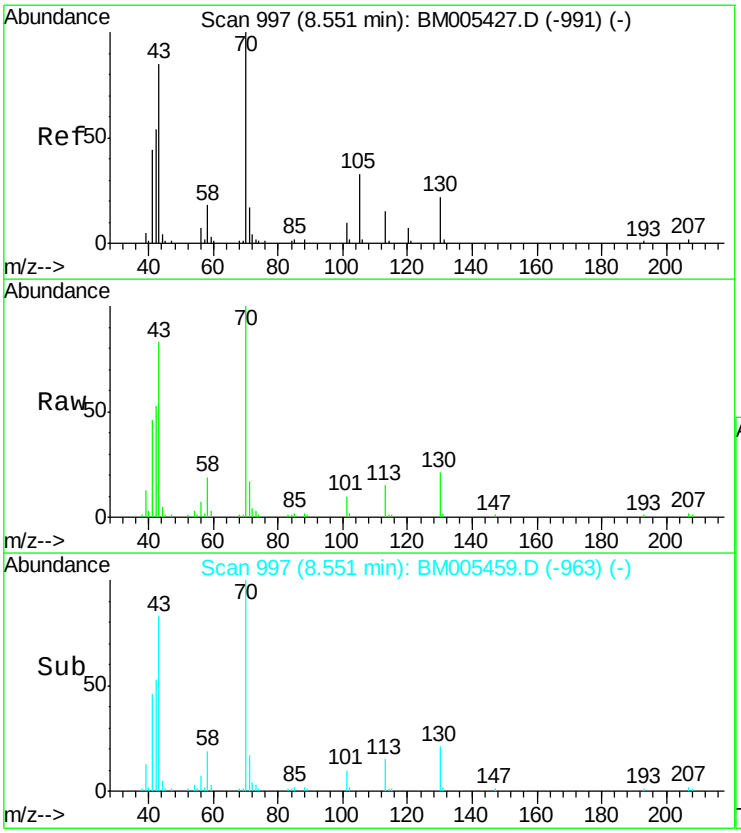
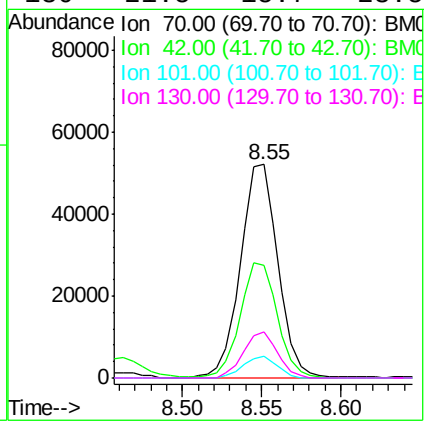
5/16/2016 7:02:02 PM

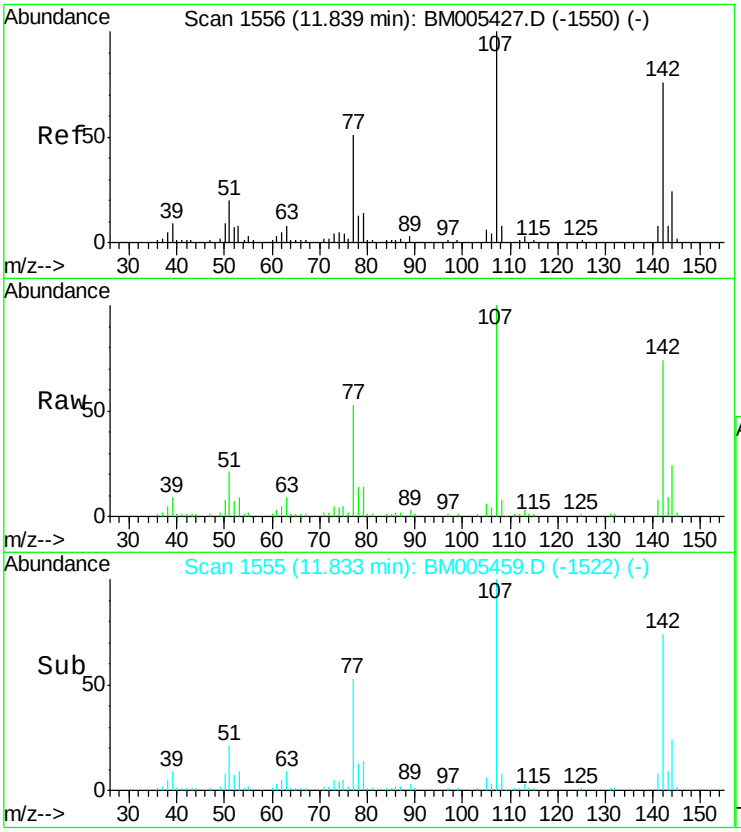


#15
N-Nitroso-di-n-propylamine
Concen: 23.28 ng/ul
RT: 8.55 min Scan# 997
Delta R.T. -0.00 min
Lab File: BM005459.D
Acq: 14 May 2016 10:36

Tgt Ion: 70 Resp: 85877

Ion	Ratio	Lower	Upper
70	100		
42	53.0	42.8	64.2
101	9.9	7.8	11.6
130	21.5	15.7	23.5

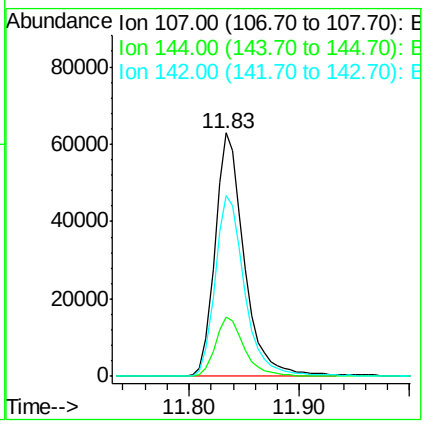




#33
4-Chloro-3-methylphenol
Concen: 21.10 ng/ul
RT: 11.83 min Scan# 1555
Delta R.T. -0.01 min
Lab File: BM005459.D
Acq: 14 May 2016 10:36

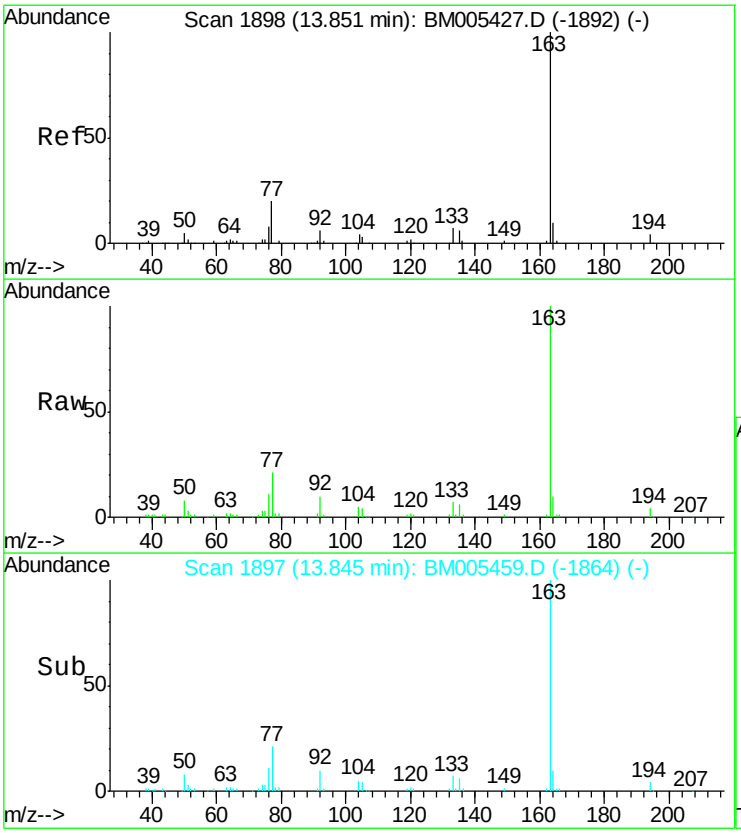
Tgt Ion:107 Resp: 115439

Ion	Ratio	Lower	Upper
107	100		
144	24.5	19.3	28.9
142	74.3	60.8	91.2



Instrument :
BNA_M
ClientSampleId :
H4061MS

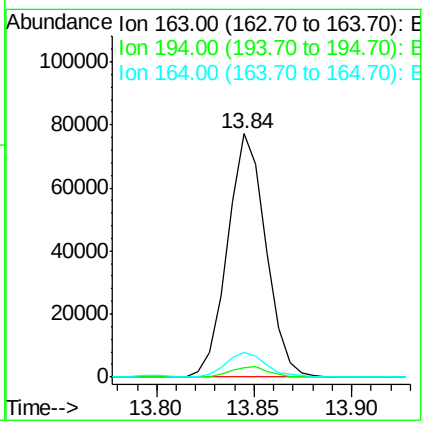
Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM

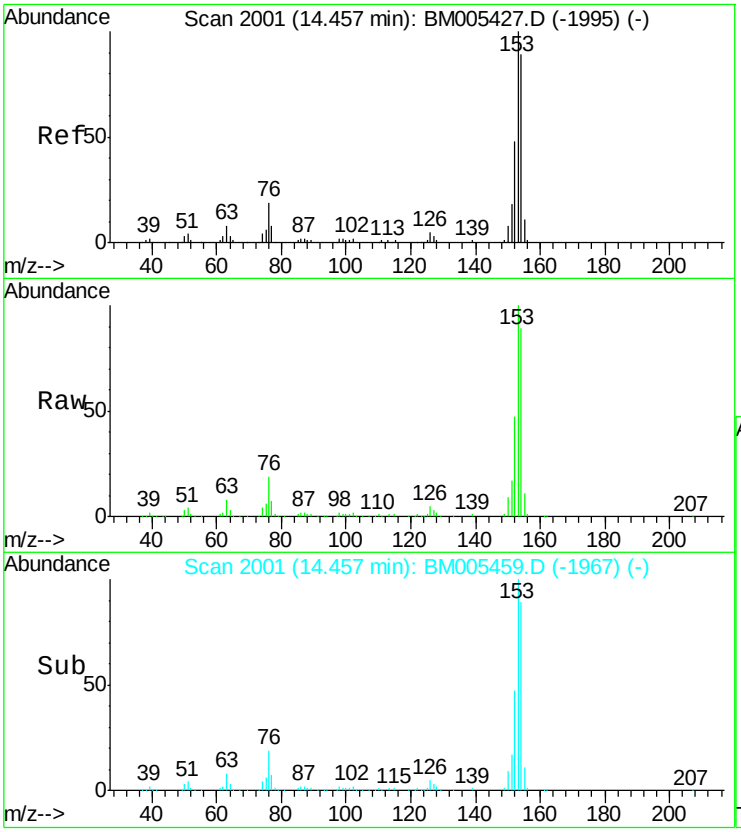


#44
Dimethylphthalate
Concen: 6.94 ng/ul
RT: 13.84 min Scan# 1897
Delta R.T. -0.01 min
Lab File: BM005459.D
Acq: 14 May 2016 10:36

Tgt Ion:163 Resp: 105097

Ion	Ratio	Lower	Upper
163	100		
194	3.8	3.4	5.0
164	10.4	7.9	11.9

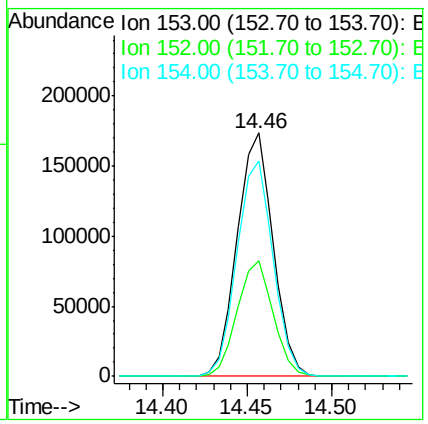




#49
Acenaphthene
Concen: 20.75 ng/ul
RT: 14.46 min Scan# 2001
Delta R.T. -0.00 min
Lab File: BM005459.D
Acq: 14 May 2016 10:36

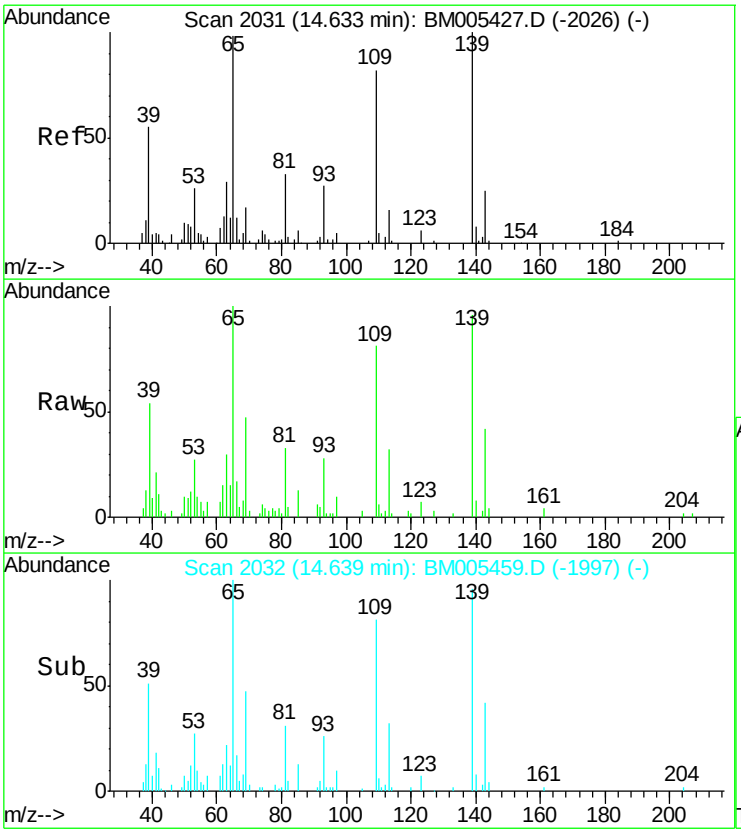
Tgt Ion:153 Resp: 257384

Ion	Ratio	Lower	Upper
153	100		
152	47.3	38.9	58.3
154	88.7	70.3	105.5



Instrument :
BNA_M
ClientSampleId :
H4061MS

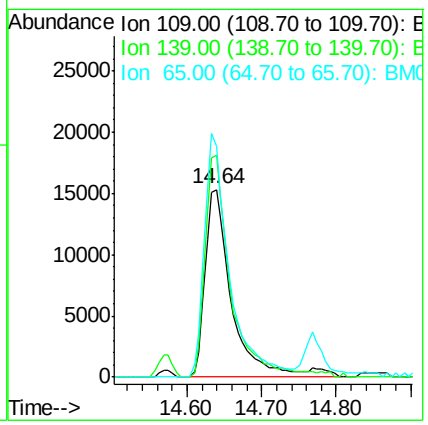
Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM

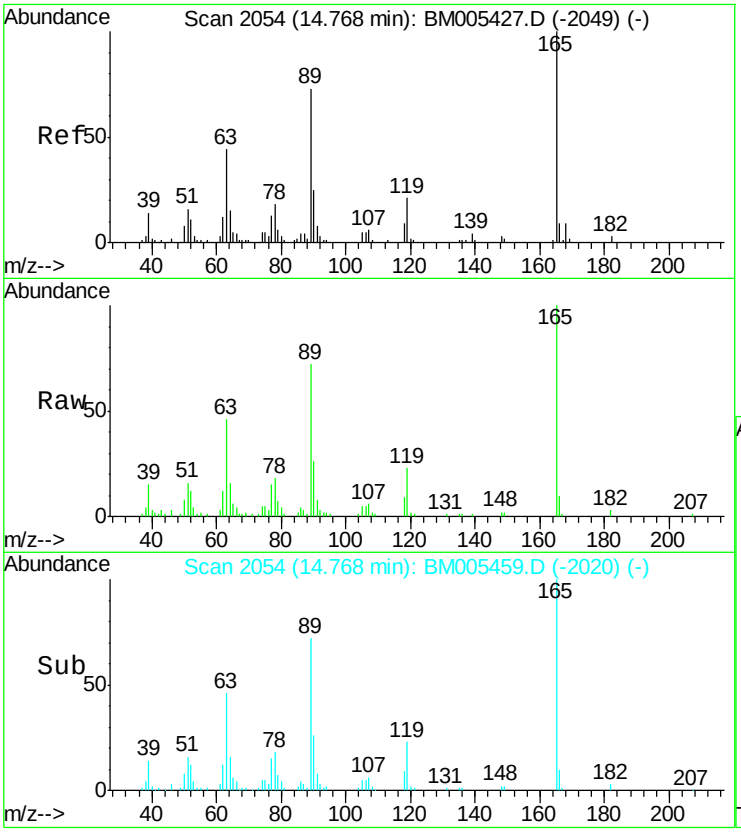


#52
4-Nitrophenol
Concen: 16.62 ng/ul m
RT: 14.64 min Scan# 2032
Delta R.T. 0.01 min
Lab File: BM005459.D
Acq: 14 May 2016 10:36

Tgt Ion:109 Resp: 38251

Ion	Ratio	Lower	Upper
109	100		
139	118.3	103.6	155.4
65	123.0	104.7	157.1

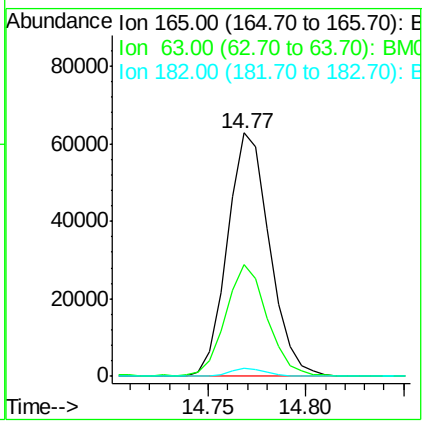




#54
2,4-Dinitrotoluene
Concen: 21.13 ng/ul
RT: 14.77 min Scan# 2054
Delta R.T. -0.00 min
Lab File: BM005459.D
Acq: 14 May 2016 10:36

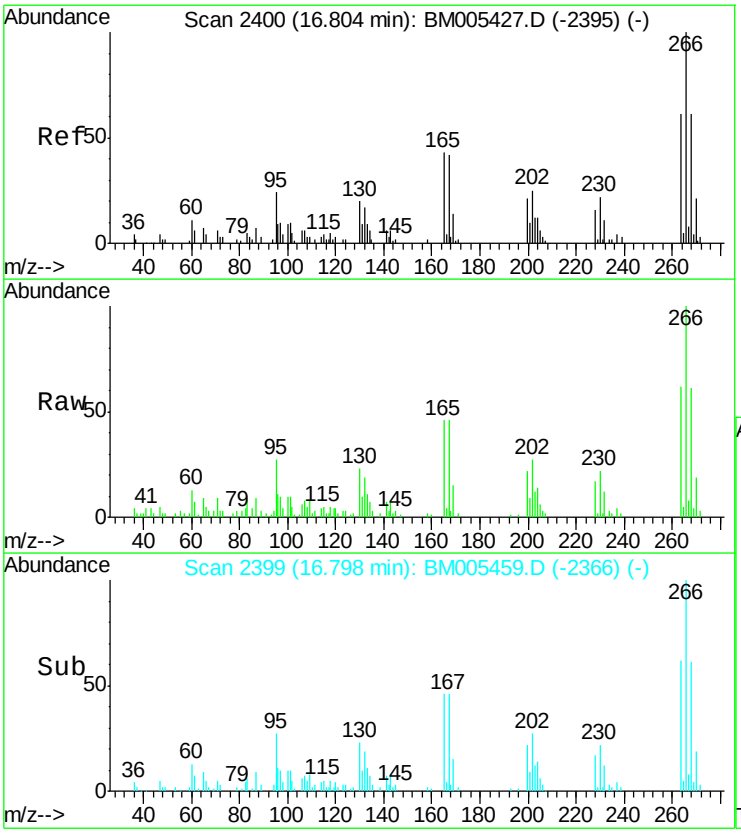
Tgt Ion:165 Resp: 94155

Ion	Ratio	Lower	Upper
165	100		
63	46.1	36.2	54.4
182	3.1	2.5	3.7



Instrument :
BNA_M
ClientSampleId :
H4061MS

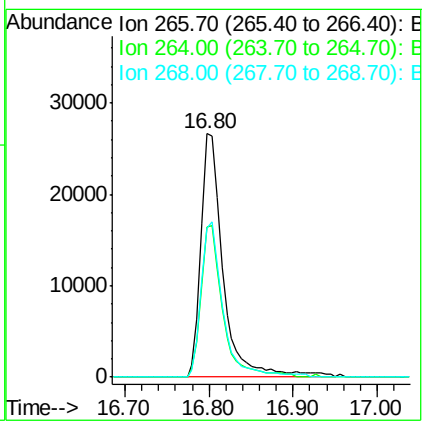
Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM

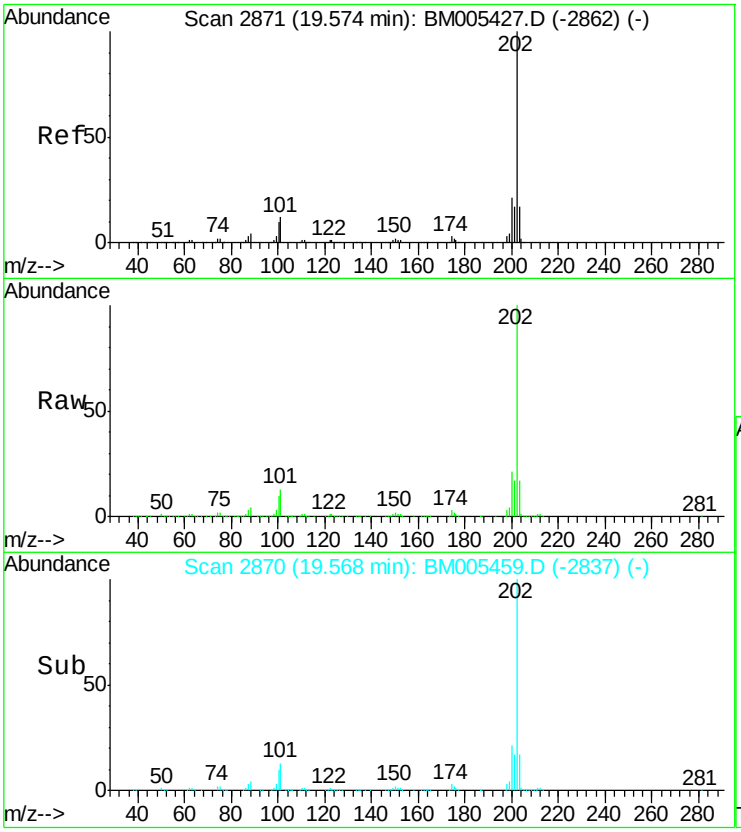


#68
Pentachlorophenol
Concen: 18.21 ng/ul m
RT: 16.80 min Scan# 2399
Delta R.T. -0.01 min
Lab File: BM005459.D
Acq: 14 May 2016 10:36

Tgt Ion:266 Resp: 48363

Ion	Ratio	Lower	Upper
266	100		
264	61.7	52.0	78.0
268	61.4	53.0	79.6

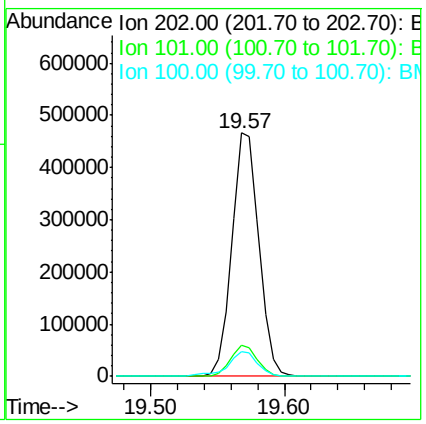




#77
Pyrene
Concen: 21.82 ng/ul
RT: 19.57 min Scan# 2870
Delta R.T. -0.01 min
Lab File: BM005459.D
Acq: 14 May 2016 10:36

Tgt Ion:202 Resp: 655834

Ion	Ratio	Lower	Upper
202	100		
101	12.7	10.8	16.2
100	10.3	8.4	12.6



Instrument :
BNA_M
ClientSampleId :
H4061MS

Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005459.D
Acq On : 14 May 2016 10:36
Operator : UM/SJ
Sample : H2834-14MS
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4061MS

Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM

Quant Time: May 16 04:12:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	63562	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	296549	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	189197	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	444383	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	518205	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	436350	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	4725	3.50	ng/uL	0.00
5) Phenol-d5	6.93	99	112240	19.47	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	66853	20.33	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	89371	20.53	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	93488	19.62	ng/ul	0.00
19) Nitrobenzene-d5	8.90	128	45389	21.44	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	51464	21.47	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	90811	20.38	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	50393m	9.40	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	326810	21.55	ng/ul	0.00
46) Acenaphthylene-d8	14.08	160	378947	21.30	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	35903m	12.97	ng/ul	0.00
57) Fluorene-d10	15.39	176	270481	20.66	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	28885	11.55	ng/ul	0.00
70) Anthracene-d10	17.24	188	425152	21.64	ng/ul	0.00
76) Pyrene-d10	19.54	212	518689	21.68	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	420676	21.78	ng/ul	0.00
Target Compounds						Qvalue
6) Phenol	6.96	94	117588	19.74	ng/ul	98
10) 2-Chlorophenol	7.32	128	87966	19.75	ng/ul	96
14) Acetophenone	8.58	105	8430	1.19	ng/ul	97
15) N-Nitroso-di-n-propylamine	8.55	70	85877	23.28	ng/ul	99
33) 4-Chloro-3-methylphenol	11.83	107	115439	21.10	ng/ul	98
44) Dimethylphthalate	13.84	163	105097	6.94	ng/ul	99
49) Acenaphthene	14.46	153	257384	20.75	ng/ul	99
52) 4-Nitrophenol	14.64	109	38251m	16.62	ng/ul	
54) 2,4-Dinitrotoluene	14.77	165	94155	21.13	ng/ul	99
68) Pentachlorophenol	16.80	266	48363m	18.21	ng/ul	
77) Pyrene	19.57	202	655834	21.82	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

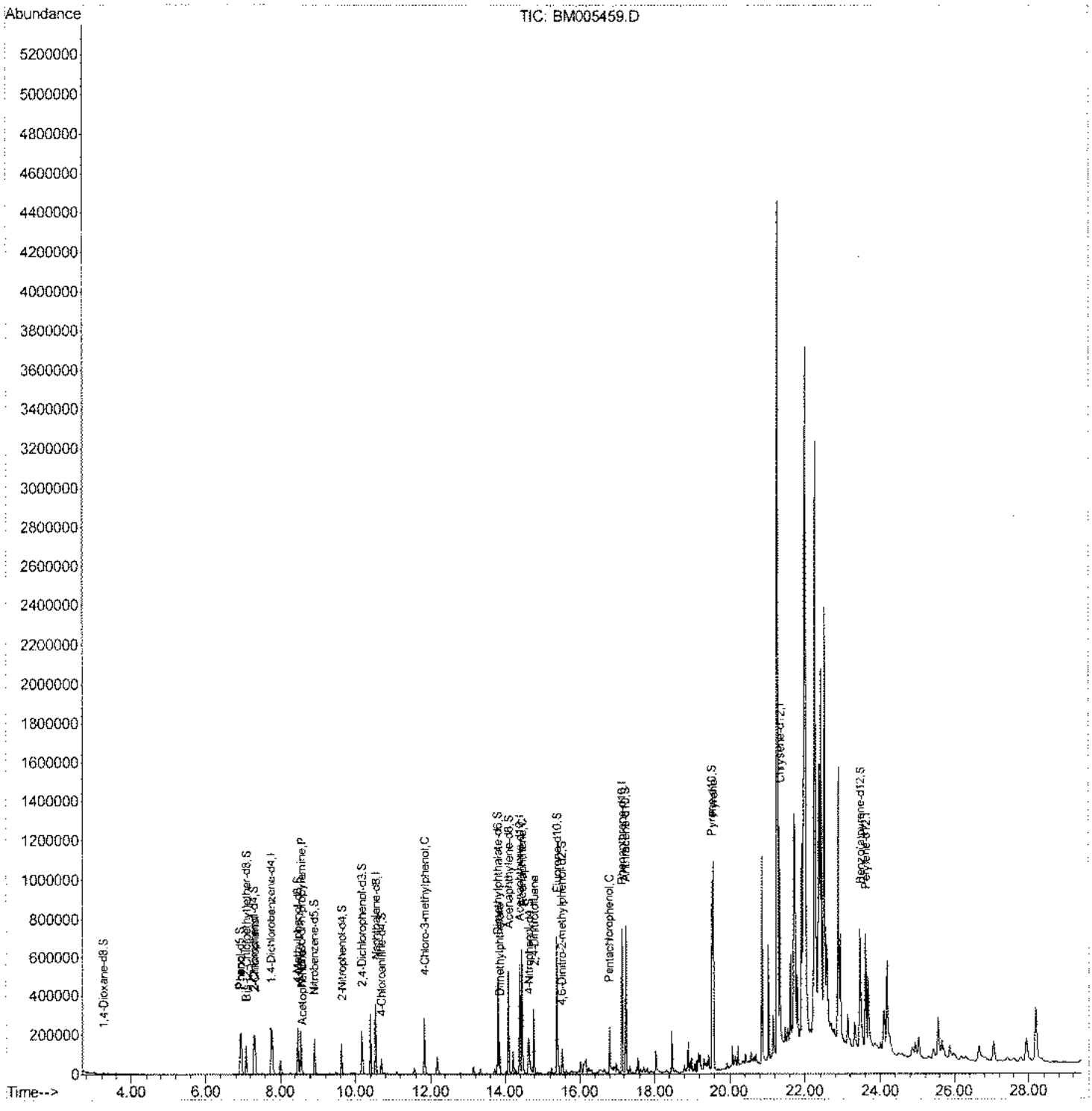
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005459.D
Acq On : 14 May 2016 10:36
Operator : UM/SJ
Sample : H2834-14MS
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 16 04:12:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MS

Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM



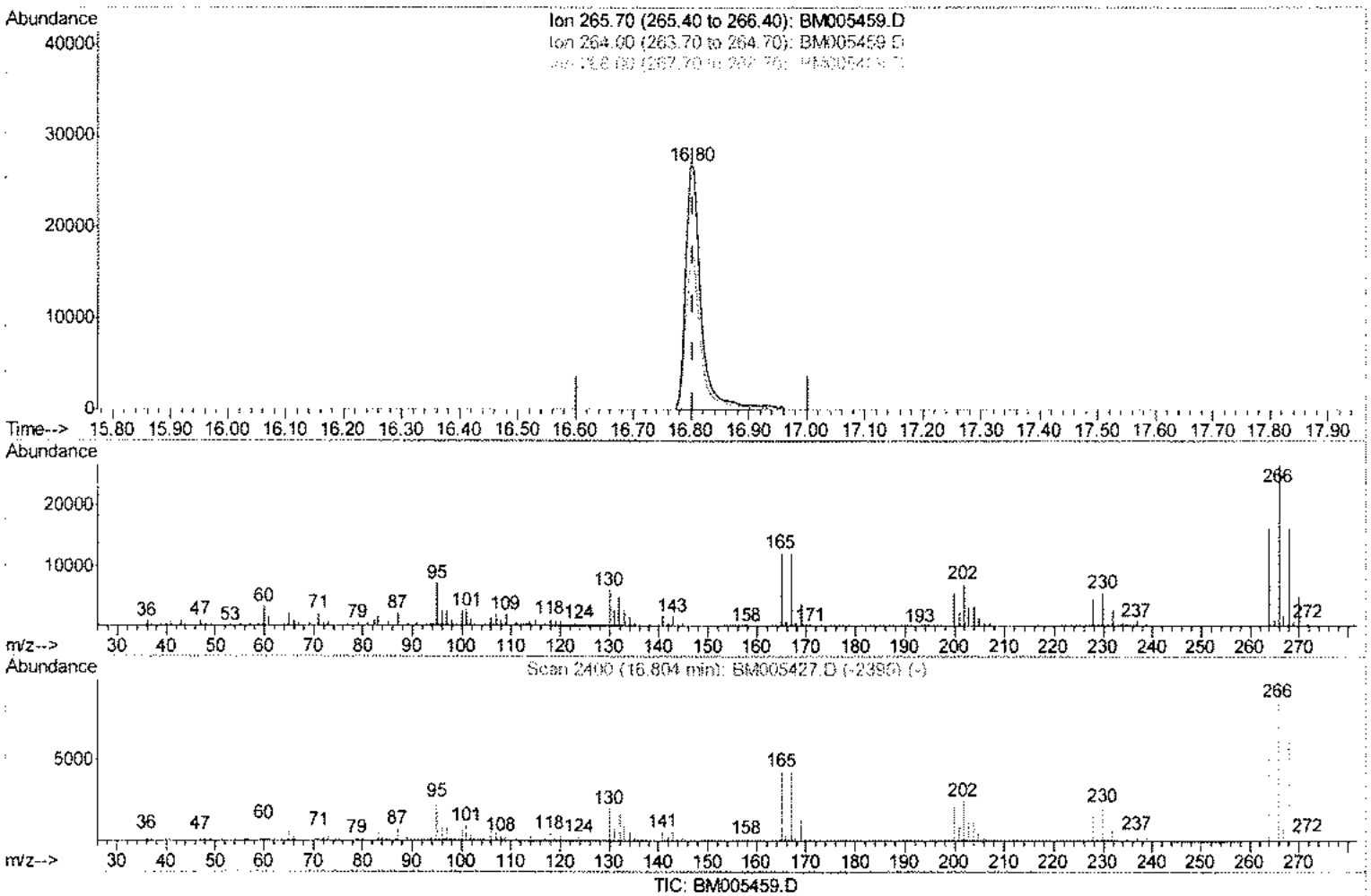
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005459.D
Acq On : 14 May 2016 10:36
Operator : UM/SJ
Sample : H2834-14MS
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 16 03:40:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MS

Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM



(68) Pentachlorophenol (C)

16.798min (-0.006) 18.21ng/ul m

response 48363

U.M 05/17/16

Ion	Exp%	Act%
265.70	100	100
264.00	65.00	61.72
268.00	66.30	61.37
0.00	0.00	0.00

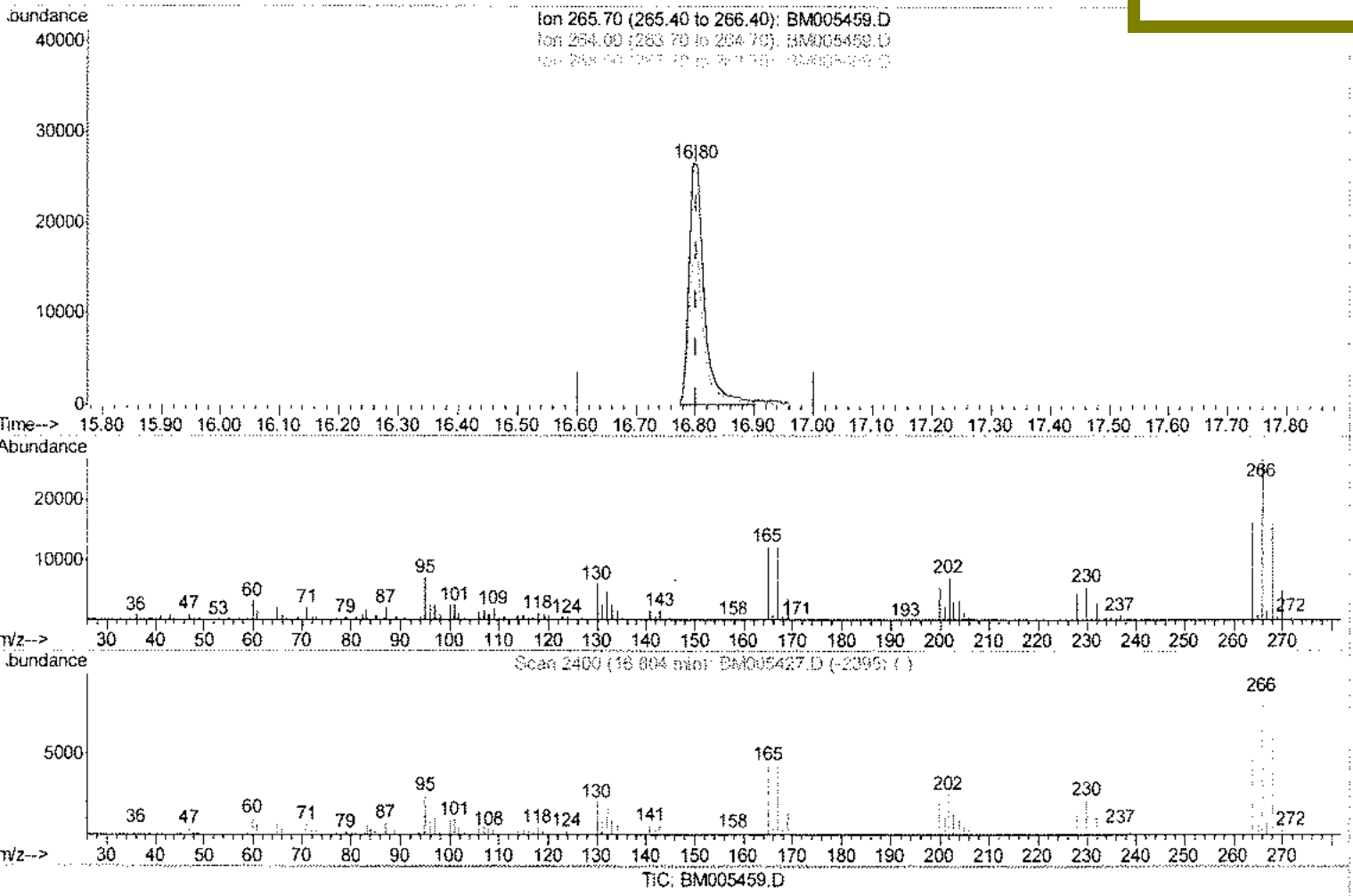
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005459.D
Acq On : 14 May 2016 10:36
Operator : UM/SJ
Sample : H2834-14MS
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 16 03:40:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MS

Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM



(68) Pentachlorophenol (C)

16.798min (-0.006) 17.69ng/ul

response 46960

Ion	Exp%	Act%
265.70	100	100
264.00	65.00	61.72
268.00	66.30	61.37
0.00	0.00	0.00

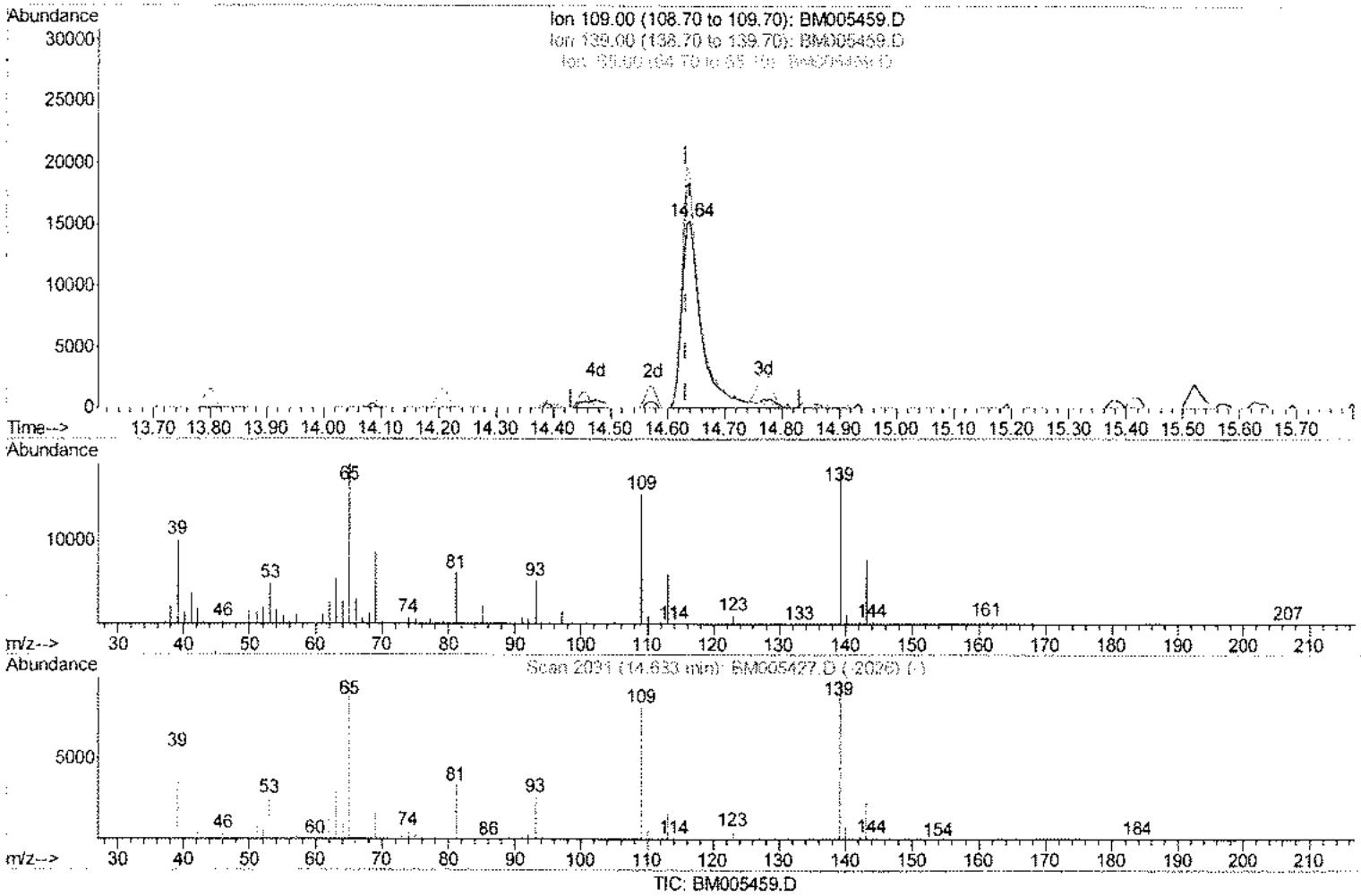
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005459.D
Acq On : 14 May 2016 10:36
Operator : UM/SJ
Sample : H2834-14MS
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 16 03:40:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MS

Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM



TIC: BM005459.D

(52) 4-Nitrophenol

14.639min (+0.006) 16.62ng/ul m

response 38251

U.M 05/17/16

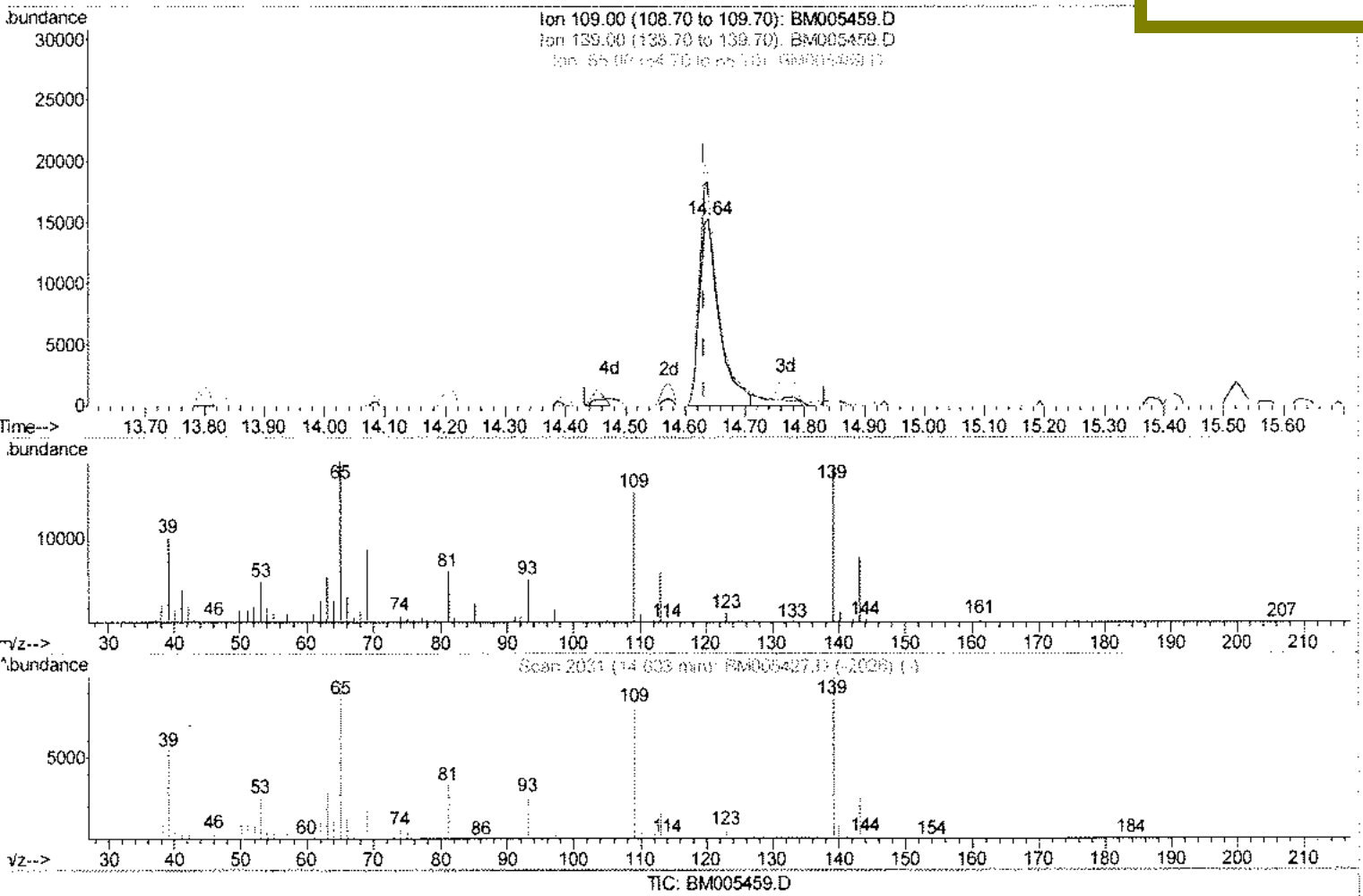
Ion	Exp%	Act%
109.00	100	100
139.00	129.50	118.33
65.00	130.90	122.98
0.00	0.00	0.00

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005459.D
Acq On : 14 May 2016 10:36
Operator : UM/SJ
Sample : H2834-14MS
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 16 03:40:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MS

Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM



(52) 4-Nitrophenol

14.639min (+0.006) 15.32ng/ul

response 35270

Ion	Exp%	Act%
109.00	100	100
139.00	129.50	118.33
65.00	130.90	122.98
0.00	0.00	0.00

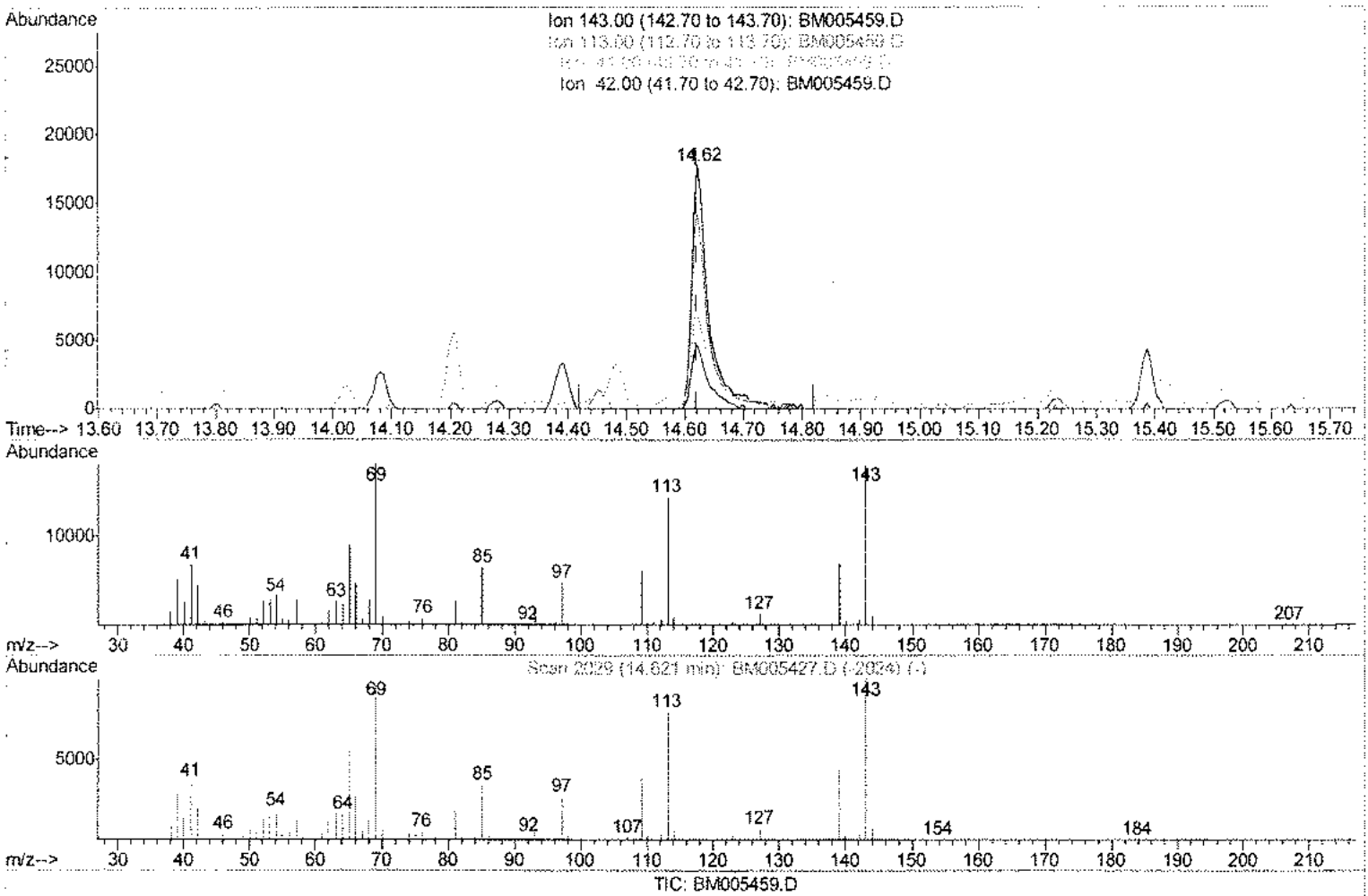
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005459.D
Acq On : 14 May 2016 10:36
Operator : UM/SJ
Sample : H2834-14MS
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 16 03:40:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MS

Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM



(51) 4-Nitrophenol-d4 (S)

14.621min (-0.000) 12.97ng/ul m

response 35903

U · M
05/17/16

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	80.63
41.00	38.10	39.13
42.00	26.00	26.37

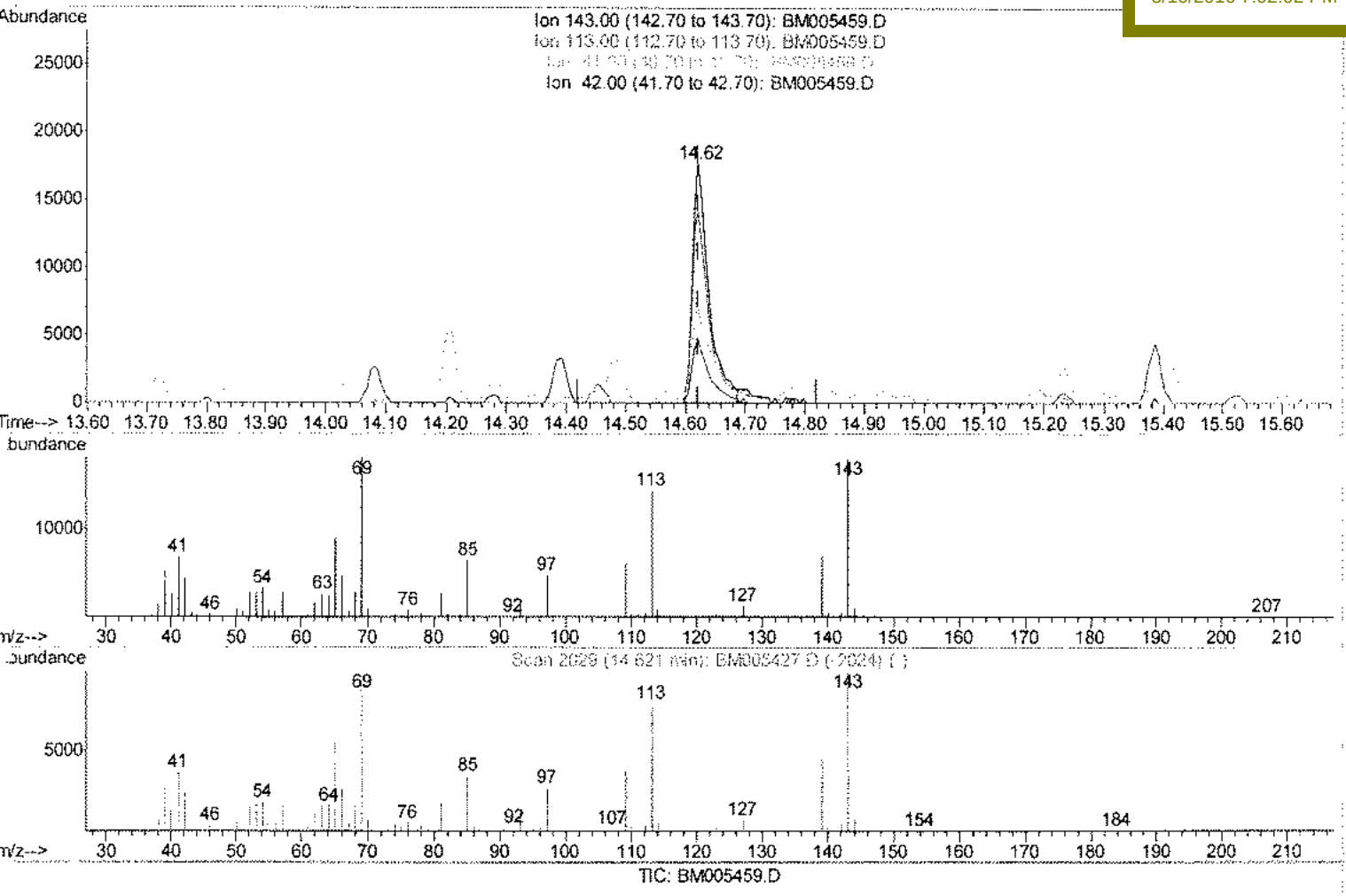
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005459.D
Acq On : 14 May 2016 10:36
Operator : UM/SJ
Sample : H2834-14MS
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 16 03:40:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MS

Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM



(51) 4-Nitrophenol-d4 (S)

14.621min (-0.000) 12.21ng/ul

response 33803

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	80.63
41.00	38.10	39.13
42.00	26.00	26.37

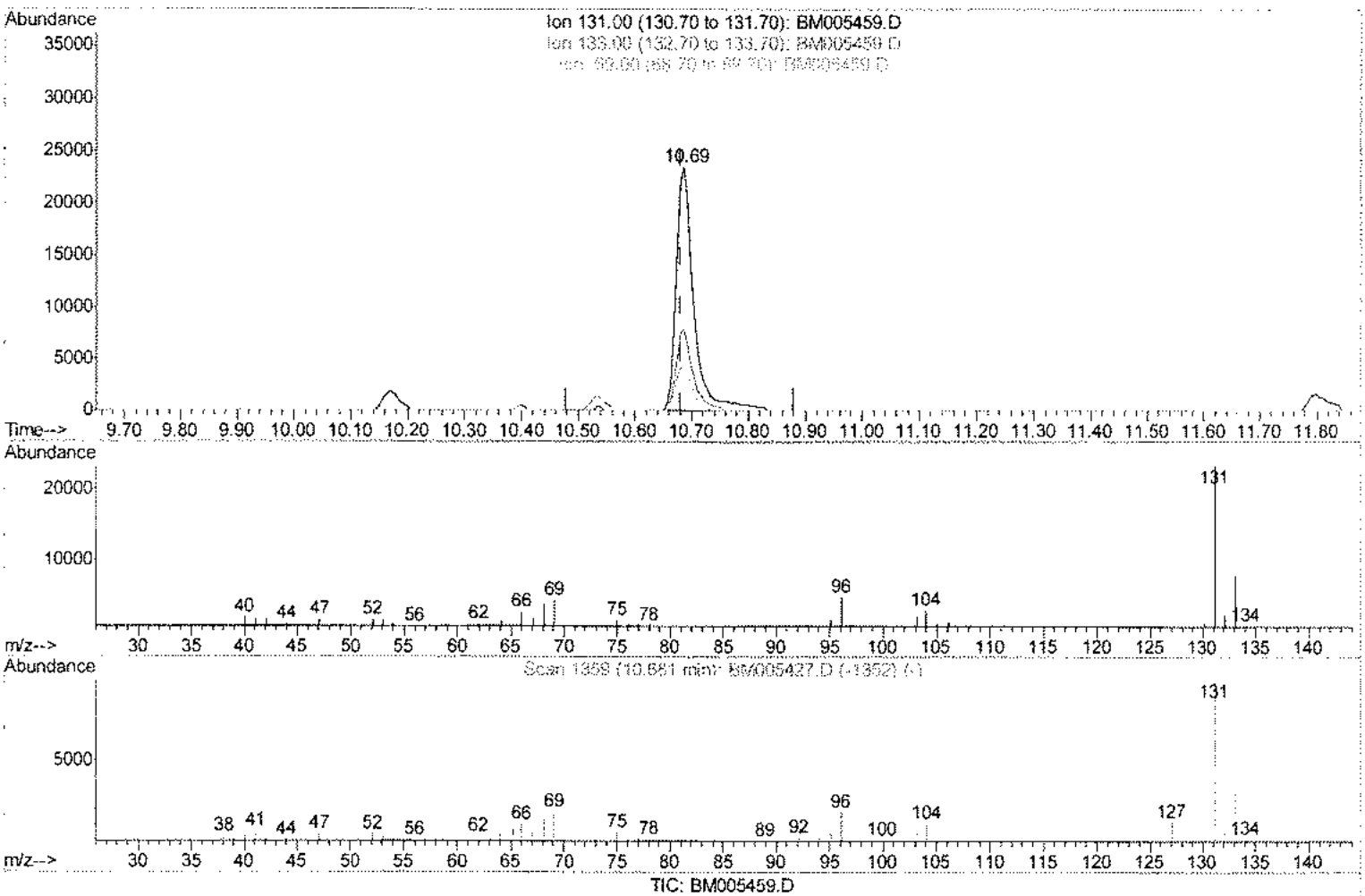
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005459.D
Acq On : 14 May 2016 10:36
Operator : UM/SJ
Sample : H2834-14MS
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 16 03:40:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MS

Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM



(29) 4-Chloroaniline-d4 (S)

10.686min (+0.006) 9.40ng/ul m > U·M 05/17/16

response 50393

Ion	Exp%	Act%
131.00	100	100
133.00	32.30	33.49
69.00	19.20	17.52
0.00	0.00	0.00

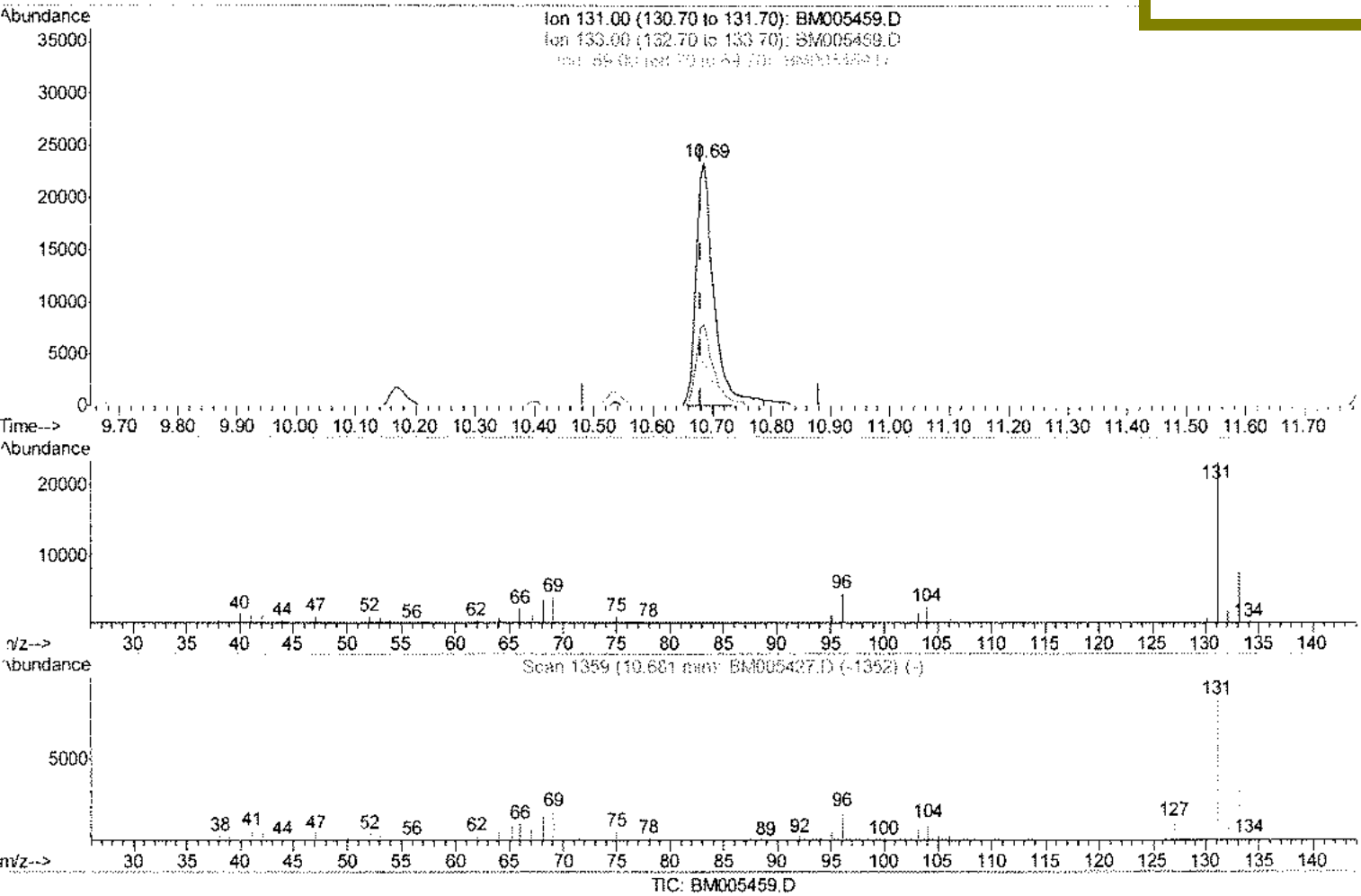
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005459.D
Acq On : 14 May 2016 10:36
Operator : UM/SJ
Sample : H2834-14MS
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 16 03:40:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MS

Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM



(29) 4-Chloroaniline-d4 (S)

10.686min (+0.006) 9.21ng/ul

response 49386

Ion	Exp%	Act%
131.00	100	100
133.00	32.30	33.49
69.00	19.20	17.52
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005459.D
Acq On : 14 May 2016 10:36
Operator : UM/SJ
Sample : H2834-14MS
Misc :
ALS Vial : 33 Sample Multiplier: 1

Quant Time: May 16 04:12:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4061MS

Manual Integrations APPROVED
sohil
5/16/2016 7:02:02 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	63562	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	296549	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	189197	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	444383	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	518205	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	436350	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	4725	3.50	ng/uL	0.00
5) Phenol-d5	6.93	99	112240	19.47	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	66853	20.33	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	89371	20.53	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	93488	19.62	ng/ul	0.00
19) Nitrobenzene-d5	8.90	128	45389	21.44	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	51464	21.47	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	90811	20.38	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	50393m	9.40	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	326810	21.55	ng/ul	0.00
46) Acenaphthylene-d8	14.08	160	378947	21.30	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	35903m	12.97	ng/ul	0.00
57) Fluorene-d10	15.39	176	270481	20.66	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	28885	11.55	ng/ul	0.00
70) Anthracene-d10	17.24	188	425152	21.64	ng/ul	0.00
76) Pyrene-d10	19.54	212	518689	21.68	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	420676	21.78	ng/ul	0.00
Target Compounds						Qvalue
6) Phenol	6.96	94	117588	19.74	ng/ul	98
10) 2-Chlorophenol	7.32	128	87966	19.75	ng/ul	96
14) Acetophenone	8.58	105	8430	1.19	ng/ul	97
15) N-Nitroso-di-n-propylamine	8.55	70	85877	23.28	ng/ul	99
33) 4-Chloro-3-methylphenol	11.83	107	115439	21.10	ng/ul	98
44) Dimethylphthalate	13.84	163	105097	6.94	ng/ul	99
49) Acenaphthene	14.46	153	257384	20.75	ng/ul	99
52) 4-Nitrophenol	14.64	109	38251m	16.62	ng/ul	
54) 2,4-Dinitrotoluene	14.77	165	94155	21.13	ng/ul	99
68) Pentachlorophenol	16.80	266	48363m	18.21	ng/ul	
77) Pyrene	19.57	202	655834	21.82	ng/ul	99

U.M 05/17/16

U.M 05/17/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-03MSD
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005453.D
% Solids :
Date Received : 05/03/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	6.8	J
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	24	
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	32	
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	27	
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-03MSD
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005453.D
% Solids :
Date Received : 05/03/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	32	
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	5.1	J
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	36	
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	24	
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4002MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2834-03MSD
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005453.D
% Solids :
Date Received : 05/03/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	29	
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

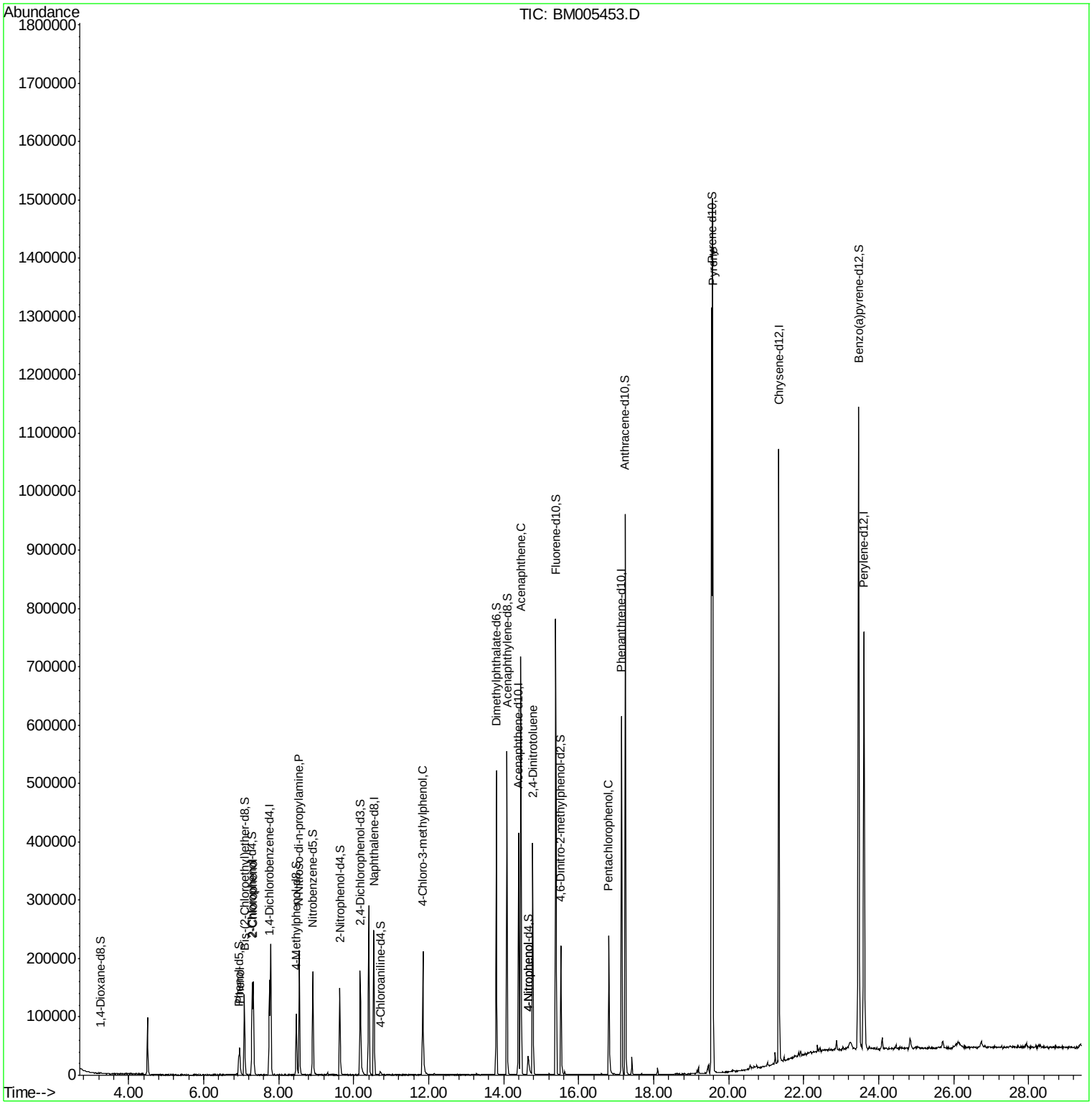
Quantitation Report (QT Reviewed)

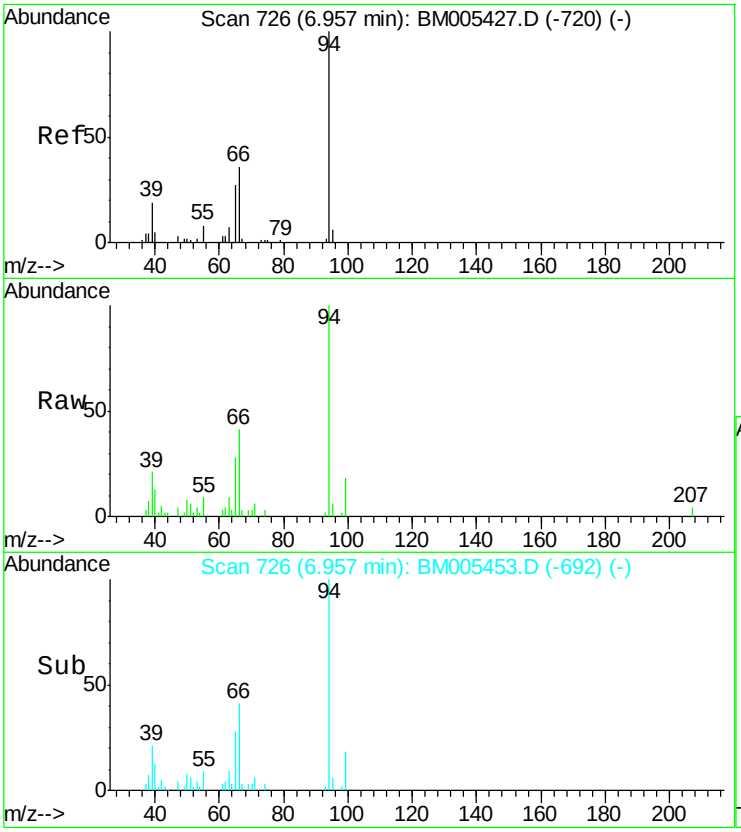
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005453.D
Acq On : 14 May 2016 06:58
Operator : UM/SJ
Sample : H2834-03MSD
Misc :
ALS Vial : 27 Sample Multiplier: 1

Quant Time: May 16 04:29:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002MSD

Manual Integrations APPROVED
sohil
5/16/2016 7:01:45 PM

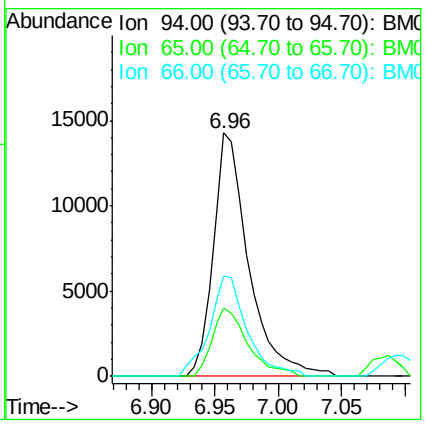




#6
Phenol
Concen: 6.76 ng/ul
RT: 6.96 min Scan# 726
Delta R.T. -0.00 min
Lab File: BM005453.D
Acq: 14 May 2016 06:58

Tgt Ion: 94 Resp: 27811

Ion	Ratio	Lower	Upper
94	100		
65	28.0	22.7	34.1
66	41.0	31.7	47.5



Instrument :
BNA_M
ClientSampleId :
H4002MSD

Manual Integrations APPROVED
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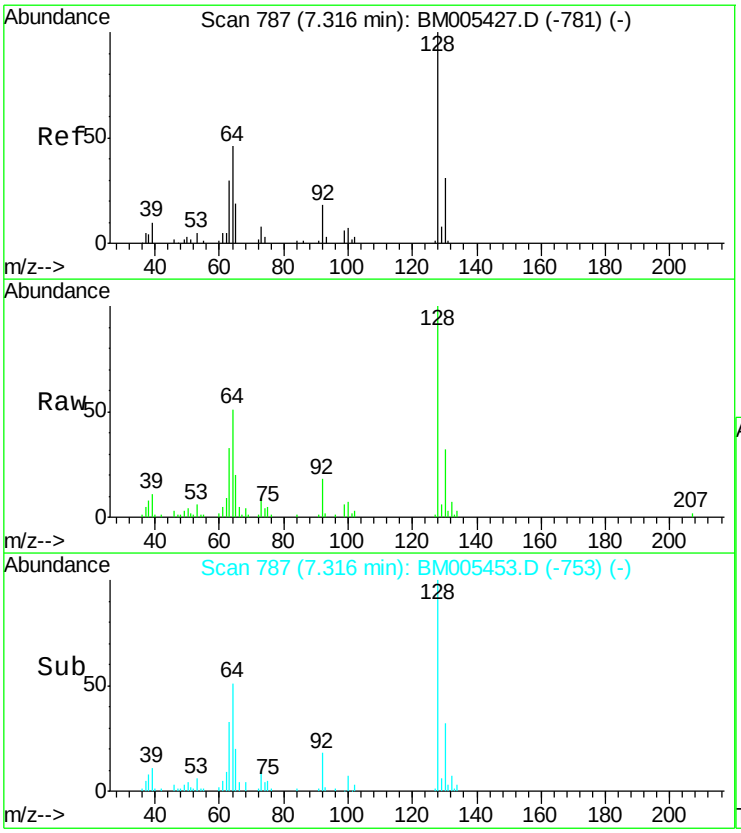
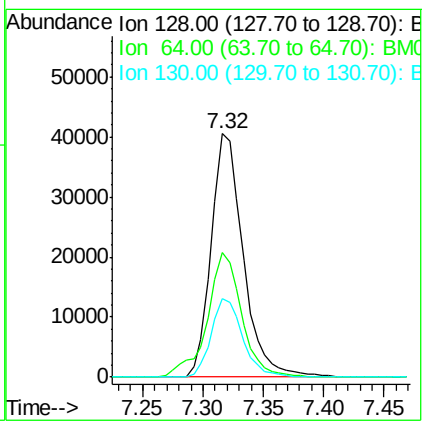
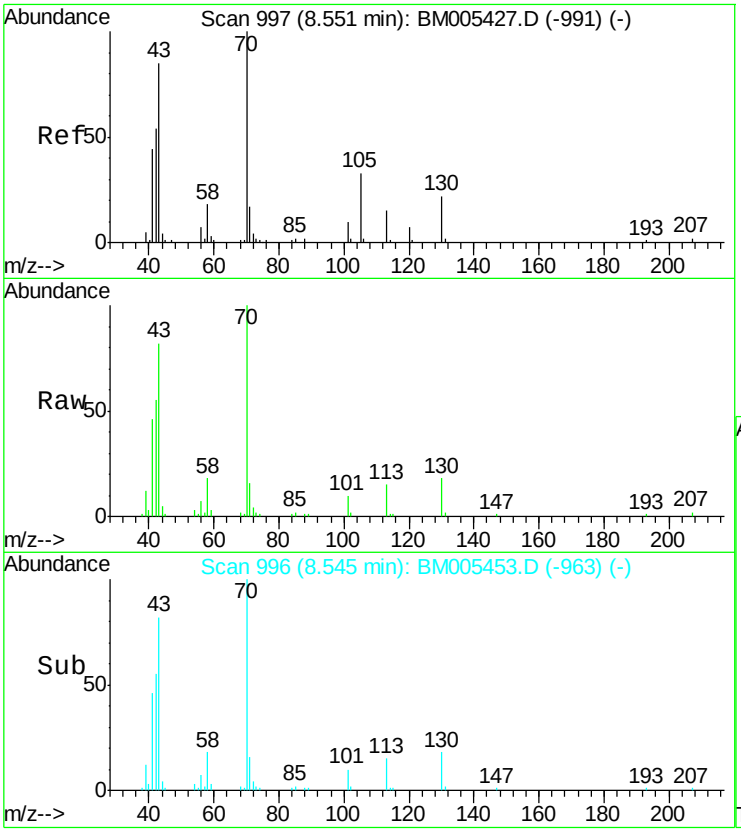


#10
2-Chlorophenol
Concen: 24.24 ng/ul
RT: 7.32 min Scan# 787
Delta R.T. -0.00 min
Lab File: BM005453.D
Acq: 14 May 2016 06:58

Tgt Ion:128 Resp: 74504

Ion	Ratio	Lower	Upper
128	100		
64	51.1	37.8	56.8
130	32.2	24.9	37.3

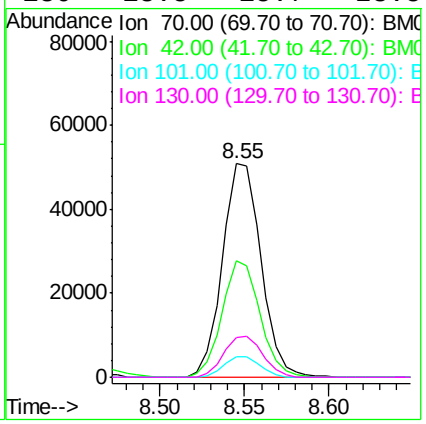




#15
N-Nitroso-di-n-propylamine
Concen: 31.78 ng/ul
RT: 8.55 min Scan# 996
Delta R.T. -0.01 min
Lab File: BM005453.D
Acq: 14 May 2016 06:58

Tgt Ion: 70 Resp: 80908

Ion	Ratio	Lower	Upper
70	100		
42	54.5	42.8	64.2
101	9.7	7.8	11.6
130	18.5	15.7	23.5



Instrument :
BNA_M
ClientSampleId :
H4002MSD

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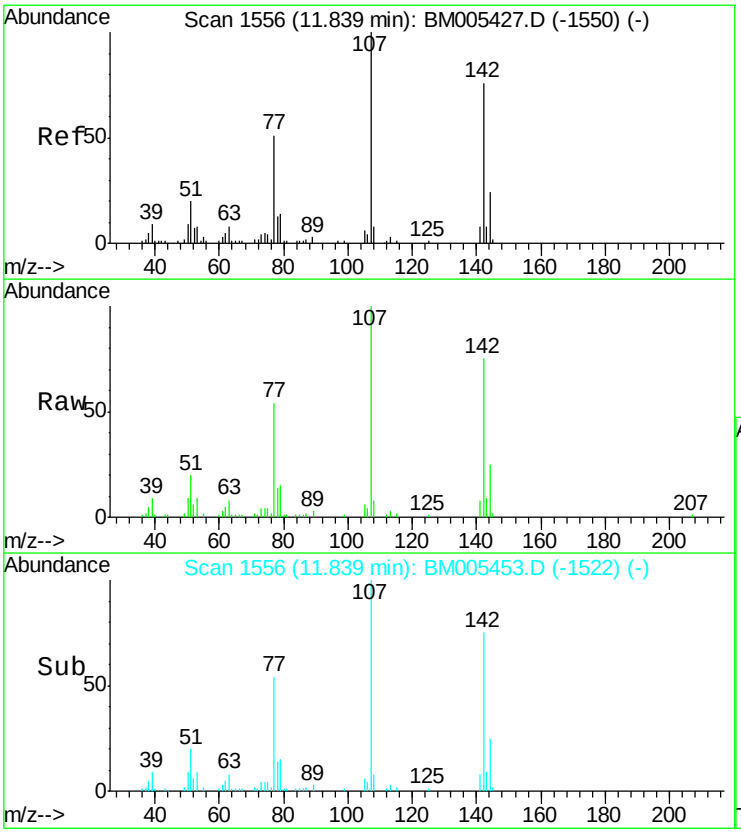
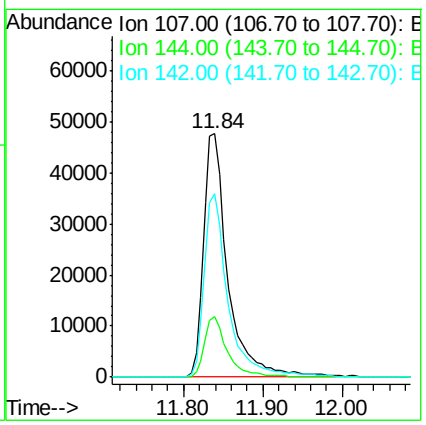
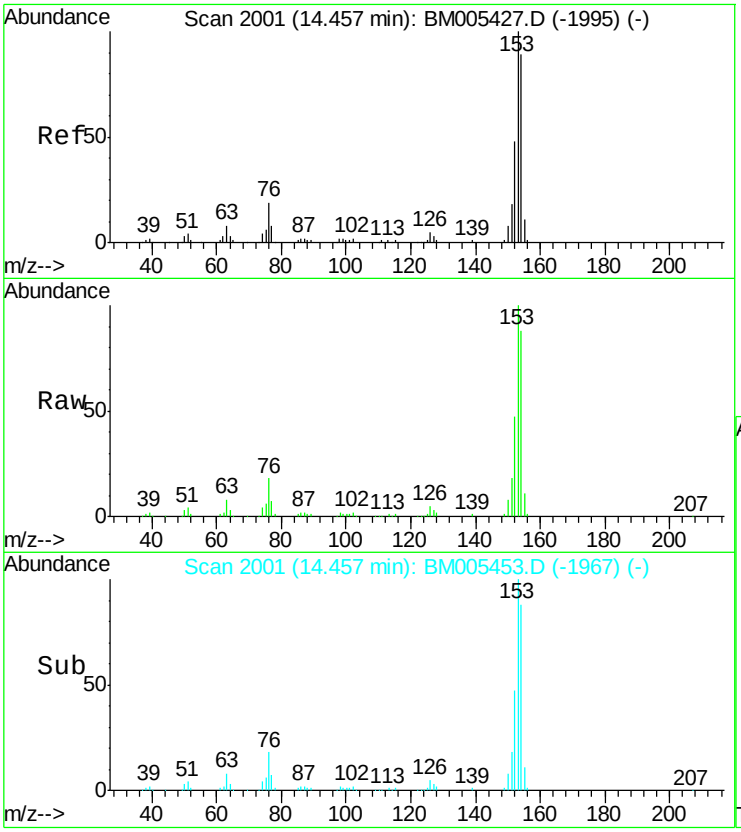


#33
4-Chloro-3-methylphenol
Concen: 26.67 ng/ul
RT: 11.84 min Scan# 1556
Delta R.T. -0.00 min
Lab File: BM005453.D
Acq: 14 May 2016 06:58

Tgt Ion:107 Resp: 101938

Ion	Ratio	Lower	Upper
107	100		
144	24.8	19.3	28.9
142	75.5	60.8	91.2

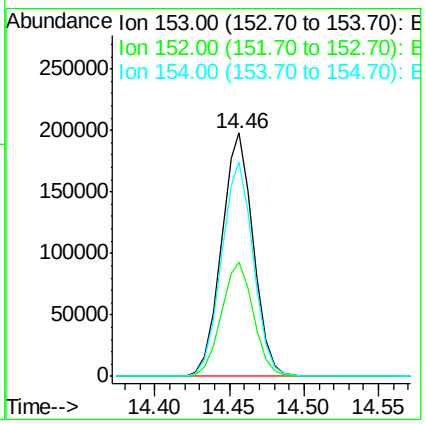




#49
Acenaphthene
Concen: 32.32 ng/ul
RT: 14.46 min Scan# 2001
Delta R.T. -0.00 min
Lab File: BM005453.D
Acq: 14 May 2016 06:58

Tgt Ion:153 Resp: 295135

Ion	Ratio	Lower	Upper
153	100		
152	47.2	38.9	58.3
154	87.8	70.3	105.5



Instrument :
BNA_M
ClientSampleId :
H4002MSD

Manual Integrations APPROVED
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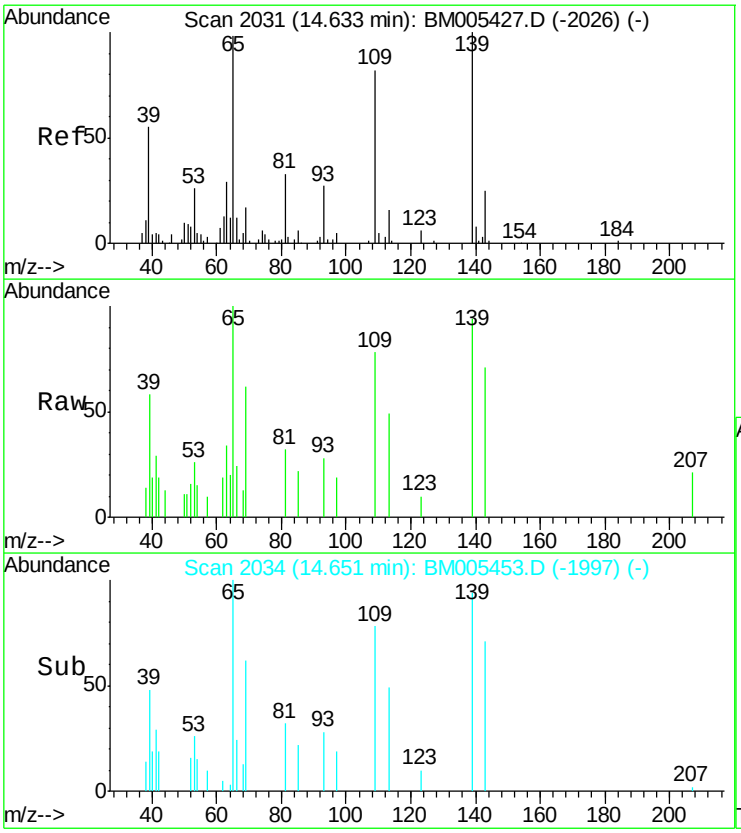
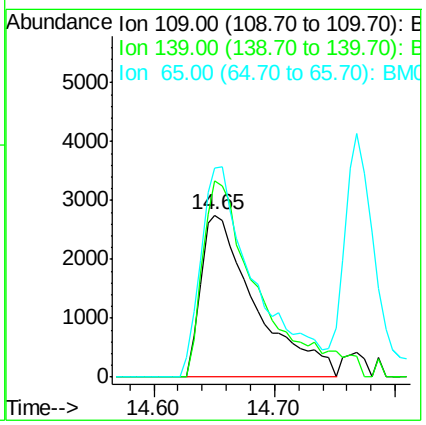
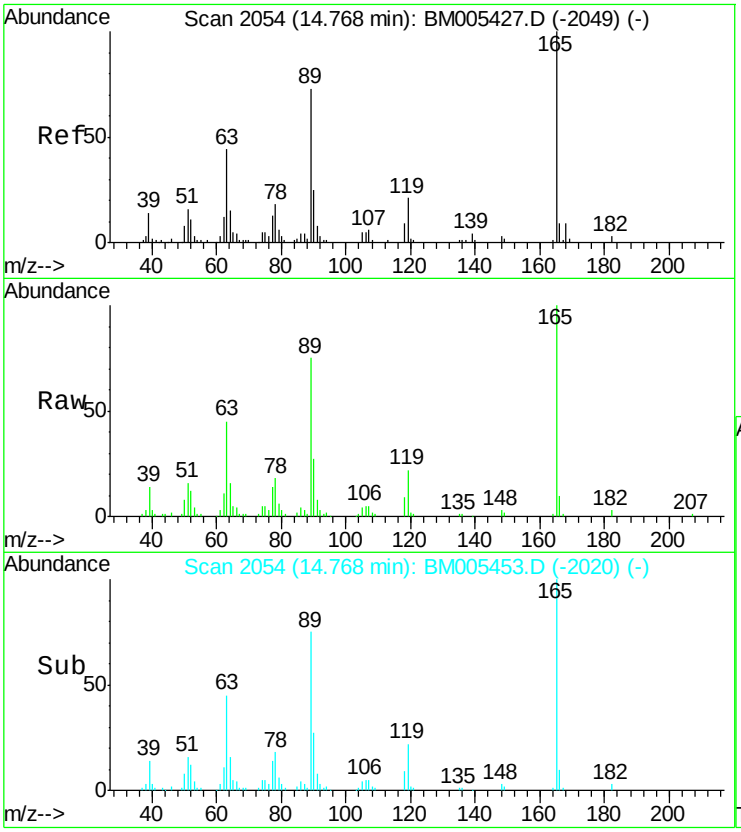


#52
4-Nitrophenol
Concen: 5.07 ng/ul
RT: 14.65 min Scan# 2034
Delta R.T. 0.02 min
Lab File: BM005453.D
Acq: 14 May 2016 06:58

Tgt Ion:109 Resp: 8595

Ion	Ratio	Lower	Upper
109	100		
139	121.2	103.6	155.4
65	128.7	104.7	157.1

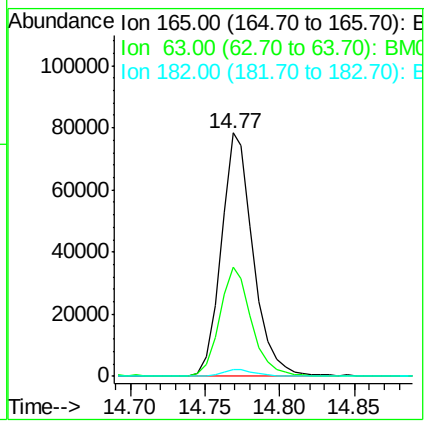




#54
2,4-Dinitrotoluene
Concen: 35.68 ng/ul
RT: 14.77 min Scan# 2054
Delta R.T. -0.00 min
Lab File: BM005453.D
Acq: 14 May 2016 06:58

Tgt Ion:165 Resp: 117093

Ion	Ratio	Lower	Upper
165	100		
63	45.0	36.2	54.4
182	3.0	2.5	3.7



Instrument :
BNA_M
ClientSampleId :
H4002MSD

Manual Integrations APPROVED
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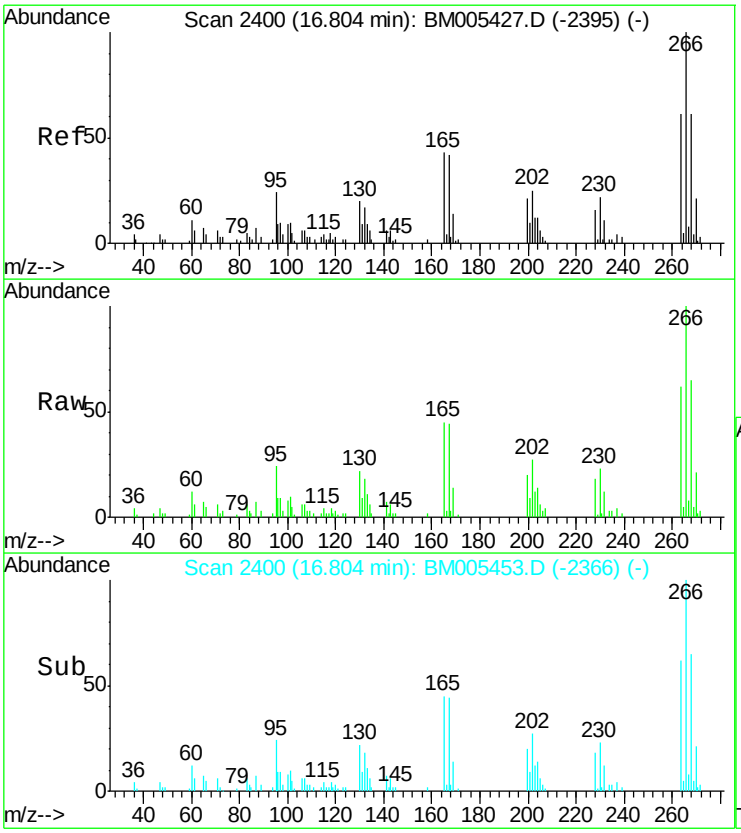
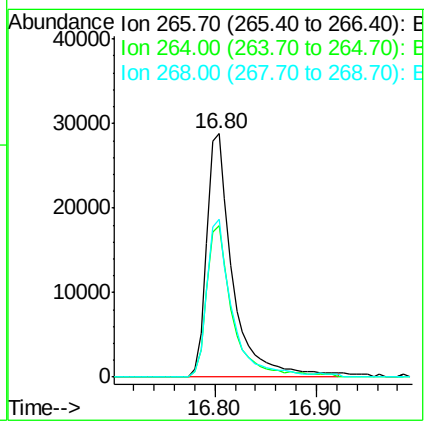
5/16/2016 7:01:45 PM

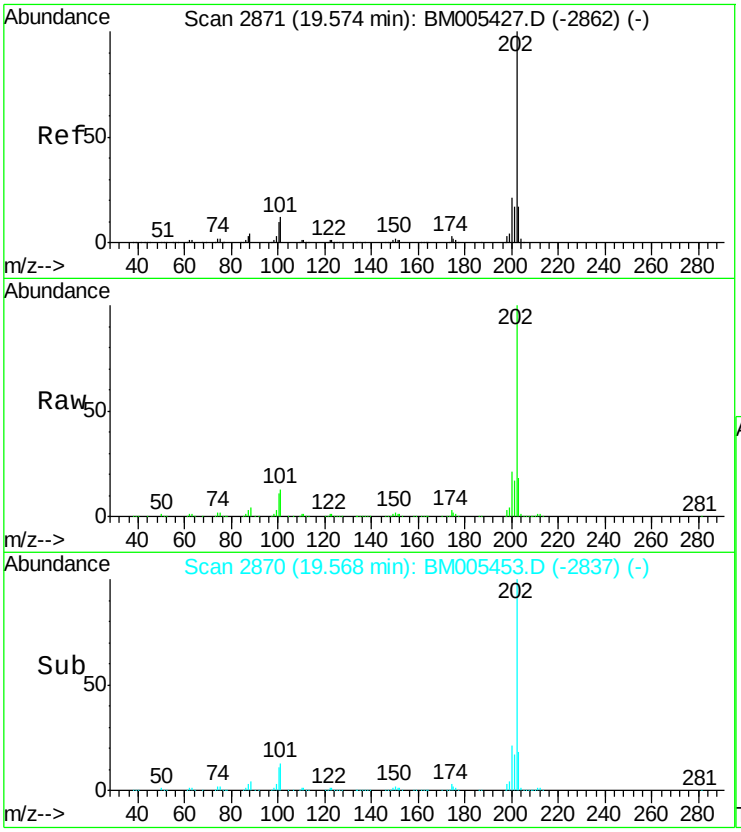


#68
Pentachlorophenol
Concen: 23.54 ng/ul
RT: 16.80 min Scan# 2400
Delta R.T. -0.00 min
Lab File: BM005453.D
Acq: 14 May 2016 06:58

Tgt Ion:266 Resp: 51388

Ion	Ratio	Lower	Upper
266	100		
264	62.1	52.0	78.0
268	65.0	53.0	79.6

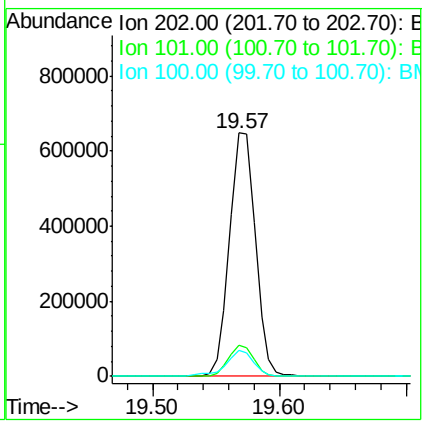




#77
Pyrene
Concen: 29.29 ng/ul
RT: 19.57 min Scan# 2870
Delta R.T. -0.01 min
Lab File: BM005453.D
Acq: 14 May 2016 06:58

Tgt Ion:202 Resp: 917137

Ion	Ratio	Lower	Upper
202	100		
101	12.9	10.8	16.2
100	10.7	8.4	12.6



Instrument :
BNA_M
ClientSampleId :
H4002MSD

Manual Integrations APPROVED
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5/16/2016 7:01:45 PM

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005453.D
Acq On : 14 May 2016 06:58
Operator : UM/SJ
Sample : H2834-03MSD
Misc :
ALS Vial : 27 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4002MSD

Manual Integrations APPROVED
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5/16/2016 7:01:45 PM

Quant Time: May 16 04:29:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	43867	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	207205	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	139326	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	365368	20.00	ng/ul	0.00
75) Chrysene-d12	21.33	240	539904	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	535616	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1271	1.36	ng/uL	0.00
5) Phenol-d5	6.93	99	24392	6.13	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	66053	29.10	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	71708	23.86	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	44390	13.50	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	45414	30.70	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	49552	29.58	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	82257	26.42	ng/ul	0.00
29) 4-Chloroaniline-d4	10.71	131	7166	1.91	ng/ul	0.03
43) Dimethylphthalate-d6	13.80	166	352494	31.56	ng/ul	0.00
46) Acenaphthylene-d8	14.08	160	407690	31.12	ng/ul	0.00
51) 4-Nitrophenol-d4	14.64	143	9088m	4.46	ng/ul	0.02
57) Fluorene-d10	15.39	176	313393	32.50	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	51368	24.99	ng/ul	0.00
70) Anthracene-d10	17.24	188	543327	33.64	ng/ul	0.00
76) Pyrene-d10	19.54	212	720300	28.90	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	797098	33.62	ng/ul	0.00
Target Compounds						Qvalue
6) Phenol	6.96	94	27811	6.76	ng/ul	98
10) 2-Chlorophenol	7.32	128	74504	24.24	ng/ul	96
15) N-Nitroso-di-n-propylamine	8.55	70	80908	31.78	ng/ul	98
33) 4-Chloro-3-methylphenol	11.84	107	101938	26.67	ng/ul	99
49) Acenaphthene	14.46	153	295135	32.32	ng/ul	99
52) 4-Nitrophenol	14.65	109	8595	5.07	ng/ul	96
54) 2,4-Dinitrotoluene	14.77	165	117093	35.68	ng/ul	99
68) Pentachlorophenol	16.80	266	51388	23.54	ng/ul	97
77) Pyrene	19.57	202	917137	29.29	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

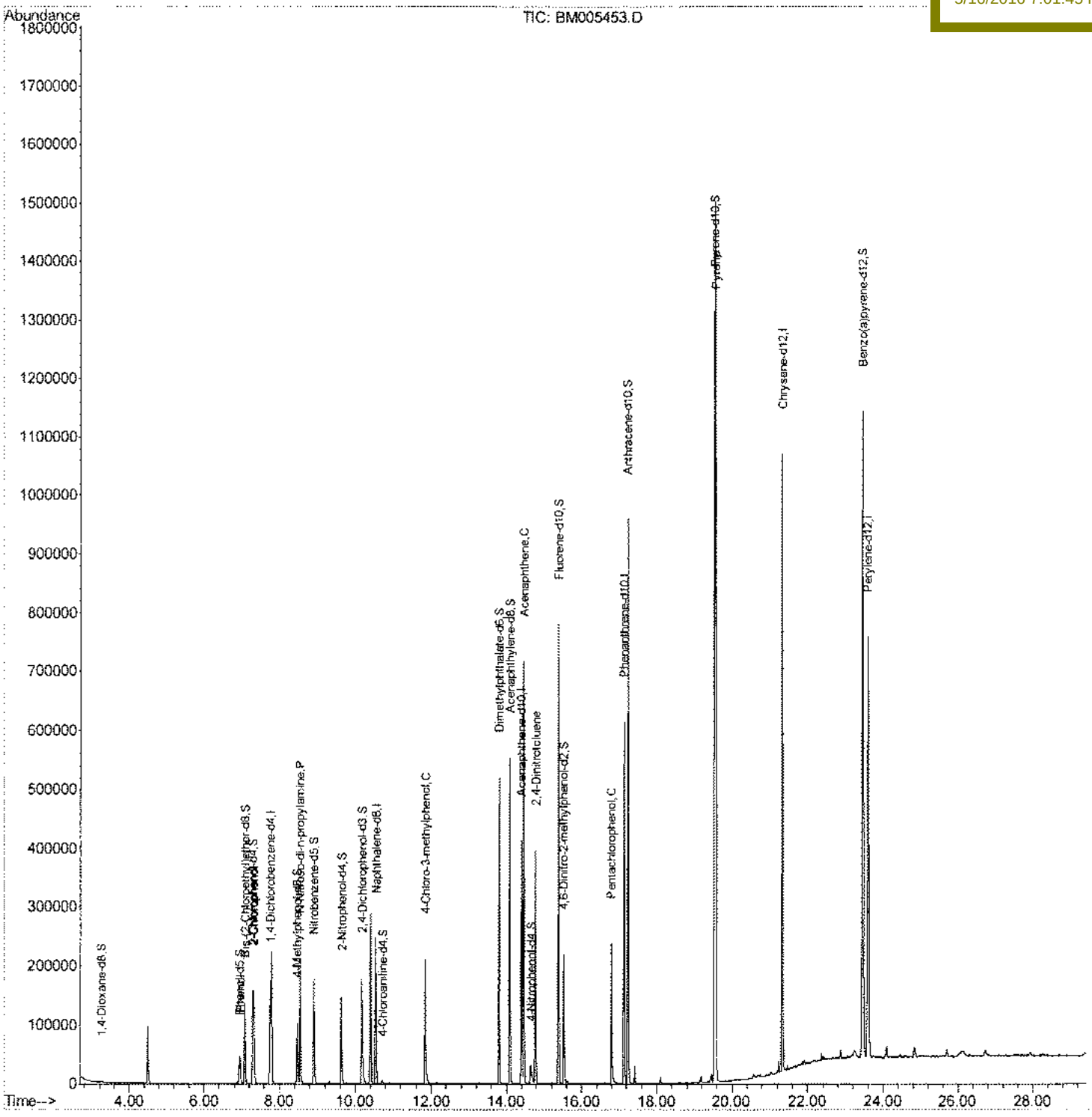
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005453.D
Acq On : 14 May 2016 06:58
Operator : UM/SJ
Sample : H2834-03MSD
Misc :
ALS Vial : 27 Sample Multiplier: 1

Quant Time: May 16 04:29:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002MSD

Manual Integrations APPROVED
sohil
5/16/2016 7:01:45 PM



Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005453.D
Acq On : 14 May 2016 06:58
Operator : UM/SJ
Sample : H2834-03MSD
Misc :
ALS Vial : 27 Sample Multiplier: 1

Quant Time: May 16 04:28:16 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002MSD

Manual Integrations APPROVED
sohil
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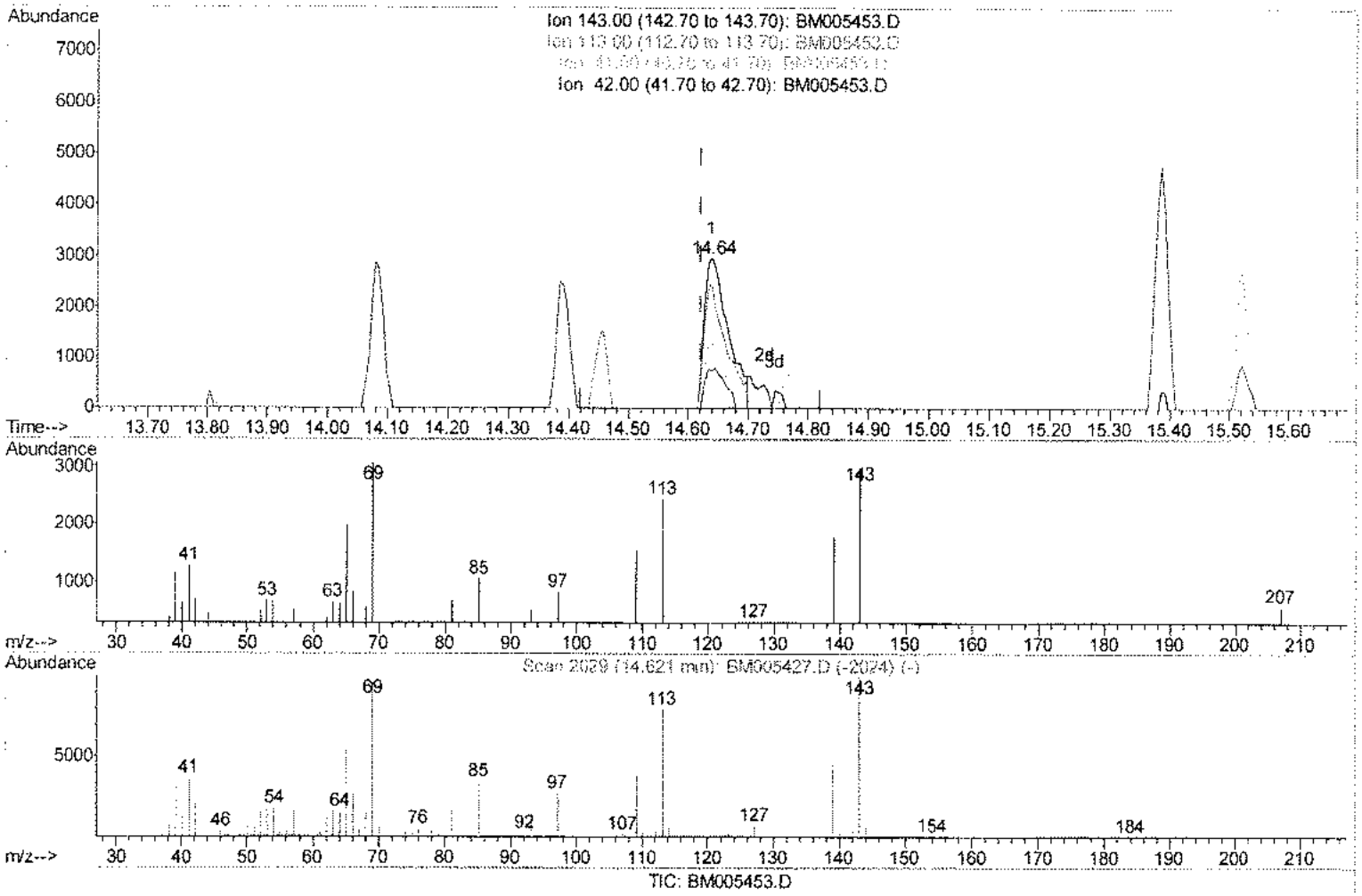


(51) 4-Nitrophenol-d4 (S)

14.639min (+0.018) 3.99ng/ul

response 8124

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	82.80
41.00	38.10	44.05
42.00	26.00	24.59

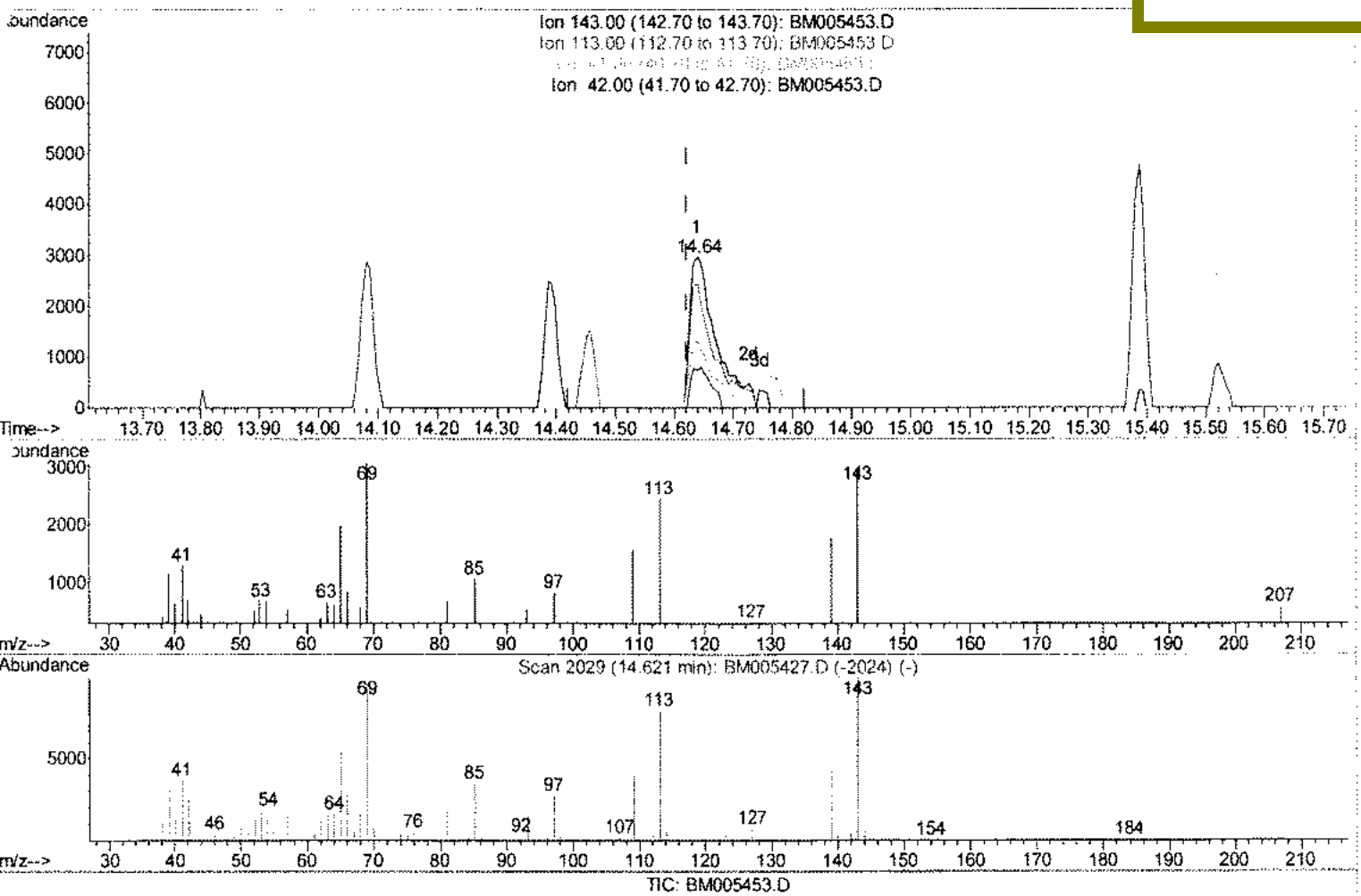
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005453.D
Acq On : 14 May 2016 06:58
Operator : UM/SJ
Sample : H2834-03MSD
Misc :
ALS Vial : 27 Sample Multiplier: 1

Quant Time: May 16 04:28:16 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4002MSD

Manual Integrations APPROVED
sohil
5/16/2016 7:01:45 PM



TIC: BM005453.D

(51) 4-Nitrophenol-d4 (S)

14.639min (+0.018) 4.46ng/ul m

response 9088

U · M
05/17/16

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	82.80
41.00	38.10	44.05
42.00	26.00	24.59

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005453.D
Acq On : 14 May 2016 06:58
Operator : UM/SJ
Sample : H2834-03MSD
Misc :
ALS Vial : 27 Sample Multiplier: 1

Quant Time: May 16 04:29:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4002MSD

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	43867	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	207205	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	139326	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	365368	20.00	ng/ul	0.00
75) Chrysene-d12	21.33	240	539904	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	535616	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1271	1.36	ng/uL	0.00
5) Phenol-d5	6.93	99	24392	6.13	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	66053	29.10	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	71708	23.86	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	44390	13.50	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	45414	30.70	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	49552	29.58	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	82257	26.42	ng/ul	0.00
29) 4-Chloroaniline-d4	10.71	131	7166	1.91	ng/ul	0.03
43) Dimethylphthalate-d6	13.80	166	352494	31.56	ng/ul	0.00
46) Acenaphthylene-d8	14.08	160	407690	31.12	ng/ul	0.00
51) 4-Nitrophenol-d4	14.64	143	9088m	4.46	ng/ul	0.02
57) Fluorene-d10	15.39	176	313393	32.50	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	51368	24.99	ng/ul	0.00
70) Anthracene-d10	17.24	188	543327	33.64	ng/ul	0.00
76) Pyrene-d10	19.54	212	720300	28.90	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	797098	33.62	ng/ul	0.00
Target Compounds						Qvalue
6) Phenol	6.96	94	27811	6.76	ng/ul	98
10) 2-Chlorophenol	7.32	128	74504	24.24	ng/ul	96
15) N-Nitroso-di-n-propylamine	8.55	70	80908	31.78	ng/ul	98
33) 4-Chloro-3-methylphenol	11.84	107	101938	26.67	ng/ul	99
49) Acenaphthene	14.46	153	295135	32.32	ng/ul	99
52) 4-Nitrophenol	14.65	109	8595	5.07	ng/ul	96
54) 2,4-Dinitrotoluene	14.77	165	117093	35.68	ng/ul	99
68) Pentachlorophenol	16.80	266	51388	23.54	ng/ul	97
77) Pyrene	19.57	202	917137	29.29	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

U.M 05/17/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-15MSD
Sample wt/vol : 30.06 (g/mL): g
Lab File ID : BM005460.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	100	U
100-52-7	Benzaldehyde	96	J
108-95-2	Phenol	1200	
111-44-4	Bis(2-Chloroethyl)ether	520	U
95-57-8	2-Chlorophenol	1200	
95-48-7	2-Methylphenol	520	U
108-60-1	2,2-oxybis(1-Chloropropane)	520	U
98-86-2	Acetophenone	69	J
106-44-5	4-Methylphenol	520	U
621-64-7	N-Nitroso-di-n-propylamine	1400	
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-Chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	270	U
106-47-8	4-Chloroaniline	520	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	520	U
59-50-7	4-Chloro-3-methylphenol	1300	
91-57-6	2-Methylnaphthalene	270	U
77-47-4	Hexachlorocyclopentadiene	520	U
88-06-2	2,4,6-Trichlorophenol	270	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061MSD

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Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4002
Analytical Method : SVOA
Level : LOW
Matrix : Soil
Lab Sample ID : H2834-15MSD
Sample wt/vol : 30.06 (g/mL): g
Lab File ID : BM005460.D
% Solids : 63.8
Date Received : 05/04/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/05/2016
GC Column : ID : (mm)
Date Analyzed : 05/14/2016
Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1-Biphenyl	270	U
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	270	U
131-11-3	Dimethylphthalate	410	
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	270	U
99-09-2	3-Nitroaniline	520	U
83-32-9	Acenaphthene	1300	
51-28-5	2,4-Dinitrophenol	520	U
100-02-7	4-Nitrophenol	1100	
132-64-9	Dibenzofuran	270	U
121-14-2	2,4-Dinitrotoluene	1400	
84-66-2	Diethylphthalate	270	U
86-73-7	Fluorene	270	U
7005-72-3	4-Chlorophenyl-phenylether	270	U
100-01-6	4-Nitroaniline	520	U
534-52-1	4,6-Dinitro-2-methylphenol	520	U
86-30-6	N-Nitrosodiphenylamine	270	U
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U
101-55-3	4-Bromophenyl-phenylether	270	U
118-74-1	Hexachlorobenzene	270	U
1912-24-9	Atrazine	520	U
87-86-5	Pentachlorophenol	1200	
85-01-8	Phenanthrene	270	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4061MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
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Extract Concentrated :(Y / N) Y
Extract Volume : 500 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : SOXH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types : GPC
Cleanup Factor : 2.0
Concentration Units (µg/L,mg/L,µg/kg): µg/kg

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	270	U
86-74-8	Carbazole	520	U
84-74-2	Di-n-butylphthalate	270	U
206-44-0	Fluoranthene	270	U
129-00-0	Pyrene	1300	
85-68-7	Butylbenzylphthalate	270	U
91-94-1	3,3-Dichlorobenzidine	520	U
56-55-3	Benzo(a)anthracene	270	U
218-01-9	Chrysene	270	U
117-81-7	Bis(2-ethylhexyl)phthalate	270	U
117-84-0	Di-n-octyl phthalate	520	U
205-99-2	Benzo(b)fluoranthene	270	U
207-08-9	Benzo(k)fluoranthene	270	U
50-32-8	Benzo(a)pyrene	270	U
193-39-5	Indeno(1,2,3-cd)pyrene	270	U
53-70-3	Dibenzo(a,h)anthracene	270	U
191-24-2	Benzo(g,h,i)perylene	270	U
58-90-2	2,3,4,6-Tetrachlorophenol	270	U

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005460.D
Acq On : 14 May 2016 11:12
Operator : UM/SJ
Sample : H2834-15MSD
Misc :
ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 16 04:17:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
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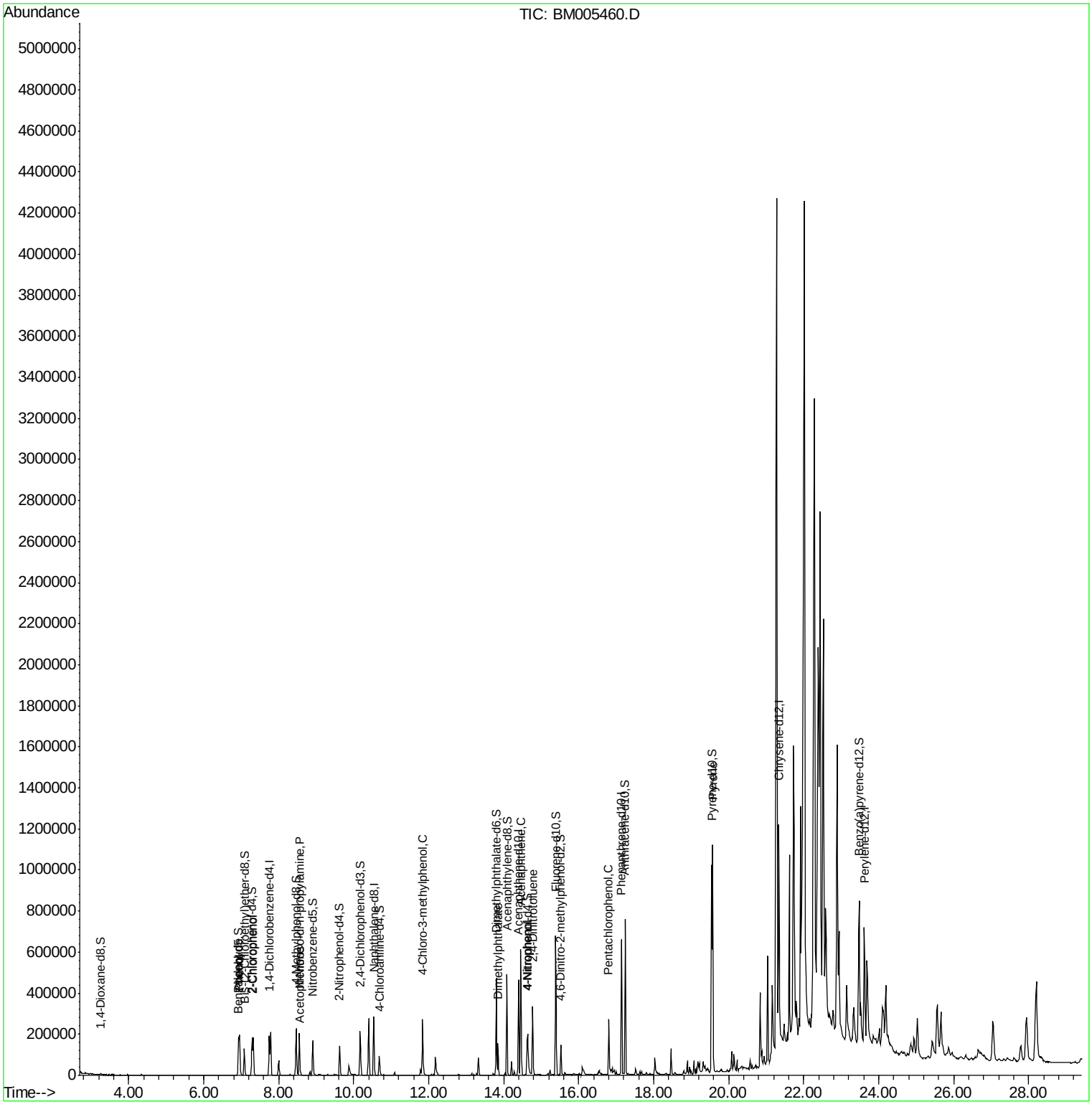
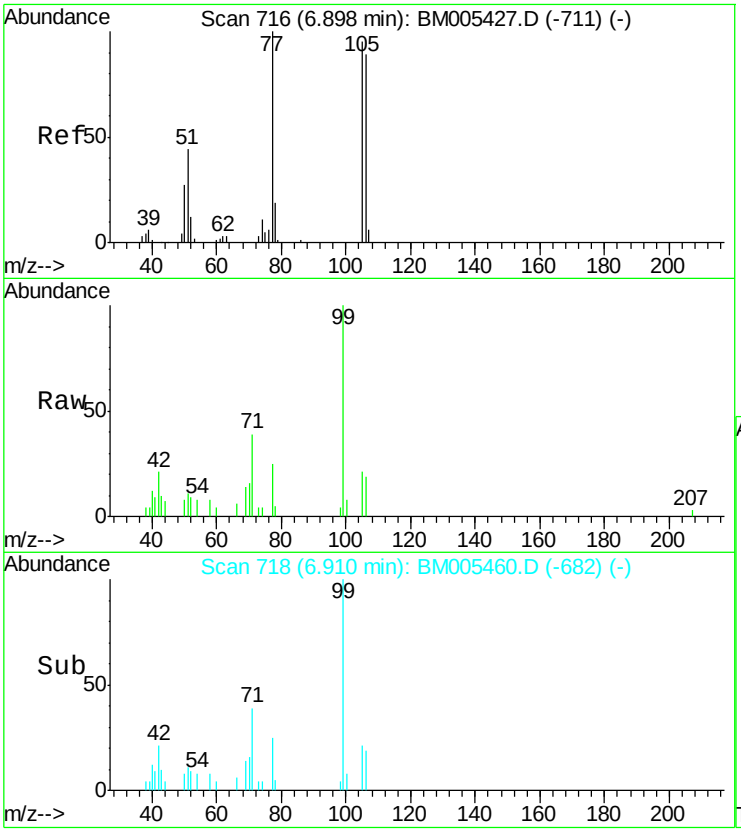
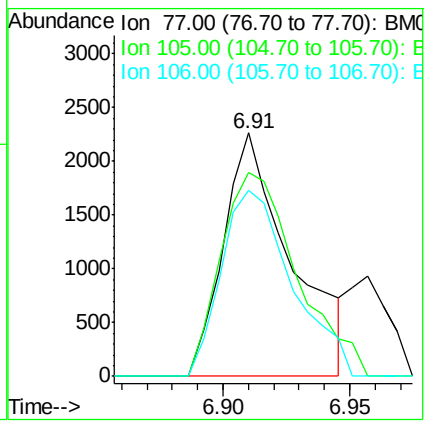




#4
Benzaldehyde
Concen: 1.85 ng/ul
RT: 6.91 min Scan# 718
Delta R.T. 0.01 min
Lab File: BM005460.D
Acq: 14 May 2016 11:12

Tgt Ion: 77 Resp: 4187

Ion	Ratio	Lower	Upper
77	100		
105	83.8	77.6	116.4
106	76.3	77.9	116.9#



Instrument :
BNA_M
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
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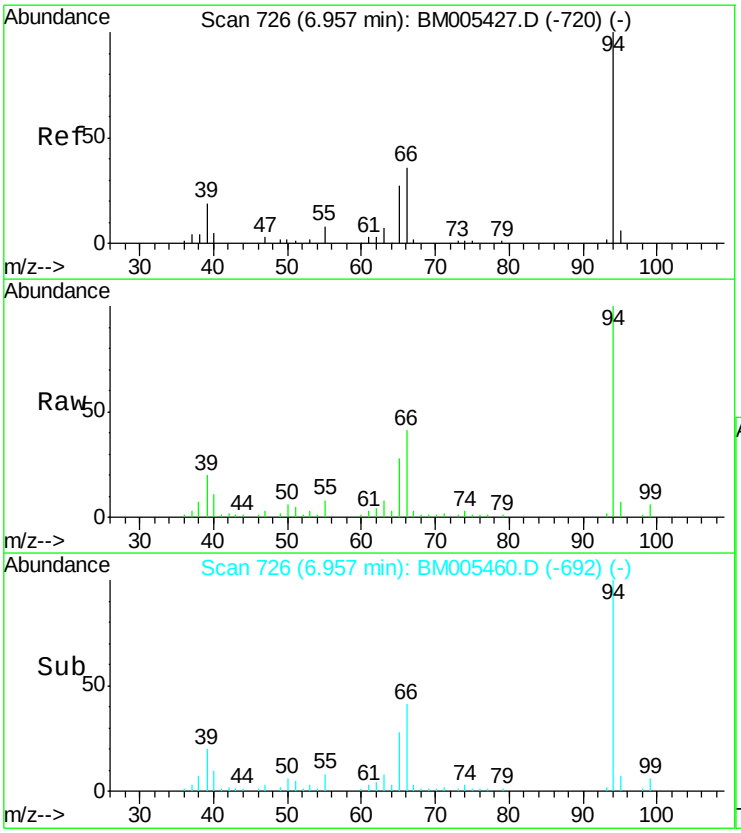
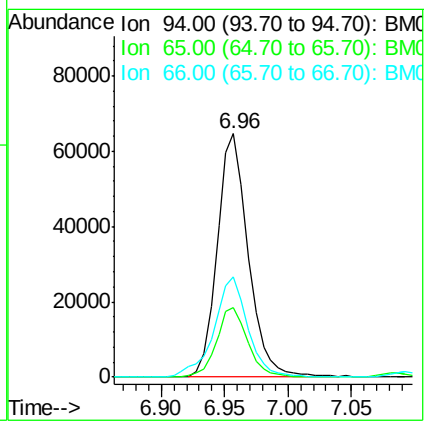
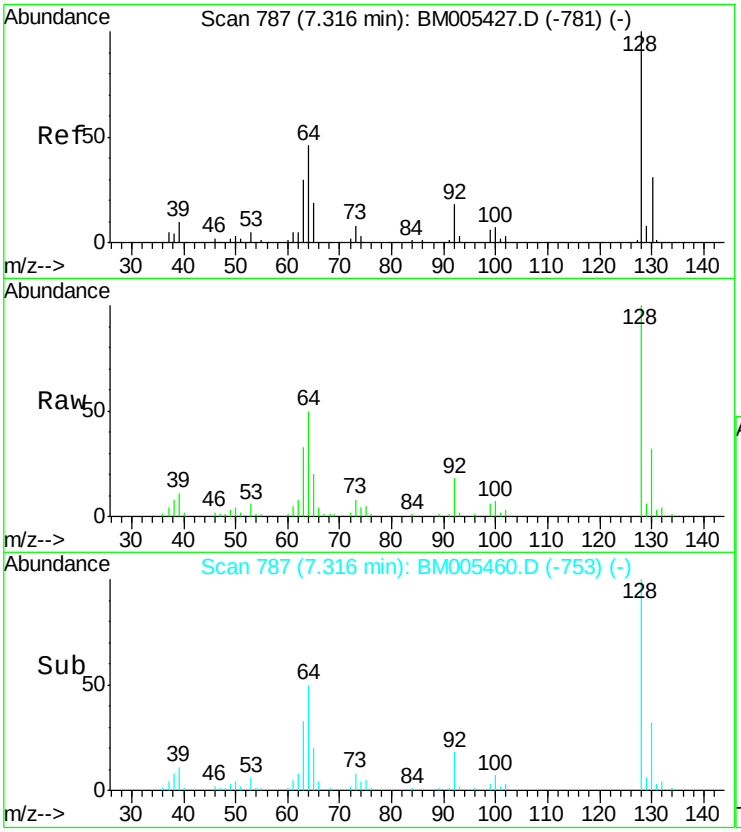


#6
Phenol
Concen: 22.71 ng/ul
RT: 6.96 min Scan# 726
Delta R.T. -0.00 min
Lab File: BM005460.D
Acq: 14 May 2016 11:12

Tgt Ion: 94 Resp: 109781

Ion	Ratio	Lower	Upper
94	100		
65	28.3	22.7	34.1
66	41.0	31.7	47.5

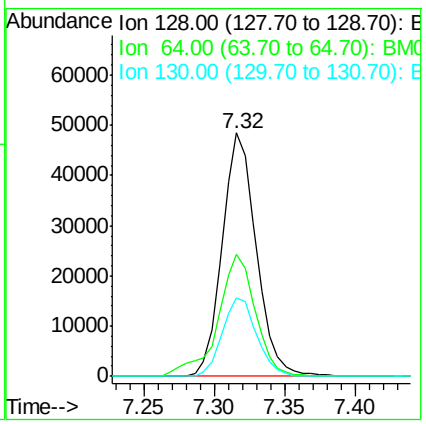




#10
2-Chlorophenol
Concen: 22.54 ng/ul
RT: 7.32 min Scan# 787
Delta R.T. -0.00 min
Lab File: BM005460.D
Acq: 14 May 2016 11:12

Tgt Ion:128 Resp: 81446

Ion	Ratio	Lower	Upper
128	100		
64	50.2	37.8	56.8
130	32.2	24.9	37.3



Instrument :
BNA_M
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
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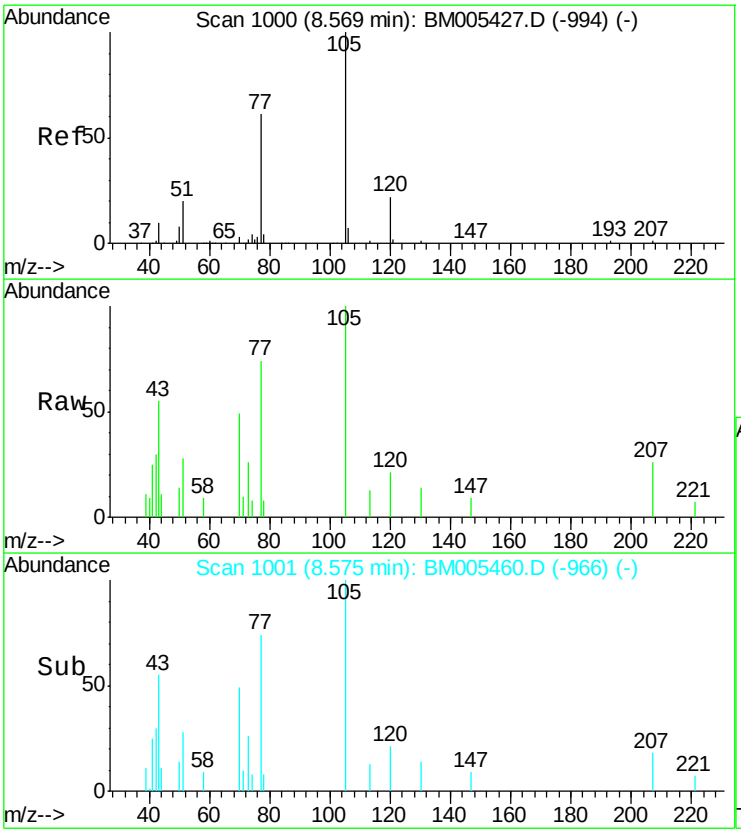
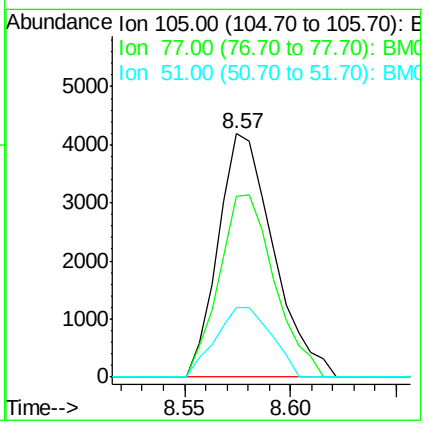
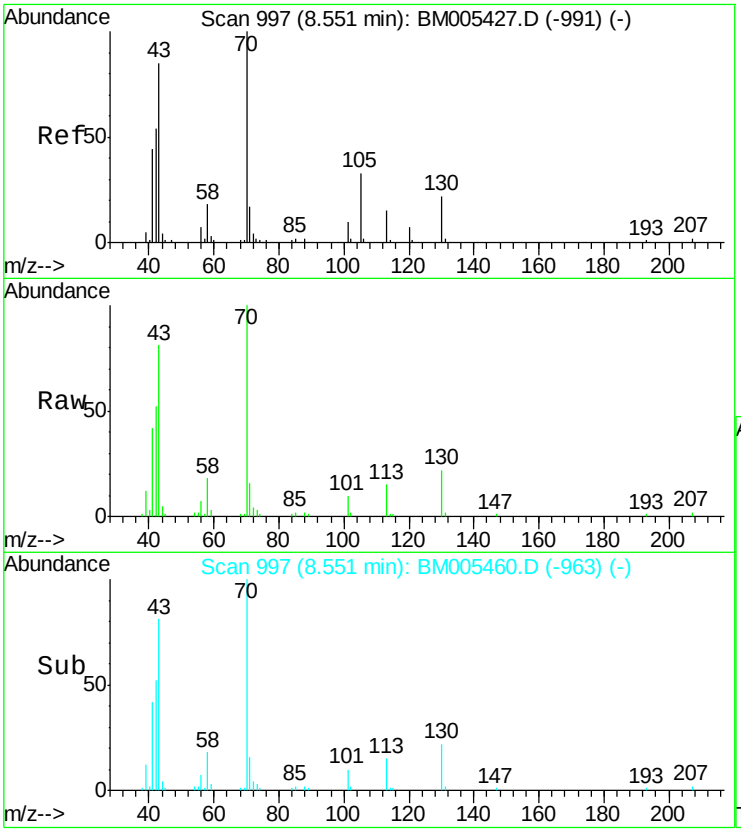


#14
Acetophenone
Concen: 1.32 ng/ul
RT: 8.57 min Scan# 1001
Delta R.T. 0.01 min
Lab File: BM005460.D
Acq: 14 May 2016 11:12

Tgt Ion:105 Resp: 7587

Ion	Ratio	Lower	Upper
105	100		
77	74.2	61.2	91.8
51	28.4	21.2	31.8

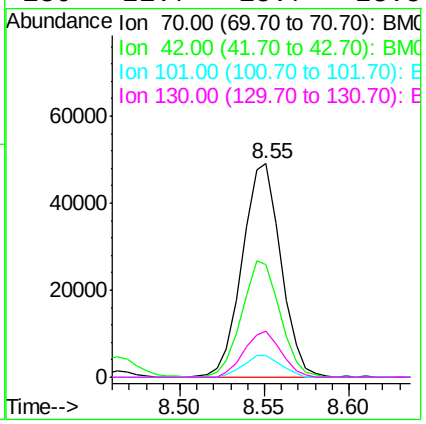




#15
N-Nitroso-di-n-propylamine
Concen: 26.20 ng/ul
RT: 8.55 min Scan# 997
Delta R.T. -0.00 min
Lab File: BM005460.D
Acq: 14 May 2016 11:12

Tgt Ion: 70 Resp: 78401

Ion	Ratio	Lower	Upper
70	100		
42	52.5	42.8	64.2
101	10.5	7.8	11.6
130	21.7	15.7	23.5



Instrument :
BNA_M
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
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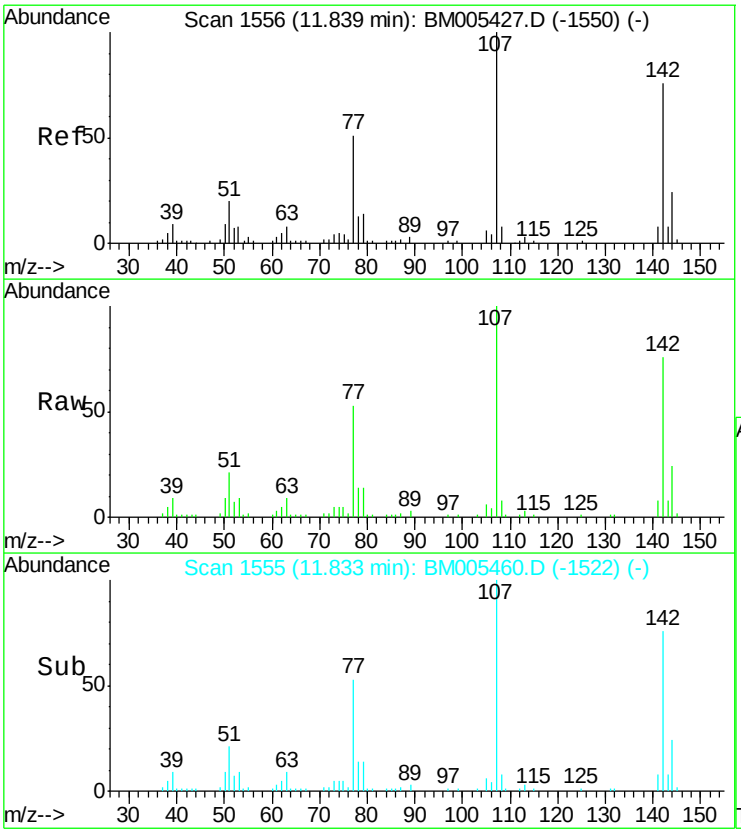
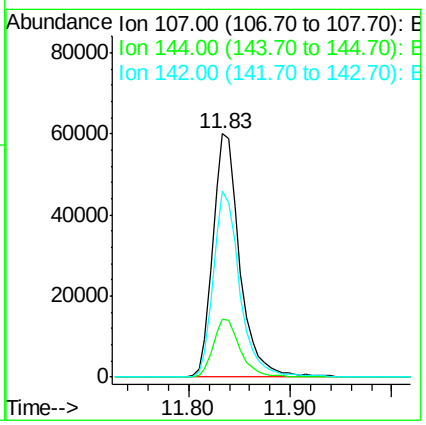
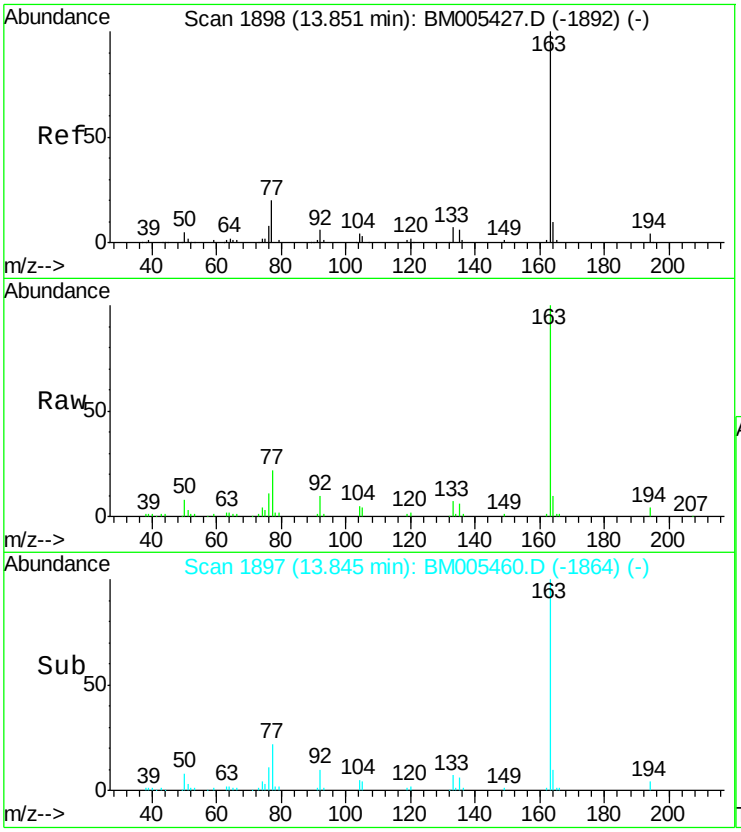


#33
4-Chloro-3-methylphenol
Concen: 25.18 ng/ul
RT: 11.83 min Scan# 1555
Delta R.T. -0.01 min
Lab File: BM005460.D
Acq: 14 May 2016 11:12

Tgt Ion:107 Resp: 110585

Ion	Ratio	Lower	Upper
107	100		
144	23.8	19.3	28.9
142	76.5	60.8	91.2

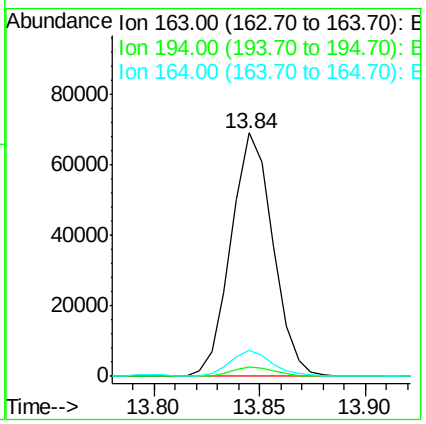




#44
Dimethylphthalate
Concen: 7.89 ng/ul
RT: 13.84 min Scan# 1897
Delta R.T. -0.01 min
Lab File: BM005460.D
Acq: 14 May 2016 11:12

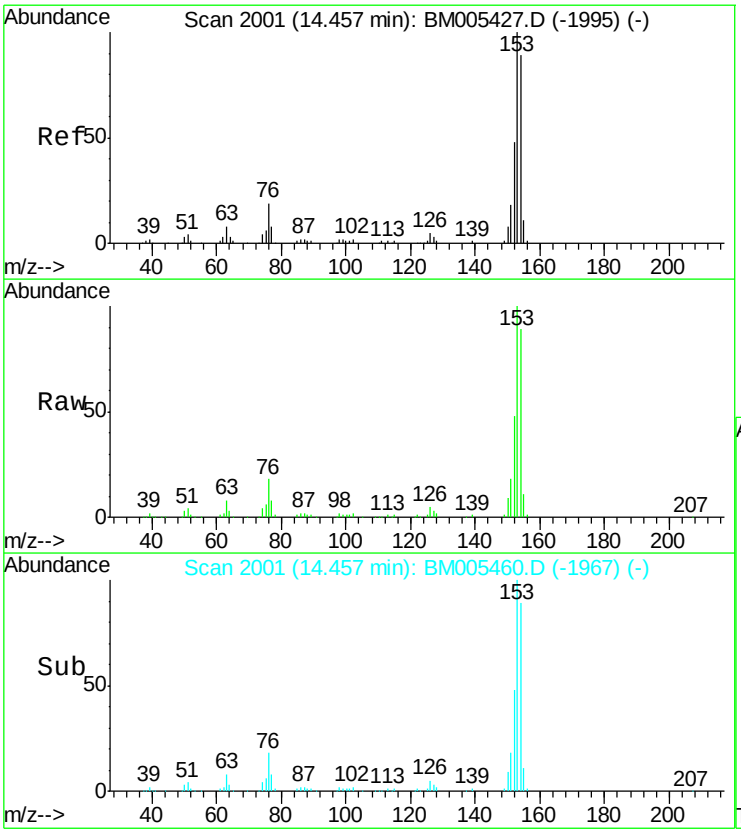
Tgt Ion:163 Resp: 95220

Ion	Ratio	Lower	Upper
163	100		
194	4.0	3.4	5.0
164	10.5	7.9	11.9



Instrument :
BNA_M
ClientSampleId :
H4061MSD

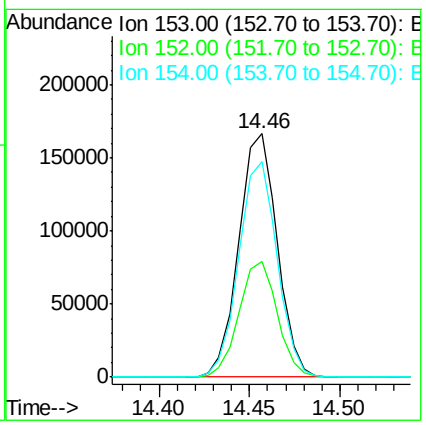
Manual Integrations APPROVED
sohil
5/16/2016 7:02:04 PM

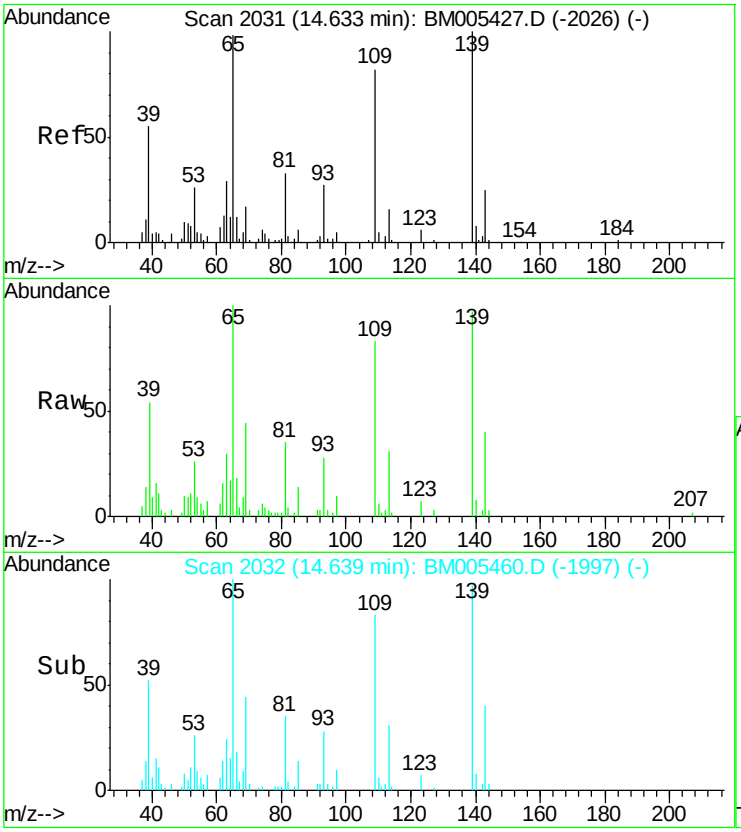


#49
Acenaphthene
Concen: 24.91 ng/ul
RT: 14.46 min Scan# 2001
Delta R.T. -0.00 min
Lab File: BM005460.D
Acq: 14 May 2016 11:12

Tgt Ion:153 Resp: 245941

Ion	Ratio	Lower	Upper
153	100		
152	47.5	38.9	58.3
154	88.6	70.3	105.5

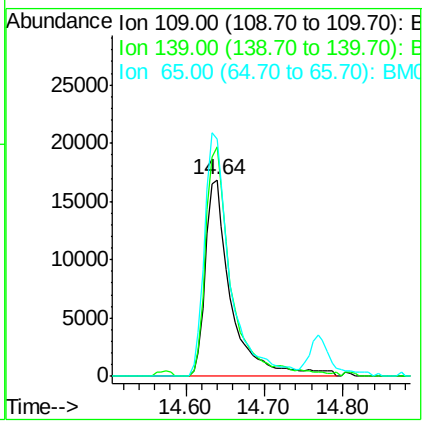




#52
4-Nitrophenol
Concen: 21.03 ng/ul m
RT: 14.64 min Scan# 2032
Delta R.T. 0.01 min
Lab File: BM005460.D
Acq: 14 May 2016 11:12

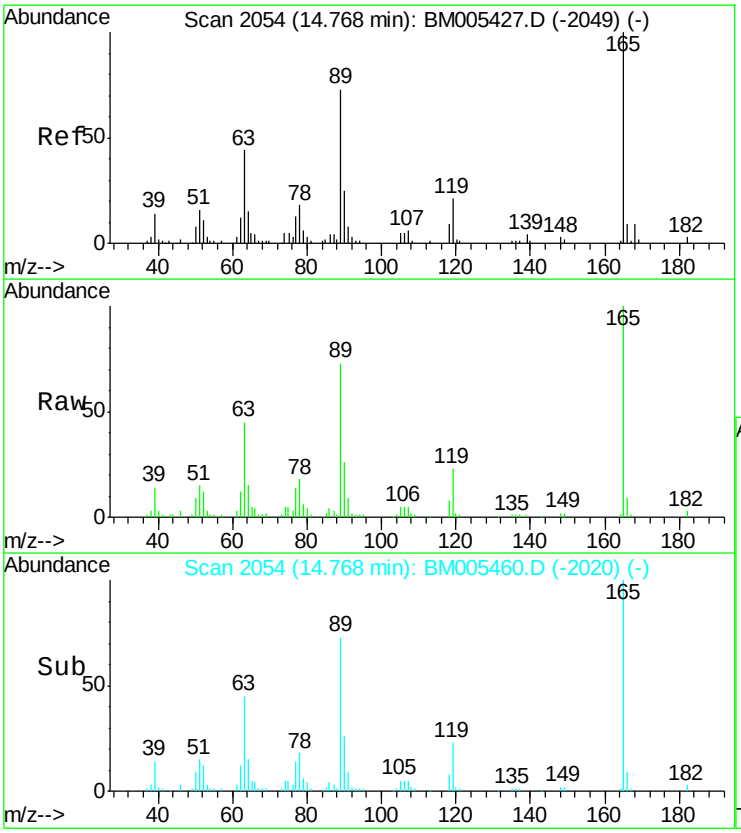
Tgt Ion:109 Resp: 38524

Ion	Ratio	Lower	Upper
109	100		
139	116.4	103.6	155.4
65	120.5	104.7	157.1



Instrument :
BNA_M
ClientSampleId :
H4061MSD

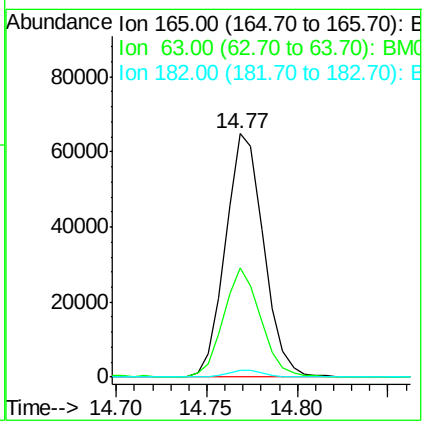
Manual Integrations APPROVED
sohil
5/16/2016 7:02:04 PM

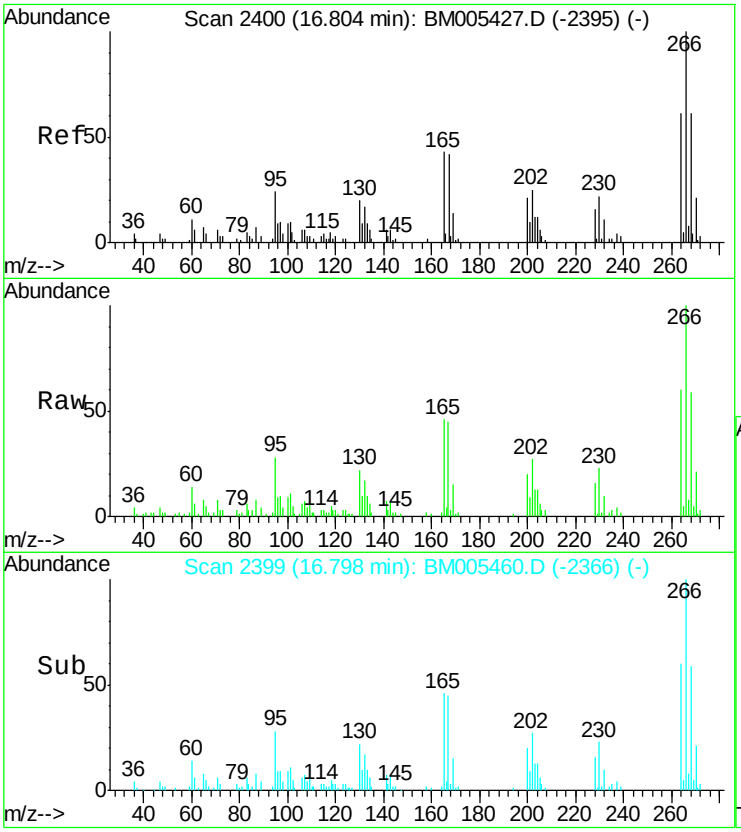


#54
2,4-Dinitrotoluene
Concen: 26.75 ng/ul
RT: 14.77 min Scan# 2054
Delta R.T. -0.00 min
Lab File: BM005460.D
Acq: 14 May 2016 11:12

Tgt Ion:165 Resp: 94898

Ion	Ratio	Lower	Upper
165	100		
63	45.0	36.2	54.4
182	2.9	2.5	3.7

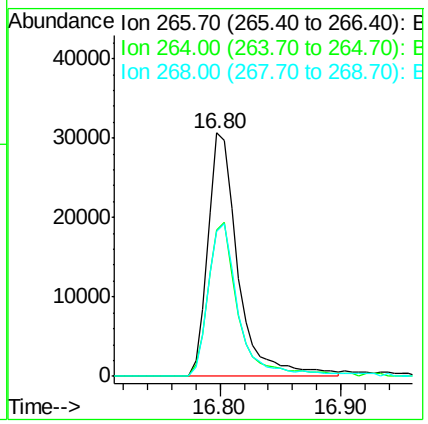




#68
Pentachlorophenol
Concen: 23.18 ng/ul
RT: 16.80 min Scan# 2399
Delta R.T. -0.01 min
Lab File: BM005460.D
Acq: 14 May 2016 11:12

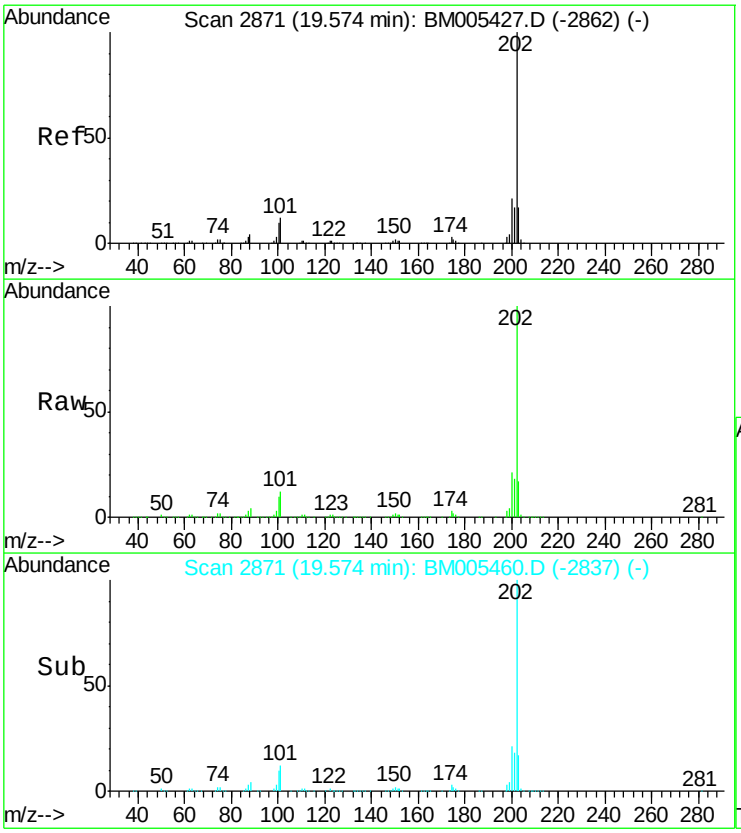
Tgt Ion:266 Resp: 53059

Ion	Ratio	Lower	Upper
266	100		
264	60.3	52.0	78.0
268	59.4	53.0	79.6



Instrument :
BNA_M
ClientSampleId :
H4061MSD

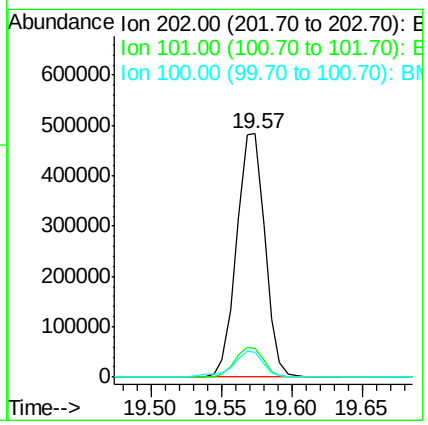
Manual Integrations APPROVED
sohil
5/16/2016 7:02:04 PM



#77
Pyrene
Concen: 24.66 ng/ul
RT: 19.57 min Scan# 2871
Delta R.T. -0.00 min
Lab File: BM005460.D
Acq: 14 May 2016 11:12

Tgt Ion:202 Resp: 677389

Ion	Ratio	Lower	Upper
202	100		
101	12.0	10.8	16.2
100	9.9	8.4	12.6



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005460.D
Acq On : 14 May 2016 11:12
Operator : UM/SJ
Sample : H2834-15MSD
Misc :
ALS Vial : 34 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4061MSD

Manual Integrations APPROVED
sohil
5/16/2016 7:02:04 PM

Quant Time: May 16 04:17:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	51562	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	238097	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	150598	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	383066	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	473564	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	401608	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	4317	3.94	ng/uL	0.00
5) Phenol-d5	6.93	99	103897	22.22	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	60651	22.73	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	81400	23.05	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	87220	22.56	ng/ul	0.00
19) Nitrobenzene-d5	8.90	128	41853	24.62	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	48316	25.10	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	85950	24.03	ng/ul	0.00
29) 4-Chloroaniline-d4	10.68	131	57087	13.26	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	315991	26.18	ng/ul	0.00
46) Acenaphthylene-d8	14.08	160	356861	25.20	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	39394m	17.88	ng/ul	0.00
57) Fluorene-d10	15.39	176	261046	25.04	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	32721	15.18	ng/ul	0.00
70) Anthracene-d10	17.24	188	428673	25.32	ng/ul	0.00
76) Pyrene-d10	19.54	212	531506	24.31	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	452484	25.45	ng/ul	0.01
Target Compounds						Qvalue
4) Benzaldehyde	6.91	77	4187	1.85	ng/ul#	83
6) Phenol	6.96	94	109781	22.71	ng/ul	99
10) 2-Chlorophenol	7.32	128	81446	22.54	ng/ul	97
14) Acetophenone	8.57	105	7587	1.32	ng/ul	97
15) N-Nitroso-di-n-propylamine	8.55	70	78401	26.20	ng/ul	98
33) 4-Chloro-3-methylphenol	11.83	107	110585	25.18	ng/ul	99
44) Dimethylphthalate	13.84	163	95220	7.89	ng/ul	99
49) Acenaphthene	14.46	153	245941	24.91	ng/ul	99
52) 4-Nitrophenol	14.64	109	38524m	21.03	ng/ul	
54) 2,4-Dinitrotoluene	14.77	165	94898	26.75	ng/ul	100
68) Pentachlorophenol	16.80	266	53059	23.18	ng/ul	93
77) Pyrene	19.57	202	677389	24.66	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

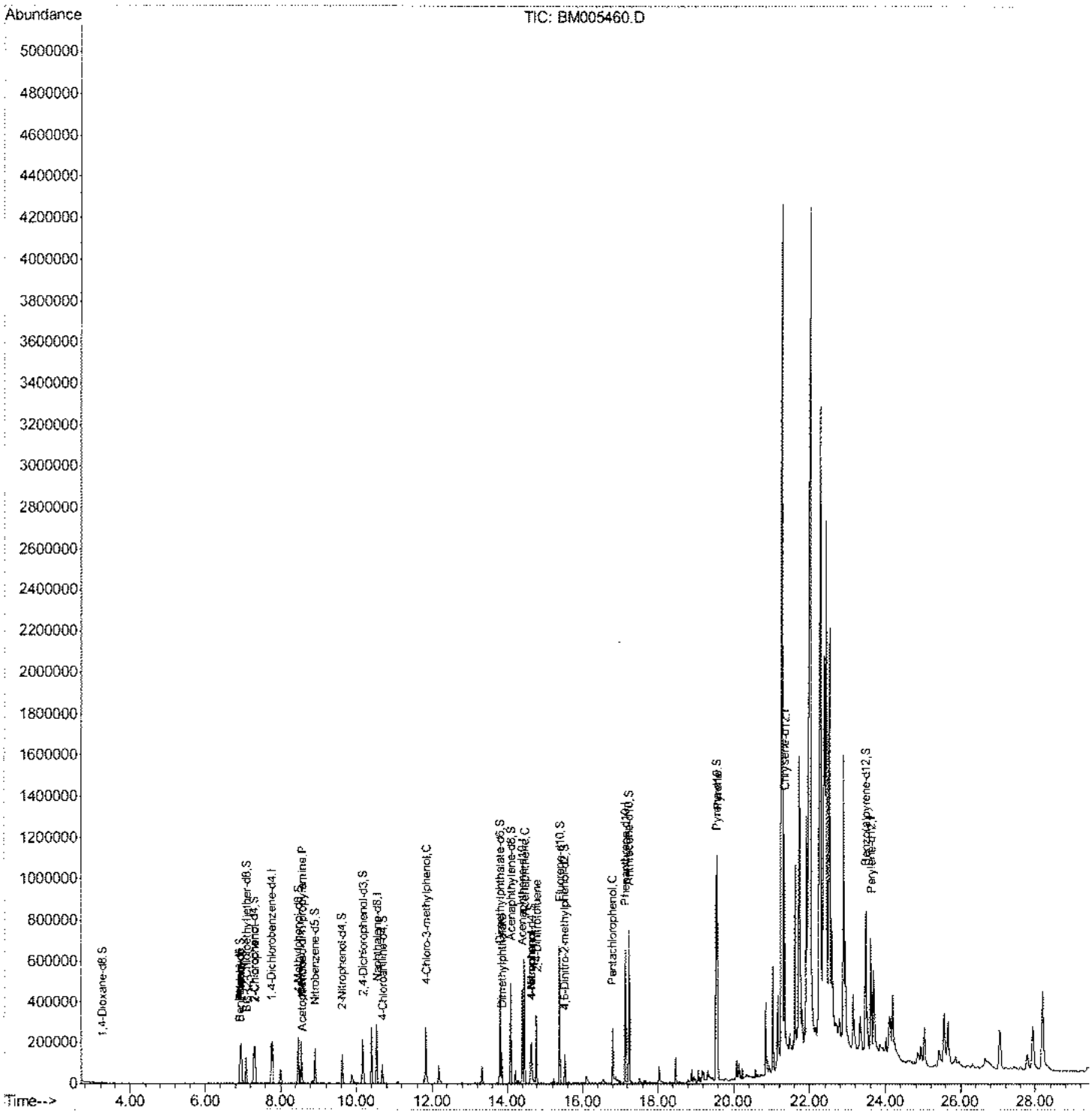
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005460.D
Acq On : 14 May 2016 11:12
Operator : UM/SJ
Sample : H2834-15MSD
Misc :
ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 16 04:17:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
sohil
5/16/2016 7:02:04 PM



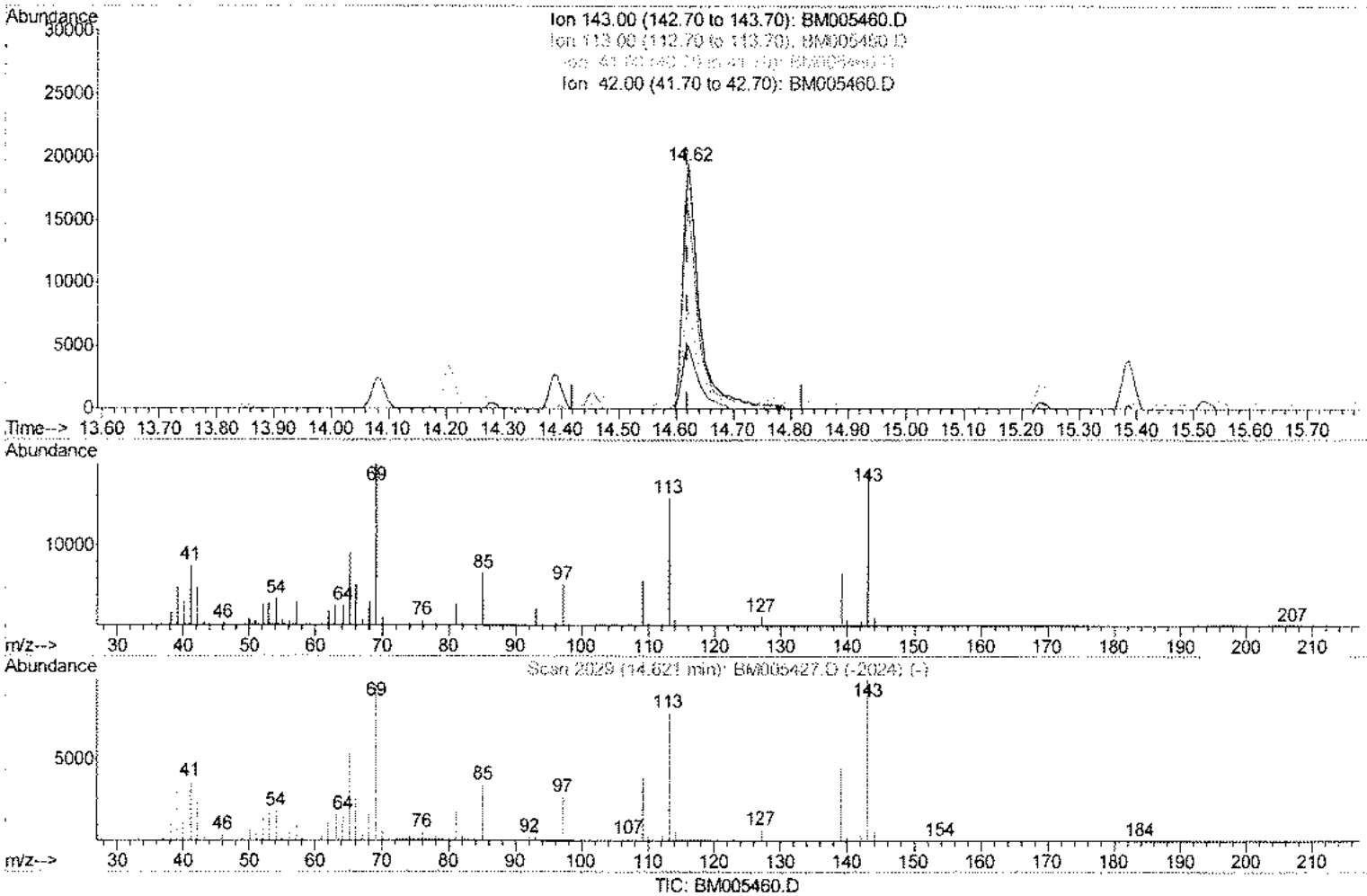
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005460.D
Acq On : 14 May 2016 11:12
Operator : UM/SJ
Sample : H2834-15MSD
Misc :
ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 16 03:41:08 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
sohil
5/16/2016 7:02:04 PM



TIC: BM005460.D

(51) 4-Nitrophenol-d4 (S)

14.621min (-0.000) 17.88ng/ul m

response 39394

U.M 05/17/16

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	81.80
41.00	38.10	39.48
42.00	26.00	25.99

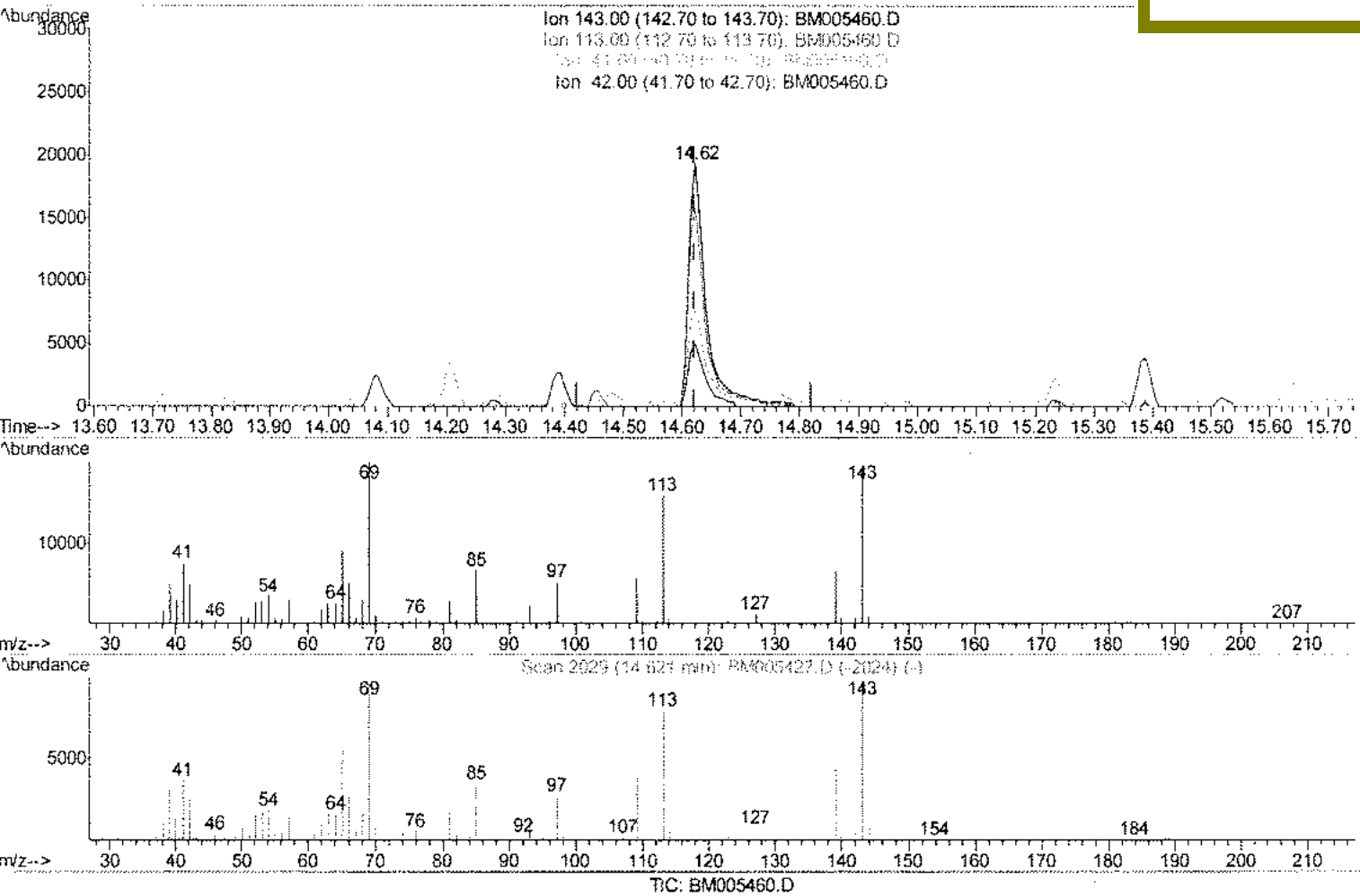
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005460.D
Acq On : 14 May 2016 11:12
Operator : UM/SJ
Sample : H2834-15MSD
Misc :
ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 16 03:41:08 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
sohil
5/16/2016 7:02:04 PM



(51) 4-Nitrophenol-d4 (S)

14.621min (-0.000) 17.55ng/ul

response 38668

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	81.80
41.00	38.10	39.48
42.00	26.00	25.99

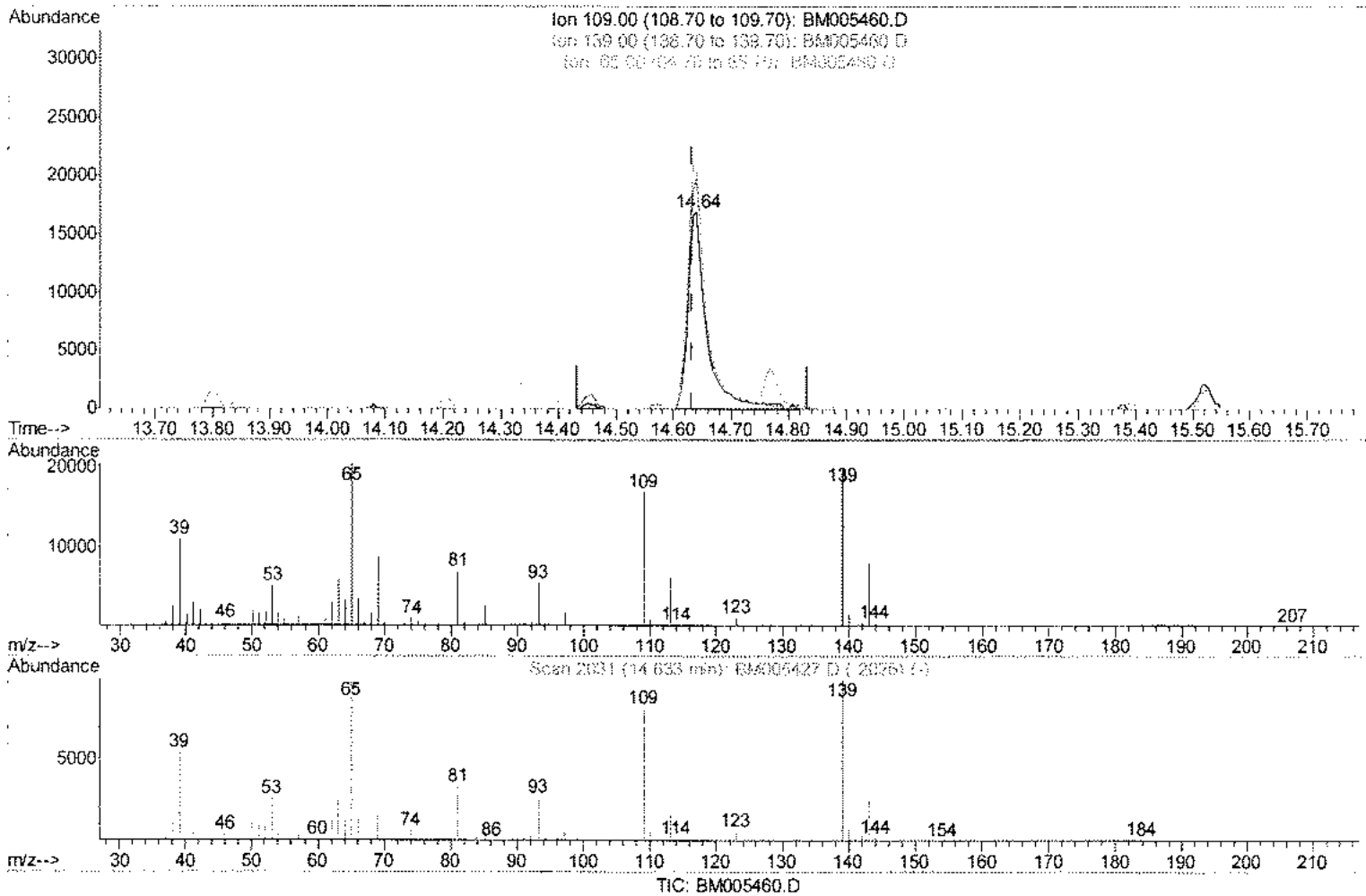
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005460.D
Acq On : 14 May 2016 11:12
Operator : UM/SJ
Sample : H2834-15MSD
Misc :
ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 16 03:41:08 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
sohil
5/16/2016 7:02:04 PM



TIC: BM005460.D

(52) 4-Nitrophenol

14.639min (+0.006) 21.03ng/ul m > U · M 5/17/16

response 38524

Ion	Exp%	Act%
109.00	100	100
139.00	129.50	116.40
65.00	130.90	120.47
0.00	0.00	0.00

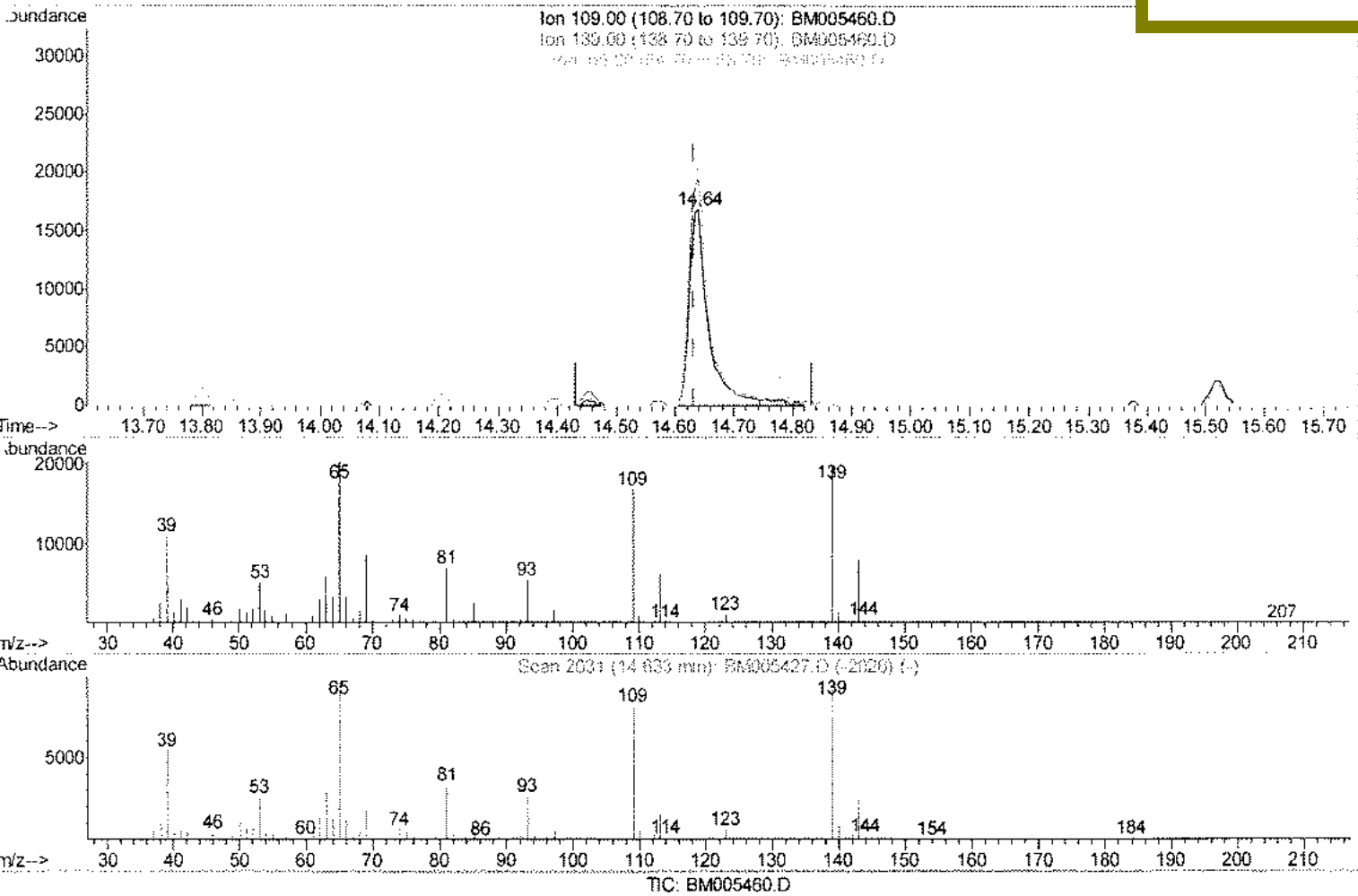
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005460.D
Acq On : 14 May 2016 11:12
Operator : UM/SJ
Sample : H2834-15MSD
Misc :
ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 16 03:41:08 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4061MSD

Manual Integrations APPROVED
sohil
5/16/2016 7:02:04 PM



TIC: BM005460.D

(52) 4-Nitrophenol

14.639min (+0.006) 20.36ng/ul

response 37291

Ion	Exp%	Act%
109.00	100	100
139.00	129.50	116.40
65.00	130.90	120.47
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005460.D
Acq On : 14 May 2016 11:12
Operator : UM/SJ
Sample : H2834-15MSD
Misc :
ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 16 04:17:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4061MSD

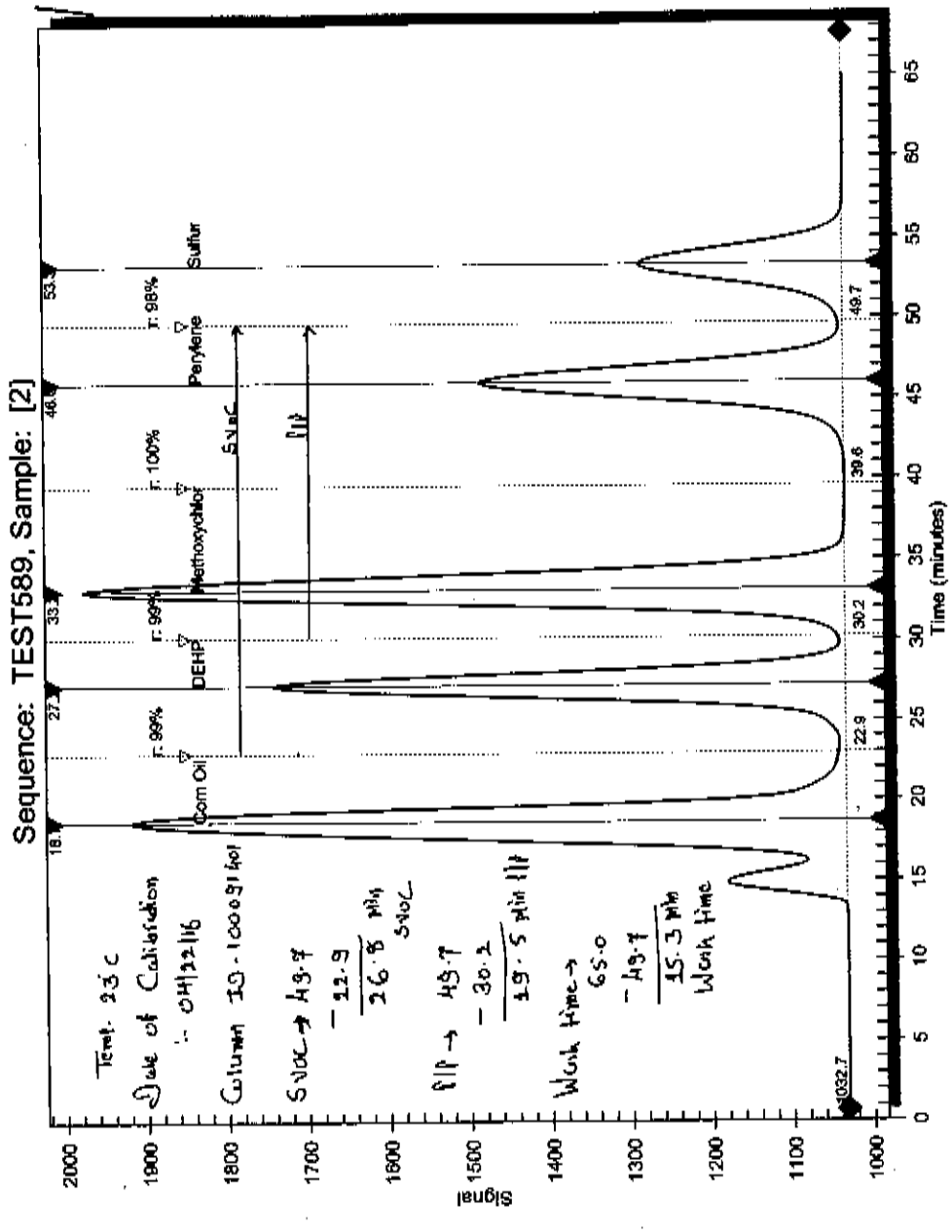
Manual Integrations APPROVED
sohil
5/16/2016 7:02:04 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	51562	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	238097	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	150598	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	383066	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	473564	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	401608	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	4317	3.94	ng/uL	0.00
5) Phenol-d5	6.93	99	103897	22.22	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	60651	22.73	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	81400	23.05	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	87220	22.56	ng/ul	0.00
19) Nitrobenzene-d5	8.90	128	41853	24.62	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	48316	25.10	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	85950	24.03	ng/ul	0.00
29) 4-Chloroaniline-d4	10.68	131	57087	13.26	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	315991	26.18	ng/ul	0.00
46) Acenaphthylene-d8	14.08	160	356861	25.20	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	39394m	17.88	ng/ul	0.00
57) Fluorene-d10	15.39	176	261046	25.04	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	32721	15.18	ng/ul	0.00
70) Anthracene-d10	17.24	188	428673	25.32	ng/ul	0.00
76) Pyrene-d10	19.54	212	531506	24.31	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	452484	25.45	ng/ul	0.01
Target Compounds						Qvalue
4) Benzaldehyde	6.91	77	4187	1.85	ng/ul#	83
6) Phenol	6.96	94	109781	22.71	ng/ul	99
10) 2-Chlorophenol	7.32	128	81446	22.54	ng/ul	97
14) Acetophenone	8.57	105	7587	1.32	ng/ul	97
15) N-Nitroso-di-n-propylamine	8.55	70	78401	26.20	ng/ul	98
33) 4-Chloro-3-methylphenol	11.83	107	110585	25.18	ng/ul	99
44) Dimethylphthalate	13.84	163	95220	7.89	ng/ul	99
49) Acenaphthene	14.46	153	245941	24.91	ng/ul	99
52) 4-Nitrophenol	14.64	109	38524m	21.03	ng/ul	
54) 2,4-Dinitrotoluene	14.77	165	94898	26.75	ng/ul	100
68) Pentachlorophenol	16.80	266	53059	23.18	ng/ul	93
77) Pyrene	19.57	202	677389	24.66	ng/ul	97

U.M 05/17/16

U.M 05/17/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed



CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908) 789-8900 www.chemtech.net

Daily Analysis Runlog

J2 SCIENTIFIC ACCUPREP GPC System

Start Date: 04/25/16 End Date: 05/01/16 Analyst [illegible] Review By: [illegible]

STD. Name	STD REF. #:	Check Standard	Data File and Date	Reagent
GPC Calibration	E1 1670	BNA Blank Check		Methylene Chloride
Pest Check Std	H 10896 2.0 ml	Pesticide Blank Check		Reagent Reference #
PCB Check Std	H 10806 1.0 ml	Pesticide Check		E 2098
CALIB. DATE:	04/22/16	PCB Check		

Port #	Sample ID	Volume Collected	GPC Date	BNA	PEST	Comments
1	Column cleaned	-	04/22/16	-	-	
2	Calc Calibration	-		-	-	U.V. Trace Analysis
1	Column cleaned	-	04/22/16	-	-	
2	H 2694-09 Blk			-	✓	H 2694-BN Blk & Lcs
3	H 2694-08 Blk			-	✓	
4	H 2694-07 Pest Blk			-	✓	
5	H 2694-06 Pest Blk			-	✓	
6	H 2694-05 Blk BN			✓	-	

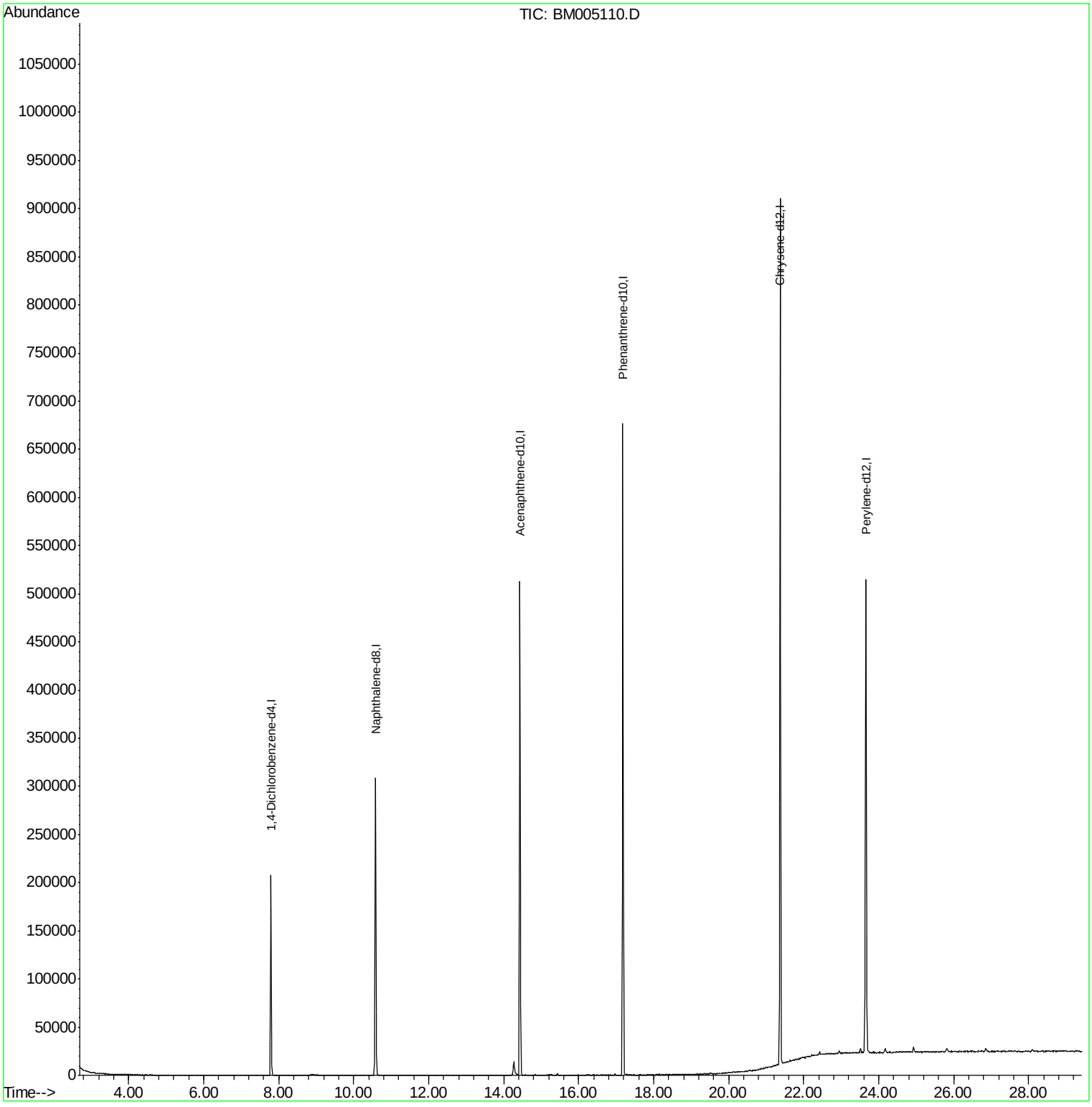
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA M\DATA\BM042816\
Data File : BM005110.D
Acq On : 28 Apr 2016 12:24
Operator : UM/SJ
Sample : H2694-05
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 29 10:52:26 2016
Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM042516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri Apr 29 02:20:37 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SVOC-GPC-BLANK

Manual Integrations APPROVED
sohil
4/29/2016 10:36:29 AM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA M\DATA\BM042816\
Data File : BM005110.D
Acq On : 28 Apr 2016 12:24
Operator : UM/SJ
Sample : H2694-05
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SVOC-GPC-BLANK

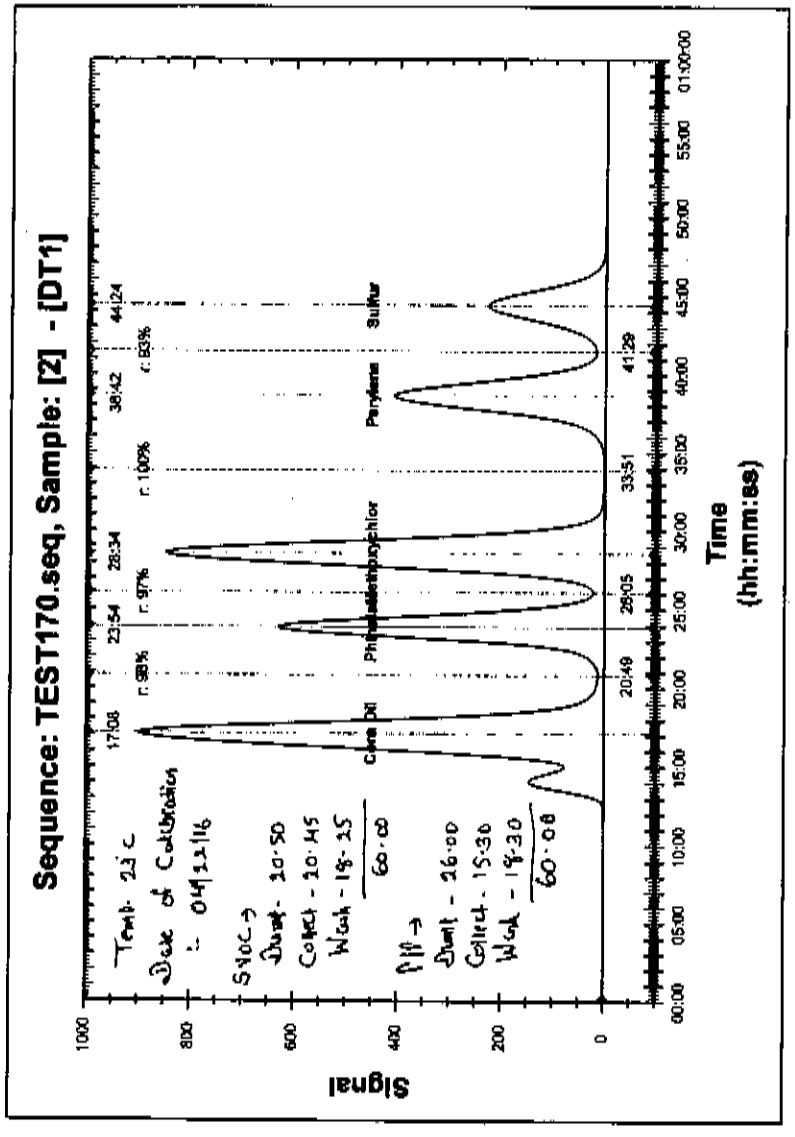
Manual Integrations APPROVED
sohil
4/29/2016 10:36:29 AM

Quant Time: Apr 29 10:52:26 2016
Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM042516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri Apr 29 02:20:37 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.79	152	59201	20.00	ng/ul	0.00
18) Naphthalene-d8	10.58	136	264665	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.43	164	172001	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.18	188	413495	20.00	ng/ul	0.00
75) Chrysene-d12	21.37	240	441629	20.00	ng/ul	0.00
83) Perylene-d12	23.66	264	361248	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0	0.00	ng/uL	
5) Phenol-d5	0.00	99	0	0.00	ng/ul	
7) Bis-(2-Chloroethyl)ether-d	0.00	67	0	0.00	ng/ul	
9) 2-Chlorophenol-d4	0.00	132	0	0.00	ng/ul	
13) 4-Methylphenol-d8	0.00	113	0	0.00	ng/ul	
19) Nitrobenzene-d5	0.00	128	0	0.00	ng/ul	
22) 2-Nitrophenol-d4	0.00	143	0	0.00	ng/ul	
26) 2,4-Dichlorophenol-d3	0.00	165	0	0.00	ng/ul	
29) 4-Chloroaniline-d4	0.00	131	0	0.00	ng/ul	
43) Dimethylphthalate-d6	0.00	166	0	0.00	ng/ul	
46) Acenaphthylene-d8	0.00	160	0	0.00	ng/ul	
51) 4-Nitrophenol-d4	0.00	143	0	0.00	ng/ul	
57) Fluorene-d10	0.00	176	0d	0.00	ng/ul	
62) 4,6-Dinitro-2-methylphenol	0.00	200	0	0.00	ng/ul	
70) Anthracene-d10	0.00	188	0d	0.00	ng/ul	
76) Pyrene-d10	0.00	212	0	0.00	ng/ul	
87) Benzo(a)pyrene-d12	0.00	264	0d	0.00	ng/ul	

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed



GPC

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908) 789-8900 www.chemtech.net

Daily Analysis Runlog

J2 SCIENTIFIC PREPLINE GPC System

Start Date: 04/25/16 End Date: 05/01/16 Analyst M/JJM Review By

STD. Name	STD REF. #:	Check Standard	Data File and Date	Reagent
GPC Calibration	E.P 1670	BNA Blank Check		Methylene Chloride
Pest Check Std	PP 10896 2.0 mL	Pesticide Blank Check		Reagent Reference #
PCB Check Std	PP 10804 1.0 mL	Pesticide Check		E 2098
CALIB. DATE:	04/22/16	PCB Check		

	Port #	Sample ID	Volume Collected	GPC Date	BNA	PEST	Comments
	1	GPC Calibration	-	04/22/16	-	-	U.V. Trace Analysis
	1	H 2694 - 1M PCB 50%	55	04/22/16	-	✓	H 2694 BN/PCB/Kit
	2	H 2694 - 12 PCB BLK	55		-	✓	
	3	H 2694 - 12 PEST 50%	55		-	✓	
	4	H 2694 - 11 PEST BLK	55		-	✓	
	5	H 2694 - 10 BLK BN	45		✓	-	

4/22

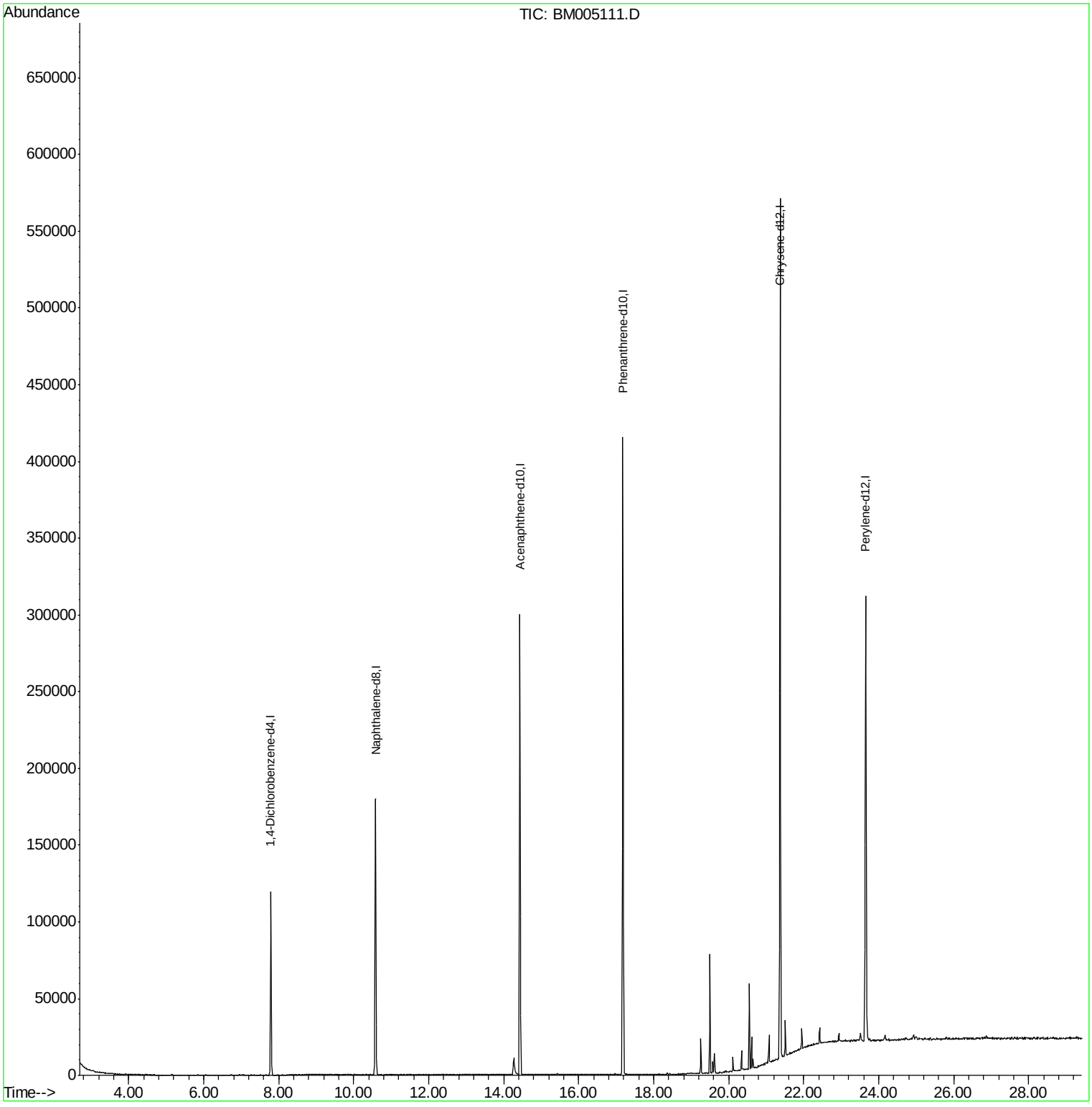
Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA M\DATA\BM042816\
Data File : BM005111.D
Acq On : 28 Apr 2016 13:00
Operator : UM/SJ
Sample : H2694-10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 29 10:53:52 2016
Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM042516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri Apr 29 02:20:37 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SVOC-GPC2-BLANK

Manual Integrations APPROVED
sohil
4/29/2016 10:36:30 AM



Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA M\DATA\BM042816\
Data File : BM005111.D
Acq On : 28 Apr 2016 13:00
Operator : UM/SJ
Sample : H2694-10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SVOC-GPC2-BLANK

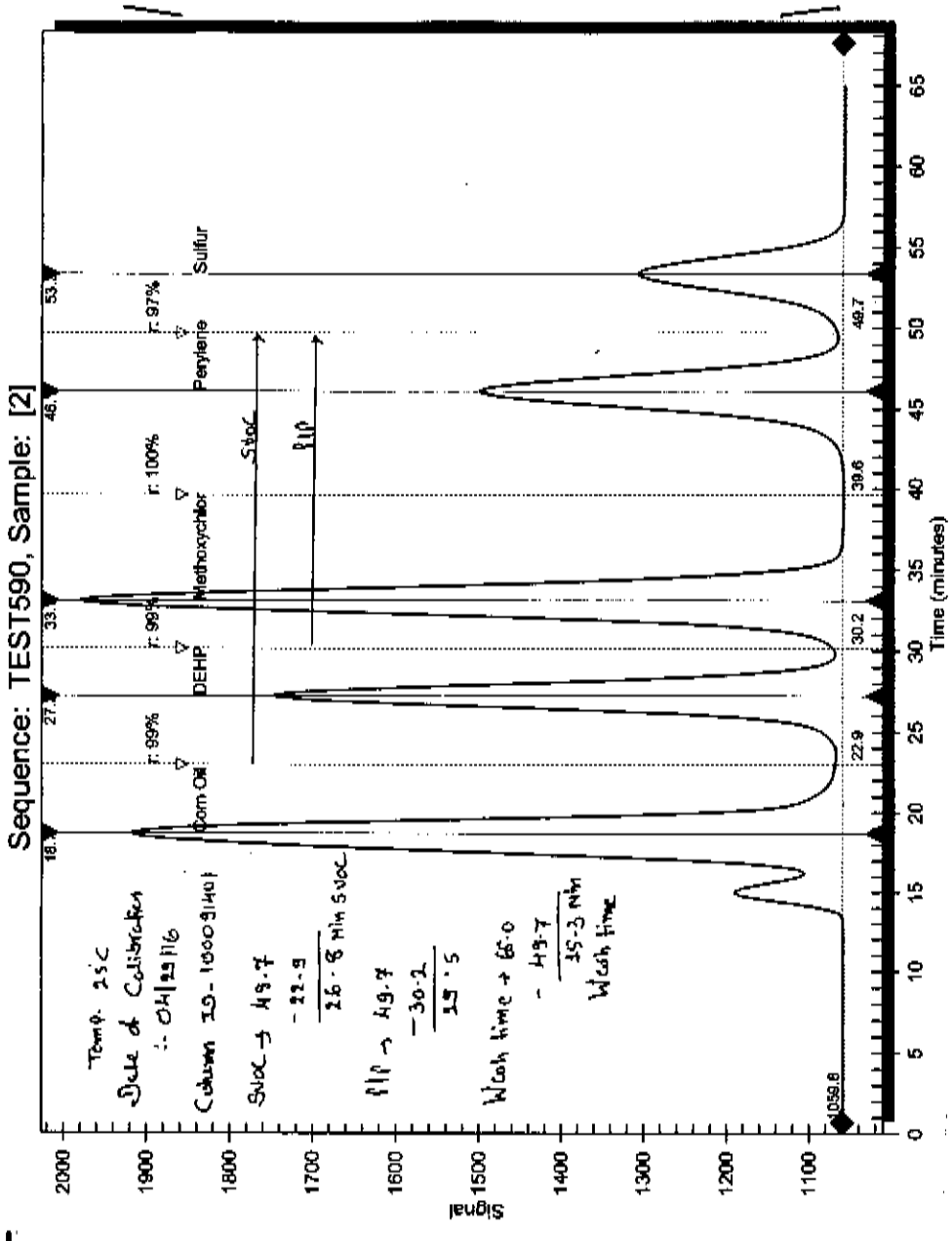
Manual Integrations APPROVED
sohil
4/29/2016 10:36:30 AM

Quant Time: Apr 29 10:53:52 2016
Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM042516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri Apr 29 02:20:37 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.79	152	34221	20.00	ng/ul	0.00
18) Naphthalene-d8	10.58	136	156560	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.43	164	102863	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	249813	20.00	ng/ul	0.00
75) Chrysene-d12	21.37	240	266816	20.00	ng/ul	0.00
83) Perylene-d12	23.65	264	213427	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0	0.00	ng/uL	
5) Phenol-d5	0.00	99	0	0.00	ng/ul	
7) Bis-(2-Chloroethyl)ether-d	0.00	67	0	0.00	ng/ul	
9) 2-Chlorophenol-d4	0.00	132	0	0.00	ng/ul	
13) 4-Methylphenol-d8	0.00	113	0	0.00	ng/ul	
19) Nitrobenzene-d5	0.00	128	0	0.00	ng/ul	
22) 2-Nitrophenol-d4	0.00	143	0	0.00	ng/ul	
26) 2,4-Dichlorophenol-d3	0.00	165	0	0.00	ng/ul	
29) 4-Chloroaniline-d4	0.00	131	0	0.00	ng/ul	
43) Dimethylphthalate-d6	0.00	166	0	0.00	ng/ul	
46) Acenaphthylene-d8	0.00	160	0	0.00	ng/ul	
51) 4-Nitrophenol-d4	0.00	143	0	0.00	ng/ul	
57) Fluorene-d10	0.00	176	0d	0.00	ng/ul	
62) 4,6-Dinitro-2-methylphenol	0.00	200	0	0.00	ng/ul	
70) Anthracene-d10	0.00	188	0d	0.00	ng/ul	
76) Pyrene-d10	0.00	212	0	0.00	ng/ul	
87) Benzo(a)pyrene-d12	0.00	264	0d	0.00	ng/ul	

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed



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Daily Analysis Runlog

J2 SCIENTIFIC ACCUPREP GPC System

Start Date: 05/02/16 End Date: 05/09/16 Analyst: [illegible] Review By: [illegible]

STD. Name	STD REF. #:	Check Standard	Data File and Date	Reagent
GPC Calibration	E# 1670	BNA Blank Check		Methylene Chloride
Pest Check Std	PP 10896 2.0 ml	Pesticide Blank Check		Reagent Reference #
PCB Check Std	PP 10906 1.0 ml	Pesticide Check		E 2105
CALIB. DATE:	04/29/16	PCB Check		

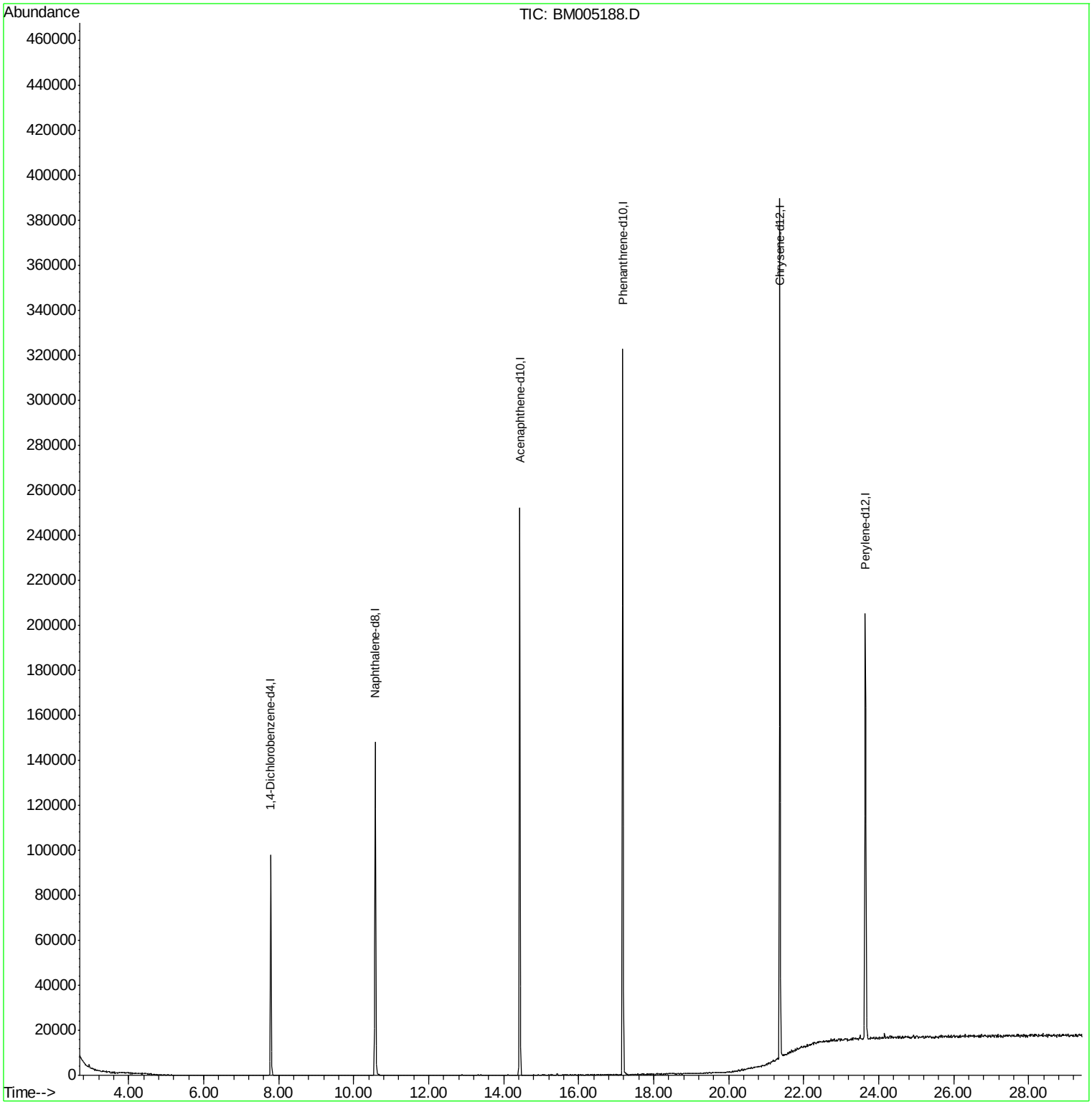
	Port #	Sample ID	Volume Collected	GPC Date	BNA	PEST	Comments
	1	Column Cleaned	-	04/29/16	-	-	
	2	GPC Calibration	-		-	-	U.V. Trace Analysis
	1	Column Cleaned	-	04/29/16	-	-	
	2	H 2796-09 Pig Stk	SS		-	✓	H 2796-BN Healthy
	3	H 2798-05 PCB Blk	SS		-	✓	
	4	H 2798-07 Pest Stk	SS		-	✓	
	5	H 2798-06 Pest Blk	SS		-	✓	
	6	H 2798-05 BN	FT		✓	-	

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA M\DATA\BM050216\
Data File : BM005188.D
Acq On : 02 May 2016 12:20
Operator : UM/SJ
Sample : H2798-05
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SVOC-GPC-BLANK

Quant Time: May 03 10:49:19 2016
Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM042516.M
Quant Title : SVOA CALIBRATION
QLast Update : Tue May 03 03:20:39 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA M\DATA\BM050216\
Data File : BM005188.D
Acq On : 02 May 2016 12:20
Operator : UM/SJ
Sample : H2798-05
Misc :
ALS Vial : 3 Sample Multiplier: 1

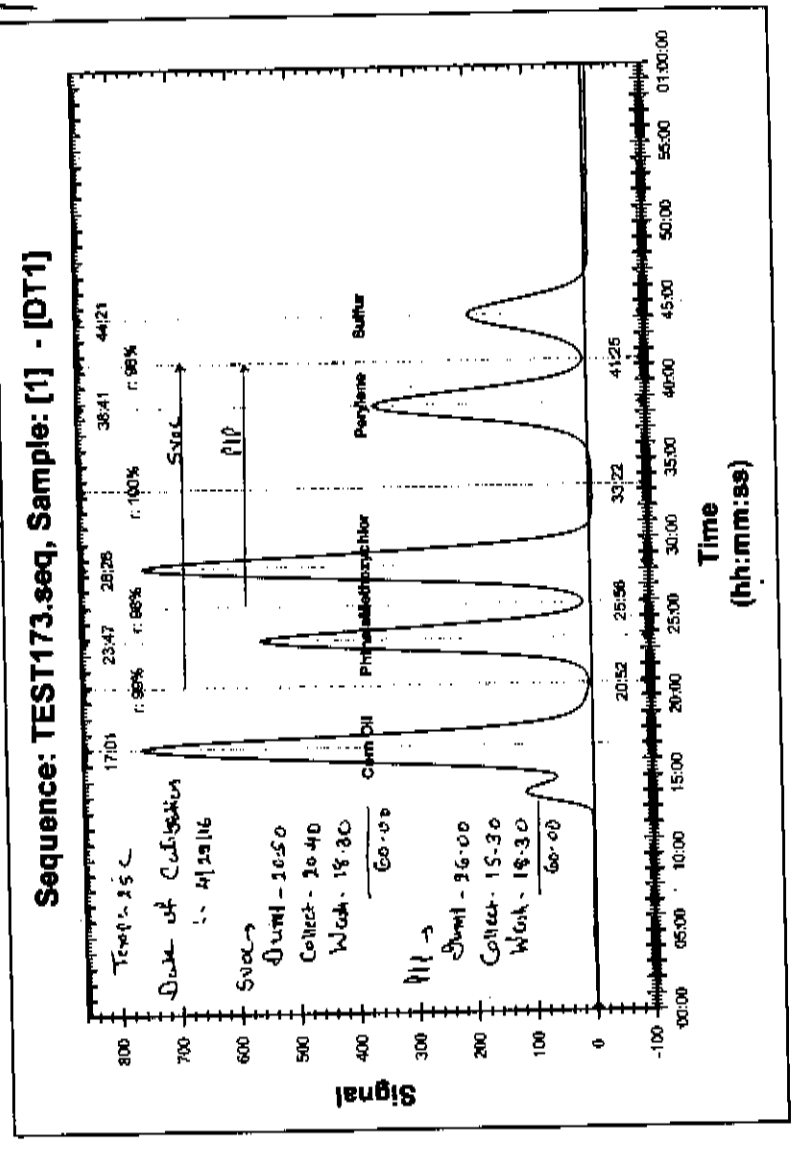
Instrument : BNA_M
ClientSampleId : SVOC-GPC-BLANK

Quant Time: May 03 10:49:19 2016
Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM042516.M
Quant Title : SVOA CALIBRATION
QLast Update : Tue May 03 03:20:39 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.79	152	28304	20.00	ng/ul	0.00
18) Naphthalene-d8	10.57	136	133029	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.43	164	86989	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	202031	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	179336	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	145233	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0	0.00	ng/uL	
5) Phenol-d5	0.00	99	0	0.00	ng/ul	
7) Bis-(2-Chloroethyl)ether-d	0.00	67	0	0.00	ng/ul	
9) 2-Chlorophenol-d4	0.00	132	0	0.00	ng/ul	
13) 4-Methylphenol-d8	0.00	113	0	0.00	ng/ul	
19) Nitrobenzene-d5	0.00	128	0	0.00	ng/ul	
22) 2-Nitrophenol-d4	0.00	143	0	0.00	ng/ul	
26) 2,4-Dichlorophenol-d3	0.00	165	0	0.00	ng/ul	
29) 4-Chloroaniline-d4	0.00	131	0	0.00	ng/ul	
43) Dimethylphthalate-d6	0.00	166	0	0.00	ng/ul	
46) Acenaphthylene-d8	0.00	160	0	0.00	ng/ul	
51) 4-Nitrophenol-d4	0.00	143	0	0.00	ng/ul	
57) Fluorene-d10	0.00	176	0d	0.00	ng/ul	
62) 4,6-Dinitro-2-methylphenol	0.00	200	0	0.00	ng/ul	
70) Anthracene-d10	0.00	188	0d	0.00	ng/ul	
76) Pyrene-d10	0.00	212	0	0.00	ng/ul	
87) Benzo(a)pyrene-d12	0.00	264	0d	0.00	ng/ul	

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed



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Daily Analysis Runlog

J2 SCIENTIFIC PREPLINE GPC System

Start Date: 05/02/16 End Date: 05/05/16 Analyst: [illegible] Review By: [illegible]

STD. Name	STD REF. #:	Check Standard	Data File and Date	Reagent
GPC Calibration	E1670	BNA Blank Check		Methylene Chloride
Pest Check Std	H10896 2.0 ML	Pesticide Blank Check		Reagent Reference #
PCB Check Std	H10806 1.0 ML	Pesticide Check		E 2105
CALIB. DATE:-	04/29/16	PCB Check		

	Port #	Sample ID	Volume Collected	GPC Date	BNA	PEST	Comments
	1	Chk Calibration	--	04/29/16	-	-	H.V. Trace Analysis
	1	H 2798-14 KB SPK	55	04/29/16	-	✓	H 2798 BNA ISTD
	2	H 2798-13 LIABK	55		-	✓	
	3	H 2798-12 Pest SPK	55		-	✓	
	4	H 2798-11 Pest Blk	55		-	✓	
	5	H 2798-10 BN	70		✓	-	

4/29

Daily Maintenance Runlog For J2 SCIENTIFIC ACCUPREP GPC System

	Analyst Initial	Performed
1.	STS	filling of Meds.
2.		
3		
4		
5		

Daily Analysis Ruulog

J2 SCIENTIFIC ACCUPREP GPC System

Start Date: 05/02/16 End Date: 05/09/16 Analyst [illegible] Review By: [illegible]

STD. Name	STD REF. #:	Check Standard	Data File and Date	Reagent
GPC Calibration	EP 1670	BNA Blank Check		Methylene Chloride
Pest Check Std	PP 108956 2.0mL	Pesticide Blank Check		Reagent Reference #
PCB Check Std	PP 109006 1.0mL	Pesticide Check		E 2105
CALIB. DATE:	04/29/16	PCB Check		

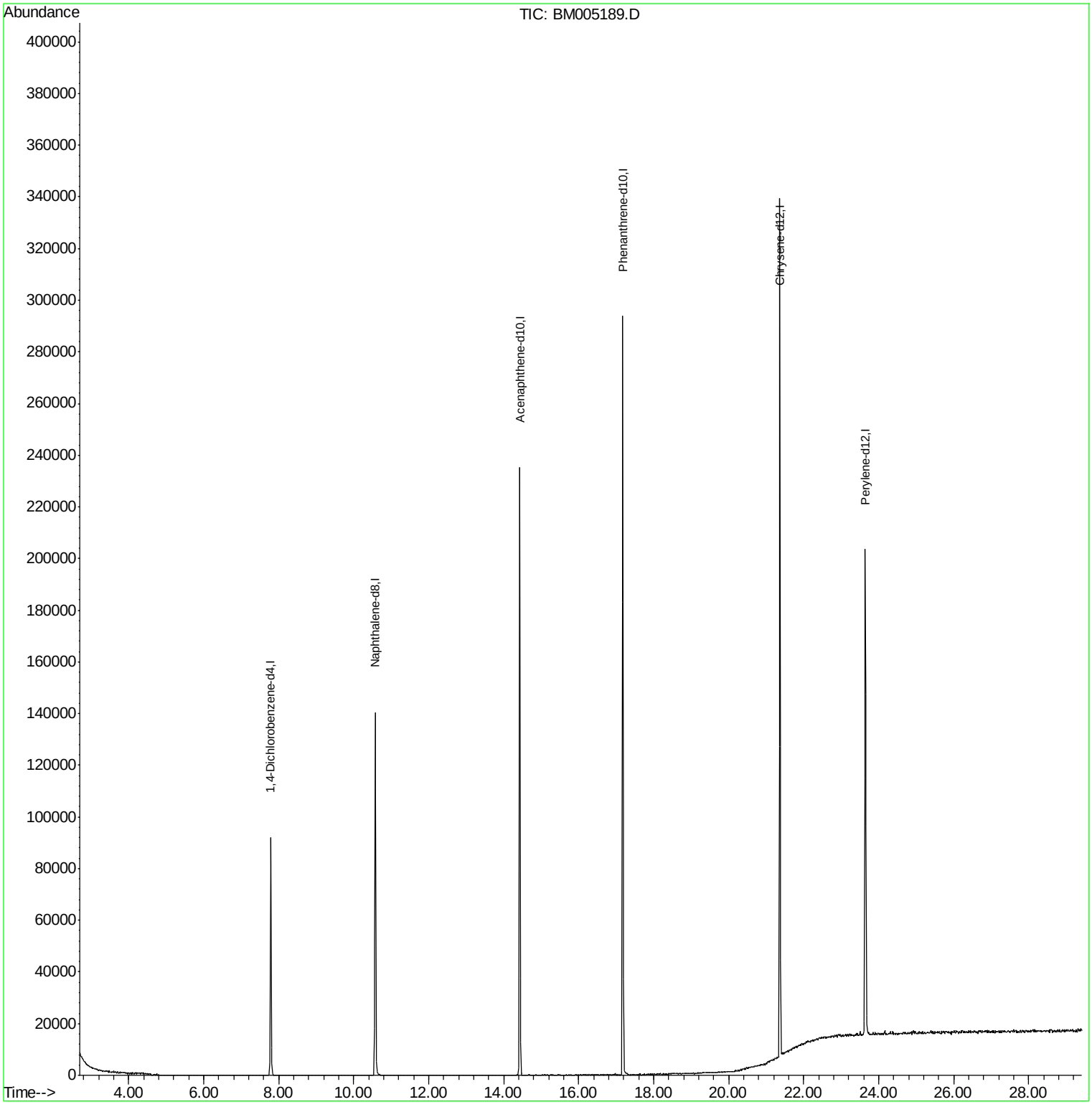
	Port #	Sample ID	Volume Collected	GPC Date	BNA	PEST	Comments
	1	H 2834-13-BN 2.2	75	05/01/16	✓	–	H 2534 & BN H 2588
	2	-16	75		✓	–	
	3	-14 MS	75		✓	–	
	4	-15 MSD	75		✓	–	
	5	Blk BN	75		✓	–	
	6	H 2588-01 BN 2.2	75		✓	–	
	7	-02	75		✓	–	
	8	-03	75	05/06/16	✓	–	
	9	-04	75		✓	–	
	10	-05	75		✓	–	
	11	-06	75		✓	–	
	12	-07	75		✓	–	
	13	-08	75		✓	–	
	14	-09	75		✓	–	
	15	-10	75		✓	–	
	16						
	17						

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA M\DATA\BM050216\
Data File : BM005189.D
Acq On : 02 May 2016 12:56
Operator : UM/SJ
Sample : H2798-10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SVOC-GPC2-BLANK

Quant Time: May 03 10:50:40 2016
Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM042516.M
Quant Title : SVOA CALIBRATION
QLast Update : Tue May 03 03:20:39 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA M\DATA\BM050216\
Data File : BM005189.D
Acq On : 02 May 2016 12:56
Operator : UM/SJ
Sample : H2798-10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SVOC-GPC2-BLANK

Quant Time: May 03 10:50:40 2016
Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM042516.M
Quant Title : SVOA CALIBRATION
QLast Update : Tue May 03 03:20:39 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.79	152	27076	20.00	ng/ul	0.00
18) Naphthalene-d8	10.57	136	126066	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.43	164	81864	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	183438	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	162750	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	138553	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0	0.00	ng/uL	
5) Phenol-d5	0.00	99	0	0.00	ng/ul	
7) Bis-(2-Chloroethyl)ether-d	0.00	67	0	0.00	ng/ul	
9) 2-Chlorophenol-d4	0.00	132	0	0.00	ng/ul	
13) 4-Methylphenol-d8	0.00	113	0	0.00	ng/ul	
19) Nitrobenzene-d5	0.00	128	0	0.00	ng/ul	
22) 2-Nitrophenol-d4	0.00	143	0	0.00	ng/ul	
26) 2,4-Dichlorophenol-d3	0.00	165	0	0.00	ng/ul	
29) 4-Chloroaniline-d4	0.00	131	0	0.00	ng/ul	
43) Dimethylphthalate-d6	0.00	166	0	0.00	ng/ul	
46) Acenaphthylene-d8	0.00	160	0	0.00	ng/ul	
51) 4-Nitrophenol-d4	0.00	143	0	0.00	ng/ul	
57) Fluorene-d10	0.00	176	0	0.00	ng/ul	
62) 4,6-Dinitro-2-methylphenol	0.00	200	0	0.00	ng/ul	
70) Anthracene-d10	0.00	188	0d	0.00	ng/ul	
76) Pyrene-d10	0.00	212	0	0.00	ng/ul	
87) Benzo(a)pyrene-d12	0.00	264	0d	0.00	ng/ul	

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Prep Standard - Chemical Standard Summary

Order ID : H2834

Test : VOC-Low Level -15

Prepbatch ID :

Sequence ID/Qc Batch ID: VI050416,VI050516,VI050616,VI050416

Standard ID :
VP47998,VP52019,VP52036,VP52453,VP52662,VP52664,VP52665,VP52666,VP52667,VP52668,VP52669,VP52670,VP52696,VP52698,VP52699,VP52700,VP52731,VP52733,VP52734,VP52735,

Chemical ID :
V1456,V5218,V5740,V5948,V6161,V6285,V6330,V6355,V6373,V6406,V6419,V6493,V6580,V6583,V6588,V6592,V6593,V6671,

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
218	BFB, 25PPM	VP47998	11/13/2015	05/13/2016	sam

FROM 0.500ml of V5218 + 49.500ml of V6285 = Final Quantity: 50.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1721	SOM01.2 TRACE-Calibration Mix,25 PPM	VP52019	04/15/2016	05/16/2016	sam

FROM 0.125ml of V5948 + 0.125ml of V6161 + 0.125ml of V6355 + 0.250ml of V6406 + 0.250ml of V6419 + 0.500ml of V6373 + 8.625ml of V6493 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1896	Trace internal standard 50 ppm	VP52036	04/15/2016	05/16/2016	sam

FROM 0.200ml of V5740 + 9.800ml of V6493 = Final Quantity: 10.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1897	Trace surrogate mix 25 ppm	VP52453	04/28/2016	05/28/2016	sam

FROM 0.200ml of V6593 + 0.500ml of V6330 + 1.200ml of V6580 + 1.200ml of V6583 + 1.200ml of V6588 + 1.200ml of V6592 + 4.500ml of V6671 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52662	05/04/2016	05/05/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1722	0.5 PPB ICC SOM01.2 Trace	VP52664	05/04/2016	05/05/2016	feifei

FROM 39.990ml of V1456 + 0.001ml of VP52019 + 0.001ml of VP52453 + 0.004ml of VP52036 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1723	1 PPB ICC SOM01.2 Trace	VP52665	05/04/2016	05/05/2016	feifei

FROM 39.990ml of V1456 + 0.002ml of VP52019 + 0.002ml of VP52453 + 0.004ml of VP52036 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1724	5 PPB ICC SOM01.2 Trace	VP52666	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1725	10 PPB ICC SOM01.2 Trace	VP52667	05/04/2016	05/05/2016	feifei

FROM 39.960ml of V1456 + 0.004ml of VP52036 + 0.016ml of VP52019 + 0.016ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1726	20 PPB ICC SOM01.2 Trace	VP52668	05/04/2016	05/05/2016	feifei

FROM 39.930ml of V1456 + 0.004ml of VP52036 + 0.032ml of VP52019 + 0.032ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52669	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52670	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52696	05/05/2016	05/06/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52698	05/05/2016	05/06/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52699	05/05/2016	05/06/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52700	05/05/2016	05/06/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52731	05/06/2016	05/07/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52733	05/06/2016	05/07/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52734	05/06/2016	05/07/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52735	05/06/2016	05/07/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	DIW / DI Water	DAILY	12/31/2019	03/01/2010 / apatel	03/02/2010 / apatel	V1456

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30067 / BFB tuneing solution	A0102518	04/30/2019	11/13/2015 / sam	07/14/2014 / sam	V5218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30091 / VOA Mix, CLP method L/C Internal Std 2500uq/ml, PT&M, 1ml/ampul	A099377	10/31/2018	04/13/2016 / sam	03/27/2015 / sam	V5740

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30429 / 1,2,3-Trichloropropane Standard, 2,000 ug/ml	A0108463	01/31/2020	12/11/2015 / sam	06/04/2015 / sam	V5948

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30492 / VOA Mix, OLC 03.2 VOA Mega Mix, 1mL, 2000ug/mL, P&TM	A0102833	04/30/2017	03/16/2016 / sam	09/24/2015 / sam	V6161

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	118655	07/13/2017	11/13/2015 / sam	11/04/2015 / sam	V6285

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30624 / VOA Stock Standard, OLC 3.2 VOA non-ketone, deuterated monitoring compounds, 1mL, 500ug/mL, Methanol-d	A0113615	08/31/2018	04/22/2016 / sam	10/28/2015 / sam	V6330

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30042 / VOA Mix,500 series method 502.2 Calibration Std #1 gases, 2000uq/ml, PTM, 1ml	A0114018	05/31/2022	04/14/2016 / sam	10/28/2015 / sam	V6355

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A0110042	07/31/2018	03/16/2016 / sam	10/28/2015 / sam	V6373

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31280 / Naphthalene, 1000 PPM in Methanol	A0111730	05/31/2021	01/13/2016 / sam	11/17/2015 / sam	V6406

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31081 / 1,3,5-Trichlorobenzene	A0109767	03/31/2020	04/14/2016 / sam	11/19/2015 / sam	V6419

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	127999	10/27/2017	04/05/2016 / sam	01/13/2016 / sam	V6493

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6580

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6583

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6588

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6592

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6593

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	0000127999	10/27/2017	04/28/2016 / sam	04/12/2016 / sam	V6671

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30492 **Lot No.:** A0102833

Description : OLC 03.2 VOA Mega Mix

OLC 03.2 VOA Mega Mix 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2017 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.: K=2)	
1	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 (Lot Q9B-87) **Purity** 98%	2,006.1 µg/mL	+/- 11.7727 µg/mL +/- 106.7701 µg/mL +/- 106.8878 µg/mL	Gravimetric Unstressed Stressed
2	1,1-dichloroethene **CAS #** 75-35-4 (Lot 33096BKV) **Purity** 99%	2,001.3 µg/mL	+/- 15.4296 µg/mL +/- 106.9831 µg/mL +/- 107.1000 µg/mL	Gravimetric Unstressed Stressed
3	Methyl acetate **CAS #** 79-20-9 (Lot 56696JMV) **Purity** 99%	2,001.5 µg/mL	+/- 11.7459 µg/mL +/- 106.5274 µg/mL +/- 106.6448 µg/mL	Gravimetric Unstressed Stressed
4	Methylene chloride (dichloromethane) **CAS #** 75-09-2 (Lot SHBC7917V) **Purity** 99%	2,001.8 µg/mL	+/- 15.4334 µg/mL +/- 107.0098 µg/mL +/- 107.1268 µg/mL	Gravimetric Unstressed Stressed
5	Carbon disulfide **CAS #** 75-15-0 (Lot C30Y997) **Purity** 98%	2,003.6 µg/mL	+/- 11.7583 µg/mL +/- 106.6397 µg/mL +/- 106.7573 µg/mL	Gravimetric Unstressed Stressed
6	Methyl-tert-butyl ether (MTBE) **CAS #** 1634-04-4 (Lot SHBD2980V) **Purity** 99%	2,001.0 µg/mL	+/- 11.7430 µg/mL +/- 106.5008 µg/mL +/- 106.6182 µg/mL	Gravimetric Unstressed Stressed
7	trans-1,2-Dichloroethene **CAS #** 156-60-5 (Lot 09431AEV) **Purity** 99%	2,005.0 µg/mL	+/- 15.4585 µg/mL +/- 107.1836 µg/mL +/- 107.3007 µg/mL	Gravimetric Unstressed Stressed
8	1,1-Dichloroethane **CAS #** 75-34-3 (Lot Q179-33) **Purity** 98%	2,003.0 µg/mL	+/- 15.4429 µg/mL +/- 107.0752 µg/mL +/- 107.1923 µg/mL	Gravimetric Unstressed Stressed

25	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBD2073V)	2,000.2	µg/mL	+/- +/- +/-	15.4213 106.9257 107.0425	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	dibromochloromethane **CAS #** 124-48-1 **Purity** 98%	(Lot MKBP0459V)	2,000.4	µg/mL	+/- +/- +/-	15.4234 106.9403 107.0572	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	1,2-Dibromoethane (EDB) **CAS #** 106-93-4 **Purity** 99%	(Lot BCBH3877V)	2,004.0	µg/mL	+/- +/- +/-	11.7606 106.6604 106.7780	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Chlorobenzene **CAS #** 108-90-7 **Purity** 99%	(Lot SHBD3200V)	2,002.3	µg/mL	+/- +/- +/-	15.4373 107.0366 107.1536	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Ethylbenzene **CAS #** 100-41-4 **Purity** 99%	(Lot SHBC9001V)	2,005.0	µg/mL	+/- +/- +/-	11.7665 106.7137 106.8313	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot H08Y016)	1,005.5	µg/mL	+/- +/- +/-	5.9008 53.5165 53.5755	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	p-Xylene **CAS #** 106-42-3 **Purity** 99%	(Lot SHBC6261V)	1,004.0	µg/mL	+/- +/- +/-	5.8920 53.4367 53.4956	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	o-Xylene **CAS #** 95-47-6 **Purity** 99%	(Lot SHBC4667V)	2,000.0	µg/mL	+/- +/- +/-	11.7371 106.4475 106.5649	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	Styrene **CAS #** 100-42-5 **Purity** 99%	(Lot 10174567)	2,002.5	µg/mL	+/- +/- +/-	11.7518 106.5806 106.6981	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Isopropylbenzene (cumene) **CAS #** 98-82-8 **Purity** 99%	(Lot 10169400)	2,006.5	µg/mL	+/- +/- +/-	11.7753 106.7935 106.9112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	bromoform **CAS #** 75-25-2 **Purity** 99%	(Lot SHBC3410V)	2,005.1	µg/mL	+/- +/- +/-	15.4593 107.1889 107.3061	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	1,1,2,2-Tetrachloroethane **CAS #** 79-34-5 **Purity** 99%	(Lot I29W026)	2,001.9	µg/mL	+/- +/- +/-	15.4342 107.0152 107.1322	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBC1891V)	2,003.2	µg/mL	+/- +/- +/-	15.4448 107.0887 107.2057	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBL3891V)	2,007.4	µg/mL	+/- +/- +/-	15.4766 107.3092 107.4265	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot 68996CMV)	2,002.6	µg/mL	+/- +/- +/-	15.4400 107.0553 107.1723	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
40	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8 **Purity** 99%	(Lot FBL01)	2,000.5	µg/mL	+/- +/- +/-	11.7401 106.4742 106.5916	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

J.T.Baker®

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Material No.:9077-02
Batch No.: 0000118655
Manufactured Date:2015/07/16
Expiration Date:2017/07/13

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.3000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	0.1
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

For Laboratory, Research or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India. 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
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Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9077-02
Batch No.: 0000127999
Manufactured Date: 2015/10/30
Expiration Date: 2017/10/27

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.7000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	<0.01
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

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Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 11485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 11485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James T Ethier
Jamie Ethier
Vice President Global Quality

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30625 **Lot No.:** A0114355

Description : OLC 3.2 VOA Deuterated Monitoring Compounds

OLC 3.2 VOA Ketone Deuterated Monitoring Compounds 500µg/mL, Deuterium Oxide, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Butanone-d5 **CAS #** 24313-50-6 (Lot M276P24) **Purity** 99%	501.0 µg/mL	+/- 2.9758 +/- 26.6691 +/- 26.6985	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Hexanone-d5 **CAS #** 4840-82-8 (Lot I500P2) **Purity** 99%	501.0 µg/mL	+/- 2.9758 +/- 26.6691 +/- 26.6985	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Deuterium Oxide
CAS # 7789-20-0
Purity 99%

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5 vials.

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Catalog No. : 30429 **Lot No.:** A0108463

Description : 1,2,3-Trichloropropane Standard

1,2,3-Trichloropropane 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2,3-Trichloropropane **CAS #** 96-18-4 (Lot 1428739V) **Purity** 99%	2,012.0 µg/mL	+/- 18.7105 µg/mL +/- 26.9814 µg/mL +/- 29.9140 µg/mL		Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30006 **Lot No.:** A0110042

Description : VOA Calibration Mix #1

VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acetone **CAS #** 67-64-1 **Purity** 99% (Lot 07196AK)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 **Purity** 99% (Lot BCBH7802V)	5,000.3 µg/mL	+/- 29.0722 +/- 266.1049 +/- 266.3984	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 **Purity** 99% (Lot SHBD1798V)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 **Purity** 99% (Lot MKBN7380V)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

12 14

Methanol
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For Purge and Trap Analysis

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Material No.: 9077-02
Batch No.: 0000127999
Manufactured Date: 2015/10/30
Expiration Date: 2017/10/27

Dee 11/3/16

V-6482 to V 6493 S4

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.7000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	<0.01
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

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Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

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5 vials

Certificate of Analysis

Rec 07/14/14

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 30067 **Lot No.:** A0102518

Description: 4-Bromofluorobenzene Standard

4-Bromofluorobenzene Standard 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size: 2 mL **Pkg Amt:** > 1 mL

Expiration Date: April 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	1-Bromo-4-fluorobenzene (BFB)	2,506.0 µg/mL	+/- 14.7066	µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 01127COV)		+/- 28.3294	µg/mL	Unstressed
	Purity 99%		+/- 32.5790	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 31081 **Lot No.:** A0109767

Description : 1,3,5-Trichlorobenzene Standard

1,3,5-Trichlorobenzene Standard 1,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,3,5-Trichlorobenzene	1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 108-70-3 (Lot 11319AS)		+/- 11.4324	µg/mL	Unstressed
	Purity 99%		+/- 13.1369	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 31280 **Lot No.:** A0111730

Description : Naphthalene Standard

Naphthalene Standard 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2021 **Storage:** 25°C nominal

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L. ; K=2)		
1	Naphthalene **CAS #** 91-20-3 **Purity** 99% (Lot MKBH4351V)	1,004.0 µg/mL	+/- 5.9635 +/- 44.6249 +/- 49.0256	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 30624 **Lot No.:** A0113615

Description : SOM 01.1 VOA DMC Non-Ketones Standard

OLC 3.2 VOA Non-Ketone Deuterated Monitoring Compounds
500µg/mL, Methanol-OD, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Vinyl Chloride-d3 **CAS #** 6745-35-3 (Lot PR-21820) **Purity** 98%	523.4 µg/mL	+/- 35.2305 µg/mL +/- 35.5916 µg/mL +/- 35.7499 µg/mL	Gravimetric Unstressed Stressed
2	Chloroethane-d5 **CAS #** 19199-91-8 (Lot F243P15) **Purity** 99%	509.0 µg/mL	+/- 19.1030 µg/mL +/- 19.7259 µg/mL +/- 19.9947 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethylene-d2 **CAS #** 22280-73-5 (Lot PR-21050) **Purity** 99%	501.0 µg/mL	+/- 2.9758 µg/mL +/- 5.6822 µg/mL +/- 6.5294 µg/mL	Gravimetric Unstressed Stressed
4	Chloroform-d **CAS #** 865-49-6 (Lot A021968500l) **Purity** 99%	503.0 µg/mL	+/- 2.9877 µg/mL +/- 5.7049 µg/mL +/- 6.5554 µg/mL	Gravimetric Unstressed Stressed
5	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot 14C-191) **Purity** 99%	504.0 µg/mL	+/- 2.9936 µg/mL +/- 5.7162 µg/mL +/- 6.5685 µg/mL	Gravimetric Unstressed Stressed
6	Benzene-d6 **CAS #** 1076-43-3 (Lot 14G-554) **Purity** 99%	500.0 µg/mL	+/- 2.9698 µg/mL +/- 5.6709 µg/mL +/- 6.5163 µg/mL	Gravimetric Unstressed Stressed
7	1,2-Dichloropropane-d6 **CAS #** 93952-08-0 (Lot Z322P8) **Purity** 99%	502.0 µg/mL	+/- 2.9817 µg/mL +/- 5.6935 µg/mL +/- 6.5424 µg/mL	Gravimetric Unstressed Stressed

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Catalog No. : 30042 **Lot No.:** A0114018

Description : 502.2 Calibration Mix #1

502.2 Calibration Mix #1 2,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot Q167-08) **Purity** 99%	2,013.4 µg/mL	+/- 14.1778 +/- 24.0720 -/- 27.3231	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBF7067V) **Purity** 99%	2,014.0 µg/mL	+/- 15.9346 +/- 25.1511 +/- 28.2800	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 25LPST) **Purity** 99%	2,018.2 µg/mL	+/- 15.9614 +/- 25.1997 +/- 28.3356	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,018.8 µg/mL	+/- 15.1008 +/- 24.6679 +/- 27.8655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	2,006.0 µg/mL	-/- 12.7193 +/- 23.1828 +/- 26.5198	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Trichlorofluoromethane (CFC-11) **CAS #** 75-69-4 (Lot SHBF6387V) **Purity** 99%	2,014.0 µg/mL	+/- 15.3697 +/- 24.7970 +/- 27.9656	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30091 **Lot No.:** A099377

Description : L/C VOA Internal Standard Mix

L/C Internal Std 2500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Difluorobenzene	2,500.5 µg/mL	+/- 14.6743	µg/mL Gravimetric
	CAS # 540-36-3 (Lot 13105AO)		+/- 26.5411	µg/mL Unstressed
	Purity 99%		+/- 30.8641	µg/mL Stressed
2	Chlorobenzene-d5	2,499.0 µg/mL	+/- 14.6655	µg/mL Gravimetric
	CAS # 3114-55-4 (Lot PR-22736)		+/- 26.5252	µg/mL Unstressed
	Purity 99%		+/- 30.8456	µg/mL Stressed
3	1,4-Dichlorobenzene-d4	2,504.5 µg/mL	+/- 14.6978	µg/mL Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/- 26.5836	µg/mL Unstressed
	Purity 99%		+/- 30.9135	µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Prep Standard - Chemical Standard Summary

Order ID : H2834

Test : VOC-TCLVOA-10

Prepbatch ID :

Sequence ID/Qc Batch ID: VI050416,VT050516,VT050916,VT041216,VT050616

Standard ID :

VP47998,VP51196,VP51197,VP51198,VP51299,VP51898,VP51899,VP51900,VP51901,VP51902,VP51904,VP51905,VP51906,VP51907,VP52016,VP52017,VP52018,VP52019,VP52036,VP52194,VP52211,VP52212,VP52213,VP52214,VP52215,VP52453,VP52460,VP52662,VP52664,VP52665,VP52666,VP52667,VP52668,VP52669,VP52670,VP52692,VP52693,VP52694,VP52695,VP52707,VP52708,VP52709,VP52723,VP52724,VP52725,VP52726,VP52727,VP52728,VP52729,VP52730,VP52802,VP52809,VP52810,VP52811,VP52812,

Chemical ID :

V1456,V5218,V5739,V5740,V5882,V5948,V6160,V6161,V6162,V6285,V6325,V6326,V6327,V6330,V6331,V6339,V6345,V6355,V6372,V6373,V6374,V6377,V6406,V6408,V6410,V6411,V6412,V6413,V6417,V6418,V6419,V6420,V6421,V6422,V6483,V6486,V6493,V6580,V6583,V6588,V6592,V6593,V6598,V6600,V6601,V6603,V6671,V6674,V6710,V6712,V6713,

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
218	BFB, 25PPM	VP47998	11/13/2015	05/13/2016	sam

FROM 0.500ml of V5218 + 49.500ml of V6285 = Final Quantity: 50.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
651	SOM01.2 Calibration Mix, 200PPM	VP51196	03/15/2016	04/15/2016	sam

FROM 0.800ml of V6374 + 0.800ml of V6413 + 0.800ml of V6417 + 1.000ml of V6160 + 1.000ml of V6345 + 1.200ml of V6412 + 1.200ml of V6418 + 3.200ml of V6483 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
913	SOM01.2 Calibration Mix, 100PPM	VP51197	03/15/2016	04/15/2016	sam

FROM 2.500ml of V6483 + 2.500ml of VP51196 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
2133	SOM01.2 Calibration mix, 10PPM	VP51198	03/15/2016	04/15/2016	sam

FROM 4.750ml of V6483 + 0.250ml of VP51196 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
2159	SOM01.2. Internal Standard 50 ppm	VP51299	03/18/2016	04/18/2016	sam

FROM 0.200ml of V5739 + 9.800ml of V6486 = Final Quantity: 10.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
650	SOM01.2 Surrogate, 100PPM	VP51898	04/12/2016	05/12/2016	sam

FROM 0.300ml of V6327 + 0.500ml of V6325 + 0.500ml of V6598 + 0.500ml of V6601 + 1.200ml of V6326 + 1.500ml of V6600 + 1.500ml of V6603 + 4.000ml of V6493 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
2752	SOM01.2 Surrogate, 10ppm	VP51899	04/12/2016	05/12/2016	sam

FROM 4.500ml of V6493 + 0.500ml of VP51898 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
732	BFB TUNE CHECK - SOIL	VP51900	04/12/2016	04/13/2016	feifei

FROM 4.998ml of V1456 + 0.002ml of VP47998 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
763	5 PPB ICC, SOM01.2LM-SOIL	VP51901	04/12/2016	04/13/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP51198 + 0.003ml of VP51899 + 0.005ml of VP51299 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
764	10 PPB ICC, SOM01.2LM-SOIL	VP51902	04/12/2016	04/13/2016	feifei

FROM 4.985ml of V1456 + 0.005ml of VP51198 + 0.005ml of VP51299 + 0.005ml of VP51899 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
765	50 PPB ICC, SOM01.2LM-SOIL	VP51904	04/12/2016	04/13/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP51197 + 0.003ml of VP51898 + 0.005ml of VP51299 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
766	100 PPB ICC, SOM01.2LM-SOIL	VP51905	04/12/2016	04/13/2016	feifei

FROM 4.988ml of V1456 + 0.003ml of VP51196 + 0.005ml of VP51299 + 0.005ml of VP51898 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
767	200 PPB ICC, SOM01.2LM-SOIL	VP51906	04/12/2016	04/13/2016	feifei

FROM 4.980ml of V1456 + 0.005ml of VP51196 + 0.005ml of VP51299 + 0.010ml of VP51898 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
768	50 PPB CCC-CCV, SOM01.2LM-SOIL	VP51907	04/12/2016	04/13/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP51197 + 0.003ml of VP51898 + 0.005ml of VP51299 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
651	SOM01.2 Calibration Mix, 200PPM	VP52016	04/15/2016	05/16/2016	sam

FROM 0.300ml of V6373 + 0.500ml of V6372 + 1.000ml of V6161 + 1.000ml of V6355 + 1.000ml of V6406 + 1.000ml of V6408 + 1.000ml of V6419 + 1.000ml of V6420 + 3.200ml of V6493 = Final Quantity: 10.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
913	SOM01.2 Calibration Mix, 100PPM	VP52017	04/15/2016	05/16/2016	sam

FROM 2.500ml of V6493 + 2.500ml of VP52016 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
2133	SOM01.2 Calibration mix, 10PPM	VP52018	04/15/2016	05/16/2016	sam

FROM 4.750ml of V6493 + 0.250ml of VP52016 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1721	SOM01.2 TRACE-Calibration Mix,25 PPM	VP52019	04/15/2016	05/16/2016	sam

FROM 0.125ml of V5948 + 0.125ml of V6161 + 0.125ml of V6355 + 0.250ml of V6406 + 0.250ml of V6419 + 0.500ml of V6373 + 8.625ml of V6493 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1896	Trace internal standard 50 ppm	VP52036	04/15/2016	05/16/2016	sam

FROM 0.200ml of V5740 + 9.800ml of V6493 = Final Quantity: 10.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
2159	SOM01.2. Internal Standard 50 ppm	VP52194	04/19/2016	05/19/2016	sam

FROM 0.200ml of V5740 + 9.800ml of V6493 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
763	5 PPB ICC, SOM01.2LM-SOIL	VP52211	04/20/2016	04/21/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP51899 + 0.003ml of VP52018 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
764	10 PPB ICC, SOM01.2LM-SOIL	VP52212	04/20/2016	04/21/2016	feifei

FROM 4.985ml of V1456 + 0.005ml of VP51899 + 0.005ml of VP52018 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
765	50 PPB ICC, SOM01.2LM-SOIL	VP52213	04/20/2016	04/21/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP51898 + 0.003ml of VP52017 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
766	100 PPB ICC, SOM01.2LM-SOIL	VP52214	04/20/2016	04/21/2016	feifei

FROM 4.988ml of V1456 + 0.003ml of VP52016 + 0.005ml of VP51898 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
767	200 PPB ICC, SOM01.2LM-SOIL	VP52215	04/20/2016	04/21/2016	feifei

FROM 4.980ml of V1456 + 0.005ml of VP52016 + 0.005ml of VP52194 + 0.010ml of VP51898 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1897	Trace surrogate mix 25 ppm	VP52453	04/28/2016	05/28/2016	sam

FROM 0.200ml of V6593 + 0.500ml of V6330 + 1.200ml of V6580 + 1.200ml of V6583 + 1.200ml of V6588 + 1.200ml of V6592 + 4.500ml of V6671 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
651	SOM01.2 Calibration Mix, 200PPM	VP52460	04/28/2016	05/28/2016	sam

FROM 0.500ml of V6411 + 0.500ml of V6413 + 0.500ml of V6419 + 0.500ml of V6422 + 0.800ml of V6377 + 1.000ml of V5882 + 1.000ml of V6162 + 1.000ml of V6410 + 1.000ml of V6421 + 3.200ml of V6671 = Final Quantity: 10.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52662	05/04/2016	05/05/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1722	0.5 PPB ICC SOM01.2 Trace	VP52664	05/04/2016	05/05/2016	feifei

FROM 39.990ml of V1456 + 0.001ml of VP52019 + 0.001ml of VP52453 + 0.004ml of VP52036 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1723	1 PPB ICC SOM01.2 Trace	VP52665	05/04/2016	05/05/2016	feifei

FROM 39.990ml of V1456 + 0.002ml of VP52019 + 0.002ml of VP52453 + 0.004ml of VP52036 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1724	5 PPB ICC SOM01.2 Trace	VP52666	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1725	10 PPB ICC SOM01.2 Trace	VP52667	05/04/2016	05/05/2016	feifei

FROM 39.960ml of V1456 + 0.004ml of VP52036 + 0.016ml of VP52019 + 0.016ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1726	20 PPB ICC SOM01.2 Trace	VP52668	05/04/2016	05/05/2016	feifei

FROM 39.930ml of V1456 + 0.004ml of VP52036 + 0.032ml of VP52019 + 0.032ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52669	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52670	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
732	BFB TUNE CHECK - SOIL	VP52692	05/05/2016	05/06/2016	feifei

FROM 4.998ml of V1456 + 0.002ml of VP47998 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
768	50 PPB CCC-CCV, SOM01.2LM-SOIL	VP52693	05/05/2016	05/06/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP51898 + 0.003ml of VP52017 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
768	50 PPB CCC-CCV, SOM01.2LM-SOIL	VP52694	05/05/2016	05/06/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP51898 + 0.003ml of VP52017 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
768	50 PPB CCC-CCV, SOM01.2LM-SOIL	VP52695	05/05/2016	05/06/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP51898 + 0.003ml of VP52017 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
913	SOM01.2 Calibration Mix, 100PPM	VP52707	05/05/2016	05/28/2016	sam

FROM 2.500ml of V6674 + 2.500ml of VP52460 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
2133	SOM01.2 Calibration mix, 10PPM	VP52708	05/05/2016	05/28/2016	sam

FROM 4.750ml of V6674 + 0.250ml of VP52460 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
650	SOM01.2 Surrogate, 100PPM	VP52709	05/05/2016	06/06/2016	sam

FROM 0.500ml of V6331 + 1.200ml of V6713 + 1.400ml of V6710 + 1.400ml of V6712 + 1.500ml of V6339 + 4.000ml of V6674 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
732	BFB TUNE CHECK - SOIL	VP52723	05/06/2016	05/07/2016	feifei

FROM 4.998ml of V1456 + 0.002ml of VP47998 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
763	5 PPB ICC, SOM01.2LM-SOIL	VP52724	05/06/2016	05/07/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP51899 + 0.003ml of VP52708 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
764	10 PPB ICC, SOM01.2LM-SOIL	VP52725	05/06/2016	05/07/2016	feifei

FROM 4.985ml of V1456 + 0.005ml of VP51899 + 0.005ml of VP52194 + 0.005ml of VP52708 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
765	50 PPB ICC, SOM01.2LM-SOIL	VP52726	05/06/2016	05/07/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP52707 + 0.003ml of VP52709 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
766	100 PPB ICC, SOM01.2LM-SOIL	VP52727	05/06/2016	05/07/2016	feifei

FROM 4.988ml of V1456 + 0.003ml of VP52460 + 0.005ml of VP52194 + 0.005ml of VP52709 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
767	200 PPB ICC, SOM01.2LM-SOIL	VP52728	05/06/2016	05/07/2016	feifei

FROM 4.980ml of V1456 + 0.005ml of VP52194 + 0.005ml of VP52460 + 0.010ml of VP52709 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
768	50 PPB CCC-CCV, SOM01.2LM-SOIL	VP52729	05/06/2016	05/07/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP52707 + 0.003ml of VP52709 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
768	50 PPB CCC-CCV, SOM01.2LM-SOIL	VP52730	05/06/2016	05/07/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP52707 + 0.003ml of VP52709 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
768	50 PPB CCC-CCV, SOM01.2LM-SOIL	VP52802	05/06/2016	05/07/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP52707 + 0.003ml of VP52709 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
732	BFB TUNE CHECK - SOIL	VP52809	05/09/2016	05/10/2016	feifei

FROM 4.998ml of V1456 + 0.002ml of VP47998 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
768	50 PPB CCC-CCV, SOM01.2LM-SOIL	VP52810	05/09/2016	05/10/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP52707 + 0.003ml of VP52709 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
768	50 PPB CCC-CCV, SOM01.2LM-SOIL	VP52811	05/09/2016	05/10/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP52707 + 0.003ml of VP52709 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
768	50 PPB CCC-CCV, SOM01.2LM-SOIL	VP52812	05/09/2016	05/10/2016	feifei

FROM 4.990ml of V1456 + 0.003ml of VP52707 + 0.003ml of VP52709 + 0.005ml of VP52194 = Final Quantity: 5.000 ml

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	DIW / DI Water	DAILY	12/31/2019	03/01/2010 / apatel	03/02/2010 / apatel	V1456

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30067 / BFB tuneing solution	A0102518	04/30/2019	11/13/2015 / sam	07/14/2014 / sam	V5218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30091 / VOA Mix, CLP method L/C Internal Std 2500uq/ml, PT&M, 1ml/ampul	A099377	10/31/2018	03/14/2016 / sam	03/27/2015 / sam	V5739

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30091 / VOA Mix, CLP method L/C Internal Std 2500uq/ml, PT&M, 1ml/ampul	A099377	10/31/2018	04/13/2016 / sam	03/27/2015 / sam	V5740

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30042 / VOA Mix,500 series method 502.2 Calibration Std #1 gases, 2000uq/ml, PTM, 1ml	A0109529	11/30/2021	04/28/2016 / sam	05/28/2015 / sam	V5882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30429 / 1,2,3-Trichloropropane Standard, 2,000 ug/ml	A0108463	01/31/2020	12/11/2015 / sam	06/04/2015 / sam	V5948

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30492 / VOA Mix, OLC 03.2 VOA Mega Mix, 1mL, 2000ug/mL, P&TM	A0102833	04/30/2017	02/15/2016 / sam	09/24/2015 / sam	V6160

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30492 / VOA Mix, OLC 03.2 VOA Mega Mix, 1mL, 2000ug/mL, P&TM	A0102833	04/30/2017	03/16/2016 / sam	09/24/2015 / sam	V6161

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30492 / VOA Mix, OLC 03.2 VOA Mega Mix, 1mL, 2000ug/mL, P&TM	A0102833	04/30/2017	04/28/2016 / sam	09/24/2015 / sam	V6162

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	118655	07/13/2017	11/13/2015 / sam	11/04/2015 / sam	V6285

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30624 / VOA Stock Standard, OLC 3.2 VOA non-ketone, deuterated monitoring compounds, 1mL, 500ug/mL, Methanol-d	A0113615	08/31/2018	03/30/2016 / sam	10/28/2015 / sam	V6325

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30624 / VOA Stock Standard, OLC 3.2 VOA non-ketone, deuterated monitoring compounds, 1mL, 500ug/mL, Methanol-d	A0113615	08/31/2018	04/12/2016 / sam	10/28/2015 / sam	V6326

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30624 / VOA Stock Standard, OLC 3.2 VOA non-ketone, deuterated monitoring compounds, 1mL, 500ug/mL, Methanol-d	A0113615	08/31/2018	04/12/2016 / sam	10/28/2015 / sam	V6327

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30624 / VOA Stock Standard, OLC 3.2 VOA non-ketone, deuterated monitoring compounds, 1mL, 500ug/mL, Methanol-d	A0113615	08/31/2018	04/22/2016 / sam	10/28/2015 / sam	V6330

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30624 / VOA Stock Standard, OLC 3.2 VOA non-ketone, deuterated monitoring compounds, 1mL, 500ug/mL, Methanol-d	A0113615	08/31/2018	04/28/2016 / sam	10/28/2015 / sam	V6331

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30624 / VOA Stock Standard, OLC 3.2 VOA non-ketone, deuterated monitoring compounds, 1mL, 500ug/mL, Methanol-d	A0113615	08/31/2018	05/05/2016 / sam	10/28/2015 / sam	V6339

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30042 / VOA Mix,500 series method 502.2 Calibration Std #1 gases, 2000ug/ml, PTM, 1ml	A0112834	05/31/2022	03/14/2016 / sam	10/28/2015 / sam	V6345

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30042 / VOA Mix,500 series method 502.2 Calibration Std #1 gases, 2000ug/ml, PTM, 1ml	A0114018	05/31/2022	04/14/2016 / sam	10/28/2015 / sam	V6355

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A0110042	07/31/2018	03/16/2016 / sam	10/28/2015 / sam	V6372

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A0110042	07/31/2018	03/16/2016 / sam	10/28/2015 / sam	V6373

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A0110042	07/31/2018	03/14/2016 / sam	10/28/2015 / sam	V6374

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A0110042	07/31/2018	04/28/2016 / sam	10/28/2015 / sam	V6377

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31280 / Naphthalene, 1000 PPM in Methanol	A0111730	05/31/2021	01/13/2016 / sam	11/17/2015 / sam	V6406

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31280 / Naphthalene, 1000 PPM in Methanol	A0111730	05/31/2021	04/14/2016 / sam	11/17/2015 / sam	V6408

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31280 / Naphthalene, 1000 PPM in Methanol	A0111730	05/31/2021	04/28/2016 / sam	11/17/2015 / sam	V6410

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31280 / Naphthalene, 1000 PPM in Methanol	A0111730	05/31/2021	04/28/2016 / sam	11/17/2015 / sam	V6411

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31280 / Naphthalene, 1000 PPM in Methanol	A0111730	05/31/2021	03/15/2016 / sam	11/17/2015 / sam	V6412

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31280 / Naphthalene, 1000 PPM in Methanol	A0111730	05/31/2021	03/15/2016 / sam	11/17/2015 / sam	V6413

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31081 / 1,3,5-Trichlorobenzene	A0109767	03/31/2020	02/15/2016 / sam	11/19/2015 / sam	V6417

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31081 / 1,3,5-Trichlorobenzene	A0109767	03/31/2020	03/15/2016 / sam	11/19/2015 / sam	V6418

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31081 / 1,3,5-Trichlorobenzene	A0109767	03/31/2020	04/14/2016 / sam	11/19/2015 / sam	V6419

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31081 / 1,3,5-Trichlorobenzene	A0109767	03/31/2020	04/14/2016 / sam	11/19/2015 / sam	V6420

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31081 / 1,3,5-Trichlorobenzene	A0109767	03/31/2020	04/28/2016 / sam	11/19/2015 / sam	V6421

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31081 / 1,3,5-Trichlorobenzene	A0113973	03/31/2020	04/28/2016 / sam	11/19/2015 / sam	V6422

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	127999	10/27/2017	02/29/2016 / sam	01/13/2016 / sam	V6483

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	127999	10/27/2017	03/18/2016 / sam	01/13/2016 / sam	V6486

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	127999	10/27/2017	04/05/2016 / sam	01/13/2016 / sam	V6493

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6580

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6583

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6588

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6592

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6593

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0117015	08/31/2017	03/30/2016 / sam	03/08/2016 / sam	V6598

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0117015	08/31/2017	04/12/2016 / sam	03/08/2016 / sam	V6600

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0117015	08/31/2017	04/12/2016 / sam	03/08/2016 / sam	V6601

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0117015	08/31/2017	04/12/2016 / sam	03/08/2016 / sam	V6603

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	0000127999	10/27/2017	04/28/2016 / sam	04/12/2016 / sam	V6671

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	0000127999	10/27/2017	05/04/2016 / sam	04/12/2016 / sam	V6674

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0117015	08/31/2017	05/05/2016 / sam	04/20/2016 / sam	V6710

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0117015	08/31/2017	05/05/2016 / sam	04/20/2016 / sam	V6712

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0117015	08/31/2017	05/05/2016 / sam	04/20/2016 / sam	V6713

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Catalog No. : 30492 **Lot No.:** A0102833

Description : OLC 03.2 VOA Mega Mix

OLC 03.2 VOA Mega Mix 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2017 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.: K=2)		
1	1,1,2-Trichlorotrifluoroethane (CFC-113)	2,006.1 µg/mL	+/- 11.7727	µg/mL	Gravimetric
	CAS # 76-13-1 (Lot Q9B-87)		+/- 106.7701	µg/mL	Unstressed
	Purity 98%		+/- 106.8878	µg/mL	Stressed
2	1,1-dichloroethene	2,001.3 µg/mL	+/- 15.4296	µg/mL	Gravimetric
	CAS # 75-35-4 (Lot 33096BKV)		+/- 106.9831	µg/mL	Unstressed
	Purity 99%		+/- 107.1000	µg/mL	Stressed
3	Methyl acetate	2,001.5 µg/mL	+/- 11.7459	µg/mL	Gravimetric
	CAS # 79-20-9 (Lot 56696JMV)		+/- 106.5274	µg/mL	Unstressed
	Purity 99%		+/- 106.6448	µg/mL	Stressed
4	Methylene chloride (dichloromethane)	2,001.8 µg/mL	+/- 15.4334	µg/mL	Gravimetric
	CAS # 75-09-2 (Lot SHBC7917V)		+/- 107.0098	µg/mL	Unstressed
	Purity 99%		+/- 107.1268	µg/mL	Stressed
5	Carbon disulfide	2,003.6 µg/mL	+/- 11.7583	µg/mL	Gravimetric
	CAS # 75-15-0 (Lot C30Y997)		+/- 106.6397	µg/mL	Unstressed
	Purity 98%		+/- 106.7573	µg/mL	Stressed
6	Methyl-tert-butyl ether (MTBE)	2,001.0 µg/mL	+/- 11.7430	µg/mL	Gravimetric
	CAS # 1634-04-4 (Lot SHBD2980V)		+/- 106.5008	µg/mL	Unstressed
	Purity 99%		+/- 106.6182	µg/mL	Stressed
7	trans-1,2-Dichloroethene	2,005.0 µg/mL	+/- 15.4585	µg/mL	Gravimetric
	CAS # 156-60-5 (Lot 09431AEV)		+/- 107.1836	µg/mL	Unstressed
	Purity 99%		+/- 107.3007	µg/mL	Stressed
8	1,1-Dichloroethane	2,003.0 µg/mL	+/- 15.4429	µg/mL	Gravimetric
	CAS # 75-34-3 (Lot Q179-33)		+/- 107.0752	µg/mL	Unstressed
	Purity 98%		+/- 107.1923	µg/mL	Stressed

25	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBD2073V)	2,000.2	µg/mL	+/- +/- +/-	15.4213 106.9257 107.0425	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	dibromochloromethane **CAS #** 124-48-1 **Purity** 98%	(Lot MKBP0459V)	2,000.4	µg/mL	+/- +/- +/-	15.4234 106.9403 107.0572	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	1,2-Dibromoethane (EDB) **CAS #** 106-93-4 **Purity** 99%	(Lot BCBH3877V)	2,004.0	µg/mL	+/- +/- +/-	11.7606 106.6604 106.7780	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Chlorobenzene **CAS #** 108-90-7 **Purity** 99%	(Lot SHBD3200V)	2,002.3	µg/mL	+/- +/- +/-	15.4373 107.0366 107.1536	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Ethylbenzene **CAS #** 100-41-4 **Purity** 99%	(Lot SHBC9001V)	2,005.0	µg/mL	+/- +/- +/-	11.7665 106.7137 106.8313	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot H08Y016)	1,005.5	µg/mL	+/- +/- +/-	5.9008 53.5165 53.5755	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	p-Xylene **CAS #** 106-42-3 **Purity** 99%	(Lot SHBC6261V)	1,004.0	µg/mL	+/- +/- +/-	5.8920 53.4367 53.4956	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	o-Xylene **CAS #** 95-47-6 **Purity** 99%	(Lot SHBC4667V)	2,000.0	µg/mL	+/- +/- +/-	11.7371 106.4475 106.5649	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	Styrene **CAS #** 100-42-5 **Purity** 99%	(Lot 10174567)	2,002.5	µg/mL	+/- +/- +/-	11.7518 106.5806 106.6981	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Isopropylbenzene (cumene) **CAS #** 98-82-8 **Purity** 99%	(Lot 10169400)	2,006.5	µg/mL	+/- +/- +/-	11.7753 106.7935 106.9112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	bromoform **CAS #** 75-25-2 **Purity** 99%	(Lot SHBC3410V)	2,005.1	µg/mL	+/- +/- +/-	15.4593 107.1889 107.3061	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	1,1,2,2-Tetrachloroethane **CAS #** 79-34-5 **Purity** 99%	(Lot I29W026)	2,001.9	µg/mL	+/- +/- +/-	15.4342 107.0152 107.1322	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBC1891V)	2,003.2	µg/mL	+/- +/- +/-	15.4448 107.0887 107.2057	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBL3891V)	2,007.4	µg/mL	+/- +/- +/-	15.4766 107.3092 107.4265	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot 68996CMV)	2,002.6	µg/mL	+/- +/- +/-	15.4400 107.0553 107.1723	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
40	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8 **Purity** 99%	(Lot FBL01)	2,000.5	µg/mL	+/- +/- +/-	11.7401 106.4742 106.5916	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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Catalog No. : 30625 **Lot No.:** A0117015

Description : OLC 3.2 VOA Deuterated Monitoring Compounds

OLC 3.2 VOA Ketone Deuterated Monitoring Compounds 500µg/mL, Deuterium Oxide, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Butanone-d5 **CAS #** 24313-50-6 (Lot M276P24) **Purity** 99%	500.0 µg/mL	+/- 2.9698 µg/mL +/- 30.1733 µg/mL +/- 30.2449 µg/mL	Gravimetric Unstressed Stressed
2	2-Hexanone-d5 **CAS #** 4840-82-8 (Lot I500P2) **Purity** 99%	500.0 µg/mL	+/- 2.9698 µg/mL +/- 30.1733 µg/mL +/- 30.2449 µg/mL	Gravimetric Unstressed Stressed

Solvent: Deuterium Oxide
CAS # 7789-20-0
Purity 99%

Methanol
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For Purge and Trap Analysis

Material No.:9077-02
Batch No.: 0000118655
Manufactured Date:2015/07/16
Expiration Date:2017/07/13

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Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.3000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	0.1
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

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Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India. 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
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12

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

Material No.: 9077-02
Batch No.: 0000127999
Manufactured Date: 2015/10/30
Expiration Date: 2017/10/27

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.7000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	<0.01
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

For Laboratory, Research or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

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Gliwice, Poland 9001:2008
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Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

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Catalog No. : 30625 **Lot No.:** A0114355

Description : OLC 3.2 VOA Deuterated Monitoring Compounds

OLC 3.2 VOA Ketone Deuterated Monitoring Compounds 500µg/mL, Deuterium Oxide, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Butanone-d5 **CAS #** 24313-50-6 (Lot M276P24) **Purity** 99%	501.0 µg/mL	+/- 2.9758 +/- 26.6691 +/- 26.6985	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Hexanone-d5 **CAS #** 4840-82-8 (Lot I500P2) **Purity** 99%	501.0 µg/mL	+/- 2.9758 +/- 26.6691 +/- 26.6985	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Deuterium Oxide
CAS # 7789-20-0
Purity 99%

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Catalog No. : 30429 **Lot No.:** A0108463

Description : 1,2,3-Trichloropropane Standard

1,2,3-Trichloropropane 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2,3-Trichloropropane **CAS #** 96-18-4 (Lot 1428739V) **Purity** 99%	2,012.0 µg/mL	+/- 18.7105 µg/mL +/- 26.9814 µg/mL +/- 29.9140 µg/mL		Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 30006 **Lot No.:** A0110042

Description : VOA Calibration Mix #1

VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acetone **CAS #** 67-64-1 **Purity** 99% (Lot 07196AK)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 **Purity** 99% (Lot BCBH7802V)	5,000.3 µg/mL	+/- 29.0722 +/- 266.1049 +/- 266.3984	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 **Purity** 99% (Lot SHBD1798V)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 **Purity** 99% (Lot MKBN7380V)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

12 14

Methanol
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Material No.: 9077-02
Batch No.: 0000127999
Manufactured Date: 2015/10/30
Expiration Date: 2017/10/27

Dee 11/3/16

V-6482 to V 6493 S4

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Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.7000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	<0.01
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

For Laboratory, Research or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
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Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
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Testing Laboratory
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Catalog No.: 30067 **Lot No.:** A0102518

Description: 4-Bromofluorobenzene Standard

4-Bromofluorobenzene Standard 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size: 2 mL **Pkg Amt:** > 1 mL

Expiration Date: April 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	1-Bromo-4-fluorobenzene (BFB)	2,506.0 µg/mL	+/- 14.7066	µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 01127COV)		+/- 28.3294	µg/mL	Unstressed
	Purity 99%		+/- 32.5790	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 30042 **Lot No.:** A0109529

Description : 502.2 Calibration Mix #1

502.2 Calibration Mix #1 2,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot Q167-08) **Purity** 99%	1,996.7 µg/mL	+/- 13.4280 µg/mL +/- 23.5055 µg/mL +/- 26.7738 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBC8470V) **Purity** 99%	2,003.4 µg/mL	+/- 13.4056 µg/mL +/- 23.5457 µg/mL +/- 26.8296 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 17542) **Purity** 99%	2,008.0 µg/mL	+/- 13.6043 µg/mL +/- 23.6960 µg/mL +/- 26.9758 µg/mL	Gravimetric Unstressed Stressed
4	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,009.5 µg/mL	+/- 13.0312 µg/mL +/- 23.3832 µg/mL +/- 26.7059 µg/mL	Gravimetric Unstressed Stressed
5	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	1,998.3 µg/mL	+/- 13.3715 µg/mL +/- 23.4857 µg/mL +/- 26.7613 µg/mL	Gravimetric Unstressed Stressed
6	Trichlorofluoromethane (CFC-11) **CAS #** 75-69-4 (Lot SHBD5121V) **Purity** 99%	1,998.5 µg/mL	+/- 13.2531 µg/mL +/- 23.4203 µg/mL +/- 26.7045 µg/mL	Gravimetric Unstressed Stressed

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Catalog No. : 31081 **Lot No.:** A0109767

Description : 1,3,5-Trichlorobenzene Standard

1,3,5-Trichlorobenzene Standard 1,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,3,5-Trichlorobenzene	1,008.0 µg/mL	+/- 5.9872	µg/mL Gravimetric
	CAS # 108-70-3 (Lot 11319AS)		+/- 11.4324	µg/mL Unstressed
	Purity 99%		+/- 13.1369	µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 31280 **Lot No.:** A0111730

Description : Naphthalene Standard

Naphthalene Standard 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2021 **Storage:** 25°C nominal

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L. ; K=2)		
1	Naphthalene **CAS #** 91-20-3 **Purity** 99% (Lot MKBH4351V)	1,004.0 µg/mL	+/- 5.9635 +/- 44.6249 +/- 49.0256	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 30042 **Lot No.:** A0112834

Description : 502.2 Calibration Mix #1

502.2 Calibration Mix #1 2,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot Q167-08) **Purity** 99%	2,001.9 µg/mL	+/- 16.3175 µg/mL +/- 25.3058 µg/mL +/- 28.3823 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBF7067V) **Purity** 99%	2,002.5 µg/mL	+/- 15.7857 µg/mL +/- 24.9704 µg/mL +/- 28.0854 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 25LPST) **Purity** 99%	2,000.1 µg/mL	+/- 16.4089 µg/mL +/- 25.3518 µg/mL +/- 28.4183 µg/mL	Gravimetric Unstressed Stressed
4	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,001.8 µg/mL	+/- 16.3217 µg/mL +/- 25.3075 µg/mL +/- 28.3835 µg/mL	Gravimetric Unstressed Stressed
5	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	1,997.5 µg/mL	+/- 16.5711 µg/mL +/- 25.4381 µg/mL +/- 28.4878 µg/mL	Gravimetric Unstressed Stressed
6	Trichlorofluoromethane (CFC-11) **CAS #** 75-69-4 (Lot SHBD5121V) **Purity** 99%	1,998.3 µg/mL	+/- 16.9478 µg/mL +/- 25.6908 µg/mL +/- 28.7160 µg/mL	Gravimetric Unstressed Stressed

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Catalog No. : 30624 **Lot No.:** A0113615

Description : SOM 01.1 VOA DMC Non-Ketones Standard

OLC 3.2 VOA Non-Ketone Deuterated Monitoring Compounds
500µg/mL, Methanol-OD, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Vinyl Chloride-d3 **CAS #** 6745-35-3 (Lot PR-21820) **Purity** 98%	523.4 µg/mL	+/- 35.2305 µg/mL +/- 35.5916 µg/mL +/- 35.7499 µg/mL	Gravimetric Unstressed Stressed
2	Chloroethane-d5 **CAS #** 19199-91-8 (Lot F243P15) **Purity** 99%	509.0 µg/mL	+/- 19.1030 µg/mL +/- 19.7259 µg/mL +/- 19.9947 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethylene-d2 **CAS #** 22280-73-5 (Lot PR-21050) **Purity** 99%	501.0 µg/mL	+/- 2.9758 µg/mL +/- 5.6822 µg/mL +/- 6.5294 µg/mL	Gravimetric Unstressed Stressed
4	Chloroform-d **CAS #** 865-49-6 (Lot A021968500l) **Purity** 99%	503.0 µg/mL	+/- 2.9877 µg/mL +/- 5.7049 µg/mL +/- 6.5554 µg/mL	Gravimetric Unstressed Stressed
5	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot 14C-191) **Purity** 99%	504.0 µg/mL	+/- 2.9936 µg/mL +/- 5.7162 µg/mL +/- 6.5685 µg/mL	Gravimetric Unstressed Stressed
6	Benzene-d6 **CAS #** 1076-43-3 (Lot 14G-554) **Purity** 99%	500.0 µg/mL	+/- 2.9698 µg/mL +/- 5.6709 µg/mL +/- 6.5163 µg/mL	Gravimetric Unstressed Stressed
7	1,2-Dichloropropane-d6 **CAS #** 93952-08-0 (Lot Z322P8) **Purity** 99%	502.0 µg/mL	+/- 2.9817 µg/mL +/- 5.6935 µg/mL +/- 6.5424 µg/mL	Gravimetric Unstressed Stressed

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Catalog No. : 31081 **Lot No.:** A0113973

Description : 1,3,5-Trichlorobenzene Standard

1,3,5-Trichlorobenzene Standard 1,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,3,5-Trichlorobenzene	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 108-70-3 (Lot 11319AS)		+/- 11.3644	µg/mL	Unstressed
	Purity 99%		+/- 13.0587	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 30042 **Lot No.:** A0114018

Description : 502.2 Calibration Mix #1

502.2 Calibration Mix #1 2,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot Q167-08) **Purity** 99%	2,013.4 µg/mL	+/- 14.1778 +/- 24.0720 -/- 27.3231	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBF7067V) **Purity** 99%	2,014.0 µg/mL	+/- 15.9346 +/- 25.1511 +/- 28.2800	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 25LPST) **Purity** 99%	2,018.2 µg/mL	+/- 15.9614 +/- 25.1997 +/- 28.3356	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,018.8 µg/mL	+/- 15.1008 +/- 24.6679 +/- 27.8655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	2,006.0 µg/mL	-/- 12.7193 +/- 23.1828 +/- 26.5198	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Trichlorofluoromethane (CFC-11) **CAS #** 75-69-4 (Lot SHBF6387V) **Purity** 99%	2,014.0 µg/mL	+/- 15.3697 +/- 24.7970 +/- 27.9656	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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Catalog No. : 30625 **Lot No.:** A0117015

Description : OLC 3.2 VOA Deuterated Monitoring Compounds

OLC 3.2 VOA Ketone Deuterated Monitoring Compounds 500µg/mL, Deuterium Oxide, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L. K=2)		
1	2-Butanone-d5	500.0 µg/mL	+/- 2.9698	µg/mL	Gravimetric
	CAS # 24313-50-6 (Lot M276P24)		+/- 30.1733	µg/mL	Unstressed
	Purity 99%		+/- 30.2449	µg/mL	Stressed
2	2-Hexanone-d5	500.0 µg/mL	+/- 2.9698	µg/mL	Gravimetric
	CAS # 4840-82-8 (Lot I500P2)		+/- 30.1733	µg/mL	Unstressed
	Purity 99%		+/- 30.2449	µg/mL	Stressed

Solvent: Deuterium Oxide
CAS # 7789-20-0
Purity 99%

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Catalog No. : 30091 **Lot No.:** A099377

Description : L/C VOA Internal Standard Mix

L/C Internal Std 2500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Difluorobenzene	2,500.5 µg/mL	+/- 14.6743 µg/mL	Gravimetric
	CAS # 540-36-3 (Lot 13105AO)		+/- 26.5411 µg/mL	Unstressed
	Purity 99%		+/- 30.8641 µg/mL	Stressed
2	Chlorobenzene-d5	2,499.0 µg/mL	+/- 14.6655 µg/mL	Gravimetric
	CAS # 3114-55-4 (Lot PR-22736)		+/- 26.5252 µg/mL	Unstressed
	Purity 99%		+/- 30.8456 µg/mL	Stressed
3	1,4-Dichlorobenzene-d4	2,504.5 µg/mL	+/- 14.6978 µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/- 26.5836 µg/mL	Unstressed
	Purity 99%		+/- 30.9135 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Prep Standard - Chemical Standard Summary

Order ID : H2834

Test : SVOC-TCL BNA -20

Prepbatch ID : PB90332,PB90330,

Sequence ID/Qc Batch ID: bm051116,bm051316,BM050516

Standard ID :
EP1653,EP1663,EP1671,SP3536,SP3592,SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643,SP3652,

Chemical ID :
1ul IS/ 100ul sample,E1520,E2036,E2072,E2087,E2105,E2106,H1268,H1316,M3518,S3852,S3950,S3957,S4227,S4228,S4605,S4617,S4663,S4672,S4673,S4704,S4711,S4814,S4815,S4985,S4992,S4993,S4996,S5008,S5017,S5020,S5022,S5067,S5068,S5069,S5070,S5071,S5072,S5085,V4294,

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
256	BAKED SODIUM SULPHATE	EP1653	02/29/2016	08/29/2016	Rajesh

FROM 4000.000ml of E2036 = Final Quantity: 4000.000 gram

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
314	1.1 H2SO4 SOLN	EP1663	04/01/2016	10/01/2016	rajesh

FROM 1000.000ml of M3518 + 1000.000ml of V4294 = Final Quantity: 2000.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
2017	1:1 ACETONE/METHYLENE CHLORIDE	EP1671	04/28/2016	10/26/2016	rajesh

FROM 8000.000ml of E2105 + 8000.000ml of E2106 = Final Quantity: 16000.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3116	SOM02.2 Spike Solution, 80PPM	SP3536	12/17/2015	06/17/2016	Sohil

FROM 0.400ml of S3852 + 0.800ml of S4228 + 48.800ml of H1268 = Final Quantity: 50.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3334	50ug/ml SOM DFTPP	SP3592	02/08/2016	08/08/2016	UMANGI

FROM 0.200ml of S3957 + 9.800ml of E2072 = Final Quantity: 10.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3243	SOM02.2 STOCK 160 PPM	SP3637	03/16/2016	07/31/2016	UMANGI

FROM 0.320ml of S4605 + 0.320ml of S4617 + 0.320ml of S4663 + 0.320ml of S4704 + 0.400ml of S4992 + 0.600ml of S4672 + 0.800ml of S3950 + 0.800ml of S4711 + 0.800ml of S4996 + 0.800ml of S5085 + 1.000ml of S4673 + 1.200ml of S4993 + 2.320ml of E2087 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3244	SSTD160 PPM	SP3638	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 1.000ml of SP3637 = Final Quantity: 1.010 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3245	SSTD80 PPM	SP3639	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.500ml of E2087 + 0.500ml of SP3637 = Final Quantity: 1.010 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3246	SSTD40 PPM	SP3640	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.725ml of E2087 + 0.250ml of SP3637 = Final Quantity: 1.010 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3247	SSTD20 PPM	SP3641	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.875ml of E2087 + 0.125ml of SP3637 = Final Quantity: 1.010 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3248	SSTD10 PPM	SP3642	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.500ml of E2087 + 0.500ml of SP3641 = Final Quantity: 1.010 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3249	SSTD005 PPM	SP3643	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.750ml of E2087 + 0.250ml of SP3641 = Final Quantity: 1.010 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3217	SOM02.1 SIM/Reg Surrogate 80/16/0.8 PPM	SP3652	03/28/2016	09/28/2016	umangi

FROM 0.080ml of S4227 + 0.400ml of S4815 + 0.800ml of S4985 + 1.200ml of S4814 + 1.200ml of S5067 + 1.200ml of S5068 + 1.200ml of S5069 + 1.200ml of S5070 + 1.200ml of S5071 + 1.200ml of S5072 + 190.320ml of H1316 = Final Quantity: 200.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3382-05 / Sand, Purified (cs/4x2.5kg)	J40625	02/15/2017	09/25/2012 / muteen	02/15/2012 / rajesh	E1520

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	/ Sodium sulfate (anhyhdrous)	433101	10/05/2020	10/30/2015 / rajesh	10/05/2015 / rajesh	E2036

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	0000131014	08/08/2016	02/09/2016 / rajesh	01/22/2016 / rajesh	E2072

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EMD Chemicals Inc.	DX0831CJ-38 / DCM, Cycle Tainer	56056	09/14/2016	03/15/2016 / rajesh	03/15/2016 / rajesh	E2087

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EMD Chemicals Inc.	DX0831CJ-38 / DCM, Cycle Tainer	56056	10/26/2016	04/27/2016 / rajesh	04/08/2016 / rajesh	E2105

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	0000133024	10/27/2016	04/28/2016 / rajesh	04/28/2016 / rajesh	E2106

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9093-03 / Methanol, HPLC (cs/4x4L)	0000064689	01/14/2018	03/10/2015 / TEJASKUMAR	01/14/2015 / IWONA	H1268

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9093-03 / Methanol, HPLC (cs/4x4L)	0000119840	08/16/2020	02/23/2016 / umangi	01/22/2016 / UMANGI	H1316

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	0000095945	11/02/2019	11/20/2015 / mohan	11/18/2015 / mohan	M3518

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31071 / SV Mix,8000 series method, acid matrix spike, 10,000ug/mL, methanol, 5mL/ampul	A0103147	06/30/2021	10/03/2015 / TEJASKUMAR	10/03/2014 / TEJASKUMAR	S3852

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31833 / caprolactam, 2,000 µg/mL in methylene chloride, 1 mL/ampul	A0105455	08/31/2016	01/02/2015 / jung	10/16/2014 / TEJASKUMAR	S3950

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31001 / SV Tuning Compound Standard, 2500 ug/ml,	A0103386	05/31/2017	01/22/2015 / TEJASKUMAR	10/30/2014 / TEJASKUMAR	S3957

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	33913 / SOM01.0 SIM Analysis Standard (Surrogate), 2000 PPM	A0106668	09/30/2020	12/14/2015 / Sohil	02/12/2015 / TEJASKUMAR	S4227

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31084 / SV Mix,8000 series method, Base Neutral Matrix Spike, 5000ug/mL, MeOH, 5mL/ampul	A0108368	01/31/2018	06/16/2015 / TEJASKUMAR	02/12/2015 / TEJASKUMAR	S4228

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31853 / 1,4-Dioxane, 2000 ug/ml , Solvent: Methylene Chloride	A0110448	04/30/2020	02/22/2016 / Sohil	07/07/2015 / TEJASKUMAR	S4605

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30614 / 1,4-Dioxane-D8 Standard	A0111152	05/31/2018	02/23/2016 / umangi	07/17/2015 / TEJASKUMAR	S4617

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	98496 / 1,2,3,4-Tetrachlorobenzene, 5000 ug/mL, in MeCl2	061115	06/11/2020	02/22/2016 / Sohil	08/12/2015 / umangi	S4663

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31900 / SOM01.1 Mega Mix, 500-1000 ug/ml	A01082223	07/31/2016	02/22/2016 / Sohil	08/14/2015 / umangi	S4672

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31900 / SOM01.1 Mega Mix, 500-1000 ug/ml	A0112856	07/31/2016	02/29/2016 / UMANGI	08/14/2015 / umangi	S4673

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	98495 / Pentachlorobenzene, 5000 ug/mL, in MeCl2	061115	06/11/2020	02/22/2016 / Sohil	08/31/2015 / umangi	S4704

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	33017 / Benzaldehyde, 2000 ug/ml	A0111289	05/31/2017	03/14/2016 / UMANGI	09/08/2015 / UMANGI	S4711

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30614 / 1,4-Dioxane-D8 Standard	A0111152	05/31/2018	03/28/2016 / umangi	10/20/2015 / nEVILKUMAR	S4814

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30614 / 1,4-Dioxane-D8 Standard	A0111152	05/31/2018	03/28/2016 / umangi	10/20/2015 / nEVILKUMAR	S4815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0112586	04/30/2019	03/28/2016 / umangi	11/13/2015 / Sohil	S4985

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32208 / atrazine, 1,000 µg/mL in acetone, 1 mL/ampul	A0112545	03/31/2019	02/22/2016 / Sohil	11/19/2015 / Sohil	S4992

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32208 / atrazine, 1,000 µg/mL in acetone, 1 mL/ampul	A0112545	03/31/2019	03/14/2016 / UMANGI	11/19/2015 / Sohil	S4993

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	90494 / 1-Methylnaphthalene, 2000 ug/mL, in methylene chloride	070314	07/03/2019	03/14/2016 / UMANGI	11/19/2015 / Sohil	S4996

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31206 / SV Mix, CLP method, Internal Std, 2000ug/mL, CH2Cl2, 1mL	A0115444	10/31/2021	03/16/2016 / UMANGI	12/18/2015 / Sohil	S5008

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31206 / SV Mix, CLP method, Internal Std, 2000ug/mL, CH2Cl2, 1mL	A0115444	05/09/2016	05/02/2016 / umangi	12/18/2015 / Sohil	S5017

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31206 / SV Mix, CLP method, Internal Std, 2000ug/mL, CH2Cl2, 1mL	A0115444	10/31/2021	05/04/2016 / umangi	12/18/2015 / Sohil	S5020

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31206 / SV Mix, CLP method, Internal Std, 2000ug/mL, CH2Cl2, 1mL	A0115444	10/31/2021	05/12/2016 / umangi	12/18/2015 / Sohil	S5022

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	03/28/2016 / umangi	01/28/2016 / Sohil	S5067

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	03/28/2016 / umangi	01/28/2016 / Sohil	S5068

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	03/28/2016 / umangi	01/28/2016 / Sohil	S5069

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	03/28/2016 / umangi	01/28/2016 / Sohil	S5070

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	03/28/2016 / umangi	01/28/2016 / Sohil	S5071

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	03/28/2016 / umangi	01/28/2016 / Sohil	S5072

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	03/14/2016 / UMANGI	01/28/2016 / Sohil	S5085

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	200111-SCB-R2 / DI Water, Res-Kem	VOC-DailyChecke	12/31/2020	07/01/2013 / apatel	07/01/2013 / apatel	V4294

Methanol
HPLC
For use in Liquid Chromatography (HPLC & UHPLC) & Spectrophotometry
(methyl alcohol)

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9093-03
Batch No.: 0000064689
Manufactured Date: 2013/11/15
Retest Date: 2018/11/14

SEIDLER CHEMICAL COMPANY
537 Raymond Boulevard
Newark, NJ 07105

Rec: 1/14/15

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Ultraviolet Absorbance (1.00-cm cell vs. water) - 400-254 nm	<= 0.01	< 0.01
Ultraviolet Absorbance (1.00-cm cell vs. water) - 225 nm	<= 0.15	0.12
Ultraviolet Absorbance (1.00-cm cell vs. water) - UV Cut-off, nm	<= 205	204
Gradient Elution Test (a.u.) - 254 nm	<= 0.002	< 0.001
Fluorescence Trace Impurities, measured as Quinine Base - at 450 nm Emission	<= 0.3 ppb	< 0.1
Fluorescence Trace Impurities, measured as Quinine Base - at Emission Maximum for Impurities	<= 1.0 ppb	0.1
Acetone	<= 0.001 %	< 0.001
Residue after Evaporation	<= 1.0000 ppm	0.1000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	<0.01
Water (by KF, coulometric)	<= 0.05 %	< 0.01

For Laboratory, Research or Manufacturing Use

H1268
H1269
H1270
H1271

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & QC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008, 17025:2005
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

Richard M Siberski
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 , Fax: 610.573.2610

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number: 98495
Lot Number: 061115
Description: Pentachlorobenzene

Expiration Date: 061120
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000

Solvent(s):	Lot#
Methylene chloride	72062

54703
54704
54705
54706

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.002 Flask Uncertainty

LM 06/31/15

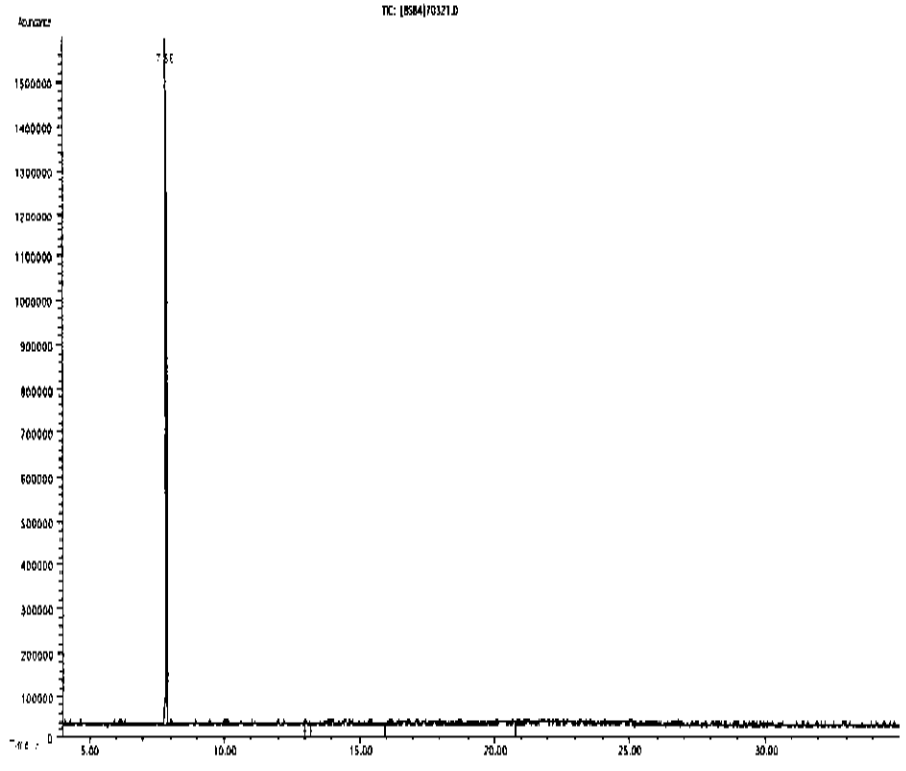
Formulated By: Paul Barron 061115 DATE

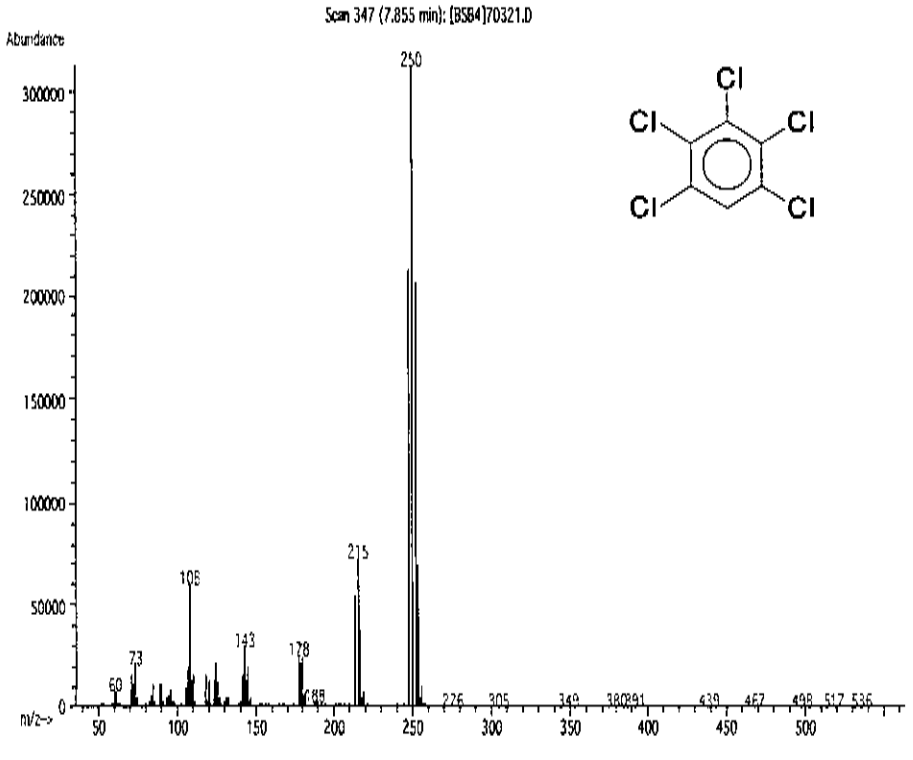
Reviewed By: Pedro L. Rentas 061115 DATE

MSDS Information
(Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. Pentachlorobenzene	321	2705100	5000	99.5	0.5	0.05024	0.05038	5013.7	0.0102	00608-93-5	N/A	orl-rat 1080mg/kg

Method GC7MSD-1.M: Column: SPB-608 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 150°C (4min.), Temp 2 = 290°C (13.5 min.), Rate = 8°C/min., Injector B= 200°C, Detector B = 290°C. Split Ratio = 100:1, Scan Rate = 2. Analysis performed by Candice Warren.





1411

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Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

1412

CERTIFIED WEIGHT REPORT

Part Number:	90494
Lot Number:	070314
Description:	1-Methylnaphthalene
Expiration Date:	070319
Recommended Storage:	Refrigerate (4 °C)
Nominal Concentration (µg/mL):	2000

Solvent(s):	**Lot#**
Methylene chloride	74359

S4996 SJ
↓ 11/23/15
S5000

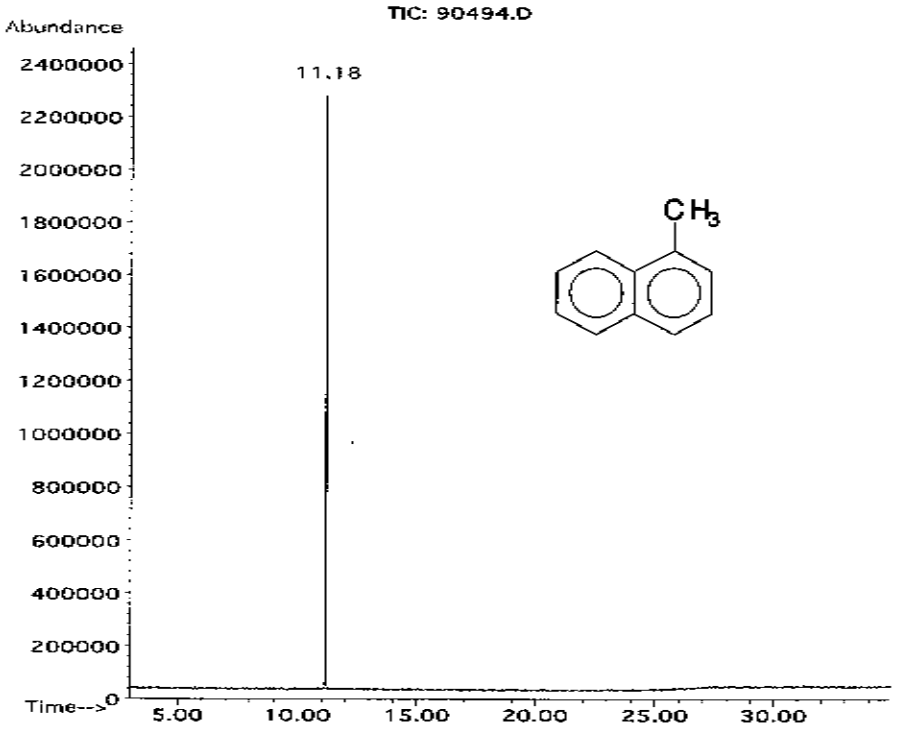
Formulated By:	Paul Barron	070314 DATE
Reviewed By:	Pedro L. Rentas	070314 DATE

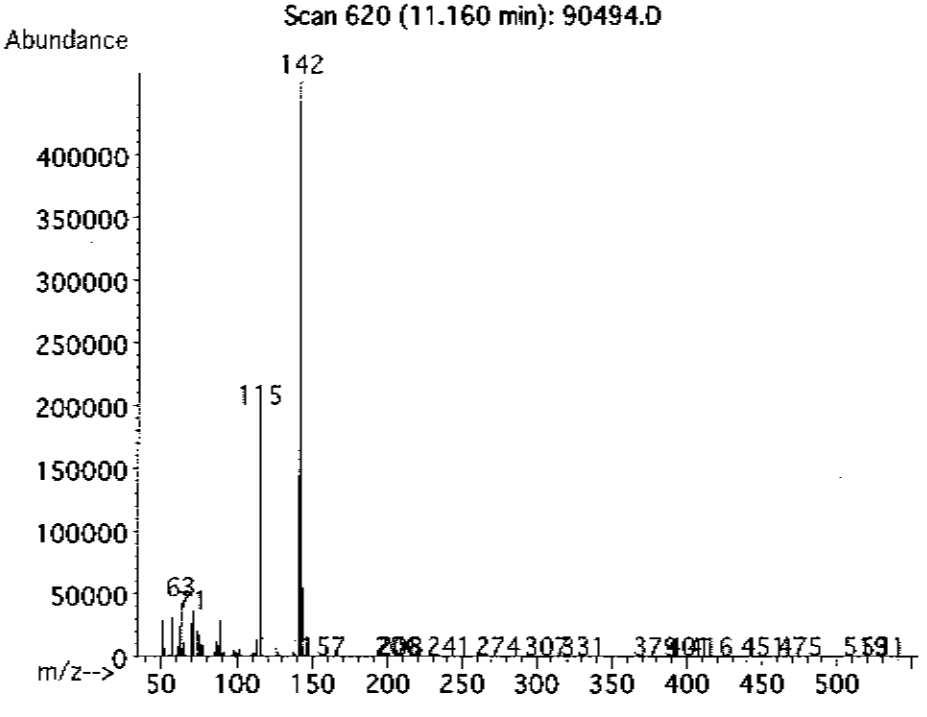
5E-05 Balance Uncertainty
0.003 Flask Uncertainty

Weight(s) shown below were combined and diluted to: 100.0

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 1-Methylnaphthalene	313	04413BX	2000	98	0.2	0.20410	0.20420	2001.0	0.0041	00090-12-0	N/A	orl-rat 1840mg/kg

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Gina McLane.

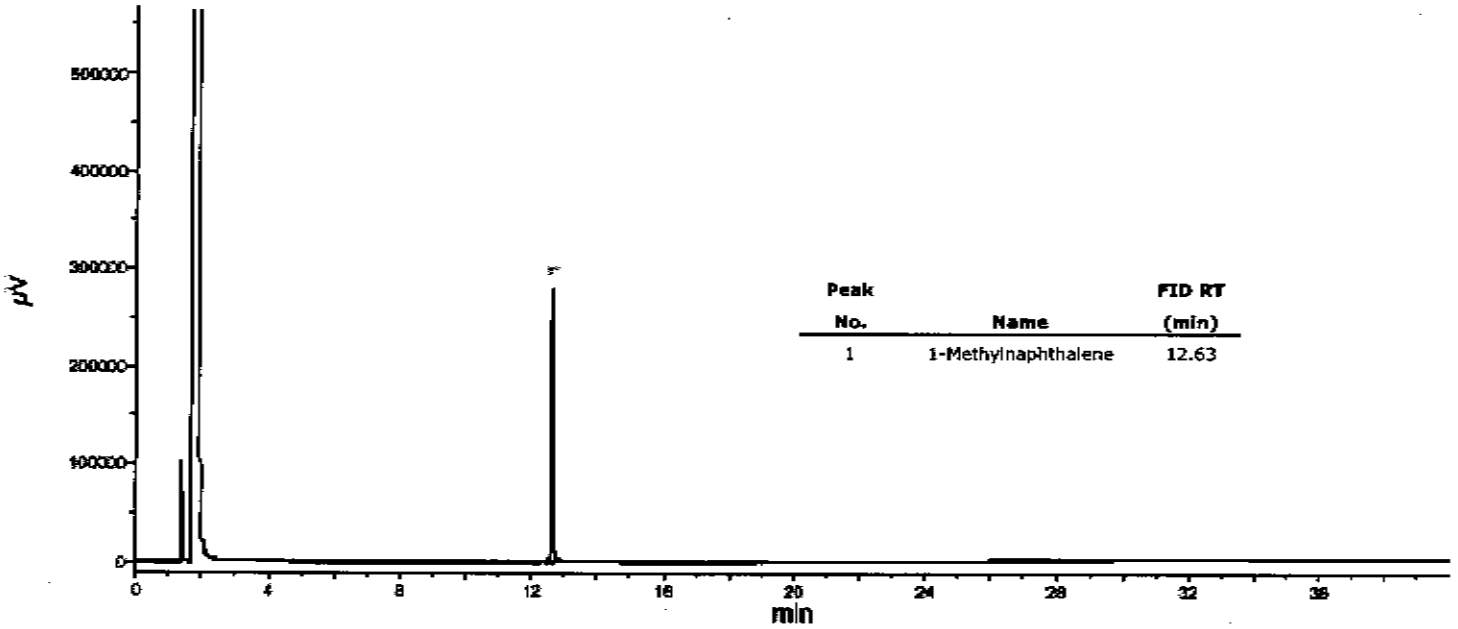




Run 49, "P90494 L070314 [2000µg/mL in MeCl2]"

Run Length: 39.99 min, 23997 points at 10 points/second.
Created: Thu, Jul 10, 2014 at 12:38:44 AM.
Sampled: Sequence "070814-GC9M2", Method "GC9-M2".
Analyzed using Method "GC9-M2".

Comments
GC9M2 Analysis by Melissa Stonier
SPB-5 30 meter x 0.53 µm x 1.5 df
Flow Rates; Total Flow = 300 mL/min, Helium (carrier)=6mL, Helium (makeup)=25mL, Hydrogen (detector)=30, Air (detector)=360
Oven Temp 1 = 50 C (1 min), Rate = 10 C/min, Oven Temp 2 = 300 (14 min), Total Run Time=40 min.
Injector Temp = 250 C, FID Temp = 300 C, FID Signal = Edaq Channel 1
Gas Chromatograph = HP5890, Injector = HP7673A, Standard Injection = 0.5 uL, Range = 4



Peak No.	Name	FID RT (min)
1	1-Methylnaphthalene	12.63

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Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited Testing Laboratory
Certificate #3222.02

RCA 7/17/15

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Materiel is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30614 **Lot No.:** A0111152

Description : 1,4-dioxane-d8 Standard

1,4-dioxane-d8 Standard 2000 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.I.; K=2)		
1	1,4-Dioxane-d8	2,004.0 µg/mL	+/- 11.7606	µg/mL	Gravimetric
	CAS # 17647-74-4 (Lot 1-19073)		+/- 42.5297	µg/mL	Unstressed
	Purity 99%		+/- 42.7181	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

54614
54615
54616
54617

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

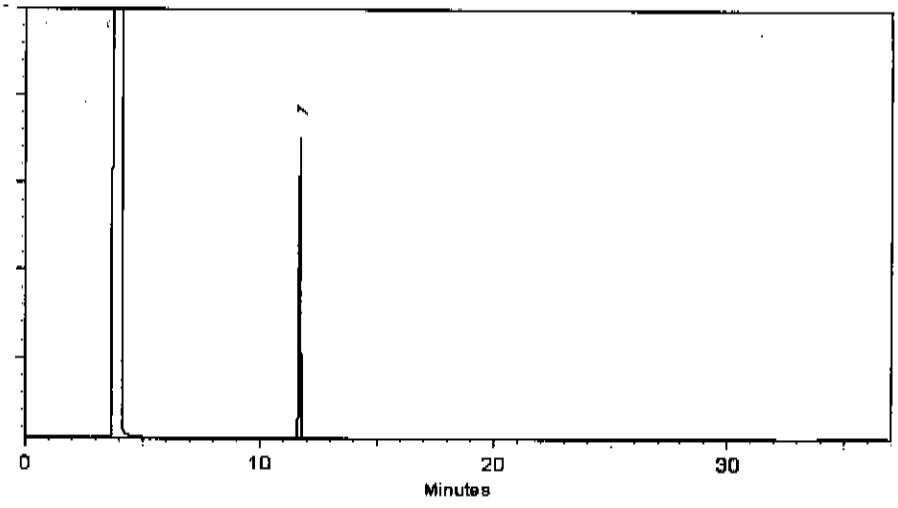
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Valerie S. Strohm - ARM R&D Chemist

Date Mixed: 15-May-2015 **Balance:** 1125113331

Jennifer L. Pollino - QC Analyst

Date Passed: 19-May-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommendad condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentretion of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes grevimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certifiad combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncartainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restak will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative fer details.
- If eny undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (600)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

02/19/15

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31084 **Lot No.:** A0108368

Description : B/N Matrix Spike Mix

Base Neutral Matrix Spike 5000µg/mL, Methanol, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2018 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.I., K=2)		
1	1,4-Dichlorobenzene		5,001.3	µg/mL	+/- 29.3506	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBL3891V)			+/- 138.0486	µg/mL	Unstressed
	Purity 99%				+/- 138.0486	µg/mL	Stressed
2	N-Nitroso-di-n-propylamine		5,002.7	µg/mL	+/- 29.3585	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/- 138.0854	µg/mL	Unstressed
	Purity 99%				+/- 138.0854	µg/mL	Stressed
3	1,2,4-Trichlorobenzene		5,001.3	µg/mL	+/- 29.3502	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBC5541V)			+/- 138.0467	µg/mL	Unstressed
	Purity 98%				+/- 138.0467	µg/mL	Stressed
4	Acenaphthene		5,000.7	µg/mL	+/- 29.3467	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBJ4871V)			+/- 138.0302	µg/mL	Unstressed
	Purity 99%				+/- 138.0302	µg/mL	Stressed
5	2,4-Dinitrotoluene		5,001.3	µg/mL	+/- 29.3506	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/- 138.0486	µg/mL	Unstressed
	Purity 99%				+/- 138.0486	µg/mL	Stressed
6	Pyrene		5,000.3	µg/mL	+/- 29.3445	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBJ0984V)			+/- 138.0197	µg/mL	Unstressed
	Purity 98%				+/- 138.0197	µg/mL	Stressed

54228
54229

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

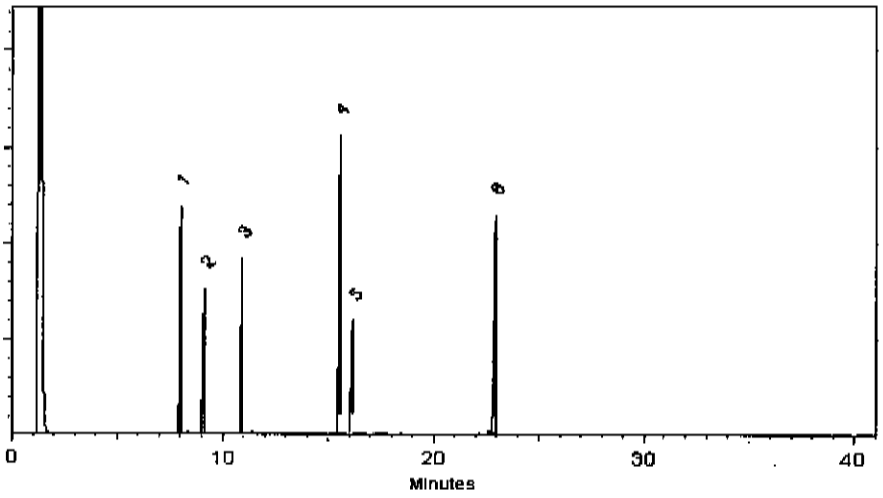
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Connor Flannery - Mix Technician

Date Mixed: 18-Jan-2015 **Balance:** 1128360905

Tyler Brown - QA Analyst

Date Passed: 21-Jan-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constreints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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Bellefonte, PA 16823-8812
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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

02/19/15

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33913 **Lot No.:** A0106668

Description : SOM01.0 SIM Analysis Standard

SOM01.1 Deuterated Monitoring Compound Mix SIM Compounds
2000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2020 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.I., K=2)		
1	2-Methylnaphthalene-d10	2,003.1 µg/mL	+/- 18.6279	µg/mL	Gravimetric
	CAS # 7297-45-2 (Lot P364P4)		+/- 90.1793	µg/mL	Unstressed
	Purity 98%		+/- 98.8575	µg/mL	Stressed
2	Fluoranthene-d10	1,999.2 µg/mL	+/- 18.5915	µg/mL	Gravimetric
	CAS # 93951-69-0 (Lot PR-20668)		+/- 90.0028	µg/mL	Unstressed
	Purity 98%		+/- 98.6640	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

S 4226
S 4227

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

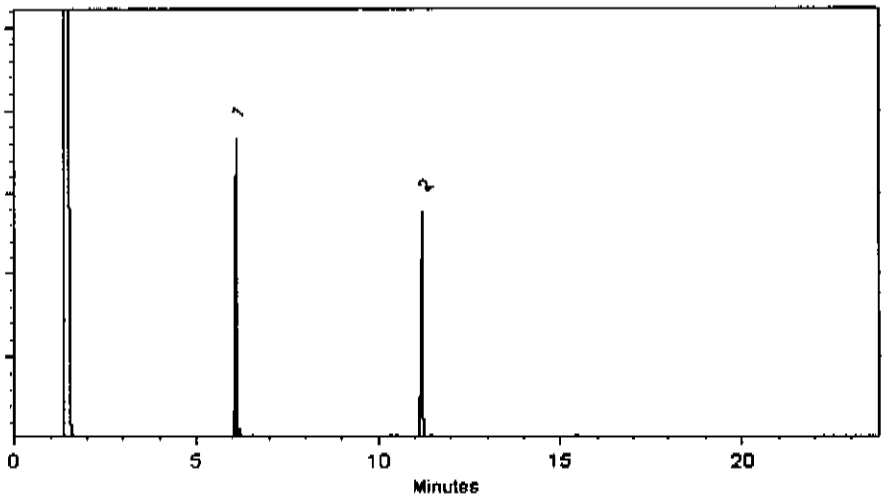
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 17-Oct-2014 **Balance:** 1128353505

Jennifer L Pollino

Jennifer L. Pollino - QC Analyst

Date Passed: 21-Oct-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

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Certified Uncertainty Value Notes:

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$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
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Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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Certificate of Analysis

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Catalog No. : 31071 **Lot No.:** A0103147

Description : Acid Matrix Spike Mix (SW-846)

Acid Matrix Spike 10,000µg/mL, Methanol, 5mL/ampul

10/03/14

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Phenol **CAS #** 108-95-2 **Purity** 99%	(Lot SHBC6998V)	10,003.0	µg/mL	+/- 58.5698 +/- 249.3405 +/- 313.5161	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Chlorophenol **CAS #** 95-57-8 **Purity** 99%	(Lot MKBD3900V)	10,002.0	µg/mL	+/- 58.5639 +/- 249.3156 +/- 313.4848	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	4-Chloro-3-methylphenol **CAS #** 59-50-7 **Purity** 99%	(Lot STBC0769V)	10,004.0	µg/mL	+/- 58.5756 +/- 249.3654 +/- 313.5474	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	10,003.0	µg/mL	+/- 58.5698 +/- 249.3405 +/- 313.5161	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Pentachlorophenol **CAS #** 87-86-5 **Purity** 99%	(Lot 140226JLM)	10,003.0	µg/mL	+/- 58.5698 +/- 249.3405 +/- 313.5161	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

53852
53853

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

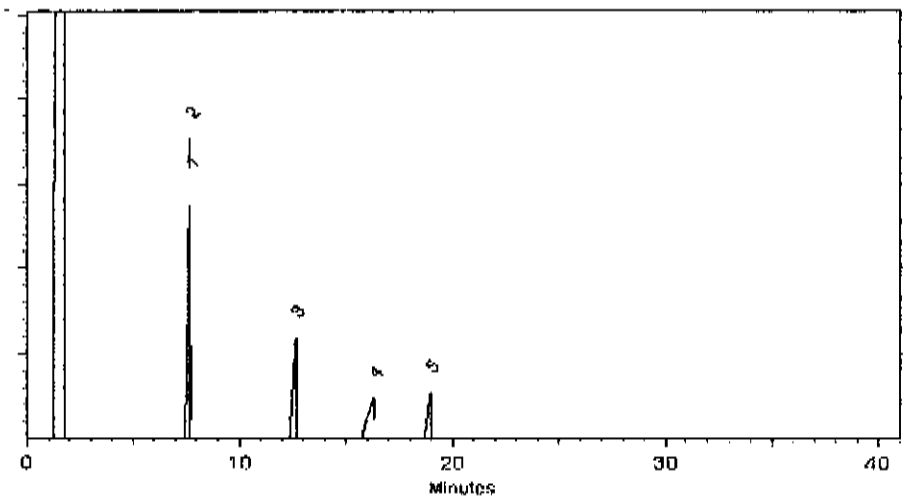
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
HID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 05-May-2014 **Balance:** 1125113331

Amanda Miller - QC Analyst

Date Passed: 07-May-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

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Certified Uncertainty Value Notes:

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Manufacturing Notes:

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Handling Notes:

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Rec. 10/30/14

Catalog No. : 31001 **Lot No.:** A0103386

Description : SV Tuning Compound Standard

Tuning Std Decafluorotriphenylphosphine 2500µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.: K=2)		
1	DFTPP (Decafluorotriphenylphosphine)	2,500.0 µg/mL	+/- 14.8492	µg/mL	Gravimetric
	CAS # 5074-71-5 (Lot 10109917)		+/- 111.1178	µg/mL	Unstressed
	Purity 99%		+/- 122.0757	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

S 3957

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

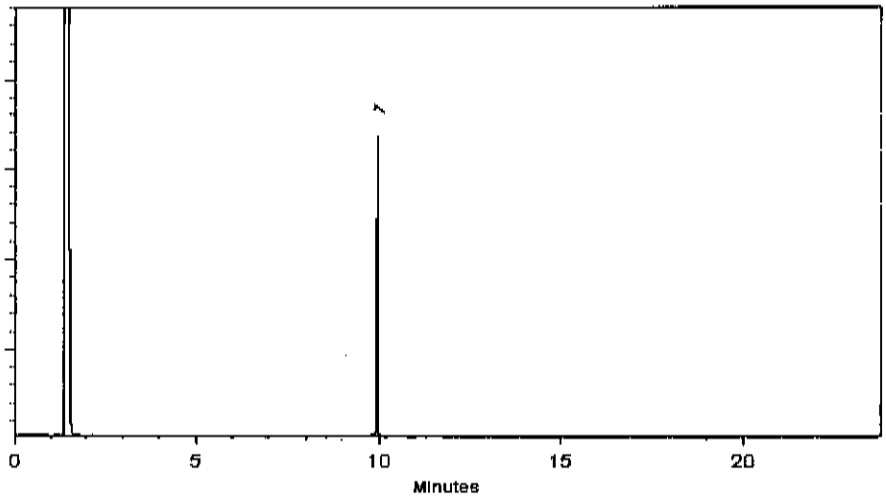
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 15-May-2014 **Balance:** 1128342313

Jennifer L. Pollino - QC Analyst

Date Passed: 19-May-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

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Manufacturing Notes:

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Rec: 12/30/14
Lough

Catalog No. : 31833 **Lot No.:** A0105455

Description : Epsilon-Caprolactam Standard

Epsilon-caprolactam Std 2000µg/mL, Methylene Chloride(Methanol free), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2016 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	epsilon-Caprolactam	2,004.0 µg/mL	+/- 18.6361	µg/mL	Gravimetric
	CAS # 105-60-2 (Lot 10000218)		+/- 26.3242	µg/mL	Unstressed
	Purity 99%		+/- 39.9571	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

54066
54067

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

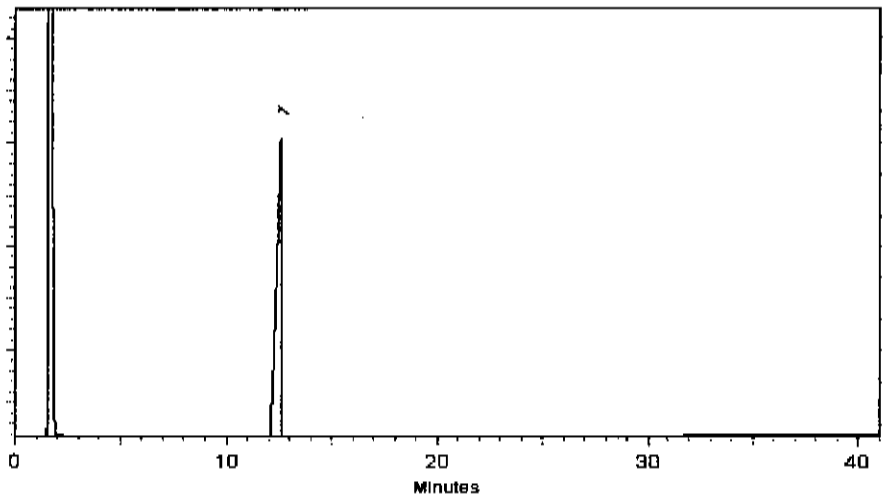
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Hauver

Date Mixed: 19-Aug-2014 **Balance:** 1128360905

Jodi E. Breon

Jodi E. Breon - QA Analyst

Date Passed: 27-Aug-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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Manufacturing Notes:

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Handling Notes:

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UM
54671 OLM01.1
54672

Catalog No. : 31900 **Lot No.:** A0108223

Description : OLM 01.1 Revised SV MegaMix

OLM 01.1 Revised SV MegaMix 500-1000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2016 **Storage:** 0°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Phenol **CAS #** 108-95-2 **Purity** 99%	(Lot SHBC6998V)	1,000.2 µg/mL	+/- 6.6856 µg/mL +/- 11.4365 µg/mL +/- 18.8643 µg/mL	Gravimetric Unstressed Stressed
2	Bis(2-chloroethyl)ether **CAS #** 111-44-4 **Purity** 99%	(Lot 45296HKV)	1,001.6 µg/mL	+/- 6.6949 µg/mL +/- 11.4525 µg/mL +/- 18.8907 µg/mL	Gravimetric Unstressed Stressed
3	2-Chlorophenol **CAS #** 95-57-8 **Purity** 99%	(Lot MKBD3900V)	1,000.1 µg/mL	+/- 6.6852 µg/mL +/- 11.4359 µg/mL +/- 18.8633 µg/mL	Gravimetric Unstressed Stressed
4	2,2'-oxybis(1-chloropropane) **CAS #** 108-60-1 **Purity** 99%	(Lot 7-XDD-199-6)	1,001.4 µg/mL	+/- 6.6936 µg/mL +/- 11.4502 µg/mL +/- 18.8869 µg/mL	Gravimetric Unstressed Stressed
5	2-Methylphenol (o-cresol) **CAS #** 95-48-7 **Purity** 99%	(Lot SHBC1479V)	1,002.4 µg/mL	+/- 6.7003 µg/mL +/- 11.4616 µg/mL +/- 18.9058 µg/mL	Gravimetric Unstressed Stressed
6	Acetophenone **CAS #** 98-86-2 **Purity** 99%	(Lot MKBR7156V)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 11.0159 µg/mL +/- 18.6105 µg/mL	Gravimetric Unstressed Stressed
7	Hexachloroethane **CAS #** 67-72-1 **Purity** 99%	(Lot 4H3SF)	1,003.0 µg/mL	+/- 6.7043 µg/mL +/- 11.4685 µg/mL +/- 18.9171 µg/mL	Gravimetric Unstressed Stressed

24	2,4,6-Trichlorophenol **CAS #** 88-06-2 **Purity** 99%	(Lot MKBH7393V)	1,000.3	µg/mL	+/- 6.6866 +/- 11.4382 +/- 18.8671	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4,5-Trichlorophenol **CAS #** 95-95-4 **Purity** 99%	(Lot FHM01)	1,000.1	µg/mL	+/- 6.6852 +/- 11.4359 +/- 18.8633	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	2-Chloronaphthalene **CAS #** 91-58-7 **Purity** 99%	(Lot FIJ01)	1,001.8	µg/mL	+/- 6.6963 +/- 11.4548 +/- 18.8944	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Biphenyl **CAS #** 92-52-4 **Purity** 99%	(Lot 1277976)	1,000.0	µg/mL	+/- 5.9397 +/- 11.0159 +/- 18.6105	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,000.5	µg/mL	+/- 6.7354 +/- 11.4683 +/- 18.8877	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Acenaphthylene **CAS #** 208-96-8 **Purity** 99%	(Lot ER030707-01)	1,000.9	µg/mL	+/- 6.6906 +/- 11.4451 +/- 18.8784	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,000.8	µg/mL	+/- 6.6896 +/- 11.4433 +/- 18.8756	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,000.5	µg/mL	+/- 6.6879 +/- 11.4405 +/- 18.8709	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKBJ4871V)	1,002.9	µg/mL	+/- 6.7040 +/- 11.4679 +/- 18.9161	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBH5131V)	1,002.5	µg/mL	+/- 6.7488 +/- 11.4912 +/- 18.9255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot MKBP5833V)	1,001.0	µg/mL	+/- 6.6909 +/- 11.4456 +/- 18.8794	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKBK2375V)	1,000.0	µg/mL	+/- 5.9397 +/- 11.0159 +/- 18.6105	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,002.5	µg/mL	+/- 6.7013 +/- 11.4634 +/- 18.9086	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	1,000.3	µg/mL	+/- 6.6863 +/- 11.4376 +/- 18.8662	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot FN10221307)	1,001.5	µg/mL	+/- 6.7421 +/- 11.4798 +/- 18.9066	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,000.9	µg/mL	+/- 6.6907 +/- 11.4453 +/- 18.8789	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Chrysene		1,001.5 µg/mL	+/- 6.6943	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot PR121912-01)		+/- 11.4514	µg/mL	Unstressed
	Purity 99%			+/- 18.8888	µg/mL	Stressed
57	3,3'-Dichlorobenzidine		1,002.5 µg/mL	+/- 6.7488	µg/mL	Gravimetric
	CAS # 91-94-1	(Lot 141205JLM)		+/- 11.4912	µg/mL	Unstressed
	Purity 99%			+/- 18.9255	µg/mL	Stressed
58	Bis(2-ethylhexyl)phthalate		1,006.9 µg/mL	+/- 6.7304	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBK2695V)		+/- 11.5131	µg/mL	Unstressed
	Purity 99%			+/- 18.9906	µg/mL	Stressed
59	Di-n-octyl phthalate		1,003.2 µg/mL	+/- 6.7060	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 3128600)		+/- 11.4714	µg/mL	Unstressed
	Purity 99%			+/- 18.9218	µg/mL	Stressed
60	Benzo(b)fluoranthene		1,003.8 µg/mL	+/- 6.7100	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot ER022008-02)		+/- 11.4782	µg/mL	Unstressed
	Purity 99%			+/- 18.9331	µg/mL	Stressed
61	Benzo(k)fluoranthene		1,004.3 µg/mL	+/- 6.7130	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot ER041513-01)		+/- 11.4834	µg/mL	Unstressed
	Purity 99%			+/- 18.9416	µg/mL	Stressed
62	Benzo(a)pyrene		1,002.7 µg/mL	+/- 6.7026	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)		+/- 11.4656	µg/mL	Unstressed
	Purity 99%			+/- 18.9124	µg/mL	Stressed
63	Indeno(1,2,3-cd)pyrene		1,002.9 µg/mL	+/- 6.7036	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)		+/- 11.4674	µg/mL	Unstressed
	Purity 99%			+/- 18.9152	µg/mL	Stressed
64	Dibenz(a,h)anthracene		1,001.5 µg/mL	+/- 6.6943	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)		+/- 11.4514	µg/mL	Unstressed
	Purity 99%			+/- 18.8888	µg/mL	Stressed
65	Benzo(g,h,i)perylene		1,004.3 µg/mL	+/- 6.7130	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER020708-08)		+/- 11.4834	µg/mL	Unstressed
	Purity 99%			+/- 18.9416	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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Certificate of Analysis

04107715

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31853 **Lot No.:** A0110448

Description : 1,4-dioxane

1,4-Dioxane 2,000µg/mL, Methylene Chloride, 1mL/ampul

S4604

S4605

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane	2,005.0 µg/mL	+/- 11.7665	µg/mL	Gravimetric
	CAS # 123-91-1 (Lot SHBF2002V)		+/- 42.5509	µg/mL	Unstressed
	Purity 99%		+/- 42.7394	µg/mL	Stressed

Solvent: Methylene Chloride (MEOH FREE)
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
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S4814
1
S4838
NP
10/20/15

Catalog No. : 30614 **Lot No.:** A0111152

Description : 1,4-dioxane-d8 Standard

1,4-dioxane-d8 Standard 2000 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane-d8	2,004.0 µg/mL	+/- 11.7606	µg/mL	Gravimetric
	CAS # 17647-74-4 (Lot 1-19073)		+/- 42.5297	µg/mL	Unstressed
	Purity 99%		+/- 42.7181	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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S4709
S4710
S4711
S4712
S4713 um 09/09/15

Catalog No. : 33017 **Lot No.:** A0111289

Description : Benzaldehyde Standard

Benzaldehyde 2000µg/mL Methylene Chloride (Methanol free), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Benzaldehyde **CAS #** 100-52-7 (Lot SHBD3510V) **Purity** 99%	2,012.0 µg/mL	+/- 11.8075 +/- 64.5160 +/- 74.9913	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
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S4991 SJ 11/23/15 ↓ S4995

Catalog No. : 32208 **Lot No.:** A0112545

Description : Atrazine Standard

Atrazine Standard 1000 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav Conc. (weight/volume)	Expanded Uncertainty (95% C.L. ; K=2)		
1	Atrazine	1,009.4 µg/mL	+/- 5.9955	µg/mL	Gravimetric
	CAS # 1912-24-9 (Lot TZ8ED)		+/- 39.4963	µg/mL	Unstressed
	Purity 98%		+/- 62.6664	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
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- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

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Handling Notes:

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54976 – 54990

SJ
11/16/2015

Catalog No. : 31810 **Lot No.:** A0112586

Description : OLC03.2 SVOA Deuterated Monitoring Compounds Mix

OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL/ampul, Methylene Chloride, 2000µg/mL

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2019 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Phenol-d5	2,003.3 µg/mL	+/- 11.7567 µg/mL	Gravimetric
	CAS # 4165-62-2 (Lot X479P8)		+/- 49.9425 µg/mL	Unstressed
	Purity 99%		+/- 62.7939 µg/mL	Stressed
2	bis(2-Chloroethyl) ether-d8	2,005.3 µg/mL	+/- 11.7683 µg/mL	Gravimetric
	CAS # 93952-02-4 (Lot X485P12)		+/- 49.9919 µg/mL	Unstressed
	Purity 97%		+/- 62.8559 µg/mL	Stressed
3	2-Chlorophenol-d4	2,004.7 µg/mL	+/- 11.7645 µg/mL	Gravimetric
	CAS # 93951-73-6 (Lot PR-20630)		+/- 49.9758 µg/mL	Unstressed
	Purity 99%		+/- 62.8357 µg/mL	Stressed
4	4-Methylphenol-d8	2,004.0 µg/mL	+/- 11.7606 µg/mL	Gravimetric
	CAS # 190780-66-6 (Lot W519P30)		+/- 49.9591 µg/mL	Unstressed
	Purity 99%		+/- 62.8148 µg/mL	Stressed
5	Nitrobenzene-d5	2,005.3 µg/mL	+/- 11.7684 µg/mL	Gravimetric
	CAS # 4165-60-0 (Lot PR-24042)		+/- 49.9924 µg/mL	Unstressed
	Purity 99%		+/- 62.8566 µg/mL	Stressed
6	2-Nitrophenol-d4	2,002.0 µg/mL	+/- 11.7489 µg/mL	Gravimetric
	CAS # 93951-78-1 (Lot L184P31)		+/- 49.9093 µg/mL	Unstressed
	Purity 99%		+/- 62.7521 µg/mL	Stressed
7	2,4-Dichlorophenol-d3	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 93951-74-7 (Lot AB210P9)		+/- 49.8594 µg/mL	Unstressed
	Purity 99%		+/- 62.6894 µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

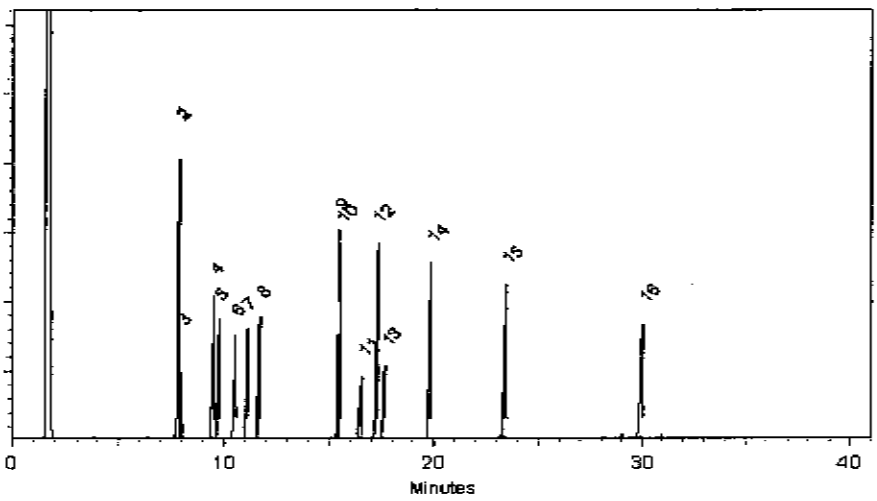
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Jennifer L. Pollino - QC Analyst

Date Mixed: 16-Jul-2015 **Balance:** 1128353505

Date Passed: 20-Jul-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31900 **Lot No.:** A0112856

Description : OLM 01.1 Revised SV MegaMix

OLM 01.1 Revised SV MegaMix 500-1000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2017 **Storage:** 0°C or colder

Handling: Sonication required. Mix is photosensitive.

55192 um
55193
04/15/16
55194
55195

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Phenol **CAS #** 108-95-2 **Purity** 99% (Lot SHBC6998V)	1,005.3 µg/mL.	+/- 6.7197 µg/mL +/- 11.4948 µg/mL +/- 18.9605 µg/mL	Gravimetric Unstressed Stressed
2	Bis(2-chlorocthyl)ether **CAS #** 111-44-4 **Purity** 99% (Lot 45296HKV)	1,005.7 µg/mL	+/- 6.7223 µg/mL +/- 11.4994 µg/mL +/- 18.9680 µg/mL	Gravimetric Unstressed Stressed
3	2-Chlorophenol **CAS #** 95-57-8 **Purity** 99% (Lot MKBD3900V)	1,000.0 µg/mL	+/- 6.6846 µg/mL +/- 11.4348 µg/mL +/- 18.8614 µg/mL	Gravimetric Unstressed Stressed
4	2,2'-oxybis(1-chloropropane) **CAS #** 108-60-1 **Purity** 99% (Lot 2-KMW-57-8)	1,004.5 µg/mL	+/- 6.7147 µg/mL +/- 11.4862 µg/mL +/- 18.9463 µg/mL	Gravimetric Unstressed Stressed
5	2-Methylphenol (o-cresol) **CAS #** 95-48-7 **Purity** 99% (Lot SHBC1479V)	1,001.8 µg/mL	+/- 6.6966 µg/mL +/- 11.4554 µg/mL +/- 18.8954 µg/mL	Gravimetric Unstressed Stressed
6	Acctophenone **CAS #** 98-86-2 **Purity** 99% (Lot MKBR7156V)	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 11.1040 µg/mL +/- 18.7594 µg/mL	Gravimetric Unstressed Stressed
7	Hexachloroethane **CAS #** 67-72-1 **Purity** 99% (Lot 4H3SF)	1,003.3 µg/mL	+/- 6.7066 µg/mL +/- 11.4725 µg/mL +/- 18.9237 µg/mL	Gravimetric Unstressed Stressed

8	N-Nitroso-di-n-propylamine		1,008.0	µg/mL	+/-	6.7859	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	11.5543	µg/mL	Unstressed
	Purity 99%				+/-	19.0293	µg/mL	Stressed
9	4-Methylphenol (p-cresol)		501.9	µg/mL	+/-	3.3547	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	5.7385	µg/mL	Unstressed
	Purity 99%				+/-	9.4656	µg/mL	Stressed
10	3-Methylphenol (m-cresol)		501.3	µg/mL	+/-	3.3506	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	5.7317	µg/mL	Unstressed
	Purity 99%				+/-	9.4543	µg/mL	Stressed
11	Nitrobenzene		1,003.2	µg/mL	+/-	6.7056	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBB0246V)			+/-	11.4708	µg/mL	Unstressed
	Purity 99%				+/-	18.9209	µg/mL	Stressed
12	Isophorone		1,004.1	µg/mL	+/-	6.7117	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	11.4811	µg/mL	Unstressed
	Purity 99%				+/-	18.9378	µg/mL	Stressed
13	2-Nitrophenol		1,002.1	µg/mL	+/-	6.6983	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	11.4582	µg/mL	Unstressed
	Purity 99%				+/-	18.9001	µg/mL	Stressed
14	2,4-Dimethylphenol		1,001.6	µg/mL	+/-	6.6953	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	11.4531	µg/mL	Unstressed
	Purity 99%				+/-	18.8916	µg/mL	Stressed
15	Bis(2-chloroethoxy)methane		1,002.9	µg/mL	+/-	6.7040	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 2238100)			+/-	11.4679	µg/mL	Unstressed
	Purity 99%				+/-	18.9161	µg/mL	Stressed
16	2,4-Dichlorophenol		1,003.2	µg/mL	+/-	6.7056	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	11.4708	µg/mL	Unstressed
	Purity 99%				+/-	18.9209	µg/mL	Stressed
17	Naphthalene		1,007.3	µg/mL	+/-	6.7334	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBH4351V)			+/-	11.5182	µg/mL	Unstressed
	Purity 99%				+/-	18.9991	µg/mL	Stressed
18	4-Chloroaniline		1,005.0	µg/mL	+/-	6.7657	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot 12528PH)			+/-	11.5199	µg/mL	Unstressed
	Purity 99%				+/-	18.9727	µg/mL	Stressed
19	Hexachlorobutadiene		1,001.4	µg/mL	+/-	6.6937	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	11.4504	µg/mL	Unstressed
	Purity 98%				+/-	18.8872	µg/mL	Stressed
20	2-Methylnaphthalene		1,000.4	µg/mL	+/-	6.7344	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	11.4666	µg/mL	Unstressed
	Purity 95%				+/-	18.8849	µg/mL	Stressed
21	4-Chloro-3-methylphenol		1,000.4	µg/mL	+/-	6.6873	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC0769V)			+/-	11.4393	µg/mL	Unstressed
	Purity 99%				+/-	18.8690	µg/mL	Stressed
22	1,2,4,5-Tetrachlorobenzene		1,008.5	µg/mL	+/-	6.7892	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot 06024AJV)			+/-	11.5600	µg/mL	Unstressed
	Purity 99%				+/-	19.0388	µg/mL	Stressed
23	Hexachlorocyclopentadiene		1,009.2	µg/mL	+/-	6.7457	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 3488800)			+/-	11.5394	µg/mL	Unstressed
	Purity 99%				+/-	19.0340	µg/mL	Stressed

24	2,4,6-Trichlorophenol **CAS #** 88-06-2 **Purity** 99%	(Lot MKBH7393V)	1,004.0	µg/mL	+/- 6.7110 +/- 11.4799 +/- 18.9359	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4,5-Trichlorophenol **CAS #** 95-95-4 **Purity** 99%	(Lot FHM01)	1,007.6	µg/mL	+/- 6.7350 +/- 11.5211 +/- 19.0038	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	2-Chloronaphthalene **CAS #** 91-58-7 **Purity** 99%	(Lot FIJ01)	1,005.6	µg/mL	+/- 6.7220 +/- 11.4988 +/- 18.9671	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Biphenyl **CAS #** 92-52-4 **Purity** 99%	(Lot 1277976)	1,010.0	µg/mL	+/- 5.9991 +/- 11.1261 +/- 18.7966	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,007.0	µg/mL	+/- 6.7791 +/- 11.5428 +/- 19.0105	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Acenaphthylene **CAS #** 208-96-8 **Purity** 99%	(Lot ER030707-01)	1,000.9	µg/mL	+/- 6.6906 +/- 11.4451 +/- 18.8784	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,004.1	µg/mL	+/- 6.7117 +/- 11.4811 +/- 18.9378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,002.2	µg/mL	+/- 6.6990 +/- 11.4594 +/- 18.9020	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKBP0384V)	1,005.5	µg/mL	+/- 6.7210 +/- 11.4971 +/- 18.9642	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	3-Nitroaniline **CAS #** 99-09-2 **Purity** 97%	(Lot MKBH5131V)	1,004.9	µg/mL	+/- 6.7651 +/- 11.5190 +/- 18.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBD8351V)	1,006.6	µg/mL	+/- 6.7284 +/- 11.5097 +/- 18.9850	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKBH8392V)	1,002.0	µg/mL	+/- 5.9516 +/- 11.0379 +/- 18.6477	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,004.2	µg/mL	+/- 6.7123 +/- 11.4822 +/- 18.9397	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBP6945V)	1,000.0	µg/mL	+/- 6.6846 +/- 11.4348 +/- 18.8614	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot Er100206-01)	1,009.5	µg/mL	+/- 6.7960 +/- 11.5715 +/- 19.0576	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,003.8	µg/mL	+/- 6.7101 +/- 11.4784 +/- 18.9334	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	4-Chlorophenyl phenyl ether		1,002.4	µg/mL	+/- 6.7006	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBS2248V)			+/- 11.4622	µg/mL	Unstressed
	Purity 99%				+/- 18.9067	µg/mL	Stressed
41	Diethylphthalate		1,005.3	µg/mL	+/- 6.7197	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBJ3578V)			+/- 11.4948	µg/mL	Unstressed
	Purity 99%				+/- 18.9605	µg/mL	Stressed
42	4-Nitroaniline		1,007.5	µg/mL	+/- 6.7825	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/- 11.5485	µg/mL	Unstressed
	Purity 99%				+/- 19.0199	µg/mL	Stressed
43	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		1,000.0	µg/mL	+/- 6.6846	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC06195V)			+/- 11.4348	µg/mL	Unstressed
	Purity 99%				+/- 18.8614	µg/mL	Stressed
44	Diphenylamine		1,007.5	µg/mL	+/- 6.7825	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/- 11.5485	µg/mL	Unstressed
	Purity 99%				+/- 19.0199	µg/mL	Stressed
45	4-Bromophenyl phenyl ether		1,001.5	µg/mL	+/- 6.6944	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/- 11.4515	µg/mL	Unstressed
	Purity 98%				+/- 18.8890	µg/mL	Stressed
46	Hexachlorobenzene		1,004.0	µg/mL	+/- 6.7111	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LC04221V)			+/- 11.4801	µg/mL	Unstressed
	Purity 98%				+/- 18.9362	µg/mL	Stressed
47	Pentachlorophenol		1,002.2	µg/mL	+/- 6.6990	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 140626JLM)			+/- 11.4594	µg/mL	Unstressed
	Purity 99%				+/- 18.9020	µg/mL	Stressed
48	Phenanthrene		1,000.3	µg/mL	+/- 6.6865	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKBQ8219V)			+/- 11.4380	µg/mL	Unstressed
	Purity 98%				+/- 18.8668	µg/mL	Stressed
49	Anthracene		1,001.1	µg/mL	+/- 6.6919	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/- 11.4473	µg/mL	Unstressed
	Purity 99%				+/- 18.8822	µg/mL	Stressed
50	Carbazole		1,007.9	µg/mL	+/- 6.7854	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 4017900)			+/- 11.5535	µg/mL	Unstressed
	Purity 98%				+/- 19.0280	µg/mL	Stressed
51	Di-n-butylphthalate		1,002.4	µg/mL	+/- 6.7006	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBL8501V)			+/- 11.4622	µg/mL	Unstressed
	Purity 99%				+/- 18.9067	µg/mL	Stressed
52	Fluoranthene		1,000.2	µg/mL	+/- 6.6858	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot 00828AJ)			+/- 11.4369	µg/mL	Unstressed
	Purity 98%				+/- 18.8650	µg/mL	Stressed
53	Pyrene		1,001.1	µg/mL	+/- 6.6916	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBL6786V)			+/- 11.4468	µg/mL	Unstressed
	Purity 99%				+/- 18.8812	µg/mL	Stressed
54	Benzyl butyl phthalate		1,003.0	µg/mL	+/- 6.7046	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot 0302711V)			+/- 11.4691	µg/mL	Unstressed
	Purity 99%				+/- 18.9180	µg/mL	Stressed
55	Benz(a)anthracene		1,002.9	µg/mL	+/- 6.7040	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/- 11.4679	µg/mL	Unstressed
	Purity 99%				+/- 18.9161	µg/mL	Stressed

56	Chrysene **CAS #** 218-01-9 **Purity** 99%	(Lot PR121912-01)	1,006.2	µg/mL	+/- 6.7260 +/- 11.5057 +/- 18.9784	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	3,3'-Dichlorobenzidine **CAS #** 91-94-1 **Purity** 99%	(Lot 150701JLMA)	1,009.5	µg/mL	+/- 6.7960 +/- 11.5715 +/- 19.0576	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	Bis(2-ethylhexyl)phthalate **CAS #** 117-81-7 **Purity** 99%	(Lot MKBK2695V)	1,002.6	µg/mL	+/- 6.7016 +/- 11.4639 +/- 18.9095	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	Di-n-octyl phthalate **CAS #** 117-84-0 **Purity** 99%	(Lot 3128600)	1,001.2	µg/mL	+/- 6.6923 +/- 11.4479 +/- 18.8831	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	Benzo(b)fluoranthene **CAS #** 205-99-2 **Purity** 99%	(Lot ER022008-02)	1,002.5	µg/mL	+/- 6.7013 +/- 11.4634 +/- 18.9086	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	Benzo(k)fluoranthene **CAS #** 207-08-9 **Purity** 99%	(Lot 012012k)	1,002.7	µg/mL	+/- 6.7023 +/- 11.4651 +/- 18.9114	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	Benzo(a)pyrene **CAS #** 50-32-8 **Purity** 99%	(Lot ER071309-02)	1,002.3	µg/mL	+/- 6.6996 +/- 11.4605 +/- 18.9039	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	Indeno(1,2,3-cd)pyrene **CAS #** 193-39-5 **Purity** 99%	(Lot ER082107-02)	1,005.7	µg/mL	+/- 6.7227 +/- 11.4999 +/- 18.9690	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	Dibenz(a,h)anthracene **CAS #** 53-70-3 **Purity** 99%	(Lot ER032211-01)	1,008.6	µg/mL	+/- 6.7421 +/- 11.5331 +/- 19.0237	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	Benzo(g,h,i)perylene **CAS #** 191-24-2 **Purity** 99%	(Lot ER020708-08)	1,003.0	µg/mL	+/- 6.7046 +/- 11.4691 +/- 18.9180	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK
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www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

S 5001
/
S 5030 SJ 12/14/15

Catalog No. : 31206 **Lot No.:** A0115444

Description : SV Internal Standard Mix 2mg/ml

SV Internal Standard Mix 2mg/ml 2,000 µg/ml, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2021 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav Conc. (weight/volume)	Expanded Uncertainty (95% C.L. K=2)		
1	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 **Purity** 99% (Lot PR-18488)	2,000.2 µg/mL	+/- 11.6293 +/- 90.0902 +/- 99.9662	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 **Purity** 99% (Lot M-1452)	2,000.3 µg/mL	+/- 11.6299 +/- 90.0947 +/- 99.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 **Purity** 99% (Lot PR-25444)	2,000.3 µg/mL	+/- 11.6299 +/- 90.0947 +/- 99.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 **Purity** 99% (Lot PR-23065)	2,000.2 µg/mL	+/- 11.6293 +/- 90.0902 +/- 99.9662	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 **Purity** 99% (Lot I-19260)	2,000.9 µg/mL	+/- 11.6334 +/- 90.1217 +/- 100.0012	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 **Purity** 99% (Lot PR-24113)	2,000.3 µg/mL	+/- 11.6299 +/- 90.0947 +/- 99.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	4-Chloroaniline-d4 **CAS #** 191656-33-4 **Purity** 99%	(Lot C190P48)	2,008.7	µg/mL	+/- 11.7880 +/- 58.6415 +/- 71.1507	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Dimethylphthalate-d6 **CAS #** 85448-30-2 **Purity** 99%	(Lot X477P10)	2,009.3	µg/mL	+/- 11.7919 +/- 58.6610 +/- 71.1743	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acenaphthylene-d8 **CAS #** 93951-97-4 **Purity** 99%	(Lot I-102)	2,007.3	µg/mL	+/- 11.7802 +/- 58.6026 +/- 71.1035	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	4-Nitrophenol-d4 **CAS #** 93951-79-2 **Purity** 99%	(Lot P-141)	2,010.0	µg/mL	+/- 11.7958 +/- 58.6804 +/- 71.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Fluorene-d10 **CAS #** 81103-79-9 **Purity** 98%	(Lot M149P26)	2,005.7	µg/mL	+/- 11.7708 +/- 58.5559 +/- 71.0468	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	4,6-Dinitro-2-methylphenol-d2 **CAS #** 93951-76-9 **Purity** 99%	(Lot AB-322)	2,008.0	µg/mL	+/- 11.7841 +/- 58.6221 +/- 71.1271	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	Anthracene-d10 **CAS #** 1719-06-8 **Purity** 99%	(Lot PR-20576)	2,008.7	µg/mL	+/- 11.7880 +/- 58.6415 +/- 71.1507	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Pyrene-d10 **CAS #** 1718-52-1 **Purity** 98%	(Lot PR-14089)	2,010.3	µg/mL	+/- 11.7976 +/- 58.6894 +/- 71.2088	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Benzo(a)pyrene-d12 **CAS #** 63466-71-7 **Purity** 99%	(Lot PR-25741)	2,008.0	µg/mL	+/- 11.7841 +/- 58.6221 +/- 71.1271	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent:	Methylene Chloride **CAS #** 75-09-2 **Purity** 99%						

RESTEK
110 Banner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1668
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

S5114 – S5143

UH 04/07/16

Catalog No. : 31810 **Lot No.:** A0115813

Description : OLC03.2 SVOA Deuterated Monitoring Compounds Mix

OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL/ampul, Methylene Chloride, 2000µg/mL

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2019 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Phenol-d5 **CAS #** 4165-62-2 (Lot X479P8) **Purity** 99%	2,010.7 µg/mL	+/- 11.7997 µg/mL +/- 58.6999 µg/mL +/- 71.2215 µg/mL	Gravimetric Unstressed Stressed
2	bis(2-Chloroethyl) ether-d8 **CAS #** 93952-02-4 (Lot X-485) **Purity** 98%	2,004.4 µg/mL	+/- 11.7631 µg/mL +/- 58.5177 µg/mL +/- 71.0005 µg/mL	Gravimetric Unstressed Stressed
3	2-Chlorophenol-d4 **CAS #** 93951-73-6 (Lot PR-20630) **Purity** 99%	2,011.3 µg/mL	+/- 11.8036 µg/mL +/- 58.7194 µg/mL +/- 71.2452 µg/mL	Gravimetric Unstressed Stressed
4	4-Methylphenol-d8 **CAS #** 190780-66-6 (Lot W519P34) **Purity** 99%	2,012.0 µg/mL	+/- 11.8075 µg/mL +/- 58.7388 µg/mL +/- 71.2688 µg/mL	Gravimetric Unstressed Stressed
5	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-24042) **Purity** 99%	2,008.7 µg/mL	+/- 11.7880 µg/mL +/- 58.6415 µg/mL +/- 71.1507 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitrophenol-d4 **CAS #** 93951-78-1 (Lot H-151) **Purity** 99%	2,012.0 µg/mL	+/- 11.8075 µg/mL +/- 58.7388 µg/mL +/- 71.2688 µg/mL	Gravimetric Unstressed Stressed
7	2,4-Dichlorophenol-d3 **CAS #** 93951-74-7 (Lot AB210P6) **Purity** 99%	2,009.3 µg/mL	+/- 11.7919 µg/mL +/- 58.6610 µg/mL +/- 71.1743 µg/mL	Gravimetric Unstressed Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

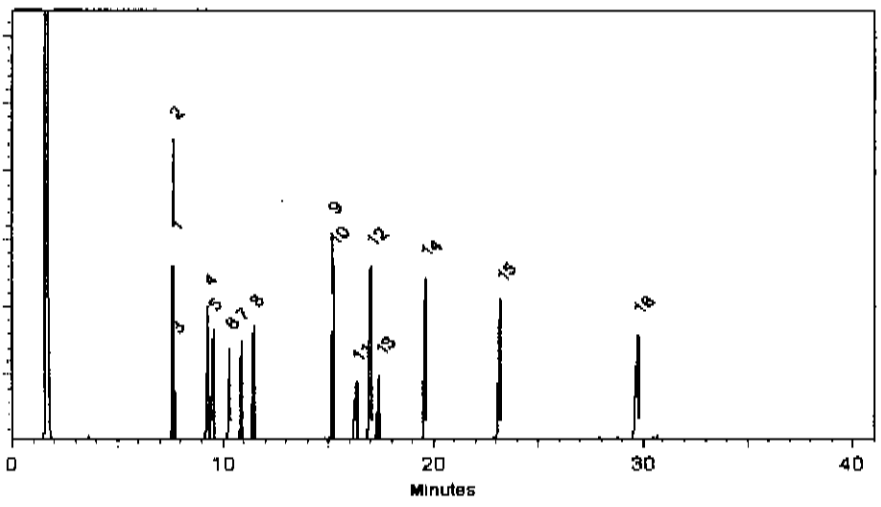
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 07-Dec-2015 **Balance:** B442140311

Jennifer L. Pollino - QC Analyst

Date Passed: 09-Dec-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

PCI SCIENTIFIC SUPPLY, INC.

41 PLYMOUTH STREET
FAIRFIELD, NJ 07004
P# (973) 244-9002
F# (973) 244-9448

CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE ANHYDROUS		
QUALITY :	ACS	FORMULA :	Na_2SO_4
SPECIFICATION NUMBER :	6390	RELEASE DATE:	AGO/25/2014
LOT NUMBER :	433101		

TEST	SPECIFICATIONS	LOT VALUES
Insoluble matter	Max. 0.01%	0.006 %
Loss on ignition	Max. 0.5%	0.3 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.1
Chloride (Cl)	Max. 0.001%	<0.001 %
Nitrogen compounds (como N)	Max. 5 ppm	<5 ppm
Assay (Na_2SO_4)	Min. 99.0%	99.5 %
Iron (Fe)	Max. 0.001%	<0.001 %
Heavy metals (como Pb)	Max. 5 ppm	<5 ppm
Potassium (K)	Max. 0.008%	0.001 %
Calcium (Ca)	Max. 0.01%	0.001 %
Magnesium (Mg)	Max. 0.005%	0.002 %
Phosphate (PO_4)	Max. 0.001%	<0.001 %
Appearance	Crystals	Crystals
Retained on US Standard No. 10 sieve	Max. 1.0%	0.0 %
Retained on US Standard No. 60 sieve	Min. 80.0%	98.3 %
Through US Standard No. 60 sieve	Max. 19.0%	1.5 %
Through US Standard No. 100 sieve	Max. 10.0%	0.2 %

E 2036

Methylene Chloride
ULTRA RESI-ANALYZED
For Organic Residue Analysis
(dichloromethane)

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9266-A4
Batch No.: 0000131014
Manufactured Date: 2015/11/25
Expiration Date: 2017/02/23

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	2
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	>= 99.8 %	100.0
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0000 ppm	0.1000
Titrable Acid (µeq/g)	<= 0.3	< 0.1
Chloride (Cl)	<= 10 ppm	< 5
Water (by KF, coulometric)	<= 0.02 %	< 0.01

For Laboratory, Research or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

E2072

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Debradun, India. 9001:2008 14001:2004, 13485:2003
Mumbai, India. 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Certificate of Analysis

Date of Release:	2/26/2016
Name:	Dichloromethane OmniSolv®
Item No:	DX0831 all size codes
Lot / Batch No:	56056
Country of Origin:	USA

Characteristic	Requirement		Results	Units
	Min.	Max.		
Assay (GC)	99.9		99.95	%
Capillary ECD responsive substances (as PCNB)		2	0.32	ng/L
Capillary FID responsive substances (as decane)		3	< 0.10	µg/L
Color (APHA)		10	<10	
Filtered through 0.2 µm filter			Passes test	
Fluorescence (as quinine base)		500	78	ppt
Form			Clear liquid	
Free halogens			Passes test	
Identity (IR-spectrum)			Conforms	
Refractive index (n 20/D)			1.4240	
Residue after evaporation		1	<0.5	ppm
Titrable acid		0.2	0.09	µeq/g
UV Abs. at 231 nm		1.00	0.726	AU
UV Abs. at 235 nm		0.40	0.280	AU
UV Abs. at 240 nm		0.20	0.080	AU
UV Abs. at 250 nm		0.01	0.005	AU
UV Abs. at 260 nm		0.005	< 0.001	AU
UV Cut-off		231	229.6	nm
Water (H2O)		0.005	0.0003	%

Gene Desolelle

Quality Control Manager

This document has been produced electronically and is valid without a signature.

E 2087

EMD Millipore is a division of Merck KGaA, Darmstadt, Germany

EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821
U.S.A

Certificate of Analysis

Date of Release: 2/26/2016

Name: Dichloromethane
OmniSolv®

Item No: DX0831 all size codes

Lot / Batch No: 56056

Country of Origin: USA

Characteristic	Requirement		Results	Units
	Min.	Max.		
Assay (GC)	99.9		99.95	%
Capillary ECD responsive substances (as PCNB)		2	0.32	ng/L
Capillary FID responsive substances (as decane)		3	< 0.10	µg/L
Color (APHA)		10	<10	
Filtered through 0.2 µm filter			Passes test	
Fluorescence (as quinine base)		500	78	ppt
Form			Clear liquid	
Free halogens			Passes test	
Identity (IR-spectrum)			Conforms	
Refractive index (n 20/D)			1.4240	
Residue after evaporation		1	<0.5	ppm
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UV Abs. at 250 nm		0.01	0.005	AU
UV Abs. at 260 nm		0.005	< 0.001	AU
UV Cut-off		231	229.6	nm
Water (H2O)		0.005	0.0003	%

Gene Desotelle

Quality Control Manager
This document has been produced electronically and is valid without a signature.

EMD Millipore is a division of Merck KGaA,Darmstadt, Germany
EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821
U.S.A

E 2105

Acetone
ULTRA RESI-ANALYZED
For Organic Residue Analysis

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9254-03
Batch No.: 0000133024
Manufactured Date: 2015/11/03
Expiration Date: 2018/11/02

Certificate of Analysis

Test	Specification	Result
Assay ($(CH_3)_2CO$) (by GC, corrected for water)	>= 99.4 %	99.7
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0000 ppm	0.1000
Substances Reducing Permanganate	Passes Test	PT
Titrable Acid (µeq/g)	<= 0.3	0.1
Titrable Base (µeq/g)	<= 0.6	< 0.1
Water (H_2O)	<= 0.5 %	0.3
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	1

For Laboratory, Research or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

E 2106

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James T Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

SAFETY DATA SHEET

1. Identification

Product identifier: ACETONE

Other means of identification

Synonyms: 2-Propanone, Dimethyl ketone

Product No.: 2462, 2572, 2570, 9422, 9036, 9015, 9010, 9009, 9008, 9006, 9005, 9003, 9002, 2443, 2437, 2435, 2432, H580, 5975, 5965, H451, 2440, A134, 5580, 5356, 5018, 5008, 9271, 9254, 70444, 10654

Recommended use and restriction on use

Recommended use: Not available.
Restrictions on use: Not known.

Details of the supplier of the safety data sheet

Manufacturer

Company Name: Avantor Performance Materials, Inc.
Address: 3477 Corporate Parkway, Suite 200
Center Valley, PA 18034

Telephone: Customer Service: 855-282-6867

Fax: 610-573-2610
Contact Person: Environmental Health & Safety
E-mail: info@avantormaterials.com

Emergency telephone number:
CHEMTREC: 1-800-424-9300 within US and Canada
CHEMTREC: 1-703-527-3887 outside US and Canada

2. Hazard(s) identification

Hazard Classification

Label Elements

Hazard Symbol:

Signal Word: Danger

Hazard Statement:
Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause drowsiness or dizziness.
May be harmful if swallowed and enters airways.

Precautionary Statement

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Ground and bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash thoroughly after handling. Avoid breathing dust/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

Response: In case of fire: Use water spray, foam, dry powder or carbon dioxide for extinction. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Storage: Store in a well-ventilated place. Keep cool. Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Substances

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
ACETONE		67-64-1	99 - 100%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Ingestion: Call a physician or poison control center immediately. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Inhalation: Move to fresh air. Get medical attention if symptoms persist.

Skin Contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation persists after washing.

Most important symptoms/effects, acute and delayed

Symptoms: Narcotic effect.

Indication of immediate medical attention and special treatment needed

Treatment:	Symptoms may be delayed. Treat symptomatically.

5. Fire-fighting measures

General Fire Hazards: Flammable liquid and vapor.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Water spray, foam, dry powder or carbon dioxide.
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.
Specific hazards arising from the chemical:	Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations. Heat may cause the containers to explode.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a profected location. Move containers from fire area if you can do so without risk.
Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away. Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind.
Methods and meterial for containment and cleaning up:	Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharges. Stop leak if possible without any risk. Use only non-sparking tools. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.
Notification Procedures:	Inform authorities if large amounts are involved.
Environmental Precautions:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Ground and bond container and receiving equipment. Use personal protective equipment as required. Do not get in eyes, on skin, on clothing. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

Conditions for safe storage, including any incompatibilities: Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a cool, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	type	Exposure Limit Values	Source
ACETONE	REL	250 ppm 590 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	1,000 ppm 2,400 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	750 ppm 1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	1,000 ppm 2,400 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	250 ppm	US. ACGIH Threshold Limit Values (03 2015)
	STEL	500 ppm	US. ACGIH Threshold Limit Values (03 2015)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
ACETONE (acetone: Sampling time: End of shift.)	25 mg/l (Urine)	ACGIH BEL (03 2015)

Appropriate Engineering Controls No data available.

Individual protection measures, such as personal protective equipment

General information: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

Eye/face protection: Wear safety glasses with side shields (or goggles) and a face shield.

Skin Protection

Hand Protection: Chemical resistant gloves

Other: Wear suitable protective clothing and gloves.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapor cartridge.

Hygiene measures: Provide eyewash station and safety shower. Observe good industrial hygiene practices. Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Do not get this material in contact with skin. Avoid contact with eyes. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Colorless
Odor:	Sweet, mint-like
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	-94.7 °C
Initial boiling point and boiling range:	56 °C (101.3 kPa)
Flash Point:	-20 °C (Closed Cup)
Evaporation rate:	No data available.
Flammability (solid, gas):	Class IB Flammable Liquid
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	12.8 %(V)
Flammability limit - lower (%):	2.6 %(V)
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	30.9 kPa (25 °C)
Vapor density:	2
Relative density:	0.7899 (4 °C)
Solubility(ies)	
Solubility in water:	Miscible with water.
Solubility (other):	alcohol: Very Soluble benzene: Soluble chloroform: Very Soluble ether: Very Soluble
Partition coefficient (n-octanol/water):	-0.24
Auto-ignition temperature:	869 °F
Decomposition temperature:	No data available.
Viscosity:	No data available.

Other information

Liquid conductivity:	0.06 µS/cm
Molecular weight:	58.08 g/mol (C3H6O)

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.

Conditions to avoid:	Heat, sparks, flames.
Incompatible Materials:	Oxidizers, acids
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	Harmful if swallowed.
Inhalation:	May cause irritation to the respiratory system.
Skin Contact:	Causes mild skin irritation. Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Eye contact:	Causes eye irritation.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: LD 50 (Rat): 5,800 mg/kg

Dermal
Product: LD 50 (Rabbit): 20,000 mg/kg

Inhalation
Product: LC 50 (Rat, 4 h): 76 mg/l

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: Prolonged or repeated contact may cause irritation.

Serious Eye Damage/Eye Irritation
Product: Irritating to eyes.

Respiratory or Skin Sensitization
Product: Not a skin sensitizer.

Carcinogenicity
Product: This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No mutagenic components identified

In vivo
Product: No mutagenic components identified

Reproductive toxicity
Product: Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure
Product: Respiratory tract irritation. Narcotic effect.

Specific Target Organ Toxicity - Repeated Exposure
Product: None known.

Aspiration Hazard
Product: Not classified

Other effects: None known.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: LC 50 (Fathead minnow (Pimephales promelas), 96 h): 5,490 - 7,030 mg/l Mortality
LC 50 (Bluegill (Lepomis macrochirus), 96 h): 8,300 mg/l Mortality

Aquatic Invertebrates
Product: LC 50 (Brine shrimp (Artemia salina), 24 h): 2,100 mg/l Mortality
LC 50 (Water flea (Daphnia magna), 48 h): 12,100 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: Expected to be readily biodegradable.

BOD/COD Ratio
Product: No data available.

Bioaccumulative Potential
Bioconcentration Factor (BCF)
Product: No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)
Product: Log Kow: -0.24

Mobility in Soil:	No data available.
Other Adverse Effects:	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

13. Disposal considerations

Disposal instructions:	Discharge, treatment, or disposal may be subject to national, state, or local laws.
Contaminated Packaging:	Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN Number:	UN 1090
UN Proper Shipping Name:	Acetone
Transport Hazard Class(es)	
Class(es):	3
Label(s):	3
Packing Group:	II
Marine Pollutant:	Not a Marine Pollutant
Special precautions for user:	–

IMDG

UN Number:	UN 1090
UN Proper Shipping Name:	ACETONE
Transport Hazard Class(es)	
Class(es):	3
Label(s):	3
EmS No.:	F-E, S-D
Packing Group:	II
Marine Pollutant:	Not a Marine Pollutant
Special precautions for user:	–

IATA

UN Number:	UN 1090
Proper Shipping Name:	Acetone
Transport Hazard Class(es):	
Class(es):	3
Label(s):	3
Marine Pollutant:	Not a Marine Pollutant
Packing Group:	II
Special precautions for user:	–

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity	Reportable quantity
ACETONE	5000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Acute (Immediate)
Fire

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

Chemical Identity	Reportable quantity
ACETONE	5000 lbs.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
ACETONE	10000 lbs

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity
ACETONE

US. Massachusetts RTK - Substance List

Chemical Identity
ACETONE

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
ACETONE

US. Rhode Island RTK

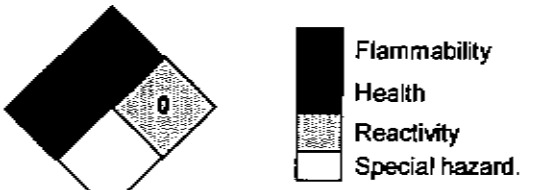
Chemical Identity
ACETONE

Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

16.Other information, including date of preparation or last revision

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date:	04-14-2016
Revision Date:	No data available.
Version #:	2.0
Further Information:	No data available.

Disclaimer:

THE INFORMATION PRESENTED IN THIS MATERIAL SAFETY DATA SHEET (MSDS/SDS) WAS PREPARED BY TECHNICAL PERSONNEL BASED ON DATA THAT THEY BELIEVE IN THEIR GOOD FAITH JUDGMENT IS ACCURATE. HOWEVER, THE INFORMATION PROVIDED HEREIN IS PROVIDED "AS IS," AND AVANTOR PERFORMANCE MATERIALS MAKES AND GIVES NO REPRESENTATIONS OR WARRANTIES WHATSOEVER, AND EXPRESSLY DISCLAIMS ALL WARRANTIES REGARDING SUCH INFORMATION AND THE PRODUCT TO WHICH IT RELATES, WHETHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING WITHOUT LIMITATION, WARRANTIES OF ACCURACY, COMPLETENESS, MERCHANTABILITY, NON-INFRINGEMENT, PERFORMANCE, SAFETY, SUITABILITY, STABILITY, AND FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING, COURSE OF PERFORMANCE, OR USAGE OF TRADE. THIS MSDS/SDS IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONARY HANDLING OF THE MATERIAL BY A PROPERLY TRAINED PERSON USING THIS PRODUCT, AND IS NOT INTENDED TO BE COMPREHENSIVE AS TO THE MANNER AND CONDITIONS OF USE, HANDLING, STORAGE, OR DISPOSAL OF THE PRODUCT. INDIVIDUALS RECEIVING THIS MSDS/SDS MUST ALWAYS EXERCISE THEIR OWN INDEPENDENT JUDGMENT IN DETERMINING THE APPROPRIATENESS OF SUCH ISSUES. ACCORDINGLY, AVANTOR PERFORMANCE MATERIALS ASSUMES NO LIABILITY WHATSOEVER FOR THE USE OF OR RELIANCE UPON THIS INFORMATION. NO SUGGESTIONS FOR USE ARE INTENDED AS, AND NOTHING HEREIN SHALL BE CONSTRUED AS, A RECOMMENDATION TO INFRINGE ANY EXISTING PATENTS OR TO VIOLATE ANY FEDERAL, STATE, LOCAL, OR FOREIGN LAWS. AVANTOR PERFORMANCE MATERIALS REMINDS YOU THAT IT IS YOUR LEGAL DUTY TO MAKE ALL INFORMATION IN THIS MSDS/SDS AVAILABLE TO YOUR EMPLOYEES.

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M357 8
Reagan 11/18/15
Exp. 2019/11/02
MB

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9673-33
Batch No.: 0000095945
Manufactured Date: 2014/11/03
Retest Date: 2019/11/02

Certificate of Analysis

Test	Specification	Result
ACS - Assay (H_2SO_4)	95.0 - 98.0 %	95.9
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	6
ACS - Residue after Ignition	<= 3 ppm	< 1
ACS - Substances Reducing Permanganate (as SO_2)	<= 2 ppm	< 2
Ammonium (NH_4)	<= 1 ppm	< 1
Chloride (Cl)	<= 0.1 ppm	< 0.1
Nitrate (NO_3)	<= 0.2 ppm	< 0.2
Phosphate (PO_4)	<= 0.5 ppm	< 0.5
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	1.3
Arsenic and Antimony (as As)	<= 4 ppb	< 3
Trace Impurities - Barium (Ba)	<= 10.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 10.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 10.0 ppb	< 0.7
Trace Impurities - Cadmium (Cd)	<= 2.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	7.2
Trace Impurities - Chromium (Cr)	<= 6.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 0.5 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	0.2
Trace Impurities - Gallium (Ga)	<= 10.0 ppb	< 0.2
Trace Impurities - Germanium (Ge)	<= 10.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 10.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 500 ppb	< 300

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9673-33
Batch No.: 0000095945

Test	Specification	Result
Trace Impurities - Iron (Fe)	<= 50.0 ppb	29.9
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 10.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	< 0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 3.0
Trace Impurities - Nickel (Ni)	<= 2.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 10.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 500.0 ppb	< 2.0
Trace Impurities - Selenium (Se)	<= 50.0 ppb	< 10.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 0.4
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 500.0 ppb	4.4
Trace Impurities - Strontium (Sr)	<= 5.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 10.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 20.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	0.9
Trace Impurities - Titanium (Ti)	<= 10.0 ppb	1.7
Trace Impurities - Vanadium (V)	<= 10.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	1.1
Trace Impurities - Zirconium (Zr)	<= 10.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008, 17025:2005
Selangor, Malaysia 9001:2008
Dehradun, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Panoli, India 9001:2008

Richard M Siberski
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600

Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 , Fax: 610.573.2610

CHEMTECH **EXTRACTION LOGPAGE**

PB90330

SOP ID: M SOM02.2

Matrix : Water

Clean Up SOP #: N/A

Weigh By: N/A **Extraction By:** RP

Balance check: N/A

Balance ID: 2 **Weight 1:** (2) 2 **Weight 2:** (2) 2

Batch# PB90330

Extraction Date : 05/05/16

Extraction Start Time : 11:30

Extraction End Time : 18:50

Review By : L

Filter By: RP **Concentration By:** JUM

Method of Extraction

☐ Seperatory Funne ☑ Continious Liquid/Liquid ☐ Sonication ☐ Waste Dilution ☐ Soxhlet

Standared Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike	0.5ML	80 PPM	SP3536
Surrogate	0.5ML	80+0.8 PPM	SP3652

Chemical Used	ML/SAMPLE USED	Lot Number
Methylene Chloride		E2105
Baked Na2SO4		EP1653
H2SO4 1:1		EP1663

RP 5/5

Extraction Conformance/Non-Conformance Comments:

NH Strip Lot No. E2056

Extraction End Time: 18:50

RP 5/5

KD Bath Temperature: 60.1 c

Received Dete: 05/06/16

Delivered Date: 05/05/16

Delivered Time: 18:55

Envap Temperature: 40 c

Received By: UM

Delivered By: JUM

Analysis Group:

Extraction Group: , RS, SJ, MM, UA, RP, JP, NP, UM

CHEMTECH **EXTRACTION LOGPAGE** **PrepBatch ID** **PB90330**

Analytical Method: 8270D-2 SVOC **Extraction Date:** 05/05/2016-11:30 **Concentration Date:** 05/05/16

Lab Sample ID	Client Sample ID	Test	g (mL)	PH	Surr/Spike By:		Final Vol.(mL)	Comments	Prep Pos
	2	2			Added By	Verified By			
PB90330BL	SBLK30	SVOC-TCL BNA -20	1000	6	RS	N	1	Bottle	
H2834-01	H4002	SVOC-TCL BNA -20	1000	6				E	
H2834-02	H4002MS	SVOC-TCL BNA -20	1000	6				E	
H2834-03	H4002MSD	SVOC-TCL BNA -20	1000	6				E	
H2834-18	H4102	SVOC-TCL BNA -20	1000	6				E	
H2834-19	H4116	SVOC-TCL BNA -20	1000	6				D	
H2834-20	H4117	SVOC-TCL BNA -20	1000	6				D	
H2834-21	H4118	SVOC-TCL BNA -20	1000	6			1	D	

PH adjusted for Acid 22

* Extracts relinquished on the same date as received.

CHEMTECH **EXTRACTION LOGPAGE** **PrepBatch ID : PB90330**

Analytical Method: 2 **Extraction Date:** 05/05/2016-11:30 **Concentration Date:** __/__/__

Lab Sample ID	Client Sample ID	Test	g / mL	PH	Surr/Spike By:		Final Vol (mL)	Comments	Prep Pos
		2 2			Added By	Verified By			
PB90330BL	SBLK30	SVOC-TCL BNA -20	1000.0	6	RUPESH	rajesh	1		
H2834-01	H4002	SVOC-TCL BNA -20	1000.0	6	RUPESH	rajesh	1		
H2834-02	H4002MS	SVOC-TCL BNA -20	1000.0	6	RUPESH	rajesh	1		
H2834-03	H4002MSD	SVOC-TCL BNA -20	1000.0	6	RUPESH	rajesh	1		
H2834-18	H4102	SVOC-TCL BNA -20	1000.0	6	RUPESH	rajesh	1		
H2834-19	H4116	SVOC-TCL BNA -20	1000.0	6	RUPESH	rajesh	1		
H2834-20	H4117	SVOC-TCL BNA -20	1000.0	6	RUPESH	rajesh	1		
H2834-21	H4118	SVOC-TCL BNA -20	1000.0	6	RUPESH	rajesh	1		

pH adjusted for Acid <2

5/5

* Extracts relinquished on the same date as received.

5/5

CHEMTECH **EXTRACTION LOGPAGE**

PB90332

SOP ID: M SOM02.2

Matrix : Solid

Clean Up SOP #: GPC Cleanup

Weigh By: RS **Extraction By:** RS

Balance check: RS

Balance ID: Ex-SC-1

Batch# PB90332

Extraction Date : 05/05/16

Extraction Start Time : 15:12

Extraction End Time 10:00 (5/6/16)

Review By :

Filter By: RS **Concentration By:** MM

Weight 1: (20.00) 20.00 **Weight 2:** (10.00) 10.00

Method of Extraction

☐ Seperatory Funne ☐ Continious Liquid/Liquid ☐ Sonication ☐ Waste Dilution ☑ Soxhlet

Standared Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike	0.5ML	80 ppm	SP3536
Surrogate	0.5ML	80 + 0.8 ppm	SP3652

Chemical Used	ML/SAMPLE USED	Lot Number
Mcl2/Acetone/1:1		EP1671
Methylene Chloride		E2105
Sand		E1520
Baked Na2SO4		EP1653

5/6

5/6

Extraction Conformance/Non-Conformance Comments:

Extraction End Time: 10:00 (5/6/16) Crrc Project H 2798 & H 2694

KD Bath Temperature: 60.1 c

Received Date: 05/06/16

Delivered Date: 05/06/16

Delivered Time: 10:05

Envap Temperature: 40 c

Received By: UM

Delivered By: MM

Analysis Group:

Extraction Group: , RS, SJ, MM, UA, RP, JP, NP, UM

CHEMTECH **EXTRACTION LOGPAGE** **PrepBatch ID** **PB90332**

Analytical Method: SOM02.2 SVOC **Extraction Date:** 05/05/2016-15:12 **Concentration Date:** 05/06/16

Lab Sample ID	Client Sample ID	Test	g / mL	PM	Surr/Spike By:		Final Vol.(mL)	Comments	Prep Pos
			2		Added By	Verified By			
PB90332BL	SBLK32	SVOC-TCL BNA -20	30.02		RS	M	0.5		01
H2834-13	H4061	SVOC-TCL BNA -20	30.10		↓	↓	↓	Jar E	02
H2834-14	H4061MS	SVOC-TCL BNA -20	30.03		↓	↓	↓	E	03
H2834-15	H4061MSD	SVOC-TCL BNA -20	30.06		↓	↓	↓	E	04
H2834-16	H4076	SVOC-TCL BNA -20	30.08		↓	↓	↓	E	05

* Extracts relinquished on the same date as received.

STL

CHEMTECH **EXTRACTION LOGPAGE** **PrepBatch ID : PB90332**

Analytical Method: 2 **Extraction Date:** 05/05/2016-15:12 **Concentration Date:** __/__/__

Lab Sample ID	Client Sample ID	Test	g / mL	PH	Surr/Spike By:		Final Vol.(mL)	Comments	Prep Bas
		2	2		Added By	Verified By			
PB90332BL	SBLK32	SVOC-TCL BNA -20	30.02		RUPESH	rajesh	0.5		
H2834-13	H4061	SVOC-TCL BNA -20	30.10		RUPESH	rajesh	0.5		
H2834-14	H4061MS	SVOC-TCL BNA -20	30.03		RUPESH	rajesh	0.5		
H2834-15	H4061MSD	SVOC-TCL BNA -20	30.06		RUPESH	rajesh	0.5		
H2834-16	H4076	SVOC-TCL BNA -20	30.08		RUPESH	rajesh	0.5		

5/6

* Extracts relinquished on the same date as received.

5/6

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050416

Review By	mohammad	Review On	5/5/2016 9:02:17 AM		
SubDirectory	VI050416	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52662
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52669,VP52670
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB32	VI049219.D	4 May 2016 8:57	FY/SY	Ok
2	VSTD0.533	VI049220.D	4 May 2016 11:27	FY/SY	Ok
3	VSTD00134	VI049221.D	4 May 2016 11:58	FY/SY	Ok
4	VSTD00535	VI049222.D	4 May 2016 12:30	FY/SY	Ok
5	VSTD01036	VI049223.D	4 May 2016 13:02	FY/SY	Ok
6	VSTD02037	VI049224.D	4 May 2016 13:33	FY/SY	Ok
7	VSTDCCC005	VI049225.D	4 May 2016 14:05	FY/SY	Ok
8	VI0504WBL01	VI049226.D	4 May 2016 15:13	FY/SY	Ok
9	H2799-02DL2	VI049227.D	4 May 2016 15:45	FY/SY	Ok,M
10	H2743-14	VI049228.D	4 May 2016 16:17	FY/SY	Ok
11	H2743-15	VI049229.D	4 May 2016 16:49	FY/SY	Ok,M
12	H2743-09DL	VI049230.D	4 May 2016 17:20	FY/SY	Ok
13	H2743-10DL	VI049231.D	4 May 2016 17:52	FY/SY	Ok,M
14	H2743-13DL	VI049232.D	4 May 2016 18:23	FY/SY	Ok
15	H2834-04	VI049233.D	4 May 2016 18:55	FY/SY	Ok,M
16	H2834-01	VI049234.D	4 May 2016 19:27	FY/SY	Dilution
17	H2834-02	VI049235.D	4 May 2016 19:58	FY/SY	Not Ok
18	H2834-03	VI049236.D	4 May 2016 20:30	FY/SY	Not Ok
19	H2834-05	VI049237.D	4 May 2016 21:02	FY/SY	Dilution
20	H2834-06	VI049238.D	4 May 2016 21:33	FY/SY	Dilution
21	H2834-07	VI049239.D	4 May 2016 22:05	FY/SY	Dilution
22	H2834-08	VI049240.D	4 May 2016 22:37	FY/SY	ReRun
23	H2834-09	VI049241.D	4 May 2016 23:08	FY/SY	Ok
24	H2834-10	VI049242.D	4 May 2016 23:40	FY/SY	Ok,M
25	VSTDCCC005EC	VI049243.D	5 May 2016 00:11	FY/SY	Ok,M

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050516

Review By	feifei	Review On	5/6/2016 11:44:01 AM		
SubDirectory	VI050516	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52696
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52698,VP52699,VP52700
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB33	VI049244.D	5 May 2016 9:34	FY/SY	Ok
2	VSTDCCC005	VI049245.D	5 May 2016 10:15	FY/SY	Ok
3	VI0505WBL01	VI049246.D	5 May 2016 10:59	FY/SY	Ok,M
4	H2799-11	VI049247.D	5 May 2016 11:31	FY/SY	Ok
5	H2743-18	VI049248.D	5 May 2016 12:03	FY/SY	Ok
6	H2834-12	VI049249.D	5 May 2016 12:34	FY/SY	Ok,M
7	H2796-21	VI049250.D	5 May 2016 13:06	FY/SY	Ok,M
8	H2834-08RE	VI049251.D	5 May 2016 13:38	FY/SY	Confirms
9	H2834-01DL	VI049252.D	5 May 2016 14:09	FY/SY	Ok,M
10	H2834-02MS	VI049253.D	5 May 2016 15:13	FY/SY	Ok
11	H2834-03MSD	VI049254.D	5 May 2016 15:44	FY/SY	Ok
12	VSTDCCC005	VI049255.D	5 May 2016 16:16	FY/SY	Ok
13	VI0505WBL02	VI049256.D	5 May 2016 16:54	FY/SY	Ok,M
14	H2834-06DL	VI049257.D	5 May 2016 17:59	FY/SY	Ok
15	H2834-05DL	VI049258.D	5 May 2016 18:31	FY/SY	Ok
16	H2834-07DL	VI049259.D	5 May 2016 19:02	FY/SY	Ok,M
17	H2874-01	VI049260.D	5 May 2016 19:34	FY/SY	Ok
18	H2874-09	VI049261.D	5 May 2016 20:06	FY/SY	Dilution
19	H2874-10MS	VI049262.D	5 May 2016 20:37	FY/SY	Ok
20	H2874-11MSD	VI049263.D	5 May 2016 21:09	FY/SY	Ok,M
21	H2874-04	VI049264.D	5 May 2016 21:41	FY/SY	Not Ok
22	H2874-05	VI049265.D	5 May 2016 22:12	FY/SY	Ok,M
23	H2874-06	VI049266.D	5 May 2016 22:44	FY/SY	Ok,M
24	H2874-07	VI049267.D	5 May 2016 23:16	FY/SY	Ok,M
25	H2874-08	VI049268.D	5 May 2016 23:47	FY/SY	Ok,M
26	H2874-12	VI049269.D	6 May 2016 00:19	FY/SY	Ok

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050516

Review By	feifei	Review On	5/6/2016 11:44:01 AM		
SubDirectory	VI050516	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52696
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52698,VP52699,VP52700
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

27	H2834-18	VI049270.D	6 May 2016 00:50	FY/SY	Dilution
28	H2834-19	VI049271.D	6 May 2016 1:22	FY/SY	Dilution
29	H2834-20	VI049272.D	6 May 2016 1:54	FY/SY	ReRun
30	H2834-21	VI049273.D	6 May 2016 2:25	FY/SY	Not Ok
31	VSTDCCC005EC	VI049274.D	6 May 2016 2:57	FY/SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050616

Review By	feifei	Review On	5/9/2016 12:05:45 PM		
SubDirectory	VI050616	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52731
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52733,VP52734,VP52735
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB34	VI049275.D	6 May 2016 9:02	FY/SY	Ok
2	VSTDCCC005	VI049276.D	6 May 2016 10:21	FY/SY	Ok
3	VI0506WBL01	VI049277.D	6 May 2016 11:45	FY/SY	Ok
4	H2834-21	VI049278.D	6 May 2016 12:17	FY/SY	Ok
5	H2874-04	VI049279.D	6 May 2016 12:49	FY/SY	Ok,M
6	H2834-20	VI049280.D	6 May 2016 13:20	FY/SY	Ok
7	H2834-18DL	VI049281.D	6 May 2016 13:52	FY/SY	Ok,M
8	H2874-13	VI049282.D	6 May 2016 14:24	FY/SY	Ok,M
9	H2874-14	VI049283.D	6 May 2016 14:55	FY/SY	Dilution
10	H2874-14DL	VI049284.D	6 May 2016 16:05	FY/SY	Ok,M
11	H2874-09DL	VI049285.D	6 May 2016 16:37	FY/SY	Ok
12	H2834-19DL	VI049286.D	6 May 2016 17:09	FY/SY	Ok
13	H2874-15	VI049287.D	6 May 2016 17:40	FY/SY	Not Ok
14	H2834-11	VI049288.D	6 May 2016 18:12	FY/SY	Ok
15	VSTDCCC005EC	VI049289.D	6 May 2016 19:15	FY/SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050416

Review By	mohammad	Review On	5/5/2016 9:02:17 AM		
SubDirectory	VI050416	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52662
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52669,VP52670
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB32	BFB32	VI049219.D		Ok
2	VSTD0.533	VSTD0.533	VI049220.D		Ok
3	VSTD00134	VSTD00134	VI049221.D		Ok
4	VSTD00535	VSTD00535	VI049222.D		Ok
5	VSTD01036	VSTD01036	VI049223.D	(V#6390)	Ok
6	VSTD02037	VSTD02037	VI049224.D		Ok
7	VSTDCCC005	VSTD00538	VI049225.D		Ok
8	VI0504WBL01	VBLK27	VI049226.D		Ok
9	H2799-02DL2	C0H63DL2	VI049227.D	pH#1.0 vial C	Ok,M
10	H2743-14	H4015	VI049228.D	pH#1.0 vial B	Ok
11	H2743-15	H4017	VI049229.D	pH#1.0 vial B	Ok,M
12	H2743-09DL	H4009DL	VI049230.D	pH#1.0 vial B	Ok
13	H2743-10DL	H4011DL	VI049231.D	pH#1.0 vial B	Ok,M
14	H2743-13DL	H4007DL	VI049232.D	pH#1.0 vial B	Ok
15	H2834-04	H4006	VI049233.D	pH#1.0 vial A	Ok,M
16	H2834-01	H4002	VI049234.D	pH#1.0A need 5X	Dilution
17	H2834-02	H4002	VI049235.D	pH#1.0A Need 5x,MS not spike	Not Ok
18	H2834-03	H4002	VI049236.D	pH#1.0A Need 5x,MSD not spike	Not Ok
19	H2834-05	H4094	VI049237.D	pH#1.0A Need 5x	Dilution
20	H2834-06	H4121	VI049238.D	pH#1.0A Need 2x	Dilution
21	H2834-07	H4123	VI049239.D	pH#1.0A Need 5x	Dilution
22	H2834-08	H4124	VI049240.D	pH#1.0A E flag in previous sample	ReRun

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050416

Review By	mohammad	Review On	5/5/2016 9:02:17 AM		
SubDirectory	VI050416	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52662
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52669,VP52670
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

23	H2834-09	H4132	VI049241.D	pH#1.0 vial A	Ok
24	H2834-10	H4133	VI049242.D	pH#1.0 vial A	Ok,M
25	VSTDCCC005EC	VSTD00539	VI049243.D		Ok,M

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050516

Review By	feifei	Review On	5/6/2016 11:44:01 AM		
SubDirectory	VI050516	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52696
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52698,VP52699,VP52700
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB33	BFB33	VI049244.D		Ok
2	VSTDCCC005	VSTD00540	VI049245.D		Ok
3	VI0505WBL01	VBLK28	VI049246.D	(V#6390)	Ok,M
4	H2799-11	VHBLK01	VI049247.D	pH#1.6A SB	Ok
5	H2743-18	VHBLK01	VI049248.D	pH#1.6A SB	Ok
6	H2834-12	H4004	VI049249.D	pH#1.0 vial A	Ok,M
7	H2796-21	VHBLK01	VI049250.D	pH#1.6B SB	Ok,M
8	H2834-08RE	H4124RE	VI049251.D	pH#1.0 vial B	Confirms
9	H2834-01DL	H4002DL	VI049252.D	pH#1.0 vial C	Ok,M
10	H2834-02MS	H4002MS	VI049253.D	pH#1.0 vial B	Ok
11	H2834-03MSD	H4002MSD	VI049254.D	pH#1.0 vial B	Ok
12	VSTDCCC005	VSTD00541	VI049255.D		Ok
13	VI0505WBL02	VBLK29	VI049256.D		Ok,M
14	H2834-06DL	H4121DL	VI049257.D	pH#1.0 vial B	Ok
15	H2834-05DL	H4094DL	VI049258.D	pH#1.0 vial B	Ok
16	H2834-07DL	H4123DL	VI049259.D	pH#1.0 vial B	Ok,M
17	H2874-01	H4010	VI049260.D	pH#1.0 vial A	Ok
18	H2874-09	H4113	VI049261.D	pH#1.0A Need 5x	Dilution
19	H2874-10MS	H4113MS	VI049262.D	pH#1.0 vial A	Ok
20	H2874-11MSD	H4113MSD	VI049263.D	pH#1.0 vial A	Ok,M
21	H2874-04	H4099	VI049264.D	pH#1.6 vial A, conform concentration	Not Ok
22	H2874-05	H4101	VI049265.D	pH#1.0 vial A	Ok,M

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050516

Review By	feifei	Review On	5/6/2016 11:44:01 AM		
SubDirectory	VI050516	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52696
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52698,VP52699,VP52700
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

23	H2874-06	H4103	VI049266.D	pH#1.0 vial A	Ok,M
24	H2874-07	H4111	VI049267.D	pH#1.0 vial A	Ok,M
25	H2874-08	H4112	VI049268.D	pH#1.0 vial A	Ok,M
26	H2874-12	H4120	VI049269.D	pH#1.0 vial A	Ok
27	H2834-18	H4102	VI049270.D	pH#1.0A Need 5x	Dilution
28	H2834-19	H4116	VI049271.D	pH#1.0A Need 5x	Dilution
29	H2834-20	H4117	VI049272.D	pH#1.0A E flag in previous sample	ReRun
30	H2834-21	H4118	VI049273.D	pH#1.0A Confirm conc.	Not Ok
31	VSTDCCC005EC	VSTD00542	VI049274.D		Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050616

Review By	feifei	Review On	5/9/2016 12:05:45 PM		
SubDirectory	VI050616	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52731
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52733,VP52734,VP52735
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB34	BFB34	VI049275.D		Ok
2	VSTDCCC005	VSTD00543	VI049276.D		Ok
3	VI0506WBL01	VBLK30	VI049277.D	(V#6390)	Ok
4	H2834-21	H4118	VI049278.D	pH#1.0 vial B	Ok
5	H2874-04	H4099	VI049279.D	pH#1.0 vial B	Ok,M
6	H2834-20	H4117	VI049280.D	pH#1.0 vial B	Ok
7	H2834-18DL	H4102DL	VI049281.D	pH#1.0 vial B	Ok,M
8	H2874-13	H4126	VI049282.D	pH#1.0 vial A	Ok,M
9	H2874-14	H4129	VI049283.D	pH#1.6A Need 5x	Dilution
10	H2874-14DL	H4129DL	VI049284.D	pH#1.0 vial B	Ok,M
11	H2874-09DL	H4113DL	VI049285.D	pH#1.0 vial B	Ok
12	H2834-19DL	H4116DL	VI049286.D	pH#1.0 vial B	Ok
13	H2874-15	VHBLK01	VI049287.D	pH#1.6A SB, need to run adding sample	Not Ok
14	H2834-11	VHBLK01	VI049288.D	pH#1.0A SB	Ok
15	VSTDCCC005EC	VSTD00544	VI049289.D		Ok

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT041216

Review By	feifei	Review On	4/13/2016 9:55:35 AM		
SubDirectory	VT041216	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM041216S.M

STD. NAME	STD REF.#
Tune/Reschk	VP51900
Initial Calibration Stds	VP51901,VP51902,VP51904,VP51905,VP51906
CCC	VP51907
Internal Standard/PEM	VP51299,VP51899
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB96	VT013543.D	12 Apr 2016 12:19	FY/SY	Ok
2	VSTD2.585	VT013544.D	12 Apr 2016 12:45	FY/SY	Ok,M
3	VSTD00586	VT013545.D	12 Apr 2016 13:11	FY/SY	Ok,M
4	VSTD02587	VT013546.D	12 Apr 2016 13:37	FY/SY	Ok,M
5	VSTD05088	VT013547.D	12 Apr 2016 14:03	FY/SY	Ok,M
6	VSTD10089	VT013548.D	12 Apr 2016 14:29	FY/SY	Ok,M
7	VT0412SBL01	VT013549.D	12 Apr 2016 15:21	FY/SY	Ok
8	H2342-02	VT013550.D	12 Apr 2016 15:50	FY/SY	Ok,M
9	H2342-11	VT013551.D	12 Apr 2016 16:22	FY/SY	Ok
10	H2342-12	VT013552.D	12 Apr 2016 17:15	FY/SY	Ok
11	H2342-13	VT013553.D	12 Apr 2016 17:41	FY/SY	Ok,M
12	H2342-14	VT013554.D	12 Apr 2016 18:07	FY/SY	Ok
13	H2342-15	VT013555.D	12 Apr 2016 18:34	FY/SY	Ok,M
14	H2342-16	VT013556.D	12 Apr 2016 19:00	FY/SY	Ok
15	H2342-17	VT013557.D	12 Apr 2016 19:25	FY/SY	Ok
16	VSTDCCC025EC	VT013558.D	12 Apr 2016 19:52	FY/SY	Ok,M

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT050516

Review By	feifei	Review On	5/6/2016 9:46:08 AM		
SubDirectory	VT050516	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM041216S.M

STD. NAME	STD REF.#
Tune/Reschk	VP52692
Initial Calibration Stds	VP52211,VP52212,VP52213,VP52214,VP52215
CCC	VP52693,VP52694,VP52695
Internal Standard/PEM	VP52194,VP52017
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB87	VT013896.D	5 May 2016 9:36	FY/SY	Ok
2	VSTDCCC025	VT013897.D	5 May 2016 10:40	FY/SY	Ok,M
3	VT0505SBL01	VT013898.D	5 May 2016 11:48	FY/SY	Ok
4	H2849-03RE	VT013899.D	5 May 2016 12:22	FY/SY	Confirms
5	H2849-01RE	VT013900.D	5 May 2016 12:48	FY/SY	Confirms
6	H2849-04RE	VT013901.D	5 May 2016 13:15	FY/SY	Confirms
7	H2849-05RE	VT013902.D	5 May 2016 13:40	FY/SY	Confirms
8	H2849-06RE	VT013903.D	5 May 2016 14:06	FY/SY	Confirms
9	H2849-07RE	VT013904.D	5 May 2016 14:32	FY/SY	Confirms
10	H2849-08	VT013905.D	5 May 2016 14:58	FY/SY	Ok
11	H2849-09RE	VT013906.D	5 May 2016 15:24	FY/SY	Confirms
12	VSTDCCC025	VT013907.D	5 May 2016 15:50	FY/SY	Ok,M
13	VT0505SBL02	VT013908.D	5 May 2016 16:51	FY/SY	Ok,M
14	H2841-21	VT013909.D	5 May 2016 17:17	FY/SY	Ok,M
15	H2841-06	VT013910.D	5 May 2016 17:43	FY/SY	Ok
16	H2841-07MS	VT013911.D	5 May 2016 18:09	FY/SY	Not Ok
17	H2841-08MSD	VT013912.D	5 May 2016 18:35	FY/SY	Not Ok
18	H2834-13	VT013913.D	5 May 2016 19:01	FY/SY	Ok,M
19	H2834-14MS	VT013914.D	5 May 2016 19:27	FY/SY	Not Ok
20	H2834-15MSD	VT013915.D	5 May 2016 19:53	FY/SY	Not Ok
21	H2841-09	VT013916.D	5 May 2016 20:19	FY/SY	Ok
22	H2841-10	VT013917.D	5 May 2016 20:45	FY/SY	Ok,M
23	H2841-11	VT013918.D	5 May 2016 21:11	FY/SY	ReRun
24	H2841-12	VT013919.D	5 May 2016 22:03	FY/SY	Ok
25	H2841-13	VT013920.D	5 May 2016 22:29	FY/SY	Ok
26	H2841-14	VT013921.D	5 May 2016 22:55	FY/SY	ReRun

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT050516

Review By	feifei	Review On	5/6/2016 9:46:08 AM		
SubDirectory	VT050516	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM041216S.M

STD. NAME	STD REF.#
Tune/Reschk	VP52692
Initial Calibration Stds	VP52211,VP52212,VP52213,VP52214,VP52215
CCC	VP52693,VP52694,VP52695
Internal Standard/PEM	VP52194,VP52017
ICV/I.BLK	N/A

27	H2841-15	VT013922.D	5 May 2016 23:21	FY/SY	ReRun
28	H2841-16	VT013923.D	5 May 2016 23:47	FY/SY	ReRun
29	H2841-17	VT013924.D	6 May 2016 00:13	FY/SY	ReRun
30	H2841-18	VT013925.D	6 May 2016 00:39	FY/SY	Ok
31	H2841-19	VT013926.D	6 May 2016 1:05	FY/SY	Not Ok
32	H2841-20	VT013927.D	6 May 2016 1:31	FY/SY	Ok
33	H2834-16	VT013928.D	6 May 2016 1:57	FY/SY	ReRun
34	VSTDCCC025EC	VT013929.D	6 May 2016 2:23	FY/SY	Ok,M

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT050616

Review By	feifei	Review On	5/9/2016 11:31:40 AM		
SubDirectory	VT050616	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM050616S.M

STD. NAME	STD REF.#
Tune/Reschk	VP52723
Initial Calibration Stds	VP52724,VP52725,VP52726,VP52727,VP52728
CCC	VP52729,VP52730,VP52802
Internal Standard/PEM	VP52194,VP52709
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB88	VT013930.D	6 May 2016 9:01	FY/SY	Ok
2	VSTD2.582	VT013931.D	6 May 2016 9:38	FY/SY	Ok,M
3	VSTD00583	VT013932.D	6 May 2016 10:05	FY/SY	Ok,M
4	VSTD02584	VT013933.D	6 May 2016 10:31	FY/SY	Ok,M
5	VSTD05085	VT013934.D	6 May 2016 10:57	FY/SY	Ok,M
6	VSTD10086	VT013935.D	6 May 2016 11:23	FY/SY	Ok,M
7	VT0506SBL01	VT013936.D	6 May 2016 12:16	FY/SY	Ok
8	H2841-04	VT013937.D	6 May 2016 13:23	FY/SY	Ok
9	H2841-07MS	VT013938.D	6 May 2016 14:04	FY/SY	Ok
10	H2841-08MSD	VT013939.D	6 May 2016 14:30	FY/SY	Ok
11	H2841-19	VT013940.D	6 May 2016 14:56	FY/SY	Ok
12	VSTDCCC025	VT013941.D	6 May 2016 15:22	FY/SY	Ok,M
13	VT0506SBL02	VT013942.D	6 May 2016 16:20	FY/SY	Ok,M
14	H2888-01	VT013943.D	6 May 2016 16:48	FY/SY	Ok,M
15	H2888-02	VT013944.D	6 May 2016 17:15	FY/SY	Not Ok
16	H2888-03	VT013945.D	6 May 2016 17:41	FY/SY	Ok
17	H2890-11	VT013946.D	6 May 2016 18:07	FY/SY	Ok,M
18	H2890-12MS	VT013947.D	6 May 2016 18:33	FY/SY	Ok
19	H2890-13MSD	VT013948.D	6 May 2016 19:00	FY/SY	Ok,M
20	H2888-04	VT013949.D	6 May 2016 19:26	FY/SY	Ok,M
21	H2888-05	VT013950.D	6 May 2016 19:52	FY/SY	ReRun
22	H2888-06	VT013951.D	6 May 2016 20:18	FY/SY	ReRun
23	H2888-07	VT013952.D	6 May 2016 20:44	FY/SY	Not Ok
24	H2888-08	VT013953.D	6 May 2016 21:37	FY/SY	Ok
25	H2888-09	VT013954.D	6 May 2016 22:03	FY/SY	Ok
26	H2888-10	VT013955.D	6 May 2016 22:29	FY/SY	ReRun

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT050616

Review By	feifei	Review On	5/9/2016 11:31:40 AM		
SubDirectory	VT050616	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM050616S.M

STD. NAME	STD REF.#
Tune/Reschk	VP52723
Initial Calibration Stds	VP52724,VP52725,VP52726,VP52727,VP52728
CCC	VP52729,VP52730,VP52802
Internal Standard/PEM	VP52194,VP52709
ICV/I.BLK	N/A

27	H2888-11	VT013956.D	6 May 2016 22:55	FY/SY	ReRun
28	H2888-12	VT013957.D	6 May 2016 23:22	FY/SY	Ok,M
29	H2888-13	VT013958.D	6 May 2016 23:48	FY/SY	Ok,M
30	H2888-14	VT013959.D	7 May 2016 00:14	FY/SY	ReRun
31	H2888-15	VT013960.D	7 May 2016 00:40	FY/SY	ReRun
32	H2888-16	VT013961.D	7 May 2016 1:06	FY/SY	Ok
33	H2888-17	VT013962.D	7 May 2016 1:32	FY/SY	ReRun
34	VSTDCCC025	VT013963.D	7 May 2016 2:24	FY/SY	Ok,M
35	VT0506SBL03	VT013964.D	7 May 2016 3:16	FY/SY	Ok
36	H2890-04	VT013965.D	7 May 2016 3:42	FY/SY	Ok
37	H2890-18	VT013966.D	7 May 2016 4:09	FY/SY	Ok
38	H2888-21	VT013967.D	7 May 2016 4:35	FY/SY	ReRun
39	H2888-22	VT013968.D	7 May 2016 5:01	FY/SY	Ok,M
40	H2890-01	VT013969.D	7 May 2016 5:27	FY/SY	Not Ok
41	H2890-02	VT013970.D	7 May 2016 5:53	FY/SY	Ok,M
42	H2890-03	VT013971.D	7 May 2016 6:19	FY/SY	ReRun
43	H2890-06	VT013972.D	7 May 2016 6:45	FY/SY	Not Ok
44	H2890-07	VT013973.D	7 May 2016 7:11	FY/SY	ReRun
45	H2890-08	VT013974.D	7 May 2016 7:38	FY/SY	ReRun
46	H2890-09	VT013975.D	7 May 2016 8:29	FY/SY	Not Ok
47	H2890-10	VT013976.D	7 May 2016 8:56	FY/SY	ReRun
48	H2890-14	VT013977.D	7 May 2016 9:21	FY/SY	Not Ok
49	H2890-15	VT013978.D	7 May 2016 9:47	FY/SY	Ok
50	H2890-16	VT013979.D	7 May 2016 10:13	FY/SY	ReRun
51	H2847-13	VT013980.D	7 May 2016 10:39	FY/SY	Not Ok
52	H2847-14	VT013981.D	7 May 2016 11:06	FY/SY	Ok
53	H2847-15	VT013982.D	7 May 2016 11:32	FY/SY	Ok
54	H2847-16	VT013983.D	7 May 2016 11:58	FY/SY	ReRun

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT050616

Review By	feifei	Review On	5/9/2016 11:31:40 AM		
SubDirectory	VT050616	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM050616S.M

STD. NAME	STD REF.#
Tune/Reschk	VP52723
Initial Calibration Stds	VP52724,VP52725,VP52726,VP52727,VP52728
CCC	VP52729,VP52730,VP52802
Internal Standard/PEM	VP52194,VP52709
ICV/I.BLK	N/A

55	H2847-17	VT013984.D	7 May 2016 12:24	FY/SY	Ok
56	VSTDCCC025EC	VT013985.D	7 May 2016 12:50	FY/SY	Ok,M

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT050916

Review By	feifei	Review On	5/10/2016 10:47:44 AM		
SubDirectory	VT050916	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM050616S.M

STD. NAME	STD REF.#
Tune/Reschk	VP52809
Initial Calibration Stds	VP52724,VP52725,VP52726,VP52727,VP52728
CCC	VP52810,VP52811,VP52812
Internal Standard/PEM	VP52194,VP52709
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB89	VT013986.D	9 May 2016 9:40	FY/SY	Ok
2	VSTDCCC025	VT013987.D	9 May 2016 10:07	FY/SY	Ok,M
3	VT0509SBL01	VT013988.D	9 May 2016 11:22	FY/SY	Ok
4	H2834-16	VT013989.D	9 May 2016 11:48	FY/SY	Ok
5	H2834-14MS	VT013990.D	9 May 2016 12:14	FY/SY	Ok,M
6	H2834-15MSD	VT013991.D	9 May 2016 12:41	FY/SY	Ok,M
7	H2847-16	VT013992.D	9 May 2016 13:07	FY/SY	Ok,M
8	H2847-13	VT013993.D	9 May 2016 13:33	FY/SY	Ok,M
9	H2841-11RE	VT013994.D	9 May 2016 14:00	FY/SY	Confirms
10	H2841-14	VT013995.D	9 May 2016 14:26	FY/SY	Ok,M
11	H2841-15	VT013996.D	9 May 2016 14:52	FY/SY	Ok,M
12	H2841-16RE	VT013997.D	9 May 2016 15:18	FY/SY	Confirms
13	H2841-17RE	VT013998.D	9 May 2016 15:44	FY/SY	Confirms
14	VSTDCCC025	VT013999.D	9 May 2016 16:11	FY/SY	Ok,M
15	VT0509SBL02	VT014000.D	9 May 2016 17:05	FY/SY	Ok,M
16	H2834-17	VT014001.D	9 May 2016 17:32	FY/SY	Ok,M
17	H2909-04	VT014002.D	9 May 2016 17:58	FY/SY	Ok,M
18	H2909-05	VT014003.D	9 May 2016 18:24	FY/SY	Ok,M
19	H2909-06	VT014004.D	9 May 2016 18:50	FY/SY	Ok,M
20	H2909-07	VT014005.D	9 May 2016 19:15	FY/SY	Ok,M
21	H2909-08	VT014006.D	9 May 2016 19:41	FY/SY	Ok
22	H2909-09	VT014007.D	9 May 2016 20:07	FY/SY	Ok,M
23	H2909-10	VT014008.D	9 May 2016 20:33	FY/SY	Ok,M
24	H2909-11	VT014009.D	9 May 2016 20:59	FY/SY	Dilution
25	H2909-12	VT014010.D	9 May 2016 21:25	FY/SY	ReRun
26	H2909-13	VT014011.D	9 May 2016 21:51	FY/SY	Ok,M

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT050916

Review By	feifei	Review On	5/10/2016 10:47:44 AM		
SubDirectory	VT050916	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM050616S.M

STD. NAME	STD REF.#
Tune/Reschk	VP52809
Initial Calibration Stds	VP52724,VP52725,VP52726,VP52727,VP52728
CCC	VP52810,VP52811,VP52812
Internal Standard/PEM	VP52194,VP52709
ICV/I.BLK	N/A

27	H2909-14	VT014012.D	9 May 2016 22:43	FY/SY	Dilution
28	H2909-15	VT014013.D	9 May 2016 23:09	FY/SY	Dilution
29	H2909-16	VT014014.D	9 May 2016 23:36	FY/SY	ReRun
30	H2909-17	VT014015.D	10 May 2016 00:02	FY/SY	Ok,M
31	H2909-18	VT014016.D	10 May 2016 00:27	FY/SY	Ok,M
32	H2909-19	VT014017.D	10 May 2016 00:54	FY/SY	Ok,M
33	H2909-20	VT014018.D	10 May 2016 1:20	FY/SY	ReRun
34	H2909-21	VT014019.D	10 May 2016 1:46	FY/SY	ReRun
35	H2909-22	VT014020.D	10 May 2016 2:12	FY/SY	Ok,M
36	VSTDCCC025EC	VT014021.D	10 May 2016 2:38	FY/SY	Ok,M

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT041216

Review By	feifei	Review On	4/13/2016 9:55:35 AM		
SubDirectory	VT041216	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM041216S.M

STD. NAME	STD REF.#
Tune/Reschk	VP51900
Initial Calibration Stds	VP51901,VP51902,VP51904,VP51905,VP51906
CCC	VP51907
Internal Standard/PEM	VP51299,VP51899
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB96	BFB96	VT013543.D		Ok
2	VSTD2.585	VSTD2.585	VT013544.D		Ok,M
3	VSTD00586	VSTD00586	VT013545.D		Ok,M
4	VSTD02587	VSTD02587	VT013546.D		Ok,M
5	VSTD05088	VSTD05088	VT013547.D		Ok,M
6	VSTD10089	VSTD10089	VT013548.D		Ok,M
7	VT0412SBL01	VBLK98	VT013549.D		Ok
8	H2342-02	D9T34	VT013550.D	PE	Ok,M
9	H2342-11	D9T40	VT013551.D	Vial A	Ok
10	H2342-12	D9T41	VT013552.D	Vial A	Ok
11	H2342-13	D9T42	VT013553.D	Vial A	Ok,M
12	H2342-14	D9T43	VT013554.D	Vial A	Ok
13	H2342-15	D9T44	VT013555.D	Vial A	Ok,M
14	H2342-16	D9T45	VT013556.D	Vial A	Ok
15	H2342-17	D9T46	VT013557.D	Vial A	Ok
16	VSTDCCC025EC	VSTD02590	VT013558.D		Ok,M

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT050516

Review By	feifei	Review On	5/6/2016 9:46:08 AM		
SubDirectory	VT050516	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM041216S.M

STD. NAME	STD REF.#
Tune/Reschk	VP52692
Initial Calibration Stds	VP52211,VP52212,VP52213,VP52214,VP52215
CCC	VP52693,VP52694,VP52695
Internal Standard/PEM	VP52194,VP52017
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB87	BFB87	VT013896.D		Ok
2	VSTDCCC025	VSTD02579	VT013897.D		Ok,M
3	VT0505SBL01	VBLK97	VT013898.D		Ok
4	H2849-03RE	C0AA3RE	VT013899.D	Vial B, Internal standard fail	Confirms
5	H2849-01RE	C0AA0RE	VT013900.D	Vial B, Internal standard fail	Confirms
6	H2849-04RE	C0AA4RE	VT013901.D	Vial B, Internal standard fail	Confirms
7	H2849-05RE	C0AA5RE	VT013902.D	Vial B, Internal standard fail	Confirms
8	H2849-06RE	C0AA6RE	VT013903.D	Vial B, Surrogate Fail,Internal standard fail	Confirms
9	H2849-07RE	C0AA7RE	VT013904.D	Vial B, Internal standard fail	Confirms
10	H2849-08	C0AA8	VT013905.D	Vial B	Ok
11	H2849-09RE	C0AA9RE	VT013906.D	Vial B, Internal standard fail	Confirms
12	VSTDCCC025	VSTD02580	VT013907.D		Ok,M
13	VT0505SBL02	VBLK98	VT013908.D		Ok,M
14	H2841-21	D9WZ0	VT013909.D	Vial A	Ok,M
15	H2841-06	D9WS3	VT013910.D	Vial A	Ok
16	H2841-07MS	D9WS3MS	VT013911.D	Vial A, Internal standard fail	Not Ok
17	H2841-08MSD	D9WS3MSD	VT013912.D	Vial A, Not purge well	Not Ok
18	H2834-13	H4061	VT013913.D	Vial A	Ok,M
19	H2834-14MS	H4061MS	VT013914.D	Vial A, Internal standard fail	Not Ok
20	H2834-15MSD	H4061MSD	VT013915.D	Vial A, Internal standard fail	Not Ok
21	H2841-09	D9WS4	VT013916.D	Vial A	Ok
22	H2841-10	D9WS5	VT013917.D	Vial A	Ok,M

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT050516

Review By	feifei	Review On	5/6/2016 9:46:08 AM		
SubDirectory	VT050516	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM041216S.M

STD. NAME	STD REF.#
Tune/Reschk	VP52692
Initial Calibration Stds	VP52211,VP52212,VP52213,VP52214,VP52215
CCC	VP52693,VP52694,VP52695
Internal Standard/PEM	VP52194,VP52017
ICV/I.BLK	N/A

23	H2841-11	D9WS6	VT013918.D	Vial A, Internal standard fail	ReRun
24	H2841-12	D9WS7	VT013919.D	Vial A	Ok
25	H2841-13	D9WS8	VT013920.D	Vial A	Ok
26	H2841-14	D9WS9	VT013921.D	Vial A, Internal standard fail	ReRun
27	H2841-15	D9WT0	VT013922.D	Vial A, Internal standard fail	ReRun
28	H2841-16	D9WT1	VT013923.D	Vial A, Internal standard fail	ReRun
29	H2841-17	D9WW5	VT013924.D	Vial A, Internal standard fail	ReRun
30	H2841-18	D9WX4	VT013925.D	Vial A	Ok
31	H2841-19	D9WX5	VT013926.D	Vial A, Not purge well	Not Ok
32	H2841-20	D9WX6	VT013927.D	Vial A	Ok
33	H2834-16	H4076	VT013928.D	Vial A, Internal standard fail	ReRun
34	VSTDCCC025EC	VSTD02581	VT013929.D		Ok,M

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT050616

Review By	feifei	Review On	5/9/2016 11:31:40 AM		
SubDirectory	VT050616	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM050616S.M

STD. NAME	STD REF.#
Tune/Reschk	VP52723
Initial Calibration Stds	VP52724,VP52725,VP52726,VP52727,VP52728
CCC	VP52729,VP52730,VP52802
Internal Standard/PEM	VP52194,VP52709
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB88	BFB88	VT013930.D		Ok
2	VSTD2.582	VSTD2.582	VT013931.D		Ok,M
3	VSTD00583	VSTD00583	VT013932.D		Ok,M
4	VSTD02584	VSTD02584	VT013933.D		Ok,M
5	VSTD05085	VSTD05085	VT013934.D		Ok,M
6	VSTD10086	VSTD10086	VT013935.D		Ok,M
7	VT0506SBL01	VBLK99	VT013936.D		Ok
8	H2841-04	D9WR4	VT013937.D	PE	Ok
9	H2841-07MS	D9WS3MS	VT013938.D	Vial B	Ok
10	H2841-08MSD	D9WS3MSD	VT013939.D	Vial B	Ok
11	H2841-19	D9WX5	VT013940.D	Vial B, Internal standard fail	Ok
12	VSTDCCC025	VSTD02596	VT013941.D		Ok,M
13	VT0506SBL02	VBLK76	VT013942.D		Ok,M
14	H2888-01	D9WS2	VT013943.D	Vial A	Ok,M
15	H2888-02	D9WT9	VT013944.D	Vial A, Not purge well	Not Ok
16	H2888-03	D9WW0	VT013945.D	Vial A	Ok
17	H2890-11	D9WT7	VT013946.D	Vial A, Internal standard fail	Ok,M
18	H2890-12MS	D9WT7MS	VT013947.D	Vial A, Internal standard fail	Ok
19	H2890-13MSD	D9W7MSD	VT013948.D	Vial A, Internal standard fail	Ok,M
20	H2888-04	D9WW1	VT013949.D	Vial A	Ok,M
21	H2888-05	D9WW2	VT013950.D	Vial A, Internal standard fail	ReRun
22	H2888-06	D9WW3	VT013951.D	Vial A, Internal standard fail	ReRun

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT050616

Review By	feifei	Review On	5/9/2016 11:31:40 AM		
SubDirectory	VT050616	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM050616S.M

STD. NAME	STD REF.#
Tune/Reschk	VP52723
Initial Calibration Stds	VP52724,VP52725,VP52726,VP52727,VP52728
CCC	VP52729,VP52730,VP52802
Internal Standard/PEM	VP52194,VP52709
ICV/I.BLK	N/A

23	H2888-07	D9WW4	VT013952.D	Vial A, Not purge well	Not Ok
24	H2888-08	D9WW6	VT013953.D	Vial A	Ok
25	H2888-09	D9WW7	VT013954.D	Vial A	Ok
26	H2888-10	D9WW8	VT013955.D	Vial A, Internal standard fail	ReRun
27	H2888-11	D9WW9	VT013956.D	Vial A, Internal standard fail	ReRun
28	H2888-12	D9WX0	VT013957.D	Vial A	Ok,M
29	H2888-13	D9WX2	VT013958.D	Vial A	Ok,M
30	H2888-14	D9WX3	VT013959.D	Vial A, Internal standard fail	ReRun
31	H2888-15	D9WX7	VT013960.D	Vial A, Internal standard fail	ReRun
32	H2888-16	D9WX8	VT013961.D	Vial A	Ok
33	H2888-17	D9WX9	VT013962.D	Vial A, Internal standard fail	ReRun
34	VSTDCCC025	VSTD02588	VT013963.D		Ok,M
35	VT0506SBL03	VBLK77	VT013964.D		Ok
36	H2890-04	D9WZ1	VT013965.D	Vial A	Ok
37	H2890-18	D9WZ2	VT013966.D	Vial A	Ok
38	H2888-21	D9WY1	VT013967.D	Vial A, Internal standard fail	ReRun
39	H2888-22	D9WY3	VT013968.D	Vial A	Ok,M
40	H2890-01	D9WY5	VT013969.D	Vial A, Not purge well	Not Ok
41	H2890-02	D9WY7	VT013970.D	Vial A	Ok,M
42	H2890-03	D9WY9	VT013971.D	Vial A, Internal standard fail	ReRun
43	H2890-06	D9WT2	VT013972.D	Vial A, Not purge well	Not Ok
44	H2890-07	D9WT3	VT013973.D	Vial A, Internal standard fail	ReRun
45	H2890-08	D9WT4	VT013974.D	Vial A, Internal standard fail	ReRun

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT050616

Review By	feifei	Review On	5/9/2016 11:31:40 AM		
SubDirectory	VT050616	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM050616S.M

STD. NAME	STD REF.#
Tune/Reschk	VP52723
Initial Calibration Stds	VP52724,VP52725,VP52726,VP52727,VP52728
CCC	VP52729,VP52730,VP52802
Internal Standard/PEM	VP52194,VP52709
ICV/I.BLK	N/A

46	H2890-09	D9WT5	VT013975.D	Vial A, Not purge well	Not Ok
47	H2890-10	D9WT6	VT013976.D	Vial A, Internal standard fail,Surrogate Fail	ReRun
48	H2890-14	D9WT8	VT013977.D	Vial A, Not purge well	Not Ok
49	H2890-15	D9WY4	VT013978.D	Vial A	Ok
50	H2890-16	D9WY6	VT013979.D	Vial A, Internal standard fail	ReRun
51	H2847-13	BD3C1	VT013980.D	Vial A, Not purge well	Not Ok
52	H2847-14	BD3C2	VT013981.D	Vial A	Ok
53	H2847-15	BD3C3	VT013982.D	Vial A	Ok
54	H2847-16	BD3C4	VT013983.D	Vial A, Internal standard fail	ReRun
55	H2847-17	BD3E2	VT013984.D	Vial A	Ok
56	VSTDCCC025EC	VSTD02589	VT013985.D		Ok,M

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT050916

Review By	feifei	Review On	5/10/2016 10:47:44 AM		
SubDirectory	VT050916	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM050616S.M

STD. NAME	STD REF.#
Tune/Reschk	VP52809
Initial Calibration Stds	VP52724,VP52725,VP52726,VP52727,VP52728
CCC	VP52810,VP52811,VP52812
Internal Standard/PEM	VP52194,VP52709
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB89	BFB89	VT013986.D		Ok
2	VSTDCCC025	VSTD02590	VT013987.D		Ok,M
3	VT0509SBL01	VBLK78	VT013988.D		Ok
4	H2834-16	H4076	VT013989.D	Vial B	Ok
5	H2834-14MS	H4061MS	VT013990.D	Vial B	Ok,M
6	H2834-15MSD	H4061MSD	VT013991.D	Vial B	Ok,M
7	H2847-16	BD3C4	VT013992.D	Vial B	Ok,M
8	H2847-13	BD3C1	VT013993.D	Vial B	Ok,M
9	H2841-11RE	D9WS6RE	VT013994.D	Vial B, Internal standard fail	Confirms
10	H2841-14	D9WS9	VT013995.D	Vial B	Ok,M
11	H2841-15	D9WT0	VT013996.D	Vial B	Ok,M
12	H2841-16RE	D9WT1RE	VT013997.D	Vial B, Internal standard fail	Confirms
13	H2841-17RE	D9WW5RE	VT013998.D	Vial B, Internal standard fail	Confirms
14	VSTDCCC025	VSTD02591	VT013999.D		Ok,M
15	VT0509SBL02	VBLK79	VT014000.D		Ok,M
16	H2834-17	VHBLK02	VT014001.D	SB, vial A	Ok,M
17	H2909-04	G9HP2	VT014002.D	Vial A	Ok,M
18	H2909-05	G9HP3	VT014003.D	Vial A	Ok,M
19	H2909-06	G9HP4	VT014004.D	Vial A	Ok,M
20	H2909-07	G9HP5	VT014005.D	Vial A	Ok,M
21	H2909-08	G9HP6	VT014006.D	Vial A	Ok
22	H2909-09	G9HP7	VT014007.D	Vial A	Ok,M

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Instrument ID: MSVOA_T

Daily Analysis Runlog For Sequence/QCBatch ID # VT050916

Review By	feifei	Review On	5/10/2016 10:47:44 AM		
SubDirectory	VT050916	HP Acquire Method	MOONMOON	HP Processing Method	SOM2TLM050616S.M

STD. NAME	STD REF.#
Tune/Reschk	VP52809
Initial Calibration Stds	VP52724,VP52725,VP52726,VP52727,VP52728
CCC	VP52810,VP52811,VP52812
Internal Standard/PEM	VP52194,VP52709
ICV/I.BLK	N/A

23	H2909-10	G9HP8	VT014008.D	Vial A	Ok,M
24	H2909-11	G9HP9	VT014009.D	Vial A, Need MEOH	Dilution
25	H2909-12	G9HQ0	VT014010.D	Vial A, Surrogate Fail	ReRun
26	H2909-13	G9HQ1	VT014011.D	Vial A	Ok,M
27	H2909-14	G9HQ2	VT014012.D	Vial A, Need MEOH	Dilution
28	H2909-15	G9HQ3	VT014013.D	Vial A, Need MEOH	Dilution
29	H2909-16	G9HQ4	VT014014.D	Vial A, E flag in previous sample	ReRun
30	H2909-17	G9HQ5	VT014015.D	Vial A	Ok,M
31	H2909-18	G9HQ6	VT014016.D	Vial A	Ok,M
32	H2909-19	G9HQ7	VT014017.D	Vial A	Ok,M
33	H2909-20	G9HQ8	VT014018.D	Vial A, Internal standard fail	ReRun
34	H2909-21	G9HQ9	VT014019.D	Vial A, Internal standard fail	ReRun
35	H2909-22	G9HR2	VT014020.D	Vial A	Ok,M
36	VSTDCCC025EC	VSTD02592	VT014021.D		Ok,M

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Encore Preservation Log

Date Preservation: H2834- 5/5/16 Analyst Signature:

Balance id: Mettler PE300 Supervisor Signature:

Lab ID	Preservation Time	Vial A weight	Vial B weight	Vial C weight Preserve with MeoH	Comments
H2834-13A	14:00	3.75g	—	—	
-13B	14:01	—	4.47g	—	
-13C	14:02	—	—	4.68g	V6670 - MeOH
-14A	14:04	5.04g	—	—	
-14B	14:06	—	4.64g	—	
-14C	14:07	—	—	4.31g	V6670
-15A	14:09	5.03g	—	—	
-15B	14:10	—	3.66g	—	
-15C	14:11	—	—	5.22g	V6670
-16A	14:13	4.50g	—	—	
-16B	14:15	—	4.45g	—	
-16C	14:16	—	—	4.39g	V6670
					5/5/16

Instructions: 5ml MeOH added for SOM02.2 method and 10ml for regular 8260.Water addition to vial A and B is done at time of analysis. Preserve samples immediately if the samples are not to be analyzed within 48hrs of sampling.

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM050516

Review By	sohil	Review On	5/6/2016 7:15:46 PM		
SubDirectory	BM050516	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5017,1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	DFTPP64	BM005230.D	05 May 2016 10:23	UM/SJ	Ok
2	SSTD00540	BM005231.D	05 May 2016 11:09	UM/SJ	Ok
3	SSTD01041	BM005232.D	05 May 2016 11:45	UM/SJ	Ok
4	SSTD02042	BM005233.D	05 May 2016 12:21	UM/SJ	Ok,M
5	SSTD04043	BM005234.D	05 May 2016 12:57	UM/SJ	Ok,M
6	SSTD08044	BM005235.D	05 May 2016 13:33	UM/SJ	Ok,M
7	SSTD16045	BM005236.D	05 May 2016 15:53	UM/SJ	Ok,M
8	SSTDCCC020	BM005237.D	05 May 2016 16:30	UM/SJ	Ok,M
9	PB90262BL	BM005238.D	05 May 2016 17:06	UM/SJ	Ok,M
10	PB90297BL	BM005239.D	05 May 2016 17:42	UM/SJ	Ok
11	H2729-02ME	BM005240.D	05 May 2016 18:26	UM/SJ	Dilution
12	PB90263BL	BM005241.D	05 May 2016 19:02	UM/SJ	Ok,M
13	PB90285BL	BM005242.D	05 May 2016 19:39	UM/SJ	Ok,M
14	H2813-01	BM005243.D	05 May 2016 20:15	UM/SJ	Dilution
15	H2813-02	BM005244.D	05 May 2016 20:51	UM/SJ	Dilution
16	H2813-03	BM005245.D	05 May 2016 21:28	UM/SJ	Dilution
17	H2813-04	BM005246.D	05 May 2016 22:04	UM/SJ	Dilution
18	H2813-05	BM005247.D	05 May 2016 22:41	UM/SJ	Ok,M
19	H2813-06	BM005248.D	05 May 2016 23:17	UM/SJ	Dilution
20	H2813-07	BM005249.D	05 May 2016 23:53	UM/SJ	Dilution
21	H2813-08	BM005250.D	06 May 2016 00:30	UM/SJ	Ok,M
22	SSTDCCC020	BM005251.D	06 May 2016 01:06	UM/SJ	Ok,M
23	H2813-09	BM005252.D	06 May 2016 01:46	UM/SJ	Dilution
24	H2813-10	BM005253.D	06 May 2016 02:22	UM/SJ	Dilution
25	H2813-11	BM005254.D	06 May 2016 02:58	UM/SJ	Dilution
26	H2813-12	BM005255.D	06 May 2016 03:35	UM/SJ	Dilution

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM050516

Review By	sohil	Review On	5/6/2016 7:15:46 PM		
SubDirectory	BM050516	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5017,1ul IS/ 100ul sample
ICV/I.BLK	NA

27	H2813-13	BM005256.D	06 May 2016 04:11	UM/SJ	Dilution
28	H2813-14	BM005257.D	06 May 2016 04:47	UM/SJ	Dilution
29	H2813-19	BM005258.D	06 May 2016 05:24	UM/SJ	Ok,M
30	H2813-20	BM005259.D	06 May 2016 06:00	UM/SJ	Ok,M
31	H2813-17	BM005260.D	06 May 2016 08:35	UM/SJ	Ok
32	H2813-18	BM005261.D	06 May 2016 09:11	UM/SJ	Ok
33	H2729-02MEDL	BM005262.D	06 May 2016 09:47	UM/SJ	Ok,M
34	SSTDCCC020	BM005263.D	06 May 2016 10:24	UM/SJ	Ok,M
35	H2813-01DL	BM005264.D	06 May 2016 11:00	UM/SJ	Not Ok
36	H2813-02DL	BM005265.D	06 May 2016 11:36	UM/SJ	Not Ok
37	H2813-03DL	BM005266.D	06 May 2016 12:13	UM/SJ	Ok
38	H2813-04DL	BM005267.D	06 May 2016 12:49	UM/SJ	Ok
39	H2813-06DL	BM005268.D	06 May 2016 14:05	UM/SJ	Ok
40	H2813-07DL	BM005269.D	06 May 2016 14:41	UM/SJ	Ok
41	H2813-09DL	BM005270.D	06 May 2016 15:17	UM/SJ	Ok
42	H2813-10DL	BM005271.D	06 May 2016 15:53	UM/SJ	Ok
43	H2813-11DL	BM005272.D	06 May 2016 16:30	UM/SJ	Ok
44	H2813-12DL	BM005273.D	06 May 2016 17:06	UM/SJ	Ok
45	SSTDCCC020EC	BM005274.D	06 May 2016 17:42	UM/SJ	Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051116

Review By	sohil	Review On	5/12/2016 7:22:26 PM		
SubDirectory	BM051116	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5020, 1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	DFTPP36	BM005379.D	11 May 2016 08:24	UM/SJ	Ok
2	SSTDCCC020	BM005380.D	11 May 2016 09:01	UM/SJ	Ok,M
3	H2888-16	BM005381.D	11 May 2016 09:36	UM/SJ	Ok
4	H2888-17	BM005382.D	11 May 2016 10:13	UM/SJ	Ok
5	H2888-18	BM005383.D	11 May 2016 11:35	UM/SJ	Ok
6	H2888-19MS	BM005384.D	11 May 2016 12:47	UM/SJ	Ok
7	H2888-21	BM005385.D	11 May 2016 14:00	UM/SJ	Ok
8	H2888-20MSD	BM005386.D	11 May 2016 14:36	UM/SJ	Ok
9	H2888-22	BM005387.D	11 May 2016 15:13	UM/SJ	Ok,M
10	PB90332BL	BM005388.D	11 May 2016 15:49	UM/SJ	Ok
11	H2834-13	BM005389.D	11 May 2016 16:25	UM/SJ	Ok,M
12	H2834-14MS	BM005390.D	11 May 2016 17:02	UM/SJ	Not Ok
13	H2834-15MSD	BM005391.D	11 May 2016 17:38	UM/SJ	Not Ok
14	H2834-16	BM005392.D	11 May 2016 18:15	UM/SJ	Ok,M
15	SSTDCCC020EC	BM005393.D	11 May 2016 18:52	UM/SJ	Ok,M
16	H2918-05	BM005394.D	11 May 2016 19:28	UM/SJ	ReRun
17	H2918-10	BM005395.D	11 May 2016 20:05	UM/SJ	ReRun
18	PB90393BL	BM005396.D	11 May 2016 20:41	UM/SJ	Ok,M
19	H2847-10	BM005397.D	11 May 2016 21:18	UM/SJ	ReRun
20	H2890-19	BM005398.D	11 May 2016 21:54	UM/SJ	ReRun
21	H2890-20MS	BM005399.D	11 May 2016 22:31	UM/SJ	Ok
22	H2890-21MSD	BM005400.D	11 May 2016 23:07	UM/SJ	Ok,M
23	H2890-22	BM005401.D	11 May 2016 23:44	UM/SJ	ReRun
24	H2890-23	BM005402.D	12 May 2016 00:20	UM/SJ	Ok
25	PB90392BL	BM005403.D	12 May 2016 00:56	UM/SJ	Not Ok
26	H2846-01	BM005404.D	12 May 2016 01:33	UM/SJ	Not Ok

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051116

Review By	sohil	Review On	5/12/2016 7:22:26 PM		
SubDirectory	BM051116	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5020, 1ul IS/ 100ul sample
ICV/I.BLK	NA

27	H2846-02	BM005405.D	12 May 2016 02:09	UM/SJ	ReRun
28	PB90404BL	BM005406.D	12 May 2016 02:46	UM/SJ	ReRun
29	H2853-17	BM005407.D	12 May 2016 03:22	UM/SJ	Ok,M
30	H2943-02	BM005408.D	12 May 2016 03:58	UM/SJ	Ok,M
31	SSTDCCC020EC	BM005409.D	12 May 2016 05:11	UM/SJ	Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051316

Review By	sohil	Review On	5/16/2016 7:02:56 PM		
SubDirectory	BM051316	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5022, 1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	DFTPP38	BM005426.D	13 May 2016 11:10	UM/SJ	Ok
2	SSTDCCC020	BM005427.D	13 May 2016 11:46	UM/SJ	Ok,M
3	PB90403BL	BM005428.D	13 May 2016 12:23	UM/SJ	Ok
4	H2874-07	BM005429.D	13 May 2016 12:59	UM/SJ	Ok
5	H2874-09	BM005430.D	13 May 2016 13:36	UM/SJ	Ok,M
6	H2874-10MS	BM005431.D	13 May 2016 14:12	UM/SJ	Ok,M
7	H2874-11MSD	BM005432.D	13 May 2016 14:49	UM/SJ	Ok,M
8	H2874-17	BM005433.D	13 May 2016 15:25	UM/SJ	Ok,M
9	H2874-24	BM005434.D	13 May 2016 16:02	UM/SJ	Ok,M
10	SSTDCCC020	BM005435.D	13 May 2016 17:05	UM/SJ	Ok,M
11	PB90371BL	BM005436.D	13 May 2016 17:42	UM/SJ	Ok
12	H2847-14	BM005437.D	13 May 2016 18:19	UM/SJ	Ok,M
13	H2847-02	BM005438.D	13 May 2016 18:55	UM/SJ	Ok,M
14	H2847-05	BM005439.D	13 May 2016 19:32	UM/SJ	Ok,M
15	H2847-06	BM005440.D	13 May 2016 20:09	UM/SJ	Ok,M
16	H2847-07	BM005441.D	13 May 2016 20:45	UM/SJ	Ok,M
17	H2847-08	BM005442.D	13 May 2016 21:22	UM/SJ	Ok,M
18	H2847-09	BM005443.D	13 May 2016 21:58	UM/SJ	Ok,M
19	H2847-13	BM005444.D	13 May 2016 22:35	UM/SJ	Ok,M
20	H2847-01	BM005445.D	13 May 2016 23:11	UM/SJ	Ok,M
21	H2847-15	BM005446.D	13 May 2016 23:48	UM/SJ	Ok,M
22	H2847-16	BM005447.D	14 May 2016 00:24	UM/SJ	Ok,M
23	H2847-17	BM005448.D	14 May 2016 01:00	UM/SJ	Ok,M
24	SSTDCCC020	BM005449.D	14 May 2016 04:32	UM/SJ	Ok,M
25	PB90330BL	BM005450.D	14 May 2016 05:09	UM/SJ	Ok,M
26	H2834-01	BM005451.D	14 May 2016 05:45	UM/SJ	Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051316

Review By	sohil	Review On	5/16/2016 7:02:56 PM		
SubDirectory	BM051316	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5022, 1ul IS/ 100ul sample
ICV/I.BLK	NA

27	H2834-02MS	BM005452.D	14 May 2016 06:21	UM/SJ	Ok,M
28	H2834-03MSD	BM005453.D	14 May 2016 06:58	UM/SJ	Ok,M
29	H2834-18	BM005454.D	14 May 2016 07:34	UM/SJ	Ok,M
30	H2834-19	BM005455.D	14 May 2016 08:10	UM/SJ	Ok,M
31	H2834-20	BM005456.D	14 May 2016 08:47	UM/SJ	Ok,M
32	H2834-21	BM005457.D	14 May 2016 09:23	UM/SJ	Ok,M
33	H2853-18	BM005458.D	14 May 2016 09:59	UM/SJ	Ok,M
34	H2834-14MS	BM005459.D	14 May 2016 10:36	UM/SJ	Ok,M
35	H2834-15MSD	BM005460.D	14 May 2016 11:12	UM/SJ	Ok,M
36	SSTDCCC020EC	BM005461.D	14 May 2016 13:09	UM/SJ	Ok

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM050516

Review By	sohil	Review On	5/6/2016 7:15:46 PM		
SubDirectory	BM050516	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5017,1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	DFTPP64	DFTPP64	BM005230.D		Ok
2	SSTD00540	SSTD00540	BM005231.D		Ok
3	SSTD01041	SSTD01041	BM005232.D		Ok
4	SSTD02042	SSTD02042	BM005233.D		Ok,M
5	SSTD04043	SSTD04043	BM005234.D		Ok,M
6	SSTD08044	SSTD08044	BM005235.D		Ok,M
7	SSTD16045	SSTD16045	BM005236.D		Ok,M
8	SSTDCCC020	SSTD02046	BM005237.D		Ok,M
9	PB90262BL	SBLK62	BM005238.D		Ok,M
10	PB90297BL	SBLK97	BM005239.D		Ok
11	H2729-02ME	BD3D0ME	BM005240.D	Need 2X	Dilution
12	PB90263BL	SBLK63	BM005241.D		Ok,M
13	PB90285BL	SBLK85	BM005242.D		Ok,M
14	H2813-01	BC7M6	BM005243.D	Need 20X	Dilution
15	H2813-02	BC7M7	BM005244.D	Need 10X	Dilution
16	H2813-03	BC7P2	BM005245.D	Need 10X	Dilution
17	H2813-04	BC7P3	BM005246.D	Need 10X	Dilution
18	H2813-05	BC7Q4	BM005247.D		Ok,M
19	H2813-06	BC7R8	BM005248.D	Need 10X	Dilution
20	H2813-07	BC7R9	BM005249.D	Need 10X	Dilution
21	H2813-08	BC7S5	BM005250.D		Ok,M
22	SSTDCCC020	SSTD02047	BM005251.D		Ok,M

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM050516

Review By	sohil	Review On	5/6/2016 7:15:46 PM		
SubDirectory	BM050516	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5017,1ul IS/ 100ul sample
ICV/I.BLK	NA

23	H2813-09	BC7S7	BM005252.D	Need 10X	Dilution
24	H2813-10	BC7S8	BM005253.D	Need 10X	Dilution
25	H2813-11	BC7T1	BM005254.D	Need 10X	Dilution
26	H2813-12	BC7T2	BM005255.D	Need 10X	Dilution
27	H2813-13	BC7T4	BM005256.D	Need 10X	Dilution
28	H2813-14	BC7T5	BM005257.D	Need 10X	Dilution
29	H2813-19	BC812	BM005258.D		Ok,M
30	H2813-20	BC813	BM005259.D		Ok,M
31	H2813-17	BC810	BM005260.D		Ok
32	H2813-18	BC811	BM005261.D		Ok
33	H2729-02MEDL	BD3D0MEDL	BM005262.D		Ok,M
34	SSTDCCC020	SSTD02048	BM005263.D		Ok,M
35	H2813-01DL	BC7M6DL	BM005264.D	Need further dilution	Not Ok
36	H2813-02DL	BC7M7DL	BM005265.D	wrong dilution	Not Ok
37	H2813-03DL	BC7P2DL	BM005266.D		Ok
38	H2813-04DL	BC7P3DL	BM005267.D		Ok
39	H2813-06DL	BC7R8DL	BM005268.D		Ok
40	H2813-07DL	BC7R9DL	BM005269.D		Ok
41	H2813-09DL	BC7S7DL	BM005270.D		Ok
42	H2813-10DL	BC7S8DL	BM005271.D		Ok
43	H2813-11DL	BC7T1DL	BM005272.D		Ok
44	H2813-12DL	BC7T2DL	BM005273.D		Ok
45	SSTDCCC020EC	SSTD02049	BM005274.D		Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051116

Review By	sohil	Review On	5/12/2016 7:22:26 PM		
SubDirectory	BM051116	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5020, 1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	DFTPP36	DFTPP36	BM005379.D		Ok
2	SSTDCCC020	SSTD02061	BM005380.D		Ok,M
3	H2888-16	D9WX8	BM005381.D		Ok
4	H2888-17	D9WX9	BM005382.D		Ok
5	H2888-18	D9WY0	BM005383.D		Ok
6	H2888-19MS	D9WY0MS	BM005384.D		Ok
7	H2888-21	D9WY1	BM005385.D		Ok
8	H2888-20MSD	D9WY0MSD	BM005386.D	compound # 49,77 fail for recovery	Ok
9	H2888-22	D9WY3	BM005387.D		Ok,M
10	PB90332BL	SBLK32	BM005388.D		Ok
11	H2834-13	H4061	BM005389.D		Ok,M
12	H2834-14MS	H4061MS	BM005390.D	Internal standard fail	Not Ok
13	H2834-15MSD	H4061MSD	BM005391.D	Internal Standard fail	Not Ok
14	H2834-16	H4076	BM005392.D		Ok,M
15	SSTDCCC020EC	SSTD02062	BM005393.D		Ok,M
16	H2918-05	SVOC-GPC-BLANK	BM005394.D	Internal standard fail	ReRun
17	H2918-10	SVOC-GPC2-BLANK	BM005395.D	Internal standard fail	ReRun
18	PB90393BL	SBLK93	BM005396.D		Ok,M
19	H2847-10	BD3J6	BM005397.D	Internal standard fail	ReRun
20	H2890-19	D9X06	BM005398.D	Internal standard fail	ReRun
21	H2890-20MS	D9X06MS	BM005399.D	compound # 52,49,15,6 fail for recovery	Ok
22	H2890-21MSD	D9X06MSD	BM005400.D	compound # 52,49,15,6 fail for recovery	Ok,M

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051116

Review By	sohil	Review On	5/12/2016 7:22:26 PM		
SubDirectory	BM051116	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5020, 1ul IS/ 100ul sample
ICV/I.BLK	NA

23	H2890-22	D9X07	BM005401.D	Surrogate fail	ReRun
24	H2890-23	D9X12	BM005402.D		Ok
25	PB90392BL	SBLK92	BM005403.D	Internal standard fail	Not Ok
26	H2846-01	C0AC7	BM005404.D	Need straight	Not Ok
27	H2846-02	C0AC8	BM005405.D	Internal standard fail	ReRun
28	PB90404BL	SBLK04	BM005406.D	Internal standard fail	ReRun
29	H2853-17	D9X08	BM005407.D		Ok,M
30	H2943-02	H4105	BM005408.D		Ok,M
31	SSTDCCC020EC	SSTD02063	BM005409.D		Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051316

Review By	sohil	Review On	5/16/2016 7:02:56 PM		
SubDirectory	BM051316	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5022, 1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	DFTPP38	DFTPP38	BM005426.D		Ok
2	SSTDCCC020	SSTD02066	BM005427.D		Ok,M
3	PB90403BL	SBLK03	BM005428.D		Ok
4	H2874-07	H4111	BM005429.D		Ok
5	H2874-09	H4113	BM005430.D		Ok,M
6	H2874-10MS	H4113MS	BM005431.D		Ok,M
7	H2874-11MSD	H4113MSD	BM005432.D		Ok,M
8	H2874-17	H4013	BM005433.D		Ok,M
9	H2874-24	H4097	BM005434.D		Ok,M
10	SSTDCCC020	SSTD02034	BM005435.D		Ok,M
11	PB90371BL	SBLK71	BM005436.D		Ok
12	H2847-14	BD3C2	BM005437.D		Ok,M
13	H2847-02	BD371	BM005438.D		Ok,M
14	H2847-05	BD373	BM005439.D		Ok,M
15	H2847-06	BD374	BM005440.D		Ok,M
16	H2847-07	BD376	BM005441.D		Ok,M
17	H2847-08	BD377	BM005442.D		Ok,M
18	H2847-09	BD378	BM005443.D		Ok,M
19	H2847-13	BD3C1	BM005444.D		Ok,M
20	H2847-01	B0AR7	BM005445.D		Ok,M
21	H2847-15	BD3C3	BM005446.D		Ok,M
22	H2847-16	BD3C4	BM005447.D		Ok,M

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051316

Review By	sohil	Review On	5/16/2016 7:02:56 PM		
SubDirectory	BM051316	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5022, 1ul IS/ 100ul sample
ICV/I.BLK	NA

23	H2847-17	BD3E2	BM005448.D		Ok,M
24	SSTDCCC020	SSTD02035	BM005449.D		Ok,M
25	PB90330BL	SBLK30	BM005450.D		Ok,M
26	H2834-01	H4002	BM005451.D		Ok,M
27	H2834-02MS	H4002MS	BM005452.D		Ok,M
28	H2834-03MSD	H4002MSD	BM005453.D		Ok,M
29	H2834-18	H4102	BM005454.D		Ok,M
30	H2834-19	H4116	BM005455.D		Ok,M
31	H2834-20	H4117	BM005456.D		Ok,M
32	H2834-21	H4118	BM005457.D		Ok,M
33	H2853-18	D9X09	BM005458.D		Ok,M
34	H2834-14MS	H4061MS	BM005459.D		Ok,M
35	H2834-15MSD	H4061MSD	BM005460.D		Ok,M
36	SSTDCCC020EC	SSTD02036	BM005461.D		Ok

CHEMTECH

PERCENT SOLIDS

Analyst Name: jignesh

Date: 5/6/2016

OVEN TEMP IN Celsius (°C) :	109	OVEN TEMP OUT Celsius (°C):	103
Time IN	17:20	Time OUT:	08:19
In Date:	05/05/2016	Out Date:	05/06/2016
Weight Check 1.0g=	1.00 g	Weight Check 1.0g=	1.00 g
Weight Check 10g=	10.00 g	Weight Check 10g=	10.00 g

QC: LB81430

Lab ID	Client Sample ID	Dish#	Dish Weight (g) (A)	Dish + Sample Wt. (g) (B)	Dish + Dry Sample Wt. (g) (C)	% Solid
H2834-13	H4061	1	1.17	9.52	6.5	63.8
H2834-14	H4061MS	2	1.17	9.52	6.5	63.8
H2834-15	H4061MSD	3	1.17	9.52	6.5	63.8
H2834-16	H4076	4	1.19	9.68	5.97	56.3
H2834-17	VHBLK02	5	1.00	2.00	2.00	100

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

LB81430

WorkList Name : %1-h2834 WorkList ID : 86692 Date : 5/5/2016 4:53:33 PM

Due Date	Matrix	Sample	Test	Preservative	Customer	Storage Location	Customer Sample	Collect Date	Method
05/13/2016	Solid	H2834-13	Percent Solids	Cool 4 deg C	USEP04	R11	H4061	05/03/2016	Chemtech -SO
05/13/2016	Solid	H2834-14	Percent Solids	Cool 4 deg C	USEP04	R11	H4061MS	05/03/2016	Chemtech -SO
05/13/2016	Solid	H2834-15	Percent Solids	Cool 4 deg C	USEP04	R11	H4061MSD	05/03/2016	Chemtech -SO
05/13/2016	Solid	H2834-16	Percent Solids	Cool 4 deg C	USEP04	R11	H4076	05/03/2016	Chemtech -SO
05/13/2016	Solid	H2834-17	Percent Solids	Cool 4 deg C	USEP04	R11	VHBLK02	05/03/2016	Chemtech -SO

1519

Date/Time 05/05/16 5:00 pm

Received by:

Relinquished by:

Page 1 of 1

Date/Time 05/05/16 5:35 pm

Received by:

Relinquished by:

ORIGIN DAPAA (303) 590-9145
EDWARD LUNDVALL
EA ENGINEERING, SCIENCE & TECH
7593 EAST PRENTICE AVENUE
SUITE 2466
GREENWOOD VILLAGE, CO 80111
UNITED STATES US

SHIP DATE: 02MAY16
ACTWGT: 80.00 LB
CAD: 5873190/INET3730

BILL SENDER

TO DIVYA MEHTA
CHEMTECH CONSULTING GROUP
284 SHEFFIELD ST
MOUNTAINSIDE NJ 07092
(908) 789-8900
INV:
PO:
REF: 620889.539WFE
DEPT:

540J1/6323/727F

FedEx Express

J1810020501uu

George Negrau 5th floor 920 4 pcc

TRK# 0201 7762 4514 8907

TUE - 03 MAY 10:30A
PRIORITY OVERNIGHT

NE CDWA

07092
NJ-US EWR

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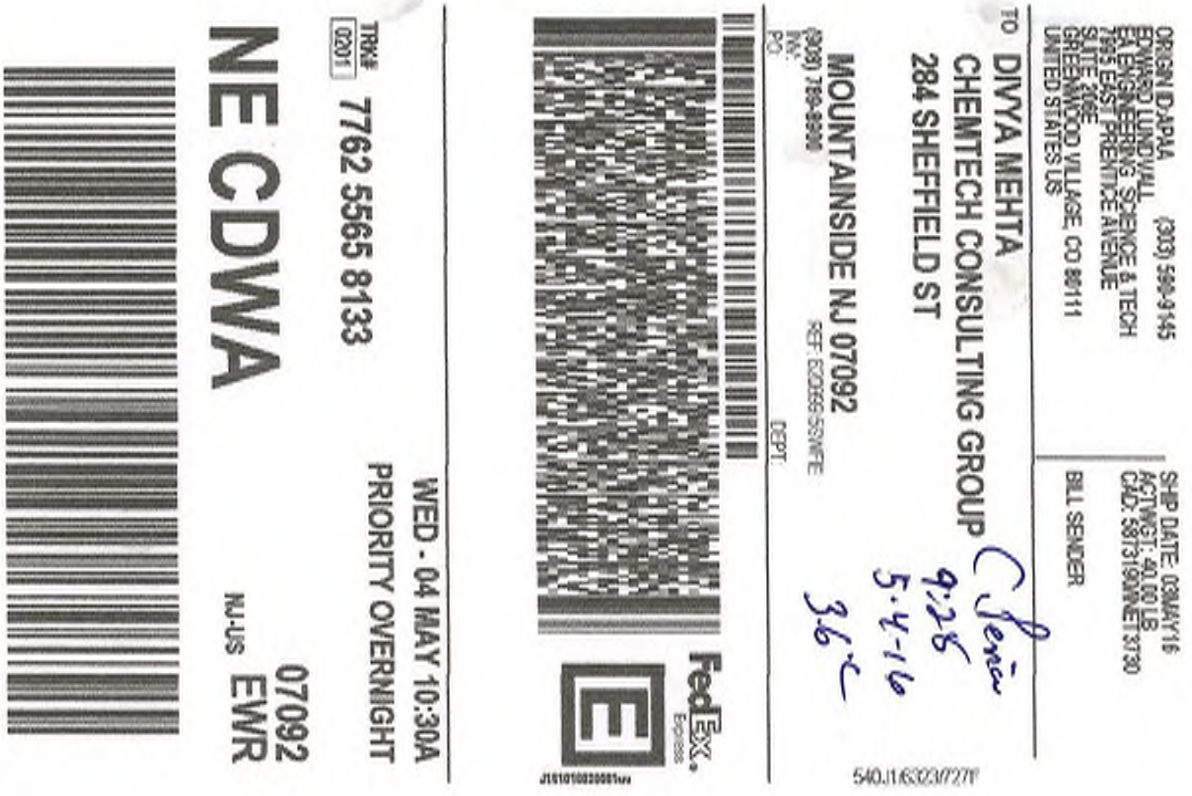

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3

ORIGIN ID:APAA (303) 590-9145
EDWARD LUNDVALL
EA ENGINEERING, SCIENCE & TECH
7995 EAST PRENTICE AVENUE
SUITE 206E
GREENWOOD VILLAGE, CO 80111
UNITED STATES US

SHIP DATE: 04MAY16
ACTWGT: 80.00 LB
CAD: 5873190/INET3730

BILL SENDER

TO **DIVYA MEHTA**
CHEMTECH CONSULTING GROUP
284 SHEFFIELD ST

MOUNTAINSIDE NJ 07092
(908) 789-8900 REF: 6203899.59WFIE
INV:
PO: DEPT:

540J1/63D3/27FF

FedEx Express

George Nelson 5/5/16 925. 31°C

THU - 05 MAY 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **7762 5738 0633**

NE CDWA

07092
NJ-US **EWR**

1523

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4

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EDWARD LUND/VALL
EA ENGINEERING, SCIENCE & TECH
7995 EAST PRENTICE AVENUE
SUITE 206E
GREENWOOD VILLAGE, CO 80111
UNITED STATES US

SHIP DATE: 04MAY16
ACTWGT: 80.00 LB
CAD: 5873198/INET3730

BILL SENDER

TO **DIVYA MEHTA**
CHEMTECH CONSULTING GROUP
284 SHEFFIELD ST

MOUNTAINSIDE NJ 07092
(908) 789-8900 REF: 6202899.5SWFIE
INV:
PO: DEPT:

540J1/03230727/F

FedEx Express

Gorge Negron 5/5/16 925 2.9°C

THU - 05 MAY 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **7762 5738 7329**

NE CDWA

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NJ-US **EWR**

1524

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5

5

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Login Summary Report

Order ID :	H2834	Order Date :	5/5/2016 9:25:00 AM	Project Mgr :	Mohammad
Client :	USEPA CLP Organics	Project :	46114	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	5/5/2016 9:25:00 AM	EDD Type :	EPA CLP
Date Sign Off :	5/5/2016 3:55:03 PM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
H2834-01	H4002	Water	05/02/2016						
				SVOC-TCL BNA -20		SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-02	H4002MS	Water	05/02/2016						
				SVOC-TCL BNA -20		SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-03	H4002MSD	Water	05/02/2016						
				SVOC-TCL BNA -20		SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-04	H4006	Water	05/02/2016		TB				
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-05	H4094	Water	05/02/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-06	H4121	Water	05/02/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-07	H4123	Water	05/02/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-08	H4124	Water	05/02/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-09	H4132	Water	05/02/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-10	H4133	Water	05/02/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-11	VHBLK01	Water	05/02/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-12	H4004	Water	05/03/2016		TB				
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-13	H4061	Solid	05/03/2016						
				Percent Solids		Chemtech -SOP	15	05/26/2016	05/26/2016

				SVOC-TCL BNA -20	SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-TCLVOA-10	SOM02.2_VOC	15	05/26/2016	05/26/2016
H2834-14	H4061MS	Solid	05/03/2016					
				Percent Solids	Chemtech -SOP	15	05/26/2016	05/26/2016
				SVOC-TCL BNA -20	SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-TCLVOA-10	SOM02.2_VOC	15	05/26/2016	05/26/2016
H2834-15	H4061MSD	Solid	05/03/2016					
				Percent Solids	Chemtech -SOP	15	05/26/2016	05/26/2016
				SVOC-TCL BNA -20	SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-TCLVOA-10	SOM02.2_VOC	15	05/26/2016	05/26/2016
H2834-16	H4076	Solid	05/03/2016					
				Percent Solids	Chemtech -SOP	15	05/26/2016	05/26/2016
				SVOC-TCL BNA -20	SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-TCLVOA-10	SOM02.2_VOC	15	05/26/2016	05/26/2016
H2834-17	VHBLK02	Solid	05/03/2016					
				Percent Solids	Chemtech -SOP	15	05/26/2016	05/26/2016
				VOC-TCLVOA-10	SOM02.2_VOC	15	05/26/2016	05/26/2016
H2834-18	H4102	Water	05/03/2016					
				SVOC-TCL BNA -20	SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-19	H4116	Water	05/03/2016					
				SVOC-TCL BNA -20	SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-20	H4117	Water	05/03/2016					
				SVOC-TCL BNA -20	SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016
H2834-21	H4118	Water	05/03/2016					
				SVOC-TCL BNA -20	SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016

LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H2834 USEP04	**Order Date:**	5/3/2016	**Project Mgr:**	mohammad
Client Name:	USEPA CLP Organics	**Project Name:**	46114	**Report Type:**	USEPA CLP
Client Contact:	Anita Kapadia	**Rec DateTime**	5/3/2016 9:20:00 AM	**EDD:**	EPA CLP
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	1,2
Invoice Contact	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	5/5/2016 3:55:03 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates
H2834-01	H4002	Water	5/2/2016	9:00	5	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/16/2016	5/16/20
H2834-02	H4002MS	Water	5/2/2016	9:00	5	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/16/2016	5/16/20
H2834-03	H4002MSD	Water	5/2/2016	9:00	5	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/16/2016	5/16/20
H2834-04	H4006	Water	5/2/2016	7:00	3	VOC-Low Level -15		SOM02.2_Trace	TB	15 Bus. 5/16/2016	5/16/20
H2834-05	H4094	Water	5/2/2016	13:40	3	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/16/2016	5/16/20
H2834-06	H4121	Water	5/2/2016	15:10	3	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/16/2016	5/16/20
H2834-07	H4123	Water	5/2/2016	14:00	3	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/16/2016	5/16/20
H2834-08	H4124	Water	5/2/2016	14:30	3	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/16/2016	5/16/20

1527

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H2834 USEP04	**Order Date:**	5/3/2016	**Project Mgr:**	mohammad
Client Name:	USEPA CLP Organics	**Project Name:**	46114	**Report Type:**	USEPA CLP
Client Contact:	Anita Kapadia	**Rec DateTime**	5/3/2016 9:20:00 AM	**EDD:**	EPA CLP
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	2
Invoice Contact	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	5/5/2016 3:55:03 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates
H2834-09	H4132	Water	5/2/2016	14:20	3	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/16/2016	5/16/20
H2834-10	H4133	Water	5/2/2016	13:15	3	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/16/2016	5/16/20
H2834-11	VHBLK01	Water	5/2/2016	0:00	3	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/16/2016	5/16/20
H2834-12	H4004	Water	5/3/2016	7:30	3	VOC-Low Level -15		SOM02.2_Trace	TB	15 Bus. 5/17/2016	5/17/20
H2834-13	H4061	Solid	5/3/2016	8:55	5	VOC-TCLVOA-10		SOM02.2_VOC		15 Bus. 5/17/2016	5/17/20
H2834-14	H4061MS	Solid	5/3/2016	8:55	5	VOC-TCLVOA-10		SOM02.2_VOC		15 Bus. 5/17/2016	5/17/20
H2834-15	H4061MSD	Solid	5/3/2016	8:55	5	VOC-TCLVOA-10		SOM02.2_VOC		15 Bus. 5/17/2016	5/17/20
H2834-16	H4076	Solid	5/3/2016	13:45	5	VOC-TCLVOA-10		SOM02.2_VOC		15 Bus. 5/17/2016	5/17/20
H2834-17	VHBLK02	Solid	5/3/2016	0:00	3	VOC-TCLVOA-10		SOM02.2_VOC		15 Bus. 5/17/2016	5/17/20

1528

LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H2834 USEP04	**Order Date:**	5/3/2016	**Project Mgr:**	mohammad
Client Name:	USEPA CLP Organics	**Project Name:**	46114	**Report Type:**	USEPA CLP
Client Contact:	Anita Kapadia	**Rec DateTime**	5/5/2016 9:25:00 AM	**EDD:**	EPA CLP
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	4,5
Invoice Contact	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	5/5/2016 3:55:03 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates
H2834-18	H4102	Water	5/3/2016	10:30	5	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/17/2016	5/17/20
H2834-19	H4116	Water	5/3/2016	13:45	5	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/17/2016	5/17/20
H2834-20	H4117	Water	5/3/2016	11:20	5	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/17/2016	5/17/20
H2834-21	H4118	Water	5/3/2016	12:00	5	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/17/2016	5/17/20

1529

LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H2834 USEP04	**Order Date:**	5/3/2016	**Project Mgr:**	mohammad
Client Name:	USEPA CLP Organics	**Project Name:**	46114	**Report Type:**	USEPA CLP
Client Contact:	Anita Kapadia	**Rec DateTime**	5/5/2016 9:25:00 AM	**EDD:**	EPA CLP
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	4,5
Invoice Contact	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	5/5/2016 3:55:03 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates

SAMPLE CONDITION RECORD

Are samples submitted with a chain of custody?	Yes
Are the number of samples the same as stated on the chain of custody?	Yes
Are bottle caps tight and securely in place?	Yes
Were all containers intact when received?	Yes
Were samples submitted in an ice chest?	Yes
Were samples received cold?	Yes
Were samples within the holding time for the requested test(s)?	Yes
Is the volume of sample submitted sufficient for the requested test(s)?	Yes
Are all samples for volatile organic analyses free of headspace?	Yes

ORDER COMMENT

CASE:46114, SDG: H4002 NO MA REQUIRED ----------

Relinquished By: _____ **Received By:** _____

Date / Time: 5.5.16 4:00 **Date / Time:** 5/5/16 400

Storage Area: VOA Refridgerator Room

1530

WORKLIST(Hardcopy Internal Chain)

WorkList Name : H2834 SVOC 2.2 W WorkList ID : 86697 Date : 5/5/2016 11:15:56 AM

Due Date	Matrix	Sample	Test	Preservative	Customer	Storage Location	Customer Sample	Collect Date	Method
05/09/2016	Water	H2834-01	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4002	05/02/2016	SOM02.2_SVC
05/09/2016	Water	H2834-02	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4002MS	05/02/2016	SOM02.2_SVC
05/09/2016	Water	H2834-03	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4002MSD	05/02/2016	SOM02.2_SVC
05/10/2016	Water	H2834-18	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4102	05/03/2016	SOM02.2_SVC
05/10/2016	Water	H2834-19	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4116	05/03/2016	SOM02.2_SVC
05/10/2016	Water	H2834-20	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4117	05/03/2016	SOM02.2_SVC
05/10/2016	Water	H2834-21	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4118	05/03/2016	SOM02.2_SVC

Date/Time 05/05/16
Received by: [signature]
Relinquished by: CP

Date/Time 05/05/16
Received by: CP
Relinquished by: [signature]

WORKLIST(Hardcopy Internal Chain)

WorkList Name : H2834 SVOC 2.2 WorkList ID : 86721 Date : 5/5/2016 3:01:20 PM

Due Date	Matrix	Sample	Test	Preservative	Customer	Storage Location	Customer Sample	Collect Date	Method
05/17/2016	Solid	H2834-13	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4061	05/03/2016	SOM02.2_SVC
05/17/2016	Solid	H2834-14	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4061MS	05/03/2016	SOM02.2_SVC
05/17/2016	Solid	H2634-15	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4061MSD	05/03/2016	SOM02.2_SVC
05/17/2016	Solid	H2834-16	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4076	05/03/2016	SOM02.2_SVC

Date/Time 05/05/16
Received by:
Relinquished by: CP

Date/Time 05/05/16
Received by: CP
Relinquished by:

mildred V. Reyes

From: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Sent: Wednesday, May 04, 2016 11:09 AM
To: epa@chemtech.net
Cc: "Goodrich, Donald"
Subject: Region 08 | Case 46114 | Lab CHM | Issue Multiple | FINAL
Attachments: COC - 8-050216-102658-0009_MSD.PDF; COC - 8-050216-163402-0010_MSD.PDF; COC- 8-042516-142347-0005.pdf

Sohil,

Incorrect/duplicated sample IDs
Issue 1: The COC lists individual sample for each laboratory QC sample (MS/MSD), instead of including them under one sample ID. The laboratory is requesting to use the sample IDs as listed below for each parent sample and laboratory QC sample.

Sample Identifier	CLP No.	Location	Sample Type	Lab will use
A-GW-MTO-MS	H4001	Mt Olivet	Lab QC	H4002, H4002MS, H4002MSD
A-GW-MTO	H4002	Mt Olivet	Parent Sample	
A-GW-MTO-MSD	H4003	Mt Olivet	Lab QC	
A-GW-MTO	MH4001	Mt Olivet	Parent Sample	MH4001 MH4001D MH1001S
A-GW-MTO-MS	MH4005	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4016	Mt Olivet	Lab QC	
A-GW-MTO	MH4002	Mt Olivet	Parent Sample	MH4002 MH4002D MH1002S
A-GW-MTO-MS	MH4014	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4017	Mt Olivet	Lab QC	

Resolution: Per Region 8, the laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples using the attached revised COCs.

pH outside allowable limit
Issue 2: The samples listed below appear to be received unpreserved. The laboratory like to preserve these samples in-house.
MH4001
MH4002
MH4005
MH4014
MH4016
MH4017
Resolution 2: Per Region 8, the laboratory shall preserve the unpreserved samples to an acceptable pH level of <2. This resolution applies to the remainder of the samples associated with this Case when the pH exceeds acceptable levels. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Please let me know if you have any questions. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
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From: Moss, Pamela [mailto:pmoss@eaest.com]
Sent: Wednesday, May 04, 2016 10:11 AM
To: Don Goodrich (Goodrich.Donald@epa.gov); Vanaman, Alexandra
Subject: RE: Region 08 | Case 46114 | Lab CHM - Corrected COCs for MS/MSD

Plz see attached corrected COCs for samples collected April 25 and May 2 with associated MS/MSD samples. These have been revised per your email. Plz let me know if you have any questions. thanks.

Pam

PLZ NOTE NEW ADDRESS BELOW

Pamela J. Moss
Senior Scientist
EA Engineering, Science, and Technology, Inc., PBC
7995 E. Prentice Ave, Suite 206E
Greenwood Village, CO 80111
303-590-9143 (office)
303-810-6903 (cell)
pmoss@eaest.com

EA Engineering, Science, and Technology, Inc.

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Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8

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From: Vanaman, Alexandra
Sent: Tuesday, May 03, 2016 3:20 PM
To: 'epa@chemtech.net'
Subject: Region 08 | Case 46114 | Lab CHM | Issue Multiple

Sohil,

Please see the resolutions below. Please note that this ROC has not been finalized. I will finalize the ROC once I receive the revised COC from the sampler for issue 1, however, the numbers proposed will be submitted on the COCs so you can log the samples in and start with sample prep and analyses.

Incorrect/duplicated sample IDs
Issue 1: The COC lists individual sample for each laboratory QC sample (MS/MSD), instead of including them under one sample ID. The laboratory is requesting to use the sample IDs as listed below for each parent sample and laboratory QC sample.

Sample Identifier	CLP No.	Location	Sample Type	Lab will use
A-GW-MTO-MS	H4001	Mt Olivet	Lab QC	H4002, H4002MS, H4002MSD
A-GW-MTO	H4002	Mt Olivet	Parent Sample	
A-GW-MTO-MSD	H4003	Mt Olivet	Lab QC	
A-GW-MTO	MH4001	Mt Olivet	Parent Sample	MH4001 MH4001D MH1001S
A-GW-MTO-MS	MH4005	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4016	Mt Olivet	Lab QC	
A-GW-MTO	MH4002	Mt Olivet	Parent Sample	MH4002 MH4002D MH1002S
A-GW-MTO-MS	MH4014	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4017	Mt Olivet	Lab QC	

pH outside allowable limit
Issue 2: The samples listed below appear to be received unpreserved. The laboratory like to preserve these samples in-house.
MH4001
MH4002
MH4005
MH4014
MH4016

MH4017
Resolution 2: Per Region 8, the laboratory shall preserve the unpreserved samples to an acceptable pH level of <2. This resolution applies to the remainder of the samples associated with this Case when the pH exceeds acceptable levels. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8
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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Tuesday, May 03, 2016 3:04 PM
To: Vanaman, Alexandra
Cc: Moss, Pamela
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Multiple

Ali, resolve the second issue as follows:

Issue 2: the laboratory shall preserve the unpreserved samples to an acceptable pH level of <2. This resolution applies to the remainder of the samples associated with this Case when the pH exceeds acceptable levels.

Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Tuesday, May 03, 2016 2:58 PM
To: Moss, Pamela; Vanaman, Alexandra
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Multiple

Ali, Pam and I discussed the COC issue this morning. Pam will be revising the COCs just as the lab proposed. You can notify the lab that the numbers they proposed will be submitted on the COCs so they can log the samples in and start with sample prep and analyses.

Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Tuesday, May 03, 2016 12:07 PM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Cc: Moss, Pamela <pmoss@eaest.com>
Subject: Region 08 | Case 46114 | Lab CHM | Issue Multiple

Good afternoon,

CHM is reporting the following issue regarding Case 46114. Please advise. Also, please advise if the resolution for issue 2 should be applied to the remainder of samples for this Case when the pH exceeds allowable the limits.

Incorrect/duplicated sample IDs
Issue 1: The COC lists individual sample for each laboratory QC sample (MS/MSD), instead of including them under one sample ID. The laboratory is requesting to use the sample IDs as listed below for each parent sample and laboratory QC sample.

Sample Identifier	CLP No.	Location	Sample Type	Lab will use
A-GW-MTO-MS	H4001	Mt Olivet	Lab QC	H4002, H4002MS, H4002MSD
A-GW-MTO	H4002	Mt Olivet	Parent Sample	
A-GW-MTO-MSD	H4003	Mt Olivet	Lab QC	
A-GW-MTO	MH4001	Mt Olivet	Parent Sample	MH4001 MH4001D MH1001S
A-GW-MTO-MS	MH4005	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4016	Mt Olivet	Lab QC	
A-GW-MTO	MH4002	Mt Olivet	Parent Sample	MH4002 MH4002D MH1002S
A-GW-MTO-MS	MH4014	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4017	Mt Olivet	Lab QC	

pH outside allowable limit
Issue 2: The samples listed below appear to be received unpreserved. The laboratory like to preserve these samples in-house.
MH4001
MH4002
MH4005
MH4014
MH4016
MH4017

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8

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From: Sohil Jodhani [mailto:Sohil@chemtech.net]
Sent: Tuesday, May 03, 2016 12:49 PM
To: Vanaman, Alexandra
Cc: DASSsupport; Mohammad@chemtech.net
Subject: Region 08 | Case 46114 | Lab CHM | SDG H4002, MH4001 & MH4002 | Issue Incorrect/duplicated sample IDs

Hi Alexandra,

Sample received with 05/03 shipment has below discrepancies,

Issue1: The COC lists individual sample for each laboratory QC sample (MS/MSD), instead of including them under one sample ID. The laboratory is requesting the use the sample IDs below for each parent sample and laboratory QC sample.

Sample Identifier	CLP No.	Location	Sample Type	Lab will use
A-GW-MTO-MS	H4001	Mt Olivet	Lab QC	**H4002, H4002MS, H4002MSD**
A-GW-MTO	H4002	Mt Olivet	Parent Sample	
A-GW-MTO-MSD	H4003	Mt Olivet	Lab QC	
A-GW-MTO	MH4001	Mt Olivet	Parent Sample	**MH4001 MH4001D MH1001S**
A-GW-MTO-MS	MH4005	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4016	Mt Olivet	Lab QC	
A-GW-MTO	MH4002	Mt Olivet	Parent Sample	**MH4002 MH4002D MH1002S**
A-GW-MTO-MS	MH4014	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4017	Mt Olivet	Lab QC	

Issue 2: The laboratory has received three water samples for Total Metals and three water samples for Dissolved metals on 05/03. The samples listed below were received unpreserved. The laboratory like to preserve these samples in-house.
MH4001
MH4002
MH4005
MH4014
MH4016
MH4017

Please see attachment for your reference.

Thanks & Regards,

Sohil Jodhani
QC-Analyst
Direct Line: (908)728-3148
General Number: (908)789-8900
Fax: (908)789-8922

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mildred V. Reyes

From: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Sent: Monday, May 09, 2016 11:20 AM
To: epa@chemtech.net
Cc: "Goodrich, Donald"; Moss, Pamela
Subject: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC | FINAL
Attachments: 46114-0507.pdf

Sohil,

Issue: The water samples for this Case are scheduled for 86 TVOA and 17 SVOA analysis; however, the COCs list VOA=TCL VOCs by CLP.

Resolution: Per Region 8, the samples in question shall be analyzed as scheduled for TVOA. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples. This resolution may be applied to all COCs received for this Case with this issue.

Please let me know if you have any questions. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2, 7, and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Monday, May 09, 2016 11:15 AM
To: Vanaman, Alexandra
Cc: Moss, Pamela
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Correct, thanks.
-dgg

Don Goodrich

US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Monday, May 09, 2016 9:14 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Cc: Moss, Pamela <pmoss@eaest.com>
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Hi Don,

Should this resolution be applied to all COCs received for this Case with this issue?

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2, 7, and 8
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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Monday, May 09, 2016 11:12 AM
To: Vanaman, Alexandra
Cc: Moss, Pamela
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Ali, the samples in question shall be analyzed as scheduled for TVOA.

Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Monday, May 09, 2016 7:52 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>

Cc: Moss, Pamela <pmoss@eaest.com>
Subject: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Good morning,

CHM is reporting the following issue regarding Case 46114. Please advise.

Issue: The water samples for this Case are scheduled for 86 TVOA and 17 SVOA analysis; however, the COCs list VOA=TCL VOCs by CLP.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8
CSC Government Solutions LLC, A CSRA Company
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From: Sohil Jodhani [mailto:Sohil@chemtech.net]
Sent: Saturday, May 07, 2016 11:29 AM
To: Vanaman, Alexandra
Cc: DASSsupport; Mohammad@chemtech.net
Subject: Region 08 | Case 46114 | Lab CHM | SDG multiple | Issue Discrepancies with tags, jars, and/or COC

Hi Alexandra,

Samples received today with 05/07 shipment and lab would like to confirm below.

Issue: As per ASR, water samples are scheduled for TVOA analysis but analysis key written on the COC is VOA=TCL VOCs by CLP so lab would like to confirm that Lab is following the ASR and doing analysis for TVOA for water samples, Please advise.

This issue is addressing for all previous shipments also.

Thanks & Regards,

Sohil Jodhani
QC-Analyst
Direct Line: (908)728-3148
General Number: (908)789-8900
Fax: (908)789-8922

CHEMTECH
284 Sheffield Street,
Mountainside, New Jersey 07092
Phone: (908) 789 8900
Fax: (908) 789 8922

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ACCREDITED ISO/IEC 17025

DoD ELAP

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SDG COVER PAGE

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Cas No.: 46114 MA No. : SDG No.: H4010

SOW No. : SOM02.3

EPA Sample No.	Lab Sample ID	Analysis Method: Trace VOA	Low Med VOA	SVOA	SVOA SIM	PEST	ARO
H4010	H2874-01	X					
H4099	H2874-04	X					
H4101	H2874-05	X					
H4103	H2874-06	X					
H4111	H2874-07	X		X			
H4112	H2874-08	X					
H4113	H2874-09	X		X			
H4113MS	H2874-10	X		X			
H4113MSD	H2874-11	X		X			
H4120	H2874-12	X					
H4126	H2874-13	X					
H4129	H2874-14	X					
VHBLK01	H2874-15	X					
H4012	H2874-16	X					
H4013	H2874-17	X		X			
H4016	H2874-18	X					
H4018	H2874-19	X					
H4019	H2874-20	X					
H4020	H2874-21	X					
H4091	H2874-22	X					
H4096	H2874-23	X					
H4097	H2874-24	X		X			
H4098	H2874-25	X					

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative.Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee,as verified by the following signature.

Signature: Hildred U Reyes Name: Hildred U Reyes

Date: 5/23/16 Title: QA QC/DCO

SDG # H4010

USEPA CLP COC (LAB COPY)
DateShipped: 5/4/2016
CarrierName: FedEx
AirbillNo: 776257380633

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050416-122017-0019
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-TB-008	H4010	Water/ Ned Lundvall		VOC(21)	1473 (HCL), 1474 (HCL), 1475 (HCL) (3)	A-TB-008	05/04/2016 07:45	
A-SS-01-D	H4082	Soil/ Ned Lundvall	Grab	VOC(21), SVOC(21)	1033 (6 C), 1034 (6 C), 1035 (6 C), 1036 (6 C), 1037 (6 C) (5)	A-SW-~~18~~ 01	05/04/2016 13:40	
A-SS-01	H4086	Soil/ Ned Lundvall	Grab	VOC(21), SVOC(21)	1000 (6 C), 1001 (6 C), 1009 (6 C), 1010 (6 C), 1011 (6 C) (5)	A-SW-~~18~~ 01	05/04/2016 13:40	
A-SW-009	H4099	Surface Water/ Ned Lundvall	Grab	VOC(21)	1156 (HCL), 1157 (HCL), 1158 (HCL) (3)	A-SW-09	05/03/2016 08:55	
A-SW-011	H4101	Surface Water/ Ned Lundvall	Grab	VOC(21)	1162 (HCL), 1163 (HCL), 1164 (HCL) (3)	A-SW-11	05/03/2016 12:30	
A-SW-012	H4102	Surface Water/ Ned Lundvall	Grab	VOC(21)	1165 (HCL), 1166 (HCL), 1167 (HCL) (3)	A-SW-12	05/03/2016 10:30	
A-SW-013	H4103	Surface Water/ Ned Lundvall	Grab	VOC(21)	1168 (HCL), 1169 (HCL), 1170 (HCL) (3)	A-SW-13	05/03/2016 14:30	
A-SW-021	H4111	Surface Water/ Ned Lundvall	Grab	VOC(21)	1192 (HCL), 1193 (HCL), 1194 (HCL) (3)	A-SW-21	05/03/2016 13:20	
A-SW-022	H4112	Surface Water/ Ned Lundvall	Grab	VOC(21)	1195 (HCL), 1196 (HCL), 1197 (HCL) (3)	A-SW-22	05/03/2016 15:50	
A-SW-023	H4113	Surface Water/ Ned Lundvall	Grab	VOC(21)	1198 (HCL), 1199 (HCL), 1200 (HCL) (3)	A-SW-23	05/03/2016 09:30	

Copy Original Documents are Included in CSF H4009
Signature
5/5/16 Date

Sample(s) to be used for Lab QC: A-SW-023-MS Tag 1376, A-SW-023-MS Tag 1377, A-SW-023-MS Tag 1378	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: VOC=TCL VOCs by CLP, SVOC=TCL SVOCs by CLP	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/4/16 1600	Fedex		
			George Nguyen	5/5/16 925	3.1°C

2

SDG # H4020

USEPA CLP COC (LAB COPY)

DateShipped: 5/4/2016
CarrierName: FedEx
AirbillNo: 776257380633

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050416-122017-0019

Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-023-MS	H4113MS	Surface Water/ Ned Lundvall	Grab	VOC(21)	1376 (HCL), 1377 (HCL), 1378 (HCL) (3)	A-SW-23	05/03/2016 09:30	
A-SW-023-MSD	H4113MSD	Surface Water/ Ned Lundvall	Grab	VOC(21)	1391 (HCL), 1392 (HCL), 1393 (HCL) (3)	A-SW-23	05/03/2016 09:30	
A-SW-026	H4116	Surface Water/ Ned Lundvall	Grab	VOC(21)	1207 (HCL), 1208 (HCL), 1209 (HCL) (3)	A-SW-26	05/03/2016 13:45	
A-SW-027	H4117	Surface Water/ Ned Lundvall	Grab	VOC(21)	1210 (HCL), 1211 (HCL), 1212 (HCL) (3)	A-SW-27	05/03/2016 11:20	
A-SW-028	H4118	Surface Water/ Ned Lundvall	Grab	VOC(21)	1213 (HCL), 1214 (HCL), 1215 (HCL) (3)	A-SW-28	05/03/2016 12:00	
A-SW-030	H4120	Surface Water/ Ned Lundvall	Grab	VOC(21)	1219 (HCL), 1220 (HCL), 1221 (HCL) (3)	A-SW-30	05/03/2016 16:30	
A-SW-036	H4126	Surface Water/ Ned Lundvall	Grab	VOC(21)	1237 (HCL), 1238 (HCL), ~~1239 (HCL) (3)~~ 2	A-SW-36	05/03/2016 17:30	
A-SW-039	H4129	Surface Water/ Ned Lundvall	Grab	VOC(21)	1246 (HCL), 1247 (HCL), 1248 (HCL) (3)	A-SW-39	05/03/2016 17:00	
A-SS-01-D	MH4029	Soil/ Ned Lundvall	Grab	TMet(21)	1038 (6 C) (1)	A-SW-~~16~~01	05/04/2016 13:40	
A-SS-01	MH4030	Soil/ Ned Lundvall	Grab	TMet(21)	1002 (6 C) (1)	A-SW-~~16~~01	05/04/2016 13:40	

Copy Original Documents are included in CSF H4002
Signature
5/5/16
Date

Sample(s) to be used for Lab QC: A-SW-023-MS Tag 1378, A-SW-023-MSD Tag 1391, A-SW-023-MSD Tag 1392, A-SW-023-MSD Tag 1393

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP, SVOC=TCL SVOCs by CLP, TMet=Total Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/4/16 KW	Fedex		
			GORGE NEGRON	5/5/16 925	31°C

3

SDG # H4010

USEPA CLP COC (LAB COPY)
DateShipped: 5/4/2016
CarrierName: FedEx
AirbillNo: 776257385598

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050416-110537-0017
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-021	H4111	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1437 (6 C), 1438 (6 C) (2)	A-SW-21	05/03/2016 13:20	
A-SW-023	H4113	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1364 (6 C), 1365 (6 C) (2)	A-SW-23	05/03/2016 09:30	
A-SW-023-MS	H4113MS	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1379 (6 C), 1380 (6 C) (2)	A-SW-23	05/03/2016 09:30	
A-SW-023-MSD	H4113MSD	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1394 (6 C), 1395 (6 C) (2)	A-SW-23	05/03/2016 09:30	

Sample(s) to be used for Lab QC: A-SW-023-MS Tag 1379, A-SW-023-MS Tag 1380, A-SW-023-MSD Tag 1394, A-SW-023-MSD Tag 1395

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: SVOC=TCL SVOCs by CLP

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	5/4/16 1700	Fedex		
			George Negron	5/5/16 925	3.3°C

SDG-#-H6010

USEPA CLP COC (LAB COPY)

DateShipped: 5/5/2016
CarrierName: FedEx
AirbillNo: 776268141330

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050516-130827-0021

Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-FB-003	H4012	Water/ Ned Lundvall		VOC(21)	1470 (HCL), 1471 (HCL), 1472 (HCL) (3)	A-FB-003	05/05/2016 07:00	2
A-SW-007-D	H4013	Surface Water/ Ned Lundvall	Grab	VOC(21)	1491 (HCL), 1492 (HCL), 1493 (HCL) (3)	A-SW-07	05/04/2016 11:00	2
A-SW-008-D	H4016	Surface Water/ Ned Lundvall	Grab	VOC(21)	1507 (HCL), 1508 (HCL), 1509 (HCL) (3)	A-SW-08	05/04/2016 10:10	2
A-SW-006-D	H4018	Surface Water/ Ned Lundvall	Grab	VOC(21)	1527 (HCL), 1528 (HCL), 1529 (HCL) (3)	A-SW-06	05/04/2016 17:00	2
A-SW-001-D	H4019	Surface Water/ Ned Lundvall	Grab	VOC(21)	1542 (HCL), 1543 (HCL), 1544 (HCL) (3)	A-SW-01	05/04/2016 14:00	2
A-TB-009	H4020	Water/ Ned Lundvall		VOC(21)	1546 (HCL), 1547 (HCL), 1548 (HCL) (3)	A-TB-008	05/05/2016 07:45	2
A-SW-001	H4091	Surface Water/ Ned Lundvall	Grab	VOC(21)	1123 (HCL), 1124 (HCL), 1125 (HCL) (3)	A-SW-01	05/04/2016 14:00	2
A-SW-006	H4096	Surface Water/ Ned Lundvall	Grab	VOC(21)	1147 (HCL), 1148 (HCL), 1149 (HCL) (3)	A-SW-06	05/04/2016 17:00	2
A-SW-007	H4097	Surface Water/ Ned Lundvall	Grab	VOC(21)	1150 (HCL), 1151 (HCL), 1152 (HCL) (3)	A-SW-07	05/04/2016 11:00	2
A-SW-008	H4098	Surface Water/ Ned Lundvall	Grab	VOC(21)	1153 (HCL), 1154 (HCL), 1155 (HCL) (3)	A-SW-08	05/04/2016 10:10	2

Sample(s) to be used for Lab QC: A-SW-001 Tag 1123

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	5/5/16 1340	FedEx		
	FedEx	12:35 5-6-16	[signature]	12:35 5-6-16	3.7 °C

01

SDG # H4010

USEPA CLP COC (LAB COPY)

DateShipped: 5/5/2016
CarrierName: FedEx
AirbillNo: 776268140300

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050516-130156-0020

Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-007-D	H4013	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1495 (6 C), 1496 (6 C) (2)	A-SW-07	05/04/2016 11:00	1
A-SW-007	H4097	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1486 (6 C), 1487 (6 C) (2)	A-SW-07	05/04/2016 11:00	1
A-SW-015	H4105	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1500 (6 C), 1501 (6 C) (2)	A-SW-15	05/04/2016 11:30	1
A-SW-016	H4106	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1519 (6 C), 1520 (6 C) (2)	A-SW-16	05/04/2016 13:20	1
A-SW-047	H4137	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1478 (6 C), 1479 (6 C) (2)	A-SW-47	05/04/2016 08:40	1

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: SVOC=TCL SVOCs by CLP

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Edward Fendol	5/5/16 1340	Fedex		
	FEDEX	12:35 5-6-16		12:35 5-6-16	4°C

6

Sample Delivery Group (SDG) Cover Sheet

SDG Number	H4010	Case Number	46114	Contract Number	EP-W-14-030
Lab Code	CHM	SDG Turnaround	21 DAYS	Delivery CLIN(s)	1

First Sample Received in SDG	H4010	Last Sample Received in SDG	H4098
First Sample Receipt Date	5/5/2016 9:25:00 AM	Last Sample Receipt Date	5/6/2016 12:35:00 PM

USEPA Sample Numbers in SDG (Listed in Numerical Order)

CLP Sample ID	Sample Type	Requested Analytical CLIN(s)/SubCLIN(s)	Solicitation Number	MA Number(s)
H4010	Field Blank	0011AB	N/A	N/A
H4099	Field Sample	0011AB	N/A	N/A
H4101	Field Sample	0011AB	N/A	N/A
H4103	Field Sample	0011AB	N/A	N/A
H4111	Field Sample	0011AB,0014AB	N/A	N/A
H4112	Field Sample	0011AB	N/A	N/A
H4113	Field Sample	0014AB,0011AB	N/A	N/A
H4113MS	Field Sample	0014AB,0011AB	N/A	N/A
H4113MSD	Field Sample	0014AB,0011AB	N/A	N/A
H4120	Field Sample	0011AB	N/A	N/A
H4126	Field Sample	0011AB	N/A	N/A
H4129	Field Sample	0011AB	N/A	N/A
H4012	Field Blank	0011AB	N/A	N/A
H4013	Field Sample	0014AB,0011AB	N/A	N/A
H4016	Field Sample	0011AB	N/A	N/A
H4018	Field Sample	0011AB	N/A	N/A
H4019	Field Sample	0011AB	N/A	N/A
H4020	Field Blank	0011AB	N/A	N/A
H4091	Field Sample	0011AB	N/A	N/A
H4096	Field Sample	0011AB	N/A	N/A
H4097	Field Sample	0014AB,0011AB	N/A	N/A
H4098	Field Sample	0011AB	N/A	N/A

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature S. M. Woodward Date 5/12/16

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 1 of 1
Received By (Print Name) DEEPAK PARMAR		Log-in Date **5/5/2016**
Received By (Signature)		
Case Number 46114	SDG No. H4010	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776257380633
6. Sample Tags Sample Tag #	N/A N/A
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	3.1 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/05/2016
12. Time Received	09:25

	EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H4010	1473,74,75	H2874-01	Tubed
2	H4099	1156,57,58	H2874-04	
3	H4101	1162,63,64	H2874-05	
4	H4103	1168,69,70	H2874-06	
5	H4111	1192,93,94,1437,38	H2874-07	
6	H4112	1195,96,97	H2874-08	
7	H4113	1198,99,00,1364,65	H2874-09	
8	H4113MS	1376,77,78,1379,80	H2874-10	
9	H4113MSD	1391,92,93,1394,95	H2874-11	
10	H4120	1219,20,21	H2874-12	
11	H4126	1237,38,39	H2874-13	
12	H4129	1246,47,48	H2874-14	
13				
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26				
27				

* Contact SMO and attach record of resolution

Reviewed By S. M. Johnson	Logbook No.
Date 5/11/16	Logbook Page No.

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 2 of 4
Received By (Print Name) DEBRAH PARMAR		Log-in Date **5/5/2016**
Received By (Signature)		
Case Number 46114	SDG No. H4010	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776257385598
6. Sample Tags Sample Tag #	N/A Y03
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	3.3 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/05/2016
12.Time Received	09:25

	EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H4111	1192,93,94,1437,38	H2874-07	
2	H4113	1198,99,00,1364,65	H2874-09	
3	H4113MS	1376,77,78,1379,80	H2874-10	
4	H4113MSD	1391,92,93,1394,95	H2874-11	

* Contact SMO and attach record of resolution

Reviewed By	S M. Jeffers	Logbook No.	7
Date	5/11/16	Logbook Page No.	

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 3 of 4
Received By (Print Name) DEEPAK PARMAR		Log-in Date **5/6/2016**
Received By (Signature)		
Case Number 46114	SDG No. H4010	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776268141330
6. Sample Tags Sample Tag #	N/A Yes
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	3.7 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/06/2016
12.Time Received	12:35

	EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H4012	1470,71,72	H2874-16	Intact
2	H4013	1491,92,93,1495,96	H2874-17	
3	H4016	1507,08,09	H2874-18	
4	H4018	1527,28,29	H2874-19	
5	H4019	1542,43,44	H2874-20	
6	H4020	1546,47,48	H2874-21	
7	H4091	1123.24.25	H2874-22	
8	H4096	1147.48.49	H2874-23	
9	H4097	1150.51.52,1486,87	H2874-24	
10	H4098	1153.54.55	H2874-25	
11				
12				
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* Contact SMO and attach record of resolution

Reviewed By S.M. Rahman	Logbook No.
Date 5/18/16	Logbook Page No.

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 4 of 4
Received By (Print Name) DEEPAK PARMAR		Log-in Date **5/6/2016**
Received By (Signature)		
Case Number 46114	SDG No. H4010	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776268140300
6. Sample Tags Sample Tag #	N/A 705
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	4.0 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/06/2016
12.Time Received	12:35

	EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H4013	1491,92,93,1495,96	H2874-17	Tube
2	H4097	1150.51.52,1486,87	H2874-24	1

* Contact SMO and attach record of resolution

Reviewed By S. M. Jodhani	Logbook No.
Date 5/11/16	Logbook Page No.

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME	CHEMTECH CONSULTING GROUP
LAB CODE	CHM
CONTRACT NO.	EPW14030
CASE NO.	46114
SDG NO.	H4010
MA NO.	
SOW NO.	SOM02.3

All documents delivered in the complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.4)

		PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
1.	SDG Cover Page	1	1	✓	
2.	Traffic Report/Chain of Custody Record(s)	2	7	✓	
3.	Sample Log-In Sheet (DC-1)	8	11	✓	
4.	CSF Inventory Sheet (DC-2)	12	18	✓	
5.	SDG Narrative	19	32	✓	
Organic Analysis					
Trace Volatiles					
	Quality Control Summary				
6.	Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	33	36	✓	
7.	Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requeste by the EPA Region)	37	37	✓	
8.	Method Blank Summary (Form 4-OR)	38	42	✓	
9.	GC/MS Instrument Performance Check (Form 5-OR)	43	48	✓	
10.	Internal Standard Area and Retention Summary (Form 8A-OR)	49	53	✓	
	Sample Data				
11.	TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	54	457	✓	
12.	Tentatively Identified Compounds (Form 1B-OR)			\	
13.	Raw Data for each sample:			\	
	Reconstructed total ion chromatograms (RICs) for each sample			\	
	Raw Spectra and bacground-subtracted mass spectra of target analytes identified			\	
	Quantitation Reports			\	
	Mass Spectra of all reported TICs with three best library matches			\	
	Standards Data (All Instruments)				
14.	GC/MS Initial Calibration Data (Form 6A-OR)	458	474	✓	
15.	RICs and Quantitation Reports for all Standards			\	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
16. Continuing Calibration Verification for GC/MS (Form 7-OR)	475	560	✓	
17. RICs and Quantitation Reports for all Standards			↘	
Quality Control Data				
18. Performance Check	561	607	✓	
19. Blank Data	608	687	✓	
20. Matrix Spike/Matrix Spike Duplicate Data (Form 3A-OR) (if requested by EPA Region)	688	711	✓	
21. Original Preparation and analysis forms or copies of preparation and analysis logbook pages (including screening records if applicable)	907	1029	✓	
Low-Medium Volatiles				
Quality Control Summary				
22. Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	NA	NA	✓	
23. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by EPA Region)	NA	NA	✓	
24. Method Blank Summary (Form 4-OR)	NA	NA	✓	
25. GC/MS Instrument Performance Check (Form 5-OR)	NA	NA	✓	
26. Internal Standard Area and Retention Time Summary (Form 8A-OR)	NA	NA	✓	
Sample Data				
27. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	
28. Tentatively Identified Compounds (Form 1B-OR)				
29. Raw Data for Each Sample:				
Reconstructed total ion chromatograms (RICs) for each sample				
Raw Spectra and background-subtracted mass spectra of target analytes identified				
Quantitation Reports				
Mass Spectra of all reported TICs with three best library matches				
Standards Data (All Instruments)				
30. GC/MS Initial Calibration Data (Form 6A-OR)	NA	NA	✓	
31. RICs and Quantitation Reports for all Standards				
32. Continuing Calibration Verification for GC/MS (Form 7A-OR)	NA	NA	✓	
33. RICs and Quantitation Reports for all Standards				
Quality Control Data				
34. Performance Check	NA	NA	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
35. Blank Data	NA	NA	✓	
36. Matrix Spike/Matrix Spike Duplicate Data (if requested by EPA Region)	NA	NA	✓	
37. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	NA	NA	✓	
Semivolatiles				
Quality Control Summary				
38. Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	712	713	✓	
39. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by EPA Region)	714	714	✓	
40. Method Blank Summary (Form 4-OR)	715	715	✓	
41. GC/MS Instrument Performance Check (Form 5-OR)	716	717	✓	
42. Internal Standard Area and Retention Time Summary (Form 8A-OR)	718	719	✓	
Sample Data				
43. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	720	773	✓	
44. Tentatively Identified Compounds (Form 1B-OR)			\	
45. Raw Data for Each sample:			\	
Reconstructed total ion chromatograms (RICs) for each sample	NA	NA	✓	
Raw Spectra and background-subtracted mass spectra of target analytes identified			\	
Quantitation Reports			\	
Mass Spectra of all reported TICs with three best library matches			\	
GPC chromatograms (if GPC is required)			\	
Standards Data (All Instruments)				
46. GC/MS Initial Calibration Data (Form 6A-OR)	774	816	✓	
47. RICs and Quantitation Reports for all Standards			\	
48. Continuing Calibration Verification for GC/MS (Form 7A-OR)	817	844	✓	
49. RICs and Quantitation Reports for all Standards			\	
Quality Control Data				
50. Performance Check	845	866	✓	
51. Blank Data	867	876	✓	
52. Matrix Spike/Matrix Spike Duplicate Data (if requested by EPA Region)	877	906	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
53. Raw GPC Data	NA	NA	✓	
54. For SIM analysis (if requested), at the same sequence as listed above, except for that Form 1B-OR and TIC spectra data which are not required for SIM method.	NA	NA	✓	
55. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	907	1029	✓	
Pesticides				
Quality Control Summary				
56. Surrogate Recovery (Form 2C-OR)	NA	NA	✓	
57. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR each columns)	NA	NA	✓	
58. Laboratory Control Sample Recovery (Form 3B-OR each column)	NA	NA	✓	
59. Method Blank Summary (Form 4-OR)	NA	NA	✓	
Sample Data				
60. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	
61. Raw Data for Each Sample:				
Chromatograms (Primary Column)				
Chromatograms (Secondary Column)				
Quantitation Reports				
Manual Worksheets				
62. For Pesticides by GC/MS Confirmation:				
Copies of raw spectra and copies of background-subtracted mass spectra of target analytes (samples & standards)				
Standards Data				
63. Initial Calibration of Single Component Analytes (Form 6B-OR and 6C-OR)	NA	NA	✓	
64. Initial Calibration of Multicomponent Analytes (Form 6D-OR and 6E-OR)	NA	NA	✓	
65. Analyte Resolution Summary (Form 6G-OR)	NA	NA	✓	
66. Pesticide Performance Evaluation Mixture Calibration Verification Summary (Form 7B-OR)	NA	NA	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
67. Continuing Calibration Verification Summary (Form 7C-OR)	NA	NA	✓	
68. Multicomponent Coninuing Calibration Verification Summary (Form 7D-OR)	NA	NA	✓	
69. Analytical Sequence (Form 8B-OR)	NA	NA	✓	
70. Florisil Cartridge Check (Form 9A-OR)	NA	NA	✓	
71. GPC Calibration Verification (Form 9B-OR)	NA	NA	✓	
72. Identification Summary for Single Component Analytes (Form 10A-OR)	NA	NA	✓	
73. Identification Summary for Multicomponent Analytes (Form 10B-OR)				
74. Chromatograms and Quantitation Reports:	NA	NA	✓	
A printout of Retention Times and corresponding peak areas or peak heights				
Quality Control Data				
75. Blank Data	NA	NA	✓	
76. Matrix Spike/Matrix Spike Duplicate Data	NA	NA	✓	
77. Laboratory Control Sample	NA	NA	✓	
78. Raw GPC Data	NA	NA	✓	
79. Raw Florisil Data	NA	NA	✓	
80. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	NA	NA	✓	
Aroclor Data				
Quality Control Summary				
81. Surrogate Recovery (Form 2C-OR)	NA	NA	✓	
82. Matrix Spike/Matrix Spike Duplicate Summary (Form 3A-OR)	NA	NA	✓	
83. Laboratory Control Sample Recovery (Form 3B-OR for each column)	NA	NA	✓	
84. Method Blank Summary (Form 4-OR)	NA	NA	✓	
Sample Data				
85. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
86. Raw Data for Each Sample:	NA	NA	✓	
Chromatograms (Primary Column)	NA	NA	✓	
Chromatograms (Secondary Column)	NA	NA	✓	
Quantitation Reports	NA	NA	✓	
Manual Worksheets	NA	NA	✓	
87. For Aroclors by GC/MS Confirmation:	NA	NA	✓	
Copies of raw spectra and copies of background-subtracted mass spectra of target analytes (samples & standards)	NA	NA	✓	
Standards Data				
88. Initial Calibration of Multicomponent Analytes(Form 6D-OR, Form 6E-OR, and Form 6F-OR)	NA	NA	✓	
89. Multicomponent Continuing Calibration Verification Summary (Form 7D-OR)	NA	NA	✓	
90. Analytical Sequence (Form 8B-OR)	NA	NA	✓	
91. Identification Summary for Multicomponent Analytes (Form 10B-OR)	NA	NA	✓	
92. Chromatograms and data system printouts:	NA	NA	✓	
A printout of Retention Times and corresponding peak areas or peak heights				
Qaulity Control Data				
93. Blank Data	NA	NA	✓	
94. Matrix Spike/Matrix Spike Duplicate Data	NA	NA	✓	
95. Laboratory Control Sample (LCS) Data	NA	NA	✓	
96. Raw GPC Data (if performed)	NA	NA	✓	
97. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including Percent Solid Determinations logs and screening records if applicable)	NA	NA	✓	
Additional				
98. EPA Shipping/Receiving Documents Airbills (No. of shipments 4)	1030	1033	✓	
Sample Tags	NA	NA	↘	
Sample Log-In Sheet (Lab)	1034	1035	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
99. Misc. Shipping/Receiving Records (list all individual records) Communication Logs	NA	NA	✓	
100. Internal Lab Sample Transfer Records & Tracking Sheets (describe or list)	1036	1036	✓	
101. PE/PT Instruction Forms	NA	NA	✓	
102. Other Records (describe or list)				
Communication Log	1037	1040	✓	

103. Comments

Completed by: (CLP Lab) Hildred D Reyes (Signature) | H Dolores D Reyes/DCO (Printed Name/Title) | 5/23/16 (Date)

Audited by: (EPA) (Signature) | (Printed Name/Title) | (Date)

SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE# 46114
SDG# H4010
CONTRACT# EPW14030
LAB CODE: CHM
CHEMTECH PROJECT # H2874
MODIFICATION REF. NUMBER: N/A

Sample ID	Test	EPA Sample ID	pH
H2874-01		H4010	1.0
H2874-04		H4099	1.6
H2874-05		H4101	1.0
H2874-06		H4103	1.0
H2874-07		H4111	1.0
H2874-08		H4112	1.0
H2874-09		H4113	1.0
H2874-09DL	VOC	H4113DL	1.0
H2874-10		H4113MS	1.0
H2874-11		H4113MSD	1.0
H2874-12		H4120	1.0
H2874-13		H4126	1.0
H2874-14	VOC	H4129	1.6
H2874-14DL	VOC	H4129DL	1.0
H2874-16		H4012	1.0
H2874-17		H4013	1.0
H2874-18		H4016	1.0
H2874-19		H4018	1.0
H2874-19DL	VOC	H4018DL	1.0
H2874-20		H4019	1.0
H2874-21		H4020	1.0
H2874-22		H4091	1.0
H2874-23		H4096	1.0
H2874-23DL	VOC	H4096DL	1.0
H2874-24		H4097	1.0
H2874-24RE	VOC	H4097RE	1.0
H2874-25		H4098	1.0

14 Water samples were delivered to the laboratory intact on 05/05/2016.
10 Water samples were delivered to the laboratory intact on 05/06/2016.

Test requested on the Chain of Custody was Volatile Organic and Semi Volatile Organic by Method SOM02.3.

Samples for Volatile Organic analyses were transferred unopened to the Volatile Laboratory. Sample Tags were not received with the samples.

The temperature of the samples was measured using an I R Gun. The samples temperature was 3.1 and 3.3 degrees Celsius for the samples received on 05/05/2016 and 3.7 and 4.0 degrees Celsius for the samples received on 05/06/2016.

Shipping Discrepancies and/or QC issues:

Issue 1 : Sample tags were not received with samples at the laboratory. Sample tag numbers may or may not be listed on the TR/COC.

Resolution 1: In accordance with previous direction from Region 8, the laboratory will note the issue in the SDG Narrative, and proceed with the analysis of the sample. The Resolution will be applied to all samples received for this Case.

Issue 2: The water samples for this Case are scheduled for 86 TVOA and 17 SVOA analysis; however, the COCs list VOA=TCL VOCs by CLP.

Resolution 2: Per Region 8, the samples in question shall be analyzed as scheduled for TVOA. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples. This resolution may be applied to all COCs received for this Case with this issue.

Trace Volatiles:

The analysis performed on instrument MSVOA_I were done using C column RXI-624 30m 0.25mm 1.4um 872456. The Trap was supplied by OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.

The analysis of VOC-Low Level -15 was based on method SOM02.3_Trace.

Surrogate recoveries met the criteria except for the followings:
H4016 [1,1-Dichloroethene-d2-59%].
As per method, up to 3 surrogates are allowed to fail; therefore no corrective action was required for above mention sample.
Holding Times were met.

Instrument Performance Check met requirements.
Retention Times met requirements.
The MS {H4113MS } recoveries met the requirements.
The MSD {H4113MSD} recoveries met the requirements.
The RPD for recoveries met criteria.
The Internal Standards Areas met requirements.
The initial Calibration met the requirements.
The Continuing Calibration met the requirements.
The Blank analysis did not indicate the presence of lab contamination.

The Storage Blank did not indicate the presence of lab contamination .
Samples H4018, H4096, H4113, and H4129 were diluted due to high concentrations.

The sample H4091 was analyzed following the analysis of H4018.
The sample (H4018) had common hit of compound (Tetrachloroethene) with concentration above calibration levels. Therefore, this sample was re-analyzed diluted. And the following sample H4091 had concentration of this compound is below CRQL, respectively therefore, No instrument blank was analyzed.

Sample H4097 was analyzed following the analysis of H4096. Sample H4096 has a concentration above calibration levels for Tetrachloroethene. Sample H4097 was considered to have a carryover of that compound (from H4096) and was reanalyzed. The reanalysis confirmed the hit is from H4096.

The sample # H4129DL is analyzed follow the analysis of sample # H4129, it is same samples dilution run is analyzed, therefore no instrument blank was analyzed.

The sample # H4113MS was analyzed following the analysis H4113 ,these both samples had common hit of compounds with concentration above calibration levels for Tetrachloroethene. therefore the original sample was re-analyzed diluted. No instrument blank was analyzed.

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Calculation:

$$\text{Concentration in ug/L} = \frac{(Ax)\,(Is)\,(DF)}{(Ais)\,(RRF)\,(Vo)}$$

Where,

Ax = Area of the characteristic ion (EICP) for the compound to be measured.
Ais = Area of the characteristic ion (EICP) for the internal standard.
Is = Amount of internal standard added in ng.
RRF = Mean Relative Response Factor from the initial calibration standard.

Vo = Total volume of water purged, in mL.
DF = Dilution Factor.

Example Calculation for sample # H4018 for Tetrachloroethene:

Ax= 4183202
Is= 250
RRF= 0.390
DF=1
Ais=815314
Vo= 50

$$\text{Concentration in ug/L} = \frac{(4183202)\ (250)\ (1)}{(815314)(0.390)\ (50)}$$

$$= 65.78 \text{ ug/L}$$

Reported Result = 66 ug/L

Relative Response Factor =:Tetrachloroethene RUN # VI050416 for 5 ppb

$$\text{RRF} = \frac{\text{Area of compound}}{\text{Area of Internal Standard}} \times \frac{\text{Conc. of Internal Standard}}{\text{Conc. of Compound}}$$

$$\text{RRF} = \frac{374867}{966164} \times \frac{5.0}{5.0} = 0.3879$$

RRF=0.388

Semivolatiles

The samples were analyzed on instrument BNA_M using GC Column ZB-Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

Semi volatile Organic samples for Water were extracted by Method SOM02.3 on 05/08/16.

The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for H4111 [1,4-Dioxane-d8 - 15%], H4113 [1,4-Dioxane-d8 - 16%], H4113MS [1,4-Dioxane-d8 - 14%], H4113MSD [1,4-Dioxane-d8 - 14%], H4013 [1,4-Dioxane-d8 - 14%], H4097 [1 and4-Dioxane-d8 - 15%]. As per method four surrogates are allowed to fail. No further corrective action was taken.
The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds.
The MSD recoveries met the acceptable requirements.
The RPD recoveries met criteria.
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements.
The Continuous Calibration met the requirements.
The Tuning criteria met requirements.

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Concentration of Water Sample:

$$\text{Concentration ug/L} = \frac{(Ax)\,(Is)\,(Vt)\,(DF)\,(GPC)}{(Ais)\,(\overline{RRF})\,(Vo)\,(Vi)}$$

Where,

Ax = Area of the characteristic ion for the compound to be measured.
Ais = Area of the characteristic ion for the internal standard.
Is = Amount of internal standard injected in ng.
Vo = Volume of water extracted in mL.
Vi = Volume of extract injected in uL.
Vt = Volume of the concentrated extract in uL

$\overline{RRF}$ = Mean Relative Response Factor determined from the initial calibration standard.
GPC = $\frac{Vin}{Vout}$ = GPC factor (If no GPC is performed, GPC=1)

No target compounds were detected on the sample

RRF Calculation of standard 20 ppb for Dimethylphthalate with M instrument for method 05/05/16

RRF = Area of compound / Area of Internal Standard X Conc. of Internal Standard / Conc. of Compound

= 434026/ 259664 X 20/20

= 1.671 (Reported RRF)

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V Reyes Name: Mildred V. Reyes

Date: 5/23/16 Title: Document Control Officer

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Manual Integration Report

Sequence:	VI050416	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005EC/ VSTD00539	VI049243.D	cis-1,2-Dichloroethene	lisa	5/5/2016 8:52:38 AM	mohammad	5/5/2016 9:01:16 AM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VI050516	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VI0505WBL02/ VBLK29	VI049256.D	1,1-Dichloroethene-d2	apatel	5/6/2016 9:10:37 AM	feifei	5/6/2016 11:44:14 AM	Peak Integrated by Software incorrectly
H2874-11MSD/ H4113MSD	VI049263.D	Chloroethane-d5	apatel	5/6/2016 9:10:49 AM	feifei	5/6/2016 11:44:17 AM	Peak Integrated by Software incorrectly
H2874-05/ H4101	VI049265.D	cis-1,2-Dichloroethene	apatel	5/6/2016 9:11:06 AM	feifei	5/6/2016 11:44:21 AM	Peak Integrated by Software incorrectly
H2874-06/ H4103	VI049266.D	1,1-Dichloroethene-d2	apatel	5/6/2016 9:11:10 AM	feifei	5/6/2016 11:44:22 AM	Peak Integrated by Software incorrectly
H2874-06/ H4103	VI049266.D	Chloroethane-d5	apatel	5/6/2016 9:11:10 AM	feifei	5/6/2016 11:44:22 AM	Peak Integrated by Software incorrectly
H2874-07/ H4111	VI049267.D	cis-1,2-Dichloroethene	apatel	5/6/2016 9:11:14 AM	feifei	5/6/2016 11:44:24 AM	Peak Integrated by Software incorrectly
H2874-08/ H4112	VI049268.D	Chloroethane-d5	apatel	5/6/2016 9:11:19 AM	feifei	5/6/2016 11:44:26 AM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VI050616	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
H2874-04/ H4099	VI049279.D	Chloroethane-d5	lisa	5/9/2016 10:23:54 AM	feifei	5/9/2016 12:05:18 PM	Peak Integrated by Software incorrectly
H2874-13/ H4126	VI049282.D	1,2-Dichloroethane-d4	lisa	5/9/2016 10:23:59 AM	feifei	5/9/2016 12:05:13 PM	Peak Integrated by Software incorrectly
H2874-14DL/ H4129DL	VI049284.D	1,2-Dichloroethane-d4	lisa	5/9/2016 10:24:01 AM	feifei	5/9/2016 12:05:14 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VI050916	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005/ VSTD00545	VI049291.D	cis-1,2-Dichloroethene	lisa	5/10/2016 11:42:11 AM	feifei	5/10/2016 1:38:20 PM	Peak Integrated by Software incorrectly
H2874-21/ H4020	VI049293.D	1,2-Dichloroethane-d4	lisa	5/10/2016 11:42:14 AM	feifei	5/10/2016 1:38:23 PM	Peak Integrated by Software incorrectly
H2874-20/ H4019	VI049294.D	1,2-Dichloroethane-d4	lisa	5/10/2016 11:42:16 AM	feifei	5/10/2016 1:38:24 PM	Peak Integrated by Software incorrectly
H2874-17/ H4013	VI049296.D	1,2-Dichloroethane-d4	lisa	5/10/2016 11:42:18 AM	feifei	5/10/2016 1:38:11 PM	Peak Integrated by Software incorrectly
H2874-17/ H4013	VI049296.D	Chloroethane-d5	lisa	5/10/2016 11:42:18 AM	feifei	5/10/2016 1:38:11 PM	Peak Integrated by Software incorrectly
H2874-18/ H4016	VI049297.D	1,2-Dichloroethane-d4	lisa	5/10/2016 11:42:19 AM	feifei	5/10/2016 1:38:12 PM	Peak Integrated by Software incorrectly
H2874-25/ H4098	VI049302.D	1,2-Dichloroethane-d4	lisa	5/10/2016 11:42:22 AM	feifei	5/10/2016 1:38:14 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VI051116	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005/ VSTD00550	VI049333.D	cis-1,2-Dichloroethene	feifei	5/12/2016 10:20:42 AM	mmdadoda	5/12/2016 6:14:28 PM	Peak Integrated by Software incorrectly
H2874-19DL/ H4018DL	VI049343.D	1,2-Dichloroethane-d4	feifei	5/12/2016 10:20:53 AM	mmdadoda	5/12/2016 6:14:37 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	vi051216	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005/ VSTD00527	VI049349.D	cis-1,2-Dichloroethene	lisa	5/13/2016 9:17:32 AM	feifei	5/13/2016 12:27:53 PM	Peak Integrated by Software incorrectly
VI0512WBL01/ VBLK35	VI049350.D	1,2-Dichloroethane-d4	lisa	5/13/2016 9:17:39 AM	feifei	5/13/2016 12:27:55 PM	Peak Integrated by Software incorrectly
VSTDCCC005EC/ VSTD00528	VI049360.D	cis-1,2-Dichloroethene	lisa	5/13/2016 9:17:37 AM	feifei	5/13/2016 12:27:59 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	BM050516	Instrument	BNA_m

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTD02042/ SSTD02042	BM005233.D	Caprolactam	umangi	5/6/2016 7:10:46 PM	sohil	5/6/2016 7:14:59 PM	Peak Integrated by Software incorrectly
SSTD04043/ SSTD04043	BM005234.D	Caprolactam	umangi	5/6/2016 7:10:47 PM	sohil	5/6/2016 7:15:02 PM	Peak Integrated by Software incorrectly
SSTD08044/ SSTD08044	BM005235.D	Caprolactam	umangi	5/6/2016 7:10:48 PM	sohil	5/6/2016 7:15:03 PM	Peak Integrated by Software incorrectly
SSTD16045/ SSTD16045	BM005236.D	Benzaldehyde	umangi	5/6/2016 7:10:52 PM	sohil	5/6/2016 7:15:04 PM	Peak Integrated by Software incorrectly
SSTD16045/ SSTD16045	BM005236.D	Caprolactam	umangi	5/6/2016 7:10:52 PM	sohil	5/6/2016 7:15:04 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02046	BM005237.D	Caprolactam	umangi	5/6/2016 7:10:49 PM	sohil	5/6/2016 7:15:05 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02047	BM005251.D	Caprolactam	umangi	5/6/2016 7:11:03 PM	sohil	5/6/2016 7:15:20 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02048	BM005263.D	Caprolactam	umangi	5/6/2016 7:11:14 PM	sohil	5/6/2016 7:15:24 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02049	BM005274.D	Caprolactam	umangi	5/6/2016 7:11:10 PM	sohil	5/6/2016 7:15:25 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	bm051316	Instrument	BNA_m

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTDCCC020/ SSTD02066	BM005427.D	4-Nitroaniline	umangi	5/14/2016 9:57:14 AM	sohil	5/14/2016 9:58:31 AM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02066	BM005427.D	Caprolactam	umangi	5/14/2016 9:57:14 AM	sohil	5/14/2016 9:58:31 AM	Peak Integrated by Software incorrectly
H2874-09/ H4113	BM005430.D	4-Chloroaniline-d4	umangi	5/14/2016 9:56:30 AM	sohil	5/14/2016 9:58:34 AM	Peak Integrated by Software incorrectly
H2874-09/ H4113	BM005430.D	4-Nitrophenol-d4	umangi	5/14/2016 9:56:30 AM	sohil	5/14/2016 9:58:34 AM	Peak Integrated by Software incorrectly
H2874-10MS/ H4113MS	BM005431.D	4-Nitrophenol-d4	umangi	5/14/2016 9:56:32 AM	sohil	5/14/2016 9:58:37 AM	Peak Integrated by Software incorrectly
H2874-11MSD/ H4113MSD	BM005432.D	4-Nitrophenol	umangi	5/14/2016 9:56:34 AM	sohil	5/14/2016 9:58:40 AM	Peak Integrated by Software incorrectly
H2874-11MSD/ H4113MSD	BM005432.D	4-Nitrophenol-d4	umangi	5/14/2016 9:56:34 AM	sohil	5/14/2016 9:58:40 AM	Peak Integrated by Software incorrectly
H2874-17/ H4013	BM005433.D	4-Nitrophenol-d4	umangi	5/14/2016 9:56:37 AM	sohil	5/14/2016 9:58:42 AM	Peak Integrated by Software incorrectly
H2874-24/ H4097	BM005434.D	4-Chloroaniline-d4	umangi	5/14/2016 9:56:39 AM	sohil	5/14/2016 9:58:45 AM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02034	BM005435.D	4-Nitroaniline	umangi	5/14/2016 9:56:40 AM	sohil	5/14/2016 9:58:48 AM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02034	BM005435.D	Caprolactam	umangi	5/14/2016 9:56:40 AM	sohil	5/14/2016 9:58:48 AM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02035	BM005449.D	4-Nitroaniline	umangi	5/14/2016 9:57:11 AM	sohil	5/14/2016 9:59:30 AM	Peak Integrated by Software incorrectly

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4010
Analytical Method : Trace VOA Level : _____
Matrix : Water

EPA Sample No .	DMC1 (VCL)	DMC2 (CLA)	DMC3 (DCE)	DMC4 (BUT)	DMC5 (CLF)	DMC6 (DCA)	DMC7 (BEN)	DMC8 (DPA)
VBLK29	95	114	71	97	95	104	107	108
H4010	91	98	66	94	82	100	94	95
H4113	99	113	72	112	98	109	103	105
H4113MS	87	96	89	113	93	102	97	98
H4113MSD	92	108	92	91	95	101	103	102
H4101	96	115	72	116	100	109	105	107
H4103	101	121	74	119	103	113	108	113
H4111	88	105	65	104	92	99	97	98
H4112	90	114	68	111	96	103	101	103
H4120	91	114	69	109	96	105	103	102
VBLK30	82	102	61	102	87	95	93	94
H4099	88	104	68	109	95	104	102	102
H4126	90	106	67	110	95	104	102	104
H4129	90	106	66	109	95	104	102	103
H4129DL	84	94	63	108	92	101	96	97
H4113DL	85	100	64	109	92	103	100	101
VBLK31	84	100	65	105	94	105	104	107
H4020	79	97	63	103	86	104	101	104
H4019	85	102	67	114	97	108	105	105
H4012	82	95	64	99	85	99	100	103
H4013	85	107	67	114	97	110	107	110
H4016	76	91	59 *	99	88	98	92	95
H4018	78	95	64	99	90	102	101	101
H4091	81	100	63	112	95	103	100	102
H4096	80	96	64	114	97	104	99	100
H4097	76	98	61	113	91	101	96	97
H4098	79	96	63	110	95	104	98	99
VBLK34	83	93	64	108	85	97	94	97
H4097RE	91	104	71	117	98	107	108	111
H4096DL	89	101	70	123	102	110	107	108
H4018DL	82	93	67	114	96	104	100	101

	QC LIMITS
DMC1 (VCL) = Vinyl Chloride-d3	(40-130)
DMC2 (CLA) = Chloroethane-d5	(65-130)
DMC3 (DCE) = 1,1-Dichloroethene-d2	(60-125)
DMC4 (BUT) = 2-Butanone-d5	(40-130)
DMC5 (CLF) = Chloroform-d	(70-125)
DMC6 (DCA) = 1,2-Dichloroethane-d4	(70-130)
DMC7 (BEN) = Benzene-d6	(70-125)
DMC8 (DPA) = 1,2-Dichloropropane-d6	(60-140)

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4010

Analytical Method : Trace VOA Level : _____

Matrix : Water

EPA Sample No .	DMC1 (VCL)	DMC2 (CLA)	DMC3 (DCE)	DMC4 (BUT)	DMC5 (CLF)	DMC6 (DCA)	DMC7 (BEN)	DMC8 (DPA)
VBLK35	73	89	60	107	87	95	90	93
VHBLK01	84	101	72	122	99	113	107	107

	QC LIMITS
DMC1 (VCL) = Vinyl Chloride-d3	(40-130)
DMC2 (CLA) = Chloroethane-d5	(65-130)
DMC3 (DCE) = 1,1-Dichloroethene-d2	(60-125)
DMC4 (BUT) = 2-Butanone-d5	(40-130)
DMC5 (CLF) = Chloroform-d	(70-125)
DMC6 (DCA) = 1,2-Dichloroethane-d4	(70-130)
DMC7 (BEN) = Benzene-d6	(70-125)
DMC8 (DPA) = 1,2-Dichloropropane-d6	(60-140)

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4010
Analytical Method : Trace VOA Level : _____
Matrix : Water

EPA Sample No .	DMC9 (TOL)	DMC10 (TDP)	DMC11 (HEX)	DMC12 (TCA)	DMC13 (DCZ)	DMC14	DMC15	DMC16	TOT OUT
VBLK29	99	99	99	89	90				0
H4010	91	90	97	90	94				0
H4113	100	97	104	98	100				0
H4113MS	92	90	105	95	90				0
H4113MSD	97	92	97	86	85				0
H4101	100	99	110	101	101				0
H4103	102	95	111	103	100				0
H4111	91	86	98	90	88				0
H4112	94	89	102	96	93				0
H4120	98	90	104	97	93				0
VBLK30	88	88	96	86	86				0
H4099	95	92	107	95	97				0
H4126	97	96	104	94	96				0
H4129	95	89	106	97	92				0
H4129DL	90	91	101	91	92				0
H4113DL	94	89	105	93	91				0
VBLK31	100	101	113	104	100				0
H4020	96	95	111	101	99				0
H4019	98	100	115	103	99				0
H4012	94	91	107	97	99				0
H4013	101	96	114	105	103				0
H4016	88	85	99	91	88				1
H4018	93	89	102	96	93				0
H4091	93	91	111	97	95				0
H4096	93	90	105	97	94				0
H4097	91	86	106	96	93				0
H4098	93	88	107	97	94				0
VBLK34	91	90	102	95	90				0
H4097RE	102	98	114	103	101				0
H4096DL	102	99	117	104	106				0

	QC LIMITS
DMC9 (TOL) = Toluene-d8	(70-130)
DMC10 (TDP) = trans-1,3-Dichloropropene-d4	(55-130)
DMC11 (HEX) = 2-Hexanone-d5	(45-130)
DMC12 (TCA) = 1,1,2,2-Tetrachloroethane-d2	(65-120)
DMC13 (DCZ) = 1,2-Dichlorobenzene-d4	(80-120)

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4010
Analytical Method : Trace VOA Level : _____
Matrix : Water

EPA Sample No .	DMC9 (TOL)	DMC10 (TDP)	DMC11 (HEX)	DMC12 (TCA)	DMC13 (DCZ)	DMC14	DMC15	DMC16	TOT OUT
H4018DL	96	86	107	100	99				0
VBLK35	87	85	101	91	89				0
VHBLK01	105	99	121	108	105				0

	QC LIMITS
DMC9 (TOL) = Toluene-d8	(70-130)
DMC10 (TDP) = trans-1,3-Dichloropropene-d4	(55-130)
DMC11 (HEX) = 2-Hexanone-d5	(45-130)
DMC12 (TCA) = 1,1,2,2-Tetrachloroethane-d2	(65-120)
DMC13 (DCZ) = 1,2-Dichlorobenzene-d4	(80-120)

FORM 3A-OR
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No. : 46114 MA No .: _____ SDG No. : H4010

Analytical Method : Trace VOA Level : _____

Matrix Water

EPA Sample No.(Matrix Spike/Metrix Spike Duplicate): H4113

Instrument ID : MSVOA_I GC Column RXI-624 ID : 0.25 (mm)

Concentration Units (ug/L,mg/L ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %R #	QC Limits %R
1,1-Dichloroethene	5	0	4.3	86	61 - 145
Benzene	5	0	5	100	76 - 127
Trichloroethene	5	0.46	5.1	93	71 - 120
Toluene	5	0	5	100	76 - 125
Chlorobenzene	5	0	4.9	98	75 - 130

ANALYTE	SPIKE AADDED	MSD CONCENTRATION	MSD %R #	RPD	QC Limits	
					RPD	%R
1,1-Dichloroethene	5	4.5	90	5	14	61 - 145
Benzene	5	5.3	106	6	11	76 - 127
Trichloroethene	5	5.5	101	8	14	71 - 120
Toluene	5	5.3	106	6	13	76 - 125
Chlorobenzene	5	5	100	2	13	75 - 130

EPA SAMPLE NO.

VBLK29

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4010
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0505WBL02
Instrument ID: MSVOA_I
Lab File ID : VI049256.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/05/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 16:54
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4010	H2874-01	VI049260.D	05/05/2016 19:34
H4113	H2874-09	VI049261.D	05/05/2016 20:06
H4113MS	H2874-10MS	VI049262.D	05/05/2016 20:37
H4113MSD	H2874-11MSD	VI049263.D	05/05/2016 21:09
H4101	H2874-05	VI049265.D	05/05/2016 22:12
H4103	H2874-06	VI049266.D	05/05/2016 22:44
H4111	H2874-07	VI049267.D	05/05/2016 23:16
H4112	H2874-08	VI049268.D	05/05/2016 23:47
H4120	H2874-12	VI049269.D	05/06/2016 00:19

EPA SAMPLE NO.

VBLK30

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4010
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0506WBL01
Instrument ID: MSVOA_I
Lab File ID : VI049277.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/06/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 11:45
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4099	H2874-04	VI049279.D	05/06/2016 12:49
H4126	H2874-13	VI049282.D	05/06/2016 14:24
H4129	H2874-14	VI049283.D	05/06/2016 14:55
H4129DL	H2874-14DL	VI049284.D	05/06/2016 16:05
H4113DL	H2874-09DL	VI049285.D	05/06/2016 16:37

EPA SAMPLE NO.

VBLK31

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4010
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0509WBL01
Instrument ID: MSVOA_I
Lab File ID : VI049292.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/09/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 11:52
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4020	H2874-21	VI049293.D	05/09/2016 12:58
H4019	H2874-20	VI049294.D	05/09/2016 13:29
H4012	H2874-16	VI049295.D	05/09/2016 14:01
H4013	H2874-17	VI049296.D	05/09/2016 14:33
H4016	H2874-18	VI049297.D	05/09/2016 15:04
H4018	H2874-19	VI049298.D	05/09/2016 15:36
H4091	H2874-22	VI049299.D	05/09/2016 16:08
H4096	H2874-23	VI049300.D	05/09/2016 16:39
H4097	H2874-24	VI049301.D	05/09/2016 17:11
H4098	H2874-25	VI049302.D	05/09/2016 17:43

EPA SAMPLE NO.

VBLK34

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0511WBL01
Instrument ID: MSVOA_I
Lab File ID : VI049334.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/11/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 11:25
Heated Purge: (Y/N) N Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4097RE	H2874-24RE	VI049335.D	05/11/2016 12:05
H4096DL	H2874-23DL	VI049342.D	05/11/2016 15:49
H4018DL	H2874-19DL	VI049343.D	05/11/2016 16:21

EPA SAMPLE NO.

VBLK35

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0512WBL01
Instrument ID: MSVOA_I
Lab File ID : VI049350.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/12/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 14:23
Heated Purge: (Y/N) N Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
VHBLK01	H2874-15	VI049352.D	05/12/2016 15:46

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB32

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method : Trace VOA Lab File ID : VI049219.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/04/2016 Injection Time: 08:57

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	29.8	
75	30.0 - 80.0% of mass 95	62.3	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.6	
173	Less than 2.0% of mass 174	0.3(0.4)	1
174	50.0 - 120% of mass 95	77.4	
175	5.0 - 9.0% of mass 174	5.5(7.1)	1
176	95.0 - 101% of mass 174	73.5(95)	1
177	5.0 - 9.0% of mass 176	4.9(6.7)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD0.533	VSTD0.533	VI049220.D	05/04/2016	11:27
VSTD00134	VSTD00134	VI049221.D	05/04/2016	11:58
VSTD00535	VSTD00535	VI049222.D	05/04/2016	12:30
VSTD01036	VSTD01036	VI049223.D	05/04/2016	13:02
VSTD02037	VSTD02037	VI049224.D	05/04/2016	13:33

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB33

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method : Trace VOA Lab File ID : VI049244.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/05/2016 Injection Time: 09:34

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	31.1	
75	30.0 - 80.0% of mass 95	62.8	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	7.2	
173	Less than 2.0% of mass 174	0.4(0.5)	1
174	50.0 - 120% of mass 95	77.8	
175	5.0 - 9.0% of mass 174	5.4(7)	1
176	95.0 - 101% of mass 174	76.2(98)	1
177	5.0 - 9.0% of mass 176	4.9(6.4)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00540	VSTDCCC005	VI049245.D	05/05/2016	10:15
VSTD00541	VSTDCCC005	VI049255.D	05/05/2016	16:16
VBLK29	VI0505WBL02	VI049256.D	05/05/2016	16:54
H4010	H2874-01	VI049260.D	05/05/2016	19:34
H4113	H2874-09	VI049261.D	05/05/2016	20:06
H4113MS	H2874-10MS	VI049262.D	05/05/2016	20:37
H4113MSD	H2874-11MSD	VI049263.D	05/05/2016	21:09
H4101	H2874-05	VI049265.D	05/05/2016	22:12
H4103	H2874-06	VI049266.D	05/05/2016	22:44
H4111	H2874-07	VI049267.D	05/05/2016	23:16
H4112	H2874-08	VI049268.D	05/05/2016	23:47
H4120	H2874-12	VI049269.D	05/06/2016	00:19
VSTD00542	VSTDCCC005EC	VI049274.D	05/06/2016	02:57

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB34

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method : Trace VOA Lab File ID : VI049275.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/06/2016 Injection Time: 09:02

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	31	
75	30.0 - 80.0% of mass 95	65.2	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	7.2	
173	Less than 2.0% of mass 174	0.0(0.0)	1
174	50.0 - 120% of mass 95	75.4	
175	5.0 - 9.0% of mass 174	6.5(8.6)	1
176	95.0 - 101% of mass 174	73(96.8)	1
177	5.0 - 9.0% of mass 176	5(6.9)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00543	VSTDCCC005	VI049276.D	05/06/2016	10:21
VBLK30	VI0506WBL01	VI049277.D	05/06/2016	11:45
H4099	H2874-04	VI049279.D	05/06/2016	12:49
H4126	H2874-13	VI049282.D	05/06/2016	14:24
H4129	H2874-14	VI049283.D	05/06/2016	14:55
H4129DL	H2874-14DL	VI049284.D	05/06/2016	16:05
H4113DL	H2874-09DL	VI049285.D	05/06/2016	16:37
VSTD00544	VSTDCCC005EC	VI049289.D	05/06/2016	19:15

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB35

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method : Trace VOA Lab File ID : VI049290.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/09/2016 Injection Time: 09:50

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	29.9	
75	30.0 - 80.0% of mass 95	61.4	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.7	
173	Less than 2.0% of mass 174	0.4(0.5)	1
174	50.0 - 120% of mass 95	76.6	
175	5.0 - 9.0% of mass 174	5.5(7.2)	1
176	95.0 - 101% of mass 174	73.6(96)	1
177	5.0 - 9.0% of mass 176	5.6(7.6)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00545	VSTDCCC005	VI049291.D	05/09/2016	11:03
VBLK31	VI0509WBL01	VI049292.D	05/09/2016	11:52
H4020	H2874-21	VI049293.D	05/09/2016	12:58
H4019	H2874-20	VI049294.D	05/09/2016	13:29
H4012	H2874-16	VI049295.D	05/09/2016	14:01
H4013	H2874-17	VI049296.D	05/09/2016	14:33
H4016	H2874-18	VI049297.D	05/09/2016	15:04
H4018	H2874-19	VI049298.D	05/09/2016	15:36
H4091	H2874-22	VI049299.D	05/09/2016	16:08
H4096	H2874-23	VI049300.D	05/09/2016	16:39
H4097	H2874-24	VI049301.D	05/09/2016	17:11
H4098	H2874-25	VI049302.D	05/09/2016	17:43
VSTD00546	VSTDCCC005	VI049303.D	05/09/2016	18:15

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB37

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method : Trace VOA Lab File ID : VI049332.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/11/2016 Injection Time: 10:00

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	30	
75	30.0 - 80.0% of mass 95	62.5	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.9	
173	Less than 2.0% of mass 174	0.2(0.2)	1
174	50.0 - 120% of mass 95	77.7	
175	5.0 - 9.0% of mass 174	5.6(7.2)	1
176	95.0 - 101% of mass 174	74.5(95.9)	1
177	5.0 - 9.0% of mass 176	5(6.8)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00550	VSTDCCC005	VI049333.D	05/11/2016	10:42
VBLK34	VI0511WBL01	VI049334.D	05/11/2016	11:25
H4097RE	H2874-24RE	VI049335.D	05/11/2016	12:05
H4096DL	H2874-23DL	VI049342.D	05/11/2016	15:49
H4018DL	H2874-19DL	VI049343.D	05/11/2016	16:21
VSTD00526	VSTDCCC005EC	VI049347.D	05/11/2016	18:32

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB38

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method : Trace VOA Lab File ID : VI049348.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/12/2016 Injection Time: 09:58

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	27.7	
75	30.0 - 80.0% of mass 95	58.8	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.9	
173	Less than 2.0% of mass 174	0.4(0.5)	1
174	50.0 - 120% of mass 95	81	
175	5.0 - 9.0% of mass 174	5.6(6.9)	1
176	95.0 - 101% of mass 174	79(97.6)	1
177	5.0 - 9.0% of mass 176	5.5(7)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00527	VSTDCCC005	VI049349.D	05/12/2016	12:03
VBLK35	VI0512WBL01	VI049350.D	05/12/2016	14:23
VHBLK01	H2874-15	VI049352.D	05/12/2016	15:46
VSTD00528	VSTDCCC005EC	VI049360.D	05/12/2016	20:37

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4010
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00541 | Lab File ID (Standard) : VI049255.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 05/04/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/05/2016
Heated Purge: (Y/N) N | Time Analyzed : 16:16

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1235300	7.95	831818	11.22	319065	13.44
UPPER LIMIT	2470600	8.12	1663640	11.39	638130	13.61
LOWER LIMIT	617650	7.78	415909	11.05	159533	13.27
EPA SAMPLE NO.						
VBLK29	1193553	7.93	762181	11.23	241848	13.43
H4010	1251022	7.94	858559	11.22	304764	13.44
H4113	1212214	7.94	816297	11.22	296947	13.44
H4113MS	1230747	7.93	839300	11.22	311386	13.44
H4113MSD	1203572	7.94	778036	11.23	245366	13.43
H4101	1173670	7.93	773733	11.22	277489	13.44
H4103	1098501	7.94	710182	11.23	249336	13.44
H4111	1218429	7.94	798411	11.23	288692	13.43
H4112	1191467	7.94	785313	11.23	289260	13.43
H4120	1147362	7.94	739494	11.23	275659	13.43

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4010
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00543 | Lab File ID (Standard) : VI049276.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 05/04/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/06/2016
Heated Purge: (Y/N) N | Time Analyzed : 10:21

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1457810	7.94	978595	11.22	385883	13.44
UPPER LIMIT	2915620	8.11	1957190	11.39	771766	13.61
LOWER LIMIT	728905	7.77	489298	11.05	192942	13.27
EPA SAMPLE NO.						
VBLK30	1307874	7.94	851739	11.23	307505	13.44
H4099	1147136	7.94	740439	11.22	265552	13.44
H4126	1145067	7.93	741363	11.22	269242	13.43
H4129	1190499	7.94	767136	11.22	281270	13.44
H4129DL	1207787	7.93	793875	11.22	285466	13.43
H4113DL	1169809	7.93	756102	11.22	281915	13.43

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4010
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00545 | Lab File ID (Standard) : VI049291.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 05/04/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/09/2016
Heated Purge: (Y/N) N | Time Analyzed : 11:03

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1472790	7.92	1026160	11.21	402955	13.43
UPPER LIMIT	2945580	8.09	2052320	11.38	805910	13.6
LOWER LIMIT	736395	7.75	513080	11.04	201478	13.26
EPA SAMPLE NO.						
VBLK31	1343497	7.91	900437	11.21	340706	13.42
H4020	1281692	7.92	846016	11.21	311027	13.42
H4019	1190360	7.91	793876	11.21	294992	13.41
H4012	1247784	7.92	808372	11.21	295613	13.41
H4013	1153708	7.92	751281	11.21	274957	13.42
H4016	1312652	7.91	869053	11.21	313554	13.41
H4018	1244126	7.92	815314	11.21	300575	13.42
H4091	1162728	7.91	766487	11.21	283703	13.42
H4096	1205167	7.92	798165	11.20	293854	13.42
H4097	1210817	7.92	800975	11.21	287057	13.42
H4098	1147529	7.92	757536	11.21	282028	13.42

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4010
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00550 | Lab File ID (Standard) : VI049333.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 05/04/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/11/2016
Heated Purge: (Y/N) N | Time Analyzed : 10:42

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1319730	7.91	924898	11.20	367134	13.41
UPPER LIMIT	2639460	8.08	1849800	11.37	734268	13.58
LOWER LIMIT	659866	7.74	462449	11.03	183567	13.24
EPA SAMPLE NO.						
VBLK34	1290350	7.90	859838	11.20	331353	13.41
H4097RE	1138271	7.90	743116	11.20	278318	13.41
H4096DL	1067561	7.90	721660	11.20	265229	13.41
H4018DL	1132982	7.91	772382	11.20	288565	13.41

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4010
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00527 | Lab File ID (Standard) : VI049349.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 05/04/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/12/2016
Heated Purge: (Y/N) N | Time Analyzed : 12:03

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1295570	7.91	928274	11.20	374949	13.41
UPPER LIMIT	2591130	8.08	1856550	11.37	749898	13.58
LOWER LIMIT	647783	7.74	464137	11.03	187475	13.24
EPA SAMPLE NO.						
VBLK35	1318748	7.91	908211	11.21	356452	13.41
VHBLK01	1140607	7.90	801085	11.20	315035	13.41

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4010

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049260.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.52	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4010

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049260.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4010

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049260.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4010

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049260.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.23	1.2	JN
2	E966796	Total Alkanes	N/A	0.0	

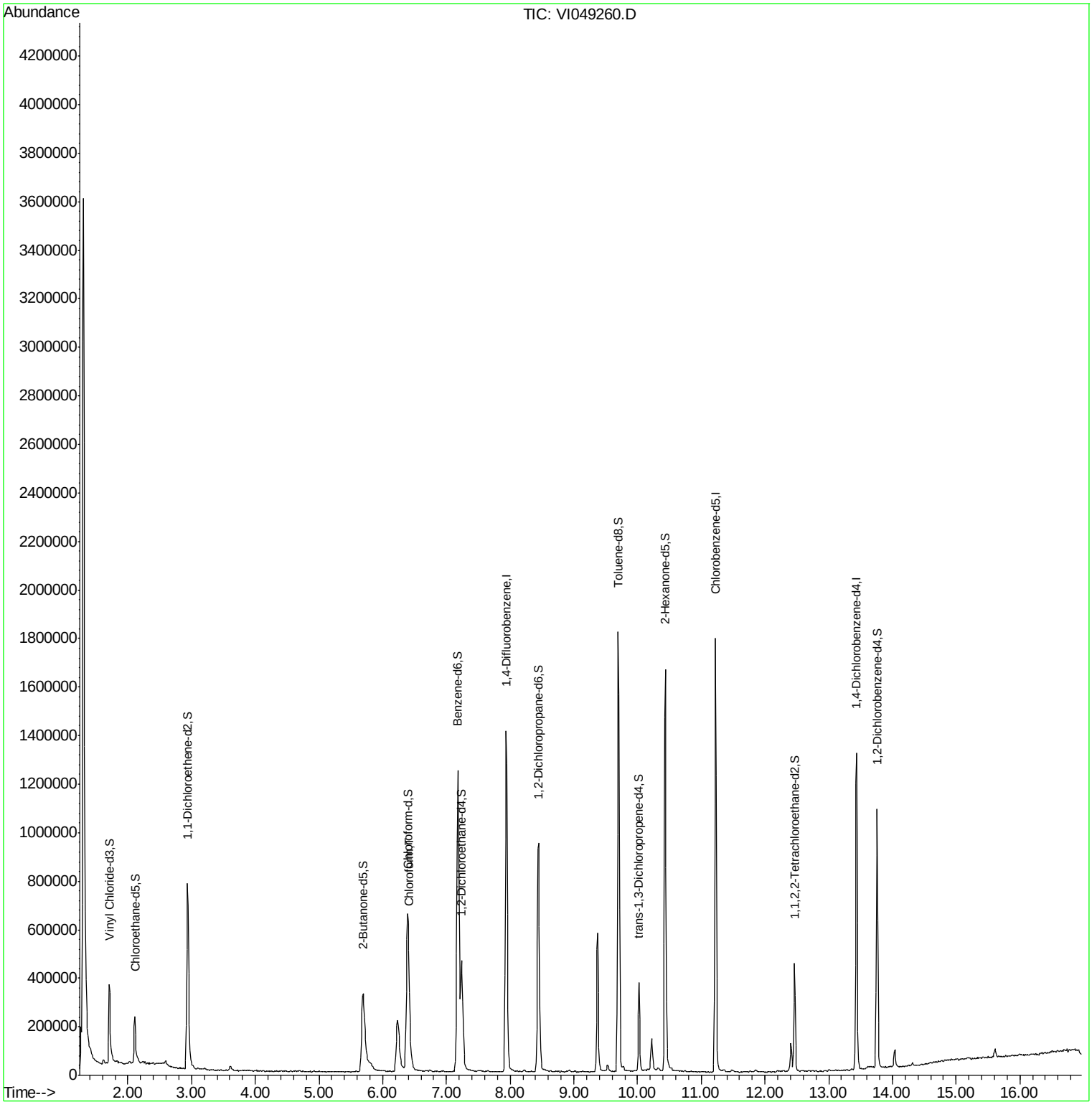
EPA-designated Registry Number.

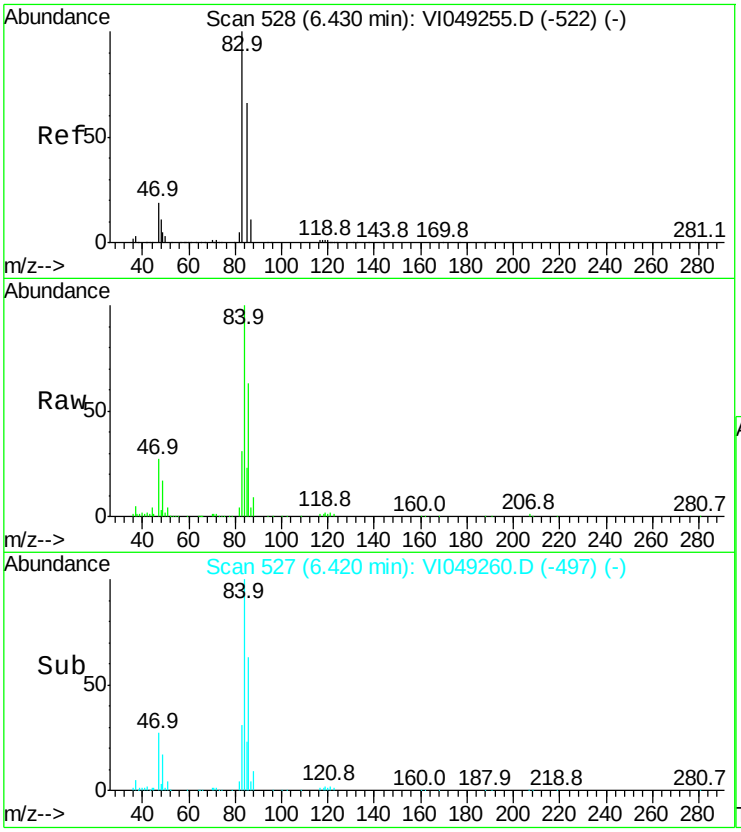
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049260.D
Acq On : 5 May 2016 19:34
Operator : FY/SY
Sample : H2874-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4010

Quant Time: May 06 05:47:25 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

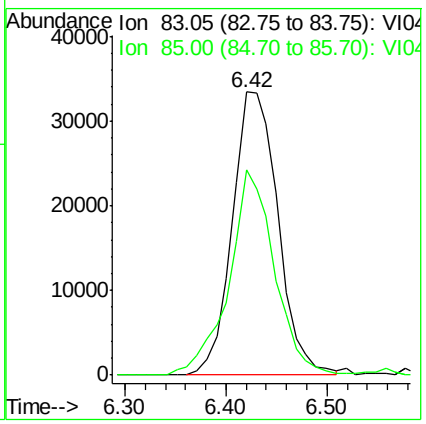




#25
Chloroform
Concen: 0.52 ug/L
RT: 6.42 min Scan# 527
Delta R.T. -0.01 min
Lab File: VI049260.D
Acq: 5 May 2016 19:34

Tgt Ion: 83 Resp: 104995

Ion	Ratio	Lower	Upper
83	100		
85	72.6	47.3	87.8



Instrument :
MSVOA_I
ClientSampleId :
H4010

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049260.D
Acq On : 5 May 2016 19:34
Operator : FY/SY
Sample : H2874-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4010

Quant Time: May 06 05:47:25 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1251022	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	858559	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	304764	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	350295	4.55	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 91.00%			
7) Chloroethane-d5	2.11	69	208530	4.89	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 97.80%			
11) 1,1-Dichloroethene-d2	2.94	63	599420	3.30	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 66.00%			
20) 2-Butanone-d5	5.68	46	780590	46.81	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 93.62%			
24) Chloroform-d	6.39	84	804298	4.10	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 82.00%			
26) 1,2-Dichloroethane-d4	7.24	65	400956	5.00	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.00%			
32) Benzene-d6	7.18	84	1567893	4.69	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.80%			
36) 1,2-Dichloropropane-d6	8.45	67	446003	4.74	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 94.80%			
41) Toluene-d8	9.70	98	1116799	4.53	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.60%			
43) trans-1,3-Dichloropropene-	10.02	79	166473	4.49	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 89.80%			
46) 2-Hexanone-d5	10.44	63	567150	48.53	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 97.06%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	192425	4.50	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 90.00%			
63) 1,2-Dichlorobenzene-d4	13.76	152	250994	4.70	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 94.00%			
Target Compounds						Qvalue
25) Chloroform	6.42	83	104995	0.52	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049260.D
Acq On : 5 May 2016 19:34
Operator : FY/SY
Sample : H2874-01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4010

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.302	4	7	36	rVB	3568492	7768299	100.00%	18.621%
2	1.617	36	39	42	rBV3	18230	37098	0.48%	0.089%
3	1.706	45	48	57	rBV	322430	587918	7.57%	1.409%
4	2.021	78	80	83	rBV4	7572	16603	0.21%	0.040%
5	2.109	86	89	97	rVB	193682	388894	5.01%	0.932%
6	2.592	136	138	144	rVB4	22428	42105	0.54%	0.101%
7	2.818	159	161	162	rBV	6775	5698	0.07%	0.014%
8	2.936	168	173	186	rVV	763658	1710684	22.02%	4.101%
9	3.103	188	190	192	rBV3	3800	4688	0.06%	0.011%
10	3.202	198	200	204	rVB3	7241	15136	0.19%	0.036%
11	3.251	204	205	208	rVB3	5350	7442	0.10%	0.018%
12	3.300	208	210	213	rBV4	4505	10696	0.14%	0.026%
13	3.468	223	227	228	rVB4	5112	9056	0.12%	0.022%
14	3.605	236	241	248	rVB3	18156	55053	0.71%	0.132%
15	3.930	273	274	278	rVB3	4945	6967	0.09%	0.017%
16	4.019	278	283	284	rBV5	5379	11282	0.15%	0.027%
17	4.127	291	294	296	rBV4	2797	6108	0.08%	0.015%
18	4.304	309	312	313	rBV2	3939	6141	0.08%	0.015%
19	4.550	334	337	340	rBV5	4778	8810	0.11%	0.021%
20	4.698	349	352	354	rBV3	3461	7185	0.09%	0.017%
21	4.747	354	357	358	rVB2	3753	5346	0.07%	0.013%
22	4.787	358	361	365	rBV5	3073	6711	0.09%	0.016%
23	4.914	370	374	377	rBV3	4242	9854	0.13%	0.024%
24	5.170	397	400	402	rVB3	2330	4545	0.06%	0.011%
25	5.456	428	429	433	rVB3	3626	5188	0.07%	0.012%
26	5.505	433	434	436	rBV2	4049	5628	0.07%	0.013%
27	5.692	446	453	472	rBV2	321633	1449323	18.66%	3.474%
28	5.889	472	473	475	rVB2	5912	6461	0.08%	0.015%
29	5.918	475	476	480	rBV5	6929	9859	0.13%	0.024%
30	6.233	500	508	518	rBV	209570	743173	9.57%	1.781%
31	6.391	518	524	536	rVB	647337	2159177	27.79%	5.176%
32	6.568	541	542	544	rVV2	6556	7970	0.10%	0.019%
33	6.676	548	553	554	rVV5	5029	12376	0.16%	0.030%
34	6.735	557	559	564	rVV3	6112	13680	0.18%	0.033%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049260.D
Acq On : 5 May 2016 19:34
Operator : FY/SY
Sample : H2874-01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4010

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.853	569	571	576	rVV6	4718	7342	0.09%	0.018%
36	7.178	598	604	608	rBV	1240529	3294916	42.41%	7.898%
37	7.237	608	610	620	rVV	457115	1094458	14.09%	2.623%
38	7.345	620	621	626	rVV4	10153	25325	0.33%	0.061%
39	7.424	626	629	631	rVV4	5755	13085	0.17%	0.031%
40	7.513	633	638	639	rVV5	6268	14111	0.18%	0.034%
41	7.552	641	642	645	rVB3	5422	6149	0.08%	0.015%
42	7.641	650	651	657	rVV5	4503	11129	0.14%	0.027%
43	7.936	676	681	695	rVV	1402891	3086936	39.74%	7.400%
44	8.103	697	698	700	rVV2	4060	4805	0.06%	0.012%
45	8.221	706	710	714	rVV5	6575	17085	0.22%	0.041%
46	8.448	727	733	740	rVV	941306	2148463	27.66%	5.150%
47	8.556	742	744	747	rVV4	8566	17613	0.23%	0.042%
48	8.625	750	751	755	rVV4	4582	9033	0.12%	0.022%
49	8.733	759	762	763	rVV2	2968	4606	0.06%	0.011%
50	8.763	763	765	767	rVB3	4072	5114	0.07%	0.012%
51	8.802	767	769	770	rBV2	4095	4829	0.06%	0.012%
52	8.841	770	773	774	rVB2	3057	5149	0.07%	0.012%
53	8.871	774	776	777	rBV2	2909	5040	0.06%	0.012%
54	8.930	779	782	784	rVV3	8409	14037	0.18%	0.034%
55	9.028	788	792	793	rVB4	5244	9506	0.12%	0.023%
56	9.068	793	796	797	rBV2	4184	4719	0.06%	0.011%
57	9.137	799	803	806	rBV3	3292	5048	0.06%	0.012%
58	9.373	822	827	837	rBV	571379	1064106	13.70%	2.551%
59	9.491	837	839	840	rVV2	2974	4768	0.06%	0.011%
60	9.530	840	843	849	rVB2	25497	56569	0.73%	0.136%
61	9.698	856	860	866	rVV	1809701	3262877	42.00%	7.821%
62	9.776	866	868	871	rVV3	19337	36839	0.47%	0.088%
63	10.022	889	893	899	rBV	362957	578242	7.44%	1.386%
64	10.150	904	906	909	rBV4	4754	9718	0.13%	0.023%
65	10.219	909	913	921	rVB	131183	271810	3.50%	0.652%
66	10.328	921	924	927	rVB5	13804	28395	0.37%	0.068%
67	10.436	931	935	944	rBV	1653374	2962171	38.13%	7.101%
68	10.603	949	952	953	rVV2	3162	5133	0.07%	0.012%
69	10.731	964	965	968	rVB2	3812	5037	0.06%	0.012%
70	10.918	981	984	986	rVB3	3658	6441	0.08%	0.015%
71	11.223	1011	1015	1025	rBV	1784776	2940379	37.85%	7.048%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049260.D
Acq On : 5 May 2016 19:34
Operator : FY/SY
Sample : H2874-01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4010

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.361	1027	1029	1033	rVB4	10392	15832	0.20%	0.038%
73	11.479	1038	1041	1049	rBV10	7976	22774	0.29%	0.055%
74	11.627	1052	1056	1057	rVB2	5408	7594	0.10%	0.018%
75	11.646	1057	1058	1059	rBV	3890	4523	0.06%	0.011%
76	11.705	1063	1064	1068	rVB4	3158	5390	0.07%	0.013%
77	11.764	1068	1070	1072	rBV3	4582	7813	0.10%	0.019%
78	11.853	1076	1079	1083	rVB6	7046	16372	0.21%	0.039%
79	12.188	1110	1113	1116	rBV5	5913	13165	0.17%	0.032%
80	12.276	1121	1122	1124	rBV2	3592	5776	0.07%	0.014%
81	12.355	1127	1130	1131	rBV3	4952	8801	0.11%	0.021%
82	12.404	1131	1135	1138	rVV	114661	213841	2.75%	0.513%
83	12.463	1138	1141	1146	rVV	443181	731674	9.42%	1.754%
84	12.522	1146	1147	1150	rVB2	5494	5705	0.07%	0.014%
85	12.798	1173	1175	1179	rVB5	3351	7230	0.09%	0.017%
86	12.857	1179	1181	1183	rBV3	2911	5803	0.07%	0.014%
87	13.005	1193	1196	1198	rBV4	5972	14036	0.18%	0.034%
88	13.113	1205	1207	1208	rVB2	4875	4721	0.06%	0.011%
89	13.152	1208	1211	1215	rBV6	3795	6294	0.08%	0.015%
90	13.369	1228	1233	1235	rBV5	6937	16824	0.22%	0.040%
91	13.438	1235	1240	1246	rBV	1305493	2266057	29.17%	5.432%
92	13.615	1254	1258	1260	rBV4	10093	21531	0.28%	0.052%
93	13.762	1268	1273	1279	rBV	1065858	1863639	23.99%	4.467%
94	13.890	1285	1286	1288	rBV2	5412	4574	0.06%	0.011%
95	13.979	1293	1295	1296	rVV2	7338	8033	0.10%	0.019%
96	14.038	1297	1301	1307	rVB2	74639	151472	1.95%	0.363%
97	14.136	1307	1311	1312	rBV4	5308	9532	0.12%	0.023%
98	14.314	1327	1329	1332	rBV3	10893	14882	0.19%	0.036%
99	14.717	1368	1370	1372	rBV3	9131	11002	0.14%	0.026%
100	15.613	1458	1461	1465	rVB	36139	66508	0.86%	0.159%

Sum of corrected areas: 41717535

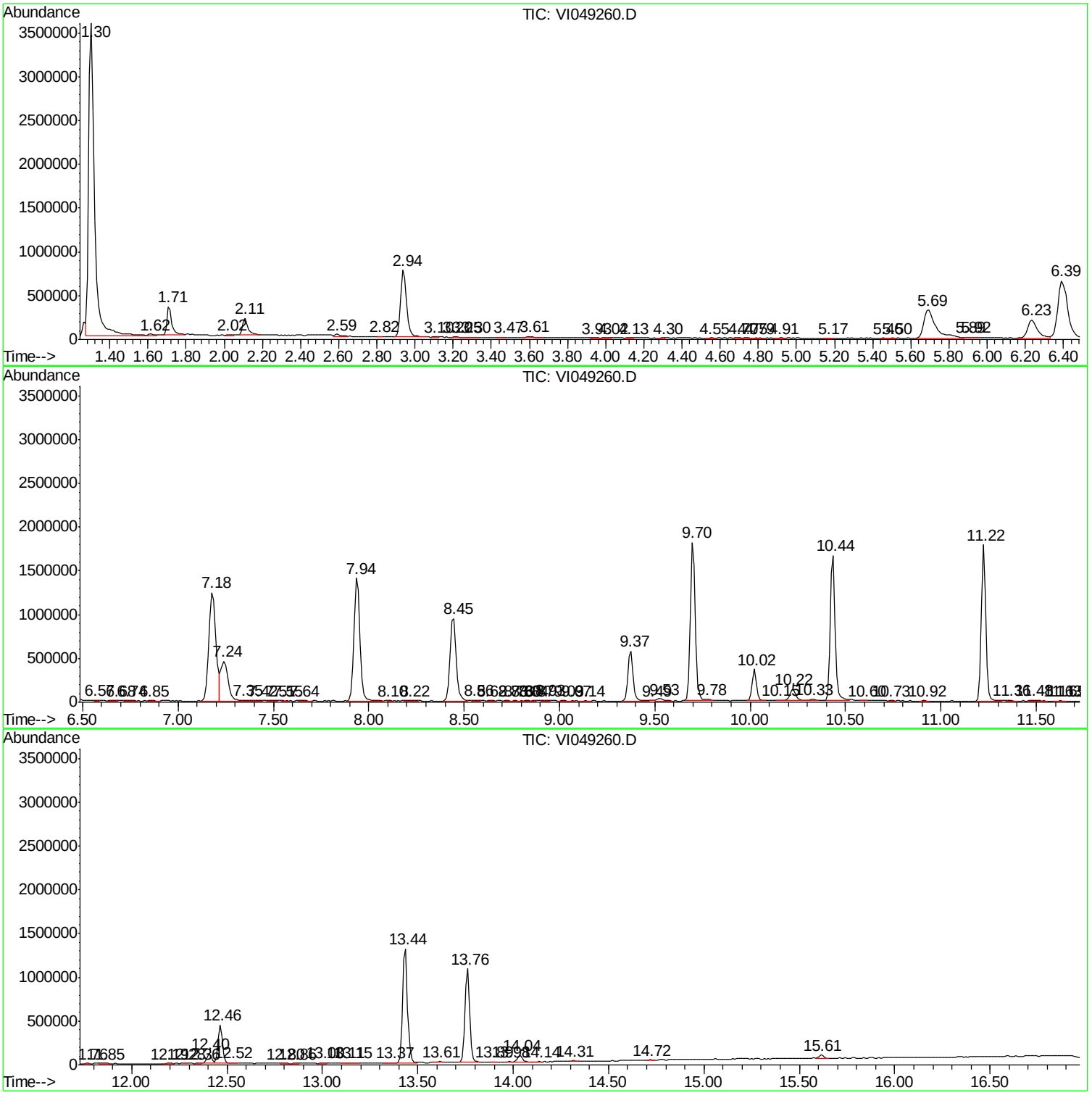
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049260.D
Acq On : 5 May 2016 19:34
Operator : FY/SY
Sample : H2874-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4010

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049260.D
Acq On : 5 May 2016 19:34
Operator : FY/SY
Sample : H2874-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4010

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

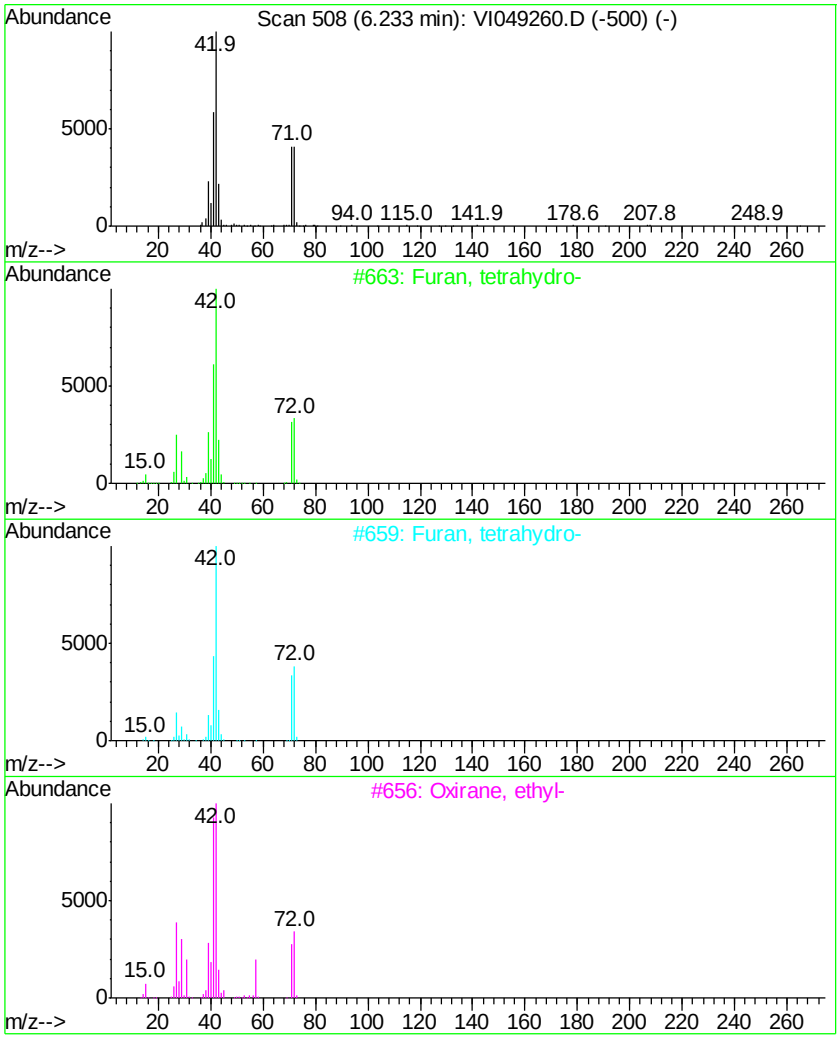
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

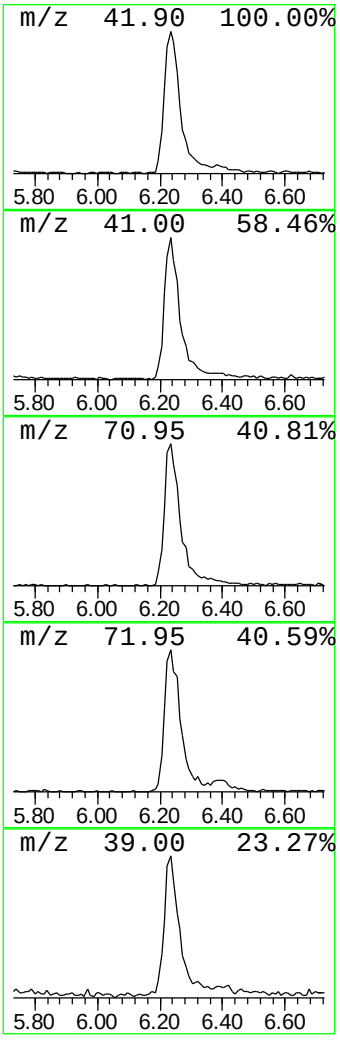
****

Peak Number 2 Furan, tetrahydro- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.23	1.20 ug/L	743173	1,4-Difluorobenzene	7.94

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Furan, tetrahydro-	72	C4H8O	000109-99-9	90
2	Furan, tetrahydro-	72	C4H8O	000109-99-9	86
3	Oxirane, ethyl-	72	C4H8O	000106-88-7	58
4	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	53
5	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	42





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049260.D
Acq On : 5 May 2016 19:34
Operator : FY/SY
Sample : H2874-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4010

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Furan, tetrahydro-	6.23	1.2	ug/L	743173	1	7.94	3086940	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049295.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049295.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049295.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4012

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049295.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.21	0.45	JN
2	E966796	Total Alkanes	N/A	0.0	

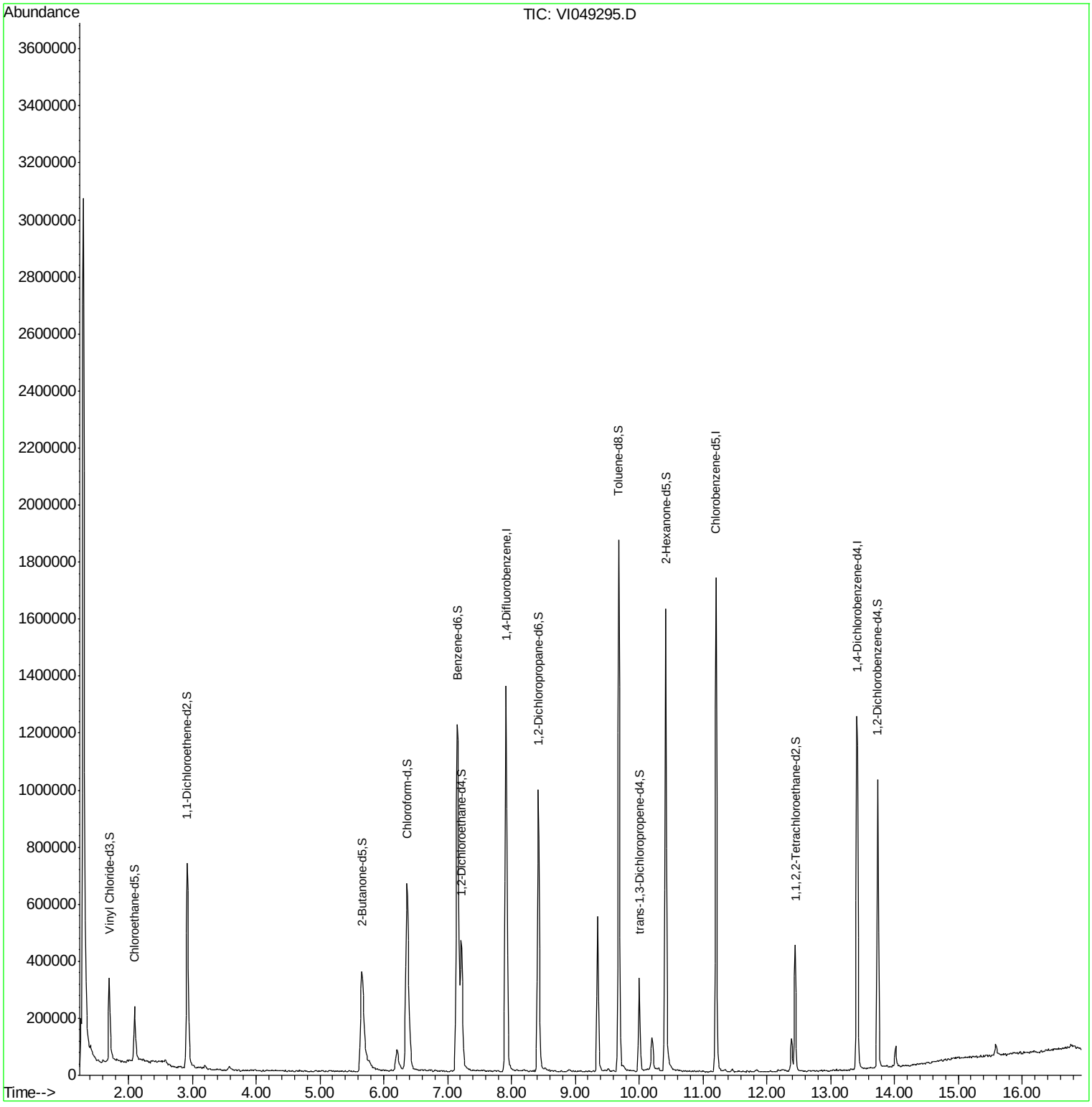
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049295.D
Acq On : 9 May 2016 14:01
Operator : FY/SY
Sample : H2874-16
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4012

Quant Time: May 10 05:45:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049295.D
Acq On : 9 May 2016 14:01
Operator : FY/SY
Sample : H2874-16
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4012

Quant Time: May 10 05:45:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1247784	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	808372	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	295613	5.00	ug/L	-0.02
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	313282	4.08	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 81.60%			
7) Chloroethane-d5	2.09	69	203020	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.40%			
11) 1,1-Dichloroethene-d2	2.92	63	577516	3.19	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.80%			
20) 2-Butanone-d5	5.66	46	827211	49.74	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 99.48%			
24) Chloroform-d	6.36	84	833232	4.26	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 85.20%			
26) 1,2-Dichloroethane-d4	7.22	65	396426	4.96	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.20%			
32) Benzene-d6	7.15	84	1579876	5.02	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.40%			
36) 1,2-Dichloropropane-d6	8.42	67	455113	5.14	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 102.80%			
41) Toluene-d8	9.68	98	1096749	4.72	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.40%			
43) trans-1,3-Dichloropropene-	10.01	79	158898	4.55	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.00%			
46) 2-Hexanone-d5	10.41	63	589786	53.60	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 107.20%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	195937	4.87	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 97.40%			
63) 1,2-Dichlorobenzene-d4	13.75	152	256547	4.95	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 99.00%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049295.D
Acq On : 9 May 2016 14:01
Operator : FY/SY
Sample : H2874-16
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4012

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.296	4	7	17	rVB	2978080	6129259	100.00%	15.659%
2	1.601	36	38	41	rBV3	9588	16402	0.27%	0.042%
3	1.699	45	48	55	rBV	291049	491301	8.02%	1.255%
4	1.985	75	77	78	rBV2	8466	7871	0.13%	0.020%
5	2.093	85	88	101	rBV	189466	383594	6.26%	0.980%
6	2.359	113	115	116	rBV2	8759	13371	0.22%	0.034%
7	2.920	167	172	181	rVV	718302	1596935	26.05%	4.080%
8	3.126	192	193	196	rVB3	6189	8793	0.14%	0.022%
9	3.166	196	197	199	rVV2	5567	8063	0.13%	0.021%
10	3.195	199	200	205	rVB	14826	23024	0.38%	0.059%
11	3.274	206	208	212	rVB5	4832	7820	0.13%	0.020%
12	3.432	222	224	227	rVB4	4665	8856	0.14%	0.023%
13	3.579	234	239	247	rBV8	13989	42124	0.69%	0.108%
14	3.727	252	254	257	rVB4	4599	8077	0.13%	0.021%
15	3.973	277	279	283	rBV4	5311	11495	0.19%	0.029%
16	4.111	291	293	295	rBV2	5339	8002	0.13%	0.020%
17	4.504	332	333	336	rVB2	3946	5657	0.09%	0.014%
18	4.573	336	340	341	rBV4	3976	7632	0.12%	0.019%
19	4.682	350	351	356	rVB5	4518	5477	0.09%	0.014%
20	4.918	372	375	376	rBV3	5028	7275	0.12%	0.019%
21	5.036	384	387	390	rVB4	4147	9229	0.15%	0.024%
22	5.095	390	393	396	rBV4	2583	5424	0.09%	0.014%
23	5.311	414	415	418	rBV3	3773	4998	0.08%	0.013%
24	5.459	425	430	432	rBV6	2630	5527	0.09%	0.014%
25	5.528	435	437	440	rVB4	3947	6176	0.10%	0.016%
26	5.577	440	442	443	rBV2	2943	4546	0.07%	0.012%
27	5.656	443	450	467	rBV	351271	1437605	23.45%	3.673%
28	6.109	493	496	500	rBV4	3788	8186	0.13%	0.021%
29	6.207	500	506	515	rBV	74142	272606	4.45%	0.696%
30	6.365	515	522	535	rVB	654344	2132287	34.79%	5.448%
31	6.611	545	547	548	rVB2	4345	4758	0.08%	0.012%
32	6.630	548	549	553	rBV4	5008	9425	0.15%	0.024%
33	6.748	559	561	563	rVB3	6448	8540	0.14%	0.022%
34	6.807	563	567	568	rBV4	5204	9534	0.16%	0.024%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049295.D
Acq On : 9 May 2016 14:01
Operator : FY/SY
Sample : H2874-16
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4012

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.053	589	592	594	rBV4	5944	9161	0.15%	0.023%
36	7.152	594	602	606	rBV	1214914	3275363	53.44%	8.368%
37	7.211	606	608	624	rVV	456712	1144593	18.67%	2.924%
38	7.536	638	641	643	rBV3	3154	7169	0.12%	0.018%
39	7.565	643	644	647	rVB2	4506	5634	0.09%	0.014%
40	7.654	652	653	656	rVB3	3543	4695	0.08%	0.012%
41	7.742	659	662	664	rBV4	3609	5613	0.09%	0.014%
42	7.782	664	666	669	rVB3	4263	7010	0.11%	0.018%
43	7.920	674	680	694	rBV	1352818	3037370	49.56%	7.760%
44	8.097	694	698	700	rVB5	4095	8159	0.13%	0.021%
45	8.205	705	709	711	rBV4	3914	8366	0.14%	0.021%
46	8.422	725	731	740	rBV	989194	2179209	35.55%	5.567%
47	8.530	740	742	745	rVV2	9932	16769	0.27%	0.043%
48	8.589	747	748	750	rVB2	4118	4743	0.08%	0.012%
49	8.638	750	753	755	rVB3	4424	8626	0.14%	0.022%
50	8.697	757	759	762	rVB4	4351	7338	0.12%	0.019%
51	8.756	762	765	766	rBV3	2428	5316	0.09%	0.014%
52	8.904	775	780	785	rBV8	7645	21625	0.35%	0.055%
53	9.042	791	794	797	rBV4	4729	7949	0.13%	0.020%
54	9.169	803	807	808	rVB4	4046	5565	0.09%	0.014%
55	9.209	808	811	812	rBV3	4627	6670	0.11%	0.017%
56	9.278	817	818	821	rBV3	3302	5402	0.09%	0.014%
57	9.347	821	825	835	rBV	544682	1070841	17.47%	2.736%
58	9.514	840	842	846	rVB5	9790	17586	0.29%	0.045%
59	9.681	854	859	864	rBV	1862767	3220480	52.54%	8.228%
60	9.858	875	877	881	rVB5	3458	5672	0.09%	0.014%
61	10.006	888	892	899	rBV	325807	558122	9.11%	1.426%
62	10.134	902	905	906	rVV3	7019	10527	0.17%	0.027%
63	10.203	906	912	917	rVV	113694	252387	4.12%	0.645%
64	10.301	920	922	929	rVB7	8834	18008	0.29%	0.046%
65	10.419	929	934	947	rBV	1621592	3110996	50.76%	7.948%
66	10.784	968	971	974	rVB4	3819	8849	0.14%	0.023%
67	10.872	977	980	982	rVB4	4379	6420	0.10%	0.016%
68	10.951	985	988	989	rVB2	3283	5130	0.08%	0.013%
69	11.207	1009	1014	1024	rBV	1733533	2845307	46.42%	7.269%
70	11.335	1024	1027	1032	rVB6	8360	20896	0.34%	0.053%
71	11.463	1037	1040	1043	rVB4	9940	20406	0.33%	0.052%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049295.D
Acq On : 9 May 2016 14:01
Operator : FY/SY
Sample : H2874-16
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4012

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.532	1043	1047	1048	rBV4	3462	8288	0.14%	0.021%
73	11.551	1048	1049	1052	rVB3	4556	5887	0.10%	0.015%
74	11.660	1058	1060	1062	rVB2	3626	5188	0.08%	0.013%
75	11.699	1062	1064	1067	rVB4	5146	8503	0.14%	0.022%
76	11.738	1067	1068	1071	rBV3	4085	6710	0.11%	0.017%
77	11.837	1071	1078	1083	rBV8	8189	23365	0.38%	0.060%
78	12.063	1098	1101	1104	rBV4	3288	8999	0.15%	0.023%
79	12.181	1111	1113	1117	rBV4	6589	11936	0.19%	0.030%
80	12.250	1117	1120	1121	rBV3	3348	7669	0.13%	0.020%
81	12.270	1121	1122	1127	rVB5	5313	9154	0.15%	0.023%
82	12.388	1129	1134	1137	rBV	115823	224364	3.66%	0.573%
83	12.447	1137	1140	1148	rVB	441507	746614	12.18%	1.907%
84	12.663	1159	1162	1165	rBV4	3465	8444	0.14%	0.022%
85	12.722	1165	1168	1169	rBV3	2940	4919	0.08%	0.013%
86	12.742	1169	1170	1172	rVB2	3874	4536	0.07%	0.012%
87	12.772	1172	1173	1177	rBV4	3308	6002	0.10%	0.015%
88	12.900	1183	1186	1187	rBV3	3596	5718	0.09%	0.015%
89	12.939	1187	1190	1194	rVB5	4547	10796	0.18%	0.028%
90	13.037	1196	1200	1203	rBV6	4890	8437	0.14%	0.022%
91	13.096	1205	1206	1208	rBV2	6288	5415	0.09%	0.014%
92	13.146	1208	1211	1213	rBV4	3558	6491	0.11%	0.017%
93	13.323	1226	1229	1230	rBV3	4883	9296	0.15%	0.024%
94	13.411	1234	1238	1246	rBV	1238244	2206468	36.00%	5.637%
95	13.736	1267	1271	1279	rVV	1009225	1882928	30.72%	4.811%
96	13.933	1289	1291	1293	rVB3	4873	5479	0.09%	0.014%
97	13.972	1293	1295	1296	rBV2	8260	9630	0.16%	0.025%
98	14.022	1296	1300	1304	rVB	72485	131857	2.15%	0.337%
99	14.179	1314	1316	1319	rBV2	3819	8072	0.13%	0.021%
100	15.586	1456	1459	1467	rBV2	39428	97000	1.58%	0.248%

Sum of corrected areas: 39142006

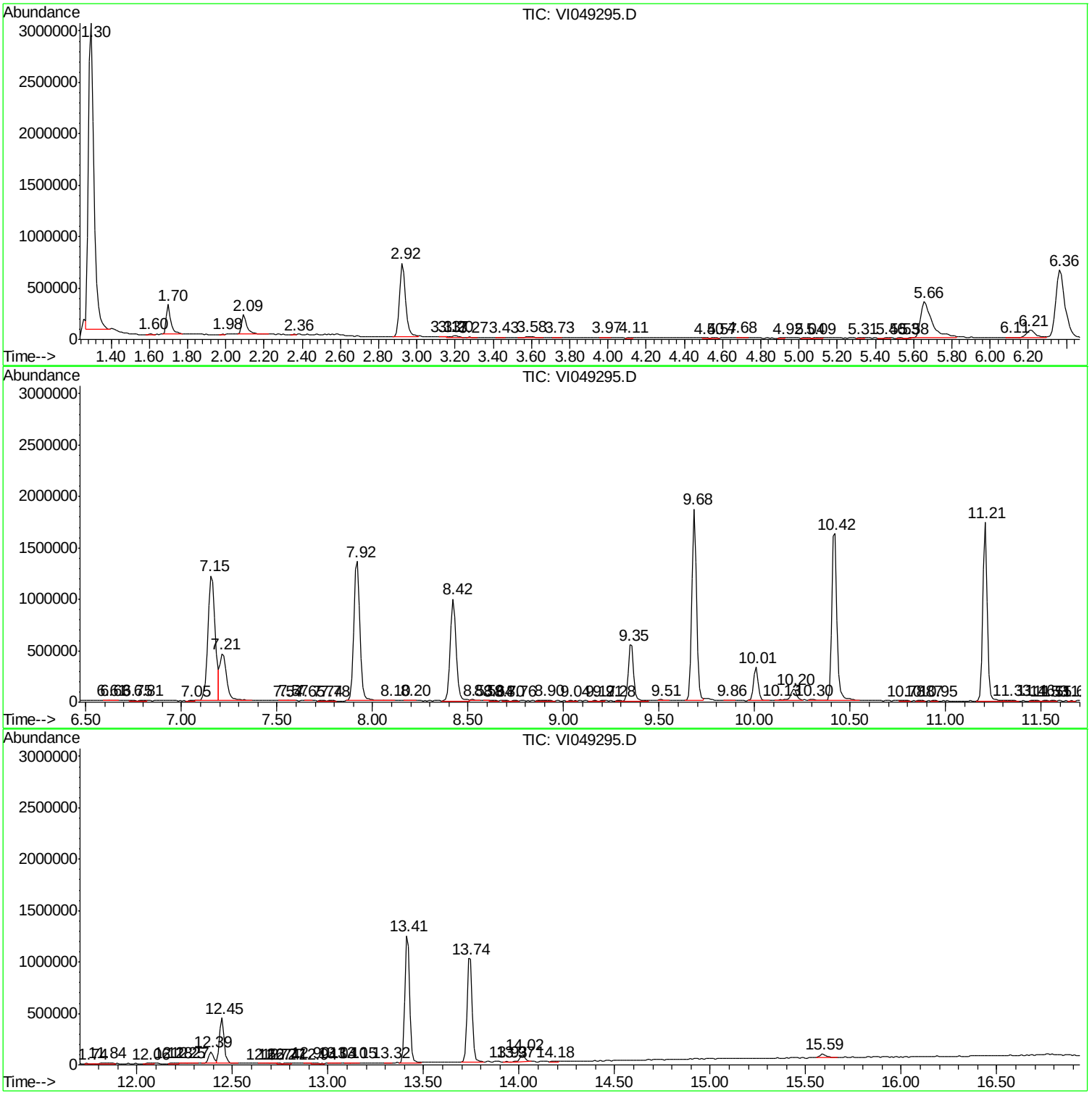
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049295.D
Acq On : 9 May 2016 14:01
Operator : FY/SY
Sample : H2874-16
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4012

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049295.D
Acq On : 9 May 2016 14:01
Operator : FY/SY
Sample : H2874-16
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4012

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

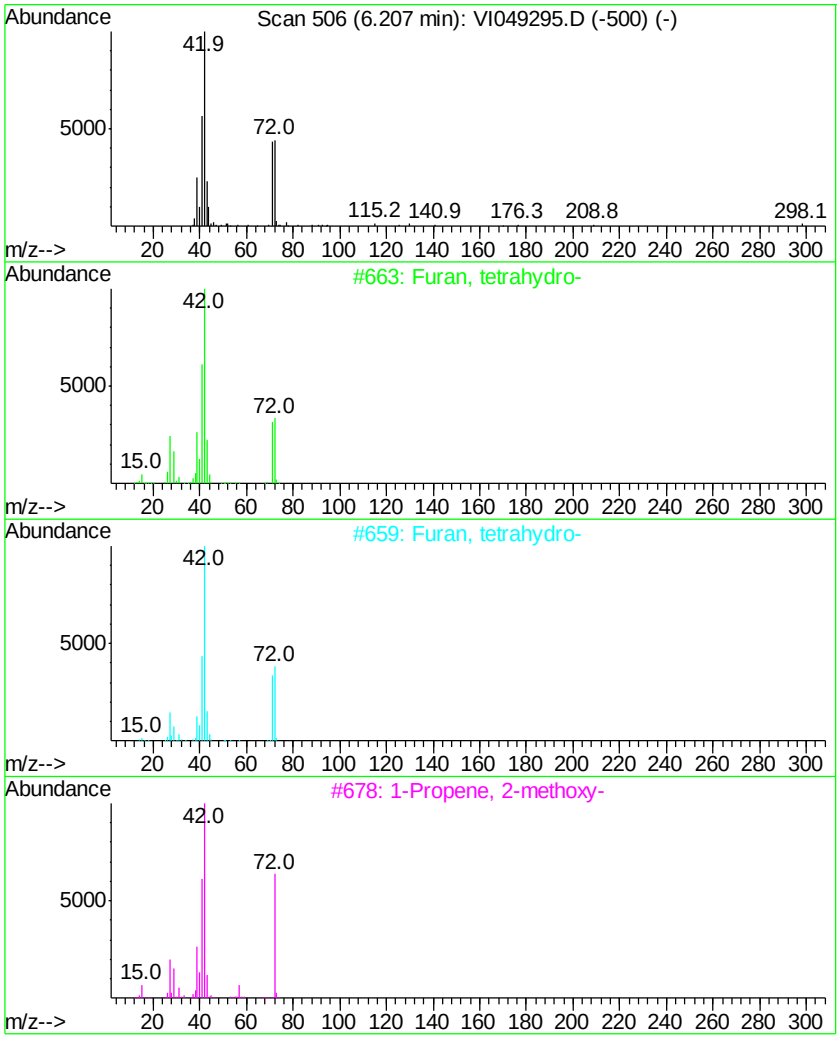
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

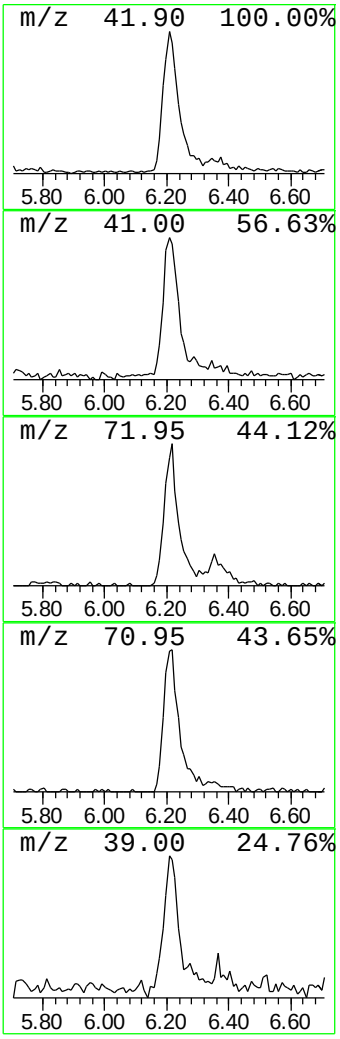
****

Peak Number 2 Furan, tetrahydro- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.21	0.45 ug/L	272606	1,4-Difluorobenzene	7.92

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Furan, tetrahydro-	72	C4H8O	000109-99-9	87
2	Furan, tetrahydro-	72	C4H8O	000109-99-9	86
3	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	52
4	Diaziridine,3,3-dimethyl-	72	C3H8N2	004901-76-2	42
5	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	40





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049295.D
Acq On : 9 May 2016 14:01
Operator : FY/SY
Sample : H2874-16
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4012

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Furan, tetrahydro-	6.21	0.5	ug/L	272606	1	7.92	3037370	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049296.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.3	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049296.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.8	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049296.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049296.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

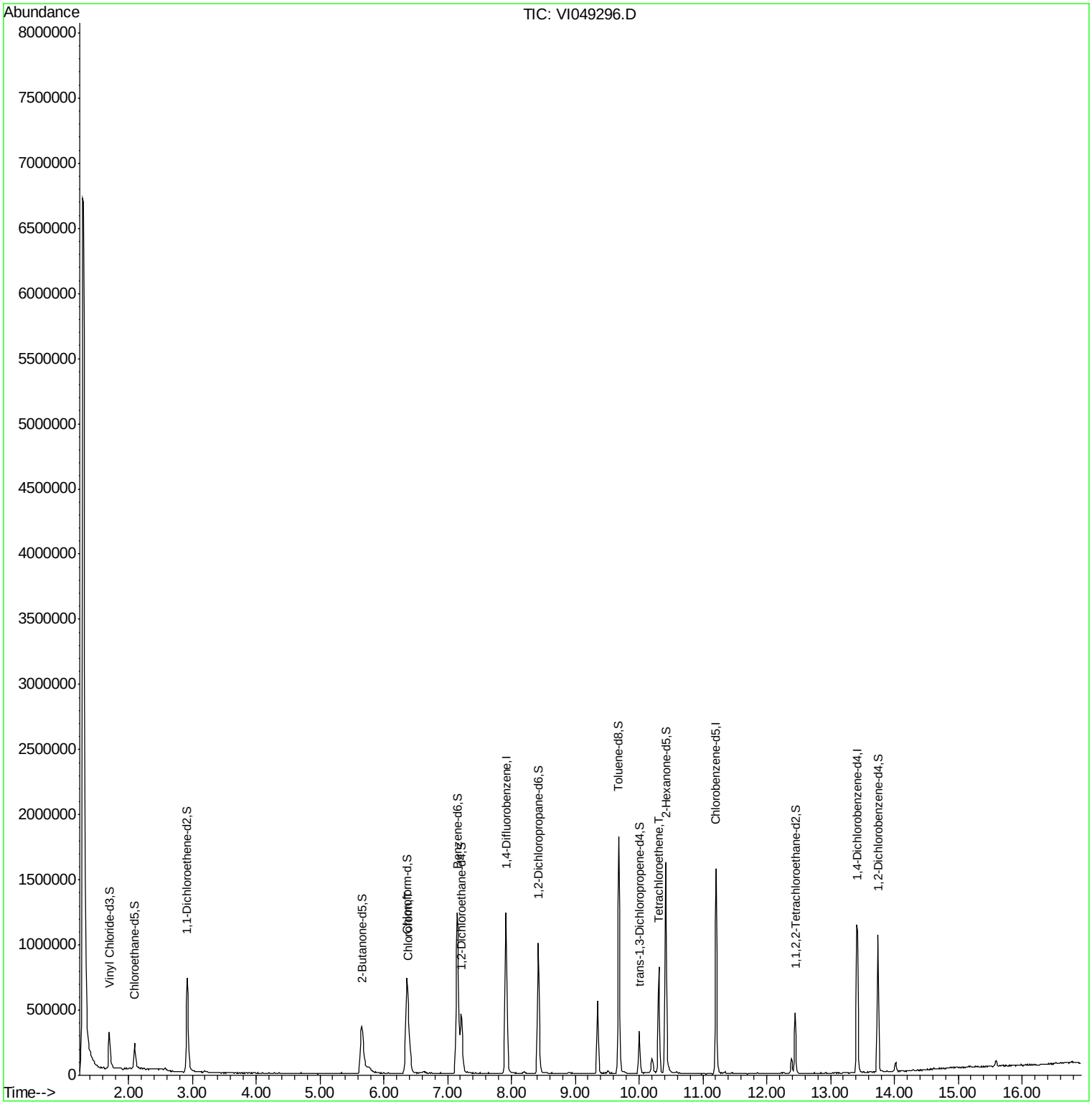
Quantitation Report (QT/LSC Reviewed)

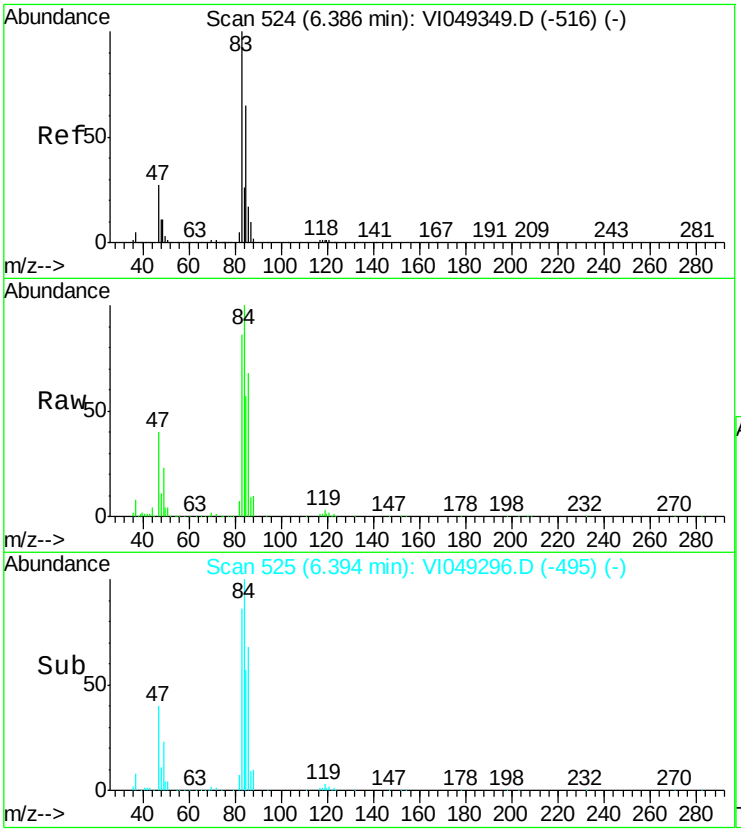
Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050916\
Data File : VI049296.D
Acq On : 9 May 2016 14:33
Operator : FY/SY
Sample : H2874-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 23 07:29:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4013

Manual Integrations APPROVED
feifei
5/10/2016 1:38:11 PM

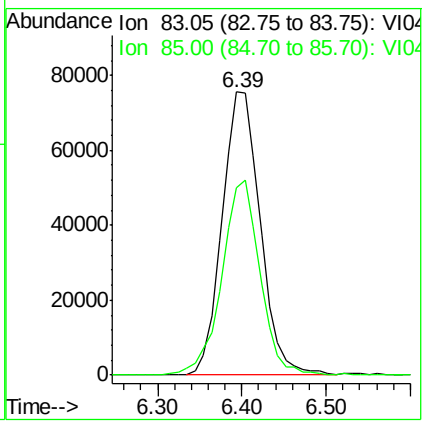




#25
Chloroform
Concen: 1.28 ug/L
RT: 6.39 min Scan# 525
Delta R.T. -0.01 min
Lab File: VI049296.D
Acq: 9 May 2016 14:33

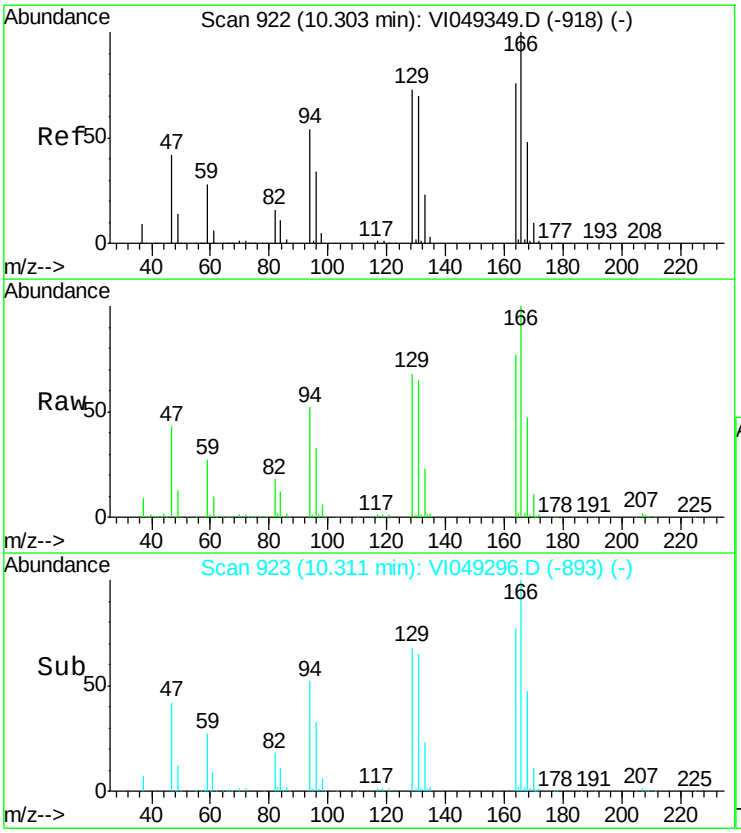
Tgt Ion: 83 Resp: 237154

Ion	Ratio	Lower	Upper
83	100		
85	66.3	47.3	87.8



Instrument :
MSVOA_I
ClientSampleId :
H4013

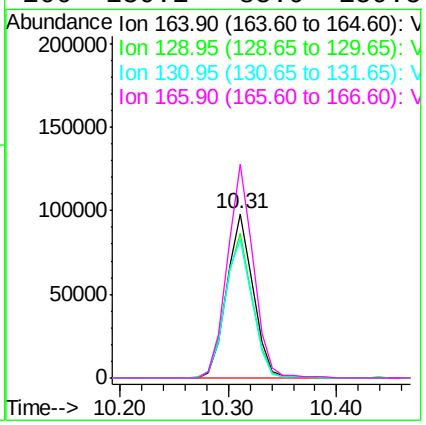
Manual Integrations APPROVED
feifei
5/10/2016 1:38:11 PM



#47
Tetrachloroethene
Concen: 2.84 ug/L
RT: 10.31 min Scan# 923
Delta R.T. -0.01 min
Lab File: VI049296.D
Acq: 9 May 2016 14:33

Tgt Ion:164 Resp: 166662

Ion	Ratio	Lower	Upper
164	100		
129	88.4	62.1	115.3
131	84.4	60.6	112.6
166	130.1	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050916\
Data File : VI049296.D
Acq On : 9 May 2016 14:33
Operator : FY/SY
Sample : H2874-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4013

Manual Integrations APPROVED
feifei
5/10/2016 1:38:11 PM

Quant Time: May 23 07:29:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1153708	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	751281	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	274957	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	301683	4.25	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 85.00%			
7) Chloroethane-d5	2.09	69	209535m	5.33	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 106.60%			
11) 1,1-Dichloroethene-d2	2.92	63	562583	3.36	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 67.20%			
20) 2-Butanone-d5	5.66	46	876341	56.99	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 113.98%			
24) Chloroform-d	6.36	84	876146	4.85	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.00%			
26) 1,2-Dichloroethane-d4	7.21	65	407325m	5.51	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 110.20%			
32) Benzene-d6	7.15	84	1572290	5.37	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 107.40%			
36) 1,2-Dichloropropane-d6	8.42	67	451858	5.49	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 109.80%			
41) Toluene-d8	9.68	98	1089638	5.05	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.00%			
43) trans-1,3-Dichloropropene-	10.01	79	154965	4.78	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 95.60%			
46) 2-Hexanone-d5	10.42	63	584039	57.11	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 114.22%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	197238	5.27	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 105.40%			
63) 1,2-Dichlorobenzene-d4	13.75	152	248083	5.15	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 103.00%			
Target Compounds						Qvalue
25) Chloroform	6.39	83	237154	1.28	ug/L	99
47) Tetrachloroethene	10.31	164	166662	2.84	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049296.D
Acq On : 9 May 2016 14:33
Operator : FY/SY
Sample : H2874-17
Misc : 25mL/MSVOA I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4013

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	3	6	33	rVB	6672192	18751514	100.00%	35.637%
2	1.699	45	48	55	rBV	277398	481516	2.57%	0.915%
3	1.935	70	72	73	rBV2	7883	10669	0.06%	0.020%
4	2.093	85	88	97	rVB	191348	376214	2.01%	0.715%
5	2.299	106	109	110	rBV3	6623	11002	0.06%	0.021%
6	2.486	126	128	130	rBV3	7206	12627	0.07%	0.024%
7	2.575	134	137	142	rVB4	18704	44157	0.24%	0.084%
8	2.919	167	172	185	rBV	720012	1615695	8.62%	3.071%
9	3.116	190	192	197	rVV5	8144	21121	0.11%	0.040%
10	3.195	197	200	206	rVB3	17757	47655	0.25%	0.091%
11	3.352	213	216	217	rBV3	3842	5943	0.03%	0.011%
12	3.530	233	234	236	rBV	5963	6151	0.03%	0.012%
13	3.569	236	238	243	rVV5	4723	10996	0.06%	0.021%
14	3.628	243	244	247	rVB3	5670	4835	0.03%	0.009%
15	3.667	247	248	251	rBV3	3287	4815	0.03%	0.009%
16	3.736	253	255	257	rBV3	4329	7077	0.04%	0.013%
17	3.835	263	265	269	rVB5	3174	5339	0.03%	0.010%
18	3.973	276	279	281	rVB3	6794	9446	0.05%	0.018%
19	4.022	281	284	285	rBV3	2890	5482	0.03%	0.010%
20	4.199	299	302	304	rVB4	3556	5996	0.03%	0.011%
21	4.287	310	311	317	rVB5	3392	6629	0.04%	0.013%
22	4.406	320	323	324	rBV3	3886	7165	0.04%	0.014%
23	4.435	324	326	332	rVB5	3369	7544	0.04%	0.014%
24	4.514	332	334	337	rBV3	2992	5091	0.03%	0.010%
25	4.927	374	376	378	rVB3	3813	5744	0.03%	0.011%
26	4.996	380	383	385	rBV3	6545	11678	0.06%	0.022%
27	5.409	424	425	428	rBV3	4654	6695	0.04%	0.013%
28	5.498	433	434	438	rVB4	2712	4773	0.03%	0.009%
29	5.656	442	450	459	rBV	359457	1339200	7.14%	2.545%
30	6.207	502	506	508	rVB5	2923	6882	0.04%	0.013%
31	6.364	513	522	533	rBV2	731279	2611899	13.93%	4.964%
32	6.630	544	549	555	rVB6	13422	42895	0.23%	0.082%
33	6.718	555	558	560	rBV3	2967	5407	0.03%	0.010%
34	6.866	567	573	574	rBV5	2130	6327	0.03%	0.012%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049296.D
Acq On : 9 May 2016 14:33
Operator : FY/SY
Sample : H2874-17
Misc : 25mL/MSVOA I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4013

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.886	574	575	578	rBV3	5289	7715	0.04%	0.015%
36	7.151	595	602	606	rBV	1232267	3270649	17.44%	6.216%
37	7.211	606	608	617	rVV	452611	1059510	5.65%	2.014%
38	7.309	617	618	625	rVB6	8937	17546	0.09%	0.033%
39	7.644	648	652	655	rVB6	5051	7590	0.04%	0.014%
40	7.732	659	661	664	rBV4	4630	10773	0.06%	0.020%
41	7.772	664	665	668	rVB2	5147	4966	0.03%	0.009%
42	7.919	674	680	690	rBV	1233543	2808311	14.98%	5.337%
43	8.195	704	708	716	rVB8	17004	42905	0.23%	0.082%
44	8.421	725	731	741	rBV	996578	2133911	11.38%	4.055%
45	8.529	741	742	744	rVV2	7222	6686	0.04%	0.013%
46	8.628	751	752	755	rVB3	4892	6321	0.03%	0.012%
47	8.677	755	757	759	rVB3	3818	5528	0.03%	0.011%
48	8.825	771	772	775	rVB3	4331	5179	0.03%	0.010%
49	8.894	775	779	783	rBV7	10558	36909	0.20%	0.070%
50	9.199	808	810	812	rVB3	5126	5669	0.03%	0.011%
51	9.248	812	815	816	rBV3	2944	5307	0.03%	0.010%
52	9.346	821	825	832	rBV	557811	1057021	5.64%	2.009%
53	9.504	838	841	846	rVB4	18495	41102	0.22%	0.078%
54	9.573	846	848	851	rVB4	4541	6010	0.03%	0.011%
55	9.681	854	859	865	rBV	1819399	3173626	16.92%	6.031%
56	10.006	888	892	899	rVV	328023	562079	3.00%	1.068%
57	10.134	899	905	906	rVV6	9404	26399	0.14%	0.050%
58	10.203	906	912	918	rVV	116323	277586	1.48%	0.528%
59	10.311	918	923	930	rVV	816205	1429192	7.62%	2.716%
60	10.419	930	934	949	rVV	1621584	3125926	16.67%	5.941%
61	10.586	949	951	954	rVV4	11683	21585	0.12%	0.041%
62	10.626	954	955	958	rVV3	5257	7285	0.04%	0.014%
63	10.685	958	961	962	rVB3	4092	5753	0.03%	0.011%
64	10.951	987	988	990	rVB2	6119	6757	0.04%	0.013%
65	10.980	990	991	993	rBV2	5173	5337	0.03%	0.010%
66	11.069	998	1000	1003	rBV4	2717	6629	0.04%	0.013%
67	11.206	1010	1014	1022	rVV	1569464	2596617	13.85%	4.935%
68	11.344	1024	1028	1032	rVB3	12112	24425	0.13%	0.046%
69	11.452	1037	1039	1045	rVB6	10064	19932	0.11%	0.038%
70	11.561	1048	1050	1053	rVB3	2552	5005	0.03%	0.010%
71	11.620	1053	1056	1057	rBV2	3680	6564	0.04%	0.012%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049296.D
Acq On : 9 May 2016 14:33
Operator : FY/SY
Sample : H2874-17
Misc : 25mL/MSVOA I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4013

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.728	1064	1067	1070	rBV5	3144	7448	0.04%	0.014%
73	11.826	1073	1077	1078	rBV4	4141	6745	0.04%	0.013%
74	11.856	1078	1080	1081	rVB2	5038	5361	0.03%	0.010%
75	12.053	1097	1100	1103	rBV4	3428	8516	0.05%	0.016%
76	12.181	1110	1113	1115	rBV3	4846	9037	0.05%	0.017%
77	12.240	1115	1119	1120	rBV3	5272	7684	0.04%	0.015%
78	12.269	1120	1122	1123	rVV2	4929	5879	0.03%	0.011%
79	12.387	1128	1134	1137	rBV	109984	213962	1.14%	0.407%
80	12.446	1137	1140	1146	rVV	462949	743869	3.97%	1.414%
81	12.663	1159	1162	1165	rVB4	4223	8268	0.04%	0.016%
82	12.742	1165	1170	1171	rBV4	5481	10842	0.06%	0.021%
83	12.850	1178	1181	1183	rBV3	5564	6843	0.04%	0.013%
84	12.919	1186	1188	1190	rVB4	4067	5813	0.03%	0.011%
85	13.037	1197	1200	1201	rBV3	5943	7411	0.04%	0.014%
86	13.076	1201	1204	1206	rBV4	2423	5250	0.03%	0.010%
87	13.254	1220	1222	1226	rVB5	3953	7637	0.04%	0.015%
88	13.332	1226	1230	1234	rBV7	7742	21521	0.11%	0.041%
89	13.411	1234	1238	1247	rBV	1138734	2047830	10.92%	3.892%
90	13.608	1257	1258	1262	rVV4	4568	9311	0.05%	0.018%
91	13.746	1267	1272	1278	rVV	1051001	1860317	9.92%	3.536%
92	14.021	1295	1300	1304	rVV	71126	131617	0.70%	0.250%
93	14.080	1304	1306	1307	rVB2	4952	4786	0.03%	0.009%
94	14.297	1326	1328	1330	rBV3	7678	11567	0.06%	0.022%
95	14.356	1333	1334	1337	rBV2	4864	10401	0.06%	0.020%
96	14.622	1359	1361	1364	rBV4	6279	6569	0.04%	0.012%
97	14.700	1368	1369	1371	rVB2	9093	6190	0.03%	0.012%
98	14.730	1371	1372	1374	rBV2	7092	9922	0.05%	0.019%
99	15.271	1425	1427	1429	rBV2	9078	15484	0.08%	0.029%
100	15.596	1456	1460	1464	rVB	39617	75289	0.40%	0.143%

Sum of corrected areas: 52617853

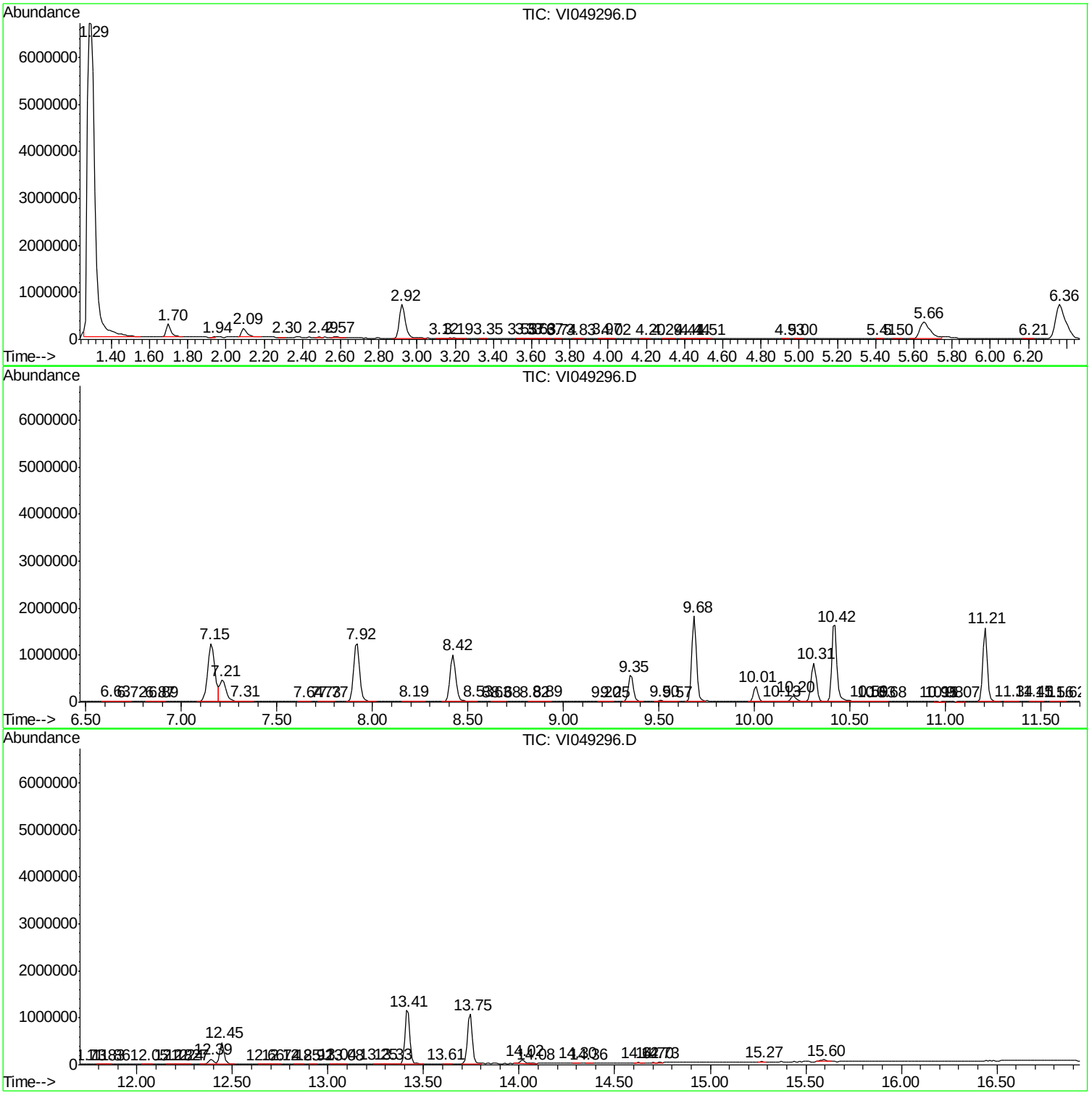
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049296.D
Acq On : 9 May 2016 14:33
Operator : FY/SY
Sample : H2874-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4013

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049296.D
Acq On : 9 May 2016 14:33
Operator : FY/SY
Sample : H2874-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4013

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049296.D
Acq On : 9 May 2016 14:33
Operator : FY/SY
Sample : H2874-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4013

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

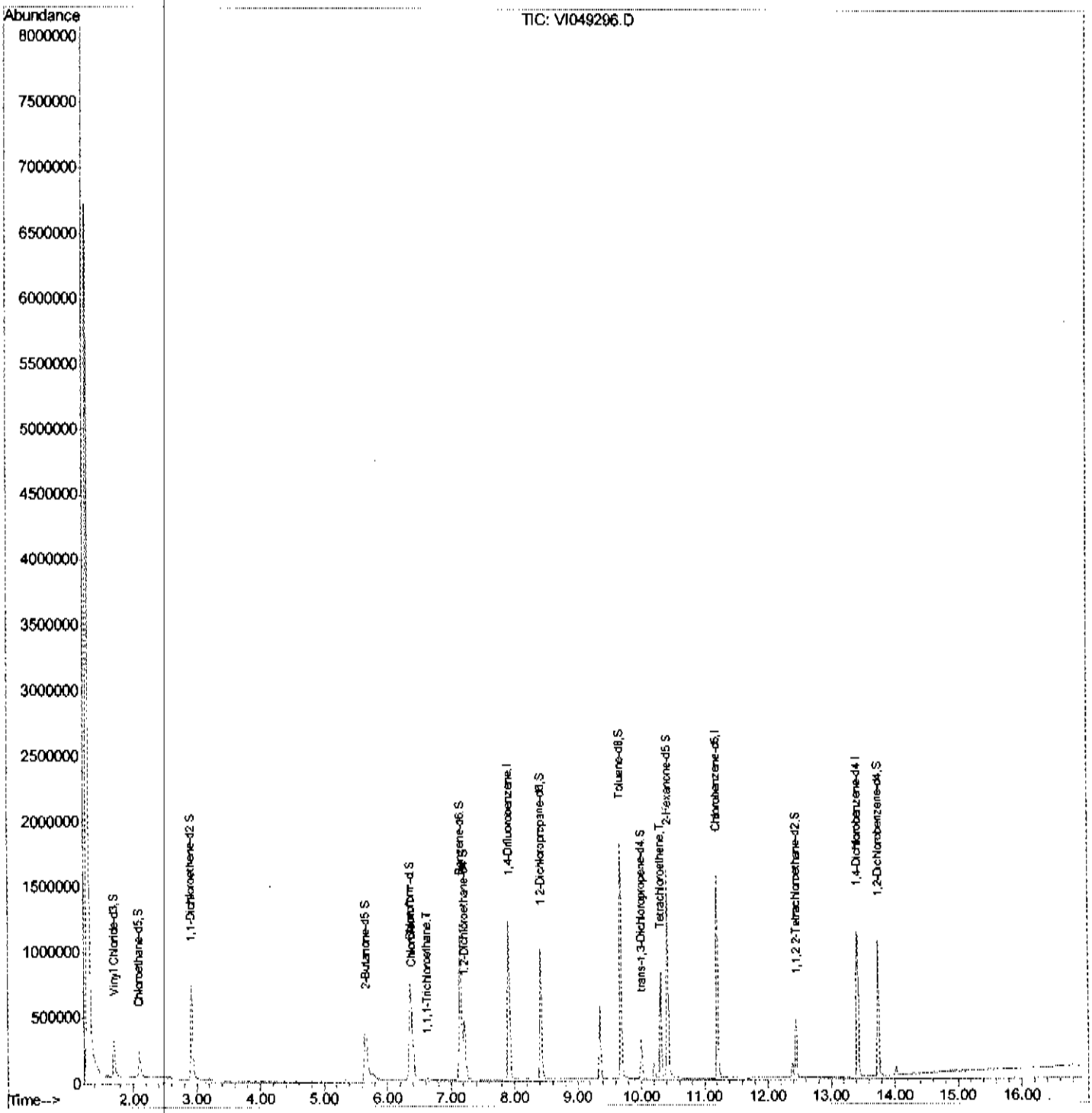
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049296.D
Acq On : 9 May 2016 14:33
Operator : FY/SY
Sample : H2874-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 10 05:49:02 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4013

Manual Integrations APPROVED
feifei
5/10/2016 1:38:11 PM



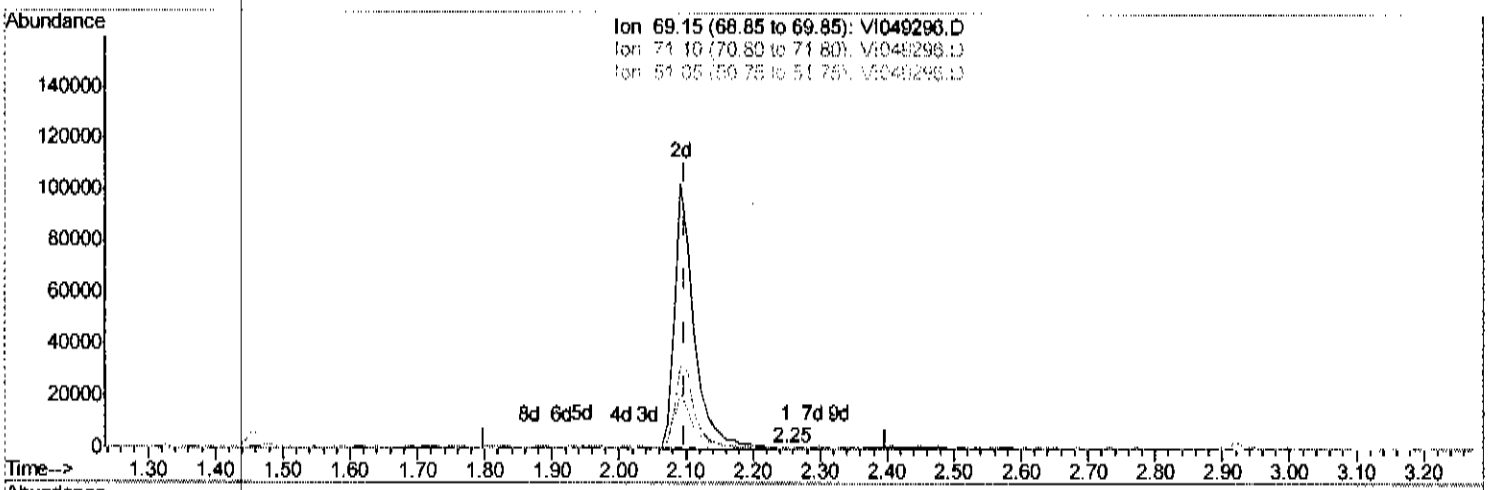
Quantitation Report (Qedit)

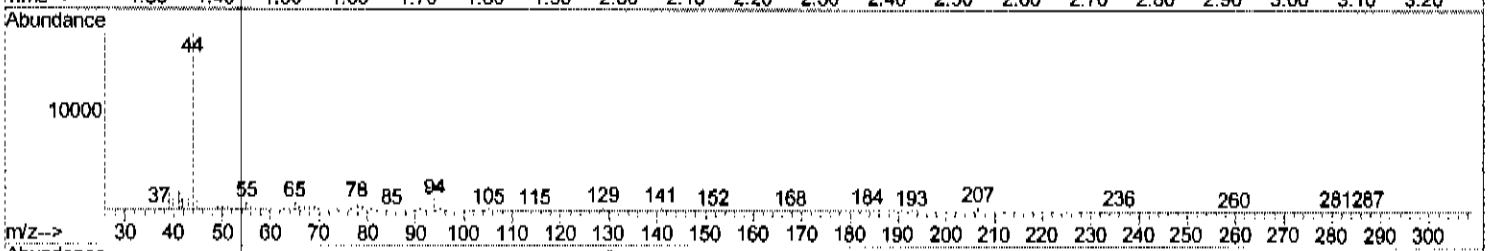
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049296.D
Acq On : 9 May 2016 14:33
Operator : FY/SY
Sample : H2874-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

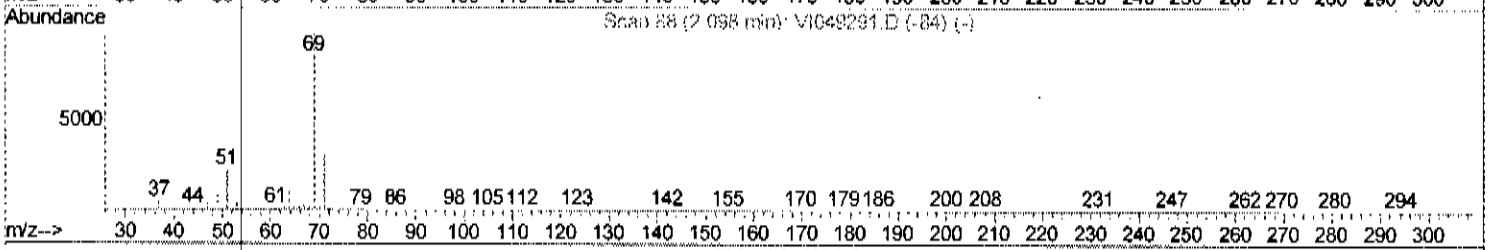
Quant Time: May 10 05:37:22 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4013

Manual Integrations APPROVED
feifei
5/10/2016 1:38:11 PM







TIC: VI049296.D

(7) Chloroethane-d5 (S)

2.250min (+0.152) 0.03ug/L

response 1054

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	28.84
51.05	32.70	28.56
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049296.D
Acq On : 9 May 2016 14:33
Operator : FY/SY
Sample : H2874-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 10 05:37:22 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4013

Manual Integrations APPROVED
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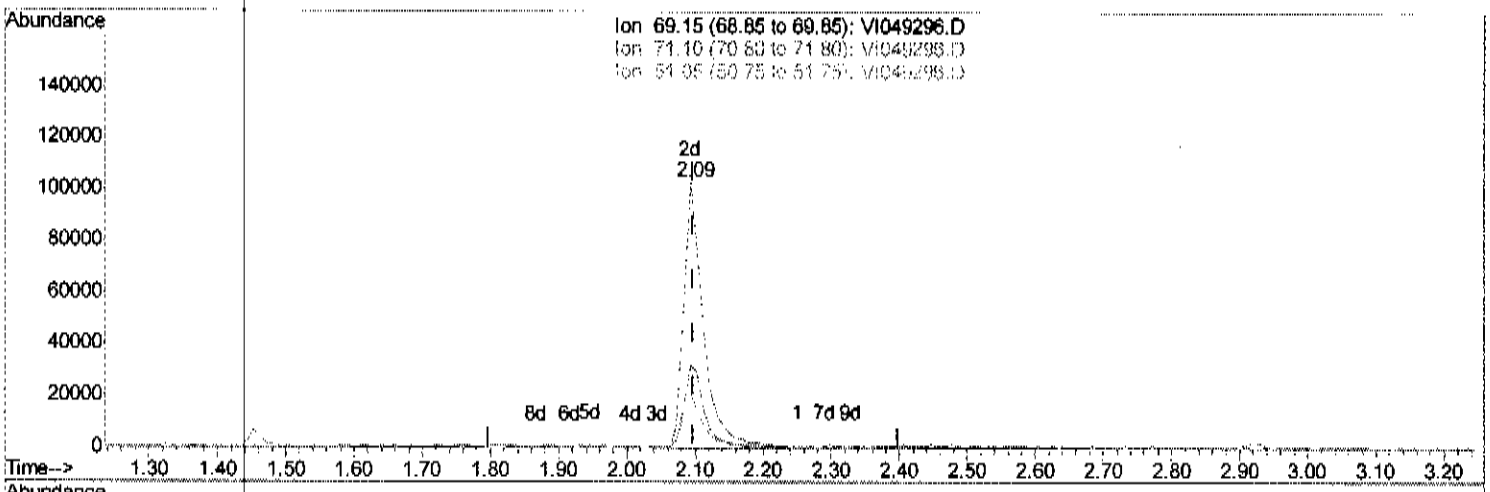
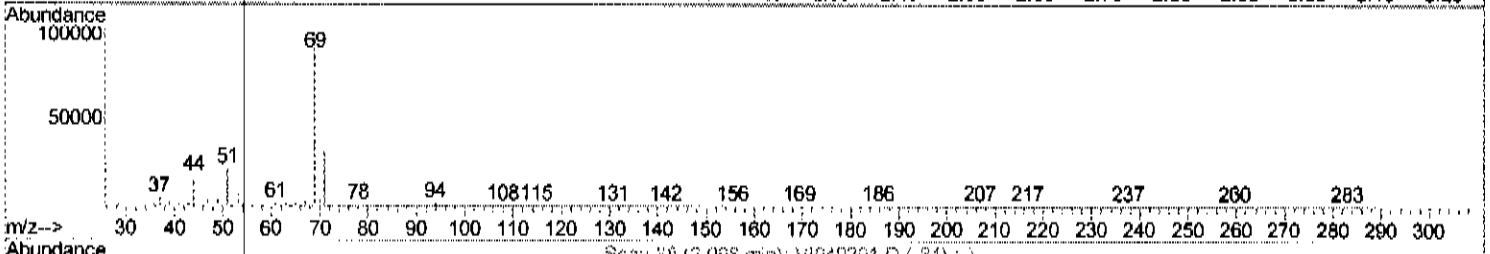
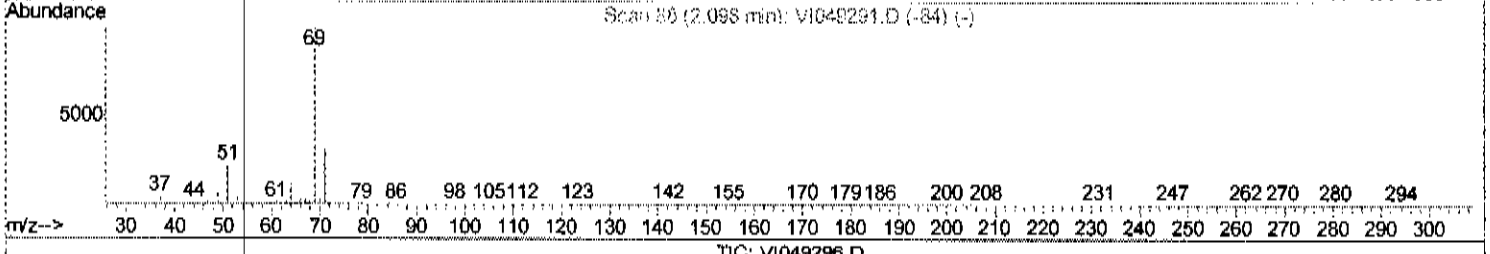
5/10/2016 1:38:11 PM





Scan 86 (2.098 min): VI049291.D (-84) (-)



TIC: VI049296.D

(7) Chloroethane-d5 (S)

2.093min (-0.006) 5.33ug/L m

response 209535

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.15#
51.05	32.70	0.14#
0.00	0.00	0.00

FY 5/10/2016

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049296.D
Acq On : 9 May 2016 14:33
Operator : FY/SY
Sample : H2874-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 10 05:37:22 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4013

Manual Integrations APPROVED
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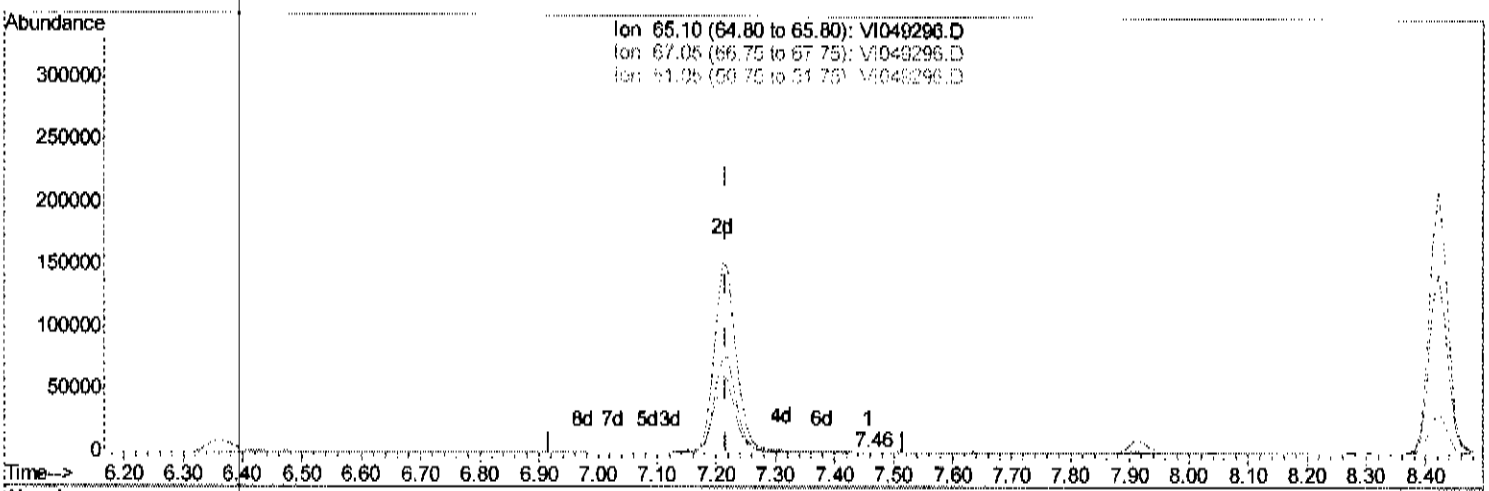
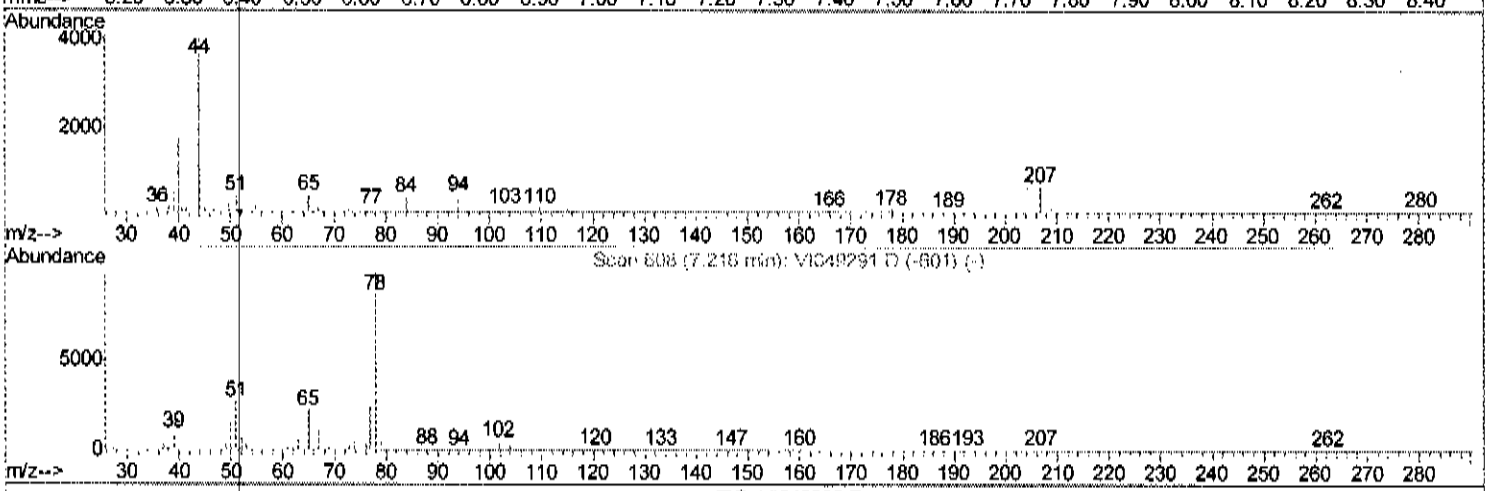




Scan 608 (7.216 min): VI049291.D (-601) (-)

TIC: VI049296.D

(26) 1,2-Dichloroethane-d4 (S)

7.457min (+0.240) 0.00ug/L

response 362

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	53.59
51.05	123.20	87.02
0.00	0.00	0.00

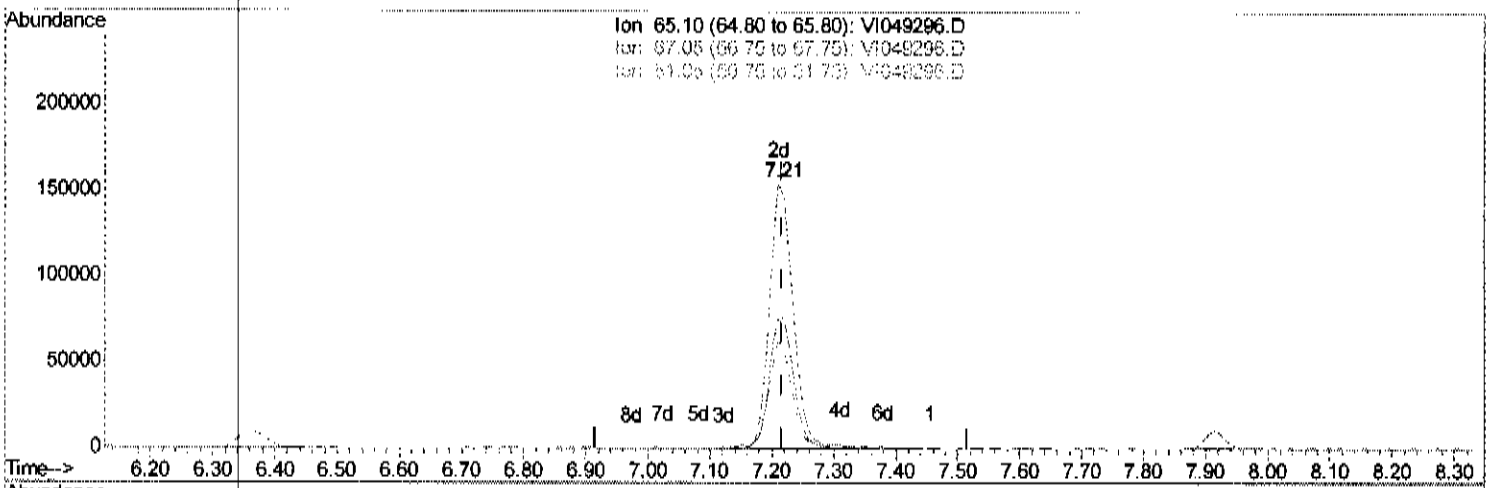
Quantitation Report (Qedit)

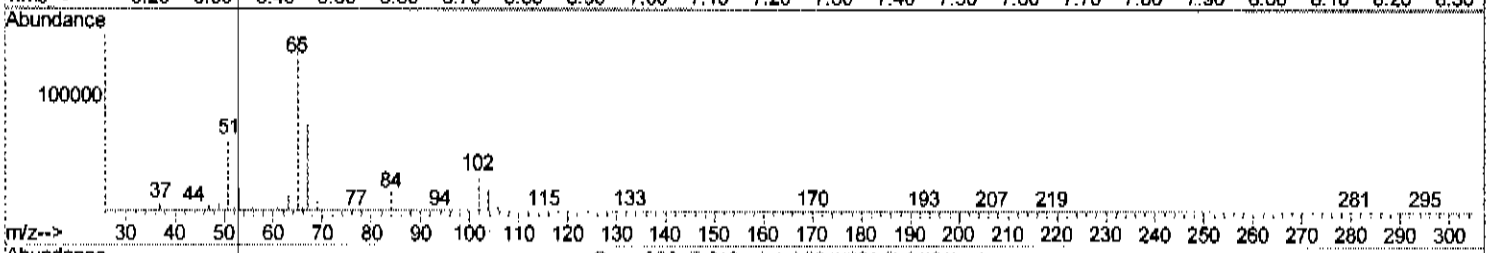
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049296.D
Acq On : 9 May 2016 14:33
Operator : FY/SY
Sample : H2874-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 10 05:37:22 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

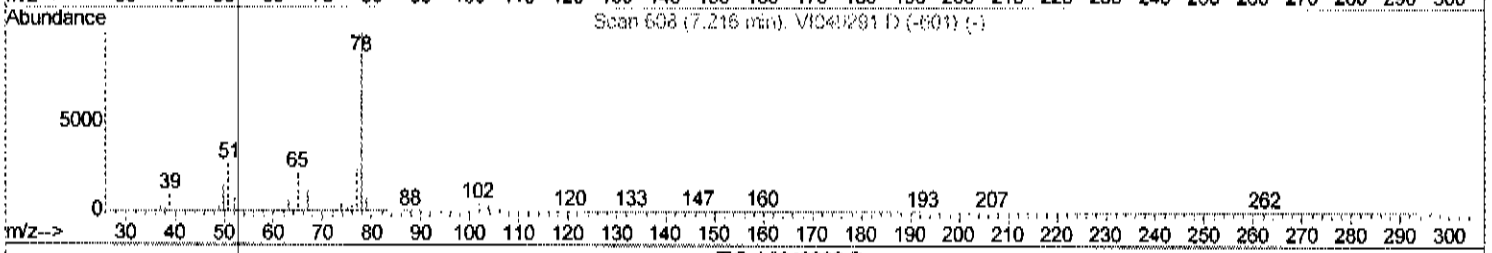
Instrument :
MSVOA_I
ClientSampleId :
H4013

Manual Integrations APPROVED
feifei
5/10/2016 1:38:11 PM





Scan 608 (7.216 min): VI049291.D (-601) (-)



TIC: VI049296.D

(26) 1,2-Dichloroethane-d4 (S)

7.211min (-0.006) 5.51ug/L m

response 407325

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.05#
51.05	123.20	0.08#
0.00	0.00	0.00

FY 5/10/2016

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050916\
Data File : VI049296.D
Acq On : 9 May 2016 14:33
Operator : FY/SY
Sample : H2874-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 23 07:29:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4013

Manual Integrations APPROVED
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FY
5/10/2016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1153708	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	751281	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	274957	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	301683	4.25	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 85.00%			
7) Chloroethane-d5	2.09	69	209535m	5.33	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 106.60%			
11) 1,1-Dichloroethene-d2	2.92	63	562583	3.36	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 67.20%			
20) 2-Butanone-d5	5.66	46	876341	56.99	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 113.98%			
24) Chloroform-d	6.36	84	876146	4.85	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.00%			
26) 1,2-Dichloroethane-d4	7.21	65	407325m	5.51	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 110.20%			
32) Benzene-d6	7.15	84	1572290	5.37	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 107.40%			
36) 1,2-Dichloropropane-d6	8.42	67	451858	5.49	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 109.80%			
41) Toluene-d8	9.68	98	1089638	5.05	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.00%			
43) trans-1,3-Dichloropropene-	10.01	79	154965	4.78	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 95.60%			
46) 2-Hexanone-d5	10.42	63	584039	57.11	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 114.22%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	197238	5.27	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 105.40%			
63) 1,2-Dichlorobenzene-d4	13.75	152	248083	5.15	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 103.00%			
Target Compounds						Qvalue
25) Chloroform	6.39	83	237154	1.28	ug/L	99
47) Tetrachloroethene	10.31	164	166662	2.84	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4016

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049297.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.7	
71-55-6	1,1,1-Trichloroethane	0.19	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.13	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4016

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049297.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	6.7	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4016

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049297.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4016

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049297.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

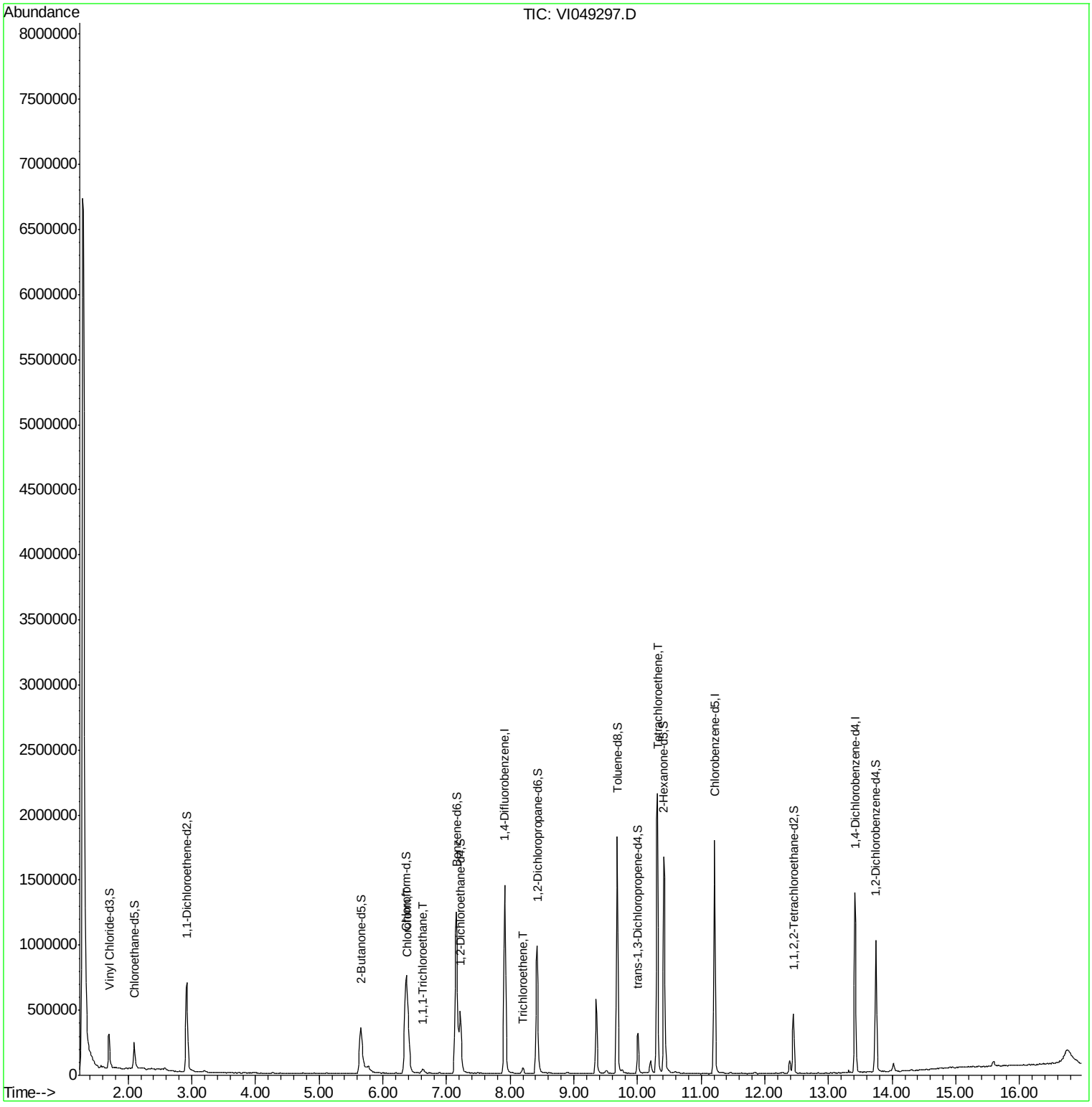
Quantitation Report (QT/LSC Reviewed)

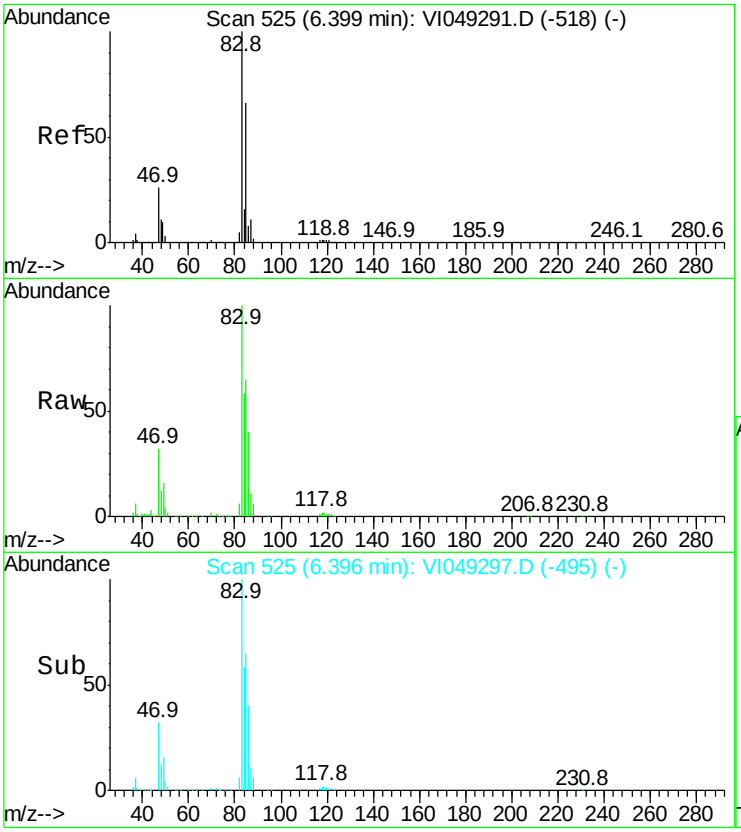
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049297.D
Acq On : 9 May 2016 15:04
Operator : FY/SY
Sample : H2874-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 10 05:51:01 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4016

Manual Integrations APPROVED
feifei
5/10/2016 1:38:12 PM

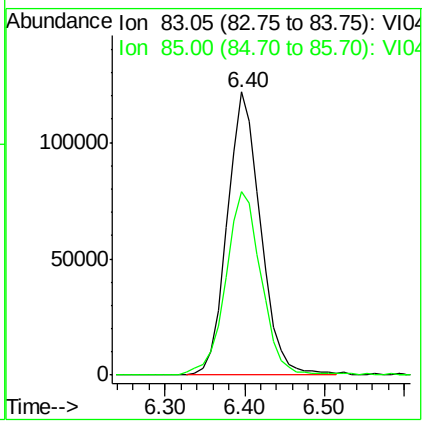




#25
Chloroform
Concen: 1.68 ug/L
RT: 6.40 min Scan# 525
Delta R.T. -0.00 min
Lab File: VI049297.D
Acq: 9 May 2016 15:04

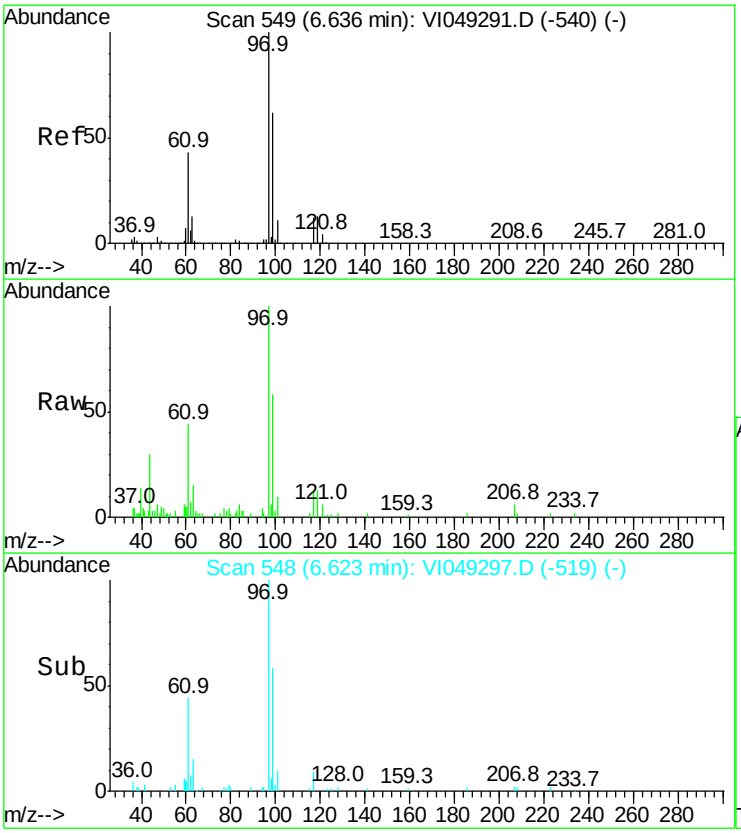
Tgt Ion: 83 Resp: 354874

Ion	Ratio	Lower	Upper
83	100		
85	64.9	47.3	87.8



Instrument :
MSVOA_I
ClientSampleId :
H4016

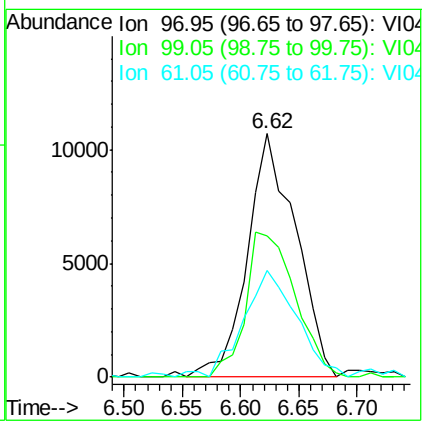
Manual Integrations APPROVED
feifei
5/10/2016 1:38:12 PM

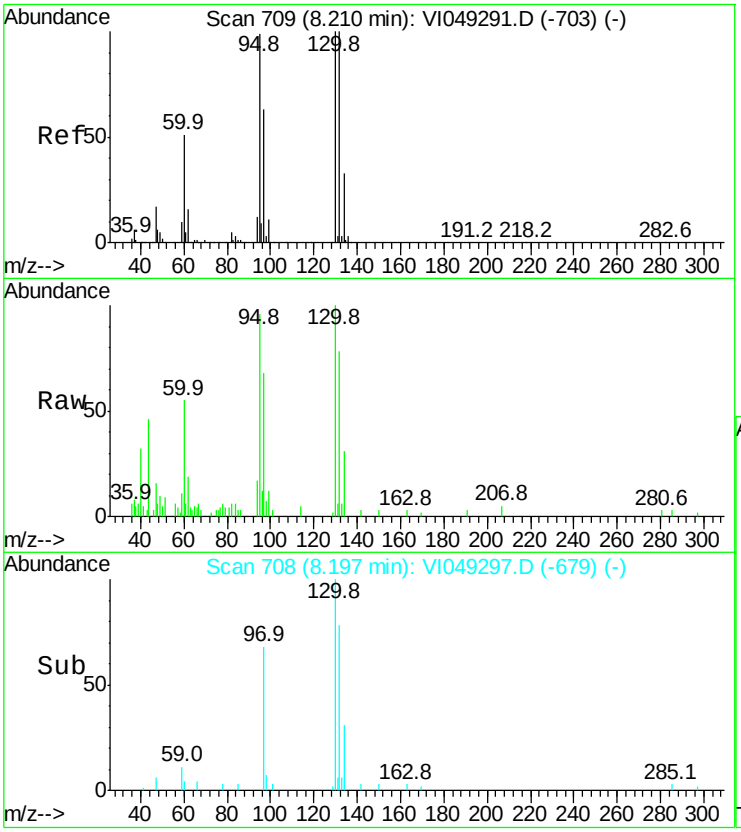


#29
1,1,1-Trichloroethane
Concen: 0.19 ug/L
RT: 6.62 min Scan# 548
Delta R.T. -0.01 min
Lab File: VI049297.D
Acq: 9 May 2016 15:04

Tgt Ion: 97 Resp: 30805

Ion	Ratio	Lower	Upper
97	100		
99	60.9	51.1	76.7
61	47.5	33.3	49.9

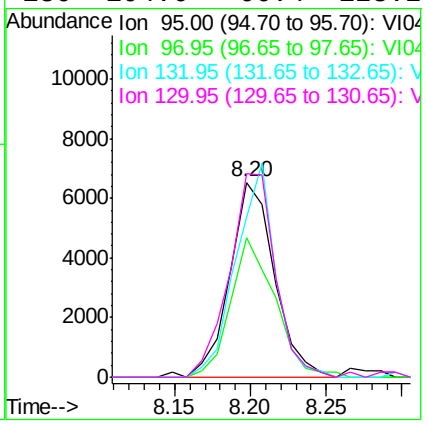




#34
Trichloroethene
Concen: 0.13 ug/L
RT: 8.20 min Scan# 708
Delta R.T. -0.01 min
Lab File: VI049297.D
Acq: 9 May 2016 15:04

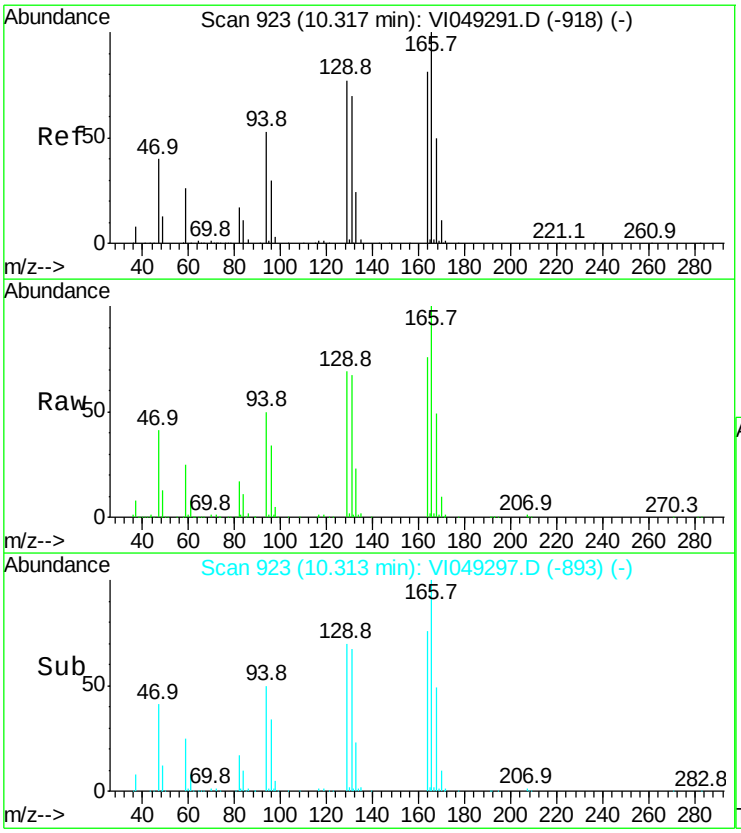
Tgt Ion: 95 Resp: 13346

Ion	Ratio	Lower	Upper
95	100		
97	71.6	45.8	85.2
132	81.9	63.9	118.7
130	104.6	66.4	123.2



Instrument :
MSVOA_I
ClientSampleId :
H4016

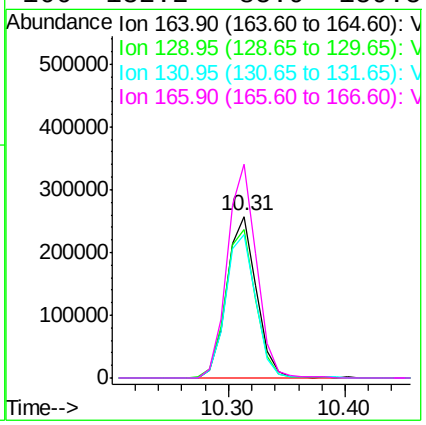
Manual Integrations APPROVED
feifei
5/10/2016 1:38:12 PM



#47
Tetrachloroethene
Concen: 6.66 ug/L
RT: 10.31 min Scan# 923
Delta R.T. -0.00 min
Lab File: VI049297.D
Acq: 9 May 2016 15:04

Tgt Ion:164 Resp: 452028

Ion	Ratio	Lower	Upper
164	100		
129	91.8	62.1	115.3
131	88.9	60.6	112.6
166	132.2	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049297.D
Acq On : 9 May 2016 15:04
Operator : FY/SY
Sample : H2874-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4016

Manual Integrations APPROVED
feifei
5/10/2016 1:38:12 PM

Quant Time: May 10 05:51:01 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1312652	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.21	117	869053	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	313554	5.00	ug/L	-0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	307641	3.81	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 76.20%			
7) Chloroethane-d5	2.10	69	204120	4.56	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 91.20%			
11) 1,1-Dichloroethene-d2	2.92	63	559757	2.94	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 58.80%#			
20) 2-Butanone-d5	5.65	46	865474	49.47	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 98.94%			
24) Chloroform-d	6.36	84	908115	4.42	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 88.40%			
26) 1,2-Dichloroethane-d4	7.21	65	410959m	4.89	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 97.80%			
32) Benzene-d6	7.15	84	1564856	4.62	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 92.40%			
36) 1,2-Dichloropropane-d6	8.42	67	451760	4.75	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 95.00%			
41) Toluene-d8	9.68	98	1097225	4.39	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.80%			
43) trans-1,3-Dichloropropene-	10.01	79	158556	4.23	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 84.60%			
46) 2-Hexanone-d5	10.41	63	587043	49.62	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 99.24%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	196058	4.53	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 90.60%			
63) 1,2-Dichlorobenzene-d4	13.75	152	241169	4.39	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 87.80%			
Target Compounds						Qvalue
25) Chloroform	6.40	83	354874	1.68	ug/L	97
29) 1,1,1-Trichloroethane	6.62	97	30805	0.19	ug/L	94
34) Trichloroethene	8.20	95	13346	0.13	ug/L	91
47) Tetrachloroethene	10.31	164	452028	6.66	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049297.D
Acq On : 9 May 2016 15:04
Operator : FY/SY
Sample : H2874-18
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4016

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.288	3	6	32	rVB	6680411	18533561	100.00%	32.808%
2	1.574	33	35	36	rBV	15105	13923	0.08%	0.025%
3	1.702	44	48	54	rBV	262964	487201	2.63%	0.862%
4	2.017	78	80	82	rBV3	7476	10866	0.06%	0.019%
5	2.095	84	88	95	rVV	199801	381904	2.06%	0.676%
6	2.528	130	132	135	rVV3	6398	11967	0.06%	0.021%
7	2.578	135	137	147	rVV3	22444	63153	0.34%	0.112%
8	2.715	149	151	152	rVB2	6917	7120	0.04%	0.013%
9	2.922	167	172	187	rBV	688958	1627597	8.78%	2.881%
10	3.188	196	199	214	rVB3	17822	80392	0.43%	0.142%
11	3.404	220	221	225	rVB3	5087	5880	0.03%	0.010%
12	3.522	231	233	235	rVB3	4328	5128	0.03%	0.009%
13	3.581	235	239	241	rBV3	7829	19306	0.10%	0.034%
14	3.818	260	263	264	rBV3	2903	5723	0.03%	0.010%
15	3.847	264	266	269	rVV4	3937	7352	0.04%	0.013%
16	3.916	272	273	275	rVV2	4855	5137	0.03%	0.009%
17	3.985	275	280	282	rVV6	6167	16638	0.09%	0.029%
18	4.133	292	295	296	rVB2	4399	6603	0.04%	0.012%
19	4.172	296	299	301	rBV3	3830	7946	0.04%	0.014%
20	4.280	306	310	314	rVB6	3997	8875	0.05%	0.016%
21	4.644	345	347	350	rVB4	2788	5668	0.03%	0.010%
22	4.684	350	351	354	rBV3	2886	5390	0.03%	0.010%
23	4.920	373	375	377	rVV2	5040	7366	0.04%	0.013%
24	4.989	379	382	384	rVB2	3803	6770	0.04%	0.012%
25	5.117	393	395	398	rVB4	4889	7846	0.04%	0.014%
26	5.225	405	406	408	rBV2	3879	5540	0.03%	0.010%
27	5.314	412	415	418	rVB4	5405	10550	0.06%	0.019%
28	5.353	418	419	422	rBV3	4492	6974	0.04%	0.012%
29	5.658	442	450	458	rBV	353393	1310165	7.07%	2.319%
30	5.953	477	480	482	rVB4	7550	13198	0.07%	0.023%
31	5.993	482	484	486	rVB3	4890	6575	0.04%	0.012%
32	6.199	499	505	507	rBV3	4428	10542	0.06%	0.019%
33	6.367	514	522	536	rVV2	750641	2962491	15.98%	5.244%
34	6.514	536	537	539	rVV2	8242	8744	0.05%	0.015%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049297.D
Acq On : 9 May 2016 15:04
Operator : FY/SY
Sample : H2874-18
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4016

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.623	543	548	556	rVB4	32611	98368	0.53%	0.174%
36	6.829	565	569	571	rBV3	3059	7579	0.04%	0.013%
37	6.879	571	574	575	rBV2	3797	7542	0.04%	0.013%
38	6.898	575	576	580	rVB4	6587	9369	0.05%	0.017%
39	7.026	586	589	592	rBV3	3131	6128	0.03%	0.011%
40	7.154	592	602	606	rBV	1245167	3358468	18.12%	5.945%
41	7.213	606	608	619	rVB	475394	1004177	5.42%	1.778%
42	7.489	634	636	639	rVV2	3575	6056	0.03%	0.011%
43	7.617	648	649	657	rVB8	4807	15664	0.08%	0.028%
44	7.735	657	661	665	rBV6	4452	14244	0.08%	0.025%
45	7.912	673	679	689	rBV	1448350	3195242	17.24%	5.656%
46	8.138	699	702	704	rVB2	2890	5344	0.03%	0.009%
47	8.197	704	708	713	rBV3	41782	95555	0.52%	0.169%
48	8.296	716	718	721	rVB3	4553	8056	0.04%	0.014%
49	8.424	725	731	739	rBV	978039	2148998	11.60%	3.804%
50	8.611	748	750	754	rVB5	5652	11354	0.06%	0.020%
51	8.739	762	763	767	rVB3	4372	6675	0.04%	0.012%
52	8.876	773	777	778	rBV3	8429	10885	0.06%	0.019%
53	8.906	778	780	786	rVB6	10267	20454	0.11%	0.036%
54	9.073	793	797	799	rBV3	3406	9449	0.05%	0.017%
55	9.142	801	804	806	rBV3	2542	6760	0.04%	0.012%
56	9.260	814	816	819	rVB3	4001	6214	0.03%	0.011%
57	9.349	821	825	833	rBV	568328	1021770	5.51%	1.809%
58	9.506	838	841	845	rVB	21536	45946	0.25%	0.081%
59	9.684	854	859	865	rBV	1822185	3219352	17.37%	5.699%
60	9.762	865	867	873	rVB2	24417	45910	0.25%	0.081%
61	9.861	875	877	882	rVB5	6531	13901	0.08%	0.025%
62	9.930	882	884	887	rBV4	3801	7923	0.04%	0.014%
63	10.008	887	892	899	rBV	309703	566955	3.06%	1.004%
64	10.156	899	907	908	rBV7	6423	23115	0.12%	0.041%
65	10.205	908	912	918	rVV	91322	192052	1.04%	0.340%
66	10.313	918	923	929	rVV	2142882	3849539	20.77%	6.814%
67	10.412	929	933	948	rVB	1658547	3085319	16.65%	5.462%
68	10.589	948	951	954	rBV4	10792	17195	0.09%	0.030%
69	10.727	963	965	969	rVB5	5032	9757	0.05%	0.017%
70	10.963	987	989	992	rVB4	2987	5358	0.03%	0.009%
71	11.032	992	996	997	rBV3	3238	5518	0.03%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049297.D
Acq On : 9 May 2016 15:04
Operator : FY/SY
Sample : H2874-18
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4016

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.071	997	1000	1002	rVB4	4011	6586	0.04%	0.012%
73	11.209	1009	1014	1023	rBV	1794548	3035223	16.38%	5.373%
74	11.337	1023	1027	1032	rVB6	11644	32931	0.18%	0.058%
75	11.455	1037	1039	1043	rBV3	9354	16466	0.09%	0.029%
76	11.632	1055	1057	1060	rVB3	6062	6928	0.04%	0.012%
77	11.672	1060	1061	1066	rVB5	5344	10248	0.06%	0.018%
78	11.750	1066	1069	1070	rBV3	4090	7136	0.04%	0.013%
79	11.829	1074	1077	1078	rBV3	6239	10196	0.06%	0.018%
80	11.859	1078	1080	1083	rVB3	9327	14507	0.08%	0.026%
81	12.026	1096	1097	1105	rVB7	3207	10319	0.06%	0.018%
82	12.174	1109	1112	1114	rBV4	5235	9422	0.05%	0.017%
83	12.272	1120	1122	1125	rVB4	6625	12377	0.07%	0.022%
84	12.390	1130	1134	1137	rBV	97388	183749	0.99%	0.325%
85	12.449	1137	1140	1149	rVB	455294	738542	3.98%	1.307%
86	12.725	1165	1168	1169	rVB2	5622	6171	0.03%	0.011%
87	13.168	1210	1213	1216	rBV5	3931	8585	0.05%	0.015%
88	13.256	1216	1222	1223	rBV6	4878	13726	0.07%	0.024%
89	13.315	1227	1228	1230	rVV	23343	16905	0.09%	0.030%
90	13.345	1230	1231	1234	rVV3	5920	6760	0.04%	0.012%
91	13.414	1234	1238	1246	rVV	1383890	2353609	12.70%	4.166%
92	13.512	1246	1248	1250	rVV4	5429	7472	0.04%	0.013%
93	13.610	1255	1258	1260	rBV3	6320	12456	0.07%	0.022%
94	13.650	1260	1262	1265	rVB4	4805	6875	0.04%	0.012%
95	13.738	1267	1271	1280	rVV	1009173	1882197	10.16%	3.332%
96	13.876	1283	1285	1289	rVV4	3620	8050	0.04%	0.014%
97	14.024	1296	1300	1307	rVB	61702	121876	0.66%	0.216%
98	14.299	1326	1328	1332	rBV4	8091	18781	0.10%	0.033%
99	14.536	1350	1352	1355	rBV4	6668	12690	0.07%	0.022%
100	15.599	1456	1460	1466	rVB	34775	84584	0.46%	0.150%

Sum of corrected areas: 56491649

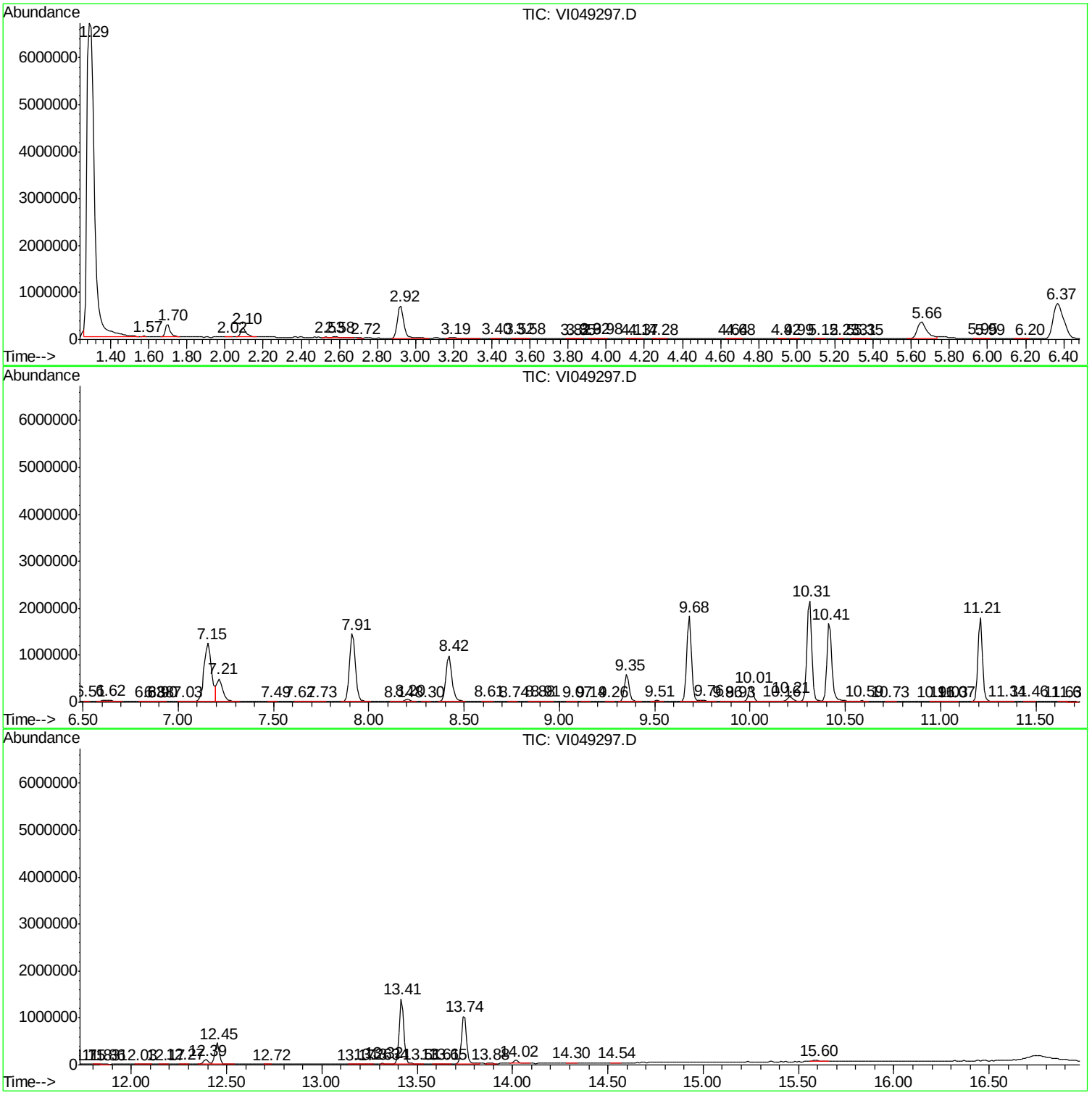
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049297.D
Acq On : 9 May 2016 15:04
Operator : FY/SY
Sample : H2874-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4016

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049297.D
Acq On : 9 May 2016 15:04
Operator : FY/SY
Sample : H2874-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4016

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049297.D
Acq On : 9 May 2016 15:04
Operator : FY/SY
Sample : H2874-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4016

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

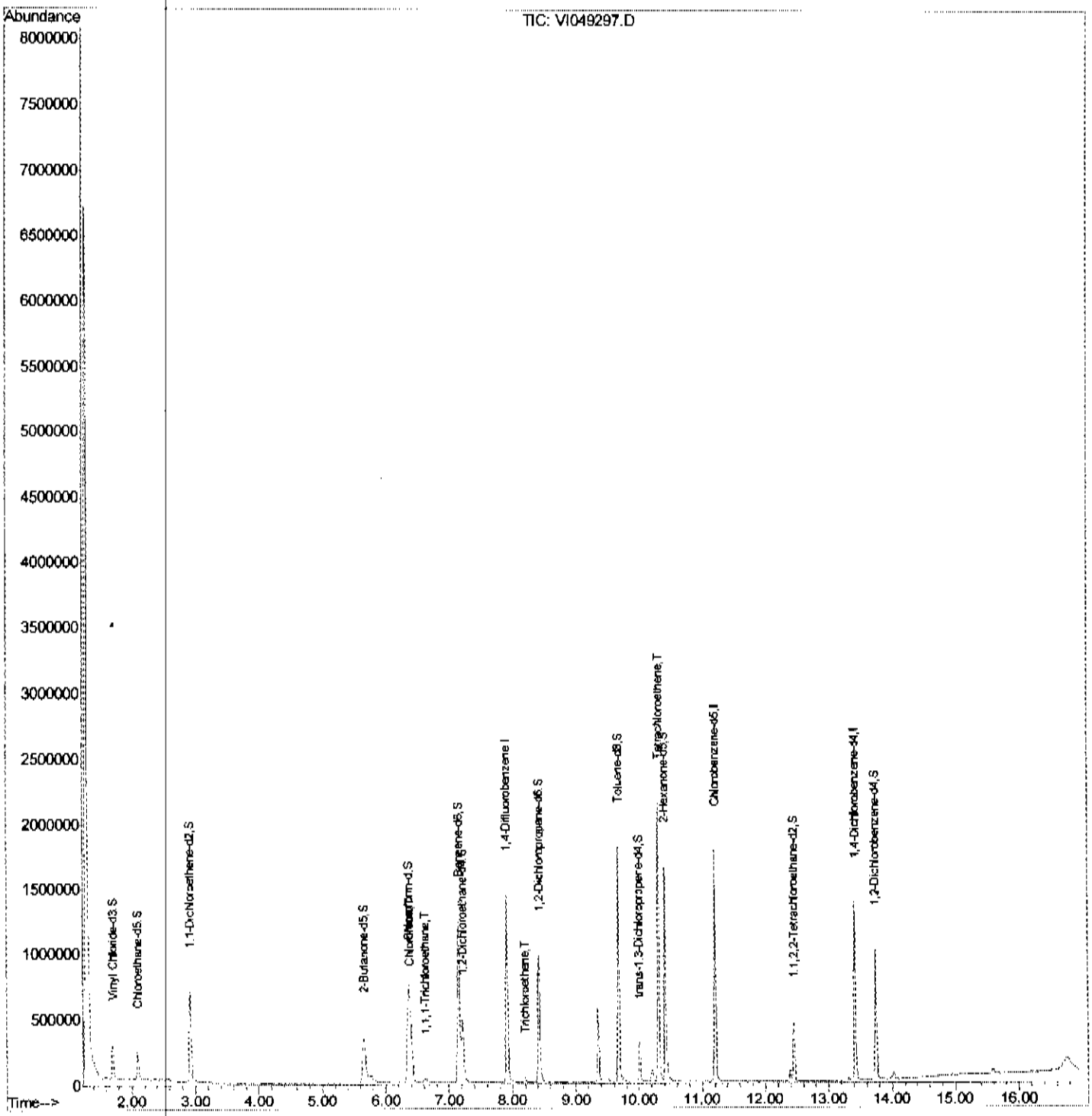
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049297.D
Acq On : 9 May 2016 15:04
Operator : FY/SY
Sample : H2874-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 10 05:51:01 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4016

Manual Integrations APPROVED
feifei
5/10/2016 1:38:12 PM



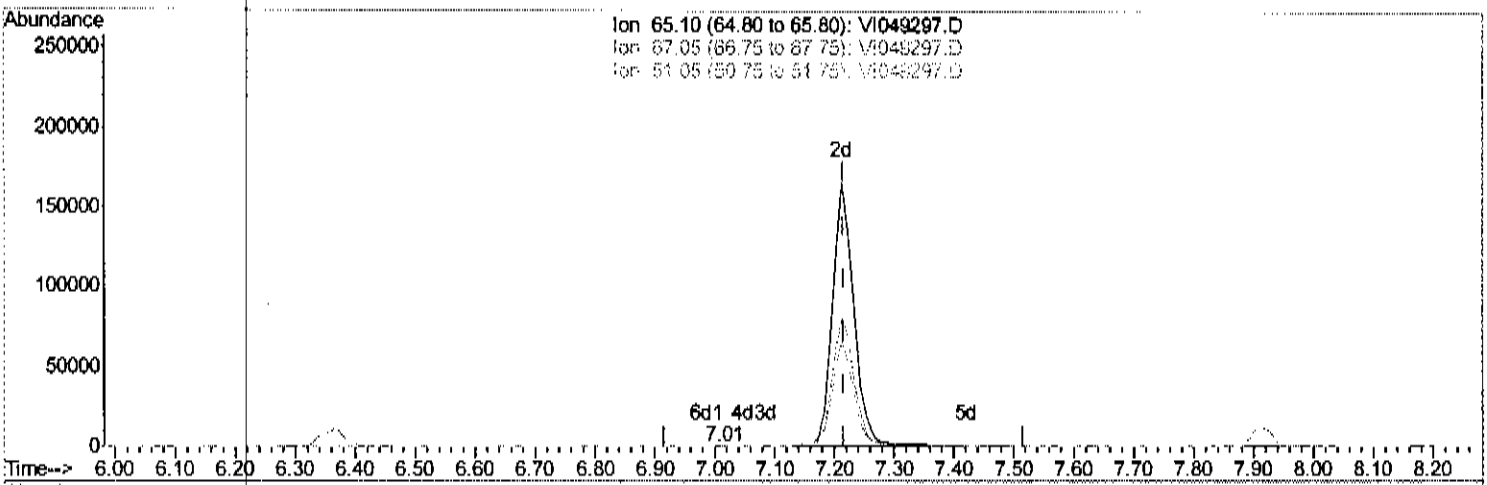
Quantitation Report (Qedit)

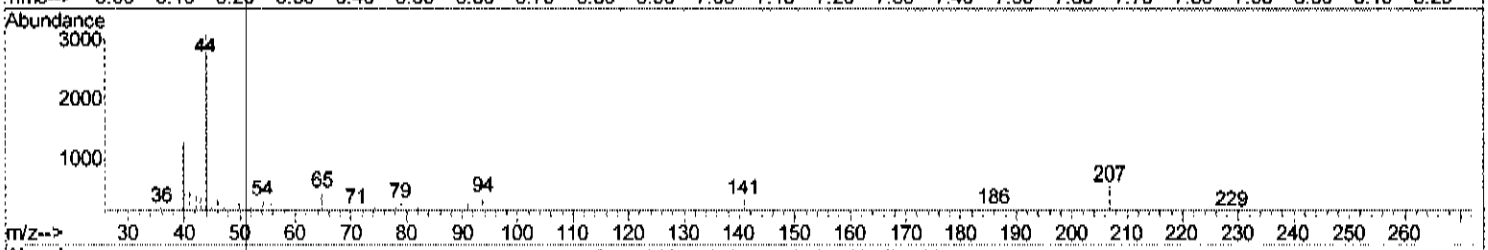
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049297.D
Acq On : 9 May 2016 15:04
Operator : FY/SY
Sample : H2874-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

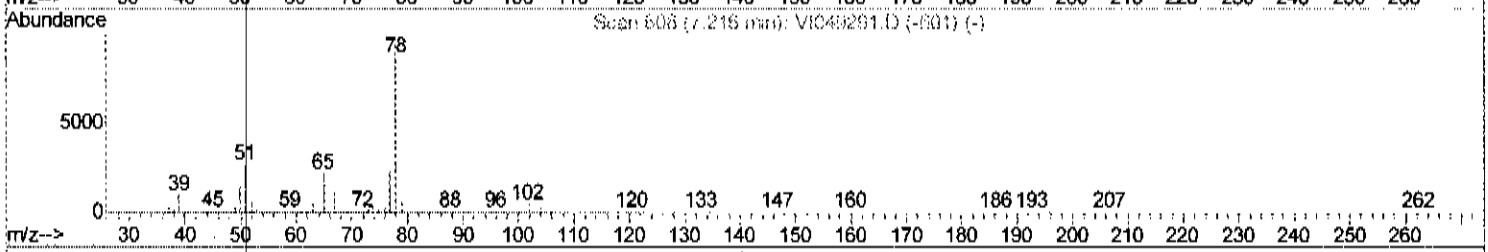
Quant Time: May 10 05:37:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4016

Manual Integrations APPROVED
feifei
5/10/2016 1:38:12 PM







TIC: VI049297.D

(26) 1,2-Dichloroethane-d4 (S)

7.006min (-0.210) 0.00ug/L

response 397

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	55.42
51.05	123.20	106.55
0.00	0.00	0.00

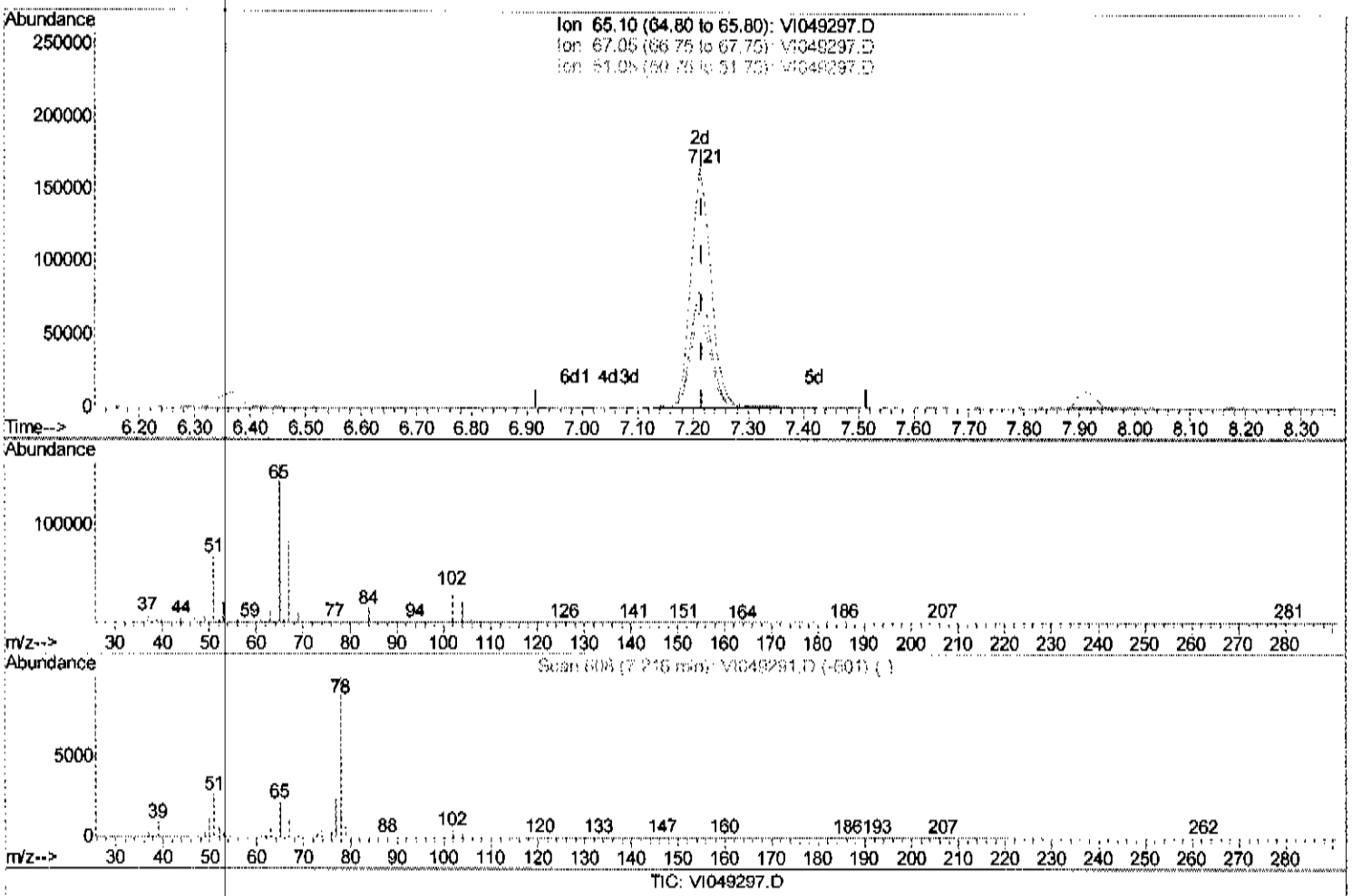
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049297.D
Acq On : 9 May 2016 15:04
Operator : FY/SY
Sample : H2874-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 10 05:37:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4016

Manual Integrations APPROVED
feifei
5/10/2016 1:38:12 PM



TIC: VI049297.D

(26) 1,2-Dichloroethane-d4 (S)

7.213min (-0.003) 4.89ug/L m

response 410959

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.05#
51.05	123.20	0.10#
0.00	0.00	0.00

FY 5/10/16

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\V1050916\
Data File : VI049297.D
Acq On : 9 May 2016 15:04
Operator : FY/SY
Sample : H2874-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 10 05:51:01 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4016

Manual Integrations APPROVED
feifei
5/10/2016 1:38:12 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1312652	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.21	117	869053	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	313554	5.00	ug/L	-0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	307641	3.81	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 76.20%			
7) Chloroethane-d5	2.10	69	204120	4.56	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 91.20%			
11) 1,1-Dichloroethene-d2	2.92	63	559757	2.94	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 58.80%#			
20) 2-Butanone-d5	5.65	46	865474	49.47	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 98.94%			
24) Chloroform-d	6.36	84	908115	4.42	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 88.40%			
26) 1,2-Dichloroethane-d4	7.21	65	410959m	4.89	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 97.80%			
32) Benzene-d6	7.15	84	1564856	4.62	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 92.40%			
36) 1,2-Dichloropropane-d6	8.42	67	451760	4.75	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 95.00%			
41) Toluene-d8	9.68	98	1097225	4.39	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.80%			
43) trans-1,3-Dichloropropene-	10.01	79	158556	4.23	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 84.60%			
46) 2-Hexanone-d5	10.41	63	587043	49.62	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 99.24%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	196058	4.53	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 90.60%			
63) 1,2-Dichlorobenzene-d4	13.75	152	241169	4.39	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 87.80%			
Target Compounds						Qvalue
25) Chloroform	6.40	83	354874	1.68	ug/L	97
29) 1,1,1-Trichloroethane	6.62	97	30805	0.19	ug/L	94
34) Trichloroethene	8.20	95	13346	0.13	ug/L	91
47) Tetrachloroethene	10.31	164	452028	6.66	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FT 5/10/2016

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4018

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049298.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.55	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.6	
71-55-6	1,1,1-Trichloroethane	0.95	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.96	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4018

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049298.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.28	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	66	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4018

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049298.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4018

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049298.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

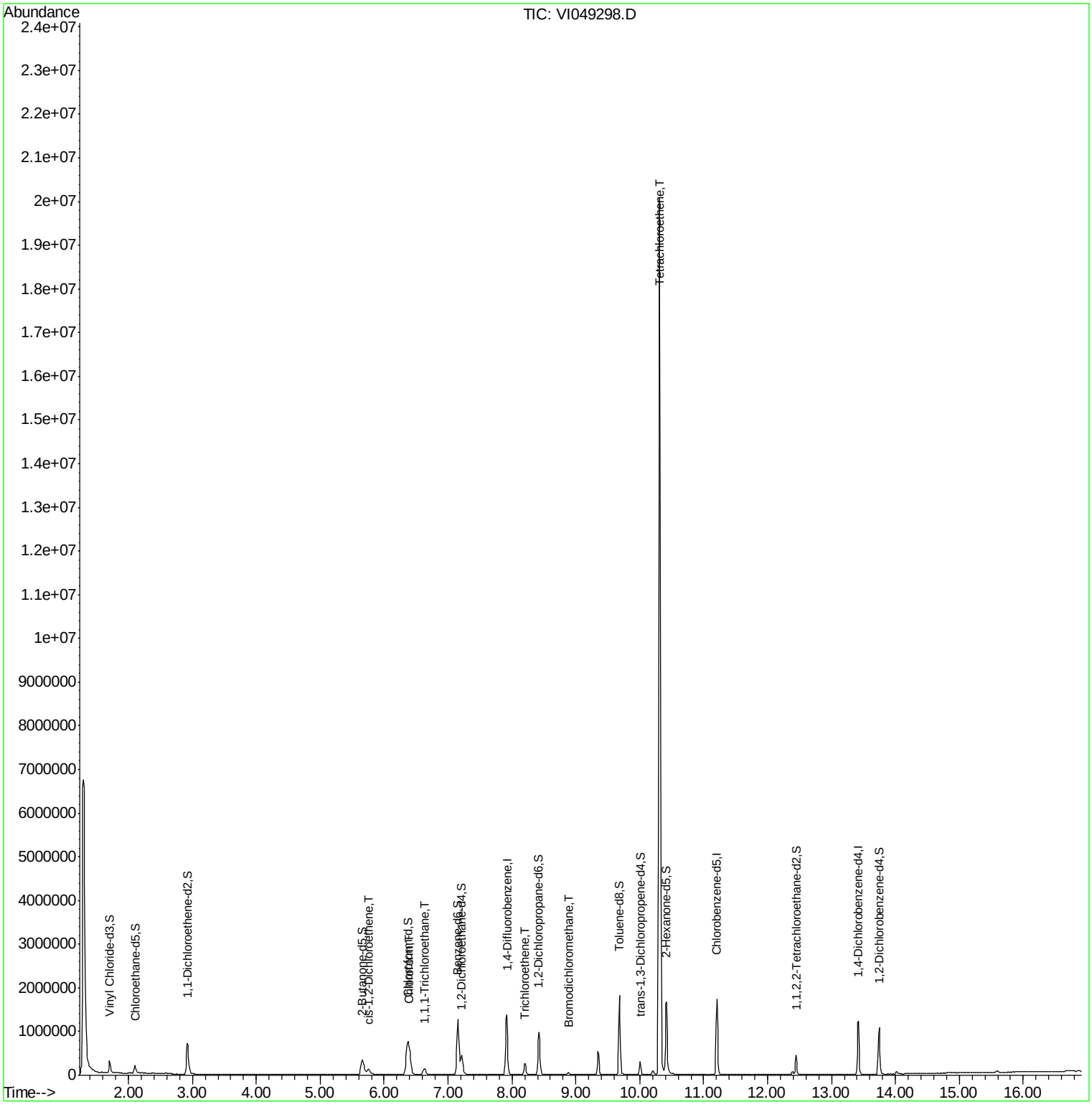
EPA-designated Registry Number.

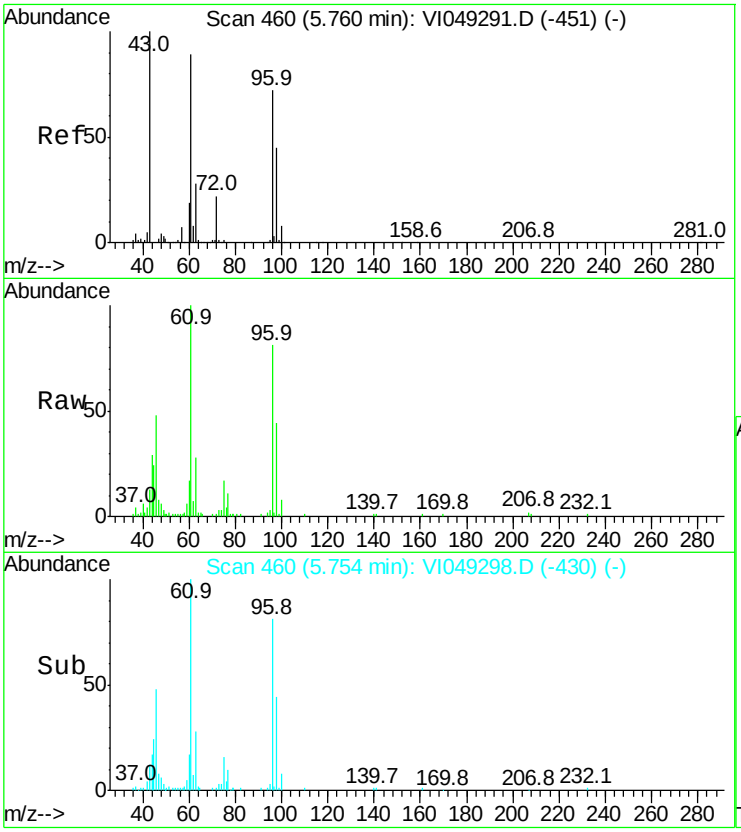
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049298.D
Acq On : 9 May 2016 15:36
Operator : FY/SY
Sample : H2874-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4018

Quant Time: May 10 05:53:15 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration



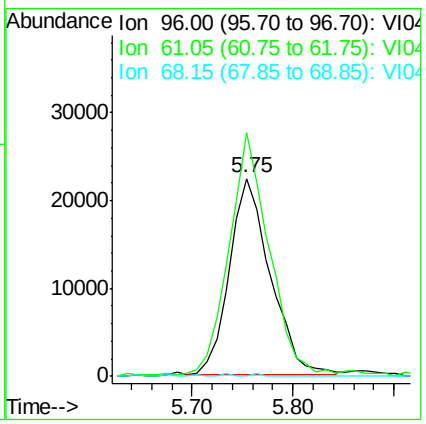


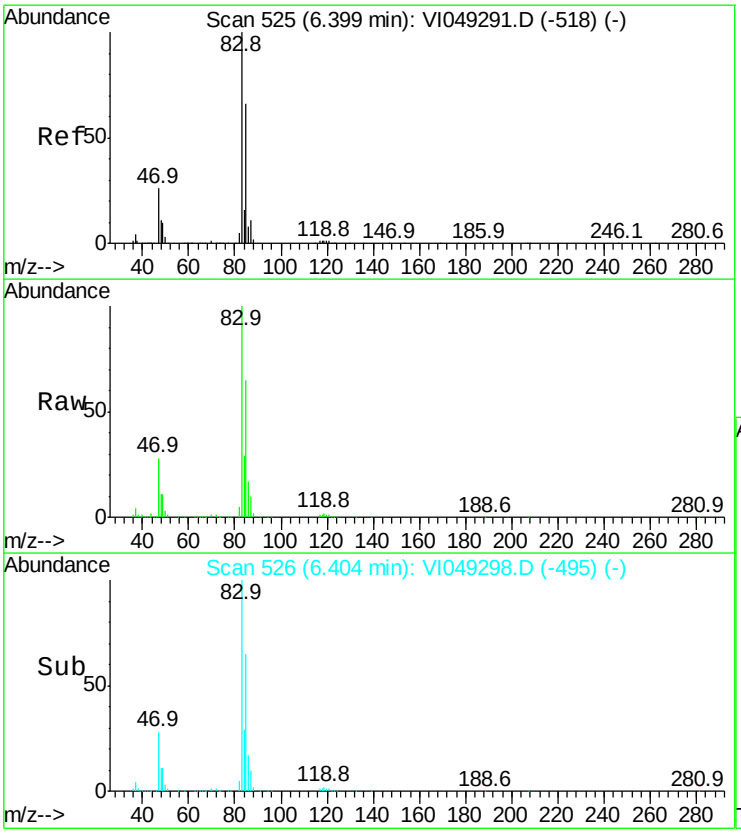
#22
cis-1,2-Dichloroethene
Concen: 0.55 ug/L
RT: 5.75 min Scan# 460
Delta R.T. -0.01 min
Lab File: VI049298.D
Acq: 9 May 2016 15:36

Instrument :
MSVOA_I
ClientSampleId :
H4018

Tgt Ion: 96 Resp: 62927

Ion	Ratio	Lower	Upper
96	100		
61	122.9	82.1	152.5
68	0.0	0.0	0.0

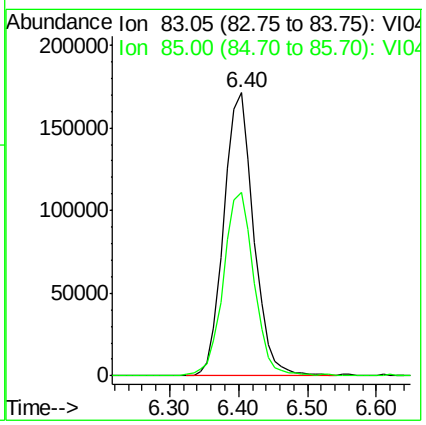


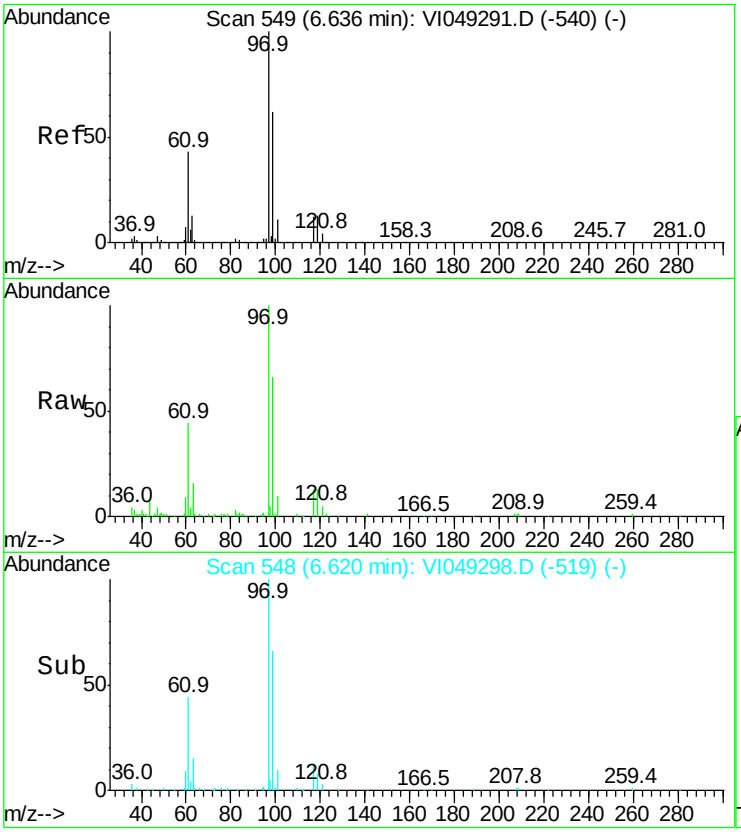


#25
Chloroform
Concen: 2.57 ug/L
RT: 6.40 min Scan# 526
Delta R.T. 0.00 min
Lab File: VI049298.D
Acq: 9 May 2016 15:36

Tgt Ion: 83 Resp: 513938

Ion	Ratio	Lower	Upper
83	100		
85	64.9	47.3	87.8



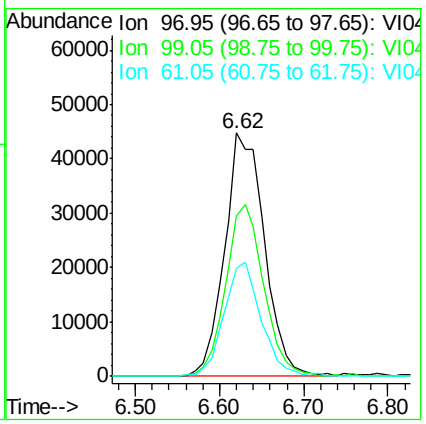


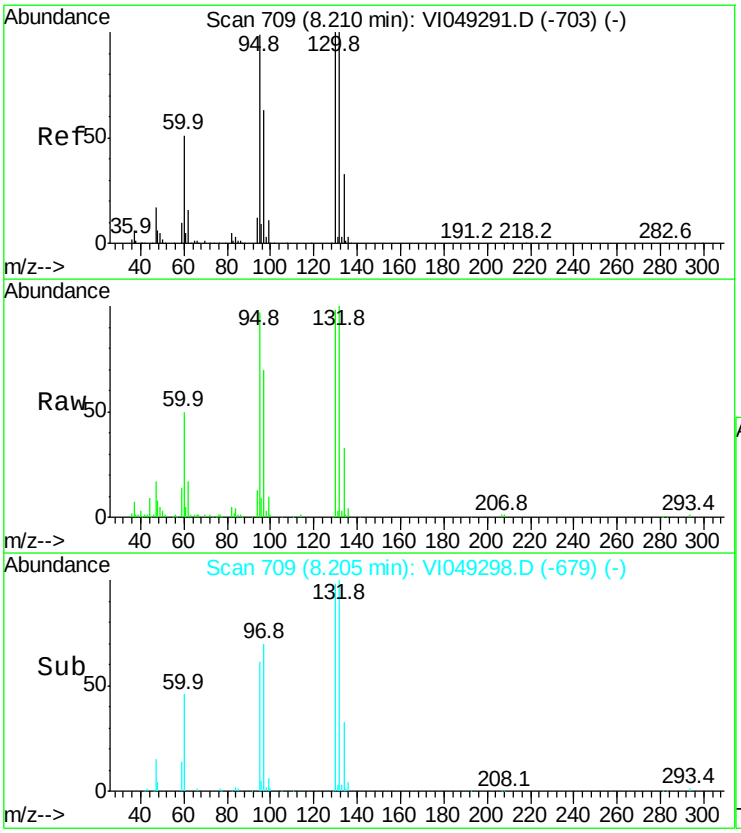
#29
1,1,1-Trichloroethane
Concen: 0.95 ug/L
RT: 6.62 min Scan# 548
Delta R.T. -0.02 min
Lab File: VI049298.D
Acq: 9 May 2016 15:36

Instrument : MSVOA_I
ClientSampleId : H4018

Tgt Ion: 97 Resp: 146663

Ion	Ratio	Lower	Upper
97	100		
99	67.7	51.1	76.7
61	43.6	33.3	49.9

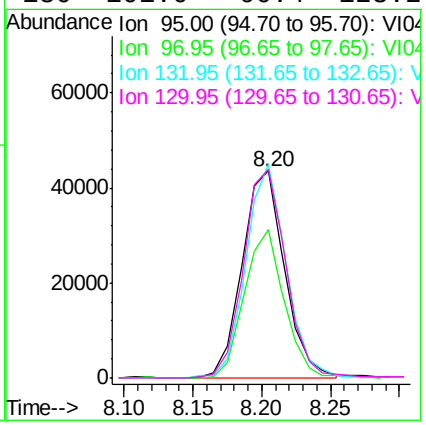


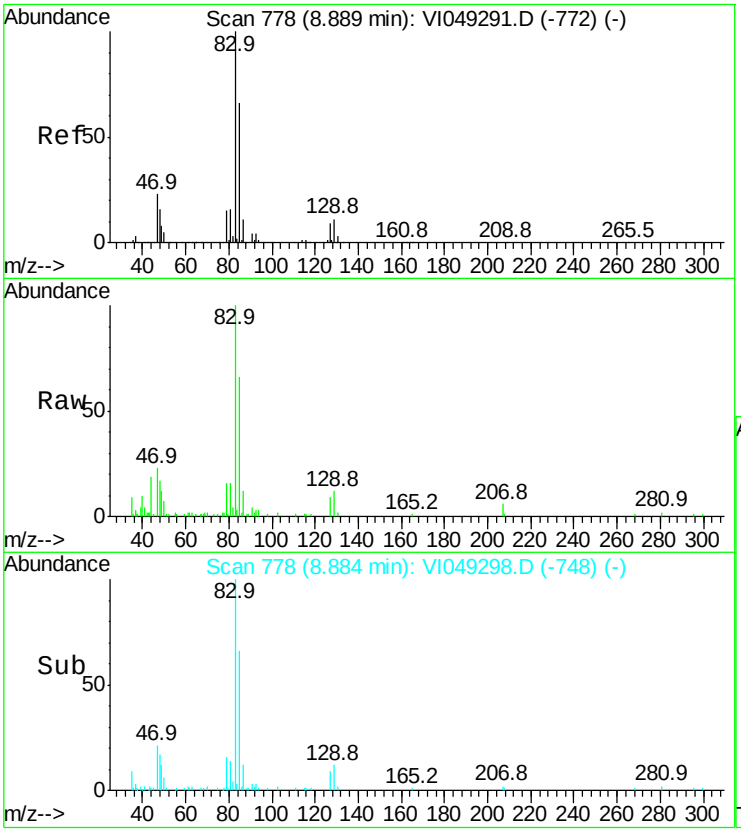


#34
Trichloroethene
Concen: 0.96 ug/L
RT: 8.20 min Scan# 709
Delta R.T. -0.01 min
Lab File: VI049298.D
Acq: 9 May 2016 15:36

Tgt Ion: 95 Resp: 93412

Ion	Ratio	Lower	Upper
95	100		
97	71.7	45.8	85.2
132	103.1	63.9	118.7
130	101.0	66.4	123.2



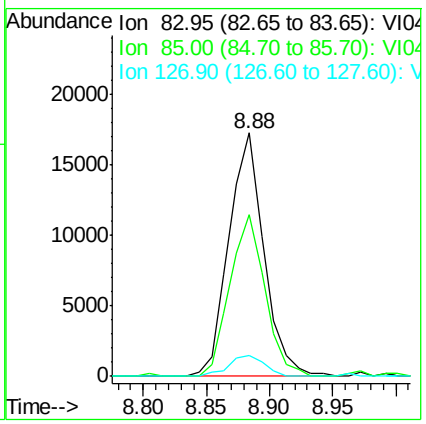


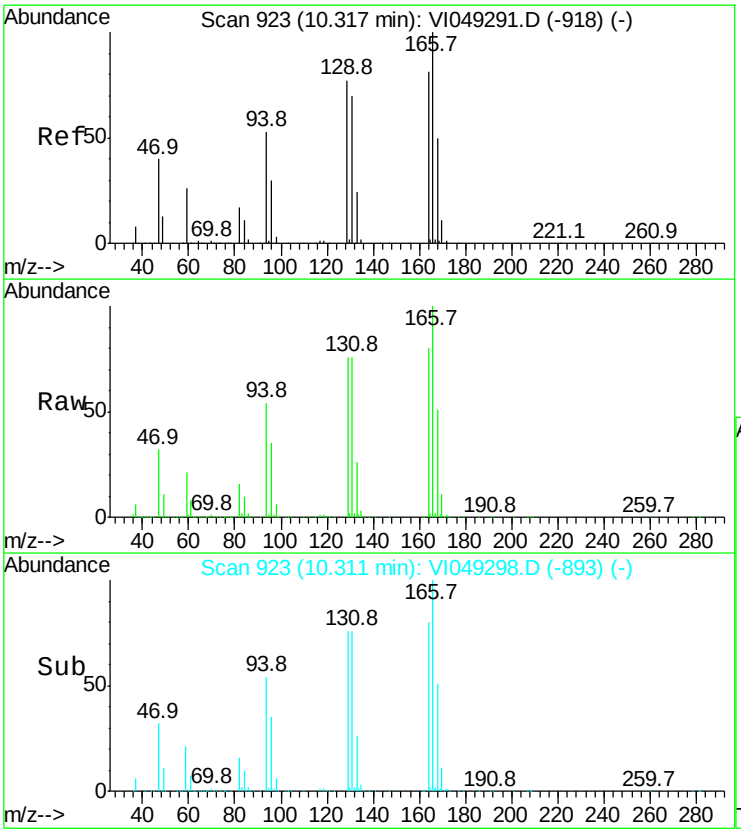
#38
Bromodichloromethane
Concen: 0.28 ug/L
RT: 8.88 min Scan# 778
Delta R.T. -0.01 min
Lab File: VI049298.D
Acq: 9 May 2016 15:36

Instrument : MSVOA_I
ClientSampleId : H4018

Tgt Ion: 83 Resp: 33198

Ion	Ratio	Lower	Upper
83	100		
85	66.4	44.7	83.1
127	8.7	6.6	9.8

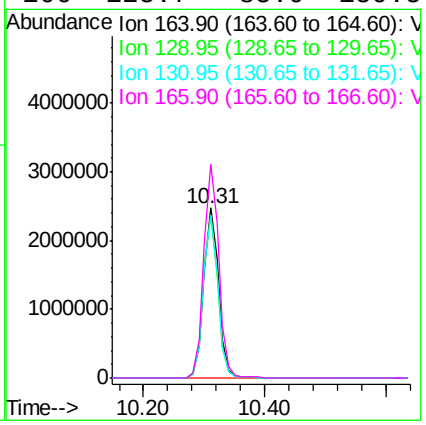




#47
Tetrachloroethene
Concen: 65.74 ug/L
RT: 10.31 min Scan# 923
Delta R.T. -0.01 min
Lab File: VI049298.D
Acq: 9 May 2016 15:36

Tgt Ion:164 Resp: 4183202

Ion	Ratio	Lower	Upper
164	100		
129	95.7	62.1	115.3
131	95.6	60.6	112.6
166	125.7	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049298.D
Acq On : 9 May 2016 15:36
Operator : FY/SY
Sample : H2874-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4018

Quant Time: May 10 05:53:15 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1244126	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	815314	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	300575	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	299570	3.91	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 78.20%			
7) Chloroethane-d5	2.09	69	201570	4.75	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.00%			
11) 1,1-Dichloroethene-d2	2.92	63	574553	3.18	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.60%			
20) 2-Butanone-d5	5.66	46	817243	49.28	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 98.56%			
24) Chloroform-d	6.36	84	873042	4.48	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.60%			
26) 1,2-Dichloroethane-d4	7.21	65	406228	5.10	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.00%			
32) Benzene-d6	7.15	84	1597513	5.03	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.60%			
36) 1,2-Dichloropropane-d6	8.42	67	451548	5.06	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.20%			
41) Toluene-d8	9.68	98	1086828	4.64	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.80%			
43) trans-1,3-Dichloropropene-	10.01	79	155721	4.43	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 88.60%			
46) 2-Hexanone-d5	10.42	63	564318	50.85	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 101.70%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	195128	4.80	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 96.00%			
63) 1,2-Dichlorobenzene-d4	13.75	152	244069	4.63	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 92.60%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.75	96	62927	0.55	ug/L	95
25) Chloroform	6.40	83	513938	2.57	ug/L	97
29) 1,1,1-Trichloroethane	6.62	97	146663	0.95	ug/L	96
34) Trichloroethene	8.20	95	93412	0.96	ug/L	91
38) Bromodichloromethane	8.88	83	33198	0.28	ug/L	97
47) Tetrachloroethene	10.31	164	4183202	65.74	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049298.D
Acq On : 9 May 2016 15:36
Operator : FY/SY
Sample : H2874-19
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4018

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.296	3	7	33	rVB	6707569	18569012	53.27%	20.872%
2	1.581	33	36	37	rBV2	11837	15266	0.04%	0.017%
3	1.699	45	48	53	rBV	282775	478982	1.37%	0.538%
4	1.807	57	59	65	rVB6	10026	19099	0.05%	0.021%
5	1.935	70	72	77	rBV6	6264	18283	0.05%	0.021%
6	2.103	85	89	95	rBV	174391	378582	1.09%	0.426%
7	2.585	137	138	146	rVB3	24131	47968	0.14%	0.054%
8	2.919	168	172	186	rBV	716123	1712431	4.91%	1.925%
9	3.106	188	191	199	rVB8	10337	32106	0.09%	0.036%
10	3.264	206	207	210	rBV2	3958	6265	0.02%	0.007%
11	3.343	213	215	218	rVB4	4049	8824	0.03%	0.010%
12	3.402	218	221	224	rVB5	4856	9408	0.03%	0.011%
13	3.480	226	229	232	rVB5	3871	8083	0.02%	0.009%
14	3.579	235	239	247	rVB7	10860	30577	0.09%	0.034%
15	3.982	276	280	281	rBV3	6379	15399	0.04%	0.017%
16	4.110	289	293	295	rVB5	4100	8145	0.02%	0.009%
17	4.337	315	316	321	rVB5	2807	6795	0.02%	0.008%
18	4.415	321	324	327	rBV4	3954	7646	0.02%	0.009%
19	4.602	340	343	345	rBV2	4494	6897	0.02%	0.008%
20	4.691	350	352	354	rBV3	5792	12430	0.04%	0.014%
21	5.065	387	390	392	rBV4	3898	6686	0.02%	0.008%
22	5.095	392	393	396	rVB3	4420	6574	0.02%	0.007%
23	5.163	396	400	401	rBV4	4319	8411	0.02%	0.009%
24	5.410	422	425	427	rBV4	4009	8589	0.02%	0.010%
25	5.656	442	450	456	rBV	337831	1219374	3.50%	1.371%
26	5.754	456	460	471	rVV3	125317	481099	1.38%	0.541%
27	5.872	471	472	475	rVV3	8449	12422	0.04%	0.014%
28	6.138	496	499	501	rBV5	3386	6255	0.02%	0.007%
29	6.187	501	504	505	rVB3	5405	7968	0.02%	0.009%
30	6.226	505	508	510	rBV3	5723	12113	0.03%	0.014%
31	6.374	516	523	539	rVV3	753751	3255705	9.34%	3.659%
32	6.630	541	549	558	rVV	140554	473960	1.36%	0.533%
33	6.876	572	574	580	rVB5	5948	11505	0.03%	0.013%
34	7.033	587	590	592	rVB3	4532	6677	0.02%	0.008%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049298.D
Acq On : 9 May 2016 15:36
Operator : FY/SY
Sample : H2874-19
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4018

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.152	592	602	606	rBV	1266802	3304288	9.48%	3.714%
36	7.211	606	608	624	rVB	450917	1098993	3.15%	1.235%
37	7.466	630	634	635	rBV3	3363	6159	0.02%	0.007%
38	7.624	647	650	653	rBV4	5161	14142	0.04%	0.016%
39	7.713	657	659	662	rVB4	4127	6295	0.02%	0.007%
40	7.919	674	680	690	rBV	1373558	3041277	8.72%	3.418%
41	8.205	703	709	715	rVV	262175	556037	1.60%	0.625%
42	8.303	717	719	722	rVB4	4317	7725	0.02%	0.009%
43	8.421	725	731	740	rBV	972568	2150087	6.17%	2.417%
44	8.529	740	742	746	rVB5	6898	15234	0.04%	0.017%
45	8.598	748	749	753	rVB4	3970	6950	0.02%	0.008%
46	8.657	753	755	759	rVB5	4348	7540	0.02%	0.008%
47	8.736	759	763	765	rVB3	4411	9580	0.03%	0.011%
48	8.785	765	768	769	rBV3	4813	6785	0.02%	0.008%
49	8.884	773	778	784	rBV	59164	121381	0.35%	0.136%
50	9.081	796	798	801	rVB4	3489	5999	0.02%	0.007%
51	9.159	801	806	807	rBV4	2735	7635	0.02%	0.009%
52	9.228	811	813	817	rVB5	3892	7249	0.02%	0.008%
53	9.346	821	825	836	rBV	539117	994549	2.85%	1.118%
54	9.514	838	842	845	rVB4	8892	22164	0.06%	0.025%
55	9.563	845	847	849	rBV3	5450	9560	0.03%	0.011%
56	9.681	854	859	865	rBV	1812614	3178493	9.12%	3.573%
57	10.006	888	892	899	rVV	312899	555070	1.59%	0.624%
58	10.134	901	905	908	rVV5	10618	33360	0.10%	0.037%
59	10.203	908	912	918	rVV	85041	206484	0.59%	0.232%
60	10.311	918	923	930	rVV	20059256	34857551	100.00%	39.180%
61	10.419	930	934	950	rVV	1660473	3457306	9.92%	3.886%
62	10.586	950	951	952	rVV	12457	11204	0.03%	0.013%
63	10.616	952	954	961	rVV8	10627	36825	0.11%	0.041%
64	10.695	961	962	966	rVV4	7081	11759	0.03%	0.013%
65	10.832	973	976	979	rVV2	3253	7024	0.02%	0.008%
66	10.941	985	987	990	rBV4	6159	11595	0.03%	0.013%
67	11.069	997	1000	1001	rVB3	5355	7261	0.02%	0.008%
68	11.206	1010	1014	1024	rBV	1726712	2844044	8.16%	3.197%
69	11.334	1024	1027	1035	rVB7	8812	27614	0.08%	0.031%
70	11.462	1037	1040	1043	rVB5	4247	10275	0.03%	0.012%
71	11.620	1054	1056	1058	rVB3	4895	6162	0.02%	0.007%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049298.D
Acq On : 9 May 2016 15:36
Operator : FY/SY
Sample : H2874-19
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4018

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.836	1075	1078	1086	rVB6	7374	22399	0.06%	0.025%
73	12.151	1106	1110	1111	rBV4	4009	6396	0.02%	0.007%
74	12.387	1130	1134	1137	rBV	73589	140990	0.40%	0.158%
75	12.447	1137	1140	1147	rVB	455336	726544	2.08%	0.817%
76	12.525	1147	1148	1153	rVB5	5051	7529	0.02%	0.008%
77	12.653	1157	1161	1164	rVB6	4587	10895	0.03%	0.012%
78	12.702	1164	1166	1170	rVB4	4983	9812	0.03%	0.011%
79	12.752	1170	1171	1174	rBV3	4648	6164	0.02%	0.007%
80	12.860	1180	1182	1184	rBV3	3890	5936	0.02%	0.007%
81	12.929	1187	1189	1192	rVB4	3468	6523	0.02%	0.007%
82	13.067	1199	1203	1206	rVB6	3861	9709	0.03%	0.011%
83	13.234	1217	1220	1221	rVB3	3831	5954	0.02%	0.007%
84	13.273	1221	1224	1226	rBV3	3659	7538	0.02%	0.008%
85	13.332	1226	1230	1234	rBV7	6440	17125	0.05%	0.019%
86	13.421	1234	1239	1247	rBV	1215163	2190853	6.29%	2.463%
87	13.746	1267	1272	1281	rBV	1061629	1883624	5.40%	2.117%
88	13.923	1287	1290	1293	rBV4	4242	9136	0.03%	0.010%
89	14.021	1296	1300	1307	rVB	52109	93765	0.27%	0.105%
90	14.139	1311	1312	1313	rBV	5654	5854	0.02%	0.007%
91	14.257	1323	1324	1326	rBV	5310	7536	0.02%	0.008%
92	14.307	1327	1329	1331	rVB3	9558	12941	0.04%	0.015%
93	14.415	1339	1340	1343	rBV2	4906	9036	0.03%	0.010%
94	14.523	1348	1351	1352	rBV3	6719	11632	0.03%	0.013%
95	14.553	1352	1354	1356	rBV2	4969	7100	0.02%	0.008%
96	14.612	1356	1360	1362	rBV4	9450	18757	0.05%	0.021%
97	14.651	1362	1364	1365	rVB	30762	24128	0.07%	0.027%
98	14.710	1365	1370	1372	rBV5	14503	46029	0.13%	0.052%
99	14.986	1396	1398	1399	rBV2	8739	12230	0.04%	0.014%
100	15.596	1456	1460	1463	rVB2	37379	79453	0.23%	0.089%

Sum of corrected areas: 88966780

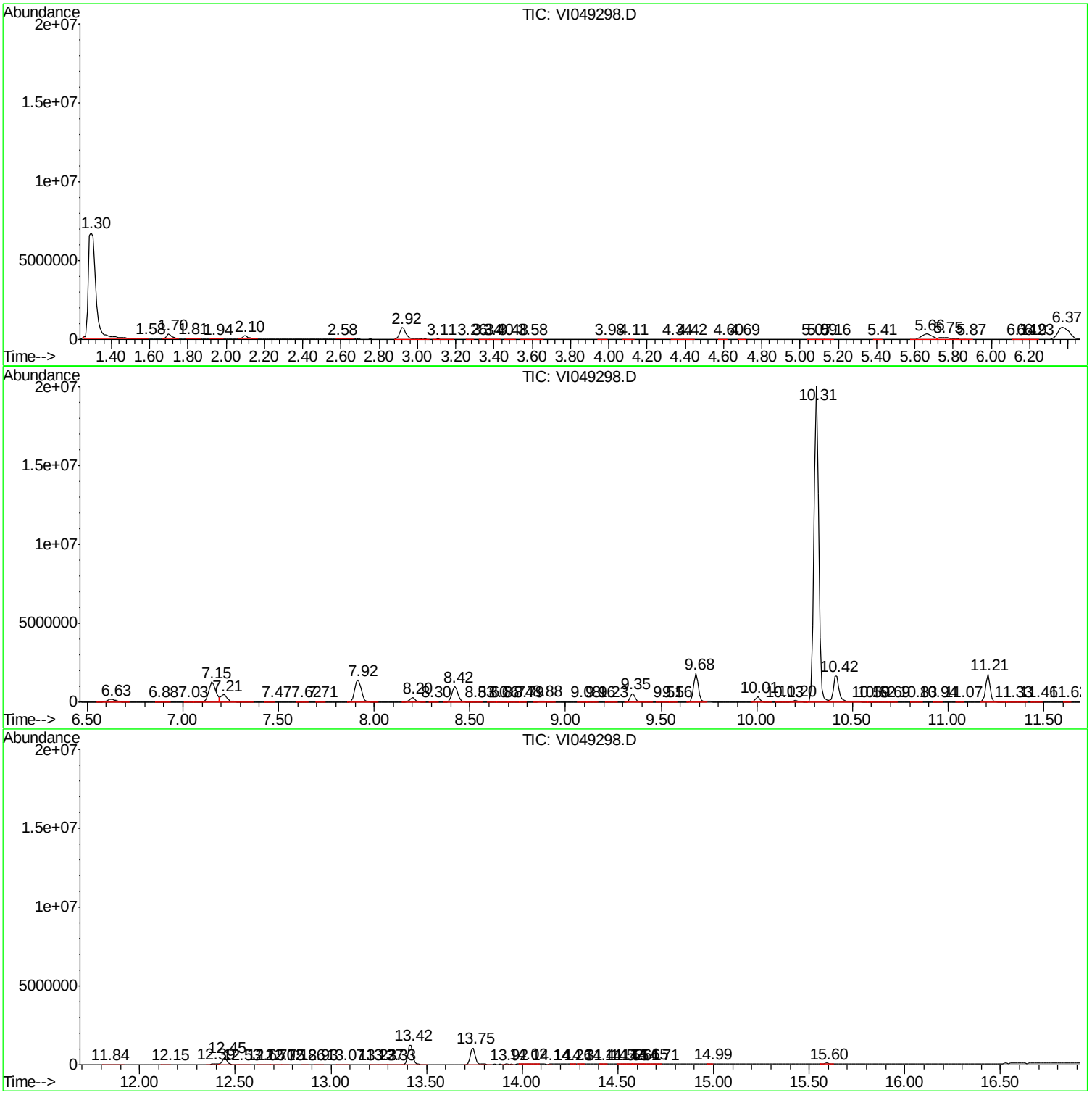
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049298.D
Acq On : 9 May 2016 15:36
Operator : FY/SY
Sample : H2874-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4018

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049298.D
Acq On : 9 May 2016 15:36
Operator : FY/SY
Sample : H2874-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4018

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049298.D
Acq On : 9 May 2016 15:36
Operator : FY/SY
Sample : H2874-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4018

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4018DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049343.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	50	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4018DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049343.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	80	D
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-trichlorobenzene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4018DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049343.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4018DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049343.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 10.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

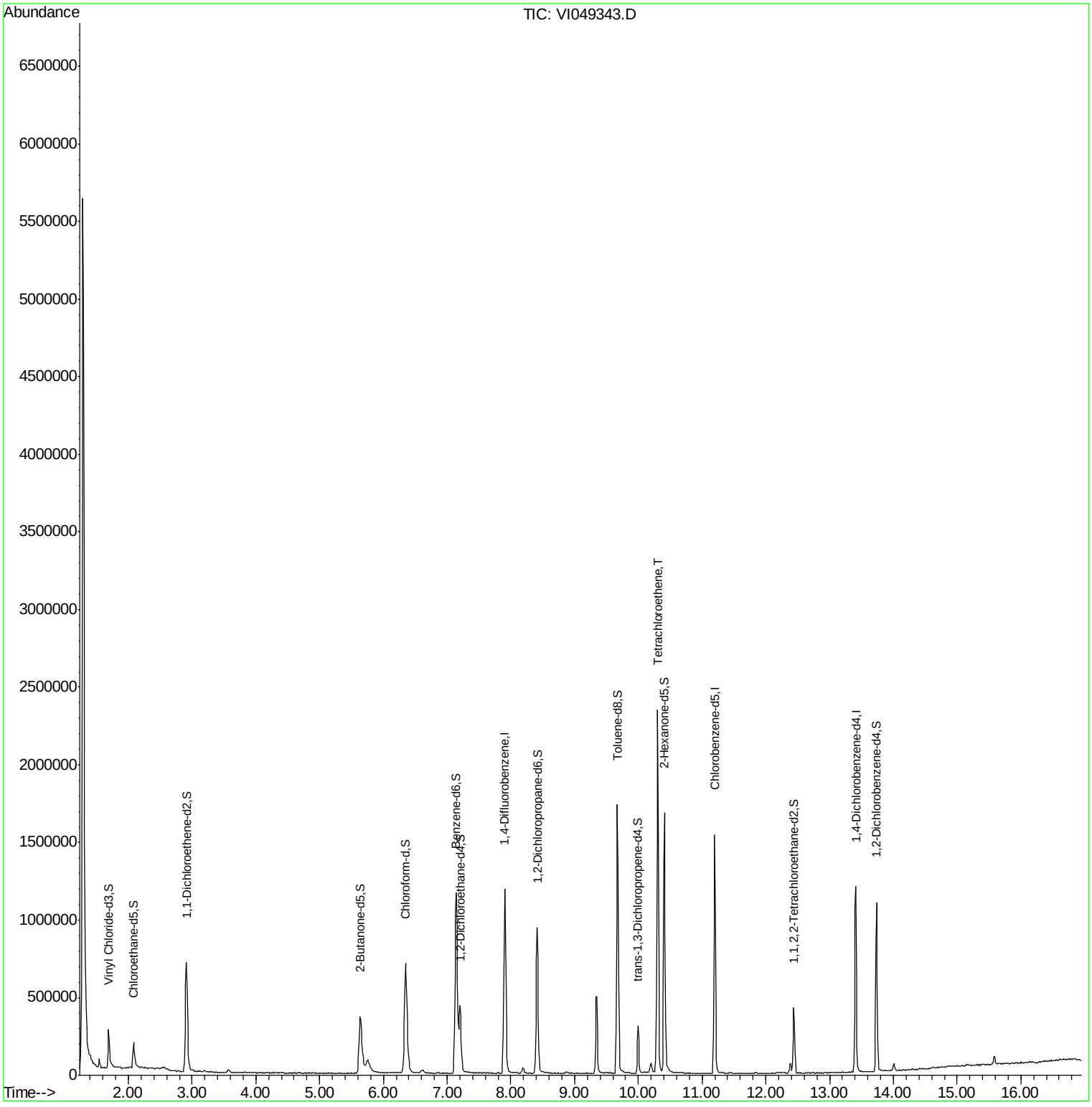
Quantitation Report (LSC Reviewed)

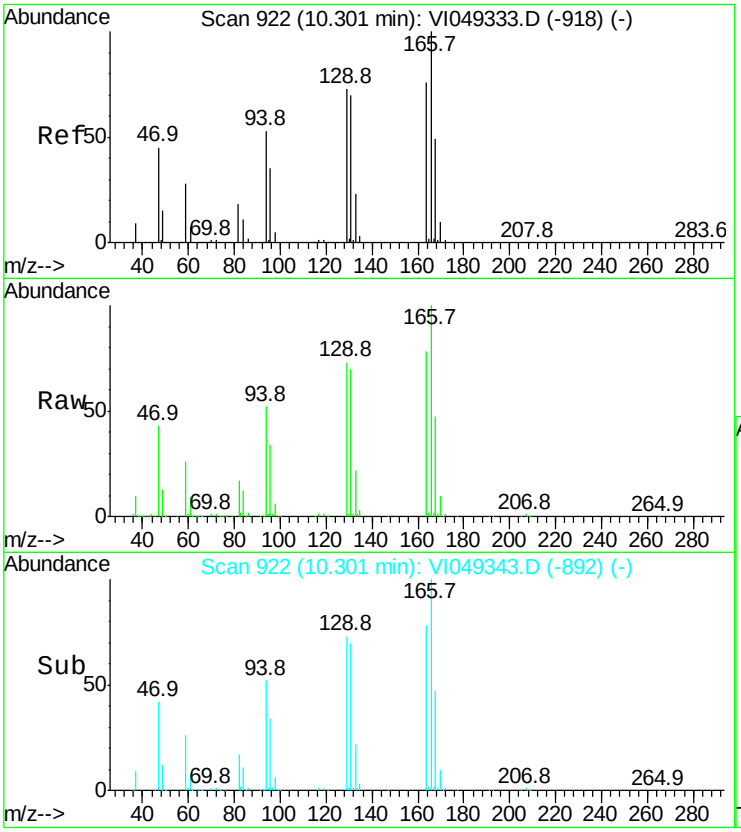
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049343.D
Acq On : 11 May 2016 16:21
Operator : FY/SY
Sample : H2874-19DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 12 07:06:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4018DL

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:37 PM

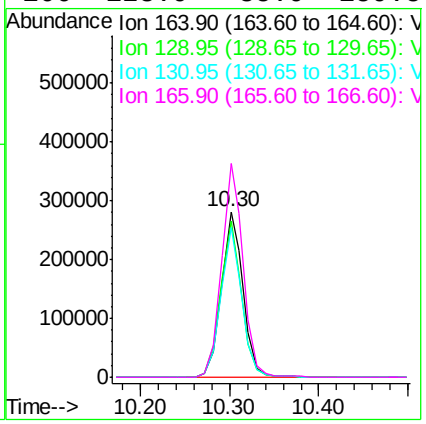




#47
Tetrachloroethene
Concen: 7.99 ug/L
RT: 10.30 min Scan# 922
Delta R.T. 0.00 min
Lab File: VI049343.D
Acq: 11 May 2016 16:21

Tgt Ion:164 Resp: 481803

Ion	Ratio	Lower	Upper
164	100		
129	94.1	62.1	115.3
131	90.6	60.6	112.6
166	128.9	85.9	159.5



Instrument :
MSVOA_I
ClientSampleId :
H4018DL

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:37 PM

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049343.D
Acq On : 11 May 2016 16:21
Operator : FY/SY
Sample : H2874-19DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4018DL

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:37 PM

Quant Time: May 12 07:06:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1132982	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	772382	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	288565	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	287158	4.12	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.40%			
7) Chloroethane-d5	2.08	69	179856	4.66	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.20%			
11) 1,1-Dichloroethene-d2	2.91	63	547520	3.33	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 66.60%			
20) 2-Butanone-d5	5.64	46	857542	56.79	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 113.58%			
24) Chloroform-d	6.34	84	855634	4.82	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.40%			
26) 1,2-Dichloroethane-d4	7.20	65	377281m	5.20	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.00%			
32) Benzene-d6	7.14	84	1500915	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.80%			
36) 1,2-Dichloropropane-d6	8.41	67	427670	5.05	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.00%			
41) Toluene-d8	9.67	98	1067397	4.81	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.20%			
43) trans-1,3-Dichloropropene-	10.00	79	143147	4.29	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 85.80%			
46) 2-Hexanone-d5	10.41	63	561599	53.41	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 106.82%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	192350	5.00	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 100.00%			
63) 1,2-Dichlorobenzene-d4	13.74	152	249910	4.94	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.80%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.30	164	481803	7.99	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049343.D
Acq On : 11 May 2016 16:21
Operator : FY/SY
Sample : H2874-19DL 10X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4018DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	3	6	30	rVB	5593362	12636185	100.00%	26.506%
2	1.542	30	32	36	rVB	56937	74882	0.59%	0.157%
3	1.689	44	47	55	rBV	245842	448916	3.55%	0.942%
4	2.024	79	81	84	rBV4	8551	15068	0.12%	0.032%
5	2.083	84	87	97	rVB	163160	348590	2.76%	0.731%
6	2.467	122	126	129	rBV6	6723	15743	0.12%	0.033%
7	2.792	156	159	161	rVB4	5175	7822	0.06%	0.016%
8	2.910	166	171	180	rBV	702331	1575691	12.47%	3.305%
9	3.087	187	189	192	rBV4	3848	7512	0.06%	0.016%
10	3.185	197	199	203	rVV3	9576	21575	0.17%	0.045%
11	3.569	233	238	246	rBV2	17605	54038	0.43%	0.113%
12	3.825	263	264	266	rBV2	4677	6018	0.05%	0.013%
13	3.864	266	268	271	rVB4	3785	6029	0.05%	0.013%
14	4.042	283	286	288	rBV4	4674	7088	0.06%	0.015%
15	4.110	292	293	295	rBV2	4511	6556	0.05%	0.014%
16	4.297	310	312	317	rBV5	2706	5021	0.04%	0.011%
17	4.484	328	331	332	rBV3	4892	5373	0.04%	0.011%
18	4.514	332	334	338	rVV5	4347	6775	0.05%	0.014%
19	4.612	340	344	347	rVB4	3371	8092	0.06%	0.017%
20	4.770	358	360	362	rBV3	4516	6084	0.05%	0.013%
21	4.898	371	373	376	rVB2	3712	6490	0.05%	0.014%
22	4.947	376	378	381	rBV2	3661	5592	0.04%	0.012%
23	5.006	383	384	387	rVB3	5072	4977	0.04%	0.010%
24	5.065	387	390	392	rBV4	4145	6624	0.05%	0.014%
25	5.104	392	394	396	rVB2	3869	5285	0.04%	0.011%
26	5.252	407	409	414	rVB5	2749	5632	0.04%	0.012%
27	5.311	414	415	420	rVB3	3237	7435	0.06%	0.016%
28	5.449	426	429	433	rVB5	4239	8356	0.07%	0.018%
29	5.547	435	439	440	rBV3	4815	6650	0.05%	0.014%
30	5.636	442	448	455	rBV	361594	1245028	9.85%	2.612%
31	5.754	456	460	471	rVB	74939	309803	2.45%	0.650%
32	6.030	486	488	491	rVB3	3838	6070	0.05%	0.013%
33	6.177	501	503	508	rVB4	2674	6300	0.05%	0.013%
34	6.345	512	520	535	rBV	706835	2196645	17.38%	4.608%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049343.D
Acq On : 11 May 2016 16:21
Operator : FY/SY
Sample : H2874-19DL 10X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4018DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.620	542	548	554	rVB3	19844	69102	0.55%	0.145%
36	6.876	573	574	577	rVB3	5246	4969	0.04%	0.010%
37	6.925	577	579	581	rBV3	3499	5714	0.05%	0.012%
38	7.004	585	587	589	rBV2	2940	5185	0.04%	0.011%
39	7.142	594	601	605	rBV	1161339	3142162	24.87%	6.591%
40	7.201	605	607	615	rVB	426595	894061	7.08%	1.875%
41	7.388	624	626	629	rVB4	4397	7566	0.06%	0.016%
42	7.467	632	634	636	rBV3	4646	6208	0.05%	0.013%
43	7.585	643	646	648	rBV4	2774	4941	0.04%	0.010%
44	7.634	648	651	653	rBV3	4032	6127	0.05%	0.013%
45	7.772	661	665	666	rVB4	3012	6039	0.05%	0.013%
46	7.801	666	668	672	rBV3	4126	11222	0.09%	0.024%
47	7.900	673	678	692	rBV	1186018	2720380	21.53%	5.706%
48	8.096	697	698	701	rVB3	3540	4594	0.04%	0.010%
49	8.195	701	708	714	rBV4	35466	90628	0.72%	0.190%
50	8.411	725	730	738	rBV	936925	1993367	15.78%	4.181%
51	8.687	753	758	759	rBV3	3251	5802	0.05%	0.012%
52	8.874	773	777	778	rBV2	10641	16090	0.13%	0.034%
53	8.943	783	784	788	rVB3	4753	6623	0.05%	0.014%
54	9.189	808	809	811	rVB	4778	4918	0.04%	0.010%
55	9.248	811	815	816	rBV4	3279	5187	0.04%	0.011%
56	9.287	816	819	820	rVB3	3097	4926	0.04%	0.010%
57	9.346	820	825	831	rBV	496060	975375	7.72%	2.046%
58	9.504	837	841	842	rBV3	3792	6507	0.05%	0.014%
59	9.671	853	858	874	rBV	1732282	3111268	24.62%	6.526%
60	9.858	874	877	880	rVB5	2870	6788	0.05%	0.014%
61	9.996	887	891	899	rBV	304992	525032	4.15%	1.101%
62	10.085	899	900	901	rVV	6065	6423	0.05%	0.013%
63	10.144	904	906	907	rVV2	7776	10392	0.08%	0.022%
64	10.193	907	911	917	rVV	63608	156612	1.24%	0.329%
65	10.301	917	922	929	rVV	2340600	3993947	31.61%	8.378%
66	10.409	929	933	949	rVV	1677695	2980102	23.58%	6.251%
67	10.577	949	950	954	rVV3	5335	9943	0.08%	0.021%
68	10.636	954	956	957	rVB2	4924	5074	0.04%	0.011%
69	10.803	971	973	976	rVB3	4968	6745	0.05%	0.014%
70	10.970	988	990	995	rVB5	3952	6075	0.05%	0.013%
71	11.049	995	998	1000	rBV4	2861	4950	0.04%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049343.D
Acq On : 11 May 2016 16:21
Operator : FY/SY
Sample : H2874-19DL 10X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4018DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.197	1009	1013	1023	rBV	1538124	2584114	20.45%	5.420%
73	11.334	1025	1027	1030	rVB3	6731	11506	0.09%	0.024%
74	11.462	1034	1040	1041	rBV5	5815	12311	0.10%	0.026%
75	11.640	1056	1058	1062	rVB3	3763	7809	0.06%	0.016%
76	11.827	1073	1077	1079	rBV5	5222	11505	0.09%	0.024%
77	11.994	1090	1094	1095	rBV4	2607	4994	0.04%	0.010%
78	12.014	1095	1096	1101	rBV3	3434	6733	0.05%	0.014%
79	12.102	1104	1105	1108	rBV3	4387	4662	0.04%	0.010%
80	12.181	1108	1113	1117	rBV7	5337	21069	0.17%	0.044%
81	12.279	1120	1123	1125	rVV4	3426	5330	0.04%	0.011%
82	12.388	1129	1134	1136	rBV	63633	124544	0.99%	0.261%
83	12.437	1136	1139	1144	rVB	423311	706139	5.59%	1.481%
84	12.555	1150	1151	1153	rVB2	5983	4915	0.04%	0.010%
85	12.634	1157	1159	1161	rVB3	3533	5487	0.04%	0.012%
86	12.683	1161	1164	1165	rBV3	4575	8813	0.07%	0.018%
87	12.742	1165	1170	1174	rVB7	5834	13885	0.11%	0.029%
88	12.870	1180	1183	1185	rBV4	2987	5022	0.04%	0.011%
89	12.919	1185	1188	1190	rBV4	4289	7909	0.06%	0.017%
90	13.342	1229	1231	1233	rBV3	4969	6444	0.05%	0.014%
91	13.411	1233	1238	1245	rBV	1195151	2065679	16.35%	4.333%
92	13.736	1266	1271	1282	rVV	1090531	1870483	14.80%	3.924%
93	13.864	1282	1284	1287	rVB3	5316	8958	0.07%	0.019%
94	14.012	1293	1299	1305	rBV2	48200	105662	0.84%	0.222%
95	14.208	1317	1319	1320	rBV2	5502	6787	0.05%	0.014%
96	14.287	1323	1327	1330	rBV6	5892	17027	0.13%	0.036%
97	14.553	1352	1354	1355	rBV2	4981	5605	0.04%	0.012%
98	15.074	1405	1407	1410	rBV4	9047	14318	0.11%	0.030%
99	15.143	1412	1414	1416	rBV2	9034	15888	0.13%	0.033%
100	15.586	1455	1459	1463	rBV	52169	104473	0.83%	0.219%

Sum of corrected areas: 47673060

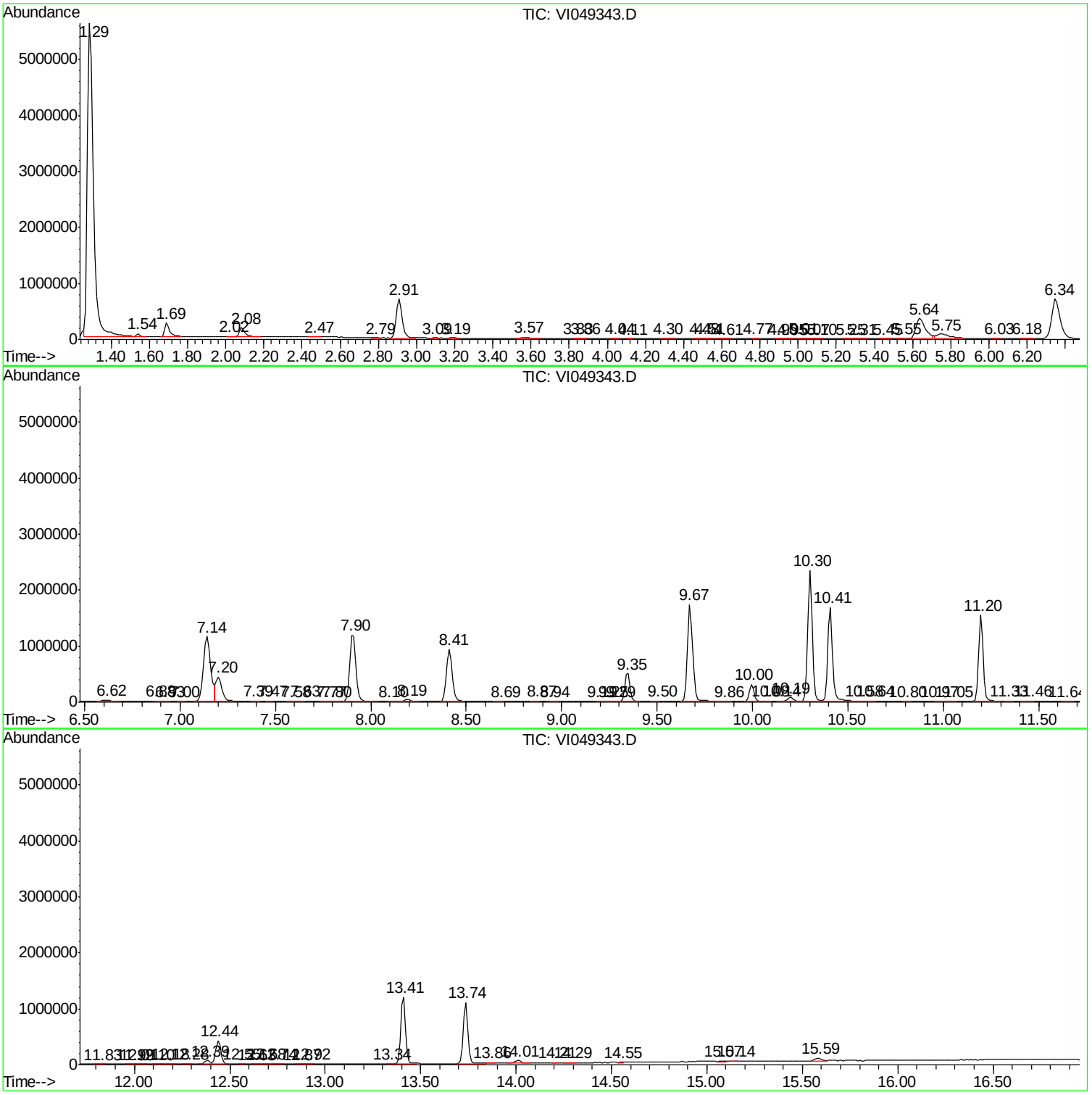
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049343.D
Acq On : 11 May 2016 16:21
Operator : FY/SY
Sample : H2874-19DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4018DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049343.D
Acq On : 11 May 2016 16:21
Operator : FY/SY
Sample : H2874-19DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4018DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049343.D
Acq On : 11 May 2016 16:21
Operator : FY/SY
Sample : H2874-19DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4018DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

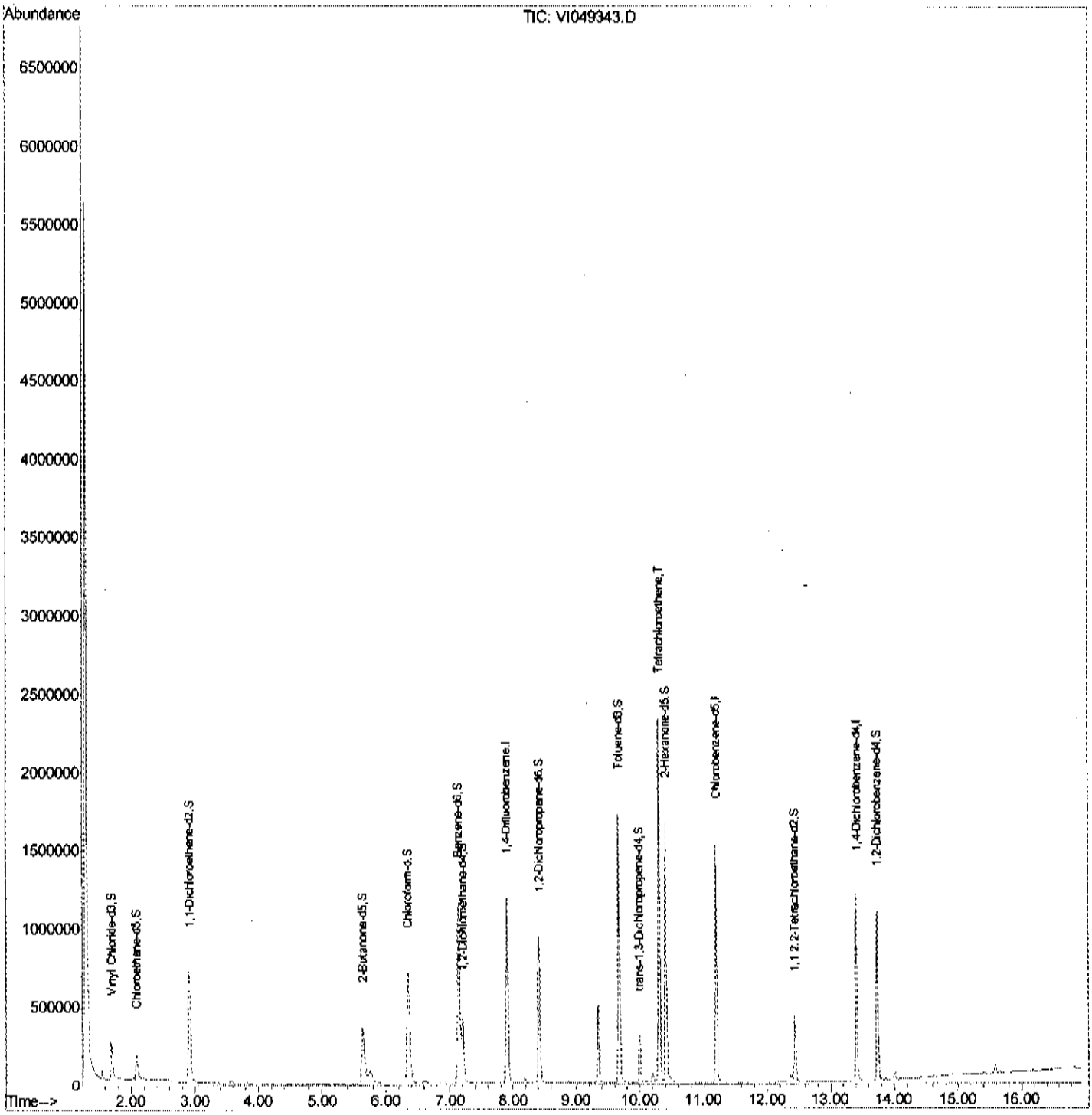
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049343.D
Acq On : 11 May 2016 16:21
Operator : FY/SY
Sample : H2874-19DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 12 07:06:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4018DL

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:37 PM



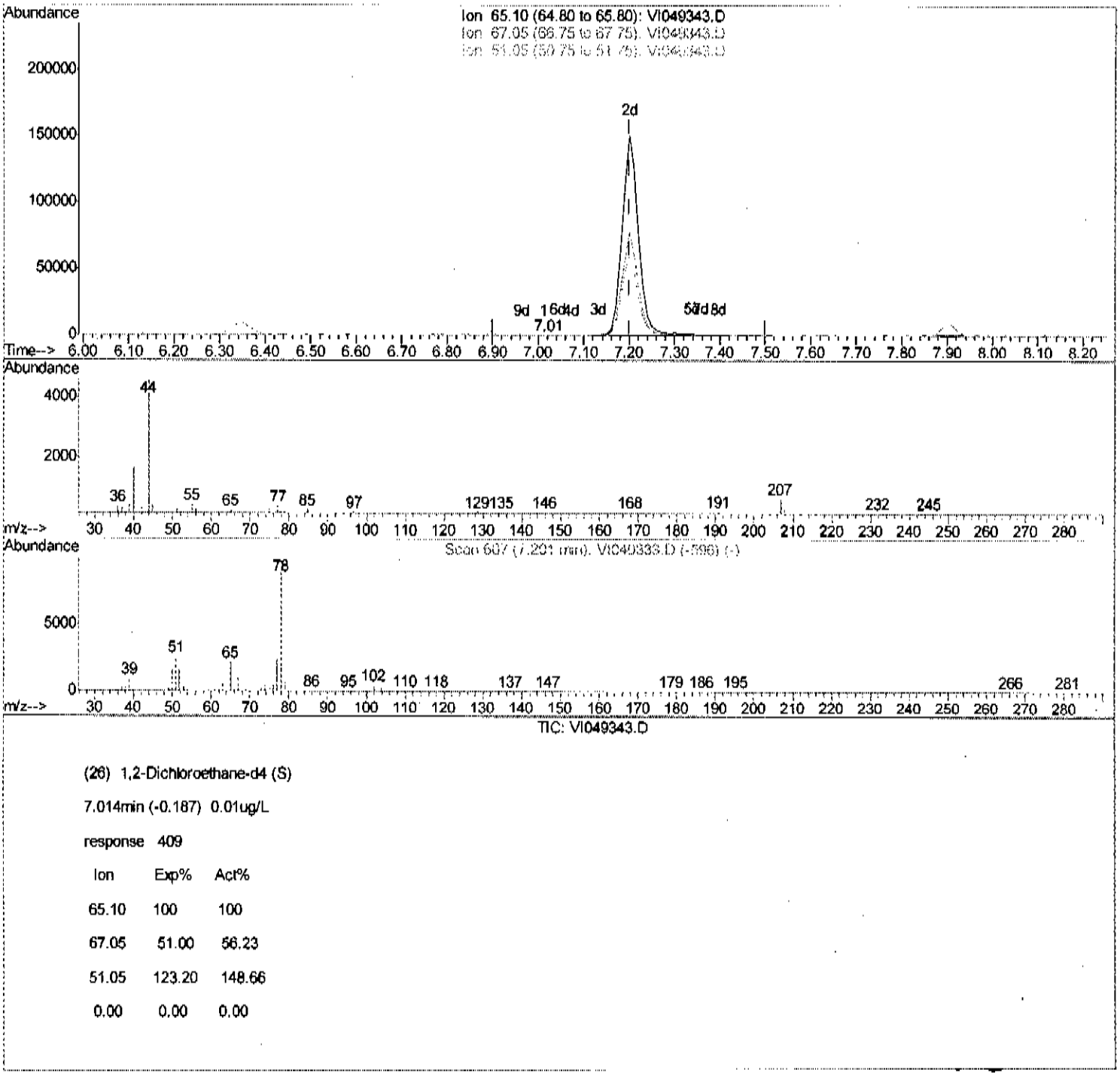
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049343.D
Acq On : 11 May 2016 16:21
Operator : FY/SY
Sample : H2874-19DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 12 06:05:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4018DL

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:37 PM



(26) 1,2-Dichloroethane-d4 (S)

7.014min (-0.187) 0.01ug/L

response 409

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	56.23
51.05	123.20	148.66
0.00	0.00	0.00

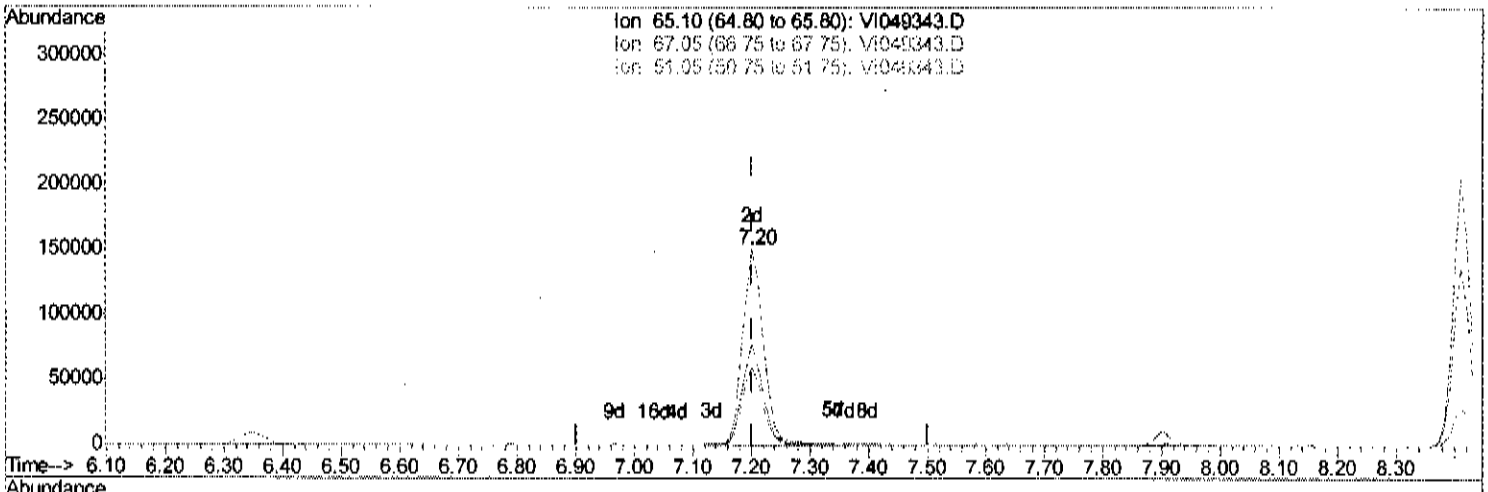
Quantitation Report (QediL)

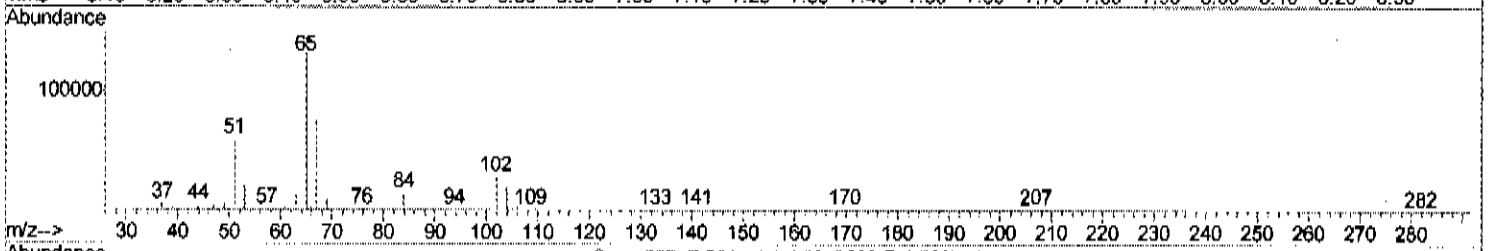
Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049343.D
Acq On : 11 May 2016 16:21
Operator : FY/SY
Sample : H2874-19DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 12 06:05:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

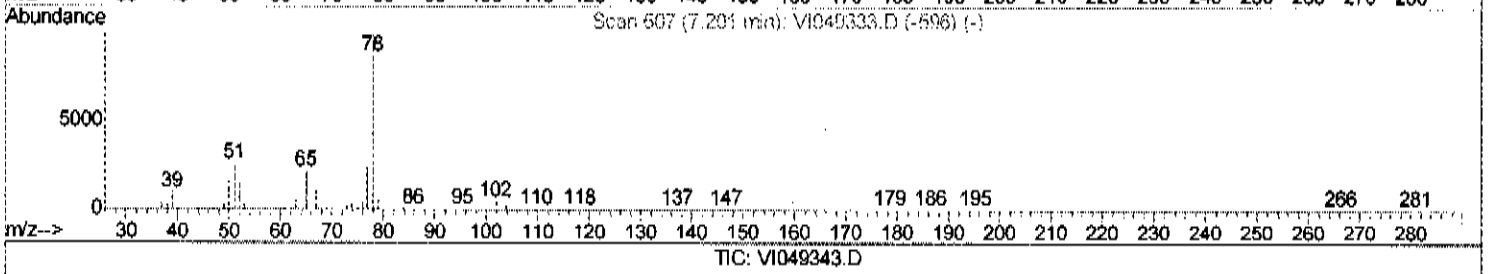
Instrument :
MSVOA_I
ClientSampleId :
H4018DL

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:37 PM





Scan 507 (7.201 min): VI049333.D (-506) (-)



TIC: VI049343.D

(26) 1,2-Dichloroethane-d4 (S)

7.201min (+0.000) 5.20ug/L m

response 377281

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.06#
51.05	123.20	0.16#
0.00	0.00	0.00

FY
5/16/2016

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049343.D
Acq On : 11 May 2016 16:21
Operator : FY/SY
Sample : H2874-19DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 12 07:06:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4018DL

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:37 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1132982	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	772382	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	288565	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	287158	4.12	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.40%			
7) Chloroethane-d5	2.08	69	179856	4.66	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.20%			
11) 1,1-Dichloroethene-d2	2.91	63	547520	3.33	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 66.60%			
20) 2-Butanone-d5	5.64	46	857542	56.79	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 113.58%			
24) Chloroform-d	6.34	84	855634	4.82	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.40%			
26) 1,2-Dichloroethane-d4	7.20	65	377281m	5.20	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.00%			
32) Benzene-d6	7.14	84	1500915	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.80%			
36) 1,2-Dichloropropane-d6	8.41	67	427670	5.05	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.00%			
41) Toluene-d8	9.67	98	1067397	4.81	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.20%			
43) trans-1,3-Dichloropropene-	10.00	79	143147	4.29	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 85.80%			
46) 2-Hexanone-d5	10.41	63	561599	53.41	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 106.82%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	192350	5.00	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 100.00%			
63) 1,2-Dichlorobenzene-d4	13.74	152	249910	4.94	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.80%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.30	164	481803	7.99	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FT 5/11/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4019

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049294.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4019

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049294.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4019

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049294.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4019

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049294.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

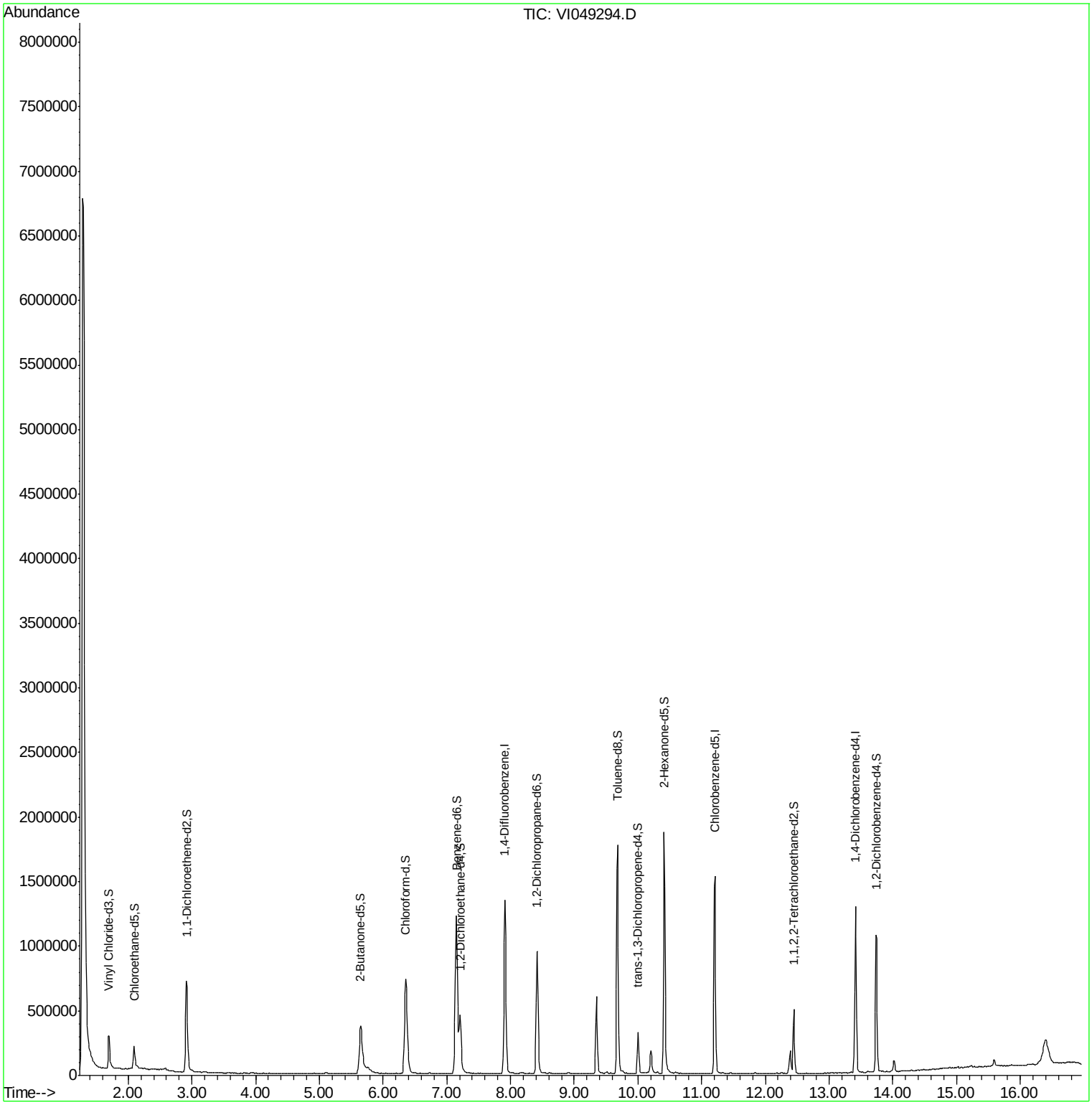
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049294.D
Acq On : 9 May 2016 13:29
Operator : FY/SY
Sample : H2874-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 10 05:44:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4019

Manual Integrations APPROVED
feifei
5/10/2016 1:38:24 PM



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049294.D
Acq On : 9 May 2016 13:29
Operator : FY/SY
Sample : H2874-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4019

Manual Integrations APPROVED
feifei
5/10/2016 1:38:24 PM

Quant Time: May 10 05:44:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1190360	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.21	117	793876	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	294992	5.00	ug/L	-0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	313196	4.27	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 85.40%			
7) Chloroethane-d5	2.09	69	207885	5.12	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 102.40%			
11) 1,1-Dichloroethene-d2	2.91	63	577866	3.35	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 67.00%			
20) 2-Butanone-d5	5.65	46	906643	57.14	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 114.28%			
24) Chloroform-d	6.36	84	904650	4.85	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.00%			
26) 1,2-Dichloroethane-d4	7.21	65	413414m	5.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 108.40%			
32) Benzene-d6	7.15	84	1616027	5.23	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.60%			
36) 1,2-Dichloropropane-d6	8.42	67	457544	5.26	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 105.20%			
41) Toluene-d8	9.68	98	1116633	4.89	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 97.80%			
43) trans-1,3-Dichloropropene-	10.01	79	170948	4.99	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 99.80%			
46) 2-Hexanone-d5	10.41	63	621555	57.52	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 115.04%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	203516	5.15	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 103.00%			
63) 1,2-Dichlorobenzene-d4	13.75	152	257259	4.97	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 99.40%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049294.D
Acq On : 9 May 2016 13:29
Operator : FY/SY
Sample : H2874-20
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4019

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.287	3	6	36	rVB	6735322	20176768	100.00%	36.871%
2	1.691	44	47	57	rVB	253977	488555	2.42%	0.893%
3	1.956	72	74	78	rBV3	9103	19969	0.10%	0.036%
4	2.094	84	88	95	rBV	175746	374034	1.85%	0.684%
5	2.576	136	137	140	rVB3	11962	13462	0.07%	0.025%
6	2.911	166	171	187	rBV	703176	1623149	8.04%	2.966%
7	3.187	195	199	205	rVB7	11393	38479	0.19%	0.070%
8	3.275	207	208	211	rVB3	5907	6704	0.03%	0.012%
9	3.570	235	238	242	rBV5	5339	12348	0.06%	0.023%
10	3.639	242	245	246	rVV3	2949	5375	0.03%	0.010%
11	3.807	260	262	265	rBV4	3857	7803	0.04%	0.014%
12	3.935	272	275	276	rBV2	3180	6627	0.03%	0.012%
13	4.004	281	282	285	rVB3	5975	4597	0.02%	0.008%
14	4.122	291	294	299	rVB6	5261	9486	0.05%	0.017%
15	4.397	318	322	324	rBV4	3160	7534	0.04%	0.014%
16	4.427	324	325	329	rVV4	2819	5927	0.03%	0.011%
17	4.574	337	340	342	rVB4	3777	6295	0.03%	0.012%
18	4.604	342	343	346	rBV3	3041	4406	0.02%	0.008%
19	4.653	346	348	351	rBV3	2160	4627	0.02%	0.008%
20	4.850	366	368	370	rVB3	3763	4407	0.02%	0.008%
21	4.919	372	375	378	rBV4	6407	11960	0.06%	0.022%
22	5.047	385	388	389	rVB3	3653	5016	0.02%	0.009%
23	5.106	389	394	397	rBV7	10255	26158	0.13%	0.048%
24	5.332	416	417	420	rVB3	3279	5332	0.03%	0.010%
25	5.391	420	423	424	rBV2	3664	4976	0.02%	0.009%
26	5.431	426	427	429	rBV2	4485	5886	0.03%	0.011%
27	5.549	436	439	442	rVB5	2386	4575	0.02%	0.008%
28	5.647	442	449	459	rBV	368199	1397120	6.92%	2.553%
29	6.208	502	506	510	rVB6	4420	11165	0.06%	0.020%
30	6.356	510	521	533	rBV	731465	2319931	11.50%	4.239%
31	6.484	533	534	539	rVV4	5188	8703	0.04%	0.016%
32	6.740	555	560	561	rBV4	4464	9874	0.05%	0.018%
33	7.153	594	602	605	rBV	1227788	3292386	16.32%	6.016%
34	7.212	605	608	620	rVB	448958	1134785	5.62%	2.074%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049294.D
Acq On : 9 May 2016 13:29
Operator : FY/SY
Sample : H2874-20
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4019

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.596	644	647	648	rBV3	3616	5075	0.03%	0.009%
36	7.911	673	679	690	rBV	1342912	2911821	14.43%	5.321%
37	8.147	700	703	705	rBV4	6788	12292	0.06%	0.022%
38	8.177	705	706	708	rVV2	6266	8186	0.04%	0.015%
39	8.295	715	718	721	rBV5	6060	10470	0.05%	0.019%
40	8.413	725	730	741	rBV	946333	2215783	10.98%	4.049%
41	8.619	746	751	756	rVB8	7423	24369	0.12%	0.045%
42	8.698	756	759	761	rVB4	3439	5190	0.03%	0.009%
43	8.905	774	780	783	rBV6	11069	28371	0.14%	0.052%
44	8.944	783	784	786	rBV2	3235	4475	0.02%	0.008%
45	9.082	793	798	800	rBV6	3961	8404	0.04%	0.015%
46	9.141	800	804	805	rVB3	4421	7325	0.04%	0.013%
47	9.348	820	825	833	rBV	600695	1096682	5.44%	2.004%
48	9.505	838	841	844	rBV3	12916	22466	0.11%	0.041%
49	9.564	846	847	850	rVB2	6015	7880	0.04%	0.014%
50	9.682	854	859	865	rBV	1770734	3279793	16.26%	5.993%
51	9.810	871	872	874	rVB2	4009	4578	0.02%	0.008%
52	9.850	874	876	879	rVV4	3262	6231	0.03%	0.011%
53	9.997	887	891	897	rBV	321674	602362	2.99%	1.101%
54	10.155	901	907	908	rVV5	11236	32950	0.16%	0.060%
55	10.204	908	912	920	rVV	176395	405202	2.01%	0.740%
56	10.312	920	923	926	rVV5	11772	22920	0.11%	0.042%
57	10.411	929	933	948	rVV	1867123	3253639	16.13%	5.946%
58	10.588	948	951	954	rVV5	11078	25037	0.12%	0.046%
59	10.667	957	959	961	rVB3	4645	4949	0.02%	0.009%
60	10.696	961	962	967	rVB5	3998	7381	0.04%	0.013%
61	10.844	972	977	983	rVB9	4677	13865	0.07%	0.025%
62	10.932	983	986	987	rBV3	3103	5905	0.03%	0.011%
63	11.208	1009	1014	1024	rVV	1531747	2766208	13.71%	5.055%
64	11.336	1026	1027	1031	rVB3	13212	17935	0.09%	0.033%
65	11.464	1031	1040	1045	rBV9	9239	31810	0.16%	0.058%
66	11.621	1053	1056	1058	rBV3	3558	6479	0.03%	0.012%
67	11.769	1069	1071	1073	rVB3	3070	4436	0.02%	0.008%
68	11.838	1073	1078	1083	rVB6	9235	21709	0.11%	0.040%
69	11.976	1090	1092	1095	rVB4	3682	6618	0.03%	0.012%
70	12.064	1095	1101	1102	rBV3	3848	10803	0.05%	0.020%
71	12.172	1109	1112	1115	rBV4	8089	19425	0.10%	0.035%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049294.D
Acq On : 9 May 2016 13:29
Operator : FY/SY
Sample : H2874-20
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4019

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	12.241	1115	1119	1124	rBV7	8472	17745	0.09%	0.032%
73	12.389	1127	1134	1137	rVV	177175	337442	1.67%	0.617%
74	12.448	1137	1140	1147	rVB	497134	780653	3.87%	1.427%
75	12.615	1154	1157	1158	rBV3	3251	5092	0.03%	0.009%
76	12.645	1158	1160	1162	rVB3	5039	6780	0.03%	0.012%
77	12.694	1162	1165	1166	rVB3	4058	4634	0.02%	0.008%
78	12.724	1166	1168	1169	rBV2	4548	4346	0.02%	0.008%
79	12.763	1169	1172	1174	rBV4	3681	6301	0.03%	0.012%
80	12.812	1174	1177	1179	rVB4	3773	6801	0.03%	0.012%
81	12.842	1179	1180	1182	rBV2	3712	5251	0.03%	0.010%
82	12.930	1188	1189	1192	rVB3	4583	5755	0.03%	0.011%
83	12.979	1192	1194	1195	rBV2	3778	5307	0.03%	0.010%
84	13.039	1198	1200	1204	rVB5	4163	8125	0.04%	0.015%
85	13.088	1204	1205	1209	rBV4	4728	7157	0.04%	0.013%
86	13.353	1226	1232	1234	rBV6	12941	34992	0.17%	0.064%
87	13.412	1234	1238	1248	rVV	1285426	2170228	10.76%	3.966%
88	13.531	1248	1250	1254	rVB5	4992	9427	0.05%	0.017%
89	13.609	1254	1258	1259	rBV3	12293	20860	0.10%	0.038%
90	13.737	1267	1271	1277	rBV	1064397	1946143	9.65%	3.556%
91	13.846	1280	1282	1283	rVB2	4356	5546	0.03%	0.010%
92	13.934	1289	1291	1293	rBV3	4247	7355	0.04%	0.013%
93	13.973	1293	1295	1296	rVV2	4025	5919	0.03%	0.011%
94	14.013	1296	1299	1304	rVB2	83171	169410	0.84%	0.310%
95	14.131	1309	1311	1312	rBV2	5003	7771	0.04%	0.014%
96	14.298	1325	1328	1331	rVB4	8720	15566	0.08%	0.028%
97	14.485	1345	1347	1350	rBV4	7753	14815	0.07%	0.027%
98	14.623	1359	1361	1365	rBV3	8833	21799	0.11%	0.040%
99	15.588	1456	1459	1465	rBV	47292	92459	0.46%	0.169%
100	16.404	1532	1542	1554	rVB	175021	1021903	5.06%	1.867%

Sum of corrected areas: 54723025

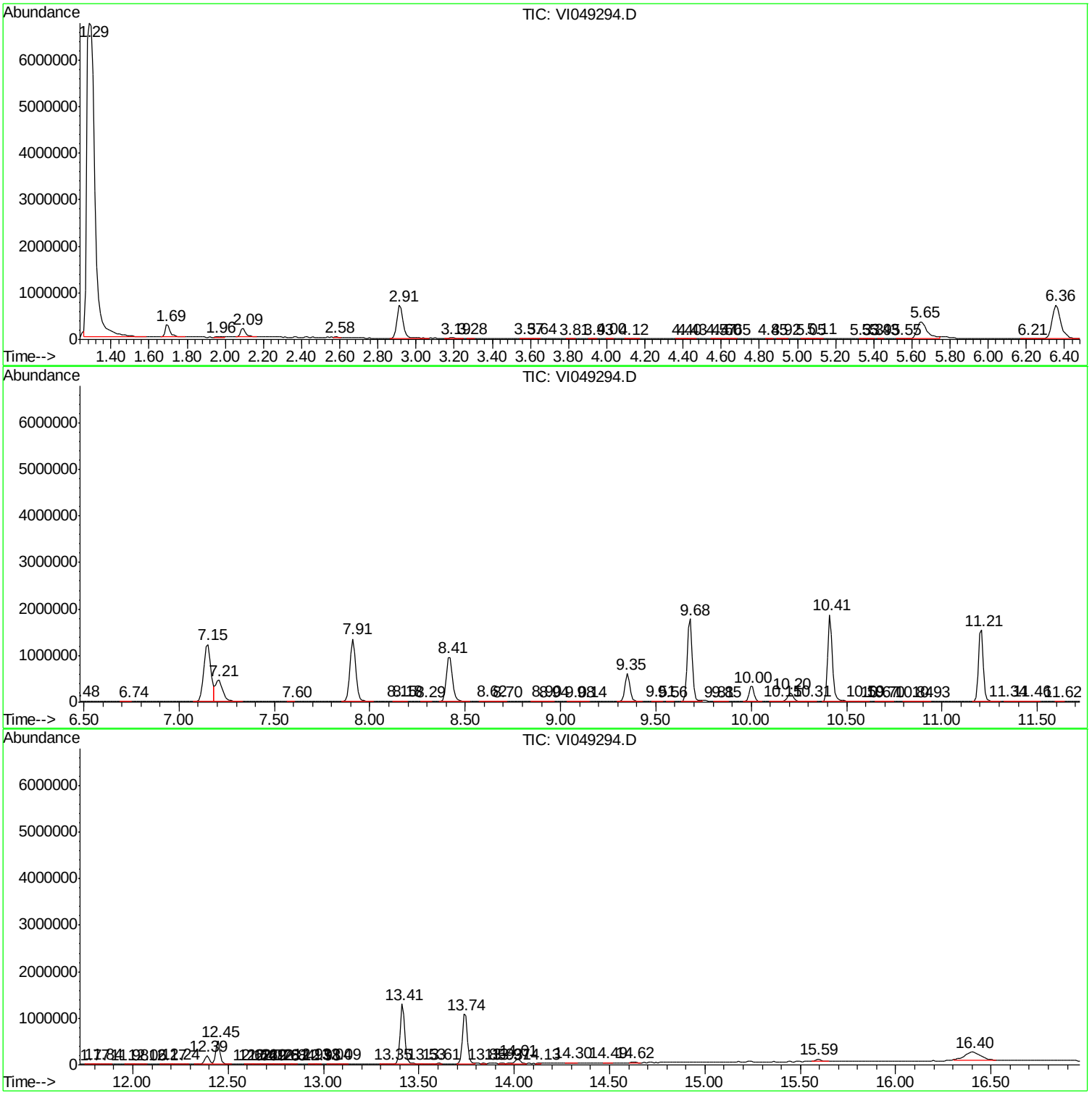
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049294.D
Acq On : 9 May 2016 13:29
Operator : FY/SY
Sample : H2874-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4019

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049294.D
Acq On : 9 May 2016 13:29
Operator : FY/SY
Sample : H2874-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4019

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049294.D
Acq On : 9 May 2016 13:29
Operator : FY/SY
Sample : H2874-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4019

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

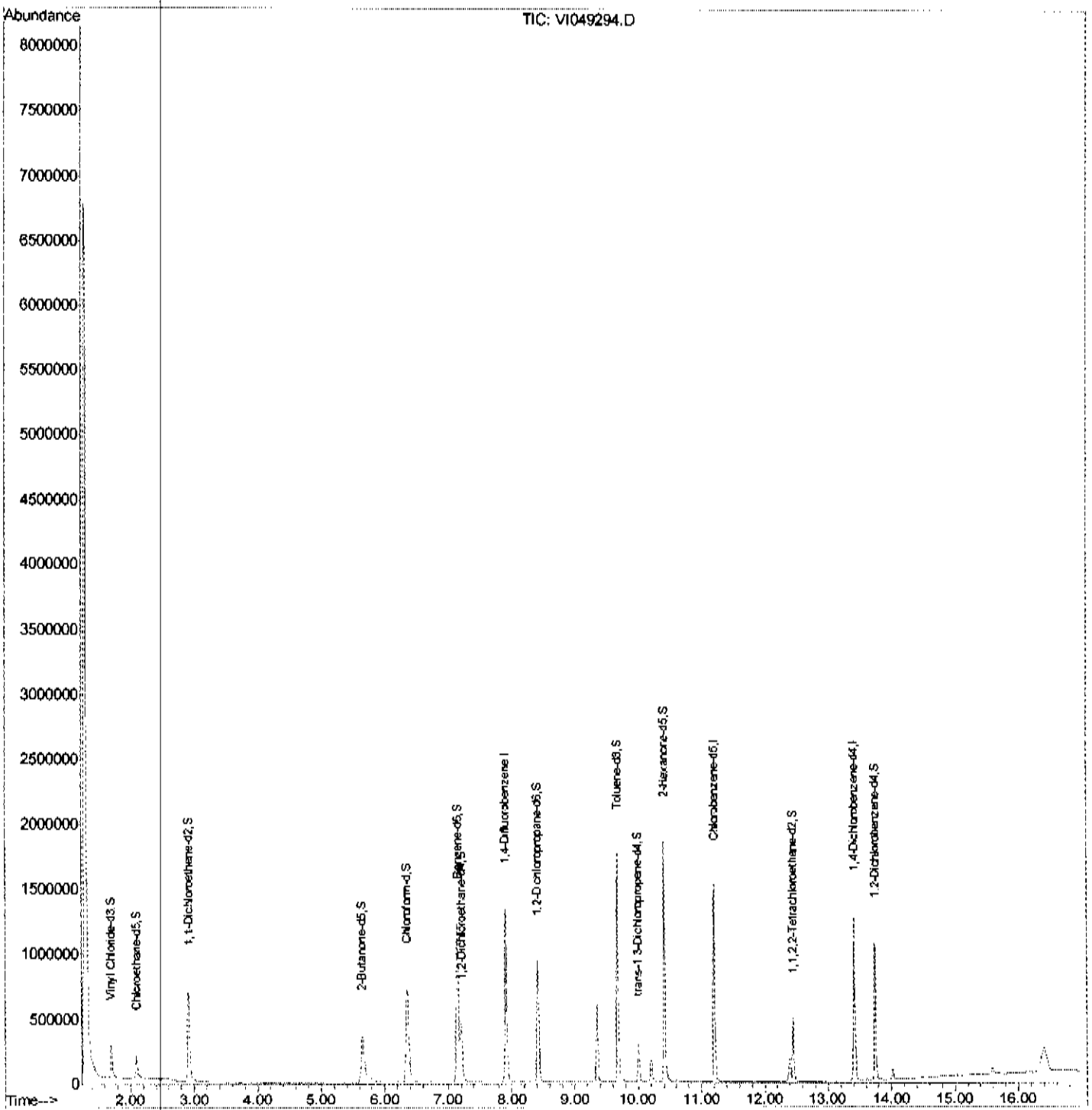
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049294.D
Acq On : 9 May 2016 13:29
Operator : FY/SY
Sample : H2874-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 10 05:44:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4019

Manual Integrations APPROVED
feifei
5/10/2016 1:38:24 PM



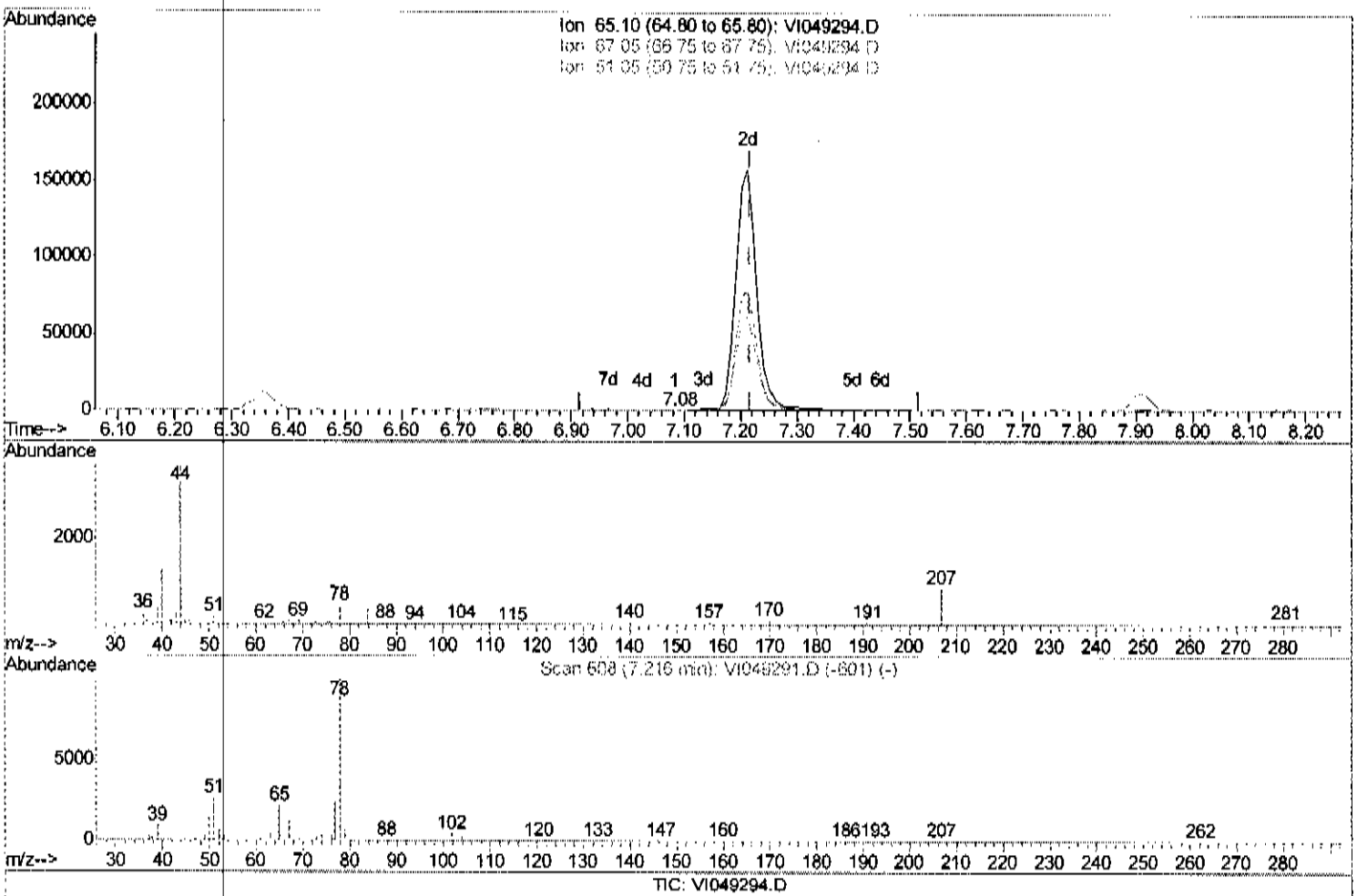
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049294.D
Acq On : 9 May 2016 13:29
Operator : FY/SY
Sample : H2874-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 10 05:37:07 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4019

Manual Integrations APPROVED
feifei
5/10/2016 1:38:24 PM



(26) 1,2-Dichloroethane-d4 (S)

7.084min (-0.132) 0.00ug/L

response 346

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	36.42
51.05	123.20	94.80
0.00	0.00	0.00

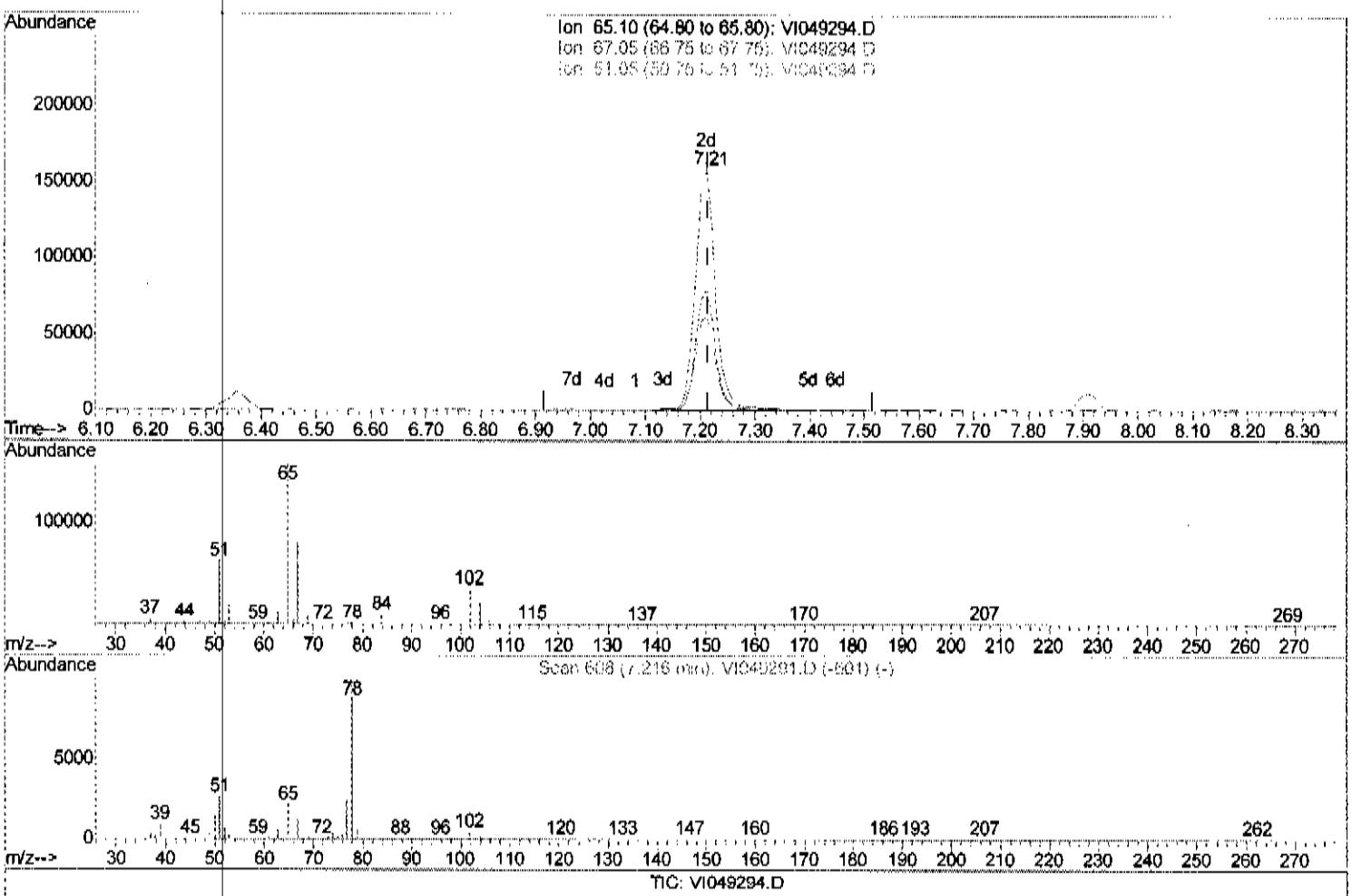
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049294.D
Acq On : 9 May 2016 13:29
Operator : FY/SY
Sample : H2874-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 10 05:37:07 2016
Quant Method : W:\HPCHEM1\MSVOA_1\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4019

Manual Integrations APPROVED
feifei
5/10/2016 1:38:24 PM



TIC: VI049294.D

(26) 1,2-Dichloroethane-d4 (S)

7.212min (-0.004) 5.42ug/L m

response 413414

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.03#
51.05	123.20	0.08#
0.00	0.00	0.00

FY 5/10/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VT049294.D
Acq On : 9 May 2016 13:29
Operator : FY/SY
Sample : H2874-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 10 05:41:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4019

Manual Integrations APPROVED
feifei
5/10/2016 1:38:24 PM

Internal Standards			R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene			7.91	114	1190360	5.00	ug/L	-0.01
28) Chlorobenzene-d5			11.21	117	793876	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4			13.41	152	294992	5.00	ug/L	-0.01
System Monitoring Compounds								
4) Vinyl Chloride-d3			1.69	65	313196	4.27	ug/L	0.00
Spiked Amount	5.000	Range 40 - 130			Recovery =	85.40%		
7) Chloroethane-d5			2.09	69	207885	5.12	ug/L	0.00
Spiked Amount	5.000	Range 65 - 130			Recovery =	102.40%		
11) 1,1-Dichloroethene-d2			2.91	63	577866	3.35	ug/L	-0.01
Spiked Amount	5.000	Range 60 - 125			Recovery =	67.00%		
20) 2-Butanone-d5			5.65	46	906643	57.14	ug/L	0.00
Spiked Amount	50.000	Range 40 - 130			Recovery =	114.28%		
24) Chloroform-d			6.36	84	904650	4.85	ug/L	-0.01
Spiked Amount	5.000	Range 70 - 125			Recovery =	97.00%		
26) 1,2-Dichloroethane-d4			7.21	65	413414m	5.42	ug/L	0.00
Spiked Amount	5.000	Range 70 - 130			Recovery =	108.40%		
32) Benzene-d6			7.15	84	1616027	5.23	ug/L	0.00
Spiked Amount	5.000	Range 70 - 125			Recovery =	104.60%		
36) 1,2-Dichloropropane-d6			8.42	67	457544	5.26	ug/L	0.00
Spiked Amount	5.000	Range 60 - 140			Recovery =	105.20%		
41) Toluene-d8			9.68	98	1116633	4.89	ug/L	0.00
Spiked Amount	5.000	Range 70 - 130			Recovery =	97.80%		
43) trans-1,3-Dichloropropene-			10.01	79	170948	4.99	ug/L	0.00
Spiked Amount	5.000	Range 55 - 130			Recovery =	99.80%		
46) 2-Hexanone-d5			10.41	63	621555	57.52	ug/L	0.00
Spiked Amount	50.000	Range 45 - 130			Recovery =	115.04%		
57) 1,1,2,2-Tetrachloroethane-			12.45	84	203516	5.15	ug/L	0.00
Spiked Amount	5.000	Range 65 - 120			Recovery =	103.00%		
63) 1,2-Dichlorobenzene-d4			13.75	152	257259	4.97	ug/L	0.00
Spiked Amount	5.000	Range 80 - 120			Recovery =	99.40%		

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FY 5/10/2016

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4020

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049293.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4020

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049293.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4020

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049293.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4020

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049293.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.21	0.41	JN
2	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

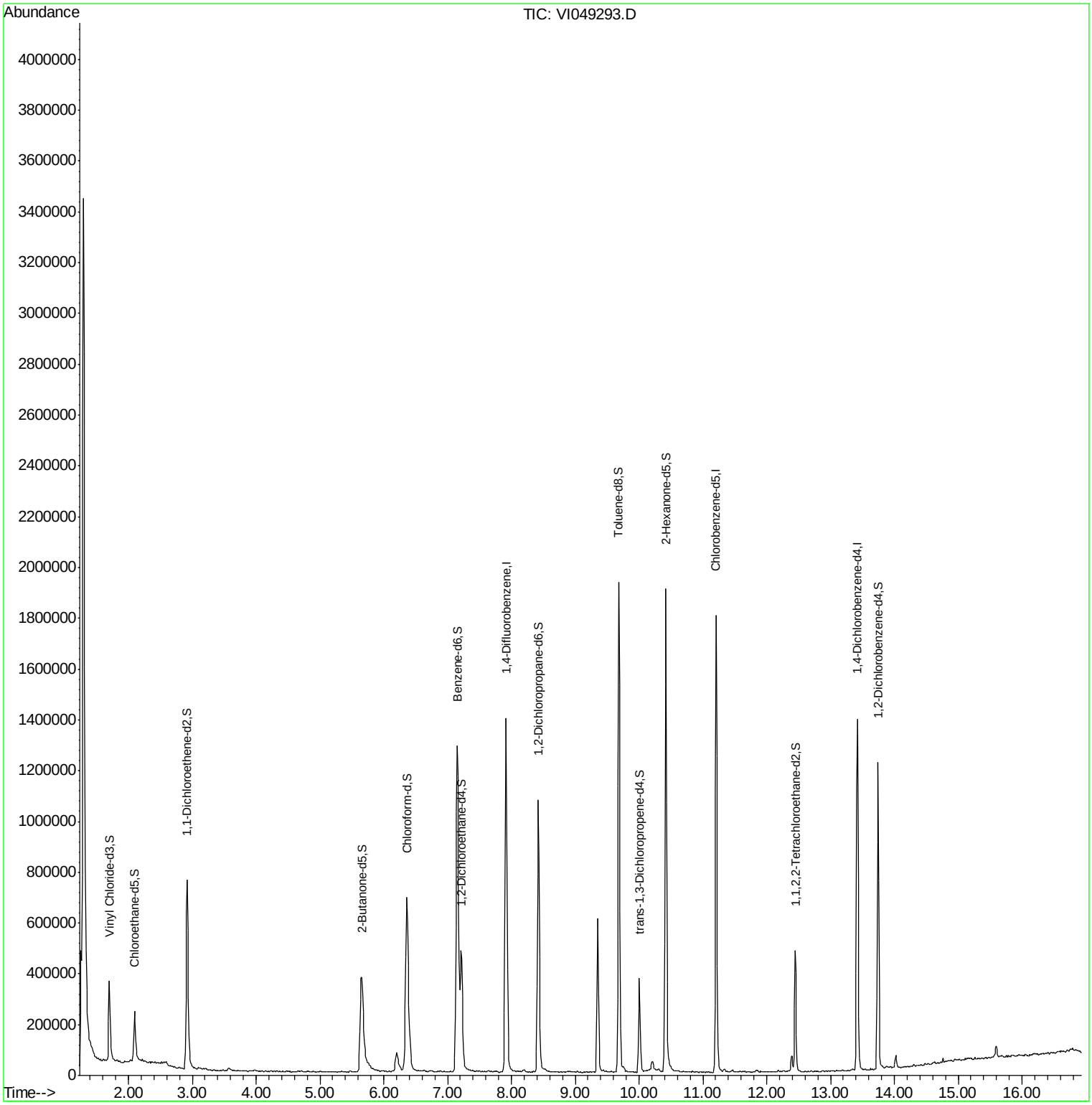
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049293.D
Acq On : 9 May 2016 12:58
Operator : FY/SY
Sample : H2874-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 10 05:42:27 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4020

Manual Integrations APPROVED
feifei
5/10/2016 1:38:23 PM



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049293.D
Acq On : 9 May 2016 12:58
Operator : FY/SY
Sample : H2874-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4020

Manual Integrations APPROVED
feifei
5/10/2016 1:38:23 PM

Quant Time: May 10 05:42:27 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1281692	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	846016	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	311027	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	312498	3.96	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 79.20%			
7) Chloroethane-d5	2.09	69	212698	4.87	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 97.40%			
11) 1,1-Dichloroethene-d2	2.92	63	586143	3.15	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.00%			
20) 2-Butanone-d5	5.66	46	883814	51.74	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 103.48%			
24) Chloroform-d	6.36	84	859920	4.28	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 85.60%			
26) 1,2-Dichloroethane-d4	7.21	65	426142m	5.19	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.80%			
32) Benzene-d6	7.15	84	1670310	5.07	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.40%			
36) 1,2-Dichloropropane-d6	8.42	67	483572	5.22	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.40%			
41) Toluene-d8	9.68	98	1167758	4.80	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.00%			
43) trans-1,3-Dichloropropene-	10.01	79	173694	4.76	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 95.20%			
46) 2-Hexanone-d5	10.42	63	640081	55.58	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 111.16%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	212291	5.04	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 100.80%			
63) 1,2-Dichlorobenzene-d4	13.75	152	270755	4.97	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 99.40%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049293.D
Acq On : 9 May 2016 12:58
Operator : FY/SY
Sample : H2874-21
Misc : 25mL/MSVOA I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4020

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.296	4	7	29	rVB	3388612	7827747	100.00%	18.450%
2	1.699	45	48	59	rVB	315630	515289	6.58%	1.215%
3	1.935	70	72	73	rBV2	6917	6402	0.08%	0.015%
4	2.093	85	88	100	rBV	194701	400482	5.12%	0.944%
5	2.555	133	135	136	rBV2	7878	9359	0.12%	0.022%
6	2.920	166	172	186	rVB	745728	1685906	21.54%	3.974%
7	3.097	188	190	192	rBV3	6960	10026	0.13%	0.024%
8	3.441	222	225	227	rBV4	3146	6308	0.08%	0.015%
9	3.471	227	228	233	rVB5	5240	10446	0.13%	0.025%
10	3.579	235	239	244	rBV4	13200	31748	0.41%	0.075%
11	3.658	244	247	248	rVB2	5385	7520	0.10%	0.018%
12	3.904	269	272	274	rBV4	4429	7245	0.09%	0.017%
13	3.982	278	280	283	rVV4	8093	10105	0.13%	0.024%
14	4.081	289	290	294	rVV3	3215	5058	0.06%	0.012%
15	4.189	299	301	303	rVB3	3120	4702	0.06%	0.011%
16	4.238	303	306	308	rBV4	5689	11591	0.15%	0.027%
17	4.278	308	310	313	rBV4	4240	5827	0.07%	0.014%
18	4.366	318	319	321	rBV2	3554	4727	0.06%	0.011%
19	4.622	342	345	347	rBV4	2328	5995	0.08%	0.014%
20	4.662	347	349	352	rVB3	5573	8557	0.11%	0.020%
21	4.711	352	354	357	rBV4	3723	7453	0.10%	0.018%
22	4.770	357	360	362	rBV4	2008	4764	0.06%	0.011%
23	4.868	367	370	372	rBV4	2796	6099	0.08%	0.014%
24	5.006	379	384	385	rBV3	5200	7284	0.09%	0.017%
25	5.311	411	415	416	rBV4	3149	4592	0.06%	0.011%
26	5.478	429	432	435	rBV2	4295	8972	0.11%	0.021%
27	5.656	443	450	471	rBV	373840	1541167	19.69%	3.633%
28	5.882	471	473	475	rVV3	6139	10225	0.13%	0.024%
29	6.030	487	488	491	rVB3	3809	5684	0.07%	0.013%
30	6.079	491	493	496	rBV3	3794	6543	0.08%	0.015%
31	6.138	496	499	500	rBV3	5384	8876	0.11%	0.021%
32	6.207	500	506	514	rVV	74951	256474	3.28%	0.605%
33	6.364	514	522	539	rVB	683433	2286017	29.20%	5.388%
34	6.719	555	558	560	rBV3	3595	5453	0.07%	0.013%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049293.D
Acq On : 9 May 2016 12:58
Operator : FY/SY
Sample : H2874-21
Misc : 25mL/MSVOA I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4020

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.896	572	576	579	rBV6	4958	11256	0.14%	0.027%
36	7.152	595	602	606	rBV	1283987	3456596	44.16%	8.147%
37	7.211	606	608	617	rVB	469109	1097512	14.02%	2.587%
38	7.388	625	626	629	rVB3	3999	5179	0.07%	0.012%
39	7.624	646	650	655	rVB7	4083	9501	0.12%	0.022%
40	7.752	662	663	668	rVB5	6100	11796	0.15%	0.028%
41	7.919	674	680	691	rBV	1393294	3118885	39.84%	7.351%
42	8.037	691	692	696	rVB3	5031	7181	0.09%	0.017%
43	8.096	696	698	699	rVB2	6086	5902	0.08%	0.014%
44	8.116	699	700	703	rVB3	5557	6550	0.08%	0.015%
45	8.195	703	708	713	rBV7	8489	28278	0.36%	0.067%
46	8.274	715	716	719	rBV3	4044	4734	0.06%	0.011%
47	8.342	722	723	725	rBV2	4734	5326	0.07%	0.013%
48	8.421	725	731	751	rVB	1069558	2339904	29.89%	5.515%
49	8.766	764	766	769	rBV3	3759	7962	0.10%	0.019%
50	8.835	769	773	774	rVB2	2925	5136	0.07%	0.012%
51	8.864	774	776	777	rBV2	3674	6097	0.08%	0.014%
52	9.031	791	793	796	rBV2	5308	6709	0.09%	0.016%
53	9.179	805	808	810	rVB3	3029	5691	0.07%	0.013%
54	9.356	821	826	832	rBV	606584	1156217	14.77%	2.725%
55	9.435	832	834	837	rVB4	4676	8318	0.11%	0.020%
56	9.563	846	847	851	rVB3	5196	10565	0.13%	0.025%
57	9.612	851	852	855	rBV3	3808	6618	0.08%	0.016%
58	9.681	855	859	865	rBV	1929026	3416654	43.65%	8.053%
59	9.838	873	875	877	rVB3	2768	4739	0.06%	0.011%
60	9.898	880	881	884	rVB3	4153	6777	0.09%	0.016%
61	10.006	887	892	898	rBV	372363	643540	8.22%	1.517%
62	10.144	903	906	908	rBV3	3629	8464	0.11%	0.020%
63	10.203	908	912	920	rVV	35784	96631	1.23%	0.228%
64	10.311	920	923	927	rVB6	10830	23700	0.30%	0.056%
65	10.419	930	934	948	rBV	1898124	3360779	42.93%	7.921%
66	10.911	980	984	986	rVB4	3934	8290	0.11%	0.020%
67	10.951	986	988	993	rBV4	2843	6958	0.09%	0.016%
68	11.049	996	998	1000	rBV3	3562	5021	0.06%	0.012%
69	11.079	1000	1001	1004	rVB3	4059	6276	0.08%	0.015%
70	11.207	1010	1014	1024	rBV	1797858	2971629	37.96%	7.004%
71	11.334	1024	1027	1032	rVB6	10006	24920	0.32%	0.059%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049293.D
Acq On : 9 May 2016 12:58
Operator : FY/SY
Sample : H2874-21
Misc : 25mL/MSVOA I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4020

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.462	1035	1040	1043	rBV5	8455	20705	0.26%	0.049%
73	11.659	1059	1060	1062	rVB2	6274	5738	0.07%	0.014%
74	11.699	1062	1064	1066	rBV3	3706	5900	0.08%	0.014%
75	11.836	1074	1078	1084	rVB6	11612	33304	0.43%	0.078%
76	11.905	1084	1085	1086	rBV	5594	4892	0.06%	0.012%
77	12.063	1097	1101	1106	rVB8	2434	5695	0.07%	0.013%
78	12.181	1108	1113	1116	rBV5	8298	17133	0.22%	0.040%
79	12.260	1119	1121	1125	rBV4	4995	10434	0.13%	0.025%
80	12.388	1127	1134	1137	rBV	61172	132482	1.69%	0.312%
81	12.447	1137	1140	1146	rVB	475210	797826	10.19%	1.880%
82	12.693	1163	1165	1168	rBV3	3735	5359	0.07%	0.013%
83	12.929	1186	1189	1191	rVB4	5429	9868	0.13%	0.023%
84	12.968	1191	1193	1195	rBV3	4512	8798	0.11%	0.021%
85	13.096	1203	1206	1211	rBV7	5057	10464	0.13%	0.025%
86	13.195	1213	1216	1220	rBV6	3741	8260	0.11%	0.019%
87	13.352	1229	1232	1234	rBV4	3579	7150	0.09%	0.017%
88	13.421	1234	1239	1248	rBV	1384111	2354091	30.07%	5.549%
89	13.687	1264	1266	1268	rBV3	3402	5633	0.07%	0.013%
90	13.746	1268	1272	1282	rBV	1207978	2078144	26.55%	4.898%
91	13.943	1290	1292	1294	rVB2	5504	6204	0.08%	0.015%
92	14.021	1294	1300	1305	rBV2	48390	99118	1.27%	0.234%
93	14.159	1312	1314	1317	rBV4	6996	9925	0.13%	0.023%
94	14.208	1317	1319	1320	rBV2	4712	6034	0.08%	0.014%
95	14.307	1326	1329	1331	rVB3	8158	12009	0.15%	0.028%
96	14.484	1344	1347	1350	rBV4	8558	18369	0.23%	0.043%
97	14.759	1374	1375	1376	rVB	18523	10938	0.14%	0.026%
98	14.789	1376	1378	1379	rBV	6164	8475	0.11%	0.020%
99	15.261	1424	1426	1428	rBV3	9157	9165	0.12%	0.022%
100	15.596	1457	1460	1464	rVB	44589	83574	1.07%	0.197%

Sum of corrected areas: 42426621

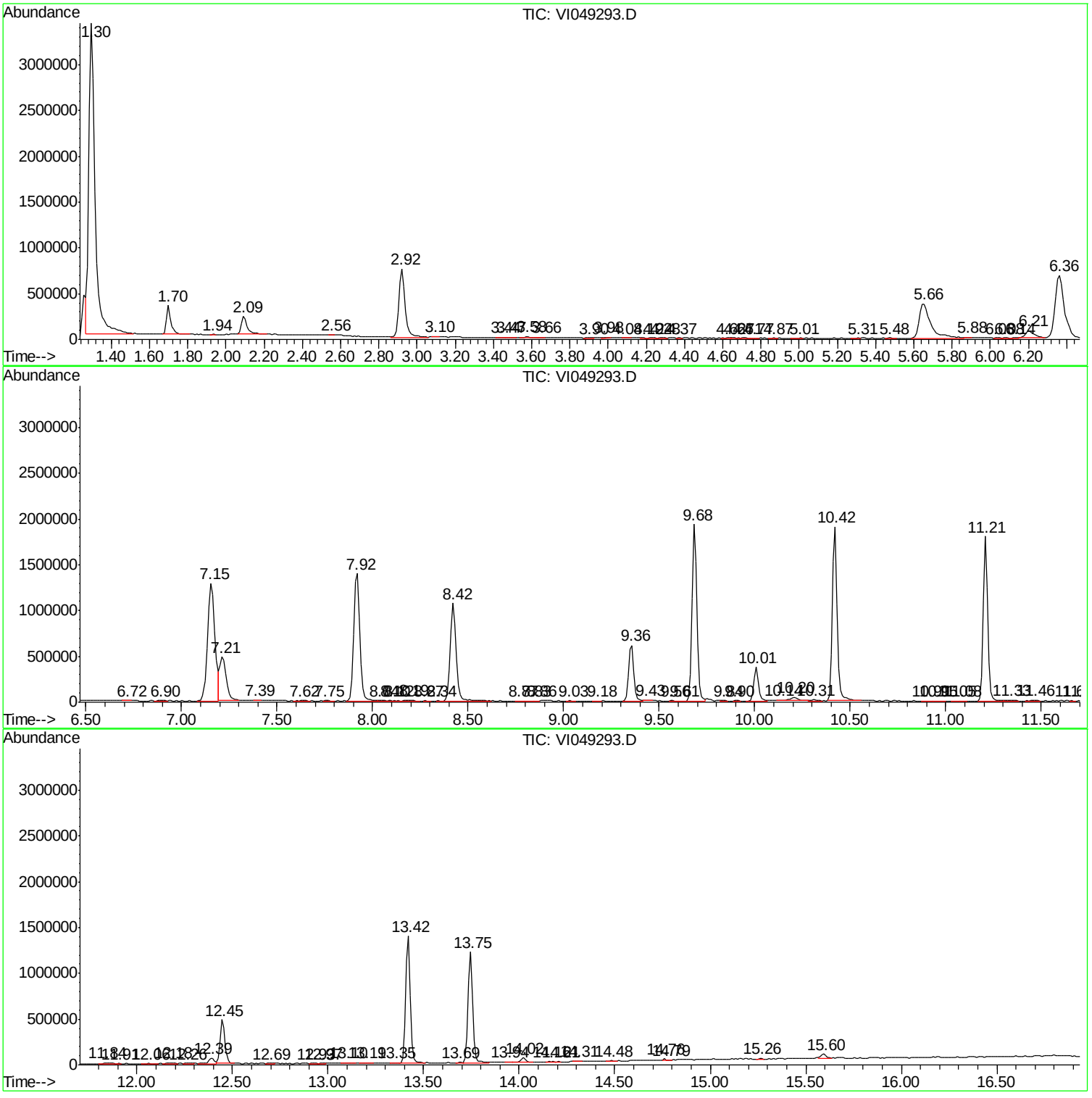
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049293.D
Acq On : 9 May 2016 12:58
Operator : FY/SY
Sample : H2874-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4020

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049293.D
Acq On : 9 May 2016 12:58
Operator : FY/SY
Sample : H2874-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4020

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

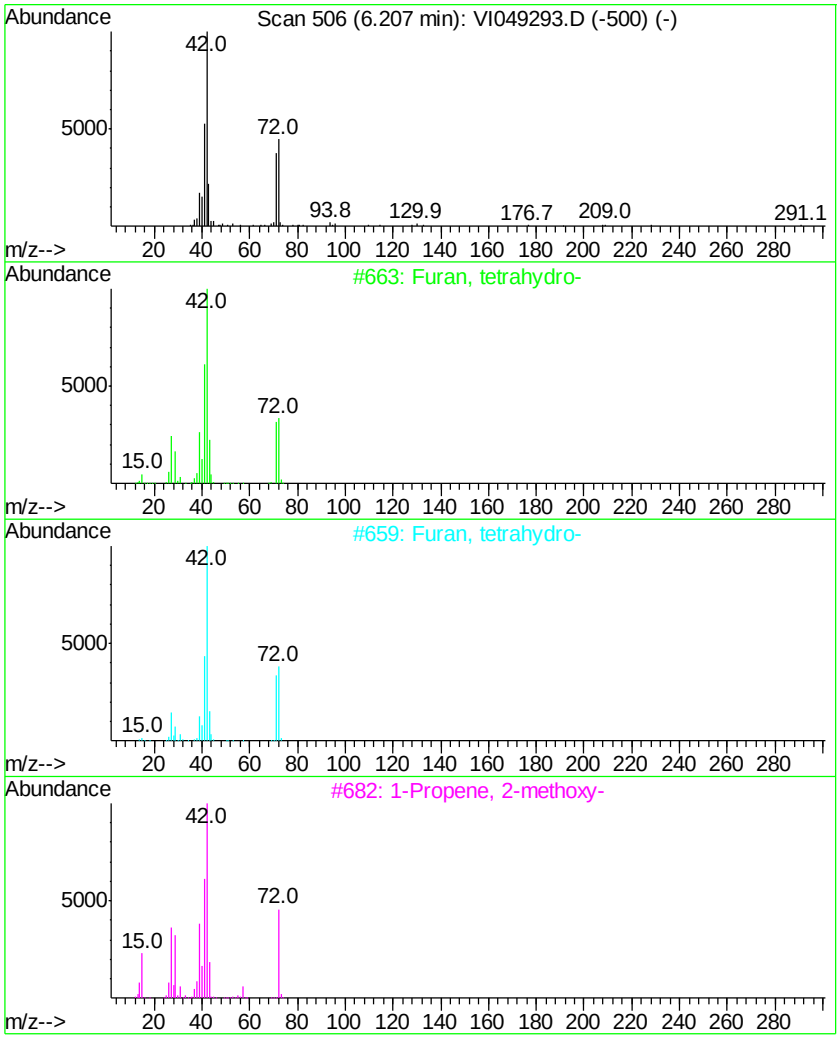
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

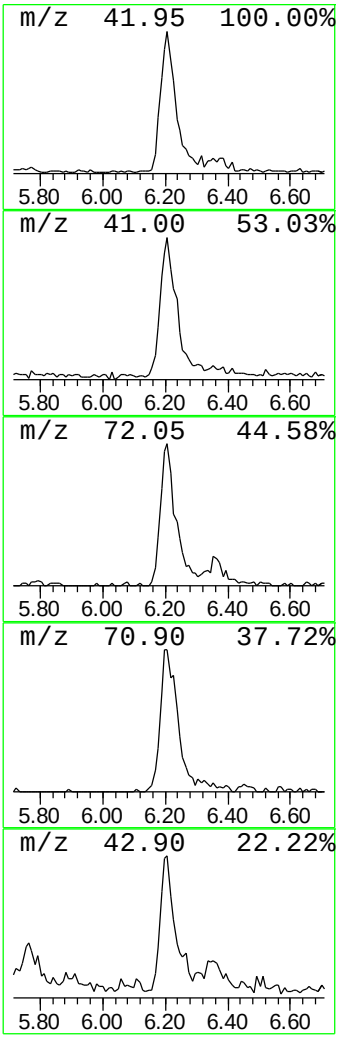
****

Peak Number 2 Furan, tetrahydro- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.21	0.41 ug/L	256474	1,4-Difluorobenzene	7.92

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Furan, tetrahydro-	72	C4H8O	000109-99-9	80
2	Furan, tetrahydro-	72	C4H8O	000109-99-9	72
3	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	64
4	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	59
5	Isobutylene epoxide	72	C4H8O	000558-30-5	45





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049293.D
Acq On : 9 May 2016 12:58
Operator : FY/SY
Sample : H2874-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4020

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Furan, tetrahydro-	6.21	0.4	ug/L	256474	1	7.92	3118890	5.0

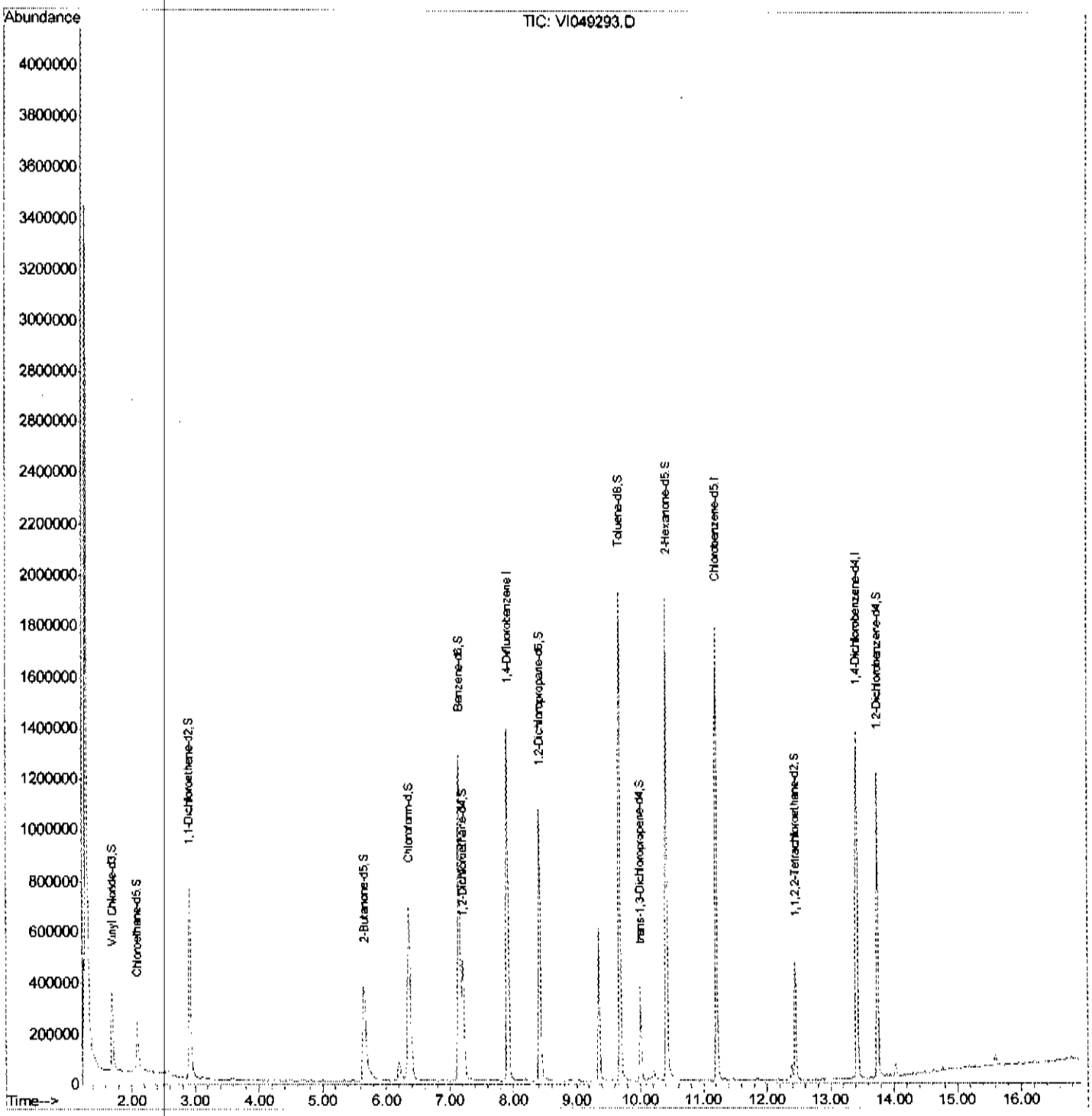
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049293.D
Acq On : 9 May 2016 12:58
Operator : FY/SY
Sample : H2874-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 10 05:42:27 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4020

Manual Integrations APPROVED
feifei
5/10/2016 1:38:23 PM



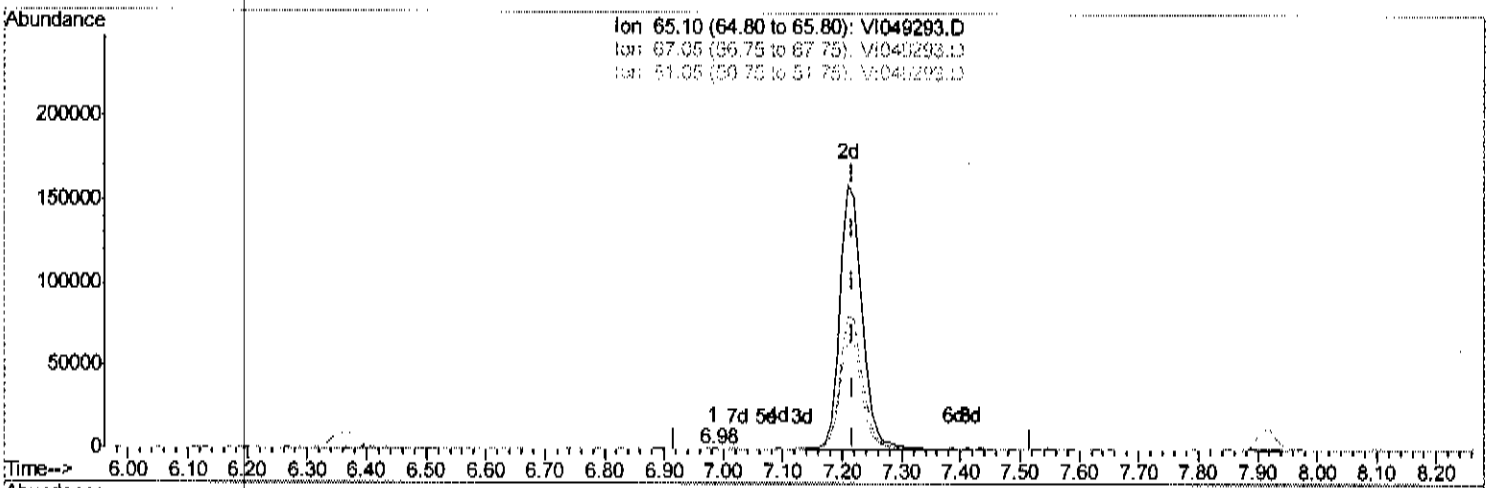
Quantitation Report (Qedit)

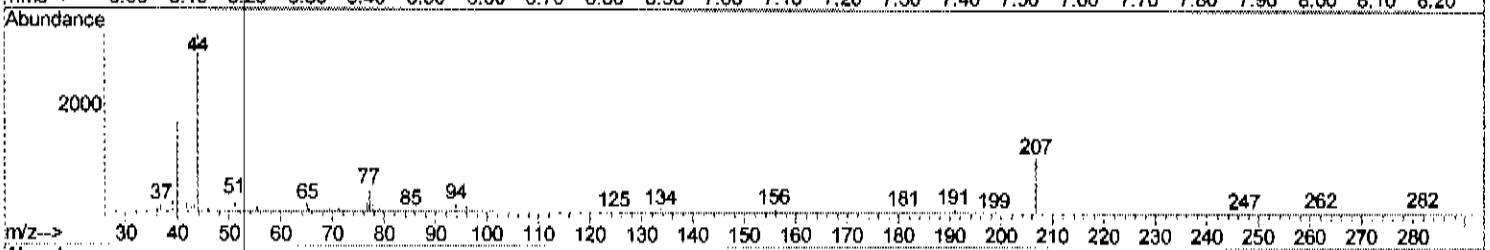
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049293.D
Acq On : 9 May 2016 12:58
Operator : FY/SY
Sample : H2874-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 10 05:37:01 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

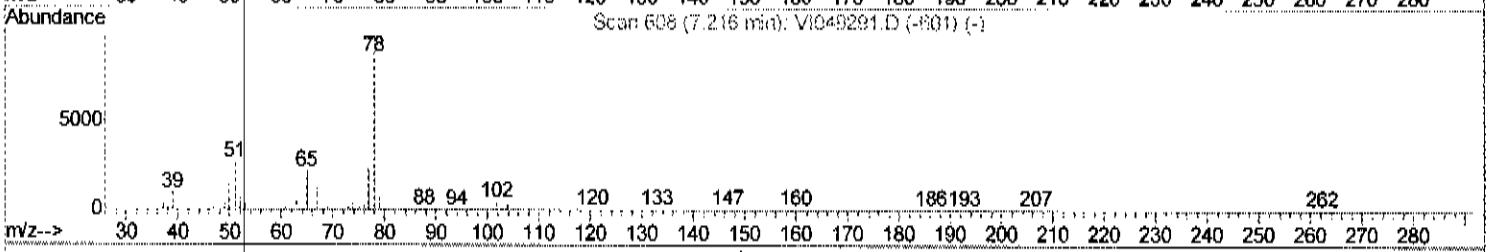
Instrument :
MSVOA_I
ClientSampleId :
H4020

Manual Integrations APPROVED
feifei
5/10/2016 1:38:23 PM





Scan 608 (7.216 min): VI049291.D (-801) (-)



TIC: VI049293.D

(26) 1,2-Dichloroethane-d4 (S)

6.984min (-0.232) 0.01ug/L

response 692

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	41.76
51.05	123.20	137.14
0.00	0.00	0.00

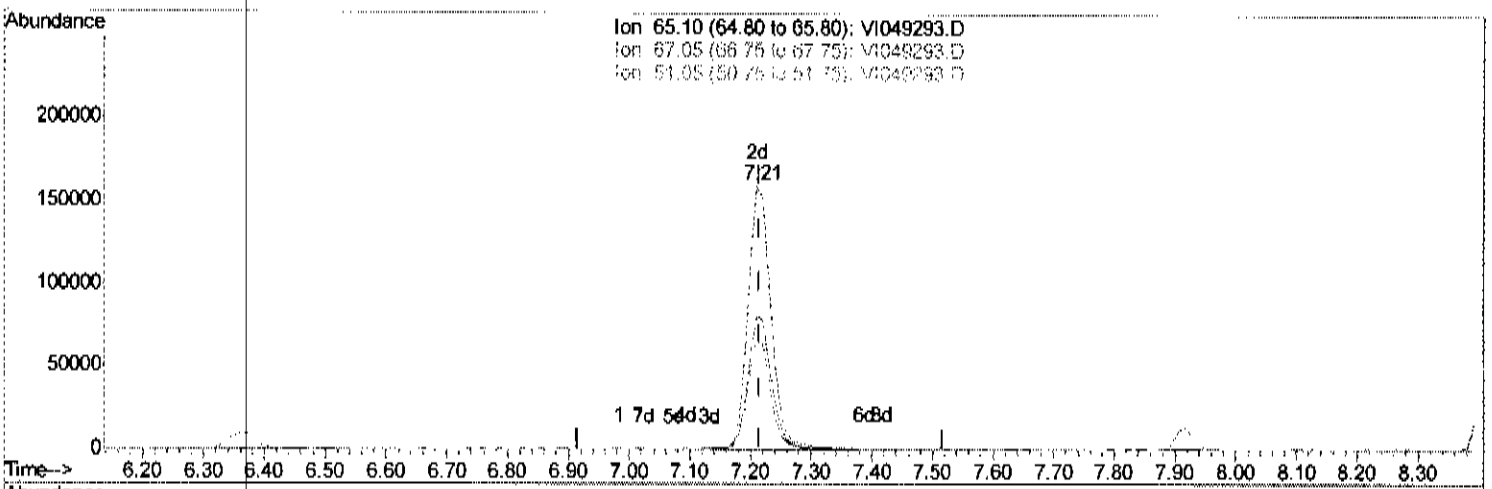
Quantitation Report (Qedit)

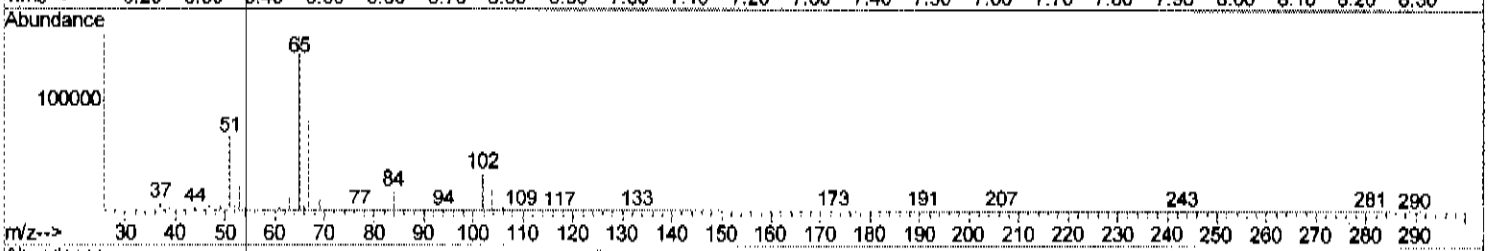
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049293.D
Acq On : 9 May 2016 12:58
Operator : FY/SY
Sample : H2874-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

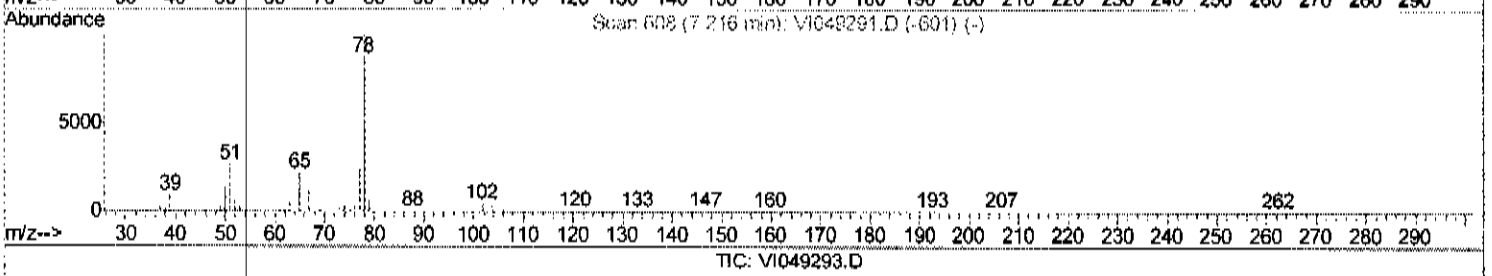
Quant Time: May 10 05:37:01 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4020

Manual Integrations APPROVED
feifei
5/10/2016 1:38:23 PM







(26) 1,2-Dichloroethane-d4 (S)

7.211min (-0.006) 5.19ug/L m

response 426142

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.07#
51.05	123.20	0.22#
0.00	0.00	0.00

FY 5/10/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049293.D
Acq On : 9 May 2016 12:58
Operator : FY/SY
Sample : H2874-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 10 05:42:27 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4020

Manual Integrations APPROVED
feifei
5/10/2016 1:38:23 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1281692	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	846016	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	311027	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	312498	3.96	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery =	79.20%		
7) Chloroethane-d5	2.09	69	212698	4.87	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery =	97.40%		
11) 1,1-Dichloroethene-d2	2.92	63	586143	3.15	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery =	63.00%		
20) 2-Butanone-d5	5.66	46	883814	51.74	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery =	103.48%		
24) Chloroform-d	6.36	84	859920	4.28	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery =	85.60%		
26) 1,2-Dichloroethane-d4	7.21	65	426142m	5.19	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery =	103.80%		
32) Benzene-d6	7.15	84	1670310	5.07	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery =	101.40%		
36) 1,2-Dichloropropane-d6	8.42	67	483572	5.22	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery =	104.40%		
41) Toluene-d8	9.68	98	1167758	4.80	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery =	96.00%		
43) trans-1,3-Dichloropropene-	10.01	79	173694	4.76	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery =	95.20%		
46) 2-Hexanone-d5	10.42	63	640081	55.58	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery =	111.16%		
57) 1,1,2,2-Tetrachloroethane-	12.45	84	212291	5.04	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery =	100.80%		
63) 1,2-Dichlorobenzene-d4	13.75	152	270755	4.97	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery =	99.40%		

Target Compounds	Qvalue

(#) - qualifier out of range (m) = manual integration (+) = signals summed

PT 5/10/2016

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4091

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-22
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049299.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.8	
75-15-0	Carbon disulfide	0.070	J
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4091

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-22
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049299.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.10	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.13	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4091

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-22
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049299.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4091

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-22
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049299.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000066-25-1	Hexanal	10.59	1.5	JN
2	E966796	Total Alkanes	N/A	0.38	

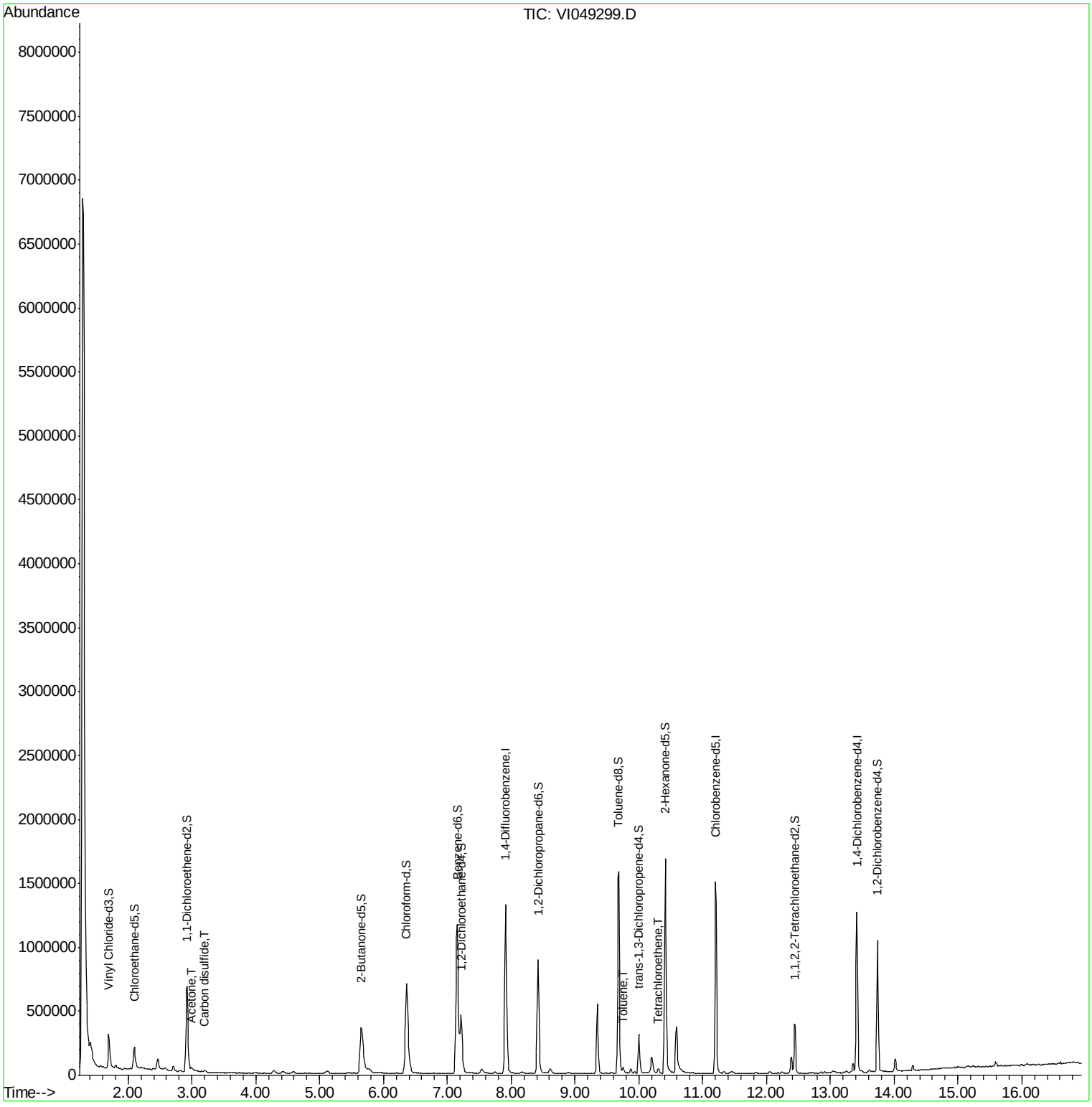
EPA-designated Registry Number.

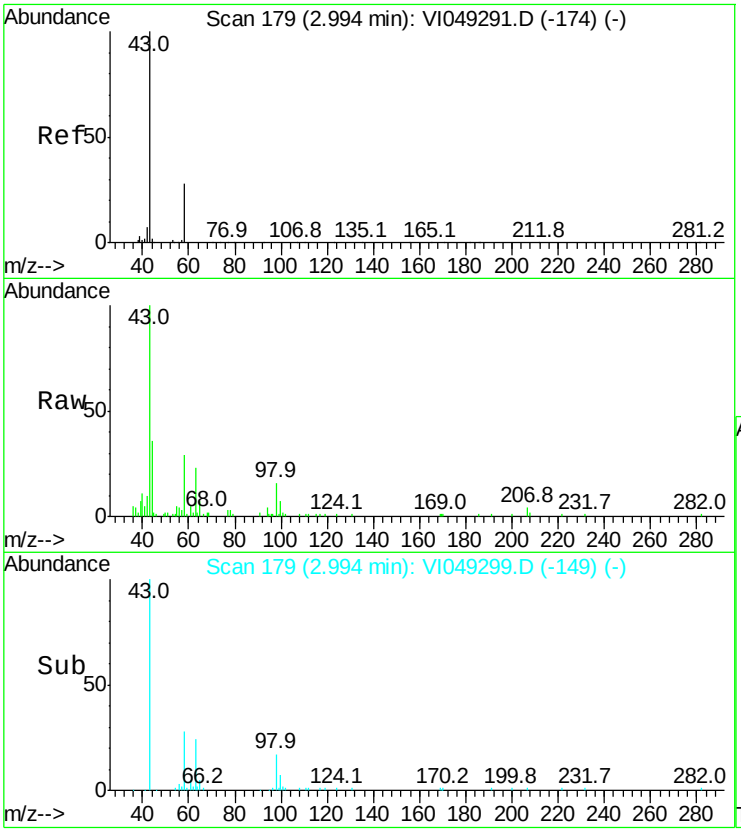
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049299.D
Acq On : 9 May 2016 16:08
Operator : FY/SY
Sample : H2874-22
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4091

Quant Time: May 10 12:56:38 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration



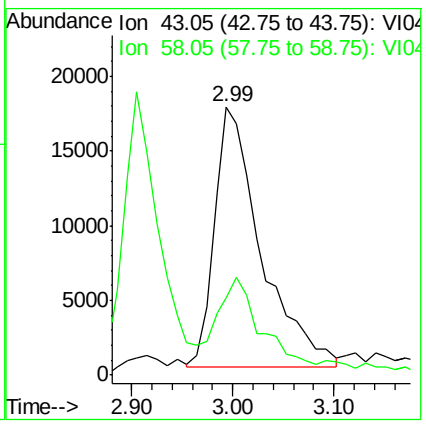


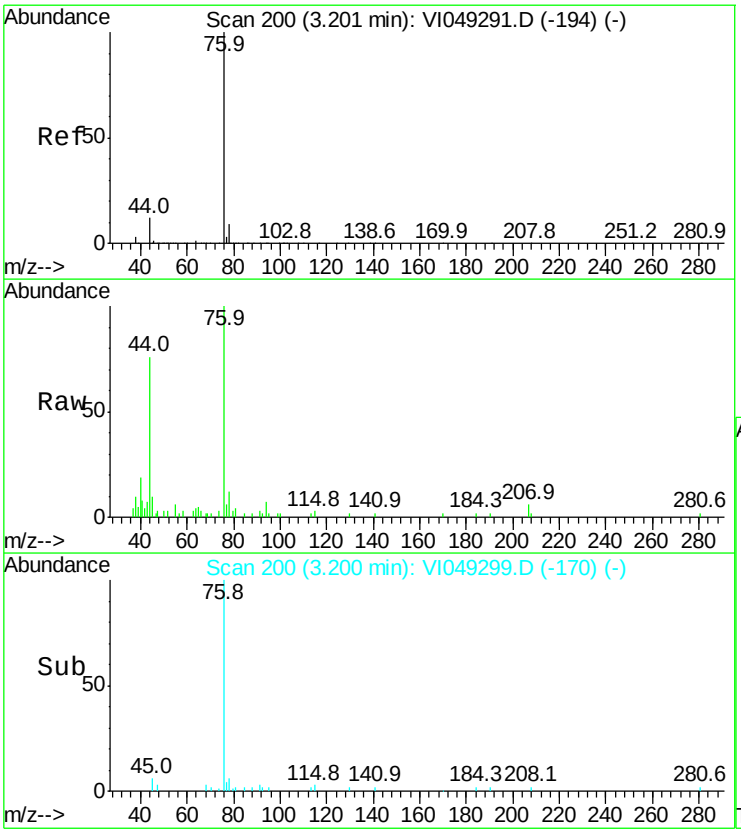
#13
Acetone
Concen: 5.82 ug/L
RT: 2.99 min Scan# 179
Delta R.T. -0.00 min
Lab File: VI049299.D
Acq: 9 May 2016 16:08

Instrument : MSVOA_I
ClientSampleId : H4091

Tgt Ion: 43 Resp: 55941

Ion	Ratio	Lower	Upper
43	100		
58	15.8	0.0	62.0

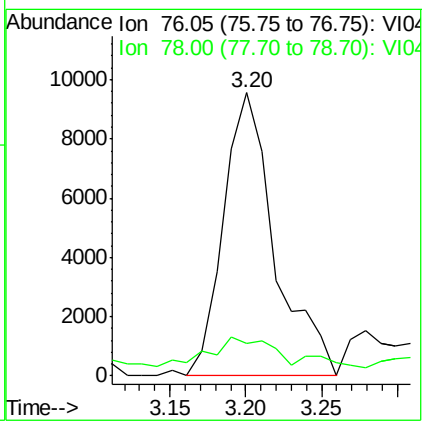


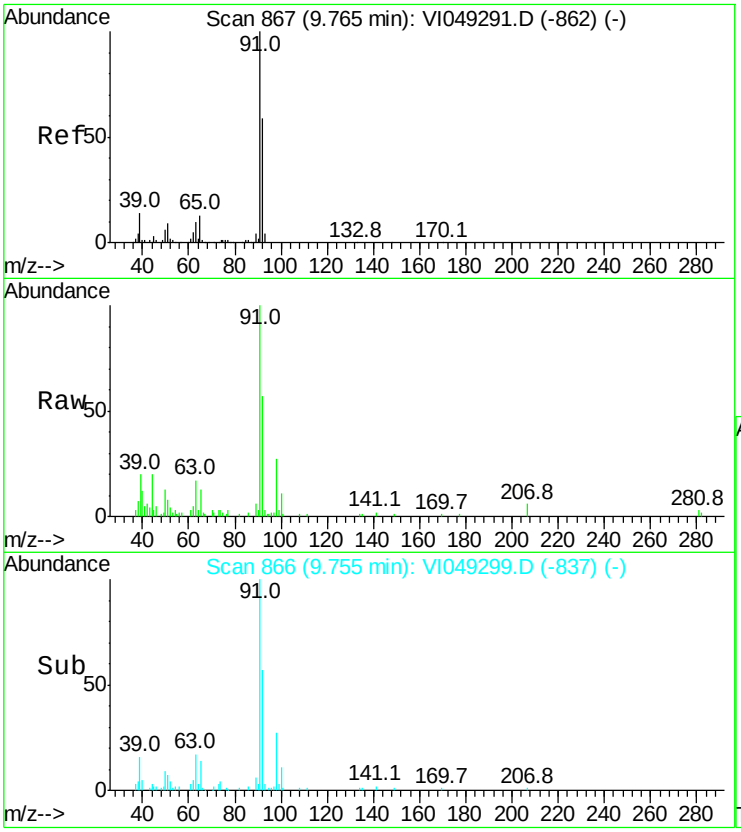


#14
Carbon disulfide
Concen: 0.07 ug/L
RT: 3.20 min Scan# 200
Delta R.T. -0.00 min
Lab File: VI049299.D
Acq: 9 May 2016 16:08

Tgt Ion: 76 Resp: 22479

Ion	Ratio	Lower	Upper
76	100		
78	11.5	7.4	11.0#



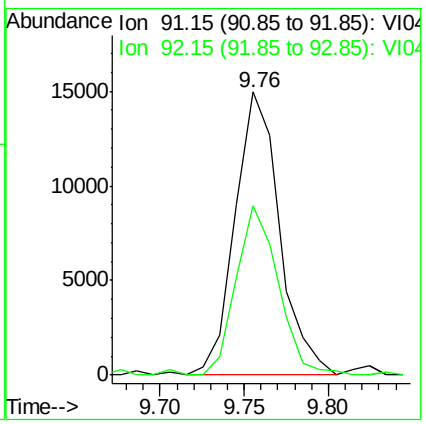


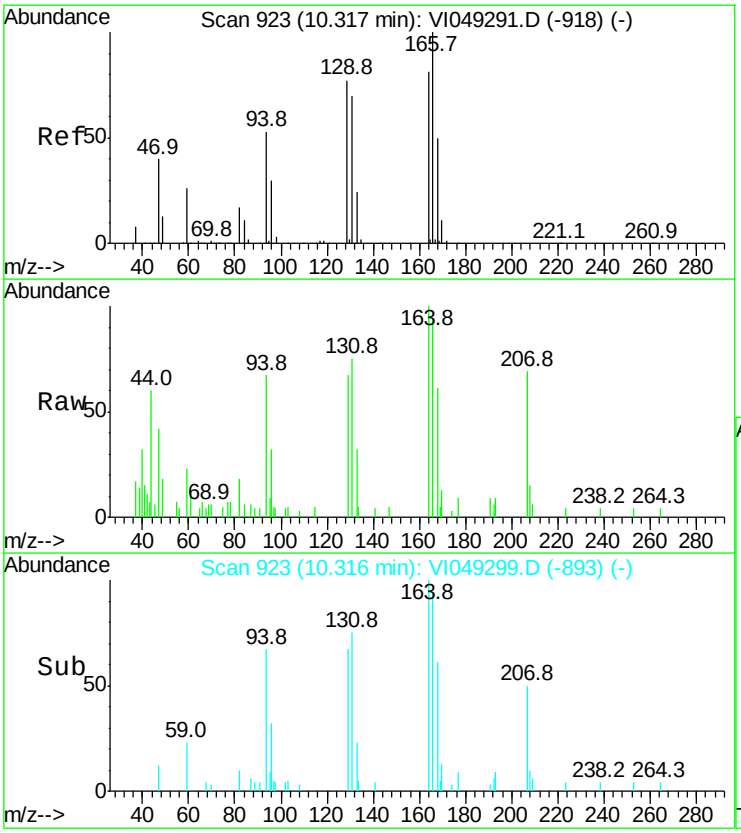
#42
Toluene
Concen: 0.10 ug/L
RT: 9.76 min Scan# 866
Delta R.T. -0.01 min
Lab File: VI049299.D
Acq: 9 May 2016 16:08

Instrument :
MSVOA_I
ClientSampleId :
H4091

Tgt Ion: 91 Resp: 27348

Ion	Ratio	Lower	Upper
91	100		
92	59.8	41.2	76.4

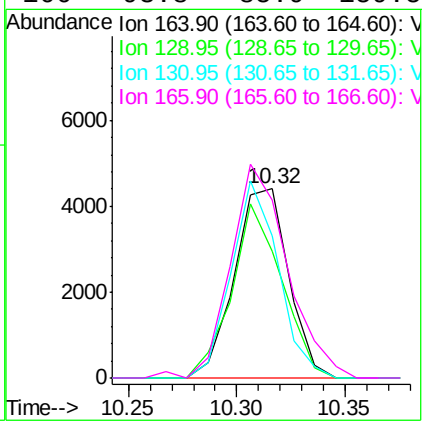




#47
Tetrachloroethene
Concen: 0.13 ug/L
RT: 10.32 min Scan# 923
Delta R.T. -0.00 min
Lab File: VI049299.D
Acq: 9 May 2016 16:08

Tgt Ion:164 Resp: 7659

Ion	Ratio	Lower	Upper
164	100		
129	67.3	62.1	115.3
131	75.3	60.6	112.6
166	93.8	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049299.D
Acq On : 9 May 2016 16:08
Operator : FY/SY
Sample : H2874-22
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4091

Quant Time: May 10 12:56:38 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1162728	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.21	117	766487	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	283703	5.00	ug/L	-0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	289556	4.05	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 81.00%			
7) Chloroethane-d5	2.10	69	197414	4.98	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 99.60%			
11) 1,1-Dichloroethene-d2	2.92	63	535121	3.17	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.40%			
20) 2-Butanone-d5	5.65	46	866804	55.93	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 111.86%			
24) Chloroform-d	6.36	84	867329	4.76	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.20%			
26) 1,2-Dichloroethane-d4	7.22	65	384828	5.16	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.20%			
32) Benzene-d6	7.16	84	1493064	5.00	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.00%			
36) 1,2-Dichloropropane-d6	8.43	67	426652	5.08	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.60%			
41) Toluene-d8	9.69	98	1020392	4.63	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.60%			
43) trans-1,3-Dichloropropene-	10.00	79	150814	4.56	ug/L	-0.01
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.20%			
46) 2-Hexanone-d5	10.41	63	576854	55.29	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 110.58%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	184779	4.84	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 120		Recovery = 96.80%			
63) 1,2-Dichlorobenzene-d4	13.74	152	235559	4.74	ug/L	-0.01
Spiked Amount 5.000	Range 80 - 120		Recovery = 94.80%			
Target Compounds						Qvalue
13) Acetone	2.99	43	55941	5.82	ug/L	72
14) Carbon disulfide	3.20	76	22479	0.07	ug/L #	94
42) Toluene	9.76	91	27348	0.10	ug/L	99
47) Tetrachloroethene	10.32	164	7659	0.13	ug/L	79

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049299.D
Acq On : 9 May 2016 16:08
Operator : FY/SY
Sample : H2874-22
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4091

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.291	3	6	16	rBV	6683001	19461295	100.00%	36.260%
2	1.409	16	18	32	rVB2	193869	632565	3.25%	1.179%
3	1.567	32	34	36	rVB	14993	15845	0.08%	0.030%
4	1.695	44	47	56	rVV	267618	487639	2.51%	0.909%
5	1.803	56	58	64	rVB	24828	55303	0.28%	0.103%
6	1.941	69	72	74	rBV3	11901	23586	0.12%	0.044%
7	2.098	84	88	96	rBV	173116	361476	1.86%	0.674%
8	2.197	96	98	101	rVB4	10315	19223	0.10%	0.036%
9	2.393	116	118	120	rBV3	11002	19831	0.10%	0.037%
10	2.462	122	125	132	rVV	91556	210708	1.08%	0.393%
11	2.580	135	137	145	rVB5	25782	68193	0.35%	0.127%
12	2.708	146	150	157	rVB2	37594	92984	0.48%	0.173%
13	2.925	167	172	177	rBV	666005	1545007	7.94%	2.879%
14	2.994	177	179	189	rVB2	31636	97379	0.50%	0.181%
15	3.151	194	195	197	rVV2	9226	8997	0.05%	0.017%
16	3.191	197	199	206	rVB3	15426	39662	0.20%	0.074%
17	3.496	227	230	232	rVB4	7320	12185	0.06%	0.023%
18	3.574	232	238	239	rBV6	8371	19335	0.10%	0.036%
19	3.732	251	254	256	rBV4	4036	6804	0.03%	0.013%
20	3.791	258	260	261	rBV2	5612	7835	0.04%	0.015%
21	3.929	271	274	276	rBV4	3151	8051	0.04%	0.015%
22	4.135	293	295	298	rVB4	5316	8850	0.05%	0.016%
23	4.194	298	301	303	rBV4	4049	7296	0.04%	0.014%
24	4.273	305	309	316	rBV3	22143	68405	0.35%	0.127%
25	4.441	320	326	332	rVB5	12298	45780	0.24%	0.085%
26	4.588	332	341	343	rBV6	13749	35054	0.18%	0.065%
27	4.765	356	359	362	rVV5	3181	6684	0.03%	0.012%
28	4.992	377	382	383	rBV3	3458	9382	0.05%	0.017%
29	5.120	390	395	400	rBV2	21351	57300	0.29%	0.107%
30	5.444	425	428	431	rBV4	7550	17966	0.09%	0.033%
31	5.533	434	437	438	rBV3	4415	8675	0.04%	0.016%
32	5.651	443	449	467	rBV	361600	1436718	7.38%	2.677%
33	6.360	514	521	531	rBV	701900	2197451	11.29%	4.094%
34	6.586	541	544	547	rBV5	4275	7493	0.04%	0.014%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049299.D
Acq On : 9 May 2016 16:08
Operator : FY/SY
Sample : H2874-22
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4091

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.891	574	575	578	rVB3	5581	7307	0.04%	0.014%
36	7.157	595	602	606	rBV	1165293	3188106	16.38%	5.940%
37	7.216	606	608	618	rVV	453118	983361	5.05%	1.832%
38	7.334	618	620	622	rVB3	5603	7967	0.04%	0.015%
39	7.541	636	641	646	rVV4	33060	93491	0.48%	0.174%
40	7.639	650	651	657	rVB6	4327	8249	0.04%	0.015%
41	7.747	657	662	665	rBV6	12097	24676	0.13%	0.046%
42	7.915	674	679	689	rVV	1316808	2796081	14.37%	5.210%
43	8.053	692	693	698	rVB4	4664	9864	0.05%	0.018%
44	8.171	701	705	715	rVB4	14805	52048	0.27%	0.097%
45	8.308	715	719	722	rVB4	7260	17595	0.09%	0.033%
46	8.427	722	731	739	rBV	893716	2085712	10.72%	3.886%
47	8.525	739	741	746	rVV6	5929	13081	0.07%	0.024%
48	8.614	746	750	757	rVB2	37958	106233	0.55%	0.198%
49	8.879	775	777	783	rVB7	5911	19241	0.10%	0.036%
50	8.988	786	788	791	rVB4	6238	7870	0.04%	0.015%
51	9.293	816	819	820	rBV3	6691	9352	0.05%	0.017%
52	9.352	820	825	836	rBV	542844	974164	5.01%	1.815%
53	9.490	836	839	844	rVB5	7908	21690	0.11%	0.040%
54	9.568	844	847	850	rBV3	12808	26295	0.14%	0.049%
55	9.686	854	859	864	rBV	1574736	2995825	15.39%	5.582%
56	9.755	864	866	869	rVB	42419	70014	0.36%	0.130%
57	9.873	875	878	882	rVB	31104	50734	0.26%	0.095%
58	9.932	882	884	887	rVB2	16511	26217	0.13%	0.049%
59	10.001	887	891	899	rBV	310273	558415	2.87%	1.040%
60	10.129	903	904	906	rBV2	4864	7334	0.04%	0.014%
61	10.208	907	912	919	rVV	123763	259349	1.33%	0.483%
62	10.306	919	922	926	rVB3	36270	68657	0.35%	0.128%
63	10.415	929	933	947	rBV	1681708	3029781	15.57%	5.645%
64	10.592	947	951	965	rBV	355587	789370	4.06%	1.471%
65	10.986	989	991	993	rVB3	4339	6667	0.03%	0.012%
66	11.153	1006	1008	1009	rBV2	4176	6602	0.03%	0.012%
67	11.202	1009	1013	1023	rBV	1497923	2635032	13.54%	4.910%
68	11.330	1023	1026	1030	rVB2	13662	26828	0.14%	0.050%
69	11.428	1032	1036	1037	rBV4	5819	13268	0.07%	0.025%
70	11.458	1037	1039	1042	rVV4	11036	16068	0.08%	0.030%
71	11.586	1050	1052	1055	rBV4	4887	11016	0.06%	0.021%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049299.D
Acq On : 9 May 2016 16:08
Operator : FY/SY
Sample : H2874-22
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4091

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.832	1074	1077	1081	rVB5	11023	23108	0.12%	0.043%
73	11.930	1083	1087	1090	rVB6	4558	10153	0.05%	0.019%
74	12.048	1097	1099	1106	rBV6	16191	38564	0.20%	0.072%
75	12.186	1110	1113	1115	rBV4	3902	7041	0.04%	0.013%
76	12.245	1115	1119	1123	rVB6	10373	20705	0.11%	0.039%
77	12.393	1128	1134	1136	rBV	125687	233318	1.20%	0.435%
78	12.442	1136	1139	1146	rVB	385034	691876	3.56%	1.289%
79	12.688	1158	1164	1165	rBV6	4744	9485	0.05%	0.018%
80	12.728	1165	1168	1170	rVB3	8559	10855	0.06%	0.020%
81	12.855	1177	1181	1183	rBV3	13737	22637	0.12%	0.042%
82	12.905	1183	1186	1190	rVB6	11513	20622	0.11%	0.038%
83	12.974	1190	1193	1195	rBV3	7611	15095	0.08%	0.028%
84	13.042	1197	1200	1203	rBV4	19803	34760	0.18%	0.065%
85	13.151	1209	1211	1214	rVB2	5298	7424	0.04%	0.014%
86	13.220	1214	1218	1219	rBV3	7797	16671	0.09%	0.031%
87	13.249	1219	1221	1226	rVB3	12950	24460	0.13%	0.046%
88	13.357	1226	1232	1234	rBV	72937	129683	0.67%	0.242%
89	13.416	1234	1238	1243	rVB	1248168	2006336	10.31%	3.738%
90	13.613	1253	1258	1261	rBV7	19253	51627	0.27%	0.096%
91	13.741	1267	1271	1277	rBV	1029605	1754221	9.01%	3.268%
92	14.017	1295	1299	1305	rBV3	94973	188561	0.97%	0.351%
93	14.233	1319	1321	1324	rBV3	7316	13097	0.07%	0.024%
94	14.292	1324	1327	1332	rVV2	44595	87835	0.45%	0.164%
95	14.578	1354	1356	1358	rBV3	5910	8072	0.04%	0.015%
96	14.617	1358	1360	1361	rBV2	6943	8790	0.05%	0.016%
97	14.765	1373	1375	1376	rBV2	8180	9808	0.05%	0.018%
98	15.592	1456	1459	1462	rBV	37890	63153	0.32%	0.118%
99	16.615	1561	1563	1564	rVB2	25614	22759	0.12%	0.042%
100	16.645	1564	1566	1567	rBV2	11440	15989	0.08%	0.030%

Sum of corrected areas: 53671222

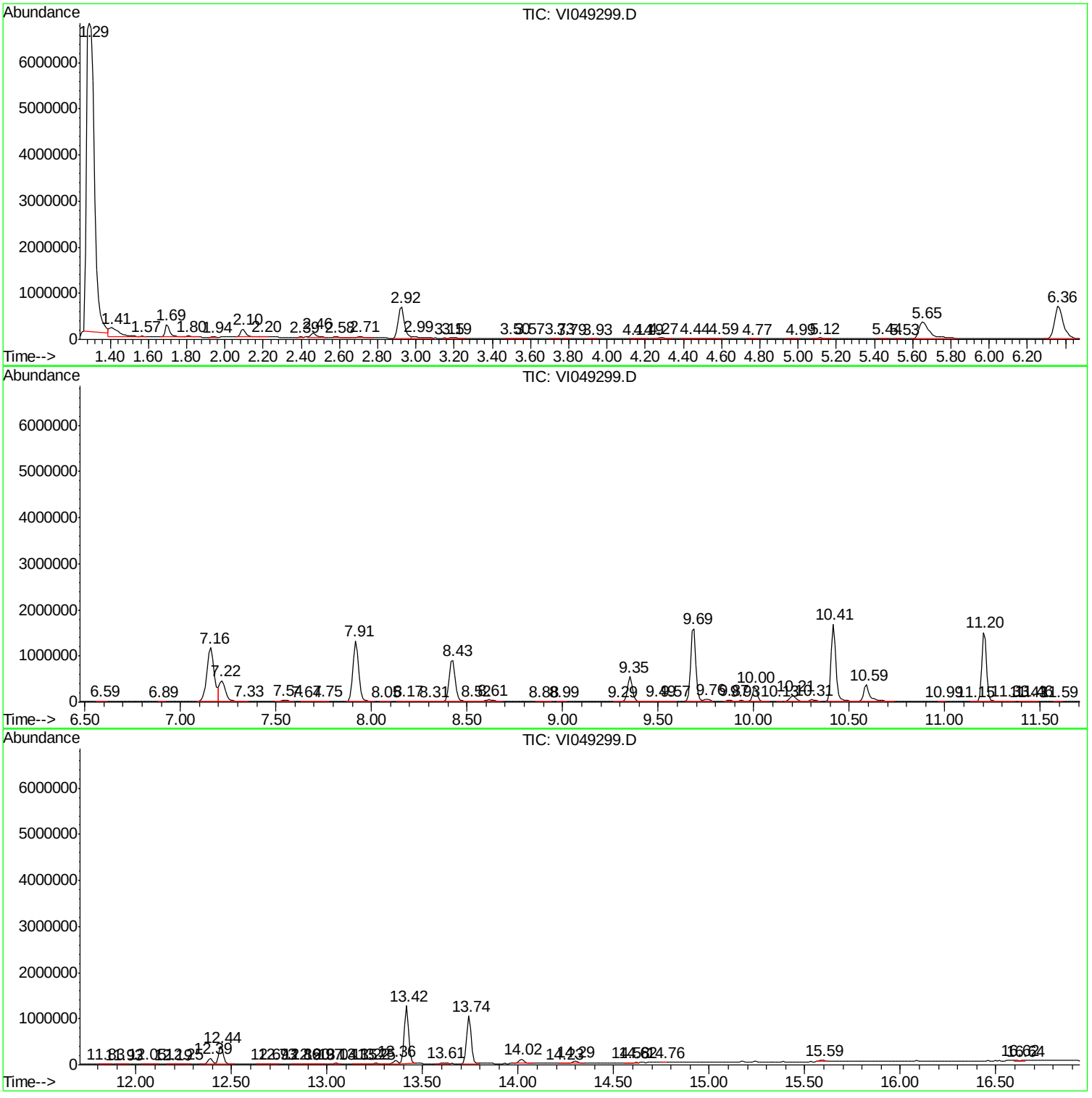
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049299.D
Acq On : 9 May 2016 16:08
Operator : FY/SY
Sample : H2874-22
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4091

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049299.D
Acq On : 9 May 2016 16:08
Operator : FY/SY
Sample : H2874-22
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4091

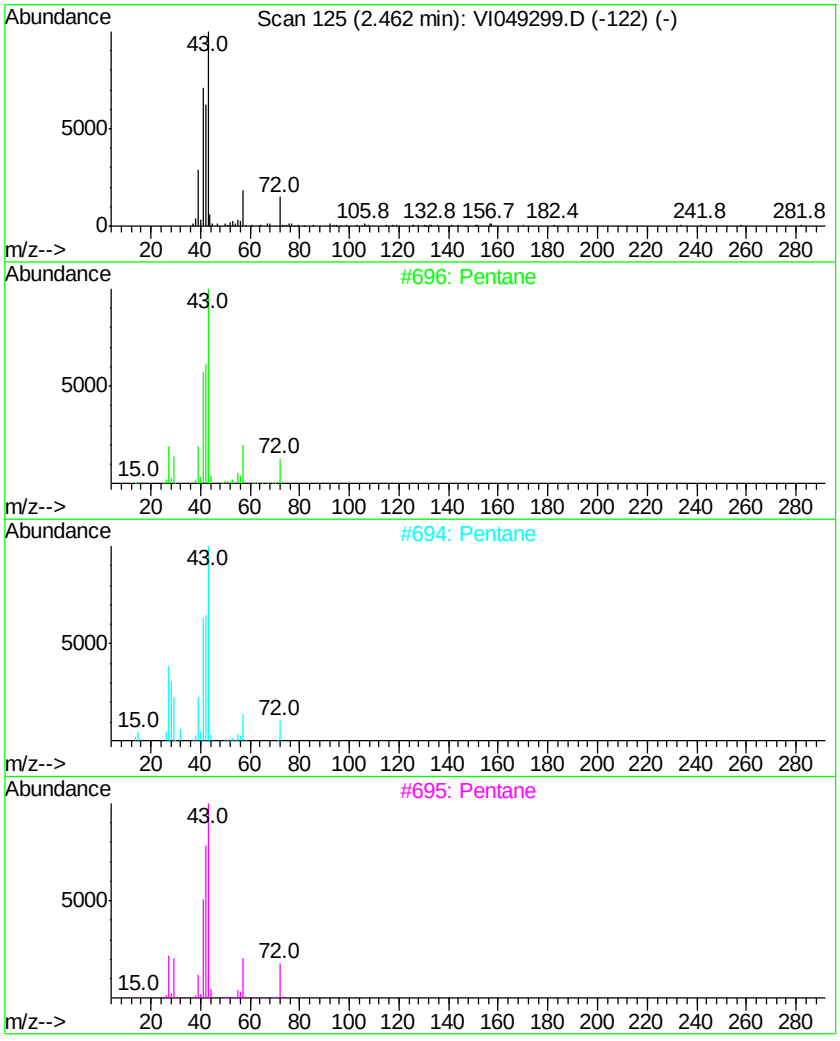
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

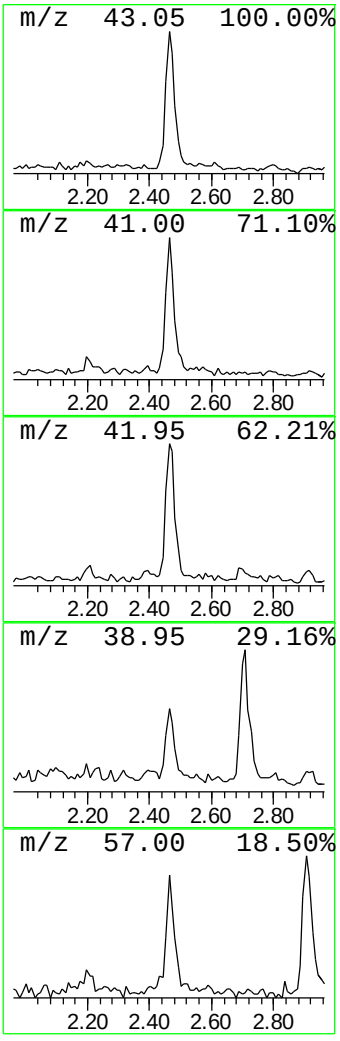
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 3 (DEL) Alkane: Straight-Chai... Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.46	0.38 ug/L	210708	1,4-Difluorobenzene	7.91

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	80
2	Pentane	72	C5H12	000109-66-0	80
3	Pentane	72	C5H12	000109-66-0	80
4	Pentane	72	C5H12	000109-66-0	72
5	Pentane	72	C5H12	000109-66-0	72





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049299.D
Acq On : 9 May 2016 16:08
Operator : FY/SY
Sample : H2874-22
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4091

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

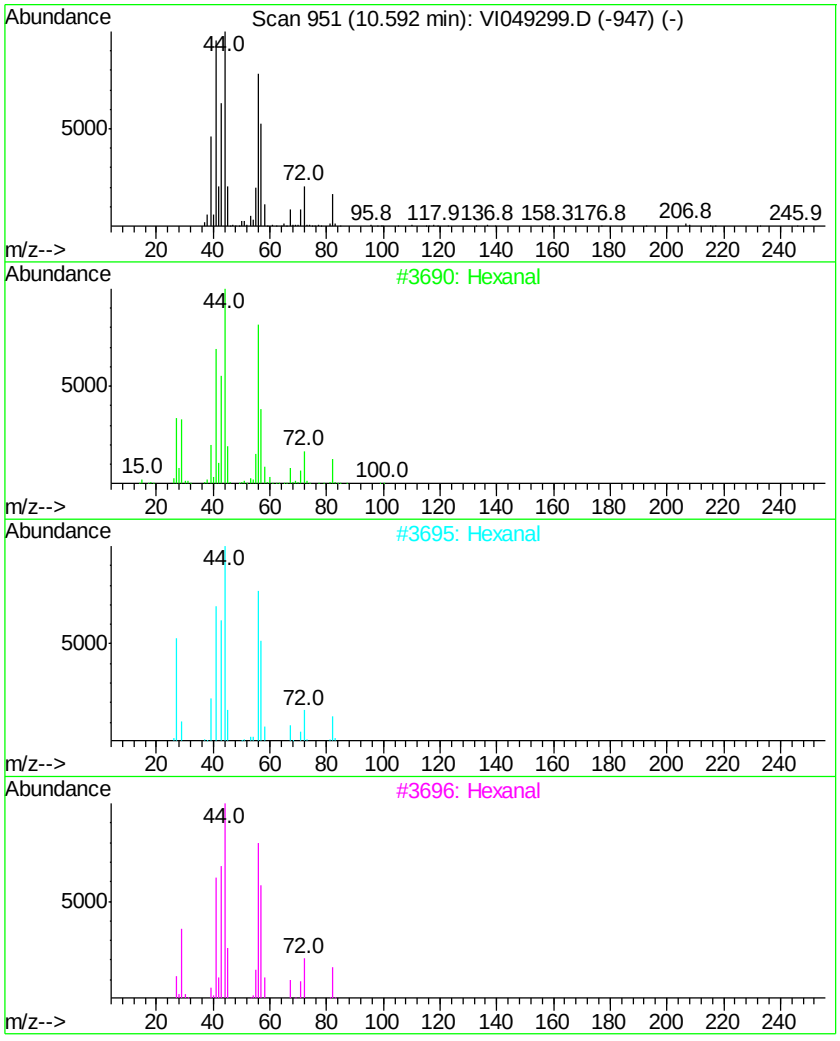
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

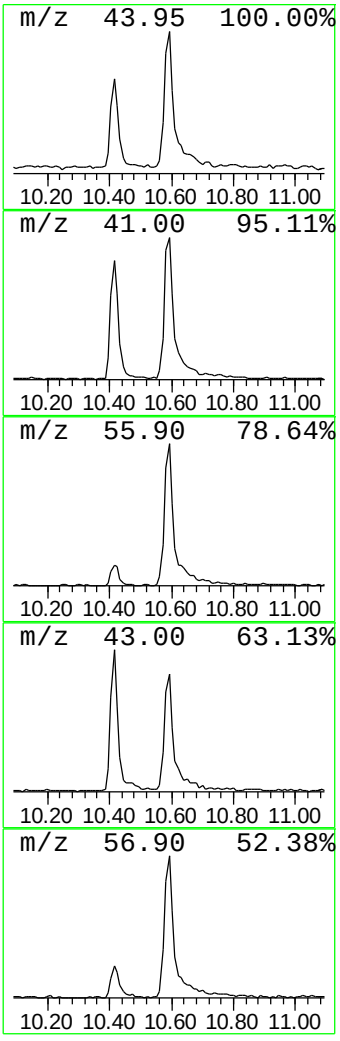
****

Peak Number 6 Hexanal Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.59	1.50 ug/L	789370	Chlorobenzene-d5	11.21

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexanal	100	C6H12O	000066-25-1	74
2	Hexanal	100	C6H12O	000066-25-1	64
3	Hexanal	100	C6H12O	000066-25-1	64
4	Hexanal	100	C6H12O	000066-25-1	64
5	Cyclobutanol, 2-ethyl-	100	C6H12O	035301-43-0	50





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049299.D
Acq On : 9 May 2016 16:08
Operator : FY/SY
Sample : H2874-22
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4091

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
(DEL) Alkane: Str...	2.46	0.4	ug/L	210708	1	7.91	2796080	5.0
Hexanal	10.59	1.5	ug/L	789370	2	11.21	2635030	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4096

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049300.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.58	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.3	
71-55-6	1,1,1-Trichloroethane	0.95	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.96	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4096

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049300.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.29	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	66	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4096

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049300.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4096

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049300.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	9.35	1.7	J
2	E966796	Total Alkanes	N/A	0.0	

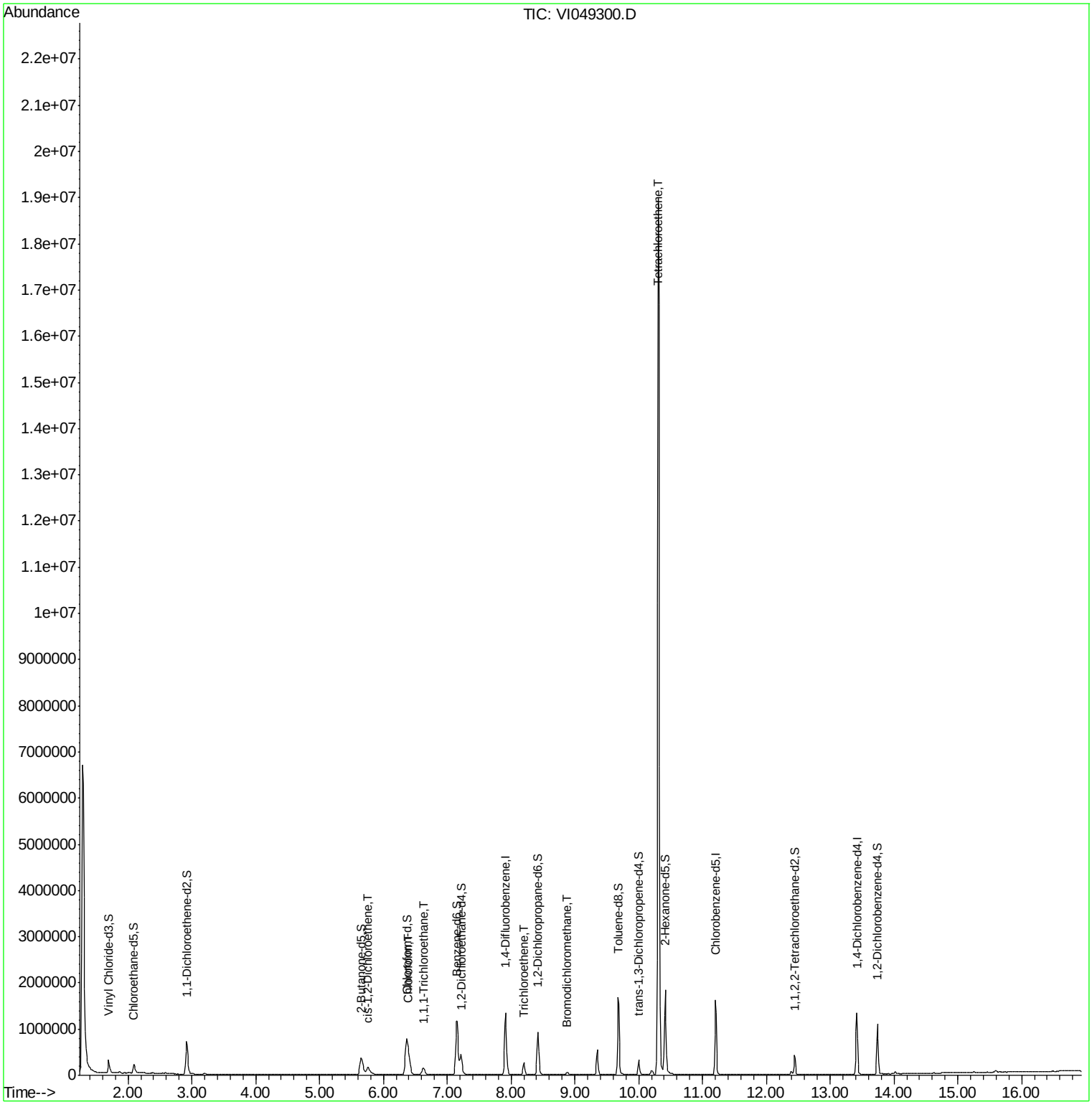
EPA-designated Registry Number.

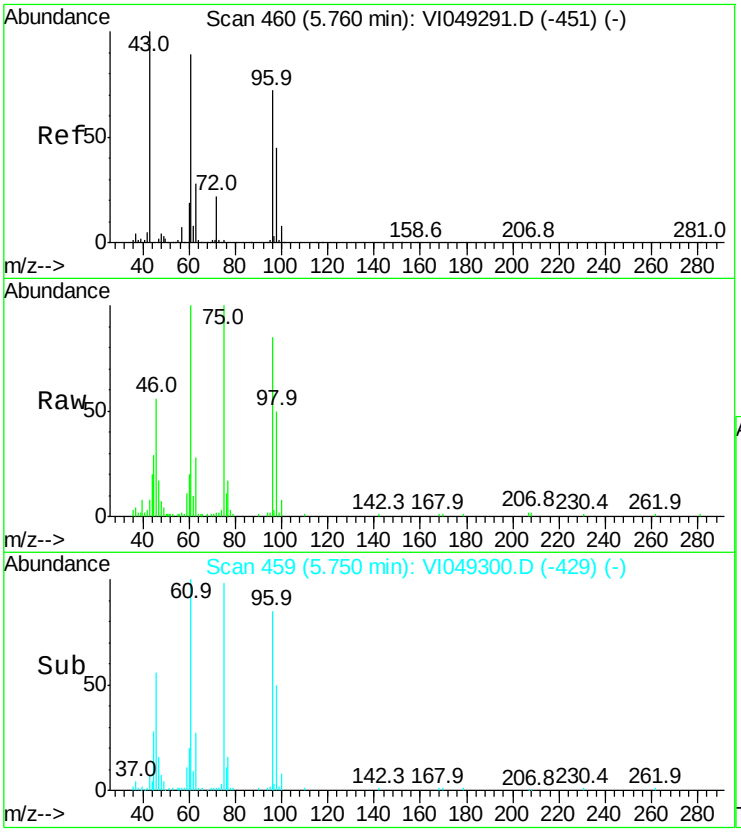
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049300.D
Acq On : 9 May 2016 16:39
Operator : FY/SY
Sample : H2874-23
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096

Quant Time: May 10 05:59:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration



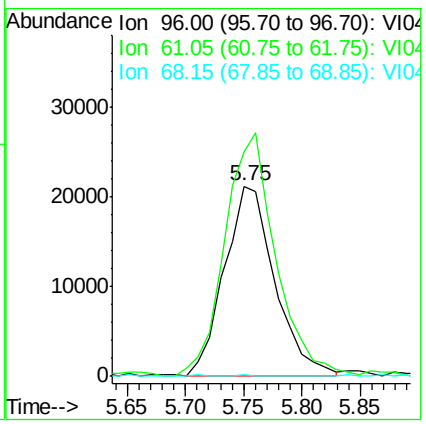


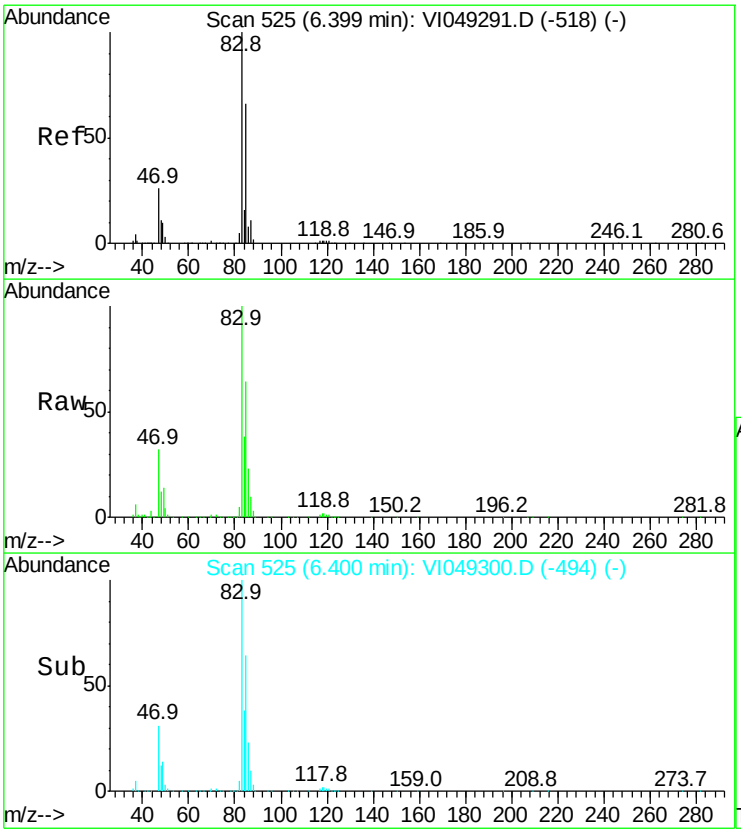
#22
cis-1,2-Dichloroethene
Concen: 0.58 ug/L
RT: 5.75 min Scan# 459
Delta R.T. -0.01 min
Lab File: VI049300.D
Acq: 9 May 2016 16:39

Instrument : MSVOA_I
ClientSampleId : H4096

Tgt Ion: 96 Resp: 63789

Ion	Ratio	Lower	Upper
96	100		
61	118.1	82.1	152.5
68	0.9	0.0	0.0#

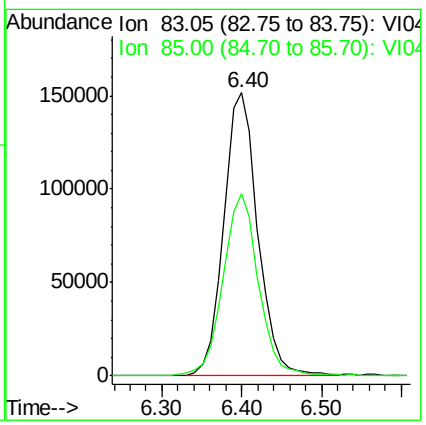


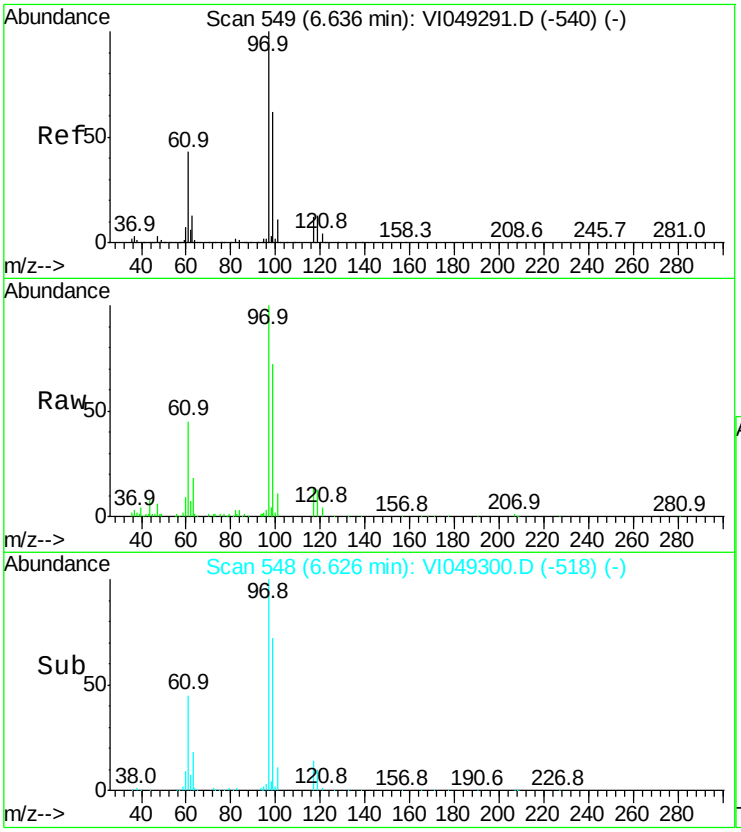


#25
Chloroform
Concen: 2.34 ug/L
RT: 6.40 min Scan# 525
Delta R.T. 0.00 min
Lab File: VI049300.D
Acq: 9 May 2016 16:39

Tgt Ion: 83 Resp: 452587

Ion	Ratio	Lower	Upper
83	100		
85	64.3	47.3	87.8



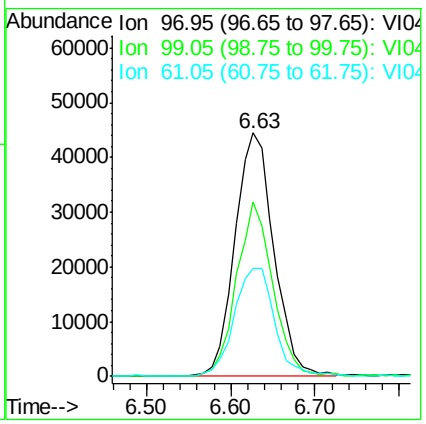


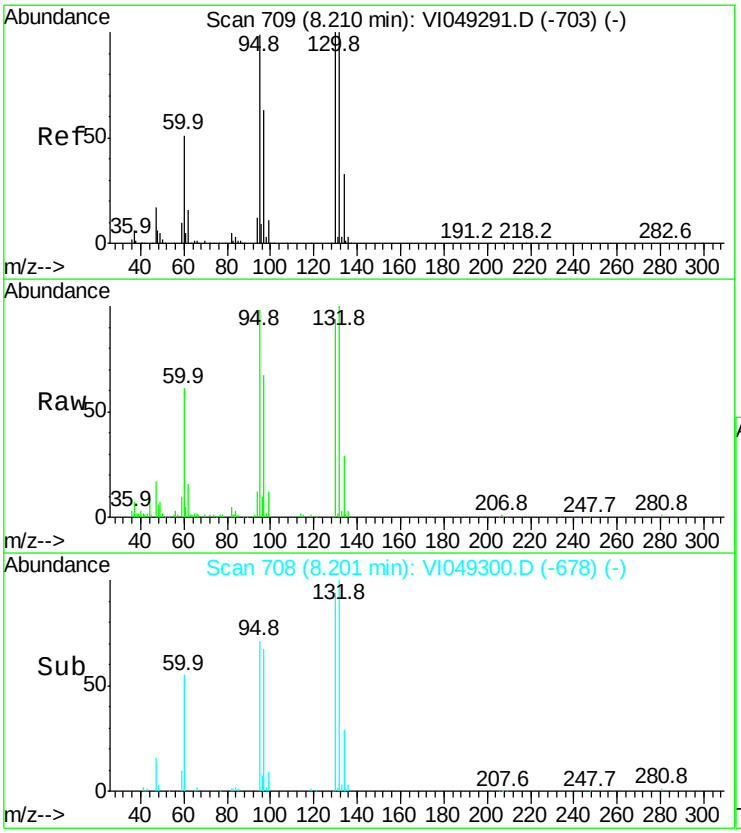
#29
1,1,1-Trichloroethane
Concen: 0.95 ug/L
RT: 6.63 min Scan# 548
Delta R.T. -0.01 min
Lab File: VI049300.D
Acq: 9 May 2016 16:39

Instrument : MSVOA_I
ClientSampleId : H4096

Tgt Ion: 97 Resp: 143467

Ion	Ratio	Lower	Upper
97	100		
99	66.4	51.1	76.7
61	46.2	33.3	49.9

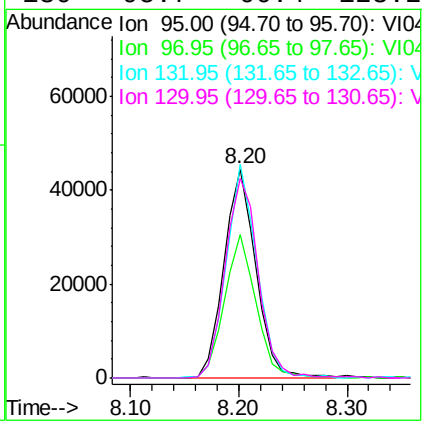


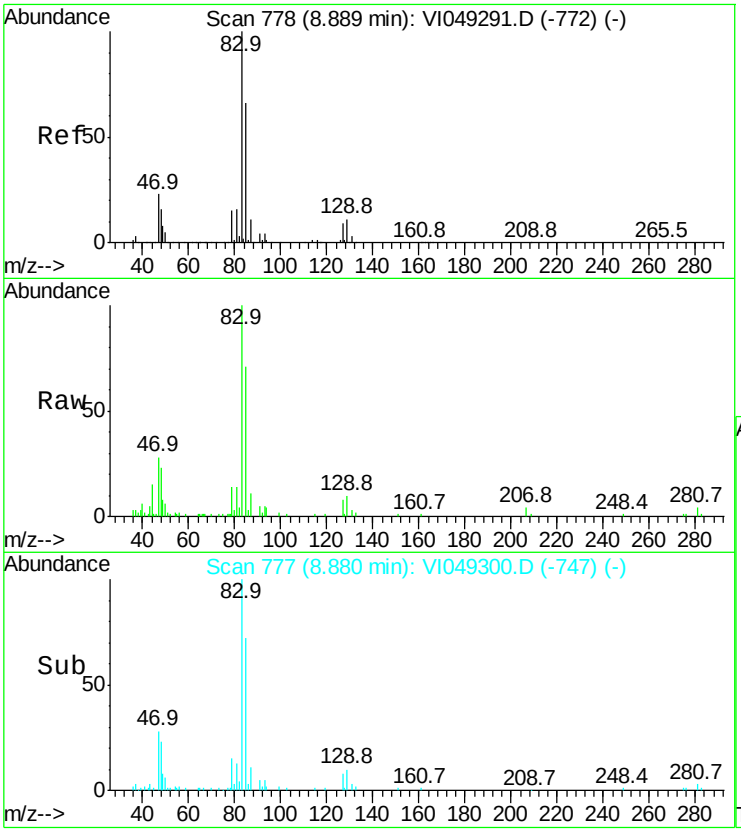


#34
Trichloroethene
Concen: 0.96 ug/L
RT: 8.20 min Scan# 708
Delta R.T. -0.01 min
Lab File: VI049300.D
Acq: 9 May 2016 16:39

Tgt Ion: 95 Resp: 91331

Ion	Ratio	Lower	Upper
95	100		
97	68.7	45.8	85.2
132	102.1	63.9	118.7
130	95.7	66.4	123.2



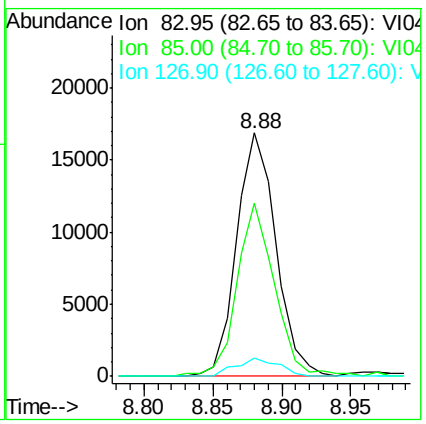


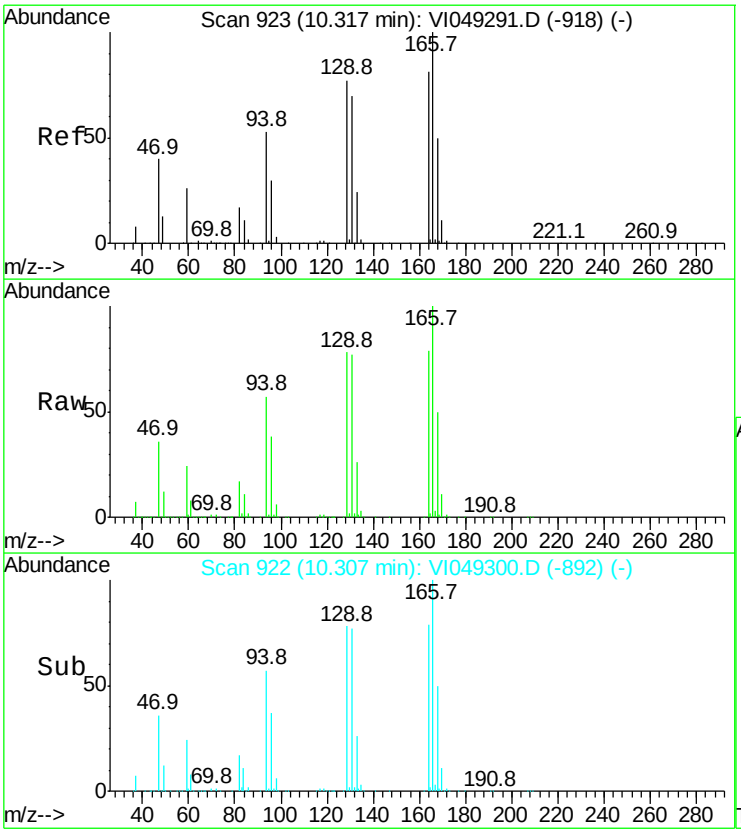
#38
Bromodichloromethane
Concen: 0.29 ug/L
RT: 8.88 min Scan# 777
Delta R.T. -0.01 min
Lab File: VI049300.D
Acq: 9 May 2016 16:39

Instrument : MSVOA_I
ClientSampleId : H4096

Tgt Ion: 83 Resp: 33600

Ion	Ratio	Lower	Upper
83	100		
85	71.2	44.7	83.1
127	7.7	6.6	9.8

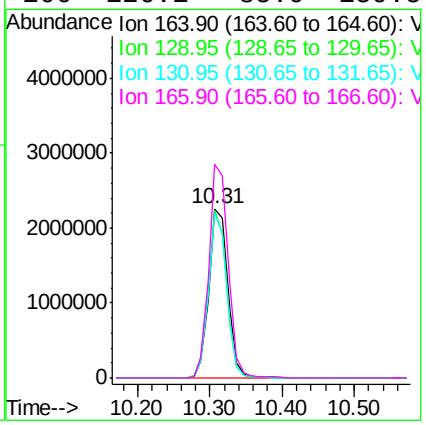




#47
Tetrachloroethene
Concen: 65.66 ug/L
RT: 10.31 min Scan# 922
Delta R.T. -0.01 min
Lab File: VI049300.D
Acq: 9 May 2016 16:39

Tgt Ion:164 Resp: 4089669

Ion	Ratio	Lower	Upper
164	100		
129	98.8	62.1	115.3
131	97.3	60.6	112.6
166	126.1	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049300.D
Acq On : 9 May 2016 16:39
Operator : FY/SY
Sample : H2874-23
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096

Quant Time: May 10 05:59:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1205167	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	798165	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	293854	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	298086	4.02	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 80.40%			
7) Chloroethane-d5	2.09	69	197767	4.81	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 96.20%			
11) 1,1-Dichloroethene-d2	2.92	63	563280	3.22	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 64.40%			
20) 2-Butanone-d5	5.65	46	919333	57.23	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 114.46%			
24) Chloroform-d	6.36	84	914135	4.84	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.80%			
26) 1,2-Dichloroethane-d4	7.22	65	402421	5.21	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.20%			
32) Benzene-d6	7.16	84	1531496	4.93	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.60%			
36) 1,2-Dichloropropane-d6	8.42	67	437629	5.01	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 100.20%			
41) Toluene-d8	9.68	98	1063611	4.64	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.80%			
43) trans-1,3-Dichloropropene-	10.00	79	154882	4.50	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 90.00%			
46) 2-Hexanone-d5	10.42	63	572951	52.73	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 105.46%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	193497	4.87	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 97.40%			
63) 1,2-Dichlorobenzene-d4	13.74	152	243090	4.72	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 94.40%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.75	96	63789	0.58	ug/L #	99
25) Chloroform	6.40	83	452587	2.34	ug/L	96
29) 1,1,1-Trichloroethane	6.63	97	143467	0.95	ug/L	95
34) Trichloroethene	8.20	95	91331	0.96	ug/L	94
38) Bromodichloromethane	8.88	83	33600	0.29	ug/L	92
47) Tetrachloroethene	10.31	164	4089669	65.66	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049300.D
Acq On : 9 May 2016 16:39
Operator : FY/SY
Sample : H2874-23
Misc : 25mL/MSVOA I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.292	3	6	29	rVB	6645528	17930435	52.74%	20.612%
2	1.568	32	34	37	rBV2	12070	21623	0.06%	0.025%
3	1.696	44	47	54	rBV	286480	469013	1.38%	0.539%
4	1.863	61	64	69	rVB	30553	65375	0.19%	0.075%
5	2.089	84	87	97	rVB	181010	373873	1.10%	0.430%
6	2.522	129	131	132	rBV2	6596	9594	0.03%	0.011%
7	2.591	135	138	140	rVB	16894	29959	0.09%	0.034%
8	2.916	165	171	180	rBV2	710825	1685648	4.96%	1.938%
9	3.113	189	191	196	rVB5	6537	14119	0.04%	0.016%
10	3.182	196	198	209	rVV4	12378	44576	0.13%	0.051%
11	3.359	215	216	218	rBV2	4973	4588	0.01%	0.005%
12	3.506	229	231	233	rVB3	5971	6886	0.02%	0.008%
13	3.575	235	238	243	rVB3	10802	29014	0.09%	0.033%
14	3.644	243	245	248	rBV4	3644	6550	0.02%	0.008%
15	3.841	263	265	268	rVB4	3512	4906	0.01%	0.006%
16	3.979	275	279	285	rVB6	9168	25094	0.07%	0.029%
17	4.136	293	295	297	rBV2	4109	4996	0.01%	0.006%
18	4.264	306	308	309	rBV	4252	5452	0.02%	0.006%
19	4.294	309	311	313	rVV3	3901	6910	0.02%	0.008%
20	4.412	321	323	329	rVB5	3195	7781	0.02%	0.009%
21	4.560	334	338	339	rVB4	3878	6321	0.02%	0.007%
22	4.589	339	341	344	rBV3	4724	10540	0.03%	0.012%
23	4.697	347	352	356	rBV3	11431	26483	0.08%	0.030%
24	4.835	364	366	369	rBV4	3921	6883	0.02%	0.008%
25	4.953	374	378	379	rVB2	4194	6790	0.02%	0.008%
26	5.071	388	390	393	rBV3	3228	5045	0.01%	0.006%
27	5.327	415	416	418	rBV2	3376	4956	0.01%	0.006%
28	5.514	433	435	438	rBV4	2625	4676	0.01%	0.005%
29	5.652	441	449	456	rBV	375018	1329441	3.91%	1.528%
30	5.760	456	460	474	rVV3	154125	591657	1.74%	0.680%
31	5.928	474	477	478	rVB3	4430	7536	0.02%	0.009%
32	6.370	512	522	538	rBV2	774060	3224314	9.48%	3.707%
33	6.626	540	548	561	rVB	145211	468695	1.38%	0.539%
34	6.892	573	575	578	rVB3	5716	10823	0.03%	0.012%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049300.D
Acq On : 9 May 2016 16:39
Operator : FY/SY
Sample : H2874-23
Misc : 25mL/MSVOA I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.931	578	579	582	rBV3	2868	4684	0.01%	0.005%
36	7.148	595	601	605	rBV	1165591	3163927	9.31%	3.637%
37	7.217	605	608	618	rVB	432174	1080766	3.18%	1.242%
38	7.453	630	632	634	rBV3	2601	4562	0.01%	0.005%
39	7.630	647	650	653	rBV4	5208	12529	0.04%	0.014%
40	7.758	662	663	666	rVB3	4595	7655	0.02%	0.009%
41	7.916	673	679	690	rBV	1346151	2918465	8.58%	3.355%
42	8.034	690	691	693	rVV2	4048	4622	0.01%	0.005%
43	8.083	693	696	699	rVB5	3882	8327	0.02%	0.010%
44	8.201	703	708	717	rVB	268790	557991	1.64%	0.641%
45	8.418	723	730	739	rBV	928875	2097002	6.17%	2.411%
46	8.536	739	742	747	rVB5	11009	25261	0.07%	0.029%
47	8.713	759	760	763	rBV3	3490	5231	0.02%	0.006%
48	8.752	763	764	768	rVB4	2881	4817	0.01%	0.006%
49	8.880	773	777	783	rBV2	55088	126665	0.37%	0.146%
50	9.057	794	795	799	rVB4	3122	5268	0.02%	0.006%
51	9.136	801	803	810	rVB8	3277	9499	0.03%	0.011%
52	9.225	810	812	813	rBV2	3136	4612	0.01%	0.005%
53	9.284	817	818	821	rBV3	3528	6574	0.02%	0.008%
54	9.353	821	825	833	rBV	548732	991525	2.92%	1.140%
55	9.510	838	841	845	rVB3	13686	27119	0.08%	0.031%
56	9.569	845	847	850	rVB3	3014	5115	0.02%	0.006%
57	9.677	854	858	870	rBV	1680142	3120921	9.18%	3.588%
58	9.894	879	880	884	rVB3	4082	6899	0.02%	0.008%
59	10.002	887	891	899	rVV	327732	540582	1.59%	0.621%
60	10.209	903	912	918	rVV	77737	235613	0.69%	0.271%
61	10.307	918	922	929	rVV	18970066	33995739	100.00%	39.080%
62	10.416	929	933	946	rVV	1833054	3368534	9.91%	3.872%
63	10.583	949	950	951	rVV	15061	14501	0.04%	0.017%
64	10.632	953	955	960	rVV6	15150	35301	0.10%	0.041%
65	10.740	964	966	969	rVV4	4808	7488	0.02%	0.009%
66	10.809	971	973	975	rBV3	3670	5053	0.01%	0.006%
67	10.849	975	977	980	rVB4	3207	5172	0.02%	0.006%
68	10.947	984	987	989	rVB4	3121	5821	0.02%	0.007%
69	11.016	993	994	996	rVB	5331	4636	0.01%	0.005%
70	11.203	1009	1013	1022	rBV	1627326	2770669	8.15%	3.185%
71	11.341	1022	1027	1030	rVB5	9034	22832	0.07%	0.026%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049300.D
Acq On : 9 May 2016 16:39
Operator : FY/SY
Sample : H2874-23
Misc : 25mL/MSVOA I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.459	1036	1039	1042	rVB3	7412	13775	0.04%	0.016%
73	11.518	1042	1045	1046	rVB3	5905	8394	0.02%	0.010%
74	11.685	1059	1062	1065	rVB4	3828	8484	0.02%	0.010%
75	11.833	1065	1077	1083	rBV10	12443	59064	0.17%	0.068%
76	12.030	1094	1097	1100	rBV4	2903	4795	0.01%	0.006%
77	12.177	1108	1112	1114	rBV4	6598	9797	0.03%	0.011%
78	12.236	1117	1118	1120	rBV2	4883	8313	0.02%	0.010%
79	12.276	1120	1122	1124	rVV3	5287	7208	0.02%	0.008%
80	12.305	1124	1125	1128	rVB3	3774	4910	0.01%	0.006%
81	12.394	1128	1134	1136	rBV2	72891	150897	0.44%	0.173%
82	12.443	1136	1139	1144	rVV	422856	712880	2.10%	0.820%
83	12.591	1152	1154	1159	rVB5	3668	8427	0.02%	0.010%
84	12.778	1172	1173	1175	rVB2	5476	5374	0.02%	0.006%
85	12.827	1175	1178	1179	rBV3	3627	7531	0.02%	0.009%
86	12.896	1183	1185	1186	rBV2	4361	6525	0.02%	0.008%
87	13.063	1198	1202	1203	rVV4	3943	6004	0.02%	0.007%
88	13.250	1220	1221	1225	rVB3	2436	4650	0.01%	0.005%
89	13.348	1228	1231	1234	rVV4	4661	9929	0.03%	0.011%
90	13.417	1234	1238	1249	rVV	1333473	2183029	6.42%	2.510%
91	13.673	1262	1264	1266	rVB3	5885	6872	0.02%	0.008%
92	13.742	1266	1271	1280	rBV	1086239	1885411	5.55%	2.167%
93	14.018	1295	1299	1303	rBV2	50166	85744	0.25%	0.099%
94	14.156	1309	1313	1314	rBV3	3225	7974	0.02%	0.009%
95	14.185	1314	1316	1317	rVV2	5087	6422	0.02%	0.007%
96	14.293	1325	1327	1330	rVV4	8668	17591	0.05%	0.020%
97	14.480	1345	1346	1347	rBV	8001	7224	0.02%	0.008%
98	14.618	1358	1360	1362	rBV2	10067	16104	0.05%	0.019%
99	14.746	1371	1373	1374	rBV2	6717	5657	0.02%	0.007%
100	15.592	1456	1459	1463	rVB2	33864	67767	0.20%	0.078%

Sum of corrected areas: 86989281

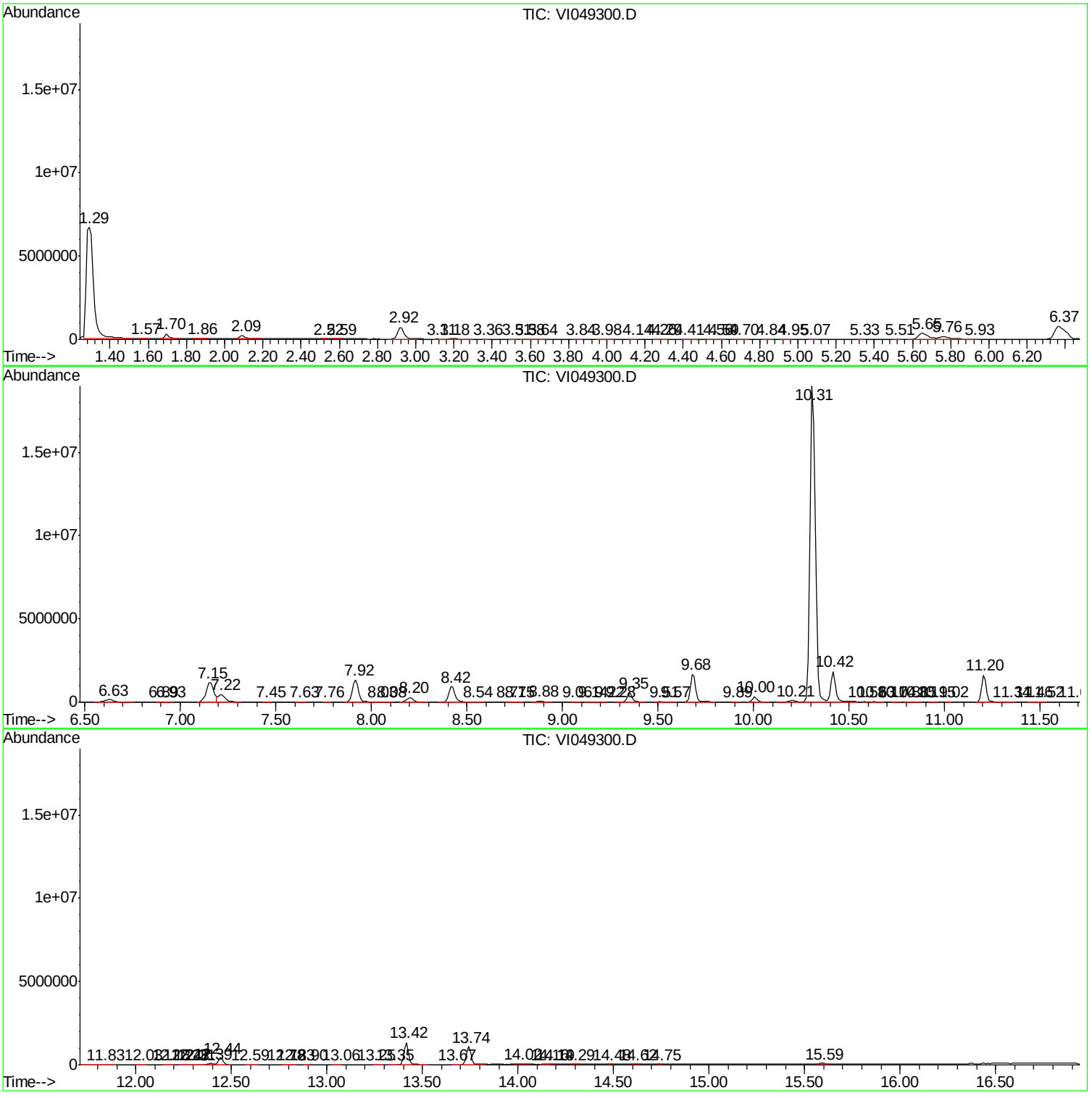
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049300.D
Acq On : 9 May 2016 16:39
Operator : FY/SY
Sample : H2874-23
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049300.D
Acq On : 9 May 2016 16:39
Operator : FY/SY
Sample : H2874-23
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

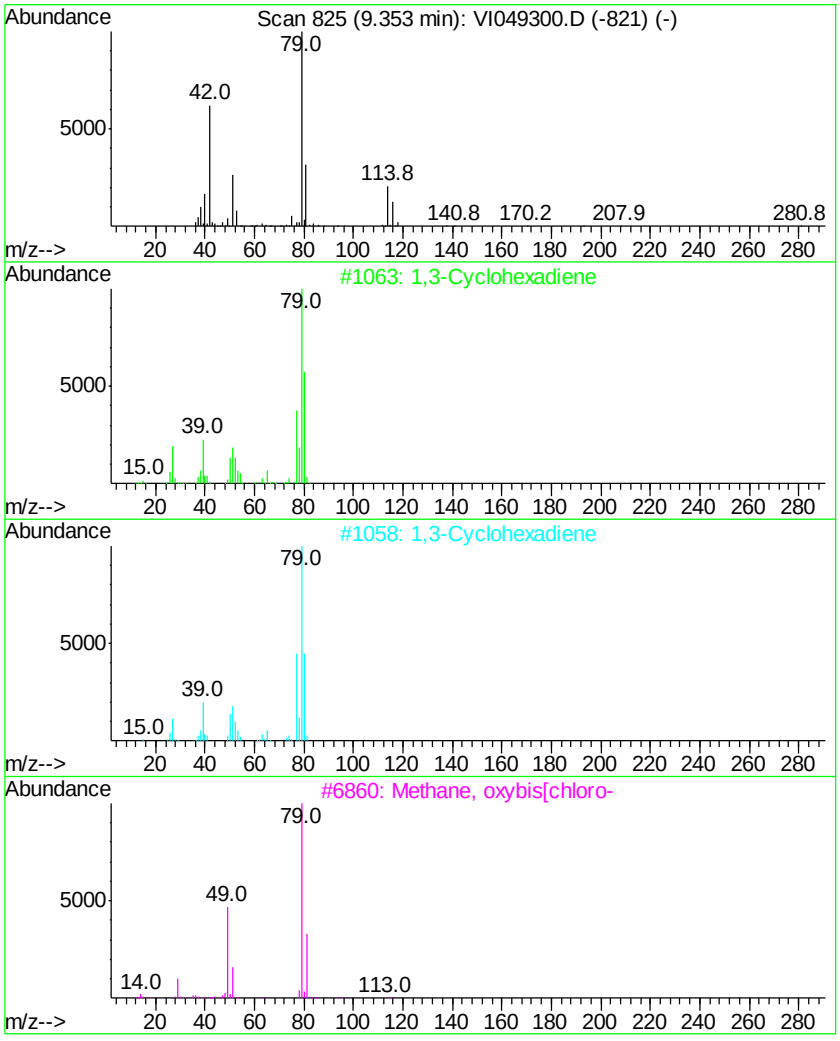
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

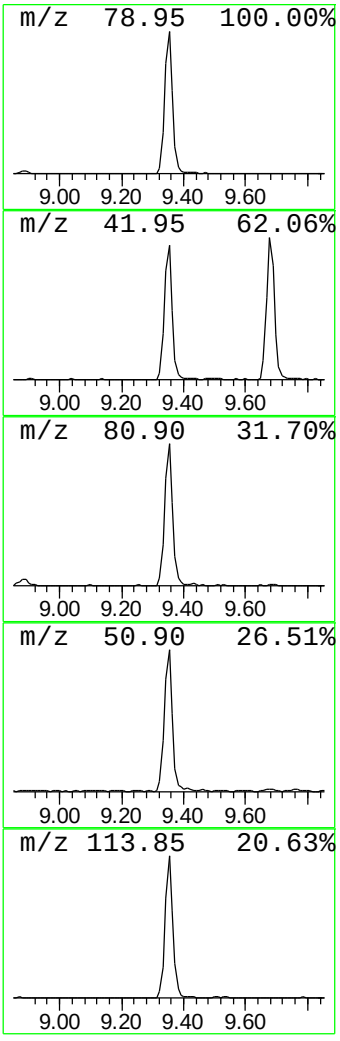
****

Peak Number 2 unknown-01 Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.35	1.70 ug/L	991525	1,4-Difluorobenzene	7.92

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,3-Cyclohexadiene	80	C6H8	000592-57-4	28
2	1,3-Cyclohexadiene	80	C6H8	000592-57-4	28
3	Methane, oxybis[chloro-	114	C2H4Cl2O	000542-88-1	23
4	2-Propanol, 1,3-dichloro-	128	C3H6Cl2O	000096-23-1	17
5	Cyclopropane	42	C3H6	000075-19-4	9





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049300.D
Acq On : 9 May 2016 16:39
Operator : FY/SY
Sample : H2874-23
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
unknown-01	9.35	1.7	ug/L	991525	1	7.92	2918470	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4096DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049342.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	50	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4096DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049342.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	74	D
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-trichlorobenzene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4096DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049342.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4096DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-23DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049342.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 10.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	5.74	4.1	J
2	E966796	Total Alkanes	N/A	0.0	

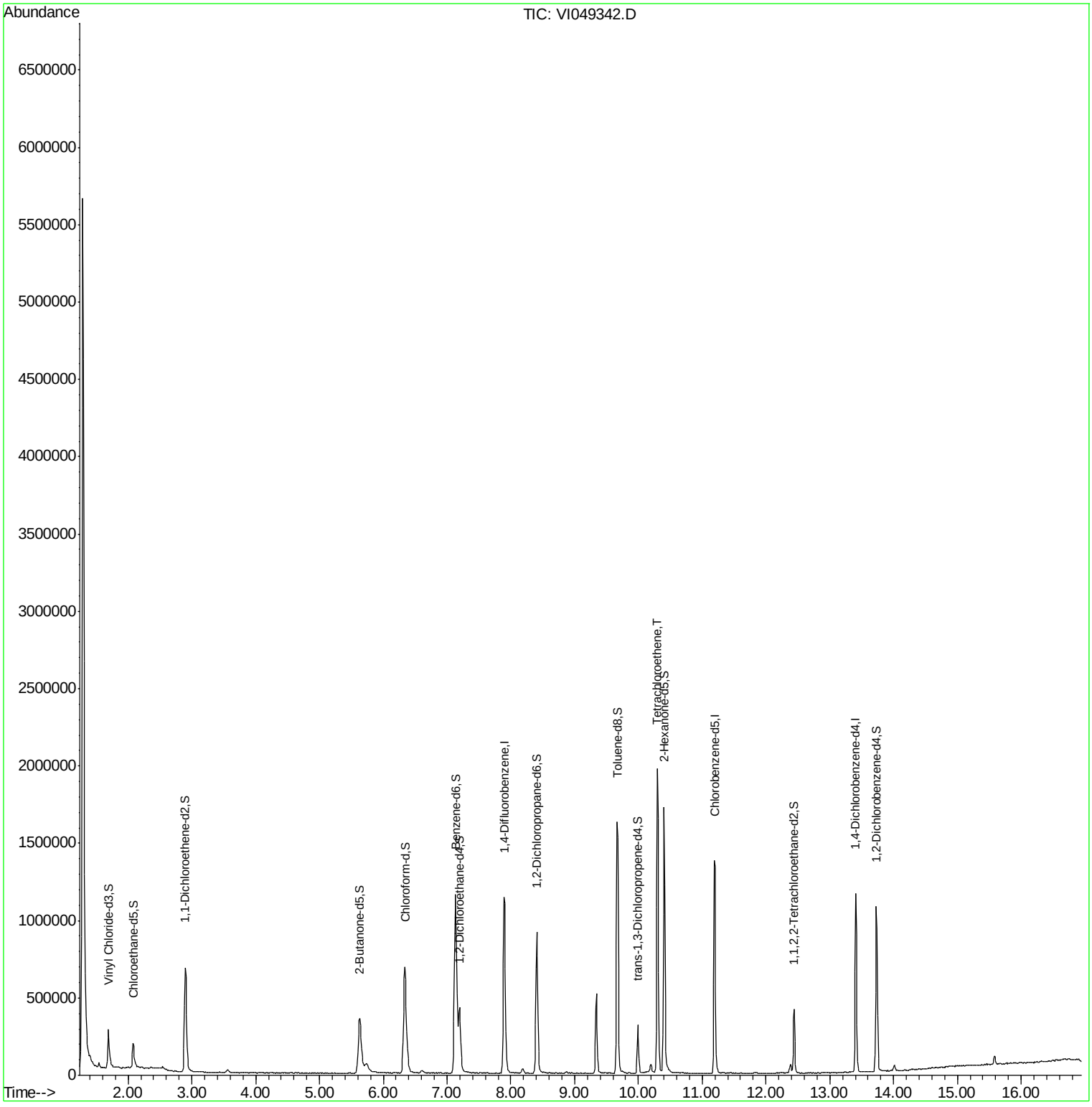
EPA-designated Registry Number.

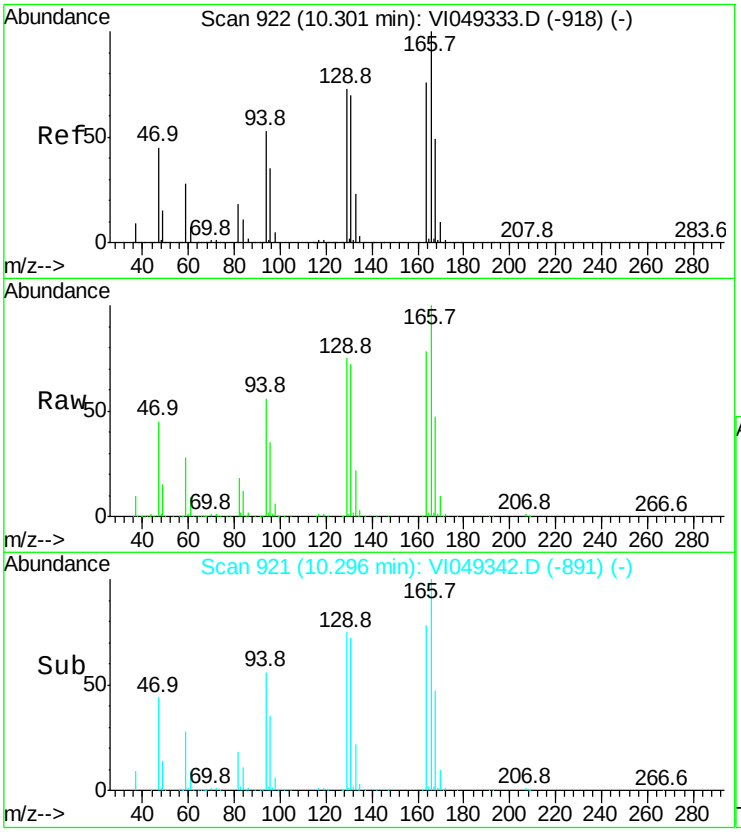
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049342.D
Acq On : 11 May 2016 15:49
Operator : FY/SY
Sample : H2874-23DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096DL

Quant Time: May 12 07:02:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration



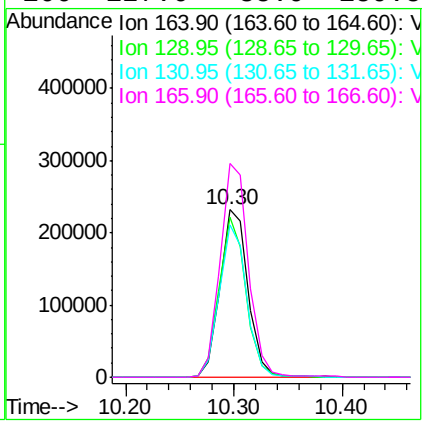


#47
Tetrachloroethene
Concen: 7.43 ug/L
RT: 10.30 min Scan# 921
Delta R.T. -0.01 min
Lab File: VI049342.D
Acq: 11 May 2016 15:49

Instrument :
MSVOA_I
ClientSampleId :
H4096DL

Tgt Ion:164 Resp: 418472

Ion	Ratio	Lower	Upper
164	100		
129	95.8	62.1	115.3
131	91.4	60.6	112.6
166	127.6	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049342.D
Acq On : 11 May 2016 15:49
Operator : FY/SY
Sample : H2874-23DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096DL

Quant Time: May 12 07:02:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1067561	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	721660	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	265229	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	292631	4.45	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 89.00%			
7) Chloroethane-d5	2.08	69	184356	5.06	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.20%			
11) 1,1-Dichloroethene-d2	2.89	63	539914	3.49	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 69.80%			
20) 2-Butanone-d5	5.63	46	871937	61.28	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 122.56%			
24) Chloroform-d	6.34	84	851363	5.09	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.80%			
26) 1,2-Dichloroethane-d4	7.20	65	375918	5.49	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.80%			
32) Benzene-d6	7.14	84	1497932	5.33	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 106.60%			
36) 1,2-Dichloropropane-d6	8.41	67	426098	5.39	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.80%			
41) Toluene-d8	9.67	98	1054195	5.08	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.60%			
43) trans-1,3-Dichloropropene-	9.99	79	153724	4.94	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.80%			
46) 2-Hexanone-d5	10.40	63	575499	58.58	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 117.16%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	187700	5.22	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 104.40%			
63) 1,2-Dichlorobenzene-d4	13.73	152	247043	5.31	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 106.20%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.30	164	418472	7.43	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049342.D
Acq On : 11 May 2016 15:49
Operator : FY/SY
Sample : H2874-23DL 10X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.290	3	6	16	rVB	5546496	11697916	100.00%	25.582%
2	1.536	29	31	35	rVB2	35688	60835	0.52%	0.133%
3	1.694	43	47	57	rBV	248317	472278	4.04%	1.033%
4	1.920	68	70	72	rBV3	8917	13524	0.12%	0.030%
5	2.078	83	86	95	rBV	158575	322144	2.75%	0.704%
6	2.540	132	133	141	rVB3	24457	53446	0.46%	0.117%
7	2.727	151	152	154	rBV2	4685	7552	0.06%	0.017%
8	2.895	164	169	178	rBV	675405	1544921	13.21%	3.379%
9	3.072	185	187	188	rBV2	4528	7198	0.06%	0.016%
10	3.328	211	213	216	rBV4	4897	10370	0.09%	0.023%
11	3.397	216	220	223	rVB6	4901	13419	0.11%	0.029%
12	3.554	230	236	241	rBV3	21061	61178	0.52%	0.134%
13	3.771	255	258	259	rBV3	3432	6243	0.05%	0.014%
14	3.948	273	276	279	rVV5	4844	10068	0.09%	0.022%
15	4.115	292	293	297	rVB2	4194	7407	0.06%	0.016%
16	4.164	297	298	303	rBV5	4698	9103	0.08%	0.020%
17	4.263	303	308	310	rVB6	4979	12988	0.11%	0.028%
18	4.410	320	323	325	rBV4	3748	6879	0.06%	0.015%
19	4.499	329	332	335	rBV5	2273	5600	0.05%	0.012%
20	4.548	335	337	339	rBV3	3056	5542	0.05%	0.012%
21	4.932	373	376	378	rVB3	3631	5402	0.05%	0.012%
22	5.011	381	384	386	rBV4	3436	5772	0.05%	0.013%
23	5.119	393	395	398	rBV2	5382	10272	0.09%	0.022%
24	5.237	405	407	409	rBV3	4482	6325	0.05%	0.014%
25	5.326	413	416	419	rVB3	2796	5382	0.05%	0.012%
26	5.473	425	431	434	rVB7	4351	11377	0.10%	0.025%
27	5.631	439	447	454	rBV	356730	1275139	10.90%	2.789%
28	5.739	454	458	468	rVB2	55483	217071	1.86%	0.475%
29	5.916	474	476	481	rVB5	4424	11421	0.10%	0.025%
30	6.024	485	487	489	rVB3	5062	6043	0.05%	0.013%
31	6.074	489	492	494	rVB4	4118	8178	0.07%	0.018%
32	6.172	498	502	504	rBV5	4108	8661	0.07%	0.019%
33	6.241	507	509	511	rVB3	4240	5942	0.05%	0.013%
34	6.339	511	519	532	rBV	691928	2211669	18.91%	4.837%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049342.D
Acq On : 11 May 2016 15:49
Operator : FY/SY
Sample : H2874-23DL 10X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.517	536	537	541	rVB4	4444	7330	0.06%	0.016%
36	6.595	541	545	550	rBV2	16846	48503	0.41%	0.106%
37	6.654	550	551	553	rVB2	4975	5221	0.04%	0.011%
38	6.684	553	554	555	rBV	6591	5237	0.04%	0.011%
39	6.822	567	568	571	rBV3	3174	5875	0.05%	0.013%
40	6.861	571	572	574	rVB2	6784	5415	0.05%	0.012%
41	6.900	574	576	580	rVB5	2800	5997	0.05%	0.013%
42	7.038	588	590	591	rBV2	3438	5566	0.05%	0.012%
43	7.137	593	600	604	rBV	1156791	3190525	27.27%	6.977%
44	7.196	604	606	614	rVV2	420182	892106	7.63%	1.951%
45	7.314	616	618	619	rVB2	6413	6366	0.05%	0.014%
46	7.511	635	638	641	rVB5	3778	7485	0.06%	0.016%
47	7.737	659	661	663	rBV2	3341	6263	0.05%	0.014%
48	7.894	672	677	694	rBV	1139847	2619827	22.40%	5.729%
49	8.180	702	706	712	rVB2	28170	67385	0.58%	0.147%
50	8.249	712	713	718	rVB5	3856	8613	0.07%	0.019%
51	8.406	722	729	738	rBV	914380	2037895	17.42%	4.457%
52	8.514	738	740	745	rVB5	6786	18865	0.16%	0.041%
53	8.603	747	749	751	rVB3	3754	6350	0.05%	0.014%
54	8.633	751	752	754	rBV2	3344	5207	0.04%	0.011%
55	8.711	757	760	762	rBV4	3862	6526	0.06%	0.014%
56	8.869	772	776	779	rBV5	10124	21766	0.19%	0.048%
57	8.957	782	785	788	rVB5	3071	5826	0.05%	0.013%
58	9.213	810	811	815	rBV3	3857	7921	0.07%	0.017%
59	9.341	819	824	831	rBV	518783	959410	8.20%	2.098%
60	9.469	836	837	841	rVB4	5305	7765	0.07%	0.017%
61	9.548	843	845	851	rVB6	4257	9362	0.08%	0.020%
62	9.666	853	857	864	rBV	1621487	3039723	25.99%	6.647%
63	9.843	874	875	880	rVB5	5189	8697	0.07%	0.019%
64	9.912	880	882	885	rVB3	3028	5627	0.05%	0.012%
65	9.991	885	890	896	rBV	316476	538026	4.60%	1.177%
66	10.079	896	899	900	rVV2	5829	9099	0.08%	0.020%
67	10.129	900	904	905	rVV4	8327	19901	0.17%	0.044%
68	10.197	907	911	917	rVV	56853	136231	1.16%	0.298%
69	10.296	917	921	928	rVV	1968878	3480453	29.75%	7.611%
70	10.404	928	932	945	rVV	1721549	2983913	25.51%	6.525%
71	10.542	945	946	948	rVV2	5875	8079	0.07%	0.018%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049342.D
Acq On : 11 May 2016 15:49
Operator : FY/SY
Sample : H2874-23DL 10X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	10.768	967	969	973	rVB5	3577	5580	0.05%	0.012%
73	10.837	973	976	979	rVB5	3420	7809	0.07%	0.017%
74	10.945	983	987	990	rBV4	2214	5153	0.04%	0.011%
75	11.004	992	993	997	rBV4	3751	5178	0.04%	0.011%
76	11.191	1008	1012	1022	rBV	1378489	2462057	21.05%	5.384%
77	11.329	1022	1026	1030	rVB6	9566	25262	0.22%	0.055%
78	11.388	1030	1032	1033	rBV2	4842	5931	0.05%	0.013%
79	11.457	1035	1039	1041	rBV5	7137	15530	0.13%	0.034%
80	11.821	1073	1076	1078	rBV3	6379	11642	0.10%	0.025%
81	11.851	1078	1079	1083	rVB4	5232	8476	0.07%	0.019%
82	12.126	1104	1107	1109	rBV3	3019	6236	0.05%	0.014%
83	12.176	1109	1112	1113	rVB3	5003	7040	0.06%	0.015%
84	12.382	1125	1133	1135	rBV2	55944	105778	0.90%	0.231%
85	12.441	1135	1139	1143	rVB	409744	688303	5.88%	1.505%
86	12.815	1174	1177	1181	rBV6	2707	9803	0.08%	0.021%
87	12.973	1191	1193	1196	rVB3	4416	6205	0.05%	0.014%
88	13.071	1201	1203	1207	rVB5	4703	11334	0.10%	0.025%
89	13.121	1207	1208	1211	rBV3	3261	5510	0.05%	0.012%
90	13.229	1218	1219	1222	rBV3	6372	10979	0.09%	0.024%
91	13.357	1229	1232	1233	rBV3	2967	5590	0.05%	0.012%
92	13.406	1233	1237	1244	rBV	1152237	1914177	16.36%	4.186%
93	13.731	1266	1270	1280	rVV	1065970	1844770	15.77%	4.034%
94	13.908	1287	1288	1290	rBV2	7961	6086	0.05%	0.013%
95	13.967	1290	1294	1295	rBV4	7428	14875	0.13%	0.033%
96	14.016	1295	1299	1304	rVV2	38822	85750	0.73%	0.188%
97	14.282	1325	1326	1328	rBV2	4871	6318	0.05%	0.014%
98	14.400	1335	1338	1339	rBV3	7042	11699	0.10%	0.026%
99	15.463	1444	1446	1447	rBV2	10170	10529	0.09%	0.023%
100	15.581	1455	1458	1463	rVB	51156	102496	0.88%	0.224%

Sum of corrected areas: 45727717

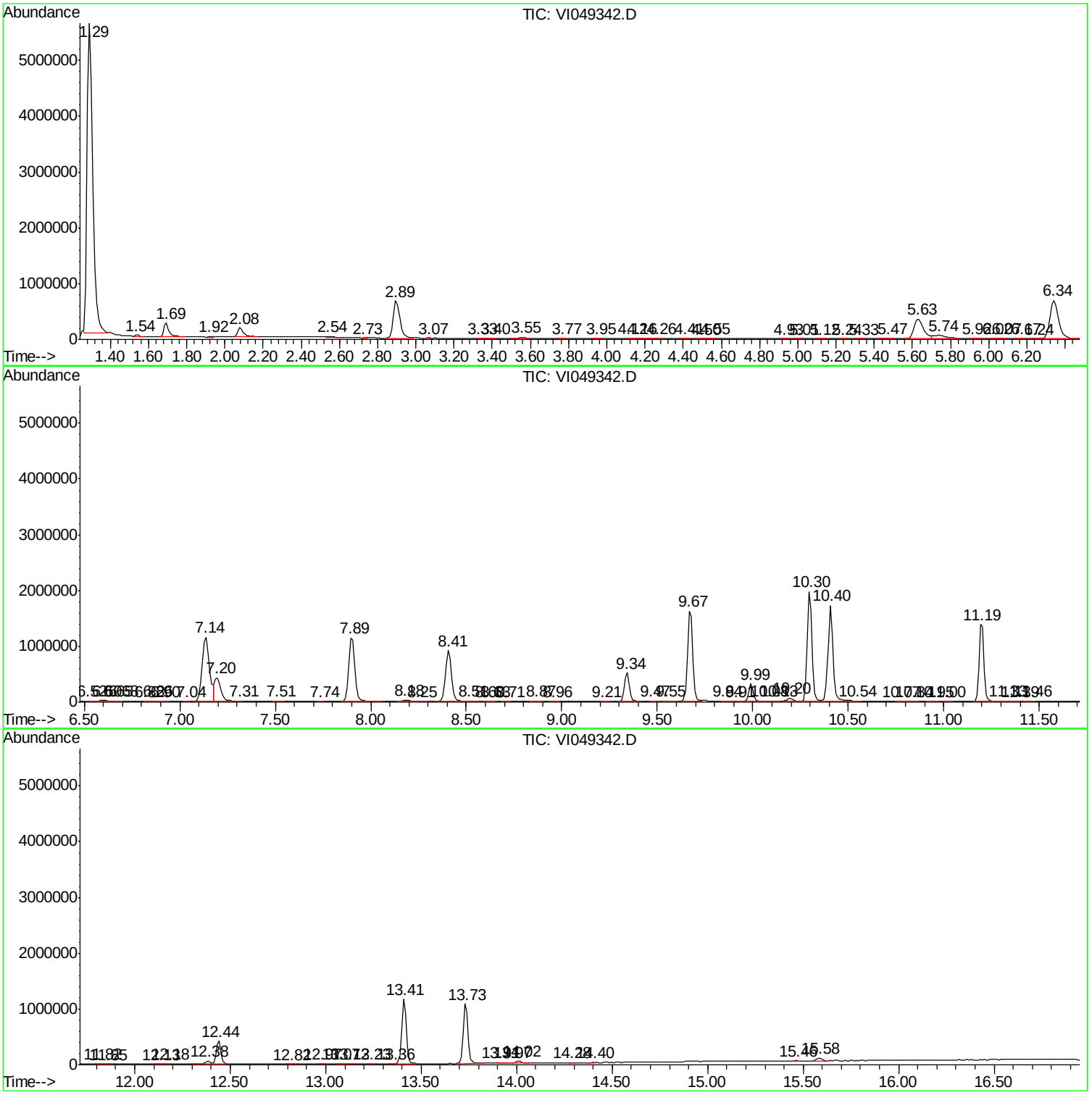
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049342.D
Acq On : 11 May 2016 15:49
Operator : FY/SY
Sample : H2874-23DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049342.D
Acq On : 11 May 2016 15:49
Operator : FY/SY
Sample : H2874-23DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

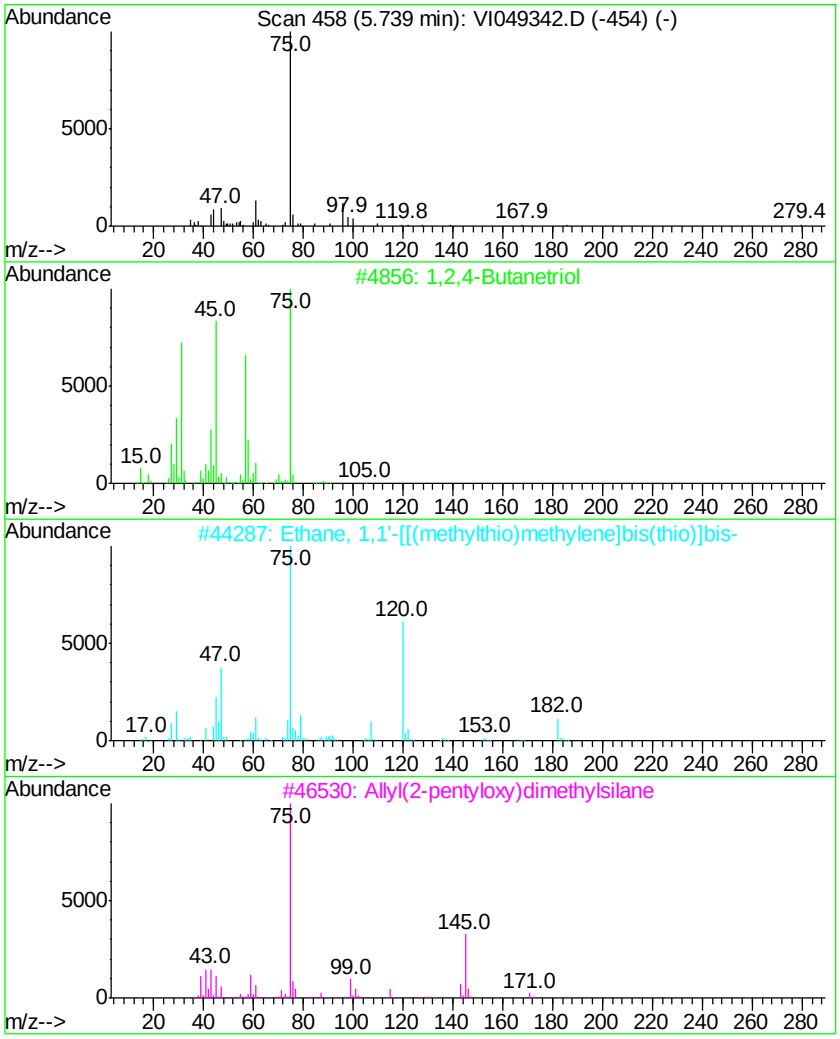
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

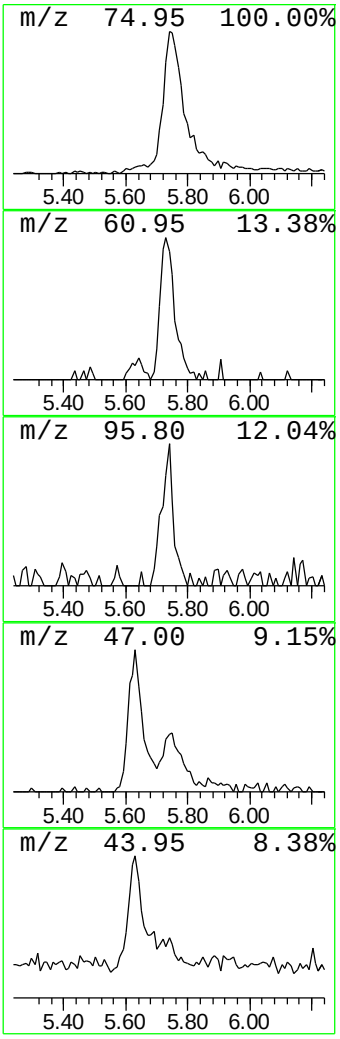
****

Peak Number 2 unknown-01 Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.74	0.41 ug/L	217071	1,4-Difluorobenzene	7.90

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,2,4-Butanetriol	106	C4H10O3	003068-00-6	39
2	Ethane, 1,1'-[[(methylthio)methy...	182	C6H14S3	054724-98-0	38
3	Allyl(2-pentyloxy)dimethylsilane	186	C10H22OSi	1000245-83-5	9
4	Formamide, N-methylthio	75	C2H5NS	018952-41-5	9
5	Heptane, 1,1-dimethoxy-	160	C9H20O2	010032-05-0	9





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049342.D
Acq On : 11 May 2016 15:49
Operator : FY/SY
Sample : H2874-23DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4096DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
unknown-01	5.74	0.4	ug/L	217071	1	7.90	2619830	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4097

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-24
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049301.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.0	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4097

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-24
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049301.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.7	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4097

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-24
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049301.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4097

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-24
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049301.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

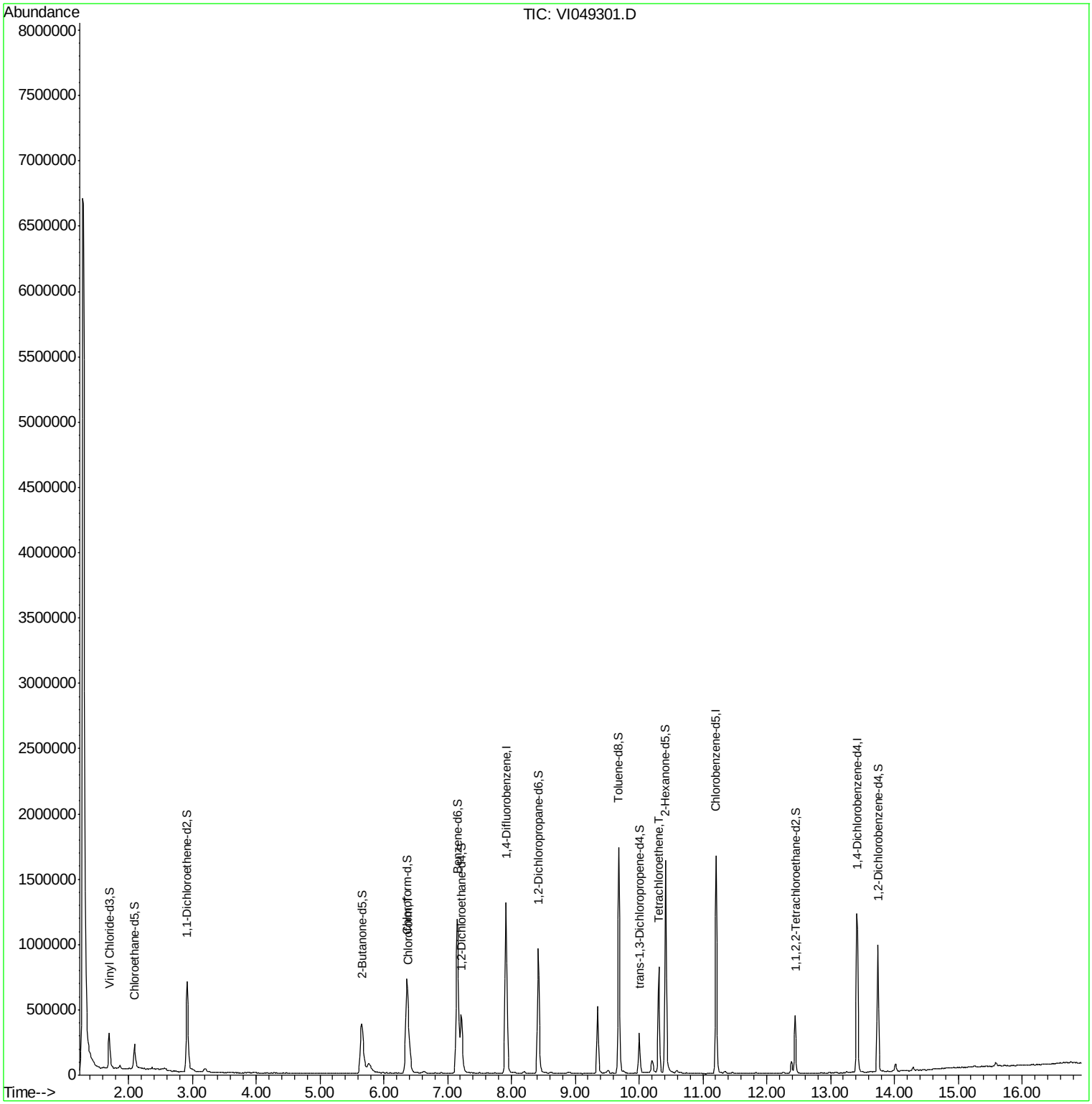
EPA-designated Registry Number.

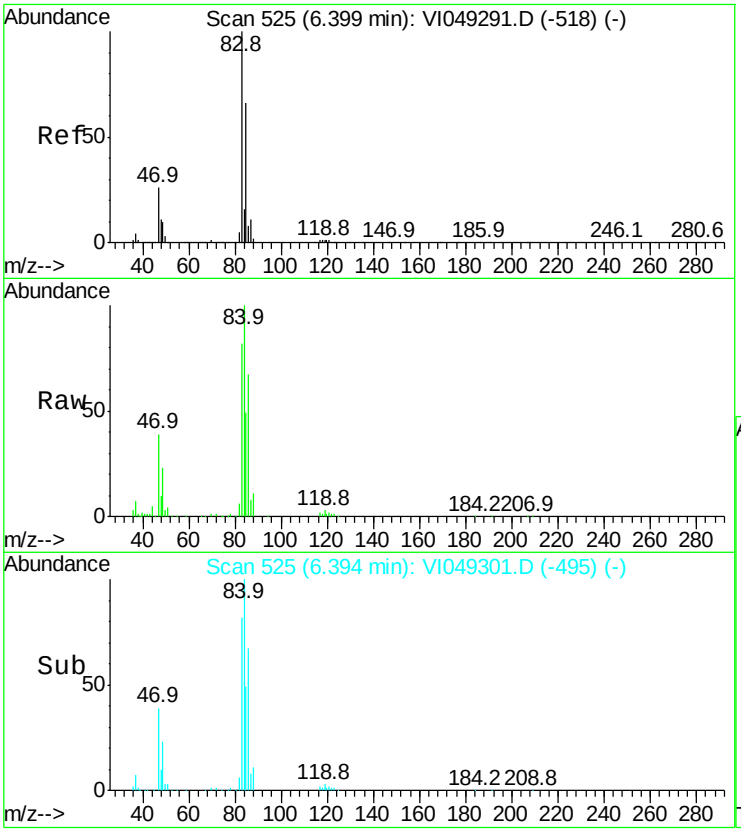
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049301.D
Acq On : 9 May 2016 17:11
Operator : FY/SY
Sample : H2874-24
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4097

Quant Time: May 10 06:05:07 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration



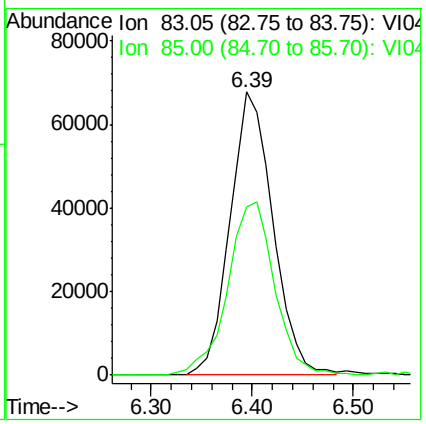


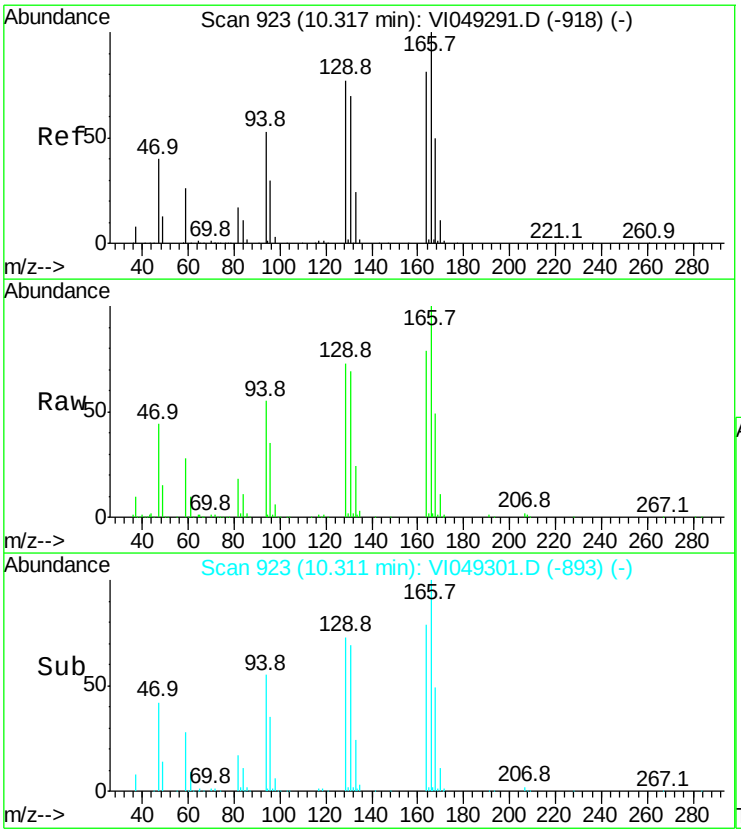
#25
Chloroform
Concen: 1.03 ug/L
RT: 6.39 min Scan# 525
Delta R.T. -0.01 min
Lab File: VI049301.D
Acq: 9 May 2016 17:11

Instrument :
MSVOA_I
ClientSampleId :
H4097

Tgt Ion: 83 Resp: 200035

Ion	Ratio	Lower	Upper
83	100		
85	59.2	47.3	87.8

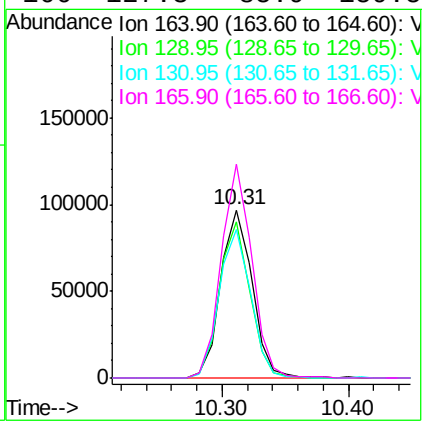




#47
Tetrachloroethene
Concen: 2.68 ug/L
RT: 10.31 min Scan# 923
Delta R.T. -0.01 min
Lab File: VI049301.D
Acq: 9 May 2016 17:11

Tgt Ion:164 Resp: 167607

Ion	Ratio	Lower	Upper
164	100		
129	93.4	62.1	115.3
131	88.4	60.6	112.6
166	127.3	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049301.D
Acq On : 9 May 2016 17:11
Operator : FY/SY
Sample : H2874-24
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4097

Quant Time: May 10 06:05:07 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1210817	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	800975	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	287057	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	282959	3.80	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 76.00%			
7) Chloroethane-d5	2.09	69	203138	4.92	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 98.40%			
11) 1,1-Dichloroethene-d2	2.92	63	539139	3.07	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 61.40%			
20) 2-Butanone-d5	5.66	46	910094	56.39	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 112.78%			
24) Chloroform-d	6.36	84	863787	4.55	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 91.00%			
26) 1,2-Dichloroethane-d4	7.21	65	393501	5.07	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.40%			
32) Benzene-d6	7.15	84	1498997	4.80	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.00%			
36) 1,2-Dichloropropane-d6	8.42	67	427282	4.87	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.40%			
41) Toluene-d8	9.68	98	1042879	4.53	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.60%			
43) trans-1,3-Dichloropropene-	10.01	79	148947	4.31	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 86.20%			
46) 2-Hexanone-d5	10.41	63	575926	52.82	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 105.64%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	190551	4.78	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.60%			
63) 1,2-Dichlorobenzene-d4	13.75	152	233968	4.65	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.00%			
Target Compounds						Qvalue
25) Chloroform	6.39	83	200035	1.03	ug/L	90
47) Tetrachloroethene	10.31	164	167607	2.68	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049301.D
Acq On : 9 May 2016 17:11
Operator : FY/SY
Sample : H2874-24
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4097

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	3	6	34	rVB	6661104	18277826	100.00%	35.208%
2	1.700	45	48	55	rVB	271534	458070	2.51%	0.882%
3	1.867	62	65	71	rVB	31506	59255	0.32%	0.114%
4	2.093	85	88	96	rBV	186821	354374	1.94%	0.683%
5	2.369	114	116	122	rVB7	17550	33382	0.18%	0.064%
6	2.723	151	152	156	rVB3	5941	9494	0.05%	0.018%
7	2.822	159	162	164	rBV4	5072	8622	0.05%	0.017%
8	2.920	167	172	179	rBV	691085	1517559	8.30%	2.923%
9	3.205	196	201	215	rVB2	26941	113778	0.62%	0.219%
10	3.540	234	235	236	rBV	5137	4996	0.03%	0.010%
11	3.589	238	240	244	rVB5	5911	8393	0.05%	0.016%
12	3.816	261	263	266	rBV4	2262	5216	0.03%	0.010%
13	3.894	266	271	273	rVB5	4117	10582	0.06%	0.020%
14	3.973	275	279	280	rBV3	5038	10472	0.06%	0.020%
15	4.032	283	285	289	rVB4	4516	7670	0.04%	0.015%
16	4.278	307	310	312	rVB3	4167	7143	0.04%	0.014%
17	4.426	323	325	329	rVB4	4905	7525	0.04%	0.014%
18	4.475	329	330	332	rBV2	5162	5424	0.03%	0.010%
19	4.751	357	358	362	rVB4	2992	5782	0.03%	0.011%
20	4.849	364	368	371	rBV5	2160	5195	0.03%	0.010%
21	4.898	371	373	375	rVB3	5067	7750	0.04%	0.015%
22	4.938	375	377	378	rBV2	4330	5479	0.03%	0.011%
23	5.135	392	397	399	rBV5	3716	11028	0.06%	0.021%
24	5.164	399	400	403	rVB3	4903	6131	0.03%	0.012%
25	5.223	403	406	407	rBV3	3548	5076	0.03%	0.010%
26	5.371	417	421	422	rBV3	4450	6041	0.03%	0.012%
27	5.656	442	450	458	rBV	383613	1344341	7.36%	2.590%
28	5.764	458	461	471	rVB	64142	251279	1.37%	0.484%
29	5.991	481	484	486	rVB4	3380	5187	0.03%	0.010%
30	6.040	488	489	491	rVB2	5620	5582	0.03%	0.011%
31	6.099	491	495	496	rBV4	4398	7665	0.04%	0.015%
32	6.178	500	503	506	rBV4	3334	7917	0.04%	0.015%
33	6.365	513	522	535	rBV2	722811	2533596	13.86%	4.880%
34	6.630	544	549	555	rVB6	12320	39169	0.21%	0.075%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049301.D
Acq On : 9 May 2016 17:11
Operator : FY/SY
Sample : H2874-24
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4097

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.906	575	577	581	rVB5	5765	11183	0.06%	0.022%
36	6.985	581	585	586	rVB3	5029	9720	0.05%	0.019%
37	7.034	586	590	591	rBV3	3487	6527	0.04%	0.013%
38	7.152	594	602	606	rBV	1186711	3158195	17.28%	6.084%
39	7.211	606	608	619	rVV	445237	1052283	5.76%	2.027%
40	7.339	619	621	623	rVB3	7547	11119	0.06%	0.021%
41	7.506	634	638	639	rBV4	3282	6438	0.04%	0.012%
42	7.634	647	651	656	rVB7	6131	17494	0.10%	0.034%
43	7.713	656	659	660	rBV3	2909	6132	0.03%	0.012%
44	7.743	660	662	664	rVB3	4928	6083	0.03%	0.012%
45	7.920	674	680	688	rBV	1307283	2947099	16.12%	5.677%
46	8.117	697	700	704	rBV6	2965	7056	0.04%	0.014%
47	8.195	704	708	712	rVB6	14863	37082	0.20%	0.071%
48	8.264	712	715	716	rBV3	4787	8289	0.05%	0.016%
49	8.422	725	731	741	rBV	954822	2060121	11.27%	3.968%
50	8.530	741	742	746	rVV4	8459	16485	0.09%	0.032%
51	8.609	748	750	755	rVV4	8322	20814	0.11%	0.040%
52	8.914	776	781	785	rVV8	10166	29107	0.16%	0.056%
53	9.002	788	790	793	rVB4	4456	8086	0.04%	0.016%
54	9.042	793	794	797	rBV3	4326	5545	0.03%	0.011%
55	9.091	797	799	801	rVB3	4240	6976	0.04%	0.013%
56	9.130	801	803	805	rBV3	4247	7048	0.04%	0.014%
57	9.347	820	825	833	rBV	511314	970431	5.31%	1.869%
58	9.475	836	838	839	rBV2	5588	7453	0.04%	0.014%
59	9.514	839	842	846	rVB4	22782	44062	0.24%	0.085%
60	9.583	846	849	852	rVB4	3860	6968	0.04%	0.013%
61	9.682	854	859	865	rBV	1731275	3025595	16.55%	5.828%
62	9.937	881	885	888	rBV5	4390	5813	0.03%	0.011%
63	10.006	888	892	897	rBV	306727	520553	2.85%	1.003%
64	10.115	901	903	904	rVV2	5653	8231	0.05%	0.016%
65	10.134	904	905	906	rVV	7481	6738	0.04%	0.013%
66	10.203	906	912	918	rVV	95732	218603	1.20%	0.421%
67	10.311	918	923	929	rVV	811958	1404443	7.68%	2.705%
68	10.410	929	933	948	rVB	1625390	3041238	16.64%	5.858%
69	10.587	948	951	954	rBV4	17189	36436	0.20%	0.070%
70	10.744	964	967	969	rVB4	4110	5698	0.03%	0.011%
71	10.823	974	975	979	rVB4	4405	8512	0.05%	0.016%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049301.D
Acq On : 9 May 2016 17:11
Operator : FY/SY
Sample : H2874-24
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4097

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	10.892	979	982	985	rBV4	4232	8201	0.04%	0.016%
73	10.971	988	990	993	rVB3	3052	5896	0.03%	0.011%
74	11.059	998	999	1001	rBV	4079	5021	0.03%	0.010%
75	11.207	1010	1014	1024	rVV	1666781	2770266	15.16%	5.336%
76	11.345	1025	1028	1033	rVB4	18822	35464	0.19%	0.068%
77	11.463	1033	1040	1044	rBV8	7100	19490	0.11%	0.038%
78	11.561	1049	1050	1053	rBV3	2887	5415	0.03%	0.010%
79	11.660	1057	1060	1066	rVB7	2965	6082	0.03%	0.012%
80	11.827	1076	1077	1082	rVB4	8359	16778	0.09%	0.032%
81	11.945	1087	1089	1092	rVB4	3147	6074	0.03%	0.012%
82	12.172	1109	1112	1117	rBV6	5131	15401	0.08%	0.030%
83	12.250	1117	1120	1125	rBV5	4954	13203	0.07%	0.025%
84	12.388	1129	1134	1137	rBV2	87670	172004	0.94%	0.331%
85	12.447	1137	1140	1145	rVB	440368	704258	3.85%	1.357%
86	12.733	1168	1169	1173	rVB4	3113	5328	0.03%	0.010%
87	12.841	1176	1180	1181	rBV3	4477	6489	0.04%	0.012%
88	12.979	1191	1194	1197	rBV4	3359	7540	0.04%	0.015%
89	13.254	1219	1222	1224	rBV4	9227	14842	0.08%	0.029%
90	13.343	1226	1231	1234	rBV5	6280	18780	0.10%	0.036%
91	13.412	1234	1238	1245	rBV	1213684	2119962	11.60%	4.084%
92	13.628	1257	1260	1263	rVV5	4713	8403	0.05%	0.016%
93	13.746	1267	1272	1278	rBV	974544	1784023	9.76%	3.437%
94	14.012	1294	1299	1303	rBV2	54703	125601	0.69%	0.242%
95	14.297	1325	1328	1332	rBV4	26764	48063	0.26%	0.093%
96	14.465	1343	1345	1348	rVB3	6407	10194	0.06%	0.020%
97	14.514	1348	1350	1354	rBV4	6776	16517	0.09%	0.032%
98	14.750	1372	1374	1376	rBV3	6403	7616	0.04%	0.015%
99	15.124	1410	1412	1413	rBV2	7651	6077	0.03%	0.012%
100	15.587	1456	1459	1463	rBV	25805	54191	0.30%	0.104%

Sum of corrected areas: 51913834

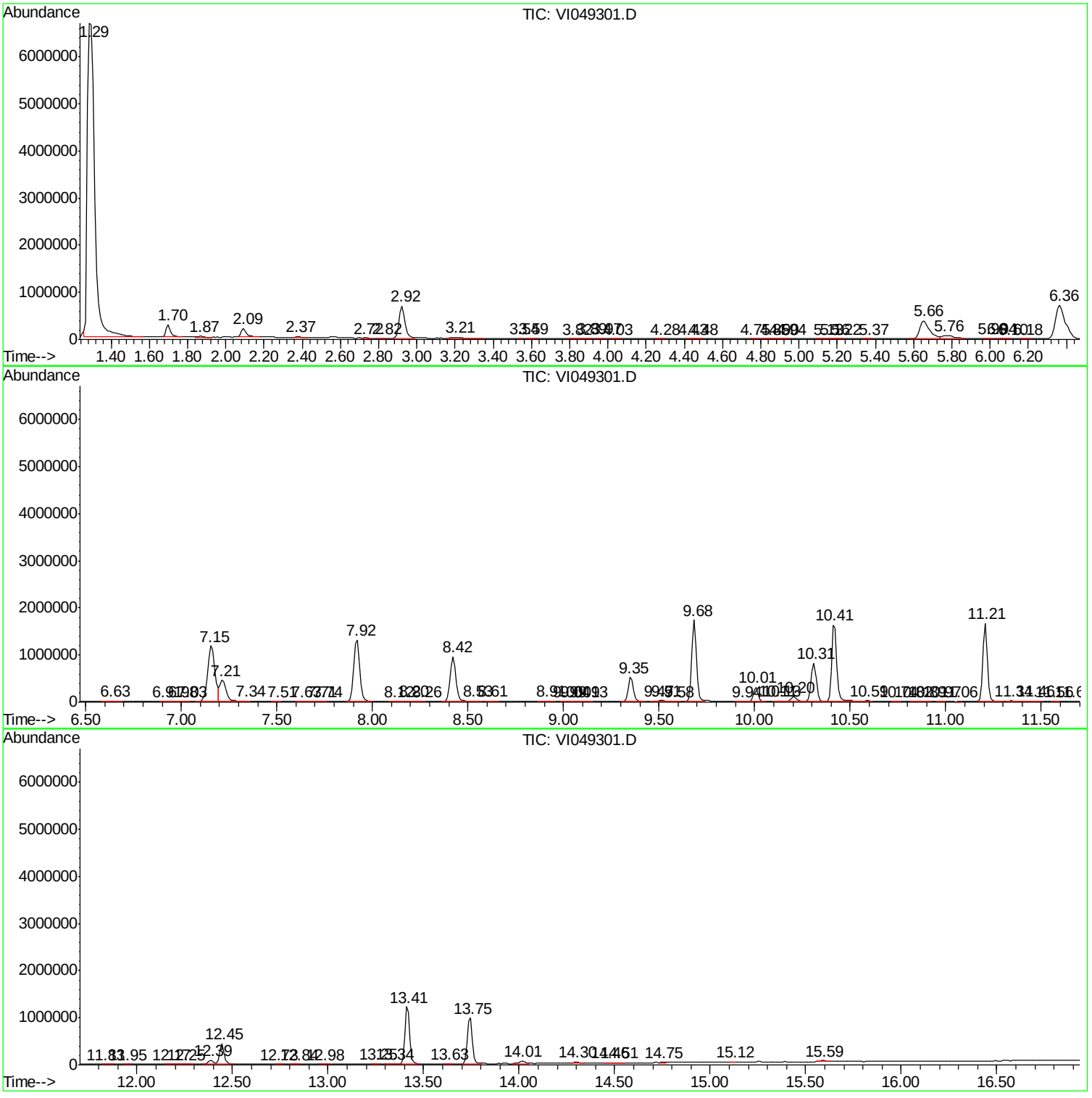
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049301.D
Acq On : 9 May 2016 17:11
Operator : FY/SY
Sample : H2874-24
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4097

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049301.D
Acq On : 9 May 2016 17:11
Operator : FY/SY
Sample : H2874-24
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4097

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049301.D
Acq On : 9 May 2016 17:11
Operator : FY/SY
Sample : H2874-24
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4097

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4097RE

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-24RE
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049335.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.3	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4097RE

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-24RE
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049335.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.9	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4097RE

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-24RE
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049335.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H4097RE

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-24RE
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049335.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

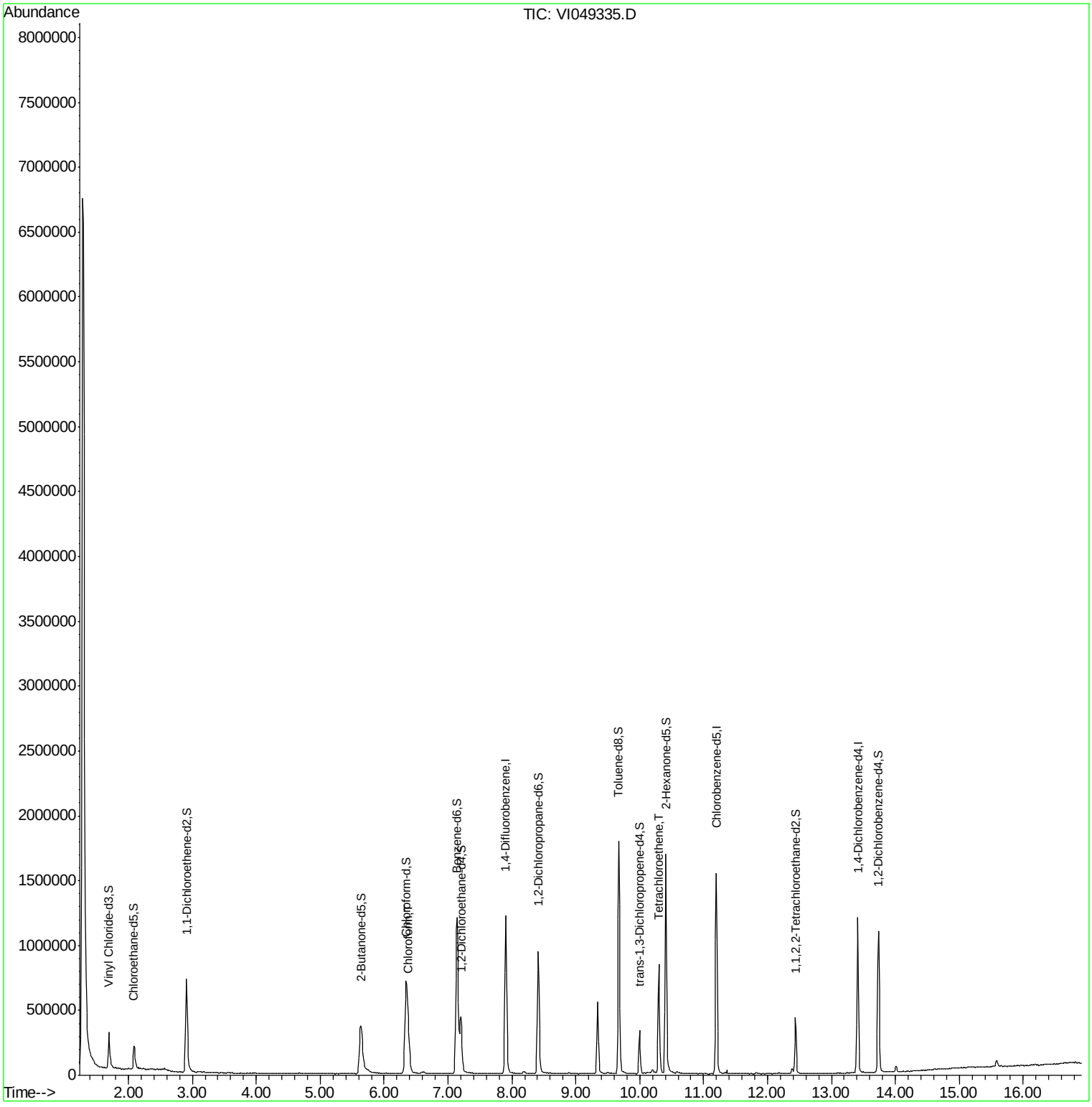
EPA-designated Registry Number.

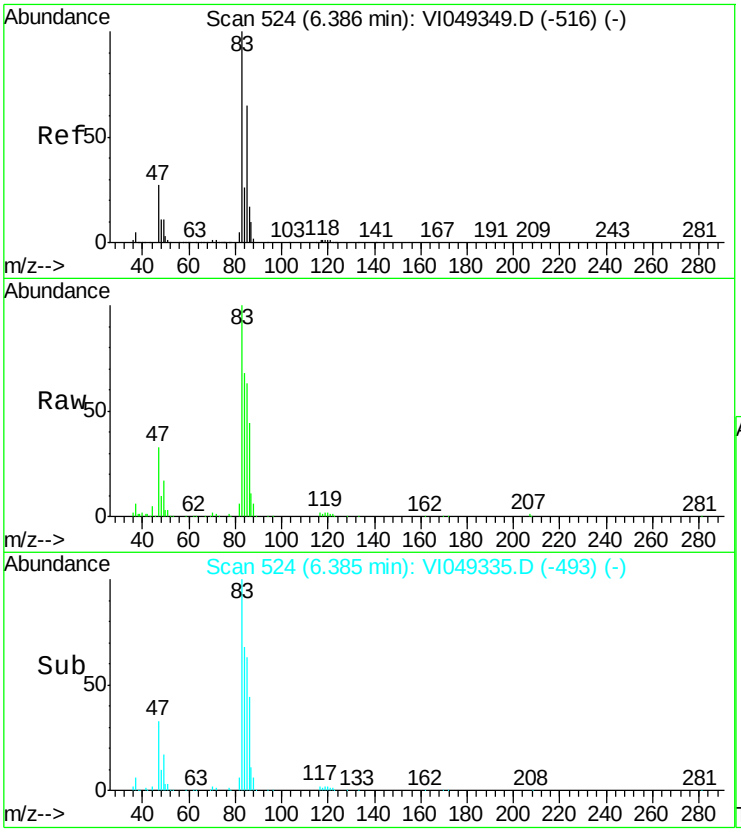
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049335.D
Acq On : 11 May 2016 12:05
Operator : FY/SY
Sample : H2874-24RE
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4097RE

Quant Time: May 12 06:37:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration



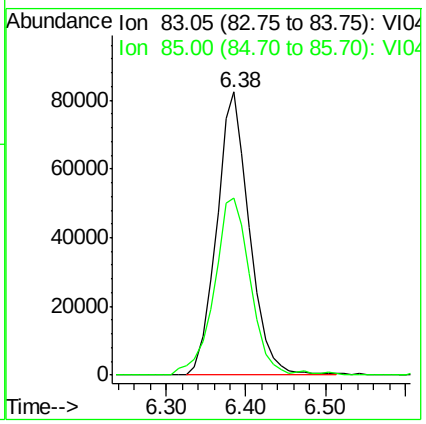


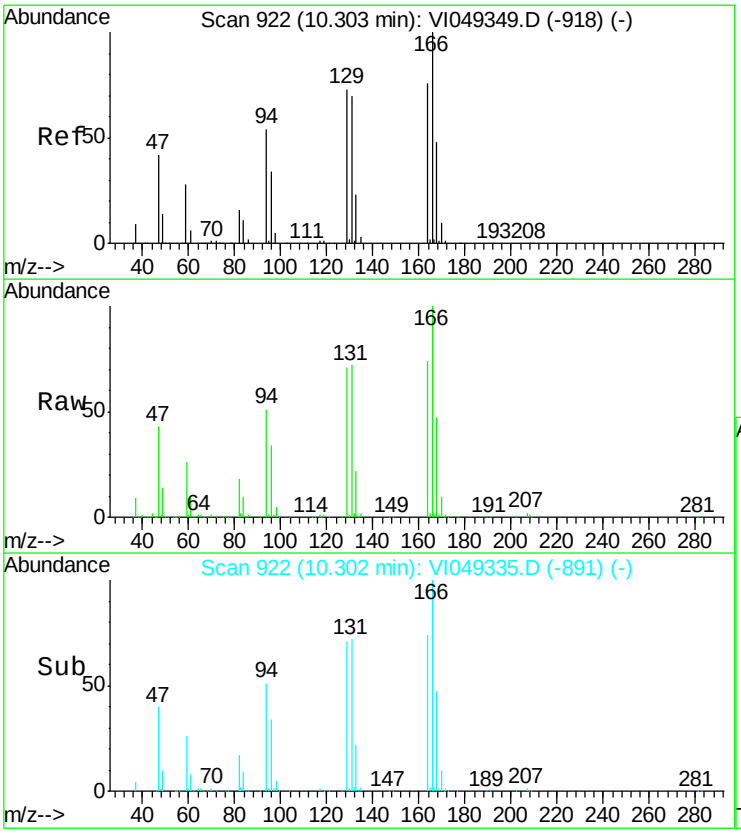
#25
Chloroform
Concen: 1.29 ug/L
RT: 6.38 min Scan# 524
Delta R.T. 0.00 min
Lab File: VI049335.D
Acq: 11 May 2016 12:05

Instrument : MSVOA_I
ClientSampleId : H4097RE

Tgt Ion: 83 Resp: 236887

Ion	Ratio	Lower	Upper
83	100		
85	62.6	47.3	87.8

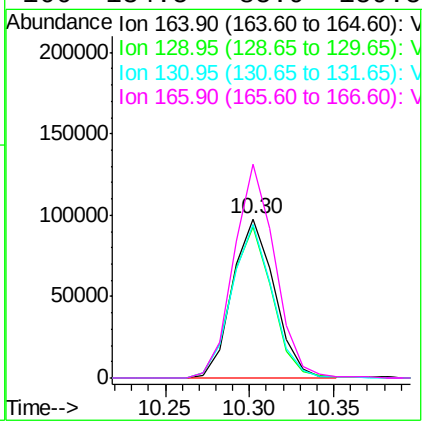




#47
Tetrachloroethene
Concen: 2.91 ug/L
RT: 10.30 min Scan# 922
Delta R.T. 0.00 min
Lab File: VI049335.D
Acq: 11 May 2016 12:05

Tgt Ion:164 Resp: 168780

Ion	Ratio	Lower	Upper
164	100		
129	95.5	62.1	115.3
131	96.9	60.6	112.6
166	134.5	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049335.D
Acq On : 11 May 2016 12:05
Operator : FY/SY
Sample : H2874-24RE
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4097RE

Quant Time: May 12 06:37:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1138271	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	743116	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	278318	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	318914	4.55	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 91.00%			
7) Chloroethane-d5	2.08	69	202643	5.22	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 104.40%			
11) 1,1-Dichloroethene-d2	2.91	63	582901	3.53	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 70.60%			
20) 2-Butanone-d5	5.64	46	888430	58.56	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 117.12%			
24) Chloroform-d	6.35	84	875152	4.91	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.20%			
26) 1,2-Dichloroethane-d4	7.20	65	391676	5.37	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.40%			
32) Benzene-d6	7.14	84	1563697	5.40	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 108.00%			
36) 1,2-Dichloropropane-d6	8.41	67	452691	5.56	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 111.20%			
41) Toluene-d8	9.67	98	1088371	5.10	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.00%			
43) trans-1,3-Dichloropropene-	10.00	79	156660	4.89	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 97.80%			
46) 2-Hexanone-d5	10.41	63	578945	57.23	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 114.46%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	190698	5.15	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 103.00%			
63) 1,2-Dichlorobenzene-d4	13.74	152	247055	5.06	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.20%			
Target Compounds						Qvalue
25) Chloroform	6.38	83	236887	1.29	ug/L	94
47) Tetrachloroethene	10.30	164	168780	2.91	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\Data\VI051116\
Data File : VI049335.D
Acq On : 11 May 2016 12:05
Operator : FY/SY
Sample : H2874-24RE
Misc : 25mL/MSVOA I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4097RE

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.287	3	6	29	rVB	6689564	19031666	100.00%	36.381%
2	1.690	44	47	56	rVV	281838	514460	2.70%	0.983%
3	1.799	56	58	60	rVB3	11762	15685	0.08%	0.030%
4	2.084	84	87	95	rBV	177645	375403	1.97%	0.718%
5	2.360	113	115	121	rVB6	12948	34189	0.18%	0.065%
6	2.448	121	124	127	rBV5	8780	21547	0.11%	0.041%
7	2.566	135	136	141	rVB3	16420	23417	0.12%	0.045%
8	2.763	154	156	157	rVB2	4213	4742	0.02%	0.009%
9	2.802	157	160	162	rVV3	6062	9711	0.05%	0.019%
10	2.911	166	171	186	rVV	718024	1677713	8.82%	3.207%
11	3.088	186	189	193	rVV4	8102	21593	0.11%	0.041%
12	3.176	195	198	202	rVB5	7269	13712	0.07%	0.026%
13	3.363	215	217	219	rVV3	3397	3965	0.02%	0.008%
14	3.442	223	225	229	rVB3	4123	8212	0.04%	0.016%
15	3.491	229	230	233	rVB3	5787	6155	0.03%	0.012%
16	3.570	233	238	241	rBV7	6843	20988	0.11%	0.040%
17	3.610	241	242	246	rBV3	3396	4408	0.02%	0.008%
18	3.718	252	253	256	rBV3	3619	6612	0.03%	0.013%
19	3.797	259	261	262	rBV2	2899	4380	0.02%	0.008%
20	3.944	274	276	279	rVV3	3758	7172	0.04%	0.014%
21	3.983	279	280	283	rVB3	5773	5365	0.03%	0.010%
22	4.239	302	306	309	rBV4	3096	5826	0.03%	0.011%
23	4.397	318	322	324	rBV5	3196	8097	0.04%	0.015%
24	4.485	329	331	333	rVB3	4095	5303	0.03%	0.010%
25	4.525	333	335	337	rBV2	3187	4869	0.03%	0.009%
26	4.564	337	339	342	rBV2	3135	5945	0.03%	0.011%
27	4.623	342	345	347	rVB3	4038	8035	0.04%	0.015%
28	4.672	347	350	353	rBV4	6581	11661	0.06%	0.022%
29	4.761	355	359	360	rBV4	4171	5151	0.03%	0.010%
30	5.096	391	393	396	rVB4	2720	5001	0.03%	0.010%
31	5.155	396	399	403	rVB4	2838	7761	0.04%	0.015%
32	5.253	407	409	412	rVB4	3963	6859	0.04%	0.013%
33	5.371	420	421	424	rBV3	3972	5509	0.03%	0.011%
34	5.430	424	427	428	rBV3	4387	4384	0.02%	0.008%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\Data\VI051116\
Data File : VI049335.D
Acq On : 11 May 2016 12:05
Operator : FY/SY
Sample : H2874-24RE
Misc : 25mL/MSVOA I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4097RE

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	5.519	433	436	437	rVB3	3366	5579	0.03%	0.011%
36	5.637	440	448	459	rBV	370641	1386328	7.28%	2.650%
37	5.893	472	474	476	rBV3	3638	5303	0.03%	0.010%
38	5.922	476	477	480	rVB3	3499	4583	0.02%	0.009%
39	6.247	509	510	512	rBV2	4976	7321	0.04%	0.014%
40	6.346	513	520	533	rBV2	711617	2567789	13.49%	4.909%
41	6.601	542	546	547	rBV2	9512	18851	0.10%	0.036%
42	6.739	554	560	561	rBV5	4398	12962	0.07%	0.025%
43	6.857	569	572	576	rVB6	2735	7648	0.04%	0.015%
44	7.143	594	601	605	rBV	1203192	3323958	17.47%	6.354%
45	7.202	605	607	618	rVV	434252	959629	5.04%	1.834%
46	7.320	618	619	623	rVB4	6818	11158	0.06%	0.021%
47	7.527	638	640	642	rVV2	3798	5081	0.03%	0.010%
48	7.605	646	648	652	rBV4	3114	6496	0.03%	0.012%
49	7.901	673	678	687	rBV	1214449	2704867	14.21%	5.171%
50	8.186	703	707	712	rVB6	15866	35867	0.19%	0.069%
51	8.412	724	730	739	rBV	944683	2116807	11.12%	4.046%
52	8.599	746	749	752	rVB4	3651	7469	0.04%	0.014%
53	8.737	761	763	766	rVB3	2986	4693	0.02%	0.009%
54	8.895	773	779	785	rVB10	7141	28521	0.15%	0.055%
55	9.013	789	791	794	rVB4	3130	6250	0.03%	0.012%
56	9.229	812	813	816	rVB3	3111	4187	0.02%	0.008%
57	9.338	820	824	835	rBV	553332	1065678	5.60%	2.037%
58	9.505	837	841	843	rBV3	11473	22839	0.12%	0.044%
59	9.554	843	846	849	rVB5	5563	10305	0.05%	0.020%
60	9.672	853	858	864	rBV	1790901	3173687	16.68%	6.067%
61	9.928	882	884	886	rVB2	2338	3984	0.02%	0.008%
62	9.997	886	891	897	rBV	337678	574377	3.02%	1.098%
63	10.076	897	899	900	rVV2	6302	8544	0.04%	0.016%
64	10.115	900	903	904	rVV2	7555	11540	0.06%	0.022%
65	10.135	904	905	907	rVV2	6960	10559	0.06%	0.020%
66	10.194	907	911	917	rVV2	28813	82757	0.43%	0.158%
67	10.302	917	922	929	rVV	838756	1455326	7.65%	2.782%
68	10.410	929	933	948	rVB	1692368	3041180	15.98%	5.814%
69	10.578	948	950	953	rBV3	11465	24128	0.13%	0.046%
70	10.814	972	974	977	rVB3	2171	4779	0.03%	0.009%
71	10.873	977	980	984	rVB5	3983	10001	0.05%	0.019%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\Data\VI051116\
Data File : VI049335.D
Acq On : 11 May 2016 12:05
Operator : FY/SY
Sample : H2874-24RE
Misc : 25mL/MSVOA I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4097RE

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	10.971	988	990	992	rVB4	3442	4276	0.02%	0.008%
73	11.198	1009	1013	1023	rBV	1548289	2576538	13.54%	4.925%
74	11.326	1024	1026	1029	rVV3	8770	16481	0.09%	0.032%
75	11.365	1029	1030	1032	rVB	30480	18540	0.10%	0.035%
76	11.444	1036	1038	1041	rVB4	5401	9939	0.05%	0.019%
77	11.690	1062	1063	1066	rVB3	3494	4914	0.03%	0.009%
78	11.729	1066	1067	1073	rBV5	2865	8127	0.04%	0.016%
79	11.828	1073	1077	1082	rBV6	9112	25404	0.13%	0.049%
80	11.936	1084	1088	1090	rVB4	3544	6341	0.03%	0.012%
81	12.172	1108	1112	1116	rBV5	7121	15644	0.08%	0.030%
82	12.261	1119	1121	1122	rVB2	3719	4259	0.02%	0.008%
83	12.280	1122	1123	1127	rBV4	3346	4268	0.02%	0.008%
84	12.339	1127	1129	1130	rBV2	3514	4483	0.02%	0.009%
85	12.379	1130	1133	1136	rVV2	33386	70249	0.37%	0.134%
86	12.438	1136	1139	1147	rVB	433320	721146	3.79%	1.379%
87	12.861	1177	1182	1183	rBV6	4532	10687	0.06%	0.020%
88	12.959	1191	1192	1196	rVB4	2867	5437	0.03%	0.010%
89	13.137	1209	1210	1212	rVB2	5197	4652	0.02%	0.009%
90	13.186	1212	1215	1216	rBV3	3141	4855	0.03%	0.009%
91	13.255	1216	1222	1225	rBV8	7073	16212	0.09%	0.031%
92	13.333	1225	1230	1233	rBV7	7437	20520	0.11%	0.039%
93	13.412	1233	1238	1245	rBV	1196026	2060856	10.83%	3.940%
94	13.501	1245	1247	1251	rVB5	7913	12604	0.07%	0.024%
95	13.609	1256	1258	1259	rBV2	3115	4305	0.02%	0.008%
96	13.737	1266	1271	1276	rBV	1088062	1873137	9.84%	3.581%
97	14.013	1295	1299	1303	rBV	42694	74322	0.39%	0.142%
98	14.239	1320	1322	1324	rBV2	3573	4994	0.03%	0.010%
99	14.475	1345	1346	1347	rBV	5732	3943	0.02%	0.008%
100	15.587	1455	1459	1463	rVB	47177	98402	0.52%	0.188%

Sum of corrected areas: 52312062

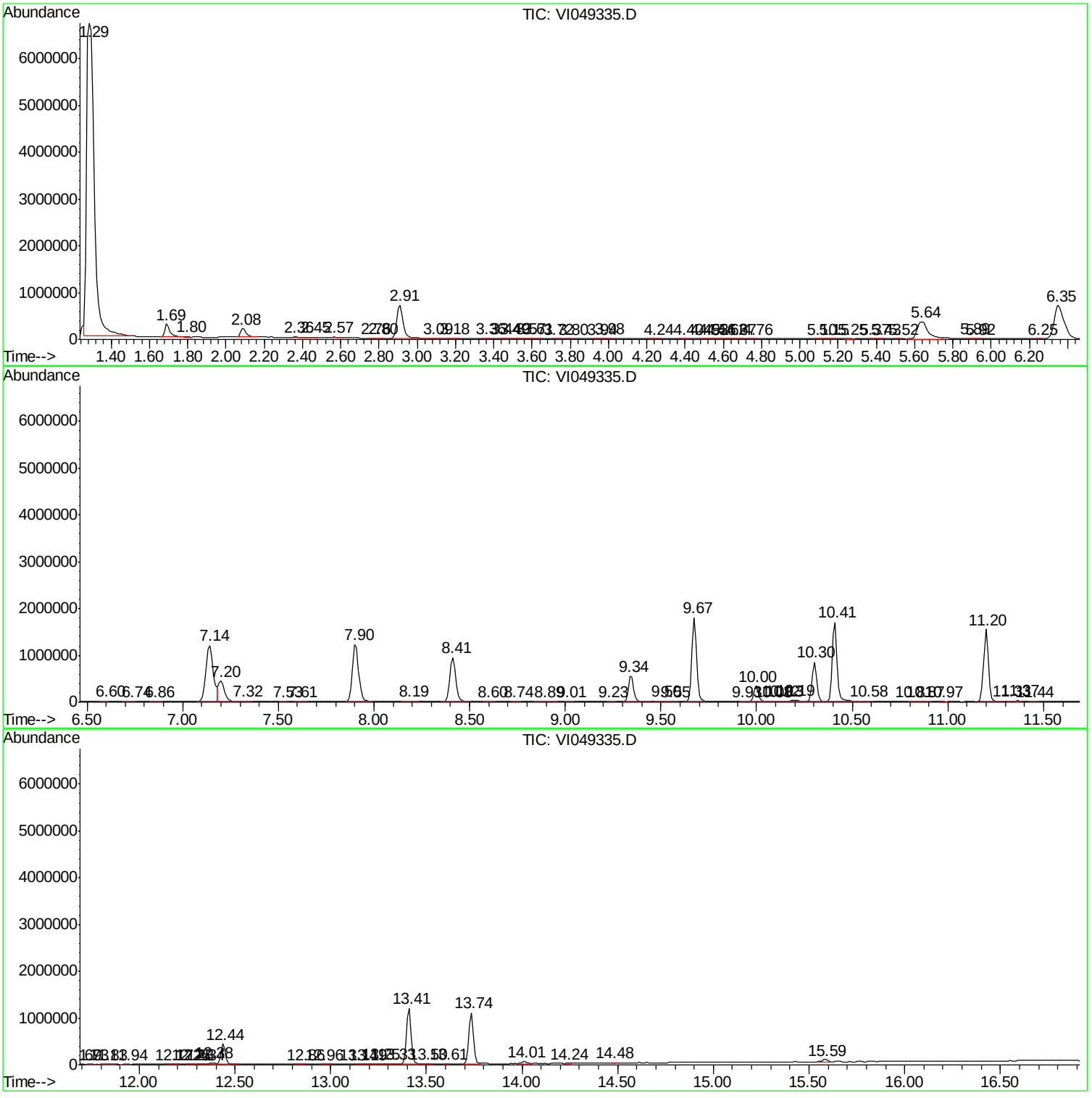
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049335.D
Acq On : 11 May 2016 12:05
Operator : FY/SY
Sample : H2874-24RE
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4097RE

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049335.D
Acq On : 11 May 2016 12:05
Operator : FY/SY
Sample : H2874-24RE
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4097RE

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049335.D
Acq On : 11 May 2016 12:05
Operator : FY/SY
Sample : H2874-24RE
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4097RE

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4098

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-25
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049302.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.9	
71-55-6	1,1,1-Trichloroethane	0.21	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.13	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4098

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-25
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049302.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	7.5	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4098

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-25
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049302.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4098

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-25
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049302.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

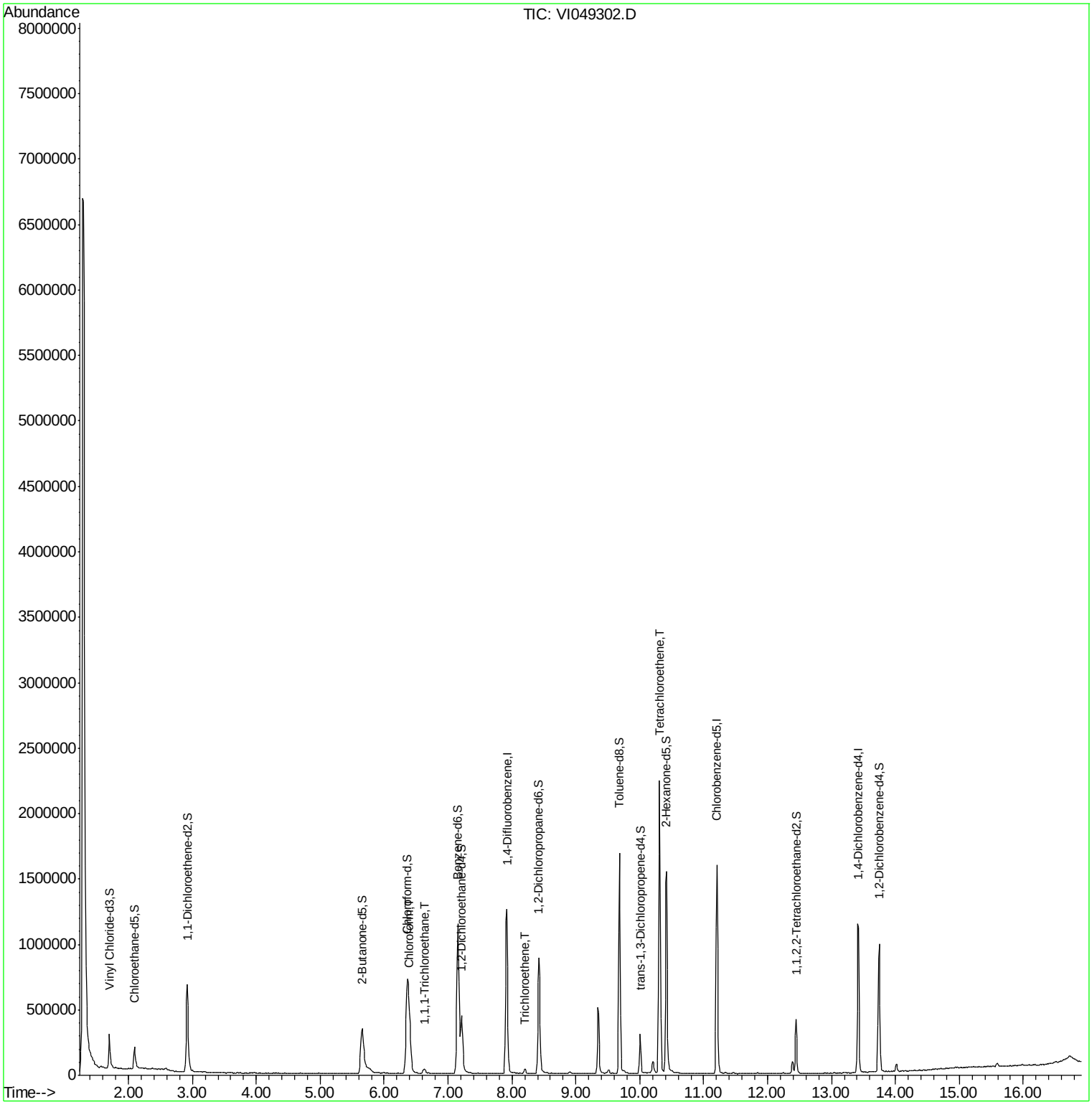
Quantitation Report (QT/LSC Reviewed)

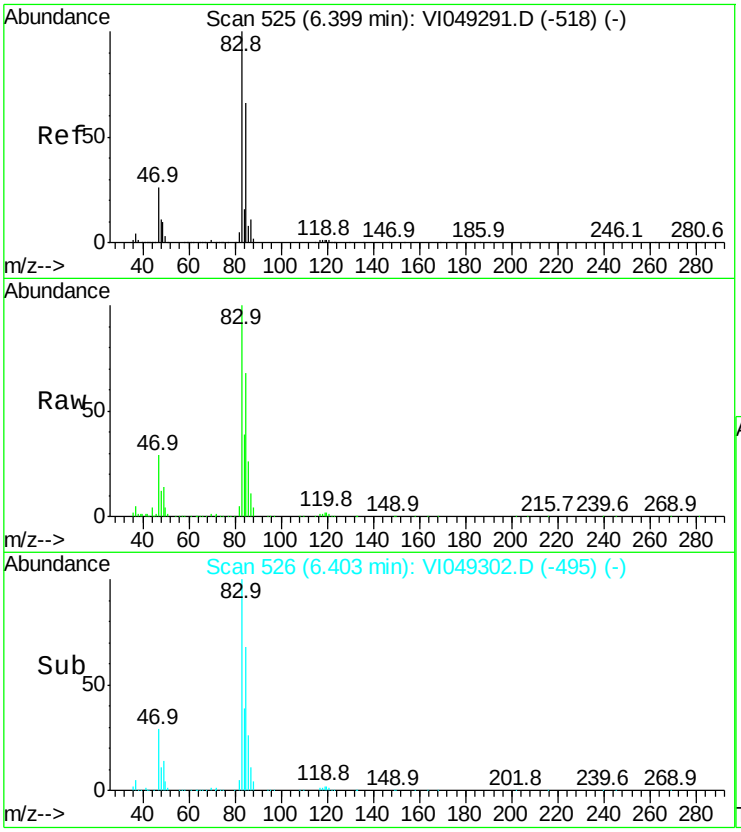
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049302.D
Acq On : 9 May 2016 17:43
Operator : FY/SY
Sample : H2874-25
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 10 06:07:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4098

Manual Integrations APPROVED
feifei
5/10/2016 1:38:14 PM

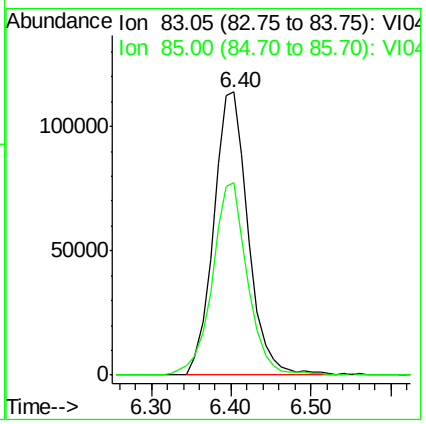




#25
Chloroform
Concen: 1.87 ug/L
RT: 6.40 min Scan# 526
Delta R.T. 0.00 min
Lab File: VI049302.D
Acq: 9 May 2016 17:43

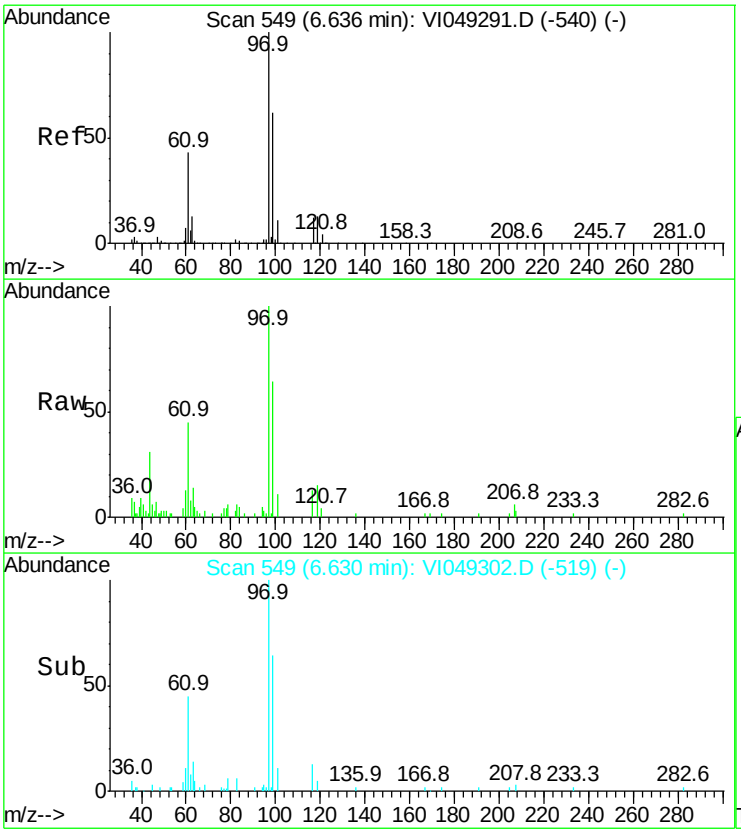
Tgt Ion: 83 Resp: 344648

Ion	Ratio	Lower	Upper
83	100		
85	68.2	47.3	87.8



Instrument :
MSVOA_I
ClientSampleId :
H4098

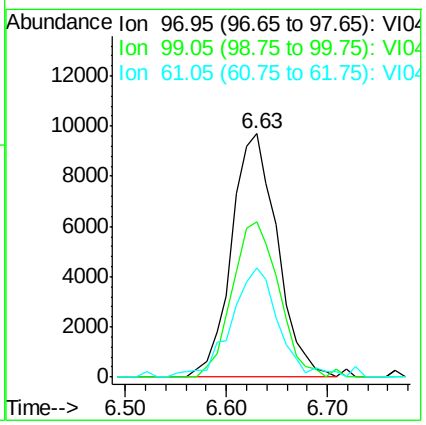
Manual Integrations APPROVED
feifei
5/10/2016 1:38:14 PM

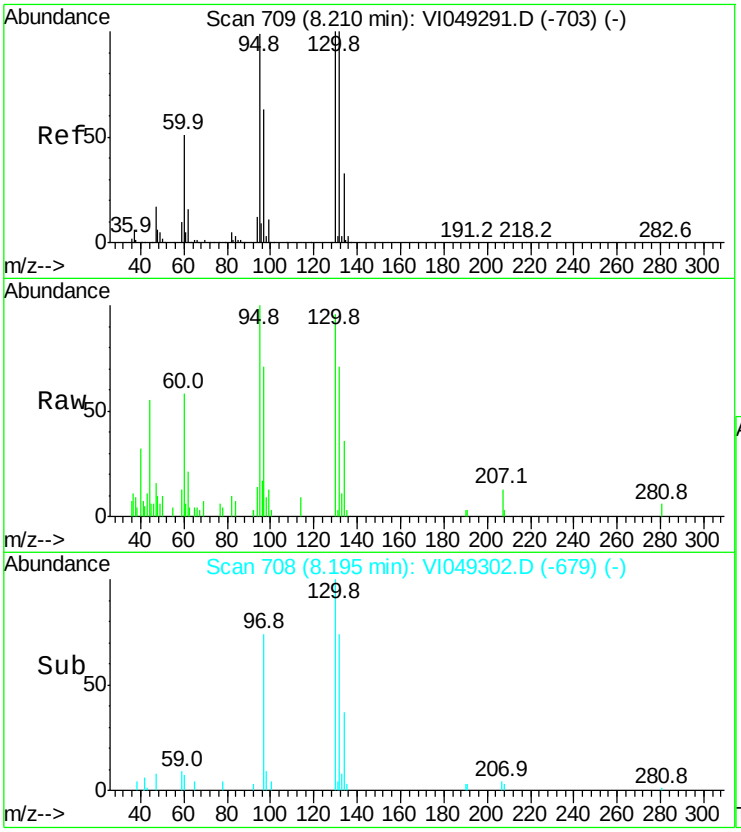


#29
1,1,1-Trichloroethane
Concen: 0.21 ug/L
RT: 6.63 min Scan# 549
Delta R.T. -0.01 min
Lab File: VI049302.D
Acq: 9 May 2016 17:43

Tgt Ion: 97 Resp: 30484

Ion	Ratio	Lower	Upper
97	100		
99	64.7	51.1	76.7
61	40.9	33.3	49.9

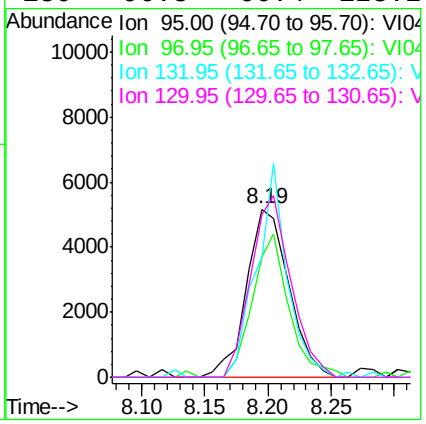




#34
Trichloroethene
Concen: 0.13 ug/L
RT: 8.19 min Scan# 708
Delta R.T. -0.02 min
Lab File: VI049302.D
Acq: 9 May 2016 17:43

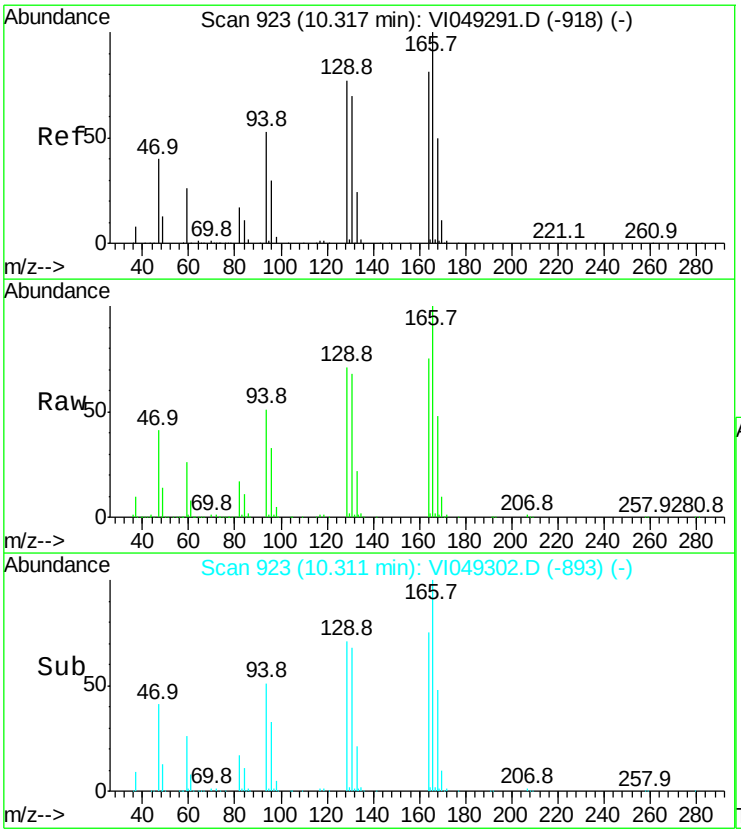
Tgt Ion: 95 Resp: 12086

Ion	Ratio	Lower	Upper
95	100		
97	71.2	45.8	85.2
132	71.3	63.9	118.7
130	96.3	66.4	123.2



Instrument :
MSVOA_I
ClientSampleId :
H4098

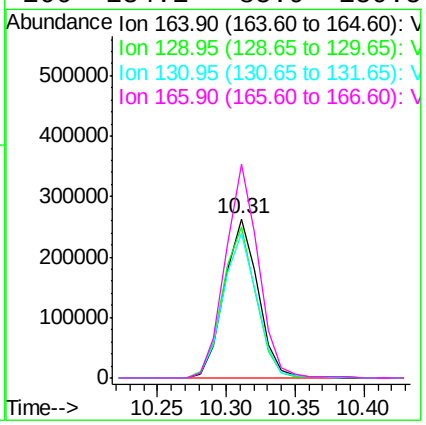
Manual Integrations APPROVED
feifei
5/10/2016 1:38:14 PM



#47
Tetrachloroethene
Concen: 7.53 ug/L
RT: 10.31 min Scan# 923
Delta R.T. -0.01 min
Lab File: VI049302.D
Acq: 9 May 2016 17:43

Tgt Ion:164 Resp: 445246

Ion	Ratio	Lower	Upper
164	100		
129	94.6	62.1	115.3
131	91.2	60.6	112.6
166	134.1	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049302.D
Acq On : 9 May 2016 17:43
Operator : FY/SY
Sample : H2874-25
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 10 06:07:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4098

Manual Integrations APPROVED
feifei
5/10/2016 1:38:14 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1147529	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	757536	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	282028	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	278632	3.94	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 78.80%			
7) Chloroethane-d5	2.09	69	187907	4.80	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 96.00%			
11) 1,1-Dichloroethene-d2	2.92	63	528045	3.17	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.40%			
20) 2-Butanone-d5	5.66	46	844028	55.18	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 110.36%			
24) Chloroform-d	6.36	84	852858	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
26) 1,2-Dichloroethane-d4	7.21	65	381818m	5.19	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.80%			
32) Benzene-d6	7.15	84	1449655	4.91	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.20%			
36) 1,2-Dichloropropane-d6	8.42	67	411318	4.96	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 99.20%			
41) Toluene-d8	9.68	98	1012938	4.65	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.00%			
43) trans-1,3-Dichloropropene-	10.01	79	144080	4.41	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 88.20%			
46) 2-Hexanone-d5	10.42	63	551446	53.48	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 106.96%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	183472	4.86	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 97.20%			
63) 1,2-Dichlorobenzene-d4	13.75	152	232037	4.69	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.80%			
Target Compounds						Qvalue
25) Chloroform	6.40	83	344648	1.87	ug/L	99
29) 1,1,1-Trichloroethane	6.63	97	30484	0.21	ug/L	99
34) Trichloroethene	8.19	95	12086	0.13	ug/L	90
47) Tetrachloroethene	10.31	164	445246	7.53	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049302.D
Acq On : 9 May 2016 17:43
Operator : FY/SY
Sample : H2874-25
Misc : 25mL/MSVOA I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4098

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	3	6	32	rVB	6642959	18742016	100.00%	34.619%
2	1.571	32	35	37	rBV2	12375	23984	0.13%	0.044%
3	1.699	45	48	56	rVB	263008	447273	2.39%	0.826%
4	2.093	84	88	100	rBV	167021	359738	1.92%	0.664%
5	2.368	114	116	121	rBV5	8195	16086	0.09%	0.030%
6	2.585	136	138	141	rVB2	12177	16995	0.09%	0.031%
7	2.801	157	160	164	rVB6	5299	12204	0.07%	0.023%
8	2.919	167	172	185	rVV	668066	1492572	7.96%	2.757%
9	3.343	213	215	217	rBV3	3301	5054	0.03%	0.009%
10	3.372	217	218	224	rVV4	4086	9279	0.05%	0.017%
11	3.539	233	235	237	rBV3	2756	4556	0.02%	0.008%
12	3.579	237	239	242	rVV3	6835	14465	0.08%	0.027%
13	3.746	254	256	258	rVB3	4101	5073	0.03%	0.009%
14	3.923	273	274	276	rBV2	4494	6425	0.03%	0.012%
15	3.963	276	278	281	rVV3	6475	12123	0.06%	0.022%
16	4.100	290	292	295	rBV2	3325	5139	0.03%	0.009%
17	4.150	295	297	299	rVB3	4244	5296	0.03%	0.010%
18	4.189	299	301	303	rBV3	3845	5002	0.03%	0.009%
19	4.297	311	312	316	rBV4	4190	9057	0.05%	0.017%
20	4.445	326	327	330	rBV3	4449	5964	0.03%	0.011%
21	4.691	347	352	354	rBV5	4605	13513	0.07%	0.025%
22	4.750	357	358	363	rVB4	3738	6009	0.03%	0.011%
23	4.829	363	366	370	rBV4	2391	6807	0.04%	0.013%
24	4.976	380	381	384	rVB3	5311	5899	0.03%	0.011%
25	5.114	390	395	399	rBV7	5523	17883	0.10%	0.033%
26	5.252	404	409	411	rBV4	3625	8253	0.04%	0.015%
27	5.360	419	420	424	rVB2	3520	5605	0.03%	0.010%
28	5.655	442	450	468	rBV	344300	1443489	7.70%	2.666%
29	5.852	468	470	474	rVB5	3989	6865	0.04%	0.013%
30	6.364	513	522	540	rBV2	726328	2859304	15.26%	5.281%
31	6.630	543	549	554	rVB4	30540	94232	0.50%	0.174%
32	6.699	554	556	559	rBV4	3457	4652	0.02%	0.009%
33	6.886	571	575	576	rVB3	3332	4738	0.03%	0.009%
34	7.151	594	602	606	rBV	1145329	3042496	16.23%	5.620%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049302.D
Acq On : 9 May 2016 17:43
Operator : FY/SY
Sample : H2874-25
Misc : 25mL/MSVOA I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4098

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.210	606	608	624	rVB	439248	1047191	5.59%	1.934%
36	7.624	647	650	652	rBV4	3213	4548	0.02%	0.008%
37	7.791	665	667	669	rVB3	3502	4732	0.03%	0.009%
38	7.919	674	680	690	rBV	1253115	2788257	14.88%	5.150%
39	8.037	690	692	695	rVB4	3973	5623	0.03%	0.010%
40	8.204	705	709	713	rBV	34380	73399	0.39%	0.136%
41	8.421	726	731	740	rBV	880318	1971529	10.52%	3.642%
42	8.529	740	742	749	rVB7	8292	17999	0.10%	0.033%
43	8.618	749	751	755	rVB5	4849	6951	0.04%	0.013%
44	8.677	755	757	761	rVB5	3200	6284	0.03%	0.012%
45	8.903	773	780	789	rBV8	15228	46709	0.25%	0.086%
46	9.110	800	801	804	rBV3	4046	5091	0.03%	0.009%
47	9.159	804	806	809	rVB2	4252	4535	0.02%	0.008%
48	9.287	817	819	821	rBV3	3115	4635	0.02%	0.009%
49	9.346	821	825	835	rBV	504572	947793	5.06%	1.751%
50	9.513	838	842	846	rVB	28009	52863	0.28%	0.098%
51	9.573	846	848	852	rVB5	4391	7671	0.04%	0.014%
52	9.681	855	859	865	rBV	1685078	2941458	15.69%	5.433%
53	10.006	888	892	898	rVV	304208	511268	2.73%	0.944%
54	10.074	898	899	900	rVV	7707	7554	0.04%	0.014%
55	10.104	900	902	903	rVV2	8214	11575	0.06%	0.021%
56	10.134	903	905	906	rVV2	10268	13680	0.07%	0.025%
57	10.202	906	912	918	rVV	94096	245433	1.31%	0.453%
58	10.311	918	923	930	rVV	2242677	3909563	20.86%	7.221%
59	10.419	930	934	947	rVV	1546095	2989291	15.95%	5.522%
60	10.567	947	949	950	rVV2	8137	13872	0.07%	0.026%
61	10.626	954	955	958	rVV3	7293	13701	0.07%	0.025%
62	10.724	962	965	969	rVV4	5941	14552	0.08%	0.027%
63	10.803	972	973	974	rVV	6022	4815	0.03%	0.009%
64	10.822	974	975	977	rVV2	4247	5494	0.03%	0.010%
65	10.950	986	988	989	rVV2	3456	4921	0.03%	0.009%
66	10.970	989	990	993	rVV3	3775	4601	0.02%	0.008%
67	11.206	1010	1014	1024	rBV	1590462	2627579	14.02%	4.853%
68	11.334	1024	1027	1034	rVB7	10658	28005	0.15%	0.052%
69	11.452	1036	1039	1042	rBV4	7190	12744	0.07%	0.024%
70	11.570	1047	1051	1052	rBV4	4253	9911	0.05%	0.018%
71	11.836	1075	1078	1082	rVB6	8522	18835	0.10%	0.035%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049302.D
Acq On : 9 May 2016 17:43
Operator : FY/SY
Sample : H2874-25
Misc : 25mL/MSVOA I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4098

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.954	1088	1090	1094	rVB5	3092	5657	0.03%	0.010%
73	12.013	1094	1096	1098	rBV2	3155	5051	0.03%	0.009%
74	12.191	1110	1114	1117	rBV5	4964	13254	0.07%	0.024%
75	12.240	1117	1119	1123	rBV5	4183	9586	0.05%	0.018%
76	12.387	1130	1134	1137	rBV2	89485	165915	0.89%	0.306%
77	12.446	1137	1140	1148	rVB	413353	694375	3.70%	1.283%
78	12.614	1155	1157	1159	rBV2	4735	6263	0.03%	0.012%
79	12.683	1162	1164	1166	rVB3	4171	6136	0.03%	0.011%
80	12.722	1166	1168	1169	rBV2	4650	7226	0.04%	0.013%
81	12.830	1177	1179	1180	rBV	3568	5099	0.03%	0.009%
82	13.037	1197	1200	1204	rBV5	4222	12422	0.07%	0.023%
83	13.135	1209	1210	1213	rVB3	5395	6614	0.04%	0.012%
84	13.175	1213	1214	1215	rBV	4759	5053	0.03%	0.009%
85	13.263	1221	1223	1226	rVB3	4378	6423	0.03%	0.012%
86	13.332	1228	1230	1234	rBV5	5996	12944	0.07%	0.024%
87	13.411	1234	1238	1247	rBV	1138008	2055834	10.97%	3.797%
88	13.588	1253	1256	1257	rBV2	7952	13622	0.07%	0.025%
89	13.746	1267	1272	1282	rBV	977584	1749460	9.33%	3.231%
90	13.893	1285	1287	1290	rVB4	4667	6860	0.04%	0.013%
91	14.021	1296	1300	1304	rVB2	59152	117848	0.63%	0.218%
92	14.120	1307	1310	1311	rBV3	7350	10436	0.06%	0.019%
93	14.218	1318	1320	1322	rBV3	5759	6056	0.03%	0.011%
94	14.257	1322	1324	1325	rBV2	4327	6049	0.03%	0.011%
95	14.366	1333	1335	1337	rBV3	6168	9860	0.05%	0.018%
96	14.533	1347	1352	1353	rBV5	6197	15618	0.08%	0.029%
97	14.592	1355	1358	1359	rBV3	7032	11699	0.06%	0.022%
98	14.671	1364	1366	1367	rBV2	5894	7033	0.04%	0.013%
99	15.222	1420	1422	1423	rBV2	7965	8054	0.04%	0.015%
100	15.586	1456	1459	1462	rBV2	27375	55061	0.29%	0.102%

Sum of corrected areas: 54138216

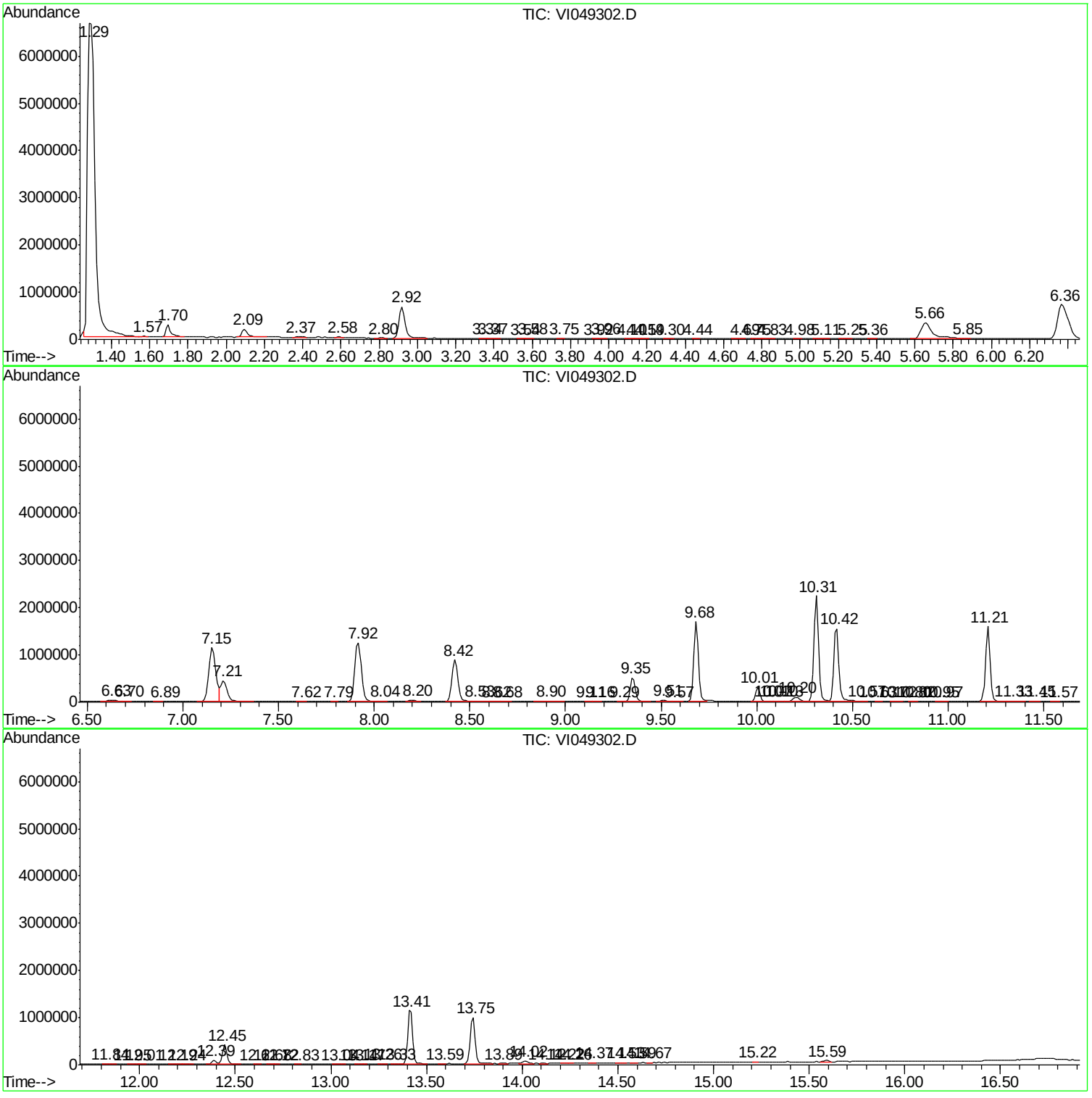
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049302.D
Acq On : 9 May 2016 17:43
Operator : FY/SY
Sample : H2874-25
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4098

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049302.D
Acq On : 9 May 2016 17:43
Operator : FY/SY
Sample : H2874-25
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4098

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049302.D
Acq On : 9 May 2016 17:43
Operator : FY/SY
Sample : H2874-25
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4098

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

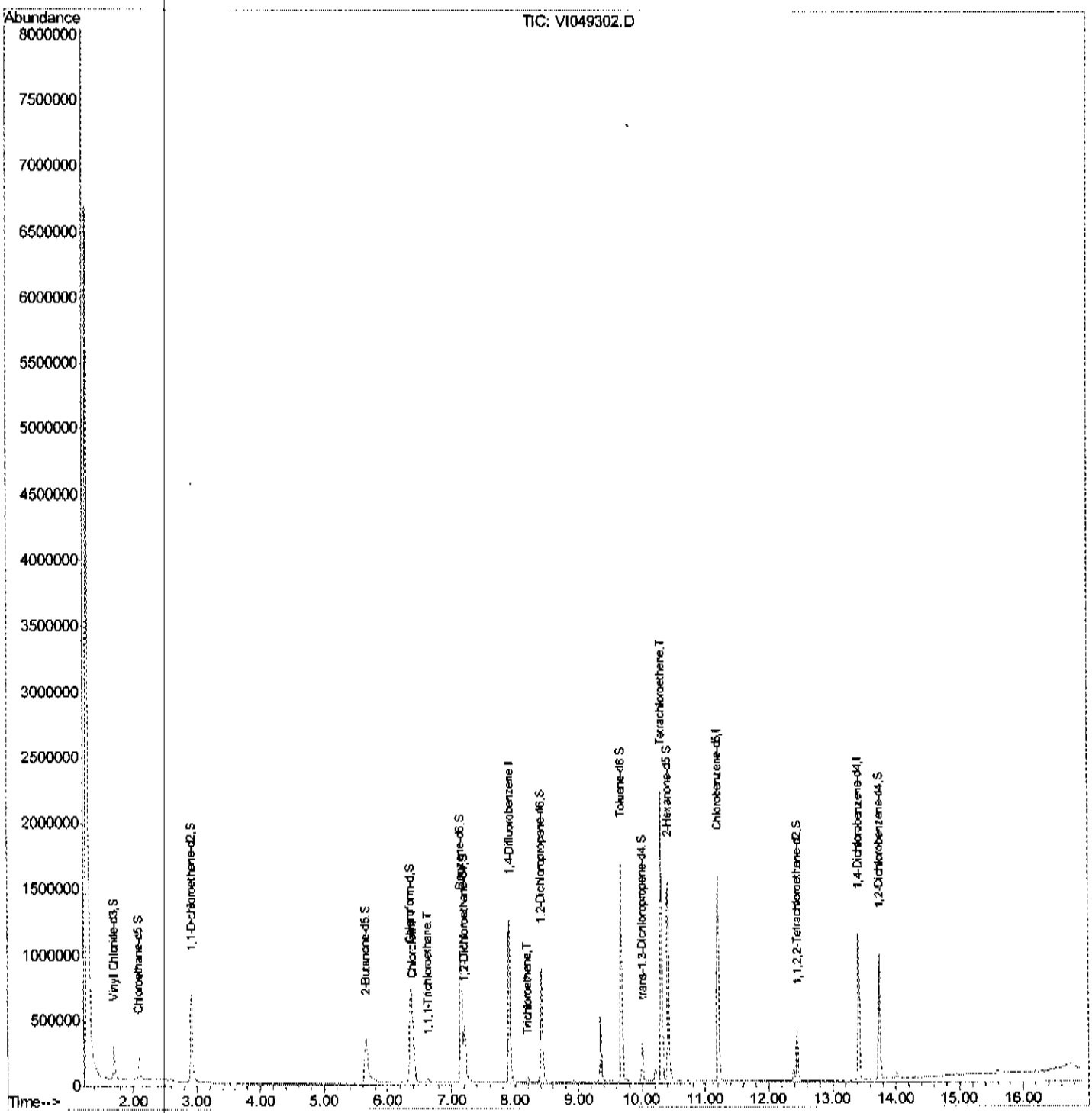
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\V1050916\
Data File : V1049302.D
Acq On : 9 May 2016 17:43
Operator : FY/SY
Sample : H2874-25
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 10 06:07:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4098

Manual Integrations APPROVED
feifei
5/10/2016 1:38:14 PM



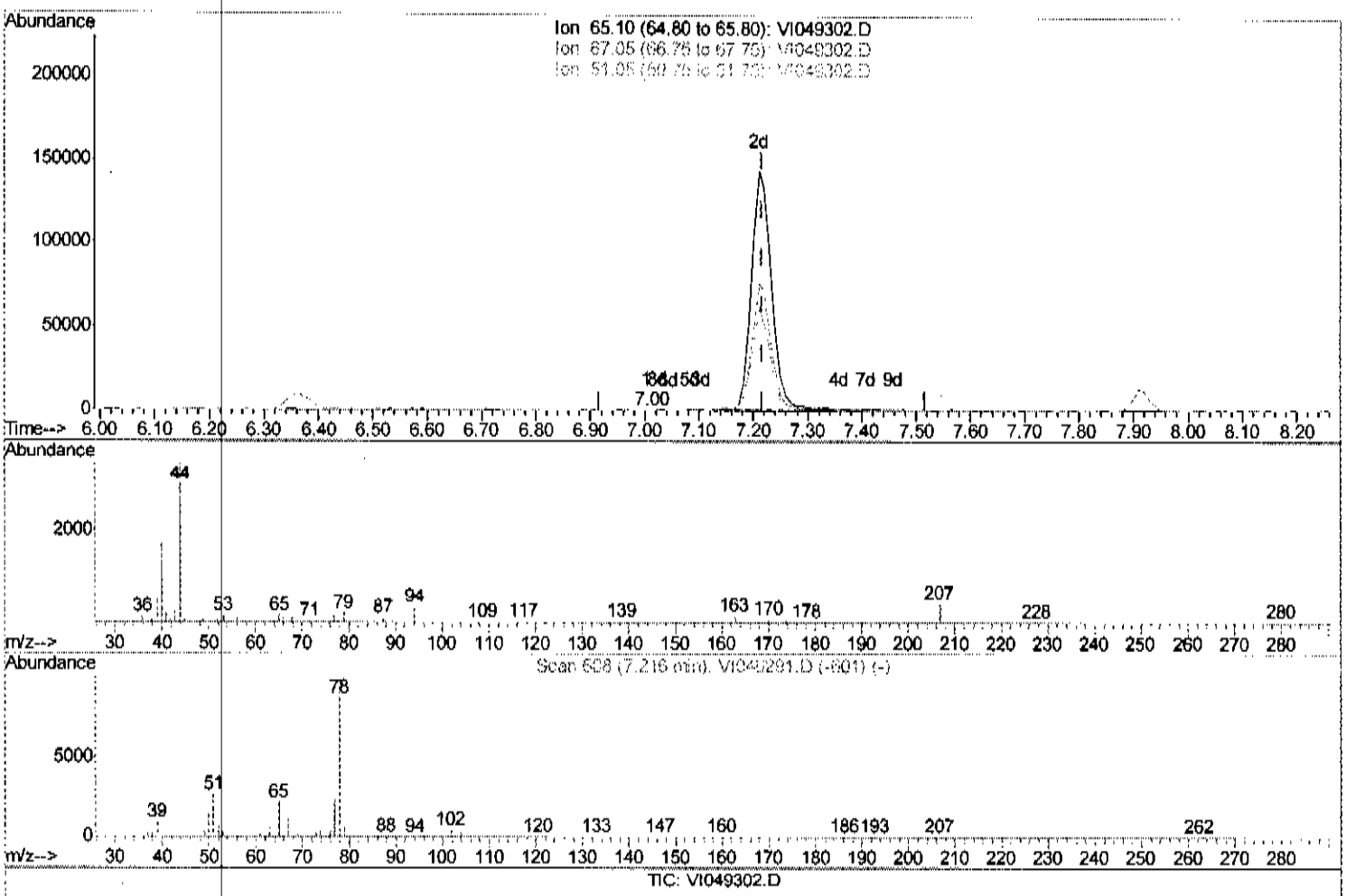
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049302.D
Acq On : 9 May 2016 17:43
Operator : FY/SY
Sample : H2874-25
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 10 05:38:12 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4098

Manual Integrations APPROVED
feifei
5/10/2016 1:38:14 PM



TIC: VI049302.D

(26) 1,2-Dichloroethane-d4 (S)

7.004min (-0.212) 0.00ug/L

response 174

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	54.60
51.05	123.20	150.00
0.00	0.00	0.00

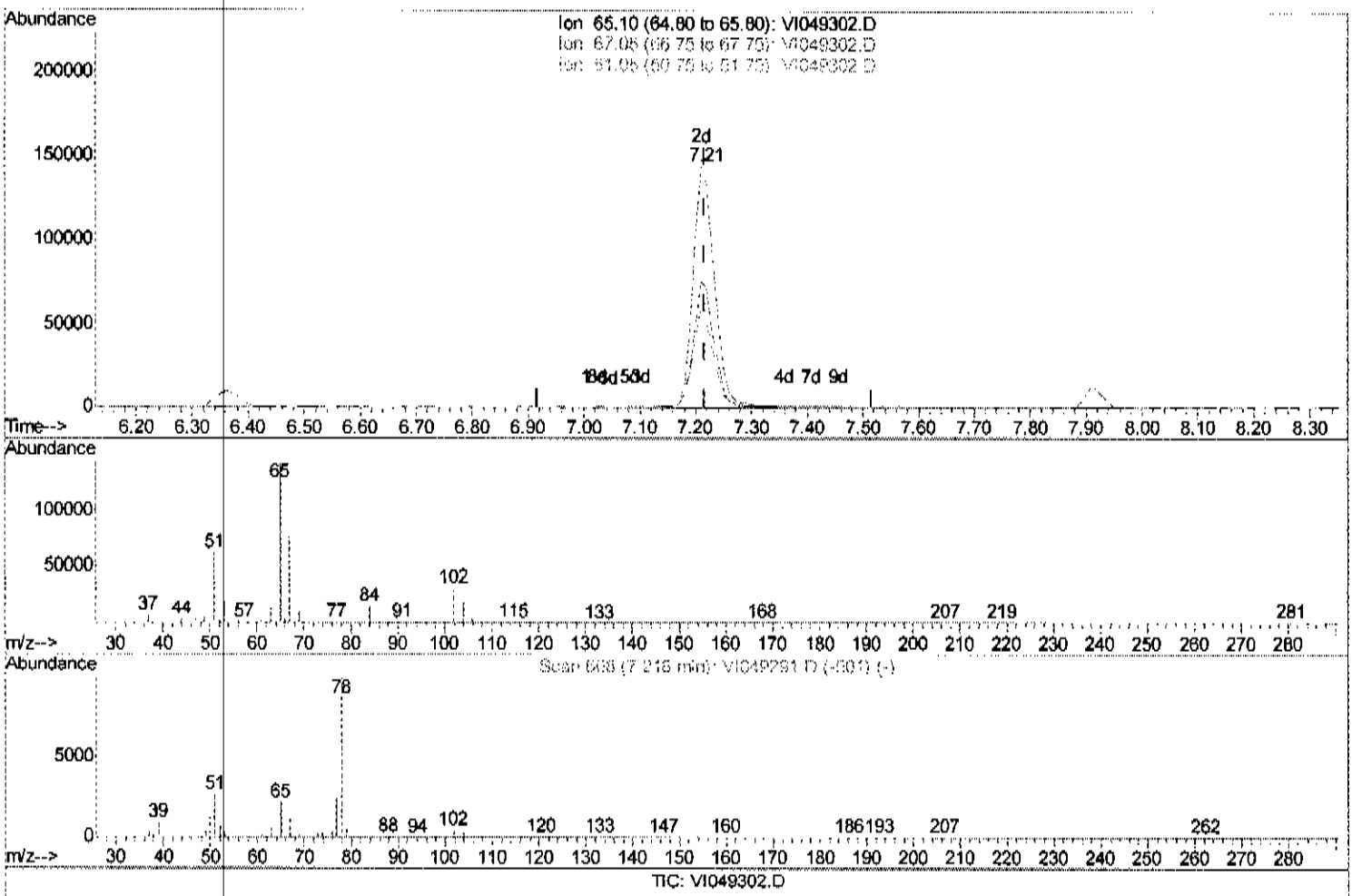
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049302.D
Acq On : 9 May 2016 17:43
Operator : FY/SY
Sample : H2874-25
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 10 05:38:12 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4098

Manual Integrations APPROVED
feifei
5/10/2016 1:38:14 PM



TIC: VI049302.D

(26) 1,2-Dichloroethane-d4 (S)

7.210min (-0.006) 5.19ug/L m

response 381818

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.02#
51.05	123.20	0.07#
0.00	0.00	0.00

FT 5/10/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049302.D
Acq On : 9 May 2016 17:43
Operator : FY/SY
Sample : H2874-25
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 10 06:07:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4098

Manual Integrations APPROVED
feifei
5/10/2016 1:38:14 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1147529	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	757536	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	282028	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	278632	3.94	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 78.80%			
7) Chloroethane-d5	2.09	69	187907	4.80	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 96.00%			
11) 1,1-Dichloroethene-d2	2.92	63	528045	3.17	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.40%			
20) 2-Butanone-d5	5.66	46	844028	55.18	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 110.36%			
24) Chloroform-d	6.36	84	852858	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
26) 1,2-Dichloroethane-d4	7.21	65	381818m	5.19	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.80%			
32) Benzene-d6	7.15	84	1449655	4.91	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.20%			
36) 1,2-Dichloropropane-d6	8.42	67	411318	4.96	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 99.20%			
41) Toluene-d8	9.68	98	1012938	4.65	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.00%			
43) trans-1,3-Dichloropropene-	10.01	79	144080	4.41	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 88.20%			
46) 2-Hexanone-d5	10.42	63	551446	53.48	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 106.96%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	183472	4.86	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 97.20%			
63) 1,2-Dichlorobenzene-d4	13.75	152	232037	4.69	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.80%			
Target Compounds						Qvalue
25) Chloroform	6.40	83	344648	1.87	ug/L	99
29) 1,1,1-Trichloroethane	6.63	97	30484	0.21	ug/L	99
34) Trichloroethene	8.19	95	12086	0.13	ug/L	90
47) Tetrachloroethene	10.31	164	445246	7.53	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FT slip hold

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4099

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049279.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.11	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.74	
71-55-6	1,1,1-Trichloroethane	0.29	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.88	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4099

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049279.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.11	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	19	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4099

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049279.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4099

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049279.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

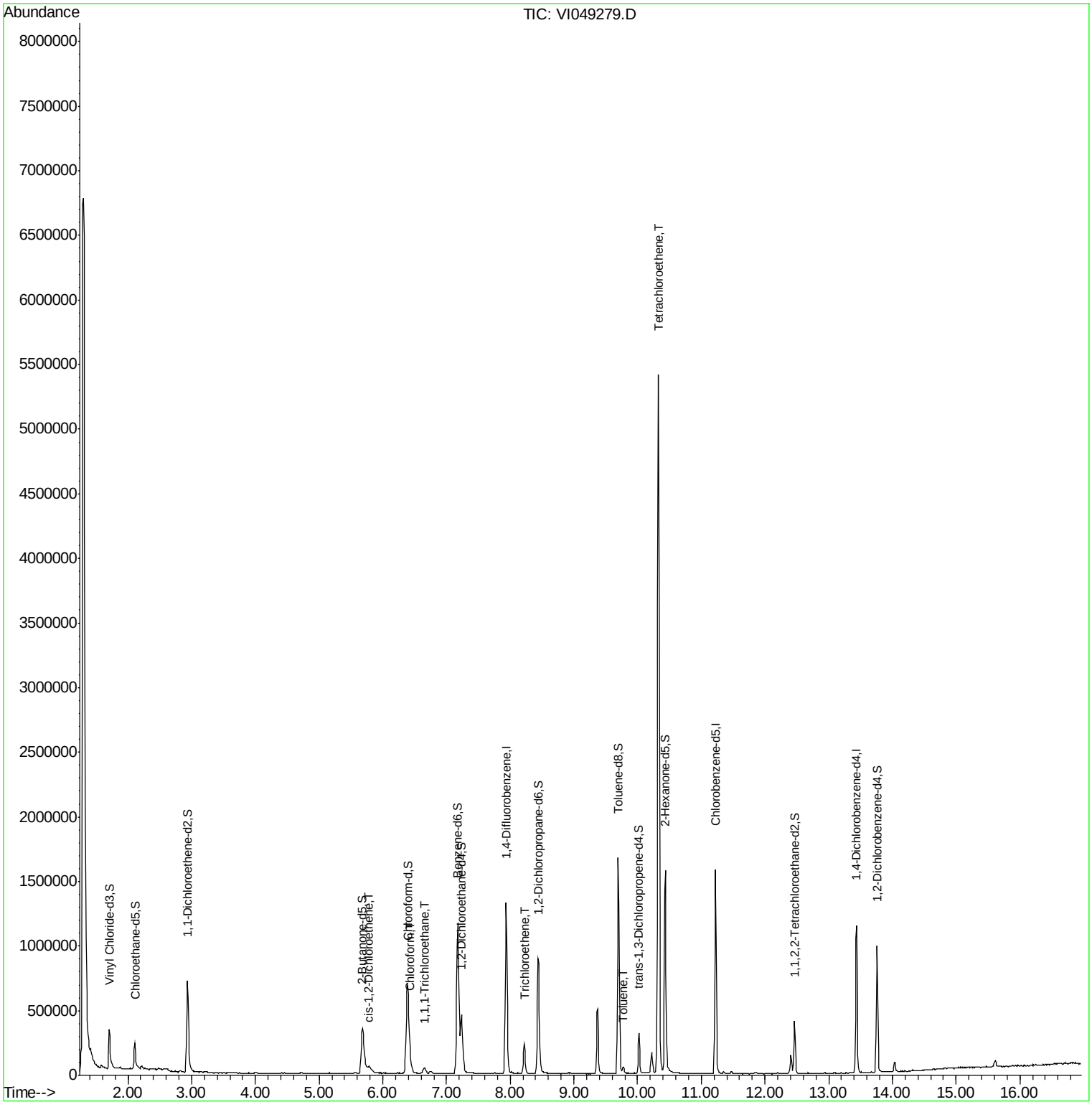
Quantitation Report (LSC Reviewed)

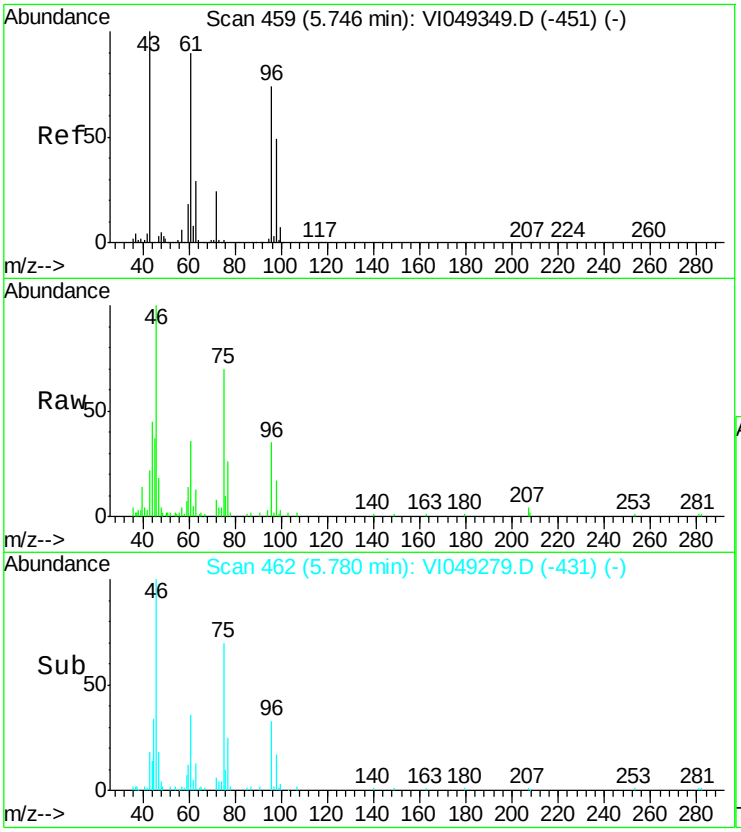
Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050616\
Data File : VI049279.D
Acq On : 6 May 2016 12:49
Operator : FY/SY
Sample : H2874-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 23 07:31:34 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4099

Manual Integrations APPROVED
feifei
5/9/2016 12:05:18 PM

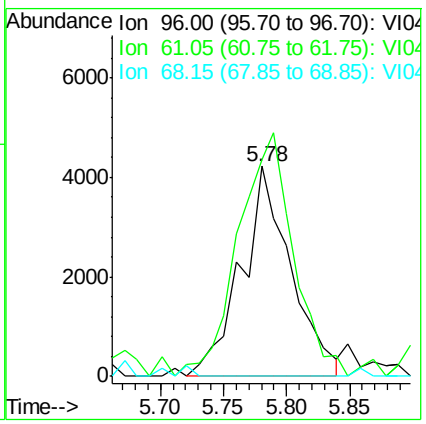




#22
cis-1,2-Dichloroethene
Concen: 0.11 ug/L
RT: 5.78 min Scan# 462
Delta R.T. 0.00 min
Lab File: VI049279.D
Acq: 6 May 2016 12:49

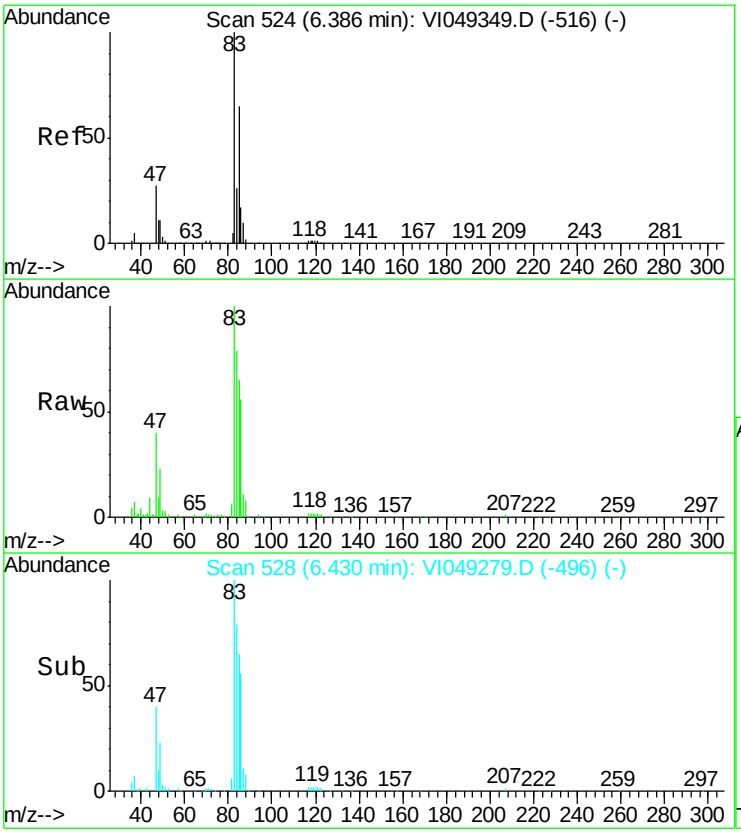
Tgt Ion: 96 Resp: 11465

Ion	Ratio	Lower	Upper
96	100		
61	103.6	82.1	152.5
68	0.0	0.0	0.0



Instrument :
MSVOA_I
ClientSampleId :
H4099

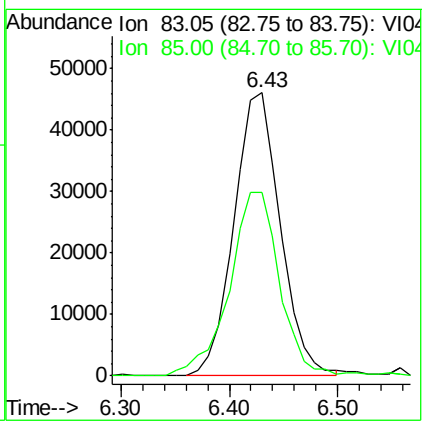
Manual Integrations APPROVED
feifei
5/9/2016 12:05:18 PM

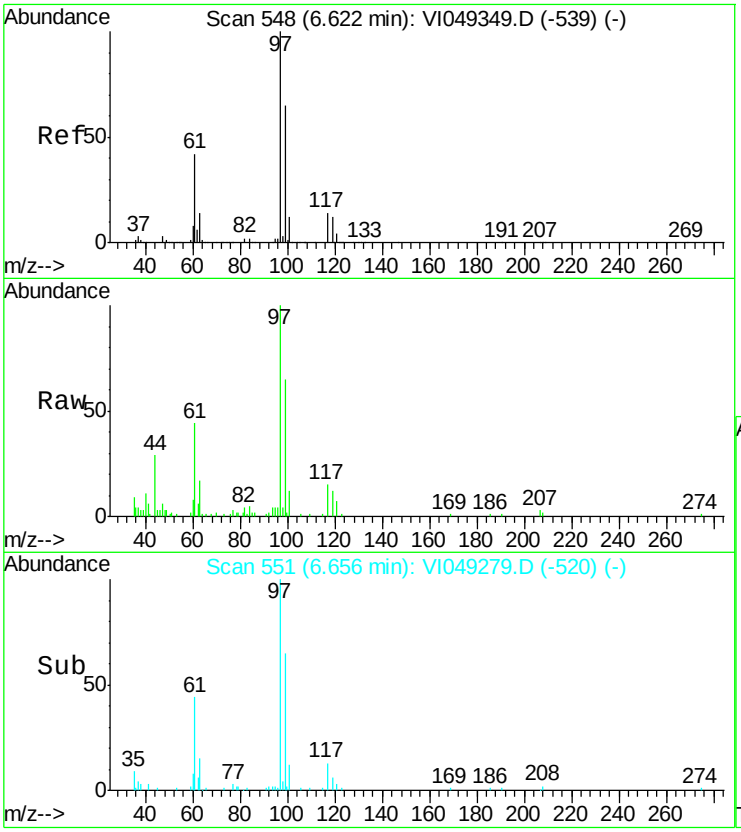


#25
Chloroform
Concen: 0.74 ug/L
RT: 6.43 min Scan# 528
Delta R.T. 0.01 min
Lab File: VI049279.D
Acq: 6 May 2016 12:49

Tgt Ion: 83 Resp: 137236

Ion	Ratio	Lower	Upper
83	100		
85	65.0	47.3	87.8

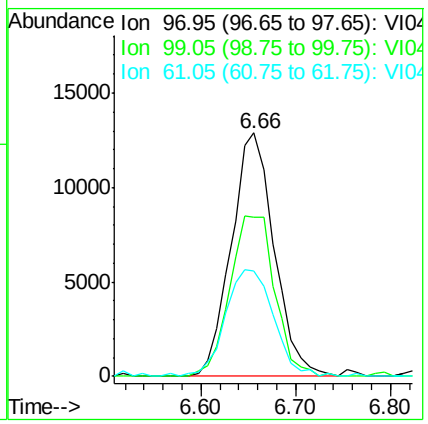




#29
1,1,1-Trichloroethane
Concen: 0.29 ug/L
RT: 6.66 min Scan# 551
Delta R.T. 0.00 min
Lab File: VI049279.D
Acq: 6 May 2016 12:49

Tgt Ion: 97 Resp: 40541

Ion	Ratio	Lower	Upper
97	100		
99	68.8	51.1	76.7
61	48.8	33.3	49.9



Instrument :
MSVOA_I
ClientSampleId :
H4099

Manual Integrations APPROVED
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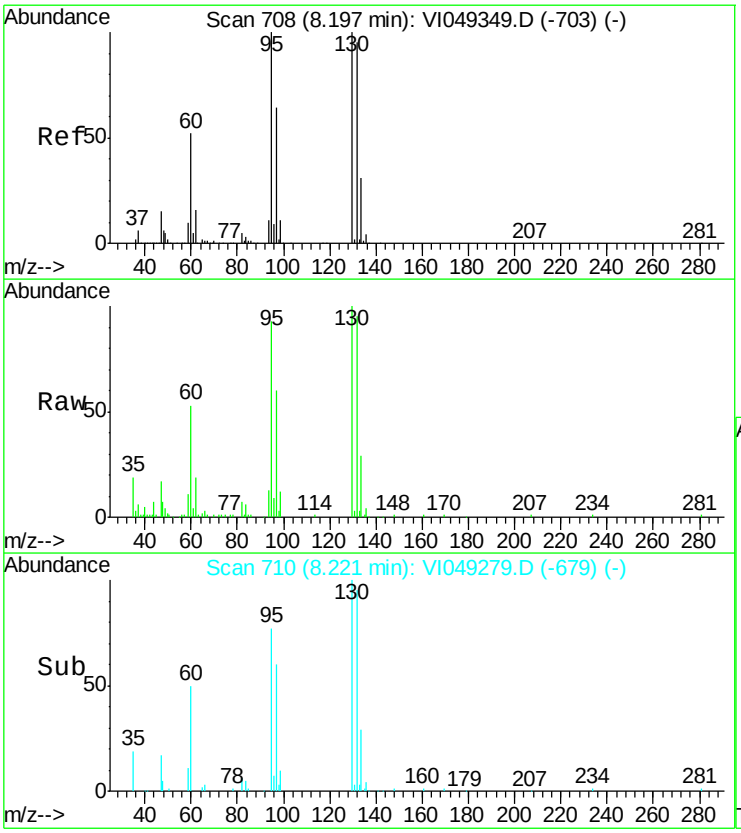
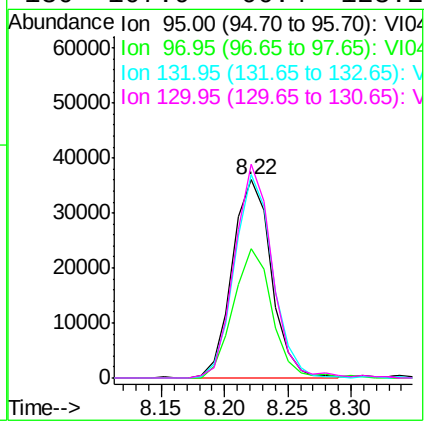
5/9/2016 12:05:18 PM

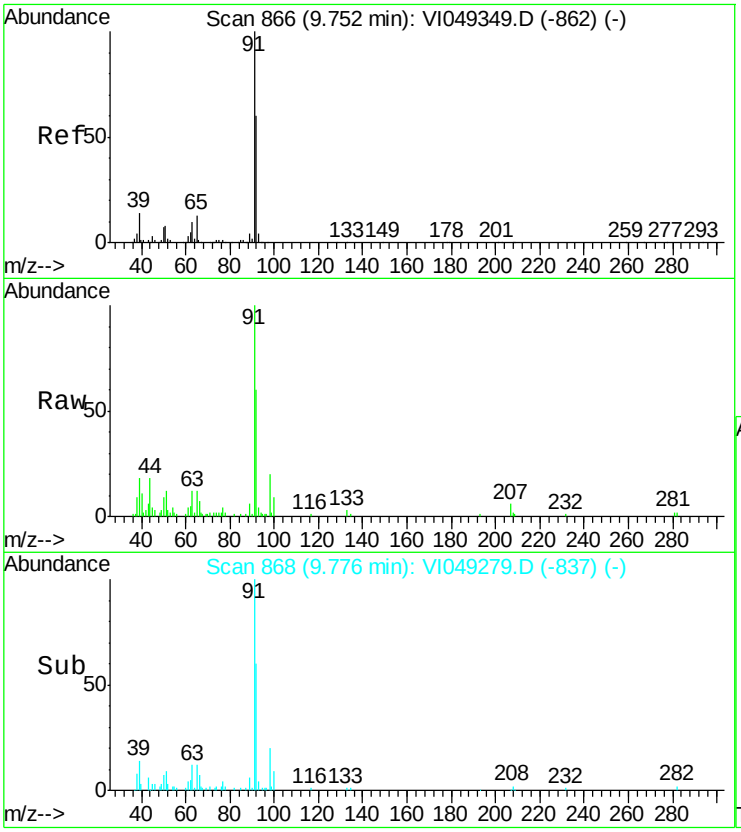


#34
Trichloroethene
Concen: 0.88 ug/L
RT: 8.22 min Scan# 710
Delta R.T. 0.00 min
Lab File: VI049279.D
Acq: 6 May 2016 12:49

Tgt Ion: 95 Resp: 77321

Ion	Ratio	Lower	Upper
95	100		
97	65.1	45.8	85.2
132	102.8	63.9	118.7
130	107.9	66.4	123.2





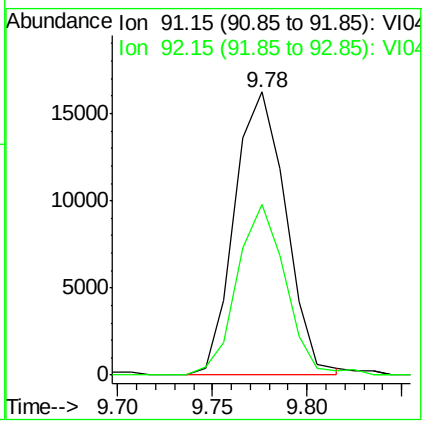
#42
Toluene
Concen: 0.11 ug/L
RT: 9.78 min Scan# 868
Delta R.T. 0.00 min
Lab File: VI049279.D
Acq: 6 May 2016 12:49

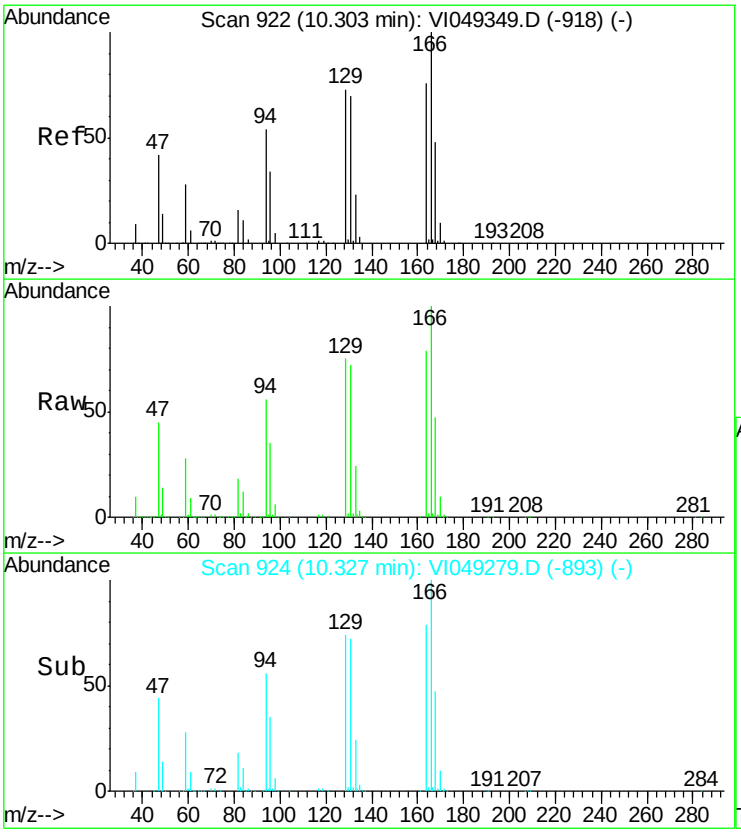
Tgt Ion: 91 Resp: 30423

Ion	Ratio	Lower	Upper
91	100		
92	60.4	41.2	76.4

Instrument :
MSVOA_I
ClientSampleId :
H4099

Manual Integrations APPROVED
feifei
5/9/2016 12:05:18 PM

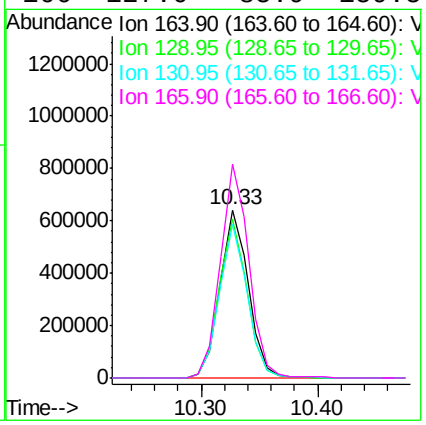




#47
Tetrachloroethene
Concen: 18.77 ug/L
RT: 10.33 min Scan# 924
Delta R.T. 0.00 min
Lab File: VI049279.D
Acq: 6 May 2016 12:49

Tgt Ion:164 Resp: 1084902

Ion	Ratio	Lower	Upper
164	100		
129	94.6	62.1	115.3
131	91.4	60.6	112.6
166	127.0	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050616\
Data File : VI049279.D
Acq On : 6 May 2016 12:49
Operator : FY/SY
Sample : H2874-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4099

Manual Integrations APPROVED
feifei
5/9/2016 12:05:18 PM

Quant Time: May 23 07:31:34 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1147136	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	740439	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	265552	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	309379	4.38	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 87.60%			
7) Chloroethane-d5	2.11	69	202985m	5.19	ug/L	0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 103.80%			
11) 1,1-Dichloroethene-d2	2.94	63	563012	3.38	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 67.60%			
20) 2-Butanone-d5	5.68	46	835167	54.62	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 109.24%			
24) Chloroform-d	6.39	84	852743	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
26) 1,2-Dichloroethane-d4	7.24	65	382329	5.20	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.00%			
32) Benzene-d6	7.18	84	1472991	5.11	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.20%			
36) 1,2-Dichloropropane-d6	8.44	67	412002	5.08	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.60%			
41) Toluene-d8	9.70	98	1006528	4.73	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
43) trans-1,3-Dichloropropene-	10.02	79	147020	4.60	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.00%			
46) 2-Hexanone-d5	10.44	63	537594	53.34	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 106.68%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	175481	4.76	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.20%			
63) 1,2-Dichlorobenzene-d4	13.76	152	225667	4.85	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 97.00%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.78	96	11465	0.11	ug/L	87
25) Chloroform	6.43	83	137236	0.74	ug/L	97
29) 1,1,1-Trichloroethane	6.66	97	40541	0.29	ug/L	92
34) Trichloroethene	8.22	95	77321	0.88	ug/L	90
42) Toluene	9.78	91	30423	0.11	ug/L	98
47) Tetrachloroethene	10.33	164	1084902	18.77	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049279.D
Acq On : 6 May 2016 12:49
Operator : FY/SY
Sample : H2874-04
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4099

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.302	3	7	17	rBV	6616926	18581922	100.00%	31.128%
2	1.577	33	35	38	rBV2	21203	33439	0.18%	0.056%
3	1.705	45	48	59	rBV	303050	587790	3.16%	0.985%
4	1.873	63	65	69	rVB3	13886	25593	0.14%	0.043%
5	2.109	85	89	97	rBV	194967	384914	2.07%	0.645%
6	2.207	97	99	104	rBV5	19604	40373	0.22%	0.068%
7	2.355	112	114	115	rBV2	7327	7904	0.04%	0.013%
8	2.483	125	127	129	rBV3	7511	7665	0.04%	0.013%
9	2.690	147	148	150	rVB2	7715	6956	0.04%	0.012%
10	2.749	153	154	157	rVB3	11529	14220	0.08%	0.024%
11	2.818	157	161	164	rBV5	12717	31512	0.17%	0.053%
12	2.936	168	173	182	rBV	709620	1574233	8.47%	2.637%
13	3.192	197	199	200	rBV2	6340	7859	0.04%	0.013%
14	3.300	207	210	211	rVB2	3706	5464	0.03%	0.009%
15	3.379	215	218	222	rVB6	3254	10210	0.05%	0.017%
16	3.438	222	224	225	rBV2	4313	5149	0.03%	0.009%
17	3.566	234	237	239	rBV3	4833	8304	0.04%	0.014%
18	3.674	245	248	254	rVB8	9515	25465	0.14%	0.043%
19	3.831	262	264	266	rBV2	2825	4727	0.03%	0.008%
20	4.008	278	282	287	rVB6	7154	20305	0.11%	0.034%
21	4.343	315	316	320	rVB4	3502	4973	0.03%	0.008%
22	4.412	320	323	325	rBV4	4230	7038	0.04%	0.012%
23	4.461	325	328	332	rVB5	7690	17372	0.09%	0.029%
24	4.560	336	338	340	rVB3	3891	4968	0.03%	0.008%
25	4.727	349	355	360	rBV6	8074	29778	0.16%	0.050%
26	4.796	360	362	365	rBV3	3184	4706	0.03%	0.008%
27	5.160	393	399	401	rBV6	6738	15453	0.08%	0.026%
28	5.337	414	417	418	rVB3	4553	4809	0.03%	0.008%
29	5.573	438	441	445	rVB5	4959	11048	0.06%	0.019%
30	5.682	445	452	460	rBV	349346	1238781	6.67%	2.075%
31	5.908	474	475	479	rVB3	4452	8238	0.04%	0.014%
32	6.075	490	492	494	rVB3	4837	7782	0.04%	0.013%
33	6.115	494	496	501	rBV6	2940	8409	0.05%	0.014%
34	6.193	501	504	506	rBV3	3391	5405	0.03%	0.009%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049279.D
Acq On : 6 May 2016 12:49
Operator : FY/SY
Sample : H2874-04
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4099

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.252	509	510	514	rVB4	4198	5882	0.03%	0.010%
36	6.390	514	524	536	rBV2	684889	2356722	12.68%	3.948%
37	6.656	544	551	556	rBV	42436	133771	0.72%	0.224%
38	6.754	556	561	569	rVB5	14930	49358	0.27%	0.083%
39	6.971	581	583	586	rVB4	3795	5054	0.03%	0.008%
40	7.059	590	592	595	rVB2	4119	6645	0.04%	0.011%
41	7.178	595	604	608	rBV	1170166	3143217	16.92%	5.266%
42	7.237	608	610	620	rVV	455677	1018657	5.48%	1.706%
43	7.345	620	621	626	rVV5	6086	15285	0.08%	0.026%
44	7.414	626	628	631	rVB4	6485	11099	0.06%	0.019%
45	7.453	631	632	635	rBV3	4502	7365	0.04%	0.012%
46	7.640	648	651	657	rVB7	3293	8897	0.05%	0.015%
47	7.758	661	663	669	rVB7	6815	13720	0.07%	0.023%
48	7.935	675	681	693	rBV	1320172	2814792	15.15%	4.715%
49	8.221	705	710	716	rBV	229342	467889	2.52%	0.784%
50	8.437	727	732	742	rBV	888265	2026638	10.91%	3.395%
51	8.742	759	763	768	rVB8	6722	20409	0.11%	0.034%
52	8.841	770	773	775	rBV3	3682	4802	0.03%	0.008%
53	8.929	775	782	786	rBV7	6718	22084	0.12%	0.037%
54	9.156	802	805	806	rVB3	3405	4891	0.03%	0.008%
55	9.274	815	817	819	rBV3	3255	5885	0.03%	0.010%
56	9.372	822	827	837	rBV	502252	983623	5.29%	1.648%
57	9.589	846	849	853	rVB6	4858	11993	0.06%	0.020%
58	9.638	853	854	856	rBV2	3593	4792	0.03%	0.008%
59	9.697	856	860	865	rVV	1671929	2940382	15.82%	4.926%
60	9.776	865	868	873	rVV	51090	107220	0.58%	0.180%
61	9.884	877	879	883	rVB5	4295	8294	0.04%	0.014%
62	9.953	883	886	889	rVB4	5655	8659	0.05%	0.015%
63	10.022	889	893	899	rBV	312715	537634	2.89%	0.901%
64	10.219	906	913	918	rBV	156409	335030	1.80%	0.561%
65	10.327	919	924	931	rVV	5401004	9210505	49.57%	15.429%
66	10.435	931	935	948	rVB	1564423	2864600	15.42%	4.799%
67	10.612	951	953	954	rVB2	5498	5133	0.03%	0.009%
68	10.770	967	969	971	rBV2	3782	6107	0.03%	0.010%
69	11.006	992	993	998	rVB4	2636	5109	0.03%	0.009%
70	11.223	1011	1015	1025	rBV	1580071	2600264	13.99%	4.356%
71	11.351	1025	1028	1034	rVB5	15377	33976	0.18%	0.057%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049279.D
Acq On : 6 May 2016 12:49
Operator : FY/SY
Sample : H2874-04
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4099

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.479	1034	1041	1046	rBV2	18423	45225	0.24%	0.076%
73	11.656	1058	1059	1062	rBV3	4506	6294	0.03%	0.011%
74	11.852	1075	1079	1084	rVB3	12446	29123	0.16%	0.049%
75	12.010	1092	1095	1097	rBV4	5171	9744	0.05%	0.016%
76	12.197	1110	1114	1116	rBV3	7681	14458	0.08%	0.024%
77	12.266	1116	1121	1122	rBV5	4161	8918	0.05%	0.015%
78	12.404	1130	1135	1138	rBV	141411	258302	1.39%	0.433%
79	12.463	1138	1141	1146	rVB	403453	680100	3.66%	1.139%
80	12.650	1155	1160	1161	rBV4	3672	7391	0.04%	0.012%
81	12.679	1161	1163	1165	rVV3	4491	7105	0.04%	0.012%
82	12.758	1168	1171	1173	rVB3	2905	4715	0.03%	0.008%
83	12.807	1174	1176	1180	rVB4	2349	4968	0.03%	0.008%
84	12.876	1180	1183	1184	rBV3	4106	5535	0.03%	0.009%
85	12.935	1188	1189	1192	rBV3	5577	7310	0.04%	0.012%
86	12.984	1192	1194	1197	rBV4	3629	5584	0.03%	0.009%
87	13.102	1203	1206	1209	rBV4	4893	8295	0.04%	0.014%
88	13.270	1222	1223	1226	rVB3	3899	4973	0.03%	0.008%
89	13.329	1226	1229	1230	rBV3	3836	6454	0.03%	0.011%
90	13.368	1230	1233	1235	rVB4	4800	6423	0.03%	0.011%
91	13.437	1235	1240	1246	rBV	1142158	2002198	10.77%	3.354%
92	13.634	1254	1260	1262	rBV6	3654	11082	0.06%	0.019%
93	13.663	1262	1263	1266	rBV3	5296	8233	0.04%	0.014%
94	13.762	1268	1273	1281	rBV	976297	1714841	9.23%	2.873%
95	14.028	1297	1300	1306	rVB2	73739	144916	0.78%	0.243%
96	14.136	1309	1311	1313	rBV3	5682	9795	0.05%	0.016%
97	14.264	1322	1324	1325	rBV2	6167	8334	0.04%	0.014%
98	14.323	1327	1330	1333	rVV5	7850	17394	0.09%	0.029%
99	15.612	1457	1461	1465	rVB	43572	79674	0.43%	0.133%
100	16.478	1547	1549	1550	rBV2	11389	17870	0.10%	0.030%

Sum of corrected areas: 59694401

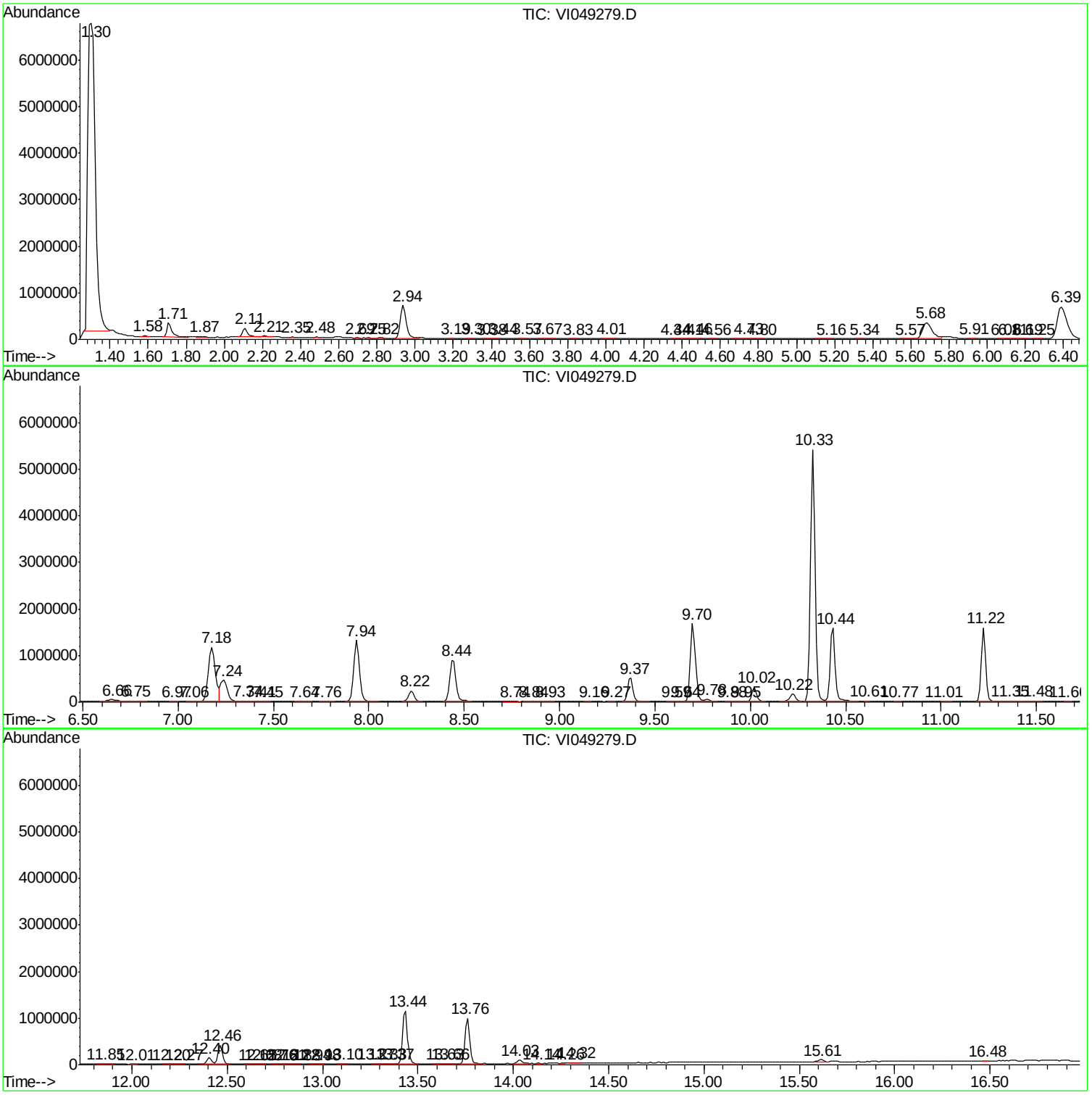
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049279.D
Acq On : 6 May 2016 12:49
Operator : FY/SY
Sample : H2874-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4099

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049279.D
Acq On : 6 May 2016 12:49
Operator : FY/SY
Sample : H2874-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4099

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049279.D
Acq On : 6 May 2016 12:49
Operator : FY/SY
Sample : H2874-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4099

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

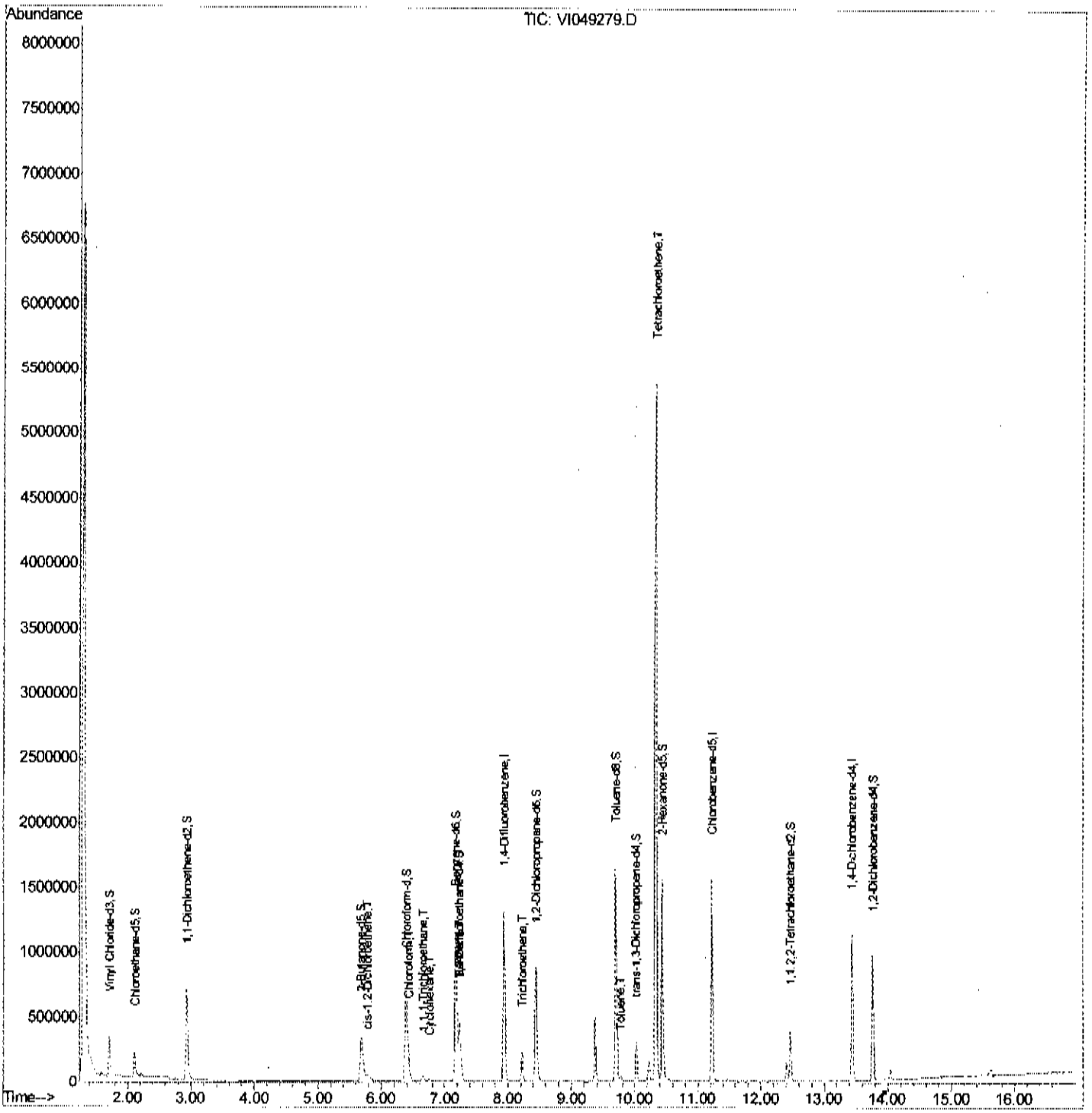
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049279.D
Acq On : 6 May 2016 12:49
Operator : FY/SY
Sample : H2874-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 04:26:23 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4099

Manual Integrations APPROVED
feifei
5/9/2016 12:05:18 PM

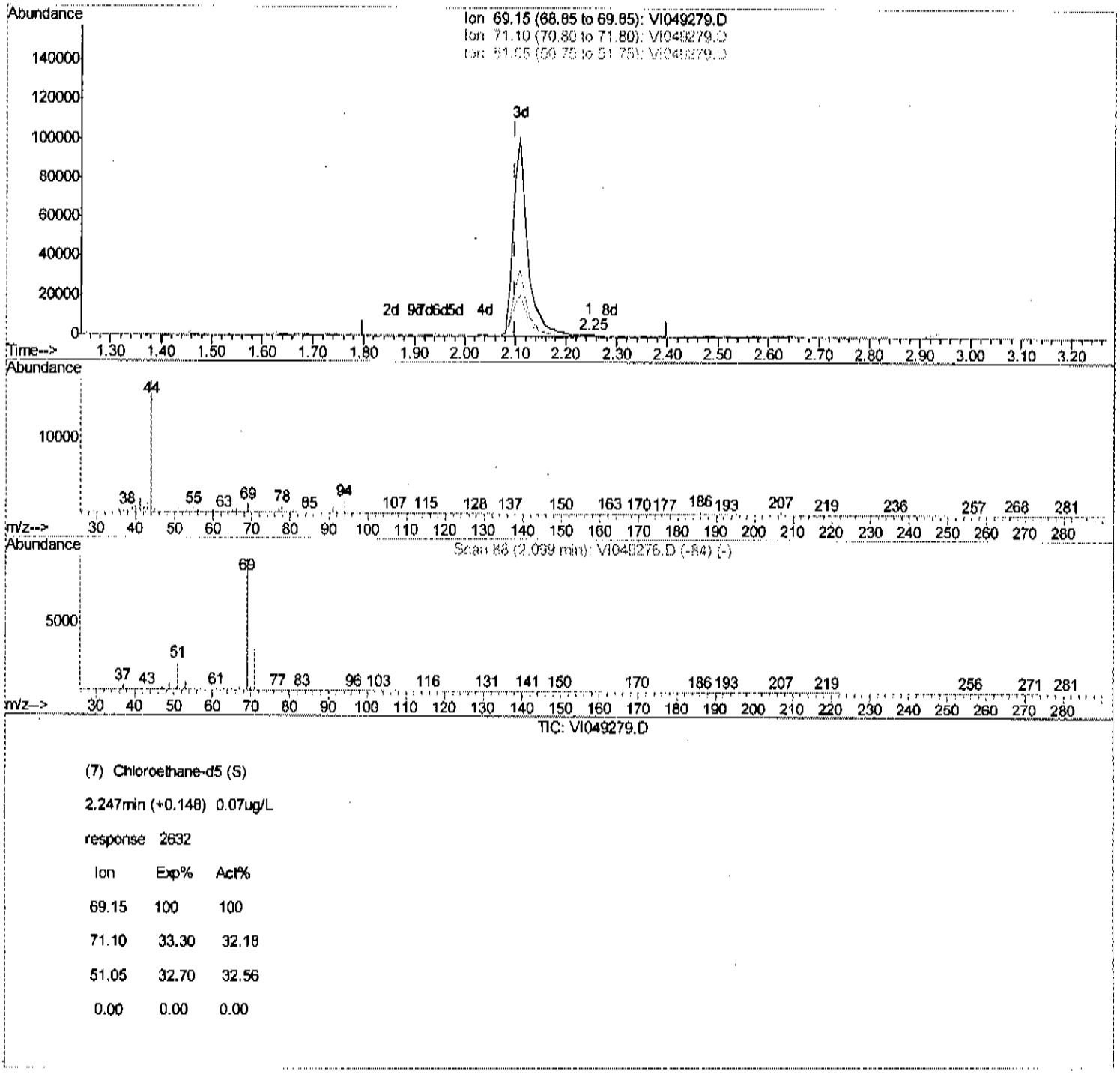


Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049279.D
Acq On : 6 May 2016 12:49
Operator : FY/SY
Sample : H2874-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 04:13:11 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4099

Manual Integrations APPROVED
feifei
5/9/2016 12:05:18 PM



(7) Chloroethane-d5 (S)

2.247min (+0.148) 0.07ug/L

response 2632

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	32.18
51.05	32.70	32.56
0.00	0.00	0.00

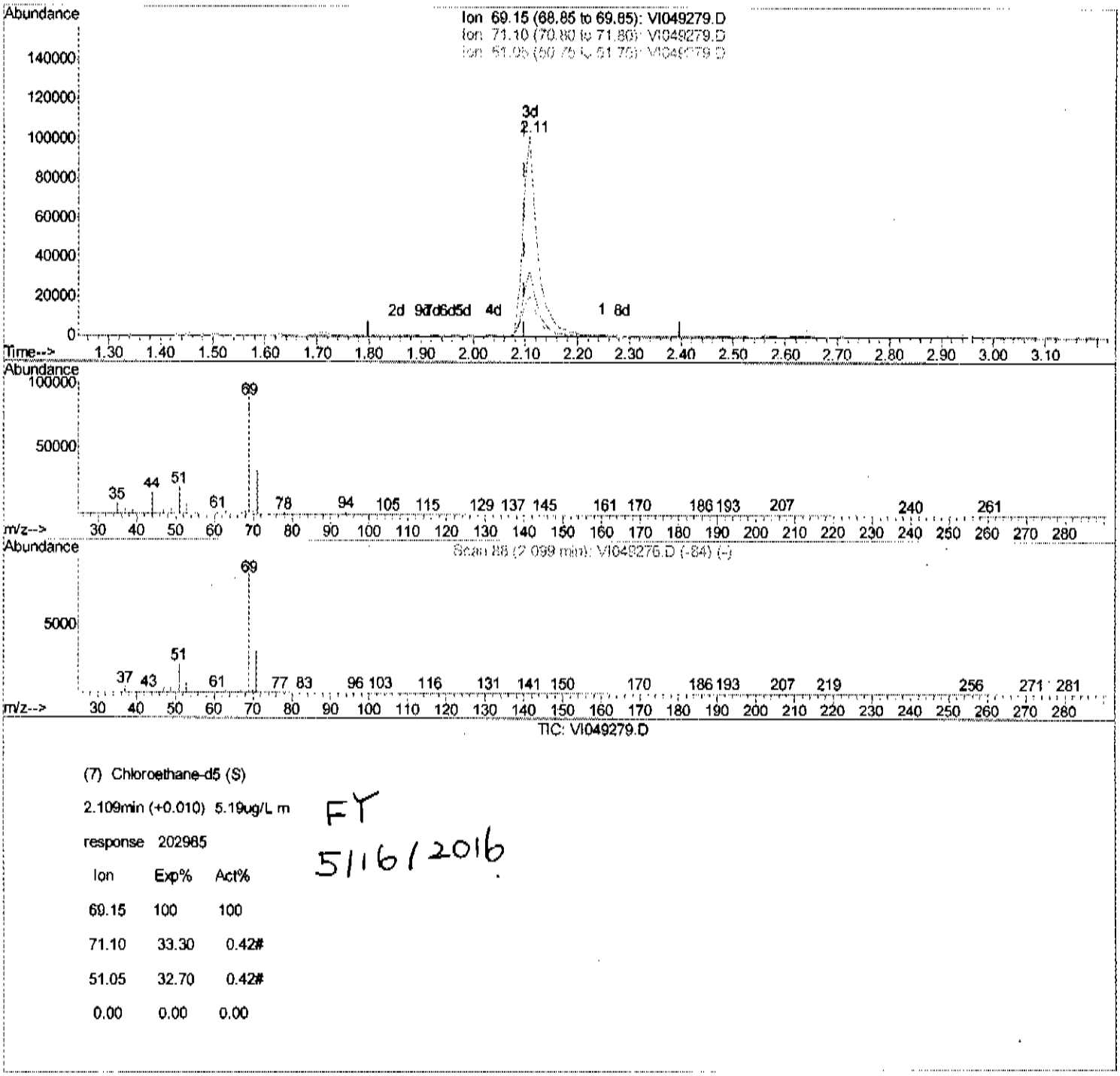
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049279.D
Acq On : 6 May 2016 12:49
Operator : FY/SY
Sample : H2874-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 04:13:11 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4099

Manual Integrations APPROVED
feifei
5/9/2016 12:05:18 PM



(7) Chloroethane-d5 (S)

2.109min (+0.010) 5.19ug/L m

response 202985

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.42#
51.05	32.70	0.42#
0.00	0.00	0.00

FY
5/16/2016

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050616\
Data File : VI049279.D
Acq On : 6 May 2016 12:49
Operator : FY/SY
Sample : H2874-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 23 07:31:34 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4099

Manual Integrations APPROVED
feifei
5/9/2016 12:05:18 PM

FY 5/16/2016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1147136	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	740439	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	265552	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	309379	4.38	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 87.60%			
7) Chloroethane-d5	2.11	69	202985m	5.19	ug/L	0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 103.80%			
11) 1,1-Dichloroethene-d2	2.94	63	563012	3.38	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 67.60%			
20) 2-Butanone-d5	5.68	46	835167	54.62	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 109.24%			
24) Chloroform-d	6.39	84	852743	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
26) 1,2-Dichloroethane-d4	7.24	65	382329	5.20	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.00%			
32) Benzene-d6	7.18	84	1472991	5.11	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.20%			
36) 1,2-Dichloropropane-d6	8.44	67	412002	5.08	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.60%			
41) Toluene-d8	9.70	98	1006528	4.73	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
43) trans-1,3-Dichloropropene-	10.02	79	147020	4.60	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.00%			
46) 2-Hexanone-d5	10.44	63	537594	53.34	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 106.68%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	175481	4.76	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.20%			
63) 1,2-Dichlorobenzene-d4	13.76	152	225667	4.85	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 97.00%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.78	96	11465	0.11	ug/L	87
25) Chloroform	6.43	83	137236	0.74	ug/L	97
29) 1,1,1-Trichloroethane	6.66	97	40541	0.29	ug/L	92
34) Trichloroethene	8.22	95	77321	0.88	ug/L	90
42) Toluene	9.78	91	30423	0.11	ug/L	98
47) Tetrachloroethene	10.33	164	1084902	18.77	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4101

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049265.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.60	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.4	
71-55-6	1,1,1-Trichloroethane	0.34	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.61	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4101

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049265.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	20	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4101

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049265.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4101

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049265.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

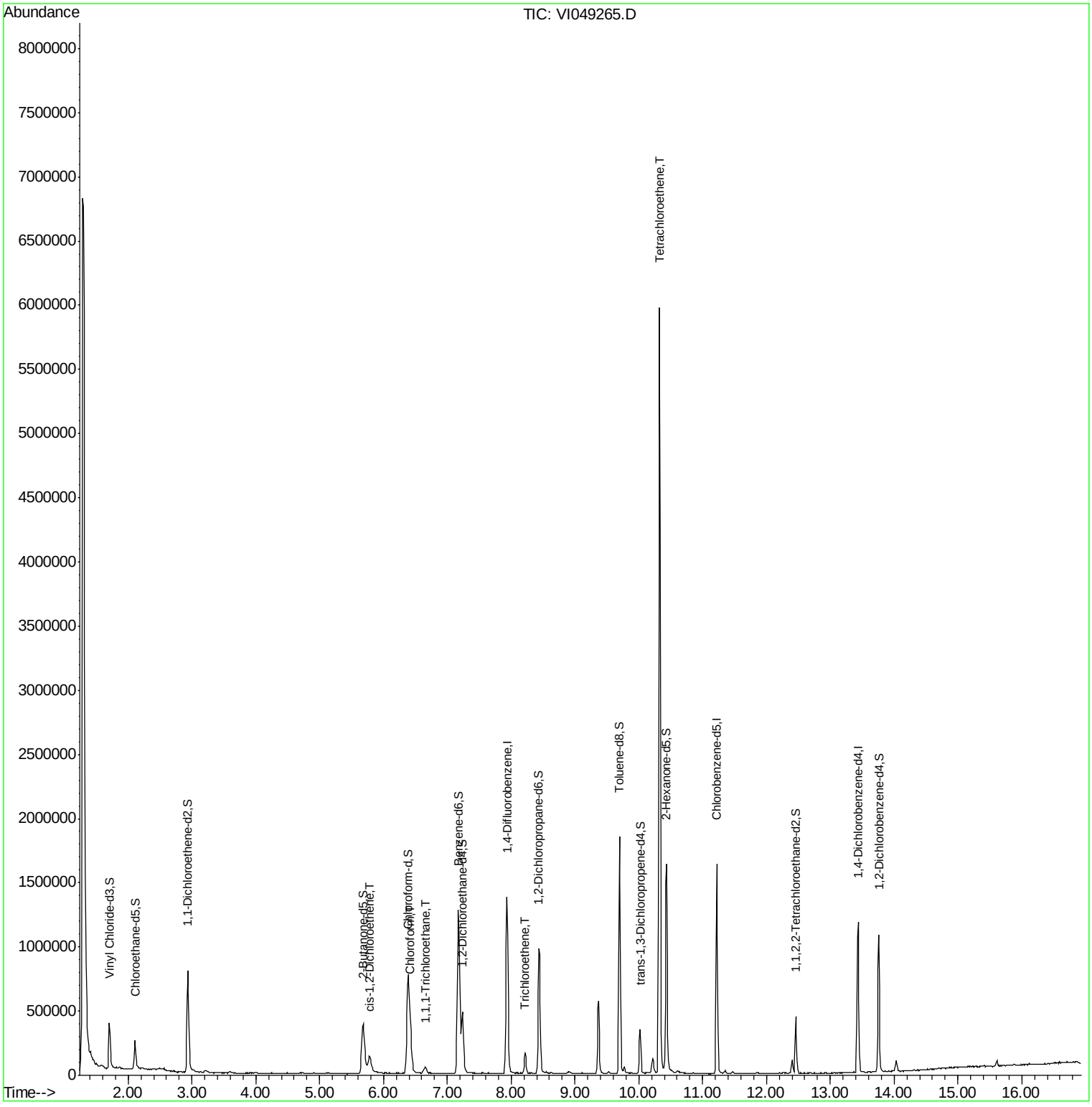
Quantitation Report (LSC Reviewed)

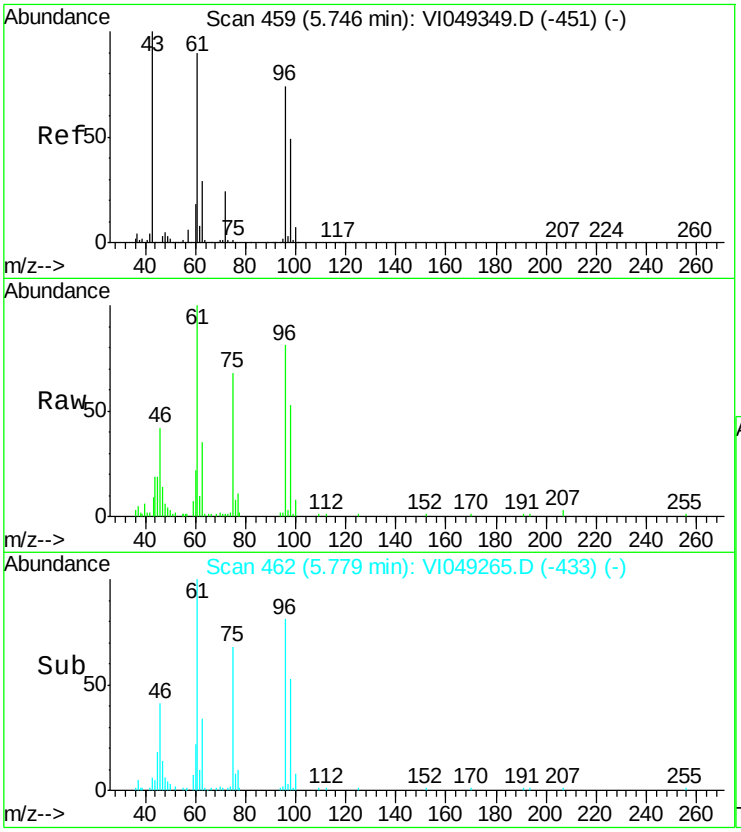
Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050516\
Data File : VI049265.D
Acq On : 5 May 2016 22:12
Operator : FY/SY
Sample : H2874-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Quant Time: May 23 07:27:00 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4101

Manual Integrations APPROVED
feifei
5/6/2016 11:44:21 AM

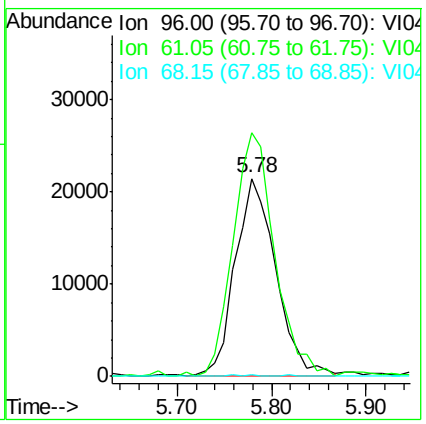




#22
cis-1,2-Dichloroethene
Concen: 0.60 ug/L m
RT: 5.78 min Scan# 462
Delta R.T. -0.01 min
Lab File: VI049265.D
Acq: 5 May 2016 22:12

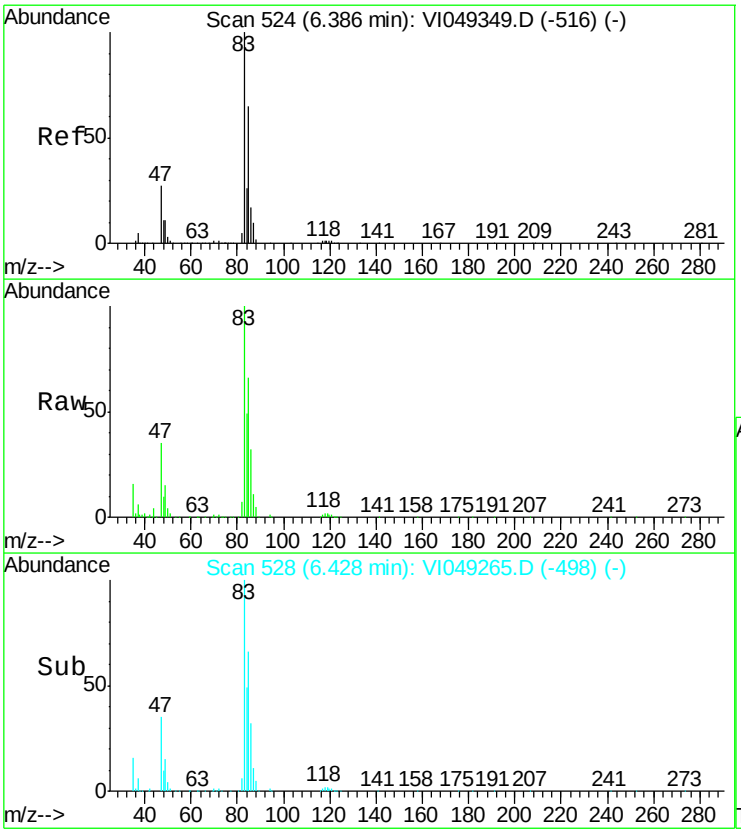
Tgt Ion: 96 Resp: 64584

Ion	Ratio	Lower	Upper
96	100		
61	122.9	82.1	152.5
68	0.8	0.0	0.0#



Instrument :
MSVOA_I
ClientSampleId :
H4101

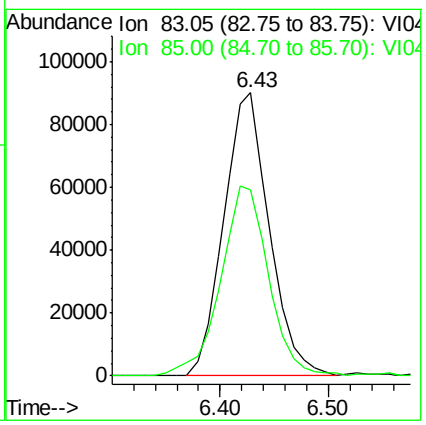
Manual Integrations APPROVED
feifei
5/6/2016 11:44:21 AM

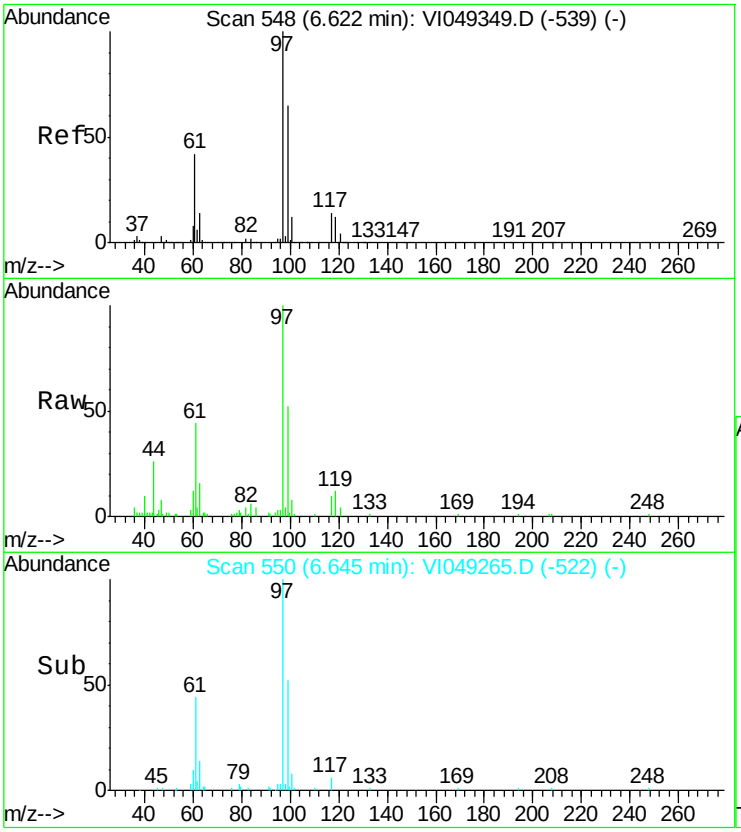


#25
Chloroform
Concen: 1.39 ug/L
RT: 6.43 min Scan# 528
Delta R.T. -0.00 min
Lab File: VI049265.D
Acq: 5 May 2016 22:12

Tgt Ion: 83 Resp: 262856

Ion	Ratio	Lower	Upper
83	100		
85	65.8	47.3	87.8

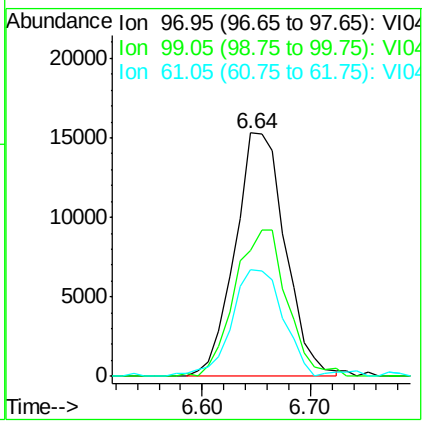




#29
1,1,1-Trichloroethane
Concen: 0.34 ug/L
RT: 6.64 min Scan# 550
Delta R.T. -0.02 min
Lab File: VI049265.D
Acq: 5 May 2016 22:12

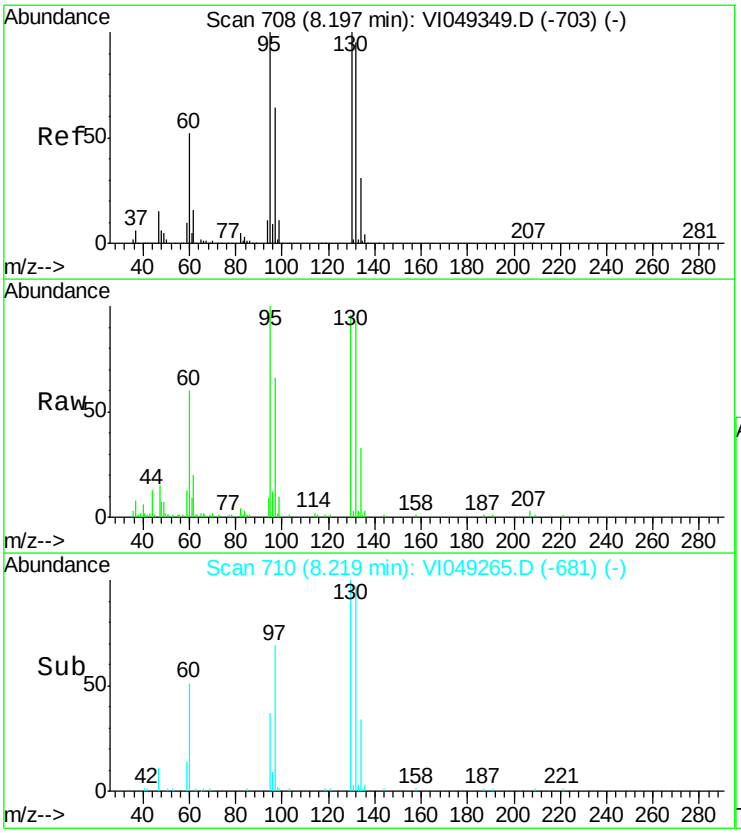
Tgt Ion: 97 Resp: 49444

Ion	Ratio	Lower	Upper
97	100		
99	61.9	51.1	76.7
61	44.8	33.3	49.9



Instrument :
MSVOA_I
ClientSampleId :
H4101

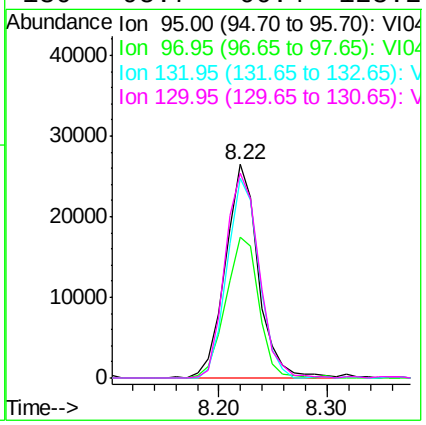
Manual Integrations APPROVED
feifei
5/6/2016 11:44:21 AM

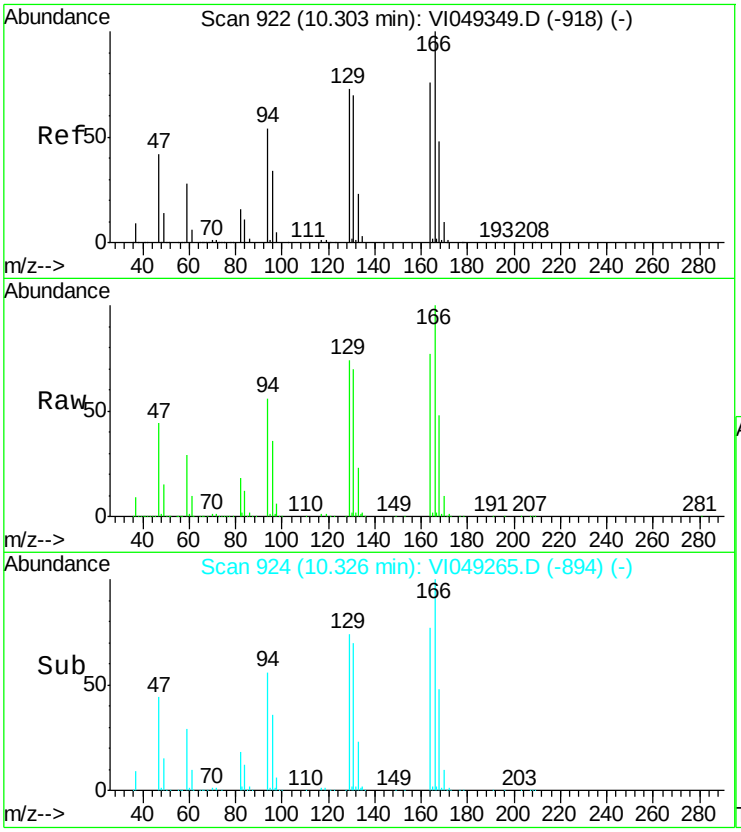


#34
Trichloroethene
Concen: 0.61 ug/L
RT: 8.22 min Scan# 710
Delta R.T. -0.01 min
Lab File: VI049265.D
Acq: 5 May 2016 22:12

Tgt Ion: 95 Resp: 56057

Ion	Ratio	Lower	Upper
95	100		
97	65.7	45.8	85.2
132	93.2	63.9	118.7
130	95.7	66.4	123.2

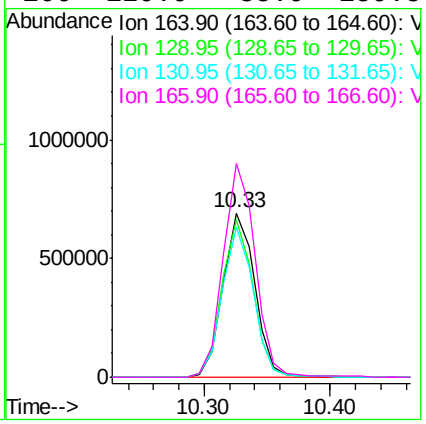




#47
Tetrachloroethene
Concen: 19.86 ug/L
RT: 10.33 min Scan# 924
Delta R.T. -0.00 min
Lab File: VI049265.D
Acq: 5 May 2016 22:12

Tgt Ion:164 Resp: 1199068

Ion	Ratio	Lower	Upper
164	100		
129	96.0	62.1	115.3
131	91.4	60.6	112.6
166	129.9	85.9	159.5



Instrument :
MSVOA_I
ClientSampleId :
H4101

Manual Integrations APPROVED
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5/6/2016 11:44:21 AM

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050516\
Data File : VI049265.D
Acq On : 5 May 2016 22:12
Operator : FY/SY
Sample : H2874-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4101

Manual Integrations APPROVED
feifei
5/6/2016 11:44:21 AM

Quant Time: May 23 07:27:00 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1173670	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.22	117	773733	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	277489	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	347976	4.82	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 96.40%			
7) Chloroethane-d5	2.11	69	230875	5.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 115.40%			
11) 1,1-Dichloroethene-d2	2.93	63	611618	3.59	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 71.80%			
20) 2-Butanone-d5	5.68	46	909943	58.17	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 116.34%			
24) Chloroform-d	6.39	84	922704	5.02	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.40%			
26) 1,2-Dichloroethane-d4	7.24	65	410106	5.45	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.00%			
32) Benzene-d6	7.18	84	1589644	5.27	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 105.40%			
36) 1,2-Dichloropropane-d6	8.44	67	453465	5.35	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.00%			
41) Toluene-d8	9.70	98	1109113	4.99	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.80%			
43) trans-1,3-Dichloropropene-	10.02	79	165106	4.94	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.80%			
46) 2-Hexanone-d5	10.43	63	579145	54.99	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 109.98%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	194209	5.04	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 100.80%			
63) 1,2-Dichlorobenzene-d4	13.76	152	245672	5.05	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.00%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.78	96	64584m	0.60	ug/L	
25) Chloroform	6.43	83	262856	1.39	ug/L	98
29) 1,1,1-Trichloroethane	6.64	97	49444	0.34	ug/L	96
34) Trichloroethene	8.22	95	56057	0.61	ug/L	99
47) Tetrachloroethene	10.33	164	1199068	19.86	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049265.D
Acq On : 5 May 2016 22:12
Operator : FY/SY
Sample : H2874-05
Misc : 25mL/MSVOA I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4101

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.291	3	6	26	rVB	6742968	19064789	100.00%	30.019%
2	1.576	33	35	38	rBV2	13007	19104	0.10%	0.030%
3	1.704	45	48	58	rBV	350724	577316	3.03%	0.909%
4	1.871	63	65	71	rVB3	20357	42697	0.22%	0.067%
5	2.108	85	89	97	rBV	216194	421269	2.21%	0.663%
6	2.383	115	117	118	rBV2	6679	5804	0.03%	0.009%
7	2.452	123	124	126	rBV2	7966	11556	0.06%	0.018%
8	2.669	145	146	148	rBV2	4485	5469	0.03%	0.009%
9	2.934	168	173	181	rBV	793467	1748814	9.17%	2.754%
10	3.121	191	192	196	rVB3	6235	9383	0.05%	0.015%
11	3.220	198	202	208	rVB3	15129	46124	0.24%	0.073%
12	3.377	215	218	221	rBV4	3874	8221	0.04%	0.013%
13	3.584	237	239	247	rVB2	13678	40154	0.21%	0.063%
14	3.672	247	248	252	rBV4	3092	5155	0.03%	0.008%
15	3.850	264	266	269	rBV4	4025	7183	0.04%	0.011%
16	3.918	270	273	275	rVV3	3753	8930	0.05%	0.014%
17	3.987	278	280	285	rVV6	6683	13988	0.07%	0.022%
18	4.214	300	303	304	rBV3	3477	6422	0.03%	0.010%
19	4.440	321	326	327	rBV5	3836	10338	0.05%	0.016%
20	4.460	327	328	330	rVV2	4196	5179	0.03%	0.008%
21	4.598	339	342	343	rBV3	3668	6868	0.04%	0.011%
22	4.726	353	355	360	rVB5	7608	15505	0.08%	0.024%
23	4.785	360	361	365	rBV4	3495	6094	0.03%	0.010%
24	4.913	373	374	378	rBV4	5695	8735	0.05%	0.014%
25	5.001	382	383	388	rVB4	2795	5190	0.03%	0.008%
26	5.139	395	397	403	rVB6	4361	8142	0.04%	0.013%
27	5.326	415	416	419	rVB3	3950	5292	0.03%	0.008%
28	5.365	419	420	423	rBV	4205	7371	0.04%	0.012%
29	5.415	423	425	427	rVB2	3689	5884	0.03%	0.009%
30	5.483	427	432	433	rBV4	5438	13941	0.07%	0.022%
31	5.542	436	438	440	rBV3	3664	5974	0.03%	0.009%
32	5.680	446	452	458	rBV	389520	1299983	6.82%	2.047%
33	5.779	458	462	471	rVB3	124058	439989	2.31%	0.693%
34	6.094	493	494	496	rBV2	3954	5970	0.03%	0.009%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049265.D
Acq On : 5 May 2016 22:12
Operator : FY/SY
Sample : H2874-05
Misc : 25mL/MSVOA I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4101

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.310	513	516	517	rBV3	5079	6241	0.03%	0.010%
36	6.389	517	524	540	rBV2	773473	2818284	14.78%	4.438%
37	6.655	544	551	559	rVB2	50491	163878	0.86%	0.258%
38	6.773	561	563	566	rVB3	4745	10361	0.05%	0.016%
39	6.970	581	583	587	rBV4	2586	6466	0.03%	0.010%
40	7.176	597	604	608	rBV	1273401	3385426	17.76%	5.331%
41	7.235	608	610	618	rVB	473203	1035543	5.43%	1.631%
42	7.422	628	629	631	rVB2	5646	5666	0.03%	0.009%
43	7.471	631	634	635	rBV3	4027	5356	0.03%	0.008%
44	7.560	639	643	644	rVV3	4853	9823	0.05%	0.015%
45	7.590	644	646	648	rVB3	3694	5388	0.03%	0.008%
46	7.639	650	651	654	rBV3	4902	6950	0.04%	0.011%
47	7.767	661	664	665	rBV3	4308	7190	0.04%	0.011%
48	7.816	667	669	671	rVB3	4107	6546	0.03%	0.010%
49	7.865	671	674	675	rBV3	4174	5915	0.03%	0.009%
50	7.934	675	681	694	rBV	1372816	2882481	15.12%	4.539%
51	8.219	704	710	717	rBV	155955	332767	1.75%	0.524%
52	8.436	727	732	740	rBV	967625	2164472	11.35%	3.408%
53	8.633	747	752	757	rBV6	4925	18221	0.10%	0.029%
54	8.899	776	779	785	rVB5	17933	40027	0.21%	0.063%
55	9.115	799	801	803	rBV	8003	6534	0.03%	0.010%
56	9.145	803	804	808	rVB4	3920	6116	0.03%	0.010%
57	9.253	811	815	817	rBV4	2193	5256	0.03%	0.008%
58	9.371	823	827	835	rVV	562217	1067057	5.60%	1.680%
59	9.528	838	843	847	rVB6	10905	24607	0.13%	0.039%
60	9.696	856	860	865	rBV	1842904	3238207	16.99%	5.099%
61	9.774	865	868	875	rVB2	49910	107108	0.56%	0.169%
62	9.893	877	880	881	rVB3	6192	9204	0.05%	0.014%
63	9.912	881	882	884	rBV2	4962	5341	0.03%	0.008%
64	10.021	889	893	902	rBV	341222	588939	3.09%	0.927%
65	10.129	902	904	907	rBV4	7063	16349	0.09%	0.026%
66	10.217	907	913	919	rBV	108844	224747	1.18%	0.354%
67	10.326	919	924	931	rVV	5959639	10254308	53.79%	16.146%
68	10.434	931	935	950	rVB	1622953	3035432	15.92%	4.779%
69	10.601	950	952	955	rBV3	15275	28823	0.15%	0.045%
70	10.700	960	962	963	rVB2	5546	5047	0.03%	0.008%
71	10.857	976	978	981	rBV4	5942	11775	0.06%	0.019%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049265.D
Acq On : 5 May 2016 22:12
Operator : FY/SY
Sample : H2874-05
Misc : 25mL/MSVOA I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4101

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.074	998	1000	1003	rVB4	4560	6742	0.04%	0.011%
73	11.152	1005	1008	1011	rBV4	4691	9594	0.05%	0.015%
74	11.221	1011	1015	1024	rBV	1630391	2697194	14.15%	4.247%
75	11.359	1025	1029	1032	rVB3	18372	36478	0.19%	0.057%
76	11.477	1036	1041	1044	rVB3	14815	34371	0.18%	0.054%
77	11.595	1051	1053	1054	rBV2	5832	6060	0.03%	0.010%
78	11.851	1073	1079	1083	rVB8	9421	27088	0.14%	0.043%
79	12.284	1118	1123	1124	rVB5	5169	10468	0.05%	0.016%
80	12.402	1129	1135	1138	rBV	109738	200267	1.05%	0.315%
81	12.461	1138	1141	1146	rVB	443522	730378	3.83%	1.150%
82	12.589	1152	1154	1157	rVB4	3469	5041	0.03%	0.008%
83	12.698	1162	1165	1166	rBV3	4219	7107	0.04%	0.011%
84	12.747	1166	1170	1173	rVB6	3564	9126	0.05%	0.014%
85	12.934	1185	1189	1190	rBV4	3679	7203	0.04%	0.011%
86	13.062	1200	1202	1204	rBV2	7199	13956	0.07%	0.022%
87	13.091	1204	1205	1207	rVB2	6447	6666	0.03%	0.010%
88	13.121	1207	1208	1210	rBV2	3644	5793	0.03%	0.009%
89	13.278	1222	1224	1226	rBV3	3807	6322	0.03%	0.010%
90	13.436	1235	1240	1247	rBV	1173827	2057005	10.79%	3.239%
91	13.593	1255	1256	1258	rBV2	2986	5108	0.03%	0.008%
92	13.662	1261	1263	1265	rVV3	5303	8137	0.04%	0.013%
93	13.761	1268	1273	1281	rVV	1070619	1851867	9.71%	2.916%
94	13.859	1281	1283	1284	rVB2	7915	8106	0.04%	0.013%
95	13.879	1284	1285	1288	rBV3	5545	12464	0.07%	0.020%
96	14.036	1294	1301	1305	rBV2	83227	185280	0.97%	0.292%
97	14.154	1312	1313	1316	rBV3	9922	15811	0.08%	0.025%
98	14.312	1327	1329	1331	rBV3	12507	21142	0.11%	0.033%
99	14.636	1360	1362	1363	rBV2	7620	9132	0.05%	0.014%
100	15.611	1458	1461	1464	rVB2	42785	71254	0.37%	0.112%

Sum of corrected areas: 63509844

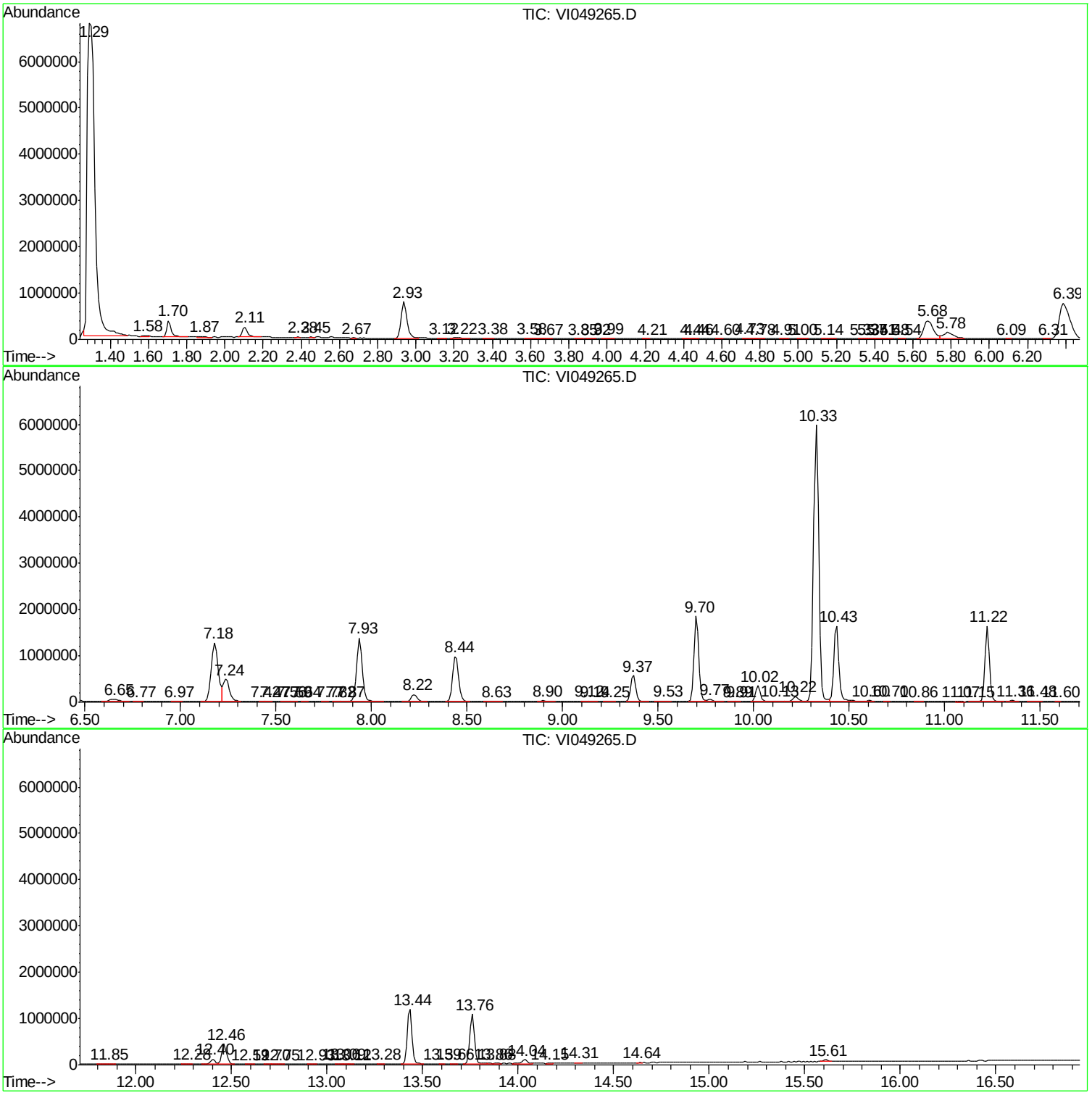
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049265.D
Acq On : 5 May 2016 22:12
Operator : FY/SY
Sample : H2874-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4101

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049265.D
Acq On : 5 May 2016 22:12
Operator : FY/SY
Sample : H2874-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4101

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049265.D
Acq On : 5 May 2016 22:12
Operator : FY/SY
Sample : H2874-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4101

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

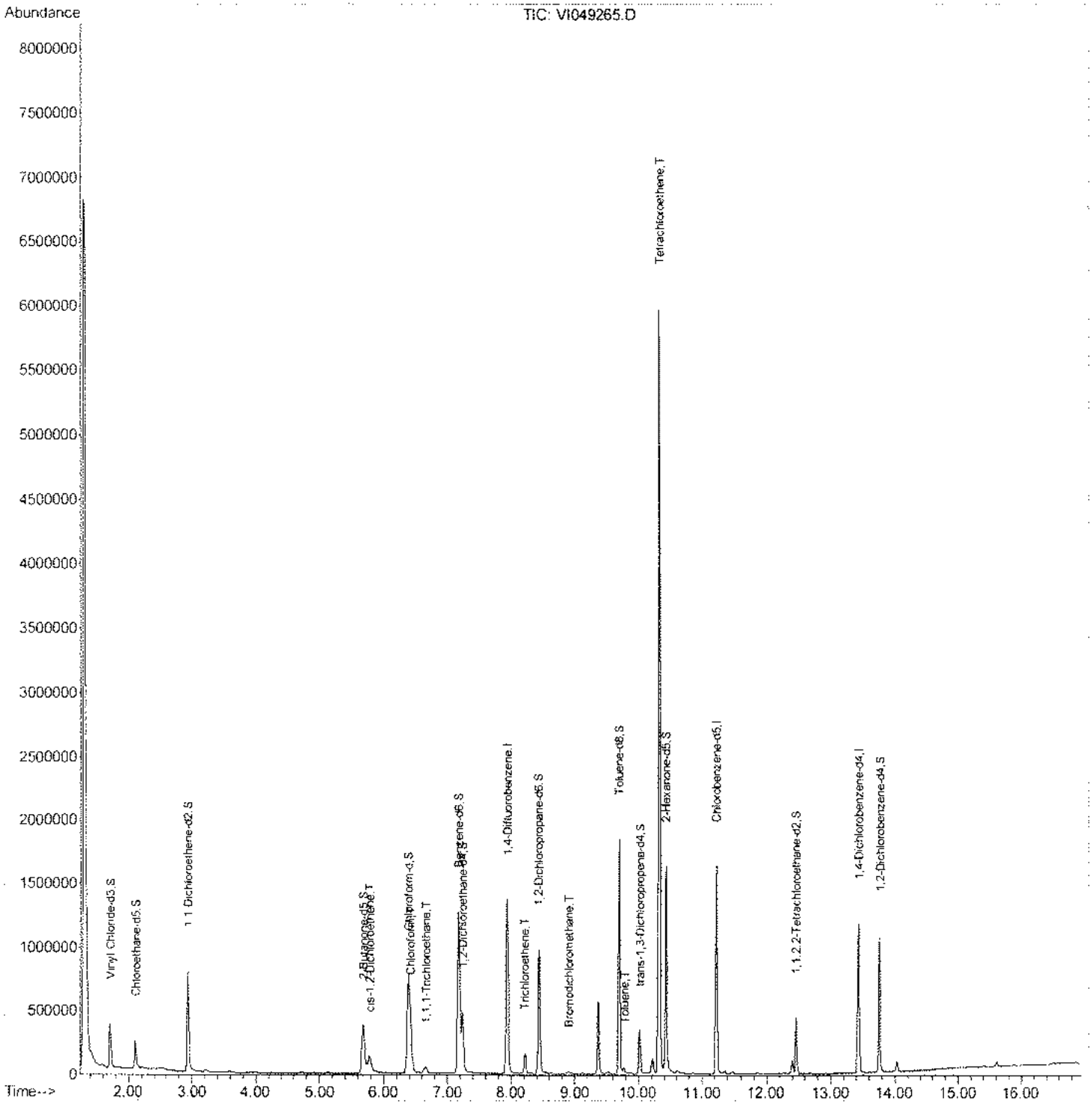
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049265.D
Acq On : 5 May 2016 22:12
Operator : FY/SY
Sample : H2874-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Quant Time: May 06 06:11:43 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4101

Manual Integrations APPROVED
feifei
5/6/2016 11:44:21 AM



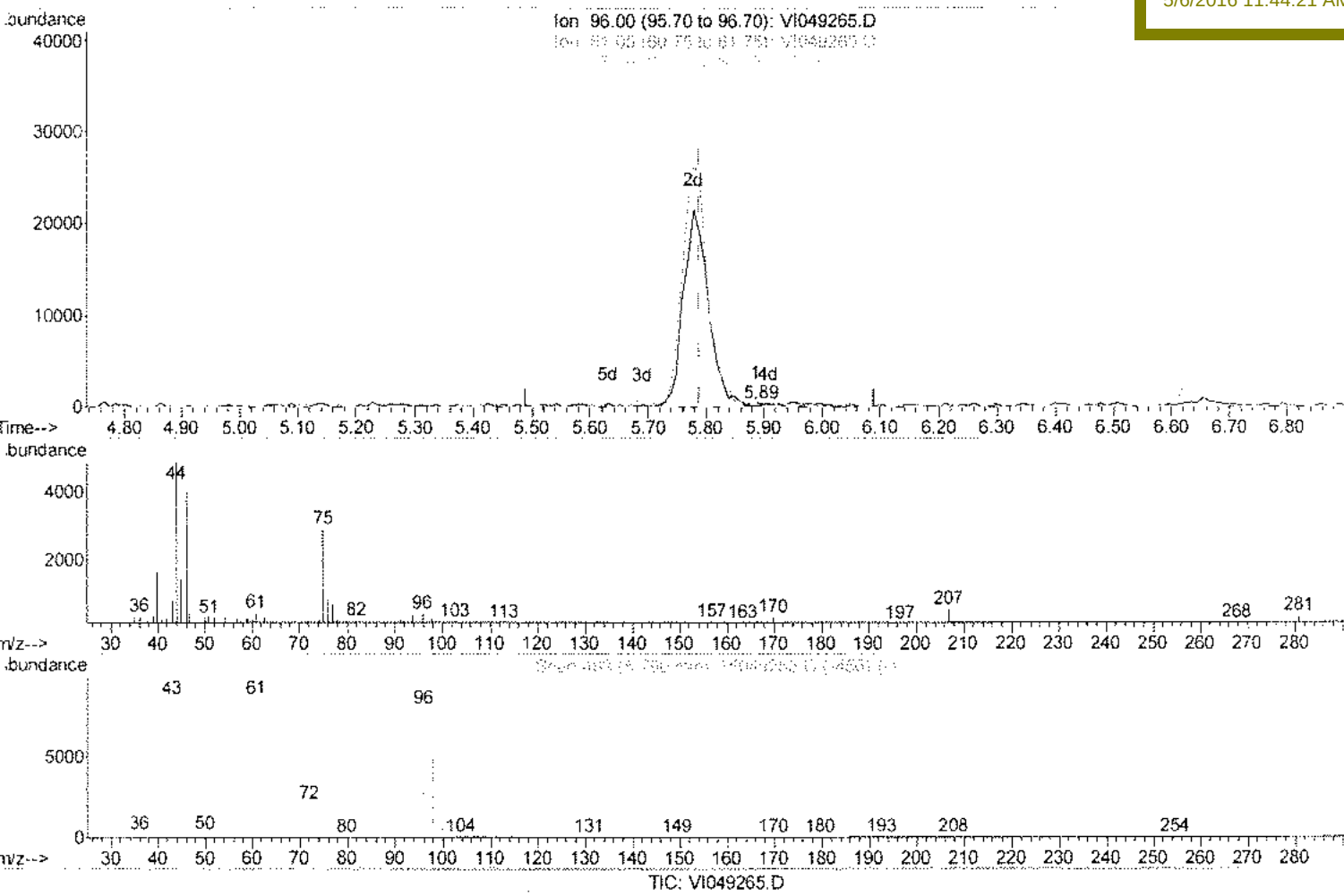
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049265.D
Acq On : 5 May 2016 22:12
Operator : FY/SY
Sample : H2874-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Quant Time: May 06 05:23:07 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4101

Manual Integrations APPROVED
feifei
5/6/2016 11:44:21 AM



TIC: VI049265.D

(22) cis-1,2-Dichloroethene (T)

5.887min (+0.097) 0.00ug/L

response 334

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	105.66
68.15	0.00	0.00
0.00	0.00	0.00

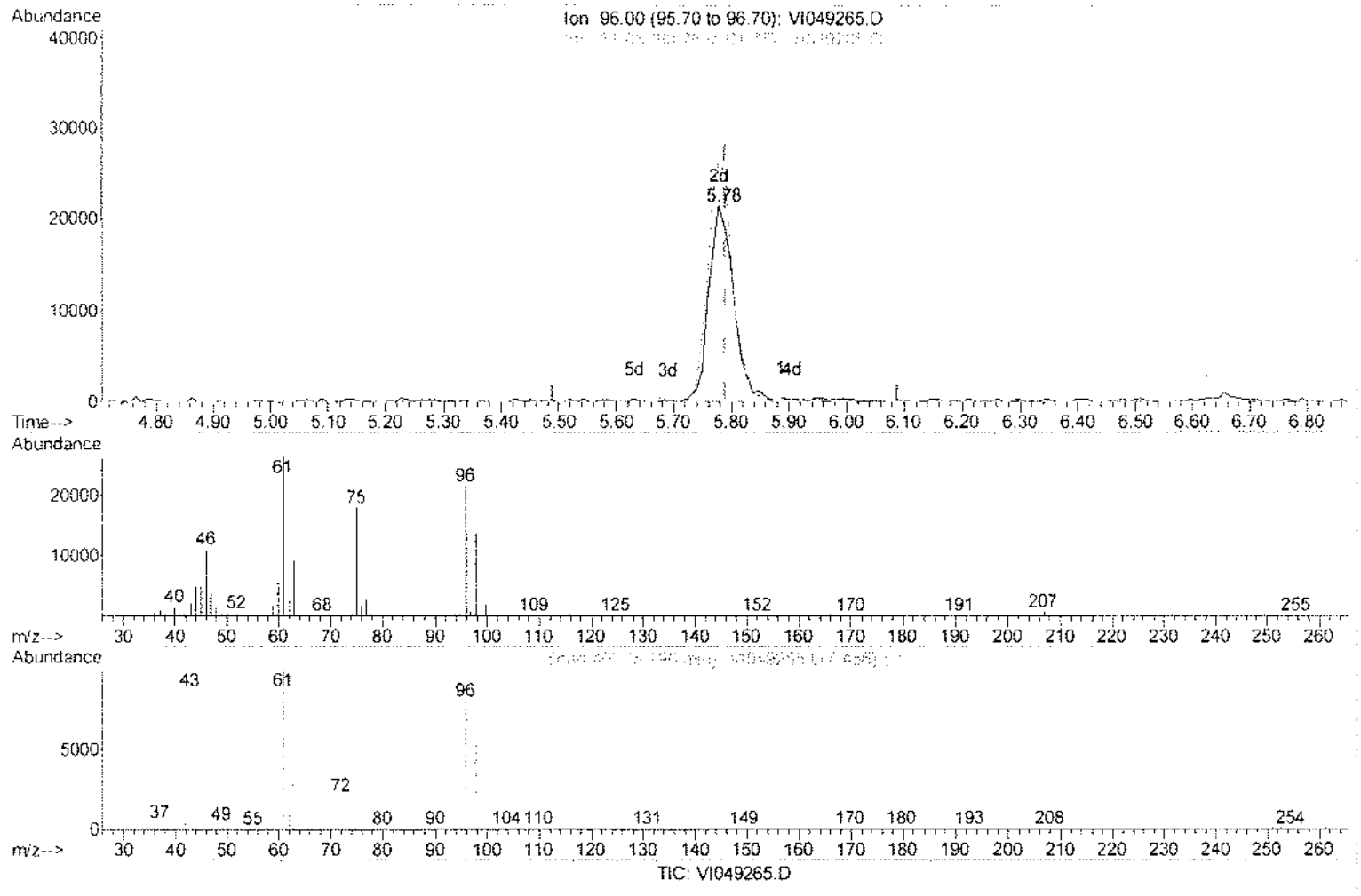
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049265.D
Acq On : 5 May 2016 22:12
Operator : FY/SY
Sample : H2874-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Quant Time: May 06 05:23:07 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4101

Manual Integrations APPROVED
feifei
5/6/2016 11:44:21 AM



(22) cis-1,2-Dichloroethene (T)

5.779min (-0.011) 0.60ug/L m M.D 05/09/16

response 64584

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	122.91
68.15	0.00	0.77#
0.00	0.00	0.00

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050516\
Data File : VI049265.D
Acq On : 5 May 2016 22:12
Operator : FY/SY
Sample : H2874-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Quant Time: May 23 07:27:00 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4101

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1173670	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.22	117	773733	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	277489	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	347976	4.82	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 96.40%			
7) Chloroethane-d5	2.11	69	230875	5.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 115.40%			
11) 1,1-Dichloroethene-d2	2.93	63	611618	3.59	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 71.80%			
20) 2-Butanone-d5	5.68	46	909943	58.17	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 116.34%			
24) Chloroform-d	6.39	84	922704	5.02	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.40%			
26) 1,2-Dichloroethane-d4	7.24	65	410106	5.45	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.00%			
32) Benzene-d6	7.18	84	1589644	5.27	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 105.40%			
36) 1,2-Dichloropropane-d6	8.44	67	453465	5.35	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.00%			
41) Toluene-d8	9.70	98	1109113	4.99	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.80%			
43) trans-1,3-Dichloropropene-	10.02	79	165106	4.94	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.80%			
46) 2-Hexanone-d5	10.43	63	579145	54.99	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 109.98%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	194209	5.04	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 100.80%			
63) 1,2-Dichlorobenzene-d4	13.76	152	245672	5.05	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.00%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.78	96	64584m	0.60	ug/L	
25) Chloroform	6.43	83	262856	1.39	ug/L	98
29) 1,1,1-Trichloroethane	6.64	97	49444	0.34	ug/L	96
34) Trichloroethene	8.22	95	56057	0.61	ug/L	99
47) Tetrachloroethene	10.33	164	1199068	19.86	ug/L	94

H.D 05/09/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4103

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049266.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	9.8	
75-15-0	Carbon disulfide	0.19	J
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.37	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4103

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049266.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.71	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.8	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.15	J
95-47-6	o-Xylene	0.10	J
179601-23-1	m,p-Xylene	0.22	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4103

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049266.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4103

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049266.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	2.57	0.57	J
2	E966796	Total Alkanes	N/A	0.72	

EPA-designated Registry Number.

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 06 06:16:29 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4103

Manual Integrations APPROVED
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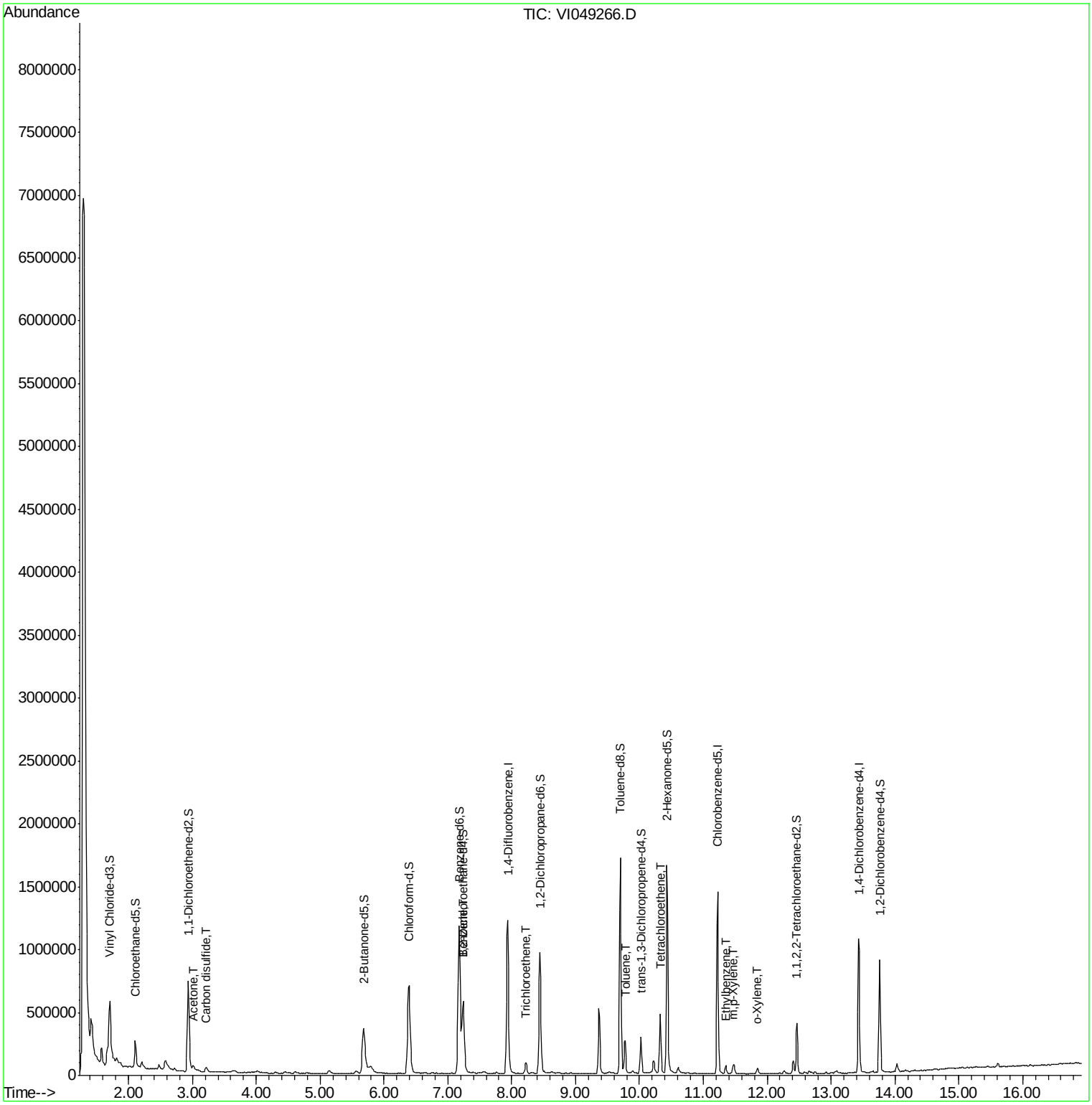
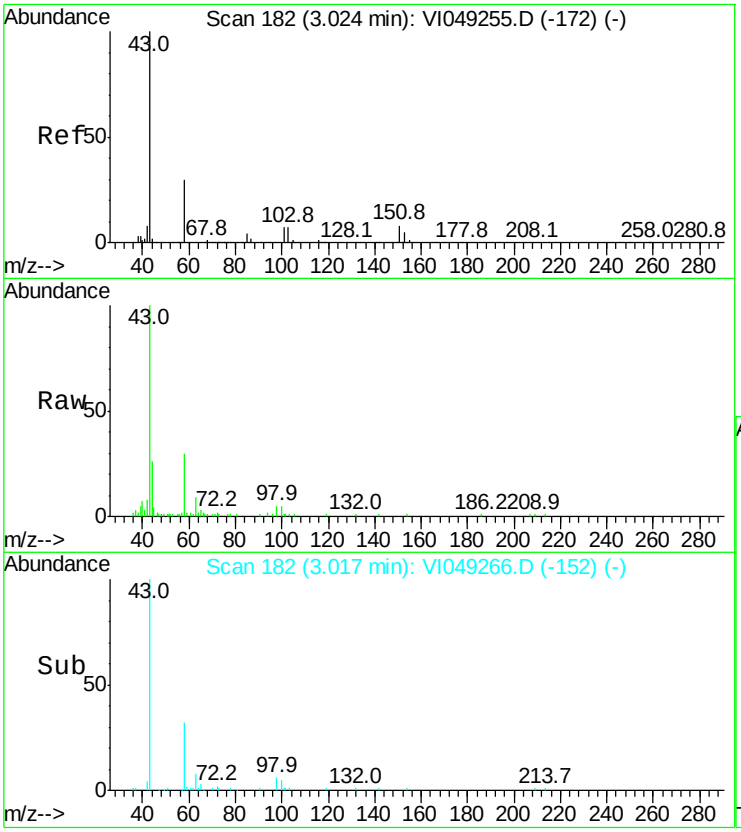
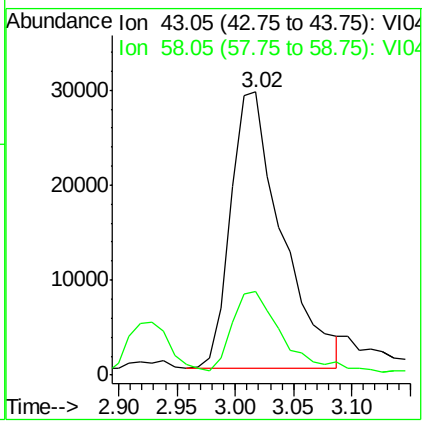




#13
Acetone
Concen: 9.75 ug/L
RT: 3.02 min Scan# 182
Delta R.T. -0.01 min
Lab File: VI049266.D
Acq: 5 May 2016 22:44

Tgt Ion: 43 Resp: 88499

Ion	Ratio	Lower	Upper
43	100		
58	29.2	0.0	62.0



Instrument :
MSVOA_I
ClientSampleId :
H4103

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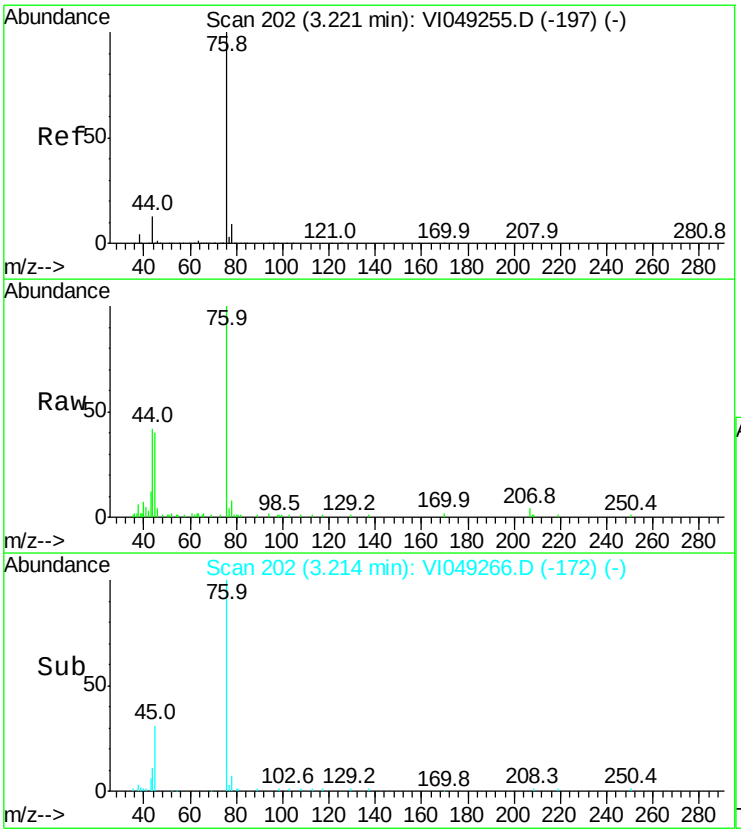
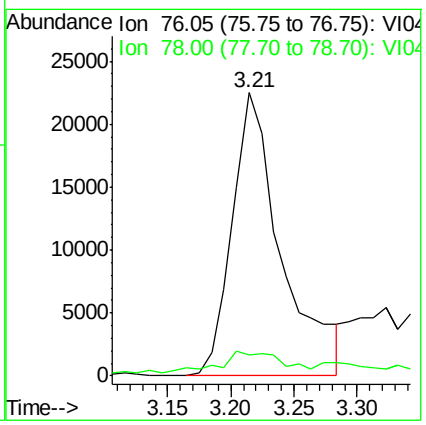
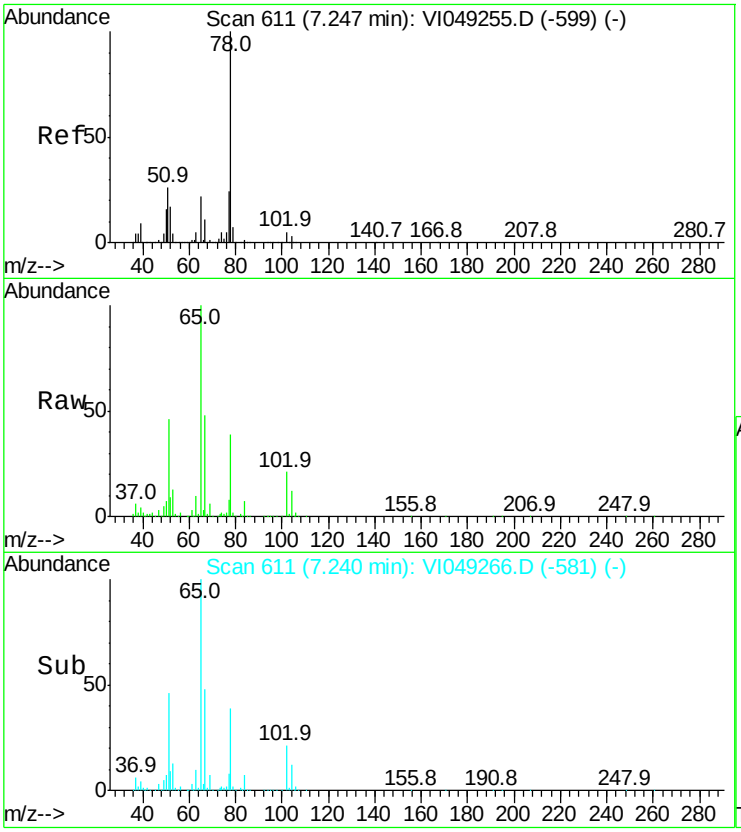


#14
Carbon disulfide
Concen: 0.19 ug/L
RT: 3.21 min Scan# 202
Delta R.T. -0.01 min
Lab File: VI049266.D
Acq: 5 May 2016 22:44

Tgt Ion: 76 Resp: 60708

Ion	Ratio	Lower	Upper
76	100		
78	7.6	7.4	11.0





#33
Benzene
Concen: 0.50 ug/L
RT: 7.24 min Scan# 611
Delta R.T. -0.01 min
Lab File: VI049266.D
Acq: 5 May 2016 22:44

Tgt Ion: 78 Resp: 152059

Instrument :
MSVOA_I
ClientSampleId :
H4103

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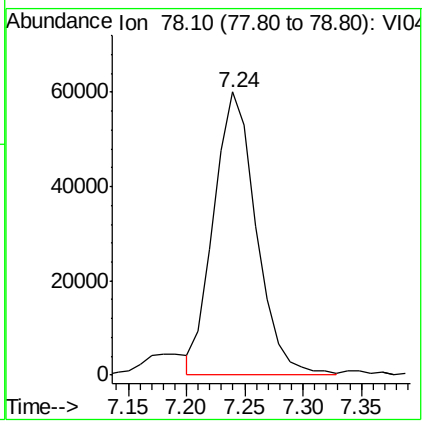
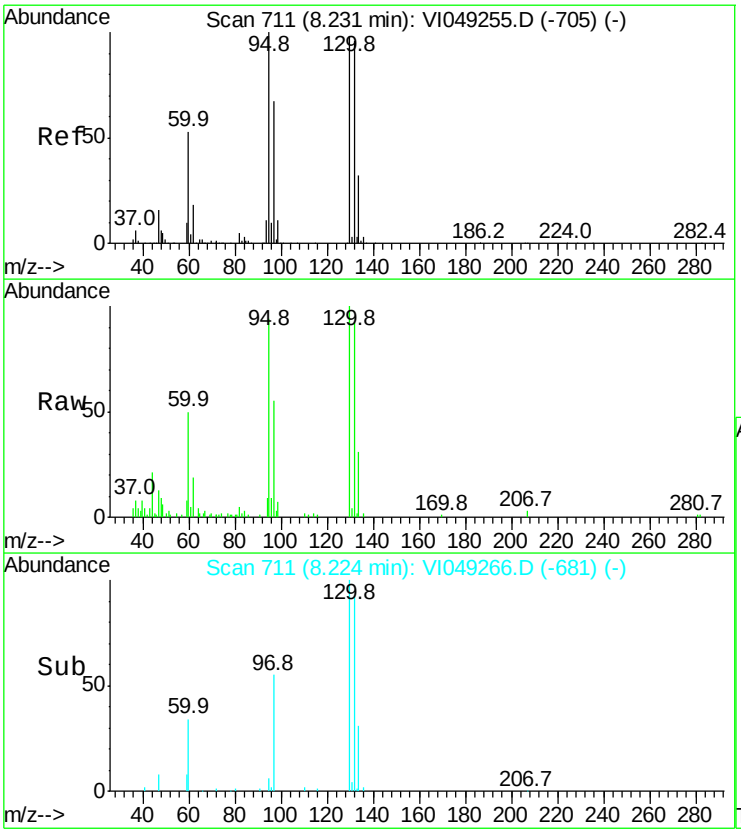
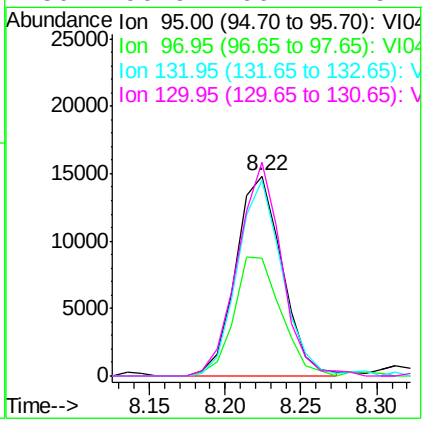


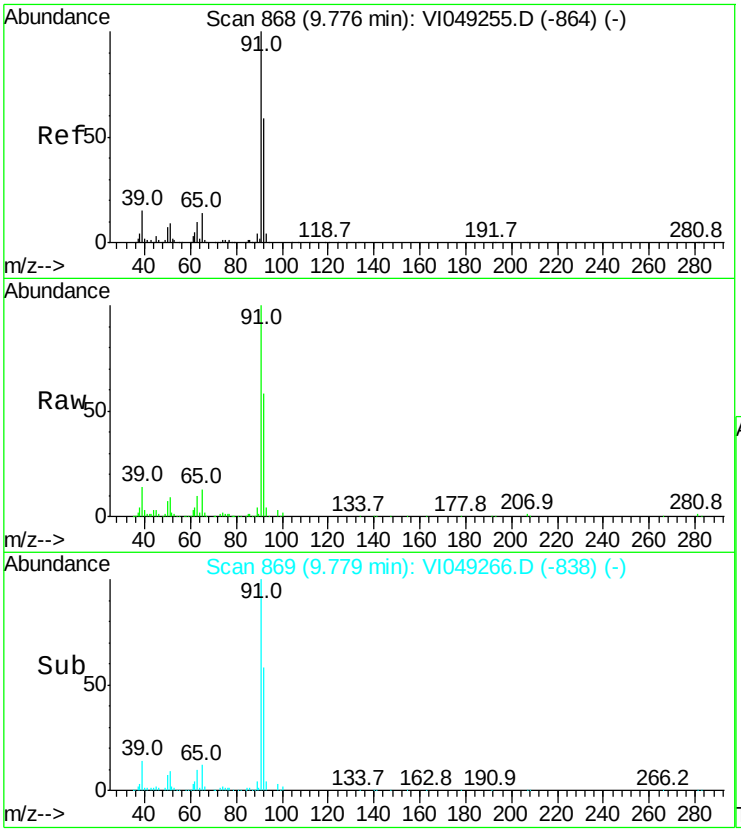


#34
Trichloroethene
Concen: 0.37 ug/L
RT: 8.22 min Scan# 711
Delta R.T. -0.01 min
Lab File: VI049266.D
Acq: 5 May 2016 22:44

Tgt Ion: 95 Resp: 31533

Ion	Ratio	Lower	Upper
95	100		
97	58.9	45.8	85.2
132	98.0	63.9	118.7
130	106.9	66.4	123.2





#42
Toluene
Concen: 0.71 ug/L
RT: 9.78 min Scan# 869
Delta R.T. 0.00 min
Lab File: VI049266.D
Acq: 5 May 2016 22:44

Tgt Ion: 91 Resp: 181285

Ion	Ratio	Lower	Upper
91	100		
92	57.7	41.2	76.4

Instrument :
MSVOA_I
ClientSampleId :
H4103

Manual Integrations APPROVED
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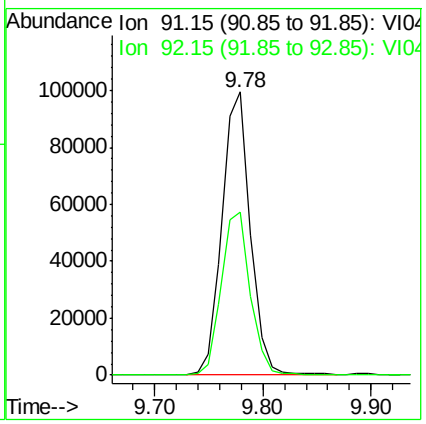
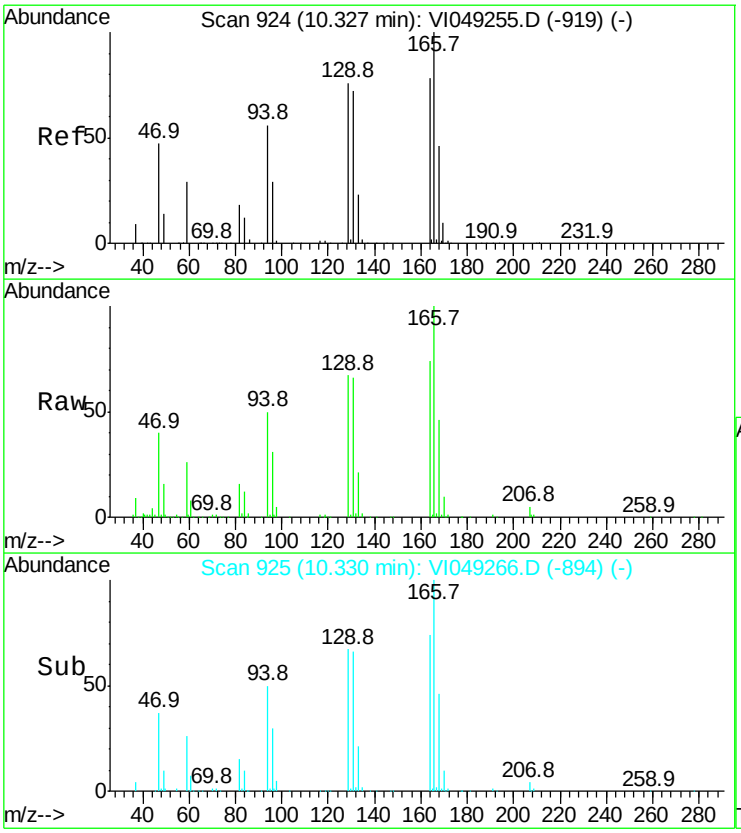
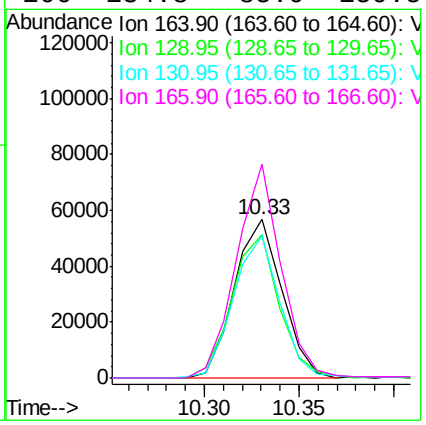


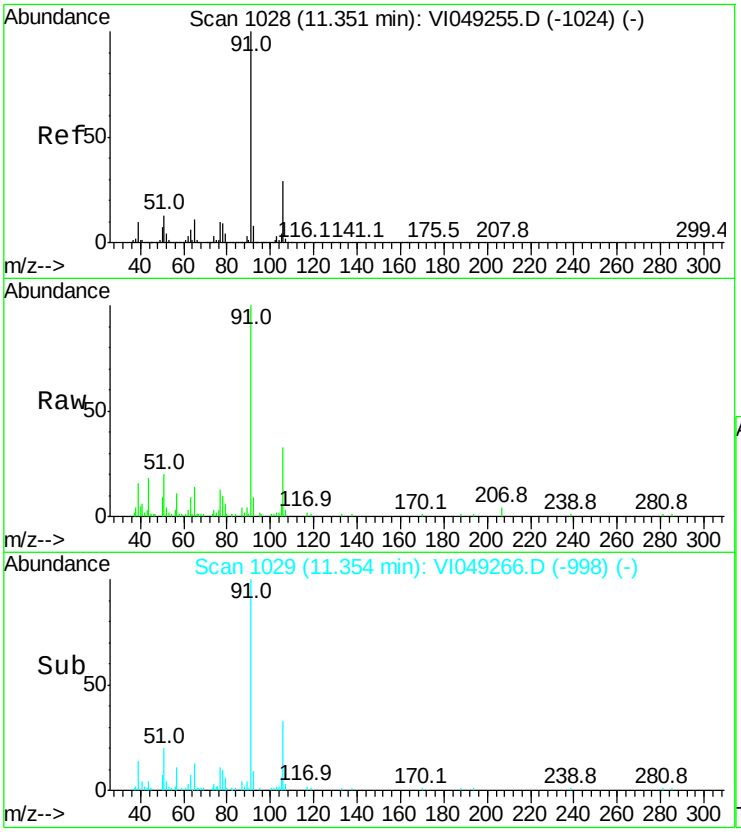


#47
Tetrachloroethene
Concen: 1.79 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.00 min
Lab File: VI049266.D
Acq: 5 May 2016 22:44

Tgt Ion:164 Resp: 98965

Ion	Ratio	Lower	Upper
164	100		
129	90.9	62.1	115.3
131	89.4	60.6	112.6
166	134.8	85.9	159.5

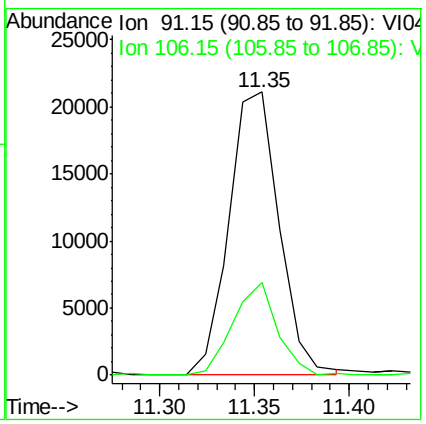




#52
Ethylbenzene
Concen: 0.15 ug/L
RT: 11.35 min Scan# 1029
Delta R.T. 0.00 min
Lab File: VI049266.D
Acq: 5 May 2016 22:44

Tgt Ion: 91 Resp: 38763

Ion	Ratio	Lower	Upper
91	100		
106	32.9	20.5	38.1



Instrument :
MSVOA_I
ClientSampleId :
H4103

Manual Integrations APPROVED
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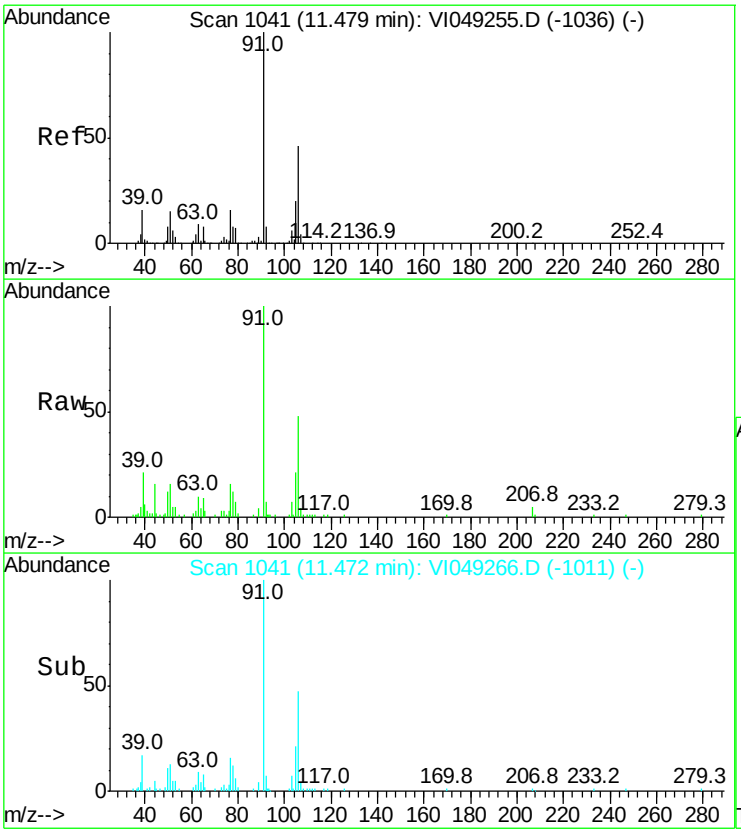
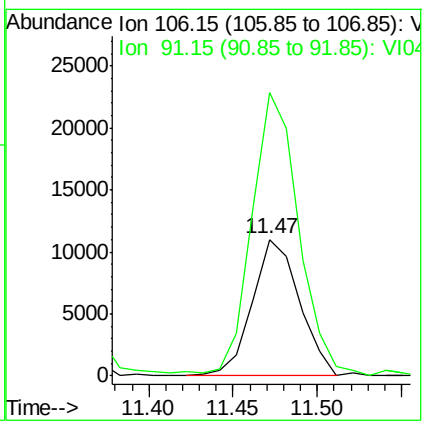
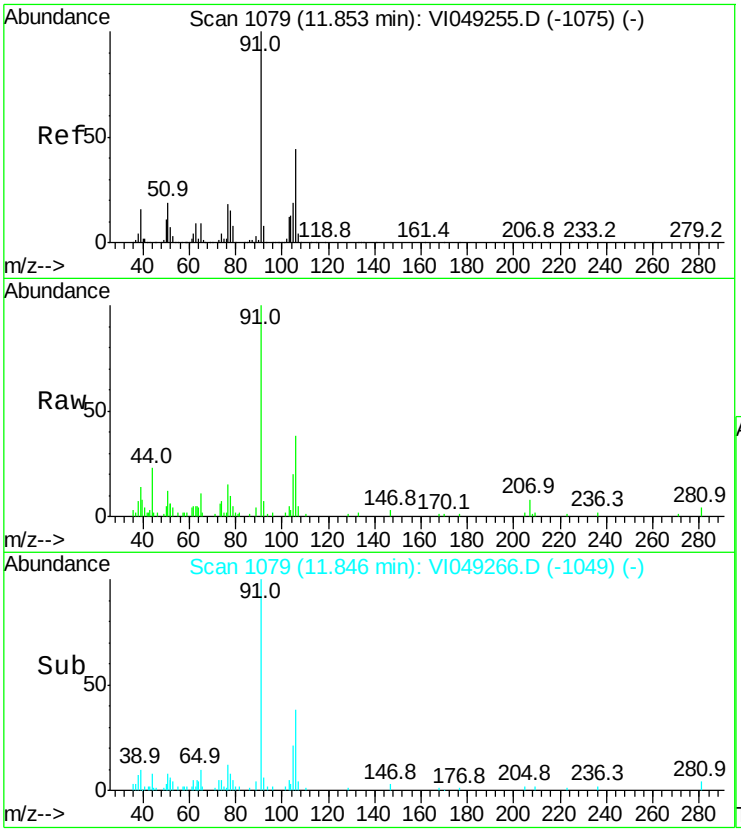


#53
m,p-Xylene
Concen: 0.22 ug/L
RT: 11.47 min Scan# 1041
Delta R.T. -0.01 min
Lab File: VI049266.D
Acq: 5 May 2016 22:44

Tgt Ion:106 Resp: 21365

Ion	Ratio	Lower	Upper
106	100		
91	207.8	155.0	287.9

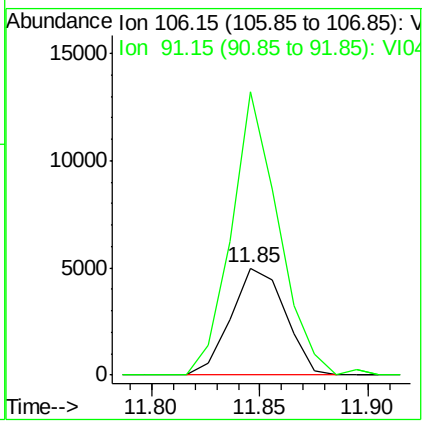




#54
o-Xylene
Concen: 0.10 ug/L
RT: 11.85 min Scan# 1079
Delta R.T. -0.01 min
Lab File: VI049266.D
Acq: 5 May 2016 22:44

Tgt Ion:106 Resp: 8697

Ion	Ratio	Lower	Upper
106	100		
91	252.6	158.8	295.0



Instrument :
MSVOA_I
ClientSampleId :
H4103

Manual Integrations APPROVED
feifei
5/6/2016 11:44:22 AM

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 06 06:16:29 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4103

Manual Integrations APPROVED
feifei
5/6/2016 11:44:22 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1098501	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	710182	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	249336	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	342840	5.07	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 101.40%			
7) Chloroethane-d5	2.10	69	227360m	6.07	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 121.40%			
11) 1,1-Dichloroethene-d2	2.94	63	588952m	3.70	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 74.00%			
20) 2-Butanone-d5	5.68	46	874498	59.73	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 119.46%			
24) Chloroform-d	6.39	84	885944	5.15	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.00%			
26) 1,2-Dichloroethane-d4	7.24	65	399428	5.67	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 113.40%			
32) Benzene-d6	7.18	84	1498465	5.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 108.40%			
36) 1,2-Dichloropropane-d6	8.44	67	437845	5.63	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 112.60%			
41) Toluene-d8	9.70	98	1044802	5.12	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.40%			
43) trans-1,3-Dichloropropene-	10.02	79	146312	4.77	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 95.40%			
46) 2-Hexanone-d5	10.43	63	537061	55.55	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 111.10%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	181470	5.13	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 102.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	217587	4.98	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 99.60%			
Target Compounds						Qvalue
13) Acetone	3.02	43	88499	9.75	ug/L	97
14) Carbon disulfide	3.21	76	60708	0.19	ug/L	96
33) Benzene	7.24	78	152059	0.50	ug/L	100
34) Trichloroethene	8.22	95	31533	0.37	ug/L	91
42) Toluene	9.78	91	181285	0.71	ug/L	99
47) Tetrachloroethene	10.33	164	98965	1.79	ug/L	94
52) Ethylbenzene	11.35	91	38763	0.15	ug/L	93
53) m,p-Xylene	11.47	106	21365	0.22	ug/L	92
54) o-Xylene	11.85	106	8697	0.10	ug/L	84

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4103

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.295	3	7	17	rBV	6806963	22411785	100.00%	38.131%
2	1.413	17	19	33	rVB2	343224	1104987	4.93%	1.880%
3	1.581	33	36	41	rVB2	139374	254126	1.13%	0.432%
4	1.708	41	49	58	rBV2	508019	1455632	6.49%	2.477%
5	1.817	58	60	64	rVB2	41906	68874	0.31%	0.117%
6	2.102	86	89	97	rBV	212869	420443	1.88%	0.715%
7	2.210	97	100	108	rVB4	58348	136941	0.61%	0.233%
8	2.476	124	127	133	rVB3	36830	78096	0.35%	0.133%
9	2.575	133	137	150	rVV3	76482	310695	1.39%	0.529%
10	2.712	150	151	159	rVB2	22043	43498	0.19%	0.074%
11	2.939	169	174	179	rBV	724623	1615597	7.21%	2.749%
12	3.008	179	181	186	rVB	38378	91107	0.41%	0.155%
13	3.214	198	202	210	rBV2	35815	94837	0.42%	0.161%
14	3.647	241	246	247	rBV4	7378	19138	0.09%	0.033%
15	3.746	253	256	257	rVB3	4552	6361	0.03%	0.011%
16	3.785	257	260	262	rBV3	3387	7759	0.03%	0.013%
17	3.874	267	269	273	rVB4	5257	8898	0.04%	0.015%
18	3.923	273	274	276	rBV2	4037	5941	0.03%	0.010%
19	4.011	280	283	285	rVB2	7959	15424	0.07%	0.026%
20	4.297	309	312	317	rBV6	10943	32645	0.15%	0.056%
21	4.464	323	329	338	rVB6	12198	55799	0.25%	0.095%
22	4.612	340	344	352	rVB5	11846	39956	0.18%	0.068%
23	4.809	359	364	365	rBV5	5063	11524	0.05%	0.020%
24	4.956	376	379	381	rBV3	3259	7318	0.03%	0.012%
25	5.006	383	384	387	rBV3	4092	5708	0.03%	0.010%
26	5.143	393	398	404	rBV3	21400	69057	0.31%	0.117%
27	5.399	422	424	426	rVB3	4558	7054	0.03%	0.012%
28	5.439	426	428	431	rBV4	5295	14185	0.06%	0.024%
29	5.566	436	441	446	rBV5	16285	52901	0.24%	0.090%
30	5.685	446	453	460	rBV	357828	1243628	5.55%	2.116%
31	6.226	505	508	510	rBV4	4122	7920	0.04%	0.013%
32	6.393	517	525	539	rVV	699799	2129327	9.50%	3.623%
33	6.649	547	551	557	rVV7	6919	23456	0.10%	0.040%
34	6.738	559	560	562	rVV2	5105	7832	0.03%	0.013%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4103

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.767	562	563	567	rVV4	7153	9325	0.04%	0.016%
36	6.816	567	568	571	rVB3	5298	7913	0.04%	0.013%
37	7.053	589	592	595	rVB3	4791	9442	0.04%	0.016%
38	7.181	598	605	608	rBV	1174775	3085060	13.77%	5.249%
39	7.240	608	611	620	rVV	572348	1461236	6.52%	2.486%
40	7.338	620	621	623	rVV2	10036	14109	0.06%	0.024%
41	7.397	626	627	631	rVV3	9718	16693	0.07%	0.028%
42	7.476	633	635	636	rVV2	5541	8124	0.04%	0.014%
43	7.564	640	644	651	rVB6	14371	51503	0.23%	0.088%
44	7.722	657	660	661	rBV4	6181	9442	0.04%	0.016%
45	7.761	661	664	668	rVB4	9778	18872	0.08%	0.032%
46	7.938	676	682	694	rBV	1221477	2702319	12.06%	4.598%
47	8.224	705	711	717	rVB	84754	190294	0.85%	0.324%
48	8.312	717	720	725	rVB5	8769	23408	0.10%	0.040%
49	8.440	725	733	743	rBV	963319	2111448	9.42%	3.592%
50	8.618	749	751	755	rVB2	11844	27570	0.12%	0.047%
51	8.736	758	763	769	rVB9	5797	25787	0.12%	0.044%
52	8.844	772	774	776	rBV2	5732	10942	0.05%	0.019%
53	8.923	779	782	787	rVB6	10786	25183	0.11%	0.043%
54	9.366	822	827	835	rBV	519311	974769	4.35%	1.658%
55	9.533	840	844	846	rBV4	10137	15397	0.07%	0.026%
56	9.592	849	850	853	rVB2	8861	9617	0.04%	0.016%
57	9.700	856	861	865	rBV	1712751	3017092	13.46%	5.133%
58	9.779	865	869	877	rVB	254645	490953	2.19%	0.835%
59	9.897	877	881	886	rVB2	21227	40659	0.18%	0.069%
60	10.025	889	894	899	rBV	295245	546541	2.44%	0.930%
61	10.222	905	914	920	rBV2	98309	225867	1.01%	0.384%
62	10.330	920	925	931	rVV	469817	845216	3.77%	1.438%
63	10.428	931	935	949	rVB	1653939	2891611	12.90%	4.920%
64	10.606	949	953	959	rBV	43827	101110	0.45%	0.172%
65	10.852	975	978	979	rBV3	4626	7162	0.03%	0.012%
66	10.999	992	993	996	rBV3	4375	8403	0.04%	0.014%
67	11.117	1000	1005	1006	rBV5	4019	9238	0.04%	0.016%
68	11.226	1011	1016	1024	rBV	1450000	2472654	11.03%	4.207%
69	11.354	1025	1029	1036	rVB2	65134	122158	0.55%	0.208%
70	11.432	1036	1037	1038	rBV	7871	8264	0.04%	0.014%
71	11.472	1038	1041	1051	rVB	77655	155066	0.69%	0.264%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4103

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.610	1053	1055	1058	rBV4	5585	10871	0.05%	0.018%
73	11.728	1064	1067	1069	rBV3	2885	5965	0.03%	0.010%
74	11.797	1069	1074	1076	rBV5	5665	14807	0.07%	0.025%
75	11.846	1076	1079	1086	rVB2	42972	75517	0.34%	0.128%
76	12.200	1110	1115	1118	rBV3	11689	24929	0.11%	0.042%
77	12.269	1118	1122	1125	rBV3	21870	45855	0.20%	0.078%
78	12.407	1129	1136	1139	rBV	101154	201481	0.90%	0.343%
79	12.466	1139	1142	1149	rVB	399622	686333	3.06%	1.168%
80	12.584	1151	1154	1155	rBV3	10024	12693	0.06%	0.022%
81	12.653	1159	1161	1164	rBV3	18038	33960	0.15%	0.058%
82	12.751	1169	1171	1174	rVB3	12243	18520	0.08%	0.032%
83	12.928	1185	1189	1192	rBV4	11490	16555	0.07%	0.028%
84	13.096	1200	1206	1211	rBV6	19130	60451	0.27%	0.103%
85	13.273	1221	1224	1225	rBV2	4909	7684	0.03%	0.013%
86	13.371	1232	1234	1236	rVB3	8063	10378	0.05%	0.018%
87	13.430	1236	1240	1252	rBV	1069794	1891801	8.44%	3.219%
88	13.627	1257	1260	1261	rBV3	10750	15518	0.07%	0.026%
89	13.657	1261	1263	1266	rVB4	12929	18544	0.08%	0.032%
90	13.765	1269	1274	1282	rBV	895057	1678671	7.49%	2.856%
91	13.962	1291	1294	1296	rBV4	7498	14210	0.06%	0.024%
92	14.031	1296	1301	1307	rVV2	69716	150928	0.67%	0.257%
93	14.159	1312	1314	1320	rVB7	11948	28987	0.13%	0.049%
94	14.257	1322	1324	1325	rBV2	5108	6843	0.03%	0.012%
95	14.316	1325	1330	1333	rBV5	13838	27059	0.12%	0.046%
96	14.414	1337	1340	1342	rBV4	9044	19450	0.09%	0.033%
97	14.503	1346	1349	1351	rBV4	7508	14432	0.06%	0.025%
98	14.542	1351	1353	1355	rBV3	5069	7318	0.03%	0.012%
99	14.601	1357	1359	1361	rBV3	6522	11977	0.05%	0.020%
100	15.605	1459	1461	1465	rVB2	26858	54501	0.24%	0.093%

Sum of corrected areas: 58775134

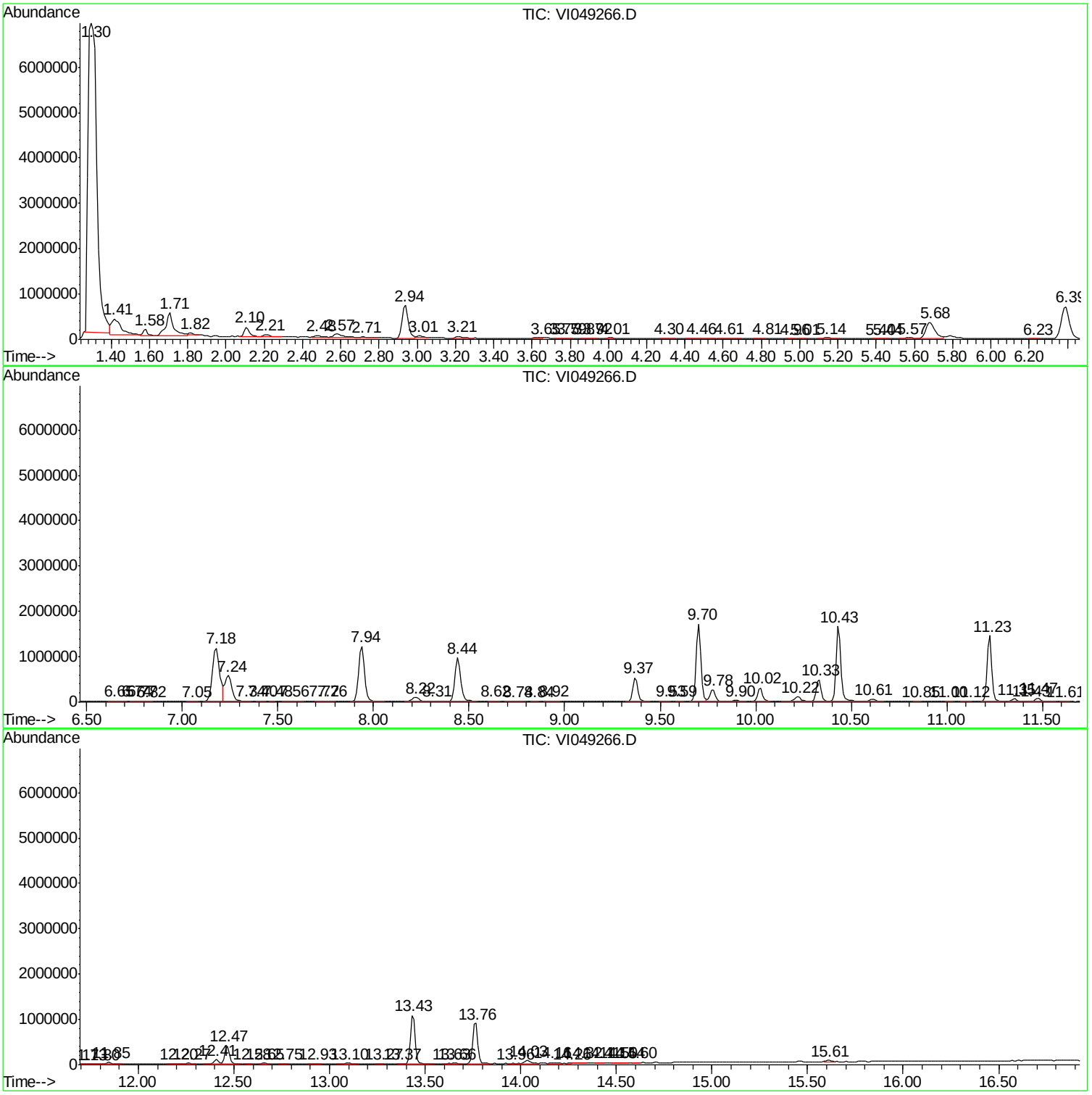
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4103

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4103

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

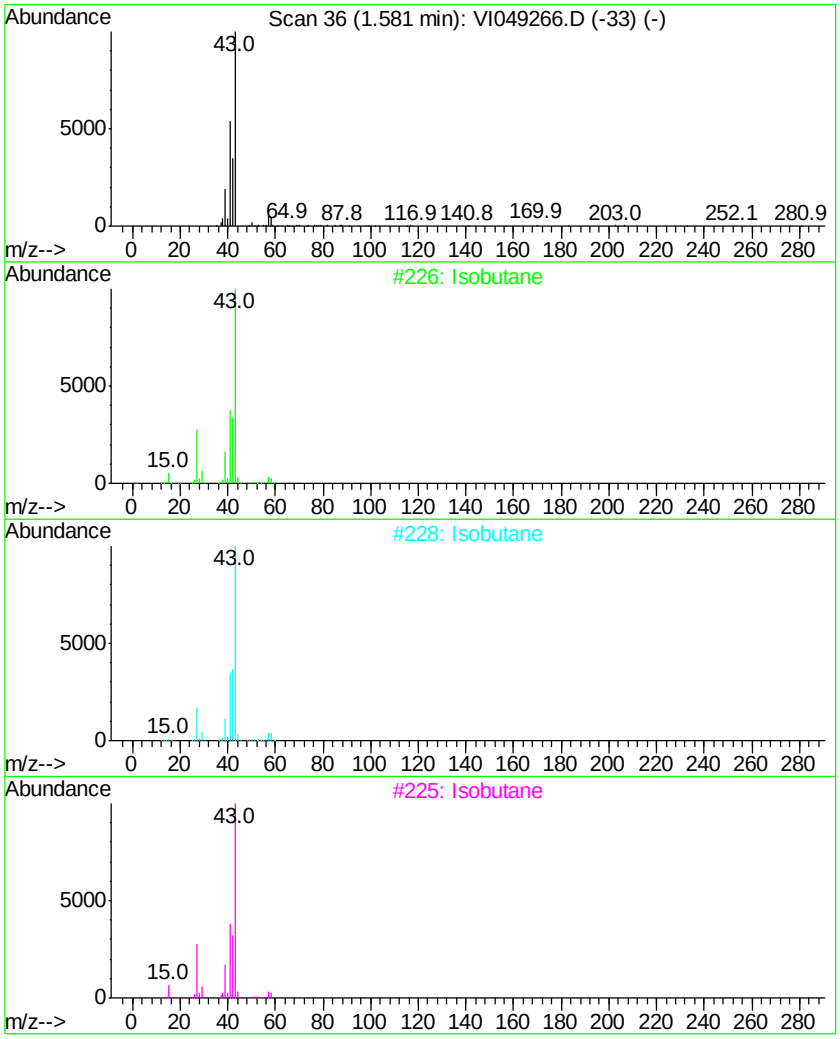
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

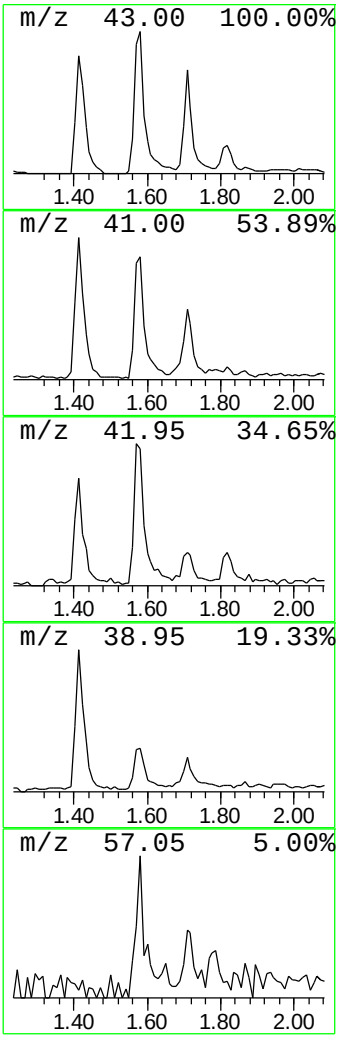
****

Peak Number 3 (DEL) Alkane: Straight-Chai... Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.58	0.47 ug/L	254126	1,4-Difluorobenzene	7.94

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	59
2	Isobutane	58	C4H10	000075-28-5	59
3	Isobutane	58	C4H10	000075-28-5	59
4	Isobutane	58	C4H10	000075-28-5	38
5	5-Methyloxazolidine	87	C4H9NO	058328-22-6	9





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4103

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

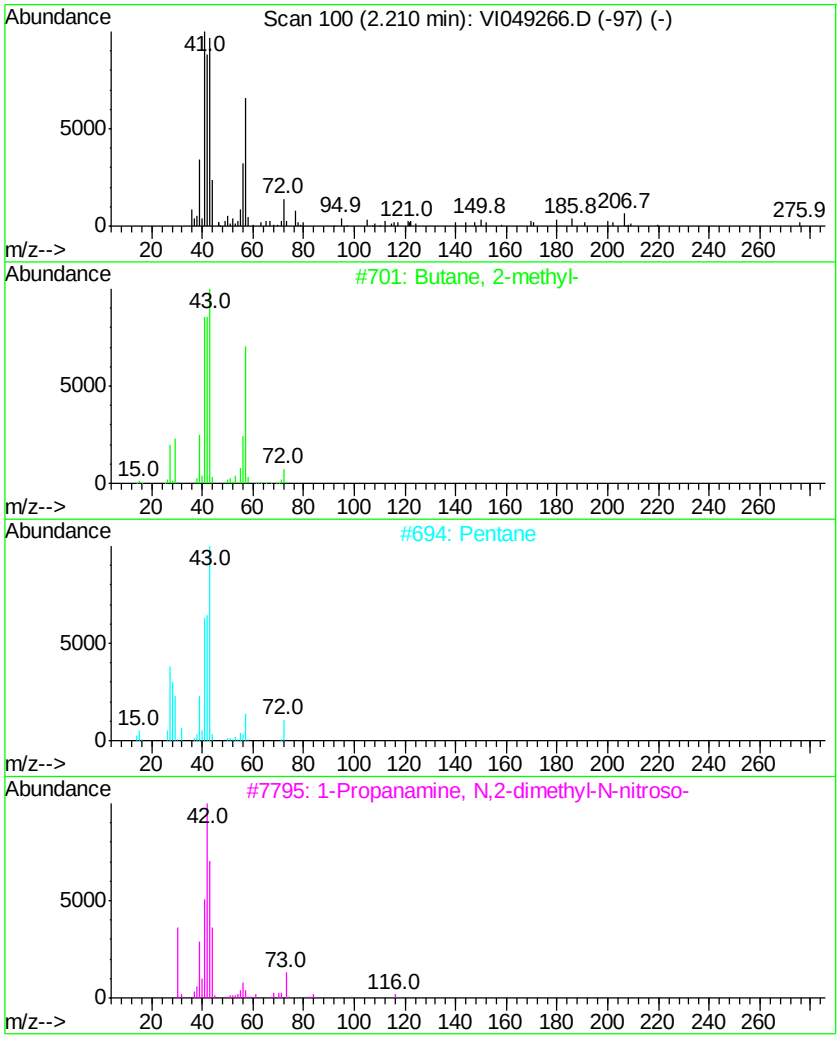
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

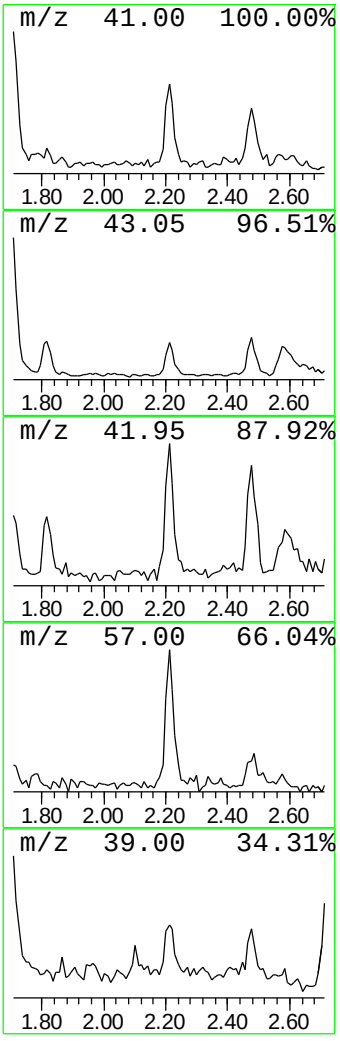
****

Peak Number 4 (DEL) Alkane: Straight-Chai... Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.21	0.25 ug/L	136941	1,4-Difluorobenzene	7.94

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	62
2	Pentane	72	C5H12	000109-66-0	50
3	1-Propanamine, N,2-dimethyl-N-ni...	116	C5H12N2O	034419-76-6	50
4	Butane, 2-methyl-	72	C5H12	000078-78-4	42
5	Butane, 2-methyl-	72	C5H12	000078-78-4	42





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4103

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

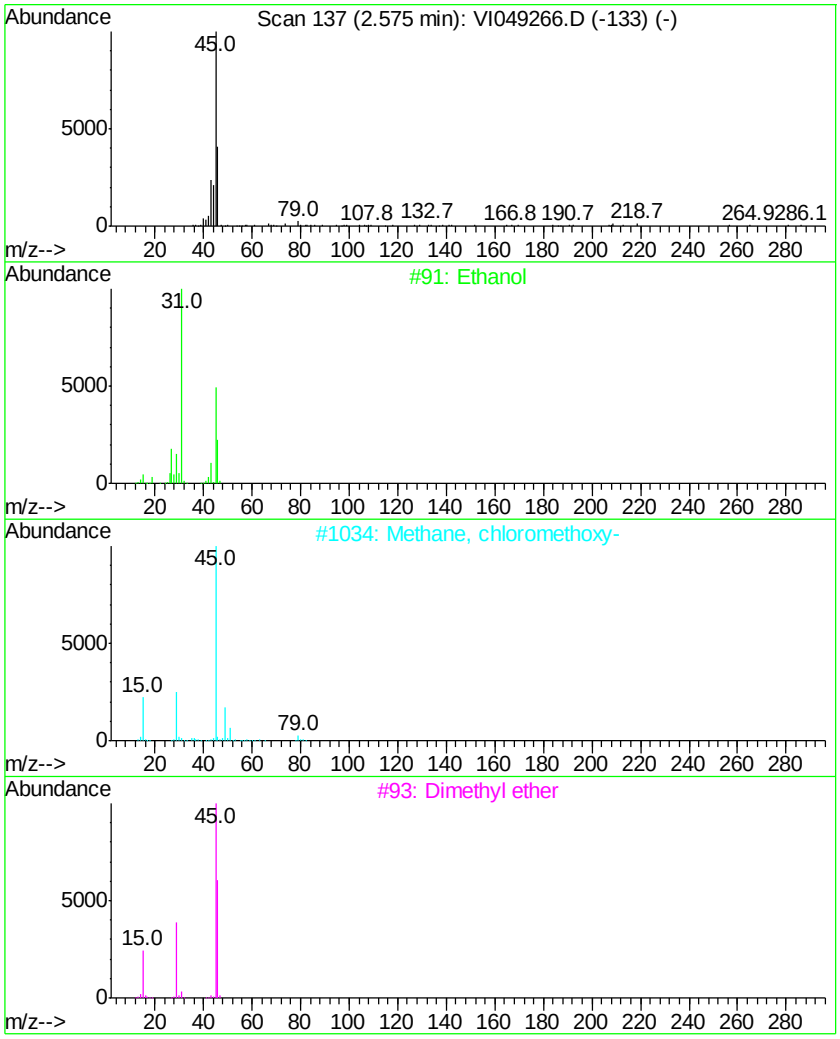
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

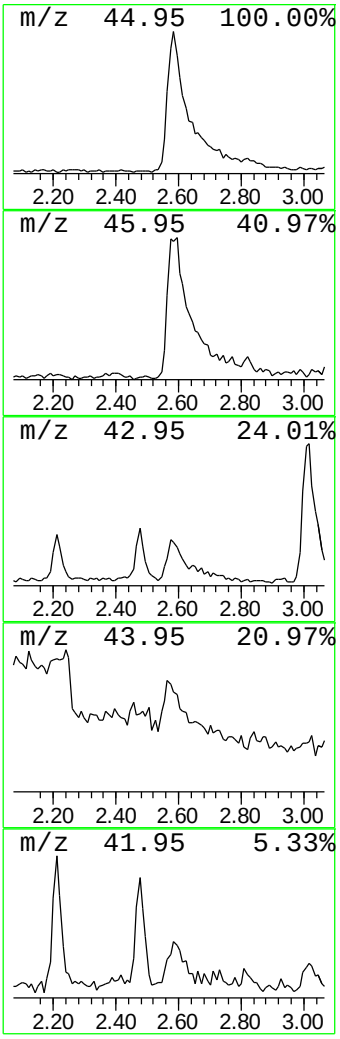
****

Peak Number 5 unknown-01 Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.57	0.57 ug/L	310695	1,4-Difluorobenzene	7.94

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethanol	46	C2H6O	000064-17-5	38
2	Methane, chloromethoxy-	80	C2H5ClO	000107-30-2	32
3	Dimethyl ether	46	C2H6O	000115-10-6	9
4	Dimethyl ether	46	C2H6O	000115-10-6	9
5	Ethanol	46	C2H6O	000064-17-5	7





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4103

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
(DEL) Alkane: Str...	1.58	0.5	ug/L	254126	1	7.94	2702320	5.0
(DEL) Alkane: Str...	2.21	0.3	ug/L	136941	1	7.94	2702320	5.0
unknown-01	2.57	0.6	ug/L	310695	1	7.94	2702320	5.0

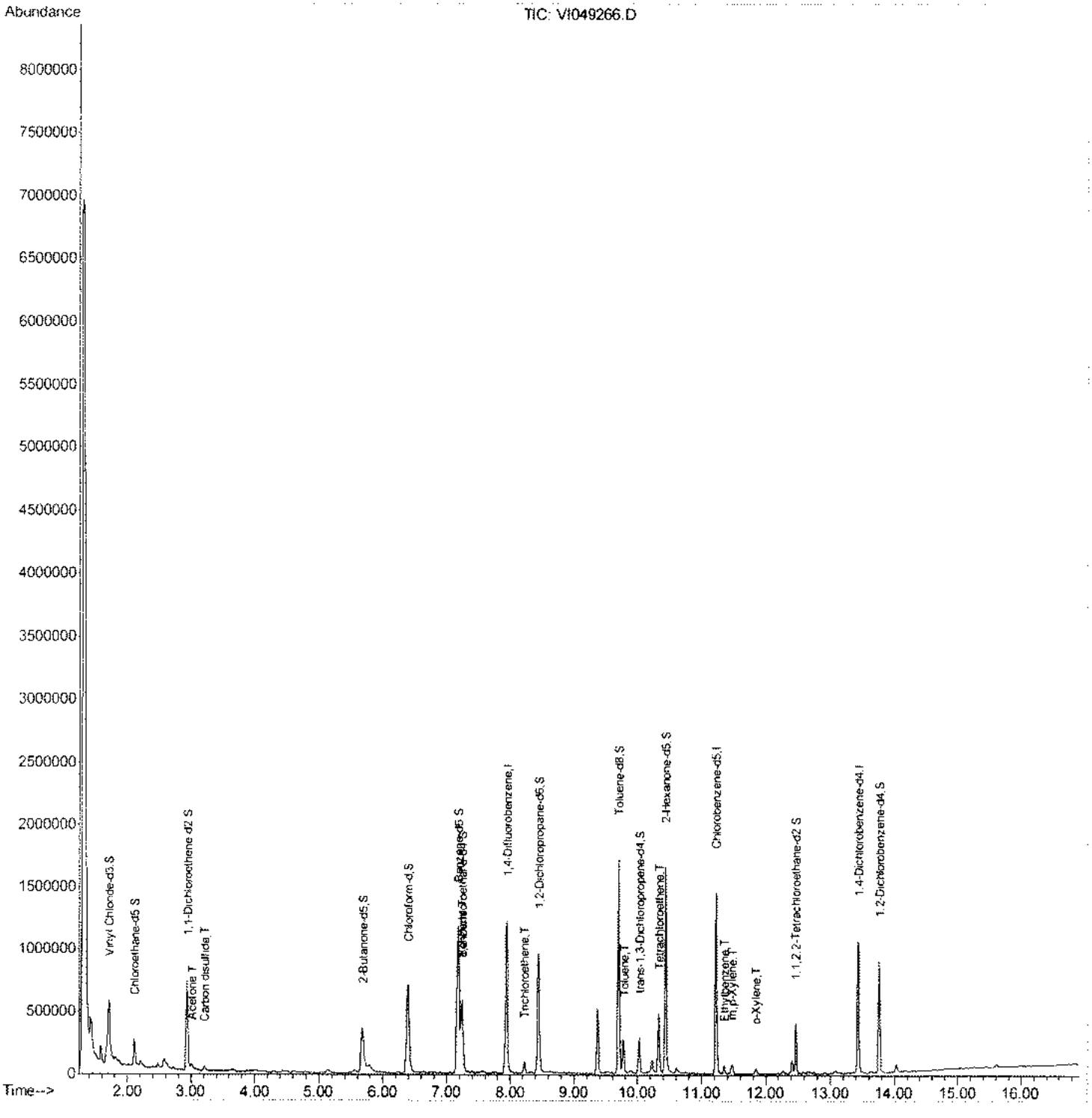
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 06 06:16:29 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4103

Manual Integrations APPROVED
feifei
5/6/2016 11:44:22 AM



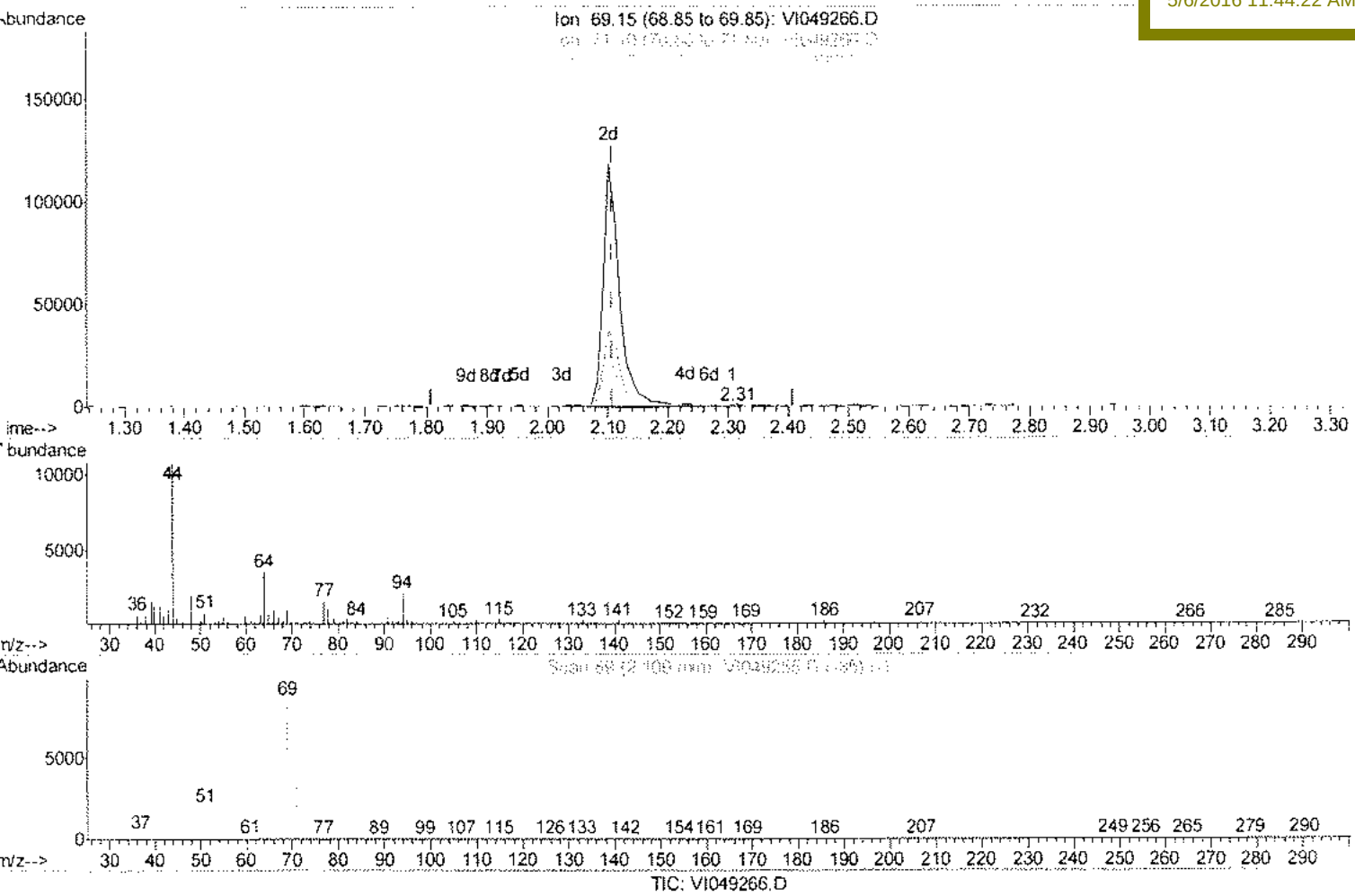
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 06 05:23:16 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4103

Manual Integrations APPROVED
feifei
5/6/2016 11:44:22 AM



TIC: VI049266.D

(7) Chloroethane-d5 (S)

2.309min (+0.200) 0.03ug/L

response 1049

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	40.13
51.05	32.70	41.94
0.00	0.00	0.00

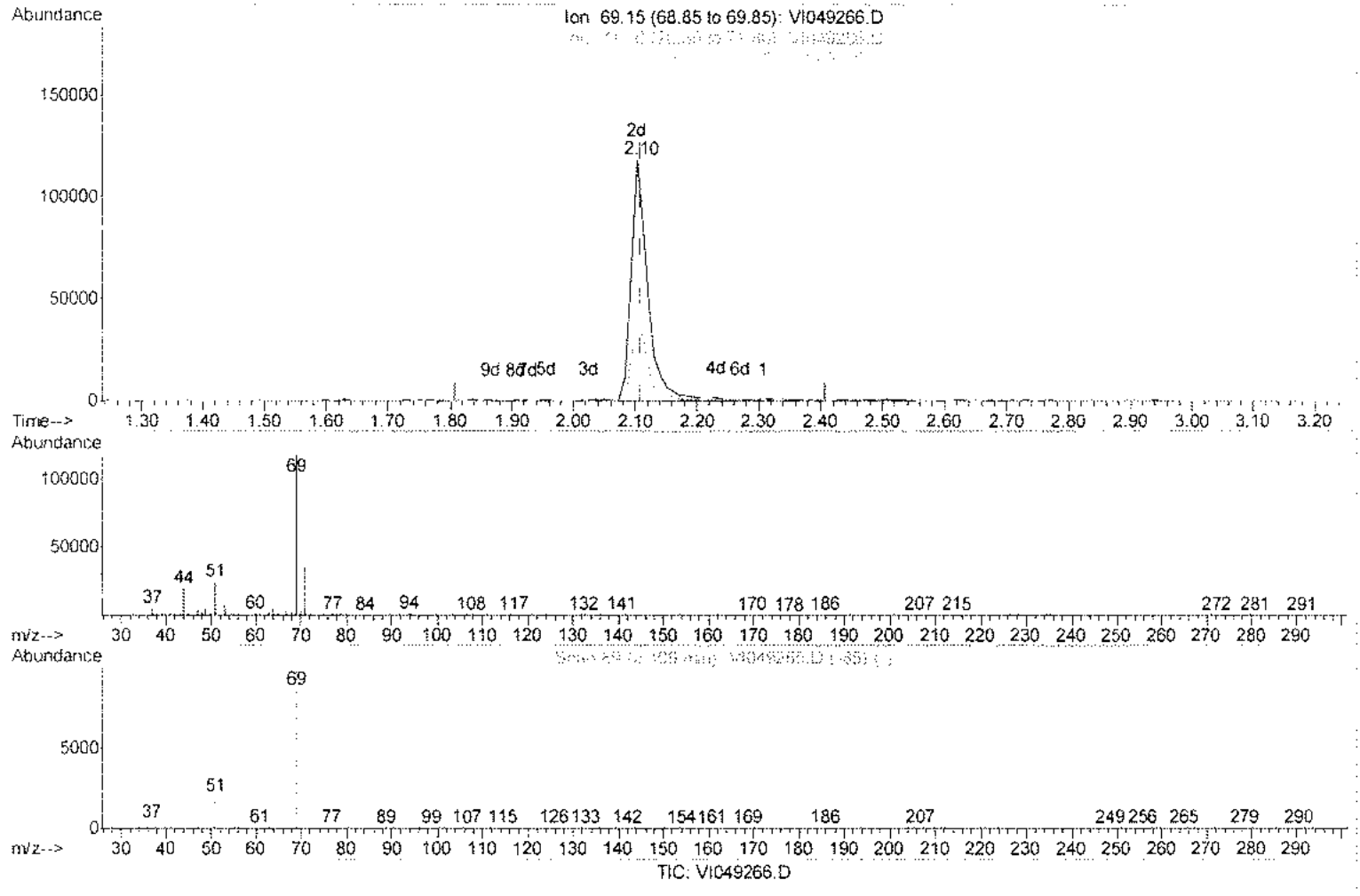
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 06 05:23:16 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4103

Manual Integrations APPROVED
feifei
5/6/2016 11:44:22 AM



TIC: VI049266.D

(7) Chloroethane-d5 (S)

2.102min (-0.007) 6.07ug/L m M.D 05/09/16

response 227360

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.19#
51.05	32.70	0.19#
0.00	0.00	0.00

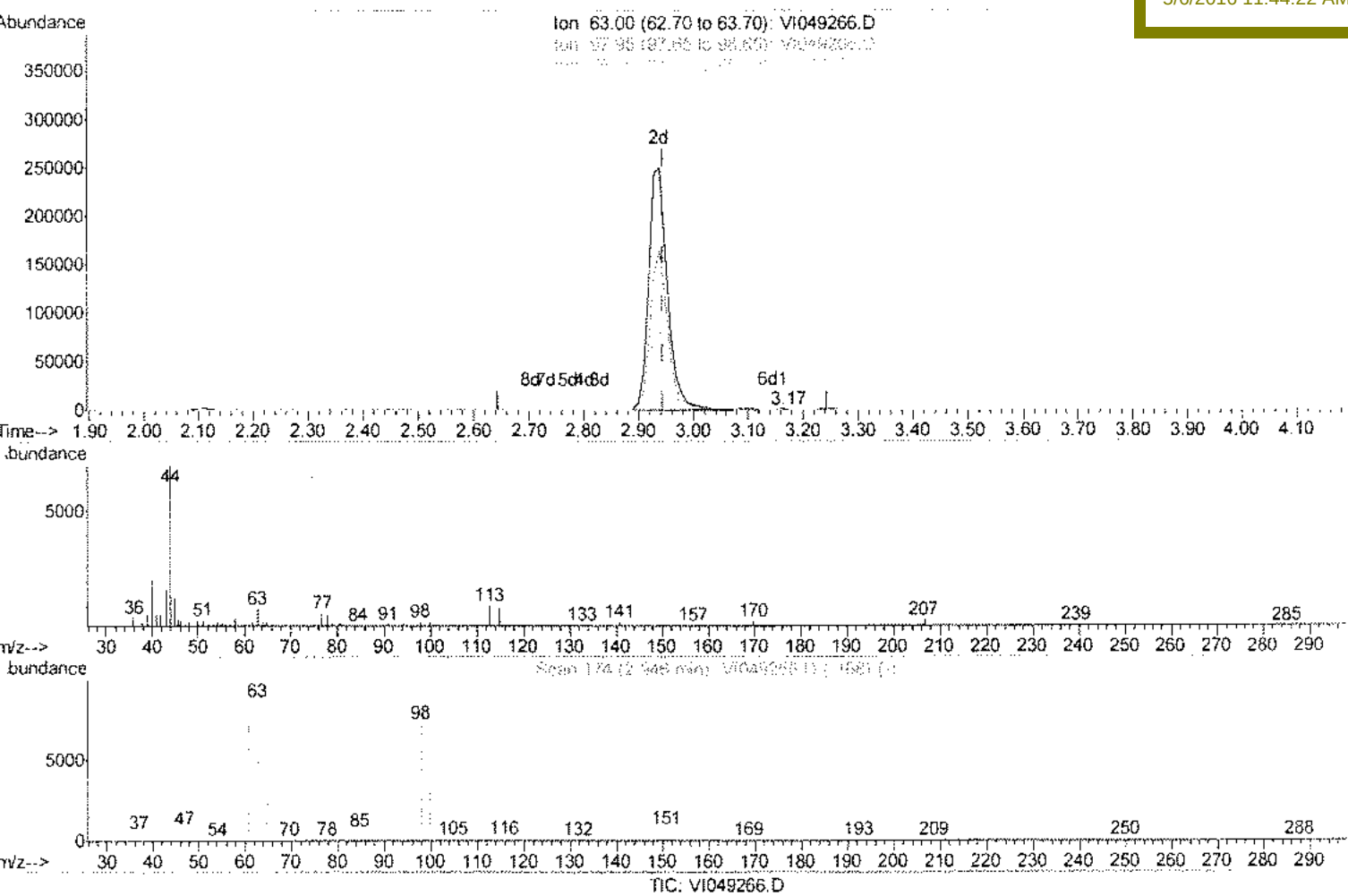
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 06 05:23:16 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4103

Manual Integrations APPROVED
feifei
5/6/2016 11:44:22 AM



TIC: VI049266.D

(11) 1,1-Dichloroethene-d2 (S)

3.165min (+0.219) 0.00ug/L

response 569

Ion	Exp%	Act%
63.00	100	100
97.95	85.40	94.73
65.10	23.80	19.33
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 06 05:23:16 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4103

Manual Integrations APPROVED
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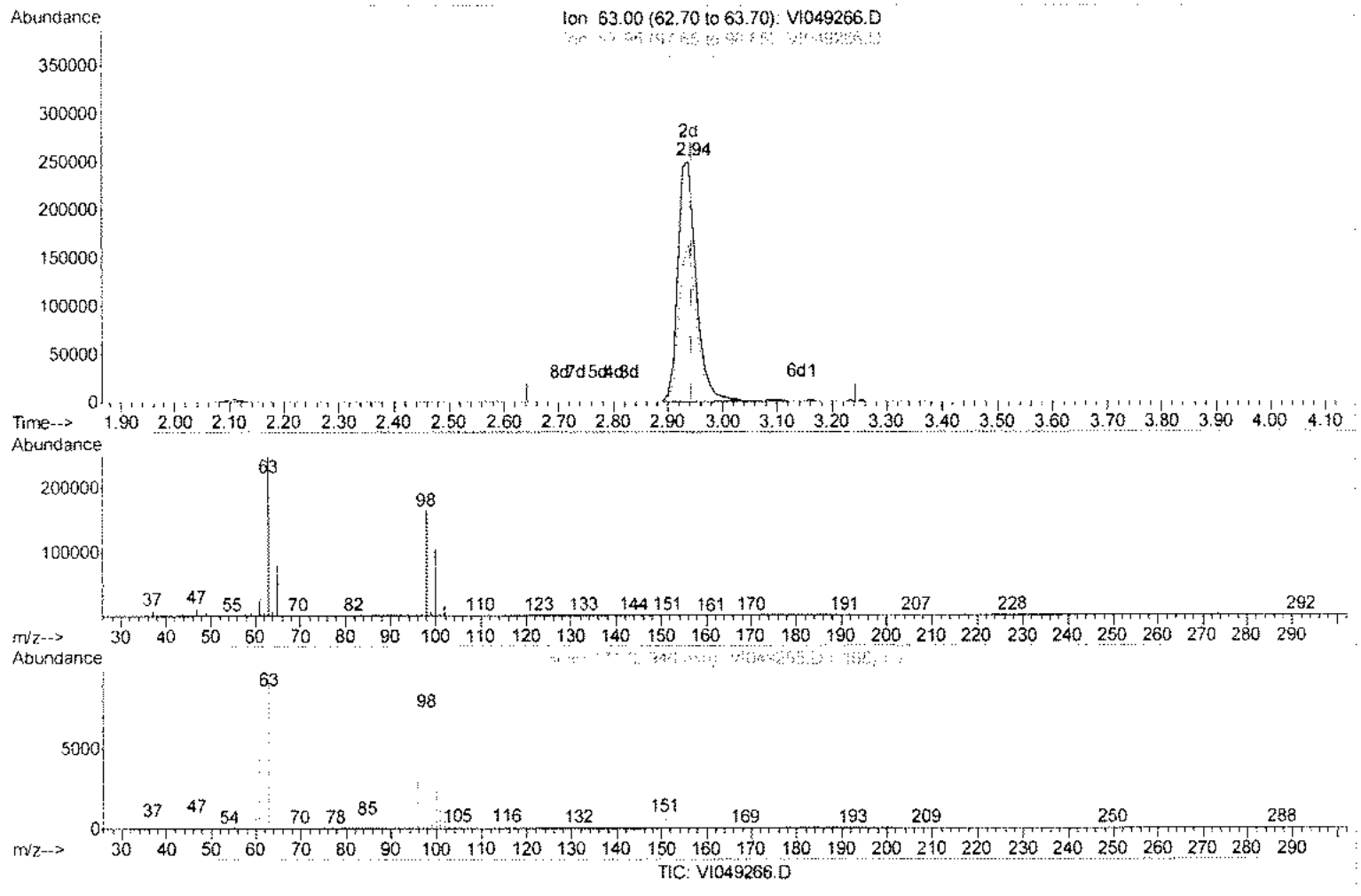
5/6/2016 11:44:22 AM



(11) 1,1-Dichloroethene-d2 (S)

2.939min (-0.007) 3.70ug/L m M.D 05/09/16

response 588952

Ion	Exp%	Act%
63.00	100	100
97.95	85.40	0.09#
65.10	23.80	0.02#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049266.D
Acq On : 5 May 2016 22:44
Operator : FY/SY
Sample : H2874-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: May 06 06:16:29 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4103

Manual Integrations APPROVED
feifei
5/6/2016 11:44:22 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1098501	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	710182	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	249336	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	342840	5.07	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 101.40%			
7) Chloroethane-d5	2.10	69	227360m	6.07	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 121.40%			
11) 1,1-Dichloroethene-d2	2.94	63	588952m	3.70	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 74.00%			
20) 2-Butanone-d5	5.68	46	874498	59.73	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 119.46%			
24) Chloroform-d	6.39	84	885944	5.15	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.00%			
26) 1,2-Dichloroethane-d4	7.24	65	399428	5.67	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 113.40%			
32) Benzene-d6	7.18	84	1498465	5.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 108.40%			
36) 1,2-Dichloropropane-d6	8.44	67	437845	5.63	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 112.60%			
41) Toluene-d8	9.70	98	1044802	5.12	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.40%			
43) trans-1,3-Dichloropropene-	10.02	79	146312	4.77	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 95.40%			
46) 2-Hexanone-d5	10.43	63	537061	55.55	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 111.10%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	181470	5.13	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 102.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	217587	4.98	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 99.60%			
Target Compounds						Qvalue
13) Acetone	3.02	43	88499	9.75	ug/L	97
14) Carbon disulfide	3.21	76	60708	0.19	ug/L	96
33) Benzene	7.24	78	152059	0.50	ug/L	100
34) Trichloroethene	8.22	95	31533	0.37	ug/L	91
42) Toluene	9.78	91	181285	0.71	ug/L	99
47) Tetrachloroethene	10.33	164	98965	1.79	ug/L	94
52) Ethylbenzene	11.35	91	38763	0.15	ug/L	93
53) m,p-Xylene	11.47	106	21365	0.22	ug/L	92
54) o-Xylene	11.85	106	8697	0.10	ug/L	84

M.D 05/09/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4111

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049267.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.44	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.55	
71-55-6	1,1,1-Trichloroethane	0.090	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.62	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4111

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049267.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	6.5	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4111

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049267.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4111

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049267.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

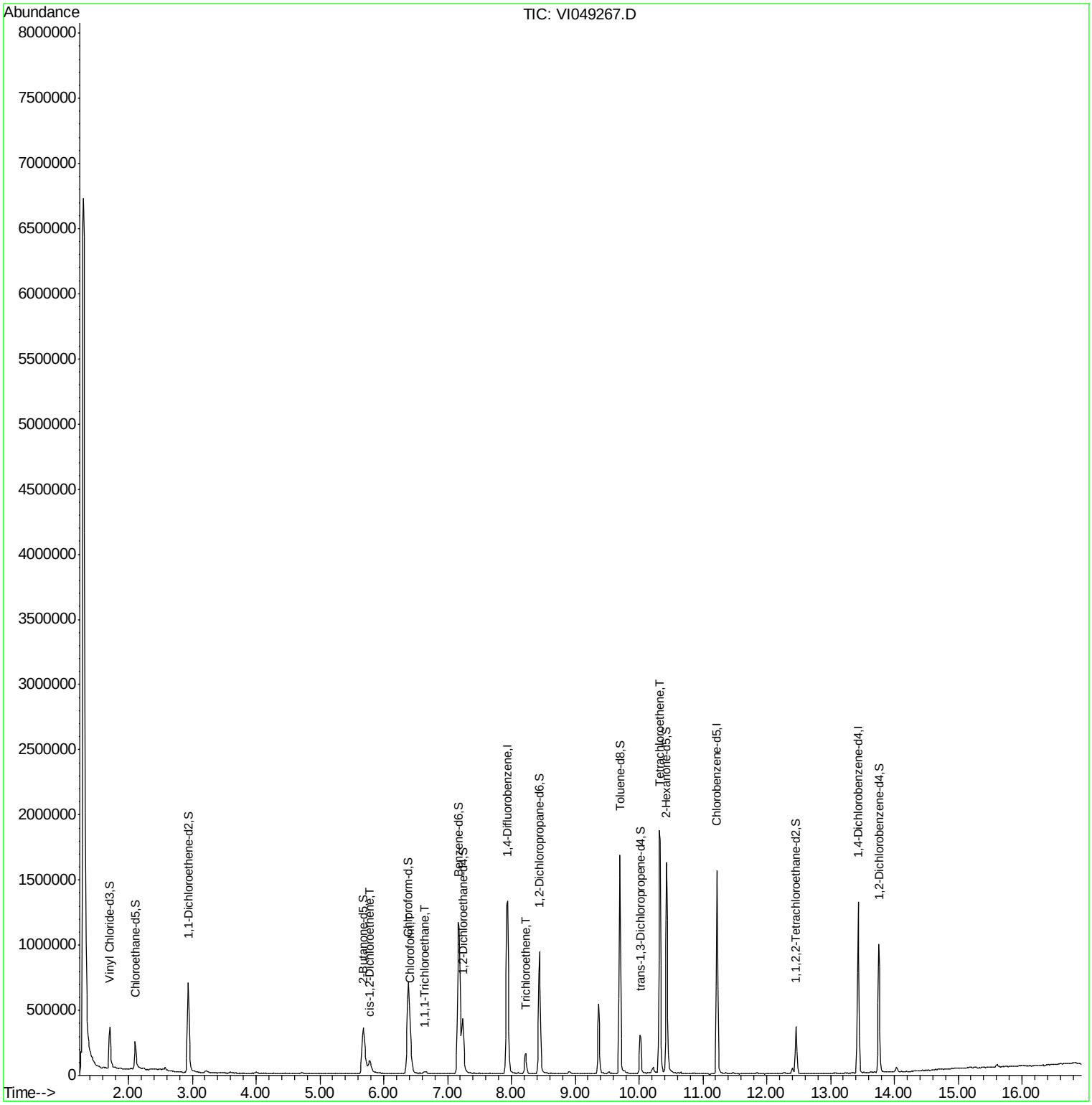
Quantitation Report (QT/LSC Reviewed)

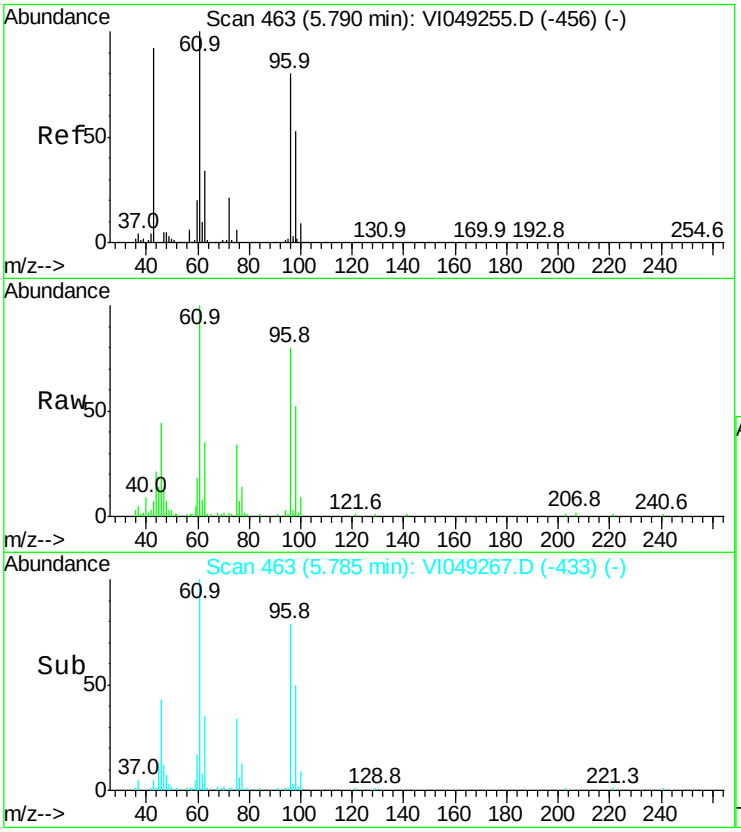
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049267.D
Acq On : 5 May 2016 23:16
Operator : FY/SY
Sample : H2874-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 06 06:48:55 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4111

Manual Integrations APPROVED
feifei
5/6/2016 11:44:24 AM

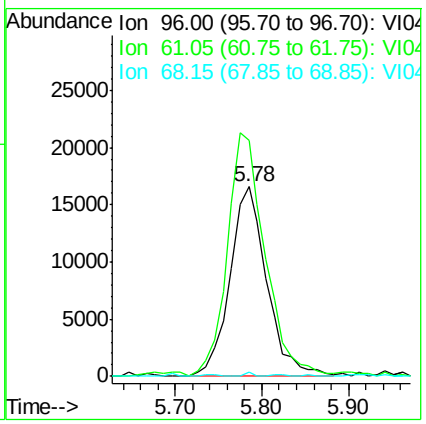




#22
cis-1,2-Dichloroethene
Concen: 0.44 ug/L m
RT: 5.78 min Scan# 463
Delta R.T. -0.01 min
Lab File: VI049267.D
Acq: 5 May 2016 23:16

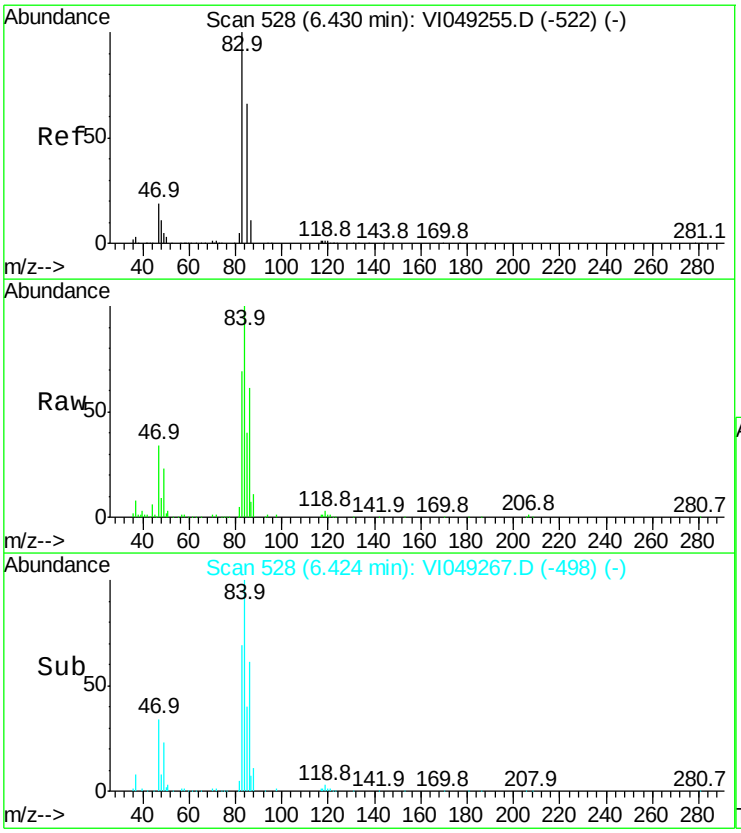
Tgt Ion: 96 Resp: 49069

Ion	Ratio	Lower	Upper
96	100		
61	124.4	82.1	152.5
68	1.9	0.0	0.0#



Instrument :
MSVOA_I
ClientSampleId :
H4111

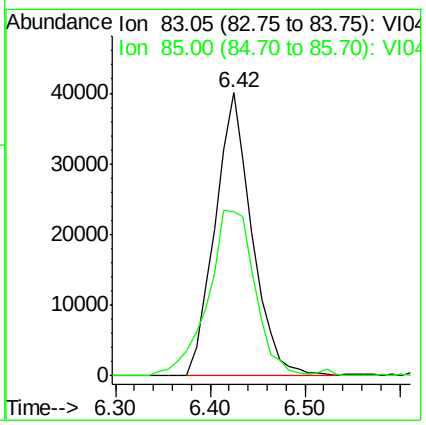
Manual Integrations APPROVED
feifei
5/6/2016 11:44:24 AM

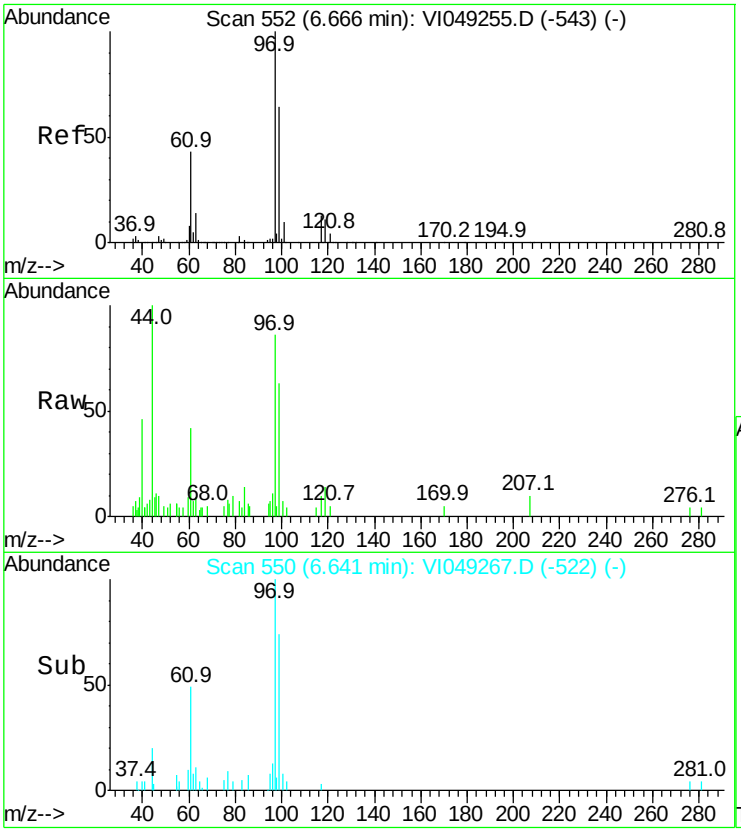


#25
Chloroform
Concen: 0.55 ug/L
RT: 6.42 min Scan# 528
Delta R.T. -0.01 min
Lab File: VI049267.D
Acq: 5 May 2016 23:16

Tgt Ion: 83 Resp: 108219

Ion	Ratio	Lower	Upper
83	100		
85	58.3	47.3	87.8

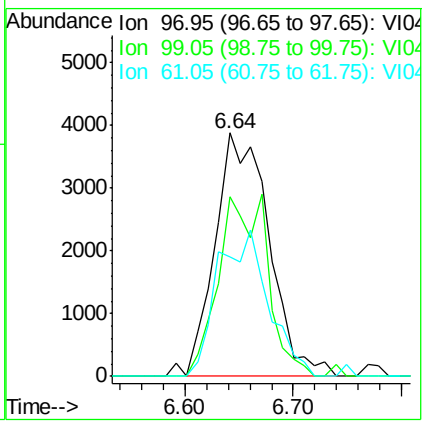




#29
1,1,1-Trichloroethane
Concen: 0.09 ug/L
RT: 6.64 min Scan# 550
Delta R.T. -0.02 min
Lab File: VI049267.D
Acq: 5 May 2016 23:16

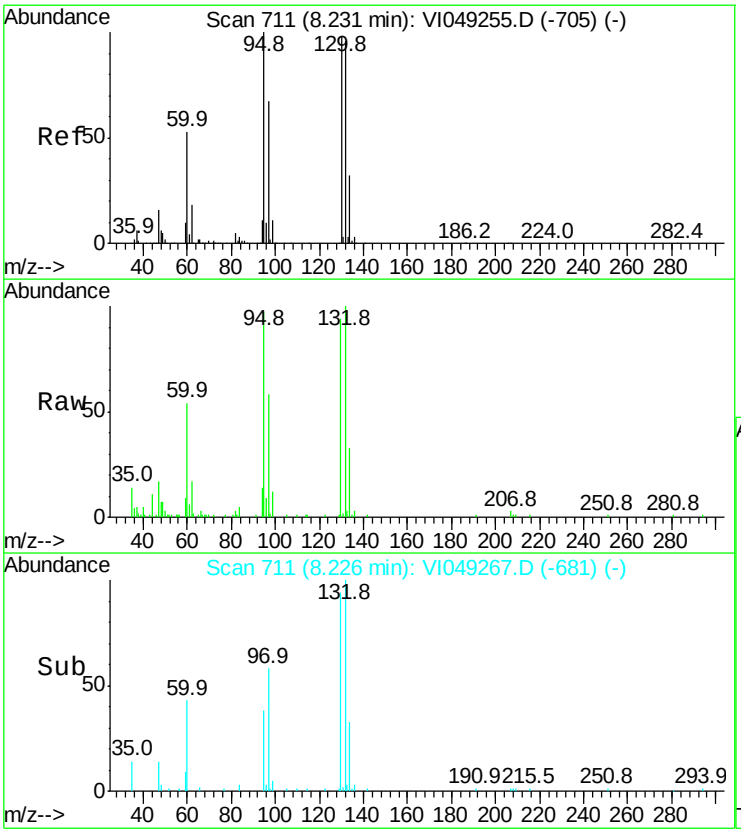
Tgt Ion: 97 Resp: 13374

Ion	Ratio	Lower	Upper
97	100		
99	45.9	51.1	76.7#
61	29.9	33.3	49.9#



Instrument :
MSVOA_I
ClientSampleId :
H4111

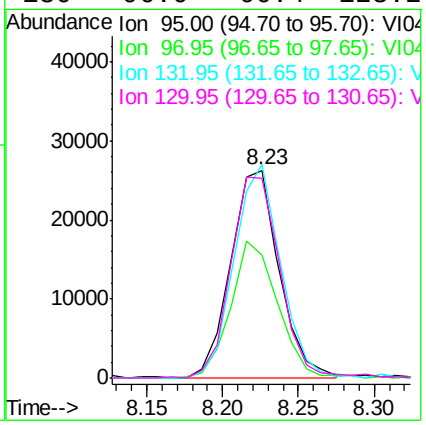
Manual Integrations APPROVED
feifei
5/6/2016 11:44:24 AM

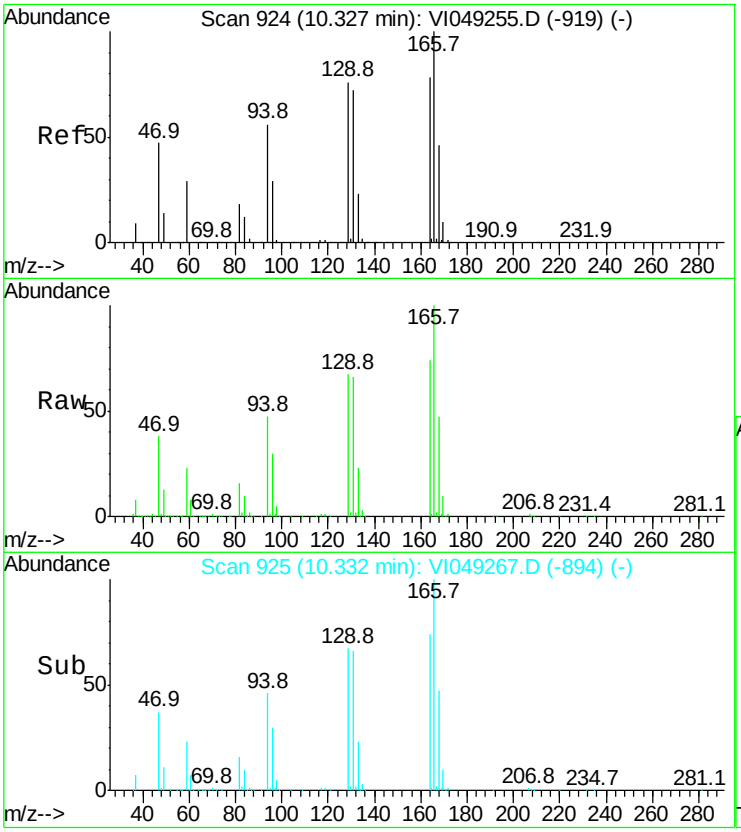


#34
Trichloroethene
Concen: 0.62 ug/L
RT: 8.23 min Scan# 711
Delta R.T. -0.01 min
Lab File: VI049267.D
Acq: 5 May 2016 23:16

Tgt Ion: 95 Resp: 58415

Ion	Ratio	Lower	Upper
95	100		
97	59.4	45.8	85.2
132	102.7	63.9	118.7
130	96.0	66.4	123.2

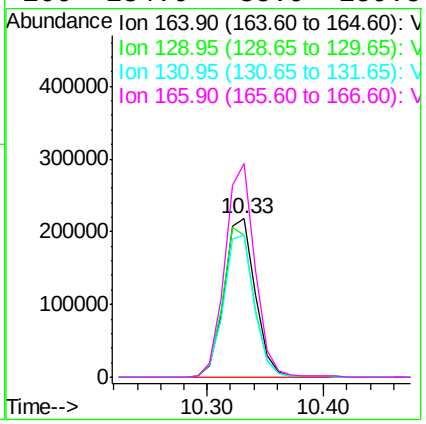




#47
Tetrachloroethene
Concen: 6.45 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.00 min
Lab File: VI049267.D
Acq: 5 May 2016 23:16

Tgt Ion:164 Resp: 402095

Ion	Ratio	Lower	Upper
164	100		
129	89.9	62.1	115.3
131	89.3	60.6	112.6
166	134.6	85.9	159.5



Instrument :
MSVOA_I
ClientSampleId :
H4111

Manual Integrations APPROVED
feifei
5/6/2016 11:44:24 AM

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049267.D
Acq On : 5 May 2016 23:16
Operator : FY/SY
Sample : H2874-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 06 06:48:55 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4111

Manual Integrations APPROVED
feifei
5/6/2016 11:44:24 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1218429	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	798411	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	288692	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	329141	4.39	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 87.80%			
7) Chloroethane-d5	2.10	69	218972	5.27	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 105.40%			
11) 1,1-Dichloroethene-d2	2.94	63	571386	3.23	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 64.60%			
20) 2-Butanone-d5	5.68	46	841901	51.84	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 103.68%			
24) Chloroform-d	6.39	84	879395	4.61	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 92.20%			
26) 1,2-Dichloroethane-d4	7.24	65	385487	4.94	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.80%			
32) Benzene-d6	7.17	84	1503423	4.83	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.60%			
36) 1,2-Dichloropropane-d6	8.44	67	426882	4.88	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.60%			
41) Toluene-d8	9.70	98	1045925	4.56	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 91.20%			
43) trans-1,3-Dichloropropene-	10.02	79	148204	4.30	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 86.00%			
46) 2-Hexanone-d5	10.43	63	533180	49.06	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 98.12%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	179083	4.50	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 90.00%			
63) 1,2-Dichlorobenzene-d4	13.76	152	222481	4.40	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.00%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.78	96	49069m	0.44	ug/L	
25) Chloroform	6.42	83	108219	0.55	ug/L	89
29) 1,1,1-Trichloroethane	6.64	97	13374	0.09	ug/L #	79
34) Trichloroethene	8.23	95	58415	0.62	ug/L	93
47) Tetrachloroethene	10.33	164	402095	6.45	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049267.D
Acq On : 5 May 2016 23:16
Operator : FY/SY
Sample : H2874-07
Misc : 25mL/MSVOA I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4111

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.297	4	7	31	rVB	6664442	17923622	100.00%	33.642%
2	1.602	37	38	41	rBV3	11497	17239	0.10%	0.032%
3	1.710	45	49	56	rBV	314911	531276	2.96%	0.997%
4	1.877	63	66	69	rVB4	9826	19065	0.11%	0.036%
5	2.104	86	89	94	rBV	207217	397412	2.22%	0.746%
6	2.576	135	137	143	rVB2	26110	51228	0.29%	0.096%
7	2.822	160	162	163	rBV2	4486	4768	0.03%	0.009%
8	2.940	169	174	186	rBV	686228	1620751	9.04%	3.042%
9	3.216	199	202	204	rBV2	14680	30360	0.17%	0.057%
10	3.403	220	221	225	rBV3	6067	10421	0.06%	0.020%
11	3.600	239	241	245	rVB4	5056	7847	0.04%	0.015%
12	3.747	252	256	257	rBV4	7299	11172	0.06%	0.021%
13	3.777	257	259	261	rVV3	4388	7251	0.04%	0.014%
14	3.836	263	265	267	rVV2	3680	6997	0.04%	0.013%
15	3.866	267	268	270	rVV2	3295	4677	0.03%	0.009%
16	3.944	274	276	277	rVV2	5232	7041	0.04%	0.013%
17	4.003	277	282	288	rVV6	13121	42609	0.24%	0.080%
18	4.082	288	290	293	rVV4	4127	6163	0.03%	0.012%
19	4.151	295	297	300	rBV4	6709	14500	0.08%	0.027%
20	4.200	300	302	306	rVB5	3228	6856	0.04%	0.013%
21	4.299	311	312	315	rVV2	3159	5050	0.03%	0.009%
22	4.407	321	323	326	rVB4	3069	6077	0.03%	0.011%
23	4.456	326	328	329	rBV2	4877	4847	0.03%	0.009%
24	4.653	345	348	350	rBV3	2231	5108	0.03%	0.010%
25	4.712	350	354	358	rBV7	6608	17812	0.10%	0.033%
26	4.997	382	383	385	rVB2	4612	4712	0.03%	0.009%
27	5.047	385	388	389	rBV3	4630	6913	0.04%	0.013%
28	5.184	398	402	404	rBV3	3709	9701	0.05%	0.018%
29	5.352	416	419	421	rVB3	3978	7081	0.04%	0.013%
30	5.480	430	432	435	rBV3	3453	5432	0.03%	0.010%
31	5.676	446	452	459	rBV	349956	1206980	6.73%	2.265%
32	5.775	459	462	471	rVB2	88516	288271	1.61%	0.541%
33	5.932	476	478	479	rVV2	6254	7137	0.04%	0.013%
34	6.080	491	493	497	rVB5	3364	7008	0.04%	0.013%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049267.D
Acq On : 5 May 2016 23:16
Operator : FY/SY
Sample : H2874-07
Misc : 25mL/MSVOA I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4111

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.237	505	509	511	rBV4	3802	7378	0.04%	0.014%
36	6.385	515	524	536	rBV2	707784	2334025	13.02%	4.381%
37	6.611	545	547	548	rVV2	7156	8619	0.05%	0.016%
38	6.641	548	550	561	rVB8	16303	57347	0.32%	0.108%
39	6.769	561	563	565	rBV2	3945	4720	0.03%	0.009%
40	6.976	580	584	586	rVV4	3192	5309	0.03%	0.010%
41	7.172	597	604	608	rBV	1168914	3119172	17.40%	5.855%
42	7.241	608	611	620	rVB	418721	1044336	5.83%	1.960%
43	7.665	651	654	655	rVB3	4942	5366	0.03%	0.010%
44	7.940	676	682	694	rBV	1325293	2974321	16.59%	5.583%
45	8.098	697	698	701	rVB2	3381	5356	0.03%	0.010%
46	8.226	706	711	716	rVB	157248	349215	1.95%	0.655%
47	8.285	716	717	721	rBV4	4315	7420	0.04%	0.014%
48	8.442	726	733	741	rBV	936889	2042736	11.40%	3.834%
49	8.540	741	743	749	rVB6	9557	20547	0.11%	0.039%
50	8.796	767	769	772	rVB4	4718	6654	0.04%	0.012%
51	8.915	772	781	786	rBV4	15083	55611	0.31%	0.104%
52	9.013	788	791	794	rVB4	3721	6096	0.03%	0.011%
53	9.062	794	796	799	rVB3	4052	6327	0.04%	0.012%
54	9.141	799	804	807	rBV5	2690	7716	0.04%	0.014%
55	9.367	822	827	833	rBV	540663	958363	5.35%	1.799%
56	9.446	833	835	838	rVB4	4864	6114	0.03%	0.011%
57	9.525	839	843	847	rVB2	15810	33604	0.19%	0.063%
58	9.574	847	848	852	rVB5	4527	6671	0.04%	0.013%
59	9.702	856	861	866	rBV	1677826	3039778	16.96%	5.705%
60	9.909	878	882	884	rVB4	3373	7382	0.04%	0.014%
61	10.017	888	893	899	rBV	295011	527252	2.94%	0.990%
62	10.145	903	906	908	rVV4	8499	20473	0.11%	0.038%
63	10.223	910	914	918	rVV	47008	115936	0.65%	0.218%
64	10.322	920	924	931	rVV	1865391	3499937	19.53%	6.569%
65	10.430	931	935	951	rVV	1621376	2880099	16.07%	5.406%
66	10.627	951	955	956	rVV4	5810	13558	0.08%	0.025%
67	10.657	956	958	959	rVV	16511	12651	0.07%	0.024%
68	10.863	976	979	980	rBV3	5606	9351	0.05%	0.018%
69	11.060	997	999	1005	rVB7	3872	6977	0.04%	0.013%
70	11.129	1005	1006	1009	rBV2	4205	6160	0.03%	0.012%
71	11.218	1011	1015	1026	rBV	1561815	2785918	15.54%	5.229%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049267.D
Acq On : 5 May 2016 23:16
Operator : FY/SY
Sample : H2874-07
Misc : 25mL/MSVOA I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4111

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.355	1026	1029	1032	rVB5	10102	19927	0.11%	0.037%
73	11.473	1038	1041	1046	rVB5	10438	22445	0.13%	0.042%
74	11.552	1046	1049	1051	rVB4	4135	6259	0.03%	0.012%
75	11.710	1062	1065	1068	rBV4	2302	4787	0.03%	0.009%
76	11.788	1071	1073	1076	rBV3	2760	5255	0.03%	0.010%
77	11.847	1076	1079	1085	rVB6	9643	24568	0.14%	0.046%
78	11.936	1085	1088	1091	rVB5	4292	8077	0.05%	0.015%
79	11.995	1091	1094	1097	rBV5	3206	5590	0.03%	0.010%
80	12.054	1097	1100	1103	rBV5	2999	6918	0.04%	0.013%
81	12.202	1112	1115	1118	rBV5	4479	11497	0.06%	0.022%
82	12.261	1118	1121	1123	rBV3	4449	8899	0.05%	0.017%
83	12.369	1129	1132	1133	rBV3	6189	10560	0.06%	0.020%
84	12.408	1133	1136	1138	rVV	43461	87366	0.49%	0.164%
85	12.458	1138	1141	1147	rVV	359736	678561	3.79%	1.274%
86	12.536	1147	1149	1152	rVB4	4312	5118	0.03%	0.010%
87	12.989	1191	1195	1196	rVB3	3932	6787	0.04%	0.013%
88	13.028	1196	1199	1200	rBV3	2855	6448	0.04%	0.012%
89	13.068	1200	1203	1205	rVB4	4337	6800	0.04%	0.013%
90	13.097	1205	1206	1211	rVB5	3386	5522	0.03%	0.010%
91	13.235	1215	1220	1221	rBV5	4023	8523	0.05%	0.016%
92	13.363	1230	1233	1235	rVB3	6310	10294	0.06%	0.019%
93	13.432	1235	1240	1246	rBV	1313798	2145213	11.97%	4.026%
94	13.639	1256	1261	1262	rBV5	6963	15052	0.08%	0.028%
95	13.757	1269	1273	1278	rBV	985127	1700365	9.49%	3.191%
96	14.032	1296	1301	1308	rVV	36116	79413	0.44%	0.149%
97	14.318	1327	1330	1333	rBV5	7489	18255	0.10%	0.034%
98	14.446	1341	1343	1345	rVB2	5762	7158	0.04%	0.013%
99	14.505	1347	1349	1350	rBV2	4550	5288	0.03%	0.010%
100	15.617	1458	1462	1466	rVB2	25232	55314	0.31%	0.104%

Sum of corrected areas: 53278138

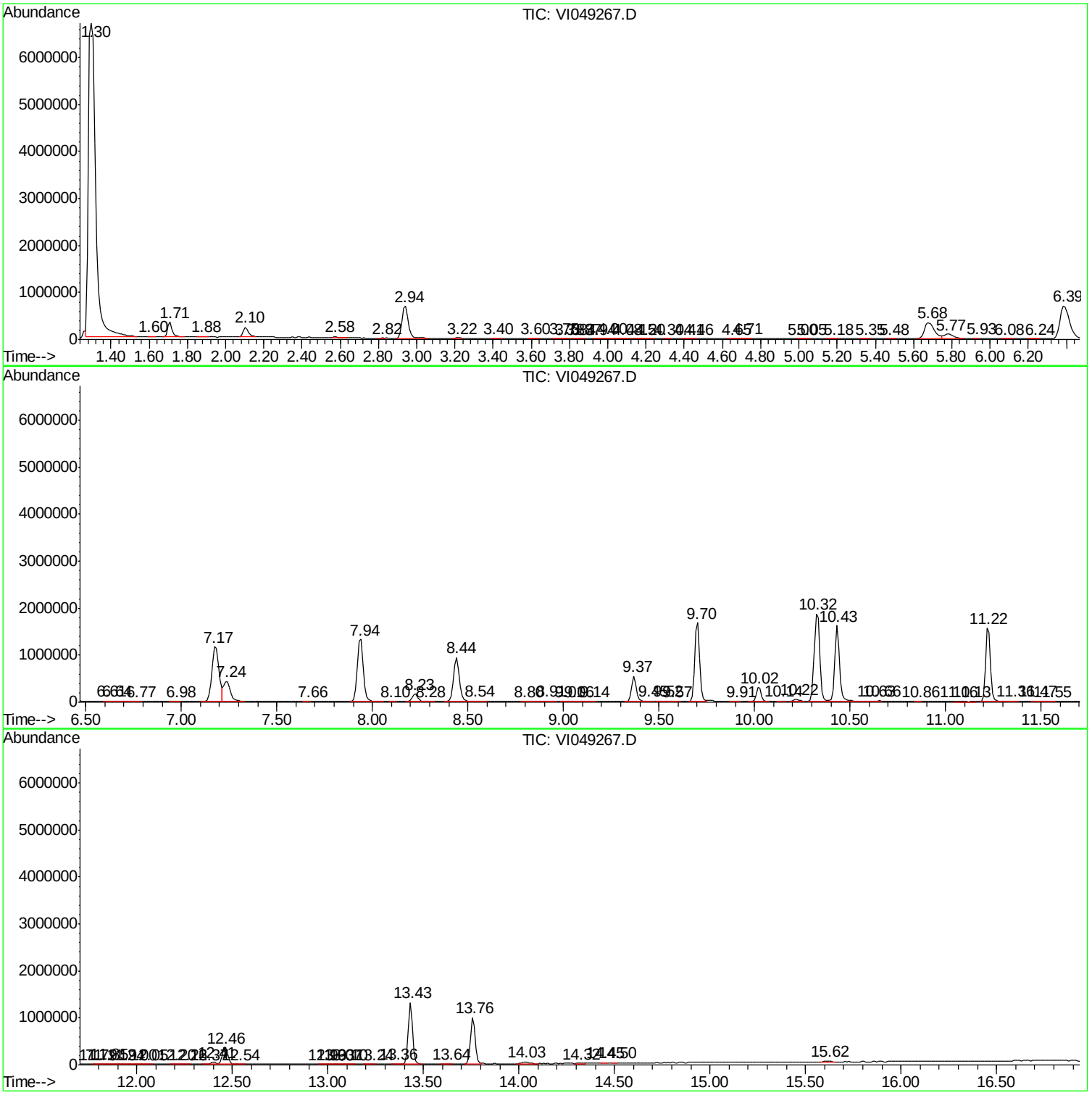
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049267.D
Acq On : 5 May 2016 23:16
Operator : FY/SY
Sample : H2874-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4111

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049267.D
Acq On : 5 May 2016 23:16
Operator : FY/SY
Sample : H2874-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4111

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049267.D
Acq On : 5 May 2016 23:16
Operator : FY/SY
Sample : H2874-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4111

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

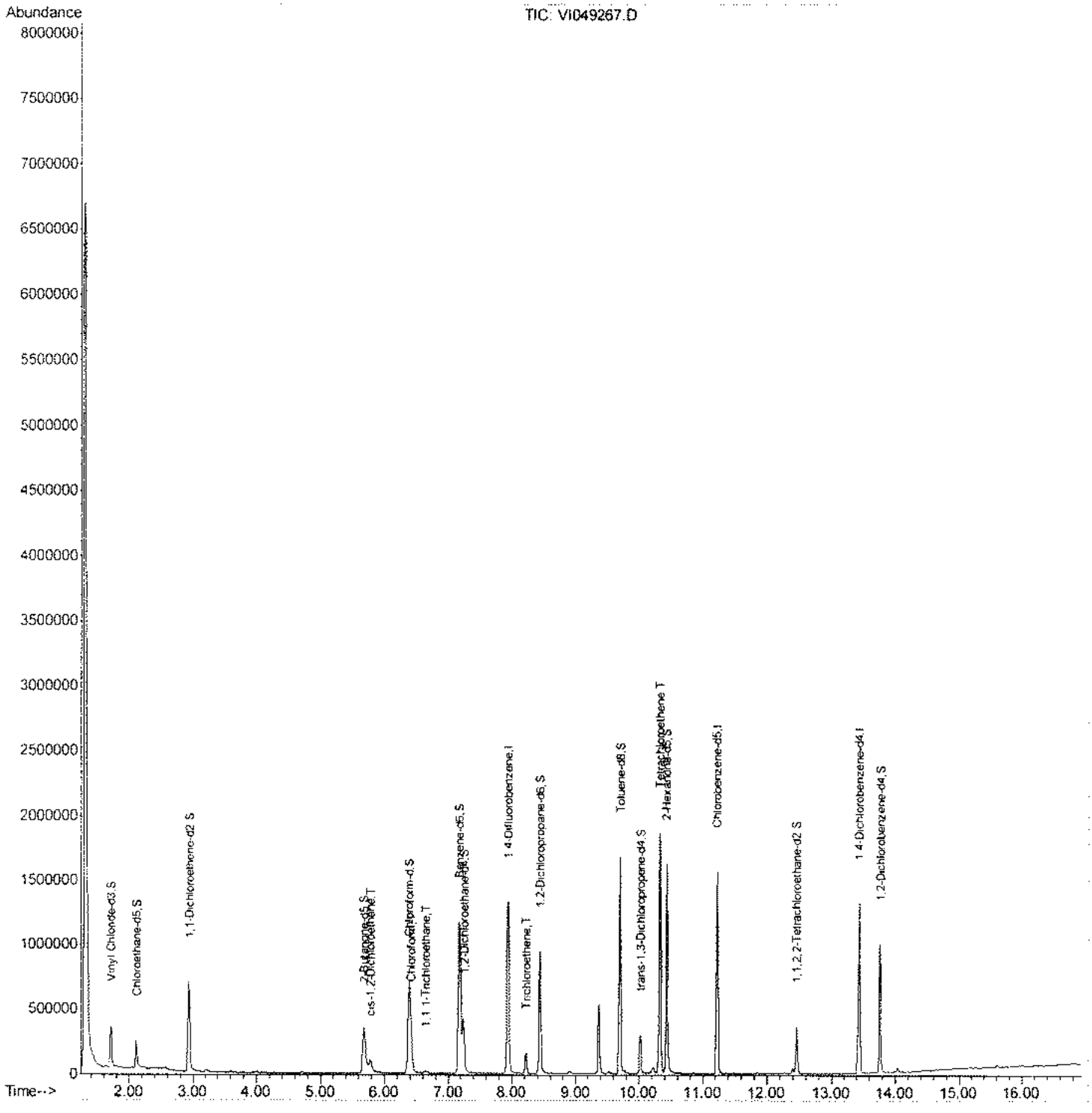
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049267.D
Acq On : 5 May 2016 23:16
Operator : FY/SY
Sample : H2874-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 06 06:48:55 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4111

Manual Integrations APPROVED
feifei
5/6/2016 11:44:24 AM



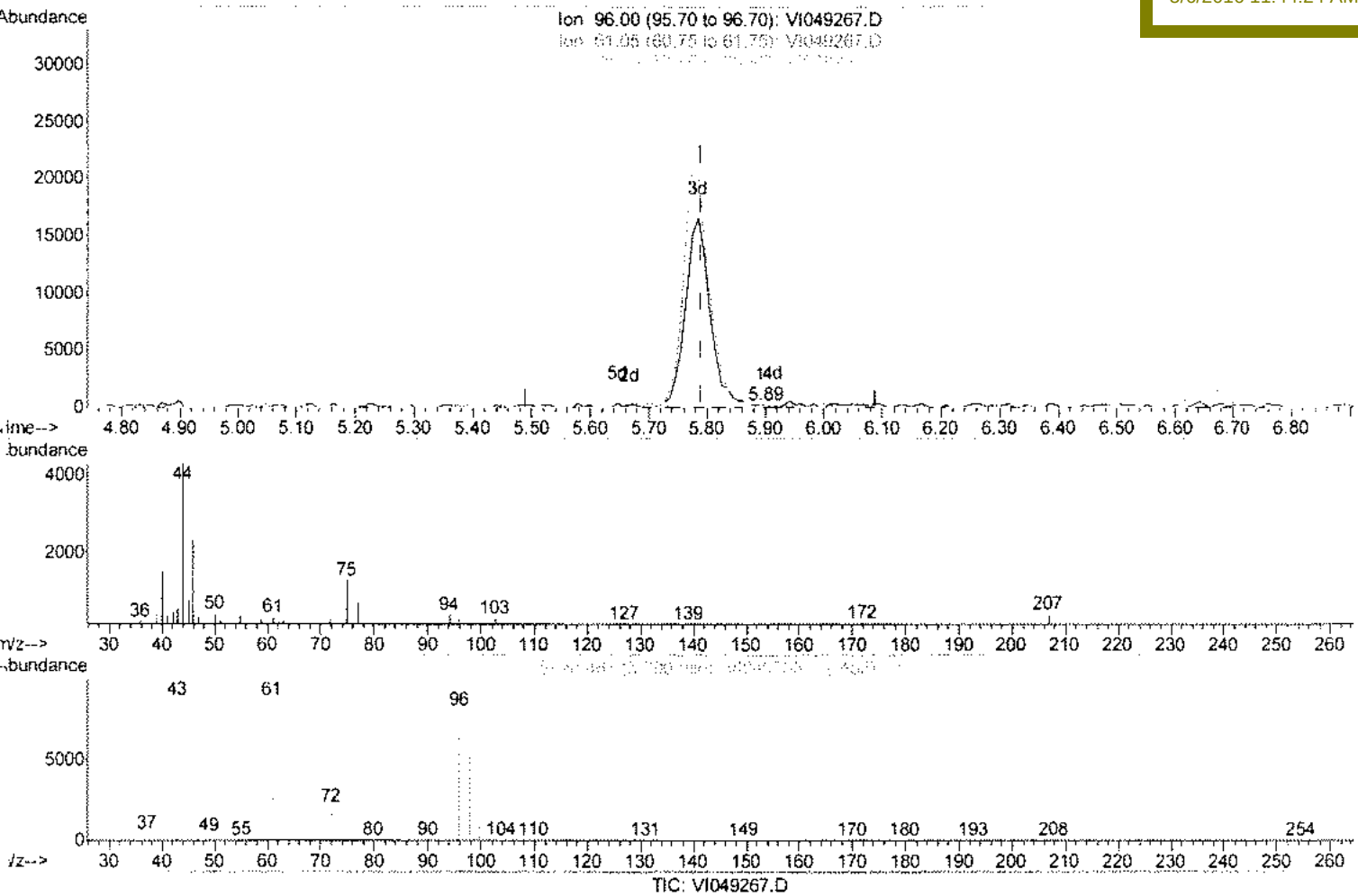
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049267.D
Acq On : 5 May 2016 23:16
Operator : FY/SY
Sample : H2874-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 06 05:23:25 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4111

Manual Integrations APPROVED
feifei
5/6/2016 11:44:24 AM



TIC: VI049267.D

(22) cis-1,2-Dichloroethene (T)

5.893min (+0.103) 0.00ug/L

response 166

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	117.79
68.15	0.00	0.00
0.00	0.00	0.00

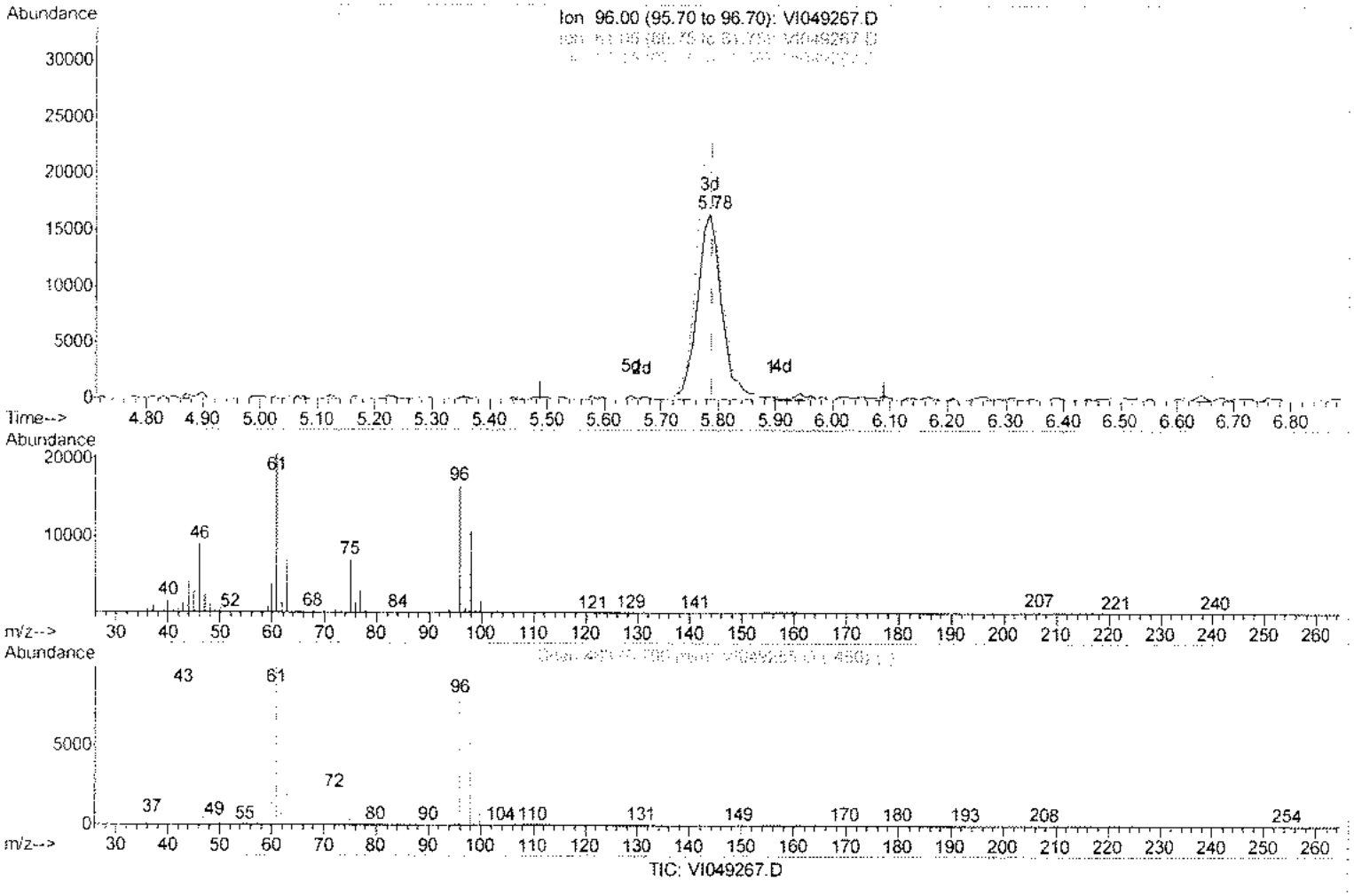
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049267.D
Acq On : 5 May 2016 23:16
Operator : FY/SY
Sample : H2874-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 06 05:23:25 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4111

Manual Integrations APPROVED
feifei
5/6/2016 11:44:24 AM



(22) cis-1,2-Dichloroethene (T)

5.785min (-0.005) 0.44ug/L m

response 49069

M.D 05/09/16

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	124.42
68.15	0.00	1.94#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049267.D
Acq On : 5 May 2016 23:16
Operator : FY/SY
Sample : H2874-07
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 06 06:48:55 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4111

Manual Integrations APPROVED
feifei
5/6/2016 11:44:24 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1218429	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	798411	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	288692	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	329141	4.39	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 87.80%			
7) Chloroethane-d5	2.10	69	218972	5.27	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 105.40%			
11) 1,1-Dichloroethene-d2	2.94	63	571386	3.23	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 64.60%			
20) 2-Butanone-d5	5.68	46	841901	51.84	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 103.68%			
24) Chloroform-d	6.39	84	879395	4.61	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 92.20%			
26) 1,2-Dichloroethane-d4	7.24	65	385487	4.94	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.80%			
32) Benzene-d6	7.17	84	1503423	4.83	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.60%			
36) 1,2-Dichloropropane-d6	8.44	67	426882	4.88	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.60%			
41) Toluene-d8	9.70	98	1045925	4.56	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 91.20%			
43) trans-1,3-Dichloropropene-	10.02	79	148204	4.30	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 86.00%			
46) 2-Hexanone-d5	10.43	63	533180	49.06	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 98.12%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	179083	4.50	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 90.00%			
63) 1,2-Dichlorobenzene-d4	13.76	152	222481	4.40	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.00%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.78	96	49069m	0.44	ug/L	
25) Chloroform	6.42	83	108219	0.55	ug/L	89
29) 1,1,1-Trichloroethane	6.64	97	13374	0.09	ug/L #	79
34) Trichloroethene	8.23	95	58415	0.62	ug/L	93
47) Tetrachloroethene	10.33	164	402095	6.45	ug/L	94

M.D 05/09/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4112

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049268.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.13	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.47	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4112

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049268.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.9	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4112

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049268.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4112

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-08
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049268.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

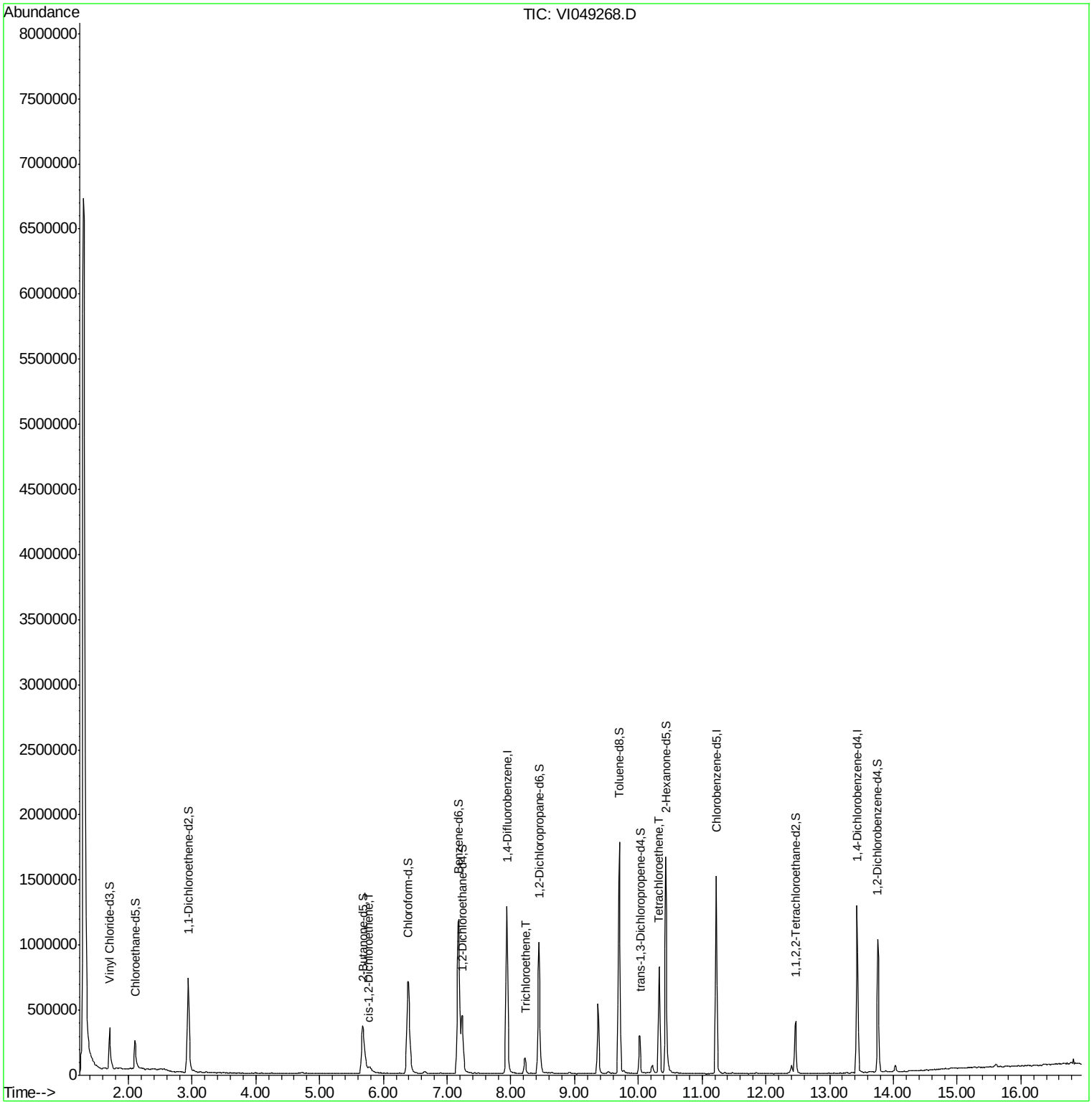
Quantitation Report (QT/LSC Reviewed)

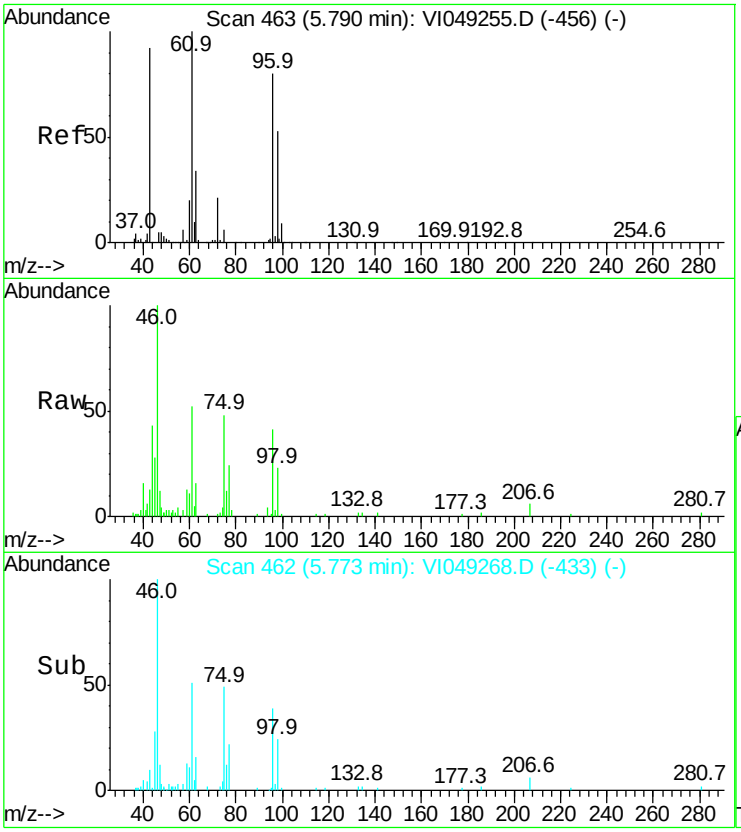
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049268.D
Acq On : 5 May 2016 23:47
Operator : FY/SY
Sample : H2874-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 26 Sample Multiplier: 1

Quant Time: May 06 06:51:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4112

Manual Integrations APPROVED
feifei
5/6/2016 11:44:26 AM

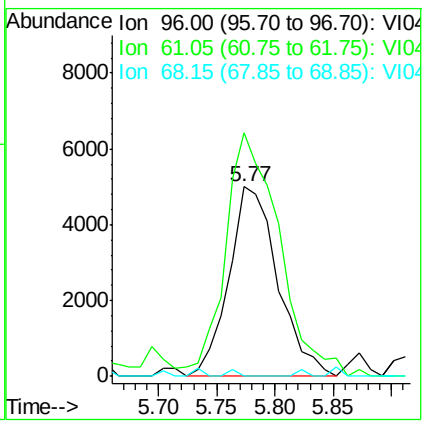




#22
cis-1,2-Dichloroethene
Concen: 0.13 ug/L
RT: 5.77 min Scan# 462
Delta R.T. -0.02 min
Lab File: VI049268.D
Acq: 5 May 2016 23:47

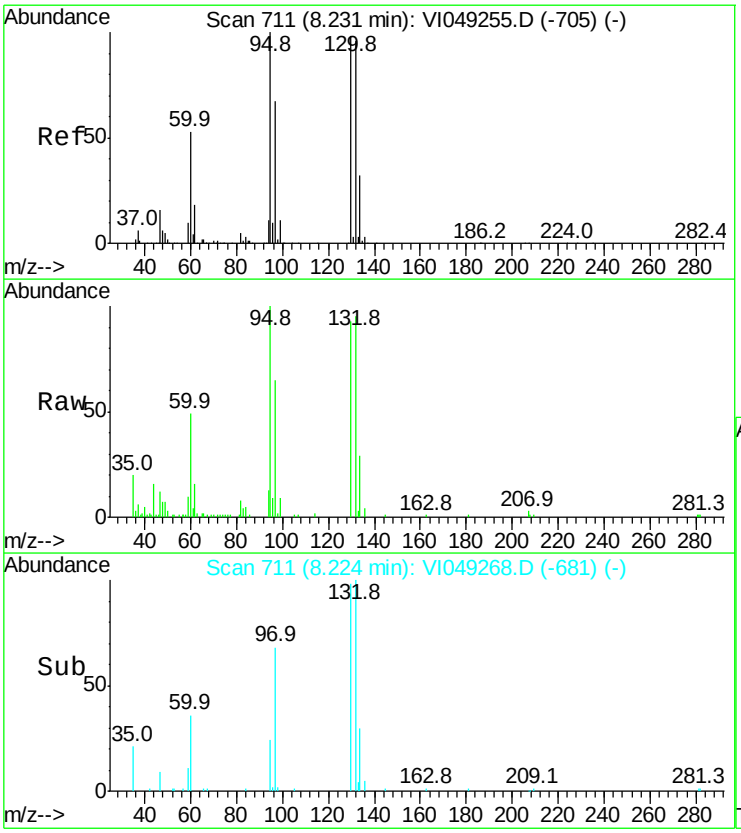
Tgt Ion: 96 Resp: 14588

Ion	Ratio	Lower	Upper
96	100		
61	128.3	82.1	152.5
68	0.0	0.0	0.0



Instrument :
MSVOA_I
ClientSampleId :
H4112

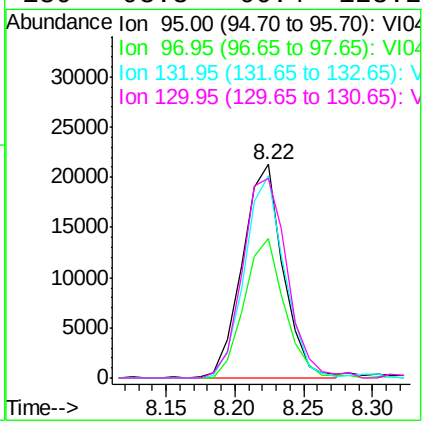
Manual Integrations APPROVED
feifei
5/6/2016 11:44:26 AM

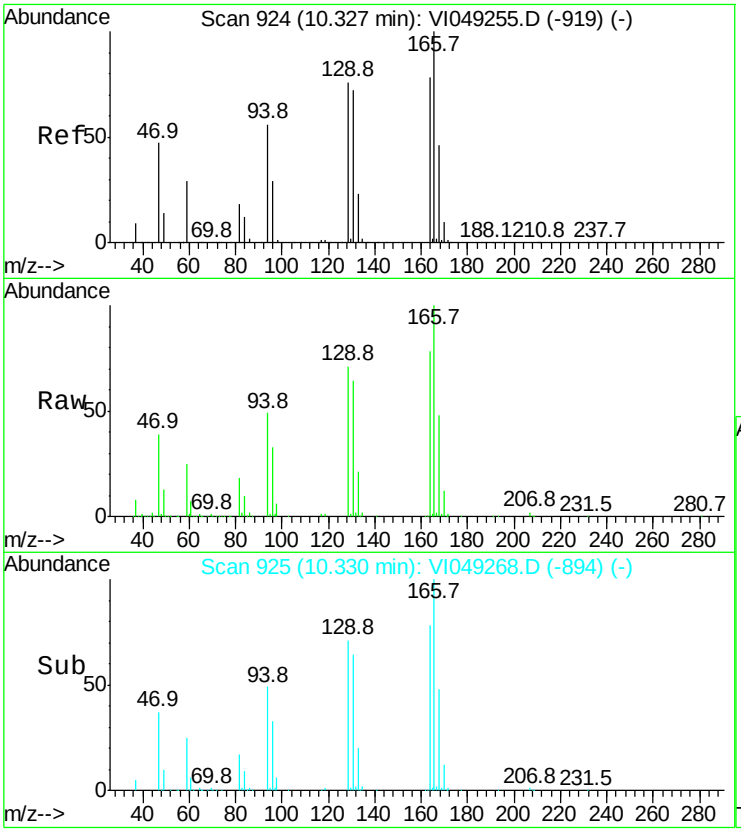


#34
Trichloroethene
Concen: 0.47 ug/L
RT: 8.22 min Scan# 711
Delta R.T. -0.01 min
Lab File: VI049268.D
Acq: 5 May 2016 23:47

Tgt Ion: 95 Resp: 43865

Ion	Ratio	Lower	Upper
95	100		
97	65.2	45.8	85.2
132	95.0	63.9	118.7
130	93.3	66.4	123.2

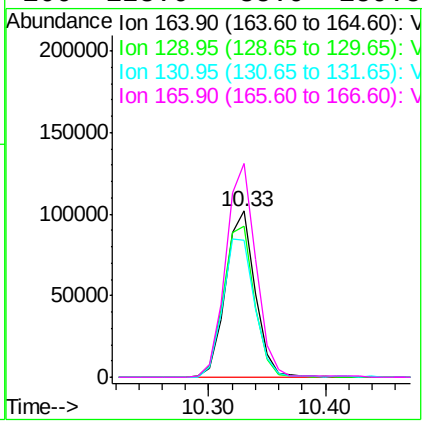




#47
Tetrachloroethene
Concen: 2.94 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.00 min
Lab File: VI049268.D
Acq: 5 May 2016 23:47

Tgt Ion:164 Resp: 179950

Ion	Ratio	Lower	Upper
164	100		
129	91.3	62.1	115.3
131	82.4	60.6	112.6
166	128.6	85.9	159.5



Instrument :
MSVOA_I
ClientSampleId :
H4112

Manual Integrations APPROVED
feifei
5/6/2016 11:44:26 AM

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049268.D
Acq On : 5 May 2016 23:47
Operator : FY/SY
Sample : H2874-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 26 Sample Multiplier: 1

Quant Time: May 06 06:51:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4112

Manual Integrations APPROVED
feifei
5/6/2016 11:44:26 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1191467	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	785313	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	289260	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	328270	4.48	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 89.60%			
7) Chloroethane-d5	2.10	69	232474m	5.72	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 114.40%			
11) 1,1-Dichloroethene-d2	2.94	63	590959	3.42	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 68.40%			
20) 2-Butanone-d5	5.68	46	883205	55.61	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 111.22%			
24) Chloroform-d	6.38	84	896897	4.81	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.20%			
26) 1,2-Dichloroethane-d4	7.24	65	392102	5.14	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.80%			
32) Benzene-d6	7.18	84	1540222	5.03	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.60%			
36) 1,2-Dichloropropane-d6	8.44	67	444183	5.16	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 103.20%			
41) Toluene-d8	9.70	98	1066067	4.72	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.40%			
43) trans-1,3-Dichloropropene-	10.03	79	150164	4.43	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 88.60%			
46) 2-Hexanone-d5	10.43	63	544679	50.95	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 101.90%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	187579	4.79	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.80%			
63) 1,2-Dichlorobenzene-d4	13.77	152	235233	4.64	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 92.80%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.77	96	14588	0.13	ug/L	90
34) Trichloroethene	8.22	95	43865	0.47	ug/L	98
47) Tetrachloroethene	10.33	164	179950	2.94	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049268.D
Acq On : 5 May 2016 23:47
Operator : FY/SY
Sample : H2874-08
Misc : 25mL/MSVOA I/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4112

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.295	4	7	36	rVB	6686938	18183937	100.00%	35.150%
2	1.610	36	39	42	rBV4	11782	23552	0.13%	0.046%
3	1.709	46	49	56	rVB	316005	521120	2.87%	1.007%
4	2.102	86	89	97	rBV	219080	449054	2.47%	0.868%
5	2.555	133	135	141	rVB3	16648	44932	0.25%	0.087%
6	2.821	160	162	166	rVB5	7662	11305	0.06%	0.022%
7	2.939	168	174	181	rBV	721223	1637874	9.01%	3.166%
8	3.215	198	202	208	rBV5	5296	17344	0.10%	0.034%
9	3.441	221	225	227	rVB4	3881	7545	0.04%	0.015%
10	3.470	227	228	233	rVB5	2350	5801	0.03%	0.011%
11	3.598	238	241	242	rBV2	5397	7088	0.04%	0.014%
12	3.785	258	260	262	rVB3	4703	5554	0.03%	0.011%
13	3.844	264	266	269	rVV4	2845	4861	0.03%	0.009%
14	3.992	277	281	284	rBV6	6044	15143	0.08%	0.029%
15	4.248	304	307	310	rVB4	5155	10018	0.06%	0.019%
16	4.307	310	313	315	rBV4	3469	8280	0.05%	0.016%
17	4.494	328	332	333	rVB4	3112	4851	0.03%	0.009%
18	4.632	343	346	348	rVB3	3301	5589	0.03%	0.011%
19	4.671	348	350	351	rBV2	5263	6026	0.03%	0.012%
20	4.720	353	355	359	rVV4	5572	11971	0.07%	0.023%
21	4.789	361	362	365	rBV2	6280	5266	0.03%	0.010%
22	4.848	365	368	370	rBV4	4036	5529	0.03%	0.011%
23	5.016	382	385	387	rBV3	3156	5716	0.03%	0.011%
24	5.065	387	390	391	rVV3	5626	8425	0.05%	0.016%
25	5.094	391	393	395	rVB2	3019	5094	0.03%	0.010%
26	5.144	395	398	401	rBV2	4984	12151	0.07%	0.023%
27	5.252	405	409	410	rVV2	2697	5249	0.03%	0.010%
28	5.370	416	421	424	rVB5	3135	7902	0.04%	0.015%
29	5.468	429	431	434	rVV4	4488	7896	0.04%	0.015%
30	5.675	446	452	460	rBV	368758	1279791	7.04%	2.474%
31	5.773	460	462	473	rVV4	53094	219184	1.21%	0.424%
32	5.901	473	475	478	rVV4	8119	17904	0.10%	0.035%
33	5.941	478	479	481	rVV2	6017	7110	0.04%	0.014%
34	6.059	488	491	493	rVB4	3668	7477	0.04%	0.014%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049268.D
Acq On : 5 May 2016 23:47
Operator : FY/SY
Sample : H2874-08
Misc : 25mL/MSVOA I/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4112

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.256	508	511	515	rBV4	4788	9326	0.05%	0.018%
36	6.384	517	524	535	rBV	704857	2307106	12.69%	4.460%
37	6.502	535	536	542	rVB5	5531	9597	0.05%	0.019%
38	6.640	546	550	557	rVB6	11579	35613	0.20%	0.069%
39	6.895	574	576	582	rBV7	6123	15019	0.08%	0.029%
40	7.004	584	587	589	rBV4	2974	5958	0.03%	0.012%
41	7.181	598	605	608	rBV	1185365	3159362	17.37%	6.107%
42	7.230	608	610	623	rVB	440645	1102668	6.06%	2.131%
43	7.437	629	631	634	rVB3	4976	7133	0.04%	0.014%
44	7.486	634	636	639	rVB4	5091	8173	0.04%	0.016%
45	7.545	639	642	644	rBV4	4468	6261	0.03%	0.012%
46	7.653	651	653	657	rVB5	4196	8142	0.04%	0.016%
47	7.939	676	682	695	rBV	1282939	2929854	16.11%	5.663%
48	8.224	706	711	715	rVV	123383	259888	1.43%	0.502%
49	8.441	727	733	741	rBV	1010291	2108027	11.59%	4.075%
50	8.529	741	742	747	rVB5	7021	16428	0.09%	0.032%
51	8.588	747	748	751	rVB3	3233	4673	0.03%	0.009%
52	8.726	760	762	765	rBV4	3570	5158	0.03%	0.010%
53	8.825	769	772	775	rBV5	3911	9714	0.05%	0.019%
54	8.913	778	781	786	rVB5	7413	15479	0.09%	0.030%
55	8.992	786	789	790	rVB2	3961	4729	0.03%	0.009%
56	9.071	793	797	802	rBV7	4638	17190	0.09%	0.033%
57	9.277	816	818	821	rBV4	3899	6882	0.04%	0.013%
58	9.366	823	827	836	rBV	535268	972463	5.35%	1.880%
59	9.533	838	844	847	rVB3	15816	35109	0.19%	0.068%
60	9.592	847	850	854	rVB6	6079	13452	0.07%	0.026%
61	9.700	856	861	866	rBV	1776291	3118348	17.15%	6.028%
62	9.937	883	885	889	rVB5	3996	7476	0.04%	0.014%
63	10.025	889	894	898	rBV	287470	540341	2.97%	1.044%
64	10.153	906	907	909	rVV2	5380	7370	0.04%	0.014%
65	10.222	909	914	920	rVV2	61757	142681	0.78%	0.276%
66	10.320	920	924	931	rVV	813325	1548450	8.52%	2.993%
67	10.429	931	935	945	rVB	1656038	2865422	15.76%	5.539%
68	10.606	950	953	955	rVB3	2501	4844	0.03%	0.009%
69	10.744	965	967	971	rVB5	3651	6718	0.04%	0.013%
70	11.039	994	997	999	rVB4	3386	6147	0.03%	0.012%
71	11.118	1004	1005	1008	rBV2	4997	8003	0.04%	0.015%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049268.D
Acq On : 5 May 2016 23:47
Operator : FY/SY
Sample : H2874-08
Misc : 25mL/MSVOA I/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4112

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.226	1011	1016	1027	rBV	1516032	2735156	15.04%	5.287%
73	11.354	1027	1029	1033	rVB5	9241	13600	0.07%	0.026%
74	11.482	1038	1042	1045	rVB6	7502	15827	0.09%	0.031%
75	11.580	1048	1052	1054	rBV3	2699	4887	0.03%	0.009%
76	11.669	1057	1061	1065	rBV5	3561	10220	0.06%	0.020%
77	11.757	1067	1070	1071	rBV3	2855	4857	0.03%	0.009%
78	11.846	1074	1079	1084	rBV8	9107	22383	0.12%	0.043%
79	12.151	1107	1110	1112	rBV3	3535	7150	0.04%	0.014%
80	12.190	1112	1114	1118	rBV4	3985	6349	0.03%	0.012%
81	12.250	1118	1120	1122	rBV3	3874	5451	0.03%	0.011%
82	12.299	1122	1125	1127	rVB4	3347	6334	0.03%	0.012%
83	12.407	1127	1136	1138	rBV	62684	140009	0.77%	0.271%
84	12.466	1138	1142	1147	rVB	396774	675076	3.71%	1.305%
85	12.751	1168	1171	1174	rBV4	2831	6582	0.04%	0.013%
86	13.224	1215	1219	1221	rBV3	3861	7563	0.04%	0.015%
87	13.342	1229	1231	1232	rBV2	5431	8312	0.05%	0.016%
88	13.431	1236	1240	1247	rBV	1288620	2124386	11.68%	4.106%
89	13.618	1257	1259	1262	rBV4	5214	13138	0.07%	0.025%
90	13.755	1269	1273	1281	rBV	1018165	1788220	9.83%	3.457%
91	13.873	1283	1285	1290	rVB6	7492	14575	0.08%	0.028%
92	14.031	1297	1301	1305	rBV2	46404	76844	0.42%	0.149%
93	14.434	1340	1342	1343	rBV2	5851	5799	0.03%	0.011%
94	14.484	1345	1347	1348	rVV2	7066	5812	0.03%	0.011%
95	14.562	1353	1355	1357	rBV3	4570	7397	0.04%	0.014%
96	15.419	1440	1442	1443	rBV2	8231	7804	0.04%	0.015%
97	15.616	1458	1462	1465	rVB	18514	39579	0.22%	0.077%
98	16.344	1534	1536	1537	rBV2	12447	18271	0.10%	0.035%
99	16.826	1583	1585	1586	rVB	47075	35255	0.19%	0.068%
100	16.846	1586	1587	1589	rBV2	14488	20314	0.11%	0.039%

Sum of corrected areas: 51732893

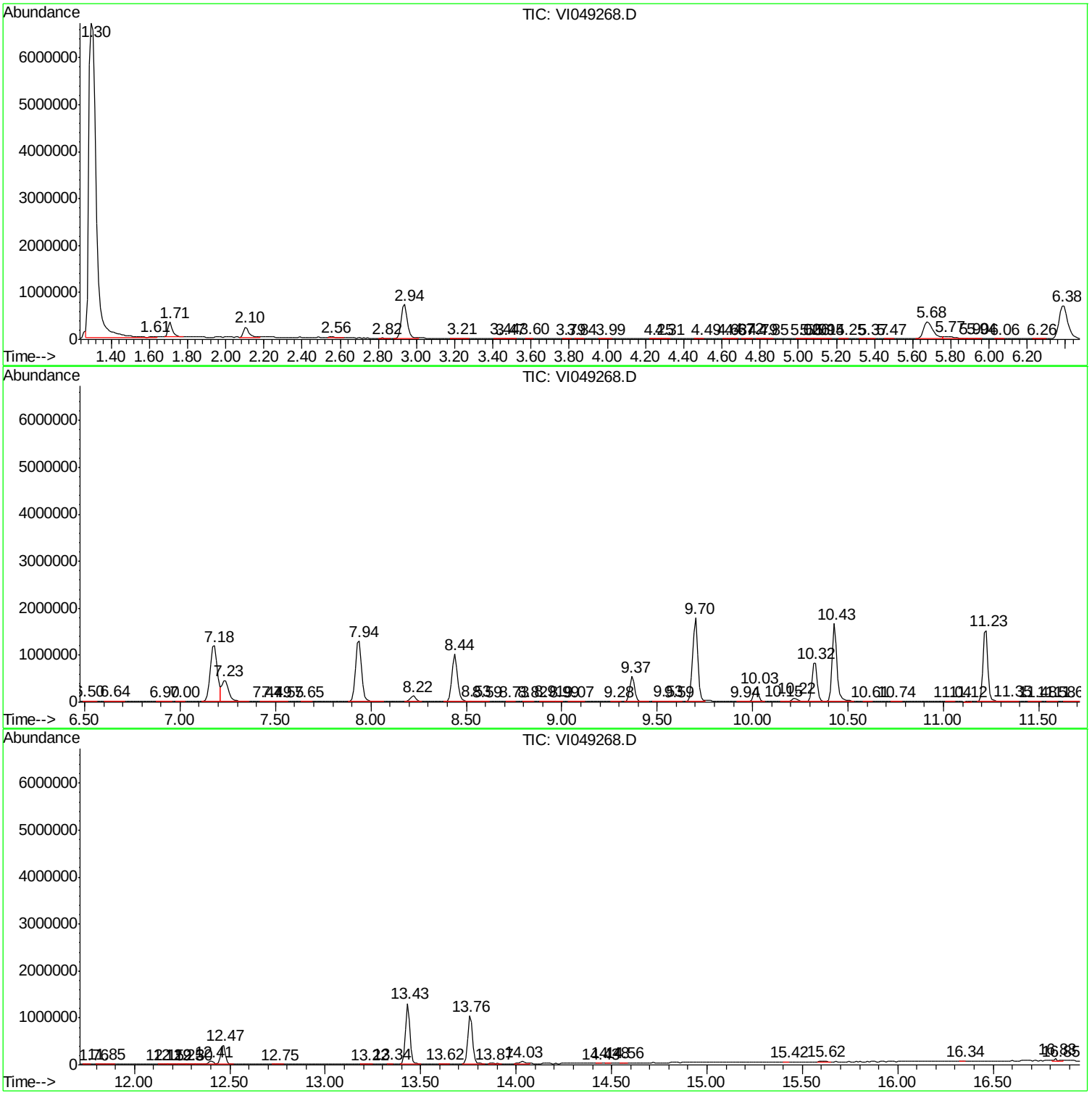
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049268.D
Acq On : 5 May 2016 23:47
Operator : FY/SY
Sample : H2874-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4112

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049268.D
Acq On : 5 May 2016 23:47
Operator : FY/SY
Sample : H2874-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4112

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049268.D
Acq On : 5 May 2016 23:47
Operator : FY/SY
Sample : H2874-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4112

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

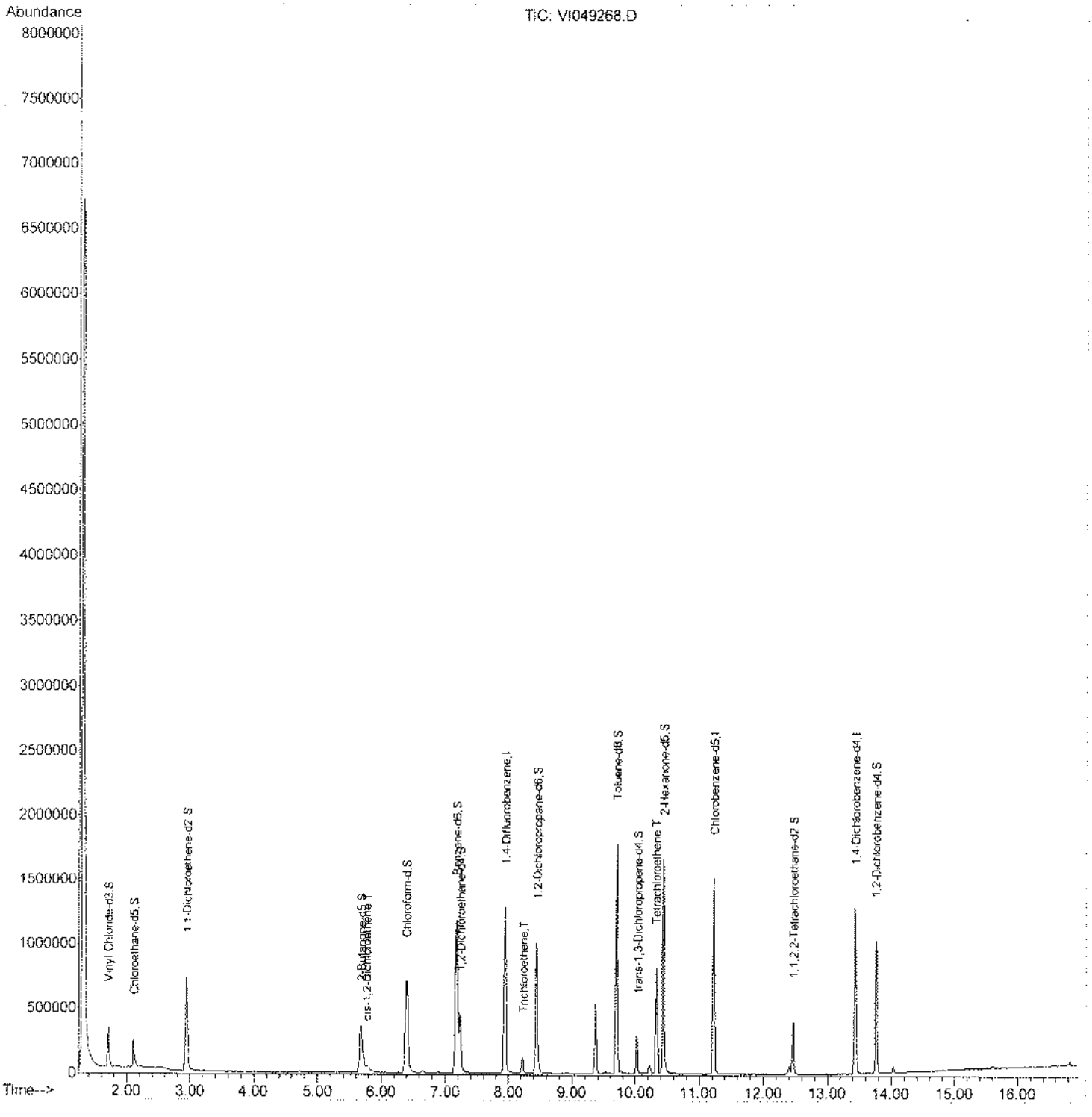
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049268.D
Acq On : 5 May 2016 23:47
Operator : FY/SY
Sample : H2874-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 26 Sample Multiplier: 1

Quant Time: May 06 06:51:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4112

Manual Integrations APPROVED
feifei
5/6/2016 11:44:26 AM



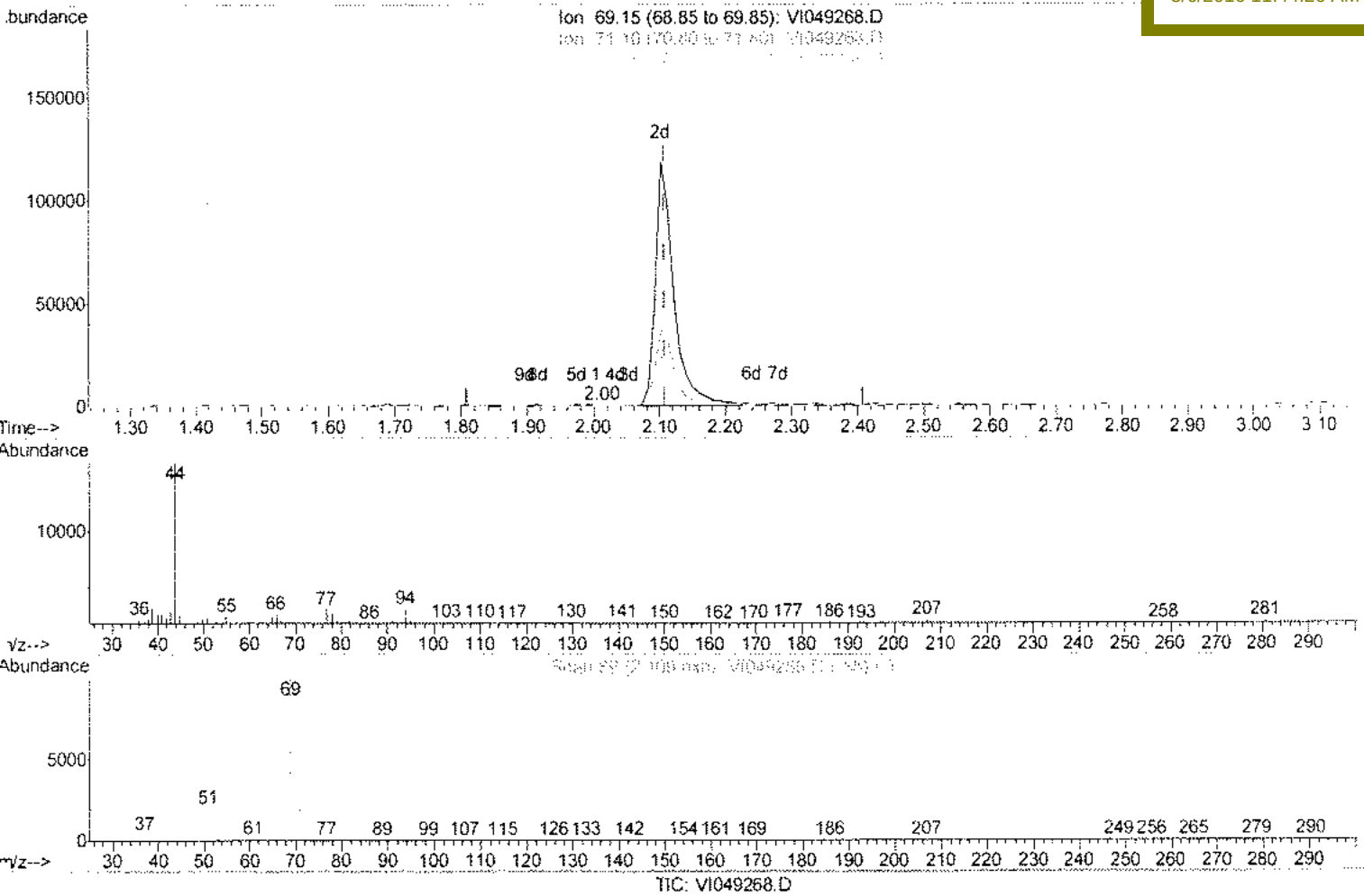
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049268.D
Acq On : 5 May 2016 23:47
Operator : FY/SY
Sample : H2874-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 26 Sample Multiplier: 1

Quant Time: May 06 05:23:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4112

Manual Integrations APPROVED
feifei
5/6/2016 11:44:26 AM



TIC: VI049268.D

(7) Chloroethane-d5 (S)

2.004min (-0.105) 0.02ug/L

response 813

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	31.12
51.05	32.70	34.44
0.00	0.00	0.00

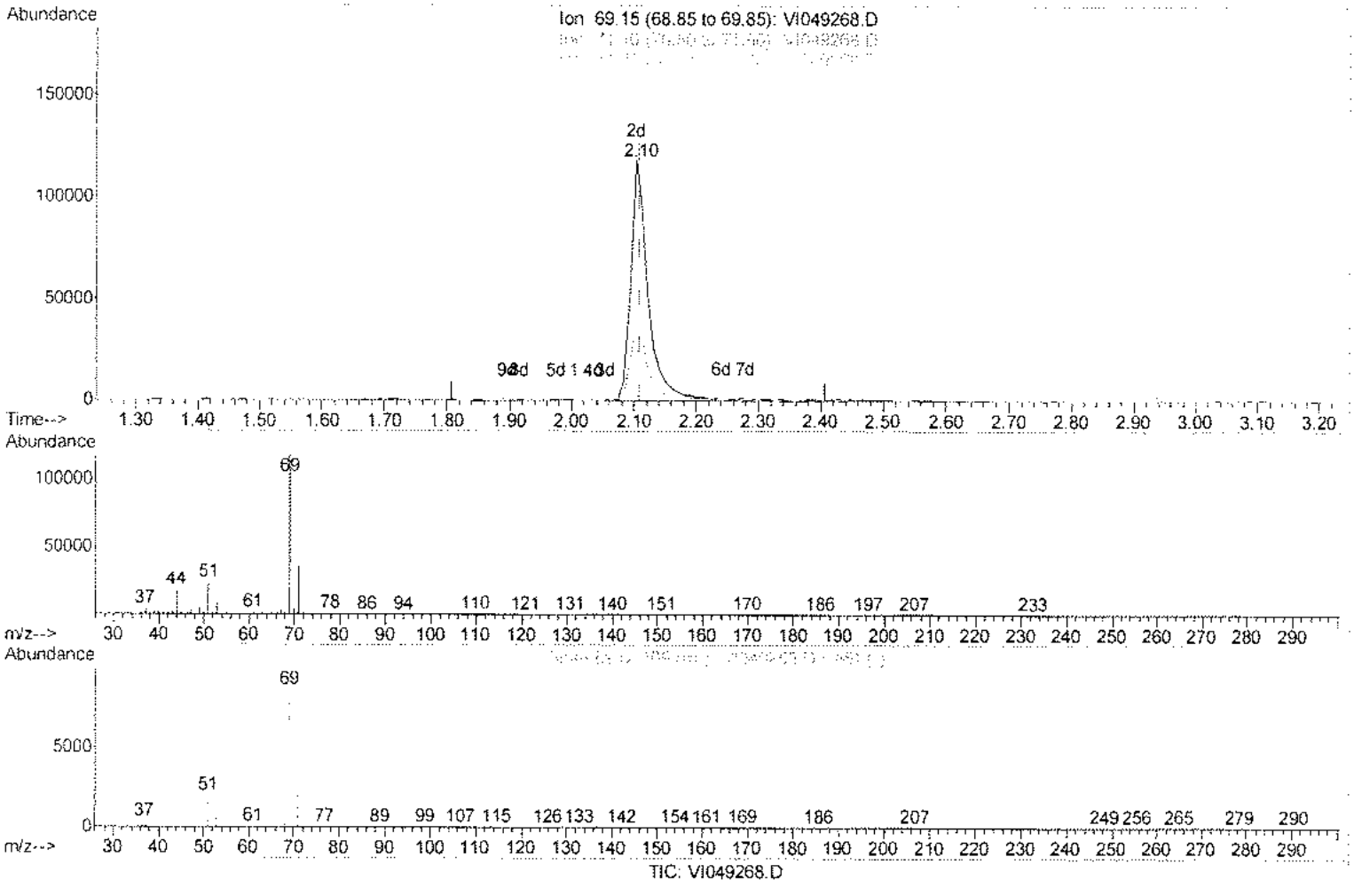
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049268.D
Acq On : 5 May 2016 23:47
Operator : FY/SY
Sample : H2874-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 26 Sample Multiplier: 1

Quant Time: May 06 05:23:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4112

Manual Integrations APPROVED
feifei
5/6/2016 11:44:26 AM



(7) Chloroethane-d5 (S)

2.102min (-0.007) 5.72ug/L m M.D 05/09/16

response 232474

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.11#
51.05	32.70	0.12#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049268.D
Acq On : 5 May 2016 23:47
Operator : FY/SY
Sample : H2874-08
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 26 Sample Multiplier: 1

Quant Time: May 06 06:51:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4112

Manual Integrations APPROVED
feifei
5/6/2016 11:44:26 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1191467	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	785313	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	289260	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	328270	4.48	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 89.60%			
7) Chloroethane-d5	2.10	69	232474m	5.72	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 114.40%			
11) 1,1-Dichloroethene-d2	2.94	63	590959	3.42	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 68.40%			
20) 2-Butanone-d5	5.68	46	883205	55.61	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 111.22%			
24) Chloroform-d	6.38	84	896897	4.81	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.20%			
26) 1,2-Dichloroethane-d4	7.24	65	392102	5.14	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.80%			
32) Benzene-d6	7.18	84	1540222	5.03	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.60%			
36) 1,2-Dichloropropane-d6	8.44	67	444183	5.16	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 103.20%			
41) Toluene-d8	9.70	98	1066067	4.72	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.40%			
43) trans-1,3-Dichloropropene-	10.03	79	150164	4.43	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 88.60%			
46) 2-Hexanone-d5	10.43	63	544679	50.95	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 101.90%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	187579	4.79	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.80%			
63) 1,2-Dichlorobenzene-d4	13.77	152	235233	4.64	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 92.80%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.77	96	14588	0.13	ug/L	90
34) Trichloroethene	8.22	95	43865	0.47	ug/L	98
47) Tetrachloroethene	10.33	164	179950	2.94	ug/L	96

m.D 05/09/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049261.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.15	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.8	
71-55-6	1,1,1-Trichloroethane	0.55	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.46	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049261.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	27	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049261.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4113

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049261.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

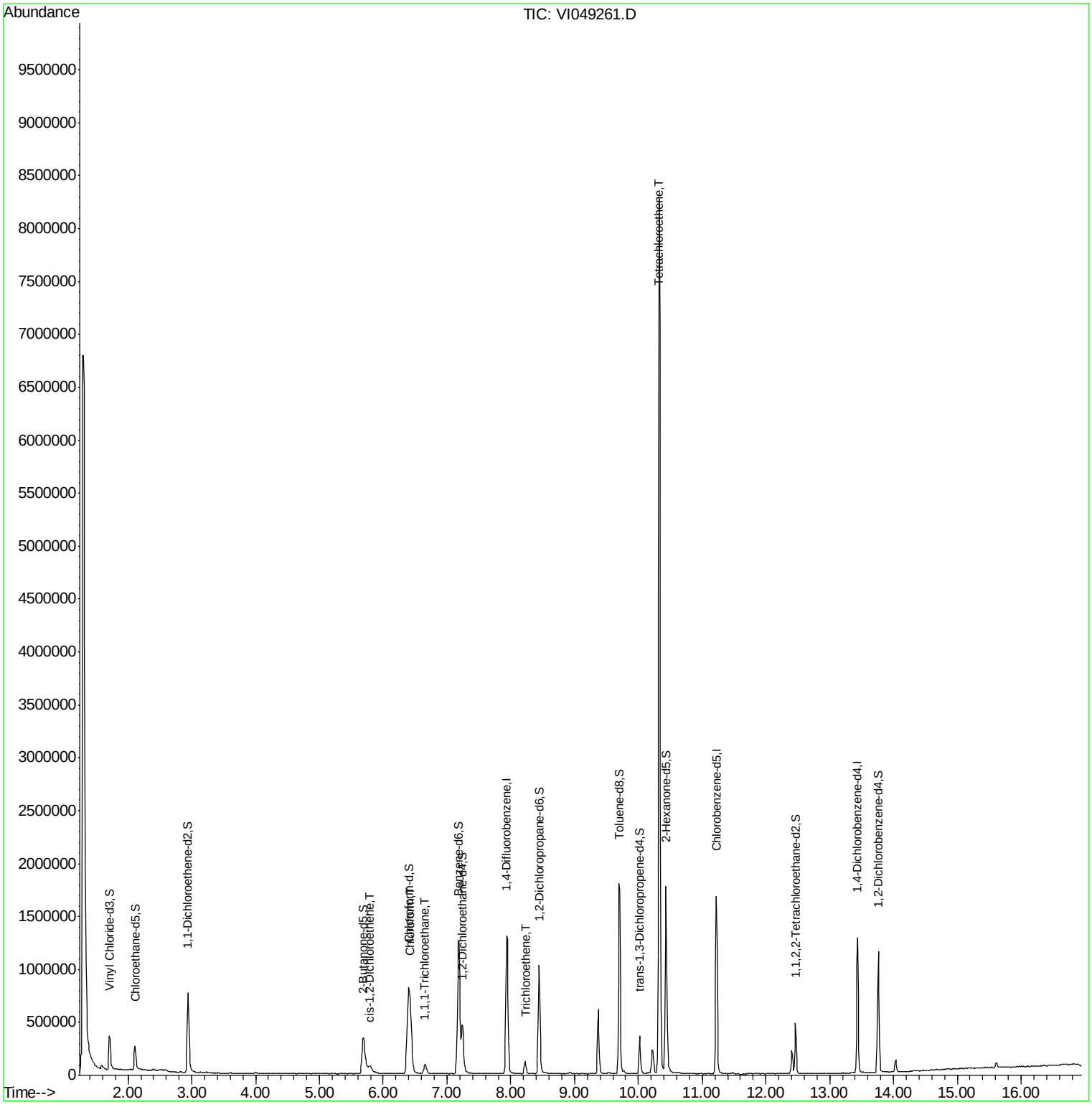
EPA-designated Registry Number.

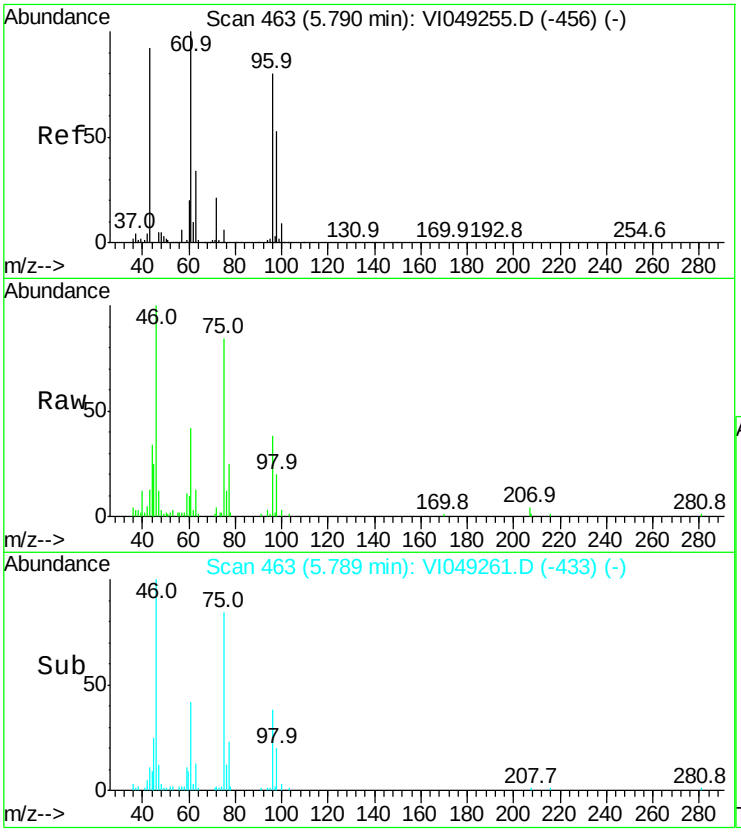
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049261.D
Acq On : 5 May 2016 20:06
Operator : FY/SY
Sample : H2874-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113

Quant Time: May 06 05:50:09 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration



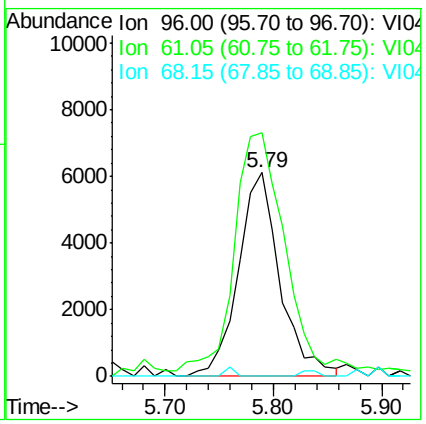


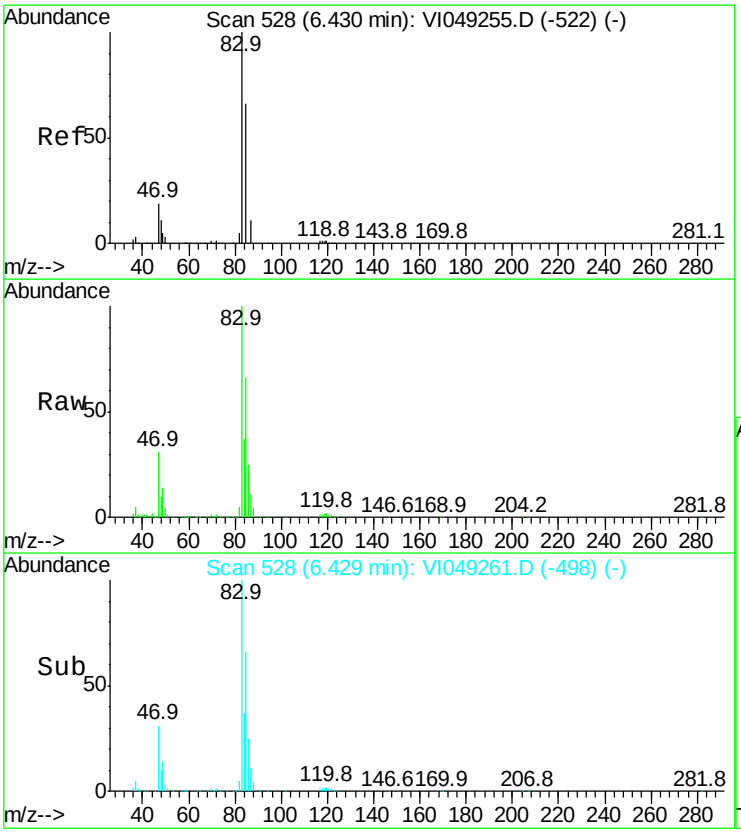
#22
cis-1,2-Dichloroethene
Concen: 0.15 ug/L
RT: 5.79 min Scan# 463
Delta R.T. -0.00 min
Lab File: VI049261.D
Acq: 5 May 2016 20:06

Instrument : MSVOA_I
ClientSampleId : H4113

Tgt Ion: 96 Resp: 16344

Ion	Ratio	Lower	Upper
96	100		
61	119.5	82.1	152.5
68	0.0	0.0	0.0

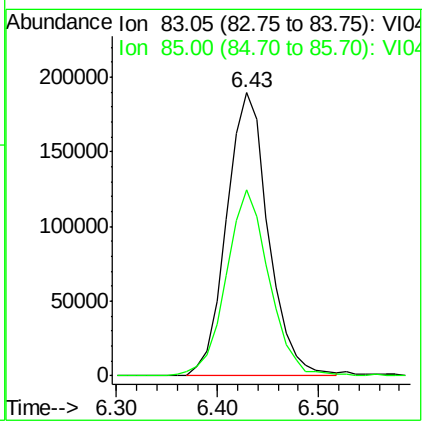


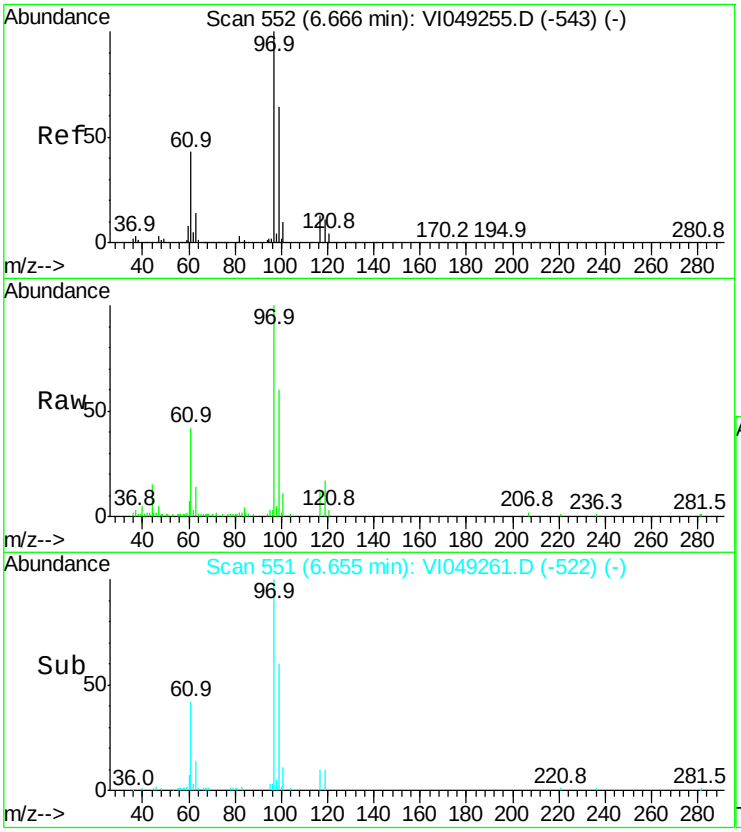


#25
Chloroform
Concen: 2.80 ug/L
RT: 6.43 min Scan# 528
Delta R.T. -0.00 min
Lab File: VI049261.D
Acq: 5 May 2016 20:06

Tgt Ion: 83 Resp: 546443

Ion	Ratio	Lower	Upper
83	100		
85	65.8	47.3	87.8



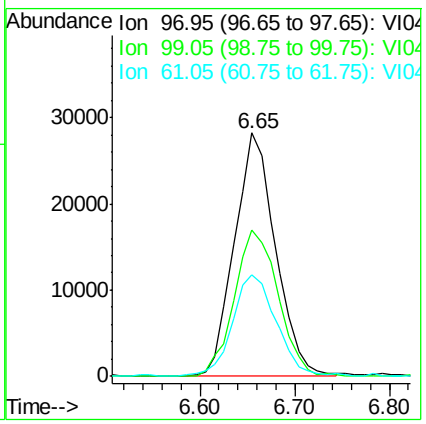


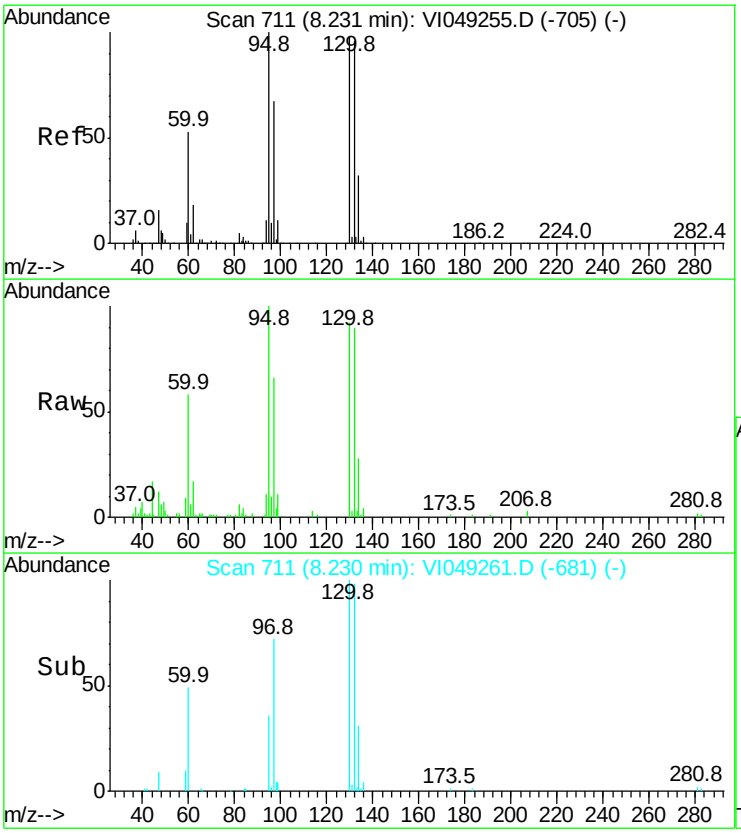
#29
1,1,1-Trichloroethane
Concen: 0.55 ug/L
RT: 6.65 min Scan# 551
Delta R.T. -0.01 min
Lab File: VI049261.D
Acq: 5 May 2016 20:06

Instrument : MSVOA_I
ClientSampleId : H4113

Tgt Ion: 97 Resp: 85003

Ion	Ratio	Lower	Upper
97	100		
99	63.7	51.1	76.7
61	44.1	33.3	49.9

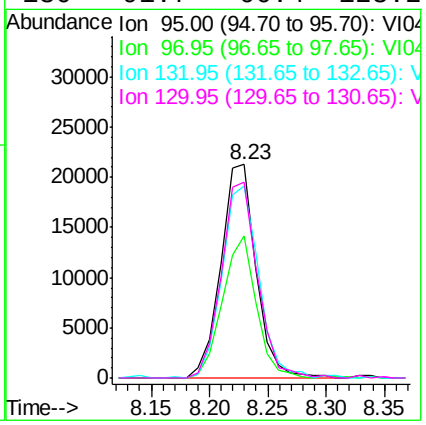


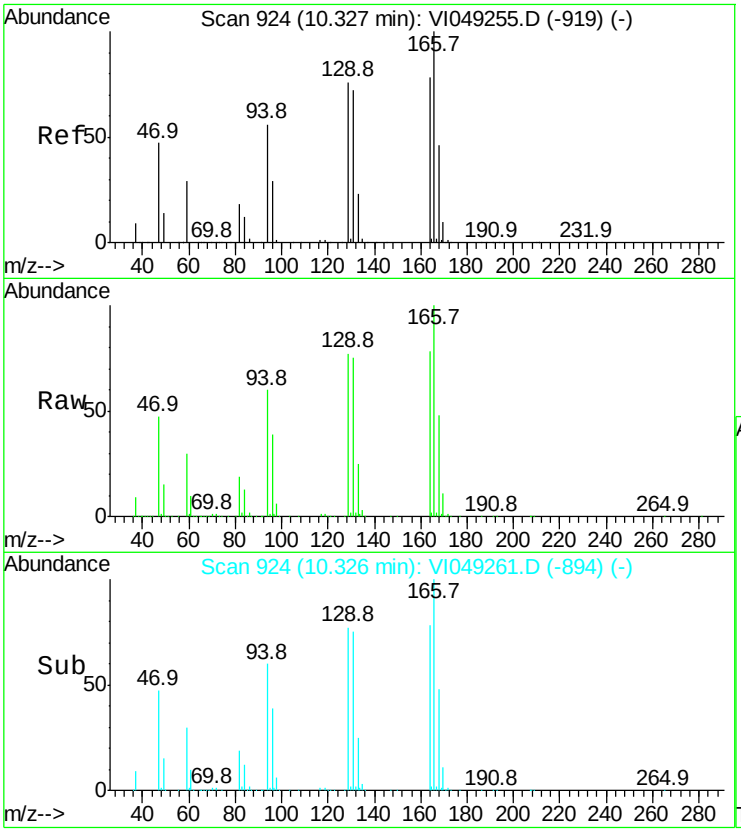


#34
Trichloroethene
Concen: 0.46 ug/L
RT: 8.23 min Scan# 711
Delta R.T. -0.00 min
Lab File: VI049261.D
Acq: 5 May 2016 20:06

Tgt Ion: 95 Resp: 44690

Ion	Ratio	Lower	Upper
95	100		
97	66.4	45.8	85.2
132	89.9	63.9	118.7
130	91.7	66.4	123.2



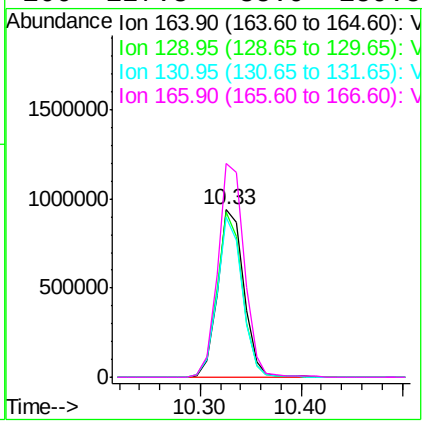


#47
Tetrachloroethene
Concen: 26.70 ug/L
RT: 10.33 min Scan# 924
Delta R.T. -0.00 min
Lab File: VI049261.D
Acq: 5 May 2016 20:06

Instrument :
MSVOA_I
ClientSampleId :
H4113

Tgt Ion:164 Resp: 1701100

Ion	Ratio	Lower	Upper
164	100		
129	98.7	62.1	115.3
131	95.8	60.6	112.6
166	127.8	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049261.D
Acq On : 5 May 2016 20:06
Operator : FY/SY
Sample : H2874-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113

Quant Time: May 06 05:50:09 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1212214	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	816297	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	296947	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	368101	4.93	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 98.60%			
7) Chloroethane-d5	2.11	69	234088	5.66	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 113.20%			
11) 1,1-Dichloroethene-d2	2.93	63	628561	3.58	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 71.60%			
20) 2-Butanone-d5	5.69	46	905642	56.05	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 112.10%			
24) Chloroform-d	6.39	84	925932	4.88	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.60%			
26) 1,2-Dichloroethane-d4	7.25	65	423394	5.45	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.00%			
32) Benzene-d6	7.19	84	1645559	5.17	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.40%			
36) 1,2-Dichloropropane-d6	8.45	67	469786	5.25	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 105.00%			
41) Toluene-d8	9.71	98	1167355	4.98	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.60%			
43) trans-1,3-Dichloropropene-	10.02	79	170554	4.84	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 96.80%			
46) 2-Hexanone-d5	10.43	63	579842	52.18	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 104.36%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	199711	4.91	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.20%			
63) 1,2-Dichlorobenzene-d4	13.76	152	261449	5.02	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 100.40%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.79	96	16344	0.15	ug/L	98
25) Chloroform	6.43	83	546443	2.80	ug/L	98
29) 1,1,1-Trichloroethane	6.65	97	85003	0.55	ug/L	98
34) Trichloroethene	8.23	95	44690	0.46	ug/L	98
47) Tetrachloroethene	10.33	164	1701100	26.70	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049261.D
Acq On : 5 May 2016 20:06
Operator : FY/SY
Sample : H2874-09
Misc : 25mL/MSVOA I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.301	3	7	34	rVB	6741529	19766789	100.00%	28.057%
2	1.586	34	36	42	rVV3	36630	71073	0.36%	0.101%
3	1.704	45	48	57	rBV	319744	572701	2.90%	0.813%
4	2.029	79	81	83	rBV2	7230	8715	0.04%	0.012%
5	2.108	85	89	99	rBV	228622	464956	2.35%	0.660%
6	2.393	115	118	122	rVB6	12417	28867	0.15%	0.041%
7	2.826	159	162	168	rBV6	8070	16688	0.08%	0.024%
8	2.935	168	173	184	rBV	755256	1754228	8.87%	2.490%
9	3.210	199	201	202	rBV2	4953	7369	0.04%	0.010%
10	3.338	212	214	217	rVB3	4112	5364	0.03%	0.008%
11	3.604	237	241	244	rVB5	6380	14555	0.07%	0.021%
12	3.673	247	248	250	rBV2	3760	5374	0.03%	0.008%
13	3.998	278	281	284	rBV5	9926	17798	0.09%	0.025%
14	4.106	290	292	295	rBV4	3738	6491	0.03%	0.009%
15	4.204	300	302	304	rVB3	4800	6790	0.03%	0.010%
16	4.303	306	312	314	rBV5	5285	13741	0.07%	0.020%
17	4.342	314	316	319	rVB4	5093	6436	0.03%	0.009%
18	4.381	319	320	324	rVB3	5015	9164	0.05%	0.013%
19	4.628	343	345	346	rVB2	5028	5747	0.03%	0.008%
20	4.657	346	348	349	rBV3	5166	8402	0.04%	0.012%
21	4.726	352	355	358	rVB5	5227	10347	0.05%	0.015%
22	4.824	364	365	369	rVB4	5042	6966	0.04%	0.010%
23	4.893	369	372	373	rBV3	3212	6570	0.03%	0.009%
24	4.913	373	374	378	rBV4	5236	8548	0.04%	0.012%
25	5.149	395	398	399	rVB3	4534	6280	0.03%	0.009%
26	5.218	401	405	406	rBV3	4037	6855	0.03%	0.010%
27	5.326	413	416	417	rBV3	4353	8686	0.04%	0.012%
28	5.454	427	429	431	rBV3	3770	5323	0.03%	0.008%
29	5.503	432	434	437	rVB4	3127	5475	0.03%	0.008%
30	5.563	437	440	441	rBV2	4555	6472	0.03%	0.009%
31	5.690	446	453	461	rBV	340962	1333472	6.75%	1.893%
32	5.956	478	480	486	rVB7	5462	12563	0.06%	0.018%
33	6.232	503	508	509	rBV5	3495	5677	0.03%	0.008%
34	6.320	514	517	518	rBV3	3754	7211	0.04%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049261.D
Acq On : 5 May 2016 20:06
Operator : FY/SY
Sample : H2874-09
Misc : 25mL/MSVOA I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.399	518	525	537	rVV2	814929	3480214	17.61%	4.940%
36	6.576	541	543	544	rVV2	4433	5503	0.03%	0.008%
37	6.655	545	551	560	rVB2	83909	254502	1.29%	0.361%
38	6.921	575	578	584	rVB7	4283	8427	0.04%	0.012%
39	7.186	596	605	608	rBV	1257425	3427051	17.34%	4.864%
40	7.236	608	610	621	rVB	458915	1148743	5.81%	1.631%
41	7.570	643	644	647	rVB3	4698	4899	0.02%	0.007%
42	7.787	663	666	669	rVB5	5279	10963	0.06%	0.016%
43	7.934	675	681	696	rBV	1307990	2986092	15.11%	4.238%
44	8.230	705	711	717	rBV3	120751	278483	1.41%	0.395%
45	8.358	721	724	726	rVB4	2916	5033	0.03%	0.007%
46	8.446	726	733	740	rBV	1025928	2273062	11.50%	3.226%
47	8.761	764	765	769	rVB4	3992	5271	0.03%	0.007%
48	8.840	769	773	774	rBV4	4123	7231	0.04%	0.010%
49	8.909	774	780	781	rBV6	11207	22988	0.12%	0.033%
50	9.017	789	791	794	rBV3	3486	5603	0.03%	0.008%
51	9.194	806	809	811	rVB4	3790	5861	0.03%	0.008%
52	9.371	819	827	834	rBV	615058	1122666	5.68%	1.594%
53	9.529	838	843	846	rVB2	11842	24825	0.13%	0.035%
54	9.696	856	860	866	rBV	1797469	3397735	17.19%	4.823%
55	9.765	866	867	873	rVV	26633	53639	0.27%	0.076%
56	10.021	889	893	899	rBV	357447	604121	3.06%	0.857%
57	10.119	901	903	904	rVV2	3381	4848	0.02%	0.007%
58	10.139	904	905	906	rVV	7242	6279	0.03%	0.009%
59	10.159	906	907	908	rVV	6633	7304	0.04%	0.010%
60	10.218	909	913	920	rVV	226360	505732	2.56%	0.718%
61	10.326	920	924	931	rVV	8266992	14598757	73.85%	20.722%
62	10.434	931	935	951	rVB	1767132	3189072	16.13%	4.527%
63	10.769	968	969	973	rVB4	3132	5300	0.03%	0.008%
64	10.867	978	979	983	rVB3	4152	7179	0.04%	0.010%
65	10.946	986	987	989	rBV2	3414	5023	0.03%	0.007%
66	11.222	1011	1015	1026	rBV	1682614	2854596	14.44%	4.052%
67	11.350	1026	1028	1033	rVB4	9298	19312	0.10%	0.027%
68	11.409	1033	1034	1036	rBV	3799	5713	0.03%	0.008%
69	11.478	1038	1041	1047	rVB6	11416	28608	0.14%	0.041%
70	11.743	1063	1068	1069	rBV6	4120	7145	0.04%	0.010%
71	11.812	1073	1075	1077	rBV2	2866	5291	0.03%	0.008%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049261.D
Acq On : 5 May 2016 20:06
Operator : FY/SY
Sample : H2874-09
Misc : 25mL/MSVOA I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.861	1077	1080	1082	rVB4	6105	12489	0.06%	0.018%
73	11.891	1082	1083	1085	rVB	4702	4912	0.02%	0.007%
74	11.940	1085	1088	1090	rBV4	3506	8400	0.04%	0.012%
75	12.107	1102	1105	1109	rVB6	2495	6807	0.03%	0.010%
76	12.206	1112	1115	1116	rBV3	3037	5896	0.03%	0.008%
77	12.265	1118	1121	1122	rBV2	5015	8765	0.04%	0.012%
78	12.403	1130	1135	1138	rBV	216407	396465	2.01%	0.563%
79	12.462	1138	1141	1148	rVB	480013	780567	3.95%	1.108%
80	12.541	1148	1149	1153	rVB3	5021	5007	0.03%	0.007%
81	12.590	1153	1154	1157	rVB3	5339	6258	0.03%	0.009%
82	12.688	1162	1164	1167	rBV4	5073	6721	0.03%	0.010%
83	12.747	1169	1170	1173	rVB2	4521	5521	0.03%	0.008%
84	13.052	1197	1201	1203	rBV5	3364	8270	0.04%	0.012%
85	13.190	1214	1215	1217	rBV2	7269	8764	0.04%	0.012%
86	13.220	1217	1218	1222	rVV3	7060	13792	0.07%	0.020%
87	13.269	1222	1223	1224	rVV	6181	5067	0.03%	0.007%
88	13.338	1226	1230	1231	rVV3	5364	11943	0.06%	0.017%
89	13.367	1231	1233	1235	rVV3	5612	11010	0.06%	0.016%
90	13.436	1235	1240	1247	rVV	1285075	2201464	11.14%	3.125%
91	13.525	1247	1249	1251	rVV3	7500	10401	0.05%	0.015%
92	13.633	1259	1260	1264	rBV3	4698	10364	0.05%	0.015%
93	13.761	1268	1273	1283	rVV	1144411	1987232	10.05%	2.821%
94	13.958	1291	1293	1294	rBV2	4341	6392	0.03%	0.009%
95	14.036	1297	1301	1305	rVV2	114885	200582	1.01%	0.285%
96	14.214	1318	1319	1321	rVB2	6820	6004	0.03%	0.009%
97	14.312	1327	1329	1334	rBV6	6132	14141	0.07%	0.020%
98	14.509	1347	1349	1350	rBV2	5267	8286	0.04%	0.012%
99	14.912	1389	1390	1392	rBV2	9729	14606	0.07%	0.021%
100	15.611	1458	1461	1465	rBV	43450	81206	0.41%	0.115%

Sum of corrected areas: 70452096

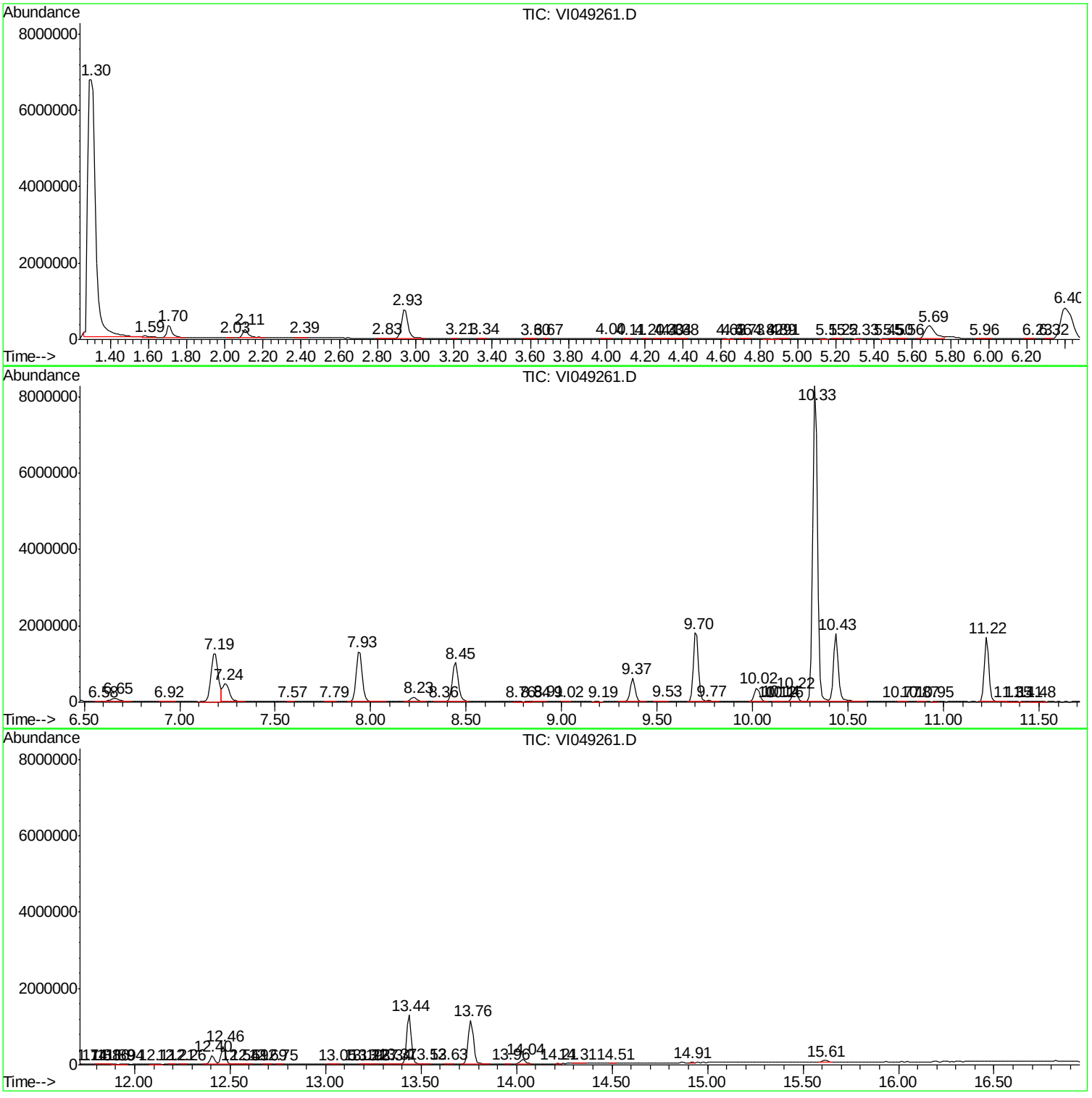
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049261.D
Acq On : 5 May 2016 20:06
Operator : FY/SY
Sample : H2874-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049261.D
Acq On : 5 May 2016 20:06
Operator : FY/SY
Sample : H2874-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4113

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049261.D
Acq On : 5 May 2016 20:06
Operator : FY/SY
Sample : H2874-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-09DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049285.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	3.0	D
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-09DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049285.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	25	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-09DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049285.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4113DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-09DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049285.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 5.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

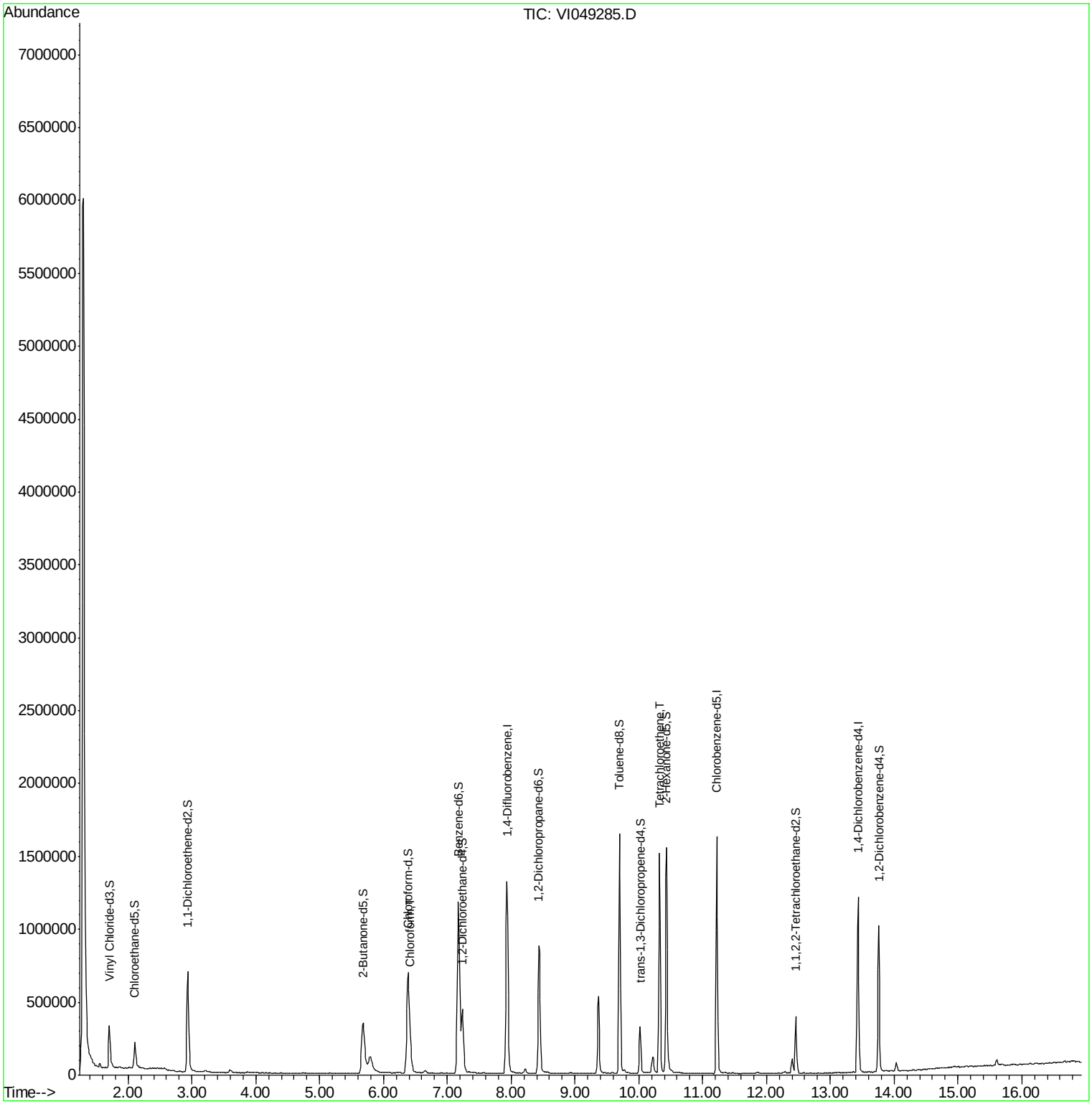
EPA-designated Registry Number.

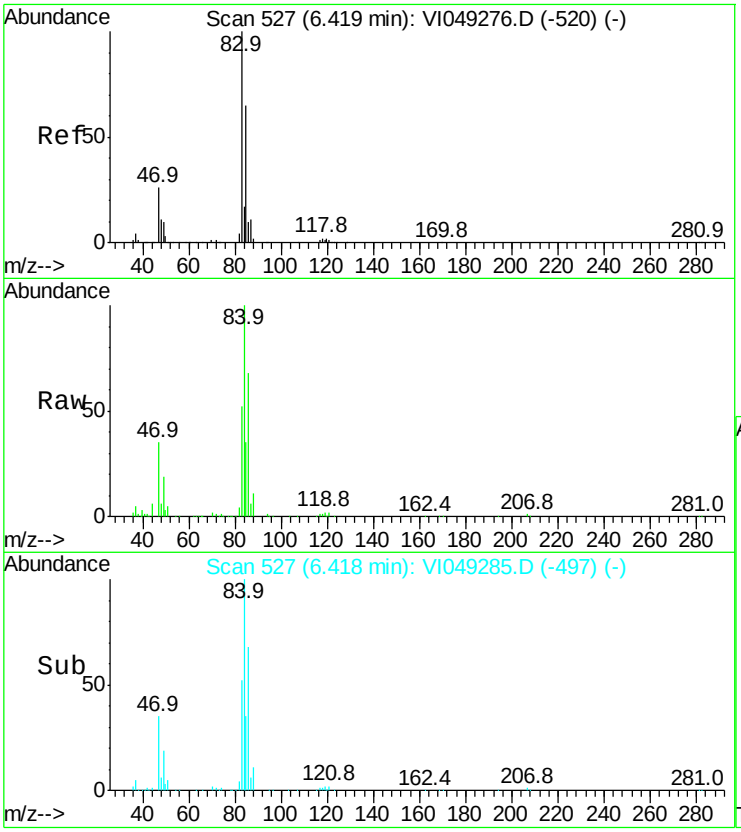
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049285.D
Acq On : 6 May 2016 16:37
Operator : FY/SY
Sample : H2874-09DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113DL

Quant Time: May 07 04:55:56 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration



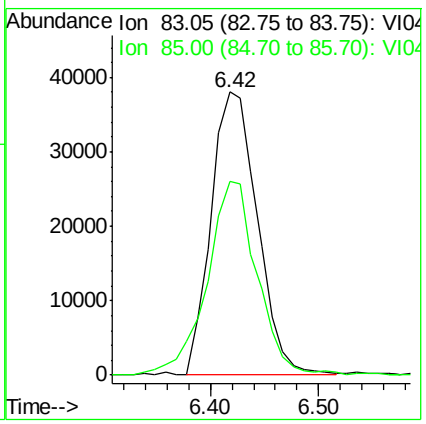


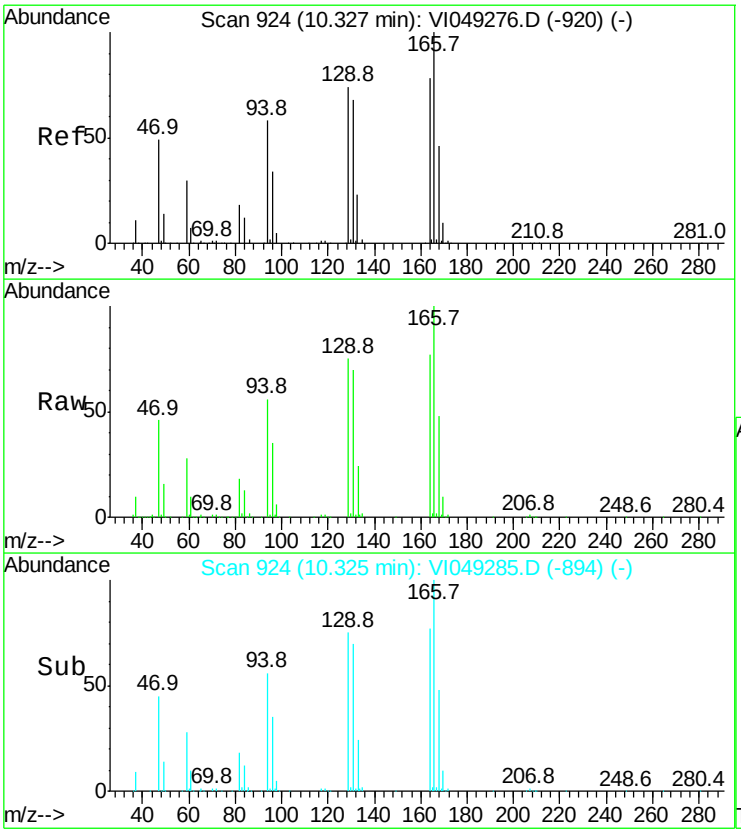
#25
Chloroform
Concen: 0.60 ug/L
RT: 6.42 min Scan# 527
Delta R.T. -0.00 min
Lab File: VI049285.D
Acq: 6 May 2016 16:37

Instrument :
MSVOA_I
ClientSampleId :
H4113DL

Tgt Ion: 83 Resp: 112982

Ion	Ratio	Lower	Upper
83	100		
85	68.3	47.3	87.8

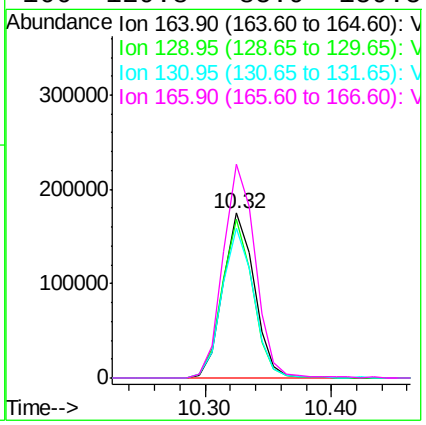




#47
Tetrachloroethene
Concen: 5.05 ug/L
RT: 10.32 min Scan# 924
Delta R.T. -0.00 min
Lab File: VI049285.D
Acq: 6 May 2016 16:37

Tgt Ion:164 Resp: 298241

Ion	Ratio	Lower	Upper
164	100		
129	96.7	62.1	115.3
131	90.7	60.6	112.6
166	129.8	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049285.D
Acq On : 6 May 2016 16:37
Operator : FY/SY
Sample : H2874-09DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113DL

Quant Time: May 07 04:55:56 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1169809	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	756102	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	281915	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	307638	4.27	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 85.40%			
7) Chloroethane-d5	2.11	69	200050	5.02	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 100.40%			
11) 1,1-Dichloroethene-d2	2.93	63	546844	3.22	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 64.40%			
20) 2-Butanone-d5	5.68	46	849419	54.48	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 108.96%			
24) Chloroform-d	6.39	84	840627	4.59	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 91.80%			
26) 1,2-Dichloroethane-d4	7.23	65	387259	5.17	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.40%			
32) Benzene-d6	7.18	84	1478312	5.02	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.40%			
36) 1,2-Dichloropropane-d6	8.44	67	417394	5.04	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 100.80%			
41) Toluene-d8	9.69	98	1017978	4.68	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.60%			
43) trans-1,3-Dichloropropene-	10.02	79	145381	4.46	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 89.20%			
46) 2-Hexanone-d5	10.43	63	540449	52.51	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 105.02%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	174640	4.64	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 92.80%			
63) 1,2-Dichlorobenzene-d4	13.76	152	224595	4.54	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 90.80%			
Target Compounds						Qvalue
25) Chloroform	6.42	83	112982	0.60	ug/L	99
47) Tetrachloroethene	10.32	164	298241	5.05	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049285.D
Acq On : 6 May 2016 16:37
Operator : FY/SY
Sample : H2874-09DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.300	3	7	26	rVB	5950081	14589125	100.00%	30.090%
2	1.556	30	33	37	rVB2	29330	43948	0.30%	0.091%
3	1.644	40	42	44	rBV3	6642	6206	0.04%	0.013%
4	1.703	45	48	59	rVB	290745	507994	3.48%	1.048%
5	2.018	78	80	83	rBV4	8979	13459	0.09%	0.028%
6	2.097	85	88	96	rVB	174380	377133	2.59%	0.778%
7	2.343	111	113	115	rBV3	6149	8096	0.06%	0.017%
8	2.559	134	135	141	rVB4	21307	41352	0.28%	0.085%
9	2.638	141	143	148	rVB6	6965	12012	0.08%	0.025%
10	2.806	158	160	165	rVB4	7277	15871	0.11%	0.033%
11	2.933	168	173	182	rBV	689312	1552786	10.64%	3.203%
12	3.111	188	191	197	rBV7	6107	16945	0.12%	0.035%
13	3.199	197	200	208	rVB3	12874	43552	0.30%	0.090%
14	3.426	220	223	224	rBV3	3914	4248	0.03%	0.009%
15	3.593	233	240	246	rBV3	21175	69675	0.48%	0.144%
16	3.800	259	261	262	rVB2	4222	4362	0.03%	0.009%
17	3.829	262	264	265	rBV2	4351	4926	0.03%	0.010%
18	3.868	265	268	271	rVV3	5620	12827	0.09%	0.026%
19	3.987	278	280	283	rVV4	3996	7475	0.05%	0.015%
20	4.095	289	291	295	rVB5	3803	7527	0.05%	0.016%
21	4.164	295	298	300	rVB4	3307	7043	0.05%	0.015%
22	4.223	300	304	306	rVB4	4708	9120	0.06%	0.019%
23	4.567	338	339	341	rBV2	3885	4859	0.03%	0.010%
24	4.735	354	356	359	rVB4	3747	6252	0.04%	0.013%
25	5.040	384	387	390	rVB4	2251	5019	0.03%	0.010%
26	5.128	392	396	397	rBV4	2708	4667	0.03%	0.010%
27	5.679	445	452	459	rBV	348951	1253265	8.59%	2.585%
28	5.798	459	464	475	rVV	112925	524647	3.60%	1.082%
29	5.955	478	480	483	rVV4	5979	15719	0.11%	0.032%
30	6.044	486	489	491	rBV3	4376	6099	0.04%	0.013%
31	6.388	517	524	534	rBV2	690376	2245312	15.39%	4.631%
32	6.644	545	550	555	rBV4	14416	48555	0.33%	0.100%
33	6.821	565	568	570	rBV3	2929	5050	0.03%	0.010%
34	6.920	575	578	581	rVB5	5210	10321	0.07%	0.021%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049285.D
Acq On : 6 May 2016 16:37
Operator : FY/SY
Sample : H2874-09DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.988	584	585	587	rVB2	5363	5093	0.03%	0.011%
36	7.038	587	590	592	rBV3	3057	5902	0.04%	0.012%
37	7.175	596	604	608	rBV	1179902	3142813	21.54%	6.482%
38	7.234	608	610	618	rVB	432035	938266	6.43%	1.935%
39	7.490	632	636	639	rBV6	3067	8656	0.06%	0.018%
40	7.549	639	642	643	rVB3	4526	5845	0.04%	0.012%
41	7.579	643	645	647	rBV3	4477	6470	0.04%	0.013%
42	7.628	649	650	652	rBV2	4347	6330	0.04%	0.013%
43	7.736	658	661	663	rBV4	3356	4477	0.03%	0.009%
44	7.933	675	681	692	rVV	1317571	2870714	19.68%	5.921%
45	8.130	699	701	704	rVB4	4174	6443	0.04%	0.013%
46	8.219	704	710	715	rBV4	28833	68765	0.47%	0.142%
47	8.435	727	732	743	rBV	872325	1992760	13.66%	4.110%
48	8.563	743	745	746	rVB2	6256	6596	0.05%	0.014%
49	8.917	779	781	783	rBV3	6815	7594	0.05%	0.016%
50	9.006	788	790	792	rVB2	4203	5763	0.04%	0.012%
51	9.055	792	795	797	rBV4	4076	5515	0.04%	0.011%
52	9.223	810	812	816	rVB4	3963	4821	0.03%	0.010%
53	9.291	818	819	822	rBV3	4203	7042	0.05%	0.015%
54	9.370	822	827	835	rBV	528347	991947	6.80%	2.046%
55	9.478	835	838	840	rVB4	3526	5076	0.03%	0.010%
56	9.577	845	848	852	rBV6	3624	8571	0.06%	0.018%
57	9.695	856	860	866	rBV	1642608	2941653	20.16%	6.067%
58	9.833	873	874	876	rVB2	3727	4190	0.03%	0.009%
59	10.020	889	893	899	rBV	317802	531528	3.64%	1.096%
60	10.098	899	901	902	rBV2	4108	4411	0.03%	0.009%
61	10.217	909	913	920	rBV	110652	233393	1.60%	0.481%
62	10.325	920	924	931	rVV	1508337	2588886	17.75%	5.340%
63	10.433	931	935	948	rVV	1542474	2833226	19.42%	5.844%
64	10.679	958	960	962	rVB3	6118	6612	0.05%	0.014%
65	10.728	962	965	967	rVB4	3943	6284	0.04%	0.013%
66	10.768	967	969	970	rBV2	3389	5343	0.04%	0.011%
67	10.965	986	989	991	rBV3	4803	9541	0.07%	0.020%
68	11.152	1005	1008	1011	rVV4	3237	4814	0.03%	0.010%
69	11.220	1011	1015	1025	rVV	1625456	2661910	18.25%	5.490%
70	11.348	1025	1028	1032	rVV6	9268	24858	0.17%	0.051%
71	11.417	1032	1035	1037	rVV4	6250	10258	0.07%	0.021%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049285.D
Acq On : 6 May 2016 16:37
Operator : FY/SY
Sample : H2874-09DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.476	1037	1041	1044	rVV4	7701	18315	0.13%	0.038%
73	11.614	1053	1055	1056	rBV2	3054	5045	0.03%	0.010%
74	11.752	1068	1069	1072	rVB3	4571	7332	0.05%	0.015%
75	11.860	1075	1080	1083	rVB6	6809	20740	0.14%	0.043%
76	11.959	1088	1090	1092	rBV3	2875	5558	0.04%	0.011%
77	12.057	1096	1100	1103	rBV3	2193	4865	0.03%	0.010%
78	12.126	1103	1107	1110	rBV5	2847	6691	0.05%	0.014%
79	12.195	1112	1114	1117	rVB4	5470	9901	0.07%	0.020%
80	12.293	1117	1124	1128	rBV6	13809	45362	0.31%	0.094%
81	12.342	1128	1129	1131	rVV2	4393	5432	0.04%	0.011%
82	12.402	1131	1135	1138	rVV	101655	196087	1.34%	0.404%
83	12.461	1138	1141	1147	rVV	392132	668446	4.58%	1.379%
84	12.579	1151	1153	1155	rVB3	3782	5280	0.04%	0.011%
85	12.687	1160	1164	1166	rVB4	3124	5870	0.04%	0.012%
86	12.815	1176	1177	1180	rVB3	3992	4697	0.03%	0.010%
87	12.874	1180	1183	1185	rBV4	2200	4761	0.03%	0.010%
88	13.002	1191	1196	1199	rBV6	4310	13983	0.10%	0.029%
89	13.061	1199	1202	1205	rBV4	4863	10413	0.07%	0.021%
90	13.268	1221	1223	1225	rBV3	2471	5058	0.03%	0.010%
91	13.366	1228	1233	1235	rBV5	8002	15127	0.10%	0.031%
92	13.435	1235	1240	1248	rBV	1200276	2044167	14.01%	4.216%
93	13.583	1254	1255	1256	rBV	5122	4157	0.03%	0.009%
94	13.602	1256	1257	1260	rVV3	3991	6585	0.05%	0.014%
95	13.760	1268	1273	1278	rBV	1003640	1681897	11.53%	3.469%
96	14.035	1296	1301	1304	rBV	60411	111870	0.77%	0.231%
97	14.193	1316	1317	1319	rVB2	6452	6747	0.05%	0.014%
98	14.311	1326	1329	1331	rVB4	7142	11999	0.08%	0.025%
99	14.547	1350	1353	1354	rBV3	10369	18042	0.12%	0.037%
100	15.610	1458	1461	1465	rBV	38611	81959	0.56%	0.169%

Sum of corrected areas: 48484199

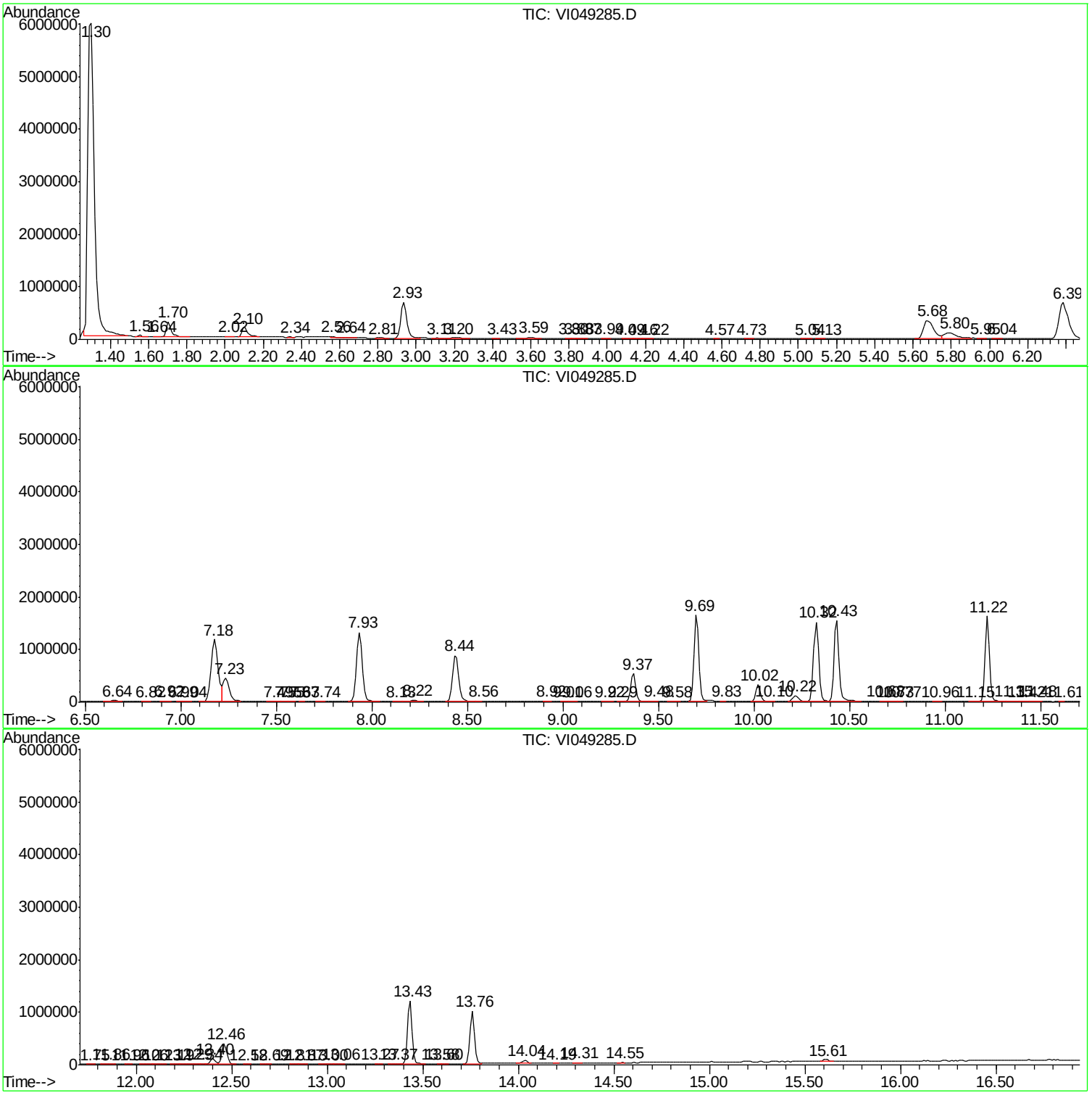
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049285.D
Acq On : 6 May 2016 16:37
Operator : FY/SY
Sample : H2874-09DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049285.D
Acq On : 6 May 2016 16:37
Operator : FY/SY
Sample : H2874-09DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4113DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049285.D
Acq On : 6 May 2016 16:37
Operator : FY/SY
Sample : H2874-09DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4120

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049269.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.090	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4120

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049269.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4120

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049269.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4120

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049269.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

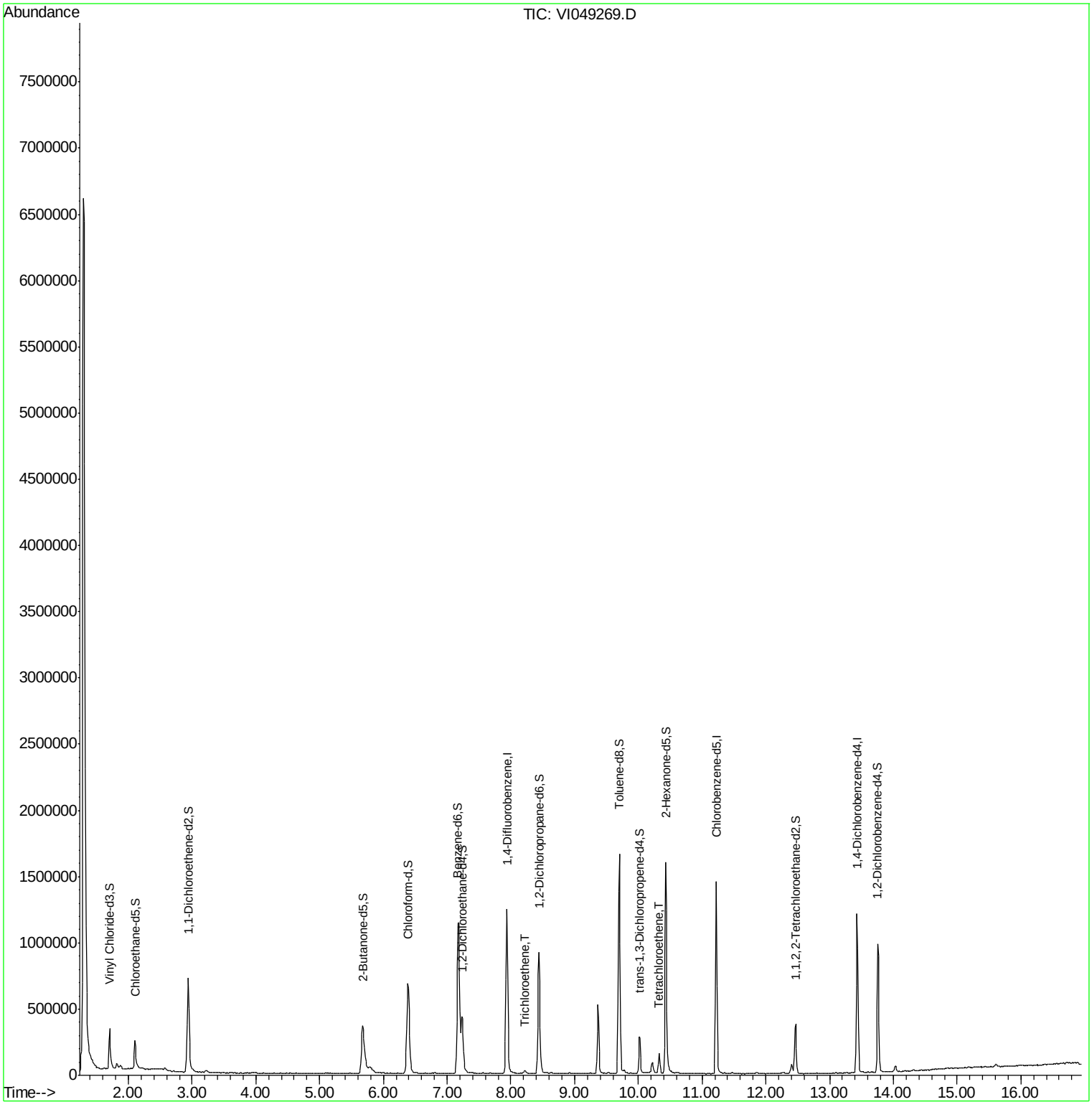
EPA-designated Registry Number.

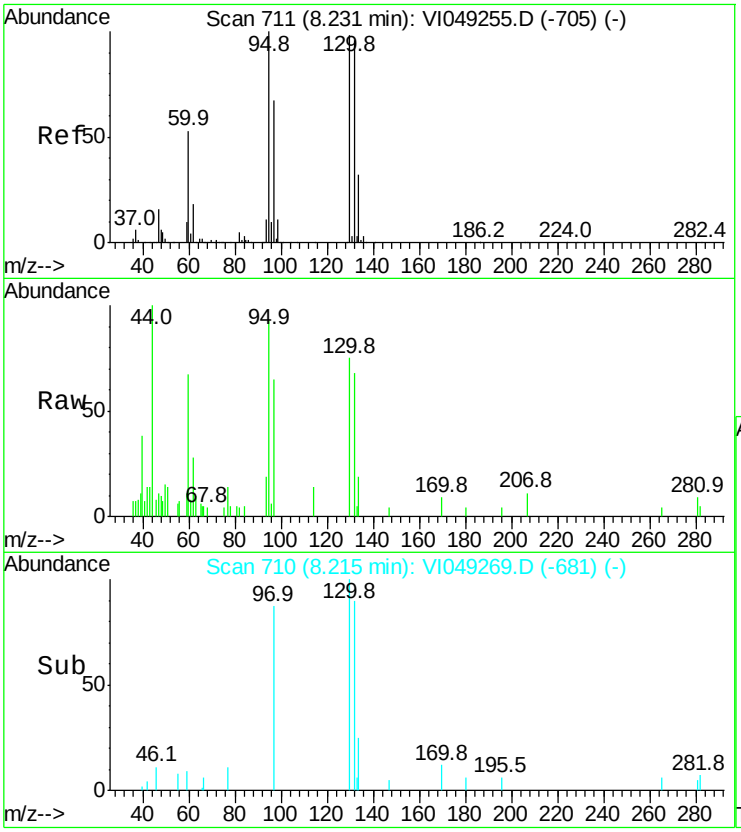
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049269.D
Acq On : 6 May 2016 00:19
Operator : FY/SY
Sample : H2874-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4120

Quant Time: May 06 06:53:45 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration



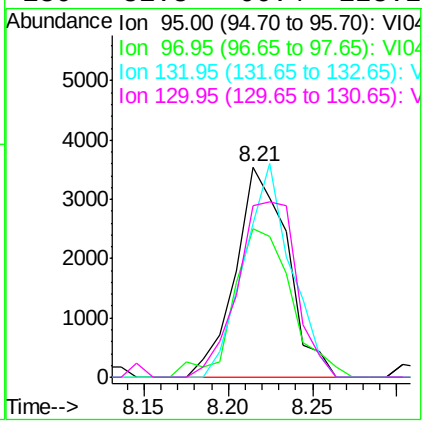


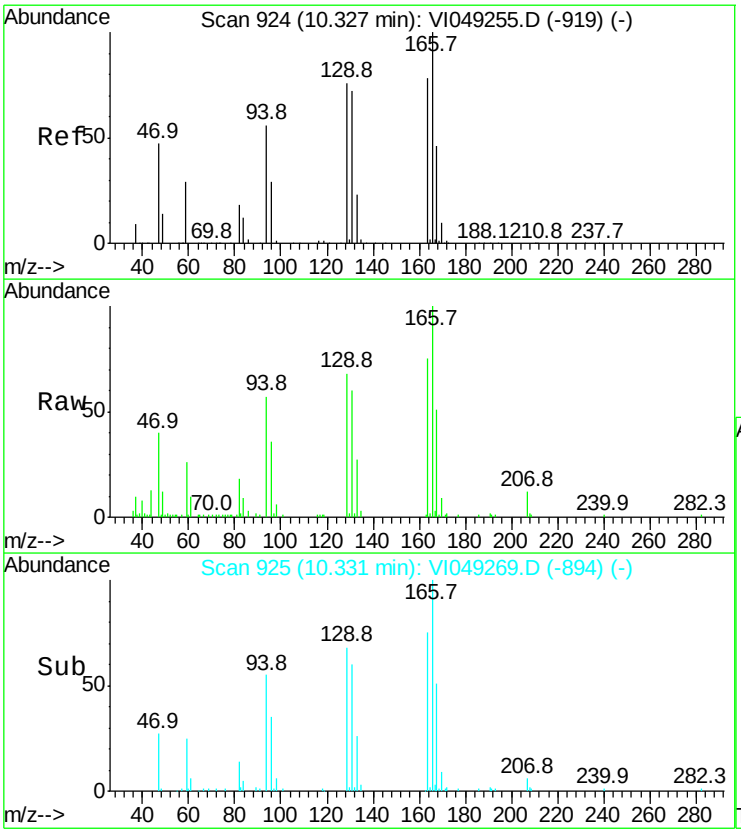
#34
Trichloroethene
Concen: 0.09 ug/L
RT: 8.21 min Scan# 710
Delta R.T. -0.02 min
Lab File: VI049269.D
Acq: 6 May 2016 00:19

Instrument :
MSVOA_I
ClientSampleId :
H4120

Tgt Ion: 95 Resp: 7554

Ion	Ratio	Lower	Upper
95	100		
97	70.5	45.8	85.2
132	73.3	63.9	118.7
130	81.3	66.4	123.2

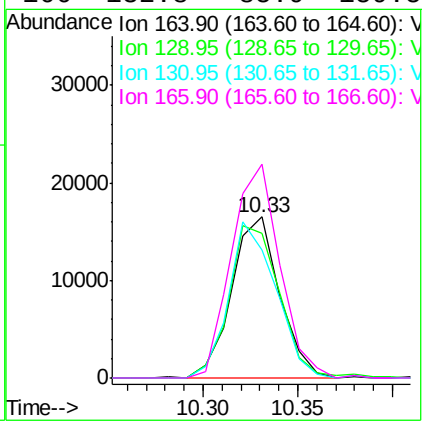




#47
Tetrachloroethene
Concen: 0.50 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.00 min
Lab File: VI049269.D
Acq: 6 May 2016 00:19

Tgt Ion:164 Resp: 28894

Ion	Ratio	Lower	Upper
164	100		
129	90.2	62.1	115.3
131	80.0	60.6	112.6
166	132.8	85.9	159.5



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049269.D
Acq On : 6 May 2016 00:19
Operator : FY/SY
Sample : H2874-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4120

Quant Time: May 06 06:53:45 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1147362	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	739494	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	275659	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	321339	4.55	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 91.00%			
7) Chloroethane-d5	2.10	69	222841	5.70	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 114.00%			
11) 1,1-Dichloroethene-d2	2.94	63	575818	3.46	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 69.20%			
20) 2-Butanone-d5	5.68	46	834984	54.60	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 109.20%			
24) Chloroform-d	6.38	84	865470	4.82	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.40%			
26) 1,2-Dichloroethane-d4	7.24	65	384745	5.23	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.60%			
32) Benzene-d6	7.18	84	1481156	5.14	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.80%			
36) 1,2-Dichloropropane-d6	8.44	67	411858	5.08	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.60%			
41) Toluene-d8	9.70	98	1041501	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
43) trans-1,3-Dichloropropene-	10.02	79	143581	4.50	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 90.00%			
46) 2-Hexanone-d5	10.43	63	521088	51.76	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 103.52%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	177835	4.83	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 96.60%			
63) 1,2-Dichlorobenzene-d4	13.77	152	223597	4.63	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 92.60%			
Target Compounds						Qvalue
34) Trichloroethene	8.21	95	7554	0.09	ug/L	86
47) Tetrachloroethene	10.33	164	28894	0.50	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049269.D
Acq On : 6 May 2016 00:19
Operator : FY/SY
Sample : H2874-12
Misc : 25mL/MSVOA I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4120

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.296	4	7	28	rVB	6562805	16778580	100.00%	35.203%
2	1.611	37	39	42	rBV4	10579	17009	0.10%	0.036%
3	1.709	46	49	56	rVV	306849	533897	3.18%	1.120%
4	1.817	57	60	63	rVV	46940	98148	0.58%	0.206%
5	1.876	64	66	70	rVB2	32806	58713	0.35%	0.123%
6	2.103	85	89	96	rBV	210034	392267	2.34%	0.823%
7	2.575	134	137	145	rVB3	23701	62854	0.37%	0.132%
8	2.713	149	151	152	rBV2	4255	5923	0.04%	0.012%
9	2.939	167	174	186	rBV	713260	1698806	10.12%	3.564%
10	3.215	198	202	209	rVB3	14095	45621	0.27%	0.096%
11	3.363	215	217	218	rVB2	5396	5631	0.03%	0.012%
12	3.599	238	241	242	rBV2	5232	7927	0.05%	0.017%
13	3.618	242	243	246	rVB3	3926	5671	0.03%	0.012%
14	3.678	246	249	251	rVB4	5031	7365	0.04%	0.015%
15	3.766	256	258	263	rBV6	2973	7465	0.04%	0.016%
16	3.825	263	264	267	rBV3	4176	6596	0.04%	0.014%
17	3.953	273	277	278	rBV3	4642	9233	0.06%	0.019%
18	4.012	282	283	288	rVB5	5850	8232	0.05%	0.017%
19	4.120	292	294	295	rBV2	4926	5512	0.03%	0.012%
20	4.140	295	296	302	rVB6	3869	9699	0.06%	0.020%
21	4.239	305	306	310	rVB3	3807	5348	0.03%	0.011%
22	4.288	310	311	313	rBV2	4503	5511	0.03%	0.012%
23	4.386	318	321	323	rVB4	4868	7848	0.05%	0.016%
24	4.632	344	346	349	rVB3	4801	7784	0.05%	0.016%
25	4.711	352	354	357	rVB3	3744	5474	0.03%	0.011%
26	5.124	394	396	399	rVB4	4840	7169	0.04%	0.015%
27	5.262	409	410	416	rVB5	2887	7025	0.04%	0.015%
28	5.479	428	432	439	rBV9	5209	19760	0.12%	0.041%
29	5.675	445	452	460	rBV	361955	1251014	7.46%	2.625%
30	5.902	473	475	478	rVB4	4517	7569	0.05%	0.016%
31	6.227	502	508	509	rBV3	5486	13152	0.08%	0.028%
32	6.384	515	524	534	rBV	680308	2061171	12.28%	4.325%
33	6.630	546	549	550	rBV3	2863	6070	0.04%	0.013%
34	6.660	550	552	556	rVB4	5372	9264	0.06%	0.019%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049269.D
Acq On : 6 May 2016 00:19
Operator : FY/SY
Sample : H2874-12
Misc : 25mL/MSVOA I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4120

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.817	564	568	573	rVB	6180	13664	0.08%	0.029%
36	6.955	580	582	585	rVB4	2883	5611	0.03%	0.012%
37	7.024	587	589	592	rVB3	3651	5352	0.03%	0.011%
38	7.171	597	604	608	rBV	1140083	3091961	18.43%	6.487%
39	7.230	608	610	619	rVB	421062	1029060	6.13%	2.159%
40	7.555	641	643	645	rBV3	4780	6810	0.04%	0.014%
41	7.673	653	655	658	rVV4	4859	6370	0.04%	0.013%
42	7.762	661	664	671	rVB9	4287	14238	0.08%	0.030%
43	7.939	676	682	689	rBV	1238869	2790595	16.63%	5.855%
44	8.116	697	700	703	rVB4	3039	7184	0.04%	0.015%
45	8.215	705	710	715	rVB5	18892	53501	0.32%	0.112%
46	8.441	728	733	742	rBV	915733	2026197	12.08%	4.251%
47	8.539	742	743	746	rVV2	8869	13823	0.08%	0.029%
48	8.638	750	753	756	rVB4	8495	15950	0.10%	0.033%
49	8.805	766	770	771	rVB3	4169	7040	0.04%	0.015%
50	8.923	780	782	784	rBV3	4834	8089	0.05%	0.017%
51	9.248	810	815	818	rBV4	6111	16820	0.10%	0.035%
52	9.366	823	827	833	rBV	522171	938889	5.60%	1.970%
53	9.534	840	844	847	rVB4	6932	15067	0.09%	0.032%
54	9.593	847	850	854	rVB5	3813	7253	0.04%	0.015%
55	9.701	856	861	867	rBV	1657992	3000965	17.89%	6.296%
56	9.780	867	869	872	rVB4	20505	31036	0.18%	0.065%
57	9.878	877	879	882	rVB4	3979	5370	0.03%	0.011%
58	10.016	888	893	900	rBV	277657	525448	3.13%	1.102%
59	10.222	904	914	918	rVV	77685	183620	1.09%	0.385%
60	10.321	921	924	929	rVB	151371	270902	1.61%	0.568%
61	10.429	931	935	949	rBV	1590956	2793723	16.65%	5.861%
62	10.616	949	954	959	rVB8	6245	20587	0.12%	0.043%
63	10.715	962	964	967	rVB4	3625	6192	0.04%	0.013%
64	10.803	970	973	975	rBV4	3665	5352	0.03%	0.011%
65	11.010	989	994	997	rVB7	6387	16292	0.10%	0.034%
66	11.108	1002	1004	1007	rVB4	3195	5400	0.03%	0.011%
67	11.226	1011	1016	1027	rBV	1447311	2596538	15.48%	5.448%
68	11.354	1027	1029	1032	rVB3	8963	14098	0.08%	0.030%
69	11.472	1038	1041	1044	rVB5	8085	18068	0.11%	0.038%
70	11.522	1044	1046	1049	rVB4	3938	5979	0.04%	0.013%
71	11.797	1069	1074	1076	rBV4	3577	9594	0.06%	0.020%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049269.D
Acq On : 6 May 2016 00:19
Operator : FY/SY
Sample : H2874-12
Misc : 25mL/MSVOA I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4120

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.856	1076	1080	1084	rBV6	7551	20869	0.12%	0.044%
73	12.073	1097	1102	1104	rBV5	3941	7786	0.05%	0.016%
74	12.191	1109	1114	1117	rVB6	4042	9945	0.06%	0.021%
75	12.240	1117	1119	1120	rBV2	6129	8429	0.05%	0.018%
76	12.279	1120	1123	1128	rVB5	5244	16677	0.10%	0.035%
77	12.407	1131	1136	1138	rBV2	69849	136787	0.82%	0.287%
78	12.466	1138	1142	1149	rVB	371054	663716	3.96%	1.393%
79	12.585	1152	1154	1155	rVB2	5708	6556	0.04%	0.014%
80	12.614	1155	1157	1158	rBV3	5860	7638	0.05%	0.016%
81	12.683	1161	1164	1168	rBV5	5419	15282	0.09%	0.032%
82	12.752	1168	1171	1174	rBV5	3551	5774	0.03%	0.012%
83	12.801	1174	1176	1179	rVB4	5126	6352	0.04%	0.013%
84	12.949	1187	1191	1192	rVB3	2847	6027	0.04%	0.013%
85	12.998	1192	1196	1198	rBV5	3618	7820	0.05%	0.016%
86	13.096	1204	1206	1210	rBV5	3947	8352	0.05%	0.018%
87	13.234	1216	1220	1221	rBV4	6419	10382	0.06%	0.022%
88	13.273	1221	1224	1227	rBV5	3497	7720	0.05%	0.016%
89	13.372	1229	1234	1236	rBV5	5600	14269	0.09%	0.030%
90	13.431	1236	1240	1246	rBV	1203146	2025635	12.07%	4.250%
91	13.598	1254	1257	1260	rBV5	5164	10294	0.06%	0.022%
92	13.657	1260	1263	1264	rBV3	3500	6002	0.04%	0.013%
93	13.756	1269	1273	1282	rVV	971253	1739500	10.37%	3.650%
94	13.894	1286	1287	1290	rBV3	4437	5397	0.03%	0.011%
95	14.031	1297	1301	1306	rVB	43304	86556	0.52%	0.182%
96	14.149	1311	1313	1314	rBV2	6166	6330	0.04%	0.013%
97	14.327	1328	1331	1334	rBV5	5957	11772	0.07%	0.025%
98	14.504	1347	1349	1350	rBV2	6445	5694	0.03%	0.012%
99	14.582	1355	1357	1359	rBV3	5846	11808	0.07%	0.025%
100	15.606	1459	1461	1464	rVB	17417	31009	0.18%	0.065%

Sum of corrected areas: 47662324

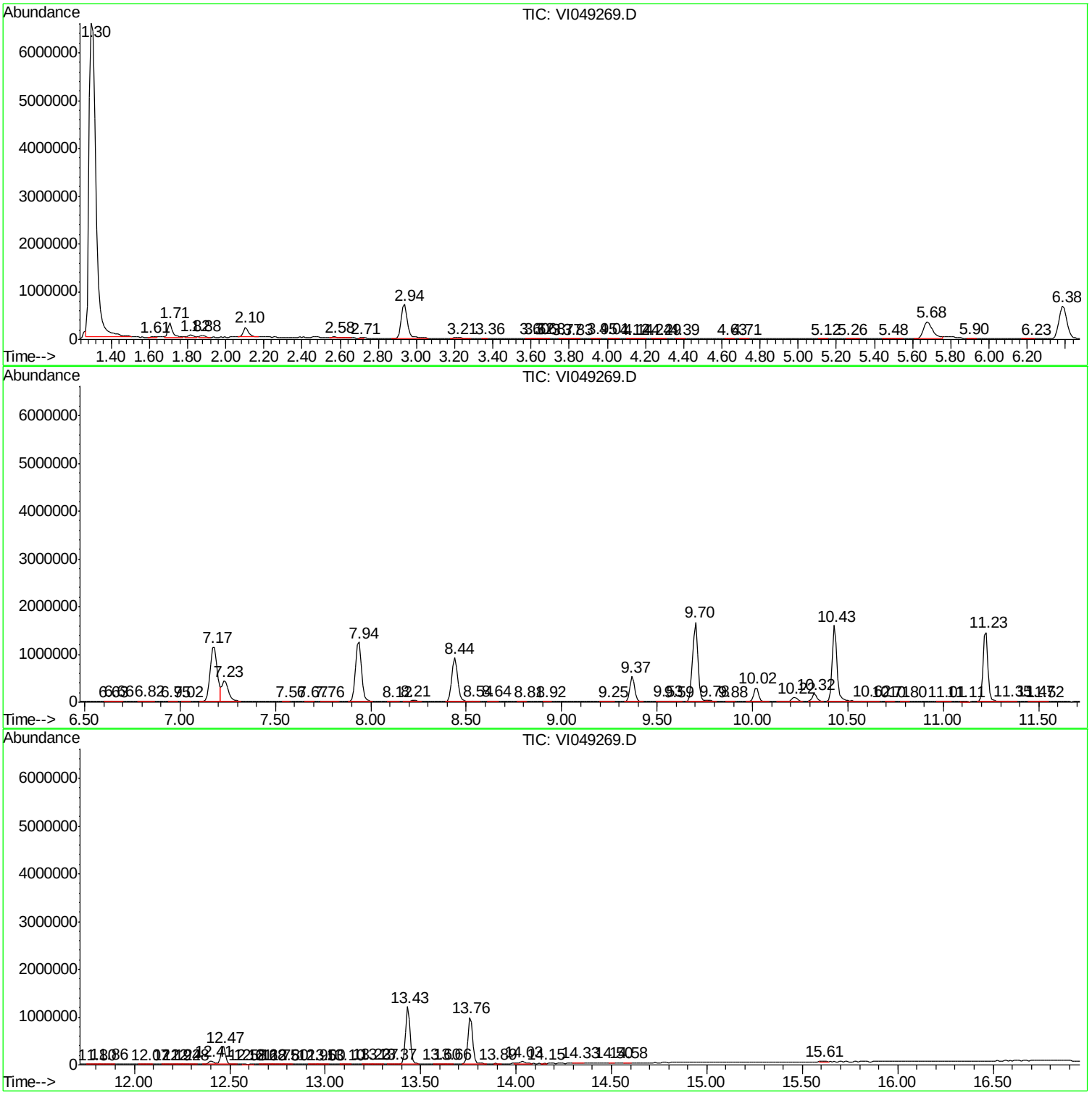
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049269.D
Acq On : 6 May 2016 00:19
Operator : FY/SY
Sample : H2874-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4120

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049269.D
Acq On : 6 May 2016 00:19
Operator : FY/SY
Sample : H2874-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4120

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049269.D
Acq On : 6 May 2016 00:19
Operator : FY/SY
Sample : H2874-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4120

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4126

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049282.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.13	J
156-59-2	cis-1,2-Dichloroethene	0.69	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	2.3	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4126

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049282.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.2	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4126

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049282.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4126

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049282.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

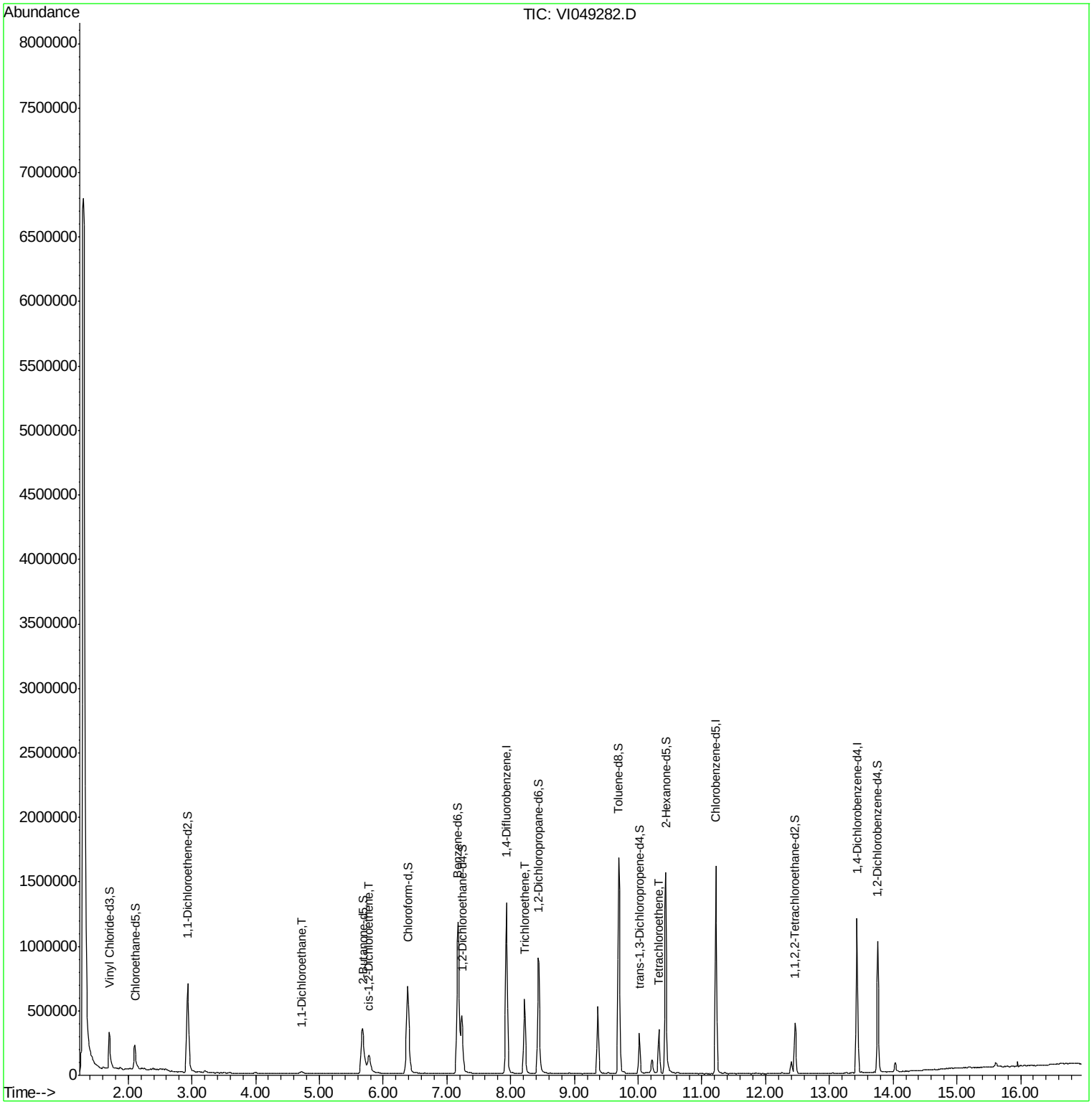
Quantitation Report (LSC Reviewed)

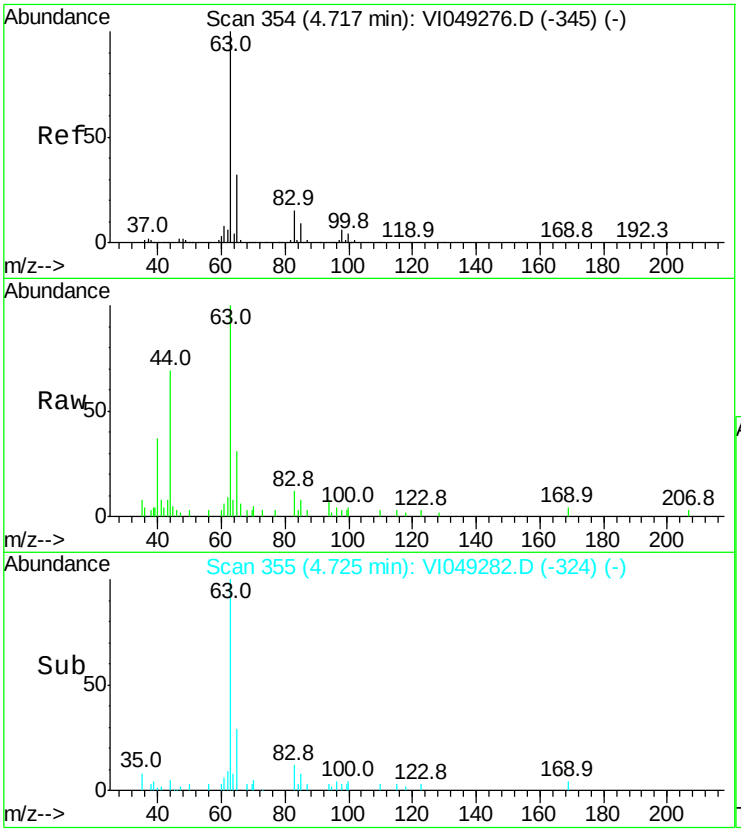
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049282.D
Acq On : 6 May 2016 14:24
Operator : FY/SY
Sample : H2874-13
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 07 04:40:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4126

Manual Integrations APPROVED
feifei
5/9/2016 12:05:13 PM

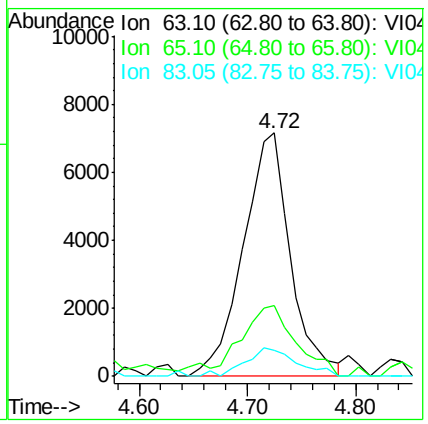




#19
1,1-Dichloroethane
Concen: 0.13 ug/L
RT: 4.72 min Scan# 355
Delta R.T. 0.01 min
Lab File: VI049282.D
Acq: 6 May 2016 14:24

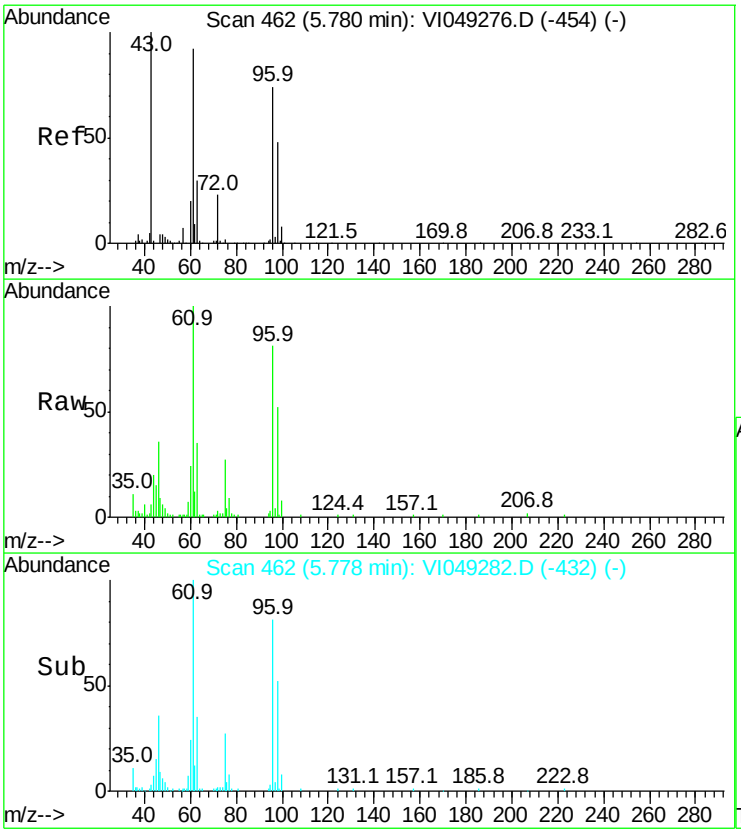
Tgt Ion: 63 Resp: 21659

Ion	Ratio	Lower	Upper
63	100		
65	28.9	23.1	42.9
83	10.6	10.5	19.5



Instrument :
MSVOA_I
ClientSampleId :
H4126

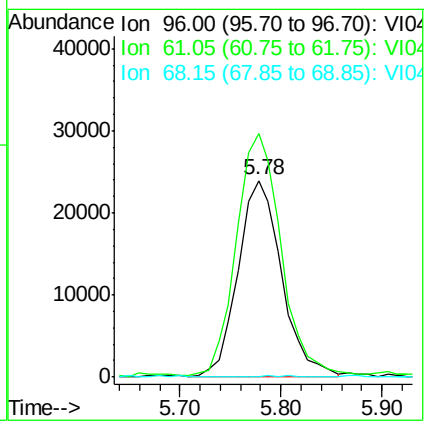
Manual Integrations APPROVED
feifei
5/9/2016 12:05:13 PM

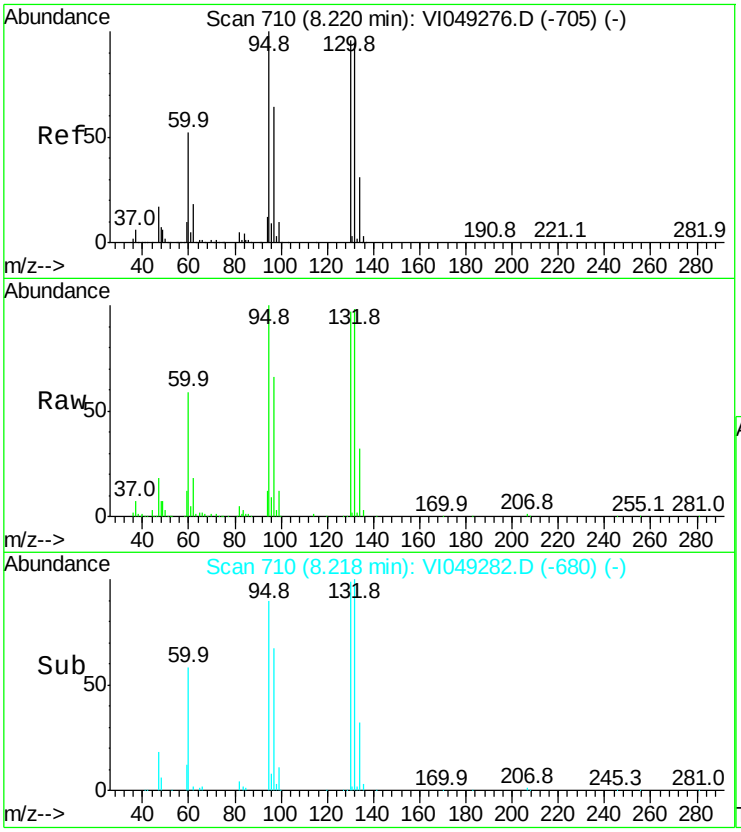


#22
cis-1,2-Dichloroethene
Concen: 0.69 ug/L
RT: 5.78 min Scan# 462
Delta R.T. -0.00 min
Lab File: VI049282.D
Acq: 6 May 2016 14:24

Tgt Ion: 96 Resp: 72310

Ion	Ratio	Lower	Upper
96	100		
61	123.7	82.1	152.5
68	0.0	0.0	0.0

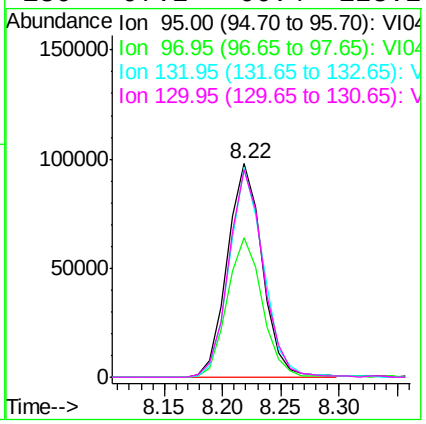




#34
Trichloroethene
Concen: 2.31 ug/L
RT: 8.22 min Scan# 710
Delta R.T. -0.00 min
Lab File: VI049282.D
Acq: 6 May 2016 14:24

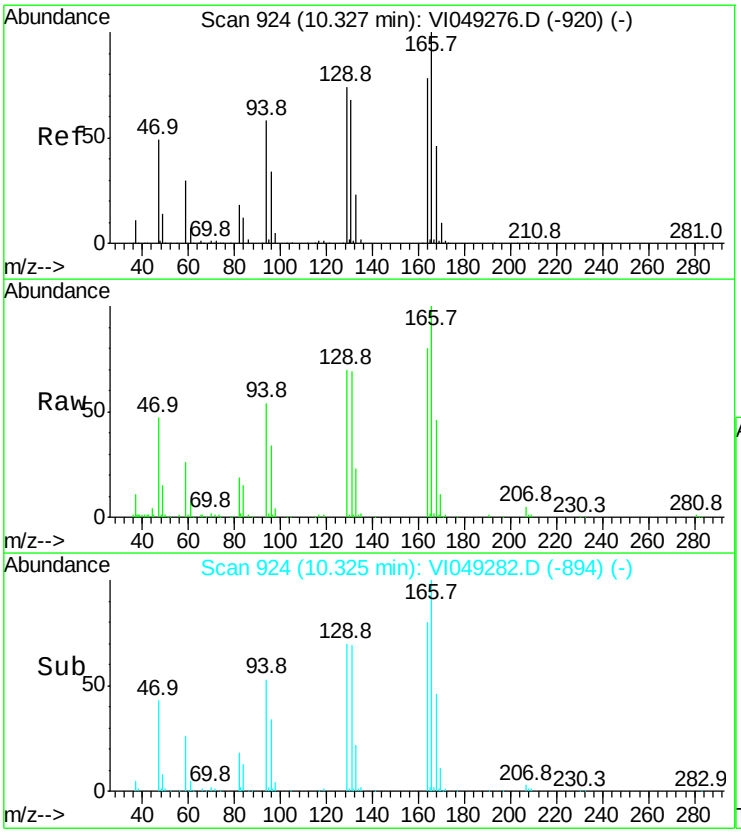
Tgt Ion: 95 Resp: 203692

Ion	Ratio	Lower	Upper
95	100		
97	65.5	45.8	85.2
132	98.2	63.9	118.7
130	97.2	66.4	123.2



Instrument :
MSVOA_I
ClientSampleId :
H4126

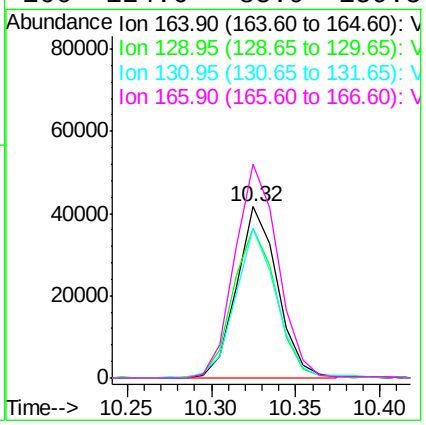
Manual Integrations APPROVED
feifei
5/9/2016 12:05:13 PM



#47
Tetrachloroethene
Concen: 1.22 ug/L
RT: 10.32 min Scan# 924
Delta R.T. -0.00 min
Lab File: VI049282.D
Acq: 6 May 2016 14:24

Tgt Ion:164 Resp: 70319

Ion	Ratio	Lower	Upper
164	100		
129	87.1	62.1	115.3
131	87.1	60.6	112.6
166	124.6	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049282.D
Acq On : 6 May 2016 14:24
Operator : FY/SY
Sample : H2874-13
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4126

Manual Integrations APPROVED
feifei
5/9/2016 12:05:13 PM

Quant Time: May 07 04:40:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1145067	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	741363	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	269242	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	317543	4.50	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 90.00%			
7) Chloroethane-d5	2.11	69	206848	5.30	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 106.00%			
11) 1,1-Dichloroethene-d2	2.93	63	557795	3.36	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 67.20%			
20) 2-Butanone-d5	5.68	46	842896	55.23	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 110.46%			
24) Chloroform-d	6.39	84	852775	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
26) 1,2-Dichloroethane-d4	7.23	65	382916m	5.22	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.40%			
32) Benzene-d6	7.18	84	1476154	5.11	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.20%			
36) 1,2-Dichloropropane-d6	8.44	67	421126	5.19	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 103.80%			
41) Toluene-d8	9.69	98	1030034	4.83	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.60%			
43) trans-1,3-Dichloropropene-	10.02	79	153644	4.80	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 96.00%			
46) 2-Hexanone-d5	10.43	63	524692	51.99	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 103.98%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	173280	4.69	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 93.80%			
63) 1,2-Dichlorobenzene-d4	13.76	152	226288	4.79	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 95.80%			
Target Compounds						Qvalue
19) 1,1-Dichloroethane	4.72	63	21659	0.13	ug/L	92
22) cis-1,2-Dichloroethene	5.78	96	72310	0.69	ug/L	94
34) Trichloroethene	8.22	95	203692	2.31	ug/L	96
47) Tetrachloroethene	10.32	164	70319	1.22	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049282.D
Acq On : 6 May 2016 14:24
Operator : FY/SY
Sample : H2874-13
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4126

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.300	3	7	34	rVB	6740113	19539558	100.00%	37.243%
2	1.605	36	38	43	rBV4	9611	27944	0.14%	0.053%
3	1.703	45	48	56	rBV	280504	495162	2.53%	0.944%
4	1.870	63	65	70	rVB2	16409	35762	0.18%	0.068%
5	2.107	85	89	97	rBV	181998	383239	1.96%	0.730%
6	2.422	119	121	122	rVB2	6716	5665	0.03%	0.011%
7	2.589	136	138	142	rVB5	18259	35044	0.18%	0.067%
8	2.766	154	156	157	rVB2	4579	4695	0.02%	0.009%
9	2.815	157	161	168	rVB9	7711	29601	0.15%	0.056%
10	2.933	168	173	186	rBV	693913	1608366	8.23%	3.066%
11	3.199	198	200	208	rVB7	12692	34726	0.18%	0.066%
12	3.327	211	213	216	rVB3	3274	5589	0.03%	0.011%
13	3.445	223	225	228	rVB3	5477	8576	0.04%	0.016%
14	3.593	237	240	243	rBV5	8367	17357	0.09%	0.033%
15	3.858	265	267	269	rBV3	3781	6406	0.03%	0.012%
16	3.977	276	279	282	rBV5	3709	10370	0.05%	0.020%
17	4.223	301	304	306	rVB4	3942	5341	0.03%	0.010%
18	4.282	306	310	312	rBV4	3163	7492	0.04%	0.014%
19	4.400	318	322	323	rBV2	3472	7019	0.04%	0.013%
20	4.725	350	355	359	rBV3	13367	40976	0.21%	0.078%
21	4.941	374	377	379	rVB3	4421	4797	0.02%	0.009%
22	5.030	383	386	388	rBV4	4308	7436	0.04%	0.014%
23	5.079	388	391	394	rBV4	3701	4815	0.02%	0.009%
24	5.256	406	409	412	rVB5	3107	6054	0.03%	0.012%
25	5.354	417	419	422	rBV3	3093	4375	0.02%	0.008%
26	5.473	428	431	432	rBV3	2294	4274	0.02%	0.008%
27	5.679	445	452	458	rBV	347694	1202349	6.15%	2.292%
28	5.778	458	462	476	rVV2	139507	525131	2.69%	1.001%
29	5.925	476	477	482	rVB3	8040	13683	0.07%	0.026%
30	6.063	490	491	495	rVB4	2974	4509	0.02%	0.009%
31	6.388	516	524	536	rBV	675148	2068086	10.58%	3.942%
32	6.526	536	538	541	rVV4	5675	10869	0.06%	0.021%
33	6.595	544	545	548	rBV3	3184	5062	0.03%	0.010%
34	6.654	548	551	556	rVB7	4507	12467	0.06%	0.024%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049282.D
Acq On : 6 May 2016 14:24
Operator : FY/SY
Sample : H2874-13
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4126

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.175	597	604	608	rBV	1174469	3150154	16.12%	6.004%
36	7.234	608	610	622	rVV	449016	1000465	5.12%	1.907%
37	7.372	622	624	628	rVV5	6516	13416	0.07%	0.026%
38	7.451	630	632	635	rBV4	2467	5056	0.03%	0.010%
39	7.500	635	637	641	rVB5	3306	5285	0.03%	0.010%
40	7.657	650	653	655	rVB3	5682	10073	0.05%	0.019%
41	7.707	655	658	660	rBV4	4102	7084	0.04%	0.014%
42	7.933	675	681	690	rBV	1330979	2830135	14.48%	5.394%
43	8.031	690	691	693	rVB2	5049	5143	0.03%	0.010%
44	8.120	699	700	705	rBV5	3363	6423	0.03%	0.012%
45	8.218	705	710	716	rBV	579652	1188625	6.08%	2.266%
46	8.327	719	721	725	rVB5	3761	7416	0.04%	0.014%
47	8.435	727	732	742	rBV	895694	1992793	10.20%	3.798%
48	8.917	777	781	785	rVB5	7687	19115	0.10%	0.036%
49	8.966	785	786	788	rBV2	3312	4540	0.02%	0.009%
50	9.006	788	790	793	rVB3	3007	5083	0.03%	0.010%
51	9.213	807	811	812	rBV3	2577	4676	0.02%	0.009%
52	9.281	817	818	821	rVB2	2877	4399	0.02%	0.008%
53	9.370	821	827	835	rBV	520756	996873	5.10%	1.900%
54	9.527	837	843	846	rBV5	9676	20855	0.11%	0.040%
55	9.695	856	860	866	rBV	1671262	2988314	15.29%	5.696%
56	9.901	879	881	884	rVB3	3032	5814	0.03%	0.011%
57	9.951	884	886	888	rBV3	4525	8430	0.04%	0.016%
58	10.020	888	893	899	rVV	313358	538369	2.76%	1.026%
59	10.148	901	906	907	rVV5	10177	26019	0.13%	0.050%
60	10.216	909	913	919	rVV	108017	242500	1.24%	0.462%
61	10.325	919	924	930	rVV	343703	623718	3.19%	1.189%
62	10.433	931	935	947	rVV	1561815	2850551	14.59%	5.433%
63	10.610	951	953	955	rVV3	7522	15216	0.08%	0.029%
64	10.640	955	956	958	rVV2	7327	7651	0.04%	0.015%
65	10.689	960	961	964	rVB3	2938	4332	0.02%	0.008%
66	10.738	964	966	968	rVB3	4030	5829	0.03%	0.011%
67	10.787	968	971	974	rVB4	4394	6540	0.03%	0.012%
68	10.856	974	978	979	rBV3	4574	6568	0.03%	0.013%
69	10.974	987	990	994	rBV6	3181	7076	0.04%	0.013%
70	11.063	997	999	1002	rBV4	1995	4541	0.02%	0.009%
71	11.220	1011	1015	1026	rBV	1609634	2642510	13.52%	5.037%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049282.D
Acq On : 6 May 2016 14:24
Operator : FY/SY
Sample : H2874-13
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4126

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.348	1026	1028	1035	rVB6	11299	26368	0.13%	0.050%
73	11.437	1035	1037	1039	rBV3	4179	7776	0.04%	0.015%
74	11.516	1043	1045	1047	rVB2	4000	6215	0.03%	0.012%
75	11.752	1066	1069	1071	rVB4	3552	5414	0.03%	0.010%
76	11.801	1071	1074	1075	rBV3	5416	6350	0.03%	0.012%
77	11.850	1077	1079	1082	rVB3	5708	8677	0.04%	0.017%
78	12.057	1098	1100	1105	rBV6	2668	6655	0.03%	0.013%
79	12.214	1111	1116	1117	rBV5	5474	11721	0.06%	0.022%
80	12.264	1117	1121	1125	rBV7	5137	17095	0.09%	0.033%
81	12.401	1131	1135	1138	rVV2	90493	181561	0.93%	0.346%
82	12.460	1138	1141	1148	rVB	390051	669943	3.43%	1.277%
83	12.559	1148	1151	1153	rVB4	3892	5771	0.03%	0.011%
84	12.756	1168	1171	1172	rBV3	5273	8093	0.04%	0.015%
85	13.051	1199	1201	1204	rBV4	4697	7432	0.04%	0.014%
86	13.130	1206	1209	1211	rVB4	3155	5183	0.03%	0.010%
87	13.238	1215	1220	1221	rVB4	2718	6227	0.03%	0.012%
88	13.258	1221	1222	1226	rBV4	3898	7658	0.04%	0.015%
89	13.366	1228	1233	1235	rBV5	5443	13336	0.07%	0.025%
90	13.435	1235	1240	1245	rBV	1201176	2026402	10.37%	3.862%
91	13.760	1269	1273	1280	rBV	1018729	1722817	8.82%	3.284%
92	14.035	1297	1301	1306	rVB	69924	128104	0.66%	0.244%
93	14.193	1315	1317	1318	rBV2	3843	5374	0.03%	0.010%
94	14.261	1322	1324	1327	rBV4	5056	11989	0.06%	0.023%
95	14.311	1327	1329	1330	rVV	4220	4218	0.02%	0.008%
96	14.714	1368	1370	1371	rBV2	6482	5236	0.03%	0.010%
97	14.872	1385	1386	1388	rBV2	8497	8489	0.04%	0.016%
98	15.610	1458	1461	1465	rVB	33073	61924	0.32%	0.118%
99	15.954	1495	1496	1497	rVB	42080	24848	0.13%	0.047%
100	15.994	1497	1500	1501	rBV3	9729	19143	0.10%	0.036%

Sum of corrected areas: 52464401

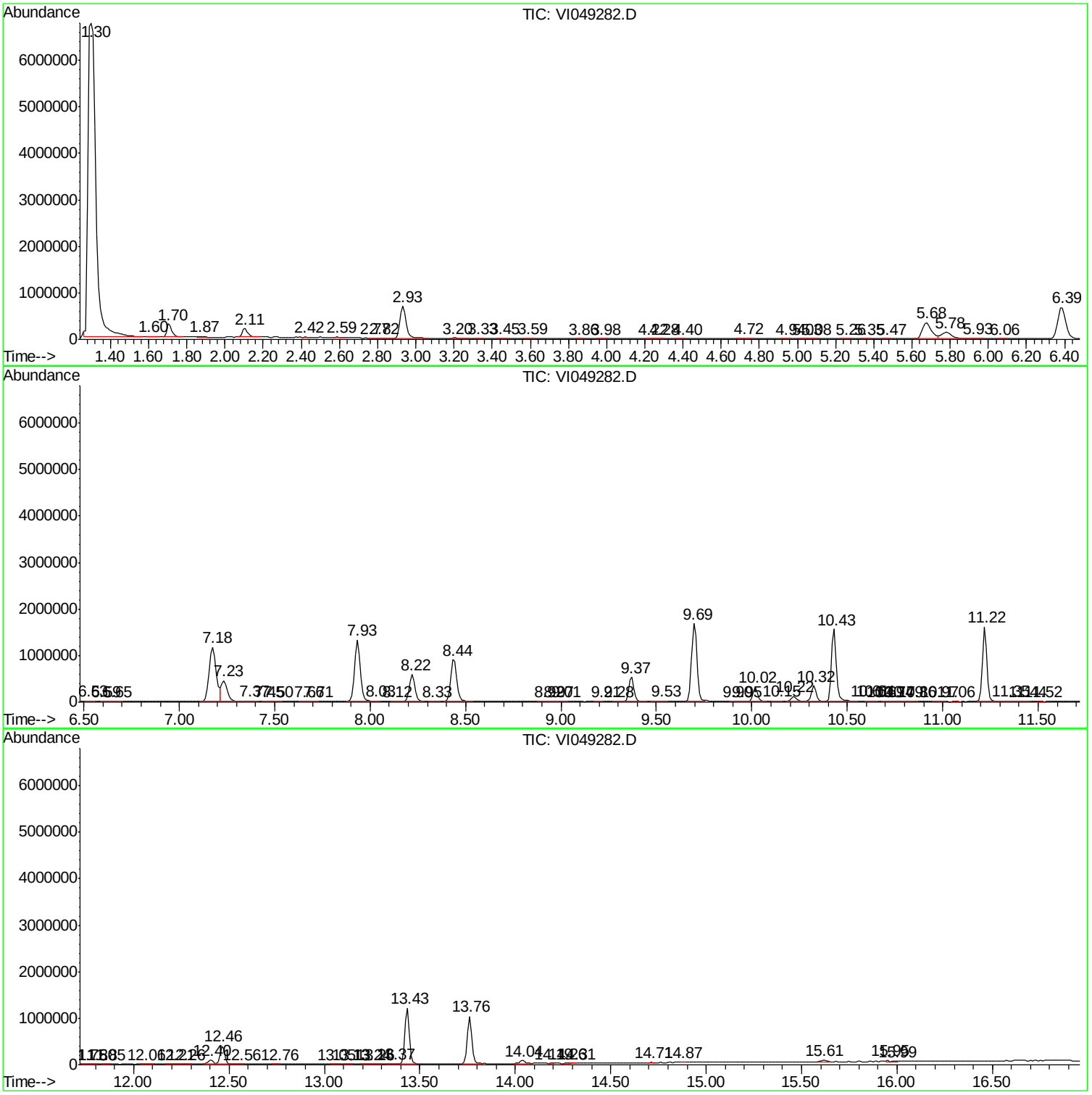
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049282.D
Acq On : 6 May 2016 14:24
Operator : FY/SY
Sample : H2874-13
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4126

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049282.D
Acq On : 6 May 2016 14:24
Operator : FY/SY
Sample : H2874-13
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4126

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049282.D
Acq On : 6 May 2016 14:24
Operator : FY/SY
Sample : H2874-13
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4126

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

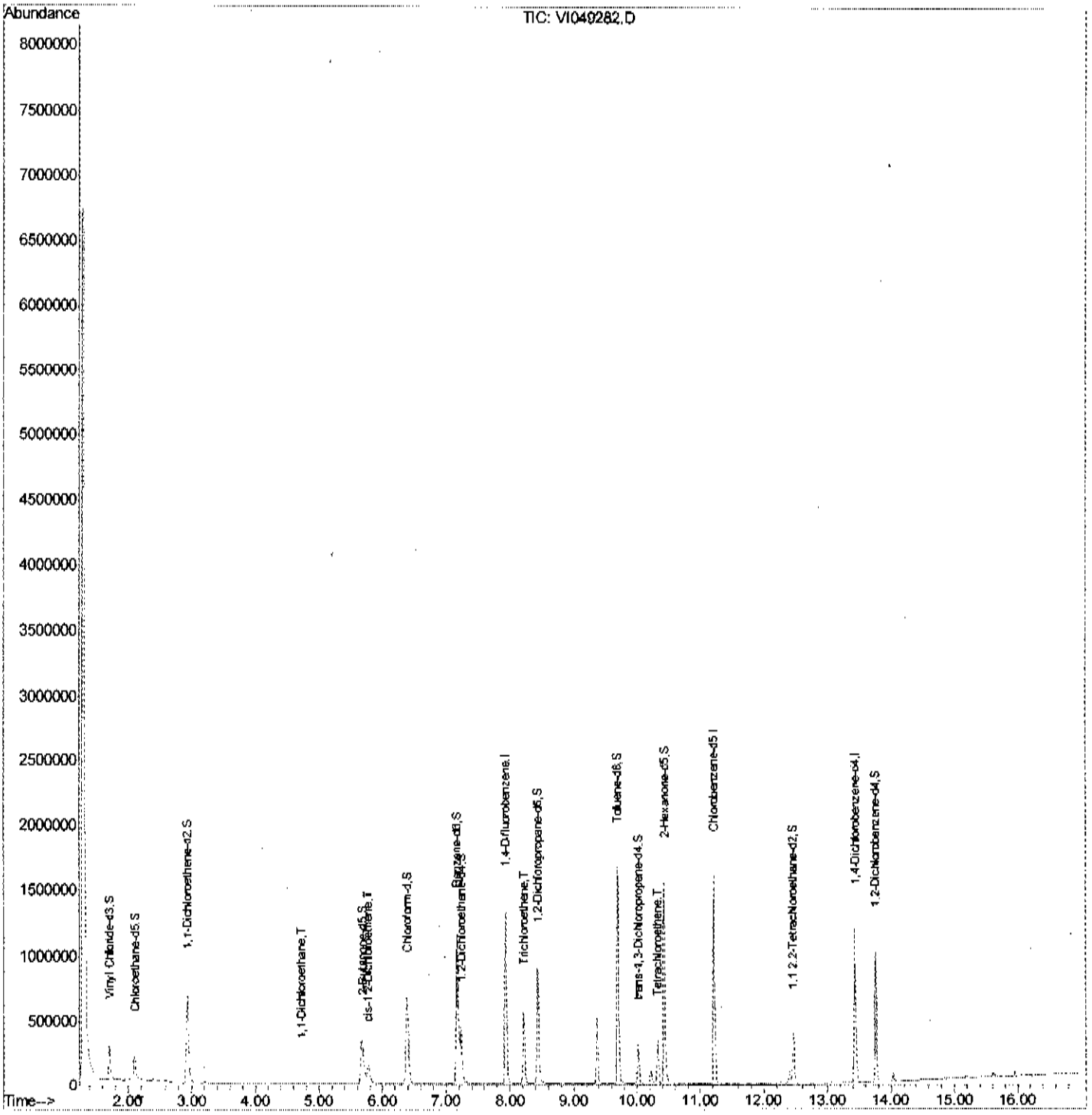
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049282.D
Acq On : 6 May 2016 14:24
Operator : FY/SY
Sample : H2874-13
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 07 04:40:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4126

Manual Integrations APPROVED
feifei
5/9/2016 12:05:13 PM



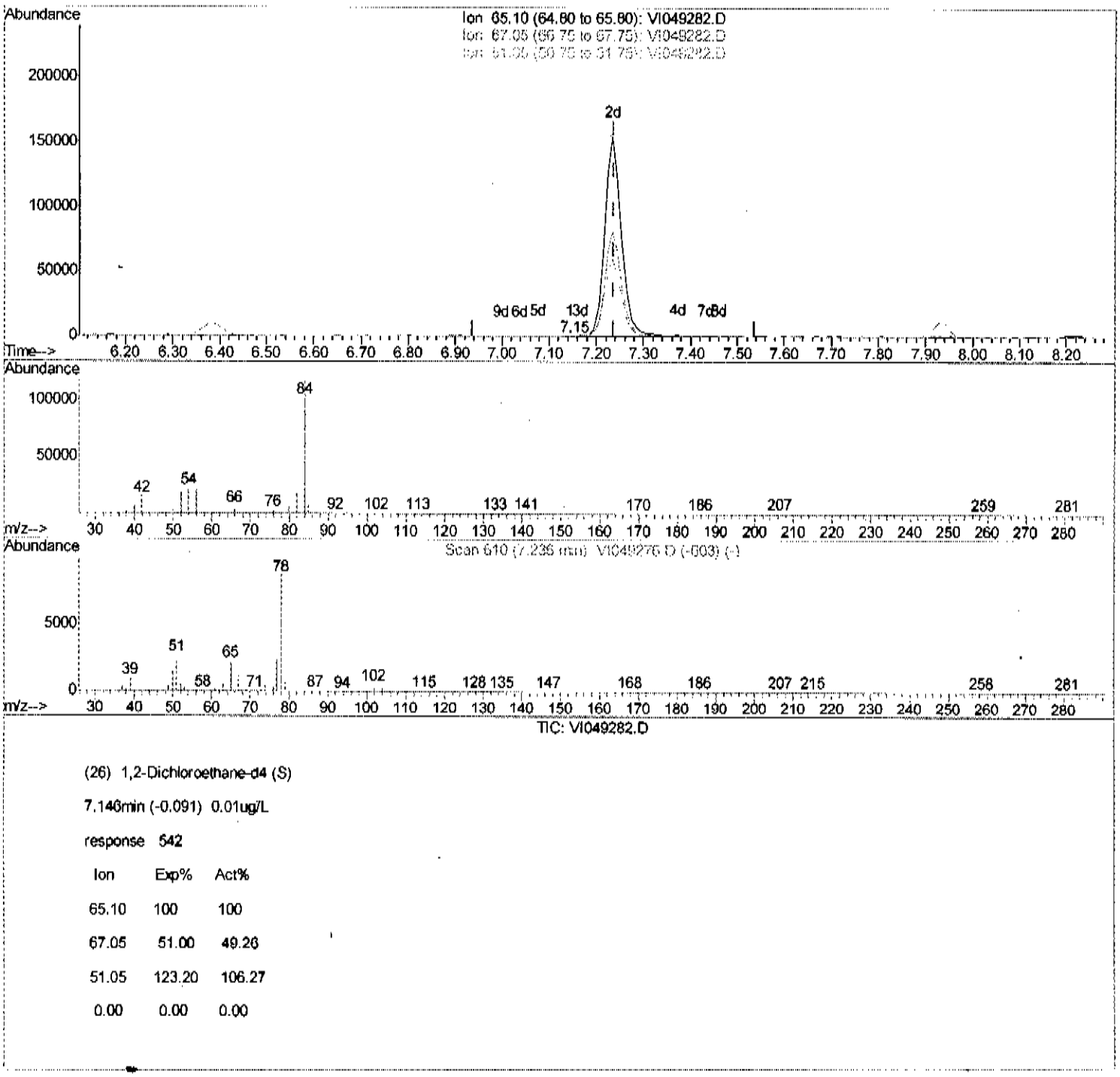
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049282.D
Acq On : 6 May 2016 14:24
Operator : FY/SY
Sample : H2874-13
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 07 04:13:40 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4126

Manual Integrations APPROVED
feifei
5/9/2016 12:05:13 PM



TIC: VI049282.D

(26) 1,2-Dichloroethane-d4 (S)

7.146min (-0.091) 0.01ug/L

response 542

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	49.26
51.05	123.20	106.27
0.00	0.00	0.00

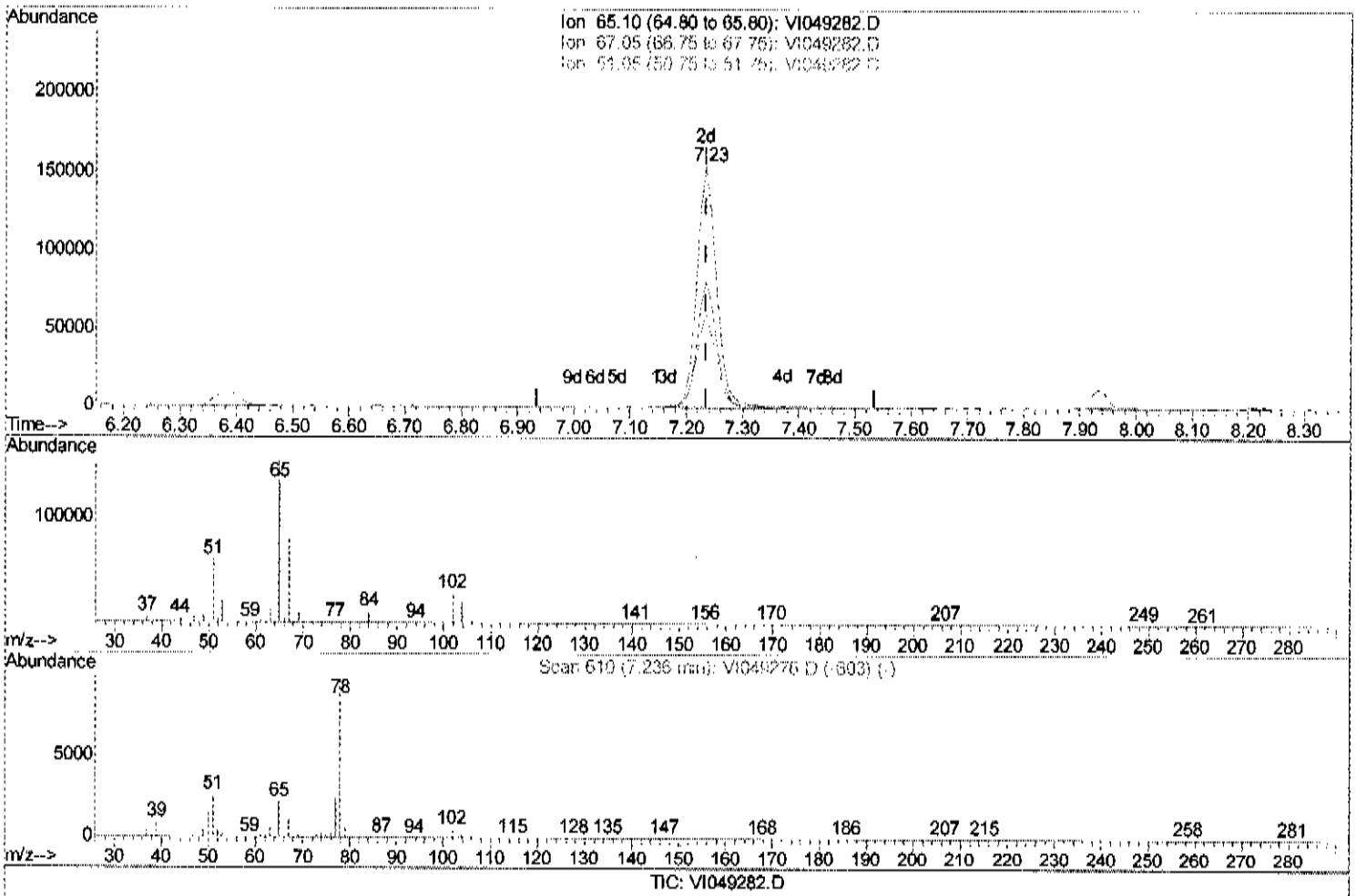
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049282.D
Acq On : 6 May 2016 14:24
Operator : FY/SY
Sample : H2874-13
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 07 04:13:40 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4126

Manual Integrations APPROVED
feifei
5/9/2016 12:05:13 PM



TIC: VI049282.D

(26) 1,2-Dichloroethane-d4 (S)

7.234min (-0.002) 5.22ug/L m

response 382916

FT
5/16/2016

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.07#
51.05	123.20	0.15#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049282.D
Acq On : 6 May 2016 14:24
Operator : FY/SY
Sample : H2874-13
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 07 04:40:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4126

Manual Integrations APPROVED
feifei
5/9/2016 12:05:13 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1145067	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	741363	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	269242	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	317543	4.50	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 90.00%			
7) Chloroethane-d5	2.11	69	206848	5.30	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 106.00%			
11) 1,1-Dichloroethene-d2	2.93	63	557795	3.36	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 67.20%			
20) 2-Butanone-d5	5.68	46	842896	55.23	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 110.46%			
24) Chloroform-d	6.39	84	852775	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
26) 1,2-Dichloroethane-d4	7.23	65	382916m	5.22	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.40%			
32) Benzene-d6	7.18	84	1476154	5.11	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.20%			
36) 1,2-Dichloropropane-d6	8.44	67	421126	5.19	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 103.80%			
41) Toluene-d8	9.69	98	1030034	4.83	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.60%			
43) trans-1,3-Dichloropropene-	10.02	79	153644	4.80	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 96.00%			
46) 2-Hexanone-d5	10.43	63	524692	51.99	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 103.98%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	173280	4.69	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 93.80%			
63) 1,2-Dichlorobenzene-d4	13.76	152	226288	4.79	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 95.80%			
Target Compounds						Qvalue
19) 1,1-Dichloroethane	4.72	63	21659	0.13	ug/L	92
22) cis-1,2-Dichloroethene	5.78	96	72310	0.69	ug/L	94
34) Trichloroethene	8.22	95	203692	2.31	ug/L	96
47) Tetrachloroethene	10.32	164	70319	1.22	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FT 5/16/2016

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4129

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-14
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049283.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.31	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.2	
71-55-6	1,1,1-Trichloroethane	0.39	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4129

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-14
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049283.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.17	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	22	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4129

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-14
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049283.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4129

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-14
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049283.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

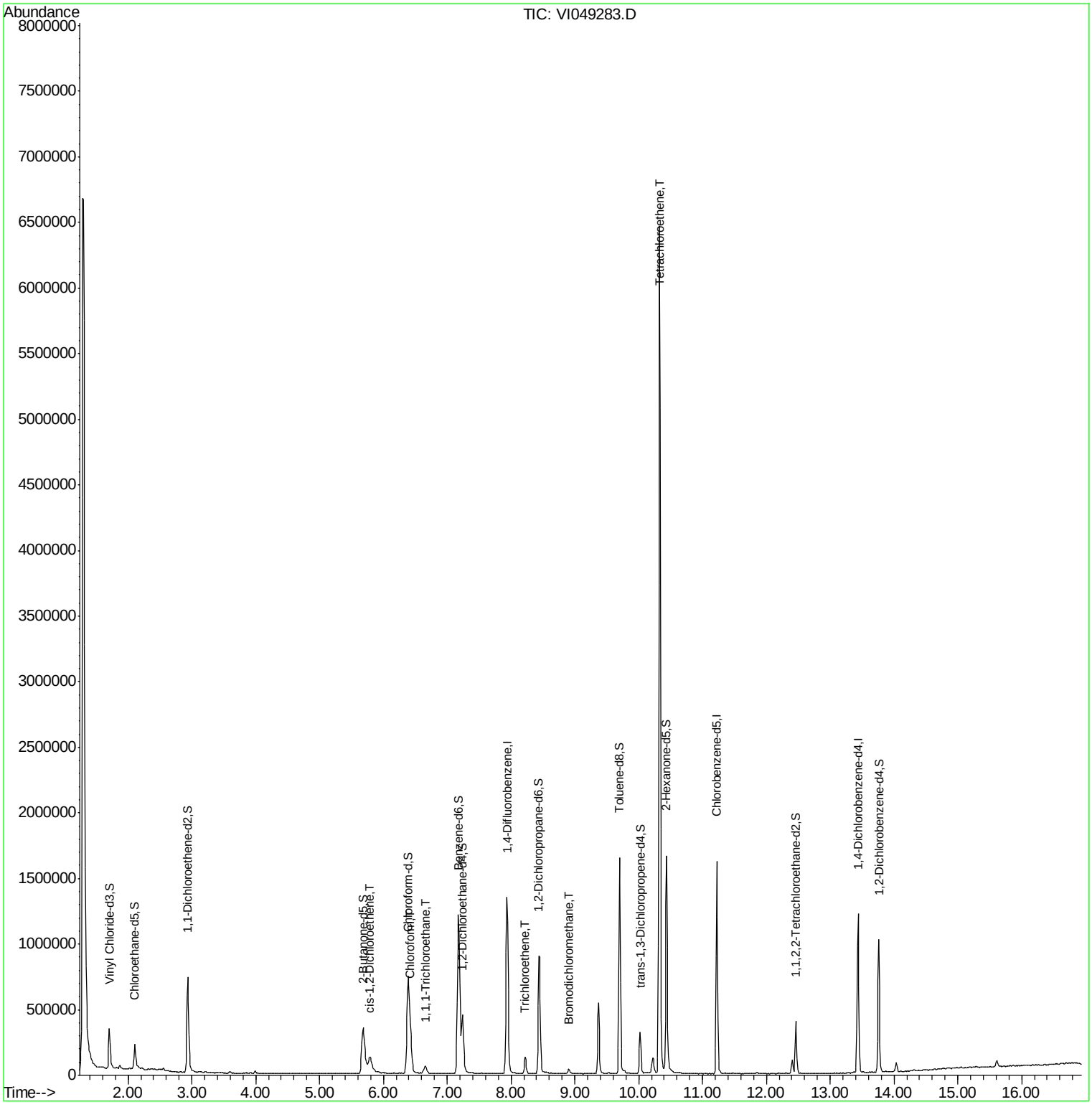
EPA-designated Registry Number.

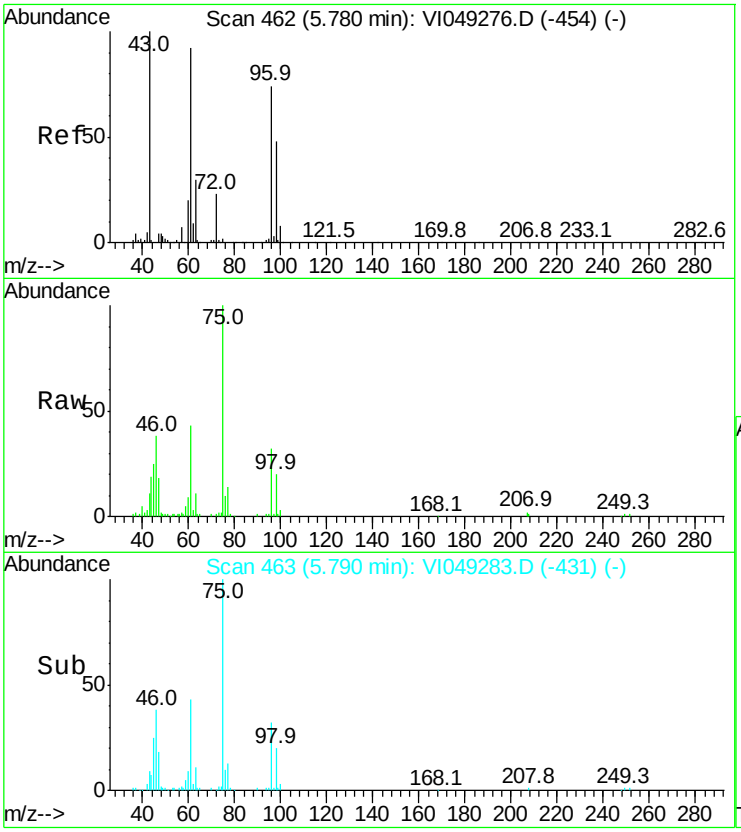
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049283.D
Acq On : 6 May 2016 14:55
Operator : FY/SY
Sample : H2874-14
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4129

Quant Time: May 07 04:44:01 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration



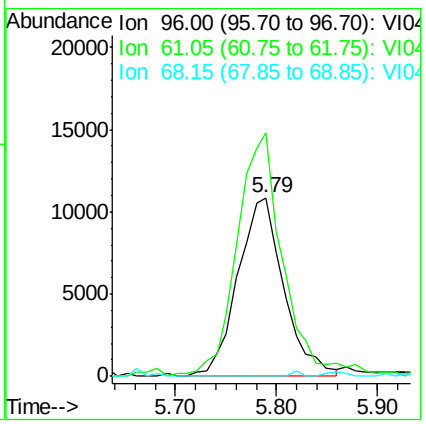


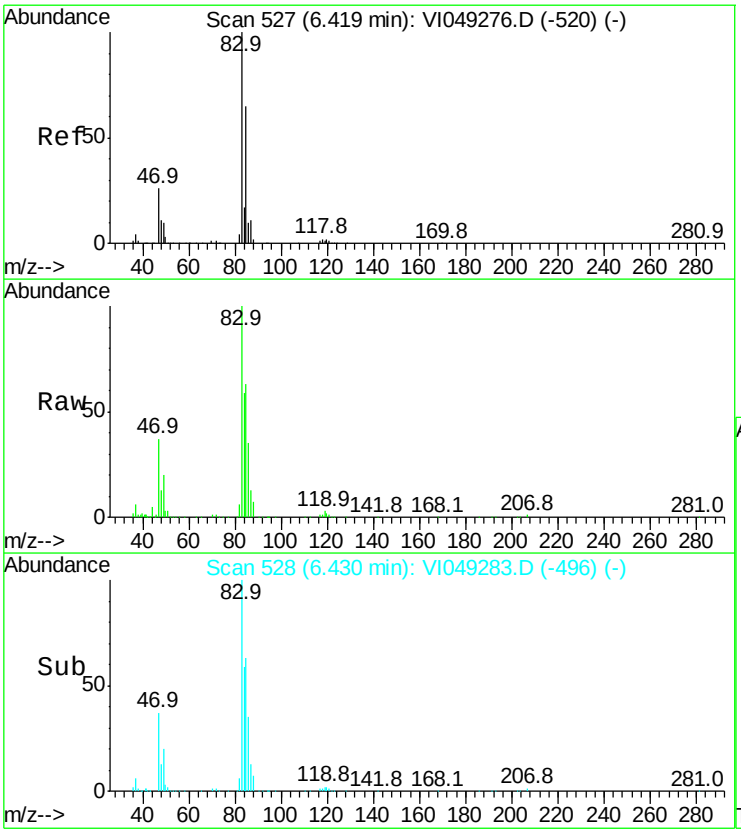
#22
cis-1,2-Dichloroethene
Concen: 0.31 ug/L
RT: 5.79 min Scan# 463
Delta R.T. 0.01 min
Lab File: VI049283.D
Acq: 6 May 2016 14:55

Instrument : MSVOA_I
ClientSampleId : H4129

Tgt Ion: 96 Resp: 34394

Ion	Ratio	Lower	Upper
96	100		
61	136.3	82.1	152.5
68	0.0	0.0	0.0

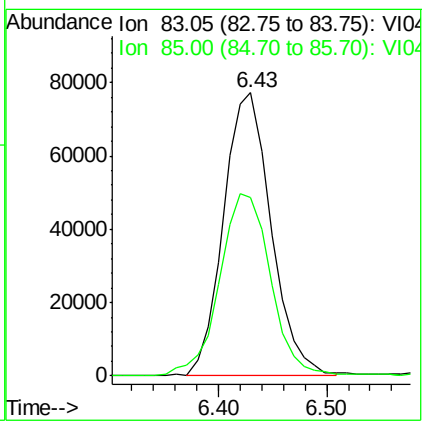


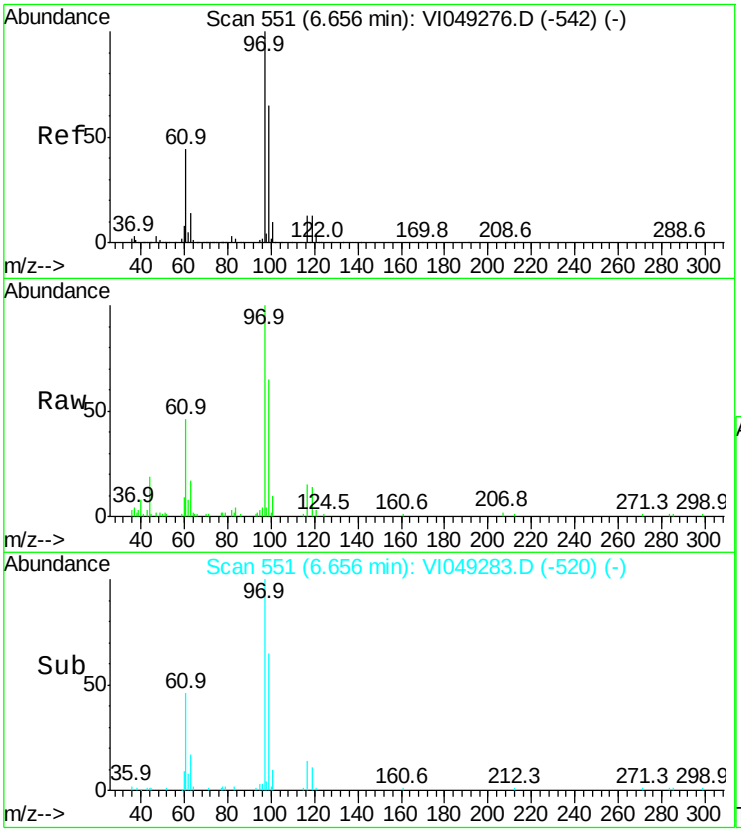


#25
Chloroform
Concen: 1.23 ug/L
RT: 6.43 min Scan# 528
Delta R.T. 0.01 min
Lab File: VI049283.D
Acq: 6 May 2016 14:55

Tgt Ion: 83 Resp: 235576

Ion	Ratio	Lower	Upper
83	100		
85	63.1	47.3	87.8



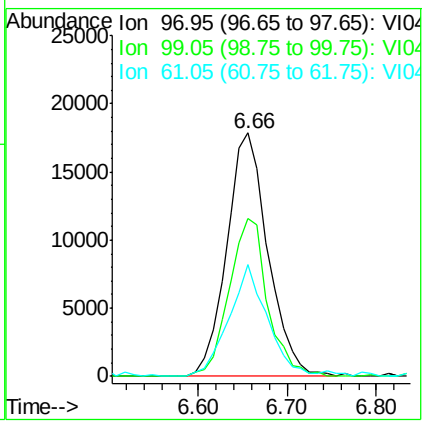


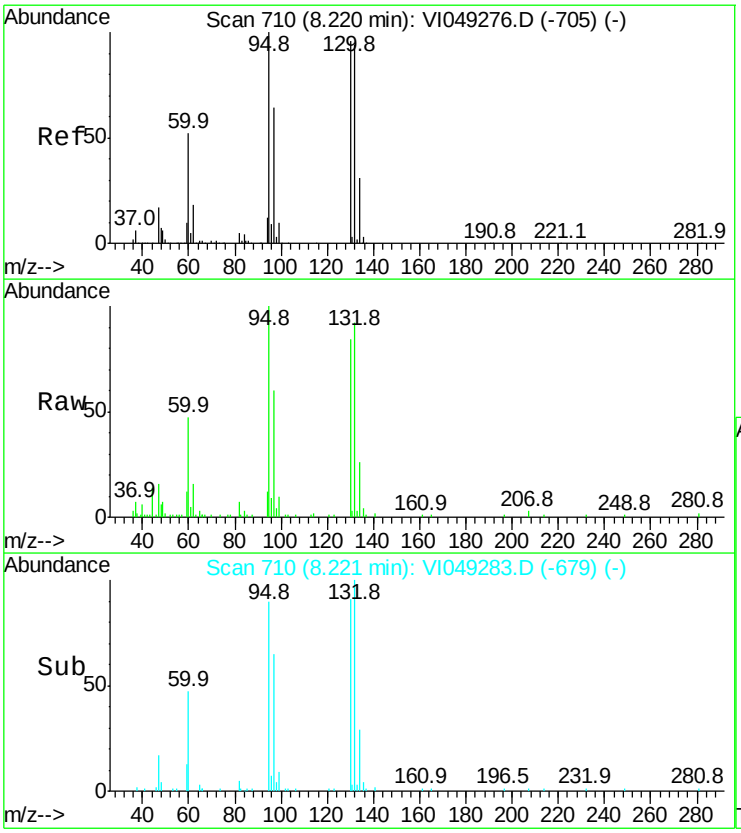
#29
1,1,1-Trichloroethane
Concen: 0.39 ug/L
RT: 6.66 min Scan# 551
Delta R.T. 0.00 min
Lab File: VI049283.D
Acq: 6 May 2016 14:55

Instrument : MSVOA_I
ClientSampleId : H4129

Tgt Ion: 97 Resp: 57469

Ion	Ratio	Lower	Upper
97	100		
99	60.6	51.1	76.7
61	42.6	33.3	49.9

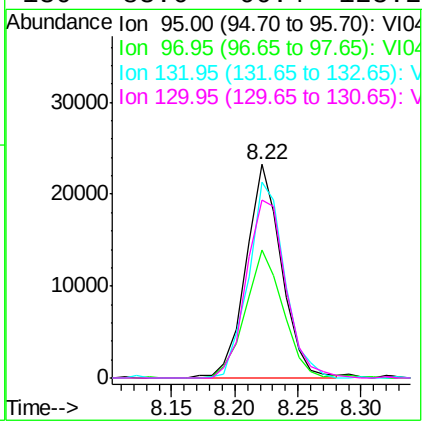


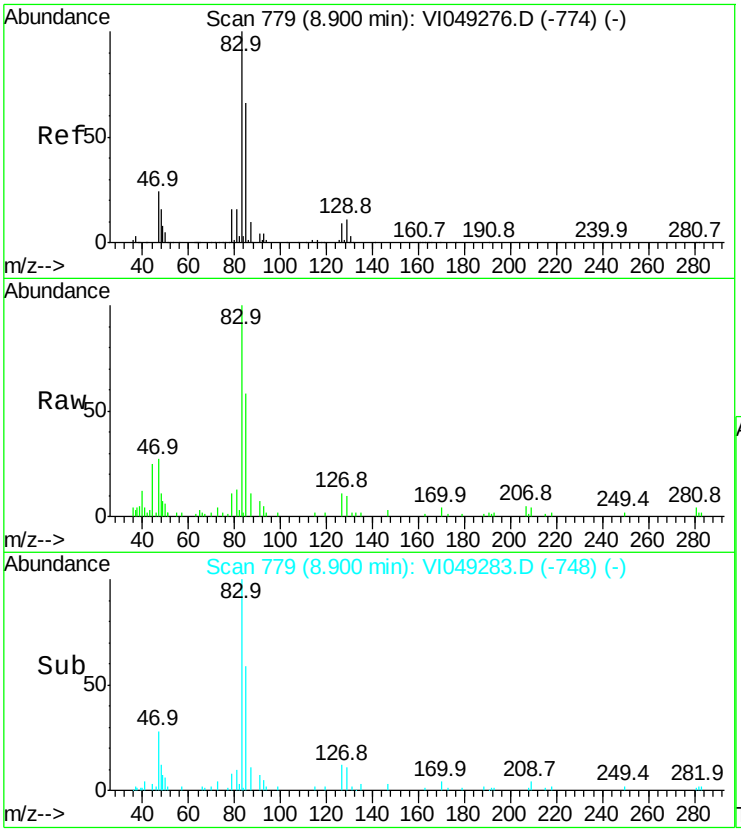


#34
Trichloroethene
Concen: 0.50 ug/L
RT: 8.22 min Scan# 710
Delta R.T. 0.00 min
Lab File: VI049283.D
Acq: 6 May 2016 14:55

Tgt Ion: 95 Resp: 45423

Ion	Ratio	Lower	Upper
95	100		
97	59.9	45.8	85.2
132	91.5	63.9	118.7
130	83.6	66.4	123.2



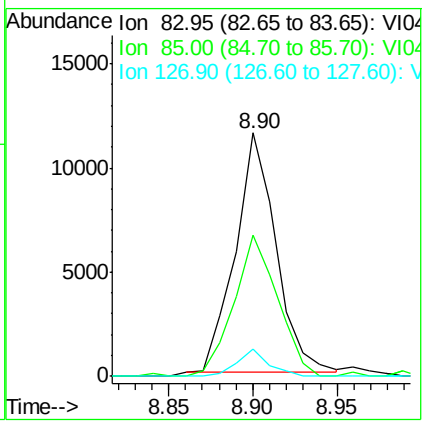


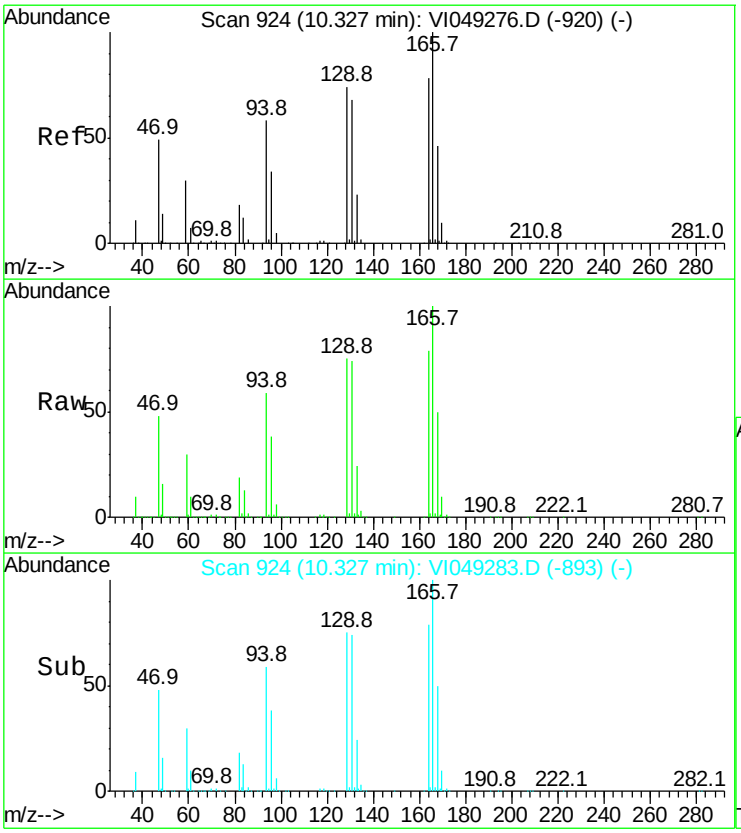
#38
Bromodichloromethane
Concen: 0.17 ug/L
RT: 8.90 min Scan# 779
Delta R.T. 0.00 min
Lab File: VI049283.D
Acq: 6 May 2016 14:55

Instrument : MSVOA_I
ClientSampleId : H4129

Tgt Ion: 83 Resp: 19279

Ion	Ratio	Lower	Upper
83	100		
85	58.0	44.7	83.1
127	11.3	6.6	9.8#

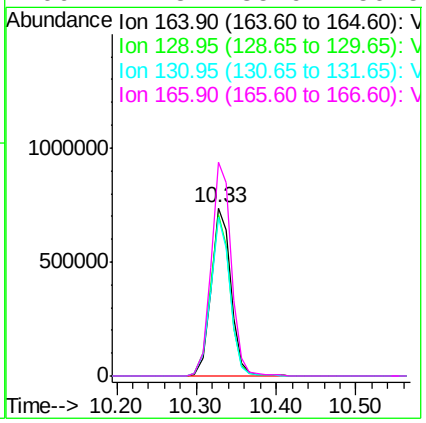




#47
Tetrachloroethene
Concen: 21.60 ug/L
RT: 10.33 min Scan# 924
Delta R.T. 0.00 min
Lab File: VI049283.D
Acq: 6 May 2016 14:55

Tgt Ion:164 Resp: 1292908

Ion	Ratio	Lower	Upper
164	100		
129	95.9	62.1	115.3
131	94.6	60.6	112.6
166	127.3	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049283.D
Acq On : 6 May 2016 14:55
Operator : FY/SY
Sample : H2874-14
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4129

Quant Time: May 07 04:44:01 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1190499	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.22	117	767136	5.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	281270	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	1.71	65	327993	4.48	ug/L		0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 89.60%				
7) Chloroethane-d5	2.10	69	215494	5.31	ug/L		0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 106.20%				
11) 1,1-Dichloroethene-d2	2.94	63	571509	3.31	ug/L		0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 66.20%				
20) 2-Butanone-d5	5.68	46	860903	54.25	ug/L		0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 108.50%				
24) Chloroform-d	6.39	84	883962	4.74	ug/L		0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.80%				
26) 1,2-Dichloroethane-d4	7.24	65	394945	5.18	ug/L		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.60%				
32) Benzene-d6	7.18	84	1521387	5.09	ug/L		0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.80%				
36) 1,2-Dichloropropane-d6	8.45	67	433203	5.16	ug/L		0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 103.20%				
41) Toluene-d8	9.70	98	1046822	4.75	ug/L		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.00%				
43) trans-1,3-Dichloropropene-	10.02	79	147008	4.44	ug/L		0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 88.80%				
46) 2-Hexanone-d5	10.44	63	553702	53.02	ug/L		0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 106.04%				
57) 1,1,2,2-Tetrachloroethane-	12.46	84	186235	4.87	ug/L		0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 97.40%				
63) 1,2-Dichlorobenzene-d4	13.76	152	226642	4.60	ug/L		0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 92.00%				
Target Compounds							Qvalue
22) cis-1,2-Dichloroethene	5.79	96	34394	0.31	ug/L		83
25) Chloroform	6.43	83	235576	1.23	ug/L		95
29) 1,1,1-Trichloroethane	6.66	97	57469	0.39	ug/L		97
34) Trichloroethene	8.22	95	45423	0.50	ug/L		94
38) Bromodichloromethane	8.90	83	19279	0.17	ug/L	#	92
47) Tetrachloroethene	10.33	164	1292908	21.60	ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049283.D
Acq On : 6 May 2016 14:55
Operator : FY/SY
Sample : H2874-14
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4129

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.292	3	6	30	rVB	6621466	18190594	100.00%	29.338%
2	1.706	45	48	57	rVB	300328	506168	2.78%	0.816%
3	1.824	58	60	63	rVV4	11030	17295	0.10%	0.028%
4	1.873	63	65	69	rVB2	24880	46468	0.26%	0.075%
5	2.099	85	88	98	rBV	188889	405809	2.23%	0.655%
6	2.306	107	109	112	rBV4	6601	14746	0.08%	0.024%
7	2.532	131	132	133	rVB	7800	4606	0.03%	0.007%
8	2.749	153	154	156	rVB2	5822	5200	0.03%	0.008%
9	2.828	159	162	165	rBV4	2706	6164	0.03%	0.010%
10	2.936	167	173	180	rBV	726049	1645292	9.04%	2.654%
11	3.103	188	190	191	rBV2	4544	7103	0.04%	0.011%
12	3.211	198	201	204	rBV4	7078	12086	0.07%	0.019%
13	3.487	227	229	231	rVB2	5452	5443	0.03%	0.009%
14	3.605	236	241	243	rBV5	9279	22261	0.12%	0.036%
15	3.644	243	245	249	rVB4	5104	9115	0.05%	0.015%
16	3.723	249	253	254	rBV2	3307	6195	0.03%	0.010%
17	3.812	260	262	263	rVB2	4601	4565	0.03%	0.007%
18	3.841	263	265	267	rBV4	5766	7192	0.04%	0.012%
19	3.930	272	274	276	rVB3	4350	4568	0.03%	0.007%
20	3.989	278	280	283	rBV	18226	15598	0.09%	0.025%
21	4.028	283	284	287	rVB	11212	10383	0.06%	0.017%
22	4.068	287	288	292	rVB3	3758	6523	0.04%	0.011%
23	4.166	297	298	301	rBV3	3318	5436	0.03%	0.009%
24	4.215	301	303	307	rVB5	4101	9412	0.05%	0.015%
25	4.274	307	309	311	rBV3	4040	5778	0.03%	0.009%
26	4.422	316	324	325	rBV6	3246	7807	0.04%	0.013%
27	4.501	328	332	334	rBV3	3993	9323	0.05%	0.015%
28	4.629	344	345	349	rVB4	3788	5201	0.03%	0.008%
29	4.707	349	353	356	rBV5	4347	11290	0.06%	0.018%
30	4.914	373	374	379	rVB5	3613	5655	0.03%	0.009%
31	5.022	383	385	387	rVB2	4103	4959	0.03%	0.008%
32	5.426	424	426	429	rBV4	3204	4591	0.03%	0.007%
33	5.485	429	432	436	rVB6	3351	7053	0.04%	0.011%
34	5.682	445	452	459	rBV	353382	1261191	6.93%	2.034%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049283.D
Acq On : 6 May 2016 14:55
Operator : FY/SY
Sample : H2874-14
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4129

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	5.790	459	463	481	rVV2	121930	558911	3.07%	0.901%
36	6.135	496	498	500	rVB3	4661	6457	0.04%	0.010%
37	6.164	500	501	504	rBV2	5431	8740	0.05%	0.014%
38	6.253	508	510	511	rVV2	5239	5531	0.03%	0.009%
39	6.390	516	524	538	rVV2	741888	2656523	14.60%	4.285%
40	6.656	545	551	561	rBV	54754	174965	0.96%	0.282%
41	6.902	572	576	577	rBV4	4166	7472	0.04%	0.012%
42	7.178	598	604	608	rBV	1211377	3202612	17.61%	5.165%
43	7.237	608	610	620	rVB	441706	1007053	5.54%	1.624%
44	7.719	656	659	661	rBV4	2478	5667	0.03%	0.009%
45	7.768	661	664	667	rBV5	4495	6784	0.04%	0.011%
46	7.936	675	681	689	rBV	1342712	2919996	16.05%	4.709%
47	8.113	698	699	703	rVB4	4589	7653	0.04%	0.012%
48	8.172	703	705	706	rBV2	3093	4924	0.03%	0.008%
49	8.221	706	710	717	rVV	125979	267416	1.47%	0.431%
50	8.438	727	732	739	rVV	894081	2043240	11.23%	3.295%
51	8.546	741	743	749	rVB7	11026	26342	0.14%	0.042%
52	8.752	762	764	765	rBV2	4574	5691	0.03%	0.009%
53	8.900	776	779	785	rBV2	35943	76402	0.42%	0.123%
54	9.058	792	795	798	rVB3	3565	7379	0.04%	0.012%
55	9.097	798	799	802	rVB3	4427	6968	0.04%	0.011%
56	9.146	802	804	806	rBV3	4385	6822	0.04%	0.011%
57	9.373	822	827	836	rBV	540502	997661	5.48%	1.609%
58	9.520	840	842	846	rVB4	5791	9288	0.05%	0.015%
59	9.589	846	849	852	rVB5	4300	9025	0.05%	0.015%
60	9.697	856	860	866	rBV	1649322	3063222	16.84%	4.940%
61	10.022	889	893	898	rVV	312495	517158	2.84%	0.834%
62	10.170	906	908	909	rVV2	5527	8374	0.05%	0.014%
63	10.219	909	913	920	rVV	115057	263654	1.45%	0.425%
64	10.327	920	924	931	rVV	6452818	11122971	61.15%	17.940%
65	10.435	931	935	948	rVV	1655196	2952969	16.23%	4.763%
66	10.918	983	984	986	rVB2	4681	5415	0.03%	0.009%
67	10.996	989	992	993	rVB3	6029	6697	0.04%	0.011%
68	11.016	993	994	996	rBV2	3794	5051	0.03%	0.008%
69	11.065	998	999	1001	rVB2	5009	4582	0.03%	0.007%
70	11.223	1011	1015	1026	rBV	1622867	2685304	14.76%	4.331%
71	11.351	1026	1028	1032	rVB4	6636	11513	0.06%	0.019%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049283.D
Acq On : 6 May 2016 14:55
Operator : FY/SY
Sample : H2874-14
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4129

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.479	1037	1041	1045	rVB5	9150	19515	0.11%	0.031%
73	11.548	1045	1048	1050	rBV4	2377	4733	0.03%	0.008%
74	11.656	1057	1059	1062	rBV4	4752	8400	0.05%	0.014%
75	11.804	1072	1074	1076	rVB3	3287	5117	0.03%	0.008%
76	11.863	1076	1080	1084	rVB4	9497	23262	0.13%	0.038%
77	12.079	1099	1102	1103	rBV3	3948	4880	0.03%	0.008%
78	12.138	1103	1108	1109	rVB2	3980	8684	0.05%	0.014%
79	12.197	1111	1114	1117	rBV4	5708	8620	0.05%	0.014%
80	12.256	1117	1120	1122	rBV3	4223	7621	0.04%	0.012%
81	12.305	1122	1125	1126	rVB3	6074	8545	0.05%	0.014%
82	12.404	1130	1135	1138	rVV	106787	200295	1.10%	0.323%
83	12.463	1138	1141	1147	rVB	398230	684025	3.76%	1.103%
84	12.532	1147	1148	1152	rBV4	5098	8750	0.05%	0.014%
85	12.758	1168	1171	1174	rVB5	3676	8556	0.05%	0.014%
86	12.926	1186	1188	1189	rBV2	3299	4922	0.03%	0.008%
87	12.985	1191	1194	1195	rBV3	2679	4713	0.03%	0.008%
88	13.290	1223	1225	1228	rVB4	3272	5282	0.03%	0.009%
89	13.437	1236	1240	1246	rVB	1207881	2008981	11.04%	3.240%
90	13.693	1265	1266	1268	rBV2	4106	4634	0.03%	0.007%
91	13.762	1269	1273	1281	rVV	1010461	1717735	9.44%	2.770%
92	13.870	1283	1284	1287	rVB2	5623	6540	0.04%	0.011%
93	13.920	1287	1289	1292	rBV4	3567	6752	0.04%	0.011%
94	14.038	1295	1301	1305	rVB	71778	141447	0.78%	0.228%
95	14.107	1306	1308	1311	rVB4	4256	6363	0.03%	0.010%
96	14.175	1313	1315	1317	rBV3	4334	5460	0.03%	0.009%
97	14.244	1321	1322	1323	rBV	5827	5776	0.03%	0.009%
98	14.313	1327	1329	1332	rVV4	9058	15291	0.08%	0.025%
99	14.766	1373	1375	1378	rBV4	7348	11703	0.06%	0.019%
100	15.612	1458	1461	1465	rVB	47275	88439	0.49%	0.143%

Sum of corrected areas: 62002543

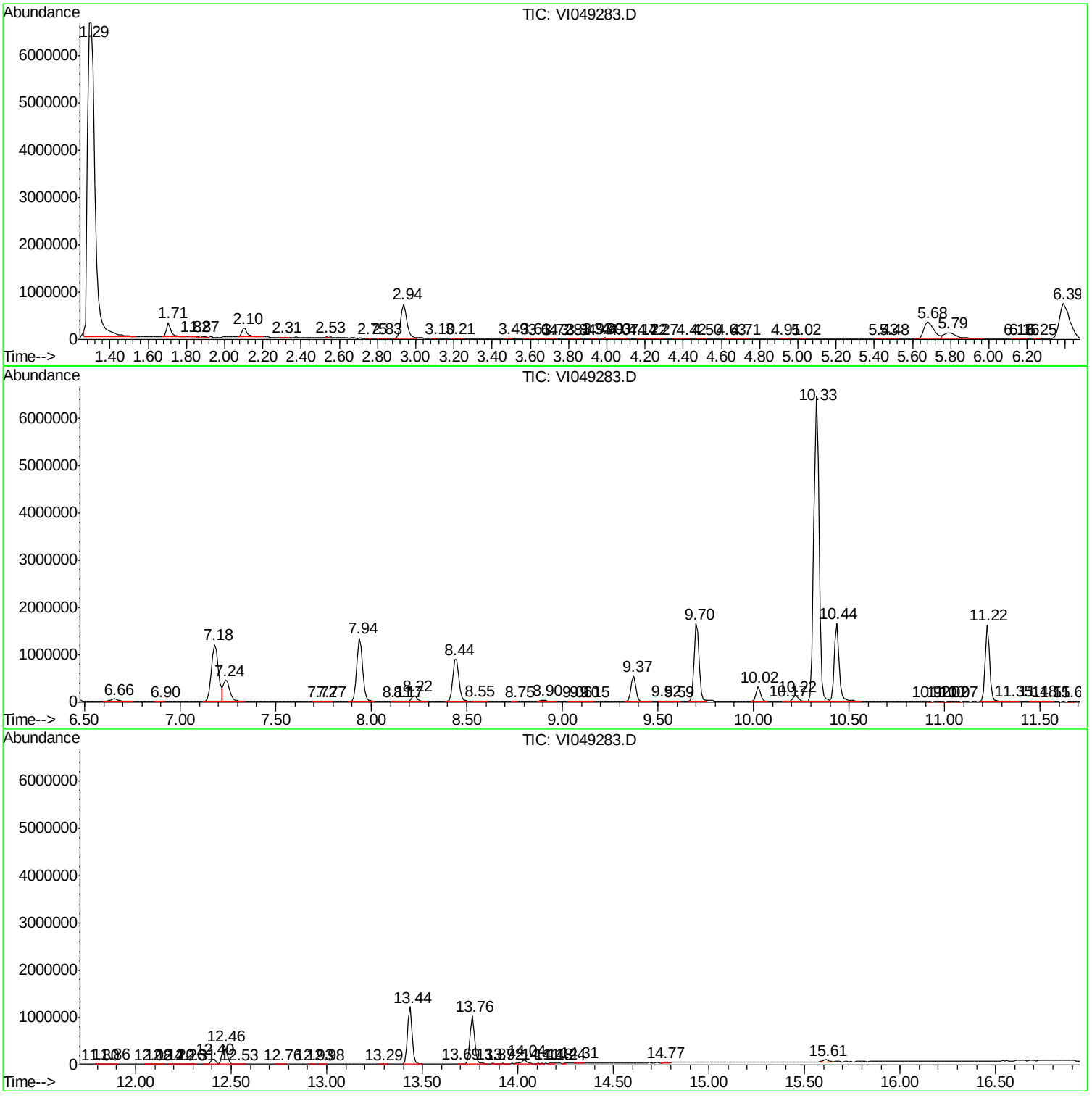
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049283.D
Acq On : 6 May 2016 14:55
Operator : FY/SY
Sample : H2874-14
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4129

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049283.D
Acq On : 6 May 2016 14:55
Operator : FY/SY
Sample : H2874-14
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4129

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049283.D
Acq On : 6 May 2016 14:55
Operator : FY/SY
Sample : H2874-14
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4129

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4129DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-14DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049284.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4129DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-14DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049284.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	31	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4129DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-14DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049284.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4129DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-14DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049284.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 5.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

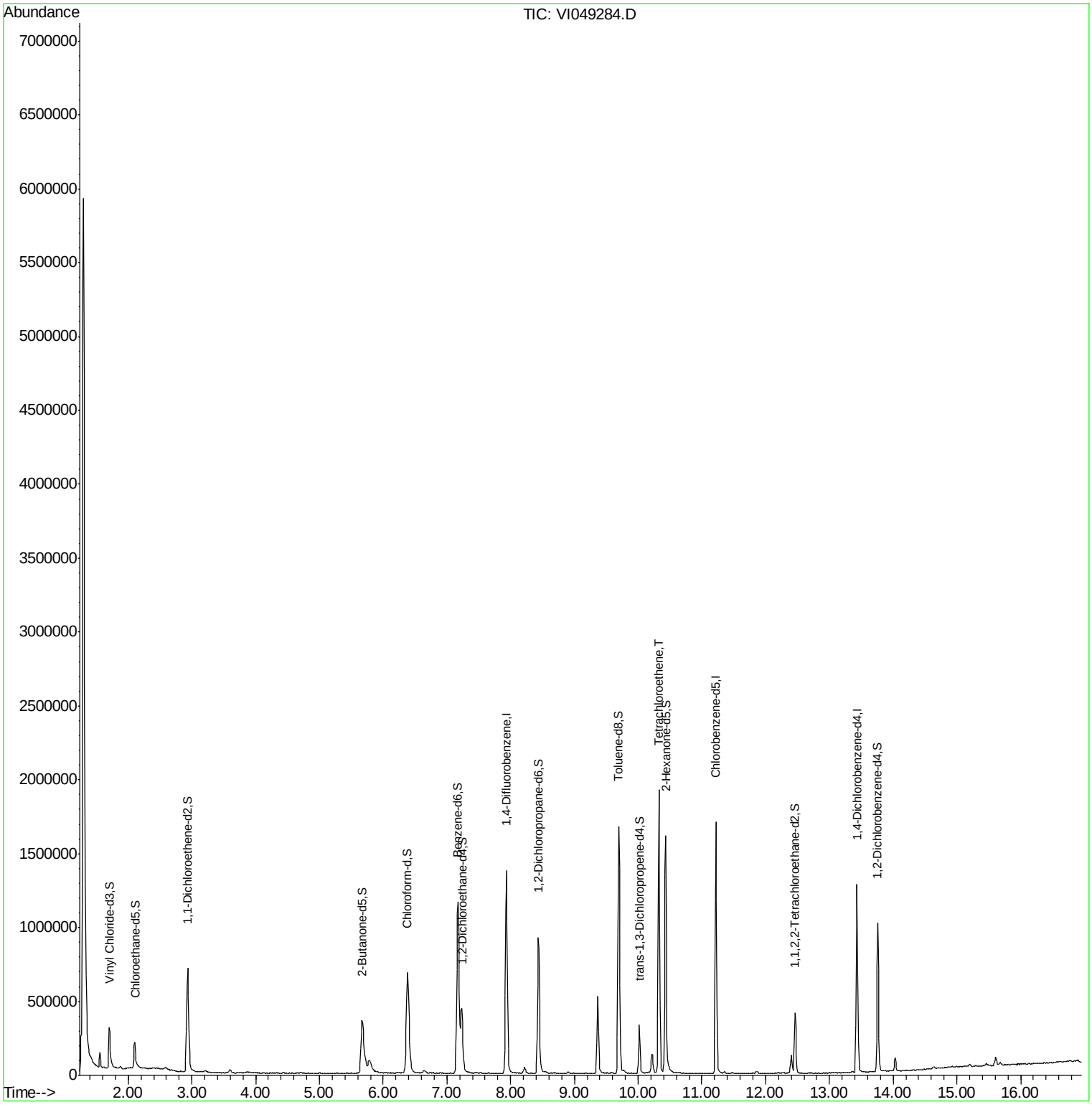
Quantitation Report (LSC Reviewed)

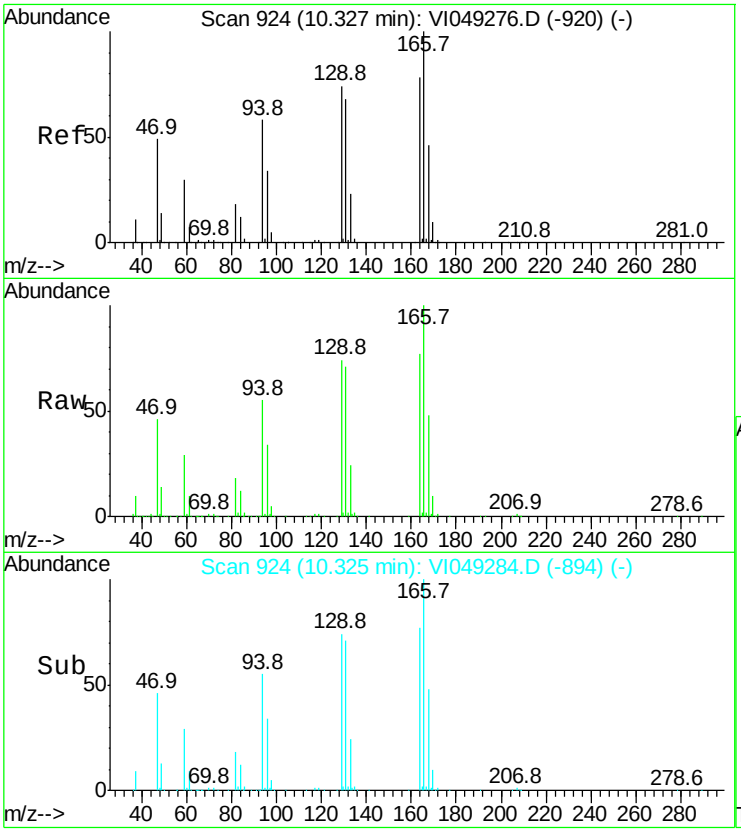
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049284.D
Acq On : 6 May 2016 16:05
Operator : FY/SY
Sample : H2874-14DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 07 04:48:53 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4129DL

Manual Integrations APPROVED
feifei
5/9/2016 12:05:14 PM

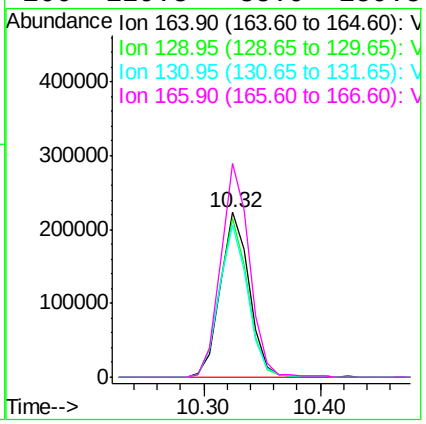




#47
Tetrachloroethene
Concen: 6.22 ug/L
RT: 10.32 min Scan# 924
Delta R.T. -0.00 min
Lab File: VI049284.D
Acq: 6 May 2016 16:05

Tgt Ion:164 Resp: 385542

Ion	Ratio	Lower	Upper
164	100		
129	96.3	62.1	115.3
131	92.5	60.6	112.6
166	129.8	85.9	159.5



Instrument :
MSVOA_I
ClientSampleId :
H4129DL

Manual Integrations APPROVED
feifei
5/9/2016 12:05:14 PM

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049284.D
Acq On : 6 May 2016 16:05
Operator : FY/SY
Sample : H2874-14DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4129DL

Manual Integrations APPROVED
feifei
5/9/2016 12:05:14 PM

Quant Time: May 07 04:48:53 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1207787	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	793875	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	285466	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	312844	4.21	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 84.20%			
7) Chloroethane-d5	2.11	69	192993	4.69	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.80%			
11) 1,1-Dichloroethene-d2	2.93	63	554905	3.17	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.40%			
20) 2-Butanone-d5	5.67	46	870397	54.07	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 108.14%			
24) Chloroform-d	6.38	84	869834	4.60	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 92.00%			
26) 1,2-Dichloroethane-d4	7.23	65	392345m	5.07	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.40%			
32) Benzene-d6	7.18	84	1490214	4.82	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.40%			
36) 1,2-Dichloropropane-d6	8.44	67	421660	4.85	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.00%			
41) Toluene-d8	9.69	98	1031382	4.52	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.40%			
43) trans-1,3-Dichloropropene-	10.02	79	155648	4.54	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 90.80%			
46) 2-Hexanone-d5	10.43	63	547140	50.63	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 101.26%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	179523	4.54	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 90.80%			
63) 1,2-Dichlorobenzene-d4	13.76	152	229948	4.59	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 91.80%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.32	164	385542	6.22	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049284.D
Acq On : 6 May 2016 16:05
Operator : FY/SY
Sample : H2874-14DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4129DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.300	3	7	27	rVB	5871640	13548886	100.00%	27.659%
2	1.555	31	33	37	rVB	102764	131431	0.97%	0.268%
3	1.615	37	39	43	rVB4	8816	13426	0.10%	0.027%
4	1.703	45	48	58	rBV	269847	501728	3.70%	1.024%
5	1.880	64	66	69	rVB	18499	27109	0.20%	0.055%
6	2.107	85	89	97	rBV	173643	373021	2.75%	0.761%
7	2.392	115	118	122	rBV6	8704	23564	0.17%	0.048%
8	2.589	137	138	142	rVB3	14216	18747	0.14%	0.038%
9	2.933	168	173	182	rBV	700678	1574524	11.62%	3.214%
10	3.101	188	190	191	rBV2	4512	6257	0.05%	0.013%
11	3.209	198	201	204	rBV3	9500	19952	0.15%	0.041%
12	3.435	223	224	227	rVB2	5538	8243	0.06%	0.017%
13	3.603	235	241	244	rVV2	19398	54630	0.40%	0.112%
14	3.701	248	251	252	rBV3	3404	5095	0.04%	0.010%
15	3.858	265	267	269	rVV3	7662	12322	0.09%	0.025%
16	3.898	269	271	277	rVV6	5278	11774	0.09%	0.024%
17	3.986	279	280	285	rVB5	5861	13801	0.10%	0.028%
18	4.105	288	292	293	rBV4	3164	6056	0.04%	0.012%
19	4.331	313	315	320	rVB3	3931	9418	0.07%	0.019%
20	4.420	320	324	325	rBV3	5668	9279	0.07%	0.019%
21	5.010	381	384	386	rVB4	3169	4889	0.04%	0.010%
22	5.158	397	399	401	rVB3	2958	4797	0.04%	0.010%
23	5.227	404	406	407	rBV2	4015	5340	0.04%	0.011%
24	5.276	410	411	414	rBV2	4976	5516	0.04%	0.011%
25	5.502	430	434	438	rVB5	3491	10187	0.08%	0.021%
26	5.591	438	443	444	rBV5	3453	7165	0.05%	0.015%
27	5.669	444	451	459	rBV	357959	1276147	9.42%	2.605%
28	5.788	459	463	475	rVB2	80119	320760	2.37%	0.655%
29	6.063	488	491	494	rVB4	4049	7267	0.05%	0.015%
30	6.102	494	495	499	rVB4	4598	7224	0.05%	0.015%
31	6.211	502	506	507	rBV4	3717	6680	0.05%	0.014%
32	6.230	507	508	513	rVB5	5271	10569	0.08%	0.022%
33	6.309	513	516	517	rBV3	2540	4928	0.04%	0.010%
34	6.378	517	523	534	rVV	680435	2198256	16.22%	4.488%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049284.D
Acq On : 6 May 2016 16:05
Operator : FY/SY
Sample : H2874-14DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4129DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.516	536	537	539	rVV2	4249	5537	0.04%	0.011%
36	6.555	539	541	543	rVV3	3423	5595	0.04%	0.011%
37	6.604	543	546	547	rVV3	3294	6364	0.05%	0.013%
38	6.644	547	550	557	rVB4	17610	53849	0.40%	0.110%
39	6.723	557	558	562	rBV4	3386	5951	0.04%	0.012%
40	6.929	577	579	582	rVB4	3652	5298	0.04%	0.011%
41	7.175	596	604	608	rBV	1159013	3238060	23.90%	6.610%
42	7.234	608	610	620	rVB	433162	924923	6.83%	1.888%
43	7.520	638	639	643	rVB4	4792	7466	0.06%	0.015%
44	7.608	646	648	650	rBV3	3262	6624	0.05%	0.014%
45	7.648	650	652	655	rVB4	4033	5541	0.04%	0.011%
46	7.697	655	657	659	rVB2	3948	4834	0.04%	0.010%
47	7.746	659	662	664	rBV3	3843	8147	0.06%	0.017%
48	7.933	675	681	693	rBV	1376340	2989855	22.07%	6.104%
49	8.219	703	710	718	rVB2	40897	98566	0.73%	0.201%
50	8.317	718	720	722	rVB3	5947	5345	0.04%	0.011%
51	8.435	727	732	749	rBV	922256	2083478	15.38%	4.253%
52	8.839	769	773	775	rBV3	2565	6072	0.04%	0.012%
53	8.898	777	779	783	rVB3	7977	15909	0.12%	0.032%
54	8.986	783	788	792	rVB5	5084	13374	0.10%	0.027%
55	9.045	792	794	798	rBV4	2921	6620	0.05%	0.014%
56	9.183	805	808	812	rVB5	4382	6972	0.05%	0.014%
57	9.370	822	827	835	rBV	520551	1014452	7.49%	2.071%
58	9.577	844	848	851	rBV4	8276	16942	0.13%	0.035%
59	9.695	856	860	866	rBV	1671610	3014553	22.25%	6.154%
60	9.764	866	867	875	rVB4	21586	48977	0.36%	0.100%
61	10.020	887	893	901	rBV	330292	559912	4.13%	1.143%
62	10.108	901	902	904	rBV2	4188	6057	0.04%	0.012%
63	10.216	909	913	919	rVV	126117	268167	1.98%	0.547%
64	10.325	919	924	931	rVV	1914549	3279540	24.21%	6.695%
65	10.433	931	935	947	rVB	1602666	2865704	21.15%	5.850%
66	11.112	1002	1004	1007	rVB4	3217	4601	0.03%	0.009%
67	11.220	1011	1015	1025	rBV	1702892	2771338	20.45%	5.657%
68	11.348	1025	1028	1031	rVB4	12393	19721	0.15%	0.040%
69	11.476	1038	1041	1045	rVB3	9893	20565	0.15%	0.042%
70	11.545	1045	1048	1051	rVB5	2892	5605	0.04%	0.011%
71	11.762	1067	1070	1072	rBV3	4091	6969	0.05%	0.014%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049284.D
Acq On : 6 May 2016 16:05
Operator : FY/SY
Sample : H2874-14DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4129DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.850	1075	1079	1085	rVB8	11608	36125	0.27%	0.074%
73	12.057	1095	1100	1101	rBV3	2982	5177	0.04%	0.011%
74	12.136	1105	1108	1109	rBV3	4386	5810	0.04%	0.012%
75	12.195	1111	1114	1118	rBV4	6565	12827	0.09%	0.026%
76	12.273	1120	1122	1125	rVB3	4436	7996	0.06%	0.016%
77	12.401	1129	1135	1138	rBV	121638	232744	1.72%	0.475%
78	12.460	1138	1141	1145	rVB	406743	659449	4.87%	1.346%
79	12.510	1145	1146	1150	rVB4	4737	6041	0.04%	0.012%
80	12.569	1150	1152	1155	rVB4	5268	10447	0.08%	0.021%
81	12.618	1155	1157	1159	rBV2	4856	9902	0.07%	0.020%
82	12.726	1167	1168	1171	rVB4	4278	6315	0.05%	0.013%
83	12.785	1171	1174	1175	rBV3	5046	7482	0.06%	0.015%
84	12.903	1184	1186	1189	rVB4	4231	7888	0.06%	0.016%
85	12.992	1193	1195	1198	rVB3	2659	4770	0.04%	0.010%
86	13.051	1198	1201	1205	rBV5	3376	7744	0.06%	0.016%
87	13.287	1224	1225	1227	rVB2	4639	4959	0.04%	0.010%
88	13.366	1229	1233	1236	rBV4	9221	21620	0.16%	0.044%
89	13.435	1236	1240	1250	rBV	1270146	2139263	15.79%	4.367%
90	13.632	1258	1260	1263	rBV4	4167	6492	0.05%	0.013%
91	13.760	1269	1273	1282	rBV	1004047	1732542	12.79%	3.537%
92	13.937	1290	1291	1293	rBV2	6313	8642	0.06%	0.018%
93	14.035	1297	1301	1305	rVV2	89837	165997	1.23%	0.339%
94	14.134	1310	1311	1315	rBV4	5316	8324	0.06%	0.017%
95	14.212	1315	1319	1321	rBV5	6202	15655	0.12%	0.032%
96	14.281	1324	1326	1327	rBV2	6165	5127	0.04%	0.010%
97	14.636	1359	1362	1366	rBV6	11584	28318	0.21%	0.058%
98	15.206	1417	1420	1424	rVB3	14884	32637	0.24%	0.067%
99	15.462	1443	1446	1449	rVB3	12791	22738	0.17%	0.046%
100	15.610	1457	1461	1464	rBV	57931	126201	0.93%	0.258%

Sum of corrected areas: 48985703

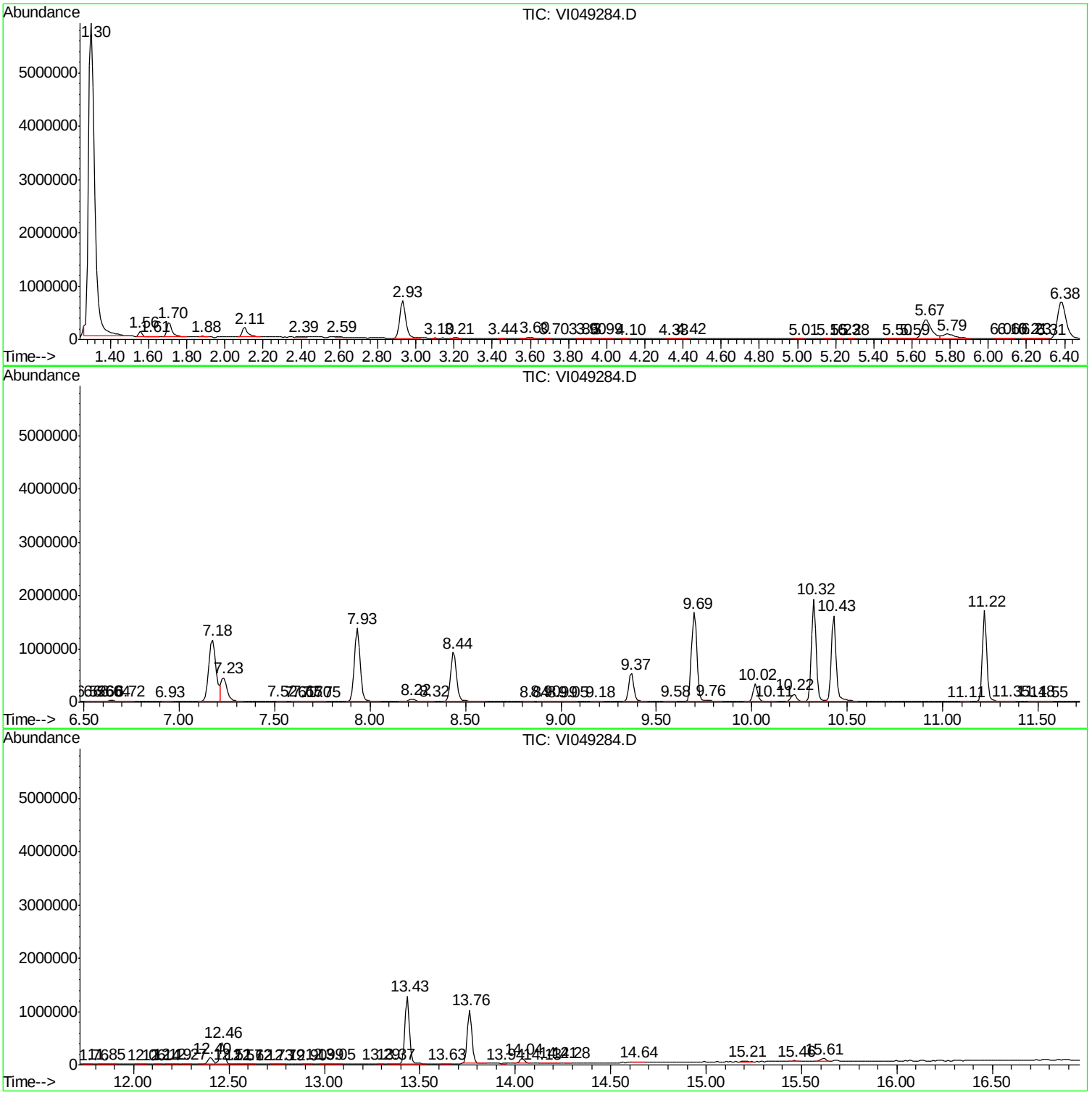
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049284.D
Acq On : 6 May 2016 16:05
Operator : FY/SY
Sample : H2874-14DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4129DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049284.D
Acq On : 6 May 2016 16:05
Operator : FY/SY
Sample : H2874-14DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4129DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049284.D
Acq On : 6 May 2016 16:05
Operator : FY/SY
Sample : H2874-14DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4129DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

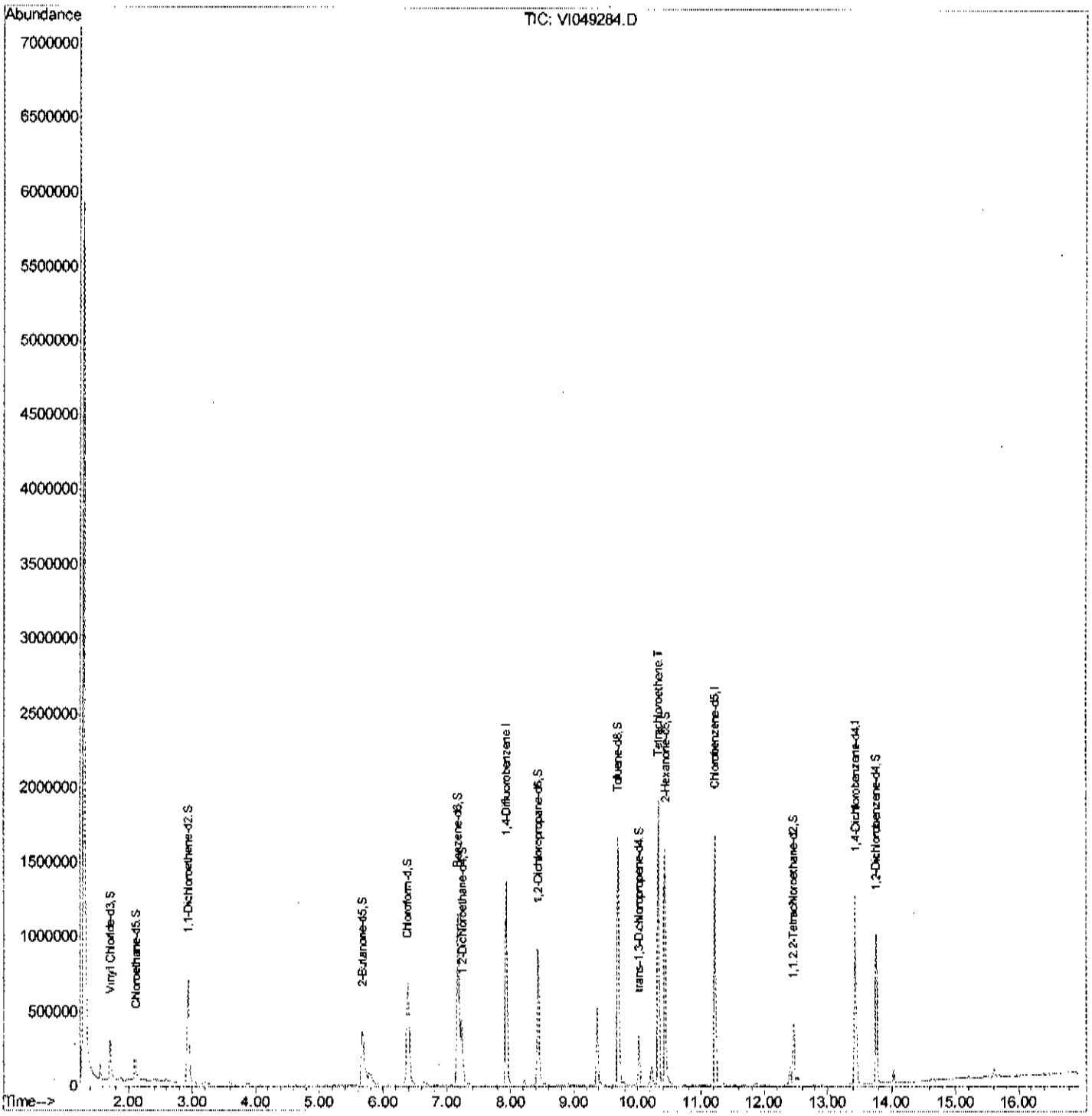
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050616\
Data File : VI049284.D
Acq On : 6 May 2016 16:05
Operator : FY/SY
Sample : H2874-14DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 07 04:48:53 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4129DL

Manual Integrations APPROVED
feifei
5/9/2016 12:05:14 PM



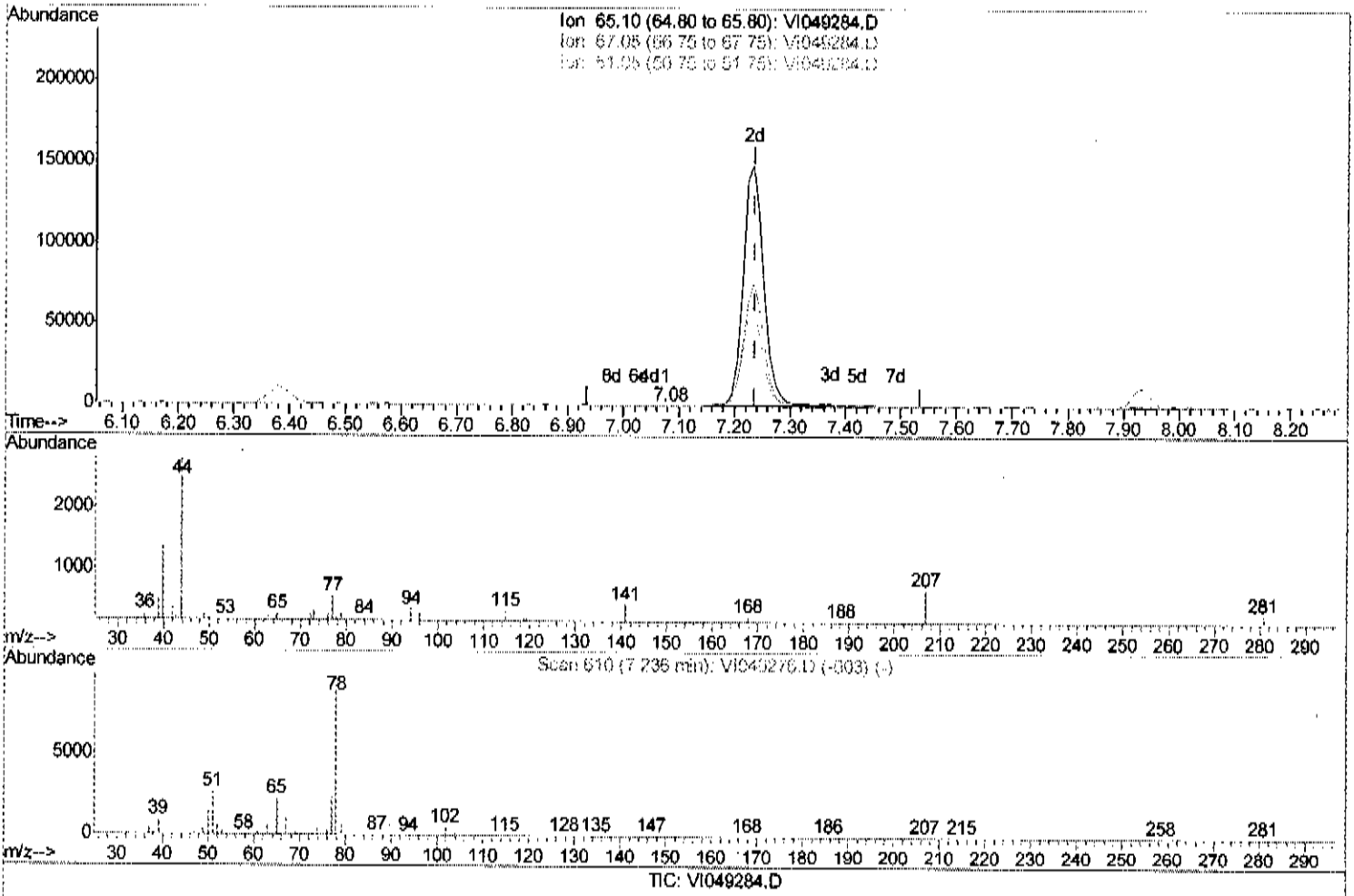
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050616\
Data File : VI049284.D
Acq On : 6 May 2016 16:05
Operator : FY/SY
Sample : H2874-14DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 07 04:13:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOM1TR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4129DL

Manual Integrations APPROVED
feifei
5/9/2016 12:05:14 PM



(26) 1,2-Dichloroethane-d4 (S)

7.077min (-0.159) 0.00ug/L

response 342

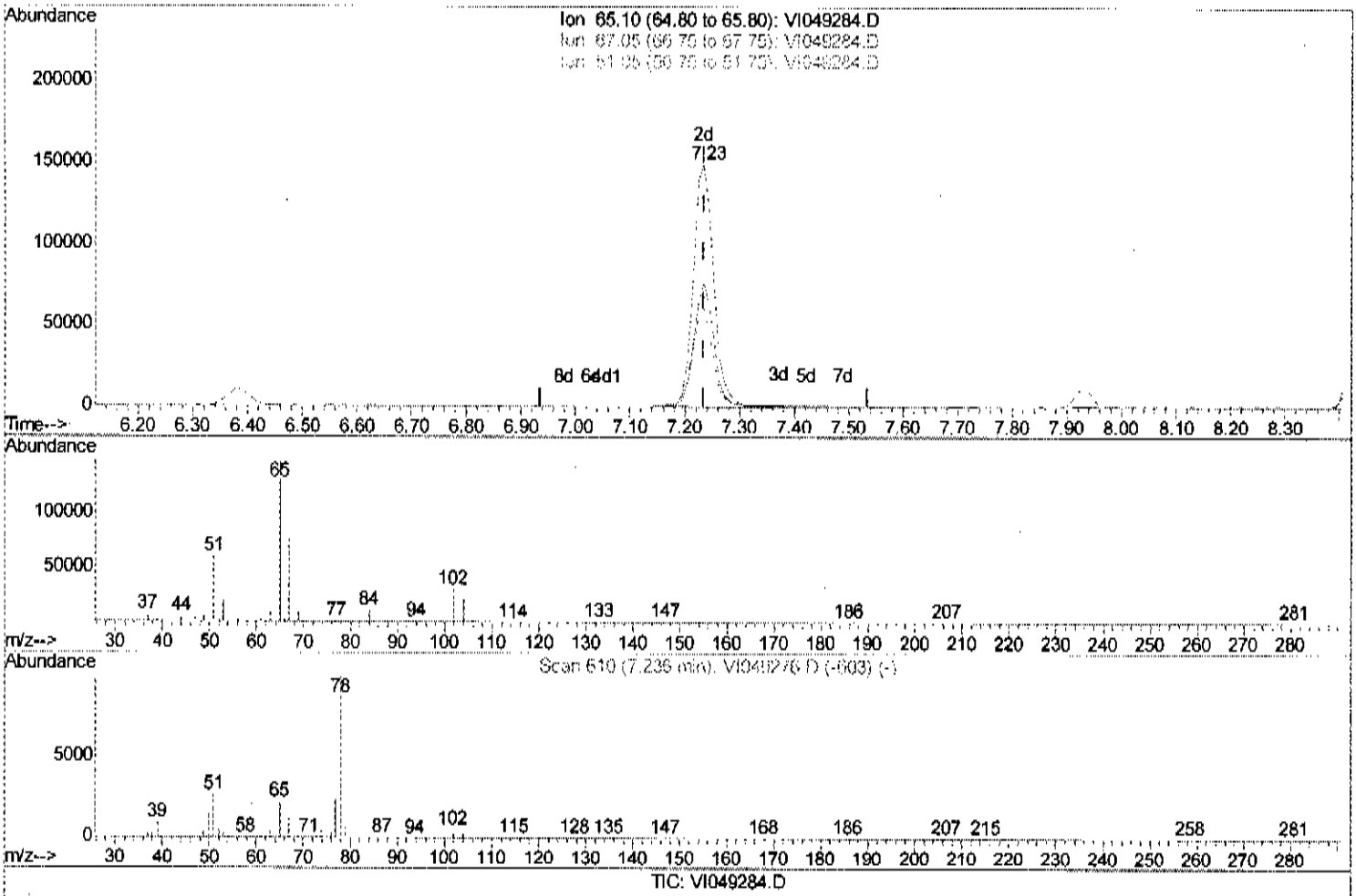
Ion	Exp%	Act%
65.10	100	100
67.05	51.00	59.94
51.05	123.20	110.82
0.00	0.00	0.00

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050616\
Data File : VI049284.D
Acq On : 6 May 2016 16:05
Operator : FY/SY
Sample : H2874-14DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 07 04:13:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4129DL

Manual Integrations APPROVED
feifei
5/9/2016 12:05:14 PM



TIC: VI049284.D

(26) 1,2-Dichloroethane-d4 (S)
7.234min (-0.002) 5.07ug/L m
response 392345

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.05#
51.05	123.20	0.10#
0.00	0.00	0.00

FT
5/16/2016

Quantitation Report (QT Reviewed)

Instrument :
MSVOA_I
ClientSampleId :
H4129DL

Manual Integrations APPROVED
feifei
5/9/2016 12:05:14 PM

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050616\
Data File : VI049284.D
Acq On : 6 May 2016 16:05
Operator : FY/SY
Sample : H2874-14DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 07 04:48:53 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1207787	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	793875	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	285466	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	312844	4.21	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 84.20%			
7) Chloroethane-d5	2.11	69	192993	4.69	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.80%			
11) 1,1-Dichloroethene-d2	2.93	63	554905	3.17	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.40%			
20) 2-Butanone-d5	5.67	46	870397	54.07	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 108.14%			
24) Chloroform-d	6.38	84	869834	4.60	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 92.00%			
26) 1,2-Dichloroethane-d4	7.23	65	392345m	5.07	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.40%			
32) Benzene-d6	7.18	84	1490214	4.82	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.40%			
36) 1,2-Dichloropropane-d6	8.44	67	421660	4.85	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.00%			
41) Toluene-d8	9.69	98	1031382	4.52	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.40%			
43) trans-1,3-Dichloropropene-	10.02	79	155648	4.54	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 90.80%			
46) 2-Hexanone-d5	10.43	63	547140	50.63	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 101.26%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	179523	4.54	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 90.80%			
63) 1,2-Dichlorobenzene-d4	13.76	152	229948	4.59	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 91.80%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.32	164	385542	6.22	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FY 5/16/2016

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010
Analytical Method : Trace VOA Level :
Instrument ID: MSVOA_I Calibration Date(s): 05/04/2016 05/04/2016
GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 11:27 13:33
Length : 30 (m)
Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VI049220.D RRF1.0 = VI049221.D
RRF5.0 = VI049222.D RRF10 = VI049223.D RRF20 = VI049224.D

ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.538	0.547	0.574	0.556	0.601	0.563	4.4
Chloromethane	0.493	0.504	0.475	0.470	0.469	0.482	3.2
Vinyl chloride	0.321	0.358	0.339	0.328	0.340	0.337	4.1
Bromomethane	0.200	0.198	0.157	0.144	0.117	0.163	22
Chloroethane	0.146	0.171	0.149	0.134	0.120	0.144	13.2
Trichlorofluoromethane	0.468	0.496	0.470	0.459	0.462	0.471	3.1
1,1-Dichloroethene	0.384	0.433	0.405	0.395	0.401	0.404	4.6
1,1,2-Trichloro-1,2,2-trifluoroetha	0.416	0.419	0.439	0.421	0.461	0.431	4.4
Acetone	0.042	0.036	0.041	0.043	0.045	0.041	8.1
Carbon disulfide	1.391	1.508	1.497	1.445	1.477	1.463	3.2
Methyl Acetate	0.106	0.118	0.119	0.120	0.127	0.118	6.6
Methylene chloride	0.439	0.475	0.440	0.425	0.446	0.445	4.1
trans-1,2-Dichloroethene	0.423	0.465	0.449	0.431	0.462	0.446	4.2
Methyl tert-butyl Ether	0.679	0.759	0.754	0.720	0.775	0.737	5.2
1,1-Dichloroethane	0.720	0.797	0.761	0.728	0.775	0.756	4.2
cis-1,2-Dichloroethene	0.440	0.472	0.458	0.444	0.480	0.459	3.8
2-Butanone	0.066	0.070	0.079	0.077	0.082	0.075	8.8
Bromochloromethane	0.181	0.188	0.184	0.178	0.189	0.184	2.6
Chloroform	0.778	0.854	0.803	0.771	0.815	0.804	4.1
1,1,1-Trichloroethane	0.896	1.076	0.958	0.890	0.926	0.949	8
Cyclohexane	0.783	0.891	0.849	0.799	0.865	0.837	5.4
Carbon tetrachloride	0.773	0.908	0.846	0.793	0.827	0.829	6.3
Benzene	2.033	2.369	2.170	2.042	2.090	2.141	6.5
1,2-Dichloroethane	0.386	0.427	0.406	0.391	0.417	0.405	4.2
Trichloroethene	0.569	0.665	0.592	0.553	0.591	0.594	7.3
Methylcyclohexane	0.681	0.714	0.757	0.722	0.791	0.733	5.8
1,2-Dichloropropane	0.476	0.549	0.505	0.480	0.500	0.502	5.8
Bromodichloromethane	0.669	0.810	0.737	0.698	0.744	0.732	7.3
cis-1,3-Dichloropropene	0.669	0.828	0.743	0.702	0.757	0.740	8.1
4-Methyl-2-pentanone	0.240	0.286	0.271	0.250	0.245	0.258	7.4
Toluene	1.676	1.953	1.825	1.770	1.806	1.806	5.6
trans-1,3-Dichloropropene	0.505	0.582	0.575	0.564	0.609	0.567	6.8

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method : Trace VOA Level :

Instrument ID: MSVOA_I Calibration Date(s): 05/04/2016 05/04/2016

GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 11:27 13:33

Length : 30 (m)

Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VI049220.D RRF1.0 = VI049221.D
RRF5.0 = VI049222.D RRF10 = VI049223.D RRF20 = VI049224.D

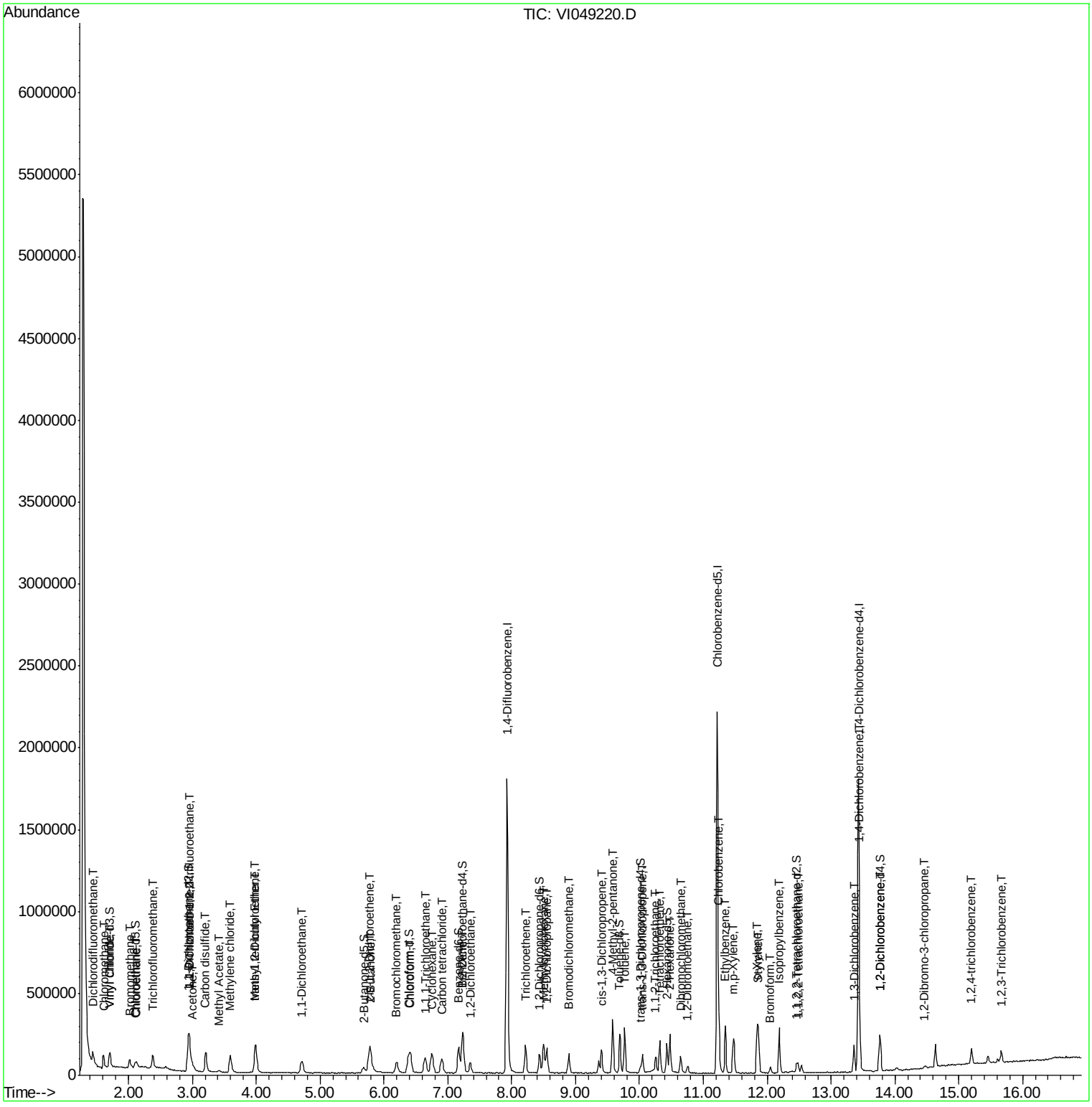
ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
1,1,2-Trichloroethane	0.231	0.272	0.264	0.256	0.281	0.261	7.3
Tetrachloroethene	0.370	0.406	0.388	0.379	0.408	0.390	4.3
2-Hexanone	0.152	0.188	0.178	0.170	0.176	0.173	7.6
Dibromochloromethane	0.329	0.406	0.402	0.395	0.436	0.393	10
1,2-Dibromoethane	0.238	0.287	0.280	0.264	0.292	0.272	8.1
Chlorobenzene	1.011	1.096	1.100	1.067	1.142	1.083	4.5
Ethylbenzene	1.706	1.812	1.947	1.894	1.973	1.866	5.8
o-Xylene	0.558	0.568	0.655	0.656	0.742	0.636	11.9
m,p-Xylene	0.591	0.626	0.704	0.699	0.780	0.680	10.8
Styrene	0.868	0.950	1.112	1.111	1.232	1.055	13.7
Bromoform	0.390	0.501	0.470	0.466	0.504	0.466	9.9
Isopropylbenzene	1.439	1.487	1.741	1.740	1.833	1.648	10.6
1,1,2,2-Tetrachloroethane	0.238	0.235	0.251	0.248	0.287	0.252	8.2
1,3-Dichlorobenzene	1.574	1.685	1.711	1.692	1.820	1.696	5.1
1,4-Dichlorobenzene	1.707	1.775	1.689	1.715	1.825	1.742	3.2
1,2-Dichlorobenzene	1.294	1.371	1.411	1.406	1.545	1.405	6.5
1,2-Dibromo-3-chloropropane	0.065	0.110	0.078	0.082	0.092	0.086	19.7
1,2,4-trichlorobenzene	0.732	0.603	0.766	0.760	0.892	0.751	13.7
1,2,3-Trichlorobenzene	0.568	0.460	0.549	0.552	0.649	0.556	12.1
Vinyl Chloride-d3	0.303	0.324	0.307	0.316	0.289	0.308	4.3
Chloroethane-d5	0.188	0.202	0.174	0.164	0.124	0.170	17.4
1,1-Dichloroethene-d2	0.713	0.755	0.738	0.729	0.691	0.725	3.4
2-Butanone-d5	0.051	0.066	0.072	0.074	0.071	0.067	13.8
Chloroform-d	0.737	0.815	0.799	0.802	0.761	0.783	4.2
1,2-Dichloroethane-d4	0.312	0.337	0.329	0.325	0.299	0.320	4.7
Benzene-d6	1.834	2.173	2.000	1.949	1.783	1.948	7.9
1,2-Dichloropropane-d6	0.519	0.607	0.558	0.545	0.509	0.548	7
Toluene-d8	1.341	1.543	1.488	1.459	1.354	1.437	6.1
trans-1,3-Dichloropropene-d4	0.181	0.227	0.226	0.226	0.219	0.216	9.2
2-Hexanone-d5	0.055	0.072	0.071	0.071	0.071	0.068	10.6
1,1,2,2-Tetrachloroethane-d2	0.218	0.235	0.256	0.263	0.274	0.249	9
1,2-Dichlorobenzene-d4	0.859	0.849	0.869	0.912	0.893	0.877	2.9

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049220.D
Acq On : 4 May 2016 11:27
Operator : FY/SY
Sample : VSTD0.533
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD0.533

Quant Time: May 04 12:54:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049220.D
Acq On : 4 May 2016 11:27
Operator : FY/SY
Sample : VSTD0.533
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD0.533

Quant Time: May 04 12:54:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1583520	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.22	117	1071757	5.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	393159	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	1.70	65	47940	0.56	ug/L		-0.01
7) Chloroethane-d5	2.09	69	29838	0.59	ug/L		-0.01
11) 1,1-Dichloroethene-d2	2.93	63	112957	0.52	ug/L		0.00
20) 2-Butanone-d5	5.69	46	80851	4.28	ug/L		0.02
24) Chloroform-d	6.38	84	116714	0.48	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.23	65	49329	0.51	ug/L		0.00
32) Benzene-d6	7.17	84	196516	0.49	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.44	67	55574	0.48	ug/L		0.00
41) Toluene-d8	9.69	98	143683	0.46	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.02	79	19375	0.41	ug/L		0.00
46) 2-Hexanone-d5	10.43	63	59088	3.89	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	23375	0.38	ug/L		0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	33778	0.45	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.44	85	85244	0.57	ug/L		97
3) Chloromethane	1.61	50	78014	0.61	ug/L		98
5) Vinyl chloride	1.71	62	50865	0.57	ug/L		94
6) Bromomethane	2.02	94	31645	0.69	ug/L		99
8) Chloroethane	2.12	64	23186	0.57	ug/L		95
9) Trichlorofluoromethane	2.38	101	74151	0.61	ug/L		99
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	65845	0.57	ug/L		97
12) 1,1-Dichloroethene	2.95	96	60731	0.51	ug/L		95
13) Acetone	3.01	43	65787	6.14	ug/L		92
14) Carbon disulfide	3.21	76	220279	0.50	ug/L		97
15) Methyl Acetate	3.41	43	16711	0.50	ug/L		94
16) Methylene chloride	3.59	84	69501	0.53	ug/L		92
17) Methyl tert-butyl Ether	3.98	73	107503	0.50	ug/L		99
18) trans-1,2-Dichloroethene	3.99	96	66984	0.50	ug/L		92
19) 1,1-Dichloroethane	4.71	63	113985	0.52	ug/L		96
21) 2-Butanone	5.79	43	105165	5.28	ug/L		95
22) cis-1,2-Dichloroethene	5.77	96	69641	0.49	ug/L		82
23) Bromochloromethane	6.21	128	28643	0.53	ug/L		92
25) Chloroform	6.41	83	123168	0.51	ug/L		95
27) 1,2-Dichloroethane	7.36	62	61137	0.51	ug/L	#	92
29) 1,1,1-Trichloroethane	6.64	97	96055	0.54	ug/L		97
30) Cyclohexane	6.75	56	83902	0.58	ug/L		100
31) Carbon tetrachloride	6.91	117	82897	0.55	ug/L		96
33) Benzene	7.23	78	217861	0.52	ug/L		100
34) Trichloroethene	8.22	95	60940	0.52	ug/L		92
35) Methylcyclohexane	8.50	83	72953	0.54	ug/L		96
37) 1,2-Dichloropropane	8.55	63	51040	0.50	ug/L	#	97
38) Bromodichloromethane	8.89	83	71718	0.49	ug/L		98
39) cis-1,3-Dichloropropene	9.41	75	71745	0.48	ug/L		99
40) 4-Methyl-2-pentanone	9.58	43	257723	4.99	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049220.D
Acq On : 4 May 2016 11:27
Operator : FY/SY
Sample : VSTD0.533
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD0.533

Quant Time: May 04 12:54:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.77	91	179579	0.47	ug/L		98
44) trans-1,3-Dichloropropene	10.05	75	54124	0.45	ug/L		94
45) 1,1,2-Trichloroethane	10.25	97	24736	0.43	ug/L		92
47) Tetrachloroethene	10.32	164	39614	0.49	ug/L		93
48) 2-Hexanone	10.48	43	163129	4.52	ug/L		99
49) Dibromochloromethane	10.65	129	35222	0.43	ug/L		99
50) 1,2-Dibromoethane	10.75	107	25463	0.43	ug/L		99
51) Chlorobenzene	11.25	112	108303	0.46	ug/L		99
52) Ethylbenzene	11.34	91	182792	0.45	ug/L		98
53) m,p-Xylene	11.47	106	63389	0.42	ug/L		95
54) o-Xylene	11.85	106	59773	0.42	ug/L		100
55) Styrene	11.87	104	93024	0.39	ug/L		92
56) Isopropylbenzene	12.19	105	154217	0.42	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.49	83	25473	0.43	ug/L		86
60) Bromoform	12.05	173	15337	0.44	ug/L	#	97
61) 1,3-Dichlorobenzene	13.36	146	61886	0.46	ug/L		95
62) 1,4-Dichlorobenzene	13.45	146	67101	0.48	ug/L		94
64) 1,2-Dichlorobenzene	13.78	146	50866	0.44	ug/L		90
65) 1,2-Dibromo-3-chloropropan	14.47	75	2575	0.38	ug/L	#	76
66) 1,2,4-trichlorobenzene	15.20	180	28774	0.43	ug/L		98
67) 1,2,3-Trichlorobenzene	15.67	180	22326	0.44	ug/L		94

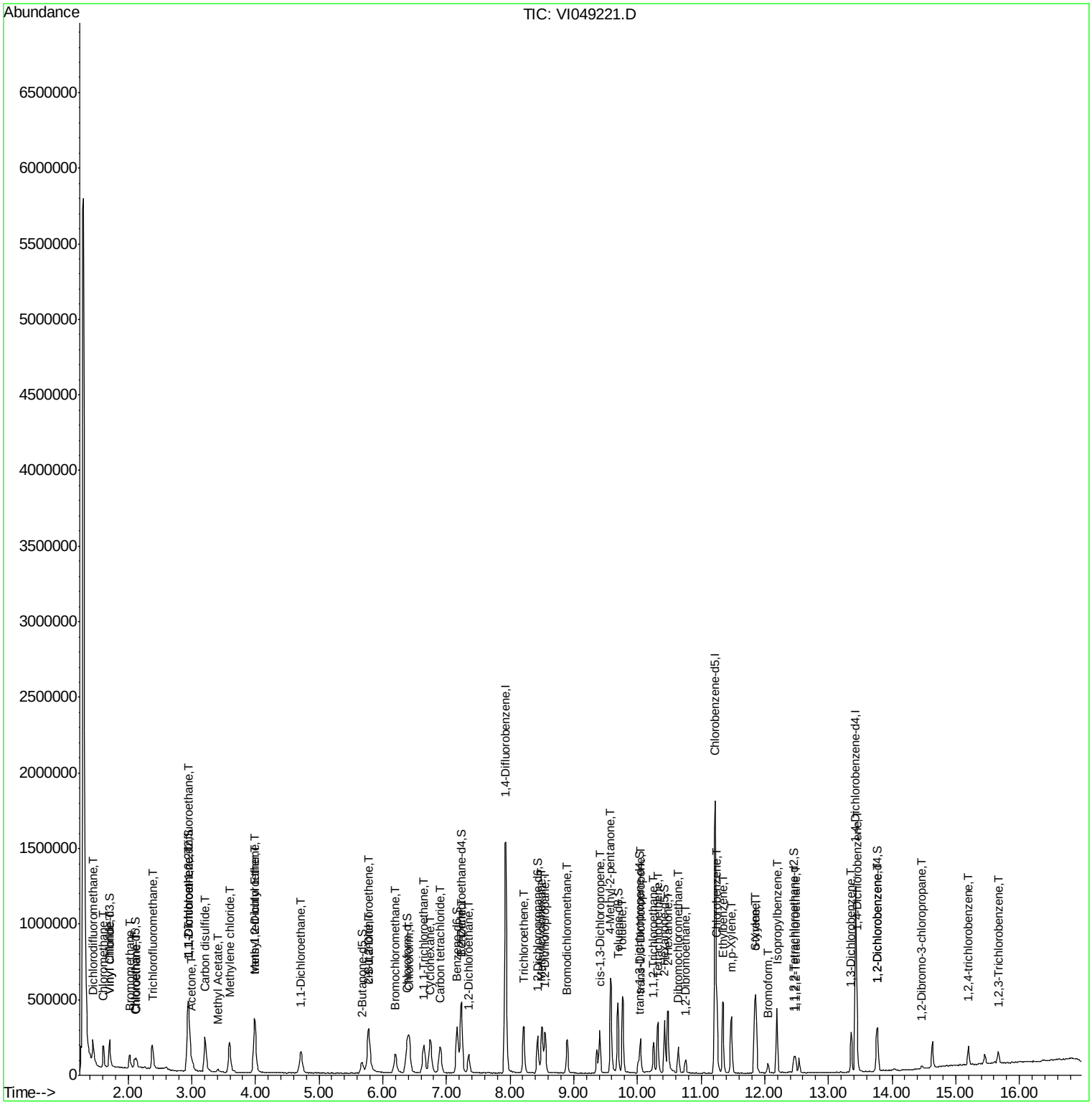
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049221.D
Acq On : 4 May 2016 11:58
Operator : FY/SY
Sample : VSTD00134
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00134

Quant Time: May 04 12:54:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049221.D
Acq On : 4 May 2016 11:58
Operator : FY/SY
Sample : VSTD00134
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00134

Quant Time: May 04 12:54:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1425657	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	907600	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	278770	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	92417	1.21	ug/L	0.00
7) Chloroethane-d5	2.11	69	57615	1.26	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	215352	1.11	ug/L	0.00
20) 2-Butanone-d5	5.67	46	187185	11.00	ug/L	0.00
24) Chloroform-d	6.38	84	232456	1.06	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.24	65	96053	1.10	ug/L	0.00
32) Benzene-d6	7.17	84	394446	1.16	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.44	67	110173	1.13	ug/L	0.00
41) Toluene-d8	9.70	98	280045	1.05	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	41222	1.03	ug/L	0.00
46) 2-Hexanone-d5	10.42	63	130255	10.11	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	42601	0.83	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	47353	0.90	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	156022	1.16	ug/L	96
3) Chloromethane	1.61	50	143674	1.25	ug/L	98
5) Vinyl chloride	1.71	62	101996	1.27	ug/L	99
6) Bromomethane	2.03	94	56541	1.37	ug/L	98
8) Chloroethane	2.13	64	48739	1.34	ug/L	99
9) Trichlorofluoromethane	2.38	101	141354	1.29	ug/L	97
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	119467	1.15	ug/L	97
12) 1,1-Dichloroethene	2.95	96	123513	1.15	ug/L	91
13) Acetone	3.00	43	103310	10.71	ug/L	90
14) Carbon disulfide	3.21	76	429844	1.08	ug/L	100
15) Methyl Acetate	3.42	43	33612	1.12	ug/L	97
16) Methylene chloride	3.59	84	135396	1.14	ug/L	96
17) Methyl tert-butyl Ether	3.99	73	216315	1.13	ug/L	99
18) trans-1,2-Dichloroethene	3.99	96	132532	1.09	ug/L	94
19) 1,1-Dichloroethane	4.72	63	227155	1.15	ug/L	100
21) 2-Butanone	5.79	43	198667	11.09	ug/L	99
22) cis-1,2-Dichloroethene	5.77	96	134700	1.06	ug/L	98
23) Bromochloromethane	6.20	128	53734	1.11	ug/L	94
25) Chloroform	6.42	83	243369	1.12	ug/L	95
27) 1,2-Dichloroethane	7.35	62	121724	1.14	ug/L	99
29) 1,1,1-Trichloroethane	6.64	97	195365	1.29	ug/L	98
30) Cyclohexane	6.75	56	161808	1.32	ug/L	97
31) Carbon tetrachloride	6.90	117	164739	1.30	ug/L	99
33) Benzene	7.24	78	429953	1.21	ug/L	100
34) Trichloroethene	8.21	95	120761	1.21	ug/L	98
35) Methylcyclohexane	8.49	83	129531	1.14	ug/L	95
37) 1,2-Dichloropropane	8.54	63	99691	1.15	ug/L	98
38) Bromodichloromethane	8.90	83	147018	1.18	ug/L	95
39) cis-1,3-Dichloropropene	9.41	75	150303	1.18	ug/L	99
40) 4-Methyl-2-pentanone	9.58	43	518603	11.86	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049221.D
Acq On : 4 May 2016 11:58
Operator : FY/SY
Sample : VSTD00134
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00134

Quant Time: May 04 12:54:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.76	91	354465	1.11	ug/L		98
44) trans-1,3-Dichloropropene	10.05	75	105643	1.04	ug/L		98
45) 1,1,2-Trichloroethane	10.26	97	49376	1.00	ug/L		96
47) Tetrachloroethene	10.33	164	73746	1.08	ug/L		97
48) 2-Hexanone	10.47	43	341156	11.16	ug/L		93
49) Dibromochloromethane	10.64	129	73641	1.05	ug/L		94
50) 1,2-Dibromoethane	10.76	107	52051	1.03	ug/L		94
51) Chlorobenzene	11.25	112	198885	1.00	ug/L		97
52) Ethylbenzene	11.35	91	328935	0.95	ug/L		97
53) m,p-Xylene	11.48	106	113672	0.89	ug/L		100
54) o-Xylene	11.84	106	103152	0.86	ug/L		92
55) Styrene	11.86	104	172395	0.86	ug/L		98
56) Isopropylbenzene	12.20	105	269919	0.87	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.48	83	42726	0.85	ug/L		96
60) Bromoform	12.05	173	27954	1.14	ug/L		98
61) 1,3-Dichlorobenzene	13.36	146	93938	0.98	ug/L		95
62) 1,4-Dichlorobenzene	13.46	146	98975	1.00	ug/L		95
64) 1,2-Dichlorobenzene	13.78	146	76464	0.93	ug/L		95
65) 1,2-Dibromo-3-chloropropan	14.47	75	6160	1.27	ug/L	#	77
66) 1,2,4-trichlorobenzene	15.20	180	33635	0.70	ug/L		99
67) 1,2,3-Trichlorobenzene	15.67	180	25667	0.72	ug/L		99

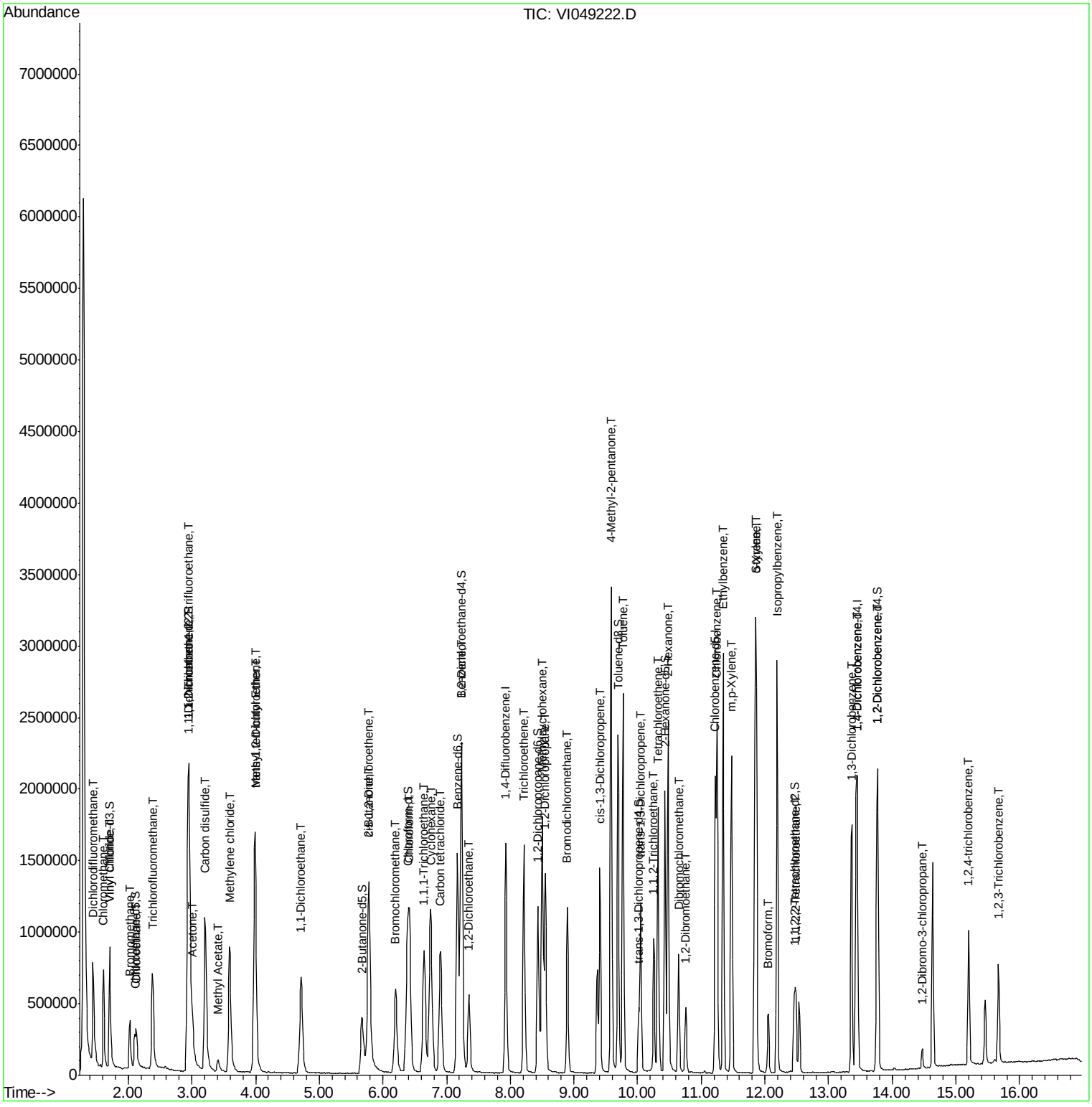
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049222.D
Acq On : 4 May 2016 12:30
Operator : FY/SY
Sample : VSTD00535
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00535

Quant Time: May 04 12:54:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049222.D
Acq On : 4 May 2016 12:30
Operator : FY/SY
Sample : VSTD00535
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00535

Quant Time: May 04 12:54:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1387511	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	966164	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	378132	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	425291	5.71	ug/L	0.00
7) Chloroethane-d5	2.10	69	241187	5.42	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	1024075	5.42	ug/L	0.00
20) 2-Butanone-d5	5.67	46	995120	60.10	ug/L	0.00
24) Chloroform-d	6.38	84	1109276	5.18	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.23	65	457025	5.37	ug/L	0.00
32) Benzene-d6	7.17	84	1932549	5.33	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.43	67	539585	5.18	ug/L	0.00
41) Toluene-d8	9.69	98	1438042	5.08	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	218683	5.13	ug/L	0.00
46) 2-Hexanone-d5	10.43	63	686533	50.08	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	247288	4.50	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	328714	4.58	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	796877	6.06	ug/L	98
3) Chloromethane	1.61	50	659513	5.88	ug/L	98
5) Vinyl chloride	1.71	62	470430	6.01	ug/L	99
6) Bromomethane	2.02	94	217759	5.41	ug/L	100
8) Chloroethane	2.12	64	206953	5.84	ug/L	93
9) Trichlorofluoromethane	2.38	101	652640	6.12	ug/L	97
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	609280	6.02	ug/L	99
12) 1,1-Dichloroethene	2.95	96	561763	5.39	ug/L	95
13) Acetone	3.01	43	564267	60.13	ug/L	98
14) Carbon disulfide	3.21	76	2076484	5.35	ug/L	100
15) Methyl Acetate	3.41	43	165335	5.67	ug/L	98
16) Methylene chloride	3.59	84	610472	5.27	ug/L	96
17) Methyl tert-butyl Ether	3.98	73	1046212	5.61	ug/L	99
18) trans-1,2-Dichloroethene	3.99	96	623257	5.28	ug/L	95
19) 1,1-Dichloroethane	4.71	63	1055265	5.49	ug/L	97
21) 2-Butanone	5.78	43	1090421	62.52	ug/L	97
22) cis-1,2-Dichloroethene	5.77	96	634938	5.14	ug/L	98
23) Bromochloromethane	6.20	128	255349	5.40	ug/L	92
25) Chloroform	6.41	83	1114407	5.29	ug/L	97
27) 1,2-Dichloroethane	7.35	62	563870	5.41	ug/L	100
29) 1,1,1-Trichloroethane	6.65	97	925756	5.76	ug/L	98
30) Cyclohexane	6.75	56	820242	6.27	ug/L	98
31) Carbon tetrachloride	6.91	117	817207	6.06	ug/L	100
33) Benzene	7.23	78	2096710	5.54	ug/L	100
34) Trichloroethene	8.22	95	571727	5.39	ug/L	96
35) Methylcyclohexane	8.50	83	731179	6.04	ug/L	99
37) 1,2-Dichloropropane	8.55	63	488269	5.31	ug/L	98
38) Bromodichloromethane	8.89	83	712248	5.38	ug/L	100
39) cis-1,3-Dichloropropene	9.41	75	717788	5.29	ug/L	100
40) 4-Methyl-2-pentanone	9.58	43	2615758	56.21	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049222.D
Acq On : 4 May 2016 12:30
Operator : FY/SY
Sample : VSTD00535
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00535

Quant Time: May 04 12:54:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.77	91	1763408	5.17	ug/L	100
44) trans-1,3-Dichloropropene	10.05	75	555982	5.12	ug/L	100
45) 1,1,2-Trichloroethane	10.25	97	255422	4.88	ug/L	98
47) Tetrachloroethene	10.32	164	374867	5.15	ug/L	96
48) 2-Hexanone	10.48	43	1718206	52.79	ug/L	100
49) Dibromochloromethane	10.65	129	387930	5.19	ug/L	98
50) 1,2-Dibromoethane	10.75	107	270504	5.03	ug/L	94
51) Chlorobenzene	11.25	112	1063006	5.03	ug/L	98
52) Ethylbenzene	11.35	91	1881376	5.08	ug/L	100
53) m,p-Xylene	11.47	106	679743	5.00	ug/L	98
54) o-Xylene	11.85	106	632711	4.94	ug/L	96
55) Styrene	11.87	104	1074496	5.04	ug/L	100
56) Isopropylbenzene	12.19	105	1682173	5.11	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.49	83	242821	4.56	ug/L	96
60) Bromoform	12.05	173	177627	5.35	ug/L	99
61) 1,3-Dichlorobenzene	13.36	146	646942	4.97	ug/L	98
62) 1,4-Dichlorobenzene	13.45	146	638743	4.76	ug/L	98
64) 1,2-Dichlorobenzene	13.78	146	533683	4.80	ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.47	75	29452	4.47	ug/L	88
66) 1,2,4-trichlorobenzene	15.20	180	289805	4.48	ug/L	96
67) 1,2,3-Trichlorobenzene	15.67	180	207658	4.29	ug/L	98

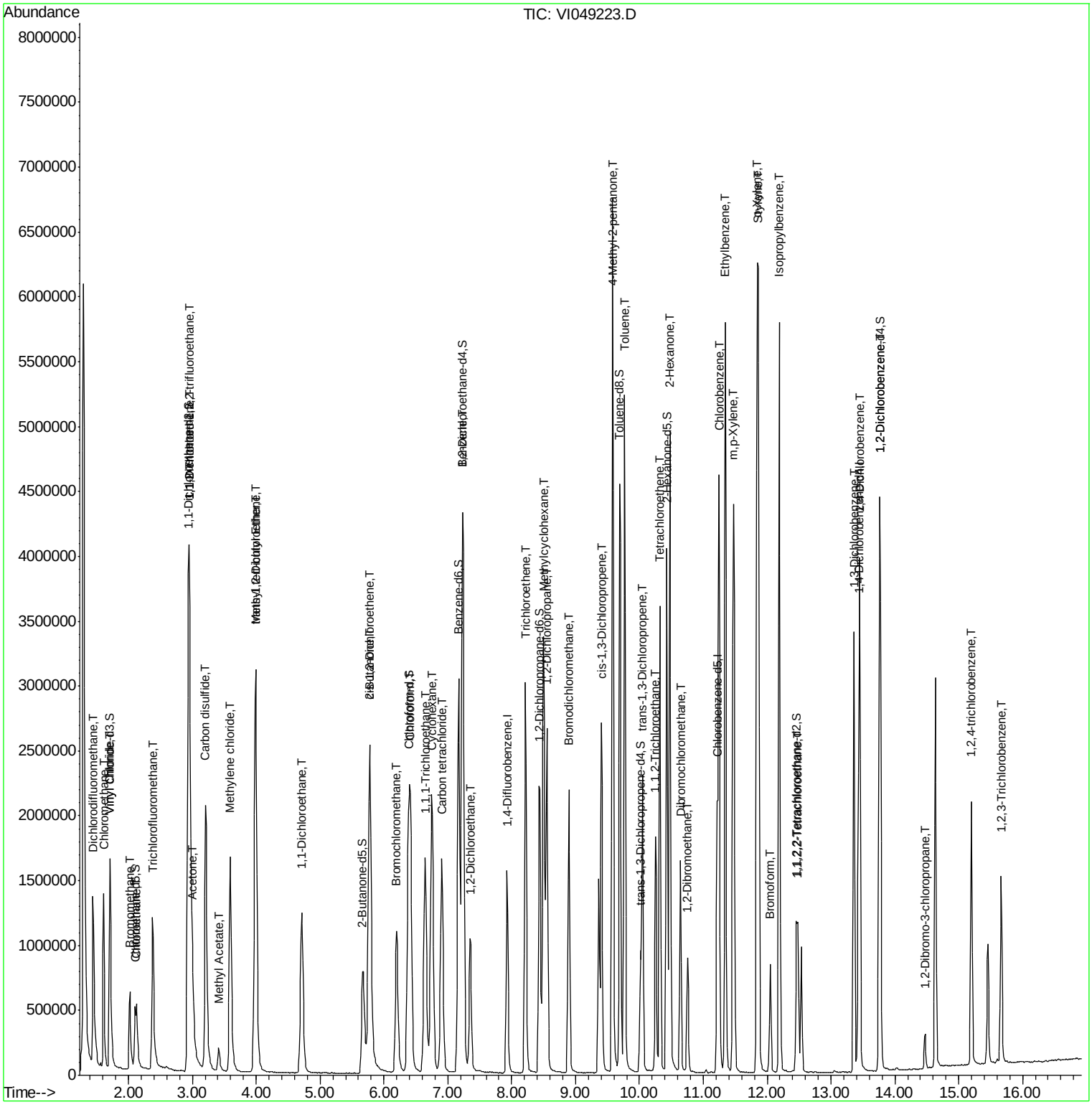
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049223.D
Acq On : 4 May 2016 13:02
Operator : FY/SY
Sample : VSTD01036
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01036

Quant Time: May 04 13:22:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:02:09 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049223.D
Acq On : 4 May 2016 13:02
Operator : FY/SY
Sample : VSTD01036
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01036

Quant Time: May 04 13:22:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:02:09 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1346932	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	978979	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	391643	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	852545	10.17	ug/L	0.00
7) Chloroethane-d5	2.10	69	441331	8.71	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	1962568	9.90	ug/L	0.00
20) 2-Butanone-d5	5.67	46	1983326	117.22	ug/L	0.00
24) Chloroform-d	6.38	84	2161653	10.24	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.23	65	876015	9.98	ug/L	0.00
32) Benzene-d6	7.17	84	3815591	9.73	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.43	67	1067054	9.71	ug/L	0.00
41) Toluene-d8	9.69	98	2856146	10.01	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	441531	10.67	ug/L	0.00
46) 2-Hexanone-d5	10.43	63	1398322	108.24	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	515068	11.14	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	714609	10.62	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	1496448	10.04	ug/L	98
3) Chloromethane	1.61	50	1264869	9.57	ug/L	97
5) Vinyl chloride	1.71	62	882275	9.65	ug/L	99
6) Bromomethane	2.02	94	387232	7.77	ug/L	97
8) Chloroethane	2.12	64	361250	8.62	ug/L	96
9) Trichlorofluoromethane	2.38	101	1236936	9.60	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	1132918	9.90	ug/L	99
12) 1,1-Dichloroethene	2.95	96	1065279	9.71	ug/L	99
13) Acetone	3.01	43	1154285	108.53	ug/L	94
14) Carbon disulfide	3.21	76	3891847	9.86	ug/L	99
15) Methyl Acetate	3.41	43	324256	10.54	ug/L	95
16) Methylene chloride	3.59	84	1144292	9.41	ug/L	96
17) Methyl tert-butyl Ether	3.98	73	1940115	9.86	ug/L	99
18) trans-1,2-Dichloroethene	3.99	96	1161176	9.67	ug/L	97
19) 1,1-Dichloroethane	4.71	63	1961074	9.59	ug/L	100
21) 2-Butanone	5.78	43	2069517	107.36	ug/L	100
22) cis-1,2-Dichloroethene	5.77	96	1197407	9.73	ug/L	96
23) Bromochloromethane	6.20	128	479204	9.64	ug/L	95
25) Chloroform	6.41	83	2076321	9.50	ug/L	98
27) 1,2-Dichloroethane	7.35	62	1054465	9.63	ug/L	98
29) 1,1,1-Trichloroethane	6.65	97	1742986	9.11	ug/L	98
30) Cyclohexane	6.75	56	1563911	9.50	ug/L	97
31) Carbon tetrachloride	6.91	117	1553503	9.42	ug/L	99
33) Benzene	7.23	78	3997279	9.32	ug/L	100
34) Trichloroethene	8.22	95	1082122	9.08	ug/L	98
35) Methylcyclohexane	8.50	83	1414618	10.08	ug/L	99
37) 1,2-Dichloropropane	8.55	63	940352	9.41	ug/L	99
38) Bromodichloromethane	8.89	83	1366909	9.45	ug/L	98
39) cis-1,3-Dichloropropene	9.41	75	1374976	9.40	ug/L	99
40) 4-Methyl-2-pentanone	9.58	43	4902699	94.26	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049223.D
Acq On : 4 May 2016 13:02
Operator : FY/SY
Sample : VSTD01036
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01036

Quant Time: May 04 13:22:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:02:09 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.77	91	3465077	9.74	ug/L	98
44) trans-1,3-Dichloropropene	10.05	75	1105184	10.19	ug/L	99
45) 1,1,2-Trichloroethane	10.25	97	500341	9.99	ug/L	98
47) Tetrachloroethene	10.32	164	742833	9.78	ug/L	95
48) 2-Hexanone	10.48	43	3335204	98.66	ug/L	98
49) Dibromochloromethane	10.65	129	773201	10.43	ug/L	99
50) 1,2-Dibromoethane	10.75	107	516165	9.83	ug/L	100
51) Chlorobenzene	11.25	112	2088636	9.98	ug/L	98
52) Ethylbenzene	11.34	91	3709193	10.40	ug/L	98
53) m,p-Xylene	11.47	106	1367664	10.91	ug/L	96
54) o-Xylene	11.85	106	1284417	11.05	ug/L	94
55) Styrene	11.87	104	2175319	11.38	ug/L	100
56) Isopropylbenzene	12.19	105	3406235	11.18	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.49	83	486520	10.29	ug/L	99
60) Bromoform	12.05	173	364966	10.27	ug/L	100
61) 1,3-Dichlorobenzene	13.36	146	1325420	10.21	ug/L	99
62) 1,4-Dichlorobenzene	13.45	146	1343241	9.95	ug/L	98
64) 1,2-Dichlorobenzene	13.78	146	1101321	10.35	ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.46	75	64450	9.72	ug/L	89
66) 1,2,4-trichlorobenzene	15.20	180	595041	10.84	ug/L	99
67) 1,2,3-Trichlorobenzene	15.67	180	432037	10.49	ug/L	97

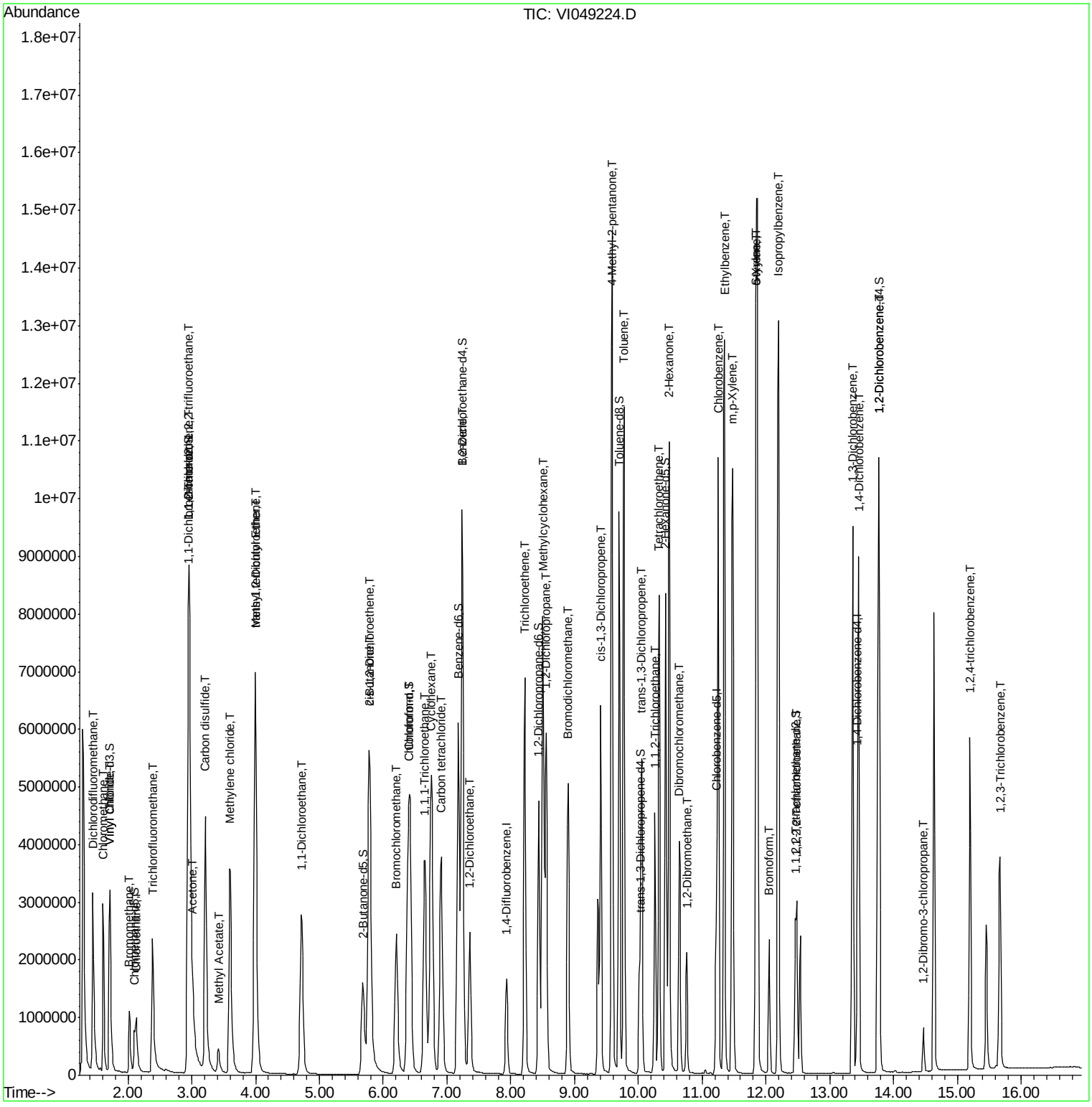
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049224.D
Acq On : 4 May 2016 13:33
Operator : FY/SY
Sample : VSTD02037
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02037

Quant Time: May 04 13:56:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:27:51 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049224.D
Acq On : 4 May 2016 13:33
Operator : FY/SY
Sample : VSTD02037
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02037

Quant Time: May 04 13:56:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:27:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1461579	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	1086543	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	471623	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	1691207	18.52	ug/L	0.00
7) Chloroethane-d5	2.10	69	726792	13.66	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	4036999	18.82	ug/L	0.00
20) 2-Butanone-d5	5.68	46	4160883	217.27	ug/L	0.01
24) Chloroform-d	6.39	84	4451409	19.31	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.24	65	1748807	18.37	ug/L	0.00
32) Benzene-d6	7.18	84	7749910	17.93	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.44	67	2214284	18.29	ug/L	0.00
41) Toluene-d8	9.70	98	5885440	18.58	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	952520	20.39	ug/L	0.00
46) 2-Hexanone-d5	10.42	63	3083599	210.72	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	1189030	22.52	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	1684802	20.47	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	3513178	21.70	ug/L	99
3) Chloromethane	1.61	50	2740270	19.31	ug/L	97
5) Vinyl chloride	1.71	62	1989115	20.23	ug/L	99
6) Bromomethane	2.02	94	681315	13.34	ug/L	95
8) Chloroethane	2.13	64	699614	15.94	ug/L	96
9) Trichlorofluoromethane	2.38	101	2703301	19.54	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	2693766	21.75	ug/L	99
12) 1,1-Dichloroethene	2.95	96	2344375	19.84	ug/L	98
13) Acetone	3.01	43	2651705	224.97	ug/L	96
14) Carbon disulfide	3.21	76	8635675	20.23	ug/L	98
15) Methyl Acetate	3.42	43	742482	21.95	ug/L	94
16) Methylene chloride	3.60	84	2605444	20.05	ug/L	99
17) Methyl tert-butyl Ether	3.99	73	4528073	21.28	ug/L	99
18) trans-1,2-Dichloroethene	4.00	96	2702539	20.92	ug/L	98
19) 1,1-Dichloroethane	4.72	63	4528793	20.62	ug/L	99
21) 2-Butanone	5.79	43	4815478	226.05	ug/L	99
22) cis-1,2-Dichloroethene	5.78	96	2805467	21.16	ug/L	97
23) Bromochloromethane	6.20	128	1105137	20.68	ug/L	92
25) Chloroform	6.42	83	4766471	20.35	ug/L	99
27) 1,2-Dichloroethane	7.35	62	2435376	20.69	ug/L	98
29) 1,1,1-Trichloroethane	6.65	97	4024599	19.39	ug/L	98
30) Cyclohexane	6.75	56	3759993	20.83	ug/L	99
31) Carbon tetrachloride	6.91	117	3593861	19.92	ug/L	98
33) Benzene	7.24	78	9083823	19.41	ug/L	100
34) Trichloroethene	8.22	95	2570250	19.89	ug/L	96
35) Methylcyclohexane	8.51	83	3435954	22.01	ug/L	99
37) 1,2-Dichloropropane	8.55	63	2175167	19.91	ug/L	100
38) Bromodichloromethane	8.90	83	3234934	20.43	ug/L	97
39) cis-1,3-Dichloropropene	9.41	75	3290905	20.59	ug/L	97
40) 4-Methyl-2-pentanone	9.59	43	10638557	186.98	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049224.D
Acq On : 4 May 2016 13:33
Operator : FY/SY
Sample : VSTD02037
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02037

Quant Time: May 04 13:56:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:27:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.77	91	7848741	20.00	ug/L	91
44) trans-1,3-Dichloropropene	10.05	75	2646058	21.87	ug/L	96
45) 1,1,2-Trichloroethane	10.26	97	1219815	21.95	ug/L	98
47) Tetrachloroethene	10.33	164	1772171	21.14	ug/L	95
48) 2-Hexanone	10.48	43	7635735	204.19	ug/L	96
49) Dibromochloromethane	10.64	129	1894342	22.78	ug/L	98
50) 1,2-Dibromoethane	10.76	107	1270502	21.90	ug/L	99
51) Chlorobenzene	11.25	112	4962671	21.38	ug/L	97
52) Ethylbenzene	11.35	91	8575376	21.45	ug/L	90
53) m,p-Xylene	11.48	106	3390654	23.82	ug/L	89
54) o-Xylene	11.84	106	3225706	24.37	ug/L	93
55) Styrene	11.86	104	5354222	24.39	ug/L	90
56) Isopropylbenzene	12.20	105	7966938	22.89	ug/L	95
58) 1,1,2,2-Tetrachloroethane	12.48	83	1245644	23.57	ug/L	99
60) Bromoform	12.05	173	949899	22.05	ug/L	100
61) 1,3-Dichlorobenzene	13.36	146	3432822	21.85	ug/L	96
62) 1,4-Dichlorobenzene	13.46	146	3442102	21.20	ug/L	98
64) 1,2-Dichlorobenzene	13.77	146	2913858	22.54	ug/L	96
65) 1,2-Dibromo-3-chloropropan	14.47	75	173184	21.85	ug/L	89
66) 1,2,4-trichlorobenzene	15.20	180	1682098	24.93	ug/L	99
67) 1,2,3-Trichlorobenzene	15.67	180	1223545	24.37	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 10:15

Lab File ID: VI049245.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00540 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.625	0.01	10.9	± 40.0
Chloromethane	0.482	0.510	0.01	5.8	± 30.0
Vinyl chloride	0.337	0.378	0.01	12.1	± 30.0
Bromomethane	0.163	0.178	0.01	8.8	± 30.0
Chloroethane	0.144	0.169	0.01	17.2	± 30.0
Trichlorofluoromethane	0.471	0.544	0.01	15.3	± 30.0
1,1-Dichloroethene	0.404	0.421	0.02	4.4	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.483	0.01	12.1	± 30.0
Acetone	0.041	0.047	0.01	14.5	± 40.0
Carbon disulfide	1.463	1.515	0.01	3.5	± 25.0
Methyl Acetate	0.118	0.127	0.01	8.0	± 40.0
Methylene chloride	0.445	0.448	0.01	0.7	± 30.0
trans-1,2-Dichloroethene	0.446	0.467	0.07	4.8	± 20.0
Methyl tert-butyl Ether	0.737	0.791	0.01	7.3	± 30.0
1,1-Dichloroethane	0.756	0.780	0.1	3.2	± 20.0
cis-1,2-Dichloroethene	0.459	0.471	0.1	2.7	± 20.0
2-Butanone	0.075	0.084	0.01	12.3	± 40.0
Bromochloromethane	0.184	0.189	0.02	2.6	± 20.0
Chloroform	0.804	0.836	0.04	4.0	± 20.0
1,1,1-Trichloroethane	0.949	1.025	0.05	7.9	± 20.0
Cyclohexane	0.837	0.951	0.1	13.5	± 25.0
Carbon tetrachloride	0.829	0.911	0.02	9.8	± 25.0
Benzene	2.141	2.315	0.3	8.1	± 20.0
1,2-Dichloroethane	0.405	0.433	0.01	6.8	± 25.0
Trichloroethene	0.594	0.634	0.1	6.7	± 20.0
Methylcyclohexane	0.733	0.866	0.2	18.2	± 25.0
1,2-Dichloropropane	0.502	0.536	0.1	6.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 10:15

Lab File ID: VI049245.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00540 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.787	0.09	7.6	± 20.0
cis-1,3-Dichloropropene	0.740	0.790	0.1	6.8	± 20.0
4-Methyl-2-pentanone	0.258	0.292	0.01	13	± 30.0
Toluene	1.806	1.937	0.4	7.3	± 20.0
trans-1,3-Dichloropropene	0.567	0.618	0.01	8.9	± 20.0
1,1,2-Trichloroethane	0.261	0.282	0.04	8.0	± 20.0
Tetrachloroethene	0.390	0.420	0.1	7.7	± 20.0
2-Hexanone	0.173	0.194	0.01	12	± 40.0
Dibromochloromethane	0.393	0.429	0.05	9.2	± 20.0
1,2-Dibromoethane	0.272	0.294	0.01	8.1	± 20.0
Chlorobenzene	1.083	1.157	0.4	6.8	± 20.0
Ethylbenzene	1.866	2.048	0.5	9.7	± 20.0
o-Xylene	0.636	0.684	0.3	7.5	± 20.0
m,p-Xylene	0.680	0.730	0.2	7.3	± 20.0
Styrene	1.055	1.150	0.2	9.1	± 20.0
Bromoform	0.466	0.521	0.01	11.7	± 30.0
Isopropylbenzene	1.648	1.838	0.7	11.5	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.268	0.05	6.3	± 25.0
1,3-Dichlorobenzene	1.696	1.809	0.5	6.6	± 20.0
1,4-Dichlorobenzene	1.742	1.796	0.7	3.1	± 20.0
1,2-Dichlorobenzene	1.405	1.513	0.4	7.6	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.085	0.01	-0.1	± 40.0
1,2,4-trichlorobenzene	0.751	0.830	0.3	10.6	± 30.0
1,2,3-Trichlorobenzene	0.556	0.604	0.2	8.8	± 40.0
Vinyl Chloride-d3	0.308	0.279	0.01	-9.5	± 30.0
Chloroethane-d5	0.170	0.159	0.01	-6.7	± 30.0
1,1-Dichloroethene-d2	0.725	0.666	0.01	-8.2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 10:15

Lab File ID: VI049245.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00540 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.064	0.01	-3.6	± 40.0
Chloroform-d	0.783	0.705	0.01	-9.9	± 20.0
1,2-Dichloroethane-d4	0.320	0.291	0.01	-9.3	± 25.0
Benzene-d6	1.948	1.788	0.03	-8.2	± 20.0
1,2-Dichloropropane-d6	0.548	0.505	0.1	-7.8	± 20.0
Toluene-d8	1.437	1.305	0.2	-9.2	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.197	0.01	-8.6	± 25.0
2-Hexanone-d5	0.068	0.065	0.01	-4.3	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.233	0.01	-6.5	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.775	0.06	-11.6	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 16:16

Lab File ID: VI049255.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00541 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.578	0.01	2.6	± 40.0
Chloromethane	0.482	0.490	0.01	1.7	± 30.0
Vinyl chloride	0.337	0.350	0.01	3.7	± 30.0
Bromomethane	0.163	0.162	0.01	-0.5	± 30.0
Chloroethane	0.144	0.150	0.01	4.3	± 30.0
Trichlorofluoromethane	0.471	0.479	0.01	1.6	± 30.0
1,1-Dichloroethene	0.404	0.400	0.02	-1	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.437	0.01	1.5	± 30.0
Acetone	0.041	0.045	0.01	8.7	± 40.0
Carbon disulfide	1.463	1.435	0.01	-2	± 25.0
Methyl Acetate	0.118	0.122	0.01	3.3	± 40.0
Methylene chloride	0.445	0.441	0.01	-0.8	± 30.0
trans-1,2-Dichloroethene	0.446	0.443	0.07	-0.7	± 20.0
Methyl tert-butyl Ether	0.737	0.758	0.01	2.8	± 30.0
1,1-Dichloroethane	0.756	0.773	0.1	2.2	± 20.0
cis-1,2-Dichloroethene	0.459	0.454	0.1	-1	± 20.0
2-Butanone	0.075	0.078	0.01	4.7	± 40.0
Bromochloromethane	0.184	0.182	0.02	-1.2	± 20.0
Chloroform	0.804	0.813	0.04	1.1	± 20.0
1,1,1-Trichloroethane	0.949	0.976	0.05	2.8	± 20.0
Cyclohexane	0.837	0.872	0.1	4.2	± 25.0
Carbon tetrachloride	0.829	0.846	0.02	2.0	± 25.0
Benzene	2.141	2.219	0.3	3.7	± 20.0
1,2-Dichloroethane	0.405	0.418	0.01	3.1	± 25.0
Trichloroethene	0.594	0.588	0.1	-0.9	± 20.0
Methylcyclohexane	0.733	0.759	0.2	3.6	± 25.0
1,2-Dichloropropane	0.502	0.527	0.1	5.0	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 16:16

Lab File ID: VI049255.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00541 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.723	0.09	-1.2	± 20.0
cis-1,3-Dichloropropene	0.740	0.742	0.1	0.2	± 20.0
4-Methyl-2-pentanone	0.258	0.276	0.01	6.7	± 30.0
Toluene	1.806	1.819	0.4	0.7	± 20.0
trans-1,3-Dichloropropene	0.567	0.555	0.01	-2.2	± 20.0
1,1,2-Trichloroethane	0.261	0.267	0.04	2.5	± 20.0
Tetrachloroethene	0.390	0.382	0.1	-2.2	± 20.0
2-Hexanone	0.173	0.181	0.01	4.9	± 40.0
Dibromochloromethane	0.393	0.392	0.05	-0.2	± 20.0
1,2-Dibromoethane	0.272	0.271	0.01	-0.2	± 20.0
Chlorobenzene	1.083	1.070	0.4	-1.2	± 20.0
Ethylbenzene	1.866	1.867	0.5	0.0	± 20.0
o-Xylene	0.636	0.624	0.3	-1.9	± 20.0
m,p-Xylene	0.680	0.672	0.2	-1.2	± 20.0
Styrene	1.055	1.054	0.2	-0.1	± 20.0
Bromoform	0.466	0.438	0.01	-6	± 30.0
Isopropylbenzene	1.648	1.647	0.7	-0.1	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.255	0.05	1.0	± 25.0
1,3-Dichlorobenzene	1.696	1.665	0.5	-1.9	± 20.0
1,4-Dichlorobenzene	1.742	1.693	0.7	-2.8	± 20.0
1,2-Dichlorobenzene	1.405	1.409	0.4	0.2	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.086	0.01	0.8	± 40.0
1,2,4-trichlorobenzene	0.751	0.732	0.3	-2.4	± 30.0
1,2,3-Trichlorobenzene	0.556	0.538	0.2	-3.2	± 40.0
Vinyl Chloride-d3	0.308	0.299	0.01	-2.7	± 30.0
Chloroethane-d5	0.170	0.172	0.01	1.0	± 30.0
1,1-Dichloroethene-d2	0.725	0.711	0.01	-2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/05/2016 Time: 16:16

Lab File ID: VI049255.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00541 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.075	0.01	12.2	± 40.0
Chloroform-d	0.783	0.787	0.01	0.5	± 20.0
1,2-Dichloroethane-d4	0.320	0.339	0.01	5.7	± 25.0
Benzene-d6	1.948	2.005	0.03	2.9	± 20.0
1,2-Dichloropropane-d6	0.548	0.563	0.1	2.7	± 20.0
Toluene-d8	1.437	1.435	0.2	-0.1	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.211	0.01	-2.3	± 25.0
2-Hexanone-d5	0.068	0.072	0.01	5.6	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.256	0.01	2.9	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.849	0.06	-3.1	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 02:57

Lab File ID: VI049274.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00542 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.513	0.01	-8.9	± 50.0
Chloromethane	0.482	0.454	0.01	-5.7	± 50.0
Vinyl chloride	0.337	0.340	0.01	0.9	± 50.0
Bromomethane	0.163	0.102	0.01	-37.7	± 50.0
Chloroethane	0.144	0.157	0.01	9.1	± 50.0
Trichlorofluoromethane	0.471	0.451	0.01	-4.4	± 50.0
1,1-Dichloroethene	0.404	0.383	0.02	-5	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.379	0.01	-12.1	± 50.0
Acetone	0.041	0.043	0.01	4.1	± 50.0
Carbon disulfide	1.463	1.354	0.01	-7.5	± 25.0
Methyl Acetate	0.118	0.132	0.01	12.1	± 50.0
Methylene chloride	0.445	0.441	0.01	-0.8	± 50.0
trans-1,2-Dichloroethene	0.446	0.432	0.07	-3.1	± 25.0
Methyl tert-butyl Ether	0.737	0.751	0.01	1.8	± 50.0
1,1-Dichloroethane	0.756	0.756	0.1	0.1	± 25.0
cis-1,2-Dichloroethene	0.459	0.451	0.1	-1.6	± 25.0
2-Butanone	0.075	0.081	0.01	7.8	± 50.0
Bromochloromethane	0.184	0.182	0.02	-1.4	± 25.0
Chloroform	0.804	0.807	0.04	0.4	± 25.0
1,1,1-Trichloroethane	0.949	0.964	0.05	1.6	± 25.0
Cyclohexane	0.837	0.741	0.1	-11.5	± 50.0
Carbon tetrachloride	0.829	0.809	0.02	-2.5	± 50.0
Benzene	2.141	2.212	0.3	3.3	± 25.0
1,2-Dichloroethane	0.405	0.411	0.01	1.3	± 50.0
Trichloroethene	0.594	0.575	0.1	-3.2	± 25.0
Methylcyclohexane	0.733	0.619	0.2	-15.5	± 50.0
1,2-Dichloropropane	0.502	0.513	0.1	2.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 02:57

Lab File ID: VI049274.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00542 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.738	0.09	0.8	± 25.0
cis-1,3-Dichloropropene	0.740	0.696	0.1	-6	± 25.0
4-Methyl-2-pentanone	0.258	0.280	0.01	8.2	± 50.0
Toluene	1.806	1.788	0.4	-1	± 25.0
trans-1,3-Dichloropropene	0.567	0.541	0.01	-4.7	± 25.0
1,1,2-Trichloroethane	0.261	0.274	0.04	4.9	± 25.0
Tetrachloroethene	0.390	0.354	0.1	-9.2	± 25.0
2-Hexanone	0.173	0.187	0.01	8.3	± 50.0
Dibromochloromethane	0.393	0.393	0.05	-0.1	± 25.0
1,2-Dibromoethane	0.272	0.273	0.01	0.4	± 25.0
Chlorobenzene	1.083	1.053	0.4	-2.8	± 25.0
Ethylbenzene	1.866	1.761	0.5	-5.7	± 25.0
o-Xylene	0.636	0.607	0.3	-4.6	± 25.0
m,p-Xylene	0.680	0.634	0.2	-6.7	± 25.0
Styrene	1.055	1.013	0.2	-4	± 25.0
Bromoform	0.466	0.459	0.01	-1.6	± 50.0
Isopropylbenzene	1.648	1.497	0.7	-9.2	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.253	0.05	0.2	± 25.0
1,3-Dichlorobenzene	1.696	1.690	0.5	-0.4	± 25.0
1,4-Dichlorobenzene	1.742	1.715	0.7	-1.6	± 25.0
1,2-Dichlorobenzene	1.405	1.412	0.4	0.5	± 25.0
1,2-Dibromo-3-chloropropane	0.086	0.094	0.01	9.3	± 50.0
1,2,4-trichlorobenzene	0.751	0.756	0.3	0.7	± 50.0
1,2,3-Trichlorobenzene	0.556	0.562	0.2	1.1	± 50.0
Vinyl Chloride-d3	0.308	0.289	0.01	-6	± 50.0
Chloroethane-d5	0.170	0.183	0.01	7.5	± 50.0
1,1-Dichloroethene-d2	0.725	0.680	0.01	-6.3	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 02:57

Lab File ID: VI049274.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00542 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.073	0.01	9.3	± 50.0
Chloroform-d	0.783	0.773	0.01	-1.2	± 25.0
1,2-Dichloroethane-d4	0.320	0.325	0.01	1.5	± 25.0
Benzene-d6	1.948	1.970	0.03	1.2	± 25.0
1,2-Dichloropropane-d6	0.548	0.565	0.1	3.1	± 25.0
Toluene-d8	1.437	1.357	0.2	-5.5	± 25.0
trans-1,3-Dichloropropene-d4	0.216	0.198	0.01	-8.1	± 25.0
2-Hexanone-d5	0.068	0.072	0.01	5.9	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.253	0.01	1.4	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.832	0.06	-5.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 10:21

Lab File ID: VI049276.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00543 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.527	0.01	-6.4	± 40.0
Chloromethane	0.482	0.430	0.01	-10.8	± 30.0
Vinyl chloride	0.337	0.330	0.01	-2.2	± 30.0
Bromomethane	0.163	0.129	0.01	-21	± 30.0
Chloroethane	0.144	0.149	0.01	3.3	± 30.0
Trichlorofluoromethane	0.471	0.468	0.01	-0.7	± 30.0
1,1-Dichloroethene	0.404	0.377	0.02	-6.5	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.412	0.01	-4.5	± 30.0
Acetone	0.041	0.043	0.01	5.1	± 40.0
Carbon disulfide	1.463	1.361	0.01	-7	± 25.0
Methyl Acetate	0.118	0.117	0.01	-0.7	± 40.0
Methylene chloride	0.445	0.408	0.01	-8.4	± 30.0
trans-1,2-Dichloroethene	0.446	0.422	0.07	-5.5	± 20.0
Methyl tert-butyl Ether	0.737	0.693	0.01	-6	± 30.0
1,1-Dichloroethane	0.756	0.713	0.1	-5.7	± 20.0
cis-1,2-Dichloroethene	0.459	0.425	0.1	-7.4	± 20.0
2-Butanone	0.075	0.074	0.01	-1.7	± 40.0
Bromochloromethane	0.184	0.169	0.02	-8.3	± 20.0
Chloroform	0.804	0.757	0.04	-5.9	± 20.0
1,1,1-Trichloroethane	0.949	0.925	0.05	-2.5	± 20.0
Cyclohexane	0.837	0.804	0.1	-4	± 25.0
Carbon tetrachloride	0.829	0.791	0.02	-4.6	± 25.0
Benzene	2.141	2.065	0.3	-3.5	± 20.0
1,2-Dichloroethane	0.405	0.385	0.01	-5.1	± 25.0
Trichloroethene	0.594	0.556	0.1	-6.4	± 20.0
Methylcyclohexane	0.733	0.711	0.2	-2.9	± 25.0
1,2-Dichloropropane	0.502	0.476	0.1	-5.3	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 10:21

Lab File ID: VI049276.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00543 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.695	0.09	-5	± 20.0
cis-1,3-Dichloropropene	0.740	0.673	0.1	-9	± 20.0
4-Methyl-2-pentanone	0.258	0.256	0.01	-0.7	± 30.0
Toluene	1.806	1.723	0.4	-4.6	± 20.0
trans-1,3-Dichloropropene	0.567	0.546	0.01	-3.7	± 20.0
1,1,2-Trichloroethane	0.261	0.246	0.04	-5.6	± 20.0
Tetrachloroethene	0.390	0.365	0.1	-6.4	± 20.0
2-Hexanone	0.173	0.172	0.01	-0.4	± 40.0
Dibromochloromethane	0.393	0.382	0.05	-2.8	± 20.0
1,2-Dibromoethane	0.272	0.254	0.01	-6.7	± 20.0
Chlorobenzene	1.083	1.027	0.4	-5.2	± 20.0
Ethylbenzene	1.866	1.780	0.5	-4.6	± 20.0
o-Xylene	0.636	0.595	0.3	-6.4	± 20.0
m,p-Xylene	0.680	0.641	0.2	-5.7	± 20.0
Styrene	1.055	1.016	0.2	-3.7	± 20.0
Bromoform	0.466	0.434	0.01	-6.9	± 30.0
Isopropylbenzene	1.648	1.584	0.7	-3.9	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.232	0.05	-7.7	± 25.0
1,3-Dichlorobenzene	1.696	1.550	0.5	-8.6	± 20.0
1,4-Dichlorobenzene	1.742	1.582	0.7	-9.2	± 20.0
1,2-Dichlorobenzene	1.405	1.270	0.4	-9.6	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.074	0.01	-14.1	± 40.0
1,2,4-trichlorobenzene	0.751	0.710	0.3	-5.4	± 30.0
1,2,3-Trichlorobenzene	0.556	0.517	0.2	-6.8	± 40.0
Vinyl Chloride-d3	0.308	0.246	0.01	-20.2	± 30.0
Chloroethane-d5	0.170	0.156	0.01	-8.6	± 30.0
1,1-Dichloroethene-d2	0.725	0.607	0.01	-16.2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 10:21

Lab File ID: VI049276.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00543 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.067	0.01	-0.2	± 40.0
Chloroform-d	0.783	0.692	0.01	-11.6	± 20.0
1,2-Dichloroethane-d4	0.320	0.290	0.01	-9.4	± 25.0
Benzene-d6	1.948	1.734	0.03	-11	± 20.0
1,2-Dichloropropane-d6	0.548	0.495	0.1	-9.6	± 20.0
Toluene-d8	1.437	1.229	0.2	-14.4	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.184	0.01	-14.6	± 25.0
2-Hexanone-d5	0.068	0.063	0.01	-7.6	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.227	0.01	-9	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.726	0.06	-17.2	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 19:15

Lab File ID: VI049289.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00544 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.535	0.01	-5	± 50.0
Chloromethane	0.482	0.451	0.01	-6.5	± 50.0
Vinyl chloride	0.337	0.354	0.01	5.1	± 50.0
Bromomethane	0.163	0.149	0.01	-8.4	± 50.0
Chloroethane	0.144	0.159	0.01	10.7	± 50.0
Trichlorofluoromethane	0.471	0.484	0.01	2.6	± 50.0
1,1-Dichloroethene	0.404	0.416	0.02	3.0	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.418	0.01	-2.9	± 50.0
Acetone	0.041	0.043	0.01	2.9	± 50.0
Carbon disulfide	1.463	1.484	0.01	1.4	± 25.0
Methyl Acetate	0.118	0.122	0.01	3.3	± 50.0
Methylene chloride	0.445	0.450	0.01	1.2	± 50.0
trans-1,2-Dichloroethene	0.446	0.460	0.07	3.1	± 25.0
Methyl tert-butyl Ether	0.737	0.772	0.01	4.7	± 50.0
1,1-Dichloroethane	0.756	0.781	0.1	3.4	± 25.0
cis-1,2-Dichloroethene	0.459	0.469	0.1	2.2	± 25.0
2-Butanone	0.075	0.080	0.01	7.5	± 50.0
Bromochloromethane	0.184	0.176	0.02	-4.4	± 25.0
Chloroform	0.804	0.836	0.04	4.0	± 25.0
1,1,1-Trichloroethane	0.949	1.000	0.05	5.4	± 25.0
Cyclohexane	0.837	0.824	0.1	-1.6	± 50.0
Carbon tetrachloride	0.829	0.869	0.02	4.8	± 50.0
Benzene	2.141	2.260	0.3	5.6	± 25.0
1,2-Dichloroethane	0.405	0.416	0.01	2.5	± 50.0
Trichloroethene	0.594	0.610	0.1	2.7	± 25.0
Methylcyclohexane	0.733	0.702	0.2	-4.1	± 50.0
1,2-Dichloropropane	0.502	0.527	0.1	5.0	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 19:15

Lab File ID: VI049289.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00544 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.764	0.09	4.4	± 25.0
cis-1,3-Dichloropropene	0.740	0.738	0.1	-0.3	± 25.0
4-Methyl-2-pentanone	0.258	0.274	0.01	6.0	± 50.0
Toluene	1.806	1.891	0.4	4.7	± 25.0
trans-1,3-Dichloropropene	0.567	0.574	0.01	1.2	± 25.0
1,1,2-Trichloroethane	0.261	0.274	0.04	5.2	± 25.0
Tetrachloroethene	0.390	0.403	0.1	3.3	± 25.0
2-Hexanone	0.173	0.183	0.01	5.6	± 50.0
Dibromochloromethane	0.393	0.399	0.05	1.6	± 25.0
1,2-Dibromoethane	0.272	0.276	0.01	1.5	± 25.0
Chlorobenzene	1.083	1.126	0.4	4.0	± 25.0
Ethylbenzene	1.866	1.984	0.5	6.3	± 25.0
o-Xylene	0.636	0.661	0.3	4.0	± 25.0
m,p-Xylene	0.680	0.707	0.2	4.0	± 25.0
Styrene	1.055	1.100	0.2	4.3	± 25.0
Bromoform	0.466	0.458	0.01	-1.8	± 50.0
Isopropylbenzene	1.648	1.743	0.7	5.8	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.252	0.05	0.1	± 25.0
1,3-Dichlorobenzene	1.696	1.786	0.5	5.3	± 25.0
1,4-Dichlorobenzene	1.742	1.787	0.7	2.6	± 25.0
1,2-Dichlorobenzene	1.405	1.457	0.4	3.7	± 25.0
1,2-Dibromo-3-chloropropane	0.086	0.086	0.01	0.1	± 50.0
1,2,4-trichlorobenzene	0.751	0.773	0.3	3.0	± 50.0
1,2,3-Trichlorobenzene	0.556	0.570	0.2	2.7	± 50.0
Vinyl Chloride-d3	0.308	0.253	0.01	-17.7	± 50.0
Chloroethane-d5	0.170	0.159	0.01	-6.5	± 50.0
1,1-Dichloroethene-d2	0.725	0.647	0.01	-10.7	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/06/2016 Time: 19:15

Lab File ID: VI049289.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00544 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.072	0.01	8.3	± 50.0
Chloroform-d	0.783	0.744	0.01	-5	± 25.0
1,2-Dichloroethane-d4	0.320	0.318	0.01	-0.8	± 25.0
Benzene-d6	1.948	1.851	0.03	-5	± 25.0
1,2-Dichloropropane-d6	0.548	0.524	0.1	-4.2	± 25.0
Toluene-d8	1.437	1.305	0.2	-9.2	± 25.0
trans-1,3-Dichloropropene-d4	0.216	0.197	0.01	-8.7	± 25.0
2-Hexanone-d5	0.068	0.070	0.01	3.1	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.238	0.01	-4.4	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.815	0.06	-7	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/09/2016 Time: 11:03

Lab File ID: VI049291.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00545 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.544	0.01	-3.4	± 40.0
Chloromethane	0.482	0.398	0.01	-17.3	± 30.0
Vinyl chloride	0.337	0.313	0.01	-7	± 30.0
Bromomethane	0.163	0.132	0.01	-19.3	± 30.0
Chloroethane	0.144	0.140	0.01	-2.7	± 30.0
Trichlorofluoromethane	0.471	0.456	0.01	-3.2	± 30.0
1,1-Dichloroethene	0.404	0.379	0.02	-6.2	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.432	0.01	0.2	± 30.0
Acetone	0.041	0.041	0.01	0.0	± 40.0
Carbon disulfide	1.463	1.337	0.01	-8.6	± 25.0
Methyl Acetate	0.118	0.119	0.01	0.9	± 40.0
Methylene chloride	0.445	0.411	0.01	-7.5	± 30.0
trans-1,2-Dichloroethene	0.446	0.421	0.07	-5.6	± 20.0
Methyl tert-butyl Ether	0.737	0.705	0.01	-4.3	± 30.0
1,1-Dichloroethane	0.756	0.700	0.1	-7.4	± 20.0
cis-1,2-Dichloroethene	0.459	0.431	0.1	-6.1	± 20.0
2-Butanone	0.075	0.076	0.01	1.3	± 40.0
Bromochloromethane	0.184	0.169	0.02	-8	± 20.0
Chloroform	0.804	0.761	0.04	-5.3	± 20.0
1,1,1-Trichloroethane	0.949	0.889	0.05	-6.4	± 20.0
Cyclohexane	0.837	0.826	0.1	-1.3	± 25.0
Carbon tetrachloride	0.829	0.785	0.02	-5.4	± 25.0
Benzene	2.141	2.075	0.3	-3.1	± 20.0
1,2-Dichloroethane	0.405	0.381	0.01	-6.1	± 25.0
Trichloroethene	0.594	0.566	0.1	-4.8	± 20.0
Methylcyclohexane	0.733	0.740	0.2	1.0	± 25.0
1,2-Dichloropropane	0.502	0.490	0.1	-2.4	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/09/2016 Time: 11:03

Lab File ID: VI049291.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00545 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.712	0.09	-2.7	± 20.0
cis-1,3-Dichloropropene	0.740	0.719	0.1	-2.8	± 20.0
4-Methyl-2-pentanone	0.258	0.265	0.01	2.4	± 30.0
Toluene	1.806	1.761	0.4	-2.5	± 20.0
trans-1,3-Dichloropropene	0.567	0.563	0.01	-0.8	± 20.0
1,1,2-Trichloroethane	0.261	0.256	0.04	-1.8	± 20.0
Tetrachloroethene	0.390	0.385	0.1	-1.4	± 20.0
2-Hexanone	0.173	0.181	0.01	4.9	± 40.0
Dibromochloromethane	0.393	0.399	0.05	1.4	± 20.0
1,2-Dibromoethane	0.272	0.260	0.01	-4.6	± 20.0
Chlorobenzene	1.083	1.060	0.4	-2.1	± 20.0
Ethylbenzene	1.866	1.860	0.5	-0.4	± 20.0
o-Xylene	0.636	0.627	0.3	-1.3	± 20.0
m,p-Xylene	0.680	0.671	0.2	-1.4	± 20.0
Styrene	1.055	1.035	0.2	-1.8	± 20.0
Bromoform	0.466	0.451	0.01	-3.2	± 30.0
Isopropylbenzene	1.648	1.655	0.7	0.4	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.247	0.05	-1.9	± 25.0
1,3-Dichlorobenzene	1.696	1.677	0.5	-1.1	± 20.0
1,4-Dichlorobenzene	1.742	1.657	0.7	-4.9	± 20.0
1,2-Dichlorobenzene	1.405	1.376	0.4	-2.1	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.079	0.01	-7.6	± 40.0
1,2,4-trichlorobenzene	0.751	0.762	0.3	1.5	± 30.0
1,2,3-Trichlorobenzene	0.556	0.541	0.2	-2.5	± 40.0
Vinyl Chloride-d3	0.308	0.230	0.01	-25.2	± 30.0
Chloroethane-d5	0.170	0.146	0.01	-14.3	± 30.0
1,1-Dichloroethene-d2	0.725	0.605	0.01	-16.6	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/09/2016 Time: 11:03

Lab File ID: VI049291.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00545 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.069	0.01	3.3	± 40.0
Chloroform-d	0.783	0.712	0.01	-9.1	± 20.0
1,2-Dichloroethane-d4	0.320	0.297	0.01	-7.2	± 25.0
Benzene-d6	1.948	1.728	0.03	-11.3	± 20.0
1,2-Dichloropropane-d6	0.548	0.509	0.1	-7	± 20.0
Toluene-d8	1.437	1.261	0.2	-12.2	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.200	0.01	-7.5	± 25.0
2-Hexanone-d5	0.068	0.071	0.01	4.3	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.245	0.01	-1.5	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.781	0.06	-10.9	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/09/2016 Time: 18:15

Lab File ID: VI049303.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00546 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.551	0.01	-2.2	± 40.0
Chloromethane	0.482	0.395	0.01	-18	± 30.0
Vinyl chloride	0.337	0.330	0.01	-2.2	± 30.0
Bromomethane	0.163	0.115	0.01	-29.4	± 30.0
Chloroethane	0.144	0.148	0.01	2.9	± 30.0
Trichlorofluoromethane	0.471	0.461	0.01	-2.3	± 30.0
1,1-Dichloroethene	0.404	0.401	0.02	-0.6	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.438	0.01	1.6	± 30.0
Acetone	0.041	0.043	0.01	5.1	± 40.0
Carbon disulfide	1.463	1.385	0.01	-5.4	± 25.0
Methyl Acetate	0.118	0.121	0.01	2.8	± 40.0
Methylene chloride	0.445	0.440	0.01	-1.1	± 30.0
trans-1,2-Dichloroethene	0.446	0.443	0.07	-0.7	± 20.0
Methyl tert-butyl Ether	0.737	0.729	0.01	-1.1	± 30.0
1,1-Dichloroethane	0.756	0.754	0.1	-0.3	± 20.0
cis-1,2-Dichloroethene	0.459	0.448	0.1	-2.3	± 20.0
2-Butanone	0.075	0.079	0.01	5.6	± 40.0
Bromochloromethane	0.184	0.170	0.02	-7.5	± 20.0
Chloroform	0.804	0.809	0.04	0.7	± 20.0
1,1,1-Trichloroethane	0.949	0.960	0.05	1.1	± 20.0
Cyclohexane	0.837	0.812	0.1	-3	± 25.0
Carbon tetrachloride	0.829	0.845	0.02	1.9	± 25.0
Benzene	2.141	2.188	0.3	2.2	± 20.0
1,2-Dichloroethane	0.405	0.404	0.01	-0.4	± 25.0
Trichloroethene	0.594	0.582	0.1	-2	± 20.0
Methylcyclohexane	0.733	0.729	0.2	-0.6	± 25.0
1,2-Dichloropropane	0.502	0.496	0.1	-1.3	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/09/2016 Time: 18:15

Lab File ID: VI049303.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00546 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.707	0.09	-3.4	± 20.0
cis-1,3-Dichloropropene	0.740	0.684	0.1	-7.5	± 20.0
4-Methyl-2-pentanone	0.258	0.265	0.01	2.5	± 30.0
Toluene	1.806	1.823	0.4	1.0	± 20.0
trans-1,3-Dichloropropene	0.567	0.533	0.01	-6	± 20.0
1,1,2-Trichloroethane	0.261	0.253	0.04	-3.1	± 20.0
Tetrachloroethene	0.390	0.389	0.1	-0.3	± 20.0
2-Hexanone	0.173	0.178	0.01	3.1	± 40.0
Dibromochloromethane	0.393	0.376	0.05	-4.3	± 20.0
1,2-Dibromoethane	0.272	0.267	0.01	-2	± 20.0
Chlorobenzene	1.083	1.071	0.4	-1.1	± 20.0
Ethylbenzene	1.866	1.893	0.5	1.4	± 20.0
o-Xylene	0.636	0.632	0.3	-0.6	± 20.0
m,p-Xylene	0.680	0.679	0.2	-0.1	± 20.0
Styrene	1.055	1.067	0.2	1.2	± 20.0
Bromoform	0.466	0.397	0.01	-14.8	± 30.0
Isopropylbenzene	1.648	1.671	0.7	1.4	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.246	0.05	-2.3	± 25.0
1,3-Dichlorobenzene	1.696	1.673	0.5	-1.3	± 20.0
1,4-Dichlorobenzene	1.742	1.678	0.7	-3.7	± 20.0
1,2-Dichlorobenzene	1.405	1.380	0.4	-1.8	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.077	0.01	-10.4	± 40.0
1,2,4-trichlorobenzene	0.751	0.735	0.3	-2.1	± 30.0
1,2,3-Trichlorobenzene	0.556	0.545	0.2	-1.8	± 40.0
Vinyl Chloride-d3	0.308	0.236	0.01	-23.5	± 30.0
Chloroethane-d5	0.170	0.150	0.01	-12.1	± 30.0
1,1-Dichloroethene-d2	0.725	0.615	0.01	-15.2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/09/2016 Time: 18:15

Lab File ID: VI049303.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00546 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.073	0.01	9.3	± 40.0
Chloroform-d	0.783	0.731	0.01	-6.7	± 20.0
1,2-Dichloroethane-d4	0.320	0.302	0.01	-5.8	± 25.0
Benzene-d6	1.948	1.803	0.03	-7.4	± 20.0
1,2-Dichloropropane-d6	0.548	0.515	0.1	-5.9	± 20.0
Toluene-d8	1.437	1.270	0.2	-11.6	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.181	0.01	-16.2	± 25.0
2-Hexanone-d5	0.068	0.071	0.01	4.1	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.238	0.01	-4.6	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.758	0.06	-13.6	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/11/2016 Time: 10:42

Lab File ID: VI049333.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00550 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.625	0.01	11	± 40.0
Chloromethane	0.482	0.454	0.01	-5.8	± 30.0
Vinyl chloride	0.337	0.365	0.01	8.4	± 30.0
Bromomethane	0.163	0.167	0.01	2.5	± 30.0
Chloroethane	0.144	0.161	0.01	12	± 30.0
Trichlorofluoromethane	0.471	0.537	0.01	14	± 30.0
1,1-Dichloroethene	0.404	0.447	0.02	10.7	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.507	0.01	17.7	± 30.0
Acetone	0.041	0.050	0.01	20.8	± 40.0
Carbon disulfide	1.463	1.548	0.01	5.8	± 25.0
Methyl Acetate	0.118	0.141	0.01	19.4	± 40.0
Methylene chloride	0.445	0.469	0.01	5.5	± 30.0
trans-1,2-Dichloroethene	0.446	0.491	0.07	10	± 20.0
Methyl tert-butyl Ether	0.737	0.820	0.01	11.2	± 30.0
1,1-Dichloroethane	0.756	0.827	0.1	9.3	± 20.0
cis-1,2-Dichloroethene	0.459	0.513	0.1	11.9	± 20.0
2-Butanone	0.075	0.089	0.01	19.4	± 40.0
Bromochloromethane	0.184	0.202	0.02	9.7	± 20.0
Chloroform	0.804	0.902	0.04	12.2	± 20.0
1,1,1-Trichloroethane	0.949	1.056	0.05	11.2	± 20.0
Cyclohexane	0.837	0.946	0.1	13	± 25.0
Carbon tetrachloride	0.829	0.916	0.02	10.4	± 25.0
Benzene	2.141	2.384	0.3	11.4	± 20.0
1,2-Dichloroethane	0.405	0.444	0.01	9.6	± 25.0
Trichloroethene	0.594	0.637	0.1	7.2	± 20.0
Methylcyclohexane	0.733	0.833	0.2	13.7	± 25.0
1,2-Dichloropropane	0.502	0.551	0.1	9.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/11/2016 Time: 10:42

Lab File ID: VI049333.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00550 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.813	0.09	11.1	± 20.0
cis-1,3-Dichloropropene	0.740	0.785	0.1	6.1	± 20.0
4-Methyl-2-pentanone	0.258	0.296	0.01	14.5	± 30.0
Toluene	1.806	1.994	0.4	10.4	± 20.0
trans-1,3-Dichloropropene	0.567	0.621	0.01	9.5	± 20.0
1,1,2-Trichloroethane	0.261	0.294	0.04	12.9	± 20.0
Tetrachloroethene	0.390	0.427	0.1	9.4	± 20.0
2-Hexanone	0.173	0.199	0.01	15	± 40.0
Dibromochloromethane	0.393	0.443	0.05	12.6	± 20.0
1,2-Dibromoethane	0.272	0.307	0.01	12.9	± 20.0
Chlorobenzene	1.083	1.188	0.4	9.7	± 20.0
Ethylbenzene	1.866	2.108	0.5	12.9	± 20.0
o-Xylene	0.636	0.710	0.3	11.7	± 20.0
m,p-Xylene	0.680	0.760	0.2	11.8	± 20.0
Styrene	1.055	1.172	0.2	11.1	± 20.0
Bromoform	0.466	0.495	0.01	6.1	± 30.0
Isopropylbenzene	1.648	1.895	0.7	15	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.284	0.05	12.8	± 25.0
1,3-Dichlorobenzene	1.696	1.896	0.5	11.8	± 20.0
1,4-Dichlorobenzene	1.742	1.880	0.7	7.9	± 20.0
1,2-Dichlorobenzene	1.405	1.573	0.4	11.9	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.084	0.01	-2.1	± 40.0
1,2,4-trichlorobenzene	0.751	0.860	0.3	14.6	± 30.0
1,2,3-Trichlorobenzene	0.556	0.613	0.2	10.3	± 40.0
Vinyl Chloride-d3	0.308	0.276	0.01	-10.2	± 30.0
Chloroethane-d5	0.170	0.162	0.01	-4.9	± 30.0
1,1-Dichloroethene-d2	0.725	0.708	0.01	-2.4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/11/2016 Time: 10:42

Lab File ID: VI049333.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00550 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.079	0.01	17.9	± 40.0
Chloroform-d	0.783	0.805	0.01	2.8	± 20.0
1,2-Dichloroethane-d4	0.320	0.337	0.01	5.2	± 25.0
Benzene-d6	1.948	1.950	0.03	0.1	± 20.0
1,2-Dichloropropane-d6	0.548	0.556	0.1	1.5	± 20.0
Toluene-d8	1.437	1.407	0.2	-2.1	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.214	0.01	-0.7	± 25.0
2-Hexanone-d5	0.068	0.078	0.01	13.8	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.272	0.01	9.0	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.866	0.06	-1.2	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/11/2016 Time: 18:32

Lab File ID: VI049347.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00526 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.518	0.01	-8	± 50.0
Chloromethane	0.482	0.396	0.01	-17.9	± 50.0
Vinyl chloride	0.337	0.319	0.01	-5.4	± 50.0
Bromomethane	0.163	0.138	0.01	-15.3	± 50.0
Chloroethane	0.144	0.138	0.01	-4	± 50.0
Trichlorofluoromethane	0.471	0.430	0.01	-8.7	± 50.0
1,1-Dichloroethene	0.404	0.396	0.02	-2	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.415	0.01	-3.7	± 50.0
Acetone	0.041	0.044	0.01	7.3	± 50.0
Carbon disulfide	1.463	1.349	0.01	-7.8	± 25.0
Methyl Acetate	0.118	0.124	0.01	5.0	± 50.0
Methylene chloride	0.445	0.450	0.01	1.2	± 50.0
trans-1,2-Dichloroethene	0.446	0.439	0.07	-1.5	± 25.0
Methyl tert-butyl Ether	0.737	0.783	0.01	6.1	± 50.0
1,1-Dichloroethane	0.756	0.771	0.1	2.0	± 25.0
cis-1,2-Dichloroethene	0.459	0.470	0.1	2.4	± 25.0
2-Butanone	0.075	0.082	0.01	10	± 50.0
Bromochloromethane	0.184	0.183	0.02	-0.7	± 25.0
Chloroform	0.804	0.851	0.04	5.9	± 25.0
1,1,1-Trichloroethane	0.949	0.938	0.05	-1.2	± 25.0
Cyclohexane	0.837	0.800	0.1	-4.5	± 50.0
Carbon tetrachloride	0.829	0.818	0.02	-1.4	± 50.0
Benzene	2.141	2.216	0.3	3.5	± 25.0
1,2-Dichloroethane	0.405	0.418	0.01	3.0	± 50.0
Trichloroethene	0.594	0.583	0.1	-1.8	± 25.0
Methylcyclohexane	0.733	0.688	0.2	-6.1	± 50.0
1,2-Dichloropropane	0.502	0.514	0.1	2.4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/11/2016 Time: 18:32

Lab File ID: VI049347.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00526 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.716	0.09	-2.1	± 25.0
cis-1,3-Dichloropropene	0.740	0.702	0.1	-5.1	± 25.0
4-Methyl-2-pentanone	0.258	0.278	0.01	7.7	± 50.0
Toluene	1.806	1.828	0.4	1.2	± 25.0
trans-1,3-Dichloropropene	0.567	0.540	0.01	-4.7	± 25.0
1,1,2-Trichloroethane	0.261	0.275	0.04	5.4	± 25.0
Tetrachloroethene	0.390	0.391	0.1	0.3	± 25.0
2-Hexanone	0.173	0.182	0.01	5.3	± 50.0
Dibromochloromethane	0.393	0.393	0.05	-0.1	± 25.0
1,2-Dibromoethane	0.272	0.286	0.01	5.0	± 25.0
Chlorobenzene	1.083	1.121	0.4	3.5	± 25.0
Ethylbenzene	1.866	1.934	0.5	3.6	± 25.0
o-Xylene	0.636	0.656	0.3	3.2	± 25.0
m,p-Xylene	0.680	0.693	0.2	1.9	± 25.0
Styrene	1.055	1.107	0.2	5.0	± 25.0
Bromoform	0.466	0.430	0.01	-7.8	± 50.0
Isopropylbenzene	1.648	1.749	0.7	6.1	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.265	0.05	5.1	± 25.0
1,3-Dichlorobenzene	1.696	1.691	0.5	-0.3	± 25.0
1,4-Dichlorobenzene	1.742	1.740	0.7	-0.1	± 25.0
1,2-Dichlorobenzene	1.405	1.435	0.4	2.1	± 25.0
1,2-Dibromo-3-chloropropane	0.086	0.079	0.01	-7.7	± 50.0
1,2,4-trichlorobenzene	0.751	0.780	0.3	3.9	± 50.0
1,2,3-Trichlorobenzene	0.556	0.575	0.2	3.4	± 50.0
Vinyl Chloride-d3	0.308	0.241	0.01	-21.8	± 50.0
Chloroethane-d5	0.170	0.154	0.01	-9.6	± 50.0
1,1-Dichloroethene-d2	0.725	0.648	0.01	-10.6	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/11/2016 Time: 18:32

Lab File ID: VI049347.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00526 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.074	0.01	11.1	± 50.0
Chloroform-d	0.783	0.765	0.01	-2.3	± 25.0
1,2-Dichloroethane-d4	0.320	0.319	0.01	-0.5	± 25.0
Benzene-d6	1.948	1.913	0.03	-1.8	± 25.0
1,2-Dichloropropane-d6	0.548	0.540	0.1	-1.3	± 25.0
Toluene-d8	1.437	1.376	0.2	-4.3	± 25.0
trans-1,3-Dichloropropene-d4	0.216	0.197	0.01	-8.9	± 25.0
2-Hexanone-d5	0.068	0.074	0.01	8.2	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.271	0.01	8.7	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.841	0.06	-4.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 12:03

Lab File ID: VI049349.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00527 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.537	0.01	-4.7	± 40.0
Chloromethane	0.482	0.406	0.01	-15.7	± 30.0
Vinyl chloride	0.337	0.319	0.01	-5.5	± 30.0
Bromomethane	0.163	0.149	0.01	-8.8	± 30.0
Chloroethane	0.144	0.146	0.01	1.5	± 30.0
Trichlorofluoromethane	0.471	0.468	0.01	-0.7	± 30.0
1,1-Dichloroethene	0.404	0.401	0.02	-0.5	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.437	0.01	1.4	± 30.0
Acetone	0.041	0.041	0.01	0.2	± 40.0
Carbon disulfide	1.463	1.393	0.01	-4.8	± 25.0
Methyl Acetate	0.118	0.121	0.01	2.7	± 40.0
Methylene chloride	0.445	0.435	0.01	-2.3	± 30.0
trans-1,2-Dichloroethene	0.446	0.452	0.07	1.3	± 20.0
Methyl tert-butyl Ether	0.737	0.742	0.01	0.7	± 30.0
1,1-Dichloroethane	0.756	0.753	0.1	-0.5	± 20.0
cis-1,2-Dichloroethene	0.459	0.466	0.1	1.5	± 20.0
2-Butanone	0.075	0.079	0.01	5.2	± 40.0
Bromochloromethane	0.184	0.181	0.02	-1.8	± 20.0
Chloroform	0.804	0.826	0.04	2.7	± 20.0
1,1,1-Trichloroethane	0.949	0.926	0.05	-2.4	± 20.0
Cyclohexane	0.837	0.810	0.1	-3.3	± 25.0
Carbon tetrachloride	0.829	0.814	0.02	-1.8	± 25.0
Benzene	2.141	2.127	0.3	-0.7	± 20.0
1,2-Dichloroethane	0.405	0.391	0.01	-3.7	± 25.0
Trichloroethene	0.594	0.579	0.1	-2.5	± 20.0
Methylcyclohexane	0.733	0.734	0.2	0.1	± 25.0
1,2-Dichloropropane	0.502	0.489	0.1	-2.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 12:03

Lab File ID: VI049349.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00527 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.731	0.09	-0.2	± 20.0
cis-1,3-Dichloropropene	0.740	0.728	0.1	-1.6	± 20.0
4-Methyl-2-pentanone	0.258	0.262	0.01	1.3	± 30.0
Toluene	1.806	1.815	0.4	0.5	± 20.0
trans-1,3-Dichloropropene	0.567	0.562	0.01	-1	± 20.0
1,1,2-Trichloroethane	0.261	0.265	0.04	1.8	± 20.0
Tetrachloroethene	0.390	0.393	0.1	0.7	± 20.0
2-Hexanone	0.173	0.176	0.01	1.7	± 40.0
Dibromochloromethane	0.393	0.406	0.05	3.1	± 20.0
1,2-Dibromoethane	0.272	0.273	0.01	0.5	± 20.0
Chlorobenzene	1.083	1.103	0.4	1.9	± 20.0
Ethylbenzene	1.866	1.944	0.5	4.1	± 20.0
o-Xylene	0.636	0.651	0.3	2.4	± 20.0
m,p-Xylene	0.680	0.699	0.2	2.8	± 20.0
Styrene	1.055	1.096	0.2	3.9	± 20.0
Bromoform	0.466	0.460	0.01	-1.2	± 30.0
Isopropylbenzene	1.648	1.772	0.7	7.5	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.252	0.05	0.0	± 25.0
1,3-Dichlorobenzene	1.696	1.745	0.5	2.9	± 20.0
1,4-Dichlorobenzene	1.742	1.791	0.7	2.8	± 20.0
1,2-Dichlorobenzene	1.405	1.435	0.4	2.1	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.083	0.01	-2.7	± 40.0
1,2,4-trichlorobenzene	0.751	0.814	0.3	8.5	± 30.0
1,2,3-Trichlorobenzene	0.556	0.598	0.2	7.7	± 40.0
Vinyl Chloride-d3	0.308	0.255	0.01	-17.3	± 30.0
Chloroethane-d5	0.170	0.163	0.01	-4.2	± 30.0
1,1-Dichloroethene-d2	0.725	0.667	0.01	-8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 12:03

Lab File ID: VI049349.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00527 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.080	0.01	19.8	± 40.0
Chloroform-d	0.783	0.798	0.01	1.8	± 20.0
1,2-Dichloroethane-d4	0.320	0.332	0.01	3.5	± 25.0
Benzene-d6	1.948	1.945	0.03	-0.1	± 20.0
1,2-Dichloropropane-d6	0.548	0.553	0.1	1.0	± 20.0
Toluene-d8	1.437	1.414	0.2	-1.6	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.215	0.01	-0.3	± 25.0
2-Hexanone-d5	0.068	0.078	0.01	14.2	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.278	0.01	11.5	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.892	0.06	1.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 20:37

Lab File ID: VI049360.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00528 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.532	0.01	-5.6	± 50.0
Chloromethane	0.482	0.416	0.01	-13.8	± 50.0
Vinyl chloride	0.337	0.331	0.01	-1.8	± 50.0
Bromomethane	0.163	0.149	0.01	-8.5	± 50.0
Chloroethane	0.144	0.150	0.01	4.2	± 50.0
Trichlorofluoromethane	0.471	0.451	0.01	-4.4	± 50.0
1,1-Dichloroethene	0.404	0.417	0.02	3.3	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.446	0.01	3.4	± 50.0
Acetone	0.041	0.043	0.01	5.3	± 50.0
Carbon disulfide	1.463	1.425	0.01	-2.6	± 25.0
Methyl Acetate	0.118	0.127	0.01	7.5	± 50.0
Methylene chloride	0.445	0.447	0.01	0.5	± 50.0
trans-1,2-Dichloroethene	0.446	0.467	0.07	4.6	± 25.0
Methyl tert-butyl Ether	0.737	0.792	0.01	7.5	± 50.0
1,1-Dichloroethane	0.756	0.794	0.1	5.0	± 25.0
cis-1,2-Dichloroethene	0.459	0.491	0.1	7.1	± 25.0
2-Butanone	0.075	0.082	0.01	9.9	± 50.0
Bromochloromethane	0.184	0.185	0.02	0.8	± 25.0
Chloroform	0.804	0.868	0.04	8.0	± 25.0
1,1,1-Trichloroethane	0.949	0.982	0.05	3.4	± 25.0
Cyclohexane	0.837	0.809	0.1	-3.4	± 50.0
Carbon tetrachloride	0.829	0.846	0.02	2.0	± 50.0
Benzene	2.141	2.218	0.3	3.6	± 25.0
1,2-Dichloroethane	0.405	0.419	0.01	3.2	± 50.0
Trichloroethene	0.594	0.600	0.1	1.1	± 25.0
Methylcyclohexane	0.733	0.711	0.2	-2.9	± 50.0
1,2-Dichloropropane	0.502	0.503	0.1	0.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 20:37

Lab File ID: VI049360.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00528 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.734	0.09	0.3	± 25.0
cis-1,3-Dichloropropene	0.740	0.731	0.1	-1.3	± 25.0
4-Methyl-2-pentanone	0.258	0.268	0.01	3.9	± 50.0
Toluene	1.806	1.891	0.4	4.7	± 25.0
trans-1,3-Dichloropropene	0.567	0.572	0.01	0.9	± 25.0
1,1,2-Trichloroethane	0.261	0.277	0.04	6.1	± 25.0
Tetrachloroethene	0.390	0.407	0.1	4.3	± 25.0
2-Hexanone	0.173	0.178	0.01	2.8	± 50.0
Dibromochloromethane	0.393	0.426	0.05	8.4	± 25.0
1,2-Dibromoethane	0.272	0.284	0.01	4.5	± 25.0
Chlorobenzene	1.083	1.172	0.4	8.2	± 25.0
Ethylbenzene	1.866	2.034	0.5	9.0	± 25.0
o-Xylene	0.636	0.696	0.3	9.4	± 25.0
m,p-Xylene	0.680	0.739	0.2	8.7	± 25.0
Styrene	1.055	1.170	0.2	10.9	± 25.0
Bromoform	0.466	0.462	0.01	-1	± 50.0
Isopropylbenzene	1.648	1.885	0.7	14.4	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.271	0.05	7.6	± 25.0
1,3-Dichlorobenzene	1.696	1.792	0.5	5.7	± 25.0
1,4-Dichlorobenzene	1.742	1.767	0.7	1.4	± 25.0
1,2-Dichlorobenzene	1.405	1.520	0.4	8.2	± 25.0
1,2-Dibromo-3-chloropropane	0.086	0.092	0.01	7.7	± 50.0
1,2,4-trichlorobenzene	0.751	0.842	0.3	12.2	± 50.0
1,2,3-Trichlorobenzene	0.556	0.632	0.2	13.8	± 50.0
Vinyl Chloride-d3	0.308	0.254	0.01	-17.4	± 50.0
Chloroethane-d5	0.170	0.160	0.01	-6.2	± 50.0
1,1-Dichloroethene-d2	0.725	0.690	0.01	-4.9	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 20:37

Lab File ID: VI049360.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00528 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

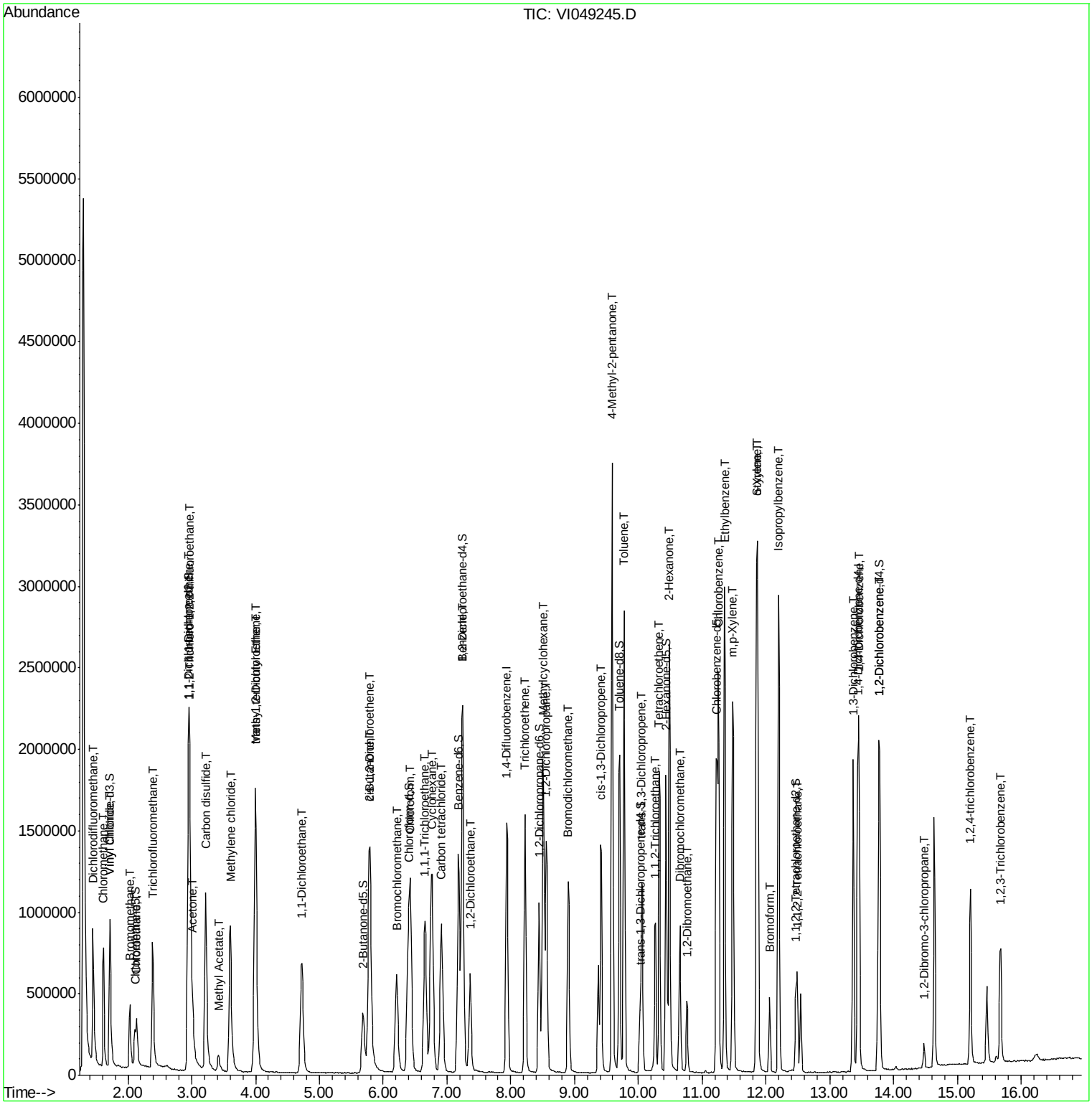
ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.088	0.01	31.5	± 50.0
Chloroform-d	0.783	0.859	0.01	9.7	± 25.0
1,2-Dichloroethane-d4	0.320	0.350	0.01	9.2	± 25.0
Benzene-d6	1.948	2.022	0.03	3.8	± 25.0
1,2-Dichloropropane-d6	0.548	0.580	0.1	5.8	± 25.0
Toluene-d8	1.437	1.475	0.2	2.7	± 25.0
trans-1,3-Dichloropropene-d4	0.216	0.219	0.01	1.6	± 25.0
2-Hexanone-d5	0.068	0.083	0.01	21.4	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.300	0.01	20.6	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.944	0.06	7.7	± 25.0

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050516\
Data File : VI049245.D
Acq On : 5 May 2016 10:15
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00540

Quant Time: May 06 04:36:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050516\
Data File : VI049245.D
Acq On : 5 May 2016 10:15
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00540

Quant Time: May 06 04:36:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1400841	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	948431	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	368197	5.00	ug/L	0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.72	65	390336	4.53	ug/L	0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 90.60%			
7) Chloroethane-d5	2.11	69	222774	4.66	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.20%			
11) 1,1-Dichloroethene-d2	2.94	63	932804	4.59	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 91.80%			
20) 2-Butanone-d5	5.68	46	899951	48.20	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 96.40%			
24) Chloroform-d	6.39	84	987828	4.50	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.00%			
26) 1,2-Dichloroethane-d4	7.24	65	407190	4.54	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.80%			
32) Benzene-d6	7.18	84	1695967	4.59	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 91.80%			
36) 1,2-Dichloropropane-d6	8.45	67	478823	4.61	ug/L	0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 92.20%			
41) Toluene-d8	9.71	98	1237704	4.54	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.80%			
43) trans-1,3-Dichloropropene-	10.02	79	187030	4.57	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.40%			
46) 2-Hexanone-d5	10.44	63	617924	47.86	ug/L	0.01
Spiked Amount 50.000	Range 45 - 130		Recovery = 95.72%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	220938	4.68	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 93.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	285343	4.42	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	874839	5.54	ug/L	98
3) Chloromethane	1.62	50	714612	5.29	ug/L	98
5) Vinyl chloride	1.72	62	529506	5.61	ug/L	96
6) Bromomethane	2.03	94	248668	5.44	ug/L	99
8) Chloroethane	2.14	64	236620	5.86	ug/L	91
9) Trichlorofluoromethane	2.38	101	761388	5.77	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.98	101	676868	5.60	ug/L	99
12) 1,1-Dichloroethene	2.96	96	590388	5.22	ug/L	92
13) Acetone	3.01	43	662078	57.18	ug/L	96
14) Carbon disulfide	3.22	76	2121868	5.18	ug/L	100
15) Methyl Acetate	3.42	43	178458	5.40	ug/L	96
16) Methylene chloride	3.61	84	627648	5.04	ug/L	95
17) Methyl tert-butyl Ether	4.00	73	1108616	5.37	ug/L	99
18) trans-1,2-Dichloroethene	4.00	96	654759	5.24	ug/L	96
19) 1,1-Dichloroethane	4.73	63	1092395	5.16	ug/L	100
21) 2-Butanone	5.79	43	1176798	56.17	ug/L	99
22) cis-1,2-Dichloroethene	5.78	96	660236	5.14	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050516\
Data File : VI049245.D
Acq On : 5 May 2016 10:15
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00540

Quant Time: May 06 04:36:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 05 05:21:45 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.21	128	264512	5.13	ug/L	93
25) Chloroform	6.43	83	1171280	5.20	ug/L	100
27) 1,2-Dichloroethane	7.36	62	606547	5.34	ug/L	100
29) 1,1,1-Trichloroethane	6.66	97	971956	5.40	ug/L	97
30) Cyclohexane	6.76	56	901595	5.68	ug/L	98
31) Carbon tetrachloride	6.91	117	864104	5.49	ug/L	98
33) Benzene	7.25	78	2195225	5.41	ug/L	100
34) Trichloroethene	8.22	95	600950	5.33	ug/L	97
35) Methylcyclohexane	8.51	83	821210	5.91	ug/L	100
37) 1,2-Dichloropropane	8.56	63	508548	5.34	ug/L	99
38) Bromodichloromethane	8.90	83	746639	5.38	ug/L	99
39) cis-1,3-Dichloropropene	9.41	75	749431	5.34	ug/L	99
40) 4-Methyl-2-pentanone	9.59	43	2769733	56.50	ug/L	99
42) Toluene	9.78	91	1837161	5.36	ug/L	98
44) trans-1,3-Dichloropropene	10.06	75	585853	5.45	ug/L	97
45) 1,1,2-Trichloroethane	10.27	97	267001	5.40	ug/L	98
47) Tetrachloroethene	10.33	164	398726	5.39	ug/L	98
48) 2-Hexanone	10.48	43	1836447	56.03	ug/L	99
49) Dibromochloromethane	10.65	129	407336	5.46	ug/L	97
50) 1,2-Dibromoethane	10.76	107	279070	5.41	ug/L	97
51) Chlorobenzene	11.25	112	1097413	5.34	ug/L	97
52) Ethylbenzene	11.35	91	1942037	5.49	ug/L	100
53) m,p-Xylene	11.48	106	692185	5.37	ug/L	99
54) o-Xylene	11.85	106	648446	5.38	ug/L	99
55) Styrene	11.87	104	1090889	5.45	ug/L	97
56) Isopropylbenzene	12.20	105	1742953	5.58	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.49	83	254023	5.32	ug/L	99
60) Bromoform	12.06	173	191745	5.59	ug/L	97
61) 1,3-Dichlorobenzene	13.37	146	666033	5.33	ug/L	98
62) 1,4-Dichlorobenzene	13.46	146	661270	5.15	ug/L	98
64) 1,2-Dichlorobenzene	13.78	146	556914	5.38	ug/L	96
65) 1,2-Dibromo-3-chloropropan	14.48	75	31467	4.99	ug/L	95
66) 1,2,4-trichlorobenzene	15.21	180	305542	5.53	ug/L	99
67) 1,2,3-Trichlorobenzene	15.68	180	222470	5.44	ug/L	98

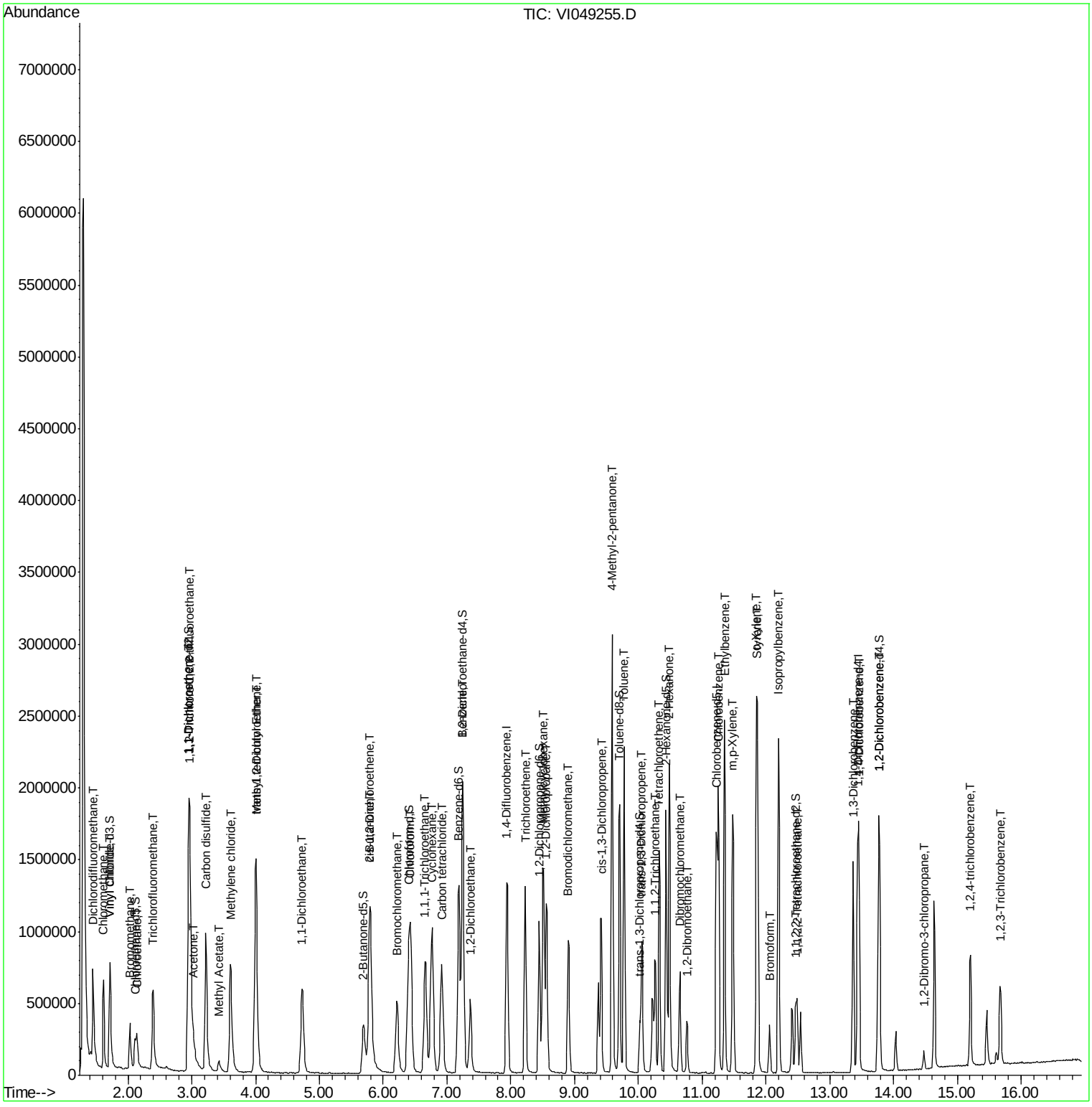
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049255.D
Acq On : 5 May 2016 16:16
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00541

Quant Time: May 06 04:44:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049255.D
Acq On : 5 May 2016 16:16
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00541

Quant Time: May 06 04:44:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.95	114	1235299	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	831818	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	319065	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.72	65	369908	4.86	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 97.20%			
7) Chloroethane-d5	2.11	69	212761	5.05	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.00%			
11) 1,1-Dichloroethene-d2	2.95	63	878013	4.90	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 98.00%			
20) 2-Butanone-d5	5.69	46	922328	56.02	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 112.04%			
24) Chloroform-d	6.40	84	971856	5.02	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.40%			
26) 1,2-Dichloroethane-d4	7.25	65	418229	5.28	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.60%			
32) Benzene-d6	7.19	84	1667844	5.15	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.00%			
36) 1,2-Dichloropropane-d6	8.45	67	468018	5.14	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 102.80%			
41) Toluene-d8	9.71	98	1193987	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.80%			
43) trans-1,3-Dichloropropene-	10.02	79	175391	4.89	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 97.80%			
46) 2-Hexanone-d5	10.44	63	598214	52.83	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 105.66%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	213248	5.15	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 103.00%			
63) 1,2-Dichlorobenzene-d4	13.76	152	271041	4.85	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 97.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	714152	5.13	ug/L	100
3) Chloromethane	1.62	50	605465	5.08	ug/L	98
5) Vinyl chloride	1.72	62	432005	5.19	ug/L	96
6) Bromomethane	2.03	94	200448	4.98	ug/L	95
8) Chloroethane	2.14	64	185632	5.22	ug/L	97
9) Trichlorofluoromethane	2.39	101	591418	5.08	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.98	101	540291	5.07	ug/L	98
12) 1,1-Dichloroethene	2.96	96	493581	4.95	ug/L	82
13) Acetone	3.02	43	554215	54.28	ug/L	91
14) Carbon disulfide	3.22	76	1772136	4.90	ug/L	99
15) Methyl Acetate	3.43	43	150578	5.17	ug/L	95
16) Methylene chloride	3.61	84	545239	4.96	ug/L	95
17) Methyl tert-butyl Ether	4.00	73	936466	5.14	ug/L	99
18) trans-1,2-Dichloroethene	4.01	96	547189	4.97	ug/L	96
19) 1,1-Dichloroethane	4.73	63	954530	5.11	ug/L	97
21) 2-Butanone	5.80	43	966983	52.34	ug/L	97
22) cis-1,2-Dichloroethene	5.79	96	560927	4.95	ug/L #	93

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049255.D
Acq On : 5 May 2016 16:16
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00541

Quant Time: May 06 04:44:26 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 04:42:07 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.21	128	224701	4.94	ug/L	87
25) Chloroform	6.43	83	1004724	5.06	ug/L	99
27) 1,2-Dichloroethane	7.36	62	516238	5.15	ug/L	99
29) 1,1,1-Trichloroethane	6.67	97	812100	5.14	ug/L	97
30) Cyclohexane	6.76	56	725551	5.21	ug/L	96
31) Carbon tetrachloride	6.92	117	703969	5.10	ug/L	98
33) Benzene	7.25	78	1845852	5.18	ug/L	100
34) Trichloroethene	8.23	95	489375	4.95	ug/L	96
35) Methylcyclohexane	8.52	83	631757	5.18	ug/L	99
37) 1,2-Dichloropropane	8.57	63	438556	5.25	ug/L	98
38) Bromodichloromethane	8.90	83	601241	4.94	ug/L	97
39) cis-1,3-Dichloropropene	9.42	75	616876	5.01	ug/L	98
40) 4-Methyl-2-pentanone	9.59	43	2293928	53.36	ug/L	98
42) Toluene	9.78	91	1513251	5.04	ug/L	99
44) trans-1,3-Dichloropropene	10.06	75	461257	4.89	ug/L	98
45) 1,1,2-Trichloroethane	10.27	97	222286	5.13	ug/L	96
47) Tetrachloroethene	10.33	164	317508	4.89	ug/L	93
48) 2-Hexanone	10.48	43	1508416	52.47	ug/L	99
49) Dibromochloromethane	10.65	129	326411	4.99	ug/L	96
50) 1,2-Dibromoethane	10.76	107	225798	4.99	ug/L	97
51) Chlorobenzene	11.25	112	889821	4.94	ug/L	98
52) Ethylbenzene	11.35	91	1553128	5.00	ug/L	100
53) m,p-Xylene	11.48	106	558818	4.94	ug/L	97
54) o-Xylene	11.85	106	518776	4.90	ug/L	99
55) Styrene	11.87	104	876554	5.00	ug/L	99
56) Isopropylbenzene	12.20	105	1370095	5.00	ug/L	98
58) 1,1,2,2-Tetrachloroethane	12.49	83	211712	5.05	ug/L	99
60) Bromoform	12.06	173	139853	4.70	ug/L	100
61) 1,3-Dichlorobenzene	13.37	146	531089	4.91	ug/L	99
62) 1,4-Dichlorobenzene	13.46	146	540227	4.86	ug/L	99
64) 1,2-Dichlorobenzene	13.78	146	449518	5.01	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.48	75	27546	5.04	ug/L	94
66) 1,2,4-trichlorobenzene	15.21	180	233697	4.88	ug/L	98
67) 1,2,3-Trichlorobenzene	15.68	180	171609	4.84	ug/L	95

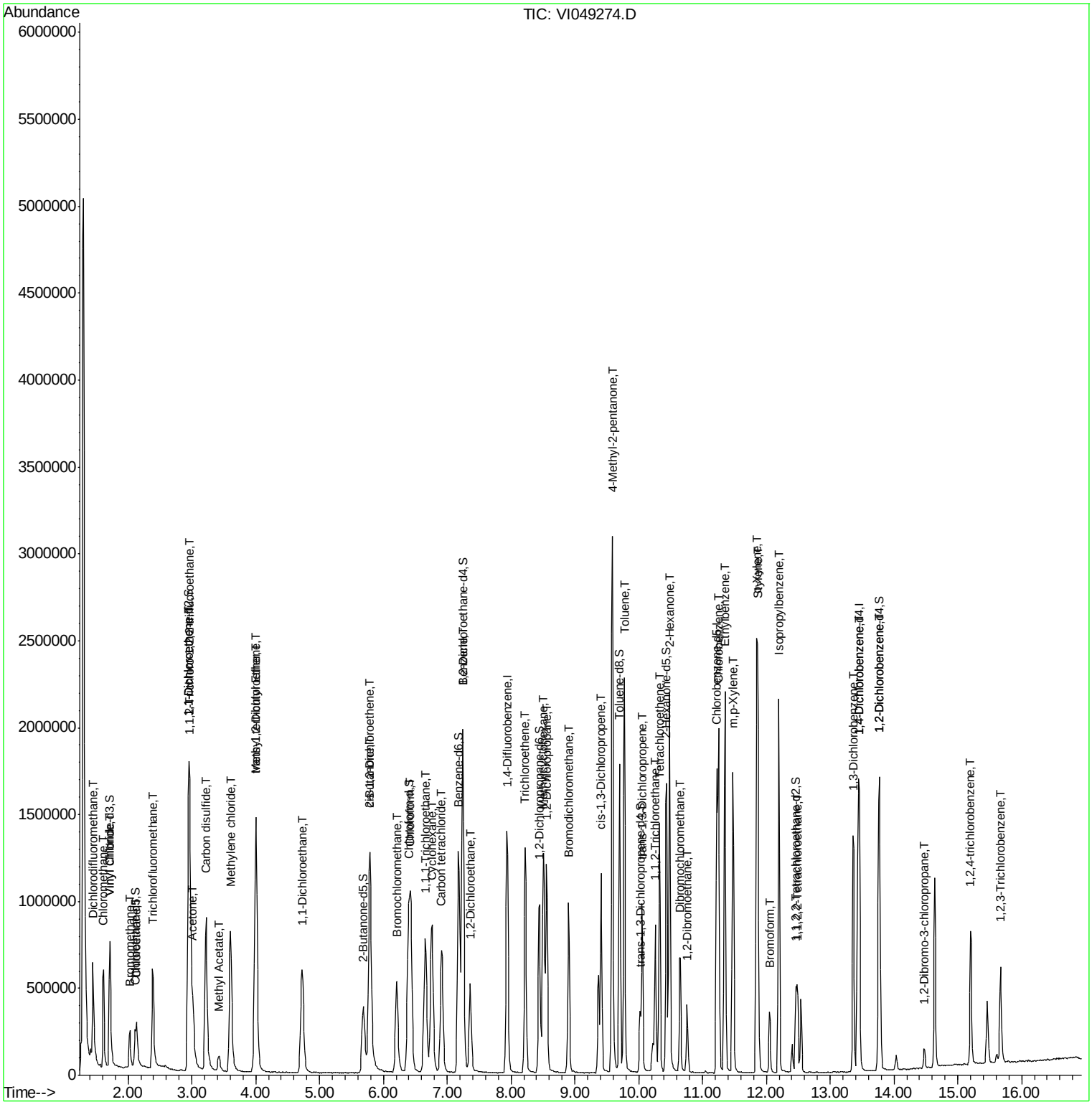
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049274.D
Acq On : 6 May 2016 2:57
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 32 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00542

Quant Time: May 06 05:24:16 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049274.D
Acq On : 6 May 2016 2:57
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 32 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00542

Quant Time: May 06 05:24:16 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1253214	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.22	117	819708	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	302969	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	362555	4.70	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 94.00%			
7) Chloroethane-d5	2.11	69	229752	5.38	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 107.60%			
11) 1,1-Dichloroethene-d2	2.95	63	851851	4.69	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 93.80%			
20) 2-Butanone-d5	5.68	46	911979	54.60	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 109.20%			
24) Chloroform-d	6.39	84	969209	4.94	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.80%			
26) 1,2-Dichloroethane-d4	7.24	65	407665	5.08	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.60%			
32) Benzene-d6	7.18	84	1615167	5.06	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.20%			
36) 1,2-Dichloropropane-d6	8.45	67	462962	5.16	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 103.20%			
41) Toluene-d8	9.70	98	1112652	4.72	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.40%			
43) trans-1,3-Dichloropropene-	10.02	79	162620	4.60	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.00%			
46) 2-Hexanone-d5	10.44	63	590745	52.94	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 105.88%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	207124	5.07	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 101.40%			
63) 1,2-Dichlorobenzene-d4	13.76	152	252018	4.74	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 94.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	643426	4.56	ug/L	98
3) Chloromethane	1.62	50	569284	4.71	ug/L	96
5) Vinyl chloride	1.72	62	426331	5.05	ug/L	100
6) Bromomethane	2.03	94	127363	3.12	ug/L	94
8) Chloroethane	2.14	64	197052	5.46	ug/L	99
9) Trichlorofluoromethane	2.38	101	564786	4.78	ug/L	96
10) 1,1,2-Trichloro-1,2,2-trif	2.97	101	474642	4.39	ug/L	99
12) 1,1-Dichloroethene	2.96	96	480589	4.75	ug/L	91
13) Acetone	3.01	43	538629	52.00	ug/L	98
14) Carbon disulfide	3.22	76	1696882	4.63	ug/L	99
15) Methyl Acetate	3.43	43	165758	5.61	ug/L	98
16) Methylene chloride	3.60	84	553026	4.96	ug/L	97
17) Methyl tert-butyl Ether	4.00	73	940893	5.09	ug/L	99
18) trans-1,2-Dichloroethene	4.00	96	541908	4.85	ug/L	93
19) 1,1-Dichloroethane	4.73	63	947895	5.00	ug/L	99
21) 2-Butanone	5.79	43	1009482	53.86	ug/L	97
22) cis-1,2-Dichloroethene	5.78	96	565702	4.92	ug/L	91

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049274.D
Acq On : 6 May 2016 2:57
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 32 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00542

Quant Time: May 06 05:24:16 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.20	128	227586	4.93	ug/L		91
25) Chloroform	6.43	83	1011554	5.02	ug/L		96
27) 1,2-Dichloroethane	7.36	62	514516	5.06	ug/L		100
29) 1,1,1-Trichloroethane	6.66	97	790607	5.08	ug/L		98
30) Cyclohexane	6.76	56	607812	4.43	ug/L		98
31) Carbon tetrachloride	6.91	117	662862	4.87	ug/L		99
33) Benzene	7.25	78	1812822	5.17	ug/L		100
34) Trichloroethene	8.22	95	471339	4.84	ug/L		98
35) Methylcyclohexane	8.51	83	507713	4.23	ug/L		98
37) 1,2-Dichloropropane	8.56	63	420191	5.10	ug/L		99
38) Bromodichloromethane	8.90	83	604854	5.04	ug/L		100
39) cis-1,3-Dichloropropene	9.41	75	570123	4.70	ug/L		100
40) 4-Methyl-2-pentanone	9.59	43	2293121	54.13	ug/L		99
42) Toluene	9.78	91	1465753	4.95	ug/L		98
44) trans-1,3-Dichloropropene	10.05	75	443082	4.77	ug/L		100
45) 1,1,2-Trichloroethane	10.26	97	224304	5.25	ug/L		98
47) Tetrachloroethene	10.33	164	290410	4.54	ug/L		94
48) 2-Hexanone	10.48	43	1534157	54.15	ug/L		98
49) Dibromochloromethane	10.65	129	322130	5.00	ug/L		100
50) 1,2-Dibromoethane	10.76	107	223987	5.02	ug/L	#	98
51) Chlorobenzene	11.25	112	863141	4.86	ug/L		99
52) Ethylbenzene	11.35	91	1443111	4.72	ug/L		99
53) m,p-Xylene	11.48	106	520081	4.67	ug/L		98
54) o-Xylene	11.85	106	497295	4.77	ug/L		99
55) Styrene	11.87	104	830187	4.80	ug/L		100
56) Isopropylbenzene	12.20	105	1226751	4.54	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.48	83	207012	5.01	ug/L		99
60) Bromoform	12.05	173	138937	4.92	ug/L		99
61) 1,3-Dichlorobenzene	13.37	146	511928	4.98	ug/L		98
62) 1,4-Dichlorobenzene	13.46	146	519477	4.92	ug/L		99
64) 1,2-Dichlorobenzene	13.78	146	427901	5.02	ug/L		99
65) 1,2-Dibromo-3-chloropropan	14.47	75	28348	5.47	ug/L		91
66) 1,2,4-trichlorobenzene	15.20	180	228948	5.03	ug/L		95
67) 1,2,3-Trichlorobenzene	15.67	180	170204	5.06	ug/L		97

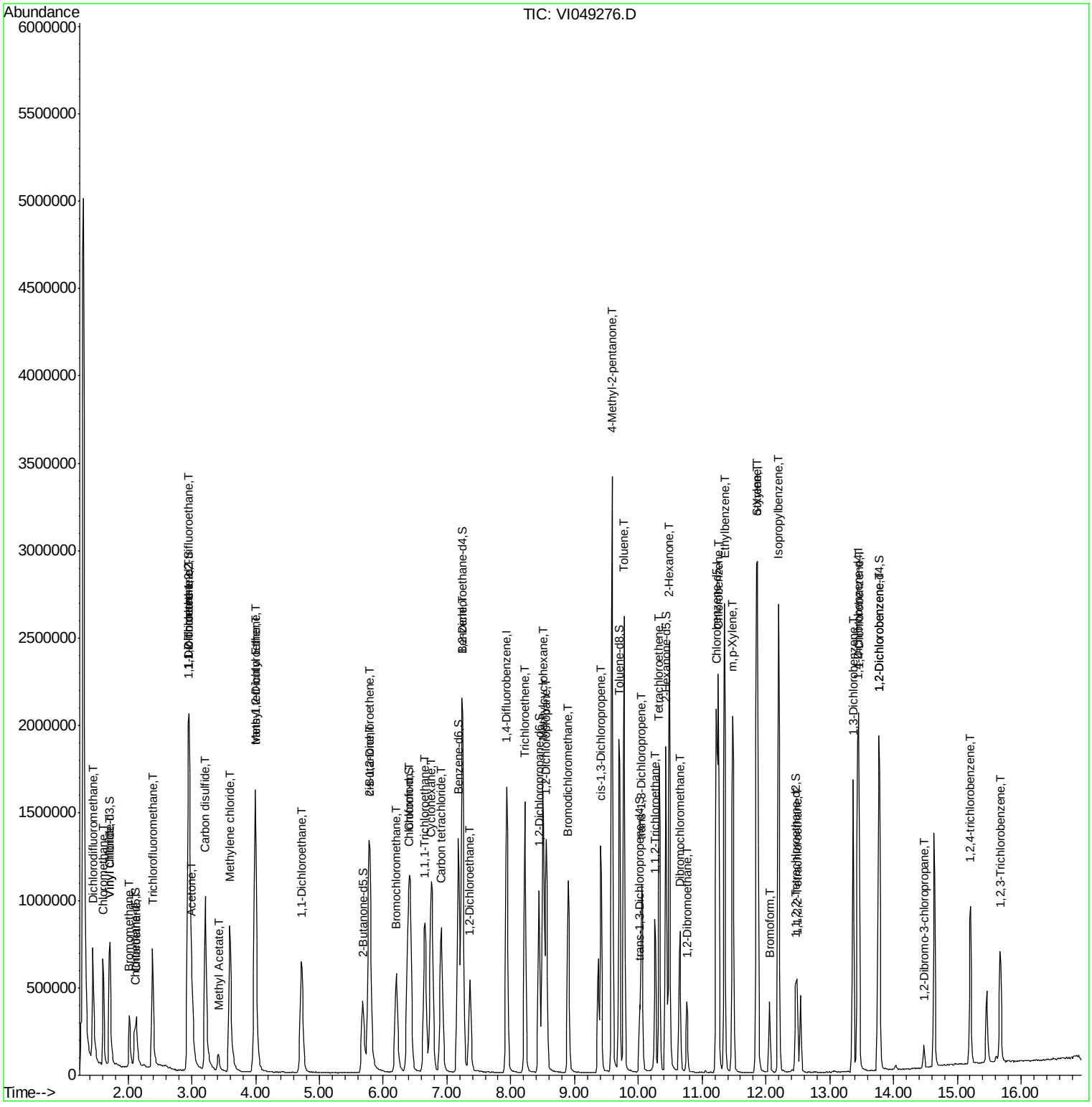
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050616\
Data File : VI049276.D
Acq On : 6 May 2016 10:21
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00543

Quant Time: May 07 04:01:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050616\
Data File : VI049276.D
Acq On : 6 May 2016 10:21
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00543

Quant Time: May 07 04:01:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1457810	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.22	117	978595	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	385883	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	357956	3.99	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 79.80%			
7) Chloroethane-d5	2.10	69	227142	4.57	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 91.40%			
11) 1,1-Dichloroethene-d2	2.94	63	885353	4.19	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 83.80%			
20) 2-Butanone-d5	5.68	46	969877	49.91	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 99.82%			
24) Chloroform-d	6.39	84	1009082	4.42	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 88.40%			
26) 1,2-Dichloroethane-d4	7.24	65	423180	4.53	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.60%			
32) Benzene-d6	7.18	84	1697006	4.45	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.00%			
36) 1,2-Dichloropropane-d6	8.45	67	484322	4.52	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 90.40%			
41) Toluene-d8	9.70	98	1203152	4.28	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 85.60%			
43) trans-1,3-Dichloropropene-	10.02	79	180403	4.27	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 85.40%			
46) 2-Hexanone-d5	10.43	63	615291	46.19	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 92.38%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	221823	4.55	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.00%			
63) 1,2-Dichlorobenzene-d4	13.76	152	280133	4.14	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 82.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	768665	4.68	ug/L	99
3) Chloromethane	1.61	50	627026	4.46	ug/L	100
5) Vinyl chloride	1.71	62	480547	4.89	ug/L	99
6) Bromomethane	2.02	94	187937	3.95	ug/L	94
8) Chloroethane	2.13	64	216902	5.16	ug/L	97
9) Trichlorofluoromethane	2.38	101	681837	4.96	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	600097	4.77	ug/L	99
12) 1,1-Dichloroethene	2.95	96	550063	4.67	ug/L	92
13) Acetone	3.00	43	633400	52.56	ug/L	97
14) Carbon disulfide	3.21	76	1984629	4.65	ug/L	99
15) Methyl Acetate	3.42	43	170853	4.97	ug/L	100
16) Methylene chloride	3.59	84	594079	4.58	ug/L	96
17) Methyl tert-butyl Ether	4.00	73	1010102	4.70	ug/L	99
18) trans-1,2-Dichloroethene	4.00	96	614508	4.72	ug/L	98
19) 1,1-Dichloroethane	4.72	63	1039081	4.71	ug/L	99
21) 2-Butanone	5.79	43	1071932	49.17	ug/L	98
22) cis-1,2-Dichloroethene	5.78	96	619319	4.63	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050616\
Data File : VI049276.D
Acq On : 6 May 2016 10:21
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00543

Quant Time: May 07 04:01:32 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.20	128	246281	4.59	ug/L	92
25) Chloroform	6.42	83	1103309	4.71	ug/L	97
27) 1,2-Dichloroethane	7.35	62	560850	4.74	ug/L	99
29) 1,1,1-Trichloroethane	6.66	97	905451	4.87	ug/L	99
30) Cyclohexane	6.75	56	786429	4.80	ug/L	96
31) Carbon tetrachloride	6.91	117	774042	4.77	ug/L	97
33) Benzene	7.24	78	2020683	4.82	ug/L	100
34) Trichloroethene	8.22	95	543970	4.68	ug/L	98
35) Methylcyclohexane	8.51	83	696201	4.85	ug/L	99
37) 1,2-Dichloropropane	8.56	63	465393	4.73	ug/L	99
38) Bromodichloromethane	8.90	83	680100	4.75	ug/L	97
39) cis-1,3-Dichloropropene	9.41	75	658901	4.55	ug/L	100
40) 4-Methyl-2-pentanone	9.59	43	2510029	49.63	ug/L	99
42) Toluene	9.78	91	1686286	4.77	ug/L	98
44) trans-1,3-Dichloropropene	10.05	75	534620	4.82	ug/L	97
45) 1,1,2-Trichloroethane	10.26	97	240895	4.72	ug/L	99
47) Tetrachloroethene	10.33	164	357307	4.68	ug/L	96
48) 2-Hexanone	10.48	43	1684573	49.81	ug/L	96
49) Dibromochloromethane	10.65	129	374003	4.86	ug/L	98
50) 1,2-Dibromoethane	10.76	107	248593	4.67	ug/L	94
51) Chlorobenzene	11.25	112	1004732	4.74	ug/L	99
52) Ethylbenzene	11.35	91	1741844	4.77	ug/L	100
53) m,p-Xylene	11.48	106	627273	4.71	ug/L	100
54) o-Xylene	11.85	106	582077	4.68	ug/L	99
55) Styrene	11.87	104	993985	4.82	ug/L	98
56) Isopropylbenzene	12.20	105	1549928	4.81	ug/L	98
58) 1,1,2,2-Tetrachloroethane	12.49	83	227442	4.61	ug/L	99
60) Bromoform	12.06	173	167531	4.66	ug/L	98
61) 1,3-Dichlorobenzene	13.37	146	598140	4.57	ug/L	99
62) 1,4-Dichlorobenzene	13.46	146	610441	4.54	ug/L	98
64) 1,2-Dichlorobenzene	13.78	146	489976	4.52	ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.48	75	28372	4.30	ug/L	93
66) 1,2,4-trichlorobenzene	15.21	180	274011	4.73	ug/L	98
67) 1,2,3-Trichlorobenzene	15.67	180	199688	4.66	ug/L	97

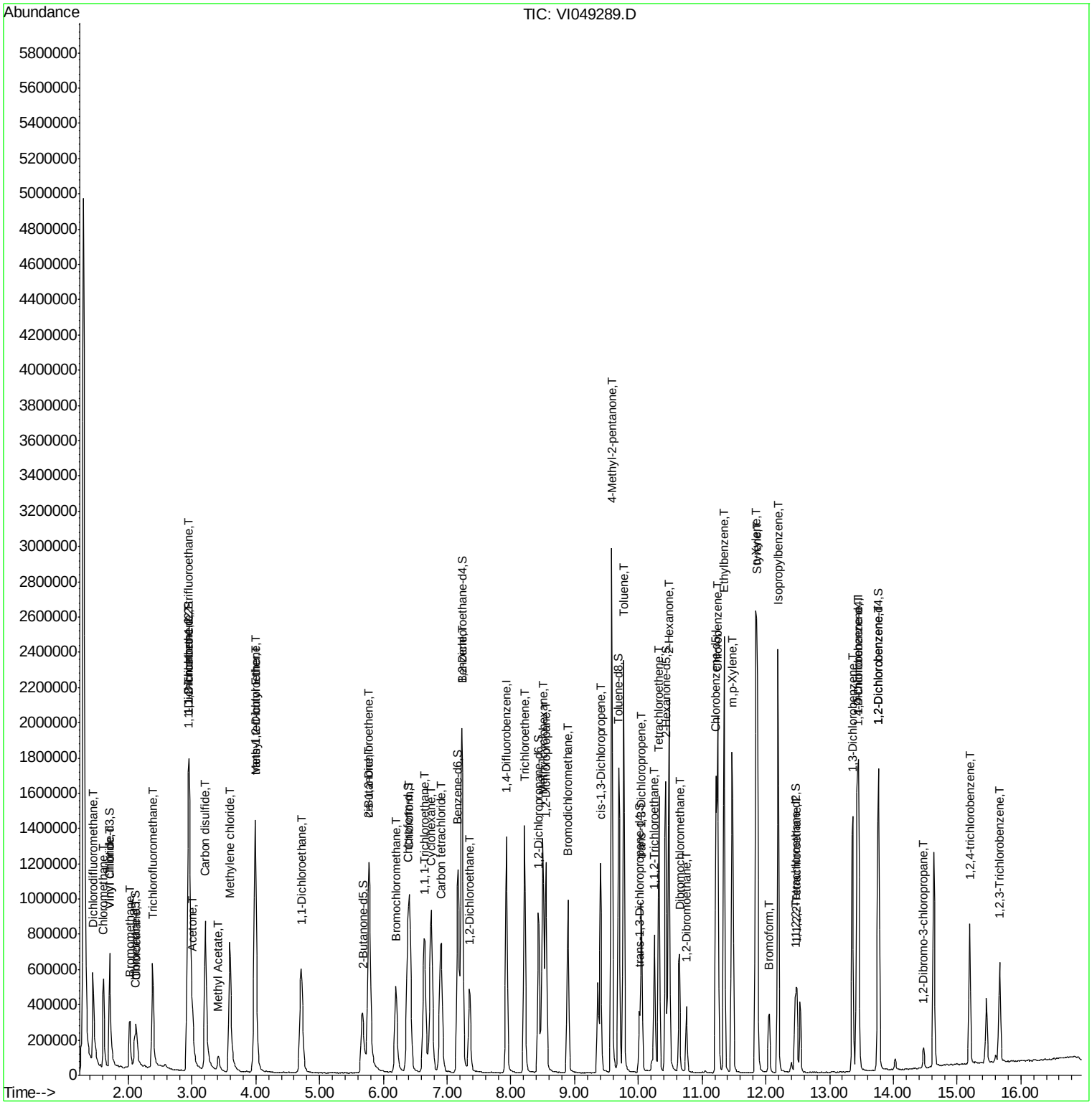
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049289.D
Acq On : 6 May 2016 19:15
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00544

Quant Time: May 09 13:22:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Mon May 09 13:17:11 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049289.D
Acq On : 6 May 2016 19:15
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00544

Quant Time: May 09 13:22:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Mon May 09 13:17:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1181131	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	797532	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	306691	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	299273	4.12	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.40%			
7) Chloroethane-d5	2.10	69	188275	4.67	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.40%			
11) 1,1-Dichloroethene-d2	2.93	63	764726	4.46	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 89.20%			
20) 2-Butanone-d5	5.67	46	851617	54.09	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 108.18%			
24) Chloroform-d	6.38	84	878846	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
26) 1,2-Dichloroethane-d4	7.23	65	375365	4.96	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.20%			
32) Benzene-d6	7.17	84	1476029	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
36) 1,2-Dichloropropane-d6	8.43	67	418300	4.79	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 140		Recovery = 95.80%			
41) Toluene-d8	9.69	98	1040675	4.54	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.80%			
43) trans-1,3-Dichloropropene-	10.02	79	157185	4.57	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.40%			
46) 2-Hexanone-d5	10.43	63	560035	51.59	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 103.18%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	189967	4.78	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	250014	4.65	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	632358	4.75	ug/L	98
3) Chloromethane	1.61	50	532307	4.67	ug/L	100
5) Vinyl chloride	1.71	62	418612	5.26	ug/L	96
6) Bromomethane	2.02	94	176511	4.58	ug/L	95
8) Chloroethane	2.12	64	188340	5.53	ug/L	100
9) Trichlorofluoromethane	2.38	101	571163	5.13	ug/L	96
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	494186	4.85	ug/L	99
12) 1,1-Dichloroethene	2.95	96	491141	5.15	ug/L	92
13) Acetone	3.01	43	502025	51.42	ug/L	99
14) Carbon disulfide	3.20	76	1752802	5.07	ug/L	99
15) Methyl Acetate	3.41	43	143975	5.17	ug/L	96
16) Methylene chloride	3.59	84	531801	5.06	ug/L	97
17) Methyl tert-butyl Ether	3.98	73	911659	5.23	ug/L	97
18) trans-1,2-Dichloroethene	3.99	96	543415	5.16	ug/L	96
19) 1,1-Dichloroethane	4.71	63	922864	5.17	ug/L	98
21) 2-Butanone	5.78	43	949535	53.76	ug/L	100
22) cis-1,2-Dichloroethene	5.77	96	553914	5.11	ug/L	92

Quantitation Report (Not Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049289.D
Acq On : 6 May 2016 19:15
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00544

Quant Time: May 09 13:22:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Mon May 09 13:17:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.20	128	207900	4.78	ug/L		85
25) Chloroform	6.41	83	987783	5.20	ug/L		100
27) 1,2-Dichloroethane	7.35	62	490815	5.12	ug/L		99
29) 1,1,1-Trichloroethane	6.64	97	797768	5.27	ug/L		97
30) Cyclohexane	6.75	56	657512	4.92	ug/L		98
31) Carbon tetrachloride	6.91	117	693050	5.24	ug/L		98
33) Benzene	7.23	78	1802745	5.28	ug/L		100
34) Trichloroethene	8.21	95	486364	5.13	ug/L		96
35) Methylcyclohexane	8.50	83	560168	4.79	ug/L		100
37) 1,2-Dichloropropane	8.55	63	420697	5.25	ug/L		99
38) Bromodichloromethane	8.89	83	608996	5.22	ug/L		97
39) cis-1,3-Dichloropropene	9.41	75	588180	4.98	ug/L		99
40) 4-Methyl-2-pentanone	9.58	43	2184299	52.99	ug/L		99
42) Toluene	9.77	91	1507871	5.23	ug/L		99
44) trans-1,3-Dichloropropene	10.04	75	457834	5.06	ug/L		97
45) 1,1,2-Trichloroethane	10.25	97	218787	5.26	ug/L		96
47) Tetrachloroethene	10.32	164	321446	5.16	ug/L		96
48) 2-Hexanone	10.48	43	1455744	52.81	ug/L		99
49) Dibromochloromethane	10.65	129	318584	5.08	ug/L		99
50) 1,2-Dibromoethane	10.75	107	220339	5.08	ug/L		97
51) Chlorobenzene	11.25	112	898345	5.20	ug/L		99
52) Ethylbenzene	11.34	91	1582569	5.32	ug/L		100
53) m,p-Xylene	11.47	106	563966	5.20	ug/L		94
54) o-Xylene	11.85	106	527501	5.20	ug/L		95
55) Styrene	11.87	104	877245	5.22	ug/L		97
56) Isopropylbenzene	12.19	105	1390422	5.29	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.49	83	201110	5.01	ug/L		93
60) Bromoform	12.05	173	140448	4.91	ug/L		98
61) 1,3-Dichlorobenzene	13.36	146	547733	5.26	ug/L		99
62) 1,4-Dichlorobenzene	13.45	146	547981	5.13	ug/L		99
64) 1,2-Dichlorobenzene	13.78	146	446909	5.18	ug/L		99
65) 1,2-Dibromo-3-chloropropan	14.46	75	26273	5.00	ug/L	#	82
66) 1,2,4-trichlorobenzene	15.20	180	237152	5.15	ug/L		98
67) 1,2,3-Trichlorobenzene	15.66	180	174894	5.13	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

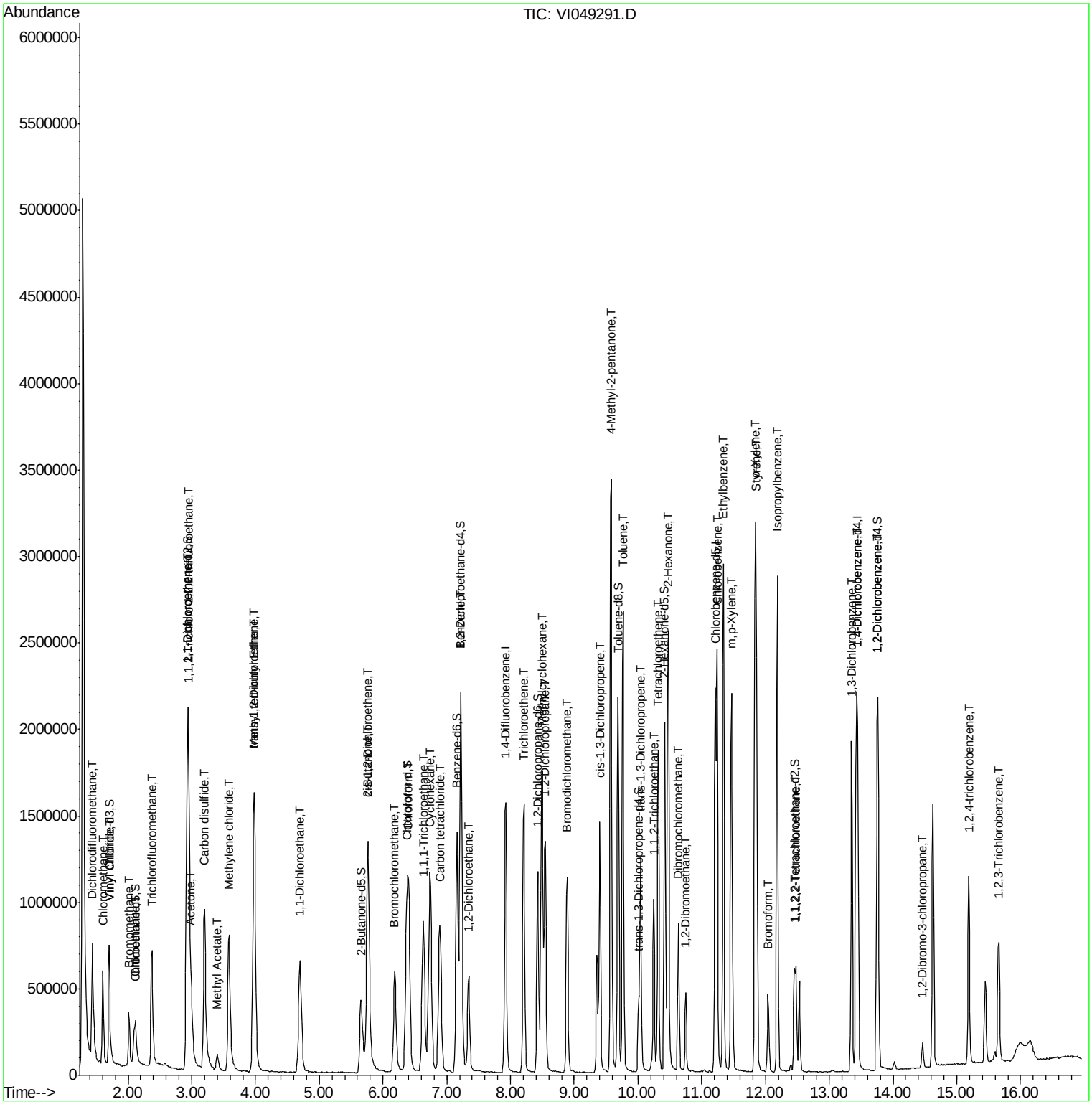
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050916\
Data File : VI049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 05:34:33 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00545

Manual Integrations APPROVED
feifei
5/10/2016 1:38:20 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050916\
Data File : VI049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 05:34:33 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00545

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1472789	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.21	117	1026159	5.00	ug/L	-0.01
59) 1,4-Dichlorobenzene-d4	13.43	152	402955	5.00	ug/L	-0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	338835	3.74	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 74.80%			
7) Chloroethane-d5	2.10	69	215126	4.28	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 85.60%			
11) 1,1-Dichloroethene-d2	2.93	63	890844	4.17	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 83.40%			
20) 2-Butanone-d5	5.65	46	1013174	51.61	ug/L	-0.03
Spiked Amount 50.000	Range 40 - 130		Recovery = 103.22%			
24) Chloroform-d	6.37	84	1048224	4.54	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.80%			
26) 1,2-Dichloroethane-d4	7.22	65	437770	4.64	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.80%			
32) Benzene-d6	7.16	84	1772921	4.44	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 88.80%			
36) 1,2-Dichloropropane-d6	8.43	67	522784	4.65	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 140		Recovery = 93.00%			
41) Toluene-d8	9.69	98	1294111	4.39	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.80%			
43) trans-1,3-Dichloropropene-	10.01	79	204811	4.62	ug/L	-0.01
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.40%			
46) 2-Hexanone-d5	10.41	63	728533	52.15	ug/L	-0.02
Spiked Amount 50.000	Range 45 - 130		Recovery = 104.30%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	251704	4.92	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.40%			
63) 1,2-Dichlorobenzene-d4	13.75	152	314844	4.46	ug/L	-0.01
Spiked Amount 5.000	Range 80 - 120		Recovery = 89.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	801065	4.83	ug/L	98
3) Chloromethane	1.61	50	586688	4.13	ug/L	99
5) Vinyl chloride	1.70	62	461514	4.65	ug/L	99
6) Bromomethane	2.01	94	193848	4.04	ug/L	97
8) Chloroethane	2.12	64	206539	4.87	ug/L	95
9) Trichlorofluoromethane	2.37	101	671857	4.84	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.95	101	635733	5.01	ug/L	99
12) 1,1-Dichloroethene	2.94	96	557775	4.69	ug/L	98
13) Acetone	2.99	43	607878	49.93	ug/L	98
14) Carbon disulfide	3.20	76	1969103	4.57	ug/L	100
15) Methyl Acetate	3.40	43	175467	5.05	ug/L	98
16) Methylene chloride	3.58	84	605869	4.62	ug/L	99
17) Methyl tert-butyl Ether	3.97	73	1038949	4.78	ug/L	100
18) trans-1,2-Dichloroethene	3.98	96	620155	4.72	ug/L	98
19) 1,1-Dichloroethane	4.70	63	1031094	4.63	ug/L	99
21) 2-Butanone	5.77	43	1115934	50.67	ug/L	100
22) cis-1,2-Dichloroethene	5.76	96	634608m	4.70	ug/L	

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050916\
Data File : VI049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00545

Manual Integrations APPROVED
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5/10/2016 1:38:20 PM

Quant Time: May 10 05:34:33 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.18	128	249365	4.60	ug/L	94
25) Chloroform	6.40	83	1121013	4.73	ug/L	99
27) 1,2-Dichloroethane	7.34	62	560605	4.69	ug/L	98
29) 1,1,1-Trichloroethane	6.64	97	912359	4.68	ug/L	97
30) Cyclohexane	6.73	56	847820	4.93	ug/L	97
31) Carbon tetrachloride	6.89	117	805548	4.73	ug/L	99
33) Benzene	7.23	78	2129158	4.85	ug/L	100
34) Trichloroethene	8.21	95	580305	4.76	ug/L	93
35) Methylcyclohexane	8.50	83	759632	5.05	ug/L	98
37) 1,2-Dichloropropane	8.54	63	503182	4.88	ug/L	98
38) Bromodichloromethane	8.89	83	730199	4.86	ug/L	98
39) cis-1,3-Dichloropropene	9.40	75	738049	4.86	ug/L	99
40) 4-Methyl-2-pentanone	9.58	43	2715473	51.20	ug/L	99
42) Toluene	9.77	91	1807323	4.88	ug/L	100
44) trans-1,3-Dichloropropene	10.04	75	577504	4.96	ug/L	97
45) 1,1,2-Trichloroethane	10.25	97	262822	4.91	ug/L	98
47) Tetrachloroethene	10.32	164	394722	4.93	ug/L	98
48) 2-Hexanone	10.47	43	1859372	52.43	ug/L	98
49) Dibromochloromethane	10.63	129	409341	5.07	ug/L	99
50) 1,2-Dibromoethane	10.75	107	266512	4.77	ug/L	96
51) Chlorobenzene	11.24	112	1087726	4.89	ug/L	98
52) Ethylbenzene	11.34	91	1908317	4.98	ug/L	98
53) m,p-Xylene	11.47	106	688048	4.93	ug/L	97
54) o-Xylene	11.83	106	643711	4.93	ug/L	96
55) Styrene	11.86	104	1062306	4.91	ug/L	99
56) Isopropylbenzene	12.19	105	1698408	5.02	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	253513	4.90	ug/L	98
60) Bromoform	12.04	173	181811	4.84	ug/L	100
61) 1,3-Dichlorobenzene	13.35	146	675760	4.94	ug/L	97
62) 1,4-Dichlorobenzene	13.45	146	667531	4.75	ug/L	96
64) 1,2-Dichlorobenzene	13.77	146	554462	4.90	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.46	75	31876	4.62	ug/L	92
66) 1,2,4-trichlorobenzene	15.19	180	306892	5.07	ug/L	97
67) 1,2,3-Trichlorobenzene	15.66	180	218176	4.87	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 05:34:33 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00545

Manual Integrations APPROVED
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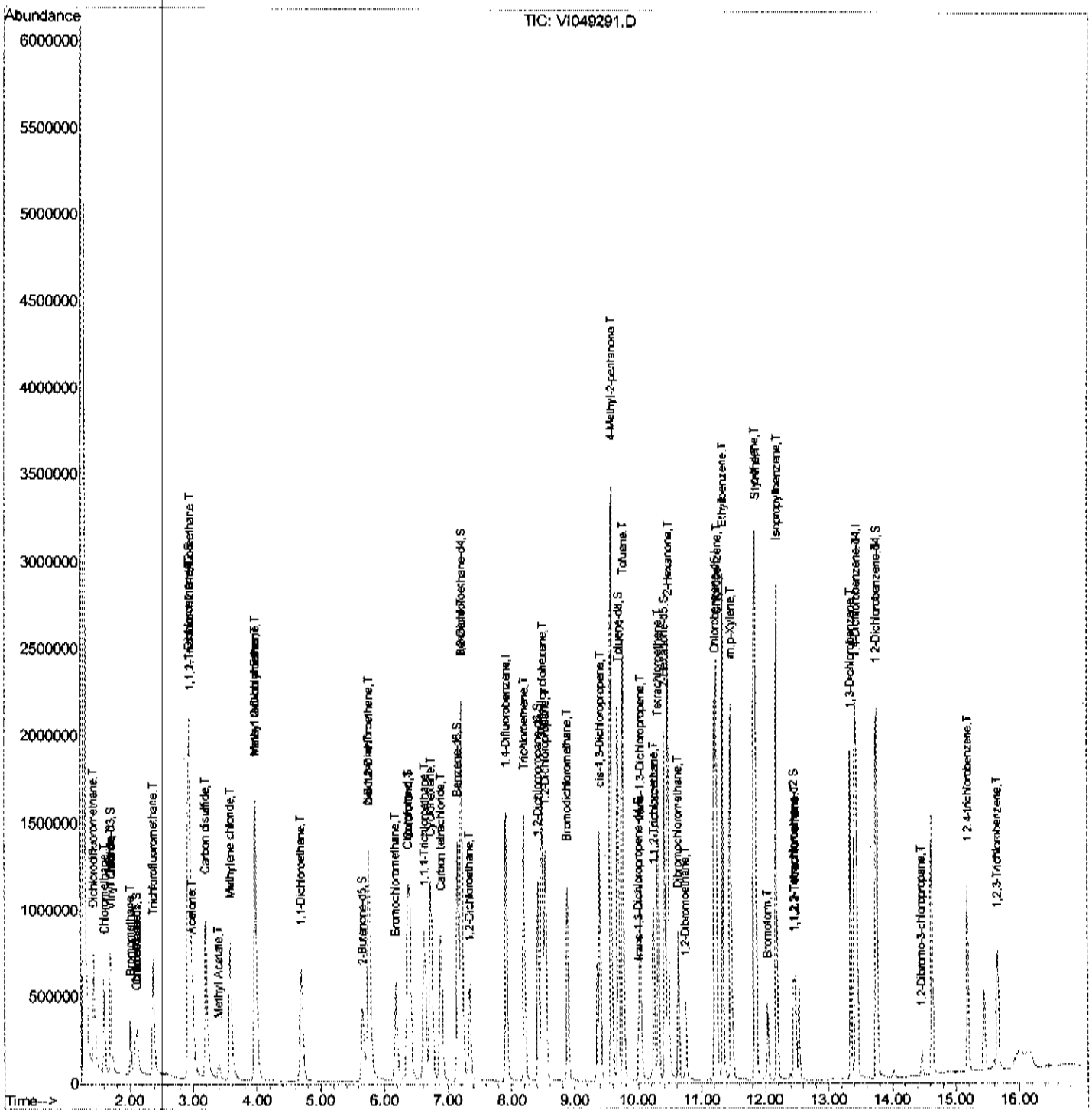


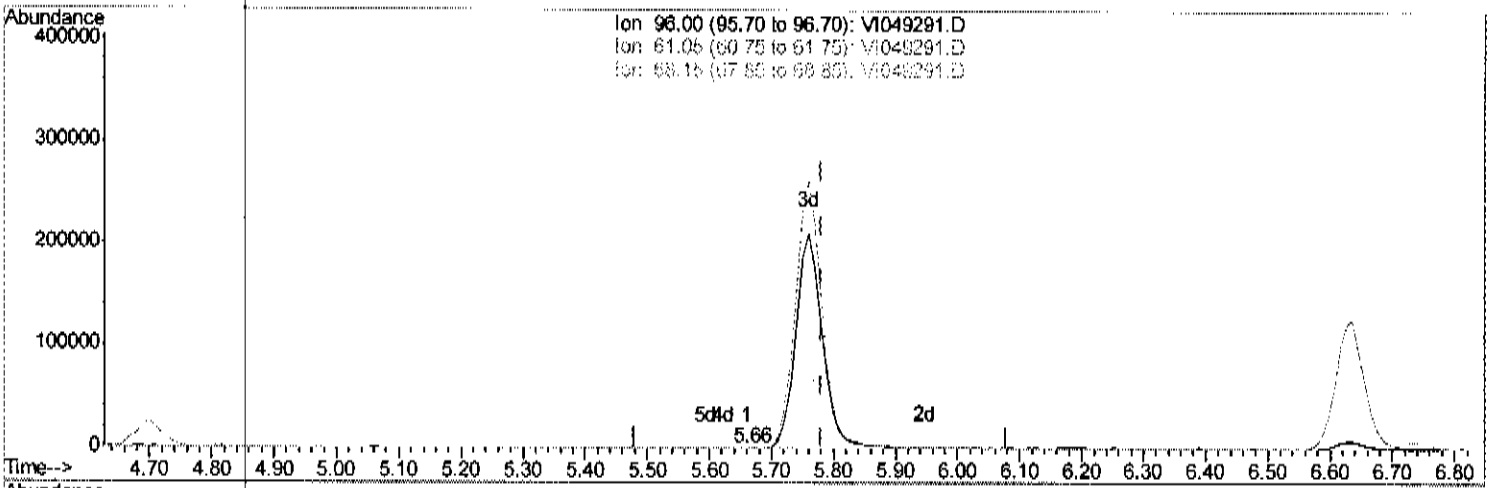
Quantitation Report (Qedit)

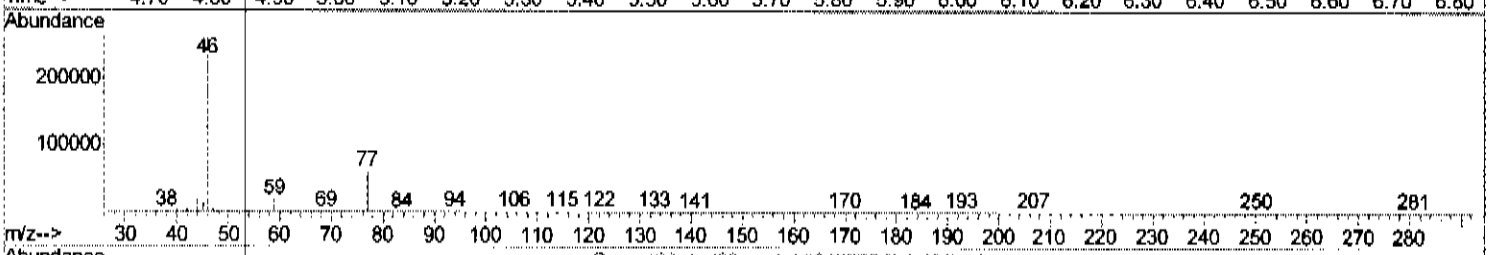
Data Path : W:\HPCHEM1\MSVOA_T\DATA\VI050916\
Data File : VI049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 05:33:53 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

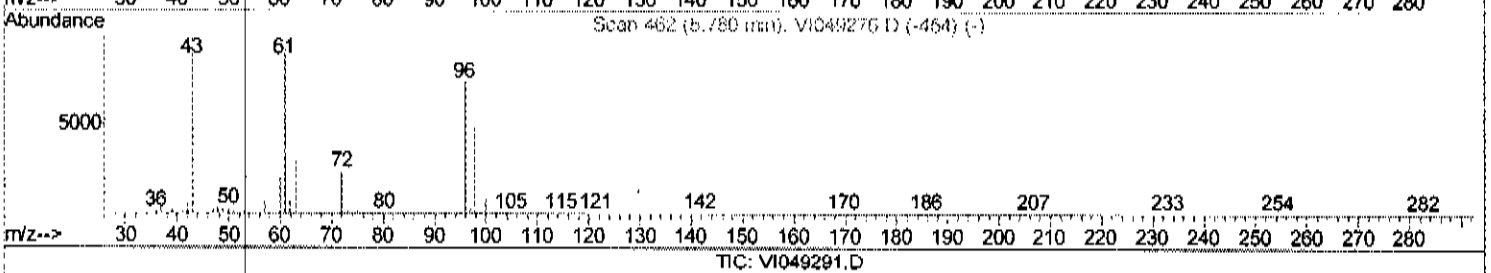
Instrument :
MSVOA_I
ClientSampleId :
VSTD00545

Manual Integrations APPROVED
feifei
5/10/2016 1:38:20 PM





Scan 462 (5.780 min): VI049276.D (-464) (-)



TIC: VI049291.D

(22) cis-1,2-Dichloroethene (T)

5.661min (-0.118) 0.00ug/L

response 571

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	117.79
68.15	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 05:33:53 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMTTR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00545

Manual Integrations APPROVED
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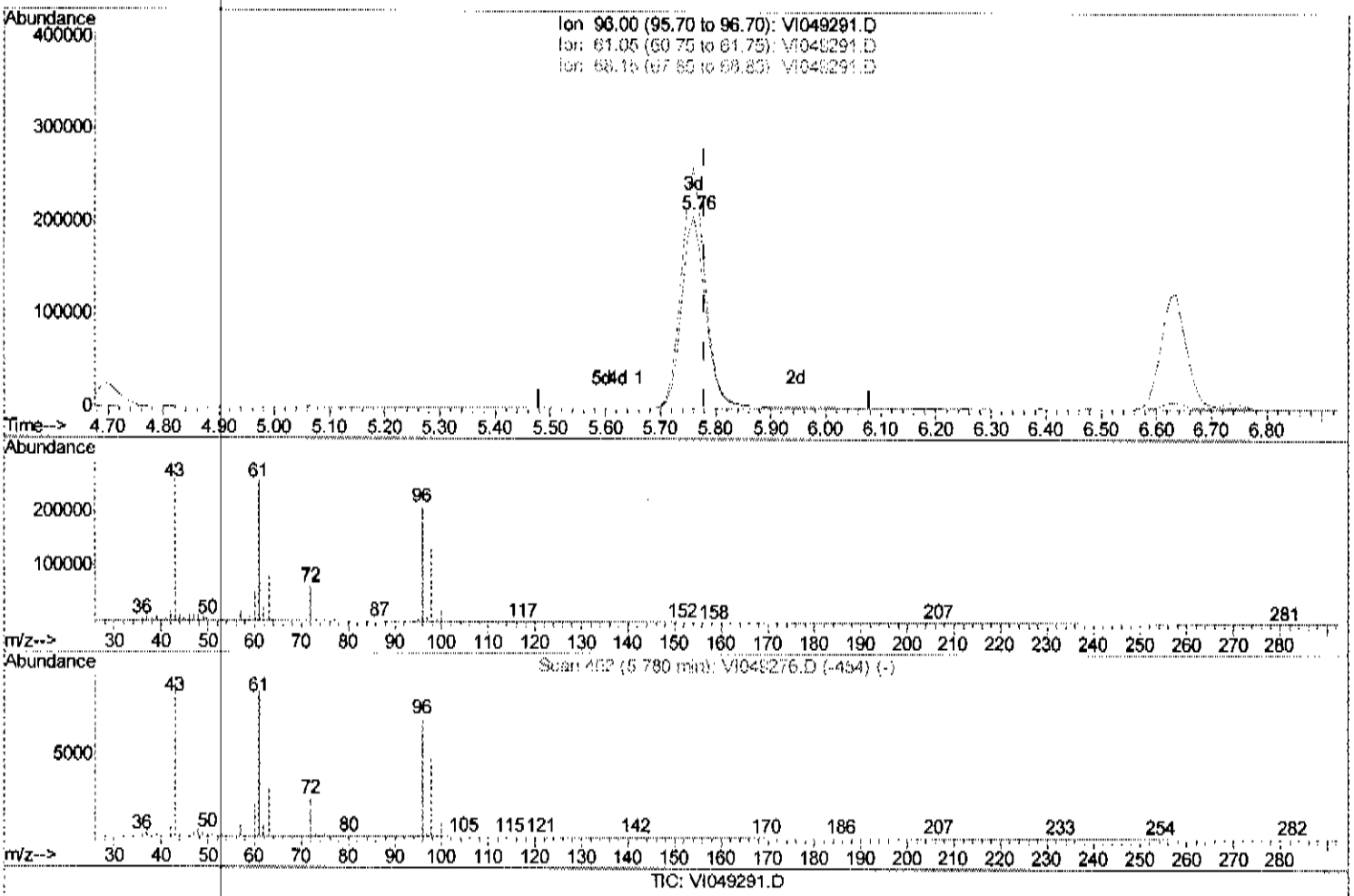
5/10/2016 1:38:20 PM



TIC: VI049291.D

(22) cis-1,2-Dichloroethene (T)

5.760min (-0.020) 4.70ug/L m

response 634608

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	123.95
68.15	0.00	0.07#
0.00	0.00	0.00

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5/10/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VT049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 05:34:33 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00545

Manual Integrations APPROVED
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5/10/2016 1:38:20 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1472789	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.21	117	1026159	5.00	ug/L	-0.01
59) 1,4-Dichlorobenzene-d4	13.43	152	402955	5.00	ug/L	-0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	338835	3.74	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 74.80%			
7) Chloroethane-d5	2.10	69	215126	4.28	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 85.60%			
11) 1,1-Dichloroethene-d2	2.93	63	890844	4.17	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 83.40%			
20) 2-Butanone-d5	5.65	46	1013174	51.61	ug/L	-0.03
Spiked Amount 50.000	Range 40 - 130		Recovery = 103.22%			
24) Chloroform-d	6.37	84	1048224	4.54	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.80%			
26) 1,2-Dichloroethane-d4	7.22	65	437770	4.64	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.80%			
32) Benzene-d6	7.16	84	1772921	4.44	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 88.80%			
36) 1,2-Dichloropropane-d6	8.43	67	522784	4.65	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 140		Recovery = 93.00%			
41) Toluene-d8	9.69	98	1294111	4.39	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.80%			
43) trans-1,3-Dichloropropene-	10.01	79	204811	4.62	ug/L	-0.01
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.40%			
46) 2-Hexanone-d5	10.41	63	728533	52.15	ug/L	-0.02
Spiked Amount 50.000	Range 45 - 130		Recovery = 104.30%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	251704	4.92	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.40%			
63) 1,2-Dichlorobenzene-d4	13.75	152	314844	4.46	ug/L	-0.01
Spiked Amount 5.000	Range 80 - 120		Recovery = 89.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	801065	4.83	ug/L	98
3) Chloromethane	1.61	50	586688	4.13	ug/L	99
5) Vinyl chloride	1.70	62	461514	4.65	ug/L	99
6) Bromomethane	2.01	94	193848	4.04	ug/L	97
8) Chloroethane	2.12	64	206539	4.87	ug/L	95
9) Trichlorofluoromethane	2.37	101	671857	4.84	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.95	101	635733	5.01	ug/L	99
12) 1,1-Dichloroethene	2.94	96	557775	4.69	ug/L	98
13) Acetone	2.99	43	607878	49.93	ug/L	98
14) Carbon disulfide	3.20	76	1969103	4.57	ug/L	100
15) Methyl Acetate	3.40	43	175467	5.05	ug/L	98
16) Methylene chloride	3.58	84	605869	4.62	ug/L	99
17) Methyl tert-butyl Ether	3.97	73	1038949	4.78	ug/L	100
18) trans-1,2-Dichloroethene	3.98	96	620155	4.72	ug/L	98
19) 1,1-Dichloroethane	4.70	63	1031094	4.63	ug/L	99
21) 2-Butanone	5.77	43	1115934	50.67	ug/L	100
22) cis-1,2-Dichloroethene	5.76	96	634608m	4.70	ug/L	

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Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_1\DATA\VI050916\
Data File : VI049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 05:34:33 2016
Quant Method : W:\HPCHEM1\MSVOA_1\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00545

Manual Integrations APPROVED
feifei
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Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
23) Bromochloromethane	6.18	128	249365	4.60 ug/L	94
25) Chloroform	6.40	83	1121013	4.73 ug/L	99
27) 1,2-Dichloroethane	7.34	62	560605	4.69 ug/L	98
29) 1,1,1-Trichloroethane	6.64	97	912359	4.68 ug/L	97
30) Cyclohexane	6.73	56	847820	4.93 ug/L	97
31) Carbon tetrachloride	6.89	117	805548	4.73 ug/L	99
33) Benzene	7.23	78	2129158	4.85 ug/L	100
34) Trichloroethene	8.21	95	580305	4.76 ug/L	93
35) Methylcyclohexane	8.50	83	759632	5.05 ug/L	98
37) 1,2-Dichloropropane	8.54	63	503182	4.88 ug/L	98
38) Bromodichloromethane	8.89	83	730199	4.86 ug/L	98
39) cis-1,3-Dichloropropene	9.40	75	738049	4.86 ug/L	99
40) 4-Methyl-2-pentanone	9.58	43	2715473	51.20 ug/L	99
42) Toluene	9.77	91	1807323	4.88 ug/L	100
44) trans-1,3-Dichloropropene	10.04	75	577504	4.96 ug/L	97
45) 1,1,2-Trichloroethane	10.25	97	262822	4.91 ug/L	98
47) Tetrachloroethene	10.32	164	394722	4.93 ug/L	98
48) 2-Hexanone	10.47	43	1859372	52.43 ug/L	98
49) Dibromochloromethane	10.63	129	409341	5.07 ug/L	99
50) 1,2-Dibromoethane	10.75	107	266512	4.77 ug/L	96
51) Chlorobenzene	11.24	112	1087726	4.89 ug/L	98
52) Ethylbenzene	11.34	91	1908317	4.98 ug/L	98
53) m,p-Xylene	11.47	106	688048	4.93 ug/L	97
54) o-Xylene	11.83	106	643711	4.93 ug/L	96
55) Styrene	11.86	104	1062306	4.91 ug/L	99
56) Isopropylbenzene	12.19	105	1698408	5.02 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	253513	4.90 ug/L	98
60) Bromoform	12.04	173	181811	4.84 ug/L	100
61) 1,3-Dichlorobenzene	13.35	146	675760	4.94 ug/L	97
62) 1,4-Dichlorobenzene	13.45	146	667531	4.75 ug/L	96
64) 1,2-Dichlorobenzene	13.77	146	554462	4.90 ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.46	75	31876	4.62 ug/L	92
66) 1,2,4-trichlorobenzene	15.19	180	306892	5.07 ug/L	97
67) 1,2,3-Trichlorobenzene	15.66	180	218176	4.87 ug/L	97

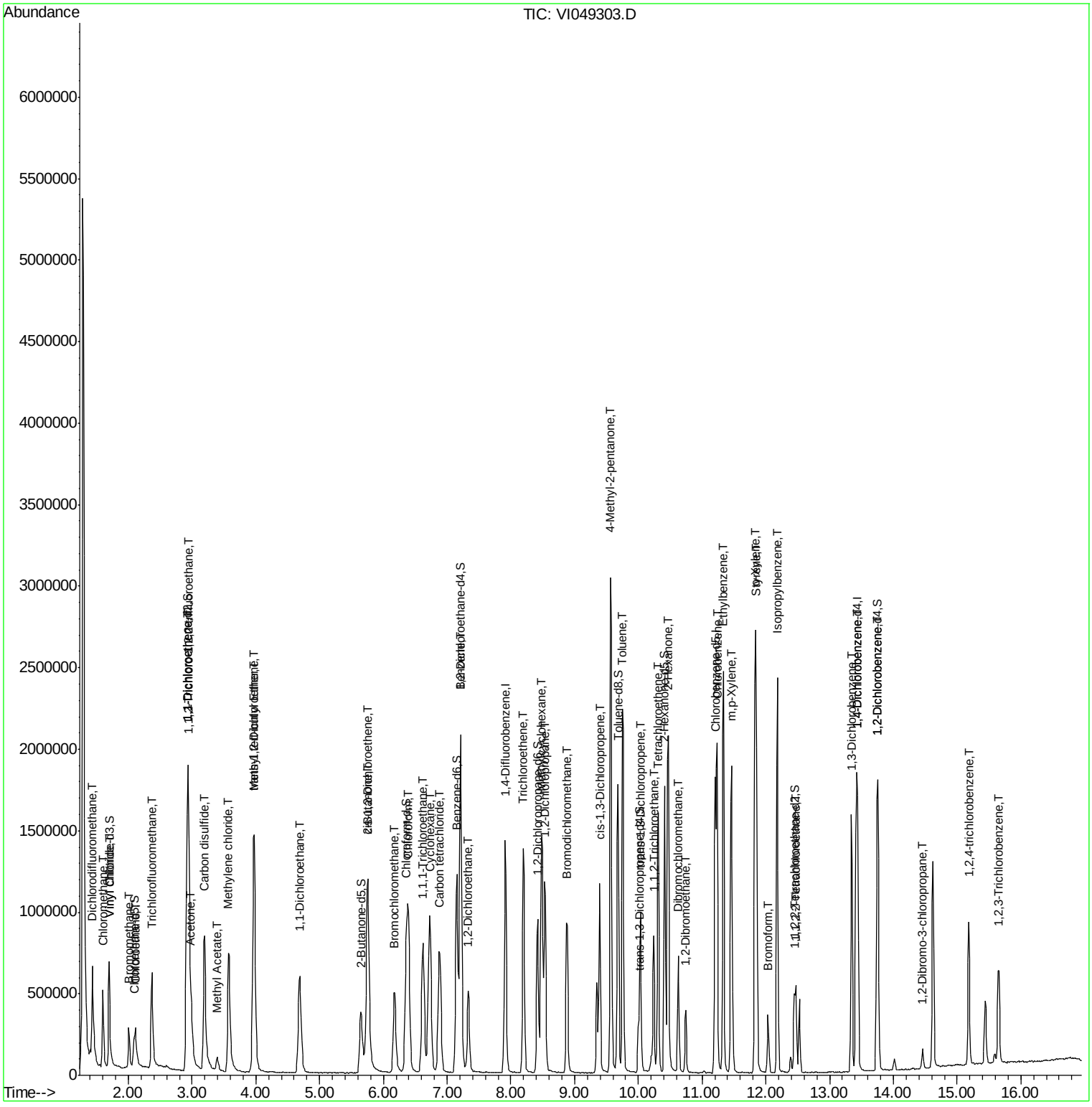
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049303.D
Acq On : 9 May 2016 18:15
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00546

Quant Time: May 10 05:38:18 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049303.D
Acq On : 9 May 2016 18:15
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00546

Quant Time: May 10 05:38:18 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1268200	5.00	ug/L	-0.02
28) Chlorobenzene-d5	11.21	117	859906	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	343318	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	298676	3.83	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 76.60%			
7) Chloroethane-d5	2.08	69	190081	4.40	ug/L	-0.02
Spiked Amount 5.000	Range 65 - 130		Recovery = 88.00%			
11) 1,1-Dichloroethene-d2	2.92	63	779830	4.24	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 84.80%			
20) 2-Butanone-d5	5.65	46	923602	54.64	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 109.28%			
24) Chloroform-d	6.35	84	926448	4.66	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.20%			
26) 1,2-Dichloroethane-d4	7.21	65	382767	4.71	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.20%			
32) Benzene-d6	7.15	84	1550297	4.63	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 92.60%			
36) 1,2-Dichloropropane-d6	8.42	67	443265	4.71	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 94.20%			
41) Toluene-d8	9.68	98	1092479	4.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.40%			
43) trans-1,3-Dichloropropene-	10.01	79	155465	4.19	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 83.80%			
46) 2-Hexanone-d5	10.41	63	609373	52.06	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 104.12%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	204347	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.40%			
63) 1,2-Dichlorobenzene-d4	13.75	152	260080	4.32	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 86.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	698723	4.89	ug/L	98
3) Chloromethane	1.60	50	501485	4.10	ug/L	98
5) Vinyl chloride	1.70	62	418117	4.89	ug/L	97
6) Bromomethane	2.00	94	146153	3.53	ug/L	94
8) Chloroethane	2.11	64	188069	5.15	ug/L	99
9) Trichlorofluoromethane	2.37	101	584175	4.89	ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.95	101	555525	5.08	ug/L	99
12) 1,1-Dichloroethene	2.93	96	508674	4.97	ug/L	96
13) Acetone	2.99	43	550705	52.53	ug/L	95
14) Carbon disulfide	3.20	76	1755877	4.73	ug/L	99
15) Methyl Acetate	3.39	43	153892	5.14	ug/L	96
16) Methylene chloride	3.58	84	557575	4.94	ug/L	96
17) Methyl tert-butyl Ether	3.96	73	924892	4.95	ug/L	98
18) trans-1,2-Dichloroethene	3.97	96	561559	4.96	ug/L	97
19) 1,1-Dichloroethane	4.69	63	956237	4.99	ug/L	98
21) 2-Butanone	5.76	43	1002206	52.84	ug/L	96
22) cis-1,2-Dichloroethene	5.74	96	568230	4.88	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049303.D
Acq On : 9 May 2016 18:15
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00546

Quant Time: May 10 05:38:18 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.17	128	215867	4.62	ug/L		91
25) Chloroform	6.39	83	1026473	5.03	ug/L		97
27) 1,2-Dichloroethane	7.33	62	512115	4.98	ug/L		100
29) 1,1,1-Trichloroethane	6.62	97	825665	5.06	ug/L		97
30) Cyclohexane	6.72	56	698459	4.85	ug/L		98
31) Carbon tetrachloride	6.89	117	726686	5.09	ug/L		99
33) Benzene	7.21	78	1881737	5.11	ug/L		100
34) Trichloroethene	8.19	95	500306	4.90	ug/L		98
35) Methylcyclohexane	8.48	83	626542	4.97	ug/L		99
37) 1,2-Dichloropropane	8.53	63	426467	4.94	ug/L		100
38) Bromodichloromethane	8.87	83	608044	4.83	ug/L		98
39) cis-1,3-Dichloropropene	9.40	75	588484	4.62	ug/L		98
40) 4-Methyl-2-pentanone	9.56	43	2278063	51.26	ug/L		100
42) Toluene	9.75	91	1567855	5.05	ug/L		99
44) trans-1,3-Dichloropropene	10.04	75	458152	4.70	ug/L		100
45) 1,1,2-Trichloroethane	10.24	97	217140	4.84	ug/L		99
47) Tetrachloroethene	10.31	164	334407	4.98	ug/L		95
48) 2-Hexanone	10.47	43	1532331	51.56	ug/L		98
49) Dibromochloromethane	10.63	129	323631	4.78	ug/L		99
50) 1,2-Dibromoethane	10.74	107	229208	4.90	ug/L	#	99
51) Chlorobenzene	11.24	112	921215	4.95	ug/L		98
52) Ethylbenzene	11.33	91	1627549	5.07	ug/L		98
53) m,p-Xylene	11.46	106	584060	4.99	ug/L		95
54) o-Xylene	11.83	106	543189	4.97	ug/L		96
55) Styrene	11.86	104	917630	5.06	ug/L		99
56) Isopropylbenzene	12.18	105	1436516	5.07	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.47	83	211691	4.89	ug/L		97
60) Bromoform	12.03	173	136408	4.26	ug/L		98
61) 1,3-Dichlorobenzene	13.34	146	574529	4.93	ug/L		97
62) 1,4-Dichlorobenzene	13.44	146	576140	4.82	ug/L		98
64) 1,2-Dichlorobenzene	13.77	146	473743	4.91	ug/L		99
65) 1,2-Dibromo-3-chloropropan	14.45	75	26341	4.48	ug/L		94
66) 1,2,4-trichlorobenzene	15.18	180	252172	4.89	ug/L		97
67) 1,2,3-Trichlorobenzene	15.66	180	187201	4.91	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:55:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00550

Manual Integrations APPROVED
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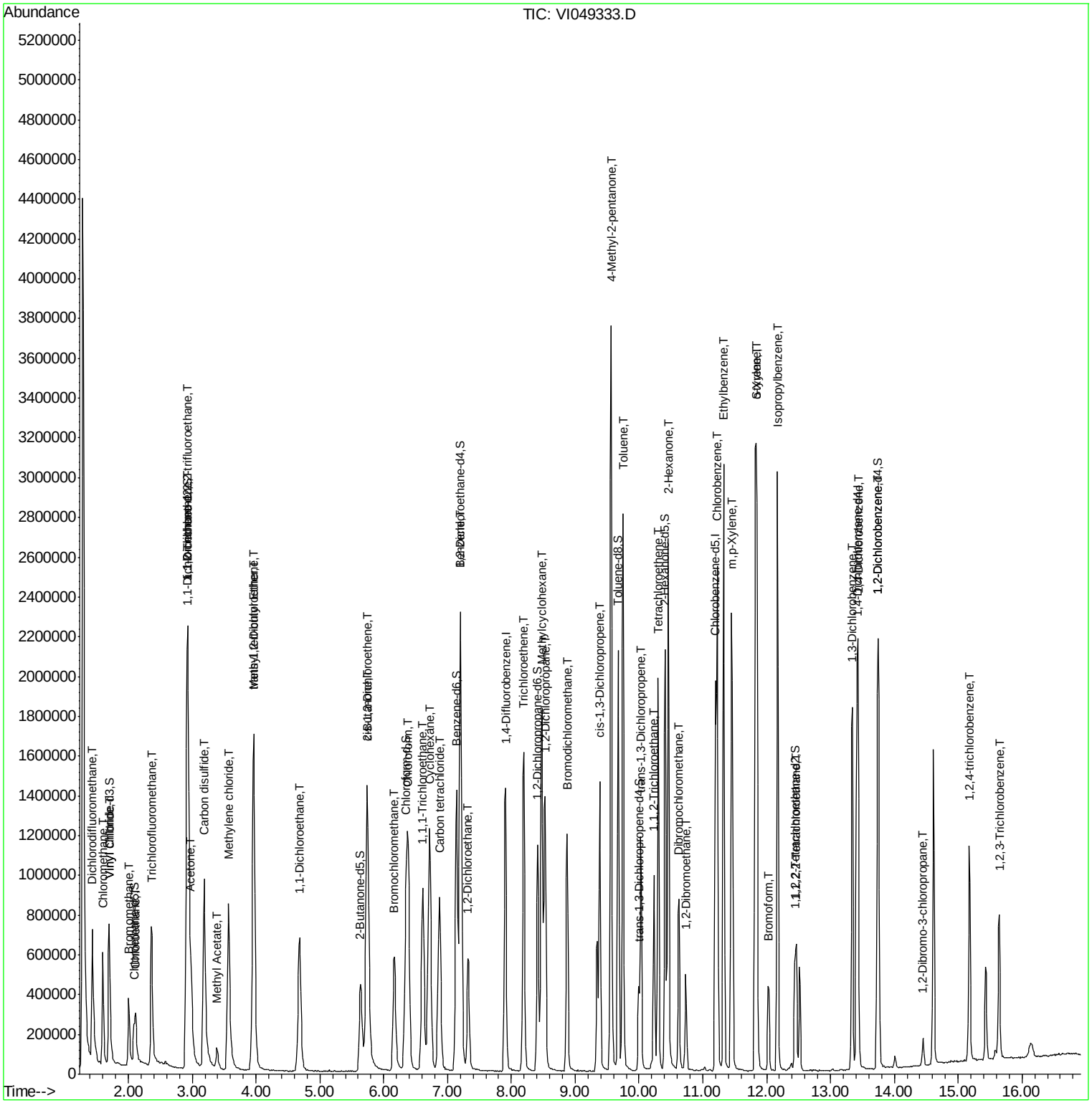

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00550

Manual Integrations APPROVED
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Quant Time: May 12 05:55:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1319731	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	924898	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	367134	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	364759	4.49	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 89.80%			
7) Chloroethane-d5	2.08	69	214088	4.76	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.20%			
11) 1,1-Dichloroethene-d2	2.91	63	934213	4.88	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 97.60%			
20) 2-Butanone-d5	5.64	46	1036391	58.92	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 117.84%			
24) Chloroform-d	6.34	84	1062410	5.14	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.80%			
26) 1,2-Dichloroethane-d4	7.20	65	444833	5.26	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.20%			
32) Benzene-d6	7.14	84	1803960	5.01	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.20%			
36) 1,2-Dichloropropane-d6	8.41	67	514068	5.07	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.40%			
41) Toluene-d8	9.67	98	1301171	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
43) trans-1,3-Dichloropropene-	10.00	79	198140	4.96	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 99.20%			
46) 2-Hexanone-d5	10.41	63	716853	56.94	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 113.88%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	251218	5.45	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 109.00%			
63) 1,2-Dichlorobenzene-d4	13.74	152	318069	4.94	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	825181	5.55	ug/L	98
3) Chloromethane	1.60	50	599121	4.71	ug/L	96
5) Vinyl chloride	1.70	62	482228	5.42	ug/L	99
6) Bromomethane	2.00	94	220648	5.13	ug/L	98
8) Chloroethane	2.11	64	212957	5.60	ug/L	96
9) Trichlorofluoromethane	2.36	101	709022	5.70	ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	669509	5.88	ug/L	99
12) 1,1-Dichloroethene	2.93	96	589693	5.54	ug/L	92
13) Acetone	2.98	43	658976	60.41	ug/L	96
14) Carbon disulfide	3.19	76	2043518	5.29	ug/L	100
15) Methyl Acetate	3.38	43	185891	5.97	ug/L	100
16) Methylene chloride	3.57	84	619476	5.28	ug/L	98
17) Methyl tert-butyl Ether	3.96	73	1081617	5.56	ug/L	98
18) trans-1,2-Dichloroethene	3.96	96	647787	5.50	ug/L	99
19) 1,1-Dichloroethane	4.68	63	1090772	5.47	ug/L	98
21) 2-Butanone	5.74	43	1179036	59.74	ug/L	100
22) cis-1,2-Dichloroethene	5.74	96	677240m	5.59	ug/L	

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00550

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:28 PM

Quant Time: May 12 05:55:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
23) Bromochloromethane	6.17	128	266517	5.49 ug/L	95
25) Chloroform	6.38	83	1190640	5.61 ug/L	98
27) 1,2-Dichloroethane	7.32	62	586440	5.48 ug/L	99
29) 1,1,1-Trichloroethane	6.61	97	976256	5.56 ug/L	99
30) Cyclohexane	6.72	56	875103	5.65 ug/L	98
31) Carbon tetrachloride	6.88	117	846827	5.52 ug/L	100
33) Benzene	7.20	78	2204948	5.57 ug/L	100
34) Trichloroethene	8.19	95	588744	5.36 ug/L	92
35) Methylcyclohexane	8.48	83	770813	5.69 ug/L	97
37) 1,2-Dichloropropane	8.53	63	509570	5.48 ug/L	100
38) Bromodichloromethane	8.87	83	751913	5.55 ug/L	100
39) cis-1,3-Dichloropropene	9.39	75	725883	5.30 ug/L	98
40) 4-Methyl-2-pentanone	9.56	43	2737043	57.26 ug/L	99
42) Toluene	9.75	91	1843815	5.52 ug/L	98
44) trans-1,3-Dichloropropene	10.03	75	574584	5.48 ug/L	99
45) 1,1,2-Trichloroethane	10.23	97	272276	5.65 ug/L	97
47) Tetrachloroethene	10.30	164	394649	5.47 ug/L	93
48) 2-Hexanone	10.46	43	1838604	57.52 ug/L	99
49) Dibromochloromethane	10.63	129	409658	5.63 ug/L	100
50) 1,2-Dibromoethane	10.73	107	284178	5.65 ug/L	99
51) Chlorobenzene	11.23	112	1098615	5.48 ug/L	99
52) Ethylbenzene	11.32	91	1949363	5.65 ug/L	100
53) m,p-Xylene	11.45	106	703222	5.59 ug/L	100
54) o-Xylene	11.83	106	656724	5.58 ug/L	100
55) Styrene	11.85	104	1083736	5.56 ug/L	99
56) Isopropylbenzene	12.17	105	1752472	5.75 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	262742	5.64 ug/L	99
60) Bromoform	12.03	173	181618	5.31 ug/L	100
61) 1,3-Dichlorobenzene	13.34	146	696104	5.59 ug/L	99
62) 1,4-Dichlorobenzene	13.43	146	690080	5.39 ug/L	99
64) 1,2-Dichlorobenzene	13.76	146	577380	5.59 ug/L	100
65) 1,2-Dibromo-3-chloropropan	14.44	75	30764	4.90 ug/L	99
66) 1,2,4-trichlorobenzene	15.17	180	315843	5.73 ug/L	98
67) 1,2,3-Trichlorobenzene	15.65	180	224937	5.51 ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

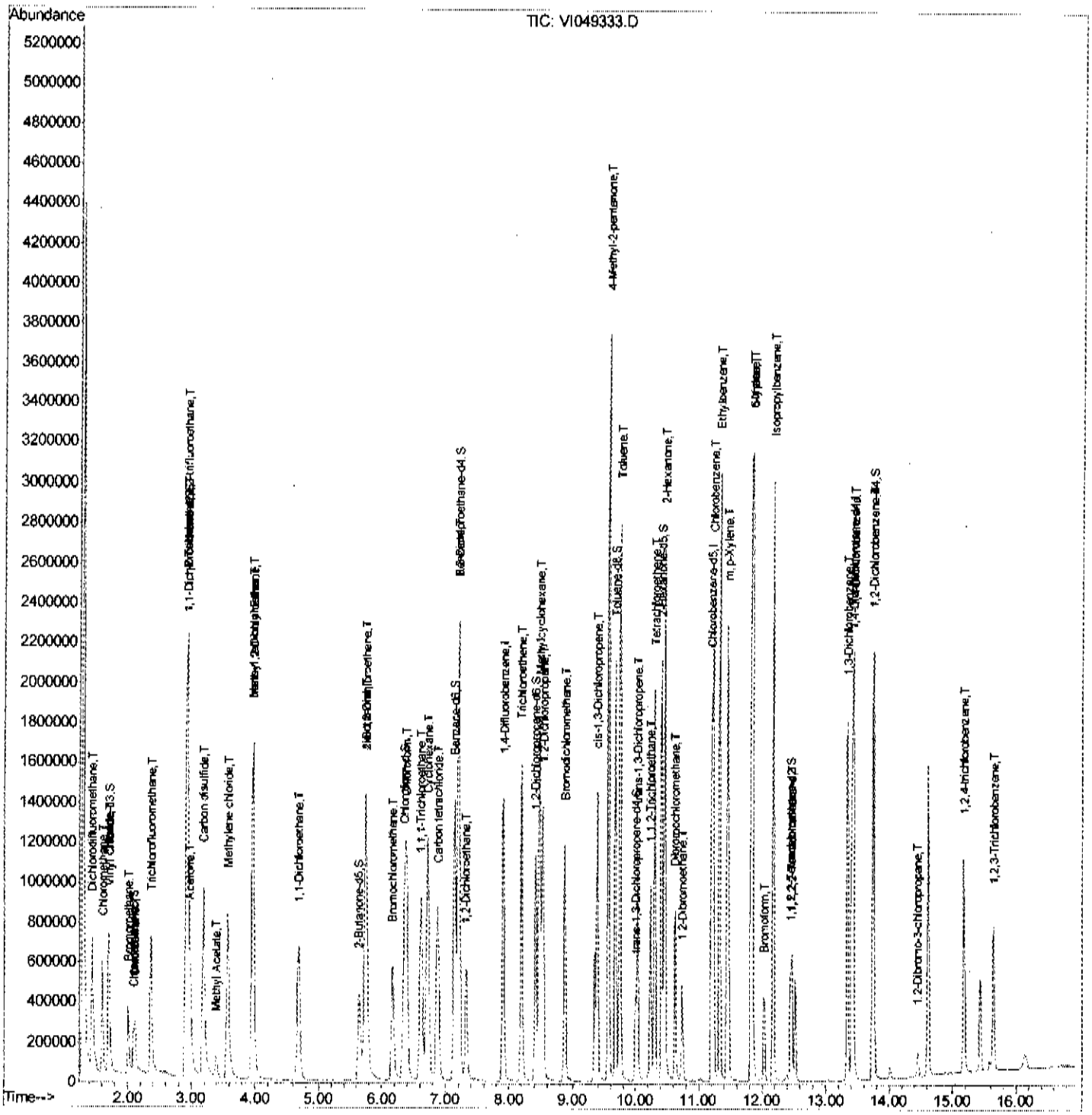
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:55:31 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00550

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:28 PM

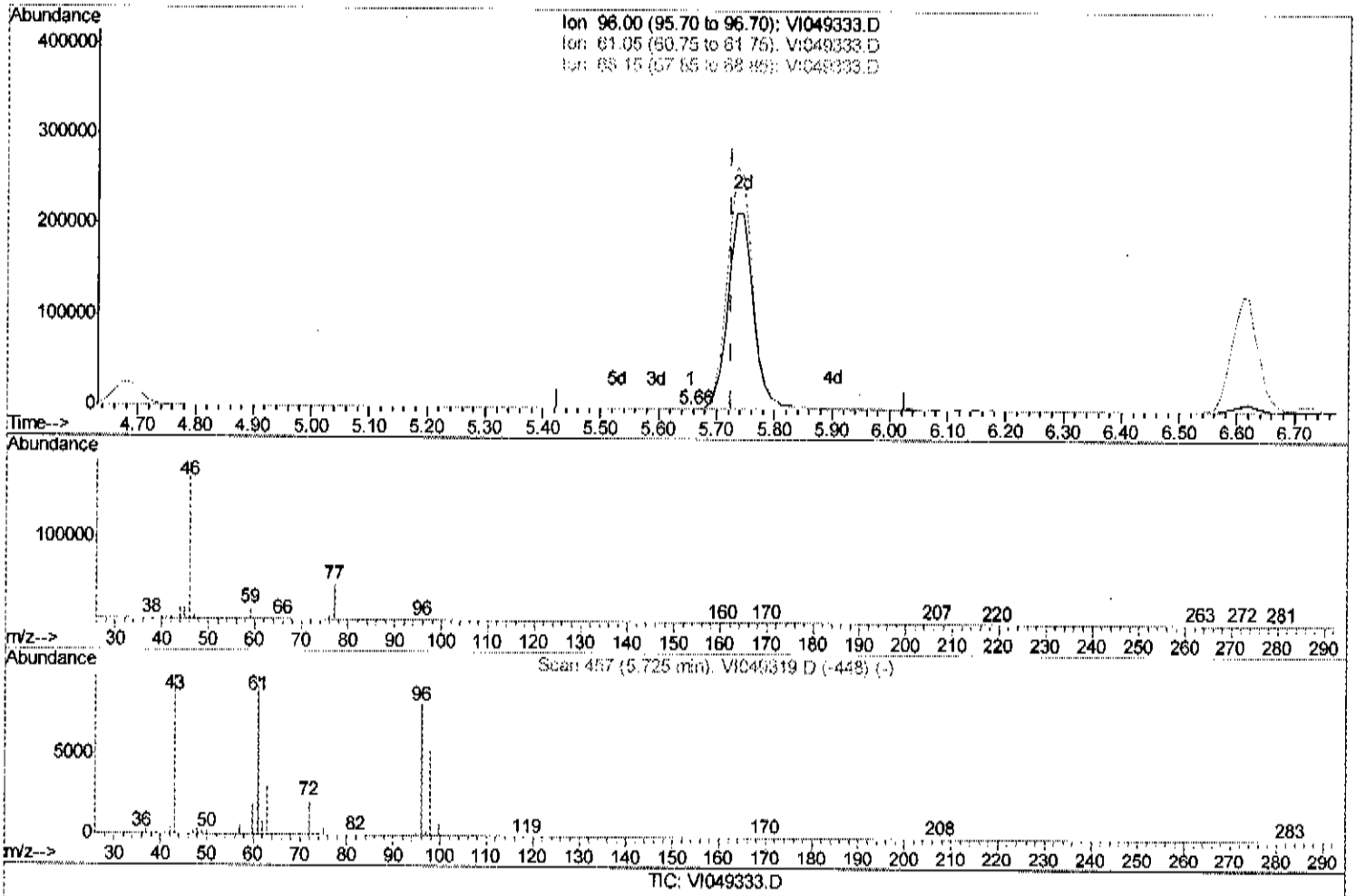


Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:54:38 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00550

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:28 PM



TIC: VI049333.D

(22) cis-1,2-Dichloroethene (T)

5.655min (-0.070) 0.00ug/L

response 476

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	85.99
68.15	0.00	0.00
0.00	0.00	0.00

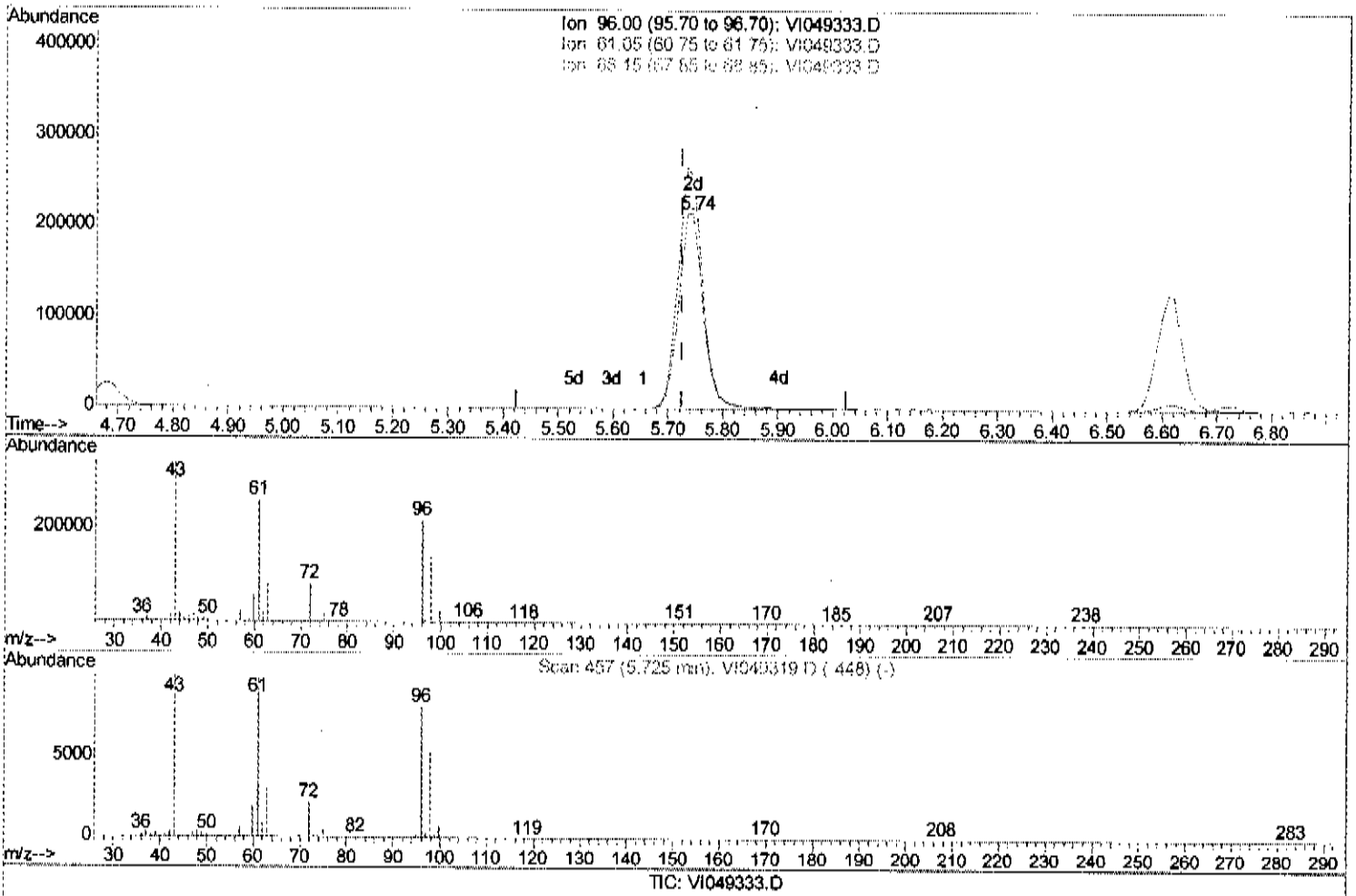
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:54:38 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00550

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:28 PM



(22) cis-1,2-Dichloroethene (T)

5.744min (+0.019) 5.59ug/L m

response 677240

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	119.53
68.15	0.00	0.11#
0.00	0.00	0.00

FY
5/16/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:55:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00550

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1319731	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	924898	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	367134	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	364759	4.49	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 89.80%			
7) Chloroethane-d5	2.08	69	214088	4.76	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.20%			
11) 1,1-Dichloroethene-d2	2.91	63	934213	4.88	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 97.60%			
20) 2-Butanone-d5	5.64	46	1036391	58.92	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 117.84%			
24) Chloroform-d	6.34	84	1062410	5.14	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.80%			
26) 1,2-Dichloroethane-d4	7.20	65	444833	5.26	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.20%			
32) Benzene-d6	7.14	84	1803960	5.01	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.20%			
36) 1,2-Dichloropropane-d6	8.41	67	514068	5.07	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.40%			
41) Toluene-d8	9.67	98	1301171	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
43) trans-1,3-Dichloropropene-	10.00	79	198140	4.96	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 99.20%			
46) 2-Hexanone-d5	10.41	63	716853	56.94	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 113.88%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	251218	5.45	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 109.00%			
63) 1,2-Dichlorobenzene-d4	13.74	152	318069	4.94	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	825181	5.55	ug/L	98
3) Chloromethane	1.60	50	599121	4.71	ug/L	96
5) Vinyl chloride	1.70	62	482228	5.42	ug/L	99
6) Bromomethane	2.00	94	220648	5.13	ug/L	98
8) Chloroethane	2.11	64	212957	5.60	ug/L	96
9) Trichlorofluoromethane	2.36	101	709022	5.70	ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	669509	5.88	ug/L	99
12) 1,1-Dichloroethene	2.93	96	589693	5.54	ug/L	92
13) Acetone	2.98	43	658976	60.41	ug/L	96
14) Carbon disulfide	3.19	76	2043518	5.29	ug/L	100
15) Methyl Acetate	3.38	43	185891	5.97	ug/L	100
16) Methylene chloride	3.57	84	619476	5.28	ug/L	98
17) Methyl tert-butyl Ether	3.96	73	1081617	5.56	ug/L	98
18) trans-1,2-Dichloroethene	3.96	96	647787	5.50	ug/L	99
19) 1,1-Dichloroethane	4.68	63	1090772	5.47	ug/L	98
21) 2-Butanone	5.74	43	1179036	59.74	ug/L	100
22) cis-1,2-Dichloroethene	5.74	96	677240m	5.59	ug/L	

FT 5/12/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:55:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00550

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:28 PM

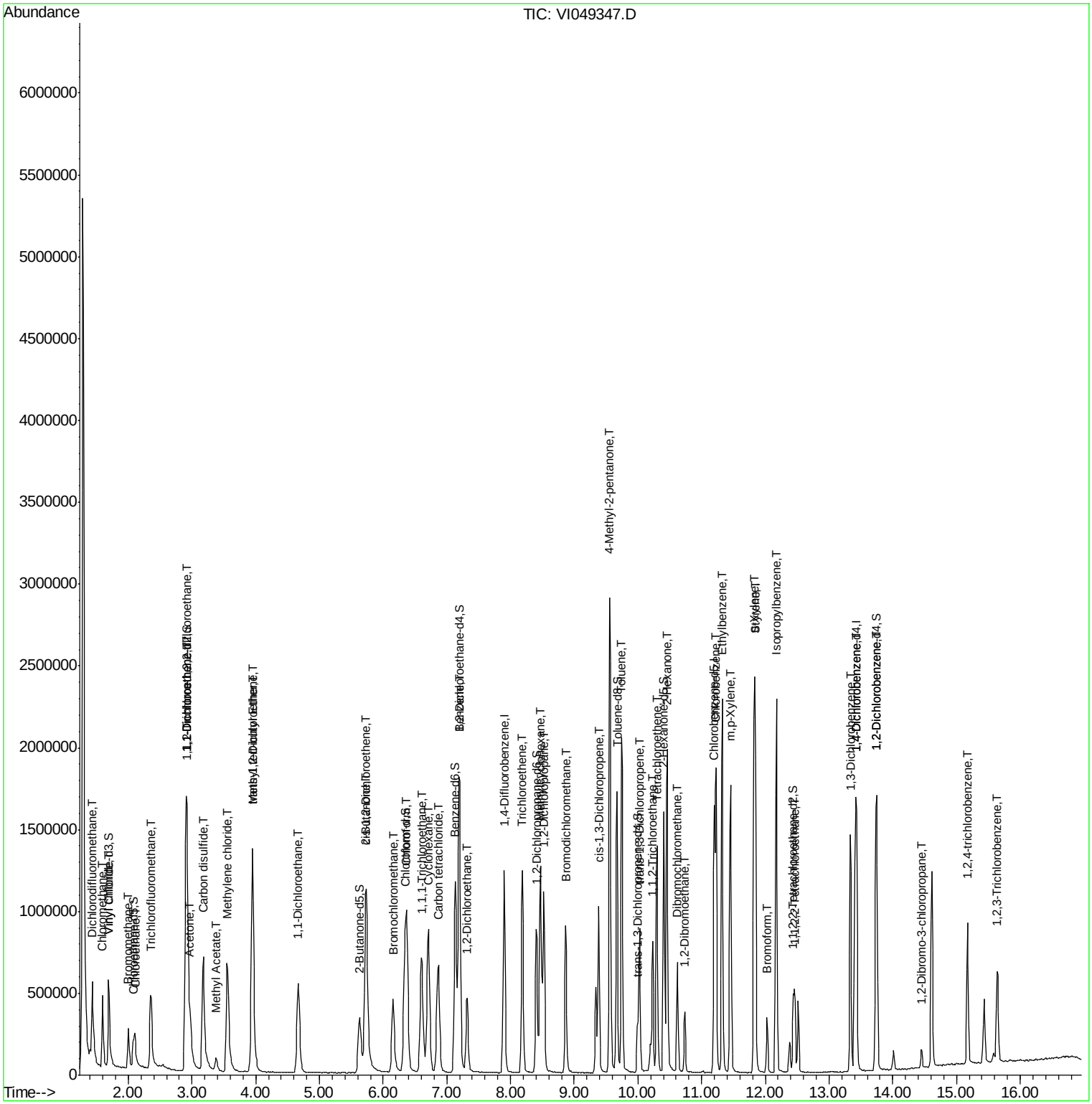
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.17	128	266517	5.49	ug/L	95
25) Chloroform	6.38	83	1190640	5.61	ug/L	98
27) 1,2-Dichloroethane	7.32	62	586440	5.48	ug/L	99
29) 1,1,1-Trichloroethane	6.61	97	976256	5.56	ug/L	99
30) Cyclohexane	6.72	56	875103	5.65	ug/L	98
31) Carbon tetrachloride	6.88	117	846827	5.52	ug/L	100
33) Benzene	7.20	78	2204948	5.57	ug/L	100
34) Trichloroethene	8.19	95	588744	5.36	ug/L	92
35) Methylcyclohexane	8.48	83	770813	5.69	ug/L	97
37) 1,2-Dichloropropane	8.53	63	509570	5.48	ug/L	100
38) Bromodichloromethane	8.87	83	751913	5.55	ug/L	100
39) cis-1,3-Dichloropropene	9.39	75	725883	5.30	ug/L	98
40) 4-Methyl-2-pentanone	9.56	43	2737043	57.26	ug/L	99
42) Toluene	9.75	91	1843815	5.52	ug/L	98
44) trans-1,3-Dichloropropene	10.03	75	574584	5.48	ug/L	99
45) 1,1,2-Trichloroethane	10.23	97	272276	5.65	ug/L	97
47) Tetrachloroethene	10.30	164	394649	5.47	ug/L	93
48) 2-Hexanone	10.46	43	1838604	57.52	ug/L	99
49) Dibromochloromethane	10.63	129	409658	5.63	ug/L	100
50) 1,2-Dibromoethane	10.73	107	284178	5.65	ug/L	99
51) Chlorobenzene	11.23	112	1098615	5.48	ug/L	99
52) Ethylbenzene	11.32	91	1949363	5.65	ug/L	100
53) m,p-Xylene	11.45	106	703222	5.59	ug/L	100
54) o-Xylene	11.83	106	656724	5.58	ug/L	100
55) Styrene	11.85	104	1083736	5.56	ug/L	99
56) Isopropylbenzene	12.17	105	1752472	5.75	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	262742	5.64	ug/L	99
60) Bromoform	12.03	173	181618	5.31	ug/L	100
61) 1,3-Dichlorobenzene	13.34	146	696104	5.59	ug/L	99
62) 1,4-Dichlorobenzene	13.43	146	690080	5.39	ug/L	99
64) 1,2-Dichlorobenzene	13.76	146	577380	5.59	ug/L	100
65) 1,2-Dibromo-3-chloropropan	14.44	75	30764	4.90	ug/L	99
66) 1,2,4-trichlorobenzene	15.17	180	315843	5.73	ug/L	98
67) 1,2,3-Trichlorobenzene	15.65	180	224937	5.51	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049347.D
Acq On : 11 May 2016 18:32
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00526

Quant Time: May 12 06:05:53 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049347.D
Acq On : 11 May 2016 18:32
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00526

Quant Time: May 12 06:05:53 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1137201	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	779060	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	317837	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	273577	3.91	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 78.20%			
7) Chloroethane-d5	2.07	69	175348	4.52	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 90.40%			
11) 1,1-Dichloroethene-d2	2.90	63	737029	4.47	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 89.40%			
20) 2-Butanone-d5	5.63	46	841448	55.51	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 111.02%			
24) Chloroform-d	6.34	84	870212	4.89	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.80%			
26) 1,2-Dichloroethane-d4	7.19	65	362413	4.97	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.40%			
32) Benzene-d6	7.13	84	1490714	4.91	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.20%			
36) 1,2-Dichloropropane-d6	8.40	67	420983	4.93	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 98.60%			
41) Toluene-d8	9.67	98	1071844	4.79	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.80%			
43) trans-1,3-Dichloropropene-	9.99	79	153271	4.56	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.20%			
46) 2-Hexanone-d5	10.40	63	574390	54.16	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 108.32%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	210897	5.43	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 108.60%			
63) 1,2-Dichlorobenzene-d4	13.74	152	267306	4.80	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 96.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	589558	4.60	ug/L	98
3) Chloromethane	1.59	50	450245	4.11	ug/L	100
5) Vinyl chloride	1.70	62	362697	4.73	ug/L	98
6) Bromomethane	2.00	94	157161	4.24	ug/L	97
8) Chloroethane	2.10	64	157270	4.80	ug/L	98
9) Trichlorofluoromethane	2.35	101	489166	4.56	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.93	101	472108	4.82	ug/L	98
12) 1,1-Dichloroethene	2.91	96	450011	4.90	ug/L	94
13) Acetone	2.97	43	503258	53.54	ug/L	97
14) Carbon disulfide	3.18	76	1534168	4.61	ug/L	99
15) Methyl Acetate	3.37	43	140929	5.25	ug/L	92
16) Methylene chloride	3.55	84	512006	5.06	ug/L	99
17) Methyl tert-butyl Ether	3.95	73	889894	5.31	ug/L	97
18) trans-1,2-Dichloroethene	3.95	96	499744	4.93	ug/L	99
19) 1,1-Dichloroethane	4.66	63	877116	5.10	ug/L	98
21) 2-Butanone	5.75	43	935729	55.02	ug/L	99
22) cis-1,2-Dichloroethene	5.73	96	534498	5.12	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049347.D
Acq On : 11 May 2016 18:32
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00526

Quant Time: May 12 06:05:53 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.16	128	207951	4.97	ug/L	97
25) Chloroform	6.38	83	967939	5.29	ug/L	96
27) 1,2-Dichloroethane	7.31	62	474801	5.15	ug/L	99
29) 1,1,1-Trichloroethane	6.60	97	731034	4.94	ug/L	96
30) Cyclohexane	6.71	56	622882	4.77	ug/L	98
31) Carbon tetrachloride	6.87	117	636995	4.93	ug/L	99
33) Benzene	7.20	78	1726465	5.18	ug/L	100
34) Trichloroethene	8.19	95	454267	4.91	ug/L	97
35) Methylcyclohexane	8.47	83	535814	4.69	ug/L	99
37) 1,2-Dichloropropane	8.52	63	400648	5.12	ug/L	99
38) Bromodichloromethane	8.87	83	557801	4.89	ug/L	95
39) cis-1,3-Dichloropropene	9.39	75	547053	4.74	ug/L	100
40) 4-Methyl-2-pentanone	9.55	43	2167724	53.84	ug/L	100
42) Toluene	9.74	91	1423913	5.06	ug/L	100
44) trans-1,3-Dichloropropene	10.03	75	420820	4.76	ug/L	98
45) 1,1,2-Trichloroethane	10.23	97	213987	5.27	ug/L	97
47) Tetrachloroethene	10.30	164	304982	5.02	ug/L	97
48) 2-Hexanone	10.46	43	1416893	52.62	ug/L	100
49) Dibromochloromethane	10.62	129	306061	4.99	ug/L	96
50) 1,2-Dibromoethane	10.74	107	222502	5.25	ug/L	99
51) Chlorobenzene	11.23	112	873024	5.17	ug/L	97
52) Ethylbenzene	11.33	91	1506690	5.18	ug/L	98
53) m,p-Xylene	11.45	106	539806	5.09	ug/L	95
54) o-Xylene	11.82	106	511332	5.16	ug/L	96
55) Styrene	11.85	104	862765	5.25	ug/L	96
56) Isopropylbenzene	12.17	105	1362299	5.31	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	206179	5.25	ug/L	97
60) Bromoform	12.02	173	136616	4.61	ug/L	100
61) 1,3-Dichlorobenzene	13.33	146	537372	4.98	ug/L	98
62) 1,4-Dichlorobenzene	13.43	146	552971	4.99	ug/L	98
64) 1,2-Dichlorobenzene	13.76	146	456198	5.11	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.45	75	25107	4.61	ug/L	91
66) 1,2,4-trichlorobenzene	15.17	180	247839	5.19	ug/L	96
67) 1,2,3-Trichlorobenzene	15.65	180	182608	5.17	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

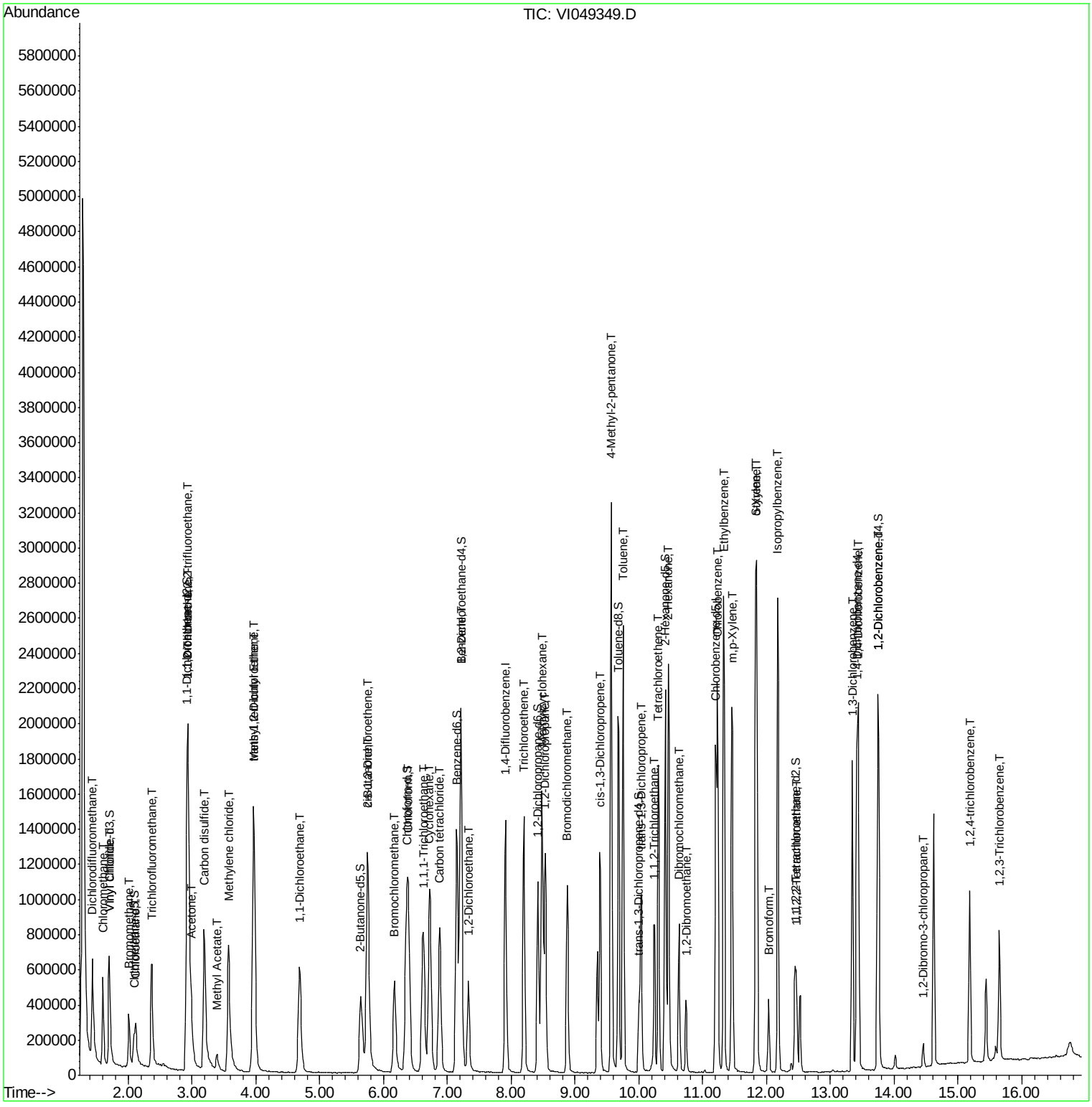
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
feifei
5/13/2016 12:27:53 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
feifei
5/13/2016 12:27:53 PM

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1295565	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	928274	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	374949	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	329772	4.13	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.60%			
7) Chloroethane-d5	2.08	69	211682	4.79	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.80%			
11) 1,1-Dichloroethene-d2	2.91	63	864483	4.60	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 92.00%			
20) 2-Butanone-d5	5.64	46	1034175	59.89	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 119.78%			
24) Chloroform-d	6.36	84	1033260	5.09	ug/L	0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.80%			
26) 1,2-Dichloroethane-d4	7.21	65	429502	5.17	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.40%			
32) Benzene-d6	7.14	84	1805395	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.80%			
36) 1,2-Dichloropropane-d6	8.41	67	513478	5.05	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.00%			
41) Toluene-d8	9.68	98	1312649	4.92	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.40%			
43) trans-1,3-Dichloropropene-	10.00	79	199797	4.99	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 99.80%			
46) 2-Hexanone-d5	10.41	63	722525	57.18	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 114.36%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	257869	5.58	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 111.60%			
63) 1,2-Dichlorobenzene-d4	13.74	152	334415	5.09	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	695673	4.77	ug/L	96
3) Chloromethane	1.60	50	526629	4.22	ug/L	100
5) Vinyl chloride	1.70	62	412648	4.72	ug/L	99
6) Bromomethane	2.01	94	192838	4.56	ug/L	97
8) Chloroethane	2.11	64	189504	5.08	ug/L	94
9) Trichlorofluoromethane	2.37	101	606296	4.97	ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	566400	5.07	ug/L	100
12) 1,1-Dichloroethene	2.93	96	520038	4.97	ug/L	95
13) Acetone	2.99	43	536964	50.14	ug/L	97
14) Carbon disulfide	3.19	76	1805293	4.76	ug/L	99
15) Methyl Acetate	3.39	43	156983	5.13	ug/L	98
16) Methylene chloride	3.57	84	563110	4.89	ug/L	98
17) Methyl tert-butyl Ether	3.96	73	961419	5.03	ug/L	98
18) trans-1,2-Dichloroethene	3.96	96	585645	5.07	ug/L	94
19) 1,1-Dichloroethane	4.68	63	974959	4.98	ug/L	96
21) 2-Butanone	5.76	43	1019124	52.60	ug/L	99
22) cis-1,2-Dichloroethene	5.75	96	603288m	5.07	ug/L	

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
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5/13/2016 12:27:53 PM

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.17	128	234146	4.91	ug/L	97
25) Chloroform	6.39	83	1069679	5.13	ug/L	97
27) 1,2-Dichloroethane	7.33	62	505978	4.82	ug/L	97
29) 1,1,1-Trichloroethane	6.62	97	859724	4.88	ug/L	99
30) Cyclohexane	6.72	56	751873	4.84	ug/L	99
31) Carbon tetrachloride	6.88	117	755838	4.91	ug/L	100
33) Benzene	7.21	78	1974065	4.97	ug/L	100
34) Trichloroethene	8.20	95	537504	4.87	ug/L	96
35) Methylcyclohexane	8.48	83	681007	5.01	ug/L	99
37) 1,2-Dichloropropane	8.53	63	453558	4.86	ug/L	100
38) Bromodichloromethane	8.88	83	678172	4.99	ug/L	98
39) cis-1,3-Dichloropropene	9.39	75	675768	4.92	ug/L	99
40) 4-Methyl-2-pentanone	9.56	43	2430671	50.66	ug/L	99
42) Toluene	9.75	91	1684845	5.03	ug/L	98
44) trans-1,3-Dichloropropene	10.04	75	521293	4.95	ug/L	96
45) 1,1,2-Trichloroethane	10.24	97	246420	5.09	ug/L	96
47) Tetrachloroethene	10.30	164	364808	5.04	ug/L	93
48) 2-Hexanone	10.46	43	1630946	50.84	ug/L	99
49) Dibromochloromethane	10.63	129	376461	5.16	ug/L	99
50) 1,2-Dibromoethane	10.74	107	253859	5.03	ug/L	96
51) Chlorobenzene	11.23	112	1024301	5.09	ug/L	97
52) Ethylbenzene	11.33	91	1804270	5.21	ug/L	100
53) m,p-Xylene	11.45	106	648903	5.14	ug/L	96
54) o-Xylene	11.83	106	604496	5.12	ug/L	100
55) Styrene	11.85	104	1017342	5.20	ug/L	99
56) Isopropylbenzene	12.17	105	1644835	5.38	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	233788	5.00	ug/L	96
60) Bromoform	12.04	173	172649	4.94	ug/L	97
61) 1,3-Dichlorobenzene	13.34	146	654328	5.14	ug/L	98
62) 1,4-Dichlorobenzene	13.43	146	671508	5.14	ug/L	98
64) 1,2-Dichlorobenzene	13.76	146	537966	5.10	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.46	75	31225	4.86	ug/L	92
66) 1,2,4-trichlorobenzene	15.18	180	305336	5.42	ug/L	97
67) 1,2,3-Trichlorobenzene	15.65	180	224205	5.38	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
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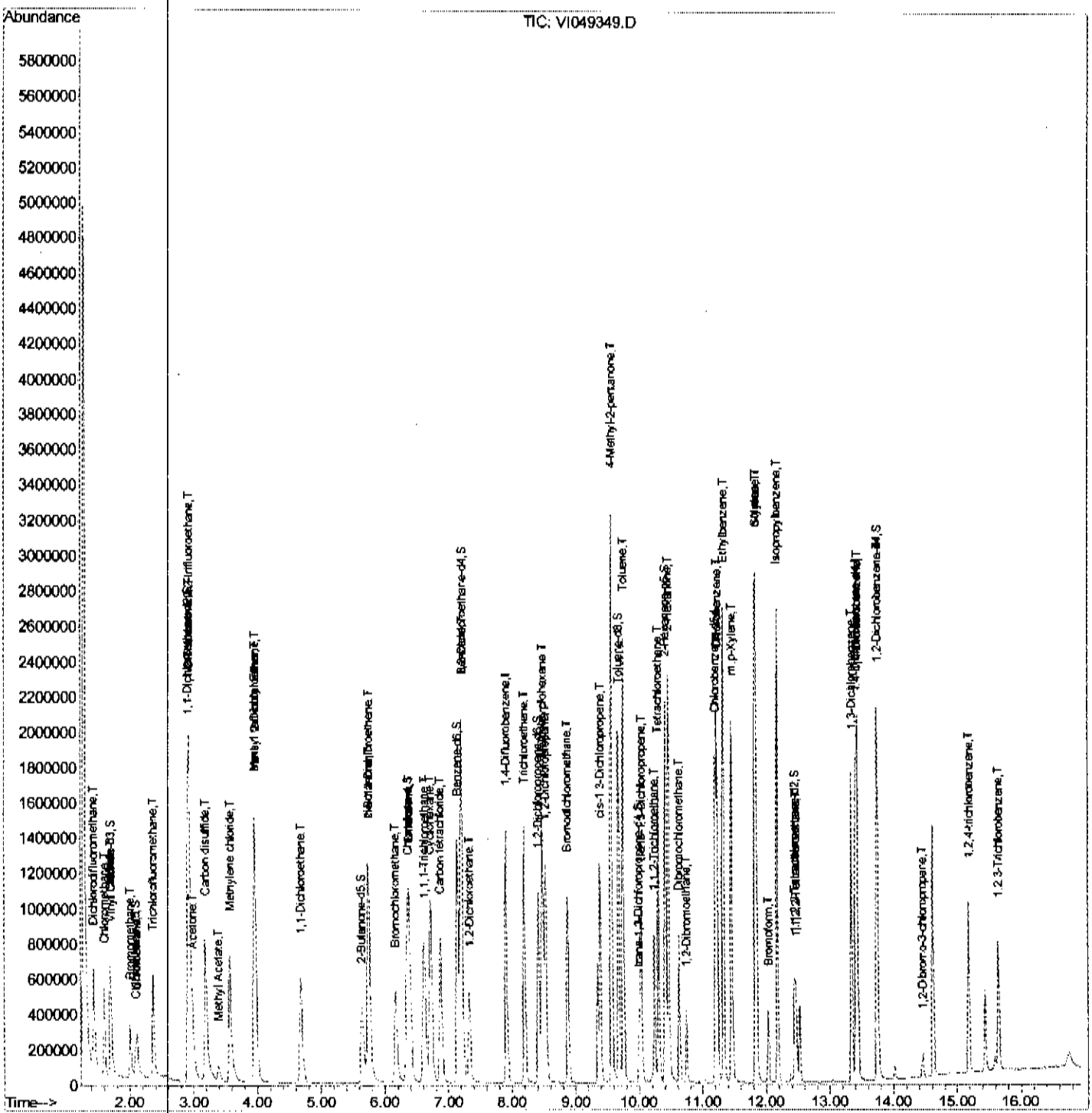

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
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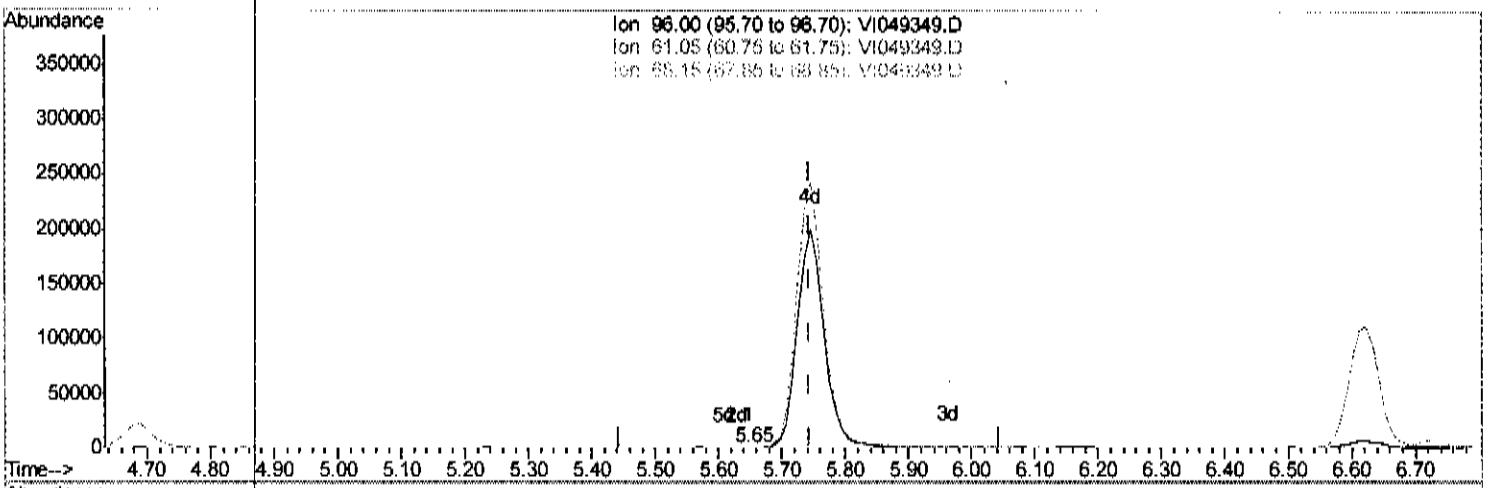
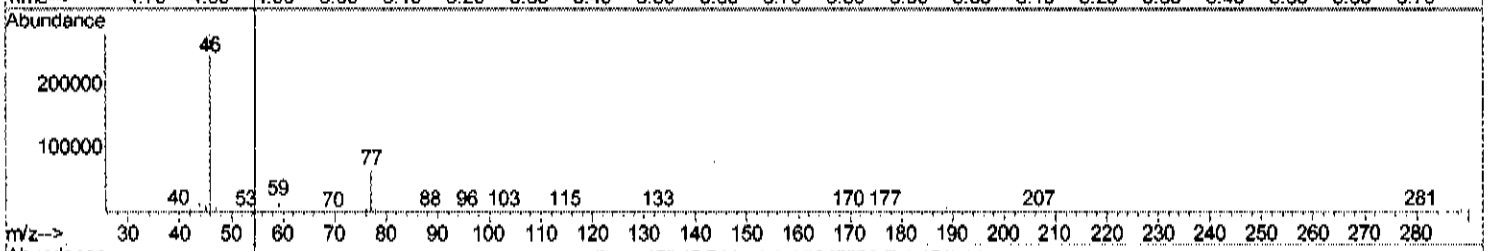
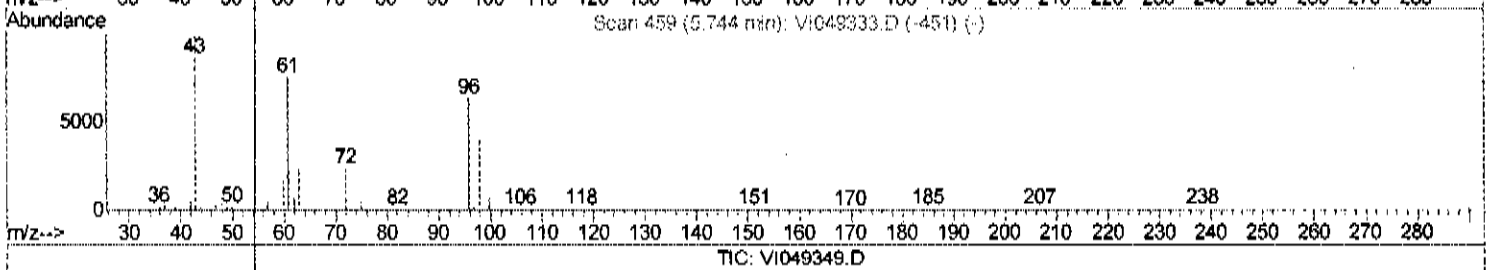
5/13/2016 12:27:53 PM







TIC: VI049349.D

(22) cis-1,2-Dichloroethene (T)

5.648min (-0.096) 0.00ug/L

response 424

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	128.57
68.15	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
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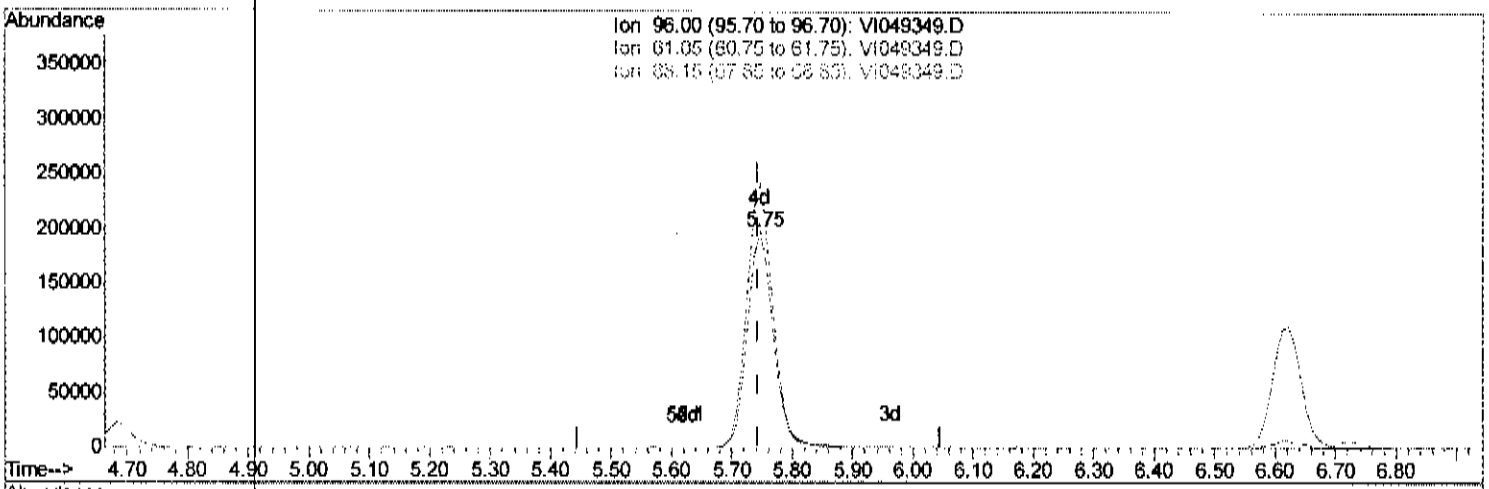

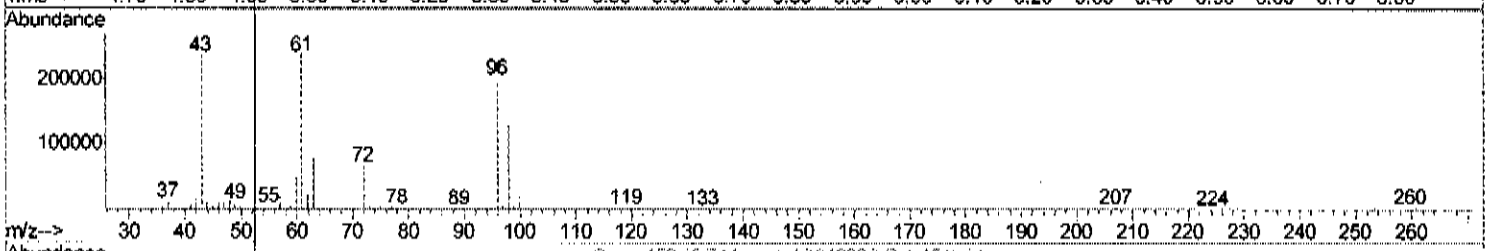

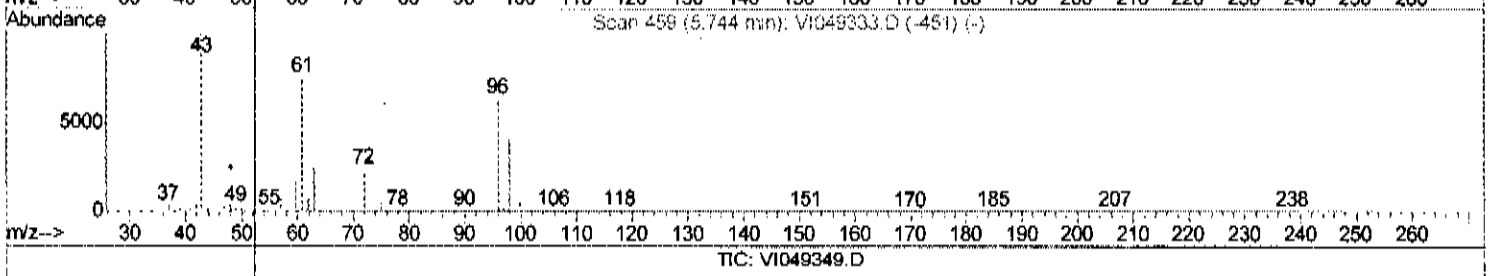

TIC: VI049349.D

(22) cis-1,2-Dichloroethene (T)

5.746min (+0.002) 5.07ug/L m

05/14/16 SY

response 603288

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	121.72
68.15	0.00	0.14#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00527

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1295565	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	928274	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	374949	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	329772	4.13	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.60%			
7) Chloroethane-d5	2.08	69	211682	4.79	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.80%			
11) 1,1-Dichloroethene-d2	2.91	63	864483	4.60	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 92.00%			
20) 2-Butanone-d5	5.64	46	1034175	59.89	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 119.78%			
24) Chloroform-d	6.36	84	1033260	5.09	ug/L	0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.80%			
26) 1,2-Dichloroethane-d4	7.21	65	429502	5.17	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.40%			
32) Benzene-d6	7.14	84	1805395	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.80%			
36) 1,2-Dichloropropane-d6	8.41	67	513478	5.05	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.00%			
41) Toluene-d8	9.68	98	1312649	4.92	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.40%			
43) trans-1,3-Dichloropropene-	10.00	79	199797	4.99	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 99.80%			
46) 2-Hexanone-d5	10.41	63	722525	57.18	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 114.36%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	257869	5.58	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 111.60%			
63) 1,2-Dichlorobenzene-d4	13.74	152	334415	5.09	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	695673	4.77	ug/L	96
3) Chloromethane	1.60	50	526629	4.22	ug/L	100
5) Vinyl chloride	1.70	62	412648	4.72	ug/L	99
6) Bromomethane	2.01	94	192838	4.56	ug/L	97
8) Chloroethane	2.11	64	189504	5.08	ug/L	94
9) Trichlorofluoromethane	2.37	101	606296	4.97	ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	566400	5.07	ug/L	100
12) 1,1-Dichloroethene	2.93	96	520038	4.97	ug/L	95
13) Acetone	2.99	43	536964	50.14	ug/L	97
14) Carbon disulfide	3.19	76	1805293	4.76	ug/L	99
15) Methyl Acetate	3.39	43	156983	5.13	ug/L	98
16) Methylene chloride	3.57	84	563110	4.89	ug/L	98
17) Methyl tert-butyl Ether	3.96	73	961419	5.03	ug/L	98
18) trans-1,2-Dichloroethene	3.96	96	585645	5.07	ug/L	94
19) 1,1-Dichloroethane	4.68	63	974959	4.98	ug/L	96
21) 2-Butanone	5.76	43	1019124	52.60	ug/L	99
22) cis-1,2-Dichloroethene	5.75	96	603288m	5.07	ug/L	

05/14/16 FY

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00527

Manual Integrations APPROVED
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5/13/2016 12:27:53 PM

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
23) Bromochloromethane	6.17	128	234146	4.91 ug/L	97
25) Chloroform	6.39	83	1069679	5.13 ug/L	97
27) 1,2-Dichloroethane	7.33	62	505978	4.82 ug/L	97
29) 1,1,1-Trichloroethane	6.62	97	859724	4.88 ug/L	99
30) Cyclohexane	6.72	56	751873	4.84 ug/L	99
31) Carbon tetrachloride	6.88	117	755838	4.91 ug/L	100
33) Benzene	7.21	78	1974065	4.97 ug/L	100
34) Trichloroethene	8.20	95	537504	4.87 ug/L	96
35) Methylcyclohexane	8.48	83	681007	5.01 ug/L	99
37) 1,2-Dichloropropane	8.53	63	453558	4.86 ug/L	100
38) Bromodichloromethane	8.88	83	678172	4.99 ug/L	98
39) cis-1,3-Dichloropropene	9.39	75	675768	4.92 ug/L	99
40) 4-Methyl-2-pentanone	9.56	43	2430671	50.66 ug/L	99
42) Toluene	9.75	91	1684845	5.03 ug/L	98
44) trans-1,3-Dichloropropene	10.04	75	521293	4.95 ug/L	96
45) 1,1,2-Trichloroethane	10.24	97	246420	5.09 ug/L	96
47) Tetrachloroethene	10.30	164	364808	5.04 ug/L	93
48) 2-Hexanone	10.46	43	1630946	50.84 ug/L	99
49) Dibromochloromethane	10.63	129	376461	5.16 ug/L	99
50) 1,2-Dibromoethane	10.74	107	253859	5.03 ug/L	96
51) Chlorobenzene	11.23	112	1024301	5.09 ug/L	97
52) Ethylbenzene	11.33	91	1804270	5.21 ug/L	100
53) m,p-Xylene	11.45	106	648903	5.14 ug/L	96
54) o-Xylene	11.83	106	604496	5.12 ug/L	100
55) Styrene	11.85	104	1017342	5.20 ug/L	99
56) Isopropylbenzene	12.17	105	1644835	5.38 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	233788	5.00 ug/L	96
60) Bromoform	12.04	173	172649	4.94 ug/L	97
61) 1,3-Dichlorobenzene	13.34	146	654328	5.14 ug/L	98
62) 1,4-Dichlorobenzene	13.43	146	671508	5.14 ug/L	98
64) 1,2-Dichlorobenzene	13.76	146	537966	5.10 ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.46	75	31225	4.86 ug/L	92
66) 1,2,4-trichlorobenzene	15.18	180	305336	5.42 ug/L	97
67) 1,2,3-Trichlorobenzene	15.65	180	224205	5.38 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00528

Manual Integrations APPROVED
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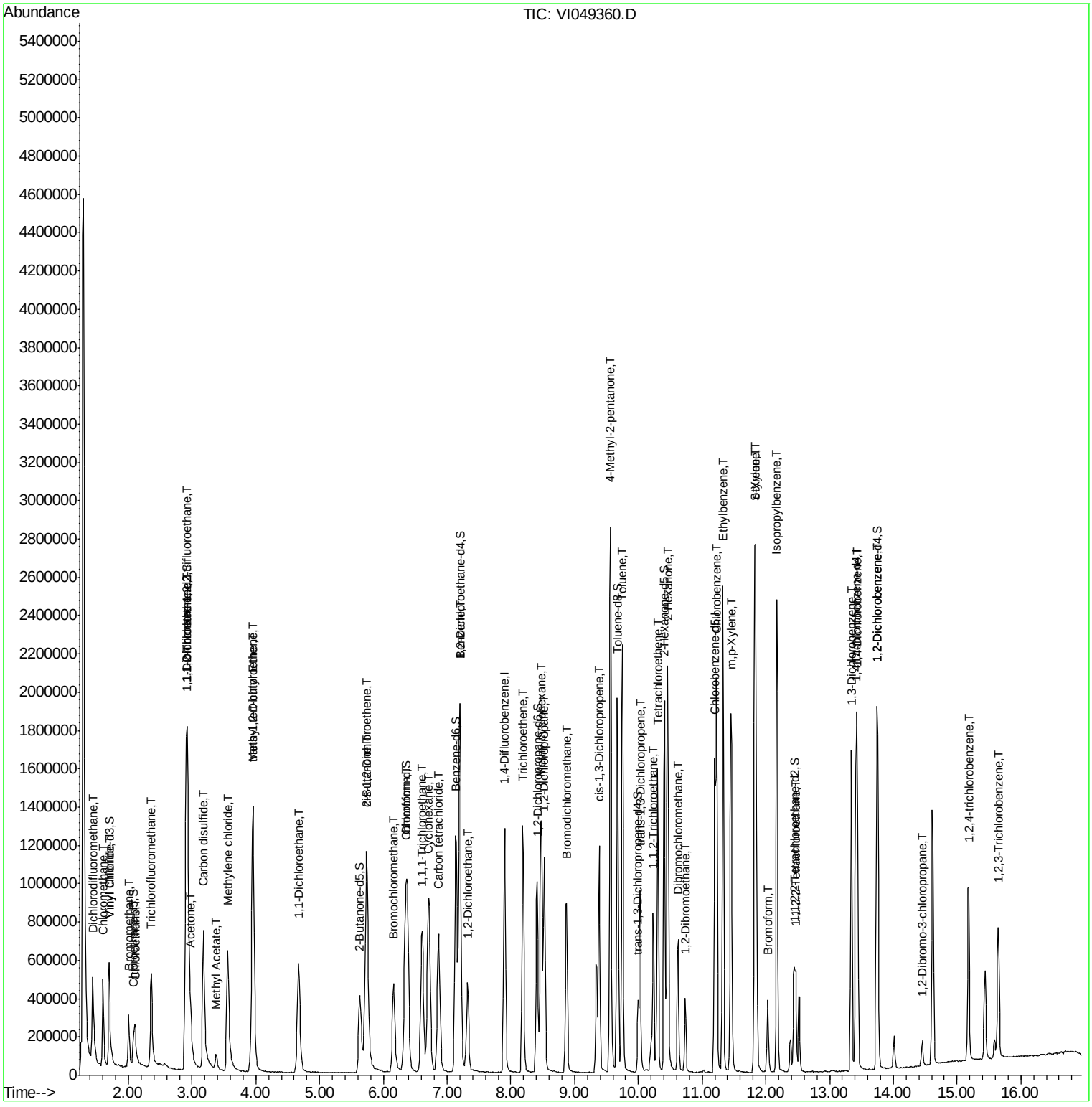

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Manual Integrations APPROVED
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Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1130489	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.20	117	808102	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	342879	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	287302	4.13	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.60%			
7) Chloroethane-d5	2.08	69	180739	4.69	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.80%			
11) 1,1-Dichloroethene-d2	2.90	63	779926	4.76	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 95.20%			
20) 2-Butanone-d5	5.63	46	990072	65.71	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 131.42%#			
24) Chloroform-d	6.34	84	971192	5.49	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 109.80%			
26) 1,2-Dichloroethane-d4	7.20	65	395559	5.46	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.20%			
32) Benzene-d6	7.13	84	1633659	5.19	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.80%			
36) 1,2-Dichloropropane-d6	8.41	67	468384	5.29	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 105.80%			
41) Toluene-d8	9.67	98	1192019	5.13	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.60%			
43) trans-1,3-Dichloropropene-	10.00	79	177131	5.08	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 101.60%			
46) 2-Hexanone-d5	10.41	63	668111	60.74	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 121.48%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	242675	6.03	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 120.60%#			
63) 1,2-Dichlorobenzene-d4	13.74	152	323596	5.38	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 107.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	601225	4.72	ug/L	99
3) Chloromethane	1.60	50	469986	4.31	ug/L	95
5) Vinyl chloride	1.70	62	374086	4.91	ug/L	99
6) Bromomethane	2.00	94	168687	4.58	ug/L	100
8) Chloroethane	2.11	64	169719	5.21	ug/L	99
9) Trichlorofluoromethane	2.36	101	509339	4.78	ug/L	100
10) 1,1,2-Trichloro-1,2,2-trif	2.93	101	503775	5.17	ug/L	99
12) 1,1-Dichloroethene	2.92	96	471346	5.17	ug/L	91
13) Acetone	2.98	43	491417	52.59	ug/L	98
14) Carbon disulfide	3.18	76	1611278	4.87	ug/L	99
15) Methyl Acetate	3.37	43	143503	5.38	ug/L	96
16) Methylene chloride	3.56	84	505487	5.03	ug/L	99
17) Methyl tert-butyl Ether	3.95	73	895763	5.37	ug/L	98
18) trans-1,2-Dichloroethene	3.95	96	527516	5.23	ug/L	97
19) 1,1-Dichloroethane	4.67	63	897405	5.25	ug/L	99
21) 2-Butanone	5.74	43	928701	54.93	ug/L	99
22) cis-1,2-Dichloroethene	5.73	96	555428m	5.35	ug/L	

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Manual Integrations APPROVED
feifei
5/13/2016 12:27:59 PM

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.16	128	209657	5.04	ug/L		97
25) Chloroform	6.37	83	981326	5.40	ug/L		98
27) 1,2-Dichloroethane	7.32	62	473209	5.16	ug/L		97
29) 1,1,1-Trichloroethane	6.61	97	793676	5.17	ug/L		99
30) Cyclohexane	6.71	56	653440	4.83	ug/L		100
31) Carbon tetrachloride	6.87	117	683478	5.10	ug/L		99
33) Benzene	7.20	78	1792270	5.18	ug/L		100
34) Trichloroethene	8.19	95	485204	5.05	ug/L		97
35) Methylcyclohexane	8.48	83	574862	4.85	ug/L		99
37) 1,2-Dichloropropane	8.52	63	406410	5.01	ug/L		99
38) Bromodichloromethane	8.87	83	593029	5.01	ug/L		99
39) cis-1,3-Dichloropropene	9.39	75	590353	4.94	ug/L		100
40) 4-Methyl-2-pentanone	9.56	43	2169012	51.93	ug/L		100
42) Toluene	9.75	91	1528146	5.24	ug/L		98
44) trans-1,3-Dichloropropene	10.03	75	462356	5.04	ug/L		97
45) 1,1,2-Trichloroethane	10.23	97	223574	5.31	ug/L		95
47) Tetrachloroethene	10.30	164	328912	5.22	ug/L		96
48) 2-Hexanone	10.46	43	1435500	51.40	ug/L		99
49) Dibromochloromethane	10.63	129	344430	5.42	ug/L		98
50) 1,2-Dibromoethane	10.73	107	229770	5.23	ug/L		97
51) Chlorobenzene	11.23	112	946789	5.41	ug/L		98
52) Ethylbenzene	11.33	91	1643567	5.45	ug/L		99
53) m,p-Xylene	11.45	106	597153	5.43	ug/L		94
54) o-Xylene	11.83	106	562263	5.47	ug/L		99
55) Styrene	11.85	104	945478	5.55	ug/L		99
56) Isopropylbenzene	12.17	105	1522900	5.72	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.47	83	218971	5.38	ug/L		98
60) Bromoform	12.03	173	158286	4.95	ug/L		99
61) 1,3-Dichlorobenzene	13.34	146	614579	5.28	ug/L		99
62) 1,4-Dichlorobenzene	13.43	146	605763	5.07	ug/L		99
64) 1,2-Dichlorobenzene	13.76	146	521275	5.41	ug/L		97
65) 1,2-Dibromo-3-chloropropan	14.45	75	31604	5.38	ug/L	#	77
66) 1,2,4-trichlorobenzene	15.18	180	288703	5.61	ug/L		97
67) 1,2,3-Trichlorobenzene	15.65	180	216837	5.69	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_1\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00528

Manual Integrations APPROVED
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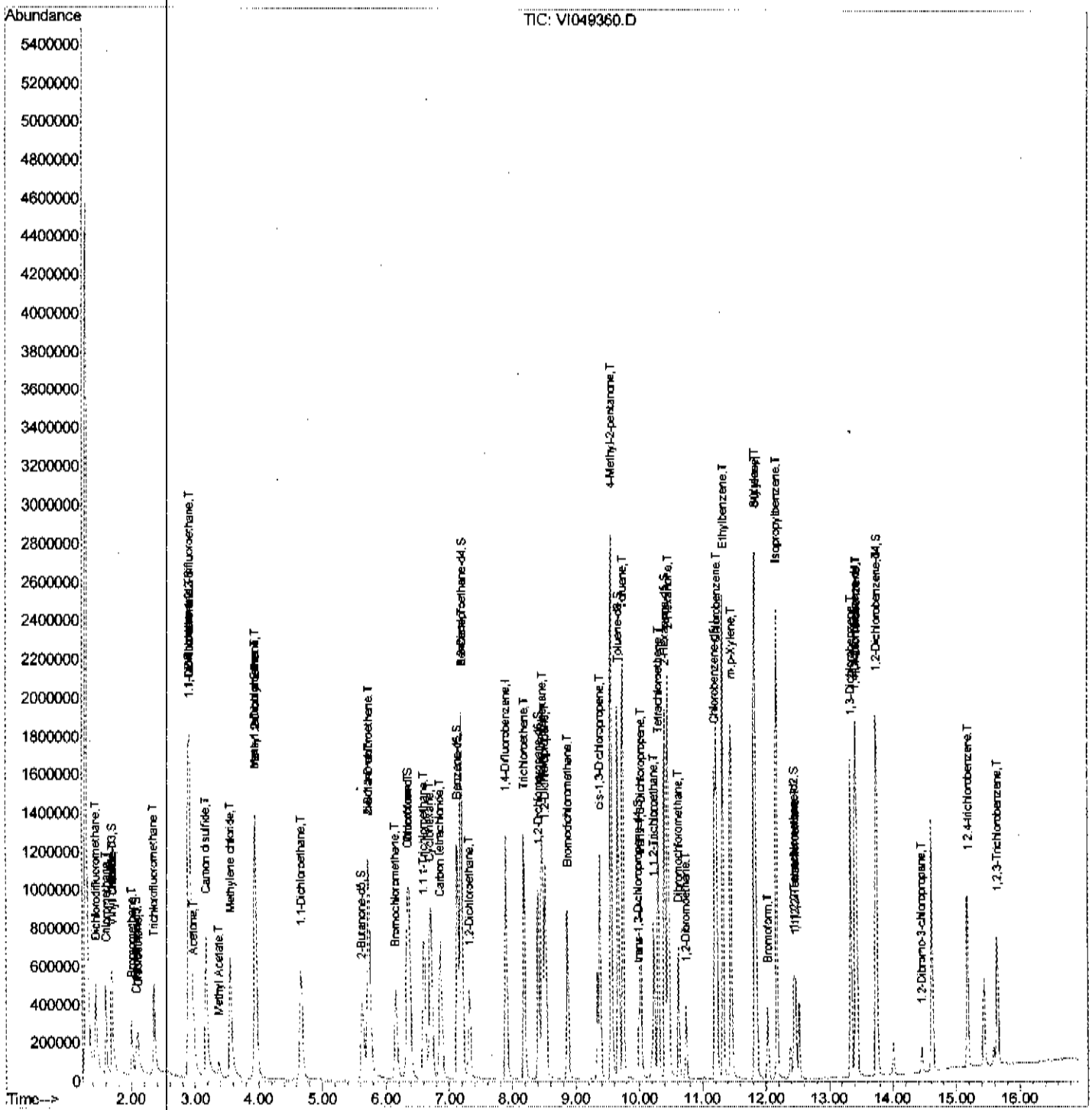
5/13/2016 12:27:59 PM



Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:14 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00528

Manual Integrations APPROVED
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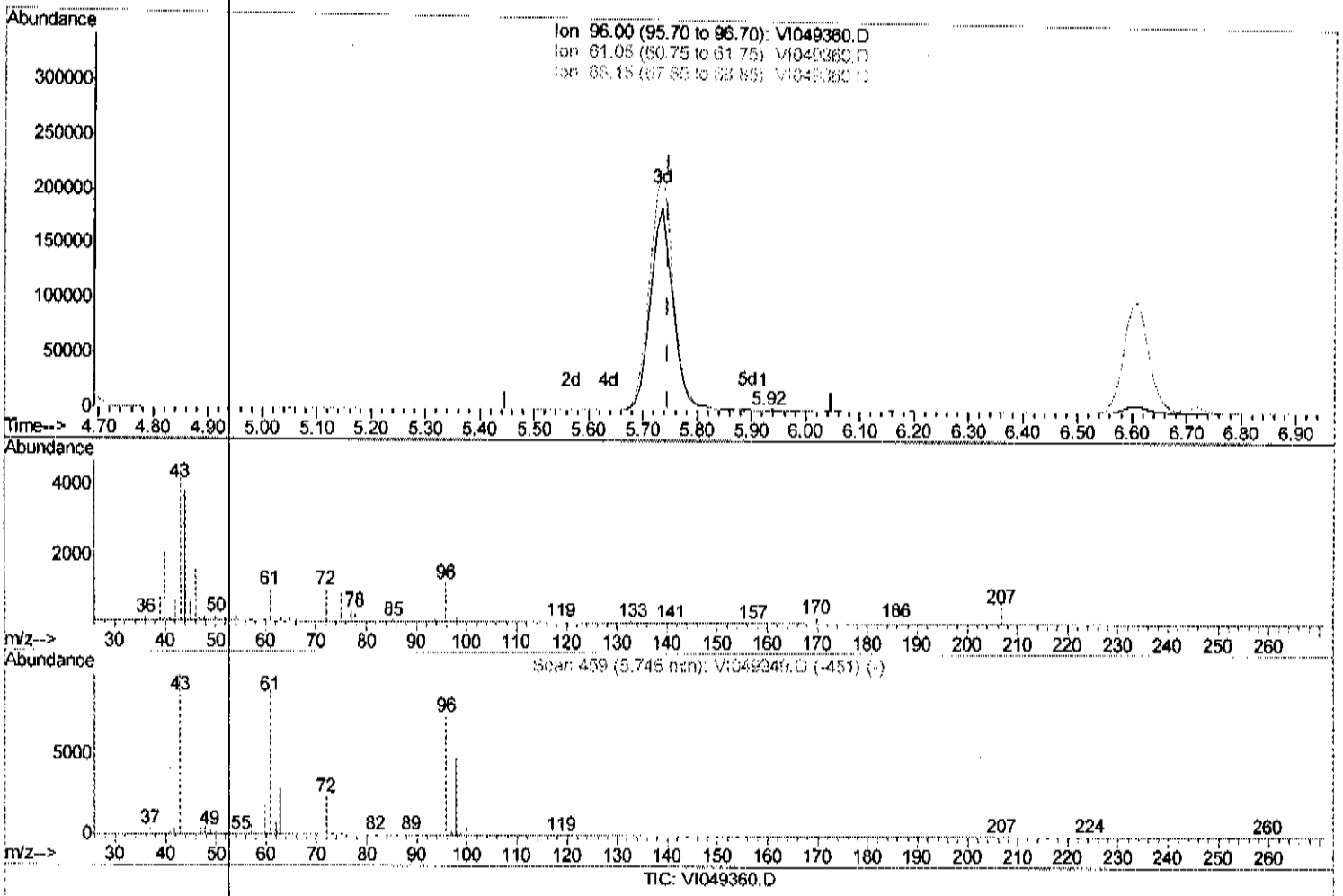
5/13/2016 12:27:59 PM



(22) cis-1,2-Dichloroethene (T)

5.922min (+0.176) 0.01ug/L

response 1364

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	83.74
68.15	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:14 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00528

Manual Integrations APPROVED
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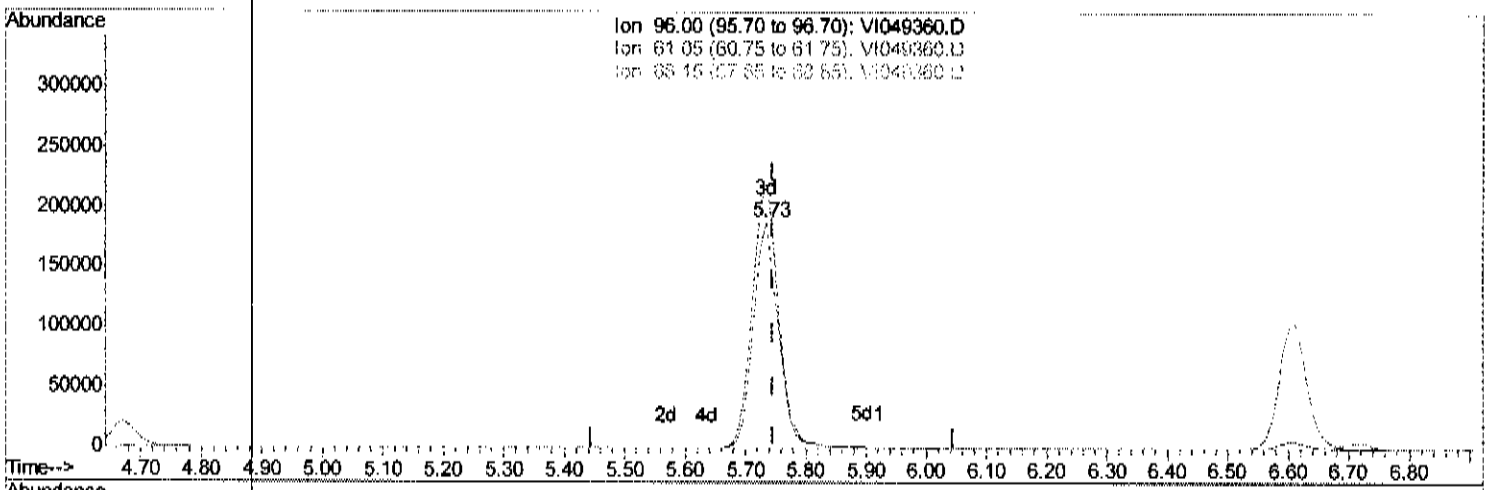
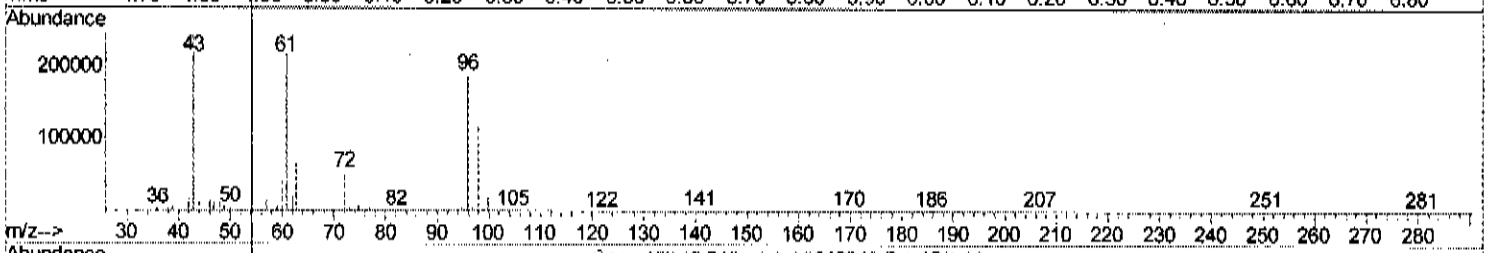
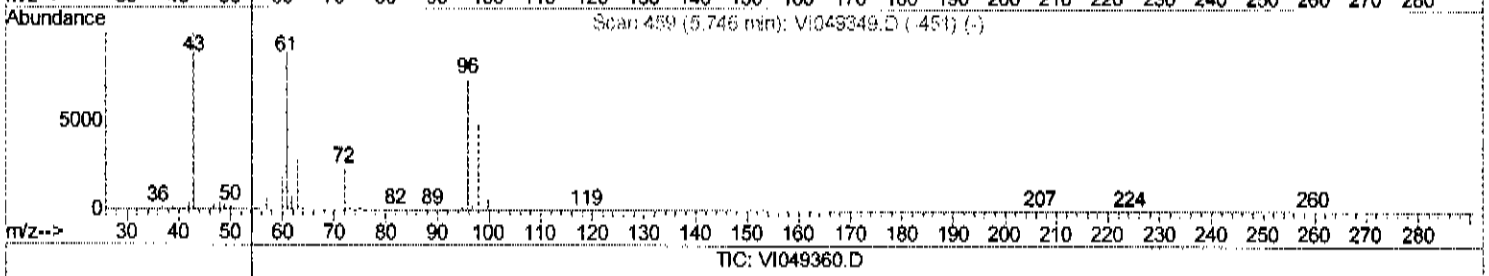
5/13/2016 12:27:59 PM







(22) cis-1,2-Dichloroethene (T)

5.735min (-0.011) 5.35ug/L m) 05/14/16 FY

response 555428

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	116.76
68.15	0.00	0.11#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VT051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Manual Integrations APPROVED
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5/13/2016 12:27:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1130489	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.20	117	808102	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	342879	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	287302	4.13	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.60%			
7) Chloroethane-d5	2.08	69	180739	4.69	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.80%			
11) 1,1-Dichloroethene-d2	2.90	63	779926	4.76	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 95.20%			
20) 2-Butanone-d5	5.63	46	990072	65.71	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 131.42%#			
24) Chloroform-d	6.34	84	971192	5.49	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 109.80%			
26) 1,2-Dichloroethane-d4	7.20	65	395559	5.46	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.20%			
32) Benzene-d6	7.13	84	1633659	5.19	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.80%			
36) 1,2-Dichloropropane-d6	8.41	67	468384	5.29	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 105.80%			
41) Toluene-d8	9.67	98	1192019	5.13	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.60%			
43) trans-1,3-Dichloropropene-	10.00	79	177131	5.08	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 101.60%			
46) 2-Hexanone-d5	10.41	63	668111	60.74	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 121.48%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	242675	6.03	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 120.60%#			
63) 1,2-Dichlorobenzene-d4	13.74	152	323596	5.38	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 107.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	601225	4.72	ug/L	99
3) Chloromethane	1.60	50	469986	4.31	ug/L	95
5) Vinyl chloride	1.70	62	374086	4.91	ug/L	99
6) Bromomethane	2.00	94	168687	4.58	ug/L	100
8) Chloroethane	2.11	64	169719	5.21	ug/L	99
9) Trichlorofluoromethane	2.36	101	509339	4.78	ug/L	100
10) 1,1,2-Trichloro-1,2,2-trif	2.93	101	503775	5.17	ug/L	99
12) 1,1-Dichloroethene	2.92	96	471346	5.17	ug/L	91
13) Acetone	2.98	43	491417	52.59	ug/L	98
14) Carbon disulfide	3.18	76	1611278	4.87	ug/L	99
15) Methyl Acetate	3.37	43	143503	5.38	ug/L	96
16) Methylene chloride	3.56	84	505487	5.03	ug/L	99
17) Methyl tert-butyl Ether	3.95	73	895763	5.37	ug/L	98
18) trans-1,2-Dichloroethene	3.95	96	527516	5.23	ug/L	97
19) 1,1-Dichloroethane	4.67	63	897405	5.25	ug/L	99
21) 2-Butanone	5.74	43	928701	54.93	ug/L	99
22) cis-1,2-Dichloroethene	5.73	96	555428m	5.35	ug/L	

05/14/16 SY

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Manual Integrations APPROVED
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5/13/2016 12:27:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.16	128	209657	5.04	ug/L		97
25) Chloroform	6.37	83	981326	5.40	ug/L		98
27) 1,2-Dichloroethane	7.32	62	473209	5.16	ug/L		97
29) 1,1,1-Trichloroethane	6.61	97	793676	5.17	ug/L		99
30) Cyclohexane	6.71	56	653440	4.83	ug/L		100
31) Carbon tetrachloride	6.87	117	683478	5.10	ug/L		99
33) Benzene	7.20	78	1792270	5.18	ug/L		100
34) Trichloroethene	8.19	95	485204	5.05	ug/L		97
35) Methylcyclohexane	8.48	83	574862	4.85	ug/L		99
37) 1,2-Dichloropropane	8.52	63	406410	5.01	ug/L		99
38) Bromodichloromethane	8.87	83	593029	5.01	ug/L		99
39) cis-1,3-Dichloropropene	9.39	75	590353	4.94	ug/L		100
40) 4-Methyl-2-pentanone	9.56	43	2169012	51.93	ug/L		100
42) Toluene	9.75	91	1528146	5.24	ug/L		98
44) trans-1,3-Dichloropropene	10.03	75	462356	5.04	ug/L		97
45) 1,1,2-Trichloroethane	10.23	97	223574	5.31	ug/L		95
47) Tetrachloroethene	10.30	164	328912	5.22	ug/L		96
48) 2-Hexanone	10.46	43	1435500	51.40	ug/L		99
49) Dibromochloromethane	10.63	129	344430	5.42	ug/L		98
50) 1,2-Dibromoethane	10.73	107	229770	5.23	ug/L		97
51) Chlorobenzene	11.23	112	946789	5.41	ug/L		98
52) Ethylbenzene	11.33	91	1643567	5.45	ug/L		99
53) m,p-Xylene	11.45	106	597153	5.43	ug/L		94
54) o-Xylene	11.83	106	562263	5.47	ug/L		99
55) Styrene	11.85	104	945478	5.55	ug/L		99
56) Isopropylbenzene	12.17	105	1522900	5.72	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.47	83	218971	5.38	ug/L		98
60) Bromoform	12.03	173	158286	4.95	ug/L		99
61) 1,3-Dichlorobenzene	13.34	146	614579	5.28	ug/L		99
62) 1,4-Dichlorobenzene	13.43	146	605763	5.07	ug/L		99
64) 1,2-Dichlorobenzene	13.76	146	521275	5.41	ug/L		97
65) 1,2-Dibromo-3-chloropropan	14.45	75	31604	5.38	ug/L	#	77
66) 1,2,4-trichlorobenzene	15.18	180	288703	5.61	ug/L		97
67) 1,2,3-Trichlorobenzene	15.65	180	216837	5.69	ug/L		98

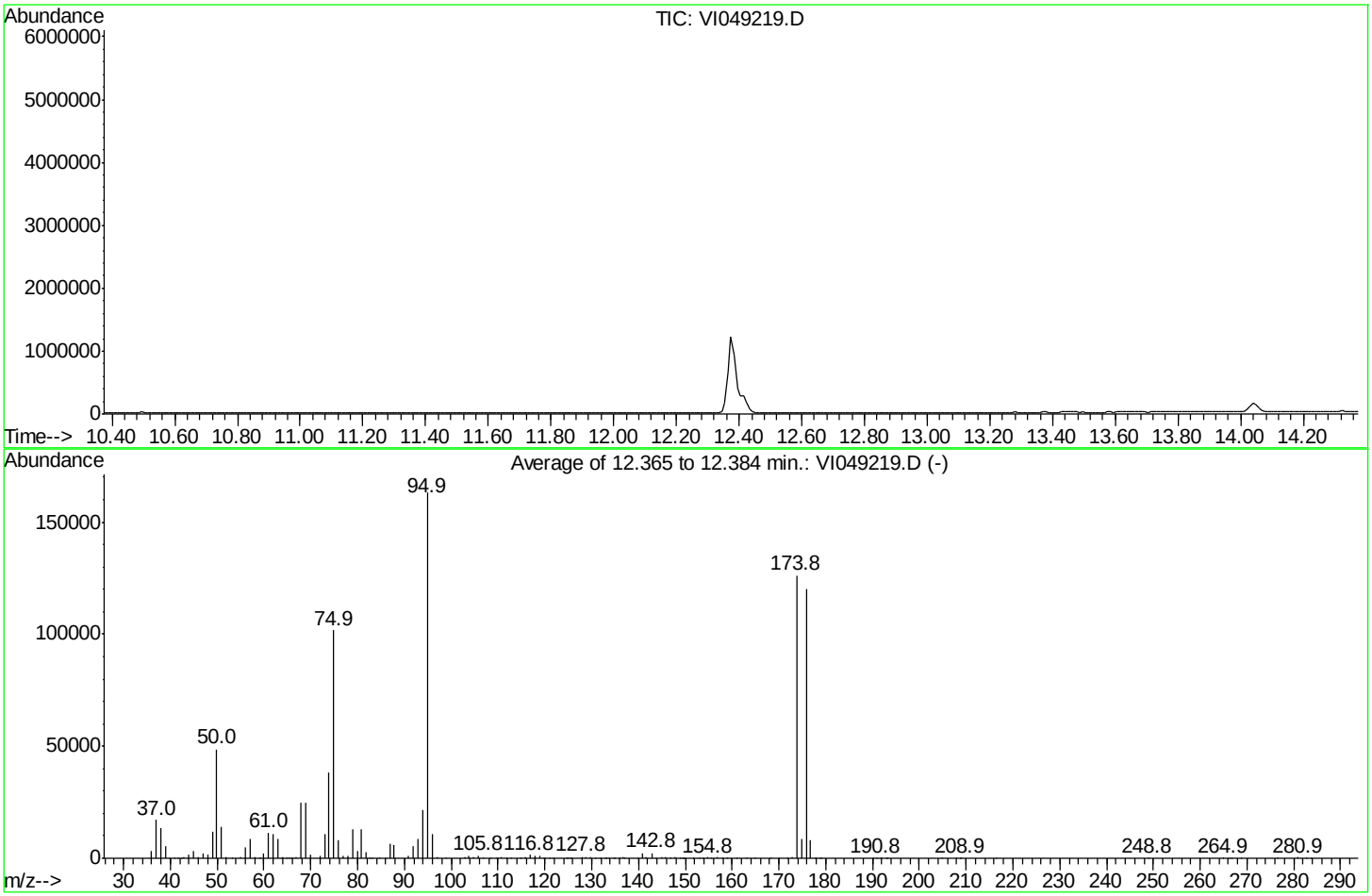
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049219.D
Acq On : 4 May 2016 8:57
Operator : FY/SY
Sample : BFB32
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB32

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Thu May 05 05:21:45 2016



AutoFind: Scans 1131, 1132, 1133; Background Corrected with Scan 1127

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	29.8	48658	PASS
75	95	30	80	62.3	101623	PASS
95	95	100	100	100.0	163138	PASS
96	95	5	9	6.6	10709	PASS
173	174	0.00	2	0.4	466	PASS
174	95	50	120	77.4	126261	PASS
175	174	5	9	7.1	8907	PASS
176	174	95	101	95.0	119986	PASS
177	176	5	9	6.7	8043	PASS

Scan 1127 (12.325 min): VI049219.D
BFB32

m/z	Abundance
35.95	298.0
39.00	695.0
39.90	1003.0
40.90	193.0
41.85	163.0
42.95	315.0
43.95	3257.0
44.75	335.0
50.95	353.0
51.85	155.0
52.30	169.0
55.00	175.0
58.95	188.0
59.80	152.0
60.70	181.0
62.60	204.0
63.85	210.0
64.95	244.0
69.70	179.0
70.65	165.0
72.95	1105.0
74.90	318.0
77.15	237.0
78.15	292.0
90.50	157.0
93.95	184.0
95.90	208.0
96.20	201.0
103.90	168.0
118.60	197.0
128.25	182.0
132.90	470.0
170.15	200.0
190.95	569.0
192.65	240.0
192.85	237.0
193.85	188.0
196.80	210.0
206.85	2279.0
207.95	227.0
208.80	215.0
248.45	210.0
259.70	198.0
260.10	177.0
266.70	256.0
279.30	193.0
280.90	939.0
282.00	618.0
282.70	217.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

Scan 1131 (12.365 min): VI049219.D
BFB32

Instrument :
MSVOA_I
ClientSampleId :
BFB32

m/z	Abundance
35.95	3387.0
36.95	16400.0
37.90	12574.0
39.00	5397.0
39.90	994.0
40.90	333.0
41.45	151.0
42.85	382.0
43.95	4353.0
44.90	2396.0
45.90	430.0
47.00	1397.0
48.00	1273.0
48.95	10427.0
49.95	40832.0
50.95	11832.0
51.95	573.0
54.90	696.0
55.95	4145.0
56.95	6496.0
57.95	425.0
58.85	195.0
59.05	204.0
60.00	1842.0
60.90	7636.0
61.90	8896.0
62.95	6635.0
63.75	777.0
65.35	189.0
65.85	161.0
66.90	732.0
67.90	19888.0
69.00	18984.0
69.95	2323.0
70.65	184.0
71.85	883.0
72.95	8029.0
73.90	31672.0
74.90	80968.0
75.90	5440.0
76.85	924.0
77.85	1029.0
78.85	10120.0
79.85	2196.0
80.80	10141.0
81.90	1487.0
83.00	323.0
86.85	4766.0
87.80	4132.0
90.80	743.0
91.85	4453.0
92.85	6191.0
93.95	15779.0
94.90	117320.0
95.90	9075.0
97.00	340.0
102.90	379.0
103.80	1179.0
104.90	343.0
105.75	930.0
109.70	471.0
111.70	194.0
114.85	216.0
115.90	472.0
116.80	1033.0
117.80	685.0
118.70	565.0
121.85	154.0
124.70	208.0
125.80	199.0
127.95	490.0
128.85	436.0
129.75	354.0
130.90	334.0
132.90	615.0
134.65	235.0
135.85	367.0
136.75	256.0
140.85	1126.0
141.65	217.0
142.75	1473.0
145.00	166.0
145.80	362.0
147.70	268.0
149.45	160.0
151.60	170.0
152.90	200.0
154.80	391.0
156.85	237.0
160.90	222.0
169.85	307.0
171.85	202.0

173.80	65312.0
174.80	4793.0
175.80	65368.0
176.75	4902.0
178.65	172.0
190.10	160.0
190.75	566.0
191.65	190.0
192.95	236.0
193.15	214.0
206.85	1761.0
207.95	262.0
208.70	271.0
266.70	442.0
276.55	157.0
280.90	946.0
282.75	152.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

Scan 1132 (12.374 min): VI049219.D
BFB32

Instrument :
MSVOA_I
ClientSampleId :
BFB32

m/z	Abundance
35.85	4655.0
36.95	19600.0
37.90	18296.0
39.00	7284.0
39.90	1195.0
40.90	673.0
42.45	214.0
42.95	431.0
43.95	6160.0
44.90	4370.0
45.90	515.0
46.90	3092.0
48.00	1961.0
48.95	15554.0
49.95	65416.0
50.95	18432.0
52.10	1007.0
53.30	154.0
54.90	840.0
55.85	6955.0
56.95	11209.0
57.95	647.0
58.85	350.0
59.90	3284.0
61.00	16251.0
61.90	13481.0
62.95	12315.0
63.95	1166.0
64.65	165.0
65.05	173.0
66.15	164.0
66.80	661.0
67.90	31992.0
68.90	35312.0
69.85	2042.0
71.95	1466.0
72.95	14442.0
73.90	49128.0
74.90	133120.0
76.00	12095.0
76.85	1193.0
77.85	926.0
78.85	17856.0
79.95	4684.0
80.80	17176.0
81.90	3445.0
82.60	238.0
86.85	8701.0
87.80	7453.0
90.80	1627.0
91.95	6924.0
92.95	12441.0
93.95	29432.0
94.90	210944.0
95.90	14756.0
96.90	329.0
102.90	365.0
103.80	1365.0
104.80	518.0
105.85	1424.0
106.95	382.0
108.35	158.0
109.90	192.0
110.80	350.0
111.80	275.0
112.65	399.0
114.95	211.0
115.85	936.0
116.80	1561.0
117.80	1332.0
118.90	1283.0
119.65	245.0
124.90	184.0
125.40	293.0
127.85	934.0
128.85	838.0
129.75	638.0
130.90	272.0
131.70	158.0
132.80	366.0
133.10	385.0
133.75	238.0
134.85	484.0
136.85	631.0
139.70	193.0
140.75	2515.0
141.75	473.0
142.85	2401.0
144.80	347.0
145.90	426.0
146.90	225.0
147.70	484.0

149.65	210.0
149.95	198.0
151.50	193.0
152.70	183.0
154.95	407.0
156.85	439.0
158.90	235.0
160.90	226.0
172.80	783.0
173.80	161024.0
174.80	10973.0
175.80	150400.0
176.85	10045.0
177.95	425.0
190.95	483.0
192.75	305.0
206.85	2070.0
207.85	328.0
208.70	384.0
248.85	277.0
266.60	313.0
268.85	298.0
281.00	1268.0
282.00	427.0
282.85	313.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

Scan 1133 (12.384 min): VI049219.D
BFB32

Instrument :
MSVOA_I
ClientSampleId :
BFB32

m/z	Abundance
35.95	2668.0
36.95	15616.0
37.90	9791.0
39.00	5131.0
39.80	1471.0
40.90	413.0
41.95	173.0
42.95	1060.0
43.85	4958.0
44.90	3509.0
45.70	203.0
47.00	1887.0
47.90	1572.0
48.95	10424.0
49.95	39728.0
50.95	12734.0
51.85	482.0
55.00	825.0
55.95	4090.0
56.95	7627.0
58.05	189.0
59.05	544.0
59.80	1876.0
60.90	10057.0
62.00	9237.0
62.95	6707.0
64.05	455.0
64.95	465.0
65.65	211.0
67.90	23032.0
69.00	19328.0
69.85	1535.0
70.75	158.0
71.85	765.0
72.95	12688.0
73.90	33488.0
74.90	91736.0
76.00	6961.0
76.85	1161.0
77.85	572.0
78.85	11286.0
79.85	3582.0
80.80	12245.0
81.80	3778.0
83.10	300.0
84.65	198.0
85.85	249.0
86.85	6705.0
87.80	6129.0
90.90	1207.0
91.95	5420.0
92.95	7957.0
93.95	20096.0
94.90	161152.0
95.90	8922.0
97.00	250.0
98.75	175.0
102.90	577.0
103.80	857.0
104.80	535.0
105.95	967.0
106.75	254.0
109.80	206.0
110.70	638.0
111.90	289.0
112.75	263.0
114.75	168.0
115.90	645.0
116.90	1655.0
117.90	808.0
118.90	1711.0
119.95	235.0
120.95	174.0
124.60	243.0
125.70	210.0
127.75	467.0
128.75	347.0
129.75	843.0
130.70	179.0
132.90	1031.0
133.65	316.0
134.65	393.0
137.05	551.0
140.85	2300.0
141.75	353.0
142.75	2711.0
143.75	213.0
144.80	378.0
145.70	203.0
146.70	398.0
147.80	307.0
148.95	199.0

149.55	179.0
152.90	192.0
153.80	185.0
154.80	521.0
155.45	210.0
156.85	276.0
157.75	173.0
158.70	174.0
160.90	394.0
163.05	258.0
164.75	183.0
168.20	153.0
172.70	615.0
173.80	152448.0
174.80	10955.0
175.80	144192.0
176.85	9184.0
177.65	362.0
178.95	221.0
190.85	691.0
191.95	296.0
192.95	678.0
204.85	357.0
206.95	2760.0
207.95	341.0
208.90	487.0
216.40	277.0
248.85	248.0
264.95	512.0
266.10	240.0
266.80	222.0
280.90	2231.0
281.80	453.0
282.95	438.0
283.75	210.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

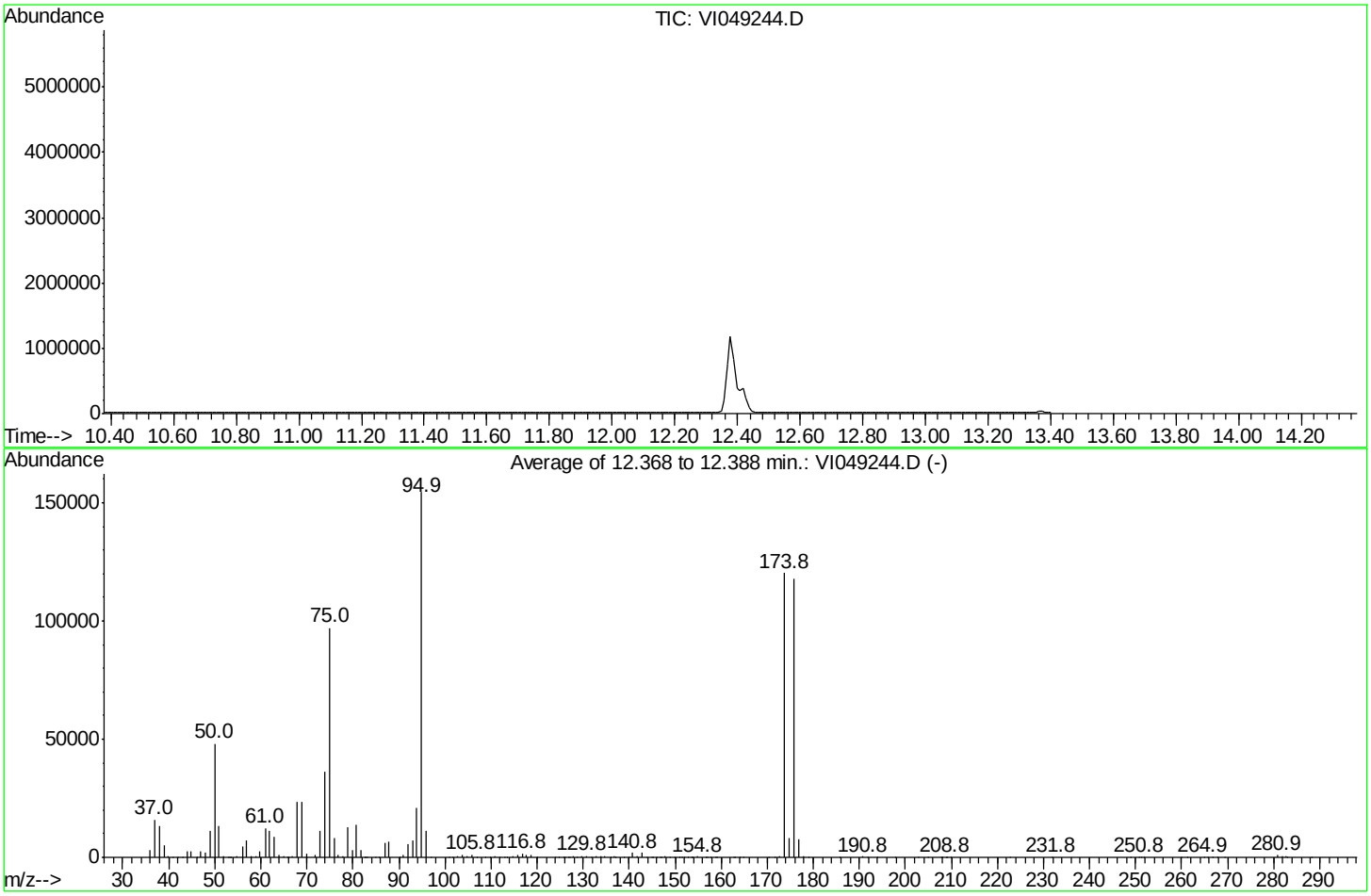
BFB

Data Path : W:\HPCHEM1\MSVOA I\Data\VI050516\
Data File : VI049244.D
Acq On : 5 May 2016 9:34
Operator : FY/SY
Sample : BFB33
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB33

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Fri May 06 05:16:54 2016



AutoFind: Scans 1132, 1133, 1134; Background Corrected with Scan 1128

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	31.1	48040	PASS
75	95	30	80	62.8	96938	PASS
95	95	100	100	100.0	154458	PASS
96	95	5	9	7.2	11123	PASS
173	174	0.00	2	0.5	634	PASS
174	95	50	120	77.8	120165	PASS
175	174	5	9	7.0	8383	PASS
176	174	95	101	98.0	117768	PASS
177	176	5	9	6.4	7560	PASS

Scan 1128 (12.329 min): VI049244.D
BFB33

m/z	Abundance
35.35	154.0
35.55	159.0
36.15	223.0
38.90	413.0
39.90	530.0
41.10	317.0
41.95	162.0
42.95	621.0
43.85	2027.0
44.85	479.0
45.70	198.0
51.05	395.0
53.80	180.0
54.80	209.0
56.15	242.0
56.85	240.0
58.75	227.0
59.60	218.0
71.05	320.0
72.95	1782.0
75.00	259.0
78.05	211.0
80.80	232.0
84.65	186.0
87.05	169.0
92.85	211.0
93.75	202.0
95.90	372.0
96.50	168.0
96.80	159.0
104.00	168.0
105.10	209.0
114.65	163.0
118.80	180.0
132.90	393.0
160.70	221.0
165.25	160.0
168.10	181.0
169.95	373.0
189.70	164.0
190.85	218.0
191.75	174.0
192.85	675.0
206.85	1917.0
207.75	208.0
208.90	169.0
223.60	151.0
260.10	178.0
266.80	188.0
269.75	190.0
280.80	1159.0
281.80	344.0

Instrument :
MSVOA_I
ClientSampleId :
BFB33

Scan 1132 (12.368 min): VI049244.D
BFB33

Instrument :
MSVOA_I
ClientSampleId :
BFB33

m/z	Abundance
35.95	3638.0
36.95	16028.0
38.00	13826.0
39.00	5577.0
39.90	1058.0
40.90	213.0
41.75	312.0
42.85	674.0
43.95	4353.0
45.00	2536.0
46.00	314.0
47.00	2598.0
47.90	2079.0
48.95	10265.0
49.95	45528.0
50.95	12316.0
52.00	468.0
53.50	191.0
54.90	1145.0
55.95	4795.0
56.95	6959.0
58.05	484.0
59.05	399.0
59.90	2250.0
61.00	11389.0
62.00	11178.0
62.95	8623.0
63.95	995.0
64.85	285.0
67.00	335.0
67.90	20888.0
68.90	22704.0
69.95	1731.0
71.95	1489.0
72.95	10380.0
73.90	31160.0
75.00	85880.0
76.00	8510.0
76.85	1277.0
77.85	703.0
78.85	10914.0
79.85	2342.0
80.80	11639.0
81.90	2517.0
82.70	389.0
85.95	225.0
86.85	5694.0
87.80	5186.0
90.00	151.0
90.80	741.0
91.85	5275.0
92.95	7243.0
93.95	18416.0
94.90	127632.0
95.90	9938.0
97.00	316.0
102.90	402.0
103.80	982.0
104.80	336.0
105.75	956.0
109.80	282.0
110.70	269.0
111.80	225.0
114.75	286.0
115.75	765.0
116.90	939.0
117.80	749.0
118.80	1452.0
126.75	183.0
127.65	490.0
129.75	659.0
130.80	235.0
132.90	394.0
134.75	382.0
136.65	221.0
140.70	1327.0
142.75	1511.0
143.75	160.0
145.20	195.0
146.70	288.0
147.70	154.0
148.75	159.0
153.90	164.0
154.95	251.0
156.95	224.0
158.70	219.0
162.65	172.0
164.85	161.0
165.05	156.0
171.65	164.0
172.80	403.0
173.80	78664.0

174.80	5737.0
175.80	75632.0
176.75	5226.0
177.95	225.0
185.75	208.0
190.75	186.0
192.85	215.0
197.75	162.0
206.85	1644.0
207.85	665.0
208.80	261.0
209.90	154.0
222.60	154.0
266.70	396.0
267.90	173.0
280.90	495.0
281.80	218.0

Instrument :
MSVOA_I
ClientSampleId :
BFB33

Scan 1133 (12.378 min): VI049244.D
BFB33

Instrument :
MSVOA_I
ClientSampleId :
BFB33

m/z	Abundance
35.95	4385.0
36.95	19200.0
38.00	17120.0
39.00	6918.0
39.90	1394.0
41.20	323.0
42.05	278.0
42.95	805.0
43.95	5823.0
45.00	3719.0
46.00	290.0
46.90	3359.0
47.90	2241.0
48.95	14683.0
49.95	64144.0
50.95	17912.0
51.95	638.0
52.90	168.0
54.90	1041.0
55.95	5395.0
56.95	9348.0
57.95	211.0
58.95	265.0
59.90	2911.0
61.00	16232.0
62.00	14198.0
62.95	11113.0
63.95	1167.0
64.95	352.0
65.85	640.0
66.80	615.0
67.90	31664.0
68.90	30320.0
69.95	2219.0
71.05	212.0
71.95	1338.0
72.95	15287.0
73.90	47720.0
74.90	130312.0
75.90	9787.0
76.85	1369.0
77.95	880.0
78.85	16832.0
79.85	4481.0
80.80	19296.0
81.90	3731.0
82.90	494.0
84.85	199.0
85.75	229.0
86.95	8350.0
87.80	9061.0
90.80	1412.0
91.95	6957.0
92.95	9708.0
93.95	26936.0
94.90	200640.0
95.90	15133.0
96.90	435.0
102.80	153.0
103.80	1790.0
104.80	357.0
105.75	1261.0
106.85	288.0
109.90	182.0
110.80	503.0
111.70	217.0
112.75	369.0
113.45	171.0
114.85	579.0
115.85	1166.0
116.80	2152.0
117.70	1190.0
118.80	1601.0
123.80	406.0
125.70	186.0
127.05	210.0
127.75	791.0
128.75	322.0
129.85	859.0
130.90	321.0
132.70	285.0
133.65	161.0
134.65	455.0
135.95	227.0
136.75	803.0
138.70	189.0
140.75	2188.0
141.95	400.0
142.85	2023.0
143.85	351.0
144.90	475.0
145.80	229.0

146.90	171.0
147.80	524.0
148.85	173.0
149.95	482.0
151.40	156.0
152.00	167.0
152.80	250.0
153.60	262.0
154.90	266.0
156.85	477.0
158.60	388.0
160.70	335.0
162.85	271.0
172.80	741.0
173.80	155392.0
174.80	10465.0
175.80	151424.0
176.75	8953.0
177.85	332.0
178.85	193.0
190.85	473.0
191.65	200.0
192.75	169.0
206.85	1548.0
208.05	475.0
208.90	467.0
231.80	264.0
250.75	221.0
259.80	177.0
266.60	217.0
280.90	1403.0
281.90	263.0
283.05	191.0

Instrument :
MSVOA_I
ClientSampleId :
BFB33

Scan 1134 (12.388 min): VI049244.D
BFB33

Instrument :
MSVOA_I
ClientSampleId :
BFB33

m/z	Abundance
35.85	2120.0
36.95	12447.0
38.00	9496.0
39.00	3702.0
40.00	1140.0
40.90	399.0
41.85	334.0
42.95	874.0
43.95	3558.0
44.90	3183.0
46.10	211.0
47.00	1603.0
47.80	1265.0
48.95	8301.0
49.95	34448.0
50.95	10260.0
52.00	325.0
53.10	176.0
54.80	677.0
55.95	3871.0
56.95	5150.0
57.95	522.0
59.10	567.0
59.80	1994.0
60.90	9153.0
61.90	8555.0
62.95	6496.0
63.85	894.0
64.95	220.0
66.05	334.0
66.80	487.0
67.90	18152.0
69.00	16704.0
70.05	1000.0
71.85	978.0
72.95	12637.0
73.90	30064.0
74.90	75400.0
76.00	6009.0
76.85	535.0
77.85	552.0
78.85	10628.0
79.85	2809.0
80.80	11837.0
81.80	3306.0
82.60	175.0
83.10	208.0
84.95	151.0
85.65	188.0
86.85	5404.0
87.90	4973.0
90.90	945.0
91.95	4360.0
92.95	5892.0
93.95	18520.0
94.90	135104.0
95.90	9415.0
96.90	335.0
100.95	175.0
101.65	247.0
102.70	486.0
103.80	991.0
104.70	387.0
105.75	891.0
106.85	391.0
108.75	165.0
110.90	448.0
111.70	193.0
112.85	295.0
114.75	529.0
115.85	788.0
116.80	1527.0
117.70	1098.0
118.90	1088.0
119.95	169.0
123.90	266.0
124.70	679.0
125.90	210.0
127.85	544.0
128.75	490.0
129.85	825.0
130.70	300.0
131.70	154.0
132.80	2461.0
133.75	782.0
134.65	628.0
137.05	238.0
138.80	187.0
140.00	195.0
140.75	2246.0
141.75	573.0
142.85	1996.0

145.90	187.0
146.80	417.0
147.95	627.0
148.75	300.0
149.75	256.0
150.95	158.0
152.00	217.0
154.80	708.0
156.65	405.0
157.75	195.0
158.90	282.0
160.80	323.0
162.85	331.0
163.95	271.0
164.85	268.0
170.35	165.0
172.70	759.0
173.80	126440.0
174.80	8949.0
175.80	126248.0
176.85	8503.0
177.85	384.0
178.85	516.0
190.85	1469.0
191.85	404.0
192.95	1487.0
193.85	374.0
202.70	315.0
204.85	218.0
206.85	1651.0
207.75	309.0
208.70	290.0
209.10	215.0
248.85	375.0
250.90	228.0
251.30	175.0
251.80	158.0
261.20	156.0
264.85	508.0
265.70	156.0
266.70	429.0
267.80	164.0
269.25	167.0
280.90	4536.0
281.90	1395.0
282.75	959.0
288.20	178.0

Instrument :
MSVOA_I
ClientSampleId :
BFB33

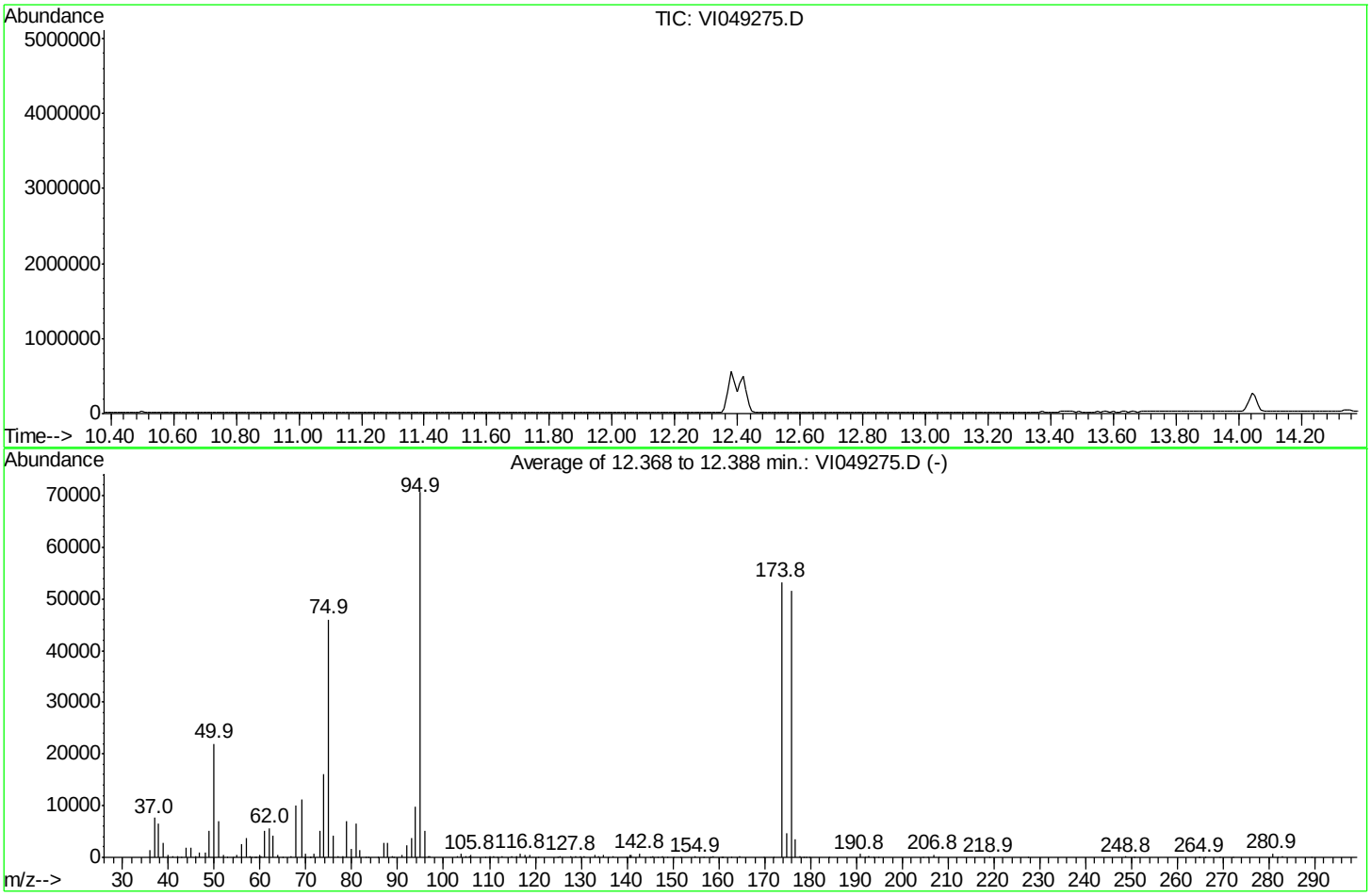
BFB

Data Path : W:\HPCHEM1\MSVOA I\Data\VI050616\
Data File : VI049275.D
Acq On : 6 May 2016 9:02
Operator : FY/SY
Sample : BFB34
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB34

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Sat May 07 04:11:41 2016



AutoFind: Scans 1132, 1133, 1134; Background Corrected with Scan 1128

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	31.0	21937	PASS
75	95	30	80	65.2	46069	PASS
95	95	100	100	100.0	70666	PASS
96	95	5	9	7.2	5058	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	75.4	53282	PASS
175	174	5	9	8.6	4561	PASS
176	174	95	101	96.8	51565	PASS
177	176	5	9	6.9	3537	PASS

Scan 1128 (12.329 min): VI049275.D
BFB34

m/z	Abundance
35.95	170.0
37.90	378.0
38.90	268.0
39.90	522.0
41.10	332.0
42.75	256.0
43.85	1734.0
44.75	171.0
49.75	151.0
50.85	274.0
54.70	154.0
58.95	386.0
60.50	182.0
61.10	226.0
64.75	152.0
65.95	168.0
72.95	394.0
73.90	339.0
76.85	201.0
77.95	195.0
85.25	225.0
93.85	244.0
102.70	164.0
107.85	178.0
124.80	232.0
126.85	253.0
133.00	469.0
141.95	202.0
146.80	263.0
170.15	176.0
192.95	233.0
206.85	1073.0
207.75	154.0
208.15	201.0
208.80	227.0
249.65	198.0
280.80	1059.0
281.80	543.0
292.75	170.0

Instrument :
MSVOA_I
ClientSampleId :
BFB34

Scan 1132 (12.368 min): VI049275.D
BFB34

m/z	Abundance
35.95	1375.0
36.95	5943.0
38.00	5763.0
39.00	2026.0
39.90	889.0
40.80	502.0
42.05	166.0
43.95	2804.0
44.90	1537.0
46.00	258.0
47.00	869.0
48.00	1043.0
48.95	3949.0
49.95	17256.0
51.05	5443.0
52.00	283.0
54.00	183.0
55.10	388.0
55.95	2036.0
56.95	2962.0
57.75	247.0
58.75	190.0
59.20	154.0
59.90	261.0
60.90	4834.0
62.00	4647.0
62.95	3745.0
63.85	284.0
66.80	370.0
67.90	7710.0
69.00	7653.0
69.85	301.0
71.85	287.0
72.95	2818.0
73.90	11870.0
74.90	32584.0
75.90	3762.0
76.80	279.0
78.05	648.0
78.85	5363.0
79.85	1192.0
80.80	4149.0
81.80	926.0
86.85	2051.0
87.90	1720.0
88.80	219.0
90.80	616.0
91.85	2228.0
92.95	2528.0
93.95	7823.0
94.90	47600.0
95.90	4089.0
97.10	179.0
103.00	227.0
103.90	769.0
105.65	468.0
109.10	212.0
110.80	176.0
111.70	184.0
115.90	252.0
116.80	581.0
117.80	428.0
118.80	207.0
127.95	169.0
129.95	260.0
130.80	216.0
132.90	468.0
134.85	373.0
140.70	210.0
140.95	187.0
141.75	164.0
142.95	398.0
147.85	209.0
150.25	205.0
158.15	167.0
173.80	28104.0
174.80	2927.0
175.80	25744.0
176.75	1658.0
177.95	245.0
184.15	306.0
190.85	164.0
192.65	213.0
206.95	1555.0
207.95	404.0
264.75	211.0
272.10	155.0
280.80	372.0
281.80	224.0
282.95	172.0

Instrument :
MSVOA_I
ClientSampleId :
BFB34

Scan 1133 (12.378 min): VI049275.D
BFB34

Instrument :
MSVOA_I
ClientSampleId :
BFB34

m/z	Abundance
36.05	1808.0
36.95	10778.0
37.90	10141.0
39.00	3913.0
39.90	1078.0
40.90	172.0
41.85	171.0
42.95	360.0
43.95	3367.0
44.90	1948.0
46.00	210.0
46.80	948.0
48.00	1218.0
48.95	6688.0
49.95	30288.0
50.95	10081.0
52.00	562.0
54.90	609.0
55.95	3566.0
56.95	4941.0
57.85	612.0
58.95	186.0
59.90	1457.0
60.90	6119.0
62.00	7489.0
62.85	4626.0
63.95	782.0
64.95	194.0
67.90	13564.0
69.00	16369.0
69.85	1005.0
70.85	355.0
71.85	1130.0
72.95	7206.0
73.90	20936.0
74.90	60936.0
76.00	5500.0
76.85	751.0
77.85	507.0
78.85	9232.0
79.95	2215.0
80.90	8762.0
81.80	1498.0
86.95	3367.0
87.80	4145.0
89.00	235.0
90.90	506.0
91.95	3417.0
92.95	4925.0
93.95	12084.0
94.90	96776.0
95.90	6313.0
96.80	431.0
102.90	488.0
103.80	611.0
104.90	298.0
105.85	1124.0
108.05	151.0
110.80	314.0
112.85	390.0
114.95	321.0
115.85	397.0
116.80	752.0
117.80	573.0
118.80	626.0
127.85	370.0
128.95	183.0
129.75	232.0
130.70	263.0
133.00	388.0
133.85	175.0
134.75	320.0
135.85	265.0
136.85	445.0
139.80	213.0
140.85	1164.0
142.75	919.0
145.70	389.0
146.60	178.0
147.80	240.0
151.80	211.0
154.90	312.0
158.80	279.0
161.00	160.0
169.85	219.0
171.95	229.0
173.80	66512.0
174.80	5737.0
175.80	64192.0
176.75	4529.0
190.85	436.0
192.55	215.0

192.75	215.0
204.50	150.0
205.55	176.0
206.85	1558.0
207.95	250.0
208.90	151.0
218.95	166.0
266.10	152.0
280.80	798.0
282.00	229.0

Instrument :
MSVOA_I
ClientSampleId :
BFB34

Scan 1134 (12.388 min): VI049275.D
BFB34

Instrument :
MSVOA_I
ClientSampleId :
BFB34

m/z	Abundance
35.95	1333.0
36.95	6070.0
38.00	4739.0
38.90	3081.0
39.80	1204.0
41.95	278.0
42.85	649.0
43.95	4311.0
44.90	2717.0
46.10	595.0
46.80	772.0
48.00	764.0
48.85	5119.0
49.95	18720.0
50.95	6579.0
51.95	383.0
52.90	201.0
55.00	420.0
55.85	1810.0
56.95	3161.0
58.05	194.0
58.95	825.0
60.10	813.0
60.90	5392.0
62.00	4676.0
62.95	4311.0
63.95	310.0
64.75	290.0
65.85	268.0
66.70	329.0
67.90	9087.0
69.00	9654.0
69.95	1103.0
71.05	343.0
71.75	408.0
72.95	6911.0
73.90	16608.0
74.90	44688.0
76.00	3473.0
76.85	447.0
78.85	6476.0
79.95	1646.0
80.80	6584.0
81.80	1568.0
83.00	182.0
83.60	235.0
85.65	198.0
86.95	3241.0
87.80	2300.0
88.70	248.0
90.90	561.0
91.85	1715.0
92.95	3743.0
93.95	10167.0
94.90	67624.0
96.00	4774.0
97.00	244.0
102.70	406.0
104.00	711.0
104.80	260.0
105.95	338.0
110.10	485.0
111.70	151.0
114.85	518.0
115.75	309.0
116.80	1023.0
117.70	413.0
118.80	854.0
120.65	174.0
124.90	713.0
125.50	422.0
127.75	407.0
128.75	404.0
129.75	385.0
132.90	1902.0
133.65	463.0
134.65	425.0
136.85	184.0
140.75	1126.0
142.75	1095.0
145.10	183.0
145.80	216.0
146.80	482.0
147.70	209.0
148.75	254.0
154.90	194.0
156.75	294.0
158.90	212.0
160.70	261.0
162.85	196.0
164.65	378.0
173.80	65232.0

174.80	5019.0
175.80	64760.0
176.75	4425.0
177.75	436.0
178.65	310.0
178.95	302.0
179.75	162.0
190.85	1367.0
191.85	330.0
192.85	1123.0
193.75	326.0
194.80	185.0
206.85	1630.0
208.05	298.0
208.90	258.0
227.35	166.0
248.85	427.0
250.75	225.0
264.95	268.0
269.25	161.0
280.90	4461.0
281.80	1072.0
282.85	432.0
289.30	180.0

Instrument :
MSVOA_I
ClientSampleId :
BFB34

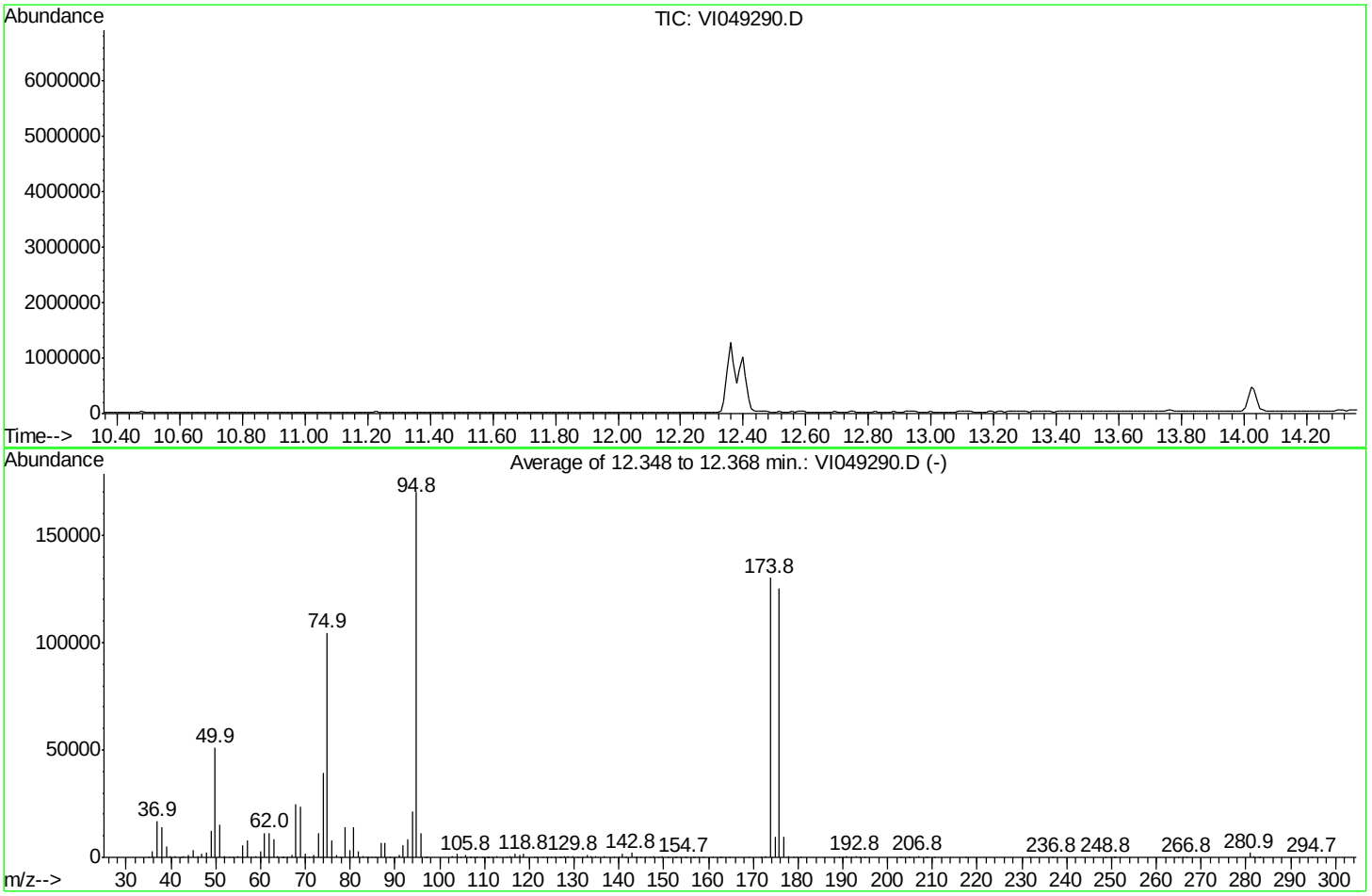
BFB

Data Path : W:\HPCHEM1\MSVOA I\Data\VI050916\
Data File : VI049290.D
Acq On : 9 May 2016 9:50
Operator : FY/SY
Sample : BFB35
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB35

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Tue May 10 06:11:38 2016



AutoFind: Scans 1130, 1131, 1132; Background Corrected with Scan 1126

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	29.9	50925	PASS
75	95	30	80	61.4	104469	PASS
95	95	100	100	100.0	170060	PASS
96	95	5	9	6.7	11422	PASS
173	174	0.00	2	0.5	648	PASS
174	95	50	120	76.6	130256	PASS
175	174	5	9	7.2	9369	PASS
176	174	95	101	96.0	125084	PASS
177	176	5	9	7.6	9536	PASS

Scan 1126 (12.309 min): VI049290.D
BFB35

m/z	Abundance
35.75	434.0
36.35	158.0
36.75	200.0
37.90	382.0
38.40	323.0
39.00	440.0
39.90	754.0
40.90	643.0
41.75	378.0
42.95	705.0
43.95	3669.0
44.85	762.0
47.00	176.0
47.60	173.0
49.75	171.0
50.95	252.0
54.80	461.0
57.05	313.0
58.85	496.0
59.90	187.0
62.85	366.0
65.05	355.0
66.60	165.0
72.95	4254.0
73.90	364.0
74.90	349.0
77.05	231.0
77.85	461.0
79.05	313.0
80.90	193.0
84.75	167.0
87.70	199.0
90.10	192.0
92.05	225.0
92.65	271.0
93.85	172.0
94.70	158.0
95.90	295.0
97.70	195.0
102.80	311.0
104.90	243.0
114.75	190.0
115.85	212.0
118.60	199.0
124.80	215.0
126.10	290.0
130.70	202.0
132.90	687.0
136.85	184.0
146.90	364.0
154.10	152.0
156.95	222.0
169.95	207.0
175.90	180.0
176.95	309.0
181.00	156.0
189.70	172.0
190.85	331.0
192.95	396.0
195.10	188.0
205.75	173.0
206.95	1950.0
207.85	663.0
217.80	205.0
220.85	173.0
222.60	233.0
231.80	170.0
260.00	271.0
264.65	155.0
266.70	190.0
280.90	859.0
281.60	214.0
281.90	193.0
282.95	166.0
283.85	172.0

Instrument :
MSVOA_I
ClientSampleId :
BFB35

Scan 1130 (12.348 min): VI049290.D
BFB35

m/z	Abundance
35.95	3657.0
36.95	17104.0
37.90	14263.0
39.00	5888.0
39.90	1612.0
40.80	338.0
41.10	382.0
41.85	492.0
42.95	1005.0
43.95	4753.0
44.90	3238.0
46.00	258.0
46.90	1626.0
47.90	2359.0
48.95	11648.0
49.95	48616.0
50.95	14728.0
51.85	609.0
53.00	172.0
53.90	239.0
55.00	998.0
55.95	4630.0
56.95	7591.0
57.85	243.0
58.95	642.0
59.90	2048.0
60.90	10781.0
62.00	9843.0
62.95	9485.0
63.95	979.0
64.75	260.0
65.25	189.0
67.00	1055.0
67.90	23296.0
68.90	21512.0
69.85	2151.0
70.85	204.0
71.85	1104.0
72.95	11484.0
73.90	32680.0
74.90	89184.0
76.00	7574.0
76.80	1281.0
77.75	665.0
78.85	12121.0
79.85	2513.0
80.80	13051.0
81.80	2454.0
82.90	315.0
84.85	267.0
85.75	176.0
86.85	5739.0
87.90	4549.0
90.90	1009.0
91.95	5454.0
92.95	7213.0
93.95	18080.0
94.90	142848.0
95.90	10247.0
96.80	428.0
102.90	376.0
103.90	1500.0
104.80	399.0
105.75	842.0
106.75	300.0
107.65	179.0
108.15	204.0
109.90	478.0
110.60	218.0
112.75	269.0
114.85	220.0
116.00	1051.0
116.80	1313.0
117.90	855.0
118.80	1298.0
121.05	169.0
121.85	196.0
126.10	151.0
127.85	526.0
128.85	475.0
129.75	719.0
130.90	332.0
131.90	158.0
132.90	1044.0
134.85	413.0
136.95	730.0
140.75	1677.0
142.85	1000.0
145.80	150.0
146.90	347.0
147.80	249.0
149.75	189.0

Instrument :
MSVOA_I
ClientSampleId :
BFB35

154.70	308.0
156.65	229.0
157.85	187.0
158.80	153.0
162.55	373.0
172.90	504.0
173.80	77296.0
174.90	5271.0
175.80	74224.0
176.75	5415.0
177.85	261.0
190.85	498.0
191.75	205.0
192.95	230.0
194.90	165.0
204.75	172.0
206.85	1922.0
207.85	393.0
208.60	401.0
231.90	241.0
250.55	168.0
266.70	232.0
280.80	620.0
281.80	402.0
283.05	154.0
294.70	155.0

Instrument :
MSVOA_I
ClientSampleId :
BFB35

Scan 1131 (12.358 min): VI049290.D
BFB35

Instrument :
MSVOA_I
ClientSampleId :
BFB35

m/z	Abundance
35.05	170.0
35.95	3706.0
36.95	21632.0
37.90	19256.0
39.00	6802.0
40.00	1337.0
41.00	637.0
42.15	531.0
42.85	1021.0
43.95	5439.0
44.90	4031.0
45.90	477.0
46.90	2532.0
47.90	2551.0
48.95	16920.0
49.95	66768.0
50.95	20744.0
51.95	1226.0
53.00	300.0
55.00	1741.0
55.95	7867.0
56.95	10308.0
57.85	430.0
58.95	555.0
59.90	4083.0
61.00	14409.0
62.00	14279.0
62.95	10074.0
63.95	789.0
64.95	257.0
65.95	184.0
66.90	876.0
67.90	32872.0
69.00	30432.0
69.85	2743.0
70.95	349.0
71.95	1540.0
72.95	18960.0
73.90	54400.0
74.90	139904.0
76.00	11123.0
76.85	2127.0
77.85	946.0
78.85	18432.0
79.85	4186.0
80.80	17536.0
81.90	4166.0
82.90	500.0
84.05	177.0
86.85	9807.0
87.80	8777.0
90.90	1723.0
91.95	7363.0
92.95	11042.0
93.95	26864.0
94.90	221568.0
95.90	15184.0
96.80	407.0
102.90	478.0
103.80	2147.0
104.70	589.0
105.85	1304.0
106.95	224.0
109.80	214.0
110.80	438.0
111.80	398.0
112.75	381.0
114.85	235.0
115.85	1248.0
116.80	2359.0
117.80	1012.0
118.80	2225.0
121.65	161.0
122.95	223.0
124.00	179.0
124.80	174.0
125.80	167.0
126.00	184.0
126.65	244.0
127.75	721.0
128.75	593.0
129.85	857.0
130.90	600.0
131.80	219.0
132.80	874.0
133.75	553.0
134.85	1133.0
136.85	856.0
139.80	229.0
140.75	2476.0
141.65	388.0
142.75	2869.0

143.85	165.0
144.80	241.0
145.80	219.0
146.80	521.0
147.85	690.0
148.85	281.0
149.65	419.0
151.05	170.0
152.50	232.0
153.80	236.0
154.70	522.0
156.85	647.0
158.80	344.0
160.80	284.0
162.85	219.0
164.75	185.0
169.85	346.0
171.75	168.0
172.80	653.0
173.80	174976.0
174.80	13493.0
175.80	161600.0
176.75	12967.0
177.75	701.0
190.95	424.0
191.85	195.0
192.95	492.0
193.85	313.0
204.95	157.0
206.85	2692.0
207.95	463.0
208.90	494.0
217.50	151.0
231.70	179.0
236.80	187.0
266.80	226.0
280.80	893.0
281.90	461.0
283.15	153.0

Instrument :
MSVOA_I
ClientSampleId :
BFB35

Scan 1132 (12.368 min): VI049290.D
BFB35

Instrument :
MSVOA_I
ClientSampleId :
BFB35

m/z	Abundance
35.95	2656.0
36.95	12344.0
37.90	9828.0
39.00	4107.0
39.90	1502.0
41.00	933.0
41.85	530.0
42.85	1132.0
43.95	4767.0
44.90	4885.0
46.00	875.0
46.90	1678.0
47.90	1070.0
48.85	9299.0
49.95	37904.0
50.95	10858.0
51.95	443.0
52.80	209.0
55.00	1183.0
55.85	3709.0
56.95	7017.0
58.85	1982.0
60.00	2469.0
61.00	9314.0
62.00	10437.0
62.95	6505.0
63.85	702.0
64.95	432.0
66.90	682.0
67.90	18744.0
68.90	19448.0
69.85	900.0
72.05	1304.0
72.95	16584.0
73.90	32704.0
74.90	85368.0
76.00	5730.0
76.95	1367.0
77.85	682.0
78.85	12255.0
79.85	3216.0
80.80	11479.0
81.90	2667.0
82.90	207.0
83.70	185.0
84.85	541.0
85.65	269.0
86.85	5284.0
87.80	6754.0
88.80	570.0
90.00	168.0
90.90	591.0
91.85	5086.0
92.95	7312.0
93.95	19664.0
94.90	146240.0
96.00	9720.0
97.10	245.0
102.90	1483.0
103.80	1641.0
104.80	590.0
105.85	666.0
106.85	350.0
109.50	428.0
111.00	505.0
111.60	251.0
112.85	311.0
114.85	788.0
115.75	814.0
116.80	1063.0
117.90	1082.0
118.80	1946.0
120.95	156.0
123.70	175.0
124.90	1312.0
126.00	240.0
126.95	218.0
127.85	468.0
128.65	399.0
129.85	966.0
130.70	209.0
131.80	155.0
132.90	2821.0
133.85	679.0
134.95	842.0
136.95	868.0
138.90	183.0
139.90	164.0
140.85	1618.0
141.65	195.0
142.85	2487.0
144.05	215.0

144.80	190.0
145.70	194.0
146.80	837.0
147.85	480.0
148.75	440.0
149.85	318.0
152.80	276.0
154.20	162.0
154.95	251.0
156.75	576.0
157.75	184.0
158.70	212.0
160.90	504.0
162.95	481.0
164.85	478.0
169.00	249.0
169.95	151.0
172.70	788.0
173.80	138496.0
174.80	9344.0
175.80	139968.0
176.85	11153.0
177.75	452.0
178.85	847.0
179.80	204.0
180.70	155.0
189.20	276.0
190.10	158.0
190.85	1778.0
191.85	384.0
192.85	2185.0
193.85	571.0
194.80	202.0
202.80	215.0
204.85	345.0
206.85	3038.0
208.05	571.0
209.00	271.0
210.50	187.0
231.80	232.0
248.75	595.0
249.75	154.0
250.75	176.0
251.90	157.0
259.80	184.0
264.75	809.0
265.90	174.0
266.80	664.0
280.90	7180.0
281.90	2064.0
282.85	1265.0
283.85	343.0

Instrument :
MSVOA_I
ClientSampleId :
BFB35

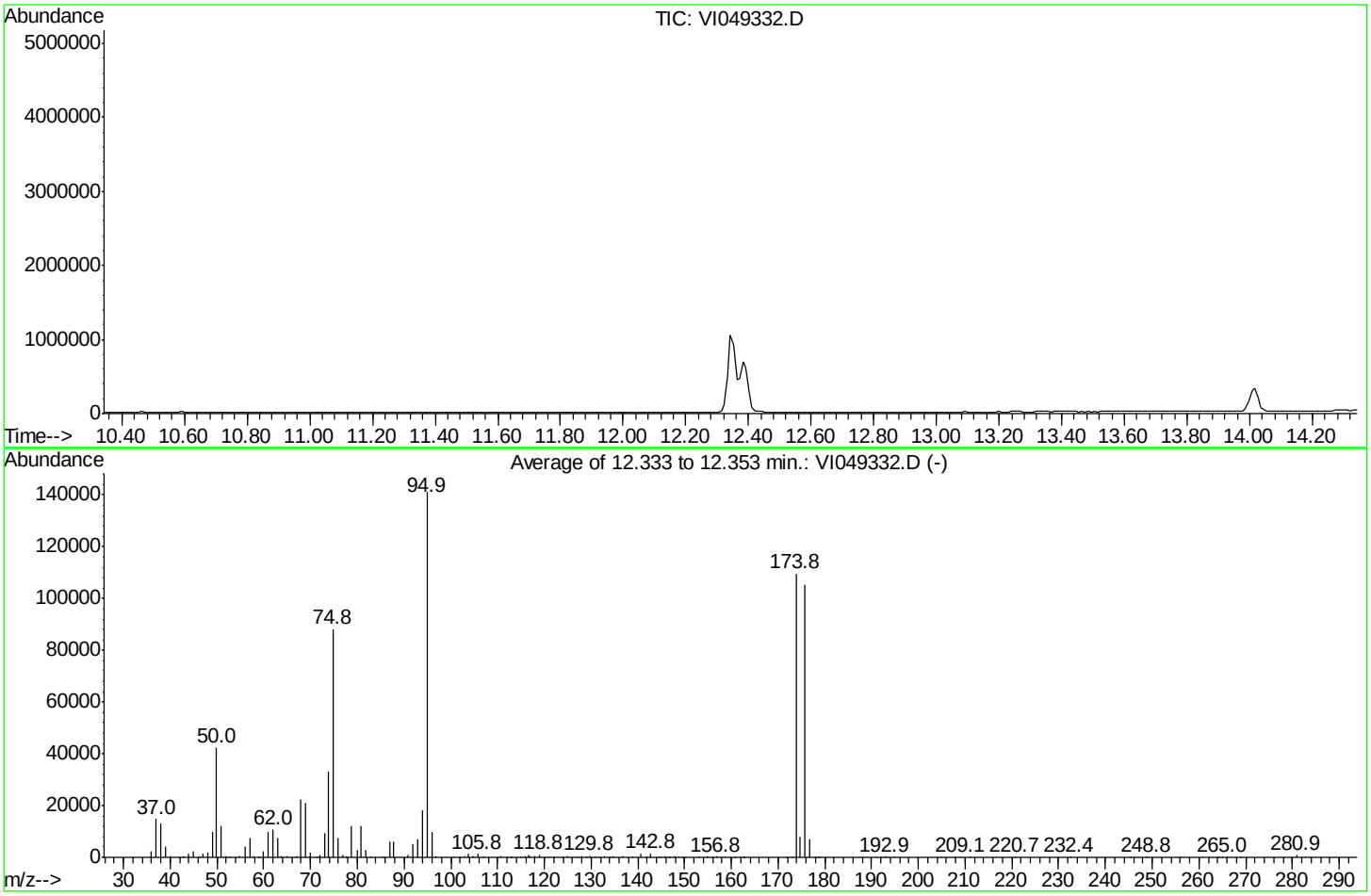
BFB

Data Path : W:\HPCHEM1\MSVOA I\Data\VI051116\
Data File : VI049332.D
Acq On : 11 May 2016 10:00
Operator : FY/SY
Sample : BFB37
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB37

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Thu May 12 06:03:43 2016



AutoFind: Scans 1128, 1129, 1130; Background Corrected with Scan 1124

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	30.0	42346	PASS
75	95	30	80	62.5	88238	PASS
95	95	100	100	100.0	141072	PASS
96	95	5	9	6.9	9702	PASS
173	174	0.00	2	0.2	240	PASS
174	95	50	120	77.7	109669	PASS
175	174	5	9	7.2	7865	PASS
176	174	95	101	95.9	105146	PASS
177	176	5	9	6.8	7103	PASS

Scan 1124 (12.294 min): VI049332.D
BFB37

m/z	Abundance
35.55	285.0
35.95	294.0
37.45	306.0
38.90	539.0
39.90	488.0
41.00	588.0
41.85	200.0
42.95	305.0
43.85	3577.0
45.00	483.0
46.10	227.0
48.65	207.0
50.95	518.0
52.00	202.0
53.10	236.0
54.00	188.0
55.00	308.0
58.75	320.0
65.95	177.0
69.00	236.0
72.95	1168.0
74.80	308.0
76.85	283.0
77.15	261.0
77.95	267.0
78.75	193.0
88.90	168.0
94.05	367.0
95.90	264.0
104.70	158.0
108.25	227.0
119.00	339.0
125.70	258.0
128.85	167.0
132.70	342.0
134.05	209.0
151.35	163.0
164.95	187.0
169.55	206.0
176.85	225.0
184.25	174.0
190.85	651.0
192.75	376.0
206.85	1995.0
207.95	368.0
208.80	230.0
231.70	164.0
243.45	342.0
249.05	160.0
266.80	447.0
267.80	170.0
277.65	197.0
280.80	864.0
282.00	249.0
282.70	240.0
295.30	177.0

Instrument :
MSVOA_I
ClientSampleId :
BFB37

Scan 1128 (12.333 min): VI049332.D
BFB37

m/z	Abundance
35.85	2377.0
36.95	12487.0
37.90	9436.0
39.00	4169.0
39.90	1039.0
41.00	373.0
41.95	406.0
42.95	395.0
43.95	3608.0
44.90	1948.0
46.00	348.0
46.90	1166.0
47.90	987.0
48.95	8269.0
49.95	30280.0
50.95	9090.0
51.95	381.0
54.80	267.0
55.95	2329.0
56.95	5451.0
57.85	632.0
59.90	1642.0
61.00	6174.0
62.00	7406.0
62.95	5525.0
63.85	706.0
65.05	371.0
67.00	436.0
67.90	14280.0
69.00	15782.0
69.95	1178.0
71.15	202.0
71.85	680.0
72.95	6643.0
73.90	22448.0
74.90	62120.0
75.90	5800.0
76.85	736.0
77.85	424.0
78.85	8817.0
79.95	1732.0
80.80	8182.0
81.80	1541.0
82.80	163.0
85.35	169.0
86.85	3328.0
87.80	4592.0
90.80	878.0
91.95	2976.0
92.85	4173.0
93.95	12150.0
94.90	88176.0
95.90	7218.0
96.90	331.0
102.90	271.0
103.90	525.0
104.90	356.0
105.85	615.0
106.75	200.0
110.80	152.0
112.95	157.0
114.95	244.0
115.90	408.0
116.70	701.0
117.80	432.0
118.80	878.0
122.15	219.0
123.80	233.0
124.90	161.0
127.05	198.0
127.95	323.0
129.75	442.0
130.90	191.0
132.90	162.0
133.85	229.0
134.75	338.0
136.85	481.0
140.85	622.0
141.75	433.0
142.85	746.0
146.60	177.0
147.70	204.0
154.70	202.0
154.90	208.0
156.85	365.0
160.80	220.0
172.70	322.0
173.80	49520.0
174.80	2833.0
175.80	45584.0
176.75	3176.0
188.00	167.0

Instrument :
MSVOA_I
ClientSampleId :
BFB37

190.75	493.0
192.75	564.0
206.85	1701.0
207.75	318.0
245.40	152.0
265.10	160.0
266.90	188.0
268.85	163.0
280.70	567.0
281.10	460.0
281.90	254.0
282.85	183.0

Instrument :
MSVOA_I
ClientSampleId :
BFB37

Scan 1129 (12.343 min): VI049332.D
BFB37

Instrument :
MSVOA_I
ClientSampleId :
BFB37

m/z	Abundance
35.95	3887.0
36.95	19328.0
38.00	17488.0
38.90	5483.0
40.00	1273.0
40.90	596.0
41.75	161.0
42.85	1175.0
43.95	5933.0
44.90	2995.0
46.20	537.0
46.90	2154.0
47.90	2307.0
48.95	13880.0
49.95	57088.0
50.95	15625.0
51.85	463.0
54.80	885.0
55.85	4897.0
56.95	10148.0
57.85	763.0
58.95	311.0
60.00	2679.0
61.00	13053.0
62.00	13813.0
62.95	10004.0
63.85	701.0
64.95	398.0
66.15	178.0
67.00	855.0
67.90	29792.0
68.90	25792.0
69.85	2462.0
72.05	1985.0
72.95	12344.0
73.90	44080.0
74.90	113424.0
76.00	8921.0
76.85	1605.0
77.85	1156.0
78.85	16013.0
79.85	3502.0
80.80	16976.0
81.90	3350.0
85.85	161.0
86.85	7074.0
87.90	6191.0
90.80	1687.0
91.95	6438.0
92.95	9499.0
93.95	22632.0
94.90	185536.0
95.90	12112.0
96.90	443.0
100.75	213.0
102.00	196.0
102.80	262.0
103.80	1412.0
104.80	585.0
105.85	1610.0
106.85	250.0
109.90	469.0
110.70	401.0
112.00	391.0
112.65	322.0
114.75	265.0
115.90	812.0
116.90	1534.0
117.80	501.0
118.90	1230.0
123.80	276.0
127.85	913.0
128.75	336.0
129.75	771.0
130.80	215.0
131.50	164.0
132.90	528.0
133.85	156.0
134.75	253.0
136.75	540.0
138.80	182.0
140.75	2150.0
141.95	299.0
142.85	2123.0
143.85	170.0
144.60	192.0
145.80	517.0
146.90	224.0
147.80	653.0
152.90	175.0
154.80	504.0
156.75	510.0

158.90	345.0
162.55	297.0
164.75	169.0
171.85	154.0
173.80	138240.0
174.80	10410.0
175.80	130464.0
176.75	8839.0
177.95	215.0
178.65	154.0
190.85	172.0
192.55	181.0
206.95	1326.0
207.95	277.0
209.20	184.0
232.40	189.0
266.80	243.0
280.70	699.0
281.90	260.0
282.70	159.0

Instrument :
MSVOA_I
ClientSampleId :
BFB37

Scan 1130 (12.353 min): VI049332.D
BFB37

Instrument :
MSVOA_I
ClientSampleId :
BFB37

m/z	Abundance
35.95	2114.0
36.95	12664.0
37.90	12026.0
38.90	4085.0
39.80	916.0
40.90	788.0
41.95	253.0
42.95	838.0
43.95	5621.0
45.00	3670.0
46.10	299.0
46.90	1522.0
47.90	1855.0
48.95	7944.0
49.95	39672.0
50.95	12763.0
51.95	963.0
52.60	170.0
53.80	151.0
54.90	874.0
55.85	5332.0
56.95	7107.0
57.95	415.0
58.85	792.0
60.00	2078.0
61.00	9499.0
62.00	10427.0
62.95	7546.0
63.95	385.0
67.00	284.0
67.90	22768.0
68.90	21704.0
69.85	1880.0
71.95	1387.0
72.95	12744.0
73.90	32944.0
74.90	90096.0
76.00	7966.0
76.95	1072.0
77.75	914.0
78.85	11985.0
79.85	3374.0
80.80	11722.0
81.90	2909.0
82.80	339.0
86.85	7984.0
87.80	7834.0
88.90	239.0
90.90	850.0
91.95	5367.0
92.95	7874.0
93.95	21256.0
94.90	149504.0
95.90	10568.0
96.90	551.0
102.80	526.0
103.80	1615.0
104.70	335.0
105.75	1349.0
109.90	212.0
110.80	324.0
111.90	318.0
112.85	248.0
114.75	206.0
115.90	568.0
116.70	1472.0
117.80	1200.0
118.90	1846.0
120.85	186.0
124.80	684.0
127.85	713.0
128.95	397.0
129.75	694.0
130.90	336.0
132.90	1262.0
133.95	328.0
134.75	594.0
136.85	636.0
140.75	1988.0
142.75	1898.0
143.95	197.0
145.00	189.0
145.70	298.0
146.70	244.0
147.85	334.0
148.75	433.0
149.75	182.0
150.05	249.0
154.80	355.0
155.75	153.0
156.85	422.0
158.70	395.0

160.80	318.0
162.75	280.0
164.85	334.0
171.95	172.0
172.80	399.0
173.80	141248.0
174.80	10353.0
175.80	139392.0
176.75	9970.0
177.65	357.0
178.85	184.0
190.85	946.0
191.85	334.0
192.95	1089.0
194.80	166.0
204.75	302.0
206.85	2131.0
207.85	786.0
209.00	411.0
211.00	185.0
220.65	164.0
231.80	202.0
248.75	395.0
255.85	161.0
264.05	160.0
264.95	186.0
266.10	161.0
266.80	293.0
280.90	2324.0
281.80	918.0
282.85	481.0
283.85	215.0

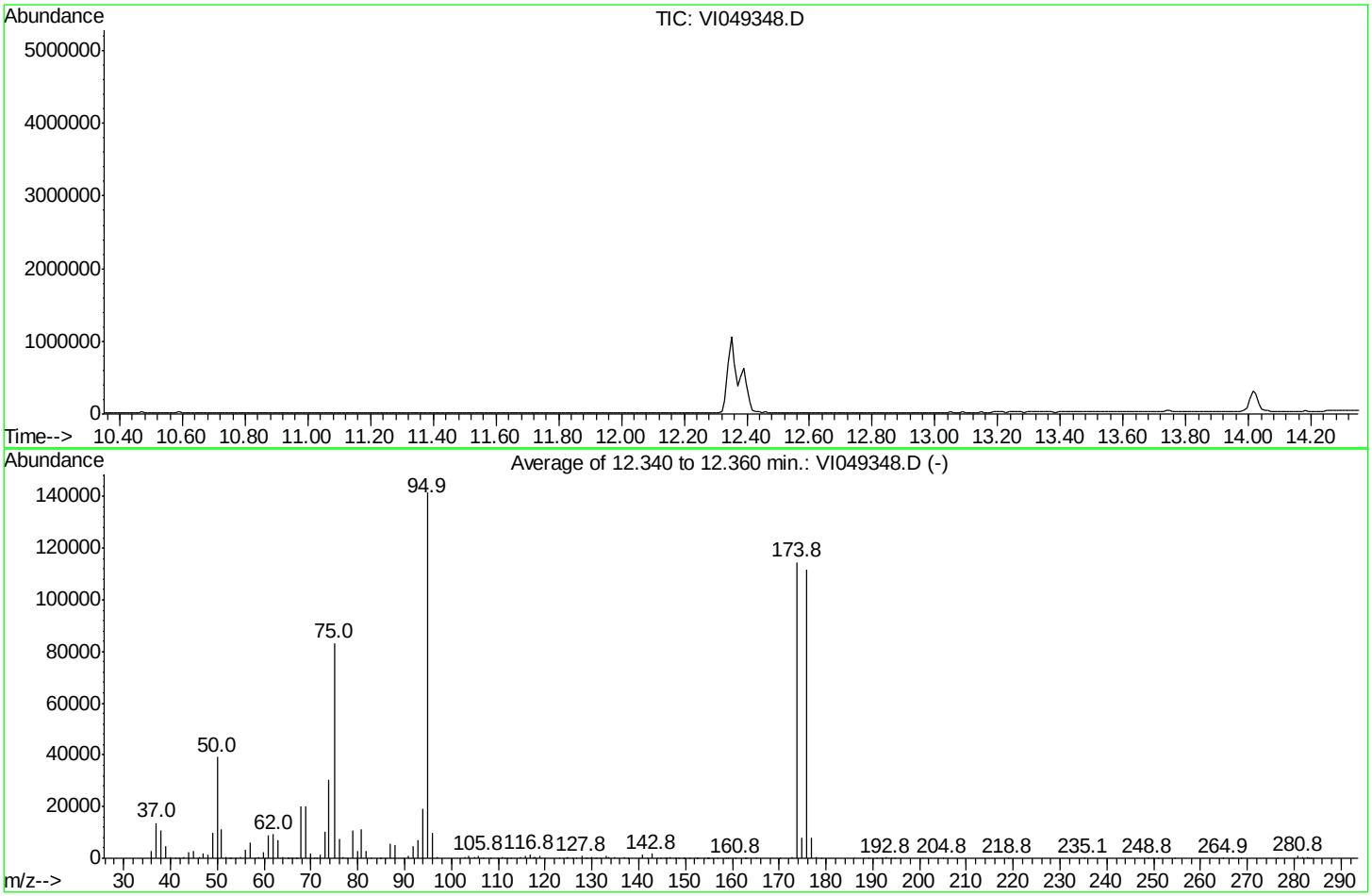
Instrument :
MSVOA_I
ClientSampleId :
BFB37

Data Path : W:\HPCHEM1\MSVOA I\Data\VI051216\
Data File : VI049348.D
Acq On : 12 May 2016 9:58
Operator : FY/SY
Sample : BFB38
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB38

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Fri May 13 04:31:36 2016



AutoFind: Scans 1129, 1130, 1131; Background Corrected with Scan 1125

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.7	39208	PASS
75	95	30	80	58.8	83152	PASS
95	95	100	100	100.0	141482	PASS
96	95	5	9	6.9	9729	PASS
173	174	0.00	2	0.5	586	PASS
174	95	50	120	81.0	114557	PASS
175	174	5	9	6.9	7853	PASS
176	174	95	101	97.6	111770	PASS
177	176	5	9	7.0	7795	PASS

Scan 1125 (12.301 min): VI049348.D
BFB38

m/z	Abundance
35.65	246.0
36.25	178.0
38.00	334.0
38.90	518.0
39.90	784.0
40.90	388.0
42.95	472.0
43.95	2165.0
45.00	290.0
45.90	217.0
49.95	176.0
50.85	284.0
54.90	219.0
55.95	201.0
61.60	163.0
62.10	176.0
72.95	835.0
76.85	477.0
77.85	376.0
78.95	197.0
82.80	164.0
94.15	301.0
96.10	327.0
97.70	188.0
98.55	211.0
102.80	242.0
103.90	160.0
109.90	184.0
132.80	448.0
147.80	236.0
169.85	190.0
190.75	523.0
192.75	322.0
206.85	2203.0
207.85	609.0
209.00	252.0
222.80	163.0
248.85	164.0
261.10	171.0
266.90	209.0
280.80	1306.0
282.00	232.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

Scan 1129 (12.340 min): VI049348.D
BFB38

Instrument :
MSVOA_I
ClientSampleId :
BFB38

m/z	Abundance
35.95	2705.0
36.95	14958.0
38.00	13425.0
39.00	5592.0
39.90	1163.0
40.90	647.0
42.05	372.0
42.85	465.0
43.85	4577.0
44.90	3347.0
45.80	330.0
47.00	2293.0
47.90	1658.0
48.95	9385.0
49.95	39768.0
50.95	12085.0
52.10	647.0
55.00	745.0
55.95	3968.0
56.95	5959.0
58.05	162.0
58.95	312.0
59.90	2053.0
61.00	8326.0
62.00	9975.0
62.95	6965.0
63.95	584.0
66.80	680.0
67.90	21064.0
69.00	19248.0
69.95	2099.0
71.15	154.0
71.95	1231.0
72.95	8655.0
73.90	29464.0
75.00	78816.0
76.00	7725.0
76.80	1083.0
77.75	931.0
78.85	10378.0
79.95	2748.0
80.80	10858.0
81.80	2818.0
84.75	170.0
85.85	165.0
86.85	4704.0
87.90	3935.0
90.80	909.0
91.85	3400.0
92.95	6124.0
93.95	16082.0
94.90	123920.0
95.90	9211.0
96.90	594.0
102.80	191.0
103.90	1455.0
104.90	210.0
105.95	886.0
106.65	160.0
108.45	181.0
110.80	267.0
112.75	263.0
114.75	407.0
115.65	404.0
116.70	1129.0
117.70	466.0
119.00	483.0
119.95	231.0
124.60	168.0
125.90	180.0
127.85	715.0
128.75	245.0
129.65	663.0
132.80	560.0
134.85	278.0
136.85	564.0
140.75	1438.0
142.75	1743.0
145.70	173.0
147.00	285.0
147.70	366.0
152.50	182.0
154.10	178.0
154.95	279.0
172.70	396.0
173.80	78472.0
174.80	5361.0
175.80	73992.0
176.85	5400.0
185.95	234.0
189.10	156.0
190.85	289.0

191.75	166.0
192.95	428.0
206.85	1625.0
207.95	429.0
208.90	277.0
222.70	168.0
248.75	256.0
266.80	385.0
276.25	161.0
280.90	893.0
281.90	191.0
283.05	187.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

Scan 1130 (12.350 min): VI049348.D
BFB38

m/z	Abundance
35.95	3753.0
36.95	17648.0
38.00	12834.0
39.00	5406.0
40.00	792.0
41.10	548.0
41.85	235.0
42.85	856.0
43.95	4710.0
44.90	3012.0
46.20	477.0
46.90	2167.0
48.00	1963.0
48.95	13122.0
49.95	51640.0
50.95	14864.0
51.95	742.0
54.00	167.0
55.00	730.0
55.95	4714.0
56.95	7344.0
58.85	283.0
60.00	2639.0
60.90	12704.0
61.90	11739.0
62.95	9074.0
63.95	652.0
64.95	319.0
65.85	311.0
67.90	25104.0
69.00	28088.0
69.95	1888.0
71.05	240.0
71.95	1796.0
72.95	12146.0
73.90	37952.0
74.90	107888.0
76.00	9782.0
76.85	934.0
77.75	698.0
78.85	15130.0
79.95	3753.0
80.80	15332.0
81.80	3213.0
82.90	342.0
84.95	285.0
85.65	166.0
86.85	6940.0
87.80	7116.0
90.90	911.0
91.85	6685.0
92.95	8572.0
93.95	27080.0
94.90	190464.0
95.90	12777.0
96.90	564.0
102.90	634.0
103.80	1367.0
104.90	366.0
105.75	1250.0
106.75	294.0
109.70	392.0
110.90	239.0
111.90	243.0
112.75	272.0
114.75	200.0
115.75	1420.0
116.80	1946.0
117.90	801.0
118.80	1345.0
122.95	191.0
127.85	906.0
128.95	248.0
129.85	670.0
130.70	267.0
131.00	277.0
133.00	775.0
133.75	220.0
134.85	366.0
136.85	706.0
140.75	1516.0
141.95	188.0
142.85	1943.0
144.70	181.0
145.70	385.0
146.80	412.0
147.80	528.0
149.65	258.0
149.95	198.0
152.90	166.0
154.70	704.0
156.75	217.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

158.60	174.0
160.80	532.0
162.75	224.0
170.15	155.0
172.80	731.0
173.80	149888.0
174.90	10880.0
175.80	146944.0
176.85	9647.0
177.95	473.0
188.00	167.0
190.65	251.0
192.75	296.0
206.95	1632.0
207.75	476.0
208.70	158.0
264.85	182.0
266.60	284.0
280.80	1106.0
282.00	200.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

Scan 1131 (12.360 min): VI049348.D
BFB38

Instrument :
MSVOA_I
ClientSampleId :
BFB38

m/z	Abundance
35.85	2399.0
36.95	8754.0
37.90	6467.0
39.00	3971.0
39.90	1175.0
42.95	969.0
43.95	4407.0
45.00	3414.0
46.00	411.0
47.00	1572.0
48.00	1195.0
48.95	6588.0
49.95	26744.0
50.95	7053.0
51.95	260.0
52.70	197.0
53.00	176.0
55.00	685.0
55.95	2280.0
56.95	4832.0
57.95	380.0
58.95	849.0
60.00	1841.0
60.90	6012.0
62.00	6205.0
62.95	4896.0
64.05	458.0
65.15	210.0
66.05	352.0
67.00	559.0
67.90	14574.0
68.90	13403.0
69.95	1006.0
70.65	155.0
71.95	864.0
72.95	13200.0
73.90	23976.0
74.90	62752.0
76.00	5343.0
76.85	858.0
78.85	7220.0
79.95	2367.0
80.80	8034.0
81.90	1755.0
83.00	456.0
85.85	168.0
86.85	5117.0
87.80	4379.0
89.70	226.0
90.80	1233.0
91.95	4610.0
92.95	6068.0
93.95	15275.0
94.90	110064.0
95.90	8180.0
96.90	357.0
102.90	830.0
103.70	1038.0
105.00	333.0
105.75	828.0
109.80	307.0
111.00	398.0
111.50	289.0
112.00	229.0
112.55	217.0
114.75	503.0
115.85	596.0
116.70	1345.0
117.60	746.0
118.90	1317.0
124.90	1064.0
125.80	314.0
126.55	152.0
127.75	612.0
128.75	278.0
129.85	652.0
131.90	152.0
132.90	2048.0
133.60	650.0
134.85	873.0
136.85	373.0
137.80	169.0
139.90	184.0
140.85	1308.0
141.85	264.0
142.75	1498.0
143.85	263.0
144.80	218.0
145.90	475.0
146.70	523.0
147.60	445.0
147.95	315.0

148.65	221.0
149.85	157.0
150.75	178.0
152.00	152.0
152.70	334.0
153.90	252.0
154.80	549.0
155.65	152.0
156.75	206.0
159.00	347.0
160.60	182.0
162.65	184.0
163.05	185.0
164.95	180.0
172.70	631.0
173.80	115312.0
174.80	7320.0
175.80	114376.0
176.75	8338.0
177.75	593.0
178.85	477.0
190.85	1243.0
191.85	267.0
192.75	1459.0
193.85	257.0
194.60	264.0
204.85	223.0
206.85	3228.0
207.95	496.0
208.90	258.0
218.80	176.0
235.05	200.0
248.75	483.0
249.85	160.0
250.80	159.0
254.35	156.0
264.95	350.0
266.70	368.0
268.65	151.0
280.80	4107.0
281.90	1514.0
282.75	931.0
283.65	171.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK29

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0505WBL02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049256.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK29

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0505WBL02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049256.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK29

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0505WBL02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049256.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLK29

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0505WBL02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049256.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/05/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

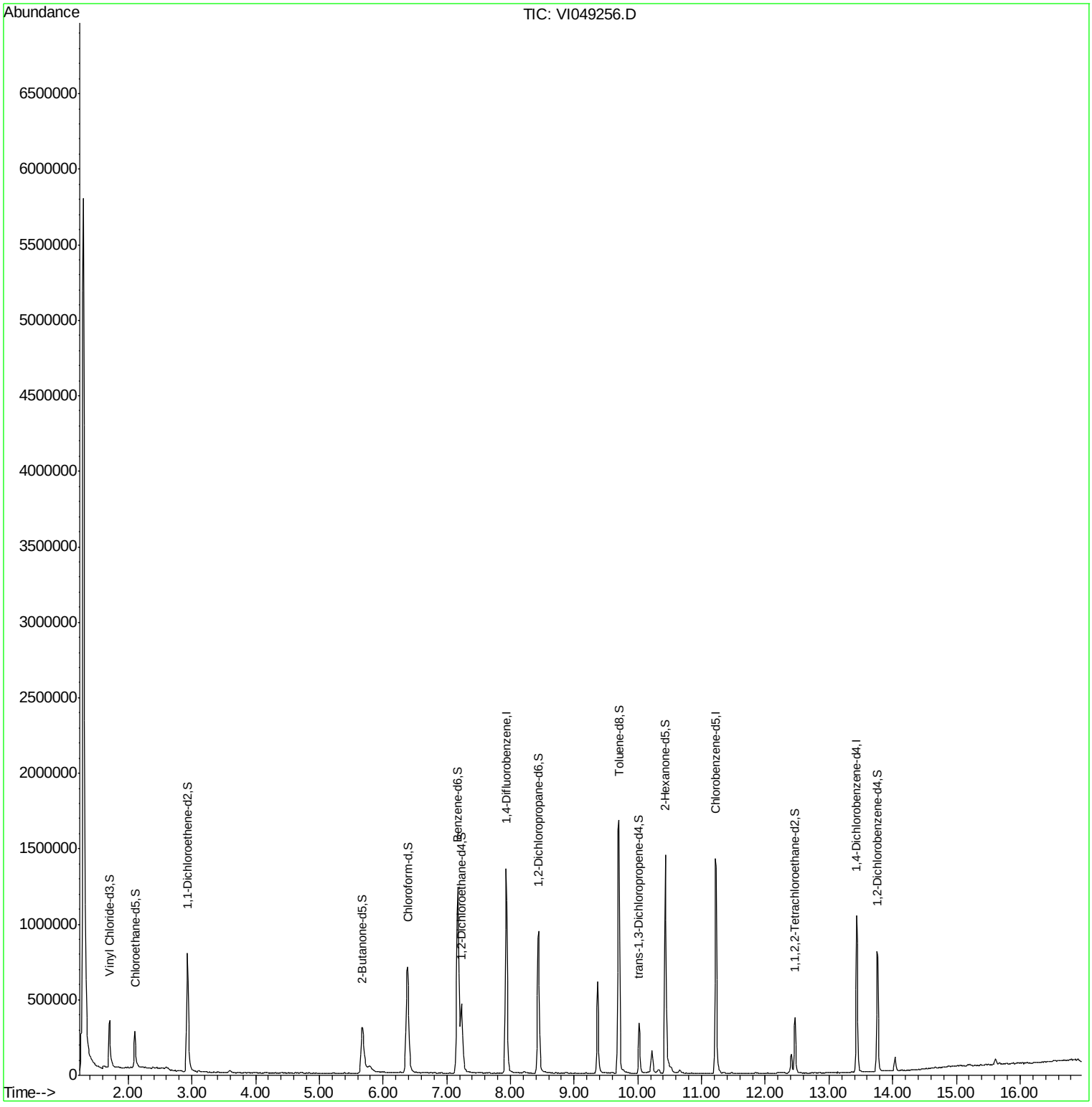
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 06 05:30:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK29

Manual Integrations APPROVED
feifei
5/6/2016 11:44:14 AM



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK29

Manual Integrations APPROVED
feifei
5/6/2016 11:44:14 AM

Quant Time: May 06 05:30:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1193553	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.23	117	762181	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	241848	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	350184	4.77	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 95.40%			
7) Chloroethane-d5	2.11	69	232207	5.71	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 114.20%			
11) 1,1-Dichloroethene-d2	2.93	63	615715m	3.56	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 71.20%			
20) 2-Butanone-d5	5.67	46	773513	48.62	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 97.24%			
24) Chloroform-d	6.39	84	891507	4.77	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.40%			
26) 1,2-Dichloroethane-d4	7.23	65	398378	5.21	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.20%			
32) Benzene-d6	7.17	84	1591671	5.36	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 107.20%			
36) 1,2-Dichloropropane-d6	8.44	67	450379	5.39	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.80%			
41) Toluene-d8	9.70	98	1085476	4.96	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.20%			
43) trans-1,3-Dichloropropene-	10.02	79	162296	4.93	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.60%			
46) 2-Hexanone-d5	10.43	63	512237	49.37	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 98.74%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	168251	4.43	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 88.60%			
63) 1,2-Dichlorobenzene-d4	13.77	152	189866	4.48	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 89.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK29

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.298	3	7	35	rVB	5761016	12988236	100.00%	29.228%
2	1.613	37	39	42	rBV4	15360	39787	0.31%	0.090%
3	1.712	46	49	57	rVB	312445	567882	4.37%	1.278%
4	1.958	72	74	75	rBV	6686	6609	0.05%	0.015%
5	2.105	86	89	98	rVB	237644	424585	3.27%	0.955%
6	2.381	115	117	119	rBV3	10690	13633	0.10%	0.031%
7	2.597	136	139	141	rBV4	11986	18809	0.14%	0.042%
8	2.775	155	157	159	rBV3	2989	4445	0.03%	0.010%
9	2.932	168	173	182	rBV	782895	1706565	13.14%	3.840%
10	3.030	182	183	185	rVV2	8246	10346	0.08%	0.023%
11	3.109	188	191	197	rBV8	10448	28011	0.22%	0.063%
12	3.208	199	201	206	rVB3	5800	13388	0.10%	0.030%
13	3.523	230	233	235	rVB4	3608	5345	0.04%	0.012%
14	3.591	235	240	244	rBV5	16400	44260	0.34%	0.100%
15	3.719	250	253	254	rBV3	4139	6429	0.05%	0.014%
16	3.818	261	263	267	rVB5	3604	8110	0.06%	0.018%
17	3.877	267	269	273	rVV4	4559	10285	0.08%	0.023%
18	3.936	273	275	276	rVB2	4832	4483	0.03%	0.010%
19	3.995	276	281	285	rBV6	6155	22121	0.17%	0.050%
20	4.074	287	289	291	rVB3	3958	5174	0.04%	0.012%
21	4.152	294	297	298	rVV3	4120	6350	0.05%	0.014%
22	4.221	302	304	306	rBV2	3614	4402	0.03%	0.010%
23	4.408	321	323	324	rBV	3365	4923	0.04%	0.011%
24	4.625	342	345	347	rBV3	3293	6058	0.05%	0.014%
25	4.841	364	367	368	rVB3	5824	9026	0.07%	0.020%
26	4.871	368	370	372	rBV3	4176	7229	0.06%	0.016%
27	4.979	379	381	384	rVB4	3000	4630	0.04%	0.010%
28	5.235	404	407	409	rBV3	6448	11855	0.09%	0.027%
29	5.324	413	416	418	rBV4	3166	6396	0.05%	0.014%
30	5.402	422	424	426	rBV2	3354	4768	0.04%	0.011%
31	5.678	445	452	460	rBV	303378	1105586	8.51%	2.488%
32	5.786	461	463	473	rVB2	37223	121366	0.93%	0.273%
33	5.993	482	484	485	rBV2	3824	5553	0.04%	0.012%
34	6.062	489	491	493	rVB3	3104	4908	0.04%	0.011%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK29

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.101	493	495	498	rVB4	3203	5415	0.04%	0.012%
36	6.268	511	512	515	rVB2	6171	6515	0.05%	0.015%
37	6.387	515	524	536	rBV	704669	2189213	16.86%	4.927%
38	6.515	536	537	540	rVB3	4089	4743	0.04%	0.011%
39	6.613	545	547	549	rBV3	4827	10131	0.08%	0.023%
40	7.174	595	604	608	rBV	1236026	3356853	25.85%	7.554%
41	7.233	608	610	620	rVV	456699	1043395	8.03%	2.348%
42	7.341	620	621	627	rVV6	9459	22951	0.18%	0.052%
43	7.420	627	629	630	rVV2	3387	4626	0.04%	0.010%
44	7.469	633	634	637	rBV3	3738	6024	0.05%	0.014%
45	7.509	637	638	641	rVB3	3387	4499	0.03%	0.010%
46	7.656	652	653	661	rVB7	6004	10866	0.08%	0.024%
47	7.794	666	667	669	rBV2	4130	5538	0.04%	0.012%
48	7.932	674	681	694	rBV	1357669	2962577	22.81%	6.667%
49	8.099	696	698	700	rVB3	4495	4475	0.03%	0.010%
50	8.227	706	711	713	rBV5	8787	22105	0.17%	0.050%
51	8.444	727	733	742	rBV	937070	2114031	16.28%	4.757%
52	8.650	753	754	758	rVB4	6167	9213	0.07%	0.021%
53	8.719	758	761	762	rBV3	4623	8527	0.07%	0.019%
54	8.749	762	764	767	rVB4	4371	5429	0.04%	0.012%
55	8.798	767	769	771	rBV2	3704	5388	0.04%	0.012%
56	9.192	807	809	810	rVB3	5311	5875	0.05%	0.013%
57	9.231	810	813	814	rBV3	2653	4798	0.04%	0.011%
58	9.320	819	822	823	rBV3	3476	4801	0.04%	0.011%
59	9.369	823	827	838	rBV	603704	1081800	8.33%	2.434%
60	9.595	847	850	853	rBV4	4232	9651	0.07%	0.022%
61	9.703	856	861	866	rBV	1674504	3159796	24.33%	7.111%
62	10.018	889	893	900	rVV	333820	579052	4.46%	1.303%
63	10.117	901	903	905	rVV2	7038	13473	0.10%	0.030%
64	10.156	905	907	908	rVV2	8604	12375	0.10%	0.028%
65	10.225	909	914	919	rVV	151337	341164	2.63%	0.768%
66	10.323	919	924	928	rVV7	24891	59925	0.46%	0.135%
67	10.432	931	935	951	rBV	1442646	2751714	21.19%	6.192%
68	10.609	951	953	954	rVV2	5995	6326	0.05%	0.014%
69	10.658	954	958	966	rVB3	20239	51592	0.40%	0.116%
70	10.865	978	979	982	rVB3	2867	4393	0.03%	0.010%
71	11.071	996	1000	1002	rVB4	3243	6872	0.05%	0.015%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK29

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.219	1011	1015	1025	rBV	1425360	2646043	20.37%	5.955%
73	11.357	1025	1029	1033	rVB6	8785	21156	0.16%	0.048%
74	11.475	1038	1041	1044	rVB2	5229	8053	0.06%	0.018%
75	11.623	1053	1056	1058	rBV4	3918	6836	0.05%	0.015%
76	11.859	1075	1080	1084	rVB6	6701	18801	0.14%	0.042%
77	12.036	1095	1098	1099	rBV3	4383	6189	0.05%	0.014%
78	12.203	1109	1115	1118	rBV8	8583	25866	0.20%	0.058%
79	12.410	1129	1136	1139	rBV	129031	257123	1.98%	0.579%
80	12.469	1139	1142	1147	rVV	371114	643483	4.95%	1.448%
81	12.548	1147	1150	1153	rVB5	6727	15221	0.12%	0.034%
82	12.597	1153	1155	1157	rBV2	3715	5737	0.04%	0.013%
83	12.705	1163	1166	1167	rBV2	3866	4853	0.04%	0.011%
84	12.764	1171	1172	1176	rBV3	3390	5803	0.04%	0.013%
85	12.951	1187	1191	1193	rBV4	4687	11574	0.09%	0.026%
86	12.991	1193	1195	1197	rVV3	2898	4474	0.03%	0.010%
87	13.089	1203	1205	1207	rVV3	2774	5428	0.04%	0.012%
88	13.138	1209	1210	1213	rBV3	7018	9489	0.07%	0.021%
89	13.276	1222	1224	1225	rBV2	4061	4738	0.04%	0.011%
90	13.365	1228	1233	1236	rBV7	7105	18337	0.14%	0.041%
91	13.433	1236	1240	1248	rVV	1037779	1801418	13.87%	4.054%
92	13.552	1250	1252	1255	rVB3	4951	8263	0.06%	0.019%
93	13.699	1264	1267	1269	rBV4	2809	6108	0.05%	0.014%
94	13.758	1269	1273	1280	rBV	800431	1506877	11.60%	3.391%
95	13.847	1280	1282	1284	rVV3	6309	9476	0.07%	0.021%
96	13.876	1284	1285	1288	rVV3	5348	6304	0.05%	0.014%
97	14.034	1297	1301	1308	rVV2	92172	174637	1.34%	0.393%
98	14.477	1345	1346	1349	rBV3	4750	6429	0.05%	0.014%
99	14.526	1349	1351	1352	rBV2	6522	6939	0.05%	0.016%
100	15.618	1459	1462	1465	rBV	34295	63688	0.49%	0.143%

Sum of corrected areas: 44437017

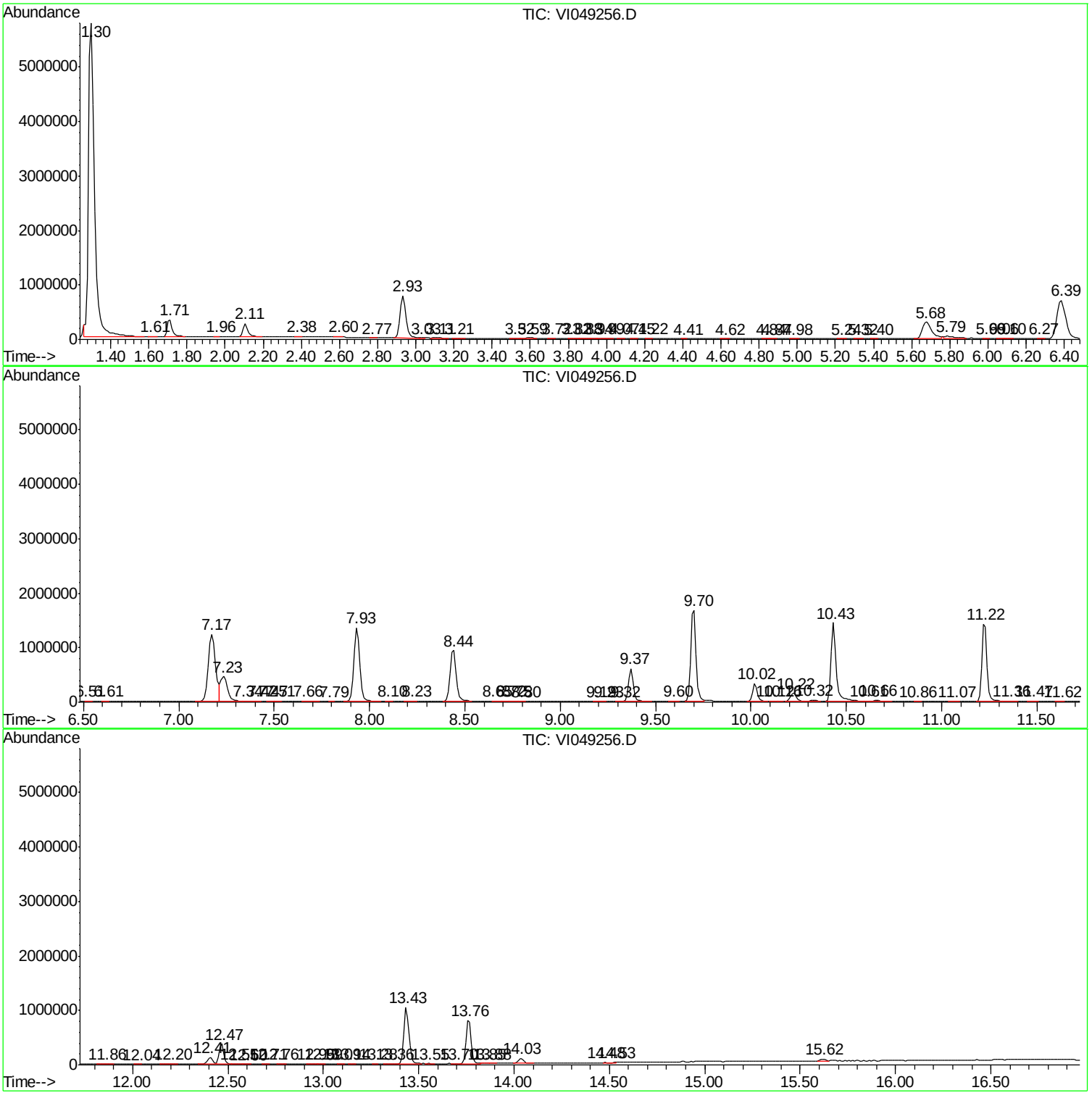
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK29

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK29

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK29

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

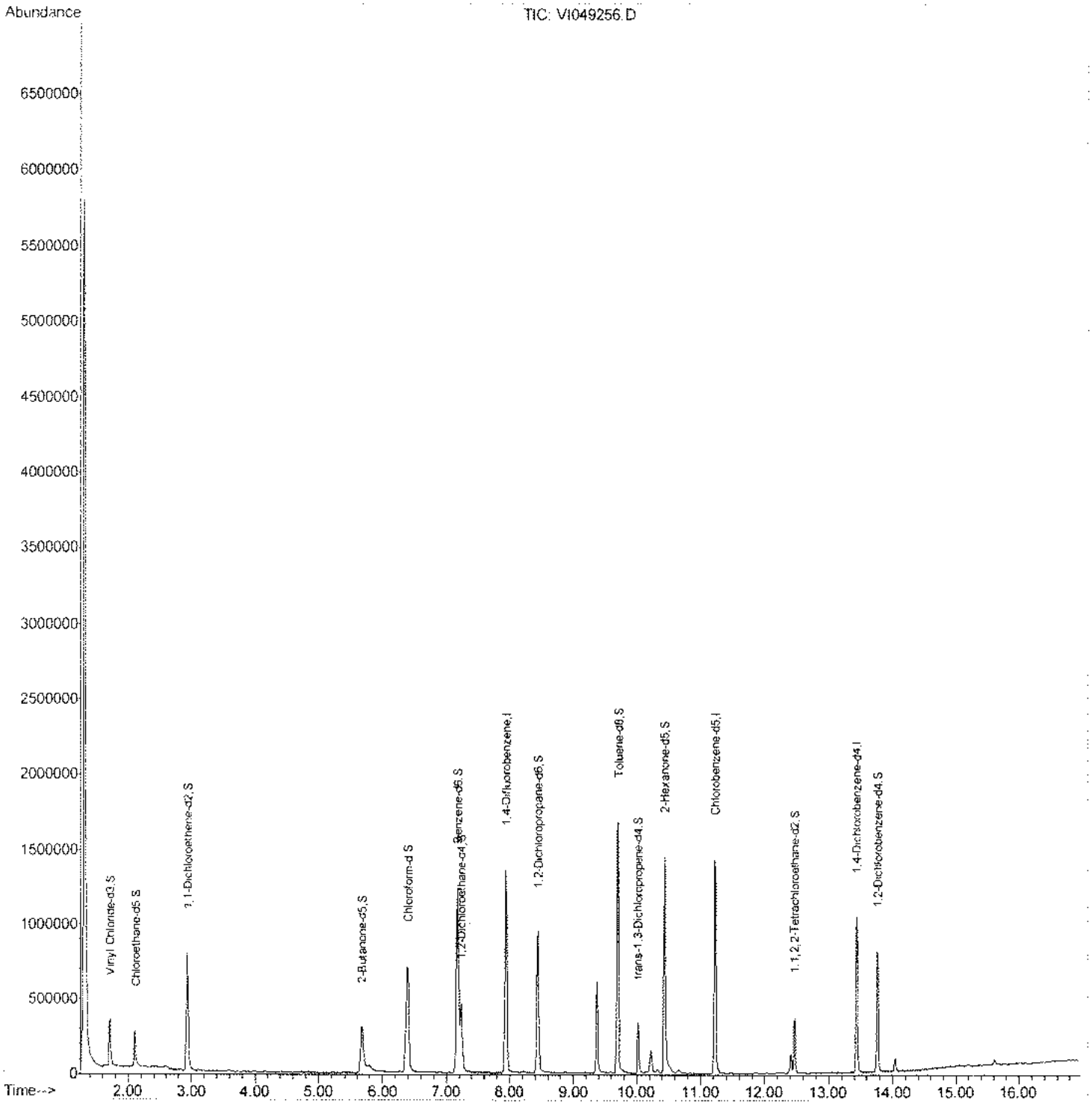
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 06 05:30:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK29

Manual Integrations APPROVED
feifei
5/6/2016 11:44:14 AM



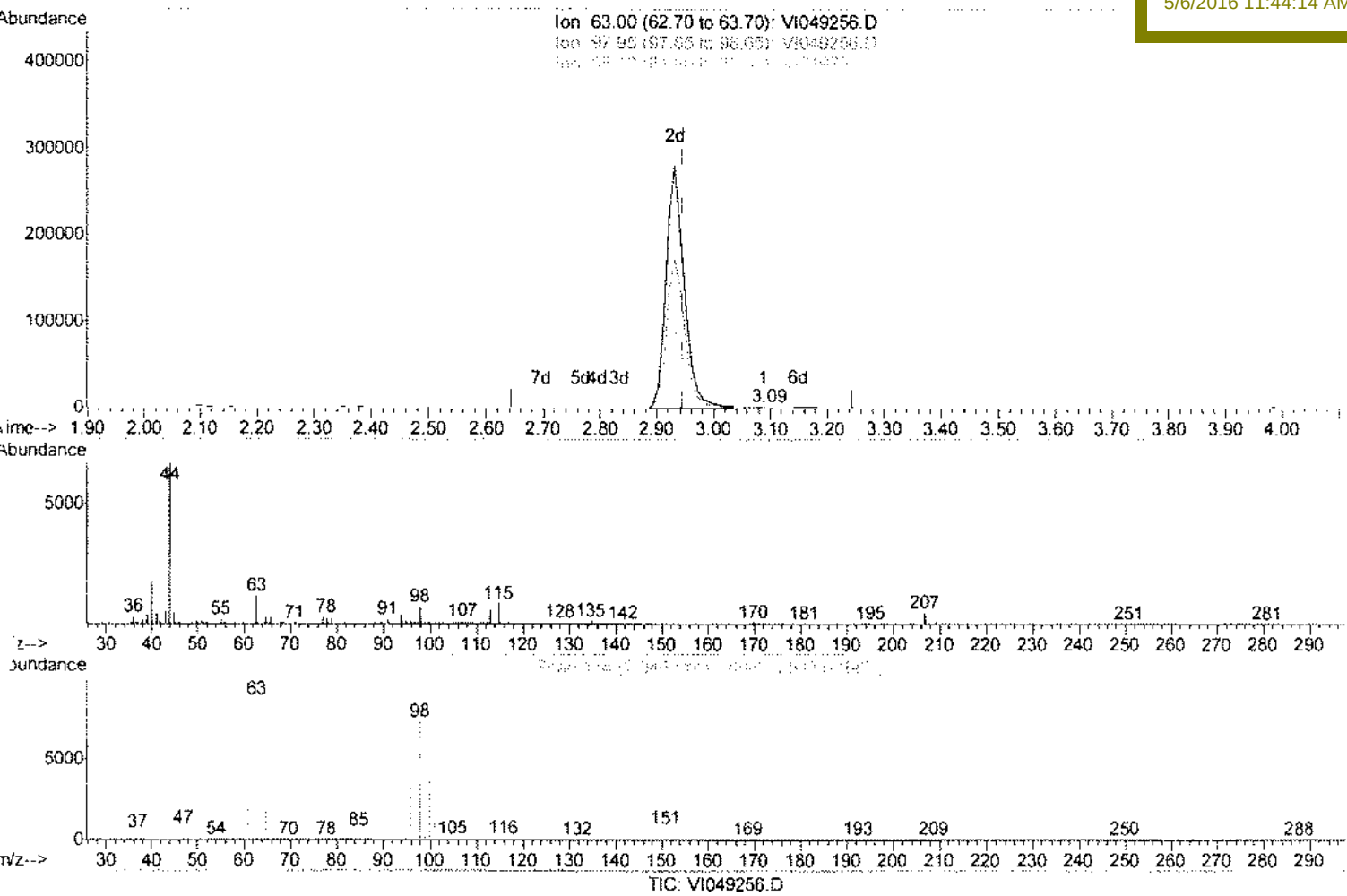
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 06 05:21:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK29

Manual Integrations APPROVED
feifei
5/6/2016 11:44:14 AM



(11) 1,1-Dichloroethene-d2 (S)

3.090min (+0.144) 0.01ug/L

response 1056

Ion	Exp%	Act%
63.00	100	100
97.95	85.40	82.39
65.10	23.80	20.17
0.00	0.00	0.00

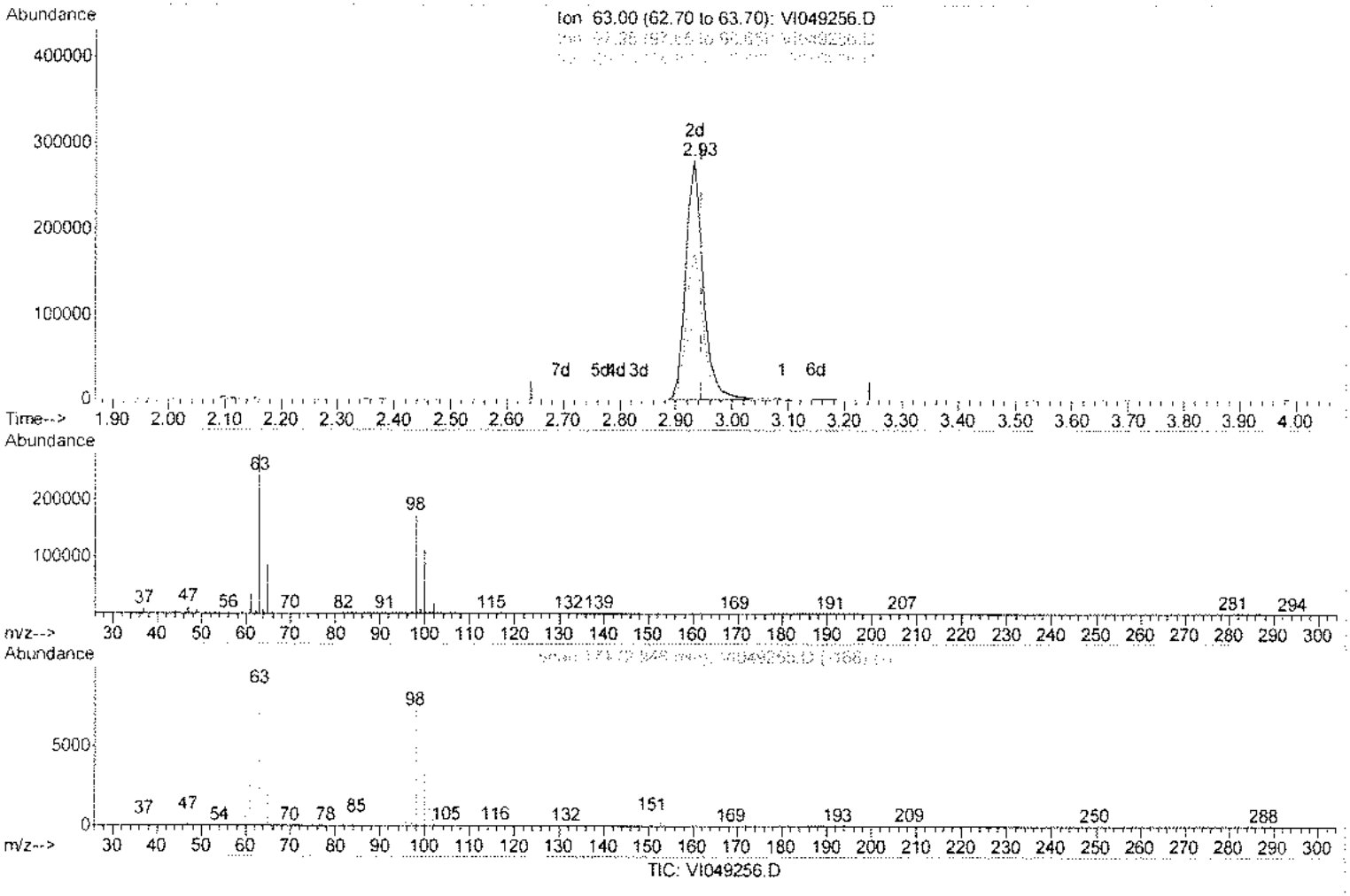
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 06 05:21:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK29

Manual Integrations APPROVED
feifei
5/6/2016 11:44:14 AM



(11) 1,1-Dichloroethene-d2 (S)

2.932min (-0.014) 3.56ug/L m M.D 05/09/16

response 615715

Ion	Exp%	Act%
63.00	100	100
97.95	85.40	0.14#
65.10	23.80	0.03#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049256.D
Acq On : 5 May 2016 16:54
Operator : FY/SY
Sample : VI0505WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 06 05:30:20 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VBLK29

Manual Integrations APPROVED
feifei
5/6/2016 11:44:14 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1193553	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.23	117	762181	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	241848	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	350184	4.77	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 95.40%			
7) Chloroethane-d5	2.11	69	232207	5.71	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 114.20%			
11) 1,1-Dichloroethene-d2	2.93	63	615715m	3.56	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 71.20%			
20) 2-Butanone-d5	5.67	46	773513	48.62	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 97.24%			
24) Chloroform-d	6.39	84	891507	4.77	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.40%			
26) 1,2-Dichloroethane-d4	7.23	65	398378	5.21	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.20%			
32) Benzene-d6	7.17	84	1591671	5.36	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 107.20%			
36) 1,2-Dichloropropane-d6	8.44	67	450379	5.39	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.80%			
41) Toluene-d8	9.70	98	1085476	4.96	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.20%			
43) trans-1,3-Dichloropropene-	10.02	79	162296	4.93	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.60%			
46) 2-Hexanone-d5	10.43	63	512237	49.37	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 98.74%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	168251	4.43	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 88.60%			
63) 1,2-Dichlorobenzene-d4	13.77	152	189866	4.48	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 89.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

M.D 05/09/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK30

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0506WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049277.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK30

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0506WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049277.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK30

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0506WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049277.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/06/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK30

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0506WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049277.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/06/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

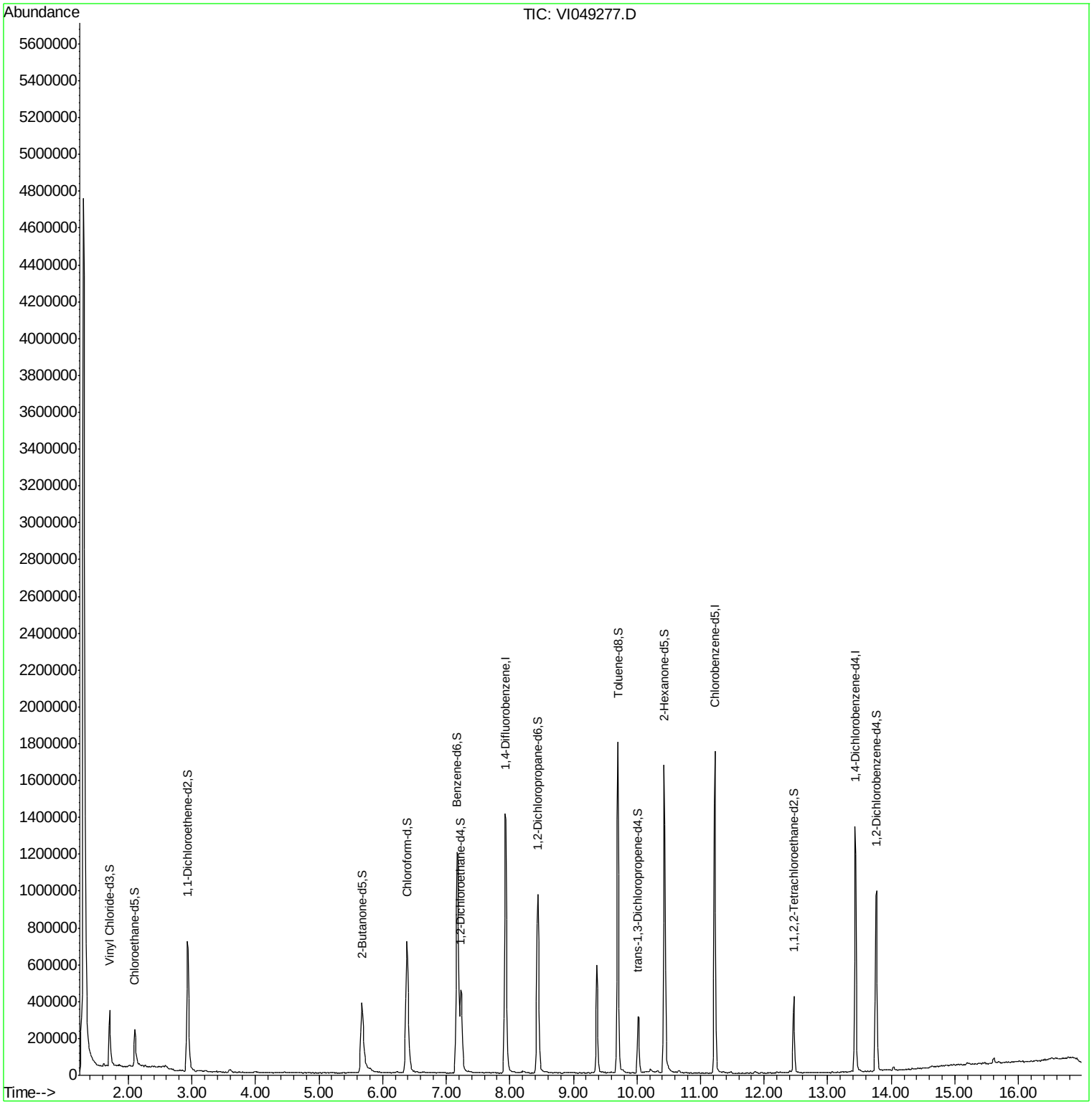
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK30

Quant Time: May 07 04:18:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK30

Quant Time: May 07 04:18:57 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1307874	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	851739	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	307505	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	328161	4.08	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 81.60%			
7) Chloroethane-d5	2.10	69	226389	5.08	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.60%			
11) 1,1-Dichloroethene-d2	2.93	63	582944	3.07	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 61.40%			
20) 2-Butanone-d5	5.68	46	886506	50.85	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 101.70%			
24) Chloroform-d	6.38	84	889889	4.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 86.80%			
26) 1,2-Dichloroethane-d4	7.23	65	399023	4.76	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.20%			
32) Benzene-d6	7.17	84	1546049	4.66	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.20%			
36) 1,2-Dichloropropane-d6	8.44	67	437564	4.69	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 93.80%			
41) Toluene-d8	9.70	98	1075811	4.40	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.00%			
43) trans-1,3-Dichloropropene-	10.03	79	162047	4.41	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 88.20%			
46) 2-Hexanone-d5	10.43	63	553577	47.75	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 95.50%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	181995	4.29	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 85.80%			
63) 1,2-Dichlorobenzene-d4	13.77	152	231762	4.30	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 86.00%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK30

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.296	4	7	33	rVB	4713433	10979095	100.00%	25.425%
2	1.611	37	39	42	rBV4	14359	21533	0.20%	0.050%
3	1.709	46	49	57	rBV	302119	523217	4.77%	1.212%
4	2.103	86	89	95	rBV	200274	410517	3.74%	0.951%
5	2.260	103	105	108	rVB	9898	18779	0.17%	0.043%
6	2.930	168	173	187	rVB	705615	1653298	15.06%	3.829%
7	3.077	187	188	190	rBV2	4389	4938	0.04%	0.011%
8	3.205	199	201	206	rVB4	6429	17089	0.16%	0.040%
9	3.343	213	215	217	rBV3	4346	6505	0.06%	0.015%
10	3.392	219	220	221	rVB	7860	4641	0.04%	0.011%
11	3.422	221	223	224	rBV	4438	5865	0.05%	0.014%
12	3.451	224	226	228	rVB3	3763	5777	0.05%	0.013%
13	3.589	236	240	247	rVB4	15540	47550	0.43%	0.110%
14	3.796	259	261	264	rVB4	4286	6934	0.06%	0.016%
15	3.855	264	267	270	rBV2	3160	7762	0.07%	0.018%
16	4.002	278	282	284	rVB4	4941	10278	0.09%	0.024%
17	4.032	284	285	290	rVB5	5071	4404	0.04%	0.010%
18	4.189	298	301	306	rBV5	4534	12467	0.11%	0.029%
19	4.268	306	309	310	rVB2	3499	5160	0.05%	0.012%
20	4.721	353	355	357	rVB3	3778	6051	0.06%	0.014%
21	4.780	357	361	363	rBV4	3745	7182	0.07%	0.017%
22	4.888	371	372	376	rVB3	5089	7858	0.07%	0.018%
23	5.026	383	386	388	rBV4	3711	6491	0.06%	0.015%
24	5.370	420	421	423	rBV2	3802	4651	0.04%	0.011%
25	5.459	427	430	431	rBV3	2972	4618	0.04%	0.011%
26	5.676	444	452	471	rBV	378917	1420836	12.94%	3.290%
27	5.912	475	476	478	rVV2	4864	6863	0.06%	0.016%
28	5.951	478	480	483	rVB4	3223	5460	0.05%	0.013%
29	6.119	496	497	499	rVB2	3989	4426	0.04%	0.010%
30	6.227	501	508	510	rBV5	5738	16753	0.15%	0.039%
31	6.384	516	524	534	rBV	714424	2142429	19.51%	4.961%
32	6.522	537	538	544	rVB5	5088	9754	0.09%	0.023%
33	6.758	558	562	564	rVB5	3536	7366	0.07%	0.017%
34	6.857	571	572	574	rBV2	2850	4372	0.04%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK30

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.172	598	604	608	rBV	1200414	3222821	29.35%	7.463%
36	7.231	608	610	621	rVV	447235	1088396	9.91%	2.521%
37	7.349	621	622	626	rVB4	5816	7304	0.07%	0.017%
38	7.575	644	645	647	rVB2	4398	4930	0.04%	0.011%
39	7.605	647	648	651	rBV3	3963	5906	0.05%	0.014%
40	7.644	651	652	658	rVB4	3984	8458	0.08%	0.020%
41	7.929	676	681	694	rBV	1406691	3192302	29.08%	7.393%
42	8.185	705	707	708	rVV2	3502	5116	0.05%	0.012%
43	8.205	708	709	713	rVB4	9751	18779	0.17%	0.043%
44	8.264	713	715	721	rVB5	4042	9759	0.09%	0.023%
45	8.441	726	733	744	rBV	969440	2144005	19.53%	4.965%
46	8.717	757	761	762	rBV4	3372	7056	0.06%	0.016%
47	8.766	765	766	770	rVB4	3966	7057	0.06%	0.016%
48	8.845	773	774	777	rBV2	2578	5516	0.05%	0.013%
49	9.051	794	795	797	rBV2	5165	4559	0.04%	0.011%
50	9.091	797	799	802	rBV4	3021	6027	0.05%	0.014%
51	9.160	804	806	809	rVB4	2841	4958	0.05%	0.011%
52	9.238	811	814	816	rVB3	2416	4740	0.04%	0.011%
53	9.366	823	827	833	rBV	583669	1041705	9.49%	2.412%
54	9.534	842	844	847	rBV4	3992	9110	0.08%	0.021%
55	9.593	847	850	853	rBV5	5623	10545	0.10%	0.024%
56	9.701	856	861	868	rBV	1797850	3159587	28.78%	7.317%
57	9.868	877	878	882	rVB3	4337	5628	0.05%	0.013%
58	10.016	889	893	900	rBV	306602	582872	5.31%	1.350%
59	10.095	900	901	902	rVV	5602	4733	0.04%	0.011%
60	10.144	902	906	907	rVV4	6630	15271	0.14%	0.035%
61	10.213	910	913	917	rVV2	18766	49202	0.45%	0.114%
62	10.301	920	922	923	rVV2	5490	9390	0.09%	0.022%
63	10.331	923	925	931	rVB5	12098	19468	0.18%	0.045%
64	10.429	931	935	948	rBV	1671225	2938547	26.76%	6.805%
65	10.616	952	954	956	rVV3	5518	8888	0.08%	0.021%
66	10.656	956	958	966	rVB8	10464	28197	0.26%	0.065%
67	11.079	999	1001	1002	rBV2	4002	5076	0.05%	0.012%
68	11.099	1002	1003	1007	rVB3	3482	4862	0.04%	0.011%
69	11.227	1011	1016	1026	rBV	1745276	2967634	27.03%	6.872%
70	11.354	1026	1029	1032	rVB4	7697	14672	0.13%	0.034%
71	11.394	1032	1033	1036	rVB3	4679	6107	0.06%	0.014%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK30

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.473	1039	1041	1044	rVB4	7104	12210	0.11%	0.028%
73	11.601	1052	1054	1057	rVB4	3871	5431	0.05%	0.013%
74	11.660	1057	1060	1061	rBV3	4662	6229	0.06%	0.014%
75	11.778	1070	1072	1074	rVB3	3204	4501	0.04%	0.010%
76	11.856	1077	1080	1088	rVB7	9662	28277	0.26%	0.065%
77	12.083	1102	1103	1106	rBV3	2941	4765	0.04%	0.011%
78	12.201	1111	1115	1118	rBV5	7383	19838	0.18%	0.046%
79	12.250	1118	1120	1122	rVB2	3680	4709	0.04%	0.011%
80	12.309	1124	1126	1131	rVB6	4554	9854	0.09%	0.023%
81	12.408	1133	1136	1138	rVV3	9842	16125	0.15%	0.037%
82	12.467	1138	1142	1146	rVV	411876	687786	6.26%	1.593%
83	12.585	1151	1154	1156	rVB4	3549	5588	0.05%	0.013%
84	12.624	1156	1158	1163	rBV6	3056	7904	0.07%	0.018%
85	13.008	1191	1197	1198	rBV5	3490	9207	0.08%	0.021%
86	13.077	1201	1204	1207	rBV4	5747	15198	0.14%	0.035%
87	13.156	1211	1212	1214	rBV2	5283	6766	0.06%	0.016%
88	13.244	1218	1221	1222	rBV3	2446	4393	0.04%	0.010%
89	13.372	1228	1234	1236	rBV7	7597	21432	0.20%	0.050%
90	13.431	1236	1240	1255	rVV	1332880	2321510	21.14%	5.376%
91	13.667	1262	1264	1268	rBV5	2979	6569	0.06%	0.015%
92	13.766	1269	1274	1280	rBV	979298	1803982	16.43%	4.178%
93	14.031	1298	1301	1304	rBV3	19237	34581	0.31%	0.080%
94	14.130	1308	1311	1312	rBV3	4631	7235	0.07%	0.017%
95	14.228	1319	1321	1323	rBV3	3591	4504	0.04%	0.010%
96	14.268	1323	1325	1326	rVV2	4943	4845	0.04%	0.011%
97	14.327	1329	1331	1332	rBV2	5637	5701	0.05%	0.013%
98	14.711	1368	1370	1373	rBV4	7282	9273	0.08%	0.021%
99	15.193	1416	1419	1421	rBV4	12421	25260	0.23%	0.058%
100	15.616	1458	1462	1465	rBV2	27881	57809	0.53%	0.134%

Sum of corrected areas: 43181584

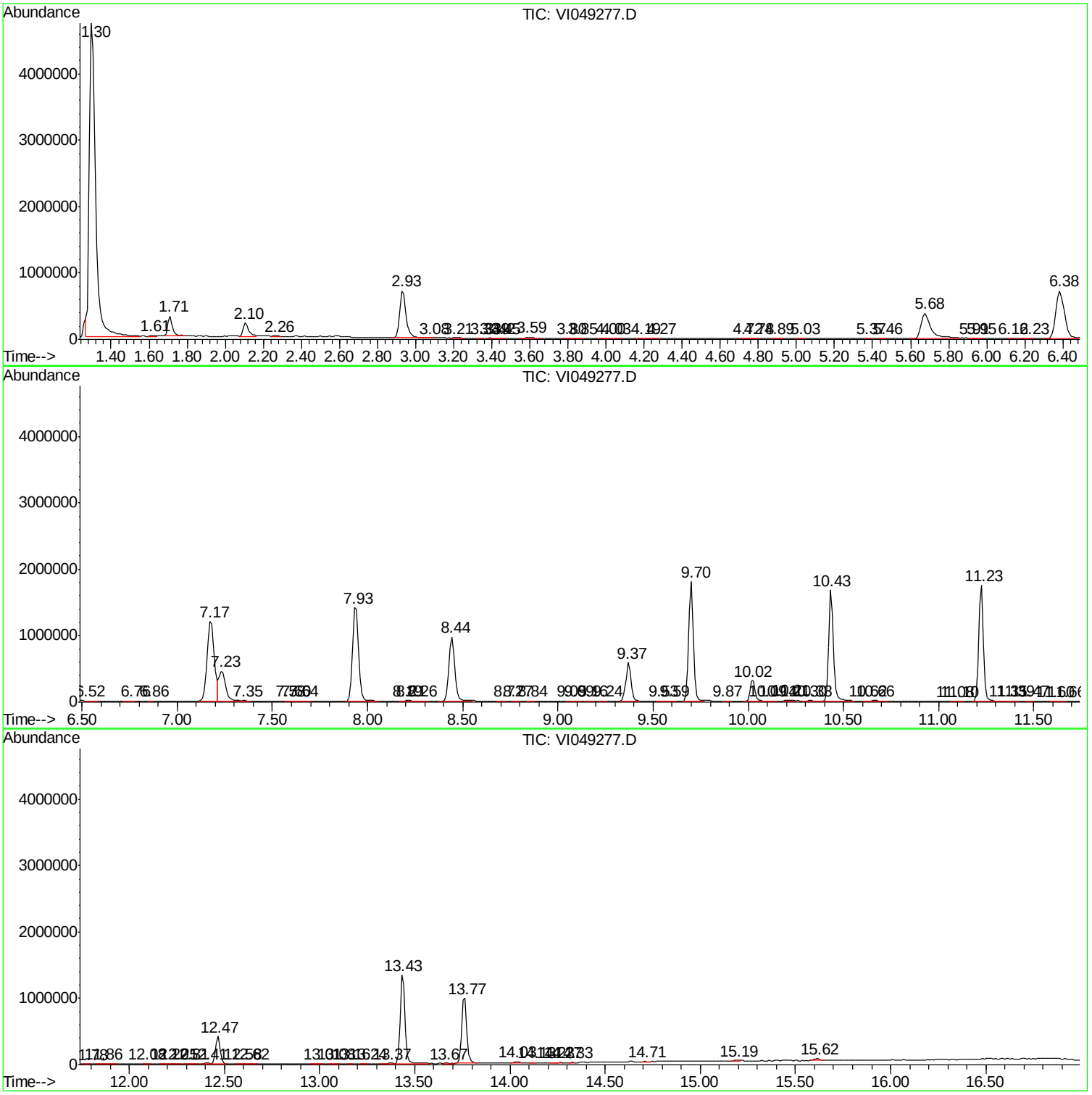
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK30

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK30

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050616\
Data File : VI049277.D
Acq On : 6 May 2016 11:45
Operator : FY/SY
Sample : VI0506WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK30

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK31

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0509WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049292.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK31

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0509WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049292.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK31

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0509WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049292.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK31

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0509WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049292.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

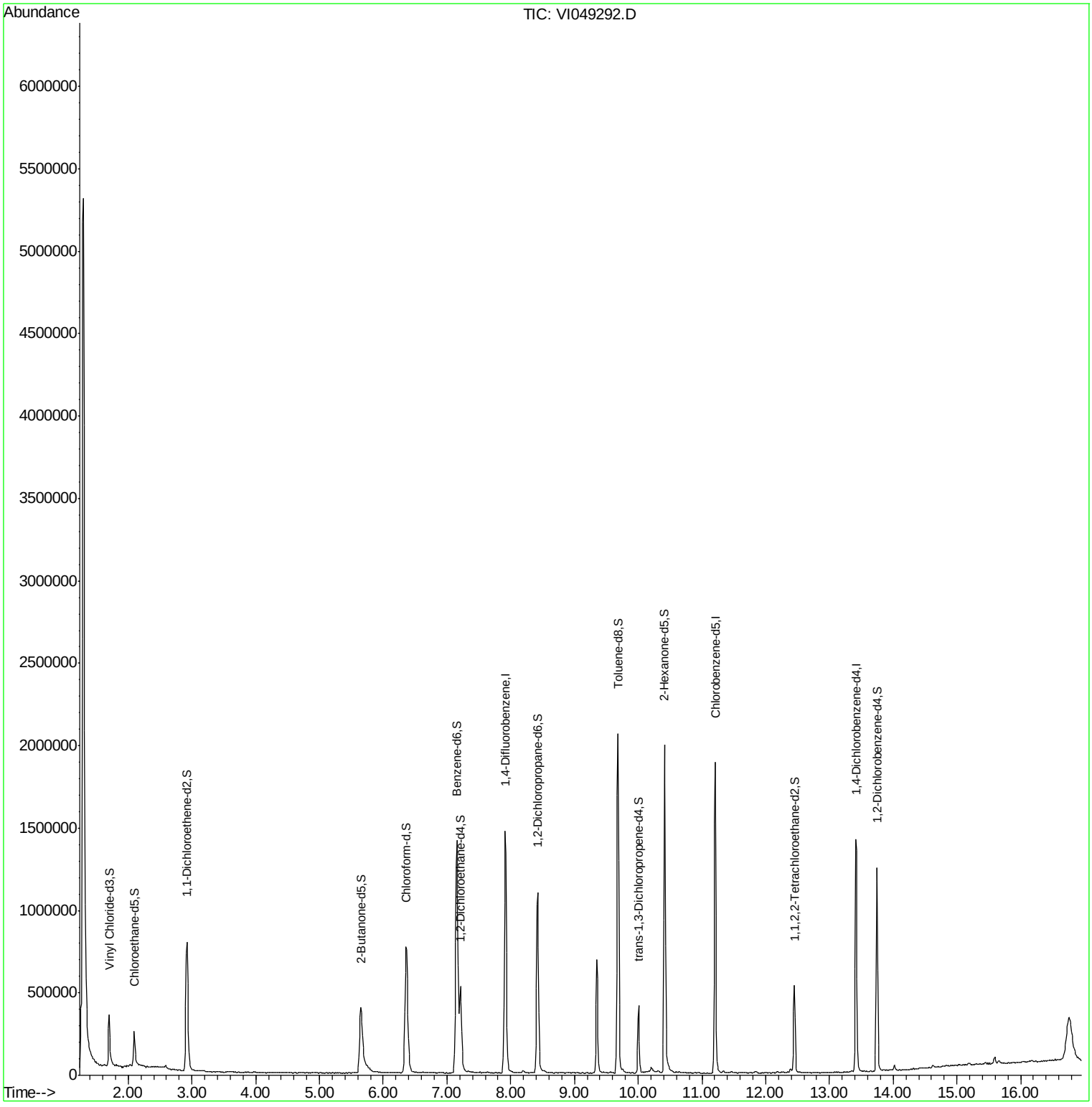
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049292.D
Acq On : 9 May 2016 11:52
Operator : FY/SY
Sample : VI0509WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK31

Quant Time: May 10 05:40:10 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049292.D
Acq On : 9 May 2016 11:52
Operator : FY/SY
Sample : VI0509WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK31

Quant Time: May 10 05:40:10 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1343497	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.21	117	900437	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	340706	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	348304	4.21	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 84.20%			
7) Chloroethane-d5	2.10	69	229245	5.00	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 100.00%			
11) 1,1-Dichloroethene-d2	2.92	63	635183	3.26	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 65.20%			
20) 2-Butanone-d5	5.65	46	941777	52.59	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 105.18%			
24) Chloroform-d	6.36	84	986825	4.69	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.80%			
26) 1,2-Dichloroethane-d4	7.21	65	452032	5.25	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.00%			
32) Benzene-d6	7.15	84	1816877	5.18	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.60%			
36) 1,2-Dichloropropane-d6	8.42	67	526342	5.34	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 106.80%			
41) Toluene-d8	9.68	98	1293728	5.00	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.00%			
43) trans-1,3-Dichloropropene-	10.01	79	195576	5.03	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 100.60%			
46) 2-Hexanone-d5	10.41	63	689419	56.25	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 112.50%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	234237	5.22	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 104.40%			
63) 1,2-Dichlorobenzene-d4	13.75	152	298190	4.99	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 99.80%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049292.D
Acq On : 9 May 2016 11:52
Operator : FY/SY
Sample : VI0509WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK31

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.298	3	7	32	rVB	5258031	13139176	100.00%	25.393%
2	1.623	36	40	44	rBV5	8960	28626	0.22%	0.055%
3	1.702	44	48	57	rVB	313606	574172	4.37%	1.110%
4	1.810	57	59	60	rBV2	8398	9869	0.08%	0.019%
5	1.948	70	73	75	rBV4	10132	24072	0.18%	0.047%
6	1.977	75	76	77	rVV	9657	7501	0.06%	0.014%
7	2.026	79	81	84	rVV3	10931	19773	0.15%	0.038%
8	2.095	84	88	95	rBV	213063	425822	3.24%	0.823%
9	2.292	107	108	113	rBV5	6821	14665	0.11%	0.028%
10	2.922	166	172	186	rVB	784375	1818250	13.84%	3.514%
11	3.089	188	189	192	rBV3	4168	5557	0.04%	0.011%
12	3.276	207	208	212	rVB4	7322	11516	0.09%	0.022%
13	3.355	212	216	217	rVV4	5722	9777	0.07%	0.019%
14	3.394	217	220	222	rVV4	4321	10429	0.08%	0.020%
15	3.424	222	223	226	rVV2	5313	6779	0.05%	0.013%
16	3.581	234	239	243	rBV5	7653	24819	0.19%	0.048%
17	3.729	251	254	257	rVB5	4304	7251	0.06%	0.014%
18	3.886	266	270	271	rVB3	5321	7449	0.06%	0.014%
19	3.965	276	278	280	rVV3	7278	10104	0.08%	0.020%
20	4.290	307	311	314	rBV5	2436	5487	0.04%	0.011%
21	4.526	333	335	340	rVB6	4566	8908	0.07%	0.017%
22	4.694	347	352	354	rBV6	4962	11054	0.08%	0.021%
23	4.822	360	365	366	rVB5	4306	10431	0.08%	0.020%
24	5.068	389	390	392	rBV	4761	5243	0.04%	0.010%
25	5.097	392	393	396	rVB3	3139	5351	0.04%	0.010%
26	5.205	402	404	406	rVB2	3951	6720	0.05%	0.013%
27	5.245	406	408	410	rBV3	4245	7376	0.06%	0.014%
28	5.471	428	431	433	rBV3	5710	10807	0.08%	0.021%
29	5.520	433	436	438	rBV3	3750	7997	0.06%	0.015%
30	5.648	442	449	461	rBV	397315	1532161	11.66%	2.961%
31	5.944	478	479	484	rVB5	4375	8254	0.06%	0.016%
32	6.042	486	489	492	rVB5	2393	5193	0.04%	0.010%
33	6.357	513	521	535	rBV	768277	2481433	18.89%	4.796%
34	6.544	538	540	544	rVB5	3826	7594	0.06%	0.015%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049292.D
Acq On : 9 May 2016 11:52
Operator : FY/SY
Sample : VI0509WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK31

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.701	552	556	557	rBV4	3479	6126	0.05%	0.012%
36	6.770	561	563	567	rVB5	4157	6558	0.05%	0.013%
37	7.154	593	602	606	rBV	1413249	3832869	29.17%	7.408%
38	7.213	606	608	618	rVB	517407	1099821	8.37%	2.126%
39	7.410	627	628	629	rBV	9811	6676	0.05%	0.013%
40	7.489	633	636	637	rVV3	3814	5967	0.05%	0.012%
41	7.518	637	639	641	rVB2	7360	8059	0.06%	0.016%
42	7.548	641	642	646	rBV4	4109	7069	0.05%	0.014%
43	7.617	646	649	650	rBV3	3506	5422	0.04%	0.010%
44	7.636	650	651	656	rVB4	6386	9844	0.07%	0.019%
45	7.745	659	662	664	rBV4	2987	5466	0.04%	0.011%
46	7.912	673	679	693	rBV	1471393	3307285	25.17%	6.392%
47	8.197	702	708	711	rBV7	11637	34152	0.26%	0.066%
48	8.325	717	721	722	rBV4	4289	5867	0.04%	0.011%
49	8.424	725	731	740	rBV	1096411	2487475	18.93%	4.807%
50	8.621	748	751	752	rVB3	3676	5464	0.04%	0.011%
51	8.660	752	755	756	rVB3	3825	5804	0.04%	0.011%
52	8.876	775	777	778	rBV2	4153	5556	0.04%	0.011%
53	8.916	778	781	784	rVB5	5124	10474	0.08%	0.020%
54	9.044	791	794	800	rBV7	2772	7824	0.06%	0.015%
55	9.113	800	801	804	rVB3	3368	5499	0.04%	0.011%
56	9.201	806	810	814	rBV7	3007	7750	0.06%	0.015%
57	9.349	821	825	834	rBV	687097	1260872	9.60%	2.437%
58	9.457	834	836	838	rVB3	5589	7697	0.06%	0.015%
59	9.516	840	842	843	rVB2	5203	5524	0.04%	0.011%
60	9.565	843	847	850	rBV5	7885	20860	0.16%	0.040%
61	9.683	854	859	865	rBV	2061735	3751491	28.55%	7.250%
62	9.851	874	876	879	rVB4	3877	6703	0.05%	0.013%
63	9.900	879	881	885	rVB5	4657	9678	0.07%	0.019%
64	10.008	885	892	897	rBV	409807	718528	5.47%	1.389%
65	10.067	897	898	900	rVV2	7078	9809	0.07%	0.019%
66	10.097	900	901	902	rVV	7538	7201	0.05%	0.014%
67	10.117	902	903	905	rVV2	7551	12173	0.09%	0.024%
68	10.205	906	912	920	rVV2	36231	125714	0.96%	0.243%
69	10.313	920	923	929	rVV8	15475	35524	0.27%	0.069%
70	10.412	929	933	950	rVV	1990485	3701961	28.17%	7.155%
71	10.609	952	953	954	rVV	6656	5965	0.05%	0.012%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049292.D
Acq On : 9 May 2016 11:52
Operator : FY/SY
Sample : VI0509WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK31

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	10.638	954	956	959	rVV4	7565	12763	0.10%	0.025%
73	11.209	1009	1014	1022	rBV	1883778	3166871	24.10%	6.120%
74	11.337	1022	1027	1031	rVB4	11195	27282	0.21%	0.053%
75	11.455	1037	1039	1044	rBV3	7120	14613	0.11%	0.028%
76	11.839	1073	1078	1082	rBV7	10379	28712	0.22%	0.055%
77	11.947	1088	1089	1091	rVB2	4734	5516	0.04%	0.011%
78	11.977	1091	1092	1094	rBV2	5344	8131	0.06%	0.016%
79	12.183	1109	1113	1115	rBV3	10581	25132	0.19%	0.049%
80	12.341	1126	1129	1131	rBV4	6593	11643	0.09%	0.023%
81	12.390	1131	1134	1136	rVV2	23634	42238	0.32%	0.082%
82	12.449	1136	1140	1146	rVB	528001	882512	6.72%	1.706%
83	12.518	1146	1147	1154	rVB7	4163	10105	0.08%	0.020%
84	12.685	1163	1164	1167	rVB3	5826	8062	0.06%	0.016%
85	12.734	1167	1169	1174	rBV5	5500	15272	0.12%	0.030%
86	12.882	1181	1184	1185	rBV2	3576	6023	0.05%	0.012%
87	13.079	1202	1204	1206	rBV3	4365	7567	0.06%	0.015%
88	13.345	1229	1231	1234	rVB4	7752	13284	0.10%	0.026%
89	13.414	1234	1238	1245	rBV	1412001	2532865	19.28%	4.895%
90	13.640	1259	1261	1264	rVB4	4881	7587	0.06%	0.015%
91	13.748	1267	1272	1280	rBV	1238072	2284011	17.38%	4.414%
92	13.866	1280	1284	1285	rBV4	5576	10500	0.08%	0.020%
93	14.024	1297	1300	1305	rVB2	28326	52184	0.40%	0.101%
94	14.162	1310	1314	1316	rBV5	4197	9294	0.07%	0.018%
95	14.201	1316	1318	1321	rVB4	4717	7007	0.05%	0.014%
96	14.624	1358	1361	1366	rBV7	14107	29656	0.23%	0.057%
97	15.185	1415	1418	1422	rBV6	11651	26851	0.20%	0.052%
98	15.451	1442	1445	1447	rBV3	12194	21458	0.16%	0.041%
99	15.599	1456	1460	1463	rBV	42352	87721	0.67%	0.170%
100	16.750	1568	1577	1593	rVB2	246790	1561529	11.88%	3.018%

Sum of corrected areas: 51742732

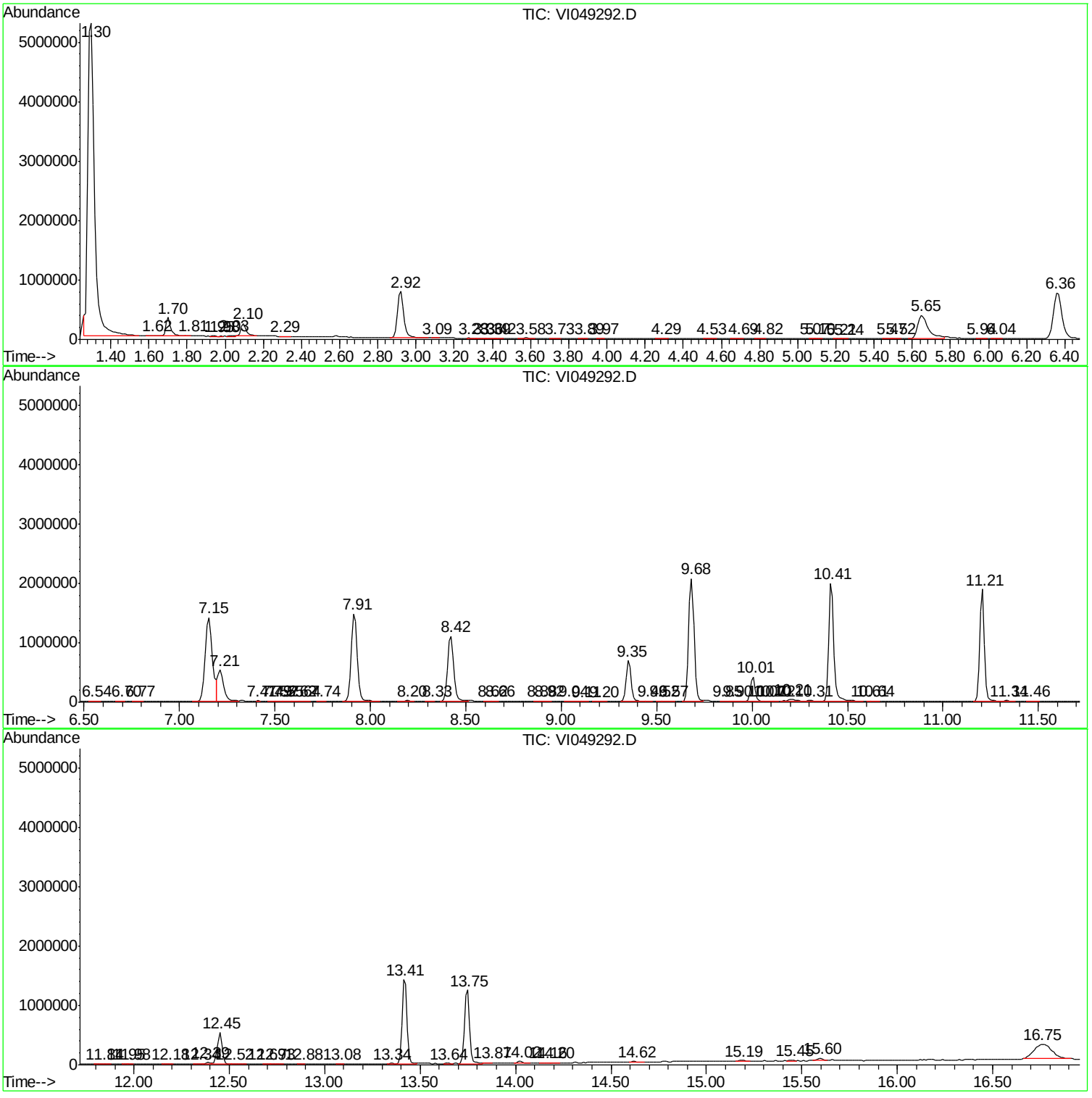
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049292.D
Acq On : 9 May 2016 11:52
Operator : FY/SY
Sample : VI0509WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK31

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049292.D
Acq On : 9 May 2016 11:52
Operator : FY/SY
Sample : VI0509WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK31

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049292.D
Acq On : 9 May 2016 11:52
Operator : FY/SY
Sample : VI0509WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK31

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK34

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0511WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049334.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK34

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0511WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049334.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK34

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0511WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049334.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK34

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0511WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049334.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

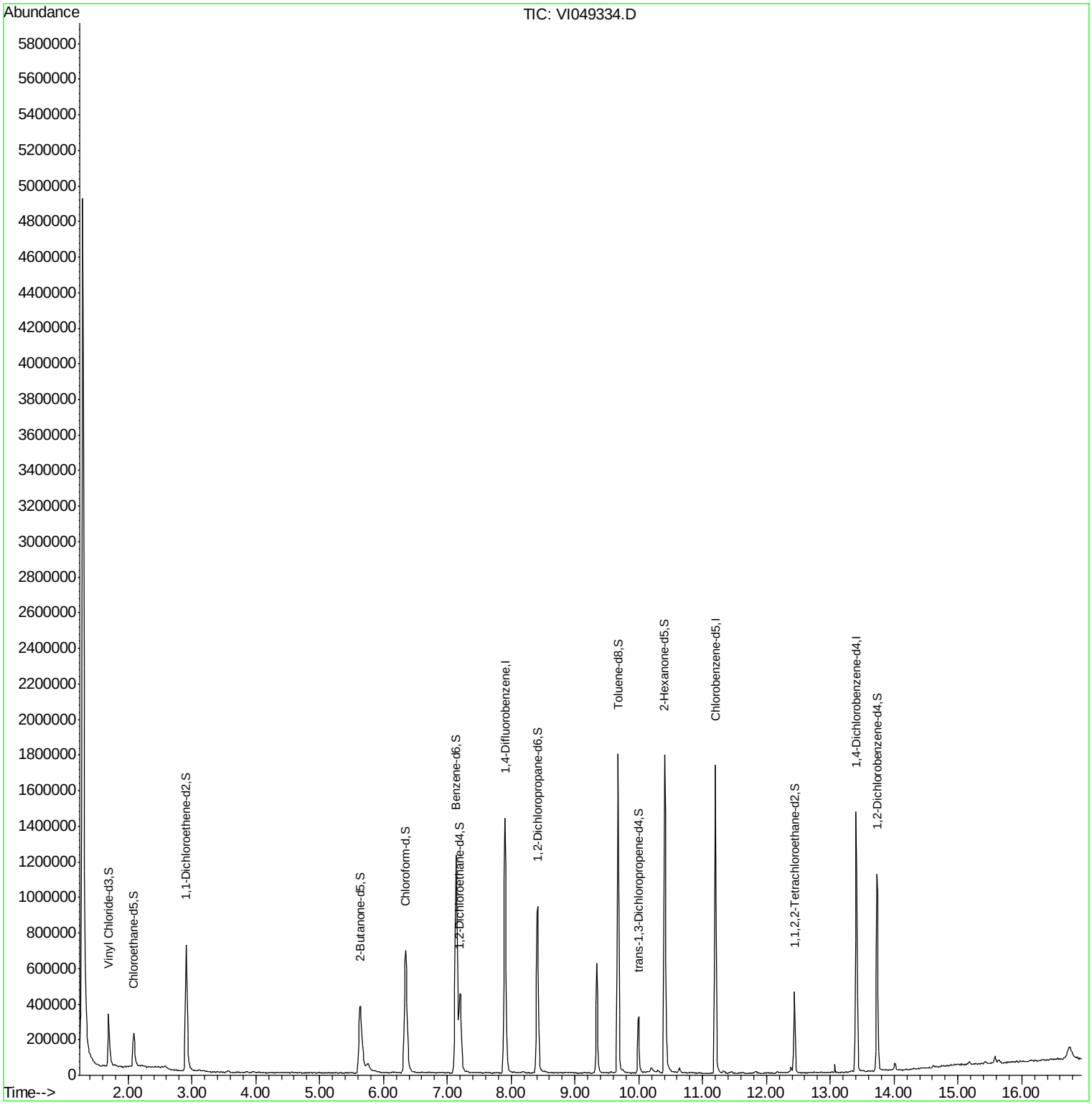
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK34

Quant Time: May 12 06:31:56 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK34

Quant Time: May 12 06:31:56 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1290350	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	859838	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	331353	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	331503	4.17	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 83.40%			
7) Chloroethane-d5	2.09	69	205230	4.66	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.20%			
11) 1,1-Dichloroethene-d2	2.90	63	595721	3.18	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.60%			
20) 2-Butanone-d5	5.63	46	928282	53.97	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 107.94%			
24) Chloroform-d	6.35	84	863429	4.27	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 85.40%			
26) 1,2-Dichloroethane-d4	7.20	65	399375	4.83	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.60%			
32) Benzene-d6	7.14	84	1579370	4.72	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.40%			
36) 1,2-Dichloropropane-d6	8.42	67	455223	4.83	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 96.60%			
41) Toluene-d8	9.68	98	1126854	4.56	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 91.20%			
43) trans-1,3-Dichloropropene-	10.00	79	167580	4.52	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 90.40%			
46) 2-Hexanone-d5	10.40	63	598038	51.09	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 102.18%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	204472	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.40%			
63) 1,2-Dichlorobenzene-d4	13.74	152	261717	4.50	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 90.00%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK34

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.290	3	6	28	rVB	4869073	11528440	100.00%	25.607%
2	1.693	44	47	54	rBV	293909	506475	4.39%	1.125%
3	1.989	75	77	78	rBV2	6829	8857	0.08%	0.020%
4	2.087	83	87	97	rVV	190056	406641	3.53%	0.903%
5	2.205	97	99	102	rVV4	6660	13628	0.12%	0.030%
6	2.589	134	138	146	rVB6	21352	72917	0.63%	0.162%
7	2.746	152	154	156	rVB3	4360	5864	0.05%	0.013%
8	2.904	166	170	182	rVB	710399	1677429	14.55%	3.726%
9	3.120	189	192	197	rVB6	7712	18084	0.16%	0.040%
10	3.189	197	199	201	rVB3	6049	8827	0.08%	0.020%
11	3.229	201	203	207	rVB4	5155	8549	0.07%	0.019%
12	3.396	218	220	221	rBV2	2979	5125	0.04%	0.011%
13	3.573	233	238	241	rVB7	8345	19410	0.17%	0.043%
14	3.701	247	251	252	rBV4	3088	4965	0.04%	0.011%
15	3.947	274	276	278	rBV3	4540	8822	0.08%	0.020%
16	4.233	302	305	308	rVV3	4140	11370	0.10%	0.025%
17	4.321	311	314	315	rBV3	3912	5865	0.05%	0.013%
18	4.410	319	323	327	rBV5	3344	9458	0.08%	0.021%
19	4.518	332	334	336	rVB2	3899	5630	0.05%	0.013%
20	4.557	336	338	343	rBV7	6347	11353	0.10%	0.025%
21	4.636	343	346	347	rVB3	3416	5043	0.04%	0.011%
22	4.676	347	350	352	rBV3	3867	4865	0.04%	0.011%
23	4.744	355	357	359	rVB3	3921	4828	0.04%	0.011%
24	4.813	362	364	366	rVB3	6086	8654	0.08%	0.019%
25	4.882	368	371	372	rVB3	4824	7311	0.06%	0.016%
26	4.902	372	373	374	rBV	4241	4441	0.04%	0.010%
27	5.325	413	416	420	rVB4	3489	9093	0.08%	0.020%
28	5.394	420	423	426	rBV4	3874	7900	0.07%	0.018%
29	5.473	429	431	433	rBV3	2696	5048	0.04%	0.011%
30	5.640	441	448	456	rBV	376270	1365347	11.84%	3.033%
31	5.758	456	460	470	rVB3	42417	163028	1.41%	0.362%
32	6.142	496	499	500	rBV3	4700	5384	0.05%	0.012%
33	6.172	500	502	503	rVB2	4640	4707	0.04%	0.010%
34	6.191	503	504	506	rBV2	3640	4713	0.04%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK34

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.349	512	520	534	rBV	688060	2175378	18.87%	4.832%
36	6.713	555	557	558	rBV2	5291	5514	0.05%	0.012%
37	6.929	576	579	583	rVB6	4592	9044	0.08%	0.020%
38	7.136	593	600	604	rBV	1229573	3263997	28.31%	7.250%
39	7.195	604	606	616	rVB	437487	1068441	9.27%	2.373%
40	7.431	627	630	633	rVB4	3008	5381	0.05%	0.012%
41	7.608	646	648	650	rBV3	4092	4705	0.04%	0.010%
42	7.658	652	653	657	rVB4	4260	7172	0.06%	0.016%
43	7.904	672	678	690	rBV	1434157	3134708	27.19%	6.963%
44	8.169	702	705	713	rVB9	10573	35201	0.31%	0.078%
45	8.415	724	730	736	rBV	937835	2126742	18.45%	4.724%
46	8.858	770	775	778	rBV5	3883	11042	0.10%	0.025%
47	8.898	778	779	784	rVV5	4800	8506	0.07%	0.019%
48	9.341	819	824	834	rBV	614207	1066047	9.25%	2.368%
49	9.557	843	846	848	rBV2	8405	13668	0.12%	0.030%
50	9.675	853	858	864	rBV	1793481	3255044	28.23%	7.230%
51	9.793	869	870	873	rVB3	5505	6266	0.05%	0.014%
52	9.921	882	883	886	rVB3	3428	4793	0.04%	0.011%
53	10.000	886	891	897	rBV	320192	592774	5.14%	1.317%
54	10.118	902	903	905	rVV2	8785	14465	0.13%	0.032%
55	10.197	908	911	917	rVV2	31039	94321	0.82%	0.210%
56	10.295	917	921	925	rVV5	16015	42847	0.37%	0.095%
57	10.404	928	932	944	rVV	1787114	3154954	27.37%	7.008%
58	10.532	944	945	948	rVV2	9409	14082	0.12%	0.031%
59	10.571	948	949	951	rVV2	6392	8699	0.08%	0.019%
60	10.640	951	956	962	rVB2	27006	62621	0.54%	0.139%
61	10.846	975	977	980	rVB4	2566	4949	0.04%	0.011%
62	10.945	985	987	989	rBV3	3546	6367	0.06%	0.014%
63	11.014	991	994	995	rVB3	4015	5147	0.04%	0.011%
64	11.063	995	999	1001	rBV5	3965	10728	0.09%	0.024%
65	11.201	1008	1013	1023	rBV	1731582	2988524	25.92%	6.638%
66	11.329	1023	1026	1031	rVB3	13096	32946	0.29%	0.073%
67	11.417	1031	1035	1036	rBV4	3881	9276	0.08%	0.021%
68	11.457	1036	1039	1043	rVB4	8559	15174	0.13%	0.034%
69	11.624	1054	1056	1060	rBV5	2964	4448	0.04%	0.010%
70	11.831	1073	1077	1080	rBV4	10487	25740	0.22%	0.057%
71	11.880	1080	1082	1085	rVB3	3688	5576	0.05%	0.012%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK34

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.968	1088	1091	1094	rBV5	4124	10298	0.09%	0.023%
73	12.175	1106	1112	1115	rBV4	12598	29791	0.26%	0.066%
74	12.234	1115	1118	1119	rBV3	4318	6214	0.05%	0.014%
75	12.283	1121	1123	1126	rVB4	3403	4631	0.04%	0.010%
76	12.382	1126	1133	1135	rBV3	33535	64024	0.56%	0.142%
77	12.441	1135	1139	1144	rVB	451691	740876	6.43%	1.646%
78	12.579	1150	1153	1156	rBV5	2997	7368	0.06%	0.016%
79	12.746	1167	1170	1176	rVB7	3873	8675	0.08%	0.019%
80	12.854	1178	1181	1182	rBV3	4717	5170	0.04%	0.011%
81	12.972	1190	1193	1194	rBV3	3699	5887	0.05%	0.013%
82	13.031	1196	1199	1201	rBV3	3018	5284	0.05%	0.012%
83	13.071	1201	1203	1204	rVB	47171	31327	0.27%	0.070%
84	13.100	1204	1206	1209	rBV4	4043	4799	0.04%	0.011%
85	13.179	1213	1214	1217	rVB3	4173	4914	0.04%	0.011%
86	13.238	1217	1220	1221	rBV3	3932	6203	0.05%	0.014%
87	13.307	1223	1227	1228	rBV3	4394	7325	0.06%	0.016%
88	13.336	1228	1230	1233	rBV4	7272	11853	0.10%	0.026%
89	13.405	1233	1237	1243	rBV	1460616	2412585	20.93%	5.359%
90	13.583	1253	1255	1256	rBV2	3543	4396	0.04%	0.010%
91	13.612	1256	1258	1260	rVB3	4430	4619	0.04%	0.010%
92	13.642	1260	1261	1264	rBV3	3805	5539	0.05%	0.012%
93	13.730	1266	1270	1278	rBV	1109268	1987852	17.24%	4.415%
94	14.016	1295	1299	1303	rBV2	39306	75127	0.65%	0.167%
95	14.193	1313	1317	1322	rBV8	5317	21905	0.19%	0.049%
96	14.616	1356	1360	1362	rBV5	16148	29461	0.26%	0.065%
97	14.744	1371	1373	1375	rBV3	8931	16398	0.14%	0.036%
98	15.049	1403	1404	1405	rBV	9180	6503	0.06%	0.014%
99	15.580	1455	1458	1461	rVB	35928	61833	0.54%	0.137%
100	16.752	1573	1577	1584	rVB	52795	206578	1.79%	0.459%

Sum of corrected areas: 45020793

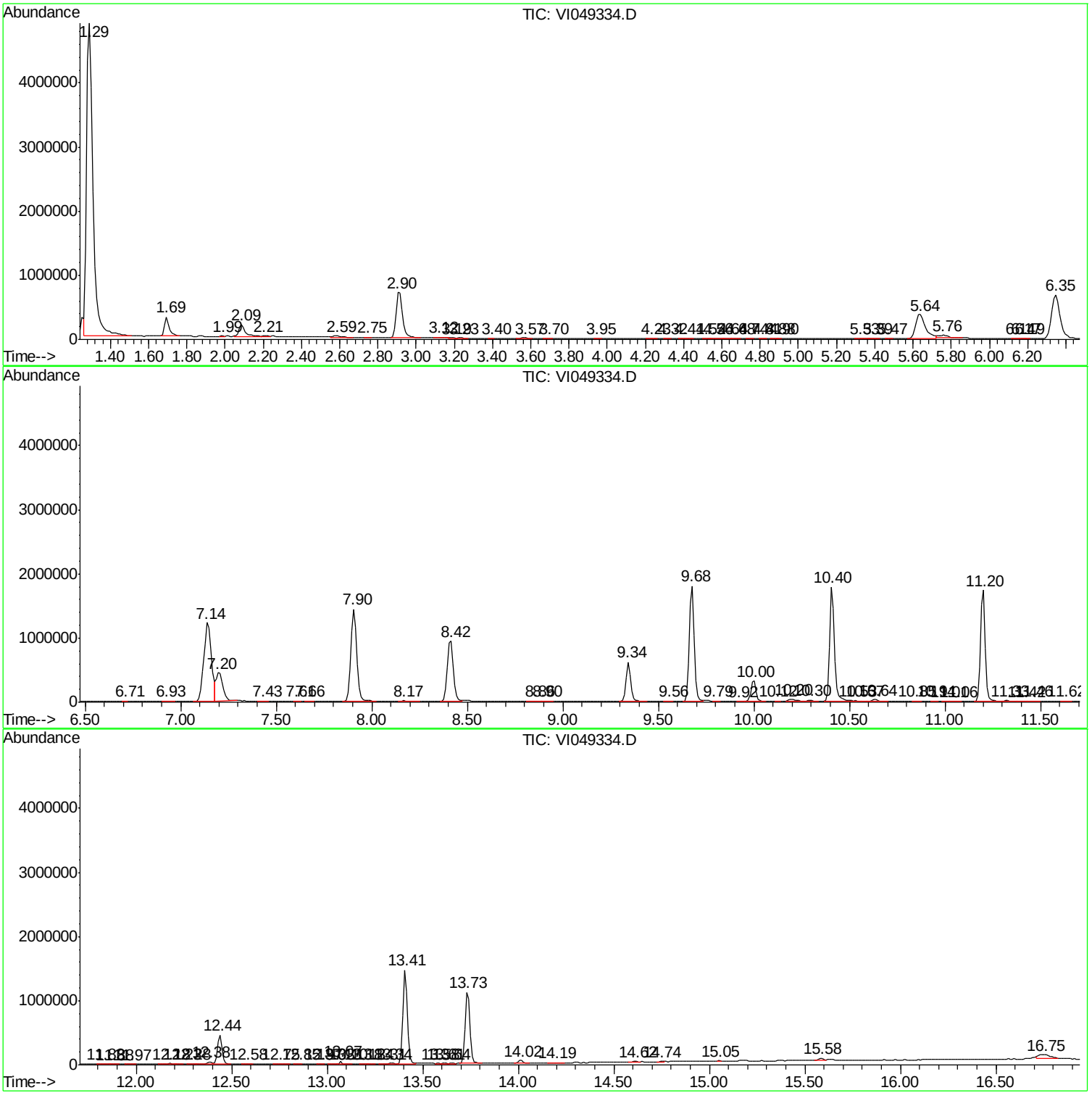
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK34

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK34

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK34

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK35

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049350.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK35

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049350.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK35

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049350.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLK35

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049350.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

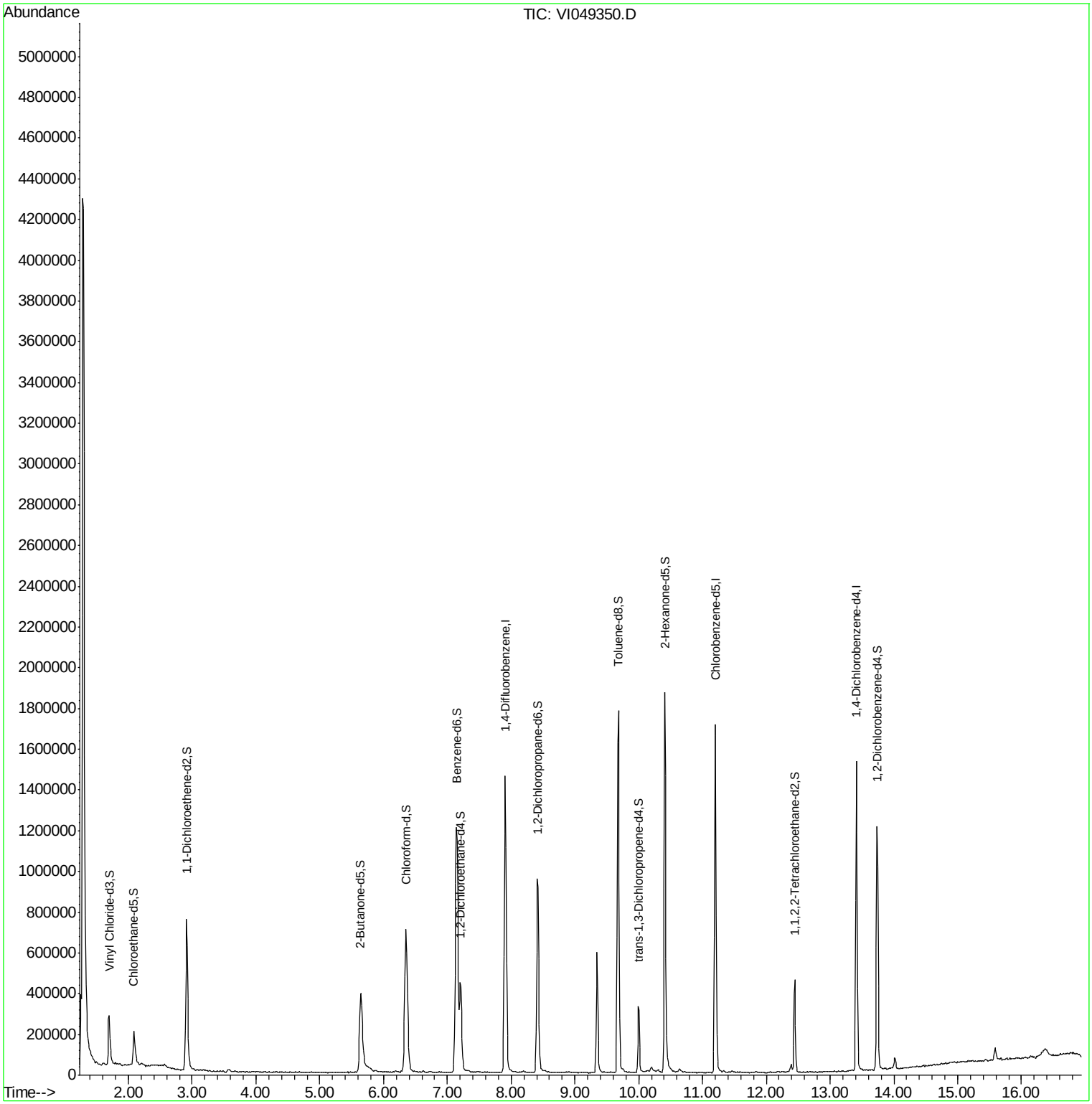
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 04:38:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM

Quant Time: May 13 04:38:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1318748	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	908211	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	356452	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	295730	3.64	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 72.80%			
7) Chloroethane-d5	2.09	69	200151	4.45	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 89.00%			
11) 1,1-Dichloroethene-d2	2.91	63	573760	3.00	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 60.00%			
20) 2-Butanone-d5	5.64	46	938482	53.39	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 106.78%			
24) Chloroform-d	6.35	84	896059	4.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 86.80%			
26) 1,2-Dichloroethane-d4	7.20	65	400003m	4.73	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
32) Benzene-d6	7.14	84	1589239	4.49	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.80%			
36) 1,2-Dichloropropane-d6	8.41	67	460649	4.63	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 92.60%			
41) Toluene-d8	9.68	98	1136770	4.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.20%			
43) trans-1,3-Dichloropropene-	10.00	79	165888	4.23	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 84.60%			
46) 2-Hexanone-d5	10.41	63	621684	50.29	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 100.58%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	206284	4.56	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.20%			
63) 1,2-Dichlorobenzene-d4	13.74	152	276712	4.43	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	4	6	26	rVB	4244553	10182202	100.00%	23.240%
2	1.600	35	38	39	rBV3	10493	16308	0.16%	0.037%
3	1.699	45	48	54	rBV	238732	457032	4.49%	1.043%
4	2.083	84	87	96	rVB	167306	374526	3.68%	0.855%
5	2.565	134	136	141	rVB3	20543	46227	0.45%	0.106%
6	2.693	147	149	155	rVB6	7172	17292	0.17%	0.039%
7	2.831	162	163	166	rBV3	4348	9050	0.09%	0.021%
8	2.909	166	171	185	rVV	745216	1661722	16.32%	3.793%
9	3.087	185	189	190	rVV4	5006	11022	0.11%	0.025%
10	3.136	192	194	195	rVV2	4906	5907	0.06%	0.013%
11	3.185	195	199	200	rVV3	3942	9146	0.09%	0.021%
12	3.244	203	205	206	rVB2	5592	5585	0.05%	0.013%
13	3.264	206	207	210	rBV3	5959	10197	0.10%	0.023%
14	3.333	210	214	217	rVB6	4401	7791	0.08%	0.018%
15	3.392	217	220	223	rBV5	5486	10964	0.11%	0.025%
16	3.480	228	229	233	rVB4	5148	5996	0.06%	0.014%
17	3.559	233	237	242	rBV6	12917	38966	0.38%	0.089%
18	3.953	273	277	278	rBV3	3739	8622	0.08%	0.020%
19	3.982	278	280	281	rVB2	4860	5275	0.05%	0.012%
20	4.002	281	282	285	rBV2	3897	7877	0.08%	0.018%
21	4.140	294	296	300	rVB4	2644	4706	0.05%	0.011%
22	4.681	348	351	352	rBV3	4785	6535	0.06%	0.015%
23	5.114	393	395	396	rVB2	5078	5874	0.06%	0.013%
24	5.134	396	397	399	rBV2	3109	4596	0.05%	0.010%
25	5.173	399	401	405	rVB5	2420	4802	0.05%	0.011%
26	5.272	410	411	415	rBV4	2998	4803	0.05%	0.011%
27	5.439	425	428	429	rVB3	5293	6820	0.07%	0.016%
28	5.478	429	432	434	rBV3	5298	11603	0.11%	0.026%
29	5.557	438	440	441	rBV2	3627	4533	0.04%	0.010%
30	5.636	441	448	458	rBV	388677	1397996	13.73%	3.191%
31	5.931	477	478	482	rVB4	3385	4700	0.05%	0.011%
32	6.187	502	504	507	rBV4	4912	7679	0.08%	0.018%
33	6.226	507	508	512	rVB2	6199	7316	0.07%	0.017%
34	6.275	512	513	514	rBV	8277	6539	0.06%	0.015%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.354	514	521	533	rVV	701712	2148022	21.10%	4.903%
36	6.482	533	534	538	rVV4	4291	6673	0.07%	0.015%
37	6.620	545	548	551	rVB5	6406	11484	0.11%	0.026%
38	6.708	553	557	558	rBV3	3041	4522	0.04%	0.010%
39	6.866	570	573	575	rBV4	4403	7229	0.07%	0.016%
40	7.142	594	601	605	rBV	1202887	3281552	32.23%	7.490%
41	7.201	605	607	617	rVB	431931	1056078	10.37%	2.410%
42	7.555	640	643	644	rBV3	2646	4927	0.05%	0.011%
43	7.624	647	650	652	rVB4	3554	6198	0.06%	0.014%
44	7.673	652	655	658	rVB5	2619	4988	0.05%	0.011%
45	7.909	673	679	694	rBV	1455673	3180931	31.24%	7.260%
46	8.195	705	708	710	rVB4	5846	11517	0.11%	0.026%
47	8.332	719	722	725	rBV4	2652	7182	0.07%	0.016%
48	8.411	725	730	739	rBV	950367	2169547	21.31%	4.952%
49	8.893	777	779	783	rVB5	3892	6348	0.06%	0.014%
50	9.071	795	797	798	rBV2	4079	4611	0.05%	0.011%
51	9.179	805	808	811	rVB5	2982	6814	0.07%	0.016%
52	9.267	814	817	820	rBV4	4615	10077	0.10%	0.023%
53	9.346	820	825	834	rBV	592523	1080345	10.61%	2.466%
54	9.464	834	837	839	rVV4	4647	7695	0.08%	0.018%
55	9.681	854	859	864	rBV	1774853	3254412	31.96%	7.428%
56	9.750	864	866	875	rVB5	18882	53427	0.52%	0.122%
57	9.947	882	886	887	rBV4	3627	5427	0.05%	0.012%
58	9.996	887	891	897	rBV	323302	575150	5.65%	1.313%
59	10.153	899	907	908	rVV7	9274	35867	0.35%	0.082%
60	10.202	908	912	916	rVV	27083	74232	0.73%	0.169%
61	10.311	918	923	929	rVV8	14636	38081	0.37%	0.087%
62	10.409	929	933	950	rVV	1865314	3217118	31.60%	7.343%
63	10.635	952	956	962	rVV5	17402	44957	0.44%	0.103%
64	10.704	962	963	966	rVV3	3764	6850	0.07%	0.016%
65	10.941	984	987	990	rBV4	2650	6932	0.07%	0.016%
66	11.118	1001	1005	1008	rVV6	3636	7350	0.07%	0.017%
67	11.206	1009	1014	1024	rVV	1708979	3098438	30.43%	7.072%
68	11.324	1024	1026	1032	rVV4	9958	29629	0.29%	0.068%
69	11.462	1036	1040	1043	rVV5	9193	24036	0.24%	0.055%
70	11.551	1047	1049	1051	rVV2	5467	7878	0.08%	0.018%
71	11.590	1051	1053	1056	rVV4	4477	7965	0.08%	0.018%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.836	1073	1078	1081	rBV5	7389	20279	0.20%	0.046%
73	11.954	1089	1090	1095	rVB4	2514	5325	0.05%	0.012%
74	12.023	1095	1097	1100	rBV4	3604	8205	0.08%	0.019%
75	12.063	1100	1101	1105	rBV4	5024	6114	0.06%	0.014%
76	12.171	1108	1112	1117	rBV7	7633	21787	0.21%	0.050%
77	12.387	1129	1134	1136	rVV2	38196	72643	0.71%	0.166%
78	12.446	1136	1140	1146	rVB	455325	779998	7.66%	1.780%
79	12.525	1146	1148	1152	rBV4	2643	4472	0.04%	0.010%
80	12.633	1157	1159	1161	rVB3	4037	4683	0.05%	0.011%
81	12.692	1161	1165	1166	rVB3	3616	4940	0.05%	0.011%
82	12.732	1166	1169	1171	rVB4	3820	5716	0.06%	0.013%
83	12.761	1171	1172	1175	rBV2	3219	5646	0.06%	0.013%
84	12.850	1180	1181	1184	rBV3	3217	4943	0.05%	0.011%
85	12.909	1184	1187	1191	rBV4	3440	8027	0.08%	0.018%
86	12.968	1191	1193	1196	rVB4	2704	5233	0.05%	0.012%
87	13.047	1198	1201	1202	rBV3	3518	7238	0.07%	0.017%
88	13.135	1207	1210	1211	rBV3	4955	8085	0.08%	0.018%
89	13.303	1225	1227	1228	rBV	5245	6557	0.06%	0.015%
90	13.342	1229	1231	1234	rVB4	7753	9912	0.10%	0.023%
91	13.411	1234	1238	1245	rBV	1519904	2544761	24.99%	5.808%
92	13.736	1266	1271	1276	rBV	1196345	2079984	20.43%	4.747%
93	13.933	1287	1291	1292	rBV4	4777	10245	0.10%	0.023%
94	13.962	1292	1294	1295	rVV2	6597	9108	0.09%	0.021%
95	14.011	1295	1299	1303	rVV2	56358	118718	1.17%	0.271%
96	14.110	1307	1309	1312	rBV4	6619	11094	0.11%	0.025%
97	14.257	1322	1324	1325	rBV2	5792	5337	0.05%	0.012%
98	14.287	1325	1327	1331	rBV5	5112	12541	0.12%	0.029%
99	14.503	1347	1349	1352	rBV4	6179	11415	0.11%	0.026%
100	15.586	1454	1459	1463	rBV	64270	146019	1.43%	0.333%

Sum of corrected areas: 43813723

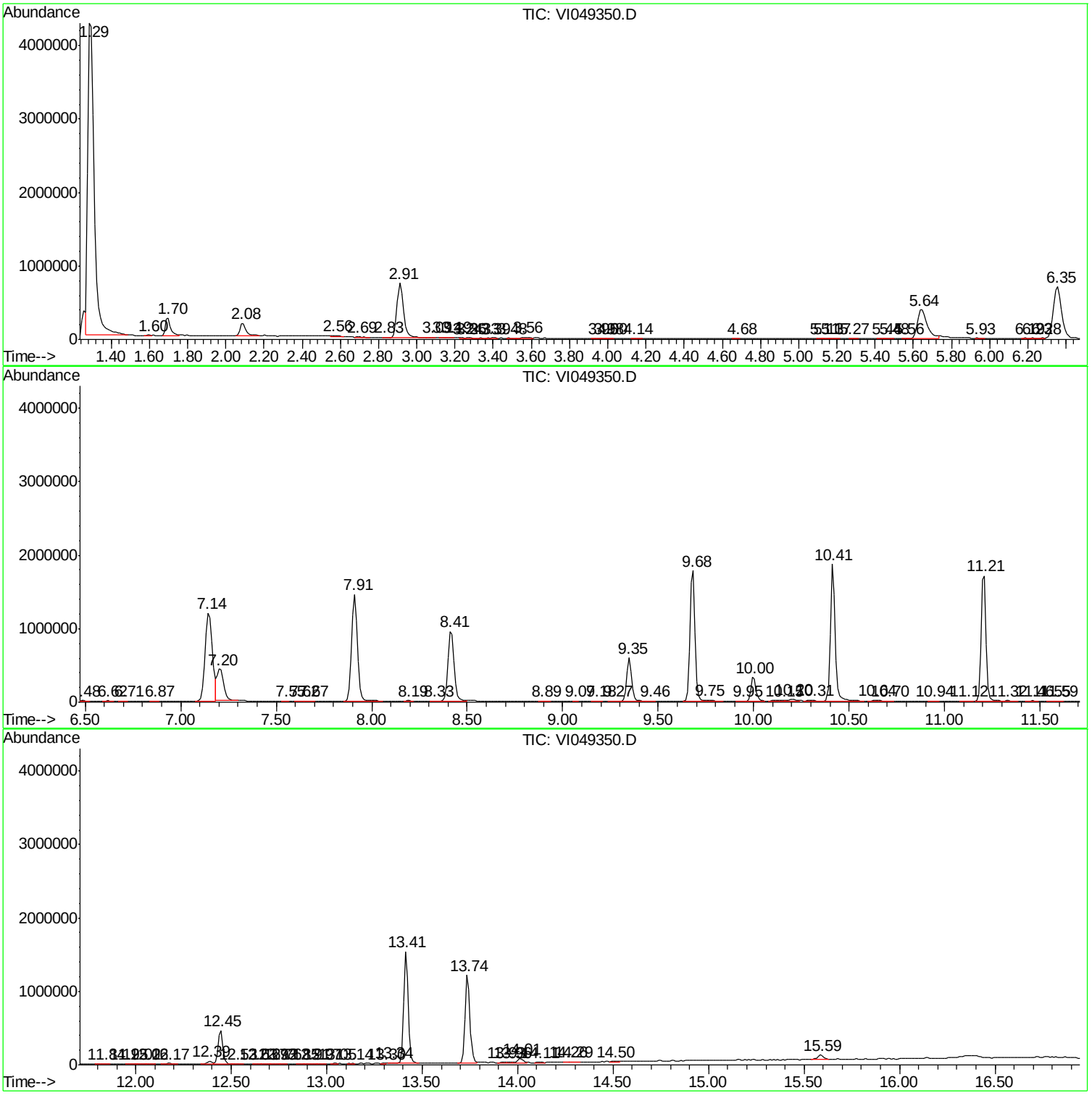
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

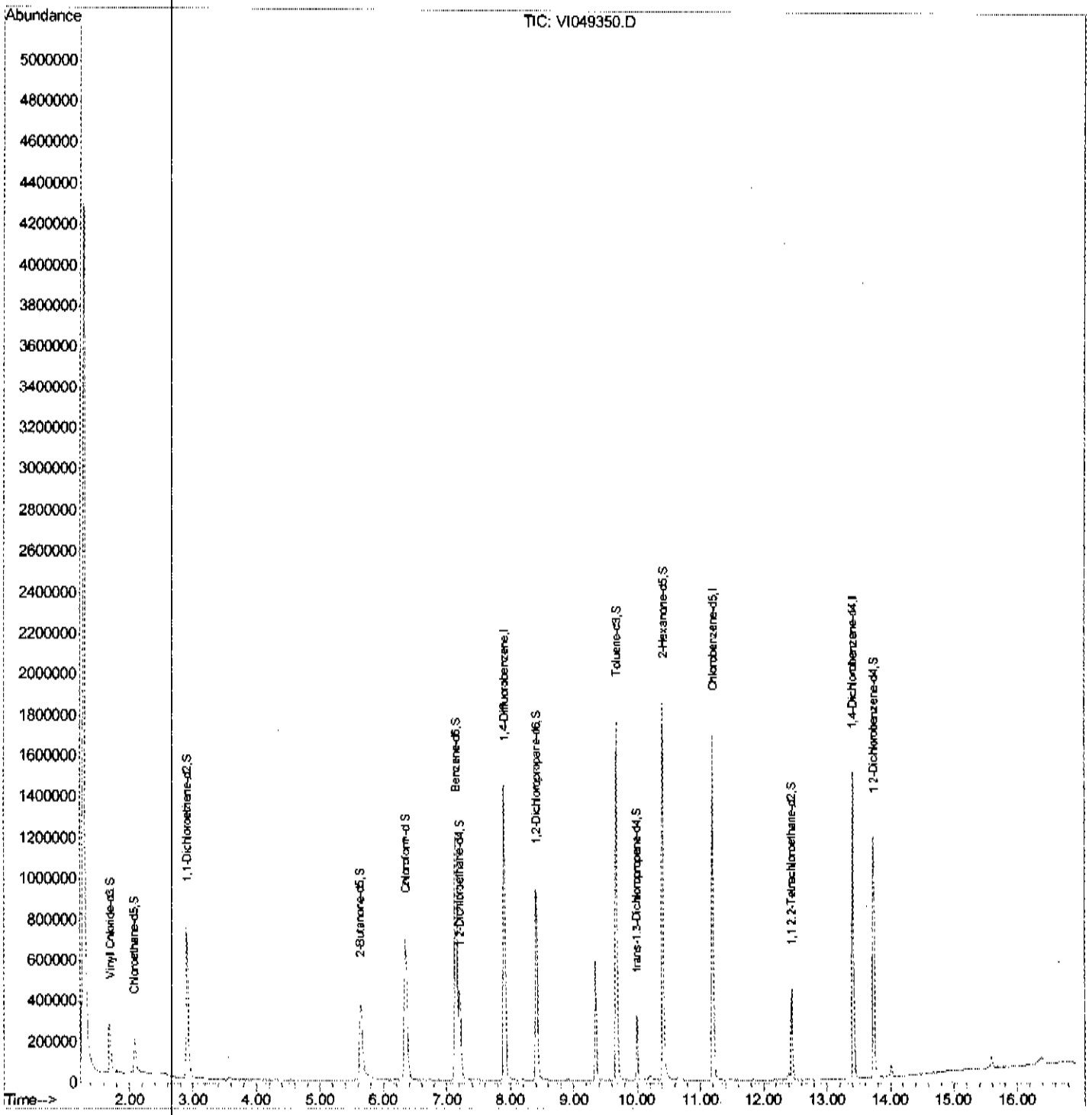
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 04:38:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM



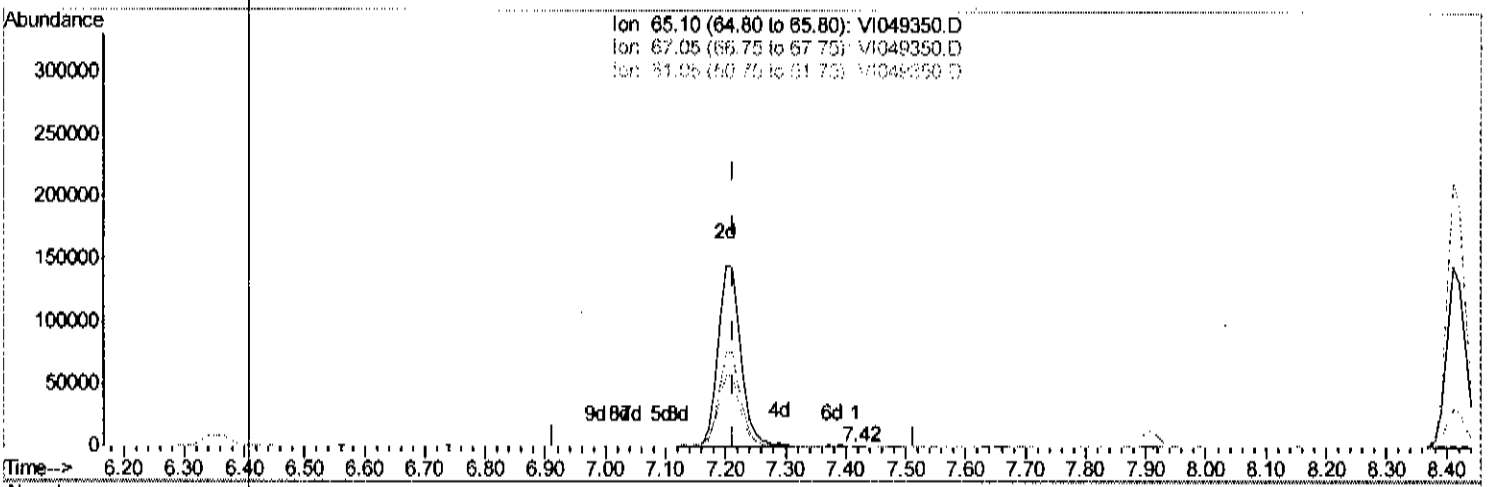
Quantitation Report (Qedit)

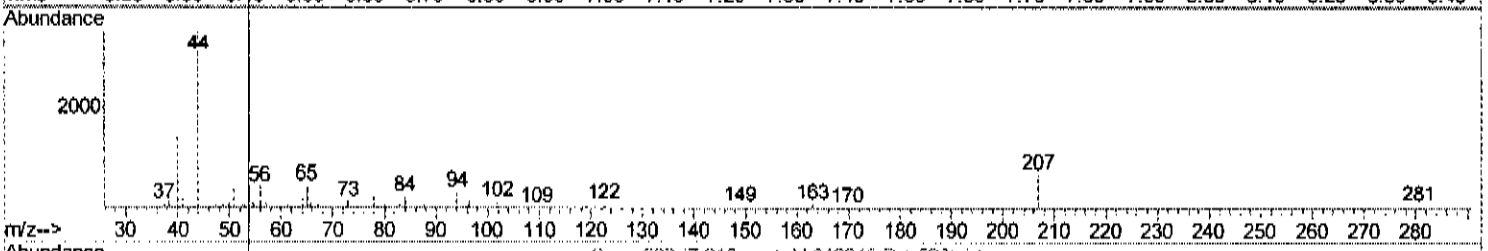
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

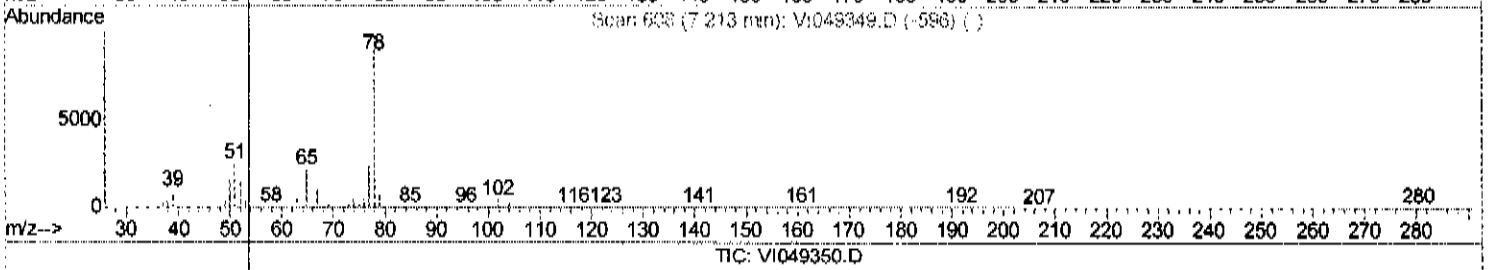
Quant Time: May 13 04:32:13 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM







(26) 1,2-Dichloroethane-d4 (S)

7.417min (+0.204) 0.01ug/L

response 584

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	47.26
51.05	123.20	95.21
0.00	0.00	0.00

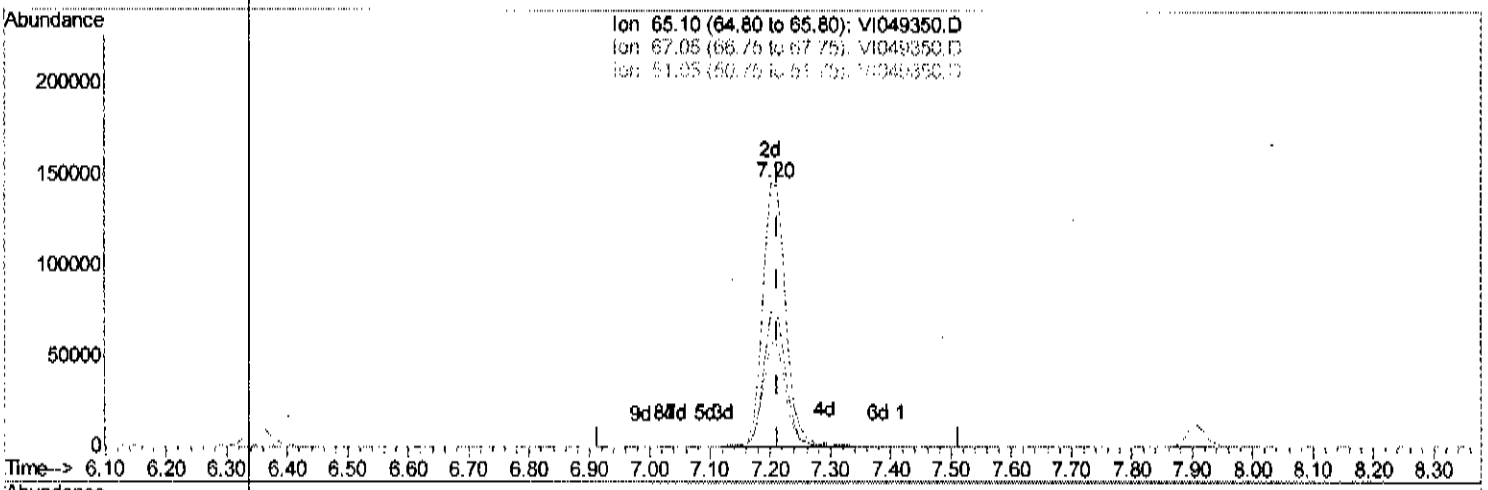
Quantitation Report (Qedit)

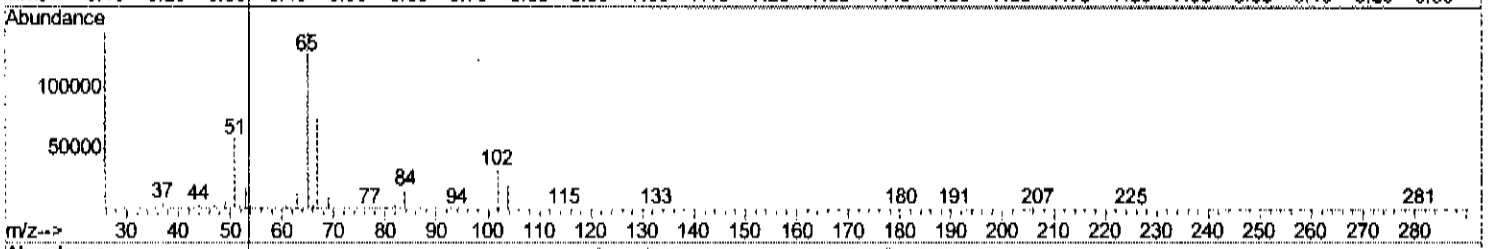
Data Path : W:\HPCHEM1\MSVOA_1\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

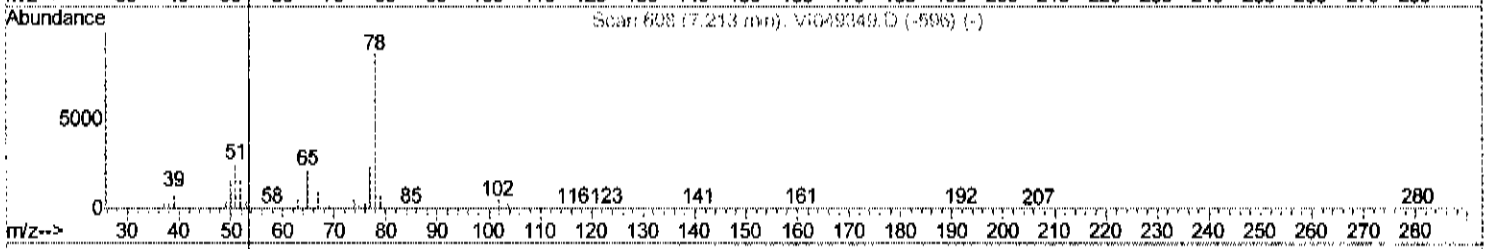
Quant Time: May 13 04:32:13 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM







TIC: VI049350.D

(26) 1,2-Dichloroethane-d4 (S)

7.201min (-0.012) 4.73ug/L m > 05/14/16 SY

response 400003

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.07#
51.05	123.20	0.14#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 04:38:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1318748	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	908211	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	356452	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	295730	3.64	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 72.80%			
7) Chloroethane-d5	2.09	69	200151	4.45	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 89.00%			
11) 1,1-Dichloroethene-d2	2.91	63	573760	3.00	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 60.00%			
20) 2-Butanone-d5	5.64	46	938482	53.39	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 106.78%			
24) Chloroform-d	6.35	84	896059	4.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 86.80%			
26) 1,2-Dichloroethane-d4	7.20	65	400003m	4.73	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
32) Benzene-d6	7.14	84	1589239	4.49	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.80%			
36) 1,2-Dichloropropane-d6	8.41	67	460649	4.63	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 92.60%			
41) Toluene-d8	9.68	98	1136770	4.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.20%			
43) trans-1,3-Dichloropropene-	10.00	79	165888	4.23	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 84.60%			
46) 2-Hexanone-d5	10.41	63	621684	50.29	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 100.58%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	206284	4.56	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.20%			
63) 1,2-Dichlorobenzene-d4	13.74	152	276712	4.43	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

05/14/16 dq

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049352.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049352.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049352.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049352.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

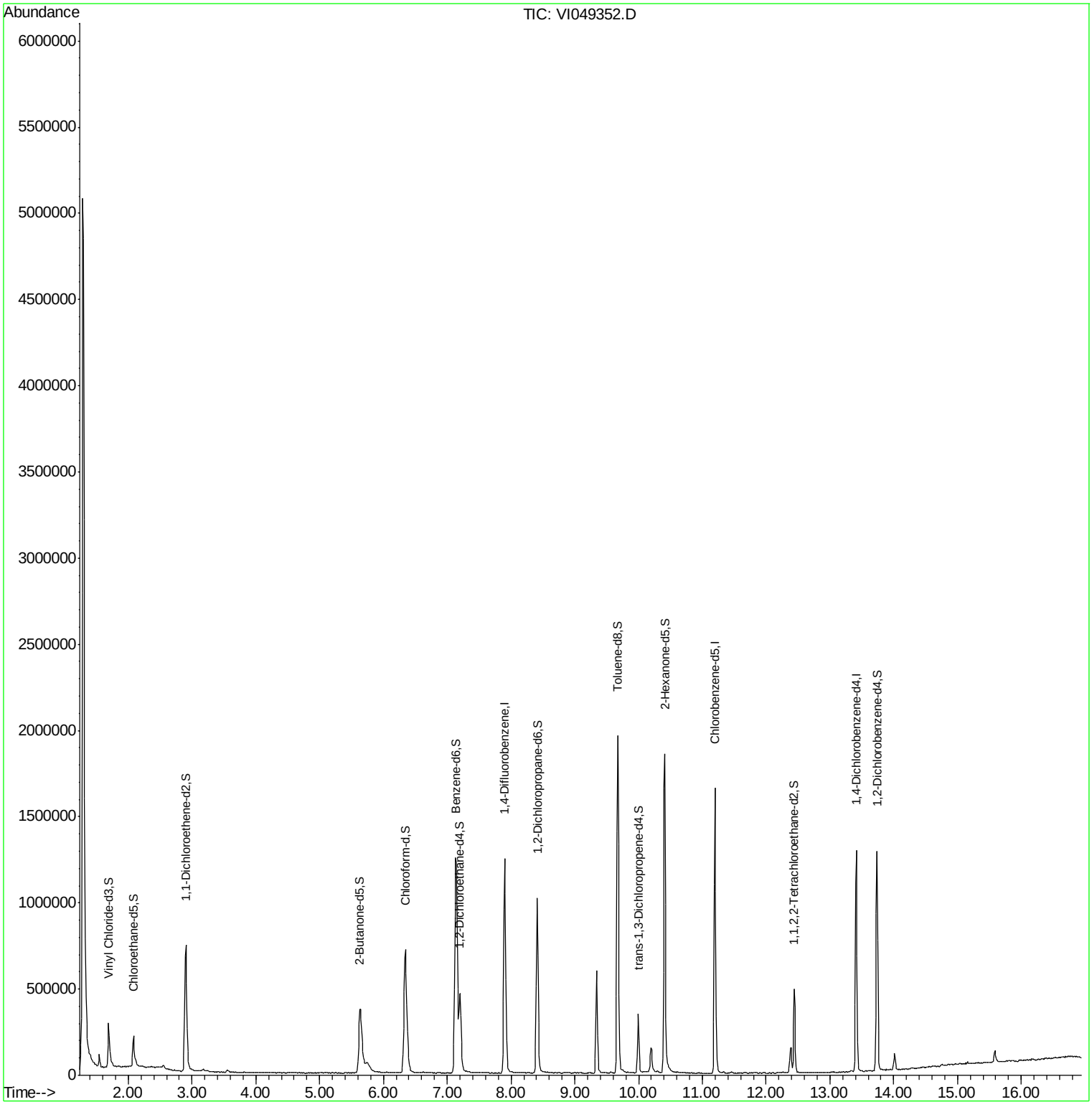
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049352.D
Acq On : 12 May 2016 15:46
Operator : FY/SY
Sample : H2874-15
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Quant Time: May 13 04:42:09 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049352.D
Acq On : 12 May 2016 15:46
Operator : FY/SY
Sample : H2874-15
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Quant Time: May 13 04:42:09 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1140607	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	801085	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	315035	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	293429	4.18	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 83.60%			
7) Chloroethane-d5	2.09	69	197307	5.07	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.40%			
11) 1,1-Dichloroethene-d2	2.90	63	592439	3.58	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 71.60%			
20) 2-Butanone-d5	5.63	46	928519	61.07	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 122.14%			
24) Chloroform-d	6.35	84	884205	4.95	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.00%			
26) 1,2-Dichloroethane-d4	7.20	65	413218	5.65	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 113.00%			
32) Benzene-d6	7.13	84	1665038	5.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 106.80%			
36) 1,2-Dichloropropane-d6	8.41	67	469446	5.35	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.00%			
41) Toluene-d8	9.67	98	1203241	5.23	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.60%			
43) trans-1,3-Dichloropropene-	10.00	79	171058	4.95	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 99.00%			
46) 2-Hexanone-d5	10.41	63	658664	60.40	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 120.80%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	215307	5.40	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 108.00%			
63) 1,2-Dichlorobenzene-d4	13.74	152	290535	5.26	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 105.20%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049352.D
Acq On : 12 May 2016 15:46
Operator : FY/SY
Sample : H2874-15
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.288	3	6	29	rVB	5031395	11634834	100.00%	25.439%
2	1.544	29	32	36	rVB	76595	105748	0.91%	0.231%
3	1.603	36	38	39	rVB2	8291	6606	0.06%	0.014%
4	1.632	39	41	44	rBV4	5430	10835	0.09%	0.024%
5	1.691	44	47	57	rBV	255804	502054	4.32%	1.098%
6	1.947	71	73	74	rBV2	6265	7638	0.07%	0.017%
7	2.085	83	87	100	rVB	174994	362949	3.12%	0.794%
8	2.548	132	134	139	rVB2	20363	40019	0.34%	0.087%
9	2.725	150	152	155	rVB4	6894	9416	0.08%	0.021%
10	2.902	165	170	178	rBV	727762	1650906	14.19%	3.610%
11	3.177	194	198	202	rBV	12334	26275	0.23%	0.057%
12	3.305	209	211	216	rVB4	4700	8151	0.07%	0.018%
13	3.551	232	236	243	rVV5	14939	41658	0.36%	0.091%
14	4.004	279	282	284	rBV3	3079	4636	0.04%	0.010%
15	4.359	314	318	320	rBV5	5856	13426	0.12%	0.029%
16	4.418	323	324	328	rVB4	3151	5015	0.04%	0.011%
17	4.634	344	346	348	rVB3	4256	5410	0.05%	0.012%
18	4.664	348	349	351	rBV2	3193	5057	0.04%	0.011%
19	5.018	382	385	386	rBV2	3272	6113	0.05%	0.013%
20	5.107	392	394	397	rVB3	3293	4549	0.04%	0.010%
21	5.195	400	403	406	rBV3	4122	9628	0.08%	0.021%
22	5.303	411	414	415	rBV2	4943	6106	0.05%	0.013%
23	5.441	427	428	431	rBV3	3971	6203	0.05%	0.014%
24	5.628	441	447	456	rBV	367957	1405566	12.08%	3.073%
25	5.943	477	479	480	rVB2	4685	5461	0.05%	0.012%
26	6.051	489	490	494	rVB3	4161	4383	0.04%	0.010%
27	6.189	500	504	506	rVB4	4155	8660	0.07%	0.019%
28	6.219	506	507	510	rVB2	3831	4678	0.04%	0.010%
29	6.347	513	520	535	rVV	713323	2249558	19.33%	4.919%
30	6.622	547	548	551	rVB3	6914	6972	0.06%	0.015%
31	6.721	555	558	559	rBV2	4226	6107	0.05%	0.013%
32	6.849	567	571	573	rBV3	3920	8092	0.07%	0.018%
33	7.134	593	600	604	rBV	1250164	3403367	29.25%	7.441%
34	7.193	604	606	624	rVB	460396	1185335	10.19%	2.592%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049352.D
Acq On : 12 May 2016 15:46
Operator : FY/SY
Sample : H2874-15
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.478	632	635	640	rVB6	4474	8576	0.07%	0.019%
36	7.597	646	647	651	rBV4	2149	5131	0.04%	0.011%
37	7.695	654	657	660	rVB4	3589	8260	0.07%	0.018%
38	7.744	660	662	663	rBV2	3195	4843	0.04%	0.011%
39	7.902	672	678	689	rBV	1243592	2767322	23.78%	6.051%
40	8.167	703	705	712	rVB8	5229	14875	0.13%	0.033%
41	8.295	716	718	721	rVB4	3448	6283	0.05%	0.014%
42	8.413	724	730	738	rVV	1013653	2250108	19.34%	4.920%
43	8.512	738	740	744	rVV5	10466	25986	0.22%	0.057%
44	8.571	744	746	748	rVV3	7400	8757	0.08%	0.019%
45	8.837	770	773	775	rBV4	3006	5736	0.05%	0.013%
46	8.994	787	789	792	rBV4	1999	4751	0.04%	0.010%
47	9.122	801	802	808	rVB4	2863	7647	0.07%	0.017%
48	9.201	808	810	811	rBV2	3204	4789	0.04%	0.010%
49	9.240	811	814	816	rBV4	2739	4489	0.04%	0.010%
50	9.339	819	824	832	rBV	596439	1116566	9.60%	2.441%
51	9.447	834	835	838	rVV3	4347	7065	0.06%	0.015%
52	9.565	843	847	851	rBV4	6505	12191	0.10%	0.027%
53	9.673	853	858	872	rBV	1957637	3503415	30.11%	7.660%
54	9.831	872	874	881	rVB7	4943	9190	0.08%	0.020%
55	9.998	887	891	897	rVV	343068	595050	5.11%	1.301%
56	10.087	899	900	902	rVV2	9523	11803	0.10%	0.026%
57	10.116	902	903	905	rVV2	8352	12507	0.11%	0.027%
58	10.195	905	911	917	rVV	147470	345324	2.97%	0.755%
59	10.293	919	921	928	rVV7	12144	22542	0.19%	0.049%
60	10.411	928	933	948	rVV	1850860	3423498	29.42%	7.485%
61	10.598	950	952	953	rVV2	3895	4479	0.04%	0.010%
62	10.618	953	954	957	rVV3	4458	5961	0.05%	0.013%
63	10.953	986	988	989	rVB2	4056	4342	0.04%	0.009%
64	11.199	1009	1013	1022	rBV	1650023	2713987	23.33%	5.934%
65	11.327	1024	1026	1032	rVB5	11460	18515	0.16%	0.040%
66	11.455	1035	1039	1044	rVB5	8254	21108	0.18%	0.046%
67	11.592	1050	1053	1054	rVB3	3653	4778	0.04%	0.010%
68	11.661	1057	1060	1061	rBV3	3471	5483	0.05%	0.012%
69	11.829	1073	1077	1082	rVB7	8333	26893	0.23%	0.059%
70	11.898	1082	1084	1088	rBV5	5007	10591	0.09%	0.023%
71	11.976	1088	1092	1095	rBV5	3237	8853	0.08%	0.019%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049352.D
Acq On : 12 May 2016 15:46
Operator : FY/SY
Sample : H2874-15
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	12.055	1095	1100	1103	rBV6	1430	4515	0.04%	0.010%
73	12.094	1103	1104	1107	rVB3	3867	4983	0.04%	0.011%
74	12.173	1110	1112	1115	rBV4	6122	13579	0.12%	0.030%
75	12.222	1115	1117	1120	rBV3	3035	7015	0.06%	0.015%
76	12.262	1120	1121	1125	rVB4	3924	6595	0.06%	0.014%
77	12.380	1128	1133	1136	rBV	144504	285171	2.45%	0.624%
78	12.439	1136	1139	1144	rVV	482927	802274	6.90%	1.754%
79	12.616	1154	1157	1158	rVB3	3698	6062	0.05%	0.013%
80	12.646	1158	1160	1161	rBV2	3158	4342	0.04%	0.009%
81	12.705	1163	1166	1169	rBV4	3660	6675	0.06%	0.015%
82	12.803	1173	1176	1178	rVB4	3571	6326	0.05%	0.014%
83	12.852	1178	1181	1183	rBV4	3625	7704	0.07%	0.017%
84	12.990	1194	1195	1197	rBV2	2798	4679	0.04%	0.010%
85	13.039	1199	1200	1202	rVB3	6150	5187	0.04%	0.011%
86	13.069	1202	1203	1206	rVB3	4022	5062	0.04%	0.011%
87	13.147	1209	1211	1213	rBV2	3483	6460	0.06%	0.014%
88	13.266	1219	1223	1224	rVB2	3556	5363	0.05%	0.012%
89	13.344	1224	1231	1233	rBV7	8376	29284	0.25%	0.064%
90	13.413	1233	1238	1245	rBV	1284960	2212971	19.02%	4.839%
91	13.640	1259	1261	1263	rVB3	4949	6909	0.06%	0.015%
92	13.679	1263	1265	1266	rBV2	5348	6389	0.05%	0.014%
93	13.738	1266	1271	1277	rBV	1277469	2150582	18.48%	4.702%
94	13.886	1285	1286	1287	rBV	6172	5137	0.04%	0.011%
95	14.014	1295	1299	1305	rVV2	95819	180641	1.55%	0.395%
96	14.181	1314	1316	1317	rBV2	4537	4410	0.04%	0.010%
97	14.456	1342	1344	1347	rBV4	6964	16466	0.14%	0.036%
98	14.762	1370	1375	1377	rBV6	11209	32622	0.28%	0.071%
99	15.155	1413	1415	1417	rBV2	12665	13460	0.12%	0.029%
100	15.588	1456	1459	1464	rVB	64685	122588	1.05%	0.268%

Sum of corrected areas: 45736556

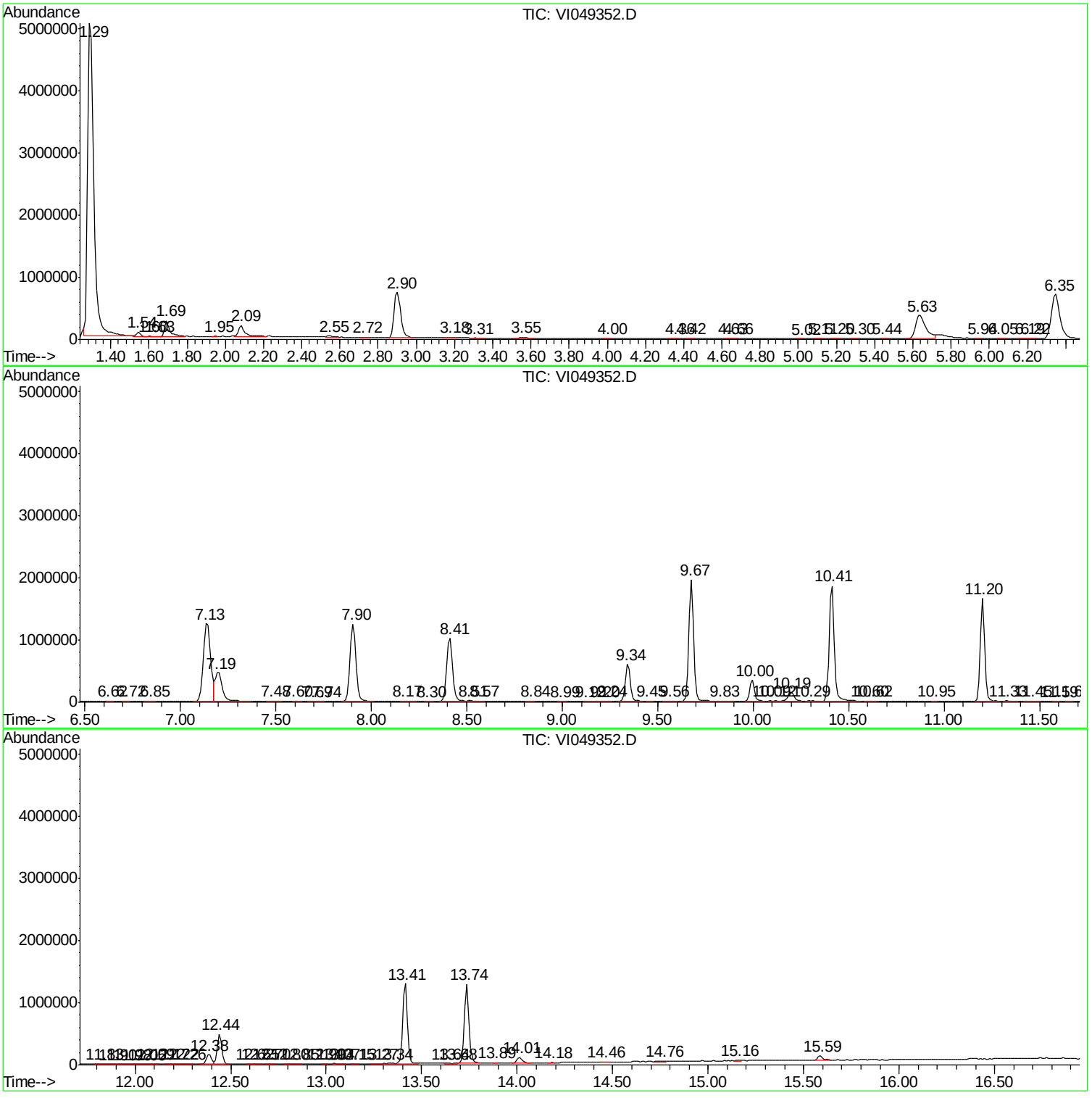
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049352.D
Acq On : 12 May 2016 15:46
Operator : FY/SY
Sample : H2874-15
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049352.D
Acq On : 12 May 2016 15:46
Operator : FY/SY
Sample : H2874-15
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049352.D
Acq On : 12 May 2016 15:46
Operator : FY/SY
Sample : H2874-15
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-10MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049262.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	4.3	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.15	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.7	
71-55-6	1,1,1-Trichloroethane	0.52	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	5.0	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	5.1	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-10MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049262.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	26	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	4.9	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-10MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049262.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

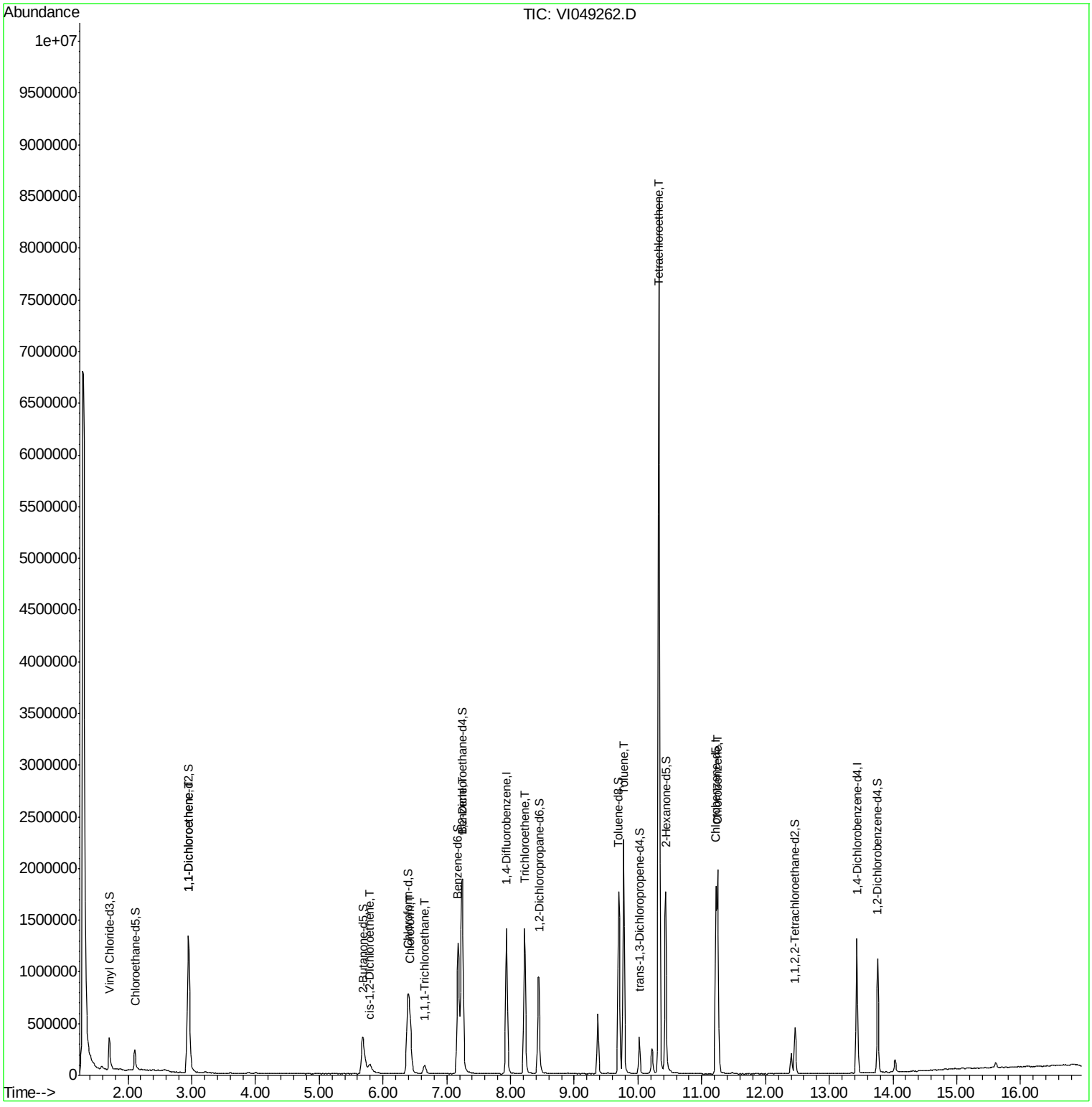
CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

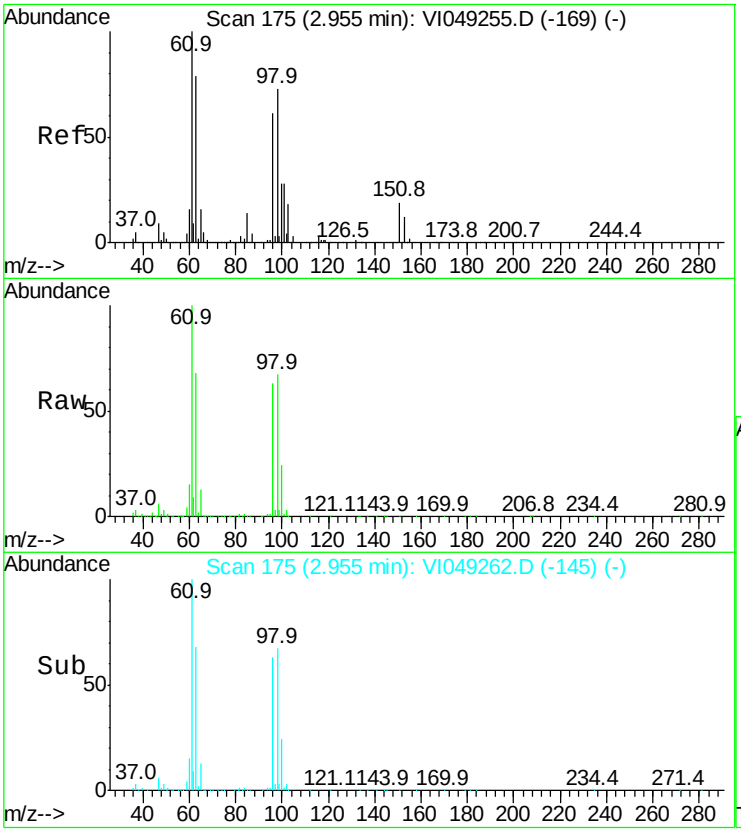
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049262.D
Acq On : 5 May 2016 20:37
Operator : FY/SY
Sample : H2874-10MS
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113MS

Quant Time: May 06 05:55:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration



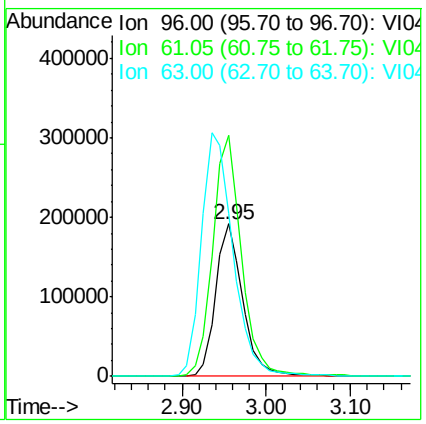


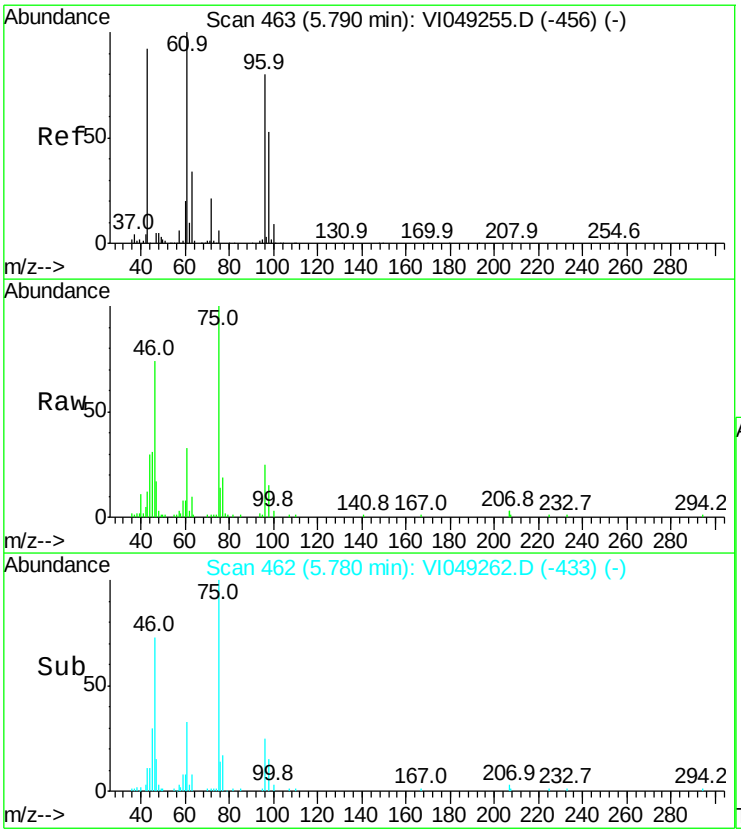
#12
1,1-Dichloroethene
Concen: 4.26 ug/L
RT: 2.95 min Scan# 175
Delta R.T. -0.00 min
Lab File: VI049262.D
Acq: 5 May 2016 20:37

Instrument : MSVOA_I
ClientSampleId : H4113MS

Tgt Ion: 96 Resp: 423442

Ion	Ratio	Lower	Upper
96	100		
61	157.9	104.6	194.2
63	107.0	73.0	135.6

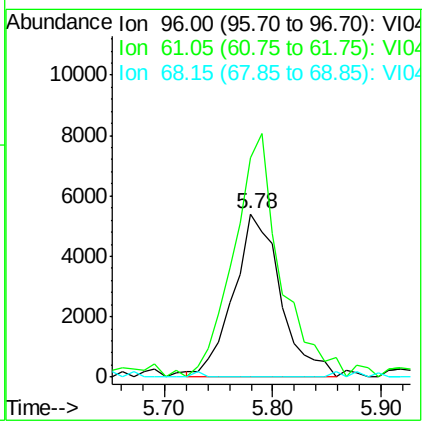


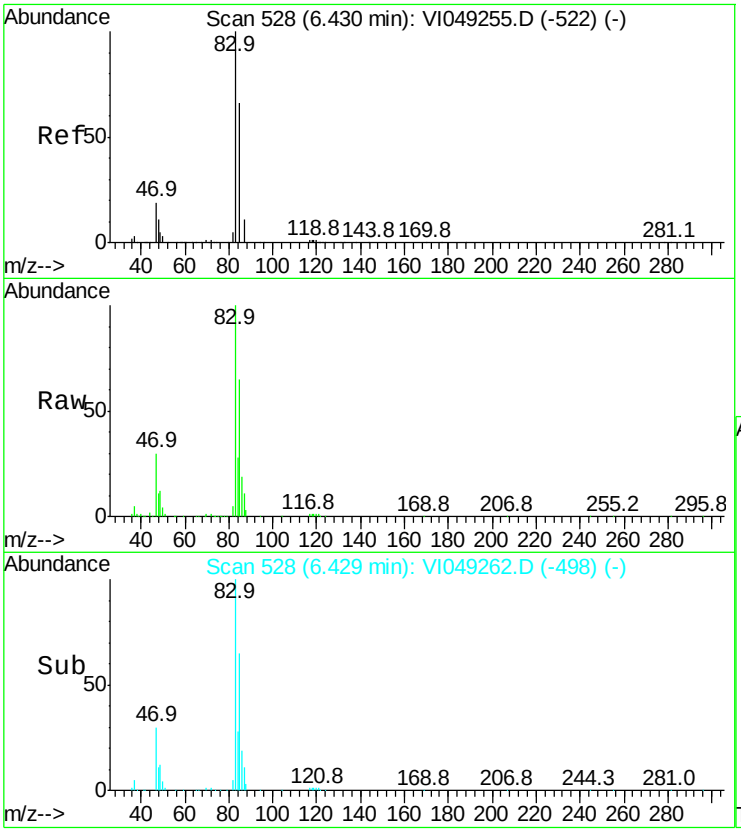


#22
cis-1,2-Dichloroethene
Concen: 0.15 ug/L
RT: 5.78 min Scan# 462
Delta R.T. -0.01 min
Lab File: VI049262.D
Acq: 5 May 2016 20:37

Tgt Ion: 96 Resp: 16378

Ion	Ratio	Lower	Upper
96	100		
61	134.5	82.1	152.5
68	0.0	0.0	0.0



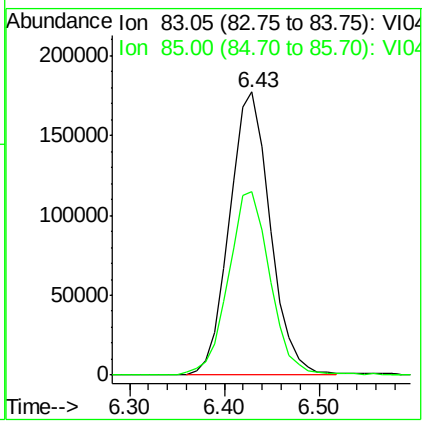


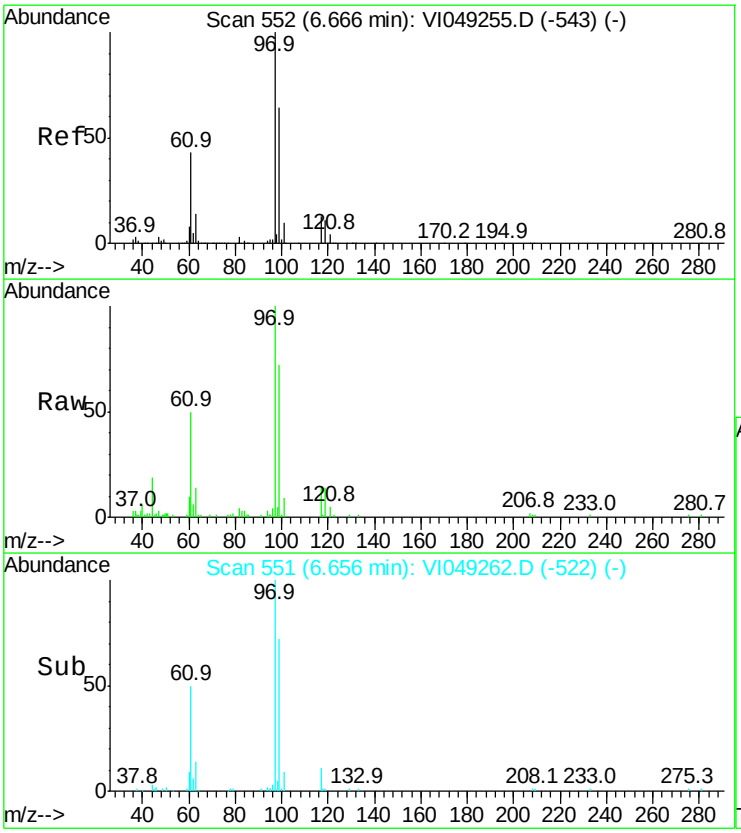
#25
Chloroform
Concen: 2.67 ug/L
RT: 6.43 min Scan# 528
Delta R.T. -0.00 min
Lab File: VI049262.D
Acq: 5 May 2016 20:37

Instrument :
MSVOA_I
ClientSampleId :
H4113MS

Tgt Ion: 83 Resp: 527829

Ion	Ratio	Lower	Upper
83	100		
85	64.7	47.3	87.8

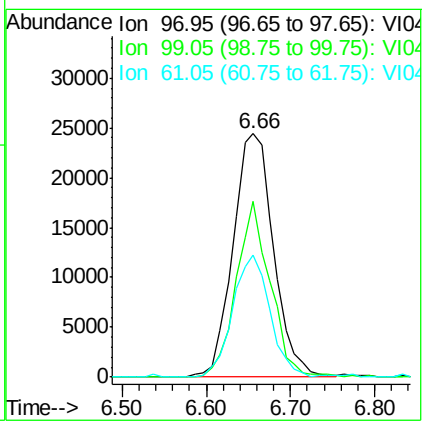


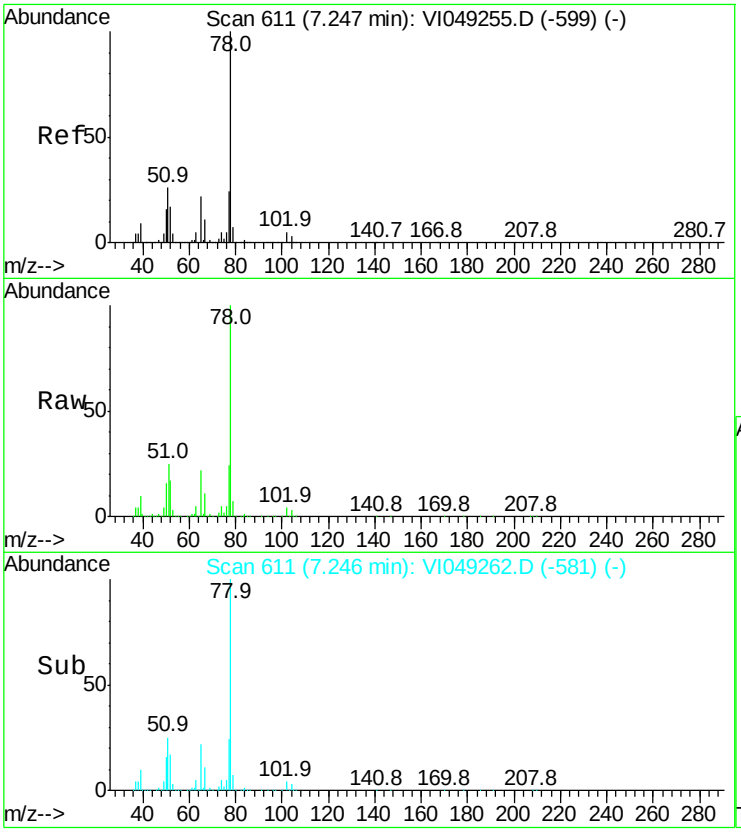


#29
1,1,1-Trichloroethane
Concen: 0.52 ug/L
RT: 6.66 min Scan# 551
Delta R.T. -0.01 min
Lab File: VI049262.D
Acq: 5 May 2016 20:37

Tgt Ion: 97 Resp: 82072

Ion	Ratio	Lower	Upper
97	100		
99	59.8	51.1	76.7
61	45.8	33.3	49.9

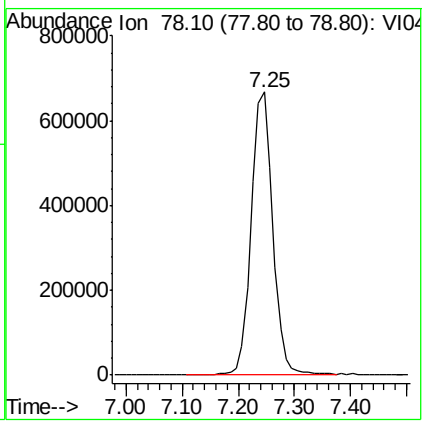


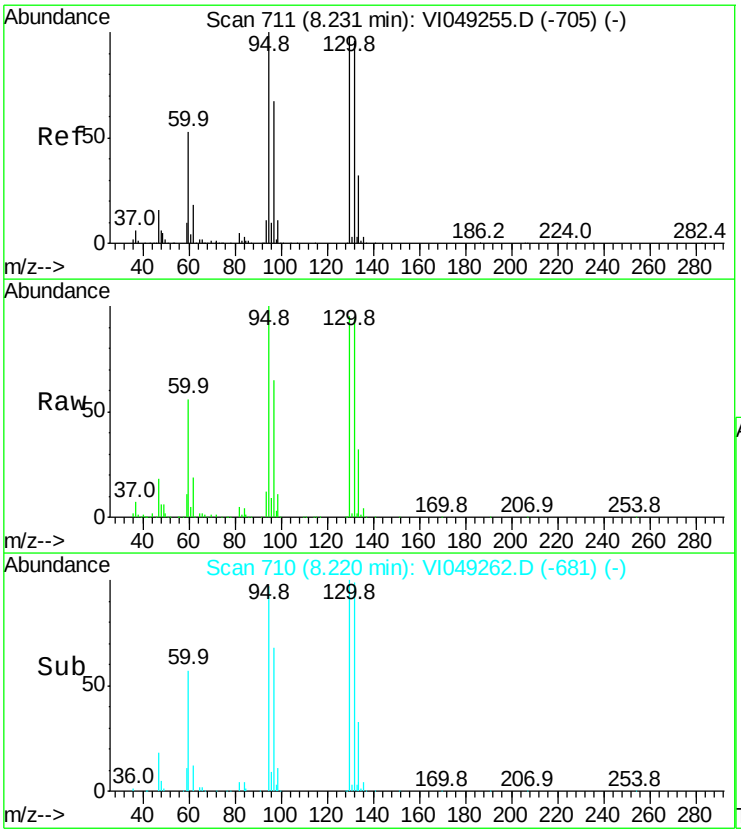


#33
Benzene
Concen: 4.96 ug/L
RT: 7.25 min Scan# 611
Delta R.T. -0.00 min
Lab File: VI049262.D
Acq: 5 May 2016 20:37

Instrument :
MSVOA_I
ClientSampleId :
H4113MS

Tgt Ion: 78 Resp: 1783911

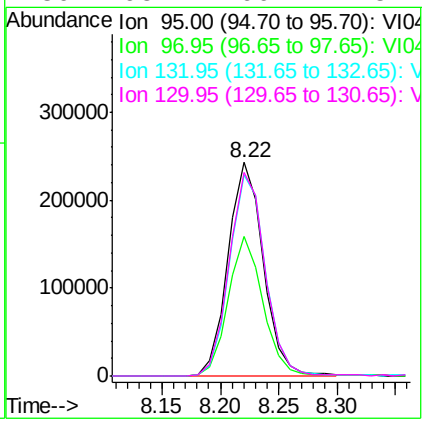


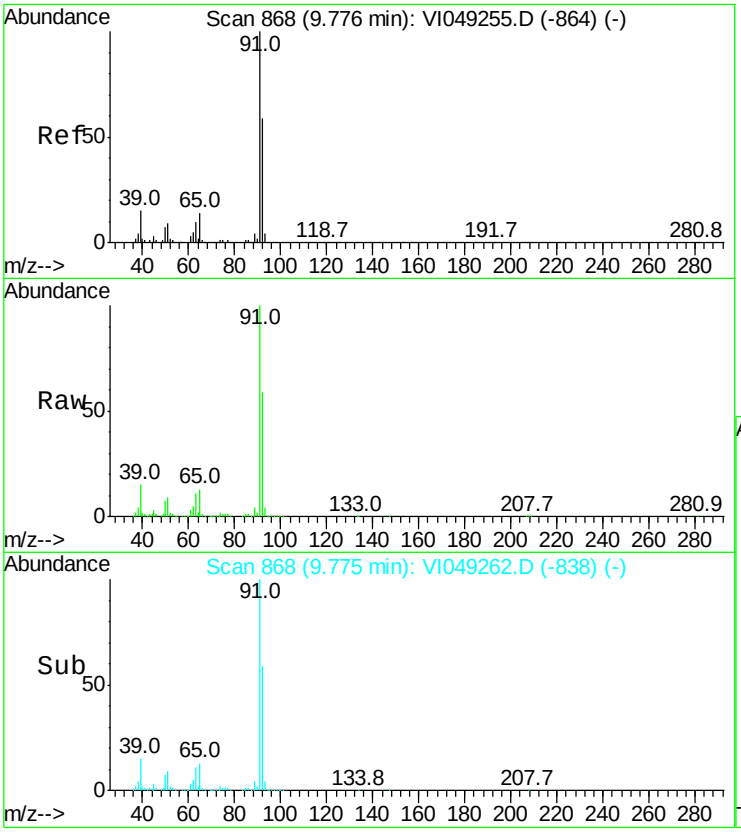


#34
Trichloroethene
Concen: 5.10 ug/L
RT: 8.22 min Scan# 710
Delta R.T. -0.01 min
Lab File: VI049262.D
Acq: 5 May 2016 20:37

Tgt Ion: 95 Resp: 508520

Ion	Ratio	Lower	Upper
95	100		
97	65.1	45.8	85.2
132	93.9	63.9	118.7
130	95.1	66.4	123.2



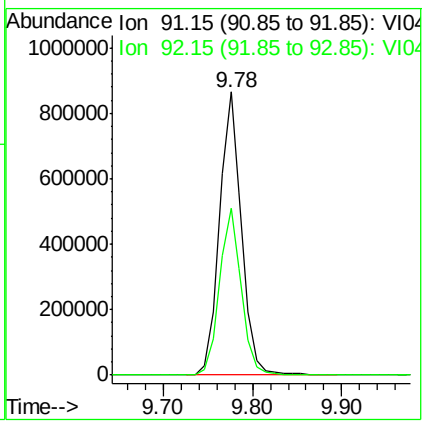


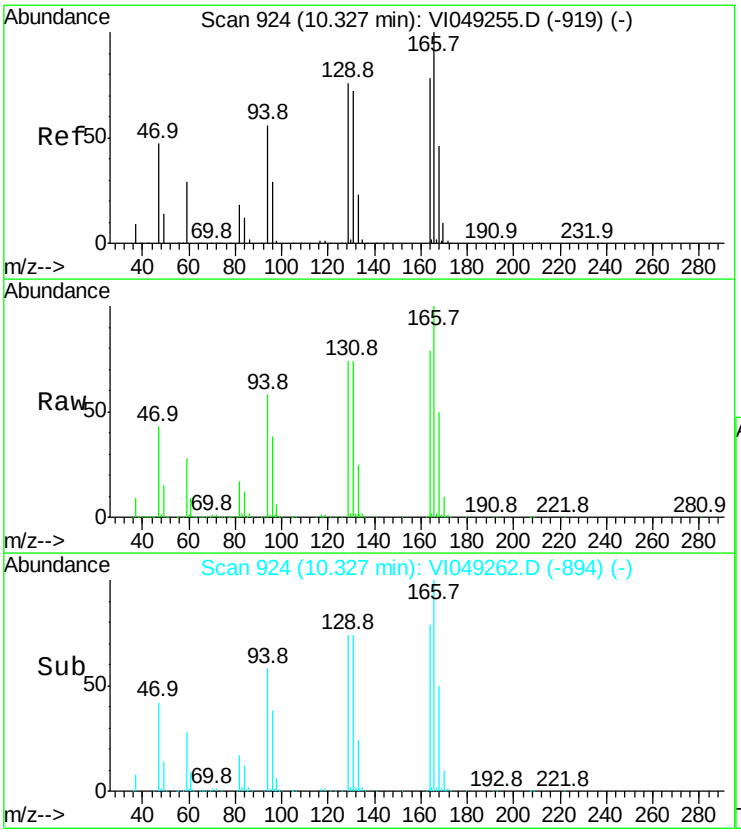
#42
Toluene
Concen: 4.95 ug/L
RT: 9.78 min Scan# 868
Delta R.T. -0.00 min
Lab File: VI049262.D
Acq: 5 May 2016 20:37

Instrument : MSVOA_I
ClientSampleId : H4113MS

Tgt Ion: 91 Resp: 1499041

Ion	Ratio	Lower	Upper
91	100		
92	59.2	41.2	76.4

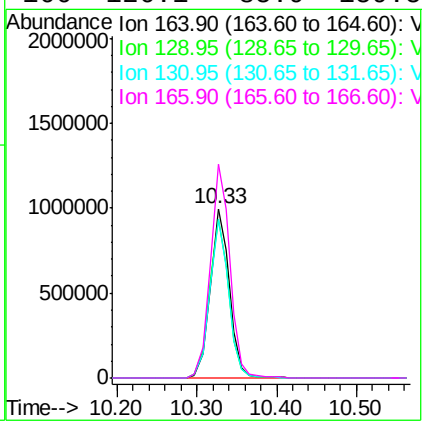


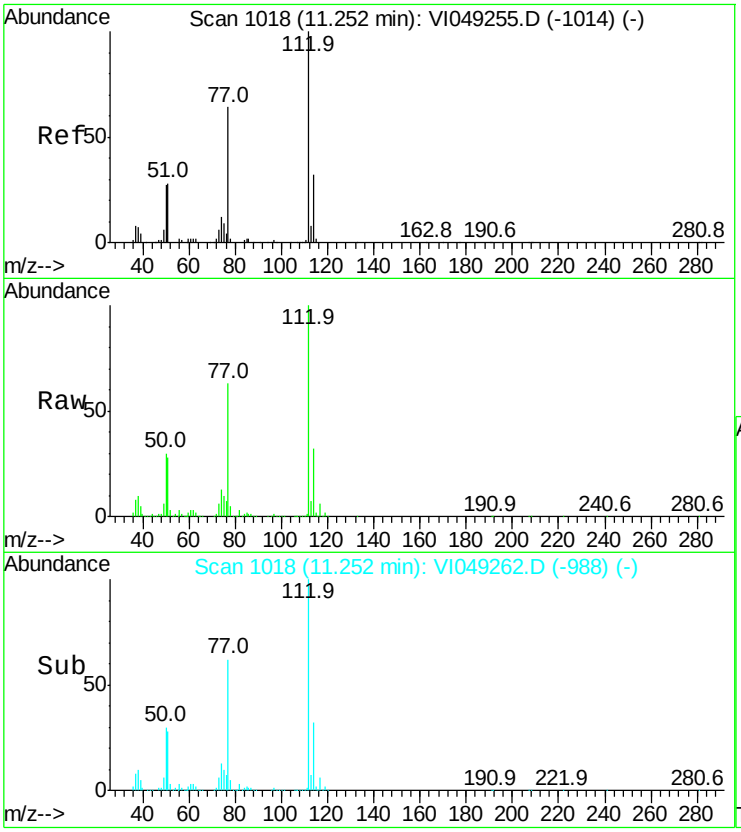


#47
Tetrachloroethene
Concen: 25.69 ug/L
RT: 10.33 min Scan# 924
Delta R.T. -0.00 min
Lab File: VI049262.D
Acq: 5 May 2016 20:37

Tgt Ion:164 Resp: 1682779

Ion	Ratio	Lower	Upper
164	100		
129	93.8	62.1	115.3
131	93.6	60.6	112.6
166	126.1	85.9	159.5



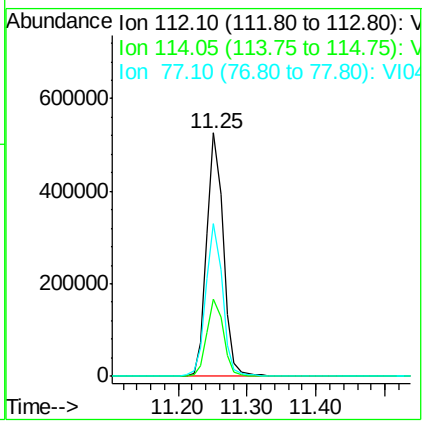


#51
Chlorobenzene
Concen: 4.85 ug/L
RT: 11.25 min Scan# 1018
Delta R.T. -0.00 min
Lab File: VI049262.D
Acq: 5 May 2016 20:37

Instrument :
MSVOA_I
ClientSampleId :
H4113MS

Tgt Ion:112 Resp: 882560

Ion	Ratio	Lower	Upper
112	100		
114	31.9	23.2	43.2
77	62.5	50.3	75.5



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049262.D
Acq On : 5 May 2016 20:37
Operator : FY/SY
Sample : H2874-10MS
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113MS

Quant Time: May 06 05:55:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1230747	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.22	117	839300	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.44	152	311386	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	330758	4.37	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 87.40%			
7) Chloroethane-d5	2.11	69	201775	4.81	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 96.20%			
11) 1,1-Dichloroethene-d2	2.94	63	796662	4.46	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 89.20%			
20) 2-Butanone-d5	5.68	46	926392	56.47	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 112.94%			
24) Chloroform-d	6.39	84	897130	4.65	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.00%			
26) 1,2-Dichloroethane-d4	7.24	65	403691	5.12	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.40%			
32) Benzene-d6	7.18	84	1584381	4.85	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.00%			
36) 1,2-Dichloropropane-d6	8.44	67	448270	4.88	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.60%			
41) Toluene-d8	9.70	98	1109145	4.60	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.00%			
43) trans-1,3-Dichloropropene-	10.02	79	162121	4.48	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 89.60%			
46) 2-Hexanone-d5	10.43	63	602245	52.71	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 105.42%			
57) 1,1,2,2-Tetrachloroethane-	12.46	84	198147	4.74	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 94.80%			
63) 1,2-Dichlorobenzene-d4	13.76	152	246035	4.51	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 90.20%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	2.95	96	423442	4.26	ug/L	95
22) cis-1,2-Dichloroethene	5.78	96	16378	0.15	ug/L	84
25) Chloroform	6.43	83	527829	2.67	ug/L	97
29) 1,1,1-Trichloroethane	6.66	97	82072	0.52	ug/L	94
33) Benzene	7.25	78	1783911	4.96	ug/L	100
34) Trichloroethene	8.22	95	508520	5.10	ug/L	99
42) Toluene	9.78	91	1499041	4.95	ug/L	99
47) Tetrachloroethene	10.33	164	1682779	25.69	ug/L	95
51) Chlorobenzene	11.25	112	882560	4.85	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-11MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049263.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	4.5	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.14	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.7	
71-55-6	1,1,1-Trichloroethane	0.55	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	5.3	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	5.5	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-11MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049263.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.3	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	28	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	5.0	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2874-11MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049263.D
% Solids :
Date Received : 05/05/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/05/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

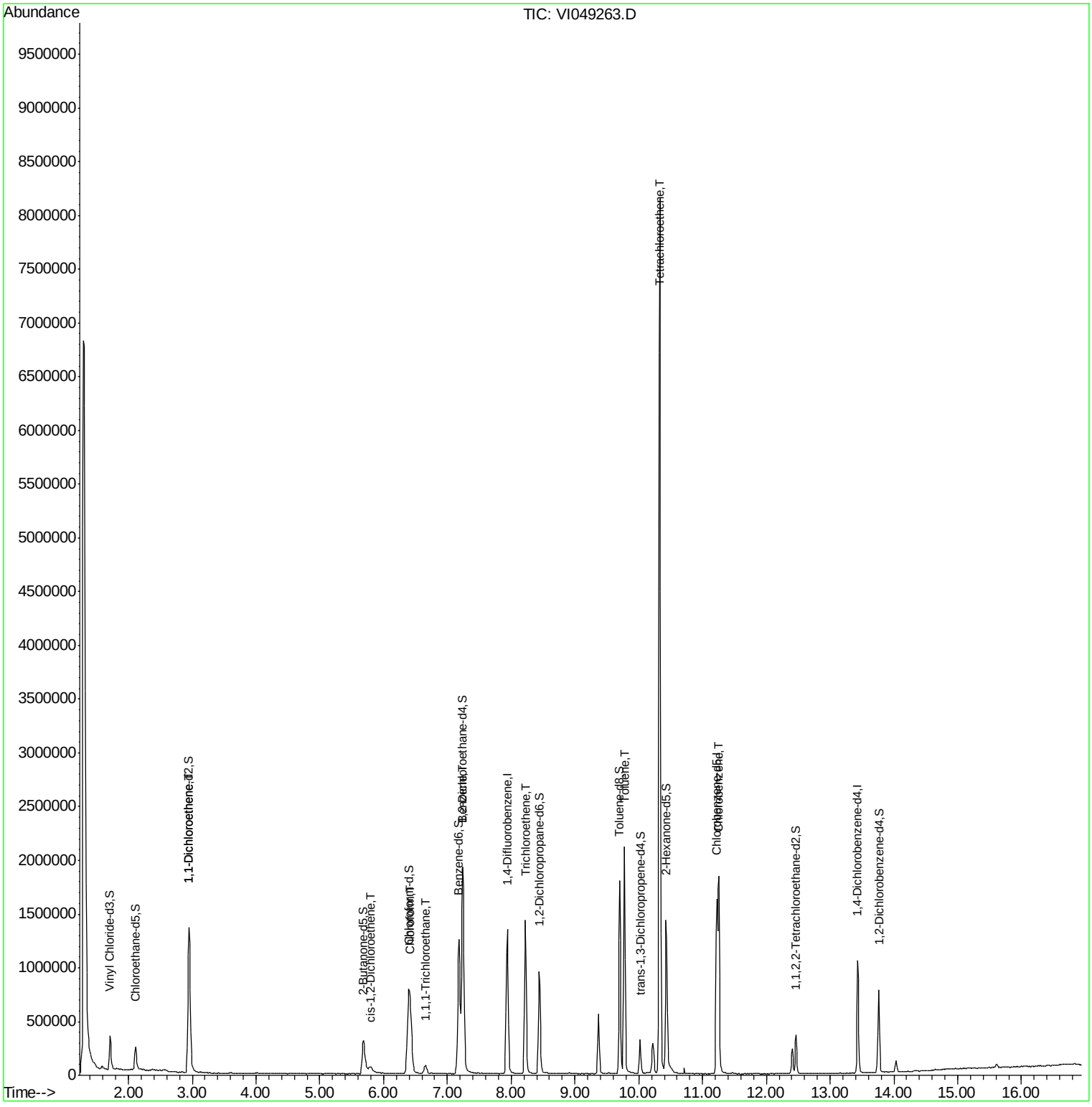
Quantitation Report (QT Reviewed)

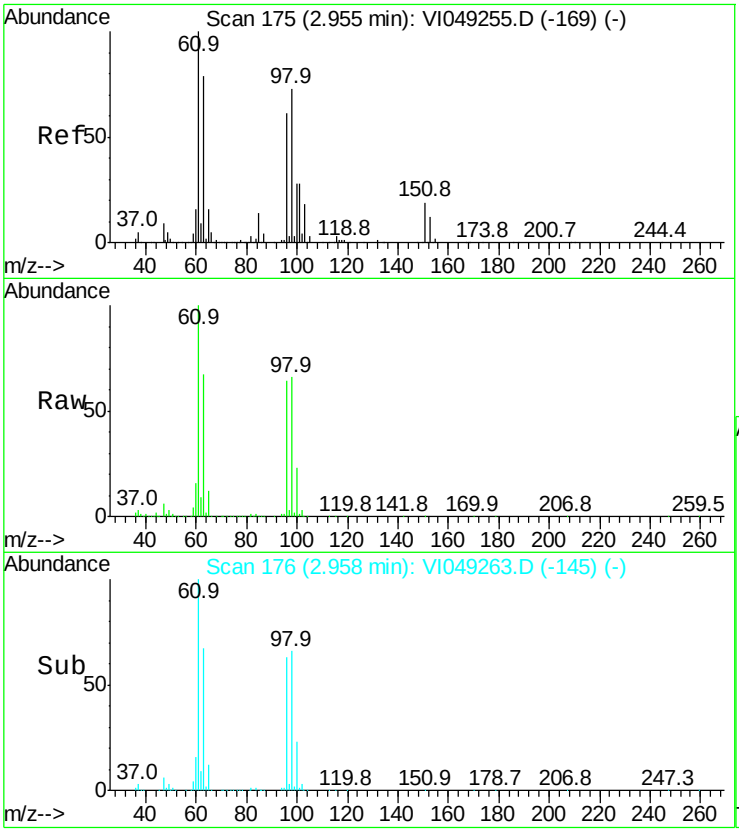
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049263.D
Acq On : 5 May 2016 21:09
Operator : FY/SY
Sample : H2874-11MSD
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: May 06 06:01:42 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
feifei
5/6/2016 11:44:17 AM

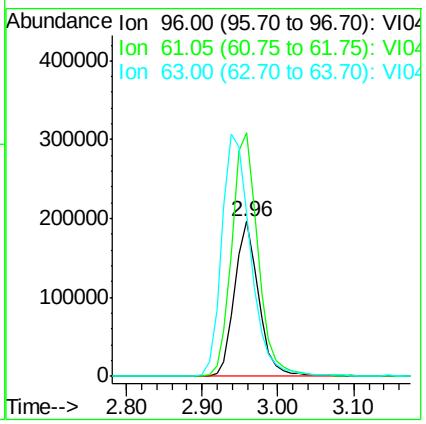




#12
1,1-Dichloroethene
Concen: 4.45 ug/L
RT: 2.96 min Scan# 176
Delta R.T. 0.00 min
Lab File: VI049263.D
Acq: 5 May 2016 21:09

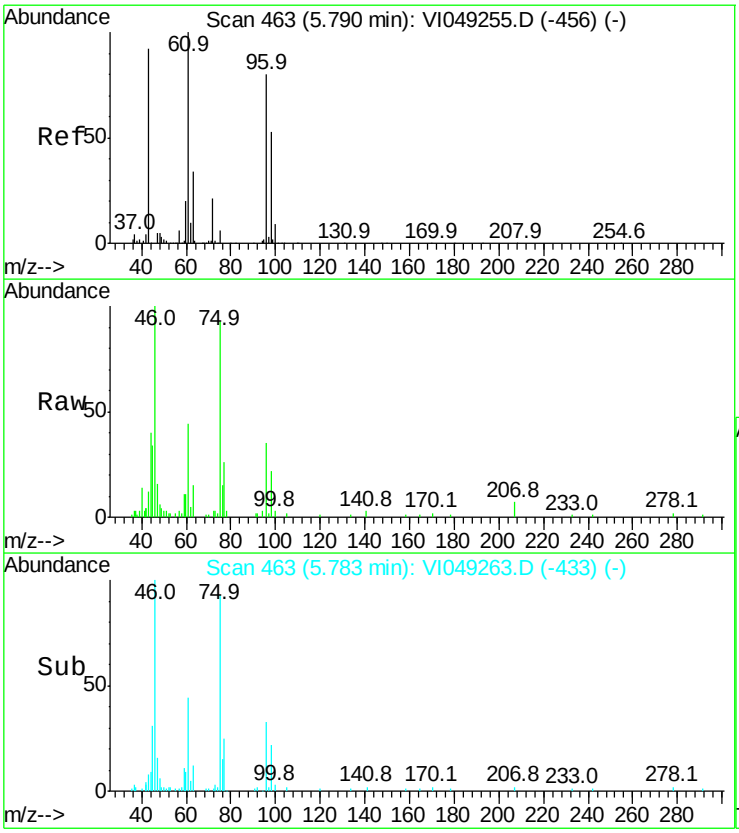
Tgt Ion: 96 Resp: 432170

Ion	Ratio	Lower	Upper
96	100		
61	157.3	104.6	194.2
63	105.1	73.0	135.6



Instrument :
MSVOA_I
ClientSampleId :
H4113MSD

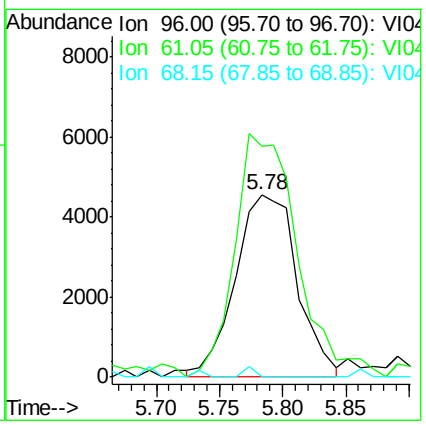
Manual Integrations APPROVED
feifei
5/6/2016 11:44:17 AM

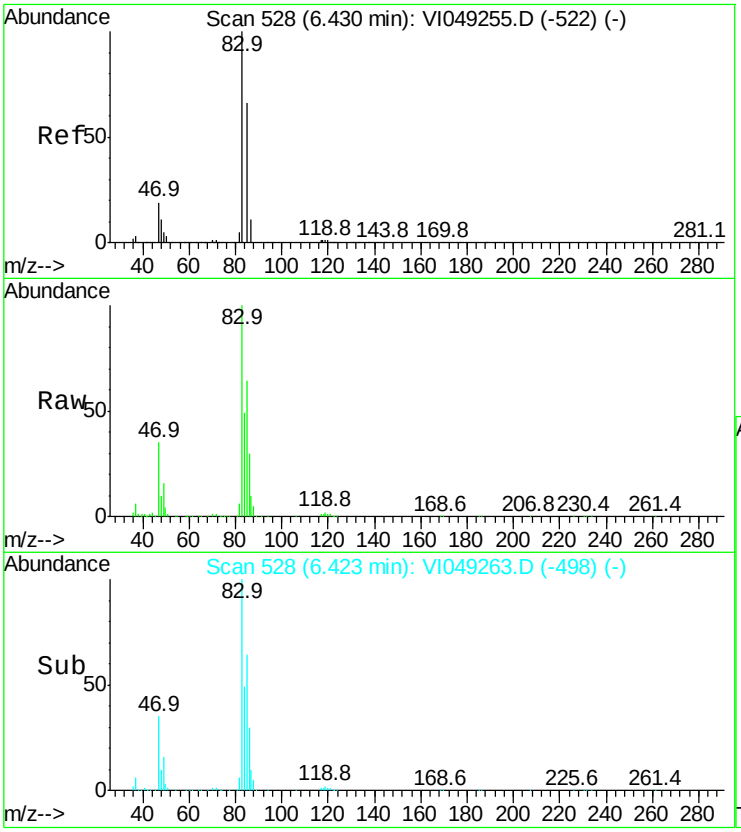


#22
cis-1,2-Dichloroethene
Concen: 0.14 ug/L
RT: 5.78 min Scan# 463
Delta R.T. -0.01 min
Lab File: VI049263.D
Acq: 5 May 2016 21:09

Tgt Ion: 96 Resp: 15458

Ion	Ratio	Lower	Upper
96	100		
61	126.5	82.1	152.5
68	0.0	0.0	0.0

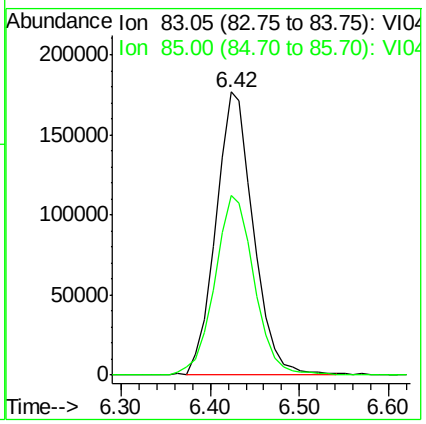




#25
Chloroform
Concen: 2.68 ug/L
RT: 6.42 min Scan# 528
Delta R.T. -0.01 min
Lab File: VI049263.D
Acq: 5 May 2016 21:09

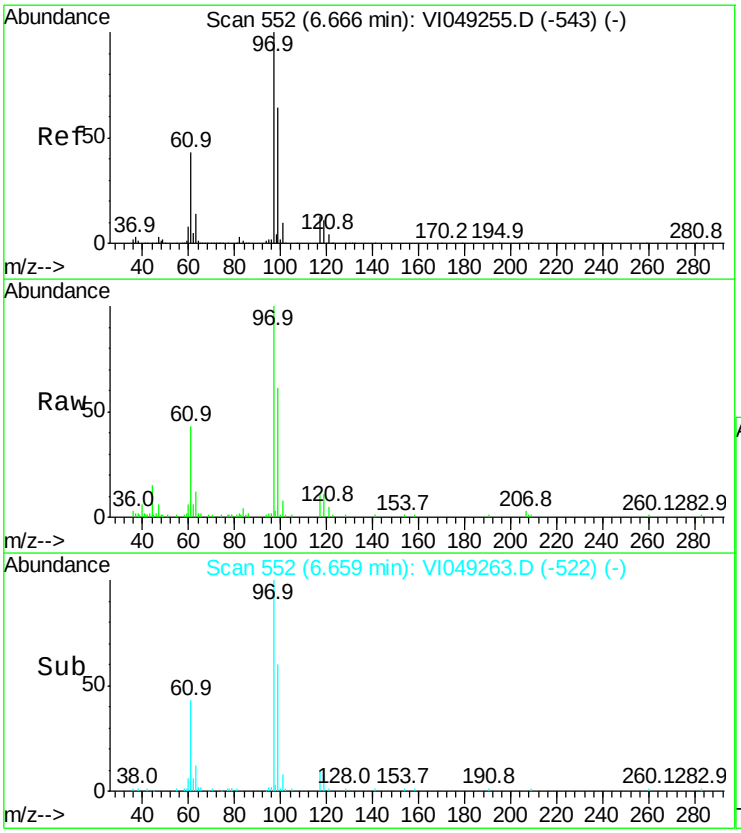
Tgt Ion: 83 Resp: 519101

Ion	Ratio	Lower	Upper
83	100		
85	63.6	47.3	87.8



Instrument :
MSVOA_I
ClientSampleId :
H4113MSD

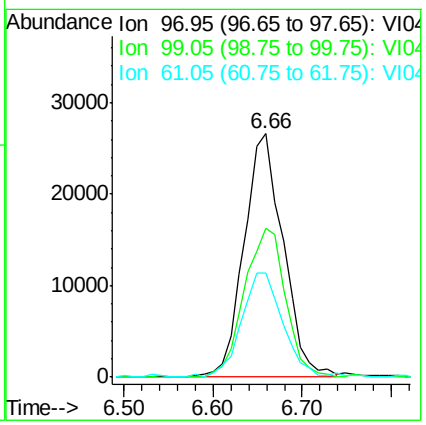
Manual Integrations APPROVED
feifei
5/6/2016 11:44:17 AM

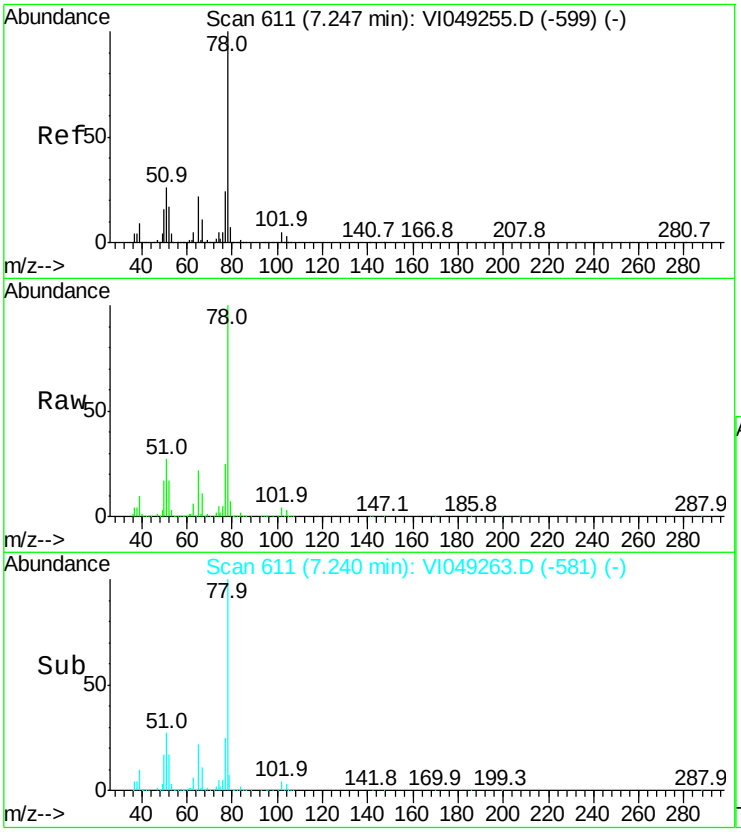


#29
1,1,1-Trichloroethane
Concen: 0.55 ug/L
RT: 6.66 min Scan# 552
Delta R.T. -0.01 min
Lab File: VI049263.D
Acq: 5 May 2016 21:09

Tgt Ion: 97 Resp: 80801

Ion	Ratio	Lower	Upper
97	100		
99	64.0	51.1	76.7
61	44.4	33.3	49.9





#33
Benzene
Concen: 5.30 ug/L
RT: 7.24 min Scan# 611
Delta R.T. -0.01 min
Lab File: VI049263.D
Acq: 5 May 2016 21:09

Tgt Ion: 78 Resp: 1765885

Instrument :
MSVOA_I
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
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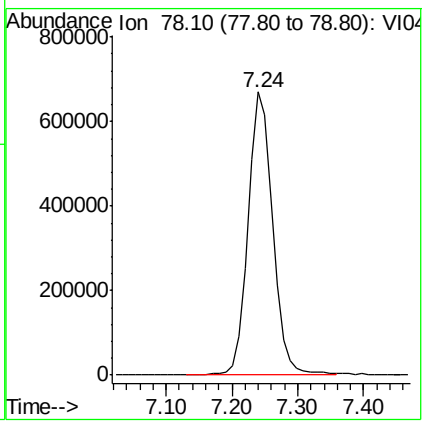
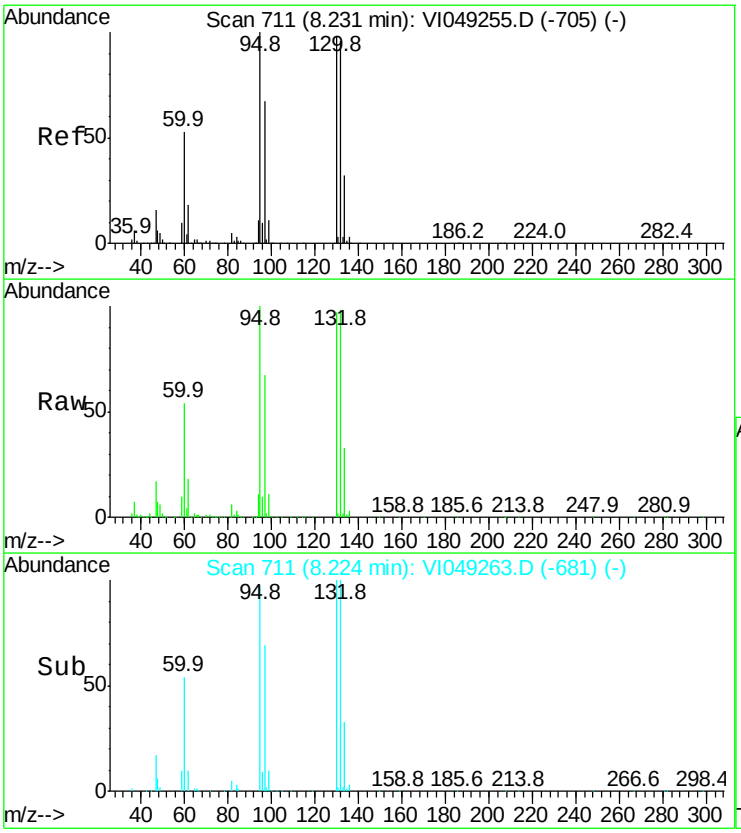
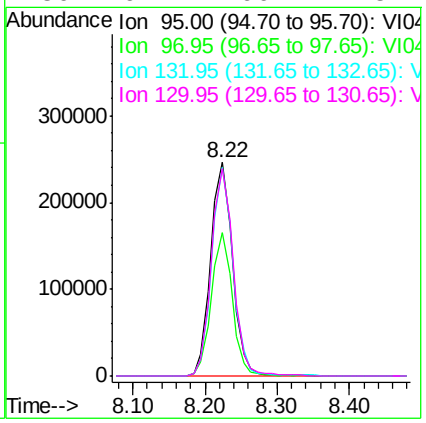


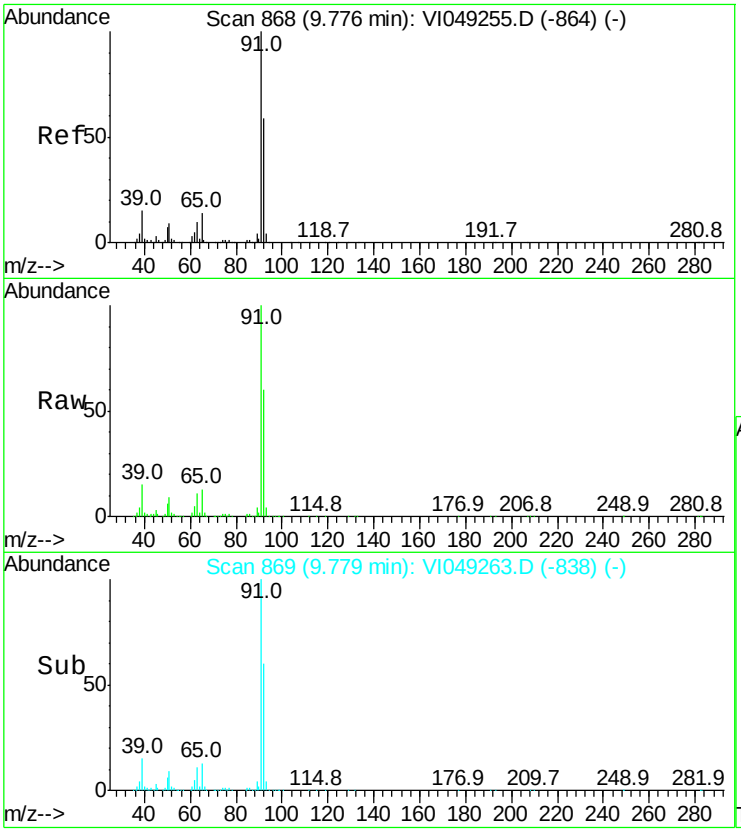


#34
Trichloroethene
Concen: 5.51 ug/L
RT: 8.22 min Scan# 711
Delta R.T. -0.01 min
Lab File: VI049263.D
Acq: 5 May 2016 21:09

Tgt Ion: 95 Resp: 509589

Ion	Ratio	Lower	Upper
95	100		
97	67.0	45.8	85.2
132	97.7	63.9	118.7
130	97.2	66.4	123.2

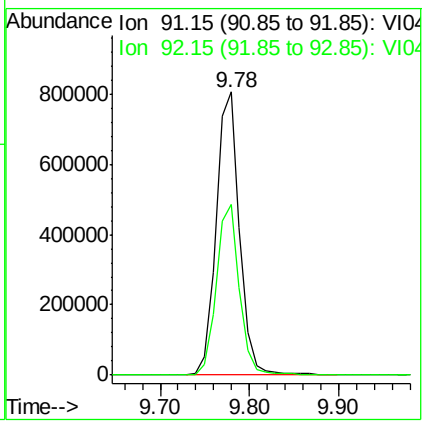




#42
Toluene
Concen: 5.26 ug/L
RT: 9.78 min Scan# 869
Delta R.T. 0.00 min
Lab File: VI049263.D
Acq: 5 May 2016 21:09

Tgt Ion: 91 Resp: 1477969

Ion	Ratio	Lower	Upper
91	100		
92	60.2	41.2	76.4



Instrument :
MSVOA_I
ClientSampleId :
H4113MSD

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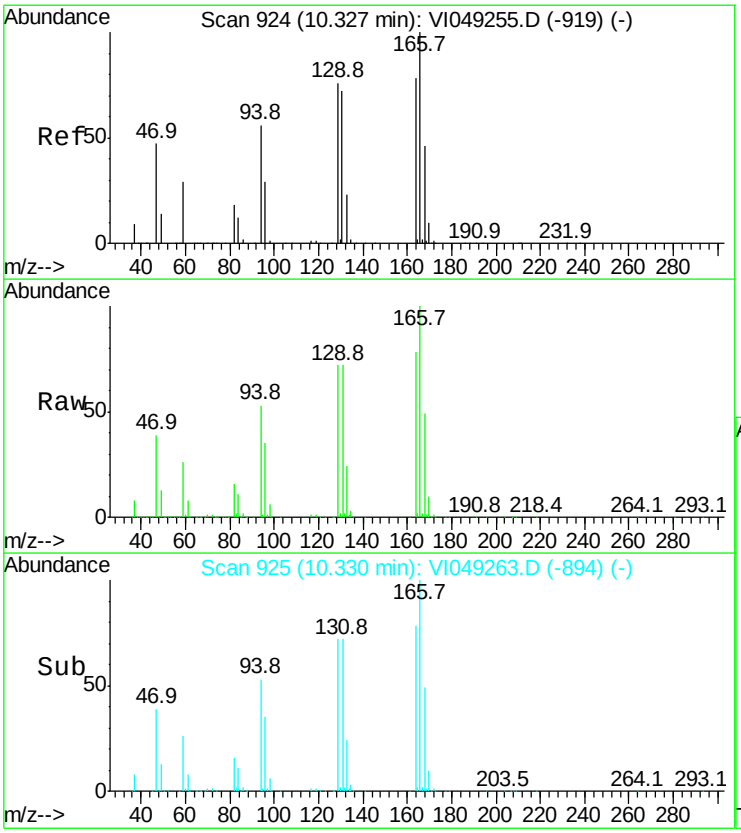
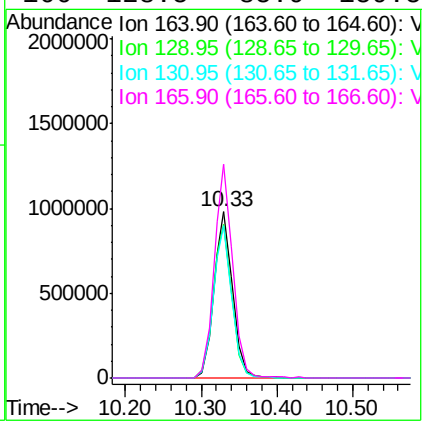
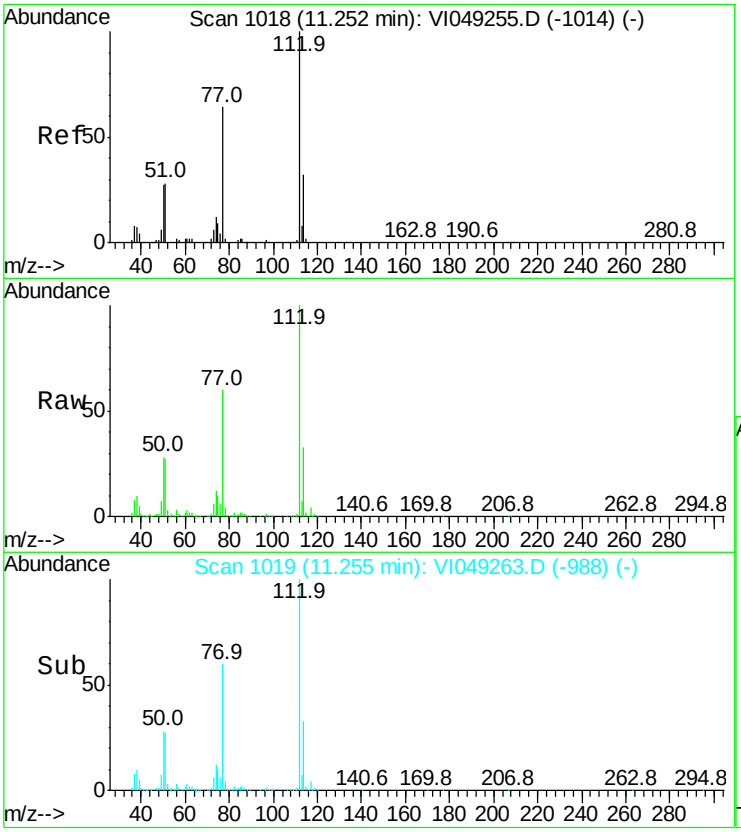


#47
Tetrachloroethene
Concen: 27.71 ug/L
RT: 10.33 min Scan# 925
Delta R.T. 0.00 min
Lab File: VI049263.D
Acq: 5 May 2016 21:09

Tgt Ion:164 Resp: 1682364

Ion	Ratio	Lower	Upper
164	100		
129	92.7	62.1	115.3
131	92.0	60.6	112.6
166	128.5	85.9	159.5

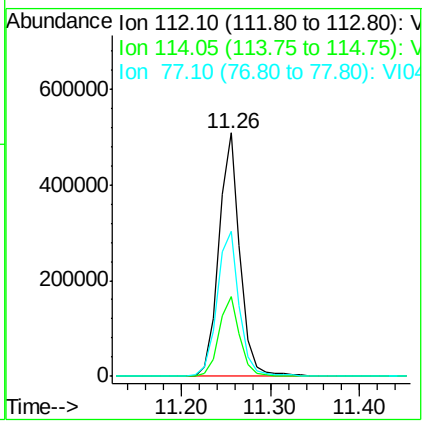




#51
Chlorobenzene
Concen: 5.00 ug/L
RT: 11.26 min Scan# 1019
Delta R.T. 0.00 min
Lab File: VI049263.D
Acq: 5 May 2016 21:09

Tgt Ion:112 Resp: 843311

Ion	Ratio	Lower	Upper
112	100		
114	32.7	23.2	43.2
77	59.8	50.3	75.5



Instrument :
MSVOA_I
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
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5/6/2016 11:44:17 AM

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049263.D
Acq On : 5 May 2016 21:09
Operator : FY/SY
Sample : H2874-11MSD
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4113MSD

Manual Integrations APPROVED
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5/6/2016 11:44:17 AM

Quant Time: May 06 06:01:42 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1203572	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	778036	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	245366	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	341453	4.61	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 92.20%			
7) Chloroethane-d5	2.11	69	221035m	5.39	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 107.80%			
11) 1,1-Dichloroethene-d2	2.94	63	802471	4.60	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 92.00%			
20) 2-Butanone-d5	5.68	46	731196	45.58	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 91.16%			
24) Chloroform-d	6.39	84	892274	4.73	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.60%			
26) 1,2-Dichloroethane-d4	7.24	65	387736	5.03	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.60%			
32) Benzene-d6	7.18	84	1566446	5.17	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.40%			
36) 1,2-Dichloropropane-d6	8.44	67	436268	5.12	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 102.40%			
41) Toluene-d8	9.70	98	1086346	4.86	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 97.20%			
43) trans-1,3-Dichloropropene-	10.03	79	154930	4.61	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.20%			
46) 2-Hexanone-d5	10.43	63	511064	48.25	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 96.50%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	165695	4.28	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 85.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	183359	4.26	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 85.20%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	2.96	96	432170	4.45	ug/L	96
22) cis-1,2-Dichloroethene	5.78	96	15458	0.14	ug/L	92
25) Chloroform	6.42	83	519101	2.68	ug/L	95
29) 1,1,1-Trichloroethane	6.66	97	80801	0.55	ug/L	98
33) Benzene	7.24	78	1765885	5.30	ug/L	100
34) Trichloroethene	8.22	95	509589	5.51	ug/L	96
42) Toluene	9.78	91	1477969	5.26	ug/L	98
47) Tetrachloroethene	10.33	164	1682364	27.71	ug/L	95
51) Chlorobenzene	11.26	112	843311	5.00	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049263.D
Acq On : 5 May 2016 21:09
Operator : FY/SY
Sample : H2874-11MSD
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: May 06 06:01:42 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
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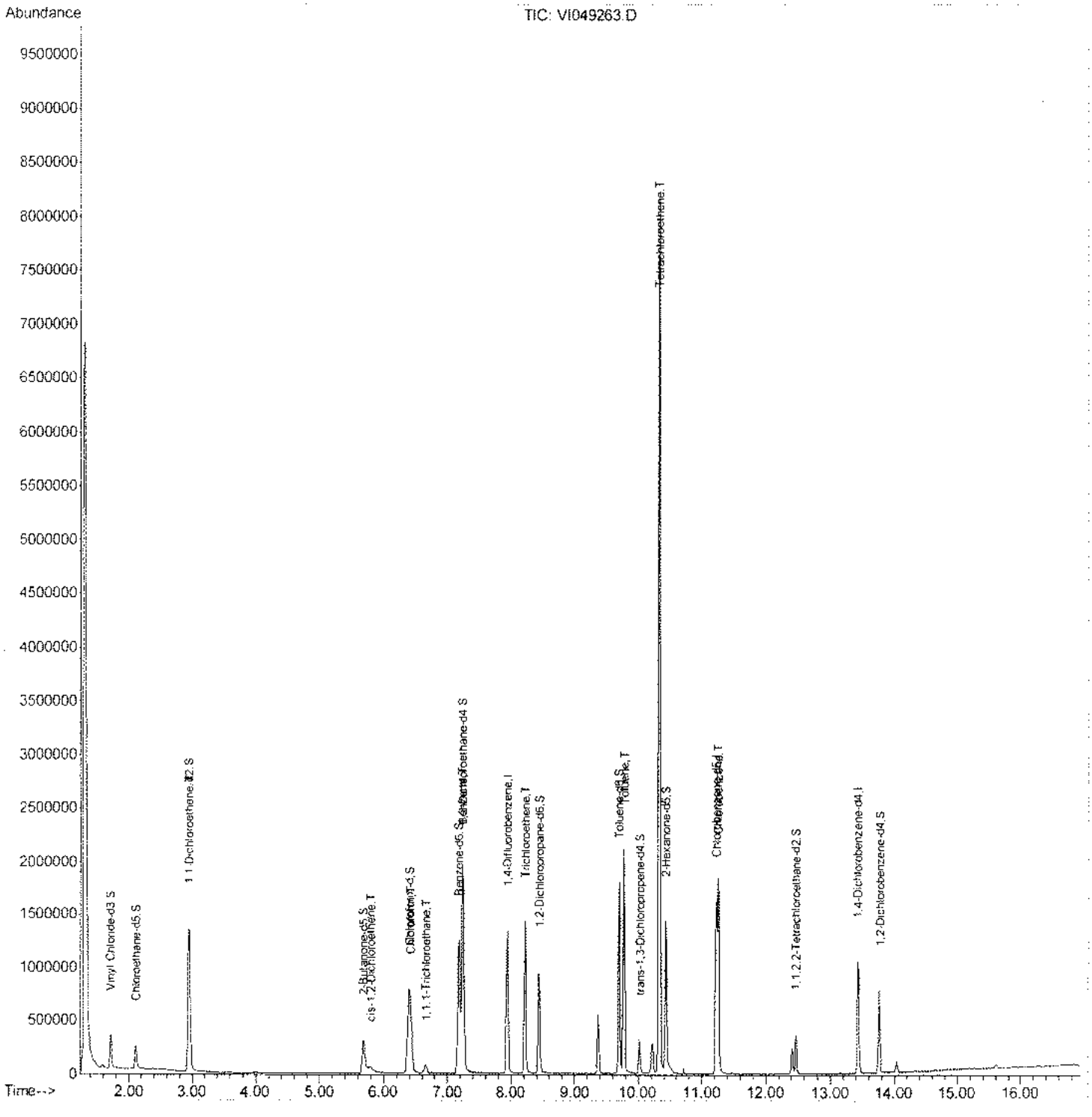

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049263.D
Acq On : 5 May 2016 21:09
Operator : FY/SY
Sample : H2874-11MSD
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: May 06 05:22:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
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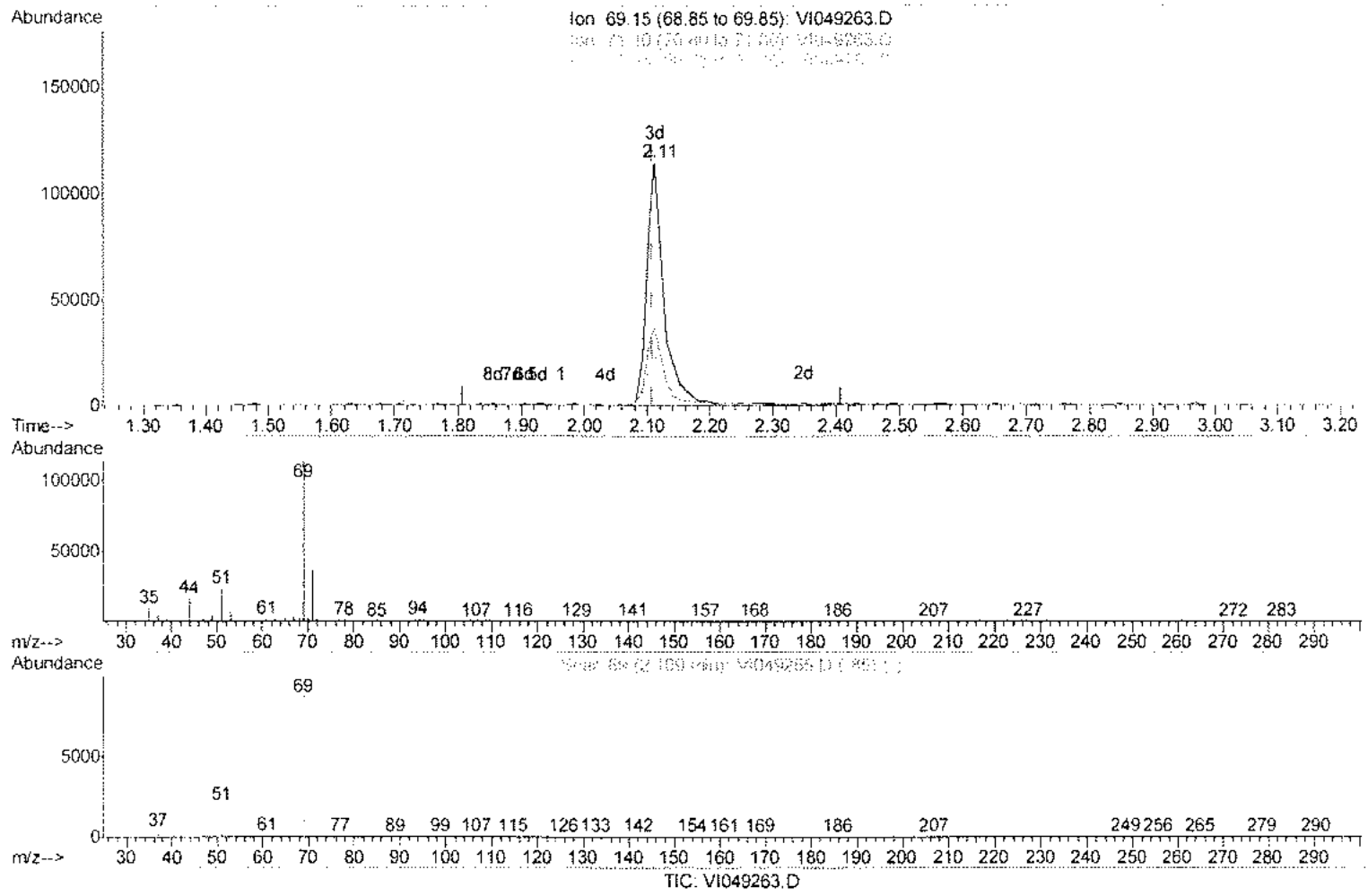
5/6/2016 11:44:17 AM



TIC: VI049263.D

(7) Chloroethane-d5 (S)

2.112min (+0.003) 5.39ug/L m

response 221035

M.D 05/09/16

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.09#
51.05	32.70	0.09#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049263.D
Acq On : 5 May 2016 21:09
Operator : FY/SY
Sample : H2874-11MSD
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: May 06 05:22:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4113MSD

Manual Integrations APPROVED
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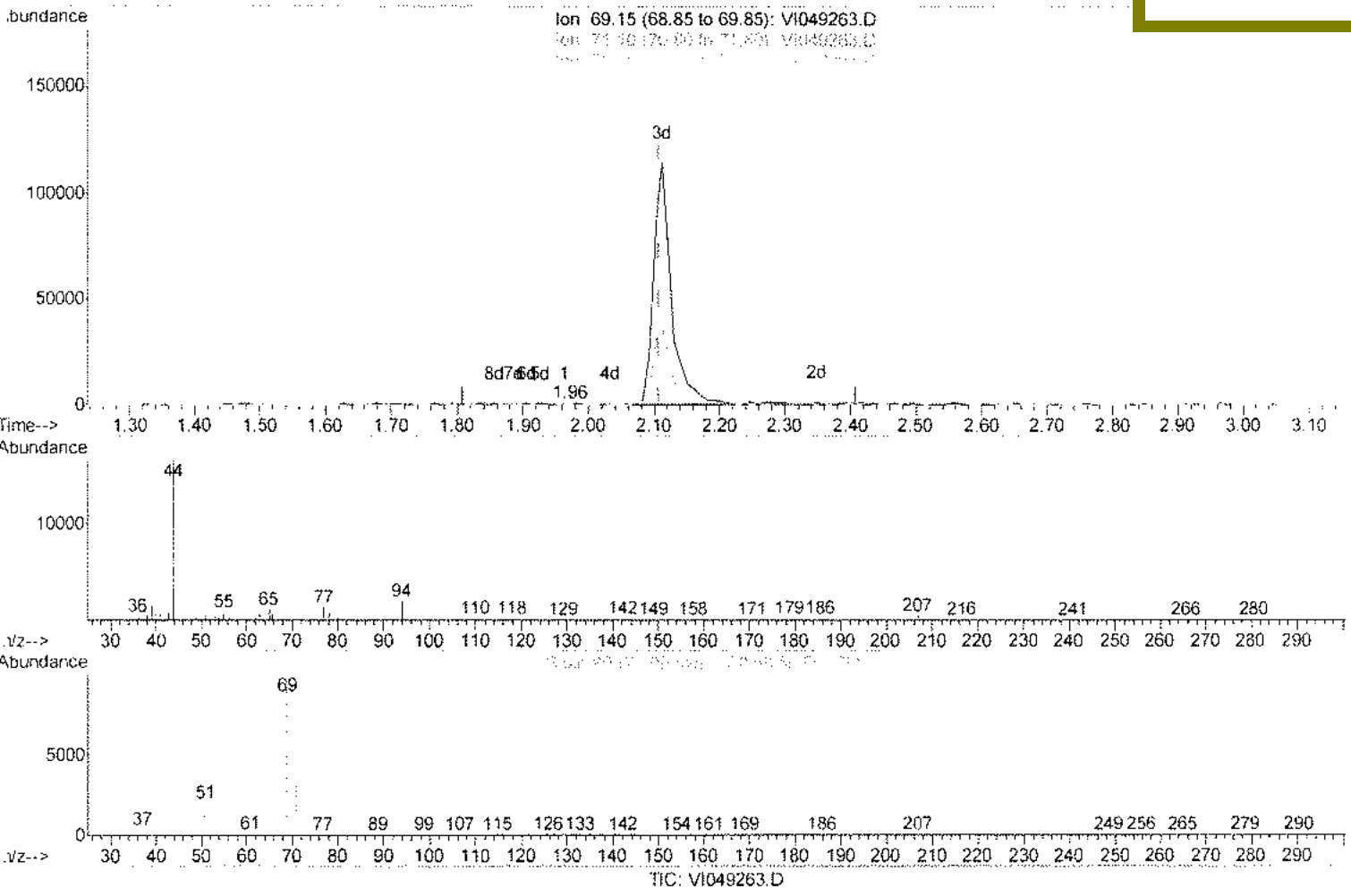
5/6/2016 11:44:17 AM



(7) Chloroethane-d5 (S)

1.964min (-0.145) 0.02ug/L

response 678

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	29.94
51.05	32.70	30.24
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050516\
Data File : VI049263.D
Acq On : 5 May 2016 21:09
Operator : FY/SY
Sample : H2874-11MSD
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: May 06 06:01:42 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 06 05:16:54 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4113MSD

Manual Integrations APPROVED
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5/6/2016 11:44:17 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.94	114	1203572	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.23	117	778036	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	245366	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	341453	4.61	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 92.20%			
7) Chloroethane-d5	2.11	69	221035m	5.39	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 107.80%			
11) 1,1-Dichloroethene-d2	2.94	63	802471	4.60	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 92.00%			
20) 2-Butanone-d5	5.68	46	731196	45.58	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 91.16%			
24) Chloroform-d	6.39	84	892274	4.73	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.60%			
26) 1,2-Dichloroethane-d4	7.24	65	387736	5.03	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.60%			
32) Benzene-d6	7.18	84	1566446	5.17	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.40%			
36) 1,2-Dichloropropane-d6	8.44	67	436268	5.12	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 102.40%			
41) Toluene-d8	9.70	98	1086346	4.86	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 97.20%			
43) trans-1,3-Dichloropropene-	10.03	79	154930	4.61	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.20%			
46) 2-Hexanone-d5	10.43	63	511064	48.25	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 96.50%			
57) 1,1,2,2-Tetrachloroethane-	12.47	84	165695	4.28	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 85.60%			
63) 1,2-Dichlorobenzene-d4	13.76	152	183359	4.26	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 85.20%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	2.96	96	432170	4.45	ug/L	96
22) cis-1,2-Dichloroethene	5.78	96	15458	0.14	ug/L	92
25) Chloroform	6.42	83	519101	2.68	ug/L	95
29) 1,1,1-Trichloroethane	6.66	97	80801	0.55	ug/L	98
33) Benzene	7.24	78	1765885	5.30	ug/L	100
34) Trichloroethene	8.22	95	509589	5.51	ug/L	96
42) Toluene	9.78	91	1477969	5.26	ug/L	98
47) Tetrachloroethene	10.33	164	1682364	27.71	ug/L	95
51) Chlorobenzene	11.26	112	843311	5.00	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

M.D 05/09/16

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract: EPW14030

Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4010

Analytical Method : SVOA Level : _____

Matrix : Water

EPA Sample No .	DMC1 (DXE)	DMC2 (PHL)	DMC3 (BCE)	DMC4 (2CP)	DMC5 (4MP)	DMC6 (NBZ)	DMC7 (2NP)	DMC8 (DCP)	DMC9 (4CA)
H4013	14 *	13	71	56	33	78	80	66	5
H4097	15 *	14	76	60	36	83	85	70	5
H4111	15 *	17	84	66	40	87	89	75	7
H4113	16 *	16	77	63	39	85	88	75	4
H4113MS	14 *	15	76	61	36	82	84	71	6
H4113MSD	14 *	15	75	60	36	82	83	70	7
SBLK03	81	80	86	86	83	91	94	82	76

	QC LIMITS
DMC1 (DXE) = 1,4-Dioxane-d8	40 - 110
DMC2 (PHL) = Phenol-d5	10 - 130
DMC3 (BCE) = Bis(2-Chloroethyl)ether-d8	25 - 120
DMC4 (2CP) = 2-Chlorophenol-d4	20 - 130
DMC5 (4MP) = 4-Methylphenol-d8	25 - 125
DMC6 (NBZ) = Nitrobenzene-d5	20 - 125
DMC7 (2NP) = 2-Nitrophenol-d4	20 - 130
DMC8 (DCP) = 2,4-Dichlorophenol-d3	20 - 120
DMC9 (4CA) = 4-Chloroaniline-d4	1 - 146

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4010
Analytical Method : SVOA Level : _____
Matrix : Water

EPA Sample No .	DMC10 (DMP)	DMC11 ACY	DMC12 (4NP)	DMC13 (FLR)	DMC14 (NMP)	DMC15 (ANC)	DMC16 (PYR)	DMC17 (BAP)	Tot Out
H4013	77	76	12	75	75	78	73	79	1
H4097	79	80	12	78	77	82	76	81	1
H4111	83	83	14	83	80	85	74	83	1
H4113	87	85	16	85	86	88	83	88	1
H4113MS	81	80	13	80	77	82	76	83	1
H4113MSD	79	79	13	79	75	80	75	81	1
SBLK03	88	84	83	83	88	87	83	91	0

	QC LIMITS
DMC10 (DMP) = Dimethylphthalate-d6	25 - 130
DMC11 (ACY) = Acenaphthylene-d8	10 - 130
DMC12 (4NP) = 4-Nitrophenol-d4	10 - 150
DMC13 (FLR) = Fluorene-d10	25 - 125
DMC14 (NMP) = 4,6-Dinitro-2-methylphenol-d2	10 - 130
DMC15 (ANC) = Anthracene-d10	25 - 130
DMC16 (PYR) = Pyrene-d10	15 - 130
DMC17 (BAP) = Benzo(a)pyrene-d12	20 - 130

FORM 3A-OR
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No. : 46114 MA No .: SDG No. : H4010

Analytical Method : SVOA Level :

Matrix Water

EPA Sample No.(Matrix Spike/Metrix Spike Duplicate): H4113

Instrument ID : BNA_M GC Column ZB-GR ID : 0.25 (mm)

Concentration Units (ug/L,mg/L ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %R #	QC Limits %R
Phenol	40	0	6.2	16	12 - 110
2-Chlorophenol	40	0	24	60	27 - 123
N-Nitroso-di-n-propylamine	40	0	34	85	41 - 116
4-Chloro-3-methylphenol	40	0	27	68	23 - 97
Acenaphthene	40	0	31	78	46 - 118
4-Nitrophenol	40	0	5.8	15	10 - 80
2,4-Dinitrotoluene	40	0	34	85	24 - 96
Pentachlorophenol	40	0	30	75	9 - 103
Pyrene	40	0	30	75	26 - 127

ANALYTE	SPIKE AADDED	MSD CONCENTRATION	MSD %R #	RPD	QC Limits	
					RPD	%R
Phenol	40	6.3	16	0	42	12 - 110
2-Chlorophenol	40	24	60	0	40	27 - 123
N-Nitroso-di-n-propylamine	40	33	83	2	38	41 - 116
4-Chloro-3-methylphenol	40	26	65	5	42	23 - 97
Acenaphthene	40	31	78	0	31	46 - 118
4-Nitrophenol	40	5.7	14	7	50	10 - 80
2,4-Dinitrotoluene	40	33	83	2	38	24 - 96
Pentachlorophenol	40	29	73	3	50	9 - 103
Pyrene	40	30	75	0	31	26 - 127

EPA SAMPLE NO.

SBLK03

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : _____ sdg no.: H4010
Analytical Method: SVOA
Level : _____
Matrix : Water
Lab Sample ID: PB90403BL
Instrument ID: BNA_M
Lab File ID : BM005428.D
Extraction Type : CONH
Date Extracted : 05/08/2016
GC Column ( ) : ZB-GR ID : 0.25 (mm)
Date Analyzed : 05/13/2016
GC Column ( ) : _____ ID : _____ (mm)
Time Analyzed : 12:23
Heated Purge: (Y/N) _____ Cleanup(Y/N): N
Cleanup Types : _____

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
H4111	H2874-07	BM005429.D	05/13/2016 12:59
H4113	H2874-09	BM005430.D	05/13/2016 13:36
H4113MS	H2874-10MS	BM005431.D	05/13/2016 14:12
H4113MSD	H2874-11MSD	BM005432.D	05/13/2016 14:49
H4013	H2874-17	BM005433.D	05/13/2016 15:25
H4097	H2874-24	BM005434.D	05/13/2016 16:02

FORM 5-OR
GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.
DFTPP64

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Lab File ID : BM005230.D
Instrument ID: BNA_M
BFB / DFTPP : DFTPP
GC Column : ZB-GR ID : 0.25 (mm)
Injection Date : 05/05/2016
Injection Time : 10:23

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	31
68	Less than 2.0% of mass 69	0.6(1.8) 1
69	Present	32.4
70	Less than 2.0% of mass 69	0.0(0.0) 1
127	10.0 - 80.0% of mass 198	43.1
197	Less than 2.0% of mass 198	0.7
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	25.7
365	Greater than 1% of mass 198	3.2
441	Present, but less than mass 443	12.6
442	Greater than 50.0% of mass 198	81.3
443	15.0 - 24.0% of mass 442	15.9(19.5) 2

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD00540	SSTD00540	BM005231.D	05/05/2016	11:09
SSTD01041	SSTD01041	BM005232.D	05/05/2016	11:45
SSTD02042	SSTD02042	BM005233.D	05/05/2016	12:21
SSTD04043	SSTD04043	BM005234.D	05/05/2016	12:57
SSTD08044	SSTD08044	BM005235.D	05/05/2016	13:33
SSTD16045	SSTD16045	BM005236.D	05/05/2016	15:53

FORM 5-OR
GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.
DFTPP38

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code: CHM Case No.: 46114 MA No. : SDG No.: H4010
Analytical Method : SVOA Lab File ID : BM005426.D
Instrument ID: BNA_M BFB / DFTPP : DFTPP
GC Column : ZB-GR ID : 0.25 (mm)
Injection Date : 05/13/2016 Injection Time : 11:10

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	27
68	Less than 2.0% of mass 69	0.6(2) 1
69	Present	29.9
70	Less than 2.0% of mass 69	0.2(0.6) 1
127	10.0 - 80.0% of mass 198	41.5
197	Less than 2.0% of mass 198	0.9
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	28.4
365	Greater than 1% of mass 198	3.8
441	Present, but less than mass 443	15.3
442	Greater than 50.0% of mass 198	98.6
443	15.0 - 24.0% of mass 442	19(19.3) 2

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD02066	SSTDCCC020	BM005427.D	05/13/2016	11:46
SBLK03	PB90403BL	BM005428.D	05/13/2016	12:23
H4111	H2874-07	BM005429.D	05/13/2016	12:59
H4113	H2874-09	BM005430.D	05/13/2016	13:36
H4113MS	H2874-10MS	BM005431.D	05/13/2016	14:12
H4113MSD	H2874-11MSD	BM005432.D	05/13/2016	14:49
H4013	H2874-17	BM005433.D	05/13/2016	15:25
H4097	H2874-24	BM005434.D	05/13/2016	16:02
SSTD02034	SSTDCCC020	BM005435.D	05/13/2016	17:05

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010
Analytical Method: SVOA Level :
EPA Sample No. : SSTD02066 Lab File ID (Standard) : BM005427.D
Instrument ID : BNA_M Init.Calib.Date(s): 05/05/2016
GC Column : ZB-GR ID: 0.25 (mm) Date Analyzed : 05/13/2016
Heated Purge: Time Analyzed : 11:46

	IS1 (DCB) AREA	RT	IS2 (NPT) AREA	RT	IS3 (ANT) AREA	RT
12 HOUR STD	53315	7.75	252436	10.53	164238	14.39
UPPER LIMIT	106630	8.25	504872	11.03	328476	14.89
LOWER LIMIT	26657.5	7.25	126218	10.03	82119	13.89
EPA SAMPLE NO.						
H4111	62059	7.75	307149	10.53	206956	14.39
H4113	82842	7.75	389680	10.53	250486	14.39
H4113MS	64791	7.75	309970	10.53	204750	14.39
H4113MSD	69588	7.75	328113	10.53	211575	14.39
H4013	93043	7.75	435032	10.53	279703	14.39
H4097	83245	7.75	390856	10.53	254183	14.39
SBLK03	87331	7.75	422814	10.53	276612	14.39

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

FORM 8B-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010
Analytical Method: SVOA Level :
EPA Sample No. : SSTD02066 Lab File ID (Standard) : BM005427.D
Instrument ID : BNA_M Init.Calib.Date(s): 05/05/2016
GC Column : ZB-GR ID: 0.25 (mm) Date Analyzed : 05/13/2016
Heated Purge: Time Analyzed : 11:46

	IS4 (PHN) AREA	RT	IS5 (CRY) AREA	RT	IS6 (PRY) AREA	RT
12 HOUR STD	396308	17.14	463039	21.34	411120	23.61
UPPER LIMIT	792616	17.6	926078	21.84	822240	24.11
LOWER LIMIT	198154	16.6	231520	20.84	205560	23.11
EPA SAMPLE NO.						
H4111	512122	17.14	675747	21.34	655179	23.61
H4113	608820	17.14	700167	21.34	579671	23.61
H4113MS	508994	17.14	615991	21.34	524727	23.60
H4113MSD	519223	17.14	622010	21.34	524407	23.60
H4013	671859	17.14	803418	21.34	700162	23.61
H4097	612067	17.14	741270	21.34	681598	23.61
SBLK03	669307	17.14	763502	21.34	592403	23.61

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-17
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005433.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-17
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005433.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-17
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005433.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4013

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-17
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005433.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/13/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : 6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

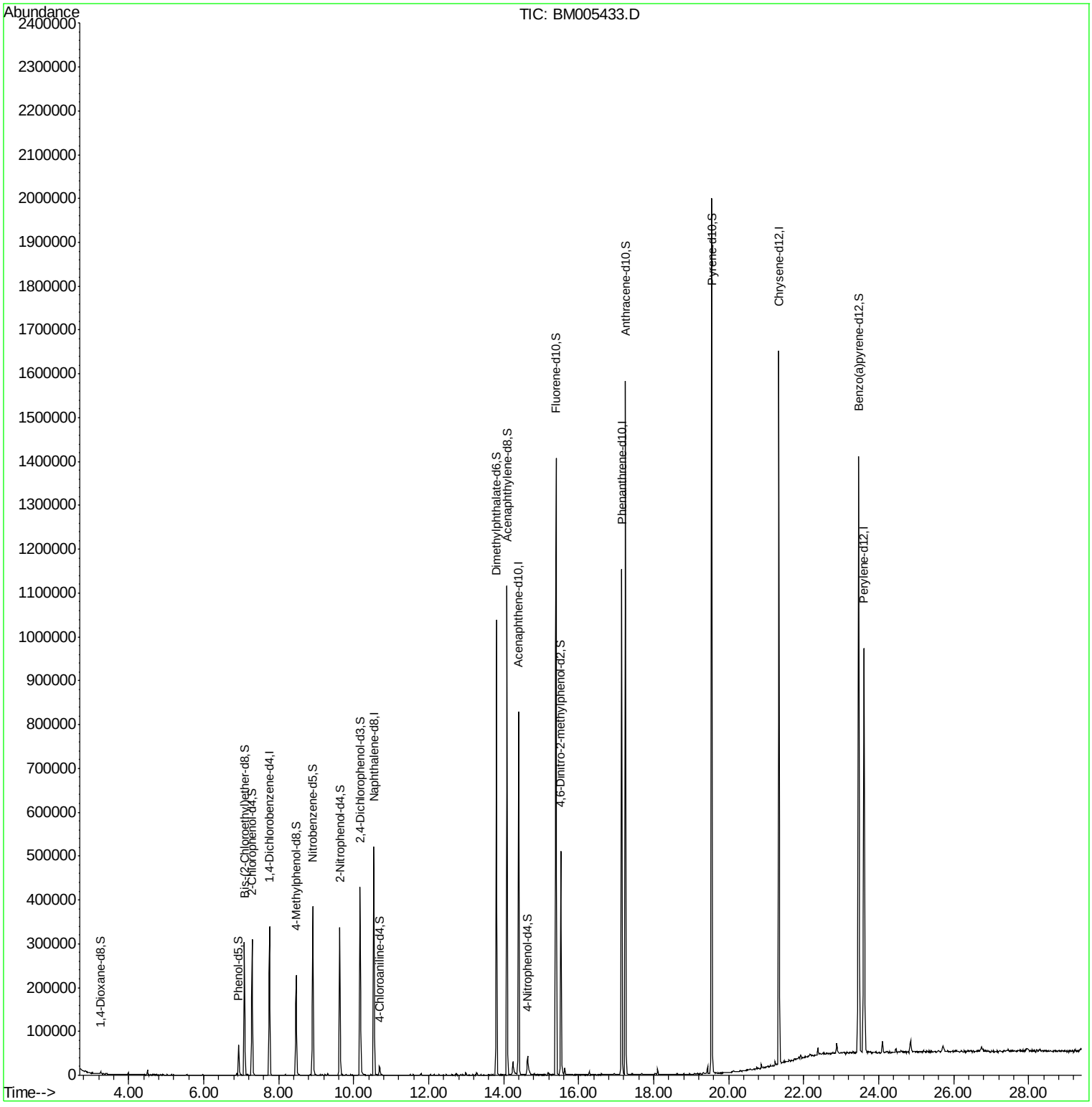
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005433.D
Acq On : 13 May 2016 15:25
Operator : UM/SJ
Sample : H2874-17
Misc :
ALS Vial : 60 Sample Multiplier: 1

Quant Time: May 14 02:13:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4013

Manual Integrations APPROVED
sohil
5/14/2016 9:58:42 AM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005433.D
Acq On : 13 May 2016 15:25
Operator : UM/SJ
Sample : H2874-17
Misc :
ALS Vial : 60 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H4013

Manual Integrations APPROVED
sohil
5/14/2016 9:58:42 AM

Quant Time: May 14 02:13:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	93043	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	435032	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	279703	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	671859	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	803418	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	700162	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	2262	1.14	ng/uL	0.00
5) Phenol-d5	6.93	99	45237	5.36	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	136374	28.33	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	143059	22.45	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	91332	13.09	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	96615	31.11	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	112287	31.93	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.16	165	173601	26.56	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	14447	1.84	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	688198	30.70	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	796171	30.28	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	18924m	4.62	ng/ul	0.01
57) Fluorene-d10	15.39	176	580114	29.97	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	114038	30.17	ng/ul	0.00
70) Anthracene-d10	17.24	188	931476	31.36	ng/ul	0.00
76) Pyrene-d10	19.54	212	1076649	29.03	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	974455	31.44	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005433.D
Acq On : 13 May 2016 15:25
Operator : UM/SJ
Sample : H2874-17
Misc :
ALS Vial : 60 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4013

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.928	717	721	731	rBV	68869	116705	4.02%	0.445%
2	7.087	742	748	761	rBV	303728	477765	16.46%	1.823%
3	7.287	776	782	793	rBV	308572	498908	17.19%	1.903%
4	7.751	854	861	872	rBV	339265	558935	19.26%	2.132%
5	8.463	976	982	1001	rVB	228906	390040	13.44%	1.488%
6	8.904	1049	1057	1073	rBV	385002	661946	22.81%	2.525%
7	9.628	1173	1180	1190	rBV	337349	574950	19.81%	2.193%
8	10.163	1265	1271	1289	rBV	429363	781765	26.94%	2.982%
9	10.533	1327	1334	1342	rBV	521832	895028	30.84%	3.415%
10	10.686	1354	1360	1369	rBV	20257	38977	1.34%	0.149%
11	13.804	1883	1890	1899	rBV	1037988	1462284	50.38%	5.579%
12	14.086	1931	1938	1947	rBV	1115708	1670907	57.57%	6.375%
13	14.245	1958	1965	1973	rBV	29702	67191	2.32%	0.256%
14	14.392	1984	1990	1999	rVB2	827491	1297356	44.70%	4.949%
15	14.633	2024	2031	2044	rBV	43138	105269	3.63%	0.402%
16	15.392	2151	2160	2168	rBV	1407326	2152266	74.16%	8.211%
17	15.521	2176	2182	2193	rBV	509577	738962	25.46%	2.819%
18	17.145	2451	2458	2464	rBV2	1153118	1658588	57.15%	6.328%
19	17.245	2468	2475	2488	rVV2	1582459	2403217	82.81%	9.168%
20	19.545	2859	2866	2877	rBV2	1995484	2902252	100.00%	11.072%
21	21.339	3165	3171	3183	rBV	1626646	2173813	74.90%	8.293%
22	23.462	3524	3532	3541	rBV2	1360441	2632047	90.69%	10.041%
23	23.603	3549	3556	3569	rVB2	921807	1855904	63.95%	7.080%
24	24.097	3636	3640	3646	rVB	25840	46561	1.60%	0.178%
25	24.844	3762	3767	3775	rVB2	25330	50352	1.73%	0.192%

Sum of corrected areas: 26211988

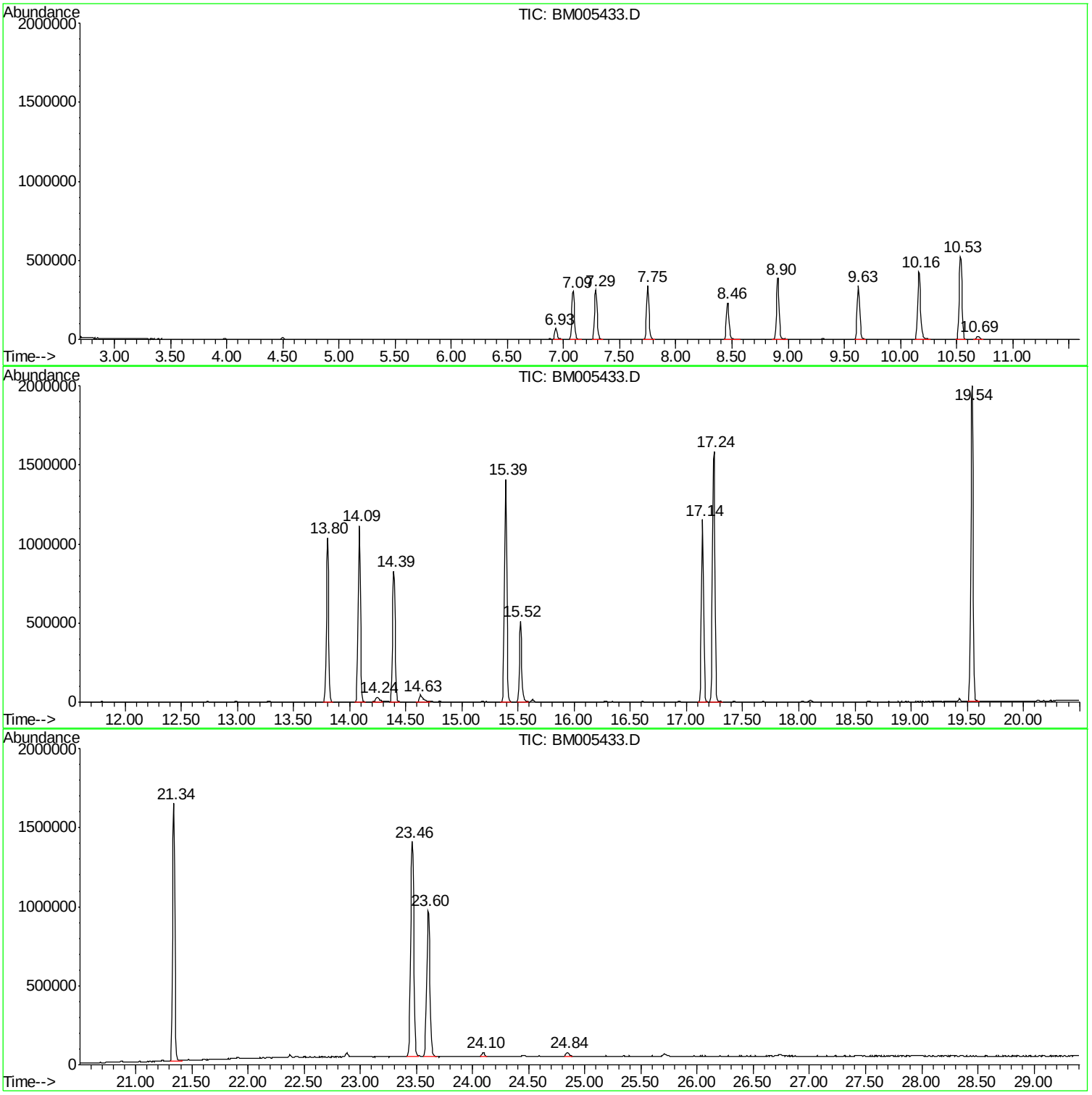
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005433.D
Acq On : 13 May 2016 15:25
Operator : UM/SJ
Sample : H2874-17
Misc :
ALS Vial : 60 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4013

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005433.D
Acq On : 13 May 2016 15:25
Operator : UM/SJ
Sample : H2874-17
Misc :
ALS Vial : 60 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H4013

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005433.D
Acq On : 13 May 2016 15:25
Operator : UM/SJ
Sample : H2874-17
Misc :
ALS Vial : 60 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4013

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

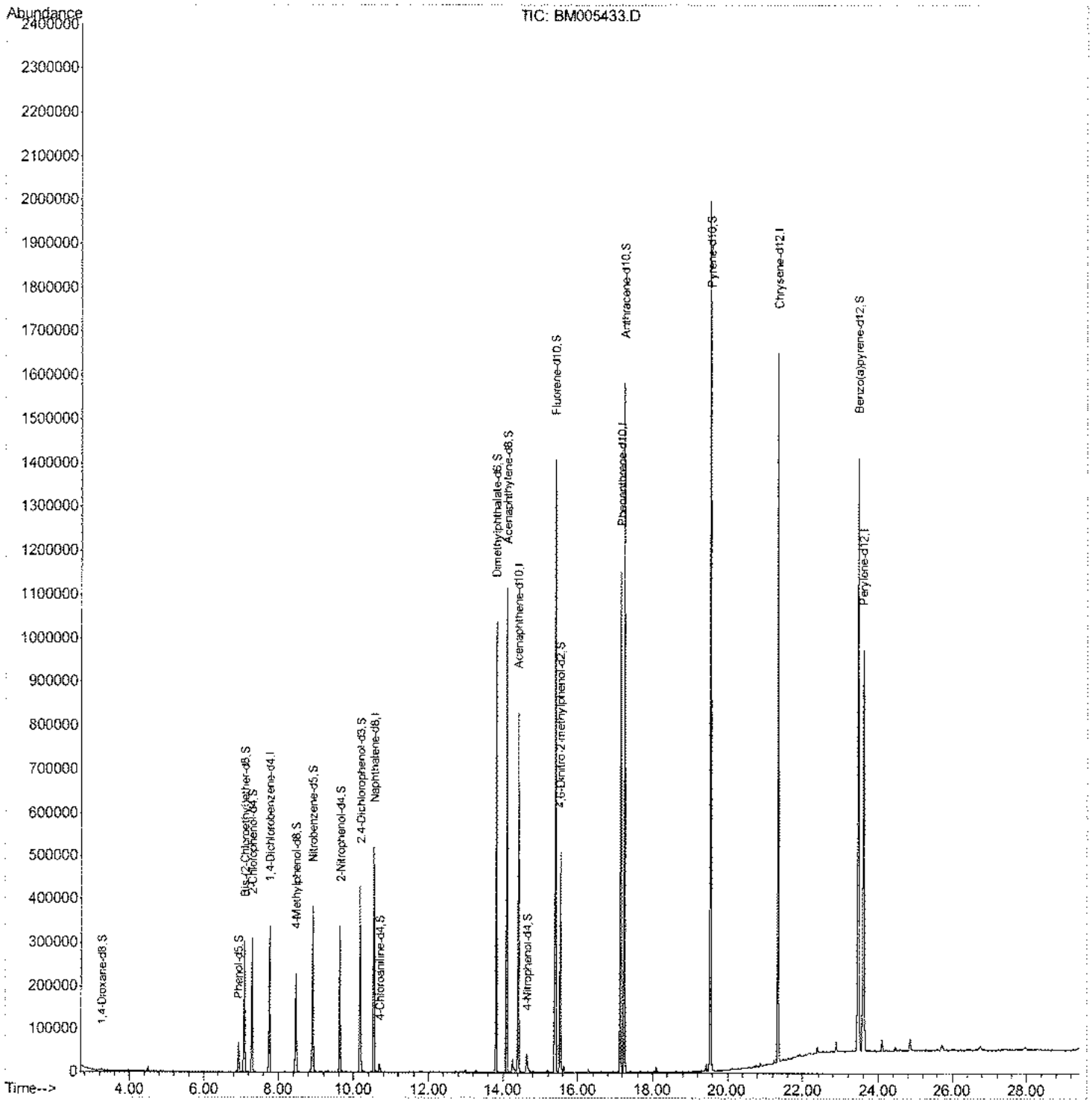
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005433.D
Acq On : 13 May 2016 15:25
Operator : UM/SJ
Sample : H2874-17
Misc :
ALS Vial : 60 Sample Multiplier: 1

Quant Time: May 14 02:13:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4013

Manual Integrations APPROVED
sohil
5/14/2016 9:58:42 AM



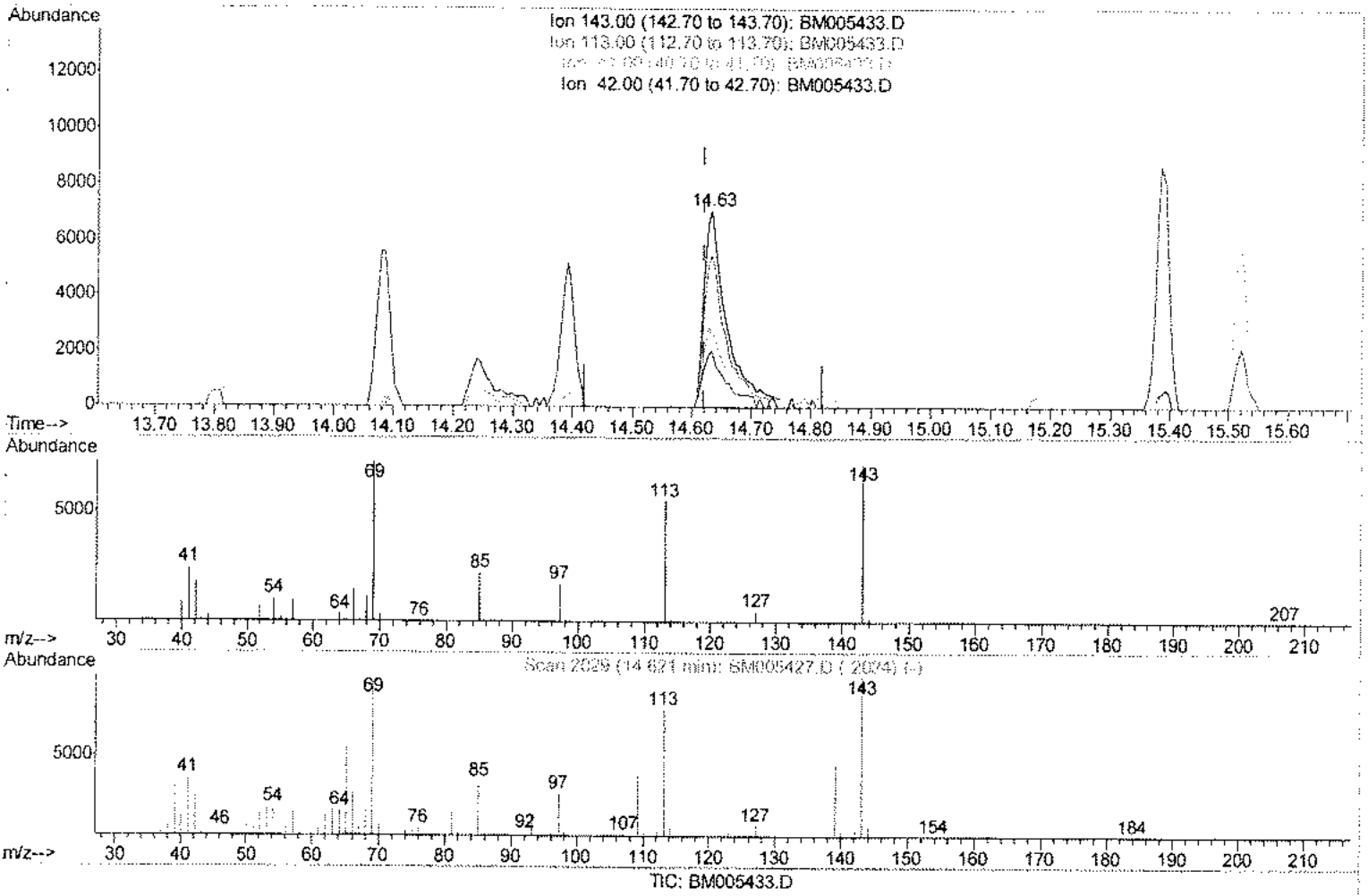
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005433.D
Acq On : 13 May 2016 15:25
Operator : UM/SJ
Sample : H2874-17
Misc :
ALS Vial : 60 Sample Multiplier: 1

Quant Time: May 14 02:12:32 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4013

Manual Integrations APPROVED
sohil
5/14/2016 9:58:42 AM



(51) 4-Nitrophenol-d4 (S)

14.633min (+0.012) 4.62ng/ul m U. M

05/17/16

response 18924

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	77.73
41.00	38.10	36.46
42.00	26.00	28.36

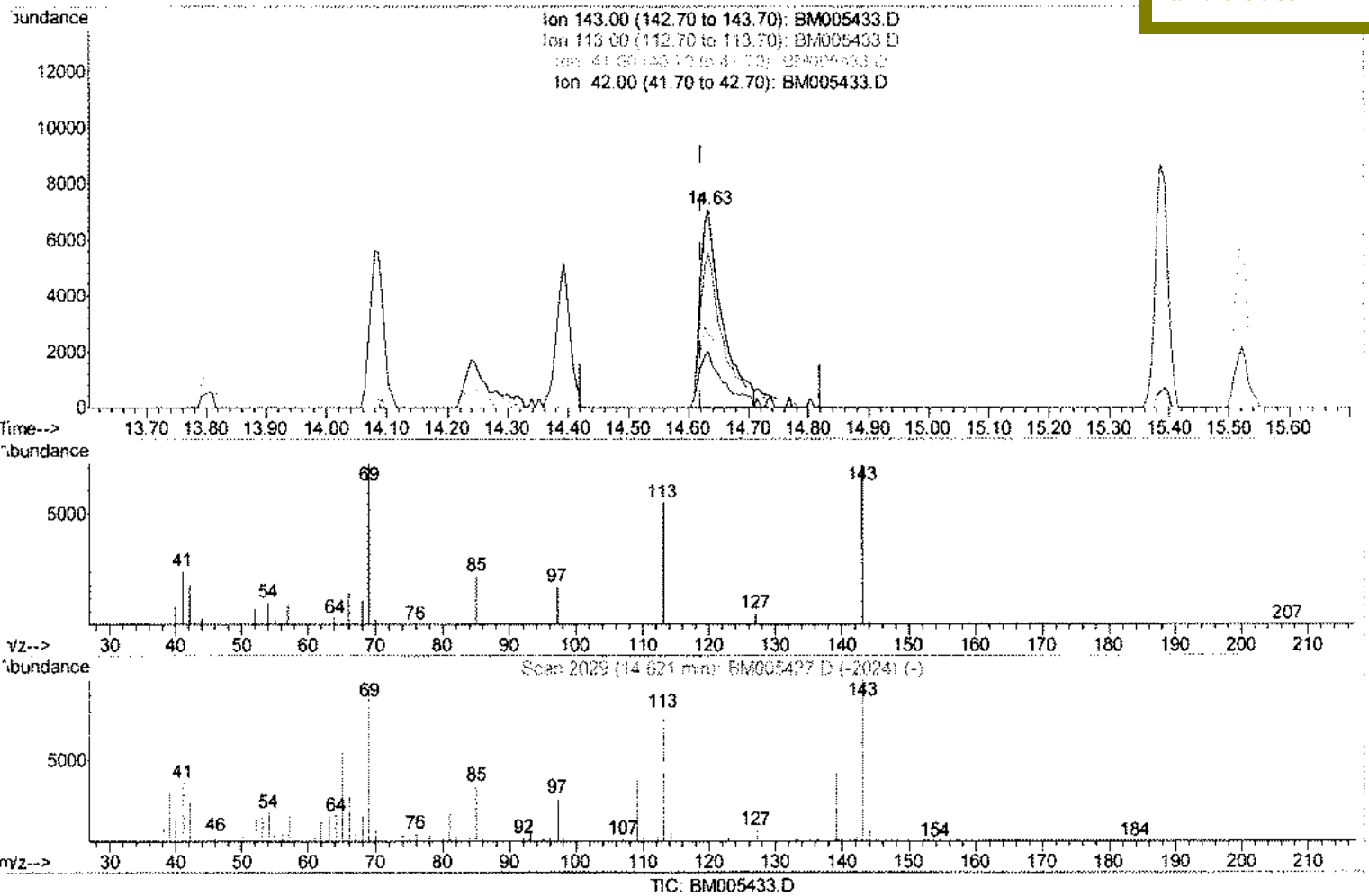
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005433.D
Acq On : 13 May 2016 15:25
Operator : UM/SJ
Sample : H2874-17
Misc :
ALS Vial : 60 Sample Multiplier: 1

Quant Time: May 14 02:12:32 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4013

Manual Integrations APPROVED
sohil
5/14/2016 9:58:42 AM



(51) 4-Nitrophenol-d4 (S)

14.633min (+0.012) 4.36ng/ul

response 17828

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	77.73
41.00	38.10	36.46
42.00	26.00	28.36

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005433.D
Acq On : 13 May 2016 15:25
Operator : UM/SJ
Sample : H2874-17
Misc :
ALS Vial : 60 Sample Multiplier: 1

Quant Time: May 14 02:13:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4013

Manual Integrations APPROVED
sohil
5/14/2016 9:58:42 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	93043	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	435032	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	279703	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	671859	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	803418	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	700162	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	2262	1.14	ng/uL	0.00
5) Phenol-d5	6.93	99	45237	5.36	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	136374	28.33	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	143059	22.45	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	91332	13.09	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	96615	31.11	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	112287	31.93	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.16	165	173601	26.56	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	14447	1.84	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	688198	30.70	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	796171	30.28	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	18924m	4.62	ng/ul	0.01
57) Fluorene-d10	15.39	176	580114	29.97	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	114038	30.17	ng/ul	0.00
70) Anthracene-d10	17.24	188	931476	31.36	ng/ul	0.00
76) Pyrene-d10	19.54	212	1076649	29.03	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	974455	31.44	ng/ul	0.00

U.M 05/17/16

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4097

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-24
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005434.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4097

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-24
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005434.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4097

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-24
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005434.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4097

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-24
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005434.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/13/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : 6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

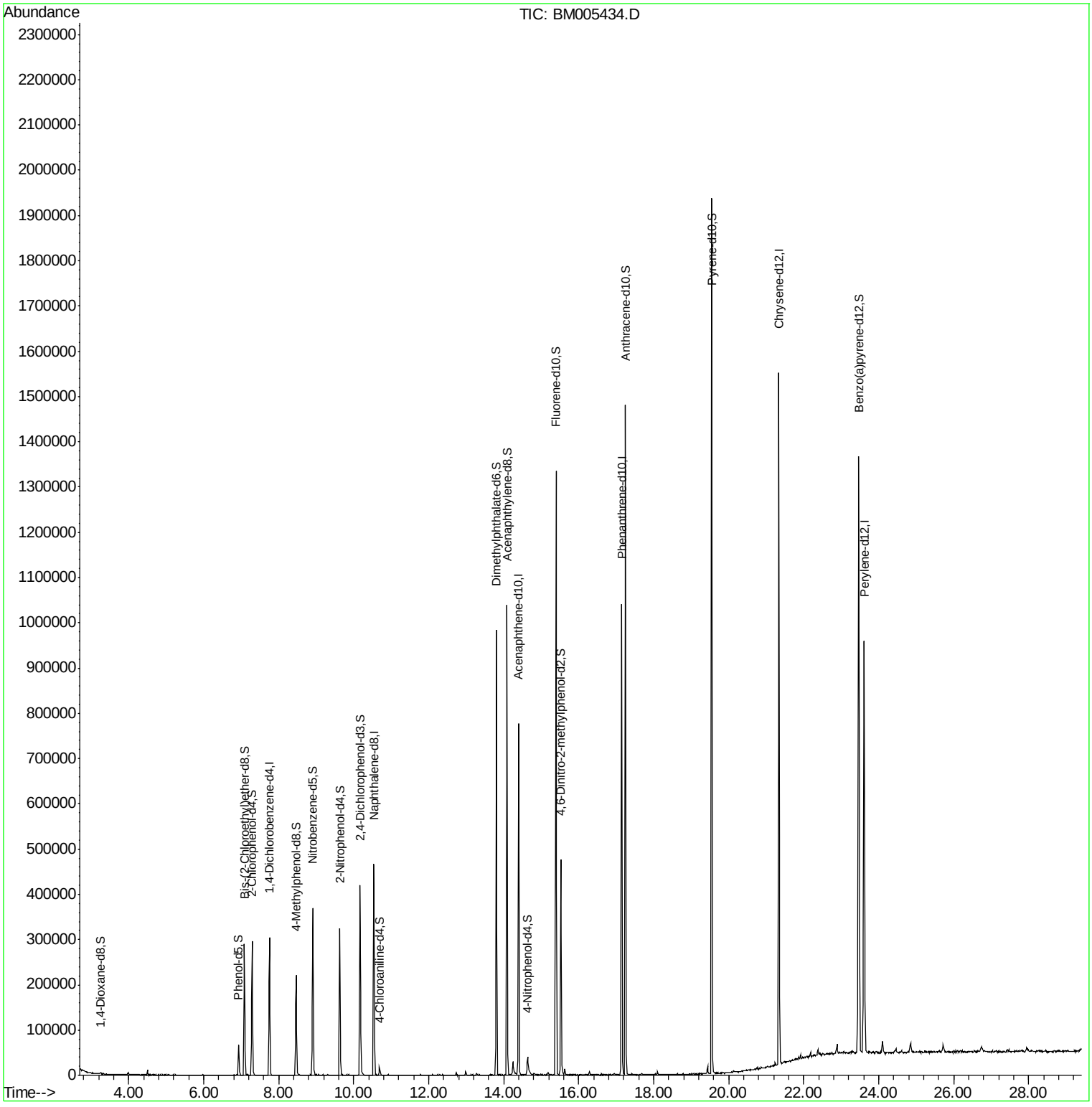
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005434.D
Acq On : 13 May 2016 16:02
Operator : UM/SJ
Sample : H2874-24
Misc :
ALS Vial : 61 Sample Multiplier: 1

Quant Time: May 14 00:45:45 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4097

Manual Integrations APPROVED
sohil
5/14/2016 9:58:45 AM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005434.D
Acq On : 13 May 2016 16:02
Operator : UM/SJ
Sample : H2874-24
Misc :
ALS Vial : 61 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H4097

Manual Integrations APPROVED
sohil
5/14/2016 9:58:45 AM

Quant Time: May 14 00:45:45 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	83245	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	390856	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	254183	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	612067	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	741270	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	681598	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	2104	1.19	ng/uL	0.00
5) Phenol-d5	6.93	99	43440	5.75	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	130491	30.30	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	137565	24.12	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	88782	14.23	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	92337	33.09	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	107668	34.08	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.16	165	164782	28.06	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	12830m	1.82	ng/ul	0.01
43) Dimethylphthalate-d6	13.80	166	645375	31.68	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	760949	31.84	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	17590	4.73	ng/ul	0.01
57) Fluorene-d10	15.39	176	552422	31.40	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	106108	30.82	ng/ul	0.00
70) Anthracene-d10	17.24	188	887156	32.79	ng/ul	0.00
76) Pyrene-d10	19.54	212	1037152	30.31	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	980181	32.49	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005434.D
Acq On : 13 May 2016 16:02
Operator : UM/SJ
Sample : H2874-24
Misc :
ALS Vial : 61 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4097

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.928	717	721	730	rBV	67440	113434	4.07%	0.457%
2	7.087	741	748	761	rBV	290706	459572	16.48%	1.852%
3	7.287	775	782	795	rBV	295161	478613	17.16%	1.928%
4	7.751	854	861	874	rVB	304159	498138	17.86%	2.007%
5	8.463	976	982	993	rBV	219952	378143	13.56%	1.524%
6	8.910	1051	1058	1072	rBV	368645	632256	22.67%	2.548%
7	9.628	1173	1180	1190	rBV	324779	550995	19.75%	2.220%
8	10.163	1265	1271	1286	rBV	419246	744039	26.67%	2.998%
9	10.534	1327	1334	1345	rBV	465875	804731	28.85%	3.242%
10	10.686	1354	1360	1369	rBV	18228	33317	1.19%	0.134%
11	13.804	1884	1890	1897	rBV	983171	1366601	48.99%	5.506%
12	14.086	1931	1938	1948	rBV	1037163	1591321	57.05%	6.412%
13	14.239	1958	1964	1978	rBV	27844	67544	2.42%	0.272%
14	14.392	1984	1990	1999	rVB2	775835	1178419	42.25%	4.748%
15	14.633	2026	2031	2044	rBV	38444	99499	3.57%	0.401%
16	15.392	2152	2160	2169	rBV	1333007	2045740	73.34%	8.243%
17	15.521	2176	2182	2196	rBV	474994	682586	24.47%	2.750%
18	17.145	2451	2458	2468	rBV2	1039987	1514216	54.28%	6.101%
19	17.245	2468	2475	2489	rVV2	1479233	2285622	81.94%	9.209%
20	19.545	2859	2866	2879	rBV2	1933867	2789486	100.00%	11.240%
21	21.339	3165	3171	3181	rBV	1527701	2002933	71.80%	8.070%
22	22.886	3430	3434	3440	rVB3	19628	30048	1.08%	0.121%
23	23.468	3524	3533	3541	rBV2	1315219	2624395	94.08%	10.574%
24	23.609	3549	3557	3571	rVB2	908455	1796797	64.41%	7.240%
25	24.097	3637	3640	3651	rVB	26566	50040	1.79%	0.202%

Sum of corrected areas: 24818485

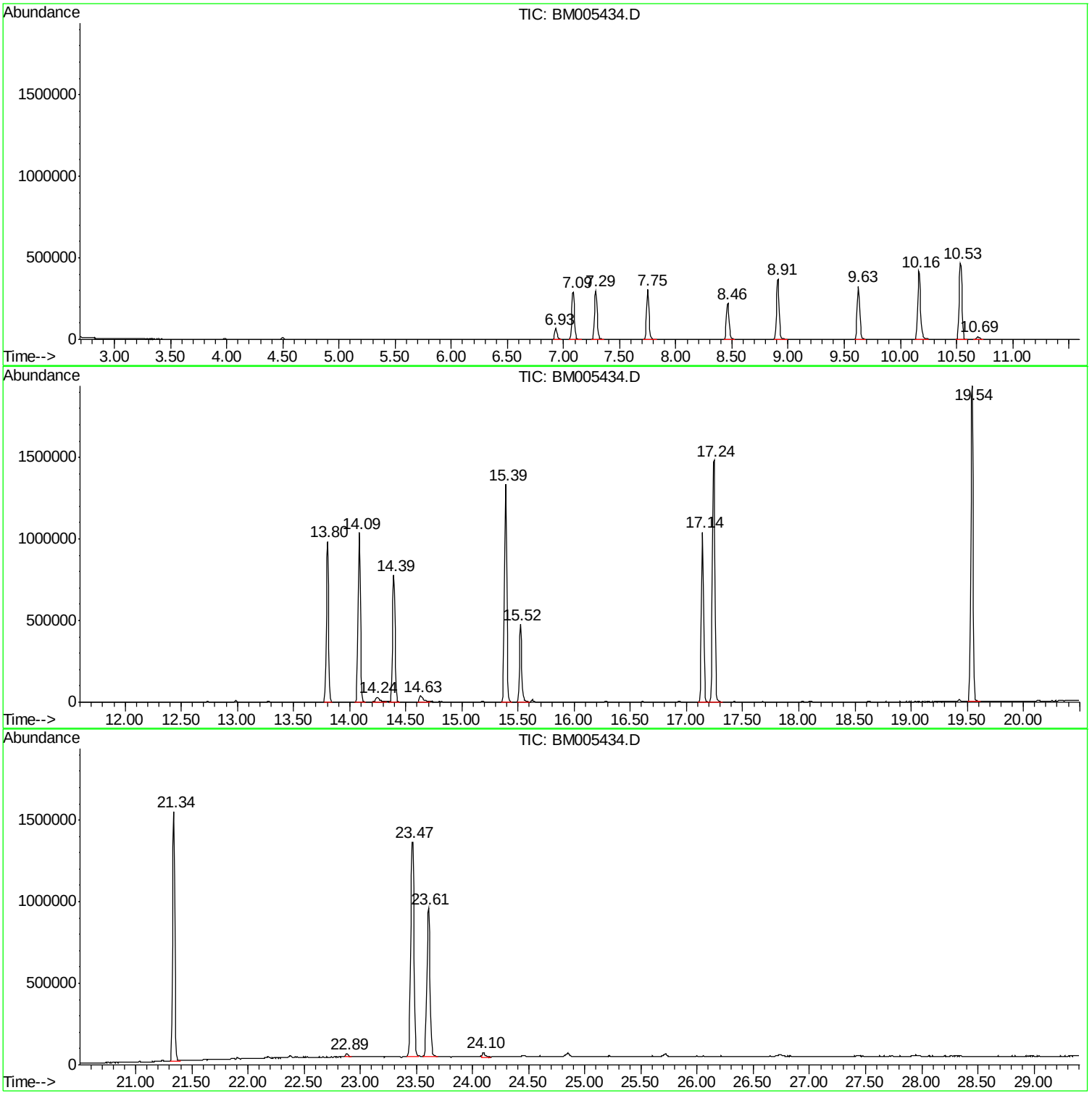
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005434.D
Acq On : 13 May 2016 16:02
Operator : UM/SJ
Sample : H2874-24
Misc :
ALS Vial : 61 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4097

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005434.D
Acq On : 13 May 2016 16:02
Operator : UM/SJ
Sample : H2874-24
Misc :
ALS Vial : 61 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H4097

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005434.D
Acq On : 13 May 2016 16:02
Operator : UM/SJ
Sample : H2874-24
Misc :
ALS Vial : 61 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4097

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

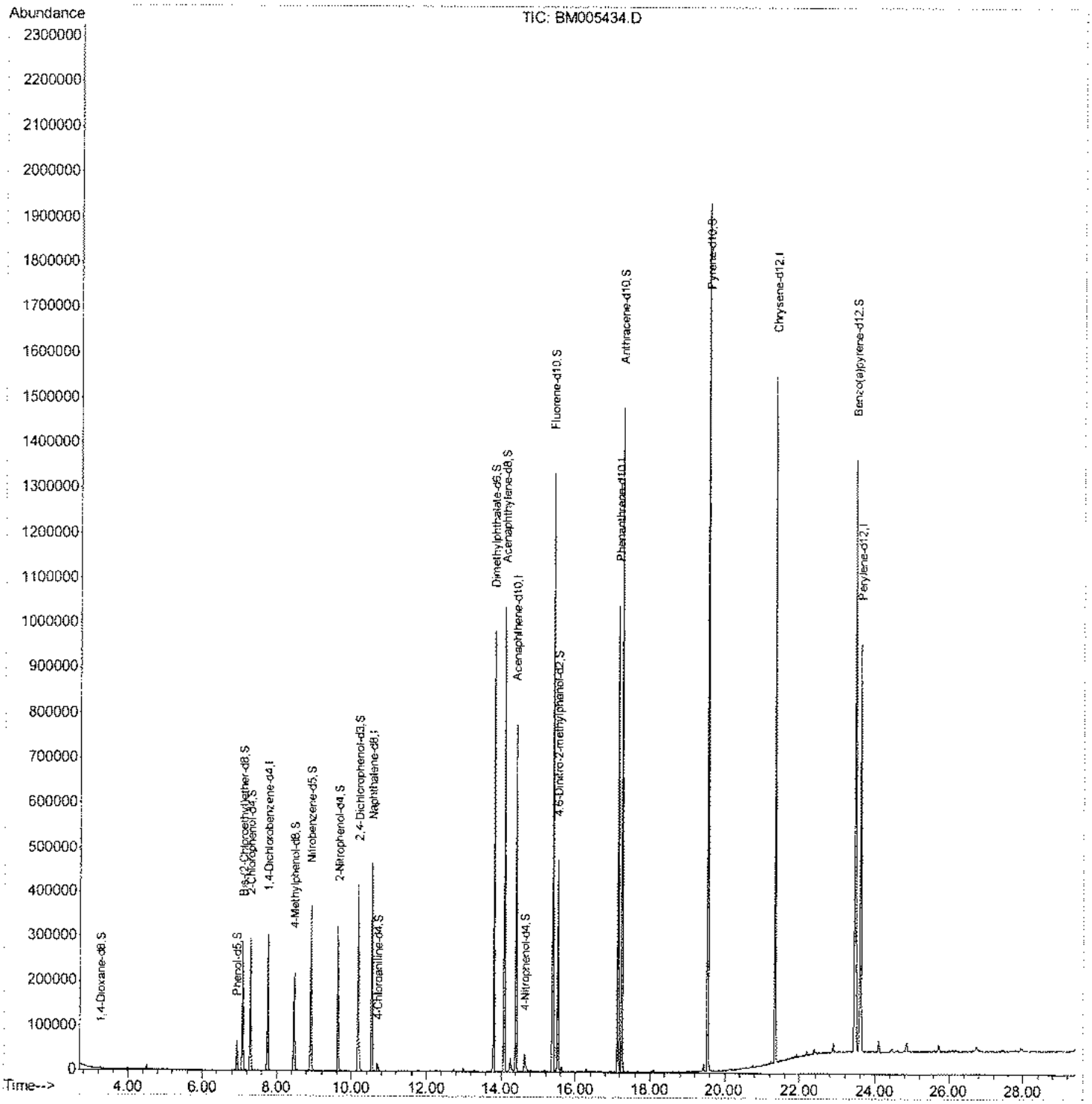
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005434.D
Acq On : 13 May 2016 16:02
Operator : UM/SJ
Sample : H2874-24
Misc :
ALS Vial : 61 Sample Multiplier: 1

Quant Time: May 14 00:45:45 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4097

Manual Integrations APPROVED
sohil
5/14/2016 9:58:45 AM



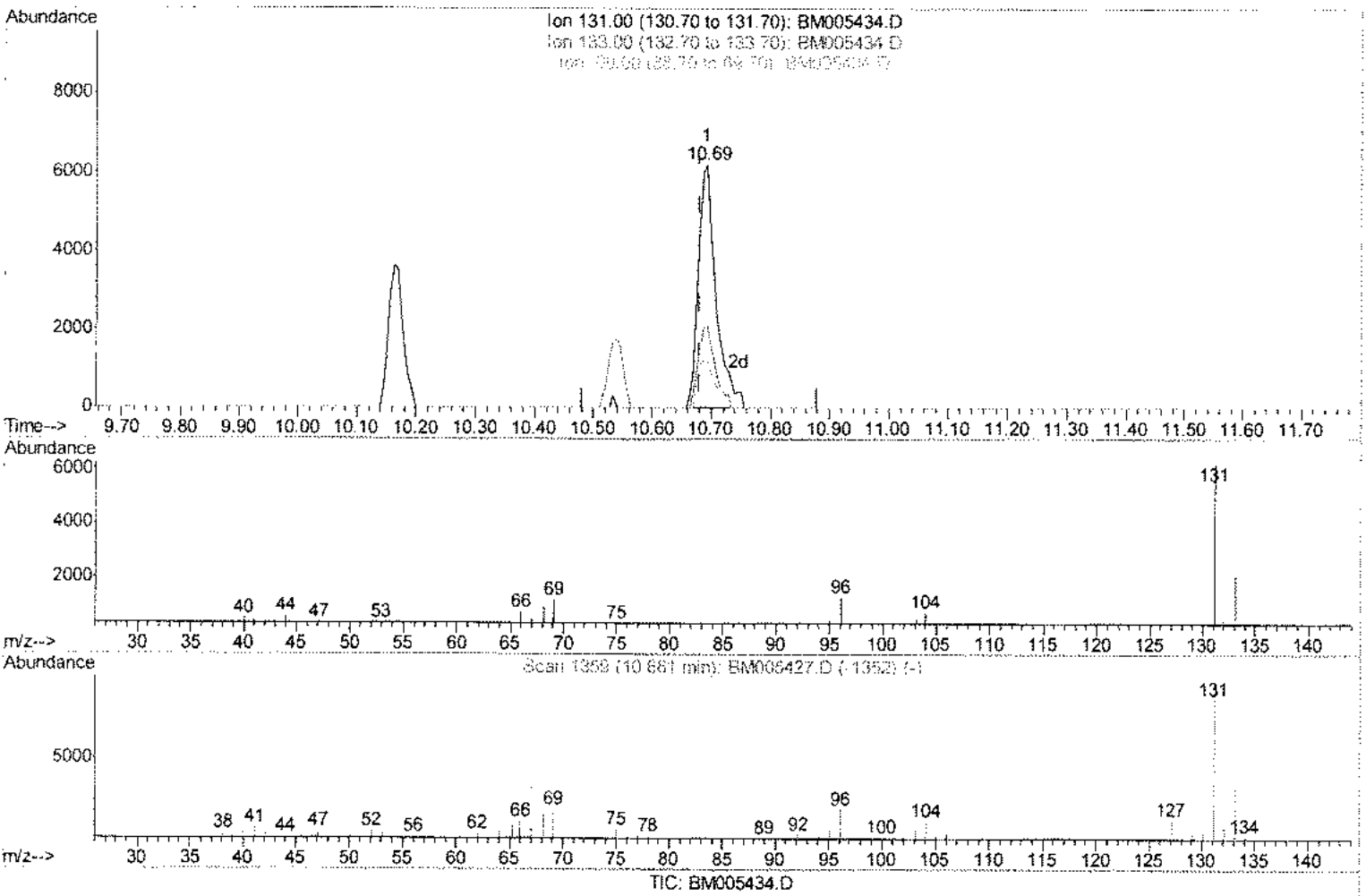
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005434.D
Acq On : 13 May 2016 16:02
Operator : UM/SJ
Sample : H2874-24
Misc :
ALS Vial : 61 Sample Multiplier: 1

Quant Time: May 14 00:21:05 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4097

Manual Integrations APPROVED
sohil
5/14/2016 9:58:45 AM



(29) 4-Chloroaniline-d4 (S)

10.692min (+0.012) 1.82ng/ul m U.M 05/17/16

response 12830

Ion	Exp%	Act%
131.00	100	100
133.00	32.30	34.17
69.00	19.20	19.46
0.00	0.00	0.00

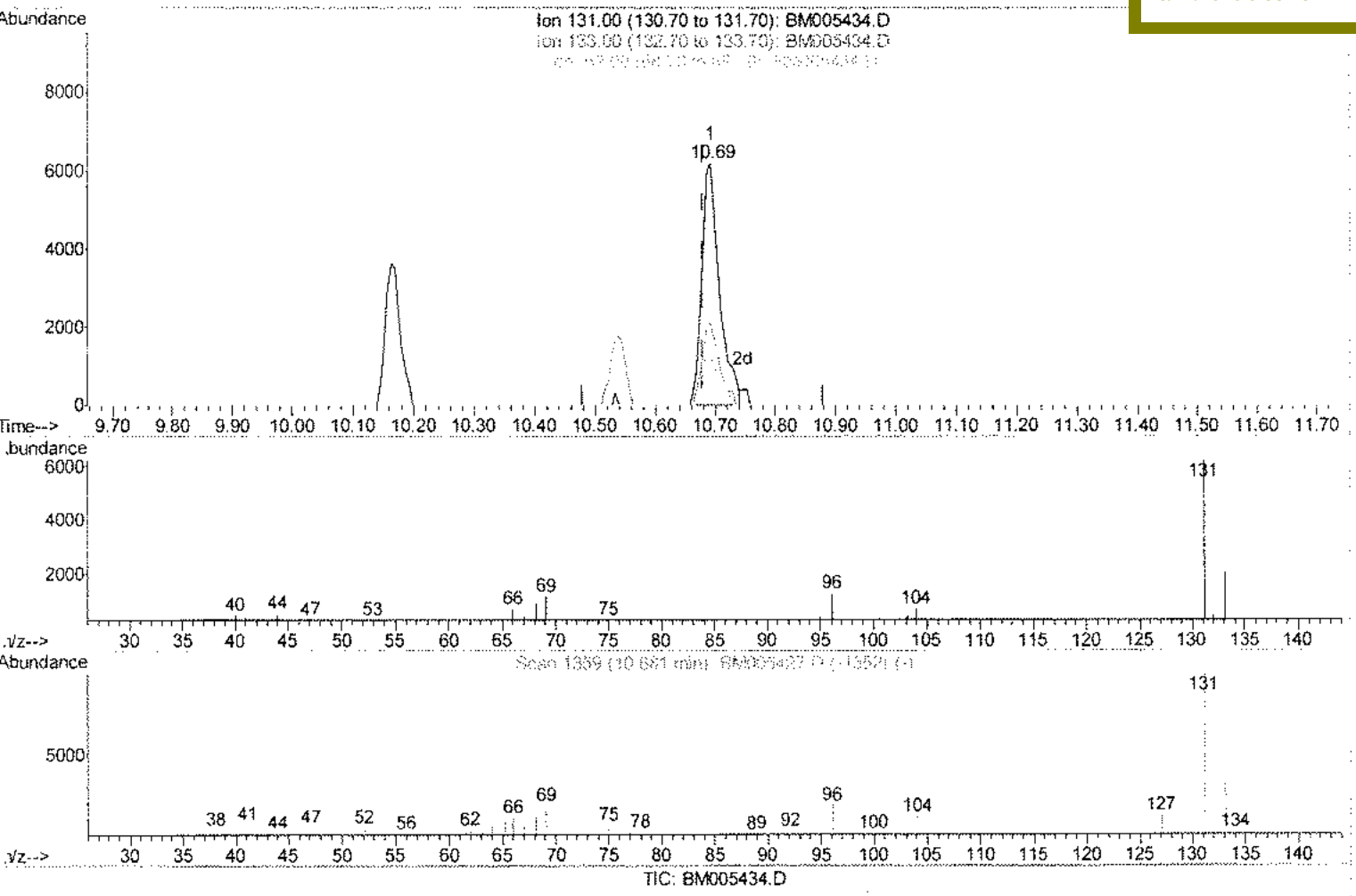
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005434.D
Acq On : 13 May 2016 16:02
Operator : UM/SJ
Sample : H2874-24
Misc :
ALS Vial : 61 Sample Multiplier: 1

Quant Time: May 14 00:21:05 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4097

Manual Integrations APPROVED
sohil
5/14/2016 9:58:45 AM



TIC: BM005434.D

(29) 4-Chloroaniline-d4 (S)

10.692min (+0.012) 1.78ng/ul

response 12549

Ion	Exp%	Act%
131.00	100	100
133.00	32.30	34.17
69.00	19.20	19.46
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005434.D
Acq On : 13 May 2016 16:02
Operator : UM/SJ
Sample : H2874-24
Misc :
ALS Vial : 61 Sample Multiplier: 1

Quant Time: May 14 00:45:45 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4097

Manual Integrations APPROVED
sohil
5/14/2016 9:58:45 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	83245	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	390856	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	254183	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	612067	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	741270	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	681598	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	2104	1.19	ng/uL	0.00
5) Phenol-d5	6.93	99	43440	5.75	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	130491	30.30	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	137565	24.12	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	88782	14.23	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	92337	33.09	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	107668	34.08	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.16	165	164782	28.06	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	12830m	1.82	ng/ul	0.01
43) Dimethylphthalate-d6	13.80	166	645375	31.68	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	760949	31.84	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	17590	4.73	ng/ul	0.01
57) Fluorene-d10	15.39	176	552422	31.40	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	106108	30.82	ng/ul	0.00
70) Anthracene-d10	17.24	188	887156	32.79	ng/ul	0.00
76) Pyrene-d10	19.54	212	1037152	30.31	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	980181	32.49	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

U.M 05/17/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4111

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-07
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005429.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4111

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-07
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005429.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4111

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-07
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005429.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4111

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-07
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005429.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/13/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : 6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

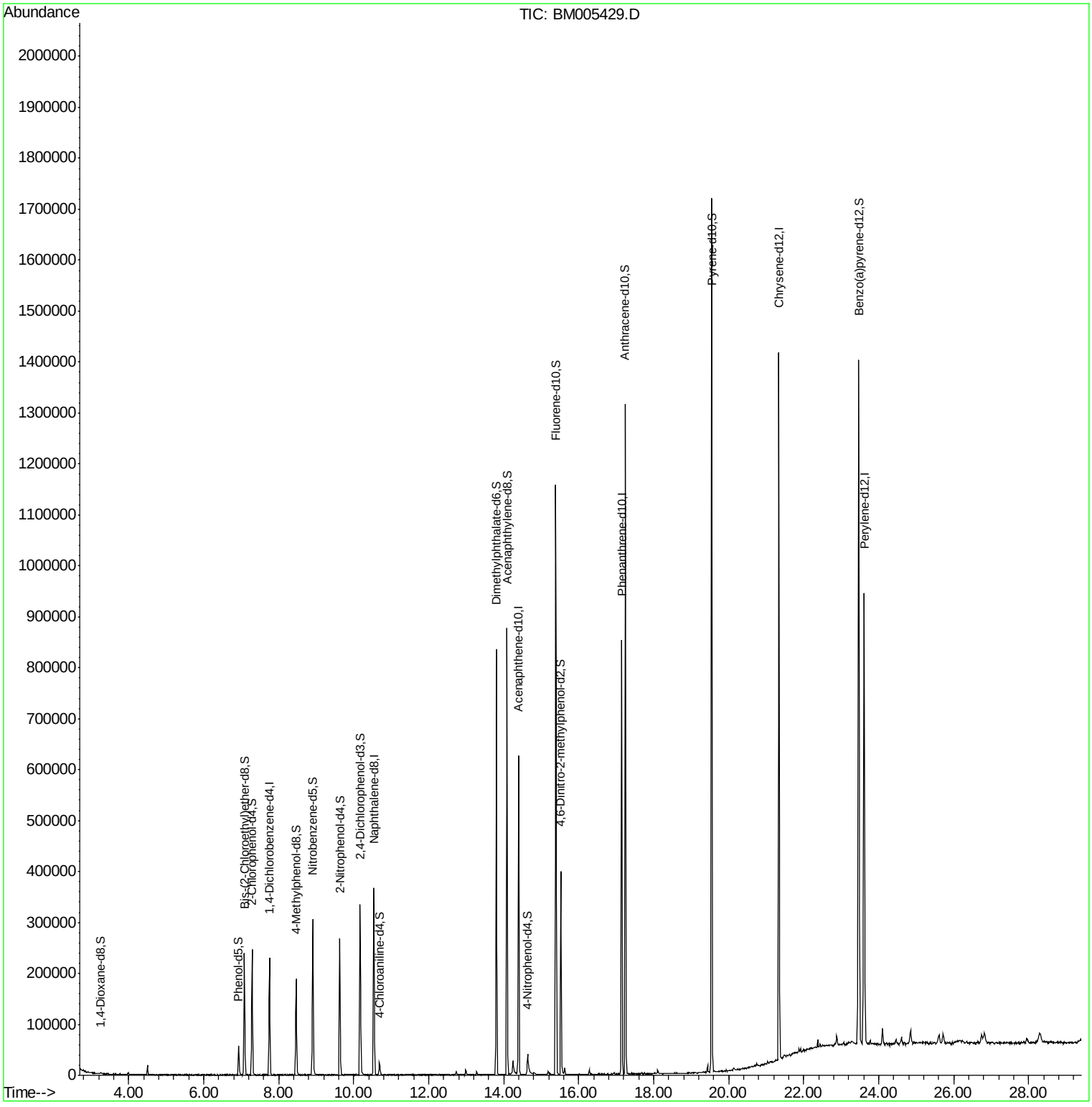
EPA-designated Registry Number.

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005429.D
Acq On : 13 May 2016 12:59
Operator : UM/SJ
Sample : H2874-07
Misc :
ALS Vial : 56 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4111

Quant Time: May 14 00:33:54 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005429.D
Acq On : 13 May 2016 12:59
Operator : UM/SJ
Sample : H2874-07
Misc :
ALS Vial : 56 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4111

Quant Time: May 14 00:33:54 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	62059	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	307149	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	206956	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	512122	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	675747	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	655179	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1591	1.21	ng/uL	0.00
5) Phenol-d5	6.93	99	37483	6.66	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.08	67	107343	33.43	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	112638	26.50	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	74196	15.95	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	76187	34.74	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	88526	35.65	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.16	165	138944	30.11	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	16247	2.93	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	551901	33.27	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	645623	33.18	ng/ul	0.00
51) 4-Nitrophenol-d4	14.64	143	16553	5.47	ng/ul	0.02
57) Fluorene-d10	15.39	176	473037	33.02	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	92155	31.99	ng/ul	0.00
70) Anthracene-d10	17.24	188	766658	33.87	ng/ul	0.00
76) Pyrene-d10	19.54	212	919480	29.48	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	965698	33.30	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005429.D
Acq On : 13 May 2016 12:59
Operator : UM/SJ
Sample : H2874-07
Misc :
ALS Vial : 56 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4111

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.498	303	308	313	rVB	19483	30979	1.20%	0.142%
2	6.928	716	721	731	rBV	56858	97509	3.77%	0.448%
3	7.087	739	748	756	rBV	238615	377544	14.58%	1.736%
4	7.287	776	782	791	rBV	246079	390984	15.10%	1.798%
5	7.751	854	861	868	rBV	229177	369841	14.28%	1.701%
6	8.463	976	982	991	rBV	188522	310645	11.99%	1.429%
7	8.904	1051	1057	1071	rBV	305103	522791	20.19%	2.404%
8	9.628	1173	1180	1192	rBV	268573	457850	17.68%	2.106%
9	10.163	1266	1271	1288	rBV	335156	621499	24.00%	2.858%
10	10.533	1327	1334	1343	rBV	366607	628579	24.27%	2.891%
11	10.686	1356	1360	1369	rBV	23458	41851	1.62%	0.192%
12	13.804	1883	1890	1901	rBV	834375	1170998	45.21%	5.385%
13	14.086	1931	1938	1947	rBV	875164	1353849	52.27%	6.226%
14	14.245	1957	1965	1974	rBV2	26338	63104	2.44%	0.290%
15	14.392	1984	1990	1998	rVB2	624500	962689	37.17%	4.427%
16	14.633	2026	2031	2046	rBV2	40054	98511	3.80%	0.453%
17	15.386	2153	2159	2168	rBV	1156948	1741985	67.26%	8.011%
18	15.521	2177	2182	2195	rBV	398938	596029	23.01%	2.741%
19	17.145	2451	2458	2468	rBV2	851721	1256807	48.53%	5.780%
20	17.239	2468	2474	2483	rBV2	1313840	1970915	76.10%	9.064%
21	19.545	2859	2866	2875	rBV	1714126	2458308	94.92%	11.305%
22	21.339	3165	3171	3184	rBV	1389591	1833788	70.81%	8.433%
23	23.462	3524	3532	3544	rBV2	1340743	2589866	100.00%	11.910%
24	23.609	3549	3557	3572	rVB2	884703	1743503	67.32%	8.018%
25	24.097	3636	3640	3648	rVB2	31230	54935	2.12%	0.253%

Sum of corrected areas: 21745359

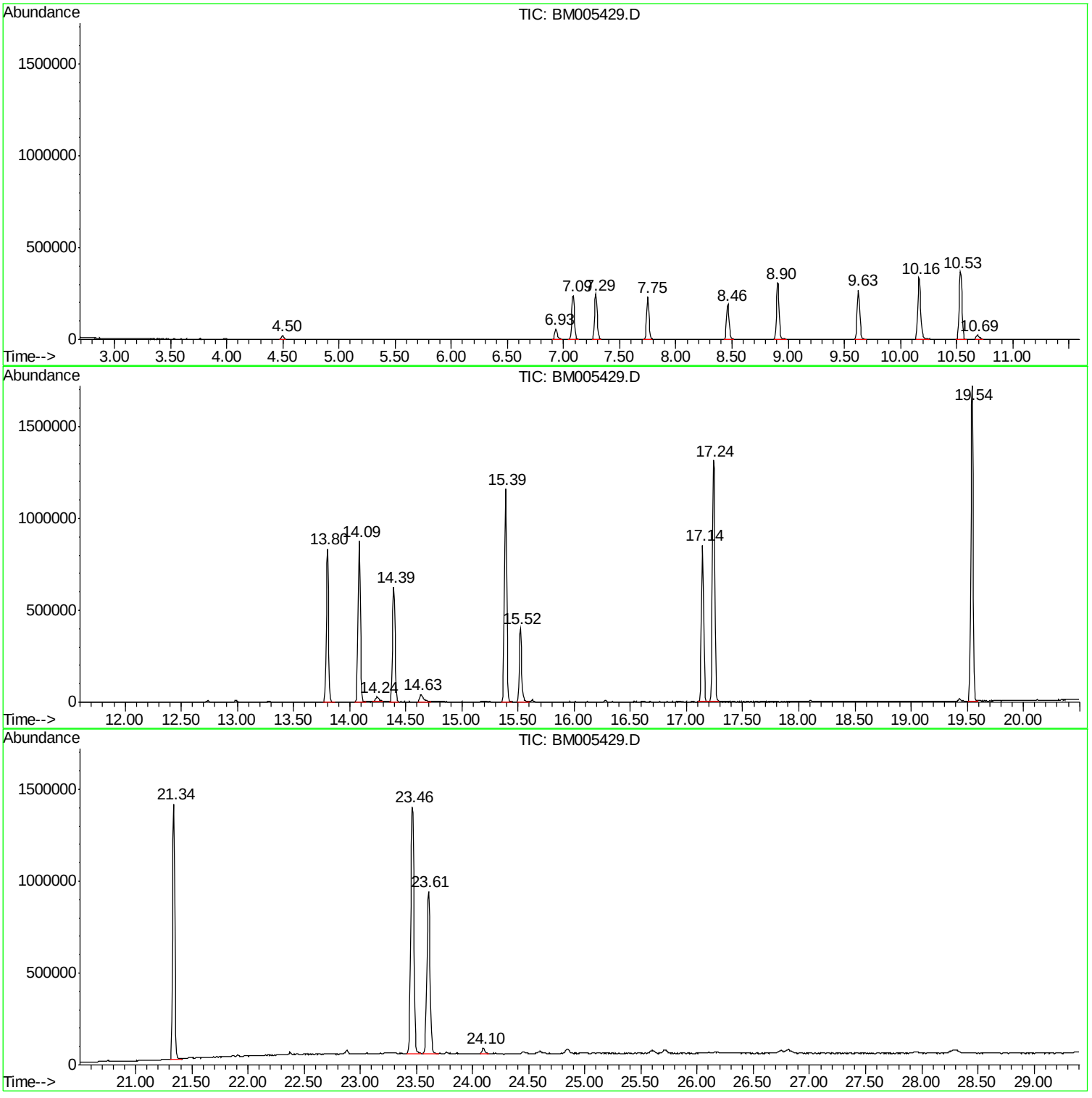
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005429.D
Acq On : 13 May 2016 12:59
Operator : UM/SJ
Sample : H2874-07
Misc :
ALS Vial : 56 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4111

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005429.D
Acq On : 13 May 2016 12:59
Operator : UM/SJ
Sample : H2874-07
Misc :
ALS Vial : 56 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H4111

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005429.D
Acq On : 13 May 2016 12:59
Operator : UM/SJ
Sample : H2874-07
Misc :
ALS Vial : 56 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4111

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-09
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005430.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-09
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005430.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-09
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005430.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4113

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-09
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005430.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/13/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : 6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

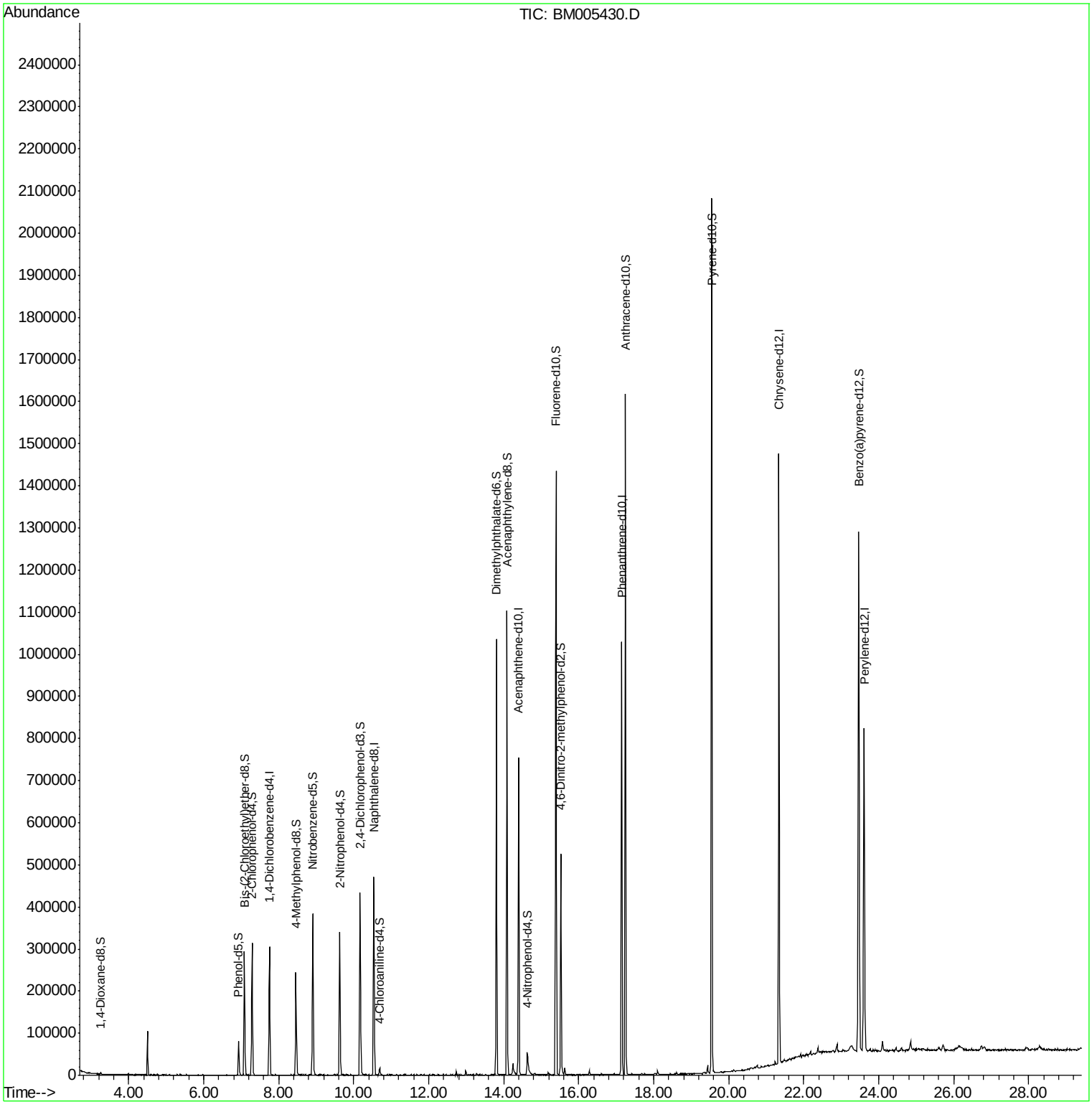
Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005430.D
Acq On : 13 May 2016 13:36
Operator : UM/SJ
Sample : H2874-09
Misc :
ALS Vial : 57 Sample Multiplier: 1

Quant Time: May 14 00:36:40 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113

Manual Integrations APPROVED
sohil
5/14/2016 9:58:34 AM



Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005430.D
Acq On : 13 May 2016 13:36
Operator : UM/SJ
Sample : H2874-09
Misc :
ALS Vial : 57 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4113

Manual Integrations APPROVED
sohil
5/14/2016 9:58:34 AM

Quant Time: May 14 00:36:40 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	82842	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	389680	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	250486	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	608820	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	700167	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	579671	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	2227	1.26	ng/uL	0.00
5) Phenol-d5	6.93	99	48986	6.52	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	131966	30.79	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	142589	25.13	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	95815	15.43	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	95070	34.17	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	110944	35.22	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.16	165	174745	29.85	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	12023m	1.71	ng/ul	0.01
43) Dimethylphthalate-d6	13.80	166	695614	34.65	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	797717	33.87	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	23072m	6.30	ng/ul	0.00
57) Fluorene-d10	15.39	176	587701	33.90	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	118359	34.56	ng/ul	0.00
70) Anthracene-d10	17.24	188	946542	35.17	ng/ul	0.00
76) Pyrene-d10	19.54	212	1078183	33.36	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	904682	35.26	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005430.D
Acq On : 13 May 2016 13:36
Operator : UM/SJ
Sample : H2874-09
Misc :
ALS Vial : 57 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4113

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.499	303	308	314	rBV	103134	153561	5.27%	0.610%
2	6.928	716	721	732	rBV	79750	133319	4.58%	0.530%
3	7.087	742	748	756	rBV	293451	465951	16.00%	1.852%
4	7.287	776	782	792	rBV	313063	501984	17.24%	1.995%
5	7.751	855	861	871	rVB	304913	499134	17.14%	1.984%
6	8.457	976	981	992	rBV	242823	409720	14.07%	1.629%
7	8.910	1051	1058	1076	rVB	381954	650849	22.35%	2.587%
8	9.628	1173	1180	1195	rVB	338748	570159	19.58%	2.266%
9	10.163	1265	1271	1287	rBV	433531	784558	26.94%	3.118%
10	10.533	1326	1334	1344	rBV	471121	802301	27.55%	3.189%
11	10.692	1355	1361	1372	rBV2	16495	32733	1.12%	0.130%
12	13.804	1883	1890	1901	rBV	1034805	1478424	50.77%	5.876%
13	14.086	1931	1938	1947	rBV	1101099	1670698	57.37%	6.641%
14	14.245	1957	1965	1976	rBV2	27001	66218	2.27%	0.263%
15	14.392	1984	1990	2000	rVB2	752527	1172907	40.28%	4.662%
16	14.627	2025	2030	2045	rBV	53305	130137	4.47%	0.517%
17	15.392	2150	2160	2169	rBV	1435073	2172127	74.59%	8.634%
18	15.521	2176	2182	2196	rBV	523988	766666	26.33%	3.047%
19	17.145	2451	2458	2468	rBV2	1027698	1499152	51.48%	5.959%
20	17.245	2468	2475	2489	rBV	1615282	2437746	83.71%	9.690%
21	19.545	2859	2866	2879	rBV	2076941	2912141	100.00%	11.575%
22	21.339	3165	3171	3181	rBV	1447373	1890963	64.93%	7.516%
23	23.462	3524	3532	3544	rBV2	1233354	2431822	83.51%	9.666%
24	23.609	3549	3557	3569	rVB2	766164	1525256	52.38%	6.063%

Sum of corrected areas: 25158526

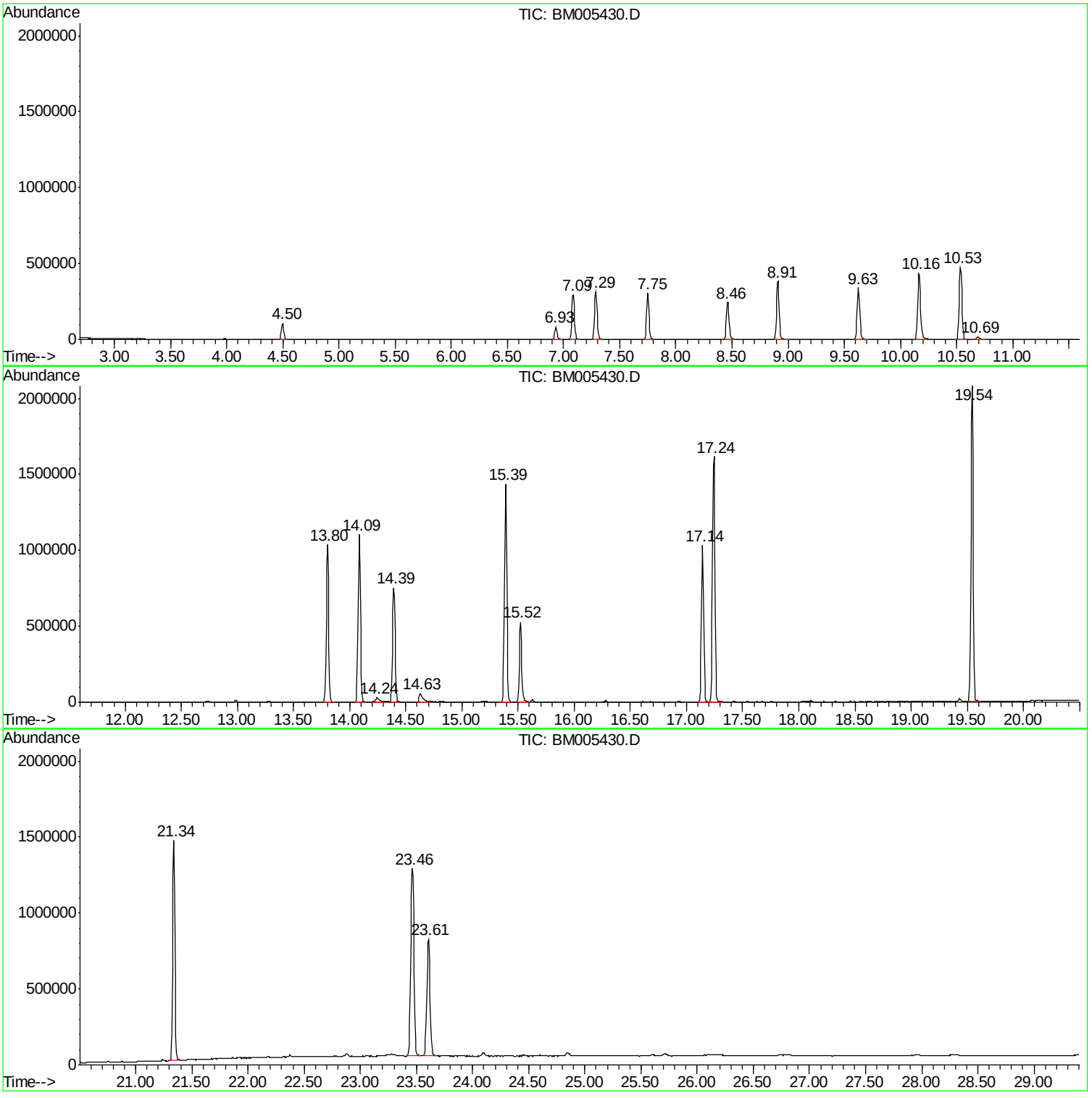
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005430.D
Acq On : 13 May 2016 13:36
Operator : UM/SJ
Sample : H2874-09
Misc :
ALS Vial : 57 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4113

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005430.D
Acq On : 13 May 2016 13:36
Operator : UM/SJ
Sample : H2874-09
Misc :
ALS Vial : 57 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H4113

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005430.D
Acq On : 13 May 2016 13:36
Operator : UM/SJ
Sample : H2874-09
Misc :
ALS Vial : 57 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4113

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

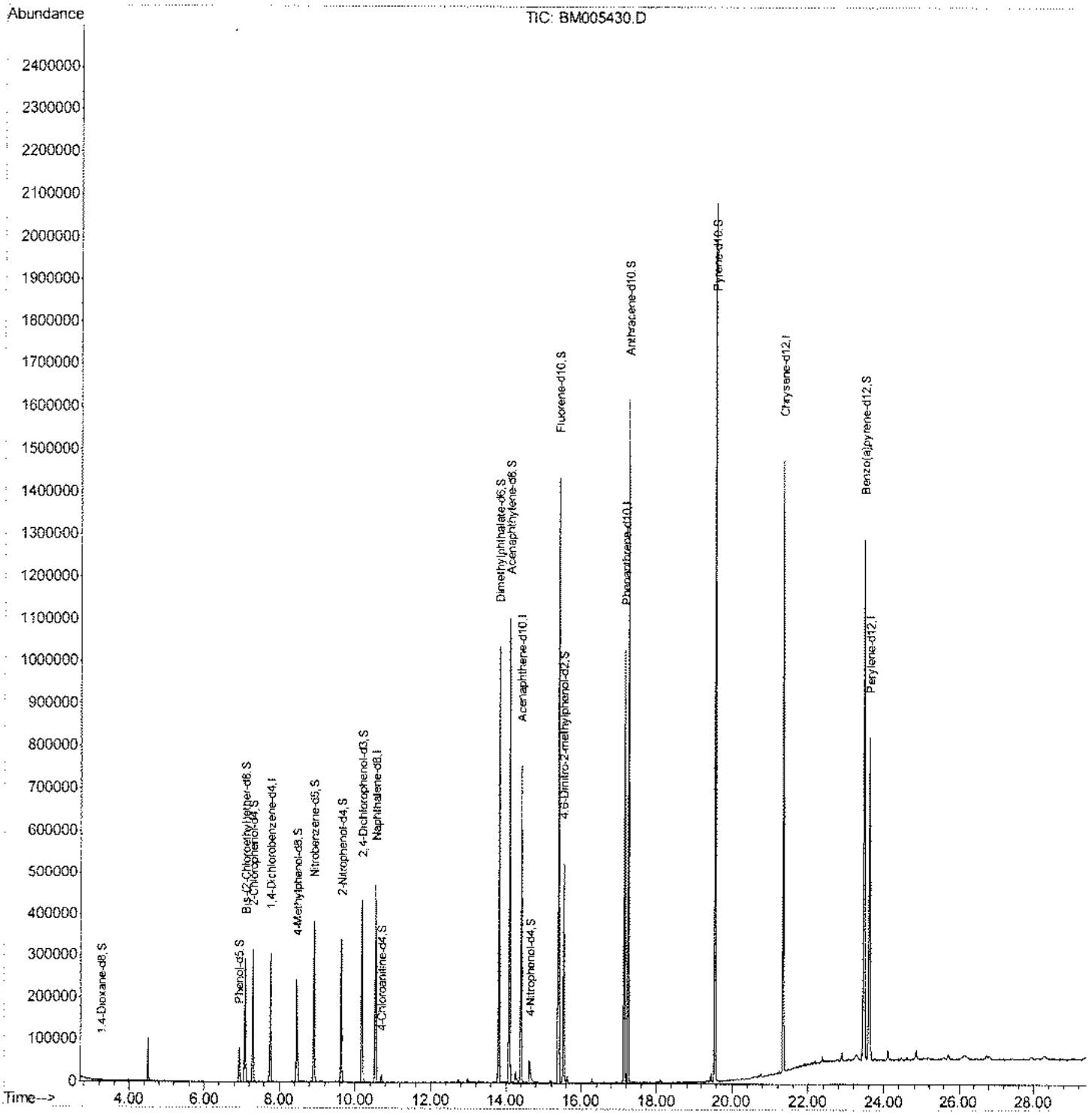
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005430.D
Acq On : 13 May 2016 13:36
Operator : UM/SJ
Sample : H2874-09
Misc :
ALS Vial : 57 Sample Multiplier: 1

Quant Time: May 14 00:36:40 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113

Manual Integrations APPROVED
sohil
5/14/2016 9:58:34 AM



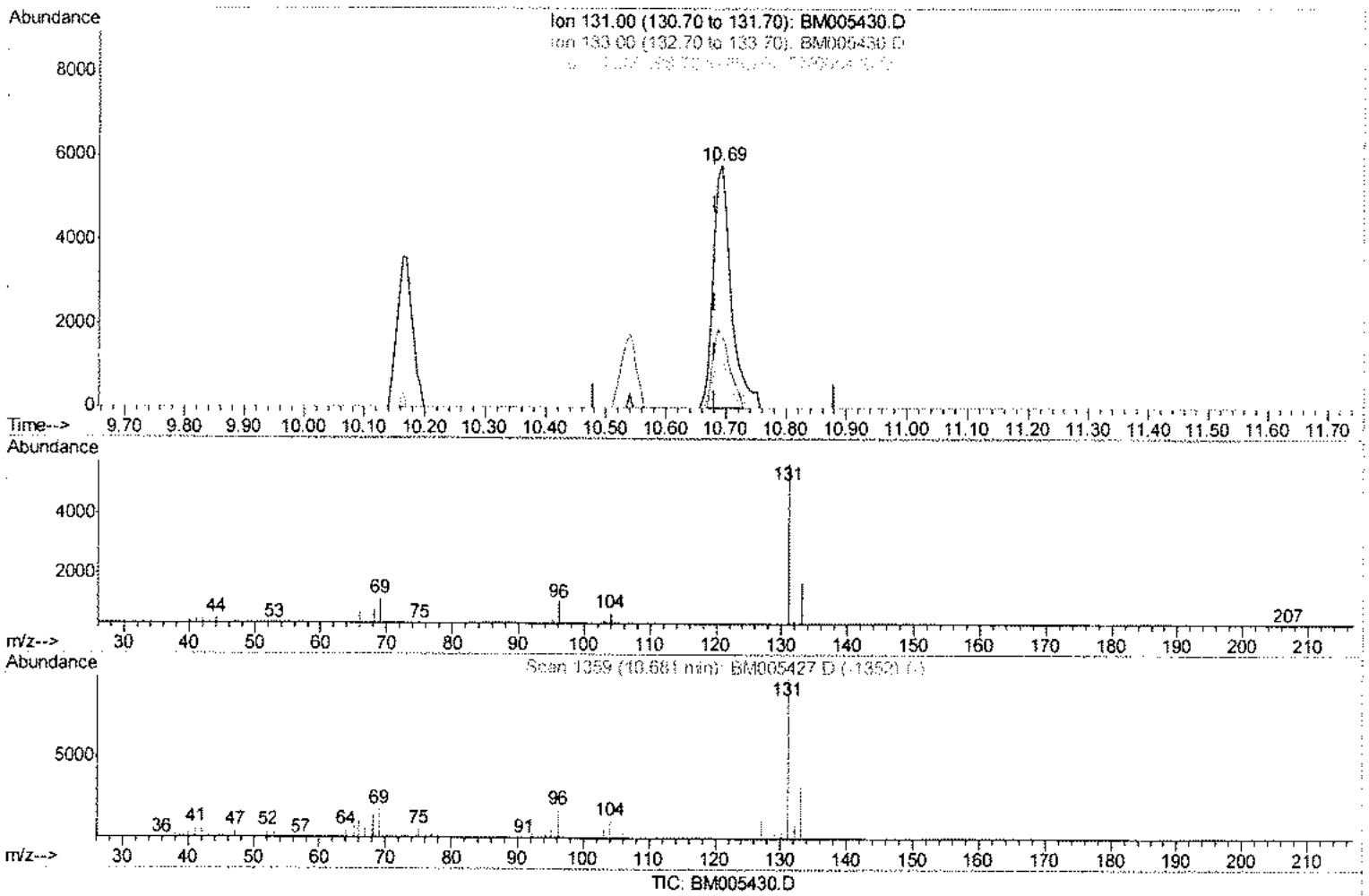
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005430.D
Acq On : 13 May 2016 13:36
Operator : UM/SJ
Sample : H2874-09
Misc :
ALS Vial : 57 Sample Multiplier: 1

Quant Time: May 14 00:20:30 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113

Manual Integrations APPROVED
sohil
5/14/2016 9:58:34 AM



TIC: BM005430.D

(29) 4-Chloroaniline-d4 (S)

10.692min (+0.012) 1.71ng/ul m U,M 05/17/16

response 12023

Ion	Exp%	Act%
131.00	100	100
133.00	32.30	29.70
69.00	19.20	19.80
0.00	0.00	0.00

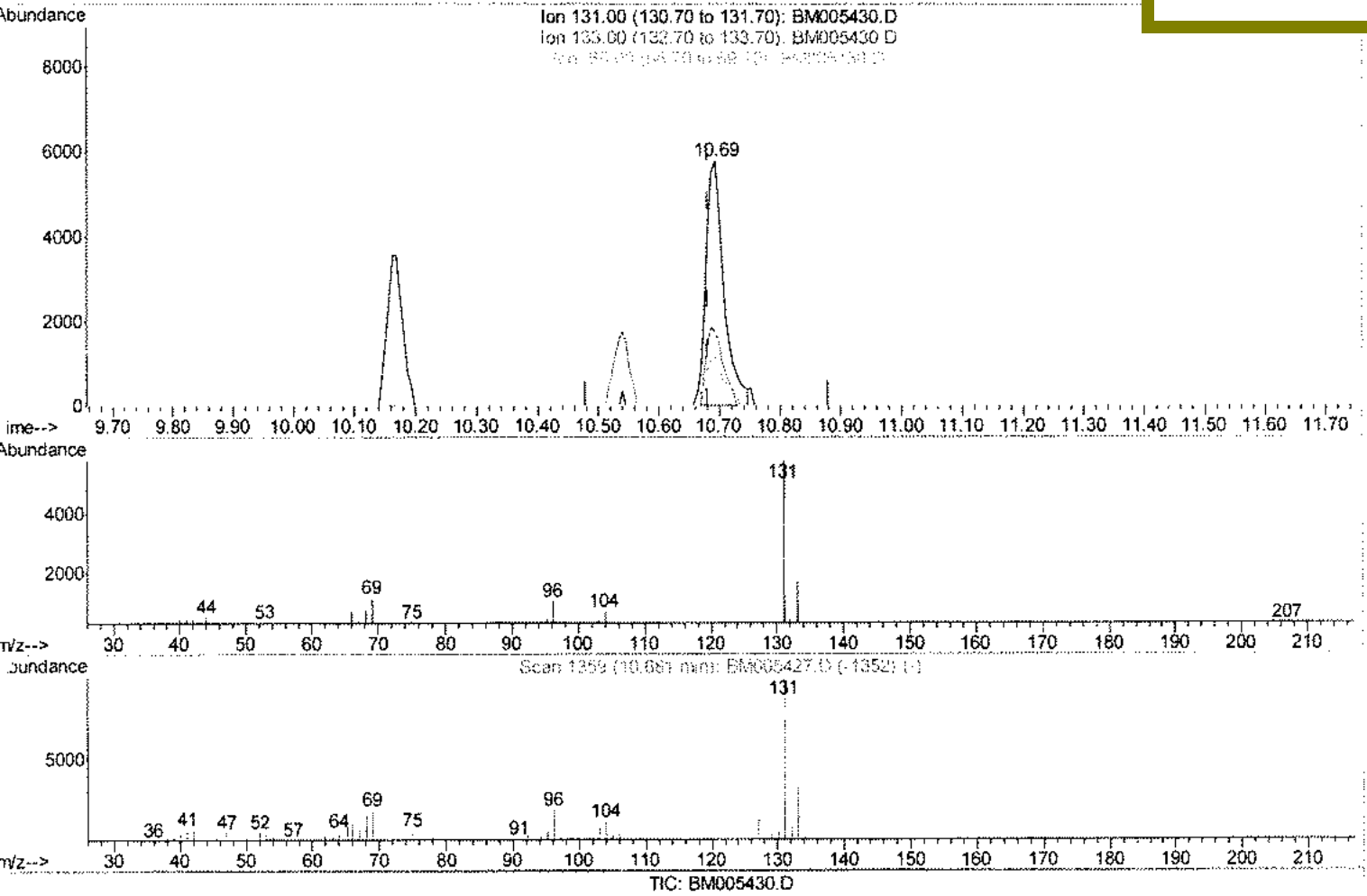
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005430.D
Acq On : 13 May 2016 13:36
Operator : UM/SJ
Sample : H2874-09
Misc :
ALS Vial : 57 Sample Multiplier: 1

Quant Time: May 14 00:20:30 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113

Manual Integrations APPROVED
sohil
5/14/2016 9:58:34 AM



(29) 4-Chloroaniline-d4 (S)

10.692min (+0.012) 1.69ng/ul

response 11888

Ion	Exp%	Act%
131.00	100	100
133.00	32.30	29.70
69.00	19.20	19.80
0.00	0.00	0.00

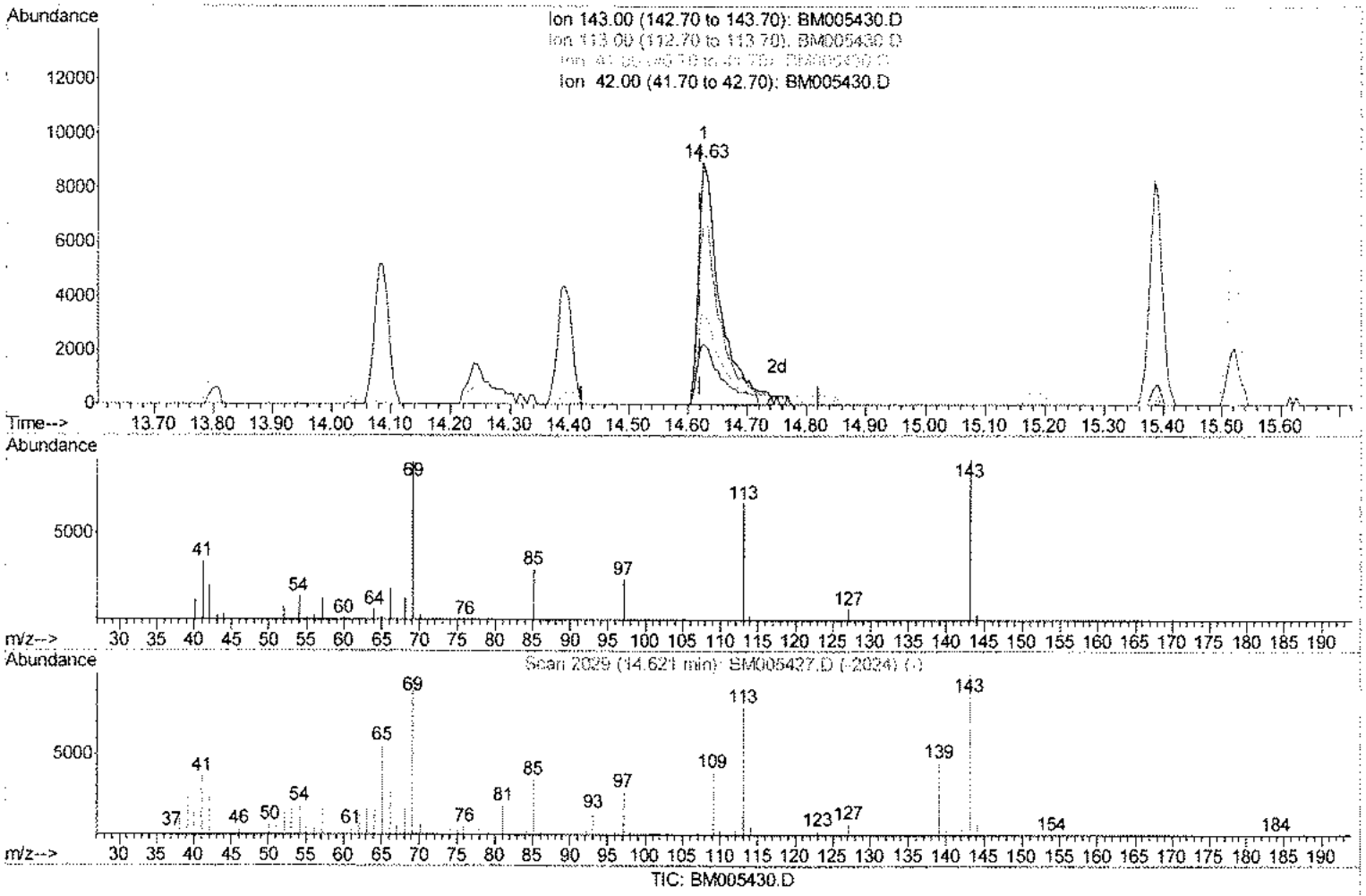
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005430.D
Acq On : 13 May 2016 13:36
Operator : UM/SJ
Sample : H2874-09
Misc :
ALS Vial : 57 Sample Multiplier: 1

Quant Time: May 14 00:20:30 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113

Manual Integrations APPROVED
sohil
5/14/2016 9:58:34 AM



TIC: BM005430.D

(51) 4-Nitrophenol-d4 (S)

14.627min (+0.006) 6.30ng/ul m U.M

response 23072 05/17/16

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	73.92
41.00	38.10	39.07
42.00	26.00	24.96

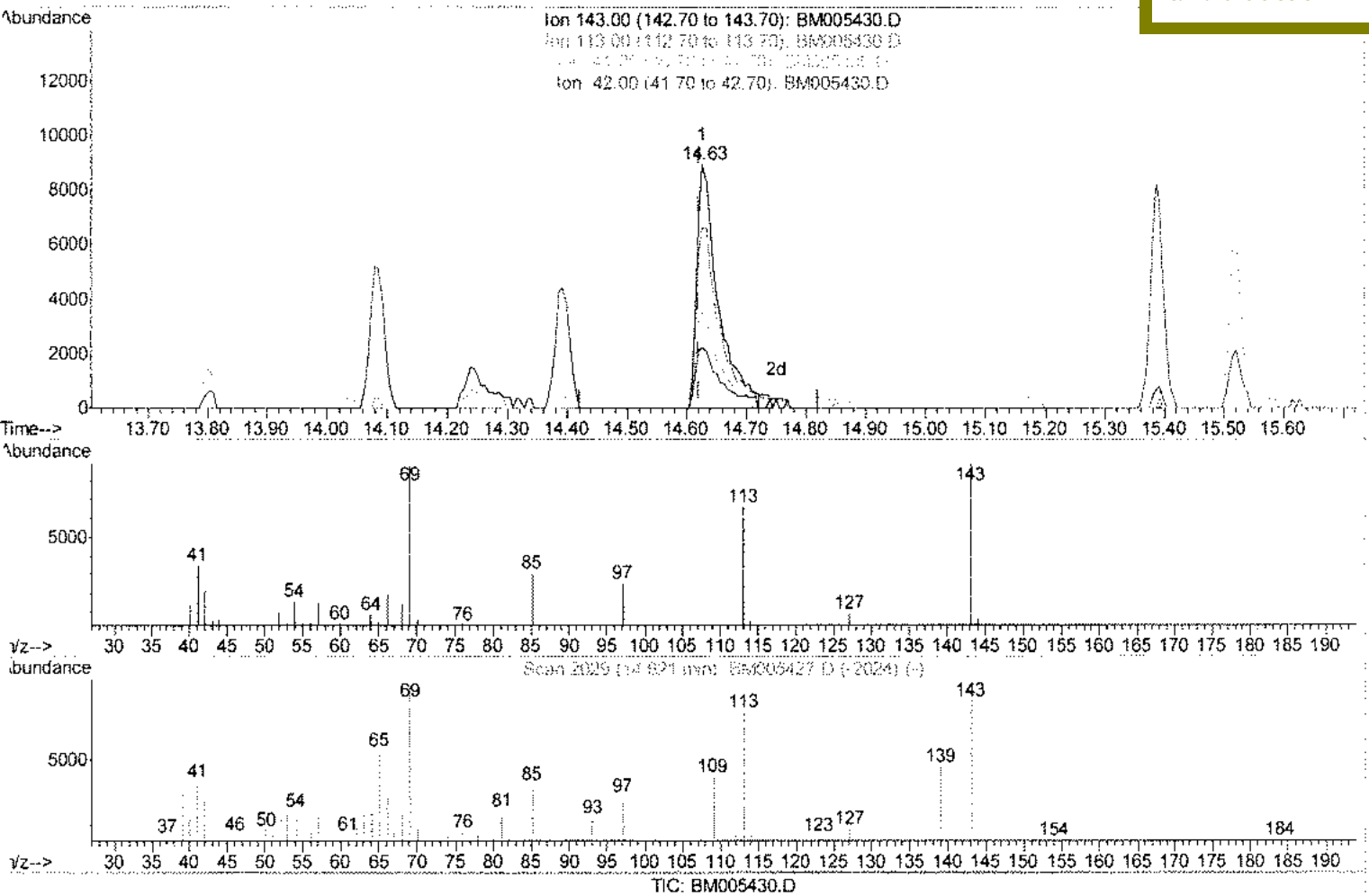
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005430.D
Acq On : 13 May 2016 13:36
Operator : UM/SJ
Sample : H2874-09
Misc :
ALS Vial : 57 Sample Multiplier: 1

Quant Time: May 14 00:20:30 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113

Manual Integrations APPROVED
sohil
5/14/2016 9:58:34 AM



TIC: BM005430.D

(51) 4-Nitrophenol-d4 (S)

14.627min (+0.006) 6.04ng/ul

response 22132

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	73.92
41.00	38.10	39.07
42.00	26.00	24.96

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005430.D
Acq On : 13 May 2016 13:36
Operator : UM/SJ
Sample : H2874-09
Misc :
ALS Vial : 57 Sample Multiplier: 1

Quant Time: May 14 00:36:40 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4113

Manual Integrations APPROVED
sohil
5/14/2016 9:58:34 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	82842	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	389680	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	250486	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	608820	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	700167	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	579671	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	2227	1.26	ng/uL	0.00
5) Phenol-d5	6.93	99	48986	6.52	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	131966	30.79	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	142589	25.13	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	95815	15.43	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	95070	34.17	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	110944	35.22	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.16	165	174745	29.85	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	12023m	1.71	ng/ul	0.01
43) Dimethylphthalate-d6	13.80	166	695614	34.65	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	797717	33.87	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	23072m	6.30	ng/ul	0.00
57) Fluorene-d10	15.39	176	587701	33.90	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	118359	34.56	ng/ul	0.00
70) Anthracene-d10	17.24	188	946542	35.17	ng/ul	0.00
76) Pyrene-d10	19.54	212	1078183	33.36	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	904682	35.26	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

V.M 05/17/16

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group | Contract: EPW14030

Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4010

Analytical Method : SVOA | Level :

Instrument ID: BNA_M | Calibration Date(s): 05/05/2016 05/05/2016

GC Column: ZB-GR | ID: 0.25 (mm) | Calibration Time(s): 11:09 15:53

Length : 30 (m)

Heated Purge: (Y/N) | Purge Volume : (mL)

LAB FILE ID: RRF005 =BM005231.D RRF010= BM005232.D RRF020 =BM005233.D
RRF040 =BM005234.D RRF080= BM005235.D RRF160 =BM005236.D

ANALYTE	RRF005	RRF010	RRF020	RRF040	RRF080	RRF160	$\overline{RRF}$	% RSD
1,4-Dioxane	0.797	0.789	0.828	0.752	0.710		0.776	5.8
Benzaldehyde		1.093	1.158	1.003	0.762	0.378	0.879	36.2
Phenol		1.841	1.952	1.887	1.887	1.807	1.875	2.9
Bis(2-Chloroethyl)ether		1.468	1.502	1.430	1.377	1.280	1.411	6.2
2-Chlorophenol	1.318	1.383	1.465	1.423	1.418		1.401	3.9
2-Methylphenol		1.394	1.492	1.483	1.475	1.401	1.449	3.3
2,2-oxybis(1-Chloropropane)		2.031	2.029	1.954	1.847	1.712	1.915	7.1
Acetophenone		2.412	2.419	2.193	2.125	1.958	2.221	8.9
4-Methylphenol		1.600	1.689	1.619	1.594	1.538	1.608	3.4
N-Nitroso-di-n-propylamine	1.134	1.218	1.227	1.144	1.080		1.161	5.3
Hexachloroethane	0.517	0.523	0.541	0.530	0.525		0.527	1.7
Nitrobenzene	0.340	0.354	0.369	0.362	0.363		0.357	3.1
Isophorone	0.643	0.681	0.723	0.716	0.708		0.694	4.7
2-Nitrophenol	0.155	0.169	0.181	0.182	0.183		0.174	7.0
2,4-Dimethylphenol	0.356	0.371	0.382	0.369	0.370		0.370	2.5
Bis(2-Chloroethoxy)methane	0.438	0.440	0.445	0.426	0.412		0.432	3.1
2,4-Dichlorophenol	0.290	0.301	0.320	0.316	0.311		0.308	4.0
Naphthalene	1.038	1.024	1.031	0.982	0.956		1.006	3.5
4-Chloroaniline		0.399	0.431	0.397	0.356	0.260	0.369	17.9
Hexachlorobutadiene	0.186	0.183	0.185	0.180	0.180		0.183	1.5
Caprolactam		0.097	0.114	0.121	0.122	0.120	0.115	9.0
4-Chloro-3-methylphenol	0.347	0.364	0.384	0.379	0.371		0.369	4.0
2-Methylnaphthalene	0.778	0.782	0.777	0.731	0.695		0.753	5.1
Hexachlorocyclopentadiene		0.237	0.296	0.330	0.356	0.335	0.311	15.0
2,4,6-Trichlorophenol	0.367	0.390	0.422	0.427	0.420		0.405	6.4
2,4,5-Trichlorophenol	0.408	0.440	0.462	0.477	0.461		0.450	5.9
1,1-Biphenyl	1.619	1.643	1.644	1.571	1.445		1.584	5.3
2-Chloronaphthalene	1.188	1.212	1.241	1.208	1.141		1.198	3.1
2-Nitroaniline	0.299	0.340	0.392	0.408	0.406		0.369	12.9
Dimethylphthalate	1.615	1.637	1.671	1.578	1.507		1.602	3.9
2,6-Dinitrotoluene	0.257	0.293	0.336	0.347	0.346		0.316	12.5
Acenaphthylene	2.003	2.081	2.082	1.949	1.832		1.989	5.2

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group | Contract: EPW14030

Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4010

Analytical Method : SVOA | Level :

Instrument ID: BNA_M | Calibration Date(s): 05/05/2016 05/05/2016

GC Column: ZB-GR | ID: 0.25 (mm) | Calibration Time(s): 11:09 15:53

Length : 30 (m)

Heated Purge: (Y/N) | Purge Volume : (mL)

LAB FILE ID: RRF005 =BM005231.D RRF010= BM005232.D RRF020 =BM005233.D
RRF040 =BM005234.D RRF080= BM005235.D RRF160 =BM005236.D

ANALYTE	RRF005	RRF010	RRF020	RRF040	RRF080	RRF160	$\overline{RRF}$	% RSD
3-Nitroaniline		0.305	0.370	0.360	0.344	0.305	0.337	9.1
Acenaphthene	1.361	1.374	1.343	1.270	1.206		1.311	5.4
2,4-Dinitrophenol		0.106	0.155	0.192	0.226	0.229	0.182	28.5
4-Nitrophenol		0.221	0.246	0.252	0.259	0.239	0.243	6.0
Dibenzofuran	1.992	1.988	1.979	1.850	1.701		1.902	6.7
2,4-Dinitrotoluene	0.397	0.463	0.498	0.507	0.490		0.471	9.5
Diethylphthalate	1.599	1.636	1.685	1.626	1.546		1.618	3.2
Fluorene	1.642	1.613	1.525	1.411	1.244		1.487	11.0
4-Chlorophenyl-phenylether	0.807	0.795	0.756	0.701	0.626		0.737	10.1
4-Nitroaniline		0.337	0.374	0.370	0.361	0.342	0.357	4.6
4,6-Dinitro-2-methylphenol		0.103	0.119	0.126	0.126	0.116	0.118	8.1
N-Nitrosodiphenylamine	0.571	0.581	0.563	0.534	0.489		0.548	6.7
4-Bromophenyl-phenylether	0.194	0.198	0.199	0.190	0.179		0.192	4.2
1,2,4,5-Tetrachlorobenzene	0.600	0.609	0.633	0.614	0.586		0.608	2.9
Hexachlorobenzene	0.219	0.222	0.223	0.212	0.199		0.215	4.6
Atrazine		0.208	0.218	0.210	0.194	0.169	0.200	9.7
Pentachlorophenol		0.101	0.118	0.126	0.129	0.124	0.120	9.3
Phenanthrene	1.130	1.111	1.095	1.012	0.911		1.052	8.6
Anthracene	1.133	1.118	1.084	1.010	0.898		1.048	9.2
Carbazole		1.028	1.027	0.953	0.867	0.738	0.922	13.3
Di-n-butylphthalate	1.097	1.153	1.199	1.137	1.040		1.125	5.3
Fluoranthene		1.346	1.339	1.213	1.059	0.868	1.165	17.4
Pyrene	1.201	1.193	1.200	1.142	1.065		1.160	5.1
Butylbenzylphthalate	0.419	0.452	0.502	0.524	0.512		0.482	9.3
3,3-Dichlorobenzidine		0.348	0.403	0.376	0.347	0.324	0.360	8.5
Benzo(a)anthracene	1.188	1.175	1.194	1.132	1.062		1.150	4.8
Chrysene	1.145	1.105	1.138	1.077	0.992		1.091	5.7
Bis(2-ethylhexyl)phthalate	0.618	0.665	0.728	0.697	0.637		0.669	6.6
Di-n-octyl phthalate		1.202	1.271	1.264	1.143	0.960	1.168	10.9
Benzo(b)fluoranthene	1.218	1.200	1.181	1.175	1.072		1.169	4.8
Benzo(k)fluoranthene	1.124	1.152	1.162	1.069	0.996		1.101	6.2
Benzo(a)pyrene	1.144	1.148	1.145	1.083	1.008		1.106	5.5

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group | Contract: EPW14030

Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4010

Analytical Method : SVOA | Level :

Instrument ID: BNA_M | Calibration Date(s): 05/05/2016 05/05/2016

GC Column: ZB-GR | ID: 0.25 (mm) | Calibration Time(s): 11:09 15:53

Length : 30 (m)

Heated Purge: (Y/N) | Purge Volume : (mL)

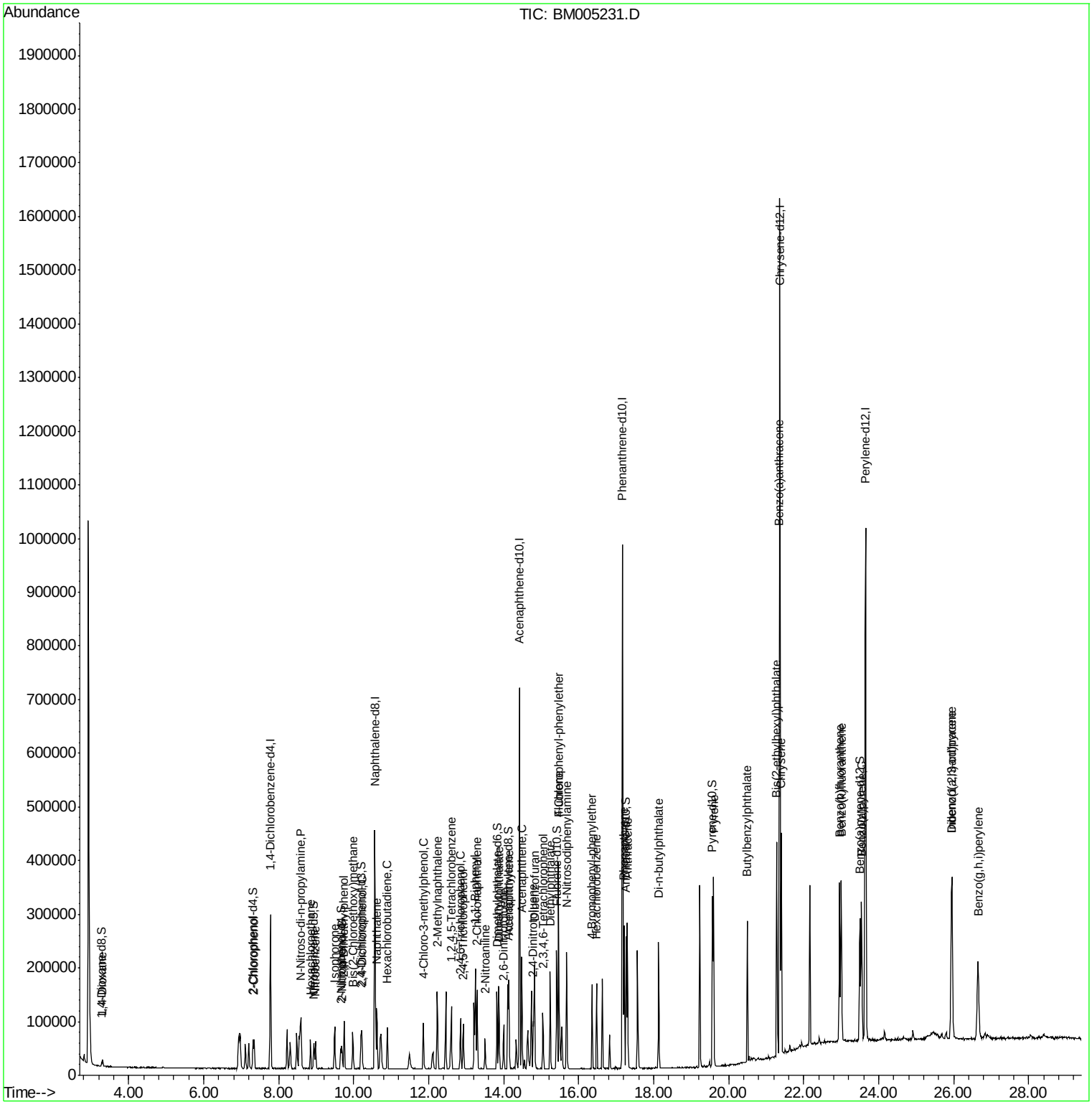
LAB FILE ID:	RRF005 =BM005231.D RRF040 =BM005234.D			RRF010= BM005232.D RRF080= BM005235.D			RRF020 =BM005233.D RRF160 =BM005236.D	
ANALYTE	RRF005	RRF010	RRF020	RRF040	RRF080	RRF160	$\overline{\text{RRF}}$	% RSD
Indeno(1,2,3-cd)pyrene	1.248	1.233	1.258	1.191	1.103		1.206	5.3
Dibenzo(a,h)anthracene	1.054	1.045	1.059	0.991	0.898		1.010	6.7
Benzo(g,h,i)perylene	1.040	1.020	1.050	1.032	0.968		1.022	3.2
2,3,4,6-Tetrachlorophenol	0.346	0.370	0.398	0.402	0.395		0.382	6.2
1,4-Dioxane-d8	0.444	0.437	0.438	0.413	0.395		0.425	4.8
Phenol-d5		1.743	1.864	1.843	1.830	1.791	1.814	2.6
Bis-(2-Chloroethyl)ether-d8		1.080	1.106	1.045	0.998	0.945	1.035	6.2
2-Chlorophenol-d4	1.275	1.328	1.426	1.408	1.413		1.370	4.8
4-Methylphenol-d8		1.440	1.536	1.531	1.513	1.476	1.499	2.7
Nitrobenzene-d5	0.126	0.135	0.147	0.151	0.154		0.143	8.4
2-Nitrophenol-d4	0.138	0.151	0.169	0.173	0.177		0.162	10.2
2,4-Dichlorophenol-d3	0.275	0.292	0.313	0.311	0.311		0.300	5.5
4-Chloroaniline-d4		0.383	0.426	0.396	0.351	0.252	0.362	18.5
Dimethylphthalate-d6	1.582	1.624	1.676	1.611	1.524		1.603	3.5
Acenaphthylene-d8	1.825	1.918	1.975	1.888	1.795		1.880	3.8
4-Nitrophenol-d4		0.254	0.303	0.308	0.311	0.288	0.293	7.9
Fluorene-d10	1.448	1.438	1.429	1.352	1.255		1.384	5.9
4,6-Dinitro-2-methylphenol-d2		0.095	0.111	0.120	0.123	0.113	0.113	9.6
Anthracene-d10	0.929	0.932	0.914	0.857	0.787		0.884	7.0
Pyrene-d10	0.912	0.934	0.954	0.929	0.886		0.923	2.8
Benzo(a)pyrene-d12	0.893	0.905	0.908	0.885	0.836		0.885	3.3

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005231.D
Acq On : 05 May 2016 11:09
Operator : UM/SJ
Sample : SSTD00540
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD00540

Quant Time: May 05 14:04:10 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005231.D
Acq On : 05 May 2016 11:09
Operator : UM/SJ
Sample : SSTD00540
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD00540

Quant Time: May 05 14:04:10 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	77482	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	367748	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	244001	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.16	188	591120	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	705171	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	699412	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	3441	2.27	ng/uL	0.00
5) Phenol-d5	0.00	99	0d	0.00	ng/ul	
7) Bis-(2-Chloroethyl)ether-d	0.00	67	0d	0.00	ng/ul	
9) 2-Chlorophenol-d4	7.31	132	24702	4.87	ng/ul	0.00
13) 4-Methylphenol-d8	0.00	113	0d	0.00	ng/ul	
19) Nitrobenzene-d5	8.93	128	11562	4.67	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	12686	4.63	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	25307	4.77	ng/ul	0.00
29) 4-Chloroaniline-d4	0.00	131	0d	0.00	ng/ul	
43) Dimethylphthalate-d6	13.82	166	96474	5.02	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	111352	4.91	ng/ul	0.00
51) 4-Nitrophenol-d4	0.00	143	0d	0.00	ng/ul	
57) Fluorene-d10	15.41	176	88310	5.18	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	0.00	200	0d	0.00	ng/ul	
70) Anthracene-d10	17.26	188	137322	5.18	ng/ul	0.00
76) Pyrene-d10	19.56	212	160760	5.15	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.50	264	156129	5.03	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	6177	2.19	ng/uL#	90
10) 2-Chlorophenol	7.34	128	25535	4.86	ng/ul	94
15) N-Nitroso-di-n-propylamine	8.57	70	21964	5.33	ng/ul	99
17) Hexachloroethane	8.85	117	10020	4.88	ng/ul	95
20) Nitrobenzene	8.97	77	31263	5.03	ng/ul	95
21) Isophorone	9.49	82	59080	5.02	ng/ul	96
23) 2-Nitrophenol	9.68	139	14268	4.76	ng/ul	96
24) 2,4-Dimethylphenol	9.74	107	32692	4.92	ng/ul	99
25) Bis(2-Chloroethoxy)methane	9.97	93	40257	5.44	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	26636	4.87	ng/ul	98
28) Naphthalene	10.62	128	95401	5.13	ng/ul	99
31) Hexachlorobutadiene	10.89	225	17113	4.80	ng/ul	99
33) 4-Chloro-3-methylphenol	11.86	107	31864	4.98	ng/ul	98
34) 2-Methylnaphthalene	12.23	142	71515	5.17	ng/ul	98
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	36606	4.93	ng/ul	97
38) 2,4,6-Trichlorophenol	12.85	196	22379	4.79	ng/ul	94
39) 2,4,5-Trichlorophenol	12.92	196	24890	4.74	ng/ul	95
40) 1,1'-Biphenyl	13.25	154	98762	5.18	ng/ul	98
41) 2-Chloronaphthalene	13.29	162	72471	4.97	ng/ul	99
42) 2-Nitroaniline	13.50	65	18246	4.68	ng/ul	89
44) Dimethylphthalate	13.87	163	98523	5.09	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	15678	4.33	ng/ul	97
47) Acenaphthylene	14.14	152	122204	5.05	ng/ul	100

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005231.D
Acq On : 05 May 2016 11:09
Operator : UM/SJ
Sample : SSTD00540
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD00540

Quant Time: May 05 14:04:10 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Acenaphthene	14.48	153	83035	5.18	ng/ul	99
53) Dibenzofuran	14.82	168	121528	5.13	ng/ul	98
54) 2,4-Dinitrotoluene	14.79	165	24205	4.28	ng/ul#	95
55) 2,3,4,6-Tetrachlorophenol	15.05	232	21133	4.59	ng/ul#	94
56) Diethylphthalate	15.24	149	97550	4.99	ng/ul	99
58) Fluorene	15.47	166	100154	5.37	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	49222	5.31	ng/ul	96
64) N-Nitrosodiphenylamine	15.67	169	84397	5.25	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	28617	5.08	ng/ul	96
66) Hexachlorobenzene	16.47	284	32365	5.03	ng/ul	97
69) Phenanthrene	17.21	178	166988	5.26	ng/ul	99
71) Anthracene	17.30	178	167417	5.25	ng/ul	99
73) Di-n-butylphthalate	18.13	149	162102	5.17	ng/ul	99
77) Pyrene	19.59	202	211675	5.32	ng/ul	99
78) Butylbenzylphthalate	20.49	149	73797	4.94	ng/ul	97
80) Benzo(a)anthracene	21.34	228	209481	5.21	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	108996	5.12	ng/ul	99
82) Chrysene	21.40	228	201866	5.22	ng/ul	99
85) Benzo(b)fluoranthene	22.96	252	212925	5.15	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	196555	4.88	ng/ul	98
88) Benzo(a)pyrene	23.54	252	200049	5.12	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.94	276	218199	5.55	ng/ul	99
90) Dibenzo(a,h)anthracene	25.95	278	184354	5.60	ng/ul	100
91) Benzo(g,h,i)perylene	26.64	276	181802	5.59	ng/ul	98

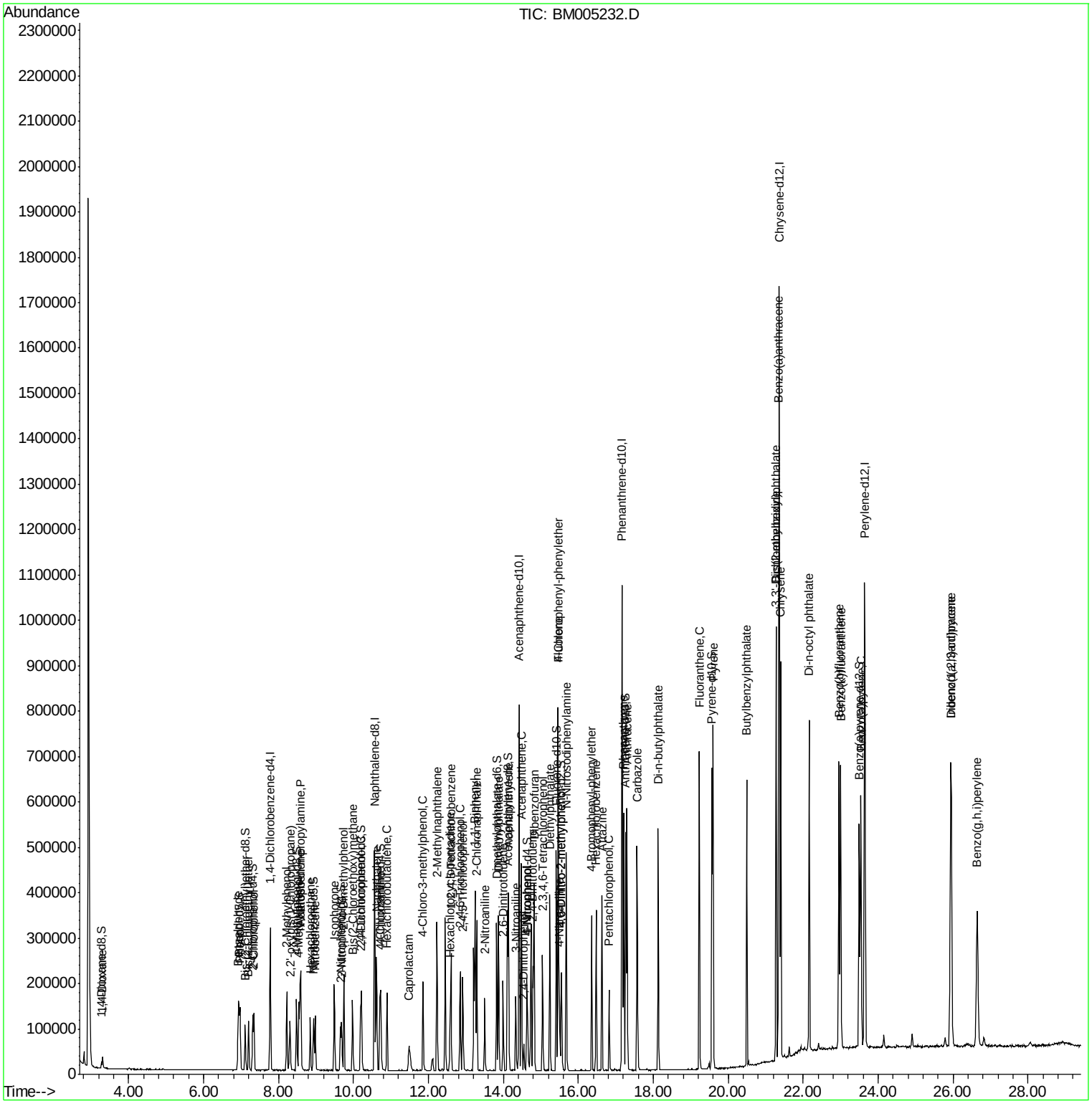
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005232.D
Acq On : 05 May 2016 11:45
Operator : UM/SJ
Sample : SSTD01041
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD01041

Quant Time: May 05 13:41:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005232.D
Acq On : 05 May 2016 11:45
Operator : UM/SJ
Sample : SSTD01041
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD01041

Quant Time: May 05 13:41:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	83684	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	405734	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	262777	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.16	188	633818	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	746308	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	730021	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	7315	4.47	ng/uL	0.00
5) Phenol-d5	6.95	99	72946	10.38	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	45177	11.23	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	55564	10.13	ng/ul	0.00
13) 4-Methylphenol-d8	8.48	113	60250	10.11	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	27391	10.04	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	30695	10.16	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	59213	10.12	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	77621	11.04	ng/ul	0.00
43) Dimethylphthalate-d6	13.82	166	213325	10.31	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	251940	10.31	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	33435	9.23	ng/ul	0.00
57) Fluorene-d10	15.41	176	188975	10.30	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.54	200	30123	8.66	ng/ul	0.00
70) Anthracene-d10	17.26	188	295453	10.40	ng/ul	0.00
76) Pyrene-d10	19.56	212	348652	10.56	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.49	264	330187	10.18	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	13212	4.35	ng/uL#	92
4) Benzaldehyde	6.92	77	45744	13.32	ng/ul	99
6) Phenol	6.97	94	77047	10.37	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.20	93	61411	10.91	ng/ul	99
10) 2-Chlorophenol	7.34	128	57858	10.19	ng/ul	98
11) 2-Methylphenol	8.22	108	58339	10.24	ng/ul	94
12) 2,2'-oxybis(1-Chloropropan	8.30	45	84980	11.55	ng/ul	99
14) Acetophenone	8.59	105	100927	11.12	ng/ul	98
15) N-Nitroso-di-n-propylamine	8.57	70	50947	11.44	ng/ul	100
16) 4-Methylphenol	8.54	108	66958	10.46	ng/ul	97
17) Hexachloroethane	8.85	117	21904	9.88	ng/ul	95
20) Nitrobenzene	8.97	77	71804	10.48	ng/ul	98
21) Isophorone	9.49	82	138221	10.64	ng/ul	99
23) 2-Nitrophenol	9.68	139	34272	10.36	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	75276	10.27	ng/ul	99
25) Bis(2-Chloroethoxy)methane	9.97	93	89304	10.93	ng/ul	99
27) 2,4-Dichlorophenol	10.21	162	61093	10.12	ng/ul	99
28) Naphthalene	10.61	128	207795	10.12	ng/ul	99
30) 4-Chloroaniline	10.73	127	80963	11.15	ng/ul	97
31) Hexachlorobutadiene	10.89	225	37051	9.42	ng/ul	98
32) Caprolactam	11.48	113	19669	9.33	ng/ul	91
33) 4-Chloro-3-methylphenol	11.85	107	73880	10.48	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	158715	10.41	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005232.D
Acq On : 05 May 2016 11:45
Operator : UM/SJ
Sample : SSTD01041
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD01041

Quant Time: May 05 13:41:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	80018	10.01	ng/ul	99
37) Hexachlorocyclopentadiene	12.57	237	31151	7.03	ng/ul	97
38) 2,4,6-Trichlorophenol	12.85	196	51267	10.19	ng/ul	94
39) 2,4,5-Trichlorophenol	12.92	196	57810	10.22	ng/ul	99
40) 1,1'-Biphenyl	13.25	154	215901	10.51	ng/ul	99
41) 2-Chloronaphthalene	13.29	162	159289	10.15	ng/ul	99
42) 2-Nitroaniline	13.50	65	44638	10.63	ng/ul	92
44) Dimethylphthalate	13.87	163	215050	10.32	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	38538	9.89	ng/ul	93
47) Acenaphthylene	14.13	152	273373	10.48	ng/ul	99
48) 3-Nitroaniline	14.33	138	40021	9.83	ng/ul	91
49) Acenaphthene	14.48	153	180502	10.46	ng/ul	99
50) 2,4-Dinitrophenol	14.55	184	13948	6.39	ng/ul	91
52) 4-Nitrophenol	14.64	109	28996	8.91	ng/ul	100
53) Dibenzofuran	14.82	168	261146	10.23	ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	60850	9.99	ng/ul	98
55) 2,3,4,6-Tetrachlorophenol	15.04	232	48553	9.79	ng/ul#	96
56) Diethylphthalate	15.24	149	214890	10.20	ng/ul	99
58) Fluorene	15.47	166	211993	10.56	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	104411	10.45	ng/ul	98
60) 4-Nitroaniline	15.49	138	44321	9.79	ng/ul	98
63) 4,6-Dinitro-2-methylphenol	15.55	198	32627	8.90	ng/ul#	91
64) N-Nitrosodiphenylamine	15.67	169	183981	10.68	ng/ul	100
65) 4-Bromophenyl-phenylether	16.36	248	62681	10.37	ng/ul	97
66) Hexachlorobenzene	16.47	284	70449	10.21	ng/ul	96
67) Atrazine	16.63	200	65970	10.50	ng/ul	97
68) Pentachlorophenol	16.82	266	31979	8.44	ng/ul	97
69) Phenanthrene	17.20	178	351982	10.35	ng/ul	100
71) Anthracene	17.30	178	354434	10.37	ng/ul	99
72) Carbazole	17.57	167	325779	10.96	ng/ul	100
73) Di-n-butylphthalate	18.13	149	365342	10.87	ng/ul	100
74) Fluoranthene	19.23	202	426671	11.23	ng/ul	100
77) Pyrene	19.59	202	445024	10.57	ng/ul	100
78) Butylbenzylphthalate	20.49	149	168630	10.66	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	129782	9.86	ng/ul	99
80) Benzo(a)anthracene	21.34	228	438607	10.31	ng/ul	100
81) Bis(2-ethylhexyl)phthalate	21.27	149	248130	11.01	ng/ul	98
82) Chrysene	21.40	228	412472	10.08	ng/ul	99
84) Di-n-octyl phthalate	22.16	149	438661	10.14	ng/ul	99
85) Benzo(b)fluoranthene	22.95	252	437833	10.14	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	420405	10.00	ng/ul	100
88) Benzo(a)pyrene	23.54	252	419087	10.27	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.94	276	449896	10.96	ng/ul	99
90) Dibenzo(a,h)anthracene	25.94	278	381529	11.10	ng/ul	99
91) Benzo(g,h,i)perylene	26.64	276	372189	10.97	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

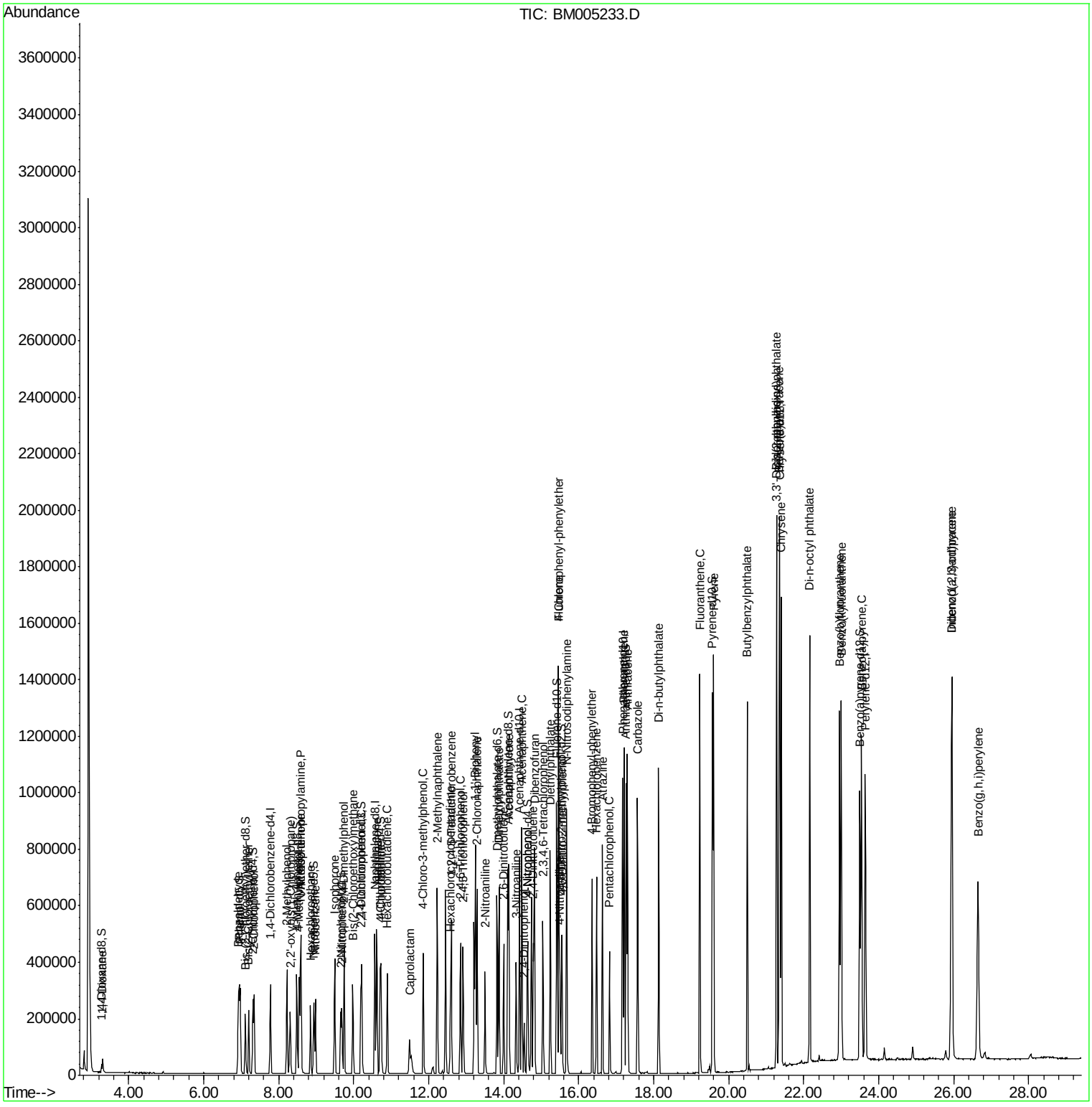
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
sohil
5/6/2016 7:14:59 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
sohil
5/6/2016 7:14:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	85340	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	410502	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	259664	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	638987	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	725743	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	742303	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	14937	8.95	ng/uL	0.00
5) Phenol-d5	6.95	99	159033	22.19	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	94416	23.02	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	121697	21.76	ng/ul	0.00
13) 4-Methylphenol-d8	8.48	113	131095	21.57	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	60545	21.92	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	69418	22.71	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	128474	21.71	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	175012	24.61	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	435081	21.29	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	512945	21.24	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	78607	21.96	ng/ul	0.00
57) Fluorene-d10	15.41	176	371068	20.47	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.54	200	71168	20.29	ng/ul	0.00
70) Anthracene-d10	17.26	188	584211	20.39	ng/ul	0.00
76) Pyrene-d10	19.56	212	692650	21.58	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.49	264	674114	20.45	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	28273	9.12	ng/uL	98
4) Benzaldehyde	6.92	77	98828	28.22	ng/ul	97
6) Phenol	6.97	94	166572	21.98	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	128185	22.34	ng/ul	97
10) 2-Chlorophenol	7.34	128	125006	21.60	ng/ul	98
11) 2-Methylphenol	8.22	108	127313	21.90	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.30	45	173188	23.08	ng/ul	99
14) Acetophenone	8.59	105	206418	22.31	ng/ul	100
15) N-Nitroso-di-n-propylamine	8.57	70	104699	23.05	ng/ul	99
16) 4-Methylphenol	8.55	108	144160	22.09	ng/ul	96
17) Hexachloroethane	8.85	117	46148	20.40	ng/ul	99
20) Nitrobenzene	8.97	77	151589	21.86	ng/ul	97
21) Isophorone	9.49	82	296803	22.59	ng/ul	99
23) 2-Nitrophenol	9.68	139	74467	22.26	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	156683	21.12	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.97	93	182804	22.11	ng/ul	99
27) 2,4-Dichlorophenol	10.21	162	131526	21.54	ng/ul	99
28) Naphthalene	10.61	128	423115	20.37	ng/ul	99
30) 4-Chloroaniline	10.73	127	176934	24.08	ng/ul	98
31) Hexachlorobutadiene	10.89	225	75992	19.11	ng/ul	99
32) Caprolactam	11.48	113	46902m	22.00	ng/ul	
33) 4-Chloro-3-methylphenol	11.85	107	157685	22.10	ng/ul	98
34) 2-Methylnaphthalene	12.23	142	318952	20.67	ng/ul	100

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	164451	20.82	ng/ul	99
37) Hexachlorocyclopentadiene	12.57	237	76874	17.55	ng/ul	93
38) 2,4,6-Trichlorophenol	12.84	196	109648	22.05	ng/ul	94
39) 2,4,5-Trichlorophenol	12.92	196	120034	21.48	ng/ul	100
40) 1,1'-Biphenyl	13.24	154	426795	21.03	ng/ul	100
41) 2-Chloronaphthalene	13.29	162	322157	20.78	ng/ul	99
42) 2-Nitroaniline	13.50	65	101733	24.51	ng/ul	95
44) Dimethylphthalate	13.87	163	434026	21.07	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	87306	22.68	ng/ul	91
47) Acenaphthylene	14.14	152	540693	20.98	ng/ul	100
48) 3-Nitroaniline	14.33	138	96063	23.88	ng/ul	97
49) Acenaphthene	14.48	153	348839	20.46	ng/ul	98
50) 2,4-Dinitrophenol	14.54	184	40323	18.69	ng/ul	95
52) 4-Nitrophenol	14.64	109	63917	19.87	ng/ul	99
53) Dibenzofuran	14.82	168	513939	20.38	ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	129322	21.49	ng/ul	94
55) 2,3,4,6-Tetrachlorophenol	15.04	232	103385	21.09	ng/ul#	93
56) Diethylphthalate	15.24	149	437479	21.02	ng/ul	99
58) Fluorene	15.47	166	396021	19.96	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	196258	19.88	ng/ul	99
60) 4-Nitroaniline	15.50	138	97225	21.74	ng/ul	98
63) 4,6-Dinitro-2-methylphenol	15.56	198	76247	20.64	ng/ul#	88
64) N-Nitrosodiphenylamine	15.67	169	359924	20.72	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	126984	20.85	ng/ul	96
66) Hexachlorobenzene	16.47	284	142418	20.47	ng/ul	98
67) Atrazine	16.63	200	139465	22.03	ng/ul	99
68) Pentachlorophenol	16.82	266	75332	19.72	ng/ul	98
69) Phenanthrene	17.21	178	699634	20.40	ng/ul	99
71) Anthracene	17.30	178	692458	20.10	ng/ul	99
72) Carbazole	17.57	167	656169	21.91	ng/ul	99
73) Di-n-butylphthalate	18.13	149	766300	22.62	ng/ul	100
74) Fluoranthene	19.23	202	855338	22.33	ng/ul	100
77) Pyrene	19.59	202	871228	21.28	ng/ul	99
78) Butylbenzylphthalate	20.49	149	364649	23.71	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	292510	22.85	ng/ul	98
80) Benzo(a)anthracene	21.34	228	866329	20.93	ng/ul	100
81) Bis(2-ethylhexyl)phthalate	21.27	149	528146	24.10	ng/ul	98
82) Chrysene	21.40	228	826013	20.76	ng/ul	99
84) Di-n-octyl phthalate	22.16	149	943740	21.45	ng/ul	100
85) Benzo(b)fluoranthene	22.96	252	876542	19.96	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	862599	20.18	ng/ul	100
88) Benzo(a)pyrene	23.54	252	849948	20.48	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.94	276	934142	22.37	ng/ul	98
90) Dibenzo(a,h)anthracene	25.95	278	785969	22.48	ng/ul	99
91) Benzo(g,h,i)perylene	26.64	276	779275	22.59	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
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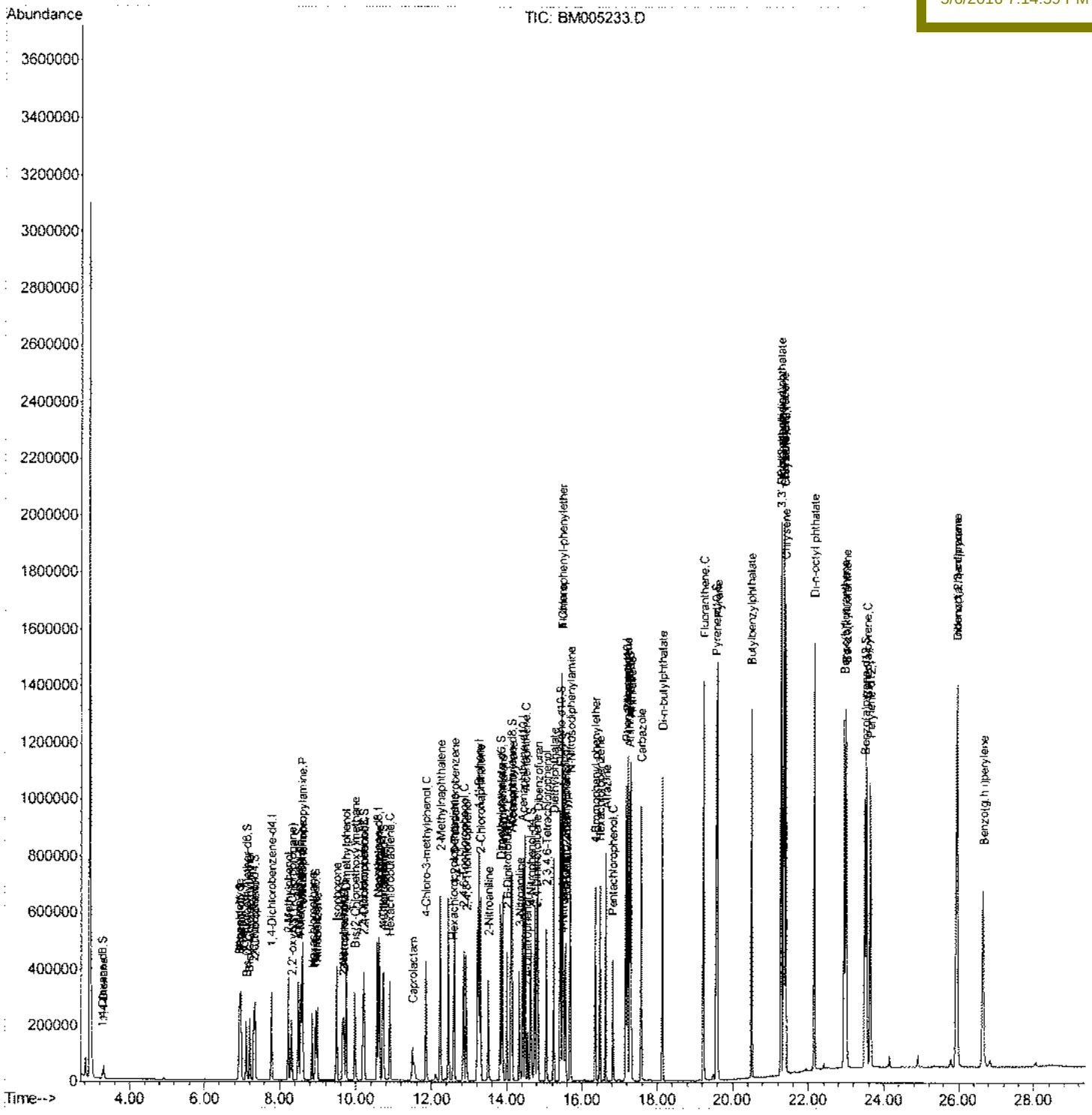

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:42:18 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
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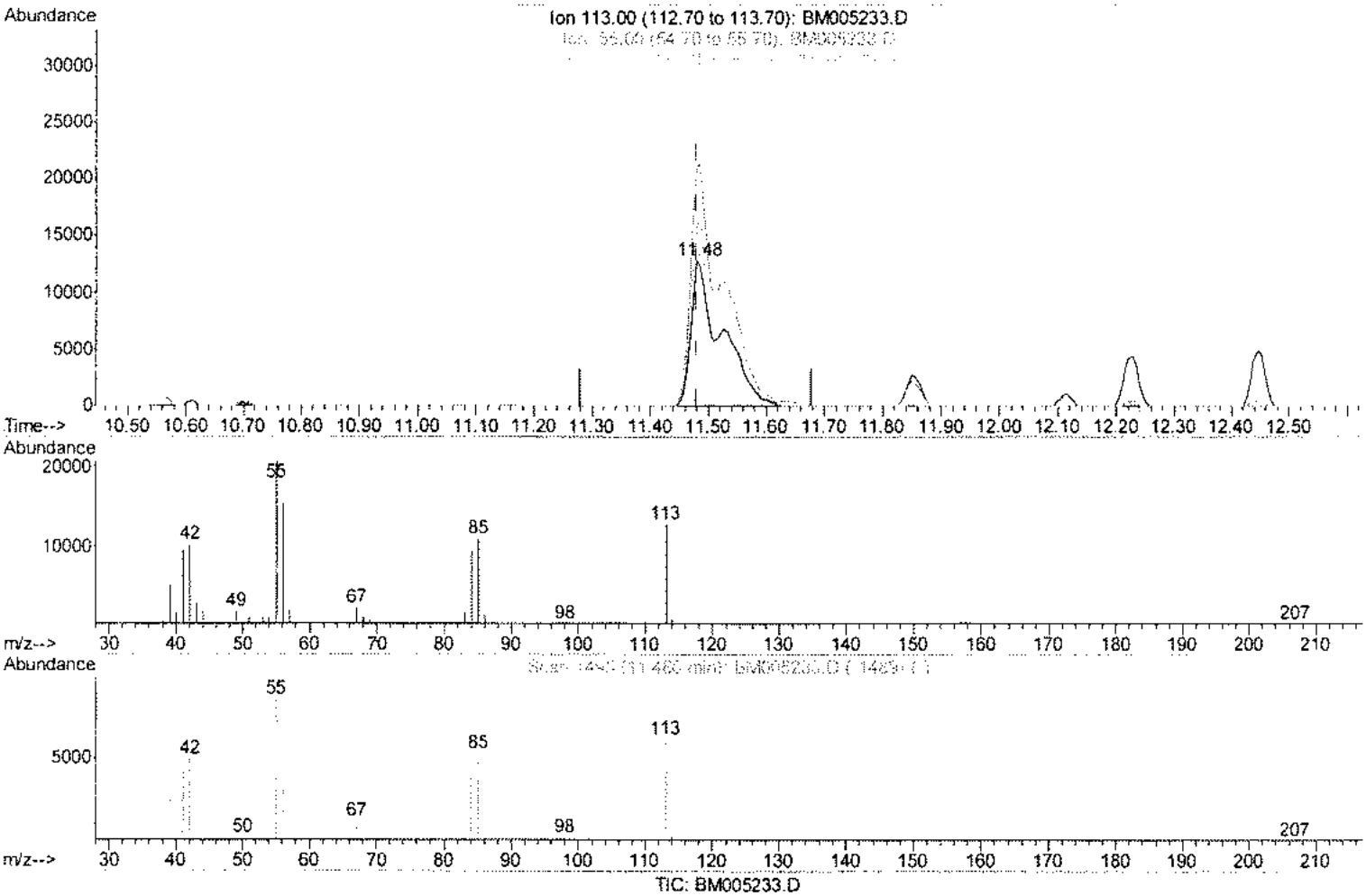

(32) Caprolactam

11.480min (0.000) 22.00ng/ul m UM 05/07/16

response 46902

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	161.31
56.00	120.80	120.84
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:42:18 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
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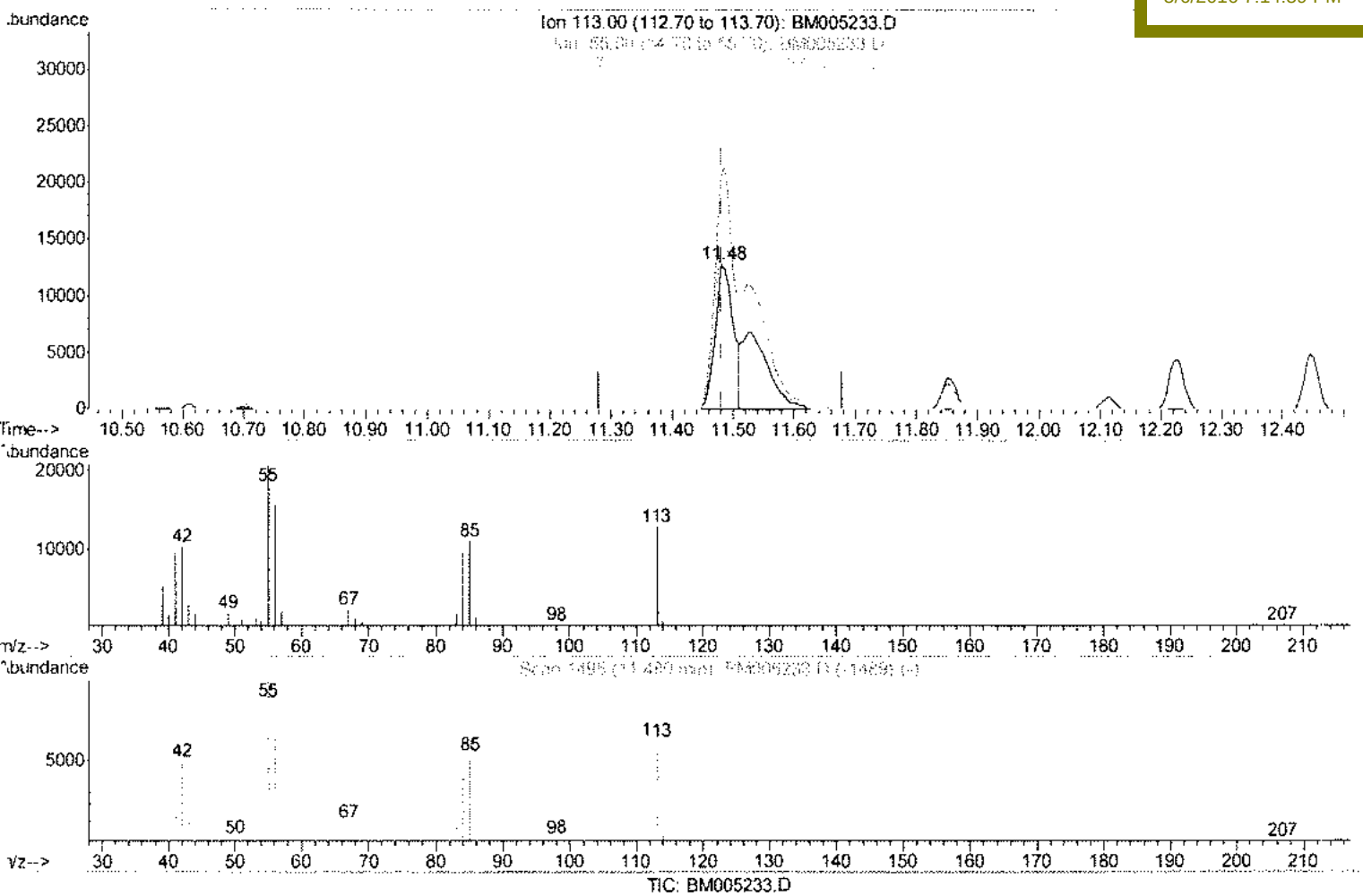

(32) Caprolactam

11.480min (0.000) 12.53ng/ul

response 26716

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	161.31
56.00	120.80	120.84
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02042

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	85340	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	410502	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	259664	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	638987	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	725743	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	742303	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	14937	8.95	ng/uL	0.00
5) Phenol-d5	6.95	99	159033	22.19	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	94416	23.02	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	121697	21.76	ng/ul	0.00
13) 4-Methylphenol-d8	8.48	113	131095	21.57	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	60545	21.92	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	69418	22.71	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	128474	21.71	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	175012	24.61	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	435081	21.29	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	512945	21.24	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	78607	21.96	ng/ul	0.00
57) Fluorene-d10	15.41	176	371068	20.47	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.54	200	71168	20.29	ng/ul	0.00
70) Anthracene-d10	17.26	188	584211	20.39	ng/ul	0.00
76) Pyrene-d10	19.56	212	692650	21.58	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.49	264	674114	20.45	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	28273	9.12	ng/uL	98
4) Benzaldehyde	6.92	77	98828	28.22	ng/ul	97
6) Phenol	6.97	94	166572	21.98	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	128185	22.34	ng/ul	97
10) 2-Chlorophenol	7.34	128	125006	21.60	ng/ul	98
11) 2-Methylphenol	8.22	108	127313	21.90	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.30	45	173188	23.08	ng/ul	99
14) Acetophenone	8.59	105	206418	22.31	ng/ul	100
15) N-Nitroso-di-n-propylamine	8.57	70	104699	23.05	ng/ul	99
16) 4-Methylphenol	8.55	108	144160	22.09	ng/ul	96
17) Hexachloroethane	8.85	117	46148	20.40	ng/ul	99
20) Nitrobenzene	8.97	77	151589	21.86	ng/ul	97
21) Isophorone	9.49	82	296803	22.59	ng/ul	99
23) 2-Nitrophenol	9.68	139	74467	22.26	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	156683	21.12	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.97	93	182804	22.11	ng/ul	99
27) 2,4-Dichlorophenol	10.21	162	131526	21.54	ng/ul	99
28) Naphthalene	10.61	128	423115	20.37	ng/ul	99
30) 4-Chloroaniline	10.73	127	176934	24.08	ng/ul	98
31) Hexachlorobutadiene	10.89	225	75992	19.11	ng/ul	99
32) Caprolactam	11.48	113	46902m	22.00	ng/ul	
33) 4-Chloro-3-methylphenol	11.85	107	157685	22.10	ng/ul	98
34) 2-Methylnaphthalene	12.23	142	318952	20.67	ng/ul	100

U.M 05/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02042

Manual Integrations APPROVED
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5/6/2016 7:14:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	164451	20.82	ng/ul	99
37) Hexachlorocyclopentadiene	12.57	237	76874	17.55	ng/ul	93
38) 2,4,6-Trichlorophenol	12.84	196	109648	22.05	ng/ul	94
39) 2,4,5-Trichlorophenol	12.92	196	120034	21.48	ng/ul	100
40) 1,1'-Biphenyl	13.24	154	426795	21.03	ng/ul	100
41) 2-Chloronaphthalene	13.29	162	322157	20.78	ng/ul	99
42) 2-Nitroaniline	13.50	65	101733	24.51	ng/ul	95
44) Dimethylphthalate	13.87	163	434026	21.07	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	87306	22.68	ng/ul	91
47) Acenaphthylene	14.14	152	540693	20.98	ng/ul	100
48) 3-Nitroaniline	14.33	138	96063	23.88	ng/ul	97
49) Acenaphthene	14.48	153	348839	20.46	ng/ul	98
50) 2,4-Dinitrophenol	14.54	184	40323	18.69	ng/ul	95
52) 4-Nitrophenol	14.64	109	63917	19.87	ng/ul	99
53) Dibenzofuran	14.82	168	513939	20.38	ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	129322	21.49	ng/ul	94
55) 2,3,4,6-Tetrachlorophenol	15.04	232	103385	21.09	ng/ul#	93
56) Diethylphthalate	15.24	149	437479	21.02	ng/ul	99
58) Fluorene	15.47	166	396021	19.96	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	196258	19.88	ng/ul	99
60) 4-Nitroaniline	15.50	138	97225	21.74	ng/ul	98
63) 4,6-Dinitro-2-methylphenol	15.56	198	76247	20.64	ng/ul#	88
64) N-Nitrosodiphenylamine	15.67	169	359924	20.72	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	126984	20.85	ng/ul	96
66) Hexachlorobenzene	16.47	284	142418	20.47	ng/ul	98
67) Atrazine	16.63	200	139465	22.03	ng/ul	99
68) Pentachlorophenol	16.82	266	75332	19.72	ng/ul	98
69) Phenanthrene	17.21	178	699634	20.40	ng/ul	99
71) Anthracene	17.30	178	692458	20.10	ng/ul	99
72) Carbazole	17.57	167	656169	21.91	ng/ul	99
73) Di-n-butylphthalate	18.13	149	766300	22.62	ng/ul	100
74) Fluoranthene	19.23	202	855338	22.33	ng/ul	100
77) Pyrene	19.59	202	871228	21.28	ng/ul	99
78) Butylbenzylphthalate	20.49	149	364649	23.71	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	292510	22.85	ng/ul	98
80) Benzo(a)anthracene	21.34	228	866329	20.93	ng/ul	100
81) Bis(2-ethylhexyl)phthalate	21.27	149	528146	24.10	ng/ul	98
82) Chrysene	21.40	228	826013	20.76	ng/ul	99
84) Di-n-octyl phthalate	22.16	149	943740	21.45	ng/ul	100
85) Benzo(b)fluoranthene	22.96	252	876542	19.96	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	862599	20.18	ng/ul	100
88) Benzo(a)pyrene	23.54	252	849948	20.48	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.94	276	934142	22.37	ng/ul	98
90) Dibenzo(a,h)anthracene	25.95	278	785969	22.48	ng/ul	99
91) Benzo(g,h,i)perylene	26.64	276	779275	22.59	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
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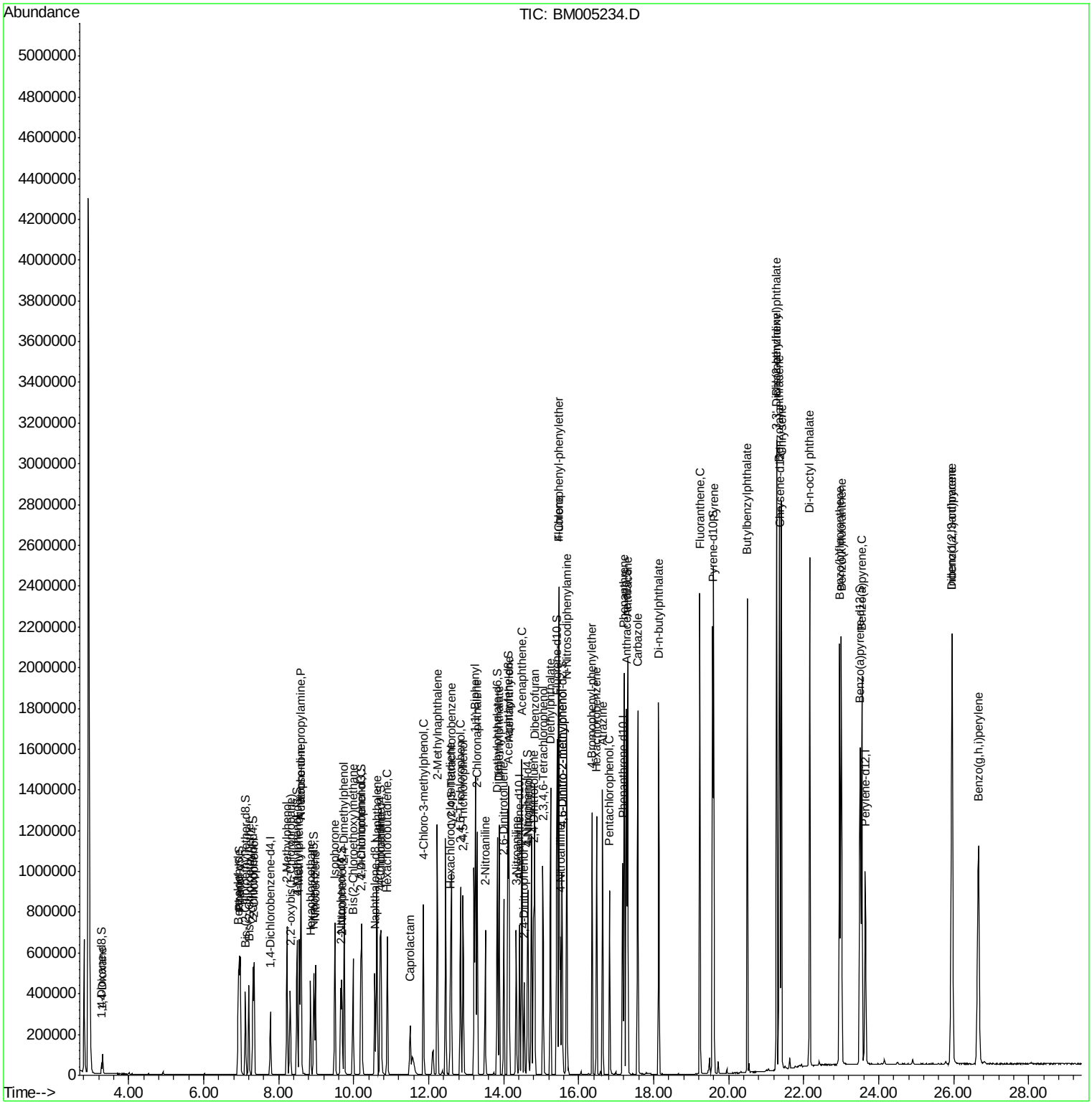
5/6/2016 7:15:02 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
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5/6/2016 7:15:02 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.78	152	84562	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	403635	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	251460	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	619996	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	654734	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	679108	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	27933	16.90	ng/uL	0.00
5) Phenol-d5	6.95	99	311622	43.88	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	176761	43.50	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	238066	42.96	ng/ul	0.00
13) 4-Methylphenol-d8	8.49	113	258926	43.00	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	122067	44.96	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	139600	46.44	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	251376	43.20	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	319946	45.75	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	810084	40.93	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	949365	40.60	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	154681	44.63	ng/ul	0.00
57) Fluorene-d10	15.42	176	679698	38.71	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.55	200	149006	43.78	ng/ul	0.00
70) Anthracene-d10	17.27	188	1063154	38.25	ng/ul	0.00
76) Pyrene-d10	19.57	212	1216425	42.00	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.50	264	1202409	39.87	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	50901	16.57	ng/uL	99
4) Benzaldehyde	6.92	77	169654	48.90	ng/ul	98
6) Phenol	6.98	94	319063	42.50	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	241856	42.53	ng/ul	99
10) 2-Chlorophenol	7.34	128	240670	41.96	ng/ul	97
11) 2-Methylphenol	8.22	108	250854	43.56	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.31	45	330391	44.43	ng/ul	98
14) Acetophenone	8.60	105	370892	40.45	ng/ul	100
15) N-Nitroso-di-n-propylamine	8.59	70	193546	43.00	ng/ul	97
16) 4-Methylphenol	8.55	108	273782	42.33	ng/ul	99
17) Hexachloroethane	8.85	117	89667	40.01	ng/ul	97
20) Nitrobenzene	8.97	77	291849	42.80	ng/ul	97
21) Isophorone	9.50	82	577750	44.71	ng/ul	99
23) 2-Nitrophenol	9.68	139	146919	44.66	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	297922	40.85	ng/ul	100
25) Bis(2-Chloroethoxy)methane	9.98	93	343635	42.27	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	254999	42.46	ng/ul	98
28) Naphthalene	10.62	128	792956	38.83	ng/ul	99
30) 4-Chloroaniline	10.73	127	320811	44.41	ng/ul	99
31) Hexachlorobutadiene	10.89	225	145369	37.17	ng/ul	99
32) Caprolactam	11.50	113	97338m	46.44	ng/ul	
33) 4-Chloro-3-methylphenol	11.86	107	305943	43.61	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	590164	38.89	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
sohil
5/6/2016 7:15:02 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	308575	40.34	ng/ul	98
37) Hexachlorocyclopentadiene	12.57	237	165875	39.11	ng/ul	96
38) 2,4,6-Trichlorophenol	12.85	196	214651	44.57	ng/ul	95
39) 2,4,5-Trichlorophenol	12.92	196	239902	44.34	ng/ul	98
40) 1,1'-Biphenyl	13.25	154	790207	40.21	ng/ul	99
41) 2-Chloronaphthalene	13.29	162	607593	40.47	ng/ul	98
42) 2-Nitroaniline	13.50	65	205060	51.01	ng/ul	96
44) Dimethylphthalate	13.87	163	793709	39.79	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	174443	46.79	ng/ul#	88
47) Acenaphthylene	14.14	152	979969	39.27	ng/ul	99
48) 3-Nitroaniline	14.33	138	181153	46.50	ng/ul	98
49) Acenaphthene	14.48	153	638866	38.70	ng/ul	99
50) 2,4-Dinitrophenol	14.54	184	96796	46.32	ng/ul	94
52) 4-Nitrophenol	14.65	109	126938	40.75	ng/ul	97
53) Dibenzofuran	14.82	168	930477	38.11	ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	255030	43.76	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.05	232	202175	42.59	ng/ul#	100
56) Diethylphthalate	15.25	149	817513	40.56	ng/ul	99
58) Fluorene	15.47	166	709743	36.94	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.46	204	352607	36.88	ng/ul	99
60) 4-Nitroaniline	15.50	138	186037	42.96	ng/ul	97
63) 4,6-Dinitro-2-methylphenol	15.56	198	156691	43.71	ng/ul#	92
64) N-Nitrosodiphenylamine	15.68	169	662167	39.28	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	235524	39.85	ng/ul	98
66) Hexachlorobenzene	16.47	284	263031	38.96	ng/ul	99
67) Atrazine	16.63	200	260164	42.35	ng/ul	97
68) Pentachlorophenol	16.82	266	155897	42.07	ng/ul	98
69) Phenanthrene	17.21	178	1254576	37.70	ng/ul	99
71) Anthracene	17.30	178	1252211	37.46	ng/ul	100
72) Carbazole	17.57	167	1181972	40.67	ng/ul	100
73) Di-n-butylphthalate	18.13	149	1409761	42.89	ng/ul	100
74) Fluoranthene	19.23	202	1504599	40.49	ng/ul	99
77) Pyrene	19.60	202	1495200	40.49	ng/ul	99
78) Butylbenzylphthalate	20.49	149	685781	49.43	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	492093	42.60	ng/ul	99
80) Benzo(a)anthracene	21.35	228	1482911	39.72	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	913304	46.20	ng/ul	97
82) Chrysene	21.40	228	1409938	39.28	ng/ul	99
84) Di-n-octyl phthalate	22.16	149	1717400	42.67	ng/ul	98
85) Benzo(b)fluoranthene	22.96	252	1595664	39.71	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	1451729	37.12	ng/ul	99
88) Benzo(a)pyrene	23.54	252	1471288	38.75	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.95	276	1617052	42.34	ng/ul	99
90) Dibenzo(a,h)anthracene	25.96	278	1346332	42.09	ng/ul	99
91) Benzo(g,h,i)perylene	26.66	276	1401939	44.41	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
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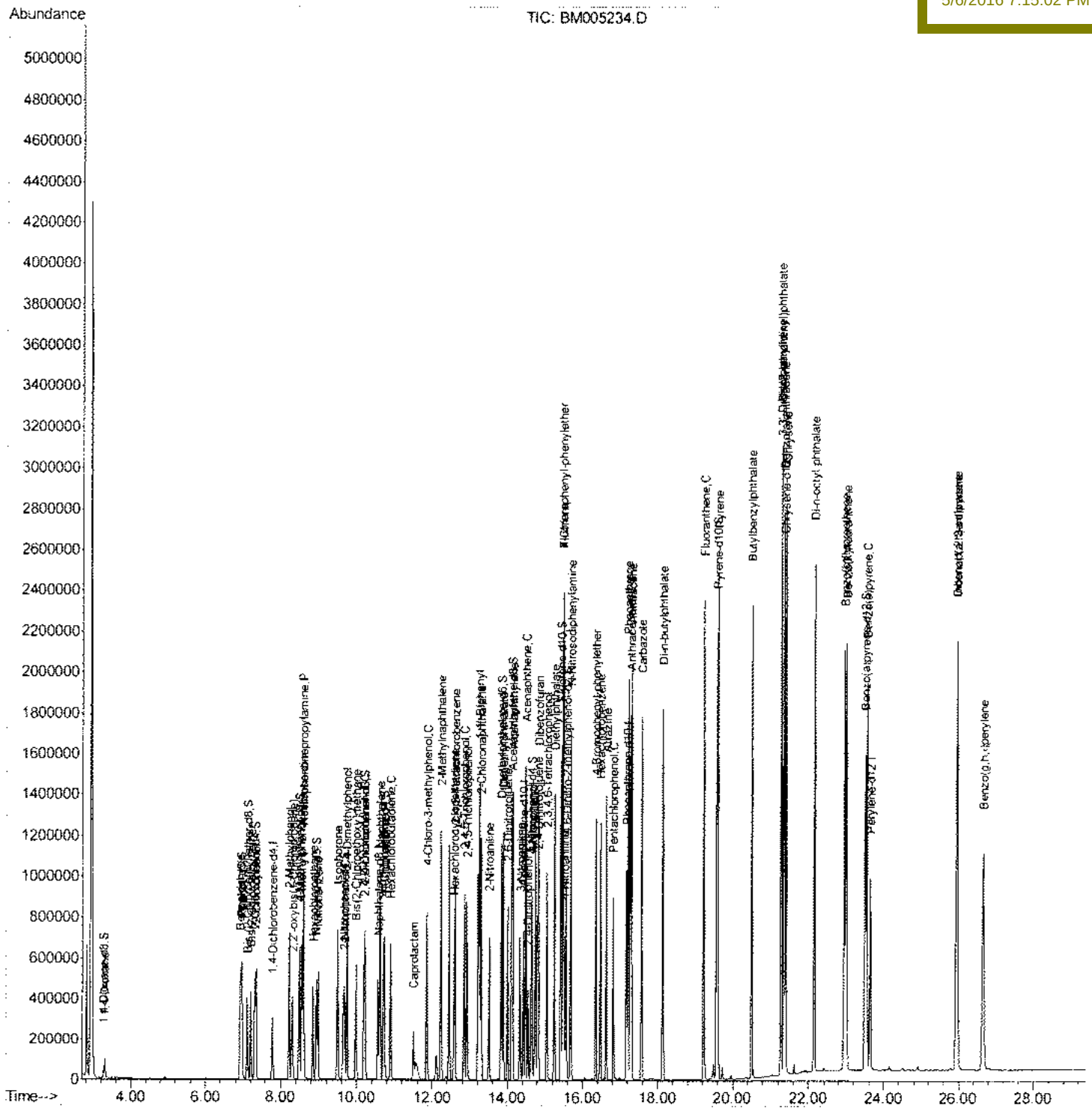

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:42:38 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
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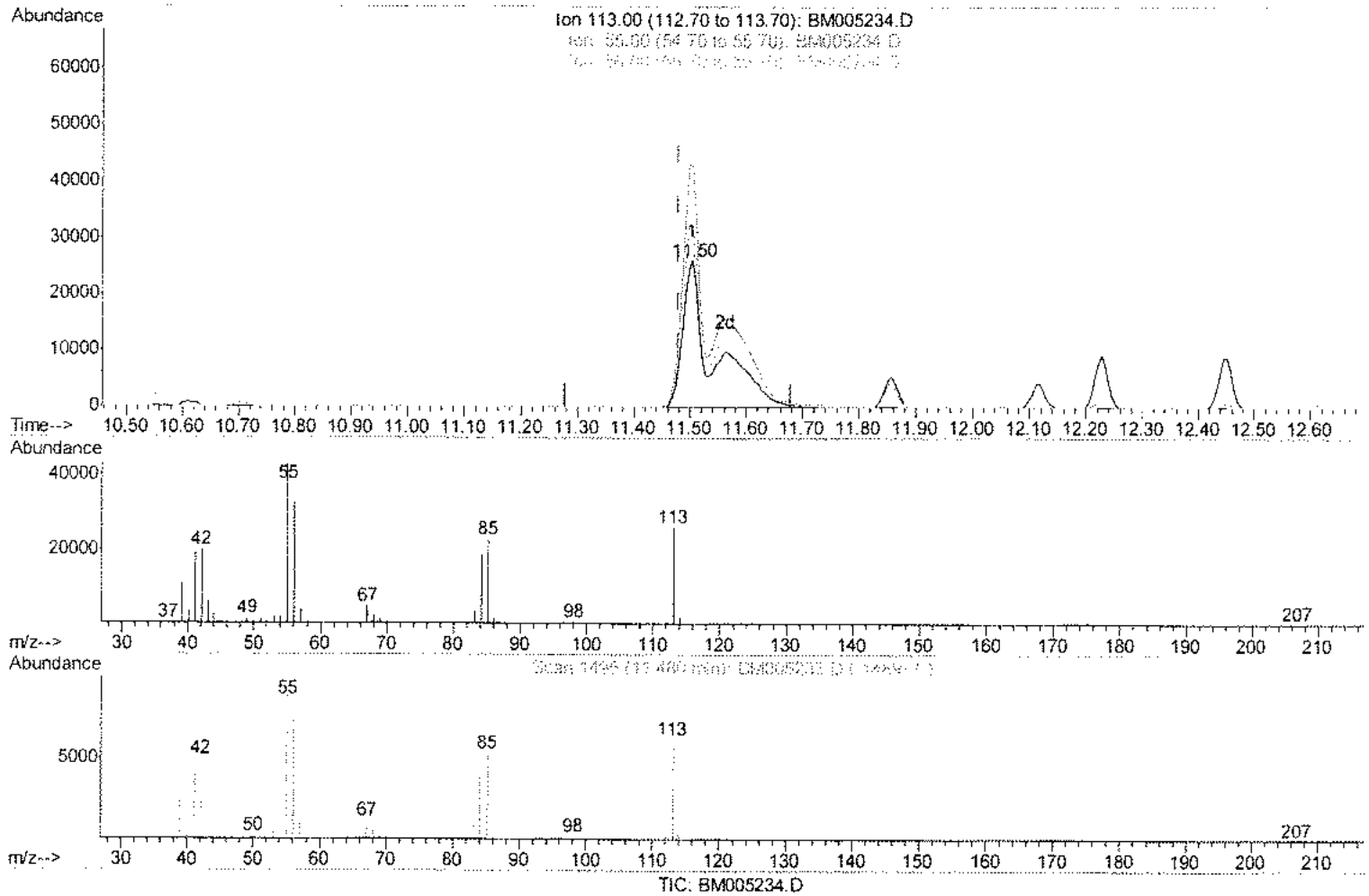
5/6/2016 7:15:02 PM



(32) Caprolactam

11.504min (+0.024) 46.44ng/ul m U.M 05/07/16

response 97338

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	165.66
56.00	120.80	125.31
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:42:38 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
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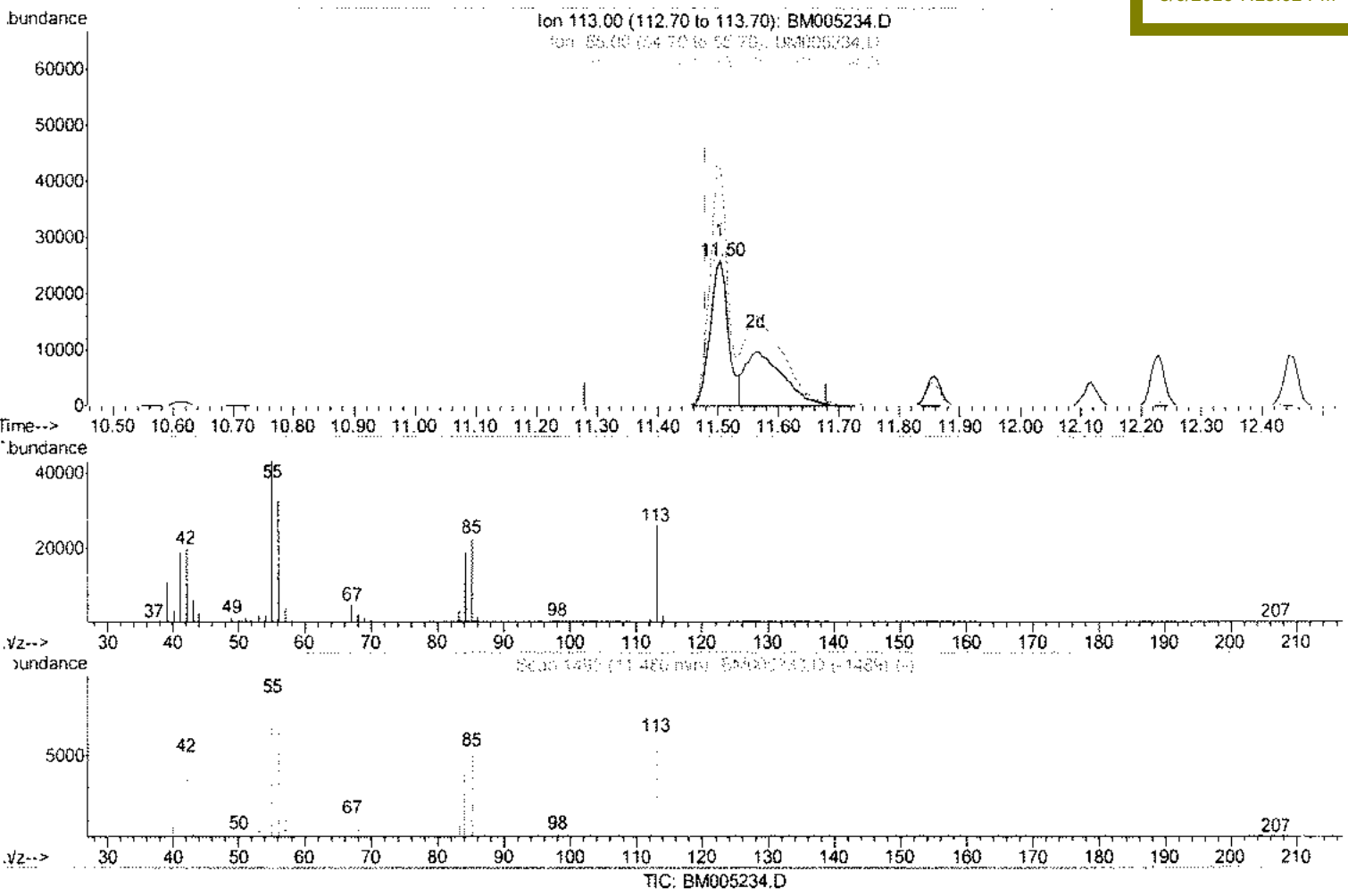

(32) Caprolactam

11.504min (+0.024) 25.82ng/ul

response 54124

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	165.66
56.00	120.80	125.31
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD04043

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.78	152	84562	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	403635	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	251460	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	619996	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	654734	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	679108	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	27933	16.90	ng/uL	0.00
5) Phenol-d5	6.95	99	311622	43.88	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	176761	43.50	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	238066	42.96	ng/ul	0.00
13) 4-Methylphenol-d8	8.49	113	258926	43.00	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	122067	44.96	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	139600	46.44	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	251376	43.20	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	319946	45.75	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	810084	40.93	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	949365	40.60	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	154681	44.63	ng/ul	0.00
57) Fluorene-d10	15.42	176	679698	38.71	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.55	200	149006	43.78	ng/ul	0.00
70) Anthracene-d10	17.27	188	1063154	38.25	ng/ul	0.00
76) Pyrene-d10	19.57	212	1216425	42.00	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.50	264	1202409	39.87	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	50901	16.57	ng/uL	99
4) Benzaldehyde	6.92	77	169654	48.90	ng/ul	98
6) Phenol	6.98	94	319063	42.50	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	241856	42.53	ng/ul	99
10) 2-Chlorophenol	7.34	128	240670	41.96	ng/ul	97
11) 2-Methylphenol	8.22	108	250854	43.56	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.31	45	330391	44.43	ng/ul	98
14) Acetophenone	8.60	105	370892	40.45	ng/ul	100
15) N-Nitroso-di-n-propylamine	8.59	70	193546	43.00	ng/ul	97
16) 4-Methylphenol	8.55	108	273782	42.33	ng/ul	99
17) Hexachloroethane	8.85	117	89667	40.01	ng/ul	97
20) Nitrobenzene	8.97	77	291849	42.80	ng/ul	97
21) Isophorone	9.50	82	577750	44.71	ng/ul	99
23) 2-Nitrophenol	9.68	139	146919	44.66	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	297922	40.85	ng/ul	100
25) Bis(2-Chloroethoxy)methane	9.98	93	343635	42.27	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	254999	42.46	ng/ul	98
28) Naphthalene	10.62	128	792956	38.83	ng/ul	99
30) 4-Chloroaniline	10.73	127	320811	44.41	ng/ul	99
31) Hexachlorobutadiene	10.89	225	145369	37.17	ng/ul	99
32) Caprolactam	11.50	113	97338m	46.44	ng/ul	
33) 4-Chloro-3-methylphenol	11.86	107	305943	43.61	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	590164	38.89	ng/ul	99

U.M 05/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD04043

Manual Integrations APPROVED
sohil
5/6/2016 7:15:02 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	308575	40.34	ng/ul	98
37) Hexachlorocyclopentadiene	12.57	237	165875	39.11	ng/ul	96
38) 2,4,6-Trichlorophenol	12.85	196	214651	44.57	ng/ul	95
39) 2,4,5-Trichlorophenol	12.92	196	239902	44.34	ng/ul	98
40) 1,1'-Biphenyl	13.25	154	790207	40.21	ng/ul	99
41) 2-Chloronaphthalene	13.29	162	607593	40.47	ng/ul	98
42) 2-Nitroaniline	13.50	65	205060	51.01	ng/ul	96
44) Dimethylphthalate	13.87	163	793709	39.79	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	174443	46.79	ng/ul#	88
47) Acenaphthylene	14.14	152	979969	39.27	ng/ul	99
48) 3-Nitroaniline	14.33	138	181153	46.50	ng/ul	98
49) Acenaphthene	14.48	153	638866	38.70	ng/ul	99
50) 2,4-Dinitrophenol	14.54	184	96796	46.32	ng/ul	94
52) 4-Nitrophenol	14.65	109	126938	40.75	ng/ul	97
53) Dibenzofuran	14.82	168	930477	38.11	ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	255030	43.76	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.05	232	202175	42.59	ng/ul#	100
56) Diethylphthalate	15.25	149	817513	40.56	ng/ul	99
58) Fluorene	15.47	166	709743	36.94	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.46	204	352607	36.88	ng/ul	99
60) 4-Nitroaniline	15.50	138	186037	42.96	ng/ul	97
63) 4,6-Dinitro-2-methylphenol	15.56	198	156691	43.71	ng/ul#	92
64) N-Nitrosodiphenylamine	15.68	169	662167	39.28	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	235524	39.85	ng/ul	98
66) Hexachlorobenzene	16.47	284	263031	38.96	ng/ul	99
67) Atrazine	16.63	200	260164	42.35	ng/ul	97
68) Pentachlorophenol	16.82	266	155897	42.07	ng/ul	98
69) Phenanthrene	17.21	178	1254576	37.70	ng/ul	99
71) Anthracene	17.30	178	1252211	37.46	ng/ul	100
72) Carbazole	17.57	167	1181972	40.67	ng/ul	100
73) Di-n-butylphthalate	18.13	149	1409761	42.89	ng/ul	100
74) Fluoranthene	19.23	202	1504599	40.49	ng/ul	99
77) Pyrene	19.60	202	1495200	40.49	ng/ul	99
78) Butylbenzylphthalate	20.49	149	685781	49.43	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	492093	42.60	ng/ul	99
80) Benzo(a)anthracene	21.35	228	1482911	39.72	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	913304	46.20	ng/ul	97
82) Chrysene	21.40	228	1409938	39.28	ng/ul	99
84) Di-n-octyl phthalate	22.16	149	1717400	42.67	ng/ul	98
85) Benzo(b)fluoranthene	22.96	252	1595664	39.71	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	1451729	37.12	ng/ul	99
88) Benzo(a)pyrene	23.54	252	1471288	38.75	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.95	276	1617052	42.34	ng/ul	99
90) Dibenzo(a,h)anthracene	25.96	278	1346332	42.09	ng/ul	99
91) Benzo(g,h,i)perylene	26.66	276	1401939	44.41	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
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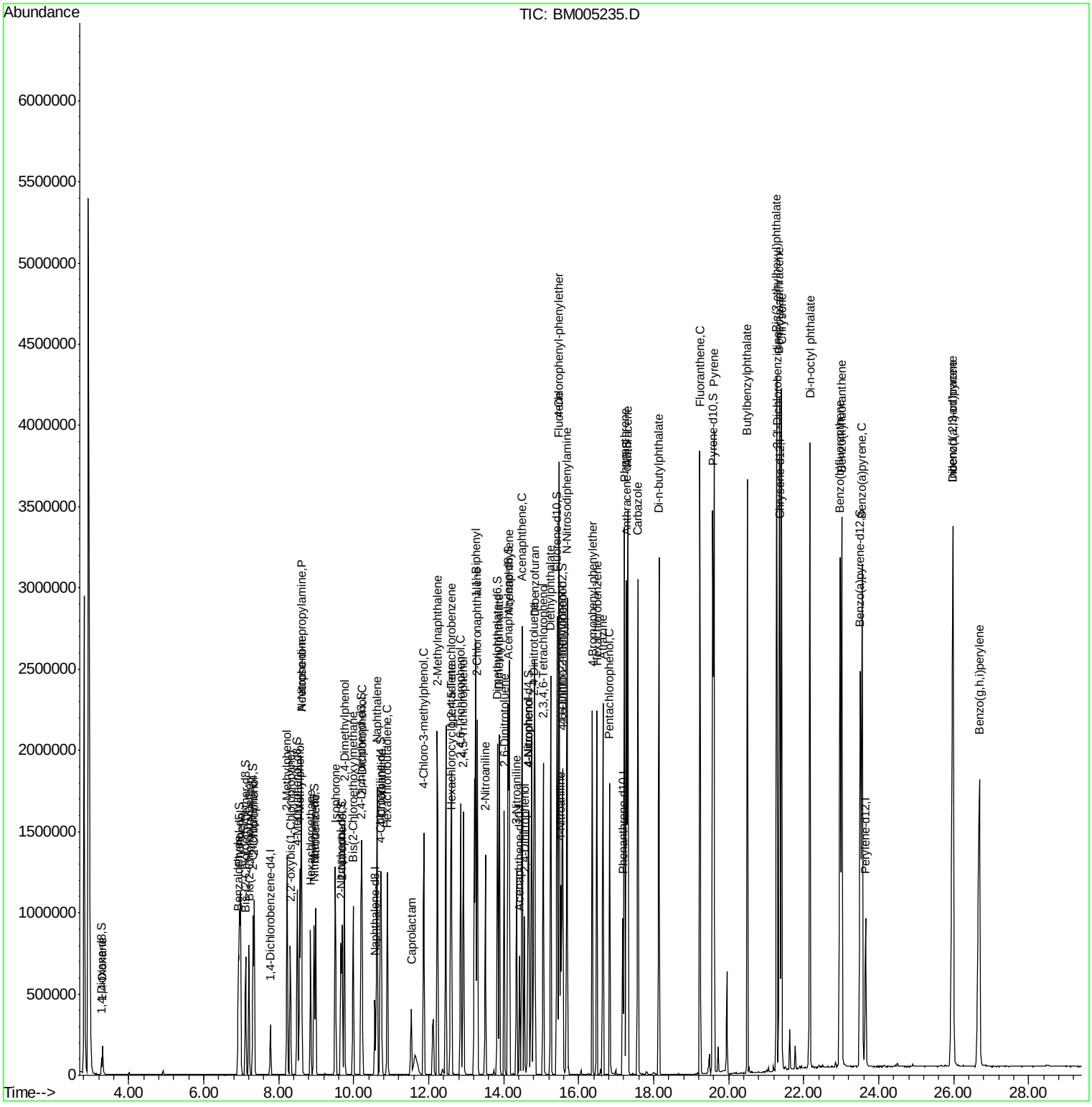
5/6/2016 7:15:03 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
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5/6/2016 7:15:03 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	83048	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	393148	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	246950	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	615677	20.00	ng/ul	0.00
75) Chrysene-d12	21.37	240	600527	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	644546	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	52514	32.35	ng/uL	0.00
5) Phenol-d5	6.95	99	607880	87.16	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.12	67	331598	83.08	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	469486	86.27	ng/ul	0.00
13) 4-Methylphenol-d8	8.49	113	502580	84.98	ng/ul	0.01
19) Nitrobenzene-d5	8.94	128	242925	91.85	ng/ul	0.00
22) 2-Nitrophenol-d4	9.66	143	278426	95.09	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	488977	86.28	ng/ul	0.00
29) 4-Chloroaniline-d4	10.71	131	552060	81.05	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	1505300	77.44	ng/ul	0.00
46) Acenaphthylene-d8	14.12	160	1773448	77.23	ng/ul	0.00
51) 4-Nitrophenol-d4	14.65	143	307075	90.22	ng/ul	0.02
57) Fluorene-d10	15.42	176	1239568	71.89	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.56	200	301685	89.26	ng/ul	0.02
70) Anthracene-d10	17.27	188	1938659	70.24	ng/ul	0.01
76) Pyrene-d10	19.57	212	2129410	80.16	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.51	264	2154188	75.25	ng/ul	0.02
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	94388	31.29	ng/uL	97
4) Benzaldehyde	6.92	77	253162	74.29	ng/ul	98
6) Phenol	6.98	94	626822	85.01	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	457552	81.93	ng/ul	99
10) 2-Chlorophenol	7.35	128	471091	83.63	ng/ul	99
11) 2-Methylphenol	8.22	108	489878	86.61	ng/ul	98
12) 2,2'-oxybis(1-Chloropropan	8.31	45	613586	84.03	ng/ul	99
14) Acetophenone	8.60	105	705900	78.40	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.60	70	358888	81.20	ng/ul	97
16) 4-Methylphenol	8.56	108	529578	83.38	ng/ul	95
17) Hexachloroethane	8.85	117	174404	79.24	ng/ul	96
20) Nitrobenzene	8.98	77	570370	85.88	ng/ul	96
21) Isophorone	9.51	82	1113543	88.47	ng/ul	98
23) 2-Nitrophenol	9.69	139	288558	90.06	ng/ul	99
24) 2,4-Dimethylphenol	9.75	107	582268	81.96	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.98	93	648690	81.93	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	489833	83.75	ng/ul	97
28) Naphthalene	10.62	128	1504056	75.61	ng/ul	99
30) 4-Chloroaniline	10.73	127	560036	79.59	ng/ul	98
31) Hexachlorobutadiene	10.90	225	283788	74.50	ng/ul	98
32) Caprolactam	11.54	113	191776m	93.93	ng/ul	
33) 4-Chloro-3-methylphenol	11.87	107	583313	85.36	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	1092687	73.93	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
sohil
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	578806	77.06	ng/ul	99
37) Hexachlorocyclopentadiene	12.58	237	351379	84.35	ng/ul	96
38) 2,4,6-Trichlorophenol	12.84	196	414809	87.70	ng/ul	95
39) 2,4,5-Trichlorophenol	12.93	196	455075	85.64	ng/ul	98
40) 1,1'-Biphenyl	13.25	154	1427149	73.94	ng/ul	99
41) 2-Chloronaphthalene	13.29	162	1126850	76.42	ng/ul	98
42) 2-Nitroaniline	13.51	65	400709	101.51	ng/ul	95
44) Dimethylphthalate	13.88	163	1488978	76.01	ng/ul	99
45) 2,6-Dinitrotoluene	14.01	165	341823	93.36	ng/ul#	88
47) Acenaphthylene	14.14	152	1809814	73.85	ng/ul	100
48) 3-Nitroaniline	14.34	138	339864	88.83	ng/ul	98
49) Acenaphthene	14.49	153	1191285	73.48	ng/ul	99
50) 2,4-Dinitrophenol	14.55	184	222750	108.54	ng/ul	92
52) 4-Nitrophenol	14.66	109	255508	83.53	ng/ul	96
53) Dibenzofuran	14.82	168	1680618	70.09	ng/ul	97
54) 2,4-Dinitrotoluene	14.80	165	484206	84.61	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.05	232	390197	83.71	ng/ul#	94
56) Diethylphthalate	15.25	149	1526647	77.12	ng/ul	99
58) Fluorene	15.48	166	1228930	65.13	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	618031	65.82	ng/ul	97
60) 4-Nitroaniline	15.52	138	356295	83.78	ng/ul	97
63) 4,6-Dinitro-2-methylphenol	15.57	198	310835	87.32	ng/ul#	86
64) N-Nitrosodiphenylamine	15.69	169	1205367	72.01	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	439906	74.95	ng/ul	97
66) Hexachlorobenzene	16.48	284	490128	73.10	ng/ul	97
67) Atrazine	16.64	200	478348	78.41	ng/ul	98
68) Pentachlorophenol	16.82	266	317223	86.20	ng/ul	98
69) Phenanthrene	17.22	178	2242657	67.87	ng/ul	99
71) Anthracene	17.31	178	2210378	66.58	ng/ul	100
72) Carbazole	17.58	167	2134031	73.94	ng/ul	99
73) Di-n-butylphthalate	18.13	149	2560656	78.45	ng/ul	100
74) Fluoranthene	19.23	202	2608839	70.70	ng/ul	98
77) Pyrene	19.60	202	2557222	75.49	ng/ul	98
78) Butylbenzylphthalate	20.49	149	1229136	96.59	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.29	252	833999	78.72	ng/ul	99
80) Benzo(a)anthracene	21.35	228	2552213	74.53	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	1530144	84.40	ng/ul#	98
82) Chrysene	21.41	228	2381747	72.34	ng/ul	98
84) Di-n-octyl phthalate	22.16	149	2946352	77.13	ng/ul#	96
85) Benzo(b)fluoranthene	22.97	252	2764613	72.49	ng/ul	99
86) Benzo(k)fluoranthene	23.01	252	2568479	69.20	ng/ul	99
88) Benzo(a)pyrene	23.56	252	2599043	72.13	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.97	276	2842888	78.42	ng/ul	97
90) Dibenzo(a,h)anthracene	25.98	278	2315960	76.29	ng/ul	98
91) Benzo(g,h,i)perylene	26.68	276	2494535	83.27	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

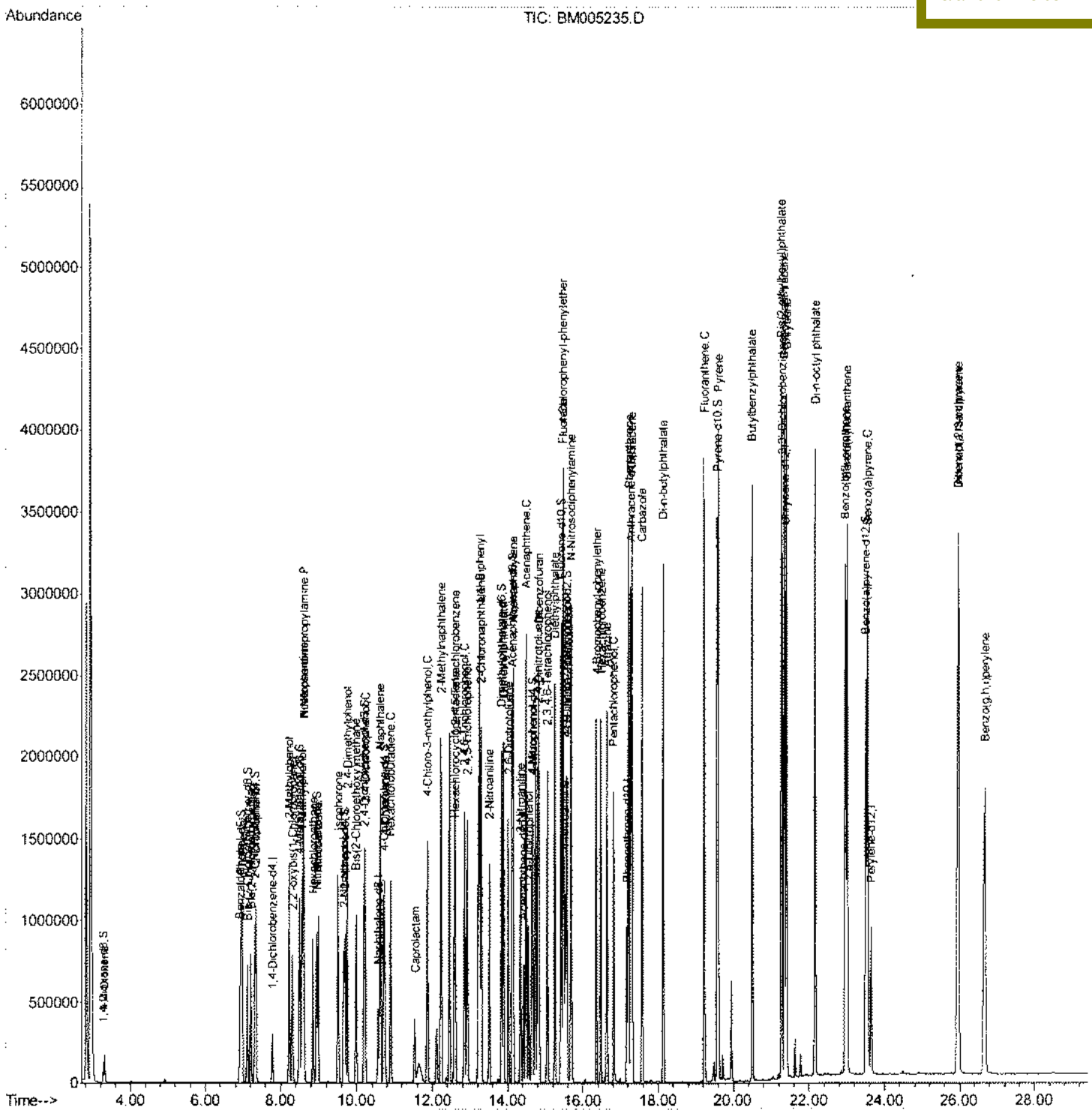
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
sohil
5/6/2016 7:15:03 PM



Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:12:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
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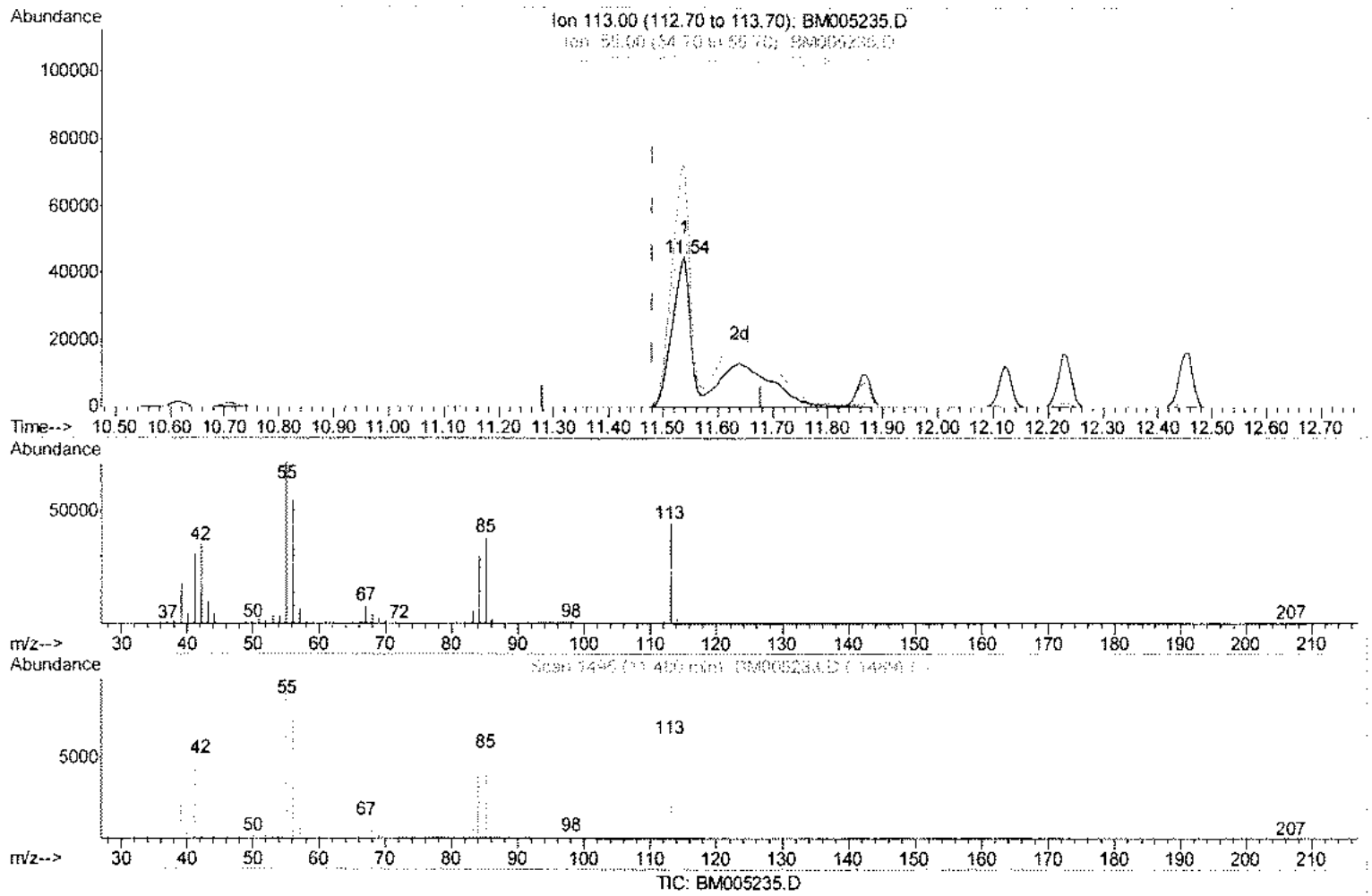
5/6/2016 7:15:03 PM



TIC: BM005235.D

(32) Caprolactam

11.539min (+0.059) 93.93ng/ul m U.M 05/07/16

response 191776

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	160.35
56.00	120.80	123.22
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:12:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
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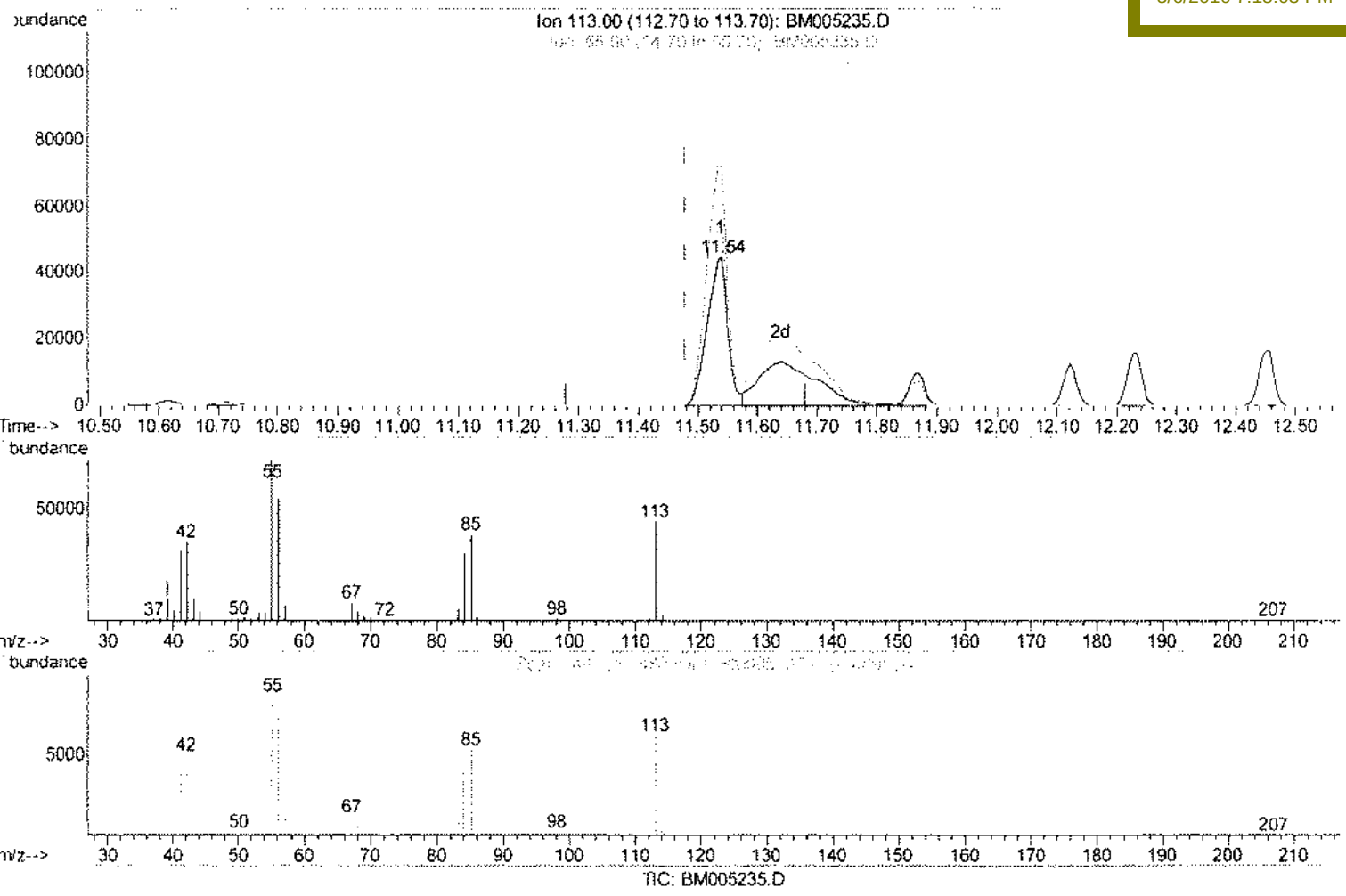
5/6/2016 7:15:03 PM



(32) Caprolactam

11.539min (+0.059) 51.75ng/ul

response 105649

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	160.35
56.00	120.80	123.22
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD08044

Manual Integrations APPROVED
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5/6/2016 7:15:03 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	83048	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	393148	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	246950	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	615677	20.00	ng/ul	0.00
75) Chrysene-d12	21.37	240	600527	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	644546	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	52514	32.35	ng/uL	0.00
5) Phenol-d5	6.95	99	607880	87.16	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.12	67	331598	83.08	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	469486	86.27	ng/ul	0.00
13) 4-Methylphenol-d8	8.49	113	502580	84.98	ng/ul	0.01
19) Nitrobenzene-d5	8.94	128	242925	91.85	ng/ul	0.00
22) 2-Nitrophenol-d4	9.66	143	278426	95.09	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	488977	86.28	ng/ul	0.00
29) 4-Chloroaniline-d4	10.71	131	552060	81.05	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	1505300	77.44	ng/ul	0.00
46) Acenaphthylene-d8	14.12	160	1773448	77.23	ng/ul	0.00
51) 4-Nitrophenol-d4	14.65	143	307075	90.22	ng/ul	0.02
57) Fluorene-d10	15.42	176	1239568	71.89	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.56	200	301685	89.26	ng/ul	0.02
70) Anthracene-d10	17.27	188	1938659	70.24	ng/ul	0.01
76) Pyrene-d10	19.57	212	2129410	80.16	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.51	264	2154188	75.25	ng/ul	0.02
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	94388	31.29	ng/uL	97
4) Benzaldehyde	6.92	77	253162	74.29	ng/ul	98
6) Phenol	6.98	94	626822	85.01	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	457552	81.93	ng/ul	99
10) 2-Chlorophenol	7.35	128	471091	83.63	ng/ul	99
11) 2-Methylphenol	8.22	108	489878	86.61	ng/ul	98
12) 2,2'-oxybis(1-Chloropropan	8.31	45	613586	84.03	ng/ul	99
14) Acetophenone	8.60	105	705900	78.40	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.60	70	358888	81.20	ng/ul	97
16) 4-Methylphenol	8.56	108	529578	83.38	ng/ul	95
17) Hexachloroethane	8.85	117	174404	79.24	ng/ul	96
20) Nitrobenzene	8.98	77	570370	85.88	ng/ul	96
21) Isophorone	9.51	82	1113543	88.47	ng/ul	98
23) 2-Nitrophenol	9.69	139	288558	90.06	ng/ul	99
24) 2,4-Dimethylphenol	9.75	107	582268	81.96	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.98	93	648690	81.93	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	489833	83.75	ng/ul	97
28) Naphthalene	10.62	128	1504056	75.61	ng/ul	99
30) 4-Chloroaniline	10.73	127	560036	79.59	ng/ul	98
31) Hexachlorobutadiene	10.90	225	283788	74.50	ng/ul	98
32) Caprolactam	11.54	113	191776m	93.93	ng/ul	
33) 4-Chloro-3-methylphenol	11.87	107	583313	85.36	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	1092687	73.93	ng/ul	99

U.M 05/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD08044

Manual Integrations APPROVED
sohil
5/6/2016 7:15:03 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	578806	77.06	ng/ul	99
37) Hexachlorocyclopentadiene	12.58	237	351379	84.35	ng/ul	96
38) 2,4,6-Trichlorophenol	12.84	196	414809	87.70	ng/ul	95
39) 2,4,5-Trichlorophenol	12.93	196	455075	85.64	ng/ul	98
40) 1,1'-Biphenyl	13.25	154	1427149	73.94	ng/ul	99
41) 2-Chloronaphthalene	13.29	162	1126850	76.42	ng/ul	98
42) 2-Nitroaniline	13.51	65	400709	101.51	ng/ul	95
44) Dimethylphthalate	13.88	163	1488978	76.01	ng/ul	99
45) 2,6-Dinitrotoluene	14.01	165	341823	93.36	ng/ul#	88
47) Acenaphthylene	14.14	152	1809814	73.85	ng/ul	100
48) 3-Nitroaniline	14.34	138	339864	88.83	ng/ul	98
49) Acenaphthene	14.49	153	1191285	73.48	ng/ul	99
50) 2,4-Dinitrophenol	14.55	184	222750	108.54	ng/ul	92
52) 4-Nitrophenol	14.66	109	255508	83.53	ng/ul	96
53) Dibenzofuran	14.82	168	1680618	70.09	ng/ul	97
54) 2,4-Dinitrotoluene	14.80	165	484206	84.61	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.05	232	390197	83.71	ng/ul#	94
56) Diethylphthalate	15.25	149	1526647	77.12	ng/ul	99
58) Fluorene	15.48	166	1228930	65.13	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	618031	65.82	ng/ul	97
60) 4-Nitroaniline	15.52	138	356295	83.78	ng/ul	97
63) 4,6-Dinitro-2-methylphenol	15.57	198	310835	87.32	ng/ul#	86
64) N-Nitrosodiphenylamine	15.69	169	1205367	72.01	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	439906	74.95	ng/ul	97
66) Hexachlorobenzene	16.48	284	490128	73.10	ng/ul	97
67) Atrazine	16.64	200	478348	78.41	ng/ul	98
68) Pentachlorophenol	16.82	266	317223	86.20	ng/ul	98
69) Phenanthrene	17.22	178	2242657	67.87	ng/ul	99
71) Anthracene	17.31	178	2210378	66.58	ng/ul	100
72) Carbazole	17.58	167	2134031	73.94	ng/ul	99
73) Di-n-butylphthalate	18.13	149	2560656	78.45	ng/ul	100
74) Fluoranthene	19.23	202	2608839	70.70	ng/ul	98
77) Pyrene	19.60	202	2557222	75.49	ng/ul	98
78) Butylbenzylphthalate	20.49	149	1229136	96.59	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.29	252	833999	78.72	ng/ul	99
80) Benzo(a)anthracene	21.35	228	2552213	74.53	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	1530144	84.40	ng/ul#	98
82) Chrysene	21.41	228	2381747	72.34	ng/ul	98
84) Di-n-octyl phthalate	22.16	149	2946352	77.13	ng/ul#	96
85) Benzo(b)fluoranthene	22.97	252	2764613	72.49	ng/ul	99
86) Benzo(k)fluoranthene	23.01	252	2568479	69.20	ng/ul	99
88) Benzo(a)pyrene	23.56	252	2599043	72.13	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.97	276	2842888	78.42	ng/ul	97
90) Dibenzo(a,h)anthracene	25.98	278	2315960	76.29	ng/ul	98
91) Benzo(g,h,i)perylene	26.68	276	2494535	83.27	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
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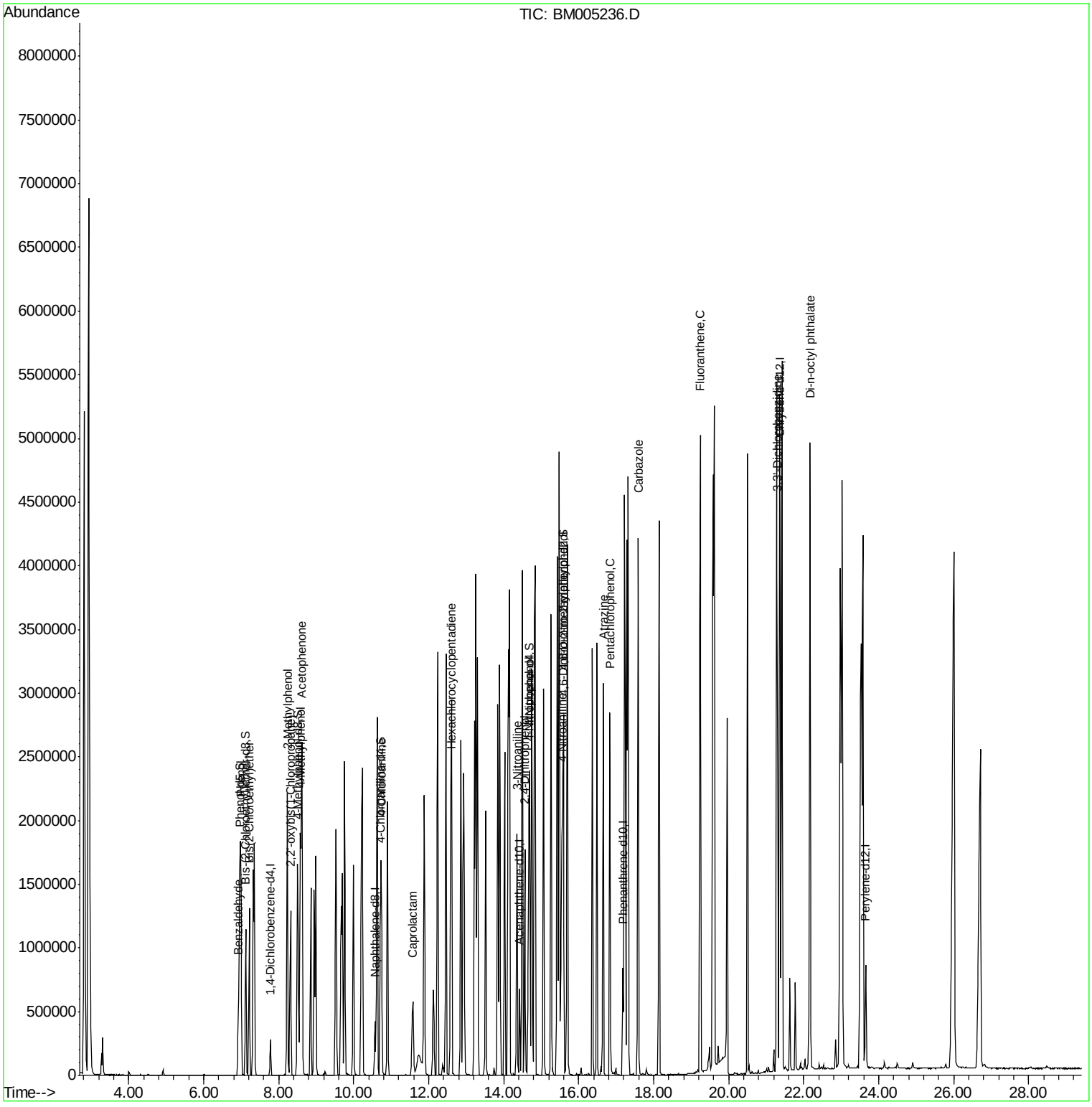
5/6/2016 7:15:04 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
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5/6/2016 7:15:04 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	75056	20.00	ng/ul	0.00
18) Naphthalene-d8	10.57	136	363283	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	233509	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	561822	20.00	ng/ul	0.00
75) Chrysene-d12	21.37	240	497720	20.00	ng/ul	0.01
83) Perylene-d12	23.65	264	563686	20.00	ng/ul	0.01
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0d	0.00	ng/uL	
5) Phenol-d5	6.96	99	1075165	158.15	ng/ul	0.01
7) Bis-(2-Chloroethyl)ether-d	7.12	67	567293	146.18	ng/ul	0.01
9) 2-Chlorophenol-d4	0.00	132	0d	0.00	ng/ul	
13) 4-Methylphenol-d8	8.50	113	886525	157.84	ng/ul	0.02
19) Nitrobenzene-d5	0.00	128	0d	0.00	ng/ul	
22) 2-Nitrophenol-d4	0.00	143	0d	0.00	ng/ul	
26) 2,4-Dichlorophenol-d3	0.00	165	0d	0.00	ng/ul	
29) 4-Chloroaniline-d4	10.71	131	732409	111.84	ng/ul	0.00
43) Dimethylphthalate-d6	0.00	166	0d	0.00	ng/ul	
46) Acenaphthylene-d8	0.00	160	0d	0.00	ng/ul	
51) 4-Nitrophenol-d4	14.67	143	537109	157.83	ng/ul	0.04
57) Fluorene-d10	0.00	176	0d	0.00	ng/ul	
62) 4,6-Dinitro-2-methylphenol	15.57	200	509862	162.21	ng/ul	0.03
70) Anthracene-d10	0.00	188	0d	0.00	ng/ul	
76) Pyrene-d10	0.00	212	0d	0.00	ng/ul	
87) Benzo(a)pyrene-d12	0.00	264	0d	0.00	ng/ul	
Target Compounds						Qvalue
4) Benzaldehyde	6.92	77	226824m	70.51	ng/ul	
6) Phenol	6.99	94	1085067	154.48	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.22	93	768562	145.00	ng/ul	98
11) 2-Methylphenol	8.23	108	841458	155.00	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.32	45	1027856	143.11	ng/ul	98
14) Acetophenone	8.61	105	1175531	141.43	ng/ul	99
16) 4-Methylphenol	8.58	108	923518	153.36	ng/ul	94
30) 4-Chloroaniline	10.74	127	757005	113.61	ng/ul	98
32) Caprolactam	11.58	113	347344m	163.70	ng/ul	
37) Hexachlorocyclopentadiene	12.58	237	626609	173.01	ng/ul	95
48) 3-Nitroaniline	14.36	138	569448	145.96	ng/ul	99
50) 2,4-Dinitrophenol	14.56	184	428328	202.75	ng/ul	93
52) 4-Nitrophenol	14.69	109	445714	157.24	ng/ul	92
60) 4-Nitroaniline	15.54	138	639334	154.35	ng/ul	93
63) 4,6-Dinitro-2-methylphenol	15.59	198	522473	157.93	ng/ul#	87
67) Atrazine	16.66	200	758834	135.68	ng/ul	99
68) Pentachlorophenol	16.83	266	558124	166.98	ng/ul	97
72) Carbazole	17.59	167	3315288	128.31	ng/ul	98
74) Fluoranthene	19.24	202	3900552	119.85	ng/ul	96
79) 3,3'-Dichlorobenzidine	21.29	252	1289339	144.50	ng/ul	98
84) Di-n-octyl phthalate	22.17	149	4331133	131.76	ng/ul#	94

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
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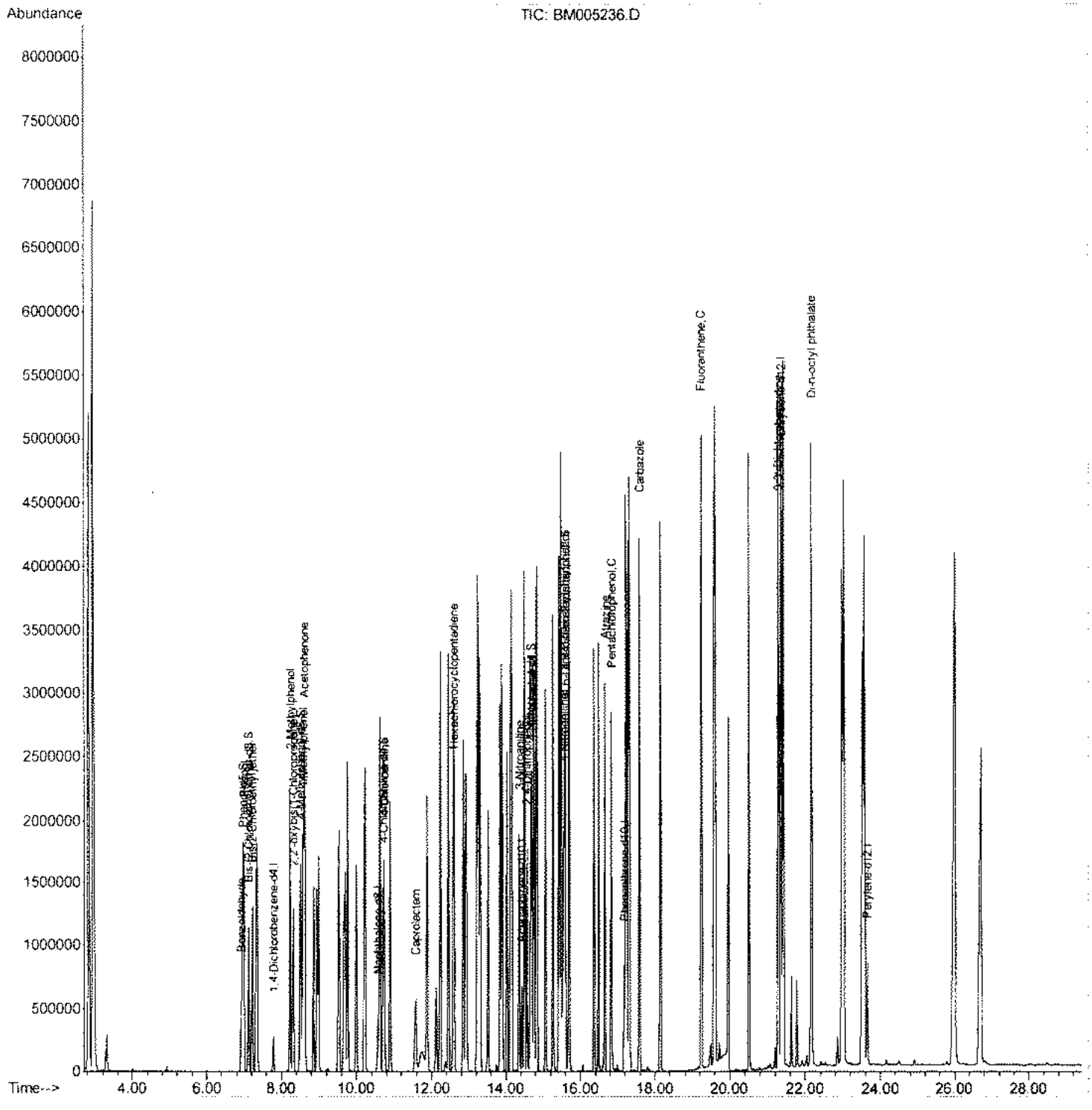

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:30:47 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
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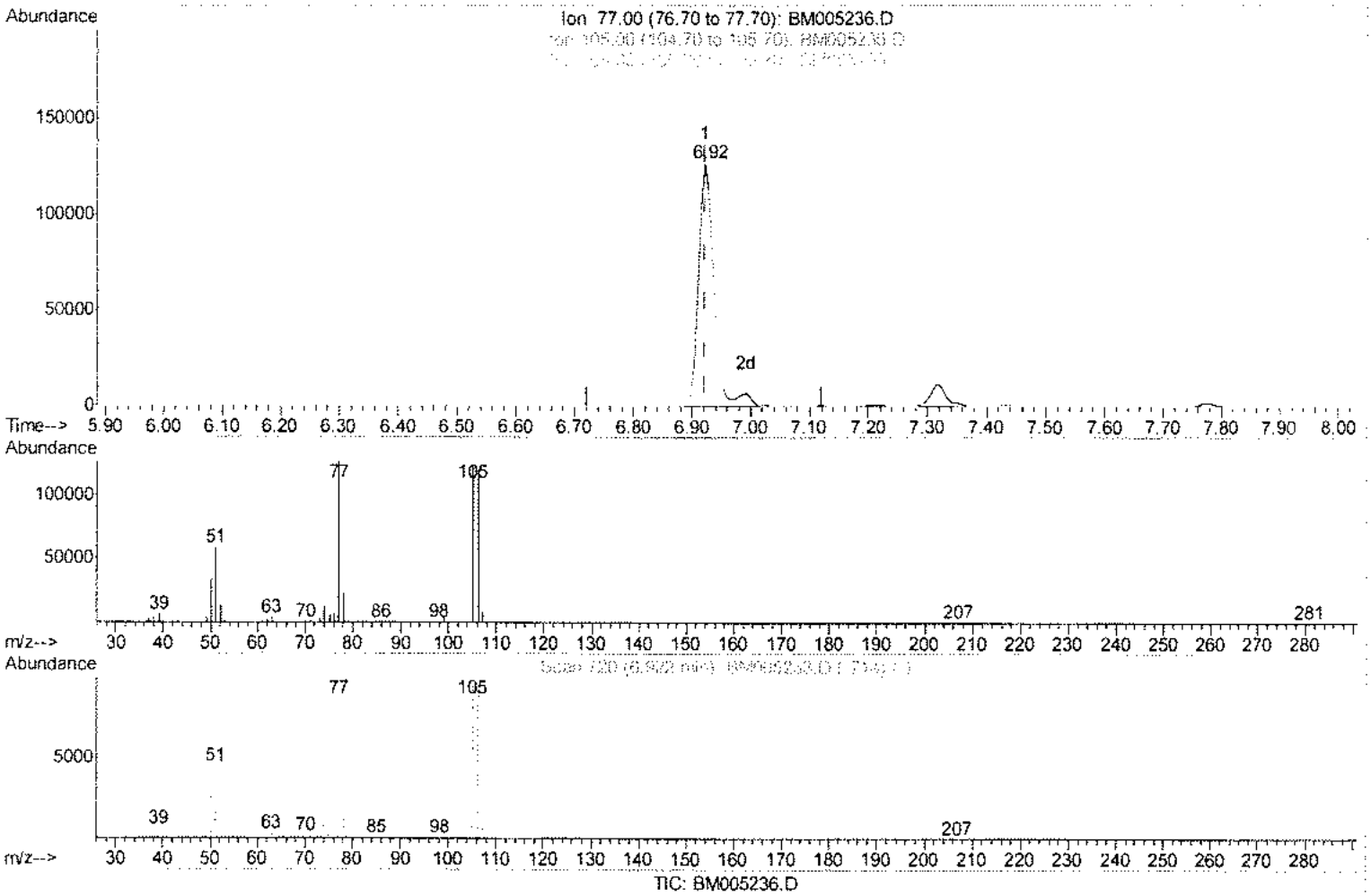
5/6/2016 7:15:04 PM



TIC: BM005236.D

(4) Benzaldehyde

6.922min (+0.000) 70.51ng/ul m U.M 05/07/16

response 226824

Ion	Exp%	Act%
77.00	100	100
105.00	97.00	97.33
106.00	97.40	94.23
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:30:47 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
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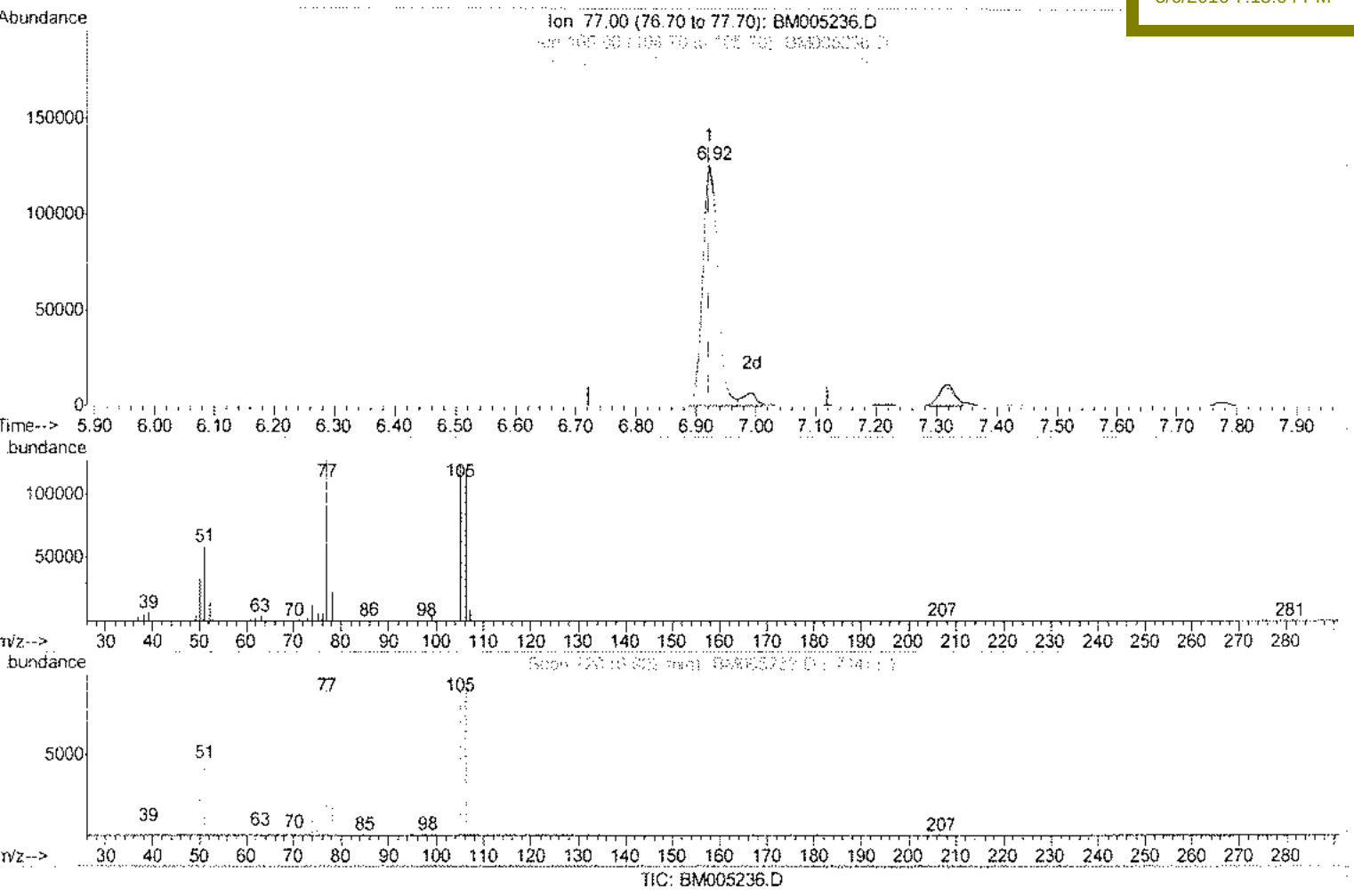

TIC: BM005236.D

(4) Benzaldehyde

6.922min (+0.000) 66.89ng/ul

response 215195

Ion	Exp%	Act%
77.00	100	100
105.00	97.00	97.33
106.00	97.40	94.23
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:30:47 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
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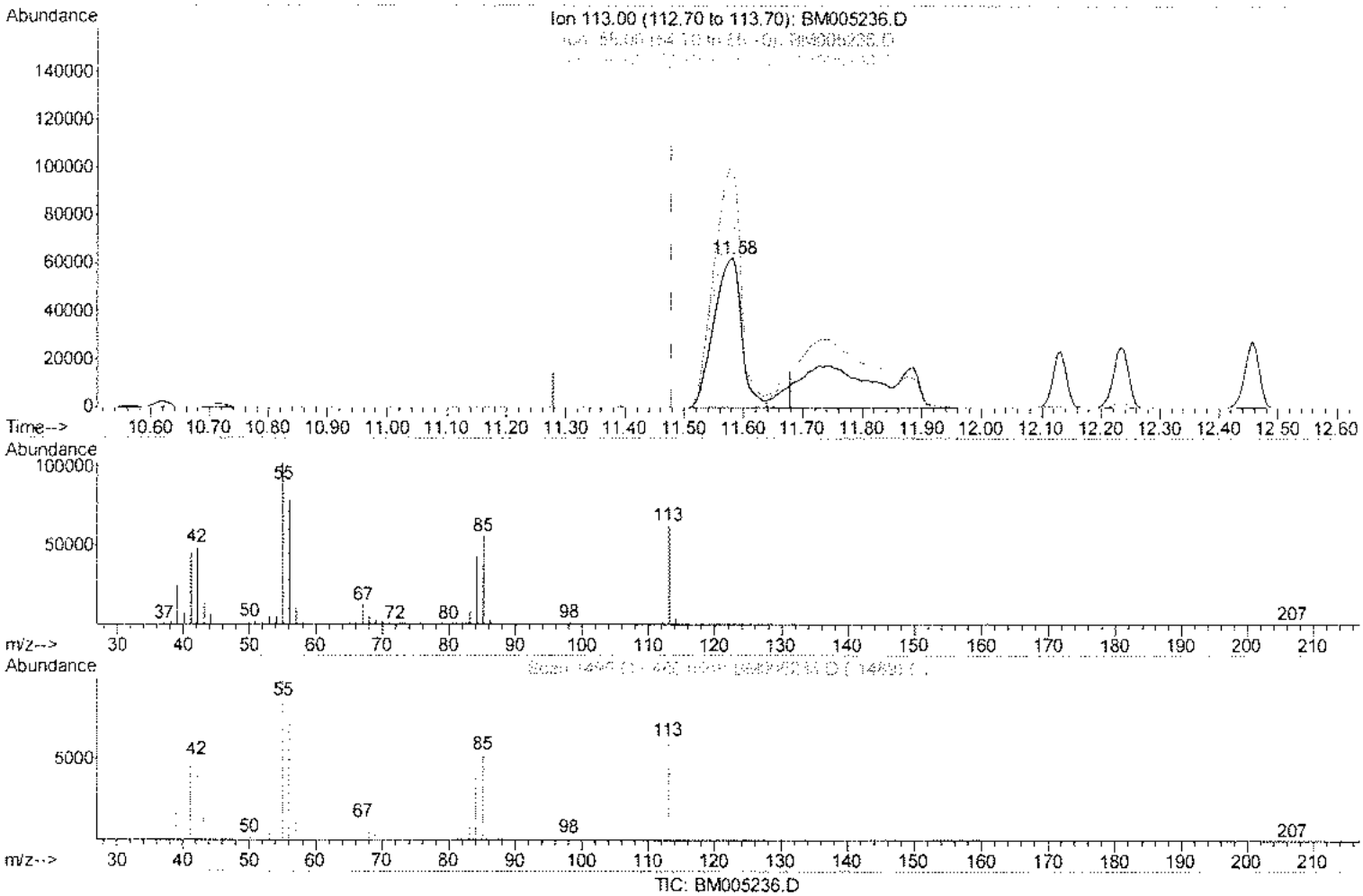

TIC: BM005236.D

(32) Caprolactam

11.581min (+0 100) 94.71ng/ul

response 200962

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	163.17
56.00	120.80	124.86
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:30:47 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
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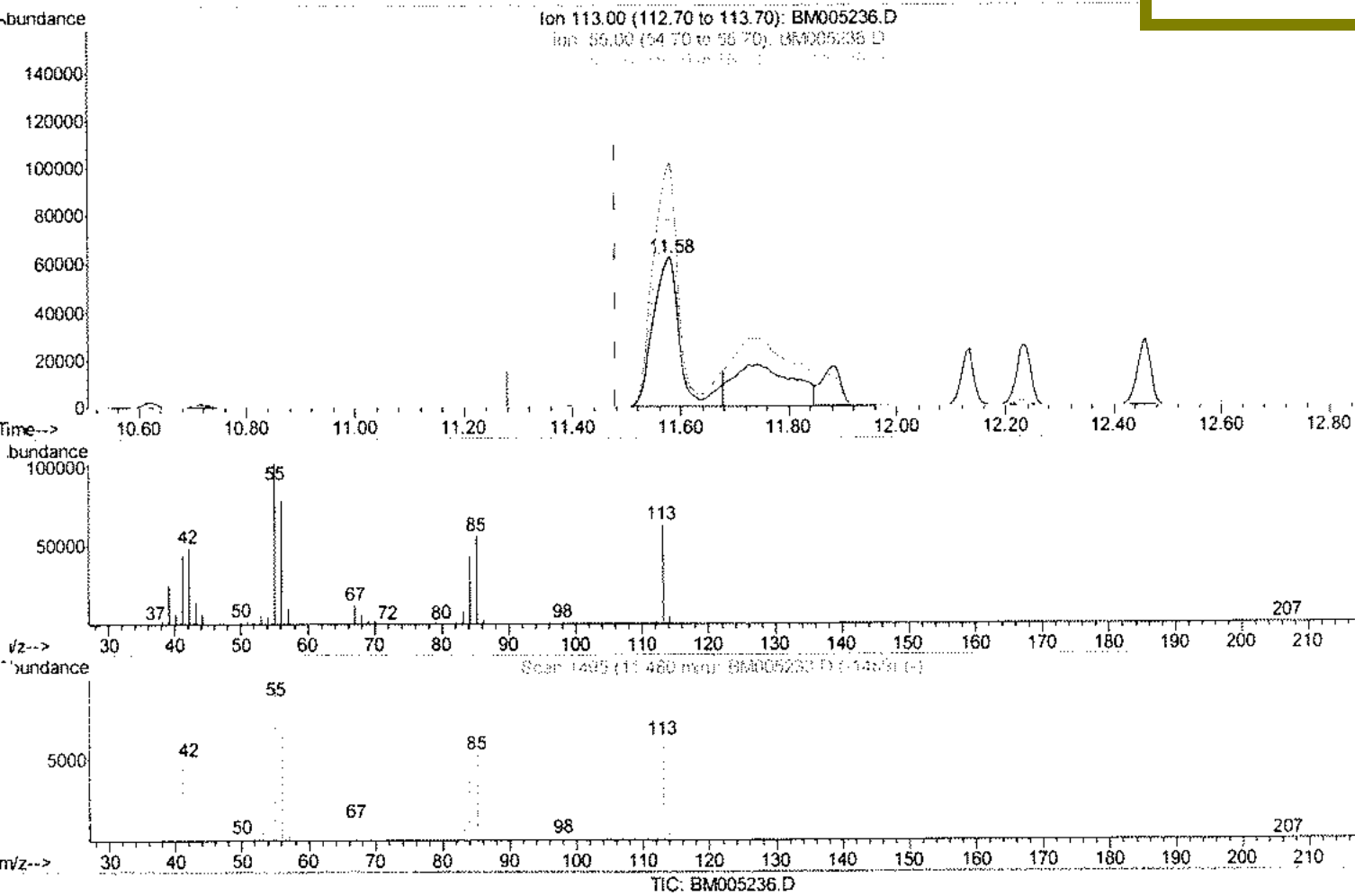

(32) Caprolactam

11.581min (+0.100) 163.70ng/ul m U.M 05/07/16

response 347344

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	163.17
56.00	120.80	124.86
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD16045

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	75056	20.00	ng/ul	0.00
18) Naphthalene-d8	10.57	136	363283	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	233509	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	561822	20.00	ng/ul	0.00
75) Chrysene-d12	21.37	240	497720	20.00	ng/ul	0.01
83) Perylene-d12	23.65	264	563686	20.00	ng/ul	0.01
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0d	0.00	ng/uL	
5) Phenol-d5	6.96	99	1075165	158.15	ng/ul	0.01
7) Bis-(2-Chloroethyl)ether-d	7.12	67	567293	146.18	ng/ul	0.01
9) 2-Chlorophenol-d4	0.00	132	0d	0.00	ng/ul	
13) 4-Methylphenol-d8	8.50	113	886525	157.84	ng/ul	0.02
19) Nitrobenzene-d5	0.00	128	0d	0.00	ng/ul	
22) 2-Nitrophenol-d4	0.00	143	0d	0.00	ng/ul	
26) 2,4-Dichlorophenol-d3	0.00	165	0d	0.00	ng/ul	
29) 4-Chloroaniline-d4	10.71	131	732409	111.84	ng/ul	0.00
43) Dimethylphthalate-d6	0.00	166	0d	0.00	ng/ul	
46) Acenaphthylene-d8	0.00	160	0d	0.00	ng/ul	
51) 4-Nitrophenol-d4	14.67	143	537109	157.83	ng/ul	0.04
57) Fluorene-d10	0.00	176	0d	0.00	ng/ul	
62) 4,6-Dinitro-2-methylphenol	15.57	200	509862	162.21	ng/ul	0.03
70) Anthracene-d10	0.00	188	0d	0.00	ng/ul	
76) Pyrene-d10	0.00	212	0d	0.00	ng/ul	
87) Benzo(a)pyrene-d12	0.00	264	0d	0.00	ng/ul	
Target Compounds						Qvalue
4) Benzaldehyde	6.92	77	226824m	70.51	ng/ul	
6) Phenol	6.99	94	1085067	154.48	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.22	93	768562	145.00	ng/ul	98
11) 2-Methylphenol	8.23	108	841458	155.00	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.32	45	1027856	143.11	ng/ul	98
14) Acetophenone	8.61	105	1175531	141.43	ng/ul	99
16) 4-Methylphenol	8.58	108	923518	153.36	ng/ul	94
30) 4-Chloroaniline	10.74	127	757005	113.61	ng/ul	98
32) Caprolactam	11.58	113	347344m	163.70	ng/ul	
37) Hexachlorocyclopentadiene	12.58	237	626609	173.01	ng/ul	95
48) 3-Nitroaniline	14.36	138	569448	145.96	ng/ul	99
50) 2,4-Dinitrophenol	14.56	184	428328	202.75	ng/ul	93
52) 4-Nitrophenol	14.69	109	445714	157.24	ng/ul	92
60) 4-Nitroaniline	15.54	138	639334	154.35	ng/ul	93
63) 4,6-Dinitro-2-methylphenol	15.59	198	522473	157.93	ng/ul#	87
67) Atrazine	16.66	200	758834	135.68	ng/ul	99
68) Pentachlorophenol	16.83	266	558124	166.98	ng/ul	97
72) Carbazole	17.59	167	3315288	128.31	ng/ul	98
74) Fluoranthene	19.24	202	3900552	119.85	ng/ul	96
79) 3,3'-Dichlorobenzidine	21.29	252	1289339	144.50	ng/ul	98
84) Di-n-octyl phthalate	22.17	149	4331133	131.76	ng/ul#	94

U.M 05/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
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5/6/2016 7:15:04 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 11:46

Lab File ID: BM005427.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02066 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.776	0.769	0.01	-0.9	± 40.0
Benzaldehyde	0.879	1.137	0.10	29.4	± 40.0
Phenol	1.875	1.893	0.08	1.0	± 20.0
Bis(2-Chloroethyl)ether	1.411	1.427	0.10	1.1	± 20.0
2-Chlorophenol	1.401	1.429	0.20	2.0	± 20.0
2-Methylphenol	1.449	1.474	0.01	1.7	± 20.0
2,2-oxybis(1-Chloropropane)	1.915	1.992	0.01	4.0	± 25.0
Acetophenone	2.221	2.421	0.06	9.0	± 20.0
4-Methylphenol	1.608	1.627	0.01	1.2	± 20.0
N-Nitroso-di-n-propylamine	1.161	1.245	0.08	7.2	± 25.0
Hexachloroethane	0.527	0.567	0.10	7.6	± 20.0
Nitrobenzene	0.357	0.374	0.09	4.8	± 20.0
Isophorone	0.694	0.741	0.10	6.8	± 20.0
2-Nitrophenol	0.174	0.187	0.06	7.5	± 20.0
2,4-Dimethylphenol	0.370	0.388	0.05	4.9	± 25.0
Bis(2-Chloroethoxy)methane	0.432	0.437	0.08	1.2	± 20.0
2,4-Dichlorophenol	0.308	0.326	0.06	5.8	± 20.0
Naphthalene	1.006	1.036	0.20	3.0	± 20.0
4-Chloroaniline	0.369	0.418	0.01	13.3	± 40.0
Hexachlorobutadiene	0.183	0.204	0.04	11.5	± 20.0
Caprolactam	0.115	0.123	0.01	7.0	± 30.0
4-Chloro-3-methylphenol	0.369	0.401	0.04	8.7	± 20.0
2-Methylnaphthalene	0.753	0.783	0.10	4.0	± 20.0
Hexachlorocyclopentadiene	0.311	0.194	0.01	-37.6	± 40.0
2,4,6-Trichlorophenol	0.405	0.429	0.09	5.9	± 20.0
2,4,5-Trichlorophenol	0.450	0.448	0.10	-0.4	± 20.0
1,1-Biphenyl	1.584	1.618	0.20	2.1	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 11:46

Lab File ID: BM005427.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02066 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
2-Chloronaphthalene	1.198	1.229	0.30	2.6	± 20.0
2-Nitroaniline	0.369	0.412	0.06	11.7	± 25.0
Dimethylphthalate	1.602	1.668	0.30	4.1	± 20.0
2,6-Dinitrotoluene	0.316	0.342	0.08	8.2	± 20.0
Acenaphthylene	1.989	2.072	0.40	4.2	± 20.0
3-Nitroaniline	0.337	0.370	0.01	9.8	± 25.0
Acenaphthene	1.311	1.355	0.20	3.4	± 20.0
2,4-Dinitrophenol	0.182	0.141	0.01	-22.5	± 50.0
4-Nitrophenol	0.243	0.238	0.01	-2.1	± 40.0
Dibenzofuran	1.902	1.960	0.30	3.0	± 20.0
2,4-Dinitrotoluene	0.471	0.510	0.07	8.3	± 20.0
Diethylphthalate	1.618	1.722	0.30	6.4	± 20.0
Fluorene	1.487	1.587	0.20	6.7	± 20.0
4-Chlorophenyl-phenylether	0.737	0.793	0.10	7.6	± 20.0
4-Nitroaniline	0.357	0.377	0.01	5.6	± 40.0
4,6-Dinitro-2-methylphenol	0.118	0.120	0.01	1.7	± 30.0
N-Nitrosodiphenylamine	0.548	0.586	0.10	6.9	± 20.0
4-Bromophenyl-phenylether	0.192	0.213	0.07	10.9	± 20.0
1,2,4,5-Tetrachlorobenzene	0.608	0.635	0.10	4.4	± 20.0
Hexachlorobenzene	0.215	0.235	0.05	9.3	± 20.0
Atrazine	0.200	0.234	0.01	17.0	± 25.0
Pentachlorophenol	0.120	0.110	0.01	-8.3	± 40.0
Phenanthrene	1.052	1.109	0.20	5.4	± 20.0
Anthracene	1.048	1.131	0.20	7.9	± 20.0
Carbazole	0.922	1.051	0.05	14.0	± 20.0
Di-n-butylphthalate	1.125	1.321	0.50	17.4	± 20.0
Fluoranthene	1.165	1.367	0.10	17.3	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 11:46

Lab File ID: BM005427.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02066 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
Pyrene	1.160	1.200	0.40	3.4	± 25.0
Butylbenzylphthalate	0.482	0.543	0.10	12.7	± 25.0
3,3-Dichlorobenzidine	0.360	0.390	0.01	8.3	± 40.0
Benzo(a)anthracene	1.150	1.201	0.30	4.4	± 20.0
Chrysene	1.091	1.145	0.20	4.9	± 20.0
Bis(2-ethylhexyl)phthalate	0.669	0.780	0.20	16.6	± 25.0
Di-n-octyl phthalate	1.168	1.515	0.01	29.7	± 40.0
Benzo(b)fluoranthene	1.169	1.298	0.01	11.0	± 25.0
Benzo(k)fluoranthene	1.101	1.205	0.01	9.4	± 25.0
Benzo(a)pyrene	1.106	1.173	0.01	6.1	± 20.0
Indeno(1,2,3-cd)pyrene	1.206	1.074	0.01	-10.9	± 25.0
Dibenzo(a,h)anthracene	1.010	0.900	0.01	-10.9	± 25.0
Benzo(g,h,i)perylene	1.022	0.867	0.01	-15.2	± 30.0
2,3,4,6-Tetrachlorophenol	0.382	0.392	0.04	2.6	± 20.0
1,4-Dioxane-d8	0.425	0.415	0.01	-2.4	± 25.0
Phenol-d5	1.814	1.808	0.01	-0.3	± 25.0
Bis-(2-Chloroethyl)ether-d8	1.035	1.053	0.10	1.7	± 20.0
2-Chlorophenol-d4	1.370	1.426	0.20	4.1	± 20.0
4-Methylphenol-d8	1.499	1.518	0.01	1.3	± 20.0
Nitrobenzene-d5	0.143	0.152	0.05	6.3	± 20.0
2-Nitrophenol-d4	0.162	0.177	0.05	9.3	± 20.0
2,4-Dichlorophenol-d3	0.300	0.319	0.06	6.3	± 20.0
4-Chloroaniline-d4	0.362	0.414	0.01	14.4	± 40.0
Dimethylphthalate-d6	1.603	1.678	0.30	4.7	± 20.0
Acenaphthylene-d8	1.880	1.961	0.40	4.3	± 20.0
4-Nitrophenol-d4	0.293	0.278	0.01	-5.1	± 40.0
Fluorene-d10	1.384	1.434	0.10	3.6	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 11:46

Lab File ID: BM005427.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02066 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
4,6-Dinitro-2-methylphenol-d2	0.113	0.116	0.01	2.7	± 30.0
Anthracene-d10	0.884	0.951	0.30	7.6	± 20.0
Pyrene-d10	0.923	0.950	0.30	2.9	± 25.0
Benzo(a)pyrene-d12	0.885	0.939	0.01	6.1	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 17:05

Lab File ID: BM005435.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02034 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.776	0.786	0.01	1.3	± 40.0
Benzaldehyde	0.879	1.146	0.10	30.4	± 40.0
Phenol	1.875	1.906	0.08	1.7	± 20.0
Bis(2-Chloroethyl)ether	1.411	1.435	0.10	1.7	± 20.0
2-Chlorophenol	1.401	1.432	0.20	2.2	± 20.0
2-Methylphenol	1.449	1.437	0.01	-0.8	± 20.0
2,2-oxybis(1-Chloropropane)	1.915	2.033	0.01	6.2	± 25.0
Acetophenone	2.221	2.338	0.06	5.3	± 20.0
4-Methylphenol	1.608	1.576	0.01	-2.0	± 20.0
N-Nitroso-di-n-propylamine	1.161	1.205	0.08	3.8	± 25.0
Hexachloroethane	0.527	0.555	0.10	5.3	± 20.0
Nitrobenzene	0.357	0.375	0.09	5.0	± 20.0
Isophorone	0.694	0.724	0.10	4.3	± 20.0
2-Nitrophenol	0.174	0.186	0.06	6.9	± 20.0
2,4-Dimethylphenol	0.370	0.385	0.05	4.1	± 25.0
Bis(2-Chloroethoxy)methane	0.432	0.434	0.08	0.5	± 20.0
2,4-Dichlorophenol	0.308	0.320	0.06	3.9	± 20.0
Naphthalene	1.006	1.034	0.20	2.8	± 20.0
4-Chloroaniline	0.369	0.409	0.01	10.8	± 40.0
Hexachlorobutadiene	0.183	0.204	0.04	11.5	± 20.0
Caprolactam	0.115	0.115	0.01	0.0	± 30.0
4-Chloro-3-methylphenol	0.369	0.388	0.04	5.1	± 20.0
2-Methylnaphthalene	0.753	0.777	0.10	3.2	± 20.0
Hexachlorocyclopentadiene	0.311	0.247	0.01	-20.6	± 40.0
2,4,6-Trichlorophenol	0.405	0.429	0.09	5.9	± 20.0
2,4,5-Trichlorophenol	0.450	0.477	0.10	6.0	± 20.0
1,1-Biphenyl	1.584	1.643	0.20	3.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 17:05

Lab File ID: BM005435.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02034 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
2-Chloronaphthalene	1.198	1.244	0.30	3.8	± 20.0
2-Nitroaniline	0.369	0.405	0.06	9.8	± 25.0
Dimethylphthalate	1.602	1.660	0.30	3.6	± 20.0
2,6-Dinitrotoluene	0.316	0.340	0.08	7.6	± 20.0
Acenaphthylene	1.989	2.072	0.40	4.2	± 20.0
3-Nitroaniline	0.337	0.368	0.01	9.2	± 25.0
Acenaphthene	1.311	1.358	0.20	3.6	± 20.0
2,4-Dinitrophenol	0.182	0.137	0.01	-24.7	± 50.0
4-Nitrophenol	0.243	0.229	0.01	-5.8	± 40.0
Dibenzofuran	1.902	1.966	0.30	3.4	± 20.0
2,4-Dinitrotoluene	0.471	0.509	0.07	8.1	± 20.0
Diethylphthalate	1.618	1.703	0.30	5.3	± 20.0
Fluorene	1.487	1.576	0.20	6.0	± 20.0
4-Chlorophenyl-phenylether	0.737	0.795	0.10	7.9	± 20.0
4-Nitroaniline	0.357	0.375	0.01	5.0	± 40.0
4,6-Dinitro-2-methylphenol	0.118	0.116	0.01	-1.7	± 30.0
N-Nitrosodiphenylamine	0.548	0.581	0.10	6.0	± 20.0
4-Bromophenyl-phenylether	0.192	0.212	0.07	10.4	± 20.0
1,2,4,5-Tetrachlorobenzene	0.608	0.646	0.10	6.3	± 20.0
Hexachlorobenzene	0.215	0.237	0.05	10.2	± 20.0
Atrazine	0.200	0.230	0.01	15.0	± 25.0
Pentachlorophenol	0.120	0.104	0.01	-13.3	± 40.0
Phenanthrene	1.052	1.105	0.20	5.0	± 20.0
Anthracene	1.048	1.113	0.20	6.2	± 20.0
Carbazole	0.922	1.038	0.05	12.6	± 20.0
Di-n-butylphthalate	1.125	1.246	0.50	10.8	± 20.0
Fluoranthene	1.165	1.357	0.10	16.5	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 17:05

Lab File ID: BM005435.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02034 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
Pyrene	1.160	1.227	0.40	5.8	± 25.0
Butylbenzylphthalate	0.482	0.540	0.10	12.0	± 25.0
3,3-Dichlorobenzidine	0.360	0.399	0.01	10.8	± 40.0
Benzo(a)anthracene	1.150	1.203	0.30	4.6	± 20.0
Chrysene	1.091	1.144	0.20	4.9	± 20.0
Bis(2-ethylhexyl)phthalate	0.669	0.765	0.20	14.4	± 25.0
Di-n-octyl phthalate	1.168	1.493	0.01	27.8	± 40.0
Benzo(b)fluoranthene	1.169	1.286	0.01	10.0	± 25.0
Benzo(k)fluoranthene	1.101	1.201	0.01	9.1	± 25.0
Benzo(a)pyrene	1.106	1.174	0.01	6.1	± 20.0
Indeno(1,2,3-cd)pyrene	1.206	1.079	0.01	-10.5	± 25.0
Dibenzo(a,h)anthracene	1.010	0.906	0.01	-10.3	± 25.0
Benzo(g,h,i)perylene	1.022	0.875	0.01	-14.4	± 30.0
2,3,4,6-Tetrachlorophenol	0.382	0.385	0.04	0.8	± 20.0
1,4-Dioxane-d8	0.425	0.438	0.01	3.1	± 25.0
Phenol-d5	1.814	1.819	0.01	0.3	± 25.0
Bis-(2-Chloroethyl)ether-d8	1.035	1.072	0.10	3.6	± 20.0
2-Chlorophenol-d4	1.370	1.402	0.20	2.3	± 20.0
4-Methylphenol-d8	1.499	1.475	0.01	-1.6	± 20.0
Nitrobenzene-d5	0.143	0.150	0.05	4.9	± 20.0
2-Nitrophenol-d4	0.162	0.175	0.05	8.0	± 20.0
2,4-Dichlorophenol-d3	0.300	0.320	0.06	6.7	± 20.0
4-Chloroaniline-d4	0.362	0.409	0.01	13.0	± 40.0
Dimethylphthalate-d6	1.603	1.675	0.30	4.5	± 20.0
Acenaphthylene-d8	1.880	1.970	0.40	4.8	± 20.0
4-Nitrophenol-d4	0.293	0.261	0.01	-10.9	± 40.0
Fluorene-d10	1.384	1.423	0.10	2.8	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4010

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/13/2016 Time: 17:05

Lab File ID: BM005435.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02034 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
4,6-Dinitro-2-methylphenol-d2	0.113	0.111	0.01	-1.8	± 30.0
Anthracene-d10	0.884	0.941	0.30	6.4	± 20.0
Pyrene-d10	0.923	0.973	0.30	5.4	± 25.0
Benzo(a)pyrene-d12	0.885	0.940	0.01	6.2	± 20.0

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:02:31 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02066

Manual Integrations APPROVED
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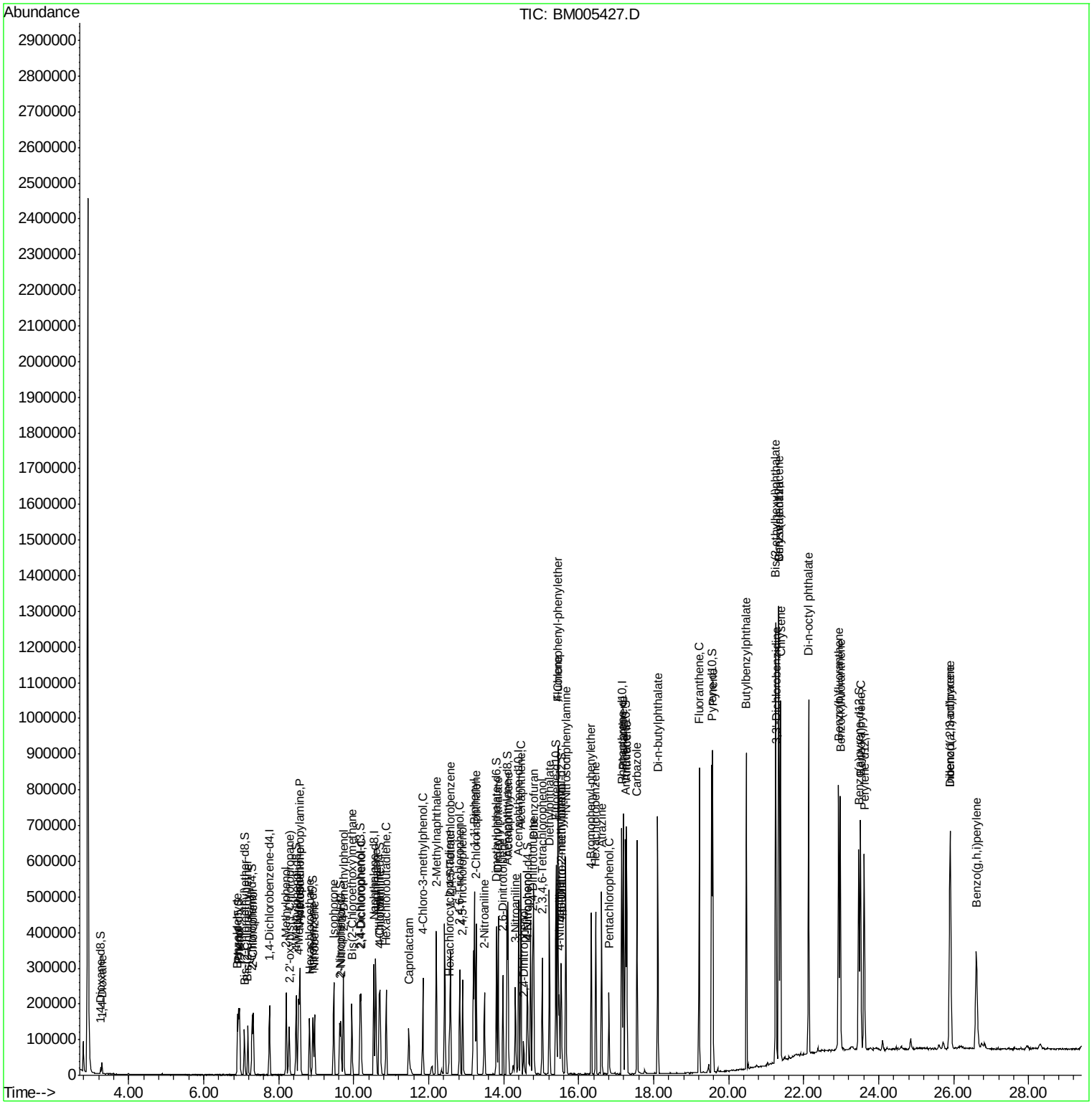
5/14/2016 9:58:31 AM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:02:31 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02066

Manual Integrations APPROVED
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5/14/2016 9:58:31 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	53315	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	252436	20.00	ng/ul	-0.01
35) Acenaphthene-d10	14.39	164	164238	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	396308	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	463039	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	411120	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	8859	7.81	ng/uL	0.00
5) Phenol-d5	6.93	99	96416	19.94	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	56125	20.35	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	76028	20.82	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	80945	20.25	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	38325	21.26	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	44679	21.89	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.16	165	80502	21.23	ng/ul	-0.01
29) 4-Chloroaniline-d4	10.68	131	104530	22.90	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	275564	20.93	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	322080	20.86	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	45699	19.02	ng/ul	0.00
57) Fluorene-d10	15.39	176	235590	20.72	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	46090	20.67	ng/ul	0.00
70) Anthracene-d10	17.24	188	376801	21.51	ng/ul	0.00
76) Pyrene-d10	19.54	212	439732	20.57	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	386140	21.22	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	16393	7.93	ng/uL	96
4) Benzaldehyde	6.90	77	60593	25.86	ng/ul	95
6) Phenol	6.96	94	100902	20.19	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.17	93	76091	20.22	ng/ul	99
10) 2-Chlorophenol	7.32	128	76161	20.39	ng/ul	97
11) 2-Methylphenol	8.20	108	78560	20.34	ng/ul	96
12) 2,2'-oxybis(1-Chloropropan	8.28	45	106184	20.81	ng/ul	98
14) Acetophenone	8.57	105	129101	21.80	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.55	70	66378	21.45	ng/ul	98
16) 4-Methylphenol	8.53	108	86735	20.23	ng/ul	96
17) Hexachloroethane	8.82	117	30204	21.49	ng/ul	93
20) Nitrobenzene	8.95	77	94401	20.92	ng/ul	97
21) Isophorone	9.47	82	187130	21.36	ng/ul#	97
23) 2-Nitrophenol	9.66	139	47326	21.52	ng/ul	95
24) 2,4-Dimethylphenol	9.72	107	97856	20.98	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.95	93	110363	20.23	ng/ul	98
27) 2,4-Dichlorophenol	10.19	162	82338	21.20	ng/ul	99
28) Naphthalene	10.59	128	261410	20.58	ng/ul	99
30) 4-Chloroaniline	10.70	127	105636	22.69	ng/ul	100
31) Hexachlorobutadiene	10.86	225	51505	22.31	ng/ul	99
32) Caprolactam	11.47	113	30960m	21.39	ng/ul	
33) 4-Chloro-3-methylphenol	11.84	107	101149	21.72	ng/ul	100
34) 2-Methylnaphthalene	12.20	142	197741	20.82	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:02:31 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02066

Manual Integrations APPROVED
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5/14/2016 9:58:31 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.57	216	104290	20.87	ng/ul	98
37) Hexachlorocyclopentadiene	12.55	237	31825	12.47	ng/ul	92
38) 2,4,6-Trichlorophenol	12.82	196	70456	21.17	ng/ul	97
39) 2,4,5-Trichlorophenol	12.90	196	73505	19.91	ng/ul	99
40) 1,1'-Biphenyl	13.22	154	265690	20.42	ng/ul	99
41) 2-Chloronaphthalene	13.26	162	201899	20.52	ng/ul	98
42) 2-Nitroaniline	13.48	65	67716	22.36	ng/ul	95
44) Dimethylphthalate	13.85	163	274000	20.83	ng/ul	100
45) 2,6-Dinitrotoluene	13.98	165	56243	21.68	ng/ul	93
47) Acenaphthylene	14.12	152	340260	20.83	ng/ul	100
48) 3-Nitroaniline	14.31	138	60765	21.97	ng/ul	98
49) Acenaphthene	14.46	153	222463	20.66	ng/ul	98
50) 2,4-Dinitrophenol	14.53	184	23173	15.53	ng/ul	96
52) 4-Nitrophenol	14.63	109	39155	19.60	ng/ul	94
53) Dibenzofuran	14.79	168	321854	20.61	ng/ul	98
54) 2,4-Dinitrotoluene	14.77	165	83698	21.64	ng/ul	98
55) 2,3,4,6-Tetrachlorophenol	15.03	232	64451	20.53	ng/ul#	97
56) Diethylphthalate	15.22	149	282821	21.28	ng/ul	100
58) Fluorene	15.44	166	260580	21.34	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.44	204	130170	21.51	ng/ul	98
60) 4-Nitroaniline	15.48	138	61854m	21.10	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	47551	20.30	ng/ul#	91
64) N-Nitrosodiphenylamine	15.66	169	232091	21.39	ng/ul	100
65) 4-Bromophenyl-phenylether	16.33	248	84237	22.17	ng/ul	97
66) Hexachlorobenzene	16.45	284	92988	21.82	ng/ul	98
67) Atrazine	16.61	200	92726	23.41	ng/ul	99
68) Pentachlorophenol	16.80	266	43748	18.47	ng/ul	95
69) Phenanthrene	17.19	178	439349	21.08	ng/ul	100
71) Anthracene	17.28	178	448327	21.58	ng/ul	100
72) Carbazole	17.55	167	416601	22.79	ng/ul	99
73) Di-n-butylphthalate	18.10	149	523702	23.49	ng/ul	100
74) Fluoranthene	19.21	202	541768	23.47	ng/ul	98
77) Pyrene	19.57	202	555431	20.68	ng/ul	98
78) Butylbenzylphthalate	20.47	149	251558	22.56	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	180426	21.68	ng/ul	98
80) Benzo(a)anthracene	21.33	228	555983	20.87	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.24	149	361347	23.33	ng/ul#	98
82) Chrysene	21.38	228	530087	20.98	ng/ul	100
84) Di-n-octyl phthalate	22.13	149	623019	25.95	ng/ul	100
85) Benzo(b)fluoranthene	22.93	252	533455	22.20	ng/ul	99
86) Benzo(k)fluoranthene	22.97	252	495326	21.89	ng/ul	99
88) Benzo(a)pyrene	23.51	252	482051	21.21	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.90	276	441555	17.81	ng/ul	97
90) Dibenzo(a,h)anthracene	25.90	278	370123	17.83	ng/ul	98
91) Benzo(g,h,i)perylene	26.60	276	356314	16.96	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

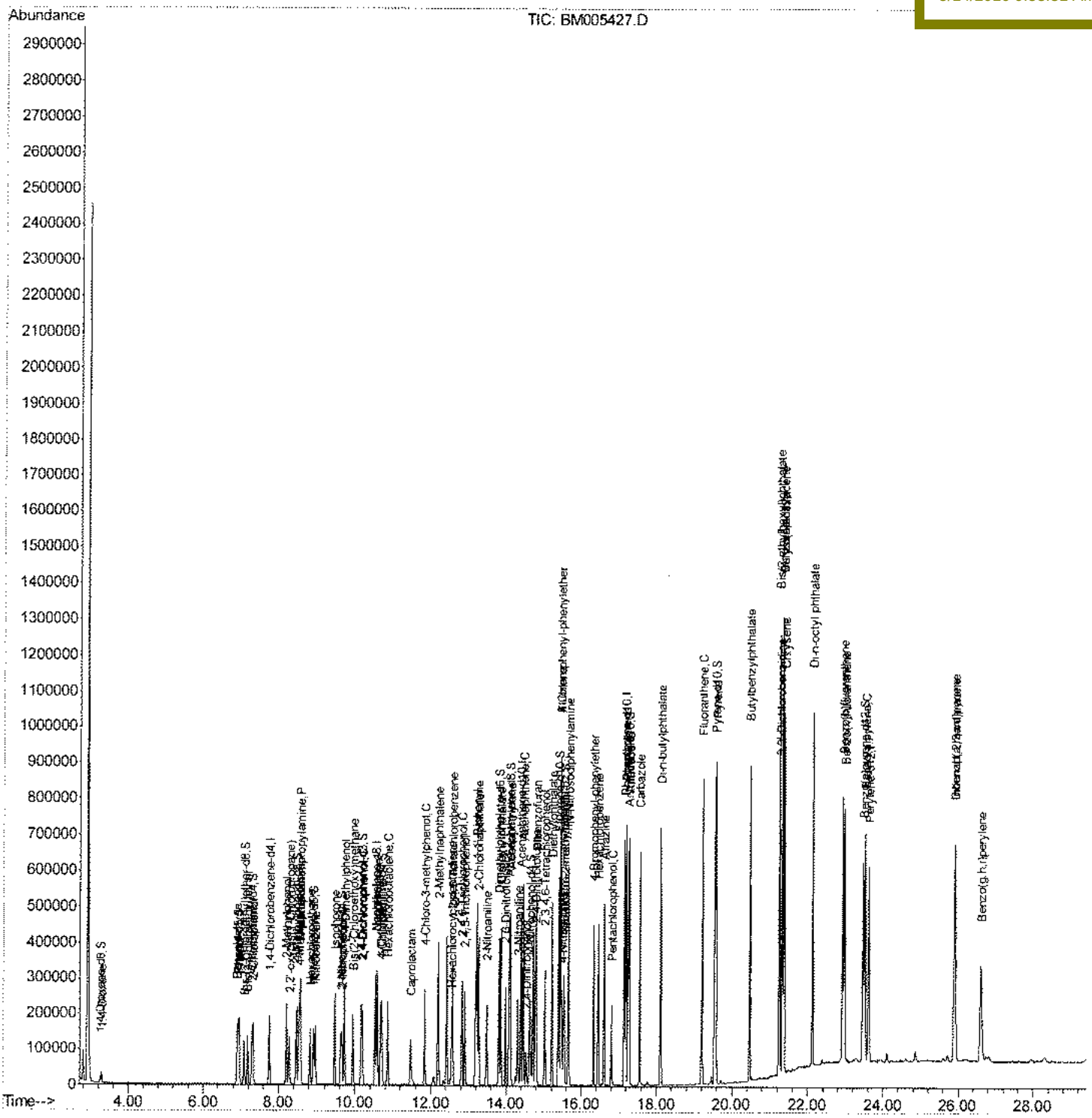
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:02:31 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02066

Manual Integrations APPROVED
sohil
5/14/2016 9:58:31 AM



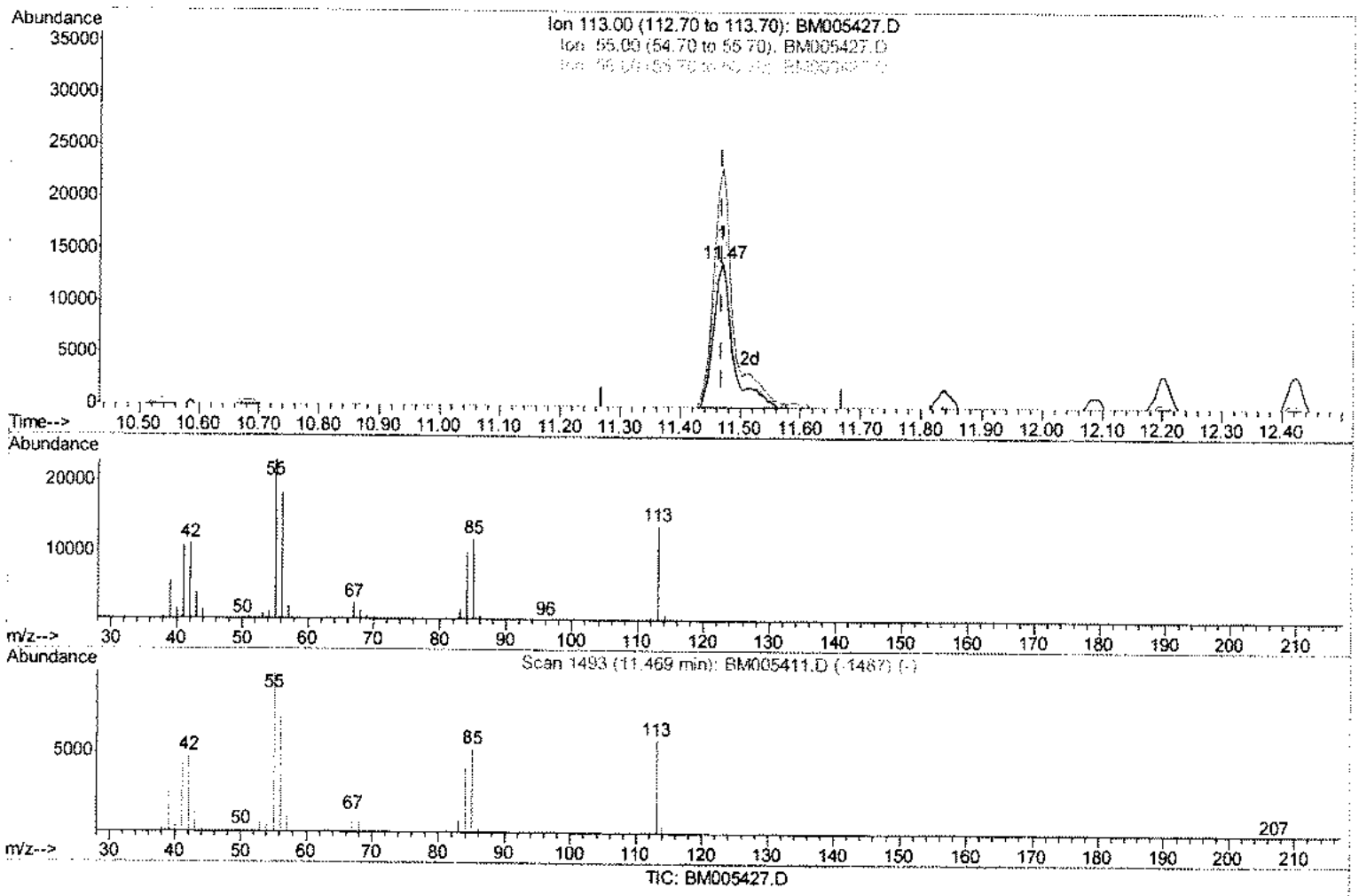
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 23:57:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02066

Manual Integrations APPROVED
sohil
5/14/2016 9:58:31 AM



(32) Caprolactam

11.469min (-0.000) 21.39ng/ul m U.M 05/17/16

response 30960

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	165.88
56.00	120.80	131.29
0.00	0.00	0.00

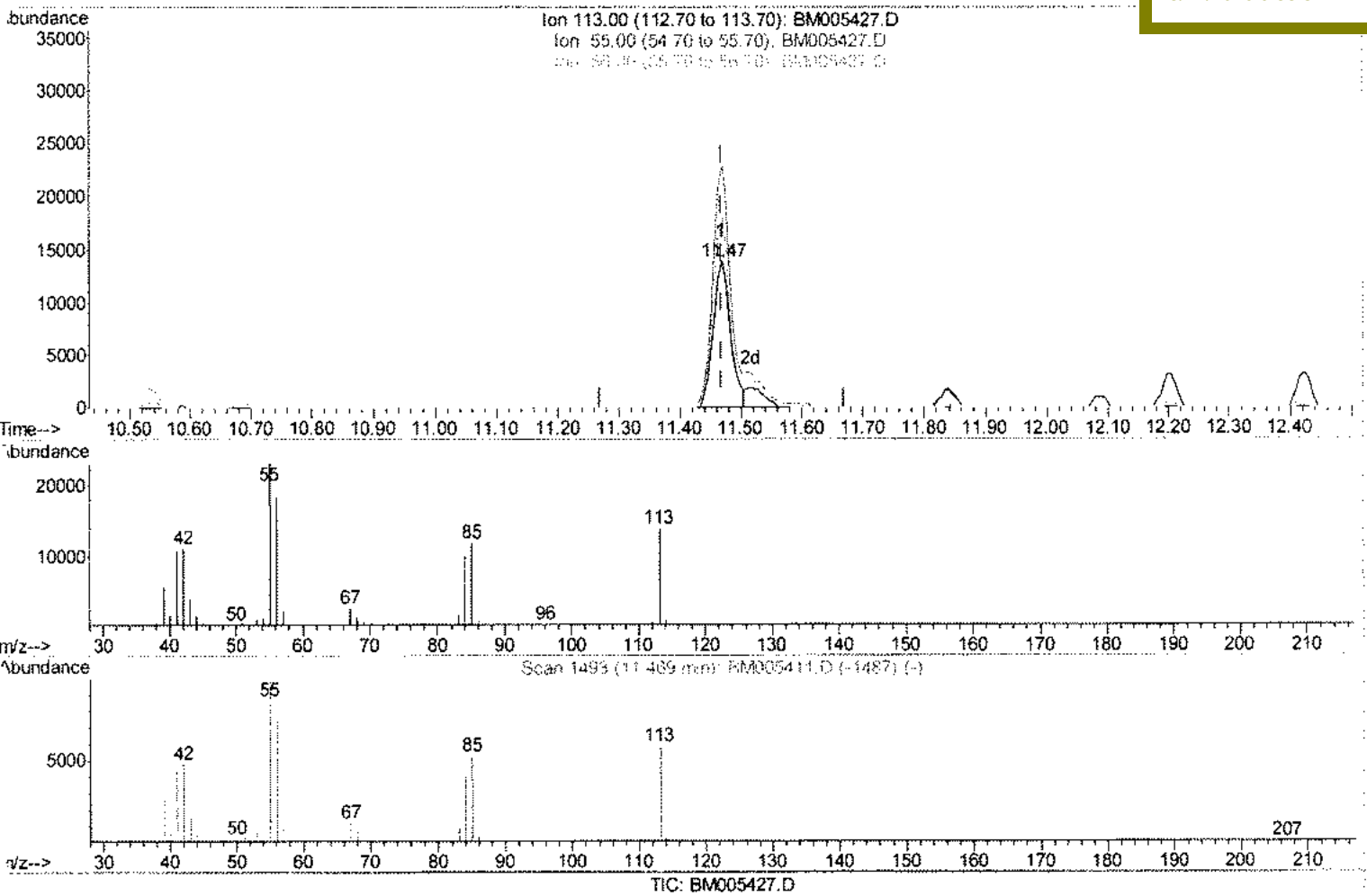
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 23:57:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02066

Manual Integrations APPROVED
sohil
5/14/2016 9:58:31 AM



TIC: BM005427.D

(32) Caprolactam

11.469min (-0.000) 18.77ng/ul

response 27162

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	165.88
56.00	120.80	131.29
0.00	0.00	0.00

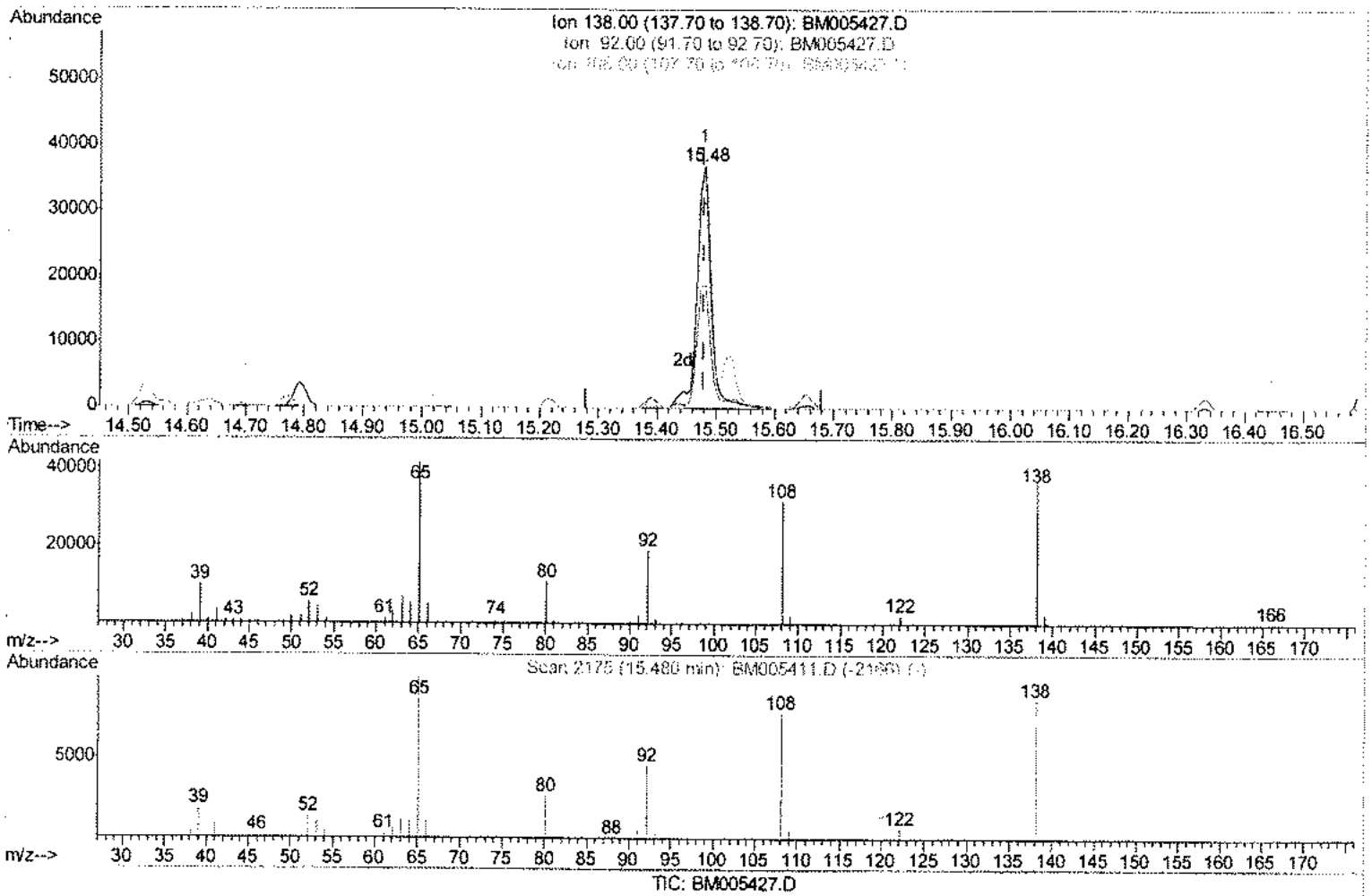
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 23:57:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02066

Manual Integrations APPROVED
sohil
5/14/2016 9:58:31 AM



TIC: BM005427.D

(60) 4-Nitroaniline

15.480min (-0.000) 21.10ng/ul m U.M 05/17/16

response 61854

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	51.94
108.00	82.90	86.01
0.00	0.00	0.00

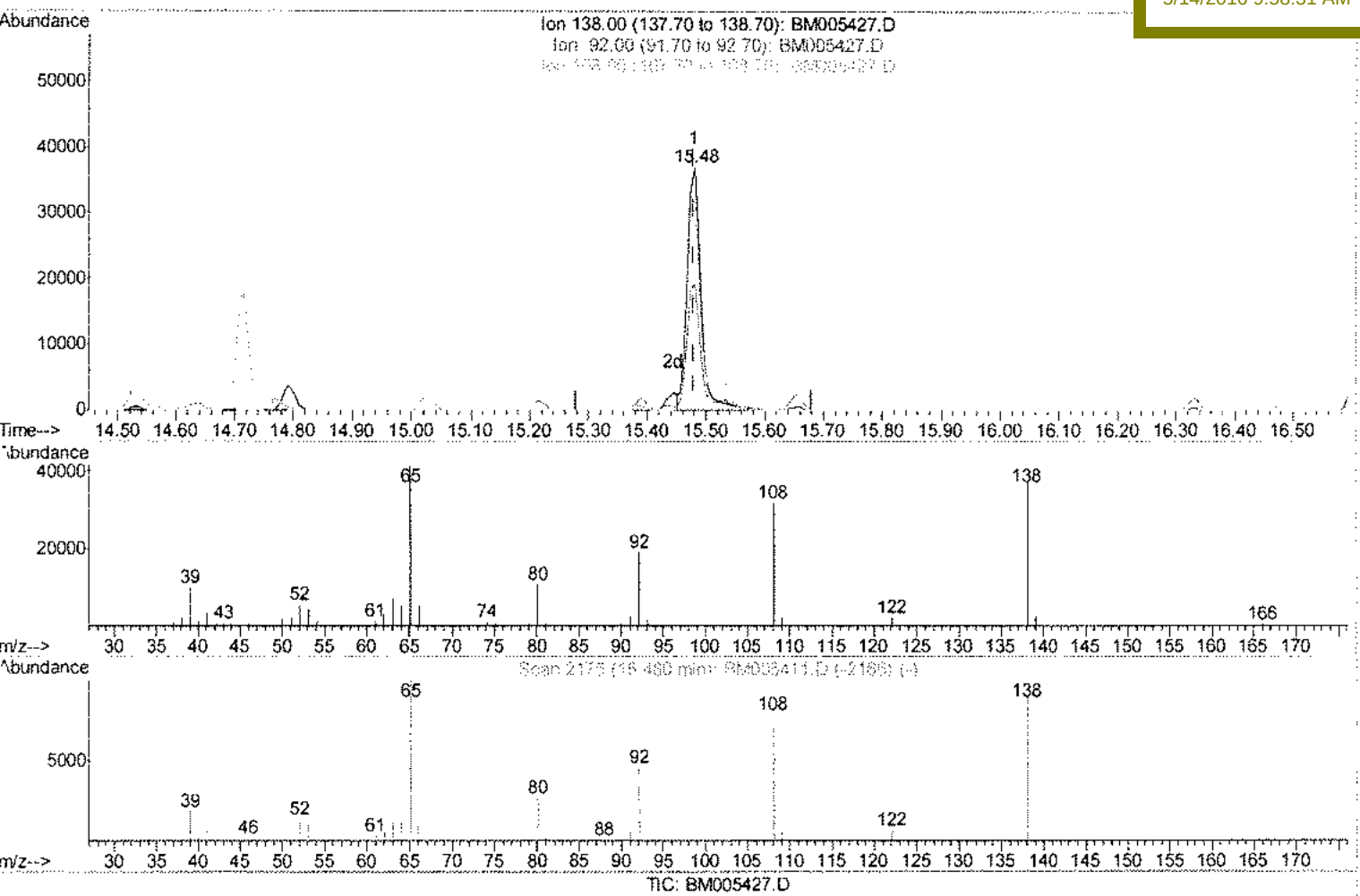
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 23:57:52 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02066

Manual Integrations APPROVED
sohil
5/14/2016 9:58:31 AM



(60) 4-Nitroaniline

15.480min (-0.000) 20.07ng/ul

response 58821

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	51.94
108.00	82.90	86.01
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:02:31 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02066

Manual Integrations APPROVED
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5/14/2016 9:58:31 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.57	216	104290	20.87	ng/ul	98
37) Hexachlorocyclopentadiene	12.55	237	31825	12.47	ng/ul	92
38) 2,4,6-Trichlorophenol	12.82	196	70456	21.17	ng/ul	97
39) 2,4,5-Trichlorophenol	12.90	196	73505	19.91	ng/ul	99
40) 1,1'-Biphenyl	13.22	154	265690	20.42	ng/ul	99
41) 2-Chloronaphthalene	13.26	162	201899	20.52	ng/ul	98
42) 2-Nitroaniline	13.48	65	67716	22.36	ng/ul	95
44) Dimethylphthalate	13.85	163	274000	20.83	ng/ul	100
45) 2,6-Dinitrotoluene	13.98	165	56243	21.68	ng/ul	93
47) Acenaphthylene	14.12	152	340260	20.83	ng/ul	100
48) 3-Nitroaniline	14.31	138	60765	21.97	ng/ul	98
49) Acenaphthene	14.46	153	222463	20.66	ng/ul	98
50) 2,4-Dinitrophenol	14.53	184	23173	15.53	ng/ul	96
52) 4-Nitrophenol	14.63	109	39155	19.60	ng/ul	94
53) Dibenzofuran	14.79	168	321854	20.61	ng/ul	98
54) 2,4-Dinitrotoluene	14.77	165	83698	21.64	ng/ul	98
55) 2,3,4,6-Tetrachlorophenol	15.03	232	64451	20.53	ng/ul#	97
56) Diethylphthalate	15.22	149	282821	21.28	ng/ul	100
58) Fluorene	15.44	166	260580	21.34	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.44	204	130170	21.51	ng/ul	98
60) 4-Nitroaniline	15.48	138	61854m	21.10	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	47551	20.30	ng/ul#	91
64) N-Nitrosodiphenylamine	15.66	169	232091	21.39	ng/ul	100
65) 4-Bromophenyl-phenylether	16.33	248	84237	22.17	ng/ul	97
66) Hexachlorobenzene	16.45	284	92988	21.82	ng/ul	98
67) Atrazine	16.61	200	92726	23.41	ng/ul	99
68) Pentachlorophenol	16.80	266	43748	18.47	ng/ul	95
69) Phenanthrene	17.19	178	439349	21.08	ng/ul	100
71) Anthracene	17.28	178	448327	21.58	ng/ul	100
72) Carbazole	17.55	167	416601	22.79	ng/ul	99
73) Di-n-butylphthalate	18.10	149	523702	23.49	ng/ul	100
74) Fluoranthene	19.21	202	541768	23.47	ng/ul	98
77) Pyrene	19.57	202	555431	20.68	ng/ul	98
78) Butylbenzylphthalate	20.47	149	251558	22.56	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	180426	21.68	ng/ul	98
80) Benzo(a)anthracene	21.33	228	555983	20.87	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.24	149	361347	23.33	ng/ul#	98
82) Chrysene	21.38	228	530087	20.98	ng/ul	100
84) Di-n-octyl phthalate	22.13	149	623019	25.95	ng/ul	100
85) Benzo(b)fluoranthene	22.93	252	533455	22.20	ng/ul	99
86) Benzo(k)fluoranthene	22.97	252	495326	21.89	ng/ul	99
88) Benzo(a)pyrene	23.51	252	482051	21.21	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.90	276	441555	17.81	ng/ul	97
90) Dibenzo(a,h)anthracene	25.90	278	370123	17.83	ng/ul	98
91) Benzo(g,h,i)perylene	26.60	276	356314	16.96	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

U.M 05/17/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005427.D
Acq On : 13 May 2016 11:46
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:02:31 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02066

Manual Integrations APPROVED
sohil
5/14/2016 9:58:31 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	53315	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	252436	20.00	ng/ul	-0.01
35) Acenaphthene-d10	14.39	164	164238	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	396308	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	463039	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	411120	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	8859	7.81	ng/uL	0.00
5) Phenol-d5	6.93	99	96416	19.94	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	56125	20.35	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	76028	20.82	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	80945	20.25	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	38325	21.26	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	44679	21.89	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.16	165	80502	21.23	ng/ul	-0.01
29) 4-Chloroaniline-d4	10.68	131	104530	22.90	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	275564	20.93	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	322080	20.86	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	45699	19.02	ng/ul	0.00
57) Fluorene-d10	15.39	176	235590	20.72	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	46090	20.67	ng/ul	0.00
70) Anthracene-d10	17.24	188	376801	21.51	ng/ul	0.00
76) Pyrene-d10	19.54	212	439732	20.57	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	386140	21.22	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	16393	7.93	ng/uL	96
4) Benzaldehyde	6.90	77	60593	25.86	ng/ul	95
6) Phenol	6.96	94	100902	20.19	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.17	93	76091	20.22	ng/ul	99
10) 2-Chlorophenol	7.32	128	76161	20.39	ng/ul	97
11) 2-Methylphenol	8.20	108	78560	20.34	ng/ul	96
12) 2,2'-oxybis(1-Chloropropan	8.28	45	106184	20.81	ng/ul	98
14) Acetophenone	8.57	105	129101	21.80	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.55	70	66378	21.45	ng/ul	98
16) 4-Methylphenol	8.53	108	86735	20.23	ng/ul	96
17) Hexachloroethane	8.82	117	30204	21.49	ng/ul	93
20) Nitrobenzene	8.95	77	94401	20.92	ng/ul	97
21) Isophorone	9.47	82	187130	21.36	ng/ul#	97
23) 2-Nitrophenol	9.66	139	47326	21.52	ng/ul	95
24) 2,4-Dimethylphenol	9.72	107	97856	20.98	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.95	93	110363	20.23	ng/ul	98
27) 2,4-Dichlorophenol	10.19	162	82338	21.20	ng/ul	99
28) Naphthalene	10.59	128	261410	20.58	ng/ul	99
30) 4-Chloroaniline	10.70	127	105636	22.69	ng/ul	100
31) Hexachlorobutadiene	10.86	225	51505	22.31	ng/ul	99
32) Caprolactam	11.47	113	30960m	21.39	ng/ul	
33) 4-Chloro-3-methylphenol	11.84	107	101149	21.72	ng/ul	100
34) 2-Methylnaphthalene	12.20	142	197741	20.82	ng/ul	99

U.M 05/17/16

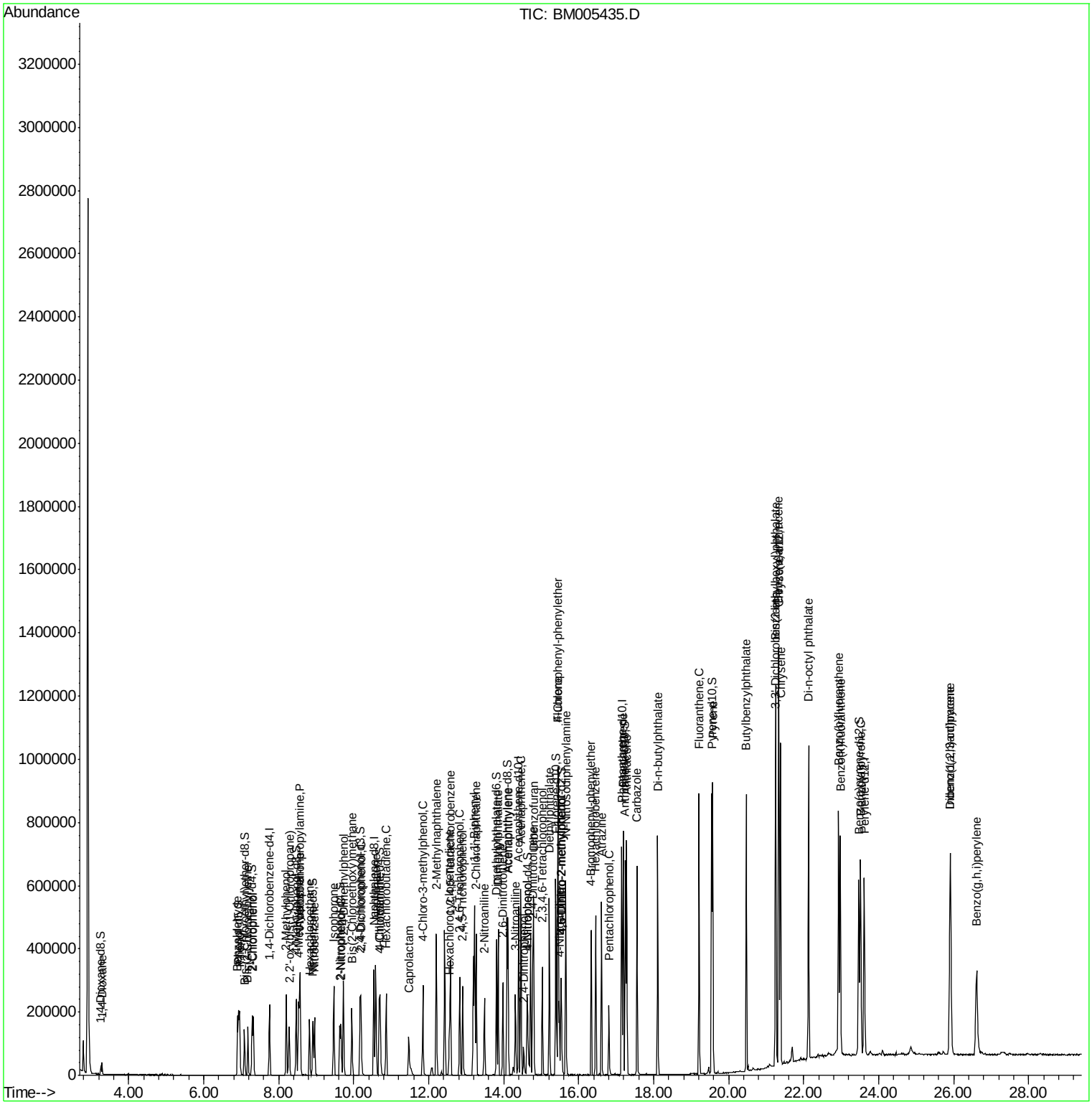
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:47:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:47:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	59500	20.00	ng/ul	0.00
18) Naphthalene-d8	10.54	136	277888	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	174095	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	417314	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	470014	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	415334	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	10424	8.24	ng/uL	0.00
5) Phenol-d5	6.93	99	108211	20.05	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	63812	20.73	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	83431	20.47	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	87757	19.67	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	41680	21.01	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	48702	21.68	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	88800	21.27	ng/ul	0.00
29) 4-Chloroaniline-d4	10.68	131	113736	22.63	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	291682	20.90	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	342929	20.95	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	45520	17.87	ng/ul	0.00
57) Fluorene-d10	15.39	176	247746	20.56	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	46141	19.66	ng/ul	0.00
70) Anthracene-d10	17.24	188	392585	21.28	ng/ul	0.00
76) Pyrene-d10	19.54	212	457296	21.08	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	390208	21.22	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	18702	8.11	ng/uL#	93
4) Benzaldehyde	6.90	77	68199	26.08	ng/ul	97
6) Phenol	6.96	94	113435	20.34	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.17	93	85379	20.33	ng/ul	97
10) 2-Chlorophenol	7.32	128	85207	20.44	ng/ul	98
11) 2-Methylphenol	8.20	108	85497	19.83	ng/ul	100
12) 2,2'-oxybis(1-Chloropropan	8.28	45	120976	21.24	ng/ul	98
14) Acetophenone	8.57	105	139141	21.06	ng/ul	96
15) N-Nitroso-di-n-propylamine	8.55	70	71706	20.77	ng/ul	100
16) 4-Methylphenol	8.53	108	93794	19.61	ng/ul	100
17) Hexachloroethane	8.82	117	32996	21.03	ng/ul	94
20) Nitrobenzene	8.95	77	104295	21.00	ng/ul	96
21) Isophorone	9.47	82	201145	20.86	ng/ul	99
23) 2-Nitrophenol	9.66	139	51674	21.35	ng/ul	96
24) 2,4-Dimethylphenol	9.72	107	106957	20.83	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.95	93	120688	20.09	ng/ul	98
27) 2,4-Dichlorophenol	10.19	162	88930	20.80	ng/ul	100
28) Naphthalene	10.59	128	287252	20.54	ng/ul	99
30) 4-Chloroaniline	10.70	127	113782	22.20	ng/ul	99
31) Hexachlorobutadiene	10.86	225	56755	22.33	ng/ul	98
32) Caprolactam	11.47	113	31987m	20.08	ng/ul	
33) 4-Chloro-3-methylphenol	11.84	107	107902	21.05	ng/ul	98
34) 2-Methylnaphthalene	12.20	142	215843	20.64	ng/ul	98

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:47:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.57	216	112506	21.24	ng/ul	98
37) Hexachlorocyclopentadiene	12.55	237	42927	15.87	ng/ul	98
38) 2,4,6-Trichlorophenol	12.82	196	74688	21.17	ng/ul	95
39) 2,4,5-Trichlorophenol	12.90	196	82983	21.20	ng/ul	97
40) 1,1'-Biphenyl	13.22	154	285955	20.73	ng/ul	99
41) 2-Chloronaphthalene	13.26	162	216607	20.77	ng/ul	99
42) 2-Nitroaniline	13.48	65	70564	21.98	ng/ul	95
44) Dimethylphthalate	13.85	163	289065	20.73	ng/ul	100
45) 2,6-Dinitrotoluene	13.98	165	59180	21.52	ng/ul#	88
47) Acenaphthylene	14.12	152	360748	20.83	ng/ul	100
48) 3-Nitroaniline	14.31	138	63989	21.83	ng/ul	93
49) Acenaphthene	14.46	153	236335	20.71	ng/ul	99
50) 2,4-Dinitrophenol	14.53	184	23933	15.13	ng/ul	99
52) 4-Nitrophenol	14.63	109	39795	18.79	ng/ul	97
53) Dibenzofuran	14.79	168	342310	20.67	ng/ul	100
54) 2,4-Dinitrotoluene	14.77	165	88569	21.60	ng/ul	99
55) 2,3,4,6-Tetrachlorophenol	15.03	232	67080	20.16	ng/ul#	96
56) Diethylphthalate	15.22	149	296405	21.04	ng/ul	99
58) Fluorene	15.44	166	274397	21.20	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.44	204	138348	21.57	ng/ul	98
60) 4-Nitroaniline	15.48	138	65233m	21.00	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	48563	19.69	ng/ul#	93
64) N-Nitrosodiphenylamine	15.66	169	242600	21.23	ng/ul	99
65) 4-Bromophenyl-phenylether	16.33	248	88368	22.09	ng/ul	96
66) Hexachlorobenzene	16.45	284	98745	22.00	ng/ul	96
67) Atrazine	16.60	200	96006	23.02	ng/ul	100
68) Pentachlorophenol	16.80	266	43436	17.42	ng/ul	99
69) Phenanthrene	17.19	178	461069	21.01	ng/ul	99
71) Anthracene	17.27	178	464292	21.22	ng/ul	99
72) Carbazole	17.55	167	433371	22.52	ng/ul	99
73) Di-n-butylphthalate	18.10	149	520162	22.16	ng/ul	100
74) Fluoranthene	19.21	202	566127	23.29	ng/ul	96
77) Pyrene	19.57	202	576547	21.15	ng/ul	97
78) Butylbenzylphthalate	20.47	149	253618	22.41	ng/ul	97
79) 3,3'-Dichlorobenzidine	21.26	252	187330	22.17	ng/ul	98
80) Benzo(a)anthracene	21.33	228	565341	20.91	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.24	149	359721	22.88	ng/ul#	97
82) Chrysene	21.38	228	537694	20.96	ng/ul	100
84) Di-n-octyl phthalate	22.13	149	619924	25.55	ng/ul	99
85) Benzo(b)fluoranthene	22.93	252	533943	21.99	ng/ul	98
86) Benzo(k)fluoranthene	22.97	252	498813	21.82	ng/ul	99
88) Benzo(a)pyrene	23.51	252	487738	21.24	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.90	276	447971	17.88	ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	376136	17.94	ng/ul	98
91) Benzo(g,h,i)perylene	26.61	276	363228	17.12	ng/ul	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

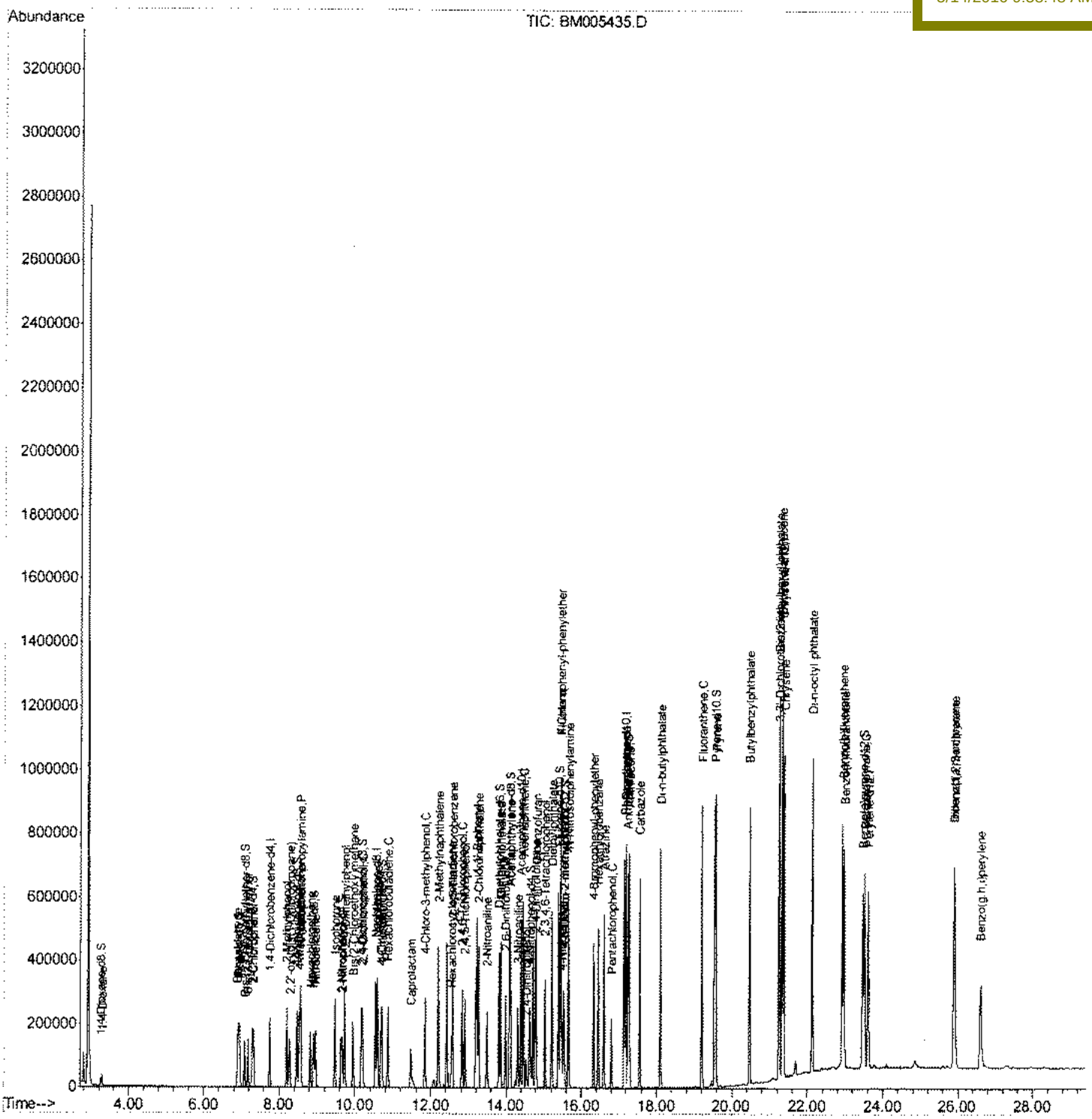
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:47:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM



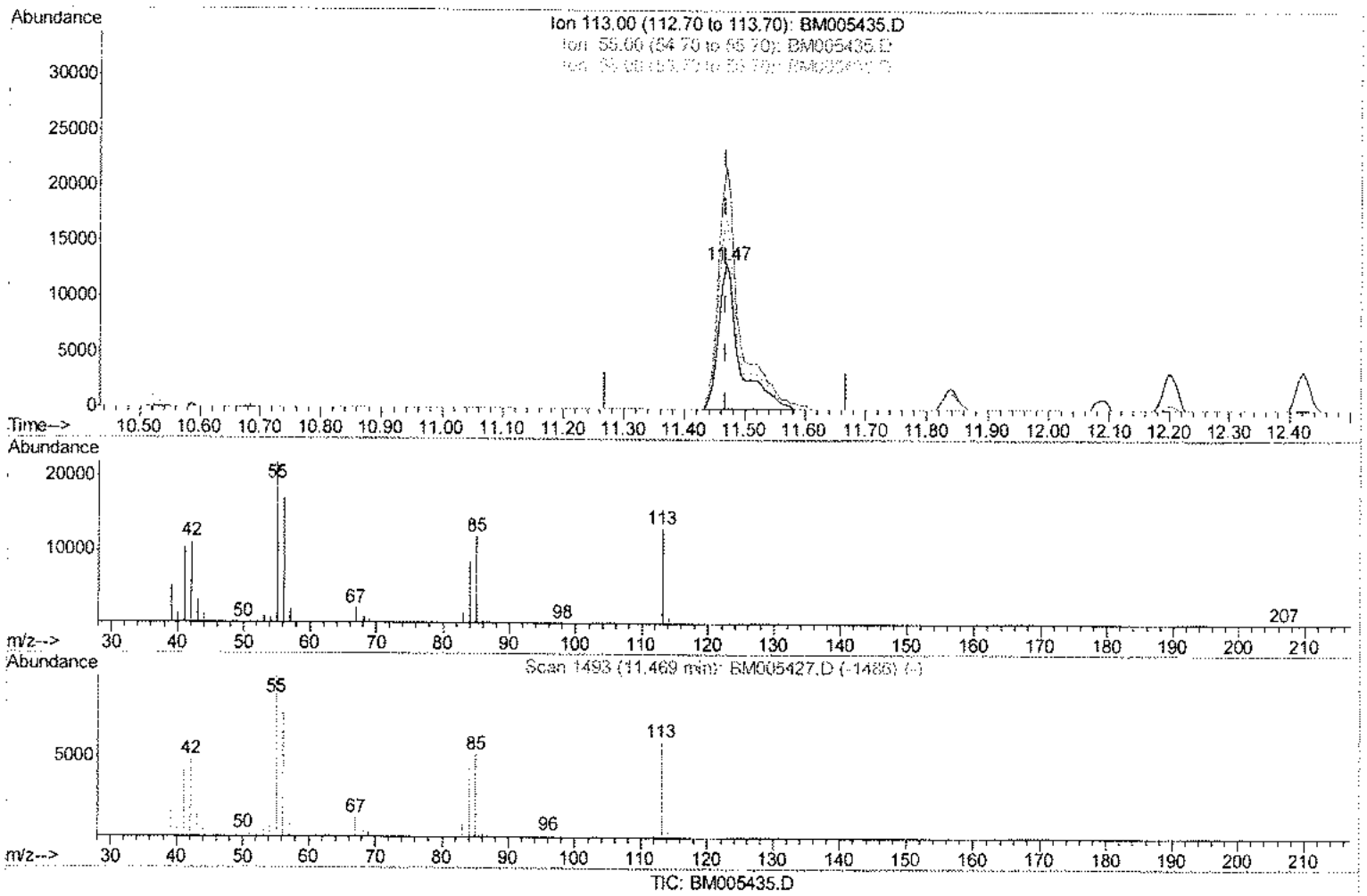
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:21:13 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM



TIC: BM005435.D

(32) Caprolactam

11.469min (+0.000) 20.08ng/ul m U.M 05/17/16

response 31987

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	167.14
56.00	120.80	130.40
0.00	0.00	0.00

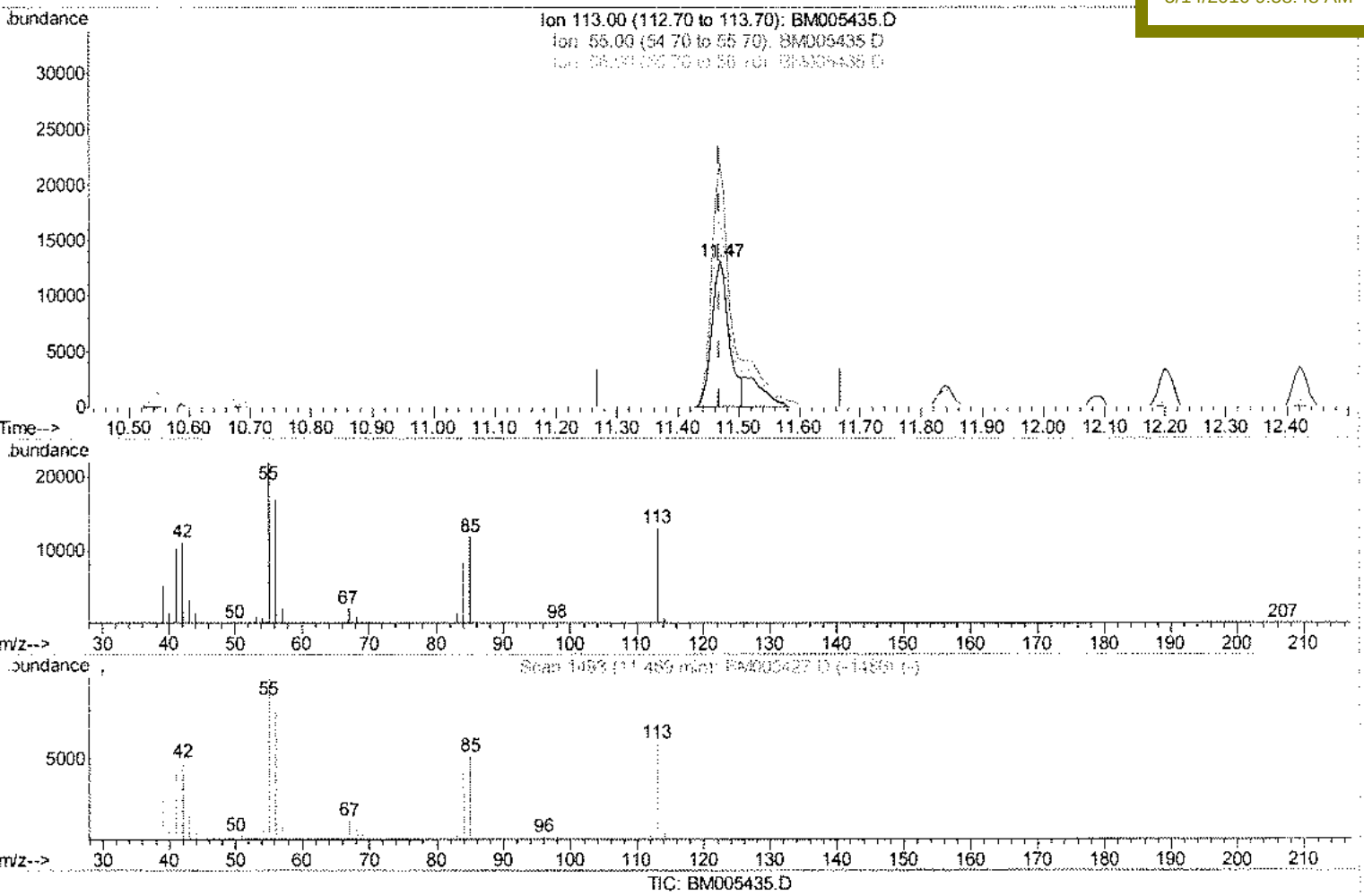
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:21:13 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM



(32) Caprolactam

11.469min (+0.000) 16.17ng/ul

response 25766

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	167.14
56.00	120.80	130.40
0.00	0.00	0.00

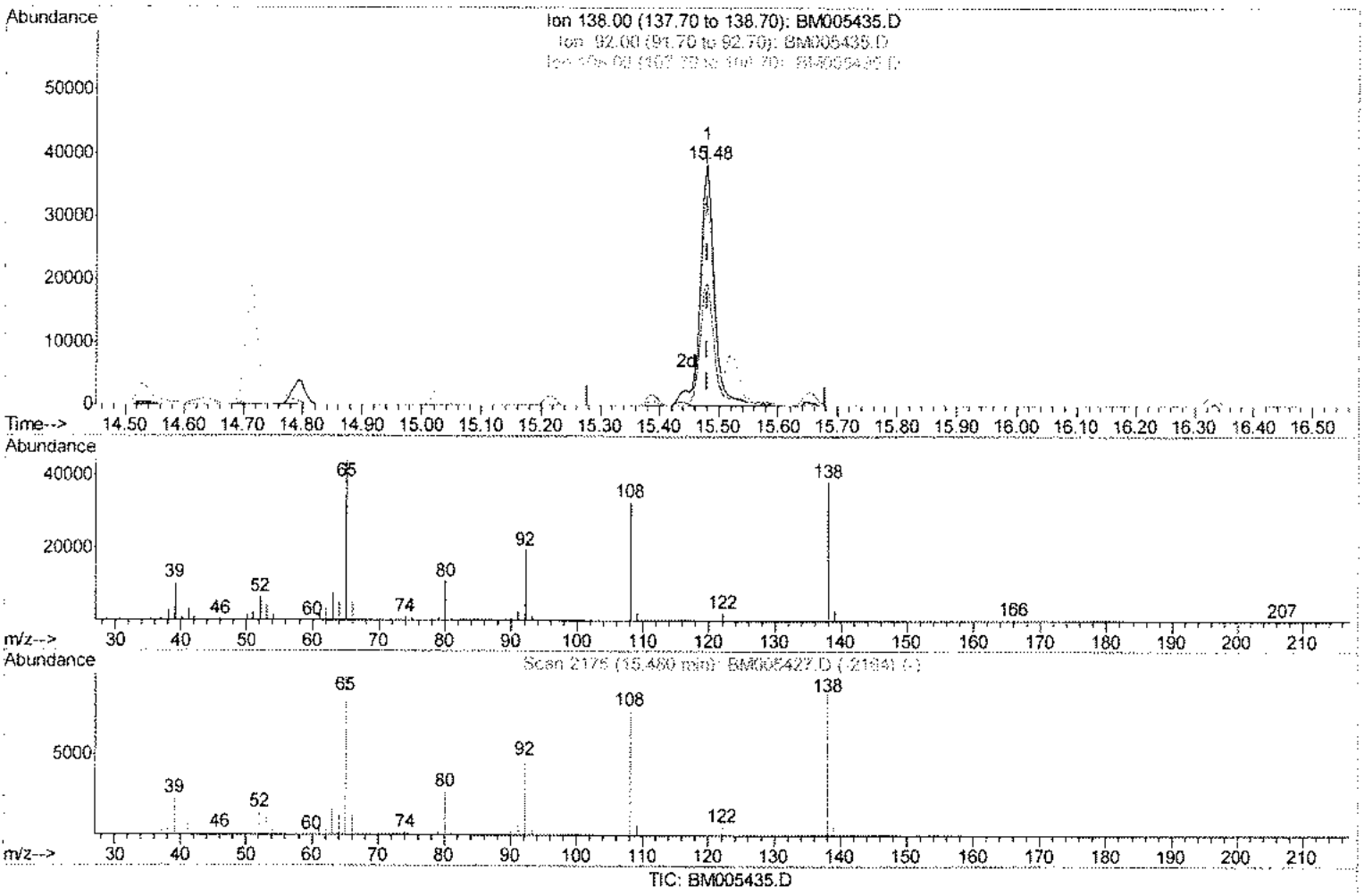
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:21:13 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM



(60) 4-Nitroaniline

15.480min (+0.000) 21.00ng/ul m U.M 05/17/16

response 65233

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	51.50
108.00	82.90	85.22
0.00	0.00	0.00

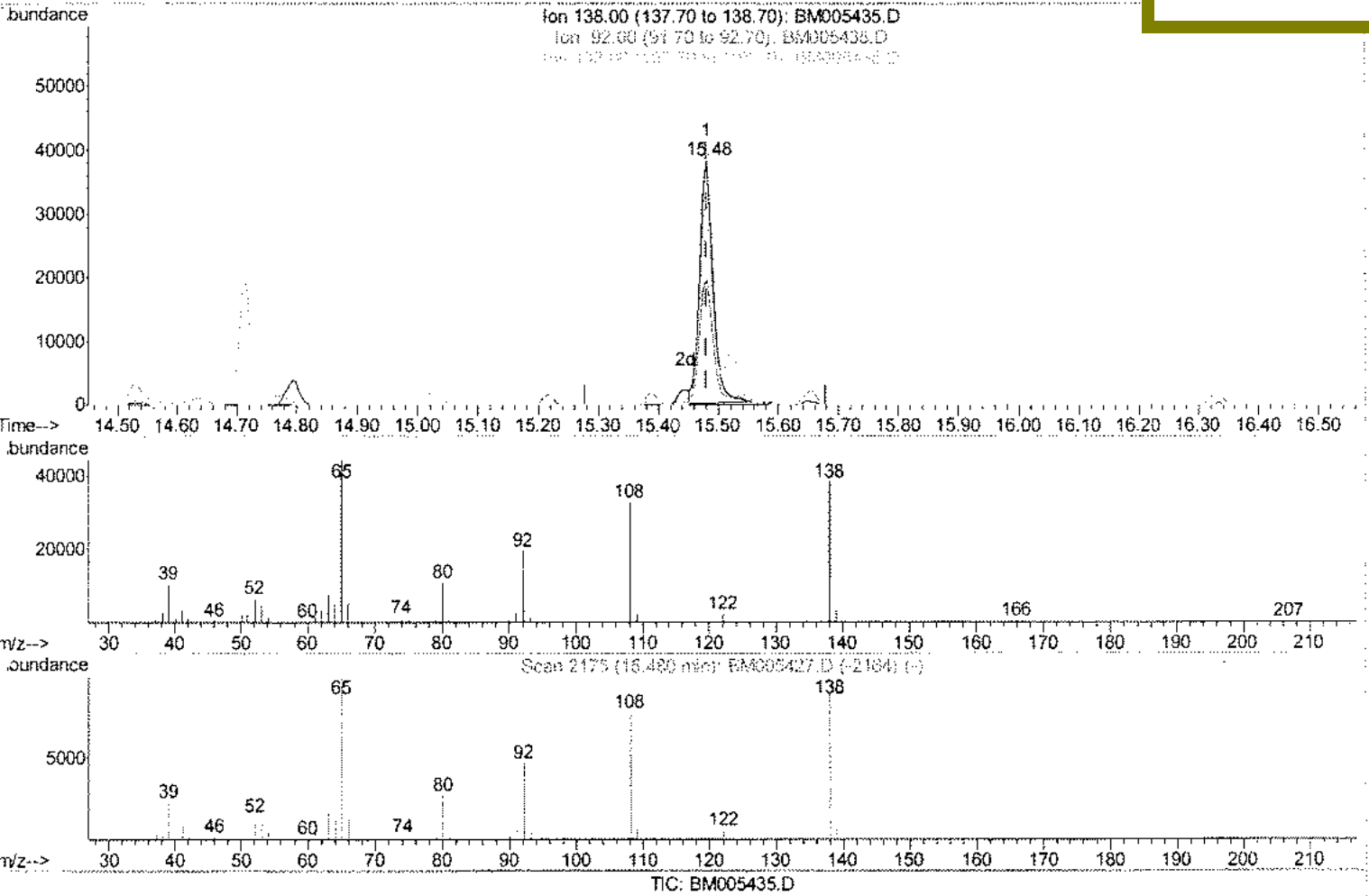
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:21:13 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM



(60) 4-Nitroaniline

15.480min (+0.000) 19.11ng/ul

response 59387

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	51.50
108.00	82.90	85.22
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:47:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.57	216	112506	21.24	ng/ul	98
37) Hexachlorocyclopentadiene	12.55	237	42927	15.87	ng/ul	98
38) 2,4,6-Trichlorophenol	12.82	196	74688	21.17	ng/ul	95
39) 2,4,5-Trichlorophenol	12.90	196	82983	21.20	ng/ul	97
40) 1,1'-Biphenyl	13.22	154	285955	20.73	ng/ul	99
41) 2-Chloronaphthalene	13.26	162	216607	20.77	ng/ul	99
42) 2-Nitroaniline	13.48	65	70564	21.98	ng/ul	95
44) Dimethylphthalate	13.85	163	289065	20.73	ng/ul	100
45) 2,6-Dinitrotoluene	13.98	165	59180	21.52	ng/ul#	88
47) Acenaphthylene	14.12	152	360748	20.83	ng/ul	100
48) 3-Nitroaniline	14.31	138	63989	21.83	ng/ul	93
49) Acenaphthene	14.46	153	236335	20.71	ng/ul	99
50) 2,4-Dinitrophenol	14.53	184	23933	15.13	ng/ul	99
52) 4-Nitrophenol	14.63	109	39795	18.79	ng/ul	97
53) Dibenzofuran	14.79	168	342310	20.67	ng/ul	100
54) 2,4-Dinitrotoluene	14.77	165	88569	21.60	ng/ul	99
55) 2,3,4,6-Tetrachlorophenol	15.03	232	67080	20.16	ng/ul#	96
56) Diethylphthalate	15.22	149	296405	21.04	ng/ul	99
58) Fluorene	15.44	166	274397	21.20	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.44	204	138348	21.57	ng/ul	98
60) 4-Nitroaniline	15.48	138	65233m	21.00	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	48563	19.69	ng/ul#	93
64) N-Nitrosodiphenylamine	15.66	169	242600	21.23	ng/ul	99
65) 4-Bromophenyl-phenylether	16.33	248	88368	22.09	ng/ul	96
66) Hexachlorobenzene	16.45	284	98745	22.00	ng/ul	96
67) Atrazine	16.60	200	96006	23.02	ng/ul	100
68) Pentachlorophenol	16.80	266	43436	17.42	ng/ul	99
69) Phenanthrene	17.19	178	461069	21.01	ng/ul	99
71) Anthracene	17.27	178	464292	21.22	ng/ul	99
72) Carbazole	17.55	167	433371	22.52	ng/ul	99
73) Di-n-butylphthalate	18.10	149	520162	22.16	ng/ul	100
74) Fluoranthene	19.21	202	566127	23.29	ng/ul	96
77) Pyrene	19.57	202	576547	21.15	ng/ul	97
78) Butylbenzylphthalate	20.47	149	253618	22.41	ng/ul	97
79) 3,3'-Dichlorobenzidine	21.26	252	187330	22.17	ng/ul	98
80) Benzo(a)anthracene	21.33	228	565341	20.91	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.24	149	359721	22.88	ng/ul#	97
82) Chrysene	21.38	228	537694	20.96	ng/ul	100
84) Di-n-octyl phthalate	22.13	149	619924	25.55	ng/ul	99
85) Benzo(b)fluoranthene	22.93	252	533943	21.99	ng/ul	98
86) Benzo(k)fluoranthene	22.97	252	498813	21.82	ng/ul	99
88) Benzo(a)pyrene	23.51	252	487738	21.24	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.90	276	447971	17.88	ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	376136	17.94	ng/ul	98
91) Benzo(g,h,i)perylene	26.61	276	363228	17.12	ng/ul	98

U.M 05/17/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005435.D
Acq On : 13 May 2016 17:05
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:47:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02034

Manual Integrations APPROVED
sohil
5/14/2016 9:58:48 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	59500	20.00	ng/ul	0.00
18) Naphthalene-d8	10.54	136	277888	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	174095	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	417314	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	470014	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	415334	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	10424	8.24	ng/uL	0.00
5) Phenol-d5	6.93	99	108211	20.05	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	63812	20.73	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	83431	20.47	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	87757	19.67	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	41680	21.01	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	48702	21.68	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	88800	21.27	ng/ul	0.00
29) 4-Chloroaniline-d4	10.68	131	113736	22.63	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	291682	20.90	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	342929	20.95	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	45520	17.87	ng/ul	0.00
57) Fluorene-d10	15.39	176	247746	20.56	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	46141	19.66	ng/ul	0.00
70) Anthracene-d10	17.24	188	392585	21.28	ng/ul	0.00
76) Pyrene-d10	19.54	212	457296	21.08	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	390208	21.22	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	18702	8.11	ng/uL#	93
4) Benzaldehyde	6.90	77	68199	26.08	ng/ul	97
6) Phenol	6.96	94	113435	20.34	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.17	93	85379	20.33	ng/ul	97
10) 2-Chlorophenol	7.32	128	85207	20.44	ng/ul	98
11) 2-Methylphenol	8.20	108	85497	19.83	ng/ul	100
12) 2,2'-oxybis(1-Chloropropan	8.28	45	120976	21.24	ng/ul	98
14) Acetophenone	8.57	105	139141	21.06	ng/ul	96
15) N-Nitroso-di-n-propylamine	8.55	70	71706	20.77	ng/ul	100
16) 4-Methylphenol	8.53	108	93794	19.61	ng/ul	100
17) Hexachloroethane	8.82	117	32996	21.03	ng/ul	94
20) Nitrobenzene	8.95	77	104295	21.00	ng/ul	96
21) Isophorone	9.47	82	201145	20.86	ng/ul	99
23) 2-Nitrophenol	9.66	139	51674	21.35	ng/ul	96
24) 2,4-Dimethylphenol	9.72	107	106957	20.83	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.95	93	120688	20.09	ng/ul	98
27) 2,4-Dichlorophenol	10.19	162	88930	20.80	ng/ul	100
28) Naphthalene	10.59	128	287252	20.54	ng/ul	99
30) 4-Chloroaniline	10.70	127	113782	22.20	ng/ul	99
31) Hexachlorobutadiene	10.86	225	56755	22.33	ng/ul	98
32) Caprolactam	11.47	113	31987m	20.08	ng/ul	
33) 4-Chloro-3-methylphenol	11.84	107	107902	21.05	ng/ul	98
34) 2-Methylnaphthalene	12.20	142	215843	20.64	ng/ul	98

U.M 05/17/16

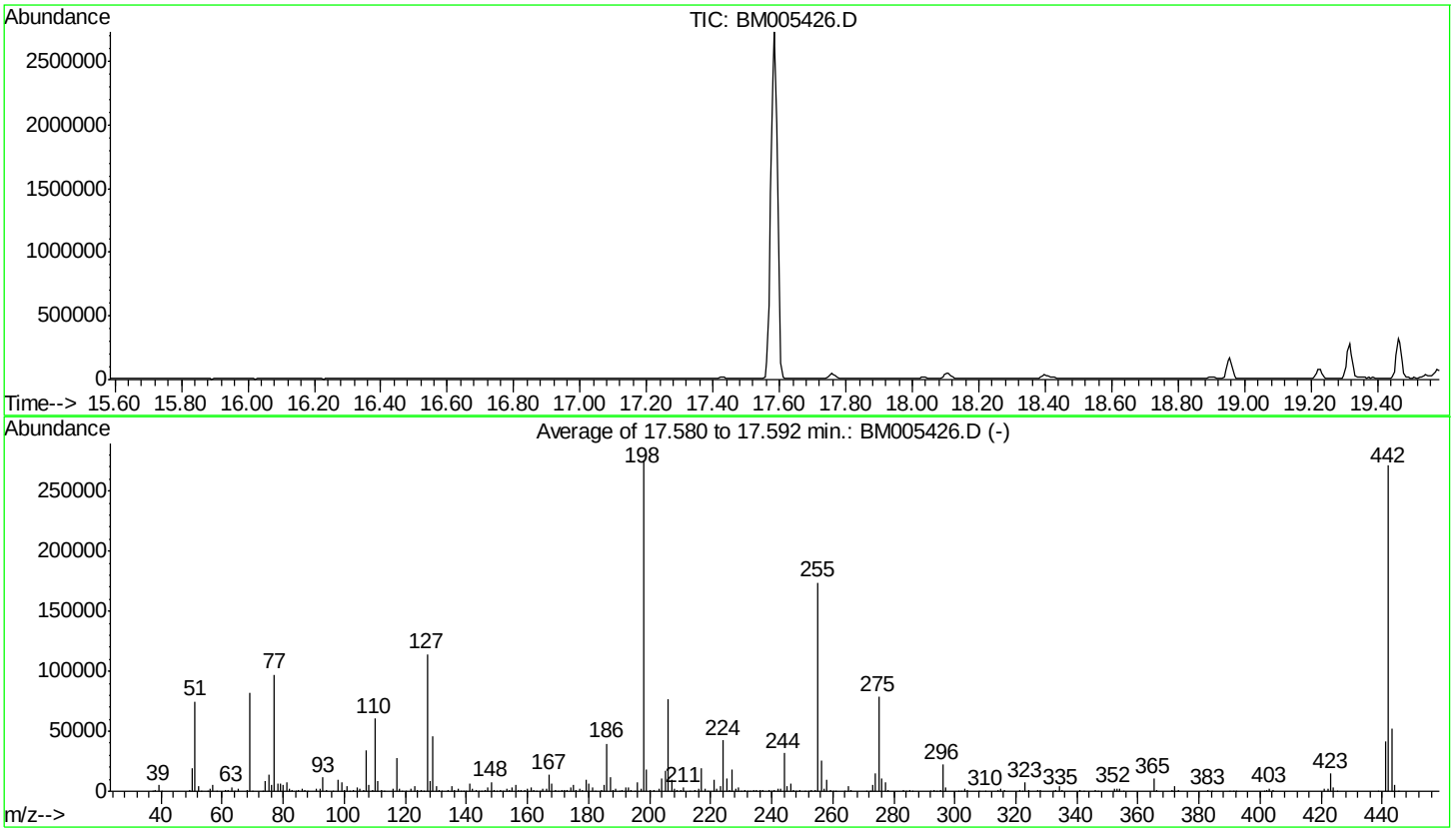
DFTPP

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005426.D
Acq On : 13 May 2016 11:10
Operator : UM/SJ
Sample : DFTPP38
Misc :
ALS Vial : 1 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : DFTPP38

Integration File: LSCINT.P

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION
Last Update : Sat May 14 00:15:57 2016



AutoFind: Scans 2532, 2533, 2534; Background Corrected with Scan 2526

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	27.0	74578	PASS
68	69	0.00	2	2.0	1627	PASS
69	198	0.00	100	29.9	82349	PASS
70	69	0.00	2	0.6	455	PASS
127	198	10	80	41.5	114381	PASS
197	198	0.00	2	0.9	2348	PASS
198	198	100	100	100.0	275840	PASS
199	198	5	9	6.7	18413	PASS
275	198	10	60	28.4	78309	PASS
365	198	1	100	3.8	10521	PASS
441	443	0.01	100	80.2	42074	PASS
442	198	50	100	98.6	272042	PASS
443	442	15	24	19.3	52474	PASS

Scan 2532 (17.580 min): BM005426.D
DFTPP38

m/z	Abundance
37.00	311.0
38.10	938.0
39.10	5496.0
40.00	430.0
41.10	446.0
43.00	791.0
44.00	520.0
45.00	621.0
49.10	664.0
50.10	21528.0
51.10	82720.0
52.10	4428.0
55.00	723.0
56.00	2506.0
57.00	5756.0
58.00	326.0
60.10	411.0
61.10	1209.0
62.10	1172.0
63.10	3786.0
64.10	555.0
65.10	1812.0
68.10	1831.0
69.00	91176.0
70.00	529.0
73.00	1017.0
74.10	9461.0
75.10	15820.0
76.10	5540.0
77.10	108496.0
78.10	7647.0
79.10	7500.0
80.00	5312.0
81.00	7965.0
82.00	1974.0
83.00	1908.0
85.00	1598.0
86.00	2411.0
87.00	1152.0
88.00	414.0
91.00	2029.0
92.10	2088.0
93.10	12860.0
94.00	909.0
96.00	575.0
97.00	375.0
98.00	10650.0
99.00	7926.0
100.00	763.0
101.00	4767.0
103.00	1503.0
104.00	2746.0
105.00	2801.0
106.10	1017.0
107.10	38048.0
108.10	5597.0
109.10	1200.0
110.00	64864.0
111.00	9712.0
112.00	1371.0
113.10	460.0
116.10	2051.0
117.00	30744.0
118.10	2319.0
119.00	367.0
120.00	459.0
122.00	2573.0
123.10	4133.0
124.00	1670.0
125.00	1493.0
127.10	123600.0
128.10	9725.0
129.00	49984.0
130.00	4228.0
131.00	833.0
132.00	426.0
134.00	1388.0
135.10	4334.0
136.00	1634.0
137.10	2126.0
137.90	387.0
139.00	313.0
140.00	687.0
141.00	6808.0
142.00	2207.0
143.00	1345.0
144.10	406.0
145.00	314.0
146.00	1046.0
147.00	3648.0
148.00	8299.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

Scan 2526 (17.545 min): BM005426.D
DFTPP38

m/z	Abundance
40.00	329.0
41.00	525.0
42.10	332.0
43.10	1564.0
44.00	1100.0
45.00	1048.0
55.10	364.0
57.00	337.0
60.00	767.0
73.00	466.0
207.10	451.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

149.00	1619.0
150.00	457.0
151.10	916.0
151.80	572.0
153.00	2173.0
154.00	1695.0
155.10	3595.0
156.10	5598.0
157.00	1100.0
158.00	1237.0
159.00	1095.0
160.00	2328.0
161.10	3295.0
162.00	811.0
163.00	302.0
165.00	2786.0
166.10	2275.0
167.10	14557.0
168.10	6476.0
169.00	1104.0
170.00	399.0
171.00	623.0
172.00	1302.0
173.10	1548.0
174.10	3051.0
175.10	5501.0
176.00	1430.0
177.10	2727.0
178.10	979.0
179.00	10342.0
180.10	7081.0
181.10	3275.0
182.10	564.0
184.00	922.0
185.10	5441.0
186.10	40784.0
187.10	11932.0
188.10	1372.0
189.00	2359.0
190.00	406.0
191.00	1256.0
192.10	3306.0
193.10	3513.0
194.00	893.0
195.00	491.0
196.10	7411.0
197.20	2407.0
198.00	282112.0
199.00	19472.0
200.10	1568.0
201.50	996.0
203.10	1901.0
204.10	10433.0
205.10	17720.0
206.10	76744.0
207.10	10693.0
208.00	2769.0
209.00	865.0
210.20	1060.0
211.10	2971.0
215.00	1068.0
216.00	1843.0
217.00	19696.0
218.00	2445.0
219.00	329.0
221.10	9752.0
222.00	2551.0
223.10	4483.0
224.10	41680.0
225.10	10838.0
226.10	1203.0
227.10	18400.0
228.10	2617.0
229.00	3751.0
230.00	492.0
231.10	1523.0
234.00	1069.0
235.00	1397.0
236.00	902.0
237.10	1522.0
239.00	901.0
240.00	539.0
241.00	913.0
242.00	2012.0
243.10	2393.0
244.10	31112.0
245.10	4416.0
246.10	7058.0
247.00	1502.0
248.10	315.0
249.00	1231.0
253.00	732.0
255.10	168896.0
256.10	24992.0
257.10	2012.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

258.10	9690.0
259.00	1604.0
260.00	323.0
265.10	3905.0
266.00	687.0
271.00	406.0
272.10	422.0
273.10	4858.0
274.10	13776.0
275.10	74552.0
276.10	10664.0
277.10	6588.0
278.10	1105.0
283.20	733.0
284.10	434.0
285.10	1224.0
293.00	1411.0
294.10	359.0
295.20	525.0
296.10	20784.0
297.10	3105.0
301.00	321.0
302.00	479.0
303.10	2492.0
304.10	885.0
314.00	861.0
315.10	2475.0
316.00	1303.0
321.00	670.0
322.00	413.0
323.10	6470.0
324.10	1051.0
327.00	1146.0
328.00	692.0
332.00	476.0
333.10	609.0
334.10	4191.0
335.00	1124.0
341.10	620.0
346.00	1377.0
352.10	1933.0
353.10	1528.0
354.10	2208.0
355.10	368.0
365.10	9683.0
366.10	1409.0
371.00	574.0
372.10	3525.0
373.10	880.0
383.00	1052.0
390.10	443.0
391.00	341.0
402.00	1364.0
403.10	2043.0
404.00	702.0
421.00	1664.0
422.10	1742.0
423.10	12308.0
424.10	3013.0
425.10	351.0
441.10	33832.0
442.10	224832.0
443.10	44264.0
444.10	4232.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

Scan 2533 (17.586 min): BM005426.D
DFTPP38

m/z	Abundance
37.00	386.0
38.00	903.0
39.10	5685.0
40.10	410.0
41.00	434.0
43.10	751.0
44.00	497.0
45.00	569.0
49.20	815.0
50.10	22104.0
51.10	83992.0
52.10	4316.0
53.00	307.0
55.00	590.0
56.00	2541.0
57.10	5812.0
58.00	302.0
60.10	526.0
61.00	1247.0
62.00	1440.0
63.10	3896.0
64.00	518.0
65.10	1799.0
68.10	1821.0
69.00	93480.0
70.00	475.0
73.10	1156.0
74.10	10122.0
75.10	15857.0
76.10	5553.0
77.10	109520.0
78.10	7422.0
79.10	7832.0
80.00	5619.0
81.00	8330.0
82.10	1984.0
83.00	1690.0
84.00	344.0
85.10	1431.0
86.00	2459.0
87.10	1281.0
88.00	463.0
91.00	2003.0
92.10	2166.0
93.10	13307.0
94.00	952.0
96.10	677.0
97.20	366.0
98.00	11136.0
99.00	8249.0
100.10	748.0
101.00	4590.0
101.90	309.0
103.00	1630.0
104.00	3150.0
105.00	3157.0
106.10	1066.0
107.10	39352.0
108.00	5899.0
109.20	1091.0
110.00	69072.0
111.00	10095.0
112.10	1340.0
113.00	434.0
116.10	2173.0
117.10	32136.0
118.00	2346.0
120.00	569.0
122.00	2650.0
123.00	4235.0
124.00	1907.0
125.00	1596.0
127.10	131456.0
128.10	10191.0
129.00	52760.0
130.00	4303.0
131.10	889.0
132.00	420.0
134.10	1584.0
135.00	4555.0
136.10	1867.0
137.10	2363.0
138.00	426.0
140.00	604.0
141.00	7212.0
142.00	2238.0
143.00	1521.0
144.00	371.0
145.10	339.0
146.00	1320.0
147.10	3821.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

148.00	8468.0
149.00	1782.0
150.00	533.0
151.10	912.0
151.80	632.0
153.10	2483.0
154.00	1800.0
155.10	4033.0
156.10	6265.0
157.00	1387.0
158.00	1373.0
159.00	1149.0
160.10	2366.0
161.10	3542.0
162.00	1096.0
164.00	325.0
165.00	2869.0
166.10	2346.0
167.10	15107.0
168.10	6946.0
169.00	1152.0
170.00	532.0
171.10	723.0
172.00	1402.0
173.00	1762.0
174.10	3218.0
175.10	5981.0
176.10	1734.0
177.00	2939.0
178.10	998.0
179.00	11164.0
180.10	8075.0
181.10	3752.0
182.00	670.0
184.00	1026.0
185.10	5694.0
186.10	45208.0
187.10	13296.0
188.10	1320.0
189.00	2919.0
190.00	519.0
191.00	1268.0
192.10	3558.0
193.10	4053.0
194.00	887.0
195.10	393.0
196.10	8349.0
197.20	2797.0
198.00	316864.0
199.00	21000.0
200.10	1752.0
201.50	1359.0
203.00	2269.0
204.10	12076.0
205.10	20456.0
206.10	88992.0
207.10	11618.0
208.10	3094.0
209.10	938.0
210.10	1413.0
211.10	3441.0
213.00	323.0
215.00	1036.0
216.10	1874.0
217.00	22848.0
218.00	3031.0
219.10	300.0
221.10	11535.0
221.90	2685.0
223.10	4905.0
224.10	49440.0
225.10	12684.0
226.10	1293.0
227.10	20696.0
228.10	2923.0
229.10	4297.0
230.00	676.0
231.10	1776.0
232.10	307.0
233.00	474.0
234.00	1203.0
235.00	1478.0
236.10	984.0
237.00	1466.0
239.00	766.0
240.00	596.0
241.00	1280.0
242.10	2446.0
243.10	2765.0
244.10	36760.0
245.10	4586.0
246.10	7560.0
247.10	1419.0
249.00	1256.0
251.00	346.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

252.00	474.0
253.00	896.0
254.20	2240.0
255.10	202368.0
256.10	29176.0
257.10	2299.0
258.10	11272.0
259.00	1981.0
260.00	423.0
261.00	300.0
264.00	376.0
265.10	4834.0
266.10	824.0
271.10	445.0
272.10	663.0
273.10	6127.0
274.10	16944.0
275.10	91576.0
276.10	12207.0
277.10	8215.0
278.10	1269.0
283.00	883.0
284.10	729.0
285.10	1333.0
286.00	350.0
292.10	356.0
293.00	1792.0
294.00	455.0
295.20	804.0
296.10	25904.0
297.10	3727.0
301.10	366.0
302.00	437.0
303.10	2928.0
304.10	894.0
308.00	345.0
310.10	432.0
314.10	1254.0
315.00	2829.0
316.10	1597.0
321.10	714.0
322.00	510.0
323.10	8622.0
324.10	1584.0
327.00	1586.0
328.10	916.0
332.10	639.0
333.00	943.0
334.10	5616.0
335.10	1361.0
341.00	839.0
346.00	1788.0
346.90	361.0
352.10	2761.0
353.10	1785.0
354.10	2904.0
355.10	543.0
365.00	11955.0
366.00	1736.0
371.10	681.0
372.10	4625.0
373.10	1138.0
383.10	1309.0
384.00	436.0
390.10	556.0
391.00	347.0
392.10	319.0
401.10	321.0
402.10	1950.0
403.10	2681.0
404.10	968.0
421.10	2510.0
422.10	1983.0
423.10	17032.0
424.10	3598.0
425.00	413.0
438.60	331.0
441.10	49448.0
442.10	315200.0
443.10	61040.0
444.10	5528.0
445.10	341.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

Scan 2534 (17.592 min): BM005426.D
DFTPP38

m/z	Abundance
38.10	732.0
39.10	3955.0
40.00	354.0
41.00	476.0
43.00	1010.0
44.00	730.0
45.00	691.0
49.10	537.0
50.10	14543.0
51.10	57024.0
52.10	2875.0
55.00	552.0
56.00	1741.0
57.00	4118.0
60.00	541.0
61.00	734.0
62.00	851.0
63.10	2410.0
64.00	363.0
65.10	1333.0
68.10	1229.0
69.00	62392.0
70.00	363.0
73.00	848.0
74.10	6457.0
75.00	10434.0
76.10	3752.0
77.10	74296.0
78.10	5266.0
79.00	5339.0
80.00	3744.0
81.00	5393.0
82.00	1337.0
83.00	1169.0
83.90	310.0
85.10	1047.0
86.00	1754.0
87.00	803.0
91.00	1423.0
92.00	1306.0
93.00	8763.0
94.00	605.0
96.00	386.0
97.00	307.0
98.00	7377.0
99.00	5455.0
100.10	455.0
101.00	3414.0
103.00	1088.0
104.00	2298.0
105.00	2024.0
106.00	643.0
107.00	25936.0
108.10	3993.0
109.10	829.0
110.00	47400.0
111.00	6917.0
112.00	868.0
116.10	1473.0
117.00	21064.0
118.10	1291.0
122.00	1784.0
123.10	3014.0
124.00	1253.0
125.10	1047.0
126.20	626.0
127.10	88088.0
128.10	7235.0
129.00	34616.0
130.00	3004.0
131.00	579.0
132.10	316.0
134.00	1067.0
135.00	3020.0
136.00	1192.0
137.00	1481.0
137.90	365.0
140.00	419.0
141.00	5087.0
142.00	1572.0
143.00	1074.0
145.00	334.0
146.00	877.0
147.00	2751.0
148.00	5757.0
149.00	1230.0
150.00	375.0
151.00	730.0
151.90	412.0
153.00	1410.0
154.00	1167.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

155.10	2711.0
156.10	4147.0
157.00	822.0
158.00	860.0
159.10	699.0
160.10	1494.0
161.00	2479.0
162.00	604.0
164.10	317.0
165.00	2045.0
166.00	1630.0
167.10	10643.0
168.10	4741.0
169.10	925.0
170.00	384.0
171.10	475.0
172.00	942.0
173.00	1254.0
174.00	2152.0
175.10	4099.0
176.10	1036.0
177.00	1953.0
178.00	822.0
179.00	7831.0
180.00	5649.0
181.10	2496.0
182.10	425.0
184.10	653.0
185.00	3808.0
186.10	32800.0
187.10	9462.0
188.10	939.0
189.00	2093.0
190.00	336.0
191.00	1103.0
192.00	2712.0
193.10	2893.0
194.00	643.0
195.10	449.0
196.00	6210.0
197.20	1842.0
198.00	228544.0
199.00	14769.0
200.00	1209.0
201.50	948.0
203.00	1660.0
204.10	8406.0
205.10	14311.0
206.10	62968.0
207.10	8413.0
208.00	2136.0
209.00	700.0
210.10	883.0
211.10	2555.0
215.00	717.0
216.10	1244.0
217.00	16338.0
218.00	2168.0
221.10	8810.0
221.90	2095.0
223.10	3690.0
224.10	35672.0
225.10	9094.0
226.10	952.0
227.10	15582.0
228.10	2252.0
229.10	3054.0
230.00	432.0
231.10	1089.0
233.00	317.0
234.00	1028.0
235.00	1135.0
236.00	732.0
237.00	1240.0
239.10	645.0
240.00	442.0
241.00	866.0
242.00	1844.0
243.10	2165.0
244.10	26824.0
245.10	3378.0
246.10	5742.0
247.00	1192.0
249.00	971.0
253.10	650.0
254.20	1704.0
255.10	149824.0
256.10	21072.0
257.10	1769.0
258.10	9048.0
259.10	1241.0
265.00	3616.0
266.00	605.0
272.00	451.0
273.10	4574.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

274.10	12809.0
275.10	68800.0
276.10	9429.0
277.00	6303.0
278.00	878.0
283.10	690.0
284.10	451.0
285.10	1252.0
293.00	1540.0
294.00	435.0
295.10	448.0
296.10	19776.0
297.10	2772.0
303.10	2281.0
304.00	656.0
314.00	941.0
315.00	2186.0
316.00	1222.0
321.10	714.0
322.10	349.0
323.10	6736.0
324.10	999.0
327.00	1264.0
328.10	696.0
332.10	553.0
333.10	660.0
334.10	4348.0
335.00	1199.0
341.00	871.0
342.10	302.0
346.00	1382.0
352.10	2289.0
353.10	1681.0
354.10	2403.0
355.10	426.0
365.00	9926.0
366.00	1286.0
371.10	572.0
372.10	3914.0
373.10	909.0
383.00	994.0
390.00	522.0
391.10	351.0
402.00	1512.0
403.10	2180.0
404.10	859.0
421.10	1894.0
422.10	2148.0
423.10	14633.0
424.10	2997.0
441.10	42944.0
442.10	276096.0
443.10	52120.0
444.10	4833.0

Instrument :
BNA_M
ClientSampleId :
DFTPP38

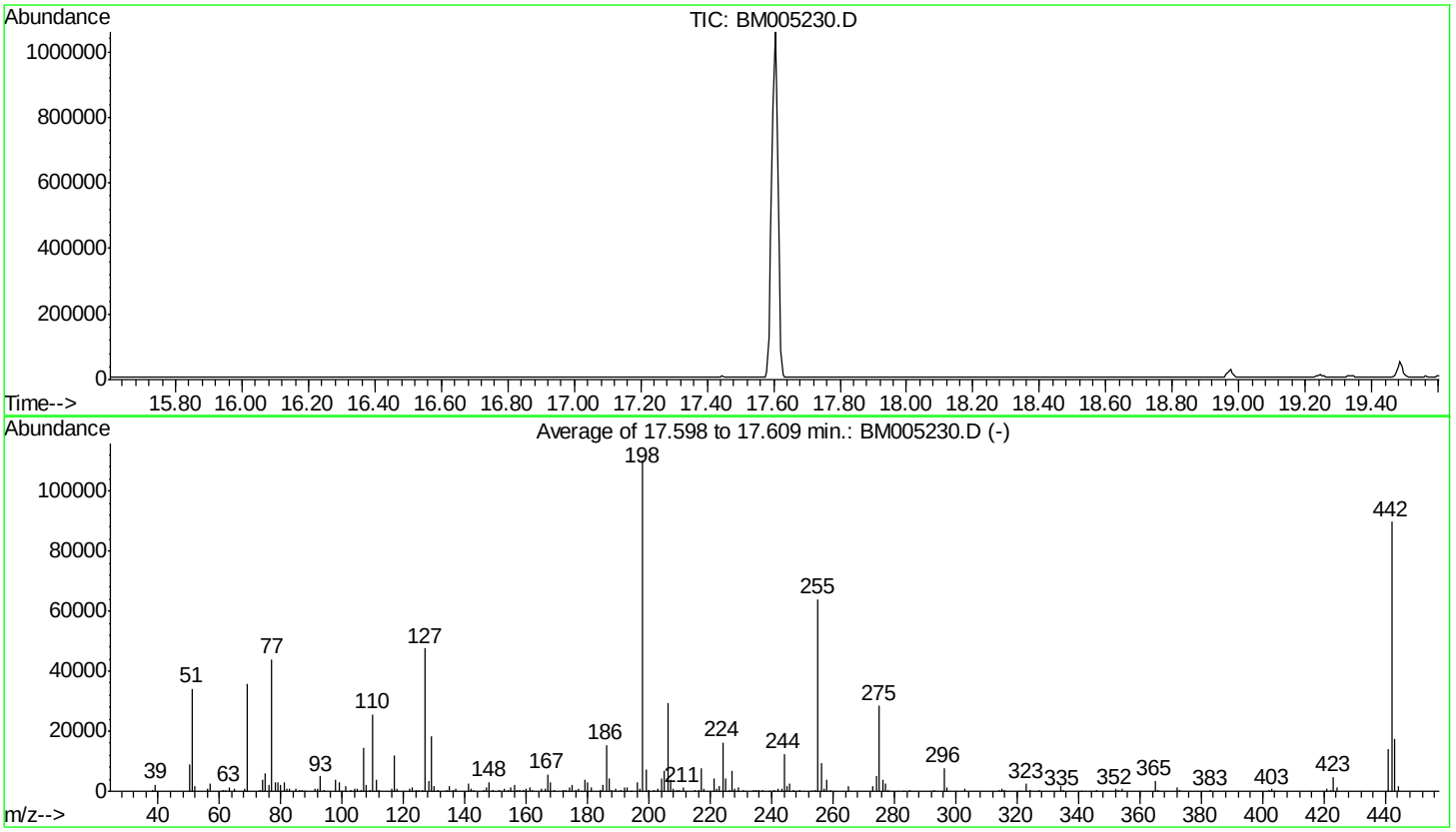
DFTPP

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005230.D
Acq On : 05 May 2016 10:23
Operator : UM/SJ
Sample : DFTPP64
Misc :
ALS Vial : 1 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : DFTPP64

Integration File: LSCINT.P

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION
Last Update : Sat May 07 07:05:19 2016



AutoFind: Scans 2535, 2536, 2537; Background Corrected with Scan 2530

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	31.0	34217	PASS
68	69	0.00	2	1.8	659	PASS
69	198	0.00	100	32.4	35757	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	43.1	47546	PASS
197	198	0.00	2	0.7	792	PASS
198	198	100	100	100.0	110320	PASS
199	198	5	9	6.7	7441	PASS
275	198	10	60	25.7	28354	PASS
365	198	1	100	3.2	3476	PASS
441	443	0.01	100	79.3	13888	PASS
442	198	50	100	81.3	89733	PASS
443	442	15	24	19.5	17511	PASS

Scan 2530 (17.568 min): BM005230.D
DFTPP64

m/z	Abundance
44.00	519.0
47.00	617.0
49.00	2627.0
51.00	900.0
84.00	2048.0
86.00	1264.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

Scan 2535 (17.598 min): BM005230.D
DFTPP64

Instrument :
BNA_M
ClientSampleId :
DFTPP64

m/z	Abundance
38.00	406.0
39.10	2380.0
44.00	354.0
47.00	345.0
49.00	2022.0
50.10	9141.0
51.10	36032.0
52.10	1876.0
56.00	1048.0
57.00	2579.0
61.00	451.0
62.00	500.0
63.00	1540.0
65.10	757.0
68.00	668.0
69.00	35840.0
73.00	405.0
74.10	3676.0
75.00	6149.0
76.10	2327.0
77.10	45112.0
78.10	3248.0
79.00	3053.0
80.00	2218.0
81.00	3242.0
82.00	790.0
83.00	823.0
84.00	1527.0
85.00	673.0
86.00	1887.0
87.00	423.0
87.90	327.0
91.00	611.0
92.00	752.0
93.00	5149.0
94.00	321.0
98.00	3964.0
99.00	3167.0
101.00	1833.0
103.00	496.0
104.00	1015.0
105.00	1090.0
106.10	351.0
107.00	13953.0
108.00	2163.0
109.10	387.0
110.00	25256.0
111.00	3942.0
112.00	505.0
116.00	742.0
117.00	11558.0
118.00	927.0
122.00	841.0
123.00	1346.0
124.00	594.0
124.90	662.0
126.20	322.0
127.10	46136.0
128.00	3539.0
129.00	17656.0
130.00	1569.0
134.00	527.0
135.00	1362.0
136.00	598.0
137.10	852.0
141.00	2457.0
142.00	837.0
143.00	495.0
146.00	405.0
147.00	1262.0
148.00	2869.0
149.00	595.0
151.00	303.0
153.00	823.0
154.00	542.0
155.00	1384.0
156.00	2064.0
157.10	395.0
158.00	465.0
159.00	309.0
160.00	736.0
161.00	1172.0
162.00	312.0
165.00	936.0
166.10	725.0
167.00	5242.0
168.00	2705.0
169.00	469.0
172.00	373.0
173.00	607.0
174.00	1029.0

175.10	1947.0
176.10	544.0
177.00	920.0
179.00	3586.0
180.10	2706.0
181.00	1174.0
184.10	331.0
185.00	1711.0
186.10	14171.0
187.00	4055.0
188.00	538.0
189.00	852.0
191.00	395.0
192.00	1174.0
193.00	1409.0
194.10	318.0
196.00	2657.0
197.20	710.0
198.00	101448.0
199.00	7050.0
200.00	595.0
201.50	438.0
203.00	730.0
204.10	3526.0
205.10	6507.0
206.10	26568.0
207.10	3747.0
208.00	887.0
209.00	326.0
210.10	376.0
211.10	1027.0
216.00	613.0
217.00	7204.0
218.00	910.0
221.10	4006.0
221.80	896.0
223.00	1489.0
224.10	14596.0
225.10	3736.0
226.10	419.0
227.00	6253.0
228.00	917.0
229.00	1294.0
231.00	504.0
234.00	349.0
235.00	398.0
236.00	313.0
237.00	675.0
242.00	739.0
243.10	801.0
244.10	10751.0
245.10	1396.0
246.00	2293.0
247.00	419.0
249.00	397.0
254.20	610.0
255.10	55232.0
256.10	8495.0
257.10	608.0
258.00	3267.0
259.00	545.0
265.00	1351.0
273.00	1582.0
274.10	4311.0
275.10	24848.0
276.10	3422.0
277.00	2159.0
278.00	367.0
285.00	384.0
293.00	477.0
296.10	6372.0
297.00	980.0
303.00	795.0
315.00	736.0
316.00	419.0
323.10	2082.0
324.00	383.0
327.00	355.0
334.00	1295.0
335.00	312.0
346.00	470.0
352.00	596.0
353.00	408.0
354.10	694.0
365.00	2620.0
366.00	410.0
372.00	1049.0
402.00	402.0
403.00	595.0
421.00	509.0
422.00	457.0
423.10	3403.0
424.00	1020.0
441.10	9920.0
442.10	65048.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

443.10 13117.0
444.10 1258.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

Scan 2536 (17.604 min): BM005230.D
DFTPP64

Instrument :
BNA_M
ClientSampleId :
DFTPP64

m/z	Abundance
38.00	419.0
39.10	2594.0
44.00	336.0
47.00	334.0
49.00	1974.0
50.10	9883.0
51.10	39344.0
52.10	2013.0
56.00	1141.0
57.00	2770.0
61.00	485.0
62.00	650.0
63.10	1559.0
65.10	786.0
68.10	794.0
69.00	41640.0
73.00	414.0
74.10	4578.0
75.00	6712.0
76.10	2430.0
77.10	50088.0
78.10	3595.0
79.00	3328.0
80.00	2425.0
81.00	3377.0
82.00	898.0
83.00	895.0
84.00	1530.0
85.00	747.0
86.00	1848.0
87.00	492.0
88.00	305.0
91.00	839.0
92.00	908.0
93.00	5722.0
94.00	359.0
98.00	4719.0
99.00	3525.0
100.00	344.0
101.00	1980.0
103.00	717.0
104.00	1127.0
105.00	1216.0
106.10	422.0
107.00	16848.0
108.00	2481.0
109.00	470.0
110.00	29520.0
111.00	4312.0
112.00	556.0
116.00	892.0
117.00	13797.0
118.00	1014.0
122.00	1057.0
123.00	1669.0
124.00	772.0
125.00	728.0
126.20	404.0
127.10	54592.0
128.10	4249.0
129.00	20968.0
130.00	1932.0
131.00	342.0
134.00	665.0
135.00	1813.0
136.00	668.0
137.00	929.0
141.00	2953.0
142.00	924.0
143.00	591.0
146.00	531.0
147.00	1549.0
148.00	3527.0
149.00	721.0
151.10	438.0
153.00	1016.0
154.00	704.0
155.00	1868.0
156.10	2431.0
157.10	515.0
158.00	489.0
159.00	380.0
160.00	932.0
161.00	1304.0
162.00	389.0
165.00	1146.0
166.00	923.0
167.00	6343.0
168.00	3390.0
169.10	587.0
171.90	524.0

173.00	671.0
174.00	1420.0
175.10	2581.0
176.00	653.0
177.00	1158.0
178.00	409.0
179.00	4619.0
180.00	3299.0
181.00	1383.0
184.00	361.0
185.10	2457.0
186.10	18096.0
187.10	5077.0
188.00	544.0
189.00	1158.0
191.00	554.0
192.00	1558.0
193.10	1730.0
194.00	359.0
196.10	3377.0
197.10	989.0
198.00	127632.0
199.00	8581.0
200.00	726.0
201.60	531.0
203.00	932.0
204.10	4975.0
205.10	8001.0
206.10	34160.0
207.10	4686.0
208.00	1157.0
209.00	387.0
210.10	484.0
211.00	1270.0
215.00	390.0
216.00	706.0
217.00	8852.0
218.00	1261.0
221.10	4774.0
221.90	1113.0
223.00	2088.0
224.10	18704.0
225.10	5011.0
226.10	515.0
227.10	7957.0
228.00	1073.0
229.00	1580.0
231.00	680.0
234.00	468.0
235.00	573.0
236.00	399.0
237.10	605.0
239.00	302.0
241.00	447.0
242.00	950.0
243.10	1044.0
244.10	14804.0
245.10	1847.0
246.00	2994.0
247.00	590.0
249.00	509.0
253.00	361.0
254.20	748.0
255.10	75072.0
256.10	10580.0
257.00	925.0
258.00	4270.0
259.10	657.0
265.00	1686.0
273.00	2137.0
274.10	5897.0
275.10	32728.0
276.10	4369.0
277.00	2956.0
278.00	569.0
283.00	348.0
285.10	525.0
293.00	678.0
296.10	9230.0
297.00	1238.0
303.00	1116.0
314.10	457.0
315.00	1120.0
316.10	607.0
321.00	333.0
323.10	2972.0
324.00	562.0
326.90	552.0
334.10	1936.0
335.00	476.0
341.00	321.0
346.00	691.0
352.10	843.0
353.00	692.0
354.10	1002.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

365.00	4035.0
366.00	594.0
372.10	1404.0
373.10	420.0
383.00	408.0
402.00	659.0
403.00	845.0
404.00	350.0
421.10	734.0
422.00	779.0
423.10	5572.0
424.10	1393.0
441.10	15921.0
442.10	103408.0
443.10	20496.0
444.10	1951.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

Scan 2537 (17.609 min): BM005230.D
DFTPP64

m/z	Abundance
38.00	319.0
39.10	2000.0
44.00	420.0
46.90	406.0
49.00	2212.0
50.10	7343.0
51.10	29976.0
52.00	1412.0
56.00	885.0
57.00	2082.0
61.00	342.0
62.00	421.0
63.00	1147.0
65.00	647.0
68.00	515.0
69.00	29792.0
73.10	326.0
74.00	3172.0
75.00	4965.0
76.10	1791.0
77.10	36880.0
78.10	2547.0
79.00	2255.0
80.00	1635.0
81.00	2507.0
82.00	672.0
83.00	619.0
84.00	1668.0
85.00	575.0
86.00	1808.0
87.00	402.0
91.00	554.0
92.00	732.0
93.00	4178.0
94.00	311.0
98.00	3409.0
99.00	2683.0
101.00	1587.0
103.00	503.0
104.00	965.0
105.00	888.0
107.00	12040.0
108.00	1880.0
109.10	351.0
110.00	22032.0
111.00	3360.0
112.00	330.0
116.00	663.0
117.00	10030.0
118.00	776.0
122.00	788.0
123.00	1223.0
124.00	555.0
125.00	508.0
127.00	41912.0
128.00	3049.0
129.00	15742.0
130.00	1214.0
131.00	348.0
134.00	466.0
135.00	1384.0
136.00	506.0
137.00	678.0
141.00	2211.0
142.00	631.0
143.00	487.0
146.00	380.0
147.00	1110.0
148.00	2698.0
149.00	505.0
153.00	707.0
154.00	506.0
155.10	1241.0
156.10	1989.0
157.10	372.0
157.90	398.0
160.00	691.0
161.00	1017.0
162.00	334.0
165.00	834.0
166.00	734.0
167.00	5097.0
168.00	2387.0
169.00	372.0
172.00	452.0
173.00	577.0
174.00	980.0
175.10	2055.0
176.00	499.0
177.00	846.0
179.00	3431.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

180.00	2437.0
181.00	1168.0
185.10	1653.0
186.10	14153.0
187.10	3905.0
188.00	431.0
189.00	865.0
190.90	364.0
192.00	1118.0
193.00	1372.0
196.10	2820.0
197.10	677.0
198.00	101880.0
199.00	6692.0
200.00	522.0
201.50	445.0
203.00	697.0
204.10	3922.0
205.10	6423.0
206.10	26904.0
207.10	3684.0
208.00	937.0
209.00	317.0
210.20	378.0
211.10	1021.0
214.90	342.0
216.00	607.0
217.00	6882.0
218.00	975.0
221.10	4335.0
221.80	962.0
223.10	1544.0
224.10	15397.0
225.10	3782.0
226.00	445.0
227.10	6428.0
228.00	786.0
229.00	1347.0
231.00	606.0
234.00	346.0
235.00	475.0
237.00	565.0
241.00	323.0
242.00	726.0
243.10	935.0
244.10	12006.0
245.10	1522.0
246.00	2335.0
247.00	498.0
249.00	435.0
253.10	303.0
254.20	595.0
255.10	61520.0
256.10	8655.0
257.10	663.0
258.10	3496.0
259.00	584.0
265.00	1504.0
273.00	1896.0
274.00	4973.0
275.10	27488.0
276.10	3632.0
277.00	2495.0
278.00	468.0
285.00	421.0
293.00	576.0
296.00	7914.0
297.00	1166.0
303.00	897.0
314.00	392.0
315.00	949.0
316.00	509.0
323.10	2548.0
324.10	534.0
327.00	528.0
334.00	1582.0
335.00	462.0
346.00	571.0
352.00	852.0
353.00	501.0
354.10	862.0
365.00	3775.0
366.00	553.0
372.10	1439.0
373.10	339.0
383.00	351.0
402.00	609.0
403.10	817.0
421.00	779.0
422.00	694.0
423.10	5280.0
424.10	1272.0
441.10	15824.0
442.10	100744.0
443.10	18920.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

444.10 1722.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK03

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB90403BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005428.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK03

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB90403BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005428.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK03

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB90403BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005428.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK03

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB90403BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005428.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/13/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

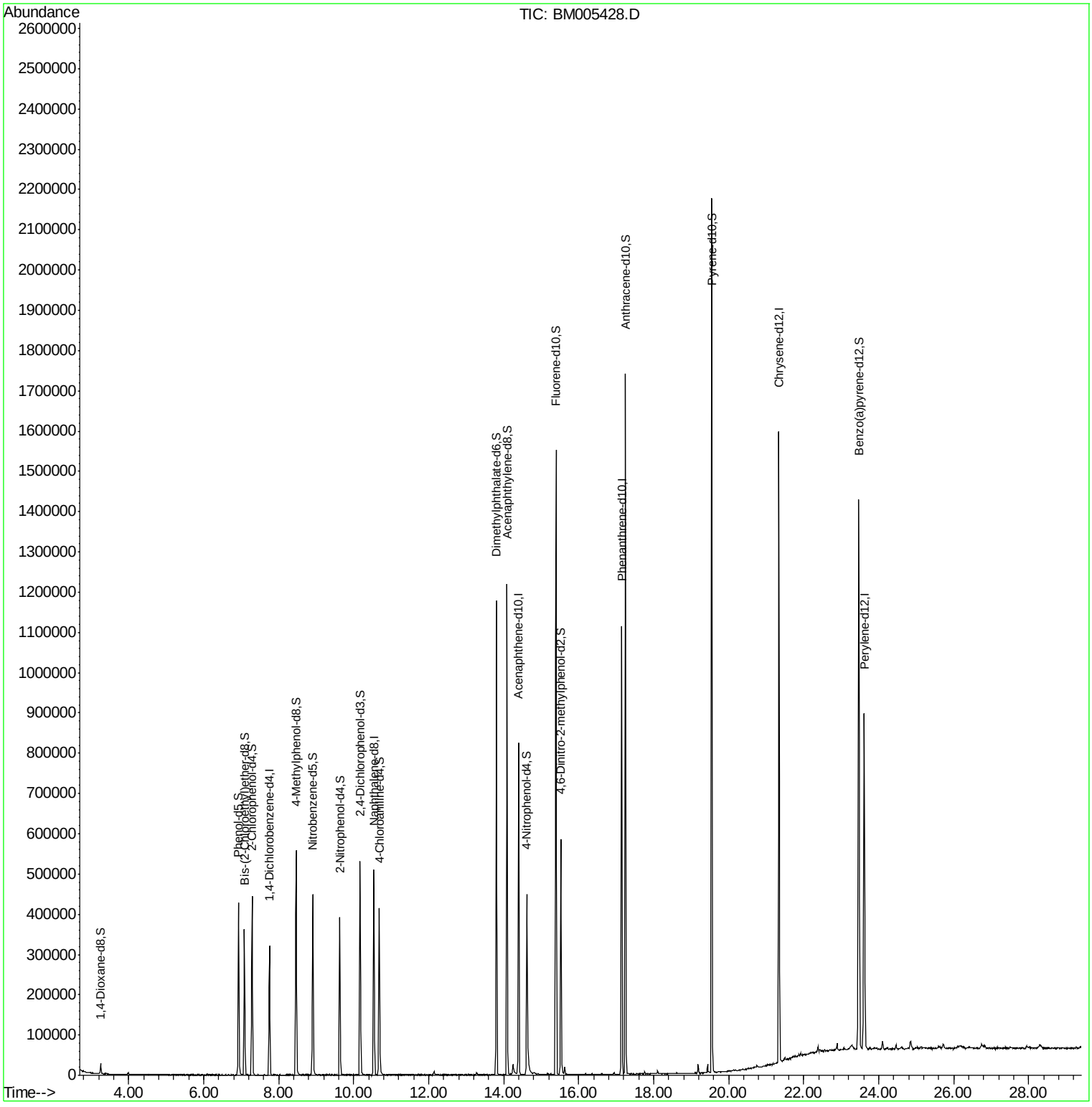
EPA-designated Registry Number.

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005428.D
Acq On : 13 May 2016 12:23
Operator : UM/SJ
Sample : PB90403BL
Misc :
ALS Vial : 55 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SBLK03

Quant Time: May 14 00:28:40 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005428.D
Acq On : 13 May 2016 12:23
Operator : UM/SJ
Sample : PB90403BL
Misc :
ALS Vial : 55 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK03

Quant Time: May 14 00:28:40 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	87331	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	422814	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	276612	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	669307	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	763502	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	592403	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	12060	6.49	ng/uL	0.00
5) Phenol-d5	6.93	99	253370	31.99	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	155441	34.40	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	204737	34.22	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	216240	33.03	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	109930	36.42	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	128573	37.62	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.16	165	208185	32.77	ng/ul	0.00
29) 4-Chloroaniline-d4	10.68	131	233441	30.53	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	780486	35.20	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	879082	33.80	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	133926	33.09	ng/ul	0.00
57) Fluorene-d10	15.39	176	637494	33.30	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	132510	35.19	ng/ul	0.00
70) Anthracene-d10	17.24	188	1026252	34.69	ng/ul	0.00
76) Pyrene-d10	19.54	212	1174424	33.32	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	958416	36.55	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA M\Data\BM051316\
Data File : BM005428.D
Acq On : 13 May 2016 12:23
Operator : UM/SJ
Sample : PB90403BL
Misc :
ALS Vial : 55 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK03

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.928	715	721	737	rVB	428343	690673	21.80%	2.291%
2	7.087	741	748	756	rBV	361187	549479	17.34%	1.823%
3	7.287	776	782	796	rVB	444750	718267	22.67%	2.383%
4	7.751	854	861	873	rVB	321827	525783	16.60%	1.744%
5	8.463	975	982	999	rBV	558427	938089	29.61%	3.112%
6	8.910	1051	1058	1069	rBV	447212	745764	23.54%	2.474%
7	9.628	1173	1180	1192	rBV	390510	663005	20.93%	2.199%
8	10.163	1265	1271	1288	rBV	530953	953506	30.10%	3.163%
9	10.533	1325	1334	1343	rBV	510030	874293	27.60%	2.900%
10	10.680	1352	1359	1374	rBV	415033	762221	24.06%	2.529%
11	13.804	1884	1890	1901	rBV	1177160	1663496	52.51%	5.518%
12	14.086	1931	1938	1946	rBV	1219518	1852325	58.47%	6.145%
13	14.245	1958	1965	1983	rBV	24462	65705	2.07%	0.218%
14	14.392	1984	1990	1999	rVB2	822600	1287246	40.63%	4.270%
15	14.616	2022	2028	2055	rBV	447808	832606	26.28%	2.762%
16	15.392	2152	2160	2168	rBV	1550074	2355076	74.34%	7.813%
17	15.521	2177	2182	2196	rBV	584753	849948	26.83%	2.820%
18	17.145	2451	2458	2465	rBV2	1112732	1645585	51.94%	5.459%
19	17.245	2468	2475	2485	rVB2	1738209	2649938	83.64%	8.791%
20	19.545	2860	2866	2878	rVB2	2170476	3168097	100.00%	10.510%
21	21.339	3166	3171	3181	rBV	1566398	2066402	65.23%	6.855%
22	23.468	3525	3533	3542	rBV2	1361971	2664295	84.10%	8.838%
23	23.609	3549	3557	3566	rBV2	830752	1622979	51.23%	5.384%

Sum of corrected areas: 30144778

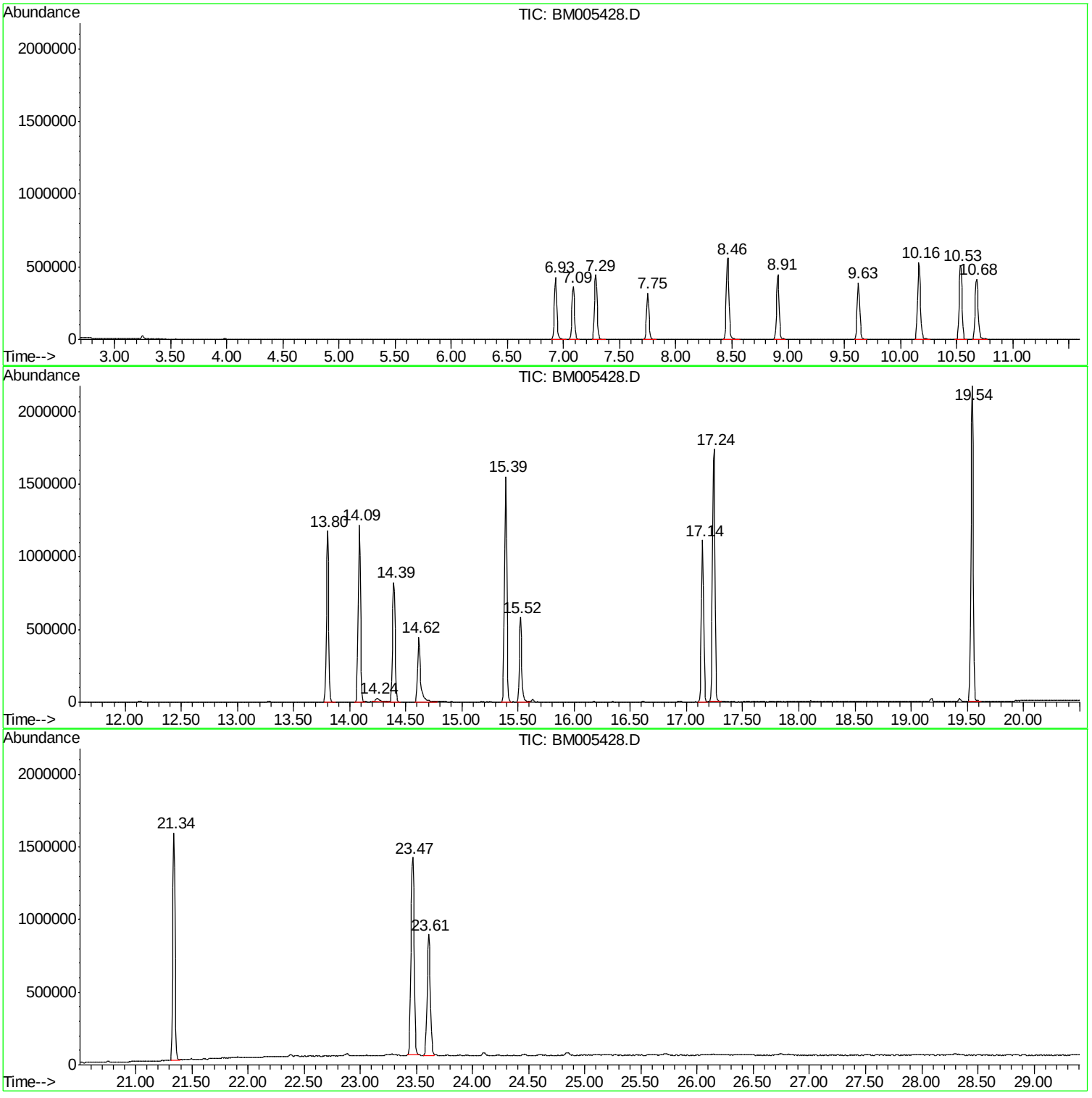
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA M\Data\BM051316\
Data File : BM005428.D
Acq On : 13 May 2016 12:23
Operator : UM/SJ
Sample : PB90403BL
Misc :
ALS Vial : 55 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK03

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005428.D
Acq On : 13 May 2016 12:23
Operator : UM/SJ
Sample : PB90403BL
Misc :
ALS Vial : 55 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SBLK03

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051316\
Data File : BM005428.D
Acq On : 13 May 2016 12:23
Operator : UM/SJ
Sample : PB90403BL
Misc :
ALS Vial : 55 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK03

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-10
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005431.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	6.2	J
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	24	
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	34	
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	27	
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-10
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005431.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	31	
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	5.8	J
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	34	
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	30	
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-10
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005431.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	30	
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

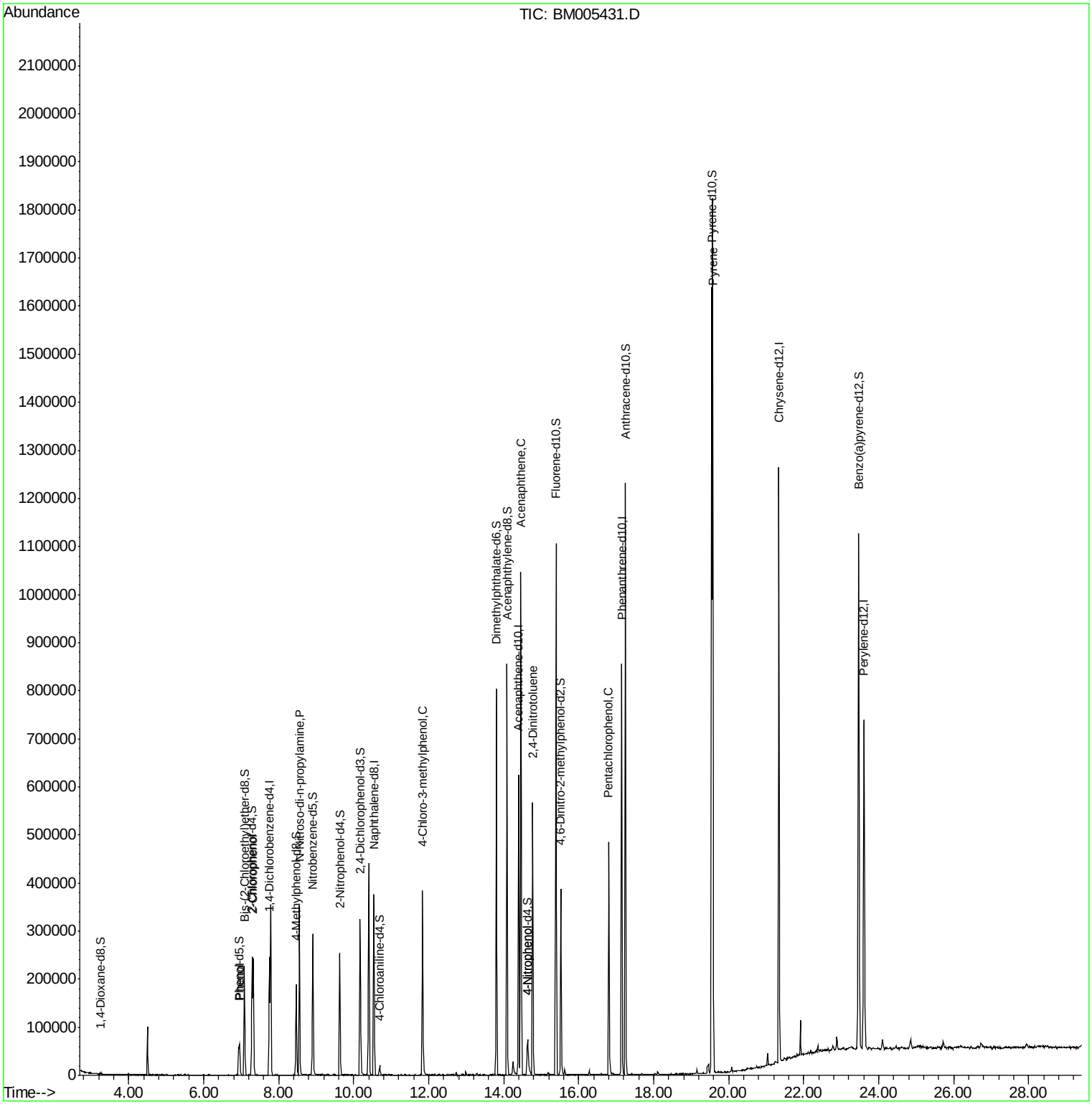
Quantitation Report (LSC Reviewed)

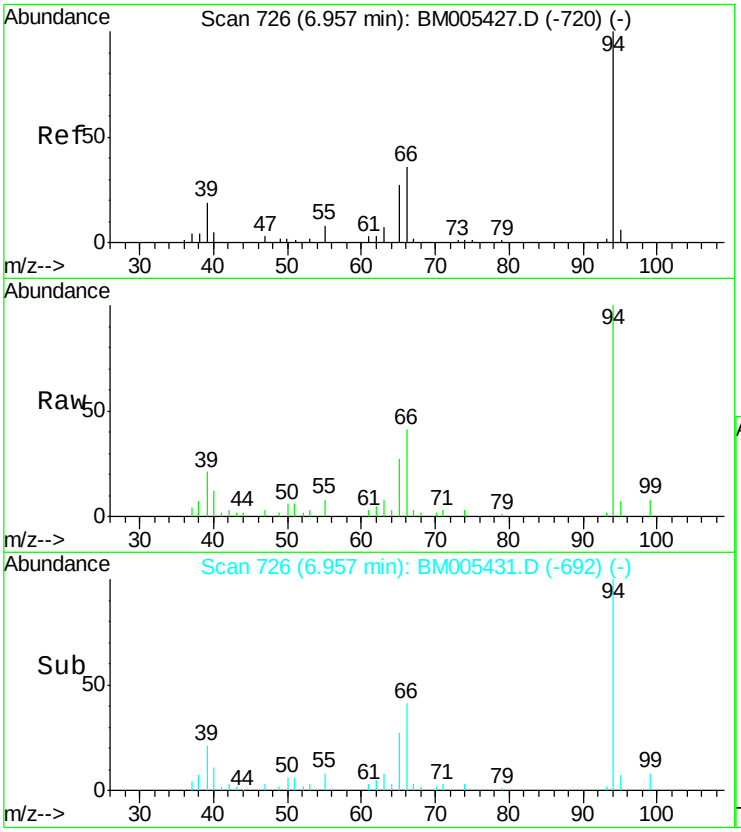
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005431.D
Acq On : 13 May 2016 14:12
Operator : UM/SJ
Sample : H2874-10MS
Misc :
ALS Vial : 58 Sample Multiplier: 1

Quant Time: May 14 00:38:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113MS

Manual Integrations APPROVED
sohil
5/14/2016 9:58:37 AM

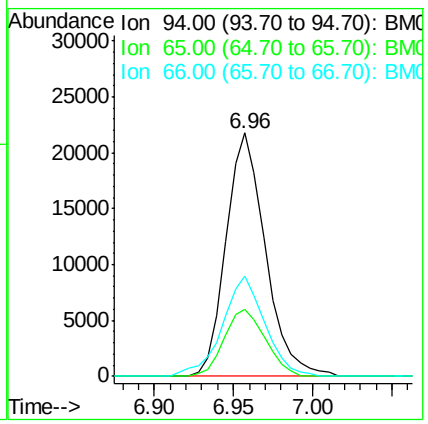




#6
Phenol
Concen: 6.16 ng/ul
RT: 6.96 min Scan# 726
Delta R.T. -0.00 min
Lab File: BM005431.D
Acq: 13 May 2016 14:12

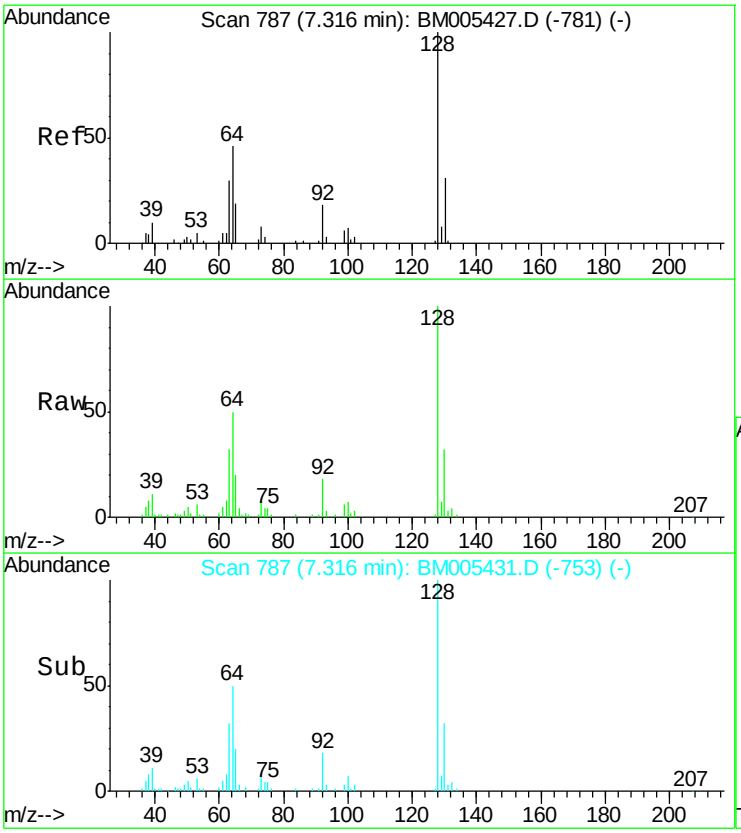
Tgt Ion: 94 Resp: 37403

Ion	Ratio	Lower	Upper
94	100		
65	27.4	22.7	34.1
66	41.1	31.7	47.5



Instrument :
BNA_M
ClientSampleId :
H4113MS

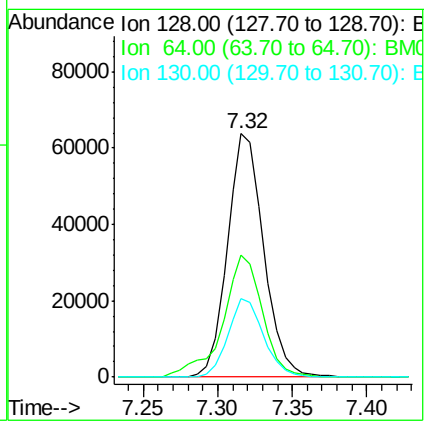
Manual Integrations APPROVED
sohil
5/14/2016 9:58:37 AM

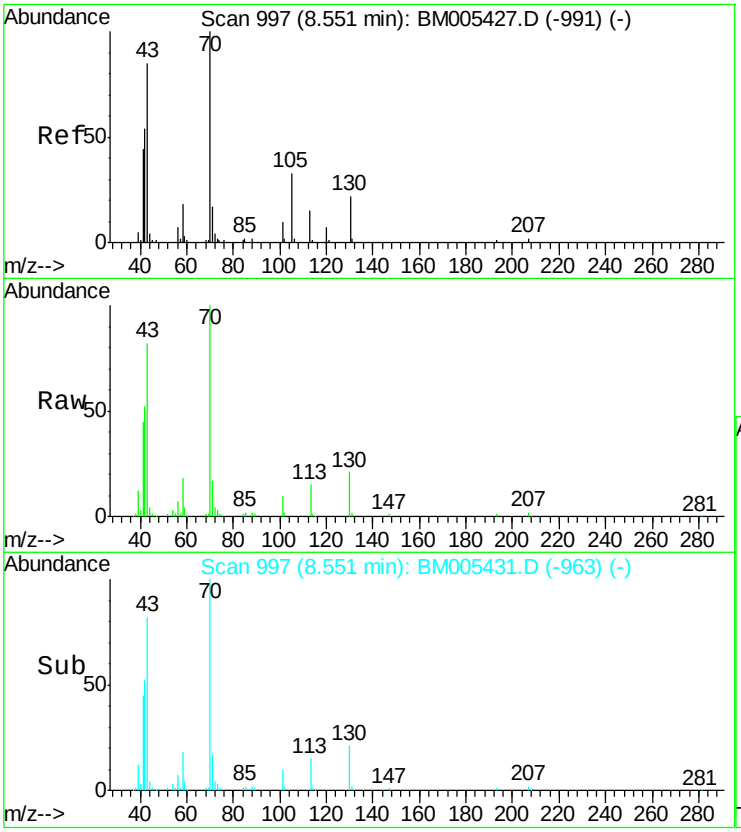


#10
2-Chlorophenol
Concen: 23.88 ng/ul
RT: 7.32 min Scan# 787
Delta R.T. -0.00 min
Lab File: BM005431.D
Acq: 13 May 2016 14:12

Tgt Ion:128 Resp: 108396

Ion	Ratio	Lower	Upper
128	100		
64	50.0	37.8	56.8
130	32.0	24.9	37.3

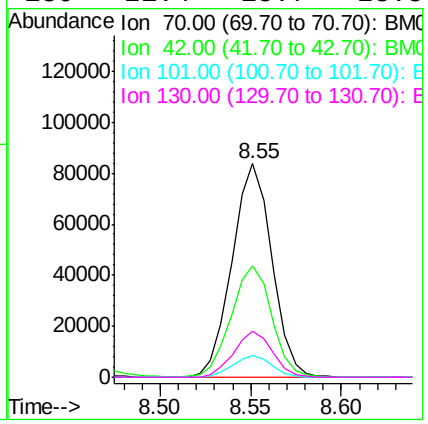




#15
N-Nitroso-di-n-propylamine
Concen: 34.06 ng/ul
RT: 8.55 min Scan# 997
Delta R.T. -0.00 min
Lab File: BM005431.D
Acq: 13 May 2016 14:12

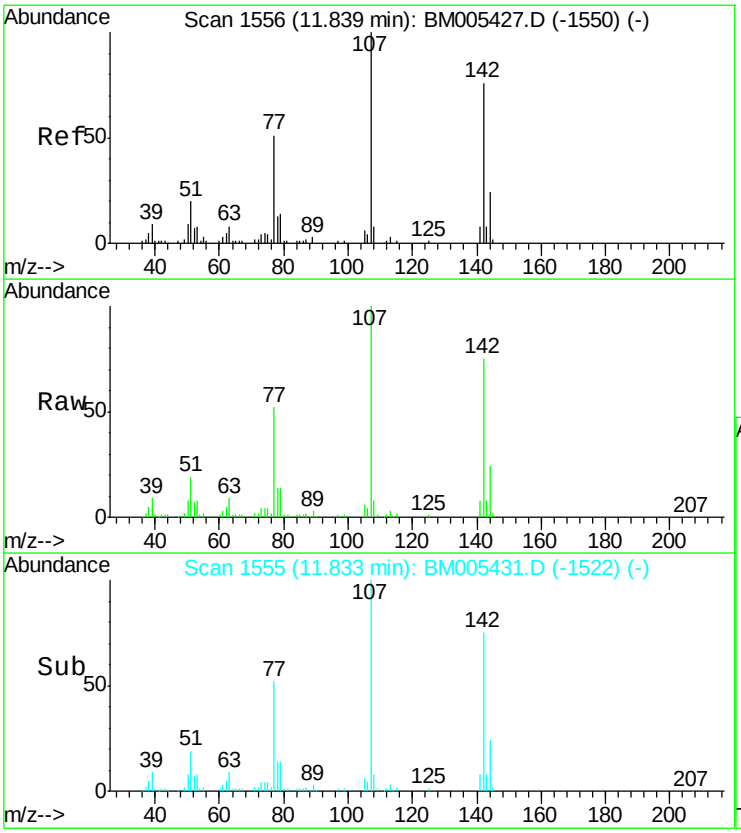
Tgt Ion: 70 Resp: 128080

Ion	Ratio	Lower	Upper
70	100		
42	52.0	42.8	64.2
101	10.0	7.8	11.6
130	21.4	15.7	23.5



Instrument :
BNA_M
ClientSampleId :
H4113MS

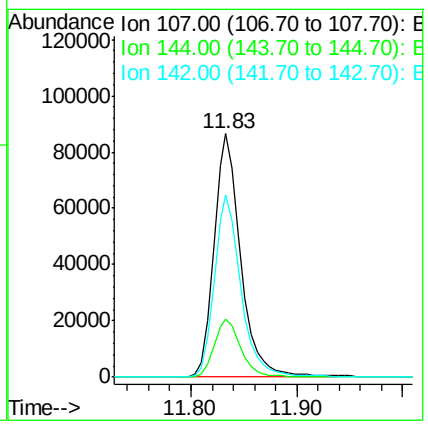
Manual Integrations APPROVED
sohil
5/14/2016 9:58:37 AM

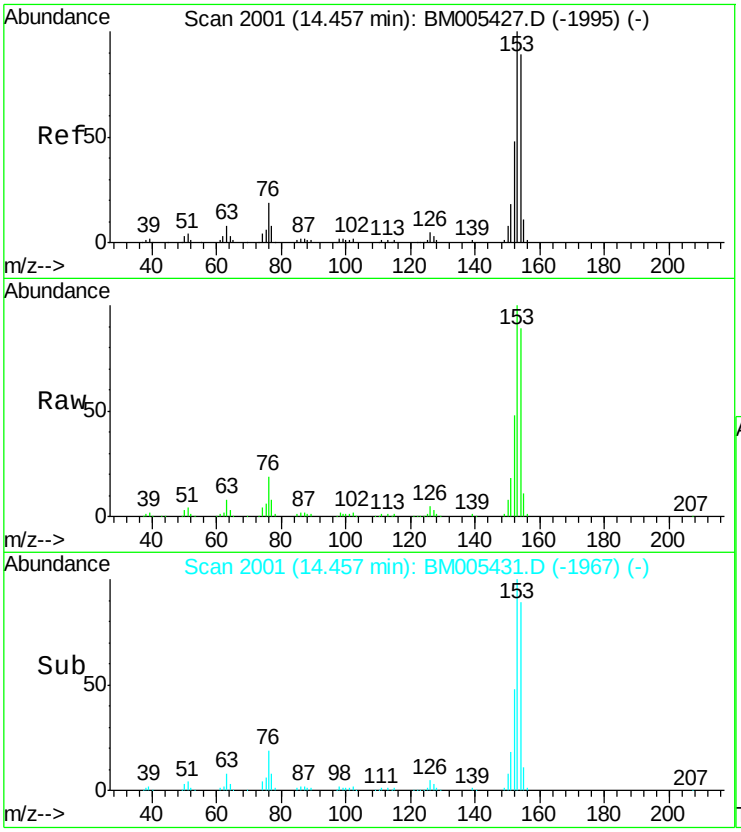


#33
4-Chloro-3-methylphenol
Concen: 26.71 ng/ul
RT: 11.83 min Scan# 1555
Delta R.T. -0.01 min
Lab File: BM005431.D
Acq: 13 May 2016 14:12

Tgt Ion:107 Resp: 152718

Ion	Ratio	Lower	Upper
107	100		
144	23.7	19.3	28.9
142	74.7	60.8	91.2

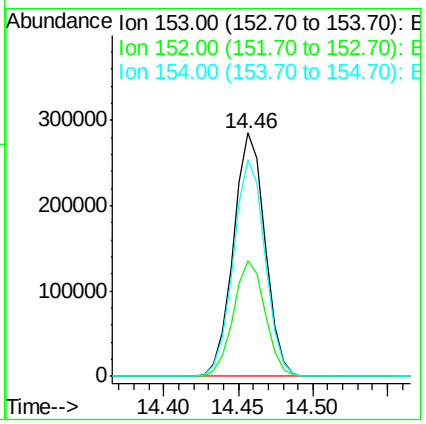




#49
Acenaphthene
Concen: 31.43 ng/ul
RT: 14.46 min Scan# 2001
Delta R.T. -0.00 min
Lab File: BM005431.D
Acq: 13 May 2016 14:12

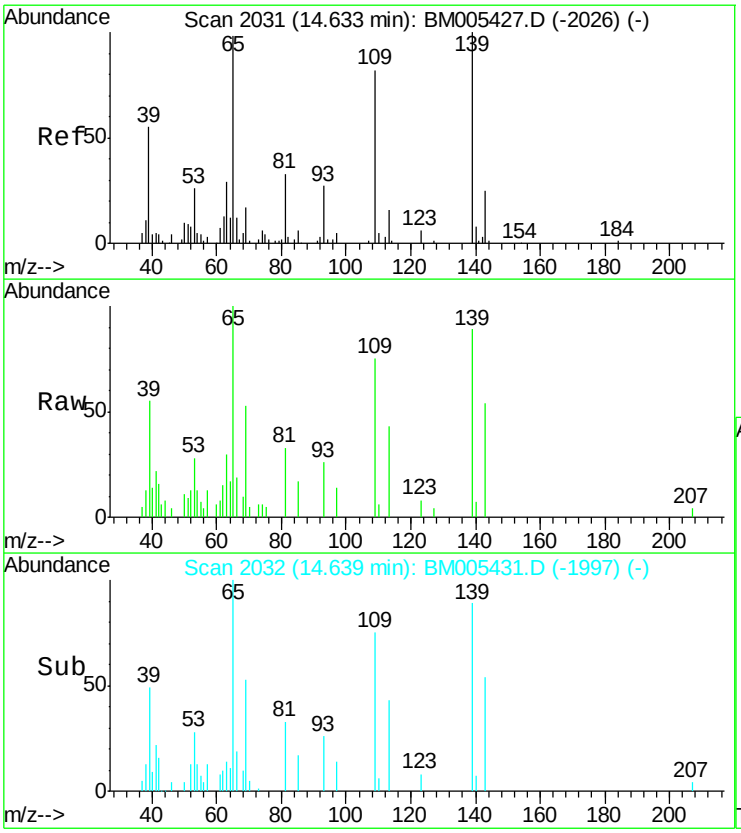
Tgt Ion:153 Resp: 421836

Ion	Ratio	Lower	Upper
153	100		
152	47.5	38.9	58.3
154	89.0	70.3	105.5



Instrument :
BNA_M
ClientSampleId :
H4113MS

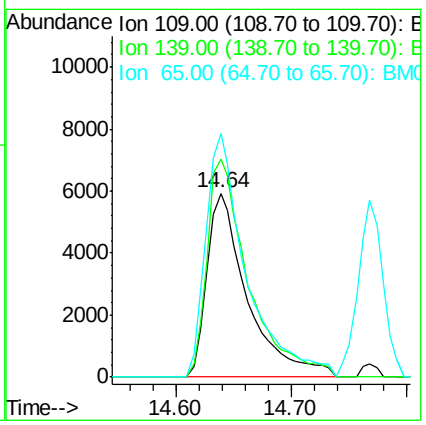
Manual Integrations APPROVED
sohil
5/14/2016 9:58:37 AM

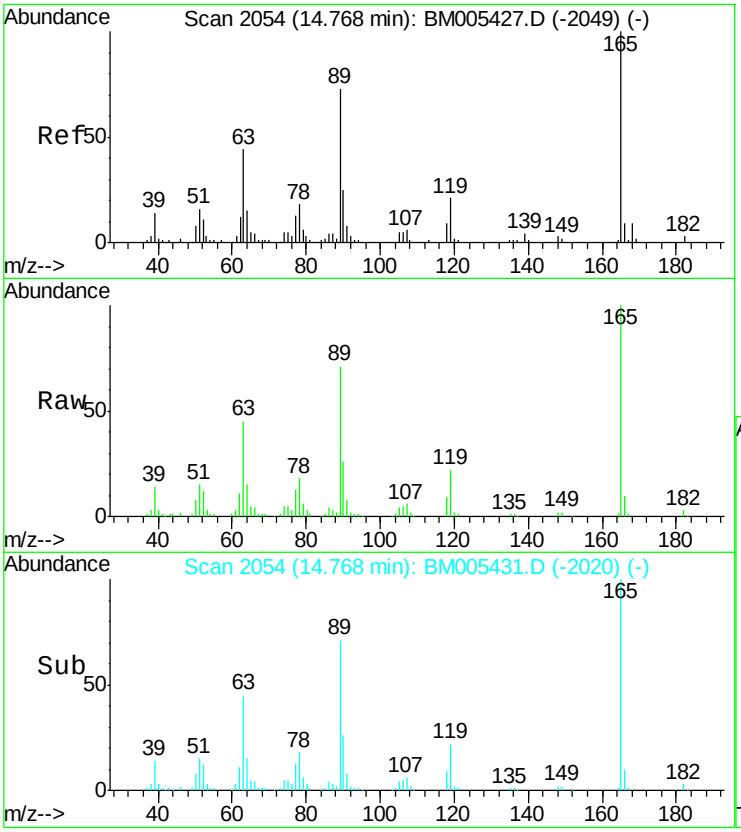


#52
4-Nitrophenol
Concen: 5.82 ng/ul
RT: 14.64 min Scan# 2032
Delta R.T. 0.01 min
Lab File: BM005431.D
Acq: 13 May 2016 14:12

Tgt Ion:109 Resp: 14486

Ion	Ratio	Lower	Upper
109	100		
139	118.4	103.6	155.4
65	132.5	104.7	157.1

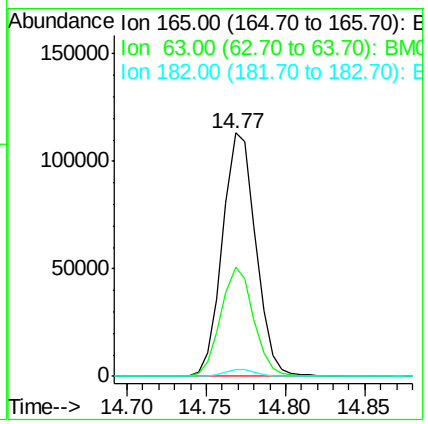




#54
2,4-Dinitrotoluene
Concen: 34.34 ng/ul
RT: 14.77 min Scan# 2054
Delta R.T. -0.00 min
Lab File: BM005431.D
Acq: 13 May 2016 14:12

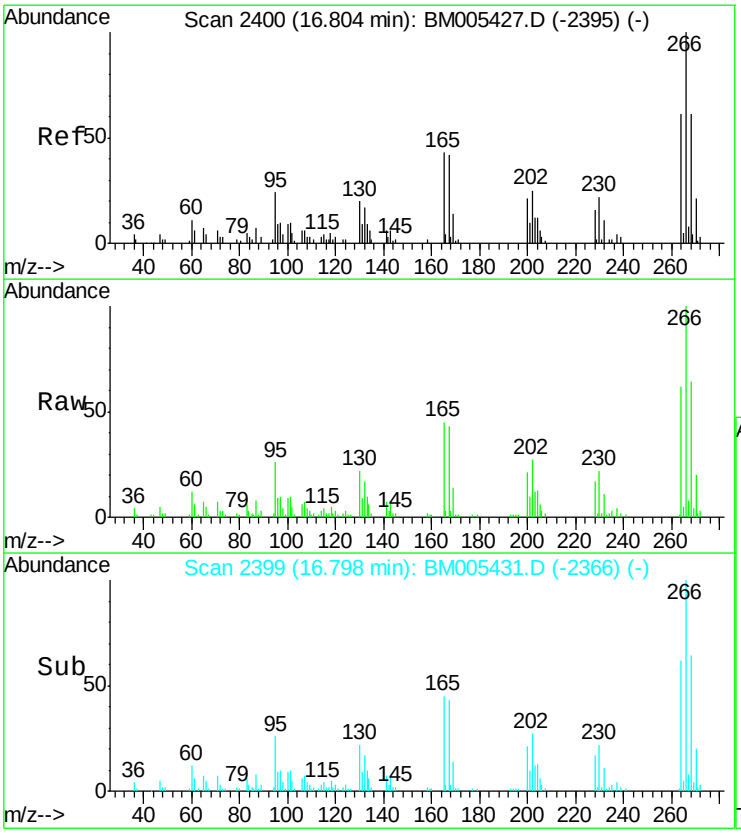
Tgt Ion:165 Resp: 165602

Ion	Ratio	Lower	Upper
165	100		
63	44.8	36.2	54.4
182	2.9	2.5	3.7



Instrument :
BNA_M
ClientSampleId :
H4113MS

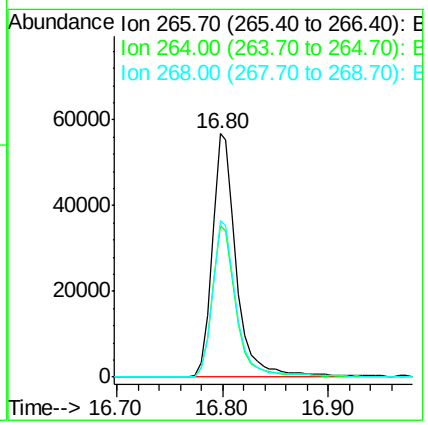
Manual Integrations APPROVED
sohil
5/14/2016 9:58:37 AM

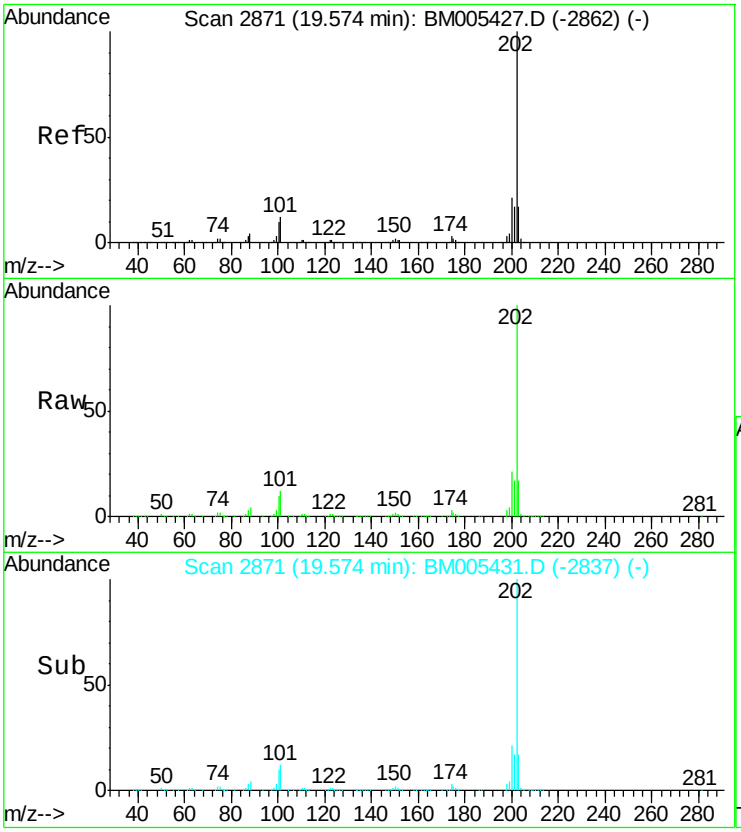


#68
Pentachlorophenol
Concen: 29.89 ng/ul
RT: 16.80 min Scan# 2399
Delta R.T. -0.01 min
Lab File: BM005431.D
Acq: 13 May 2016 14:12

Tgt Ion:266 Resp: 90898

Ion	Ratio	Lower	Upper
266	100		
264	62.2	52.0	78.0
268	64.4	53.0	79.6

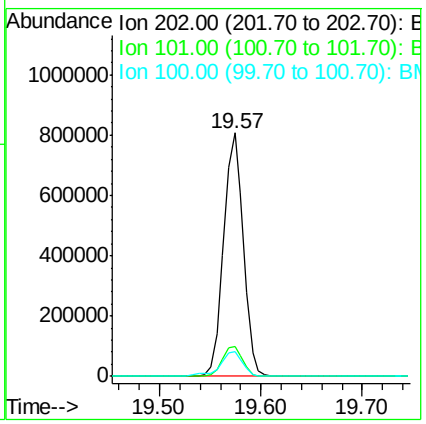




#77
Pyrene
Concen: 30.45 ng/ul
RT: 19.57 min Scan# 2871
Delta R.T. -0.00 min
Lab File: BM005431.D
Acq: 13 May 2016 14:12

Tgt Ion:202 Resp: 1087793

Ion	Ratio	Lower	Upper
202	100		
101	12.3	10.8	16.2
100	10.2	8.4	12.6



Instrument :
BNA_M
ClientSampleId :
H4113MS

Manual Integrations APPROVED
sohil
5/14/2016 9:58:37 AM

Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005431.D
Acq On : 13 May 2016 14:12
Operator : UM/SJ
Sample : H2874-10MS
Misc :
ALS Vial : 58 Sample Multiplier: 1

Quant Time: May 14 00:38:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4113MS

Manual Integrations APPROVED
sohil
5/14/2016 9:58:37 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	64791	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	309970	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	204750	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	508994	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	615991	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	524727	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1557	1.13	ng/uL	0.00
5) Phenol-d5	6.93	99	34928	5.94	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	101458	30.26	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	107779	24.28	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	70754	14.57	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	72727	32.86	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	83901	33.48	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	132605	28.47	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	14319	2.55	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	531382	32.38	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	617644	32.09	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	16027m	5.35	ng/ul	0.00
57) Fluorene-d10	15.39	176	451881	31.89	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	87710	30.63	ng/ul	0.00
70) Anthracene-d10	17.24	188	737018	32.76	ng/ul	0.00
76) Pyrene-d10	19.54	212	869932	30.59	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	768697	33.10	ng/ul	0.00
Target Compounds						Qvalue
6) Phenol	6.96	94	37403	6.16	ng/ul	98
10) 2-Chlorophenol	7.32	128	108396	23.88	ng/ul	97
15) N-Nitroso-di-n-propylamine	8.55	70	128080	34.06	ng/ul	98
33) 4-Chloro-3-methylphenol	11.83	107	152718	26.71	ng/ul	99
49) Acenaphthene	14.46	153	421836	31.43	ng/ul	99
52) 4-Nitrophenol	14.64	109	14486	5.82	ng/ul	95
54) 2,4-Dinitrotoluene	14.77	165	165602	34.34	ng/ul	99
68) Pentachlorophenol	16.80	266	90898	29.89	ng/ul	97
77) Pyrene	19.57	202	1087793	30.45	ng/ul	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

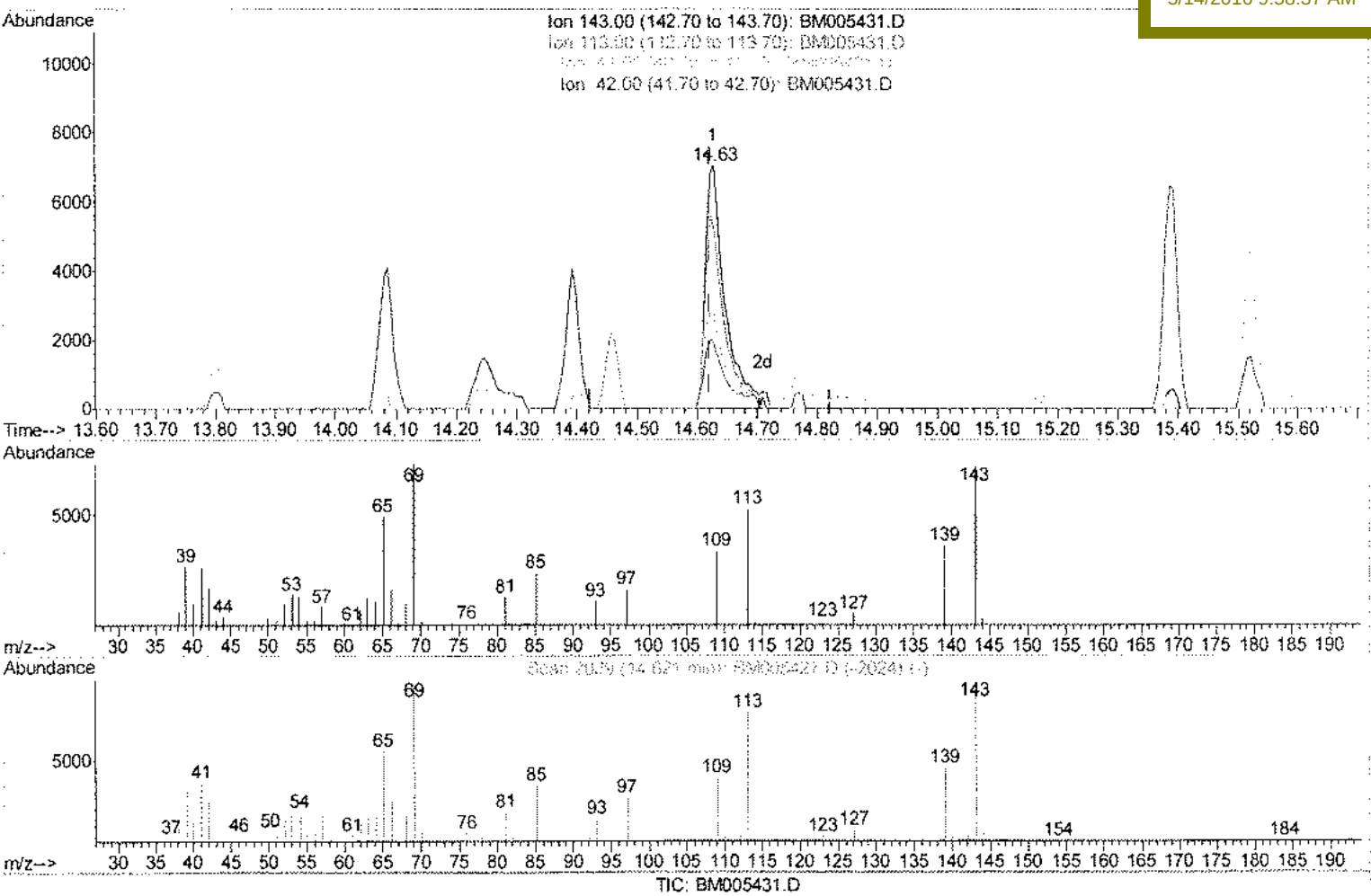
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005431.D
Acq On : 13 May 2016 14:12
Operator : UM/SJ
Sample : H2874-10MS

Misc :
ALS Vial : 58 Sample Multiplier: 1

Quant Time: May 14 00:20:38 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113MS

Manual Integrations APPROVED
sohil
5/14/2016 9:58:37 AM



(51) 4-Nitrophenol-d4 (S)

14.627min (+0.006) 5.24ng/ul

response 15703

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	74.23
41.00	38.10	39.24
42.00	26.00	27.01

Quantitation Report (Qedit)

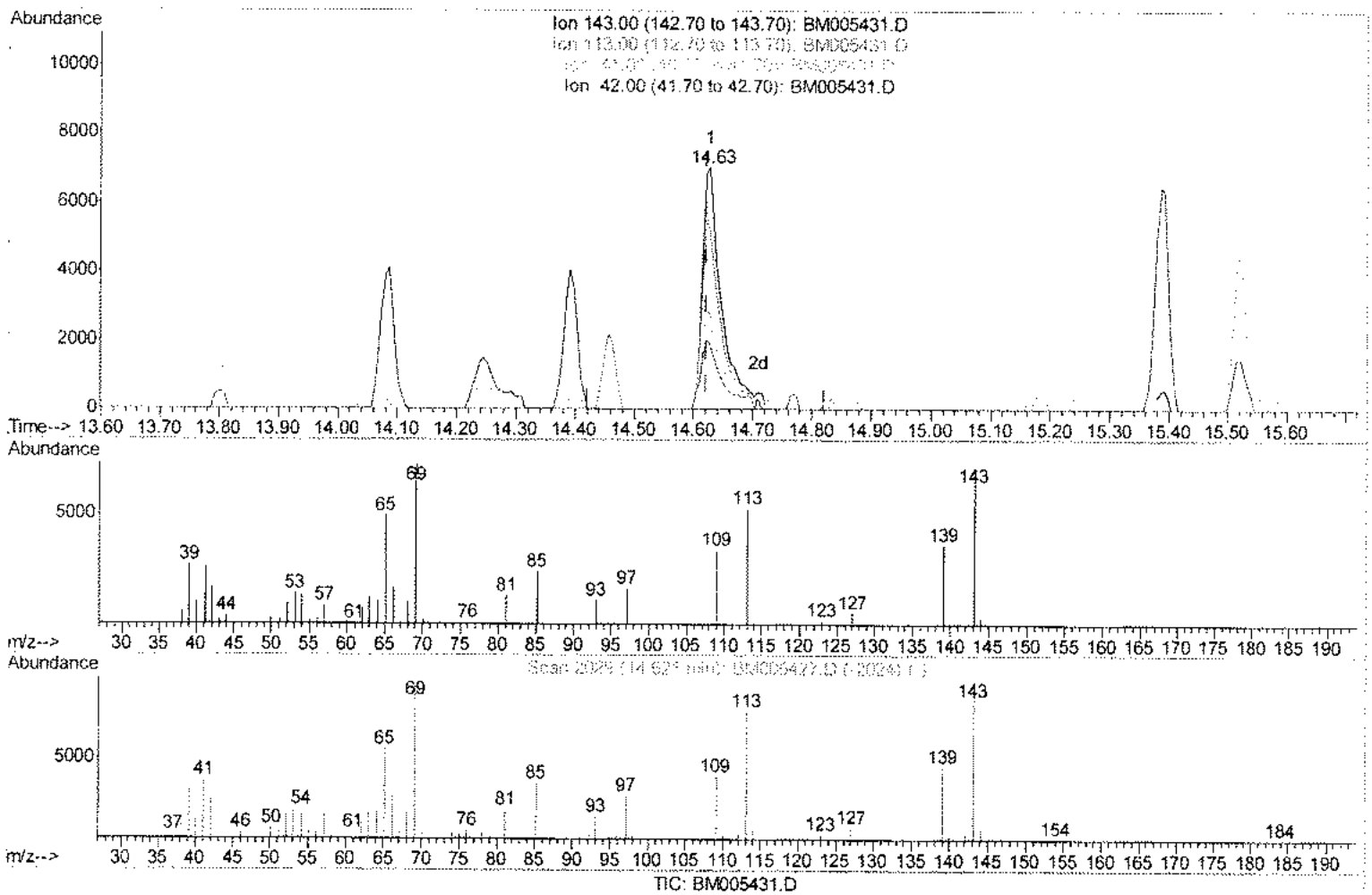
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005431.D
Acq On : 13 May 2016 14:12
Operator : UM/SJ
Sample : H2874-10MS

Misc :
ALS Vial : 58 Sample Multiplier: 1

Quant Time: May 14 00:20:38 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113MS

Manual Integrations APPROVED
sohil
5/14/2016 9:58:37 AM



(51) 4-Nitrophenol-d4 (S)

14.627min (+0.006) 5.35ng/ul m

U.M. 05/15/2016

response 16027

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	74.23
41.00	38.10	39.24
42.00	26.00	27.01

Quantitation Report (QT Reviewed)

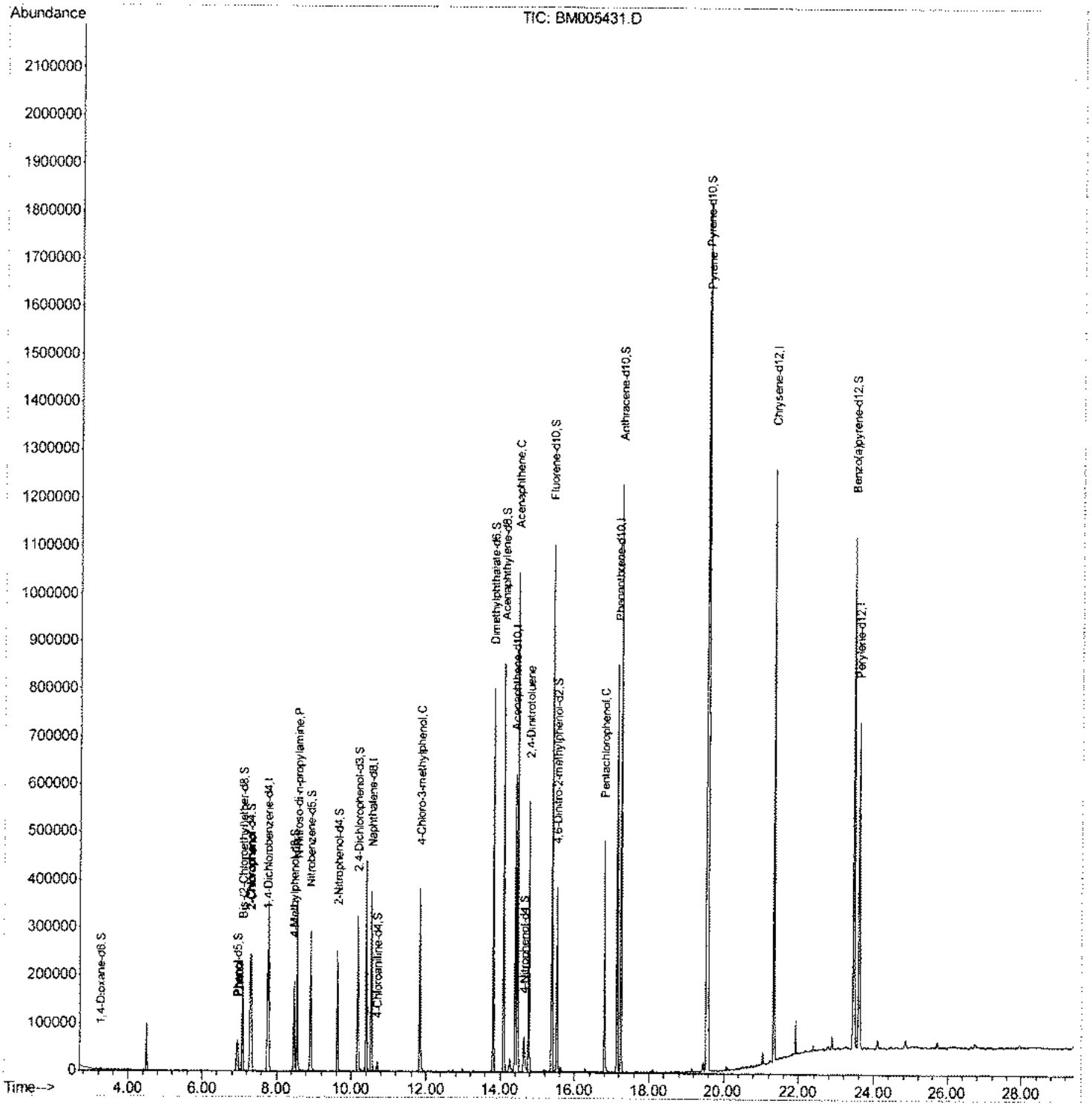
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005431.D
Acq On : 13 May 2016 14:12
Operator : UM/SJ
Sample : H2874-10MS

Misc :
ALS Vial : 58 Sample Multiplier: 1

Quant Time: May 14 00:38:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113MS

Manual Integrations APPROVED
sohil
5/14/2016 9:58:37 AM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005431.D
Acq On : 13 May 2016 14:12
Operator : UM/SJ
Sample : H2874-10MS
Misc :
ALS Vial : 58 Sample Multiplier: 1

Quant Time: May 14 00:38:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4113MS

Manual Integrations APPROVED
sohil
5/14/2016 9:58:37 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	64791	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	309970	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	204750	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	508994	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	615991	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	524727	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1557	1.13	ng/uL	0.00
5) Phenol-d5	6.93	99	34928	5.94	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	101458	30.26	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	107779	24.28	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	70754	14.57	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	72727	32.86	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	83901	33.48	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	132605	28.47	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	14319	2.55	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	531382	32.38	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	617644	32.09	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	16027m	5.35	ng/ul	0.00
57) Fluorene-d10	15.39	176	451881	31.89	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	87710	30.63	ng/ul	0.00
70) Anthracene-d10	17.24	188	737018	32.76	ng/ul	0.00
76) Pyrene-d10	19.54	212	869932	30.59	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	768697	33.10	ng/ul	0.00
Target Compounds						Qvalue
6) Phenol	6.96	94	37403	6.16	ng/ul	98
10) 2-Chlorophenol	7.32	128	108396	23.88	ng/ul	97
15) N-Nitroso-di-n-propylamine	8.55	70	128080	34.06	ng/ul	98
33) 4-Chloro-3-methylphenol	11.83	107	152718	26.71	ng/ul	99
49) Acenaphthene	14.46	153	421836	31.43	ng/ul	99
52) 4-Nitrophenol	14.64	109	14486	5.82	ng/ul	95
54) 2,4-Dinitrotoluene	14.77	165	165602	34.34	ng/ul	99
68) Pentachlorophenol	16.80	266	90898	29.89	ng/ul	97
77) Pyrene	19.57	202	1087793	30.45	ng/ul	98

U.M. 05/15/2016

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-11
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005432.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	6.3	J
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	24	
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	33	
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	26	
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-11
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005432.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	31	
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	5.7	J
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	33	
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	29	
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4113MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4010
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2874-11
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005432.D
% Solids :
Date Received : 05/05/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	30	
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

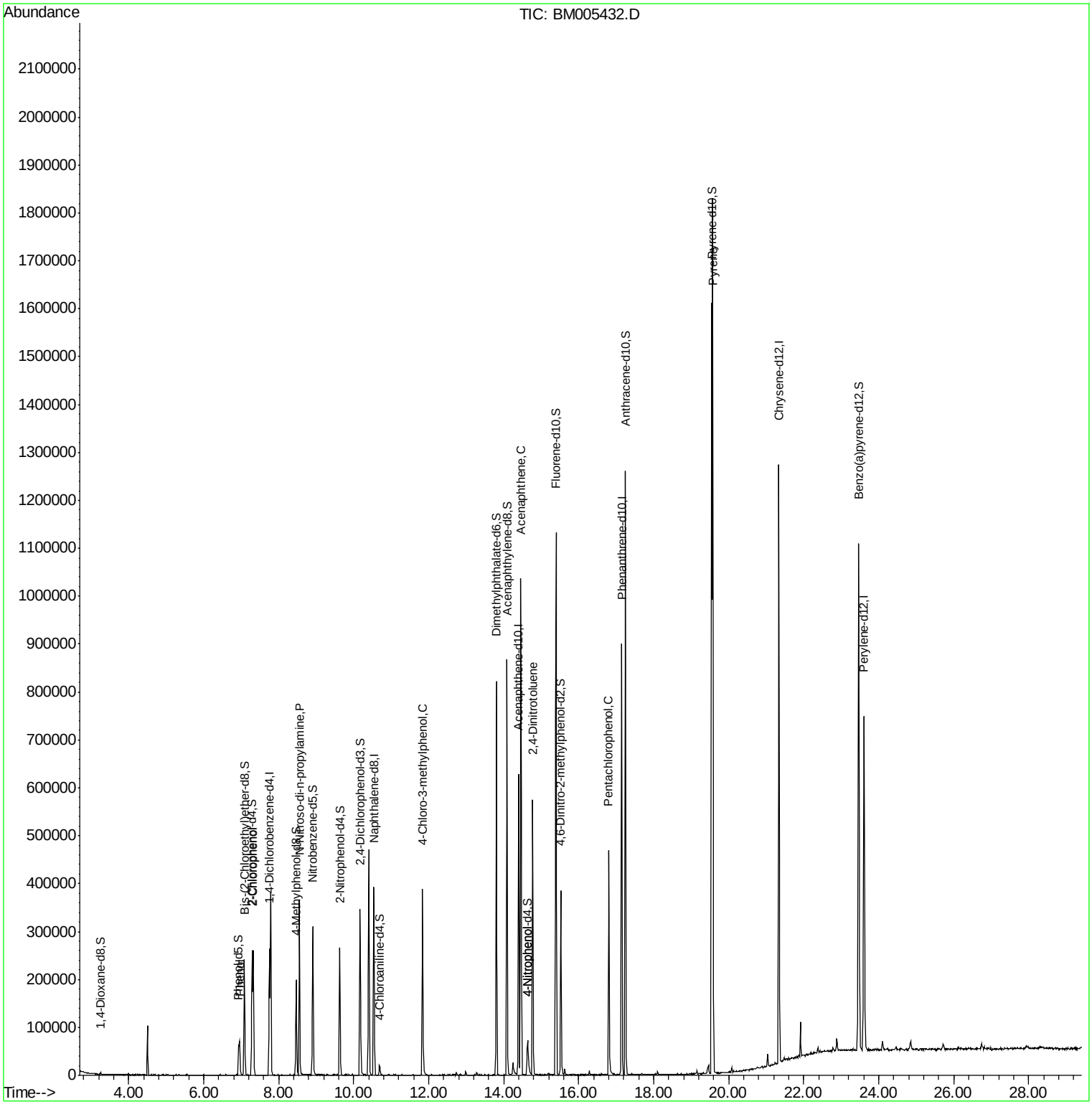
Quantitation Report (LSC Reviewed)

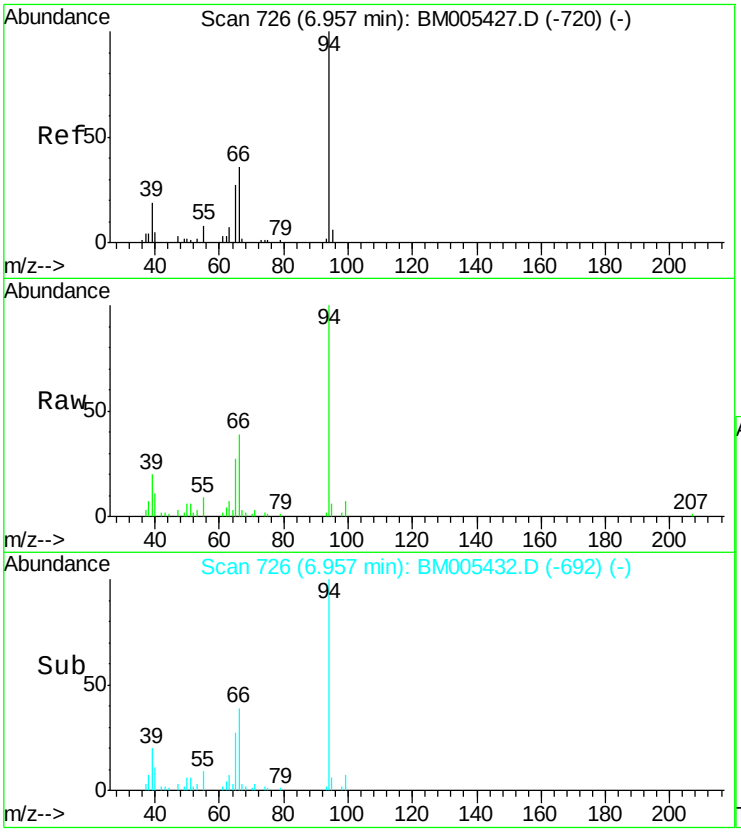
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005432.D
Acq On : 13 May 2016 14:49
Operator : UM/SJ
Sample : H2874-11MSD
Misc :
ALS Vial : 59 Sample Multiplier: 1

Quant Time: May 14 00:41:22 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
sohil
5/14/2016 9:58:40 AM

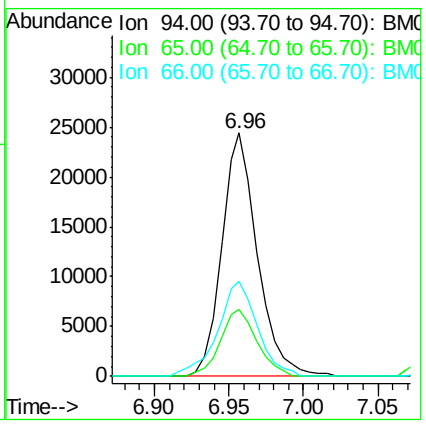




#6
Phenol
Concen: 6.25 ng/ul
RT: 6.96 min Scan# 726
Delta R.T. -0.00 min
Lab File: BM005432.D
Acq: 13 May 2016 14:49

Tgt Ion: 94 Resp: 40790

Ion	Ratio	Lower	Upper
94	100		
65	27.5	22.7	34.1
66	39.2	31.7	47.5



Instrument :
BNA_M
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
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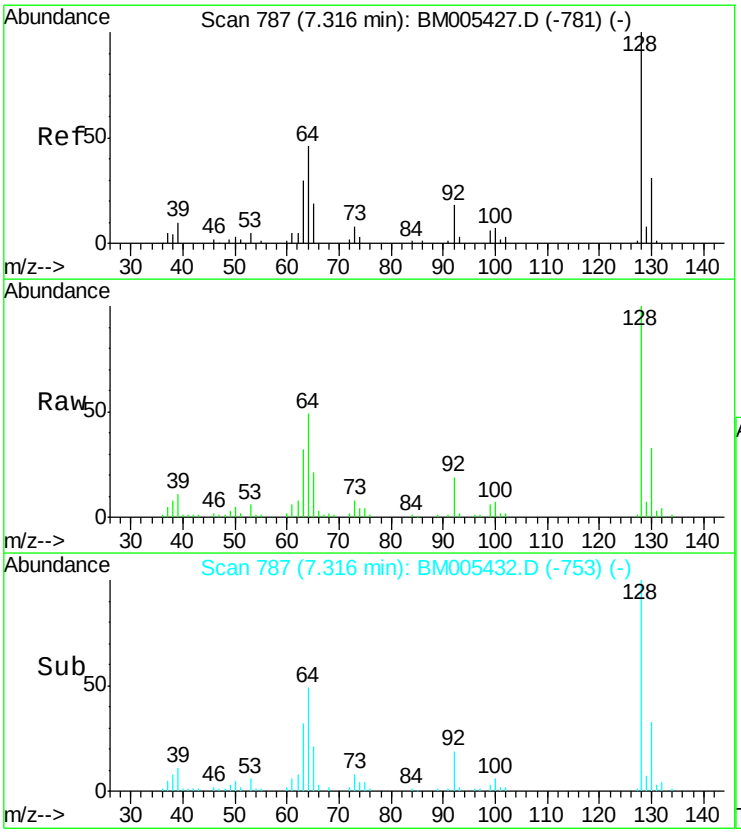
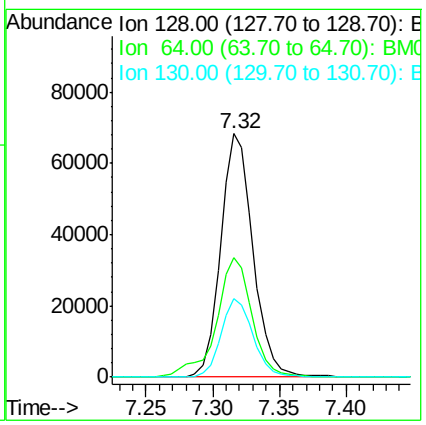
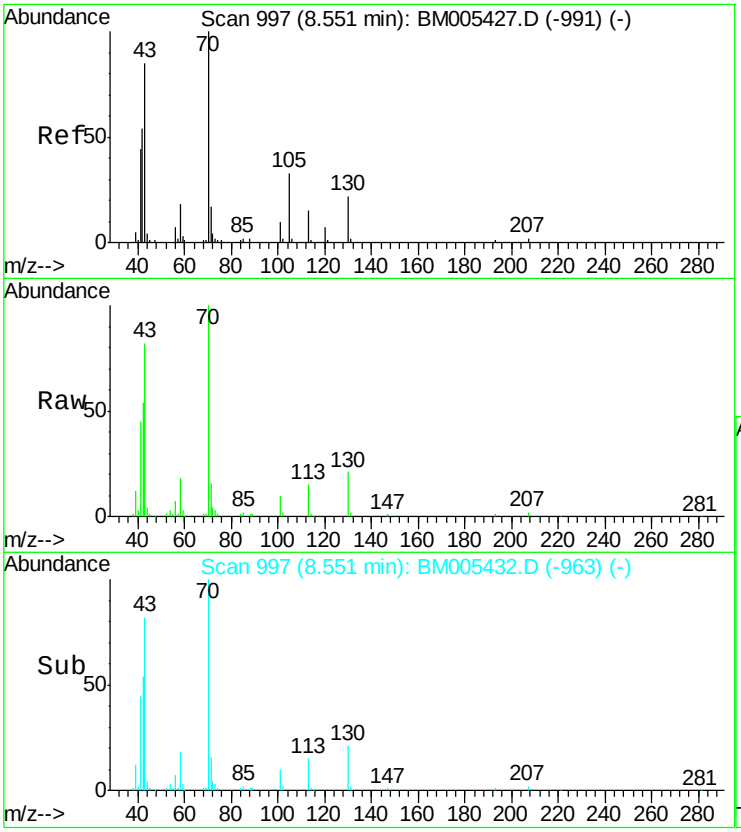


#10
2-Chlorophenol
Concen: 23.78 ng/ul
RT: 7.32 min Scan# 787
Delta R.T. -0.00 min
Lab File: BM005432.D
Acq: 13 May 2016 14:49

Tgt Ion:128 Resp: 115947

Ion	Ratio	Lower	Upper
128	100		
64	49.1	37.8	56.8
130	32.5	24.9	37.3

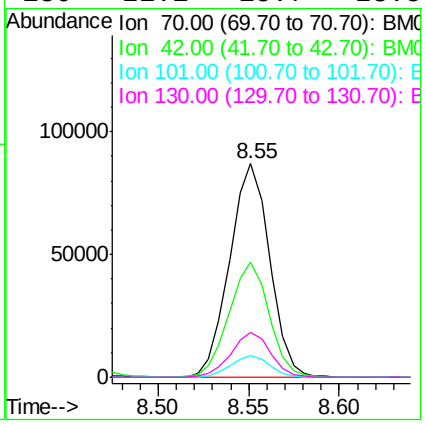




#15
N-Nitroso-di-n-propylamine
Concen: 33.08 ng/ul
RT: 8.55 min Scan# 997
Delta R.T. -0.00 min
Lab File: BM005432.D
Acq: 13 May 2016 14:49

Tgt Ion: 70 Resp: 133569

Ion	Ratio	Lower	Upper
70	100		
42	53.8	42.8	64.2
101	10.0	7.8	11.6
130	21.1	15.7	23.5



Instrument :
BNA_M
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
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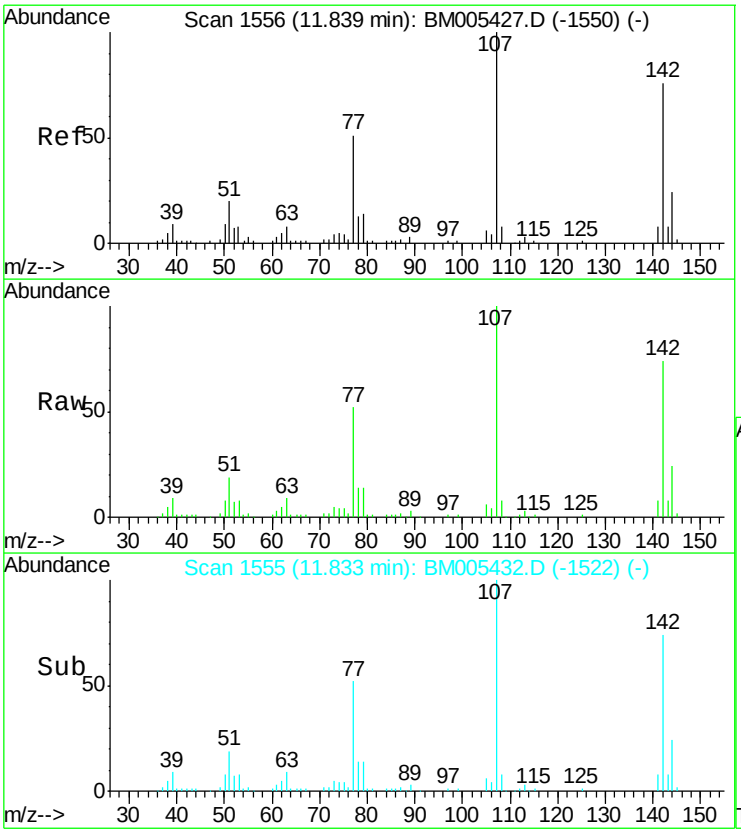
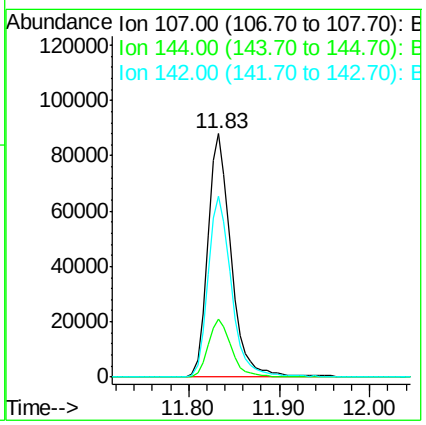
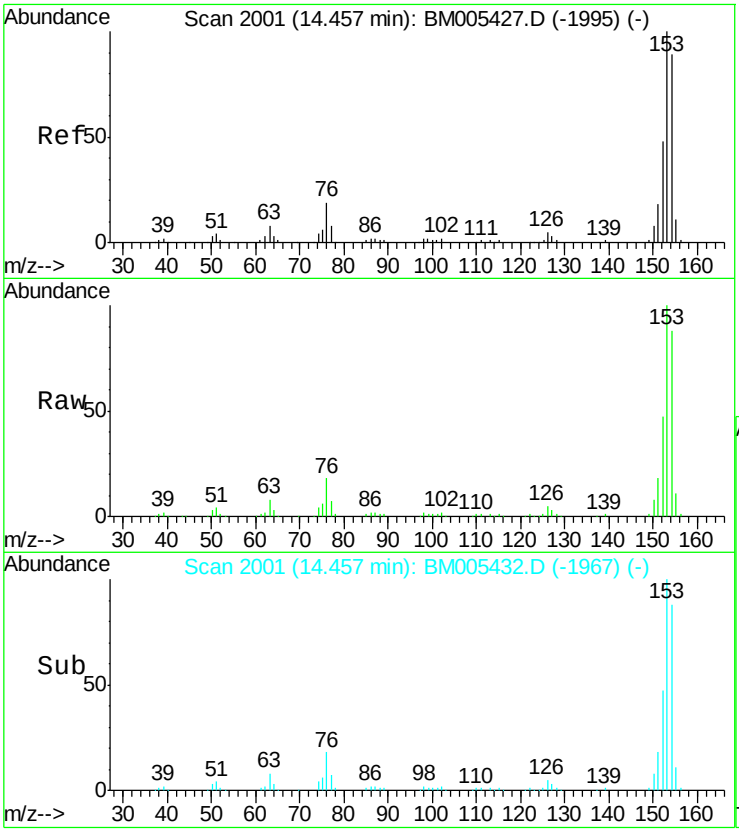


#33
4-Chloro-3-methylphenol
Concen: 25.90 ng/ul
RT: 11.83 min Scan# 1555
Delta R.T. -0.01 min
Lab File: BM005432.D
Acq: 13 May 2016 14:49

Tgt Ion:107 Resp: 156784

Ion	Ratio	Lower	Upper
107	100		
144	24.1	19.3	28.9
142	74.1	60.8	91.2

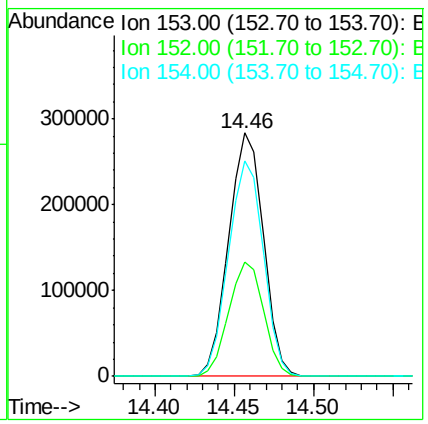




#49
Acenaphthene
Concen: 31.16 ng/ul
RT: 14.46 min Scan# 2001
Delta R.T. -0.00 min
Lab File: BM005432.D
Acq: 13 May 2016 14:49

Tgt Ion:153 Resp: 432193

Ion	Ratio	Lower	Upper
153	100		
152	47.2	38.9	58.3
154	88.3	70.3	105.5



Instrument :
BNA_M
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
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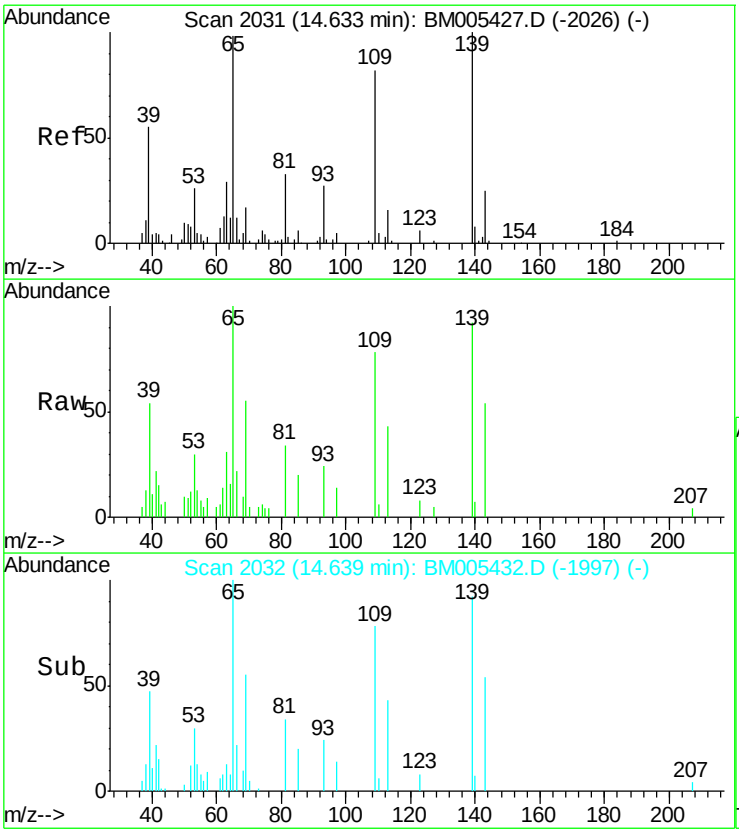
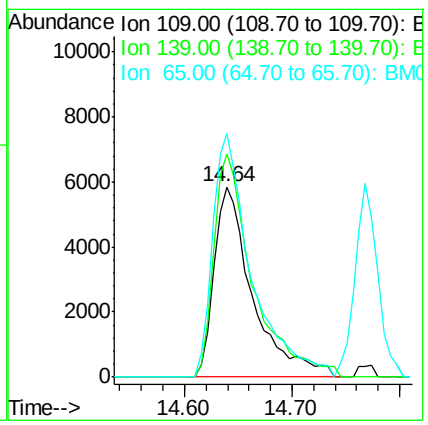
5/14/2016 9:58:40 AM

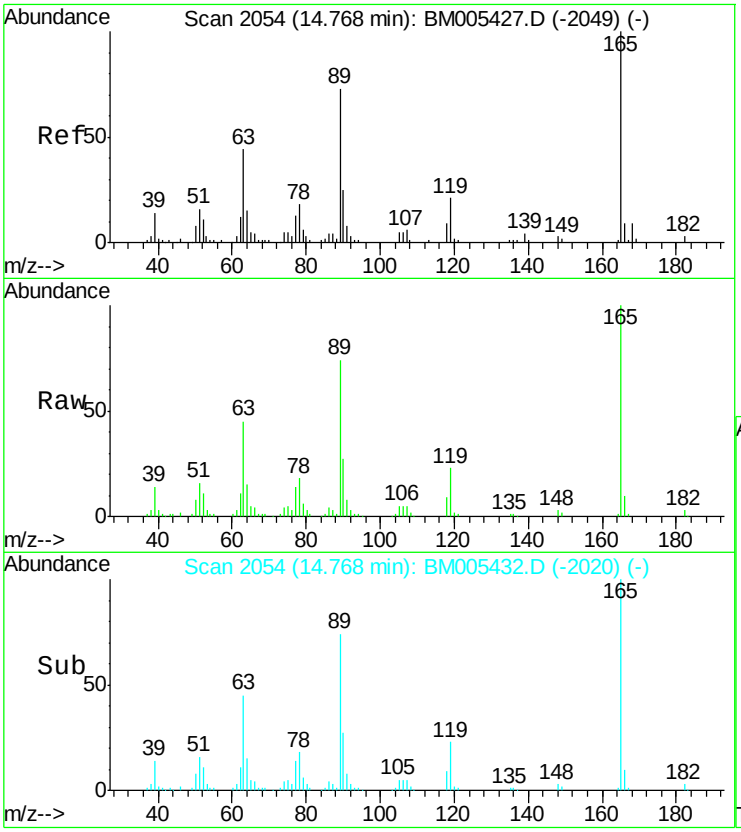


#52
4-Nitrophenol
Concen: 5.67 ng/ul m
RT: 14.64 min Scan# 2032
Delta R.T. 0.01 min
Lab File: BM005432.D
Acq: 13 May 2016 14:49

Tgt Ion:109 Resp: 14581

Ion	Ratio	Lower	Upper
109	100		
139	117.5	103.6	155.4
65	127.9	104.7	157.1

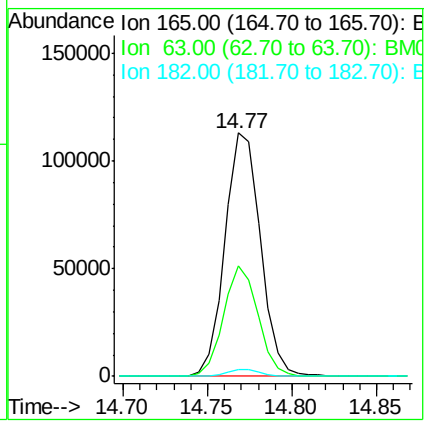




#54
2,4-Dinitrotoluene
Concen: 33.28 ng/ul
RT: 14.77 min Scan# 2054
Delta R.T. -0.00 min
Lab File: BM005432.D
Acq: 13 May 2016 14:49

Tgt Ion:165 Resp: 165830

Ion	Ratio	Lower	Upper
165	100		
63	45.5	36.2	54.4
182	3.0	2.5	3.7



Instrument :
BNA_M
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
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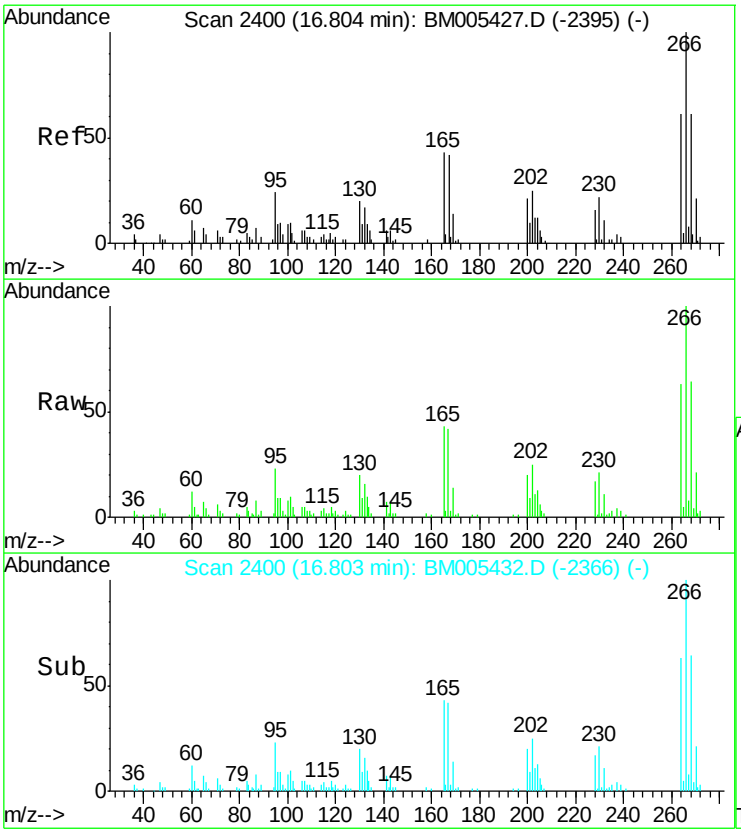
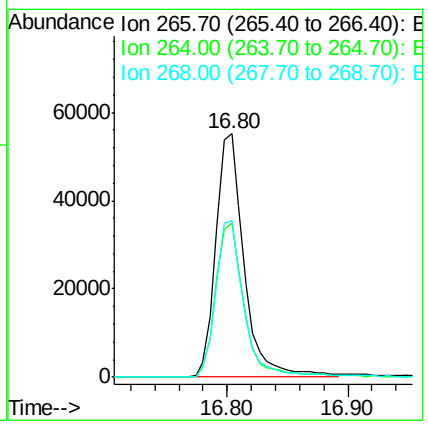
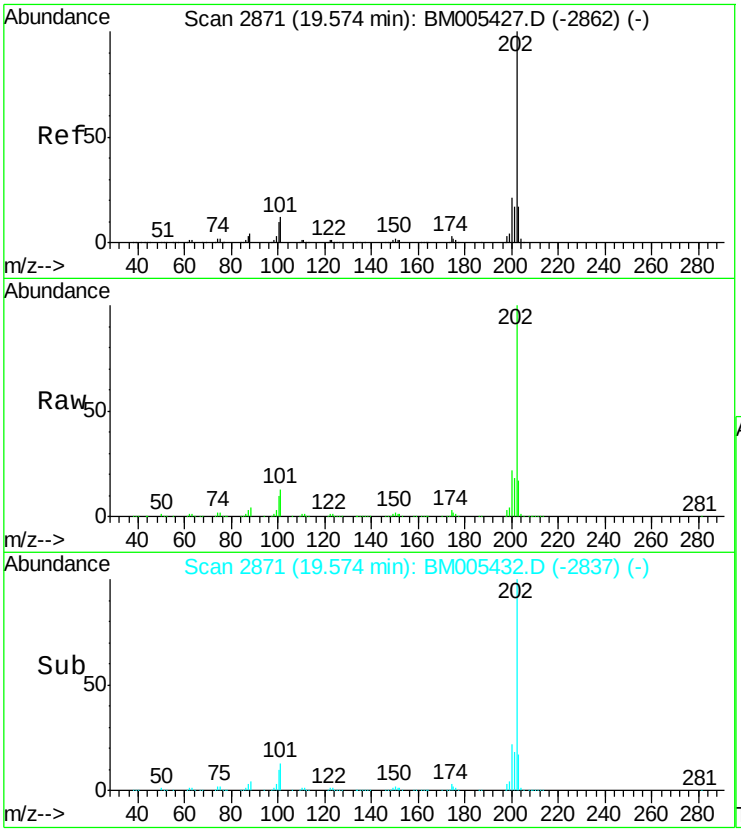


#68
Pentachlorophenol
Concen: 28.72 ng/ul
RT: 16.80 min Scan# 2400
Delta R.T. -0.00 min
Lab File: BM005432.D
Acq: 13 May 2016 14:49

Tgt Ion:266 Resp: 89094

Ion	Ratio	Lower	Upper
266	100		
264	63.1	52.0	78.0
268	64.5	53.0	79.6

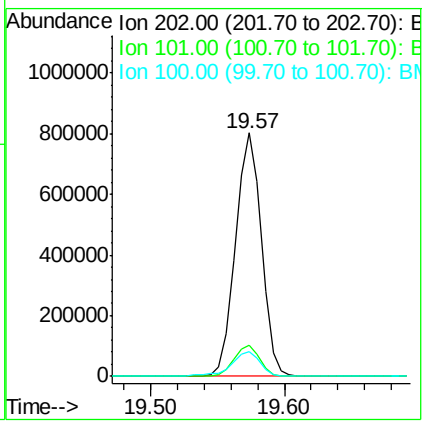




#77
Pyrene
Concen: 29.86 ng/ul
RT: 19.57 min Scan# 2871
Delta R.T. -0.00 min
Lab File: BM005432.D
Acq: 13 May 2016 14:49

Tgt Ion:202 Resp: 1077410

Ion	Ratio	Lower	Upper
202	100		
101	12.6	10.8	16.2
100	10.3	8.4	12.6



Instrument :
BNA_M
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
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Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005432.D
Acq On : 13 May 2016 14:49
Operator : UM/SJ
Sample : H2874-11MSD
Misc :
ALS Vial : 59 Sample Multiplier: 1

Quant Time: May 14 00:41:22 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
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5/14/2016 9:58:40 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	69588	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	328113	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	211575	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	519223	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	622010	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	524407	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1695	1.15	ng/uL	0.00
5) Phenol-d5	6.93	99	37064	5.87	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	108437	30.12	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	115294	24.19	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	74536	14.29	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	76510	32.66	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	88088	33.21	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.16	165	138186	28.03	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	15486	2.61	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	536259	31.62	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	631523	31.75	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	15860m	5.12	ng/ul	0.00
57) Fluorene-d10	15.39	176	460842	31.47	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	87980	30.12	ng/ul	0.00
70) Anthracene-d10	17.24	188	738585	32.18	ng/ul	0.00
76) Pyrene-d10	19.54	212	864218	30.10	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	749724	32.30	ng/ul	0.00
Target Compounds						Qvalue
6) Phenol	6.96	94	40790	6.25	ng/ul	99
10) 2-Chlorophenol	7.32	128	115947	23.78	ng/ul	97
15) N-Nitroso-di-n-propylamine	8.55	70	133569	33.08	ng/ul	99
33) 4-Chloro-3-methylphenol	11.83	107	156784	25.90	ng/ul	98
49) Acenaphthene	14.46	153	432193	31.16	ng/ul	99
52) 4-Nitrophenol	14.64	109	14581m	5.67	ng/ul	
54) 2,4-Dinitrotoluene	14.77	165	165830	33.28	ng/ul	100
68) Pentachlorophenol	16.80	266	89094	28.72	ng/ul	98
77) Pyrene	19.57	202	1077410	29.86	ng/ul	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

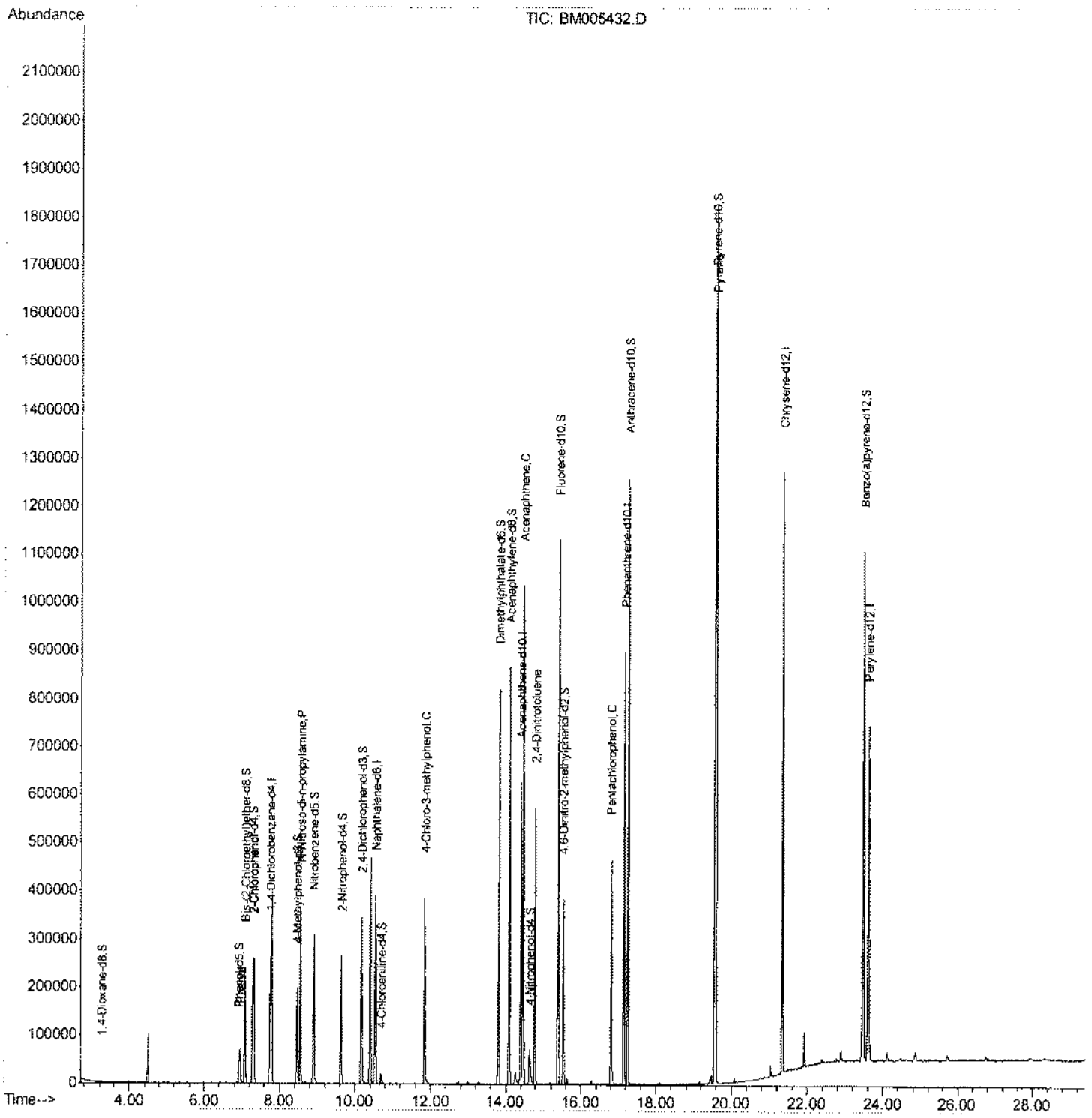
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005432.D
Acq On : 13 May 2016 14:49
Operator : UM/SJ
Sample : H2874-11MSD

Misc :
ALS Vial : 59 Sample Multiplier: 1

Quant Time: May 14 00:41:22 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
sohil
5/14/2016 9:58:40 AM



Quantitation Report (Qedit)

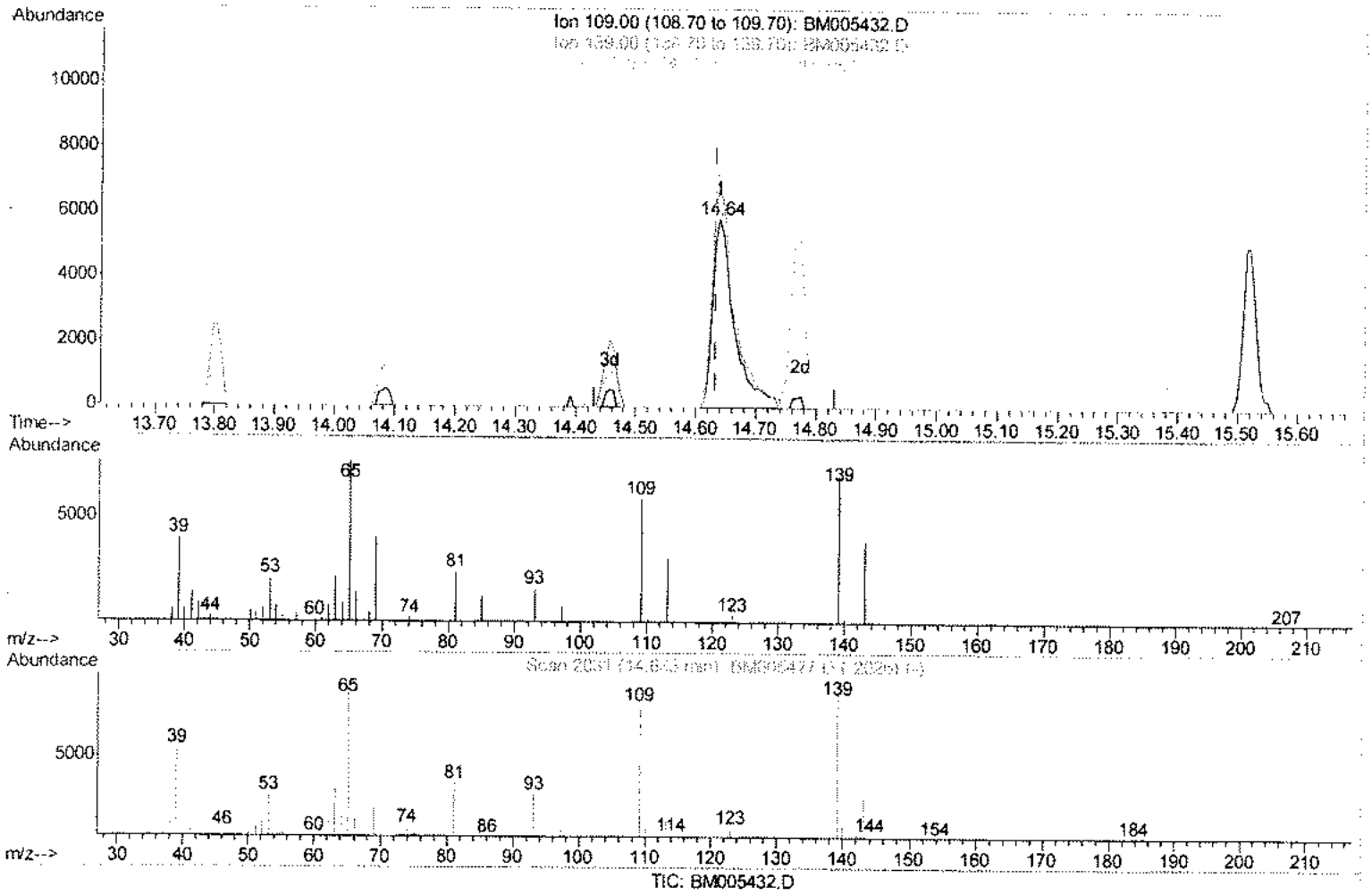
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005432.D
Acq On : 13 May 2016 14:49
Operator : UM/SJ
Sample : H2874-11MSD

Misc :
ALS Vial : 59 Sample Multiplier: 1

Quant Time: May 14 00:20:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
sohil
5/14/2016 9:58:40 AM



(52) 4-Nitrophenol

14.639min (+0.006) 5.67ng/ul m

response 14581

U.M. 05/15/2016

Ion	Exp%	Act%
109.00	100	100
139.00	129.50	117.53
65.00	130.90	127.92
0.00	0.00	0.00

Quantitation Report (Qedit)

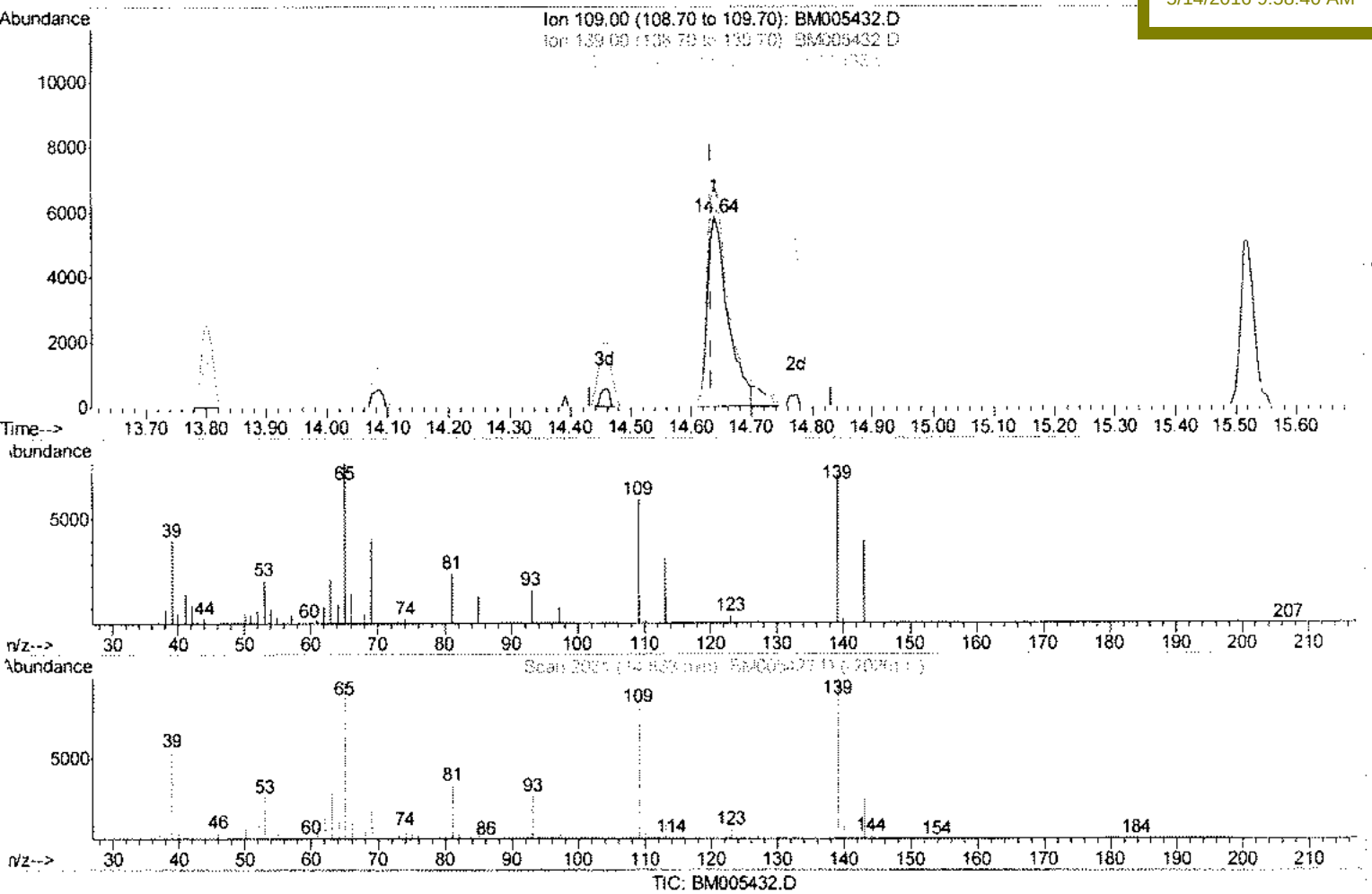
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005432.D
Acq On : 13 May 2016 14:49
Operator : UM/SJ
Sample : H2874-11MSD

Misc :
ALS Vial : 59 Sample Multiplier: 1

Quant Time: May 14 00:20:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
sohil
5/14/2016 9:58:40 AM



TIC: BM005432.D

(52) 4-Nitrophenol

14.639min (+0.006) 5.30ng/ul

response 13641

Ion	Exp%	Act%
109.00	100	100
139.00	129.50	117.53
65.00	130.90	127.92
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005432.D
Acq On : 13 May 2016 14:49
Operator : UM/SJ
Sample : H2874-11MSD

Misc :
ALS Vial : 59 Sample Multiplier: 1

Quant Time: May 14 00:20:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
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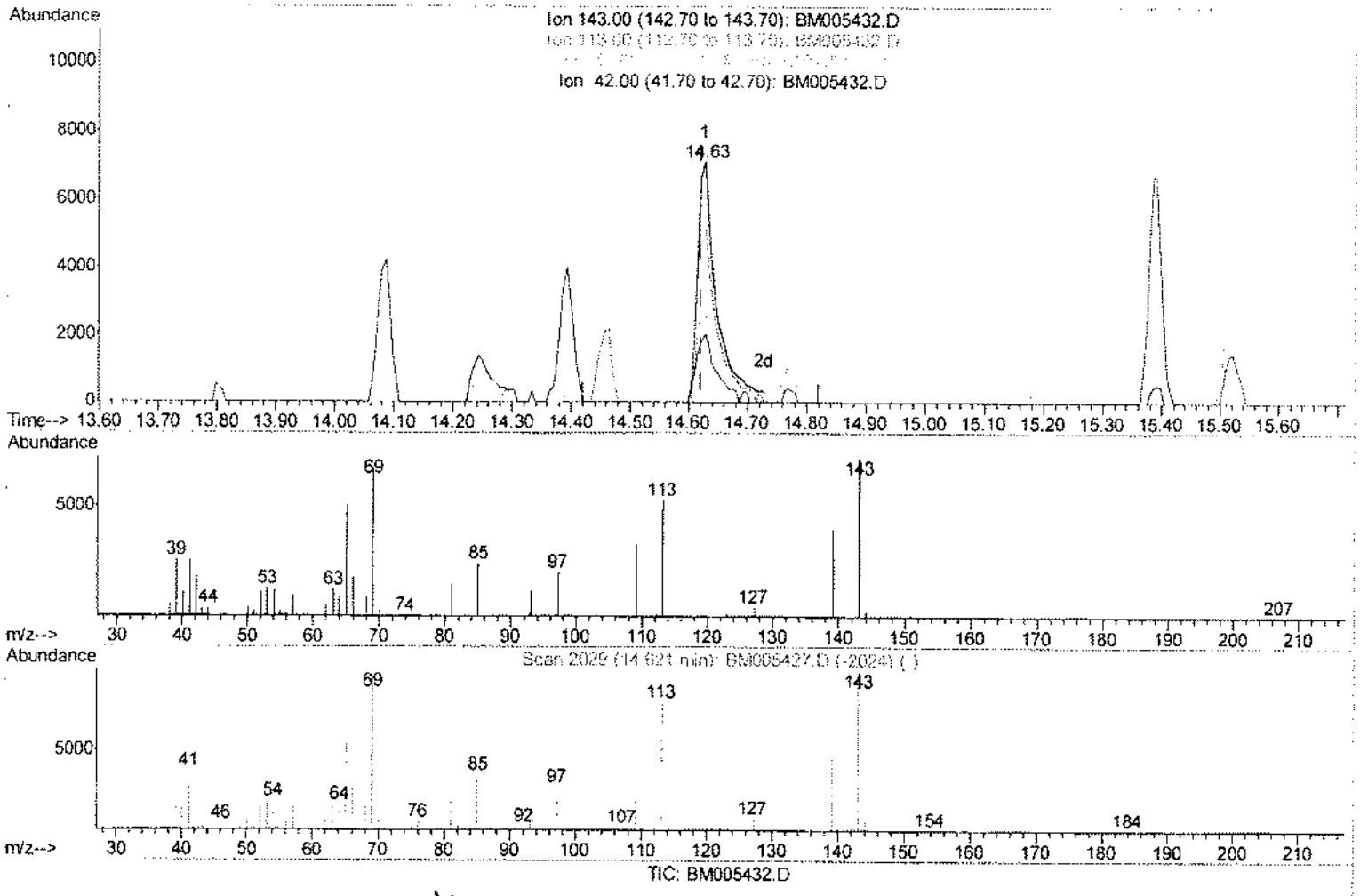
5/14/2016 9:58:40 AM



(51) 4-Nitrophenol-d4 (S)

14.627min (+0.006) 5.12ng/ul m

U-m. 05/15/2016

response 15860

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	74.23
41.00	38.10	38.24
42.00	26.00	28.61

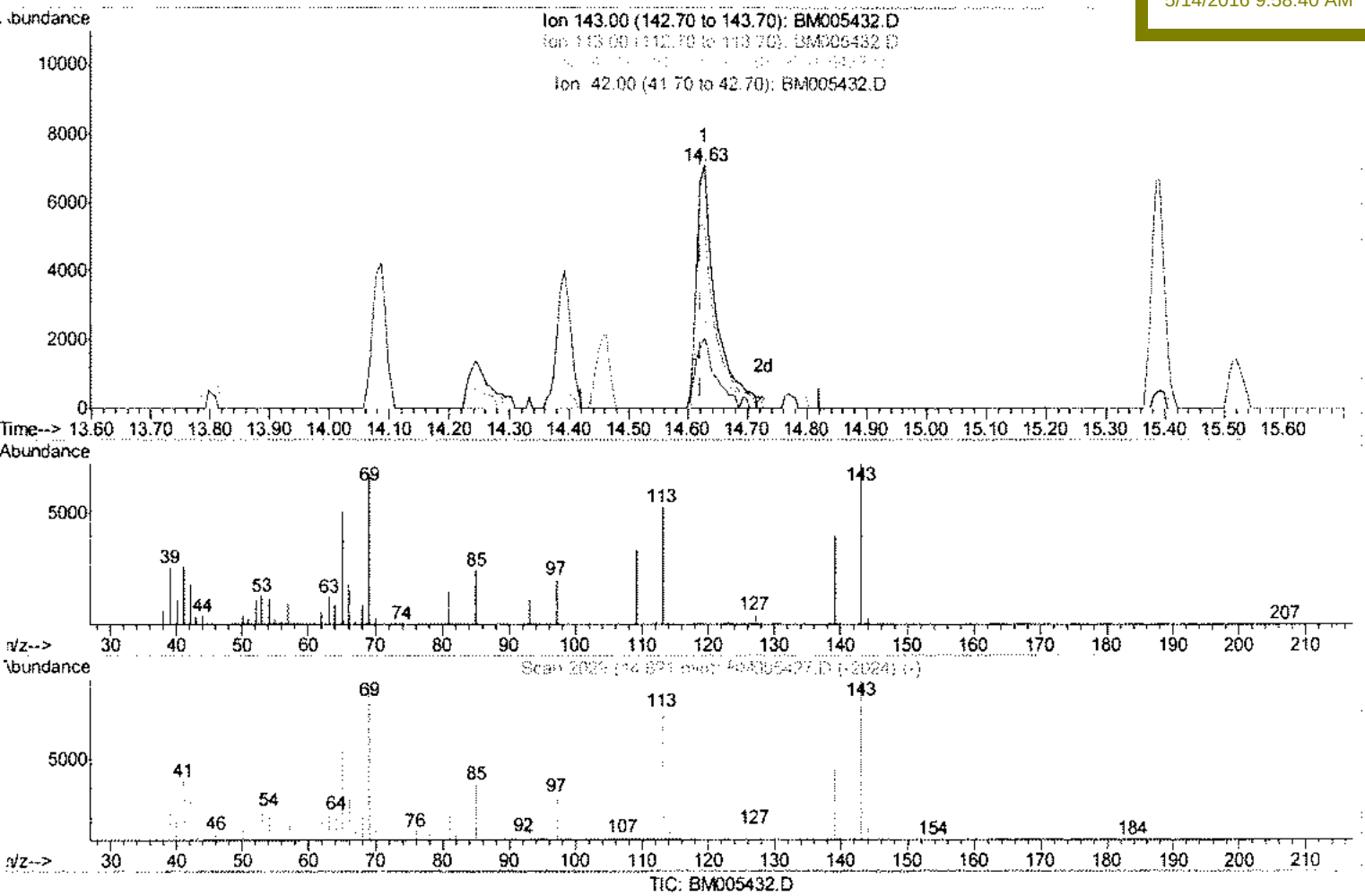
Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005432.D
Acq On : 13 May 2016 14:49
Operator : UM/SJ
Sample : H2874-11MSD

Misc :
ALS Vial : 59 Sample Multiplier: 1

Quant Time: May 14 00:20:48 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4113MSD

Manual Integrations APPROVED
sohil
5/14/2016 9:58:40 AM



TIC: BM005432.D

(51) 4-Nitrophenol-d4 (S)

14.627min (+0.006) 5.05ng/ul

response 15627

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	74.23
41.00	38.10	38.24
42.00	26.00	28.61

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051316\
Data File : BM005432.D
Acq On : 13 May 2016 14:49
Operator : UM/SJ
Sample : H2874-11MSD
Misc :
ALS Vial : 59 Sample Multiplier: 1

Quant Time: May 14 00:41:22 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Sat May 14 00:15:57 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4113MSD

Manual Integrations APPROVED
sohil
5/14/2016 9:58:40 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.75	152	69588	20.00	ng/ul	0.00
18) Naphthalene-d8	10.53	136	328113	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.39	164	211575	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.14	188	519223	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	622010	20.00	ng/ul	0.00
83) Perylene-d12	23.60	264	524407	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.25	96	1695	1.15	ng/uL	0.00
5) Phenol-d5	6.93	99	37064	5.87	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	108437	30.12	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	115294	24.19	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	74536	14.29	ng/ul	0.00
19) Nitrobenzene-d5	8.91	128	76510	32.66	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	88088	33.21	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.16	165	138186	28.03	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	15486	2.61	ng/ul	0.00
43) Dimethylphthalate-d6	13.80	166	536259	31.62	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	631523	31.75	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	15860m	5.12	ng/ul	0.00
57) Fluorene-d10	15.39	176	460842	31.47	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.52	200	87980	30.12	ng/ul	0.00
70) Anthracene-d10	17.24	188	738585	32.18	ng/ul	0.00
76) Pyrene-d10	19.54	212	864218	30.10	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	749724	32.30	ng/ul	0.00
Target Compounds						Qvalue
6) Phenol	6.96	94	40790	6.25	ng/ul	99
10) 2-Chlorophenol	7.32	128	115947	23.78	ng/ul	97
15) N-Nitroso-di-n-propylamine	8.55	70	133569	33.08	ng/ul	99
33) 4-Chloro-3-methylphenol	11.83	107	156784	25.90	ng/ul	98
49) Acenaphthene	14.46	153	432193	31.16	ng/ul	99
52) 4-Nitrophenol	14.64	109	14581m	5.67	ng/ul	
54) 2,4-Dinitrotoluene	14.77	165	165830	33.28	ng/ul	100
68) Pentachlorophenol	16.80	266	89094	28.72	ng/ul	98
77) Pyrene	19.57	202	1077410	29.86	ng/ul	98

U.M. 05/15/2016

U.M. 05/15/2016

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Prep Standard - Chemical Standard Summary

Order ID : H2874

Test : VOC-Low Level -15

Prepbatch ID :

Sequence ID/Qc Batch ID: VI050516,VI050616,VI050916,VI051116,VI051216,VI050416

Standard ID :
VP47998,VP52019,VP52036,VP52453,VP52662,VP52664,VP52665,VP52666,VP52667,VP52668,VP52669,VP52670,VP52696,VP52698,VP52699,VP52700,VP52731,VP52733,VP52734,VP52735,VP52815,VP52818,VP52819,VP52833,VP52906,VP52907,VP52951,VP52954,VP52955,

Chemical ID :
V1456,V5218,V5740,V5948,V6161,V6285,V6330,V6355,V6373,V6406,V6419,V6493,V6580,V6583,V6588,V6592,V6593,V6671,

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
218	BFB, 25PPM	VP47998	11/13/2015	05/13/2016	sam

FROM 0.500ml of V5218 + 49.500ml of V6285 = Final Quantity: 50.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1721	SOM01.2 TRACE-Calibration Mix,25 PPM	VP52019	04/15/2016	05/16/2016	sam

FROM 0.125ml of V5948 + 0.125ml of V6161 + 0.125ml of V6355 + 0.250ml of V6406 + 0.250ml of V6419 + 0.500ml of V6373 + 8.625ml of V6493 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1896	Trace internal standard 50 ppm	VP52036	04/15/2016	05/16/2016	sam

FROM 0.200ml of V5740 + 9.800ml of V6493 = Final Quantity: 10.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1897	Trace surrogate mix 25 ppm	VP52453	04/28/2016	05/28/2016	sam

FROM 0.200ml of V6593 + 0.500ml of V6330 + 1.200ml of V6580 + 1.200ml of V6583 + 1.200ml of V6588 + 1.200ml of V6592 + 4.500ml of V6671 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52662	05/04/2016	05/05/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1722	0.5 PPB ICC SOM01.2 Trace	VP52664	05/04/2016	05/05/2016	feifei

FROM 39.990ml of V1456 + 0.001ml of VP52019 + 0.001ml of VP52453 + 0.004ml of VP52036 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1723	1 PPB ICC SOM01.2 Trace	VP52665	05/04/2016	05/05/2016	feifei

FROM 39.990ml of V1456 + 0.002ml of VP52019 + 0.002ml of VP52453 + 0.004ml of VP52036 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1724	5 PPB ICC SOM01.2 Trace	VP52666	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1725	10 PPB ICC SOM01.2 Trace	VP52667	05/04/2016	05/05/2016	feifei

FROM 39.960ml of V1456 + 0.004ml of VP52036 + 0.016ml of VP52019 + 0.016ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1726	20 PPB ICC SOM01.2 Trace	VP52668	05/04/2016	05/05/2016	feifei

FROM 39.930ml of V1456 + 0.004ml of VP52036 + 0.032ml of VP52019 + 0.032ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52669	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52670	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52696	05/05/2016	05/06/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52698	05/05/2016	05/06/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52699	05/05/2016	05/06/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52700	05/05/2016	05/06/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52731	05/06/2016	05/07/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52733	05/06/2016	05/07/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52734	05/06/2016	05/07/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52735	05/06/2016	05/07/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52815	05/09/2016	05/10/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52818	05/09/2016	05/10/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52819	05/09/2016	05/10/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52833	05/09/2016	05/10/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52906	05/11/2016	05/12/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52907	05/11/2016	05/12/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52951	05/12/2016	05/13/2016	lisa

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52954	05/12/2016	05/13/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52955	05/12/2016	05/13/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	DIW / DI Water	DAILY	12/31/2019	03/01/2010 / apatel	03/02/2010 / apatel	V1456

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30067 / BFB tuneing solution	A0102518	04/30/2019	11/13/2015 / sam	07/14/2014 / sam	V5218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30091 / VOA Mix, CLP method L/C Internal Std 2500uq/ml, PT&M, 1ml/ampul	A099377	10/31/2018	04/13/2016 / sam	03/27/2015 / sam	V5740

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30429 / 1,2,3-Trichloropropane Standard, 2,000 ug/ml	A0108463	01/31/2020	12/11/2015 / sam	06/04/2015 / sam	V5948

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30492 / VOA Mix, OLC 03.2 VOA Mega Mix, 1mL, 2000ug/mL, P&TM	A0102833	04/30/2017	03/16/2016 / sam	09/24/2015 / sam	V6161

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	118655	07/13/2017	11/13/2015 / sam	11/04/2015 / sam	V6285

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30624 / VOA Stock Standard, OLC 3.2 VOA non-ketone, deuterated monitoring compounds, 1mL, 500ug/mL, Methanol-d	A0113615	08/31/2018	04/22/2016 / sam	10/28/2015 / sam	V6330

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30042 / VOA Mix,500 series method 502.2 Calibration Std #1 gases, 2000uq/ml, PTM, 1ml	A0114018	05/31/2022	04/14/2016 / sam	10/28/2015 / sam	V6355

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A0110042	07/31/2018	03/16/2016 / sam	10/28/2015 / sam	V6373

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31280 / Naphthalene, 1000 PPM in Methanol	A0111730	05/31/2021	01/13/2016 / sam	11/17/2015 / sam	V6406

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31081 / 1,3,5-Trichlorobenzene	A0109767	03/31/2020	04/14/2016 / sam	11/19/2015 / sam	V6419

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	127999	10/27/2017	04/05/2016 / sam	01/13/2016 / sam	V6493

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6580

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6583

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6588

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6592

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6593

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	0000127999	10/27/2017	04/28/2016 / sam	04/12/2016 / sam	V6671

RESTEK CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30492 **Lot No.:** A0102833

Description : OLC 03.2 VOA Mega Mix

OLC 03.2 VOA Mega Mix 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2017 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.: K=2)	
1	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 (Lot Q9B-87) **Purity** 98%	2,006.1 µg/mL	+/- 11.7727 µg/mL +/- 106.7701 µg/mL +/- 106.8878 µg/mL	Gravimetric Unstressed Stressed
2	1,1-dichloroethene **CAS #** 75-35-4 (Lot 33096BKV) **Purity** 99%	2,001.3 µg/mL	+/- 15.4296 µg/mL +/- 106.9831 µg/mL +/- 107.1000 µg/mL	Gravimetric Unstressed Stressed
3	Methyl acetate **CAS #** 79-20-9 (Lot 56696JMV) **Purity** 99%	2,001.5 µg/mL	+/- 11.7459 µg/mL +/- 106.5274 µg/mL +/- 106.6448 µg/mL	Gravimetric Unstressed Stressed
4	Methylene chloride (dichloromethane) **CAS #** 75-09-2 (Lot SHBC7917V) **Purity** 99%	2,001.8 µg/mL	+/- 15.4334 µg/mL +/- 107.0098 µg/mL +/- 107.1268 µg/mL	Gravimetric Unstressed Stressed
5	Carbon disulfide **CAS #** 75-15-0 (Lot C30Y997) **Purity** 98%	2,003.6 µg/mL	+/- 11.7583 µg/mL +/- 106.6397 µg/mL +/- 106.7573 µg/mL	Gravimetric Unstressed Stressed
6	Methyl-tert-butyl ether (MTBE) **CAS #** 1634-04-4 (Lot SHBD2980V) **Purity** 99%	2,001.0 µg/mL	+/- 11.7430 µg/mL +/- 106.5008 µg/mL +/- 106.6182 µg/mL	Gravimetric Unstressed Stressed
7	trans-1,2-Dichloroethene **CAS #** 156-60-5 (Lot 09431AEV) **Purity** 99%	2,005.0 µg/mL	+/- 15.4585 µg/mL +/- 107.1836 µg/mL +/- 107.3007 µg/mL	Gravimetric Unstressed Stressed
8	1,1-Dichloroethane **CAS #** 75-34-3 (Lot Q179-33) **Purity** 98%	2,003.0 µg/mL	+/- 15.4429 µg/mL +/- 107.0752 µg/mL +/- 107.1923 µg/mL	Gravimetric Unstressed Stressed

25	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBD2073V)	2,000.2	µg/mL	+/- +/- +/-	15.4213 106.9257 107.0425	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	dibromochloromethane **CAS #** 124-48-1 **Purity** 98%	(Lot MKBP0459V)	2,000.4	µg/mL	+/- +/- +/-	15.4234 106.9403 107.0572	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	1,2-Dibromoethane (EDB) **CAS #** 106-93-4 **Purity** 99%	(Lot BCBH3877V)	2,004.0	µg/mL	+/- +/- +/-	11.7606 106.6604 106.7780	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Chlorobenzene **CAS #** 108-90-7 **Purity** 99%	(Lot SHBD3200V)	2,002.3	µg/mL	+/- +/- +/-	15.4373 107.0366 107.1536	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Ethylbenzene **CAS #** 100-41-4 **Purity** 99%	(Lot SHBC9001V)	2,005.0	µg/mL	+/- +/- +/-	11.7665 106.7137 106.8313	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot H08Y016)	1,005.5	µg/mL	+/- +/- +/-	5.9008 53.5165 53.5755	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	p-Xylene **CAS #** 106-42-3 **Purity** 99%	(Lot SHBC6261V)	1,004.0	µg/mL	+/- +/- +/-	5.8920 53.4367 53.4956	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	o-Xylene **CAS #** 95-47-6 **Purity** 99%	(Lot SHBC4667V)	2,000.0	µg/mL	+/- +/- +/-	11.7371 106.4475 106.5649	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	Styrene **CAS #** 100-42-5 **Purity** 99%	(Lot 10174567)	2,002.5	µg/mL	+/- +/- +/-	11.7518 106.5806 106.6981	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Isopropylbenzene (cumene) **CAS #** 98-82-8 **Purity** 99%	(Lot 10169400)	2,006.5	µg/mL	+/- +/- +/-	11.7753 106.7935 106.9112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	bromoform **CAS #** 75-25-2 **Purity** 99%	(Lot SHBC3410V)	2,005.1	µg/mL	+/- +/- +/-	15.4593 107.1889 107.3061	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	1,1,2,2-Tetrachloroethane **CAS #** 79-34-5 **Purity** 99%	(Lot I29W026)	2,001.9	µg/mL	+/- +/- +/-	15.4342 107.0152 107.1322	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBC1891V)	2,003.2	µg/mL	+/- +/- +/-	15.4448 107.0887 107.2057	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBL3891V)	2,007.4	µg/mL	+/- +/- +/-	15.4766 107.3092 107.4265	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot 68996CMV)	2,002.6	µg/mL	+/- +/- +/-	15.4400 107.0553 107.1723	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
40	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8 **Purity** 99%	(Lot FBL01)	2,000.5	µg/mL	+/- +/- +/-	11.7401 106.4742 106.5916	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Methanol
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Material No.:9077-02
Batch No.: 0000118655
Manufactured Date:2015/07/16
Expiration Date:2017/07/13

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.3000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	0.1
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

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500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

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Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India. 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
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Methanol
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Material No.: 9077-02
Batch No.: 0000127999
Manufactured Date: 2015/10/30
Expiration Date: 2017/10/27

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.7000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	<0.01
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

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Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 11485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30625 **Lot No.:** A0114355

Description : OLC 3.2 VOA Deuterated Monitoring Compounds

OLC 3.2 VOA Ketone Deuterated Monitoring Compounds 500µg/mL, Deuterium Oxide, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Butanone-d5 **CAS #** 24313-50-6 (Lot M276P24) **Purity** 99%	501.0 µg/mL	+/- 2.9758 +/- 26.6691 +/- 26.6985	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Hexanone-d5 **CAS #** 4840-82-8 (Lot I500P2) **Purity** 99%	501.0 µg/mL	+/- 2.9758 +/- 26.6691 +/- 26.6985	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Deuterium Oxide
CAS # 7789-20-0
Purity 99%

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Catalog No. : 30429 **Lot No.:** A0108463

Description : 1,2,3-Trichloropropane Standard

1,2,3-Trichloropropane 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2,3-Trichloropropane **CAS #** 96-18-4 (Lot 1428739V) **Purity** 99%	2,012.0 µg/mL	+/- 18.7105 µg/mL +/- 26.9814 µg/mL +/- 29.9140 µg/mL		Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 30006 **Lot No.:** A0110042

Description : VOA Calibration Mix #1

VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acetone **CAS #** 67-64-1 **Purity** 99% (Lot 07196AK)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 **Purity** 99% (Lot BCBH7802V)	5,000.3 µg/mL	+/- 29.0722 +/- 266.1049 +/- 266.3984	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 **Purity** 99% (Lot SHBD1798V)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 **Purity** 99% (Lot MKBN7380V)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

12 14

Methanol
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Batch No.: 0000127999
Manufactured Date: 2015/10/30
Expiration Date: 2017/10/27

Dee 11/3/16

V-6482 to V 6493 S4

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.7000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	<0.01
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

For Laboratory, Research or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
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Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 30067 **Lot No.:** A0102518

Description: 4-Bromofluorobenzene Standard

4-Bromofluorobenzene Standard 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size: 2 mL **Pkg Amt:** > 1 mL

Expiration Date: April 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)	
1	1-Bromo-4-fluorobenzene (BFB)	2,506.0 µg/mL	+/- 14.7066 µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 01127COV)		+/- 28.3294 µg/mL	Unstressed
	Purity 99%		+/- 32.5790 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31081 **Lot No.:** A0109767

Description : 1,3,5-Trichlorobenzene Standard

1,3,5-Trichlorobenzene Standard 1,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,3,5-Trichlorobenzene	1,008.0 µg/mL	+/- 5.9872	µg/mL Gravimetric
	CAS # 108-70-3 (Lot 11319AS)		+/- 11.4324	µg/mL Unstressed
	Purity 99%		+/- 13.1369	µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 31280 **Lot No.:** A0111730

Description : Naphthalene Standard

Naphthalene Standard 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2021 **Storage:** 25°C nominal

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L. ; K=2)		
1	Naphthalene **CAS #** 91-20-3 **Purity** 99% (Lot MKBH4351V)	1,004.0 µg/mL	+/- 5.9635 +/- 44.6249 +/- 49.0256	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 30624 **Lot No.:** A0113615

Description : SOM 01.1 VOA DMC Non-Ketones Standard

OLC 3.2 VOA Non-Ketone Deuterated Monitoring Compounds
500µg/mL, Methanol-OD, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Vinyl Chloride-d3 **CAS #** 6745-35-3 (Lot PR-21820) **Purity** 98%	523.4 µg/mL	+/- 35.2305 µg/mL +/- 35.5916 µg/mL +/- 35.7499 µg/mL	Gravimetric Unstressed Stressed
2	Chloroethane-d5 **CAS #** 19199-91-8 (Lot F243P15) **Purity** 99%	509.0 µg/mL	+/- 19.1030 µg/mL +/- 19.7259 µg/mL +/- 19.9947 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethylene-d2 **CAS #** 22280-73-5 (Lot PR-21050) **Purity** 99%	501.0 µg/mL	+/- 2.9758 µg/mL +/- 5.6822 µg/mL +/- 6.5294 µg/mL	Gravimetric Unstressed Stressed
4	Chloroform-d **CAS #** 865-49-6 (Lot A021968500l) **Purity** 99%	503.0 µg/mL	+/- 2.9877 µg/mL +/- 5.7049 µg/mL +/- 6.5554 µg/mL	Gravimetric Unstressed Stressed
5	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot 14C-191) **Purity** 99%	504.0 µg/mL	+/- 2.9936 µg/mL +/- 5.7162 µg/mL +/- 6.5685 µg/mL	Gravimetric Unstressed Stressed
6	Benzene-d6 **CAS #** 1076-43-3 (Lot 14G-554) **Purity** 99%	500.0 µg/mL	+/- 2.9698 µg/mL +/- 5.6709 µg/mL +/- 6.5163 µg/mL	Gravimetric Unstressed Stressed
7	1,2-Dichloropropane-d6 **CAS #** 93952-08-0 (Lot Z322P8) **Purity** 99%	502.0 µg/mL	+/- 2.9817 µg/mL +/- 5.6935 µg/mL +/- 6.5424 µg/mL	Gravimetric Unstressed Stressed

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30042 **Lot No.:** A0114018

Description : 502.2 Calibration Mix #1

502.2 Calibration Mix #1 2,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot Q167-08) **Purity** 99%	2,013.4 µg/mL	+/- 14.1778 +/- 24.0720 -/- 27.3231	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBF7067V) **Purity** 99%	2,014.0 µg/mL	+/- 15.9346 +/- 25.1511 +/- 28.2800	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 25LPST) **Purity** 99%	2,018.2 µg/mL	+/- 15.9614 +/- 25.1997 +/- 28.3356	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,018.8 µg/mL	+/- 15.1008 +/- 24.6679 +/- 27.8655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	2,006.0 µg/mL	-/- 12.7193 +/- 23.1828 +/- 26.5198	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Trichlorofluoromethane (CFC-11) **CAS #** 75-69-4 (Lot SHBF6387V) **Purity** 99%	2,014.0 µg/mL	+/- 15.3697 +/- 24.7970 +/- 27.9656	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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Catalog No. : 30091 **Lot No.:** A099377

Description : L/C VOA Internal Standard Mix

L/C Internal Std 2500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Difluorobenzene	2,500.5 µg/mL	+/- 14.6743 µg/mL	Gravimetric
	CAS # 540-36-3 (Lot 13105AO)		+/- 26.5411 µg/mL	Unstressed
	Purity 99%		+/- 30.8641 µg/mL	Stressed
2	Chlorobenzene-d5	2,499.0 µg/mL	+/- 14.6655 µg/mL	Gravimetric
	CAS # 3114-55-4 (Lot PR-22736)		+/- 26.5252 µg/mL	Unstressed
	Purity 99%		+/- 30.8456 µg/mL	Stressed
3	1,4-Dichlorobenzene-d4	2,504.5 µg/mL	+/- 14.6978 µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/- 26.5836 µg/mL	Unstressed
	Purity 99%		+/- 30.9135 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Prep Standard - Chemical Standard Summary

Order ID : H2874

Test : SVOC-TCL BNA -20

Prepbatch ID : PB90403,

Sequence ID/Qc Batch ID: bm051316,BM050516

Standard ID :
EP1653,EP1663,SP3536,SP3592,SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643,SP3682,

Chemical ID :
1ul IS/ 100ul sample,E2036,E2072,E2087,E2105,H1268,H1316,M3518,S3852,S3950,S3957,S4228,S4605,S4617,S4663,S4672,S4673,S4704,S4711,S4815,S4816,S4985,S4992,S4993,S4996,S5008,S5017,S5022,S5073,S5074,S5075,S5076,S5077,S5078,S5079,S5085,V4294,

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
256	BAKED SODIUM SULPHATE	EP1653	02/29/2016	08/29/2016	Rajesh

FROM 4000.000ml of E2036 = Final Quantity: 4000.000 gram

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
314	1.1 H2SO4 SOLN	EP1663	04/01/2016	10/01/2016	rajesh

FROM 1000.000ml of M3518 + 1000.000ml of V4294 = Final Quantity: 2000.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3116	SOM02.2 Spike Solution, 80PPM	SP3536	12/17/2015	06/17/2016	Sohil

FROM 0.400ml of S3852 + 0.800ml of S4228 + 48.800ml of H1268 = Final Quantity: 50.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3334	50ug/ml SOM DFTPP	SP3592	02/08/2016	08/08/2016	UMANGI

FROM 0.200ml of S3957 + 9.800ml of E2072 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3243	SOM02.2 STOCK 160 PPM	SP3637	03/16/2016	07/31/2016	UMANGI

FROM 0.320ml of S4605 + 0.320ml of S4617 + 0.320ml of S4663 + 0.320ml of S4704 + 0.400ml of S4992 + 0.600ml of S4672 + 0.800ml of S3950 + 0.800ml of S4711 + 0.800ml of S4996 + 0.800ml of S5085 + 1.000ml of S4673 + 1.200ml of S4993 + 2.320ml of E2087 = Final Quantity: 10.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3244	SSTD160 PPM	SP3638	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 1.000ml of SP3637 = Final Quantity: 1.010 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3245	SSTD80 PPM	SP3639	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.500ml of E2087 + 0.500ml of SP3637 = Final Quantity: 1.010 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3246	SSTD40 PPM	SP3640	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.725ml of E2087 + 0.250ml of SP3637 = Final Quantity: 1.010 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3247	SSTD20 PPM	SP3641	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.875ml of E2087 + 0.125ml of SP3637 = Final Quantity: 1.010 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3248	SSTD10 PPM	SP3642	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.500ml of E2087 + 0.500ml of SP3641 = Final Quantity: 1.010 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3249	SSTD005 PPM	SP3643	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.750ml of E2087 + 0.250ml of SP3641 = Final Quantity: 1.010 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3370	SOM02.3 Surrogate (80/1-4 D8@ 32)	SP3682	05/06/2016	11/06/2016	umangi

FROM 0.600ml of S4815 + 1.000ml of S4816 + 1.000ml of S4985 + 1.000ml of S5073 + 1.000ml of S5074 + 1.000ml of S5075 + 1.000ml of S5076 + 1.000ml of S5077 + 1.000ml of S5078 + 1.000ml of S5079 + 190.400ml of H1316 = Final Quantity: 200.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	/ Sodium sulfate (anhyhdrous)	433101	10/05/2020	10/30/2015 / rajesh	10/05/2015 / rajesh	E2036

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	0000131014	08/08/2016	02/09/2016 / rajesh	01/22/2016 / rajesh	E2072

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EMD Chemicals Inc.	DX0831CJ-38 / DCM, Cycle Tainer	56056	09/14/2016	03/15/2016 / rajesh	03/15/2016 / rajesh	E2087

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EMD Chemicals Inc.	DX0831CJ-38 / DCM, Cycle Tainer	56056	10/26/2016	04/27/2016 / rajesh	04/08/2016 / rajesh	E2105

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9093-03 / Methanol, HPLC (cs/4x4L)	0000064689	01/14/2018	03/10/2015 / TEJASKUMAR	01/14/2015 / IWONA	H1268

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9093-03 / Methanol, HPLC (cs/4x4L)	0000119840	08/16/2020	02/23/2016 / umangi	01/22/2016 / UMANGI	H1316

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	0000095945	11/02/2019	11/20/2015 / mohan	11/18/2015 / mohan	M3518

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31071 / SV Mix,8000 series method, acid matrix spike, 10,000ug/mL, methanol, 5mL/ampul	A0103147	06/30/2021	10/03/2015 / TEJASKUMAR	10/03/2014 / TEJASKUMAR	S3852

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31833 / caprolactam, 2,000 µg/mL in methylene chloride, 1 mL/ampul	A0105455	08/31/2016	01/02/2015 / jung	10/16/2014 / TEJASKUMAR	S3950

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31001 / SV Tuning Compound Standard, 2500 ug/ml,	A0103386	05/31/2017	01/22/2015 / TEJASKUMAR	10/30/2014 / TEJASKUMAR	S3957

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31084 / SV Mix,8000 series method, Base Neutral Matrix Spike, 5000ug/mL, MeOH, 5mL/ampul	A0108368	01/31/2018	06/16/2015 / TEJASKUMAR	02/12/2015 / TEJASKUMAR	S4228

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31853 / 1,4-Dioxane, 2000 ug/ml , Solvent: Methylene Chloride	A0110448	04/30/2020	02/22/2016 / Sohil	07/07/2015 / TEJASKUMAR	S4605

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30614 / 1,4-Dioxane-D8 Standard	A0111152	05/31/2018	02/23/2016 / umangi	07/17/2015 / TEJASKUMAR	S4617

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	98496 / 1,2,3,4-Tetrachlorobenzene, 5000 ug/mL, in MeCl2	061115	06/11/2020	02/22/2016 / Sohil	08/12/2015 / umangi	S4663

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31900 / SOM01.1 Mega Mix, 500-1000 ug/ml	A01082223	07/31/2016	02/22/2016 / Sohil	08/14/2015 / umangi	S4672

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31900 / SOM01.1 Mega Mix, 500-1000 ug/ml	A0112856	07/31/2016	02/29/2016 / UMANGI	08/14/2015 / umangi	S4673

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	98495 / Pentachlorobenzene, 5000 ug/mL, in MeCl2	061115	06/11/2020	02/22/2016 / Sohil	08/31/2015 / umangi	S4704

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	33017 / Benzaldehyde, 2000 ug/ml	A0111289	05/31/2017	03/14/2016 / UMANGI	09/08/2015 / UMANGI	S4711

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30614 / 1,4-Dioxane-D8 Standard	A0111152	05/31/2018	03/28/2016 / umangi	10/20/2015 / nEVILKUMAR	S4815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30614 / 1,4-Dioxane-D8 Standard	A0111152	05/31/2018	05/06/2016 / umangi	10/20/2015 / nEVILKUMAR	S4816

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0112586	04/30/2019	03/28/2016 / umangi	11/13/2015 / Sohil	S4985

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32208 / atrazine, 1,000 µg/mL in acetone, 1 mL/ampul	A0112545	03/31/2019	02/22/2016 / Sohil	11/19/2015 / Sohil	S4992

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32208 / atrazine, 1,000 µg/mL in acetone, 1 mL/ampul	A0112545	03/31/2019	03/14/2016 / UMANGI	11/19/2015 / Sohil	S4993

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	90494 / 1-Methylnaphthalene, 2000 ug/mL, in methylene chloride	070314	07/03/2019	03/14/2016 / UMANGI	11/19/2015 / Sohil	S4996

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31206 / SV Mix, CLP method, Internal Std, 2000ug/mL, CH2Cl2, 1mL	A0115444	10/31/2021	03/16/2016 / UMANGI	12/18/2015 / Sohil	S5008

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31206 / SV Mix, CLP method, Internal Std, 2000ug/mL, CH2Cl2, 1mL	A0115444	05/09/2016	05/02/2016 / umangi	12/18/2015 / Sohil	S5017

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31206 / SV Mix, CLP method, Internal Std, 2000ug/mL, CH2Cl2, 1mL	A0115444	10/31/2021	05/12/2016 / umangi	12/18/2015 / Sohil	S5022

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	05/06/2016 / umangi	01/28/2016 / Sohil	S5073

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	05/06/2016 / umangi	01/28/2016 / Sohil	S5074

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	05/06/2016 / umangi	01/28/2016 / Sohil	S5075

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	05/06/2016 / umangi	01/28/2016 / Sohil	S5076

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	05/06/2016 / umangi	01/28/2016 / Sohil	S5077

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	05/06/2016 / umangi	01/28/2016 / Sohil	S5078

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	05/06/2016 / umangi	01/28/2016 / Sohil	S5079

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	03/14/2016 / UMANGI	01/28/2016 / Sohil	S5085

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	200111-SCB-R2 / DI Water, Res-Kem	VOC-DailyChecke	12/31/2020	07/01/2013 / apatel	07/01/2013 / apatel	V4294

Methanol
HPLC
For use in Liquid Chromatography (HPLC & UHPLC) & Spectrophotometry
(methyl alcohol)

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9093-03
Batch No.: 0000064689
Manufactured Date: 2013/11/15
Retest Date: 2018/11/14

SEIDLER CHEMICAL COMPANY
537 Raymond Boulevard
Newark, NJ 07105

Rec: 1/14/15

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Ultraviolet Absorbance (1.00-cm cell vs. water) - 400-254 nm	<= 0.01	< 0.01
Ultraviolet Absorbance (1.00-cm cell vs. water) - 225 nm	<= 0.15	0.12
Ultraviolet Absorbance (1.00-cm cell vs. water) - UV Cut-off, nm	<= 205	204
Gradient Elution Test (a.u.) - 254 nm	<= 0.002	< 0.001
Fluorescence Trace Impurities, measured as Quinine Base - at 450 nm Emission	<= 0.3 ppb	< 0.1
Fluorescence Trace Impurities, measured as Quinine Base - at Emission Maximum for Impurities	<= 1.0 ppb	0.1
Acetone	<= 0.001 %	< 0.001
Residue after Evaporation	<= 1.0000 ppm	0.1000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	<0.01
Water (by KF, coulometric)	<= 0.05 %	< 0.01

For Laboratory, Research or Manufacturing Use

H1268
H1269
H1270
H1271

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & QC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008, 17025:2005
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

Richard M Siberski
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

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Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number: 98495
Lot Number: 061115
Description: Pentachlorobenzene

Expiration Date: 061120
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000

Solvent(s):	Lot#
Methylene chloride	72062

S4703
S4704
S4705
S4706

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.002 Flask Uncertainty

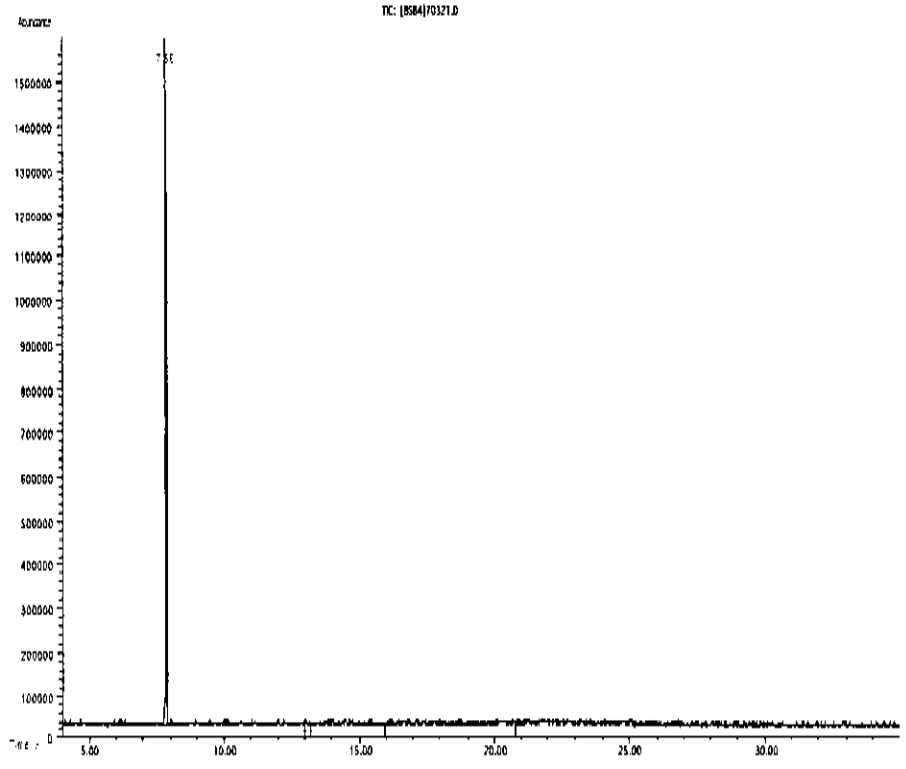
Paul Barron 061115
Formulated By: Paul Barron DATE

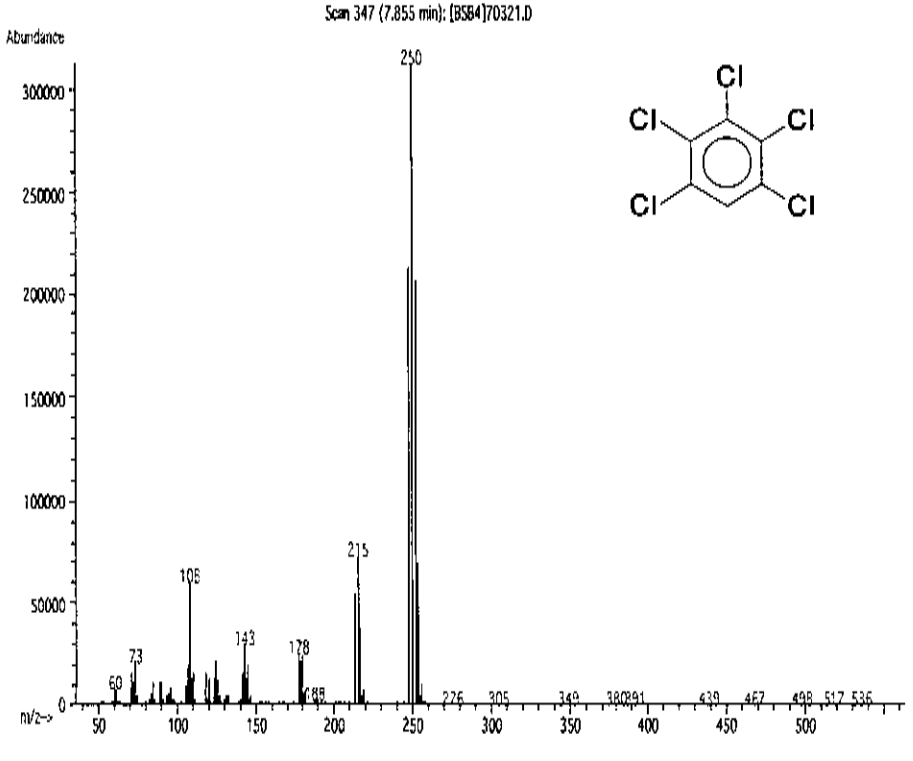
Pedro Rentas 061115
Reviewed By: Pedro L. Rentas DATE

MSDS Information
(Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. Pentachlorobenzene	321	2705100	5000	99.5	0.5	0.05024	0.05038	5013.7	0.0102	00608-93-5	N/A	orl-rat 1080mg/kg

Method GC7MSD-1.M: Column: SPB-608 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 150°C (4min.), Temp 2 = 290°C (13.5 min.), Rate = 8°C/min., Injector B= 200°C, Detector B = 290°C. Split Ratio = 100:1, Scan Rate = 2. Analysis performed by Candice Warren.





954

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Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number: 90494
Lot Number: 070314
Description: 1-Methylnaphthalene

Expiration Date: 070319
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 2000

Solvent(s):	Lot#
Methylene chloride	74359

S4996 SJ
↓ 11/23/15
S5000

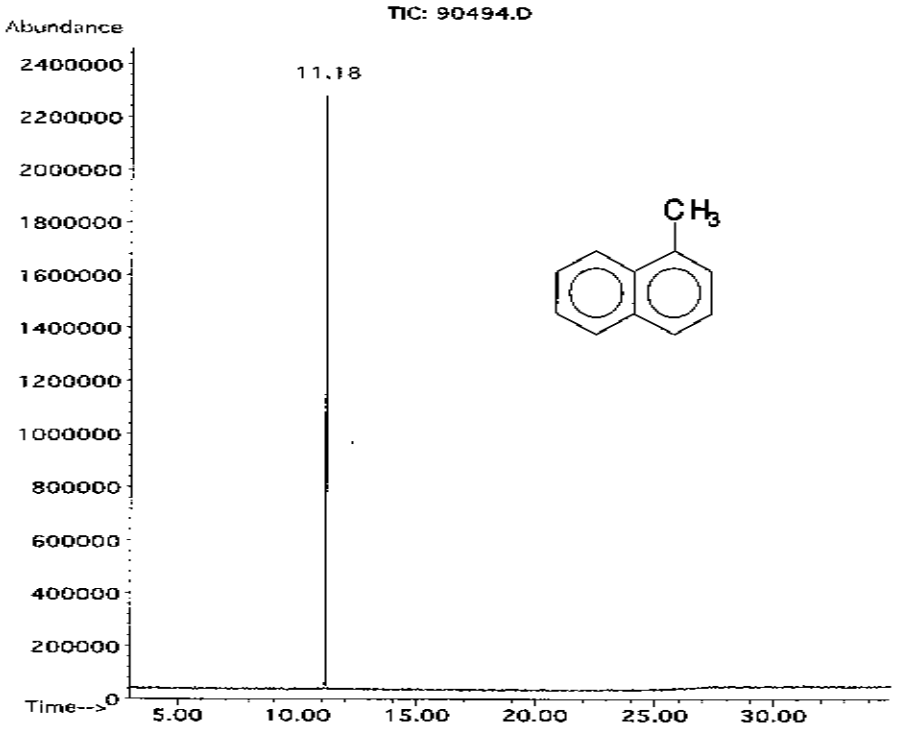
Formulated By:	Paul Barron	070314 DATE
Reviewed By:	Pedro L. Rentas	070314 DATE

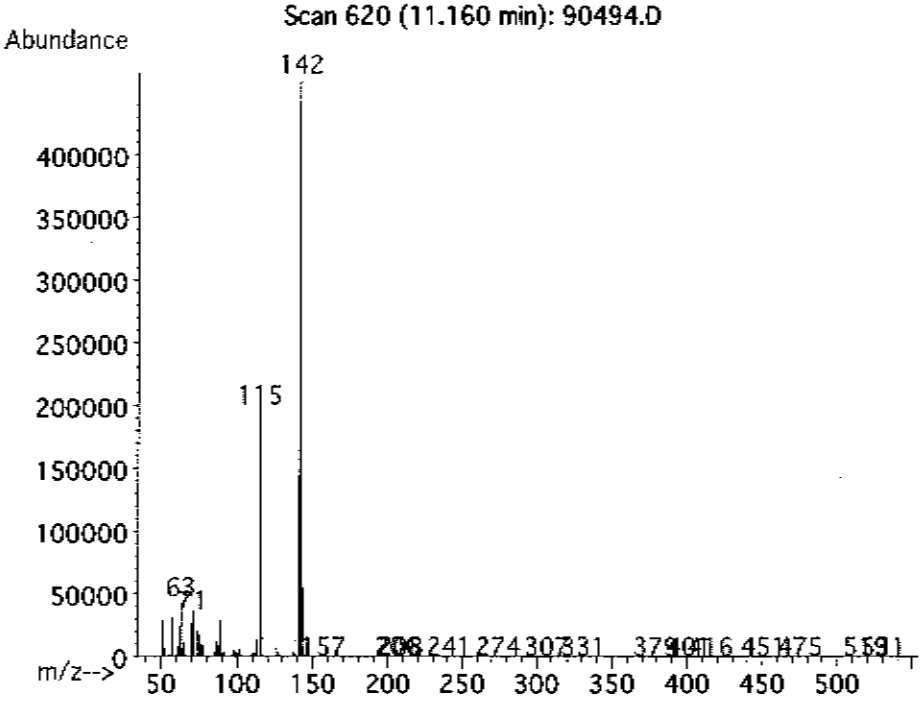
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to: 100.0 0.003 Flask Uncertainty

MSDS Information
(Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. 1-Methylnaphthalene	313	04413BX	2000	98	0.2	0.20410	0.20420	2001.0	0.0041	00090-12-0	N/A	orl-rat 1840mg/kg

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Gina McLane.



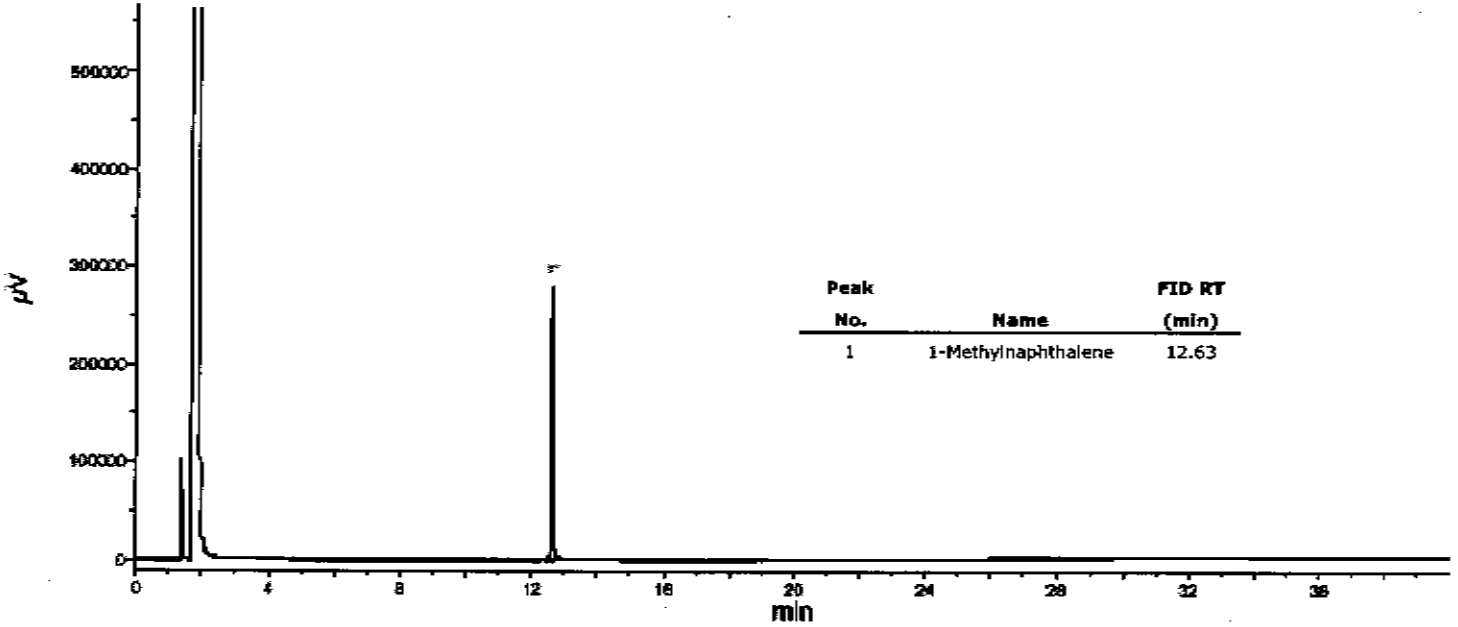


956

Run 49, "P90494 L070314 [2000µg/mL in MeCl2]"

Run Length: 39.99 min, 23997 points at 10 points/second.
Created: Thu, Jul 10, 2014 at 12:38:44 AM.
Sampled: Sequence "070814-GC9M2", Method "GC9-M2".
Analyzed using Method "GC9-M2".

Comments
GC9M2 Analysis by Melissa Stonier
SPB-5 30 meter x 0.53 µm x 1.5 df
Flow Rates; Total Flow = 300 mL/min, Helium (carrier)=6mL, Helium (makeup)=25mL, Hydrogen (detector)=30, Air (detector)=360
Oven Temp 1 = 50 C (1 min), Rate = 10 C/min, Oven Temp 2 = 300 (14 min), Total Run Time=40 min.
Injector Temp = 250 C, FID Temp = 300 C, FID Signal = Edaq Channel 1
Gas Chromatograph = HP5890, Injector = HP7673A, Standard Injection = 0.5 uL, Range = 4



Peak No.	Name	FID RT (min)
1	1-Methylnaphthalene	12.63

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Certificate of Analysis

RCA 7/17/15

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This Reference Materiel is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30614 **Lot No.:** A0111152

Description : 1,4-dioxane-d8 Standard

1,4-dioxane-d8 Standard 2000 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.I.; K=2)		
1	1,4-Dioxane-d8	2,004.0 µg/mL	+/- 11.7606	µg/mL	Gravimetric
	CAS # 17647-74-4 (Lot 1-19073)		+/- 42.5297	µg/mL	Unstressed
	Purity 99%		+/- 42.7181	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

54614
54615
54616
54617

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

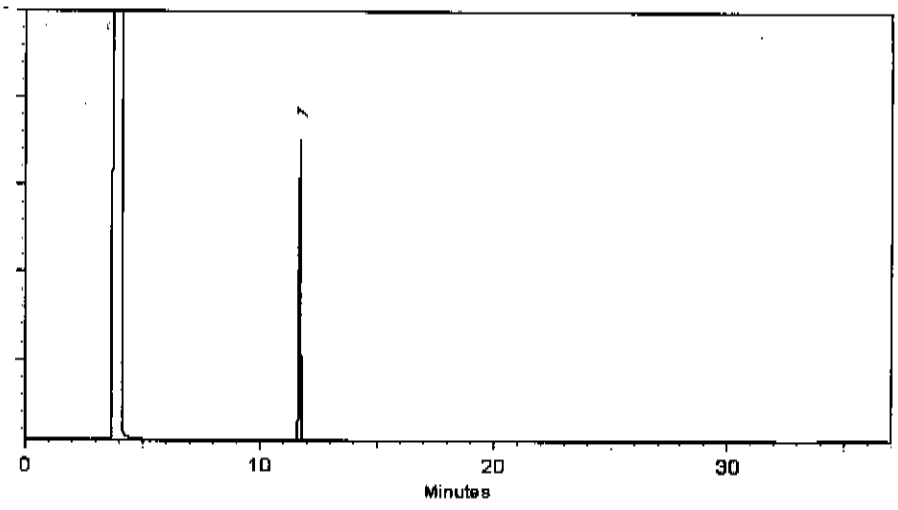
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Valerie S. Strohm - ARM R&D Chemist

Date Mixed: 15-May-2015 **Balance:** 1125113331

Jennifer L. Pollino - QC Analyst

Date Passed: 19-May-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommendad condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentretion of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes grevimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certifiad combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncartainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restak will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative fer details.
- If eny undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

02/19/16

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31084 **Lot No.:** A0108368

Description : B/N Matrix Spike Mix

Base Neutral Matrix Spike 5000µg/mL, Methanol, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2018 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.I., K=2)		
1	1,4-Dichlorobenzene		5,001.3	µg/mL	+/- 29.3506	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBL3891V)			+/- 138.0486	µg/mL	Unstressed
	Purity 99%				+/- 138.0486	µg/mL	Stressed
2	N-Nitroso-di-n-propylamine		5,002.7	µg/mL	+/- 29.3585	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/- 138.0854	µg/mL	Unstressed
	Purity 99%				+/- 138.0854	µg/mL	Stressed
3	1,2,4-Trichlorobenzene		5,001.3	µg/mL	+/- 29.3502	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBC5541V)			+/- 138.0467	µg/mL	Unstressed
	Purity 98%				+/- 138.0467	µg/mL	Stressed
4	Acenaphthene		5,000.7	µg/mL	+/- 29.3467	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBJ4871V)			+/- 138.0302	µg/mL	Unstressed
	Purity 99%				+/- 138.0302	µg/mL	Stressed
5	2,4-Dinitrotoluene		5,001.3	µg/mL	+/- 29.3506	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/- 138.0486	µg/mL	Unstressed
	Purity 99%				+/- 138.0486	µg/mL	Stressed
6	Pyrene		5,000.3	µg/mL	+/- 29.3445	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBJ0984V)			+/- 138.0197	µg/mL	Unstressed
	Purity 98%				+/- 138.0197	µg/mL	Stressed

54228
54229

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

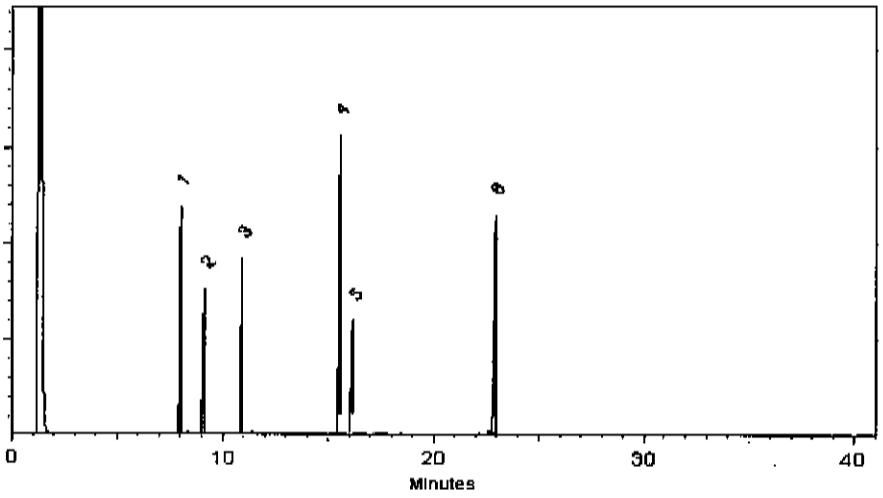
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Connor Flannery - Mix Technician

Date Mixed: 18-Jan-2015 **Balance:** 1128360905

Tyler Brown - QA Analyst

Date Passed: 21-Jan-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constreints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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ISO Guide 34 Accredited Reference Material Producer
Certificate #3223.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited Testing Laboratory
Certificate #3223.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31071 **Lot No.:** A0103147

Description : Acid Matrix Spike Mix (SW-846)

Acid Matrix Spike 10,000µg/mL, Methanol, 5mL/ampul

10/03/14

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.: K=2)		
1	Phenol		10,003.0	µg/mL	+/- 58.5698	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBC6998V)			+/- 249.3405	µg/mL	Unstressed
	Purity 99%				+/- 313.5161	µg/mL	Stressed
2	2-Chlorophenol		10,002.0	µg/mL	+/- 58.5639	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot MKBD3900V)			+/- 249.3156	µg/mL	Unstressed
	Purity 99%				+/- 313.4848	µg/mL	Stressed
3	4-Chloro-3-methylphenol		10,004.0	µg/mL	+/- 58.5756	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC0769V)			+/- 249.3654	µg/mL	Unstressed
	Purity 99%				+/- 313.5474	µg/mL	Stressed
4	4-Nitrophenol		10,003.0	µg/mL	+/- 58.5698	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)			+/- 249.3405	µg/mL	Unstressed
	Purity 99%				+/- 313.5161	µg/mL	Stressed
5	Pentachlorophenol		10,003.0	µg/mL	+/- 58.5698	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 140226JLM)			+/- 249.3405	µg/mL	Unstressed
	Purity 99%				+/- 313.5161	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

53852
53853

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

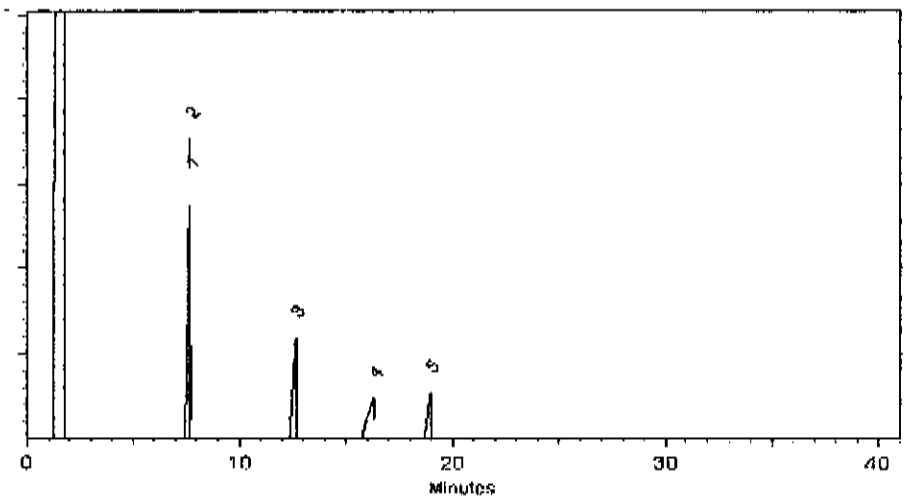
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 05-May-2014 **Balance:** 1125113331

Amanda Miller - QC Analyst

Date Passed: 07-May-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard cenditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncortainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Rec. 10/30/14

Catalog No. : 31001 **Lot No.:** A0103386

Description : SV Tuning Compound Standard

Tuning Std Decafluorotriphenylphosphine 2500µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.: K=2)		
1	DFTPP (Decafluorotriphenylphosphine)	2,500.0 µg/mL	+/- 14.8492	µg/mL	Gravimetric
	CAS # 5074-71-5 (Lot 10109917)		+/- 111.1178	µg/mL	Unstressed
	Purity 99%		+/- 122.0757	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

S 3957

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

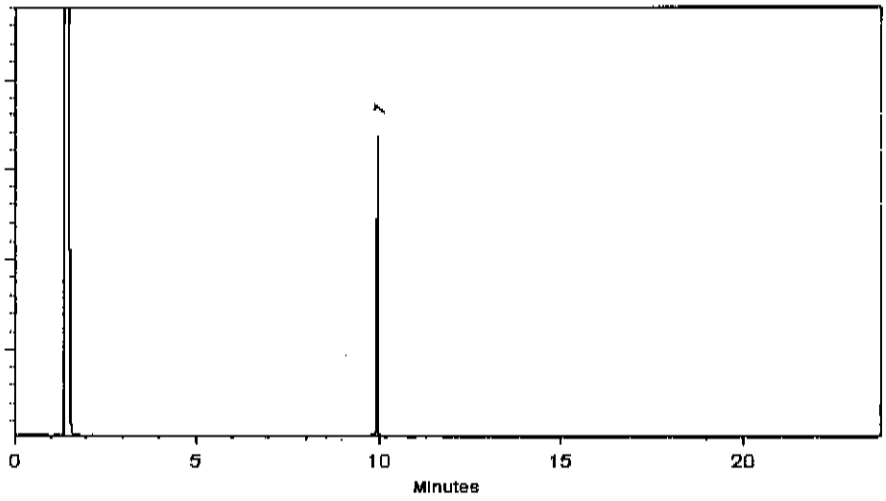
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 15-May-2014 **Balance:** 1128342313

Jennifer L. Pollino - QC Analyst

Date Passed: 19-May-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technicel Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space censtraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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CERTIFIED REFERENCE MATERIAL

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Rec: 12/30/14
Lauch

Catalog No. : 31833 **Lot No.:** A0105455

Description : Epsilon-Caprolactam Standard

Epsilon-caprolactam Std 2000µg/mL, Methylene Chloride(Methanol free), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2016 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	epsilon-Caprolactam	2,004.0 µg/mL	+/- 18.6361	µg/mL	Gravimetric
	CAS # 105-60-2 (Lot 10000218)		+/- 26.3242	µg/mL	Unstressed
	Purity 99%		+/- 39.9571	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

54066
54067

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

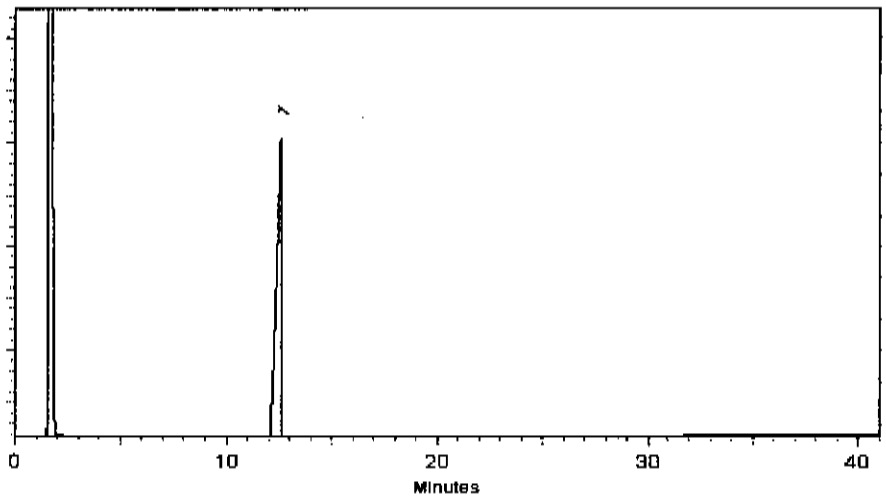
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Hauver

Date Mixed: 19-Aug-2014 **Balance:** 1128360905

Jodi E. Breon

Jodi E. Breon - QA Analyst

Date Passed: 27-Aug-2014

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

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- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

UM
54671 OLM01.1S
54672

Catalog No. : 31900 **Lot No.:** A0108223

Description : OLM 01.1 Revised SV MegaMix

OLM 01.1 Revised SV MegaMix 500-1000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2016 **Storage:** 0°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Phenol **CAS #** 108-95-2 **Purity** 99%	(Lot SHBC6998V)	1,000.2 µg/mL	+/- 6.6856 µg/mL +/- 11.4365 µg/mL +/- 18.8643 µg/mL	Gravimetric Unstressed Stressed
2	Bis(2-chloroethyl)ether **CAS #** 111-44-4 **Purity** 99%	(Lot 45296HKV)	1,001.6 µg/mL	+/- 6.6949 µg/mL +/- 11.4525 µg/mL +/- 18.8907 µg/mL	Gravimetric Unstressed Stressed
3	2-Chlorophenol **CAS #** 95-57-8 **Purity** 99%	(Lot MKBD3900V)	1,000.1 µg/mL	+/- 6.6852 µg/mL +/- 11.4359 µg/mL +/- 18.8633 µg/mL	Gravimetric Unstressed Stressed
4	2,2'-oxybis(1-chloropropane) **CAS #** 108-60-1 **Purity** 99%	(Lot 7-XDD-199-6)	1,001.4 µg/mL	+/- 6.6936 µg/mL +/- 11.4502 µg/mL +/- 18.8869 µg/mL	Gravimetric Unstressed Stressed
5	2-Methylphenol (o-cresol) **CAS #** 95-48-7 **Purity** 99%	(Lot SHBC1479V)	1,002.4 µg/mL	+/- 6.7003 µg/mL +/- 11.4616 µg/mL +/- 18.9058 µg/mL	Gravimetric Unstressed Stressed
6	Acetophenone **CAS #** 98-86-2 **Purity** 99%	(Lot MKBR7156V)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 11.0159 µg/mL +/- 18.6105 µg/mL	Gravimetric Unstressed Stressed
7	Hexachloroethane **CAS #** 67-72-1 **Purity** 99%	(Lot 4H3SF)	1,003.0 µg/mL	+/- 6.7043 µg/mL +/- 11.4685 µg/mL +/- 18.9171 µg/mL	Gravimetric Unstressed Stressed

24	2,4,6-Trichlorophenol **CAS #** 88-06-2 **Purity** 99%	(Lot MKBH7393V)	1,000.3	µg/mL	+/- 6.6866 +/- 11.4382 +/- 18.8671	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4,5-Trichlorophenol **CAS #** 95-95-4 **Purity** 99%	(Lot FHM01)	1,000.1	µg/mL	+/- 6.6852 +/- 11.4359 +/- 18.8633	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	2-Chloronaphthalene **CAS #** 91-58-7 **Purity** 99%	(Lot FIJ01)	1,001.8	µg/mL	+/- 6.6963 +/- 11.4548 +/- 18.8944	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Biphenyl **CAS #** 92-52-4 **Purity** 99%	(Lot 1277976)	1,000.0	µg/mL	+/- 5.9397 +/- 11.0159 +/- 18.6105	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,000.5	µg/mL	+/- 6.7354 +/- 11.4683 +/- 18.8877	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Acenaphthylene **CAS #** 208-96-8 **Purity** 99%	(Lot ER030707-01)	1,000.9	µg/mL	+/- 6.6906 +/- 11.4451 +/- 18.8784	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,000.8	µg/mL	+/- 6.6896 +/- 11.4433 +/- 18.8756	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,000.5	µg/mL	+/- 6.6879 +/- 11.4405 +/- 18.8709	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKBJ4871V)	1,002.9	µg/mL	+/- 6.7040 +/- 11.4679 +/- 18.9161	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBH5131V)	1,002.5	µg/mL	+/- 6.7488 +/- 11.4912 +/- 18.9255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot MKBP5833V)	1,001.0	µg/mL	+/- 6.6909 +/- 11.4456 +/- 18.8794	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKBK2375V)	1,000.0	µg/mL	+/- 5.9397 +/- 11.0159 +/- 18.6105	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,002.5	µg/mL	+/- 6.7013 +/- 11.4634 +/- 18.9086	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	1,000.3	µg/mL	+/- 6.6863 +/- 11.4376 +/- 18.8662	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot FN10221307)	1,001.5	µg/mL	+/- 6.7421 +/- 11.4798 +/- 18.9066	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,000.9	µg/mL	+/- 6.6907 +/- 11.4453 +/- 18.8789	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Chrysene		1,001.5 µg/mL	+/- 6.6943	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot PR121912-01)		+/- 11.4514	µg/mL	Unstressed
	Purity 99%			+/- 18.8888	µg/mL	Stressed
57	3,3'-Dichlorobenzidine		1,002.5 µg/mL	+/- 6.7488	µg/mL	Gravimetric
	CAS # 91-94-1	(Lot 141205JLM)		+/- 11.4912	µg/mL	Unstressed
	Purity 99%			+/- 18.9255	µg/mL	Stressed
58	Bis(2-ethylhexyl)phthalate		1,006.9 µg/mL	+/- 6.7304	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBK2695V)		+/- 11.5131	µg/mL	Unstressed
	Purity 99%			+/- 18.9906	µg/mL	Stressed
59	Di-n-octyl phthalate		1,003.2 µg/mL	+/- 6.7060	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 3128600)		+/- 11.4714	µg/mL	Unstressed
	Purity 99%			+/- 18.9218	µg/mL	Stressed
60	Benzo(b)fluoranthene		1,003.8 µg/mL	+/- 6.7100	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot ER022008-02)		+/- 11.4782	µg/mL	Unstressed
	Purity 99%			+/- 18.9331	µg/mL	Stressed
61	Benzo(k)fluoranthene		1,004.3 µg/mL	+/- 6.7130	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot ER041513-01)		+/- 11.4834	µg/mL	Unstressed
	Purity 99%			+/- 18.9416	µg/mL	Stressed
62	Benzo(a)pyrene		1,002.7 µg/mL	+/- 6.7026	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)		+/- 11.4656	µg/mL	Unstressed
	Purity 99%			+/- 18.9124	µg/mL	Stressed
63	Indeno(1,2,3-cd)pyrene		1,002.9 µg/mL	+/- 6.7036	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)		+/- 11.4674	µg/mL	Unstressed
	Purity 99%			+/- 18.9152	µg/mL	Stressed
64	Dibenz(a,h)anthracene		1,001.5 µg/mL	+/- 6.6943	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)		+/- 11.4514	µg/mL	Unstressed
	Purity 99%			+/- 18.8888	µg/mL	Stressed
65	Benzo(g,h,i)perylene		1,004.3 µg/mL	+/- 6.7130	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER020708-08)		+/- 11.4834	µg/mL	Unstressed
	Purity 99%			+/- 18.9416	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

04107715

UM

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31853 **Lot No.:** A0110448

Description : 1,4-dioxane

1,4-Dioxane 2,000µg/mL, Methylene Chloride, 1mL/ampul

S4604

S4605

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane	2,005.0 µg/mL	+/- 11.7665	µg/mL	Gravimetric
	CAS # 123-91-1 (Lot SHBF2002V)		+/- 42.5509	µg/mL	Unstressed
	Purity 99%		+/- 42.7394	µg/mL	Stressed

Solvent: Methylene Chloride (MEOH FREE)
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

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S4814
1
S4838
NP
10/20/15

Catalog No. : 30614 **Lot No.:** A0111152

Description : 1,4-dioxane-d8 Standard

1,4-dioxane-d8 Standard 2000 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane-d8	2,004.0 µg/mL	+/- 11.7606	µg/mL	Gravimetric
	CAS # 17647-74-4 (Lot 1-19073)		+/- 42.5297	µg/mL	Unstressed
	Purity 99%		+/- 42.7181	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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S4709
S4710
S4711
S4712
S4713 um 09/09/15

Catalog No. : 33017 **Lot No.:** A0111289

Description : Benzaldehyde Standard

Benzaldehyde 2000µg/mL Methylene Chloride (Methanol free), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Benzaldehyde **CAS #** 100-52-7 (Lot SHBD3510V) **Purity** 99%	2,012.0 µg/mL	+/- 11.8075 +/- 64.5160 +/- 74.9913	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

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S4991 SJ 11/23/15 ↓ S4995

Catalog No. : 32208 **Lot No.:** A0112545

Description : Atrazine Standard

Atrazine Standard 1000 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav Conc. (weight/volume)	Expanded Uncertainty (95% C.L. ; K=2)		
1	Atrazine	1,009.4 µg/mL	+/- 5.9955	µg/mL	Gravimetric
	CAS # 1912-24-9 (Lot TZ8ED)		+/- 39.4963	µg/mL	Unstressed
	Purity 98%		+/- 62.6664	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK
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www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

54976 – 54990

SJ
11/16/2015

Catalog No. : 31810 **Lot No.:** A0112586

Description : OLC03.2 SVOA Deuterated Monitoring Compounds Mix

OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL/ampul, Methylene Chloride, 2000µg/mL

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2019 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Phenol-d5	2,003.3 µg/mL	+/- 11.7567 µg/mL	Gravimetric
	CAS # 4165-62-2 (Lot X479P8)		+/- 49.9425 µg/mL	Unstressed
	Purity 99%		+/- 62.7939 µg/mL	Stressed
2	bis(2-Chloroethyl) ether-d8	2,005.3 µg/mL	+/- 11.7683 µg/mL	Gravimetric
	CAS # 93952-02-4 (Lot X485P12)		+/- 49.9919 µg/mL	Unstressed
	Purity 97%		+/- 62.8559 µg/mL	Stressed
3	2-Chlorophenol-d4	2,004.7 µg/mL	+/- 11.7645 µg/mL	Gravimetric
	CAS # 93951-73-6 (Lot PR-20630)		+/- 49.9758 µg/mL	Unstressed
	Purity 99%		+/- 62.8357 µg/mL	Stressed
4	4-Methylphenol-d8	2,004.0 µg/mL	+/- 11.7606 µg/mL	Gravimetric
	CAS # 190780-66-6 (Lot W519P30)		+/- 49.9591 µg/mL	Unstressed
	Purity 99%		+/- 62.8148 µg/mL	Stressed
5	Nitrobenzene-d5	2,005.3 µg/mL	+/- 11.7684 µg/mL	Gravimetric
	CAS # 4165-60-0 (Lot PR-24042)		+/- 49.9924 µg/mL	Unstressed
	Purity 99%		+/- 62.8566 µg/mL	Stressed
6	2-Nitrophenol-d4	2,002.0 µg/mL	+/- 11.7489 µg/mL	Gravimetric
	CAS # 93951-78-1 (Lot L184P31)		+/- 49.9093 µg/mL	Unstressed
	Purity 99%		+/- 62.7521 µg/mL	Stressed
7	2,4-Dichlorophenol-d3	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 93951-74-7 (Lot AB210P9)		+/- 49.8594 µg/mL	Unstressed
	Purity 99%		+/- 62.6894 µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

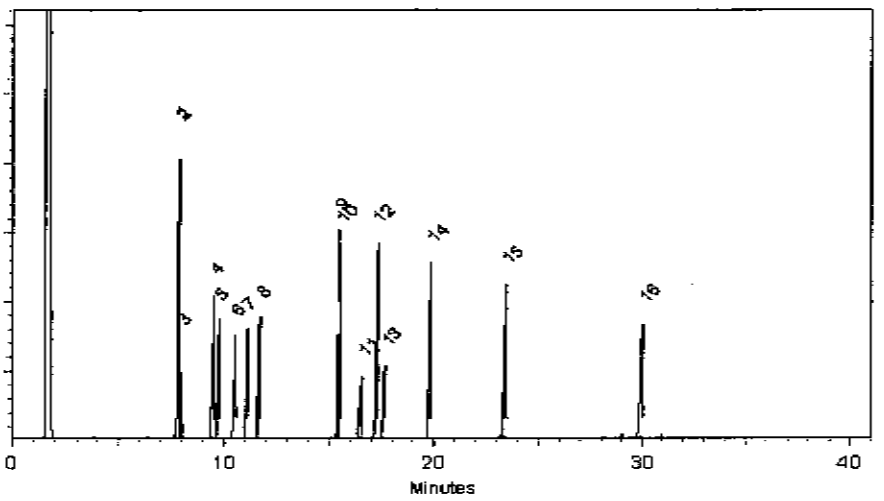
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 16-Jul-2015 **Balance:** 1128353505

Jennifer L. Pollino - QC Analyst

Date Passed: 20-Jul-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31900 **Lot No.:** A0112856

Description : OLM 01.1 Revised SV MegaMix

OLM 01.1 Revised SV MegaMix 500-1000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2017 **Storage:** 0°C or colder

Handling: Sonication required. Mix is photosensitive.

55192 um
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04/15/16
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55195

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Phenol **CAS #** 108-95-2 **Purity** 99%	(Lot SHBC6998V)	1,005.3 µg/mL.	+/- 6.7197 µg/mL +/- 11.4948 µg/mL +/- 18.9605 µg/mL		Gravimetric Unstressed Stressed
2	Bis(2-chlorocthyl)ether **CAS #** 111-44-4 **Purity** 99%	(Lot 45296HKV)	1,005.7 µg/mL	+/- 6.7223 µg/mL +/- 11.4994 µg/mL +/- 18.9680 µg/mL		Gravimetric Unstressed Stressed
3	2-Chlorophenol **CAS #** 95-57-8 **Purity** 99%	(Lot MKBD3900V)	1,000.0 µg/mL	+/- 6.6846 µg/mL +/- 11.4348 µg/mL +/- 18.8614 µg/mL		Gravimetric Unstressed Stressed
4	2,2'-oxybis(1-chloropropane) **CAS #** 108-60-1 **Purity** 99%	(Lot 2-KMW-57-8)	1,004.5 µg/mL	+/- 6.7147 µg/mL +/- 11.4862 µg/mL +/- 18.9463 µg/mL		Gravimetric Unstressed Stressed
5	2-Methylphenol (o-cresol) **CAS #** 95-48-7 **Purity** 99%	(Lot SHBC1479V)	1,001.8 µg/mL	+/- 6.6966 µg/mL +/- 11.4554 µg/mL +/- 18.8954 µg/mL		Gravimetric Unstressed Stressed
6	Acctophenone **CAS #** 98-86-2 **Purity** 99%	(Lot MKBR7156V)	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 11.1040 µg/mL +/- 18.7594 µg/mL		Gravimetric Unstressed Stressed
7	Hexachloroethane **CAS #** 67-72-1 **Purity** 99%	(Lot 4H3SF)	1,003.3 µg/mL	+/- 6.7066 µg/mL +/- 11.4725 µg/mL +/- 18.9237 µg/mL		Gravimetric Unstressed Stressed

8	N-Nitroso-di-n-propylamine		1,008.0	µg/mL	+/- 6.7859	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/- 11.5543	µg/mL	Unstressed
	Purity 99%				+/- 19.0293	µg/mL	Stressed
9	4-Methylphenol (p-cresol)		501.9	µg/mL	+/- 3.3547	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/- 5.7385	µg/mL	Unstressed
	Purity 99%				+/- 9.4656	µg/mL	Stressed
10	3-Methylphenol (m-cresol)		501.3	µg/mL	+/- 3.3506	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/- 5.7317	µg/mL	Unstressed
	Purity 99%				+/- 9.4543	µg/mL	Stressed
11	Nitrobenzene		1,003.2	µg/mL	+/- 6.7056	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBB0246V)			+/- 11.4708	µg/mL	Unstressed
	Purity 99%				+/- 18.9209	µg/mL	Stressed
12	Isophorone		1,004.1	µg/mL	+/- 6.7117	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/- 11.4811	µg/mL	Unstressed
	Purity 99%				+/- 18.9378	µg/mL	Stressed
13	2-Nitrophenol		1,002.1	µg/mL	+/- 6.6983	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/- 11.4582	µg/mL	Unstressed
	Purity 99%				+/- 18.9001	µg/mL	Stressed
14	2,4-Dimethylphenol		1,001.6	µg/mL	+/- 6.6953	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/- 11.4531	µg/mL	Unstressed
	Purity 99%				+/- 18.8916	µg/mL	Stressed
15	Bis(2-chloroethoxy)methane		1,002.9	µg/mL	+/- 6.7040	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 2238100)			+/- 11.4679	µg/mL	Unstressed
	Purity 99%				+/- 18.9161	µg/mL	Stressed
16	2,4-Dichlorophenol		1,003.2	µg/mL	+/- 6.7056	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/- 11.4708	µg/mL	Unstressed
	Purity 99%				+/- 18.9209	µg/mL	Stressed
17	Naphthalene		1,007.3	µg/mL	+/- 6.7334	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBH4351V)			+/- 11.5182	µg/mL	Unstressed
	Purity 99%				+/- 18.9991	µg/mL	Stressed
18	4-Chloroaniline		1,005.0	µg/mL	+/- 6.7657	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot 12528PH)			+/- 11.5199	µg/mL	Unstressed
	Purity 99%				+/- 18.9727	µg/mL	Stressed
19	Hexachlorobutadiene		1,001.4	µg/mL	+/- 6.6937	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/- 11.4504	µg/mL	Unstressed
	Purity 98%				+/- 18.8872	µg/mL	Stressed
20	2-Methylnaphthalene		1,000.4	µg/mL	+/- 6.7344	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/- 11.4666	µg/mL	Unstressed
	Purity 95%				+/- 18.8849	µg/mL	Stressed
21	4-Chloro-3-methylphenol		1,000.4	µg/mL	+/- 6.6873	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC0769V)			+/- 11.4393	µg/mL	Unstressed
	Purity 99%				+/- 18.8690	µg/mL	Stressed
22	1,2,4,5-Tetrachlorobenzene		1,008.5	µg/mL	+/- 6.7892	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot 06024AJV)			+/- 11.5600	µg/mL	Unstressed
	Purity 99%				+/- 19.0388	µg/mL	Stressed
23	Hexachlorocyclopentadiene		1,009.2	µg/mL	+/- 6.7457	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 3488800)			+/- 11.5394	µg/mL	Unstressed
	Purity 99%				+/- 19.0340	µg/mL	Stressed

24	2,4,6-Trichlorophenol **CAS #** 88-06-2 **Purity** 99%	(Lot MKBH17393V)	1,004.0	µg/mL	+/- 6.7110 +/- 11.4799 +/- 18.9359	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4,5-Trichlorophenol **CAS #** 95-95-4 **Purity** 99%	(Lot FHM01)	1,007.6	µg/mL	+/- 6.7350 +/- 11.5211 +/- 19.0038	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	2-Chloronaphthalene **CAS #** 91-58-7 **Purity** 99%	(Lot FIJ01)	1,005.6	µg/mL	+/- 6.7220 +/- 11.4988 +/- 18.9671	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Biphenyl **CAS #** 92-52-4 **Purity** 99%	(Lot 1277976)	1,010.0	µg/mL	+/- 5.9991 +/- 11.1261 +/- 18.7966	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,007.0	µg/mL	+/- 6.7791 +/- 11.5428 +/- 19.0105	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Acenaphthylene **CAS #** 208-96-8 **Purity** 99%	(Lot ER030707-01)	1,000.9	µg/mL	+/- 6.6906 +/- 11.4451 +/- 18.8784	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,004.1	µg/mL	+/- 6.7117 +/- 11.4811 +/- 18.9378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,002.2	µg/mL	+/- 6.6990 +/- 11.4594 +/- 18.9020	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKBP0384V)	1,005.5	µg/mL	+/- 6.7210 +/- 11.4971 +/- 18.9642	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	3-Nitroaniline **CAS #** 99-09-2 **Purity** 97%	(Lot MKBH5131V)	1,004.9	µg/mL	+/- 6.7651 +/- 11.5190 +/- 18.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBD8351V)	1,006.6	µg/mL	+/- 6.7284 +/- 11.5097 +/- 18.9850	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKBH8392V)	1,002.0	µg/mL	+/- 5.9516 +/- 11.0379 +/- 18.6477	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,004.2	µg/mL	+/- 6.7123 +/- 11.4822 +/- 18.9397	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBP6945V)	1,000.0	µg/mL	+/- 6.6846 +/- 11.4348 +/- 18.8614	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot Er100206-01)	1,009.5	µg/mL	+/- 6.7960 +/- 11.5715 +/- 19.0576	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,003.8	µg/mL	+/- 6.7101 +/- 11.4784 +/- 18.9334	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	4-Chlorophenyl phenyl ether		1,002.4	µg/mL	+/- 6.7006	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBS2248V)			+/- 11.4622	µg/mL	Unstressed
	Purity 99%				+/- 18.9067	µg/mL	Stressed
41	Diethylphthalate		1,005.3	µg/mL	+/- 6.7197	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBJ3578V)			+/- 11.4948	µg/mL	Unstressed
	Purity 99%				+/- 18.9605	µg/mL	Stressed
42	4-Nitroaniline		1,007.5	µg/mL	+/- 6.7825	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/- 11.5485	µg/mL	Unstressed
	Purity 99%				+/- 19.0199	µg/mL	Stressed
43	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		1,000.0	µg/mL	+/- 6.6846	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC06195V)			+/- 11.4348	µg/mL	Unstressed
	Purity 99%				+/- 18.8614	µg/mL	Stressed
44	Diphenylamine		1,007.5	µg/mL	+/- 6.7825	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/- 11.5485	µg/mL	Unstressed
	Purity 99%				+/- 19.0199	µg/mL	Stressed
45	4-Bromophenyl phenyl ether		1,001.5	µg/mL	+/- 6.6944	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/- 11.4515	µg/mL	Unstressed
	Purity 98%				+/- 18.8890	µg/mL	Stressed
46	Hexachlorobenzene		1,004.0	µg/mL	+/- 6.7111	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LC04221V)			+/- 11.4801	µg/mL	Unstressed
	Purity 98%				+/- 18.9362	µg/mL	Stressed
47	Pentachlorophenol		1,002.2	µg/mL	+/- 6.6990	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 140626JLM)			+/- 11.4594	µg/mL	Unstressed
	Purity 99%				+/- 18.9020	µg/mL	Stressed
48	Phenanthrene		1,000.3	µg/mL	+/- 6.6865	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKBQ8219V)			+/- 11.4380	µg/mL	Unstressed
	Purity 98%				+/- 18.8668	µg/mL	Stressed
49	Anthracene		1,001.1	µg/mL	+/- 6.6919	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/- 11.4473	µg/mL	Unstressed
	Purity 99%				+/- 18.8822	µg/mL	Stressed
50	Carbazole		1,007.9	µg/mL	+/- 6.7854	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 4017900)			+/- 11.5535	µg/mL	Unstressed
	Purity 98%				+/- 19.0280	µg/mL	Stressed
51	Di-n-butylphthalate		1,002.4	µg/mL	+/- 6.7006	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBL8501V)			+/- 11.4622	µg/mL	Unstressed
	Purity 99%				+/- 18.9067	µg/mL	Stressed
52	Fluoranthene		1,000.2	µg/mL	+/- 6.6858	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot 00828AJ)			+/- 11.4369	µg/mL	Unstressed
	Purity 98%				+/- 18.8650	µg/mL	Stressed
53	Pyrene		1,001.1	µg/mL	+/- 6.6916	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBL6786V)			+/- 11.4468	µg/mL	Unstressed
	Purity 99%				+/- 18.8812	µg/mL	Stressed
54	Benzyl butyl phthalate		1,003.0	µg/mL	+/- 6.7046	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot 0302711V)			+/- 11.4691	µg/mL	Unstressed
	Purity 99%				+/- 18.9180	µg/mL	Stressed
55	Benz(a)anthracene		1,002.9	µg/mL	+/- 6.7040	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/- 11.4679	µg/mL	Unstressed
	Purity 99%				+/- 18.9161	µg/mL	Stressed

56	Chrysene **CAS #** 218-01-9 **Purity** 99%	(Lot PR121912-01)	1,006.2	µg/mL	+/- 6.7260 +/- 11.5057 +/- 18.9784	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	3,3'-Dichlorobenzidine **CAS #** 91-94-1 **Purity** 99%	(Lot 150701JLMA)	1,009.5	µg/mL	+/- 6.7960 +/- 11.5715 +/- 19.0576	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	Bis(2-ethylhexyl)phthalate **CAS #** 117-81-7 **Purity** 99%	(Lot MKBK2695V)	1,002.6	µg/mL	+/- 6.7016 +/- 11.4639 +/- 18.9095	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	Di-n-octyl phthalate **CAS #** 117-84-0 **Purity** 99%	(Lot 3128600)	1,001.2	µg/mL	+/- 6.6923 +/- 11.4479 +/- 18.8831	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	Benzo(b)fluoranthene **CAS #** 205-99-2 **Purity** 99%	(Lot ER022008-02)	1,002.5	µg/mL	+/- 6.7013 +/- 11.4634 +/- 18.9086	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	Benzo(k)fluoranthene **CAS #** 207-08-9 **Purity** 99%	(Lot 012012k)	1,002.7	µg/mL	+/- 6.7023 +/- 11.4651 +/- 18.9114	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	Benzo(a)pyrene **CAS #** 50-32-8 **Purity** 99%	(Lot ER071309-02)	1,002.3	µg/mL	+/- 6.6996 +/- 11.4605 +/- 18.9039	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	Indeno(1,2,3-cd)pyrene **CAS #** 193-39-5 **Purity** 99%	(Lot ER082107-02)	1,005.7	µg/mL	+/- 6.7227 +/- 11.4999 +/- 18.9690	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	Dibenz(a,h)anthracene **CAS #** 53-70-3 **Purity** 99%	(Lot ER032211-01)	1,008.6	µg/mL	+/- 6.7421 +/- 11.5331 +/- 19.0237	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	Benzo(g,h,i)perylene **CAS #** 191-24-2 **Purity** 99%	(Lot ER020708-08)	1,003.0	µg/mL	+/- 6.7046 +/- 11.4691 +/- 18.9180	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

S 5001
/
S 5030

SJ
12/14/15

Catalog No. : 31206 **Lot No.:** A0115444

Description : SV Internal Standard Mix 2mg/ml

SV Internal Standard Mix 2mg/ml 2,000 µg/ml, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2021 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav Conc. (weight/volume)	Expanded Uncertainty (95% C.L. K=2)		
1	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 **Purity** 99% (Lot PR-18488)	2,000.2 µg/mL	+/- 11.6293 +/- 90.0902 +/- 99.9662	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 **Purity** 99% (Lot M-1452)	2,000.3 µg/mL	+/- 11.6299 +/- 90.0947 +/- 99.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 **Purity** 99% (Lot PR-25444)	2,000.3 µg/mL	+/- 11.6299 +/- 90.0947 +/- 99.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 **Purity** 99% (Lot PR-23065)	2,000.2 µg/mL	+/- 11.6293 +/- 90.0902 +/- 99.9662	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 **Purity** 99% (Lot I-19260)	2,000.9 µg/mL	+/- 11.6334 +/- 90.1217 +/- 100.0012	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 **Purity** 99% (Lot PR-24113)	2,000.3 µg/mL	+/- 11.6299 +/- 90.0947 +/- 99.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	4-Chloroaniline-d4 **CAS #** 191656-33-4 **Purity** 99%	(Lot C190P48)	2,008.7	µg/mL	+/- 11.7880 +/- 58.6415 +/- 71.1507	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Dimethylphthalate-d6 **CAS #** 85448-30-2 **Purity** 99%	(Lot X477P10)	2,009.3	µg/mL	+/- 11.7919 +/- 58.6610 +/- 71.1743	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acenaphthylene-d8 **CAS #** 93951-97-4 **Purity** 99%	(Lot I-102)	2,007.3	µg/mL	+/- 11.7802 +/- 58.6026 +/- 71.1035	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	4-Nitrophenol-d4 **CAS #** 93951-79-2 **Purity** 99%	(Lot P-141)	2,010.0	µg/mL	+/- 11.7958 +/- 58.6804 +/- 71.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Fluorene-d10 **CAS #** 81103-79-9 **Purity** 98%	(Lot M149P26)	2,005.7	µg/mL	+/- 11.7708 +/- 58.5559 +/- 71.0468	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	4,6-Dinitro-2-methylphenol-d2 **CAS #** 93951-76-9 **Purity** 99%	(Lot AB-322)	2,008.0	µg/mL	+/- 11.7841 +/- 58.6221 +/- 71.1271	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	Anthracene-d10 **CAS #** 1719-06-8 **Purity** 99%	(Lot PR-20576)	2,008.7	µg/mL	+/- 11.7880 +/- 58.6415 +/- 71.1507	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Pyrene-d10 **CAS #** 1718-52-1 **Purity** 98%	(Lot PR-14089)	2,010.3	µg/mL	+/- 11.7976 +/- 58.6894 +/- 71.2088	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Benzo(a)pyrene-d12 **CAS #** 63466-71-7 **Purity** 99%	(Lot PR-25741)	2,008.0	µg/mL	+/- 11.7841 +/- 58.6221 +/- 71.1271	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent:	Methylene Chloride **CAS #** 75-09-2 **Purity** 99%						

RESTEK
110 Banner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1668
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

S5114 – S5143

UH 04/07/16

Catalog No. : 31810 **Lot No.:** A0115813

Description : OLC03.2 SVOA Deuterated Monitoring Compounds Mix

OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL/ampul, Methylene Chloride, 2000µg/mL

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2019 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Phenol-d5 **CAS #** 4165-62-2 (Lot X479P8) **Purity** 99%	2,010.7 µg/mL	+/- 11.7997 µg/mL +/- 58.6999 µg/mL +/- 71.2215 µg/mL	Gravimetric Unstressed Stressed
2	bis(2-Chloroethyl) ether-d8 **CAS #** 93952-02-4 (Lot X-485) **Purity** 98%	2,004.4 µg/mL	+/- 11.7631 µg/mL +/- 58.5177 µg/mL +/- 71.0005 µg/mL	Gravimetric Unstressed Stressed
3	2-Chlorophenol-d4 **CAS #** 93951-73-6 (Lot PR-20630) **Purity** 99%	2,011.3 µg/mL	+/- 11.8036 µg/mL +/- 58.7194 µg/mL +/- 71.2452 µg/mL	Gravimetric Unstressed Stressed
4	4-Methylphenol-d8 **CAS #** 190780-66-6 (Lot W519P34) **Purity** 99%	2,012.0 µg/mL	+/- 11.8075 µg/mL +/- 58.7388 µg/mL +/- 71.2688 µg/mL	Gravimetric Unstressed Stressed
5	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-24042) **Purity** 99%	2,008.7 µg/mL	+/- 11.7880 µg/mL +/- 58.6415 µg/mL +/- 71.1507 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitrophenol-d4 **CAS #** 93951-78-1 (Lot H-151) **Purity** 99%	2,012.0 µg/mL	+/- 11.8075 µg/mL +/- 58.7388 µg/mL +/- 71.2688 µg/mL	Gravimetric Unstressed Stressed
7	2,4-Dichlorophenol-d3 **CAS #** 93951-74-7 (Lot AB210P6) **Purity** 99%	2,009.3 µg/mL	+/- 11.7919 µg/mL +/- 58.6610 µg/mL +/- 71.1743 µg/mL	Gravimetric Unstressed Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

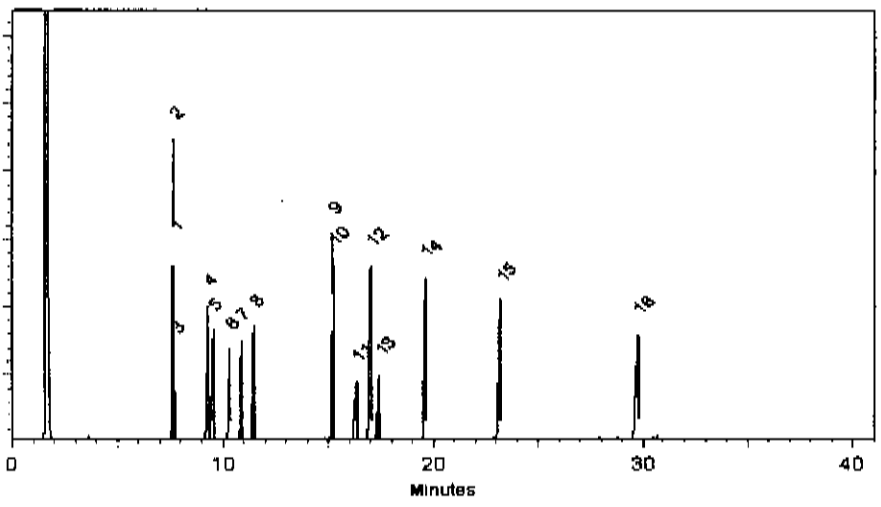
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 07-Dec-2015 **Balance:** B442140311

Jennifer L. Pollino - QC Analyst

Date Passed: 09-Dec-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

PCI SCIENTIFIC SUPPLY, INC.

41 PLYMOUTH STREET
FAIRFIELD, NJ 07004
P# (973) 244-9002
F# (973) 244-9448

CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE ANHYDROUS		
QUALITY :	ACS	FORMULA :	Na_2SO_4
SPECIFICATION NUMBER :	6390	RELEASE DATE:	AGO/25/2014
LOT NUMBER :	433101		

TEST	SPECIFICATIONS	LOT VALUES
Insoluble matter	Max. 0.01%	0.006 %
Loss on ignition	Max. 0.5%	0.3 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.1
Chloride (Cl)	Max. 0.001%	<0.001 %
Nitrogen compounds (como N)	Max. 5 ppm	<5 ppm
Assay (Na_2SO_4)	Min. 99.0%	99.5 %
Iron (Fe)	Max. 0.001%	<0.001 %
Heavy metals (como Pb)	Max. 5 ppm	<5 ppm
Potassium (K)	Max. 0.008%	0.001 %
Calcium (Ca)	Max. 0.01%	0.001 %
Magnesium (Mg)	Max. 0.005%	0.002 %
Phosphate (PO_4)	Max. 0.001%	<0.001 %
Appearance	Crystals	Crystals
Retained on US Standard No. 10 sieve	Max. 1.0%	0.0 %
Retained on US Standard No. 60 sieve	Min. 80.0%	98.3 %
Through US Standard No. 60 sieve	Max. 19.0%	1.5 %
Through US Standard No. 100 sieve	Max. 10.0%	0.2 %

E 2036

Methylene Chloride
ULTRA RESI-ANALYZED
For Organic Residue Analysis
(dichloromethane)

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9266-A4
Batch No.: 0000131014
Manufactured Date: 2015/11/25
Expiration Date: 2017/02/23

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	2
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	>= 99.8 %	100.0
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0000 ppm	0.1000
Titrable Acid (µeq/g)	<= 0.3	< 0.1
Chloride (Cl)	<= 10 ppm	< 5
Water (by KF, coulometric)	<= 0.02 %	< 0.01

For Laboratory, Research or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

E2072

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Debradun, India. 9001:2008 14001:2004, 13485:2003
Mumbai, India. 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Certificate of Analysis

Date of Release:	2/26/2016
Name:	Dichloromethane OmniSolv®
Item No:	DX0831 all size codes
Lot / Batch No:	56056
Country of Origin:	USA

Characteristic	Requirement		Results	Units
	Min.	Max.		
Assay (GC)	99.9		99.95	%
Capillary ECD responsive substances (as PCNB)		2	0.32	ng/L
Capillary FID responsive substances (as decane)		3	< 0.10	µg/L
Color (APHA)		10	<10	
Filtered through 0.2 µm filter			Passes test	
Fluorescence (as quinine base)		500	78	ppt
Form			Clear liquid	
Free halogens			Passes test	
Identity (IR-spectrum)			Conforms	
Refractive index (n 20/D)			1.4240	
Residue after evaporation		1	<0.5	ppm
Titrable acid		0.2	0.09	µeq/g
UV Abs. at 231 nm		1.00	0.726	AU
UV Abs. at 235 nm		0.40	0.280	AU
UV Abs. at 240 nm		0.20	0.080	AU
UV Abs. at 250 nm		0.01	0.005	AU
UV Abs. at 260 nm		0.005	< 0.001	AU
UV Cut-off		231	229.6	nm
Water (H2O)		0.005	0.0003	%

Gene Desolelle

Quality Control Manager

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E 2087

EMD Millipore is a division of Merck KGaA, Darmstadt, Germany

EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821
U.S.A

Certificate of Analysis

Date of Release: 2/26/2016

Name: Dichloromethane
OmniSolv®

Item No: DX0831 all size codes

Lot / Batch No: 56056

Country of Origin: USA

Characteristic	Requirement		Results	Units
	Min.	Max.		
Assay (GC)	99.9		99.95	%
Capillary ECD responsive substances (as PCNB)		2	0.32	ng/L
Capillary FID responsive substances (as decane)		3	< 0.10	µg/L
Color (APHA)		10	<10	
Filtered through 0.2 µm filter			Passes test	
Fluorescence (as quinine base)		500	78	ppt
Form			Clear liquid	
Free halogens			Passes test	
Identity (IR-spectrum)			Conforms	
Refractive index (n 20/D)			1.4240	
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UV Abs. at 235 nm		0.40	0.280	AU
UV Abs. at 240 nm		0.20	0.080	AU
UV Abs. at 250 nm		0.01	0.005	AU
UV Abs. at 260 nm		0.005	< 0.001	AU
UV Cut-off		231	229.6	nm
Water (H2O)		0.005	0.0003	%

Gene Desotelle

Quality Control Manager
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EMD Millipore is a division of Merck KGaA,Darmstadt, Germany
EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821
U.S.A

E 2105

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M357 &
Reagent 11/18/15
Exp. 2019/11/02
MB

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9673-33
Batch No.: 0000095945
Manufactured Date: 2014/11/03
Retest Date: 2019/11/02

Certificate of Analysis

Test	Specification	Result
ACS - Assay (H_2SO_4)	95.0 - 98.0 %	95.9
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	6
ACS - Residue after Ignition	<= 3 ppm	< 1
ACS - Substances Reducing Permanganate (as SO_2)	<= 2 ppm	< 2
Ammonium (NH_4)	<= 1 ppm	< 1
Chloride (Cl)	<= 0.1 ppm	< 0.1
Nitrate (NO_3)	<= 0.2 ppm	< 0.2
Phosphate (PO_4)	<= 0.5 ppm	< 0.5
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	1.3
Arsenic and Antimony (as As)	<= 4 ppb	< 3
Trace Impurities - Barium (Ba)	<= 10.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 10.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 10.0 ppb	< 0.7
Trace Impurities - Cadmium (Cd)	<= 2.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	7.2
Trace Impurities - Chromium (Cr)	<= 6.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 0.5 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	0.2
Trace Impurities - Gallium (Ga)	<= 10.0 ppb	< 0.2
Trace Impurities - Germanium (Ge)	<= 10.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 10.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 500 ppb	< 300

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9673-33
Batch No.: 0000095945

Test	Specification	Result
Trace Impurities - Iron (Fe)	<= 50.0 ppb	29.9
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 10.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	< 0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 3.0
Trace Impurities - Nickel (Ni)	<= 2.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 10.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 500.0 ppb	< 2.0
Trace Impurities - Selenium (Se)	<= 50.0 ppb	< 10.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 0.4
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 500.0 ppb	4.4
Trace Impurities - Strontium (Sr)	<= 5.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 10.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 20.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	0.9
Trace Impurities - Titanium (Ti)	<= 10.0 ppb	1.7
Trace Impurities - Vanadium (V)	<= 10.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	1.1
Trace Impurities - Zirconium (Zr)	<= 10.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008, 17025:2005
Selangor, Malaysia 9001:2008
Dehradun, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Panoli, India 9001:2008

Richard M Siberski
Vice President Global Quality

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CHEMTECH **EXTRACTION LOGPAGE**

PB90403

SOP ID: M SOM02.2

Matrix : Water

Clean Up SOP #: N/A

Weigh By: N/A **Extraction By:** UM

Balance check: N/A

Balance ID: 2

Batch# PB90403

Extraction Date : 05/08/16

Extraction Start Time : 08:13

Extraction End Time : 10:05 (5/9/16)

Review By :

Filter By: UM **Concentration By:** UM

Weight 1: (2) 2 **Weight 2:** (2) 2

Method of Extraction

☐ Seperatory Funne ☑ Continious Liquid/Liquid ☐ Sonication ☐ Waste Dilution ☐ Soxhlet

Standared Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike	0.5ML	80 PPM	SP3536
Surrogate	0.5ML	80+ 32 PPM	SP3682

Chemical Used	ML/SAMPLE USED	Lot Number
Methylene Chloride		E2105
Baked Na2SO4		EP1653
H2SO4 1:1		EP1663

5/9

Extraction Conformance/Non-Conformance Comments:

PH strip lot No: E2056

Extraction End Time: 10:05 (5/9/16)

5/9

KD Bath Temperature: 60.1 C

Received Date: 05/09/16)

Delivered Date: 05/09/16

Delivered Time: 10:10

Envap Temperature: 40 C

Received By: UM

Delivered By:

Analysis Group:

Extraction Group: , RS, SJ, MM, UA, RP, JP, NP, UM

CHEMTECH **EXTRACTION LOGPAGE** **PrepBatch ID** **PB90403**

Analytical Method: 8270D 2-2 SVOC **Extraction Date:** 05/08/2016-08:13 **Concentration Date:** 05/09/16

Lab Sample ID	Client Sample ID	Test	g / mL	PH	Surr/Spike By:		Final Vol.(mL)	Comments	Prep Pos
	2 2				Added By	Verified By			
PB90403BL	SBLK03	SVOC-TCL BNA -20	1000	6	MM	JP	1		
H2874-07	H4111	SVOC-TCL BNA -20	1000	6	↓	↓	↓	Bottle E	
H2874-09	H4113	SVOC-TCL BNA -20	1000	6				E	
H2874-10	H4113MS	SVOC-TCL BNA -20	1000	6				E	
H2874-11	H4113MSD	SVOC-TCL BNA -20	1000	6				E	
H2874-17	H4013	SVOC-TCL BNA -20	1000	6				E	
H2874-24	H4097	SVOC-TCL BNA -20	1000	6	↓	↓	↓	E	

PH adjusted for Acid <2

* Extracts relinquished on the same date as received.

5/9

CHEMTECH **EXTRACTION LOGPAGE** **PrepBatch ID : PB90403**

Analytical Method: 2 **Extraction Date:** 05/08/2016-08:13 **Concentration Date:** ___/___/___

Lab Sample ID	Client Sample ID	Test	g /(mL)	PH	Surr/Spike By:		Final Vol.(mL)	Comments	Prep Pos
		2-2			Added By	Verified By			
PB90403BL	SBLK03	SVOC-TCL BNA -20	1000.0	6	Muteen	Jignesh	1		
H2874-07	H4111	SVOC-TCL BNA -20	1000.0	6	Muteen	Jignesh	1		
H2874-09	H4113	SVOC-TCL BNA -20	1000.0	6	Muteen	Jignesh	1		
H2874-10	H4113MS	SVOC-TCL BNA -20	1000.0	6	Muteen	Jignesh	1		
H2874-11	H4113MSD	SVOC-TCL BNA -20	1000.0	6	Muteen	Jignesh	1		
H2874-17	H4013	SVOC-TCL BNA -20	1000.0	6	Muteen	Jignesh	1		
H2874-24	H4097	SVOC-TCL BNA -20	1000.0	6	Muteen	Jignesh	1		

PH adjusted for Acid<2

* Extracts relinquished on the same date as received.

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050416

Review By	mohammad	Review On	5/5/2016 9:02:17 AM		
SubDirectory	VI050416	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52662
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52669,VP52670
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB32	VI049219.D	4 May 2016 8:57	FY/SY	Ok
2	VSTD0.533	VI049220.D	4 May 2016 11:27	FY/SY	Ok
3	VSTD00134	VI049221.D	4 May 2016 11:58	FY/SY	Ok
4	VSTD00535	VI049222.D	4 May 2016 12:30	FY/SY	Ok
5	VSTD01036	VI049223.D	4 May 2016 13:02	FY/SY	Ok
6	VSTD02037	VI049224.D	4 May 2016 13:33	FY/SY	Ok
7	VSTDCCC005	VI049225.D	4 May 2016 14:05	FY/SY	Ok
8	VI0504WBL01	VI049226.D	4 May 2016 15:13	FY/SY	Ok
9	H2799-02DL2	VI049227.D	4 May 2016 15:45	FY/SY	Ok,M
10	H2743-14	VI049228.D	4 May 2016 16:17	FY/SY	Ok
11	H2743-15	VI049229.D	4 May 2016 16:49	FY/SY	Ok,M
12	H2743-09DL	VI049230.D	4 May 2016 17:20	FY/SY	Ok
13	H2743-10DL	VI049231.D	4 May 2016 17:52	FY/SY	Ok,M
14	H2743-13DL	VI049232.D	4 May 2016 18:23	FY/SY	Ok
15	H2834-04	VI049233.D	4 May 2016 18:55	FY/SY	Ok,M
16	H2834-01	VI049234.D	4 May 2016 19:27	FY/SY	Dilution
17	H2834-02	VI049235.D	4 May 2016 19:58	FY/SY	Not Ok
18	H2834-03	VI049236.D	4 May 2016 20:30	FY/SY	Not Ok
19	H2834-05	VI049237.D	4 May 2016 21:02	FY/SY	Dilution
20	H2834-06	VI049238.D	4 May 2016 21:33	FY/SY	Dilution
21	H2834-07	VI049239.D	4 May 2016 22:05	FY/SY	Dilution
22	H2834-08	VI049240.D	4 May 2016 22:37	FY/SY	ReRun
23	H2834-09	VI049241.D	4 May 2016 23:08	FY/SY	Ok
24	H2834-10	VI049242.D	4 May 2016 23:40	FY/SY	Ok,M
25	VSTDCCC005EC	VI049243.D	5 May 2016 00:11	FY/SY	Ok,M

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050516

Review By	feifei	Review On	5/6/2016 11:44:01 AM		
SubDirectory	VI050516	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52696
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52698,VP52699,VP52700
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB33	VI049244.D	5 May 2016 9:34	FY/SY	Ok
2	VSTDCCC005	VI049245.D	5 May 2016 10:15	FY/SY	Ok
3	VI0505WBL01	VI049246.D	5 May 2016 10:59	FY/SY	Ok,M
4	H2799-11	VI049247.D	5 May 2016 11:31	FY/SY	Ok
5	H2743-18	VI049248.D	5 May 2016 12:03	FY/SY	Ok
6	H2834-12	VI049249.D	5 May 2016 12:34	FY/SY	Ok,M
7	H2796-21	VI049250.D	5 May 2016 13:06	FY/SY	Ok,M
8	H2834-08RE	VI049251.D	5 May 2016 13:38	FY/SY	Confirms
9	H2834-01DL	VI049252.D	5 May 2016 14:09	FY/SY	Ok,M
10	H2834-02MS	VI049253.D	5 May 2016 15:13	FY/SY	Ok
11	H2834-03MSD	VI049254.D	5 May 2016 15:44	FY/SY	Ok
12	VSTDCCC005	VI049255.D	5 May 2016 16:16	FY/SY	Ok
13	VI0505WBL02	VI049256.D	5 May 2016 16:54	FY/SY	Ok,M
14	H2834-06DL	VI049257.D	5 May 2016 17:59	FY/SY	Ok
15	H2834-05DL	VI049258.D	5 May 2016 18:31	FY/SY	Ok
16	H2834-07DL	VI049259.D	5 May 2016 19:02	FY/SY	Ok,M
17	H2874-01	VI049260.D	5 May 2016 19:34	FY/SY	Ok
18	H2874-09	VI049261.D	5 May 2016 20:06	FY/SY	Dilution
19	H2874-10MS	VI049262.D	5 May 2016 20:37	FY/SY	Ok
20	H2874-11MSD	VI049263.D	5 May 2016 21:09	FY/SY	Ok,M
21	H2874-04	VI049264.D	5 May 2016 21:41	FY/SY	Not Ok
22	H2874-05	VI049265.D	5 May 2016 22:12	FY/SY	Ok,M
23	H2874-06	VI049266.D	5 May 2016 22:44	FY/SY	Ok,M
24	H2874-07	VI049267.D	5 May 2016 23:16	FY/SY	Ok,M
25	H2874-08	VI049268.D	5 May 2016 23:47	FY/SY	Ok,M
26	H2874-12	VI049269.D	6 May 2016 00:19	FY/SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050516

Review By	feifei	Review On	5/6/2016 11:44:01 AM		
SubDirectory	VI050516	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52696
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52698,VP52699,VP52700
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

27	H2834-18	VI049270.D	6 May 2016 00:50	FY/SY	Dilution
28	H2834-19	VI049271.D	6 May 2016 1:22	FY/SY	Dilution
29	H2834-20	VI049272.D	6 May 2016 1:54	FY/SY	ReRun
30	H2834-21	VI049273.D	6 May 2016 2:25	FY/SY	Not Ok
31	VSTDCCC005EC	VI049274.D	6 May 2016 2:57	FY/SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050616

Review By	feifei	Review On	5/9/2016 12:05:45 PM		
SubDirectory	VI050616	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52731
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52733,VP52734,VP52735
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB34	VI049275.D	6 May 2016 9:02	FY/SY	Ok
2	VSTDCCC005	VI049276.D	6 May 2016 10:21	FY/SY	Ok
3	VI0506WBL01	VI049277.D	6 May 2016 11:45	FY/SY	Ok
4	H2834-21	VI049278.D	6 May 2016 12:17	FY/SY	Ok
5	H2874-04	VI049279.D	6 May 2016 12:49	FY/SY	Ok,M
6	H2834-20	VI049280.D	6 May 2016 13:20	FY/SY	Ok
7	H2834-18DL	VI049281.D	6 May 2016 13:52	FY/SY	Ok,M
8	H2874-13	VI049282.D	6 May 2016 14:24	FY/SY	Ok,M
9	H2874-14	VI049283.D	6 May 2016 14:55	FY/SY	Dilution
10	H2874-14DL	VI049284.D	6 May 2016 16:05	FY/SY	Ok,M
11	H2874-09DL	VI049285.D	6 May 2016 16:37	FY/SY	Ok
12	H2834-19DL	VI049286.D	6 May 2016 17:09	FY/SY	Ok
13	H2874-15	VI049287.D	6 May 2016 17:40	FY/SY	Not Ok
14	H2834-11	VI049288.D	6 May 2016 18:12	FY/SY	Ok
15	VSTDCCC005EC	VI049289.D	6 May 2016 19:15	FY/SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050916

Review By	feifei	Review On	5/10/2016 2:19:02 PM		
SubDirectory	VI050916	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52815
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52818,VP52819,VP52833
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB35	VI049290.D	9 May 2016 9:50	FY/SY	Ok
2	VSTDCCC005	VI049291.D	9 May 2016 11:03	FY/SY	Ok,M
3	VI0509WBL01	VI049292.D	9 May 2016 11:52	FY/SY	Ok
4	H2874-21	VI049293.D	9 May 2016 12:58	FY/SY	Ok,M
5	H2874-20	VI049294.D	9 May 2016 13:29	FY/SY	Ok,M
6	H2874-16	VI049295.D	9 May 2016 14:01	FY/SY	Ok
7	H2874-17	VI049296.D	9 May 2016 14:33	FY/SY	Ok,M
8	H2874-18	VI049297.D	9 May 2016 15:04	FY/SY	Ok,M
9	H2874-19	VI049298.D	9 May 2016 15:36	FY/SY	Dilution
10	H2874-22	VI049299.D	9 May 2016 16:08	FY/SY	Ok
11	H2874-23	VI049300.D	9 May 2016 16:39	FY/SY	Dilution
12	H2874-24	VI049301.D	9 May 2016 17:11	FY/SY	ReRun
13	H2874-25	VI049302.D	9 May 2016 17:43	FY/SY	Ok,M
14	VSTDCCC005	VI049303.D	9 May 2016 18:15	FY/SY	Ok
15	VI0509WBL02	VI049304.D	9 May 2016 19:05	FY/SY	Ok
16	H2943-12	VI049305.D	9 May 2016 19:54	FY/SY	Ok
17	H2943-13	VI049306.D	9 May 2016 20:25	FY/SY	Ok
18	H2943-14	VI049307.D	9 May 2016 20:57	FY/SY	Ok,M
19	H2943-15	VI049308.D	9 May 2016 21:28	FY/SY	Ok
20	H2943-16	VI049309.D	9 May 2016 22:00	FY/SY	Ok
21	H2943-17	VI049310.D	9 May 2016 22:32	FY/SY	Ok
22	H2943-18	VI049311.D	9 May 2016 23:03	FY/SY	Ok
23	H2943-19	VI049312.D	9 May 2016 23:35	FY/SY	Dilution
24	H2943-20	VI049313.D	10 May 2016 00:07	FY/SY	Ok
25	H2943-21	VI049314.D	10 May 2016 00:38	FY/SY	Ok
26	H2943-22	VI049315.D	10 May 2016 1:10	FY/SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050916

Review By	feifei	Review On	5/10/2016 2:19:02 PM		
SubDirectory	VI050916	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52815
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52818,VP52819,VP52833
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

27	H2943-23	VI049316.D	10 May 2016 1:41	FY/SY	Ok
28	VSTDCCC005EC	VI049317.D	10 May 2016 2:13	FY/SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI051116

Review By	feifei	Review On	5/12/2016 10:21:44 AM		
SubDirectory	VI051116	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52906
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52906,VP52907
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB37	VI049332.D	11 May 2016 10:00	FY/SY	Ok
2	VSTDCCC005	VI049333.D	11 May 2016 10:42	FY/SY	Ok,M
3	VI0511WBL01	VI049334.D	11 May 2016 11:25	FY/SY	Ok
4	H2874-24RE	VI049335.D	11 May 2016 12:05	FY/SY	Confirms
5	H2943-04	VI049336.D	11 May 2016 12:37	FY/SY	Ok,M
6	H2943-09	VI049337.D	11 May 2016 13:09	FY/SY	Ok,M
7	H2943-10	VI049338.D	11 May 2016 13:41	FY/SY	Ok,M
8	H2943-01DL	VI049339.D	11 May 2016 14:12	FY/SY	Not Ok
9	H2943-19DL	VI049340.D	11 May 2016 14:45	FY/SY	Ok
10	H2943-05DL	VI049341.D	11 May 2016 15:17	FY/SY	Ok,M
11	H2874-23DL	VI049342.D	11 May 2016 15:49	FY/SY	Ok
12	H2874-19DL	VI049343.D	11 May 2016 16:21	FY/SY	Ok,M
13	H2943-05	VI049344.D	11 May 2016 16:53	FY/SY	Dilution
14	VIBLK51	VI049345.D	11 May 2016 17:27	FY/SY	Ok
15	H2943-01	VI049346.D	11 May 2016 17:59	FY/SY	Ok
16	VSTDCCC005EC	VI049347.D	11 May 2016 18:32	FY/SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI051216

Review By	feifei	Review On	5/13/2016 12:28:48 PM		
SubDirectory	VI051216	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52951
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52954,VP52955
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB38	VI049348.D	12 May 2016 9:58	FY/SY	Ok
2	VSTDCCC005	VI049349.D	12 May 2016 12:03	FY/SY	Ok,M
3	VI0512WBL01	VI049350.D	12 May 2016 14:23	FY/SY	Ok,M
4	H2843-06	VI049351.D	12 May 2016 15:14	FY/SY	Ok
5	H2874-15	VI049352.D	12 May 2016 15:46	FY/SY	Ok
6	H2943-11	VI049353.D	12 May 2016 16:18	FY/SY	Ok
7	H3056-01	VI049354.D	12 May 2016 16:51	FY/SY	Ok
8	H3056-02	VI049355.D	12 May 2016 17:22	FY/SY	Dilution
9	H3056-03	VI049356.D	12 May 2016 17:54	FY/SY	Ok
10	H3056-04	VI049357.D	12 May 2016 18:27	FY/SY	Ok,M
11	H3056-05	VI049358.D	12 May 2016 18:58	FY/SY	Ok
12	H3056-06	VI049359.D	12 May 2016 19:31	FY/SY	Ok
13	VSTDCCC005EC	VI049360.D	12 May 2016 20:37	FY/SY	Ok,M

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050416

Review By	mohammad	Review On	5/5/2016 9:02:17 AM		
SubDirectory	VI050416	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52662
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52669,VP52670
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB32	BFB32	VI049219.D		Ok
2	VSTD0.533	VSTD0.533	VI049220.D		Ok
3	VSTD00134	VSTD00134	VI049221.D		Ok
4	VSTD00535	VSTD00535	VI049222.D		Ok
5	VSTD01036	VSTD01036	VI049223.D	(V#6390)	Ok
6	VSTD02037	VSTD02037	VI049224.D		Ok
7	VSTDCCC005	VSTD00538	VI049225.D		Ok
8	VI0504WBL01	VBLK27	VI049226.D		Ok
9	H2799-02DL2	C0H63DL2	VI049227.D	pH#1.0 vial C	Ok,M
10	H2743-14	H4015	VI049228.D	pH#1.0 vial B	Ok
11	H2743-15	H4017	VI049229.D	pH#1.0 vial B	Ok,M
12	H2743-09DL	H4009DL	VI049230.D	pH#1.0 vial B	Ok
13	H2743-10DL	H4011DL	VI049231.D	pH#1.0 vial B	Ok,M
14	H2743-13DL	H4007DL	VI049232.D	pH#1.0 vial B	Ok
15	H2834-04	H4006	VI049233.D	pH#1.0 vial A	Ok,M
16	H2834-01	H4002	VI049234.D	pH#1.0A need 5X	Dilution
17	H2834-02	H4002	VI049235.D	pH#1.0A Need 5x,MS not spike	Not Ok
18	H2834-03	H4002	VI049236.D	pH#1.0A Need 5x,MSD not spike	Not Ok
19	H2834-05	H4094	VI049237.D	pH#1.0A Need 5x	Dilution
20	H2834-06	H4121	VI049238.D	pH#1.0A Need 2x	Dilution
21	H2834-07	H4123	VI049239.D	pH#1.0A Need 5x	Dilution
22	H2834-08	H4124	VI049240.D	pH#1.0A E flag in previous sample	ReRun

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050416

Review By	mohammad	Review On	5/5/2016 9:02:17 AM		
SubDirectory	VI050416	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52662
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52669,VP52670
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

23	H2834-09	H4132	VI049241.D	pH#1.0 vial A	Ok
24	H2834-10	H4133	VI049242.D	pH#1.0 vial A	Ok,M
25	VSTDCCC005EC	VSTD00539	VI049243.D		Ok,M

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050516

Review By	feifei	Review On	5/6/2016 11:44:01 AM		
SubDirectory	VI050516	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52696
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52698,VP52699,VP52700
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB33	BFB33	VI049244.D		Ok
2	VSTDCCC005	VSTD00540	VI049245.D		Ok
3	VI0505WBL01	VBLK28	VI049246.D	(V#6390)	Ok,M
4	H2799-11	VHBLK01	VI049247.D	pH#1.6A SB	Ok
5	H2743-18	VHBLK01	VI049248.D	pH#1.6A SB	Ok
6	H2834-12	H4004	VI049249.D	pH#1.0 vial A	Ok,M
7	H2796-21	VHBLK01	VI049250.D	pH#1.6B SB	Ok,M
8	H2834-08RE	H4124RE	VI049251.D	pH#1.0 vial B	Confirms
9	H2834-01DL	H4002DL	VI049252.D	pH#1.0 vial C	Ok,M
10	H2834-02MS	H4002MS	VI049253.D	pH#1.0 vial B	Ok
11	H2834-03MSD	H4002MSD	VI049254.D	pH#1.0 vial B	Ok
12	VSTDCCC005	VSTD00541	VI049255.D		Ok
13	VI0505WBL02	VBLK29	VI049256.D		Ok,M
14	H2834-06DL	H4121DL	VI049257.D	pH#1.0 vial B	Ok
15	H2834-05DL	H4094DL	VI049258.D	pH#1.0 vial B	Ok
16	H2834-07DL	H4123DL	VI049259.D	pH#1.0 vial B	Ok,M
17	H2874-01	H4010	VI049260.D	pH#1.0 vial A	Ok
18	H2874-09	H4113	VI049261.D	pH#1.0A Need 5x	Dilution
19	H2874-10MS	H4113MS	VI049262.D	pH#1.0 vial A	Ok
20	H2874-11MSD	H4113MSD	VI049263.D	pH#1.0 vial A	Ok,M
21	H2874-04	H4099	VI049264.D	pH#1.6 vial A, conform concentration	Not Ok
22	H2874-05	H4101	VI049265.D	pH#1.0 vial A	Ok,M

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050516

Review By	feifei	Review On	5/6/2016 11:44:01 AM		
SubDirectory	VI050516	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52696
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52698,VP52699,VP52700
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

23	H2874-06	H4103	VI049266.D	pH#1.0 vial A	Ok,M
24	H2874-07	H4111	VI049267.D	pH#1.0 vial A	Ok,M
25	H2874-08	H4112	VI049268.D	pH#1.0 vial A	Ok,M
26	H2874-12	H4120	VI049269.D	pH#1.0 vial A	Ok
27	H2834-18	H4102	VI049270.D	pH#1.0A Need 5x	Dilution
28	H2834-19	H4116	VI049271.D	pH#1.0A Need 5x	Dilution
29	H2834-20	H4117	VI049272.D	pH#1.0A E flag in previous sample	ReRun
30	H2834-21	H4118	VI049273.D	pH#1.0A Confirm conc.	Not Ok
31	VSTDCCC005EC	VSTD00542	VI049274.D		Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050616

Review By	feifei	Review On	5/9/2016 12:05:45 PM		
SubDirectory	VI050616	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52731
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52733,VP52734,VP52735
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB34	BFB34	VI049275.D		Ok
2	VSTDCCC005	VSTD00543	VI049276.D		Ok
3	VI0506WBL01	VBLK30	VI049277.D	(V#6390)	Ok
4	H2834-21	H4118	VI049278.D	pH#1.0 vial B	Ok
5	H2874-04	H4099	VI049279.D	pH#1.0 vial B	Ok,M
6	H2834-20	H4117	VI049280.D	pH#1.0 vial B	Ok
7	H2834-18DL	H4102DL	VI049281.D	pH#1.0 vial B	Ok,M
8	H2874-13	H4126	VI049282.D	pH#1.0 vial A	Ok,M
9	H2874-14	H4129	VI049283.D	pH#1.6A Need 5x	Dilution
10	H2874-14DL	H4129DL	VI049284.D	pH#1.0 vial B	Ok,M
11	H2874-09DL	H4113DL	VI049285.D	pH#1.0 vial B	Ok
12	H2834-19DL	H4116DL	VI049286.D	pH#1.0 vial B	Ok
13	H2874-15	VHBLK01	VI049287.D	pH#1.6A SB, need to run adding sample	Not Ok
14	H2834-11	VHBLK01	VI049288.D	pH#1.0A SB	Ok
15	VSTDCCC005EC	VSTD00544	VI049289.D		Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050916

Review By	feifei	Review On	5/10/2016 2:19:02 PM		
SubDirectory	VI050916	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52815
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52818,VP52819,VP52833
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB35	BFB35	VI049290.D		Ok
2	VSTDCCC005	VSTD00545	VI049291.D		Ok,M
3	VI0509WBL01	VBLK31	VI049292.D	(V#6390)	Ok
4	H2874-21	H4020	VI049293.D	pH#1.0 vial A	Ok,M
5	H2874-20	H4019	VI049294.D	pH#1.0 vial A	Ok,M
6	H2874-16	H4012	VI049295.D	pH#1.0 vial A	Ok
7	H2874-17	H4013	VI049296.D	pH#1.0 vial A	Ok,M
8	H2874-18	H4016	VI049297.D	pH#1.0 vial A	Ok,M
9	H2874-19	H4018	VI049298.D	pH#1.0A Need 10x	Dilution
10	H2874-22	H4091	VI049299.D	pH#1.0 vial A	Ok
11	H2874-23	H4096	VI049300.D	pH#1.0A Need 10x	Dilution
12	H2874-24	H4097	VI049301.D	pH#1.0A E flag in previous sample	ReRun
13	H2874-25	H4098	VI049302.D	pH#1.0 vial A	Ok,M
14	VSTDCCC005	VSTD00546	VI049303.D		Ok
15	VI0509WBL02	VBLK32	VI049304.D		Ok
16	H2943-12	H4021	VI049305.D	pH#1.0 vial A	Ok
17	H2943-13	H4022	VI049306.D	pH#1.0 vial A	Ok
18	H2943-14	H4108	VI049307.D	pH#1.0 vial A	Ok,M
19	H2943-15	H4110	VI049308.D	pH#1.0 vial A	Ok
20	H2943-16	H4115	VI049309.D	pH#1.0 vial A	Ok
21	H2943-17	H4122	VI049310.D	pH#1.0 vial A	Ok
22	H2943-18	H4127	VI049311.D	pH#1.0 vial A	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050916

Review By	feifei	Review On	5/10/2016 2:19:02 PM		
SubDirectory	VI050916	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52815
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52818,VP52819,VP52833
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

23	H2943-19	H4130	VI049312.D	pH#1.0A Need 5x	Dilution
24	H2943-20	H4131	VI049313.D	pH#1.0 vial A	Ok
25	H2943-21	H4135	VI049314.D	pH#1.0 vial A	Ok
26	H2943-22	H4136	VI049315.D	pH#1.0 vial A	Ok
27	H2943-23	H4139	VI049316.D	pH#1.0 vial A	Ok
28	VSTDCCC005EC	VSTD00547	VI049317.D		Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI051116

Review By	feifei	Review On	5/12/2016 10:21:44 AM		
SubDirectory	VI051116	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52906
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52906,VP52907
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB37	BFB37	VI049332.D		Ok
2	VSTDCCC005	VSTD00550	VI049333.D		Ok,M
3	VI0511WBL01	VBLK34	VI049334.D	(V#6390)	Ok
4	H2874-24RE	H4097RE	VI049335.D	pH#1.0 vial B	Confirms
5	H2943-04	H4109	VI049336.D	pH#1.0 vial B	Ok,M
6	H2943-09	H4137	VI049337.D	pH#1.0 vial B	Ok,M
7	H2943-10	H4138	VI049338.D	pH#1.0 vial B	Ok,M
8	H2943-01DL	H4104DL	VI049339.D	Not required	Not Ok
9	H2943-19DL	H4130DL	VI049340.D	pH#1.0 vial B	Ok
10	H2943-05DL	H4125DL	VI049341.D	pH#1.0 vial B	Ok,M
11	H2874-23DL	H4096DL	VI049342.D	pH#1.0 vial B	Ok
12	H2874-19DL	H4018DL	VI049343.D	pH#1.0 vial B	Ok,M
13	H2943-05	H4125	VI049344.D	pH#1.0B Need 10x	Dilution
14	VIBLK51	VIBLK51	VI049345.D		Ok
15	H2943-01	H4104	VI049346.D	pH#1.0 vial B	Ok
16	VSTDCCC005EC	VSTD00526	VI049347.D		Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI051216

Review By	feifei	Review On	5/13/2016 12:28:48 PM		
SubDirectory	VI051216	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52951
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52954,VP52955
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB38	BFB38	VI049348.D		Ok
2	VSTDCCC005	VSTD00527	VI049349.D		Ok,M
3	VI0512WBL01	VBLK35	VI049350.D	(V#6390)	Ok,M
4	H2843-06	VHBLK01	VI049351.D	pH#1.6A SB	Ok
5	H2874-15	VHBLK01	VI049352.D	pH#1.6B SB	Ok
6	H2943-11	VHBLK01	VI049353.D	pH#1.6A SB	Ok
7	H3056-01	H4023	VI049354.D	pH#1.0 vial A	Ok
8	H3056-02	H4024	VI049355.D	pH#1.0A Need 5x	Dilution
9	H3056-03	H4092	VI049356.D	pH#1.0 vial A	Ok
10	H3056-04	H4093	VI049357.D	pH#1.0 vial A	Ok,M
11	H3056-05	H4095	VI049358.D	pH#1.0 vial A	Ok
12	H3056-06	H4100	VI049359.D	pH#1.0 vial A	Ok
13	VSTDCCC005EC	VSTD00528	VI049360.D		Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM050516

Review By	sohil	Review On	5/6/2016 7:15:46 PM		
SubDirectory	BM050516	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5017,1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	DFTPP64	BM005230.D	05 May 2016 10:23	UM/SJ	Ok
2	SSTD00540	BM005231.D	05 May 2016 11:09	UM/SJ	Ok
3	SSTD01041	BM005232.D	05 May 2016 11:45	UM/SJ	Ok
4	SSTD02042	BM005233.D	05 May 2016 12:21	UM/SJ	Ok,M
5	SSTD04043	BM005234.D	05 May 2016 12:57	UM/SJ	Ok,M
6	SSTD08044	BM005235.D	05 May 2016 13:33	UM/SJ	Ok,M
7	SSTD16045	BM005236.D	05 May 2016 15:53	UM/SJ	Ok,M
8	SSTDCCC020	BM005237.D	05 May 2016 16:30	UM/SJ	Ok,M
9	PB90262BL	BM005238.D	05 May 2016 17:06	UM/SJ	Ok,M
10	PB90297BL	BM005239.D	05 May 2016 17:42	UM/SJ	Ok
11	H2729-02ME	BM005240.D	05 May 2016 18:26	UM/SJ	Dilution
12	PB90263BL	BM005241.D	05 May 2016 19:02	UM/SJ	Ok,M
13	PB90285BL	BM005242.D	05 May 2016 19:39	UM/SJ	Ok,M
14	H2813-01	BM005243.D	05 May 2016 20:15	UM/SJ	Dilution
15	H2813-02	BM005244.D	05 May 2016 20:51	UM/SJ	Dilution
16	H2813-03	BM005245.D	05 May 2016 21:28	UM/SJ	Dilution
17	H2813-04	BM005246.D	05 May 2016 22:04	UM/SJ	Dilution
18	H2813-05	BM005247.D	05 May 2016 22:41	UM/SJ	Ok,M
19	H2813-06	BM005248.D	05 May 2016 23:17	UM/SJ	Dilution
20	H2813-07	BM005249.D	05 May 2016 23:53	UM/SJ	Dilution
21	H2813-08	BM005250.D	06 May 2016 00:30	UM/SJ	Ok,M
22	SSTDCCC020	BM005251.D	06 May 2016 01:06	UM/SJ	Ok,M
23	H2813-09	BM005252.D	06 May 2016 01:46	UM/SJ	Dilution
24	H2813-10	BM005253.D	06 May 2016 02:22	UM/SJ	Dilution
25	H2813-11	BM005254.D	06 May 2016 02:58	UM/SJ	Dilution
26	H2813-12	BM005255.D	06 May 2016 03:35	UM/SJ	Dilution

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM050516

Review By	sohil	Review On	5/6/2016 7:15:46 PM		
SubDirectory	BM050516	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5017,1ul IS/ 100ul sample
ICV/I.BLK	NA

27	H2813-13	BM005256.D	06 May 2016 04:11	UM/SJ	Dilution
28	H2813-14	BM005257.D	06 May 2016 04:47	UM/SJ	Dilution
29	H2813-19	BM005258.D	06 May 2016 05:24	UM/SJ	Ok,M
30	H2813-20	BM005259.D	06 May 2016 06:00	UM/SJ	Ok,M
31	H2813-17	BM005260.D	06 May 2016 08:35	UM/SJ	Ok
32	H2813-18	BM005261.D	06 May 2016 09:11	UM/SJ	Ok
33	H2729-02MEDL	BM005262.D	06 May 2016 09:47	UM/SJ	Ok,M
34	SSTDCCC020	BM005263.D	06 May 2016 10:24	UM/SJ	Ok,M
35	H2813-01DL	BM005264.D	06 May 2016 11:00	UM/SJ	Not Ok
36	H2813-02DL	BM005265.D	06 May 2016 11:36	UM/SJ	Not Ok
37	H2813-03DL	BM005266.D	06 May 2016 12:13	UM/SJ	Ok
38	H2813-04DL	BM005267.D	06 May 2016 12:49	UM/SJ	Ok
39	H2813-06DL	BM005268.D	06 May 2016 14:05	UM/SJ	Ok
40	H2813-07DL	BM005269.D	06 May 2016 14:41	UM/SJ	Ok
41	H2813-09DL	BM005270.D	06 May 2016 15:17	UM/SJ	Ok
42	H2813-10DL	BM005271.D	06 May 2016 15:53	UM/SJ	Ok
43	H2813-11DL	BM005272.D	06 May 2016 16:30	UM/SJ	Ok
44	H2813-12DL	BM005273.D	06 May 2016 17:06	UM/SJ	Ok
45	SSTDCCC020EC	BM005274.D	06 May 2016 17:42	UM/SJ	Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051316

Review By	sohil	Review On	5/16/2016 7:02:44 PM		
SubDirectory	BM051316	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5022, 1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr #	SampleId	Data File Name	Date-Time	Operator	Status
1	DFTPP38	BM005426.D	13 May 2016 11:10	UM/SJ	Ok
2	SSTDCCC020	BM005427.D	13 May 2016 11:46	UM/SJ	Ok,M
3	PB90403BL	BM005428.D	13 May 2016 12:23	UM/SJ	Ok
4	H2874-07	BM005429.D	13 May 2016 12:59	UM/SJ	Ok
5	H2874-09	BM005430.D	13 May 2016 13:36	UM/SJ	Ok,M
6	H2874-10MS	BM005431.D	13 May 2016 14:12	UM/SJ	Ok,M
7	H2874-11MSD	BM005432.D	13 May 2016 14:49	UM/SJ	Ok,M
8	H2874-17	BM005433.D	13 May 2016 15:25	UM/SJ	Ok,M
9	H2874-24	BM005434.D	13 May 2016 16:02	UM/SJ	Ok,M
10	SSTDCCC020	BM005435.D	13 May 2016 17:05	UM/SJ	Ok,M
11	PB90371BL	BM005436.D	13 May 2016 17:42	UM/SJ	Ok
12	H2847-14	BM005437.D	13 May 2016 18:19	UM/SJ	Ok,M
13	H2847-02	BM005438.D	13 May 2016 18:55	UM/SJ	Ok,M
14	H2847-05	BM005439.D	13 May 2016 19:32	UM/SJ	Ok,M
15	H2847-06	BM005440.D	13 May 2016 20:09	UM/SJ	Ok,M
16	H2847-07	BM005441.D	13 May 2016 20:45	UM/SJ	Ok,M
17	H2847-08	BM005442.D	13 May 2016 21:22	UM/SJ	Ok,M
18	H2847-09	BM005443.D	13 May 2016 21:58	UM/SJ	Ok,M
19	H2847-13	BM005444.D	13 May 2016 22:35	UM/SJ	Ok,M
20	H2847-01	BM005445.D	13 May 2016 23:11	UM/SJ	Ok,M
21	H2847-15	BM005446.D	13 May 2016 23:48	UM/SJ	Ok,M
22	H2847-16	BM005447.D	14 May 2016 00:24	UM/SJ	Ok,M
23	H2847-17	BM005448.D	14 May 2016 01:00	UM/SJ	Ok,M
24	SSTDCCC020	BM005449.D	14 May 2016 04:32	UM/SJ	Ok,M
25	PB90330BL	BM005450.D	14 May 2016 05:09	UM/SJ	Ok,M
26	H2834-01	BM005451.D	14 May 2016 05:45	UM/SJ	Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051316

Review By	sohil	Review On	5/16/2016 7:02:44 PM		
SubDirectory	BM051316	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5022, 1ul IS/ 100ul sample
ICV/I.BLK	NA

27	H2834-02MS	BM005452.D	14 May 2016 06:21	UM/SJ	Ok,M
28	H2834-03MSD	BM005453.D	14 May 2016 06:58	UM/SJ	Ok,M
29	H2834-18	BM005454.D	14 May 2016 07:34	UM/SJ	Ok,M
30	H2834-19	BM005455.D	14 May 2016 08:10	UM/SJ	Ok,M
31	H2834-20	BM005456.D	14 May 2016 08:47	UM/SJ	Ok,M
32	H2834-21	BM005457.D	14 May 2016 09:23	UM/SJ	Ok,M
33	H2853-18	BM005458.D	14 May 2016 09:59	UM/SJ	Ok,M
34	H2834-14MS	BM005459.D	14 May 2016 10:36	UM/SJ	Ok,M
35	H2834-15MSD	BM005460.D	14 May 2016 11:12	UM/SJ	Ok,M
36	SSTDCCC020EC	BM005461.D	14 May 2016 13:09	UM/SJ	Ok

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM050516

Review By	sohil	Review On	5/6/2016 7:15:46 PM		
SubDirectory	BM050516	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5017, 1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	DFTPP64	DFTPP64	BM005230.D		Ok
2	SSTD00540	SSTD00540	BM005231.D		Ok
3	SSTD01041	SSTD01041	BM005232.D		Ok
4	SSTD02042	SSTD02042	BM005233.D		Ok,M
5	SSTD04043	SSTD04043	BM005234.D		Ok,M
6	SSTD08044	SSTD08044	BM005235.D		Ok,M
7	SSTD16045	SSTD16045	BM005236.D		Ok,M
8	SSTDCCC020	SSTD02046	BM005237.D		Ok,M
9	PB90262BL	SBLK62	BM005238.D		Ok,M
10	PB90297BL	SBLK97	BM005239.D		Ok
11	H2729-02ME	BD3D0ME	BM005240.D	Need 2X	Dilution
12	PB90263BL	SBLK63	BM005241.D		Ok,M
13	PB90285BL	SBLK85	BM005242.D		Ok,M
14	H2813-01	BC7M6	BM005243.D	Need 20X	Dilution
15	H2813-02	BC7M7	BM005244.D	Need 10X	Dilution
16	H2813-03	BC7P2	BM005245.D	Need 10X	Dilution
17	H2813-04	BC7P3	BM005246.D	Need 10X	Dilution
18	H2813-05	BC7Q4	BM005247.D		Ok,M
19	H2813-06	BC7R8	BM005248.D	Need 10X	Dilution
20	H2813-07	BC7R9	BM005249.D	Need 10X	Dilution
21	H2813-08	BC7S5	BM005250.D		Ok,M
22	SSTDCCC020	SSTD02047	BM005251.D		Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM050516

Review By	sohil	Review On	5/6/2016 7:15:46 PM		
SubDirectory	BM050516	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5017, 1ul IS/ 100ul sample
ICV/I.BLK	NA

23	H2813-09	BC7S7	BM005252.D	Need 10X	Dilution
24	H2813-10	BC7S8	BM005253.D	Need 10X	Dilution
25	H2813-11	BC7T1	BM005254.D	Need 10X	Dilution
26	H2813-12	BC7T2	BM005255.D	Need 10X	Dilution
27	H2813-13	BC7T4	BM005256.D	Need 10X	Dilution
28	H2813-14	BC7T5	BM005257.D	Need 10X	Dilution
29	H2813-19	BC812	BM005258.D		Ok,M
30	H2813-20	BC813	BM005259.D		Ok,M
31	H2813-17	BC810	BM005260.D		Ok
32	H2813-18	BC811	BM005261.D		Ok
33	H2729-02MEDL	BD3D0MEDL	BM005262.D		Ok,M
34	SSTDCCC020	SSTD02048	BM005263.D		Ok,M
35	H2813-01DL	BC7M6DL	BM005264.D	Need further dilution	Not Ok
36	H2813-02DL	BC7M7DL	BM005265.D	wrong dilution	Not Ok
37	H2813-03DL	BC7P2DL	BM005266.D		Ok
38	H2813-04DL	BC7P3DL	BM005267.D		Ok
39	H2813-06DL	BC7R8DL	BM005268.D		Ok
40	H2813-07DL	BC7R9DL	BM005269.D		Ok
41	H2813-09DL	BC7S7DL	BM005270.D		Ok
42	H2813-10DL	BC7S8DL	BM005271.D		Ok
43	H2813-11DL	BC7T1DL	BM005272.D		Ok
44	H2813-12DL	BC7T2DL	BM005273.D		Ok
45	SSTDCCC020EC	SSTD02049	BM005274.D		Ok,M

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051316

Review By	sohil	Review On	5/16/2016 7:02:56 PM		
SubDirectory	BM051316	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5022, 1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	DFTPP38	DFTPP38	BM005426.D		Ok
2	SSTDCCC020	SSTD02066	BM005427.D		Ok,M
3	PB90403BL	SBLK03	BM005428.D		Ok
4	H2874-07	H4111	BM005429.D		Ok
5	H2874-09	H4113	BM005430.D		Ok,M
6	H2874-10MS	H4113MS	BM005431.D		Ok,M
7	H2874-11MSD	H4113MSD	BM005432.D		Ok,M
8	H2874-17	H4013	BM005433.D		Ok,M
9	H2874-24	H4097	BM005434.D		Ok,M
10	SSTDCCC020	SSTD02034	BM005435.D		Ok,M
11	PB90371BL	SBLK71	BM005436.D		Ok
12	H2847-14	BD3C2	BM005437.D		Ok,M
13	H2847-02	BD371	BM005438.D		Ok,M
14	H2847-05	BD373	BM005439.D		Ok,M
15	H2847-06	BD374	BM005440.D		Ok,M
16	H2847-07	BD376	BM005441.D		Ok,M
17	H2847-08	BD377	BM005442.D		Ok,M
18	H2847-09	BD378	BM005443.D		Ok,M
19	H2847-13	BD3C1	BM005444.D		Ok,M
20	H2847-01	B0AR7	BM005445.D		Ok,M
21	H2847-15	BD3C3	BM005446.D		Ok,M
22	H2847-16	BD3C4	BM005447.D		Ok,M

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

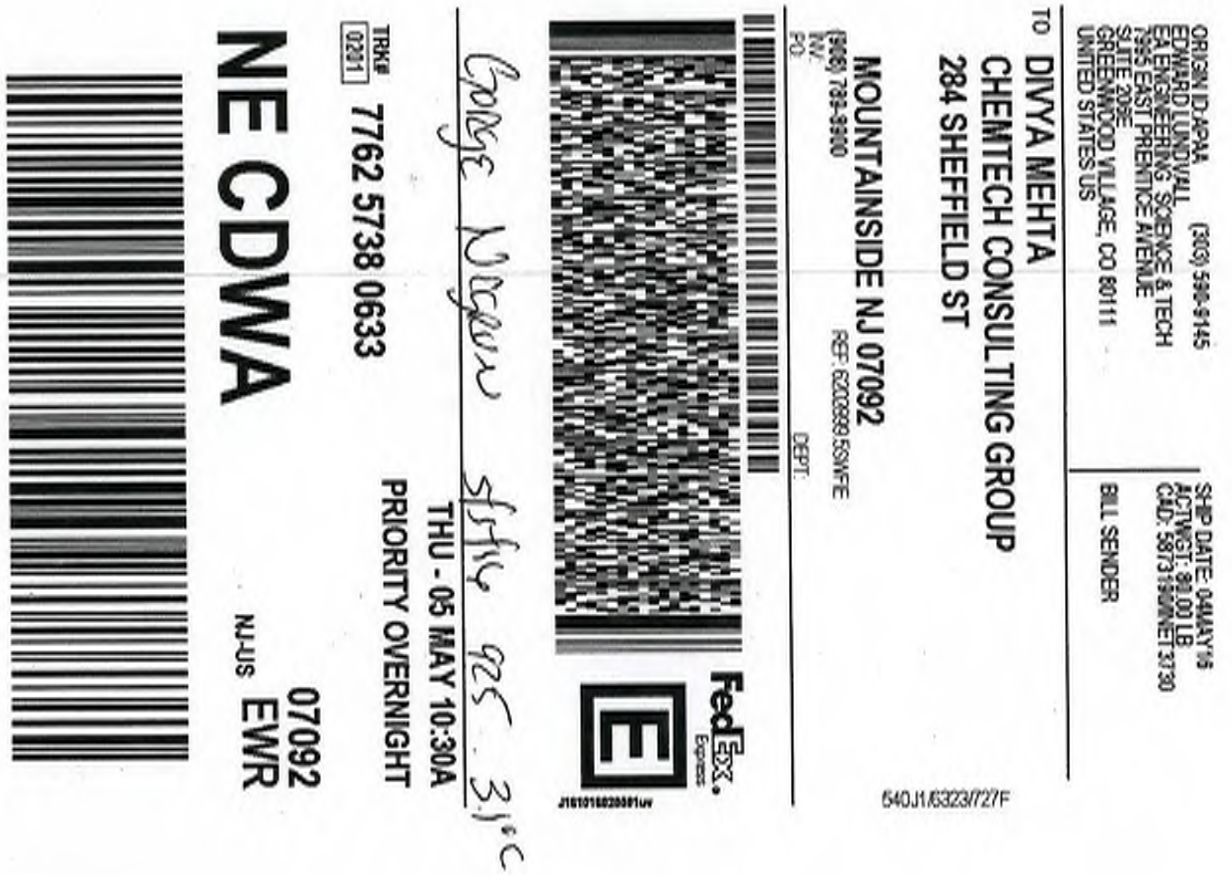
Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051316

Review By	sohil	Review On	5/16/2016 7:02:56 PM		
SubDirectory	BM051316	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5022, 1ul IS/ 100ul sample
ICV/I.BLK	NA

23	H2847-17	BD3E2	BM005448.D		Ok,M
24	SSTDCCC020	SSTD02035	BM005449.D		Ok,M
25	PB90330BL	SBLK30	BM005450.D		Ok,M
26	H2834-01	H4002	BM005451.D		Ok,M
27	H2834-02MS	H4002MS	BM005452.D		Ok,M
28	H2834-03MSD	H4002MSD	BM005453.D		Ok,M
29	H2834-18	H4102	BM005454.D		Ok,M
30	H2834-19	H4116	BM005455.D		Ok,M
31	H2834-20	H4117	BM005456.D		Ok,M
32	H2834-21	H4118	BM005457.D		Ok,M
33	H2853-18	D9X09	BM005458.D		Ok,M
34	H2834-14MS	H4061MS	BM005459.D		Ok,M
35	H2834-15MSD	H4061MSD	BM005460.D		Ok,M
36	SSTDCCC020EC	SSTD02036	BM005461.D		Ok



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Copy
Original Documents are included in CSF H4002
S.M. Todkari
Signature
5/5/16
Date

ORIGIN ID:APAA (303) 590-9145
EDWARD LUNDVALL
EA ENGINEERING, SCIENCE & TECH
7995 EAST PRENTICE AVENUE
SUITE 206E
GREENWOOD VILLAGE, CO 80111
UNITED STATES US

SHIP DATE: 04MAY16
ACTWGT: 80.00 LB
CAD: 5873190/INET3730

BILL SENDER

TO **DIVYA MEHTA**
CHEMTECH CONSULTING GROUP
284 SHEFFIELD ST

MOUNTAINSIDE NJ 07092
(908) 789-8900 REF: 6202999.5SWFIE
INV:
PO: DEPT:

540J16323/727F

FedEx Express

George Megaw 3.3°C 925

THU - 05 MAY 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **7762 5738 5598**

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NJ-US **EWR**

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EDWARD LUNDVALL
EA ENGINEERING SCIENCE & TECH
7995 EAST PRENTICE AVENUE
SUITE 206E
GREENWOOD VILLAGE, CO 80111
UNITED STATES US

SHIP DATE: 05MAY16
ACTWGT: 60.00 LB
CAD: 5873190/INET3730

BILL SENDER

TO **DIVYA MEHTA**
CHEMTECH CONSULTING GROUP
284 SHEFFIELD ST

MOUNTAINSIDE NJ 07092
(908) 789-8900 REF: 6202899.SWFIE
INV:
PO: DEPT:

Chris
5-6-16
12:35
3.7°C

540J163237/727F

FedEx. Express

FRI - 06 MAY 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **7762 6814 1330**

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NJ-US **EWR**

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ORIGIN ID:APAA (303) 590-9145
EDWARD LUND//ALL
EA ENGINEERING SCIENCE & TECH
7995 EAST PRENTICE AVENUE
SUITE 206E
GREENWOOD VILLAGE, CO 80111
UNITED STATES US

SHIP DATE: 05MAY16
ACTWGT: 80.00 LB
CAD: 5873190/INET3730

BILL SENDER

TO **DIVYA MEHTA**
CHEMTECH CONSULTING GROUP
284 SHEFFIELD ST

MOUNTAINSIDE NJ 07092
(908) 789-8900 REF: 6203899.SSWFIE
INV:
PO: DEPT:

Chain
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12:35
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Cell

540J163230/27F

FedEx Express

J161018826/ffaa

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TRK# 0201 **7762 6814 0300**

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Login Summary Report

Order ID :	H2874	Order Date :	5/6/2016 12:35:00 PM	Project Mgr :	Mohammad
Client :	USEPA CLP Organics	Project :	46114	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	5/6/2016 12:35:00 PM	EDD Type :	EPA CLP
Date Sign Off :	5/6/2016 4:31:45 PM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
H2874-01	H4010	Water	05/04/2016		TB				
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-04	H4099	Water	05/03/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-05	H4101	Water	05/03/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-06	H4103	Water	05/03/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-07	H4111	Water	05/03/2016						
				SVOC-TCL BNA -20		SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-08	H4112	Water	05/03/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-09	H4113	Water	05/03/2016						
				SVOC-TCL BNA -20		SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-10	H4113MS	Water	05/03/2016						
				SVOC-TCL BNA -20		SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-11	H4113MSD	Water	05/03/2016						
				SVOC-TCL BNA -20		SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-12	H4120	Water	05/03/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-13	H4126	Water	05/03/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-14	H4129	Water	05/03/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-15	VHBLK01	Water	05/04/2016						

				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-16	H4012	Water	05/05/2016					
				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-17	H4013	Water	05/04/2016					
				SVOC-TCL BNA -20	SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-18	H4016	Water	05/04/2016					
				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-19	H4018	Water	05/04/2016					
				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-20	H4019	Water	05/04/2016					
				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-21	H4020	Water	05/05/2016					
				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-22	H4091	Water	05/04/2016					
				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-23	H4096	Water	05/04/2016					
				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-24	H4097	Water	05/04/2016					
				SVOC-TCL BNA -20	SOM02.2_SVOC	15	05/26/2016	05/26/2016
				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016
H2874-25	H4098	Water	05/04/2016					
				VOC-Low Level -15	SOM02.2_Trace	15	05/26/2016	05/26/2016

WORKLIST(Hardcopy Internal Chain)

WorkList Name : H2874 SVOC 2.2 W WorkList ID : 86803 Date : 5/8/2016 8:02:51 AM

Due Date	Matrix	Sample	Test	Preservative	Customer	Storage Location	Customer Sample	Collect Date	Method
05/10/2016	Water	H2874-07	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4111	05/03/2016	SOM02.2_SVC
05/10/2016	Water	H2874-09	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4113	05/03/2016	SOM02.2_SVC
05/10/2016	Water	H2874-10	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4113MS	05/03/2016	SOM02.2_SVC
05/10/2016	Water	H2874-11	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4113MSD	05/03/2016	SOM02.2_SVC
05/11/2016	Water	H2874-17	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4013	05/04/2016	SOM02.2_SVC
05/11/2016	Water	H2874-24	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4097	05/04/2016	SOM02.2_SVC

Date/Time 05/09/16
Received by:
Relinquished by: JD

Date/Time 05/09/16
Received by: FP
Relinquished by:

mildred V. Reyes

From: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Sent: Monday, May 09, 2016 11:20 AM
To: epa@chemtech.net
Cc: "Goodrich, Donald"; Moss, Pamela
Subject: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC | FINAL
Attachments: 46114-0507.pdf

Sohil,

Issue: The water samples for this Case are scheduled for 86 TVOA and 17 SVOA analysis; however, the COCs list VOA=TCL VOCs by CLP.

Resolution: Per Region 8, the samples in question shall be analyzed as scheduled for TVOA. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples. This resolution may be applied to all COCs received for this Case with this issue.

Please let me know if you have any questions. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2, 7, and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
www.csra.com

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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Monday, May 09, 2016 11:15 AM
To: Vanaman, Alexandra
Cc: Moss, Pamela
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Correct, thanks.
-dgg

Don Goodrich

US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Monday, May 09, 2016 9:14 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Cc: Moss, Pamela <pmoss@eaest.com>
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Hi Don,

Should this resolution be applied to all COCs received for this Case with this issue?

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2, 7, and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Monday, May 09, 2016 11:12 AM
To: Vanaman, Alexandra
Cc: Moss, Pamela
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Ali, the samples in question shall be analyzed as scheduled for TVOA.

Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Monday, May 09, 2016 7:52 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>

Cc: Moss, Pamela <pmoss@eaest.com>
Subject: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Good morning,

CHM is reporting the following issue regarding Case 46114. Please advise.

Issue: The water samples for this Case are scheduled for 86 TVOA and 17 SVOA analysis; however, the COCs list VOA=TCL VOCs by CLP.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
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From: Sohil Jodhani [mailto:Sohil@chemtech.net]
Sent: Saturday, May 07, 2016 11:29 AM
To: Vanaman, Alexandra
Cc: DASSsupport; Mohammad@chemtech.net
Subject: Region 08 | Case 46114 | Lab CHM | SDG multiple | Issue Discrepancies with tags, jars, and/or COC

Hi Alexandra,

Samples received today with 05/07 shipment and lab would like to confirm below.

Issue: As per ASR, water samples are scheduled for TVOA analysis but analysis key written on the COC is VOA=TCL VOCs by CLP so lab would like to confirm that Lab is following the ASR and doing analysis for TVOA for water samples, Please advise.

This issue is addressing for all previous shipments also.

Thanks & Regards,

Sohil Jodhani
QC-Analyst
Direct Line: (908)728-3148
General Number: (908)789-8900
Fax: (908)789-8922

CHEMTECH
284 Sheffield Street,
Mountainside, New Jersey 07092
Phone: (908) 789 8900
Fax: (908) 789 8922

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LABORATORY ACCREDITATION BUREAU
ACCREDITED ISO/IEC 17025

DoD ELAP

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SDG COVER PAGE

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

SOW No. : ISM02.3

EPA Sample No.	Lab Sample Id	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
MH4002	H2837-01		X	X	
MH4002D	H2837-02		X	X	
MH4002S	H2837-03		X	X	
MH4025	H2837-04		X	X	
MH4025D	H2837-05		X	X	
MH4025S	H2837-06		X	X	
MH4028	H2837-07		X	X	
MH4029	H2837-08		X	X	
MH4030	H2837-09		X	X	
MH4113	H2837-10		X	X	
MH4116	H2837-11		X	X	
MH4202	H2837-12		X	X	
MH4211	H2837-13		X	X	
MH4217	H2837-14		X	X	
MH4218	H2837-15		X	X	
MH4113D	H2837-16		X	X	
MH4113S	H2837-17		X	X	

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative. Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name:

Date: 5/25/16 Title: QA/QC Dco

SDG# MH4002

USEPA CLP COC (LAB COPY)
DateShipped: 5/2/2016
CarrierName: FedEx
AirbillNo: 776245148907

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050216-102658-0009
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-GW-MTO-MS	H4001	Ground Water/ Ned Lundvall	Grab	SVOC(21)	1327 (6 C), 1328 (6 C) (2)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO	H4002	Ground Water/ Ned Lundvall	Grab	SVOC(21)	1119 (6 C), 1120 (6 C) (2)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MSD	H4004	Ground Water/ Ned Lundvall	Grab	SVOC(21)	1335 (6 C), 1336 (6 C) (2)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO	MH4001	Ground Water/ Ned Lundvall	Grab	DMet(21)	1121 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO	MH4002	Ground Water/ Ned Lundvall	Grab	TMet(21)	1122 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MS	MH4005	Ground Water/ Ned Lundvall	Grab	DMet(21)	1329 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MS	MH4014	Ground Water/ Ned Lundvall	Grab	TMet(21)	1330 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MSD	MH4016	Ground Water/ Ned Lundvall	Grab	DMet(21)	1337 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	
A-GW-MTO-MSD	MH4017	Ground Water/ Ned Lundvall	Grab	TMet(21)	1338 (HNO3 pH<2) (1)	Mt Olivet	05/02/2016 09:00	

Original Documents are included in CSF MH4002
Copy
S.M. Lundvall
Signature
5/3/16
Date

Sample(s) to be used for Lab QC: A-GW-MTO-MS Tag 1327, A-GW-MTO-MS Tag 1328, A-GW-MTO-MSD Tag 1335, A-GW-MTO-MSD Tag 1336, A-GW-MTO-MS Tag 1329, A-GW-MTO-MS Tag 1330, A-GW-MTO-MSD Tag 1337, A-GW-MTO-MSD Tag 1338

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: SVOC=TCL SVOCs by CLP, DMet=Dissolved Metals, TMet=Total Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/2/16 1700	Fedex		
			George Nesslow	5/3/16 920	4.9°C

2

SDG # MH4002

USEPA CLP COC (LAB COPY)
DateShipped: 5/3/2016
CarrierName: FedEx
AirbillNo: 776255658133

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050316-160550-0012
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-TB-006	H4004	Water/ Ned Lundvall		VOC(21)	1458 (HCL), 1459 (HCL), 1460 (HCL) (3)	A-TB-006	05/03/2016 07:30	—
A-SS-09	H4061	Soil/ Ned Lundvall	Grab	SVOC(21), VOC(21)	1004 (6 C), 1012 (6 C), 1013 (6 C), 1014 (6 C), 1018 (6 C) (5)	A-SW-09	05/03/2016 08:55	—
A-SS-09-MS	H4061MS	Soil/ Ned Lundvall	Grab	SVOC(21), VOC(21)	1352 (6 C), 1354 (6 C), 1355 (6 C), 1356 (6 C), 1357 (6 C) (5)	A-SW-09	05/03/2016 08:55	—
A-SS-09-MSD	H4061MSD	Soil/ Ned Lundvall	Grab	SVOC(21), VOC(21)	1358 (6 C), 1360 (6 C), 1361 (6 C), 1362 (6 C), 1363 (6 C) (5)	A-SW-09	05/03/2016 08:55	—
A-SS-26	H4076	Soil/ Ned Lundvall	Grab	VOC(21), SVOC(21)	1006 (6 C), 1007 (6 C), 1015 (6 C), 1016 (6 C), 1017 (6 C) (5)	A-SW-26	05/03/2016 13:45	—
A-SS-09	MH4025	Soil/ Ned Lundvall	Grab	TMet(21)	1005 (6 C) (1)	A-SW-09	05/03/2016 08:55	—
A-SS-09-MSD	MH4025D	Soil/ Ned Lundvall	Grab	TMet(21)	1359 (6 C) (1)	A-SW-09	05/03/2016 08:55	—
A-SS-09-MS	MH4025S	Soil/ Ned Lundvall	Grab	TMet(21)	1353 (6 C) (1)	A-SW-09	05/03/2016 08:55	—
A-SS-26	MH4028	Soil/ Ned Lundvall	Grab	TMet(21)	1008 (HNO3 pH<2) (1)	A-SW-26	05/03/2016 13:45	—

Original Documents are included in CSF MH4002
S.M. Hodkins
Signature
5/6/16
Date

Sample(s) to be used for Lab QC: A-SS-09-MS Tag 1352, A-SS-09-MS Tag 1354, A-SS-09-MS Tag 1355, A-SS-09-MS Tag 1356, A-SS-09-MS Tag 1357, A-SS-09-MSD Tag 1358, A-SS-09-MSD Tag 1360, A-SS-09-MSD Tag 1361, A-SS-09-MSD Tag 1362, A-SS-09-MSD Tag 1363, A-SS-09-MSD Tag 1359, A-SS-09-MS Tag 1353

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP, SVOC=TCL SVOCs by CLP, TMet=Total Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/3/16 1700	Fedex		
	Fedex	9:25 5-4-16		9:25 5-4-16	36°C

3

SDG# MH4002

USEPA CLP COC (LAB COPY)
DateShipped: 5/4/2016
CarrierName: FedEx
AirbillNo: 776257380633

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050416-122017-0019
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-023-MS	H4113MS	Surface Water/ Ned Lundvall	Grab	VOC(21)	1376 (HCL), 1377 (HCL), 1378 (HCL) (3)	A-SW-23	05/03/2016 09:30	
A-SW-023-MSD	H4113MSD	Surface Water/ Ned Lundvall	Grab	VOC(21)	1391 (HCL), 1392 (HCL), 1393 (HCL) (3)	A-SW-23	05/03/2016 09:30	
A-SW-026	H4116	Surface Water/ Ned Lundvall	Grab	VOC(21)	1207 (HCL), 1208 (HCL), 1209 (HCL) (3)	A-SW-26	05/03/2016 13:45	
A-SW-027	H4117	Surface Water/ Ned Lundvall	Grab	VOC(21)	1210 (HCL), 1211 (HCL), 1212 (HCL) (3)	A-SW-27	05/03/2016 11:20	
A-SW-028	H4118	Surface Water/ Ned Lundvall	Grab	VOC(21)	1213 (HCL), 1214 (HCL), 1215 (HCL) (3)	A-SW-28	05/03/2016 12:00	
A-SW-030	H4120	Surface Water/ Ned Lundvall	Grab	VOC(21)	1219 (HCL), 1220 (HCL), 1221 (HCL) (3)	A-SW-30	05/03/2016 16:30	
A-SW-036	H4126	Surface Water/ Ned Lundvall	Grab	VOC(21)	1237 (HCL), 1238 (HCL), ~~1239 (HCL) (3)~~ 2	A-SW-36	05/03/2016 17:30	
A-SW-039	H4129	Surface Water/ Ned Lundvall	Grab	VOC(21)	1246 (HCL), 1247 (HCL), 1248 (HCL) (3)	A-SW-39	05/03/2016 17:00	
A-SS-01-D	MH4029	Soil/ Ned Lundvall	Grab	TMet(21)	1038 (6 C) (1)	A-SW-~~15~~01	05/04/2016 13:40	
A-SS-01	MH4030	Soil/ Ned Lundvall	Grab	TMet(21)	1002 (6 C) (1)	A-SW-~~15~~01	05/04/2016 13:40	

Copy
Original Documents are Included in CSF MH4002
Signature
5/5/16
Date

Sample(s) to be used for Lab QC: A-SW-023-MS Tag 1378, A-SW-023-MSD Tag 1391, A-SW-023-MSD Tag 1392, A-SW-023-MSD Tag 1393

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP, SVOC=TCL SVOCs by CLP, TMet=Total Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/4/16 1600	Fedex		
			GORGE NEGRON	5/5/16 925	31°C

SDG# MH4002

USEPA CLP COC (LAB COPY)

DateShipped: 5/4/2016
CarrierName: FedEx
AirbillNo: 776267136562

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050416-093118-0016

Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-023	MH4113	Surface Water/ Ned Lundvall	Grab	TMet(21)	1366 (HNO3 pH<2) (1)	A-SW-23	05/03/2016 09:30	
A-SW-023-MSD	MH4113D	Surface Water/ Ned Lundvall	Grab	TMet(21)	1396 (HNO3 pH<2) (1)	A-SW-23	05/03/2016 09:30	
A-SW-023-MS	MH4113S	Surface Water/ Ned Lundvall	Grab	TMet(21)	1381 (HNO3 pH<2) (1)	A-SW-23	05/03/2016 09:30	
A-SW-026	MH4116	Surface Water/ Ned Lundvall	Grab	TMet(21)	1447 (HNO3 pH<2) (1)	A-SW-26	05/03/2016 13:45	
A-SW-012	MH4202	Surface Water/ Ned Lundvall	Grab	TMet(21)	1457 (HNO3 pH<2) (1)	A-SW-12	05/03/2016 10:30	
A-SW-021	MH4211	Surface Water/ Ned Lundvall	Grab	TMet(21)	1456 (6 C) (1)	A-SW-21	05/03/2016 13:20	
A-SW-027	MH4217	Surface Water/ Ned Lundvall	Grab	TMet(21)	1454 (HNO3 pH<2) (1)	A-SW-27	05/03/2016 11:20	
A-SW-028	MH4218	Surface Water/ Ned Lundvall	Grab	TMet(21)	1455 (HNO3 pH<2) (1)	A-SW-28	05/03/2016 12:00	

Sample(s) to be used for Lab QC: A-SW-023-MSD Tag 1396, A-SW-023-MS Tag 1381

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: TMet=Total Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	5/4/16 1700	FedEx George Negron	5/5/16 9:25	4°C

9

Sample Delivery Group (SDG) Cover Sheet

SDG Number MH4002 Case Number 46114 Contract Number EP-W-14-030

Lab Code CHM SDG Turnaround 21DAYS Delivery CLIN(s) 1

First Sample Received in SDG MH4002 Last Sample Received in SDG MH4218

First Sample Receipt Date 5/3/2016 9:20:00 AM Last Sample Receipt Date 5/5/2016 9:25:00 AM

USEPA Sample Numbers in SDG (Listed in Numerical Order)

CLP Sample ID	Sample Type	Requested Analytical CLIN(s)/SubCLIN(s)	Solicitation Number	MA Number(s)
MH4002	Field Sample	0046AB,0047AB	N/A	N/A
MH4002D	Field Sample	0047AB,0046AB	N/A	N/A
MH4002S	Field Sample	0046AB,0047AB	N/A	N/A
MH4025	Field Sample	0047AB,0046AB	N/A	N/A
MH4025D	Field Sample	0046AB,0047AB	N/A	N/A
MH4025S	Field Sample	0046AB,0047AB	N/A	N/A
MH4028	Field Sample	0046AB,0047AB	N/A	N/A
MH4029	Field Sample	0046AB,0047AB	N/A	N/A
MH4030	Field Sample	0046AB,0047AB	N/A	N/A
MH4113	Field Sample	0047AB,0046AB	N/A	N/A
MH4113D	Field Sample	0047AB,0046AB	N/A	N/A
MH4113S	Field Sample	0047AB,0046AB	N/A	N/A
MH4116	Field Sample	0046AB,0047AB	N/A	N/A
MH4202	Field Sample	0046AB,0047AB	N/A	N/A
MH4211	Field Sample	0046AB,0047AB	N/A	N/A
MH4217	Field Sample	0046AB,0047AB	N/A	N/A
MH4218	Field Sample	0046AB,0047AB	N/A	N/A

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature S.M. Jedlicki Date 5/9/16

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 1 of 4
Received By (Print Name) DEEPAK PARMAR		Log-in Date 5/3/2016
Received By (Signature)		
Case Number 46114	SDG No. MH4002	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776245148907
6. Sample Tags Sample Tag #	N/A yes
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	4.9
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/03/2016
12.Time Received	09:20

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	MH4002	< 2	1122	H2837-01	Intact
2	MH4002D	↓	1122	H2837-02	↓
3	MH4002S	↓	1122	H2837-03	↓
4					
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21					
22					
23					

* Contact SMO and attach record of resolution

Reviewed By S. M. Jodhawat	Logbook No.
Date 5/9/16	Logbook Page No.

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 2 of 4
Received By (Print Name) DEEPAK Parmar		Log-in Date **5/4/2016**
Received By (Signature)		
Case Number 46114	SDG No. MH4002	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776255658133
6. Sample Tags Sample Tag #	N/A yes
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	3.6
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/04/2016
12.Time Received	09:25

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	MH4025	N/A	1005	H2837-04	Intact
2	MH4025D		1359	H2837-05	
3	MH4025S		1353	H2837-06	
4	MH4028		1008	H2837-07	
5					
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20					
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22					
23					

* Contact SMO and attach record of resolution

Reviewed By	S.M. Jadhavi	Logbook No.	
Date	5/9/16	Logbook Page No.	

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 3 of 4
Received By (Print Name) DEEPAK PARMAR		Log-in Date **5/5/2016**
Received By (Signature)		
Case Number 46114	SDG No. MH4002	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776257380633
6. Sample Tags Sample Tag #	N/A Yes
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	3.1
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/05/2016
12.Time Received	09:25

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	MH4029	N/A	1038	H2837-08	Intact
2	MH4030	1	1002	H2837-09	〃
3					
4					
5					
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20					
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23					

* Contact SMO and attach record of resolution

Reviewed By S.M. Sadhoo	Logbook No. 2
Date 5/9/16	Logbook Page No. 2

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 4 of 4
Received By (Print Name) DEEPAK PANWAR		Log-in Date **5/5/2016**
Received By (Signature)		
Case Number 46114	SDG No. MH4002	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776267136562
6. Sample Tags Sample Tag #	N/A Yes
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	4
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/05/2016
12.Time Received	09:25

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	MH4113	<2	1366	H2837-10	Intact
2	MH4116		1447	H2837-11	
3	MH4202		1457	H2837-12	
4	MH4211		1456	H2837-13	
5	MH4217		1454	H2837-14	
6	MH4218		1455	H2837-15	
7	MH4113D		1396	H2837-16	
8	MH4113S		1381	H2837-17	
9					
10					
11					
12					
13					
14					
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16					
17					
18					
19					
20					
21					
22					
23					

* Contact SMO and attach record of resolution

Reviewed By S. M. Jadhav	Logbook No.
Date 5/9/16	Logbook Page No.

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME	**CHEMTECH CONSULTING GROUP**
LAB CODE	**CHM**
CONTRACT NO.	**EPW14030**
CASE NO.	**46114** SDG NO. **MH4002**
MA NO.	
SOW NO.	**ISM02.3**

All documents delivered in the Complete SDG File must be original documents where possible.
(Reference - Exhibit B Section 2.4)

	PAGE NOS: FROM	TO	CHECK LAB	REGION
1. SDG Cover Page	1	1	✓	
2. Sample TR/COCs	2	6	✓	
3. Sample Login Sheet (DC-1)	7	10	✓	
4. CSF Inventory Sheet (DC-2)	11	14	✓	
5. SDG Narrative	15	20	✓	
Inorganic Analysis				
ICP-AES				
6. Inorganic Analysis Data Sheet (Form 1-IN)	NA	NA	✓	
7. Initial and Continuing Calibration Verification (Form 2-IN)	NA	NA	✓	
8. Blanks (Form 3-IN)	NA	NA	✓	
9. ICP Interference Check Sample (Form 4-IN)	NA	NA	✓	
10. Matrix Spike Sample Recovery (Form 5A-IN)	NA	NA	✓	
11. Post-Digestion Spike Sample Recovery (Form 5B-IN)	NA	NA	✓	
12. Duplicates (Form 6-IN)	NA	NA	✓	
13. Laboratory Control Sample (Form 7-IN)	NA	NA	✓	
14. ICP-AES Serial Dilutions (Form 8-IN)	NA	NA	✓	
15. Method Detection Limits (Form 9-IN)	NA	NA	✓	

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOS: FROM	PAGE NOS: TO	CHECK LAB	CHECK REGION
16. ICP-AES Interelement Correction Factors (Form 10A-IN)	NA	NA	✓	
17. ICP-AES Interelement Correction Factors (Form 10B-IN)	NA	NA	✓	
18. Analysis Log (Form 12-IN)	NA	NA	✓	
19. Initial Calibration (Form 15-IN)	NA	NA	✓	
20. Initial Calibration Summary (Form 16-IN)	NA	NA	✓	
21. ICP-AES Raw Data	NA	NA	✓	
22. ICP-AES Preparation Log Books, Preparation records, Analysis records, and PE Instructions	NA	NA	✓	
ICP-MS				
23. Inorganic Analysis Data Sheet (Form 1-IN)	21	31	✓	
24. Initial and Continuing Calibration Verification (Form 2-IN)	32	32	✓	
25. Blanks (Form 3-IN)	33	34	✓	
26. ICP Interference Check Sample (Form 4-IN)	35	35	✓	
27. Matrix Spike Sample Recovery (Form 5A-IN)	36	38	✓	
28. Post-Digestion Spike Sample Recovery (Form 5B-IN)	39	39	✓	
29. Duplicates (Form 6-IN)	40	42	✓	
30. Laboratory Control Sample (Form 7-IN)	43	44	✓	
31. ICP-MS Serial Dilutions (Form 8-IN)	45	47	✓	
32. Method Detection Limits (Form 9-IN)	48	49	✓	
33. ICP-MS Internal Standard Association (Form 11-IN)	50	50	✓	
34. Analysis Log (Form 12-IN)	51	52	✓	
35. ICP-MS Tune (Form 13-IN)	53	53	✓	
36. ICP-MS Internal Standard Relative Intensity Summary (Form 14-IN)	54	61	✓	
37. Initial Calibration (Form 15-IN)	62	64	✓	

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOS: FROM	PAGE NOS: TO	CHECK LAB	CHECK REGION
38 . Initial Calibration Summary (Form 16-IN)	65	65	✓	
39 . ICP-MS Raw Data	66	254	✓	
40 . ICP-MS Preparation Log Books,Preparation records, Analysis records, and PE Instructions	255	328	✓	
Mercury				
41 . Inorganic Analysis Data Sheet (Form 1-IN)	329	339	✓	
42 . Initial and Continuing Calibration Verification (Form 2-IN)	340	341	✓	
43 . Blanks (Form 3-IN)	342	343	✓	
44 . Matrix Spike Sample Recovery (Form 5A-IN)	344	346	✓	
45 . Duplicates (Form 6-IN)	347	349	✓	
46 . Method Detection Limits (Form 9-IN)	350	351	✓	
47 . Analysis Log (Form 12-IN)	352	353	✓	
48 . Initial Calibration (Form 15-IN)	354	357	✓	
49 . Initial Calibration Summary (Form 16-IN)	358	359	✓	
50 . Mercury Raw Data	360	368	✓	
51 . Mercury Preparation Log Books,Preparation records, Analysis records, and PE Instructions	369	422	✓	
Cyanide				
52 . Inorganic Analysis Data Sheet (Form 1-IN)	NA	NA	✓	
53 . Initial and Continuing Calibration Verification (Form 2-IN)	NA	NA	✓	
54 . Blanks (Form 3-IN)	NA	NA	✓	
55 . Matrix Spike Sample Recovery (Form 5A-IN)	NA	NA	✓	
56 . Post-Distillation Spike Sample Recovery (Form 5B-IN)	NA	NA	✓	
57 . Duplicates (Form 6-IN)	NA	NA	✓	
58 . Method Detection Limits (Form 9-IN)	NA	NA	✓	

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOS: FROM	TO	CHECK LAB	REGION
59. Analysis Log (Form 12-IN)	NA	NA	✓	
60. Initial Calibration (Form 15-IN)	NA	NA	✓	
61. Initial Calibration Summary (Form 16-IN)	NA	NA	✓	
62. Cyanide Raw Data	NA	NA	✓	
63. Cyanide Preparation Log Books, Preparation records, Analysis records, and PE Instructions	NA	NA	✓	
Additional				
64. Percent Solids Determination Log	423	424	✓	
65. EPA Shipping/Receiving Documents			✓	
Airbill (No. of Shipments 4)	425	428	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab)	429	430	✓	
66. Misc. Shipping/Receiving Records (list all individual records)				
Communication Logs	NA	NA	✓	
67. Internal Lab Sample Transfer Records &				
Tracking Sheets (describe or list)	431	434	✓	
68. Other Records (describe or list) Communication Logs	435	449	✓	

69. Comments:

Completed by:
(CLP Lab) Mildred V. Reyes (Signature) | Mildred V. Reyes, Document Control Officer (Print Name & Title) | 5/25/16 (Date)

Audited by:
(EPA) (Signature) | (Print Name & Title) | (Date)

CHEMTECH
284 Sheffield Street
Mountainside, NJ 07092

SDG NARRATIVE

USEPA
SDG # MH4002
CASE # 46114
CONTRACT # EPW14030
SOW# ISM02.3
LAB NAME: CHEMTECH CONSULTING GROUP
LAB CODE: CHM
CHEMTECH PROJECT #H2837

A. Number of Samples and Date of Receipt

07 Water and 04 Soil samples were delivered to the laboratory intact on 05/03/2016 & 05/04/2016 & 05/05/2016.

B. Parameters

Test requested for Metals CLP MS = Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc & HG.

Test requested for Metals CLP MS FULL = Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Nickel, Selenium, Silver, Thallium, Vanadium & Zinc.

C. Cooler Temp

Indicator Bottle: **Presence**/Absence
Cooler: 3.1°C & 3.6°C & 4°C & 4.9°C

D. Detail Documentation (related to Sample Handling Shipping, Analytical Problem, Temp of Cooler etc):

Issue1: Mercury analysis is scheduled for the water and soil samples; however, the analysis key on the COC only lists DMet=Dissolved Metals and TMet=Total Metals. The laboratory would like to confirm that the samples should also be analyzed for Mercury with Total Metals and Dissolved Metals.

Issue 2: An additional sample was designated on the COC for laboratory QC. The laboratory received water samples with QC for metals analysis on 5/3 and on 5/5. The laboratory has already used MH4002 for laboratory QC for this SDG; however, MH4113 is also listed on the COC for QC.

Issue 3: The COC lists individual sample for each laboratory QC sample (MS/MSD), instead of

including them under one sample ID. The laboratory is requesting to use the sample IDs as listed below for each parent sample and laboratory QC sample.

Sample Identifier	CLP No.	Location	Sample Type	Lab will use
A-GW-MTO-MS	H4001	Mt Olivet	Lab QC	H4002, H4002MS, H4002MSD
A-GW-MTO	H4002	Mt Olivet	Parent Sample	
A-GW-MTO-MSD	H4003	Mt Olivet	Lab QC	
A-GW-MTO	MH4001	Mt Olivet	Parent Sample	MH4001 MH4001D MH1001S
A-GW-MTO-MS	MH4005	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4016	Mt Olivet	Lab QC	
A-GW-MTO	MH4002	Mt Olivet	Parent Sample	MH4002 MH4002D MH1002S
A-GW-MTO-MS	MH4014	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4017	Mt Olivet	Lab QC	

Issue 4: The samples listed below appear to be received unpreserved. The laboratory like to preserve these samples in-house.
MH4001
MH4002
MH4005
MH4014
MH4016
MH4017

Issue 5: Sample tags were not received with samples at the laboratory. Sample tag numbers may or may not be listed on the COC.

E. Corrective Action taken for above:

Resolution1: Per Region 8, mercury is required for all total and dissolved water samples, and for soil samples for this Case. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Resolution 2: Per Region 8, the Region would like laboratory QC on both samples. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Resolution3: Per Region 8, the laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples using the attached revised COCs.

Resolution 4: Per Region 8, the laboratory shall preserve the unpreserved samples to an acceptable pH level of <2. This resolution applies to the remainder of the samples associated with this Case when the pH exceeds acceptable levels. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Resolution 5: In accordance with previous direction from [Region 8], the laboratory will note the issue in the SDG Narrative, and proceed with the analysis of the sample. The Resolution will be applied to all samples received for this Case.

F. Analytical Techniques:

All analyses were based on CLP Methodology by method ISM02.3

G. Calculation:

Calculation for ICP-MS Soil Sample:

Conversion of Results from µg /L or ppb to mg/kg :

$$\text{Concentration (mg/kg)} = C \times \frac{V_f}{W \times S} \times DF / 1000$$

Where,

C = Instrument value in ppb (The average of all replicate integrations)
V_f = Final digestion volume (mL)
W = Initial aliquot amount (g) (Fraction of Sample amount taken in prep)
S = % Solids / 100 (Fraction of Percent Solids)

DF = Dilution Factor

Example Calculation:

If C = 12.34 ppb
V_f = 100 ml

W = 1.20 g
S = 0.90 (90/100)

DF = 1

$$\text{Concentration (mg/kg)} = 12.34 \times \frac{100}{1.2 \times 0.90} \times 1 / 1000$$

$$= 1.1426 \text{ mg/kg}$$

$$= 1.1 \text{ mg/kg (Reported Result with Signification)}$$

Calculation for ICP-MS Water Sample:

$$\text{Concentration or Result (µg/L)} = C \times \frac{V_f}{V_i} \times DF$$

Where,

C = Instrument value in ppb (The average of all replicate integrations)
V_f = Final digestion volume (mL)

V_i = Initial aliquot amount (mL) (Sample amount taken in prep)

DF = Dilution Factor

Example Calculation:

If C = 12.34 ppb
V_f = 50 ml
V_i = 50 ml
DF = 1

$$\text{Concentration or Result (µg/L)} = 12.34 \times \frac{50}{50} \times 1$$

$$= 12.34 \text{ µg/L}$$

$$= 12.3 \text{ µg/L (Reported Result with Signification)}$$

Calculation for Hg Soil Sample:

Conversion of Results from µg /L or ppb to mg/kg :

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$$\text{Concentration (mg/kg)} = C \times \frac{1}{W \times S} \times DF \times 0.1$$

Where,

C = Instrument response in µg/L from the calibration curve.
W = Initial aliquot amount (g) (Fraction of Sample amount taken in prep)
S = % Solids / 100 (Fraction of Percent Solids)
DF = Dilution Factor

Example Calculation:

If C = 12.34 ppb
W = 0.51 g
S = 0.90 (90/100)
DF = 1

$$\text{Concentration (mg/kg)} = 12.34 \times \frac{1}{0.51 \times 0.90} \times 1 \times 0.1$$

$$= 2.688 \text{ mg/kg}$$

$$= 2.7 \text{ mg/kg (Reported Result with Signification)}$$

Calculation for Hg Water Sample:

$$\text{Concentration or Result (µg/L)} = C \times DF$$

Where,

C = Instrument response in µg/L from the calibration curve.
DF = Dilution Factor

Example Calculation:

If C = 12.34 ppb
DF = 1

Concentration or Result (µg/L) = 12.34 x 1

= 12.34 µg/L

= 12.3 µg/L (Reported Result with Signification)

H. QA/ QC

Calibrations met requirements. Interference check met requirements. Blank analyses did not indicate any presence of contamination. Laboratory Control sample was within control limits. Spike sample did meet requirements. Duplicate sample did meet requirements. Serial Dilution did meet requirements except for Copper, Antimony & Zinc.

Chemical or physical interference effect was suspected and the data for all affected analytes in the sample received and associated with this serial dilution were flagged.

Some samples from SDG (MH4002) have % solids results less than 50% but more than 30%. Please see below table for detail. Laboratory has processed these samples according to the ISM02.3 SOW, Exhibit D, sections 10.1.1.5, 10.1.1.5.1, 10.1.1.6 and 10.1.1.7.

EPA Sample ID	% Solids
MH4029	44.7
MH4030	39

I certify that the data package is in compliance with the terms and conditions of the contract both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature.

Signature Mildred V Reyes

Name: Mildred V. Reyes

Date 5/25/16

Title: Document Control Officer

EPA SAMPLE NO.

MH4002

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-01

% Solids: Date Received: 05/03/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	4.0	J	05/06/2016	1503
7440-36-0	Antimony	0.68	J	05/06/2016	1503
7440-38-2	Arsenic	0.59	J	05/06/2016	1503
7440-39-3	Barium	69.0		05/06/2016	1503
7440-41-7	Beryllium	1.0	U	05/06/2016	1503
7440-43-9	Cadmium	1.0	U	05/06/2016	1503
7440-70-2	Calcium	132000		05/06/2016	1503
7440-47-3	Chromium	1.1	J	05/06/2016	1503
7440-48-4	Cobalt	1.0	U	05/06/2016	1503
7440-50-8	Copper	7.4	*	05/06/2016	1503
7439-89-6	Iron	410		05/06/2016	1503
7439-92-1	Lead	0.70	J	05/06/2016	1503
7439-95-4	Magnesium	46400		05/06/2016	1503
7439-96-5	Manganese	9.4		05/06/2016	1503
7440-02-0	Nickel	0.25	J	05/06/2016	1503
7440-09-7	Potassium	2310		05/06/2016	1503
7782-49-2	Selenium	5.0	U	05/06/2016	1503
7440-22-4	Silver	0.20	J	05/06/2016	1503
7440-23-5	Sodium	122000		05/06/2016	1503
7440-28-0	Thallium	0.15	J	05/06/2016	1503
7440-62-2	Vanadium	1.6	J	05/06/2016	1503
7440-66-6	Zinc	146	*	05/06/2016	1503

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4025

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-04

% Solids: 63.6 Date Received: 05/04/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	2.7	*	05/06/2016	1544
7440-38-2	Arsenic	24.2		05/06/2016	1544
7440-39-3	Barium	224		05/06/2016	1544
7440-41-7	Beryllium	0.40	J	05/06/2016	1544
7440-43-9	Cadmium	1.8		05/06/2016	1544
7440-47-3	Chromium	14.0		05/06/2016	1544
7440-48-4	Cobalt	5.2		05/06/2016	1544
7440-50-8	Copper	52.0		05/06/2016	1544
7439-92-1	Lead	301		05/06/2016	1544
7439-96-5	Manganese	583		05/06/2016	1544
7440-02-0	Nickel	11.1		05/06/2016	1544
7782-49-2	Selenium	1.1	J	05/06/2016	1544
7440-22-4	Silver	0.71		05/06/2016	1544
7440-28-0	Thallium	0.28	J	05/06/2016	1544
7440-62-2	Vanadium	14.8		05/06/2016	1544
7440-66-6	Zinc	348		05/06/2016	1544

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4028

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-07

% Solids: 63.5 Date Received: 05/04/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	1.2	*	05/06/2016	1608
7440-38-2	Arsenic	7.9		05/06/2016	1608
7440-39-3	Barium	122		05/06/2016	1608
7440-41-7	Beryllium	0.34	J	05/06/2016	1608
7440-43-9	Cadmium	1.1		05/06/2016	1608
7440-47-3	Chromium	9.7		05/06/2016	1608
7440-48-4	Cobalt	5.1		05/06/2016	1608
7440-50-8	Copper	36.5		05/06/2016	1608
7439-92-1	Lead	130		05/06/2016	1608
7439-96-5	Manganese	386		05/06/2016	1608
7440-02-0	Nickel	10.2		05/06/2016	1608
7782-49-2	Selenium	1.6	J	05/06/2016	1608
7440-22-4	Silver	0.39	J	05/06/2016	1608
7440-28-0	Thallium	0.22	J	05/06/2016	1608
7440-62-2	Vanadium	14.3		05/06/2016	1608
7440-66-6	Zinc	153		05/06/2016	1608

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4029

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-08

% Solids: 44.7 Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	1.4	J*	05/06/2016	1614
7440-38-2	Arsenic	6.0		05/06/2016	1614
7440-39-3	Barium	118		05/06/2016	1614
7440-41-7	Beryllium	0.36	J	05/06/2016	1614
7440-43-9	Cadmium	1.1		05/06/2016	1614
7440-47-3	Chromium	10.3		05/06/2016	1614
7440-48-4	Cobalt	4.0		05/06/2016	1614
7440-50-8	Copper	50.1		05/06/2016	1614
7439-92-1	Lead	109		05/06/2016	1614
7439-96-5	Manganese	300		05/06/2016	1614
7440-02-0	Nickel	9.6		05/06/2016	1614
7782-49-2	Selenium	1.6	J	05/06/2016	1614
7440-22-4	Silver	0.26	J	05/06/2016	1614
7440-28-0	Thallium	0.15	J	05/06/2016	1614
7440-62-2	Vanadium	11.7		05/06/2016	1614
7440-66-6	Zinc	178		05/06/2016	1614

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4030

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-09

% Solids: 39 Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	1.6	J*	05/06/2016	1620
7440-38-2	Arsenic	6.1		05/06/2016	1620
7440-39-3	Barium	130		05/06/2016	1620
7440-41-7	Beryllium	0.31	J	05/06/2016	1620
7440-43-9	Cadmium	1.3		05/06/2016	1620
7440-47-3	Chromium	13.6		05/06/2016	1620
7440-48-4	Cobalt	4.5		05/06/2016	1620
7440-50-8	Copper	67.8		05/06/2016	1620
7439-92-1	Lead	132		05/06/2016	1620
7439-96-5	Manganese	288		05/06/2016	1620
7440-02-0	Nickel	11.4		05/06/2016	1620
7782-49-2	Selenium	1.8	J	05/06/2016	1620
7440-22-4	Silver	0.31	J	05/06/2016	1620
7440-28-0	Thallium	0.18	J	05/06/2016	1620
7440-62-2	Vanadium	14.8		05/06/2016	1620
7440-66-6	Zinc	227		05/06/2016	1620

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4113

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-10

% Solids: Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	33.2		05/06/2016	1515
7440-36-0	Antimony	0.58	J	05/06/2016	1515
7440-38-2	Arsenic	1.8		05/06/2016	1515
7440-39-3	Barium	73.3		05/06/2016	1515
7440-41-7	Beryllium	1.0	U	05/06/2016	1515
7440-43-9	Cadmium	0.080	J	05/06/2016	1515
7440-70-2	Calcium	148000		05/06/2016	1515
7440-47-3	Chromium	0.64	J	05/06/2016	1515
7440-48-4	Cobalt	0.10	J	05/06/2016	1515
7440-50-8	Copper	1.6	J*	05/06/2016	1515
7439-89-6	Iron	70.6	J	05/06/2016	1515
7439-92-1	Lead	0.31	J	05/06/2016	1515
7439-95-4	Magnesium	60900		05/06/2016	1515
7439-96-5	Manganese	11.5		05/06/2016	1515
7440-02-0	Nickel	0.68	J	05/06/2016	1515
7440-09-7	Potassium	2630		05/06/2016	1515
7782-49-2	Selenium	1.8	J	05/06/2016	1515
7440-22-4	Silver	0.14	J	05/06/2016	1515
7440-23-5	Sodium	67700		05/06/2016	1515
7440-28-0	Thallium	1.0	U	05/06/2016	1515
7440-62-2	Vanadium	5.1		05/06/2016	1515
7440-66-6	Zinc	8.8	*	05/06/2016	1515

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4116

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-11

% Solids: Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	164		05/06/2016	1527
7440-36-0	Antimony	0.78	J	05/06/2016	1527
7440-38-2	Arsenic	1.2		05/06/2016	1527
7440-39-3	Barium	106		05/06/2016	1527
7440-41-7	Beryllium	1.0	U	05/06/2016	1527
7440-43-9	Cadmium	0.13	J	05/06/2016	1527
7440-70-2	Calcium	159000		05/06/2016	1527
7440-47-3	Chromium	0.82	J	05/06/2016	1527
7440-48-4	Cobalt	0.20	J	05/06/2016	1527
7440-50-8	Copper	3.2	*	05/06/2016	1527
7439-89-6	Iron	314		05/06/2016	1527
7439-92-1	Lead	7.4		05/06/2016	1527
7439-95-4	Magnesium	61100		05/06/2016	1527
7439-96-5	Manganese	9.4		05/06/2016	1527
7440-02-0	Nickel	0.72	J	05/06/2016	1527
7440-09-7	Potassium	2120		05/06/2016	1527
7782-49-2	Selenium	2.2	J	05/06/2016	1527
7440-22-4	Silver	0.13	J	05/06/2016	1527
7440-23-5	Sodium	71200		05/06/2016	1527
7440-28-0	Thallium	1.0	U	05/06/2016	1527
7440-62-2	Vanadium	5.6		05/06/2016	1527
7440-66-6	Zinc	15.1	*	05/06/2016	1527

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4202

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-12

% Solids: Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	30.8		05/06/2016	1530
7440-36-0	Antimony	0.84	J	05/06/2016	1530
7440-38-2	Arsenic	1.4		05/06/2016	1530
7440-39-3	Barium	72.6		05/06/2016	1530
7440-41-7	Beryllium	1.0	U	05/06/2016	1530
7440-43-9	Cadmium	0.060	J	05/06/2016	1530
7440-70-2	Calcium	148000		05/06/2016	1530
7440-47-3	Chromium	0.39	J	05/06/2016	1530
7440-48-4	Cobalt	0.060	J	05/06/2016	1530
7440-50-8	Copper	1.5	J*	05/06/2016	1530
7439-89-6	Iron	75.0	J	05/06/2016	1530
7439-92-1	Lead	0.40	J	05/06/2016	1530
7439-95-4	Magnesium	57600		05/06/2016	1530
7439-96-5	Manganese	1.7		05/06/2016	1530
7440-02-0	Nickel	0.57	J	05/06/2016	1530
7440-09-7	Potassium	2110		05/06/2016	1530
7782-49-2	Selenium	4.2	J	05/06/2016	1530
7440-22-4	Silver	0.090	J	05/06/2016	1530
7440-23-5	Sodium	64200		05/06/2016	1530
7440-28-0	Thallium	1.0	U	05/06/2016	1530
7440-62-2	Vanadium	5.9		05/06/2016	1530
7440-66-6	Zinc	6.0	*	05/06/2016	1530

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4211

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-13

% Solids: Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	64.2		05/06/2016	1533
7440-36-0	Antimony	0.90	J	05/06/2016	1533
7440-38-2	Arsenic	3.5		05/06/2016	1533
7440-39-3	Barium	59.3		05/06/2016	1533
7440-41-7	Beryllium	1.0	U	05/06/2016	1533
7440-43-9	Cadmium	1.0	U	05/06/2016	1533
7440-70-2	Calcium	139000		05/06/2016	1533
7440-47-3	Chromium	0.69	J	05/06/2016	1533
7440-48-4	Cobalt	0.070	J	05/06/2016	1533
7440-50-8	Copper	1.6	J*	05/06/2016	1533
7439-89-6	Iron	140	J	05/06/2016	1533
7439-92-1	Lead	1.3		05/06/2016	1533
7439-95-4	Magnesium	49900		05/06/2016	1533
7439-96-5	Manganese	16.6		05/06/2016	1533
7440-02-0	Nickel	0.35	J	05/06/2016	1533
7440-09-7	Potassium	1750		05/06/2016	1533
7782-49-2	Selenium	1.9	J	05/06/2016	1533
7440-22-4	Silver	0.090	J	05/06/2016	1533
7440-23-5	Sodium	51000		05/06/2016	1533
7440-28-0	Thallium	1.0	U	05/06/2016	1533
7440-62-2	Vanadium	2.2	J	05/06/2016	1533
7440-66-6	Zinc	8.0	*	05/06/2016	1533

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4217

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-14

% Solids: Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	2.2	J	05/06/2016	1536
7440-36-0	Antimony	0.81	J	05/06/2016	1536
7440-38-2	Arsenic	2.0		05/06/2016	1536
7440-39-3	Barium	71.8		05/06/2016	1536
7440-41-7	Beryllium	1.0	U	05/06/2016	1536
7440-43-9	Cadmium	1.0	U	05/06/2016	1536
7440-70-2	Calcium	145000		05/06/2016	1536
7440-47-3	Chromium	0.48	J	05/06/2016	1536
7440-48-4	Cobalt	1.0	U	05/06/2016	1536
7440-50-8	Copper	1.2	J*	05/06/2016	1536
7439-89-6	Iron	38.7	J	05/06/2016	1536
7439-92-1	Lead	1.0	U	05/06/2016	1536
7439-95-4	Magnesium	58300		05/06/2016	1536
7439-96-5	Manganese	6.4		05/06/2016	1536
7440-02-0	Nickel	0.44	J	05/06/2016	1536
7440-09-7	Potassium	2320		05/06/2016	1536
7782-49-2	Selenium	2.6	J	05/06/2016	1536
7440-22-4	Silver	0.080	J	05/06/2016	1536
7440-23-5	Sodium	63800		05/06/2016	1536
7440-28-0	Thallium	1.0	U	05/06/2016	1536
7440-62-2	Vanadium	5.1		05/06/2016	1536
7440-66-6	Zinc	4.3	*	05/06/2016	1536

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4218

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-15

% Solids: Date Received: 05/05/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	5.5	J	05/06/2016	1539
7440-36-0	Antimony	0.94	J	05/06/2016	1539
7440-38-2	Arsenic	2.5		05/06/2016	1539
7440-39-3	Barium	70.7		05/06/2016	1539
7440-41-7	Beryllium	1.0	U	05/06/2016	1539
7440-43-9	Cadmium	1.0	U	05/06/2016	1539
7440-70-2	Calcium	151000		05/06/2016	1539
7440-47-3	Chromium	0.54	J	05/06/2016	1539
7440-48-4	Cobalt	0.060	J	05/06/2016	1539
7440-50-8	Copper	1.4	J*	05/06/2016	1539
7439-89-6	Iron	40.0	J	05/06/2016	1539
7439-92-1	Lead	0.11	J	05/06/2016	1539
7439-95-4	Magnesium	58400		05/06/2016	1539
7439-96-5	Manganese	6.0		05/06/2016	1539
7440-02-0	Nickel	0.49	J	05/06/2016	1539
7440-09-7	Potassium	2290		05/06/2016	1539
7782-49-2	Selenium	3.0	J	05/06/2016	1539
7440-22-4	Silver	0.080	J	05/06/2016	1539
7440-23-5	Sodium	64600		05/06/2016	1539
7440-28-0	Thallium	1.0	U	05/06/2016	1539
7440-62-2	Vanadium	5.2		05/06/2016	1539
7440-66-6	Zinc	5.6	*	05/06/2016	1539

NOTE: Hardness (total) is reported in mg/L

Comments:

FORM 2 - IN

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Initial Calibration Verification Source : EPA-0307

Continuing Calibration Verification Source : MP33622

Run Batch: LB81457 Analytical Method: ICP-MS

Concentration Units: µg/L

	Initial Calibration Verification				Continuing Calibration Verification						
	ID: ICV				ID: CCV081				ID: CCV082		
Analyte	True	Found	%R	%RSD	True	Found	%R	%RSD	Found	%R	%RSD
Aluminum	504	479	95	1	10000	9170	92	2	10300	103	1
Antimony	199	204	103	0	500	513	103	1	514	103	1
Arsenic	200	203	102	0	500	512	102	1	513	103	1
Barium	99.0	101	102	0	2500	2560	102	1	2540	102	0
Beryllium	99.0	104	105	2	500	527	105	1	514	103	1
Cadmium	99.0	103	104	0	500	504	101	1	504	101	0
Calcium	2005	1930	96	2	50000	49000	98	1	49200	98	0
Chromium	98.0	98.0	100	0	500	515	103	2	527	105	1
Cobalt	100	103	103	0	500	514	103	2	531	106	1
Copper	98.0	102	104	0	1000	1030	103	2	1070	107	1
Iron	1016	995	98	0	25000	25600	102	2	26200	105	1
Lead	200	195	98	1	500	500	100	1	504	101	1
Magnesium	1215	1150	95	1	50000	47300	95	2	47800	96	1
Manganese	100	101	101	0	1000	1030	103	2	1050	105	0
Nickel	101	105	104	1	500	510	102	2	529	106	1
Potassium	2004	1910	95	1	25000	24100	96	2	24000	96	0
Selenium	206	203	99	1	500	504	101	1	506	101	2
Silver	100	105	105	0	500	522	104	1	518	104	0
Sodium	2019	2010	100	1	50000	48100	96	2	48800	98	0
Thallium	206	200	97	1	500	502	100	1	508	102	1
Vanadium	100	99.8	100	1	500	513	103	1	526	105	1
Zinc	205	206	100	1	1000	1020	102	2	1060	106	1

FORM 3 - IN
BLANKS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Preparation Blank Matrix : Solid

Preparation Blank Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg): mg/kg

Analytical Method: ICP-MS Preparation Batch: PB90341

Run Batch: LB81457 Preparation Method: 200.8

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank/Leachate Extraction	
	ID: ICB	Q	ID: CCB081	Q	ID: CCB082	Q	ID:	Q	ID: PBS008	Q
Aluminum	20.0	U	1.7	J	20.0	U				
Antimony	0.06	J	0.32	J	0.31	J			0.044	J
Arsenic	1.0	U	1.0	U	1.0	U			0.49	U
Barium	10.0	U	10.0	U	10.0	U			4.9	U
Beryllium	1.0	U	0.07	J	0.07	J			0.49	U
Cadmium	1.0	U	1.0	U	1.0	U			0.49	U
Calcium	500	U	500	U	500	U				
Chromium	2.0	U	2.0	U	0.17	J			0.092	J
Cobalt	1.0	U	1.0	U	1.0	U			0.49	U
Copper	-0.6	J	-0.45	J	-0.43	J			-0.27	J
Iron	200	U	200	U	200	U				
Lead	1.0	U	1.0	U	1.0	U			0.49	U
Magnesium	500	U	500	U	500	U				U
Manganese	1.0	U	1.0	U	0.06	J			0.49	U
Nickel	1.0	U	1.0	U	1.0	U			0.49	U
Potassium	500	U	9.1	J	500	U				
Selenium	5.0	U	5.0	U	5.0	U			2.4	U
Silver	1.0	U	1.0	U	1.0	U			0.49	U
Sodium	500	U	21.7	J	500	U				
Thallium	1.0	U	0.06	J	0.06	J			0.49	U
Vanadium	5.0	U	5.0	U	5.0	U			2.4	U
Zinc	-0.14	J	2.0	U	2.0	U			-0.13	J

FORM 3 - IN
BLANKS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Preparation Blank Matrix : WATER

Preparation Blank Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg): ug/L

Analytical Method: ICP-MS Preparation Batch: PB90375

Run Batch: LB81457 Preparation Method: 200.8

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank/Leachate Extraction	
	ID:	Q	ID:	Q	ID:	Q	ID:	Q	ID: PBW007	Q
Aluminum									20.0	U
Antimony									2.0	U
Arsenic									1.0	U
Barium									10.0	U
Beryllium									1.0	U
Cadmium									1.0	U
Calcium									500	U
Chromium									0.18	J
Cobalt									1.0	U
Copper									-0.6	J
Iron									200	U
Lead									1.0	U
Magnesium									500	U
Manganese									1.0	U
Nickel									1.0	U
Potassium									500	U
Selenium									5.0	U
Silver									1.0	U
Sodium									10.9	J
Thallium									1.0	U
Vanadium									5.0	U
Zinc									-0.28	J

FORM 4 - IN

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Analytical Method: ICP-MS ICSA Source: EPA-0803

Instrument ID: P7 ICSB Source: EPA-0803

Run Batch: LB81457

Concentration Units: ug/L

Analyte	True		Found			
	ICSA	ICSAB	ICSA	%R	ICSAB	%R
Aluminum	100000	100000	92100	92	90700	91
Antimony	1.5	22	1.3	87	20.6	94
Arsenic	0.1	19	0.34	340	19.7	104
Barium	1.2	22	1.7	142	21.6	98
Beryllium	0	19	0.29		21.2	112
Cadmium	0.7	20	0.47	67	19.3	97
Calcium	100000	100000	96000	96	95000	95
Chromium	21	40	20.3	97	41.9	105
Cobalt	1	20	1.2	120	21.3	106
Copper	8	25	7.5	94	27.2	109
Iron	100000	100000	101000	101	99900	100
Lead	4	25	4.2	105	23.0	92
Magnesium	100000	100000	93800	94	92800	93
Manganese	7	27	8.3	119	28.4	105
Nickel	6	24	5.6	93	27.0	113
Potassium	100000	100000	95600	96	94400	94
Selenium	0.3	19	0.32	107	19.1	101
Silver	0	18	0.08		18.9	105
Sodium	100000	100000	96100	96	94700	95
Thallium	0	21	0.09		19.9	95
Vanadium	0.5	19	0.16	32	19.9	105
Zinc	11	29	12.2	111	31.9	110

EPA SAMPLE NO.

MH4002S

FORM 5A - IN

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix : WATER Analytical Method: ICP-MS

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Q	Sample Result (SR)	Q	Spike Added (SA)	%R	Q
Antimony	75 - 125	111		0.68	J	100	110	
Arsenic	75 - 125	45.7		0.59	J	40.0	113	
Barium	75 - 125	2300		69.0		2000	112	
Beryllium	75 - 125	55.4		1.0	U	50.0	111	
Cadmium	75 - 125	54.4		1.0	U	50.0	109	
Chromium	75 - 125	224		1.1	J	200	111	
Cobalt	75 - 125	578		1.0	U	500	116	
Copper	75 - 125	291		7.4		250	113	
Lead	75 - 125	22.5		0.7	J	20.0	109	
Manganese	75 - 125	572		9.4		500	113	
Nickel	75 - 125	569		0.25	J	500	114	
Selenium	75 - 125	117		5.0	U	100	117	
Silver	75 - 125	55.5		0.2	J	50.0	111	
Thallium	75 - 125	55.7		0.15	J	50.0	111	
Vanadium	75 - 125	579		1.6	J	500	115	
Zinc	75 - 125	719		146		500	115	

EPA SAMPLE NO.

MH4025S

FORM 5A - IN

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix : Solid Analytical Method: ICP-MS

% Solids: 63.6

Concentration Units (µg/L, mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Q	Sample Result (SR)	Q	Spike Added (SA)	%R	Q
Antimony	75 - 125	13.8		2.7		11.2	99	
Arsenic		28.2		24.2		4.5	89	
Barium	75 - 125	446		224		220	101	
Beryllium	75 - 125	5.9		0.4	J	5.6	98	
Cadmium	75 - 125	7.3		1.8		5.6	98	
Chromium	75 - 125	38.3		14.0		22.5	108	
Cobalt	75 - 125	67.4		5.2		56.2	111	
Copper	75 - 125	83.4		52.0		28.1	112	
Lead		300		301		2.2	-45	
Manganese		643		583		56.2	107	
Nickel	75 - 125	73.4		11.1		56.2	111	
Selenium	75 - 125	11.1		1.1	J	11.2	89	
Silver	75 - 125	6.3		0.71		5.6	100	
Thallium	75 - 125	5.9		0.28	J	5.6	100	
Vanadium	75 - 125	75.4		14.8		56.2	108	
Zinc		412		348		56.2	114	

EPA SAMPLE NO.

MH4113S

FORM 5A - IN

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix : WATER Analytical Method: ICP-MS

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Q	Sample Result (SR)	Q	Spike Added (SA)	%R	Q
Antimony	75 - 125	109		0.58	J	100	108	
Arsenic	75 - 125	46.3		1.8		40.0	111	
Barium	75 - 125	2250		73.3		2000	109	
Beryllium	75 - 125	51.6		1.0	U	50.0	103	
Cadmium	75 - 125	53.3		0.08	J	50.0	106	
Chromium	75 - 125	226		0.64	J	200	113	
Cobalt	75 - 125	585		0.1	J	500	117	
Copper	75 - 125	291		1.6	J	250	116	
Lead	75 - 125	22.0		0.31	J	20.0	108	
Manganese	75 - 125	584		11.5		500	115	
Nickel	75 - 125	580		0.68	J	500	116	
Selenium	75 - 125	114		1.8	J	100	112	
Silver	75 - 125	53.5		0.14	J	50.0	107	
Thallium	75 - 125	55.7		1.0	U	50.0	111	
Vanadium	75 - 125	584		5.1		500	116	
Zinc	75 - 125	588		8.8		500	116	

EPA SAMPLE NO.

FORM 5B - IN

POST-DIGESTION/DISTILLATION SPIKE
SAMPLE RECOVERY

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ MA No. : _____ SDG No.: _____

Matrix : _____ Analytical Method: _____

% Solids: _____

Concentration Units (µg/L, mg/L or mg/kg dry weight): _____

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Q	Sample Result (SR)	Q	Spike Added (SA)	%R	Q

EPA SAMPLE NO.

MH4002D

FORM 6 - IN
DUPLICATES

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix : WATER Analytical Method: ICP-MS

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Control Limit	Sample (S)	Q	Duplicate (D)	Q	RPD	Q
Aluminum		4.0	J	3.7	J		
Antimony		0.68	J	0.42	J		
Arsenic		0.59	J	0.64	J		
Barium		69.0		70.7		2	
Beryllium		1.0	U	1.0	U		
Cadmium		1.0	U	1.0	U		
Calcium		132000		134000		2	
Chromium		1.1	J	1.1	J		
Cobalt		1.0	U	1.0	U		
Copper	2.0	7.4		7.7		4	
Iron	200	410		419		2	
Lead		0.7	J	0.67	J		
Magnesium		46400		46800		1	
Manganese		9.4		9.5		1	
Nickel		0.25	J	0.24	J		
Potassium	500	2310		2300		0	
Selenium		5.0	U	5.0	U		
Silver		0.2	J	0.21	J		
Sodium		122000		123000		1	
Thallium		0.15	J	0.06	J		
Vanadium		1.6	J	1.6	J		
Zinc		146		147		1	

EPA SAMPLE NO.

MH4025D

FORM 6 - IN
DUPLICATES

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix : Solid Analytical Method: ICP-MS

% Solids: 63.6

Concentration Units (µg/L, mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit	Sample (S)	Q	Duplicate (D)	Q	RPD	Q
Antimony	1.1	2.7		2.6		4	
Arsenic		24.2		24.1		0	
Barium		224		222		1	
Beryllium		0.4	J	0.37	J		
Cadmium	0.57	1.8		1.8		0	
Chromium		14.0		14.1		1	
Cobalt		5.2		5.3		2	
Copper		52.0		52.0		0	
Lead		301		299		1	
Manganese		583		587		1	
Nickel		11.1		11.0		1	
Selenium		1.1	J	1.0	J		
Silver	0.57	0.71		0.7		1	
Thallium		0.28	J	0.27	J		
Vanadium		14.8		14.9		1	
Zinc		348		349		0	

EPA SAMPLE NO.

MH4113D

FORM 6 - IN
DUPLICATES

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix : WATER Analytical Method: ICP-MS

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Control Limit	Sample (S)	Q	Duplicate (D)	Q	RPD	Q
Aluminum	20.0	33.2		35.2		6	
Antimony		0.58	J	0.6	J		
Arsenic	1.0	1.8		1.7		6	
Barium		73.3		72.7		1	
Beryllium		1.0	U	1.0	U		
Cadmium		0.08	J	0.1	J		
Calcium		148000		149000		1	
Chromium		0.64	J	0.57	J		
Cobalt		0.1	J	0.08	J		
Copper		1.6	J	1.5	J		
Iron		70.6	J	71.2	J		
Lead		0.31	J	0.28	J		
Magnesium		60900		61300		1	
Manganese		11.5		11.7		2	
Nickel		0.68	J	0.65	J		
Potassium		2630		2630		0	
Selenium		1.8	J	2.0	J		
Silver		0.14	J	0.12	J		
Sodium		67700		68100		1	
Thallium		1.0	U	1.0	U		
Vanadium	5.0	5.1		5.1		0	
Zinc	2.0	8.8		7.0		23	

FORM 7-IN

LABORATORY CONTROL SAMPLE

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Matrix : Solid Preparation Method: 200.8

Analytical Method: ICP-MS Preparation Batch: PB90341

Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg) mg/kg

Analyte	True	Found	%R
Antimony	2	1.9	95
Arsenic	0.98	1.0	102
Barium	9.8	9.5	97
Beryllium	0.98	1.0	102
Cadmium	0.98	0.98	100
Chromium	2	2.1	105
Cobalt	0.98	0.98	100
Copper	2	1.7	85
Lead	0.98	0.9	92
Manganese	0.98	1.0	102
Nickel	0.98	1.0	102
Selenium	4.9	5.2	106
Silver	0.98	1.2	122
Thallium	0.98	0.96	98
Vanadium	4.9	4.9	100
Zinc	2	1.9	95

FORM 7-IN

LABORATORY CONTROL SAMPLE

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Matrix : WATER Preparation Method: 200.8

Analytical Method: ICP-MS Preparation Batch: PB90375

Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg) ug/L

Analyte	True	Found	%R
Aluminum	40	37.2	93
Antimony	4	3.9	98
Arsenic	2	1.9	95
Barium	20	19.7	99
Beryllium	2	2.0	100
Cadmium	2	2.0	100
Calcium	1000	941	94
Chromium	4	4.2	105
Cobalt	2	2.0	100
Copper	4	3.4	85
Iron	400	423	106
Lead	2	1.9	95
Magnesium	1000	908	91
Manganese	2	2.0	100
Nickel	2	2.1	105
Potassium	1000	916	92
Selenium	10	10.7	107
Silver	2	2.4	120
Sodium	1000	925	93
Thallium	2	2.0	100
Vanadium	10	9.9	99
Zinc	4	3.7	93

EPA SAMPLE NO.

MH4002L

FORM 8-IN

ICP-AES AND ICP-MS SERIAL DILUTIONS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Matrix : WATER Analytical Method: ICP-MS

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight) ug/L

Analyte	Initial Sample Result (I)	Q	Serial Dilution	Q	% Difference	Q
Aluminum	4.0	J	100	U	100	
Antimony	0.68	J	10.0	U	100	
Arsenic	0.59	J	0.55	J	7	
Barium	69.0		69.4		1	
Beryllium	1.0	U	5.0	U		
Cadmium	1.0	U	5.0	U		
Calcium	132000		131000		1	
Chromium	1.1	J	1.9	J	73	
Cobalt	1.0	U	5.0	U		
Copper	7.4		6.5	J	12	*
Iron	410		411	J	0	
Lead	0.7	J	0.35	J	50	
Magnesium	46400		46200		0	
Manganese	9.4		9.3		1	
Nickel	0.25	J	5.0	U	100	
Potassium	2310		2240	J	3	
Selenium	5.0	U	25.0	U		
Silver	0.2	J	0.2	J	0	
Sodium	122000		120000		2	
Thallium	0.15	J	5.0	U	100	
Vanadium	1.6	J	1.7	J	6	
Zinc	146		148		1	

EPA SAMPLE NO.

MH4025L

FORM 8-IN

ICP-AES AND ICP-MS SERIAL DILUTIONS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Matrix : Solid Analytical Method: ICP-MS

% Solids: 63.6

Concentration Units (µg/L, mg/L or mg/kg dry weight) mg/kg

Analyte	Initial Sample Result (I)	Q	Serial Dilution	Q	% Difference	Q
Antimony	2.7		2.4	J	11	*
Arsenic	24.2		26.7		10	
Barium	224		217		3	
Beryllium	0.4	J	0.42	J	5	
Cadmium	1.8		1.8	J	0	
Chromium	14.0		14.0		0	
Cobalt	5.2		5.1		2	
Copper	52.0		50.3		3	
Lead	301		290		4	
Manganese	583		553		5	
Nickel	11.1		10.6		5	
Selenium	1.1	J	14.0	U	100	
Silver	0.71		0.67	J	6	
Thallium	0.28	J	0.25	J	11	
Vanadium	14.8		14.4		3	
Zinc	348		351		1	

EPA SAMPLE NO.

MH4113L

FORM 8-IN

ICP-AES AND ICP-MS SERIAL DILUTIONS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Matrix : WATER Analytical Method: ICP-MS

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight) ug/L

Analyte	Initial Sample Result (I)	Q	Serial Dilution	Q	% Difference	Q
Aluminum	33.2		30.0	J	10	
Antimony	0.58	J	0.35	J	40	
Arsenic	1.8		1.5	J	17	
Barium	73.3		72.1		2	
Beryllium	1.0	U	5.0	U		
Cadmium	0.08	J	5.0	U	100	
Calcium	148000		149000		1	
Chromium	0.64	J	1.4	J	119	
Cobalt	0.1	J	5.0	U	100	
Copper	1.6	J	0.75	J	53	
Iron	70.6	J	68.2	J	3	
Lead	0.31	J	5.0	U	100	
Magnesium	60900		62700		3	
Manganese	11.5		11.7		2	
Nickel	0.68	J	0.5	J	26	
Potassium	2630		2630		0	
Selenium	1.8	J	25.0	U	100	
Silver	0.14	J	5.0	U	100	
Sodium	67700		68400		1	
Thallium	1.0	U	5.0	U		
Vanadium	5.1		5.0	J	2	
Zinc	8.8		7.0	J	20	*

FORM 9-IN

METHOD DETECTION LIMIT

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Analytical Method: ICP-MS Instrument ID: P7

Preparation Method: 200.8

Concentration Units (µg/L, µg or mg/kg): ug/L

Analyte	Wavelength/Mass	MDL	Date Analyzed
Aluminum	27	1.2	12/04/2015
Antimony	121	0.051	12/04/2015
Arsenic	75	0.11	12/04/2015
Barium	137	0.21	12/04/2015
Beryllium	9	0.060	12/04/2015
Cadmium	111	0.054	12/04/2015
Calcium	44	5.5	12/04/2015
Chromium	52	0.070	12/04/2015
Cobalt	59	0.056	12/04/2015
Copper	63	0.054	12/04/2015
Iron	57	4.1	12/04/2015
Lead	208	0.061	12/04/2015
Magnesium	24	5.2	12/04/2015
Manganese	55	0.060	12/04/2015
Nickel	60	0.060	12/04/2015
Potassium	39	8.1	12/04/2015
Selenium	82	1.4	12/04/2015
Silver	107	0.036	12/04/2015
Sodium	23	10.4	12/04/2015
Thallium	205	0.054	12/04/2015
Vanadium	51	0.026	12/04/2015
Zinc	66	0.13	12/04/2015

FORM 9-IN

METHOD DETECTION LIMIT

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Analytical Method: ICP-MS Instrument ID: P7

Preparation Method: 200.8

Concentration Units (µg/L, µg or mg/kg): mg/kg

Analyte	Wavelength/Mass	MDL	Date Analyzed
Antimony	121	0.015	12/04/2015
Arsenic	75	0.053	12/04/2015
Barium	137	0.084	12/04/2015
Beryllium	9	0.051	12/04/2015
Cadmium	111	0.027	12/04/2015
Chromium	52	0.035	12/04/2015
Cobalt	59	0.020	12/04/2015
Copper	63	0.026	12/04/2015
Lead	208	0.029	12/04/2015
Manganese	55	0.051	12/04/2015
Nickel	60	0.026	12/04/2015
Selenium	82	0.46	12/04/2015
Silver	107	0.015	12/04/2015
Thallium	205	0.036	12/04/2015
Vanadium	51	0.024	12/04/2015
Zinc	66	0.083	12/04/2015

FORM 11-IN
ICP-MS INTERNAL STANDARD ASSOCIATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Instrument ID: P7 Date: 05/06/2016

Run Batch: LB81457

Analyte	Assoc. Internal Standard 1	Assoc. Internal Standard 2
Aluminum	45Sc	
Antimony	159Tb	
Arsenic	89Y	
Barium	159Tb	
Beryllium	6Li	
Cadmium	159Tb	
Calcium	45Sc	
Chromium	45Sc	
Cobalt	45Sc	
Copper	45Sc	
Iron	45Sc	
Lead	209Bi	
Magnesium	45Sc	
Manganese	45Sc	
Nickel	45Sc	
Potassium	45Sc	
Selenium	89Y	
Silver	159Tb	
Sodium	45Sc	
Thallium	209Bi	
Vanadium	45Sc	
Zinc	45Sc	

FORM 12-IN

ANALYSIS LOG

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Instrument ID: P7 Analytical Method: ICP-MS

Start Date: 05/06/2016 End Date: 05/06/2016

Run Batch: LB81457

EPA Sample No.	D/F	Time	Analytes																										
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
TUNE	1.0	1341					X				X			X	X														
S00	1.0	1344	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
S02	1.0	1351	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
S03	1.0	1354	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
S04	1.0	1358	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
S05	1.0	1401	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
S06	1.0	1404	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
S07	1.0	1407	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
S08	1.0	1410	X						X				X		X				X			X							
ICV	1.0	1415	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ICB	1.0	1434	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ICSA	1.0	1437	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ICSAB	1.0	1441	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
CCV081	1.0	1444	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
CCB081	1.0	1446	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
PBS008	1.0	1451		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
LCS008	1.0	1454		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
PBW007	1.0	1457	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
LCS007	1.0	1500	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4002	1.0	1503	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4002D	1.0	1506	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4002L	5.0	1509	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4002S	1.0	1512		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
MH4113	1.0	1515	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4113D	1.0	1518	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4113L	5.0	1521	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4113S	1.0	1524		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
MH4116	1.0	1527	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4202	1.0	1530	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4211	1.0	1533	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4217	1.0	1536	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4218	1.0	1539	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4025	1.0	1544		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
MH4025	2.0	1547																											
MH4025D	1.0	1550		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
MH4025D	2.0	1553																											
MH4025L	5.0	1556		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
MH4025L	10.0	1559																											
MH4025S	1.0	1602		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
MH4025S	2.0	1605																											

FORM 12-IN

ANALYSIS LOG

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Instrument ID: P7 Analytical Method: ICP-MS

Start Date: 05/06/2016 End Date: 05/06/2016

Run Batch: LB81457

EPA Sample No.	D/F	Time	Analytes																									
			AL	**SB**	**AS**	**BA**	**BE**	**CD**	**CA**	**CR**	**CO**	**CU**	**FE**	**PB**	**MG**	**MN**	**HG**	**NI**	**K**	**SE**	**AG**	**NA**	**TL**	**V**	**ZN**	**CN**		
MH4028	1.0	1608		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X			
MH4028	2.0	1611																										
MH4029	1.0	1614		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X			
MH4029	2.0	1617																										
MH4030	1.0	1620		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X			
MH4030	2.0	1623																										
CCV082	1.0	1626	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCB082	1.0	1629	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			

FORM 13-IN
ICP-MS TUNE

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002
Instrument ID: P7 Date: 05/06/2016
Run Batch: LB81457

Element - Mass	Avg. Measured Mass (u)	Average Peak Width (u)	%Height	%RSD
Be - 9	8.95	0.7	5	1.2
Co - 59	58.9	0.7	5	0.3
In - 113	113	0.7	5	2.0
In - 115	115	0.7	5	1.0
Mg - 24	23.9	0.7	5	2.3
Mg - 25	24.9	0.7	5	0.7
Mg - 26	25.9	0.7	5	0.9
Pb - 206	206	0.7	5	0.1
Pb - 207	206.	0.7	5	0.5
Pb - 208	207.	0.7	5	0.7

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Instrument ID: P7 Start Date : 05/06/2016

Run Batch: LB81457 End Date : 05/06/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 6Li	Q	Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q
S00	1344	100		100		100		100		100	
S02	1351	101		99		101		101		99	
S03	1354	102		99		100		99		100	
S04	1358	101		97		98		96		98	
S05	1401	102		96		98		95		99	
S06	1404	101		94		96		93		99	
S07	1407	99		92		95		91		98	
S08	1410	89		94		94		83		94	
ICV	1415	100		105		104		104		102	
ICB	1434	100		101		102		101		100	
ICSA	1437	97		98		98		93		99	
ICSAB	1441	98		102		103		97		102	
CCV081	1444	99		103		103		99		102	
CCB081	1446	99		101		102		102		101	
PBS008	1451	99		99		99		99		99	
LCS008	1454	100		99		99		100		100	
PBW007	1457	99		98		99		99		99	
LCS007	1500	98		98		99		99		100	
MH4002	1503	112		115		113		107		113	
MH4002D	1506	112		112		112		106		112	
MH4002L	1509	101		103		104		101		103	
MH4002S	1512	114		111		111		105		111	
MH4113	1515	116		108		110		105		111	
MH4113D	1518	117		108		110		105		112	
MH4113L	1521	106		99		102		100		105	
MH4113S	1524	116		103		106		101		110	
MH4116	1527	119		105		108		104		112	
MH4202	1530	119		104		108		103		112	
MH4211	1533	121		105		109		105		114	
MH4217	1536	121		105		109		105		114	
MH4218	1539	119		103		106		102		111	
MH4025	1544	108		95		113		95		104	
ZZZZZZ	1547										
MH4025D	1550	110		97		115		96		106	
ZZZZZZ	1553										
MH4025L	1556	106		97		103		99		104	
ZZZZZZ	1559										
MH4025S	1602	112		99		118		99		108	

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Instrument ID: P7 Start Date : 05/06/2016

Run Batch: LB81457 End Date : 05/06/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 6Li	Q	Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q
ZZZZZZ	1605										
MH4028	1608	111		101		118		100		107	
ZZZZZZ	1611										
MH4029	1614	110		100		112		101		107	
ZZZZZZ	1617										
MH4030	1620	109		98		109		99		105	
ZZZZZZ	1623										
CCV082	1626	101		97		98		94		101	
CCB082	1629	100		94		97		96		100	

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Instrument ID: P7 Start Date : 05/06/2016

Run Batch: LB81457 End Date : 05/06/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q	Element 165Ho	Q
S00	1344	100		100		100		100		100	
S02	1351	100		101		100		100		99	
S03	1354	100		100		100		101		100	
S04	1358	98		98		98		102		102	
S05	1401	96		96		95		100		99	
S06	1404	96		95		93		100		100	
S07	1407	97		94		90		99		99	
S08	1410	103		101		88		101		101	
ICV	1415	107		105		103		105		105	
ICB	1434	104		103		102		103		103	
ICSA	1437	99		99		93		103		102	
ICSAB	1441	103		103		97		105		106	
CCV081	1444	104		101		97		103		103	
CCB081	1446	99		99		99		101		100	
PBS008	1451	97		98		98		99		100	
LCS008	1454	99		99		99		102		101	
PBW007	1457	98		99		98		101		101	
LCS007	1500	99		100		100		102		102	
MH4002	1503	110		110		106		111		112	
MH4002D	1506	108		108		104		110		110	
MH4002L	1509	102		103		101		105		105	
MH4002S	1512	105		107		103		110		110	
MH4113	1515	102		103		100		108		109	
MH4113D	1518	101		104		101		111		110	
MH4113L	1521	95		99		98		103		104	
MH4113S	1524	97		100		98		107		107	
MH4116	1527	97		101		99		108		108	
MH4202	1530	98		103		101		110		110	
MH4211	1533	96		102		101		110		109	
MH4217	1536	98		102		101		111		110	
MH4218	1539	96		100		99		108		109	
MH4025	1544	89		107		92		101		101	
ZZZZZZ	1547										
MH4025D	1550	91		109		94		103		103	
ZZZZZZ	1553										
MH4025L	1556	93		100		98		103		103	
ZZZZZZ	1559										
MH4025S	1602	92		109		95		103		104	

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Instrument ID: P7 Start Date : 05/06/2016

Run Batch: LB81457 End Date : 05/06/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q	Element 165Ho	Q
ZZZZZZ	1605										
MH4028	1608	95		110		97		105		104	
ZZZZZZ	1611										
MH4029	1614	93		103		96		102		103	
ZZZZZZ	1617										
MH4030	1620	92		103		97		103		103	
ZZZZZZ	1623										
CCV082	1626	94		95		93		100		100	
CCB082	1629	92		94		96		100		100	

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Instrument ID: P7 Start Date : 05/06/2016

Run Batch: LB81457 End Date : 05/06/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 165Ho	Q	Element 209Bi	Q	Element	Q	Element	Q	Element	Q
S00	1344	100		100							
S02	1351	101		101							
S03	1354	100		100							
S04	1358	98		98							
S05	1401	100		100							
S06	1404	100		98							
S07	1407	99		97							
S08	1410	95		84							
ICV	1415	102		101							
ICB	1434	100		100							
ICSA	1437	100		95							
ICSAB	1441	102		97							
CCV081	1444	103		100							
CCB081	1446	102		102							
PBS008	1451	100		100							
LCS008	1454	101		101							
PBW007	1457	100		100							
LCS007	1500	100		100							
MH4002	1503	114		107							
MH4002D	1506	113		107							
MH4002L	1509	104		102							
MH4002S	1512	112		107							
MH4113	1515	112		107							
MH4113D	1518	113		109							
MH4113L	1521	106		105							
MH4113S	1524	111		107							
MH4116	1527	114		110							
MH4202	1530	113		111							
MH4211	1533	115		114							
MH4217	1536	115		112							
MH4218	1539	113		110							
MH4025	1544	105		105							
ZZZZZZ	1547										
MH4025D	1550	107		107							
ZZZZZZ	1553										
MH4025L	1556	105		105							

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Instrument ID: P7 Start Date : 05/06/2016

Run Batch: LB81457 End Date : 05/06/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 165Ho	Q	Element 209Bi	Q	Element	Q	Element	Q	Element	Q
ZZZZZZ	1559										
MH4025S	1602	108		108							
ZZZZZZ	1605										
MH4028	1608	109		109							
ZZZZZZ	1611										
MH4029	1614	108		109							
ZZZZZZ	1617										
MH4030	1620	107		108							
ZZZZZZ	1623										
CCV082	1626	101		100							
CCB082	1629	101		102							

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Instrument ID: P7 Start Date : 05/06/2016

Run Batch: LB81457 End Date : 05/06/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 209Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
S00	1344	100									
S02	1351	100									
S03	1354	100									
S04	1358	99									
S05	1401	97									
S06	1404	96									
S07	1407	94									
S08	1410	87									
ICV	1415	102									
ICB	1434	102									
ICSA	1437	94									
ICSAB	1441	97									
CCV081	1444	97									
CCB081	1446	99									
PBS008	1451	99									
LCS008	1454	100									
PBW007	1457	100									
LCS007	1500	100									
MH4002	1503	104									
MH4002D	1506	103									
MH4002L	1509	102									
MH4002S	1512	103									
MH4113	1515	101									
MH4113D	1518	103									
MH4113L	1521	100									
MH4113S	1524	101									
MH4116	1527	102									
MH4202	1530	103									
MH4211	1533	104									
MH4217	1536	104									
MH4218	1539	102									
MH4025	1544	98									
ZZZZZZ	1547										
MH4025D	1550	99									
ZZZZZZ	1553										
MH4025L	1556	101									

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Instrument ID: P7 Start Date : 05/06/2016

Run Batch: LB81457 End Date : 05/06/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 209Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
ZZZZZZ	1559										
MH4025S	1602	99									
ZZZZZZ	1605										
MH4028	1608	101									
ZZZZZZ	1611										
MH4029	1614	100									
ZZZZZZ	1617										
MH4030	1620	100									
ZZZZZZ	1623										
CCV082	1626	95									
CCB082	1629	98									

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Instrument ID: P7 Start Date: 05/06/2016

Analytical Method: ICP-MS Run Batch: LB81457

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	0	0	0	20	19.8	1	1000	1030	-3
Antimony	0	0	0	2	2.0	0	50	51.5	-3
Arsenic	0	0	0	1	1.0	0	50	55.9	-12
Barium	0	0	0	10	9.9	1	250	260	-4
Beryllium	0	0	0	1	1.0	0	50	53.3	-7
Cadmium	0	0	0	1	1.1	-10	50	53.3	-7
Calcium	0	0	0	500	482	4	5000	4970	1
Chromium	0	0	0	2	2.2	-10	50	56.6	-13
Cobalt	0	0	0	1	1.1	-10	50	58.7	-17
Copper	0	0	0	2	1.9	5	100	118	-18
Iron	0	0	0	50	51.6	-3	2500	2830	-13
Lead	0	0	0	1	0.92	8	50	49.2	2
Magnesium	0	0	0	500	475	5	5000	4980	0
Manganese	0	0	0	1	1.0	0	100	116	-16
Nickel	0	0	0	1	1.1	-10	50	60.0	-20
Potassium	0	0	0	500	477	5	2500	2360	6
Selenium	0	0	0	5	5.8	-16	50	60.9	-22
Silver	0	0	0	1	1.1	-10	50	54.2	-8
Sodium	0	0	0	500	483	3	5000	5060	-1
Thallium	0	0	0	1	1.0	0	50	50.0	0
Vanadium	0	0	0	5	5.2	-4	50	56.7	-13
Zinc	0	0	0	2	1.9	5	100	120	-20

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Instrument ID: P7 Start Date: 05/06/2016

Analytical Method: ICP-MS Run Batch: LB81457

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	2500	2380	5	5000	4690	6	10000	9220	8
Antimony	125	130	-4	250	254	-2	500	506	-1
Arsenic	125	130	-4	250	258	-3	500	507	-1
Barium	625	652	-4	1250	1260	-1	2500	2510	0
Beryllium	125	133	-6	250	254	-2	500	511	-2
Cadmium	125	133	-6	250	257	-3	500	503	-1
Calcium	12500	12600	-1	25000	24600	2	50000	49800	0
Chromium	125	130	-4	250	257	-3	500	512	-2
Cobalt	125	134	-7	250	264	-6	500	519	-4
Copper	250	268	-7	500	537	-7	1000	1040	-4
Iron	6250	6450	-3	12500	12800	-2	25000	25600	-2
Lead	125	126	-1	250	250	0	500	505	-1
Magnesium	12500	12100	3	25000	23700	5	50000	46500	7
Manganese	250	262	-5	500	521	-4	1000	1040	-4
Nickel	125	136	-9	250	268	-7	500	520	-4
Potassium	6250	6150	2	12500	12000	4	25000	23600	6
Selenium	125	136	-9	250	256	-2	500	516	-3
Silver	125	136	-9	250	262	-5	500	512	-2
Sodium	12500	12300	2	25000	24100	4	50000	47500	5
Thallium	125	127	-2	250	249	0	500	504	-1
Vanadium	125	130	-4	250	258	-3	500	514	-3
Zinc	250	273	-9	500	539	-8	1000	1050	-5

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Instrument ID: P7 Start Date: 05/06/2016

Analytical Method: ICP-MS Run Batch: LB81457

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	20000	18100	10	100000	100000	0			
Antimony	1000	995	1						
Arsenic	1000	994	1						
Barium	5000	4990	0						
Beryllium	1000	992	1						
Cadmium	1000	996	0						
Calcium	100000	97500	3	500000	501000	0			
Chromium	1000	991	1						
Cobalt	1000	985	2						
Copper	2000	1970	2						
Iron	50000	49200	2	250000	250000	0			
Lead	1000	997	0						
Magnesium	100000	90600	9	500000	502000	0			
Manganese	2000	1970	2						
Nickel	1000	984	2						
Potassium	50000	45600	9	250000	251000	0			
Selenium	1000	989	1						
Silver	1000	989	1						
Sodium	100000	92200	8	500000	502000	0			
Thallium	1000	998	0						
Vanadium	1000	990	1						
Zinc	2000	1960	2						

FORM 16-IN

INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Instrument ID: P7 Start Date : 05/06/2016

Analytical Method: ICP-MS Run Batch : LB81457

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Aluminum	0.999783	0.994021	429.286	Lin. Reg	NONE
Antimony	0.999952	1.00423	-2.9608	Lin. Reg	NONE
Arsenic	0.999923	1.00653	-4.57392	Lin. Reg	NONE
Barium	0.999981	1.00335	-11.6557	Lin. Reg	NONE
Beryllium	0.999886	1.00624	-4.41025	Lin. Reg	NONE
Cadmium	0.999948	1.00569	-3.97237	Lin. Reg	NONE
Calcium	0.999985	0.998895	410.797	Lin. Reg	NONE
Chromium	0.999855	1.0073	-5.16195	Lin. Reg	NONE
Cobalt	0.999602	1.01178	-8.47266	Lin. Reg	NONE
Copper	0.999536	1.01272	-18.3499	Lin. Reg	NONE
Iron	0.999988	1.00055	-108.744	Lin. Reg	NONE
Lead	0.999981	1.00094	-0.664541	Lin. Reg	NONE
Magnesium	0.999799	0.994404	2008.38	Lin. Reg	NONE
Manganese	0.999689	1.00953	-13.6875	Lin. Reg	NONE
Nickel	0.999503	1.01386	-9.99152	Lin. Reg	NONE
Potassium	0.999824	0.995004	896.926	Lin. Reg	NONE
Selenium	0.999745	1.01098	-7.7829	Lin. Reg	NONE
Silver	0.999782	1.00955	-6.77934	Lin. Reg	NONE
Sodium	0.999863	0.99571	1549.73	Lin. Reg	NONE
Thallium	0.999983	1.00126	-0.888532	Lin. Reg	NONE
Vanadium	0.999817	1.00802	-5.68233	Lin. Reg	NONE
Zinc	0.999365	1.01472	-21.3949	Lin. Reg	NONE

US EPA Tune Check Sample Report

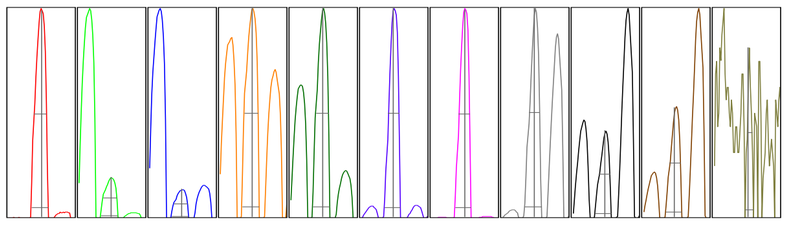
Batch Folder D:\ICP-MS Data\P7050616.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD % (Actual)	RSD % (Required)	RSD % (Flag)
9	3234	1.25	5.00	
24	83165	2.30	5.00	
25	11217	0.78	5.00	
26	13119	0.94	5.00	
59	50266	0.40	5.00	
113	3870	2.10	5.00	
115	86810	1.02	5.00	
206	17934	0.14	5.00	
207	15982	0.59	5.00	
208	38620	0.72	5.00	
220	4	72.18		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	3172	3231	3264	3275	3229
24	86547	82808	82129	82066	82275
25	11332	11287	11149	11185	11135
26	13255	13214	12957	13035	13134
59	50200	50563	50331	50219	50018
113	3932	3918	3787	3777	3938
115	88021	87095	87062	86034	85837
206	17911	17912	17968	17928	17951
207	15879	16129	15970	15927	16006
208	38300	38478	38977	38507	38837
220	8	6	0	3	4

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	594	9.05	8.9 - 9.1		0.774	0.900	
24	14326	24.00	23.9 - 24.1		0.784	0.900	
25	1928	25.00	24.9 - 25.1		0.784	0.900	
26	2251	26.00	25.9 - 26.1		0.782	0.900	
59	9251	59.00	58.9 - 59.1		0.774	0.900	
113	800	113.00	112.9 - 113.1		0.718	0.900	
115	17723	115.05	114.9 - 115.1		0.720	0.900	
206	3843	206.00	205.9 - 206.1		0.748	0.900	
207	3384	207.00	206.9 - 207.1		0.726	0.900	
208	8050	207.95	207.9 - 208.1		0.723	0.900	
220	1	220.10	-		0.387		

X% = 5 Integration Time [sec] = 0.1 Acquisition Time [sec] = 268 Y Axis = Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.80	L/min			
RF Matching	1.80	V	Option Gas	0.0	%			
Smpl Depth	10.0	mm	Nebulizer Pump	0.10	rps			
S/C Temp	2	℃						

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens					
Extract 2	-195.0	V	Cell Entrance					
Omega Bias	-105	V	Cell Exit	-50	V			
Deflect	13.2	V						

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		OctP Bias	-8.0	V			
He Flow	0.0	mL/min	OctP RF	180	V			
Energy Discrimination	5.0	V						

[He]

Mass	Count (Mean)	RSD % (Actual)	RSD % (Required)
59	13758	0.71	
89	75	10.36	
205	396	4.33	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	13720	13910	13670	13800	13692
89	77	84	78	72	63
205	417	374	409	388	391

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.80	L/min			
RF Matching	1.80	V	Option Gas	0.0	%			
Smpl Depth	10.0	mm	Nebulizer Pump	0.10	rps			
S/C Temp	2	℃						

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.9	V			
Extract 2	-200.0	V	Cell Entrance	-40	V			
Omega Bias	-110	V	Cell Exit	-60	V			
Deflect	2.0	V						

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	true		OctP Bias	-18.0	V			
He Flow	4.1	mL/min	OctP RF	180	V			
Energy Discrimination	5.0	V						

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P7
Client Sample ID :	S00	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:44:28	DataFile Name :	002CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.03	0.05	-0.02	0.00	N/A	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	N/A	ppb
Arsenic	75-2	0.00	0.00	0.00	0.00	N/A	ppb
Barium	135-1	0.00	-0.01	0.01	0.00	N/A	ppb
Barium	137-1	0.00	0.00	0.00	0.00	N/A	ppb
Beryllium	9-1	0.00	0.00	0.00	0.00	N/A	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Boron	10-1	0.13	-0.16	0.03	0.00	N/A	ppb
Boron	11-1	-0.09	0.09	0.00	0.00	N/A	ppb
Cadmium	111-1	0.02	0.00	-0.02	0.00	N/A	ppb
Cadmium	106-1	0.20	0.05	-0.25	0.00	N/A	ppb
Cadmium	108-1	0.04	-0.01	-0.03	0.00	N/A	ppb
Calcium	43-1	0.19	0.64	-0.83	0.00	N/A	ppb
Calcium	44-1	0.17	1.06	-1.23	0.00	N/A	ppb
Chromium	52-2	-0.02	-0.01	0.03	0.00	N/A	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	N/A	ppb
Copper	63-2	-0.04	-0.01	0.05	0.00	N/A	ppb
Holmium	165-2				100		%
Holmium	165-1				100		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	56-2	-0.06	-0.07	0.13	0.00	N/A	ppb
Iron	57-2	-0.20	-0.06	0.25	0.00	N/A	ppb
Lead	206-1	0.00	0.01	0.00	0.00	N/A	ppb
Lead	207-1	-0.01	0.00	0.01	0.00	N/A	ppb
Lead	208-1	0.00	0.00	0.00	0.00	N/A	ppb
Lithium	6-1				100		%
Magnesium	24-2	0.07	0.09	-0.16	0.00	N/A	ppb
Manganese	55-2	-0.01	0.01	0.00	0.00	N/A	ppb
Molybdenum	94-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	95-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	96-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	97-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00	N/A	ppb
Nickel	60-2	0.00	0.00	0.01	0.00	N/A	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P7
Client Sample ID :	S00	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:44:28	DataFile Name :	002CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-23.86	-17.86	-31.31	-24.35		ppb
Potassium	39-2	0.25	-2.13	1.88	0.00	N/A	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-2				100		%
Scandium	45-1				100		%
Selenium	82-1	0.07	0.44	-0.52	0.00	N/A	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	0.17	-0.02	-0.15	0.00	N/A	ppb
Silicon	28-1	0.00	0.07	-0.07	0.00	N/A	ppb
Silver	109-1	0.00	0.00	0.00	0.00	N/A	ppb
Silver	107-1	0.00	0.00	0.00	0.00	N/A	ppb
Sodium	23-2	0.04	-0.44	0.40	0.00	N/A	ppb
Strontium	86-1	0.02	-0.02	0.00	0.00	N/A	ppb
Strontium	88-1	0.00	0.00	0.00	0.00	N/A	ppb
Sulfur	34-1	41.74	64.46	-113.69	-2.50		ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.00	0.00	0.00	0.00	N/A	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	N/A	ppb
Tin	118-1	0.01	0.00	-0.01	0.00	N/A	ppb
Titanium	47-1	0.00	0.00	0.00	0.00	N/A	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	N/A	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	N/A	ppb
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	-0.19	0.08	0.11	0.00	N/A	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	N/A	ppb
Zirconium	91-1	0.00	0.00	0.00	0.00	N/A	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P7
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:51:12	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	18.59	19.58	21.13	19.77	6.47	ppb
Antimony	121-1	1.99	1.93	1.94	1.95	1.61	ppb
Arsenic	75-2	1.07	0.86	1.17	1.03	15.50	ppb
Barium	135-1	9.88	9.85	10.09	9.94	1.34	ppb
Barium	137-1	9.75	9.92	10.05	9.91	1.49	ppb
Beryllium	9-1	0.99	0.99	1.05	1.01	3.38	ppb
Bismuth	209-1				101		%
Bismuth	209-2				100		%
Boron	10-1	9.87	9.22	11.07	10.06	9.35	ppb
Boron	11-1	9.60	9.22	10.07	9.63	4.39	ppb
Cadmium	106-1	1.31	1.36	0.90	1.19	21.01	ppb
Cadmium	108-1	1.16	0.95	1.05	1.05	9.85	ppb
Cadmium	111-1	1.08	1.00	1.06	1.05	4.22	ppb
Calcium	43-1	485.42	486.97	483.25	485.21	0.38	ppb
Calcium	44-1	480.10	483.94	480.52	481.52	0.44	ppb
Chromium	52-2	2.23	2.13	2.14	2.17	2.60	ppb
Cobalt	59-2	1.03	1.08	1.03	1.05	2.55	ppb
Copper	63-2	2.03	1.97	1.81	1.94	5.72	ppb
Holmium	165-2				99		%
Holmium	165-1				101		%
Indium	115-1				101		%
Indium	115-2				100		%
Iron	56-2	52.32	51.62	49.65	51.19	2.70	ppb
Iron	57-2	53.74	50.83	50.23	51.60	3.63	ppb
Lead	206-1	0.92	0.94	0.90	0.92	2.23	ppb
Lead	207-1	0.96	0.91	0.94	0.94	2.43	ppb
Lead	208-1	0.94	0.92	0.90	0.92	2.06	ppb
Lithium	6-1				101		%
Magnesium	24-2	483.92	477.59	464.07	475.19	2.13	ppb
Manganese	55-2	1.05	1.01	1.06	1.04	2.55	ppb
Molybdenum	94-1	2.11	2.08	2.13	2.11	1.34	ppb
Molybdenum	95-1	4.97	5.02	4.90	4.97	1.24	ppb
Molybdenum	96-1	4.25	4.30	4.11	4.22	2.31	ppb
Molybdenum	97-1	4.97	4.88	4.96	4.94	0.96	ppb
Molybdenum	98-1	4.88	4.77	4.83	4.83	1.10	ppb
Nickel	60-2	1.16	1.02	1.00	1.06	8.47	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P7
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:51:12	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	20.63	27.27	25.14	24.35	13.94	ppb
Potassium	39-2	493.98	475.32	460.45	476.58	3.53	ppb
Rhodium	103-1				101		%
Rhodium	103-2				100		%
Scandium	45-2				100		%
Scandium	45-1				99		%
Selenium	82-1	6.12	5.57	5.73	5.81	4.87	ppb
Selenium	77-2	4.83	6.49	5.64	5.65	14.62	ppb
Selenium	78-2	5.45	5.40	6.14	5.66	7.29	ppb
Silicon	28-1	11.74	11.05	11.63	11.47	3.23	ppb
Silver	107-1	1.15	1.11	1.14	1.13	2.01	ppb
Silver	109-1	1.12	1.08	1.05	1.08	2.87	ppb
Sodium	23-2	491.90	484.83	471.14	482.62	2.19	ppb
Strontium	86-1	0.94	0.99	1.04	0.99	4.95	ppb
Strontium	88-1	0.98	0.99	1.00	0.99	1.07	ppb
Sulfur	34-1	59.66	10.65	-62.82	2.50	2469.57	ppb
Terbium	159-1				99		%
Terbium	159-2				100		%
Thallium	203-1	0.98	0.98	1.03	1.00	3.24	ppb
Thallium	205-1	1.01	1.01	1.01	1.01	0.40	ppb
Tin	118-1	5.06	5.01	4.94	5.00	1.25	ppb
Titanium	47-1	4.82	4.93	4.87	4.87	1.14	ppb
Uranium	238-1	0.90	0.91	0.91	0.91	0.77	ppb
Vanadium	51-2	5.22	5.30	5.01	5.17	2.92	ppb
Yttrium	89-2				101		%
Yttrium	89-1				101		%
Zinc	66-2	1.93	1.96	1.85	1.91	3.17	ppb
Zirconium	90-1	0.87	0.84	0.86	0.86	1.47	ppb
Zirconium	91-1	0.96	0.86	0.89	0.90	5.88	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:54:32	DataFile Name :	005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1076.22	1062.07	955.02	1031.10	6.43	ppb
Antimony	121-1	51.24	50.95	52.28	51.49	1.35	ppb
Arsenic	75-2	57.75	56.23	53.59	55.86	3.77	ppb
Barium	135-1	256.74	257.71	256.88	257.11	0.20	ppb
Barium	137-1	257.77	259.00	262.33	259.70	0.91	ppb
Beryllium	9-1	52.81	53.20	53.99	53.33	1.13	ppb
Bismuth	209-2				100		%
Bismuth	209-1				100		%
Boron	10-1	51.05	48.73	52.39	50.73	3.65	ppb
Boron	11-1	48.41	50.63	49.49	49.51	2.23	ppb
Cadmium	106-1	51.69	55.07	55.83	54.19	4.06	ppb
Cadmium	108-1	54.49	53.62	54.75	54.28	1.09	ppb
Cadmium	111-1	52.88	53.45	53.49	53.27	0.64	ppb
Calcium	43-1	4951.91	4974.21	4989.17	4971.76	0.38	ppb
Calcium	44-1	4904.12	4992.69	5019.93	4972.25	1.22	ppb
Chromium	52-2	59.41	57.11	53.13	56.55	5.62	ppb
Cobalt	59-2	61.24	59.07	55.86	58.72	4.61	ppb
Copper	63-2	122.87	118.66	111.43	117.65	4.92	ppb
Holmium	165-2				100		%
Holmium	165-1				100		%
Indium	115-1				99		%
Indium	115-2				100		%
Iron	56-2	3008.81	2890.65	2684.44	2861.30	5.74	ppb
Iron	57-2	2955.70	2866.12	2672.04	2831.29	5.12	ppb
Lead	206-1	48.97	48.71	49.11	48.93	0.42	ppb
Lead	207-1	49.72	48.95	49.86	49.51	0.99	ppb
Lead	208-1	49.14	48.99	49.43	49.18	0.46	ppb
Lithium	6-1				102		%
Magnesium	24-2	5187.61	5048.87	4698.07	4978.18	5.07	ppb
Manganese	55-2	120.62	116.75	109.33	115.57	4.96	ppb
Molybdenum	94-1	49.41	49.49	50.13	49.67	0.79	ppb
Molybdenum	95-1	50.13	50.60	51.30	50.68	1.16	ppb
Molybdenum	96-1	49.84	49.87	50.48	50.07	0.72	ppb
Molybdenum	97-1	48.97	48.40	49.53	48.96	1.15	ppb
Molybdenum	98-1	48.28	48.92	49.46	48.89	1.20	ppb
Nickel	60-2	62.19	61.31	56.56	60.02	5.05	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:54:32	DataFile Name :	005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	1060.48	988.28	944.77	997.84	5.86	ppb
Potassium	39-2	2417.33	2368.54	2281.74	2355.87	2.92	ppb
Rhodium	103-1				99		%
Rhodium	103-2				100		%
Scandium	45-1				99		%
Scandium	45-2				100		%
Selenium	82-1	60.59	60.98	61.22	60.93	0.53	ppb
Selenium	77-2	59.43	64.74	55.05	59.74	8.12	ppb
Selenium	78-2	59.84	60.71	55.11	58.56	5.14	ppb
Silicon	28-1	57.06	58.90	60.03	58.66	2.56	ppb
Silver	107-1	53.92	53.83	54.91	54.22	1.11	ppb
Silver	109-1	53.14	53.14	53.89	53.39	0.80	ppb
Sodium	23-2	5214.18	5079.92	4877.84	5057.31	3.35	ppb
Strontium	86-1	49.73	49.29	50.17	49.73	0.88	ppb
Strontium	88-1	50.59	50.73	52.00	51.11	1.52	ppb
Sulfur	34-1	974.98	1317.88	1389.46	1227.44	18.05	ppb
Terbium	159-2				101		%
Terbium	159-1				100		%
Thallium	203-1	49.90	49.33	49.87	49.70	0.65	ppb
Thallium	205-1	50.03	49.44	50.52	50.00	1.09	ppb
Tin	118-1	51.07	50.47	51.70	51.08	1.20	ppb
Titanium	47-1	50.41	52.66	50.82	51.30	2.34	ppb
Uranium	238-1	47.83	48.19	48.42	48.15	0.61	ppb
Vanadium	51-2	58.82	57.84	53.57	56.74	4.91	ppb
Yttrium	89-2				100		%
Yttrium	89-1				100		%
Zinc	66-2	125.91	120.86	114.23	120.33	4.87	ppb
Zirconium	90-1	49.30	49.66	49.78	49.58	0.51	ppb
Zirconium	91-1	49.97	49.76	50.60	50.11	0.87	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:58:08	DataFile Name :	006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2391.97	2367.28	2390.99	2383.41	0.59	ppb
Antimony	121-1	127.28	129.96	134.08	130.44	2.63	ppb
Arsenic	75-2	131.13	128.59	130.23	129.98	0.99	ppb
Barium	135-1	641.59	654.82	678.08	658.17	2.81	ppb
Barium	137-1	638.40	652.87	664.42	651.90	2.00	ppb
Beryllium	9-1	132.16	131.34	135.09	132.86	1.48	ppb
Bismuth	209-1				98		%
Bismuth	209-2				99		%
Boron	10-1	123.05	125.68	131.70	126.81	3.50	ppb
Boron	11-1	119.16	124.87	130.75	124.93	4.64	ppb
Cadmium	111-1	130.66	132.61	136.19	133.15	2.11	ppb
Cadmium	106-1	132.89	135.27	141.95	136.70	3.44	ppb
Cadmium	108-1	129.38	135.62	139.83	134.94	3.90	ppb
Calcium	43-1	12491.94	12849.73	12826.36	12722.68	1.57	ppb
Calcium	44-1	12341.74	12748.40	12813.92	12634.69	2.02	ppb
Chromium	52-2	129.78	129.82	130.25	129.95	0.20	ppb
Cobalt	59-2	134.32	133.66	133.48	133.82	0.33	ppb
Copper	63-2	268.36	265.60	268.59	267.52	0.62	ppb
Holmium	165-2				102		%
Holmium	165-1				98		%
Indium	115-1				97		%
Indium	115-2				97		%
Iron	56-2	6476.99	6463.44	6452.32	6464.25	0.19	ppb
Iron	57-2	6482.81	6416.61	6461.04	6453.49	0.52	ppb
Lead	206-1	121.65	125.15	125.56	124.12	1.73	ppb
Lead	207-1	124.19	128.51	128.29	127.00	1.91	ppb
Lead	208-1	123.06	127.27	128.02	126.11	2.12	ppb
Lithium	6-1				101		%
Magnesium	24-2	12071.32	12062.16	12139.51	12091.00	0.35	ppb
Manganese	55-2	262.78	260.47	261.64	261.63	0.44	ppb
Molybdenum	94-1	124.10	126.38	127.77	126.08	1.47	ppb
Molybdenum	95-1	126.43	127.11	130.75	128.10	1.82	ppb
Molybdenum	96-1	125.86	126.55	130.47	127.62	1.95	ppb
Molybdenum	97-1	123.82	125.85	128.78	126.15	1.97	ppb
Molybdenum	98-1	122.61	124.74	127.35	124.90	1.90	ppb
Nickel	60-2	137.27	135.89	135.52	136.23	0.68	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:58:08	DataFile Name :	006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	2717.48	2675.63	2682.46	2691.86	0.83	ppb
Potassium	39-2	6201.24	6135.39	6124.85	6153.83	0.67	ppb
Rhodium	103-2				98		%
Rhodium	103-1				96		%
Scandium	45-1				97		%
Scandium	45-2				98		%
Selenium	77-2	124.46	131.15	134.89	130.17	4.06	ppb
Selenium	78-2	134.94	132.99	135.55	134.49	0.99	ppb
Selenium	82-1	133.03	133.99	139.48	135.50	2.57	ppb
Silicon	28-1	143.47	147.38	141.96	144.27	1.94	ppb
Silver	109-1	131.84	135.97	138.57	135.46	2.51	ppb
Silver	107-1	132.87	136.41	138.98	136.09	2.25	ppb
Sodium	23-2	12271.70	12226.92	12277.92	12258.85	0.23	ppb
Strontium	86-1	125.05	127.44	130.01	127.50	1.95	ppb
Strontium	88-1	126.73	128.54	131.32	128.86	1.80	ppb
Sulfur	34-1	2771.15	3038.95	2877.51	2895.87	4.66	ppb
Terbium	159-1				98		%
Terbium	159-2				102		%
Thallium	203-1	123.22	127.59	127.34	126.05	1.95	ppb
Thallium	205-1	124.32	128.97	128.80	127.36	2.07	ppb
Tin	118-1	128.34	129.74	134.14	130.74	2.31	ppb
Titanium	47-1	127.08	130.90	128.41	128.80	1.51	ppb
Uranium	238-1	123.00	123.43	124.11	123.51	0.46	ppb
Vanadium	51-2	129.99	129.92	130.80	130.24	0.38	ppb
Yttrium	89-2				98		%
Yttrium	89-1				98		%
Zinc	66-2	274.70	270.23	274.01	272.98	0.88	ppb
Zirconium	90-1	126.26	129.29	131.45	129.00	2.02	ppb
Zirconium	91-1	124.56	127.01	127.77	126.45	1.32	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:01:19	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4667.76	4717.64	4696.33	4693.91	0.53	ppb
Antimony	121-1	255.22	256.23	251.92	254.46	0.89	ppb
Arsenic	75-2	257.34	257.44	258.50	257.76	0.25	ppb
Barium	135-1	1277.76	1266.20	1276.03	1273.33	0.49	ppb
Barium	137-1	1263.12	1269.01	1261.48	1264.54	0.31	ppb
Beryllium	9-1	252.67	256.75	254.01	254.48	0.82	ppb
Bismuth	209-1				100		%
Bismuth	209-2				97		%
Boron	10-1	235.56	243.89	245.50	241.65	2.21	ppb
Boron	11-1	235.46	245.68	250.93	244.02	3.22	ppb
Cadmium	106-1	264.34	260.67	266.63	263.88	1.14	ppb
Cadmium	108-1	260.65	257.44	262.52	260.20	0.99	ppb
Cadmium	111-1	259.20	254.15	256.53	256.63	0.99	ppb
Calcium	44-1	24466.78	24489.21	24763.69	24573.23	0.67	ppb
Calcium	43-1	24507.23	24657.81	24931.86	24698.96	0.87	ppb
Chromium	52-2	257.35	255.90	256.67	256.64	0.28	ppb
Cobalt	59-2	259.78	267.69	264.78	264.08	1.51	ppb
Copper	63-2	536.07	537.52	536.75	536.78	0.14	ppb
Holmium	165-2				99		%
Holmium	165-1				100		%
Indium	115-1				96		%
Indium	115-2				94		%
Iron	56-2	12766.12	12837.23	12829.31	12810.89	0.30	ppb
Iron	57-2	12783.48	12798.21	12721.38	12767.69	0.32	ppb
Lead	206-1	254.54	252.19	253.02	253.25	0.47	ppb
Lead	207-1	250.13	250.85	250.11	250.36	0.17	ppb
Lead	208-1	250.02	250.54	250.78	250.45	0.16	ppb
Lithium	6-1				102		%
Magnesium	24-2	23857.35	23604.25	23745.00	23735.53	0.53	ppb
Manganese	55-2	521.24	518.63	521.81	520.56	0.33	ppb
Molybdenum	94-1	249.73	253.25	253.71	252.23	0.86	ppb
Molybdenum	95-1	251.74	252.70	251.06	251.83	0.33	ppb
Molybdenum	96-1	250.40	250.99	251.63	251.01	0.24	ppb
Molybdenum	97-1	243.88	243.65	246.31	244.61	0.60	ppb
Molybdenum	98-1	250.67	250.93	252.92	251.51	0.49	ppb
Nickel	60-2	268.32	267.75	266.90	267.65	0.27	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:01:19	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	5132.91	4983.52	5239.67	5118.70	2.51	ppb
Potassium	39-2	11994.90	12075.45	12065.71	12045.35	0.36	ppb
Rhodium	103-1				95		%
Rhodium	103-2				95		%
Scandium	45-1				96		%
Scandium	45-2				96		%
Selenium	82-1	251.18	250.81	265.94	255.98	3.37	ppb
Selenium	77-2	265.59	267.98	248.35	260.64	4.11	ppb
Selenium	78-2	268.75	260.61	270.58	266.64	1.99	ppb
Silicon	28-1	262.53	265.67	266.66	264.95	0.81	ppb
Silver	107-1	262.50	262.76	260.51	261.92	0.47	ppb
Silver	109-1	264.62	262.14	262.96	263.24	0.48	ppb
Sodium	23-2	24282.76	23899.09	24126.95	24102.93	0.80	ppb
Strontium	86-1	249.17	246.38	252.39	249.31	1.21	ppb
Strontium	88-1	251.06	251.17	252.00	251.41	0.21	ppb
Sulfur	34-1	5308.09	5283.21	5472.98	5354.76	1.93	ppb
Terbium	159-1				99		%
Terbium	159-2				100		%
Thallium	203-1	255.11	254.49	249.82	253.14	1.14	ppb
Thallium	205-1	251.47	249.76	246.94	249.39	0.92	ppb
Tin	118-1	257.31	255.32	258.36	257.00	0.60	ppb
Titanium	47-1	252.33	249.14	255.75	252.40	1.31	ppb
Uranium	238-1	246.07	244.83	244.16	245.02	0.40	ppb
Vanadium	51-2	259.06	258.60	256.60	258.09	0.51	ppb
Yttrium	89-1				98		%
Yttrium	89-2				96		%
Zinc	66-2	538.36	538.20	540.93	539.16	0.28	ppb
Zirconium	90-1	251.22	249.36	252.57	251.05	0.64	ppb
Zirconium	91-1	247.83	246.94	250.56	248.44	0.76	ppb

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:04:22	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9144.27	9256.02	9257.36	9219.21	0.70	ppb
Antimony	121-1	494.82	511.66	511.83	506.10	1.93	ppb
Arsenic	75-2	502.36	508.00	510.90	507.09	0.86	ppb
Barium	135-1	2442.17	2566.25	2538.80	2515.74	2.59	ppb
Barium	137-1	2448.30	2544.92	2540.07	2511.10	2.17	ppb
Beryllium	9-1	501.59	514.63	515.67	510.63	1.54	ppb
Bismuth	209-1				98		%
Bismuth	209-2				96		%
Boron	10-1	468.27	497.59	520.64	495.50	5.30	ppb
Boron	11-1	474.64	491.79	504.72	490.38	3.08	ppb
Cadmium	108-1	506.09	515.41	511.09	510.86	0.91	ppb
Cadmium	111-1	494.30	511.74	502.94	502.99	1.73	ppb
Cadmium	106-1	502.44	522.66	507.52	510.87	2.06	ppb
Calcium	43-1	49401.91	51506.21	50885.64	50597.92	2.14	ppb
Calcium	44-1	49046.66	50589.80	49793.65	49810.04	1.55	ppb
Chromium	52-2	514.47	513.94	508.80	512.40	0.61	ppb
Cobalt	59-2	517.19	520.89	519.35	519.15	0.36	ppb
Copper	63-2	1029.94	1051.93	1031.08	1037.65	1.19	ppb
Holmium	165-2				100		%
Holmium	165-1				100		%
Indium	115-1				93		%
Indium	115-2				90		%
Iron	56-2	25255.25	25429.62	25232.94	25305.94	0.43	ppb
Iron	57-2	25390.82	25694.55	25786.20	25623.86	0.81	ppb
Lead	206-1	516.05	512.84	500.16	509.68	1.65	ppb
Lead	207-1	504.26	516.67	500.45	507.12	1.67	ppb
Lead	208-1	502.15	513.68	498.51	504.78	1.57	ppb
Lithium	6-1				101		%
Magnesium	24-2	46923.66	46632.81	46086.92	46547.80	0.91	ppb
Manganese	55-2	1044.47	1032.20	1032.10	1036.26	0.69	ppb
Molybdenum	94-1	497.50	519.24	512.16	509.63	2.18	ppb
Molybdenum	95-1	500.15	516.12	518.77	511.68	1.97	ppb
Molybdenum	96-1	498.64	512.94	510.34	507.30	1.50	ppb
Molybdenum	97-1	500.51	516.69	509.78	508.99	1.60	ppb
Molybdenum	98-1	489.78	520.50	505.55	505.27	3.04	ppb
Nickel	60-2	517.61	525.61	516.80	520.01	0.94	ppb

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:04:22	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	10232.37	10488.53	10083.46	10268.12	2.00	ppb
Potassium	39-2	23577.99	23804.75	23532.21	23638.32	0.62	ppb
Rhodium	103-2				93		%
Rhodium	103-1				93		%
Scandium	45-1				94		%
Scandium	45-2				96		%
Selenium	77-2	508.16	515.84	529.53	517.84	2.09	ppb
Selenium	78-2	500.86	510.54	530.39	513.93	2.93	ppb
Selenium	82-1	509.94	520.45	517.97	516.12	1.06	ppb
Silicon	28-1	510.43	525.31	516.87	517.53	1.44	ppb
Silver	107-1	500.80	519.60	515.62	512.01	1.93	ppb
Silver	109-1	507.59	522.26	512.01	513.95	1.46	ppb
Sodium	23-2	47398.90	47803.76	47432.53	47545.06	0.47	ppb
Strontium	86-1	504.63	526.48	516.35	515.82	2.12	ppb
Strontium	88-1	499.14	514.60	508.36	507.36	1.53	ppb
Sulfur	34-1	11026.55	11455.86	11242.44	11241.61	1.91	ppb
Terbium	159-1				99		%
Terbium	159-2				100		%
Thallium	203-1	508.08	509.81	504.52	507.47	0.53	ppb
Thallium	205-1	501.26	509.35	502.34	504.32	0.87	ppb
Tin	118-1	496.48	505.97	513.60	505.35	1.70	ppb
Titanium	47-1	496.48	512.31	511.05	506.61	1.74	ppb
Uranium	238-1	494.10	506.23	497.14	499.16	1.26	ppb
Vanadium	51-2	514.62	515.42	511.19	513.75	0.44	ppb
Yttrium	89-2				95		%
Yttrium	89-1				96		%
Zinc	66-2	1032.44	1063.14	1042.49	1046.02	1.50	ppb
Zirconium	90-1	498.04	515.89	508.25	507.39	1.77	ppb
Zirconium	91-1	501.02	522.48	507.73	510.41	2.15	ppb

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:07:21	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	18216.26	17780.35	18209.86	18068.82	1.38	ppb
Antimony	121-1	995.28	991.11	998.86	995.08	0.39	ppb
Arsenic	75-2	999.42	983.69	997.69	993.60	0.87	ppb
Barium	135-1	5000.32	4948.85	4996.21	4981.80	0.57	ppb
Barium	137-1	5013.77	4939.46	5007.68	4986.97	0.83	ppb
Beryllium	9-1	977.56	1002.09	997.60	992.42	1.32	ppb
Bismuth	209-2				94		%
Bismuth	209-1				97		%
Boron	10-1	980.88	1008.50	1022.84	1004.07	2.12	ppb
Boron	11-1	977.32	1014.32	1027.38	1006.34	2.58	ppb
Cadmium	111-1	995.74	990.94	1000.31	995.66	0.47	ppb
Cadmium	106-1	997.23	978.31	992.72	989.42	1.00	ppb
Cadmium	108-1	994.81	979.23	997.64	990.56	1.00	ppb
Calcium	43-1	98298.66	97035.36	98387.31	97907.11	0.77	ppb
Calcium	44-1	97354.74	96671.41	98350.03	97458.73	0.87	ppb
Chromium	52-2	986.76	977.31	1009.50	991.19	1.67	ppb
Cobalt	59-2	981.58	979.69	994.83	985.37	0.84	ppb
Copper	63-2	1977.27	1946.88	1982.57	1968.91	0.98	ppb
Holmium	165-2				99		%
Holmium	165-1				99		%
Indium	115-1				89		%
Indium	115-2				85		%
Iron	56-2	48809.51	47760.12	49002.54	48524.06	1.38	ppb
Iron	57-2	48969.73	48798.07	49735.03	49167.61	1.01	ppb
Lead	207-1	997.95	986.86	1003.56	996.12	0.85	ppb
Lead	208-1	998.46	993.62	1000.12	997.40	0.34	ppb
Lead	206-1	995.14	995.49	992.89	994.51	0.14	ppb
Lithium	6-1				99		%
Magnesium	24-2	90482.17	90129.14	91248.54	90619.95	0.63	ppb
Manganese	55-2	1978.18	1940.16	2005.16	1974.50	1.65	ppb
Molybdenum	94-1	1001.71	989.40	992.46	994.52	0.64	ppb
Molybdenum	95-1	998.60	989.21	992.03	993.28	0.49	ppb
Molybdenum	96-1	995.46	999.61	992.24	995.77	0.37	ppb
Molybdenum	97-1	1005.30	995.16	989.82	996.76	0.79	ppb
Molybdenum	98-1	997.40	1000.66	993.11	997.05	0.38	ppb
Nickel	60-2	981.66	972.53	996.84	983.68	1.25	ppb

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:07:21	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	20014.85	19515.63	19906.69	19812.39	1.33	ppb
Potassium	39-2	45671.36	44972.73	46032.30	45558.80	1.18	ppb
Rhodium	103-2				90		%
Rhodium	103-1				91		%
Scandium	45-1				92		%
Scandium	45-2				97		%
Selenium	77-2	979.71	990.92	991.22	987.28	0.66	ppb
Selenium	78-2	997.44	964.11	1000.22	987.26	2.04	ppb
Selenium	82-1	985.30	994.41	986.03	988.58	0.51	ppb
Silicon	28-1	984.35	981.27	988.29	984.64	0.36	ppb
Silver	107-1	998.19	974.51	995.55	989.42	1.31	ppb
Silver	109-1	993.48	975.93	995.31	988.24	1.08	ppb
Sodium	23-2	92397.17	90937.23	93384.75	92239.71	1.33	ppb
Strontium	86-1	997.33	998.64	979.93	991.96	1.05	ppb
Strontium	88-1	1000.84	995.46	989.98	995.43	0.55	ppb
Sulfur	34-1	19280.55	19078.53	19329.86	19229.65	0.69	ppb
Terbium	159-1				98		%
Terbium	159-2				99		%
Thallium	203-1	998.63	995.67	991.78	995.36	0.35	ppb
Thallium	205-1	989.20	1004.57	999.32	997.70	0.78	ppb
Tin	118-1	992.70	994.18	997.53	994.80	0.25	ppb
Titanium	47-1	993.17	995.16	998.33	995.55	0.26	ppb
Uranium	238-1	1007.92	1000.53	997.39	1001.95	0.54	ppb
Vanadium	51-2	982.67	980.53	1007.13	990.11	1.49	ppb
Yttrium	89-2				94		%
Yttrium	89-1				95		%
Zinc	66-2	1966.59	1942.31	1981.03	1963.31	1.00	ppb
Zirconium	90-1	998.27	1002.23	986.18	995.56	0.84	ppb
Zirconium	91-1	994.08	995.46	995.45	995.00	0.08	ppb

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P7
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:10:21	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	99920.04	101351.52	100175.10	100482.22	0.76	ppb
Antimony	121-1	1.41	1.44	1.47	1.44	1.96	ppb
Arsenic	75-2	0.55	0.43	0.44	0.48	14.40	ppb
Barium	135-1	1.77	1.75	1.67	1.73	3.11	ppb
Barium	137-1	1.76	1.81	1.77	1.78	1.58	ppb
Beryllium	9-1	0.23	0.23	0.15	0.20	23.29	ppb
Bismuth	209-1				84		%
Bismuth	209-2				87		%
Boron	10-1	53.91	51.36	43.41	49.56	11.04	ppb
Boron	11-1	52.80	49.32	44.35	48.82	8.70	ppb
Cadmium	106-1	1.32	0.82	-0.16	0.66	113.38	ppb
Cadmium	108-1	0.48	0.30	0.45	0.41	24.12	ppb
Cadmium	111-1	0.24	0.24	0.14	0.21	29.09	ppb
Calcium	43-1	500932.15	500968.22	499205.34	500368.57	0.20	ppb
Calcium	44-1	500039.76	501396.82	500199.98	500545.52	0.15	ppb
Chromium	52-2	11.99	11.95	11.42	11.79	2.70	ppb
Cobalt	59-2	0.85	0.90	0.89	0.88	2.76	ppb
Copper	63-2	3.20	3.48	3.23	3.30	4.64	ppb
Holmium	165-1				95		%
Holmium	165-2				101		%
Indium	115-2				95		%
Indium	115-1				89		%
Iron	56-2	247758.82	253901.01	249060.41	250240.08	1.29	ppb
Iron	57-2	247250.99	254882.03	248113.90	250082.31	1.67	ppb
Lead	206-1	5.18	5.07	5.21	5.16	1.38	ppb
Lead	207-1	4.96	4.94	4.83	4.91	1.41	ppb
Lead	208-1	5.06	5.06	5.04	5.05	0.18	ppb
Lithium	6-1				89		%
Magnesium	24-2	496967.48	509626.34	500290.94	502294.92	1.31	ppb
Manganese	55-2	6.63	6.61	6.49	6.57	1.17	ppb
Molybdenum	94-1	0.92	0.94	0.93	0.93	1.17	ppb
Molybdenum	95-1	2.54	2.59	2.63	2.59	1.62	ppb
Molybdenum	96-1	2.84	2.92	2.82	2.86	1.87	ppb
Molybdenum	97-1	2.46	2.39	2.35	2.40	2.47	ppb
Molybdenum	98-1	2.47	2.42	2.46	2.45	1.19	ppb
Nickel	60-2	6.87	6.69	6.80	6.79	1.32	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P7
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:10:21	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-28.87	-22.84	-19.40	-23.70		ppb
Potassium	39-2	249373.37	253525.35	250254.39	251051.03	0.87	ppb
Rhodium	103-2				88		%
Rhodium	103-1				83		%
Scandium	45-1				94		%
Scandium	45-2				103		%
Selenium	77-2	0.00	0.43	0.00	0.14	173.21	ppb
Selenium	78-2	0.44	1.18	0.32	0.65	72.08	ppb
Selenium	82-1	1.59	0.89	1.84	1.44	34.38	ppb
Silicon	28-1	15.99	16.01	16.31	16.10	1.10	ppb
Silver	107-1	0.82	0.91	0.86	0.86	5.50	ppb
Silver	109-1	0.88	0.83	0.83	0.85	3.12	ppb
Sodium	23-2	494728.75	508169.86	502645.02	501847.88	1.35	ppb
Strontium	86-1	33.26	33.25	34.04	33.52	1.35	ppb
Strontium	88-1	33.67	33.65	34.26	33.86	1.02	ppb
Sulfur	34-1	-89.27	-45.99	90.43	-14.94		ppb
Terbium	159-1				94		%
Terbium	159-2				101		%
Thallium	203-1	0.46	0.47	0.45	0.46	2.21	ppb
Thallium	205-1	0.46	0.42	0.46	0.45	5.09	ppb
Tin	118-1	1.02	1.01	1.05	1.03	1.90	ppb
Titanium	47-1	0.95	1.18	2.09	1.41	42.53	ppb
Uranium	238-1	0.09	0.08	0.09	0.09	6.01	ppb
Vanadium	51-2	0.27	0.26	0.28	0.27	3.85	ppb
Yttrium	89-2				101		%
Yttrium	89-1				94		%
Zinc	66-2	19.93	19.91	18.93	19.59	2.92	ppb
Zirconium	90-1	0.16	0.17	0.14	0.16	11.99	ppb
Zirconium	91-1	0.16	0.14	0.17	0.16	8.09	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICV	Instrumnet Name :	P7
Client Sample ID :	ICV	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:15:27	DataFile Name :	011ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	482.32	479.69	475.24	479.08	0.75	ppb
Antimony	121-1	203.94	204.89	204.26	204.36	0.24	ppb
Arsenic	75-2	203.04	201.95	202.87	202.62	0.29	ppb
Barium	135-1	101.02	101.89	99.48	100.80	1.21	ppb
Barium	137-1	100.86	101.40	101.82	101.36	0.47	ppb
Beryllium	9-1	102.55	104.21	105.82	104.19	1.57	ppb
Bismuth	209-2				102		%
Bismuth	209-1				101		%
Boron	10-1	612.22	615.84	634.26	620.77	1.90	ppb
Boron	11-1	620.57	630.88	642.92	631.45	1.77	ppb
Cadmium	106-1	86.44	89.37	85.23	87.02	2.44	ppb
Cadmium	108-1	98.08	98.23	96.62	97.64	0.91	ppb
Cadmium	111-1	103.11	102.73	103.10	102.98	0.21	ppb
Calcium	43-1	1938.22	1893.05	1919.09	1916.79	1.18	ppb
Calcium	44-1	1905.89	1909.73	1964.64	1926.75	1.71	ppb
Chromium	52-2	98.04	98.10	97.97	98.04	0.07	ppb
Cobalt	59-2	102.90	102.97	102.32	102.73	0.35	ppb
Copper	63-2	102.45	101.88	101.80	102.04	0.34	ppb
Holmium	165-2				105		%
Holmium	165-1				102		%
Indium	115-1				101		%
Indium	115-2				100		%
Iron	56-2	1021.44	1015.64	1014.02	1017.03	0.38	ppb
Iron	57-2	998.09	996.41	990.81	995.10	0.38	ppb
Lead	206-1	198.96	201.61	197.85	199.47	0.97	ppb
Lead	207-1	188.18	190.60	187.39	188.72	0.88	ppb
Lead	208-1	194.01	196.38	193.16	194.52	0.86	ppb
Lithium	6-1				100		%
Magnesium	24-2	1153.12	1146.56	1139.97	1146.55	0.57	ppb
Manganese	55-2	101.39	100.62	100.95	100.99	0.38	ppb
Molybdenum	97-1	494.33	491.61	497.85	494.60	0.63	ppb
Molybdenum	98-1	490.80	488.43	490.18	489.80	0.25	ppb
Molybdenum	94-1	153.37	154.56	153.91	153.95	0.39	ppb
Molybdenum	95-1	497.08	490.25	492.52	493.28	0.70	ppb
Molybdenum	96-1	410.86	412.90	413.15	412.30	0.30	ppb
Nickel	60-2	105.40	104.34	104.40	104.71	0.57	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICV	Instrumnet Name :	P7
Client Sample ID :	ICV	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:15:27	DataFile Name :	011ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-20.06	-38.71	-35.93	-31.56		ppb
Potassium	39-2	1924.31	1896.81	1899.45	1906.86	0.80	ppb
Rhodium	103-1				104		%
Rhodium	103-2				103		%
Scandium	45-1				105		%
Scandium	45-2				107		%
Selenium	82-1	200.87	205.42	201.51	202.60	1.22	ppb
Selenium	77-2	220.44	213.09	202.83	212.12	4.17	ppb
Selenium	78-2	208.40	206.56	211.23	208.73	1.13	ppb
Silicon	28-1	479.66	480.43	485.88	481.99	0.70	ppb
Silver	107-1	105.11	104.91	105.20	105.07	0.14	ppb
Silver	109-1	104.27	102.90	103.20	103.46	0.70	ppb
Sodium	23-2	2037.11	2012.53	1981.54	2010.39	1.39	ppb
Strontium	86-1	2.22	2.31	2.28	2.27	2.06	ppb
Strontium	88-1	2.28	2.33	2.29	2.30	1.20	ppb
Sulfur	34-1	-324.38	-325.64	-252.48	-300.83		ppb
Terbium	159-2				105		%
Terbium	159-1				102		%
Thallium	203-1	205.49	201.56	199.44	202.16	1.52	ppb
Thallium	205-1	201.46	200.88	197.65	200.00	1.03	ppb
Tin	118-1	496.43	492.66	494.62	494.57	0.38	ppb
Titanium	47-1	456.71	465.57	469.00	463.76	1.37	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	20.31	ppb
Vanadium	51-2	99.53	100.45	99.28	99.75	0.62	ppb
Yttrium	89-1				104		%
Yttrium	89-2				105		%
Zinc	66-2	206.99	206.65	204.93	206.19	0.54	ppb
Zirconium	90-1	0.29	0.26	0.24	0.26	9.86	ppb
Zirconium	91-1	0.35	0.36	0.29	0.33	12.07	ppb

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICB	Instrumnet Name :	P7
Client Sample ID :	ICB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:34:55	DataFile Name :	012CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.12	0.55	0.17	0.20	165.32	ppb
Antimony	121-1	0.06	0.05	0.06	0.06	11.92	ppb
Arsenic	75-2	0.01	0.02	0.01	0.01	59.74	ppb
Barium	135-1	0.02	0.01	0.00	0.01	95.51	ppb
Barium	137-1	0.00	0.01	0.00	0.00	272.76	ppb
Beryllium	9-1	0.03	0.05	0.04	0.04	16.58	ppb
Bismuth	209-1				100		%
Bismuth	209-2				102		%
Boron	10-1	3.59	2.84	3.11	3.18	11.91	ppb
Boron	11-1	3.36	3.58	3.19	3.38	5.76	ppb
Cadmium	111-1	0.01	0.03	0.00	0.01	102.63	ppb
Cadmium	106-1	0.15	0.36	-0.03	0.16	119.85	ppb
Cadmium	108-1	-0.01	-0.01	0.01	0.00		ppb
Calcium	43-1	-0.40	-2.38	2.62	-0.05		ppb
Calcium	44-1	-0.29	-1.90	-2.12	-1.44		ppb
Chromium	52-2	-0.06	-0.04	-0.02	-0.04		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	1417.04	ppb
Copper	63-2	-0.61	-0.58	-0.62	-0.60		ppb
Holmium	165-2				103		%
Holmium	165-1				100		%
Indium	115-1				102		%
Indium	115-2				103		%
Iron	56-2	0.24	0.31	0.33	0.29	16.75	ppb
Iron	57-2	0.58	0.22	-0.23	0.19	213.07	ppb
Lead	206-1	0.01	0.01	0.01	0.01	32.01	ppb
Lead	207-1	0.00	0.02	0.01	0.01	81.82	ppb
Lead	208-1	0.01	0.02	0.01	0.01	50.03	ppb
Lithium	6-1				100		%
Magnesium	24-2	1.06	1.21	1.28	1.18	9.26	ppb
Manganese	55-2	-0.01	-0.02	-0.01	-0.01		ppb
Molybdenum	94-1	0.01	0.00	0.01	0.01	27.17	ppb
Molybdenum	95-1	0.01	0.01	0.01	0.01	25.10	ppb
Molybdenum	96-1	0.02	0.01	0.01	0.01	55.48	ppb
Molybdenum	97-1	0.00	0.01	0.01	0.00	61.66	ppb
Molybdenum	98-1	0.01	0.00	0.01	0.01	42.72	ppb
Nickel	60-2	-0.05	-0.06	-0.06	-0.05		ppb

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICB	Instrumnet Name :	P7
Client Sample ID :	ICB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:34:55	DataFile Name :	012CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-37.29	-39.52	-23.56	-33.45		ppb
Potassium	39-2	0.29	-0.66	1.15	0.26	350.90	ppb
Rhodium	103-1				101		%
Rhodium	103-2				102		%
Scandium	45-2				104		%
Scandium	45-1				101		%
Selenium	82-1	0.44	1.87	0.76	1.02	72.93	ppb
Selenium	77-2	0.00	0.43	0.00	0.14	173.21	ppb
Selenium	78-2	0.94	0.04	0.11	0.36	137.94	ppb
Silicon	28-1	-1.45	-1.06	-2.34	-1.62		ppb
Silver	109-1	0.00	0.00	-0.01	0.00		ppb
Silver	107-1	0.00	0.00	0.00	0.00		ppb
Sodium	23-2	6.82	7.40	7.76	7.33	6.47	ppb
Strontium	86-1	-0.03	-0.02	-0.02	-0.02		ppb
Strontium	88-1	0.00	0.00	0.00	0.00	57.82	ppb
Sulfur	34-1	-96.58	62.60	-96.83	-43.60		ppb
Terbium	159-1				100		%
Terbium	159-2				103		%
Thallium	203-1	0.01	0.01	0.01	0.01	8.45	ppb
Thallium	205-1	0.02	0.02	0.01	0.02	3.00	ppb
Tin	118-1	0.01	0.02	0.01	0.01	32.09	ppb
Titanium	47-1	-0.01	-0.03	-0.03	-0.02		ppb
Uranium	238-1	0.00	0.00	0.00	0.00	82.33	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00		ppb
Yttrium	89-2				103		%
Yttrium	89-1				102		%
Zinc	66-2	-0.18	-0.14	-0.11	-0.14		ppb
Zirconium	91-1	0.00	0.01	-0.01	0.00		ppb
Zirconium	90-1	0.00	0.01	0.00	0.00	5756.31	ppb

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICSA	Instrumnet Name :	P7
Client Sample ID :	ICSA	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:37:59	DataFile Name :	013ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	92013.95	91845.06	92418.24	92092.42	0.32	ppb
Antimony	121-1	1.29	1.29	1.32	1.30	1.35	ppb
Arsenic	75-2	0.35	0.34	0.34	0.34	1.50	ppb
Barium	135-1	1.73	1.60	1.73	1.69	4.33	ppb
Barium	137-1	1.69	1.61	1.70	1.67	3.10	ppb
Beryllium	9-1	0.33	0.24	0.30	0.29	17.22	ppb
Bismuth	209-1				95		%
Bismuth	209-2				94		%
Boron	10-1	3.79	3.77	4.27	3.94	7.14	ppb
Boron	11-1	3.90	3.59	3.54	3.68	5.29	ppb
Cadmium	111-1	0.46	0.43	0.53	0.47	10.67	ppb
Cadmium	106-1	0.45	-0.14	0.25	0.19	163.00	ppb
Cadmium	108-1	13.57	12.19	12.06	12.61	6.65	ppb
Calcium	43-1	97861.06	94076.80	96652.73	96196.86	2.01	ppb
Calcium	44-1	96673.66	94717.80	96597.92	95996.46	1.15	ppb
Chromium	52-2	20.49	20.33	20.05	20.29	1.08	ppb
Cobalt	59-2	1.24	1.20	1.24	1.23	2.10	ppb
Copper	63-2	7.63	7.53	7.41	7.53	1.46	ppb
Holmium	165-2				102		%
Holmium	165-1				100		%
Indium	115-1				96		%
Indium	115-2				97		%
Iron	56-2	101079.00	101136.51	101691.03	101302.18	0.33	ppb
Iron	57-2	101549.09	100897.20	101817.26	101421.18	0.47	ppb
Lead	206-1	4.56	4.52	4.62	4.56	1.07	ppb
Lead	207-1	3.98	4.03	3.94	3.98	1.15	ppb
Lead	208-1	4.13	4.19	4.18	4.17	0.78	ppb
Lithium	6-1				97		%
Magnesium	24-2	93604.73	93925.94	93936.40	93822.36	0.20	ppb
Manganese	55-2	8.44	8.18	8.31	8.31	1.57	ppb
Molybdenum	94-1	597.50	591.90	603.69	597.70	0.99	ppb
Molybdenum	95-1	1947.30	1910.32	1945.28	1934.30	1.07	ppb
Molybdenum	96-1	1613.65	1596.42	1614.26	1608.11	0.63	ppb
Molybdenum	97-1	1931.20	1904.56	1930.64	1922.13	0.79	ppb
Molybdenum	98-1	1944.28	1910.28	1936.24	1930.27	0.92	ppb
Nickel	60-2	5.62	5.43	5.67	5.57	2.20	ppb

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICSA	Instrumnet Name :	P7
Client Sample ID :	ICSA	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:37:59	DataFile Name :	013ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	103267.30	101918.02	103067.52	102750.95	0.71	ppb
Potassium	39-2	95402.36	95790.76	95652.58	95615.23	0.21	ppb
Rhodium	103-2				93		%
Rhodium	103-1				93		%
Scandium	45-1				98		%
Scandium	45-2				99		%
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.05	-0.05	0.08	0.00		ppb
Selenium	82-1	0.63	0.73	-0.40	0.32	196.53	ppb
Silicon	28-1	24.11	22.19	24.82	23.71	5.73	ppb
Silver	109-1	0.07	0.10	0.09	0.09	15.45	ppb
Silver	107-1	0.07	0.07	0.08	0.08	5.67	ppb
Sodium	23-2	95898.90	95507.83	96904.96	96103.90	0.75	ppb
Strontium	86-1	33.57	33.66	33.59	33.61	0.14	ppb
Strontium	88-1	33.88	33.73	34.18	33.93	0.67	ppb
Sulfur	34-1	92157.39	89521.14	90043.76	90574.10	1.54	ppb
Terbium	159-1				99		%
Terbium	159-2				103		%
Thallium	203-1	0.08	0.07	0.09	0.08	12.37	ppb
Thallium	205-1	0.07	0.10	0.09	0.09	15.93	ppb
Tin	118-1	0.18	0.20	0.17	0.18	7.55	ppb
Titanium	47-1	1966.21	1932.45	1944.26	1947.64	0.88	ppb
Uranium	238-1	0.02	0.02	0.02	0.02	2.95	ppb
Vanadium	51-2	0.15	0.16	0.17	0.16	6.22	ppb
Yttrium	89-2				99		%
Yttrium	89-1				98		%
Zinc	66-2	12.66	11.97	11.94	12.19	3.31	ppb
Zirconium	90-1	0.04	0.04	0.03	0.04	4.92	ppb
Zirconium	91-1	0.04	0.02	0.02	0.03	37.49	ppb

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICSAB	Instrumnet Name :	P7
Client Sample ID :	ICSAB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:41:01	DataFile Name :	014ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	90696.28	90410.99	90891.47	90666.24	0.27	ppb
Antimony	121-1	20.56	20.59	20.73	20.63	0.45	ppb
Arsenic	75-2	20.28	19.73	19.10	19.70	2.98	ppb
Barium	135-1	21.76	21.58	21.77	21.70	0.49	ppb
Barium	137-1	21.73	21.61	21.42	21.59	0.73	ppb
Beryllium	9-1	21.21	21.05	21.34	21.20	0.69	ppb
Bismuth	209-2				97		%
Bismuth	209-1				97		%
Boron	10-1	3.66	3.72	3.07	3.48	10.37	ppb
Boron	11-1	3.63	3.74	3.40	3.59	4.90	ppb
Cadmium	108-1	29.36	31.79	29.57	30.24	4.45	ppb
Cadmium	111-1	19.01	19.85	18.94	19.27	2.63	ppb
Cadmium	106-1	15.21	15.39	15.68	15.43	1.55	ppb
Calcium	43-1	94150.17	95698.00	95940.20	95262.79	1.02	ppb
Calcium	44-1	93689.93	95526.55	95788.28	95001.59	1.20	ppb
Chromium	52-2	41.89	41.84	41.81	41.85	0.09	ppb
Cobalt	59-2	21.24	21.52	21.24	21.33	0.75	ppb
Copper	63-2	26.98	26.91	27.55	27.15	1.30	ppb
Holmium	165-1				102		%
Holmium	165-2				106		%
Indium	115-2				101		%
Indium	115-1				102		%
Iron	56-2	98741.12	98806.43	100043.76	99197.10	0.74	ppb
Iron	57-2	100140.79	99726.66	99869.29	99912.25	0.21	ppb
Lead	206-1	24.13	23.98	23.81	23.97	0.65	ppb
Lead	207-1	22.61	22.52	22.57	22.57	0.21	ppb
Lead	208-1	23.13	22.93	23.07	23.04	0.44	ppb
Lithium	6-1				98		%
Magnesium	24-2	92279.50	92431.07	93612.21	92774.26	0.79	ppb
Manganese	55-2	28.26	28.39	28.44	28.36	0.33	ppb
Molybdenum	94-1	580.46	584.36	582.97	582.60	0.34	ppb
Molybdenum	95-1	1898.66	1882.44	1908.78	1896.63	0.70	ppb
Molybdenum	96-1	1587.76	1564.96	1592.15	1581.62	0.92	ppb
Molybdenum	97-1	1887.30	1868.00	1887.56	1880.95	0.60	ppb
Molybdenum	98-1	1854.78	1868.21	1885.81	1869.60	0.83	ppb
Nickel	60-2	26.80	27.11	27.09	27.00	0.64	ppb

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICSAB	Instrumnet Name :	P7
Client Sample ID :	ICSAB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:41:01	DataFile Name :	014ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	100924.98	101694.25	99642.84	100754.02	1.03	ppb
Potassium	39-2	94787.88	94155.43	94287.35	94410.22	0.35	ppb
Rhodium	103-2				97		%
Rhodium	103-1				97		%
Scandium	45-1				102		%
Scandium	45-2				103		%
Selenium	82-1	18.77	17.49	20.88	19.05	8.98	ppb
Selenium	77-2	20.05	21.91	19.44	20.47	6.27	ppb
Selenium	78-2	18.52	19.63	19.77	19.31	3.54	ppb
Silicon	28-1	24.41	25.62	25.66	25.23	2.81	ppb
Silver	107-1	18.73	18.83	19.07	18.88	0.93	ppb
Silver	109-1	18.54	18.79	18.69	18.67	0.67	ppb
Sodium	23-2	94149.38	94986.86	95044.26	94726.83	0.53	ppb
Strontium	86-1	32.27	32.74	33.32	32.78	1.61	ppb
Strontium	88-1	32.93	33.31	33.28	33.17	0.64	ppb
Sulfur	34-1	89731.79	90229.78	90702.99	90221.52	0.54	ppb
Terbium	159-1				102		%
Terbium	159-2				105		%
Thallium	203-1	19.79	19.64	19.78	19.74	0.42	ppb
Thallium	205-1	19.87	19.82	20.00	19.90	0.48	ppb
Tin	118-1	0.16	0.17	0.15	0.16	6.20	ppb
Titanium	47-1	1875.81	1922.10	1940.71	1912.87	1.75	ppb
Uranium	238-1	0.03	0.03	0.03	0.03	3.64	ppb
Vanadium	51-2	19.88	19.71	20.03	19.88	0.81	ppb
Yttrium	89-1				103		%
Yttrium	89-2				103		%
Zinc	66-2	31.08	31.87	32.85	31.94	2.78	ppb
Zirconium	90-1	0.03	0.03	0.04	0.04	11.17	ppb
Zirconium	91-1	0.03	0.06	0.04	0.04	33.65	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCV081	Instrumnet Name :	P7
Client Sample ID :	CCV081	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:44:03	DataFile Name :	015CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9333.34	8968.85	9202.32	9168.17	2.01	ppb
Antimony	121-1	518.92	511.63	509.27	513.27	0.98	ppb
Arsenic	75-2	510.57	506.98	517.83	511.79	1.08	ppb
Barium	135-1	2559.29	2550.54	2529.72	2546.52	0.60	ppb
Barium	137-1	2571.12	2561.94	2535.79	2556.28	0.72	ppb
Beryllium	9-1	528.95	528.75	522.88	526.86	0.65	ppb
Bismuth	209-1				100		%
Bismuth	209-2				97		%
Boron	10-1	476.85	496.67	510.41	494.64	3.41	ppb
Boron	11-1	481.95	499.85	513.69	498.50	3.19	ppb
Cadmium	111-1	508.25	503.69	500.61	504.18	0.76	ppb
Cadmium	106-1	514.21	509.17	509.59	510.99	0.55	ppb
Cadmium	108-1	517.68	510.70	513.20	513.86	0.69	ppb
Calcium	43-1	50513.63	49216.26	49884.67	49871.52	1.30	ppb
Calcium	44-1	49334.54	48793.65	48883.82	49004.01	0.59	ppb
Chromium	52-2	525.30	509.46	510.27	515.01	1.73	ppb
Cobalt	59-2	523.44	500.46	517.30	513.73	2.32	ppb
Copper	63-2	1050.03	1010.76	1022.99	1027.93	1.96	ppb
Holmium	165-1				103		%
Holmium	165-2				103		%
Indium	115-2				95		%
Indium	115-1				98		%
Iron	56-2	25667.74	24529.01	25000.66	25065.80	2.28	ppb
Iron	57-2	26009.77	25276.50	25446.99	25577.75	1.50	ppb
Lead	206-1	508.92	503.66	498.89	503.82	1.00	ppb
Lead	207-1	504.99	499.32	496.94	500.42	0.83	ppb
Lead	208-1	502.27	502.09	495.35	499.90	0.79	ppb
Lithium	6-1				99		%
Magnesium	24-2	48162.32	46096.42	47605.54	47288.09	2.26	ppb
Manganese	55-2	1049.36	1002.86	1034.84	1029.02	2.31	ppb
Molybdenum	94-1	509.58	502.48	496.68	502.91	1.28	ppb
Molybdenum	95-1	513.98	508.93	503.91	508.94	0.99	ppb
Molybdenum	96-1	505.81	502.45	496.56	501.61	0.93	ppb
Molybdenum	97-1	509.78	504.81	495.99	503.53	1.39	ppb
Molybdenum	98-1	510.00	499.57	493.02	500.86	1.71	ppb
Nickel	60-2	522.12	497.93	511.08	510.38	2.37	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCV081	Instrumnet Name :	P7
Client Sample ID :	CCV081	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:44:03	DataFile Name :	015CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	10273.19	9968.08	10205.97	10149.08	1.58	ppb
Potassium	39-2	24520.70	23524.41	24159.45	24068.19	2.10	ppb
Rhodium	103-2				97		%
Rhodium	103-1				99		%
Scandium	45-1				103		%
Scandium	45-2				104		%
Selenium	77-2	526.21	518.69	540.96	528.62	2.14	ppb
Selenium	78-2	531.56	516.30	534.98	527.61	1.88	ppb
Selenium	82-1	507.30	501.34	503.31	503.98	0.60	ppb
Silicon	28-1	524.00	505.87	506.96	512.28	1.98	ppb
Silver	109-1	524.37	516.13	517.86	519.45	0.84	ppb
Silver	107-1	527.92	516.66	519.91	521.50	1.11	ppb
Sodium	23-2	48868.19	46943.70	48393.32	48068.40	2.09	ppb
Strontium	86-1	515.17	511.25	511.97	512.80	0.41	ppb
Strontium	88-1	512.46	509.69	501.04	507.73	1.17	ppb
Sulfur	34-1	10519.47	10150.39	10050.76	10240.21	2.41	ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	516.43	505.57	501.95	507.99	1.48	ppb
Thallium	205-1	506.94	504.31	494.88	502.04	1.26	ppb
Tin	118-1	521.25	511.56	515.98	516.26	0.94	ppb
Titanium	47-1	492.69	490.07	491.79	491.52	0.27	ppb
Uranium	238-1	491.30	490.72	482.70	488.24	0.98	ppb
Vanadium	51-2	521.16	506.73	510.49	512.79	1.46	ppb
Yttrium	89-2				101		%
Yttrium	89-1				103		%
Zinc	66-2	1030.13	996.50	1019.75	1015.46	1.70	ppb
Zirconium	90-1	504.27	498.92	498.32	500.50	0.65	ppb
Zirconium	91-1	514.47	507.39	512.06	511.31	0.70	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCB081	Instrumnet Name :	P7
Client Sample ID :	CCB081	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:46:52	DataFile Name :	016CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1.02	2.22	1.72	1.65	36.42	ppb
Antimony	121-1	0.32	0.33	0.31	0.32	3.43	ppb
Arsenic	75-2	0.05	0.09	0.04	0.06	48.13	ppb
Barium	135-1	0.07	0.08	0.08	0.08	3.49	ppb
Barium	137-1	0.12	0.08	0.07	0.09	29.22	ppb
Beryllium	9-1	0.05	0.06	0.09	0.07	30.00	ppb
Bismuth	209-1				102		%
Bismuth	209-2				99		%
Boron	10-1	23.59	20.54	18.62	20.92	11.99	ppb
Boron	11-1	22.00	19.86	18.43	20.10	8.93	ppb
Cadmium	106-1	0.05	0.04	-0.23	-0.05		ppb
Cadmium	108-1	0.06	0.04	0.06	0.05	24.86	ppb
Cadmium	111-1	0.04	0.02	0.01	0.02	78.92	ppb
Calcium	43-1	2.97	2.38	4.15	3.17	28.36	ppb
Calcium	44-1	2.16	2.52	3.23	2.64	20.60	ppb
Chromium	52-2	0.02	0.02	-0.01	0.01	121.83	ppb
Cobalt	59-2	0.01	0.02	0.02	0.02	23.78	ppb
Copper	63-2	-0.46	-0.45	-0.43	-0.45		ppb
Holmium	165-1				102		%
Holmium	165-2				100		%
Indium	115-2				99		%
Indium	115-1				102		%
Iron	56-2	3.06	2.99	2.90	2.98	2.77	ppb
Iron	57-2	3.11	3.48	4.87	3.82	24.30	ppb
Lead	206-1	0.04	0.05	0.05	0.05	18.95	ppb
Lead	207-1	0.04	0.05	0.04	0.05	4.86	ppb
Lead	208-1	0.04	0.05	0.05	0.05	13.13	ppb
Lithium	6-1				99		%
Magnesium	24-2	4.05	3.32	4.02	3.80	10.95	ppb
Manganese	55-2	0.01	0.05	0.04	0.03	52.99	ppb
Molybdenum	94-1	0.04	0.06	0.06	0.05	20.21	ppb
Molybdenum	95-1	0.12	0.12	0.11	0.12	4.49	ppb
Molybdenum	96-1	0.10	0.09	0.10	0.10	3.27	ppb
Molybdenum	97-1	0.11	0.14	0.10	0.12	16.44	ppb
Molybdenum	98-1	0.12	0.10	0.13	0.12	11.03	ppb
Nickel	60-2	-0.02	-0.04	-0.02	-0.03		ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCB081	Instrumnet Name :	P7
Client Sample ID :	CCB081	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:46:52	DataFile Name :	016CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-22.10	-26.69	-27.95	-25.58		ppb
Potassium	39-2	9.90	9.44	7.93	9.09	11.33	ppb
Rhodium	103-2				99		%
Rhodium	103-1				102		%
Scandium	45-1				101		%
Scandium	45-2				99		%
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	0.23	0.59	0.60	0.47	44.99	ppb
Selenium	82-1	0.49	0.35	-0.11	0.25	126.96	ppb
Silicon	28-1	-1.77	-1.88	-1.70	-1.78		ppb
Silver	107-1	0.03	0.02	0.03	0.03	11.63	ppb
Silver	109-1	0.04	0.02	0.03	0.03	33.04	ppb
Sodium	23-2	21.26	21.50	22.43	21.73	2.83	ppb
Strontium	86-1	-0.03	-0.03	-0.02	-0.03		ppb
Strontium	88-1	0.02	0.02	0.02	0.02	11.10	ppb
Sulfur	34-1	-787.92	-768.81	-748.31	-768.35		ppb
Terbium	159-1				101		%
Terbium	159-2				101		%
Thallium	203-1	0.07	0.08	0.06	0.07	16.23	ppb
Thallium	205-1	0.06	0.06	0.06	0.06	2.85	ppb
Tin	118-1	0.07	0.05	0.08	0.07	22.42	ppb
Titanium	47-1	0.01	0.05	0.03	0.03	66.47	ppb
Uranium	238-1	0.02	0.02	0.02	0.02	5.69	ppb
Vanadium	51-2	0.02	0.03	0.02	0.02	12.95	ppb
Yttrium	89-2				99		%
Yttrium	89-1				102		%
Zinc	66-2	-0.15	-0.15	-0.03	-0.11		ppb
Zirconium	90-1	0.03	0.04	0.03	0.03	7.46	ppb
Zirconium	91-1	0.05	0.03	0.04	0.04	17.19	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90341BL	Instrumnet Name :	P7
Client Sample ID :	PBS008	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:51:28	DataFile Name :	017CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.45	0.67	1.19	0.77	49.63	ppb
Antimony	121-1	0.08	0.08	0.10	0.09	15.60	ppb
Arsenic	75-2	0.02	0.02	0.01	0.01	50.45	ppb
Barium	135-1	0.04	0.01	0.01	0.02	87.48	ppb
Barium	137-1	0.02	0.02	0.01	0.02	10.25	ppb
Beryllium	9-1	0.05	0.05	0.06	0.05	14.72	ppb
Bismuth	209-1				100		%
Bismuth	209-2				99		%
Boron	10-1	6.10	5.29	5.12	5.50	9.52	ppb
Boron	11-1	5.64	5.85	5.60	5.70	2.42	ppb
Cadmium	111-1	0.01	0.01	0.02	0.02	43.15	ppb
Cadmium	106-1	0.05	0.15	0.26	0.16	66.66	ppb
Cadmium	108-1	0.04	0.01	0.01	0.02	59.86	ppb
Calcium	43-1	3.62	2.51	-0.28	1.95	103.03	ppb
Calcium	44-1	-0.40	-0.49	-0.54	-0.48		ppb
Chromium	52-2	0.21	0.19	0.17	0.19	12.77	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00		ppb
Copper	63-2	-0.59	-0.54	-0.55	-0.56		ppb
Holmium	165-2				100		%
Holmium	165-1				100		%
Indium	115-1				100		%
Indium	115-2				98		%
Iron	56-2	1.05	1.05	0.99	1.03	3.01	ppb
Iron	57-2	1.41	0.96	1.38	1.25	20.36	ppb
Lead	206-1	0.02	0.03	0.02	0.02	30.54	ppb
Lead	207-1	0.04	0.04	0.04	0.04	3.92	ppb
Lead	208-1	0.03	0.03	0.03	0.03	9.80	ppb
Lithium	6-1				99		%
Magnesium	24-2	1.01	1.86	1.20	1.36	32.82	ppb
Manganese	55-2	0.00	-0.01	0.00	0.00		ppb
Molybdenum	94-1	0.03	0.01	0.02	0.02	50.65	ppb
Molybdenum	95-1	0.04	0.03	0.04	0.04	13.29	ppb
Molybdenum	96-1	0.03	0.04	0.04	0.03	18.28	ppb
Molybdenum	97-1	0.03	0.05	0.05	0.05	25.21	ppb
Molybdenum	98-1	0.05	0.05	0.03	0.04	19.54	ppb
Nickel	60-2	-0.06	-0.04	-0.03	-0.05		ppb

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90341BL	Instrumnet Name :	P7
Client Sample ID :	PBS008	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:51:28	DataFile Name :	017CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-32.38	-26.05	-32.64	-30.36		ppb
Potassium	39-2	3.97	5.27	2.86	4.03	29.95	ppb
Rhodium	103-2				98		%
Rhodium	103-1				99		%
Scandium	45-1				99		%
Scandium	45-2				97		%
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	0.19	-0.23	0.28	0.08	347.87	ppb
Selenium	82-1	0.21	0.16	0.77	0.38	88.32	ppb
Silicon	28-1	-2.35	-2.07	-2.17	-2.19		ppb
Silver	109-1	0.00	0.00	0.01	0.01	43.07	ppb
Silver	107-1	0.01	0.00	0.01	0.01	69.56	ppb
Sodium	23-2	14.37	14.23	15.84	14.81	6.02	ppb
Strontium	86-1	0.00	0.00	0.02	0.01	224.57	ppb
Strontium	88-1	0.00	0.00	0.00	0.00	31.64	ppb
Sulfur	34-1	-660.49	-618.02	-725.44	-667.98		ppb
Terbium	159-1				99		%
Terbium	159-2				99		%
Thallium	203-1	0.03	0.03	0.02	0.03	9.09	ppb
Thallium	205-1	0.02	0.02	0.02	0.02	8.04	ppb
Tin	118-1	0.04	0.05	0.05	0.05	7.60	ppb
Titanium	47-1	-0.01	-0.01	-0.01	-0.01		ppb
Uranium	238-1	0.00	0.00	0.00	0.00	52.87	ppb
Vanadium	51-2	0.00	0.01	0.00	0.00	74.61	ppb
Yttrium	89-2				98		%
Yttrium	89-1				99		%
Zinc	66-2	-0.24	-0.28	-0.28	-0.27		ppb
Zirconium	90-1	0.01	0.02	0.01	0.01	15.09	ppb
Zirconium	91-1	0.01	0.01	0.00	0.01	84.70	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90341BS	Instrumnet Name :	P7
Client Sample ID :	LCS008	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:54:31	DataFile Name :	018LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	40.45	36.27	37.11	37.94	5.83	ppb
Antimony	121-1	3.80	3.76	3.90	3.82	1.97	ppb
Arsenic	75-2	2.15	1.95	2.16	2.09	5.70	ppb
Barium	135-1	19.50	19.14	19.01	19.21	1.31	ppb
Barium	137-1	19.80	18.99	19.48	19.42	2.09	ppb
Beryllium	9-1	2.07	2.13	1.94	2.05	4.79	ppb
Bismuth	209-1				101		%
Bismuth	209-2				100		%
Boron	10-1	21.48	22.72	22.68	22.29	3.17	ppb
Boron	11-1	20.73	22.57	21.44	21.58	4.32	ppb
Cadmium	106-1	2.43	2.49	1.29	2.07	32.87	ppb
Cadmium	108-1	1.84	1.91	2.13	1.96	7.88	ppb
Cadmium	111-1	2.05	2.02	1.94	2.00	2.99	ppb
Calcium	43-1	930.87	934.29	940.55	935.24	0.53	ppb
Calcium	44-1	944.00	935.03	933.87	937.63	0.59	ppb
Chromium	52-2	4.29	4.28	4.33	4.30	0.62	ppb
Cobalt	59-2	1.98	2.01	1.99	1.99	0.80	ppb
Copper	63-2	3.60	3.44	3.54	3.52	2.29	ppb
Holmium	165-1				101		%
Holmium	165-2				101		%
Indium	115-2				99		%
Indium	115-1				100		%
Iron	56-2	421.16	421.80	428.68	423.88	0.98	ppb
Iron	57-2	425.50	415.12	416.14	418.92	1.37	ppb
Lead	206-1	1.85	1.87	1.83	1.85	0.96	ppb
Lead	207-1	1.83	1.79	1.84	1.82	1.63	ppb
Lead	208-1	1.83	1.82	1.84	1.83	0.76	ppb
Lithium	6-1				100		%
Magnesium	24-2	919.42	924.10	921.61	921.71	0.25	ppb
Manganese	55-2	2.05	2.03	2.01	2.03	1.20	ppb
Molybdenum	94-1	4.25	4.18	4.24	4.22	0.94	ppb
Molybdenum	95-1	9.57	9.69	9.78	9.68	1.11	ppb
Molybdenum	96-1	8.56	8.26	8.43	8.42	1.79	ppb
Molybdenum	97-1	9.90	9.50	9.45	9.62	2.60	ppb
Molybdenum	98-1	9.58	9.47	9.55	9.54	0.58	ppb
Nickel	60-2	2.14	2.02	2.15	2.10	3.37	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90341BS	Instrumnet Name :	P7
Client Sample ID :	LCS008	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:54:31	DataFile Name :	018LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	66.14	80.57	60.89	69.20	14.73	ppb
Potassium	39-2	919.88	924.77	931.66	925.44	0.64	ppb
Rhodium	103-2				99		%
Rhodium	103-1				100		%
Scandium	45-1				99		%
Scandium	45-2				99		%
Selenium	77-2	10.53	11.53	13.69	11.92	13.56	ppb
Selenium	78-2	8.59	10.08	10.82	9.83	11.55	ppb
Selenium	82-1	11.65	11.25	8.78	10.56	14.69	ppb
Silicon	28-1	18.60	18.58	18.88	18.69	0.90	ppb
Silver	109-1	2.41	2.31	2.29	2.34	2.76	ppb
Silver	107-1	2.40	2.42	2.49	2.44	1.94	ppb
Sodium	23-2	934.86	935.00	949.11	939.65	0.87	ppb
Strontium	86-1	1.90	1.87	1.94	1.90	1.71	ppb
Strontium	88-1	1.98	1.97	1.93	1.96	1.17	ppb
Sulfur	34-1	-697.57	-565.16	-677.27	-646.67		ppb
Terbium	159-1				100		%
Terbium	159-2				102		%
Thallium	203-1	1.94	1.95	1.93	1.94	0.60	ppb
Thallium	205-1	1.93	2.00	1.95	1.96	1.84	ppb
Tin	118-1	9.73	9.67	9.81	9.74	0.68	ppb
Titanium	47-1	9.59	9.34	9.22	9.38	2.00	ppb
Uranium	238-1	1.71	1.75	1.75	1.74	1.19	ppb
Vanadium	51-2	9.85	9.90	10.01	9.92	0.80	ppb
Yttrium	89-2				99		%
Yttrium	89-1				99		%
Zinc	66-2	3.96	3.84	4.06	3.95	2.81	ppb
Zirconium	90-1	1.81	1.77	1.81	1.80	1.32	ppb
Zirconium	91-1	1.70	1.72	1.64	1.69	2.32	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90375BL	Instrumnet Name :	P7
Client Sample ID :	PBW007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:57:35	DataFile Name :	019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.28	0.37	0.36	0.33	14.77	ppb
Antimony	121-1	0.03	0.04	0.03	0.03	20.87	ppb
Arsenic	75-2	0.00	0.02	0.00	0.01	129.23	ppb
Barium	135-1	-0.01	0.00	0.00	0.00		ppb
Barium	137-1	0.00	0.01	0.01	0.01	83.25	ppb
Beryllium	9-1	0.04	0.02	0.04	0.03	31.99	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Boron	10-1	3.39	3.71	3.70	3.60	4.96	ppb
Boron	11-1	3.52	3.45	3.30	3.42	3.40	ppb
Cadmium	111-1	0.01	-0.03	-0.02	-0.01		ppb
Cadmium	106-1	-0.05	-0.41	-0.25	-0.24		ppb
Cadmium	108-1	0.01	0.04	0.04	0.03	44.93	ppb
Calcium	43-1	-2.75	2.15	2.09	0.49	568.24	ppb
Calcium	44-1	-0.15	-0.92	-1.91	-0.99		ppb
Chromium	52-2	0.17	0.19	0.17	0.18	7.18	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00		ppb
Copper	63-2	-0.61	-0.61	-0.60	-0.60		ppb
Holmium	165-1				100		%
Holmium	165-2				101		%
Indium	115-2				99		%
Indium	115-1				101		%
Iron	56-2	0.59	0.60	0.51	0.57	8.01	ppb
Iron	57-2	0.47	0.88	0.48	0.61	38.17	ppb
Lead	206-1	0.03	0.01	0.02	0.02	48.52	ppb
Lead	207-1	0.02	0.03	0.03	0.02	14.55	ppb
Lead	208-1	0.02	0.02	0.02	0.02	14.38	ppb
Lithium	6-1				99		%
Magnesium	24-2	1.21	1.35	1.58	1.38	13.53	ppb
Manganese	55-2	-0.01	-0.01	0.00	-0.01		ppb
Molybdenum	94-1	0.02	0.02	0.02	0.02	12.35	ppb
Molybdenum	95-1	0.01	0.02	0.02	0.02	23.38	ppb
Molybdenum	96-1	0.01	0.02	0.02	0.02	23.52	ppb
Molybdenum	97-1	0.01	0.01	0.01	0.01	36.44	ppb
Molybdenum	98-1	0.02	0.01	0.02	0.02	13.23	ppb
Nickel	60-2	-0.03	-0.04	-0.04	-0.04		ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90375BL	Instrumnet Name :	P7
Client Sample ID :	PBW007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:57:35	DataFile Name :	019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-39.09	-38.74	-35.88	-37.90		ppb
Potassium	39-2	-2.15	-1.99	-2.79	-2.31		ppb
Rhodium	103-1				99		%
Rhodium	103-2				98		%
Scandium	45-1				98		%
Scandium	45-2				98		%
Selenium	82-1	0.40	0.07	1.48	0.65	113.30	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	0.17	0.32	0.39	0.29	39.00	ppb
Silicon	28-1	-2.03	-1.75	-2.25	-2.01		ppb
Silver	109-1	0.00	0.00	0.00	0.00		ppb
Silver	107-1	-0.01	0.00	-0.01	0.00		ppb
Sodium	23-2	10.18	12.26	10.25	10.90	10.82	ppb
Strontium	86-1	-0.01	0.01	-0.05	-0.01		ppb
Strontium	88-1	0.00	0.00	0.00	0.00	89.71	ppb
Sulfur	34-1	-676.63	-546.81	-610.97	-611.47		ppb
Terbium	159-1				99		%
Terbium	159-2				101		%
Thallium	203-1	0.02	0.02	0.01	0.01	19.75	ppb
Thallium	205-1	0.01	0.02	0.02	0.02	7.26	ppb
Tin	118-1	0.03	0.04	0.02	0.03	17.76	ppb
Titanium	47-1	-0.03	-0.01	-0.01	-0.02		ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	477.64	ppb
Yttrium	89-1				99		%
Yttrium	89-2				99		%
Zinc	66-2	-0.29	-0.22	-0.32	-0.28		ppb
Zirconium	90-1	0.01	0.01	0.02	0.01	50.35	ppb
Zirconium	91-1	0.01	0.01	0.00	0.01	59.66	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90375BS	Instrumnet Name :	P7
Client Sample ID :	LCS007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:00:39	DataFile Name :	020LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	38.22	35.59	37.91	37.24	3.87	ppb
Antimony	121-1	3.81	3.86	3.90	3.86	1.13	ppb
Arsenic	75-2	1.84	1.95	1.78	1.86	4.66	ppb
Barium	135-1	19.55	19.27	19.27	19.36	0.83	ppb
Barium	137-1	19.81	19.88	19.45	19.71	1.17	ppb
Beryllium	9-1	2.02	2.03	2.01	2.02	0.48	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Boron	10-1	19.34	19.41	21.14	19.96	5.12	ppb
Boron	11-1	18.45	20.26	20.78	19.83	6.15	ppb
Cadmium	106-1	1.89	2.27	1.56	1.91	18.50	ppb
Cadmium	108-1	2.23	2.35	2.12	2.23	5.17	ppb
Cadmium	111-1	2.00	1.95	1.99	1.98	1.09	ppb
Calcium	43-1	927.46	934.50	939.01	933.66	0.62	ppb
Calcium	44-1	949.23	933.90	940.87	941.33	0.82	ppb
Chromium	52-2	4.30	4.26	4.11	4.22	2.39	ppb
Cobalt	59-2	1.97	2.03	2.01	2.01	1.62	ppb
Copper	63-2	3.42	3.45	3.35	3.41	1.48	ppb
Holmium	165-1				100		%
Holmium	165-2				102		%
Indium	115-2				100		%
Indium	115-1				100		%
Iron	56-2	423.67	423.76	422.85	423.43	0.12	ppb
Iron	57-2	414.16	430.76	424.25	423.06	1.98	ppb
Lead	206-1	1.88	1.82	1.85	1.85	1.77	ppb
Lead	207-1	1.86	1.84	1.86	1.85	0.68	ppb
Lead	208-1	1.85	1.85	1.85	1.85	0.14	ppb
Lithium	6-1				98		%
Magnesium	24-2	906.11	915.06	904.28	908.49	0.64	ppb
Manganese	55-2	1.84	2.09	2.08	2.00	7.28	ppb
Molybdenum	97-1	9.75	9.53	9.51	9.60	1.40	ppb
Molybdenum	98-1	9.33	9.35	9.66	9.45	1.96	ppb
Molybdenum	94-1	4.20	4.19	4.19	4.19	0.10	ppb
Molybdenum	95-1	9.56	9.74	10.10	9.80	2.80	ppb
Molybdenum	96-1	8.67	8.37	8.46	8.50	1.80	ppb
Nickel	60-2	2.13	2.15	2.10	2.13	1.27	ppb

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90375BS	Instrumnet Name :	P7
Client Sample ID :	LCS007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:00:39	DataFile Name :	020LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	74.97	70.45	63.25	69.55	8.50	ppb
Potassium	39-2	917.78	915.54	914.04	915.79	0.21	ppb
Rhodium	103-1				99		%
Rhodium	103-2				100		%
Scandium	45-2				99		%
Scandium	45-1				98		%
Selenium	82-1	10.11	11.16	10.68	10.65	4.93	ppb
Selenium	77-2	7.88	11.44	13.21	10.85	25.02	ppb
Selenium	78-2	11.07	10.78	11.94	11.26	5.35	ppb
Silicon	28-1	19.34	17.94	19.03	18.77	3.92	ppb
Silver	107-1	2.42	2.41	2.37	2.40	1.09	ppb
Silver	109-1	2.31	2.33	2.31	2.32	0.57	ppb
Sodium	23-2	928.68	929.06	916.04	924.59	0.80	ppb
Strontium	86-1	1.91	1.85	1.98	1.91	3.60	ppb
Strontium	88-1	1.97	1.92	1.96	1.95	1.32	ppb
Sulfur	34-1	-804.69	-882.28	-778.99	-821.99		ppb
Terbium	159-1				100		%
Terbium	159-2				102		%
Thallium	203-1	2.00	1.91	1.92	1.94	2.37	ppb
Thallium	205-1	1.98	1.92	1.95	1.95	1.45	ppb
Tin	118-1	9.80	9.89	9.74	9.81	0.78	ppb
Titanium	47-1	9.35	9.22	9.56	9.38	1.82	ppb
Uranium	238-1	1.75	1.71	1.75	1.74	1.40	ppb
Vanadium	51-2	9.89	9.95	9.82	9.89	0.67	ppb
Yttrium	89-2				100		%
Yttrium	89-1				99		%
Zinc	66-2	3.78	3.80	3.60	3.73	2.88	ppb
Zirconium	90-1	1.83	1.76	1.76	1.78	2.24	ppb
Zirconium	91-1	1.76	1.75	1.79	1.77	1.14	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-01	Instrumnet Name :	P7
Client Sample ID :	MH4002	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:03:42	DataFile Name :	021SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4.97	3.65	3.50	4.04	20.07	ppb
Antimony	121-1	0.70	0.69	0.65	0.68	4.17	ppb
Arsenic	75-2	0.59	0.58	0.59	0.59	0.95	ppb
Barium	135-1	68.89	69.60	68.91	69.13	0.58	ppb
Barium	137-1	68.50	69.13	69.34	68.99	0.64	ppb
Beryllium	9-1	0.03	0.02	0.02	0.02	24.19	ppb
Bismuth	209-1				107		%
Bismuth	209-2				104		%
Boron	10-1	68.38	70.93	74.23	71.18	4.13	ppb
Boron	11-1	68.28	70.51	73.71	70.84	3.86	ppb
Cadmium	108-1	0.01	0.03	0.01	0.02	71.40	ppb
Cadmium	111-1	0.03	0.04	0.03	0.03	27.22	ppb
Cadmium	106-1	-0.36	0.01	-0.13	-0.16		ppb
Calcium	43-1	132353.37	132496.52	132956.24	132602.05	0.24	ppb
Calcium	44-1	131404.07	132350.41	132559.64	132104.71	0.47	ppb
Chromium	52-2	1.06	1.08	1.12	1.09	2.75	ppb
Cobalt	59-2	0.04	0.02	0.03	0.03	17.22	ppb
Copper	63-2	7.41	7.36	7.40	7.39	0.35	ppb
Holmium	165-2				112		%
Holmium	165-1				114		%
Indium	115-1				112		%
Indium	115-2				108		%
Iron	56-2	405.88	396.15	402.94	401.65	1.24	ppb
Iron	57-2	411.93	413.98	404.17	410.03	1.26	ppb
Lead	206-1	0.72	0.73	0.72	0.72	0.65	ppb
Lead	207-1	0.67	0.67	0.66	0.67	1.25	ppb
Lead	208-1	0.69	0.70	0.70	0.70	1.38	ppb
Lithium	6-1				112		%
Magnesium	24-2	46316.77	45995.73	46871.97	46394.82	0.96	ppb
Manganese	55-2	9.27	9.39	9.57	9.41	1.61	ppb
Molybdenum	94-1	0.15	0.16	0.17	0.16	7.74	ppb
Molybdenum	95-1	0.39	0.36	0.42	0.39	8.31	ppb
Molybdenum	96-1	0.31	0.33	0.36	0.34	7.70	ppb
Molybdenum	97-1	0.43	0.41	0.41	0.42	2.82	ppb
Molybdenum	98-1	0.40	0.39	0.38	0.39	2.45	ppb
Nickel	60-2	0.27	0.25	0.23	0.25	8.19	ppb

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-01	Instrumnet Name :	P7
Client Sample ID :	MH4002	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:03:42	DataFile Name :	021SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-26.73	-29.42	-16.26	-24.14		ppb
Potassium	39-2	2288.93	2306.54	2326.48	2307.31	0.81	ppb
Rhodium	103-1				107		%
Rhodium	103-2				106		%
Scandium	45-2				110		%
Scandium	45-1				115		%
Selenium	82-1	1.16	0.93	1.69	1.26	30.92	ppb
Selenium	77-2	0.40	0.40	0.40	0.40	1.02	ppb
Selenium	78-2	0.50	1.16	0.02	0.56	102.12	ppb
Silicon	28-1	7775.67	7819.64	7915.00	7836.77	0.91	ppb
Silver	107-1	0.16	0.21	0.24	0.20	19.38	ppb
Silver	109-1	0.17	0.19	0.19	0.18	5.47	ppb
Sodium	23-2	121932.91	121097.57	122867.72	121966.07	0.73	ppb
Strontium	86-1	1049.08	1062.36	1073.42	1061.62	1.15	ppb
Strontium	88-1	1046.27	1056.49	1071.33	1058.03	1.19	ppb
Sulfur	34-1	27295.45	27735.38	27796.35	27609.06	0.99	ppb
Terbium	159-1				113		%
Terbium	159-2				111		%
Thallium	203-1	0.12	0.15	0.17	0.15	17.01	ppb
Thallium	205-1	0.12	0.15	0.18	0.15	20.35	ppb
Tin	118-1	0.17	0.17	0.17	0.17	1.61	ppb
Titanium	47-1	0.35	0.37	0.34	0.35	4.60	ppb
Uranium	238-1	1.22	1.24	1.30	1.25	3.04	ppb
Vanadium	51-2	1.64	1.55	1.57	1.59	2.79	ppb
Yttrium	89-1				113		%
Yttrium	89-2				110		%
Zinc	66-2	144.54	146.38	145.69	145.54	0.64	ppb
Zirconium	90-1	0.05	0.03	0.03	0.04	19.20	ppb
Zirconium	91-1	0.05	0.04	0.03	0.04	27.15	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-02	Instrumnet Name :	P7
Client Sample ID :	MH4002D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:06:43	DataFile Name :	022SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3.53	3.40	4.01	3.65	8.87	ppb
Antimony	121-1	0.42	0.43	0.41	0.42	2.33	ppb
Arsenic	75-2	0.63	0.69	0.60	0.64	7.04	ppb
Barium	137-1	70.59	70.49	71.07	70.72	0.44	ppb
Barium	135-1	70.92	69.18	70.03	70.04	1.24	ppb
Beryllium	9-1	0.01	0.03	0.02	0.02	64.43	ppb
Bismuth	209-1				107		%
Bismuth	209-2				103		%
Boron	10-1	72.73	74.94	73.61	73.76	1.51	ppb
Boron	11-1	70.03	72.05	74.78	72.28	3.30	ppb
Cadmium	111-1	0.04	0.04	0.01	0.03	45.54	ppb
Cadmium	106-1	-0.03	0.08	-0.34	-0.10		ppb
Cadmium	108-1	0.01	0.07	0.15	0.07	92.23	ppb
Calcium	43-1	134133.90	134592.02	136223.62	134983.18	0.81	ppb
Calcium	44-1	133793.82	134727.98	134387.09	134302.96	0.35	ppb
Chromium	52-2	1.16	1.15	1.08	1.13	3.79	ppb
Cobalt	59-2	0.03	0.03	0.02	0.03	11.55	ppb
Copper	63-2	7.61	7.70	7.73	7.68	0.79	ppb
Holmium	165-1				113		%
Holmium	165-2				110		%
Indium	115-2				107		%
Indium	115-1				111		%
Iron	56-2	409.00	406.75	407.16	407.64	0.29	ppb
Iron	57-2	417.90	417.52	421.96	419.13	0.59	ppb
Lead	206-1	0.72	0.65	0.68	0.69	4.63	ppb
Lead	207-1	0.61	0.67	0.63	0.63	4.86	ppb
Lead	208-1	0.67	0.66	0.66	0.67	0.62	ppb
Lithium	6-1				112		%
Magnesium	24-2	46960.31	46785.90	46655.05	46800.42	0.33	ppb
Manganese	55-2	9.29	9.53	9.54	9.45	1.48	ppb
Molybdenum	94-1	0.15	0.17	0.15	0.16	5.78	ppb
Molybdenum	95-1	0.37	0.42	0.39	0.39	5.63	ppb
Molybdenum	96-1	0.33	0.36	0.34	0.34	4.89	ppb
Molybdenum	97-1	0.38	0.40	0.40	0.40	3.46	ppb
Molybdenum	98-1	0.39	0.41	0.38	0.39	4.08	ppb
Nickel	60-2	0.25	0.23	0.23	0.24	5.28	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-02	Instrumnet Name :	P7
Client Sample ID :	MH4002D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:06:43	DataFile Name :	022SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-40.31	-24.51	-21.68	-28.83		ppb
Potassium	39-2	2310.79	2308.49	2294.37	2304.55	0.39	ppb
Rhodium	103-2				104		%
Rhodium	103-1				106		%
Scandium	45-1				112		%
Scandium	45-2				108		%
Selenium	77-2	0.00	1.22	0.00	0.41	173.21	ppb
Selenium	78-2	0.69	1.49	0.50	0.89	58.91	ppb
Selenium	82-1	0.85	1.51	1.40	1.25	28.42	ppb
Silicon	28-1	7864.15	7938.94	7987.70	7930.26	0.78	ppb
Silver	109-1	0.19	0.22	0.23	0.21	8.56	ppb
Silver	107-1	0.18	0.23	0.24	0.21	14.31	ppb
Sodium	23-2	123757.07	123191.02	123407.34	123451.81	0.23	ppb
Strontium	86-1	1064.07	1077.99	1076.68	1072.91	0.72	ppb
Strontium	88-1	1052.28	1074.72	1060.34	1062.45	1.07	ppb
Sulfur	34-1	27820.13	28495.24	27926.48	28080.62	1.29	ppb
Terbium	159-2				110		%
Terbium	159-1				112		%
Thallium	203-1	0.05	0.06	0.06	0.06	9.18	ppb
Thallium	205-1	0.05	0.07	0.07	0.06	22.98	ppb
Tin	118-1	0.11	0.12	0.18	0.14	28.18	ppb
Titanium	47-1	0.35	0.38	0.36	0.36	5.33	ppb
Uranium	238-1	1.30	1.29	1.29	1.29	0.65	ppb
Vanadium	51-2	1.64	1.60	1.64	1.63	1.40	ppb
Yttrium	89-2				108		%
Yttrium	89-1				112		%
Zinc	66-2	147.07	147.70	146.84	147.20	0.30	ppb
Zirconium	90-1	0.03	0.03	0.03	0.03	14.32	ppb
Zirconium	91-1	0.03	0.03	0.02	0.03	26.87	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-01LX5	Instrumnet Name :	P7
Client Sample ID :	MH4002L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-06 15:09:45	DataFile Name :	023SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.92	0.70	0.83	0.82	14.08	ppb
Antimony	121-1	0.04	0.05	0.05	0.05	8.15	ppb
Arsenic	75-2	0.09	0.11	0.12	0.11	12.72	ppb
Barium	135-1	13.89	13.75	14.08	13.91	1.17	ppb
Barium	137-1	13.77	13.89	13.94	13.87	0.63	ppb
Beryllium	9-1	0.03	0.03	0.02	0.03	9.37	ppb
Bismuth	209-1				102		%
Bismuth	209-2				102		%
Boron	10-1	19.30	19.31	18.78	19.13	1.57	ppb
Boron	11-1	20.03	19.48	19.06	19.52	2.49	ppb
Cadmium	111-1	0.03	0.02	0.01	0.02	37.65	ppb
Cadmium	106-1	0.18	0.17	0.12	0.16	22.87	ppb
Cadmium	108-1	-0.03	-0.03	-0.01	-0.02		ppb
Calcium	43-1	26245.15	26145.20	26315.45	26235.27	0.33	ppb
Calcium	44-1	26242.98	26211.99	26246.55	26233.84	0.07	ppb
Chromium	52-2	0.38	0.37	0.37	0.37	2.59	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	577.62	ppb
Copper	63-2	1.35	1.31	1.21	1.29	5.63	ppb
Holmium	165-2				105		%
Holmium	165-1				104		%
Indium	115-1				104		%
Indium	115-2				102		%
Iron	56-2	81.21	81.52	80.08	80.94	0.94	ppb
Iron	57-2	80.64	81.57	84.36	82.19	2.36	ppb
Lead	206-1	0.07	0.07	0.08	0.07	7.12	ppb
Lead	207-1	0.06	0.08	0.06	0.06	21.52	ppb
Lead	208-1	0.07	0.08	0.07	0.07	8.35	ppb
Lithium	6-1				101		%
Magnesium	24-2	9270.17	9217.58	9220.90	9236.22	0.32	ppb
Manganese	55-2	1.90	1.82	1.87	1.86	2.06	ppb
Molybdenum	94-1	0.03	0.02	0.03	0.03	16.56	ppb
Molybdenum	95-1	0.08	0.08	0.09	0.09	8.21	ppb
Molybdenum	96-1	0.10	0.07	0.07	0.08	15.78	ppb
Molybdenum	97-1	0.09	0.07	0.10	0.08	15.19	ppb
Molybdenum	98-1	0.09	0.09	0.09	0.09	1.24	ppb
Nickel	60-2	0.00	0.02	-0.01	0.00	274.34	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-01LX5	Instrumnet Name :	P7
Client Sample ID :	MH4002L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-06 15:09:45	DataFile Name :	023SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-27.18	-47.09	-27.63	-33.96		ppb
Potassium	39-2	449.71	451.44	442.28	447.81	1.09	ppb
Rhodium	103-2				101		%
Rhodium	103-1				101		%
Scandium	45-1				103		%
Scandium	45-2				102		%
Selenium	77-2	0.00	0.86	0.42	0.43	100.52	ppb
Selenium	78-2	0.14	0.10	-0.49	-0.08		ppb
Selenium	82-1	0.80	0.88	0.53	0.74	24.83	ppb
Silicon	28-1	1537.93	1536.02	1543.31	1539.09	0.25	ppb
Silver	109-1	0.03	0.04	0.04	0.04	9.37	ppb
Silver	107-1	0.03	0.05	0.03	0.04	18.56	ppb
Sodium	23-2	24074.04	23995.76	23819.69	23963.16	0.54	ppb
Strontium	86-1	202.74	202.60	204.71	203.35	0.58	ppb
Strontium	88-1	207.59	207.98	208.64	208.07	0.25	ppb
Sulfur	34-1	6309.78	6369.60	6433.14	6370.84	0.97	ppb
Terbium	159-1				103		%
Terbium	159-2				105		%
Thallium	203-1	0.01	0.01	0.01	0.01	21.10	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	20.94	ppb
Tin	118-1	0.05	0.04	0.03	0.04	34.29	ppb
Titanium	47-1	0.06	0.03	0.03	0.04	45.45	ppb
Uranium	238-1	0.24	0.24	0.25	0.24	1.99	ppb
Vanadium	51-2	0.31	0.36	0.33	0.33	7.57	ppb
Yttrium	89-2				103		%
Yttrium	89-1				104		%
Zinc	66-2	29.59	30.03	29.14	29.59	1.50	ppb
Zirconium	90-1	0.01	0.02	0.01	0.01	32.92	ppb
Zirconium	91-1	0.01	0.00	0.01	0.01	97.10	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-03	Instrumnet Name :	P7
Client Sample ID :	MH4002S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:12:48	DataFile Name :	024SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2017.64	1981.08	1992.90	1997.21	0.93	ppb
Antimony	121-1	110.89	109.75	113.51	111.38	1.73	ppb
Arsenic	75-2	45.38	45.68	45.97	45.68	0.64	ppb
Barium	135-1	2285.04	2281.51	2345.62	2304.05	1.56	ppb
Barium	137-1	2279.65	2282.91	2347.81	2303.45	1.67	ppb
Beryllium	9-1	56.32	54.86	55.11	55.43	1.40	ppb
Bismuth	209-2				103		%
Bismuth	209-1				107		%
Boron	10-1	65.05	69.37	70.20	68.21	4.06	ppb
Boron	11-1	66.65	68.42	68.95	68.01	1.77	ppb
Cadmium	111-1	54.35	53.40	55.31	54.35	1.76	ppb
Cadmium	106-1	47.39	47.76	44.33	46.49	4.05	ppb
Cadmium	108-1	50.19	49.71	50.41	50.10	0.72	ppb
Calcium	43-1	134813.39	134977.19	136131.88	135307.49	0.53	ppb
Calcium	44-1	134061.81	133543.67	135091.86	134232.45	0.59	ppb
Chromium	52-2	223.78	223.72	224.40	223.97	0.17	ppb
Cobalt	59-2	581.49	577.08	576.38	578.32	0.48	ppb
Copper	63-2	291.14	288.72	293.27	291.04	0.78	ppb
Holmium	165-2				110		%
Holmium	165-1				112		%
Indium	115-1				110		%
Indium	115-2				105		%
Iron	56-2	1536.84	1541.73	1538.45	1539.01	0.16	ppb
Iron	57-2	1541.89	1530.56	1549.84	1540.76	0.63	ppb
Lead	206-1	22.74	21.94	22.44	22.37	1.82	ppb
Lead	207-1	22.79	22.25	22.99	22.68	1.69	ppb
Lead	208-1	22.71	22.16	22.67	22.51	1.35	ppb
Lithium	6-1				114		%
Magnesium	24-2	46509.42	46492.99	46318.87	46440.43	0.23	ppb
Manganese	55-2	573.89	570.60	572.11	572.20	0.29	ppb
Molybdenum	94-1	0.26	0.24	0.24	0.25	3.10	ppb
Molybdenum	95-1	0.73	0.75	0.72	0.73	2.34	ppb
Molybdenum	96-1	0.59	0.66	0.65	0.63	5.89	ppb
Molybdenum	97-1	0.70	0.70	0.74	0.71	3.11	ppb
Molybdenum	98-1	0.70	0.69	0.72	0.70	2.30	ppb
Nickel	60-2	570.81	565.67	571.74	569.40	0.57	ppb

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-03	Instrumnet Name :	P7
Client Sample ID :	MH4002S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:12:48	DataFile Name :	024SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-40.03	-29.86	-32.55	-34.15		ppb
Potassium	39-2	2292.46	2286.17	2275.72	2284.78	0.37	ppb
Rhodium	103-1				105		%
Rhodium	103-2				103		%
Scandium	45-1				111		%
Scandium	45-2				105		%
Selenium	82-1	116.79	115.04	119.03	116.95	1.71	ppb
Selenium	77-2	116.78	119.73	127.77	121.43	4.68	ppb
Selenium	78-2	113.62	118.78	120.27	117.56	2.97	ppb
Silicon	28-1	7889.53	7829.39	7848.30	7855.74	0.39	ppb
Silver	109-1	54.01	54.41	54.98	54.47	0.89	ppb
Silver	107-1	55.11	55.07	56.19	55.46	1.15	ppb
Sodium	23-2	123657.35	122567.81	122806.68	123010.61	0.47	ppb
Strontium	86-1	1067.33	1058.54	1099.72	1075.20	2.02	ppb
Strontium	88-1	1060.60	1051.30	1098.44	1070.11	2.33	ppb
Sulfur	34-1	27872.91	27691.48	27902.85	27822.41	0.41	ppb
Terbium	159-2				110		%
Terbium	159-1				111		%
Thallium	203-1	54.89	54.27	55.27	54.81	0.92	ppb
Thallium	205-1	56.03	54.69	56.44	55.72	1.64	ppb
Tin	118-1	0.16	0.20	0.18	0.18	11.50	ppb
Titanium	47-1	0.37	0.40	0.50	0.42	16.53	ppb
Uranium	238-1	1.29	1.29	1.33	1.30	1.85	ppb
Vanadium	51-2	575.20	578.57	582.43	578.73	0.62	ppb
Yttrium	89-1				111		%
Yttrium	89-2				107		%
Zinc	66-2	716.42	716.46	723.56	718.81	0.57	ppb
Zirconium	90-1	0.03	0.03	0.03	0.03	11.58	ppb
Zirconium	91-1	0.07	0.05	0.05	0.06	20.08	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-10	Instrumnet Name :	P7
Client Sample ID :	MH4113	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:15:47	DataFile Name :	025SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	31.71	36.91	31.04	33.22	9.68	ppb
Antimony	121-1	0.63	0.59	0.53	0.58	8.77	ppb
Arsenic	75-2	1.77	1.74	1.79	1.77	1.42	ppb
Barium	135-1	72.74	72.33	71.58	72.21	0.82	ppb
Barium	137-1	73.48	73.77	72.70	73.32	0.76	ppb
Beryllium	9-1	0.03	0.03	0.04	0.03	12.78	ppb
Bismuth	209-1				107		%
Bismuth	209-2				101		%
Boron	10-1	99.80	107.45	108.33	105.19	4.46	ppb
Boron	11-1	98.78	105.39	105.87	103.35	3.83	ppb
Cadmium	111-1	0.06	0.10	0.08	0.08	24.11	ppb
Cadmium	106-1	-0.41	-0.20	-0.04	-0.21		ppb
Cadmium	108-1	0.07	0.01	0.15	0.08	91.29	ppb
Calcium	43-1	150821.53	149440.09	148944.22	149735.28	0.65	ppb
Calcium	44-1	149805.10	147863.30	147683.71	148450.70	0.79	ppb
Chromium	52-2	0.63	0.65	0.64	0.64	1.01	ppb
Cobalt	59-2	0.12	0.10	0.08	0.10	18.28	ppb
Copper	63-2	1.55	1.64	1.63	1.61	2.74	ppb
Holmium	165-2				109		%
Holmium	165-1				112		%
Indium	115-1				108		%
Indium	115-2				102		%
Iron	56-2	55.24	54.13	59.15	56.17	4.69	ppb
Iron	57-2	70.38	70.44	70.97	70.60	0.46	ppb
Lead	206-1	0.33	0.32	0.32	0.32	2.16	ppb
Lead	207-1	0.29	0.32	0.33	0.31	7.16	ppb
Lead	208-1	0.30	0.32	0.31	0.31	3.13	ppb
Lithium	6-1				116		%
Magnesium	24-2	61594.30	60780.78	60333.20	60902.76	1.05	ppb
Manganese	55-2	11.73	11.43	11.45	11.53	1.47	ppb
Molybdenum	94-1	0.15	0.17	0.18	0.17	8.24	ppb
Molybdenum	95-1	0.37	0.34	0.39	0.37	6.15	ppb
Molybdenum	96-1	0.32	0.34	0.31	0.32	4.37	ppb
Molybdenum	97-1	0.31	0.40	0.37	0.36	12.70	ppb
Molybdenum	98-1	0.37	0.34	0.37	0.36	4.29	ppb
Nickel	60-2	0.69	0.67	0.69	0.68	1.31	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-10	Instrumnet Name :	P7
Client Sample ID :	MH4113	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:15:47	DataFile Name :	025SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-9.19	-30.44	-19.90	-19.84		ppb
Potassium	39-2	2651.11	2629.64	2600.98	2627.25	0.96	ppb
Rhodium	103-2				100		%
Rhodium	103-1				105		%
Scandium	45-1				108		%
Scandium	45-2				102		%
Selenium	77-2	1.28	2.97	2.12	2.12	39.90	ppb
Selenium	78-2	2.01	1.24	1.24	1.50	29.81	ppb
Selenium	82-1	2.12	2.24	1.03	1.80	37.15	ppb
Silicon	28-1	8129.63	8092.18	8009.79	8077.20	0.76	ppb
Silver	109-1	0.13	0.12	0.16	0.14	12.33	ppb
Silver	107-1	0.12	0.14	0.16	0.14	14.31	ppb
Sodium	23-2	68259.69	67797.85	67010.93	67689.49	0.93	ppb
Strontium	86-1	1113.08	1112.78	1117.98	1114.61	0.26	ppb
Strontium	88-1	1101.56	1099.73	1096.68	1099.32	0.22	ppb
Sulfur	34-1	31547.46	31154.52	30980.13	31227.37	0.93	ppb
Terbium	159-1				111		%
Terbium	159-2				108		%
Thallium	203-1	0.02	0.02	0.03	0.03	33.06	ppb
Thallium	205-1	0.02	0.02	0.02	0.02	12.75	ppb
Tin	118-1	0.11	0.13	0.14	0.13	12.06	ppb
Titanium	47-1	1.32	1.25	1.30	1.29	2.74	ppb
Uranium	238-1	2.10	2.12	2.12	2.11	0.45	ppb
Vanadium	51-2	5.04	5.16	5.02	5.07	1.44	ppb
Yttrium	89-2				103		%
Yttrium	89-1				110		%
Zinc	66-2	8.67	9.14	8.68	8.83	3.02	ppb
Zirconium	90-1	0.06	0.07	0.06	0.06	5.10	ppb
Zirconium	91-1	0.04	0.05	0.07	0.05	28.58	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-16	Instrumnet Name :	P7
Client Sample ID :	MH4113D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:18:47	DataFile Name :	026SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	34.90	33.60	36.97	35.16	4.84	ppb
Antimony	121-1	0.59	0.60	0.61	0.60	1.24	ppb
Arsenic	75-2	1.75	1.74	1.70	1.73	1.57	ppb
Barium	135-1	72.05	72.24	72.37	72.22	0.23	ppb
Barium	137-1	72.08	72.75	73.36	72.73	0.88	ppb
Beryllium	9-1	0.01	0.03	0.01	0.02	55.33	ppb
Bismuth	209-1				109		%
Bismuth	209-2				103		%
Boron	10-1	103.92	106.06	108.33	106.11	2.08	ppb
Boron	11-1	101.93	105.34	106.85	104.71	2.41	ppb
Cadmium	111-1	0.09	0.07	0.14	0.10	35.91	ppb
Cadmium	106-1	-0.04	-0.35	0.77	0.13	456.03	ppb
Cadmium	108-1	0.03	0.11	0.07	0.07	57.61	ppb
Calcium	44-1	148489.03	149969.56	148915.24	149124.61	0.51	ppb
Calcium	43-1	149899.53	148691.43	148684.45	149091.80	0.47	ppb
Chromium	52-2	0.57	0.59	0.55	0.57	3.44	ppb
Cobalt	59-2	0.08	0.08	0.08	0.08	2.95	ppb
Copper	63-2	1.53	1.54	1.48	1.52	2.32	ppb
Holmium	165-2				110		%
Holmium	165-1				113		%
Indium	115-1				109		%
Indium	115-2				103		%
Iron	56-2	55.73	57.18	54.23	55.71	2.65	ppb
Iron	57-2	68.64	71.47	73.61	71.24	3.50	ppb
Lead	206-1	0.29	0.30	0.26	0.28	6.26	ppb
Lead	207-1	0.25	0.28	0.27	0.27	6.96	ppb
Lead	208-1	0.27	0.29	0.26	0.28	4.47	ppb
Lithium	6-1				117		%
Magnesium	24-2	61205.44	61605.34	61124.71	61311.83	0.42	ppb
Manganese	55-2	11.79	11.65	11.56	11.67	0.98	ppb
Molybdenum	94-1	0.14	0.16	0.14	0.15	7.24	ppb
Molybdenum	95-1	0.34	0.35	0.41	0.37	10.02	ppb
Molybdenum	96-1	0.31	0.32	0.36	0.33	7.10	ppb
Molybdenum	97-1	0.33	0.34	0.34	0.34	1.68	ppb
Molybdenum	98-1	0.39	0.33	0.37	0.36	8.89	ppb
Nickel	60-2	0.67	0.66	0.61	0.65	4.50	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-16	Instrumnet Name :	P7
Client Sample ID :	MH4113D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:18:47	DataFile Name :	026SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-9.11	-9.95	-30.31	-16.46		ppb
Potassium	39-2	2635.78	2642.12	2598.06	2625.32	0.91	ppb
Rhodium	103-1				105		%
Rhodium	103-2				101		%
Scandium	45-1				108		%
Scandium	45-2				101		%
Selenium	77-2	0.84	2.11	1.28	1.41	46.11	ppb
Selenium	78-2	0.91	0.88	0.42	0.74	37.79	ppb
Selenium	82-1	2.49	1.87	1.63	2.00	22.35	ppb
Silicon	28-1	8043.25	8106.20	8035.03	8061.50	0.48	ppb
Silver	109-1	0.10	0.11	0.13	0.11	15.19	ppb
Silver	107-1	0.10	0.13	0.13	0.12	15.87	ppb
Sodium	23-2	68186.74	68665.15	67594.61	68148.83	0.79	ppb
Strontium	86-1	1123.40	1114.69	1121.07	1119.72	0.40	ppb
Strontium	88-1	1110.28	1105.78	1113.89	1109.98	0.37	ppb
Sulfur	34-1	31642.64	31668.56	31301.78	31537.66	0.65	ppb
Terbium	159-2				111		%
Terbium	159-1				112		%
Thallium	203-1	0.01	0.01	0.01	0.01	6.90	ppb
Thallium	205-1	0.01	0.02	0.01	0.01	39.89	ppb
Tin	118-1	0.08	0.08	0.08	0.08	1.62	ppb
Titanium	47-1	1.51	1.45	1.39	1.45	4.13	ppb
Uranium	238-1	2.14	2.14	2.16	2.15	0.32	ppb
Vanadium	51-2	5.12	5.11	5.02	5.08	1.10	ppb
Yttrium	89-2				104		%
Yttrium	89-1				110		%
Zinc	66-2	6.76	7.23	7.10	7.03	3.45	ppb
Zirconium	90-1	0.06	0.06	0.07	0.06	10.03	ppb
Zirconium	91-1	0.05	0.06	0.06	0.06	8.14	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-10LX5	Instrumnet Name :	P7
Client Sample ID :	MH4113L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-06 15:21:48	DataFile Name :	027SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	6.53	6.32	5.11	5.99	12.76	ppb
Antimony	121-1	0.08	0.06	0.08	0.07	10.74	ppb
Arsenic	75-2	0.32	0.31	0.27	0.30	8.48	ppb
Barium	135-1	13.84	14.12	13.99	13.99	0.99	ppb
Barium	137-1	14.15	14.49	14.60	14.41	1.63	ppb
Beryllium	9-1	0.02	0.01	0.01	0.01	51.78	ppb
Bismuth	209-1				105		%
Bismuth	209-2				100		%
Boron	10-1	30.17	30.56	29.62	30.12	1.57	ppb
Boron	11-1	27.98	28.21	28.25	28.15	0.52	ppb
Cadmium	111-1	0.05	0.04	0.03	0.04	34.97	ppb
Cadmium	106-1	0.59	0.27	0.23	0.36	54.39	ppb
Cadmium	108-1	0.03	0.01	0.01	0.02	62.36	ppb
Calcium	43-1	29806.29	29597.33	29447.38	29617.00	0.61	ppb
Calcium	44-1	29719.16	29886.99	29635.40	29747.19	0.43	ppb
Chromium	52-2	0.25	0.27	0.29	0.27	7.31	ppb
Cobalt	59-2	0.01	0.01	0.01	0.01	17.30	ppb
Copper	63-2	0.16	0.16	0.11	0.15	21.32	ppb
Holmium	165-2				104		%
Holmium	165-1				106		%
Indium	115-1				103		%
Indium	115-2				99		%
Iron	56-2	11.30	10.98	10.90	11.06	1.87	ppb
Iron	57-2	14.09	14.68	12.14	13.64	9.75	ppb
Lead	206-1	0.01	0.01	0.01	0.01	22.27	ppb
Lead	207-1	0.00	-0.01	0.01	0.00		ppb
Lead	208-1	0.01	0.00	0.00	0.00	224.09	ppb
Lithium	6-1				106		%
Magnesium	24-2	12666.96	12481.01	12444.80	12530.92	0.95	ppb
Manganese	55-2	2.41	2.31	2.28	2.33	3.07	ppb
Molybdenum	94-1	0.02	0.03	0.04	0.03	29.01	ppb
Molybdenum	95-1	0.07	0.09	0.06	0.07	19.18	ppb
Molybdenum	96-1	0.07	0.06	0.07	0.07	7.09	ppb
Molybdenum	97-1	0.08	0.08	0.09	0.08	5.50	ppb
Molybdenum	98-1	0.08	0.07	0.08	0.07	5.91	ppb
Nickel	60-2	0.11	0.10	0.09	0.10	10.12	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-10LX5	Instrumnet Name :	P7
Client Sample ID :	MH4113L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-06 15:21:48	DataFile Name :	027SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-28.74	-28.65	-32.04	-29.81		ppb
Potassium	39-2	540.10	524.76	514.28	526.38	2.47	ppb
Rhodium	103-2				98		%
Rhodium	103-1				100		%
Scandium	45-1				99		%
Scandium	45-2				95		%
Selenium	77-2	0.88	0.89	0.45	0.74	34.17	ppb
Selenium	78-2	-0.64	0.26	0.05	-0.11		ppb
Selenium	82-1	0.58	0.81	1.62	1.00	54.75	ppb
Silicon	28-1	1601.35	1608.55	1576.90	1595.60	1.04	ppb
Silver	109-1	0.01	0.01	0.03	0.02	42.18	ppb
Silver	107-1	0.02	0.02	0.02	0.02	17.90	ppb
Sodium	23-2	13756.46	13659.48	13650.33	13688.76	0.43	ppb
Strontium	86-1	218.87	218.47	218.56	218.63	0.10	ppb
Strontium	88-1	223.37	222.54	223.69	223.20	0.27	ppb
Sulfur	34-1	7542.96	7692.55	7378.95	7538.15	2.08	ppb
Terbium	159-1				105		%
Terbium	159-2				103		%
Thallium	203-1	0.00	0.00	0.00	0.00	143.16	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	363.74	ppb
Tin	118-1	0.03	0.04	0.04	0.04	19.87	ppb
Titanium	47-1	0.25	0.31	0.19	0.25	23.79	ppb
Uranium	238-1	0.41	0.40	0.42	0.41	2.32	ppb
Vanadium	51-2	1.00	1.03	0.98	1.00	2.46	ppb
Yttrium	89-2				99		%
Yttrium	89-1				102		%
Zinc	66-2	1.37	1.57	1.25	1.40	11.36	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	18.93	ppb
Zirconium	91-1	0.02	0.01	0.03	0.02	58.13	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-17	Instrumnet Name :	P7
Client Sample ID :	MH4113S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:24:49	DataFile Name :	028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2045.14	2024.37	2050.94	2040.15	0.68	ppb
Antimony	121-1	109.32	109.25	108.90	109.16	0.21	ppb
Arsenic	75-2	45.74	46.21	46.85	46.27	1.20	ppb
Barium	135-1	2270.88	2258.80	2279.44	2269.71	0.46	ppb
Barium	137-1	2242.57	2240.90	2276.34	2253.27	0.89	ppb
Beryllium	9-1	52.65	52.16	50.10	51.64	2.62	ppb
Bismuth	209-2				101		%
Bismuth	209-1				107		%
Boron	10-1	101.25	109.27	109.11	106.54	4.31	ppb
Boron	11-1	100.11	104.27	105.26	103.21	2.65	ppb
Cadmium	106-1	44.90	44.64	46.02	45.19	1.63	ppb
Cadmium	108-1	47.71	49.86	48.81	48.79	2.21	ppb
Cadmium	111-1	53.34	53.42	52.99	53.25	0.43	ppb
Calcium	43-1	153153.63	155433.48	152802.74	153796.61	0.93	ppb
Calcium	44-1	151956.16	154089.72	153140.80	153062.23	0.70	ppb
Chromium	52-2	227.39	225.56	226.24	226.40	0.41	ppb
Cobalt	59-2	587.93	577.13	590.45	585.17	1.21	ppb
Copper	63-2	293.07	290.31	289.96	291.11	0.58	ppb
Holmium	165-1				111		%
Holmium	165-2				107		%
Indium	115-1				105		%
Indium	115-2				100		%
Iron	56-2	1203.54	1200.79	1203.90	1202.75	0.14	ppb
Iron	57-2	1189.68	1200.68	1208.02	1199.46	0.77	ppb
Lead	208-1	21.73	21.90	22.25	21.96	1.20	ppb
Lead	206-1	21.68	22.05	22.25	21.99	1.32	ppb
Lead	207-1	22.01	21.78	22.33	22.04	1.25	ppb
Lithium	6-1				116		%
Magnesium	24-2	62893.14	61783.82	62790.39	62489.12	0.98	ppb
Manganese	55-2	585.97	583.95	583.15	584.35	0.25	ppb
Molybdenum	94-1	0.26	0.24	0.24	0.25	4.00	ppb
Molybdenum	95-1	0.65	0.69	0.73	0.69	5.54	ppb
Molybdenum	96-1	0.53	0.61	0.59	0.58	7.24	ppb
Molybdenum	97-1	0.65	0.69	0.71	0.69	4.70	ppb
Molybdenum	98-1	0.66	0.69	0.62	0.66	5.44	ppb
Nickel	60-2	580.75	577.87	582.07	580.23	0.37	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-17	Instrumnet Name :	P7
Client Sample ID :	MH4113S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:24:49	DataFile Name :	028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-14.71	-30.78	-6.63	-17.37		ppb
Potassium	39-2	2665.45	2646.97	2665.07	2659.16	0.40	ppb
Rhodium	103-1				101		%
Rhodium	103-2				98		%
Scandium	45-2				97		%
Scandium	45-1				103		%
Selenium	77-2	113.47	120.03	116.20	116.56	2.83	ppb
Selenium	78-2	116.68	115.12	115.53	115.78	0.70	ppb
Selenium	82-1	111.71	112.41	118.29	114.14	3.17	ppb
Silicon	28-1	8193.88	8306.53	8267.33	8255.91	0.69	ppb
Silver	109-1	53.00	53.11	52.35	52.82	0.78	ppb
Silver	107-1	53.46	53.49	53.59	53.51	0.12	ppb
Sodium	23-2	69580.75	68803.71	69476.87	69287.11	0.61	ppb
Strontium	86-1	1137.99	1151.13	1152.86	1147.33	0.71	ppb
Strontium	88-1	1121.25	1135.26	1140.54	1132.35	0.88	ppb
Sulfur	34-1	32887.55	32922.27	32566.96	32792.26	0.60	ppb
Terbium	159-2				107		%
Terbium	159-1				110		%
Thallium	203-1	54.84	55.27	55.16	55.09	0.41	ppb
Thallium	205-1	55.23	55.57	56.22	55.67	0.91	ppb
Tin	118-1	0.12	0.14	0.13	0.13	8.64	ppb
Titanium	47-1	1.54	1.47	1.63	1.55	5.20	ppb
Uranium	238-1	2.17	2.19	2.22	2.19	1.19	ppb
Vanadium	51-2	584.71	577.86	588.14	583.57	0.90	ppb
Yttrium	89-2				100		%
Yttrium	89-1				106		%
Zinc	66-2	588.65	582.72	591.92	587.76	0.79	ppb
Zirconium	90-1	0.06	0.08	0.06	0.06	16.14	ppb
Zirconium	91-1	0.08	0.09	0.08	0.08	8.83	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-11	Instrumnet Name :	P7
Client Sample ID :	MH4116	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:27:47	DataFile Name :	029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	170.23	161.07	160.65	163.98	3.30	ppb
Antimony	121-1	0.77	0.78	0.79	0.78	1.21	ppb
Arsenic	75-2	1.22	1.08	1.22	1.17	6.84	ppb
Barium	135-1	103.90	106.39	104.78	105.02	1.20	ppb
Barium	137-1	105.62	107.63	104.96	106.07	1.31	ppb
Beryllium	9-1	0.03	0.02	0.03	0.03	24.11	ppb
Bismuth	209-1				110		%
Bismuth	209-2				102		%
Boron	10-1	105.78	113.28	112.38	110.48	3.71	ppb
Boron	11-1	102.00	109.97	111.00	107.65	4.58	ppb
Cadmium	111-1	0.13	0.15	0.11	0.13	14.56	ppb
Cadmium	106-1	0.28	0.15	-0.06	0.12	143.92	ppb
Cadmium	108-1	0.12	0.19	0.15	0.15	20.79	ppb
Calcium	43-1	159404.85	158476.88	158893.64	158925.13	0.29	ppb
Calcium	44-1	158555.39	159309.57	158516.99	158793.98	0.28	ppb
Chromium	52-2	0.81	0.83	0.81	0.82	1.15	ppb
Cobalt	59-2	0.20	0.21	0.20	0.20	2.59	ppb
Copper	63-2	3.14	3.14	3.30	3.19	2.79	ppb
Holmium	165-2				108		%
Holmium	165-1				114		%
Indium	115-1				108		%
Indium	115-2				101		%
Iron	56-2	303.71	295.44	302.36	300.50	1.48	ppb
Iron	57-2	319.03	303.70	319.73	314.15	2.88	ppb
Lead	206-1	7.41	7.40	7.63	7.48	1.76	ppb
Lead	207-1	7.02	7.09	7.20	7.10	1.29	ppb
Lead	208-1	7.25	7.36	7.46	7.36	1.44	ppb
Lithium	6-1				119		%
Magnesium	24-2	61139.68	60449.05	61678.69	61089.14	1.01	ppb
Manganese	55-2	9.32	9.12	9.83	9.43	3.88	ppb
Molybdenum	94-1	0.26	0.23	0.24	0.24	5.97	ppb
Molybdenum	95-1	0.49	0.52	0.50	0.50	2.30	ppb
Molybdenum	96-1	0.47	0.45	0.42	0.45	5.64	ppb
Molybdenum	97-1	0.55	0.49	0.51	0.52	6.59	ppb
Molybdenum	98-1	0.52	0.50	0.48	0.50	3.46	ppb
Nickel	60-2	0.67	0.77	0.71	0.72	6.96	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-11	Instrumnet Name :	P7
Client Sample ID :	MH4116	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:27:47	DataFile Name :	029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	1.09	23.66	42.29	22.35	92.32	ppb
Potassium	39-2	2126.19	2084.76	2149.83	2120.26	1.55	ppb
Rhodium	103-2				99		%
Rhodium	103-1				104		%
Scandium	45-1				105		%
Scandium	45-2				97		%
Selenium	77-2	2.17	1.73	2.60	2.17	20.07	ppb
Selenium	78-2	2.25	2.38	1.04	1.89	39.07	ppb
Selenium	82-1	2.77	2.37	1.39	2.17	32.63	ppb
Silicon	28-1	8420.24	8586.85	8482.44	8496.51	0.99	ppb
Silver	109-1	0.11	0.12	0.14	0.12	15.31	ppb
Silver	107-1	0.11	0.13	0.14	0.13	10.44	ppb
Sodium	23-2	71385.25	70379.84	71865.67	71210.25	1.06	ppb
Strontium	86-1	1189.94	1196.79	1191.14	1192.62	0.31	ppb
Strontium	88-1	1174.67	1198.29	1189.87	1187.61	1.01	ppb
Sulfur	34-1	31383.15	31419.28	31439.42	31413.95	0.09	ppb
Terbium	159-1				112		%
Terbium	159-2				108		%
Thallium	203-1	0.03	0.03	0.03	0.03	17.85	ppb
Thallium	205-1	0.03	0.03	0.03	0.03	8.65	ppb
Tin	118-1	0.08	0.09	0.09	0.09	10.11	ppb
Titanium	47-1	5.95	5.96	5.94	5.95	0.14	ppb
Uranium	238-1	2.42	2.48	2.50	2.47	1.66	ppb
Vanadium	51-2	5.61	5.59	5.60	5.60	0.18	ppb
Yttrium	89-2				101		%
Yttrium	89-1				108		%
Zinc	66-2	15.34	14.93	15.01	15.09	1.45	ppb
Zirconium	90-1	0.12	0.12	0.14	0.13	9.44	ppb
Zirconium	91-1	0.10	0.12	0.13	0.11	9.85	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-12	Instrumnet Name :	P7
Client Sample ID :	MH4202	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:30:48	DataFile Name :	030SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	30.36	31.38	30.58	30.77	1.74	ppb
Antimony	121-1	0.86	0.83	0.82	0.84	2.62	ppb
Arsenic	75-2	1.36	1.44	1.36	1.39	3.38	ppb
Barium	135-1	72.72	72.42	70.57	71.90	1.62	ppb
Barium	137-1	72.46	73.40	72.02	72.63	0.97	ppb
Beryllium	9-1	0.02	0.03	0.01	0.02	39.66	ppb
Bismuth	209-1				111		%
Bismuth	209-2				103		%
Boron	10-1	101.87	106.29	103.19	103.78	2.18	ppb
Boron	11-1	96.23	101.36	102.66	100.09	3.40	ppb
Cadmium	111-1	0.08	0.04	0.07	0.06	36.04	ppb
Cadmium	106-1	0.49	-0.21	0.05	0.11	319.17	ppb
Cadmium	108-1	0.15	0.05	0.03	0.07	84.29	ppb
Calcium	43-1	149046.48	148450.90	148609.94	148702.44	0.21	ppb
Calcium	44-1	148307.95	146610.15	148042.17	147653.42	0.62	ppb
Chromium	52-2	0.40	0.39	0.38	0.39	2.26	ppb
Cobalt	59-2	0.07	0.05	0.07	0.06	14.44	ppb
Copper	63-2	1.54	1.45	1.45	1.48	3.33	ppb
Holmium	165-2				110		%
Holmium	165-1				113		%
Indium	115-1				109		%
Indium	115-2				102		%
Iron	56-2	60.92	60.25	59.80	60.32	0.94	ppb
Iron	57-2	77.88	74.24	72.76	74.96	3.52	ppb
Lead	206-1	0.43	0.41	0.41	0.41	2.87	ppb
Lead	207-1	0.39	0.38	0.36	0.38	3.99	ppb
Lead	208-1	0.41	0.40	0.38	0.40	4.75	ppb
Lithium	6-1				119		%
Magnesium	24-2	57982.29	57552.53	57157.75	57564.19	0.72	ppb
Manganese	55-2	1.71	1.55	1.75	1.67	6.19	ppb
Molybdenum	94-1	0.24	0.25	0.25	0.25	2.71	ppb
Molybdenum	95-1	0.67	0.68	0.60	0.65	6.34	ppb
Molybdenum	96-1	0.56	0.56	0.58	0.57	1.71	ppb
Molybdenum	97-1	0.67	0.65	0.67	0.66	1.24	ppb
Molybdenum	98-1	0.62	0.62	0.64	0.63	1.27	ppb
Nickel	60-2	0.61	0.55	0.56	0.57	5.19	ppb

Reviewed By:jaswal
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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-12	Instrumnet Name :	P7
Client Sample ID :	MH4202	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:30:48	DataFile Name :	030SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	18.07	-10.77	1.83	3.04	475.36	ppb
Potassium	39-2	2135.83	2120.49	2081.39	2112.57	1.33	ppb
Rhodium	103-2				101		%
Rhodium	103-1				103		%
Scandium	45-1				104		%
Scandium	45-2				98		%
Selenium	77-2	2.99	2.99	2.56	2.85	8.73	ppb
Selenium	78-2	2.81	2.24	3.35	2.80	19.90	ppb
Selenium	82-1	4.00	4.58	3.91	4.17	8.77	ppb
Silicon	28-1	7613.41	7574.97	7599.85	7596.08	0.26	ppb
Silver	109-1	0.08	0.07	0.11	0.09	18.59	ppb
Silver	107-1	0.08	0.09	0.09	0.09	5.31	ppb
Sodium	23-2	64747.86	64272.06	63658.86	64226.26	0.85	ppb
Strontium	86-1	1073.49	1092.59	1072.72	1079.60	1.04	ppb
Strontium	88-1	1064.70	1086.30	1064.31	1071.77	1.17	ppb
Sulfur	34-1	32773.46	32569.14	32412.32	32584.98	0.56	ppb
Terbium	159-1				112		%
Terbium	159-2				110		%
Thallium	203-1	0.02	0.01	0.01	0.01	26.21	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	15.69	ppb
Tin	118-1	0.05	0.07	0.05	0.06	12.80	ppb
Titanium	47-1	1.57	1.44	1.28	1.43	10.05	ppb
Uranium	238-1	3.05	3.06	3.04	3.05	0.28	ppb
Vanadium	51-2	5.96	5.80	5.92	5.89	1.45	ppb
Yttrium	89-2				103		%
Yttrium	89-1				108		%
Zinc	66-2	6.03	5.96	5.95	5.98	0.74	ppb
Zirconium	90-1	0.06	0.05	0.05	0.06	11.11	ppb
Zirconium	91-1	0.05	0.08	0.04	0.06	35.06	ppb

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-13	Instrumnet Name :	P7
Client Sample ID :	MH4211	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:33:49	DataFile Name :	031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	62.42	65.91	64.16	64.16	2.72	ppb
Antimony	121-1	0.94	0.90	0.85	0.90	4.95	ppb
Arsenic	75-2	3.55	3.41	3.59	3.52	2.74	ppb
Barium	135-1	59.97	59.48	59.97	59.81	0.47	ppb
Barium	137-1	59.55	58.89	59.52	59.32	0.63	ppb
Beryllium	9-1	0.02	0.01	0.01	0.01	38.06	ppb
Bismuth	209-1				114		%
Bismuth	209-2				104		%
Boron	10-1	82.27	81.22	82.32	81.94	0.76	ppb
Boron	11-1	77.18	78.53	84.08	79.93	4.58	ppb
Cadmium	111-1	0.00	0.02	0.04	0.02	102.16	ppb
Cadmium	106-1	-0.31	-0.01	0.03	-0.10		ppb
Cadmium	108-1	0.03	0.09	-0.01	0.03	140.07	ppb
Calcium	43-1	140366.84	141227.86	138378.65	139991.12	1.04	ppb
Calcium	44-1	138594.67	138767.13	138473.22	138611.67	0.11	ppb
Chromium	52-2	0.66	0.72	0.71	0.69	4.65	ppb
Cobalt	59-2	0.08	0.08	0.06	0.07	15.16	ppb
Copper	63-2	1.52	1.64	1.60	1.59	3.68	ppb
Holmium	165-2				109		%
Holmium	165-1				115		%
Indium	115-1				110		%
Indium	115-2				102		%
Iron	56-2	123.46	125.67	124.65	124.59	0.89	ppb
Iron	57-2	136.95	136.01	145.54	139.50	3.76	ppb
Lead	206-1	1.41	1.37	1.35	1.37	2.16	ppb
Lead	207-1	1.33	1.25	1.31	1.29	3.25	ppb
Lead	208-1	1.36	1.31	1.34	1.33	1.98	ppb
Lithium	6-1				121		%
Magnesium	24-2	49620.52	50162.38	49781.68	49854.86	0.56	ppb
Manganese	55-2	16.40	16.93	16.47	16.60	1.72	ppb
Molybdenum	94-1	0.22	0.27	0.24	0.25	10.01	ppb
Molybdenum	95-1	0.66	0.64	0.68	0.66	3.14	ppb
Molybdenum	96-1	0.55	0.53	0.62	0.57	8.45	ppb
Molybdenum	97-1	0.63	0.63	0.63	0.63	0.44	ppb
Molybdenum	98-1	0.67	0.62	0.65	0.65	3.81	ppb
Nickel	60-2	0.33	0.40	0.32	0.35	12.19	ppb

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LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-13	Instrumnet Name :	P7
Client Sample ID :	MH4211	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:33:49	DataFile Name :	031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-24.51	-32.16	-27.40	-28.02		ppb
Potassium	39-2	1741.96	1762.48	1749.16	1751.20	0.59	ppb
Rhodium	103-1				105		%
Rhodium	103-2				101		%
Scandium	45-1				105		%
Scandium	45-2				96		%
Selenium	82-1	2.47	1.41	1.82	1.90	28.34	ppb
Selenium	77-2	3.01	1.71	2.61	2.44	27.17	ppb
Selenium	78-2	0.38	0.86	0.13	0.45	81.47	ppb
Silicon	28-1	8515.51	8422.63	8378.00	8438.72	0.83	ppb
Silver	109-1	0.08	0.10	0.10	0.09	12.90	ppb
Silver	107-1	0.08	0.08	0.10	0.09	11.32	ppb
Sodium	23-2	50945.71	51173.46	50852.75	50990.64	0.32	ppb
Strontium	86-1	1049.69	1048.48	1072.88	1057.01	1.30	ppb
Strontium	88-1	1042.34	1041.59	1074.03	1052.65	1.76	ppb
Sulfur	34-1	32350.19	32542.71	31620.39	32171.10	1.51	ppb
Terbium	159-1				114		%
Terbium	159-2				110		%
Thallium	203-1	0.01	0.01	0.00	0.01	43.24	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	25.80	ppb
Tin	118-1	0.07	0.07	0.05	0.06	14.27	ppb
Titanium	47-1	2.72	2.40	2.60	2.57	6.35	ppb
Uranium	238-1	2.44	2.43	2.48	2.45	1.09	ppb
Vanadium	51-2	2.17	2.25	2.12	2.18	3.03	ppb
Yttrium	89-2				102		%
Yttrium	89-1				109		%
Zinc	66-2	7.98	8.22	7.81	8.00	2.56	ppb
Zirconium	90-1	0.06	0.06	0.05	0.05	8.93	ppb
Zirconium	91-1	0.05	0.04	0.06	0.05	21.16	ppb

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-14	Instrumnet Name :	P7
Client Sample ID :	MH4217	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:36:49	DataFile Name :	032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2.41	2.17	2.11	2.23	7.15	ppb
Antimony	121-1	0.87	0.80	0.77	0.81	6.09	ppb
Arsenic	75-2	2.01	2.01	1.94	1.99	2.02	ppb
Barium	135-1	70.57	71.16	70.57	70.76	0.48	ppb
Barium	137-1	71.65	72.36	71.50	71.83	0.64	ppb
Beryllium	9-1	0.02	0.01	0.00	0.01	83.03	ppb
Bismuth	209-1				112		%
Bismuth	209-2				104		%
Boron	11-1	97.71	98.64	103.40	99.92	3.05	ppb
Boron	10-1	96.98	102.87	104.02	101.29	3.73	ppb
Cadmium	106-1	0.12	-0.18	-0.18	-0.08		ppb
Cadmium	108-1	-0.01	0.03	0.05	0.02	136.17	ppb
Cadmium	111-1	0.05	0.03	0.03	0.04	25.54	ppb
Calcium	43-1	147623.54	145689.10	146713.36	146675.33	0.66	ppb
Calcium	44-1	146066.61	144638.45	145637.47	145447.51	0.50	ppb
Chromium	52-2	0.48	0.49	0.47	0.48	2.25	ppb
Cobalt	59-2	0.02	0.02	0.03	0.02	20.00	ppb
Copper	63-2	1.15	1.16	1.23	1.18	3.90	ppb
Holmium	165-2				110		%
Holmium	165-1				115		%
Indium	115-1				109		%
Indium	115-2				102		%
Iron	56-2	24.48	24.55	24.66	24.56	0.37	ppb
Iron	57-2	40.06	37.96	38.21	38.74	2.97	ppb
Lead	206-1	-0.03	-0.04	-0.04	-0.04		ppb
Lead	207-1	-0.03	-0.03	-0.03	-0.03		ppb
Lead	208-1	-0.03	-0.03	-0.04	-0.04		ppb
Lithium	6-1				121		%
Magnesium	24-2	58259.71	58346.84	58265.73	58290.76	0.08	ppb
Manganese	55-2	6.40	6.40	6.42	6.41	0.18	ppb
Molybdenum	94-1	0.21	0.20	0.20	0.20	1.97	ppb
Molybdenum	95-1	0.52	0.53	0.58	0.54	5.82	ppb
Molybdenum	96-1	0.49	0.47	0.49	0.48	2.20	ppb
Molybdenum	97-1	0.52	0.57	0.56	0.55	5.06	ppb
Molybdenum	98-1	0.56	0.56	0.56	0.56	0.87	ppb
Nickel	60-2	0.43	0.44	0.44	0.44	0.74	ppb

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-14	Instrumnet Name :	P7
Client Sample ID :	MH4217	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:36:49	DataFile Name :	032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-35.71	-35.79	-23.07	-31.52		ppb
Potassium	39-2	2337.75	2315.31	2299.78	2317.61	0.82	ppb
Rhodium	103-2				101		%
Rhodium	103-1				105		%
Scandium	45-1				105		%
Scandium	45-2				98		%
Selenium	77-2	2.15	1.72	1.30	1.72	24.65	ppb
Selenium	78-2	2.06	0.45	0.40	0.97	97.59	ppb
Selenium	82-1	2.90	2.30	2.62	2.61	11.39	ppb
Silicon	28-1	7812.79	7748.42	7857.18	7806.13	0.70	ppb
Silver	107-1	0.08	0.07	0.09	0.08	10.14	ppb
Silver	109-1	0.07	0.08	0.09	0.08	12.45	ppb
Sodium	23-2	63696.76	64015.69	63740.49	63817.65	0.27	ppb
Strontium	86-1	1084.56	1080.13	1079.68	1081.46	0.25	ppb
Strontium	88-1	1084.91	1075.02	1080.89	1080.27	0.46	ppb
Sulfur	34-1	31834.51	31800.03	31981.50	31872.01	0.30	ppb
Terbium	159-1				114		%
Terbium	159-2				111		%
Thallium	203-1	0.00	0.00	0.00	0.00		ppb
Thallium	205-1	0.01	0.00	0.00	0.01	44.51	ppb
Tin	118-1	0.03	0.04	0.04	0.04	14.59	ppb
Titanium	47-1	0.42	0.26	0.43	0.37	25.36	ppb
Uranium	238-1	2.39	2.41	2.43	2.41	0.80	ppb
Vanadium	51-2	5.12	5.11	5.05	5.09	0.73	ppb
Yttrium	89-2				102		%
Yttrium	89-1				109		%
Zinc	66-2	4.40	4.29	4.09	4.26	3.70	ppb
Zirconium	90-1	0.04	0.05	0.03	0.04	20.08	ppb
Zirconium	91-1	0.06	0.04	0.04	0.05	18.88	ppb

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-15	Instrumnet Name :	P7
Client Sample ID :	MH4218	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:39:51	DataFile Name :	033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	6.54	5.16	4.74	5.48	17.17	ppb
Antimony	121-1	0.98	0.90	0.93	0.94	4.70	ppb
Arsenic	75-2	2.67	2.46	2.29	2.47	7.76	ppb
Barium	135-1	69.75	69.34	70.00	69.70	0.48	ppb
Barium	137-1	70.79	69.91	71.30	70.67	0.99	ppb
Beryllium	9-1	0.02	0.00	0.00	0.00	241.20	ppb
Bismuth	209-2				102		%
Bismuth	209-1				110		%
Boron	10-1	103.90	106.58	108.20	106.22	2.05	ppb
Boron	11-1	102.31	104.82	106.95	104.69	2.22	ppb
Cadmium	106-1	-0.30	-0.22	-0.28	-0.27		ppb
Cadmium	108-1	0.11	0.01	0.07	0.06	79.26	ppb
Cadmium	111-1	0.02	0.03	0.02	0.02	34.92	ppb
Calcium	43-1	153826.86	150559.36	149578.76	151321.66	1.47	ppb
Calcium	44-1	153749.51	150904.83	149316.27	151323.54	1.48	ppb
Chromium	52-2	0.54	0.55	0.53	0.54	2.10	ppb
Cobalt	59-2	0.06	0.05	0.06	0.06	13.10	ppb
Copper	63-2	1.38	1.33	1.44	1.38	3.93	ppb
Holmium	165-2				109		%
Holmium	165-1				113		%
Indium	115-1				107		%
Indium	115-2				100		%
Iron	56-2	24.30	24.08	24.28	24.22	0.51	ppb
Iron	57-2	40.58	43.43	36.10	40.04	9.22	ppb
Lead	206-1	0.11	0.11	0.13	0.12	10.67	ppb
Lead	207-1	0.11	0.09	0.11	0.11	10.66	ppb
Lead	208-1	0.11	0.11	0.12	0.11	6.16	ppb
Lithium	6-1				119		%
Magnesium	24-2	58255.46	58215.19	58843.88	58438.17	0.60	ppb
Manganese	55-2	6.03	5.95	6.06	6.01	0.97	ppb
Molybdenum	94-1	0.30	0.33	0.28	0.30	6.91	ppb
Molybdenum	95-1	0.83	0.88	0.82	0.84	3.99	ppb
Molybdenum	96-1	0.72	0.70	0.72	0.71	1.33	ppb
Molybdenum	97-1	0.90	0.81	0.74	0.82	9.43	ppb
Molybdenum	98-1	0.84	0.85	0.80	0.83	3.50	ppb
Nickel	60-2	0.52	0.47	0.50	0.49	5.29	ppb

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-15	Instrumnet Name :	P7
Client Sample ID :	MH4218	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:39:51	DataFile Name :	033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-1.70	-11.29	-17.37	-10.12		ppb
Potassium	39-2	2283.36	2298.54	2297.28	2293.06	0.37	ppb
Rhodium	103-2				99		%
Rhodium	103-1				102		%
Scandium	45-1				103		%
Scandium	45-2				96		%
Selenium	82-1	2.71	3.10	3.03	2.95	7.08	ppb
Selenium	77-2	3.50	1.76	1.75	2.34	43.18	ppb
Selenium	78-2	1.78	1.51	2.21	1.84	19.21	ppb
Silicon	28-1	7781.61	7553.85	7586.15	7640.53	1.61	ppb
Silver	109-1	0.07	0.08	0.10	0.08	15.10	ppb
Silver	107-1	0.07	0.07	0.09	0.08	18.56	ppb
Sodium	23-2	64308.30	64462.91	65117.71	64629.64	0.66	ppb
Strontium	86-1	1106.75	1108.39	1096.91	1104.02	0.56	ppb
Strontium	88-1	1111.64	1109.56	1110.80	1110.67	0.09	ppb
Sulfur	34-1	34573.47	33614.78	33347.21	33845.15	1.91	ppb
Terbium	159-2				108		%
Terbium	159-1				111		%
Thallium	203-1	0.00	0.01	0.01	0.01	106.47	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	14.47	ppb
Tin	118-1	0.05	0.06	0.07	0.06	15.39	ppb
Titanium	47-1	0.45	0.56	0.52	0.51	11.27	ppb
Uranium	238-1	3.26	3.28	3.32	3.29	0.92	ppb
Vanadium	51-2	5.19	5.21	5.30	5.24	1.18	ppb
Yttrium	89-1				106		%
Yttrium	89-2				100		%
Zinc	66-2	5.59	5.42	5.70	5.57	2.55	ppb
Zirconium	90-1	0.05	0.05	0.05	0.05	7.28	ppb
Zirconium	91-1	0.05	0.04	0.04	0.04	11.24	ppb

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04	Instrumnet Name :	P7
Client Sample ID :	MH4025	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:44:10	DataFile Name :	034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10384.98	10512.32	10490.70	10462.67	0.65	ppb
Antimony	121-1	4.88	4.68	4.65	4.74	2.55	ppb
Arsenic	75-2	43.39	42.78	43.13	43.10	0.71	ppb
Barium	135-1	389.41	392.89	390.76	391.02	0.45	ppb
Barium	137-1	397.23	400.59	396.46	398.10	0.55	ppb
Beryllium	9-1	0.67	0.74	0.75	0.72	6.23	ppb
Bismuth	209-2				98		%
Bismuth	209-1				105		%
Boron	10-1	68.80	69.86	71.98	70.22	2.31	ppb
Boron	11-1	67.12	66.68	68.45	67.42	1.37	ppb
Cadmium	111-1	3.21	3.11	3.13	3.15	1.67	ppb
Cadmium	106-1	4.72	4.12	3.40	4.08	16.18	ppb
Cadmium	108-1	3.30	4.10	3.23	3.54	13.63	ppb
Calcium	43-1	202409.49	201503.29	202334.07	202082.29	0.25	ppb
Calcium	44-1	202929.05	201446.83	203021.43	202465.77	0.44	ppb
Chromium	52-2	25.01	24.80	25.07	24.96	0.56	ppb
Cobalt	59-2	9.13	9.29	9.33	9.25	1.11	ppb
Copper	63-2	91.90	92.81	93.09	92.60	0.67	ppb
Holmium	165-2				101		%
Holmium	165-1				105		%
Indium	115-1				100		%
Indium	115-2				93		%
Iron	56-2	18156.51	18213.07	18311.39	18226.99	0.43	ppb
Iron	57-2	17935.42	17995.54	18090.21	18007.06	0.43	ppb
Lead	206-1	550.11	547.74	563.07	553.64	1.49	ppb
Lead	207-1	518.95	512.28	531.95	521.06	1.92	ppb
Lead	208-1	534.63	529.36	542.94	535.64	1.28	ppb
Lithium	6-1				108		%
Magnesium	24-2	19603.47	19601.94	19684.14	19629.85	0.24	ppb
Manganese	55-2	1028.42	1037.54	1047.19	1037.72	0.90	ppb
Molybdenum	94-1	2.48	2.59	2.52	2.53	2.36	ppb
Molybdenum	95-1	1.05	1.07	1.03	1.05	1.74	ppb
Molybdenum	96-1	1.48	1.47	1.46	1.47	0.88	ppb
Molybdenum	97-1	1.04	1.14	1.08	1.09	4.51	ppb
Molybdenum	98-1	1.04	1.04	1.02	1.03	1.27	ppb
Nickel	60-2	19.67	19.72	19.98	19.79	0.86	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04	Instrumnet Name :	P7
Client Sample ID :	MH4025	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:44:10	DataFile Name :	034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	3530.71	3692.33	3783.73	3668.92	3.49	ppb
Potassium	39-2	3645.47	3666.63	3678.21	3663.44	0.45	ppb
Rhodium	103-2				92		%
Rhodium	103-1				95		%
Scandium	45-1				95		%
Scandium	45-2				89		%
Selenium	77-2	11.10	7.41	9.76	9.42	19.85	ppb
Selenium	78-2	1.80	2.14	2.95	2.30	25.67	ppb
Selenium	82-1	1.29	2.25	2.45	2.00	30.96	ppb
Silicon	28-1	1444.72	932.74	966.61	1114.69	25.69	ppb
Silver	109-1	1.29	1.23	1.27	1.27	2.29	ppb
Silver	107-1	1.24	1.24	1.29	1.26	2.56	ppb
Sodium	23-2	1004.20	1007.97	1020.72	1010.96	0.86	ppb
Strontium	86-1	622.62	629.75	626.47	626.28	0.57	ppb
Strontium	88-1	617.95	626.59	623.32	622.62	0.70	ppb
Sulfur	34-1	1740.77	1690.93	1682.14	1704.61	1.85	ppb
Terbium	159-2				101		%
Terbium	159-1				104		%
Thallium	203-1	0.47	0.47	0.46	0.47	0.96	ppb
Thallium	205-1	0.49	0.49	0.50	0.49	1.17	ppb
Tin	118-1	11.68	11.63	11.35	11.56	1.53	ppb
Titanium	47-1	233.53	232.49	233.48	233.17	0.25	ppb
Uranium	238-1	1.53	1.49	1.56	1.53	2.60	ppb
Vanadium	51-2	26.26	26.36	26.29	26.30	0.20	ppb
Yttrium	89-2				107		%
Yttrium	89-1				113		%
Zinc	66-2	616.15	618.76	624.39	619.77	0.68	ppb
Zirconium	90-1	3.32	3.27	3.26	3.28	1.02	ppb
Zirconium	91-1	3.19	3.17	3.19	3.18	0.33	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4025	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 15:47:17	DataFile Name :	035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5448.72	5557.47	5479.85	5495.35	1.02	ppb
Antimony	121-1	2.25	2.36	2.35	2.32	2.62	ppb
Arsenic	75-2	24.22	24.53	23.91	24.22	1.27	ppb
Barium	135-1	203.09	203.56	204.10	203.58	0.25	ppb
Barium	137-1	205.34	204.53	205.12	205.00	0.20	ppb
Beryllium	9-1	0.33	0.35	0.33	0.34	3.73	ppb
Bismuth	209-1				106		%
Bismuth	209-2				99		%
Boron	10-1	38.34	38.19	39.54	38.69	1.92	ppb
Boron	11-1	36.78	37.93	39.08	37.93	3.03	ppb
Cadmium	111-1	1.63	1.58	1.61	1.61	1.30	ppb
Cadmium	106-1	1.83	1.99	1.54	1.79	12.58	ppb
Cadmium	108-1	1.55	1.75	1.82	1.71	8.18	ppb
Calcium	43-1	107328.82	106416.13	109031.37	107592.10	1.23	ppb
Calcium	44-1	105739.37	106216.74	107030.96	106329.02	0.61	ppb
Chromium	52-2	13.00	13.08	13.22	13.10	0.86	ppb
Cobalt	59-2	4.86	4.84	4.88	4.86	0.38	ppb
Copper	63-2	47.89	48.98	48.42	48.43	1.12	ppb
Holmium	165-2				102		%
Holmium	165-1				106		%
Indium	115-1				100		%
Indium	115-2				94		%
Iron	56-2	9491.15	9660.60	9574.98	9575.58	0.88	ppb
Iron	57-2	9443.83	9565.37	9506.83	9505.34	0.64	ppb
Lead	206-1	288.13	281.83	294.79	288.25	2.25	ppb
Lead	207-1	270.77	263.96	274.26	269.66	1.94	ppb
Lead	208-1	277.86	272.78	282.59	277.74	1.77	ppb
Lithium	6-1				107		%
Magnesium	24-2	10308.53	10465.72	10476.54	10416.93	0.90	ppb
Manganese	55-2	526.24	533.59	529.97	529.94	0.69	ppb
Molybdenum	94-1	1.44	1.36	1.40	1.40	2.79	ppb
Molybdenum	95-1	0.59	0.63	0.64	0.62	4.07	ppb
Molybdenum	96-1	0.80	0.87	0.78	0.81	5.75	ppb
Molybdenum	97-1	0.62	0.61	0.53	0.59	9.00	ppb
Molybdenum	98-1	0.62	0.62	0.59	0.61	2.98	ppb
Nickel	60-2	10.27	10.20	10.16	10.21	0.56	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4025	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 15:47:17	DataFile Name :	035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	1821.63	1876.22	1888.57	1862.14	1.91	ppb
Potassium	39-2	1885.74	1929.06	1921.63	1912.15	1.21	ppb
Rhodium	103-2				94		%
Rhodium	103-1				96		%
Scandium	45-1				95		%
Scandium	45-2				91		%
Selenium	77-2	4.70	4.35	5.59	4.88	13.05	ppb
Selenium	78-2	0.71	0.91	1.15	0.92	23.89	ppb
Selenium	82-1	2.05	0.83	0.87	1.25	55.45	ppb
Silicon	28-1	507.34	514.06	486.12	502.51	2.90	ppb
Silver	109-1	0.63	0.61	0.65	0.63	3.27	ppb
Silver	107-1	0.63	0.65	0.64	0.64	1.22	ppb
Sodium	23-2	530.37	534.59	534.83	533.26	0.47	ppb
Strontium	86-1	338.10	337.67	345.86	340.54	1.35	ppb
Strontium	88-1	344.28	345.22	342.84	344.11	0.35	ppb
Sulfur	34-1	760.21	671.98	707.77	713.32	6.22	ppb
Terbium	159-1				104		%
Terbium	159-2				102		%
Thallium	203-1	0.25	0.24	0.24	0.24	0.92	ppb
Thallium	205-1	0.24	0.22	0.26	0.24	7.07	ppb
Tin	118-1	6.08	6.11	5.99	6.06	1.03	ppb
Titanium	47-1	121.34	121.94	124.86	122.71	1.53	ppb
Uranium	238-1	0.79	0.74	0.80	0.78	3.86	ppb
Vanadium	51-2	13.46	13.92	13.65	13.68	1.71	ppb
Yttrium	89-2				102		%
Yttrium	89-1				107		%
Zinc	66-2	329.84	335.05	333.34	332.74	0.80	ppb
Zirconium	90-1	1.79	1.81	1.79	1.80	0.59	ppb
Zirconium	91-1	1.80	1.80	1.79	1.80	0.47	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-05	Instrumnet Name :	P7
Client Sample ID :	MH4025D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:50:19	DataFile Name :	036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10289.95	10336.43	10531.21	10385.86	1.23	ppb
Antimony	121-1	4.61	4.49	4.51	4.54	1.45	ppb
Arsenic	75-2	42.67	42.68	42.59	42.65	0.12	ppb
Barium	137-1	390.74	386.67	397.83	391.75	1.44	ppb
Barium	135-1	388.12	381.06	394.87	388.02	1.78	ppb
Beryllium	9-1	0.72	0.64	0.63	0.66	7.40	ppb
Bismuth	209-1				107		%
Bismuth	209-2				99		%
Boron	10-1	65.42	70.80	70.09	68.77	4.25	ppb
Boron	11-1	64.75	67.76	69.28	67.26	3.43	ppb
Cadmium	106-1	4.06	3.46	3.43	3.65	9.81	ppb
Cadmium	108-1	3.56	3.33	3.25	3.38	4.80	ppb
Cadmium	111-1	3.13	3.06	3.33	3.17	4.33	ppb
Calcium	43-1	201956.24	199282.19	203918.08	201718.84	1.15	ppb
Calcium	44-1	199249.20	198816.13	200748.35	199604.56	0.51	ppb
Chromium	52-2	24.86	24.76	25.16	24.92	0.84	ppb
Cobalt	59-2	9.27	9.27	9.53	9.36	1.60	ppb
Copper	63-2	91.58	91.61	92.78	91.99	0.74	ppb
Holmium	165-2				103		%
Holmium	165-1				107		%
Indium	115-2				95		%
Indium	115-1				100		%
Iron	56-2	18221.91	18283.71	18316.48	18274.03	0.26	ppb
Iron	57-2	18040.37	17966.12	18138.26	18048.25	0.48	ppb
Lead	206-1	540.80	552.55	553.51	548.95	1.29	ppb
Lead	207-1	503.08	515.36	511.14	509.86	1.22	ppb
Lead	208-1	521.48	533.72	530.54	528.58	1.20	ppb
Lithium	6-1				110		%
Magnesium	24-2	19449.21	19495.72	19825.70	19590.21	1.05	ppb
Manganese	55-2	1036.51	1028.94	1050.24	1038.56	1.04	ppb
Molybdenum	94-1	2.48	2.56	2.55	2.53	1.62	ppb
Molybdenum	95-1	1.10	1.06	1.06	1.08	2.23	ppb
Molybdenum	96-1	1.38	1.50	1.39	1.42	4.70	ppb
Molybdenum	97-1	1.04	1.12	1.07	1.08	3.47	ppb
Molybdenum	98-1	1.00	1.03	1.02	1.02	1.14	ppb
Nickel	60-2	19.39	19.50	19.58	19.49	0.48	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-05	Instrumnet Name :	P7
Client Sample ID :	MH4025D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:50:19	DataFile Name :	036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	3517.44	3547.14	3579.25	3547.94	0.87	ppb
Potassium	39-2	3627.75	3663.52	3709.62	3666.96	1.12	ppb
Rhodium	103-1				96		%
Rhodium	103-2				94		%
Scandium	45-1				97		%
Scandium	45-2				91		%
Selenium	82-1	1.88	1.76	1.85	1.83	3.39	ppb
Selenium	77-2	9.21	11.29	12.95	11.15	16.78	ppb
Selenium	78-2	1.96	1.59	2.46	2.01	21.83	ppb
Silicon	28-1	1107.01	959.56	1046.92	1037.83	7.14	ppb
Silver	109-1	1.24	1.22	1.23	1.23	0.74	ppb
Silver	107-1	1.26	1.19	1.25	1.23	3.11	ppb
Sodium	23-2	988.19	998.51	1005.90	997.53	0.89	ppb
Strontium	86-1	612.70	622.64	627.96	621.10	1.25	ppb
Strontium	88-1	611.57	618.40	621.91	617.30	0.85	ppb
Sulfur	34-1	1413.12	1299.94	1452.31	1388.45	5.70	ppb
Terbium	159-1				106		%
Terbium	159-2				103		%
Thallium	203-1	0.44	0.46	0.48	0.46	4.18	ppb
Thallium	205-1	0.47	0.46	0.47	0.47	1.35	ppb
Tin	118-1	11.23	11.30	11.35	11.29	0.57	ppb
Titanium	47-1	231.33	230.59	235.30	232.41	1.09	ppb
Uranium	238-1	1.51	1.52	1.52	1.52	0.45	ppb
Vanadium	51-2	25.95	26.59	26.35	26.30	1.23	ppb
Yttrium	89-1				115		%
Yttrium	89-2				109		%
Zinc	66-2	613.83	612.31	624.93	617.02	1.12	ppb
Zirconium	90-1	3.17	3.24	3.20	3.20	1.01	ppb
Zirconium	91-1	3.10	3.15	3.34	3.20	3.90	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-05DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4025D	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 15:53:18	DataFile Name :	037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5506.41	5507.17	5568.01	5527.20	0.64	ppb
Antimony	121-1	2.28	2.28	2.42	2.33	3.47	ppb
Arsenic	75-2	23.98	24.28	24.20	24.15	0.66	ppb
Barium	135-1	198.61	208.01	207.22	204.61	2.55	ppb
Barium	137-1	201.36	209.60	209.43	206.80	2.28	ppb
Beryllium	9-1	0.40	0.35	0.37	0.37	6.72	ppb
Bismuth	209-2				99		%
Bismuth	209-1				106		%
Boron	10-1	38.67	41.11	38.71	39.50	3.53	ppb
Boron	11-1	37.25	38.86	39.35	38.49	2.86	ppb
Cadmium	106-1	1.93	2.28	2.64	2.28	15.66	ppb
Cadmium	108-1	1.33	2.16	1.61	1.70	24.71	ppb
Cadmium	111-1	1.69	1.69	1.73	1.70	1.44	ppb
Calcium	43-1	104273.97	107919.77	109117.86	107103.87	2.36	ppb
Calcium	44-1	103811.79	106936.41	107083.27	105943.82	1.74	ppb
Chromium	52-2	13.35	13.15	13.29	13.27	0.77	ppb
Cobalt	59-2	4.89	4.89	5.00	4.92	1.28	ppb
Copper	63-2	48.86	49.35	49.59	49.27	0.76	ppb
Holmium	165-1				106		%
Holmium	165-2				101		%
Indium	115-2				94		%
Indium	115-1				101		%
Iron	56-2	9564.32	9582.03	9696.09	9614.14	0.74	ppb
Iron	57-2	9492.77	9451.18	9568.83	9504.26	0.63	ppb
Lead	208-1	271.95	286.47	281.77	280.06	2.65	ppb
Lead	206-1	283.72	293.95	293.70	290.46	2.01	ppb
Lead	207-1	264.73	278.28	271.73	271.58	2.49	ppb
Lithium	6-1				108		%
Magnesium	24-2	10399.11	10387.77	10453.64	10413.51	0.34	ppb
Manganese	55-2	528.82	532.39	540.12	533.78	1.08	ppb
Molybdenum	94-1	1.33	1.45	1.38	1.38	4.25	ppb
Molybdenum	95-1	0.56	0.63	0.63	0.61	7.22	ppb
Molybdenum	96-1	0.88	0.85	0.80	0.84	4.51	ppb
Molybdenum	97-1	0.60	0.57	0.59	0.59	2.61	ppb
Molybdenum	98-1	0.57	0.61	0.55	0.58	5.44	ppb
Nickel	60-2	10.09	10.08	10.35	10.17	1.48	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-05DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4025D	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 15:53:18	DataFile Name :	037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	1811.84	1828.75	1854.38	1831.66	1.17	ppb
Potassium	39-2	1925.39	1915.81	1955.27	1932.16	1.07	ppb
Rhodium	103-1				98		%
Rhodium	103-2				94		%
Scandium	45-1				96		%
Scandium	45-2				91		%
Selenium	82-1	1.66	1.71	1.73	1.70	2.07	ppb
Selenium	77-2	6.42	6.02	6.91	6.45	6.91	ppb
Selenium	78-2	0.85	0.80	1.87	1.17	51.31	ppb
Silicon	28-1	576.87	526.06	575.50	559.48	5.17	ppb
Silver	107-1	0.64	0.66	0.66	0.65	2.34	ppb
Silver	109-1	0.60	0.63	0.65	0.62	3.57	ppb
Sodium	23-2	533.68	531.59	535.40	533.56	0.36	ppb
Strontium	86-1	341.62	343.86	343.08	342.85	0.33	ppb
Strontium	88-1	335.84	351.84	349.57	345.75	2.50	ppb
Sulfur	34-1	294.96	538.49	644.52	492.66	36.38	ppb
Terbium	159-2				101		%
Terbium	159-1				105		%
Thallium	203-1	0.21	0.25	0.25	0.24	9.49	ppb
Thallium	205-1	0.23	0.23	0.25	0.24	3.25	ppb
Tin	118-1	5.88	6.22	6.03	6.04	2.83	ppb
Titanium	47-1	120.54	123.15	126.79	123.49	2.54	ppb
Uranium	238-1	0.77	0.81	0.77	0.78	2.85	ppb
Vanadium	51-2	13.91	13.75	13.93	13.86	0.70	ppb
Yttrium	89-1				107		%
Yttrium	89-2				102		%
Zinc	66-2	333.95	330.86	334.59	333.13	0.60	ppb
Zirconium	90-1	1.76	1.82	1.84	1.81	2.50	ppb
Zirconium	91-1	1.64	1.72	1.70	1.68	2.45	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04LX5	Instrumnet Name :	P7
Client Sample ID :	MH4025L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-06 15:56:18	DataFile Name :	038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2062.99	2065.29	2080.32	2069.54	0.45	ppb
Antimony	121-1	0.82	0.84	0.85	0.84	2.24	ppb
Arsenic	75-2	9.46	9.50	9.57	9.51	0.60	ppb
Barium	135-1	75.35	76.23	76.68	76.09	0.89	ppb
Barium	137-1	76.63	77.51	77.29	77.14	0.59	ppb
Beryllium	9-1	0.15	0.14	0.16	0.15	8.62	ppb
Bismuth	209-2				101		%
Bismuth	209-1				105		%
Boron	10-1	15.63	19.59	17.19	17.47	11.42	ppb
Boron	11-1	15.77	16.03	17.31	16.37	5.04	ppb
Cadmium	106-1	0.37	0.23	1.22	0.60	89.01	ppb
Cadmium	108-1	0.66	0.58	0.79	0.67	15.80	ppb
Cadmium	111-1	0.60	0.59	0.71	0.63	10.41	ppb
Calcium	43-1	39881.45	39789.05	40156.04	39942.18	0.48	ppb
Calcium	44-1	39580.43	39301.57	39841.89	39574.63	0.68	ppb
Chromium	52-2	4.95	5.03	4.98	4.99	0.79	ppb
Cobalt	59-2	1.77	1.78	1.85	1.80	2.51	ppb
Copper	63-2	17.74	17.91	18.13	17.93	1.11	ppb
Holmium	165-2				103		%
Holmium	165-1				105		%
Indium	115-1				102		%
Indium	115-2				97		%
Iron	56-2	3534.00	3553.56	3549.52	3545.69	0.29	ppb
Iron	57-2	3493.75	3510.44	3479.44	3494.54	0.44	ppb
Lead	206-1	103.81	104.33	105.91	104.69	1.05	ppb
Lead	207-1	99.50	99.32	100.26	99.70	0.50	ppb
Lead	208-1	102.63	102.91	103.83	103.12	0.61	ppb
Lithium	6-1				106		%
Magnesium	24-2	3817.47	3819.34	3839.93	3825.58	0.33	ppb
Manganese	55-2	195.61	197.17	198.21	196.99	0.67	ppb
Molybdenum	94-1	0.57	0.56	0.59	0.57	2.38	ppb
Molybdenum	95-1	0.24	0.26	0.21	0.24	10.09	ppb
Molybdenum	96-1	0.30	0.31	0.33	0.31	4.72	ppb
Molybdenum	97-1	0.22	0.25	0.24	0.24	5.66	ppb
Molybdenum	98-1	0.22	0.23	0.24	0.23	4.27	ppb
Nickel	60-2	3.72	3.77	3.82	3.77	1.39	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04LX5	Instrumnet Name :	P7
Client Sample ID :	MH4025L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-06 15:56:18	DataFile Name :	038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	671.98	628.39	691.50	663.95	4.87	ppb
Potassium	39-2	708.57	711.46	710.22	710.08	0.20	ppb
Rhodium	103-2				98		%
Rhodium	103-1				99		%
Scandium	45-1				97		%
Scandium	45-2				93		%
Selenium	77-2	3.52	3.09	2.62	3.08	14.58	ppb
Selenium	82-1	0.49	0.22	0.85	0.52	60.90	ppb
Selenium	78-2	0.44	0.52	0.13	0.36	56.14	ppb
Silicon	28-1	189.18	182.05	190.41	187.21	2.41	ppb
Silver	107-1	0.23	0.26	0.24	0.24	5.06	ppb
Silver	109-1	0.24	0.24	0.23	0.24	2.22	ppb
Sodium	23-2	201.23	205.15	202.81	203.06	0.97	ppb
Strontium	86-1	130.95	132.76	131.33	131.68	0.72	ppb
Strontium	88-1	133.86	134.60	133.96	134.14	0.30	ppb
Sulfur	34-1	-104.18	-95.04	-96.34	-98.52		ppb
Terbium	159-1				104		%
Terbium	159-2				103		%
Thallium	203-1	0.10	0.08	0.09	0.09	12.06	ppb
Thallium	205-1	0.09	0.10	0.09	0.09	3.46	ppb
Tin	118-1	2.25	2.29	2.31	2.29	1.33	ppb
Titanium	47-1	45.08	44.42	45.56	45.02	1.27	ppb
Uranium	238-1	0.29	0.31	0.29	0.30	4.30	ppb
Vanadium	51-2	5.19	5.07	5.11	5.12	1.12	ppb
Yttrium	89-2				100		%
Yttrium	89-1				103		%
Zinc	66-2	124.46	125.48	125.18	125.04	0.42	ppb
Zirconium	90-1	0.69	0.70	0.67	0.69	1.70	ppb
Zirconium	91-1	0.73	0.71	0.71	0.72	1.72	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04LDLX10	Instrumnet Name :	P7
Client Sample ID :	MH4025L	Dilution Factor :	10
Date & Time Acquired ::	2016-05-06 15:59:20	DataFile Name :	039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1301.76	1316.61	1300.08	1306.15	0.70	ppb
Antimony	121-1	0.53	0.52	0.47	0.51	5.89	ppb
Arsenic	75-2	5.73	5.90	6.02	5.89	2.48	ppb
Barium	135-1	48.65	48.74	49.72	49.04	1.21	ppb
Barium	137-1	49.02	48.56	49.03	48.87	0.55	ppb
Beryllium	9-1	0.12	0.09	0.08	0.09	20.40	ppb
Bismuth	209-1				105		%
Bismuth	209-2				101		%
Boron	10-1	11.81	10.95	11.94	11.57	4.65	ppb
Boron	11-1	11.07	10.81	11.66	11.18	3.91	ppb
Cadmium	106-1	1.09	-0.18	0.36	0.42	149.20	ppb
Cadmium	108-1	0.37	0.25	0.37	0.33	21.96	ppb
Cadmium	111-1	0.46	0.37	0.39	0.40	11.58	ppb
Calcium	43-1	24721.62	24947.38	25165.55	24944.85	0.89	ppb
Calcium	44-1	24764.87	25121.55	25299.99	25062.14	1.09	ppb
Chromium	52-2	3.04	3.21	3.22	3.16	3.16	ppb
Cobalt	59-2	1.13	1.15	1.17	1.15	1.78	ppb
Copper	63-2	11.03	11.27	11.14	11.14	1.08	ppb
Holmium	165-2				102		%
Holmium	165-1				104		%
Indium	115-1				100		%
Indium	115-2				97		%
Iron	56-2	2236.57	2244.04	2260.76	2247.13	0.55	ppb
Iron	57-2	2204.80	2227.04	2209.69	2213.84	0.53	ppb
Lead	206-1	66.21	65.75	65.52	65.83	0.53	ppb
Lead	207-1	62.96	62.59	62.27	62.61	0.55	ppb
Lead	208-1	64.33	64.33	63.90	64.19	0.39	ppb
Lithium	6-1				106		%
Magnesium	24-2	2417.50	2400.70	2407.97	2408.72	0.35	ppb
Manganese	55-2	124.18	125.77	125.45	125.14	0.67	ppb
Molybdenum	94-1	0.35	0.39	0.39	0.38	5.74	ppb
Molybdenum	95-1	0.13	0.16	0.15	0.14	11.25	ppb
Molybdenum	96-1	0.18	0.20	0.23	0.20	12.81	ppb
Molybdenum	97-1	0.10	0.13	0.13	0.12	12.68	ppb
Molybdenum	98-1	0.16	0.14	0.17	0.16	12.24	ppb
Nickel	60-2	2.33	2.37	2.34	2.34	0.81	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04LDLX10	Instrumnet Name :	P7
Client Sample ID :	MH4025L	Dilution Factor :	10
Date & Time Acquired ::	2016-05-06 15:59:20	DataFile Name :	039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	433.92	440.40	416.00	430.11	2.94	ppb
Potassium	39-2	436.19	445.47	443.30	441.65	1.10	ppb
Rhodium	103-2				98		%
Rhodium	103-1				98		%
Scandium	45-1				96		%
Scandium	45-2				93		%
Selenium	77-2	0.44	2.23	0.89	1.19	78.44	ppb
Selenium	78-2	0.59	-0.25	1.05	0.47	141.78	ppb
Selenium	82-1	0.44	0.40	0.90	0.58	47.57	ppb
Silicon	28-1	125.42	124.35	127.11	125.63	1.11	ppb
Silver	107-1	0.15	0.17	0.14	0.15	7.32	ppb
Silver	109-1	0.14	0.14	0.14	0.14	3.32	ppb
Sodium	23-2	129.23	129.56	129.21	129.34	0.15	ppb
Strontium	86-1	83.78	85.20	83.49	84.15	1.09	ppb
Strontium	88-1	84.95	86.86	86.30	86.04	1.14	ppb
Sulfur	34-1	-64.65	-59.95	-2.91	-42.51		ppb
Terbium	159-1				103		%
Terbium	159-2				102		%
Thallium	203-1	0.05	0.05	0.05	0.05	2.34	ppb
Thallium	205-1	0.05	0.06	0.06	0.06	7.30	ppb
Tin	118-1	1.47	1.44	1.50	1.47	2.08	ppb
Titanium	47-1	29.07	28.49	29.49	29.02	1.74	ppb
Uranium	238-1	0.19	0.18	0.17	0.18	5.01	ppb
Vanadium	51-2	3.21	3.29	3.15	3.22	2.07	ppb
Yttrium	89-2				99		%
Yttrium	89-1				102		%
Zinc	66-2	77.47	79.29	79.88	78.88	1.60	ppb
Zirconium	90-1	0.45	0.46	0.48	0.46	3.05	ppb
Zirconium	91-1	0.43	0.51	0.49	0.48	8.02	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-06	Instrumnet Name :	P7
Client Sample ID :	MH4025S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:02:22	DataFile Name :	040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10858.37	10987.88	10958.49	10934.92	0.62	ppb
Antimony	121-1	24.86	24.36	24.62	24.61	1.01	ppb
Arsenic	75-2	51.09	49.73	50.02	50.28	1.42	ppb
Barium	135-1	797.11	793.27	814.43	801.60	1.41	ppb
Barium	137-1	794.22	791.63	799.44	795.09	0.50	ppb
Beryllium	9-1	10.41	10.46	10.36	10.41	0.49	ppb
Bismuth	209-1				108		%
Bismuth	209-2				99		%
Boron	10-1	64.05	67.63	69.45	67.04	4.10	ppb
Boron	11-1	61.67	63.06	65.25	63.33	2.85	ppb
Cadmium	111-1	13.11	12.55	13.08	12.91	2.43	ppb
Cadmium	106-1	12.85	10.98	12.22	12.02	7.91	ppb
Cadmium	108-1	12.38	11.79	12.52	12.23	3.18	ppb
Calcium	43-1	203687.19	200326.47	201648.64	201887.44	0.84	ppb
Calcium	44-1	200529.96	200262.08	201603.26	200798.44	0.35	ppb
Chromium	52-2	67.81	68.36	68.36	68.17	0.47	ppb
Cobalt	59-2	119.79	119.64	120.79	120.07	0.52	ppb
Copper	63-2	147.88	148.71	148.80	148.47	0.34	ppb
Holmium	165-2				104		%
Holmium	165-1				108		%
Indium	115-1				103		%
Indium	115-2				94		%
Iron	56-2	18431.42	18553.16	18616.39	18533.66	0.51	ppb
Iron	57-2	18232.57	18372.83	18328.44	18311.28	0.39	ppb
Lead	206-1	552.81	558.21	552.86	554.63	0.56	ppb
Lead	207-1	518.43	514.54	518.79	517.25	0.46	ppb
Lead	208-1	535.48	534.53	534.92	534.97	0.09	ppb
Lithium	6-1				112		%
Magnesium	24-2	19661.03	19828.56	19787.60	19759.06	0.44	ppb
Manganese	55-2	1136.54	1158.70	1140.37	1145.20	1.03	ppb
Molybdenum	94-1	2.51	2.48	2.62	2.54	2.93	ppb
Molybdenum	95-1	1.08	1.13	1.13	1.11	2.71	ppb
Molybdenum	96-1	1.57	1.52	1.54	1.55	1.71	ppb
Molybdenum	97-1	1.14	1.08	1.12	1.11	2.75	ppb
Molybdenum	98-1	1.10	1.14	1.12	1.12	1.74	ppb
Nickel	60-2	130.27	130.04	131.62	130.64	0.65	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-06	Instrumnet Name :	P7
Client Sample ID :	MH4025S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:02:22	DataFile Name :	040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	3621.56	3606.12	3653.64	3627.11	0.67	ppb
Potassium	39-2	3659.20	3726.10	3707.64	3697.65	0.93	ppb
Rhodium	103-2				95		%
Rhodium	103-1				99		%
Scandium	45-1				99		%
Scandium	45-2				92		%
Selenium	77-2	31.58	31.98	28.55	30.70	6.10	ppb
Selenium	78-2	20.99	21.25	21.66	21.30	1.58	ppb
Selenium	82-1	18.15	20.78	20.39	19.77	7.18	ppb
Silicon	28-1	938.92	1022.23	963.31	974.82	4.39	ppb
Silver	109-1	11.27	10.94	11.09	11.10	1.50	ppb
Silver	107-1	11.21	11.13	11.25	11.20	0.56	ppb
Sodium	23-2	993.59	1022.06	1007.66	1007.77	1.41	ppb
Strontium	86-1	617.37	627.98	619.01	621.45	0.92	ppb
Strontium	88-1	603.64	622.06	618.50	614.73	1.59	ppb
Sulfur	34-1	1549.51	1360.73	1424.32	1444.85	6.65	ppb
Terbium	159-1				108		%
Terbium	159-2				103		%
Thallium	203-1	10.49	10.49	10.46	10.48	0.16	ppb
Thallium	205-1	10.46	10.50	10.60	10.52	0.68	ppb
Tin	118-1	11.44	11.31	11.45	11.40	0.70	ppb
Titanium	47-1	231.01	235.36	234.76	233.71	1.01	ppb
Uranium	238-1	1.51	1.51	1.50	1.51	0.36	ppb
Vanadium	51-2	133.88	134.04	134.84	134.25	0.38	ppb
Yttrium	89-2				109		%
Yttrium	89-1				118		%
Zinc	66-2	727.41	735.08	737.42	733.30	0.71	ppb
Zirconium	90-1	3.11	3.26	3.16	3.17	2.37	ppb
Zirconium	91-1	3.13	3.13	3.18	3.15	0.94	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-06DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4025S	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:05:19	DataFile Name :	041SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5272.84	5364.08	5398.45	5345.12	1.21	ppb
Antimony	121-1	12.27	12.15	12.25	12.23	0.54	ppb
Arsenic	75-2	27.09	26.96	26.38	26.81	1.41	ppb
Barium	135-1	391.68	393.54	392.01	392.41	0.25	ppb
Barium	137-1	404.60	397.72	396.78	399.70	1.07	ppb
Beryllium	9-1	5.23	5.27	5.12	5.21	1.56	ppb
Bismuth	209-2				101		%
Bismuth	209-1				107		%
Boron	10-1	34.56	36.24	36.20	35.66	2.68	ppb
Boron	11-1	34.00	34.35	35.31	34.55	1.95	ppb
Cadmium	106-1	6.86	6.43	5.14	6.14	14.56	ppb
Cadmium	108-1	6.61	6.10	6.26	6.32	4.18	ppb
Cadmium	111-1	6.62	6.62	6.48	6.57	1.22	ppb
Calcium	43-1	100639.29	102558.59	103209.04	102135.64	1.31	ppb
Calcium	44-1	99958.54	101085.45	101460.37	100834.78	0.78	ppb
Chromium	52-2	32.67	33.63	33.37	33.22	1.51	ppb
Cobalt	59-2	57.55	59.38	59.66	58.86	1.95	ppb
Copper	63-2	71.87	73.99	73.64	73.17	1.56	ppb
Holmium	165-2				104		%
Holmium	165-1				108		%
Indium	115-1				103		%
Indium	115-2				98		%
Iron	57-2	8766.36	9111.06	9061.41	8979.61	2.08	ppb
Iron	56-2	8889.52	9169.30	9126.24	9061.69	1.66	ppb
Lead	206-1	276.36	275.45	287.15	279.65	2.33	ppb
Lead	207-1	260.20	258.53	264.58	261.10	1.20	ppb
Lead	208-1	268.63	267.44	271.45	269.17	0.76	ppb
Lithium	6-1				110		%
Magnesium	24-2	9664.74	9921.17	9740.01	9775.31	1.35	ppb
Manganese	55-2	542.49	557.49	553.94	551.30	1.42	ppb
Molybdenum	94-1	1.33	1.36	1.36	1.35	1.49	ppb
Molybdenum	95-1	0.62	0.57	0.55	0.58	6.17	ppb
Molybdenum	96-1	0.78	0.74	0.81	0.78	4.25	ppb
Molybdenum	97-1	0.59	0.58	0.67	0.61	8.67	ppb
Molybdenum	98-1	0.59	0.59	0.57	0.58	1.64	ppb
Nickel	60-2	63.69	65.33	65.36	64.80	1.47	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-06DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4025S	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:05:19	DataFile Name :	041SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	1591.22	1790.97	1716.23	1699.47	5.94	ppb
Potassium	39-2	1765.41	1813.35	1800.18	1792.98	1.38	ppb
Rhodium	103-2				98		%
Rhodium	103-1				99		%
Scandium	45-1				98		%
Scandium	45-2				94		%
Selenium	82-1	9.71	11.26	10.83	10.60	7.56	ppb
Selenium	77-2	13.29	14.26	14.74	14.10	5.25	ppb
Selenium	78-2	10.31	12.15	10.56	11.01	9.06	ppb
Silicon	28-1	517.59	536.16	559.21	537.66	3.88	ppb
Silver	107-1	5.75	5.64	5.71	5.70	0.99	ppb
Silver	109-1	5.66	5.61	5.57	5.61	0.79	ppb
Sodium	23-2	491.89	509.93	505.05	502.29	1.86	ppb
Strontium	86-1	321.21	319.33	326.78	322.44	1.20	ppb
Strontium	88-1	327.92	324.81	328.78	327.17	0.64	ppb
Sulfur	34-1	401.17	428.61	508.99	446.26	12.56	ppb
Terbium	159-2				104		%
Terbium	159-1				107		%
Thallium	203-1	5.20	5.15	5.15	5.17	0.52	ppb
Thallium	205-1	5.17	5.24	5.36	5.26	1.85	ppb
Tin	118-1	5.59	5.81	5.69	5.69	1.89	ppb
Titanium	47-1	115.41	115.25	118.57	116.41	1.61	ppb
Uranium	238-1	0.75	0.74	0.74	0.74	1.29	ppb
Vanadium	51-2	63.42	66.42	65.25	65.03	2.33	ppb
Yttrium	89-1				110		%
Yttrium	89-2				105		%
Zinc	66-2	360.26	366.98	364.62	363.96	0.94	ppb
Zirconium	90-1	1.74	1.63	1.70	1.69	3.05	ppb
Zirconium	91-1	1.61	1.60	1.71	1.64	3.48	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-07	Instrumnet Name :	P7
Client Sample ID :	MH4028	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:08:19	DataFile Name :	042SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	7717.76	8006.63	7795.28	7839.89	1.91	ppb
Antimony	121-1	2.15	2.09	2.17	2.14	1.78	ppb
Arsenic	75-2	14.54	14.14	14.01	14.23	1.94	ppb
Barium	135-1	218.18	219.98	218.55	218.91	0.43	ppb
Barium	137-1	219.78	219.76	219.48	219.67	0.08	ppb
Beryllium	9-1	0.61	0.65	0.60	0.62	4.46	ppb
Bismuth	209-1				109		%
Bismuth	209-2				101		%
Boron	10-1	37.44	35.23	40.04	37.57	6.40	ppb
Boron	11-1	35.15	35.69	35.67	35.50	0.87	ppb
Cadmium	108-1	2.85	3.01	2.74	2.87	4.81	ppb
Cadmium	111-1	1.97	2.00	2.00	1.99	0.78	ppb
Cadmium	106-1	2.59	3.67	3.68	3.31	19.02	ppb
Calcium	43-1	186268.01	184431.35	185142.89	185280.75	0.50	ppb
Calcium	44-1	185486.02	184330.38	185754.47	185190.29	0.41	ppb
Chromium	52-2	17.37	17.73	17.58	17.56	1.04	ppb
Cobalt	59-2	8.99	9.26	9.20	9.15	1.55	ppb
Copper	63-2	64.81	67.00	65.64	65.81	1.68	ppb
Holmium	165-2				104		%
Holmium	165-1				109		%
Indium	115-1				104		%
Indium	115-2				97		%
Iron	56-2	16767.17	17370.58	17030.87	17056.21	1.77	ppb
Iron	57-2	16665.47	17226.73	16803.29	16898.50	1.73	ppb
Lead	206-1	245.97	242.50	239.52	242.66	1.33	ppb
Lead	207-1	230.10	228.06	227.89	228.68	0.54	ppb
Lead	208-1	235.52	235.54	234.04	235.04	0.37	ppb
Lithium	6-1				111		%
Magnesium	24-2	11341.04	11684.62	11470.26	11498.64	1.51	ppb
Manganese	55-2	685.98	707.77	694.64	696.13	1.58	ppb
Molybdenum	94-1	3.42	3.29	3.53	3.41	3.57	ppb
Molybdenum	95-1	0.57	0.62	0.58	0.59	4.27	ppb
Molybdenum	96-1	1.25	1.33	1.30	1.29	3.00	ppb
Molybdenum	97-1	0.61	0.57	0.59	0.59	4.00	ppb
Molybdenum	98-1	0.61	0.53	0.59	0.58	6.94	ppb
Nickel	60-2	17.69	18.69	18.52	18.30	2.91	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-07	Instrumnet Name :	P7
Client Sample ID :	MH4028	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:08:19	DataFile Name :	042SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	2189.84	2321.78	2129.17	2213.59	4.45	ppb
Potassium	39-2	2702.74	2782.32	2716.59	2733.88	1.56	ppb
Rhodium	103-1				100		%
Rhodium	103-2				97		%
Scandium	45-2				95		%
Scandium	45-1				101		%
Selenium	82-1	2.77	2.76	3.18	2.90	8.30	ppb
Selenium	77-2	12.00	10.32	15.25	12.52	20.01	ppb
Selenium	78-2	2.74	2.70	3.93	3.12	22.47	ppb
Silicon	28-1	824.32	896.70	937.36	886.13	6.46	ppb
Silver	107-1	0.68	0.70	0.74	0.71	4.32	ppb
Silver	109-1	0.71	0.70	0.67	0.69	3.07	ppb
Sodium	23-2	659.00	670.59	659.24	662.94	1.00	ppb
Strontium	86-1	439.13	430.59	437.75	435.82	1.05	ppb
Strontium	88-1	435.78	428.81	435.76	433.45	0.93	ppb
Sulfur	34-1	1854.57	1694.10	1762.59	1770.42	4.55	ppb
Terbium	159-1				107		%
Terbium	159-2				105		%
Thallium	203-1	0.40	0.37	0.41	0.39	4.75	ppb
Thallium	205-1	0.39	0.39	0.39	0.39	0.48	ppb
Tin	118-1	2.76	2.71	2.89	2.79	3.35	ppb
Titanium	47-1	202.64	203.16	201.90	202.57	0.31	ppb
Uranium	238-1	1.38	1.40	1.39	1.39	0.85	ppb
Vanadium	51-2	25.73	26.22	25.60	25.85	1.25	ppb
Yttrium	89-1				118		%
Yttrium	89-2				110		%
Zinc	66-2	273.71	278.75	276.91	276.46	0.92	ppb
Zirconium	90-1	4.73	4.66	4.73	4.71	0.83	ppb
Zirconium	91-1	4.65	4.71	4.69	4.68	0.65	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-07DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4028	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:11:18	DataFile Name :	043SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4130.92	4170.86	4065.46	4122.42	1.29	ppb
Antimony	121-1	0.97	1.04	1.02	1.01	3.24	ppb
Arsenic	75-2	7.43	7.26	8.07	7.59	5.60	ppb
Barium	135-1	111.80	110.83	112.33	111.65	0.68	ppb
Barium	137-1	113.46	111.64	113.76	112.95	1.02	ppb
Beryllium	9-1	0.35	0.38	0.26	0.33	18.79	ppb
Bismuth	209-1				107		%
Bismuth	209-2				101		%
Boron	10-1	22.09	21.06	23.10	22.08	4.61	ppb
Boron	11-1	19.24	19.71	20.16	19.70	2.34	ppb
Cadmium	111-1	1.01	1.03	1.09	1.04	4.10	ppb
Cadmium	106-1	1.74	1.70	2.52	1.99	23.17	ppb
Cadmium	108-1	1.28	1.10	1.35	1.25	10.36	ppb
Calcium	43-1	97349.74	96696.89	97755.01	97267.21	0.55	ppb
Calcium	44-1	95864.06	95838.59	97362.47	96355.04	0.91	ppb
Chromium	52-2	9.01	8.86	9.16	9.01	1.65	ppb
Cobalt	59-2	4.73	4.67	4.65	4.68	0.89	ppb
Copper	63-2	33.37	34.03	34.01	33.80	1.11	ppb
Holmium	165-2				105		%
Holmium	165-1				107		%
Indium	115-1				104		%
Indium	115-2				98		%
Iron	56-2	8790.61	8845.24	8654.51	8763.45	1.12	ppb
Iron	57-2	8635.04	8712.19	8641.31	8662.85	0.49	ppb
Lead	206-1	122.06	118.74	120.90	120.57	1.40	ppb
Lead	207-1	116.68	112.92	115.89	115.16	1.72	ppb
Lead	208-1	120.33	116.82	120.16	119.10	1.66	ppb
Lithium	6-1				109		%
Magnesium	24-2	5870.52	5963.42	5917.75	5917.23	0.79	ppb
Manganese	55-2	356.36	358.50	356.19	357.02	0.36	ppb
Molybdenum	94-1	1.85	1.82	1.95	1.87	3.66	ppb
Molybdenum	95-1	0.31	0.35	0.31	0.32	5.80	ppb
Molybdenum	96-1	0.74	0.76	0.67	0.72	6.98	ppb
Molybdenum	97-1	0.34	0.31	0.27	0.31	11.37	ppb
Molybdenum	98-1	0.34	0.29	0.36	0.33	10.76	ppb
Nickel	60-2	9.64	10.21	9.65	9.84	3.32	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-07DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4028	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:11:18	DataFile Name :	043SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	1209.75	1086.88	1036.59	1111.07	8.02	ppb
Potassium	39-2	1397.86	1414.51	1404.36	1405.58	0.60	ppb
Rhodium	103-2				99		%
Rhodium	103-1				100		%
Scandium	45-1				99		%
Scandium	45-2				95		%
Selenium	77-2	5.45	6.29	9.24	6.99	28.50	ppb
Selenium	78-2	1.54	1.54	2.03	1.71	16.53	ppb
Selenium	82-1	1.83	0.65	1.34	1.27	46.62	ppb
Silicon	28-1	440.91	505.53	515.65	487.36	8.32	ppb
Silver	109-1	0.35	0.35	0.34	0.34	2.12	ppb
Silver	107-1	0.34	0.38	0.36	0.36	6.03	ppb
Sodium	23-2	328.25	342.46	338.37	336.36	2.18	ppb
Strontium	86-1	232.59	229.75	233.23	231.86	0.80	ppb
Strontium	88-1	234.92	233.09	235.85	234.62	0.60	ppb
Sulfur	34-1	793.77	800.13	934.19	842.70	9.41	ppb
Terbium	159-1				106		%
Terbium	159-2				105		%
Thallium	203-1	0.20	0.20	0.19	0.20	4.47	ppb
Thallium	205-1	0.19	0.20	0.20	0.20	2.01	ppb
Tin	118-1	1.44	1.48	1.51	1.48	2.43	ppb
Titanium	47-1	104.17	106.77	106.58	105.84	1.37	ppb
Uranium	238-1	0.73	0.68	0.71	0.71	3.05	ppb
Vanadium	51-2	12.86	13.34	13.13	13.11	1.84	ppb
Yttrium	89-2				104		%
Yttrium	89-1				109		%
Zinc	66-2	143.95	144.56	144.20	144.24	0.21	ppb
Zirconium	90-1	2.56	2.57	2.61	2.58	0.96	ppb
Zirconium	91-1	2.57	2.55	2.61	2.58	1.16	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-08	Instrumnet Name :	P7
Client Sample ID :	MH4029	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:14:19	DataFile Name :	044SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4493.66	4518.35	4568.09	4526.70	0.84	ppb
Antimony	121-1	1.85	1.76	1.77	1.79	2.97	ppb
Arsenic	75-2	7.79	7.60	7.69	7.69	1.25	ppb
Barium	135-1	150.77	150.25	151.91	150.98	0.56	ppb
Barium	137-1	152.12	151.91	151.85	151.96	0.09	ppb
Beryllium	9-1	0.46	0.44	0.47	0.46	3.10	ppb
Bismuth	209-1				109		%
Bismuth	209-2				100		%
Boron	10-1	42.25	41.97	44.55	42.92	3.30	ppb
Boron	11-1	41.59	42.26	42.93	42.26	1.58	ppb
Cadmium	111-1	1.49	1.40	1.33	1.40	6.00	ppb
Cadmium	106-1	2.46	2.20	1.97	2.21	11.15	ppb
Cadmium	108-1	1.67	1.80	1.94	1.80	7.68	ppb
Calcium	43-1	103186.57	103095.84	103151.81	103144.74	0.04	ppb
Calcium	44-1	102290.92	102248.52	103122.06	102553.84	0.48	ppb
Chromium	52-2	13.26	12.86	13.44	13.19	2.23	ppb
Cobalt	59-2	5.11	5.14	5.24	5.16	1.38	ppb
Copper	63-2	64.65	64.00	64.87	64.51	0.70	ppb
Holmium	165-2				103		%
Holmium	165-1				108		%
Indium	115-1				103		%
Indium	115-2				96		%
Iron	56-2	8944.11	8934.78	9176.45	9018.44	1.52	ppb
Iron	57-2	8878.65	8853.73	9040.64	8924.34	1.14	ppb
Lead	206-1	142.87	145.12	142.77	143.59	0.93	ppb
Lead	207-1	133.86	135.31	134.06	134.41	0.59	ppb
Lead	208-1	139.38	140.74	139.94	140.02	0.49	ppb
Lithium	6-1				110		%
Magnesium	24-2	8843.82	8888.88	9065.38	8932.69	1.31	ppb
Manganese	55-2	384.69	383.32	391.05	386.35	1.07	ppb
Molybdenum	94-1	2.10	2.12	2.16	2.13	1.56	ppb
Molybdenum	95-1	1.08	1.14	1.16	1.13	3.78	ppb
Molybdenum	96-1	1.42	1.41	1.38	1.40	1.50	ppb
Molybdenum	97-1	1.14	1.12	1.04	1.10	4.78	ppb
Molybdenum	98-1	1.07	1.08	1.02	1.06	3.18	ppb
Nickel	60-2	12.42	12.25	12.38	12.35	0.73	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-08	Instrumnet Name :	P7
Client Sample ID :	MH4029	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:14:19	DataFile Name :	044SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	1809.51	1792.22	1713.88	1771.87	2.88	ppb
Potassium	39-2	1957.82	1954.81	1968.30	1960.31	0.36	ppb
Rhodium	103-2				96		%
Rhodium	103-1				101		%
Scandium	45-1				100		%
Scandium	45-2				93		%
Selenium	77-2	5.04	6.77	5.99	5.93	14.61	ppb
Selenium	78-2	1.00	1.65	1.97	1.54	31.97	ppb
Selenium	82-1	2.48	2.29	1.50	2.09	24.71	ppb
Silicon	28-1	2498.49	1085.21	1111.52	1565.07	51.66	ppb
Silver	109-1	0.33	0.34	0.35	0.34	2.86	ppb
Silver	107-1	0.33	0.32	0.36	0.34	5.68	ppb
Sodium	23-2	721.28	719.60	732.57	724.48	0.97	ppb
Strontium	86-1	314.98	309.87	309.07	311.31	1.03	ppb
Strontium	88-1	319.61	315.79	316.59	317.33	0.63	ppb
Sulfur	34-1	1906.74	2011.88	2013.81	1977.47	3.10	ppb
Terbium	159-1				107		%
Terbium	159-2				102		%
Thallium	203-1	0.19	0.19	0.19	0.19	1.64	ppb
Thallium	205-1	0.19	0.19	0.19	0.19	0.35	ppb
Tin	118-1	1.89	1.93	1.92	1.91	1.29	ppb
Titanium	47-1	120.65	118.45	121.67	120.26	1.37	ppb
Uranium	238-1	1.14	1.20	1.18	1.17	2.46	ppb
Vanadium	51-2	14.85	15.00	15.22	15.03	1.24	ppb
Yttrium	89-2				103		%
Yttrium	89-1				112		%
Zinc	66-2	226.83	227.72	231.83	228.79	1.17	ppb
Zirconium	90-1	2.65	2.59	2.69	2.65	1.82	ppb
Zirconium	91-1	2.70	2.59	2.70	2.67	2.36	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-08DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4029	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:17:21	DataFile Name :	045SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2371.79	2301.57	2293.29	2322.22	1.86	ppb
Antimony	121-1	0.83	0.85	0.87	0.85	2.45	ppb
Arsenic	75-2	3.97	3.73	3.79	3.83	3.26	ppb
Barium	135-1	77.07	76.53	76.30	76.63	0.51	ppb
Barium	137-1	77.96	77.28	77.09	77.45	0.59	ppb
Beryllium	9-1	0.25	0.17	0.23	0.21	18.90	ppb
Bismuth	209-1				106		%
Bismuth	209-2				100		%
Boron	10-1	24.56	23.56	26.84	24.99	6.73	ppb
Boron	11-1	23.05	24.38	24.67	24.03	3.59	ppb
Cadmium	111-1	0.74	0.69	0.72	0.72	3.59	ppb
Cadmium	106-1	1.02	1.10	1.05	1.06	3.46	ppb
Cadmium	108-1	0.80	0.88	0.84	0.84	4.78	ppb
Calcium	43-1	52746.98	53330.87	52156.97	52744.94	1.11	ppb
Calcium	44-1	52539.26	52675.58	51090.16	52101.67	1.69	ppb
Chromium	52-2	6.83	6.80	6.67	6.77	1.30	ppb
Cobalt	59-2	2.64	2.65	2.59	2.63	1.16	ppb
Copper	63-2	33.14	32.27	32.83	32.74	1.35	ppb
Holmium	165-2				102		%
Holmium	165-1				106		%
Indium	115-1				102		%
Indium	115-2				97		%
Iron	56-2	4636.17	4536.85	4583.89	4585.64	1.08	ppb
Iron	57-2	4583.75	4529.04	4534.57	4549.12	0.66	ppb
Lead	206-1	72.32	72.24	73.33	72.63	0.84	ppb
Lead	207-1	67.53	67.29	68.67	67.83	1.08	ppb
Lead	208-1	69.48	70.14	70.61	70.08	0.81	ppb
Lithium	6-1				108		%
Magnesium	24-2	4636.26	4584.18	4568.27	4596.24	0.77	ppb
Manganese	55-2	197.00	193.87	196.34	195.74	0.84	ppb
Molybdenum	94-1	1.10	1.14	1.11	1.12	1.78	ppb
Molybdenum	95-1	0.59	0.56	0.64	0.60	6.70	ppb
Molybdenum	96-1	0.72	0.75	0.70	0.72	3.49	ppb
Molybdenum	97-1	0.60	0.60	0.55	0.58	5.10	ppb
Molybdenum	98-1	0.61	0.57	0.55	0.58	4.99	ppb
Nickel	60-2	6.25	6.26	6.23	6.25	0.19	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-08DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4029	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:17:21	DataFile Name :	045SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	927.43	830.68	912.49	890.20	5.85	ppb
Potassium	39-2	1006.76	978.50	976.14	987.14	1.73	ppb
Rhodium	103-2				98		%
Rhodium	103-1				101		%
Scandium	45-1				99		%
Scandium	45-2				93		%
Selenium	77-2	1.30	2.64	1.74	1.89	36.02	ppb
Selenium	78-2	1.75	0.15	1.41	1.10	76.12	ppb
Selenium	82-1	0.79	2.30	1.18	1.42	54.93	ppb
Silicon	28-1	563.54	559.13	542.64	555.10	1.98	ppb
Silver	109-1	0.15	0.16	0.17	0.16	6.53	ppb
Silver	107-1	0.16	0.18	0.15	0.17	8.98	ppb
Sodium	23-2	381.45	370.48	370.19	374.04	1.72	ppb
Strontium	86-1	166.05	167.58	163.41	165.68	1.27	ppb
Strontium	88-1	168.86	171.38	166.28	168.84	1.51	ppb
Sulfur	34-1	736.20	905.04	661.60	767.61	16.25	ppb
Terbium	159-1				105		%
Terbium	159-2				103		%
Thallium	203-1	0.09	0.09	0.10	0.09	10.70	ppb
Thallium	205-1	0.09	0.11	0.10	0.10	5.91	ppb
Tin	118-1	0.96	1.03	0.98	0.99	3.44	ppb
Titanium	47-1	61.60	61.81	60.73	61.38	0.93	ppb
Uranium	238-1	0.59	0.60	0.60	0.60	1.23	ppb
Vanadium	51-2	7.58	7.40	7.53	7.50	1.24	ppb
Yttrium	89-2				100		%
Yttrium	89-1				106		%
Zinc	66-2	120.20	115.56	116.97	117.58	2.02	ppb
Zirconium	90-1	1.40	1.42	1.40	1.41	0.98	ppb
Zirconium	91-1	1.34	1.47	1.47	1.43	5.15	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-09	Instrumnet Name :	P7
Client Sample ID :	MH4030	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:20:23	DataFile Name :	046SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4435.68	4487.57	4513.14	4478.80	0.88	ppb
Antimony	121-1	1.70	1.68	1.56	1.65	4.70	ppb
Arsenic	75-2	6.26	6.52	6.34	6.38	2.09	ppb
Barium	135-1	136.13	136.09	136.98	136.40	0.37	ppb
Barium	137-1	137.24	136.34	137.85	137.14	0.56	ppb
Beryllium	9-1	0.31	0.35	0.33	0.33	5.90	ppb
Bismuth	209-1				108		%
Bismuth	209-2				100		%
Boron	10-1	38.10	36.98	37.79	37.62	1.54	ppb
Boron	11-1	34.85	38.00	37.67	36.84	4.70	ppb
Cadmium	111-1	1.35	1.41	1.28	1.35	5.09	ppb
Cadmium	106-1	1.42	2.74	1.79	1.98	34.14	ppb
Cadmium	108-1	1.74	2.00	1.70	1.82	8.94	ppb
Calcium	43-1	92791.01	91028.80	91070.81	91630.21	1.10	ppb
Calcium	44-1	93251.38	90258.93	91223.99	91578.10	1.67	ppb
Chromium	52-2	14.13	14.47	14.45	14.35	1.34	ppb
Cobalt	59-2	4.67	4.76	4.79	4.74	1.38	ppb
Copper	63-2	70.39	71.16	72.69	71.41	1.64	ppb
Holmium	165-2				103		%
Holmium	165-1				107		%
Indium	115-1				102		%
Indium	115-2				96		%
Iron	56-2	8753.18	8821.71	8987.29	8854.06	1.36	ppb
Iron	57-2	8694.10	8720.97	8925.23	8780.10	1.44	ppb
Lead	206-1	142.34	141.85	141.25	141.81	0.38	ppb
Lead	207-1	133.27	132.49	132.06	132.61	0.46	ppb
Lead	208-1	139.51	137.93	138.55	138.67	0.57	ppb
Lithium	6-1				109		%
Magnesium	24-2	8414.59	8392.50	8461.85	8422.98	0.42	ppb
Manganese	55-2	299.11	303.37	307.45	303.31	1.38	ppb
Molybdenum	94-1	2.22	2.34	2.22	2.26	3.09	ppb
Molybdenum	95-1	1.24	1.21	1.28	1.24	2.66	ppb
Molybdenum	96-1	1.50	1.44	1.44	1.46	2.19	ppb
Molybdenum	97-1	1.20	1.18	1.12	1.17	3.48	ppb
Molybdenum	98-1	1.23	1.25	1.22	1.23	1.39	ppb
Nickel	60-2	12.01	11.91	12.07	12.00	0.66	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-09	Instrumnet Name :	P7
Client Sample ID :	MH4030	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:20:23	DataFile Name :	046SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	1731.51	1785.72	1703.10	1740.11	2.41	ppb
Potassium	39-2	1769.19	1766.97	1810.84	1782.33	1.39	ppb
Rhodium	103-2				97		%
Rhodium	103-1				99		%
Scandium	45-1				98		%
Scandium	45-2				92		%
Selenium	77-2	7.12	5.97	10.72	7.94	31.25	ppb
Selenium	78-2	2.22	1.68	1.91	1.94	14.20	ppb
Selenium	82-1	1.90	1.59	2.21	1.90	16.39	ppb
Silicon	28-1	1078.26	1053.30	1117.24	1082.93	2.98	ppb
Silver	109-1	0.31	0.33	0.34	0.33	3.95	ppb
Silver	107-1	0.32	0.33	0.34	0.33	3.41	ppb
Sodium	23-2	734.18	739.59	752.51	742.09	1.27	ppb
Strontium	86-1	274.97	275.41	271.90	274.09	0.70	ppb
Strontium	88-1	280.01	280.61	273.39	278.00	1.44	ppb
Sulfur	34-1	2535.26	2331.40	2510.52	2459.06	4.52	ppb
Terbium	159-1				105		%
Terbium	159-2				103		%
Thallium	203-1	0.18	0.16	0.19	0.17	9.51	ppb
Thallium	205-1	0.20	0.19	0.18	0.19	4.14	ppb
Tin	118-1	1.98	1.79	1.84	1.87	5.21	ppb
Titanium	47-1	132.04	129.98	131.04	131.02	0.79	ppb
Uranium	238-1	2.39	2.34	2.31	2.35	1.76	ppb
Vanadium	51-2	15.53	15.49	15.80	15.60	1.08	ppb
Yttrium	89-2				103		%
Yttrium	89-1				109		%
Zinc	66-2	233.64	238.15	244.47	238.75	2.28	ppb
Zirconium	90-1	2.58	2.61	2.62	2.61	0.73	ppb
Zirconium	91-1	2.92	2.56	2.61	2.69	7.19	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-09DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4030	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:23:25	DataFile Name :	047SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2324.96	2307.66	2294.36	2308.99	0.66	ppb
Antimony	121-1	0.81	0.78	0.81	0.80	2.00	ppb
Arsenic	75-2	3.48	3.47	3.62	3.52	2.35	ppb
Barium	135-1	70.92	70.81	70.98	70.91	0.12	ppb
Barium	137-1	70.77	71.73	70.64	71.05	0.84	ppb
Beryllium	9-1	0.21	0.18	0.22	0.20	10.66	ppb
Bismuth	209-1				104		%
Bismuth	209-2				99		%
Boron	10-1	21.04	21.45	22.21	21.57	2.75	ppb
Boron	11-1	20.71	20.74	21.65	21.03	2.54	ppb
Cadmium	111-1	0.63	0.72	0.77	0.71	9.83	ppb
Cadmium	106-1	0.97	0.93	1.35	1.08	21.43	ppb
Cadmium	108-1	0.69	0.97	0.60	0.75	25.92	ppb
Calcium	43-1	47480.81	48118.45	47727.72	47775.66	0.67	ppb
Calcium	44-1	47345.45	47733.54	47884.55	47654.51	0.58	ppb
Chromium	52-2	7.62	7.59	7.55	7.59	0.43	ppb
Cobalt	59-2	2.50	2.46	2.42	2.46	1.50	ppb
Copper	63-2	37.00	37.06	37.01	37.02	0.09	ppb
Holmium	165-2				101		%
Holmium	165-1				103		%
Indium	115-1				101		%
Indium	115-2				96		%
Iron	56-2	4719.25	4647.52	4826.08	4730.95	1.90	ppb
Iron	57-2	4713.89	4666.06	4754.17	4711.37	0.94	ppb
Lead	206-1	73.93	73.55	73.63	73.70	0.27	ppb
Lead	207-1	70.05	69.24	68.83	69.37	0.90	ppb
Lead	208-1	71.52	71.30	71.10	71.31	0.30	ppb
Lithium	6-1				105		%
Magnesium	24-2	4318.78	4260.59	4305.07	4294.81	0.71	ppb
Manganese	55-2	155.59	154.67	156.63	155.63	0.63	ppb
Molybdenum	94-1	1.19	1.27	1.16	1.21	4.57	ppb
Molybdenum	95-1	0.71	0.76	0.68	0.72	5.77	ppb
Molybdenum	96-1	0.83	0.80	0.82	0.82	1.86	ppb
Molybdenum	97-1	0.69	0.62	0.64	0.65	5.35	ppb
Molybdenum	98-1	0.69	0.66	0.68	0.68	2.41	ppb
Nickel	60-2	6.49	6.14	6.57	6.40	3.58	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-09DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4030	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:23:25	DataFile Name :	047SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	893.04	847.28	948.60	896.31	5.66	ppb
Potassium	39-2	917.94	893.41	915.09	908.81	1.48	ppb
Rhodium	103-2				96		%
Rhodium	103-1				98		%
Scandium	45-1				96		%
Scandium	45-2				92		%
Selenium	77-2	7.06	1.76	2.65	3.82	74.15	ppb
Selenium	78-2	0.30	1.45	0.88	0.88	65.28	ppb
Selenium	82-1	0.49	1.25	2.33	1.35	68.15	ppb
Silicon	28-1	546.88	556.38	569.57	557.61	2.04	ppb
Silver	109-1	0.15	0.18	0.16	0.17	8.19	ppb
Silver	107-1	0.15	0.17	0.15	0.16	8.45	ppb
Sodium	23-2	385.87	379.57	382.56	382.66	0.82	ppb
Strontium	86-1	146.37	146.81	142.86	145.35	1.49	ppb
Strontium	88-1	150.74	150.32	148.25	149.77	0.89	ppb
Sulfur	34-1	1083.59	1187.75	1049.59	1106.98	6.50	ppb
Terbium	159-1				103		%
Terbium	159-2				102		%
Thallium	203-1	0.09	0.11	0.10	0.10	7.19	ppb
Thallium	205-1	0.10	0.10	0.10	0.10	4.24	ppb
Tin	118-1	1.04	1.04	1.01	1.03	2.13	ppb
Titanium	47-1	68.19	68.48	68.19	68.29	0.24	ppb
Uranium	238-1	1.19	1.21	1.23	1.21	1.38	ppb
Vanadium	51-2	7.99	7.92	7.97	7.96	0.51	ppb
Yttrium	89-2				99		%
Yttrium	89-1				104		%
Zinc	66-2	123.48	120.59	121.87	121.98	1.19	ppb
Zirconium	90-1	1.42	1.40	1.41	1.41	0.69	ppb
Zirconium	91-1	1.63	1.38	1.42	1.48	9.03	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCV082	Instrumnet Name :	P7
Client Sample ID :	CCV082	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:26:27	DataFile Name :	048CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10321.89	10199.83	10231.72	10251.15	0.62	ppb
Antimony	121-1	518.33	511.55	511.70	513.86	0.75	ppb
Arsenic	75-2	509.66	514.52	515.08	513.09	0.58	ppb
Barium	135-1	2558.88	2563.92	2546.95	2556.58	0.34	ppb
Barium	137-1	2543.62	2552.89	2528.66	2541.73	0.48	ppb
Beryllium	9-1	512.56	511.62	518.91	514.36	0.77	ppb
Bismuth	209-1				100		%
Bismuth	209-2				95		%
Boron	10-1	473.88	484.65	495.80	484.78	2.26	ppb
Boron	11-1	471.12	476.73	488.95	478.93	1.90	ppb
Cadmium	111-1	505.08	505.00	501.16	503.75	0.44	ppb
Cadmium	106-1	510.79	516.80	503.58	510.39	1.30	ppb
Cadmium	108-1	510.79	515.68	501.56	509.34	1.41	ppb
Calcium	43-1	50043.14	50117.02	49431.43	49863.86	0.75	ppb
Calcium	44-1	49035.23	49334.09	49222.46	49197.26	0.31	ppb
Chromium	52-2	531.31	526.57	522.62	526.83	0.83	ppb
Cobalt	59-2	531.32	526.92	535.81	531.35	0.84	ppb
Copper	63-2	1076.84	1058.66	1070.56	1068.68	0.86	ppb
Holmium	165-2				100		%
Holmium	165-1				101		%
Indium	115-1				95		%
Indium	115-2				90		%
Iron	56-2	25890.27	25684.11	25929.53	25834.64	0.51	ppb
Iron	57-2	26303.25	25840.30	26577.47	26240.34	1.42	ppb
Lead	206-1	506.98	508.13	508.03	507.71	0.13	ppb
Lead	207-1	501.76	498.25	502.58	500.86	0.46	ppb
Lead	208-1	504.33	500.15	506.15	503.54	0.61	ppb
Lithium	6-1				101		%
Magnesium	24-2	48082.82	47763.83	47573.28	47806.64	0.54	ppb
Manganese	55-2	1053.11	1054.49	1046.92	1051.51	0.38	ppb
Molybdenum	94-1	512.16	516.91	511.39	513.49	0.58	ppb
Molybdenum	95-1	515.88	519.83	514.39	516.70	0.54	ppb
Molybdenum	96-1	515.97	514.06	511.70	513.91	0.42	ppb
Molybdenum	97-1	511.09	510.38	508.99	510.16	0.21	ppb
Molybdenum	98-1	509.09	514.62	500.68	508.13	1.38	ppb
Nickel	60-2	527.52	525.67	532.86	528.68	0.71	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCV082	Instrumnet Name :	P7
Client Sample ID :	CCV082	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:26:27	DataFile Name :	048CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	10193.05	10312.31	10364.71	10290.02	0.85	ppb
Potassium	39-2	23950.56	24119.19	24027.63	24032.46	0.35	ppb
Rhodium	103-2				93		%
Rhodium	103-1				94		%
Scandium	45-1				97		%
Scandium	45-2				94		%
Selenium	77-2	523.83	514.18	510.24	516.08	1.36	ppb
Selenium	78-2	517.20	511.25	518.95	515.80	0.78	ppb
Selenium	82-1	519.05	501.34	497.39	505.93	2.28	ppb
Silicon	28-1	498.38	499.69	503.63	500.57	0.55	ppb
Silver	109-1	510.31	514.06	517.46	513.95	0.70	ppb
Silver	107-1	517.04	520.53	516.17	517.92	0.45	ppb
Sodium	23-2	48824.30	48581.52	49051.70	48819.17	0.48	ppb
Strontium	86-1	516.16	507.27	512.56	512.00	0.87	ppb
Strontium	88-1	510.01	507.08	507.59	508.22	0.31	ppb
Sulfur	34-1	10784.40	10744.50	10506.87	10678.59	1.41	ppb
Terbium	159-1				101		%
Terbium	159-2				100		%
Thallium	203-1	510.23	516.32	513.72	513.43	0.60	ppb
Thallium	205-1	504.20	509.18	509.26	507.55	0.57	ppb
Tin	118-1	517.65	514.79	509.82	514.09	0.77	ppb
Titanium	47-1	492.81	502.45	495.88	497.04	0.99	ppb
Uranium	238-1	486.83	491.76	493.06	490.55	0.67	ppb
Vanadium	51-2	526.85	528.05	522.63	525.84	0.54	ppb
Yttrium	89-2				95		%
Yttrium	89-1				98		%
Zinc	66-2	1060.37	1051.42	1065.25	1059.01	0.66	ppb
Zirconium	90-1	499.08	508.49	500.96	502.84	0.99	ppb
Zirconium	91-1	511.30	518.89	500.77	510.32	1.78	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCB082	Instrumnet Name :	P7
Client Sample ID :	CCB082	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:29:18	DataFile Name :	049CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1.53	1.14	0.66	1.11	39.35	ppb
Antimony	121-1	0.30	0.32	0.31	0.31	2.46	ppb
Arsenic	75-2	0.06	0.06	0.04	0.05	18.99	ppb
Barium	135-1	0.17	0.17	0.13	0.16	14.60	ppb
Barium	137-1	0.19	0.11	0.16	0.15	27.68	ppb
Beryllium	9-1	0.07	0.09	0.05	0.07	27.46	ppb
Bismuth	209-1				102		%
Bismuth	209-2				98		%
Boron	10-1	17.33	15.73	16.70	16.59	4.86	ppb
Boron	11-1	18.78	16.63	15.88	17.10	8.81	ppb
Cadmium	111-1	0.03	0.06	0.00	0.03	105.08	ppb
Cadmium	106-1	-0.14	0.13	-0.59	-0.20		ppb
Cadmium	108-1	0.01	0.04	-0.01	0.01	154.87	ppb
Calcium	43-1	4.86	9.92	0.79	5.19	88.12	ppb
Calcium	44-1	2.78	1.70	1.82	2.10	28.28	ppb
Chromium	52-2	0.15	0.17	0.18	0.17	11.50	ppb
Cobalt	59-2	0.02	0.03	0.03	0.02	10.15	ppb
Copper	63-2	-0.44	-0.43	-0.42	-0.43		ppb
Holmium	165-2				100		%
Holmium	165-1				101		%
Indium	115-1				99		%
Indium	115-2				95		%
Iron	56-2	1.61	1.71	1.56	1.63	4.50	ppb
Iron	57-2	1.76	1.07	2.35	1.73	37.12	ppb
Lead	206-1	0.02	0.03	0.05	0.03	57.69	ppb
Lead	207-1	0.03	0.05	0.04	0.04	21.95	ppb
Lead	208-1	0.02	0.03	0.04	0.03	33.14	ppb
Lithium	6-1				100		%
Magnesium	24-2	3.31	2.37	2.90	2.86	16.34	ppb
Manganese	55-2	0.06	0.08	0.05	0.06	29.79	ppb
Molybdenum	94-1	0.07	0.07	0.06	0.07	11.72	ppb
Molybdenum	95-1	0.07	0.07	0.07	0.07	2.59	ppb
Molybdenum	96-1	0.09	0.07	0.07	0.08	11.54	ppb
Molybdenum	97-1	0.07	0.08	0.06	0.07	9.29	ppb
Molybdenum	98-1	0.10	0.08	0.08	0.09	10.26	ppb
Nickel	60-2	-0.05	-0.03	-0.04	-0.04		ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCB082	Instrumnet Name :	P7
Client Sample ID :	CCB082	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:29:18	DataFile Name :	049CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-44.65	-27.76	-31.06	-34.49		ppb
Potassium	39-2	-2.78	-4.00	-3.24	-3.34		ppb
Rhodium	103-2				96		%
Rhodium	103-1				96		%
Scandium	45-1				94		%
Scandium	45-2				92		%
Selenium	77-2	0.46	0.00	0.00	0.15	173.21	ppb
Selenium	78-2	0.43	-0.31	-0.30	-0.06		ppb
Selenium	82-1	0.64	0.40	0.21	0.41	51.68	ppb
Silicon	28-1	-3.31	-3.44	-3.66	-3.47		ppb
Silver	109-1	0.04	0.04	0.03	0.04	8.93	ppb
Silver	107-1	0.04	0.03	0.03	0.03	17.73	ppb
Sodium	23-2	7.53	7.76	6.51	7.26	9.12	ppb
Strontium	86-1	0.02	-0.02	0.00	0.00	373021.25	ppb
Strontium	88-1	0.05	0.03	0.03	0.04	22.54	ppb
Sulfur	34-1	-659.32	-512.62	-578.08	-583.34		ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.06	0.06	0.06	0.06	3.47	ppb
Thallium	205-1	0.07	0.06	0.06	0.06	8.99	ppb
Tin	118-1	0.13	0.13	0.14	0.13	3.16	ppb
Titanium	47-1	0.00	-0.01	-0.02	-0.01		ppb
Uranium	238-1	0.04	0.03	0.03	0.03	12.78	ppb
Vanadium	51-2	0.01	0.03	0.02	0.02	41.24	ppb
Yttrium	89-2				94		%
Yttrium	89-1				97		%
Zinc	66-2	-0.11	-0.13	-0.14	-0.12		ppb
Zirconium	90-1	0.06	0.05	0.06	0.06	9.63	ppb
Zirconium	91-1	0.07	0.06	0.05	0.06	11.60	ppb

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P7
Client Sample ID :	S00	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:44:28	DataFile Name :	002CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	42	50	42	44	10.82	cps
Antimony	121-1	100	150	125	125	20.00	cps
Arsenic	75-2	2	2	0	1	86.60	cps
Barium	135-1	42	25	58	42	40.00	cps
Barium	137-1	42	58	67	56	22.91	cps
Beryllium	9-1	11	17	22	17	33.33	cps
Bismuth	209-1	2587225	2571541	2663398	2607388	1.88	cps
Bismuth	209-2	1451221	1454304	1451163	1452229	0.12	cps
Boron	10-1	158	100	142	133	22.54	cps
Boron	11-1	592	767	692	683	12.85	cps
Cadmium	108-1	13	4	0	6	114.53	cps
Cadmium	111-1	651	625	578	618	6.05	cps
Cadmium	106-1	925	892	825	881	5.78	cps
Calcium	43-1	358	375	325	353	7.22	cps
Calcium	44-1	13540	14091	12848	13493	4.62	cps
Chromium	52-2	540	603	743	629	16.54	cps
Cobalt	59-2	87	50	80	72	27.04	cps
Copper	63-2	3477	3644	3837	3653	4.93	cps
Holmium	165-2	1946378	1969707	1942756	1952947	0.75	cps
Holmium	165-1	3882690	3948829	4026211	3952577	1.82	cps
Indium	115-1	3060196	3047111	3126176	3077828	1.38	cps
Indium	115-2	579051	582389	577243	579561	0.45	cps
Iron	56-2	3328	3328	3895	3517	9.30	cps
Iron	57-2	61	72	94	76	22.36	cps
Lead	206-1	883	933	872	896	3.63	cps
Lead	207-1	689	694	845	743	11.88	cps
Lead	208-1	3595	3439	3645	3560	3.01	cps
Lithium	6-1	264977	265863	271189	267343	1.26	cps
Magnesium	24-2	267	275	200	247	16.63	cps
Manganese	55-2	67	103	90	87	21.42	cps
Molybdenum	94-1	58	58	125	81	47.78	cps
Molybdenum	95-1	0	8	0	3	173.21	cps
Molybdenum	96-1	33	33	33	33	0.02	cps
Molybdenum	97-1	25	25	33	28	17.31	cps
Molybdenum	98-1	8	17	8	11	43.34	cps
Nickel	60-2	160	153	167	160	4.17	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P7
Client Sample ID :	S00	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:44:28	DataFile Name :	002CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	167	200	125	164	22.93	cps
Potassium	39-2	22501	21967	22693	22387	1.68	cps
Rhodium	103-1	2937562	2927597	3032748	2965969	1.96	cps
Rhodium	103-2	1462574	1471696	1468820	1467697	0.32	cps
Scandium	45-2	93872	94278	92886	93679	0.76	cps
Scandium	45-1	2061766	2066587	2081689	2070014	0.50	cps
Selenium	82-1	-58	8	-167	-72	-122.29	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	63	59	56	59	6.24	cps
Silicon	28-1	220463	221460	222177	221367	0.39	cps
Silver	107-1	183	192	208	194	6.55	cps
Silver	109-1	208	192	150	183	16.39	cps
Sodium	23-2	11338	11130	11405	11291	1.27	cps
Strontium	86-1	775	608	700	694	12.02	cps
Strontium	88-1	133	133	158	142	10.19	cps
Sulfur	34-1	331712	333568	327478	330919	0.94	cps
Terbium	159-1	4013244	4055005	4140424	4069558	1.59	cps
Terbium	159-2	1909715	1972315	1934784	1938938	1.62	cps
Thallium	203-1	92	67	83	81	15.80	cps
Thallium	205-1	158	175	142	158	10.53	cps
Tin	118-1	558	517	458	511	9.83	cps
Titanium	47-1	133	125	142	133	6.25	cps
Uranium	238-1	83	67	42	64	32.83	cps
Vanadium	51-2	23	20	7	17	52.90	cps
Yttrium	89-1	3315712	3346793	3384702	3349069	1.03	cps
Yttrium	89-2	468257	476824	473570	472883	0.91	cps
Zinc	66-2	140	293	310	248	37.82	cps
Zirconium	90-1	292	217	233	247	15.93	cps
Zirconium	91-1	58	75	42	58	28.57	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P7
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:51:12	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2100	2242	2434	2259	7.41	cps
Antimony	121-1	22127	21684	21542	21784	1.40	cps
Arsenic	75-2	419	341	463	407	15.18	cps
Barium	135-1	27161	27353	27712	27409	1.02	cps
Barium	137-1	45718	46947	47022	46563	1.57	cps
Beryllium	9-1	1439	1461	1539	1480	3.55	cps
Bismuth	209-1	2625069	2611906	2629248	2622074	0.35	cps
Bismuth	209-2	1437656	1467111	1465690	1456819	1.14	cps
Boron	10-1	2125	2025	2392	2181	8.69	cps
Boron	11-1	10229	10004	10796	10343	3.95	cps
Cadmium	106-1	1242	1267	1125	1211	6.24	cps
Cadmium	108-1	225	188	204	206	9.14	cps
Cadmium	111-1	3487	3289	3407	3395	2.93	cps
Calcium	43-1	17578	17653	17544	17592	0.32	cps
Calcium	44-1	292899	295467	293867	294078	0.44	cps
Chromium	52-2	8929	8659	8796	8795	1.54	cps
Cobalt	59-2	6255	6632	6401	6429	2.95	cps
Copper	63-2	12409	12352	11735	12165	3.07	cps
Holmium	165-1	3949260	3993534	3991179	3977991	0.63	cps
Holmium	165-2	1920885	1956712	1951912	1943169	1.00	cps
Indium	115-2	572790	586592	582559	580647	1.22	cps
Indium	115-1	3102719	3121684	3081378	3101927	0.65	cps
Iron	56-2	160455	160665	155817	158979	1.72	cps
Iron	57-2	4101	3940	3923	3988	2.46	cps
Lead	206-1	9765	9954	9626	9782	1.68	cps
Lead	207-1	8887	8458	8720	8688	2.48	cps
Lead	208-1	39696	39073	38334	39034	1.75	cps
Lithium	6-1	268322	272486	271006	270605	0.78	cps
Magnesium	24-2	134624	134801	131961	133795	1.19	cps
Manganese	55-2	2137	2090	2207	2145	2.74	cps
Molybdenum	94-1	23036	22711	23420	23056	1.54	cps
Molybdenum	95-1	29106	29415	28813	29111	1.03	cps
Molybdenum	96-1	32004	32388	31093	31828	2.09	cps
Molybdenum	97-1	18621	18304	18671	18532	1.08	cps
Molybdenum	98-1	47162	46142	46903	46736	1.13	cps
Nickel	60-2	1990	1797	1763	1850	6.62	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P7
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:51:12	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	400	442	433	425	5.19	cps
Potassium	39-2	150177	147451	144600	147409	1.89	cps
Rhodium	103-1	3018026	2980712	2971072	2989937	0.83	cps
Rhodium	103-2	1444521	1469794	1478328	1464214	1.20	cps
Scandium	45-2	92158	93499	94191	93283	1.11	cps
Scandium	45-1	2056144	2058452	2061229	2058608	0.12	cps
Selenium	82-1	1042	942	975	986	5.16	cps
Selenium	77-2	37	50	43	43	15.38	cps
Selenium	78-2	200	202	220	207	5.43	cps
Silicon	28-1	293902	289894	293971	292589	0.80	cps
Silver	107-1	15117	14683	14933	14911	1.46	cps
Silver	109-1	14299	13941	13499	13913	2.88	cps
Sodium	23-2	265087	265247	259982	263439	1.14	cps
Strontium	86-1	4276	4476	4668	4473	4.38	cps
Strontium	88-1	32095	32471	32922	32496	1.27	cps
Sulfur	34-1	331655	329708	326670	329344	0.76	cps
Terbium	159-2	1934754	1963770	1945371	1947965	0.75	cps
Terbium	159-1	4031829	4070394	4025089	4042437	0.60	cps
Thallium	203-1	11280	11239	11948	11489	3.46	cps
Thallium	205-1	27998	27864	28239	28034	0.68	cps
Tin	118-1	47080	47089	45859	46676	1.52	cps
Titanium	47-1	8386	8586	8503	8492	1.18	cps
Uranium	238-1	38258	38650	38692	38533	0.62	cps
Vanadium	51-2	16026	16493	15702	16073	2.47	cps
Yttrium	89-2	471472	478960	477023	475818	0.82	cps
Yttrium	89-1	3378466	3378890	3392487	3383281	0.24	cps
Zinc	66-2	1323	1360	1303	1329	2.16	cps
Zirconium	90-1	17929	17444	17903	17759	1.53	cps
Zirconium	91-1	4443	3976	4117	4179	5.73	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:54:32	DataFile Name :	005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	120298	119862	107998	116052	6.01	cps
Antimony	121-1	575015	571087	576622	574241	0.50	cps
Arsenic	75-2	22783	22000	20824	21869	4.51	cps
Barium	135-1	713821	715684	702057	710521	1.04	cps
Barium	137-1	1222205	1226607	1222649	1223820	0.20	cps
Beryllium	9-1	76582	77196	78603	77460	1.34	cps
Bismuth	209-2	1455589	1457631	1453722	1455647	0.13	cps
Bismuth	209-1	2604318	2621719	2592824	2606287	0.56	cps
Boron	10-1	10554	10087	10871	10504	3.75	cps
Boron	11-1	49357	51614	50644	50538	2.24	cps
Cadmium	106-1	15601	16544	16494	16213	3.27	cps
Cadmium	108-1	10475	10296	10346	10372	0.89	cps
Cadmium	111-1	142550	143917	141734	142734	0.77	cps
Calcium	43-1	178497	175740	174559	176265	1.15	cps
Calcium	44-1	2907538	2901056	2888546	2899047	0.33	cps
Chromium	52-2	224146	217556	202857	214853	5.07	cps
Cobalt	59-2	370518	360803	341870	357730	4.07	cps
Copper	63-2	543046	529648	498544	523746	4.36	cps
Holmium	165-2	1942627	1945737	1969390	1952585	0.75	cps
Holmium	165-1	3989421	3935221	3941146	3955263	0.75	cps
Indium	115-1	3052308	3068749	3055165	3058740	0.29	cps
Indium	115-2	578415	579724	579128	579089	0.11	cps
Iron	56-2	9123024	8849473	8234635	8735711	5.21	cps
Iron	57-2	223728	219043	204618	215796	4.62	cps
Lead	206-1	469472	470035	468705	469404	0.14	cps
Lead	207-1	419201	415449	418464	417705	0.48	cps
Lead	208-1	1885525	1892253	1888255	1888678	0.18	cps
Lithium	6-1	271403	271587	272488	271826	0.21	cps
Magnesium	24-2	1455231	1429987	1333267	1406162	4.58	cps
Manganese	55-2	238631	233219	218836	230229	4.44	cps
Molybdenum	94-1	538236	537216	537867	537773	0.10	cps
Molybdenum	95-1	293317	295066	295672	294685	0.41	cps
Molybdenum	96-1	375011	373942	374157	374370	0.15	cps
Molybdenum	97-1	183271	180521	182604	182132	0.79	cps
Molybdenum	98-1	466690	471244	470896	469610	0.54	cps
Nickel	60-2	99112	98655	91205	96324	4.61	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:54:32	DataFile Name :	005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	5985	5651	5426	5687	4.94	cps
Potassium	39-2	655638	649059	627327	644008	2.30	cps
Rhodium	103-1	2958980	2932102	2942539	2944540	0.46	cps
Rhodium	103-2	1458573	1465675	1472190	1465479	0.46	cps
Scandium	45-1	2084218	2042848	2023052	2050039	1.52	cps
Scandium	45-2	93080	93979	94164	93741	0.62	cps
Selenium	82-1	10955	10988	10905	10949	0.38	cps
Selenium	77-2	457	493	417	456	8.42	cps
Selenium	78-2	1626	1635	1480	1580	5.52	cps
Silicon	28-1	587565	587478	588765	587936	0.12	cps
Silver	107-1	706310	704322	707048	705893	0.20	cps
Silver	109-1	680989	680188	678756	679978	0.17	cps
Sodium	23-2	2730379	2686035	2584717	2667044	2.80	cps
Strontium	86-1	189940	187609	188741	188763	0.62	cps
Strontium	88-1	1653341	1652090	1673946	1659793	0.74	cps
Sulfur	34-1	380047	388610	388173	385610	1.25	cps
Terbium	159-2	1961528	1949990	1977609	1963042	0.71	cps
Terbium	159-1	4082271	4077516	4012808	4057532	0.96	cps
Thallium	203-1	566761	564040	563949	564916	0.28	cps
Thallium	205-1	1373057	1365887	1380494	1373146	0.53	cps
Tin	118-1	476256	470136	473880	473424	0.65	cps
Titanium	47-1	87677	89764	85791	87744	2.26	cps
Uranium	238-1	2017979	2046741	2033628	2032783	0.71	cps
Vanadium	51-2	182151	180857	167853	176954	4.47	cps
Yttrium	89-1	3377282	3365540	3326832	3356551	0.79	cps
Yttrium	89-2	477478	473539	470287	473768	0.76	cps
Zinc	66-2	71330	69139	65490	68653	4.30	cps
Zirconium	90-1	1004210	1008187	998851	1003749	0.47	cps
Zirconium	91-1	228148	226387	227548	227361	0.39	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:58:08	DataFile Name :	006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	264262	262078	261920	262753	0.50	cps
Antimony	121-1	1425564	1428027	1439510	1431034	0.52	cps
Arsenic	75-2	50121	49835	49400	49785	0.73	cps
Barium	135-1	1780662	1783051	1804011	1789241	0.72	cps
Barium	137-1	3021669	3031738	3014602	3022669	0.28	cps
Beryllium	9-1	190941	190289	191003	190744	0.21	cps
Bismuth	209-1	2607798	2537307	2535653	2560253	1.61	cps
Bismuth	209-2	1431928	1447500	1433046	1437491	0.60	cps
Boron	10-1	25155	25764	26340	25753	2.30	cps
Boron	11-1	120025	126108	128829	124987	3.61	cps
Cadmium	111-1	350717	349227	350414	350119	0.23	cps
Cadmium	106-1	38654	38587	39523	38921	1.34	cps
Cadmium	108-1	24822	25528	25715	25355	1.86	cps
Calcium	43-1	438941	439959	438397	439099	0.18	cps
Calcium	44-1	7121280	7167423	7191683	7160129	0.50	cps
Chromium	52-2	483313	484490	480970	482924	0.37	cps
Cobalt	59-2	803265	801031	791538	798612	0.78	cps
Copper	63-2	1168301	1158693	1159401	1162132	0.46	cps
Holmium	165-2	1978256	2020418	1953156	1983943	1.71	cps
Holmium	165-1	3935575	3858635	3847028	3880412	1.24	cps
Indium	115-1	2990626	2999496	2958934	2983019	0.71	cps
Indium	115-2	566132	567256	556902	563430	1.01	cps
Iron	56-2	19410672	19410304	19173200	19331392	0.71	cps
Iron	57-2	485015	481060	479298	481791	0.61	cps
Lead	206-1	1166369	1167520	1170590	1168160	0.19	cps
Lead	207-1	1047340	1054413	1051940	1051231	0.34	cps
Lead	208-1	4722912	4752304	4777148	4750788	0.57	cps
Lithium	6-1	270418	271189	264656	268754	1.33	cps
Magnesium	24-2	3347265	3351670	3337696	3345544	0.21	cps
Manganese	55-2	513859	510404	507299	510521	0.64	cps
Molybdenum	94-1	1328211	1336781	1321601	1328864	0.57	cps
Molybdenum	95-1	726921	722295	726539	725252	0.35	cps
Molybdenum	96-1	930452	924598	932101	929050	0.42	cps
Molybdenum	97-1	455350	457390	457666	456802	0.28	cps
Molybdenum	98-1	1164502	1170890	1168892	1168094	0.28	cps
Nickel	60-2	216063	214346	211508	213972	1.08	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 13:58:08	DataFile Name :	006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	14708	14516	14399	14541	1.07	cps
Potassium	39-2	1628294	1614582	1594899	1612592	1.04	cps
Rhodium	103-2	1433391	1443926	1420998	1432772	0.80	cps
Rhodium	103-1	2904010	2857621	2796385	2852672	1.89	cps
Scandium	45-1	2034159	1982150	1978709	1998339	1.55	cps
Scandium	45-2	92017	92208	91239	91822	0.56	cps
Selenium	77-2	927	990	997	971	3.98	cps
Selenium	78-2	3480	3478	3469	3476	0.17	cps
Selenium	82-1	23721	23612	24038	23790	0.93	cps
Silicon	28-1	1112482	1107793	1073037	1097771	1.96	cps
Silver	109-1	1686155	1706123	1698818	1697032	0.60	cps
Silver	107-1	1737365	1749950	1742019	1743111	0.37	cps
Sodium	23-2	6337619	6327646	6287189	6317484	0.42	cps
Strontium	86-1	468247	471614	470455	470105	0.36	cps
Strontium	88-1	4069109	4079248	4075014	4074457	0.12	cps
Sulfur	34-1	454927	455501	447365	452598	1.00	cps
Terbium	159-1	4075215	3998215	3906460	3993297	2.12	cps
Terbium	159-2	1983958	1992917	1951992	1976289	1.09	cps
Thallium	203-1	1401274	1411733	1408138	1407048	0.38	cps
Thallium	205-1	3416190	3448271	3441495	3435318	0.49	cps
Tin	118-1	1194009	1184191	1196250	1191483	0.54	cps
Titanium	47-1	215503	216313	211832	214550	1.11	cps
Uranium	238-1	5195806	5073068	5097953	5122276	1.27	cps
Vanadium	51-2	397961	398563	397061	397862	0.19	cps
Yttrium	89-2	462644	469074	459133	463617	1.09	cps
Yttrium	89-1	3318593	3279796	3207136	3268508	1.73	cps
Zinc	66-2	153560	151379	151879	152273	0.75	cps
Zirconium	90-1	2527011	2557448	2542482	2542314	0.60	cps
Zirconium	91-1	558719	563047	553842	558536	0.82	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:01:19	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	503507	509170	507625	506767	0.58	cps
Antimony	121-1	2830914	2845648	2808158	2828240	0.67	cps
Arsenic	75-2	96011	96340	96723	96358	0.37	cps
Barium	135-1	3512142	3484722	3524783	3507215	0.58	cps
Barium	137-1	5921021	5956078	5942653	5939917	0.30	cps
Beryllium	9-1	370385	372216	371171	371257	0.25	cps
Bismuth	209-2	1415154	1410495	1401848	1409166	0.48	cps
Bismuth	209-1	2572488	2597216	2620086	2596596	0.92	cps
Boron	10-1	48738	49900	50627	49755	1.92	cps
Boron	11-1	239968	247595	254877	247480	3.01	cps
Cadmium	106-1	75284	74345	76306	75312	1.30	cps
Cadmium	108-1	49520	48972	50122	49538	1.16	cps
Cadmium	111-1	688476	675914	684753	683047	0.94	cps
Calcium	43-1	843070	849079	843726	845292	0.39	cps
Calcium	44-1	13813969	13840161	13754117	13802749	0.32	cps
Chromium	52-2	935251	930529	934695	933492	0.28	cps
Cobalt	59-2	1516942	1563981	1549280	1543401	1.56	cps
Copper	63-2	2275307	2282715	2282820	2280280	0.19	cps
Holmium	165-2	1935874	1921693	1923429	1926998	0.40	cps
Holmium	165-1	3935121	3978190	3955241	3956184	0.54	cps
Indium	115-1	3016096	2916818	2941323	2958079	1.75	cps
Indium	115-2	539629	541429	545711	542256	0.58	cps
Iron	56-2	37354351	37583236	37616015	37517867	0.38	cps
Iron	57-2	933816	935410	931180	933469	0.23	cps
Lead	206-1	2406594	2407289	2436447	2416777	0.71	cps
Lead	207-1	2080046	2106157	2118360	2101521	0.93	cps
Lead	208-1	9461990	9573065	9666502	9567186	1.07	cps
Lithium	6-1	274390	271364	273518	273091	0.57	cps
Magnesium	24-2	6459439	6394454	6442169	6432021	0.52	cps
Manganese	55-2	995186	990748	998321	994752	0.38	cps
Molybdenum	94-1	2639191	2686921	2671857	2665990	0.92	cps
Molybdenum	95-1	1429239	1440334	1420373	1429982	0.70	cps
Molybdenum	96-1	1827860	1839391	1830354	1832535	0.33	cps
Molybdenum	97-1	885554	888193	891226	888324	0.32	cps
Molybdenum	98-1	2350878	2362566	2363595	2359013	0.30	cps
Nickel	60-2	412261	411602	410908	411590	0.16	cps

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LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:01:19	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	26875	26116	27484	26825	2.56	cps
Potassium	39-2	3055349	3077428	3079545	3070774	0.44	cps
Rhodium	103-2	1385319	1391451	1391466	1389412	0.26	cps
Rhodium	103-1	2806444	2849878	2824677	2827000	0.77	cps
Scandium	45-2	89851	89901	90035	89929	0.11	cps
Scandium	45-1	1992260	1994211	1959867	1982113	0.97	cps
Selenium	82-1	44287	44396	46728	45137	3.06	cps
Selenium	77-2	1930	1954	1810	1898	4.05	cps
Selenium	78-2	6709	6527	6774	6670	1.91	cps
Silicon	28-1	1816992	1837950	1812272	1822405	0.75	cps
Silver	109-1	3351641	3324406	3347089	3341046	0.44	cps
Silver	107-1	3399096	3406813	3390044	3398651	0.25	cps
Sodium	23-2	12234784	12048313	12181208	12154768	0.79	cps
Strontium	86-1	920647	913910	929233	921263	0.83	cps
Strontium	88-1	7960052	7994982	7961844	7972293	0.25	cps
Sulfur	34-1	561768	561177	560064	561003	0.15	cps
Terbium	159-2	1927285	1949414	1952987	1943229	0.72	cps
Terbium	159-1	4036028	4041088	4056030	4044382	0.26	cps
Thallium	203-1	2861866	2882328	2854287	2866161	0.51	cps
Thallium	205-1	6816570	6835348	6817504	6823141	0.16	cps
Tin	118-1	2370341	2354894	2391769	2372335	0.78	cps
Titanium	47-1	418965	414076	417736	416925	0.61	cps
Uranium	238-1	10254111	10300182	10362568	10305620	0.53	cps
Vanadium	51-2	774408	773486	768639	772177	0.40	cps
Yttrium	89-2	451584	452964	452893	452481	0.17	cps
Yttrium	89-1	3276915	3289801	3265361	3277359	0.37	cps
Zinc	66-2	293634	293709	295638	294327	0.39	cps
Zirconium	90-1	4964590	4947298	4973616	4961834	0.27	cps
Zirconium	91-1	1097607	1097968	1105785	1100453	0.42	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:04:22	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	989173	991913	1001964	994350	0.68	cps
Antimony	121-1	5600361	5622081	5648063	5623502	0.42	cps
Arsenic	75-2	187797	190113	188736	188882	0.62	cps
Barium	135-1	6849692	6987821	6942725	6926746	1.02	cps
Barium	137-1	11710850	11818042	11846140	11791677	0.61	cps
Beryllium	9-1	729122	733302	737011	733145	0.54	cps
Bismuth	209-1	2543841	2536810	2581129	2553927	0.93	cps
Bismuth	209-2	1395147	1394531	1389182	1392953	0.24	cps
Boron	10-1	95945	99929	104869	100248	4.46	cps
Boron	11-1	478996	486477	500759	488744	2.26	cps
Cadmium	108-1	98107	97000	96601	97236	0.80	cps
Cadmium	111-1	1339148	1345960	1328484	1337864	0.66	cps
Cadmium	106-1	145212	146619	143007	144946	1.26	cps
Calcium	43-1	1689397	1708697	1701171	1699755	0.57	cps
Calcium	44-1	27520293	27537310	27313788	27457130	0.45	cps
Chromium	52-2	1874460	1855038	1854828	1861442	0.61	cps
Cobalt	59-2	3028652	3021844	3043022	3031172	0.36	cps
Copper	63-2	4380771	4432482	4388085	4400446	0.64	cps
Holmium	165-2	1925517	1961722	1956688	1947976	1.01	cps
Holmium	165-1	4033131	3867910	3971292	3957444	2.11	cps
Indium	115-1	2912825	2825812	2828661	2855766	1.73	cps
Indium	115-2	521087	526935	522668	523563	0.58	cps
Iron	56-2	74106871	73921832	74082643	74037116	0.14	cps
Iron	57-2	1860013	1864689	1890028	1871576	0.86	cps
Lead	206-1	4823742	4780518	4743777	4782679	0.84	cps
Lead	207-1	4145993	4236244	4174960	4185733	1.10	cps
Lead	208-1	18788973	19167349	18926263	18960862	1.01	cps
Lithium	6-1	272100	266725	267535	268787	1.08	cps
Magnesium	24-2	12740910	12543722	12520689	12601774	0.96	cps
Manganese	55-2	1999810	1957867	1977236	1978304	1.06	cps
Molybdenum	94-1	5256170	5294222	5298792	5283061	0.44	cps
Molybdenum	95-1	2838791	2827150	2883382	2849774	1.04	cps
Molybdenum	96-1	3638874	3612491	3647025	3632796	0.50	cps
Molybdenum	97-1	1816851	1810111	1812137	1813033	0.19	cps
Molybdenum	98-1	4592006	4709592	4641531	4647710	1.27	cps
Nickel	60-2	797413	802176	796612	798734	0.38	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:04:22	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	53447	54266	52702	53472	1.46	cps
Potassium	39-2	6002233	6003175	5993955	5999787	0.08	cps
Rhodium	103-2	1367936	1359576	1370425	1365979	0.42	cps
Rhodium	103-1	2809221	2754963	2707863	2757349	1.84	cps
Scandium	45-1	1980855	1921648	1936511	1946338	1.58	cps
Scandium	45-2	90109	89267	90159	89845	0.56	cps
Selenium	77-2	3701	3761	3811	3757	1.47	cps
Selenium	78-2	12480	12733	13056	12756	2.26	cps
Selenium	82-1	89958	88608	89480	89349	0.77	cps
Silicon	28-1	3312448	3301125	3276522	3296698	0.56	cps
Silver	107-1	6617161	6665340	6642684	6641729	0.36	cps
Silver	109-1	6560138	6552877	6451873	6521630	0.93	cps
Sodium	23-2	23939922	23918891	23970245	23943019	0.11	cps
Strontium	86-1	1863289	1876050	1867004	1868781	0.35	cps
Strontium	88-1	15821037	15741347	15779060	15780481	0.25	cps
Sulfur	34-1	819000	813489	810279	814256	0.54	cps
Terbium	159-1	4118404	3998314	4015458	4044059	1.61	cps
Terbium	159-2	1919677	1952139	1945135	1938984	0.88	cps
Thallium	203-1	5636128	5639715	5678614	5651486	0.42	cps
Thallium	205-1	13435973	13615178	13662182	13571111	0.88	cps
Tin	118-1	4666415	4616874	4706644	4663311	0.96	cps
Titanium	47-1	819524	820361	824677	821521	0.34	cps
Uranium	238-1	20360253	20802422	20785625	20649433	1.21	cps
Vanadium	51-2	1542781	1530751	1533343	1535625	0.41	cps
Yttrium	89-2	452490	452984	447148	450874	0.72	cps
Yttrium	89-1	3275987	3161590	3208053	3215210	1.79	cps
Zinc	66-2	564512	575862	570319	570231	1.00	cps
Zirconium	90-1	9839262	9836000	9832777	9836013	0.03	cps
Zirconium	91-1	2218311	2232532	2201394	2217412	0.70	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:07:21	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1978405	1961918	1957033	1965785	0.57	cps
Antimony	121-1	10910903	10995812	10969242	10958652	0.40	cps
Arsenic	75-2	366668	363785	364710	365054	0.40	cps
Barium	135-1	13584421	13606212	13596964	13595865	0.08	cps
Barium	137-1	23229344	23160177	23241671	23210397	0.19	cps
Beryllium	9-1	1388968	1409027	1404579	1400858	0.75	cps
Bismuth	209-2	1355148	1363795	1363117	1360687	0.35	cps
Bismuth	209-1	2516781	2521966	2529684	2522810	0.26	cps
Boron	10-1	196299	199726	202833	199619	1.64	cps
Boron	11-1	963337	989403	1003449	985396	2.07	cps
Cadmium	111-1	2612374	2631016	2628948	2624113	0.39	cps
Cadmium	106-1	278318	276338	277547	277401	0.36	cps
Cadmium	108-1	186791	186075	187650	186839	0.42	cps
Calcium	43-1	3210870	3249037	3247530	3235812	0.67	cps
Calcium	44-1	52171101	53103186	53258060	52844115	1.11	cps
Chromium	52-2	3609105	3631661	3653674	3631480	0.61	cps
Cobalt	59-2	5771163	5852094	5787895	5803717	0.74	cps
Copper	63-2	8440762	8443849	8374902	8419838	0.46	cps
Holmium	165-2	1925573	1950602	1943116	1939764	0.66	cps
Holmium	165-1	3871934	3928621	3928080	3909545	0.83	cps
Indium	115-1	2728572	2756725	2732589	2739296	0.56	cps
Indium	115-2	487735	492278	492733	490915	0.56	cps
Iron	56-2	143794914	142951648	142854337	143200300	0.36	cps
Iron	57-2	3601643	3646364	3619686	3622564	0.62	cps
Lead	207-1	8117087	8043431	8204614	8121711	0.99	cps
Lead	208-1	36958638	36855421	37209807	37007956	0.49	cps
Lead	206-1	9202371	9224562	9228643	9218525	0.15	cps
Lithium	6-1	265967	263205	263553	264242	0.57	cps
Magnesium	24-2	24666618	24962969	24615477	24748355	0.76	cps
Manganese	55-2	3802695	3789222	3814268	3802062	0.33	cps
Molybdenum	94-1	10212070	10174923	10275013	10220669	0.50	cps
Molybdenum	95-1	5469234	5465228	5517692	5484051	0.53	cps
Molybdenum	96-1	7009757	7100640	7095733	7068710	0.72	cps
Molybdenum	97-1	3521305	3516329	3520971	3519535	0.08	cps
Molybdenum	98-1	9023424	9132215	9124246	9093295	0.67	cps
Nickel	60-2	1518258	1528160	1525613	1524010	0.34	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:07:21	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	104691	103718	103038	103816	0.80	cps
Potassium	39-2	11652990	11658417	11622124	11644510	0.17	cps
Rhodium	103-2	1317338	1333228	1320464	1323677	0.64	cps
Rhodium	103-1	2688530	2678932	2691149	2686204	0.24	cps
Scandium	45-1	1892270	1939689	1912151	1914703	1.24	cps
Scandium	45-2	90471	91916	89525	90637	1.33	cps
Selenium	77-2	7002	7139	7058	7066	0.97	cps
Selenium	78-2	24335	23712	24315	24121	1.47	cps
Selenium	82-1	167786	170822	170520	169709	0.99	cps
Silicon	28-1	5914438	6044300	5999651	5986129	1.10	cps
Silver	107-1	12774988	12621895	12763478	12720120	0.67	cps
Silver	109-1	12436569	12363754	12481248	12427190	0.48	cps
Sodium	23-2	46844553	46841217	46850158	46845309	0.01	cps
Strontium	86-1	3552795	3588632	3545078	3562168	0.65	cps
Strontium	88-1	30610989	30713088	30749391	30691156	0.23	cps
Sulfur	34-1	1141493	1161088	1155654	1152745	0.88	cps
Terbium	159-1	3989130	4037086	3996100	4007439	0.65	cps
Terbium	159-2	1919927	1921986	1930930	1924281	0.30	cps
Thallium	203-1	10959867	10949881	10940513	10950087	0.09	cps
Thallium	205-1	26232648	26695306	26636999	26521651	0.95	cps
Tin	118-1	9036927	9159284	9096824	9097678	0.67	cps
Titanium	47-1	1565954	1608409	1590613	1588325	1.34	cps
Uranium	238-1	41091213	40873977	40870267	40945152	0.31	cps
Vanadium	51-2	2957761	2998481	2999687	2985310	0.80	cps
Yttrium	89-2	444080	447631	442475	444729	0.59	cps
Yttrium	89-1	3161146	3188832	3210273	3186750	0.77	cps
Zinc	66-2	1079385	1083096	1075939	1079473	0.33	cps
Zirconium	90-1	19030226	19273039	19091936	19131734	0.66	cps
Zirconium	91-1	4247025	4290180	4318986	4285397	0.85	cps

Reviewed By:jaswal
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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P7
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:10:21	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	11428763	11606323	11832671	11622585	1.74	cps
Antimony	121-1	14958	15200	15618	15259	2.19	cps
Arsenic	75-2	217	170	178	188	13.21	cps
Barium	135-1	4659	4584	4418	4554	2.72	cps
Barium	137-1	7894	8061	7953	7969	1.06	cps
Beryllium	9-1	306	300	200	269	22.12	cps
Bismuth	209-1	2187585	2214433	2188923	2196980	0.69	cps
Bismuth	209-2	1256283	1268349	1278966	1267866	0.90	cps
Boron	10-1	9787	9262	7861	8970	11.10	cps
Boron	11-1	47250	43848	39561	43553	8.85	cps
Cadmium	106-1	1183	1042	792	1006	19.72	cps
Cadmium	108-1	92	58	88	79	22.95	cps
Cadmium	111-1	1193	1172	930	1099	13.29	cps
Calcium	43-1	16630306	16726885	16811732	16722974	0.54	cps
Calcium	44-1	272317814	274622798	276329365	274423326	0.73	cps
Chromium	52-2	46831	46707	46082	46540	0.86	cps
Cobalt	59-2	5354	5654	5738	5582	3.61	cps
Copper	63-2	18088	19376	18846	18770	3.45	cps
Holmium	165-1	3713400	3725317	3783630	3740782	1.00	cps
Holmium	165-2	1958518	1982225	1993821	1978188	0.91	cps
Indium	115-2	542991	554600	552193	549928	1.11	cps
Indium	115-1	2715870	2741722	2729481	2729024	0.47	cps
Iron	56-2	768702639	788699240	798013729	785138536	1.91	cps
Iron	57-2	19151478	19766110	19846858	19588149	1.94	cps
Lead	206-1	42424	42044	42630	42366	0.70	cps
Lead	207-1	35682	35960	34785	35476	1.73	cps
Lead	208-1	165844	167666	165371	166293	0.73	cps
Lithium	6-1	238516	236768	237188	237491	0.38	cps
Magnesium	24-2	142682112	146491091	148333970	145835724	1.98	cps
Manganese	55-2	13513	13476	13653	13548	0.69	cps
Molybdenum	94-1	9278	9687	9379	9448	2.25	cps
Molybdenum	95-1	13707	14241	14174	14041	2.07	cps
Molybdenum	96-1	19698	20666	19581	19981	2.98	cps
Molybdenum	97-1	8511	8411	8119	8347	2.44	cps
Molybdenum	98-1	22018	21968	21959	21982	0.14	cps
Nickel	60-2	11351	11074	11608	11345	2.35	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P7
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:10:21	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	142	175	200	172	16.99	cps
Potassium	39-2	66908781	68103560	69341087	68117809	1.79	cps
Rhodium	103-2	1280871	1297244	1294036	1290717	0.67	cps
Rhodium	103-1	2471793	2500168	2454199	2475387	0.94	cps
Scandium	45-1	1923377	1934408	1951085	1936290	0.72	cps
Scandium	45-2	95281	95395	98397	96358	1.83	cps
Selenium	77-2	0	3	0	1	173.21	cps
Selenium	78-2	70	91	69	77	16.11	cps
Selenium	82-1	200	83	242	175	46.90	cps
Silicon	28-1	299987	301845	306217	302683	1.06	cps
Silver	107-1	10229	11313	10846	10796	5.04	cps
Silver	109-1	10746	10112	10246	10368	3.22	cps
Sodium	23-2	264109331	271608156	277111223	270942903	2.41	cps
Strontium	86-1	117176	119528	120066	118923	1.29	cps
Strontium	88-1	1013261	1033267	1032199	1026242	1.10	cps
Sulfur	34-1	303654	307320	316089	309021	2.07	cps
Terbium	159-1	3831969	3803241	3848732	3827981	0.60	cps
Terbium	159-2	1907415	1961403	1989722	1952847	2.14	cps
Thallium	203-1	4409	4593	4351	4451	2.83	cps
Thallium	205-1	10830	9971	10671	10491	4.36	cps
Tin	118-1	9429	9270	9712	9470	2.36	cps
Titanium	47-1	1650	2034	3516	2400	41.06	cps
Uranium	238-1	3167	2892	3176	3078	5.24	cps
Vanadium	51-2	887	837	927	883	5.11	cps
Yttrium	89-2	470008	477396	480197	475867	1.11	cps
Yttrium	89-1	3109906	3172828	3113636	3132124	1.13	cps
Zinc	66-2	11772	11772	11558	11700	1.05	cps
Zirconium	90-1	3234	3517	2767	3173	11.94	cps
Zirconium	91-1	725	667	758	717	6.47	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICV	Instrumnet Name :	P7
Client Sample ID :	ICV	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:15:27	DataFile Name :	011ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	58097	57469	57277	57614	0.74	cps
Antimony	121-1	2315881	2329733	2317876	2321163	0.32	cps
Arsenic	75-2	83698	82227	82332	82752	0.99	cps
Barium	135-1	284315	287145	279795	283752	1.31	cps
Barium	137-1	484108	487298	488335	486580	0.45	cps
Beryllium	9-1	147213	149232	150148	148864	1.01	cps
Bismuth	209-1	2633178	2634930	2656935	2641681	0.50	cps
Bismuth	209-2	1491758	1481182	1483204	1485381	0.38	cps
Boron	10-1	123828	124248	126794	124957	1.28	cps
Boron	11-1	618211	626905	633037	626051	1.19	cps
Cadmium	106-1	25808	26685	25440	25978	2.46	cps
Cadmium	108-1	19080	19134	18784	18999	0.99	cps
Cadmium	111-1	280765	280109	280539	280471	0.12	cps
Calcium	43-1	73626	71598	71859	72361	1.52	cps
Calcium	44-1	1195829	1192878	1214610	1201106	0.98	cps
Chromium	52-2	398009	396106	397935	397350	0.27	cps
Cobalt	59-2	670508	667341	667123	668324	0.28	cps
Copper	63-2	488355	483080	485578	485671	0.54	cps
Holmium	165-2	2054641	2046070	2044890	2048534	0.26	cps
Holmium	165-1	4078344	4004588	4020684	4034539	0.96	cps
Indium	115-1	3110866	3082211	3098232	3097103	0.46	cps
Indium	115-2	585822	576936	573453	578737	1.10	cps
Iron	56-2	3338497	3301682	3316144	3318774	0.56	cps
Iron	57-2	81431	80856	80883	81056	0.40	cps
Lead	206-1	1925623	1952607	1932195	1936809	0.73	cps
Lead	207-1	1601973	1623644	1609704	1611774	0.68	cps
Lead	208-1	7516273	7613327	7551196	7560265	0.65	cps
Lithium	6-1	268695	268024	265583	267434	0.61	cps
Magnesium	24-2	348631	344781	344853	346089	0.64	cps
Manganese	55-2	216084	213289	215265	214879	0.67	cps
Molybdenum	97-1	1918718	1904107	1929226	1917350	0.66	cps
Molybdenum	98-1	4920276	4886088	4905999	4904121	0.35	cps
Molybdenum	94-1	1732657	1742343	1735891	1736964	0.28	cps
Molybdenum	95-1	3016737	2969013	2984184	2989978	0.82	cps
Molybdenum	96-1	3205967	3215023	3218586	3213192	0.20	cps
Nickel	60-2	180802	178030	179197	179343	0.78	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICV	Instrumnet Name :	P7
Client Sample ID :	ICV	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:15:27	DataFile Name :	011ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	200	92	108	133	43.75	cps
Potassium	39-2	567062	556289	560368	561240	0.97	cps
Rhodium	103-1	3110907	3059930	3060768	3077202	0.95	cps
Rhodium	103-2	1519222	1526102	1484538	1509954	1.48	cps
Scandium	45-2	100260	99720	100317	100099	0.33	cps
Scandium	45-1	2189626	2179873	2158272	2175924	0.74	cps
Selenium	82-1	37843	38621	37902	38122	1.14	cps
Selenium	77-2	1770	1690	1603	1688	4.94	cps
Selenium	78-2	5762	5642	5749	5718	1.16	cps
Silicon	28-1	3454947	3444685	3446657	3448763	0.16	cps
Silver	107-1	1393542	1392797	1393740	1393360	0.04	cps
Silver	109-1	1352251	1336119	1337350	1341907	0.67	cps
Sodium	23-2	1156364	1136404	1125795	1139521	1.36	cps
Strontium	86-1	9495	9837	9720	9684	1.79	cps
Strontium	88-1	77443	79010	77569	78007	1.12	cps
Sulfur	34-1	333851	332300	332638	332930	0.24	cps
Terbium	159-1	4132037	4137436	4129114	4132862	0.10	cps
Terbium	159-2	2045838	2042268	2012127	2033411	0.91	cps
Thallium	203-1	2359643	2316016	2310768	2328809	1.15	cps
Thallium	205-1	5589804	5577305	5533624	5566911	0.53	cps
Tin	118-1	4681390	4651924	4661028	4664781	0.32	cps
Titanium	47-1	833333	845723	843510	840855	0.79	cps
Uranium	238-1	492	442	350	428	16.79	cps
Vanadium	51-2	331993	333259	331373	332208	0.29	cps
Yttrium	89-1	3502869	3495439	3497146	3498485	0.11	cps
Yttrium	89-2	498964	492835	491227	494342	0.83	cps
Zinc	66-2	126139	125252	124956	125449	0.49	cps
Zirconium	90-1	6368	5668	5284	5774	9.52	cps
Zirconium	91-1	1734	1759	1417	1636	11.64	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICB	Instrumnet Name :	P7
Client Sample ID :	ICB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:34:55	DataFile Name :	012CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	33	108	67	69	54.12	cps
Antimony	121-1	842	683	758	761	10.41	cps
Arsenic	75-2	6	9	4	6	45.85	cps
Barium	135-1	100	58	50	69	38.57	cps
Barium	137-1	33	92	75	67	45.07	cps
Beryllium	9-1	67	83	72	74	11.46	cps
Bismuth	209-1	2633864	2561870	2633355	2609696	1.59	cps
Bismuth	209-2	1501870	1468055	1486640	1485521	1.14	cps
Boron	10-1	858	692	767	772	10.81	cps
Boron	11-1	4026	4151	3884	4020	3.32	cps
Cadmium	111-1	659	690	619	656	5.38	cps
Cadmium	106-1	933	983	875	931	5.83	cps
Cadmium	108-1	4	4	8	6	43.22	cps
Calcium	43-1	342	267	458	356	27.17	cps
Calcium	44-1	13440	12322	12581	12781	4.58	cps
Chromium	52-2	433	493	563	497	13.10	cps
Cobalt	59-2	57	100	73	77	28.51	cps
Copper	63-2	1010	1090	967	1022	6.12	cps
Holmium	165-2	2030444	1985638	2003310	2006464	1.12	cps
Holmium	165-1	3984646	3928223	3980732	3964534	0.79	cps
Indium	115-1	3113192	3090546	3177505	3127081	1.44	cps
Indium	115-2	599821	589929	597475	595742	0.87	cps
Iron	56-2	4529	4551	4729	4603	2.38	cps
Iron	57-2	128	94	61	94	35.30	cps
Lead	206-1	1006	1022	983	1004	1.94	cps
Lead	207-1	756	856	850	820	6.85	cps
Lead	208-1	3861	4084	3873	3939	3.18	cps
Lithium	6-1	268537	262581	270264	267127	1.51	cps
Magnesium	24-2	583	600	633	606	4.20	cps
Manganese	55-2	63	57	77	66	15.54	cps
Molybdenum	94-1	142	125	158	142	11.76	cps
Molybdenum	95-1	83	50	75	69	24.98	cps
Molybdenum	96-1	175	83	100	119	40.88	cps
Molybdenum	97-1	33	50	50	44	21.66	cps
Molybdenum	98-1	92	42	75	69	36.66	cps
Nickel	60-2	87	70	73	77	11.51	cps

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICB	Instrumnet Name :	P7
Client Sample ID :	ICB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:34:55	DataFile Name :	012CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	100	83	175	119	40.88	cps
Potassium	39-2	23945	22643	23645	23411	2.91	cps
Rhodium	103-1	3024083	2931138	3036950	2997390	1.93	cps
Rhodium	103-2	1519856	1481145	1496933	1499311	1.30	cps
Scandium	45-2	99847	95482	97609	97646	2.24	cps
Scandium	45-1	2088188	2059832	2125393	2091138	1.57	cps
Selenium	82-1	8	267	67	114	118.97	cps
Selenium	77-2	0	3	0	1	173.21	cps
Selenium	78-2	87	61	65	71	19.75	cps
Silicon	28-1	213998	213590	212068	213219	0.48	cps
Silver	109-1	183	133	117	144	24.02	cps
Silver	107-1	158	217	150	175	20.76	cps
Sodium	23-2	15851	15467	16009	15776	1.77	cps
Strontium	86-1	608	642	625	625	2.67	cps
Strontium	88-1	200	175	158	178	11.80	cps
Sulfur	34-1	329322	332389	335177	332296	0.88	cps
Terbium	159-1	4106505	4070154	4077658	4084772	0.47	cps
Terbium	159-2	2024786	1978044	2009169	2004000	1.19	cps
Thallium	203-1	225	225	208	219	4.39	cps
Thallium	205-1	592	567	567	575	2.51	cps
Tin	118-1	642	667	592	633	6.03	cps
Titanium	47-1	125	83	75	94	28.37	cps
Uranium	238-1	75	100	75	83	17.32	cps
Vanadium	51-2	13	23	13	17	34.65	cps
Yttrium	89-2	491911	479338	493252	488167	1.57	cps
Yttrium	89-1	3449360	3372931	3399364	3407218	1.14	cps
Zinc	66-2	153	173	193	173	11.54	cps
Zirconium	90-1	192	358	208	253	36.31	cps
Zirconium	91-1	42	100	33	58	62.28	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICSA	Instrumnet Name :	P7
Client Sample ID :	ICSA	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:37:59	DataFile Name :	013ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	10109837	10252096	10339178	10233704	1.13	cps
Antimony	121-1	14458	14408	14608	14491	0.72	cps
Arsenic	75-2	135	131	133	133	1.39	cps
Barium	135-1	4793	4451	4743	4662	3.96	cps
Barium	137-1	7953	7586	7944	7828	2.68	cps
Beryllium	9-1	483	344	433	420	16.73	cps
Bismuth	209-1	2491011	2465585	2453215	2469937	0.78	cps
Bismuth	209-2	1356901	1373763	1371254	1367306	0.67	cps
Boron	10-1	875	867	958	900	5.63	cps
Boron	11-1	4442	4126	4051	4206	4.94	cps
Cadmium	111-1	1828	1746	1985	1853	6.54	cps
Cadmium	106-1	1000	833	933	922	9.10	cps
Cadmium	108-1	2579	2321	2271	2391	6.92	cps
Calcium	43-1	3372842	3351941	3367112	3363965	0.32	cps
Calcium	44-1	54662885	55366126	55208901	55079304	0.67	cps
Chromium	52-2	76404	77036	76165	76535	0.59	cps
Cobalt	59-2	7445	7302	7595	7448	1.97	cps
Copper	63-2	36526	36653	36225	36468	0.60	cps
Holmium	165-2	1957653	2014561	2001140	1991118	1.49	cps
Holmium	165-1	4002631	3970264	3895635	3956177	1.39	cps
Indium	115-1	2951771	3010697	2938122	2966863	1.30	cps
Indium	115-2	562854	561966	560476	561766	0.21	cps
Iron	56-2	301256807	306231751	308600329	305362962	1.23	cps
Iron	57-2	7555906	7627039	7713825	7632257	1.04	cps
Lead	206-1	42552	41794	42452	42266	0.97	cps
Lead	207-1	32758	32819	31928	32501	1.53	cps
Lead	208-1	154640	155122	154319	154694	0.26	cps
Lithium	6-1	261350	260125	258584	260020	0.53	cps
Magnesium	24-2	25815848	26317250	26379124	26170741	1.18	cps
Manganese	55-2	16503	16249	16549	16434	0.98	cps
Molybdenum	94-1	6322858	6293576	6389713	6335382	0.78	cps
Molybdenum	95-1	11070495	10912311	11061293	11014700	0.81	cps
Molybdenum	96-1	11794757	11724794	11801684	11773745	0.36	cps
Molybdenum	97-1	7021559	6957919	7021012	7000163	0.52	cps
Molybdenum	98-1	18258357	18025030	18186688	18156692	0.66	cps
Nickel	60-2	8943	8796	9186	8975	2.20	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICSA	Instrumnet Name :	P7
Client Sample ID :	ICSA	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:37:59	DataFile Name :	013ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	545266	546721	554122	548703	0.87	cps
Potassium	39-2	24602225	25095953	25115905	24938027	1.17	cps
Rhodium	103-2	1362874	1375842	1371845	1370187	0.48	cps
Rhodium	103-1	2771006	2745543	2752868	2756472	0.48	cps
Scandium	45-1	1996613	2064048	2018137	2026266	1.70	cps
Scandium	45-2	91527	92986	93194	92569	0.98	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	57	57	61	59	3.64	cps
Selenium	82-1	42	58	-142	-14	-798.95	cps
Silicon	28-1	361137	361210	369445	363931	1.31	cps
Silver	109-1	1083	1417	1267	1256	13.30	cps
Silver	107-1	1142	1142	1225	1170	4.12	cps
Sodium	23-2	49187245	49767359	50608298	49854301	1.43	cps
Strontium	86-1	124782	125721	124905	125136	0.41	cps
Strontium	88-1	1075645	1076274	1085585	1079168	0.52	cps
Sulfur	34-1	4550035	4578600	4501009	4543215	0.86	cps
Terbium	159-1	4028372	4035494	3989741	4017869	0.61	cps
Terbium	159-2	1970652	2002483	2015108	1996081	1.15	cps
Thallium	203-1	917	858	1058	945	10.89	cps
Thallium	205-1	2017	2675	2525	2406	14.34	cps
Tin	118-1	2167	2334	2059	2186	6.34	cps
Titanium	47-1	3270983	3323390	3269327	3287900	0.94	cps
Uranium	238-1	758	758	717	745	3.23	cps
Vanadium	51-2	467	520	533	507	6.96	cps
Yttrium	89-2	467246	467667	470387	468433	0.36	cps
Yttrium	89-1	3281286	3297014	3281977	3286759	0.27	cps
Zinc	66-2	7269	6998	6998	7088	2.20	cps
Zirconium	90-1	967	950	900	939	3.70	cps
Zirconium	91-1	233	150	158	181	25.42	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICSAB	Instrumnet Name :	P7
Client Sample ID :	ICSAB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:41:01	DataFile Name :	014ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	10500126	10512939	10504414	10505826	0.06	cps
Antimony	121-1	236112	235290	237552	236318	0.48	cps
Arsenic	75-2	8134	8017	7737	7963	2.56	cps
Barium	135-1	61922	61110	61814	61615	0.72	cps
Barium	137-1	105475	104324	103719	104506	0.85	cps
Beryllium	9-1	29635	29585	29824	29681	0.43	cps
Bismuth	209-2	1392962	1403097	1410014	1402024	0.61	cps
Bismuth	209-1	2527151	2546801	2532636	2535529	0.40	cps
Boron	10-1	850	867	733	817	8.90	cps
Boron	11-1	4184	4317	3959	4153	4.36	cps
Cadmium	108-1	5776	6222	5806	5935	4.20	cps
Cadmium	111-1	52827	54871	52535	53411	2.38	cps
Cadmium	106-1	5335	5360	5460	5385	1.23	cps
Calcium	43-1	3469455	3452896	3501287	3474546	0.71	cps
Calcium	44-1	56641264	56546180	57350595	56846013	0.77	cps
Chromium	52-2	163930	164478	163343	163917	0.35	cps
Cobalt	59-2	133185	135515	132948	133883	1.06	cps
Copper	63-2	126477	126739	128875	127364	1.03	cps
Holmium	165-1	4026388	4062138	4057318	4048615	0.48	cps
Holmium	165-2	2058279	2069995	2078237	2068837	0.48	cps
Indium	115-2	580534	587691	586413	584879	0.65	cps
Indium	115-1	3161920	3136004	3127083	3141669	0.58	cps
Iron	56-2	310090607	311654674	313634740	311793340	0.57	cps
Iron	57-2	7851201	7852975	7816291	7840156	0.26	cps
Lead	206-1	224874	225286	222455	224205	0.68	cps
Lead	207-1	185374	186044	185413	185610	0.20	cps
Lead	208-1	862982	862278	862633	862631	0.04	cps
Lithium	6-1	261427	263004	261498	261976	0.34	cps
Magnesium	24-2	26816890	26978575	27156843	26984103	0.63	cps
Manganese	55-2	57994	58516	58265	58258	0.45	cps
Molybdenum	94-1	6493119	6513111	6474162	6493464	0.30	cps
Molybdenum	95-1	11410017	11271683	11388123	11356608	0.65	cps
Molybdenum	96-1	12267881	12048068	12213144	12176365	0.94	cps
Molybdenum	97-1	7253589	7153522	7202274	7203128	0.69	cps
Molybdenum	98-1	18412006	18478283	18584976	18491755	0.47	cps
Nickel	60-2	44347	45056	44738	44714	0.79	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	ICSAB	Instrumnet Name :	P7
Client Sample ID :	ICSAB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:41:01	DataFile Name :	014ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	561518	568274	553424	561072	1.33	cps
Potassium	39-2	25756397	25696746	25575933	25676359	0.36	cps
Rhodium	103-2	1415939	1418917	1428389	1421082	0.46	cps
Rhodium	103-1	2863143	2852717	2876703	2864188	0.42	cps
Scandium	45-1	2134746	2090198	2114142	2113028	1.06	cps
Scandium	45-2	96442	96864	96274	96527	0.32	cps
Selenium	82-1	3434	3184	3801	3473	8.93	cps
Selenium	77-2	157	173	153	161	6.65	cps
Selenium	78-2	554	591	593	579	3.79	cps
Silicon	28-1	388103	387761	392432	389432	0.67	cps
Silver	107-1	251153	251208	255117	252493	0.90	cps
Silver	109-1	243123	245149	244538	244270	0.43	cps
Sodium	23-2	50882998	51560338	51277146	51240161	0.66	cps
Strontium	86-1	126831	128193	129994	128339	1.24	cps
Strontium	88-1	1105266	1113978	1109113	1109453	0.39	cps
Sulfur	34-1	4745766	4670664	4747170	4721200	0.93	cps
Terbium	159-1	4176372	4155235	4166752	4166120	0.25	cps
Terbium	159-2	2042924	2040638	2049894	2044486	0.24	cps
Thallium	203-1	218160	218222	218536	218306	0.09	cps
Thallium	205-1	529225	531949	533886	531687	0.44	cps
Tin	118-1	2017	2142	1967	2042	4.42	cps
Titanium	47-1	3336492	3347471	3418602	3367522	1.32	cps
Uranium	238-1	1292	1375	1283	1317	3.85	cps
Vanadium	51-2	63814	63536	64179	63843	0.50	cps
Yttrium	89-1	3468561	3456040	3443549	3456050	0.36	cps
Yttrium	89-2	485436	491693	490164	489098	0.67	cps
Zinc	66-2	18438	18979	19440	18953	2.64	cps
Zirconium	90-1	958	925	1075	986	7.99	cps
Zirconium	91-1	200	333	250	261	25.80	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCV081	Instrumnet Name :	P7
Client Sample ID :	CCV081	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:44:03	DataFile Name :	015CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1071256	1072926	1076421	1073534	0.25	cps
Antimony	121-1	5901209	5872634	5869756	5881200	0.30	cps
Arsenic	75-2	200597	201741	201831	201390	0.34	cps
Barium	135-1	7212499	7254926	7225453	7230960	0.30	cps
Barium	137-1	12357138	12427919	12351932	12378996	0.34	cps
Beryllium	9-1	747305	742664	741187	743719	0.43	cps
Bismuth	209-1	2567374	2602306	2614853	2594844	0.95	cps
Bismuth	209-2	1395375	1425977	1404611	1408655	1.11	cps
Boron	10-1	94955	98319	101968	98414	3.56	cps
Boron	11-1	472703	487373	505460	488512	3.36	cps
Cadmium	111-1	1383502	1383899	1381134	1382845	0.11	cps
Cadmium	106-1	149305	149229	149971	149502	0.27	cps
Cadmium	108-1	100835	100403	101313	100850	0.45	cps
Calcium	43-1	1855702	1822141	1843391	1840411	0.92	cps
Calcium	44-1	29737689	29641026	29639632	29672782	0.19	cps
Chromium	52-2	2030712	2052738	2010387	2031279	1.04	cps
Cobalt	59-2	3252379	3240977	3275671	3256342	0.54	cps
Copper	63-2	4738804	4754476	4705182	4732821	0.53	cps
Holmium	165-1	4059684	4064957	4069158	4064600	0.12	cps
Holmium	165-2	2016332	2035686	1992381	2014800	1.08	cps
Indium	115-2	546744	562303	550356	553134	1.47	cps
Indium	115-1	3007369	3044974	3034685	3029009	0.64	cps
Iron	56-2	79914768	79596985	79326824	79612859	0.37	cps
Iron	57-2	2021661	2047696	2015753	2028370	0.84	cps
Lead	206-1	4801164	4816196	4793557	4803639	0.24	cps
Lead	207-1	4190399	4199740	4199858	4196666	0.13	cps
Lead	208-1	18967490	19218515	19052061	19079356	0.67	cps
Lithium	6-1	264459	262915	265338	264237	0.46	cps
Magnesium	24-2	13875503	13841568	13977439	13898170	0.51	cps
Manganese	55-2	2131818	2123451	2142536	2132602	0.45	cps
Molybdenum	94-1	5598982	5585581	5571473	5585345	0.25	cps
Molybdenum	95-1	3033891	3039265	3036717	3036625	0.09	cps
Molybdenum	96-1	3838732	3857910	3847450	3848031	0.25	cps
Molybdenum	97-1	1924490	1928059	1911634	1921394	0.45	cps
Molybdenum	98-1	4972715	4928021	4907752	4936163	0.67	cps
Nickel	60-2	853460	848330	851396	851062	0.30	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCV081	Instrumnet Name :	P7
Client Sample ID :	CCV081	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:44:03	DataFile Name :	015CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	56934	57587	57646	57389	0.69	cps
Potassium	39-2	6622348	6622737	6649931	6631672	0.24	cps
Rhodium	103-2	1405858	1446068	1424857	1425594	1.41	cps
Rhodium	103-1	2933842	2936095	2938274	2936070	0.08	cps
Scandium	45-1	2127974	2144558	2140504	2137679	0.40	cps
Scandium	45-2	95609	99650	97438	97566	2.07	cps
Selenium	77-2	4027	4021	4107	4052	1.19	cps
Selenium	78-2	13916	13692	13894	13834	0.89	cps
Selenium	82-1	93069	93052	94269	93463	0.75	cps
Silicon	28-1	3647018	3556241	3556666	3586641	1.46	cps
Silver	109-1	6809357	6764958	6815685	6796667	0.41	cps
Silver	107-1	7008847	6923370	6995661	6975959	0.66	cps
Sodium	23-2	26188329	26220624	26430018	26279657	0.50	cps
Strontium	86-1	1978240	1986193	2007094	1990509	0.75	cps
Strontium	88-1	16892437	16997989	16861790	16917405	0.42	cps
Sulfur	34-1	855018	843482	836984	845161	1.08	cps
Terbium	159-1	4138090	4176710	4193975	4169592	0.69	cps
Terbium	159-2	1984122	2017975	1986042	1996047	0.95	cps
Thallium	203-1	5781758	5737199	5723590	5747516	0.53	cps
Thallium	205-1	13713867	13828320	13635351	13725846	0.71	cps
Tin	118-1	4922607	4876156	4938604	4912456	0.66	cps
Titanium	47-1	873661	875787	877205	875551	0.20	cps
Uranium	238-1	20432232	20685750	20445892	20521292	0.69	cps
Vanadium	51-2	1657754	1679982	1654857	1664197	0.83	cps
Yttrium	89-2	475560	481658	471778	476332	1.05	cps
Yttrium	89-1	3406932	3446834	3478261	3444009	1.04	cps
Zinc	66-2	597632	602561	602927	601040	0.49	cps
Zirconium	90-1	10360496	10370739	10452663	10394633	0.49	cps
Zirconium	91-1	2368926	2363651	2407150	2379909	1.00	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCB081	Instrumnet Name :	P7
Client Sample ID :	CCB081	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:46:52	DataFile Name :	016CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	158	292	233	228	29.34	cps
Antimony	121-1	3751	3842	3617	3737	3.03	cps
Arsenic	75-2	22	37	15	25	45.84	cps
Barium	135-1	250	258	267	258	3.23	cps
Barium	137-1	633	450	392	492	25.65	cps
Beryllium	9-1	89	106	144	113	25.24	cps
Bismuth	209-1	2674372	2665150	2668796	2669439	0.17	cps
Bismuth	209-2	1430342	1450292	1437509	1439381	0.70	cps
Boron	10-1	4793	4242	3801	4279	11.62	cps
Boron	11-1	22075	20256	18562	20298	8.66	cps
Cadmium	106-1	900	900	825	875	4.95	cps
Cadmium	108-1	17	13	17	15	15.76	cps
Cadmium	111-1	743	680	645	689	7.24	cps
Calcium	43-1	467	442	500	469	6.23	cps
Calcium	44-1	15008	15100	15359	15156	1.20	cps
Chromium	52-2	717	717	597	677	10.24	cps
Cobalt	59-2	143	187	177	169	13.43	cps
Copper	63-2	1600	1663	1707	1657	3.24	cps
Holmium	165-1	4025194	3985862	4033208	4014755	0.63	cps
Holmium	165-2	1948721	1956477	1939381	1948193	0.44	cps
Indium	115-2	573633	577613	568578	573275	0.79	cps
Indium	115-1	3148535	3138950	3143784	3143756	0.15	cps
Iron	56-2	12795	12539	12133	12489	2.67	cps
Iron	57-2	311	339	439	363	18.52	cps
Lead	206-1	1267	1411	1406	1361	6.01	cps
Lead	207-1	1133	1167	1145	1148	1.48	cps
Lead	208-1	5234	5645	5640	5506	4.28	cps
Lithium	6-1	262749	266101	262122	263657	0.81	cps
Magnesium	24-2	1383	1175	1358	1306	8.71	cps
Manganese	55-2	113	180	157	150	22.55	cps
Molybdenum	94-1	533	742	717	664	17.14	cps
Molybdenum	95-1	692	717	650	686	4.91	cps
Molybdenum	96-1	792	742	775	769	3.31	cps
Molybdenum	97-1	450	558	417	475	15.59	cps
Molybdenum	98-1	1208	1033	1275	1172	10.65	cps
Nickel	60-2	120	93	120	111	13.85	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCB081	Instrumnet Name :	P7
Client Sample ID :	CCB081	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:46:52	DataFile Name :	016CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	175	150	142	156	11.15	cps
Potassium	39-2	24880	24705	24045	24543	1.79	cps
Rhodium	103-2	1454791	1456953	1438250	1449998	0.71	cps
Rhodium	103-1	3046590	3004310	2987314	3012738	1.01	cps
Scandium	45-1	2104499	2087617	2066033	2086050	0.92	cps
Scandium	45-2	93228	93020	92010	92752	0.70	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	65	74	74	71	7.53	cps
Selenium	82-1	17	-8	-92	-28	-204.23	cps
Silicon	28-1	213633	211238	210199	211690	0.83	cps
Silver	107-1	542	500	583	542	7.69	cps
Silver	109-1	650	417	558	542	21.70	cps
Sodium	23-2	22342	22418	22651	22470	0.72	cps
Strontium	86-1	608	575	625	603	4.22	cps
Strontium	88-1	733	717	833	761	8.29	cps
Sulfur	34-1	298442	296965	294868	296758	0.61	cps
Terbium	159-1	4094628	4097442	4119538	4103869	0.33	cps
Terbium	159-2	1973674	1964947	1936905	1958509	0.98	cps
Thallium	203-1	908	983	733	875	14.66	cps
Thallium	205-1	1992	1892	1909	1931	2.78	cps
Tin	118-1	1192	1017	1317	1175	12.83	cps
Titanium	47-1	150	217	192	186	18.10	cps
Uranium	238-1	925	833	858	872	5.43	cps
Vanadium	51-2	93	100	80	91	11.18	cps
Yttrium	89-2	470479	469953	468237	469556	0.25	cps
Yttrium	89-1	3434658	3405640	3377687	3405995	0.84	cps
Zinc	66-2	160	160	227	182	21.12	cps
Zirconium	90-1	917	992	892	933	5.58	cps
Zirconium	91-1	283	217	242	247	13.62	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90341BL	Instrumnet Name :	P7
Client Sample ID :	PBS008	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:51:28	DataFile Name :	017CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	92	117	175	128	33.47	cps
Antimony	121-1	975	1075	1283	1111	14.16	cps
Arsenic	75-2	9	7	4	7	41.70	cps
Barium	135-1	158	67	75	100	50.69	cps
Barium	137-1	133	142	125	133	6.25	cps
Beryllium	9-1	89	83	106	93	12.49	cps
Bismuth	209-1	2633071	2599560	2555868	2596166	1.49	cps
Bismuth	209-2	1425945	1436745	1437005	1433232	0.44	cps
Boron	10-1	1342	1175	1150	1222	8.53	cps
Boron	11-1	6185	6360	6160	6235	1.75	cps
Cadmium	111-1	643	650	680	658	2.99	cps
Cadmium	106-1	883	925	950	920	3.66	cps
Cadmium	108-1	13	8	8	10	24.77	cps
Calcium	43-1	475	433	342	417	16.37	cps
Calcium	44-1	13056	12939	13131	13042	0.74	cps
Chromium	52-2	1397	1303	1233	1311	6.25	cps
Cobalt	59-2	50	80	70	67	22.91	cps
Copper	63-2	1030	1213	1183	1142	8.61	cps
Holmium	165-2	1940468	1962523	1940003	1947665	0.66	cps
Holmium	165-1	3965809	3941002	3953284	3953365	0.31	cps
Indium	115-1	3067959	3088631	3065301	3073963	0.42	cps
Indium	115-2	565544	568695	570203	568147	0.42	cps
Iron	56-2	6513	6513	6424	6483	0.79	cps
Iron	57-2	178	144	178	167	11.55	cps
Lead	206-1	1067	1195	1111	1124	5.77	cps
Lead	207-1	1078	1061	1067	1069	0.79	cps
Lead	208-1	4706	4845	4784	4778	1.46	cps
Lithium	6-1	263832	262418	264557	263602	0.41	cps
Magnesium	24-2	517	750	575	614	19.78	cps
Manganese	55-2	83	67	83	78	12.37	cps
Molybdenum	94-1	425	208	258	297	38.17	cps
Molybdenum	95-1	258	200	208	222	14.20	cps
Molybdenum	96-1	233	317	292	281	15.24	cps
Molybdenum	97-1	150	217	225	197	20.84	cps
Molybdenum	98-1	483	442	325	417	19.70	cps
Nickel	60-2	67	87	103	86	21.46	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90341BL	Instrumnet Name :	P7
Client Sample ID :	PBS008	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:51:28	DataFile Name :	017CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	117	150	117	128	15.06	cps
Potassium	39-2	22726	23085	22701	22838	0.94	cps
Rhodium	103-2	1433342	1432451	1441092	1435628	0.33	cps
Rhodium	103-1	2962542	2909427	2928823	2933597	0.92	cps
Scandium	45-1	2038589	2027626	2062464	2042893	0.87	cps
Scandium	45-2	90840	90947	91893	91226	0.64	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	63	52	65	60	11.71	cps
Selenium	82-1	-33	-42	67	-3	-2173.99	cps
Silicon	28-1	203342	203988	206864	204731	0.92	cps
Silver	109-1	242	233	292	256	12.34	cps
Silver	107-1	350	217	350	306	25.19	cps
Sodium	23-2	18262	18212	19230	18568	3.09	cps
Strontium	86-1	692	675	758	708	6.23	cps
Strontium	88-1	225	292	292	269	14.29	cps
Sulfur	34-1	295068	295461	295443	295324	0.08	cps
Terbium	159-1	4011707	4068889	4048592	4043063	0.72	cps
Terbium	159-2	1915101	1933090	1938514	1928902	0.64	cps
Thallium	203-1	375	408	350	378	7.75	cps
Thallium	205-1	833	808	717	786	7.81	cps
Tin	118-1	883	958	933	925	4.13	cps
Titanium	47-1	117	117	108	114	4.22	cps
Uranium	238-1	192	192	100	161	32.85	cps
Vanadium	51-2	20	33	23	26	27.15	cps
Yttrium	89-2	463340	460799	460929	461689	0.31	cps
Yttrium	89-1	3353503	3294389	3295258	3314383	1.02	cps
Zinc	66-2	107	87	87	93	12.37	cps
Zirconium	90-1	500	550	475	508	7.51	cps
Zirconium	91-1	117	117	58	97	34.64	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90341BS	Instrumnet Name :	P7
Client Sample ID :	LCS008	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:54:31	DataFile Name :	018LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4576	4092	4167	4279	6.08	cps
Antimony	121-1	42649	42624	43586	42953	1.28	cps
Arsenic	75-2	839	754	839	811	6.07	cps
Barium	135-1	54173	53713	52533	53473	1.58	cps
Barium	137-1	93808	90906	91786	92167	1.61	cps
Beryllium	9-1	2995	3028	2789	2937	4.40	cps
Bismuth	209-1	2640754	2637830	2636741	2638441	0.08	cps
Bismuth	209-2	1446485	1450200	1445195	1447294	0.18	cps
Boron	10-1	4476	4659	4701	4612	2.60	cps
Boron	11-1	21324	22826	21958	22036	3.42	cps
Cadmium	106-1	1575	1608	1242	1475	13.75	cps
Cadmium	108-1	358	375	413	382	7.27	cps
Cadmium	111-1	6124	6106	5782	6004	3.21	cps
Calcium	43-1	33146	33397	33506	33350	0.55	cps
Calcium	44-1	558908	555892	553349	556050	0.50	cps
Chromium	52-2	16816	16716	16830	16788	0.37	cps
Cobalt	59-2	12055	12199	12015	12090	0.80	cps
Copper	63-2	19466	18699	19063	19076	2.01	cps
Holmium	165-1	4025349	3943147	3963587	3977361	1.08	cps
Holmium	165-2	1980471	1979504	1964532	1974836	0.45	cps
Indium	115-2	576847	572889	575058	574932	0.34	cps
Indium	115-1	3060298	3075027	3115273	3083533	0.92	cps
Iron	56-2	1283421	1280709	1295607	1286579	0.62	cps
Iron	57-2	32358	31456	31390	31735	1.71	cps
Lead	206-1	18830	19003	18652	18829	0.93	cps
Lead	207-1	16333	15977	16466	16258	1.56	cps
Lead	208-1	74856	74021	75034	74637	0.72	cps
Lithium	6-1	268865	264940	267865	267224	0.76	cps
Magnesium	24-2	258806	259179	257304	258429	0.38	cps
Manganese	55-2	4161	4101	4031	4097	1.59	cps
Molybdenum	94-1	45307	45381	45456	45381	0.16	cps
Molybdenum	95-1	54714	56479	56279	55824	1.73	cps
Molybdenum	96-1	62973	61943	62345	62420	0.83	cps
Molybdenum	97-1	36239	35420	34785	35481	2.05	cps
Molybdenum	98-1	90478	91200	90763	90814	0.40	cps
Nickel	60-2	3574	3374	3561	3503	3.19	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90341BS	Instrumnet Name :	P7
Client Sample ID :	LCS008	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:54:31	DataFile Name :	018LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	650	725	617	664	8.36	cps
Potassium	39-2	263976	264298	264892	264389	0.18	cps
Rhodium	103-2	1465336	1448745	1452980	1455687	0.59	cps
Rhodium	103-1	2969856	3001019	2948606	2973161	0.89	cps
Scandium	45-1	2041348	2049338	2042439	2044375	0.21	cps
Scandium	45-2	93328	92989	92567	92961	0.41	cps
Selenium	77-2	80	87	103	90	13.36	cps
Selenium	78-2	281	317	337	312	9.01	cps
Selenium	82-1	2000	1967	1500	1822	15.34	cps
Silicon	28-1	334730	335933	336679	335781	0.29	cps
Silver	109-1	31052	30008	29381	30147	2.80	cps
Silver	107-1	31653	32138	32614	32135	1.50	cps
Sodium	23-2	500071	498326	503380	500592	0.51	cps
Strontium	86-1	7761	7786	7928	7825	1.15	cps
Strontium	88-1	63207	64161	62211	63193	1.54	cps
Sulfur	34-1	293727	301115	294837	296560	1.34	cps
Terbium	159-1	4077189	4118360	4054383	4083311	0.79	cps
Terbium	159-2	1995855	1947290	1977698	1973614	1.24	cps
Thallium	203-1	22445	22537	22261	22414	0.63	cps
Thallium	205-1	53793	55702	54362	54619	1.79	cps
Tin	118-1	91078	91422	91229	91243	0.19	cps
Titanium	47-1	16435	16076	15817	16109	1.92	cps
Uranium	238-1	73358	74933	74623	74305	1.12	cps
Vanadium	51-2	30615	30649	30843	30702	0.40	cps
Yttrium	89-2	471974	467172	468963	469370	0.52	cps
Yttrium	89-1	3299402	3363281	3319619	3327434	0.98	cps
Zinc	66-2	2487	2410	2524	2474	2.34	cps
Zirconium	90-1	36339	36155	36447	36314	0.41	cps
Zirconium	91-1	7636	7878	7436	7650	2.89	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90375BL	Instrumnet Name :	P7
Client Sample ID :	PBW007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:57:35	DataFile Name :	019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	75	83	83	81	5.98	cps
Antimony	121-1	425	542	425	464	14.52	cps
Arsenic	75-2	2	7	2	4	86.68	cps
Barium	135-1	17	42	42	33	43.30	cps
Barium	137-1	58	83	100	81	26.03	cps
Beryllium	9-1	72	44	67	61	24.05	cps
Bismuth	209-1	2647584	2600578	2597370	2615177	1.07	cps
Bismuth	209-2	1449947	1441680	1450221	1447283	0.34	cps
Boron	10-1	808	858	867	845	3.74	cps
Boron	11-1	4134	4009	3901	4015	2.91	cps
Cadmium	111-1	634	537	555	576	8.96	cps
Cadmium	106-1	867	750	800	806	7.27	cps
Cadmium	108-1	8	13	13	11	21.67	cps
Calcium	43-1	250	417	417	361	26.65	cps
Calcium	44-1	13165	12564	12064	12598	4.38	cps
Chromium	52-2	1277	1313	1243	1278	2.74	cps
Cobalt	59-2	83	60	63	69	18.32	cps
Copper	63-2	970	950	970	963	1.20	cps
Holmium	165-1	3972364	3909574	3924597	3935512	0.83	cps
Holmium	165-2	1997126	1964121	1979468	1980238	0.83	cps
Indium	115-2	577676	570842	566171	571563	1.01	cps
Indium	115-1	3110455	3100426	3088682	3099854	0.35	cps
Iron	56-2	5262	5179	5018	5153	2.41	cps
Iron	57-2	111	139	111	120	13.32	cps
Lead	206-1	1156	978	1056	1063	8.38	cps
Lead	207-1	922	956	956	945	2.04	cps
Lead	208-1	4289	4184	4367	4280	2.15	cps
Lithium	6-1	264969	261199	264246	263472	0.76	cps
Magnesium	24-2	583	608	683	625	8.33	cps
Manganese	55-2	70	67	83	73	12.02	cps
Molybdenum	94-1	325	275	275	292	9.90	cps
Molybdenum	95-1	75	117	108	100	22.05	cps
Molybdenum	96-1	133	175	192	167	18.03	cps
Molybdenum	97-1	75	50	58	61	20.83	cps
Molybdenum	98-1	175	150	192	172	12.18	cps
Nickel	60-2	107	93	97	99	7.02	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90375BL	Instrumnet Name :	P7
Client Sample ID :	PBW007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 14:57:35	DataFile Name :	019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	83	83	100	89	10.82	cps
Potassium	39-2	21625	21199	21358	21394	1.01	cps
Rhodium	103-1	2950157	2942403	2937771	2943444	0.21	cps
Rhodium	103-2	1446525	1447584	1441812	1445307	0.21	cps
Scandium	45-1	2033009	2007337	2018095	2019480	0.64	cps
Scandium	45-2	92832	90829	92393	92018	1.14	cps
Selenium	82-1	0	-58	192	44	294.32	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	63	67	69	66	4.29	cps
Silicon	28-1	204770	203890	201863	203508	0.73	cps
Silver	109-1	133	183	125	147	21.43	cps
Silver	107-1	108	183	100	131	35.16	cps
Sodium	23-2	16485	17185	16443	16704	2.50	cps
Strontium	86-1	675	742	508	642	18.73	cps
Strontium	88-1	175	225	150	183	20.83	cps
Sulfur	34-1	293506	295791	294399	294565	0.39	cps
Terbium	159-1	4072052	3994355	4018360	4028255	0.99	cps
Terbium	159-2	1980550	1951960	1959064	1963858	0.76	cps
Thallium	203-1	275	258	208	247	14.03	cps
Thallium	205-1	550	600	575	575	4.35	cps
Tin	118-1	783	825	733	781	5.88	cps
Titanium	47-1	75	108	117	100	22.05	cps
Uranium	238-1	67	67	58	64	7.53	cps
Vanadium	51-2	23	20	10	18	39.03	cps
Yttrium	89-1	3360853	3316630	3302313	3326599	0.92	cps
Yttrium	89-2	467778	467029	466405	467070	0.15	cps
Zinc	66-2	83	117	63	88	30.70	cps
Zirconium	90-1	458	350	558	456	22.87	cps
Zirconium	91-1	100	92	67	86	20.14	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90375BS	Instrumnet Name :	P7
Client Sample ID :	LCS007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:00:39	DataFile Name :	020LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4342	3992	4284	4206	4.46	cps
Antimony	121-1	42482	43042	43753	43092	1.48	cps
Arsenic	75-2	720	761	694	725	4.63	cps
Barium	135-1	53880	53194	53479	53518	0.64	cps
Barium	137-1	93104	93540	92037	92894	0.83	cps
Beryllium	9-1	2817	2861	2845	2841	0.79	cps
Bismuth	209-1	2615445	2621044	2621376	2619289	0.13	cps
Bismuth	209-2	1457968	1459389	1458196	1458518	0.05	cps
Boron	10-1	3909	3967	4326	4067	5.55	cps
Boron	11-1	18428	20390	20974	19931	6.69	cps
Cadmium	106-1	1408	1517	1325	1417	6.78	cps
Cadmium	108-1	429	454	413	432	4.85	cps
Cadmium	111-1	5920	5820	5940	5893	1.09	cps
Calcium	43-1	32645	33531	32988	33055	1.35	cps
Calcium	44-1	555451	557332	549673	554152	0.72	cps
Chromium	52-2	16903	16553	16099	16518	2.44	cps
Cobalt	59-2	12065	12292	12249	12202	0.99	cps
Copper	63-2	18766	18639	18358	18588	1.12	cps
Holmium	165-1	3930788	3952643	3946054	3943162	0.28	cps
Holmium	165-2	1990316	1968250	2010009	1989525	1.05	cps
Indium	115-2	582379	578809	576449	579212	0.52	cps
Indium	115-1	3056882	3105942	3049599	3070808	1.00	cps
Iron	56-2	1295747	1278874	1286338	1286986	0.66	cps
Iron	57-2	31612	32442	32208	32087	1.33	cps
Lead	206-1	18981	18391	18714	18695	1.58	cps
Lead	207-1	16433	16299	16500	16411	0.62	cps
Lead	208-1	74761	74824	74734	74773	0.06	cps
Lithium	6-1	259924	262848	263819	262197	0.77	cps
Magnesium	24-2	255990	255101	254111	255067	0.37	cps
Manganese	55-2	3741	4197	4211	4050	6.61	cps
Molybdenum	97-1	35980	35370	34434	35261	2.21	cps
Molybdenum	98-1	88835	89631	90277	89581	0.81	cps
Molybdenum	94-1	45114	45298	44203	44872	1.31	cps
Molybdenum	95-1	55141	56480	57149	56257	1.82	cps
Molybdenum	96-1	64279	62454	61542	62758	2.22	cps
Nickel	60-2	3574	3557	3501	3544	1.08	cps

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	PB90375BS	Instrumnet Name :	P7
Client Sample ID :	LCS007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:00:39	DataFile Name :	020LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	700	667	633	667	5.00	cps
Potassium	39-2	264381	260304	261990	262225	0.78	cps
Rhodium	103-1	2925616	2958686	2942686	2942329	0.56	cps
Rhodium	103-2	1465193	1488330	1464813	1472778	0.91	cps
Scandium	45-2	93667	92430	93167	93088	0.67	cps
Scandium	45-1	2017805	2057081	2014126	2029670	1.17	cps
Selenium	82-1	1742	1942	1809	1831	5.56	cps
Selenium	77-2	60	87	100	82	24.77	cps
Selenium	78-2	346	337	367	350	4.33	cps
Silicon	28-1	335434	333126	332929	333830	0.42	cps
Silver	107-1	31611	31561	31194	31455	0.73	cps
Silver	109-1	29473	29832	29749	29685	0.63	cps
Sodium	23-2	498643	492253	489387	493427	0.96	cps
Strontium	86-1	7852	7661	7978	7830	2.04	cps
Strontium	88-1	63567	62395	62110	62691	1.23	cps
Sulfur	34-1	285370	287254	286039	286221	0.33	cps
Terbium	159-1	4043859	4049497	4071823	4055060	0.36	cps
Terbium	159-2	1985377	1958850	1982637	1975621	0.74	cps
Thallium	203-1	22854	21952	22036	22281	2.24	cps
Thallium	205-1	54664	53224	54028	53972	1.34	cps
Tin	118-1	90977	91900	90985	91287	0.58	cps
Titanium	47-1	15842	15943	16176	15987	1.07	cps
Uranium	238-1	74347	72629	74313	73763	1.33	cps
Vanadium	51-2	30846	30625	30462	30644	0.63	cps
Yttrium	89-2	472837	470620	470248	471235	0.30	cps
Yttrium	89-1	3327621	3347898	3265065	3313528	1.30	cps
Zinc	66-2	2397	2374	2284	2351	2.55	cps
Zirconium	90-1	36882	35729	34819	35810	2.89	cps
Zirconium	91-1	7986	7986	7961	7978	0.18	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-01	Instrumnet Name :	P7
Client Sample ID :	MH4002	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:03:42	DataFile Name :	021SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	667	500	475	547	19.04	cps
Antimony	121-1	9087	8820	8178	8695	5.37	cps
Arsenic	75-2	257	252	252	254	1.26	cps
Barium	135-1	218526	217876	212857	216420	1.43	cps
Barium	137-1	370547	369068	365219	368278	0.75	cps
Beryllium	9-1	61	44	56	54	15.80	cps
Bismuth	209-1	2824410	2817402	2715258	2785690	2.19	cps
Bismuth	209-2	1514024	1503982	1504332	1507446	0.38	cps
Boron	10-1	15550	16109	16668	16109	3.47	cps
Boron	11-1	76510	78914	81553	78992	3.19	cps
Cadmium	108-1	8	13	8	10	24.77	cps
Cadmium	111-1	789	833	783	802	3.42	cps
Cadmium	106-1	892	1000	942	945	5.74	cps
Calcium	43-1	5537070	5447796	5376988	5453951	1.47	cps
Calcium	44-1	90185404	89273706	87947510	89135540	1.26	cps
Chromium	52-2	5121	5201	5271	5198	1.44	cps
Cobalt	59-2	317	247	293	286	12.48	cps
Copper	63-2	40205	39804	39437	39815	0.97	cps
Holmium	165-2	2194854	2196097	2179801	2190250	0.41	cps
Holmium	165-1	4557813	4520482	4402143	4493479	1.81	cps
Indium	115-1	3463417	3472260	3383888	3439855	1.41	cps
Indium	115-2	626810	624678	621698	624395	0.41	cps
Iron	56-2	1372188	1333808	1337399	1347798	1.57	cps
Iron	57-2	34753	34780	33478	34337	2.17	cps
Lead	206-1	8442	8514	8136	8364	2.40	cps
Lead	207-1	6952	6924	6552	6809	3.28	cps
Lead	208-1	32327	32911	31760	32333	1.78	cps
Lithium	6-1	299541	299256	295964	298253	0.67	cps
Magnesium	24-2	14449149	14289421	14355449	14364673	0.56	cps
Manganese	55-2	20491	20665	20768	20641	0.68	cps
Molybdenum	94-1	1909	2000	2134	2014	5.62	cps
Molybdenum	95-1	2600	2342	2709	2550	7.39	cps
Molybdenum	96-1	2725	2859	3059	2881	5.83	cps
Molybdenum	97-1	1867	1759	1717	1781	4.35	cps
Molybdenum	98-1	4384	4201	4034	4206	4.16	cps
Nickel	60-2	657	620	573	617	6.77	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-01	Instrumnet Name :	P7
Client Sample ID :	MH4002	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:03:42	DataFile Name :	021SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	167	150	225	181	21.81	cps
Potassium	39-2	691816	694053	689932	691934	0.30	cps
Rhodium	103-1	3202007	3221602	3134369	3185993	1.44	cps
Rhodium	103-2	1560653	1554494	1541621	1552256	0.63	cps
Scandium	45-2	103529	103099	101639	102756	0.96	cps
Scandium	45-1	2423618	2381966	2342878	2382821	1.69	cps
Selenium	82-1	158	108	258	175	43.64	cps
Selenium	77-2	3	3	3	3	0.00	cps
Selenium	78-2	80	98	65	81	20.65	cps
Silicon	28-1	58050383	57373916	57117568	57513955	0.84	cps
Silver	107-1	2650	3284	3726	3220	16.79	cps
Silver	109-1	2742	2900	2950	2864	3.80	cps
Sodium	23-2	70737597	69961383	69978754	70225911	0.63	cps
Strontium	86-1	4552737	4547167	4498884	4532929	0.65	cps
Strontium	88-1	38984624	38825755	38551755	38787378	0.56	cps
Sulfur	34-1	1908658	1899950	1872057	1893555	1.01	cps
Terbium	159-1	4657094	4595832	4534386	4595771	1.34	cps
Terbium	159-2	2189270	2147897	2133438	2156868	1.34	cps
Thallium	203-1	1592	1917	2125	1878	14.31	cps
Thallium	205-1	3784	4734	5418	4646	17.66	cps
Tin	118-1	2392	2325	2350	2356	1.43	cps
Titanium	47-1	858	892	817	856	4.39	cps
Uranium	238-1	56114	56649	57118	56627	0.89	cps
Vanadium	51-2	5661	5348	5338	5449	3.38	cps
Yttrium	89-1	3851055	3798257	3719222	3789512	1.75	cps
Yttrium	89-2	522172	519862	512094	518042	1.02	cps
Zinc	66-2	91035	91810	90086	90977	0.95	cps
Zirconium	90-1	1342	1050	1008	1133	16.03	cps
Zirconium	91-1	308	292	200	267	21.88	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-02	Instrumnet Name :	P7
Client Sample ID :	MH4002D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:06:43	DataFile Name :	022SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	475	458	533	489	8.06	cps
Antimony	121-1	5376	5510	5218	5368	2.72	cps
Arsenic	75-2	267	293	256	272	7.00	cps
Barium	137-1	372618	374767	374327	373904	0.30	cps
Barium	135-1	219532	215657	216300	217163	0.96	cps
Beryllium	9-1	28	61	44	44	37.49	cps
Bismuth	209-1	2797432	2773343	2764158	2778311	0.62	cps
Bismuth	209-2	1487438	1496273	1497439	1493717	0.37	cps
Boron	10-1	16535	17035	16676	16749	1.54	cps
Boron	11-1	78471	80723	83463	80886	3.09	cps
Cadmium	111-1	802	814	732	783	5.63	cps
Cadmium	106-1	975	1017	875	956	7.62	cps
Cadmium	108-1	8	21	38	22	65.86	cps
Calcium	43-1	5402069	5382820	5408871	5397920	0.25	cps
Calcium	44-1	88397327	88395344	87537367	88110012	0.56	cps
Chromium	52-2	5408	5358	5088	5284	3.26	cps
Cobalt	59-2	277	250	237	254	8.00	cps
Copper	63-2	40092	40483	40670	40415	0.73	cps
Holmium	165-1	4469476	4450661	4437529	4452555	0.36	cps
Holmium	165-2	2153291	2144214	2176445	2157983	0.77	cps
Indium	115-2	616753	617019	621029	618267	0.39	cps
Indium	115-1	3425693	3383275	3412561	3407176	0.64	cps
Iron	56-2	1345723	1337410	1340402	1341178	0.31	cps
Iron	57-2	34313	34257	34664	34411	0.64	cps
Lead	206-1	8342	7625	7886	7951	4.56	cps
Lead	207-1	6302	6785	6385	6491	3.98	cps
Lead	208-1	31399	30815	30759	30991	1.14	cps
Lithium	6-1	299631	299664	298618	299305	0.20	cps
Magnesium	24-2	14258039	14195211	14172929	14208727	0.31	cps
Manganese	55-2	19977	20471	20518	20322	1.47	cps
Molybdenum	94-1	1909	2092	1909	1970	5.37	cps
Molybdenum	95-1	2459	2709	2484	2550	5.40	cps
Molybdenum	96-1	2842	3075	2834	2917	4.70	cps
Molybdenum	97-1	1625	1709	1684	1672	2.56	cps
Molybdenum	98-1	4259	4384	4001	4215	4.64	cps
Nickel	60-2	603	570	563	579	3.70	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-02	Instrumnet Name :	P7
Client Sample ID :	MH4002D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:06:43	DataFile Name :	022SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	83	175	192	150	38.89	cps
Potassium	39-2	679511	678386	675213	677703	0.33	cps
Rhodium	103-2	1534795	1519129	1523748	1525890	0.53	cps
Rhodium	103-1	3148724	3180181	3133049	3153985	0.76	cps
Scandium	45-1	2333142	2316916	2300247	2316768	0.71	cps
Scandium	45-2	100760	100690	100813	100754	0.06	cps
Selenium	77-2	0	10	0	3	173.21	cps
Selenium	78-2	83	106	78	89	16.54	cps
Selenium	82-1	92	225	200	172	41.15	cps
Silicon	28-1	56516343	56654720	56591047	56587370	0.12	cps
Silver	109-1	2967	3351	3467	3262	8.02	cps
Silver	107-1	2825	3559	3642	3342	13.45	cps
Sodium	23-2	69875222	69507327	69715029	69699193	0.26	cps
Strontium	86-1	4546772	4553577	4502226	4534192	0.62	cps
Strontium	88-1	38605622	38978039	38069001	38550887	1.19	cps
Sulfur	34-1	1865553	1888543	1844875	1866324	1.17	cps
Terbium	159-2	2123285	2110391	2157290	2130322	1.14	cps
Terbium	159-1	4544452	4576637	4534157	4551749	0.49	cps
Thallium	203-1	725	808	842	792	7.59	cps
Thallium	205-1	1500	2117	2250	1956	20.46	cps
Tin	118-1	1742	1809	2459	2003	19.79	cps
Titanium	47-1	825	892	833	850	4.27	cps
Uranium	238-1	59001	57830	57654	58162	1.26	cps
Vanadium	51-2	5504	5374	5518	5466	1.45	cps
Yttrium	89-2	510023	509949	509981	509984	0.01	cps
Yttrium	89-1	3791834	3748498	3710727	3750353	1.08	cps
Zinc	66-2	90150	90468	90055	90224	0.24	cps
Zirconium	90-1	1042	1033	850	975	11.11	cps
Zirconium	91-1	225	225	158	203	18.98	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-01LX5	Instrumnet Name :	P7
Client Sample ID :	MH4002L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-06 15:09:45	DataFile Name :	023SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	150	125	142	139	9.17	cps
Antimony	121-1	642	708	733	694	6.82	cps
Arsenic	75-2	39	44	50	44	12.50	cps
Barium	135-1	39566	39356	40243	39722	1.17	cps
Barium	137-1	66911	67783	67958	67551	0.83	cps
Beryllium	9-1	56	56	50	54	5.98	cps
Bismuth	209-1	2651585	2625898	2667364	2648282	0.79	cps
Bismuth	209-2	1485013	1471666	1485093	1480591	0.52	cps
Boron	10-1	4067	4017	3967	4017	1.24	cps
Boron	11-1	20798	19981	19847	20209	2.55	cps
Cadmium	111-1	704	688	669	687	2.58	cps
Cadmium	106-1	958	958	942	953	1.01	cps
Cadmium	108-1	0	0	4	1	173.21	cps
Calcium	43-1	961759	959463	964659	961960	0.27	cps
Calcium	44-1	15782890	15786729	15790355	15786658	0.02	cps
Chromium	52-2	2107	2050	2094	2084	1.42	cps
Cobalt	59-2	57	103	73	78	30.41	cps
Copper	63-2	9743	9613	9256	9538	2.64	cps
Holmium	165-2	2050705	2027867	2074955	2051176	1.15	cps
Holmium	165-1	4109695	4055052	4155416	4106721	1.22	cps
Indium	115-1	3185677	3192540	3181984	3186734	0.17	cps
Indium	115-2	593222	592016	591134	592124	0.18	cps
Iron	56-2	253976	256986	254624	255195	0.62	cps
Iron	57-2	6285	6407	6679	6457	3.13	cps
Lead	206-1	1595	1545	1667	1602	3.84	cps
Lead	207-1	1233	1433	1256	1308	8.38	cps
Lead	208-1	6340	6551	6195	6362	2.81	cps
Lithium	6-1	271023	267478	271310	269937	0.79	cps
Magnesium	24-2	2645443	2651601	2674731	2657259	0.58	cps
Manganese	55-2	3904	3781	3904	3863	1.84	cps
Molybdenum	94-1	442	342	383	389	12.92	cps
Molybdenum	95-1	508	483	558	517	7.39	cps
Molybdenum	96-1	783	617	600	667	15.21	cps
Molybdenum	97-1	358	300	392	350	13.26	cps
Molybdenum	98-1	867	892	867	875	1.65	cps
Nickel	60-2	167	190	153	170	10.92	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-01LX5	Instrumnet Name :	P7
Client Sample ID :	MH4002L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-06 15:09:45	DataFile Name :	023SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	150	42	150	114	54.92	cps
Potassium	39-2	142514	144126	142847	143162	0.59	cps
Rhodium	103-2	1489650	1479650	1479159	1482820	0.40	cps
Rhodium	103-1	2993664	2999909	2977307	2990293	0.39	cps
Scandium	45-1	2122293	2125317	2123008	2123539	0.07	cps
Scandium	45-2	94697	95459	96257	95471	0.82	cps
Selenium	77-2	0	7	3	3	100.05	cps
Selenium	78-2	65	63	48	59	15.58	cps
Selenium	82-1	75	92	25	64	54.31	cps
Silicon	28-1	10236205	10238356	10274714	10249758	0.21	cps
Silver	109-1	633	667	725	675	6.87	cps
Silver	107-1	650	825	667	714	13.53	cps
Sodium	23-2	12783902	12844900	12857332	12828711	0.31	cps
Strontium	86-1	796029	798688	795197	796638	0.23	cps
Strontium	88-1	6992964	7034570	6953639	6993724	0.58	cps
Sulfur	34-1	647313	651159	653553	650675	0.48	cps
Terbium	159-1	4178804	4196788	4192415	4189336	0.22	cps
Terbium	159-2	2049582	2019685	2037978	2035749	0.74	cps
Thallium	203-1	158	175	200	178	11.80	cps
Thallium	205-1	417	325	375	372	12.33	cps
Tin	118-1	1033	917	775	908	14.24	cps
Titanium	47-1	250	192	192	211	15.95	cps
Uranium	238-1	10304	10321	10772	10466	2.53	cps
Vanadium	51-2	983	1150	1070	1068	7.81	cps
Yttrium	89-2	486528	480828	487639	484999	0.75	cps
Yttrium	89-1	3481635	3495676	3444644	3473985	0.76	cps
Zinc	66-2	17247	17641	17270	17386	1.27	cps
Zirconium	90-1	458	592	442	497	16.53	cps
Zirconium	91-1	117	58	100	92	32.77	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-03	Instrumnet Name :	P7
Client Sample ID :	MH4002S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:12:48	DataFile Name :	024SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	239392	235704	234724	236607	1.04	cps
Antimony	121-1	1398521	1378143	1388434	1388366	0.73	cps
Arsenic	75-2	18953	19066	19087	19035	0.38	cps
Barium	135-1	7141258	7099112	7109711	7116694	0.31	cps
Barium	137-1	12150066	12114343	12136287	12133565	0.15	cps
Beryllium	9-1	92005	90044	89384	90478	1.51	cps
Bismuth	209-2	1499600	1493034	1481606	1491414	0.61	cps
Bismuth	209-1	2788744	2822326	2751930	2787667	1.26	cps
Boron	10-1	15108	16176	16176	15820	3.90	cps
Boron	11-1	76259	78621	78286	77722	1.64	cps
Cadmium	111-1	164694	161109	162524	162776	1.11	cps
Cadmium	106-1	16160	16210	14725	15698	5.37	cps
Cadmium	108-1	10846	10696	10567	10703	1.31	cps
Calcium	43-1	5372842	5348093	5340039	5353658	0.32	cps
Calcium	44-1	87651146	86804789	86935069	87130335	0.52	cps
Chromium	52-2	894538	896762	890409	893903	0.36	cps
Cobalt	59-2	3734361	3716269	3674439	3708356	0.83	cps
Copper	63-2	1360816	1353247	1360694	1358252	0.32	cps
Holmium	165-2	2155395	2152417	2146017	2151276	0.22	cps
Holmium	165-1	4494161	4476363	4345035	4438520	1.84	cps
Indium	115-1	3396683	3402972	3360522	3386726	0.68	cps
Indium	115-2	611831	609921	607366	609706	0.37	cps
Iron	56-2	4949033	4978432	4917871	4948445	0.61	cps
Iron	57-2	123946	123375	123671	123664	0.23	cps
Lead	206-1	233974	228418	227828	230073	1.47	cps
Lead	207-1	206169	203709	205237	205038	0.61	cps
Lead	208-1	935234	923727	921123	926695	0.81	cps
Lithium	6-1	305761	307183	303556	305500	0.60	cps
Magnesium	24-2	13849286	13882519	13691417	13807741	0.74	cps
Manganese	55-2	1205086	1201467	1192535	1199696	0.54	cps
Molybdenum	94-1	3175	3000	2925	3034	4.23	cps
Molybdenum	95-1	4718	4893	4518	4709	3.99	cps
Molybdenum	96-1	4976	5568	5243	5262	5.63	cps
Molybdenum	97-1	2925	2950	2984	2953	0.99	cps
Molybdenum	98-1	7477	7377	7436	7430	0.68	cps
Nickel	60-2	964366	958309	958847	960507	0.35	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-03	Instrumnet Name :	P7
Client Sample ID :	MH4002S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:12:48	DataFile Name :	024SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	83	142	125	117	25.75	cps
Potassium	39-2	661330	661398	651858	658195	0.83	cps
Rhodium	103-1	3179018	3123796	3031177	3111330	2.40	cps
Rhodium	103-2	1533018	1516376	1502810	1517401	1.00	cps
Scandium	45-1	2308824	2295400	2272504	2292243	0.80	cps
Scandium	45-2	98820	99092	98095	98669	0.52	cps
Selenium	82-1	23504	23145	23087	23245	0.97	cps
Selenium	77-2	950	973	1033	986	4.36	cps
Selenium	78-2	3212	3352	3376	3313	2.69	cps
Silicon	28-1	56106964	55357445	54937078	55467162	1.07	cps
Silver	109-1	777948	780322	768027	775432	0.84	cps
Silver	107-1	811512	807424	802558	807165	0.56	cps
Sodium	23-2	68474795	68058464	67505206	68012822	0.72	cps
Strontium	86-1	4506732	4468687	4475228	4483549	0.45	cps
Strontium	88-1	38450415	38105253	38379254	38311641	0.48	cps
Sulfur	34-1	1848910	1828585	1821389	1832961	0.78	cps
Terbium	159-2	2159917	2128451	2134254	2140874	0.78	cps
Terbium	159-1	4588972	4568948	4450690	4536203	1.65	cps
Thallium	203-1	667622	668057	663341	666340	0.39	cps
Thallium	205-1	1646495	1626708	1636824	1636676	0.60	cps
Tin	118-1	2267	2692	2392	2450	8.92	cps
Titanium	47-1	858	917	1100	958	13.16	cps
Uranium	238-1	58483	58868	59395	58915	0.78	cps
Vanadium	51-2	1891094	1907390	1900814	1899766	0.43	cps
Yttrium	89-1	3746968	3746189	3611208	3701455	2.11	cps
Yttrium	89-2	505488	505148	502572	504403	0.32	cps
Zinc	66-2	429671	430877	430765	430438	0.15	cps
Zirconium	90-1	1017	875	867	920	9.17	cps
Zirconium	91-1	433	342	308	361	17.93	cps

Reviewed By:jaswal
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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-10	Instrumnet Name :	P7
Client Sample ID :	MH4113	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:15:47	DataFile Name :	025SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3676	4277	3609	3854	9.55	cps
Antimony	121-1	7961	7427	6694	7361	8.64	cps
Arsenic	75-2	715	704	724	714	1.43	cps
Barium	135-1	224092	220641	220167	221633	0.97	cps
Barium	137-1	386032	383804	381349	383728	0.61	cps
Beryllium	9-1	67	67	78	70	9.11	cps
Bismuth	209-1	2814525	2771734	2754049	2780102	1.12	cps
Bismuth	209-2	1475615	1475980	1462169	1471254	0.53	cps
Boron	10-1	23561	25238	25439	24746	4.17	cps
Boron	11-1	114894	121972	122493	119786	3.54	cps
Cadmium	111-1	864	968	938	923	5.79	cps
Cadmium	106-1	850	908	967	908	6.42	cps
Cadmium	108-1	21	8	38	22	65.86	cps
Calcium	43-1	5814155	5751324	5706619	5757366	0.94	cps
Calcium	44-1	94738583	93355256	92825115	93639651	1.06	cps
Chromium	52-2	3084	3137	3124	3115	0.89	cps
Cobalt	59-2	827	703	597	709	16.24	cps
Copper	63-2	10714	11091	11064	10956	1.92	cps
Holmium	165-2	2136494	2136296	2121554	2131448	0.40	cps
Holmium	165-1	4421367	4472516	4381338	4425074	1.03	cps
Indium	115-1	3355450	3323903	3317802	3332385	0.61	cps
Indium	115-2	590280	593886	589198	591121	0.42	cps
Iron	56-2	175149	171915	187802	178289	4.71	cps
Iron	57-2	5535	5546	5596	5559	0.59	cps
Lead	206-1	4379	4206	4151	4245	2.80	cps
Lead	207-1	3417	3628	3734	3593	4.49	cps
Lead	208-1	16377	16888	16210	16491	2.14	cps
Lithium	6-1	311888	310465	310394	310916	0.27	cps
Magnesium	24-2	17701574	17489363	17388680	17526539	0.91	cps
Manganese	55-2	23860	23272	23352	23495	1.36	cps
Molybdenum	94-1	1884	2125	2192	2067	7.85	cps
Molybdenum	95-1	2342	2192	2467	2334	5.90	cps
Molybdenum	96-1	2659	2809	2567	2678	4.56	cps
Molybdenum	97-1	1308	1684	1550	1514	12.56	cps
Molybdenum	98-1	3892	3642	3926	3820	4.05	cps
Nickel	60-2	1280	1260	1290	1277	1.20	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-10	Instrumnet Name :	P7
Client Sample ID :	MH4113	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:15:47	DataFile Name :	025SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	250	133	192	192	30.43	cps
Potassium	39-2	734561	729698	723163	729141	0.78	cps
Rhodium	103-2	1471309	1467706	1473499	1470838	0.20	cps
Rhodium	103-1	3134997	3099591	3082186	3105591	0.87	cps
Scandium	45-1	2233297	2229583	2219617	2227499	0.32	cps
Scandium	45-2	95374	95492	95647	95504	0.14	cps
Selenium	77-2	10	23	17	17	39.99	cps
Selenium	78-2	115	94	94	101	11.62	cps
Selenium	82-1	342	367	125	278	47.84	cps
Silicon	28-1	55915997	55566939	54757728	55413555	1.07	cps
Silver	109-1	2117	1917	2409	2147	11.52	cps
Silver	107-1	1967	2275	2550	2264	12.89	cps
Sodium	23-2	36485754	36283744	35920790	36230096	0.79	cps
Strontium	86-1	4617081	4628746	4628169	4624665	0.14	cps
Strontium	88-1	39231680	39276289	38980110	39162693	0.41	cps
Sulfur	34-1	1977114	1953683	1936050	1955616	1.05	cps
Terbium	159-1	4522618	4478556	4515747	4505640	0.53	cps
Terbium	159-2	2083615	2113283	2113077	2103325	0.81	cps
Thallium	203-1	325	342	500	389	24.84	cps
Thallium	205-1	750	883	883	839	9.18	cps
Tin	118-1	1734	1909	2050	1897	8.36	cps
Titanium	47-1	2600	2467	2542	2536	2.64	cps
Uranium	238-1	95860	95206	94468	95178	0.73	cps
Vanadium	51-2	16022	16396	15986	16135	1.41	cps
Yttrium	89-2	487042	488351	488675	488023	0.18	cps
Yttrium	89-1	3680958	3691269	3673627	3681952	0.24	cps
Zinc	66-2	5268	5544	5288	5367	2.88	cps
Zirconium	90-1	1625	1775	1709	1703	4.41	cps
Zirconium	91-1	267	317	417	333	22.91	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-16	Instrumnet Name :	P7
Client Sample ID :	MH4113D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:18:47	DataFile Name :	026SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4034	3826	4262	4040	5.40	cps
Antimony	121-1	7627	7669	7711	7669	0.54	cps
Arsenic	75-2	720	707	687	705	2.38	cps
Barium	135-1	225449	224408	223426	224427	0.45	cps
Barium	137-1	384640	385365	386224	385410	0.21	cps
Beryllium	9-1	39	72	44	52	34.44	cps
Bismuth	209-1	2899257	2841006	2815745	2852002	1.50	cps
Bismuth	209-2	1498378	1498284	1501681	1499448	0.13	cps
Boron	10-1	24721	25197	25739	25219	2.02	cps
Boron	11-1	119470	123292	125089	122617	2.34	cps
Cadmium	111-1	959	917	1114	997	10.40	cps
Cadmium	106-1	983	875	1225	1028	17.44	cps
Cadmium	108-1	13	29	21	21	40.01	cps
Calcium	44-1	93563656	94629519	94012123	94068433	0.57	cps
Calcium	43-1	5757522	5719168	5721807	5732833	0.37	cps
Chromium	52-2	2817	2867	2757	2814	1.96	cps
Cobalt	59-2	577	540	567	561	3.38	cps
Copper	63-2	10601	10477	10327	10468	1.31	cps
Holmium	165-2	2160324	2150498	2128693	2146505	0.75	cps
Holmium	165-1	4485295	4501756	4470858	4485970	0.34	cps
Indium	115-1	3355331	3361646	3341624	3352867	0.31	cps
Indium	115-2	601363	597620	596077	598353	0.45	cps
Iron	56-2	176348	178087	171344	175259	2.00	cps
Iron	57-2	5390	5523	5762	5559	3.39	cps
Lead	206-1	4040	4101	3701	3947	5.46	cps
Lead	207-1	3134	3401	3284	3273	4.09	cps
Lead	208-1	15615	15943	14793	15450	3.84	cps
Lithium	6-1	314343	313975	314067	314128	0.06	cps
Magnesium	24-2	17558931	17403413	17498697	17487014	0.45	cps
Manganese	55-2	23936	23292	23429	23552	1.44	cps
Molybdenum	94-1	1775	1984	1742	1834	7.14	cps
Molybdenum	95-1	2192	2259	2600	2350	9.32	cps
Molybdenum	96-1	2600	2684	2934	2739	6.33	cps
Molybdenum	97-1	1392	1425	1417	1411	1.23	cps
Molybdenum	98-1	4117	3451	3892	3820	8.88	cps
Nickel	60-2	1247	1223	1160	1210	3.71	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-16	Instrumnet Name :	P7
Client Sample ID :	MH4113D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:18:47	DataFile Name :	026SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	250	242	133	208	31.24	cps
Potassium	39-2	729162	719687	717534	722127	0.86	cps
Rhodium	103-1	3089301	3133027	3097935	3106754	0.75	cps
Rhodium	103-2	1488342	1478084	1484738	1483721	0.35	cps
Scandium	45-1	2225145	2228280	2229413	2227613	0.10	cps
Scandium	45-2	95207	93751	95005	94654	0.83	cps
Selenium	77-2	7	17	10	11	45.82	cps
Selenium	78-2	87	85	72	81	9.91	cps
Selenium	82-1	417	292	242	317	28.46	cps
Silicon	28-1	55122443	55630282	55171974	55308233	0.51	cps
Silver	109-1	1600	1809	2067	1825	12.81	cps
Silver	107-1	1625	2100	2050	1925	13.56	cps
Sodium	23-2	36382764	36077732	35990663	36150387	0.57	cps
Strontium	86-1	4671784	4622741	4604372	4632966	0.75	cps
Strontium	88-1	39643101	39373475	39279802	39432126	0.48	cps
Sulfur	34-1	1974768	1978878	1961082	1971576	0.47	cps
Terbium	159-2	2166795	2136515	2136906	2146739	0.81	cps
Terbium	159-1	4593858	4560223	4532095	4562059	0.68	cps
Thallium	203-1	233	225	242	233	3.57	cps
Thallium	205-1	375	633	517	508	25.45	cps
Tin	118-1	1392	1375	1392	1386	0.69	cps
Titanium	47-1	2950	2834	2734	2839	3.82	cps
Uranium	238-1	100672	98783	98372	99276	1.24	cps
Vanadium	51-2	16226	15942	15869	16012	1.18	cps
Yttrium	89-2	496014	490071	487324	491136	0.90	cps
Yttrium	89-1	3690352	3680149	3644677	3671726	0.65	cps
Zinc	66-2	4154	4357	4341	4284	2.64	cps
Zirconium	90-1	1583	1575	1800	1653	7.72	cps
Zirconium	91-1	325	350	367	347	6.04	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-10LX5	Instrumnet Name :	P7
Client Sample ID :	MH4113L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-06 15:21:48	DataFile Name :	027SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	742	717	592	683	11.76	cps
Antimony	121-1	1033	867	1017	972	9.44	cps
Arsenic	75-2	126	122	106	118	9.20	cps
Barium	135-1	40268	40937	40636	40613	0.82	cps
Barium	137-1	70162	71627	72281	71356	1.52	cps
Beryllium	9-1	50	28	39	39	28.57	cps
Bismuth	209-1	2755114	2695738	2738719	2729857	1.12	cps
Bismuth	209-2	1472442	1435893	1457960	1455432	1.26	cps
Boron	10-1	6585	6643	6418	6549	1.78	cps
Boron	11-1	30156	30289	30215	30220	0.22	cps
Cadmium	111-1	790	744	718	751	4.91	cps
Cadmium	106-1	1100	1000	992	1031	5.85	cps
Cadmium	108-1	13	8	8	10	24.77	cps
Calcium	43-1	1057149	1050044	1052128	1053107	0.35	cps
Calcium	44-1	17298001	17400660	17376528	17358397	0.31	cps
Chromium	52-2	1510	1563	1657	1577	4.71	cps
Cobalt	59-2	123	137	147	136	8.63	cps
Copper	63-2	4174	4151	3954	4093	2.95	cps
Holmium	165-2	2045155	2006567	2024293	2025338	0.95	cps
Holmium	165-1	4185728	4215664	4183164	4194852	0.43	cps
Indium	115-1	3189201	3136526	3144657	3156795	0.90	cps
Indium	115-2	574876	571046	568973	571632	0.52	cps
Iron	56-2	36178	35143	35137	35486	1.69	cps
Iron	57-2	1095	1133	956	1061	8.81	cps
Lead	206-1	1072	1006	1039	1039	3.21	cps
Lead	207-1	750	706	872	776	11.12	cps
Lead	208-1	4039	3567	3839	3815	6.21	cps
Lithium	6-1	284005	282977	281878	282954	0.38	cps
Magnesium	24-2	3406392	3344695	3355848	3368978	0.98	cps
Manganese	55-2	4657	4441	4411	4503	2.99	cps
Molybdenum	94-1	300	458	475	411	23.49	cps
Molybdenum	95-1	400	517	358	425	19.31	cps
Molybdenum	96-1	583	525	592	567	6.41	cps
Molybdenum	97-1	342	333	367	347	4.99	cps
Molybdenum	98-1	758	692	767	739	5.56	cps
Nickel	60-2	320	303	290	304	4.94	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-10LX5	Instrumnet Name :	P7
Client Sample ID :	MH4113L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-06 15:21:48	DataFile Name :	027SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	133	133	117	128	7.53	cps
Potassium	39-2	157007	152620	150934	153520	2.04	cps
Rhodium	103-2	1451381	1434794	1431350	1439175	0.74	cps
Rhodium	103-1	3011435	2943671	2933129	2962745	1.43	cps
Scandium	45-1	2054168	2054764	2069321	2059417	0.42	cps
Scandium	45-2	89240	88929	89485	89218	0.31	cps
Selenium	77-2	7	7	3	6	34.70	cps
Selenium	78-2	43	65	59	56	20.82	cps
Selenium	82-1	33	75	225	111	90.73	cps
Silicon	28-1	10307144	10355520	10227981	10296882	0.63	cps
Silver	109-1	383	358	542	428	23.24	cps
Silver	107-1	492	533	433	486	10.33	cps
Sodium	23-2	6888654	6816338	6854374	6853122	0.53	cps
Strontium	86-1	836977	841344	839157	839159	0.26	cps
Strontium	88-1	7329379	7353280	7369484	7350714	0.27	cps
Sulfur	34-1	684779	692045	682027	686284	0.75	cps
Terbium	159-1	4266121	4252106	4259391	4259206	0.16	cps
Terbium	159-2	2000358	1999189	1979132	1992893	0.60	cps
Thallium	203-1	92	83	133	103	26.06	cps
Thallium	205-1	242	158	142	181	29.67	cps
Tin	118-1	808	900	942	883	7.72	cps
Titanium	47-1	567	658	458	561	17.84	cps
Uranium	238-1	18305	17654	18764	18241	3.06	cps
Vanadium	51-2	2987	3067	2940	2998	2.14	cps
Yttrium	89-2	471585	465209	462310	466368	1.02	cps
Yttrium	89-1	3391254	3415122	3404929	3403768	0.35	cps
Zinc	66-2	977	1080	917	991	8.34	cps
Zirconium	90-1	475	433	517	475	8.77	cps
Zirconium	91-1	158	92	192	147	34.59	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-17	Instrumnet Name :	P7
Client Sample ID :	MH4113S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:24:49	DataFile Name :	028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	222097	220737	222346	221727	0.39	cps
Antimony	121-1	1352086	1345757	1345950	1347931	0.27	cps
Arsenic	75-2	18076	18054	18217	18116	0.49	cps
Barium	135-1	6959763	6894594	6981004	6945120	0.65	cps
Barium	137-1	11721295	11664918	11889297	11758503	0.99	cps
Beryllium	9-1	87087	86127	84021	85745	1.83	cps
Bismuth	209-2	1473777	1463325	1452668	1463257	0.72	cps
Bismuth	209-1	2800380	2794142	2763400	2785974	0.71	cps
Boron	10-1	23719	25547	25906	25058	4.68	cps
Boron	11-1	115547	120132	123148	119609	3.20	cps
Cadmium	106-1	15067	14925	15409	15134	1.64	cps
Cadmium	108-1	10112	10525	10337	10325	2.00	cps
Cadmium	111-1	158518	158107	157367	157997	0.37	cps
Calcium	43-1	5678916	5676787	5580353	5645352	1.00	cps
Calcium	44-1	92434260	92322546	91748175	92168327	0.40	cps
Chromium	52-2	831946	828614	826308	828956	0.34	cps
Cobalt	59-2	3455832	3406162	3464714	3442236	0.92	cps
Copper	63-2	1253753	1247037	1238385	1246392	0.62	cps
Holmium	165-1	4430387	4424683	4360965	4405345	0.87	cps
Holmium	165-2	2086404	2113610	2066506	2088840	1.13	cps
Indium	115-1	3297037	3220003	3218537	3245192	1.38	cps
Indium	115-2	585022	574207	573998	577742	1.09	cps
Iron	56-2	3548109	3554411	3543094	3548538	0.16	cps
Iron	57-2	87549	88717	88744	88337	0.77	cps
Lead	208-1	898784	903746	907986	903505	0.51	cps
Lead	206-1	223967	227276	226815	226019	0.79	cps
Lead	207-1	199964	197445	200185	199198	0.76	cps
Lithium	6-1	309533	309049	313848	310810	0.85	cps
Magnesium	24-2	17141208	16907425	17083916	17044183	0.71	cps
Manganese	55-2	1126189	1126881	1118861	1123977	0.40	cps
Molybdenum	94-1	3142	2875	2867	2962	5.28	cps
Molybdenum	95-1	4076	4201	4443	4240	4.40	cps
Molybdenum	96-1	4317	4859	4668	4615	5.95	cps
Molybdenum	97-1	2642	2750	2825	2739	3.37	cps
Molybdenum	98-1	6802	7027	6293	6707	5.60	cps
Nickel	60-2	898032	897216	898526	897925	0.07	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-17	Instrumnet Name :	P7
Client Sample ID :	MH4113S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:24:49	DataFile Name :	028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	208	125	250	194	32.73	cps
Potassium	39-2	700269	698396	698974	699213	0.14	cps
Rhodium	103-1	3022396	3010387	2986863	3006549	0.60	cps
Rhodium	103-2	1452315	1435248	1437081	1441548	0.65	cps
Scandium	45-2	90448	90816	90293	90519	0.30	cps
Scandium	45-1	2148136	2115837	2115700	2126558	0.88	cps
Selenium	77-2	873	913	880	889	2.41	cps
Selenium	78-2	3119	3043	3039	3067	1.47	cps
Selenium	82-1	21701	21342	22427	21823	2.53	cps
Silicon	28-1	54207039	54122862	53865037	54064979	0.33	cps
Silver	109-1	748697	747127	738970	744932	0.70	cps
Silver	107-1	772035	769309	773311	771551	0.26	cps
Sodium	23-2	35270561	35018792	35157650	35149001	0.36	cps
Strontium	86-1	4639015	4586347	4585790	4603717	0.66	cps
Strontium	88-1	39244342	38835482	38952967	39010930	0.54	cps
Sulfur	34-1	1967911	1940011	1922602	1943508	1.18	cps
Terbium	159-2	2096987	2059742	2059090	2071940	1.05	cps
Terbium	159-1	4500227	4481915	4496998	4493047	0.22	cps
Thallium	203-1	669713	673532	664746	669330	0.66	cps
Thallium	205-1	1629898	1636194	1637239	1634443	0.24	cps
Tin	118-1	1817	2042	1909	1922	5.89	cps
Titanium	47-1	2900	2734	3017	2884	4.94	cps
Uranium	238-1	98438	99353	99471	99087	0.57	cps
Vanadium	51-2	1759500	1745947	1766781	1757409	0.60	cps
Yttrium	89-2	478270	472850	470609	473909	0.83	cps
Yttrium	89-1	3617494	3535618	3529895	3561002	1.38	cps
Zinc	66-2	323174	321222	324411	322936	0.50	cps
Zirconium	90-1	1617	1893	1458	1656	13.28	cps
Zirconium	91-1	442	500	450	464	6.80	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-11	Instrumnet Name :	P7
Client Sample ID :	MH4116	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:27:47	DataFile Name :	029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	18587	17886	17294	17923	3.61	cps
Antimony	121-1	9962	9845	10062	9957	1.09	cps
Arsenic	75-2	481	428	481	464	6.69	cps
Barium	135-1	327062	327629	325318	326669	0.37	cps
Barium	137-1	566975	565227	555761	562654	1.07	cps
Beryllium	9-1	72	56	78	69	16.88	cps
Bismuth	209-1	2922636	2850156	2817153	2863315	1.88	cps
Bismuth	209-2	1482338	1486531	1489607	1486158	0.25	cps
Boron	10-1	25756	27234	26766	26585	2.84	cps
Boron	11-1	122375	130265	130248	127629	3.57	cps
Cadmium	111-1	1091	1119	1017	1076	4.88	cps
Cadmium	106-1	1092	1025	967	1028	6.09	cps
Cadmium	108-1	33	46	38	39	16.37	cps
Calcium	43-1	6001983	5963340	5940404	5968575	0.52	cps
Calcium	44-1	97937525	98342204	97221000	97833576	0.58	cps
Chromium	52-2	3587	3707	3534	3609	2.46	cps
Cobalt	59-2	1233	1317	1253	1268	3.43	cps
Copper	63-2	16987	17274	17397	17219	1.22	cps
Holmium	165-2	2093771	2109899	2136150	2113273	1.01	cps
Holmium	165-1	4534919	4474539	4515618	4508359	0.68	cps
Indium	115-1	3364727	3342546	3305963	3337745	0.89	cps
Indium	115-2	583938	590275	586705	586973	0.54	cps
Iron	56-2	900841	891209	884133	892061	0.94	cps
Iron	57-2	23608	22857	23324	23263	1.63	cps
Lead	206-1	80560	78475	79961	79665	1.35	cps
Lead	207-1	67108	66137	66349	66531	0.77	cps
Lead	208-1	315463	312470	312835	313589	0.52	cps
Lithium	6-1	321793	317868	314885	318182	1.09	cps
Magnesium	24-2	16718215	16808586	16626285	16717696	0.55	cps
Manganese	55-2	18058	17975	18772	18268	2.40	cps
Molybdenum	94-1	3159	2792	2859	2937	6.65	cps
Molybdenum	95-1	3126	3226	3117	3156	1.91	cps
Molybdenum	96-1	3842	3676	3384	3634	6.39	cps
Molybdenum	97-1	2275	1975	2067	2106	7.30	cps
Molybdenum	98-1	5451	5176	5001	5210	4.36	cps
Nickel	60-2	1197	1373	1240	1270	7.25	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-11	Instrumnet Name :	P7
Client Sample ID :	MH4116	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:27:47	DataFile Name :	029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	292	417	500	403	26.03	cps
Potassium	39-2	564822	563602	562762	563729	0.18	cps
Rhodium	103-2	1445206	1464956	1450825	1453662	0.70	cps
Rhodium	103-1	3080048	3072378	3057698	3070041	0.37	cps
Scandium	45-1	2181313	2179958	2165879	2175717	0.39	cps
Scandium	45-2	90746	92279	89458	90828	1.55	cps
Selenium	77-2	17	13	20	17	20.01	cps
Selenium	78-2	119	122	87	109	17.69	cps
Selenium	82-1	467	383	192	347	40.61	cps
Silicon	28-1	56558370	57637045	56571337	56922251	1.09	cps
Silver	109-1	1734	1942	2250	1975	13.16	cps
Silver	107-1	1892	2042	2250	2061	8.73	cps
Sodium	23-2	36304195	36397647	36029837	36243893	0.53	cps
Strontium	86-1	4905950	4868654	4825818	4866807	0.82	cps
Strontium	88-1	41582393	41854821	41390433	41609216	0.56	cps
Sulfur	34-1	1922853	1923470	1912049	1919457	0.33	cps
Terbium	159-1	4621572	4521233	4558314	4567040	1.11	cps
Terbium	159-2	2081647	2105914	2084497	2090686	0.63	cps
Thallium	203-1	425	408	517	450	12.96	cps
Thallium	205-1	1067	1175	1025	1089	7.11	cps
Tin	118-1	1383	1467	1542	1464	5.41	cps
Titanium	47-1	10946	10963	10863	10924	0.49	cps
Uranium	238-1	114644	114770	113971	114462	0.38	cps
Vanadium	51-2	16957	17184	16676	16939	1.50	cps
Yttrium	89-2	476534	478038	477291	477288	0.16	cps
Yttrium	89-1	3658679	3610074	3595273	3621342	0.92	cps
Zinc	66-2	8683	8599	8379	8554	1.83	cps
Zirconium	90-1	2875	2850	3276	3001	7.95	cps
Zirconium	91-1	575	625	675	625	8.00	cps

Reviewed By:jaswal
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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-12	Instrumnet Name :	P7
Client Sample ID :	MH4202	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:30:48	DataFile Name :	030SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3376	3517	3426	3439	2.09	cps
Antimony	121-1	10905	10446	10479	10610	2.41	cps
Arsenic	75-2	544	580	548	557	3.47	cps
Barium	135-1	225308	223984	220228	223173	1.18	cps
Barium	137-1	382844	387133	383280	384419	0.61	cps
Beryllium	9-1	61	78	44	61	27.27	cps
Bismuth	209-1	2914622	2902216	2895244	2904027	0.34	cps
Bismuth	209-2	1499182	1509468	1498679	1502443	0.41	cps
Boron	10-1	24504	25689	24713	24969	2.53	cps
Boron	11-1	114078	120729	121132	118646	3.34	cps
Cadmium	111-1	940	805	893	879	7.77	cps
Cadmium	106-1	1142	917	1008	1022	11.07	cps
Cadmium	108-1	38	17	13	22	60.27	cps
Calcium	43-1	5554880	5561649	5520826	5545785	0.39	cps
Calcium	44-1	90676515	90107887	90223371	90335924	0.33	cps
Chromium	52-2	2090	2060	2044	2065	1.15	cps
Cobalt	59-2	483	390	483	452	11.92	cps
Copper	63-2	10187	9917	9883	9996	1.67	cps
Holmium	165-2	2139992	2161798	2133850	2145213	0.68	cps
Holmium	165-1	4527568	4427856	4493730	4483051	1.13	cps
Indium	115-1	3350822	3335292	3339161	3341758	0.24	cps
Indium	115-2	592512	594136	591412	592687	0.23	cps
Iron	56-2	184803	184393	182840	184012	0.56	cps
Iron	57-2	5862	5640	5523	5675	3.03	cps
Lead	206-1	5585	5323	5351	5420	2.65	cps
Lead	207-1	4523	4351	4212	4362	3.57	cps
Lead	208-1	21708	20924	19967	20866	4.18	cps
Lithium	6-1	317810	319433	316470	317905	0.47	cps
Magnesium	24-2	15973252	15992050	15866832	15944045	0.42	cps
Manganese	55-2	3407	3130	3510	3349	5.87	cps
Molybdenum	94-1	2925	2892	3050	2956	2.82	cps
Molybdenum	95-1	4259	4167	3784	4070	6.19	cps
Molybdenum	96-1	4576	4468	4676	4573	2.28	cps
Molybdenum	97-1	2725	2592	2692	2670	2.60	cps
Molybdenum	98-1	6502	6327	6585	6471	2.04	cps
Nickel	60-2	1103	1023	1043	1057	3.94	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-12	Instrumnet Name :	P7
Client Sample ID :	MH4202	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:30:48	DataFile Name :	030SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	383	233	300	306	24.60	cps
Potassium	39-2	571521	572485	561785	568597	1.04	cps
Rhodium	103-2	1472746	1479787	1479559	1477364	0.27	cps
Rhodium	103-1	3078424	3024051	3040136	3047537	0.92	cps
Scandium	45-1	2159115	2170418	2152182	2160572	0.43	cps
Scandium	45-2	91423	92214	92124	91921	0.47	cps
Selenium	77-2	23	23	20	22	8.65	cps
Selenium	78-2	135	120	150	135	10.96	cps
Selenium	82-1	708	800	683	731	8.41	cps
Silicon	28-1	50640691	50649907	50388570	50559723	0.29	cps
Silver	109-1	1375	1267	1725	1456	16.46	cps
Silver	107-1	1408	1525	1533	1489	4.69	cps
Sodium	23-2	33175544	33216787	32867825	33086719	0.58	cps
Strontium	86-1	4409457	4366126	4365457	4380347	0.58	cps
Strontium	88-1	37548915	37271311	37187358	37335862	0.51	cps
Sulfur	34-1	1972306	1972435	1948102	1964281	0.71	cps
Terbium	159-1	4548422	4540777	4581251	4556817	0.47	cps
Terbium	159-2	2127979	2160414	2109576	2132657	1.21	cps
Thallium	203-1	292	208	242	247	16.96	cps
Thallium	205-1	508	625	600	578	10.63	cps
Tin	118-1	1117	1250	1133	1167	6.23	cps
Titanium	47-1	2967	2742	2442	2717	9.70	cps
Uranium	238-1	144092	143747	142602	143480	0.54	cps
Vanadium	51-2	18145	17798	18155	18032	1.13	cps
Yttrium	89-2	484084	485520	485503	485036	0.17	cps
Yttrium	89-1	3645052	3546146	3611268	3600822	1.40	cps
Zinc	66-2	3587	3577	3571	3578	0.23	cps
Zirconium	90-1	1675	1425	1400	1500	10.14	cps
Zirconium	91-1	333	458	267	353	27.58	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-13	Instrumnet Name :	P7
Client Sample ID :	MH4211	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:33:49	DataFile Name :	031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	6869	7160	6985	7005	2.10	cps
Antimony	121-1	12106	11672	10880	11552	5.38	cps
Arsenic	75-2	1413	1363	1413	1396	2.07	cps
Barium	135-1	190140	187860	188249	188750	0.65	cps
Barium	137-1	322008	317177	318639	319275	0.78	cps
Beryllium	9-1	50	33	44	43	19.93	cps
Bismuth	209-1	2981597	2999543	2919215	2966785	1.42	cps
Bismuth	209-2	1514447	1509885	1498356	1507563	0.55	cps
Boron	10-1	20214	20006	19864	20028	0.88	cps
Boron	11-1	93480	95316	99938	96245	3.46	cps
Cadmium	111-1	702	770	807	760	7.01	cps
Cadmium	106-1	908	1000	1008	972	5.71	cps
Cadmium	108-1	13	25	4	14	75.48	cps
Calcium	43-1	5323462	5278434	5217221	5273039	1.01	cps
Calcium	44-1	86229629	85084754	85647731	85654038	0.67	cps
Chromium	52-2	3030	3210	3184	3142	3.09	cps
Cobalt	59-2	550	523	423	499	13.39	cps
Copper	63-2	10100	10464	10314	10293	1.78	cps
Holmium	165-2	2143334	2131402	2116150	2130295	0.64	cps
Holmium	165-1	4585936	4644315	4465353	4565201	2.00	cps
Indium	115-1	3377479	3395561	3368839	3380626	0.40	cps
Indium	115-2	587576	594054	584416	588682	0.83	cps
Iron	56-2	369600	371541	369239	370127	0.33	cps
Iron	57-2	10215	10020	10738	10324	3.59	cps
Lead	206-1	16433	16105	15465	16001	3.08	cps
Lead	207-1	13618	12929	13179	13242	2.64	cps
Lead	208-1	63650	61719	61430	62266	1.94	cps
Lithium	6-1	324148	324901	318324	322458	1.12	cps
Magnesium	24-2	13619602	13598565	13520996	13579721	0.38	cps
Manganese	55-2	31831	32443	31631	31968	1.32	cps
Molybdenum	94-1	2784	3326	2867	2992	9.75	cps
Molybdenum	95-1	4293	4076	4226	4198	2.65	cps
Molybdenum	96-1	4626	4343	4976	4648	6.83	cps
Molybdenum	97-1	2625	2617	2534	2592	1.96	cps
Molybdenum	98-1	7194	6593	6643	6810	4.89	cps
Nickel	60-2	677	767	643	696	9.17	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-13	Instrumnet Name :	P7
Client Sample ID :	MH4211	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:33:49	DataFile Name :	031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	158	117	142	139	15.10	cps
Potassium	39-2	468432	467852	465361	467215	0.35	cps
Rhodium	103-1	3127222	3132147	3082846	3114072	0.87	cps
Rhodium	103-2	1486000	1476548	1482671	1481740	0.32	cps
Scandium	45-1	2197105	2165240	2184192	2182179	0.73	cps
Scandium	45-2	91088	89965	90136	90396	0.67	cps
Selenium	82-1	417	200	275	297	37.02	cps
Selenium	77-2	23	13	20	19	26.96	cps
Selenium	78-2	70	83	63	72	14.28	cps
Silicon	28-1	57609747	56157522	56350120	56705796	1.39	cps
Silver	109-1	1383	1625	1709	1572	10.74	cps
Silver	107-1	1433	1450	1684	1522	9.18	cps
Sodium	23-2	26010182	25804277	25691328	25835262	0.63	cps
Strontium	86-1	4405457	4350146	4337640	4364414	0.83	cps
Strontium	88-1	37559845	37104526	37282360	37315577	0.61	cps
Sulfur	34-1	1985626	1966413	1937305	1963114	1.24	cps
Terbium	159-1	4654585	4636361	4608429	4633125	0.50	cps
Terbium	159-2	2153344	2161149	2108598	2141030	1.32	cps
Thallium	203-1	183	208	133	175	21.82	cps
Thallium	205-1	358	467	467	431	14.53	cps
Tin	118-1	1292	1333	1142	1256	8.03	cps
Titanium	47-1	5126	4468	4868	4820	6.88	cps
Uranium	238-1	118142	118103	117392	117879	0.36	cps
Vanadium	51-2	6588	6745	6365	6566	2.91	cps
Yttrium	89-2	481810	483607	475544	480320	0.88	cps
Yttrium	89-1	3724304	3681807	3587735	3664615	1.91	cps
Zinc	66-2	4647	4724	4511	4627	2.34	cps
Zirconium	90-1	1525	1542	1308	1458	8.93	cps
Zirconium	91-1	333	267	367	322	15.80	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-14	Instrumnet Name :	P7
Client Sample ID :	MH4217	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:36:49	DataFile Name :	032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	308	283	275	289	6.00	cps
Antimony	121-1	11255	10346	9896	10499	6.60	cps
Arsenic	75-2	804	800	769	791	2.44	cps
Barium	135-1	224630	225686	221782	224033	0.90	cps
Barium	137-1	388925	391358	383211	387831	1.08	cps
Beryllium	9-1	50	39	22	37	37.75	cps
Bismuth	209-1	2953034	2933041	2883040	2923038	1.23	cps
Bismuth	209-2	1508498	1514549	1520276	1514441	0.39	cps
Boron	11-1	118024	119494	124996	120838	3.04	cps
Boron	10-1	23778	25289	25523	24863	3.81	cps
Cadmium	106-1	1050	950	942	981	6.15	cps
Cadmium	108-1	4	13	17	11	57.27	cps
Cadmium	111-1	865	806	806	826	4.15	cps
Calcium	43-1	5589301	5486311	5467803	5514472	1.19	cps
Calcium	44-1	90725837	89354329	89041908	89707358	1.00	cps
Chromium	52-2	2374	2427	2337	2379	1.90	cps
Cobalt	59-2	200	200	250	217	13.33	cps
Copper	63-2	8536	8613	8896	8682	2.19	cps
Holmium	165-2	2158958	2166412	2143356	2156242	0.55	cps
Holmium	165-1	4609283	4532918	4521311	4554504	1.05	cps
Indium	115-1	3372233	3383922	3348247	3368134	0.54	cps
Indium	115-2	589479	593238	588375	590364	0.43	cps
Iron	56-2	76410	76934	76931	76758	0.39	cps
Iron	57-2	3056	2911	2917	2961	2.76	cps
Lead	206-1	689	583	572	615	10.47	cps
Lead	207-1	561	583	533	559	4.48	cps
Lead	208-1	2628	2511	2206	2448	8.91	cps
Lithium	6-1	323866	324824	324254	324315	0.15	cps
Magnesium	24-2	16071495	16162657	16068528	16100893	0.33	cps
Manganese	55-2	12539	12589	12572	12567	0.20	cps
Molybdenum	94-1	2517	2475	2400	2464	2.40	cps
Molybdenum	95-1	3301	3351	3634	3428	5.25	cps
Molybdenum	96-1	4009	3859	3967	3945	1.96	cps
Molybdenum	97-1	2134	2342	2292	2256	4.82	cps
Molybdenum	98-1	5818	5918	5835	5857	0.91	cps
Nickel	60-2	833	847	840	840	0.79	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-14	Instrumnet Name :	P7
Client Sample ID :	MH4217	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:36:49	DataFile Name :	032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	100	100	167	122	31.49	cps
Potassium	39-2	624334	621132	614372	619946	0.82	cps
Rhodium	103-2	1481830	1493160	1465112	1480034	0.95	cps
Rhodium	103-1	3127390	3079399	3100387	3102392	0.78	cps
Scandium	45-1	2193434	2181602	2159064	2178033	0.80	cps
Scandium	45-2	91548	91929	91521	91666	0.25	cps
Selenium	77-2	17	13	10	13	25.01	cps
Selenium	78-2	115	72	70	86	29.31	cps
Selenium	82-1	492	375	433	433	13.46	cps
Silicon	28-1	52786680	52071293	52253476	52370483	0.71	cps
Silver	107-1	1400	1283	1508	1397	8.05	cps
Silver	109-1	1200	1417	1450	1356	10.01	cps
Sodium	23-2	32681529	32982093	32694542	32786055	0.52	cps
Strontium	86-1	4465922	4448829	4403745	4439499	0.72	cps
Strontium	88-1	38356333	38016605	37852340	38075093	0.68	cps
Sulfur	34-1	1956301	1944019	1932944	1944421	0.60	cps
Terbium	159-1	4673181	4655992	4613959	4647711	0.66	cps
Terbium	159-2	2159768	2151131	2128742	2146547	0.75	cps
Thallium	203-1	83	75	108	89	19.52	cps
Thallium	205-1	417	275	317	336	21.66	cps
Tin	118-1	917	1025	958	967	5.65	cps
Titanium	47-1	900	617	917	811	20.79	cps
Uranium	238-1	114552	114443	113619	114205	0.45	cps
Vanadium	51-2	15612	15632	15392	15545	0.86	cps
Yttrium	89-2	482327	481727	478427	480827	0.44	cps
Yttrium	89-1	3654061	3654998	3619457	3642839	0.56	cps
Zinc	66-2	2687	2637	2514	2613	3.42	cps
Zirconium	90-1	1233	1358	983	1192	16.02	cps
Zirconium	91-1	342	275	258	292	15.12	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-15	Instrumnet Name :	P7
Client Sample ID :	MH4218	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:39:51	DataFile Name :	033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	750	600	550	633	16.43	cps
Antimony	121-1	12473	11380	11589	11814	4.91	cps
Arsenic	75-2	1044	959	894	966	7.79	cps
Barium	135-1	216671	215433	213661	215255	0.70	cps
Barium	137-1	375010	370406	371093	372169	0.67	cps
Beryllium	9-1	50	17	17	28	69.27	cps
Bismuth	209-2	1485280	1487338	1481254	1484624	0.21	cps
Bismuth	209-1	2872303	2877240	2852251	2867265	0.46	cps
Boron	10-1	25105	25773	25923	25600	1.70	cps
Boron	11-1	121804	124888	126240	124311	1.83	cps
Cadmium	106-1	892	917	883	897	1.93	cps
Cadmium	108-1	29	8	21	19	53.95	cps
Cadmium	111-1	745	782	729	752	3.60	cps
Calcium	43-1	5641183	5615710	5496622	5584505	1.38	cps
Calcium	44-1	92497000	92337179	90014004	91616061	1.52	cps
Chromium	52-2	2564	2620	2517	2567	2.02	cps
Cobalt	59-2	443	363	437	414	10.71	cps
Copper	63-2	9366	9150	9520	9345	1.99	cps
Holmium	165-2	2131512	2104883	2142770	2126388	0.92	cps
Holmium	165-1	4505193	4505658	4422528	4477793	1.07	cps
Indium	115-1	3299609	3285136	3289500	3291415	0.23	cps
Indium	115-2	581371	578718	577645	579245	0.33	cps
Iron	56-2	74667	73941	73829	74146	0.61	cps
Iron	57-2	3045	3250	2689	2995	9.48	cps
Lead	206-1	2172	2150	2372	2232	5.48	cps
Lead	207-1	1856	1689	1867	1804	5.52	cps
Lead	208-1	8574	8596	9029	8733	2.94	cps
Lithium	6-1	319310	319613	316686	318536	0.51	cps
Magnesium	24-2	15811826	15787420	15809305	15802850	0.08	cps
Manganese	55-2	11628	11455	11558	11547	0.76	cps
Molybdenum	94-1	3567	3817	3376	3587	6.18	cps
Molybdenum	95-1	5076	5410	5093	5193	3.62	cps
Molybdenum	96-1	5693	5576	5785	5685	1.84	cps
Molybdenum	97-1	3559	3201	2992	3251	8.82	cps
Molybdenum	98-1	8586	8686	8228	8500	2.84	cps
Nickel	60-2	950	870	913	911	4.40	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-15	Instrumnet Name :	P7
Client Sample ID :	MH4218	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:39:51	DataFile Name :	033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	275	225	192	231	18.19	cps
Potassium	39-2	600500	603835	597895	600744	0.50	cps
Rhodium	103-2	1447450	1442818	1451842	1447370	0.31	cps
Rhodium	103-1	3029332	3014159	3024376	3022623	0.26	cps
Scandium	45-1	2124525	2160827	2128869	2138074	0.93	cps
Scandium	45-2	90075	89998	89160	89745	0.57	cps
Selenium	82-1	442	517	508	489	8.41	cps
Selenium	77-2	27	13	13	18	43.33	cps
Selenium	78-2	106	98	117	107	8.73	cps
Silicon	28-1	50925205	50286126	49753273	50321535	1.17	cps
Silver	109-1	1217	1417	1550	1395	12.03	cps
Silver	107-1	1175	1300	1558	1345	14.54	cps
Sodium	23-2	32464453	32514723	32539028	32506068	0.12	cps
Strontium	86-1	4423826	4429882	4436373	4430027	0.14	cps
Strontium	88-1	38150593	38074735	38572743	38266023	0.70	cps
Sulfur	34-1	2028636	2015669	1972760	2005689	1.46	cps
Terbium	159-2	2100567	2090970	2106075	2099204	0.36	cps
Terbium	159-1	4560550	4561030	4480650	4534077	1.02	cps
Thallium	203-1	83	158	225	156	45.56	cps
Thallium	205-1	450	450	383	428	9.00	cps
Tin	118-1	1092	1208	1258	1186	7.21	cps
Titanium	47-1	925	1142	1067	1045	10.54	cps
Uranium	238-1	151769	152772	153407	152649	0.54	cps
Vanadium	51-2	15558	15628	15752	15646	0.63	cps
Yttrium	89-1	3547063	3546659	3589018	3560913	0.68	cps
Yttrium	89-2	473228	471232	473098	472520	0.24	cps
Zinc	66-2	3290	3197	3320	3269	1.97	cps
Zirconium	90-1	1400	1292	1267	1320	5.37	cps
Zirconium	91-1	283	258	242	261	8.03	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04	Instrumnet Name :	P7
Client Sample ID :	MH4025	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:44:10	DataFile Name :	034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1050484	1056004	1047715	1051401	0.40	cps
Antimony	121-1	56800	54223	54599	55207	2.52	cps
Arsenic	75-2	18061	17794	18156	18004	1.04	cps
Barium	135-1	1121674	1124262	1133821	1126585	0.57	cps
Barium	137-1	1951303	1954934	1961813	1956016	0.27	cps
Beryllium	9-1	1050	1167	1183	1133	6.41	cps
Bismuth	209-2	1424747	1413420	1420249	1419472	0.40	cps
Bismuth	209-1	2751362	2761518	2721058	2744646	0.77	cps
Boron	10-1	15100	15308	15951	15453	2.87	cps
Boron	11-1	72592	72030	74768	73130	1.98	cps
Cadmium	111-1	9567	9238	9402	9403	1.75	cps
Cadmium	106-1	2309	2117	1934	2120	8.85	cps
Cadmium	108-1	663	817	654	711	12.87	cps
Calcium	43-1	6886823	6842246	6820774	6849948	0.49	cps
Calcium	44-1	113265878	112213228	112272482	112583862	0.53	cps
Chromium	52-2	85741	84460	84869	85023	0.77	cps
Cobalt	59-2	50082	50567	50503	50384	0.52	cps
Copper	63-2	368534	369547	368501	368861	0.16	cps
Holmium	165-2	1967697	1957759	1968970	1964809	0.31	cps
Holmium	165-1	4177504	4157904	4146949	4160785	0.37	cps
Indium	115-1	3102090	3060369	3067854	3076771	0.72	cps
Indium	115-2	534114	534420	541489	536675	0.78	cps
Iron	56-2	49820662	49629908	49608196	49686255	0.24	cps
Iron	57-2	1228628	1224213	1223510	1225450	0.23	cps
Lead	206-1	5561585	5558047	5629898	5583177	0.73	cps
Lead	207-1	4614797	4572361	4678287	4621815	1.15	cps
Lead	208-1	21635913	21501732	21730127	21622591	0.53	cps
Lithium	6-1	289074	288696	291993	289921	0.62	cps
Magnesium	24-2	4977547	4942707	4934625	4951626	0.46	cps
Manganese	55-2	1841308	1844783	1851126	1845739	0.27	cps
Molybdenum	94-1	30433	31478	30675	30862	1.77	cps
Molybdenum	95-1	6935	6935	6727	6866	1.75	cps
Molybdenum	96-1	12581	12339	12256	12392	1.36	cps
Molybdenum	97-1	4409	4759	4543	4570	3.87	cps
Molybdenum	98-1	11330	11171	10980	11160	1.57	cps
Nickel	60-2	28474	28348	28561	28461	0.38	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04	Instrumnet Name :	P7
Client Sample ID :	MH4025	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:44:10	DataFile Name :	034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	17419	18078	18412	17970	2.81	cps
Potassium	39-2	884830	883689	881272	883264	0.21	cps
Rhodium	103-2	1350337	1353903	1352347	1352196	0.13	cps
Rhodium	103-1	2845058	2811401	2761125	2805861	1.51	cps
Scandium	45-1	1971145	1967193	1952968	1963768	0.49	cps
Scandium	45-2	84261	83678	83192	83711	0.64	cps
Selenium	77-2	90	60	80	77	19.92	cps
Selenium	78-2	113	122	146	127	13.53	cps
Selenium	82-1	183	375	417	325	38.29	cps
Silicon	28-1	8943791	5837239	5997888	6926306	25.25	cps
Silver	109-1	17320	16460	17219	17000	2.76	cps
Silver	107-1	17086	16852	17904	17281	3.19	cps
Sodium	23-2	484222	482638	485781	484213	0.32	cps
Strontium	86-1	2667059	2663809	2660295	2663721	0.13	cps
Strontium	88-1	22724502	22753898	22723451	22733950	0.08	cps
Sulfur	34-1	394136	391091	387868	391032	0.80	cps
Terbium	159-2	1937735	1983617	1960407	1960586	1.17	cps
Terbium	159-1	4229388	4201664	4260395	4230482	0.69	cps
Thallium	203-1	5735	5727	5568	5676	1.66	cps
Thallium	205-1	14275	14358	14417	14350	0.50	cps
Tin	118-1	113288	112044	110911	112081	1.06	cps
Titanium	47-1	383650	381189	380032	381624	0.48	cps
Uranium	238-1	68121	66522	69043	67896	1.88	cps
Vanadium	51-2	73626	73398	72769	73264	0.61	cps
Yttrium	89-2	503825	503418	509453	505565	0.67	cps
Yttrium	89-1	3800753	3753185	3767847	3773928	0.65	cps
Zinc	66-2	315122	314268	315285	314892	0.17	cps
Zirconium	90-1	76419	74251	74351	75007	1.63	cps
Zirconium	91-1	16427	16143	16310	16293	0.87	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4025	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 15:47:17	DataFile Name :	035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	561508	559025	559464	559999	0.24	cps
Antimony	121-1	26518	27586	27703	27269	2.40	cps
Arsenic	75-2	9707	9644	9524	9625	0.97	cps
Barium	135-1	589498	585745	593223	589489	0.63	cps
Barium	137-1	1016437	1003681	1016749	1012289	0.74	cps
Beryllium	9-1	528	561	522	537	3.92	cps
Bismuth	209-1	2740826	2816183	2735180	2764063	1.64	cps
Bismuth	209-2	1451340	1431016	1448493	1443616	0.76	cps
Boron	10-1	8369	8386	8636	8464	1.77	cps
Boron	11-1	39603	41056	42077	40912	3.04	cps
Cadmium	111-1	5206	5045	5155	5135	1.61	cps
Cadmium	106-1	1467	1500	1383	1450	4.14	cps
Cadmium	108-1	317	354	371	347	7.99	cps
Calcium	43-1	3651400	3617958	3680508	3649955	0.86	cps
Calcium	44-1	59016449	59243630	59273228	59177769	0.24	cps
Chromium	52-2	45677	44848	46015	45514	1.32	cps
Cobalt	59-2	27162	26417	27018	26866	1.47	cps
Copper	63-2	197253	196844	197540	197213	0.18	cps
Holmium	165-2	1998757	1981153	2001245	1993718	0.55	cps
Holmium	165-1	4189420	4145755	4224264	4186480	0.94	cps
Indium	115-1	3108507	3075472	3074381	3086120	0.63	cps
Indium	115-2	547524	546438	542610	545524	0.47	cps
Iron	56-2	26532843	26360985	26518264	26470697	0.36	cps
Iron	57-2	659085	651610	657312	656002	0.60	cps
Lead	206-1	2902255	2916912	2963240	2927469	1.09	cps
Lead	207-1	2399018	2403028	2424883	2408976	0.58	cps
Lead	208-1	11203586	11301034	11370612	11291744	0.74	cps
Lithium	6-1	285395	287080	285677	286050	0.32	cps
Magnesium	24-2	2666609	2642558	2684866	2664678	0.80	cps
Manganese	55-2	959888	950034	957709	955877	0.54	cps
Molybdenum	94-1	16585	15826	16310	16240	2.37	cps
Molybdenum	95-1	3659	3909	4009	3859	4.67	cps
Molybdenum	96-1	6402	6969	6260	6544	5.74	cps
Molybdenum	97-1	2484	2475	2134	2364	8.45	cps
Molybdenum	98-1	6327	6427	6102	6285	2.65	cps
Nickel	60-2	15215	14748	14908	14957	1.59	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4025	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 15:47:17	DataFile Name :	035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	9287	9328	9528	9381	1.38	cps
Potassium	39-2	476189	475025	480352	477189	0.59	cps
Rhodium	103-2	1389410	1386042	1381010	1385488	0.31	cps
Rhodium	103-1	2853011	2843633	2836748	2844464	0.29	cps
Scandium	45-1	1970855	1969552	1955549	1965319	0.43	cps
Scandium	45-2	85840	83789	85042	84890	1.22	cps
Selenium	77-2	37	33	43	38	13.48	cps
Selenium	78-2	80	83	91	85	6.69	cps
Selenium	82-1	317	83	92	164	80.77	cps
Silicon	28-1	3277083	3315488	3124343	3238971	3.12	cps
Silver	109-1	8670	8269	8903	8614	3.72	cps
Silver	107-1	8820	8953	8920	8898	0.78	cps
Sodium	23-2	265419	261057	265075	263850	0.92	cps
Strontium	86-1	1357400	1367405	1405139	1376648	1.83	cps
Strontium	88-1	11863155	11998404	11954856	11938805	0.58	cps
Sulfur	34-1	349644	345417	344570	346543	0.78	cps
Terbium	159-1	4261758	4224894	4267626	4251426	0.54	cps
Terbium	159-2	1983044	1956133	1973788	1970988	0.69	cps
Thallium	203-1	3042	3076	2992	3037	1.38	cps
Thallium	205-1	7027	6794	7569	7130	5.58	cps
Tin	118-1	59661	59444	58874	59326	0.68	cps
Titanium	47-1	199379	200233	203561	201058	1.10	cps
Uranium	238-1	34923	33987	35592	34834	2.31	cps
Vanadium	51-2	38450	38825	38631	38635	0.48	cps
Yttrium	89-2	485048	475850	481982	480960	0.97	cps
Yttrium	89-1	3561360	3592155	3603966	3585827	0.61	cps
Zinc	66-2	171958	170495	172165	171539	0.53	cps
Zirconium	90-1	38728	39481	39231	39147	0.98	cps
Zirconium	91-1	8737	8812	8770	8773	0.43	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-05	Instrumnet Name :	P7
Client Sample ID :	MH4025D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:50:19	DataFile Name :	036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1054742	1056261	1064129	1058377	0.48	cps
Antimony	121-1	54431	54005	52985	53807	1.38	cps
Arsenic	75-2	18228	18121	18015	18121	0.59	cps
Barium	137-1	1945066	1962571	1970078	1959238	0.66	cps
Barium	135-1	1132880	1134109	1146596	1137862	0.67	cps
Beryllium	9-1	1139	1017	1000	1052	7.21	cps
Bismuth	209-1	2828470	2777060	2780233	2795254	1.03	cps
Bismuth	209-2	1457823	1434648	1442212	1444894	0.82	cps
Boron	10-1	14558	15725	15625	15303	4.23	cps
Boron	11-1	71001	74192	76108	73767	3.50	cps
Cadmium	106-1	2142	2000	1942	2028	5.07	cps
Cadmium	108-1	725	692	658	692	4.82	cps
Cadmium	111-1	9461	9465	9972	9633	3.05	cps
Calcium	43-1	6995014	6946555	6992775	6978115	0.39	cps
Calcium	44-1	113212823	113689432	112931048	113277768	0.34	cps
Chromium	52-2	86377	85748	86157	86094	0.37	cps
Cobalt	59-2	51510	51336	52189	51679	0.87	cps
Copper	63-2	372129	371102	371601	371611	0.14	cps
Holmium	165-2	2026738	2011749	2004287	2014258	0.57	cps
Holmium	165-1	4250154	4244516	4201094	4231921	0.63	cps
Indium	115-2	550824	547580	545908	548104	0.46	cps
Indium	115-1	3087209	3112063	3051814	3083696	0.98	cps
Iron	56-2	50666362	50682498	50205541	50518134	0.54	cps
Iron	57-2	1252285	1243312	1241187	1245594	0.47	cps
Lead	206-1	5620686	5638435	5654674	5637931	0.30	cps
Lead	207-1	4599087	4625731	4593072	4605963	0.38	cps
Lead	208-1	21695341	21801056	21695928	21730775	0.28	cps
Lithium	6-1	292972	292653	293696	293107	0.18	cps
Magnesium	24-2	5004185	5000790	5028559	5011178	0.30	cps
Manganese	55-2	1880515	1861080	1878347	1873314	0.57	cps
Molybdenum	94-1	30968	31921	31678	31522	1.57	cps
Molybdenum	95-1	7369	7119	7052	7180	2.33	cps
Molybdenum	96-1	11880	12931	11955	12256	4.78	cps
Molybdenum	97-1	4493	4809	4593	4632	3.50	cps
Molybdenum	98-1	11096	11355	11213	11222	1.15	cps
Nickel	60-2	28451	28525	28314	28430	0.38	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-05	Instrumnet Name :	P7
Client Sample ID :	MH4025D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 15:50:19	DataFile Name :	036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	17586	17678	17636	17633	0.26	cps
Potassium	39-2	892361	898200	899078	896546	0.41	cps
Rhodium	103-1	2867649	2838571	2847635	2851285	0.52	cps
Rhodium	103-2	1397983	1378918	1377546	1384816	0.82	cps
Scandium	45-1	2006604	2019441	1986664	2004236	0.82	cps
Scandium	45-2	85384	85123	84171	84893	0.75	cps
Selenium	82-1	308	283	300	297	4.28	cps
Selenium	77-2	77	93	107	92	16.30	cps
Selenium	78-2	120	109	133	121	9.96	cps
Silicon	28-1	7026559	6158357	6590621	6591846	6.59	cps
Silver	109-1	16827	16911	16644	16794	0.81	cps
Silver	107-1	17553	16886	17278	17239	1.95	cps
Sodium	23-2	483018	486460	484507	484662	0.36	cps
Strontium	86-1	2662138	2706269	2720467	2696291	1.13	cps
Strontium	88-1	22811909	23074869	23130088	23005622	0.74	cps
Sulfur	34-1	386109	383324	384062	384498	0.38	cps
Terbium	159-1	4285883	4369950	4263623	4306485	1.30	cps
Terbium	159-2	2003233	1986511	2004639	1998128	0.50	cps
Thallium	203-1	5568	5710	5943	5740	3.30	cps
Thallium	205-1	14167	13599	13941	13902	2.06	cps
Tin	118-1	110339	113253	111003	111532	1.37	cps
Titanium	47-1	386885	388107	389608	388200	0.35	cps
Uranium	238-1	69193	68221	68632	68682	0.71	cps
Vanadium	51-2	73726	75315	73817	74286	1.20	cps
Yttrium	89-1	3855170	3856531	3843951	3851884	0.18	cps
Yttrium	89-2	517072	513812	511948	514277	0.50	cps
Zinc	66-2	318121	316361	319268	317917	0.46	cps
Zirconium	90-1	74085	75616	74490	74730	1.06	cps
Zirconium	91-1	16218	16494	17404	16705	3.71	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-05DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4025D	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 15:53:18	DataFile Name :	037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	568893	565893	562439	565742	0.57	cps
Antimony	121-1	27469	26543	28037	27350	2.76	cps
Arsenic	75-2	9587	9668	9592	9616	0.47	cps
Barium	135-1	591031	597065	592706	593601	0.52	cps
Barium	137-1	1021896	1026004	1021587	1023163	0.24	cps
Beryllium	9-1	639	556	594	596	6.99	cps
Bismuth	209-2	1440308	1432675	1422709	1431897	0.62	cps
Bismuth	209-1	2827689	2738707	2745325	2770574	1.79	cps
Boron	10-1	8619	9070	8528	8739	3.32	cps
Boron	11-1	40948	42293	42711	41984	2.19	cps
Cadmium	106-1	1533	1584	1683	1600	4.77	cps
Cadmium	108-1	279	433	325	346	22.89	cps
Cadmium	111-1	5521	5323	5423	5422	1.83	cps
Calcium	43-1	3672573	3697859	3683283	3684572	0.34	cps
Calcium	44-1	59983960	60112862	59299866	59798896	0.73	cps
Chromium	52-2	47018	46082	45781	46294	1.39	cps
Cobalt	59-2	27402	27239	27379	27340	0.32	cps
Copper	63-2	201659	202581	200084	201441	0.63	cps
Holmium	165-1	4271721	4143853	4158711	4191429	1.67	cps
Holmium	165-2	1967467	1969013	1956924	1964468	0.33	cps
Indium	115-2	547151	546980	538774	544302	0.88	cps
Indium	115-1	3163712	3081005	3090752	3111823	1.45	cps
Iron	56-2	26805232	26709530	26568980	26694581	0.45	cps
Iron	57-2	664182	657693	654585	658820	0.74	cps
Lead	208-1	11312719	11541469	11379635	11411274	1.03	cps
Lead	206-1	2948413	2958555	2963240	2956736	0.26	cps
Lead	207-1	2419882	2463616	2411508	2431668	1.15	cps
Lithium	6-1	291443	288766	288014	289408	0.62	cps
Magnesium	24-2	2696867	2679346	2650599	2675604	0.87	cps
Manganese	55-2	967049	968302	965701	967017	0.13	cps
Molybdenum	94-1	15784	16610	16001	16132	2.66	cps
Molybdenum	95-1	3534	3892	3926	3784	5.74	cps
Molybdenum	96-1	7187	6710	6435	6777	5.61	cps
Molybdenum	97-1	2484	2284	2359	2375	4.25	cps
Molybdenum	98-1	5985	6210	5651	5949	4.72	cps
Nickel	60-2	14988	14898	15025	14970	0.44	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-05DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4025D	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 15:53:18	DataFile Name :	037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	9262	9295	9262	9273	0.21	cps
Potassium	39-2	487001	482059	483229	484096	0.53	cps
Rhodium	103-1	2981393	2863898	2887118	2910803	2.14	cps
Rhodium	103-2	1379286	1386623	1371110	1379007	0.56	cps
Scandium	45-1	2040352	1985003	1955472	1993609	2.16	cps
Scandium	45-2	86058	85593	84141	85264	1.17	cps
Selenium	82-1	250	250	258	253	1.91	cps
Selenium	77-2	50	47	53	50	6.66	cps
Selenium	78-2	83	81	109	91	17.00	cps
Silicon	28-1	3827683	3414540	3660193	3634139	5.72	cps
Silver	107-1	9128	9137	9153	9139	0.14	cps
Silver	109-1	8445	8478	8703	8542	1.65	cps
Sodium	23-2	267690	265238	262534	265154	0.97	cps
Strontium	86-1	1410740	1374085	1387312	1390713	1.33	cps
Strontium	88-1	11903371	12067365	12132221	12034319	0.98	cps
Sulfur	34-1	340146	342034	341713	341298	0.30	cps
Terbium	159-2	1949029	1986804	1945757	1960530	1.16	cps
Terbium	159-1	4369230	4214522	4199701	4261151	2.20	cps
Thallium	203-1	2684	3092	3034	2937	7.52	cps
Thallium	205-1	7044	6910	7261	7072	2.50	cps
Tin	118-1	59158	60347	58347	59284	1.70	cps
Titanium	47-1	205047	203798	206700	205181	0.71	cps
Uranium	238-1	35408	36035	34422	35288	2.30	cps
Vanadium	51-2	39827	39172	39012	39337	1.10	cps
Yttrium	89-1	3663257	3544843	3587054	3598385	1.67	cps
Yttrium	89-2	483872	481837	479668	481792	0.44	cps
Zinc	66-2	174542	171992	170981	172505	1.06	cps
Zirconium	90-1	39066	39246	40108	39473	1.41	cps
Zirconium	91-1	8169	8286	8286	8247	0.82	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04LX5	Instrumnet Name :	P7
Client Sample ID :	MH4025L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-06 15:56:18	DataFile Name :	038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	217797	216734	218236	217589	0.35	cps
Antimony	121-1	9721	9946	10054	9907	1.72	cps
Arsenic	75-2	3684	3682	3752	3706	1.08	cps
Barium	135-1	219002	219828	220767	219866	0.40	cps
Barium	137-1	379812	381180	379460	380151	0.24	cps
Beryllium	9-1	244	228	267	246	7.92	cps
Bismuth	209-2	1469145	1462023	1467772	1466313	0.26	cps
Bismuth	209-1	2748438	2763092	2717933	2743154	0.84	cps
Boron	10-1	3484	4326	3809	3873	10.96	cps
Boron	11-1	17335	17594	18912	17947	4.71	cps
Cadmium	106-1	1033	983	1275	1097	14.22	cps
Cadmium	108-1	138	121	163	140	14.95	cps
Cadmium	111-1	2344	2283	2617	2415	7.35	cps
Calcium	43-1	1369280	1384891	1391048	1381740	0.81	cps
Calcium	44-1	22299020	22446427	22647169	22464205	0.78	cps
Chromium	52-2	18181	18352	18191	18242	0.52	cps
Cobalt	59-2	10170	10154	10571	10298	2.29	cps
Copper	63-2	76991	77246	78137	77458	0.78	cps
Holmium	165-2	2011838	2013759	2017446	2014347	0.14	cps
Holmium	165-1	4160325	4125536	4140493	4142118	0.42	cps
Indium	115-1	3113135	3124299	3147962	3128465	0.57	cps
Indium	115-2	563603	563705	566320	564543	0.27	cps
Iron	56-2	10121869	10116980	10101966	10113605	0.10	cps
Iron	57-2	249807	249497	247209	248838	0.57	cps
Lead	206-1	1049188	1060054	1058537	1055926	0.56	cps
Lead	207-1	884542	887645	881378	884522	0.35	cps
Lead	208-1	4151928	4185292	4153673	4163631	0.45	cps
Lithium	6-1	284384	284060	283676	284040	0.12	cps
Magnesium	24-2	1011675	1006113	1011185	1009658	0.31	cps
Manganese	55-2	365526	366238	368053	366606	0.36	cps
Molybdenum	94-1	6377	6302	6603	6427	2.44	cps
Molybdenum	95-1	1467	1542	1267	1425	9.98	cps
Molybdenum	96-1	2350	2425	2575	2450	4.68	cps
Molybdenum	97-1	883	983	933	933	5.36	cps
Molybdenum	98-1	2184	2300	2375	2286	4.23	cps
Nickel	60-2	5738	5778	5858	5791	1.06	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04LX5	Instrumnet Name :	P7
Client Sample ID :	MH4025L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-06 15:56:18	DataFile Name :	038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	3684	3442	3759	3628	4.56	cps
Potassium	39-2	196400	195937	195564	195967	0.21	cps
Rhodium	103-2	1425533	1424498	1446369	1432134	0.86	cps
Rhodium	103-1	2943147	2913011	2964125	2940094	0.87	cps
Scandium	45-1	1988683	2016025	2006485	2003731	0.69	cps
Scandium	45-2	87929	87403	87372	87568	0.36	cps
Selenium	77-2	27	23	20	23	14.29	cps
Selenium	82-1	17	-33	83	22	263.37	cps
Selenium	78-2	70	72	63	69	7.15	cps
Silicon	28-1	1366385	1341105	1386182	1364557	1.66	cps
Silver	107-1	3401	3684	3417	3501	4.54	cps
Silver	109-1	3459	3426	3301	3395	2.46	cps
Sodium	23-2	109732	110993	109809	110178	0.64	cps
Strontium	86-1	509672	515380	511040	512031	0.58	cps
Strontium	88-1	4467779	4480980	4470011	4472923	0.16	cps
Sulfur	34-1	313282	318013	316448	315914	0.76	cps
Terbium	159-1	4266699	4233532	4226552	4242261	0.51	cps
Terbium	159-2	1989447	1993963	1982975	1988795	0.28	cps
Thallium	203-1	1308	1050	1183	1181	10.94	cps
Thallium	205-1	2759	2959	2842	2853	3.52	cps
Tin	118-1	22485	22694	22853	22677	0.81	cps
Titanium	47-1	74824	74748	76298	75290	1.16	cps
Uranium	238-1	13015	13966	12690	13224	5.02	cps
Vanadium	51-2	15185	14768	14861	14938	1.47	cps
Yttrium	89-2	471439	468757	474515	471570	0.61	cps
Yttrium	89-1	3449489	3440727	3448798	3446338	0.14	cps
Zinc	66-2	66608	66752	66568	66642	0.15	cps
Zirconium	90-1	14641	14725	14291	14552	1.58	cps
Zirconium	91-1	3476	3367	3376	3406	1.77	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04LDLX10	Instrumnet Name :	P7
Client Sample ID :	MH4025L	Dilution Factor :	10
Date & Time Acquired ::	2016-05-06 15:59:20	DataFile Name :	039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	137814	137562	136165	137180	0.65	cps
Antimony	121-1	6210	6052	5535	5932	5.95	cps
Arsenic	75-2	2224	2265	2315	2268	2.00	cps
Barium	135-1	138914	138182	141160	139419	1.11	cps
Barium	137-1	238668	234787	237375	236943	0.83	cps
Beryllium	9-1	194	150	139	161	18.25	cps
Bismuth	209-1	2733665	2732374	2753634	2739891	0.44	cps
Bismuth	209-2	1474767	1454436	1454846	1461350	0.80	cps
Boron	10-1	2659	2484	2675	2606	4.08	cps
Boron	11-1	12339	12105	12906	12450	3.31	cps
Cadmium	106-1	1225	850	1008	1028	18.32	cps
Cadmium	108-1	79	54	79	71	20.38	cps
Cadmium	111-1	1894	1632	1705	1744	7.75	cps
Calcium	43-1	854435	854265	857250	855316	0.20	cps
Calcium	44-1	14047752	14118181	14144417	14103450	0.35	cps
Chromium	52-2	11438	11872	11948	11753	2.34	cps
Cobalt	59-2	6535	6588	6695	6606	1.23	cps
Copper	63-2	49286	49631	49223	49380	0.44	cps
Holmium	165-2	2037568	1996184	1970841	2001531	1.68	cps
Holmium	165-1	4131296	4099226	4080135	4103552	0.63	cps
Indium	115-1	3072380	3085787	3108619	3088929	0.59	cps
Indium	115-2	571016	560627	558777	563474	1.17	cps
Iron	56-2	6424187	6361312	6424225	6403241	0.57	cps
Iron	57-2	158093	157598	156750	157480	0.43	cps
Lead	206-1	665853	660998	663811	663554	0.37	cps
Lead	207-1	556974	553413	554912	555100	0.32	cps
Lead	208-1	2589766	2588764	2591342	2589957	0.05	cps
Lithium	6-1	283370	284323	282214	283302	0.37	cps
Magnesium	24-2	642464	629655	633092	635070	1.04	cps
Manganese	55-2	232708	232605	232579	232631	0.03	cps
Molybdenum	94-1	3959	4293	4368	4206	5.17	cps
Molybdenum	95-1	758	933	875	856	10.41	cps
Molybdenum	96-1	1400	1533	1792	1575	12.64	cps
Molybdenum	97-1	425	508	533	489	11.60	cps
Molybdenum	98-1	1625	1325	1709	1553	12.98	cps
Nickel	60-2	3661	3667	3637	3655	0.43	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-04LDLX10	Instrumnet Name :	P7
Client Sample ID :	MH4025L	Dilution Factor :	10
Date & Time Acquired ::	2016-05-06 15:59:20	DataFile Name :	039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	2484	2484	2367	2445	2.76	cps
Potassium	39-2	129326	129906	129688	129640	0.23	cps
Rhodium	103-2	1455978	1430553	1421769	1436100	1.24	cps
Rhodium	103-1	2890367	2910852	2920346	2907188	0.53	cps
Scandium	45-1	2001613	1983112	1972797	1985841	0.74	cps
Scandium	45-2	88164	87010	87222	87465	0.70	cps
Selenium	77-2	3	17	7	9	78.08	cps
Selenium	78-2	74	52	85	70	24.12	cps
Selenium	82-1	8	0	92	33	152.08	cps
Silicon	28-1	983918	968272	979951	977381	0.83	cps
Silver	107-1	2284	2417	2117	2273	6.62	cps
Silver	109-1	2092	2025	1959	2025	3.29	cps
Sodium	23-2	74460	73648	73656	73921	0.63	cps
Strontium	86-1	323675	323471	321935	323027	0.29	cps
Strontium	88-1	2812427	2826099	2851701	2830076	0.70	cps
Sulfur	34-1	317138	314421	315373	315644	0.44	cps
Terbium	159-1	4191215	4162030	4167418	4173554	0.37	cps
Terbium	159-2	2006272	1968124	1986341	1986912	0.96	cps
Thallium	203-1	692	683	717	697	2.49	cps
Thallium	205-1	1634	1842	1842	1772	6.79	cps
Tin	118-1	14625	14158	14750	14511	2.15	cps
Titanium	47-1	48615	47202	48606	48141	1.69	cps
Uranium	238-1	8487	7886	7786	8053	4.70	cps
Vanadium	51-2	9416	9530	9170	9372	1.97	cps
Yttrium	89-2	469459	464052	465100	466204	0.62	cps
Yttrium	89-1	3421624	3362590	3414974	3399729	0.95	cps
Zinc	66-2	41659	42077	42492	42076	0.99	cps
Zirconium	90-1	9522	9587	10081	9730	3.14	cps
Zirconium	91-1	2067	2359	2334	2253	7.18	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-06	Instrumnet Name :	P7
Client Sample ID :	MH4025S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:02:22	DataFile Name :	040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1136387	1129239	1131819	1132482	0.32	cps
Antimony	121-1	298489	296635	295597	296907	0.49	cps
Arsenic	75-2	21872	21292	21282	21482	1.57	cps
Barium	135-1	2370631	2392574	2422306	2395170	1.08	cps
Barium	137-1	4028207	4071859	4054981	4051682	0.54	cps
Beryllium	9-1	16498	16693	16626	16606	0.60	cps
Bismuth	209-1	2817579	2823072	2814952	2818534	0.15	cps
Bismuth	209-2	1438478	1443181	1435946	1439201	0.26	cps
Boron	10-1	14416	15317	15817	15183	4.68	cps
Boron	11-1	68423	70431	73269	70708	3.44	cps
Cadmium	111-1	38310	37222	38209	37914	1.59	cps
Cadmium	106-1	4859	4351	4668	4626	5.55	cps
Cadmium	108-1	2550	2463	2579	2531	2.40	cps
Calcium	43-1	7235099	7112903	7112469	7153490	0.99	cps
Calcium	44-1	116849698	116647253	116651332	116716094	0.10	cps
Chromium	52-2	239520	237121	238290	238310	0.50	cps
Cobalt	59-2	678703	665663	675417	673261	1.01	cps
Copper	63-2	611459	603797	607185	607480	0.63	cps
Holmium	165-2	2032088	2022091	2028329	2027503	0.25	cps
Holmium	165-1	4285683	4306753	4261264	4284567	0.53	cps
Indium	115-1	3172433	3140850	3196544	3169942	0.88	cps
Indium	115-2	548809	543289	547213	546437	0.52	cps
Iron	56-2	52325591	51722959	52157335	52068628	0.60	cps
Iron	57-2	1292216	1278714	1281969	1284300	0.55	cps
Lead	206-1	5723422	5790553	5718520	5744165	0.70	cps
Lead	207-1	4721183	4694905	4720015	4712034	0.32	cps
Lead	208-1	22191776	22195600	22147831	22178402	0.12	cps
Lithium	6-1	296267	298293	300010	298190	0.63	cps
Magnesium	24-2	5164964	5115196	5130018	5136726	0.50	cps
Manganese	55-2	2105319	2107726	2084699	2099248	0.60	cps
Molybdenum	94-1	32580	31636	33268	32495	2.52	cps
Molybdenum	95-1	7502	7686	7702	7630	1.46	cps
Molybdenum	96-1	14117	13382	13499	13666	2.89	cps
Molybdenum	97-1	5101	4743	4909	4918	3.65	cps
Molybdenum	98-1	12706	12890	12548	12714	1.35	cps
Nickel	60-2	194269	190439	193707	192805	1.07	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-06	Instrumnet Name :	P7
Client Sample ID :	MH4025S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:02:22	DataFile Name :	040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	18479	18070	18396	18315	1.18	cps
Potassium	39-2	918827	918409	918505	918580	0.02	cps
Rhodium	103-2	1389264	1390265	1383465	1387664	0.26	cps
Rhodium	103-1	2970024	2915609	2924160	2936598	1.00	cps
Scandium	45-1	2057839	2057021	2043410	2052757	0.39	cps
Scandium	45-2	87178	85609	86034	86274	0.94	cps
Selenium	77-2	263	267	237	256	6.43	cps
Selenium	78-2	661	669	676	669	1.11	cps
Selenium	82-1	3843	4326	4226	4131	6.18	cps
Silicon	28-1	6145227	6668305	6254975	6356169	4.34	cps
Silver	109-1	154690	152252	152237	153060	0.92	cps
Silver	107-1	157298	158352	157888	157846	0.33	cps
Sodium	23-2	495803	500535	496081	497473	0.53	cps
Strontium	86-1	2794501	2787048	2736254	2772601	1.14	cps
Strontium	88-1	23456624	23700658	23470936	23542740	0.58	cps
Sulfur	34-1	402421	393332	393717	396490	1.30	cps
Terbium	159-1	4366907	4428637	4367212	4387585	0.81	cps
Terbium	159-2	2003309	2002473	2007680	2004487	0.14	cps
Thallium	203-1	129028	129171	128498	128899	0.27	cps
Thallium	205-1	310766	312537	314618	312640	0.62	cps
Tin	118-1	114531	114825	114656	114671	0.13	cps
Titanium	47-1	396205	403515	399809	399843	0.91	cps
Uranium	238-1	69034	69319	68632	68995	0.50	cps
Vanadium	51-2	388328	381792	385955	385358	0.86	cps
Yttrium	89-2	518195	518198	515023	517139	0.35	cps
Yttrium	89-1	4016248	3937875	3922117	3958747	1.27	cps
Zinc	66-2	384862	381914	385037	383937	0.46	cps
Zirconium	90-1	75584	77622	74973	76059	1.82	cps
Zirconium	91-1	17078	16719	16936	16911	1.07	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-06DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4025S	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:05:19	DataFile Name :	041SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	570508	563992	568798	567766	0.60	cps
Antimony	121-1	145337	145422	146489	145750	0.44	cps
Arsenic	75-2	11164	11001	10719	10961	2.05	cps
Barium	135-1	1148266	1166155	1160759	1158393	0.79	cps
Barium	137-1	2022854	2009892	2003607	2012118	0.49	cps
Beryllium	9-1	8169	8414	8025	8202	2.40	cps
Bismuth	209-2	1484077	1458604	1455126	1465936	1.08	cps
Bismuth	209-1	2789987	2806606	2754238	2783610	0.96	cps
Boron	10-1	7727	8269	8119	8039	3.48	cps
Boron	11-1	37489	38675	39051	38405	2.12	cps
Cadmium	106-1	2992	2892	2500	2795	9.30	cps
Cadmium	108-1	1346	1254	1288	1296	3.58	cps
Cadmium	111-1	19402	19592	19190	19395	1.04	cps
Calcium	43-1	3554455	3609674	3583018	3582383	0.77	cps
Calcium	44-1	57919060	58368755	57786112	58024642	0.53	cps
Chromium	52-2	119606	119651	118979	119412	0.31	cps
Cobalt	59-2	337114	338023	340327	338488	0.49	cps
Copper	63-2	309013	309052	308269	308778	0.14	cps
Holmium	165-2	2031336	2022063	2034405	2029268	0.32	cps
Holmium	165-1	4260225	4271257	4314657	4282046	0.67	cps
Indium	115-1	3194866	3199302	3113651	3169273	1.52	cps
Indium	115-2	573844	564158	559392	565798	1.30	cps
Iron	57-2	642349	648754	646574	645893	0.50	cps
Iron	56-2	26091662	26152853	26084741	26109752	0.14	cps
Lead	206-1	2833639	2841149	2906529	2860439	1.40	cps
Lead	207-1	2346745	2345542	2355626	2349304	0.23	cps
Lead	208-1	11025540	11042264	10998531	11022111	0.20	cps
Lithium	6-1	291762	298024	292938	294241	1.13	cps
Magnesium	24-2	2624883	2618442	2576037	2606454	1.02	cps
Manganese	55-2	1038914	1037500	1033055	1036490	0.29	cps
Molybdenum	94-1	15868	16269	16051	16063	1.25	cps
Molybdenum	95-1	3934	3642	3434	3670	6.85	cps
Molybdenum	96-1	6443	6143	6585	6391	3.53	cps
Molybdenum	97-1	2425	2392	2742	2520	7.67	cps
Molybdenum	98-1	6193	6277	5985	6152	2.44	cps
Nickel	60-2	98279	97958	98206	98148	0.17	cps

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LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-06DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4025S	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:05:19	DataFile Name :	041SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	8553	9320	8961	8945	4.29	cps
Potassium	39-2	469429	467993	465725	467716	0.40	cps
Rhodium	103-2	1442633	1427774	1434724	1435044	0.52	cps
Rhodium	103-1	2929011	2946741	2950953	2942235	0.40	cps
Scandium	45-1	2046042	2038946	2011136	2032041	0.91	cps
Scandium	45-2	90125	87581	87765	88490	1.60	cps
Selenium	82-1	1850	2159	2042	2017	7.72	cps
Selenium	77-2	107	113	117	112	4.54	cps
Selenium	78-2	344	391	346	361	7.27	cps
Silicon	28-1	3466404	3570491	3663942	3566946	2.77	cps
Silver	107-1	79590	78894	79833	79439	0.61	cps
Silver	109-1	76641	76800	76206	76549	0.40	cps
Sodium	23-2	259237	260770	258916	259641	0.38	cps
Strontium	86-1	1335247	1327381	1338122	1333584	0.42	cps
Strontium	88-1	11699172	11587524	11555055	11613917	0.65	cps
Sulfur	34-1	346091	346177	345173	345814	0.16	cps
Terbium	159-2	2031688	2001640	2008508	2013945	0.78	cps
Terbium	159-1	4304587	4350994	4347722	4334435	0.60	cps
Thallium	203-1	63335	63126	61978	62813	1.16	cps
Thallium	205-1	152203	155264	155839	154435	1.27	cps
Tin	118-1	55460	58188	56949	56866	2.40	cps
Titanium	47-1	196870	195926	198804	197200	0.74	cps
Uranium	238-1	34188	33536	33194	33639	1.50	cps
Vanadium	51-2	190165	193551	190546	191420	0.97	cps
Yttrium	89-1	3687313	3687184	3632393	3668963	0.86	cps
Yttrium	89-2	498794	493786	491812	494797	0.73	cps
Zinc	66-2	197171	195178	194331	195560	0.75	cps
Zirconium	90-1	38862	36615	37567	37681	2.99	cps
Zirconium	91-1	8103	8044	8436	8194	2.58	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-07	Instrumnet Name :	P7
Client Sample ID :	MH4028	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:08:19	DataFile Name :	042SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	833811	839816	829635	834421	0.61	cps
Antimony	121-1	25966	25407	26000	25791	1.29	cps
Arsenic	75-2	6224	6094	5975	6098	2.04	cps
Barium	135-1	648958	657975	647041	651325	0.90	cps
Barium	137-1	1114805	1120966	1108135	1114635	0.58	cps
Beryllium	9-1	978	1050	967	998	4.53	cps
Bismuth	209-1	2828032	2825357	2844675	2832688	0.37	cps
Bismuth	209-2	1478055	1470276	1457340	1468557	0.71	cps
Boron	10-1	8494	8036	9095	8542	6.22	cps
Boron	11-1	39353	40112	40020	39829	1.04	cps
Cadmium	111-1	6330	6434	6383	6382	0.82	cps
Cadmium	106-1	1734	2075	2059	1956	9.85	cps
Cadmium	108-1	592	629	567	596	5.28	cps
Calcium	43-1	6657167	6712821	6644533	6671507	0.54	cps
Calcium	44-1	108750686	110061894	109361915	109391498	0.60	cps
Chromium	52-2	63774	63198	63606	63526	0.47	cps
Cobalt	59-2	52634	52641	53046	52774	0.45	cps
Copper	63-2	278589	279519	277903	278671	0.29	cps
Holmium	165-2	2072920	2037789	2010559	2040423	1.53	cps
Holmium	165-1	4297589	4289972	4333970	4307177	0.55	cps
Indium	115-1	3170212	3267426	3202976	3213538	1.54	cps
Indium	115-2	560131	558347	559846	559441	0.17	cps
Iron	56-2	49138961	49424054	49167946	49243653	0.32	cps
Iron	57-2	1219313	1223653	1211075	1218014	0.52	cps
Lead	206-1	2556606	2518090	2504206	2526301	1.07	cps
Lead	207-1	2103663	2083031	2095697	2094130	0.50	cps
Lead	208-1	9799194	9790594	9794900	9794896	0.04	cps
Lithium	6-1	296511	297726	297178	297139	0.20	cps
Magnesium	24-2	3075645	3076493	3064330	3072156	0.22	cps
Manganese	55-2	1311798	1314020	1308547	1311455	0.21	cps
Molybdenum	94-1	43217	42499	44412	43376	2.23	cps
Molybdenum	95-1	3876	4293	3926	4031	5.65	cps
Molybdenum	96-1	10971	11897	11297	11388	4.12	cps
Molybdenum	97-1	2692	2542	2592	2609	2.93	cps
Molybdenum	98-1	6869	6118	6543	6510	5.78	cps
Nickel	60-2	27372	28060	28214	27882	1.61	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-07	Instrumnet Name :	P7
Client Sample ID :	MH4028	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:08:19	DataFile Name :	042SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	11647	11972	11163	11594	3.51	cps
Potassium	39-2	706206	705205	699138	703516	0.54	cps
Rhodium	103-2	1423609	1427128	1413832	1421523	0.48	cps
Rhodium	103-1	2974341	3020038	2922253	2972211	1.65	cps
Scandium	45-1	2070522	2108622	2079150	2086098	0.96	cps
Scandium	45-2	89994	87372	88653	88673	1.48	cps
Selenium	77-2	100	87	127	104	19.50	cps
Selenium	78-2	143	143	176	154	12.52	cps
Selenium	82-1	500	508	583	531	8.65	cps
Silicon	28-1	5455473	6023887	6198914	5892758	6.60	cps
Silver	109-1	9904	9829	9303	9679	3.38	cps
Silver	107-1	9745	10054	10529	10110	3.91	cps
Sodium	23-2	343118	338794	338126	340013	0.80	cps
Strontium	86-1	1938062	1941544	1920695	1933434	0.58	cps
Strontium	88-1	16508820	16597068	16412196	16506028	0.56	cps
Sulfur	34-1	419424	419362	416775	418520	0.36	cps
Terbium	159-1	4367190	4391697	4346904	4368597	0.51	cps
Terbium	159-2	2050422	2026629	2020660	2032570	0.77	cps
Thallium	203-1	4960	4684	5176	4940	4.99	cps
Thallium	205-1	11822	11722	11789	11778	0.43	cps
Tin	118-1	28079	27703	29223	28335	2.79	cps
Titanium	47-1	349716	357065	349886	352222	1.19	cps
Uranium	238-1	63205	64218	64218	63880	0.92	cps
Vanadium	51-2	77057	76219	75529	76268	1.00	cps
Yttrium	89-2	517921	521656	516031	518536	0.55	cps
Yttrium	89-1	3915457	4000303	3892654	3936138	1.44	cps
Zinc	66-2	149640	147953	149136	148910	0.58	cps
Zirconium	90-1	111902	112739	111331	111991	0.63	cps
Zirconium	91-1	24664	25517	24747	24976	1.88	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-07DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4028	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:11:18	DataFile Name :	043SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	445120	444519	434501	441380	1.35	cps
Antimony	121-1	11689	12389	12206	12095	3.00	cps
Arsenic	75-2	3036	2965	3287	3096	5.47	cps
Barium	135-1	328459	324612	328322	327131	0.67	cps
Barium	137-1	568453	557612	567032	564366	1.04	cps
Beryllium	9-1	561	611	422	532	18.41	cps
Bismuth	209-1	2763720	2839751	2770929	2791466	1.50	cps
Bismuth	209-2	1471234	1474904	1467577	1471238	0.25	cps
Boron	10-1	4951	4776	5184	4970	4.12	cps
Boron	11-1	21357	22083	22409	21950	2.45	cps
Cadmium	111-1	3514	3553	3725	3597	3.12	cps
Cadmium	106-1	1458	1442	1684	1528	8.83	cps
Cadmium	108-1	267	229	279	258	10.07	cps
Calcium	43-1	3487265	3441104	3413946	3447438	1.08	cps
Calcium	44-1	56338462	55953141	55783626	56025076	0.51	cps
Chromium	52-2	33308	32386	33548	33081	1.86	cps
Cobalt	59-2	27666	26985	26992	27214	1.44	cps
Copper	63-2	144767	145946	146275	145663	0.54	cps
Holmium	165-2	2051116	2078876	2032794	2054262	1.13	cps
Holmium	165-1	4256787	4252652	4210634	4240024	0.60	cps
Indium	115-1	3170502	3216195	3215717	3200805	0.82	cps
Indium	115-2	568690	570780	567567	569012	0.29	cps
Iron	56-2	25694878	25572439	25091164	25452827	1.25	cps
Iron	57-2	630116	628809	625440	628121	0.38	cps
Lead	206-1	1240333	1239822	1231759	1237305	0.39	cps
Lead	207-1	1042898	1037023	1038539	1039487	0.29	cps
Lead	208-1	4894434	4882667	4900261	4892454	0.18	cps
Lithium	6-1	289365	292361	290172	290633	0.53	cps
Magnesium	24-2	1587909	1595433	1587651	1590331	0.28	cps
Manganese	55-2	679683	676292	673811	676595	0.44	cps
Molybdenum	94-1	21977	21751	22827	22185	2.56	cps
Molybdenum	95-1	2000	2225	1975	2067	6.66	cps
Molybdenum	96-1	6093	6318	5410	5940	7.97	cps
Molybdenum	97-1	1425	1283	1125	1278	11.75	cps
Molybdenum	98-1	3617	3092	3734	3481	9.82	cps
Nickel	60-2	14948	15649	14838	15145	2.90	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-07DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4028	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:11:18	DataFile Name :	043SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	6543	5843	5601	5996	8.16	cps
Potassium	39-2	374629	374703	373207	374180	0.23	cps
Rhodium	103-2	1444682	1456321	1439555	1446853	0.59	cps
Rhodium	103-1	2962302	2980366	2977768	2973478	0.33	cps
Scandium	45-1	2075190	2061544	2023137	2053290	1.31	cps
Scandium	45-2	89753	88774	89023	89183	0.57	cps
Selenium	77-2	43	50	73	56	28.35	cps
Selenium	78-2	104	104	117	108	6.93	cps
Selenium	82-1	283	50	183	172	67.97	cps
Silicon	28-1	3027770	3416423	3415571	3286588	6.82	cps
Silver	109-1	4909	4901	4718	4843	2.24	cps
Silver	107-1	4909	5493	5151	5185	5.66	cps
Sodium	23-2	175878	181029	179498	178802	1.48	cps
Strontium	86-1	963374	958408	952542	958108	0.57	cps
Strontium	88-1	8349384	8342968	8265219	8319190	0.56	cps
Sulfur	34-1	369754	367625	367012	368130	0.39	cps
Terbium	159-1	4313334	4300061	4291238	4301545	0.26	cps
Terbium	159-2	2033484	2042697	2011496	2029226	0.79	cps
Thallium	203-1	2525	2559	2334	2473	4.91	cps
Thallium	205-1	5843	6218	5877	5979	3.47	cps
Tin	118-1	14733	15092	15359	15061	2.08	cps
Titanium	47-1	180238	183528	179792	181186	1.13	cps
Uranium	238-1	32609	31564	32100	32091	1.63	cps
Vanadium	51-2	38423	39429	38908	38920	1.29	cps
Yttrium	89-2	494292	493837	492963	493697	0.14	cps
Yttrium	89-1	3673282	3699400	3622003	3664895	1.07	cps
Zinc	66-2	78600	78074	78097	78257	0.38	cps
Zirconium	90-1	56956	57525	57169	57217	0.50	cps
Zirconium	91-1	12806	12815	12831	12817	0.10	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-08	Instrumnet Name :	P7
Client Sample ID :	MH4029	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:14:19	DataFile Name :	044SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	471124	473476	468501	471034	0.53	cps
Antimony	121-1	22227	21233	21275	21579	2.60	cps
Arsenic	75-2	3174	3073	3080	3109	1.83	cps
Barium	135-1	445305	446889	450802	447665	0.63	cps
Barium	137-1	766175	770523	768488	768395	0.28	cps
Beryllium	9-1	739	717	761	739	3.01	cps
Bismuth	209-1	2836744	2833063	2837727	2835844	0.09	cps
Bismuth	209-2	1447995	1448600	1448799	1448465	0.03	cps
Boron	10-1	9428	9470	10054	9651	3.62	cps
Boron	11-1	45753	46991	47776	46840	2.18	cps
Cadmium	111-1	4916	4670	4459	4682	4.88	cps
Cadmium	106-1	1684	1617	1542	1614	4.39	cps
Cadmium	108-1	346	375	404	375	7.78	cps
Calcium	43-1	3704934	3682228	3641183	3676115	0.88	cps
Calcium	44-1	60254472	59913060	59718845	59962126	0.45	cps
Chromium	52-2	47376	45968	46975	46773	1.55	cps
Cobalt	59-2	29069	29206	29183	29152	0.25	cps
Copper	63-2	269700	266876	264704	267093	0.94	cps
Holmium	165-2	1988211	2015774	2016241	2006742	0.80	cps
Holmium	165-1	4281085	4264536	4294825	4280149	0.35	cps
Indium	115-1	3182761	3167630	3200350	3183580	0.51	cps
Indium	115-2	558088	557410	551283	555593	0.67	cps
Iron	56-2	25437358	25398190	25529962	25455170	0.27	cps
Iron	57-2	630391	628309	627919	628873	0.21	cps
Lead	206-1	1489981	1511461	1489422	1496955	0.84	cps
Lead	207-1	1227892	1239614	1230156	1232554	0.50	cps
Lead	208-1	5818488	5867394	5844070	5843317	0.42	cps
Lithium	6-1	292175	295428	295736	294446	0.67	cps
Magnesium	24-2	2327425	2338117	2333793	2333112	0.23	cps
Manganese	55-2	713884	710986	709897	711589	0.29	cps
Molybdenum	94-1	25256	25808	26442	25835	2.30	cps
Molybdenum	95-1	6960	7444	7602	7336	4.56	cps
Molybdenum	96-1	11789	11880	11647	11772	1.00	cps
Molybdenum	97-1	4734	4709	4393	4612	4.13	cps
Molybdenum	98-1	11455	11680	11055	11397	2.78	cps
Nickel	60-2	18696	18428	18225	18450	1.28	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-08	Instrumnet Name :	P7
Client Sample ID :	MH4029	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:14:19	DataFile Name :	044SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	9387	9295	8711	9131	4.01	cps
Potassium	39-2	502165	501177	493755	499032	0.92	cps
Rhodium	103-2	1426428	1411169	1407408	1415001	0.71	cps
Rhodium	103-1	2993066	3002811	2969112	2988330	0.58	cps
Scandium	45-1	2080019	2069091	2044917	2064676	0.87	cps
Scandium	45-2	87329	87286	85428	86681	1.25	cps
Selenium	77-2	40	53	47	47	14.28	cps
Selenium	78-2	89	106	113	102	12.03	cps
Selenium	82-1	417	383	225	342	29.97	cps
Silicon	28-1	16159365	7107051	7189023	10151813	51.25	cps
Silver	109-1	4676	4909	4951	4845	3.06	cps
Silver	107-1	4801	4718	5218	4912	5.46	cps
Sodium	23-2	363427	362425	360922	362258	0.35	cps
Strontium	86-1	1321422	1314854	1316812	1317696	0.26	cps
Strontium	88-1	11507614	11500377	11576464	11528151	0.36	cps
Sulfur	34-1	423843	426618	421724	424062	0.58	cps
Terbium	159-1	4336325	4366994	4357157	4353492	0.36	cps
Terbium	159-2	1972878	1983639	1988164	1981560	0.40	cps
Thallium	203-1	2409	2467	2400	2425	1.50	cps
Thallium	205-1	5918	5910	5885	5904	0.29	cps
Tin	118-1	19214	19815	19673	19567	1.60	cps
Titanium	47-1	209221	204329	207429	206993	1.20	cps
Uranium	238-1	52449	54925	54381	53919	2.41	cps
Vanadium	51-2	43166	43584	43284	43345	0.50	cps
Yttrium	89-2	493121	489416	484415	488984	0.89	cps
Yttrium	89-1	3721275	3763871	3779214	3754786	0.80	cps
Zinc	66-2	120378	120790	120347	120505	0.21	cps
Zirconium	90-1	59726	59173	61608	60169	2.12	cps
Zirconium	91-1	13649	13257	13874	13593	2.30	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-08DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4029	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:17:21	DataFile Name :	045SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	246889	243647	241579	244038	1.10	cps
Antimony	121-1	9804	10079	10296	10060	2.45	cps
Arsenic	75-2	1567	1452	1491	1503	3.89	cps
Barium	135-1	223341	222420	221283	222348	0.46	cps
Barium	137-1	385291	383057	381276	383208	0.52	cps
Beryllium	9-1	394	278	372	348	17.79	cps
Bismuth	209-1	2783169	2779511	2747574	2770084	0.71	cps
Bismuth	209-2	1453700	1444848	1446165	1448238	0.33	cps
Boron	10-1	5426	5243	5993	5554	7.04	cps
Boron	11-1	25155	26725	27217	26365	4.08	cps
Cadmium	111-1	2708	2576	2670	2651	2.56	cps
Cadmium	106-1	1225	1250	1233	1236	1.03	cps
Cadmium	108-1	167	183	175	175	4.76	cps
Calcium	43-1	1857958	1867221	1848814	1857998	0.50	cps
Calcium	44-1	30364774	30260388	29714636	30113266	1.16	cps
Chromium	52-2	24527	24814	24230	24524	1.19	cps
Cobalt	59-2	14924	15271	14861	15019	1.47	cps
Copper	63-2	138901	137619	139262	138594	0.62	cps
Holmium	165-2	2010068	1986052	2004081	2000067	0.63	cps
Holmium	165-1	4162889	4204941	4168803	4178878	0.54	cps
Indium	115-1	3152737	3166116	3140296	3153050	0.41	cps
Indium	115-2	559629	558269	560568	559488	0.21	cps
Iron	56-2	13091877	13028963	13099389	13073410	0.30	cps
Iron	57-2	323136	324700	323500	323779	0.25	cps
Lead	206-1	740388	738607	741116	740037	0.17	cps
Lead	207-1	608175	605190	610454	607940	0.43	cps
Lead	208-1	2847645	2870914	2856934	2858498	0.41	cps
Lithium	6-1	286098	287869	289795	287921	0.64	cps
Magnesium	24-2	1211429	1218157	1207970	1212519	0.43	cps
Manganese	55-2	362973	363287	366103	364121	0.47	cps
Molybdenum	94-1	12673	12965	12831	12823	1.14	cps
Molybdenum	95-1	3642	3392	3942	3659	7.53	cps
Molybdenum	96-1	5718	5876	5576	5724	2.62	cps
Molybdenum	97-1	2375	2359	2192	2309	4.39	cps
Molybdenum	98-1	6177	5726	5643	5849	4.91	cps
Nickel	60-2	9416	9580	9500	9499	0.86	cps

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Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-08DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4029	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:17:21	DataFile Name :	045SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	4909	4501	4893	4768	4.85	cps
Potassium	39-2	266429	263939	262059	264142	0.83	cps
Rhodium	103-2	1436332	1428521	1433307	1432720	0.27	cps
Rhodium	103-1	3010104	2959179	2985668	2984984	0.85	cps
Scandium	45-1	2040369	2028095	2053290	2040585	0.62	cps
Scandium	45-2	86699	88171	87738	87536	0.86	cps
Selenium	77-2	10	20	13	14	35.26	cps
Selenium	78-2	106	63	96	88	25.38	cps
Selenium	82-1	75	358	150	194	75.50	cps
Silicon	28-1	3744270	3694341	3636375	3691662	1.46	cps
Silver	109-1	2259	2292	2517	2356	5.97	cps
Silver	107-1	2409	2700	2300	2470	8.38	cps
Sodium	23-2	195737	193641	192546	193974	0.84	cps
Strontium	86-1	662930	662193	656673	660599	0.52	cps
Strontium	88-1	5782702	5809025	5731727	5774485	0.68	cps
Sulfur	34-1	360849	366552	359613	362338	1.02	cps
Terbium	159-1	4254593	4266993	4257515	4259700	0.15	cps
Terbium	159-2	2005493	1956711	2012410	1991538	1.52	cps
Thallium	203-1	1167	1133	1342	1214	9.22	cps
Thallium	205-1	2925	3267	3059	3084	5.59	cps
Tin	118-1	9846	10529	10096	10157	3.41	cps
Titanium	47-1	104855	104578	104032	104488	0.40	cps
Uranium	238-1	26653	27229	26837	26907	1.09	cps
Vanadium	51-2	21890	21726	21983	21866	0.60	cps
Yttrium	89-2	477235	470616	475692	474514	0.73	cps
Yttrium	89-1	3539416	3503283	3562613	3535104	0.85	cps
Zinc	66-2	63437	62035	62480	62650	1.14	cps
Zirconium	90-1	30041	30291	30366	30233	0.56	cps
Zirconium	91-1	6485	7010	7152	6882	5.11	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-09	Instrumnet Name :	P7
Client Sample ID :	MH4030	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:20:23	DataFile Name :	046SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	463797	465987	459015	462933	0.77	cps
Antimony	121-1	19965	20082	18504	19517	4.50	cps
Arsenic	75-2	2560	2621	2532	2571	1.77	cps
Barium	135-1	393937	400045	400536	398173	0.92	cps
Barium	137-1	677304	683463	687441	682736	0.75	cps
Beryllium	9-1	506	567	533	535	5.72	cps
Bismuth	209-1	2775119	2813437	2837525	2808694	1.12	cps
Bismuth	209-2	1467201	1444507	1446906	1452871	0.86	cps
Boron	10-1	8453	8211	8394	8353	1.51	cps
Boron	11-1	38166	41566	41240	40324	4.65	cps
Cadmium	111-1	4425	4664	4253	4447	4.64	cps
Cadmium	106-1	1342	1759	1467	1522	14.05	cps
Cadmium	108-1	354	413	350	372	9.39	cps
Calcium	43-1	3221257	3214429	3181404	3205696	0.66	cps
Calcium	44-1	53109769	52289870	52281730	52560456	0.91	cps
Chromium	52-2	50316	51162	50052	50510	1.15	cps
Cobalt	59-2	26481	26828	26451	26587	0.79	cps
Copper	63-2	292543	293672	293759	293325	0.23	cps
Holmium	165-2	2021335	2008085	2015932	2015118	0.33	cps
Holmium	165-1	4210722	4211220	4234169	4218704	0.32	cps
Indium	115-1	3124671	3155403	3160956	3147010	0.62	cps
Indium	115-2	562988	556461	554368	557939	0.81	cps
Iron	56-2	24827562	24849421	24795705	24824229	0.11	cps
Iron	57-2	615631	613277	614746	614551	0.19	cps
Lead	206-1	1452149	1467220	1473481	1464283	0.75	cps
Lead	207-1	1195896	1205407	1211748	1204351	0.66	cps
Lead	208-1	5697553	5710762	5785497	5731271	0.83	cps
Lithium	6-1	289984	290094	290326	290134	0.06	cps
Magnesium	24-2	2208526	2187545	2160310	2185460	1.11	cps
Manganese	55-2	553595	557615	553501	554904	0.42	cps
Molybdenum	94-1	25883	27562	26351	26598	3.26	cps
Molybdenum	95-1	7752	7627	8111	7830	3.21	cps
Molybdenum	96-1	12056	11730	11822	11869	1.41	cps
Molybdenum	97-1	4826	4776	4593	4732	2.60	cps
Molybdenum	98-1	12706	13048	12798	12851	1.38	cps
Nickel	60-2	18035	17761	17624	17807	1.17	cps

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On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-09	Instrumnet Name :	P7
Client Sample ID :	MH4030	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:20:23	DataFile Name :	046SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	8970	9178	8586	8911	3.37	cps
Potassium	39-2	454571	450895	452094	452520	0.41	cps
Rhodium	103-2	1431398	1418998	1406778	1419058	0.87	cps
Rhodium	103-1	2907426	2932700	2926989	2922371	0.45	cps
Scandium	45-1	2011059	2045641	2023691	2026797	0.86	cps
Scandium	45-2	87094	86494	84717	86102	1.44	cps
Selenium	77-2	57	47	83	62	30.46	cps
Selenium	78-2	122	106	111	113	7.51	cps
Selenium	82-1	292	233	358	294	21.24	cps
Silicon	28-1	6864864	6826355	7149848	6947022	2.54	cps
Silver	109-1	4376	4651	4768	4598	4.38	cps
Silver	107-1	4568	4784	4926	4759	3.79	cps
Sodium	23-2	368746	368828	367379	368318	0.22	cps
Strontium	86-1	1116333	1129473	1124255	1123354	0.59	cps
Strontium	88-1	9755557	9875752	9700989	9777433	0.91	cps
Sulfur	34-1	438854	436812	440459	438708	0.42	cps
Terbium	159-1	4248888	4315876	4293278	4286014	0.80	cps
Terbium	159-2	1997298	1985758	2005168	1996075	0.49	cps
Thallium	203-1	2209	2009	2434	2217	9.59	cps
Thallium	205-1	5927	5877	5601	5802	3.02	cps
Tin	118-1	19740	18221	18538	18833	4.25	cps
Titanium	47-1	221370	221660	221082	221371	0.13	cps
Uranium	238-1	107710	106645	106426	106927	0.64	cps
Vanadium	51-2	45009	44584	44537	44710	0.58	cps
Yttrium	89-2	494322	485999	482877	487733	1.21	cps
Yttrium	89-1	3600888	3637425	3667401	3635238	0.92	cps
Zinc	66-2	123654	125168	125843	124888	0.90	cps
Zirconium	90-1	56381	57617	58203	57400	1.62	cps
Zirconium	91-1	14249	12639	12981	13290	6.38	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-09DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4030	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:23:25	DataFile Name :	047SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	242275	241570	235772	239872	1.49	cps
Antimony	121-1	9470	9012	9454	9312	2.79	cps
Arsenic	75-2	1352	1346	1402	1367	2.24	cps
Barium	135-1	202807	199852	203611	202090	0.98	cps
Barium	137-1	345097	345220	345561	345293	0.07	cps
Beryllium	9-1	322	289	356	322	10.34	cps
Bismuth	209-1	2708830	2717424	2720679	2715644	0.23	cps
Bismuth	209-2	1438311	1438205	1427073	1434530	0.45	cps
Boron	10-1	4543	4659	4843	4681	3.23	cps
Boron	11-1	22058	22234	23293	22529	2.97	cps
Cadmium	111-1	2385	2584	2774	2581	7.54	cps
Cadmium	106-1	1192	1167	1308	1222	6.19	cps
Cadmium	108-1	142	196	125	154	24.02	cps
Calcium	43-1	1636959	1641241	1639567	1639256	0.13	cps
Calcium	44-1	26782889	26714281	26990540	26829237	0.54	cps
Chromium	52-2	27309	27322	26704	27112	1.30	cps
Cobalt	59-2	14150	14020	13543	13905	2.30	cps
Copper	63-2	154842	155792	152724	154452	1.02	cps
Holmium	165-2	1965377	1978018	1966487	1969960	0.36	cps
Holmium	165-1	4047082	4089233	4120164	4085493	0.90	cps
Indium	115-1	3118169	3093732	3125671	3112524	0.54	cps
Indium	115-2	555453	555014	551216	553894	0.42	cps
Iron	56-2	13340811	13198014	13453521	13330782	0.96	cps
Iron	57-2	332667	330794	330856	331439	0.32	cps
Lead	206-1	736660	735205	736915	736260	0.13	cps
Lead	207-1	613995	608769	605917	609560	0.67	cps
Lead	208-1	2852758	2853186	2848295	2851413	0.09	cps
Lithium	6-1	278297	280181	281546	280008	0.58	cps
Magnesium	24-2	1129707	1119570	1110503	1119927	0.86	cps
Manganese	55-2	287014	286605	284912	286177	0.39	cps
Molybdenum	94-1	13215	14186	13323	13575	3.92	cps
Molybdenum	95-1	4201	4568	4184	4318	5.02	cps
Molybdenum	96-1	6410	6210	6468	6363	2.13	cps
Molybdenum	97-1	2634	2384	2550	2523	5.05	cps
Molybdenum	98-1	6794	6510	6869	6724	2.81	cps
Nickel	60-2	9780	9303	9763	9616	2.82	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	H2837-09DLX2	Instrumnet Name :	P7
Client Sample ID :	MH4030	Dilution Factor :	2
Date & Time Acquired ::	2016-05-06 16:23:25	DataFile Name :	047SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	4743	4534	4951	4743	4.39	cps
Potassium	39-2	245016	240113	240931	242020	1.09	cps
Rhodium	103-2	1410825	1417437	1411062	1413108	0.27	cps
Rhodium	103-1	2884163	2933266	2923688	2913706	0.89	cps
Scandium	45-1	1997013	1975710	1989850	1987524	0.55	cps
Scandium	45-2	86793	87188	85589	86523	0.96	cps
Selenium	77-2	53	13	20	29	74.19	cps
Selenium	78-2	67	96	81	81	18.18	cps
Selenium	82-1	17	158	367	181	97.50	cps
Silicon	28-1	3562679	3582225	3688373	3611092	1.87	cps
Silver	109-1	2225	2542	2342	2370	6.76	cps
Silver	107-1	2242	2509	2225	2325	6.84	cps
Sodium	23-2	198098	195921	193761	195927	1.11	cps
Strontium	86-1	566306	570949	568770	568675	0.41	cps
Strontium	88-1	5002288	5013978	5061980	5026082	0.63	cps
Sulfur	34-1	369132	369927	366253	368437	0.52	cps
Terbium	159-1	4197890	4143260	4211229	4184126	0.86	cps
Terbium	159-2	1983448	1972240	1959033	1971573	0.62	cps
Thallium	203-1	1192	1350	1217	1253	6.79	cps
Thallium	205-1	2950	2934	3159	3014	4.16	cps
Tin	118-1	10521	10379	10187	10363	1.62	cps
Titanium	47-1	113588	112846	113182	113205	0.33	cps
Uranium	238-1	52491	53444	54189	53374	1.59	cps
Vanadium	51-2	23098	22978	22721	22932	0.84	cps
Yttrium	89-2	469475	469691	468754	469307	0.10	cps
Yttrium	89-1	3429705	3447387	3529007	3468700	1.53	cps
Zinc	66-2	65235	64003	63491	64243	1.40	cps
Zirconium	90-1	29532	29281	30200	29671	1.60	cps
Zirconium	91-1	7629	6510	6852	6997	8.20	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCV082	Instrumnet Name :	P7
Client Sample ID :	CCV082	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:26:27	DataFile Name :	048CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1097524	1087135	1081967	1088875	0.73	cps
Antimony	121-1	5827602	5786515	5773502	5795873	0.49	cps
Arsenic	75-2	189655	190608	191943	190736	0.60	cps
Barium	135-1	7129493	7187218	7121368	7146026	0.50	cps
Barium	137-1	12086213	12204464	12057697	12116125	0.64	cps
Beryllium	9-1	735111	735447	746916	739158	0.91	cps
Bismuth	209-1	2609006	2618357	2611847	2613070	0.18	cps
Bismuth	209-2	1387013	1385654	1387690	1386785	0.07	cps
Boron	10-1	95794	98192	100583	98190	2.44	cps
Boron	11-1	469094	475760	488587	477814	2.07	cps
Cadmium	111-1	1359274	1367380	1353517	1360057	0.51	cps
Cadmium	106-1	146633	149255	145089	146993	1.43	cps
Cadmium	108-1	98363	99911	96929	98401	1.52	cps
Calcium	43-1	1746753	1729927	1717533	1731404	0.85	cps
Calcium	44-1	28083551	27941223	28062113	28028962	0.27	cps
Chromium	52-2	1902787	1890326	1861396	1884836	1.13	cps
Cobalt	59-2	3058354	3040302	3067256	3055304	0.45	cps
Copper	63-2	4502035	4436644	4451251	4463310	0.77	cps
Holmium	165-2	1974353	1961265	1946874	1960831	0.70	cps
Holmium	165-1	4029428	3988703	4016229	4011453	0.52	cps
Indium	115-1	2902017	2953151	2902995	2919388	1.00	cps
Indium	115-2	526178	519149	525372	523567	0.73	cps
Iron	56-2	74675196	74257424	74378129	74436916	0.29	cps
Iron	57-2	1894007	1865114	1903253	1887458	1.05	cps
Lead	206-1	4860446	4888916	4875744	4875035	0.29	cps
Lead	207-1	4231137	4216618	4242648	4230135	0.31	cps
Lead	208-1	19353993	19262518	19444928	19353813	0.47	cps
Lithium	6-1	268463	269078	269438	268993	0.18	cps
Magnesium	24-2	12833107	12778402	12627458	12746322	0.84	cps
Manganese	55-2	1981985	1989329	1959522	1976945	0.79	cps
Molybdenum	94-1	5403661	5485551	5465967	5451726	0.78	cps
Molybdenum	95-1	2924095	2963599	2953723	2947139	0.70	cps
Molybdenum	96-1	3760200	3768092	3777795	3768696	0.23	cps
Molybdenum	97-1	1852732	1860963	1869242	1860979	0.44	cps
Molybdenum	98-1	4766515	4846417	4749008	4787313	1.08	cps
Nickel	60-2	798822	797917	802483	799741	0.30	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCV082	Instrumnet Name :	P7
Client Sample ID :	CCV082	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:26:27	DataFile Name :	048CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	52335	53070	52920	52775	0.74	cps
Potassium	39-2	5992814	6049267	5979048	6007043	0.62	cps
Rhodium	103-2	1373746	1358060	1378964	1370257	0.79	cps
Rhodium	103-1	2774160	2795871	2828921	2799651	0.98	cps
Scandium	45-1	2021868	1999441	2012643	2011318	0.56	cps
Scandium	45-2	88573	88784	88087	88481	0.40	cps
Selenium	77-2	3797	3711	3704	3737	1.39	cps
Selenium	78-2	12826	12622	12887	12779	1.09	cps
Selenium	82-1	91441	88834	88768	89681	1.70	cps
Silicon	28-1	3306301	3277710	3323636	3302549	0.70	cps
Silver	109-1	6551664	6640135	6666921	6619573	0.91	cps
Silver	107-1	6786494	6874033	6799052	6819860	0.69	cps
Sodium	23-2	24239196	24176296	24218448	24211313	0.13	cps
Strontium	86-1	1903247	1881392	1914666	1899768	0.89	cps
Strontium	88-1	16143430	16144150	16276757	16188112	0.47	cps
Sulfur	34-1	824701	813719	808095	815505	1.04	cps
Terbium	159-1	4091127	4116146	4105611	4104295	0.31	cps
Terbium	159-2	1928518	1947442	1917185	1931048	0.79	cps
Thallium	203-1	5804997	5895331	5851034	5850454	0.77	cps
Thallium	205-1	13860850	14048120	14015424	13974798	0.72	cps
Tin	118-1	4833156	4835817	4776876	4815283	0.69	cps
Titanium	47-1	830296	837147	831667	833037	0.44	cps
Uranium	238-1	20574651	20857202	20860718	20764190	0.79	cps
Vanadium	51-2	1552523	1559750	1531627	1547967	0.94	cps
Yttrium	89-2	450424	448408	451055	449963	0.31	cps
Yttrium	89-1	3271518	3290581	3314252	3292117	0.65	cps
Zinc	66-2	569892	566433	569375	568567	0.33	cps
Zirconium	90-1	9846350	10090449	10012623	9983141	1.25	cps
Zirconium	91-1	2260718	2307672	2243112	2270501	1.47	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCB082	Instrumnet Name :	P7
Client Sample ID :	CCB082	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:29:18	DataFile Name :	049CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	200	158	108	156	29.51	cps
Antimony	121-1	3501	3692	3651	3615	2.79	cps
Arsenic	75-2	22	24	17	21	18.35	cps
Barium	135-1	508	508	408	475	12.16	cps
Barium	137-1	958	567	825	783	25.42	cps
Beryllium	9-1	111	150	94	119	24.05	cps
Bismuth	209-1	2664570	2700733	2628099	2664468	1.36	cps
Bismuth	209-2	1421528	1415423	1422344	1419765	0.27	cps
Boron	10-1	3601	3317	3492	3470	4.12	cps
Boron	11-1	19188	17260	16418	17622	8.06	cps
Cadmium	111-1	698	770	621	697	10.71	cps
Cadmium	106-1	833	917	725	825	11.65	cps
Cadmium	108-1	8	13	4	8	49.98	cps
Calcium	43-1	492	658	358	503	29.90	cps
Calcium	44-1	14124	13490	13690	13768	2.35	cps
Chromium	52-2	1097	1177	1217	1163	5.25	cps
Cobalt	59-2	187	207	210	201	6.28	cps
Copper	63-2	1567	1597	1657	1607	2.85	cps
Holmium	165-2	1943640	1952026	1938059	1944575	0.36	cps
Holmium	165-1	3963244	3989057	4007109	3986470	0.55	cps
Indium	115-1	3025992	3028628	3091509	3048710	1.22	cps
Indium	115-2	553569	549620	554575	552588	0.47	cps
Iron	56-2	7802	8008	7585	7799	2.71	cps
Iron	57-2	194	144	233	191	23.36	cps
Lead	206-1	1067	1189	1383	1213	13.17	cps
Lead	207-1	1033	1206	1122	1120	7.69	cps
Lead	208-1	4384	4789	5045	4739	7.04	cps
Lithium	6-1	266052	269059	267498	267537	0.56	cps
Magnesium	24-2	1092	842	975	970	12.90	cps
Manganese	55-2	187	230	163	193	17.50	cps
Molybdenum	94-1	808	800	675	761	9.81	cps
Molybdenum	95-1	408	417	400	408	2.04	cps
Molybdenum	96-1	658	550	558	589	10.24	cps
Molybdenum	97-1	292	300	258	283	7.78	cps
Molybdenum	98-1	900	800	750	817	9.35	cps
Nickel	60-2	67	100	90	86	19.99	cps

Reviewed By:jaswal
On:5/11/2016 11:57:08 AM
Inst Id :P7

LB Number :	LB81457	Operator :	Jaswal
Lab Sample ID :	CCB082	Instrumnet Name :	P7
Client Sample ID :	CCB082	Dilution Factor :	1
Date & Time Acquired ::	2016-05-06 16:29:18	DataFile Name :	049CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	50	133	117	100	44.10	cps
Potassium	39-2	20031	19580	19714	19775	1.17	cps
Rhodium	103-2	1413181	1414016	1405501	1410899	0.33	cps
Rhodium	103-1	2858743	2849857	2856039	2854879	0.16	cps
Scandium	45-1	1933198	1927202	1946511	1935637	0.51	cps
Scandium	45-2	86652	85974	85753	86126	0.54	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	67	48	48	54	19.68	cps
Selenium	82-1	42	0	-33	3	1355.29	cps
Silicon	28-1	187124	185782	186301	186402	0.36	cps
Silver	109-1	642	667	600	636	5.30	cps
Silver	107-1	725	575	633	644	11.73	cps
Sodium	23-2	14099	14099	13465	13888	2.64	cps
Strontium	86-1	758	600	667	675	11.78	cps
Strontium	88-1	1575	1217	1092	1295	19.38	cps
Sulfur	34-1	279865	285498	285429	283597	1.14	cps
Terbium	159-1	4036802	4063828	4139835	4080155	1.31	cps
Terbium	159-2	1952819	1925508	1932918	1937082	0.73	cps
Thallium	203-1	750	808	758	772	4.08	cps
Thallium	205-1	2067	1900	1734	1900	8.77	cps
Tin	118-1	1734	1692	1800	1742	3.14	cps
Titanium	47-1	117	108	92	106	12.06	cps
Uranium	238-1	1592	1342	1258	1397	12.42	cps
Vanadium	51-2	57	110	77	81	33.21	cps
Yttrium	89-2	448481	444929	441906	445105	0.74	cps
Yttrium	89-1	3230520	3252129	3282342	3254997	0.80	cps
Zinc	66-2	173	160	157	163	5.40	cps
Zirconium	90-1	1425	1225	1367	1339	7.68	cps
Zirconium	91-1	342	342	292	325	8.88	cps

Sop ID:- MUM02-2 Metal ICP MS

MUM02-2 MS 2.5g

CHEMTECH

ICP MS
Soil/Sludge Preparation Sheet

PB90341

H2837

Balance ID:- M-JC-2

PrepBatch ID : PB90341

Batch# PB90341

SDG No : _____

ICP Digest Date: 05/06/16 Time : 9:00

Matrix : Solid

Sample Received By : [signature]

Final Volume : 50.0 ML

Acceptance Range: +/- 1% N/A

Balance Calibration Check(1.00)g 1.000g 1.000g

Dig Technician Signature: PB

Method : MUM02-2 MS

Supervisor Signature: [signature]

Hot Plate Temp : 1. (2.) 95°C 3.

Prep Code: CRI PB05/06/16

End time for hot Block 9:30

Standared Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00ml	MP 33630
Spike Sol. B	1.00ml	MP 33631
		PB 05/06/16

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	4.00ml	MP 33482
1.4 HCL SOLN	10.0ml	MP 32323
PTFE Boiling Stones	—	M3584
		PB 05/06/16

Date / Time	Received By	Relinquished By	Location
05/06/16 10:00	[signature]	PB	ICPLab
	Analysis Group	Digestion Group	

CHEMTECH Soil/Sludge Sample Preparation Workshee PrepBatch ID : PB90341

Lab Sample	Client Sample ID	Weight	Color Before	Color After	Texture	Artifact	Comments	Prep Pos
H2837-04	MH4025	1.40	BR	Y	M	No	7	
H2837-05	MH4025D	1.34	BR	Y	M	No	7	
H2837-06	MH4025S	1.40	BR	Y	M	No	MP33631	
H2837-07	MH4028	1.42	BR	Y	M	No	7	
H2837-08	MH4029	1.44	BR	Y	M	No	7	
H2837-09	MH4030	1.35	BR	Y	M	No	7	
PB90341BL	~~PBS01~~ PBJ008	1.03	C	C	F	No	—	
PB90341BS	~~LCS01~~ LCS008	1.02	C	C	F	No	MP33630	

PB 05/06/16

* BL=Blank BS=Blank Spike TB=TCLP Blank
* COLOR: R=Red BU=Blue Y=Yellow GR=Green O=Orange V=Violet W=White C=Colorless BR=Brown GY=Grey BL=Black
* CLARITY: CL=Clear CD=Cloudy O=Opaque
* TEXTURE: F=Fine M=Medium C=Coarse

CHEMTECH Soil/Sludge Sample Preparation Workshee PrepBatch ID : PB90341

Lab Sample ID	Client Sample ID	Weight	Color Before	Color After	Texture	Artifact	Comments	Prep Pos
H2837-04	MH4025	1.40	Brown	Yellow	Medium	No		
H2837-05	MH4025D	1.39	Brown	Yellow	Medium	No		
H2837-06	MH4025S	1.40	Brown	Yellow	Medium	No		
H2837-07	MH4028	1.42	Brown	Yellow	Medium	No		
H2837-08	MH4029	1.44	Brown	Yellow	Medium	No		
H2837-09	MH4030	1.35	Brown	Yellow	Medium	No		
PB903418L	~~PBS01~~ PBS008	1.03	Colorless	Colorless	Fine	No		
PB90341BS	~~LCS01~~ LCS008	1.02	Colorless	Colorless	Fine	No		

PB 05/06/16

* BL=Blank BS=Blank Spike TB=TCLP Blank
* COLOR: R=Red BU=Blue Y=Yellow GR=Green O=Orange V=Violet W=White C=Colorless BR=Brown GY=Grey BL=Black
* CLARITY: CL=Clear CD=Cloudy O=Opaque
* TEXTURE: F=Fine M=Medium C=Coarse

SOP ID:- MIJM02-2 Metal ICP MJ

ICP MJ

CHEMTECH

Water Sample Preparation Sheet

PB90375

IJM02-2 MJ
200.8

H2837

PrepBatch ID :	**PB90375**	**Batch#**	**PB90375**
SDG No :		**ICP Digest Date:**	05/06/16 **Time :** 9:00
Matrix :	Water	**Sample Received By :**	
Method :	MIJM02-2 MJ	**Dig Technician Signature:**	PB
Initial Volume :	50 ML	**Supervisor Signature:**	
Final Volume :	50 ML	**Prep Code:**	~~CWI~~ PB 05/06/16
Hot Plate Temp :	(1) 95°C 2. 3.		

End time for Hot Block 11:00

Standared Name	MLS USED	STD REF. # FROM LOG
LCSW	0.50ml	MP 33629
Spike Sol. B	0.50ml	MP 33631
		PB 05/06/16

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	1.00ml	MP 33482
1:1 HCL	0.50ml	MP 33483
PH STRIPS BOX-0,2,5	—	M 3584
		PB 05/06/16

Date / Time	Received By	Relinquished By	Location
05/06/16		PB	ICP Lab
	Analysis Group	**Digestion Group**	
	JS		

CHEMTECH **Water Sample Preparation Sheet** **PrepBatch ID :** **PB90375**

Lab Sample ID	Customer Sample Number	Color Before	Color After	Clarity Before	Clarity After	PH	Comments	Prep Pos
H2837-01	MH4002	C	C	C	C	4		
H2837-02	MH4002D	C	C	C	C	4		
H2837-03	MH4002S	C	C	C	C	4	MP33631	
H2837-10	MH4113	C	V	C	C	4		
H2837-11	MH4116	C	C	C	C	4		
H2837-12	MH4202	C	C	C	C	4		
H2837-13	MH4211	C	C	C	C	4		
H2837-14	MH4217	C	C	C	C	4		
H2837-15	MH4218	C	C	C	C	4		
H2837-16	MH4113D	C	C	C	C	4		
H2837-17	MH4113S	C	C	C	C	4	MP 33631	
PB90375BL	~~PBW01~~ PBW007	C	C	C	C	4	—	
PB90375BS	~~LCS01~~ LCS002	C	C	C	C	4	MP 33629	

PB 051 of 116

* BL=Blank BS=Blank Spike TB=TCLP Blank
* COLOR: R=Red BU=Blue Y=Yellow GR=Green O=Orange V=Violet W=White C=Colorless BR=Brown GY=Grey BL=Black

CHEMTECH **Water Sample Preparation Sheet** **PrepBatch ID :** **PB90375**

Lab Sample	Customer Sample Number	Color Before	Color After	Clarity Before	Clarity After	PH	Comments	Prep Pos
H2837-01	MH4002	Colorless	Colorless	Clear	Clear	<2		
H2837-02	MH4002D	Colorless	Colorless	Clear	Clear	<2		
H2837-03	MH4002S	Colorless	Colorless	Clear	Clear	<2		
H2837-10	MH4113	Colorless	Colorless	Clear	Clear	<2		
H2837-11	MH4116	Colorless	Colorless	Clear	Clear	<2		
H2837-12	MH4202	Colorless	Colorless	Clear	Clear	<2		
H2837-13	MH4211	Colorless	Colorless	Clear	Clear	<2		
H2837-14	MH4217	Colorless	Colorless	Clear	Clear	<2		
H2837-15	MH4218	Colorless	Colorless	Clear	Clear	<2		
H2837-16	MH4113D	Colorless	Colorless	Clear	Clear	<2		
H2837-17	MH4113S	Colorless	Colorless	Clear	Clear	<2		
PB90375BL	~~PBW01~~ PBW002	Colorless	Colorless	Clear	Clear	<2		
PB90375BS	~~LCS01~~ LCS007	Colorless	Colorless	Clear	Clear	<2		

PB 05/06/16

* BL=Blank BS=Blank Spike TB=TCLP Blank
* COLOR: R=Red BU=Blue Y=Yellow GR=Green O=Orange V=Violet W=White C=Colorless BR=Brown GY=Grey BL=Black

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Prep Standard - Chemical Standard Summary

Order ID : H2837

Test : Metals CLP MS

Prepbatch ID : PB90375,PB90341,

Sequence ID/Qc Batch ID: LB81457,

Standard ID :
MP33602,MP33607,MP33612,MP33613,MP33614,MP33615,MP33616,MP33617,MP33618,MP33619,MP33620,MP33621,
MP33622,MP33623,MP33624,MP33626,MP33627,MP33628,MP33669,

Chemical ID :
M3045,M3295,M3297,M3298,M3304,M3305,M3306,M3307,M3316,M3321,M3322,M3323,M3325,M3326,M3327,M3328,M3
329,M3333,M3385,M3411,M3416,M3432,M3433,M3444,M3445,M3446,M3468,M3471,M3473,M3478,M3479,M3481,M3482,
M3495,M3498,M3502,M3523,M3532,M3535,M3541,m3562,m3584,M3585,M3588,M3590,mp32323,mp33482,mp33483,mp3
3629,mp33630,mp33631,W1152,

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP33602	05/06/2016	05/20/2016	jaswal

FROM 12.500ml of M3588 + 2462.500ml of W1152 + 25.000ml of M3590 = Final Quantity: 2500.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3349	S7 ICPMS	MP33607	05/06/2016	08/30/2016	jaswal

FROM 0.500ml of M3045 + 0.500ml of M3295 + 0.500ml of M3298 + 0.500ml of M3304 + 0.500ml of M3333 + 0.500ml of M3468 + 0.500ml of M3478 + 0.500ml of M3535 + 0.950ml of M3432 + 1.000ml of M3444 + 1.000ml of M3445 + 2.000ml of M3585 + 2.450ml of M3297 + 2.450ml of M3532 + 2.500ml of M3588 + 25.000ml of M3495 + 4.950ml of M3473 + 4.950ml of M3481 + 4.950ml of M3482 + 438.800ml of W 1152 + 5.000ml of M3590 = Final Quantity: 500.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3350	S6 ICPMS	MP33612	05/06/2016	05/20/2016	jaswal

FROM 50.000ml of MP33602 + 50.000ml of MP33607 = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3351	S5 ICPMS	MP33613	05/06/2016	05/20/2016	jaswal

FROM 25.000ml of MP33607 + 75.000ml of MP33602 = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1145	S4 ICPMS	MP33614	05/06/2016	05/20/2016	jaswal

FROM 12.500ml of MP33607 + 87.500ml of MP33602 = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1146	S3 ICPMS	MP33615	05/06/2016	05/20/2016	jaswal

FROM 10.000ml of MP33612 + 90.000ml of MP33602 = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1120	ICPMS ISM01.2 S1(CONC.)	MP33616	05/06/2016	05/20/2016	jaswal

FROM 0.050ml of M3295 + 0.050ml of M3298 + 0.050ml of M3304 + 0.050ml of M3305 + 0.050ml of M3306 + 0.050ml of M3316 + 0.050ml of M3321 + 0.050ml of M3322 + 0.050ml of M3325 + 0.050ml of M3327 + 0.050ml of M3328 + 0.050ml of M3333 + 0.050ml of M3535 + 0.100ml of M3045 + 0.100ml of M3385 + 0.100ml of M3432 + 0.100ml of M3468 + 0.100ml of M3471 + 0.250ml of M3307 + 0.250ml of M3323 + 0.250ml of M3326 + 0.250ml of M3329 + 0.250ml of M3478 + 0.250ml of M3532 + 0.500ml of M3585 + 2.500ml of M3297 + 2.500ml of M3473 + 2.500ml of M3481 + 2.500ml of M3482 + 236.850ml of MP33602 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1147	S2 ICPMS	MP33617	05/06/2016	05/20/2016	jaswal

FROM 0.500ml of MP33616 + 99.500ml of MP33602 = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1148	S1 ICPMS	MP33618	05/06/2016	05/20/2016	jaswal

FROM 10.000ml of MP33617 + 90.000ml of MP33602 = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
2902	S8 ICPMS	MP33619	05/06/2016	05/20/2016	jaswal

FROM 1.000ml of M3432 + 2.500ml of M3297 + 2.500ml of M3532 + 5.000ml of M3473 + 5.000ml of M3481 + 5.000ml of M3482 + 79.000ml of MP33602 = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3130	100ppm ICV SOL.	MP33620	05/06/2016	05/20/2016	jaswal

FROM 0.250ml of M3446 + 0.250ml of M3498 + 2.500ml of M3479 + 21.500ml of MP33602 = Final Quantity: 25.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1575	ICV ISM01.2 MS	MP33621	05/06/2016	05/20/2016	jaswal

FROM 2.000ml of M3523 + 0.500ml of MP33620 + 97.500ml of MP33602 = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1430	CCV ICPMS ISM01.2	MP33622	05/06/2016	05/20/2016	jaswal

FROM 0.250ml of M3045 + 0.250ml of M3295 + 0.250ml of M3298 + 0.250ml of M3304 + 0.250ml of M3333 + 0.250ml of M3468 + 0.250ml of M3478 + 0.250ml of M3535 + 0.475ml of M3432 + 0.500ml of M3444 + 0.500ml of M3445 + 1.000ml of M3585 + 1.225ml of M3297 + 1.225ml of M3532 + 12.500ml of M3495 + 2.475ml of M3473 + 2.475ml of M3481 + 2.475ml of M3482 + 470.900ml of MP33602 = Final Quantity: 500.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1142	ICSA ICPMS	MP33623	05/06/2016	05/20/2016	jaswal

FROM 10.000ml of M3411 + 90.000ml of MP33602 = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1143	ICSAB ICPMS	MP33624	05/06/2016	05/20/2016	jaswal

FROM 10.000ml of M3411 + 10.000ml of M3416 + 80.000ml of MP33602 = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1135	MG 10PPM ILM05.4 FOR TUNE	MP33626	05/06/2016	05/20/2016	jaswal

FROM 0.100ml of M3481 + 99.900ml of MP33602 = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1174	TUNE SOL 10PPB ICPMS	MP33627	05/06/2016	05/20/2016	jaswal

FROM 0.100ml of M3541 + 0.100ml of MP33626 + 99.800ml of MP33602 = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3323	Startup configuration Sol.	MP33628	05/06/2016	05/20/2016	jaswal

FROM 0.200ml of M3433 + 99.800ml of MP33602 = Final Quantity: 200.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
857	ICPMS INT. STANDARD	MP33669	05/06/2016	05/20/2016	jaswal

FROM 10.000ml of M3590 + 440.000ml of W1152 + 50.000ml of M3502 = Final Quantity: 250.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	083013	08/30/2016	09/02/2014 / BIN	09/25/2013 / jaswal	M3045

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSR1-1 / Strontium, 125 ml, 1000 PPM	G2-SR02040	11/13/2016	01/30/2015 / BIN	01/19/2015 / BIN	M3295

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGK10-5 / Potassium, 500 ml, 10000 PPM	G2-K03042	01/06/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3297

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTH1-1 / Thorium 1000 ug/ml	H2-TH01094R	12/15/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3298

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGZR1-1 / Zirconium, 1000 PPM, 125 ml	H2-ZR01095R	12/16/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3304

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGNI1-1 / NICKEL 125mL 1000ug/mL	H2-NI02086R	12/03/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3305

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGCO1-1 / COBALT 125mL 1000ug/mL	H2-CO02063	10/27/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3306

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	G2-SI03029	01/24/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3307

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTL1-1 / THALLIUM 125mL 1000ug/mL	H2-TL02003R	11/20/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3316

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGAS1-1 / ARSENIC 125mL 1000ug/mL	H2-AS02102R	12/11/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3321

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGCD1-1 / CADMIUM, 125mL 1000ug/mL	H2-CD02055	03/31/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3322

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGV1-1 / VANADIUM 125mL 1000ug/mL	H2-V02090	05/09/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3323

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGBE1-1 / BERYLLIUM 125mL 1000ug/mL	H2-BE02021R	11/20/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3325

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGB1-1 / BORON 125mL 1000ug/mL	G2-B02117	11/14/2016	01/30/2015 / BIN	01/19/2015 / BIN	M3326

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGPB1-1 / LEAD 125mL 1000ug/mL	H2-PB03044R	12/04/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3327

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGAG1-1 / SILVER 125mL 1000ug/mL	H2-AG03035R	12/03/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3328

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSE(4)1-1 / SELENIUM 125mL 1000ug/mL	H2-SE02049	03/31/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3329

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGU1-1 / Uranium 1000 ug/ml	H2-U01102R	11/20/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3333

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSBF1-1 / Antimony, Sb, 125 ml	H2-SB03028	02/24/2017	03/30/2015 / BIN	03/27/2015 / BIN	M3385

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICPMS) STOCK SOLN	ICSA-0803	08/18/2016	02/18/2016 / jaswal	03/20/2015 / jaswal	M3411

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	/ ICSB (ICPMS) STOCK SOLUTION	ICSB-0803	08/18/2016	02/18/2016 / jaswal	03/20/2015 / jaswal	M3416

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Aluminum (Al) 10,000PPM	122214	12/22/2017	02/15/2016 / BIN	06/05/2015 / BIN	M3432

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Thermo Fisher Scientific	1600636 / Tune D25 Cross Cal Solution, 10 PPM	CM-0740	03/31/2017	06/08/2015 / jaswal	06/05/2015 / BIN	M3433

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGP10-1 / Phosphorus, 125 ml, 10000 ug/ml	G2-P02050	09/09/2016	06/25/2015 / BIN	06/18/2015 / BIN	M3444

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGS10-1 / SULFUR 125mL 10,000ug/mL	G2-S02014	11/04/2016	06/25/2015 / BIN	06/18/2015 / BIN	M3445

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGU10-1 / Uranium 10000 ug/ml	G2-U01105	11/01/2016	06/25/2015 / BIN	06/18/2015 / BIN	M3446

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGCU1-5 / Copper, 500 ml, 1000 PPM	H2-CU03021	02/13/2018	09/16/2015 / BIN	09/04/2015 / BIN	M3468

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	010615	01/06/2018	09/24/2015 / jaswal	09/24/2015 / jaswal	M3471

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Sodium, Na, 500 ml, 10,000 PPM	070615	07/06/2018	09/24/2015 / jaswal	09/24/2015 / jaswal	M3473

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	H2-MEB542131	10/01/2016	09/29/2015 / BIN	09/29/2015 / BIN	M3478

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	H2-MEB542132	10/01/2016	09/29/2015 / BIN	09/29/2015 / BIN	M3479

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGMG10-5 / Magnesium, 500 ml, 10000 PPM	J2-MG03145	07/16/2018	10/02/2015 / BIN	10/02/2015 / BIN	M3481

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGCA10-5 / Calcium, 500 ml, 10000 PPM	H2-CA04105	12/03/2017	10/02/2015 / BIN	10/02/2015 / BIN	M3482

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	6020CAL-1 / Calibration Standard Method 6020	G2-MEB503047	11/26/2016	02/18/2016 / jaswal	09/29/2015 / BIN	M3495

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSR10-1 / STRONTIUM 1 X 125 ml	H2-SR02049	11/17/2017	10/13/2015 / jaswal	09/29/2015 / BIN	M3498

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	6020ISS / 6020ISS, 10 ug/ml, Bi, Ho, In, 6Li, Rh, Sc, TB, Y	J2-MEB562038	01/08/2018	02/18/2016 / jaswal	09/29/2015 / BIN	M3502

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV1-0307	05/30/2016	12/02/2015 / jaswal	03/20/2015 / jaswal	M3523

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGFE10-5 / Iron, 500 ml, 10000 PPM	J2-FE04047	02/13/2018	12/18/2015 / BIN	12/10/2015 / BIN	M3532

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Manganese, Mn, 500 ml, 1000 PPM	072215	07/22/2018	12/18/2015 / BIN	12/07/2015 / BIN	M3535

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	IV-STOCK-12 / ICP-MS TUNING SOLUTION, 125mL	J2-MEB603008	11/06/2018	01/14/2016 / jaswal	01/07/2016 / jaswal	M3541

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	26397-103 / STONES,BOILING,PTFE 450GM	R674-6A002	04/13/2021	04/14/2016 / Bhadresh	02/25/2016 / fabian	M3562

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	140440 / TEST PAPERS,PH,0-2.5,.2SENSI, 100PK	hc563733	04/13/2021	04/14/2016 /	04/13/2016 / Bhadresh	M3584

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGBA1-1 / BARIUM 125mL 1000ug/mL	J2-BA02093	07/02/2018	04/26/2016 / BIN	02/19/2016 / BIN	M3585

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)		01/13/2021	05/05/2016 / bhadresh	04/04/2016 / bhadresh	M3588

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	0000135629	01/27/2021	05/06/2016 / bhadresh	05/04/2016 / bhadresh	M3590

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	DIW / DI Water	Lab certified	02/23/2025	02/23/2010 /	02/23/2010 / divya	W1152

Absolute Standards, Inc.
300-368-1131
www.absolutestandards.com

Certified Reference Material CRM

RD: 09/25/13
M3045

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

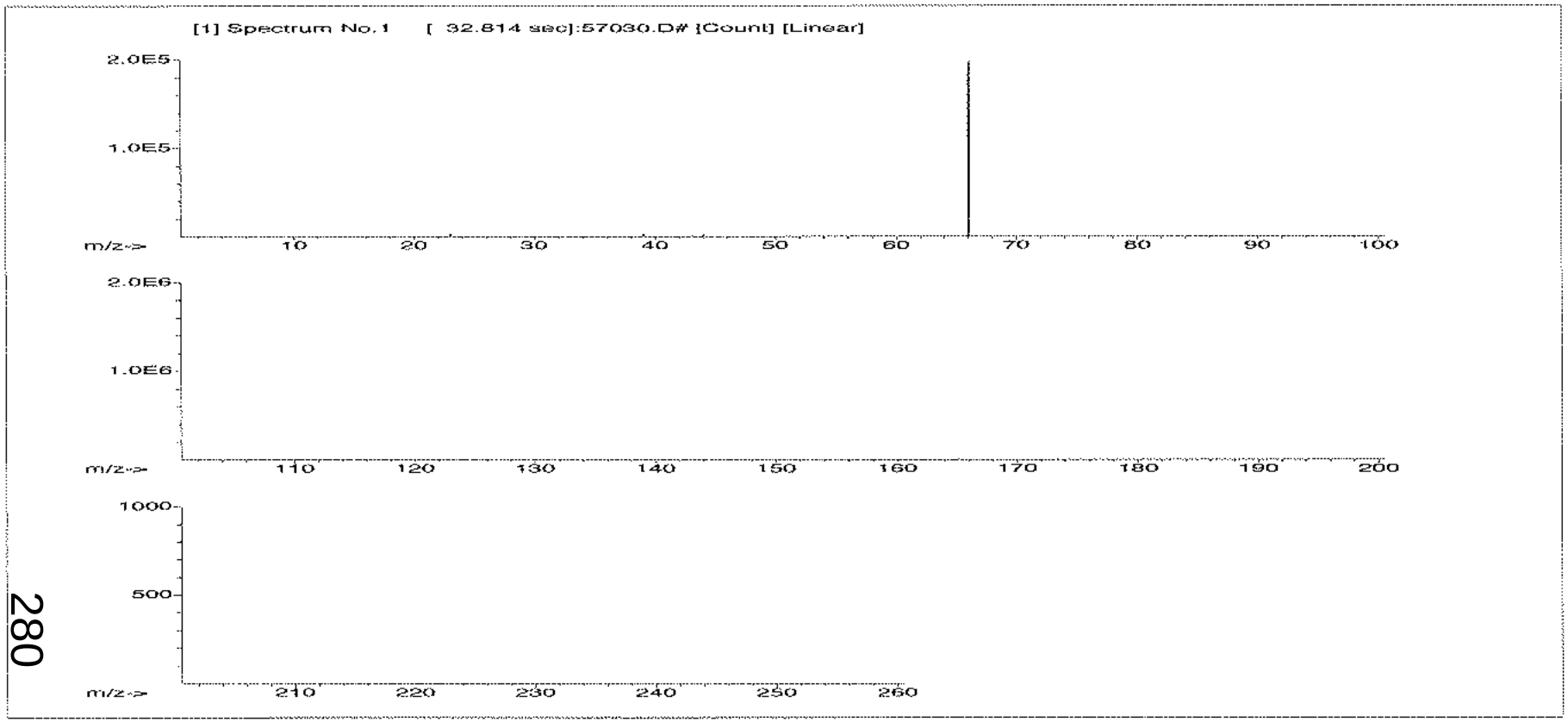
CERTIFIED WEIGHT REPORT:

			Lot #	Solvent:	
Part Number:	**58030**		C257285	Nitric Acid	
Lot Number:	**083013**				
Description:	**Zinc (Zn)**				
			2.0%	40.0	Nitric Acid
Expiration Date:	083016			(mL)	
		Storage:	20 °C		
Nominal Concentration (µg/mL):	**1000**				
			5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):		1999.68	0.100	Flask Uncertainty	

Formulated By:	Lawrence Barry	083013
Reviewed By:	Pedro L. Rentas	083013

MSDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Volume	Uncertainty Pipette	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hydrate (Zn)	58130	042313	0.1000	200.0	0.013	10001.5	**1000.3**	0.00201	13778-30-8	1 mg/m3	ort-rat 1190mg/kg	3168



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M3326 O: 01/30/15 Ex: 11/16/16
R: 01/19/15

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CERTIFICATE OF ANALYSIS

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2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGB1
Lot Number:	G2-B02117
Matrix:	H2O
Value/Analyte(s):	1 000 µg/mL Boron
Starting Material:	H3BO3
Starting Material Lot#:	1631
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 5 µg/mL weighted mean

Certified Density: 1.001 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1,001 ± 3 µg/mL** ICP Assay NIST SRM 3107 Lot Number: 070514
Assay Method #2	**1,000 ± 5 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3295 R:01/19/15 Ex: 11/13/16
09: 01/30/15

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ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	G2-SR02040
Matrix:	0.1% (v/v) HNO3
Value/Analyte(s):	1 000 µg/mL Strontium
Starting Material:	SrCO3
Starting Material Lot#:	1716
Starting Material Purity:	99.9989%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1,004 ± 5 µg/mL weighted mean

Certified Density: 1.001 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1,005 ± 3 µg/mL** ICP Assay NIST SRM 3153a Lot Number: 990906
Assay Method #2	**1,002 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3297 · R: 01/19/15 OP: 01/30/15

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ACCREDITED Testing Laboratory Certificate 88301 ACCREDITED Reference Material Producer Certificate 88302

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGK10
Lot Number:	G2-K03042
Matrix:	2% (v/v) HNO3
Value/Analyte(s):	10 000 µg/mL Potassium
Starting Material:	KNO3
Starting Material Lot#:	1727
Starting Material Purity:	99.9989%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10,001 ± 21 µg/mL weighted mean

Certified Density: 1.024 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**10023 ± 62 µg/mL** ICP Assay NIST SRM 3141a Lot Number: 051220
Assay Method #2	**9999 ± 20 µg/mL** Gravimetric NIST SRM Lot Number: See Sec 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3298 R: 01/19/15 OP: 01/30/15

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ACCREDITED Testing Laboratory Certificate 993.01 ACCREDITED Reference Material Producer Certificate 993.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTH1
Lot Number:	H2-TH01094R
Matrix:	5% (v/v) HNO3
Value/Analyte(s):	1 000 µg/mL Thorium
Starting Material:	Th(NO3)4x4H2O
Starting Material Lot#:	1803
Starting Material Purity:	99.9934%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 4 µg/mL

Certified Density: 1.026 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1001 ± 4 µg/mL** ICP Assay NIST SRM 3159 Lot Number: 992912
Assay Method #2	**1000 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3304 DP: 01/30/15 R: 01/19/15

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ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZR1
Lot Number:	H2-ZR01095R
Matrix:	tr. HF
Value/Analyte(s):	1 000 µg/mL Zirconium
Starting Material:	ZrO2
Starting Material Lot#:	1765
Starting Material Purity:	99.9947%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 995 ± 5 µg/mL - weighted mean

Certified Density: 1.000 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **997 ± 3 µg/mL**
ICP Assay NIST SRM 3169 Lot Number: 071226

Assay Method #2 **1000 ± 3 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3305 R:01/19/15 OP: 01/30/15 Ex: 12/03/17

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ACCREDITED Testing Laboratory Certificate 2853.01 ACCREDITED Reference Material Producer Certificate 3053.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNI1
Lot Number:	H2-NI02086R
Matrix:	2% v/v HNO3
Value/Analyte(s):	1 000 µg/mL Nickel
Starting Material:	Ni pieces
Starting Material Lot#:	1559
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 4 µg/mL - weighted mean

Certified Density: 1.011 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1001 ± 3 µg/mL** ICP Assay NIST SRM 3136 Lot Number: 000612
Assay Method #2	**1002 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3306 R: 01/19/15 D: 01/30/15 Ex: 10/27/17

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2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCO1
Lot Number:	H2-CO02063
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Co
Starting Material:	Cobalt Carbonate
Starting Material Lot#:	1850
Starting Material Purity:	99.9990%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 3 µg/mL - weighted mean

Certified Density: 1.017 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**996 ± 4 µg/mL** ICP Assay NIST SRM 3113 Lot Number: 000630 Co
Assay Method #2	**999 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3307 R: 01/19/15 OP: 01/30/15 Ex: 01/29/17

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2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI1
Lot Number:	G2-SI03029
Matrix:	tr. HNO3 / tr. HF
Value/Analyte(s):	1 000 µg/mL Silicon
Starting Material:	SiO2
Starting Material Lot#:	1551
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1004 ± 5 µg/mL weighted mean

Certified Density: 1.003 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1,005 ± 3 µg/mL** ICP Assay NIST SRM 3150 Lot Number: 071204
Assay Method #2	**1,000 ± 5 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M33/6 R: 01/19/15 OP: 01/30/15 Ex: 1/20/17

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ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTL1
Lot Number:	H2-TL02003R
Matrix:	0.7% v/v HNO3
Value/Analyte(s):	1 000 µg/mL Thallium
Starting Material:	TlNO3
Starting Material Lot#:	1576
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1003 ± 7 µg/mL - no weighted mean

Certified Density: 1.003 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1003 ± 6 µg/mL**
ICP Assay NIST SRM 3158 Lot Number: 993012

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3321 R:01/19/15 OP:01/30/15 Ex -12/11/17

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ACCREDITED Testing Laboratory Certificate 3813.01 ACCREDITED Reference Material Producer Certificate 3813.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS1
Lot Number:	H2-AS02102R
Matrix:	2% (v/v) HNO3
Value/Analyte(s):	1 000 µg/mL Arsenic
Starting Material:	As Lump
Starting Material Lot#:	1814
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 5 µg/mL - weighted mean

Certified Density: 1.012 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**999 ± 4 µg/mL** ICP Assay NIST SRM 3103a Lot Number: 100818
Assay Method #2	**1002 ± 3 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M332 R: 01/19/15 OP: 01/30/15 Ex: 03/31/17

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ACCREDITED Testing Laboratory Certificate 853.01 ACCREDITED Reference Material Producer Certificate 853.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCD1
Lot Number:	H2-CD02055
Matrix:	3% (v/v) HNO3
Value/Analyte(s):	1 000 µg/mL Cadmium
Starting Material:	Cd shot
Starting Material Lot#:	1816
Starting Material Purity:	99.9999%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1,002 ± 5 µg/mL weighted mean

Certified Density: 1.016 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**999 ± 4 µg/mL** ICP Assay NIST SRM 3108 Lot Number: 060531
Assay Method #2	**1003 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3323 R: 01/19/15 Ex: 01/30/15 Ex: 05/09/17

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ACCREDITED Testing Laboratory Certificate 86101 ACCREDITED Reference Material Producer Certificate 86102

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV1
Lot Number:	H2-V02090
Matrix:	2% (v/v) HNO3
Value/Analyte(s):	1 000 µg/mL Vanadium
Starting Material:	V2O5
Starting Material Lot#:	1782
Starting Material Purity:	99.9876%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 5 µg/mL weighted mean

Certified Density: 1.016 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1000 ± 5 µg/mL** ICP Assay NIST SRM 3165 Lot Number: 992706
Assay Method #2	**1000 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M 33205 R: 01/19/15 O: 01/30/15 Ex 11/20/17

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ACCREDITED ACCREDITED

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBE1
Lot Number:	H2-BE02021R
Matrix:	3% (v/v) HNO3
Value/Analyte(s):	1 000 µg/mL Beryllium
Starting Material:	Be4O(OOCCH3)6
Starting Material Lot#:	1772
Starting Material Purity:	99.9999%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1005 ± 5 µg/mL - no weighted mean

Certified Density: 1.022 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1005 ± 4 µg/mL**
ICP Assay NIST SRM 3105a Lot Number: 090514

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

IV3327 R:01/19/15 D:01/30/15
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ACCREDITED Testing Laboratory Certificate 853.01 ACCREDITED Reference Material Producer Certificate 853.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGPB1
Lot Number:	H2-PB03044R
Matrix:	0.5% v/v HNO_3
Value/Analyte(s):	1 000 µg/mL Lead
Starting Material:	$Pb(NO_3)_2$
Starting Material Lot#:	1717
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 3 µg/mL - weighted mean

Certified Density: 1.002 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **998 ± 3 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

Assay Method #2 **1002 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

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M3328 O: 01/30/15 E: 12/03/17
R: 01/19/15

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ACCREDITED Testing Laboratory Certificate 853.01 ACCREDITED Reference Material Producer Certificate 853.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAG1
Lot Number:	H2-AG03035R
Matrix:	5% HNO3 (v/v)
Value/Analyte(s):	1 000 µg/mL Silver
Starting Material:	Ag shot
Starting Material Lot#:	1641
Starting Material Purity:	100.0000%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 6 µg/mL - weighted mean

Certified Density: 1.026 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1000 ± 3 µg/mL**
ICP Assay NIST SRM 3151 Lot Number: 992212

Assay Method #2 **1003 ± 2 µg/mL**
Volhard NIST SRM 999b Lot Number: 999b

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3329 R: 01/19/15 E: 03/31/17
O: 01/30/15

INORGANIC VENTURES — CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number (010105).

ACCREDITED ACCREDITED

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE(4)1
Lot Number:	H2-SE02049
Matrix:	2% (v/v) HNO_3
Value/Analyte(s):	1 000 µg/mL Selenium
Starting Material:	Se Shot
Starting Material Lot#:	1616
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1,000 ± 4 µg/mL weighted mean

Certified Density: 1.011 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **999 ± 5 µg/mL**
ICP Assay NIST SRM 3149 Lot Number: 100901

Assay Method #2 **1,000 ± 5 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

R: 01/19/15 OD: 01/30/15 Ex: 11/20/17

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ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU1
Lot Number:	H2-U01102R
Matrix:	2% HNO3 (v/v)
Value/Analyte(s):	1 000 µg/mL Uranium
Starting Material:	UO2(NO3)2•6H2O
Starting Material Lot#:	1767
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1004 ± 6 µg/mL - no weighted mean

Certified Density: 1.010 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1004 ± 5 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

IM3385 R: 03/27/15 O: 03/30/15 Ex: 02/24/17

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 851.01 ACCREDITED Reference Material Producer Certificate 663.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSBF1
Lot Number:	H2-SB03028
Matrix:	2% (v/v) HNO3 / tr. HF
Value/Analyte(s):	1 000 µg/mL Antimony
Starting Material:	Sb shot
Starting Material Lot#:	1561
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1,001 ± 6 µg/mL no weighted mean

Certified Density: 1.010 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1001 ± 4 µg/mL** ICP Assay NIST SRM 3102A Lot Number: 061229
Assay Method #2	**1000 ± 7 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-0803, Inferferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO_3. Analyze this solution by ICP-MS.

ICSB-0803, Analytes, mixed with ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO_3. Analyze this ICSAB solution by ICP-MS.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-MS ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled results from the following sources: CLP Pre-award analysis, Quarterly Blind analysis, CLP laboratory referee analysis, and QATS Laboratory analysis.

ICSA → M3408 → M3412

ICSB → M3413 → M3418

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-MS ICSA-0803, AND ICSA-0803 MIXED WITH ICSB-0803

Element	CRQL	Part A (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)	Part A +Part B (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)
Al	20	[100000]			[100000]		
Sb	2	(1.5)	-2.5	5.5	22.0	17.6	26.4
As	1	(0.1)	-1.9	2.1	19.0	15.2	22.8
Ba	10	(1.2)	-18.8	21.2	(22.0)	2.0	42.0
Be	1	(0)	-2.0	2.0	19.0	15.2	22.8
Cd	1	(0.7)	-1.3	2.7	20.0	16.0	24.0
Ca	500	[100000]			[100000]		
C		[200000]			[200000]		
Cl		[1000000]			[1000000]		
Cr	2	21.0	16.8	25.2	40.0	32.0	48.0
Co	1	(1.0)	-1.0	3.0	20.0	16.0	24.0
Cu	2	(8.0)	4.0	12.0	25.0	20.0	30.0
Fe	200	[100000]			[100000]		
Pb	1	(4.0)	2.0	6.0	25.0	20.0	30.0
Mg	500	[100000]			[100000]		
Mn	1	(7.0)	5.0	9.0	27.0	21.6	32.4
Mo		[2000]			[2000]		
Ni	1	(6.0)	4.0	8.0	24.0	19.2	28.8
P		[100000]			[100000]		
K	500	[100000]			[100000]		
Se	5	(0.3)	-9.7	10.3	(19.0)	9.0	29.0
Ag	1	(0)	-2.0	2.0	18.0	14.4	21.6
Na	500	[100000]			[100000]		
S		[100000]			[100000]		
Tl	1	(0)	-2.0	2.0	21.0	16.8	25.2
Ti		[2000]			[2000]		
V	5	(0.5)	-9.5	10.5	(19.0)	9.0	29.0
Zn	2	(11.0)	7.0	15.0	29.0	23.2	34.8

[ ] Indicates analytes that do not require ICP-MS determination in the ICS.
( ) Indicates analyte certified values. The acceptance range is calculated based on +/- 2 times the CRQL.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-0803, Inferferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO_3. Analyze this solution by ICP-MS.

ICSB-0803, Analytes, mixed with ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO_3. Analyze this ICSAB solution by ICP-MS.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-MS ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled results from the following sources: CLP Pre-award analysis, Quarterly Blind analysis, CLP laboratory referee analysis, and QATS Laboratory analysis.

ICSA → M3408 → M3412

ICSB → M3413 → M3417

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-MS ICSA-0803, AND ICSA-0803 MIXED WITH ICSB-0803

Element	CRQL	Part A (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)	Part A +Part B (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)
Al	20	[100000]			[100000]		
Sb	2	(1.5)	-2.5	5.5	22.0	17.6	26.4
As	1	(0.1)	-1.9	2.1	19.0	15.2	22.8
Ba	10	(1.2)	-18.8	21.2	(22.0)	2.0	42.0
Be	1	(0)	-2.0	2.0	19.0	15.2	22.8
Cd	1	(0.7)	-1.3	2.7	20.0	16.0	24.0
Ca	500	[100000]			[100000]		
C		[200000]			[200000]		
Cl		[1000000]			[1000000]		
Cr	2	21.0	16.8	25.2	40.0	32.0	48.0
Co	1	(1.0)	-1.0	3.0	20.0	16.0	24.0
Cu	2	(8.0)	4.0	12.0	25.0	20.0	30.0
Fe	200	[100000]			[100000]		
Pb	1	(4.0)	2.0	6.0	25.0	20.0	30.0
Mg	500	[100000]			[100000]		
Mn	1	(7.0)	5.0	9.0	27.0	21.6	32.4
Mo		[2000]			[2000]		
Ni	1	(6.0)	4.0	8.0	24.0	19.2	28.8
P		[100000]			[100000]		
K	500	[100000]			[100000]		
Se	5	(0.3)	-9.7	10.3	(19.0)	9.0	29.0
Ag	1	(0)	-2.0	2.0	18.0	14.4	21.6
Na	500	[100000]			[100000]		
S		[100000]			[100000]		
Tl	1	(0)	-2.0	2.0	21.0	16.8	25.2
Ti		[2000]			[2000]		
V	5	(0.5)	-9.5	10.5	(19.0)	9.0	29.0
Zn	2	(11.0)	7.0	15.0	29.0	23.2	34.8

[ ] Indicates analytes that do not require ICP-MS determination in the ICS.
( ) Indicates analyte certified values. The acceptance range is calculated based on +/- 2 times the CRQL.

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Certified Reference Material CRM

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CERTIFIED WEIGHT REPORT:

Part Number: 58113
Lot Number: 122214
Description: Aluminum (Al)

Expiration Date: 122217
Storage: 20 °C
Nominal Concentration (µg/mL): 10000

Weight shown below was diluted to (mL): 2000.24

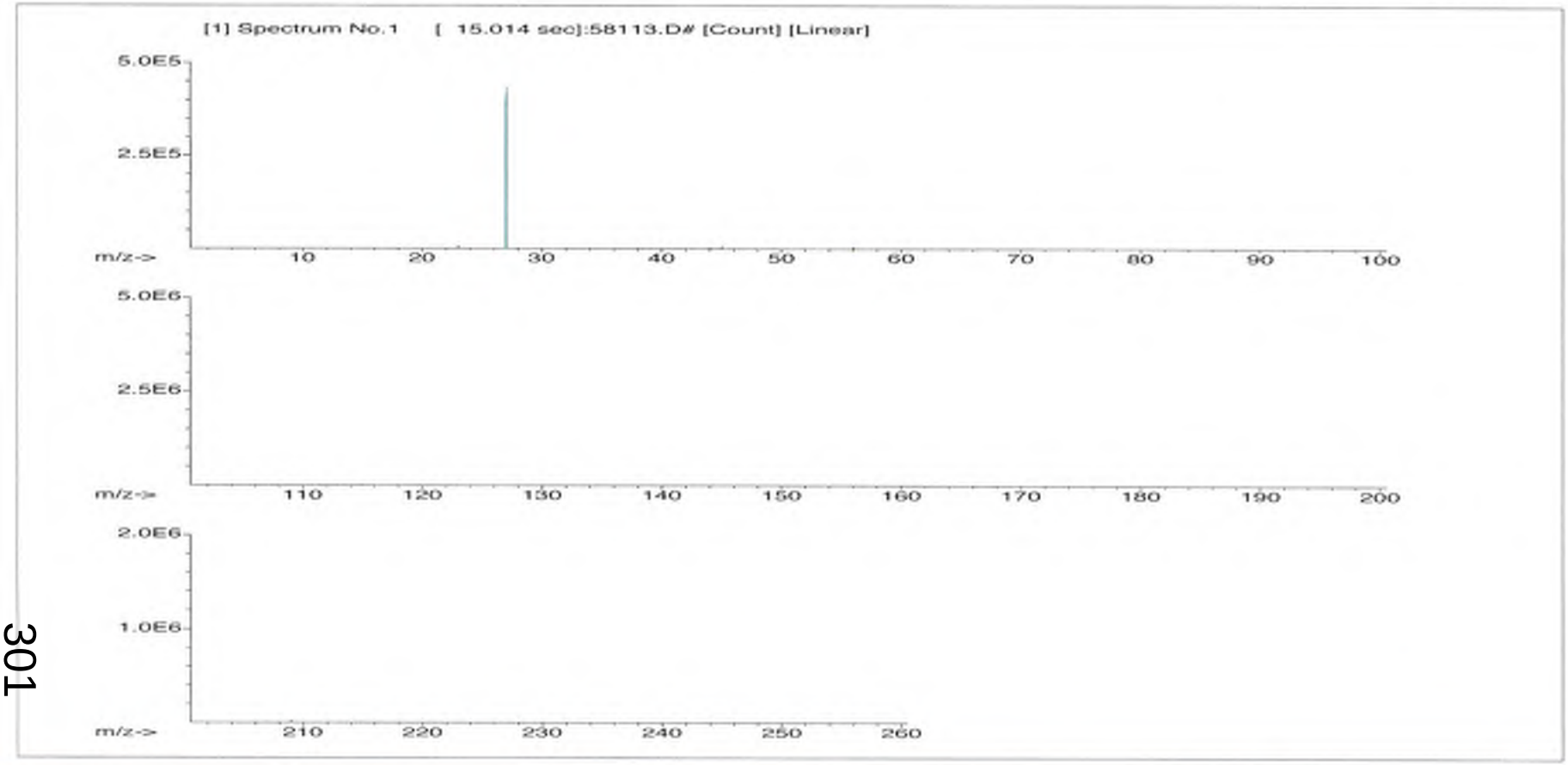
	Lot #		
Solvent:	C363101	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.142	Flask Uncertainty		

Giovanni Esposito
Formulated By: Giovanni Esposito 122214
Pedro Rentas
Reviewed By: Pedro L. Rentas 122214

M3432
R: 06/05/15
E: 12/2217

MSDS Information

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity	Uncertainty Purity	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty (+/-)	CAS#	(Solvent Safety Info. On Attached pg.) OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALE42013A1	10000.0	100	0.10	7.10	281.7261	281.7630	**10001.3**	0.00201	07784-27-2	5 mg/m3	orl-rat 264 mg/kg 3101a	



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M3433
R: 06/05/15
Ex: 03/13/17

Thermo SCIENTIFIC

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Tune D25 Cross Cal Solution

Catalog Number: 1600636
Lot Number: CM-0740
Lot Issue Date: 02/19/2015
Expiration Date: 03/31/2017

This analytical reference material was manufactured and verified in accordance with an ISO 9001 registered quality system, and the analyte concentrations were verified by an ISO 17025 accredited laboratory. The certified value for each analyte was determined gravimetrically.

Analyte	True Value	Analytical Method	NIST SRM
aluminum	10.00 ± 0.05 mg/L	ICP / ICP-MS	3101a
arsenic	10.00 ± 0.05 mg/L	ICP / ICP-MS	3103a
barium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3104a
beryllium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3105a
calcium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3109a
cadmium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3108
cobalt	10.00 ± 0.05 mg/L	ICP / ICP-MS	3113
chromium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3112a
copper	10.00 ± 0.05 mg/L	ICP / ICP-MS	3114
iron	10.00 ± 0.05 mg/L	ICP / ICP-MS	3126a
lead	10.00 ± 0.05 mg/L	ICP / ICP-MS	3128
magnesium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3131a
manganese	10.00 ± 0.05 mg/L	ICP / ICP-MS	3132
molybdenum	10.00 ± 0.05 mg/L	ICP / ICP-MS	3134
nickel	10.00 ± 0.05 mg/L	ICP / ICP-MS	3136
potassium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3141a
selenium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3149
sodium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3152a
thallium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3158
* vanadium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3165
zinc	10.00 ± 0.05 mg/L	ICP / ICP-MS	3168a
indium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3124a
lithium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3129a
uranium	10.00 ± 0.05 mg/L	ICP / ICP-MS	second source

Matrix: 5% nitric acid and trace hydrofluoric acid in low TOC water (< 50 ppb)

* light sensitive

Calibrated Class A glassware and clean bottles were used in the manufacture of this standard. Balances used in the manufacture of this standard are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001.

Prepared by ULTRA Scientific for Thermo Scientific
For Material Safety Data Sheets (MSDS), visit www.ultrasci.com

M3444

CERTIFICATE OF ANALYSIS

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R: 06/05/15 OP: 06/25/15

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED ACCREDITED

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGP10
Lot Number:	G2-P02050
Matrix:	H2O
Value/Analyte(s):	10 000 µg/mL Phosphorus
Starting Material:	H3PO4
Starting Material Lot#:	1704
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9990 ± 33 µg/mL - weighted mean

Certified Density: 1.015 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **9995 ± 40 µg/mL**
ICP Assay NIST SRM 3139a Lot Number: 060717

Assay Method #2 **9988 ± 21 µg/mL**
Acidimetric NIST SRM 84L Lot Number: 84L

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2

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M3445

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ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGS10
Lot Number:	G2-S02014
Matrix:	H2O
Value/Analyte(s):	10 000 µg/mL Sulfur
Starting Material:	H2SO4
Starting Material Lot#:	1728
Starting Material Purity:	100.0000%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10,028 ± 25 µg/mL weighted mean

Certified Density: 1.018 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **10015 ± 50 µg/mL**
ICP Assay NIST SRM 3154 Lot Number: 892205

Assay Method #2 **10030 ± 21 µg/mL**
Acidimetric NIST SRM 84L Lot Number: 84L

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3446

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ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU10
Lot Number:	G2-U01105
Matrix:	2% (v/v) HNO3
Value/Analyte(s):	10 000 µg/mL Uranium
Starting Material:	UO2(NO3)2.6H2O
Starting Material Lot#:	1841
Starting Material Purity:	99.9818%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10 007 ± 39 µg/mL - weighted mean

Certified Density: 1.022 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **10 008 ± 30 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

Assay Method #2 **10 005 ± 34 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

R: 04/04/15
OP: 09/16/15
Ex: 02/13/18
M3468

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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate #83131 ACCREDITED Reference Material Producer Certificate #3012

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU1
Lot Number:	H2-CU03021
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Cu
Starting Material:	Cu Metal
Starting Material Lot#:	1806
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1004 ± 5 µg/mL - weighted mean

Certified Density: 1.016 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1002 ± 5 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

Assay Method #2 **1005 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

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Certified Reference Material CRM

M3471

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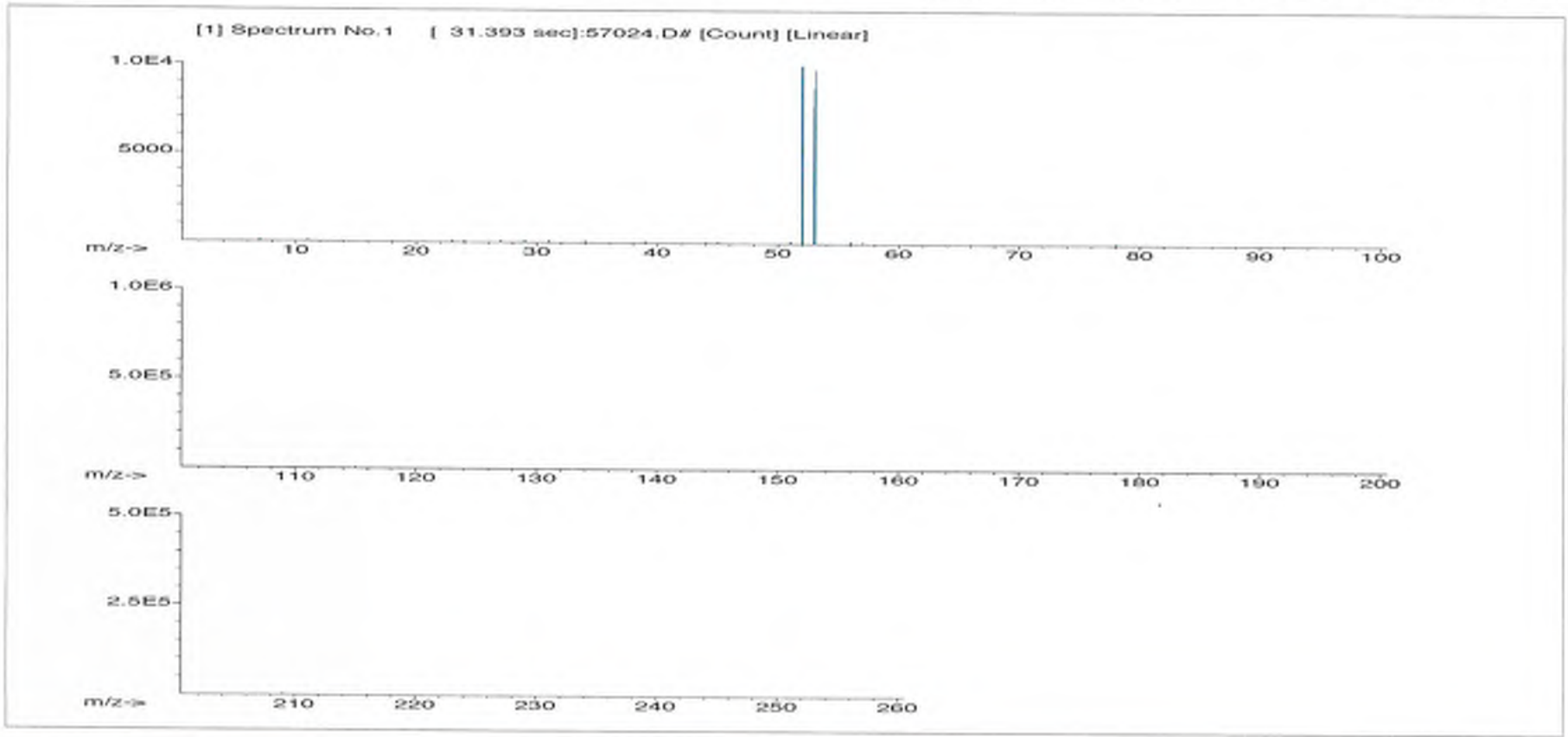
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:
Part Number:	58024	C363101	Nitric Acid
Lot Number:	010615		
Description:	Chromium (Cr)		
		2.0%	40.0 (mL) Nitric Acid
Expiration Date:	010618		
Storage:	20 °C		
Nominal Concentration (µg/mL):	1000		
		5E-05	Balance Uncertainty
Volume shown below was diluted to (mL):	2000.24	0.142	Flask Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	010615
Reviewed By:	Pedro L. Rentas	010615

Compound	Part Number	Lot Number	Dilution Factor	Initial Volume	Uncertainty Pipette	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-)	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium (III) nitrate nonahydrate (Cr)	58124	093014	0.100	200.0	0.013	10001.0	**1000.0**	0.00201	07789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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M3473

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CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 070615
Description: Sodium (Na)

Expiration Date: 070618

Storage: 20 °C

Nominal Concentration (µg/mL): 10000

Weight shown below was diluted to (mL): 2000.24

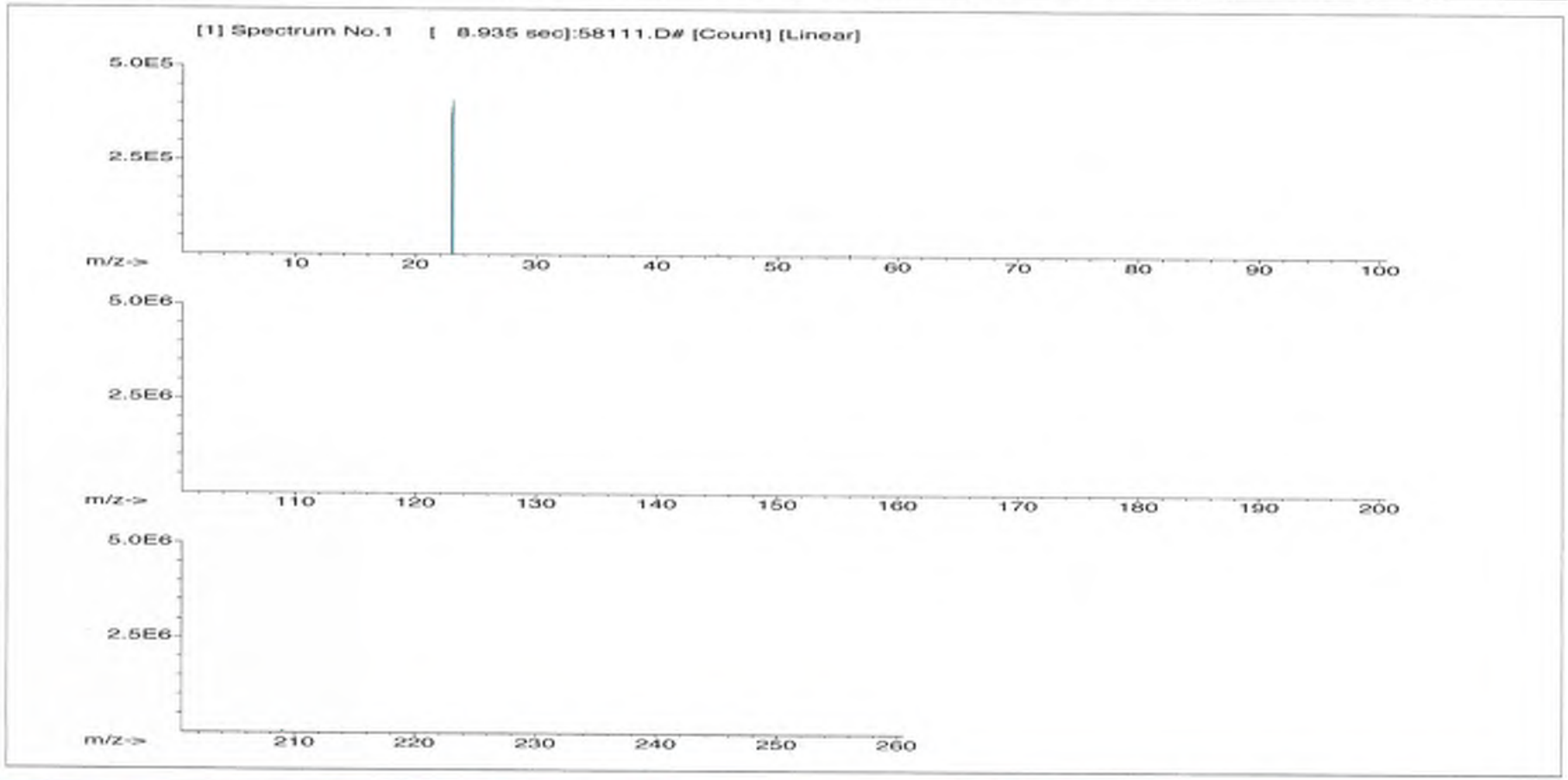
	Lot #		
Solvent:	C471305	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.148	Flask Uncertainty	

Formulated By: Lawrence Barry 070615

Reviewed By: Pedro L. Rentas 070615

MSDS Information (Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity	Uncertainty Purity	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty (+/-)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	R806NAA2R	10000.0	99.999	0.10	27.0	74.0835	74.0952	**10001.6**	0.00201	07631-99-4	5 mg/m3	orl-rat 3236 mg/kg	3152a



M3478 R: 09/29/15 Ex: 10/01/16

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

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OP: 09/29/15 BA

1.0 ACCREDITATION / REGISTRATION

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2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	H2-MEB542131
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: B, Mo, Si, Sn, Ti

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 7 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 8 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 7 µg/mL		

Certified Density: 1.032 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	070514
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Si	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\sum x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2 [\sum (s_i)^2]^{1/2}$ 2 = the coverage factor.

$[\sum (s_i)^2]^{1/2}$ = The square root of the sum of the squares of the most common errors (where's stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability

M3479 R: 09/29/15 OP: 09/29/15

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1.0 ACCREDITATION / REGISTRATION

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2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-QC-4
Lot Number:	H2-MEB542132
Matrix:	3% (v/v) HNO_3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: B, Mo, Si, Sn, Ti

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 7 µg/mL	Molybdenum, Mo	1 000 ± 7 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 7 µg/mL
Titanium, Ti	1 000 ± 7 µg/mL		

Certified Density: 1.034 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	Calculated		See Sec. 4.2
B	ICP Assay	3107	070514
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Si	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2

M 3481 R: 10/02/15 OP: 10/02/15

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMG10
Lot Number:	J2-MG03145
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Mg
Starting Material:	Mg chips
Starting Material Lot#:	1484
Starting Material Purity:	99.9987%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9970 ± 24 µg/mL

Certified Density: 1.053 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **9954 ± 58 µg/mL**
ICP Assay NIST SRM 3131a Lot Number: 050302

Assay Method #2 **9973 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3482 P: 10/02/15 R: 10/02/15
Ex: 12/03/17
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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 853.01 — ACCREDITED Reference Material Producer Certificate 853.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCA10
Lot Number:	H2-CA04105
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Ca
Starting Material:	CaO
Starting Material Lot#:	1748
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9950 ± 24 µg/mL - weighted mean

Certified Density: 1.040 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 — **9956 ± 50 µg/mL**
ICP Assay NIST SRM 3109a Lot Number: 130213

Assay Method #2 — **9948 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3495. M3496. M3497

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R: 09/29/15 Ex: 11/26/16 BH

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2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020CAL-1
Lot Number:	G2-MEB503047
Matrix:	tr. HF 5% (v/v) HNO3
Value / Analyte(s):	20 µg/mL ea:

Ag,	Al,	As,
Ba,	Be,	Ca,
Cd,	Co,	Cr3,
Cu,	Fe,	K,
Mg,	Mn,	Na,
Ni,	Pb,	Sb,
Se,	Tl,	V,
Zn		

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum	20.00 ± 0.16 µg/mL	Antimony	19.99 ± 0.14 µg/mL
Arsenic	19.99 ± 0.13 µg/mL	Barium	20.00 ± 0.15 µg/mL
Beryllium	20.00 ± 0.14 µg/mL	Cadmium	20.00 ± 0.15 µg/mL
Calcium	20.00 ± 0.16 µg/mL	Chromium+3	20.00 ± 0.16 µg/mL
Cobalt	20.00 ± 0.17 µg/mL	Copper	20.00 ± 0.16 µg/mL
Iron	20.00 ± 0.16 µg/mL	Lead	20.00 ± 0.16 µg/mL
Magnesium	20.00 ± 0.15 µg/mL	Manganese	20.00 ± 0.15 µg/mL
Nickel	20.00 ± 0.15 µg/mL	Potassium	20.00 ± 0.17 µg/mL
Selenium	19.99 ± 0.13 µg/mL	Silver	20.00 ± 0.13 µg/mL
Sodium	20.00 ± 0.16 µg/mL	Thallium	20.00 ± 0.13 µg/mL
Vanadium	20.00 ± 0.14 µg/mL	Zinc	20.00 ± 0.11 µg/mL

Certified Density: 1.026 g/mL (measured at 20 ± 1 °C)

Assay Information:

IM3498 R: 09/29/15

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EK: 11/17/2017 BH

1.0 ACCREDITATION / REGISTRATION

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2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR10
Lot Number:	H2-SR02049
Matrix:	2% (v/v) HNO_3
Value / Analyte(s):	10 000 µg/mL ea: Sr
Starting Material:	$SrCO_3$
Starting Material Lot#:	1716
Starting Material Purity:	99.9989%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 33 µg/mL - weighted mean

Certified Density: 1.030 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**9955 ± 54 µg/mL** ICP Assay NIST SRM 3153a Lot Number: 990906
Assay Method #2	**10046 ± 41 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3499. M3500. M3501. M3502. M3503

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R: 09129115 Ex: 01/08/18 BH

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ISS
Lot Number:	J2-MEB562038
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 µg/mL ea:

Bi, Ho, In,
Li6, Rh, Sc,
Tb, Y

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
6-Lithium, Li6	10.00 ± 0.05 µg/mL	Bismuth, Bi	10.00 ± 0.06 µg/mL
Holmium, Ho	10.00 ± 0.07 µg/mL	Indium, In	10.00 ± 0.05 µg/mL
Rhodium, Rh	10.00 ± 0.06 µg/mL	Scandium, Sc	10.00 ± 0.07 µg/mL
Terbium, Tb	10.00 ± 0.05 µg/mL	Yttrium, Y	10.00 ± 0.07 µg/mL

Certified Density: 1.035 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Bi	Calculated		See Sec. 4.2
Bi	ICP Assay	3106	991212
Ho	ICP Assay	3123a	790812
Ho	EDTA	928	928
In	ICP Assay	3124a	110516
In	EDTA	928	928
Li6	Gravimetric		See Sec. 4.2
Rh	Calculated		See Sec. 4.2
Rh	ICP Assay	3144	070619
Sc	ICP Assay	3148a	100701
Sc	EDTA	928	928
Tb	ICP Assay	3157a	100518
Tb	EDTA	928	928
Y	ICP Assay	3167a	790412
Y	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

For ICP-MS use: dilute the ICV1 concentrate 50-fold with 1% (v/v) nitric acid; pipet 2 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0508 For the cold vapor analysis of mercury by AA: dilute the ICV5 concentrate 100-fold with 2% (v/v) nitric acid; pipet 1 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide: dilute the ICV6 concentrate 100-fold with Type II water; pipet 1 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) ***CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS***

M3523

ICV1-0307		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2521	504
Sb	994	199
As	999	200
Ba	497	99
Be	495	99
Cd	496	99
Ca	10026	2005
Cr	490	98
Co	499	100
Cu	492	98
Fe	5082	1016
Pb	1002	200
Mg	6074	1215
Mn	499	100
Ni	503	101
K	10021	2004
Se	1029	206
Ag	501	100
Na	10097	2019
Tl	1028	206
V	501	100
Zn	1025	205

ICV5-0508		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	CN^-	99

M3532 R: 12/10/15

OP 12/18/15

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2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGFE10
Lot Number:	J2-FE04047
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Fe
Starting Material:	Fe pieces
Starting Material Lot#:	1820
Starting Material Purity:	99.9965%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10 008 ± 23 µg/mL - weighted mean

Certified Density: 1.045 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**9992 ± 31 µg/mL** ICP Assay NIST SRM 3126a Lot Number: 140812
Assay Method #2	**10 020 ± 26 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

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M3535

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R : 12/10/15
OP : 12/18/15

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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**58025**	C471305	Nitric Acid		
Lot Number:	**072215**				
Description:	**Manganese (Mn)**				
		2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	072218				
	Storage: 20 °C				
Nominal Concentration (µg/mL):	**1000**				
		5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.24	0.148	Flask Uncertainty		

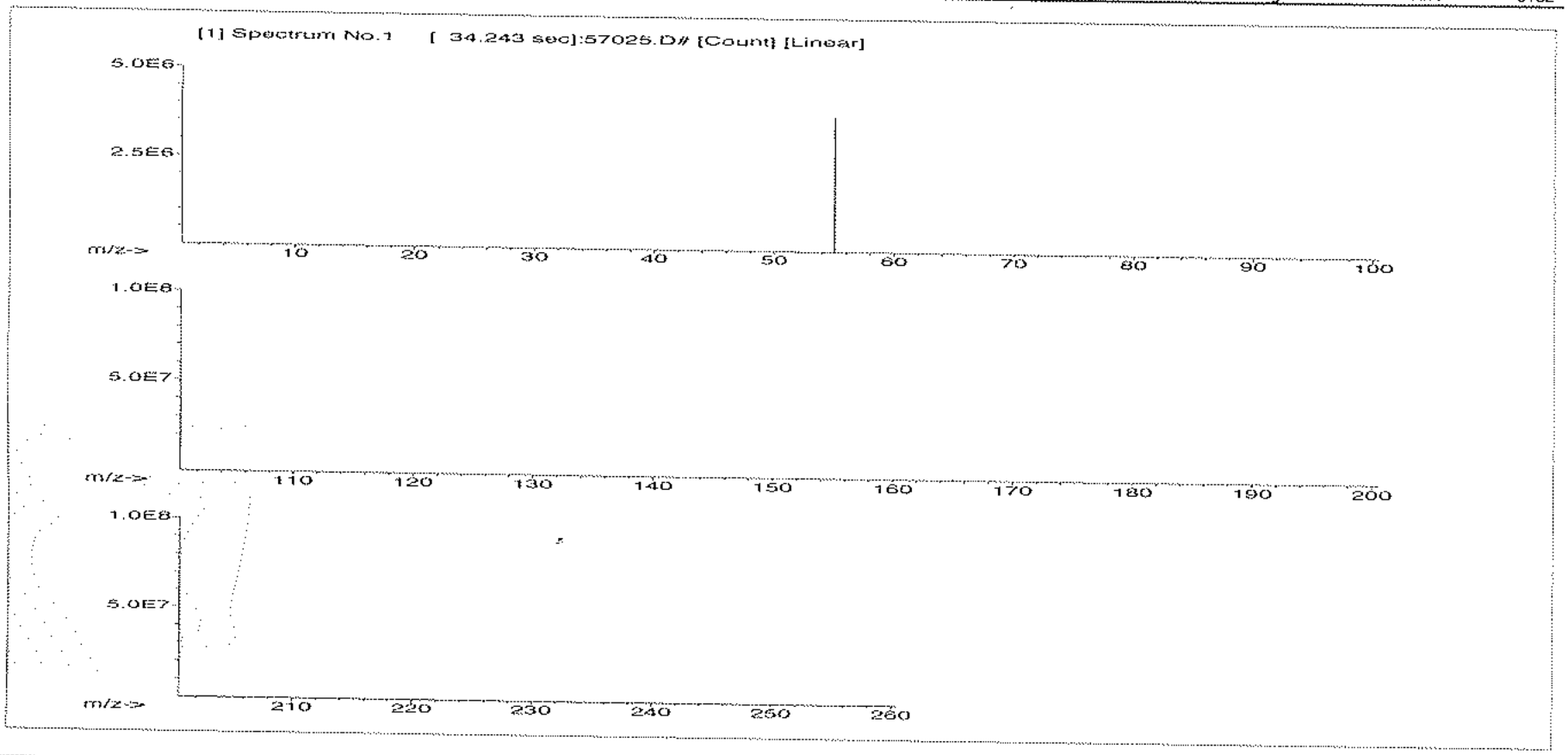
Gabriel Helland

Formulated By:	Gabriel Helland	072215

Pedro Rentas

Reviewed By:	Pedro L. Rentas	072215

Compound	Part Number	Lot Number	Dilution Factor	Initial Volume	Uncertainty Pipette	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-)	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese (II) nitrate Hydrate (Mn)	58125	012115	0.1000	200.0	0.013	10001.5	**1000.0**	0.00201	15710-66-4	5 mg/m3	N/A	3132



R: 01/07/16 Exp: 11/06/18
Do: 01/14/16

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

M3541

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-STOCK-12
Lot Number:	J2-MEB603008
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 µg/mL ea:

Ba, Be, Bi,
Ce, Co, In,
Li, Ni, Pb,
U

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Barium, Ba	10.00 ± 0.05 µg/mL	Beryllium, Be	10.00 ± 0.06 µg/mL
Bismuth, Bi	10.00 ± 0.05 µg/mL	Cerium, Ce	10.00 ± 0.05 µg/mL
Cobalt, Co	10.00 ± 0.05 µg/mL	Indium, In	10.00 ± 0.05 µg/mL
Lead, Pb	10.00 ± 0.05 µg/mL	Lithium, Li	10.00 ± 0.06 µg/mL
Nickel, Ni	10.00 ± 0.05 µg/mL	Uranium, U	10.00 ± 0.06 µg/mL

Certified Density: 1.023 g/mL (measured at 20 ± 1 °C)

Assay Information:

M3585 R: 02/19/16
D: 04/26/16

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Ex: 07/02/18 (BH)

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2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBA1
Lot Number:	J2-BA02093
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Ba
Starting Material:	Ba(NO3)2
Starting Material Lot#:	1822
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 5 µg/mL

Certified Density: 1.000 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **997 ± 3 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **998 ± 5 µg/mL**
ICP Assay NIST SRM 3104a Lot Number: 070222

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M 3588
Rec. 04/28/16
Exp : 01/13/21

Material No.: 9530-33
Batch No.: 0000134218
Manufactured Date: 2016/01/15
Retest Date: 2021/01/13

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.7
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.191
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	< 1
ACS - Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.4
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	8.3
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9530-33
Batch No.: 0000134218

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	4.0
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	1.0
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	1.0
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.2
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	0.3
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	< 0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600

Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 , Fax: 610.573.2610

Nitric Acid, 69.0-70.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

M3590
Rec. 05/04/16
Exp. 01/27/21

Material No.: 9598-34
Batch No.: 0000135629
Manufactured Date: 2016/01/29
Retest Date: 2021/01/27

Certificate of Analysis

Test	Specification	Result
ACS - Assay (HNO_3)	69.0 - 70.0 %	69.6
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 2 ppm	< 1
ACS - Specific Gravity at 60°/60°F	1.416 - 1.420	1.420
Chloride (Cl)	<= 0.04 ppm	< 0.03
Phosphate (PO_4)	<= 0.1 ppm	<0.01
Sulfate (SO_4)	<= 0.4 ppm	< 0.2
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	0.3
Arsenic and Antimony (as As)	<= 5 ppb	< 2
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 1.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 4.0 ppb	< 0.7
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	0.5
Trace Impurities - Chromium (Cr)	<= 10.0 ppb	3.0
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 20.0 ppb	< 0.2
Trace Impurities - Germanium (Ge)	<= 4.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 10.0 ppb	0.6

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3477 Corporate Parkway, Suite #200, Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9598-34
Batch No.: 0000135629

Test	Specification	Result
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	< 0.2
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 5.0 ppb	< 3.0
Trace Impurities - Nickel (Ni)	<= 1.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	0.3
Trace Impurities - Potassium (K)	<= 5.0 ppb	< 2.0
Trace Impurities - Silicon (Si)	<= 20.0 ppb	0.6
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 200.0 ppb	0.9
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 2.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	< 0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2006
Selangor, Malaysia 9001:2008
Dehradun, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Pondi, India 9001:2008

Jamie Ethier
Vice President Global Quality

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CHEMTECH

Instrument ID: P7

Daily Analysis Runlog For Sequence/QCBatch ID # LB81457

Review By jaswal Review On 5/11/2016 11:57:08 AM

STD. NAME	STD REF.#
ICAL Standard	MP33602,MP33619,MP33607,MP33612,MP33613,MP33614,MP33615,MP33617,MP33618
ICV Standard	MP33621
CCV Standard	MP33622
ICSA Standard	MP33623,MP33624
CRI Standard	
Chk Standard	MP33669,MP33627,MP33628

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	TUNE	TUNE	TUNE	05/06/16 13:41		OK
2	S00	S00	CAL1	05/06/16 13:44		OK
3	S02	S02	CAL3	05/06/16 13:51		OK
4	S03	S03	CAL4	05/06/16 13:54		OK
5	S04	S04	CAL5	05/06/16 13:58		OK
6	S05	S05	CAL6	05/06/16 14:01		OK
7	S06	S06	CAL7	05/06/16 14:04		OK
8	S07	S07	CAL8	05/06/16 14:07		OK
9	S08	S08	CAL9	05/06/16 14:10		OK
10	ICV	ICV	ICV	05/06/16 14:15		OK
11	ICB	ICB	ICB	05/06/16 14:34		OK
12	ICSA	ICSA	ICSA	05/06/16 14:37		OK
13	ICSAB	ICSAB	ICSAB	05/06/16 14:41		OK
14	CCV081	CCV081	CCV	05/06/16 14:44		OK
15	CCB081	CCB081	CCB	05/06/16 14:46		OK
16	PB90341BL	PBS008	MB	05/06/16 14:51		OK
17	PB90341BS	LCS008	LCS	05/06/16 14:54		OK
18	PB90375BL	PBW007	MB	05/06/16 14:57		OK
19	PB90375BS	LCS007	LCS	05/06/16 15:00		OK
20	H2837-01	MH4002	SAM	05/06/16 15:03		OK
21	H2837-02	MH4002D	DUP	05/06/16 15:06		OK

CHEMTECH

Instrument ID: P7

Daily Analysis Runlog For Sequence/QCBatch ID # LB81457

Review By	jaswal	Review On	5/11/2016 11:57:08 AM

STD. NAME	STD REF.#
ICAL Standard	MP33602,MP33619,MP33607,MP33612,MP33613,MP33614,MP33615,MP33617,MP33618
ICV Standard	MP33621
CCV Standard	MP33622
ICSA Standard	MP33623,MP33624
CRI Standard	
Chk Standard	MP33669,MP33627,MP33628

22	H2837-01L	MH4002L	SD	05/06/16 15:09		OK
23	H2837-03	MH4002S	MS	05/06/16 15:12		OK
24	H2837-10	MH4113	SAM	05/06/16 15:15		OK
25	H2837-16	MH4113D	DUP	05/06/16 15:18		OK
26	H2837-10L	MH4113L	SD	05/06/16 15:21		OK
27	H2837-17	MH4113S	MS	05/06/16 15:24		OK
28	H2837-11	MH4116	SAM	05/06/16 15:27		OK
29	H2837-12	MH4202	SAM	05/06/16 15:30		OK
30	H2837-13	MH4211	SAM	05/06/16 15:33		OK
31	H2837-14	MH4217	SAM	05/06/16 15:36		OK
32	H2837-15	MH4218	SAM	05/06/16 15:39		OK
33	H2837-04	MH4025	SAM	05/06/16 15:44		OK
34	H2837-04DL	MH4025	SAM	05/06/16 15:47	Not required	Not Ok
35	H2837-05	MH4025D	DUP	05/06/16 15:50		OK
36	H2837-05DL	MH4025D	DUP	05/06/16 15:53	Not required	Not Ok
37	H2837-04L	MH4025L	SD	05/06/16 15:56		OK
38	H2837-04LDL	MH4025L	SD	05/06/16 15:59	Not required	Not Ok
39	H2837-06	MH4025S	MS	05/06/16 16:02		OK
40	H2837-06DL	MH4025S	MS	05/06/16 16:05	Not required	Not Ok
41	H2837-07	MH4028	SAM	05/06/16 16:08		OK
42	H2837-07DL	MH4028	SAM	05/06/16 16:11	Not required	Not Ok
43	H2837-08	MH4029	SAM	05/06/16 16:14		OK
44	H2837-08DL	MH4029	SAM	05/06/16 16:17	Not required	Not Ok

CHEMTECH

Instrument ID: P7

Daily Analysis Runlog For Sequence/QCBatch ID # LB81457

Review By	jaswal	Review On	5/11/2016 11:57:08 AM

STD. NAME	STD REF.#
ICAL Standard	MP33602,MP33619,MP33607,MP33612,MP33613,MP33614,MP33615,MP33617,MP33618
ICV Standard	MP33621
CCV Standard	MP33622
ICSA Standard	MP33623,MP33624
CRI Standard	
Chk Standard	MP33669,MP33627,MP33628

45	H2837-09	MH4030	SAM	05/06/16 16:20		OK
46	H2837-09DL	MH4030	SAM	05/06/16 16:23	Not required	Not Ok
47	CCV082	CCV082	CCV	05/06/16 16:26		OK
48	CCB082	CCB082	CCB	05/06/16 16:29		OK
49	PB90376BL	PBW007	MB	05/06/16 17:54		OK
50	PB90376BS	LCS007	LCS	05/06/16 17:57		OK
51	H2850-12	MC0AB0	SAM	05/06/16 18:00		OK
52	H2850-13	MC0AB0D	DUP	05/06/16 18:03		OK
53	H2850-12L	MC0AB0L	SD	05/06/16 18:06		OK
54	H2850-14	MC0AB0S	MS	05/06/16 18:09		OK
55	H2850-15	MC0AD0	SAM	05/06/16 18:12		OK
56	CCV083	CCV083	CCV	05/06/16 18:15		OK
57	CCB083	CCB083	CCB	05/06/16 18:18		OK
58	H2850-16	MC0AE7	SAM	05/06/16 18:21	Zn high	Dilution
59	H2850-22	MC0AG8	SAM	05/06/16 18:24		OK
60	H2850-23	MC0AH2	SAM	05/06/16 18:27		OK
61	H2850-16DL	MC0AE7	SAM	05/06/16 18:30	2X for Zn	Confirms
62	H2850-22DL	MC0AG8	SAM	05/06/16 18:33	Not required	Not Ok
63	H2850-23DL	MC0AH2	SAM	05/06/16 18:36	Not required	Not Ok
64	H2850-16DL2	MC0AE7	SAM	05/06/16 18:39	Not required	Not Ok
65	H2850-22DL2	MC0AG8	SAM	05/06/16 18:42	Not required	Not Ok
66	H2850-23DL2	MC0AH2	SAM	05/06/16 18:45	Not required	Not Ok
67	CCV084	CCV084	CCV	05/06/16 18:48		OK

CHEMTECH

Instrument ID: P7

Daily Analysis Runlog For Sequence/QCBatch ID # LB81457

Review By	jaswal	Review On	5/11/2016 11:57:08 AM

STD. NAME	STD REF.#
ICAL Standard	MP33602,MP33619,MP33607,MP33612,MP33613,MP33614,MP33615,MP33617,MP33618
ICV Standard	MP33621
CCV Standard	MP33622
ICSA Standard	MP33623,MP33624
CRI Standard	
Chk Standard	MP33669,MP33627,MP33628

68	CCB084	CCB084	CCB	05/06/16 18:51		OK

EPA SAMPLE NO.

MH4002

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-01

% Solids: Date Received: 05/03/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/06/2016	1605

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4025

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-04

% Solids: 63.6 Date Received: 05/04/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.21		05/11/2016	1258

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4028

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-07

% Solids: 63.5 Date Received: 05/04/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.087	J	05/11/2016	1304

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4029

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-08

% Solids: 44.7 Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.13	J	05/11/2016	1306

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4030

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: SOIL Lab Sample ID: H2837-09

% Solids: 39 Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.14	J	05/11/2016	1308

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4113

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-10

% Solids: Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/06/2016	1622

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4116

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-11

% Solids: Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/06/2016	1611

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4202

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-12

% Solids: Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/06/2016	1613

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4211

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-13

% Solids: Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/06/2016	1615

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4217

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-14

% Solids: Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/06/2016	1617

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4218

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix: WATER Lab Sample ID: H2837-15

% Solids: Date Received: 05/05/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/06/2016	1619

NOTE: Hardness (total) is reported in mg/L

Comments:

FORM 2 - IN

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Initial Calibration Verification Source : EPA-0508

Continuing Calibration Verification Source : MP33597

Run Batch: LB81450 Analytical Method: CVAA

Concentration Units: µg/L

	Initial Calibration Verification				Continuing Calibration Verification						
	ID: ICV				ID: CCV029				ID: CCV030		
Analyte	True	Found	%R	%RSD	True	Found	%R	%RSD	Found	%R	%RSD
Mercury	4.0	3.9	98		5.0	4.9	98		4.7	94	

FORM 2 - IN

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Initial Calibration Verification Source : EPA-0508

Continuing Calibration Verification Source : MP33662

Run Batch: LB81528 Analytical Method: CVAA

Concentration Units: µg/L

	Initial Calibration Verification				Continuing Calibration Verification						
	ID: ICV				ID: CCV006				ID: CCV007		
Analyte	True	Found	%R	%RSD	True	Found	%R	%RSD	Found	%R	%RSD
Mercury	4.0	4.0	100		5.0	4.9	98		5.1	102	

FORM 3 - IN
BLANKS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Preparation Blank Matrix : WATER

Preparation Blank Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg): ug/L

Analytical Method: CVAA Preparation Batch: PB90345

Run Batch: LB81450 Preparation Method: 7470A

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank/Leachate Extraction	
	ID: ICB	Q	ID: CCB029	Q	ID: CCB030	Q	ID:	Q	ID: PBW003	Q
Mercury	0.2	U	0.2	U	0.2	U			0.2	U

FORM 3 - IN
BLANKS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Preparation Blank Matrix : Solid

Preparation Blank Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg): mg/kg

Analytical Method: CVAA Preparation Batch: PB90463

Run Batch: LB81528 Preparation Method: 7471B

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank/Leachate Extraction	
	ID: ICB	Q	ID: CCB006	Q	ID: CCB007	Q	ID:	Q	ID: PBS004	Q
Mercury	0.2	U	0.2	U	0.2	U			0.096	U

EPA SAMPLE NO.

MH4002S

FORM 5A - IN

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix : WATER Analytical Method: CVAA

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Q	Sample Result (SR)	Q	Spike Added (SA)	%R	Q
Mercury	75 - 125	1.1		0.2	U	1.0	110	

EPA SAMPLE NO.

MH4025S

FORM 5A - IN

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix : Solid Analytical Method: CVAA

% Solids: 63.6

Concentration Units (µg/L, mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Q	Sample Result (SR)	Q	Spike Added (SA)	%R	Q
Mercury	75 - 125	0.86		0.21		0.68	96	

EPA SAMPLE NO.

MH4113S

FORM 5A - IN

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix : WATER Analytical Method: CVAA

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Q	Sample Result (SR)	Q	Spike Added (SA)	%R	Q
Mercury	75 - 125	1.0		0.2	U	1.0	100	

EPA SAMPLE NO.

MH4002D

FORM 6 - IN
DUPLICATES

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix : WATER Analytical Method: CVAA

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Control Limit	Sample (S)	Q	Duplicate (D)	Q	RPD	Q
Mercury		0.2	U	0.2	U		

EPA SAMPLE NO.

MH4025D

FORM 6 - IN
DUPLICATES

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix : Solid Analytical Method: CVAA

% Solids: 63.6

Concentration Units (µg/L, mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit	Sample (S)	Q	Duplicate (D)	Q	RPD	Q
Mercury	0.14	0.21		0.21		0	

EPA SAMPLE NO.

MH4113D

FORM 6 - IN
DUPLICATES

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4002

Matrix : WATER Analytical Method: CVAA

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Control Limit	Sample (S)	Q	Duplicate (D)	Q	RPD	Q
Mercury		0.2	U	0.2	U		

FORM 9-IN

METHOD DETECTION LIMIT

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Analytical Method: CVAA Instrument ID: CV1

Preparation Method: 7470A

Concentration Units (µg/L, µg or mg/kg): ug/L

Analyte	Wavelength/Mass	MDL	Date Analyzed
Mercury	253.70	0.043	12/09/2015

FORM 9-IN

METHOD DETECTION LIMIT

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Analytical Method: CVAA Instrument ID: CV1

Preparation Method: 7471B

Concentration Units (µg/L, µg or mg/kg): mg/kg

Analyte	Wavelength/Mass	MDL	Date Analyzed
Mercury	253.70	0.0098	12/10/2015

FORM 12-IN
ANALYSIS LOG

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Instrument ID: CV1 Analytical Method: CVAA

Start Date: 05/06/2016 End Date: 05/06/2016

Run Batch: LB81450

EPA Sample No.	D/F	Time	Analytes																										
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN		
S0.0	1.0	1540															X												
S0.2	1.0	1543															X												
S2.5	1.0	1545															X												
S5.0	1.0	1547															X												
S7.5	1.0	1549															X												
S10.0	1.0	1551															X												
ICV	1.0	1554															X												
ICB	1.0	1556															X												
CCV029	1.0	1558															X												
CCB029	1.0	1600															X												
PBW003	1.0	1602															X												
MH4002	1.0	1605															X												
MH4002D	1.0	1607															X												
MH4002S	1.0	1609															X												
MH4116	1.0	1611															X												
MH4202	1.0	1613															X												
MH4211	1.0	1615															X												
MH4217	1.0	1617															X												
MH4218	1.0	1619															X												
MH4113	1.0	1622															X												
MH4113D	1.0	1624															X												
MH4113S	1.0	1626															X												
ZZZZZZ	1.0	1628																											
ZZZZZZ	1.0	1630																											
ZZZZZZ	1.0	1632																											
ZZZZZZ	1.0	1634																											
ZZZZZZ	1.0	1636																											
ZZZZZZ	1.0	1639																											
ZZZZZZ	1.0	1641																											
ZZZZZZ	1.0	1643																											
CCV030	1.0	1645															X												
CCB030	1.0	1647															X												

FORM 12-IN

ANALYSIS LOG

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Instrument ID: CV1 Analytical Method: CVAA

Start Date: 05/11/2016 End Date: 05/11/2016

Run Batch: LB81528

EPA Sample No.	D/F	Time	Analytes																										
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN		
S0.0	1.0	1234															X												
S0.2	1.0	1236															X												
S2.5	1.0	1238															X												
S5.0	1.0	1240															X												
S7.5	1.0	1243															X												
S10.0	1.0	1245															X												
ICV	1.0	1247															X												
ICB	1.0	1249															X												
CCV006	1.0	1251															X												
CCB006	1.0	1254															X												
PBS004	1.0	1256															X												
MH4025	1.0	1258															X												
MH4025D	1.0	1300															X												
MH4025S	1.0	1302															X												
MH4028	1.0	1304															X												
MH4029	1.0	1306															X												
MH4030	1.0	1308															X												
ZZZZZZ	1.0	1311																											
ZZZZZZ	1.0	1313																											
ZZZZZZ	1.0	1315																											
ZZZZZZ	1.0	1317																											
ZZZZZZ	1.0	1319																											
ZZZZZZ	1.0	1321																											
ZZZZZZ	1.0	1323																											
ZZZZZZ	1.0	1325																											
ZZZZZZ	1.0	1328																											
ZZZZZZ	1.0	1330																											
ZZZZZZ	1.0	1332																											
ZZZZZZ	1.0	1334																											
ZZZZZZ	1.0	1336																											
CCV007	1.0	1338															X												
CCB007	1.0	1340															X												

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Instrument ID: CV1 Start Date: 05/06/2016

Analytical Method: CVAA Run Batch: LB81450

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Mercury	0	0.032	0	0.2	0.21	-5	2.5	2.5	0

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Instrument ID: CV1 Start Date: 05/06/2016

Analytical Method: CVAA Run Batch: LB81450

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Mercury	5	5.0	0	7.5	7.5	0	10	10.0	0

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Instrument ID: CV1 Start Date: 05/11/2016

Analytical Method: CVAA Run Batch: LB81528

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Mercury	0	0	0	0.2	0.19	5	2.5	2.5	0

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4002

Instrument ID: CV1 Start Date: 05/11/2016

Analytical Method: CVAA Run Batch: LB81528

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Mercury	5	5.0	0	7.5	7.5	0	10	10.0	0

FORM 16-IN

INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Instrument ID: CV1 Start Date : 05/06/2016

Analytical Method: CVAA Run Batch : LB81450

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Mercury	0.99996	1.00001	-0.000189092	Lin. Reg	NONE

FORM 16-IN

INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4002

Instrument ID: CV1 Start Date : 05/11/2016

Analytical Method: CVAA Run Batch : LB81528

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Mercury	0.99999	1.00049	-0.00370812	Lin. Reg	NONE

MERCURY ANALYSIS LOGBOOK

Date	Case Number	Batch Number	Start Time	BLK	STD1 0.05/0.2	STD2	STD3	STD4
05/03/16 (15mo)	H2717	PB90301	14:23	24	179/812	10460	21147	31784
	H2718	PB90302						
	H2573	PB90328						
05/06/16 (3430)	H2629	PB90307	11:07	-40	631	8983	17240	26865
	H2855	PB90325		-40	631	8983	17240	26865
05/06/16 (15mo)	H2751	PB90319	13:57	50	820	10005	20992	31460
	H2752	PB90317						
05/06/16 (15mo)	H2837	PB90345	15:40	44	810	10473	21176	31763
	H2842	PB90346						
	H2855	PB90347						

MERCURY ANALYSIS LOGBOOK

STD 5	End Time	Correlation Coeficient	Stannous Chloride Prep log #	Comment	Analyst	Supervisor Signature
41816	17:02	0.998560	MP33582	ICVIB - CCVIB- 018-021	NB	
					NB	
					NB	
34937	11:13	0.9997228	MP33586	ICVIB - 33 CCVIB 22-25	NB	
					NB	
41848	15:21	0.9998812	MP33586	ICVIB - CCVIB- 026-028	NB	
					NB	
42835	17:29	0.9995598	MP33586	ICVIB - CCVIB- 029-031	NB	
					NB	
					NB	

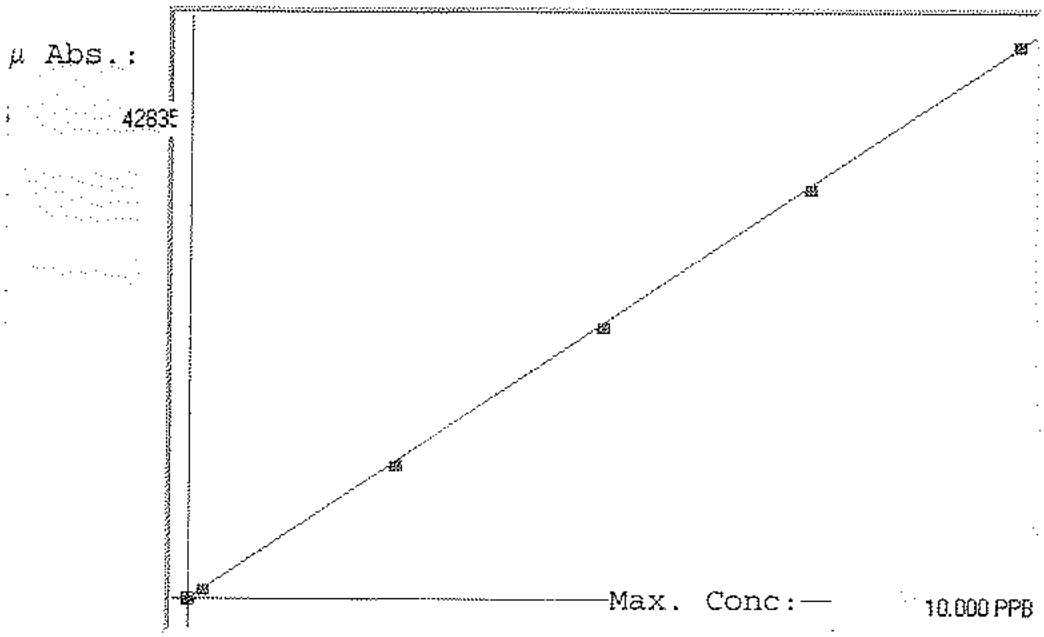
Reviewed By:mohan On:5/9/2016 7:53:18 PM Inst Id :CV1

Reviewed By:mohan
On:5/9/2016 7:53:18 PM
Inst Id :CV1

ISM02.2

LB81450
INSTRUMENT ID: CV1

Linear



A= 0.0000e+000

B= 2.3410e-004 slope

C= 2.1331e-002 y = mx + c

Rho= 0.9999599

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	%D
0.0	0.000	0.032	0.032	44	0.000	44					5
0.2	0.200	0.211	0.011	810	0.0 %	810					-1
2.5	2.500	2.473	-0.027	10473	0.0 %	10473					0
5.0	5.000	4.979	-0.021	21176	0.0 %	21176					-1
7.5	7.500	7.457	-0.043	31763	0.0 %	31763					0
10.0	10.000	10.049	0.049	42835	0.0 %	42835					

NB
5/6/16

Reviewed By:mohan
On:5/9/2016 7:53:18 PM
Inst Id :CV1

LB81450

INSTRUMENT ID : CV1

Sample ID	Extended ID	µ Abs.	Conc.		Stnd Conc	Method	Units	Date	Type
0	S0	44	-		0	ISM02.2	PPB	5/6/2016 15:40	Std
0.2	S0.2	810	-		0.2	ISM02.2	PPB	5/6/2016 15:43	Std
2.5	S2.5	10473	-		2.5	ISM02.2	PPB	5/6/2016 15:45	Std
5	S5	21176	-		5	ISM02.2	PPB	5/6/2016 15:47	Std
7.5	S7.5	31763	-		7.5	ISM02.2	PPB	5/6/2016 15:49	Std
10	S10	42835	-		10	ISM02.2	PPB	5/6/2016 15:51	Std
ICV	ICV	16707	3.9324	-		ISM02.2	PPB	5/6/2016 15:54	SMPL
ICB	ICB	-140	-0.0114	-		ISM02.2	PPB	5/6/2016 15:56	SMPL
CCV029	CCV029	21019	4.9418	-		ISM02.2	PPB	5/6/2016 15:58	SMPL
CCB029	CCB029	-208	-0.0274	-		ISM02.2	PPB	5/6/2016 16:00	SMPL
PB90345BL	PBW003	-12	0.0185	-		ISM02.2	PPB	5/6/2016 16:02	SMPL
H2837-01	MH4002	50	0.033	-		ISM02.2	PPB	5/6/2016 16:05	SMPL
H2837-02	MH4002D	41	0.0309	-		ISM02.2	PPB	5/6/2016 16:07	SMPL
H2837-03	MH4002S	4440	1.0607	-		ISM02.2	PPB	5/6/2016 16:09	SMPL
H2837-11	MH4116	13	0.0244	-		ISM02.2	PPB	5/6/2016 16:11	SMPL
H2837-12	MH4202	24	0.0269	-		ISM02.2	PPB	5/6/2016 16:13	SMPL
H2837-13	MH4211	27	0.0277	-		ISM02.2	PPB	5/6/2016 16:15	SMPL
H2837-14	MH4217	13	0.0244	-		ISM02.2	PPB	5/6/2016 16:17	SMPL
H2837-15	MH4218	13	0.0244	-		ISM02.2	PPB	5/6/2016 16:19	SMPL
H2837-10	MH4113	35	0.0295	-		ISM02.2	PPB	5/6/2016 16:22	SMPL
H2837-16	MH4113D	25	0.0272	-		ISM02.2	PPB	5/6/2016 16:24	SMPL
H2837-17	MH4113S	4368	1.0439	-		ISM02.2	PPB	5/6/2016 16:26	SMPL
PB90346BL	PBW003	13	0.0244	-		ISM02.2	PPB	5/6/2016 16:28	SMPL
H2842-01	MD9WR6	16011	3.7695	-		ISM02.2	PPB	5/6/2016 16:30	SMPL
H2842-21	MD9WZ8	-86	0.0012	-		ISM02.2	PPB	5/6/2016 16:32	SMPL
H2842-22	MD9X00	421	0.1199	-		ISM02.2	PPB	5/6/2016 16:34	SMPL
H2842-23	MD9X00D	332	0.0991	-		ISM02.2	PPB	5/6/2016 16:36	SMPL
H2842-24	MD9X00S	4287	1.0249	-		ISM02.2	PPB	5/6/2016 16:39	SMPL
PB90347BL	PBW003	-203	-0.0262	-		ISM02.2	PPB	5/6/2016 16:41	SMPL
H2855-01	MD9X10	-35	0.0131	-		ISM02.2	PPB	5/6/2016 16:43	SMPL
CCV030	CCV030	19833	4.6642	-		ISM02.2	PPB	5/6/2016 16:45	SMPL
CCB030	CCB030	-149	-0.0135	-		ISM02.2	PPB	5/6/2016 16:47	SMPL
H2855-02	MD9X15	167	0.0604	-		ISM02.2	PPB	5/6/2016 16:49	SMPL
H2855-03	MD9X16	288	0.0888	-		ISM02.2	PPB	5/6/2016 16:51	SMPL
H2855-04	MD9X17	-23	0.0159	-		ISM02.2	PPB	5/6/2016 16:53	SMPL
H2855-05	MD9WS1	-17	0.0174	-		ISM02.2	PPB	5/6/2016 16:56	SMPL
H2855-06	MD9WZ3	16	0.0251	-		ISM02.2	PPB	5/6/2016 16:58	SMPL
H2855-07	MD9WZ4	-11	0.0188	-		ISM02.2	PPB	5/6/2016 17:00	SMPL
H2855-08	MD9WZS	9	0.0234	-		ISM02.2	PPB	5/6/2016 17:02	SMPL
H2855-09	MD9WZ7	-18	0.0171	-		ISM02.2	PPB	5/6/2016 17:04	SMPL
H2855-10	MD9X02	-23	0.0159	-		ISM02.2	PPB	5/6/2016 17:06	SMPL
H2855-11	MD9X03	-8	0.0195	-		ISM02.2	PPB	5/6/2016 17:08	SMPL
H2855-12	MD9X04	9	0.0234	-		ISM02.2	PPB	5/6/2016 17:10	SMPL
H2855-13	MD9X04D	2	0.0218	-		ISM02.2	PPB	5/6/2016 17:13	SMPL
H2855-14	MD9X04S	4015	0.9612	-		ISM02.2	PPB	5/6/2016 17:15	SMPL
H2855-15	MD9X08	82	0.0405	-		ISM02.2	PPB	5/6/2016 17:17	SMPL

Reviewed By:mohan
On:5/9/2016 7:53:18 PM
Inst Id :CV1

LB81450

INSTRUMENT ID : CV1

H2855-16	MD9X09	25	0.0272	-	ISM02.2	PPB	5/6/2016 17:19	SMPL
H2855-17	MD9X11	-49	0.0099	-	ISM02.2	PPB	5/6/2016 17:21	SMPL
H2855-18	MD9X13	-50	0.0096	-	ISM02.2	PPB	5/6/2016 17:23	SMPL
H2855-19	MD9X14	-38	0.0124	-	ISM02.2	PPB	5/6/2016 17:25	SMPL
CCV031	CCV031	20143	4.7367	-	ISM02.2	PPB	5/6/2016 17:27	SMPL
CCB031	CCB031	-131	-0.0093	-	ISM02.2	PPB	5/6/2016 17:29	SMPL

CHEMTECH

284 Sheffield Street Mountainside, NJ 07092

MERCURY ANALYSIS LOGBOOK

Date	Case Number	Batch Number	Start Time	BLK	STD1	STD2	STD3	STD4
5/18/16 (3491)	H2940	PB 90469	9:42	123	844	10409	21672	39415
	H2952							
	H2957							
	H2961							
	H2965							
	H2968	PB 90470						
5/17/16 (1500)	H2837	PB 90463	12:34	103	1071	12327	24343	38072
	H2887	PB 90464						
	H2892	PB 90465						
	H2893	PB 90471						
	H2923	PB 90472						
	H2924	PB 90473						

QA Control # A3041058

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CHEMTECH

284 Sheffield Street Mountainside, NJ 07092

MERCURY ANALYSIS LOGBOOK

STD 5	End Time	Correlation Coeficient	Stannous Chloride Prep log #	Comment	Analyst	Supervisor Signature
43299	12:08	0.9997298	MP33672	ICVIB - 39 CCVIA 01-05	MB	
					MB	
					MB	
					MB	
					MB	
					MB	
48431	17:29	0.9999892	MP33672	ICVIB: CCVIA: 006-012	MB	
					MB	
					MB	
					MB	
					MB	
					MB	

QA Control # A3041058

LB 81528 CV2

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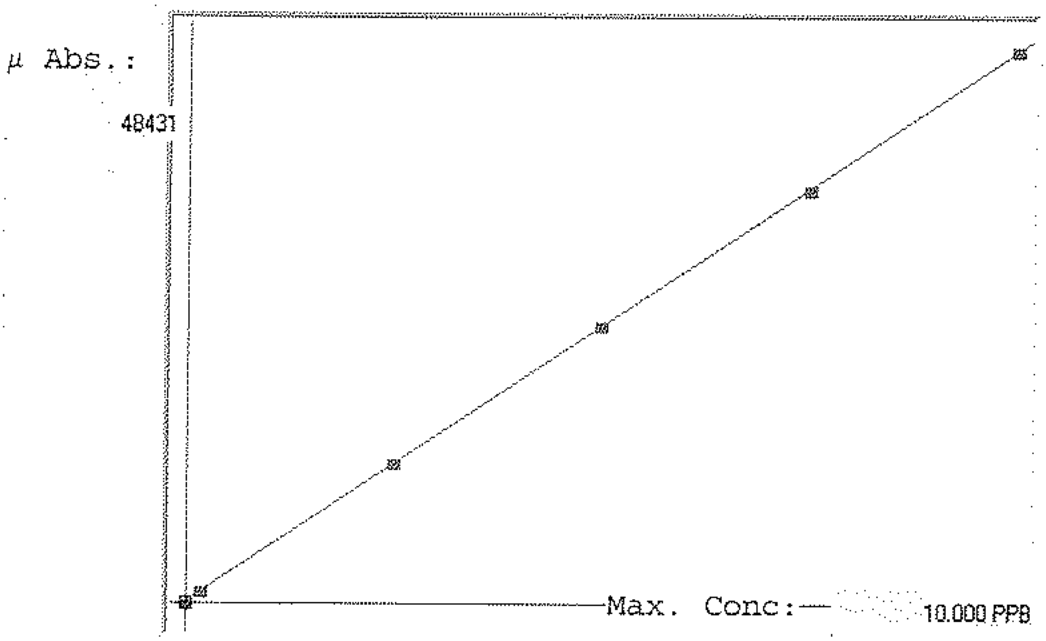
Reviewed By:jaswal
On:5/13/2016 12:55:42 PM
Inst Id :CV1

Reviewed By:jaswal
On:5/13/2016 12:55:42 PM
Inst Id :CV1

ISM02.2 LB81529

INSTRUMENT ID: CV1

Linear



A= 0.0000e+000

B= 2.0727e-004 slope

C= -3.0915e-002 y-intercept

Rho= 0.9999892

Accept=Accepted

Std ID	Conc	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	%D
0.0	0.000	-0.010	-0.010	103	0.000	103					-
0.2	0.200	0.191	-0.009	1071	0.0 %	1071					-5
2.5	2.500	2.524	0.024	12327	0.0 %	12327					1
5.0	5.000	5.015	0.015	24343	0.0 %	24343					0
7.5	7.500	7.473	-0.027	36202	0.0 %	36202					0
10.0	10.000	10.007	0.007	48431	0.0 %	48431					0

mb
5/11/16

Reviewed By:jaswal
On:5/13/2016 12:55:42 PM
Inst Id :CV1

LB81528

INSTRUMENT ID : CV1

Sample ID	Extended ID	µ Abs.	Conc.		Stnd Conc	Method	Units	Date	Type
0	S0	103	-		0	ISM02.2	PPB	5/11/2016 12:34	Std
0.2	S0.2	1071	-		0.2	ISM02.2	PPB	5/11/2016 12:36	Std
2.5	S2.5	12327	-		2.5	ISM02.2	PPB	5/11/2016 12:38	Std
5	S5	24343	-		5	ISM02.2	PPB	5/11/2016 12:40	Std
7.5	S7.5	36202	-		7.5	ISM02.2	PPB	5/11/2016 12:43	Std
10	S10	48431	-		10	ISM02.2	PPB	5/11/2016 12:45	Std
ICV	ICV	19593	4.0301	-		ISM02.2	PPB	5/11/2016 12:47	SMPL
ICB	ICB\	35	-0.0237	-		ISM02.2	PPB	5/11/2016 12:49	SMPL
CCV006	CCV006	24005	4.9445	-		ISM02.2	PPB	5/11/2016 12:51	SMPL
CCB006	CCB006	19	-0.027	-		ISM02.2	PPB	5/11/2016 12:54	SMPL
PB90463BL	PBS004	69	-0.0166	-		ISM02.2	PPB	5/11/2016 12:56	SMPL
H2837-04	MH4025	3928	0.7832	-		ISM02.2	PPB	5/11/2016 12:58	SMPL
H2837-05	MH4025D	3881	0.7735	-		ISM02.2	PPB	5/11/2016 13:00	SMPL
H2837-06	MH4025S	15434	3.1681	-		ISM02.2	PPB	5/11/2016 13:02	SMPL
H2837-07	MH4028	1692	0.3198	-		ISM02.2	PPB	5/11/2016 13:04	SMPL
H2837-08	MH4029	1736	0.3289	-		ISM02.2	PPB	5/11/2016 13:06	SMPL
H2837-09	MH4030	1643	0.3096	-		ISM02.2	PPB	5/11/2016 13:08	SMPL
PB90464BL	PBS004	-16	-0.0342	-		ISM02.2	PPB	5/11/2016 13:11	SMPL
H2887-01	MB0AR7	1011	0.1786	-		ISM02.2	PPB	5/11/2016 13:13	SMPL
H2887-02	MBD371	2346	0.4553	-		ISM02.2	PPB	5/11/2016 13:15	SMPL
H2887-03	MBD371D	2450	0.4769	-		ISM02.2	PPB	5/11/2016 13:17	SMPL
H2887-04	MBD371S	14478	2.9699	-		ISM02.2	PPB	5/11/2016 13:19	SMPL
H2887-05	MBD373	833	0.1417	-		ISM02.2	PPB	5/11/2016 13:21	SMPL
H2887-06	MBD374	953	0.1666	-		ISM02.2	PPB	5/11/2016 13:23	SMPL
H2887-07	MBD376	1386	0.2564	-		ISM02.2	PPB	5/11/2016 13:25	SMPL
H2887-08	MBD377	730	0.1204	-		ISM02.2	PPB	5/11/2016 13:28	SMPL
H2887-09	MBD378	765	0.1276	-		ISM02.2	PPB	5/11/2016 13:30	SMPL
H2887-10	MBD395	1936	0.3704	-		ISM02.2	PPB	5/11/2016 13:32	SMPL
H2887-11	MBD396	1011	0.1786	-		ISM02.2	PPB	5/11/2016 13:34	SMPL
H2887-12	MBD397	496	0.0719	-		ISM02.2	PPB	5/11/2016 13:36	SMPL
CCV007	CCV007	24882	5.1263	-		ISM02.2	PPB	5/11/2016 13:38	SMPL
CCB007	CCB007	-94	-0.0504	-		ISM02.2	PPB	5/11/2016 13:40	SMPL
H2887-13	MBD398	1005	0.1774	-		ISM02.2	PPB	5/11/2016 13:42	SMPL
H2887-14	MBD3A2	5564	1.1223	-		ISM02.2	PPB	5/11/2016 13:44	SMPL
H2887-15	MBD3A3	908	0.1573	-		ISM02.2	PPB	5/11/2016 13:47	SMPL
H2887-16	MBD3A4	700	0.1142	-		ISM02.2	PPB	5/11/2016 13:49	SMPL
H2887-17	MBD3A5	675	0.109	-		ISM02.2	PPB	5/11/2016 13:51	SMPL
H2887-18	MBD3C1	885	0.1525	-		ISM02.2	PPB	5/11/2016 13:53	SMPL
H2887-19	MBD3C2	286	0.0284	-		ISM02.2	PPB	5/11/2016 13:55	SMPL
H2887-20	MBD3C3	689	0.1119	-		ISM02.2	PPB	5/11/2016 13:57	SMPL
H2887-21	MBD3C4	495	0.0717	-		ISM02.2	PPB	5/11/2016 13:59	SMPL
H2887-22	MBD3E1	476	0.0677	-		ISM02.2	PPB	5/11/2016 14:01	SMPL
PB90465BL	PBS004	3	-0.0303	-		ISM02.2	PPB	5/11/2016 14:04	SMPL
H2892-01	MD9WS2	324	0.0362	-		ISM02.2	PPB	5/11/2016 14:06	SMPL
H2892-02	MD9WT9	25936	5.3448	-		ISM02.2	PPB	5/11/2016 14:08	SMPL
H2892-03	MD9WW0	1204	0.2186	-		ISM02.2	PPB	5/11/2016 14:10	SMPL

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H2892-04	MD9WW1	2410	0.4686	-	ISM02.2	PPB	5/11/2016 14:12 SMPL
H2892-05	MD9WW2	1572	0.2949	-	ISM02.2	PPB	5/11/2016 14:14 SMPL
H2892-06	MD9WW3	456	0.0636	-	ISM02.2	PPB	5/11/2016 14:16 SMPL
H2892-07	MD9WW4	5119	1.0301	-	ISM02.2	PPB	5/11/2016 14:18 SMPL
H2892-08	MD9WW6	142	-0.0015	-	ISM02.2	PPB	5/11/2016 14:21 SMPL
H2892-09	MD9WW7	992	0.1747	-	ISM02.2	PPB	5/11/2016 14:23 SMPL
CCV008	CCV008	24708	5.0902	-	ISM02.2	PPB	5/11/2016 14:25 SMPL
CCB008	CCB008	-96	-0.0508	-	ISM02.2	PPB	5/11/2016 14:27 SMPL
H2892-10	MD9WW8	922	0.1602	-	ISM02.2	PPB	5/11/2016 14:29 SMPL
H2892-11	MD9WW9	1051	0.1869	-	ISM02.2	PPB	5/11/2016 14:31 SMPL
H2892-12	MD9WX0	852	0.1457	-	ISM02.2	PPB	5/11/2016 14:33 SMPL
H2892-13	MD9WX2	45	-0.0216	-	ISM02.2	PPB	5/11/2016 14:35 SMPL
H2892-14	MD9WX3	254	0.0217	-	ISM02.2	PPB	5/11/2016 14:38 SMPL
H2892-15	MD9WX7	556	0.0843	-	ISM02.2	PPB	5/11/2016 14:40 SMPL
H2892-16	MD9WX9	527	0.0783	-	ISM02.2	PPB	5/11/2016 14:42 SMPL
H2892-17	MD9WY0	326	0.0367	-	ISM02.2	PPB	5/11/2016 14:44 SMPL
H2892-18	MD9WY0D	328	0.0371	-	ISM02.2	PPB	5/11/2016 14:46 SMPL
H2892-19	MD9WY0S	12637	2.5883	-	ISM02.2	PPB	5/11/2016 14:48 SMPL
H2892-20	MD9WY1	1528	0.2858	-	ISM02.2	PPB	5/11/2016 14:50 SMPL
H2892-21	MD9WY3	69	-0.0166	-	ISM02.2	PPB	5/11/2016 14:52 SMPL
H2892-22	MD9WY5	3945	0.7868	-	ISM02.2	PPB	5/11/2016 14:55 SMPL
PB90471BL	PBS004	-21	-0.0353	-	ISM02.2	PPB	5/11/2016 14:57 SMPL
H2893-01	MD9WY7	961	0.1683	-	ISM02.2	PPB	5/11/2016 14:59 SMPL
H2893-02	MD9WY9	793	0.1334	-	ISM02.2	PPB	5/11/2016 15:01 SMPL
H2893-03	MD9WT2	586192	HIGH	-	ISM02.2	PPB	5/11/2016 15:03
H2893-05	MD9WT4	10523	2.1502	-	ISM02.2	PPB	5/11/2016 15:07 SMPL
H2893-06	MD9WT5	780	0.1308	-	ISM02.2	PPB	5/11/2016 15:09 SMPL
CCV009	CCV009	24568	5.0612	-	ISM02.2	PPB	5/11/2016 15:12 SMPL
CCB009	CCB009	-100	-0.0516	-	ISM02.2	PPB	5/11/2016 15:14 SMPL
H2893-07	MD9WT6	10770	2.2014	-	ISM02.2	PPB	5/11/2016 15:16 SMPL
H2893-08	MD9WT7	3147	0.6214	-	ISM02.2	PPB	5/11/2016 15:18 SMPL
H2893-09	MD9WT7D	3401	0.674	-	ISM02.2	PPB	5/11/2016 15:20 SMPL
H2893-10	MD9WT7S	15655	3.2139	-	ISM02.2	PPB	5/11/2016 15:22 SMPL
H2893-11	MD9WT8	2093	0.4029	-	ISM02.2	PPB	5/11/2016 15:24 SMPL
H2893-12	MD9WY4	1129	0.2031	-	ISM02.2	PPB	5/11/2016 15:26 SMPL
H2893-13	MD9WY6	7079	1.4363	-	ISM02.2	PPB	5/11/2016 15:29 SMPL
H2893-14	MD9WY8	16256	3.3384	-	ISM02.2	PPB	5/11/2016 15:31 SMPL
H2893-20	MD9WX8	444	0.0611	-	ISM02.2	PPB	5/11/2016 15:33 SMPL
PB90472BL	PBS004	-18	-0.0346	-	ISM02.2	PPB	5/11/2016 15:35 SMPL
H2923-01	ME5NH5	205	0.0116	-	ISM02.2	PPB	5/11/2016 15:37 SMPL
H2923-02	ME5NH6	436	0.0595	-	ISM02.2	PPB	5/11/2016 15:39 SMPL
H2923-03	ME5NE9	2690	0.5266	-	ISM02.2	PPB	5/11/2016 15:41 SMPL
H2923-04	ME5NF0	1619	0.3047	-	ISM02.2	PPB	5/11/2016 15:43 SMPL
H2923-05	ME5NF1	5410	1.0904	-	ISM02.2	PPB	5/11/2016 15:46 SMPL
H2923-06	ME5NF2	-55	-0.0423	-	ISM02.2	PPB	5/11/2016 15:48 SMPL
H2923-07	ME5NF3	325	0.0364	-	ISM02.2	PPB	5/11/2016 15:50 SMPL
H2923-08	ME5NF4	863	0.148	-	ISM02.2	PPB	5/11/2016 15:52 SMPL

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H2923-09	ME5NF5	99	-0.0104	-	ISM02.2	PPB	5/11/2016 15:54 SMPL
H2923-10	ME5NF6	252	0.0213	-	ISM02.2	PPB	5/11/2016 15:56 SMPL
CCV010	CCV010	24822	5.1139	-	ISM02.2	PPB	5/11/2016 15:58 SMPL
CCB010	CCB010	-41	-0.0394	-	ISM02.2	PPB	5/11/2016 16:01 SMPL
H2923-11	ME5NF7	1717	0.325	-	ISM02.2	PPB	5/11/2016 16:03 SMPL
H2923-12	ME5NF8	2754	0.5399	-	ISM02.2	PPB	5/11/2016 16:05 SMPL
H2923-13	ME5NF9	494	0.0715	-	ISM02.2	PPB	5/11/2016 16:07 SMPL
H2923-14	ME5NG0	423	0.0568	-	ISM02.2	PPB	5/11/2016 16:09 SMPL
H2923-15	ME5NG1	951	0.1662	-	ISM02.2	PPB	5/11/2016 16:11 SMPL
H2923-16	ME5NG2	806	0.1361	-	ISM02.2	PPB	5/11/2016 16:13 SMPL
H2923-17	ME5NG3	849	0.1451	-	ISM02.2	PPB	5/11/2016 16:15 SMPL
H2923-18	ME5NG4	1647	0.3105	-	ISM02.2	PPB	5/11/2016 16:23 SMPL
H2923-19	ME5NG4D	1573	0.2951	-	ISM02.2	PPB	5/11/2016 16:25 SMPL
H2923-20	ME5NG4S	12685	2.5983	-	ISM02.2	PPB	5/11/2016 16:30 SMPL
H2923-21	ME5NG5	68027	14.0689	-	ISM02.2	PPB	5/11/2016 16:32 SMPL
H2923-22	ME5NG6	67176	13.8925	-	ISM02.2	PPB	5/11/2016 16:34 SMPL
PB90473BL	PBS004	-188	-0.0699	-	ISM02.2	PPB	5/11/2016 16:36 SMPL
H2924-01	ME5NG7	2795	0.5484	-	ISM02.2	PPB	5/11/2016 16:39 SMPL
H2924-02	ME5NG8	667	0.1073	-	ISM02.2	PPB	5/11/2016 16:41 SMPL
H2924-03	ME5NG9	1865	0.3556	-	ISM02.2	PPB	5/11/2016 16:43 SMPL
H2924-04	ME5NH0	1096	0.1963	-	ISM02.2	PPB	5/11/2016 16:45 SMPL
H2924-05	ME5NH1	3673	0.7304	-	ISM02.2	PPB	5/11/2016 16:47 SMPL
H2924-06	ME5NH2	5007	1.0069	-	ISM02.2	PPB	5/11/2016 16:49 SMPL
H2924-07	ME5NH3	822	0.1395	-	ISM02.2	PPB	5/11/2016 16:51 SMPL
CCV011	CCV011	24758	5.1006	-	ISM02.2	PPB	5/11/2016 16:54 SMPL
CCB011	CCB011	-11	-0.0332	-	ISM02.2	PPB	5/11/2016 16:56 SMPL
H2924-08	ME5NH4	1504	0.2808	-	ISM02.2	PPB	5/11/2016 16:58 SMPL
H2924-09	ME5NH4D	1485	0.2769	-	ISM02.2	PPB	5/11/2016 17:00 SMPL
H2924-10	ME5NH4S	14257	2.9241	-	ISM02.2	PPB	5/11/2016 17:02 SMPL
H2893-03DLX10	MD9WT2	101599	21.0272	-	ISM02.2	PPB	5/11/2016 17:04 SMPL
H2893-04	MD9WT3	260	0.023	-	ISM02.2	PPB	5/11/2016 17:06 SMPL
H2923-21DLX5	ME5NG5	13844	2.8385	-	ISM02.2	PPB	5/11/2016 17:12 SMPL
H2923-22DLX5	ME5NG6	13809	2.8312	-	ISM02.2	PPB	5/11/2016 17:17 SMPL
H2893-03DL2X50	MD9WT2	20265	4.1694	-	ISM02.2	PPB	5/11/2016 17:19 SMPL
CCV012	CCV012	24091	4.9624	-	ISM02.2	PPB	5/11/2016 17:27 SMPL
CCB012	CCB012	-23	-0.0357	-	ISM02.2	PPB	5/11/2016 17:29 SMPL

CHEMTECH **MERCURY PREPARATION WORKSHEET**

PB90345

ISM02.2 M-ISM02.2 - Mercury in Waters-CV

SOP: M Revision:

Prep Code: 747A09

Batch # PB90345

Bath Temprature: —

Digestion Time: In: 10:40 Out: 12:40

Block Temprature: 95°C

PH STRIP: M3564 NB 5/6/16

Supervisor Signature:

Balance Check: (0.2G): —

Acceptance Range 0. 199-0.201 gram

Dig Technician Signature: NB

Date: 05/06/16 Time: 10:02 Final Volume: 100 ML

Sample Received By: NB

STANDARD NAME	MLS USED	STD REF. # FROM LOG
ICV		MP33595
CCV	100mL	MP33597
Matrix Spike	0.40mL	MP33588

NB 5/6/16

CHEMICAL USED	ML/SAMPLE USED	LOT NUMBER
HNO3/H2SO4 1:2	5.0mL	MP33426
KMN04	15.0mL	MP33566
K2S2O8	8.0mL	MP33428
Hydroxylamine HCL	6.0mL	MP.335

NB 5/6/16

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	Wt(g)/Vol(ml)	COMMENTS
BLK 0.0 ppb	S0	WATER	100 ML	MP33589
Std1 0.2 ppb	S0.2			MP33590
Std2 2.5 ppb	S2.5			MP33591
Std3 5.0 ppb	S5.0			MP33592
Std4 7.5 ppb	S7.5			MP33593
Std5 10.0 ppb	S10.0			MP33594
ICV	ICV			MP33595
ICB	ICB			MP33596
CCV	CCV			MP33597
CCB	CCB			MP33598
~~CRI~~	CRA / CRI			
~~CHK STD~~	CHK STD			

NB 5/6/16

Date/Time	Received By	Relinquished By	Location
	Analysis Group	Digestion Group	
			NB 5/6/16

CHEMTECH

MERCURY PREPARATION WORKSHEET

PB90345

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST	MATRIX	Wt(g) Vol(ml)	PH	COMMENTS	PREP Pos
H2837-01	MH4002	Mercury	Water	100	<2		
H2837-02	MH4002D	Mercury	Water		<2		
H2837-03	MH4002S	Mercury	Water		<2	MP33133	
H2837-10	MH4113	Mercury	Water		<2		
H2837-11	MH4116	Mercury	Water		<2		
H2837-12	MH4202	Mercury	Water		<2		
H2837-13	MH4211	Mercury	Water		<2		
H2837-14	MH4217	Mercury	Water		<2		
H2837-15	MH4218	Mercury	Water		<2		
H2837-16	MH4113D	Mercury	Water		<2		
H2837-17	MH4113S	Mercury	Water		<2	MP33188	
PB90345BL	PBW 003	Mercury	Water		<2		

MB
5/6/16

* BL=Blank * BS=Blank Spike * TB=TCLP Blank

CHEMTECH

MERCURY PREPARATION WORKSHEET

PB90345

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST	MATRIX	Wt(g) Vol(ml)	PH	COMMENTS	Prep Pos
H2837-01	MH4002	Mercury	Water	100	<2		
H2837-02	MH4002D	Mercury	Water	100	<2		
H2837-03	MH4002S	Mercury	Water	100	<2	MP33538	
H2837-10	MH4113	Mercury	Water	100	<2		
H2837-11	MH4116	Mercury	Water	100	<2		
H2837-12	MH4202	Mercury	Water	100	<2		
H2837-13	MH4211	Mercury	Water	100	<2		
H2837-14	MH4217	Mercury	Water	100	<2		
H2837-15	MH4218	Mercury	Water	100	<2		
H2837-16	MH4113D	Mercury	Water	100	<2		
H2837-17	MH4113S	Mercury	Water	100	<2	MP33584	
PB90345BL	PBW003	Mercury	Water	100	<2		

MB
5/6/16

* BL=Blank * BS=Blank Spike * TB=TCLP Blank

CHEMTECH **MERCURY PREPARATION WORKSHEET** **PB90463**

1SM02.2 MIS M02.2 "Mercury Ion Soil-01

SOP: M Revision: Prep Code: 7471B Batch # PB90463

Bath Temprature: — BALANCE ID: MSC-3 Digestion Time: In: 16:40 Out: 17:10

Block Temprature: 95°C Supervisor Signature:

Balance Check: (0.2G): 0.209 Acceptance Range 0. 199-0.201 gram NB 5/10/16 Dig Technician Signature: NB

Date: 05/10/16 Time: 11:54 Final Volume: 100 ML Sample Received By: NB

STANDARD NAME	MLS USED	STD REF. # FROM LOG
ICV	100mL	MP33660
CCV	100mL	MP33662
Matrix Spike	1.0mL	MP33653

NB 5/10/16

CHEMICAL USED	ML/SAMPLE USED	LOT NUMBER
AQUA REGIA	5.0mL	MP33666
KMN04	15.0mL	MP33667
Hydroxylamine HCL	6.0mL	MP33500
PTFE Boiling Stones		M3536

NB 5/10/16

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	Wt(g)/Vol(ml)	COMMENTS
BLK 0.0 ppb	S0	WATER	100 ML	MP33654
Std1 0.2 ppb	S0.2			MP33655
Std2 2.5 ppb	S2.5			MP33656
Std3 5.0 ppb	S5.0			MP33657
Std4 7.5 ppb	S7.5			MP33658
Std5 10.0 ppb	S10.0			MP33659
ICV	ICV			MP33660
ICB	ICB			MP33661
CCV	CCV			MP33662
CCB	CCB			MP33663
~~CRI~~	CRA / CRI			
~~CHK STD~~	CHK STD			

NB 5/10/16

Date/Time	Received By	Relinquished By	Location
	Analysis Group	Digestion Group	
			NB 5/10/16

CHEMTECH

MERCURY PREPARATION WORKSHEET

PB90463

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST	MATRIX	Wt(g)/Vol(ml)	PH	COMMENTS	PREP Pos
H2837-04	MH4025	Mercury	Solid	0.58	7	"	
H2837-05	MH4025D	Mercury	Solid	0.58	"	"	
H2837-06	MH4025S	Mercury	Solid	0.58	"	MP33653	
H2837-07	MH4028	Mercury	Solid	0.58	"	"	
H2837-08	MH4029	Mercury	Solid	0.58	"	"	
H2837-09	MH4030	Mercury	Solid	0.55	"	"	
PB90463BL	PBS 004	Mercury	Solid	0.52	L	"	

MS
5/10/16

* BL=Blank * BS=Blank Spike * TB=TCLP Blank

CHEMTECH

MERCURY PREPARATION WORKSHEET

PB90463

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST	MATRIX	Wt(g)/Vol(ml)	PH	COMMENTS	Prep Pos
H2837-04	MH4025	Mercury	Solid	0.58		"	
H2837-05	MH4025D	Mercury	Solid	0.58		"	
H2837-06	MH4025S	Mercury	Solid	0.58		MP33653	
H2837-07	MH4028	Mercury	Solid	0.58		"	
H2837-08	MH4029	Mercury	Solid	0.58		"	
H2837-09	MH4030	Mercury	Solid	0.55		"	
PB90463BL	PBS 0.04	Mercury	Solid	0.52		"	

MB
SY 10/16

* BL=Blank * BS=Blank Spike * TB=TCLP Blank

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Prep Standard - Chemical Standard Summary

Order ID : H2837

Test : Mercury

Prepbatch ID : PB90345,PB90463,

Sequence ID/Qc Batch ID: LB81450,LB81528,

Standard ID :
MP.335,MP33426,MP33428,MP33500,MP33566,MP33586,MP33588,MP33589,MP33590,MP33591,MP33592,MP33593,MP33594,MP33595,MP33596,MP33597,MP33598,MP33653,MP33654,MP33655,MP33656,MP33657,MP33658,MP33659,MP33660,MP33661,MP33662,MP33663,MP33666,MP33667,MP33672,

Chemical ID :
M2211,M3287,M3374,M3429,M3524,M3536,M3556,M3565,M3567,M3578,M3581,M3587,M3588,M3590,W1152,

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
896	2:1 H2SO4 : HN03	MP33426	04/27/2016	09/17/2016	mohan

FROM 1600.000ml of M3578 + 800.000ml of M3567 = Final Quantity: 2400.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
66	POTASSIUM PERSULFATE SOLUTION 5 %	MP33428	04/27/2016	10/27/2016	mohan

FROM 100.000gram of M2211 + 2000.000ml of W1152 = Final Quantity: 2000.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
67	SODIUM CHLORIDE - HYDROXYL-CHLORIDE SOLUTION	MP33500	05/02/2016	11/02/2016	mohan

FROM 2000.000ml of W1152 + 240.000gram of M3429 + 240.000gram of M3556 = Final Quantity: 2000.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP33566	05/05/2016	11/05/2016	mohan

FROM 100.000gram of M3287 + 2000.000ml of W1152 = Final Quantity: 2000.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
68	STANNOUS CHLORIDE SOLUTION	MP33586	05/06/2016	05/07/2016	mohan

FROM 450.000ml of W1152 + 50.000gram of M3581 + 50.000ml of M3588 = Final Quantity: 500.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP33588	05/06/2016	05/07/2016	mohan

FROM 1.000ml of M3587 + 2.500ml of M3565 + 96.500ml of W1152 = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1340	Hg 0.00 PPB STD	MP33589	05/06/2016	05/07/2016	mohan

FROM 2.500ml of M3587 + 247.500ml of W1152 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1341	Hg 0.2 PPB STD	MP33590	05/06/2016	05/07/2016	mohan

FROM 2.500ml of M3587 + 247.300ml of W1152 + 0.200ml of MP33588 = Final Quantity: 250.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1342	Hg 2.5 PPB STD	MP33591	05/06/2016	05/07/2016	mohan

FROM 2.500ml of M3587 + 245.000ml of W1152 + 2.500ml of MP33588 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1343	Hg 5.0 PPB STD	MP33592	05/06/2016	05/07/2016	mohan

FROM 2.500ml of M3587 + 242.500ml of W1152 + 5.000ml of MP33588 = Final Quantity: 250.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1344	Hg 7.5 PPB STD	MP33593	05/06/2016	05/07/2016	mohan

FROM 2.500ml of M3587 + 240.000ml of W1152 + 7.500ml of MP33588 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1345	Hg 10.0 PPB STD	MP33594	05/06/2016	05/07/2016	mohan

FROM 2.500ml of M3587 + 237.500ml of W1152 + 10.000ml of MP33588 = Final Quantity: 250.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1346	Hg ICV SOLUTION	MP33595	05/06/2016	05/07/2016	mohan

FROM 2.500ml of M3374 + 2.500ml of M3587 + 245.000ml of W1152 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP33596	05/06/2016	05/07/2016	mohan

FROM 2.500ml of M3587 + 247.500ml of W1152 = Final Quantity: 250.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP33597	05/06/2016	05/07/2016	mohan

FROM 485.000ml of W1152 + 5.000ml of M3587 + 10.000ml of MP33588 = Final Quantity: 500.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP33598	05/06/2016	05/07/2016	mohan

FROM 495.000ml of W1152 + 5.000ml of M3587 = Final Quantity: 500.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP33653	05/10/2016	05/11/2016	mohan

FROM 1.000ml of M3590 + 2.500ml of M3565 + 96.500ml of W1152 = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1340	Hg 0.00 PPB STD	MP33654	05/10/2016	05/11/2016	mohan

FROM 2.500ml of M3590 + 247.500ml of W1152 = Final Quantity: 250.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1341	Hg 0.2 PPB STD	MP33655	05/10/2016	05/11/2016	mohan

FROM 2.500ml of M3590 + 247.300ml of W1152 + 0.200ml of MP33653 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1342	Hg 2.5 PPB STD	MP33656	05/10/2016	05/11/2016	mohan

FROM 2.500ml of M3590 + 245.000ml of W1152 + 2.500ml of MP33653 = Final Quantity: 250.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1343	Hg 5.0 PPB STD	MP33657	05/10/2016	05/11/2016	mohan

FROM 2.500ml of M3590 + 242.500ml of W1152 + 5.000ml of MP33653 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1344	Hg 7.5 PPB STD	MP33658	05/10/2016	05/11/2016	mohan

FROM 2.500ml of M3590 + 240.000ml of W1152 + 7.500ml of MP33653 = Final Quantity: 250.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1345	Hg 10.0 PPB STD	MP33659	05/10/2016	05/11/2016	mohan

FROM 2.500ml of M3590 + 237.500ml of W1152 + 10.000ml of MP33653 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1346	Hg ICV SOLUTION	MP33660	05/10/2016	05/11/2016	mohan

FROM 2.500ml of M3374 + 2.500ml of M3590 + 245.000ml of W1152 = Final Quantity: 250.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP33661	05/10/2016	05/11/2016	mohan

FROM 2.500ml of M3590 + 247.500ml of W1152 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP33662	05/10/2016	05/11/2016	mohan

FROM 485.000ml of W1152 + 5.000ml of M3590 + 10.000ml of MP33653 = Final Quantity: 500.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP33663	05/10/2016	05/11/2016	mohan

FROM 495.000ml of W1152 + 5.000ml of M3590 = Final Quantity: 500.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
887	AQUA REGIA FOR HG ON 7471A	MP33666	05/10/2016	05/11/2016	mohan

FROM 150.000ml of M3588 + 50.000ml of M3590 = Final Quantity: 200.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP33667	05/10/2016	11/10/2016	mohan

FROM 100.000gram of M3287 + 2000.000ml of W1152 = Final Quantity: 2000.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
68	STANNOUS CHLORIDE SOLUTION	MP33672	05/11/2016	05/12/2016	mohan

FROM 450.000ml of W1152 + 50.000gram of M3524 + 50.000gram of M3581 = Final Quantity: 500.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3238-05 / Potassium Persulfate (2.5kg)	K42631	12/16/2016	06/04/2015 / mohan	12/16/2011 / ALPA	M2211

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3227-05 / Potassium Permanganate (2.5kg)	0000031168	11/05/2019	01/06/2015 / mohan	11/05/2014 / mohan	M3287

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV5-0508	08/26/2016	02/26/2016 / mohan	03/20/2015 / mohan	M3374

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000101324	06/04/2020	06/04/2015 / mohan	06/04/2015 / mohan	M3429

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	0000120505	08/12/2016	12/17/2015 / mohan	12/04/2015 / mohan	M3524

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	26397-103 / STONES,BOILING,PTFE 450GM	N668-5D015	12/22/2020	12/23/2015 / fabian	12/22/2015 / fabian	M3536

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-2196-01 / Hydroxylamine Hydrochloride, Crystal (cs/4x500g)	0000121677	01/29/2021	02/26/2016 / mohan	01/29/2016 / mohan	M3556

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCl 125mL 10ug/mL	J2-HG02138	08/19/2018	03/28/2016 / mohan	02/19/2016 / mohan	M3565

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	0000131530	09/17/2016	03/17/2016 / fabian	03/02/2016 / fabian	M3567

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	0000122181	06/09/2020	04/27/2016 /	04/04/2016 / mohan	M3578

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)		08/12/2016	04/28/2016 / mohan	04/13/2016 / mohan	M3581

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	0000099263	12/04/2019	05/04/2016 / bhadresh	04/28/2016 / bhadresh	M3587

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)		01/13/2021	05/05/2016 / bhadresh	04/04/2016 / bhadresh	M3588

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	0000135629	01/27/2021	05/06/2016 / bhadresh	05/04/2016 / bhadresh	M3590

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	DIW / DI Water	Lab certified	02/23/2025	02/23/2010 /	02/23/2010 / divya	W1152

R: 08/20/15

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

QATS LABORATORY INORGANIC REFERENCE MATERIAL
INITIAL CALIBRATION VERIFICATION SOLUTIONS
(ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with CLP SOWs and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

M3371
M3372
M3373
M3374
M3375

Received on 03/20/15
(Exp 03/20/20
NB

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-0307", "ICV5-0508", and "ICV6-0400", respectively.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain-of-custody record. Report any problems to Mr. Keith Strout, CB&I Federal Services LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
CB&I Federal Services LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-0307 For ICP-AES use: dilute the ICV1 concentrate 10-fold with 2% (v/v) nitric acid; pipet 10 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

For ICP-MS use: dilute the ICV1 concentrate 50-fold with 1% (v/v) nitric acid; pipet 2 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0508 For the cold vapor analysis of mercury by AA: dilute the ICV5 concentrate 100-fold with 2% (v/v) nitric acid; pipet 1 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide: dilute the ICV6 concentrate 100-fold with Type II water; pipet 1 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-0307		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2521	504
Sb	994	199
As	999	200
Ba	497	99
Be	495	99
Cd	496	99
Ca	10026	2005
Cr	490	98
Co	499	100
Cu	492	98
Fe	5082	1016
Pb	1002	200
Mg	6074	1215
Mn	499	100
Ni	503	101
K	10021	2004
Se	1029	206
Ag	501	100
Na	10097	2019
Tl	1028	206
V	501	100
Zn	1025	205

ICV5-0508		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

Material No.: 3624-05
Batch No.: 0000101324
Manufactured Date: 2014/09/25
Retest Date: 2021/09/23

Certificate of Analysis

m 3624
06-04-15
09-23-2021

Meets ACS Reagent Chemical Requirements.

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	>= 99.0 %	100.8
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
ACS - Insoluble Matter	<= 0.005 %	0.002
Iodide (I)	<= 0.002 %	< 0.002
Bromide (Br)	<= 0.01 %	< 0.01
Chlorate and Nitrate (as NO_3)	<= 0.003 %	< 0.003
ACS - Phosphate (PO_4)	<= 5 ppm	< 5
Sulfate (SO_4)	<= 0.004 %	< 0.004
Barium (Ba)	Passes Test	PT
ACS - Heavy Metals (as Pb)	<= 5 ppm	< 5
Iron (Fe)	<= 2 ppm	< 2
Calcium (Ca)	<= 0.002 %	0.001
Magnesium (Mg)	<= 0.001 %	< 0.001
Potassium (K)	<= 0.005 %	0.003

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008, 17025:2005
Selangor, Malaysia 9001:2008
Dashrathpur, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Paroli, India 9001:2008

Richard M Siberski
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600

Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Stannous Chloride, Dihydrate, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(tin(II) chloride, dihydrate)

M3524
Rcd on 12/04/15
Exp Dt. 8/12/16
RB

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 3980-01
Batch No.: 0000120505
Manufactured Date: 2015/08/13
Expiration Date: 2016/08/12

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($SnCl_2 \cdot 2H_2O$)	98.0 - 103.0 %	99.0
Solubility in HCl	Passes Test	PT
Sulfate (SO_4)	Passes Test	PT
Calcium (Ca)	<= 0.005 %	<0.005
Iron (Fe)	<= 0.003 %	0.002
Lead (Pb)	<= 0.01 %	< 0.01
Magnesium (Mg)	<= 0.01 %	< 0.01
Potassium (K)	<= 0.005 %	0.001
Sodium (Na)	<= 0.01 %	<0.001
Trace Impurities - Arsenic (As)	<= 2.000 ppm	< 2.000
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	0.002

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008; 14001:2004; FSSC 22000
Paris, KY 9001:2008
Mexicali, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, FSSC 22000
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Delhaven, India 9001:2008, 14001:2004, FSSC 22000
Mumbai, India 9001:2008, 17025:2005
Panoli, India 9001:2008

Jamie Estile
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 , Fax: 610.573.2610

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(hydroxylammonium chloride)

M3556
Rec'd on 01/29/2016
Exp: 01/29/2021
MS

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 2196-01
Batch No.: 0000121677
Manufactured Date: 2013/12/11
Retest Date: 2020/12/09

Certificate of Analysis

Meets ACS Reagent Chemical Requirements.

Test	Specification	Result
Assay ($NH_2OH \cdot HCl$) (by $KMnO_4$ titrn)	>= 96.0 %	99.2
Clarity of Alcohol Solution	Passes Test	PT
Residue after Ignition	<= 0.050 %	0.035
Titrable Free Acid (meq/g)	<= 0.25	0.20
Ammonium (NH_4)	Passes Test	PT
Sulfur Compounds (as SO_4)	<= 0.005 %	0.005
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	3
Trace Impurities - Iron (Fe)	<= 5 ppm	3
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	< 0.005

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600

Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

INORGANIC VENTURES
SAI Technology Drive
Christiansburg, VA 24073 - USA

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 853.01 ACCREDITED Reference Material Producer Certificate 853.02

M 3565
Received on
02/19/16
NB

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	J2-HG02138
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Hg
Starting Material:	Hg metal
Starting Material Lot#:	1780
Starting Material Purity:	99.9997%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.000 ± 0.052 µg/mL

Certified Density: 1.020 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods | **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance.

$w_a = (1/u_{char\ a})^2 / [(1/u_{char\ a})^2 + (1/u_{char\ b})^2]$;

$w_b = (1/u_{char\ b})^2 / [(1/u_{char\ a})^2 + (1/u_{char\ b})^2]$

CRM/RM Expanded Uncertainty (±) $= U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) $= U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.006542	M	Eu	<	0.000218	O	Na		0.000005	O	Se	<	0.030000	O	Zn	<	0.000400
O	Al	<	0.001000	O	Fe	<	0.000800	M	Nb	<	0.002180	O	Si		0.000006	O	Zr	<	0.001000
M	As	<	0.006542	M	Ga	<	0.000436	M	Nd	<	0.000218	M	Sm	<	0.000218				
M	Au	<	0.004361	M	Gd	<	0.000218	O	Ni	<	0.002000	O	Sn	<	0.002000				
M	B	<	0.004361	M	Ge	<	0.001090	n	Os	<		O	Sr	<	0.000200				
O	Ba	<	0.000260	M	Hf	<	0.006542	O	P	<	0.030000	M	Ta	<	0.001090				
O	Be	<	0.000180	s	Hg	<		M	Pb	<	0.002180	M	Tb	<	0.000218				
M	Bi	<	0.002180	M	Ho	<	0.000218	M	Pd	<	0.008723	M	Te	<	0.010904				
O	Ca		0.000017	M	In	<	0.000218	M	Pr	<	0.000218	M	Th	<	0.000436				
O	Cd	<	0.000500	M	Ir	<	0.000218	M	Pt	<	0.000218	O	Ti	<	0.000600				
M	Ce	<	0.000218	O	K		0.000003	M	Rb	<	0.000218	O	Tl	<	0.010000				
M	Co	<	0.000436	M	La	<	0.000218	M	Re	<	0.000218	M	Tm	<	0.000218				
O	Cr	<	0.002000	O	Li	<	0.000040	M	Rh	<	0.000218	M	U	<	0.000218				
M	Cs	<	0.001090	M	Lu	<	0.000218	M	Ru	<	0.000218	O	V	<	0.000550				
M	Cu	<	0.002180	O	Mg		0.000003	O	S	<	0.030000	M	W	<	0.004361				
M	Dy	<	0.000218	O	Mn	<	0.000160	M	Sb	<	0.001090	M	Y	<	0.000218				
M	Er	<	0.000218	O	Mo	<	0.001500	O	Sc	<	0.000600	M	Yb	<	0.000218				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference

n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 19, 2015

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 19, 2018

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

James King Jr
Product Documentation Supervisor

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Nitric Acid, 69.0-70.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M3567
rec. date : 3/9/16
exp. date : 12/16/20

Material No.: 9598-34
Batch No.: 0000131530
Manufactured Date: 2015/12/18
Retest Date: 2020/12/16

Certificate of Analysis

Test	Specification	Result
ACS - Assay (HNO_3)	69.0 - 70.0 %	69.8
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 2 ppm	< 1
ACS - Specific Gravity at 60°/60°F	1.416 - 1.420	1.420
Chloride (Cl)	<= 0.04 ppm	< 0.03
Phosphate (PO_4)	<= 0.1 ppm	<0.01
Sulfate (SO_4)	<= 0.4 ppm	< 0.2
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 2
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 1.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 4.0 ppb	0.7
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	1.0
Trace Impurities - Chromium (Cr)	<= 10.0 ppb	3.0
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 20.0 ppb	< 0.2
Trace Impurities - Germanium (Ge)	<= 4.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 10.0 ppb	0.5

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Avantor ™ Performance Materials Inc.
3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9598-34
Batch No.: 0000131530

Test	Specification	Result
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	< 0.2
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	< 0.1
Trace Impurities - Molybdenum (Mo)	<= 5.0 ppb	< 3.0
Trace Impurities - Nickel (Ni)	<= 1.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	0.3
Trace Impurities - Potassium (K)	<= 5.0 ppb	< 2.0
Trace Impurities - Silicon (Si)	<= 20.0 ppb	0.5
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 200.0 ppb	< 0.5
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 2.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	< 0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	0.2

For Laboratory, Research or Manufacturing Use
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Parroli, India 9001:2008

James Ethler
Jamie Ethler
Vice President Global Quality

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Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M3578
04/04/16

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9673-33
Batch No.: 0000122181
Manufactured Date: 2015/09/08
Retest Date: 2020/09/06

Certificate of Analysis

Test	Specification	Result
ACS - Assay (H_2SO_4)	95.0 - 98.0 %	96.6
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	< 1
ACS - Substances Reducing Permanganate (as SO_2)	<= 2 ppm	< 2
Ammonium (NH_4)	<= 1 ppm	< 1
Chloride (Cl)	<= 0.1 ppm	< 0.1
Nitrate (NO_3)	<= 0.2 ppm	< 0.1
Phosphate (PO_4)	<= 0.5 ppm	< 0.1
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	0.4
Arsenic and Antimony (as As)	<= 4 ppb	< 2
Trace Impurities - Barium (Ba)	<= 10.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 10.0 ppb	< 1.0
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 10.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 2.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	2.0
Trace Impurities - Chromium (Cr)	<= 6.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 0.5 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 10.0 ppb	< 0.2
Trace Impurities - Germanium (Ge)	<= 10.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 10.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 500 ppb	< 100

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3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9673-33
Batch No.: 0000122181

Test	Specification	Result
Trace Impurities - Iron (Fe)	<= 50.0 ppb	6.0
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 10.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	0.2
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.3
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 2.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 10.0 ppb	< 1.0
Trace Impurities - Potassium (K)	<= 500.0 ppb	< 2.0
Trace Impurities - Selenium (Se)	<= 50.0 ppb	24.9
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 500.0 ppb	0.9
Trace Impurities - Strontium (Sr)	<= 5.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 10.0 ppb	< 5.0
Trace Impurities - Thallium (Tl)	<= 20.0 ppb	< 5.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 10.0 ppb	< 1.0
Trace Impurities - Vanadium (V)	<= 10.0 ppb	< 1.0
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	< 0.3
Trace Impurities - Zirconium (Zr)	<= 10.0 ppb	< 1.0

For Laboratory, Research or Manufacturing Use

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, 5S5S 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dahrtadim, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

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Stannous Chloride, Dihydrate, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(tin(II) chloride, dihydrate)

M3581
Rec'd on 01/13/16
MS

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 3980-01
Batch No.: 0000120505
Manufactured Date: 2015/08/13
Expiration Date: 2016/08/12

Certificate of Analysis

Meets ACS Reagent Chemical Requirements.

Test	Specification	Result
Assay ($SnCl_2 \cdot 2H_2O$)	98.0 - 103.0 %	99.0
Solubility in HCl	Passes Test	PT
Sulfate (SO_4)	Passes Test	PT
Calcium (Ca)	<= 0.005 %	<0.005
Iron (Fe)	<= 0.003 %	0.002
Lead (Pb)	<= 0.01 %	< 0.01
Magnesium (Mg)	<= 0.01 %	< 0.01
Potassium (K)	<= 0.005 %	0.001
Sodium (Na)	<= 0.01 %	<0.001
Trace Impurities - Arsenic (As)	<= 2.000 ppm	< 2.000
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	0.002

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dahvadun, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Pasroli, India 9001:2008

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Nitric Acid, 69.0-70.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M3587
Rec. 04/28/16
Exp. 12/04/19

Material No.: 9598-34
Batch No.: 0000099263
Manufactured Date: 2014/12/05
Retest Date: 2019/12/04

Certificate of Analysis

Test	Specification	Result
ACS - Assay (HNO_3)	69.0 - 70.0 %	69.7
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 2 ppm	< 1
ACS - Specific Gravity at 60°/60°F	1.416 - 1.420	1.419
Chloride (Cl)	<= 0.04 ppm	< 0.03
Phosphate (PO_4)	<= 0.1 ppm	<0.01
Sulfate (SO_4)	<= 0.4 ppm	< 0.2
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	0.3
Arsenic and Antimony (as As)	<= 5 ppb	< 2
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 1.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 4.0 ppb	< 0.7
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	1.0
Trace Impurities - Chromium (Cr)	<= 10.0 ppb	0.9
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 20.0 ppb	< 0.2
Trace Impurities - Germanium (Ge)	<= 4.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 10.0 ppb	0.4

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3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9598-34
Batch No.: 0000099263

Test	Specification	Result
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	0.3
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	< 0.1
Trace Impurities - Molybdenum (Mo)	<= 5.0 ppb	< 3.0
Trace Impurities - Nickel (Ni)	<= 1.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	0.4
Trace Impurities - Potassium (K)	<= 5.0 ppb	< 2.0
Trace Impurities - Silicon (Si)	<= 20.0 ppb	0.7
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 200.0 ppb	< 0.5
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 2.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	< 0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008, 17025:2005
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Paroli, India 9001:2008

Richard M Siberski
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600

Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M 3588
Rec. 04/28/16
Exp : 01/13/21

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9530-33
Batch No.: 0000134218
Manufactured Date: 2016/01/15
Retest Date: 2021/01/13

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.7
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.191
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	< 1
ACS - Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.4
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	8.3
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

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3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9530-33
Batch No.: 0000134218

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	4.0
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	1.0
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	1.0
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.2
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	0.3
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	< 0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

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Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 , Fax: 610.573.2610

Nitric Acid, 69.0-70.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

M3590
Rec. 05/04/16
Exp. 01/27/21

Material No.: 9598-34
Batch No.: 0000135629
Manufactured Date: 2016/01/29
Retest Date: 2021/01/27

Certificate of Analysis

Test	Specification	Result
ACS - Assay (HNO_3)	69.0 - 70.0 %	69.6
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 2 ppm	< 1
ACS - Specific Gravity at 60°/60°F	1.416 - 1.420	1.420
Chloride (Cl)	<= 0.04 ppm	< 0.03
Phosphate (PO_4)	<= 0.1 ppm	<0.01
Sulfate (SO_4)	<= 0.4 ppm	< 0.2
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	0.3
Arsenic and Antimony (as As)	<= 5 ppb	< 2
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 1.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 4.0 ppb	< 0.7
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	0.5
Trace Impurities - Chromium (Cr)	<= 10.0 ppb	3.0
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 20.0 ppb	< 0.2
Trace Impurities - Germanium (Ge)	<= 4.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 10.0 ppb	0.6

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Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9598-34
Batch No.: 0000135629

Test	Specification	Result
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	< 0.2
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 5.0 ppb	< 3.0
Trace Impurities - Nickel (Ni)	<= 1.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	0.3
Trace Impurities - Potassium (K)	<= 5.0 ppb	< 2.0
Trace Impurities - Silicon (Si)	<= 20.0 ppb	0.6
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 200.0 ppb	0.9
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 2.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	< 0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2006
Selangor, Malaysia 9001:2008
Dehradun, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Pondi, India 9001:2008

Jamie Ethier
Vice President Global Quality

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Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

CHEMTECH

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB81450

Review By mohan Review On 5/9/2016 7:53:18 PM

STD. NAME	STD REF.#
ICAL Standard	MP33588,MP33589,MP33590,MP33591,MP33592,MP33593,MP33594
ICV Standard	MP33595
CCV Standard	MP33597
ICSA Standard	
CRI Standard	
Chk Standard	MP33596,MP33598,MP33586

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	S0	S0.0	CAL1	05/06/16 15:40		OK
2	S0.2	S0.2	CAL2	05/06/16 15:43		OK
3	S2.5	S2.5	CAL3	05/06/16 15:45		OK
4	S5	S5.0	CAL4	05/06/16 15:47		OK
5	S7.5	S7.5	CAL5	05/06/16 15:49		OK
6	S10	S10.0	CAL6	05/06/16 15:51		OK
7	ICV	ICV	ICV	05/06/16 15:54		OK
8	ICB	ICB	ICB	05/06/16 15:56		OK
9	CCV029	CCV029	CCV	05/06/16 15:58		OK
10	CCB029	CCB029	CCB	05/06/16 16:00		OK
11	PB90345BL	PBW003	MB	05/06/16 16:02		OK
12	H2837-01	MH4002	SAM	05/06/16 16:05		OK
13	H2837-02	MH4002D	DUP	05/06/16 16:07		OK
14	H2837-03	MH4002S	MS	05/06/16 16:09		OK
15	H2837-11	MH4116	SAM	05/06/16 16:11		OK
16	H2837-12	MH4202	SAM	05/06/16 16:13		OK
17	H2837-13	MH4211	SAM	05/06/16 16:15		OK
18	H2837-14	MH4217	SAM	05/06/16 16:17		OK
19	H2837-15	MH4218	SAM	05/06/16 16:19		OK
20	H2837-10	MH4113	SAM	05/06/16 16:22		OK
21	H2837-16	MH4113D	DUP	05/06/16 16:24		OK

CHEMTECH

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB81450

Review By mohan Review On 5/9/2016 7:53:18 PM

STD. NAME	STD REF.#
ICAL Standard	MP33588,MP33589,MP33590,MP33591,MP33592,MP33593,MP33594
ICV Standard	MP33595
CCV Standard	MP33597
ICSA Standard	
CRI Standard	
Chk Standard	MP33596,MP33598,MP33586

22	H2837-17	MH4113S	MS	05/06/16 16:26		OK
23	PB90346BL	PBW003	MB	05/06/16 16:28		OK
24	H2842-01	MD9WR6	SAM	05/06/16 16:30		OK
25	H2842-21	MD9WZ8	SAM	05/06/16 16:32		OK
26	H2842-22	MD9X00	SAM	05/06/16 16:34		OK
27	H2842-23	MD9X00D	DUP	05/06/16 16:36		OK
28	H2842-24	MD9X00S	MS	05/06/16 16:39		OK
29	PB90347BL	PBW003	MB	05/06/16 16:41		OK
30	H2855-01	MD9X10	SAM	05/06/16 16:43		OK
31	CCV030	CCV030	CCV	05/06/16 16:45		OK
32	CCB030	CCB030	CCB	05/06/16 16:47		OK
33	H2855-02	MD9X15	SAM	05/06/16 16:49		OK
34	H2855-03	MD9X16	SAM	05/06/16 16:51		OK
35	H2855-04	MD9X17	SAM	05/06/16 16:53		OK
36	H2855-05	MD9WS1	SAM	05/06/16 16:56		OK
37	H2855-06	MD9WZ3	SAM	05/06/16 16:58		OK
38	H2855-07	MD9WZ4	SAM	05/06/16 17:00		OK
39	H2855-08	MD9WZ5	SAM	05/06/16 17:02		OK
40	H2855-09	MD9WZ7	SAM	05/06/16 17:04		OK
41	H2855-10	MD9X02	SAM	05/06/16 17:06		OK
42	H2855-11	MD9X03	SAM	05/06/16 17:08		OK
43	H2855-12	MD9X04	SAM	05/06/16 17:10		OK
44	H2855-13	MD9X04D	DUP	05/06/16 17:13		OK

CHEMTECH

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB81450

Review By	mohan	Review On	5/9/2016 7:53:18 PM

STD. NAME	STD REF.#
ICAL Standard	MP33588,MP33589,MP33590,MP33591,MP33592,MP33593,MP33594
ICV Standard	MP33595
CCV Standard	MP33597
ICSA Standard	
CRI Standard	
Chk Standard	MP33596,MP33598,MP33586

45	H2855-14	MD9X04S	MS	05/06/16 17:15		OK
46	H2855-15	MD9X08	SAM	05/06/16 17:17		OK
47	H2855-16	MD9X09	SAM	05/06/16 17:19		OK
48	H2855-17	MD9X11	SAM	05/06/16 17:21		OK
49	H2855-18	MD9X13	SAM	05/06/16 17:23		OK
50	H2855-19	MD9X14	SAM	05/06/16 17:25		OK
51	CCV031	CCV031	CCV	05/06/16 17:27		OK
52	CCB031	CCB031	CCB	05/06/16 17:29		OK

CHEMTECH

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB81528

Review By jaswal Review On 5/13/2016 12:55:42 PM

STD. NAME	STD REF.#
ICAL Standard	MP33653,MP33654,MP33655,MP33656,MP33657,MP33658,MP33659
ICV Standard	MP33660
CCV Standard	MP33662
ICSA Standard	
CRI Standard	
Chk Standard	MP33661,MP33663,MP33672

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	S0	S0.0	CAL1	05/11/16 12:34		OK
2	S0.2	S0.2	CAL2	05/11/16 12:36		OK
3	S2.5	S2.5	CAL3	05/11/16 12:38		OK
4	S5	S5.0	CAL4	05/11/16 12:40		OK
5	S7.5	S7.5	CAL5	05/11/16 12:43		OK
6	S10	S10.0	CAL6	05/11/16 12:45		OK
7	ICV	ICV	ICV	05/11/16 12:47		OK
8	ICB	ICB	ICB	05/11/16 12:49		OK
9	CCV006	CCV006	CCV	05/11/16 12:51		OK
10	CCB006	CCB006	CCB	05/11/16 12:54		OK
11	PB90463BL	PBS004	MB	05/11/16 12:56		OK
12	H2837-04	MH4025	SAM	05/11/16 12:58		OK
13	H2837-05	MH4025D	DUP	05/11/16 13:00		OK
14	H2837-06	MH4025S	MS	05/11/16 13:02		OK
15	H2837-07	MH4028	SAM	05/11/16 13:04		OK
16	H2837-08	MH4029	SAM	05/11/16 13:06		OK
17	H2837-09	MH4030	SAM	05/11/16 13:08		OK
18	PB90464BL	PBS004	MB	05/11/16 13:11		OK
19	H2887-01	MB0AR7	SAM	05/11/16 13:13		OK
20	H2887-02	MBD371	SAM	05/11/16 13:15		OK
21	H2887-03	MBD371D	DUP	05/11/16 13:17		OK

CHEMTECH

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB81528

Review By	jaswal	Review On	5/13/2016 12:55:42 PM

STD. NAME	STD REF.#
ICAL Standard	MP33653,MP33654,MP33655,MP33656,MP33657,MP33658,MP33659
ICV Standard	MP33660
CCV Standard	MP33662
ICSA Standard	
CRI Standard	
Chk Standard	MP33661,MP33663,MP33672

22	H2887-04	MBD371S	MS	05/11/16 13:19		OK
23	H2887-05	MBD373	SAM	05/11/16 13:21		OK
24	H2887-06	MBD374	SAM	05/11/16 13:23		OK
25	H2887-07	MBD376	SAM	05/11/16 13:25		OK
26	H2887-08	MBD377	SAM	05/11/16 13:28		OK
27	H2887-09	MBD378	SAM	05/11/16 13:30		OK
28	H2887-10	MBD395	SAM	05/11/16 13:32		OK
29	H2887-11	MBD396	SAM	05/11/16 13:34		OK
30	H2887-12	MBD397	SAM	05/11/16 13:36		OK
31	CCV007	CCV007	CCV	05/11/16 13:38		OK
32	CCB007	CCB007	CCB	05/11/16 13:40		OK
33	H2887-13	MBD398	SAM	05/11/16 13:42		OK
34	H2887-14	MBD3A2	SAM	05/11/16 13:44		OK
35	H2887-15	MBD3A3	SAM	05/11/16 13:47		OK
36	H2887-16	MBD3A4	SAM	05/11/16 13:49		OK
37	H2887-17	MBD3A5	SAM	05/11/16 13:51		OK
38	H2887-18	MBD3C1	SAM	05/11/16 13:53		OK
39	H2887-19	MBD3C2	SAM	05/11/16 13:55		OK
40	H2887-20	MBD3C3	SAM	05/11/16 13:57		OK
41	H2887-21	MBD3C4	SAM	05/11/16 13:59		OK
42	H2887-22	MBD3E1	SAM	05/11/16 14:01		OK
43	PB90465BL	PBS004	MB	05/11/16 14:04		OK
44	H2892-01	MD9WS2	SAM	05/11/16 14:06		OK

CHEMTECH

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB81528

Review By	jaswal	Review On	5/13/2016 12:55:42 PM

STD. NAME	STD REF.#
ICAL Standard	MP33653,MP33654,MP33655,MP33656,MP33657,MP33658,MP33659
ICV Standard	MP33660
CCV Standard	MP33662
ICSA Standard	
CRI Standard	
Chk Standard	MP33661,MP33663,MP33672

45	H2892-02	MD9WT9	SAM	05/11/16 14:08		OK
46	H2892-03	MD9WW0	SAM	05/11/16 14:10		OK
47	H2892-04	MD9WW1	SAM	05/11/16 14:12		OK
48	H2892-05	MD9WW2	SAM	05/11/16 14:14		OK
49	H2892-06	MD9WW3	SAM	05/11/16 14:16		OK
50	H2892-07	MD9WW4	SAM	05/11/16 14:18		OK
51	H2892-08	MD9WW6	SAM	05/11/16 14:21		OK
52	H2892-09	MD9WW7	SAM	05/11/16 14:23		OK
53	CCV008	CCV008	CCV	05/11/16 14:25		OK
54	CCB008	CCB008	CCB	05/11/16 14:27		OK
55	H2892-10	MD9WW8	SAM	05/11/16 14:29		OK
56	H2892-11	MD9WW9	SAM	05/11/16 14:31		OK
57	H2892-12	MD9WX0	SAM	05/11/16 14:33		OK
58	H2892-13	MD9WX2	SAM	05/11/16 14:35		OK
59	H2892-14	MD9WX3	SAM	05/11/16 14:38		OK
60	H2892-15	MD9WX7	SAM	05/11/16 14:40		OK
61	H2892-16	MD9WX9	SAM	05/11/16 14:42		OK
62	H2892-17	MD9WY0	SAM	05/11/16 14:44		OK
63	H2892-18	MD9WY0D	DUP	05/11/16 14:46		OK
64	H2892-19	MD9WY0S	MS	05/11/16 14:48		OK
65	H2892-20	MD9WY1	SAM	05/11/16 14:50		OK
66	H2892-21	MD9WY3	SAM	05/11/16 14:52		OK
67	H2892-22	MD9WY5	SAM	05/11/16 14:55		OK

CHEMTECH

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB81528

Review By	jaswal	Review On	5/13/2016 12:55:42 PM

STD. NAME	STD REF.#
ICAL Standard	MP33653,MP33654,MP33655,MP33656,MP33657,MP33658,MP33659
ICV Standard	MP33660
CCV Standard	MP33662
ICSA Standard	
CRI Standard	
Chk Standard	MP33661,MP33663,MP33672

68	PB90471BL	PBS004	MB	05/11/16 14:57		OK
69	H2893-01	MD9WY7	SAM	05/11/16 14:59		OK
70	H2893-02	MD9WY9	SAM	05/11/16 15:01		OK
71	H2893-03	MD9WT2	SAM	05/11/16 15:03	Hg high	Dilution
72	H2893-05	MD9WT4	SAM	05/11/16 15:07		OK
73	H2893-06	MD9WT5	SAM	05/11/16 15:09		OK
74	CCV009	CCV009	CCV	05/11/16 15:12		OK
75	CCB009	CCB009	CCB	05/11/16 15:14		OK
76	H2893-07	MD9WT6	SAM	05/11/16 15:16		OK
77	H2893-08	MD9WT7	SAM	05/11/16 15:18		OK
78	H2893-09	MD9WT7D	DUP	05/11/16 15:20		OK
79	H2893-10	MD9WT7S	MS	05/11/16 15:22		OK
80	H2893-11	MD9WT8	SAM	05/11/16 15:24		OK
81	H2893-12	MD9WY4	SAM	05/11/16 15:26		OK
82	H2893-13	MD9WY6	SAM	05/11/16 15:29		OK
83	H2893-14	MD9WY8	SAM	05/11/16 15:31		OK
84	H2893-20	MD9WX8	SAM	05/11/16 15:33		OK
85	PB90472BL	PBS004	MB	05/11/16 15:35		OK
86	H2923-01	ME5NH5	SAM	05/11/16 15:37		OK
87	H2923-02	ME5NH6	SAM	05/11/16 15:39		OK
88	H2923-03	ME5NE9	SAM	05/11/16 15:41		OK
89	H2923-04	ME5NF0	SAM	05/11/16 15:43		OK
90	H2923-05	ME5NF1	SAM	05/11/16 15:46		OK

CHEMTECH

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB81528

Review By	jaswal	Review On	5/13/2016 12:55:42 PM

STD. NAME	STD REF.#
ICAL Standard	MP33653,MP33654,MP33655,MP33656,MP33657,MP33658,MP33659
ICV Standard	MP33660
CCV Standard	MP33662
ICSA Standard	
CRI Standard	
Chk Standard	MP33661,MP33663,MP33672

91	H2923-06	ME5NF2	SAM	05/11/16 15:48		OK
92	H2923-07	ME5NF3	SAM	05/11/16 15:50		OK
93	H2923-08	ME5NF4	SAM	05/11/16 15:52		OK
94	H2923-09	ME5NF5	SAM	05/11/16 15:54		OK
95	H2923-10	ME5NF6	SAM	05/11/16 15:56		OK
96	CCV010	CCV010	CCV	05/11/16 15:58		OK
97	CCB010	CCB010	CCB	05/11/16 16:01		OK
98	H2923-11	ME5NF7	SAM	05/11/16 16:03		OK
99	H2923-12	ME5NF8	SAM	05/11/16 16:05		OK
100	H2923-13	ME5NF9	SAM	05/11/16 16:07		OK
101	H2923-14	ME5NG0	SAM	05/11/16 16:09		OK
102	H2923-15	ME5NG1	SAM	05/11/16 16:11		OK
103	H2923-16	ME5NG2	SAM	05/11/16 16:13		OK
104	H2923-17	ME5NG3	SAM	05/11/16 16:15		OK
105	H2923-18	ME5NG4	SAM	05/11/16 16:23		OK
106	H2923-19	ME5NG4D	DUP	05/11/16 16:25		OK
107	H2923-20	ME5NG4S	MS	05/11/16 16:30		OK
108	H2923-21	ME5NG5	SAM	05/11/16 16:32	Hg high	Dilution
109	H2923-22	ME5NG6	SAM	05/11/16 16:34	Hg high	Dilution
110	PB90473BL	PBS004	MB	05/11/16 16:36		OK
111	H2924-01	ME5NG7	SAM	05/11/16 16:39		OK
112	H2924-02	ME5NG8	SAM	05/11/16 16:41		OK
113	H2924-03	ME5NG9	SAM	05/11/16 16:43		OK

CHEMTECH

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB81528

Review By	jaswal	Review On	5/13/2016 12:55:42 PM

STD. NAME	STD REF.#
ICAL Standard	MP33653,MP33654,MP33655,MP33656,MP33657,MP33658,MP33659
ICV Standard	MP33660
CCV Standard	MP33662
ICSA Standard	
CRI Standard	
Chk Standard	MP33661,MP33663,MP33672

114	H2924-04	ME5NH0	SAM	05/11/16 16:45		OK
115	H2924-05	ME5NH1	SAM	05/11/16 16:47		OK
116	H2924-06	ME5NH2	SAM	05/11/16 16:49		OK
117	H2924-07	ME5NH3	SAM	05/11/16 16:51		OK
118	CCV011	CCV011	CCV	05/11/16 16:54		OK
119	CCB011	CCB011	CCB	05/11/16 16:56		OK
120	H2924-08	ME5NH4	SAM	05/11/16 16:58		OK
121	H2924-09	ME5NH4D	DUP	05/11/16 17:00		OK
122	H2924-10	ME5NH4S	MS	05/11/16 17:02		OK
123	H2893-03DL	MD9WT2	SAM	05/11/16 17:04	10 x for Hg	Confirms
124	H2893-04	MD9WT3	SAM	05/11/16 17:06		OK
125	H2923-21DL	ME5NG5	SAM	05/11/16 17:12	5x for Hg	Confirms
126	H2923-22DL	ME5NG6	SAM	05/11/16 17:17	5x for Hg	Confirms
127	H2893-03DL2	MD9WT2	SAM	05/11/16 17:19	5x for Hg	Confirms
128	CCV012	CCV012	CCV	05/11/16 17:27		OK
129	CCB012	CCB012	CCB	05/11/16 17:29		OK

CHEMTECH

PERCENT SOLIDS

Analyst Name: jignesh

Date: 5/6/2016

OVEN TEMP IN Celsius (°C) :	109	OVEN TEMP OUT Celsius (°C):	103
Time IN	17:32	Time OUT:	08:30
In Date:	05/05/2016	Out Date:	05/06/2016
Weight Check 1.0g=	1.00 g	Weight Check 1.0g=	1.00 g
Weight Check 10g=	10.00 g	Weight Check 10g=	10.00 g

QC: LB81431

Lab ID	Client Sample ID	Dish#	Dish Weight (g) (A)	Dish + Sample Wt. (g) (B)	Dish + Dry Sample Wt. (g) (C)	% Solid
H2837-04	MH4025	1	1.18	9.75	6.63	63.6
H2837-05	MH4025D	2	1.18	9.75	6.63	63.6
H2837-06	MH4025S	3	1.18	9.75	6.63	63.6
H2837-07	MH4028	4	1.14	9.96	6.74	63.5
H2837-08	MH4029	5	1.11	9.97	5.07	44.7
H2837-09	MH4030	6	1.13	9.66	4.46	39

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

LB81431

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-h2837 WorkList ID : 86693 Date : 5/5/2016 4:54:20 PM

Due Date	Matrix	Sample	Test	Preservative	Customer	Storage Location	Customer Sample	Collect Date	Method
05/13/2016	Solid	H2837-04	Percent Solids	Cool 4 deg C	USEP01	Q11	MH4025	05/03/2016	Chemtech -SO
05/13/2016	Solid	H2837-05	Percent Solids	Cool 4 deg C	USEP01	Q11	MH4025D	05/03/2016	Chemtech -SO
05/13/2016	Solid	H2837-06	Percent Solids	Cool 4 deg C	USEP01	Q11	MH4025S	05/03/2016	Chemtech -SO
05/13/2016	Solid	H2837-07	Percent Solids	Cool 4 deg C	USEP01	Q11	MH4028	05/03/2016	Chemtech -SO
05/14/2016	Solid	H2837-08	Percent Solids	Cool 4 deg C	USEP01	Q11	MH4029	05/04/2016	Chemtech -SO
05/14/2016	Solid	H2837-09	Percent Solids	Cool 4 deg C	USEP01	Q11	MH4030	05/04/2016	Chemtech -SO

424

Date/Time 05/05/16 5:15PM

Received by:

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Date/Time 05/05/16 5:20PM

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Copy
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S.M. Jodhani
Signature
5/3/16
Date

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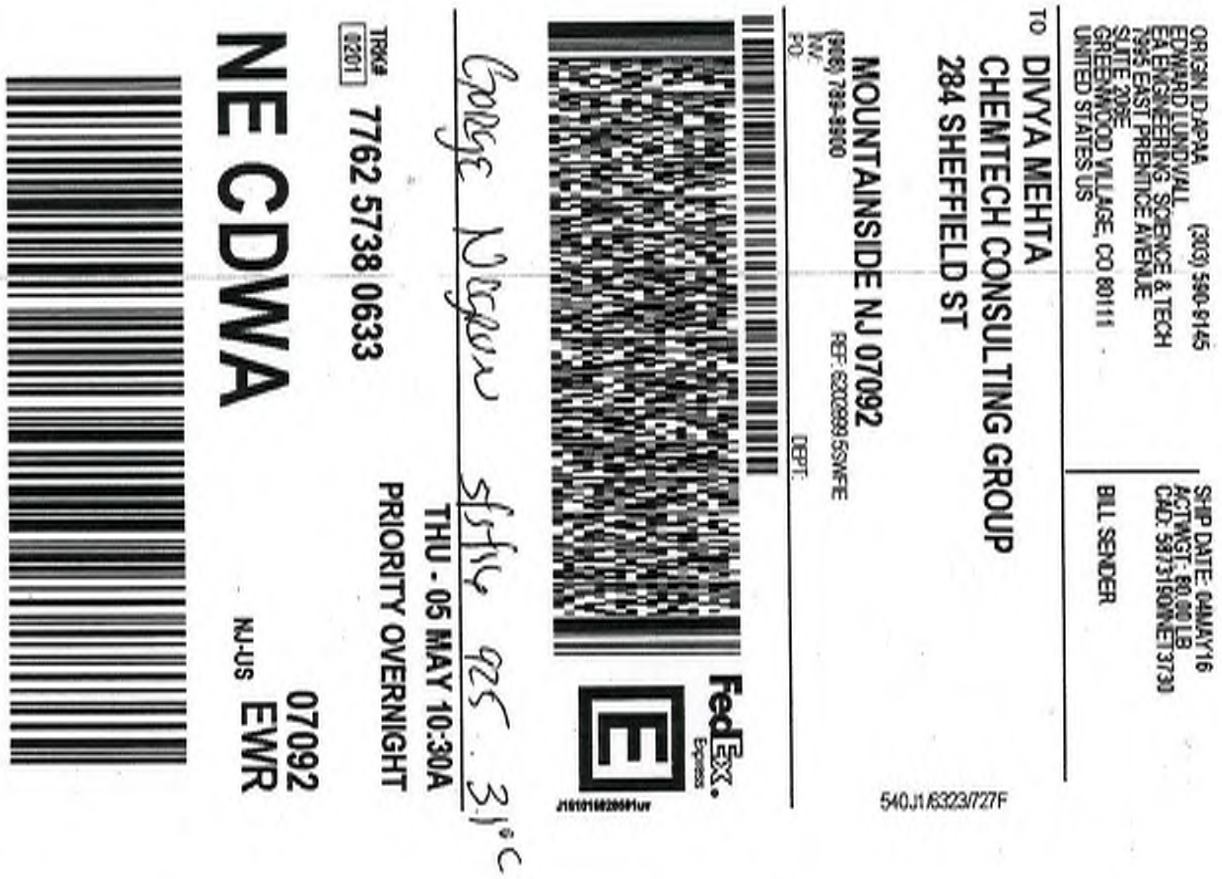
S. M. Jadhavi
Signature
5/4/16
Date



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Copy
Original Documents are included in CSF H6002
S.M. Jadhav
Signature
5/5/16
Date

ORIGIN ID:APAA (303) 590-9145
EDWARD LUNDVALL
EA ENGINEERING SCIENCE & TECH
7995 EAST PRENTICE AVENUE
SUITE 206E
GREENWOOD VILLAGE, CO 80111
UNITED STATES US

SHIP DATE: 04MAY16
ACTWGT: 80.00 LB
CAD: 5873190/INET3730

BILL SENDER

TO **DIVYA MEHTA**
CHEMTECH CONSULTING GROUP
284 SHEFFIELD ST

MOUNTAINSIDE NJ 07092
(908) 789-8900 REF: 6202899.5SWFIE
INV:
PO: DEPT:

540J163237/27FE

FedEx Express

George Negron 5/5/16 925 4° C

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PRIORITY OVERNIGHT

TRK# 0201 **7762 6713 6562**

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284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Login Summary Report

Order ID :	H2837	Order Date :	5/5/2016 9:25:00 AM	Project Mgr :	Mohammad
Client :	USEPA CLP SMO	Project :	46114	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	5/5/2016 9:25:00 AM	EDD Type :	EPA CLP
Date Sign Off :	5/5/2016 3:57:25 PM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
H2837-01	MH4002	Water	05/02/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS		ISM02.2_MS	15	05/26/2016	05/26/2016
H2837-02	MH4002D	Water	05/02/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS		ISM02.2_MS	15	05/26/2016	05/26/2016
H2837-03	MH4002S	Water	05/02/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS		ISM02.2_MS	15	05/26/2016	05/26/2016
H2837-04	MH4025	Solid	05/03/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS FULL		ISM02.2_MS	15	05/26/2016	05/26/2016
				Percent Solids		Chemtech -SOP	15	05/26/2016	05/26/2016
H2837-05	MH4025D	Solid	05/03/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS FULL		ISM02.2_MS	15	05/26/2016	05/26/2016
				Percent Solids		Chemtech -SOP	15	05/26/2016	05/26/2016
H2837-06	MH4025S	Solid	05/03/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS FULL		ISM02.2_MS	15	05/26/2016	05/26/2016
				Percent Solids		Chemtech -SOP	15	05/26/2016	05/26/2016
H2837-07	MH4028	Solid	05/03/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS FULL		ISM02.2_MS	15	05/26/2016	05/26/2016
				Percent Solids		Chemtech -SOP	15	05/26/2016	05/26/2016
H2837-08	MH4029	Solid	05/04/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS FULL		ISM02.2_MS	15	05/26/2016	05/26/2016
				Percent Solids		Chemtech -SOP	15	05/26/2016	05/26/2016
H2837-09	MH4030	Solid	05/04/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016

				Metals CLP MS FULL		ISM02.2_MS	15	05/26/2016	05/26/2016
				Percent Solids		Chemtech -SOP	15	05/26/2016	05/26/2016
H2837-10	MH4113	Water	05/03/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS		ISM02.2_MS	15	05/26/2016	05/26/2016
H2837-11	MH4116	Water	05/03/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS		ISM02.2_MS	15	05/26/2016	05/26/2016
H2837-12	MH4202	Water	05/03/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS		ISM02.2_MS	15	05/26/2016	05/26/2016
H2837-13	MH4211	Water	05/03/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS		ISM02.2_MS	15	05/26/2016	05/26/2016
H2837-14	MH4217	Water	05/03/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS		ISM02.2_MS	15	05/26/2016	05/26/2016
H2837-15	MH4218	Water	05/03/2016						
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS		ISM02.2_MS	15	05/26/2016	05/26/2016
H2837-16	MH4113D	Water	05/03/2016		H2837-10D				
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS		ISM02.2_MS	15	05/26/2016	05/26/2016
H2837-17	MH4113S	Water	05/03/2016		H2837-10S				
				Mercury		ISM02.2_HG	15	05/26/2016	05/26/2016
				Metals CLP MS		ISM02.2_MS	15	05/26/2016	05/26/2016

WORKLIST(Hardcopy Internal Chain)

WorkList Name : H2837_HgW WorkList ID : 86699 Date : 5/5/2016 6:59:24 PM

Due Date	Matrix	Sample	Test	Preservative	Customer	Storage Location	Customer Sample	Collect Date	Method
05/16/2016	Water	H2837-01	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4002	05/02/2016	ISM02.2_HG
05/16/2016	Water	H2837-02	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4002D	05/02/2016	ISM02.2_HG
05/16/2016	Water	H2837-03	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4002S	05/02/2016	ISM02.2_HG
05/17/2016	Water	H2837-10	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4113	05/03/2016	ISM02.2_HG
05/17/2016	Water	H2837-11	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4116	05/03/2016	ISM02.2_HG
05/17/2016	Water	H2837-12	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4202	05/03/2016	ISM02.2_HG
05/17/2016	Water	H2837-13	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4211	05/03/2016	ISM02.2_HG
05/17/2016	Water	H2837-14	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4217	05/03/2016	ISM02.2_HG
05/17/2016	Water	H2837-15	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4218	05/03/2016	ISM02.2_HG
05/17/2016	Water	H2837-16	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4113D	05/03/2016	ISM02.2_HG
05/17/2016	Water	H2837-17	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4113S	05/03/2016	ISM02.2_HG

431

Date/Time 05/06/16 @ 9:50
Received by: MB
Relinquished by: CG

Date/Time 05/06/16 @ 13:05
Received by: CG
Relinquished by: MB

WORKLIST(Hardcopy Internal Chain)

WorkList Name : H2837_HgS WorkList ID : 86700 Date : 5/5/2016 6:59:39 PM

Due Date	Matrix	Sample	Test	Preservative	Customer	Storage Location	Customer Sample	Collect Date	Method
05/23/2016	Solid	H2837-04	Mercury	Cool 4 deg C	USEP01	Q11	MH4025	05/03/2016	ISM02.2_HG
05/23/2016	Solid	H2837-05	Mercury	Cool 4 deg C	USEP01	Q11	MH4025D	05/03/2016	ISM02.2_HG
05/23/2016	Solid	H2837-06	Mercury	Cool 4 deg C	USEP01	Q11	MH4025S	05/03/2016	ISM02.2_HG
05/23/2016	Solid	H2837-07	Mercury	Cool 4 deg C	USEP01	Q11	MH4028	05/03/2016	ISM02.2_HG
05/24/2016	Solid	H2837-08	Mercury	Cool 4 deg C	USEP01	Q11	MH4029	05/04/2016	ISM02.2_HG
05/24/2016	Solid	H2837-09	Mercury	Cool 4 deg C	USEP01	Q11	MH4030	05/04/2016	ISM02.2_HG

Date/Time 05/10/16 @ 15:30
Received by: MB
Relinquished by:

Date/Time 05/10/16 @ 1735
Received by:
Relinquished by: MB

WORKLIST(Hardcopy Internal Chain)

WorkList Name : h2837sms WorkList ID : 86722 Date : 5/6/2016 8:37:24 AM

Due Date	Matrix	Sample	Test	Preservative	Customer	Storage Location	Customer Sample	Collect Date	Method
05/18/2016	Solid	H2837-04	Metals CLP MS	Cool 4 deg C	USEP01	Q11	MH4025	05/03/2016	ISM02.2_MS
05/18/2016	Solid	H2837-05	Metals CLP MS	Cool 4 deg C	USEP01	Q11	MH4025D	05/03/2016	ISM02.2_MS
05/18/2016	Solid	H2837-06	Metals CLP MS	Cool 4 deg C	USEP01	Q11	MH4025S	05/03/2016	ISM02.2_MS
05/18/2016	Solid	H2837-07	Metals CLP MS	Cool 4 deg C	USEP01	Q11	MH4028	05/03/2016	ISM02.2_MS
05/19/2016	Solid	H2837-08	Metals CLP MS	Cool 4 deg C	USEP01	Q11	MH4029	05/04/2016	ISM02.2_MS
05/19/2016	Solid	H2837-09	Metals CLP MS	Cool 4 deg C	USEP01	Q11	MH4030	05/04/2016	ISM02.2_MS

433

Date/Time 05/06/16 8:45
Received by: PB
Relinquished by:

Date/Time 05/06/16
Received by:
Relinquished by: PB

WORKLIST(Hardcopy Internal Chain)

WorkList Name : h2837wms WorkList ID : 86723 Date : 5/6/2016 8:39:15 AM

Due Date	Matrix	Sample	Test	Preservative	Customer	Storage Location	Customer Sample	Collect Date	Method
05/17/2016	Water	H2837-01	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4002	05/02/2016	ISM02.2_MS
05/17/2016	Water	H2837-02	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4002D	05/02/2016	ISM02.2_MS
05/17/2016	Water	H2837-03	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4002S	05/02/2016	ISM02.2_MS
05/19/2016	Water	H2837-10	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4113	05/03/2016	ISM02.2_MS
05/19/2016	Water	H2837-11	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4116	05/03/2016	ISM02.2_MS
05/19/2016	Water	H2837-12	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4202	05/03/2016	ISM02.2_MS
05/19/2016	Water	H2837-13	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4211	05/03/2016	ISM02.2_MS
05/19/2016	Water	H2837-14	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4217	05/03/2016	ISM02.2_MS
05/19/2016	Water	H2837-15	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4218	05/03/2016	ISM02.2_MS
05/19/2016	Water	H2837-16	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4113D	05/03/2016	ISM02.2_MS
05/19/2016	Water	H2837-17	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4113S	05/03/2016	ISM02.2_MS

Date/Time 05/06/16 8:45
Received by: PTB
Relinquished by:

Date/Time 05/06/16
Received by:
Relinquished by: PTB

From: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Sent: Wednesday, May 04, 2016 11:09
To: epa@chemtech.net
Cc: "Goodrich, Donald"
Subject: Region 08 | Case 46114 | Lab CHM | Issue Multiple | FINAL
Attachments: COC - 8-050216-102658-0009_MSD.PDF; COC - 8-050216-163402-0010_MSD.PDF; COC- 8-042516-142347-0005.pdf

Sohil,

Incorrect/duplicated sample IDs
Issue 1: The COC lists individual sample for each laboratory QC sample (MS/MSD), instead of including them under one sample ID. The laboratory is requesting to use the sample IDs as listed below for each parent sample and laboratory QC sample.

Sample Identifier	CLP No.	Location	Sample Type	Lab will use
A-GW-MTO-MS	H4001	Mt Olivet	Lab QC	H4002, H4002MS, H4002MSD
A-GW-MTO	H4002	Mt Olivet	Parent Sample	
A-GW-MTO-MSD	H4003	Mt Olivet	Lab QC	
A-GW-MTO	MH4001	Mt Olivet	Parent Sample	MH4001 MH4001D MH1001S
A-GW-MTO-MS	MH4005	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4016	Mt Olivet	Lab QC	
A-GW-MTO	MH4002	Mt Olivet	Parent Sample	MH4002 MH4002D MH1002S
A-GW-MTO-MS	MH4014	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4017	Mt Olivet	Lab QC	

Resolution: Per Region 8, the laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples using the attached revised COCs.

pH outside allowable limit
Issue 2: The samples listed below appear to be received unpreserved. The laboratory like to preserve these samples in-house.
MH4001
MH4002
MH4005
MH4014
MH4016
MH4017
Resolution 2: Per Region 8, the laboratory shall preserve the unpreserved samples to an acceptable pH level of <2. This resolution applies to the remainder of the samples associated with this Case when the pH exceeds acceptable levels. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Please let me know if you have any questions. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8
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From: Moss, Pamela [mailto:pmoss@eaest.com]
Sent: Wednesday, May 04, 2016 10:11 AM
To: Don Goodrich (Goodrich.Donald@epa.gov); Vanaman, Alexandra
Subject: RE: Region 08 | Case 46114 | Lab CHM - Corrected COCs for MS/MSD

Plz see attached corrected COCs for samples collected April 25 and May 2 with associated MS/MSD samples. These have been revised per your email. Plz let me know if you have any questions. thanks.

Pam

PLZ NOTE NEW ADDRESS BELOW

Pamela J. Moss
Senior Scientist
EA Engineering, Science, and Technology, Inc., PBC
7995 E. Prentice Ave, Suite 206E
Greenwood Village, CO 80111
303-590-9143 (office)
303-810-6903 (cell)
pmoss@eaest.com

EA Engineering, Science, and Technology, Inc.

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Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8

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From: Vanaman, Alexandra
Sent: Tuesday, May 03, 2016 3:20 PM
To: 'epa@chemtech.net'
Subject: Region 08 | Case 46114 | Lab CHM | Issue Multiple

Sohil,

Please see the resolutions below. Please note that this ROC has not been finalized. I will finalize the ROC once I receive the revised COC from the sampler for issue 1, however, the numbers proposed will be submitted on the COCs so you can log the samples in and start with sample prep and analyses.

Incorrect/duplicated sample IDs
Issue 1: The COC lists individual sample for each laboratory QC sample (MS/MSD), instead of including them under one sample ID. The laboratory is requesting to use the sample IDs as listed below for each parent sample and laboratory QC sample.

Sample Identifier	CLP No.	Location	Sample Type	Lab will use
A-GW-MTO-MS	H4001	Mt Olivet	Lab QC	H4002, H4002MS, H4002MSD
A-GW-MTO	H4002	Mt Olivet	Parent Sample	
A-GW-MTO-MSD	H4003	Mt Olivet	Lab QC	
A-GW-MTO	MH4001	Mt Olivet	Parent Sample	MH4001 MH4001D MH1001S
A-GW-MTO-MS	MH4005	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4016	Mt Olivet	Lab QC	
A-GW-MTO	MH4002	Mt Olivet	Parent Sample	MH4002 MH4002D MH1002S
A-GW-MTO-MS	MH4014	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4017	Mt Olivet	Lab QC	

pH outside allowable limit
Issue 2: The samples listed below appear to be received unpreserved. The laboratory like to preserve these samples in-house.
MH4001
MH4002
MH4005
MH4014
MH4016

MH4017
Resolution 2: Per Region 8, the laboratory shall preserve the unpreserved samples to an acceptable pH level of <2. This resolution applies to the remainder of the samples associated with this Case when the pH exceeds acceptable levels. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Thanks,

ALEXANDRA VANAMAN
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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Tuesday, May 03, 2016 3:04 PM
To: Vanaman, Alexandra
Cc: Moss, Pamela
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Multiple

Ali, resolve the second issue as follows:

Issue 2: the laboratory shall preserve the unpreserved samples to an acceptable pH level of <2. This resolution applies to the remainder of the samples associated with this Case when the pH exceeds acceptable levels.

Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Tuesday, May 03, 2016 2:58 PM
To: Moss, Pamela; Vanaman, Alexandra
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Multiple

Ali, Pam and I discussed the COC issue this morning. Pam will be revising the COCs just as the lab proposed. You can notify the lab that the numbers they proposed will be submitted on the COCs so they can log the samples in and start with sample prep and analyses.

Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Tuesday, May 03, 2016 12:07 PM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Cc: Moss, Pamela <pmoss@eaest.com>
Subject: Region 08 | Case 46114 | Lab CHM | Issue Multiple

Good afternoon,

CHM is reporting the following issue regarding Case 46114. Please advise. Also, please advise if the resolution for issue 2 should be applied to the remainder of samples for this Case when the pH exceeds allowable the limits.

Incorrect/duplicated sample IDs
Issue 1: The COC lists individual sample for each laboratory QC sample (MS/MSD), instead of including them under one sample ID. The laboratory is requesting to use the sample IDs as listed below for each parent sample and laboratory QC sample.

Sample Identifier	CLP No.	Location	Sample Type	Lab will use
A-GW-MTO-MS	H4001	Mt Olivet	Lab QC	H4002, H4002MS, H4002MSD
A-GW-MTO	H4002	Mt Olivet	Parent Sample	
A-GW-MTO-MSD	H4003	Mt Olivet	Lab QC	
A-GW-MTO	MH4001	Mt Olivet	Parent Sample	MH4001 MH4001D MH1001S
A-GW-MTO-MS	MH4005	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4016	Mt Olivet	Lab QC	
A-GW-MTO	MH4002	Mt Olivet	Parent Sample	MH4002 MH4002D MH1002S
A-GW-MTO-MS	MH4014	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4017	Mt Olivet	Lab QC	

pH outside allowable limit
Issue 2: The samples listed below appear to be received unpreserved. The laboratory like to preserve these samples in-house.
MH4001
MH4002
MH4005
MH4014
MH4016
MH4017

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8

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From: Sohil Jodhani [mailto:Sohil@chemtech.net]
Sent: Tuesday, May 03, 2016 12:49 PM
To: Vanaman, Alexandra
Cc: DASSsupport; Mohammad@chemtech.net
Subject: Region 08 | Case 46114 | Lab CHM | SDG H4002, MH4001 & MH4002 | Issue Incorrect/duplicated sample IDs

Hi Alexandra,

Sample received with 05/03 shipment has below discrepancies,

Issue1: The COC lists individual sample for each laboratory QC sample (MS/MSD), instead of including them under one sample ID. The laboratory is requesting the use the sample IDs below for each parent sample and laboratory QC sample.

Sample Identifier	CLP No.	Location	Sample Type	Lab will use
A-GW-MTO-MS	H4001	Mt Olivet	Lab QC	**H4002, H4002MS, H4002MSD**
A-GW-MTO	H4002	Mt Olivet	Parent Sample	
A-GW-MTO-MSD	H4003	Mt Olivet	Lab QC	
A-GW-MTO	MH4001	Mt Olivet	Parent Sample	**MH4001 MH4001D MH1001S**
A-GW-MTO-MS	MH4005	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4016	Mt Olivet	Lab QC	
A-GW-MTO	MH4002	Mt Olivet	Parent Sample	**MH4002 MH4002D MH1002S**
A-GW-MTO-MS	MH4014	Mt Olivet	Lab QC	
A-GW-MTO-MSD	MH4017	Mt Olivet	Lab QC	

Issue 2: The laboratory has received three water samples for Total Metals and three water samples for Dissolved metals on 05/03. The samples listed below were received unpreserved. The laboratory like to preserve these samples in-house.
MH4001
MH4002
MH4005
MH4014
MH4016
MH4017

Please see attachment for your reference.

Thanks & Regards,

Sohil Jodhani
QC-Analyst
Direct Line: (908)728-3148
General Number: (908)789-8900
Fax: (908)789-8922

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From: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Sent: Friday, May 06, 2016 09:10
To: epa@chemtech.net
Cc: "Goodrich, Donald"; Moss, Pamela
Subject: Region 08 | Case 46114 | Lab CHM | Issue Multiple | FINAL

Sohil,

Damaged samples
Issue 1: One vial out of three for sample H4099 arrived at the laboratory broken. The other two vials are in good condition and have enough volume in order to perform the analysis.
Resolution 1: Per Region 8, the laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Insufficient/inappropriate designation of laboratory QC
Issue 2: An additional sample was designated on the COC for laboratory QC. The laboratory received water samples with QC for metals analysis on 5/3 and on 5/5. The laboratory has already used MH4002 for laboratory QC for this SDG; however, MH4113 is also listed on the COC for QC.
Resolution 2: Per Region 8, the Region would like laboratory QC on both samples. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Please let me know if you have any questions. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8
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6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Thursday, May 05, 2016 4:37 PM
To: Vanaman, Alexandra
Cc: Moss, Pamela
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Multiple

Ali, resolve as follows:

Issue1: Teport the issue in the case narrative and continue with sample analysis.
Issue2: R8 would like laboratory QC on both samples.

Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Thursday, May 05, 2016 1:57 PM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Cc: Moss, Pamela <pmoss@eaest.com>
Subject: Region 08 | Case 46114 | Lab CHM | Issue Multiple

Good afternoon Don,

CHM is reporting the following issues regarding Case 46114. Please advise.

Damaged samples
Issue 1: One vial out of three for sample H4099 arrived at the laboratory broken. The other two vials are in good condition and have enough volume in order to perform the analysis.

Insufficient/inappropriate designation of laboratory QC
Issue 2: An additional sample was designated on the COC for laboratory QC. The laboratory received water samples with QC for metals analysis on 5/3 and on 5/5. The laboratory has already used MH4002 for laboratory QC for this SDG; however, MH4113 is also listed on the COC for QC.

Thanks,

ALEXANDRA VANAMAN
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From: Sohil Jodhani [mailto:Sohil@chemtech.net]
Sent: Thursday, May 05, 2016 1:48 PM

To: Vanaman, Alexandra
Cc: 'Mohammad Ahmed'; 'Kim'; 'Moody, Brett'; 'KEVIN'
Subject: Region 08 | Case 46114 | Lab CHM | SDG MH4002 | Issue Lab QC

Hi Alexandra,

Samples received in the shipment of 05/03 and 05/05 has below discrepancy,

Issue: Lab has received water samples with Lab QC for Metals analysis on 05/03 shipment and today also Lab has received water samples with Lab QC, however per SOW only one Lab QC is required for 20 samples. Since the SDG is open so Lab will add toady's received samples in this SDG without Lab QC because Lab QC is already logged for this SDG for sample MH4002 so Lab would like to confirm that Lab would not analyze the Lab QC for sample MH4113 as listed on the COC and Lab can perform the regular analysis for this sample.

Please see attachment for your reference.

Thanks & Regards,

Sohil Jodhani
QC-Analyst
Direct Line: (908)728-3148
General Number: (908)789-8900
Fax: (908)789-8922

From: Sohil Jodhani [mailto:Sohil@chemtech.net]
Sent: Thursday, May 05, 2016 1:48 PM
To: Vanaman, Alexandra
Cc: 'Mohammad Ahmed'; DASSsupport; 'Moody, Brett'; 'Kim'; 'KEVIN'
Subject: Region 08 | Case 46114 | Lab CHM | SDG H4010 | Issue Discrepancies with tags, jars, and/or COC

Hi Alexandra,

Samples received with 05/05 shipment has below discrepancy,

Issue1: One vial out of three for sample H4099 arrived at the laboratory broken. The other two vials are in good condition and have enough volume in order to perform the analysis.

Please see attachment for your reference.

Thanks & Regards,

Sohil Jodhani
QC-Analyst
Direct Line: (908)728-3148
General Number: (908)789-8900
Fax: (908)789-8922

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From: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Sent: Wednesday, May 11, 2016 13:13
To: epa@chemtech.net
Cc: "Goodrich, Donald"; Moss, Pamela
Subject: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC | FINAL

Good afternoon,

Issue: Mercury analysis is scheduled for the water and soil samples; however, the analysis key on the COC only lists DMet=Dissolved Metals and TMet=Total Metals. The laboratory would like to confirm that the samples should also be analyzed for Mercury with Total Metals and Dissolved Metals.
Resolution: Per Region 8, mercury is required for all total and dissolved water samples, and for soil samples for this Case. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Please let me know if you have any questions. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.

Thanks,

ALEXANDRA VANAMAN
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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Wednesday, May 11, 2016 1:12 PM
To: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Hi Ali, the proposed resolution is also acceptable.
Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687

cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Wednesday, May 11, 2016 11:10 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Hi Don,

Please advise if the Region approves of the proposed resolution below.

Issue: Mercury analysis is scheduled for the water and soil samples; however, the analysis key on the COC only lists DMet=Dissolved Metals and TMet=Total Metals. The laboratory would like to confirm that the samples should also be analyzed for Mercury with Total Metals and Dissolved Metals.

PROPOSED Resolution: Per Region 8, mercury is required for all total and dissolved water samples, and for soil samples for this Case. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2, 7, and 8
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From: Moss, Pamela [mailto:pmoss@eaest.com]
Sent: Wednesday, May 11, 2016 12:52 PM
To: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>; "Goodrich, Donald" <Goodrich.Donald@epa.gov>
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Yes mercury is required for a analysis on all total and dissolved water samples, and for soil samples. thank you.

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Wednesday, May 11, 2016 10:47 AM
To: "Goodrich, Donald"
Cc: Moss, Pamela
Subject: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Good afternoon Don,

CHM is reporting the following issue regarding Case 46114. Please advise.

Issue: Mercury analysis is scheduled for the water and soil samples; however, the analysis key on the COC only lists DMet=Dissolved Metals and TMet=Total Metals. The laboratory would like to confirm that the samples should also be analyzed for Mercury with Total Metals and Dissolved Metals.

Thanks,

ALEXANDRA VANAMAN
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From: Sohil Jodhani [mailto:Sohil@chemtech.net]
Sent: Wednesday, May 11, 2016 12:17 PM
To: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Cc: Mohammad@chemtech.net
Subject: Region 08 | Case 46114 | Lab CHM | SDG Multiple | Issue Analysis Key

Hi Alexandra,

Lab would like to confirm below.

Issue: As per ASR, Mercury analysis is scheduled for water & soil samples but analysis key written on the DMet=Dissolved Metals, TMet=Total Metals only so lab would like to confirm that Lab is following the ASR and doing analysis for Mercury with Total Metals and Dissolved Metals, Please advise.

This issue is addressing for all previous shipments also.

Please see attachment for you reference.

Thanks & Regards,

Sohil Jodhani
QC-Analyst
Direct Line: (908)728-3148
General Number: (908)789-8900
Fax: (908)789-8922

Chemtech is an equal opportunity employer

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SDG COVER PAGE

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

SOW No. : ISM02.3

EPA Sample No.	Lab Sample Id	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
MH4005	H2948-01		X	X	
MH4097	H2948-02		X	X	
MH4106	H2948-03		X	X	
MH4107	H2948-04		X	X	
MH4137	H2948-05		X	X	
MH4137D	H2948-06		X	X	
MH4137S	H2948-07		X	X	

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative. Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: [signature] for Name: Mildred Reyes

Date: 05/26/16 Title: Document Control officer

SDG#MH4005

USEPA CLP COC (LAB COPY)
DateShipped: 5/5/2016
CarrierName: FedEx
AirbillNo: 776268141330

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050516-130827-0021
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-048-MS	H4138MS	Surface Water/ Ned Lundvall	Grab	VOC(21)	1512 (HCL), 1513 (HCL), 1514 (HCL) (3)	A-SW-48	05/04/2016 09:50	2
A-SW-048-MSD	H4138MSD	Surface Water/ Ned Lundvall	Grab	VOC(21)	1516 (HCL), 1517 (HCL), 1518 (HCL) (3)	A-SW-48	05/04/2016 09:50	2
A-SW-007-D	MH4005	Surface Water/ Ned Lundvall	Grab	TMet(21)	1497 (HNO3 pH<2) (1)	A-SW-07	05/04/2016 11:00	2
A-SW-007	MH4097	Surface Water/ Ned Lundvall	Grab	TMet(21)	1488 (HNO3 pH<2) (1)	A-SW-07	05/04/2016 11:00	2
A-SW-016	MH4106	Surface Water/ Ned Lundvall	Grab	TMet(21)	1521 (HNO3 pH<2) (1)	A-SW-16	05/04/2016 13:20	2
A-SW-015	MH4107	Surface Water/ Ned Lundvall	Grab	TMet(21)	1505 (HNO3 pH<2) (1)	A-SW-15	05/04/2016 11:30	2
A-SW-047	MH4137	Surface Water/ Ned Lundvall	Grab	TMet(21)	1480 (HNO3 pH<2) (1)	A-SW-47	05/04/2016 08:40	2

Original Documents are included in CSF 114107
S. Mehta Signature 5/6/16 Date
Copy

Sample(s) to be used for Lab QC: A-SW-048-MS Tag 1514, A-SW-048-MSD Tag 1516, A-SW-048-MSD Tag 1518

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP, TMet=Total Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	5/5/16 1340	Fedex		
	FedEx	12:35 5-6-16	[signature]	12:35 5-6-16	3.7° C

2

Sample Delivery Group (SDG) Cover Sheet

SDG Number	MH4005	Case Number	46114	Contract Number	EP-W-14-030
Lab Code	CHM	SDG Turnaround	21DAYS	Delivery CLIN(s)	1

First Sample Received in SDG	MH4005	Last Sample Received in SDG	MH4137S
First Sample Receipt Date	5/6/2016 12:35:00 PM	Last Sample Receipt Date	5/6/2016 12:35:00 PM

USEPA Sample Numbers in SDG (Listed in Numerical Order)

CLP Sample ID	Sample Type	Requested Analytical CLIN(s)/SubCLIN(s)	Solicitation Number	MA Number(s)
MH4005	Field Sample	0046AB,0047AB	N/A	N/A
MH4097	Field Sample	0046AB,0047AB	N/A	N/A
MH4106	Field Sample	0047AB,0046AB	N/A	N/A
MH4107	Field Sample	0046AB,0047AB	N/A	N/A
MH4137	Field Sample	0047AB,0046AB	N/A	N/A
MH4137D	Field Sample	0046AB,0047AB	N/A	N/A
MH4137S	Field Sample	0046AB,0047AB	N/A	N/A

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature _____ Date _____

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 1 of 1
Received By (Print Name) DEEPAK PANWAR		Log-in Date **5/6/2016**
Received By (Signature)		
Case Number 46114	SDG No. MH4005	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776298141330
6. Sample Tags Sample Tag #	N/A Yes
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	3.7
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/06/2016
12.Time Received	12:35

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	MH4005	<2	1497	H2948-01	Intact
2	MH4097		1488	H2948-02	
3	MH4106		1521	H2948-03	
4	MH4107		1505	H2948-04	
5	MH4137		148	H2948-05	
6	MH4137D		1516,17,18	H2948-06	
7	MH4137S		1512,13,14	H2948-07	
8					
9					
10					
11					
12					
13					
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19					
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21					
22					
23					

* Contact SMO and attach record of resolution

Reviewed By	Logbook No.
Date	Logbook Page No.

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME	CHEMTECH CONSULTING GROUP
LAB CODE	CHM
CONTRACT NO.	EPW14030
CASE NO.	46114 SDG NO. MH4005
MA NO.	
SOW NO.	ISM02.3

All documents delivered in the Complete SDG File must be original documents where possible.
(Reference - Exhibit B Section 2.4)

	PAGE NOS: FROM	TO	CHECK LAB	REGION
1. SDG Cover Page	1	1	✓	
2. Sample TR/COCs	2	3	✓	
3. Sample Login Sheet (DC-1)	4	4	✓	
4. CSF Inventory Sheet (DC-2)	5	8	✓	
5. SDG Narrative	9	11	✓	
Inorganic Analysis				
ICP-AES				
6. Inorganic Analysis Data Sheet (Form 1-IN)	NA	NA	✓	
7. Initial and Continuing Calibration Verification (Form 2-IN)	NA	NA	✓	
8. Blanks (Form 3-IN)	NA	NA	✓	
9. ICP Interference Check Sample (Form 4-IN)	NA	NA	✓	
10. Matrix Spike Sample Recovery (Form 5A-IN)	NA	NA	✓	
11. Post-Digestion Spike Sample Recovery (Form 5B-IN)	NA	NA	✓	
12. Duplicates (Form 6-IN)	NA	NA	✓	
13. Laboratory Control Sample (Form 7-IN)	NA	NA	✓	
14. ICP-AES Serial Dilutions (Form 8-IN)	NA	NA	✓	
15. Method Detection Limits (Form 9-IN)	NA	NA	✓	

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOS: FROM	TO	CHECK LAB	REGION
16. ICP-AES Interelement Correction Factors (Form 10A-IN)	NA	NA	✓	
17. ICP-AES Interelement Correction Factors (Form 10B-IN)	NA	NA	✓	
18. Analysis Log (Form 12-IN)	NA	NA	✓	
19. Initial Calibration (Form 15-IN)	NA	NA	✓	
20. Initial Calibration Summary (Form 16-IN)	NA	NA	✓	
21. ICP-AES Raw Data	NA	NA	✓	
22. ICP-AES Preparation Log Books, Preparation records, Analysis records, and PE Instructions	NA	NA	✓	
ICP-MS				
23. Inorganic Analysis Data Sheet (Form 1-IN)	12	16	✓	
24. Initial and Continuing Calibration Verification (Form 2-IN)	17	18	✓	
25. Blanks (Form 3-IN)	19	19	✓	
26. ICP Interference Check Sample (Form 4-IN)	20	20	✓	
27. Matrix Spike Sample Recovery (Form 5A-IN)	21	21	✓	
28. Post-Digestion Spike Sample Recovery (Form 5B-IN)	22	22	✓	
29. Duplicates (Form 6-IN)	23	23	✓	
30. Laboratory Control Sample (Form 7-IN)	24	24	✓	
31. ICP-MS Serial Dilutions (Form 8-IN)	25	25	✓	
32. Method Detection Limits (Form 9-IN)	26	26	✓	
33. ICP-MS Internal Standard Association (Form 11-IN)	27	27	✓	
34. Analysis Log (Form 12-IN)	28	29	✓	
35. ICP-MS Tune (Form 13-IN)	30	30	✓	
36. ICP-MS Internal Standard Relative Intensity Summary (Form 14-IN)	31	38	✓	
37. Initial Calibration (Form 15-IN)	39	41	✓	

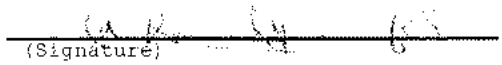
FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOS: FROM	TO	CHECK LAB	REGION
38. Initial Calibration Summary (Form 16-IN)	42	42	✓	
39. ICP-MS Raw Data	43	155	✓	
40. ICP-MS Preparation Log Books, Preparation records, Analysis records, and PE Instructions	156	240	✓	
Mercury				
41. Inorganic Analysis Data Sheet (Form 1-IN)	241	245	✓	
42. Initial and Continuing Calibration Verification (Form 2-IN)	246	246	✓	
43. Blanks (Form 3-IN)	247	247	✓	
44. Matrix Spike Sample Recovery (Form 5A-IN)	248	248	✓	
45. Duplicates (Form 6-IN)	249	249	✓	
46. Method Detection Limits (Form 9-IN)	250	250	✓	
47. Analysis Log (Form 12-IN)	251	251	✓	
48. Initial Calibration (Form 15-IN)	252	253	✓	
49. Initial Calibration Summary (Form 16-IN)	254	254	✓	
50. Mercury Raw Data	255	259	✓	
51. Mercury Preparation Log Books, Preparation records, Analysis records, and PE Instructions	260	295	✓	
Cyanide				
52. Inorganic Analysis Data Sheet (Form 1-IN)	NA	NA	✓	
53. Initial and Continuing Calibration Verification (Form 2-IN)	NA	NA	✓	
54. Blanks (Form 3-IN)	NA	NA	✓	
55. Matrix Spike Sample Recovery (Form 5A-IN)	NA	NA	✓	
56. Post-Distillation Spike Sample Recovery (Form 5B-IN)	NA	NA	✓	
57. Duplicates (Form 6-IN)	NA	NA	✓	
58. Method Detection Limits (Form 9-IN)	NA	NA	✓	

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOS: FROM	TO	CHECK LAB	REGION
59. Analysis Log (Form 12-IN)	NA	NA	✓	
60. Initial Calibration (Form 15-IN)	NA	NA	✓	
61. Initial Calibration Summary (Form 16-IN)	NA	NA	✓	
62. Cyanide Raw Data	NA	NA	✓	
63. Cyanide Preparation Log Books, Preparation records, Analysis records, and PE Instructions	NA	NA	✓	
Additional				
64. Percent Solids Determination Log	NA	NA	✓	
65. EPA Shipping/Receiving Documents			✓	
Airbill (No. of Shipments 1)	296	296	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab)	297	297	✓	
66. Misc. Shipping/Receiving Records (list all individual records)				
Communication Logs	NA	NA	✓	
67. Internal Lab Sample Transfer Records & Tracking Sheets (describe or list)	298	299	✓	
68. Other Records (describe or list) Communication Logs	300	306	✓	

69. Comments:

Completed by:
(CLP Lab)  (Signature)

Mildred V. Reyes, Document Control Officer (Print Name & Title)

6/30/16 (Date)

Audited by:
(EPA)

(Signature)

(Print Name & Title)

(Date)

CHEMTECH
284 Sheffield Street
Mountainside, NJ 07092

SDG NARRATIVE

USEPA
SDG # MH4005
CASE # 46114
CONTRACT # EPW14030
SOW# ISM02.3
LAB NAME: CHEMTECH CONSULTING GROUP
LAB CODE: CHM
CHEMTECH PROJECT #H2948

A. Number of Samples and Date of Receipt
05 Water samples were delivered to the laboratory intact on 05/06/2016.

B. Parameters

Test requested for Metals CLP MS = Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc & HG.

C. Cooler Temp

Indicator Bottle: **Presence**/Absence
Cooler: 3.7°C

D. Detail Documentation (related to Sample Handling Shipping, Analytical Problem, Temp of Cooler etc):

Issue1: Sample tags were not received with samples at the laboratory. Sample tag numbers may or may not be listed on the COC.

Issue2: Laboratory QC is required for Metals analysis for this Case; however, no samples is designated for QC on the COC. The laboratory would like to use samples MH4137 for QC as they have sufficient volume.

Issue3: Mercury analysis is scheduled for the water and soil samples; however, the analysis key on the COC only lists DMet=Dissolved Metals and TMet=Total Metals. The laboratory would like to confirm that the samples should also be analyzed for Mercury with Total Metals and Dissolved Metals.

E. Corrective Action taken for above:

Resolution1: In accordance with previous direction from [Region __8], the laboratory will note the issue in the SDG Narrative, and proceed with the analysis of the sample. The Resolution will

be applied to all samples received for this Case.

Resolution2: Per Region 8, the sample chosen for laboratory QC is acceptable to the Region. the sample chosen for laboratory QC is acceptable to the Region.

Resolution3: Per Region 8, mercury is required for all total and dissolved water samples, and for soil samples for this Case. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

F. Analytical Techniques:

All analyses were based on CLP Methodology by method ISM02.3

G. Calculation:

Calculation for ICP-MS Water Sample:

$$\text{Concentration or Result } (\mu g/L) = C \times \frac{V_f}{V_i} \times DF$$

Where,

C = Instrument value in ppb (The average of all replicate integrations)
V_f = Final digestion volume (mL)
V_i = Initial aliquot amount (mL) (Sample amount taken in prep)
DF = Dilution Factor

Example Calculation:

If C = 12.34 ppb
V_f = 50 ml
V_i = 50 ml
DF = 1

$$\text{Concentration or Result } (\mu g/L) = 12.34 \times \frac{50}{50} \times 1$$

$$= 12.34 \ \mu g/L$$

$$= 12.3 \ \mu g/L \text{ (Reported Result with Signification)}$$

CHEMTECH
284 Sheffield Street
Mountainside, NJ 07092

Calculation for Hg Water Sample:

Concentration or Result (µg/L) = C x DF

Where,

C = Instrument response in µg/L from the calibration curve.
DF = Dilution Factor

Example Calculation:

If C = 12.34 ppb
DF = 1

Concentration or Result (µg/L) = 12.34 x 1

= 12.34 µg/L

= 12.3 µg/L (Reported Result with Signification)

H. QA/ QC

Calibrations met requirements. Interference check met requirements. Blank analyses did not indicate any presence of contamination. Laboratory Control sample was within control limits. Spike sample did meet requirements. Duplicate sample did meet requirements. Serial Dilution did meet requirements except for Aluminum, Iron & Vanadium.

Chemical or physical interference effect was suspected and the data for all affected analytes in the sample received and associated with this serial dilution were flagged with

I certify that the data package is in compliance with the terms and conditions of the contract both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature.

Signature _____ Name: Mildred V. Reyes

Date 05/26/16 Title: Document Control Officer

EPA SAMPLE NO.

MH4005

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-01

% Solids: Date Received: 05/06/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	23.2	*	05/23/2016	1203
7440-36-0	Antimony	0.22	J	05/23/2016	1203
7440-38-2	Arsenic	0.90	J	05/23/2016	1203
7440-39-3	Barium	58.8		05/23/2016	1203
7440-41-7	Beryllium	1.0	U	05/23/2016	1203
7440-43-9	Cadmium	1.0	U	05/23/2016	1203
7440-70-2	Calcium	133000		05/23/2016	1203
7440-47-3	Chromium	0.80	J	05/23/2016	1203
7440-48-4	Cobalt	1.0	U	05/23/2016	1203
7440-50-8	Copper	2.6		05/23/2016	1203
7439-89-6	Iron	89.1	J*	05/23/2016	1203
7439-92-1	Lead	0.80	J	05/23/2016	1203
7439-95-4	Magnesium	53800		05/23/2016	1203
7439-96-5	Manganese	2.4		05/23/2016	1203
7440-02-0	Nickel	1.0	U	05/23/2016	1203
7440-09-7	Potassium	3890		05/23/2016	1203
7782-49-2	Selenium	5.0	U	05/23/2016	1203
7440-22-4	Silver	0.15	J	05/23/2016	1203
7440-23-5	Sodium	59200		05/23/2016	1203
7440-28-0	Thallium	1.0	U	05/23/2016	1203
7440-62-2	Vanadium	2.0	J*	05/23/2016	1203
7440-66-6	Zinc	12.2		05/23/2016	1203

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4097

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-02

% Solids: Date Received: 05/06/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	36.8	*	05/23/2016	1206
7440-36-0	Antimony	0.22	J	05/23/2016	1206
7440-38-2	Arsenic	0.91	J	05/23/2016	1206
7440-39-3	Barium	61.4		05/23/2016	1206
7440-41-7	Beryllium	1.0	U	05/23/2016	1206
7440-43-9	Cadmium	1.0	U	05/23/2016	1206
7440-70-2	Calcium	139000		05/23/2016	1206
7440-47-3	Chromium	0.94	J	05/23/2016	1206
7440-48-4	Cobalt	0.060	J	05/23/2016	1206
7440-50-8	Copper	4.8		05/23/2016	1206
7439-89-6	Iron	140	J*	05/23/2016	1206
7439-92-1	Lead	2.0		05/23/2016	1206
7439-95-4	Magnesium	54900		05/23/2016	1206
7439-96-5	Manganese	4.8		05/23/2016	1206
7440-02-0	Nickel	1.0	U	05/23/2016	1206
7440-09-7	Potassium	4100		05/23/2016	1206
7782-49-2	Selenium	1.6	J	05/23/2016	1206
7440-22-4	Silver	0.14	J	05/23/2016	1206
7440-23-5	Sodium	60900		05/23/2016	1206
7440-28-0	Thallium	1.0	U	05/23/2016	1206
7440-62-2	Vanadium	2.5	J*	05/23/2016	1206
7440-66-6	Zinc	21.7		05/23/2016	1206

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4106

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-03

% Solids: Date Received: 05/06/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	38.7	*	05/23/2016	1209
7440-36-0	Antimony	0.41	J	05/23/2016	1209
7440-38-2	Arsenic	0.68	J	05/23/2016	1209
7440-39-3	Barium	64.7		05/23/2016	1209
7440-41-7	Beryllium	1.0	U	05/23/2016	1209
7440-43-9	Cadmium	1.0	U	05/23/2016	1209
7440-70-2	Calcium	134000		05/23/2016	1209
7440-47-3	Chromium	1.3	J	05/23/2016	1209
7440-48-4	Cobalt	1.0	U	05/23/2016	1209
7440-50-8	Copper	1.4	J	05/23/2016	1209
7439-89-6	Iron	77.2	J*	05/23/2016	1209
7439-92-1	Lead	0.60	J	05/23/2016	1209
7439-95-4	Magnesium	50800		05/23/2016	1209
7439-96-5	Manganese	3.1		05/23/2016	1209
7440-02-0	Nickel	1.0	U	05/23/2016	1209
7440-09-7	Potassium	2300		05/23/2016	1209
7782-49-2	Selenium	2.0	J	05/23/2016	1209
7440-22-4	Silver	0.12	J	05/23/2016	1209
7440-23-5	Sodium	68800		05/23/2016	1209
7440-28-0	Thallium	1.0	U	05/23/2016	1209
7440-62-2	Vanadium	2.4	J*	05/23/2016	1209
7440-66-6	Zinc	5.7		05/23/2016	1209

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4107

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-04

% Solids: Date Received: 05/06/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	8230	*	05/23/2016	1219
7440-36-0	Antimony	3.0		05/23/2016	1219
7440-38-2	Arsenic	66.2		05/23/2016	1219
7440-39-3	Barium	206		05/23/2016	1219
7440-41-7	Beryllium	1.9		05/23/2016	1219
7440-43-9	Cadmium	2.5		05/23/2016	1219
7440-70-2	Calcium	179000		05/23/2016	1219
7440-47-3	Chromium	54.5		05/23/2016	1219
7440-48-4	Cobalt	15.7		05/23/2016	1219
7440-50-8	Copper	102		05/23/2016	1219
7439-89-6	Iron	13200	*	05/23/2016	1219
7439-92-1	Lead	127		05/23/2016	1219
7439-95-4	Magnesium	40800		05/23/2016	1219
7439-96-5	Manganese	351		05/23/2016	1219
7440-02-0	Nickel	25.9		05/23/2016	1219
7440-09-7	Potassium	2560		05/23/2016	1219
7782-49-2	Selenium	3.3	J	05/23/2016	1219
7440-22-4	Silver	3.0		05/23/2016	1219
7440-23-5	Sodium	33400		05/23/2016	1219
7440-28-0	Thallium	1.5		05/23/2016	1219
7440-62-2	Vanadium	32.4	*	05/23/2016	1219
7440-66-6	Zinc	757		05/23/2016	1219

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4137

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-05

% Solids: Date Received: 05/06/2016

Analytical Method: ICP-MS

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	509	*	05/23/2016	1222
7440-36-0	Antimony	0.28	J	05/23/2016	1222
7440-38-2	Arsenic	1.0		05/23/2016	1222
7440-39-3	Barium	58.1		05/23/2016	1222
7440-41-7	Beryllium	1.0	U	05/23/2016	1222
7440-43-9	Cadmium	1.0	U	05/23/2016	1222
7440-70-2	Calcium	85200		05/23/2016	1222
7440-47-3	Chromium	0.86	J	05/23/2016	1222
7440-48-4	Cobalt	0.31	J	05/23/2016	1222
7440-50-8	Copper	3.7		05/23/2016	1222
7439-89-6	Iron	506	*	05/23/2016	1222
7439-92-1	Lead	0.99	J	05/23/2016	1222
7439-95-4	Magnesium	25200		05/23/2016	1222
7439-96-5	Manganese	32.6		05/23/2016	1222
7440-02-0	Nickel	0.44	J	05/23/2016	1222
7440-09-7	Potassium	1290		05/23/2016	1222
7782-49-2	Selenium	5.0	U	05/23/2016	1222
7440-22-4	Silver	0.12	J	05/23/2016	1222
7440-23-5	Sodium	23600		05/23/2016	1222
7440-28-0	Thallium	1.0	U	05/23/2016	1222
7440-62-2	Vanadium	2.3	J*	05/23/2016	1222
7440-66-6	Zinc	7.9		05/23/2016	1222

NOTE: Hardness (total) is reported in mg/L

Comments:

FORM 2 - IN

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Initial Calibration Verification Source : EPA-0307

Continuing Calibration Verification Source : MP33847

Run Batch: LB81731 Analytical Method: ICP-MS

Concentration Units: µg/L

	Initial Calibration Verification				Continuing Calibration Verification						
	ID: ICV				ID: CCV026				ID: CCV027		
Analyte	True	Found	%R	%RSD	True	Found	%R	%RSD	Found	%R	%RSD
Aluminum	504	486	96	1	10000	9320	93	2	9280	93	1
Antimony	199	199	100	1	500	517	103	1	505	101	1
Arsenic	200	198	99	1	500	505	101	1	518	104	1
Barium	99.0	101	102	1	2500	2570	103	1	2520	101	1
Beryllium	99.0	97.5	98	2	500	511	102	1	517	103	0
Cadmium	99.0	101	102	1	500	508	102	1	498	100	1
Calcium	2005	1920	96	1	50000	48300	97	1	49100	98	0
Chromium	98.0	101	103	1	500	517	103	0	532	106	1
Cobalt	100	105	105	1	500	518	104	1	531	106	1
Copper	98.0	106	108	1	1000	1030	103	1	1070	107	1
Iron	1016	1010	99	0	25000	25200	101	1	25700	103	1
Lead	200	194	97	1	500	501	100	1	508	102	1
Magnesium	1215	1200	99	1	50000	49000	98	1	50500	101	0
Manganese	100	103	103	1	1000	1050	105	1	1050	105	1
Nickel	101	107	106	1	500	505	101	1	525	105	1
Potassium	2004	1900	95	1	25000	23900	96	1	24000	96	1
Selenium	206	205	100	2	500	506	101	1	517	103	1
Silver	100	98.2	98	1	500	525	105	1	510	102	1
Sodium	2019	2020	100	0	50000	48500	97	1	50200	100	1
Thallium	206	197	96	1	500	495	99	1	503	101	1
Vanadium	100	101	101	1	500	523	105	1	532	106	2
Zinc	205	218	106	0	1000	1030	103	1	1060	106	0

FORM 2 - IN

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Initial Calibration Verification Source : EPA-0307

Continuing Calibration Verification Source : MP33847

Run Batch: LB81731 Analytical Method: ICP-MS

Concentration Units: µg/L

	Initial Calibration Verification				Continuing Calibration Verification						
	ID:				ID: CCV028				ID:		
Analyte	True	Found	%R	%RSD	True	Found	%R	%RSD	Found	%R	%RSD
Aluminum					10000	9390	94	1			
Antimony					500	517	103	0			
Arsenic					500	521	104	0			
Barium					2500	2560	102	0			
Beryllium					500	518	104	1			
Cadmium					500	507	101	1			
Calcium					50000	49300	99	1			
Chromium					500	545	109	0			
Cobalt					500	545	109	1			
Copper					1000	1090	109	1			
Iron					25000	26200	105	0			
Lead					500	509	102	1			
Magnesium					50000	51200	102	2			
Manganese					1000	1070	107	1			
Nickel					500	535	107	1			
Potassium					25000	24200	97	1			
Selenium					500	521	104	0			
Silver					500	519	104	0			
Sodium					50000	50600	101	1			
Thallium					500	508	102	0			
Vanadium					500	537	107	1			
Zinc					1000	1080	108	1			

FORM 3 - IN
BLANKS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Preparation Blank Matrix : WATER

Preparation Blank Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg): ug/L

Analytical Method: ICP-MS Preparation Batch: PB90705

Run Batch: LB81731 Preparation Method: 200.8

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank/Leachate Extraction	
	ID: ICB	Q	ID: CCB026	Q	ID: CCB027	Q	ID: CCB028	Q	ID: PBW007	Q
Aluminum	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U
Antimony	0.23	J	0.29	J	0.25	J	0.26	J	2.0	U
Arsenic	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Barium	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Calcium	500	U	500	U	500	U	500	U	500	U
Chromium	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	U	0.09	J	0.08	J	0.1	J	2.0	U
Iron	200	U	200	U	200	U	200	U	200	U
Lead	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Magnesium	500	U	500	U	500	U	500	U	500	U
Manganese	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Nickel	1.0	U	1.0	U	1.0	U	0.26	J	1.0	U
Potassium	500	U	8.2	J	8.1	J	500	U	500	U
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	U	1.0	U	0.04	J	0.04	J	1.0	U
Sodium	16.5	J	22.0	J	24.2	J	19.6	J	500	U
Thallium	1.0	U	0.07	J	1.0	U	1.0	U	1.0	U
Vanadium	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Zinc	-0.14	J	2.0	U	-0.21	J	2.0	U	-0.36	J

FORM 4 - IN

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Analytical Method: ICP-MS ICSA Source: EPA-0803

Instrument ID: P7 ICSB Source: EPA-0803

Run Batch: LB81731

Concentration Units: ug/L

Analyte	True		Found			
	ICSA	ICSAB	ICSA	%R	ICSAB	%R
Aluminum	100000	100000	93100	93	93000	93
Antimony	1.5	22	1.2	80	20.6	94
Arsenic	0.1	19	0.34	340	19.7	104
Barium	1.2	22	1.5	125	21.7	99
Beryllium	0	19	0.32		20.7	109
Cadmium	0.7	20	0.55	79	19.8	99
Calcium	100000	100000	92700	93	93600	94
Chromium	21	40	20.0	95	41.1	103
Cobalt	1	20	1.2	120	21.8	109
Copper	8	25	8.2	103	28.7	115
Iron	100000	100000	101000	101	101000	101
Lead	4	25	4.2	105	23.7	95
Magnesium	100000	100000	96800	97	97100	97
Manganese	7	27	7.9	113	28.9	107
Nickel	6	24	5.6	93	26.8	112
Potassium	100000	100000	95900	96	97000	97
Selenium	0.3	19	1.4	467	19.4	102
Silver	0	18	0.13		19.1	106
Sodium	100000	100000	99200	99	98900	99
Thallium	0	21	0.09		19.9	95
Vanadium	0.5	19	0.17	34	20.3	107
Zinc	11	29	11.8	107	32.8	113

EPA SAMPLE NO.

MH4137S

FORM 5A - IN

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix : WATER Analytical Method: ICP-MS

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Q	Sample Result (SR)	Q	Spike Added (SA)	%R	Q
Antimony	75 - 125	106		0.28	J	100	106	
Arsenic	75 - 125	46.1		1.0		40.0	113	
Barium	75 - 125	2290		58.1		2000	112	
Beryllium	75 - 125	55.1		1.0	U	50.0	110	
Cadmium	75 - 125	54.9		1.0	U	50.0	110	
Chromium	75 - 125	239		0.86	J	200	119	
Cobalt	75 - 125	619		0.31	J	500	124	
Copper	75 - 125	314		3.7		250	124	
Lead	75 - 125	23.2		0.99	J	20.0	111	
Manganese	75 - 125	622		32.6		500	118	
Nickel	75 - 125	613		0.44	J	500	123	
Selenium	75 - 125	118		5.0	U	100	118	
Silver	75 - 125	54.6		0.12	J	50.0	109	
Thallium	75 - 125	54.4		1.0	U	50.0	109	
Vanadium	75 - 125	608		2.3	J	500	121	
Zinc	75 - 125	631		7.9		500	125	

EPA SAMPLE NO.

FORM 5B - IN

POST-DIGESTION/DISTILLATION SPIKE
SAMPLE RECOVERY

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ MA No. : _____ SDG No.: _____

Matrix : _____ Analytical Method: _____

% Solids: _____

Concentration Units (µg/L, mg/L or mg/kg dry weight): _____

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Q	Sample Result (SR)	Q	Spike Added (SA)	%R	Q

EPA SAMPLE NO.

MH4137D

FORM 6 - IN
DUPLICATES

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix : WATER Analytical Method: ICP-MS

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Control Limit	Sample (S)	Q	Duplicate (D)	Q	RPD	Q
Aluminum		509		566		11	
Antimony		0.28	J	0.3	J		
Arsenic	1.0	1.0		1.0		0	
Barium		58.1		58.4		1	
Beryllium		1.0	U	1.0	U		
Cadmium		1.0	U	1.0	U		
Calcium		85200		86100		1	
Chromium		0.86	J	0.9	J		
Cobalt		0.31	J	0.32	J		
Copper	2.0	3.7		3.9		5	
Iron	200	506		560		10	
Lead	1.0	0.99	J	1.0		1	
Magnesium		25200		25200		0	
Manganese		32.6		33.7		3	
Nickel		0.44	J	0.54	J		
Potassium	500	1290		1290		0	
Selenium	5.0	5.0	U	2.3	J		
Silver		0.12	J	0.11	J		
Sodium		23600		23600		0	
Thallium		1.0	U	1.0	U		
Vanadium		2.3	J	2.4	J		
Zinc	2.0	7.9		7.8		1	

FORM 7-IN

LABORATORY CONTROL SAMPLE

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4005

Matrix : WATER Preparation Method: 200.8

Analytical Method: ICP-MS Preparation Batch: PB90705

Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg) ug/L

Analyte	True	Found	%R
Aluminum	40	38.8	97
Antimony	4	3.7	93
Arsenic	2	2.1	105
Barium	20	19.3	97
Beryllium	2	1.9	95
Cadmium	2	1.9	95
Calcium	1000	934	93
Chromium	4	4.3	108
Cobalt	2	2.1	105
Copper	4	4.2	105
Iron	400	466	117
Lead	2	1.9	95
Magnesium	1000	1000	100
Manganese	2	2.1	105
Nickel	2	1.9	95
Potassium	1000	942	94
Selenium	10	10.1	101
Silver	2	2.3	115
Sodium	1000	1030	103
Thallium	2	1.9	95
Vanadium	10	10.3	103
Zinc	4	3.9	98

EPA SAMPLE NO.

MH4137L

FORM 8-IN

ICP-AES AND ICP-MS SERIAL DILUTIONS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4005

Matrix : WATER Analytical Method: ICP-MS

% Solids: _____

Concentration Units (µg/L, mg/L or mg/kg dry weight) ug/L

Analyte	Initial Sample Result (I)	Q	Serial Dilution	Q	% Difference	Q
Aluminum	509		685		35	*
Antimony	0.28	J	0.3	J	7	
Arsenic	1.0		1.1	J	10	
Barium	58.1		58.0		0	
Beryllium	1.0	U	5.0	U		
Cadmium	1.0	U	5.0	U		
Calcium	85200		85200		0	
Chromium	0.86	J	1.1	J	28	
Cobalt	0.31	J	0.3	J	3	
Copper	3.7		3.9	J	5	
Iron	506		580	J	15	*
Lead	0.99	J	0.8	J	19	
Magnesium	25200		25800		2	
Manganese	32.6		32.9		1	
Nickel	0.44	J	0.65	J	48	
Potassium	1290		1350	J	5	
Selenium	5.0	U	25.0	U		
Silver	0.12	J	5.0	U	100	
Sodium	23600		23800		1	
Thallium	1.0	U	5.0	U		
Vanadium	2.3	J	2.8	J	22	*
Zinc	7.9		8.7	J	10	

FORM 9-IN

METHOD DETECTION LIMIT

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4005

Analytical Method: ICP-MS Instrument ID: P7

Preparation Method: 200.8

Concentration Units (µg/L, µg or mg/kg): ug/L

Analyte	Wavelength/Mass	MDL	Date Analyzed
Aluminum	27	1.2	12/04/2015
Antimony	121	0.051	12/04/2015
Arsenic	75	0.11	12/04/2015
Barium	137	0.21	12/04/2015
Beryllium	9	0.060	12/04/2015
Cadmium	111	0.054	12/04/2015
Calcium	44	5.5	12/04/2015
Chromium	52	0.070	12/04/2015
Cobalt	59	0.056	12/04/2015
Copper	63	0.054	12/04/2015
Iron	57	4.1	12/04/2015
Lead	208	0.061	12/04/2015
Magnesium	24	5.2	12/04/2015
Manganese	55	0.060	12/04/2015
Nickel	60	0.060	12/04/2015
Potassium	39	8.1	12/04/2015
Selenium	82	1.4	12/04/2015
Silver	107	0.036	12/04/2015
Sodium	23	10.4	12/04/2015
Thallium	205	0.054	12/04/2015
Vanadium	51	0.026	12/04/2015
Zinc	66	0.13	12/04/2015

FORM 11-IN
ICP-MS INTERNAL STANDARD ASSOCIATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4005

Instrument ID: P7 Date: 05/23/2016

Run Batch: LB81731

Analyte	Assoc. Internal Standard 1	Assoc. Internal Standard 2
Aluminum	45Sc	
Antimony	159Tb	
Arsenic	89Y	
Barium	159Tb	
Beryllium	6Li	
Cadmium	159Tb	
Calcium	45Sc	
Chromium	45Sc	
Cobalt	45Sc	
Copper	45Sc	
Iron	45Sc	
Lead	209Bi	
Magnesium	45Sc	
Manganese	45Sc	
Nickel	45Sc	
Potassium	45Sc	
Selenium	89Y	
Silver	159Tb	
Sodium	45Sc	
Thallium	209Bi	
Vanadium	45Sc	
Zinc	45Sc	

FORM 12-IN

ANALYSIS LOG

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4005

Instrument ID: P7 Analytical Method: ICP-MS

Start Date: 05/23/2016 End Date: 05/23/2016

Run Batch: LB81731

EPA Sample No.	D/F	Time	Analytes																										
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
TUNE	1.0	1002					X				X			X	X														
S00	1.0	1025	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
S02	1.0	1032	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
S03	1.0	1035	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
S04	1.0	1039	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
S05	1.0	1042	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
S06	1.0	1045	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
S07	1.0	1048	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
S08	1.0	1051	X						X				X		X				X			X							
ICV	1.0	1109	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ICB	1.0	1112	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ICSA	1.0	1115	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ICSAB	1.0	1118	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
CCV026	1.0	1121	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
CCB026	1.0	1124	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ZZZZZZ	1.0	1127	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ZZZZZZ	1.0	1135																											
ZZZZZZ	1.0	1145																											
ZZZZZZ	1.0	1150																											
ZZZZZZ	1.0	1153																											
ZZZZZZ	1.0	1156																											
ZZZZZZ	5.0	1159																											
MH4005	1.0	1203	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4097	1.0	1206	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4106	1.0	1209	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
CCV027	1.0	1212	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
CCB027	1.0	1215	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4107	1.0	1219	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4137	1.0	1222	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4137D	1.0	1225	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
MH4137S	1.0	1228		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
MH4137L	5.0	1231	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
LCS007	1.0	1237	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ZZZZZZ	1.0	1240																											
ZZZZZZ	1.0	1243																											
ZZZZZZ	1.0	1246																											
PBW007	1.0	1250	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ZZZZZZ	1.0	1253																											
ZZZZZZ	1.0	1256																											
ZZZZZZ	1.0	1259																											

FORM 12-IN

ANALYSIS LOG

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4005

Instrument ID: P7 Analytical Method: ICP-MS

Start Date: 05/23/2016 End Date: 05/23/2016

Run Batch: LB81731

EPA Sample No.	D/F	Time	Analytes																									
			AL	**SB**	**AS**	**BA**	**BE**	**CD**	**CA**	**CR**	**CO**	**CU**	**FE**	**PB**	**MG**	**MN**	**HG**	**NI**	**K**	**SE**	**AG**	**NA**	**TL**	**V**	**ZN**	**CN**		
ZZZZZZ	1.0	1302																										
ZZZZZZ	1.0	1305																										
ZZZZZZ	1.0	1308																										
ZZZZZZ	1.0	1311																										
ZZZZZZ	1.0	1314																										
ZZZZZZ	1.0	1318																										
ZZZZZZ	1.0	1321																										
ZZZZZZ	1.0	1324																										
ZZZZZZ	1.0	1327																										
CCV028	1.0	1330	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCB028	1.0	1333	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			

FORM 13-IN

ICP-MS TUNE

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4005

Instrument ID: P7 Date: 05/23/2016

Run Batch: LB81731

Element - Mass	Avg. Measured Mass (u)	Average Peak Width (u)	%Height	%RSD
Be - 9	9	0.7	5	1.5
Co - 59	58.9	0.7	5	0.4
In - 113	113	0.7	5	1.7
In - 115	115	0.7	5	0.9
Mg - 24	23.9	0.7	5	0.4
Mg - 25	24.9	0.7	5	1.1
Mg - 26	25.9	0.7	5	1.2
Pb - 206	205.	0.7	5	1.4
Pb - 207	206.	0.7	5	1.6
Pb - 208	207.	0.7	5	1.3

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4005

Instrument ID: P7 Start Date : 05/23/2016

Run Batch: LB81731 End Date : 05/23/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 6Li	Q	Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q
S00	1025	100		100		100		100		100	
S02	1032	99		100		99		99		100	
S03	1035	98		100		100		99		100	
S04	1039	98		98		98		96		98	
S05	1042	99		99		98		96		100	
S06	1045	98		100		99		96		100	
S07	1048	94		99		97		92		98	
S08	1051	89		101		98		87		94	
ICV	1109	102		104		103		101		101	
ICB	1112	100		103		103		101		99	
ICSA	1115	97		105		102		96		100	
ICSAB	1118	95		107		104		97		100	
CCV026	1121	97		109		106		101		103	
CCB026	1124	98		106		104		103		100	
ZZZZZZ	1127										
ZZZZZZ	1135										
ZZZZZZ	1145										
ZZZZZZ	1150										
ZZZZZZ	1153										
ZZZZZZ	1156										
ZZZZZZ	1159										
MH4005	1203	111		112		108		104		108	
MH4097	1206	110		111		107		102		108	
MH4106	1209	111		110		109		102		108	
CCV027	1212	99		102		101		96		103	
CCB027	1215	100		100		100		99		100	
MH4107	1219	112		112		118		101		109	
MH4137	1222	110		109		107		103		109	
MH4137D	1225	110		108		107		103		109	
MH4137S	1228	110		107		107		103		109	
MH4137L	1231	105		102		102		100		104	
LCS007	1237	101		99		99		99		101	
ZZZZZZ	1240										
ZZZZZZ	1243										
ZZZZZZ	1246										
PBW007	1250	100		99		99		98		100	
ZZZZZZ	1253										
ZZZZZZ	1256										

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4005

Instrument ID: P7 Start Date : 05/23/2016

Run Batch: LB81731 End Date : 05/23/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 6Li	Q	Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q
ZZZZZZ	1259										
ZZZZZZ	1302										
ZZZZZZ	1305										
ZZZZZZ	1308										
ZZZZZZ	1311										
ZZZZZZ	1314										
ZZZZZZ	1318										
ZZZZZZ	1321										
ZZZZZZ	1324										
ZZZZZZ	1327										
CCV028	1330	97		99		99		94		100	
CCB028	1333	98		98		99		99		100	

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4005

Instrument ID: P7 Start Date : 05/23/2016

Run Batch: LB81731 End Date : 05/23/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q	Element 165Ho	Q
S00	1025	100		100		100		100		100	
S02	1032	100		100		100		100		101	
S03	1035	101		100		100		100		100	
S04	1039	99		98		97		99		100	
S05	1042	100		99		97		101		101	
S06	1045	102		99		96		100		101	
S07	1048	105		99		94		99		100	
S08	1051	107		105		91		102		103	
ICV	1109	105		104		103		103		103	
ICB	1112	103		102		102		102		101	
ICSA	1115	106		105		100		105		104	
ICSAB	1118	109		107		101		105		105	
CCV026	1121	112		107		103		105		106	
CCB026	1124	105		104		104		101		102	
ZZZZZZ	1127										
ZZZZZZ	1135										
ZZZZZZ	1145										
ZZZZZZ	1150										
ZZZZZZ	1153										
ZZZZZZ	1156										
ZZZZZZ	1159										
MH4005	1203	106		103		103		105		105	
MH4097	1206	105		102		101		104		104	
MH4106	1209	105		101		101		103		104	
CCV027	1212	103		98		97		100		100	
CCB027	1215	98		96		99		98		98	
MH4107	1219	103		110		101		103		104	
MH4137	1222	102		100		102		104		105	
MH4137D	1225	102		100		101		104		104	
MH4137S	1228	99		98		100		101		102	
MH4137L	1231	98		97		100		101		101	
LCS007	1237	96		95		98		97		98	
ZZZZZZ	1240										
ZZZZZZ	1243										
ZZZZZZ	1246										
PBW007	1250	97		96		98		98		98	
ZZZZZZ	1253										
ZZZZZZ	1256										

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4005

Instrument ID: P7 Start Date : 05/23/2016

Run Batch: LB81731 End Date : 05/23/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q	Element 165Ho	Q
ZZZZZZ	1259										
ZZZZZZ	1302										
ZZZZZZ	1305										
ZZZZZZ	1308										
ZZZZZZ	1311										
ZZZZZZ	1314										
ZZZZZZ	1318										
ZZZZZZ	1321										
ZZZZZZ	1324										
ZZZZZZ	1327										
CCV028	1330	99		95		94		97		99	
CCB028	1333	95		95		98		98		98	

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4005

Instrument ID: P7 Start Date : 05/23/2016

Run Batch: LB81731 End Date : 05/23/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 165Ho	Q	Element 209Bi	Q	Element	Q	Element	Q	Element	Q
S00	1025	100		100							
S02	1032	99		100							
S03	1035	100		100							
S04	1039	97		98							
S05	1042	98		98							
S06	1045	100		98							
S07	1048	97		92							
S08	1051	93		82							
ICV	1109	101		101							
ICB	1112	99		100							
ICSA	1115	100		93							
ICSAB	1118	100		91							
CCV026	1121	102		97							
CCB026	1124	100		99							
ZZZZZZ	1127										
ZZZZZZ	1135										
ZZZZZZ	1145										
ZZZZZZ	1150										
ZZZZZZ	1153										
ZZZZZZ	1156										
ZZZZZZ	1159										
MH4005	1203	108		101							
MH4097	1206	106		101							
MH4106	1209	108		102							
CCV027	1212	102		99							
CCB027	1215	100		101							
MH4107	1219	109		104							
MH4137	1222	108		106							
MH4137D	1225	109		105							
MH4137S	1228	108		106							
MH4137L	1231	104		104							
LCS007	1237	100		103							
ZZZZZZ	1240										
ZZZZZZ	1243										
ZZZZZZ	1246										
PBW007	1250	100		102							

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4005

Instrument ID: P7 Start Date : 05/23/2016

Run Batch: LB81731 End Date : 05/23/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 165Ho	Q	Element 209Bi	Q	Element	Q	Element	Q	Element	Q
ZZZZZZ	1253										
ZZZZZZ	1256										
ZZZZZZ	1259										
ZZZZZZ	1302										
ZZZZZZ	1305										
ZZZZZZ	1308										
ZZZZZZ	1311										
ZZZZZZ	1314										
ZZZZZZ	1318										
ZZZZZZ	1321										
ZZZZZZ	1324										
ZZZZZZ	1327										
CCV028	1330	101		98							
CCB028	1333	100		100							

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4005

Instrument ID: P7 Start Date : 05/23/2016

Run Batch: LB81731 End Date : 05/23/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 209Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
S00	1025	100									
S02	1032	100									
S03	1035	100									
S04	1039	97									
S05	1042	98									
S06	1045	97									
S07	1048	93									
S08	1051	88									
ICV	1109	101									
ICB	1112	100									
ICSA	1115	95									
ICSAB	1118	95									
CCV026	1121	99									
CCB026	1124	100									
ZZZZZZ	1127										
ZZZZZZ	1135										
ZZZZZZ	1145										
ZZZZZZ	1150										
ZZZZZZ	1153										
ZZZZZZ	1156										
ZZZZZZ	1159										
MH4005	1203	97									
MH4097	1206	97									
MH4106	1209	96									
CCV027	1212	94									
CCB027	1215	96									
MH4107	1219	98									
MH4137	1222	98									
MH4137D	1225	98									
MH4137S	1228	97									
MH4137L	1231	97									
LCS007	1237	96									
ZZZZZZ	1240										
ZZZZZZ	1243										
ZZZZZZ	1246										
PBW007	1250	97									

FORM 14-IN

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4005

Instrument ID: P7 Start Date : 05/23/2016

Run Batch: LB81731 End Date : 05/23/2016

EPA Sample No.	Time	Internal Standard %RI For:									
		Element 209Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
ZZZZZZ	1253										
ZZZZZZ	1256										
ZZZZZZ	1259										
ZZZZZZ	1302										
ZZZZZZ	1305										
ZZZZZZ	1308										
ZZZZZZ	1311										
ZZZZZZ	1314										
ZZZZZZ	1318										
ZZZZZZ	1321										
ZZZZZZ	1324										
ZZZZZZ	1327										
CCV028	1330	93									
CCB028	1333	97									

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4005

Instrument ID: P7 Start Date: 05/23/2016

Analytical Method: ICP-MS Run Batch: LB81731

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	0	0	0	20	19.0	5	1000	902	10
Antimony	0	0	0	2	2.0	0	50	49.8	0
Arsenic	0	0	0	1	0.99	1	50	48.2	4
Barium	0	0	0	10	10.1	-1	250	253	-1
Beryllium	0	0	0	1	0.98	2	50	51.2	-2
Cadmium	0	0	0	1	1.0	0	50	51.6	-3
Calcium	0	0	0	500	476	5	5000	4870	3
Chromium	0	0	0	2	1.9	5	50	49.6	1
Cobalt	0	0	0	1	1.0	0	50	51.2	-2
Copper	0	0	0	2	2.1	-5	100	103	-3
Iron	0	0	0	50	51.8	-4	2500	2390	4
Lead	0	0	0	1	0.95	5	50	49.2	2
Magnesium	0	0	0	500	490	2	5000	4860	3
Manganese	0	0	0	1	0.98	2	100	100	0
Nickel	0	0	0	1	1.1	-10	50	52.5	-5
Potassium	0	0	0	500	472	6	2500	2340	6
Selenium	0	0	0	5	5.4	-8	50	52.1	-4
Silver	0	0	0	1	1.1	-10	50	51.9	-4
Sodium	0	0	0	500	493	1	5000	4810	4
Thallium	0	0	0	1	0.98	2	50	48.7	3
Vanadium	0	0	0	5	5.0	0	50	49.5	1
Zinc	0	0	0	2	2.2	-10	100	106	-6

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4005

Instrument ID: P7 Start Date: 05/23/2016

Analytical Method: ICP-MS Run Batch: LB81731

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	2500	2380	5	5000	4740	5	10000	9370	6
Antimony	125	125	0	250	252	-1	500	502	0
Arsenic	125	125	0	250	249	0	500	506	-1
Barium	625	640	-2	1250	1250	0	2500	2510	0
Beryllium	125	127	-2	250	251	0	500	502	0
Cadmium	125	129	-3	250	250	0	500	497	1
Calcium	12500	12200	2	25000	24200	3	50000	48400	3
Chromium	125	129	-3	250	254	-2	500	517	-3
Cobalt	125	133	-6	250	263	-5	500	521	-4
Copper	250	267	-7	500	536	-7	1000	1040	-4
Iron	6250	6250	0	12500	12300	2	25000	25400	-2
Lead	125	124	1	250	251	0	500	497	1
Magnesium	12500	12600	-1	25000	24900	0	50000	49600	1
Manganese	250	258	-3	500	514	-3	1000	1030	-3
Nickel	125	134	-7	250	263	-5	500	517	-3
Potassium	6250	6060	3	12500	12000	4	25000	23700	5
Selenium	125	130	-4	250	259	-4	500	508	-2
Silver	125	131	-5	250	255	-2	500	505	-1
Sodium	12500	12300	2	25000	24600	2	50000	48500	3
Thallium	125	124	1	250	247	1	500	492	2
Vanadium	125	129	-3	250	256	-2	500	515	-3
Zinc	250	275	-10	500	532	-6	1000	1050	-5

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4005

Instrument ID: P7 Start Date: 05/23/2016

Analytical Method: ICP-MS Run Batch: LB81731

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	20000	18400	8	100000	100000	0			
Antimony	1000	999	0						
Arsenic	1000	997	0						
Barium	5000	4990	0						
Beryllium	1000	998	0						
Cadmium	1000	1000	0						
Calcium	100000	95500	5	500000	501000	0			
Chromium	1000	990	1						
Cobalt	1000	985	2						
Copper	2000	1970	2						
Iron	50000	48300	3	250000	250000	0			
Lead	1000	1000	0						
Magnesium	100000	94700	5	500000	501000	0			
Manganese	2000	1980	1						
Nickel	1000	987	1						
Potassium	50000	45800	8	250000	251000	0			
Selenium	1000	993	1						
Silver	1000	995	1						
Sodium	100000	93600	6	500000	501000	0			
Thallium	1000	1000	0						
Vanadium	1000	991	1						
Zinc	2000	1960	2						

FORM 16-IN

INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4005

Instrument ID: P7 Start Date : 05/23/2016

Analytical Method: ICP-MS Run Batch : LB81731

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Aluminum	0.999859	0.994846	375.234	Lin. Reg	NONE
Antimony	0.999996	1.00067	-0.465928	Lin. Reg	NONE
Arsenic	0.999968	1.00021	-0.174663	Lin. Reg	NONE
Barium	0.999995	1.00148	-5.12779	Lin. Reg	NONE
Beryllium	0.999994	1.00161	-1.1148	Lin. Reg	NONE
Cadmium	0.999984	1.00133	-0.934537	Lin. Reg	NONE
Calcium	0.999956	0.997279	1007.91	Lin. Reg	NONE
Chromium	0.999765	1.00464	-3.39829	Lin. Reg	NONE
Cobalt	0.99956	1.00892	-6.52661	Lin. Reg	NONE
Copper	0.999423	1.01049	-15.4514	Lin. Reg	NONE
Iron	0.999973	0.998876	205.808	Lin. Reg	NONE
Lead	0.99999	0.999033	0.662837	Lin. Reg	NONE
Magnesium	0.999937	0.99786	776.568	Lin. Reg	NONE
Manganese	0.999799	1.00533	-7.7001	Lin. Reg	NONE
Nickel	0.999675	1.00924	-6.65483	Lin. Reg	NONE
Potassium	0.999845	0.995142	876.964	Lin. Reg	NONE
Selenium	0.99991	1.00573	-4.02826	Lin. Reg	NONE
Silver	0.999957	1.00458	-3.20032	Lin. Reg	NONE
Sodium	0.999908	0.996726	1190.19	Lin. Reg	NONE
Thallium	0.999952	0.997047	1.99627	Lin. Reg	NONE
Vanadium	0.999813	1.00461	-3.33241	Lin. Reg	NONE
Zinc	0.999335	1.01206	-17.7626	Lin. Reg	NONE

US EPA Tune Check Sample Report

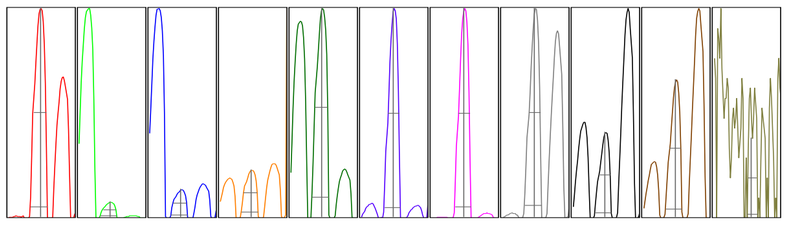
Batch Folder D:\ICP-MS Data\P7052316B-MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	1319	1.56	5.00	
24	21930	0.43	5.00	
25	3029	1.14	5.00	
26	3662	1.29	5.00	
59	20134	0.44	5.00	
113	1550	1.71	5.00	
115	34564	0.95	5.00	
206	8073	1.41	5.00	
207	7241	1.68	5.00	
208	17526	1.38	5.00	
220	4	84.09		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	1322	1315	1352	1301	1304
24	21967	21996	21992	21927	21766
25	3033	3042	3051	2969	3050
26	3635	3630	3719	3707	3618
59	20226	20162	20199	20030	20054
113	1582	1561	1513	1558	1535
115	35075	34712	34283	34386	34363
206	7941	8089	7979	8137	8219
207	7203	7200	7079	7341	7383
208	17381	17383	17326	17639	17902
220	10	3	2	1	7

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	244	9.00	8.9 - 9.1		0.767	0.900	
24	3863	23.95	23.9 - 24.1		0.749	0.900	
25	526	24.95	24.9 - 25.1		0.741	0.900	
26	628	25.95	25.9 - 26.1		0.753	0.900	
59	3670	58.95	58.9 - 59.1		0.749	0.900	
113	316	113.00	112.9 - 113.1		0.733	0.900	
115	6963	115.00	114.9 - 115.1		0.731	0.900	
206	1608	206.00	205.9 - 206.1		0.769	0.900	
207	1436	207.00	206.9 - 207.1		0.736	0.900	
208	3508	208.00	207.9 - 208.1		0.734	0.900	
220	0	220.25	-		0.445		

X% = 5 Integration Time [sec] = 0.1 Acquisition Time [sec] = 268 Y Axis = Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.80	L/min			
RF Matching	1.80	V	Option Gas	0.0	%			
Smpl Depth	10.0	mm	Nebulizer Pump	0.10	rps			
S/C Temp	2	℃						

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens					
Extract 2	-185.0	V	Cell Entrance					
Omega Bias	-100	V	Cell Exit	-50	V			
Deflect	14.0	V						

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Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		OctP Bias	-8.0	V			
He Flow	0.0	mL/min	OctP RF	180	V			
Energy Discrimination	5.0	V						

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	5834	1.08	
89	31	16.89	
205	114	7.07	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	5869	5881	5880	5806	5736
89	38	29	35	27	26
205	112	129	113	109	110

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.80	L/min			
RF Matching	1.80	V	Option Gas	0.0	%			
Smpl Depth	10.0	mm	Nebulizer Pump	0.10	rps			
S/C Temp	2	℃						

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.9	V			
Extract 2	-200.0	V	Cell Entrance	-40	V			
Omega Bias	-105	V	Cell Exit	-60	V			
Deflect	2.4	V						

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	true		OctP Bias	-18.0	V			
He Flow	4.1	mL/min	OctP RF	200	V			
Energy Discrimination	5.0	V						

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P7
Client Sample ID :	S00	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:25:28	DataFile Name :	007CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.08	0.07	-0.15	0.00	N/A	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	N/A	ppb
Arsenic	75-2	0.00	0.01	0.00	0.00	N/A	ppb
Barium	135-1	0.01	-0.01	0.00	0.00	N/A	ppb
Barium	137-1	0.00	0.00	0.00	0.00	N/A	ppb
Beryllium	9-1	-0.01	0.01	0.00	0.00	N/A	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Boron	10-1	-0.73	0.16	0.56	0.00	N/A	ppb
Boron	11-1	0.31	-0.01	-0.30	0.00	N/A	ppb
Cadmium	111-1	0.02	0.00	-0.02	0.00	N/A	ppb
Cadmium	106-1	0.26	0.00	-0.27	0.00	N/A	ppb
Cadmium	108-1	-0.01	-0.01	0.01	0.00	N/A	ppb
Calcium	43-1	0.38	-0.42	0.04	0.00	N/A	ppb
Calcium	44-1	0.46	0.70	-1.16	0.00	N/A	ppb
Chromium	52-2	0.02	-0.01	0.00	0.00	N/A	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	N/A	ppb
Copper	63-2	0.00	-0.02	0.02	0.00	N/A	ppb
Holmium	165-2				100		%
Holmium	165-1				100		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	56-2	0.03	0.04	-0.07	0.00	N/A	ppb
Iron	57-2	-0.49	0.01	0.48	0.00	N/A	ppb
Lead	206-1	-0.01	0.01	0.01	0.00	N/A	ppb
Lead	207-1	-0.01	0.00	0.01	0.00	N/A	ppb
Lead	208-1	-0.01	0.00	0.01	0.00	N/A	ppb
Lithium	6-1				100		%
Magnesium	24-2	0.08	-0.11	0.03	0.00	N/A	ppb
Manganese	55-2	0.00	0.01	-0.01	0.00	N/A	ppb
Molybdenum	94-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	95-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	96-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	97-1	0.00	-0.01	0.00	0.00	N/A	ppb
Molybdenum	98-1	0.01	0.00	0.00	0.00	N/A	ppb
Nickel	60-2	0.00	0.03	-0.03	0.00	N/A	ppb

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P7
Client Sample ID :	S00	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:25:28	DataFile Name :	007CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-37.79	-29.58	-23.72	-30.36		ppb
Potassium	39-2	0.62	1.63	-2.24	0.00	N/A	ppb
Rhodium	103-2				100		%
Rhodium	103-1				100		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.38	0.42	-0.04	0.00	N/A	ppb
Selenium	82-1	1.14	-1.26	0.12	0.00	N/A	ppb
Silicon	28-1	0.28	-0.07	-0.20	0.00	N/A	ppb
Silver	109-1	0.00	0.00	0.00	0.00	N/A	ppb
Silver	107-1	0.00	0.00	0.00	0.00	N/A	ppb
Sodium	23-2	0.21	0.09	-0.30	0.00	N/A	ppb
Strontium	86-1	-0.07	0.10	-0.03	0.00	N/A	ppb
Strontium	88-1	0.00	0.00	0.00	0.00	N/A	ppb
Sulfur	34-1	113.01	150.65	226.37	163.34	35.35	ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.00	0.00	0.00	0.00	N/A	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	N/A	ppb
Tin	118-1	0.01	0.00	0.00	0.00	N/A	ppb
Titanium	47-1	0.00	0.01	0.00	0.00	N/A	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	N/A	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	N/A	ppb
Yttrium	89-2				100		%
Yttrium	89-1				100		%
Zinc	66-2	0.00	0.05	-0.05	0.00	N/A	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	N/A	ppb
Zirconium	91-1	0.00	0.00	-0.01	0.00	N/A	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P7
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:32:15	DataFile Name :	009CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19.15	21.06	16.70	18.97	11.53	ppb
Antimony	121-1	1.99	2.00	1.95	1.98	1.32	ppb
Arsenic	75-2	0.94	1.00	1.02	0.99	3.86	ppb
Barium	135-1	9.75	10.21	9.79	9.92	2.59	ppb
Barium	137-1	10.02	10.11	10.10	10.08	0.48	ppb
Beryllium	9-1	0.93	1.01	0.99	0.98	4.22	ppb
Bismuth	209-2				100		%
Bismuth	209-1				100		%
Boron	10-1	7.41	8.01	7.41	7.61	4.53	ppb
Boron	11-1	7.59	7.56	8.92	8.03	9.63	ppb
Cadmium	106-1	1.11	1.10	1.12	1.11	0.60	ppb
Cadmium	108-1	0.72	0.85	1.24	0.94	28.60	ppb
Cadmium	111-1	1.04	0.96	1.04	1.02	4.52	ppb
Calcium	43-1	462.01	494.13	470.36	475.50	3.51	ppb
Calcium	44-1	472.03	480.87	476.04	476.31	0.93	ppb
Chromium	52-2	1.95	1.98	1.90	1.94	1.88	ppb
Cobalt	59-2	1.02	1.03	1.07	1.04	2.84	ppb
Copper	63-2	2.04	2.10	2.01	2.05	2.30	ppb
Holmium	165-2				101		%
Holmium	165-1				99		%
Indium	115-1				99		%
Indium	115-2				100		%
Iron	56-2	50.69	50.64	49.43	50.26	1.42	ppb
Iron	57-2	51.65	53.17	50.51	51.78	2.58	ppb
Lead	206-1	0.95	0.90	0.93	0.93	2.47	ppb
Lead	207-1	1.03	0.97	0.99	1.00	3.15	ppb
Lead	208-1	0.96	0.94	0.96	0.95	1.01	ppb
Lithium	6-1				99		%
Magnesium	24-2	489.69	493.03	488.69	490.47	0.46	ppb
Manganese	55-2	0.97	0.95	1.00	0.98	2.56	ppb
Molybdenum	94-1	2.16	2.14	2.11	2.14	1.32	ppb
Molybdenum	95-1	5.17	4.93	5.06	5.05	2.36	ppb
Molybdenum	96-1	4.44	4.31	4.39	4.38	1.53	ppb
Molybdenum	97-1	5.05	5.02	5.29	5.12	2.85	ppb
Molybdenum	98-1	5.16	5.00	4.93	5.03	2.37	ppb
Nickel	60-2	1.04	1.05	1.11	1.07	3.40	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P7
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:32:15	DataFile Name :	009CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	37.74	12.83	40.52	30.36	50.21	ppb
Potassium	39-2	480.46	467.45	467.38	471.76	1.60	ppb
Rhodium	103-2				100		%
Rhodium	103-1				99		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	77-2	7.65	3.85	0.77	4.09	84.25	ppb
Selenium	78-2	3.24	5.43	5.77	4.81	28.58	ppb
Selenium	82-1	6.23	5.21	4.74	5.39	14.10	ppb
Silicon	28-1	9.75	10.50	9.52	9.92	5.16	ppb
Silver	109-1	1.12	1.10	1.12	1.11	1.10	ppb
Silver	107-1	1.14	1.18	1.11	1.14	3.10	ppb
Sodium	23-2	498.77	493.85	487.57	493.40	1.14	ppb
Strontium	86-1	1.13	1.03	1.03	1.07	5.52	ppb
Strontium	88-1	1.02	1.01	1.01	1.01	0.48	ppb
Sulfur	34-1	-245.48	-21.99	-222.55	-163.34		ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.95	0.91	0.87	0.91	4.39	ppb
Thallium	205-1	0.99	0.95	1.00	0.98	2.71	ppb
Tin	118-1	5.11	5.06	5.26	5.15	2.06	ppb
Titanium	47-1	4.66	5.17	5.01	4.95	5.29	ppb
Uranium	238-1	0.92	0.91	0.92	0.92	0.48	ppb
Vanadium	51-2	5.12	4.96	4.90	4.99	2.22	ppb
Yttrium	89-2				100		%
Yttrium	89-1				99		%
Zinc	66-2	2.37	2.09	2.14	2.20	6.71	ppb
Zirconium	90-1	0.88	0.91	0.92	0.90	2.10	ppb
Zirconium	91-1	0.91	0.90	0.87	0.89	2.61	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:35:38	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	945.72	909.38	850.36	901.82	5.34	ppb
Antimony	121-1	50.16	49.62	49.65	49.81	0.61	ppb
Arsenic	75-2	49.84	49.28	45.43	48.18	4.99	ppb
Barium	135-1	253.21	250.93	247.38	250.51	1.17	ppb
Barium	137-1	254.57	252.28	250.64	252.50	0.78	ppb
Beryllium	9-1	51.30	51.12	51.26	51.23	0.18	ppb
Bismuth	209-2				100		%
Bismuth	209-1				100		%
Boron	11-1	45.00	46.65	48.45	46.70	3.69	ppb
Boron	10-1	46.67	45.33	46.92	46.31	1.84	ppb
Cadmium	106-1	53.16	53.20	52.38	52.92	0.88	ppb
Cadmium	108-1	51.02	51.75	53.84	52.20	2.80	ppb
Cadmium	111-1	51.95	52.10	50.84	51.63	1.34	ppb
Calcium	43-1	4843.94	4812.81	4817.41	4824.72	0.35	ppb
Calcium	44-1	4901.41	4849.88	4848.98	4866.76	0.62	ppb
Chromium	52-2	51.96	49.39	47.53	49.63	4.49	ppb
Cobalt	59-2	53.25	51.70	48.66	51.20	4.55	ppb
Copper	63-2	107.20	103.97	99.20	103.46	3.89	ppb
Holmium	165-2				100		%
Holmium	165-1				100		%
Indium	115-1				99		%
Indium	115-2				100		%
Iron	57-2	2497.30	2388.16	2299.45	2394.97	4.14	ppb
Iron	56-2	2527.01	2450.41	2328.58	2435.33	4.11	ppb
Lead	207-1	48.61	48.75	49.16	48.84	0.59	ppb
Lead	208-1	49.06	49.12	49.43	49.20	0.40	ppb
Lead	206-1	49.21	48.93	49.69	49.28	0.78	ppb
Lithium	6-1				98		%
Magnesium	24-2	5068.80	4878.90	4626.92	4858.21	4.56	ppb
Manganese	55-2	104.17	100.12	96.67	100.32	3.74	ppb
Molybdenum	94-1	48.32	48.47	48.40	48.40	0.16	ppb
Molybdenum	95-1	49.74	49.00	49.32	49.36	0.76	ppb
Molybdenum	96-1	49.34	49.07	49.18	49.20	0.27	ppb
Molybdenum	97-1	49.72	49.83	49.98	49.84	0.27	ppb
Molybdenum	98-1	49.57	49.60	49.17	49.45	0.49	ppb
Nickel	60-2	54.86	52.62	50.09	52.52	4.54	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:35:38	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	1025.14	1023.06	896.75	981.65	7.49	ppb
Potassium	39-2	2384.85	2330.44	2309.46	2341.58	1.66	ppb
Rhodium	103-1				99		%
Rhodium	103-2				100		%
Scandium	45-2				101		%
Scandium	45-1				100		%
Selenium	82-1	52.58	52.79	50.88	52.08	2.01	ppb
Selenium	77-2	50.32	49.22	51.69	50.41	2.45	ppb
Selenium	78-2	51.55	48.65	48.14	49.45	3.71	ppb
Silicon	28-1	52.88	54.21	53.53	53.54	1.24	ppb
Silver	109-1	51.83	51.49	50.80	51.37	1.02	ppb
Silver	107-1	52.09	52.02	51.52	51.88	0.60	ppb
Sodium	23-2	4941.06	4799.49	4691.97	4810.84	2.60	ppb
Strontium	86-1	49.80	48.73	49.09	49.21	1.11	ppb
Strontium	88-1	51.00	50.78	49.29	50.36	1.84	ppb
Sulfur	34-1	1294.20	1647.65	1169.55	1370.47	18.10	ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	47.47	46.90	47.89	47.42	1.05	ppb
Thallium	205-1	49.00	48.22	49.01	48.74	0.93	ppb
Tin	118-1	51.00	50.58	49.70	50.43	1.32	ppb
Titanium	47-1	50.47	50.97	50.22	50.55	0.75	ppb
Uranium	238-1	47.72	48.80	48.30	48.27	1.13	ppb
Vanadium	51-2	51.33	49.77	47.34	49.48	4.07	ppb
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	110.50	105.29	102.43	106.07	3.86	ppb
Zirconium	90-1	48.55	49.14	48.89	48.86	0.61	ppb
Zirconium	91-1	48.53	48.98	49.26	48.93	0.75	ppb

Reviewed By:BIN
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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:39:11	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2405.10	2421.38	2321.98	2382.82	2.24	ppb
Antimony	121-1	124.20	125.08	125.85	125.04	0.66	ppb
Arsenic	75-2	126.34	126.55	122.96	125.29	1.61	ppb
Barium	135-1	634.10	644.35	640.02	639.49	0.80	ppb
Barium	137-1	638.48	638.69	641.46	639.54	0.26	ppb
Beryllium	9-1	129.36	126.77	125.32	127.15	1.61	ppb
Bismuth	209-1				98		%
Bismuth	209-2				97		%
Boron	10-1	118.49	120.86	123.90	121.08	2.24	ppb
Boron	11-1	112.47	118.28	120.56	117.10	3.56	ppb
Cadmium	108-1	130.98	129.09	135.54	131.87	2.51	ppb
Cadmium	111-1	127.05	129.74	130.63	129.14	1.44	ppb
Cadmium	106-1	127.18	130.06	130.69	129.31	1.44	ppb
Calcium	43-1	12072.81	12217.32	11917.57	12069.23	1.24	ppb
Calcium	44-1	12125.26	12333.49	12069.54	12176.10	1.14	ppb
Chromium	52-2	131.03	130.47	126.11	129.20	2.08	ppb
Cobalt	59-2	136.02	134.32	129.26	133.20	2.64	ppb
Copper	63-2	269.52	268.66	261.78	266.65	1.59	ppb
Holmium	165-2				100		%
Holmium	165-1				97		%
Indium	115-2				97		%
Indium	115-1				96		%
Iron	56-2	6410.70	6346.20	6236.10	6331.00	1.39	ppb
Iron	57-2	6344.32	6303.33	6111.69	6253.12	1.99	ppb
Lead	206-1	125.80	121.66	125.48	124.31	1.85	ppb
Lead	207-1	124.31	120.46	124.27	123.01	1.80	ppb
Lead	208-1	124.61	121.25	124.79	123.55	1.61	ppb
Lithium	6-1				98		%
Magnesium	24-2	12771.69	12586.20	12400.81	12586.24	1.47	ppb
Manganese	55-2	260.16	259.74	255.42	258.44	1.01	ppb
Molybdenum	98-1	122.82	124.90	121.91	123.21	1.24	ppb
Molybdenum	97-1	124.00	125.75	123.38	124.38	0.99	ppb
Molybdenum	94-1	122.48	124.12	121.84	122.81	0.96	ppb
Molybdenum	95-1	123.49	125.50	123.89	124.29	0.86	ppb
Molybdenum	96-1	125.12	125.84	123.78	124.92	0.84	ppb
Nickel	60-2	135.98	134.35	131.78	134.04	1.58	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:39:11	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	2649.19	2617.95	2601.54	2622.89	0.92	ppb
Potassium	39-2	6027.20	6113.71	6041.11	6060.67	0.77	ppb
Rhodium	103-2				97		%
Rhodium	103-1				96		%
Scandium	45-1				98		%
Scandium	45-2				99		%
Selenium	77-2	134.90	126.62	130.21	130.58	3.18	ppb
Selenium	78-2	123.63	129.44	125.98	126.35	2.31	ppb
Selenium	82-1	128.75	132.79	128.21	129.92	1.93	ppb
Silicon	28-1	130.31	130.40	130.09	130.26	0.12	ppb
Silver	107-1	130.18	131.87	131.25	131.10	0.66	ppb
Silver	109-1	130.08	128.42	131.73	130.08	1.27	ppb
Sodium	23-2	12409.29	12398.90	12139.63	12315.94	1.24	ppb
Strontium	86-1	123.53	125.89	124.65	124.69	0.95	ppb
Strontium	88-1	127.01	127.10	125.99	126.70	0.49	ppb
Sulfur	34-1	3173.06	3693.71	3102.12	3322.96	9.72	ppb
Terbium	159-1				98		%
Terbium	159-2				99		%
Thallium	203-1	120.81	117.76	121.12	119.90	1.55	ppb
Thallium	205-1	124.04	121.40	125.80	123.75	1.79	ppb
Tin	118-1	125.41	126.46	127.05	126.31	0.66	ppb
Titanium	47-1	126.65	127.06	125.46	126.39	0.66	ppb
Uranium	238-1	122.02	121.42	122.75	122.06	0.55	ppb
Vanadium	51-2	130.35	129.61	125.94	128.63	1.84	ppb
Yttrium	89-2				98		%
Yttrium	89-1				98		%
Zinc	66-2	279.05	275.57	270.24	274.95	1.61	ppb
Zirconium	90-1	124.67	127.11	125.23	125.67	1.02	ppb
Zirconium	91-1	123.41	123.25	122.89	123.18	0.22	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:42:26	DataFile Name :	012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4800.60	4838.46	4574.15	4737.74	3.02	ppb
Antimony	121-1	251.98	250.86	252.38	251.74	0.31	ppb
Arsenic	75-2	254.06	251.09	241.54	248.90	2.63	ppb
Barium	135-1	1258.33	1242.62	1249.47	1250.14	0.63	ppb
Barium	137-1	1252.35	1249.63	1260.24	1254.08	0.44	ppb
Beryllium	9-1	251.30	250.87	249.55	250.57	0.36	ppb
Bismuth	209-1				98		%
Bismuth	209-2				98		%
Boron	10-1	240.19	241.38	241.83	241.13	0.35	ppb
Boron	11-1	234.74	238.00	241.62	238.12	1.44	ppb
Cadmium	111-1	252.92	247.73	250.28	250.31	1.04	ppb
Cadmium	106-1	253.42	246.68	252.07	250.73	1.42	ppb
Cadmium	108-1	257.16	251.26	256.53	254.98	1.27	ppb
Calcium	43-1	23838.44	24196.54	23907.35	23980.78	0.79	ppb
Calcium	44-1	24114.47	24296.54	24263.09	24224.70	0.40	ppb
Chromium	52-2	256.68	259.82	245.46	253.99	2.97	ppb
Cobalt	59-2	265.48	266.70	255.56	262.58	2.33	ppb
Copper	63-2	543.58	546.55	517.24	535.79	3.01	ppb
Holmium	165-2				101		%
Holmium	165-1				98		%
Indium	115-1				95		%
Indium	115-2				96		%
Iron	56-2	12610.80	12624.59	12124.82	12453.40	2.29	ppb
Iron	57-2	12486.19	12514.62	11986.47	12329.09	2.41	ppb
Lead	206-1	252.56	255.27	248.90	252.24	1.27	ppb
Lead	207-1	254.03	255.28	250.82	253.38	0.91	ppb
Lead	208-1	252.10	254.11	247.75	251.32	1.29	ppb
Lithium	6-1				99		%
Magnesium	24-2	25323.74	25363.84	23993.81	24893.79	3.13	ppb
Manganese	55-2	519.03	524.32	499.48	514.28	2.54	ppb
Molybdenum	94-1	256.02	252.81	251.51	253.45	0.92	ppb
Molybdenum	95-1	250.35	248.59	245.07	248.00	1.08	ppb
Molybdenum	96-1	257.10	255.74	250.15	254.33	1.45	ppb
Molybdenum	97-1	251.95	250.81	247.59	250.12	0.90	ppb
Molybdenum	98-1	254.32	257.18	248.81	253.44	1.68	ppb
Nickel	60-2	265.93	267.69	255.57	263.06	2.49	ppb

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LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:42:26	DataFile Name :	012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	5125.01	5252.21	4915.14	5097.45	3.34	ppb
Potassium	39-2	12008.58	12095.00	11813.37	11972.32	1.21	ppb
Rhodium	103-1				96		%
Rhodium	103-2				97		%
Scandium	45-2				100		%
Scandium	45-1				99		%
Selenium	82-1	260.36	258.74	256.56	258.56	0.74	ppb
Selenium	77-2	262.62	282.55	238.10	261.09	8.53	ppb
Selenium	78-2	263.16	257.68	244.36	255.07	3.79	ppb
Silicon	28-1	248.59	254.46	247.77	250.27	1.46	ppb
Silver	109-1	255.64	254.50	256.45	255.53	0.38	ppb
Silver	107-1	256.63	252.33	256.33	255.10	0.94	ppb
Sodium	23-2	24462.86	25001.45	24264.87	24576.40	1.55	ppb
Strontium	86-1	252.95	248.77	247.45	249.72	1.15	ppb
Strontium	88-1	252.80	253.41	250.49	252.23	0.61	ppb
Sulfur	34-1	6026.10	5947.58	5665.31	5879.66	3.23	ppb
Terbium	159-1				100		%
Terbium	159-2				101		%
Thallium	203-1	248.53	254.55	244.02	249.03	2.12	ppb
Thallium	205-1	245.70	249.56	246.11	247.13	0.86	ppb
Tin	118-1	251.69	250.64	251.67	251.33	0.24	ppb
Titanium	47-1	252.26	254.85	248.25	251.79	1.32	ppb
Uranium	238-1	245.40	247.04	245.32	245.92	0.40	ppb
Vanadium	51-2	259.71	261.22	246.65	255.86	3.13	ppb
Yttrium	89-2				99		%
Yttrium	89-1				98		%
Zinc	66-2	538.19	540.77	517.03	532.00	2.45	ppb
Zirconium	90-1	252.24	251.59	251.27	251.70	0.20	ppb
Zirconium	91-1	248.33	247.41	244.86	246.87	0.73	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:45:34	DataFile Name :	013CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9425.01	9439.69	9245.81	9370.17	1.15	ppb
Antimony	121-1	500.97	505.43	498.60	501.66	0.69	ppb
Arsenic	75-2	511.53	506.33	500.87	506.24	1.05	ppb
Barium	135-1	2519.26	2516.79	2485.56	2507.21	0.75	ppb
Barium	137-1	2523.17	2508.93	2488.14	2506.75	0.70	ppb
Beryllium	9-1	500.24	503.58	503.66	502.49	0.39	ppb
Bismuth	209-1				98		%
Bismuth	209-2				97		%
Boron	10-1	477.47	486.35	492.07	485.29	1.52	ppb
Boron	11-1	473.03	487.48	488.56	483.02	1.79	ppb
Cadmium	106-1	506.49	509.17	490.20	501.96	2.05	ppb
Cadmium	108-1	497.07	506.28	501.68	501.68	0.92	ppb
Cadmium	111-1	500.63	498.51	492.14	497.09	0.89	ppb
Calcium	43-1	49009.10	49098.88	48489.92	48865.97	0.67	ppb
Calcium	44-1	48248.77	48746.58	48288.73	48428.02	0.57	ppb
Chromium	52-2	521.48	521.60	508.07	517.05	1.50	ppb
Cobalt	59-2	526.46	523.48	512.88	520.94	1.37	ppb
Copper	63-2	1056.17	1042.70	1034.98	1044.62	1.03	ppb
Holmium	165-2				101		%
Holmium	165-1				100		%
Indium	115-1				96		%
Indium	115-2				94		%
Iron	56-2	25262.39	25143.16	24572.22	24992.59	1.48	ppb
Iron	57-2	25388.37	25720.33	25007.60	25372.10	1.41	ppb
Lead	206-1	499.93	496.51	494.29	496.91	0.57	ppb
Lead	207-1	497.18	504.25	496.92	499.45	0.83	ppb
Lead	208-1	495.97	499.48	494.45	496.63	0.52	ppb
Lithium	6-1				98		%
Magnesium	24-2	49624.74	49932.15	49253.65	49603.51	0.68	ppb
Manganese	55-2	1034.88	1042.41	1011.64	1029.64	1.56	ppb
Molybdenum	94-1	500.72	502.26	498.47	500.48	0.38	ppb
Molybdenum	95-1	505.81	508.07	501.57	505.15	0.65	ppb
Molybdenum	96-1	503.63	507.70	507.55	506.29	0.46	ppb
Molybdenum	97-1	507.09	501.80	499.58	502.82	0.77	ppb
Molybdenum	98-1	504.97	500.66	501.98	502.54	0.44	ppb
Nickel	60-2	518.31	521.92	509.89	516.71	1.19	ppb

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LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:45:34	DataFile Name :	013CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	10331.86	10182.33	10087.90	10200.69	1.21	ppb
Potassium	39-2	23823.48	23869.13	23534.27	23742.29	0.76	ppb
Rhodium	103-2				96		%
Rhodium	103-1				96		%
Scandium	45-1				100		%
Scandium	45-2				102		%
Selenium	77-2	518.57	542.43	520.13	527.05	2.53	ppb
Selenium	78-2	503.07	508.76	501.55	504.46	0.75	ppb
Selenium	82-1	509.90	508.42	505.36	507.89	0.46	ppb
Silicon	28-1	492.53	508.26	508.57	503.12	1.82	ppb
Silver	107-1	500.91	508.95	504.70	504.86	0.80	ppb
Silver	109-1	505.56	502.73	507.08	505.12	0.44	ppb
Sodium	23-2	48689.37	48744.78	48089.41	48507.85	0.75	ppb
Strontium	86-1	504.09	506.88	502.05	504.34	0.48	ppb
Strontium	88-1	496.05	501.77	498.72	498.84	0.57	ppb
Sulfur	34-1	9440.95	9514.53	9698.95	9551.48	1.39	ppb
Terbium	159-2				100		%
Terbium	159-1				100		%
Thallium	203-1	504.59	497.89	489.26	497.25	1.55	ppb
Thallium	205-1	493.40	491.71	491.75	492.29	0.20	ppb
Tin	118-1	502.75	504.98	496.26	501.33	0.90	ppb
Titanium	47-1	498.89	500.19	496.72	498.60	0.35	ppb
Uranium	238-1	495.51	491.77	493.77	493.68	0.38	ppb
Vanadium	51-2	512.38	519.77	511.66	514.60	0.87	ppb
Yttrium	89-2				99		%
Yttrium	89-1				99		%
Zinc	66-2	1054.09	1063.29	1033.65	1050.35	1.44	ppb
Zirconium	90-1	499.48	502.50	495.19	499.05	0.74	ppb
Zirconium	91-1	500.75	501.85	493.24	498.61	0.94	ppb

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LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:48:35	DataFile Name :	014CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	18264.56	18447.78	18519.77	18410.70	0.71	ppb
Antimony	121-1	991.67	997.88	1006.66	998.74	0.75	ppb
Arsenic	75-2	993.29	996.33	1002.01	997.21	0.44	ppb
Barium	135-1	4964.96	4980.17	5038.45	4994.53	0.78	ppb
Barium	137-1	4950.31	4995.23	5035.45	4993.66	0.85	ppb
Beryllium	9-1	999.04	988.79	1007.01	998.28	0.92	ppb
Bismuth	209-1				92		%
Bismuth	209-2				93		%
Boron	10-1	991.42	1012.07	1027.31	1010.27	1.78	ppb
Boron	11-1	992.13	1006.82	1038.95	1012.63	2.36	ppb
Cadmium	111-1	1000.58	995.92	1005.84	1000.78	0.50	ppb
Cadmium	106-1	996.23	1005.75	992.49	998.16	0.68	ppb
Cadmium	108-1	985.57	1007.60	997.67	996.95	1.11	ppb
Calcium	43-1	95302.32	95479.37	96296.56	95692.75	0.55	ppb
Calcium	44-1	95917.15	95165.76	95522.86	95535.26	0.39	ppb
Chromium	52-2	974.28	1002.07	993.56	989.97	1.44	ppb
Cobalt	59-2	975.63	994.80	985.47	985.30	0.97	ppb
Copper	63-2	1950.22	1964.99	1984.26	1966.49	0.87	ppb
Holmium	165-2				100		%
Holmium	165-1				97		%
Indium	115-2				89		%
Indium	115-1				90		%
Iron	56-2	46709.18	48955.89	48757.80	48140.96	2.58	ppb
Iron	57-2	47608.08	48852.63	48545.05	48335.25	1.34	ppb
Lead	206-1	999.61	992.83	1010.88	1001.11	0.91	ppb
Lead	207-1	1005.13	993.45	1000.64	999.74	0.59	ppb
Lead	208-1	1002.55	998.44	1003.74	1001.57	0.28	ppb
Lithium	6-1				94		%
Magnesium	24-2	93379.60	95364.63	95446.46	94730.23	1.24	ppb
Manganese	55-2	1960.36	1999.31	1981.94	1980.54	0.99	ppb
Molybdenum	94-1	996.69	995.58	1005.53	999.26	0.55	ppb
Molybdenum	95-1	1000.80	991.21	1002.12	998.05	0.60	ppb
Molybdenum	96-1	1000.58	988.15	998.75	995.82	0.67	ppb
Molybdenum	97-1	992.21	998.18	1005.54	998.64	0.67	ppb
Molybdenum	98-1	1000.27	994.18	999.92	998.12	0.34	ppb
Nickel	60-2	974.18	994.84	992.35	987.13	1.14	ppb

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:48:35	DataFile Name :	014CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	19659.49	19922.81	20000.24	19860.85	0.90	ppb
Potassium	39-2	45126.38	46047.06	46247.69	45807.04	1.31	ppb
Rhodium	103-2				94		%
Rhodium	103-1				92		%
Scandium	45-1				99		%
Scandium	45-2				105		%
Selenium	77-2	967.05	1018.94	962.99	982.99	3.17	ppb
Selenium	78-2	995.67	1001.21	992.21	996.36	0.46	ppb
Selenium	82-1	984.13	990.26	1005.20	993.20	1.09	ppb
Silicon	28-1	995.77	993.73	1003.11	997.54	0.49	ppb
Silver	109-1	988.15	997.73	1000.18	995.35	0.64	ppb
Silver	107-1	995.30	994.13	996.89	995.44	0.14	ppb
Sodium	23-2	92208.24	94600.93	93850.25	93553.14	1.31	ppb
Strontium	86-1	991.34	996.25	1006.35	997.98	0.77	ppb
Strontium	88-1	997.24	996.25	1005.87	999.79	0.53	ppb
Sulfur	34-1	20339.22	19685.76	19623.87	19882.95	1.99	ppb
Terbium	159-1				98		%
Terbium	159-2				99		%
Thallium	203-1	995.63	999.74	1011.79	1002.39	0.84	ppb
Thallium	205-1	996.25	1002.58	1015.56	1004.80	0.98	ppb
Tin	118-1	996.34	996.52	1003.58	998.82	0.41	ppb
Titanium	47-1	1010.30	993.77	996.09	1000.05	0.90	ppb
Uranium	238-1	1006.18	1005.68	1002.04	1004.63	0.22	ppb
Vanadium	51-2	989.48	991.25	991.68	990.81	0.12	ppb
Yttrium	89-2				99		%
Yttrium	89-1				97		%
Zinc	66-2	1940.24	1984.15	1965.82	1963.40	1.12	ppb
Zirconium	90-1	1000.75	999.75	999.56	1000.02	0.06	ppb
Zirconium	91-1	1009.57	997.42	998.28	1001.76	0.68	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P7
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:51:35	DataFile Name :	015CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	99773.25	101761.16	99659.19	100397.87	1.18	ppb
Antimony	121-1	1.32	1.32	1.38	1.34	2.65	ppb
Arsenic	75-2	0.42	0.35	0.36	0.38	9.94	ppb
Barium	135-1	0.75	0.90	0.90	0.85	10.36	ppb
Barium	137-1	0.90	0.93	0.91	0.91	1.42	ppb
Beryllium	9-1	0.14	0.08	0.09	0.11	29.06	ppb
Bismuth	209-1				82		%
Bismuth	209-2				88		%
Boron	10-1	34.96	30.38	26.95	30.76	13.06	ppb
Boron	11-1	32.65	29.13	28.25	30.01	7.76	ppb
Cadmium	111-1	0.11	0.13	0.11	0.12	10.63	ppb
Cadmium	106-1	-0.38	0.00	0.11	-0.09		ppb
Cadmium	108-1	0.17	0.27	0.18	0.21	26.73	ppb
Calcium	43-1	498448.29	498813.92	505852.88	501038.36	0.83	ppb
Calcium	44-1	501027.54	498793.28	503474.28	501098.36	0.47	ppb
Chromium	52-2	6.52	6.82	6.64	6.66	2.26	ppb
Cobalt	59-2	0.74	0.69	0.73	0.72	4.28	ppb
Copper	63-2	3.49	3.37	3.33	3.40	2.46	ppb
Holmium	165-1				93		%
Holmium	165-2				103		%
Indium	115-2				99		%
Indium	115-1				91		%
Iron	56-2	248327.77	252141.86	250650.87	250373.50	0.77	ppb
Iron	57-2	249299.90	252187.48	249428.39	250305.26	0.65	ppb
Lead	206-1	5.62	5.50	5.54	5.55	1.05	ppb
Lead	207-1	5.44	5.31	5.24	5.33	1.88	ppb
Lead	208-1	5.51	5.36	5.39	5.42	1.42	ppb
Lithium	6-1				89		%
Magnesium	24-2	497692.89	506218.80	499382.87	501098.18	0.90	ppb
Manganese	55-2	7.82	7.37	7.65	7.61	2.97	ppb
Molybdenum	94-1	0.51	0.48	0.54	0.51	6.82	ppb
Molybdenum	95-1	1.32	1.33	1.34	1.33	0.58	ppb
Molybdenum	96-1	1.92	1.86	1.98	1.92	3.12	ppb
Molybdenum	97-1	1.39	1.38	1.36	1.38	1.36	ppb
Molybdenum	98-1	1.27	1.39	1.26	1.31	5.39	ppb
Nickel	60-2	3.47	3.60	3.51	3.53	1.95	ppb

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LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P7
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:51:35	DataFile Name :	015CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-5.57	-17.81	0.77	-7.53		ppb
Potassium	39-2	250743.20	252216.80	250031.36	250997.12	0.44	ppb
Rhodium	103-1				87		%
Rhodium	103-2				91		%
Scandium	45-2				107		%
Scandium	45-1				101		%
Selenium	82-1	1.98	2.50	2.23	2.24	11.59	ppb
Selenium	77-2	0.00	0.00	0.37	0.12	173.21	ppb
Selenium	78-2	-0.19	0.10	0.72	0.21	222.33	ppb
Silicon	28-1	24.22	23.76	23.94	23.98	0.96	ppb
Silver	109-1	0.14	0.13	0.12	0.13	10.37	ppb
Silver	107-1	0.16	0.14	0.13	0.14	14.23	ppb
Sodium	23-2	500137.26	505599.96	498661.57	501466.27	0.73	ppb
Strontium	86-1	15.63	15.69	15.82	15.71	0.63	ppb
Strontium	88-1	15.54	15.63	15.61	15.59	0.31	ppb
Sulfur	34-1	-478.91	-273.29	81.76	-223.48		ppb
Terbium	159-1				94		%
Terbium	159-2				102		%
Thallium	203-1	0.44	0.44	0.42	0.43	2.89	ppb
Thallium	205-1	0.46	0.43	0.43	0.44	4.81	ppb
Tin	118-1	1.09	1.14	1.12	1.12	1.99	ppb
Titanium	47-1	0.46	0.41	0.47	0.45	6.77	ppb
Uranium	238-1	0.03	0.04	0.03	0.03	10.90	ppb
Vanadium	51-2	0.18	0.16	0.14	0.16	11.21	ppb
Yttrium	89-1				98		%
Yttrium	89-2				105		%
Zinc	66-2	22.58	22.71	22.27	22.52	1.02	ppb
Zirconium	90-1	0.10	0.11	0.11	0.11	4.44	ppb
Zirconium	91-1	0.10	0.09	0.12	0.10	16.91	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICV	Instrumnet Name :	P7
Client Sample ID :	ICV	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:09:14	DataFile Name :	017ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	487.63	486.62	482.39	485.55	0.57	ppb
Antimony	121-1	198.18	200.11	198.49	198.93	0.52	ppb
Arsenic	75-2	200.75	196.94	196.12	197.94	1.25	ppb
Barium	135-1	99.02	100.00	99.33	99.45	0.50	ppb
Barium	137-1	100.52	101.99	100.89	101.13	0.76	ppb
Beryllium	9-1	99.32	96.13	97.11	97.52	1.67	ppb
Bismuth	209-2				101		%
Bismuth	209-1				101		%
Boron	10-1	297.58	288.65	289.64	291.96	1.68	ppb
Boron	11-1	297.65	294.07	290.94	294.22	1.14	ppb
Cadmium	106-1	84.01	84.75	78.70	82.49	4.00	ppb
Cadmium	108-1	93.65	93.97	91.34	92.98	1.54	ppb
Cadmium	111-1	101.33	101.48	100.32	101.04	0.62	ppb
Calcium	43-1	1884.68	1910.30	1837.62	1877.53	1.96	ppb
Calcium	44-1	1910.31	1932.49	1910.48	1917.76	0.67	ppb
Chromium	52-2	100.86	102.08	101.11	101.35	0.64	ppb
Cobalt	59-2	104.54	105.88	105.57	105.33	0.67	ppb
Copper	63-2	105.43	107.21	106.50	106.38	0.84	ppb
Holmium	165-1				101		%
Holmium	165-2				103		%
Indium	115-2				101		%
Indium	115-1				101		%
Iron	56-2	1026.99	1028.94	1041.23	1032.38	0.75	ppb
Iron	57-2	1011.67	1010.58	1007.25	1009.83	0.23	ppb
Lead	206-1	194.84	194.45	192.03	193.77	0.79	ppb
Lead	207-1	191.97	193.40	189.66	191.68	0.99	ppb
Lead	208-1	194.09	195.00	192.18	193.76	0.74	ppb
Lithium	6-1				102		%
Magnesium	24-2	1179.48	1203.38	1208.26	1197.04	1.29	ppb
Manganese	55-2	102.21	104.10	103.72	103.34	0.97	ppb
Molybdenum	94-1	78.60	77.41	78.82	78.28	0.97	ppb
Molybdenum	95-1	261.72	259.09	262.65	261.15	0.71	ppb
Molybdenum	96-1	221.05	216.45	222.68	220.06	1.47	ppb
Molybdenum	97-1	256.13	253.29	258.07	255.83	0.94	ppb
Molybdenum	98-1	262.43	257.88	262.12	260.81	0.97	ppb
Nickel	60-2	106.18	108.30	107.84	107.44	1.04	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICV	Instrumnet Name :	P7
Client Sample ID :	ICV	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:09:14	DataFile Name :	017ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-23.57	-17.65	-32.15	-24.46		ppb
Potassium	39-2	1894.85	1917.68	1899.36	1903.97	0.63	ppb
Rhodium	103-1				101		%
Rhodium	103-2				103		%
Scandium	45-1				104		%
Scandium	45-2				105		%
Selenium	77-2	197.38	203.05	195.91	198.78	1.90	ppb
Selenium	78-2	209.42	201.73	202.70	204.61	2.05	ppb
Selenium	82-1	209.11	201.80	205.29	205.40	1.78	ppb
Silicon	28-1	245.17	249.13	247.03	247.11	0.80	ppb
Silver	107-1	98.58	98.76	97.16	98.16	0.89	ppb
Silver	109-1	98.80	99.73	97.76	98.76	1.00	ppb
Sodium	23-2	2018.15	2020.11	2023.92	2020.73	0.15	ppb
Strontium	86-1	1.96	2.43	2.06	2.15	11.67	ppb
Strontium	88-1	2.33	2.31	2.36	2.33	1.10	ppb
Sulfur	34-1	-393.41	-526.83	-636.13	-518.79		ppb
Terbium	159-2				103		%
Terbium	159-1				101		%
Thallium	203-1	199.72	198.69	198.47	198.96	0.33	ppb
Thallium	205-1	198.19	197.15	195.41	196.92	0.71	ppb
Tin	118-1	270.26	275.92	272.72	272.97	1.04	ppb
Titanium	47-1	256.35	257.90	256.49	256.91	0.33	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	7.71	ppb
Vanadium	51-2	101.33	102.06	100.93	101.44	0.57	ppb
Yttrium	89-2				104		%
Yttrium	89-1				103		%
Zinc	66-2	216.94	218.71	218.77	218.14	0.48	ppb
Zirconium	90-1	0.06	0.07	0.06	0.06	8.09	ppb
Zirconium	91-1	0.14	0.15	0.12	0.14	10.64	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICB	Instrumnet Name :	P7
Client Sample ID :	ICB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:12:21	DataFile Name :	018CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.13	-0.08	0.13	0.06	204.29	ppb
Antimony	121-1	0.23	0.25	0.21	0.23	7.00	ppb
Arsenic	75-2	0.00	0.02	0.03	0.02	76.22	ppb
Barium	135-1	0.01	0.01	0.00	0.01	75.54	ppb
Barium	137-1	0.00	0.01	0.00	0.00	120.09	ppb
Beryllium	9-1	0.03	0.02	0.03	0.03	15.44	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Boron	10-1	1.78	2.31	1.58	1.89	20.07	ppb
Boron	11-1	2.57	2.55	2.51	2.55	1.23	ppb
Cadmium	111-1	-0.04	0.02	0.01	0.00		ppb
Cadmium	106-1	-0.57	0.11	0.10	-0.12		ppb
Cadmium	108-1	-0.01	0.02	-0.03	-0.01		ppb
Calcium	43-1	-2.40	2.12	0.49	0.07	3349.71	ppb
Calcium	44-1	-2.53	-3.17	-2.37	-2.69		ppb
Chromium	52-2	-0.04	-0.08	-0.03	-0.05		ppb
Cobalt	59-2	0.00	0.00	-0.01	0.00		ppb
Copper	63-2	-0.08	-0.08	-0.09	-0.08		ppb
Holmium	165-1				99		%
Holmium	165-2				101		%
Indium	115-2				102		%
Indium	115-1				100		%
Iron	56-2	-0.14	-0.20	-0.14	-0.16		ppb
Iron	57-2	-0.11	0.52	0.08	0.16	200.13	ppb
Lead	206-1	0.04	0.01	0.02	0.02	57.16	ppb
Lead	207-1	0.02	0.02	0.02	0.02	20.09	ppb
Lead	208-1	0.03	0.02	0.02	0.02	30.08	ppb
Lithium	6-1				100		%
Magnesium	24-2	0.36	0.67	0.20	0.41	57.77	ppb
Manganese	55-2	-0.01	0.00	-0.01	0.00		ppb
Molybdenum	94-1	0.01	0.01	0.00	0.01	52.57	ppb
Molybdenum	95-1	0.02	0.02	0.03	0.02	17.06	ppb
Molybdenum	96-1	0.04	0.02	0.02	0.02	42.36	ppb
Molybdenum	97-1	0.02	0.01	0.03	0.02	35.97	ppb
Molybdenum	98-1	0.04	0.02	0.01	0.02	57.36	ppb
Nickel	60-2	0.01	0.01	-0.02	0.00	491.23	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICB	Instrumnet Name :	P7
Client Sample ID :	ICB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:12:21	DataFile Name :	018CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-8.33	-15.25	-27.89	-17.15		ppb
Potassium	39-2	3.88	1.76	-2.79	0.95	358.35	ppb
Rhodium	103-1				101		%
Rhodium	103-2				102		%
Scandium	45-1				103		%
Scandium	45-2				103		%
Selenium	82-1	-0.07	0.98	-0.96	-0.02		ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.08	-0.29	-0.36	-0.24		ppb
Silicon	28-1	0.65	-0.34	-0.25	0.02	2536.74	ppb
Silver	109-1	0.01	0.00	0.01	0.01	53.14	ppb
Silver	107-1	0.01	0.01	0.00	0.01	49.76	ppb
Sodium	23-2	16.37	16.52	16.49	16.46	0.49	ppb
Strontium	86-1	-0.20	-0.05	-0.10	-0.12		ppb
Strontium	88-1	0.00	0.00	0.00	0.00	233.51	ppb
Sulfur	34-1	-630.03	-763.77	-621.83	-671.88		ppb
Terbium	159-1				99		%
Terbium	159-2				102		%
Thallium	203-1	0.04	0.05	0.03	0.04	16.87	ppb
Thallium	205-1	0.04	0.04	0.03	0.04	13.20	ppb
Tin	118-1	0.06	0.05	0.08	0.06	19.06	ppb
Titanium	47-1	0.03	0.02	0.03	0.02	32.98	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	26.13	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	70.11	ppb
Yttrium	89-1				103		%
Yttrium	89-2				102		%
Zinc	66-2	-0.07	-0.20	-0.14	-0.14		ppb
Zirconium	90-1	0.00	0.00	0.00	0.00		ppb
Zirconium	91-1	-0.01	-0.01	0.00	-0.01		ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICSA	Instrumnet Name :	P7
Client Sample ID :	ICSA	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:15:29	DataFile Name :	019ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	92730.57	91966.69	94633.67	93110.31	1.48	ppb
Antimony	121-1	1.19	1.19	1.21	1.20	0.82	ppb
Arsenic	75-2	0.34	0.27	0.41	0.34	19.48	ppb
Barium	135-1	1.35	1.30	1.39	1.35	3.32	ppb
Barium	137-1	1.47	1.49	1.52	1.49	1.58	ppb
Beryllium	9-1	0.33	0.35	0.27	0.32	12.34	ppb
Bismuth	209-1				93		%
Bismuth	209-2				95		%
Boron	10-1	2.13	1.91	1.58	1.87	14.87	ppb
Boron	11-1	2.16	1.95	1.69	1.93	12.35	ppb
Cadmium	106-1	-0.93	-0.62	-0.80	-0.79		ppb
Cadmium	108-1	15.43	15.75	15.02	15.40	2.36	ppb
Cadmium	111-1	0.51	0.54	0.60	0.55	8.16	ppb
Calcium	43-1	92228.09	93308.59	93855.60	93130.76	0.89	ppb
Calcium	44-1	92252.74	92534.39	93352.74	92713.29	0.62	ppb
Chromium	52-2	19.93	19.80	20.12	19.95	0.82	ppb
Cobalt	59-2	1.22	1.20	1.28	1.23	3.34	ppb
Copper	63-2	8.28	8.11	8.05	8.15	1.46	ppb
Holmium	165-2				104		%
Holmium	165-1				100		%
Indium	115-1				98		%
Indium	115-2				101		%
Iron	56-2	101131.18	100571.00	101959.65	101220.61	0.69	ppb
Iron	57-2	101859.57	99801.28	102566.65	101409.16	1.42	ppb
Lead	206-1	4.54	4.52	4.44	4.50	1.16	ppb
Lead	207-1	4.08	3.97	4.11	4.05	1.76	ppb
Lead	208-1	4.22	4.21	4.21	4.21	0.20	ppb
Lithium	6-1				97		%
Magnesium	24-2	96284.02	95679.66	98485.35	96816.34	1.53	ppb
Manganese	55-2	7.88	7.83	8.02	7.91	1.25	ppb
Molybdenum	98-1	1906.95	1939.89	1930.17	1925.67	0.88	ppb
Molybdenum	94-1	586.01	589.25	598.87	591.38	1.13	ppb
Molybdenum	95-1	1902.24	1938.84	1926.68	1922.58	0.97	ppb
Molybdenum	96-1	1598.61	1629.44	1626.30	1618.12	1.05	ppb
Molybdenum	97-1	1899.01	1937.19	1943.12	1926.44	1.24	ppb
Nickel	60-2	5.76	5.41	5.56	5.58	3.18	ppb

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LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICSA	Instrumnet Name :	P7
Client Sample ID :	ICSA	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:15:29	DataFile Name :	019ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	101513.84	101670.49	102250.23	101811.52	0.38	ppb
Potassium	39-2	95552.90	95419.92	96807.37	95926.73	0.80	ppb
Rhodium	103-1				96		%
Rhodium	103-2				100		%
Scandium	45-2				106		%
Scandium	45-1				105		%
Selenium	82-1	1.32	1.64	1.14	1.37	18.56	ppb
Selenium	77-2	1.45	0.00	0.73	0.73	99.84	ppb
Selenium	78-2	-0.33	-0.13	-0.37	-0.28		ppb
Silicon	28-1	20.85	21.32	20.67	20.95	1.59	ppb
Silver	107-1	0.12	0.12	0.14	0.13	7.08	ppb
Silver	109-1	0.11	0.12	0.13	0.12	8.61	ppb
Sodium	23-2	98852.62	97977.23	100805.38	99211.74	1.46	ppb
Strontium	86-1	33.30	33.03	33.31	33.22	0.48	ppb
Strontium	88-1	33.40	33.32	33.85	33.52	0.85	ppb
Sulfur	34-1	98702.15	97489.11	98157.59	98116.28	0.62	ppb
Terbium	159-2				105		%
Terbium	159-1				100		%
Thallium	203-1	0.08	0.08	0.09	0.08	7.70	ppb
Thallium	205-1	0.10	0.10	0.09	0.09	6.17	ppb
Tin	118-1	0.18	0.22	0.19	0.20	10.96	ppb
Titanium	47-1	1946.61	1957.63	1968.85	1957.69	0.57	ppb
Uranium	238-1	0.02	0.02	0.02	0.02	5.34	ppb
Vanadium	51-2	0.18	0.16	0.18	0.17	6.72	ppb
Yttrium	89-2				105		%
Yttrium	89-1				102		%
Zinc	66-2	11.53	11.99	11.85	11.79	1.98	ppb
Zirconium	90-1	0.01	0.01	0.02	0.01	27.19	ppb
Zirconium	91-1	0.00	0.01	0.00	0.00	47.25	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICSAB	Instrumnet Name :	P7
Client Sample ID :	ICSAB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:18:34	DataFile Name :	020ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	92797.79	93151.18	93141.16	93030.04	0.22	ppb
Antimony	121-1	20.72	20.63	20.42	20.59	0.75	ppb
Arsenic	75-2	19.90	19.65	19.44	19.66	1.19	ppb
Barium	135-1	21.32	21.69	21.56	21.52	0.88	ppb
Barium	137-1	21.74	21.75	21.54	21.68	0.56	ppb
Beryllium	9-1	20.70	20.88	20.35	20.65	1.32	ppb
Bismuth	209-2				95		%
Bismuth	209-1				91		%
Boron	10-1	2.43	2.57	3.03	2.68	11.81	ppb
Boron	11-1	2.80	2.87	2.41	2.69	9.11	ppb
Cadmium	106-1	15.17	15.18	15.42	15.25	0.92	ppb
Cadmium	108-1	32.91	31.45	33.29	32.55	2.97	ppb
Cadmium	111-1	19.64	20.01	19.80	19.82	0.93	ppb
Calcium	43-1	94198.05	93415.09	94876.48	94163.21	0.78	ppb
Calcium	44-1	93736.16	93445.92	93649.67	93610.59	0.16	ppb
Chromium	52-2	41.14	41.05	41.15	41.11	0.13	ppb
Cobalt	59-2	21.92	21.64	21.78	21.78	0.65	ppb
Copper	63-2	28.60	28.82	28.78	28.73	0.42	ppb
Holmium	165-1				100		%
Holmium	165-2				105		%
Indium	115-2				103		%
Indium	115-1				100		%
Iron	56-2	101218.32	100048.32	100847.57	100704.74	0.59	ppb
Iron	57-2	101126.44	101324.42	101146.08	101198.98	0.11	ppb
Lead	206-1	24.28	24.22	24.74	24.41	1.16	ppb
Lead	207-1	22.95	22.99	23.30	23.08	0.83	ppb
Lead	208-1	23.51	23.57	23.88	23.66	0.84	ppb
Lithium	6-1				95		%
Magnesium	24-2	96603.52	97865.80	96808.26	97092.53	0.70	ppb
Manganese	55-2	28.94	28.84	28.75	28.85	0.33	ppb
Molybdenum	94-1	590.05	597.20	590.31	592.52	0.68	ppb
Molybdenum	95-1	1945.87	1947.29	1928.87	1940.68	0.53	ppb
Molybdenum	96-1	1629.27	1641.02	1598.48	1622.92	1.35	ppb
Molybdenum	97-1	1953.13	1934.87	1898.72	1928.91	1.44	ppb
Molybdenum	98-1	1952.81	1941.50	1931.42	1941.91	0.55	ppb
Nickel	60-2	27.23	26.80	26.41	26.82	1.54	ppb

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICSAB	Instrumnet Name :	P7
Client Sample ID :	ICSAB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:18:34	DataFile Name :	020ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	103147.28	102273.66	102073.32	102498.08	0.56	ppb
Potassium	39-2	96369.92	96948.07	97553.90	96957.30	0.61	ppb
Rhodium	103-1				97		%
Rhodium	103-2				101		%
Scandium	45-1				107		%
Scandium	45-2				109		%
Selenium	77-2	18.06	15.97	16.12	16.71	6.99	ppb
Selenium	78-2	19.79	20.14	19.83	19.92	0.96	ppb
Selenium	82-1	21.54	18.83	17.95	19.44	9.64	ppb
Silicon	28-1	23.31	22.84	23.41	23.19	1.31	ppb
Silver	107-1	19.06	19.10	19.17	19.11	0.30	ppb
Silver	109-1	19.08	18.85	19.11	19.01	0.74	ppb
Sodium	23-2	99730.61	98068.24	98864.37	98887.74	0.84	ppb
Strontium	86-1	33.59	33.71	33.34	33.55	0.57	ppb
Strontium	88-1	33.84	33.63	33.51	33.66	0.48	ppb
Sulfur	34-1	98950.00	98759.88	99011.47	98907.12	0.13	ppb
Terbium	159-2				105		%
Terbium	159-1				100		%
Thallium	203-1	19.45	19.29	19.46	19.40	0.49	ppb
Thallium	205-1	19.78	19.93	20.00	19.90	0.57	ppb
Tin	118-1	0.21	0.22	0.22	0.22	2.47	ppb
Titanium	47-1	1976.11	1953.28	1983.53	1970.97	0.80	ppb
Uranium	238-1	0.03	0.02	0.02	0.02	20.89	ppb
Vanadium	51-2	20.26	20.26	20.33	20.28	0.21	ppb
Yttrium	89-2				107		%
Yttrium	89-1				104		%
Zinc	66-2	33.06	33.12	32.18	32.79	1.61	ppb
Zirconium	90-1	0.03	0.03	0.03	0.03	7.57	ppb
Zirconium	91-1	0.02	0.03	0.03	0.03	15.24	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCV026	Instrumnet Name :	P7
Client Sample ID :	CCV026	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:21:39	DataFile Name :	021CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9201.61	9496.26	9255.56	9317.81	1.68	ppb
Antimony	121-1	517.00	524.42	510.87	517.43	1.31	ppb
Arsenic	75-2	507.05	505.96	500.66	504.55	0.68	ppb
Barium	135-1	2580.90	2595.14	2546.81	2574.28	0.96	ppb
Barium	137-1	2574.97	2589.27	2545.66	2569.96	0.87	ppb
Beryllium	9-1	509.26	513.59	508.74	510.53	0.52	ppb
Bismuth	209-1				97		%
Bismuth	209-2				99		%
Boron	10-1	464.31	486.42	496.95	482.56	3.45	ppb
Boron	11-1	455.93	476.81	486.72	473.15	3.32	ppb
Cadmium	111-1	510.58	513.97	500.86	508.47	1.34	ppb
Cadmium	106-1	522.56	523.89	517.67	521.37	0.63	ppb
Cadmium	108-1	520.19	527.74	518.27	522.07	0.96	ppb
Calcium	43-1	48109.43	48247.68	48758.01	48371.71	0.71	ppb
Calcium	44-1	48001.91	48586.26	48203.87	48264.02	0.61	ppb
Chromium	52-2	518.29	515.18	517.33	516.93	0.31	ppb
Cobalt	59-2	520.25	512.81	521.59	518.22	0.91	ppb
Copper	63-2	1042.80	1017.59	1038.45	1032.95	1.30	ppb
Holmium	165-2				106		%
Holmium	165-1				102		%
Indium	115-1				101		%
Indium	115-2				100		%
Iron	56-2	24949.64	24634.01	24844.24	24809.30	0.65	ppb
Iron	57-2	25395.91	25178.03	25100.38	25224.77	0.61	ppb
Lead	206-1	507.95	506.92	492.99	502.62	1.66	ppb
Lead	207-1	510.52	504.49	496.00	503.67	1.45	ppb
Lead	208-1	507.85	502.39	493.21	501.15	1.48	ppb
Lithium	6-1				97		%
Magnesium	24-2	49270.69	48264.79	49501.03	49012.17	1.34	ppb
Manganese	55-2	1052.17	1032.62	1053.24	1046.01	1.11	ppb
Molybdenum	94-1	497.13	506.94	490.92	498.33	1.62	ppb
Molybdenum	95-1	507.01	509.61	495.30	503.97	1.51	ppb
Molybdenum	96-1	510.39	507.31	503.33	507.01	0.70	ppb
Molybdenum	97-1	503.35	509.57	494.51	502.48	1.51	ppb
Molybdenum	98-1	500.24	505.05	497.31	500.87	0.78	ppb
Nickel	60-2	510.82	499.64	505.74	505.40	1.11	ppb

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LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCV026	Instrumnet Name :	P7
Client Sample ID :	CCV026	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:21:39	DataFile Name :	021CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	10111.42	10147.36	10328.10	10195.63	1.14	ppb
Potassium	39-2	24052.26	23672.50	24124.94	23949.90	1.01	ppb
Rhodium	103-1				101		%
Rhodium	103-2				103		%
Scandium	45-1				109		%
Scandium	45-2				112		%
Selenium	82-1	507.47	510.11	501.11	506.23	0.91	ppb
Selenium	77-2	520.03	532.34	521.26	524.54	1.29	ppb
Selenium	78-2	519.63	512.45	518.91	517.00	0.77	ppb
Silicon	28-1	478.57	487.16	493.03	486.25	1.50	ppb
Silver	109-1	521.33	526.75	516.60	521.56	0.97	ppb
Silver	107-1	531.59	524.38	519.43	525.13	1.16	ppb
Sodium	23-2	49037.59	48056.41	48361.56	48485.19	1.04	ppb
Strontium	86-1	514.84	510.33	501.88	509.02	1.29	ppb
Strontium	88-1	504.97	504.42	499.85	503.08	0.56	ppb
Sulfur	34-1	8978.71	8990.13	9393.36	9120.73	2.59	ppb
Terbium	159-1				103		%
Terbium	159-2				105		%
Thallium	203-1	501.34	502.85	491.09	498.43	1.28	ppb
Thallium	205-1	497.06	500.46	486.66	494.73	1.45	ppb
Tin	118-1	523.48	530.15	513.73	522.45	1.58	ppb
Titanium	47-1	485.89	490.96	489.76	488.87	0.54	ppb
Uranium	238-1	491.49	485.73	480.45	485.89	1.14	ppb
Vanadium	51-2	527.50	517.19	523.19	522.63	0.99	ppb
Yttrium	89-1				106		%
Yttrium	89-2				107		%
Zinc	66-2	1044.41	1019.72	1037.73	1033.95	1.24	ppb
Zirconium	90-1	502.72	506.71	497.04	502.16	0.97	ppb
Zirconium	91-1	507.30	505.42	498.42	503.72	0.93	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCB026	Instrumnet Name :	P7
Client Sample ID :	CCB026	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:24:30	DataFile Name :	022CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.34	0.40	0.27	0.33	19.14	ppb
Antimony	121-1	0.28	0.29	0.30	0.29	3.27	ppb
Arsenic	75-2	0.02	0.04	0.02	0.03	47.31	ppb
Barium	135-1	0.03	0.02	0.02	0.02	27.62	ppb
Barium	137-1	0.04	0.02	0.02	0.02	40.10	ppb
Beryllium	9-1	0.04	0.03	0.07	0.04	45.24	ppb
Bismuth	209-1				99		%
Bismuth	209-2				100		%
Boron	10-1	9.48	10.94	9.61	10.01	8.03	ppb
Boron	11-1	11.37	10.71	9.62	10.57	8.35	ppb
Cadmium	106-1	-0.50	-0.69	-0.14	-0.44		ppb
Cadmium	108-1	0.14	-0.03	-0.01	0.03	265.23	ppb
Cadmium	111-1	-0.02	-0.03	-0.01	-0.02		ppb
Calcium	43-1	2.75	-1.15	-2.34	-0.25		ppb
Calcium	44-1	1.11	1.93	-0.15	0.96	108.49	ppb
Chromium	52-2	-0.05	-0.06	-0.04	-0.05		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	28.60	ppb
Copper	63-2	0.11	0.09	0.07	0.09	18.84	ppb
Holmium	165-2				102		%
Holmium	165-1				100		%
Indium	115-1				104		%
Indium	115-2				103		%
Iron	56-2	0.43	0.40	0.40	0.41	4.44	ppb
Iron	57-2	-0.48	-0.16	0.01	-0.21		ppb
Lead	206-1	0.06	0.05	0.07	0.06	15.10	ppb
Lead	207-1	0.05	0.05	0.05	0.05	6.09	ppb
Lead	208-1	0.05	0.05	0.05	0.05	1.11	ppb
Lithium	6-1				98		%
Magnesium	24-2	0.62	0.63	0.66	0.64	2.63	ppb
Manganese	55-2	0.01	0.03	0.00	0.01	145.16	ppb
Molybdenum	94-1	0.04	0.03	0.04	0.04	13.42	ppb
Molybdenum	95-1	0.09	0.07	0.08	0.08	10.15	ppb
Molybdenum	96-1	0.08	0.08	0.08	0.08	2.10	ppb
Molybdenum	97-1	0.11	0.11	0.12	0.11	4.93	ppb
Molybdenum	98-1	0.10	0.09	0.09	0.09	8.86	ppb
Nickel	60-2	0.02	0.03	-0.04	0.01	581.25	ppb

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LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCB026	Instrumnet Name :	P7
Client Sample ID :	CCB026	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:24:30	DataFile Name :	022CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-34.78	-14.62	-32.02	-27.14		ppb
Potassium	39-2	7.64	7.47	9.45	8.19	13.42	ppb
Rhodium	103-2				104		%
Rhodium	103-1				103		%
Scandium	45-2				105		%
Scandium	45-1				106		%
Selenium	77-2	0.00	0.37	0.00	0.12	173.21	ppb
Selenium	78-2	-0.20	-0.64	0.12	-0.24		ppb
Selenium	82-1	1.24	0.54	1.76	1.18	51.52	ppb
Silicon	28-1	1.01	1.50	-0.15	0.79	107.74	ppb
Silver	107-1	0.04	0.02	0.03	0.03	34.16	ppb
Silver	109-1	0.03	0.04	0.03	0.03	17.27	ppb
Sodium	23-2	21.91	21.77	22.26	21.98	1.15	ppb
Strontium	86-1	0.07	0.00	0.01	0.03	122.11	ppb
Strontium	88-1	0.01	0.01	0.00	0.00	29.08	ppb
Sulfur	34-1	-1605.97	-1307.72	-1651.80	-1521.83		ppb
Terbium	159-1				100		%
Terbium	159-2				101		%
Thallium	203-1	0.07	0.08	0.05	0.07	17.68	ppb
Thallium	205-1	0.08	0.07	0.07	0.07	7.65	ppb
Tin	118-1	0.05	0.07	0.08	0.07	28.58	ppb
Titanium	47-1	0.01	0.01	0.02	0.01	40.21	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	4.42	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	140.61	ppb
Yttrium	89-2				104		%
Yttrium	89-1				104		%
Zinc	66-2	-0.03	-0.13	-0.14	-0.10		ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	15.87	ppb
Zirconium	91-1	0.00	0.01	0.01	0.00	140.77	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-01	Instrumnet Name :	P7
Client Sample ID :	MH4005	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:03:03	DataFile Name :	031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	25.14	23.09	21.37	23.20	8.14	ppb
Antimony	121-1	0.21	0.23	0.20	0.22	6.50	ppb
Arsenic	75-2	0.95	0.95	0.79	0.90	9.81	ppb
Barium	135-1	58.39	58.36	57.86	58.20	0.51	ppb
Barium	137-1	58.93	58.71	58.67	58.77	0.24	ppb
Beryllium	9-1	0.02	0.02	0.01	0.02	31.26	ppb
Bismuth	209-1				101		%
Bismuth	209-2				97		%
Boron	10-1	85.47	95.42	91.98	90.96	5.56	ppb
Boron	11-1	86.40	91.70	90.27	89.46	3.07	ppb
Cadmium	106-1	-0.81	-0.57	-0.52	-0.63		ppb
Cadmium	108-1	0.09	0.07	0.07	0.08	14.61	ppb
Cadmium	111-1	-0.01	0.03	0.02	0.01	174.67	ppb
Calcium	44-1	132978.29	133076.83	131850.88	132635.33	0.51	ppb
Calcium	43-1	132659.19	132862.45	133966.20	133162.62	0.53	ppb
Chromium	52-2	0.75	0.78	0.88	0.80	8.12	ppb
Cobalt	59-2	0.06	0.05	0.06	0.05	14.48	ppb
Copper	63-2	2.63	2.63	2.58	2.61	1.06	ppb
Holmium	165-2				105		%
Holmium	165-1				108		%
Indium	115-1				107		%
Indium	115-2				101		%
Iron	56-2	67.83	68.80	68.55	68.39	0.73	ppb
Iron	57-2	88.78	91.96	86.59	89.11	3.03	ppb
Lead	206-1	0.82	0.83	0.79	0.81	2.09	ppb
Lead	207-1	0.77	0.80	0.79	0.78	1.48	ppb
Lead	208-1	0.80	0.82	0.78	0.80	2.35	ppb
Lithium	6-1				111		%
Magnesium	24-2	53278.52	53957.37	54072.82	53769.57	0.80	ppb
Manganese	55-2	2.38	2.34	2.38	2.37	0.98	ppb
Molybdenum	94-1	0.20	0.18	0.19	0.19	4.44	ppb
Molybdenum	95-1	0.52	0.53	0.52	0.52	1.13	ppb
Molybdenum	96-1	0.47	0.49	0.40	0.45	10.55	ppb
Molybdenum	97-1	0.51	0.61	0.50	0.54	11.60	ppb
Molybdenum	98-1	0.56	0.48	0.53	0.52	7.86	ppb
Nickel	60-2	-0.18	-0.21	-0.21	-0.20		ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-01	Instrumnet Name :	P7
Client Sample ID :	MH4005	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:03:03	DataFile Name :	031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-15.97	0.31	7.29	-2.79		ppb
Potassium	39-2	3843.54	3912.11	3925.56	3893.74	1.13	ppb
Rhodium	103-1				104		%
Rhodium	103-2				103		%
Scandium	45-1				112		%
Scandium	45-2				106		%
Selenium	82-1	1.36	1.35	0.69	1.13	33.99	ppb
Selenium	77-2	2.58	0.74	1.85	1.72	53.60	ppb
Selenium	78-2	0.57	1.09	1.74	1.13	51.77	ppb
Silicon	28-1	8003.30	8037.24	7881.44	7973.99	1.03	ppb
Silver	107-1	0.13	0.15	0.17	0.15	14.40	ppb
Silver	109-1	0.12	0.13	0.16	0.14	14.97	ppb
Sodium	23-2	58528.79	59573.90	59634.18	59245.62	1.05	ppb
Strontium	86-1	1135.55	1144.40	1133.10	1137.68	0.52	ppb
Strontium	88-1	1141.76	1138.49	1125.95	1135.40	0.73	ppb
Sulfur	34-1	47044.31	47568.72	46701.09	47104.71	0.93	ppb
Terbium	159-1				108		%
Terbium	159-2				105		%
Thallium	203-1	0.01	0.01	0.00	0.01	12.33	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	17.46	ppb
Tin	118-1	0.10	0.11	0.07	0.10	23.67	ppb
Titanium	47-1	1.29	1.27	1.14	1.23	6.61	ppb
Uranium	238-1	1.86	1.87	1.83	1.85	1.14	ppb
Vanadium	51-2	2.05	1.98	1.97	2.00	2.30	ppb
Yttrium	89-1				108		%
Yttrium	89-2				103		%
Zinc	66-2	12.28	12.10	12.08	12.16	0.92	ppb
Zirconium	90-1	0.05	0.05	0.07	0.05	18.20	ppb
Zirconium	91-1	0.04	0.05	0.05	0.05	10.06	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-02	Instrumnet Name :	P7
Client Sample ID :	MH4097	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:06:08	DataFile Name :	032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	34.79	38.83	36.79	36.80	5.49	ppb
Antimony	121-1	0.22	0.20	0.22	0.22	5.60	ppb
Arsenic	75-2	0.89	0.97	0.87	0.91	5.65	ppb
Barium	135-1	61.04	59.83	61.36	60.74	1.33	ppb
Barium	137-1	61.21	61.11	62.02	61.44	0.81	ppb
Beryllium	9-1	0.02	0.01	0.01	0.01	39.07	ppb
Bismuth	209-2				97		%
Bismuth	209-1				101		%
Boron	10-1	97.34	98.47	98.08	97.96	0.59	ppb
Boron	11-1	92.04	95.28	96.13	94.49	2.28	ppb
Cadmium	111-1	0.06	0.05	0.03	0.04	37.68	ppb
Cadmium	106-1	-0.47	-0.80	-0.97	-0.75		ppb
Cadmium	108-1	0.13	0.11	0.15	0.13	16.24	ppb
Calcium	43-1	137023.27	139583.34	139705.85	138770.82	1.09	ppb
Calcium	44-1	137921.20	138336.13	140713.23	138990.19	1.08	ppb
Chromium	52-2	0.98	0.94	0.92	0.94	3.23	ppb
Cobalt	59-2	0.06	0.06	0.06	0.06	0.47	ppb
Copper	63-2	4.72	4.86	4.72	4.77	1.69	ppb
Holmium	165-1				106		%
Holmium	165-2				104		%
Indium	115-1				106		%
Indium	115-2				100		%
Iron	56-2	121.81	120.76	120.94	121.17	0.46	ppb
Iron	57-2	137.68	144.46	137.64	139.93	2.81	ppb
Lead	206-1	1.99	2.11	2.10	2.07	3.19	ppb
Lead	207-1	1.89	2.00	2.00	1.96	3.35	ppb
Lead	208-1	1.97	2.05	2.02	2.02	2.07	ppb
Lithium	6-1				110		%
Magnesium	24-2	54959.17	55007.81	54703.87	54890.28	0.30	ppb
Manganese	55-2	4.63	4.82	4.96	4.80	3.46	ppb
Molybdenum	94-1	0.19	0.17	0.16	0.17	6.74	ppb
Molybdenum	95-1	0.42	0.47	0.42	0.44	6.40	ppb
Molybdenum	96-1	0.38	0.35	0.39	0.37	5.65	ppb
Molybdenum	97-1	0.41	0.43	0.45	0.43	4.85	ppb
Molybdenum	98-1	0.44	0.40	0.42	0.42	5.71	ppb
Nickel	60-2	-0.13	-0.15	-0.10	-0.13		ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-02	Instrumnet Name :	P7
Client Sample ID :	MH4097	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:06:08	DataFile Name :	032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-13.83	-9.26	7.79	-5.10		ppb
Potassium	39-2	4059.43	4148.13	4078.64	4095.40	1.14	ppb
Rhodium	103-2				101		%
Rhodium	103-1				102		%
Scandium	45-1				111		%
Scandium	45-2				105		%
Selenium	77-2	1.89	0.37	0.75	1.00	78.65	ppb
Selenium	78-2	1.48	-0.20	0.90	0.73	117.43	ppb
Selenium	82-1	2.06	0.79	1.81	1.55	43.48	ppb
Silicon	28-1	8172.44	8273.72	8258.31	8234.82	0.66	ppb
Silver	109-1	0.12	0.13	0.14	0.13	6.51	ppb
Silver	107-1	0.12	0.13	0.16	0.14	14.61	ppb
Sodium	23-2	60803.12	60934.31	61076.51	60937.98	0.22	ppb
Strontium	86-1	1191.54	1159.29	1185.49	1178.78	1.45	ppb
Strontium	88-1	1189.42	1169.12	1182.02	1180.19	0.87	ppb
Sulfur	34-1	47625.81	48371.14	48376.32	48124.42	0.90	ppb
Terbium	159-2				104		%
Terbium	159-1				108		%
Thallium	203-1	0.01	0.00	0.01	0.01	21.38	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	19.40	ppb
Tin	118-1	0.12	0.11	0.14	0.12	12.20	ppb
Titanium	47-1	1.31	1.26	1.31	1.29	2.39	ppb
Uranium	238-1	1.87	1.90	1.93	1.90	1.56	ppb
Vanadium	51-2	2.54	2.46	2.52	2.51	1.64	ppb
Yttrium	89-2				102		%
Yttrium	89-1				107		%
Zinc	66-2	21.81	21.69	21.57	21.69	0.56	ppb
Zirconium	90-1	0.06	0.06	0.05	0.06	5.23	ppb
Zirconium	91-1	0.06	0.05	0.06	0.06	6.32	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-03	Instrumnet Name :	P7
Client Sample ID :	MH4106	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:09:12	DataFile Name :	033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	37.79	37.79	40.65	38.74	4.26	ppb
Antimony	121-1	0.41	0.43	0.39	0.41	5.31	ppb
Arsenic	75-2	0.68	0.72	0.62	0.68	7.58	ppb
Barium	135-1	63.92	62.64	64.35	63.64	1.40	ppb
Barium	137-1	64.49	64.25	65.27	64.67	0.83	ppb
Beryllium	9-1	0.01	0.02	0.02	0.02	43.91	ppb
Bismuth	209-1				102		%
Bismuth	209-2				96		%
Boron	10-1	82.96	88.66	88.70	86.77	3.80	ppb
Boron	11-1	81.80	82.45	84.97	83.07	2.02	ppb
Cadmium	106-1	-0.54	-0.45	-0.42	-0.47		ppb
Cadmium	108-1	0.03	0.03	0.01	0.02	44.98	ppb
Cadmium	111-1	-0.02	0.00	0.00	-0.01		ppb
Calcium	43-1	133175.70	133661.66	133500.08	133445.81	0.19	ppb
Calcium	44-1	132992.26	134147.72	135065.91	134068.63	0.78	ppb
Chromium	52-2	1.23	1.30	1.26	1.26	2.73	ppb
Cobalt	59-2	0.06	0.05	0.05	0.05	15.81	ppb
Copper	63-2	1.44	1.38	1.47	1.43	3.11	ppb
Holmium	165-1				108		%
Holmium	165-2				104		%
Indium	115-2				99		%
Indium	115-1				107		%
Iron	56-2	61.59	58.21	57.10	58.97	3.96	ppb
Iron	57-2	78.58	77.33	75.76	77.22	1.82	ppb
Lead	206-1	0.62	0.64	0.60	0.62	3.07	ppb
Lead	207-1	0.60	0.56	0.62	0.59	4.68	ppb
Lead	208-1	0.60	0.59	0.60	0.60	1.21	ppb
Lithium	6-1				111		%
Magnesium	24-2	50827.91	51169.84	50322.01	50773.25	0.84	ppb
Manganese	55-2	3.10	3.17	3.09	3.12	1.37	ppb
Molybdenum	94-1	0.35	0.33	0.35	0.34	3.21	ppb
Molybdenum	95-1	0.97	1.04	1.03	1.02	3.43	ppb
Molybdenum	96-1	0.83	0.82	0.88	0.84	3.61	ppb
Molybdenum	97-1	1.04	0.95	1.03	1.01	5.00	ppb
Molybdenum	98-1	1.07	1.04	0.99	1.03	3.85	ppb
Nickel	60-2	-0.20	-0.27	-0.21	-0.23		ppb

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-03	Instrumnet Name :	P7
Client Sample ID :	MH4106	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:09:12	DataFile Name :	033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-19.58	-30.99	-30.93	-27.17		ppb
Potassium	39-2	2307.28	2307.27	2297.21	2303.92	0.25	ppb
Rhodium	103-2				101		%
Rhodium	103-1				102		%
Scandium	45-1				110		%
Scandium	45-2				105		%
Selenium	77-2	1.88	1.53	0.37	1.26	62.46	ppb
Selenium	78-2	1.64	0.64	1.25	1.18	42.65	ppb
Selenium	82-1	1.19	3.13	1.52	1.95	53.46	ppb
Silicon	28-1	6939.03	6969.65	6912.62	6940.43	0.41	ppb
Silver	107-1	0.09	0.12	0.14	0.12	19.42	ppb
Silver	109-1	0.11	0.13	0.13	0.12	10.86	ppb
Sodium	23-2	68967.03	69099.55	68429.25	68831.94	0.52	ppb
Strontium	86-1	1118.19	1114.46	1124.16	1118.94	0.44	ppb
Strontium	88-1	1114.33	1112.89	1111.80	1113.01	0.11	ppb
Sulfur	34-1	58320.29	59641.65	58865.99	58942.65	1.13	ppb
Terbium	159-1				108		%
Terbium	159-2				103		%
Thallium	203-1	0.00	0.00	0.00	0.00	5.09	ppb
Thallium	205-1	0.01	0.00	0.01	0.00	105.27	ppb
Tin	118-1	0.08	0.08	0.07	0.08	5.87	ppb
Titanium	47-1	1.71	1.46	1.58	1.59	7.75	ppb
Uranium	238-1	2.26	2.23	2.24	2.24	0.65	ppb
Vanadium	51-2	2.39	2.44	2.38	2.40	1.51	ppb
Yttrium	89-2				101		%
Yttrium	89-1				109		%
Zinc	66-2	5.57	6.05	5.42	5.68	5.81	ppb
Zirconium	90-1	0.04	0.03	0.03	0.03	16.66	ppb
Zirconium	91-1	0.03	0.03	0.02	0.03	15.77	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCV027	Instrumnet Name :	P7
Client Sample ID :	CCV027	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:12:15	DataFile Name :	034CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9220.78	9265.89	9340.66	9275.78	0.65	ppb
Antimony	121-1	508.45	502.45	504.11	505.00	0.61	ppb
Arsenic	75-2	520.98	516.88	515.13	517.66	0.58	ppb
Barium	135-1	2554.37	2510.06	2478.24	2514.22	1.52	ppb
Barium	137-1	2548.99	2506.21	2507.00	2520.73	0.97	ppb
Beryllium	9-1	516.41	517.12	517.40	516.98	0.10	ppb
Bismuth	209-2				94		%
Bismuth	209-1				99		%
Boron	10-1	477.32	483.75	489.76	483.61	1.29	ppb
Boron	11-1	454.68	465.53	476.06	465.42	2.30	ppb
Cadmium	106-1	509.31	509.94	511.16	510.14	0.18	ppb
Cadmium	108-1	512.56	506.86	506.01	508.47	0.70	ppb
Cadmium	111-1	498.57	494.31	502.47	498.45	0.82	ppb
Calcium	43-1	50037.05	49582.39	49508.51	49709.32	0.58	ppb
Calcium	44-1	49175.23	49026.88	49244.53	49148.88	0.23	ppb
Chromium	52-2	525.83	534.37	534.64	531.61	0.94	ppb
Cobalt	59-2	524.84	533.54	535.42	531.27	1.06	ppb
Copper	63-2	1076.35	1061.72	1082.00	1073.36	0.97	ppb
Holmium	165-2				100		%
Holmium	165-1				102		%
Indium	115-2				91		%
Indium	115-1				96		%
Iron	56-2	25196.70	25183.34	25808.15	25396.06	1.41	ppb
Iron	57-2	25609.92	25410.13	26055.53	25691.86	1.29	ppb
Lead	206-1	512.73	503.76	511.73	509.41	0.96	ppb
Lead	207-1	517.81	504.68	513.33	511.94	1.30	ppb
Lead	208-1	511.36	504.62	507.34	507.77	0.67	ppb
Lithium	6-1				99		%
Magnesium	24-2	50634.94	50435.93	50578.25	50549.71	0.20	ppb
Manganese	55-2	1044.15	1051.13	1059.14	1051.47	0.71	ppb
Molybdenum	96-1	511.05	514.20	511.13	512.12	0.35	ppb
Molybdenum	97-1	512.26	513.14	507.88	511.09	0.55	ppb
Molybdenum	98-1	501.06	509.71	510.61	507.13	1.04	ppb
Molybdenum	94-1	500.30	509.72	508.64	506.22	1.02	ppb
Molybdenum	95-1	511.13	512.41	512.43	511.99	0.14	ppb
Nickel	60-2	520.93	525.88	527.31	524.70	0.64	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCV027	Instrumnet Name :	P7
Client Sample ID :	CCV027	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:12:15	DataFile Name :	034CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	10081.66	10231.90	10510.58	10274.71	2.12	ppb
Potassium	39-2	23859.77	23812.76	24284.41	23985.65	1.08	ppb
Rhodium	103-2				97		%
Rhodium	103-1				96		%
Scandium	45-1				102		%
Scandium	45-2				103		%
Selenium	77-2	495.32	521.26	530.50	515.70	3.54	ppb
Selenium	78-2	514.00	517.87	520.11	517.33	0.60	ppb
Selenium	82-1	514.88	520.82	516.02	517.24	0.61	ppb
Silicon	28-1	497.01	499.87	507.58	501.49	1.09	ppb
Silver	109-1	510.05	506.50	512.09	509.55	0.55	ppb
Silver	107-1	511.49	503.66	516.15	510.44	1.24	ppb
Sodium	23-2	49848.70	50326.37	50340.20	50171.76	0.56	ppb
Strontium	86-1	518.03	510.71	514.24	514.33	0.71	ppb
Strontium	88-1	509.58	507.59	517.44	511.53	1.02	ppb
Sulfur	34-1	11342.44	11152.72	11263.58	11252.91	0.85	ppb
Terbium	159-1				103		%
Terbium	159-2				100		%
Thallium	203-1	509.65	501.46	506.20	505.77	0.81	ppb
Thallium	205-1	508.73	497.50	503.63	503.28	1.12	ppb
Tin	118-1	509.54	505.32	505.63	506.83	0.46	ppb
Titanium	47-1	496.38	502.24	502.22	500.28	0.68	ppb
Uranium	238-1	499.71	500.66	502.58	500.98	0.29	ppb
Vanadium	51-2	521.85	535.00	538.48	531.78	1.65	ppb
Yttrium	89-2				98		%
Yttrium	89-1				101		%
Zinc	66-2	1058.95	1061.16	1059.97	1060.03	0.10	ppb
Zirconium	90-1	505.70	509.43	509.86	508.33	0.45	ppb
Zirconium	91-1	505.39	513.02	508.07	508.83	0.76	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCB027	Instrumnet Name :	P7
Client Sample ID :	CCB027	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:15:08	DataFile Name :	035CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.38	-0.07	0.16	0.16	143.84	ppb
Antimony	121-1	0.25	0.23	0.28	0.25	8.67	ppb
Arsenic	75-2	0.04	0.01	0.00	0.02	108.40	ppb
Barium	135-1	0.04	0.02	0.05	0.04	41.45	ppb
Barium	137-1	0.04	0.03	0.03	0.03	16.48	ppb
Beryllium	9-1	0.06	0.04	0.04	0.05	24.13	ppb
Bismuth	209-1				101		%
Bismuth	209-2				96		%
Boron	10-1	11.99	12.87	10.92	11.93	8.22	ppb
Boron	11-1	12.81	12.46	11.43	12.24	5.90	ppb
Cadmium	106-1	-0.53	-0.56	-0.23	-0.44		ppb
Cadmium	108-1	0.04	0.01	0.01	0.02	58.50	ppb
Cadmium	111-1	-0.03	-0.03	0.00	-0.02		ppb
Calcium	43-1	1.04	-0.22	0.82	0.54	123.58	ppb
Calcium	44-1	-2.13	-2.26	-2.28	-2.22		ppb
Chromium	52-2	-0.05	-0.03	-0.08	-0.05		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	143.26	ppb
Copper	63-2	0.09	0.11	0.05	0.08	35.82	ppb
Holmium	165-2				98		%
Holmium	165-1				100		%
Indium	115-1				100		%
Indium	115-2				95		%
Iron	56-2	0.28	0.17	0.14	0.19	36.94	ppb
Iron	57-2	-0.18	0.49	1.31	0.54	138.95	ppb
Lead	206-1	0.02	-0.01	0.01	0.01	169.29	ppb
Lead	207-1	0.00	0.02	0.01	0.01	88.27	ppb
Lead	208-1	0.00	0.00	0.01	0.00	59.37	ppb
Lithium	6-1				100		%
Magnesium	24-2	1.22	1.39	1.23	1.28	7.44	ppb
Manganese	55-2	0.02	0.02	0.02	0.02	21.61	ppb
Molybdenum	98-1	0.04	0.03	0.04	0.04	15.50	ppb
Molybdenum	94-1	0.03	0.03	0.02	0.03	21.69	ppb
Molybdenum	95-1	0.06	0.04	0.03	0.04	25.94	ppb
Molybdenum	96-1	0.04	0.03	0.03	0.03	19.54	ppb
Molybdenum	97-1	0.06	0.05	0.01	0.04	56.51	ppb
Nickel	60-2	-0.13	-0.02	-0.06	-0.07		ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCB027	Instrumnet Name :	P7
Client Sample ID :	CCB027	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:15:08	DataFile Name :	035CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-37.28	-34.27	-34.21	-35.25		ppb
Potassium	39-2	8.02	10.42	5.95	8.13	27.53	ppb
Rhodium	103-1				99		%
Rhodium	103-2				99		%
Scandium	45-1				100		%
Scandium	45-2				98		%
Selenium	82-1	-1.34	-1.41	1.41	-0.45		ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.24	-0.65	-0.10	-0.33		ppb
Silicon	28-1	-1.12	-0.91	-1.75	-1.26		ppb
Silver	107-1	0.04	0.04	0.05	0.04	8.23	ppb
Silver	109-1	0.06	0.05	0.05	0.05	14.56	ppb
Sodium	23-2	24.37	24.35	23.84	24.19	1.24	ppb
Strontium	86-1	0.02	0.07	0.12	0.07	68.61	ppb
Strontium	88-1	0.01	0.02	0.01	0.01	16.90	ppb
Sulfur	34-1	280.36	418.80	316.16	338.44	21.23	ppb
Terbium	159-1				100		%
Terbium	159-2				98		%
Thallium	203-1	0.06	0.06	0.04	0.05	24.65	ppb
Thallium	205-1	0.06	0.06	0.04	0.05	14.41	ppb
Tin	118-1	0.05	0.07	0.07	0.06	12.25	ppb
Titanium	47-1	-0.01	0.01	-0.01	-0.01		ppb
Uranium	238-1	0.01	0.02	0.01	0.01	20.93	ppb
Vanadium	51-2	0.00	0.01	0.00	0.00	376.23	ppb
Yttrium	89-1				100		%
Yttrium	89-2				96		%
Zinc	66-2	-0.20	-0.05	-0.39	-0.21		ppb
Zirconium	90-1	0.02	0.02	0.02	0.02	11.38	ppb
Zirconium	91-1	0.02	0.01	0.01	0.02	44.82	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-04	Instrumnet Name :	P7
Client Sample ID :	MH4107	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:19:02	DataFile Name :	036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8383.17	8100.93	8209.33	8231.14	1.73	ppb
Antimony	121-1	2.90	2.95	3.05	2.97	2.58	ppb
Arsenic	75-2	66.04	66.19	66.35	66.19	0.23	ppb
Barium	135-1	202.56	205.31	205.32	204.40	0.78	ppb
Barium	137-1	205.03	206.03	206.15	205.74	0.30	ppb
Beryllium	9-1	1.90	1.83	2.05	1.93	5.83	ppb
Bismuth	209-1				104		%
Bismuth	209-2				98		%
Boron	10-1	71.14	72.45	72.06	71.88	0.94	ppb
Boron	11-1	67.90	67.35	68.33	67.86	0.72	ppb
Cadmium	111-1	2.51	2.53	2.58	2.54	1.34	ppb
Cadmium	106-1	3.36	2.25	2.58	2.73	20.77	ppb
Cadmium	108-1	2.69	2.71	2.36	2.59	7.54	ppb
Calcium	43-1	179199.50	178015.43	178454.54	178556.49	0.34	ppb
Calcium	44-1	179055.60	178305.10	179910.70	179090.47	0.45	ppb
Chromium	52-2	55.16	53.50	54.87	54.51	1.63	ppb
Cobalt	59-2	15.73	15.33	15.95	15.67	2.01	ppb
Copper	63-2	102.13	101.23	101.86	101.74	0.45	ppb
Holmium	165-2				104		%
Holmium	165-1				109		%
Indium	115-1				105		%
Indium	115-2				98		%
Iron	56-2	13452.40	13243.04	13671.57	13455.67	1.59	ppb
Iron	57-2	13243.76	13010.10	13403.59	13219.15	1.50	ppb
Lead	206-1	126.13	126.33	129.49	127.32	1.48	ppb
Lead	207-1	124.89	124.31	125.96	125.05	0.67	ppb
Lead	208-1	125.95	126.94	128.39	127.09	0.96	ppb
Lithium	6-1				112		%
Magnesium	24-2	41101.69	40542.21	40610.85	40751.58	0.75	ppb
Manganese	55-2	352.17	344.47	355.22	350.62	1.58	ppb
Molybdenum	94-1	1.81	1.85	1.82	1.82	1.14	ppb
Molybdenum	95-1	2.11	2.15	2.11	2.12	1.05	ppb
Molybdenum	96-1	2.07	2.10	2.07	2.08	0.81	ppb
Molybdenum	97-1	2.15	2.25	2.23	2.21	2.49	ppb
Molybdenum	98-1	2.09	2.10	2.20	2.13	2.95	ppb
Nickel	60-2	25.73	25.93	25.99	25.88	0.52	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-04	Instrumnet Name :	P7
Client Sample ID :	MH4107	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:19:02	DataFile Name :	036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	1195.20	1252.83	1265.24	1237.76	3.02	ppb
Potassium	39-2	2578.84	2538.66	2575.16	2564.22	0.87	ppb
Rhodium	103-2				101		%
Rhodium	103-1				101		%
Scandium	45-1				112		%
Scandium	45-2				103		%
Selenium	77-2	8.62	10.78	13.21	10.87	21.13	ppb
Selenium	78-2	3.96	3.50	3.90	3.79	6.54	ppb
Selenium	82-1	4.33	2.13	3.54	3.34	33.40	ppb
Silicon	28-1	19129.26	18896.20	19156.77	19060.74	0.75	ppb
Silver	109-1	2.81	3.01	3.04	2.95	4.22	ppb
Silver	107-1	2.90	2.98	3.05	2.98	2.57	ppb
Sodium	23-2	33612.43	32790.41	33713.69	33372.18	1.52	ppb
Strontium	86-1	862.32	857.51	856.88	858.90	0.35	ppb
Strontium	88-1	857.71	856.42	852.68	855.60	0.30	ppb
Sulfur	34-1	17905.97	17651.98	17718.44	17758.80	0.74	ppb
Terbium	159-1				109		%
Terbium	159-2				103		%
Thallium	203-1	1.46	1.46	1.47	1.46	0.64	ppb
Thallium	205-1	1.47	1.47	1.50	1.48	1.17	ppb
Tin	118-1	2.96	2.99	3.12	3.02	2.72	ppb
Titanium	47-1	132.92	134.86	135.59	134.46	1.02	ppb
Uranium	238-1	3.46	3.49	3.55	3.50	1.27	ppb
Vanadium	51-2	32.63	31.79	32.75	32.39	1.63	ppb
Yttrium	89-2				110		%
Yttrium	89-1				118		%
Zinc	66-2	765.11	750.25	756.32	757.23	0.99	ppb
Zirconium	90-1	1.66	1.67	1.74	1.69	2.58	ppb
Zirconium	91-1	1.70	1.64	1.80	1.71	4.53	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-05	Instrumnet Name :	P7
Client Sample ID :	MH4137	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:22:07	DataFile Name :	037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	512.90	509.42	503.59	508.64	0.93	ppb
Antimony	121-1	0.29	0.26	0.29	0.28	7.43	ppb
Arsenic	75-2	1.07	1.01	1.02	1.03	2.97	ppb
Barium	135-1	57.04	58.75	58.44	58.08	1.57	ppb
Barium	137-1	57.99	57.72	58.71	58.14	0.88	ppb
Beryllium	9-1	0.05	0.04	0.03	0.04	23.33	ppb
Bismuth	209-1				106		%
Bismuth	209-2				98		%
Boron	10-1	40.95	43.29	39.98	41.41	4.11	ppb
Boron	11-1	38.96	41.36	39.99	40.10	3.01	ppb
Cadmium	111-1	-0.01	-0.05	0.00	-0.02		ppb
Cadmium	106-1	-0.59	-1.24	-0.53	-0.78		ppb
Cadmium	108-1	0.09	0.03	0.01	0.04	92.98	ppb
Calcium	43-1	85629.45	86938.50	85064.12	85877.36	1.12	ppb
Calcium	44-1	85059.76	85882.00	84736.26	85226.01	0.69	ppb
Chromium	52-2	0.83	0.86	0.89	0.86	3.32	ppb
Cobalt	59-2	0.29	0.32	0.31	0.31	5.86	ppb
Copper	63-2	3.63	3.64	3.74	3.67	1.65	ppb
Holmium	165-2				105		%
Holmium	165-1				108		%
Indium	115-1				106		%
Indium	115-2				98		%
Iron	56-2	515.67	512.43	510.32	512.81	0.53	ppb
Iron	57-2	515.08	498.22	505.17	506.16	1.67	ppb
Lead	206-1	1.03	0.98	0.97	0.99	2.92	ppb
Lead	207-1	0.98	0.96	0.97	0.97	0.66	ppb
Lead	208-1	1.00	0.99	0.97	0.99	1.51	ppb
Lithium	6-1				110		%
Magnesium	24-2	24961.90	25405.32	25145.96	25171.06	0.89	ppb
Manganese	55-2	32.68	32.69	32.56	32.64	0.22	ppb
Molybdenum	94-1	0.27	0.28	0.29	0.28	2.95	ppb
Molybdenum	95-1	0.65	0.62	0.57	0.62	7.19	ppb
Molybdenum	96-1	0.53	0.51	0.54	0.53	3.40	ppb
Molybdenum	97-1	0.62	0.60	0.65	0.62	4.25	ppb
Molybdenum	98-1	0.60	0.62	0.53	0.58	8.53	ppb
Nickel	60-2	0.45	0.52	0.37	0.44	16.64	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-05	Instrumnet Name :	P7
Client Sample ID :	MH4137	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:22:07	DataFile Name :	037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	36.75	23.83	53.82	38.13	39.44	ppb
Potassium	39-2	1280.74	1290.86	1288.02	1286.54	0.41	ppb
Rhodium	103-2				102		%
Rhodium	103-1				103		%
Scandium	45-1				109		%
Scandium	45-2				102		%
Selenium	77-2	3.03	1.53	1.91	2.16	36.37	ppb
Selenium	78-2	0.87	0.45	0.70	0.67	30.99	ppb
Selenium	82-1	1.96	0.32	0.71	1.00	86.17	ppb
Silicon	28-1	5691.35	5768.67	5732.77	5730.93	0.68	ppb
Silver	109-1	0.11	0.13	0.13	0.13	9.54	ppb
Silver	107-1	0.11	0.13	0.14	0.12	13.74	ppb
Sodium	23-2	23345.13	23724.92	23640.90	23570.32	0.85	ppb
Strontium	86-1	567.38	568.36	562.57	566.11	0.55	ppb
Strontium	88-1	566.86	567.09	565.34	566.43	0.17	ppb
Sulfur	34-1	31866.81	32242.88	31644.06	31917.91	0.95	ppb
Terbium	159-1				109		%
Terbium	159-2				104		%
Thallium	203-1	0.02	0.02	0.02	0.02	7.00	ppb
Thallium	205-1	0.03	0.02	0.02	0.02	16.65	ppb
Tin	118-1	0.09	0.09	0.07	0.08	12.88	ppb
Titanium	47-1	10.72	12.66	10.27	11.22	11.34	ppb
Uranium	238-1	1.20	1.18	1.20	1.19	0.76	ppb
Vanadium	51-2	2.23	2.28	2.24	2.25	1.08	ppb
Yttrium	89-2				100		%
Yttrium	89-1				107		%
Zinc	66-2	8.05	7.82	7.71	7.86	2.17	ppb
Zirconium	90-1	0.18	0.20	0.19	0.19	5.92	ppb
Zirconium	91-1	0.13	0.19	0.13	0.15	21.45	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-06	Instrumnet Name :	P7
Client Sample ID :	MH4137D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:25:10	DataFile Name :	038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	566.77	567.63	562.83	565.75	0.45	ppb
Antimony	121-1	0.32	0.30	0.29	0.30	3.95	ppb
Arsenic	75-2	1.11	1.02	1.00	1.04	5.53	ppb
Barium	135-1	57.04	58.05	59.22	58.10	1.88	ppb
Barium	137-1	57.96	58.38	58.89	58.41	0.80	ppb
Beryllium	9-1	0.05	0.05	0.04	0.05	11.28	ppb
Bismuth	209-2				98		%
Bismuth	209-1				105		%
Boron	10-1	39.57	44.17	40.38	41.37	5.93	ppb
Boron	11-1	38.28	39.92	38.92	39.04	2.12	ppb
Cadmium	106-1	-1.25	-0.23	-0.45	-0.64		ppb
Cadmium	111-1	-0.05	0.01	0.00	-0.02		ppb
Cadmium	108-1	0.07	0.11	0.05	0.08	38.16	ppb
Calcium	43-1	86140.03	85967.05	87513.19	86540.09	0.98	ppb
Calcium	44-1	85920.48	85802.38	86480.73	86067.86	0.42	ppb
Chromium	52-2	0.89	0.87	0.94	0.90	3.51	ppb
Cobalt	59-2	0.32	0.31	0.34	0.32	4.98	ppb
Copper	63-2	3.86	3.78	3.91	3.85	1.75	ppb
Holmium	165-2				104		%
Holmium	165-1				109		%
Indium	115-1				105		%
Indium	115-2				98		%
Iron	56-2	550.56	571.76	555.51	559.28	1.98	ppb
Iron	57-2	558.13	558.62	563.11	559.95	0.49	ppb
Lead	206-1	1.00	1.08	1.07	1.05	4.62	ppb
Lead	207-1	1.02	0.98	1.00	1.00	1.69	ppb
Lead	208-1	1.02	1.01	1.02	1.01	0.62	ppb
Lithium	6-1				110		%
Magnesium	24-2	25067.34	25320.42	25274.81	25220.86	0.53	ppb
Manganese	55-2	33.58	33.68	33.77	33.67	0.28	ppb
Molybdenum	94-1	0.33	0.26	0.33	0.31	13.11	ppb
Molybdenum	95-1	0.63	0.61	0.60	0.62	2.20	ppb
Molybdenum	96-1	0.56	0.57	0.51	0.55	6.09	ppb
Molybdenum	97-1	0.58	0.64	0.58	0.60	6.06	ppb
Molybdenum	98-1	0.56	0.60	0.61	0.59	4.79	ppb
Nickel	60-2	0.52	0.54	0.55	0.54	3.79	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-06	Instrumnet Name :	P7
Client Sample ID :	MH4137D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:25:10	DataFile Name :	038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	53.04	31.22	47.52	43.93	25.83	ppb
Potassium	39-2	1279.52	1292.13	1305.01	1292.22	0.99	ppb
Rhodium	103-2				101		%
Rhodium	103-1				103		%
Scandium	45-1				108		%
Scandium	45-2				102		%
Selenium	77-2	2.27	1.93	1.91	2.04	9.93	ppb
Selenium	78-2	0.23	0.30	1.02	0.52	84.49	ppb
Selenium	82-1	2.97	1.76	2.02	2.25	28.37	ppb
Silicon	28-1	5822.85	5821.14	5879.99	5841.33	0.57	ppb
Silver	107-1	0.10	0.11	0.10	0.11	7.37	ppb
Silver	109-1	0.11	0.10	0.11	0.10	3.83	ppb
Sodium	23-2	23607.94	23685.73	23602.88	23632.18	0.20	ppb
Strontium	86-1	580.98	574.93	578.32	578.08	0.52	ppb
Strontium	88-1	572.83	572.48	571.88	572.39	0.08	ppb
Sulfur	34-1	32330.35	32463.36	33073.92	32622.54	1.22	ppb
Terbium	159-2				104		%
Terbium	159-1				109		%
Thallium	203-1	0.01	0.02	0.01	0.02	18.18	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	26.20	ppb
Tin	118-1	0.07	0.06	0.08	0.07	8.42	ppb
Titanium	47-1	11.19	11.53	11.77	11.50	2.52	ppb
Uranium	238-1	1.20	1.25	1.22	1.22	1.99	ppb
Vanadium	51-2	2.32	2.53	2.43	2.43	4.27	ppb
Yttrium	89-2				100		%
Yttrium	89-1				107		%
Zinc	66-2	7.68	7.92	7.85	7.82	1.56	ppb
Zirconium	90-1	0.19	0.22	0.18	0.20	11.75	ppb
Zirconium	91-1	0.21	0.17	0.18	0.19	12.15	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-07	Instrumnet Name :	P7
Client Sample ID :	MH4137S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:28:14	DataFile Name :	039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2612.30	2634.54	2599.11	2615.32	0.68	ppb
Antimony	121-1	105.67	105.68	106.33	105.89	0.36	ppb
Arsenic	75-2	45.93	45.36	46.89	46.06	1.67	ppb
Barium	135-1	2282.76	2257.57	2317.74	2286.02	1.32	ppb
Barium	137-1	2278.04	2285.91	2309.45	2291.13	0.71	ppb
Beryllium	9-1	54.97	54.92	55.40	55.10	0.48	ppb
Bismuth	209-1				106		%
Bismuth	209-2				97		%
Boron	10-1	41.29	39.36	39.06	39.90	3.03	ppb
Boron	11-1	37.54	38.24	39.16	38.31	2.12	ppb
Cadmium	111-1	54.18	55.47	54.96	54.87	1.19	ppb
Cadmium	106-1	41.86	45.53	44.71	44.03	4.37	ppb
Cadmium	108-1	49.21	48.48	48.85	48.85	0.74	ppb
Calcium	43-1	86376.73	86061.13	86926.41	86454.76	0.51	ppb
Calcium	44-1	85477.87	85231.18	85968.86	85559.30	0.44	ppb
Chromium	52-2	240.94	239.43	236.29	238.89	0.99	ppb
Cobalt	59-2	626.02	622.28	607.88	618.73	1.55	ppb
Copper	63-2	316.92	313.20	311.57	313.89	0.87	ppb
Holmium	165-2				102		%
Holmium	165-1				108		%
Indium	115-1				105		%
Indium	115-2				96		%
Iron	56-2	1775.96	1750.02	1734.20	1753.39	1.20	ppb
Iron	57-2	1764.74	1726.30	1738.04	1743.03	1.13	ppb
Lead	206-1	22.78	22.89	22.97	22.88	0.41	ppb
Lead	207-1	23.34	23.53	23.24	23.37	0.63	ppb
Lead	208-1	23.21	23.26	23.16	23.21	0.22	ppb
Lithium	6-1				110		%
Magnesium	24-2	25628.55	25045.16	24716.44	25130.05	1.84	ppb
Manganese	55-2	627.21	624.02	613.32	621.52	1.17	ppb
Molybdenum	94-1	0.46	0.45	0.45	0.45	1.15	ppb
Molybdenum	95-1	1.13	1.17	1.09	1.13	3.21	ppb
Molybdenum	96-1	1.01	0.95	0.99	0.98	2.73	ppb
Molybdenum	97-1	1.20	1.19	1.11	1.17	4.36	ppb
Molybdenum	98-1	1.12	1.13	1.15	1.13	1.27	ppb
Nickel	60-2	621.92	613.69	603.39	613.00	1.51	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-07	Instrumnet Name :	P7
Client Sample ID :	MH4137S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:28:14	DataFile Name :	039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	51.34	50.39	43.58	48.44	8.74	ppb
Potassium	39-2	1279.04	1280.84	1273.20	1277.69	0.31	ppb
Rhodium	103-2				100		%
Rhodium	103-1				103		%
Scandium	45-1				107		%
Scandium	45-2				99		%
Selenium	77-2	119.04	127.54	113.24	119.94	6.00	ppb
Selenium	78-2	113.52	116.57	113.31	114.47	1.59	ppb
Selenium	82-1	120.28	115.72	119.37	118.45	2.04	ppb
Silicon	28-1	5776.85	5702.34	5781.58	5753.59	0.77	ppb
Silver	109-1	54.42	53.90	54.50	54.27	0.60	ppb
Silver	107-1	55.00	54.25	54.45	54.57	0.71	ppb
Sodium	23-2	24052.54	23588.33	23303.39	23648.09	1.60	ppb
Strontium	86-1	574.18	567.66	558.85	566.89	1.36	ppb
Strontium	88-1	568.86	561.78	564.42	565.02	0.63	ppb
Sulfur	34-1	32023.58	31569.10	32507.33	32033.34	1.46	ppb
Terbium	159-1				109		%
Terbium	159-2				101		%
Thallium	203-1	53.62	52.97	53.28	53.29	0.61	ppb
Thallium	205-1	54.73	54.04	54.51	54.43	0.64	ppb
Tin	118-1	0.13	0.12	0.15	0.13	9.06	ppb
Titanium	47-1	11.44	11.28	12.16	11.63	4.06	ppb
Uranium	238-1	1.22	1.22	1.20	1.21	0.96	ppb
Vanadium	51-2	609.72	609.73	603.59	607.68	0.58	ppb
Yttrium	89-2				98		%
Yttrium	89-1				107		%
Zinc	66-2	641.03	629.83	623.27	631.38	1.42	ppb
Zirconium	90-1	0.15	0.17	0.14	0.16	10.83	ppb
Zirconium	91-1	0.20	0.19	0.16	0.18	11.66	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-05LX5	Instrumnet Name :	P7
Client Sample ID :	MH4137L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-23 12:31:15	DataFile Name :	040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	134.01	135.79	141.41	137.07	2.82	ppb
Antimony	121-1	0.06	0.05	0.06	0.06	12.24	ppb
Arsenic	75-2	0.22	0.19	0.23	0.21	9.68	ppb
Barium	135-1	11.44	11.25	11.78	11.49	2.36	ppb
Barium	137-1	11.62	11.50	11.65	11.59	0.69	ppb
Beryllium	9-1	0.02	0.01	0.02	0.02	33.09	ppb
Bismuth	209-2				97		%
Bismuth	209-1				104		%
Boron	10-1	8.02	8.19	8.57	8.26	3.43	ppb
Boron	11-1	8.38	8.34	7.74	8.15	4.41	ppb
Cadmium	108-1	0.01	-0.03	0.01	0.00		ppb
Cadmium	111-1	-0.07	-0.03	-0.07	-0.06		ppb
Cadmium	106-1	-1.06	-0.64	-1.03	-0.91		ppb
Calcium	43-1	16513.50	16821.54	16866.15	16733.73	1.15	ppb
Calcium	44-1	16901.29	17135.74	17087.60	17041.54	0.73	ppb
Chromium	52-2	0.21	0.20	0.21	0.21	2.24	ppb
Cobalt	59-2	0.07	0.05	0.07	0.06	14.51	ppb
Copper	63-2	0.74	0.83	0.75	0.77	5.93	ppb
Holmium	165-2				101		%
Holmium	165-1				104		%
Indium	115-1				103		%
Indium	115-2				95		%
Iron	56-2	115.00	122.88	129.67	122.52	5.99	ppb
Iron	57-2	113.47	121.44	112.84	115.92	4.14	ppb
Lead	206-1	0.15	0.17	0.15	0.16	5.37	ppb
Lead	207-1	0.18	0.15	0.14	0.16	12.47	ppb
Lead	208-1	0.16	0.16	0.15	0.16	3.53	ppb
Lithium	6-1				105		%
Magnesium	24-2	5133.67	5087.39	5229.52	5150.19	1.41	ppb
Manganese	55-2	6.46	6.64	6.64	6.58	1.57	ppb
Molybdenum	96-1	0.29	0.09	0.13	0.17	61.14	ppb
Molybdenum	97-1	0.09	0.14	0.14	0.12	21.58	ppb
Molybdenum	98-1	0.09	0.12	0.13	0.11	17.85	ppb
Molybdenum	95-1	0.11	0.13	0.11	0.12	8.70	ppb
Molybdenum	94-1	0.08	0.07	0.08	0.07	8.23	ppb
Nickel	60-2	0.12	0.18	0.07	0.13	46.30	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-05LX5	Instrumnet Name :	P7
Client Sample ID :	MH4137L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-23 12:31:15	DataFile Name :	040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-27.92	-26.79	-18.25	-24.32		ppb
Potassium	39-2	260.58	277.06	274.27	270.64	3.26	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				102		%
Scandium	45-2				98		%
Selenium	77-2	0.39	0.39	0.00	0.26	86.60	ppb
Selenium	78-2	-0.59	-0.41	-0.69	-0.57		ppb
Selenium	82-1	-0.84	-0.95	0.07	-0.57		ppb
Silicon	28-1	1244.10	1338.06	1221.20	1267.79	4.88	ppb
Silver	107-1	0.03	0.03	0.02	0.02	21.70	ppb
Silver	109-1	0.03	0.04	0.04	0.03	21.09	ppb
Sodium	23-2	4701.99	4818.74	4785.06	4768.60	1.26	ppb
Strontium	86-1	109.46	111.18	109.77	110.14	0.83	ppb
Strontium	88-1	113.28	113.66	112.47	113.14	0.54	ppb
Sulfur	34-1	7604.71	7751.63	7934.78	7763.71	2.13	ppb
Terbium	159-2				101		%
Terbium	159-1				104		%
Thallium	203-1	0.00	0.00	0.00	0.00	11.60	ppb
Thallium	205-1	0.01	0.00	0.00	0.00	58.83	ppb
Tin	118-1	0.02	0.01	0.01	0.01	60.04	ppb
Titanium	47-1	2.80	6.87	3.27	4.31	51.59	ppb
Uranium	238-1	0.22	0.23	0.23	0.23	2.29	ppb
Vanadium	51-2	0.52	0.59	0.55	0.55	6.42	ppb
Yttrium	89-2				97		%
Yttrium	89-1				102		%
Zinc	66-2	1.54	1.86	1.80	1.74	9.94	ppb
Zirconium	90-1	0.12	0.10	0.08	0.10	20.96	ppb
Zirconium	91-1	0.04	0.05	0.06	0.05	20.23	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	PB90705BS	Instrumnet Name :	P7
Client Sample ID :	LCS007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:37:32	DataFile Name :	042LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	37.81	38.50	39.94	38.75	2.81	ppb
Antimony	121-1	3.70	3.68	3.84	3.74	2.42	ppb
Arsenic	75-2	2.00	2.10	2.07	2.05	2.55	ppb
Barium	135-1	19.03	18.97	18.97	18.99	0.19	ppb
Barium	137-1	18.90	19.35	19.54	19.26	1.71	ppb
Beryllium	9-1	1.90	2.01	1.86	1.92	3.94	ppb
Bismuth	209-1				103		%
Bismuth	209-2				96		%
Boron	10-1	16.94	18.49	17.16	17.53	4.78	ppb
Boron	11-1	16.24	17.23	17.98	17.15	5.07	ppb
Cadmium	106-1	1.40	0.88	1.64	1.31	29.58	ppb
Cadmium	108-1	2.39	1.95	2.25	2.19	10.31	ppb
Cadmium	111-1	1.94	1.86	1.96	1.92	2.81	ppb
Calcium	43-1	936.79	927.61	892.00	918.80	2.58	ppb
Calcium	44-1	935.79	944.27	921.46	933.84	1.23	ppb
Chromium	52-2	4.29	4.32	4.28	4.30	0.52	ppb
Cobalt	59-2	2.11	2.03	2.11	2.08	2.27	ppb
Copper	63-2	4.10	4.32	4.29	4.24	2.77	ppb
Holmium	165-2				98		%
Holmium	165-1				100		%
Indium	115-2				94		%
Indium	115-1				99		%
Iron	56-2	477.42	478.27	481.00	478.90	0.39	ppb
Iron	57-2	468.36	463.25	466.83	466.15	0.56	ppb
Lead	206-1	1.78	1.84	1.82	1.81	1.78	ppb
Lead	207-1	1.91	1.88	1.80	1.86	3.07	ppb
Lead	208-1	1.83	1.87	1.85	1.85	0.86	ppb
Lithium	6-1				101		%
Magnesium	24-2	1009.24	993.98	1000.68	1001.30	0.76	ppb
Manganese	55-2	2.15	2.01	2.08	2.08	3.38	ppb
Molybdenum	94-1	4.19	4.24	4.25	4.23	0.71	ppb
Molybdenum	95-1	9.79	10.13	9.92	9.95	1.74	ppb
Molybdenum	96-1	8.45	8.68	8.49	8.54	1.42	ppb
Molybdenum	97-1	9.88	10.17	9.85	9.97	1.77	ppb
Molybdenum	98-1	9.94	10.04	9.85	9.94	0.97	ppb
Nickel	60-2	1.89	1.95	1.95	1.93	1.73	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	PB90705BS	Instrumnet Name :	P7
Client Sample ID :	LCS007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:37:32	DataFile Name :	042LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	77.36	43.34	75.84	65.51	29.33	ppb
Potassium	39-2	947.53	930.32	946.85	941.57	1.04	ppb
Rhodium	103-1				99		%
Rhodium	103-2				98		%
Scandium	45-2				96		%
Scandium	45-1				99		%
Selenium	82-1	10.05	7.84	12.32	10.07	22.26	ppb
Selenium	77-2	7.21	11.35	8.05	8.87	24.68	ppb
Selenium	78-2	7.84	10.92	9.28	9.35	16.44	ppb
Silicon	28-1	14.65	14.44	14.94	14.68	1.74	ppb
Silver	109-1	2.23	2.18	2.22	2.21	1.07	ppb
Silver	107-1	2.28	2.22	2.29	2.26	1.50	ppb
Sodium	23-2	1033.48	1014.78	1027.22	1025.16	0.93	ppb
Strontium	86-1	1.94	2.16	1.83	1.98	8.60	ppb
Strontium	88-1	1.99	1.99	2.01	2.00	0.72	ppb
Sulfur	34-1	1166.86	655.47	620.06	814.13	37.58	ppb
Terbium	159-1				101		%
Terbium	159-2				97		%
Thallium	203-1	1.85	1.82	1.88	1.85	1.48	ppb
Thallium	205-1	1.92	1.91	1.89	1.90	0.92	ppb
Tin	118-1	9.87	9.78	9.92	9.86	0.76	ppb
Titanium	47-1	9.73	9.51	9.24	9.49	2.58	ppb
Uranium	238-1	1.82	1.79	1.76	1.79	1.72	ppb
Vanadium	51-2	10.50	10.39	10.06	10.32	2.23	ppb
Yttrium	89-2				95		%
Yttrium	89-1				99		%
Zinc	66-2	3.91	3.88	3.97	3.92	1.08	ppb
Zirconium	91-1	1.88	1.83	1.86	1.86	1.32	ppb
Zirconium	90-1	1.81	1.79	1.74	1.78	2.01	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	PB90705BL	Instrumnet Name :	P7
Client Sample ID :	PBW007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:50:01	DataFile Name :	046CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.08	0.32	0.40	0.26	61.70	ppb
Antimony	121-1	0.00	0.01	0.01	0.01	33.37	ppb
Arsenic	75-2	-0.01	0.01	0.01	0.00	484.81	ppb
Barium	135-1	0.00	0.00	0.00	0.00	22966.70	ppb
Barium	137-1	0.00	0.00	0.00	0.00	360.18	ppb
Beryllium	9-1	0.00	0.00	0.03	0.01	130.11	ppb
Bismuth	209-1				102		%
Bismuth	209-2				97		%
Boron	10-1	-2.13	-3.50	-2.80	-2.81		ppb
Boron	11-1	-2.09	-1.83	-1.96	-1.96		ppb
Cadmium	106-1	-0.80	-0.36	-0.38	-0.51		ppb
Cadmium	108-1	-0.03	-0.03	-0.03	-0.03		ppb
Cadmium	111-1	-0.06	-0.03	-0.03	-0.04		ppb
Calcium	43-1	-3.57	0.53	-1.57	-1.53		ppb
Calcium	44-1	-4.12	-4.99	-6.78	-5.30		ppb
Chromium	52-2	-0.04	-0.06	-0.07	-0.06		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00		ppb
Copper	63-2	-0.08	-0.08	-0.11	-0.09		ppb
Holmium	165-1				100		%
Holmium	165-2				98		%
Indium	115-1				100		%
Indium	115-2				96		%
Iron	56-2	-0.34	-0.16	-0.33	-0.28		ppb
Iron	57-2	-0.18	-0.01	0.14	-0.02		ppb
Lead	206-1	-0.02	-0.01	-0.01	-0.01		ppb
Lead	207-1	-0.01	0.00	-0.01	-0.01		ppb
Lead	208-1	-0.02	-0.01	-0.01	-0.01		ppb
Lithium	6-1				100		%
Magnesium	24-2	0.19	-0.07	-0.03	0.03	471.28	ppb
Manganese	55-2	0.01	0.00	0.00	0.00	180.30	ppb
Molybdenum	94-1	-0.01	0.00	0.00	0.00		ppb
Molybdenum	95-1	-0.02	-0.01	-0.02	-0.02		ppb
Molybdenum	96-1	-0.01	-0.01	-0.01	-0.01		ppb
Molybdenum	97-1	-0.01	-0.01	-0.01	-0.01		ppb
Molybdenum	98-1	-0.02	-0.02	-0.02	-0.02		ppb
Nickel	60-2	-0.03	-0.02	-0.07	-0.04		ppb

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	PB90705BL	Instrumnet Name :	P7
Client Sample ID :	PBW007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:50:01	DataFile Name :	046CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-45.72	-35.22	-27.72	-36.22		ppb
Potassium	39-2	0.24	1.15	2.13	1.17	80.63	ppb
Rhodium	103-1				98		%
Rhodium	103-2				98		%
Scandium	45-1				99		%
Scandium	45-2				97		%
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.27	-1.07	-0.33	-0.56		ppb
Selenium	82-1	0.21	-0.30	-1.07	-0.39		ppb
Silicon	28-1	-4.92	-4.90	-5.19	-5.01		ppb
Silver	109-1	0.00	0.00	0.00	0.00	221.89	ppb
Silver	107-1	0.00	0.00	0.00	0.00	96.34	ppb
Sodium	23-2	6.64	7.09	6.95	6.89	3.30	ppb
Strontium	86-1	0.01	-0.14	-0.16	-0.09		ppb
Strontium	88-1	0.00	0.00	0.00	0.00	221.69	ppb
Sulfur	34-1	822.85	870.24	649.20	780.76	14.90	ppb
Terbium	159-2				98		%
Terbium	159-1				100		%
Thallium	203-1	0.00	0.00	0.00	0.00		ppb
Thallium	205-1	0.00	0.00	0.00	0.00	422.57	ppb
Tin	118-1	0.00	0.59	0.00	0.19	174.97	ppb
Titanium	47-1	0.02	0.00	-0.02	0.00	4089.35	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	153.82	ppb
Vanadium	51-2	0.00	0.00	0.01	0.00	74.94	ppb
Yttrium	89-2				96		%
Yttrium	89-1				99		%
Zinc	66-2	-0.22	-0.33	-0.53	-0.36		ppb
Zirconium	90-1	0.01	0.00	0.00	0.00	94.64	ppb
Zirconium	91-1	0.00	-0.01	-0.01	-0.01		ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCV028	Instrumnet Name :	P7
Client Sample ID :	CCV028	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 13:30:19	DataFile Name :	059CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9467.73	9292.38	9419.61	9393.24	0.96	ppb
Antimony	121-1	516.30	515.25	518.94	516.83	0.37	ppb
Arsenic	75-2	520.98	522.84	518.60	520.81	0.41	ppb
Barium	137-1	2556.38	2575.64	2562.09	2564.70	0.39	ppb
Barium	135-1	2570.41	2568.12	2562.41	2566.98	0.16	ppb
Beryllium	9-1	519.31	521.66	512.02	517.66	0.97	ppb
Bismuth	209-1				98		%
Bismuth	209-2				93		%
Boron	10-1	473.70	495.64	481.50	483.61	2.30	ppb
Boron	11-1	449.72	462.36	465.40	459.16	1.81	ppb
Cadmium	111-1	508.06	503.72	509.16	506.98	0.57	ppb
Cadmium	106-1	515.61	512.62	517.27	515.17	0.46	ppb
Cadmium	108-1	516.47	516.67	516.62	516.59	0.02	ppb
Calcium	43-1	49737.44	49254.73	49792.73	49594.97	0.60	ppb
Calcium	44-1	49687.11	49083.77	49229.23	49333.37	0.64	ppb
Chromium	52-2	542.76	544.71	546.16	544.54	0.31	ppb
Cobalt	59-2	549.24	538.20	547.71	545.05	1.10	ppb
Copper	63-2	1104.44	1090.21	1088.73	1094.46	0.79	ppb
Holmium	165-2				99		%
Holmium	165-1				101		%
Indium	115-2				89		%
Indium	115-1				94		%
Iron	56-2	25964.17	25743.75	26023.35	25910.42	0.57	ppb
Iron	57-2	26348.05	26100.95	26259.94	26236.32	0.48	ppb
Lead	206-1	504.93	516.38	515.53	512.28	1.25	ppb
Lead	207-1	511.93	513.68	508.15	511.25	0.55	ppb
Lead	208-1	508.60	512.43	506.81	509.28	0.56	ppb
Lithium	6-1				97		%
Magnesium	24-2	52030.04	50551.41	50896.49	51159.31	1.51	ppb
Manganese	55-2	1073.16	1062.60	1069.67	1068.48	0.50	ppb
Molybdenum	94-1	515.85	510.80	513.87	513.50	0.50	ppb
Molybdenum	95-1	520.69	515.47	508.77	514.98	1.16	ppb
Molybdenum	96-1	522.60	520.15	510.67	517.80	1.22	ppb
Molybdenum	97-1	515.40	511.00	516.81	514.40	0.59	ppb
Molybdenum	98-1	513.10	510.60	512.99	512.23	0.28	ppb
Nickel	60-2	540.38	533.20	532.84	535.48	0.79	ppb

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LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCV028	Instrumnet Name :	P7
Client Sample ID :	CCV028	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 13:30:19	DataFile Name :	059CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	10368.48	10145.17	10329.61	10281.09	1.16	ppb
Potassium	39-2	24485.15	23902.01	24320.10	24235.75	1.24	ppb
Rhodium	103-2				94		%
Rhodium	103-1				94		%
Scandium	45-1				99		%
Scandium	45-2				99		%
Selenium	77-2	517.39	536.78	526.86	527.01	1.84	ppb
Selenium	78-2	519.93	513.73	509.19	514.28	1.05	ppb
Selenium	82-1	520.29	521.83	519.73	520.62	0.21	ppb
Silicon	28-1	490.59	488.97	500.95	493.50	1.32	ppb
Silver	109-1	513.90	511.03	513.39	512.77	0.30	ppb
Silver	107-1	520.40	519.09	517.72	519.07	0.26	ppb
Sodium	23-2	51022.72	50185.47	50545.23	50584.47	0.83	ppb
Strontium	86-1	524.09	516.99	512.73	517.94	1.11	ppb
Strontium	88-1	516.42	514.29	511.21	513.98	0.51	ppb
Sulfur	34-1	10976.07	10522.91	10559.13	10686.04	2.36	ppb
Terbium	159-1				100		%
Terbium	159-2				97		%
Thallium	203-1	506.59	508.52	509.59	508.23	0.30	ppb
Thallium	205-1	506.12	506.65	509.87	507.55	0.40	ppb
Tin	118-1	519.07	516.98	518.56	518.21	0.21	ppb
Titanium	47-1	510.53	497.51	502.97	503.67	1.30	ppb
Uranium	238-1	500.64	501.12	506.54	502.76	0.65	ppb
Vanadium	51-2	539.80	531.70	538.18	536.56	0.80	ppb
Yttrium	89-2				95		%
Yttrium	89-1				99		%
Zinc	66-2	1095.77	1078.99	1078.35	1084.37	0.91	ppb
Zirconium	90-1	514.90	520.33	513.86	516.36	0.67	ppb
Zirconium	91-1	515.99	517.93	509.39	514.44	0.87	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCB028	Instrumnet Name :	P7
Client Sample ID :	CCB028	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 13:33:12	DataFile Name :	060CCBD.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.17	0.09	0.33	0.19	61.45	ppb
Antimony	121-1	0.26	0.24	0.27	0.26	6.13	ppb
Arsenic	75-2	0.02	0.04	0.03	0.03	38.80	ppb
Barium	135-1	0.01	0.03	0.05	0.03	54.62	ppb
Barium	137-1	0.04	0.04	0.04	0.04	4.64	ppb
Beryllium	9-1	0.03	0.03	0.01	0.02	42.68	ppb
Bismuth	209-1				100		%
Bismuth	209-2				97		%
Boron	10-1	10.94	8.26	8.54	9.25	15.93	ppb
Boron	11-1	10.62	9.34	8.20	9.39	12.95	ppb
Cadmium	111-1	-0.05	-0.02	-0.03	-0.03		ppb
Cadmium	106-1	-0.88	-0.49	-0.66	-0.68		ppb
Cadmium	108-1	0.01	0.01	-0.01	0.01	174.44	ppb
Calcium	43-1	1.39	-1.26	-0.96	-0.28		ppb
Calcium	44-1	-3.19	-4.17	-4.12	-3.83		ppb
Chromium	52-2	-0.03	-0.01	-0.04	-0.03		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	36.79	ppb
Copper	63-2	0.11	0.10	0.11	0.10	6.63	ppb
Holmium	165-1				100		%
Holmium	165-2				98		%
Indium	115-2				95		%
Indium	115-1				98		%
Iron	56-2	0.41	0.41	0.09	0.30	59.40	ppb
Iron	57-2	-0.22	-0.45	-0.29	-0.32		ppb
Lead	206-1	0.00	0.01	0.01	0.01	63.59	ppb
Lead	207-1	0.00	0.00	0.01	0.00	225.20	ppb
Lead	208-1	0.00	0.00	0.00	0.00	142.80	ppb
Lithium	6-1				98		%
Magnesium	24-2	1.18	0.54	0.24	0.65	73.35	ppb
Manganese	55-2	0.03	0.05	0.01	0.03	66.36	ppb
Molybdenum	94-1	0.03	0.02	0.02	0.02	10.61	ppb
Molybdenum	95-1	0.05	0.03	0.04	0.04	21.16	ppb
Molybdenum	96-1	0.03	0.04	0.04	0.04	13.18	ppb
Molybdenum	97-1	0.06	0.02	0.02	0.03	62.11	ppb
Molybdenum	98-1	0.04	0.03	0.02	0.03	23.85	ppb
Nickel	60-2	0.21	0.26	0.32	0.26	21.27	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCB028	Instrumnet Name :	P7
Client Sample ID :	CCB028	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 13:33:12	DataFile Name :	060CCBD.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Phosphorus	31-2	-30.14	-46.40	-28.60	-35.05		ppb
Potassium	39-2	10.87	6.43	5.16	7.49	40.09	ppb
Rhodium	103-1				99		%
Rhodium	103-2				98		%
Scandium	45-1				98		%
Scandium	45-2				95		%
Selenium	82-1	0.83	0.32	-0.23	0.31	172.11	ppb
Selenium	77-2	0.00	0.00	1.21	0.40	173.21	ppb
Selenium	78-2	-0.34	-0.81	-0.80	-0.65		ppb
Silicon	28-1	-1.69	-2.37	-3.13	-2.40		ppb
Silver	109-1	0.04	0.04	0.03	0.04	12.66	ppb
Silver	107-1	0.03	0.04	0.03	0.04	12.90	ppb
Sodium	23-2	20.54	19.76	18.52	19.60	5.20	ppb
Strontium	86-1	-0.02	0.04	0.02	0.01	196.08	ppb
Strontium	88-1	0.01	0.02	0.01	0.01	9.78	ppb
Sulfur	34-1	336.64	268.42	265.91	290.32	13.82	ppb
Terbium	159-1				100		%
Terbium	159-2				98		%
Thallium	203-1	0.06	0.05	0.05	0.06	6.14	ppb
Thallium	205-1	0.05	0.06	0.04	0.05	17.74	ppb
Tin	118-1	0.07	0.05	0.05	0.06	14.03	ppb
Titanium	47-1	-0.02	0.08	0.03	0.03	155.24	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	22.26	ppb
Vanadium	51-2	0.00	0.00	0.01	0.00	223.45	ppb
Yttrium	89-1				99		%
Yttrium	89-2				95		%
Zinc	66-2	0.05	-0.06	-0.08	-0.03		ppb
Zirconium	90-1	0.02	0.02	0.02	0.02	3.98	ppb
Zirconium	91-1	0.01	0.02	0.02	0.02	39.21	ppb

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P7
Client Sample ID :	S00	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:25:28	DataFile Name :	007CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	42	42	17	33	43.30	cps
Antimony	121-1	125	100	58	94	35.66	cps
Arsenic	75-2	2	7	2	4	86.68	cps
Barium	135-1	33	0	8	14	124.92	cps
Barium	137-1	58	25	25	36	53.30	cps
Beryllium	9-1	0	17	6	7	114.54	cps
Bismuth	209-1	2476263	2479208	2460673	2472048	0.40	cps
Bismuth	209-2	1625380	1611400	1607188	1614656	0.59	cps
Boron	10-1	1150	1342	1433	1308	11.05	cps
Boron	11-1	6568	6193	5885	6215	5.51	cps
Cadmium	111-1	1076	1022	961	1020	5.66	cps
Cadmium	106-1	1542	1458	1375	1458	5.71	cps
Cadmium	108-1	4	4	8	6	43.22	cps
Calcium	43-1	383	358	375	372	3.42	cps
Calcium	44-1	21358	21558	20657	21191	2.23	cps
Chromium	52-2	1050	957	1000	1002	4.66	cps
Cobalt	59-2	73	33	53	53	37.50	cps
Copper	63-2	1590	1480	1707	1592	7.12	cps
Holmium	165-2	2093094	2094445	2104326	2097288	0.29	cps
Holmium	165-1	3795448	3739829	3749900	3761726	0.79	cps
Indium	115-1	3028232	3012884	3036513	3025876	0.40	cps
Indium	115-2	643488	636018	638114	639207	0.60	cps
Iron	56-2	5357	5401	5196	5318	2.04	cps
Iron	57-2	83	122	161	122	31.82	cps
Lead	206-1	594	761	744	700	13.11	cps
Lead	207-1	572	606	672	617	8.26	cps
Lead	208-1	2511	2972	3089	2858	10.69	cps
Lithium	6-1	229950	229479	230260	229897	0.17	cps
Magnesium	24-2	167	117	158	147	18.20	cps
Manganese	55-2	47	63	30	47	35.71	cps
Molybdenum	94-1	142	167	117	142	17.65	cps
Molybdenum	95-1	92	100	92	94	5.10	cps
Molybdenum	96-1	142	92	117	117	21.43	cps
Molybdenum	97-1	67	42	75	61	28.38	cps
Molybdenum	98-1	225	142	150	172	26.65	cps
Nickel	60-2	833	880	797	837	4.99	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P7
Client Sample ID :	S00	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:25:28	DataFile Name :	007CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	258	308	350	306	15.02	cps
Potassium	39-2	37983	38426	38133	38181	0.59	cps
Rhodium	103-2	1543337	1524053	1538699	1535363	0.66	cps
Rhodium	103-1	2897675	2922845	2971593	2930704	1.28	cps
Scandium	45-1	1973585	1980368	1988678	1980877	0.38	cps
Scandium	45-2	98092	98542	100487	99040	1.29	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	87	109	96	98	11.44	cps
Selenium	82-1	45	-375	-136	-155	-135.62	cps
Silicon	28-1	312555	311261	311646	311821	0.21	cps
Silver	109-1	150	83	100	111	31.22	cps
Silver	107-1	142	142	200	161	20.91	cps
Sodium	23-2	13039	13039	13106	13062	0.30	cps
Strontium	86-1	11205	11497	11238	11313	1.41	cps
Strontium	88-1	92	108	158	119	29.05	cps
Sulfur	34-1	596963	600517	606072	601184	0.76	cps
Terbium	159-1	3918986	3897678	3885821	3900828	0.43	cps
Terbium	159-2	2157509	2122780	2150982	2143757	0.86	cps
Thallium	203-1	108	25	67	67	62.50	cps
Thallium	205-1	108	192	142	147	28.49	cps
Tin	118-1	483	408	417	436	9.43	cps
Titanium	47-1	50	67	50	56	17.32	cps
Uranium	238-1	0	0	8	3	173.21	cps
Vanadium	51-2	17	10	17	14	26.66	cps
Yttrium	89-2	518839	512211	515308	515453	0.64	cps
Yttrium	89-1	3306498	3229326	3277388	3271071	1.19	cps
Zinc	66-2	860	890	847	866	2.56	cps
Zirconium	90-1	267	258	225	250	8.82	cps
Zirconium	91-1	83	83	50	72	26.65	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P7
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:32:15	DataFile Name :	009CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2209	2425	1909	2181	11.90	cps
Antimony	121-1	21584	21601	21125	21437	1.26	cps
Arsenic	75-2	406	426	433	422	3.41	cps
Barium	135-1	25149	26234	25215	25533	2.38	cps
Barium	137-1	44305	44497	44589	44464	0.33	cps
Beryllium	9-1	1361	1467	1428	1419	3.76	cps
Bismuth	209-2	1629028	1614544	1600032	1614534	0.90	cps
Bismuth	209-1	2420851	2475036	2497954	2464614	1.61	cps
Boron	10-1	2925	3034	2892	2950	2.51	cps
Boron	11-1	14850	14708	16168	15242	5.28	cps
Cadmium	106-1	1775	1767	1775	1772	0.27	cps
Cadmium	108-1	146	171	246	188	27.75	cps
Cadmium	111-1	3816	3588	3813	3739	3.49	cps
Calcium	43-1	15867	16560	16076	16168	2.20	cps
Calcium	44-1	274682	273087	275616	274461	0.47	cps
Chromium	52-2	8326	8416	8056	8266	2.27	cps
Cobalt	59-2	6105	6165	6361	6210	2.16	cps
Copper	63-2	10421	10667	10150	10413	2.48	cps
Holmium	165-2	2118482	2109543	2102753	2110259	0.37	cps
Holmium	165-1	3719063	3771010	3702249	3730774	0.96	cps
Indium	115-1	2991788	2972835	3062000	3008874	1.56	cps
Indium	115-2	640320	634633	634463	636472	0.52	cps
Iron	56-2	160881	160702	155246	158943	2.02	cps
Iron	57-2	4106	4223	3973	4101	3.05	cps
Lead	206-1	8514	8319	8609	8481	1.74	cps
Lead	207-1	8103	7825	8058	7995	1.87	cps
Lead	208-1	34613	34741	35431	34928	1.26	cps
Lithium	6-1	229707	228034	227071	228271	0.58	cps
Magnesium	24-2	129356	130203	127623	129061	1.02	cps
Manganese	55-2	1970	1944	2017	1977	1.88	cps
Molybdenum	94-1	21508	21492	21258	21420	0.65	cps
Molybdenum	95-1	27636	26601	27461	27232	2.04	cps
Molybdenum	96-1	30141	29507	30250	29966	1.34	cps
Molybdenum	97-1	16710	16752	17737	17066	3.40	cps
Molybdenum	98-1	44345	43351	42957	43551	1.64	cps
Nickel	60-2	2490	2514	2570	2525	1.63	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P7
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:32:15	DataFile Name :	009CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	717	567	725	669	13.31	cps
Potassium	39-2	167763	164216	162371	164783	1.66	cps
Rhodium	103-2	1536625	1537338	1544563	1539509	0.29	cps
Rhodium	103-1	2905858	2925819	2916413	2916030	0.34	cps
Scandium	45-2	99612	99585	98478	99225	0.65	cps
Scandium	45-1	1999715	1954333	1990891	1981646	1.21	cps
Selenium	77-2	67	33	7	36	84.55	cps
Selenium	78-2	193	256	265	238	16.53	cps
Selenium	82-1	931	760	681	791	16.13	cps
Silicon	28-1	382192	378606	378961	379920	0.52	cps
Silver	109-1	13966	13657	13966	13863	1.28	cps
Silver	107-1	14858	15234	14366	14819	2.94	cps
Sodium	23-2	256607	254135	248281	253008	1.69	cps
Strontium	86-1	14942	14725	14808	14825	0.74	cps
Strontium	88-1	29807	29840	29974	29874	0.30	cps
Sulfur	34-1	590421	585823	588736	588327	0.40	cps
Terbium	159-1	3893365	3876920	3887178	3885821	0.21	cps
Terbium	159-2	2153215	2135195	2137663	2142024	0.46	cps
Thallium	203-1	9879	9629	9345	9618	2.78	cps
Thallium	205-1	24131	23714	25208	24351	3.17	cps
Tin	118-1	43435	42800	44631	43622	2.13	cps
Titanium	47-1	7469	8094	7994	7852	4.28	cps
Uranium	238-1	33068	33494	34020	33528	1.42	cps
Vanadium	51-2	15542	15065	14721	15109	2.73	cps
Yttrium	89-2	515327	512283	511126	512912	0.42	cps
Yttrium	89-1	3210483	3238897	3256715	3235365	0.72	cps
Zinc	66-2	2230	2070	2077	2126	4.26	cps
Zirconium	90-1	16502	17211	17395	17036	2.77	cps
Zirconium	91-1	3834	3817	3701	3784	1.92	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:35:38	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	108459	104748	95403	102870	6.54	cps
Antimony	121-1	544505	536123	541968	540865	0.79	cps
Arsenic	75-2	21633	21050	19194	20626	6.17	cps
Barium	135-1	654799	645874	643291	647988	0.93	cps
Barium	137-1	1127399	1112033	1116174	1118535	0.71	cps
Beryllium	9-1	73662	72607	72931	73067	0.74	cps
Bismuth	209-1	2484094	2478933	2463915	2475648	0.42	cps
Bismuth	209-2	1626913	1613549	1586662	1609041	1.27	cps
Boron	11-1	56707	57920	60020	58216	2.88	cps
Boron	10-1	11355	10946	11305	11202	1.99	cps
Cadmium	106-1	16852	16786	16719	16786	0.40	cps
Cadmium	108-1	9966	10062	10575	10201	3.21	cps
Cadmium	111-1	140799	140538	138573	139970	0.87	cps
Calcium	43-1	161282	159518	160982	160594	0.59	cps
Calcium	44-1	2626788	2587546	2608333	2607556	0.75	cps
Chromium	52-2	197757	188836	177019	187871	5.54	cps
Cobalt	59-2	320111	312153	286187	306150	5.79	cps
Copper	63-2	468658	456580	424357	449865	5.09	cps
Holmium	165-2	2116373	2095507	2087068	2099649	0.72	cps
Holmium	165-1	3757100	3732829	3764044	3751325	0.44	cps
Indium	115-1	3015895	2973667	2992504	2994022	0.71	cps
Indium	115-2	643075	636640	631057	636924	0.94	cps
Iron	57-2	194546	186862	175245	185551	5.24	cps
Iron	56-2	7831525	7627505	7059975	7506335	5.33	cps
Lead	207-1	363882	364199	365062	364381	0.17	cps
Lead	208-1	1664471	1662831	1663203	1663502	0.05	cps
Lead	206-1	416731	413507	417402	415880	0.50	cps
Lithium	6-1	226903	224432	224825	225387	0.59	cps
Magnesium	24-2	1350077	1305185	1205577	1286946	5.75	cps
Manganese	55-2	208968	201733	189715	200139	4.86	cps
Molybdenum	94-1	486379	485604	488060	486681	0.26	cps
Molybdenum	95-1	270443	265124	268626	268064	1.01	cps
Molybdenum	96-1	340318	336858	339836	339004	0.55	cps
Molybdenum	97-1	167102	166689	168282	167358	0.49	cps
Molybdenum	98-1	432356	430573	429612	430847	0.32	cps
Nickel	60-2	88790	85581	79383	84585	5.65	cps

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LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:35:38	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	6718	6735	5810	6421	8.25	cps
Potassium	39-2	686849	675002	651862	671238	2.65	cps
Rhodium	103-1	2946444	2846271	2896410	2896375	1.73	cps
Rhodium	103-2	1574789	1526346	1517255	1539463	2.01	cps
Scandium	45-2	100542	100981	98354	99959	1.41	cps
Scandium	45-1	1981097	1972067	1988275	1980480	0.41	cps
Selenium	82-1	9179	9172	8892	9081	1.80	cps
Selenium	77-2	447	430	447	441	2.18	cps
Selenium	78-2	1641	1530	1498	1556	4.81	cps
Silicon	28-1	674108	680118	681027	678417	0.55	cps
Silver	109-1	643641	636389	634395	638142	0.76	cps
Silver	107-1	672379	668444	668737	669854	0.33	cps
Sodium	23-2	2447685	2388332	2274371	2370129	3.72	cps
Strontium	86-1	182933	178376	180775	180695	1.26	cps
Strontium	88-1	1520020	1506531	1471812	1499454	1.66	cps
Sulfur	34-1	646391	657490	643739	649207	1.12	cps
Terbium	159-1	3904063	3885887	3925846	3905266	0.51	cps
Terbium	159-2	2171708	2142649	2144664	2153007	0.75	cps
Thallium	203-1	500668	493577	500920	498388	0.84	cps
Thallium	205-1	1220783	1198923	1211285	1210330	0.91	cps
Tin	118-1	430500	424929	421874	425768	1.03	cps
Titanium	47-1	79641	80051	79523	79738	0.35	cps
Uranium	238-1	1754028	1790320	1761174	1768507	1.09	cps
Vanadium	51-2	157235	153096	141840	150724	5.29	cps
Yttrium	89-1	3272404	3256824	3278045	3269091	0.34	cps
Yttrium	89-2	524826	516531	510919	517425	1.35	cps
Zinc	66-2	64887	62138	58905	61977	4.83	cps
Zirconium	90-1	913523	920222	921612	918452	0.47	cps
Zirconium	91-1	204159	205063	207581	205601	0.86	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:39:11	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	269902	270634	260157	266898	2.19	cps
Antimony	121-1	1330841	1335626	1328543	1331670	0.27	cps
Arsenic	75-2	52961	52929	51400	52430	1.70	cps
Barium	135-1	1618691	1639052	1609608	1622450	0.93	cps
Barium	137-1	2791266	2782298	2762728	2778764	0.53	cps
Beryllium	9-1	183708	181842	180432	181994	0.90	cps
Bismuth	209-1	2406500	2456930	2395094	2419508	1.36	cps
Bismuth	209-2	1581550	1568560	1571014	1573708	0.44	cps
Boron	10-1	26549	27325	28085	27320	2.81	cps
Boron	11-1	131074	138908	141995	137326	4.10	cps
Cadmium	108-1	25248	24797	25740	25262	1.87	cps
Cadmium	111-1	338454	344366	342799	341873	0.90	cps
Cadmium	106-1	37793	38479	38219	38164	0.91	cps
Calcium	43-1	396469	394391	391432	394097	0.64	cps
Calcium	44-1	6387265	6386180	6358929	6377458	0.25	cps
Chromium	52-2	486514	482501	467559	478858	2.09	cps
Cobalt	59-2	800238	787038	759247	782174	2.68	cps
Copper	63-2	1150833	1142524	1116000	1136452	1.60	cps
Holmium	165-2	2102598	2087533	2102078	2097403	0.41	cps
Holmium	165-1	3648611	3673471	3670155	3664079	0.37	cps
Indium	115-1	2910366	2936350	2903956	2916891	0.59	cps
Indium	115-2	621142	613546	617400	617363	0.62	cps
Iron	56-2	19436541	19163487	18876949	19158992	1.46	cps
Iron	57-2	483530	478470	465056	475685	2.01	cps
Lead	206-1	1030949	1017971	1023463	1024128	0.64	cps
Lead	207-1	900581	891048	896083	895904	0.53	cps
Lead	208-1	4090849	4064156	4077457	4077487	0.33	cps
Lithium	6-1	224428	226675	227528	226210	0.71	cps
Magnesium	24-2	3329105	3267535	3227243	3274628	1.57	cps
Manganese	55-2	510720	507842	500615	506393	1.03	cps
Molybdenum	98-1	1052067	1060609	1045709	1052795	0.71	cps
Molybdenum	97-1	409330	411489	407806	409542	0.45	cps
Molybdenum	94-1	1210805	1216492	1206085	1211127	0.43	cps
Molybdenum	95-1	659360	664341	662398	662033	0.38	cps
Molybdenum	96-1	847639	845131	839689	844153	0.48	cps
Nickel	60-2	214176	210762	207256	210731	1.64	cps

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LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:39:11	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	16226	15976	15917	16040	1.02	cps
Potassium	39-2	1640969	1657272	1642028	1646756	0.55	cps
Rhodium	103-1	2821913	2844152	2806392	2824152	0.67	cps
Rhodium	103-2	1494045	1486590	1486893	1489176	0.28	cps
Scandium	45-2	98401	98005	98243	98216	0.20	cps
Scandium	45-1	1956674	1923418	1956957	1945683	0.99	cps
Selenium	82-1	22304	22810	22239	22451	1.39	cps
Selenium	77-2	1157	1083	1113	1118	3.30	cps
Selenium	78-2	3667	3826	3725	3739	2.16	cps
Silicon	28-1	1189644	1169996	1188303	1182648	0.93	cps
Silver	107-1	1658634	1674330	1647557	1660174	0.81	cps
Silver	109-1	1594443	1568573	1590742	1584586	0.88	cps
Sodium	23-2	5996793	5967635	5857338	5940589	1.24	cps
Strontium	86-1	429267	433472	433657	432132	0.57	cps
Strontium	88-1	3718840	3689367	3693922	3700710	0.43	cps
Sulfur	34-1	712505	720575	709810	714297	0.78	cps
Terbium	159-1	3854002	3840391	3796925	3830439	0.78	cps
Terbium	159-2	2130290	2144632	2116528	2130483	0.66	cps
Thallium	203-1	1234236	1228321	1231529	1231362	0.24	cps
Thallium	205-1	2993676	2991416	3021924	3002339	0.57	cps
Tin	118-1	1044321	1049362	1042324	1045336	0.35	cps
Titanium	47-1	197297	194575	195472	195781	0.71	cps
Uranium	238-1	4345339	4414580	4350749	4370222	0.88	cps
Vanadium	51-2	390724	386935	376893	384851	1.86	cps
Yttrium	89-2	506935	505818	505524	506092	0.15	cps
Yttrium	89-1	3214602	3186835	3218880	3206772	0.54	cps
Zinc	66-2	159066	156457	153823	156449	1.68	cps
Zirconium	90-1	2304169	2328963	2317447	2316860	0.54	cps
Zirconium	91-1	509832	504796	508366	507665	0.51	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:42:26	DataFile Name :	012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	545432	542346	519743	535840	2.62	cps
Antimony	121-1	2726705	2732740	2718246	2725897	0.27	cps
Arsenic	75-2	105938	105425	102489	104617	1.78	cps
Barium	135-1	3243875	3224890	3205992	3224919	0.59	cps
Barium	137-1	5528875	5553952	5537724	5540184	0.23	cps
Beryllium	9-1	360367	358359	359192	359306	0.28	cps
Bismuth	209-1	2416667	2374610	2443283	2411520	1.44	cps
Bismuth	209-2	1575328	1574819	1584057	1578068	0.33	cps
Boron	10-1	53018	53069	53571	53219	0.57	cps
Boron	11-1	269583	272176	278335	273365	1.64	cps
Cadmium	111-1	679380	669943	669167	672830	0.85	cps
Cadmium	106-1	74605	73147	73868	73873	0.99	cps
Cadmium	108-1	50055	49235	49700	49663	0.83	cps
Calcium	43-1	784195	787532	792535	788088	0.53	cps
Calcium	44-1	12709788	12669846	12886755	12755463	0.91	cps
Chromium	52-2	964056	962693	922002	949584	2.52	cps
Cobalt	59-2	1581366	1567287	1522403	1557019	1.98	cps
Copper	63-2	2348437	2329518	2234869	2304275	2.64	cps
Holmium	165-2	2150432	2116410	2076890	2114577	1.74	cps
Holmium	165-1	3674206	3701570	3728211	3701329	0.73	cps
Indium	115-1	2895568	2865192	2894868	2885209	0.60	cps
Indium	115-2	614670	613872	616667	615070	0.23	cps
Iron	56-2	38707597	38229220	37218840	38051886	2.00	cps
Iron	57-2	963414	952632	924928	946991	2.10	cps
Lead	206-1	2077863	2063597	2070310	2070590	0.34	cps
Lead	207-1	1847540	1824341	1844326	1838736	0.68	cps
Lead	208-1	8308791	8229096	8255344	8264410	0.49	cps
Lithium	6-1	226624	225743	227469	226612	0.38	cps
Magnesium	24-2	6683374	6604008	6332849	6540077	2.81	cps
Manganese	55-2	1031625	1028133	992846	1017534	2.11	cps
Molybdenum	94-1	2501964	2477717	2498598	2492759	0.53	cps
Molybdenum	95-1	1321385	1315867	1314933	1317395	0.26	cps
Molybdenum	96-1	1721690	1717555	1702931	1714059	0.58	cps
Molybdenum	97-1	822102	820724	821264	821363	0.08	cps
Molybdenum	98-1	2153453	2183933	2141661	2159682	1.01	cps
Nickel	60-2	423290	420348	406851	416829	2.10	cps

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LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:42:26	DataFile Name :	012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	31325	31659	30065	31016	2.71	cps
Potassium	39-2	3272238	3251227	3219901	3247789	0.81	cps
Rhodium	103-1	2821924	2792241	2792388	2802184	0.61	cps
Rhodium	103-2	1477285	1491217	1497337	1488613	0.69	cps
Scandium	45-1	1960936	1940149	1976081	1959055	0.92	cps
Scandium	45-2	99632	98293	99639	99188	0.78	cps
Selenium	82-1	44745	44594	44820	44720	0.26	cps
Selenium	77-2	2240	2427	2067	2245	8.02	cps
Selenium	78-2	7658	7552	7243	7484	2.88	cps
Silicon	28-1	1994249	2012490	2003998	2003579	0.46	cps
Silver	109-1	3164231	3171343	3159449	3165008	0.19	cps
Silver	107-1	3301975	3268411	3282668	3284352	0.51	cps
Sodium	23-2	11956788	12055543	11860981	11957771	0.81	cps
Strontium	86-1	857464	845886	852939	852096	0.68	cps
Strontium	88-1	7317231	7355926	7370299	7347819	0.37	cps
Sulfur	34-1	826796	814962	818814	820191	0.74	cps
Terbium	159-1	3892020	3918159	3873821	3894667	0.57	cps
Terbium	159-2	2185687	2144884	2137560	2156043	1.20	cps
Thallium	203-1	2549676	2565997	2531012	2548895	0.69	cps
Thallium	205-1	5955014	5943310	6030705	5976343	0.79	cps
Tin	118-1	2116109	2121410	2106016	2114512	0.37	cps
Titanium	47-1	393763	393593	390505	392620	0.47	cps
Uranium	238-1	8775917	8681125	8869788	8775610	1.07	cps
Vanadium	51-2	788219	782145	748647	773004	2.76	cps
Yttrium	89-2	504297	507781	513178	508419	0.88	cps
Yttrium	89-1	3177872	3187024	3230530	3198475	0.88	cps
Zinc	66-2	309812	307112	297687	304870	2.09	cps
Zirconium	90-1	4608249	4609548	4666618	4628139	0.72	cps
Zirconium	91-1	1014113	1013288	1016535	1014645	0.17	cps

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LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:45:34	DataFile Name :	013CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1082605	1080028	1081770	1081468	0.12	cps
Antimony	121-1	5434264	5474127	5487897	5465429	0.51	cps
Arsenic	75-2	214925	213731	211854	213503	0.72	cps
Barium	135-1	6510491	6494071	6517718	6507427	0.19	cps
Barium	137-1	11166786	11086635	11173417	11142280	0.43	cps
Beryllium	9-1	714289	722961	714153	717135	0.70	cps
Bismuth	209-1	2399957	2409957	2433863	2414592	0.72	cps
Bismuth	209-2	1567028	1560277	1549736	1559014	0.56	cps
Boron	10-1	103679	106154	106063	105299	1.33	cps
Boron	11-1	534745	553869	548237	545617	1.80	cps
Cadmium	106-1	148016	148562	145407	147328	1.14	cps
Cadmium	108-1	96987	98632	99324	98314	1.22	cps
Cadmium	111-1	1347117	1339340	1343724	1343394	0.29	cps
Calcium	43-1	1627320	1632836	1608648	1622935	0.78	cps
Calcium	44-1	25653275	25958037	25651593	25754301	0.69	cps
Chromium	52-2	1979094	1971776	1964098	1971656	0.38	cps
Cobalt	59-2	3170459	3140118	3146076	3152218	0.51	cps
Copper	63-2	4611669	4534998	4603241	4583303	0.92	cps
Holmium	165-2	2145631	2117141	2112124	2124965	0.85	cps
Holmium	165-1	3795993	3734187	3744826	3758335	0.88	cps
Indium	115-1	2897589	2891264	2904858	2897904	0.23	cps
Indium	115-2	602065	599026	598133	599741	0.34	cps
Iron	56-2	78388924	77712180	77665316	77922140	0.52	cps
Iron	57-2	1980370	1998372	1986943	1988562	0.46	cps
Lead	206-1	4083943	4072918	4094945	4083935	0.27	cps
Lead	207-1	3590379	3656617	3639197	3628731	0.95	cps
Lead	208-1	16230568	16413455	16409133	16351052	0.64	cps
Lithium	6-1	225660	226882	224082	225541	0.62	cps
Magnesium	24-2	13240923	13270551	13386282	13299252	0.58	cps
Manganese	55-2	2079518	2086424	2070627	2078857	0.38	cps
Molybdenum	94-1	4998501	5018257	4995537	5004098	0.25	cps
Molybdenum	95-1	2727132	2741700	2714859	2727897	0.49	cps
Molybdenum	96-1	3445148	3475945	3485477	3468857	0.61	cps
Molybdenum	97-1	1690186	1673979	1671654	1678606	0.60	cps
Molybdenum	98-1	4367705	4334175	4358800	4353560	0.40	cps
Nickel	60-2	833267	835769	835001	834679	0.15	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:45:34	DataFile Name :	013CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	63343	62188	63009	62847	0.95	cps
Potassium	39-2	6524983	6511701	6566111	6534265	0.43	cps
Rhodium	103-2	1479480	1475141	1475253	1476625	0.17	cps
Rhodium	103-1	2778079	2822830	2812813	2804574	0.84	cps
Scandium	45-1	1979785	1982864	1978019	1980223	0.12	cps
Scandium	45-2	100729	100333	102602	101222	1.20	cps
Selenium	77-2	4457	4684	4501	4547	2.65	cps
Selenium	78-2	14663	14897	14717	14759	0.83	cps
Selenium	82-1	89665	89482	89214	89454	0.25	cps
Silicon	28-1	3683323	3796911	3789722	3756652	1.69	cps
Silver	107-1	6460757	6554379	6605276	6540137	1.12	cps
Silver	109-1	6273081	6228306	6384324	6295237	1.28	cps
Sodium	23-2	24046980	23979656	24192480	24073039	0.45	cps
Strontium	86-1	1734423	1745477	1734177	1738026	0.37	cps
Strontium	88-1	14666875	14848666	14803223	14772921	0.64	cps
Sulfur	34-1	970980	975430	980397	975602	0.48	cps
Terbium	159-2	2144462	2137309	2169331	2150367	0.78	cps
Terbium	159-1	3901626	3895604	3958912	3918714	0.89	cps
Thallium	203-1	5140834	5093621	5055041	5096499	0.84	cps
Thallium	205-1	11875500	11884147	12003167	11920938	0.60	cps
Tin	118-1	4236905	4249188	4243691	4243261	0.14	cps
Titanium	47-1	786178	789462	782059	785900	0.47	cps
Uranium	238-1	17597917	17537954	17783979	17639950	0.73	cps
Vanadium	51-2	1572178	1588602	1599179	1586653	0.86	cps
Yttrium	89-2	508156	510516	511556	510076	0.34	cps
Yttrium	89-1	3246298	3249104	3258973	3251458	0.20	cps
Zinc	66-2	612632	615540	611941	613371	0.31	cps
Zirconium	90-1	9321346	9385856	9277446	9328216	0.58	cps
Zirconium	91-1	2088935	2095334	2065629	2083299	0.75	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:48:35	DataFile Name :	014CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2188744	2189239	2200123	2192702	0.29	cps
Antimony	121-1	10523984	10561499	10677005	10587496	0.75	cps
Arsenic	75-2	417349	420267	421770	419795	0.54	cps
Barium	135-1	12552875	12557678	12731502	12614018	0.81	cps
Barium	137-1	21433887	21570563	21790223	21598225	0.83	cps
Beryllium	9-1	1359206	1363628	1370540	1364458	0.42	cps
Bismuth	209-1	2267699	2272981	2258082	2266254	0.33	cps
Bismuth	209-2	1498585	1522356	1494983	1505308	0.99	cps
Boron	10-1	203804	210865	211212	208627	2.00	cps
Boron	11-1	1062258	1092622	1112505	1089128	2.32	cps
Cadmium	111-1	2633054	2613802	2645405	2630754	0.61	cps
Cadmium	106-1	283447	285377	282231	283685	0.56	cps
Cadmium	108-1	188131	191823	190334	190096	0.98	cps
Calcium	43-1	3112851	3161419	3213235	3162502	1.59	cps
Calcium	44-1	50151203	50441156	51023539	50538633	0.88	cps
Chromium	52-2	3856678	3928160	3898964	3894601	0.92	cps
Cobalt	59-2	6129670	6189481	6137945	6152365	0.53	cps
Copper	63-2	8882666	8863062	8959497	8901742	0.57	cps
Holmium	165-2	2079819	2087965	2097438	2088407	0.42	cps
Holmium	165-1	3631172	3667729	3688895	3662599	0.80	cps
Indium	115-2	562710	572214	570154	568359	0.88	cps
Indium	115-1	2706685	2715572	2751372	2724543	0.87	cps
Iron	56-2	151207342	156941709	156473126	154874059	2.06	cps
Iron	57-2	3874213	3936896	3916275	3909128	0.82	cps
Lead	206-1	7715216	7680675	7769032	7721641	0.58	cps
Lead	207-1	6857987	6794124	6798407	6816840	0.52	cps
Lead	208-1	30997207	30942076	30902556	30947280	0.15	cps
Lithium	6-1	215012	217947	215087	216015	0.77	cps
Magnesium	24-2	25994038	26288908	26339482	26207476	0.71	cps
Manganese	55-2	4109690	4150664	4118984	4126446	0.52	cps
Molybdenum	94-1	9788536	9732837	9779442	9766939	0.31	cps
Molybdenum	95-1	5308559	5233648	5263965	5268724	0.72	cps
Molybdenum	96-1	6733735	6619570	6656086	6669797	0.87	cps
Molybdenum	97-1	3253584	3258174	3265255	3259005	0.18	cps
Molybdenum	98-1	8511649	8421107	8425973	8452909	0.60	cps
Nickel	60-2	1633187	1651614	1649222	1644674	0.61	cps

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LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:48:35	DataFile Name :	014CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	125281	125719	126340	125780	0.42	cps
Potassium	39-2	12858394	12992545	13062874	12971271	0.80	cps
Rhodium	103-2	1430118	1440293	1449024	1439812	0.66	cps
Rhodium	103-1	2686848	2715287	2650807	2684314	1.20	cps
Scandium	45-1	1947712	1974434	1989767	1970638	1.08	cps
Scandium	45-2	105090	104069	104180	104446	0.54	cps
Selenium	77-2	8312	8793	8292	8466	3.35	cps
Selenium	78-2	28927	29202	28879	29002	0.60	cps
Selenium	82-1	170403	170680	172363	171149	0.62	cps
Silicon	28-1	7012823	7095057	7214725	7107535	1.43	cps
Silver	109-1	11995334	12079306	12134542	12069727	0.58	cps
Silver	107-1	12559161	12510840	12572181	12547394	0.26	cps
Sodium	23-2	47499270	48258397	47926544	47894737	0.79	cps
Strontium	86-1	3345026	3346138	3362528	3351231	0.29	cps
Strontium	88-1	29008651	28847111	28975258	28943673	0.29	cps
Sulfur	34-1	1382996	1375970	1384175	1381047	0.32	cps
Terbium	159-1	3817097	3806895	3814947	3812980	0.14	cps
Terbium	159-2	2146208	2113109	2119499	2126272	0.83	cps
Thallium	203-1	9584516	9646423	9698724	9643221	0.59	cps
Thallium	205-1	22657035	22854066	22998347	22836483	0.75	cps
Tin	118-1	8214380	8193913	8269376	8225890	0.47	cps
Titanium	47-1	1566251	1561755	1577554	1568520	0.52	cps
Uranium	238-1	33765205	33826850	33483685	33691913	0.54	cps
Vanadium	51-2	3167541	3142413	3147109	3152354	0.42	cps
Yttrium	89-2	508166	510158	509078	509134	0.20	cps
Yttrium	89-1	3193789	3179155	3162760	3178568	0.49	cps
Zinc	66-2	1175692	1190611	1180876	1182393	0.64	cps
Zirconium	90-1	18373998	18271484	18173812	18273098	0.55	cps
Zirconium	91-1	4143339	4074689	4057182	4091737	1.11	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P7
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:51:35	DataFile Name :	015CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	12008122	12339330	12214140	12187197	1.37	cps
Antimony	121-1	13649	13307	14158	13704	3.12	cps
Arsenic	75-2	191	161	163	172	9.67	cps
Barium	135-1	1842	2175	2192	2070	9.54	cps
Barium	137-1	3801	3826	3817	3815	0.33	cps
Beryllium	9-1	189	117	128	144	26.93	cps
Bismuth	209-1	2016929	2018543	2014877	2016783	0.09	cps
Bismuth	209-2	1429724	1426609	1425936	1427423	0.14	cps
Boron	10-1	7944	7219	6385	7183	10.86	cps
Boron	11-1	38534	35777	34056	36122	6.25	cps
Cadmium	106-1	1275	1350	1400	1342	4.69	cps
Cadmium	108-1	38	54	38	43	22.35	cps
Cadmium	111-1	1237	1270	1241	1249	1.41	cps
Calcium	43-1	16637529	16808181	17059474	16835061	1.26	cps
Calcium	44-1	267643039	268985314	271734214	269454189	0.77	cps
Chromium	52-2	26985	28384	27973	27781	2.59	cps
Cobalt	59-2	4751	4414	4758	4641	4.23	cps
Copper	63-2	17674	17250	17250	17392	1.41	cps
Holmium	165-1	3521715	3502507	3501594	3508605	0.32	cps
Holmium	165-2	2145841	2161714	2172891	2160149	0.63	cps
Indium	115-2	629597	635523	638327	634482	0.70	cps
Indium	115-1	2760313	2776614	2736041	2757656	0.74	cps
Iron	56-2	807353462	825908485	829835819	821032589	1.46	cps
Iron	57-2	20374838	20765584	20758813	20633078	1.08	cps
Lead	206-1	39130	38378	38562	38690	1.01	cps
Lead	207-1	33498	32752	32267	32839	1.89	cps
Lead	208-1	153815	149958	150411	151395	1.39	cps
Lithium	6-1	204159	208845	203984	205663	1.34	cps
Magnesium	24-2	139143216	142589470	142173549	141302078	1.33	cps
Manganese	55-2	16516	15689	16449	16218	2.83	cps
Molybdenum	94-1	5151	4793	5560	5168	7.43	cps
Molybdenum	95-1	7135	7119	7286	7180	1.28	cps
Molybdenum	96-1	13081	12623	13640	13115	3.89	cps
Molybdenum	97-1	4643	4584	4568	4598	0.86	cps
Molybdenum	98-1	10988	11930	11046	11322	4.66	cps
Nickel	60-2	6725	7005	6928	6886	2.10	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P7
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 10:51:35	DataFile Name :	015CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	483	408	533	475	13.24	cps
Potassium	39-2	71571929	72532845	72676383	72260386	0.83	cps
Rhodium	103-2	1399907	1408121	1405792	1404606	0.30	cps
Rhodium	103-1	2539911	2546585	2549179	2545225	0.19	cps
Scandium	45-1	1990582	2009525	2011189	2003765	0.57	cps
Scandium	45-2	105546	106338	107479	106454	0.91	cps
Selenium	77-2	0	0	3	1	173.21	cps
Selenium	78-2	96	106	124	109	13.02	cps
Selenium	82-1	190	279	236	235	18.80	cps
Silicon	28-1	480072	481454	483092	481539	0.31	cps
Silver	109-1	1792	1583	1467	1614	10.20	cps
Silver	107-1	2159	1784	1667	1870	13.74	cps
Sodium	23-2	258692589	263481514	262654781	261609628	0.98	cps
Strontium	86-1	63809	63616	65082	64169	1.24	cps
Strontium	88-1	453536	453407	459900	455614	0.81	cps
Sulfur	34-1	578361	592191	607071	592541	2.42	cps
Terbium	159-1	3686643	3608820	3662753	3652739	1.09	cps
Terbium	159-2	2178647	2200099	2185577	2188108	0.50	cps
Thallium	203-1	3842	3842	3651	3779	2.93	cps
Thallium	205-1	9462	8728	8720	8970	4.75	cps
Tin	118-1	9128	9278	9287	9231	0.97	cps
Titanium	47-1	783	717	808	770	6.16	cps
Uranium	238-1	983	1100	883	989	10.97	cps
Vanadium	51-2	587	543	480	537	10.00	cps
Yttrium	89-2	539835	541148	539180	540054	0.19	cps
Yttrium	89-1	3203609	3183831	3234410	3207283	0.79	cps
Zinc	66-2	14654	14844	14728	14742	0.65	cps
Zirconium	90-1	2117	2275	2209	2200	3.61	cps
Zirconium	91-1	483	425	575	494	15.29	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICV	Instrumnet Name :	P7
Client Sample ID :	ICV	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:09:14	DataFile Name :	017ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	58414	57687	57068	57723	1.17	cps
Antimony	121-1	2180950	2193229	2193145	2189108	0.32	cps
Arsenic	75-2	88672	87720	86457	87616	1.27	cps
Barium	135-1	259617	261107	261482	260736	0.38	cps
Barium	137-1	451352	456085	454829	454089	0.54	cps
Beryllium	9-1	146354	143847	144363	144855	0.91	cps
Bismuth	209-2	1636332	1629790	1620082	1628735	0.50	cps
Bismuth	209-1	2480745	2480185	2501890	2487607	0.50	cps
Boron	10-1	67183	66212	66003	66466	0.95	cps
Boron	11-1	349578	350772	344856	348402	0.90	cps
Cadmium	106-1	26142	26250	24680	25691	3.41	cps
Cadmium	108-1	18542	18529	18158	18409	1.18	cps
Cadmium	111-1	277438	276704	275802	276648	0.30	cps
Calcium	43-1	66090	66266	64090	65482	1.85	cps
Calcium	44-1	1087922	1088522	1081952	1086132	0.33	cps
Chromium	52-2	399804	400452	395815	398691	0.63	cps
Cobalt	59-2	656196	657715	654436	656116	0.25	cps
Copper	63-2	481357	484362	480159	481959	0.45	cps
Holmium	165-1	3790351	3810249	3820520	3807040	0.40	cps
Holmium	165-2	2173596	2172543	2136736	2160958	0.97	cps
Indium	115-2	641217	653911	645652	646927	1.00	cps
Indium	115-1	3070727	3045547	3044066	3053447	0.49	cps
Iron	56-2	3326897	3298567	3330993	3318819	0.53	cps
Iron	57-2	82374	81431	80995	81600	0.86	cps
Lead	206-1	1645643	1642022	1635744	1641137	0.31	cps
Lead	207-1	1433384	1443745	1428198	1435109	0.55	cps
Lead	208-1	6567065	6596291	6557821	6573726	0.31	cps
Lithium	6-1	232874	236464	234933	234757	0.77	cps
Magnesium	24-2	328171	331339	331992	330501	0.62	cps
Manganese	55-2	214107	215797	214563	214823	0.41	cps
Molybdenum	94-1	814547	807776	814838	812387	0.49	cps
Molybdenum	95-1	1464665	1460131	1466296	1463697	0.22	cps
Molybdenum	96-1	1569494	1547661	1577306	1564820	0.98	cps
Molybdenum	97-1	886128	882450	890669	886416	0.46	cps
Molybdenum	98-1	2356001	2331478	2347611	2345030	0.53	cps
Nickel	60-2	178633	180279	179153	179355	0.47	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICV	Instrumnet Name :	P7
Client Sample ID :	ICV	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:09:14	DataFile Name :	017ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	367	400	308	358	12.95	cps
Potassium	39-2	578184	578587	572254	576342	0.62	cps
Rhodium	103-1	2979902	2957642	2941245	2959596	0.66	cps
Rhodium	103-2	1589171	1566736	1582750	1579552	0.73	cps
Scandium	45-1	2078945	2056700	2067359	2067668	0.54	cps
Scandium	45-2	104989	103898	103682	104190	0.67	cps
Selenium	77-2	1783	1850	1767	1800	2.45	cps
Selenium	78-2	6476	6294	6259	6343	1.83	cps
Selenium	82-1	38072	36992	37283	37449	1.49	cps
Silicon	28-1	2089664	2095491	2091316	2092157	0.14	cps
Silver	107-1	1290015	1287087	1276599	1284567	0.55	cps
Silver	109-1	1243824	1250338	1235647	1243269	0.59	cps
Sodium	23-2	1052158	1042223	1041999	1045460	0.55	cps
Strontium	86-1	18604	20432	18905	19314	5.07	cps
Strontium	88-1	71780	71412	72307	71833	0.63	cps
Sulfur	34-1	607617	595585	594119	599107	1.24	cps
Terbium	159-2	2201999	2233070	2195787	2210285	0.90	cps
Terbium	159-1	3958173	3942048	3974100	3958107	0.40	cps
Thallium	203-1	2103285	2092002	2107987	2101092	0.39	cps
Thallium	205-1	4930864	4903949	4903093	4912636	0.32	cps
Tin	118-1	2310863	2349654	2341240	2333919	0.87	cps
Titanium	47-1	424241	422227	422100	422856	0.28	cps
Uranium	238-1	58	58	67	61	7.87	cps
Vanadium	51-2	324090	323035	318793	321973	0.87	cps
Yttrium	89-2	534190	538686	533145	535340	0.55	cps
Yttrium	89-1	3369403	3393091	3361275	3374590	0.49	cps
Zinc	66-2	132145	131829	131593	131855	0.21	cps
Zirconium	90-1	1333	1533	1442	1436	6.97	cps
Zirconium	91-1	667	742	608	672	9.94	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICB	Instrumnet Name :	P7
Client Sample ID :	ICB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:12:21	DataFile Name :	018CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	50	25	50	42	34.64	cps
Antimony	121-1	2559	2700	2409	2556	5.71	cps
Arsenic	75-2	6	11	17	11	49.99	cps
Barium	135-1	42	33	17	31	41.65	cps
Barium	137-1	50	67	33	50	33.34	cps
Beryllium	9-1	50	39	50	46	13.85	cps
Bismuth	209-1	2462103	2473367	2446592	2460688	0.55	cps
Bismuth	209-2	1620922	1614201	1605563	1613562	0.48	cps
Boron	10-1	1717	1800	1667	1728	3.90	cps
Boron	11-1	9253	9061	9153	9156	1.05	cps
Cadmium	111-1	914	1040	1055	1003	7.74	cps
Cadmium	106-1	1292	1458	1483	1411	7.38	cps
Cadmium	108-1	4	8	0	4	99.96	cps
Calcium	43-1	300	458	400	386	20.74	cps
Calcium	44-1	20348	20206	20523	20359	0.78	cps
Chromium	52-2	873	743	910	842	10.40	cps
Cobalt	59-2	40	27	23	30	29.40	cps
Copper	63-2	1270	1290	1253	1271	1.44	cps
Holmium	165-1	3753283	3715669	3723737	3730897	0.53	cps
Holmium	165-2	2112655	2113431	2111946	2112678	0.04	cps
Indium	115-2	652229	650946	653124	652100	0.17	cps
Indium	115-1	3033014	3007510	3035130	3025218	0.51	cps
Iron	56-2	5040	4873	5084	4999	2.23	cps
Iron	57-2	117	167	133	139	18.33	cps
Lead	206-1	1033	800	883	906	13.06	cps
Lead	207-1	783	733	739	752	3.65	cps
Lead	208-1	3706	3367	3378	3484	5.53	cps
Lithium	6-1	232649	228308	231878	230945	1.00	cps
Magnesium	24-2	250	333	208	264	24.12	cps
Manganese	55-2	37	43	37	39	9.89	cps
Molybdenum	94-1	208	258	183	217	17.63	cps
Molybdenum	95-1	208	233	250	231	9.10	cps
Molybdenum	96-1	375	233	267	292	25.39	cps
Molybdenum	97-1	150	108	158	139	19.29	cps
Molybdenum	98-1	508	317	300	375	30.87	cps
Nickel	60-2	880	887	847	871	2.46	cps

Reviewed By:BIN
On:5/23/2016 2:13:54 PM
Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICB	Instrumnet Name :	P7
Client Sample ID :	ICB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:12:21	DataFile Name :	018CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	450	408	333	397	14.88	cps
Potassium	39-2	40389	39896	38994	39760	1.78	cps
Rhodium	103-1	2966015	2913935	2959825	2946591	0.97	cps
Rhodium	103-2	1574952	1549940	1562131	1562341	0.80	cps
Scandium	45-1	2031084	2051751	2039840	2040892	0.51	cps
Scandium	45-2	101985	102216	103156	102452	0.61	cps
Selenium	82-1	-176	17	-334	-164	-106.92	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	98	91	89	93	5.29	cps
Silicon	28-1	324304	320567	319368	321413	0.80	cps
Silver	109-1	233	158	283	225	27.96	cps
Silver	107-1	283	267	200	250	17.64	cps
Sodium	23-2	21633	21758	21942	21778	0.71	cps
Strontium	86-1	10996	11497	11180	11224	2.25	cps
Strontium	88-1	192	125	108	142	31.13	cps
Sulfur	34-1	583944	584356	586798	585033	0.26	cps
Terbium	159-1	3894214	3817583	3894645	3868814	1.15	cps
Terbium	159-2	2154135	2231011	2168290	2184479	1.87	cps
Thallium	203-1	492	542	400	478	15.04	cps
Thallium	205-1	1233	1100	975	1103	11.72	cps
Tin	118-1	950	850	1067	956	11.35	cps
Titanium	47-1	108	83	100	97	13.09	cps
Uranium	238-1	33	50	33	39	24.75	cps
Vanadium	51-2	20	17	17	18	10.81	cps
Yttrium	89-1	3388743	3379730	3335389	3367954	0.85	cps
Yttrium	89-2	530751	525043	526843	527546	0.55	cps
Zinc	66-2	850	777	820	816	4.52	cps
Zirconium	90-1	183	308	267	253	25.18	cps
Zirconium	91-1	42	42	58	47	20.38	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICSA	Instrumnet Name :	P7
Client Sample ID :	ICSA	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:15:29	DataFile Name :	019ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	11055455	11074959	11299754	11143389	1.22	cps
Antimony	121-1	12948	13165	13290	13134	1.32	cps
Arsenic	75-2	156	126	185	156	19.05	cps
Barium	135-1	3492	3401	3617	3503	3.11	cps
Barium	137-1	6510	6710	6794	6671	2.18	cps
Beryllium	9-1	478	500	394	457	12.17	cps
Bismuth	209-1	2288540	2279576	2314744	2294287	0.80	cps
Bismuth	209-2	1539167	1518962	1530080	1529403	0.66	cps
Boron	10-1	1717	1684	1608	1670	3.32	cps
Boron	11-1	8403	8236	7919	8186	3.00	cps
Cadmium	106-1	1183	1292	1233	1236	4.39	cps
Cadmium	108-1	3000	3109	2955	3021	2.62	cps
Cadmium	111-1	2387	2491	2650	2509	5.28	cps
Calcium	43-1	3204982	3262587	3300689	3256086	1.48	cps
Calcium	44-1	51318916	51794000	52554017	51888978	1.20	cps
Chromium	52-2	79540	79791	80395	79909	0.55	cps
Cobalt	59-2	7692	7635	8069	7799	3.02	cps
Copper	63-2	39182	38828	38190	38734	1.30	cps
Holmium	165-2	2176801	2175017	2183985	2178601	0.22	cps
Holmium	165-1	3718541	3739139	3797218	3751632	1.09	cps
Indium	115-1	2964716	2963923	3005920	2978187	0.81	cps
Indium	115-2	647794	642025	646003	645274	0.46	cps
Iron	56-2	325702118	327164474	328876907	327247833	0.49	cps
Iron	57-2	8246517	8161365	8316574	8241485	0.94	cps
Lead	206-1	35999	35693	35632	35775	0.55	cps
Lead	207-1	28637	27819	29205	28553	2.44	cps
Lead	208-1	134385	133434	135440	134420	0.75	cps
Lithium	6-1	222576	224379	223759	223571	0.41	cps
Magnesium	24-2	26665484	26765340	27317218	26916014	1.30	cps
Manganese	55-2	16493	16550	16810	16617	1.02	cps
Molybdenum	98-1	17009163	17264080	17171670	17148304	0.75	cps
Molybdenum	94-1	6032827	6052482	6149219	6078176	1.03	cps
Molybdenum	95-1	10576501	10755810	10684666	10672326	0.85	cps
Molybdenum	96-1	11276969	11468651	11442631	11396084	0.91	cps
Molybdenum	97-1	6527260	6643527	6661609	6610799	1.10	cps
Nickel	60-2	10487	9997	10174	10219	2.43	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICSA	Instrumnet Name :	P7
Client Sample ID :	ICSA	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:15:29	DataFile Name :	019ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	641451	648919	647098	645823	0.60	cps
Potassium	39-2	27042754	27277517	27439532	27253268	0.73	cps
Rhodium	103-1	2811242	2810715	2839923	2820627	0.59	cps
Rhodium	103-2	1532683	1528785	1528913	1530127	0.14	cps
Scandium	45-2	104552	105607	104714	104957	0.54	cps
Scandium	45-1	2072196	2085016	2097073	2084762	0.60	cps
Selenium	82-1	80	137	46	88	52.52	cps
Selenium	77-2	13	0	7	7	99.98	cps
Selenium	78-2	93	98	91	94	4.11	cps
Silicon	28-1	475594	481900	480013	479169	0.68	cps
Silver	107-1	1684	1767	1925	1792	6.85	cps
Silver	109-1	1433	1617	1700	1583	8.62	cps
Sodium	23-2	50660613	50718491	51740819	51039974	1.19	cps
Strontium	86-1	128983	127748	128682	128471	0.50	cps
Strontium	88-1	1018647	1013668	1029504	1020606	0.79	cps
Sulfur	34-1	4743627	4722008	4777564	4747733	0.59	cps
Terbium	159-2	2214119	2256630	2250181	2240310	1.02	cps
Terbium	159-1	3882314	3940990	3926111	3916472	0.78	cps
Thallium	203-1	825	858	958	881	7.88	cps
Thallium	205-1	2417	2342	2184	2314	5.15	cps
Tin	118-1	1925	2317	2075	2106	9.39	cps
Titanium	47-1	3210606	3248755	3286269	3248543	1.16	cps
Uranium	238-1	567	583	533	561	4.54	cps
Vanadium	51-2	590	527	580	566	6.02	cps
Yttrium	89-2	542244	539034	540064	540447	0.30	cps
Yttrium	89-1	3347775	3340254	3339110	3342379	0.14	cps
Zinc	66-2	7862	8219	8062	8048	2.22	cps
Zirconium	90-1	475	450	575	500	13.23	cps
Zirconium	91-1	83	100	92	92	9.09	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICSAB	Instrumnet Name :	P7
Client Sample ID :	ICSAB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:18:34	DataFile Name :	020ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	11249657	11513921	11502994	11422191	1.31	cps
Antimony	121-1	223706	223315	224374	223798	0.24	cps
Arsenic	75-2	8982	9029	8845	8952	1.07	cps
Barium	135-1	54826	55930	56415	55724	1.46	cps
Barium	137-1	95771	96048	96544	96121	0.41	cps
Beryllium	9-1	28405	28839	28421	28555	0.86	cps
Bismuth	209-2	1513273	1540642	1541376	1531764	1.05	cps
Bismuth	209-1	2266250	2262584	2256894	2261909	0.21	cps
Boron	10-1	1734	1775	1892	1800	4.56	cps
Boron	11-1	8870	8995	8603	8822	2.27	cps
Cadmium	106-1	5818	5835	5993	5882	1.64	cps
Cadmium	108-1	6393	6126	6581	6367	3.59	cps
Cadmium	111-1	53558	54677	54926	54387	1.34	cps
Calcium	43-1	3307813	3319322	3393975	3340370	1.40	cps
Calcium	44-1	52691445	53152867	53627893	53157402	0.88	cps
Chromium	52-2	165783	168668	168918	167790	1.04	cps
Cobalt	59-2	139398	140289	141091	140259	0.60	cps
Copper	63-2	133444	137125	136818	135796	1.50	cps
Holmium	165-1	3737559	3722602	3773370	3744510	0.70	cps
Holmium	165-2	2172672	2233503	2228673	2211616	1.53	cps
Indium	115-2	649052	660534	658043	655876	0.92	cps
Indium	115-1	2989895	2978088	3080821	3016268	1.86	cps
Iron	56-2	331468741	334061630	336446896	333992422	0.75	cps
Iron	57-2	8324946	8504800	8482686	8437477	1.16	cps
Lead	206-1	187868	187109	190624	188534	0.98	cps
Lead	207-1	157061	157060	158787	157636	0.63	cps
Lead	208-1	729083	729796	737514	732131	0.64	cps
Lithium	6-1	216767	218173	220675	218539	0.91	cps
Magnesium	24-2	27204215	28100069	27773029	27692438	1.64	cps
Manganese	55-2	61434	62415	62171	62007	0.82	cps
Molybdenum	94-1	6090626	6227417	6247062	6188368	1.38	cps
Molybdenum	95-1	10848014	10966809	11024568	10946464	0.82	cps
Molybdenum	96-1	11523992	11725670	11591455	11613706	0.88	cps
Molybdenum	97-1	6731233	6736394	6708822	6725483	0.22	cps
Molybdenum	98-1	17464740	17540895	17709208	17571614	0.71	cps
Nickel	60-2	47062	47240	46520	46941	0.80	cps

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On:5/23/2016 2:13:54 PM
Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	ICSAB	Instrumnet Name :	P7
Client Sample ID :	ICSAB	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:18:34	DataFile Name :	020ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	662733	670009	668135	666959	0.57	cps
Potassium	39-2	27732628	28445795	28599205	28259209	1.64	cps
Rhodium	103-1	2818918	2849698	2843993	2837537	0.58	cps
Rhodium	103-2	1522369	1570472	1566949	1553263	1.73	cps
Scandium	45-1	2093961	2118855	2133142	2115319	0.94	cps
Scandium	45-2	106312	108396	108305	107671	1.09	cps
Selenium	77-2	167	150	150	156	6.19	cps
Selenium	78-2	719	743	726	729	1.69	cps
Selenium	82-1	3762	3301	3186	3416	8.93	cps
Silicon	28-1	498411	500889	508464	502588	1.04	cps
Silver	107-1	244680	245867	250512	247020	1.25	cps
Silver	109-1	235626	233405	240181	236404	1.46	cps
Sodium	23-2	51970591	52106604	52485295	52187497	0.51	cps
Strontium	86-1	130338	132113	132725	131725	0.94	cps
Strontium	88-1	1034577	1038881	1050570	1041343	0.79	cps
Sulfur	34-1	4803909	4852904	4896441	4851085	0.95	cps
Terbium	159-2	2220373	2257943	2262509	2246942	1.03	cps
Terbium	159-1	3881420	3891479	3950232	3907711	0.95	cps
Thallium	203-1	187200	185333	186456	186330	0.50	cps
Thallium	205-1	449631	452368	452808	451602	0.38	cps
Tin	118-1	2225	2317	2284	2275	2.04	cps
Titanium	47-1	3293488	3294156	3367713	3318452	1.29	cps
Uranium	238-1	967	658	717	781	20.98	cps
Vanadium	51-2	65625	66897	67088	66537	1.20	cps
Yttrium	89-2	545605	555443	550185	550411	0.89	cps
Yttrium	89-1	3356719	3391002	3441412	3396377	1.25	cps
Zinc	66-2	21182	21630	21025	21279	1.47	cps
Zirconium	90-1	833	783	775	797	3.96	cps
Zirconium	91-1	175	200	217	197	10.63	cps

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On:5/23/2016 2:13:54 PM
Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCV026	Instrumnet Name :	P7
Client Sample ID :	CCV026	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:21:39	DataFile Name :	021CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1159133	1202032	1165291	1175485	1.97	cps
Antimony	121-1	5720007	5842130	5741305	5767814	1.13	cps
Arsenic	75-2	231676	228778	228372	229609	0.78	cps
Barium	135-1	6802896	6887537	6818825	6836419	0.66	cps
Barium	137-1	11623449	11768519	11672228	11688065	0.63	cps
Beryllium	9-1	721281	724112	720784	722059	0.25	cps
Bismuth	209-1	2362781	2398383	2441018	2400727	1.63	cps
Bismuth	209-2	1598549	1586058	1598756	1594454	0.46	cps
Boron	10-1	100039	104266	107019	103775	3.39	cps
Boron	11-1	511454	532166	545771	529797	3.26	cps
Cadmium	111-1	1401292	1420305	1396289	1405962	0.90	cps
Cadmium	106-1	155712	157180	156699	156530	0.48	cps
Cadmium	108-1	103524	105749	104767	104680	1.06	cps
Calcium	43-1	1752111	1757228	1761975	1757105	0.28	cps
Calcium	44-1	27993056	28334890	27893034	28073660	0.83	cps
Chromium	52-2	2157160	2154590	2152009	2154587	0.12	cps
Cobalt	59-2	3435952	3403213	3442923	3427363	0.62	cps
Copper	63-2	4993558	4896439	4970019	4953339	1.02	cps
Holmium	165-2	2201945	2248334	2248755	2233011	1.20	cps
Holmium	165-1	3851891	3831993	3837858	3840581	0.27	cps
Indium	115-1	3023319	3079707	3021694	3041574	1.09	cps
Indium	115-2	641058	633048	644231	639446	0.90	cps
Iron	56-2	84903494	84234782	84498663	84545646	0.40	cps
Iron	57-2	2172480	2164256	2146028	2160921	0.63	cps
Lead	206-1	4085137	4138314	4096115	4106522	0.68	cps
Lead	207-1	3629587	3640781	3643168	3637845	0.20	cps
Lead	208-1	16361555	16429808	16416198	16402520	0.22	cps
Lithium	6-1	223830	222814	223905	223516	0.27	cps
Magnesium	24-2	14417479	14191416	14476964	14361953	1.05	cps
Manganese	55-2	2318675	2286602	2319759	2308346	0.82	cps
Molybdenum	94-1	5284030	5362479	5306660	5317723	0.76	cps
Molybdenum	95-1	2910609	2911541	2891743	2904631	0.38	cps
Molybdenum	96-1	3717429	3677311	3728337	3707692	0.72	cps
Molybdenum	97-1	1786339	1799762	1784815	1790305	0.46	cps
Molybdenum	98-1	4606973	4628952	4657827	4631250	0.55	cps
Nickel	60-2	900636	885215	891218	892356	0.87	cps

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On:5/23/2016 2:13:54 PM
Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCV026	Instrumnet Name :	P7
Client Sample ID :	CCV026	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:21:39	DataFile Name :	021CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	67997	68566	69404	68656	1.03	cps
Potassium	39-2	7224140	7145128	7241880	7203716	0.72	cps
Rhodium	103-1	2945305	2954437	2978046	2959262	0.57	cps
Rhodium	103-2	1565946	1551559	1604218	1573908	1.73	cps
Scandium	45-1	2171458	2171561	2154641	2165887	0.45	cps
Scandium	45-2	110468	111002	110408	110626	0.30	cps
Selenium	82-1	95016	95055	95417	95163	0.23	cps
Selenium	77-2	4861	4924	4864	4883	0.73	cps
Selenium	78-2	16467	16072	16417	16319	1.32	cps
Silicon	28-1	3935065	3999796	4012350	3982404	1.04	cps
Silver	109-1	6597806	6712398	6640969	6650391	0.87	cps
Silver	107-1	6993288	6945958	6941076	6960107	0.41	cps
Sodium	23-2	26560392	26155080	26180114	26298529	0.86	cps
Strontium	86-1	1885855	1860484	1869932	1872090	0.68	cps
Strontium	88-1	15897455	15804145	16003693	15901764	0.63	cps
Sulfur	34-1	1044759	1045308	1054671	1048246	0.53	cps
Terbium	159-1	3979493	4006901	4042206	4009533	0.78	cps
Terbium	159-2	2250521	2259679	2251878	2254026	0.22	cps
Thallium	203-1	5028532	5119693	5088860	5079028	0.91	cps
Thallium	205-1	11778413	12037563	11913881	11909952	1.09	cps
Tin	118-1	4499669	4588365	4485442	4524492	1.23	cps
Titanium	47-1	839835	848630	839959	842808	0.60	cps
Uranium	238-1	17184822	17239538	17355092	17259817	0.50	cps
Vanadium	51-2	1775084	1748779	1759589	1761150	0.75	cps
Yttrium	89-1	3456504	3439959	3515241	3470568	1.14	cps
Yttrium	89-2	552603	546859	551674	550379	0.56	cps
Zinc	66-2	665697	653125	661085	659969	0.96	cps
Zirconium	90-1	9989388	10020472	10044360	10018073	0.28	cps
Zirconium	91-1	2253286	2234207	2251467	2246320	0.47	cps

Reviewed By:BIN
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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCB026	Instrumnet Name :	P7
Client Sample ID :	CCB026	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:24:30	DataFile Name :	022CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	75	83	67	75	11.11	cps
Antimony	121-1	3234	3184	3326	3248	2.21	cps
Arsenic	75-2	15	22	11	16	35.26	cps
Barium	135-1	100	67	67	78	24.75	cps
Barium	137-1	200	108	133	147	32.19	cps
Beryllium	9-1	67	44	100	70	39.73	cps
Bismuth	209-1	2435416	2437276	2443486	2438726	0.17	cps
Bismuth	209-2	1623817	1611214	1611658	1615563	0.44	cps
Boron	10-1	3367	3634	3317	3439	4.95	cps
Boron	11-1	19088	18095	16710	17964	6.65	cps
Cadmium	106-1	1350	1250	1408	1336	5.99	cps
Cadmium	108-1	33	0	4	13	145.28	cps
Cadmium	111-1	993	938	996	975	3.35	cps
Calcium	43-1	492	350	317	386	24.07	cps
Calcium	44-1	23110	23286	22710	23036	1.28	cps
Chromium	52-2	870	833	883	862	3.00	cps
Cobalt	59-2	63	63	67	64	2.99	cps
Copper	63-2	2140	2094	1987	2074	3.79	cps
Holmium	165-2	2163136	2126568	2150970	2146891	0.87	cps
Holmium	165-1	3814055	3732607	3748765	3765142	1.15	cps
Indium	115-1	3199547	3069214	3129921	3132894	2.08	cps
Indium	115-2	656647	653307	656481	655478	0.29	cps
Iron	56-2	6941	6952	6835	6909	0.93	cps
Iron	57-2	89	117	128	111	18.03	cps
Lead	206-1	1206	1117	1272	1198	6.51	cps
Lead	207-1	989	995	956	980	2.15	cps
Lead	208-1	4556	4523	4562	4547	0.46	cps
Lithium	6-1	229001	225911	223700	226204	1.18	cps
Magnesium	24-2	325	333	333	331	1.45	cps
Manganese	55-2	63	107	43	71	45.53	cps
Molybdenum	94-1	592	475	525	531	11.03	cps
Molybdenum	95-1	625	517	550	564	9.84	cps
Molybdenum	96-1	708	683	667	686	3.06	cps
Molybdenum	97-1	442	458	467	456	2.79	cps
Molybdenum	98-1	1133	975	975	1028	8.89	cps
Nickel	60-2	917	943	813	891	7.71	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCB026	Instrumnet Name :	P7
Client Sample ID :	CCB026	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 11:24:30	DataFile Name :	022CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	292	425	308	342	21.26	cps
Potassium	39-2	42086	42763	42512	42453	0.81	cps
Rhodium	103-1	3046490	2995666	3017556	3019904	0.84	cps
Rhodium	103-2	1603888	1587960	1578238	1590029	0.81	cps
Scandium	45-2	103606	105398	103411	104138	1.05	cps
Scandium	45-1	2101438	2076209	2130741	2102796	1.30	cps
Selenium	82-1	67	-63	160	55	204.15	cps
Selenium	77-2	0	3	0	1	173.21	cps
Selenium	78-2	96	81	106	94	12.86	cps
Silicon	28-1	338173	337608	334302	336694	0.62	cps
Silver	107-1	758	475	508	581	26.67	cps
Silver	109-1	458	583	533	525	11.98	cps
Sodium	23-2	24788	25147	24922	24952	0.73	cps
Strontium	86-1	12256	11730	11739	11908	2.53	cps
Strontium	88-1	317	292	225	278	17.06	cps
Sulfur	34-1	562843	568564	568723	566710	0.59	cps
Terbium	159-1	4006250	3878200	3875354	3919935	1.91	cps
Terbium	159-2	2143384	2165783	2194984	2168050	1.19	cps
Thallium	203-1	833	842	625	767	16.01	cps
Thallium	205-1	2067	1959	1800	1942	6.91	cps
Tin	118-1	842	1017	1125	995	14.38	cps
Titanium	47-1	75	75	92	81	11.95	cps
Uranium	238-1	325	350	325	333	4.33	cps
Vanadium	51-2	20	13	23	19	26.96	cps
Yttrium	89-1	3473735	3385958	3381620	3413771	1.52	cps
Yttrium	89-2	541316	532983	537456	537251	0.78	cps
Zinc	66-2	887	843	823	851	3.80	cps
Zirconium	90-1	483	483	542	503	6.70	cps
Zirconium	91-1	67	108	100	92	24.05	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-01	Instrumnet Name :	P7
Client Sample ID :	MH4005	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:03:03	DataFile Name :	031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3059	2792	2575	2809	8.62	cps
Antimony	121-1	2592	2817	2484	2631	6.46	cps
Arsenic	75-2	422	419	354	398	9.68	cps
Barium	135-1	163289	163140	160912	162447	0.82	cps
Barium	137-1	282247	281104	279434	280928	0.50	cps
Beryllium	9-1	44	33	28	35	24.12	cps
Bismuth	209-1	2531425	2503558	2480876	2505287	1.01	cps
Bismuth	209-2	1573686	1559023	1557365	1563358	0.57	cps
Boron	10-1	22200	24354	23795	23450	4.76	cps
Boron	11-1	116203	121605	121164	119657	2.51	cps
Cadmium	106-1	1325	1400	1408	1378	3.33	cps
Cadmium	108-1	25	21	21	22	10.84	cps
Cadmium	111-1	1068	1191	1155	1138	5.52	cps
Calcium	44-1	79637937	79319239	78560818	79172665	0.70	cps
Calcium	43-1	4963434	4947480	4986805	4965906	0.40	cps
Chromium	52-2	4061	4137	4501	4233	5.55	cps
Cobalt	59-2	407	347	443	399	12.23	cps
Copper	63-2	13697	13600	13323	13540	1.43	cps
Holmium	165-2	2206608	2204869	2196240	2202573	0.25	cps
Holmium	165-1	4101955	4030678	4076148	4069594	0.89	cps
Indium	115-1	3248347	3261585	3233906	3247946	0.43	cps
Indium	115-2	648595	650263	643232	647363	0.57	cps
Iron	56-2	226023	227547	225720	226430	0.43	cps
Iron	57-2	7380	7585	7119	7361	3.18	cps
Lead	206-1	7775	7752	7408	7645	2.69	cps
Lead	207-1	6513	6613	6496	6541	0.97	cps
Lead	208-1	30643	30876	29325	30281	2.76	cps
Lithium	6-1	255428	252716	255565	254570	0.63	cps
Magnesium	24-2	14883743	14966899	14932044	14927562	0.28	cps
Manganese	55-2	5064	4941	4998	5001	1.23	cps
Molybdenum	94-1	2284	2134	2192	2203	3.43	cps
Molybdenum	95-1	3100	3200	3175	3159	1.65	cps
Molybdenum	96-1	3592	3751	3109	3484	9.60	cps
Molybdenum	97-1	1900	2292	1892	2028	11.27	cps
Molybdenum	98-1	5443	4726	5193	5121	7.11	cps
Nickel	60-2	597	527	540	554	6.70	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-01	Instrumnet Name :	P7
Client Sample ID :	MH4005	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:03:03	DataFile Name :	031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	417	517	558	497	14.64	cps
Potassium	39-2	1136265	1147644	1146318	1143409	0.54	cps
Rhodium	103-1	3060630	3027584	3030188	3039468	0.60	cps
Rhodium	103-2	1589750	1593365	1582887	1588667	0.34	cps
Scandium	45-1	2231153	2220579	2219790	2223841	0.29	cps
Scandium	45-2	105462	104717	104250	104810	0.58	cps
Selenium	82-1	90	89	-38	47	157.54	cps
Selenium	77-2	23	7	17	16	53.90	cps
Selenium	78-2	119	133	154	135	13.07	cps
Silicon	28-1	62094710	62061035	60843074	61666273	1.16	cps
Silver	107-1	1984	2267	2575	2275	13.01	cps
Silver	109-1	1734	1892	2259	1961	13.73	cps
Sodium	23-2	30261881	30584403	30478828	30441704	0.54	cps
Strontium	86-1	4202943	4280769	4271113	4251608	1.00	cps
Strontium	88-1	36446290	36729381	36603082	36592918	0.39	cps
Sulfur	34-1	2784936	2795204	2755400	2778513	0.74	cps
Terbium	159-1	4221796	4220274	4198469	4213513	0.31	cps
Terbium	159-2	2265049	2236332	2233606	2244996	0.78	cps
Thallium	203-1	133	125	117	125	6.67	cps
Thallium	205-1	350	325	392	356	9.47	cps
Tin	118-1	1383	1517	1108	1336	15.58	cps
Titanium	47-1	2350	2309	2075	2245	6.60	cps
Uranium	238-1	69730	69184	67115	68676	2.01	cps
Vanadium	51-2	6605	6328	6258	6397	2.87	cps
Yttrium	89-1	3504765	3542132	3569262	3538720	0.92	cps
Yttrium	89-2	534550	530014	532780	532448	0.43	cps
Zinc	66-2	8386	8216	8169	8257	1.38	cps
Zirconium	90-1	1275	1242	1625	1381	15.38	cps
Zirconium	91-1	267	308	308	294	8.17	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-02	Instrumnet Name :	P7
Client Sample ID :	MH4097	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:06:08	DataFile Name :	032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4167	4609	4384	4387	5.04	cps
Antimony	121-1	2709	2475	2684	2623	4.89	cps
Arsenic	75-2	387	428	380	398	6.51	cps
Barium	135-1	170946	167938	169498	169461	0.89	cps
Barium	137-1	293554	293783	293393	293577	0.07	cps
Beryllium	9-1	39	28	22	30	28.65	cps
Bismuth	209-2	1554819	1568385	1563951	1562385	0.44	cps
Bismuth	209-1	2533333	2484810	2493785	2503976	1.03	cps
Boron	10-1	24980	24988	25063	25011	0.18	cps
Boron	11-1	122838	125577	127500	125305	1.87	cps
Cadmium	111-1	1272	1242	1163	1226	4.59	cps
Cadmium	106-1	1433	1333	1258	1342	6.54	cps
Cadmium	108-1	33	29	38	33	12.50	cps
Calcium	43-1	5121027	5121130	5114695	5118951	0.07	cps
Calcium	44-1	82505823	81237960	82457312	82067032	0.88	cps
Chromium	52-2	4891	4694	4634	4740	2.83	cps
Cobalt	59-2	450	450	450	450	0.00	cps
Copper	63-2	22978	23422	22891	23097	1.23	cps
Holmium	165-1	3993454	4042029	3970418	4001967	0.91	cps
Holmium	165-2	2165490	2211546	2194047	2190361	1.06	cps
Indium	115-1	3191683	3220573	3189129	3200461	0.55	cps
Indium	115-2	637956	643228	632229	637804	0.86	cps
Iron	56-2	396405	389807	391770	392661	0.86	cps
Iron	57-2	11232	11683	11177	11364	2.44	cps
Lead	206-1	17907	18575	18547	18343	2.06	cps
Lead	207-1	15009	15537	15660	15402	2.25	cps
Lead	208-1	71032	72462	71704	71733	1.00	cps
Lithium	6-1	254387	251712	253411	253170	0.53	cps
Magnesium	24-2	15163180	15051807	15022682	15079223	0.49	cps
Manganese	55-2	9663	9990	10300	9985	3.19	cps
Molybdenum	94-1	2159	2025	1900	2028	6.37	cps
Molybdenum	95-1	2559	2842	2509	2636	6.82	cps
Molybdenum	96-1	2892	2750	3025	2889	4.76	cps
Molybdenum	97-1	1534	1642	1675	1617	4.58	cps
Molybdenum	98-1	4326	3917	4042	4095	5.11	cps
Nickel	60-2	667	623	703	664	6.03	cps

Reviewed By:BIN
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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-02	Instrumnet Name :	P7
Client Sample ID :	MH4097	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:06:08	DataFile Name :	032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	425	450	558	478	14.83	cps
Potassium	39-2	1182976	1198015	1182868	1187953	0.73	cps
Rhodium	103-2	1558184	1549878	1556125	1554729	0.28	cps
Rhodium	103-1	2978615	3009173	2983888	2990559	0.55	cps
Scandium	45-1	2228683	2187855	2183190	2199909	1.14	cps
Scandium	45-2	104156	103300	103673	103710	0.41	cps
Selenium	77-2	17	3	7	9	78.08	cps
Selenium	78-2	143	94	126	121	20.21	cps
Selenium	82-1	224	-19	176	127	101.19	cps
Silicon	28-1	63329349	62935431	62684864	62983215	0.52	cps
Silver	109-1	1775	1934	1975	1895	5.57	cps
Silver	107-1	1809	2034	2325	2056	12.60	cps
Sodium	23-2	31048100	30859212	31042862	30983391	0.35	cps
Strontium	86-1	4404713	4323803	4364672	4364396	0.93	cps
Strontium	88-1	37925487	37608448	37537178	37690371	0.55	cps
Sulfur	34-1	2807968	2789388	2783668	2793675	0.45	cps
Terbium	159-2	2209958	2220731	2234449	2221713	0.55	cps
Terbium	159-1	4227740	4237623	4170245	4211869	0.86	cps
Thallium	203-1	133	108	125	122	10.41	cps
Thallium	205-1	342	308	275	308	10.81	cps
Tin	118-1	1542	1517	1742	1600	7.71	cps
Titanium	47-1	2384	2250	2342	2325	2.93	cps
Uranium	238-1	70156	69838	71254	70416	1.05	cps
Vanadium	51-2	8069	7759	7986	7938	2.02	cps
Yttrium	89-2	521358	530880	523426	525221	0.95	cps
Yttrium	89-1	3500875	3531895	3486708	3506492	0.66	cps
Zinc	66-2	14000	13813	13790	13868	0.83	cps
Zirconium	90-1	1475	1442	1350	1422	4.55	cps
Zirconium	91-1	325	325	350	333	4.33	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-03	Instrumnet Name :	P7
Client Sample ID :	MH4106	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:09:12	DataFile Name :	033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4459	4518	4851	4609	4.59	cps
Antimony	121-1	4884	5168	4551	4868	6.34	cps
Arsenic	75-2	298	313	274	295	6.65	cps
Barium	135-1	179791	176541	177191	177841	0.97	cps
Barium	137-1	310639	310137	307807	309528	0.49	cps
Beryllium	9-1	22	39	44	35	32.88	cps
Bismuth	209-1	2571009	2537695	2477432	2528712	1.88	cps
Bismuth	209-2	1554647	1548157	1555315	1552706	0.25	cps
Boron	10-1	21791	22843	22751	22462	2.59	cps
Boron	11-1	111402	110562	113229	111731	1.22	cps
Cadmium	106-1	1417	1450	1425	1431	1.21	cps
Cadmium	108-1	13	13	8	11	21.67	cps
Cadmium	111-1	1050	1098	1088	1078	2.36	cps
Calcium	43-1	4922851	4842496	4877668	4881005	0.83	cps
Calcium	44-1	78688741	77792764	78989454	78490320	0.79	cps
Chromium	52-2	5805	6148	5975	5976	2.87	cps
Cobalt	59-2	440	367	347	384	12.78	cps
Copper	63-2	8059	7899	8282	8080	2.38	cps
Holmium	165-1	4092829	4074857	4031190	4066292	0.78	cps
Holmium	165-2	2196626	2161637	2176457	2178240	0.81	cps
Indium	115-2	632877	627169	633976	631340	0.58	cps
Indium	115-1	3264814	3219310	3222541	3235555	0.78	cps
Iron	56-2	200304	192114	188341	193586	3.16	cps
Iron	57-2	6374	6357	6224	6318	1.30	cps
Lead	206-1	6168	6224	5757	6050	4.22	cps
Lead	207-1	5318	4934	5212	5155	3.84	cps
Lead	208-1	23937	23342	23275	23518	1.55	cps
Lithium	6-1	257795	253963	252841	254867	1.02	cps
Magnesium	24-2	13824507	14100381	13850248	13925045	1.09	cps
Manganese	55-2	6405	6625	6452	6494	1.79	cps
Molybdenum	94-1	4001	3767	3909	3892	3.02	cps
Molybdenum	95-1	5885	6243	6135	6088	3.02	cps
Molybdenum	96-1	6377	6277	6627	6427	2.81	cps
Molybdenum	97-1	3884	3542	3801	3742	4.76	cps
Molybdenum	98-1	10321	10021	9437	9926	4.53	cps
Nickel	60-2	540	427	527	498	12.44	cps

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-03	Instrumnet Name :	P7
Client Sample ID :	MH4106	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:09:12	DataFile Name :	033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	383	317	317	339	11.36	cps
Potassium	39-2	679927	688858	685212	684666	0.66	cps
Rhodium	103-2	1565621	1528951	1574987	1556520	1.56	cps
Rhodium	103-1	2964770	3000569	2990161	2985167	0.62	cps
Scandium	45-1	2204328	2160464	2178790	2181194	1.01	cps
Scandium	45-2	102679	104029	103905	103538	0.72	cps
Selenium	77-2	17	13	3	11	62.48	cps
Selenium	78-2	148	117	137	134	11.92	cps
Selenium	82-1	58	434	121	205	98.45	cps
Silicon	28-1	53236235	52405651	52420520	52687469	0.90	cps
Silver	107-1	1475	1800	2059	1778	16.44	cps
Silver	109-1	1567	1909	1800	1759	9.93	cps
Sodium	23-2	34715615	35239335	34856084	34937012	0.78	cps
Strontium	86-1	4216785	4192528	4177897	4195737	0.47	cps
Strontium	88-1	36239985	36105363	35634897	35993415	0.88	cps
Sulfur	34-1	3252334	3245143	3238614	3245363	0.21	cps
Terbium	159-1	4246203	4254939	4156866	4219336	1.29	cps
Terbium	159-2	2203061	2188216	2221454	2204244	0.76	cps
Thallium	203-1	108	108	108	108	0.00	cps
Thallium	205-1	283	133	283	233	37.12	cps
Tin	118-1	1175	1217	1108	1167	4.68	cps
Titanium	47-1	3059	2575	2809	2814	8.59	cps
Uranium	238-1	85806	83601	82235	83881	2.15	cps
Vanadium	51-2	7485	7762	7539	7595	1.93	cps
Yttrium	89-2	524154	516492	525527	522058	0.93	cps
Yttrium	89-1	3570714	3562029	3519071	3550605	0.78	cps
Zinc	66-2	4194	4537	4154	4295	4.91	cps
Zirconium	90-1	1100	867	942	970	12.30	cps
Zirconium	91-1	225	200	183	203	10.34	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCV027	Instrumnet Name :	P7
Client Sample ID :	CCV027	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:12:15	DataFile Name :	034CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1078355	1077914	1073489	1076586	0.25	cps
Antimony	121-1	5648588	5627675	5581931	5619398	0.61	cps
Arsenic	75-2	216657	215733	213788	215393	0.68	cps
Barium	135-1	6760723	6697742	6537609	6665358	1.73	cps
Barium	137-1	11553608	11452567	11325833	11444003	1.00	cps
Beryllium	9-1	747165	745384	737323	743291	0.71	cps
Bismuth	209-1	2429631	2453677	2429405	2437571	0.57	cps
Bismuth	209-2	1521845	1526527	1503791	1517388	0.79	cps
Boron	10-1	105022	106020	106104	105715	0.57	cps
Boron	11-1	521051	531339	537053	529814	1.53	cps
Cadmium	111-1	1373986	1373406	1380165	1375852	0.27	cps
Cadmium	106-1	152428	153861	152472	152920	0.53	cps
Cadmium	108-1	102425	102114	100784	101775	0.86	cps
Calcium	43-1	1692139	1679327	1667810	1679759	0.72	cps
Calcium	44-1	26628468	26588740	26563103	26593437	0.12	cps
Chromium	52-2	2031792	2053884	2030085	2038587	0.65	cps
Cobalt	59-2	3218003	3254102	3226098	3232734	0.59	cps
Copper	63-2	4785010	4695110	4726969	4735696	0.96	cps
Holmium	165-2	2115845	2095952	2063375	2091724	1.27	cps
Holmium	165-1	3847262	3832261	3837713	3839078	0.20	cps
Indium	115-2	583635	587384	580924	583981	0.56	cps
Indium	115-1	2886317	2896567	2903084	2895323	0.29	cps
Iron	56-2	79603041	79141107	80125041	79623063	0.62	cps
Iron	57-2	2033879	2007366	2033492	2024912	0.75	cps
Lead	206-1	4240285	4207338	4231575	4226400	0.40	cps
Lead	207-1	3785627	3726107	3752502	3754745	0.79	cps
Lead	208-1	16940911	16882922	16806082	16876638	0.40	cps
Lithium	6-1	228652	227796	225211	227219	0.79	cps
Magnesium	24-2	13755479	13629135	13502539	13629051	0.93	cps
Manganese	55-2	2136193	2139147	2129412	2134917	0.23	cps
Molybdenum	94-1	5095359	5126268	5139382	5120337	0.44	cps
Molybdenum	95-1	2811582	2783268	2796473	2797108	0.51	cps
Molybdenum	96-1	3566558	3543598	3538982	3549713	0.42	cps
Molybdenum	97-1	1741951	1723061	1713419	1726144	0.84	cps
Molybdenum	98-1	4421497	4441527	4470251	4444425	0.55	cps
Nickel	60-2	852666	856220	848175	852354	0.47	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCV027	Instrumnet Name :	P7
Client Sample ID :	CCV027	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:12:15	DataFile Name :	034CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	62942	63536	64465	63648	1.21	cps
Potassium	39-2	6653374	6605314	6654024	6637571	0.42	cps
Rhodium	103-2	1505308	1480634	1463532	1483158	1.42	cps
Rhodium	103-1	2795098	2830897	2836454	2820816	0.80	cps
Scandium	45-1	2016360	2019439	2008582	2014794	0.28	cps
Scandium	45-2	102556	102015	100783	101785	0.89	cps
Selenium	77-2	4214	4451	4504	4390	3.52	cps
Selenium	78-2	14826	14991	14971	14929	0.60	cps
Selenium	82-1	92374	92271	91850	92165	0.30	cps
Silicon	28-1	3782592	3808342	3841407	3810780	0.77	cps
Silver	109-1	6481725	6489195	6486127	6485682	0.06	cps
Silver	107-1	6756662	6707571	6795765	6753333	0.65	cps
Sodium	23-2	25065720	25172279	24875121	25037707	0.60	cps
Strontium	86-1	1818123	1770122	1790673	1792973	1.34	cps
Strontium	88-1	15371423	15119696	15485500	15325540	1.22	cps
Sulfur	34-1	1066180	1060087	1058875	1061714	0.37	cps
Terbium	159-1	3995893	4028562	3982725	4002393	0.59	cps
Terbium	159-2	2140975	2144432	2119542	2134983	0.63	cps
Thallium	203-1	5256549	5223264	5220471	5233428	0.38	cps
Thallium	205-1	12395942	12242241	12270464	12302882	0.67	cps
Tin	118-1	4397938	4397130	4349815	4381628	0.63	cps
Titanium	47-1	796683	807321	802949	802318	0.67	cps
Uranium	238-1	17966471	18179050	18067950	18071157	0.59	cps
Vanadium	51-2	1630269	1662557	1653159	1648662	1.01	cps
Yttrium	89-2	502955	504782	501931	503223	0.29	cps
Yttrium	89-1	3311950	3270454	3285834	3289413	0.64	cps
Zinc	66-2	626611	624606	616372	622530	0.87	cps
Zirconium	90-1	9628348	9577784	9631074	9612402	0.31	cps
Zirconium	91-1	2150920	2156042	2145259	2150740	0.25	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCB027	Instrumnet Name :	P7
Client Sample ID :	CCB027	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:15:08	DataFile Name :	035CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	75	25	50	50	50.00	cps
Antimony	121-1	2842	2659	3075	2859	7.31	cps
Arsenic	75-2	19	9	4	10	71.35	cps
Barium	135-1	125	67	142	111	35.44	cps
Barium	137-1	217	183	167	189	13.48	cps
Beryllium	9-1	94	61	72	76	22.36	cps
Bismuth	209-2	1555400	1559229	1547610	1554080	0.38	cps
Bismuth	209-1	2490543	2497563	2470197	2486101	0.57	cps
Boron	10-1	3959	4109	3692	3920	5.39	cps
Boron	11-1	20974	20348	19221	20181	4.40	cps
Cadmium	108-1	13	8	8	10	24.77	cps
Cadmium	111-1	945	966	1004	972	3.11	cps
Cadmium	106-1	1308	1317	1383	1336	3.08	cps
Calcium	43-1	408	367	400	392	5.63	cps
Calcium	44-1	20139	20090	20014	20081	0.31	cps
Chromium	52-2	813	867	703	794	10.48	cps
Cobalt	59-2	53	53	70	59	16.34	cps
Copper	63-2	1920	2034	1777	1910	6.73	cps
Holmium	165-2	2064408	2073967	2045426	2061267	0.70	cps
Holmium	165-1	3771611	3767149	3739395	3759385	0.46	cps
Indium	115-1	3038605	3009394	2998457	3015485	0.69	cps
Indium	115-2	610238	611451	607331	609673	0.35	cps
Iron	56-2	6029	5690	5596	5772	3.95	cps
Iron	57-2	106	156	217	159	34.95	cps
Lead	206-1	845	661	772	759	12.16	cps
Lead	207-1	622	772	728	707	10.89	cps
Lead	208-1	2972	3011	3128	3037	2.67	cps
Lithium	6-1	231749	229241	229843	230277	0.57	cps
Magnesium	24-2	458	500	458	472	5.09	cps
Manganese	55-2	83	93	77	84	9.94	cps
Molybdenum	94-1	458	483	367	436	14.08	cps
Molybdenum	95-1	408	317	283	336	19.26	cps
Molybdenum	96-1	392	317	308	339	13.54	cps
Molybdenum	98-1	500	442	550	497	10.91	cps
Molybdenum	97-1	250	217	108	192	38.64	cps
Nickel	60-2	620	787	717	708	11.82	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCB027	Instrumnet Name :	P7
Client Sample ID :	CCB027	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:15:08	DataFile Name :	035CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	258	275	275	269	3.57	cps
Potassium	39-2	39487	39971	38760	39406	1.55	cps
Rhodium	103-1	2928813	2891085	2891823	2903907	0.74	cps
Rhodium	103-2	1538881	1518802	1504381	1520688	1.14	cps
Scandium	45-1	1988575	1990608	1984262	1987815	0.16	cps
Scandium	45-2	96965	96616	96508	96696	0.25	cps
Selenium	82-1	-397	-402	94	-235	-121.11	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	87	76	91	85	9.11	cps
Silicon	28-1	305321	307088	300330	304246	1.15	cps
Silver	107-1	667	717	750	711	5.90	cps
Silver	109-1	850	725	667	747	12.53	cps
Sodium	23-2	24370	24270	24003	24215	0.78	cps
Strontium	86-1	11463	11397	11739	11533	1.57	cps
Strontium	88-1	567	583	458	536	12.66	cps
Sulfur	34-1	608204	614378	608316	610299	0.58	cps
Terbium	159-2	2135479	2083312	2076481	2098424	1.54	cps
Terbium	159-1	3911828	3961846	3876457	3916710	1.10	cps
Thallium	203-1	750	675	475	633	22.45	cps
Thallium	205-1	1600	1533	1233	1456	13.42	cps
Tin	118-1	900	1008	1017	975	6.68	cps
Titanium	47-1	33	75	33	47	50.94	cps
Uranium	238-1	392	567	408	456	21.20	cps
Vanadium	51-2	7	33	13	18	78.05	cps
Yttrium	89-1	3292520	3224023	3276184	3264243	1.10	cps
Yttrium	89-2	495150	498117	494354	495874	0.40	cps
Zinc	66-2	737	817	627	727	13.13	cps
Zirconium	90-1	642	558	575	592	7.45	cps
Zirconium	91-1	167	133	108	136	21.50	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-04	Instrumnet Name :	P7
Client Sample ID :	MH4107	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:19:02	DataFile Name :	036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	969581	950957	943287	954608	1.42	cps
Antimony	121-1	34460	34836	35905	35067	2.14	cps
Arsenic	75-2	31208	31013	31096	31106	0.31	cps
Barium	135-1	570978	576153	573664	573599	0.45	cps
Barium	137-1	989747	990180	986412	988780	0.21	cps
Beryllium	9-1	3095	2967	3373	3145	6.59	cps
Bismuth	209-1	2586695	2577946	2572404	2579015	0.28	cps
Bismuth	209-2	1570684	1570915	1582894	1574831	0.44	cps
Boron	10-1	18779	19004	19196	18993	1.10	cps
Boron	11-1	93087	91929	94571	93195	1.42	cps
Cadmium	111-1	8485	8484	8597	8522	0.76	cps
Cadmium	106-1	2650	2292	2384	2442	7.62	cps
Cadmium	108-1	579	579	504	554	7.81	cps
Calcium	43-1	6689926	6661955	6637430	6663103	0.39	cps
Calcium	44-1	106989909	106801765	107102388	106964687	0.14	cps
Chromium	52-2	211714	208438	209235	209796	0.81	cps
Cobalt	59-2	95465	94391	96133	95329	0.92	cps
Copper	63-2	450489	453214	446356	450019	0.77	cps
Holmium	165-2	2162113	2187080	2174015	2174403	0.57	cps
Holmium	165-1	4089680	4110156	4112560	4104132	0.31	cps
Indium	115-1	3148223	3206984	3172120	3175775	0.93	cps
Indium	115-2	626974	623460	625325	625253	0.28	cps
Iron	56-2	42033209	41998186	42439468	42156954	0.58	cps
Iron	57-2	1040241	1037178	1045930	1041116	0.43	cps
Lead	206-1	1111094	1109053	1134327	1118158	1.26	cps
Lead	207-1	972554	964795	975446	970932	0.57	cps
Lead	208-1	4444757	4464222	4505680	4471553	0.70	cps
Lithium	6-1	256207	254935	258797	256647	0.77	cps
Magnesium	24-2	11042484	11055127	10839492	10979035	1.10	cps
Manganese	55-2	712586	707422	714057	711355	0.49	cps
Molybdenum	94-1	21667	21976	21817	21820	0.71	cps
Molybdenum	95-1	13682	13816	13690	13729	0.54	cps
Molybdenum	96-1	17044	17161	17094	17100	0.34	cps
Molybdenum	97-1	8603	8953	8953	8836	2.29	cps
Molybdenum	98-1	21734	21684	22969	22129	3.29	cps
Nickel	60-2	42468	43424	42605	42833	1.21	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-04	Instrumnet Name :	P7
Client Sample ID :	MH4107	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:19:02	DataFile Name :	036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	7819	8294	8194	8103	3.09	cps
Potassium	39-2	746060	746041	740193	744098	0.45	cps
Rhodium	103-2	1548261	1549282	1548157	1548567	0.04	cps
Rhodium	103-1	2927654	2992102	2996214	2971990	1.29	cps
Scandium	45-1	2226273	2231710	2218024	2225336	0.31	cps
Scandium	45-2	101424	102942	100763	101710	1.10	cps
Selenium	77-2	83	103	127	104	20.77	cps
Selenium	78-2	237	220	233	230	3.80	cps
Selenium	82-1	724	260	559	514	45.71	cps
Silicon	28-1	147605157	146167166	147269149	147013824	0.51	cps
Silver	109-1	38169	40718	40893	39927	3.82	cps
Silver	107-1	40961	41913	42732	41869	2.12	cps
Sodium	23-2	16719375	16554832	16660383	16644864	0.50	cps
Strontium	86-1	3526017	3481254	3513337	3506869	0.66	cps
Strontium	88-1	30219686	29957493	30123809	30100329	0.44	cps
Sulfur	34-1	1471630	1463802	1457795	1464409	0.47	cps
Terbium	159-1	4255512	4236718	4218156	4236795	0.44	cps
Terbium	159-2	2189431	2219111	2216352	2208298	0.74	cps
Thallium	203-1	16060	16035	16161	16085	0.41	cps
Thallium	205-1	38248	38265	38875	38462	0.93	cps
Tin	118-1	27695	27870	28872	28146	2.26	cps
Titanium	47-1	235597	239617	239420	238211	0.95	cps
Uranium	238-1	132351	133295	134977	133541	1.00	cps
Vanadium	51-2	100825	99690	100553	100356	0.59	cps
Yttrium	89-2	571427	566556	566790	568258	0.48	cps
Yttrium	89-1	3868398	3840602	3878844	3862615	0.51	cps
Zinc	66-2	447988	445879	439962	444610	0.94	cps
Zirconium	90-1	37283	37258	39178	37906	2.91	cps
Zirconium	91-1	8553	8186	9037	8592	4.97	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-05	Instrumnet Name :	P7
Client Sample ID :	MH4137	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:22:07	DataFile Name :	037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	59469	58692	58056	58739	1.20	cps
Antimony	121-1	3551	3134	3551	3412	7.05	cps
Arsenic	75-2	463	435	441	446	3.29	cps
Barium	135-1	162041	165617	162987	163548	1.13	cps
Barium	137-1	282116	278676	280384	280392	0.61	cps
Beryllium	9-1	83	78	56	72	20.35	cps
Bismuth	209-1	2621189	2612786	2614681	2616219	0.17	cps
Bismuth	209-2	1593373	1593572	1580696	1589214	0.46	cps
Boron	10-1	11321	11755	11129	11402	2.81	cps
Boron	11-1	55829	58206	57343	57126	2.11	cps
Cadmium	111-1	1099	960	1113	1058	7.99	cps
Cadmium	106-1	1417	1200	1408	1342	9.15	cps
Cadmium	108-1	25	13	8	15	56.79	cps
Calcium	43-1	3118123	3128426	3061500	3102683	1.16	cps
Calcium	44-1	49584021	49472324	48820819	49292388	0.84	cps
Chromium	52-2	4211	4291	4404	4302	2.26	cps
Cobalt	59-2	1797	1997	1934	1909	5.36	cps
Copper	63-2	17614	17544	17991	17716	1.36	cps
Holmium	165-2	2202149	2206210	2175217	2194525	0.77	cps
Holmium	165-1	4082692	4075914	4055861	4071489	0.34	cps
Indium	115-1	3232528	3227059	3194663	3218083	0.64	cps
Indium	115-2	628725	632663	621349	627579	0.92	cps
Iron	56-2	1619644	1599322	1593744	1604237	0.85	cps
Iron	57-2	40657	39080	39649	39795	2.01	cps
Lead	206-1	9898	9465	9393	9585	2.85	cps
Lead	207-1	8353	8231	8258	8281	0.77	cps
Lead	208-1	38851	38228	37694	38258	1.51	cps
Lithium	6-1	253811	251004	254761	253192	0.77	cps
Magnesium	24-2	6719478	6795501	6730320	6748433	0.61	cps
Manganese	55-2	66299	65890	65673	65954	0.48	cps
Molybdenum	94-1	3125	3134	3292	3184	2.95	cps
Molybdenum	95-1	3926	3726	3417	3690	6.94	cps
Molybdenum	96-1	4059	3851	4126	4012	3.58	cps
Molybdenum	97-1	2300	2225	2425	2317	4.36	cps
Molybdenum	98-1	5818	5968	5118	5635	8.05	cps
Nickel	60-2	1587	1683	1447	1572	7.57	cps

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On:5/23/2016 2:13:54 PM
Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-05	Instrumnet Name :	P7
Client Sample ID :	MH4137	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:22:07	DataFile Name :	037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	725	642	825	731	12.57	cps
Potassium	39-2	390965	391250	390716	390977	0.07	cps
Rhodium	103-2	1578502	1566777	1557134	1567471	0.68	cps
Rhodium	103-1	3037759	3018632	2979069	3011820	0.99	cps
Scandium	45-1	2171372	2145748	2146109	2154410	0.68	cps
Scandium	45-2	101622	100978	101041	101214	0.35	cps
Selenium	77-2	27	13	17	19	36.75	cps
Selenium	78-2	124	111	119	118	5.52	cps
Selenium	82-1	205	-108	-34	21	772.50	cps
Silicon	28-1	43072731	43138093	42878947	43029924	0.31	cps
Silver	109-1	1650	1925	1892	1822	8.24	cps
Silver	107-1	1684	1942	2125	1917	11.58	cps
Sodium	23-2	11639011	11753187	11718915	11703704	0.50	cps
Strontium	86-1	2114015	2107422	2096906	2106114	0.41	cps
Strontium	88-1	18162834	18082716	18120230	18121927	0.22	cps
Sulfur	34-1	2046210	2038324	2012769	2032434	0.86	cps
Terbium	159-1	4288468	4255534	4209917	4251306	0.93	cps
Terbium	159-2	2237296	2244828	2236332	2239485	0.21	cps
Thallium	203-1	267	292	292	283	5.09	cps
Thallium	205-1	825	767	633	742	13.25	cps
Tin	118-1	1283	1283	1100	1222	8.66	cps
Titanium	47-1	18588	21689	17603	19293	11.05	cps
Uranium	238-1	46434	45648	46258	46113	0.90	cps
Vanadium	51-2	6925	7015	6895	6945	0.90	cps
Yttrium	89-2	519753	516580	516674	517669	0.35	cps
Yttrium	89-1	3517937	3500984	3519131	3512684	0.29	cps
Zinc	66-2	5601	5434	5374	5470	2.15	cps
Zirconium	90-1	3844	4269	4134	4082	5.32	cps
Zirconium	91-1	683	917	658	753	18.93	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-06	Instrumnet Name :	P7
Client Sample ID :	MH4137D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:25:10	DataFile Name :	038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	65712	65073	64616	65133	0.85	cps
Antimony	121-1	3859	3684	3509	3684	4.75	cps
Arsenic	75-2	481	433	431	449	6.32	cps
Barium	135-1	161301	164455	164210	163322	1.07	cps
Barium	137-1	280695	283253	279655	281201	0.66	cps
Beryllium	9-1	83	94	78	85	9.96	cps
Bismuth	209-2	1584837	1590144	1592755	1589245	0.25	cps
Bismuth	209-1	2595456	2604586	2581021	2593688	0.46	cps
Boron	10-1	11021	12047	11171	11413	4.85	cps
Boron	11-1	55135	56799	55712	55882	1.51	cps
Cadmium	106-1	1200	1525	1425	1383	12.03	cps
Cadmium	111-1	963	1135	1090	1063	8.38	cps
Cadmium	108-1	21	29	17	22	28.64	cps
Calcium	43-1	3086714	3133060	3090177	3103317	0.83	cps
Calcium	44-1	49287175	50058987	48884895	49410352	1.21	cps
Chromium	52-2	4447	4327	4567	4447	2.70	cps
Cobalt	59-2	1974	1893	2084	1984	4.81	cps
Copper	63-2	18625	18071	18682	18460	1.83	cps
Holmium	165-2	2194235	2192231	2180889	2189118	0.33	cps
Holmium	165-1	4107385	4122097	4042964	4090815	1.03	cps
Indium	115-1	3170802	3196739	3207705	3191748	0.59	cps
Indium	115-2	625756	630951	627194	627967	0.43	cps
Iron	56-2	1728867	1775086	1727268	1743740	1.56	cps
Iron	57-2	44044	43588	44000	43877	0.57	cps
Lead	206-1	9526	10343	10165	10011	4.29	cps
Lead	207-1	8575	8342	8408	8442	1.42	cps
Lead	208-1	39096	38801	38756	38884	0.47	cps
Lithium	6-1	254540	252720	253505	253588	0.36	cps
Magnesium	24-2	6747873	6739466	6736999	6741446	0.08	cps
Manganese	55-2	68124	67551	67829	67834	0.42	cps
Molybdenum	94-1	3717	2950	3734	3467	12.91	cps
Molybdenum	95-1	3767	3626	3601	3665	2.45	cps
Molybdenum	96-1	4251	4309	3867	4142	5.79	cps
Molybdenum	97-1	2134	2342	2134	2203	5.46	cps
Molybdenum	98-1	5376	5751	5835	5654	4.32	cps
Nickel	60-2	1693	1720	1740	1718	1.36	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-06	Instrumnet Name :	P7
Client Sample ID :	MH4137D	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:25:10	DataFile Name :	038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	825	683	783	764	9.53	cps
Potassium	39-2	390629	389668	393732	391343	0.54	cps
Rhodium	103-2	1569921	1546100	1542611	1552877	0.96	cps
Rhodium	103-1	3019191	3031296	2993114	3014533	0.65	cps
Scandium	45-1	2136761	2173207	2105598	2138522	1.58	cps
Scandium	45-2	101622	100481	100626	100910	0.62	cps
Selenium	77-2	20	17	17	18	10.81	cps
Selenium	78-2	106	106	128	113	11.36	cps
Selenium	82-1	396	165	214	258	47.20	cps
Silicon	28-1	43357685	44084437	43141390	43527837	1.13	cps
Silver	107-1	1600	1792	1567	1653	7.35	cps
Silver	109-1	1583	1483	1533	1533	3.26	cps
Sodium	23-2	11769913	11676057	11651990	11699320	0.53	cps
Strontium	86-1	2152468	2111173	2134585	2132742	0.97	cps
Strontium	88-1	18252911	18079120	18154117	18162050	0.48	cps
Sulfur	34-1	2033553	2074064	2035445	2047688	1.12	cps
Terbium	159-2	2246766	2212039	2213017	2223940	0.89	cps
Terbium	159-1	4269156	4276766	4186061	4243994	1.19	cps
Thallium	203-1	217	275	225	239	13.21	cps
Thallium	205-1	525	375	433	444	17.01	cps
Tin	118-1	1117	1075	1158	1117	3.73	cps
Titanium	47-1	19088	20007	19776	19624	2.44	cps
Uranium	238-1	46217	48190	46425	46944	2.31	cps
Vanadium	51-2	7212	7766	7465	7481	3.71	cps
Yttrium	89-2	521100	511261	515845	516069	0.95	cps
Yttrium	89-1	3498547	3467348	3485395	3483763	0.45	cps
Zinc	66-2	5388	5464	5431	5428	0.71	cps
Zirconium	90-1	4142	4730	3842	4238	10.66	cps
Zirconium	91-1	1033	833	875	914	11.55	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-07	Instrumnet Name :	P7
Client Sample ID :	MH4137S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:28:14	DataFile Name :	039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	291131	295736	294564	293810	0.81	cps
Antimony	121-1	1251441	1255590	1248695	1251909	0.28	cps
Arsenic	75-2	19305	18896	19569	19257	1.76	cps
Barium	135-1	6440402	6389922	6484268	6438197	0.73	cps
Barium	137-1	11006657	11080382	11064869	11050636	0.35	cps
Beryllium	9-1	88038	88206	88462	88235	0.24	cps
Bismuth	209-1	2616493	2635933	2619866	2624097	0.40	cps
Bismuth	209-2	1571328	1562765	1562354	1565482	0.32	cps
Boron	10-1	11371	10938	10804	11038	2.69	cps
Boron	11-1	53897	54926	55762	54862	1.70	cps
Cadmium	111-1	160146	164480	161095	161907	1.41	cps
Cadmium	106-1	14817	16026	15584	15476	3.96	cps
Cadmium	108-1	10487	10366	10325	10393	0.81	cps
Calcium	43-1	3077618	3068788	3045658	3064021	0.54	cps
Calcium	44-1	48754941	48652562	48218845	48542116	0.59	cps
Chromium	52-2	887662	888479	885260	887134	0.19	cps
Cobalt	59-2	3657482	3661956	3611594	3643677	0.77	cps
Copper	63-2	1343602	1337455	1343308	1341455	0.26	cps
Holmium	165-2	2167452	2139051	2123865	2143456	1.03	cps
Holmium	165-1	4041394	4079642	4082391	4067809	0.56	cps
Indium	115-1	3208842	3214410	3126494	3183249	1.55	cps
Indium	115-2	614879	615682	609093	613218	0.59	cps
Iron	56-2	5351196	5311298	5313945	5325480	0.42	cps
Iron	57-2	133659	131697	133866	133074	0.90	cps
Lead	206-1	203579	206088	205502	205056	0.64	cps
Lead	207-1	184348	187272	183837	185152	1.00	cps
Lead	208-1	830978	838742	830070	833263	0.57	cps
Lithium	6-1	253076	253808	252339	253074	0.29	cps
Magnesium	24-2	6634221	6530160	6506416	6556932	1.04	cps
Manganese	55-2	1222742	1225341	1215896	1221327	0.40	cps
Molybdenum	94-1	5068	5018	4993	5026	0.76	cps
Molybdenum	95-1	6627	6885	6427	6646	3.46	cps
Molybdenum	96-1	7494	7177	7394	7355	2.20	cps
Molybdenum	97-1	4351	4351	4034	4245	4.31	cps
Molybdenum	98-1	10529	10746	10838	10704	1.48	cps
Nickel	60-2	969845	963941	956903	963563	0.67	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-07	Instrumnet Name :	P7
Client Sample ID :	MH4137S	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:28:14	DataFile Name :	039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	783	783	750	772	2.49	cps
Potassium	39-2	375513	378712	380301	378175	0.64	cps
Rhodium	103-2	1536172	1551125	1537517	1541605	0.54	cps
Rhodium	103-1	3009669	3059502	2966320	3011830	1.55	cps
Scandium	45-1	2124627	2126299	2089270	2113398	0.99	cps
Scandium	45-2	97723	98431	99377	98510	0.84	cps
Selenium	77-2	1023	1087	967	1026	5.85	cps
Selenium	78-2	3384	3441	3354	3393	1.30	cps
Selenium	82-1	22490	21842	22409	22247	1.59	cps
Silicon	28-1	42773560	42259398	42095888	42376282	0.83	cps
Silver	109-1	737249	732566	732129	733981	0.39	cps
Silver	107-1	774567	766504	760480	767184	0.92	cps
Sodium	23-2	11531195	11390795	11361552	11427847	0.79	cps
Strontium	86-1	2110931	2107361	2063135	2093809	1.27	cps
Strontium	88-1	17986245	17934812	17917672	17946243	0.20	cps
Sulfur	34-1	2008871	1990979	1995807	1998552	0.46	cps
Terbium	159-1	4259494	4273269	4223781	4252181	0.60	cps
Terbium	159-2	2164732	2169944	2172593	2169090	0.18	cps
Thallium	203-1	595679	592781	592597	593685	0.29	cps
Thallium	205-1	1436189	1428742	1432482	1432471	0.26	cps
Tin	118-1	1642	1617	1800	1686	5.90	cps
Titanium	47-1	19405	19147	20286	19613	3.05	cps
Uranium	238-1	47270	47630	46551	47150	1.17	cps
Vanadium	51-2	1815014	1828211	1827196	1823474	0.40	cps
Yttrium	89-2	508242	503711	504675	505543	0.47	cps
Yttrium	89-1	3471467	3505183	3485415	3487355	0.49	cps
Zinc	66-2	361779	358047	357735	359187	0.63	cps
Zirconium	90-1	3326	3776	3084	3395	10.35	cps
Zirconium	91-1	958	933	783	892	10.62	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-05LX5	Instrumnet Name :	P7
Client Sample ID :	MH4137L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-23 12:31:15	DataFile Name :	040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	15017	14900	15536	15151	2.23	cps
Antimony	121-1	767	658	808	745	10.40	cps
Arsenic	75-2	93	81	96	90	8.56	cps
Barium	135-1	30844	30443	31754	31013	2.17	cps
Barium	137-1	53680	53329	53791	53600	0.45	cps
Beryllium	9-1	44	28	33	35	24.12	cps
Bismuth	209-2	1580278	1568751	1569832	1572954	0.40	cps
Bismuth	209-1	2553250	2575336	2593846	2574144	0.79	cps
Boron	10-1	3150	3275	3376	3267	3.45	cps
Boron	11-1	16218	16618	15942	16259	2.09	cps
Cadmium	108-1	8	0	8	6	86.60	cps
Cadmium	111-1	872	988	857	905	7.91	cps
Cadmium	106-1	1200	1333	1208	1247	5.99	cps
Calcium	43-1	561868	571429	571864	568387	0.99	cps
Calcium	44-1	9218161	9330831	9287140	9278710	0.61	cps
Chromium	52-2	1773	1703	1727	1735	2.05	cps
Cobalt	59-2	450	350	440	413	13.32	cps
Copper	63-2	4731	4978	4671	4793	3.39	cps
Holmium	165-2	2141920	2121904	2100548	2121457	0.98	cps
Holmium	165-1	3907299	3885754	3927207	3906753	0.53	cps
Indium	115-1	3096612	3114732	3132084	3114476	0.57	cps
Indium	115-2	616361	610002	604429	610264	0.98	cps
Iron	56-2	352612	368600	389209	370141	4.96	cps
Iron	57-2	8736	9148	8519	8801	3.63	cps
Lead	206-1	2028	2178	2072	2093	3.68	cps
Lead	207-1	2000	1784	1750	1845	7.36	cps
Lead	208-1	8446	8590	8285	8440	1.81	cps
Lithium	6-1	236638	243126	243914	241226	1.66	cps
Magnesium	24-2	1333544	1294115	1332030	1319896	1.69	cps
Manganese	55-2	12686	12762	12786	12745	0.41	cps
Molybdenum	96-1	2133	783	1008	1308	55.28	cps
Molybdenum	97-1	375	533	533	481	19.02	cps
Molybdenum	98-1	967	1233	1317	1172	15.60	cps
Molybdenum	95-1	683	792	733	736	7.37	cps
Molybdenum	94-1	925	833	967	908	7.51	cps
Nickel	60-2	1023	1093	917	1011	8.80	cps

Reviewed By:BIN
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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	H2948-05LX5	Instrumnet Name :	P7
Client Sample ID :	MH4137L	Dilution Factor :	5
Date & Time Acquired ::	2016-05-23 12:31:15	DataFile Name :	040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	317	317	367	333	8.66	cps
Potassium	39-2	106868	108929	108348	108048	0.98	cps
Rhodium	103-1	2930153	2941868	2907229	2926416	0.60	cps
Rhodium	103-2	1550521	1530850	1524156	1535175	0.89	cps
Scandium	45-1	2027783	2024550	2020734	2024355	0.17	cps
Scandium	45-2	98056	96022	96149	96742	1.18	cps
Selenium	82-1	-311	-330	-149	-264	-37.76	cps
Selenium	77-2	3	3	0	2	86.60	cps
Selenium	78-2	78	83	74	78	5.94	cps
Silicon	28-1	9042287	9685592	8850834	9192904	4.76	cps
Silver	107-1	508	525	400	478	14.20	cps
Silver	109-1	450	592	625	556	16.73	cps
Sodium	23-2	2272290	2280100	2267253	2273214	0.28	cps
Strontium	86-1	395423	400750	401305	399159	0.81	cps
Strontium	88-1	3436376	3442073	3453204	3443884	0.25	cps
Sulfur	34-1	919487	924015	929731	924411	0.56	cps
Terbium	159-2	2179213	2165540	2134259	2159671	1.07	cps
Terbium	159-1	4068830	4084382	4066790	4073334	0.24	cps
Thallium	203-1	108	117	108	111	4.33	cps
Thallium	205-1	308	208	225	247	21.67	cps
Tin	118-1	658	575	508	581	12.95	cps
Titanium	47-1	4577	11120	5312	7003	51.18	cps
Uranium	238-1	8345	8695	8862	8634	3.06	cps
Vanadium	51-2	1573	1747	1620	1647	5.45	cps
Yttrium	89-1	3330663	3324774	3370816	3342084	0.75	cps
Yttrium	89-2	500026	502666	494408	499033	0.85	cps
Zinc	66-2	1727	1870	1840	1812	4.17	cps
Zirconium	90-1	2520	2101	1759	2126	17.92	cps
Zirconium	91-1	258	283	350	297	15.94	cps

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Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	PB90705BS	Instrumnet Name :	P7
Client Sample ID :	LCS007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:37:32	DataFile Name :	042LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4117	4209	4309	4212	2.28	cps
Antimony	121-1	40451	40668	41989	41036	2.03	cps
Arsenic	75-2	815	846	841	834	2.01	cps
Barium	135-1	49514	49832	49255	49533	0.58	cps
Barium	137-1	84231	87056	86914	86067	1.85	cps
Beryllium	9-1	2784	2961	2728	2824	4.32	cps
Bismuth	209-2	1549516	1551564	1567809	1556296	0.64	cps
Bismuth	209-1	2524763	2509780	2572487	2535677	1.29	cps
Boron	10-1	5026	5409	5084	5173	3.99	cps
Boron	11-1	24788	26132	26825	25915	4.00	cps
Cadmium	106-1	1875	1742	1942	1853	5.50	cps
Cadmium	108-1	475	392	446	438	9.67	cps
Cadmium	111-1	6281	6121	6328	6243	1.73	cps
Calcium	43-1	30867	30750	29781	30466	1.96	cps
Calcium	44-1	508373	515841	507250	510488	0.91	cps
Chromium	52-2	16256	16456	16102	16271	1.09	cps
Cobalt	59-2	12018	11591	11892	11834	1.85	cps
Copper	63-2	18372	19340	18969	18893	2.58	cps
Holmium	165-2	2042493	2059520	2052874	2051629	0.42	cps
Holmium	165-1	3779101	3772290	3780214	3777202	0.11	cps
Indium	115-1	3000880	3006951	3012376	3006735	0.19	cps
Indium	115-2	600340	597132	607581	601684	0.89	cps
Iron	56-2	1398498	1406777	1396415	1400563	0.39	cps
Iron	57-2	34480	34246	34062	34263	0.61	cps
Lead	206-1	15971	16410	16666	16349	2.15	cps
Lead	207-1	15165	14820	14586	14857	1.96	cps
Lead	208-1	66060	66740	67692	66830	1.23	cps
Lithium	6-1	230649	232550	231131	231443	0.43	cps
Magnesium	24-2	253443	250645	249061	251049	0.88	cps
Manganese	55-2	4111	3861	3944	3972	3.21	cps
Molybdenum	94-1	41854	42138	42857	42283	1.22	cps
Molybdenum	95-1	52665	54229	53969	53621	1.56	cps
Molybdenum	96-1	57710	58947	58604	58420	1.09	cps
Molybdenum	97-1	32855	33658	33148	33220	1.22	cps
Molybdenum	98-1	85825	86227	85952	86002	0.24	cps
Nickel	60-2	3661	3764	3714	3713	1.39	cps

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	PB90705BS	Instrumnet Name :	P7
Client Sample ID :	LCS007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:37:32	DataFile Name :	042LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	908	717	892	839	12.66	cps
Potassium	39-2	279192	275923	276540	277218	0.63	cps
Rhodium	103-2	1513987	1507856	1500245	1507362	0.46	cps
Rhodium	103-1	2871810	2895999	2909190	2892333	0.66	cps
Scandium	45-2	94751	95143	93909	94601	0.67	cps
Scandium	45-1	1941795	1953355	1966390	1953847	0.63	cps
Selenium	82-1	1607	1213	2028	1616	25.21	cps
Selenium	77-2	60	93	67	73	24.06	cps
Selenium	78-2	313	394	352	353	11.54	cps
Silicon	28-1	404037	404995	411158	406730	0.95	cps
Silver	107-1	29699	29306	29799	29601	0.88	cps
Silver	109-1	27928	27661	27837	27809	0.49	cps
Sodium	23-2	492357	485679	485101	487712	0.83	cps
Strontium	86-1	17803	18462	17612	17959	2.48	cps
Strontium	88-1	58721	58361	60085	59056	1.54	cps
Sulfur	34-1	628584	612197	614879	618554	1.42	cps
Terbium	159-2	2075649	2074225	2087713	2079196	0.36	cps
Terbium	159-1	3927280	3965056	3919659	3937332	0.62	cps
Thallium	203-1	19907	19490	20575	19991	2.74	cps
Thallium	205-1	48782	48130	48807	48573	0.79	cps
Tin	118-1	84127	84160	84454	84247	0.21	cps
Titanium	47-1	15092	14833	14516	14814	1.95	cps
Uranium	238-1	67861	66663	66830	67118	0.97	cps
Vanadium	51-2	30318	30128	28785	29743	2.81	cps
Yttrium	89-1	3233962	3217547	3270036	3240515	0.83	cps
Yttrium	89-2	491831	486121	489809	489254	0.59	cps
Zinc	66-2	2964	2960	2967	2964	0.11	cps
Zirconium	91-1	7886	7644	7869	7800	1.73	cps
Zirconium	90-1	33916	33348	32980	33415	1.41	cps

Reviewed By:BIN
On:5/23/2016 2:13:54 PM
Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	PB90705BL	Instrumnet Name :	P7
Client Sample ID :	PBW007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:50:01	DataFile Name :	046CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	42	67	75	61	28.38	cps
Antimony	121-1	150	200	167	172	14.78	cps
Arsenic	75-2	0	6	7	4	89.21	cps
Barium	135-1	8	8	25	14	69.31	cps
Barium	137-1	33	33	50	39	24.75	cps
Beryllium	9-1	11	11	44	22	86.62	cps
Bismuth	209-1	2517063	2509530	2512510	2513034	0.15	cps
Bismuth	209-2	1570239	1568999	1564278	1567839	0.20	cps
Boron	10-1	842	542	692	692	21.69	cps
Boron	11-1	3834	4117	3951	3967	3.59	cps
Cadmium	106-1	1242	1358	1342	1314	4.80	cps
Cadmium	108-1	0	0	0	0	0.00	cps
Cadmium	111-1	873	955	939	923	4.70	cps
Calcium	43-1	250	383	317	317	21.05	cps
Calcium	44-1	18721	18229	17394	18115	3.70	cps
Chromium	52-2	840	767	700	769	9.11	cps
Cobalt	59-2	50	27	23	33	43.59	cps
Copper	63-2	1230	1210	1093	1178	6.27	cps
Holmium	165-1	3764545	3766871	3749410	3760275	0.25	cps
Holmium	165-2	2056452	2064169	2040362	2053661	0.59	cps
Indium	115-1	3022897	3019862	3004067	3015609	0.34	cps
Indium	115-2	617548	610630	608915	612364	0.75	cps
Iron	56-2	4190	4651	4145	4329	6.47	cps
Iron	57-2	106	117	128	117	9.52	cps
Lead	206-1	583	656	633	624	5.93	cps
Lead	207-1	522	594	528	548	7.33	cps
Lead	208-1	2217	2517	2495	2409	6.94	cps
Lithium	6-1	229656	229170	228149	228992	0.34	cps
Magnesium	24-2	192	125	133	150	24.22	cps
Manganese	55-2	57	53	40	50	17.64	cps
Molybdenum	94-1	83	142	117	114	25.69	cps
Molybdenum	95-1	8	25	0	11	114.58	cps
Molybdenum	96-1	75	75	50	67	21.65	cps
Molybdenum	97-1	33	42	42	39	12.38	cps
Molybdenum	98-1	17	17	17	17	0.00	cps
Nickel	60-2	763	773	700	746	5.33	cps

Reviewed By:BIN
On:5/23/2016 2:13:54 PM
Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	PB90705BL	Instrumnet Name :	P7
Client Sample ID :	PBW007	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 12:50:01	DataFile Name :	046CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	208	267	308	261	19.24	cps
Potassium	39-2	37340	37164	37223	37242	0.24	cps
Rhodium	103-1	2921063	2849835	2856699	2875866	1.37	cps
Rhodium	103-2	1535551	1487112	1494839	1505834	1.73	cps
Scandium	45-1	1951417	1947472	1959315	1952735	0.31	cps
Scandium	45-2	96686	95620	95123	95810	0.83	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	87	63	83	78	16.67	cps
Selenium	82-1	-119	-206	-343	-222	-50.63	cps
Silicon	28-1	273986	273559	273239	273595	0.14	cps
Silver	109-1	108	150	108	122	19.68	cps
Silver	107-1	225	167	183	192	15.68	cps
Sodium	23-2	15901	15934	15784	15873	0.50	cps
Strontium	86-1	11297	10629	10604	10843	3.62	cps
Strontium	88-1	183	117	108	136	30.20	cps
Sulfur	34-1	618172	618782	613818	616924	0.44	cps
Terbium	159-2	2092093	2094933	2096089	2094371	0.10	cps
Terbium	159-1	3946383	3912115	3879865	3912788	0.85	cps
Thallium	203-1	83	42	75	67	33.07	cps
Thallium	205-1	233	133	125	164	36.78	cps
Tin	118-1	442	5395	400	2079	138.15	cps
Titanium	47-1	92	50	25	56	60.62	cps
Uranium	238-1	25	0	8	11	114.58	cps
Vanadium	51-2	20	20	33	24	31.49	cps
Yttrium	89-2	500307	489967	489021	493098	1.27	cps
Yttrium	89-1	3252516	3206374	3221984	3226958	0.73	cps
Zinc	66-2	723	653	543	640	14.18	cps
Zirconium	90-1	375	308	250	311	20.10	cps
Zirconium	91-1	58	50	42	50	16.67	cps

Reviewed By:BIN
On:5/23/2016 2:13:54 PM
Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCV028	Instrumnet Name :	P7
Client Sample ID :	CCV028	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 13:30:19	DataFile Name :	059CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1044767	1047675	1045193	1045878	0.15	cps
Antimony	121-1	5589534	5590160	5618205	5599300	0.29	cps
Arsenic	75-2	210534	212700	209498	210910	0.77	cps
Barium	137-1	11291421	11401040	11316854	11336438	0.51	cps
Barium	135-1	6629554	6637938	6609051	6625514	0.22	cps
Beryllium	9-1	728547	727721	724955	727075	0.26	cps
Bismuth	209-1	2442449	2418920	2405940	2422436	0.76	cps
Bismuth	209-2	1496009	1493868	1492730	1494202	0.11	cps
Boron	10-1	101069	105098	103663	103277	1.98	cps
Boron	11-1	499790	510775	521785	510783	2.15	cps
Cadmium	111-1	1364394	1355665	1367367	1362475	0.45	cps
Cadmium	106-1	150356	149816	150838	150337	0.34	cps
Cadmium	108-1	100574	100830	100604	100669	0.14	cps
Calcium	43-1	1621654	1639874	1654759	1638762	1.01	cps
Calcium	44-1	25939991	26167064	26196707	26101254	0.54	cps
Chromium	52-2	1978849	2029079	2002223	2003384	1.25	cps
Cobalt	59-2	3177601	3181352	3186257	3181737	0.14	cps
Copper	63-2	4632855	4672415	4592161	4632477	0.87	cps
Holmium	165-2	2051113	2083413	2073135	2069220	0.80	cps
Holmium	165-1	3797785	3754841	3807589	3786738	0.74	cps
Indium	115-2	570318	572147	571429	571298	0.16	cps
Indium	115-1	2837349	2834190	2844409	2838649	0.18	cps
Iron	56-2	77399716	78408449	78004157	77937441	0.65	cps
Iron	57-2	1974443	1998381	1978697	1983840	0.64	cps
Lead	206-1	4197790	4251606	4221874	4223756	0.64	cps
Lead	207-1	3762376	3738873	3678765	3726671	1.16	cps
Lead	208-1	16938183	16901619	16626562	16822121	1.01	cps
Lithium	6-1	221710	220462	223761	221978	0.75	cps
Magnesium	24-2	13337038	13239284	13118458	13231593	0.83	cps
Manganese	55-2	2071692	2095823	2076344	2081286	0.62	cps
Molybdenum	94-1	5072579	5067455	5151340	5097124	0.92	cps
Molybdenum	95-1	2765415	2761958	2754654	2760676	0.20	cps
Molybdenum	96-1	3521422	3536002	3507955	3521793	0.40	cps
Molybdenum	97-1	1692191	1692641	1729826	1704886	1.27	cps
Molybdenum	98-1	4371693	4388987	4455692	4405457	1.01	cps
Nickel	60-2	834571	841375	827488	834478	0.83	cps

Reviewed By:BIN
On:5/23/2016 2:13:54 PM
Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCV028	Instrumnet Name :	P7
Client Sample ID :	CCV028	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 13:30:19	DataFile Name :	059CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	61067	61060	61176	61101	0.11	cps
Potassium	39-2	6441581	6425567	6433713	6433620	0.12	cps
Rhodium	103-2	1439896	1445419	1437962	1441092	0.27	cps
Rhodium	103-1	2744369	2766670	2794666	2768568	0.91	cps
Scandium	45-1	1944008	1985111	1981492	1970203	1.16	cps
Scandium	45-2	96770	98871	97304	97648	1.12	cps
Selenium	77-2	4277	4467	4354	4366	2.19	cps
Selenium	78-2	14572	14496	14268	14446	1.10	cps
Selenium	82-1	90129	91198	91782	91036	0.92	cps
Silicon	28-1	3603708	3668752	3744199	3672220	1.91	cps
Silver	109-1	6363975	6342036	6357804	6354605	0.18	cps
Silver	107-1	6698921	6696491	6664544	6686652	0.29	cps
Sodium	23-2	24208314	24328119	24114197	24216877	0.44	cps
Strontium	86-1	1775831	1767479	1771365	1771558	0.24	cps
Strontium	88-1	15040931	15111676	15178703	15110437	0.46	cps
Sulfur	34-1	1013570	1016873	1016465	1015636	0.18	cps
Terbium	159-1	3893928	3902321	3894005	3896751	0.12	cps
Terbium	159-2	2073328	2098410	2095824	2089187	0.66	cps
Thallium	203-1	5252505	5221734	5204721	5226320	0.46	cps
Thallium	205-1	12397488	12290933	12302518	12330313	0.47	cps
Tin	118-1	4365834	4357650	4361649	4361711	0.09	cps
Titanium	47-1	789988	786117	793302	789803	0.46	cps
Uranium	238-1	18094905	17937733	18034607	18022415	0.44	cps
Vanadium	51-2	1591216	1601366	1595190	1595924	0.32	cps
Yttrium	89-2	488741	492017	488567	489775	0.40	cps
Yttrium	89-1	3197769	3226142	3259938	3227950	0.96	cps
Zinc	66-2	611785	615507	605395	610896	0.84	cps
Zirconium	90-1	9465525	9650248	9630159	9581978	1.06	cps
Zirconium	91-1	2120321	2147185	2133896	2133801	0.63	cps

Reviewed By:BIN
On:5/23/2016 2:13:54 PM
Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCB028	Instrumnet Name :	P7
Client Sample ID :	CCB028	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 13:33:12	DataFile Name :	060CCBD.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	50	42	67	53	24.12	cps
Antimony	121-1	2975	2717	3009	2900	5.51	cps
Arsenic	75-2	11	20	15	15	30.21	cps
Barium	135-1	50	92	133	92	45.46	cps
Barium	137-1	208	208	192	203	4.74	cps
Beryllium	9-1	44	44	22	37	34.65	cps
Bismuth	209-1	2494166	2484273	2466061	2481500	0.57	cps
Bismuth	209-2	1561474	1576769	1557013	1565085	0.66	cps
Boron	10-1	3626	3042	3084	3250	10.01	cps
Boron	11-1	17953	16468	15100	16507	8.64	cps
Cadmium	111-1	900	968	928	932	3.64	cps
Cadmium	106-1	1217	1325	1258	1267	4.31	cps
Cadmium	108-1	8	8	4	7	34.59	cps
Calcium	43-1	408	325	333	356	12.91	cps
Calcium	44-1	19021	18671	18612	18768	1.18	cps
Chromium	52-2	840	907	813	853	5.63	cps
Cobalt	59-2	57	60	63	60	5.55	cps
Copper	63-2	1950	1917	1960	1942	1.17	cps
Holmium	165-1	3800233	3791687	3748142	3780021	0.74	cps
Holmium	165-2	2056830	2060404	2061543	2059592	0.12	cps
Indium	115-2	608713	607733	599036	605161	0.88	cps
Indium	115-1	2990166	2977236	2967145	2978182	0.39	cps
Iron	56-2	6240	6263	5329	5944	8.96	cps
Iron	57-2	100	83	94	93	9.16	cps
Lead	206-1	722	783	756	754	4.06	cps
Lead	207-1	600	628	711	646	8.95	cps
Lead	208-1	2961	2839	2989	2930	2.72	cps
Lithium	6-1	225393	224730	223297	224473	0.48	cps
Magnesium	24-2	433	275	200	303	39.34	cps
Manganese	55-2	93	147	70	103	38.03	cps
Molybdenum	94-1	400	350	358	369	7.25	cps
Molybdenum	95-1	350	258	308	306	15.02	cps
Molybdenum	96-1	325	383	367	358	8.38	cps
Molybdenum	97-1	258	125	142	175	41.51	cps
Molybdenum	98-1	517	467	375	453	15.87	cps
Nickel	60-2	1113	1190	1280	1195	6.98	cps

Reviewed By:BIN
On:5/23/2016 2:13:54 PM
Inst Id :P7

LB Number :	LB81731	Operator :	Jaswal
Lab Sample ID :	CCB028	Instrumnet Name :	P7
Client Sample ID :	CCB028	Dilution Factor :	1
Date & Time Acquired ::	2016-05-23 13:33:12	DataFile Name :	060CCBD.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Phosphorus	31-2	292	200	300	264	21.03	cps
Potassium	39-2	39094	38125	37590	38270	1.99	cps
Rhodium	103-1	2879507	2890706	2897211	2889141	0.31	cps
Rhodium	103-2	1501374	1503251	1509287	1504637	0.27	cps
Scandium	45-1	1932474	1949308	1940020	1940600	0.43	cps
Scandium	45-2	94218	94620	94097	94311	0.29	cps
Selenium	82-1	-9	-99	-194	-100	-91.84	cps
Selenium	77-2	0	0	10	3	173.21	cps
Selenium	78-2	83	70	70	75	10.02	cps
Silicon	28-1	292881	290870	284400	289384	1.53	cps
Silver	109-1	575	650	525	583	10.79	cps
Silver	107-1	583	692	592	622	9.69	cps
Sodium	23-2	21908	21641	20949	21499	2.30	cps
Strontium	86-1	11230	11346	11138	11238	0.93	cps
Strontium	88-1	508	583	517	536	7.67	cps
Sulfur	34-1	593237	595725	592788	593917	0.27	cps
Terbium	159-1	3947905	3925604	3871273	3914927	1.01	cps
Terbium	159-2	2111380	2099548	2099975	2103634	0.32	cps
Thallium	203-1	692	625	625	647	5.95	cps
Thallium	205-1	1450	1634	1175	1420	16.25	cps
Tin	118-1	1025	900	883	936	8.27	cps
Titanium	47-1	25	175	108	103	73.12	cps
Uranium	238-1	508	325	467	433	22.18	cps
Vanadium	51-2	13	10	40	21	77.90	cps
Yttrium	89-1	3263778	3241165	3197242	3234062	1.05	cps
Yttrium	89-2	489972	492412	489262	490548	0.34	cps
Zinc	66-2	850	797	777	808	4.69	cps
Zirconium	90-1	592	567	583	581	2.19	cps
Zirconium	91-1	117	175	150	147	19.88	cps

SOP ID :- MISMO2.2 Metal ICP MJ.

ICP MJ

CHEMTECH

Water Sample Preparation Sheet

PB90705

15MO2 LM 20 5/18

PrepBatch ID : PB90705 H 2948

SDG No :

Matrix : Water

Method : MISMO2-2MJ

Initial Volume : 50 ML

Final Volume : 50 ML

Hot Plate Temp : 1. 95°C 2. 3.

Batch# PB90705

ICP Digest Date: 05/18/16 Time : 10:30

Sample Received By : Bin He

Dig Technician Signature: PB

Supervisor Signature:

Prep Code: CWI PB 05/18/16

End Time for Hot Block 12:30

Standared Name	MLS USED	STD REF. # FROM LOG
LCSW	0.50ml	MP 33629
Spike Sol. B	0.50ml	MP 33631
		PB 05/18/16

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	1.00ml	MP 33482
1:1 HCL	0.50ml	MP 33483
PH STRIPS BOX-0.2.5		M3584
		PB 05/18/16

Date / Time	Received By	Relinquished By	Location
05/18/16 13:15	Bin He.	PB	ICP lab
	Analysis Group	Digestion Group	
	JS		

CHEMTECH **Water Sample Preparation Sheet** **PrepBatch ID :** **PB90705**

Lab Sample ID	Customer Sample Number	Color Before	Color After	Clarity Before	Clarity After	PH	Comments	Prep Pos
H2948-01	MH4005	C	C	C	C	A		
H2948-02	MH4097	C	C	C	C	A		
H2948-03	MH4106	C	C	C	C	A		
H2948-04	MH4107	C	C	C	C	A		
H2948-05	MH4137	C	C	C	C	A		
H2948-06	MH4137D	C	C	C	C	A		
H2948-07	MH4137S	C	C	C	C	A	MP93631	
PB90705BL	~~PBW01~~ PBW1007	C	C	C	C	A		
PB90705BS	~~LCS01~~ LCS1007	C	C	C	C	A	MP93624	

PB 05/18/16

* BL=Blank BS=Blank Spike TB=TCLP Blank
* COLOR: R=Red BU=Blue Y=Yellow GR=Green O=Orange V=Violet W=White C=Colorless BR=Brown GY=Grey BL=Black

CHEMTECH **Water Sample Preparation Sheet** **PrepBatch ID :** **PB90705**

Lab Sample	Customer Sample Number	Color Before	Color After	Clarity Before	Clarity After	PH	Comments	Prep Pos
H2948-01	MH4005	Colorless	Colorless	Clear	Clear	<2		
H2948-02	MH4097	Colorless	Colorless	Clear	Clear	<2		
H2948-03	MH4106	Colorless	Colorless	Clear	Clear	<2		
H2948-04	MH4107	Colorless	Colorless	Clear	Clear	<2		
H2948-05	MH4137	Colorless	Colorless	Clear	Clear	<2		
H2948-06	MH4137D	Colorless	Colorless	Clear	Clear	<2		
H2948-07	MH4137S	Colorless	Colorless	Clear	Clear	<2		
PB90705BL	~~PBW01~~ PBW007	Colorless	Colorless	Clear	Clear	<2		
PB90705BS	~~LCS01~~ LCS 007	Colorless	Colorless	Clear	Clear	<2		

PB 05/18/16
05/18/16

* BL=Blank BS=Blank Spike TB=TCLP Blank
* COLOR: R=Red BU=Blue Y=Yellow GR=Green O=Orange V=Violet W=White C=Colorless BR=Brown GY=Grey BL=Black

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Prep Standard - Chemical Standard Summary

Order ID : H2948

Test : Metals CLP MS

Prepbatch ID : PB90705,

Sequence ID/Qc Batch ID: LB81731,

Standard ID :
MP33602,MP33607,mP33629,MP33631,MP33818,MP33819,MP33820,MP33821,MP33822,MP33823,MP33824,MP33825,
MP33826,MP33843,MP33844,MP33845,MP33846,MP33847,MP33848,MP33850,MP33851,

Chemical ID :
M2991,M3045,M3085,M3295,M3296,M3297,M3298,M3304,M3305,M3306,M3307,M3316,M3321,M3322,M3323,M3325,M3
326,M3327,M3328,M3329,M3333,M3385,M3411,M3416,M3432,M3433,M3444,M3445,M3446,M3468,M3471,M3473,M3476,
M3478,M3479,M3481,M3482,M3495,M3498,M3502,M3504,M3532,M3535,m3584,M3585,M3588,M3590,M3607,mp33482,
mp33483,W1152,

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP33602	05/06/2016	05/20/2016	jaswal

FROM 12.500ml of M3588 + 2462.500ml of W1152 + 25.000ml of M3590 = Final Quantity: 2500.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3349	S7 ICPMS	MP33607	05/06/2016	08/30/2016	jaswal

FROM 0.500ml of M3045 + 0.500ml of M3295 + 0.500ml of M3298 + 0.500ml of M3304 + 0.500ml of M3333 + 0.500ml of M3468 + 0.500ml of M3478 + 0.500ml of M3535 + 0.950ml of M3432 + 1.000ml of M3444 + 1.000ml of M3445 + 2.000ml of M3585 + 2.450ml of M3297 + 2.450ml of M3532 + 2.500ml of M3588 + 25.000ml of M3495 + 4.950ml of M3473 + 4.950ml of M3481 + 4.950ml of M3482 + 438.800ml of W 1152 + 5.000ml of M3590 = Final Quantity: 500.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1120	ICPMS ISM01.2 S1(CONC.)	MP33629	05/06/2016	05/20/2016	jaswal

FROM 0.050ml of M3295 + 0.050ml of M3298 + 0.050ml of M3304 + 0.050ml of M3305 + 0.050ml of M3306 + 0.050ml of M3316 + 0.050ml of M3321 + 0.050ml of M3322 + 0.050ml of M3325 + 0.050ml of M3327 + 0.050ml of M3328 + 0.050ml of M3333 + 0.050ml of M3535 + 0.100ml of M3045 + 0.100ml of M3385 + 0.100ml of M3432 + 0.100ml of M3468 + 0.100ml of M3471 + 0.250ml of M3307 + 0.250ml of M3323 + 0.250ml of M3326 + 0.250ml of M3329 + 0.250ml of M3478 + 0.500ml of M3585 + 1.000ml of M3532 + 2.500ml of M3297 + 2.500ml of M3473 + 2.500ml of M3481 + 2.500ml of M3482 + 236.100ml of MP33602 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
870	ICPMS SPIKE SOL.B	MP33631	05/06/2016	05/20/2016	jaswal

FROM 0.450ml of M3329 + 5.000ml of M3476 + 5.000ml of M3504 + 39.550ml of MP33602 = Final Quantity: 50.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP33818	05/23/2016	06/05/2016	BIN

FROM 12.500ml of M3588 + 2462.500ml of W1152 + 25.000ml of M3607 = Final Quantity: 2500.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
2902	S8 ICPMS	MP33819	05/23/2016	06/05/2016	BIN

FROM 1.000ml of M3432 + 2.500ml of M3297 + 2.500ml of M3532 + 5.000ml of M3473 + 5.000ml of M3481 + 5.000ml of M3482 + 79.000ml of MP33818 = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3350	S6 ICPMS	MP33820	05/23/2016	06/05/2016	BIN

FROM 50.000ml of MP33607 + 50.000ml of MP33818 = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3351	S5 ICPMS	MP33821	05/23/2016	06/05/2016	BIN

FROM 25.000ml of MP33607 + 75.000ml of MP33818 = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1145	S4 ICPMS	MP33822	05/23/2016	06/05/2016	BIN

FROM 12.500ml of MP33607 + 87.500ml of MP33818 = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1146	S3 ICPMS	MP33823	05/23/2016	06/05/2016	BIN

FROM 10.000ml of MP33820 + 90.000ml of MP33818 = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1120	ICPMS ISM01.2 S1(CONC.)	MP33824	05/23/2016	06/05/2016	BIN

FROM 0.050ml of M3298 + 0.050ml of M3304 + 0.050ml of M3305 + 0.050ml of M3306 + 0.050ml of M3316 + 0.050ml of M3321 + 0.050ml of M3322 + 0.050ml of M3325 + 0.050ml of M3327 + 0.050ml of M3328 + 0.050ml of M3333 + 0.050ml of M3535 + 0.100ml of M3045 + 0.100ml of M3385 + 0.100ml of M3432 + 0.100ml of M3468 + 0.100ml of M3471 + 0.250ml of M3295 + 0.250ml of M3307 + 0.250ml of M3323 + 0.250ml of M3326 + 0.250ml of M3329 + 0.250ml of M3478 + 0.500ml of M3585 + 1.000ml of M3532 + 2.250ml of M3296 + 2.500ml of M3297 + 2.500ml of M3473 + 2.500ml of M3481 + 2.500ml of M3482 + 25.000ml of M2991 + 233.600ml of MP33818 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1147	S2 ICPMS	MP33825	05/23/2016	06/05/2016	BIN

FROM 0.500ml of MP33824 + 99.500ml of MP33818 = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1148	S1 ICPMS	MP33826	05/23/2016	06/05/2016	BIN

FROM 10.000ml of MP33825 + 90.000ml of MP33818 = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3130	100ppm ICV SOL.	MP33843	05/23/2016	06/05/2016	BIN

FROM 0.250ml of M3446 + 0.250ml of M3498 + 2.500ml of M3479 + 21.500ml of MP33818 = Final Quantity: 25.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1575	ICV ISM01.2 MS	MP33844	05/23/2016	05/31/2016	BIN

FROM 2.000ml of M3085 + 0.500ml of MP33843 + 97.500ml of MP33818 = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1142	ICSA ICPMS	MP33845	05/23/2016	06/05/2016	BIN

FROM 10.000ml of M3411 + 90.000ml of MP33818 = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1143	ICSAB ICPMS	MP33846	05/23/2016	06/05/2016	BIN

FROM 10.000ml of M3411 + 10.000ml of M3416 + 80.000ml of MP33818 = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1430	CCV ICPMS ISM01.2	MP33847	05/23/2016	06/05/2016	BIN

FROM 0.250ml of M3045 + 0.250ml of M3295 + 0.250ml of M3298 + 0.250ml of M3304 + 0.250ml of M3333 + 0.250ml of M3468 + 0.250ml of M3478 + 0.250ml of M3535 + 0.475ml of M3432 + 0.500ml of M3444 + 0.500ml of M3445 + 1.000ml of M3585 + 1.225ml of M3297 + 1.225ml of M3532 + 12.500ml of M3495 + 2.475ml of M3473 + 2.475ml of M3481 + 2.475ml of M3482 + 470.900ml of MP33818 = Final Quantity: 500.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1135	MG 10PPM ILM05.4 FOR TUNE	MP33848	05/23/2016	06/05/2016	BIN

FROM 0.100ml of M3481 + 99.900ml of MP33818 = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
857	ICPMS INT. STANDARD	MP33850	05/23/2016	06/05/2016	BIN

FROM 2450.000ml of W1152 + 25.000ml of M3502 + 25.000ml of M3607 = Final Quantity: 2500.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3323	Startup configuration Sol.	MP33851	05/23/2016	06/05/2016	BIN

FROM 0.200ml of M3433 + 99.800ml of MP33818 = Final Quantity: 200.000 ml

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57042 / Molybdeum, Mo, 100 ml, 1000 PPM	080913	08/09/2016	10/30/2013 / BIN	09/25/2013 / BIN	M2991

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	083013	08/30/2016	09/02/2014 / BIN	09/25/2013 / jaswal	M3045

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV1-0307	05/31/2016	11/30/2015 /	10/09/2013 / jaswal	M3085

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSR1-1 / Strontium, 125 ml, 1000 PPM	G2-SR02040	11/13/2016	01/30/2015 / BIN	01/19/2015 / BIN	M3295

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	G2-TI02102	11/26/2016	01/30/2015 / BIN	01/19/2015 / BIN	M3296

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGK10-5 / Potassium, 500 ml, 10000 PPM	G2-K03042	01/06/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3297

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTH1-1 / Thorium 1000 ug/ml	H2-TH01094R	12/15/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3298

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGZR1-1 / Zirconium, 1000 PPM, 125 ml	H2-ZR01095R	12/16/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3304

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGNI1-1 / NICKEL 125mL 1000ug/mL	H2-NI02086R	12/03/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3305

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGCO1-1 / COBALT 125mL 1000ug/mL	H2-CO02063	10/27/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3306

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	G2-SI03029	01/24/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3307

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTL1-1 / THALLIUM 125mL 1000ug/mL	H2-TL02003R	11/20/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3316

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGAS1-1 / ARSENIC 125mL 1000ug/mL	H2-AS02102R	12/11/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3321

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGCD1-1 / CADMIUM, 125mL 1000ug/mL	H2-CD02055	03/31/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3322

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGV1-1 / VANADIUM 125mL 1000ug/mL	H2-V02090	05/09/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3323

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGBE1-1 / BERYLLIUM 125mL 1000ug/mL	H2-BE02021R	11/20/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3325

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGB1-1 / BORON 125mL 1000ug/mL	G2-B02117	11/14/2016	01/30/2015 / BIN	01/19/2015 / BIN	M3326

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGPB1-1 / LEAD 125mL 1000ug/mL	H2-PB03044R	12/04/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3327

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGAG1-1 / SILVER 125mL 1000ug/mL	H2-AG03035R	12/03/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3328

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSE(4)1-1 / SELENIUM 125mL 1000ug/mL	H2-SE02049	03/31/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3329

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGU1-1 / Uranium 1000 ug/ml	H2-U01102R	11/20/2017	01/30/2015 / BIN	01/19/2015 / BIN	M3333

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSBF1-1 / Antimony, Sb, 125 ml	H2-SB03028	02/24/2017	03/30/2015 / BIN	03/27/2015 / BIN	M3385

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICPMS) STOCK SOLN	ICSA-0803	08/18/2016	02/18/2016 / jaswal	03/20/2015 / jaswal	M3411

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	/ ICSB (ICPMS) STOCK SOLUTION	ICSB-0803	08/18/2016	02/18/2016 / jaswal	03/20/2015 / jaswal	M3416

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Aluminum (Al) 10,000PPM	122214	12/22/2017	02/15/2016 / BIN	06/05/2015 / BIN	M3432

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Thermo Fisher Scientific	1600636 / Tune D25 Cross Cal Solution, 10 PPM	CM-0740	03/31/2017	06/08/2015 / jaswal	06/05/2015 / BIN	M3433

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGP10-1 / Phosphorus, 125 ml, 10000 ug/ml	G2-P02050	09/09/2016	06/25/2015 / BIN	06/18/2015 / BIN	M3444

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGS10-1 / SULFUR 125mL 10,000ug/mL	G2-S02014	11/04/2016	06/25/2015 / BIN	06/18/2015 / BIN	M3445

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGU10-1 / Uranium 10000 ug/ml	G2-U01105	11/01/2016	06/25/2015 / BIN	06/18/2015 / BIN	M3446

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGCU1-5 / Copper, 500 ml, 1000 PPM	H2-CU03021	02/13/2018	09/16/2015 / BIN	09/04/2015 / BIN	M3468

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	010615	01/06/2018	09/24/2015 / jaswal	09/24/2015 / jaswal	M3471

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Sodium, Na, 500 ml, 10,000 PPM	070615	07/06/2018	09/24/2015 / jaswal	09/24/2015 / jaswal	M3473

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-1 / SOIL/WATER SPIKE SOLN 1, 125mL	J2-MEB568046	02/20/2018	09/29/2015 / BIN	09/29/2015 / BIN	M3476

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	H2-MEB542131	10/01/2016	09/29/2015 / BIN	09/29/2015 / BIN	M3478

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	H2-MEB542132	10/01/2016	09/29/2015 / BIN	09/29/2015 / BIN	M3479

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGMG10-5 / Magnesium, 500 ml, 10000 PPM	J2-MG03145	07/16/2018	10/02/2015 / BIN	10/02/2015 / BIN	M3481

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGCA10-5 / Calcium, 500 ml, 10000 PPM	H2-CA04105	12/03/2017	10/02/2015 / BIN	10/02/2015 / BIN	M3482

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	6020CAL-1 / Calibration Standard Method 6020	G2-MEB503047	11/26/2016	02/18/2016 / jaswal	09/29/2015 / BIN	M3495

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSR10-1 / STRONTIUM 1 X 125 ml	H2-SR02049	11/17/2017	10/13/2015 / jaswal	09/29/2015 / BIN	M3498

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	6020ISS / 6020ISS, 10 ug/ml, Bi, Ho, In, 6Li, Rh, Sc, TB, Y	J2-MEB562038	01/08/2018	02/18/2016 / jaswal	09/29/2015 / BIN	M3502

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-4 / SOIL/WATER SPIKE SOLN 4, 125mL	G2-MEB502029	12/24/2016	10/13/2015 / jaswal	09/29/2015 / BIN	M3504

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGFE10-5 / Iron, 500 ml, 10000 PPM	J2-FE04047	02/13/2018	12/18/2015 / BIN	12/10/2015 / BIN	M3532

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Manganese, Mn, 500 ml, 1000 PPM	072215	07/22/2018	12/18/2015 / BIN	12/07/2015 / BIN	M3535

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	140440 / TEST PAPERS,PH,0-2.5,.2SENSI, 100PK	hc563733	04/13/2021	04/14/2016 /	04/13/2016 / Bhadresh	M3584

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGBA1-1 / BARIUM 125mL 1000ug/mL	J2-BA02093	07/02/2018	04/26/2016 / BIN	02/19/2016 / BIN	M3585

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)		01/13/2021	05/05/2016 / bhadresh	04/04/2016 / bhadresh	M3588

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	0000135629	01/27/2021	05/06/2016 / bhadresh	05/04/2016 / bhadresh	M3590

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	0000137345	02/21/2021	05/19/2016 / bhadresh	05/18/2016 / bhadresh	M3607

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	DIW / DI Water	Lab certified	02/23/2025	02/23/2010 /	02/23/2010 / divya	W1152

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

M2991

RD : 09/26/13

Certified Reference Material CRM

ISO 9001 QS R
ISO 17025-34-35-43 A
Scopes: http://AbsoluteStan

CERTIFIED WEIGHT REPORT:

Part Number:	57042
Lot Number:	080913
Description:	Molybdenum (Mo)
Expiration Date:	080916
Storage:	20 °C
Nominal Concentration (µg/mL):	1000
Volume shown below was diluted to (mL):	1999.68

Lot #	Solvent:		
Y47057	Ammonium hydroxide		
0.5%	10.0 (mL)	Ammonium hydroxide	
5E-05	Balance Uncertainty		
0.100	Flask Uncertainty		

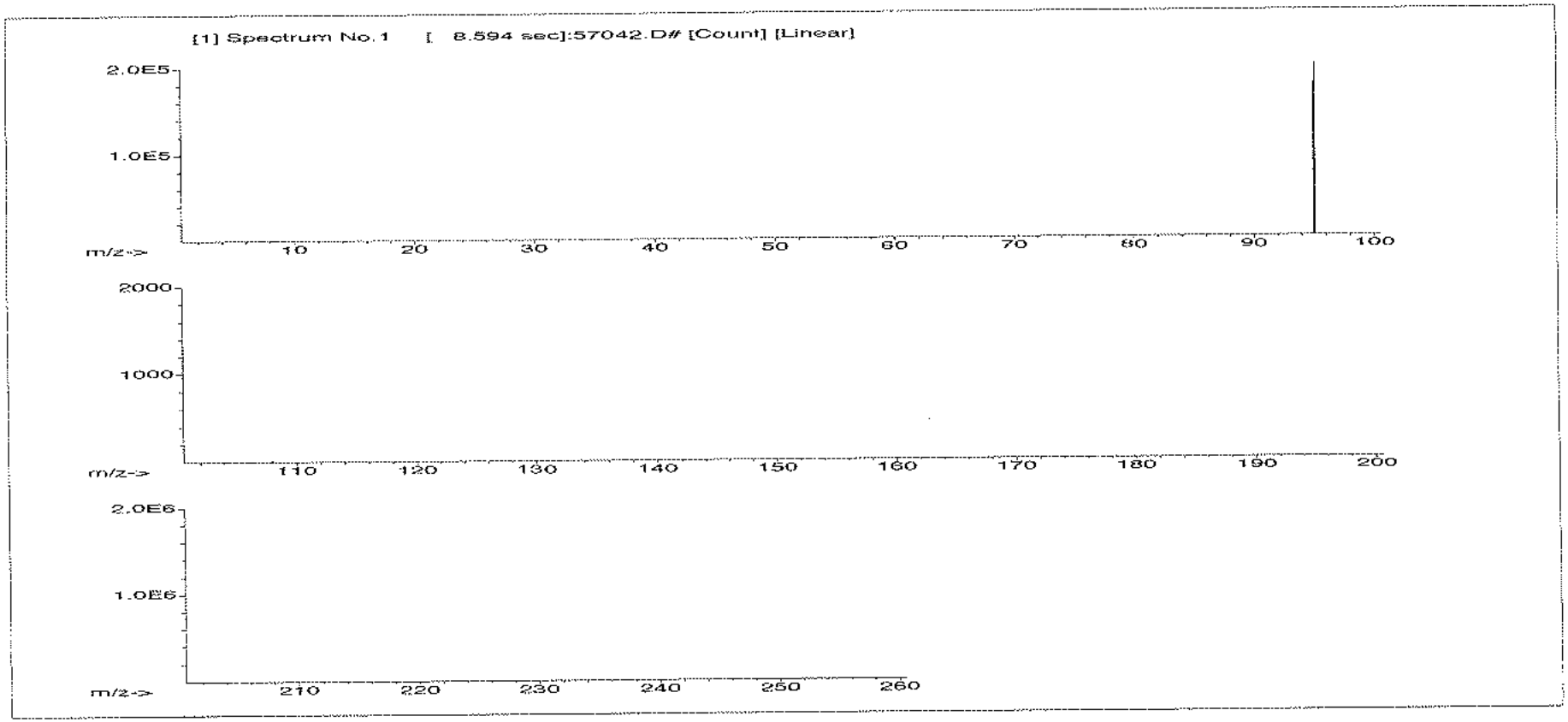
Gabriel Helland

Formulated By:	Gabriel Helland	080913

Pedro Rentas

Reviewed By:	Pedro L. Rentas	080913

Compound	Part Number	Lot Number	Dilution Factor	Initial Volume	Uncertainty Pipette	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-)	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium molybdate (Mo)	58142	072613	0.1000	200.0	0.013	10001.3	**1000.3**	0.00201	12054-85-2	5 mg(Mo)/m3	orl-rat 333 mg/kg	3134



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Absolute Standards, Inc.
300-368-1131
www.absolutestandards.com

Certified Reference Material CRM

RD: 09/25/13
M3045

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

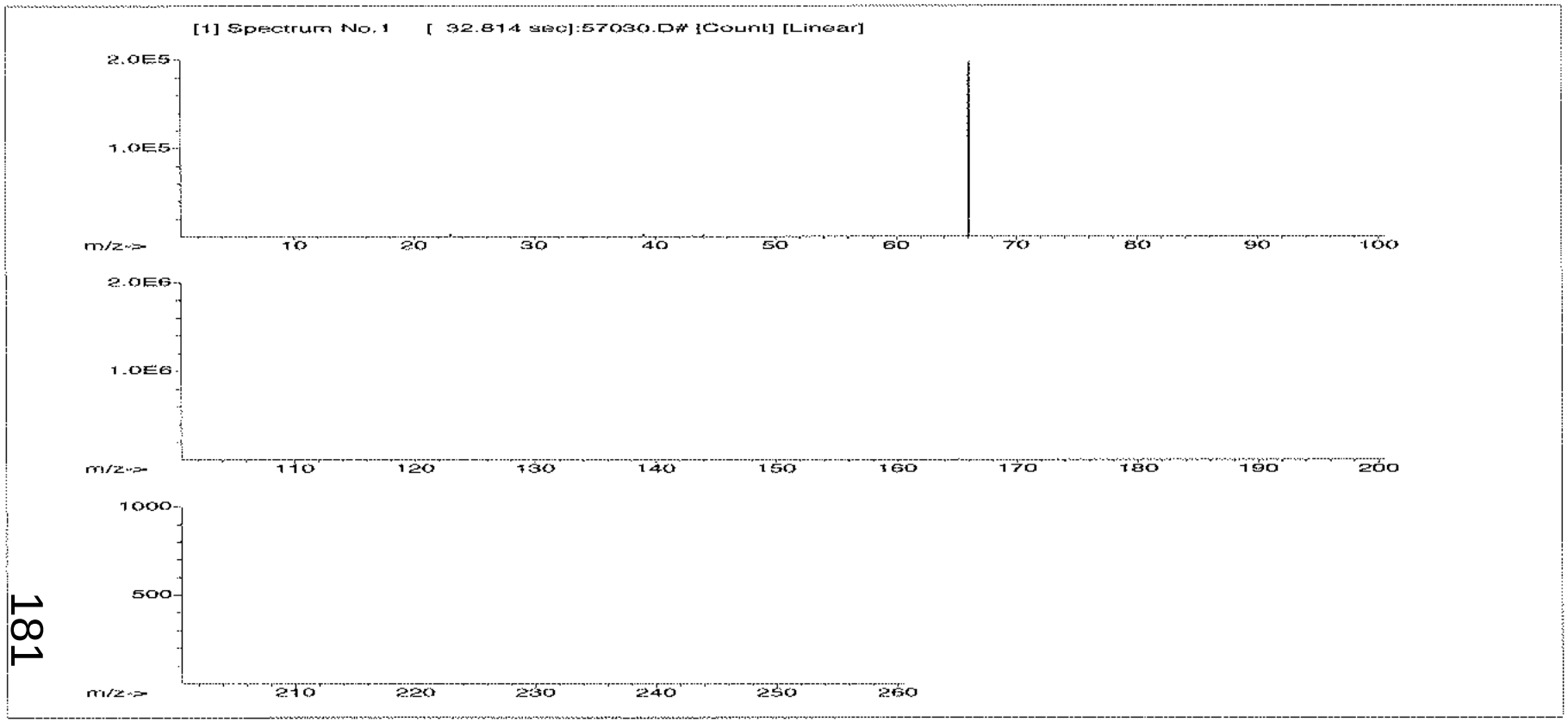
CERTIFIED WEIGHT REPORT:

			Lot #	Solvent:	
Part Number:	**58030**		C257285	Nitric Acid	
Lot Number:	**083013**				
Description:	**Zinc (Zn)**				
			2.0%	40.0	Nitric Acid
Expiration Date:	083016			(mL)	
		Storage: 20 °C			
Nominal Concentration (µg/mL):	**1000**				
		5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	1999.68	0.100	Flask Uncertainty		

Formulated By:	Lawrence Barry 083013
Reviewed By:	Pedro L. Rentas 083013

MSDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Volume	Uncertainty Pipette	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-)	(Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hydrate (Zn)	58130	042313	0.1000	200.0	0.013	10001.5	**1000.3**	0.00201	13778-30-8	1 mg/m3	ort-rat 1190mg/kg	3168



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(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

M3081 To M3090

ICV1-0307		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2521	504
Sb	994	199
As	999	200
Ba	497	99
Be	495	99
Cd	496	99
Ca	10026	2005
Cr	490	98
Co	499	100
Cu	492	98
Fe	5082	1016
Pb	1002	200
Mg	6074	1215
Mn	499	100
Ni	503	101
K	10021	2004
Se	1029	206
Ag	501	100
Na	10097	2019
Tl	1028	206
V	501	100
Zn	1025	205

ICV5-0508		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

M3326 O: 01/30/15 Ex: 11/16/16
R: 01/19/15

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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number (010105).

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGB1
Lot Number:	G2-B02117
Matrix:	H2O
Value/Analyte(s):	1 000 µg/mL Boron
Starting Material:	H3BO3
Starting Material Lot#:	1631
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 5 µg/mL weighted mean

Certified Density: 1.001 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1,001 ± 3 µg/mL** ICP Assay NIST SRM 3107 Lot Number: 070514
Assay Method #2	**1,000 ± 5 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3295 R:01/19/15 Ex: 11/13/16
09: 01/30/15

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ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Materials Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	G2-SR02040
Matrix:	0.1% (v/v) HNO3
Value/Analyte(s):	1 000 µg/mL Strontium
Starting Material:	SrCO3
Starting Material Lot#:	1716
Starting Material Purity:	99.9989%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1,004 ± 5 µg/mL weighted mean

Certified Density: 1.001 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1,005 ± 3 µg/mL** ICP Assay NIST SRM 3153a Lot Number: 990906
Assay Method #2	**1,002 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3896 R: 01/19/15 OP: 01/30/15

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Ex: 11/26/16

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ACCREDITED Testing Laboratory Certificate 881.01 ACCREDITED Reference Material Producer Certificate 583.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	G2-TI02102
Matrix:	2% (v/v) HNO3 / tr. HF
Value/Analyte(s):	1 000 µg/mL Titanium
Starting Material:	Ti Powder
Starting Material Lot#:	1769
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1,002 ± 4 µg/mL weighted mean

Certified Density: 1.012 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1002 ± 2 µg/mL** ICP Assay NIST SRM 3162a Lot Number: 060808
Assay Method #2	**1002 ± 4 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3297 · R: 01/19/15 OP: 01/30/15

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ACCREDITED Testing Laboratory Certificate 88301 ACCREDITED Reference Material Producer Certificate 88102

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGK10
Lot Number:	G2-K03042
Matrix:	2% (v/v) HNO3
Value/Analyte(s):	10 000 µg/mL Potassium
Starting Material:	KNO3
Starting Material Lot#:	1727
Starting Material Purity:	99.9989%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10,001 ± 21 µg/mL weighted mean

Certified Density: 1.024 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**10023 ± 62 µg/mL** ICP Assay NIST SRM 3141a Lot Number: 051220
Assay Method #2	**9999 ± 20 µg/mL** Gravimetric NIST SRM Lot Number: See Sec 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3298 R: 01/19/15 OP: 01/30/15

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ACCREDITED Testing Laboratory Certificate 993.01 ACCREDITED Reference Material Producer Certificate 993.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTH1
Lot Number:	H2-TH01094R
Matrix:	5% (v/v) HNO3
Value/Analyte(s):	1 000 µg/mL Thorium
Starting Material:	Th(NO3)4x4H2O
Starting Material Lot#:	1803
Starting Material Purity:	99.9934%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 4 µg/mL

Certified Density: 1.026 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1001 ± 4 µg/mL** ICP Assay NIST SRM 3159 Lot Number: 992912
Assay Method #2	**1000 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3304 DP: 01/30/15 R: 01/19/15

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ACCREDITED Testing Laboratory Certificate 88301 ACCREDITED Reference Material Producer Certificate 88302

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZR1
Lot Number:	H2-ZR01095R
Matrix:	tr. HF
Value/Analyte(s):	1 000 µg/mL Zirconium
Starting Material:	ZrO2
Starting Material Lot#:	1765
Starting Material Purity:	99.9947%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 995 ± 5 µg/mL - weighted mean

Certified Density: 1.000 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **997 ± 3 µg/mL**
ICP Assay NIST SRM 3169 Lot Number: 071226

Assay Method #2 **1000 ± 3 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3305 R:01/19/15 OP: 01/30/15 Ex: 12/03/17

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ACCREDITED Testing Laboratory Certificate 2853.01 ACCREDITED Reference Material Producer Certificate 3053.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNI1
Lot Number:	H2-NI02086R
Matrix:	2% v/v HNO3
Value/Analyte(s):	1 000 µg/mL Nickel
Starting Material:	Ni pieces
Starting Material Lot#:	1559
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 4 µg/mL - weighted mean

Certified Density: 1.011 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1001 ± 3 µg/mL** ICP Assay NIST SRM 3136 Lot Number: 000612
Assay Method #2	**1002 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3306 R: 01/19/15 D: 01/30/15 Ex: 10/27/17

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ACCREDITED ACCREDITED

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCO1
Lot Number:	H2-CO02063
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Co
Starting Material:	Cobalt Carbonate
Starting Material Lot#:	1850
Starting Material Purity:	99.9990%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 3 µg/mL - weighted mean

Certified Density: 1.017 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**996 ± 4 µg/mL** ICP Assay NIST SRM 3113 Lot Number: 000630 Co
Assay Method #2	**999 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3307 R: 01/19/15 OP: 01/30/15 Ex: 01/29/17

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ACCREDITED ACCREDITED

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI1
Lot Number:	G2-SI03029
Matrix:	tr. HNO3 / tr. HF
Value/Analyte(s):	1 000 µg/mL Silicon
Starting Material:	SiO2
Starting Material Lot#:	1551
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1004 ± 5 µg/mL weighted mean

Certified Density: 1.003 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1,005 ± 3 µg/mL** ICP Assay NIST SRM 3150 Lot Number: 071204
Assay Method #2	**1,000 ± 5 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M33/6 R: 01/19/15 OP: 01/30/15 Ex: 1/20/17

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ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTL1
Lot Number:	H2-TL02003R
Matrix:	0.7% v/v HNO3
Value/Analyte(s):	1 000 µg/mL Thallium
Starting Material:	TlNO3
Starting Material Lot#:	1576
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1003 ± 7 µg/mL - no weighted mean

Certified Density: 1.003 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1003 ± 6 µg/mL**
ICP Assay NIST SRM 3158 Lot Number: 993012

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3321 R:01/19/15 OP:01/30/15 Exp 12/11/17

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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number (010105).

ACCREDITED Testing Laboratory Certificate 3813.01 ACCREDITED Reference Material Producer Certificate 3813.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS1
Lot Number:	H2-AS02102R
Matrix:	2% (v/v) HNO3
Value/Analyte(s):	1 000 µg/mL Arsenic
Starting Material:	As Lump
Starting Material Lot#:	1814
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 5 µg/mL - weighted mean

Certified Density: 1.012 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**999 ± 4 µg/mL** ICP Assay NIST SRM 3103a Lot Number: 100818
Assay Method #2	**1002 ± 3 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M332 R: 01/19/15 OP: 01/30/15 Ex: 03/31/17

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CERTIFICATE OF ANALYSIS

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ACCREDITED Testing Laboratory Certificate 853.01 ACCREDITED Reference Material Producer Certificate 853.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCD1
Lot Number:	H2-CD02055
Matrix:	3% (v/v) HNO3
Value/Analyte(s):	1 000 µg/mL Cadmium
Starting Material:	Cd shot
Starting Material Lot#:	1816
Starting Material Purity:	99.9999%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1,002 ± 5 µg/mL weighted mean

Certified Density: 1.016 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**999 ± 4 µg/mL** ICP Assay NIST SRM 3108 Lot Number: 060531
Assay Method #2	**1003 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3323 R: 01/19/15 Ex: 01/30/15 Ex: 05/09/17

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CERTIFICATE OF ANALYSIS

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ACCREDITED Testing Laboratory Certificate 86101 ACCREDITED Reference Material Producer Certificate 86102

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV1
Lot Number:	H2-V02090
Matrix:	2% (v/v) HNO3
Value/Analyte(s):	1 000 µg/mL Vanadium
Starting Material:	V2O5
Starting Material Lot#:	1782
Starting Material Purity:	99.9876%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 5 µg/mL weighted mean

Certified Density: 1.016 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1000 ± 5 µg/mL** ICP Assay NIST SRM 3165 Lot Number: 992706
Assay Method #2	**1000 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M 33205 R: 01/19/15 O: 01/30/15 Ex 11/2017

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 953.01 ACCREDITED Reference Material Producer Certificate 3113.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBE1
Lot Number:	H2-BE02021R
Matrix:	3% (v/v) HNO3
Value/Analyte(s):	1 000 µg/mL Beryllium
Starting Material:	Be4O(OOCCH3)6
Starting Material Lot#:	1772
Starting Material Purity:	99.9999%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1005 ± 5 µg/mL - no weighted mean

Certified Density: 1.022 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1005 ± 4 µg/mL**
ICP Assay NIST SRM 3105a Lot Number: 090514

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

IV3327 R:01/19/15 D:01/30/15
Ex: 12/09/17

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate #3101

ACCREDITED Reference Material Producer Certificate #3102

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGPB1
Lot Number:	H2-PB03044R
Matrix:	0.5% v/v HNO3
Value/Analyte(s):	1 000 µg/mL Lead
Starting Material:	Pb(NO3)2
Starting Material Lot#:	1717
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 3 µg/mL - weighted mean

Certified Density: 1.002 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **998 ± 3 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

Assay Method #2 **1002 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3328 O: 01/30/15 E: 12/03/17
R: 01/19/15

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ACCREDITED Testing Laboratory Certificate 853.01 ACCREDITED Reference Material Producer Certificate 853.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAG1
Lot Number:	H2-AG03035R
Matrix:	5% HNO3 (v/v)
Value/Analyte(s):	1 000 µg/mL Silver
Starting Material:	Ag shot
Starting Material Lot#:	1641
Starting Material Purity:	100.0000%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 6 µg/mL - weighted mean

Certified Density: 1.026 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1000 ± 3 µg/mL**
ICP Assay NIST SRM 3151 Lot Number: 992212

Assay Method #2 **1003 ± 2 µg/mL**
Volhard NIST SRM 999b Lot Number: 999b

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3329 R: 01/19/15 E: 03/31/17
O: 01/30/15

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CERTIFICATE OF ANALYSIS

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ACCREDITED Testing Laboratory Certificate 843.01 ACCREDITED Reference Material Producer Certificate 2803.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE(4)1
Lot Number:	H2-SE02049
Matrix:	2% (v/v) HNO_3
Value/Analyte(s):	1 000 µg/mL Selenium
Starting Material:	Se Shot
Starting Material Lot#:	1616
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1,000 ± 4 µg/mL weighted mean

Certified Density: 1.011 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**999 ± 5 µg/mL** ICP Assay NIST SRM 3149 Lot Number: 100901
Assay Method #2	**1,000 ± 5 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

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R: 01/19/15 OD: 01/30/15 Ex: 11/20/17

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number (010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU1
Lot Number:	H2-U01102R
Matrix:	2% HNO3 (v/v)
Value/Analyte(s):	1 000 µg/mL Uranium
Starting Material:	UO2(NO3)2•6H2O
Starting Material Lot#:	1767
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1004 ± 6 µg/mL - no weighted mean

Certified Density: 1.010 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1004 ± 5 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

IM3385 R: 03/27/15 O: 03/30/15 Ex: 02/24/17

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number (010105).

ACCREDITED Testing Laboratory Certificate 851.01 ACCREDITED Reference Material Producer Certificate 663.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSBF1
Lot Number:	H2-SB03028
Matrix:	2% (v/v) HNO3 / tr. HF
Value/Analyte(s):	1 000 µg/mL Antimony
Starting Material:	Sb shot
Starting Material Lot#:	1561
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1,001 ± 6 µg/mL no weighted mean

Certified Density: 1.010 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1001 ± 4 µg/mL** ICP Assay NIST SRM 3102A Lot Number: 061229
Assay Method #2	**1000 ± 7 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-0803, Inferferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO_3. Analyze this solution by ICP-MS.

ICSB-0803, Analytes, mixed with ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO_3. Analyze this ICSAB solution by ICP-MS.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-MS ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled results from the following sources: CLP Pre-award analysis, Quarterly Blind analysis, CLP laboratory referee analysis, and QATS Laboratory analysis.

ICSA → M3408 → M3412

ICSB → M3413 → M3418

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-MS ICSA-0803, AND ICSA-0803 MIXED WITH ICSB-0803

Element	CRQL	Part A (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)	Part A +Part B (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)
Al	20	[100000]			[100000]		
Sb	2	(1.5)	-2.5	5.5	22.0	17.6	26.4
As	1	(0.1)	-1.9	2.1	19.0	15.2	22.8
Ba	10	(1.2)	-18.8	21.2	(22.0)	2.0	42.0
Be	1	(0)	-2.0	2.0	19.0	15.2	22.8
Cd	1	(0.7)	-1.3	2.7	20.0	16.0	24.0
Ca	500	[100000]			[100000]		
C		[200000]			[200000]		
Cl		[1000000]			[1000000]		
Cr	2	21.0	16.8	25.2	40.0	32.0	48.0
Co	1	(1.0)	-1.0	3.0	20.0	16.0	24.0
Cu	2	(8.0)	4.0	12.0	25.0	20.0	30.0
Fe	200	[100000]			[100000]		
Pb	1	(4.0)	2.0	6.0	25.0	20.0	30.0
Mg	500	[100000]			[100000]		
Mn	1	(7.0)	5.0	9.0	27.0	21.6	32.4
Mo		[2000]			[2000]		
Ni	1	(6.0)	4.0	8.0	24.0	19.2	28.8
P		[100000]			[100000]		
K	500	[100000]			[100000]		
Se	5	(0.3)	-9.7	10.3	(19.0)	9.0	29.0
Ag	1	(0)	-2.0	2.0	18.0	14.4	21.6
Na	500	[100000]			[100000]		
S		[100000]			[100000]		
Tl	1	(0)	-2.0	2.0	21.0	16.8	25.2
Ti		[2000]			[2000]		
V	5	(0.5)	-9.5	10.5	(19.0)	9.0	29.0
Zn	2	(11.0)	7.0	15.0	29.0	23.2	34.8

[ ] Indicates analytes that do not require ICP-MS determination in the ICS.
( ) Indicates analyte certified values. The acceptance range is calculated based on +/- 2 times the CRQL.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-0803, Inferferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO_3. Analyze this solution by ICP-MS.

ICSB-0803, Analytes, mixed with ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO_3. Analyze this ICSAB solution by ICP-MS.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-MS ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled results from the following sources: CLP Pre-award analysis, Quarterly Blind analysis, CLP laboratory referee analysis, and QATS Laboratory analysis.

ICSA → M3408 → M3412

ICSB → M3413 → M3417

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-MS ICSA-0803, AND ICSA-0803 MIXED WITH ICSB-0803

Element	CRQL	Part A (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)	Part A +Part B (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)
Al	20	[100000]			[100000]		
Sb	2	(1.5)	-2.5	5.5	22.0	17.6	26.4
As	1	(0.1)	-1.9	2.1	19.0	15.2	22.8
Ba	10	(1.2)	-18.8	21.2	(22.0)	2.0	42.0
Be	1	(0)	-2.0	2.0	19.0	15.2	22.8
Cd	1	(0.7)	-1.3	2.7	20.0	16.0	24.0
Ca	500	[100000]			[100000]		
C		[200000]			[200000]		
Cl		[1000000]			[1000000]		
Cr	2	21.0	16.8	25.2	40.0	32.0	48.0
Co	1	(1.0)	-1.0	3.0	20.0	16.0	24.0
Cu	2	(8.0)	4.0	12.0	25.0	20.0	30.0
Fe	200	[100000]			[100000]		
Pb	1	(4.0)	2.0	6.0	25.0	20.0	30.0
Mg	500	[100000]			[100000]		
Mn	1	(7.0)	5.0	9.0	27.0	21.6	32.4
Mo		[2000]			[2000]		
Ni	1	(6.0)	4.0	8.0	24.0	19.2	28.8
P		[100000]			[100000]		
K	500	[100000]			[100000]		
Se	5	(0.3)	-9.7	10.3	(19.0)	9.0	29.0
Ag	1	(0)	-2.0	2.0	18.0	14.4	21.6
Na	500	[100000]			[100000]		
S		[100000]			[100000]		
Tl	1	(0)	-2.0	2.0	21.0	16.8	25.2
Ti		[2000]			[2000]		
V	5	(0.5)	-9.5	10.5	(19.0)	9.0	29.0
Zn	2	(11.0)	7.0	15.0	29.0	23.2	34.8

[ ] Indicates analytes that do not require ICP-MS determination in the ICS.
( ) Indicates analyte certified values. The acceptance range is calculated based on +/- 2 times the CRQL.

Absolute Standards, Inc.
800-368-1131
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Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58113
Lot Number: 122214
Description: Aluminum (Al)

Expiration Date: 122217
Storage: 20 °C
Nominal Concentration (µg/mL): 10000

Weight shown below was diluted to (mL): 2000.24

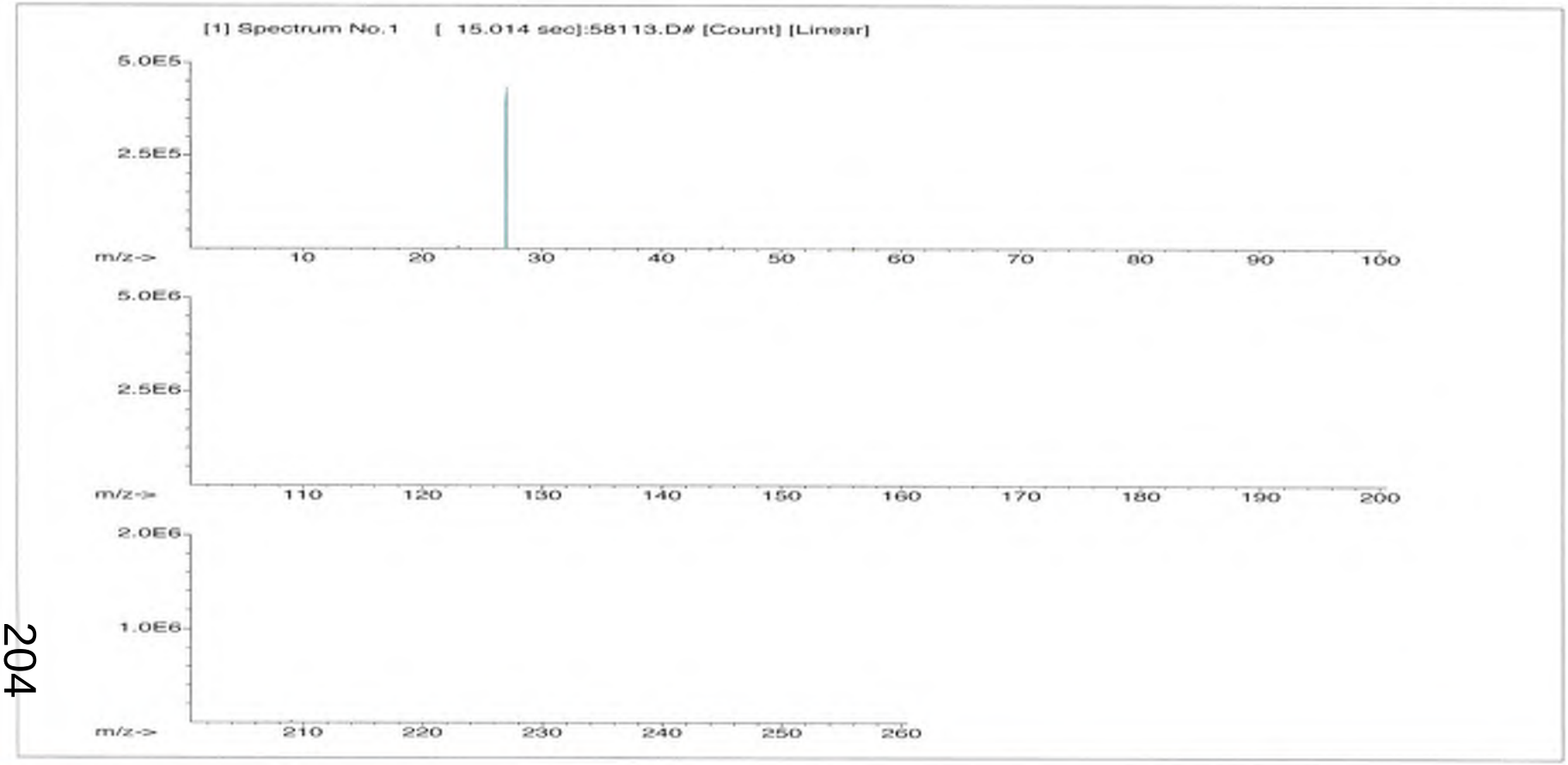
	Lot #		
Solvent:	C363101	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.142	Flask Uncertainty		

Giovanni Esposito
Formulated By: Giovanni Esposito 122214
Pedro Rentas
Reviewed By: Pedro L. Rentas 122214

M3432
R: 06/05/15
E: 12/2217

MSDS Information

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity	Uncertainty Purity	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty (+/-)	CAS#	(Solvent Safety Info. On Attached pg.) OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALE42013A1	10000.0	100	0.10	7.10	281.7261	281.7630	**10001.3**	0.00201	07784-27-2	5 mg/m3	orl-rat 264 mg/kg 3101a	



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M3433
R: 06/05/15
Ex: 03/13/17

Thermo SCIENTIFIC

www.thermo.com

Tune D25 Cross Cal Solution

Catalog Number: 1600636
Lot Number: CM-0740
Lot Issue Date: 02/19/2015
Expiration Date: 03/31/2017

This analytical reference material was manufactured and verified in accordance with an ISO 9001 registered quality system, and the analyte concentrations were verified by an ISO 17025 accredited laboratory. The certified value for each analyte was determined gravimetrically.

Analyte	True Value	Analytical Method	NIST SRM
aluminum	10.00 ± 0.05 mg/L	ICP / ICP-MS	3101a
arsenic	10.00 ± 0.05 mg/L	ICP / ICP-MS	3103a
barium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3104a
beryllium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3105a
calcium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3109a
cadmium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3108
cobalt	10.00 ± 0.05 mg/L	ICP / ICP-MS	3113
chromium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3112a
copper	10.00 ± 0.05 mg/L	ICP / ICP-MS	3114
iron	10.00 ± 0.05 mg/L	ICP / ICP-MS	3126a
lead	10.00 ± 0.05 mg/L	ICP / ICP-MS	3128
magnesium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3131a
manganese	10.00 ± 0.05 mg/L	ICP / ICP-MS	3132
molybdenum	10.00 ± 0.05 mg/L	ICP / ICP-MS	3134
nickel	10.00 ± 0.05 mg/L	ICP / ICP-MS	3136
potassium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3141a
selenium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3149
sodium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3152a
thallium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3158
* vanadium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3165
zinc	10.00 ± 0.05 mg/L	ICP / ICP-MS	3168a
indium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3124a
lithium	10.00 ± 0.05 mg/L	ICP / ICP-MS	3129a
uranium	10.00 ± 0.05 mg/L	ICP / ICP-MS	second source

Matrix: 5% nitric acid and trace hydrofluoric acid in low TOC water (< 50 ppb)

* light sensitive

Calibrated Class A glassware and clean bottles were used in the manufacture of this standard. Balances used in the manufacture of this standard are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001.

Prepared by ULTRA Scientific for Thermo Scientific
For Material Safety Data Sheets (MSDS), visit www.ultrasci.com

M3444

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010165).

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2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGP10
Lot Number:	G2-P02050
Matrix:	H2O
Value/Analyte(s):	10 000 µg/mL Phosphorus
Starting Material:	H3PO4
Starting Material Lot#:	1704
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9990 ± 33 µg/mL - weighted mean

Certified Density: 1.015 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **9995 ± 40 µg/mL**
ICP Assay NIST SRM 3139a Lot Number: 060717

Assay Method #2 **9988 ± 21 µg/mL**
Acidimetric NIST SRM 84L Lot Number: 84L

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2

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ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGS10
Lot Number:	G2-S02014
Matrix:	H2O
Value/Analyte(s):	10 000 µg/mL Sulfur
Starting Material:	H2SO4
Starting Material Lot#:	1728
Starting Material Purity:	100.0000%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10,028 ± 25 µg/mL weighted mean

Certified Density: 1.018 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **10015 ± 50 µg/mL**
ICP Assay NIST SRM 3154 Lot Number: 892205

Assay Method #2 **10030 ± 21 µg/mL**
Acidimetric NIST SRM 84L Lot Number: 84L

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3446

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ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU10
Lot Number:	G2-U01105
Matrix:	2% (v/v) HNO3
Value/Analyte(s):	10 000 µg/mL Uranium
Starting Material:	UO2(NO3)2.6H2O
Starting Material Lot#:	1841
Starting Material Purity:	99.9818%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10 007 ± 39 µg/mL - weighted mean

Certified Density: 1.022 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **10 008 ± 30 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

Assay Method #2 **10 005 ± 34 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

R: 04/04/15
DP: 09/16/15
Ex: 02/13/18
M3468

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU1
Lot Number:	H2-CU03021
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Cu
Starting Material:	Cu Metal
Starting Material Lot#:	1806
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1004 ± 5 µg/mL - weighted mean

Certified Density: 1.016 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1002 ± 5 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

Assay Method #2 **1005 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

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Certified Reference Material CRM

M3471

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	58024	C363101	Nitric Acid		
Lot Number:	010615				
Description:	Chromium (Cr)	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	010618				
	Storage: 20 °C				
Nominal Concentration (µg/mL):	1000				
		5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.24	0.142	Flask Uncertainty		

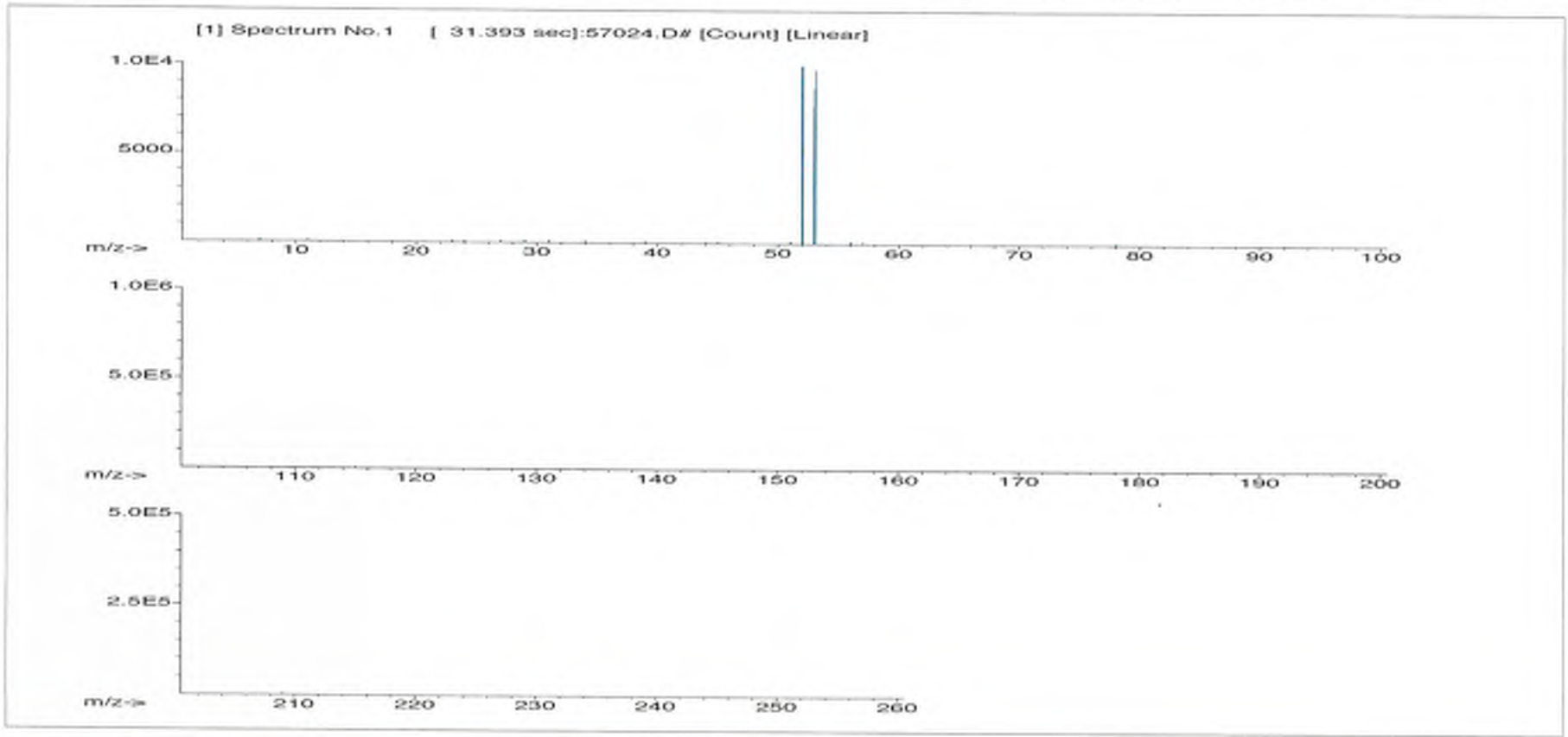
Giovanni Esposito

Formulated By:	Giovanni Esposito	010615

Pedro Rentas

Reviewed By:	Pedro L. Rentas	010615

Compound	Part Number	Lot Number	Dilution Factor	Initial Volume	Uncertainty Pipette	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-)	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium (III) nitrate nonahydrate (Cr)	58124	093014	0.100	200.0	0.013	10001.0	**1000.0**	0.00201	07789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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M3473

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CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 070615
Description: Sodium (Na)

Expiration Date: 070618

Storage: 20 °C

Nominal Concentration (µg/mL): 10000

Weight shown below was diluted to (mL): 2000.24

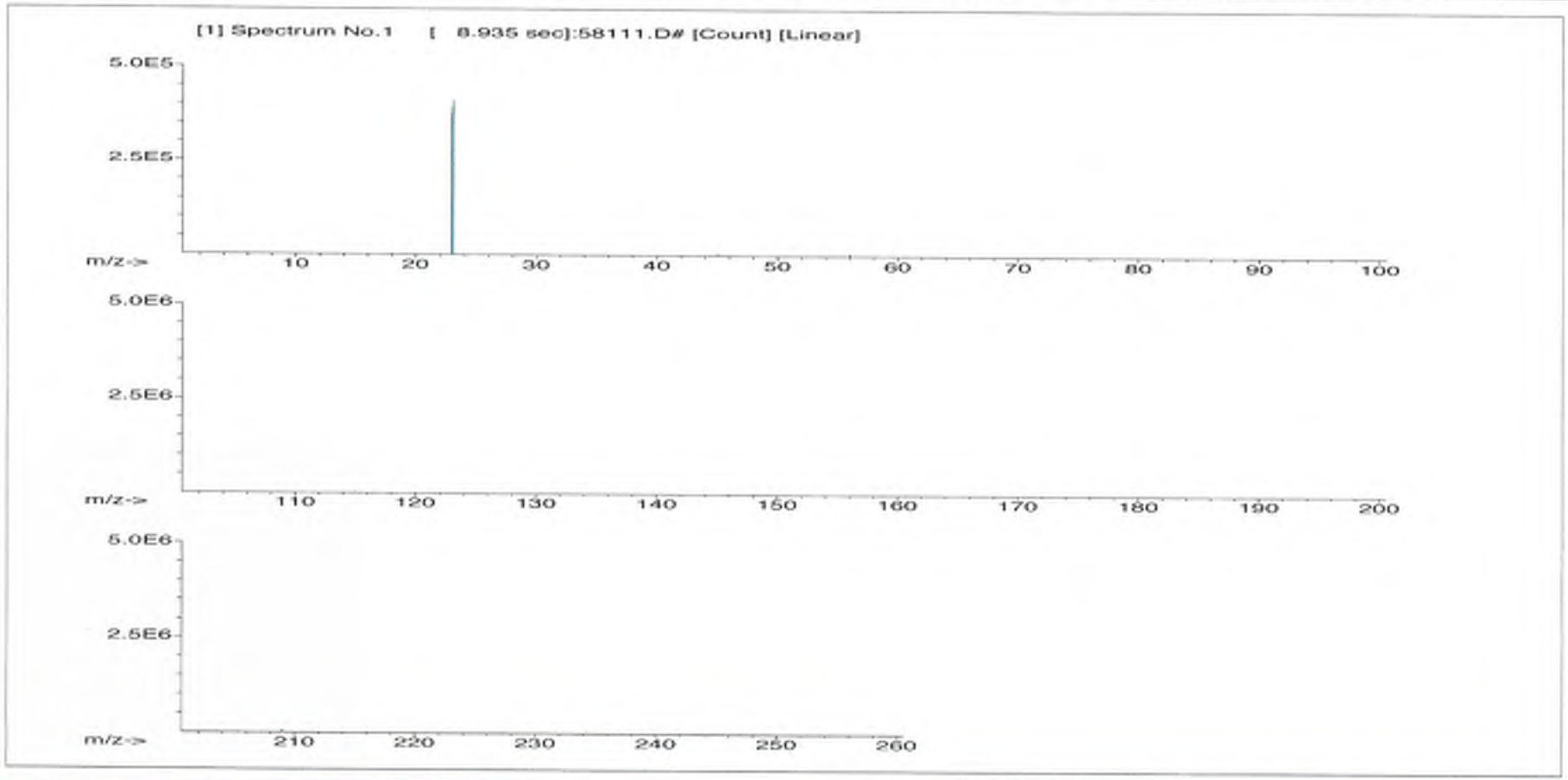
	Lot #		
Solvent:	C471305	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.148	Flask Uncertainty	

Formulated By: Lawrence Barry 070615

Reviewed By: Pedro L. Rentas 070615

MSDS Information (Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity	Uncertainty Purity	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty (+/-)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	R806NAA2R	10000.0	99.999	0.10	27.0	74.0835	74.0952	**10001.6**	0.00201	07631-99-4	5 mg/m3	orl-rat 3236 mg/kg	3152a



M3476 Ex: 02/20/18 BA

CERTIFICATE OF ANALYSIS

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R: 09/29/15 OP: 09/29/15

1.0 ACCREDITATION / REGISTRATION

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2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution

Catalog Number: CLPP-SPK-1

Lot Number: J2-MEB568046

Matrix: 7% (v/v) HNO3

Value / Analyte(s): 2 000 µg/mL ea:
Al, Ba,
1 000 µg/mL ea:
Fe,
500 µg/mL ea:
Co, Mn, Ni,
V, Zn,
250 µg/mL ea:
Cu,
200 µg/mL ea:
Cr3,
50 µg/mL ea:
Ag, Be

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum	2 000 ± 10 µg/mL	Barium	2 000 ± 10 µg/mL
Beryllium	50.01 ± 0.24 µg/mL	Chromium+3	200.0 ± 1.0 µg/mL
Cobalt	500.0 ± 2.5 µg/mL	Copper	250.0 ± 1.2 µg/mL
Iron	1 000 ± 5 µg/mL	Manganese	500.0 ± 2.2 µg/mL
Nickel	500.1 ± 2.4 µg/mL	Silver	60.00 ± 0.32 µg/mL
Vanadium	500.0 ± 2.4 µg/mL	Zinc	500.0 ± 2.4 µg/mL

Certified Density: 1.067 g/mL (measured at 20 ± 1 °C)

Assay Information:

M3478 R: 09/29/15 Ex: 10/01/16

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2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	H2-MEB542131
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: B, Mo, Si, Sn, Ti

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 7 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 8 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 7 µg/mL		

Certified Density: 1.032 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	070514
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Si	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\sum x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2 [\, \Sigma (s_i)^2 \,]^{1/2}$ 2 = the coverage factor.

$[\, \Sigma (s_i)^2 \,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where's stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability

M3479 R: 09/29/15 OP: 09/29/15

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2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-QC-4
Lot Number:	H2-MEB542132
Matrix:	3% (v/v) HNO_3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: B, Mo, Si, Sn, Ti

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 7 µg/mL	Molybdenum, Mo	1 000 ± 7 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 7 µg/mL
Titanium, Ti	1 000 ± 7 µg/mL		

Certified Density: 1.034 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	Calculated		See Sec. 4.2
B	ICP Assay	3107	070514
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Si	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2

M 3481 R: 10/02/15 OP: 10/02/15

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMG10
Lot Number:	J2-MG03145
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Mg
Starting Material:	Mg chips
Starting Material Lot#:	1484
Starting Material Purity:	99.9987%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9970 ± 24 µg/mL

Certified Density: 1.053 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **9954 ± 58 µg/mL**
ICP Assay NIST SRM 3131a Lot Number: 050302

Assay Method #2 **9973 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3482 D: 10/02/15 R: 10/02/15
Ex: 12/03/17
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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCA10
Lot Number:	H2-CA04105
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Ca
Starting Material:	CaO
Starting Material Lot#:	1748
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9950 ± 24 µg/mL - weighted mean

Certified Density: 1.040 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**9956 ± 50 µg/mL** ICP Assay NIST SRM 3109a Lot Number: 130213
Assay Method #2	**9948 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3495. M3496. M3497

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ACCREDITED Testing Laboratory Certificate 2821 ACCREDITED Reference Material Producer Certificate 9003

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020CAL-1
Lot Number:	G2-MEB503047
Matrix:	tr. HF 5% (v/v) HNO3
Value / Analyte(s):	20 µg/mL ea:

Ag,	Al,	As,
Ba,	Be,	Ca,
Cd,	Co,	Cr3,
Cu,	Fe,	K,
Mg,	Mn,	Na,
Ni,	Pb,	Sb,
Se,	Tl,	V,
Zn		

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum	20.00 ± 0.16 µg/mL	Antimony	19.99 ± 0.14 µg/mL
Arsenic	19.99 ± 0.13 µg/mL	Barium	20.00 ± 0.15 µg/mL
Beryllium	20.00 ± 0.14 µg/mL	Cadmium	20.00 ± 0.15 µg/mL
Calcium	20.00 ± 0.16 µg/mL	Chromium+3	20.00 ± 0.16 µg/mL
Cobalt	20.00 ± 0.17 µg/mL	Copper	20.00 ± 0.16 µg/mL
Iron	20.00 ± 0.16 µg/mL	Lead	20.00 ± 0.16 µg/mL
Magnesium	20.00 ± 0.15 µg/mL	Manganese	20.00 ± 0.15 µg/mL
Nickel	20.00 ± 0.15 µg/mL	Potassium	20.00 ± 0.17 µg/mL
Selenium	19.99 ± 0.13 µg/mL	Silver	20.00 ± 0.13 µg/mL
Sodium	20.00 ± 0.16 µg/mL	Thallium	20.00 ± 0.13 µg/mL
Vanadium	20.00 ± 0.14 µg/mL	Zinc	20.00 ± 0.11 µg/mL

Certified Density: 1.026 g/mL (measured at 20 ± 1 °C)

Assay Information:

IV3498 R: 09/29/15

CERTIFICATE OF ANALYSIS

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EK: 11/17/2017 BH

1.0 ACCREDITATION / REGISTRATION

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2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR10
Lot Number:	H2-SR02049
Matrix:	2% (v/v) HNO_3
Value / Analyte(s):	10 000 µg/mL ea: Sr
Starting Material:	$SrCO_3$
Starting Material Lot#:	1716
Starting Material Purity:	99.9989%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 33 µg/mL - weighted mean

Certified Density: 1.030 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**9955 ± 54 µg/mL** ICP Assay NIST SRM 3153a Lot Number: 990906
Assay Method #2	**10046 ± 41 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3499. M3500. M3501. M3502. M3503

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

R: 09129115 Ex: 01/08/18 BH

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ISS
Lot Number:	J2-MEB562038
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 µg/mL ea:

Bi, Ho, In,
Li6, Rh, Sc,
Tb, Y

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
6-Lithium, Li6	10.00 ± 0.05 µg/mL	Bismuth, Bi	10.00 ± 0.06 µg/mL
Holmium, Ho	10.00 ± 0.07 µg/mL	Indium, In	10.00 ± 0.05 µg/mL
Rhodium, Rh	10.00 ± 0.06 µg/mL	Scandium, Sc	10.00 ± 0.07 µg/mL
Terbium, Tb	10.00 ± 0.05 µg/mL	Yttrium, Y	10.00 ± 0.07 µg/mL

Certified Density: 1.035 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Bi	Calculated		See Sec. 4.2
Bi	ICP Assay	3106	991212
Ho	ICP Assay	3123a	790812
Ho	EDTA	928	928
In	ICP Assay	3124a	110516
In	EDTA	928	928
Li6	Gravimetric		See Sec. 4.2
Rh	Calculated		See Sec. 4.2
Rh	ICP Assay	3144	070619
Sc	ICP Assay	3148a	100701
Sc	EDTA	928	928
Tb	ICP Assay	3157a	100518
Tb	EDTA	928	928
Y	ICP Assay	3167a	790412
Y	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M 3504 R:09/29/15

CERTIFICATE OF ANALYSIS

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

Ex : 12/29/16 BH

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number (010105).

ACCREDITED Testing Laboratory Certificate 860.01 ACCREDITED Reference Material Producer Certificate 663.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-SPK-4
Lot Number:	G2-MEB502029
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	100 µg/mL ea: Sb, 50 µg/mL ea: Cd, Tl, 40 µg/mL ea: As, 20 µg/mL ea: Pb, 10 µg/mL ea: Se

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	100.0 ± 0.8 µg/mL	Arsenic, As	40.00 ± 0.27 µg/mL	Cadmium, Cd	50.00 ± 0.23 µg/mL
Lead, Pb	20.01 ± 0.14 µg/mL	Selenium, Se	10.00 ± 0.07 µg/mL	Thallium, Tl	50.01 ± 0.33 µg/mL

Certified Density: 1.015 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Sb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

M3532 R: 12/10/15

OP 12/18/15

RH

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGFE10
Lot Number:	J2-FE04047
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Fe
Starting Material:	Fe pieces
Starting Material Lot#:	1820
Starting Material Purity:	99.9965%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10 008 ± 23 µg/mL - weighted mean

Certified Density: 1.045 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**9992 ± 31 µg/mL** ICP Assay NIST SRM 3126a Lot Number: 140812
Assay Method #2	**10 020 ± 26 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

M3535

Certified Reference Material CRM

R: 12/10/15
OP: 12/18/15

ANAB ACCREDITED

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

222

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**58025**	C471305	Nitric Acid		
Lot Number:	**072215**				
Description:	**Manganese (Mn)**				
		2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	072218				
	Storage: 20 °C				
Nominal Concentration (µg/mL):	**1000**				
		5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.24	0.148	Flask Uncertainty		

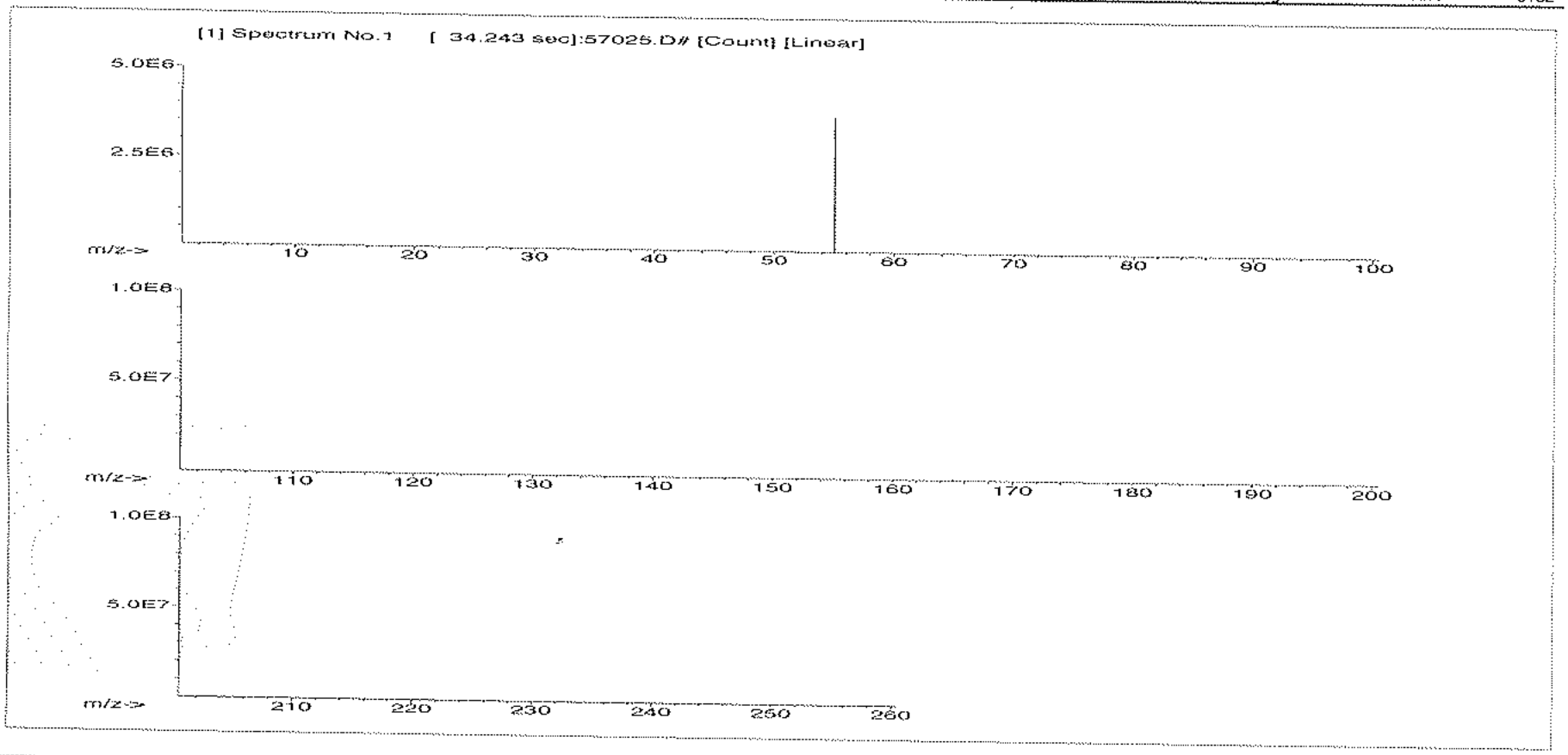
Gabriel Helland

Formulated By:	Gabriel Helland	072215

Pedro Rentas

Reviewed By:	Pedro L. Rentas	072215

Compound	Part Number	Lot Number	Dilution Factor	Initial Volume	Uncertainty Pipette	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-)	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese (II) nitrate Hydrate (Mn)	58125	012115	0.1000	200.0	0.013	10001.5	**1000.0**	0.00201	15710-66-4	5 mg/m3	N/A	3132



M3585 R: 02/19/16
D: 04/26/16

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

Ex: 07/02/18 (BH)

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED ACCREDITED

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBA1
Lot Number:	J2-BA02093
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Ba
Starting Material:	Ba(NO3)2
Starting Material Lot#:	1822
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 5 µg/mL

Certified Density: 1.000 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **997 ± 3 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **998 ± 5 µg/mL**
ICP Assay NIST SRM 3104a Lot Number: 070222

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M 3588
Rec. 04/28/16
Exp : 01/13/21

Material No.: 9530-33
Batch No.: 0000134218
Manufactured Date: 2016/01/15
Retest Date: 2021/01/13

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.7
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.191
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	< 1
ACS - Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.4
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	8.3
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9530-33
Batch No.: 0000134218

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	4.0
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	1.0
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	1.0
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.2
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	0.3
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	< 0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600

Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 , Fax: 610.573.2610

Nitric Acid, 69.0-70.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

M3590
Rec. 05/04/16
Exp. 01/27/21

Material No.: 9598-34
Batch No.: 0000135629
Manufactured Date: 2016/01/29
Retest Date: 2021/01/27

Certificate of Analysis

Test	Specification	Result
ACS - Assay (HNO_3)	69.0 - 70.0 %	69.6
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 2 ppm	< 1
ACS - Specific Gravity at 60°/60°F	1.416 - 1.420	1.420
Chloride (Cl)	<= 0.04 ppm	< 0.03
Phosphate (PO_4)	<= 0.1 ppm	<0.01
Sulfate (SO_4)	<= 0.4 ppm	< 0.2
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	0.3
Arsenic and Antimony (as As)	<= 5 ppb	< 2
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 1.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 4.0 ppb	< 0.7
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	0.5
Trace Impurities - Chromium (Cr)	<= 10.0 ppb	3.0
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 20.0 ppb	< 0.2
Trace Impurities - Germanium (Ge)	<= 4.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 10.0 ppb	0.6

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9598-34
Batch No.: 0000135629

Test	Specification	Result
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	< 0.2
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 5.0 ppb	< 3.0
Trace Impurities - Nickel (Ni)	<= 1.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	0.3
Trace Impurities - Potassium (K)	<= 5.0 ppb	< 2.0
Trace Impurities - Silicon (Si)	<= 20.0 ppb	0.6
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 200.0 ppb	0.9
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 2.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	< 0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2006
Selangor, Malaysia 9001:2008
Dehradun, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Pondi, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600

Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Nitric Acid, 69.0-70.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

M3607
Rec. 05/19/16
Exp: 02/21/21

Material No.: 9598-34
Batch No.: 0000137345
Manufactured Date: 2016/02/23
Retest Date: 2021/02/21

Certificate of Analysis

Test	Specification	Result
ACS - Assay (HNO_3)	69.0 - 70.0 %	69.3
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 2 ppm	< 1
ACS - Specific Gravity at 60°/60°F	1.416 - 1.420	1.417
Chloride (Cl)	<= 0.04 ppm	< 0.03
Phosphate (PO_4)	<= 0.1 ppm	<0.01
Sulfate (SO_4)	<= 0.4 ppm	< 0.2
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 2
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 1.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 4.0 ppb	0.9
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	0.4
Trace Impurities - Chromium (Cr)	<= 10.0 ppb	3.0
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	0.1
Trace Impurities - Gallium (Ga)	<= 20.0 ppb	< 0.2
Trace Impurities - Germanium (Ge)	<= 4.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 10.0 ppb	0.6

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9598-34
Batch No.: 0000137345

Test	Specification	Result
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	< 0.2
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 5.0 ppb	< 3.0
Trace Impurities - Nickel (Ni)	<= 1.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	0.2
Trace Impurities - Potassium (K)	<= 5.0 ppb	< 2.0
Trace Impurities - Silicon (Si)	<= 20.0 ppb	0.6
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 200.0 ppb	< 0.5
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 2.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	< 0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

CHEMTECH

Instrument ID: P7

Daily Analysis Runlog For Sequence/QCBatch ID # LB81731

Review By BIN Review On 5/23/2016 2:13:54 PM

STD. NAME	STD REF.#
ICAL Standard	MP33818,MP33819,MP33607,MP33820,MP33821,MP33822,MP33823,MP33825,MP33826
ICV Standard	MP33844
CCV Standard	MP33847
ICSA Standard	MP33845,MP33846
CRI Standard	
Chk Standard	MP33848,MP33850,MP33851

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	TUNE	TUNE	TUNE	05/23/16 10:02		OK
2	S00	S00	CAL1	05/23/16 10:25		OK
3	S02	S02	CAL3	05/23/16 10:32		OK
4	S03	S03	CAL4	05/23/16 10:35		OK
5	S04	S04	CAL5	05/23/16 10:39		OK
6	S05	S05	CAL6	05/23/16 10:42		OK
7	S06	S06	CAL7	05/23/16 10:45		OK
8	S07	S07	CAL8	05/23/16 10:48		OK
9	S08	S08	CAL9	05/23/16 10:51		OK
10	ICV	ICV	ICV	05/23/16 11:09		OK
11	ICB	ICB	ICB	05/23/16 11:12		OK
12	ICSA	ICSA	ICSA	05/23/16 11:15		OK
13	ICSAB	ICSAB	ICSAB	05/23/16 11:18		OK
14	CCV026	CCV026	CCV	05/23/16 11:21		OK
15	CCB026	CCB026	CCB	05/23/16 11:24		OK
16	CRI	CRI	CRDL	05/23/16 11:27	Not used	Not Ok
17	PB90704BL	PBW007	MB	05/23/16 11:35		OK
18	PB90704BS	LCS007	LCS	05/23/16 11:45		OK
19	H2838-01	MH4001	SAM	05/23/16 11:50		OK
20	H2838-02	MH4001D	DUP	05/23/16 11:53		OK
21	H2838-03	MH4001S	MS	05/23/16 11:56		OK

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STD. NAME	STD REF.#
ICAL Standard	MP33818,MP33819,MP33607,MP33820,MP33821,MP33822,MP33823,MP33825,MP33826
ICV Standard	MP33844
CCV Standard	MP33847
ICSA Standard	MP33845,MP33846
CRI Standard	
Chk Standard	MP33848,MP33850,MP33851

22	H2838-01L	MH4001L	SD	05/23/16 11:59		OK
23	H2948-01	MH4005	SAM	05/23/16 12:03		OK
24	H2948-02	MH4097	SAM	05/23/16 12:06		OK
25	H2948-03	MH4106	SAM	05/23/16 12:09		OK
26	CCV027	CCV027	CCV	05/23/16 12:12		OK
27	CCB027	CCB027	CCB	05/23/16 12:15		OK
28	H2948-04	MH4107	SAM	05/23/16 12:19		OK
29	H2948-05	MH4137	SAM	05/23/16 12:22		OK
30	H2948-06	MH4137D	DUP	05/23/16 12:25		OK
31	H2948-07	MH4137S	MS	05/23/16 12:28		OK
32	H2948-05L	MH4137L	SD	05/23/16 12:31		OK
33	PB90705BS	LCS007	LCS	05/23/16 12:37		OK
34	PB90706BL	PBW007	MB	05/23/16 12:40		OK
35	PB90706BS	LCS007	LCS	05/23/16 12:43		OK
36	PB90707BL	PBW007	MB	05/23/16 12:46		OK
37	PB90705BL	PBW007	MB	05/23/16 12:50		OK
38	PB90707BS	LCS007	LCS	05/23/16 12:53		OK
39	PB90708BL	PBW007	MB	05/23/16 12:56		OK
40	PB90708BS	LCS007	LCS	05/23/16 12:59		OK
41	PB90733BL	PBW007	MB	05/23/16 13:02		OK
42	PB90733BS	LCS007	LCS	05/23/16 13:05		OK
43	PB90734BL	PBW007	MB	05/23/16 13:08		OK
44	PB90734BS	LCS007	LCS	05/23/16 13:11		OK

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ICV Standard	MP33844
CCV Standard	MP33847
ICSA Standard	MP33845,MP33846
CRI Standard	
Chk Standard	MP33848,MP33850,MP33851

45	H3015-01	MC0KQ5	SAM	05/23/16 13:14		OK
46	H3015-02	MC0KQ7	SAM	05/23/16 13:18		OK
47	H3015-03	MC0KS9	SAM	05/23/16 13:21		OK
48	H3015-04	MC0KT5	SAM	05/23/16 13:24		OK
49	H3015-05	MC0KT7	SAM	05/23/16 13:27		OK
50	CCV028	CCV028	CCV	05/23/16 13:30		OK
51	CCB028	CCB028	CCB	05/23/16 13:33		OK
52	H3015-06	MC0KW1	SAM	05/23/16 13:37	%RSD fail for CCV029	Not Ok
53	H3015-07	MC0KW1D	DUP	05/23/16 13:40	%RSD fail for CCV029	Not Ok
54	H3015-08	MC0KW1S	MS	05/23/16 13:43	%RSD fail for CCV029	Not Ok
55	H3015-06L	MC0KW1L	SD	05/23/16 13:46	%RSD fail for CCV029	Not Ok
56	H3015-09	MC0KY4	SAM	05/23/16 13:49	%RSD fail for CCV029	Not Ok
57	H3015-10	MC0KY5	SAM	05/23/16 13:52	%RSD fail for CCV029	Not Ok
58	H3015-11	MC0KY6	SAM	05/23/16 13:55	%RSD fail for CCV029	Not Ok
59	H3015-12	MC0KY7	SAM	05/23/16 13:58	%RSD fail for CCV029	Not Ok
60	H3015-13	MC0KY9	SAM	05/23/16 14:01	%RSD fail for CCV029	Not Ok
61	H3015-14	MC0KZ1	SAM	05/23/16 14:04	%RSD fail for CCV029	Not Ok
62	H3015-15	MC0KZ3	SAM	05/23/16 14:07	%RSD fail for CCV029	Not Ok
63	H3015-16	MC0KZ6	SAM	05/23/16 14:11	%RSD fail for CCV029	Not Ok
64	H3015-17	MC0KZ7	SAM	05/23/16 14:14	%RSD fail for CCV029	Not Ok
65	H3015-18	MC0KZ8	SAM	05/23/16 14:17	%RSD fail for CCV029	Not Ok
66	H3015-19	MC0L01	SAM	05/23/16 14:20	%RSD fail for CCV029	Not Ok
67	H3015-20	MC0KZ4	SAM	05/23/16 14:23	%RSD fail for CCV029	Not Ok

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ICV Standard	MP33844
CCV Standard	MP33847
ICSA Standard	MP33845,MP33846
CRI Standard	
Chk Standard	MP33848,MP33850,MP33851

68	H3015-21	MC0KZ5	SAM	05/23/16 14:26	%RSD fail for CCV029	Not Ok
69	H3015-22	MC0KZ9	SAM	05/23/16 14:29	%RSD fail for CCV029	Not Ok
70	H3017-01	MC0KQ4	SAM	05/23/16 14:32	%RSD fail for CCV029	Not Ok
71	H3017-02	MC0KQ6	SAM	05/23/16 14:35	%RSD fail for CCV029	Not Ok
72	CCV029	CCV029	CCV	05/23/16 14:47	% RSD fail for so many paraters	OK
73	CCB029	CCB029	CCB	05/23/16 14:52		OK
74	H3017-03	MC0KS8	SAM	05/23/16 14:55	%RSD fail for CCV029	Not Ok
75	H3017-04	MC0KT4	SAM	05/23/16 14:58	%RSD fail for CCV029	Not Ok
76	H3017-05	MC0KT6	SAM	05/23/16 15:01	%RSD fail for CCV029	Not Ok
77	H3017-06	MC0KW0	SAM	05/23/16 15:05	%RSD fail for CCV029	Not Ok
78	H3017-07	MC0KW0D	DUP	05/23/16 15:08	%RSD fail for CCV029	Not Ok
79	H3017-08	MC0KW0S	MS	05/23/16 15:11	%RSD fail for CCV029	Not Ok
80	H3017-06L	MC0KW0L	SD	05/23/16 15:14	%RSD fail for CCV029	Not Ok
81	H3017-09	MC0KQ2	SAM	05/23/16 15:17	%RSD fail for CCV029	Not Ok
82	H3017-10	MC0KQ8	SAM	05/23/16 15:20	%RSD fail for CCV029	Not Ok
83	H3017-11	MC0KR8	SAM	05/23/16 15:23	%RSD fail for CCV029	Not Ok
84	H3017-12	MC0KS0	SAM	05/23/16 15:26	%RSD fail for CCV029	Not Ok
85	PB90809BL	PBW007	MB	05/23/16 15:29	%RSD fail for CCV029	Not Ok
86	PB90809BS	LCS007	LCS	05/23/16 15:32	%RSD fail for CCV029	Not Ok
87	H3176-01	MBCZP4	SAM	05/23/16 15:36	%RSD fail for CCV029	Not Ok
88	H3176-02	MBCZP6	SAM	05/23/16 15:39	%RSD fail for CCV029	Not Ok
89	H3176-03	MBCZP7	SAM	05/23/16 15:42	%RSD fail for CCV029	Not Ok
90	H3176-04	MBCZP8	SAM	05/23/16 15:45	%RSD fail for CCV029	Not Ok

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ICV Standard	MP33844
CCV Standard	MP33847
ICSA Standard	MP33845,MP33846
CRI Standard	
Chk Standard	MP33848,MP33850,MP33851

91	H3176-05	MBCZP9	SAM	05/23/16 15:48	%RSD fail for CCV029	Not Ok
92	H3176-06	MBCZQ0	SAM	05/23/16 15:51	%RSD fail for CCV029	Not Ok
93	H3176-07	MBCZQ1	SAM	05/23/16 15:54	%RSD fail for CCV029	Not Ok
94	H3176-08	MBCZQ2	SAM	05/23/16 15:57	%RSD fail for CCV029	Not Ok
95	H3176-09	MBCZP5	SAM	05/23/16 16:00	%RSD fail for CCV029	Not Ok
96	H3176-10	MBCZQ3	SAM	05/23/16 16:03	%RSD fail for CCV029	Not Ok
97	H3176-11	MBCZQ4	SAM	05/23/16 16:07	%RSD fail for CCV029	Not Ok
98	H3176-12	MBCZQ5	SAM	05/23/16 16:10	%RSD fail for CCV029	Not Ok
99	H3176-13	MBCZQ6	SAM	05/23/16 16:13	%RSD fail for CCV029	Not Ok
100	H3176-14	MBCZQ6D	DUP	05/23/16 16:16	%RSD fail for CCV029	Not Ok
101	H3176-15	MBCZQ6S	MS	05/23/16 16:19	%RSD fail for CCV029	Not Ok
102	H3176-13L	MBCZQ6L	SD	05/23/16 16:22	%RSD fail for CCV029	Not Ok
103	CCV030	CCV030	CCV	05/23/16 16:25		OK
104	CCB030	CCB030	CCB	05/23/16 16:28		OK
105	H3176-16	MBCZR0	SAM	05/23/16 16:33		OK
106	H3176-17	MBCZN8	SAM	05/23/16 16:37		OK
107	H3176-18	MBCZN9	SAM	05/23/16 16:40		OK
108	H3176-19	MBCZP0	SAM	05/23/16 16:43		OK
109	H3176-20	MBCZP1	SAM	05/23/16 16:46		OK
110	H3176-21	MBCZP2	SAM	05/23/16 16:49		OK
111	H3176-22	MBCZP3	SAM	05/23/16 16:52		OK
112	CCV031	CCV031	CCV	05/23/16 16:55		OK
113	CCB031	CCB031	CCB	05/23/16 16:58		OK

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ICV Standard	MP33844
CCV Standard	MP33847
ICSA Standard	MP33845,MP33846
CRI Standard	
Chk Standard	MP33848,MP33850,MP33851

114	H3017-13	MC0KS4	SAM	05/23/16 17:01		OK
115	H3017-14	MC0KX6	SAM	05/23/16 17:04		OK
116	H3017-15	MC0KT0	SAM	05/23/16 17:07		OK
117	H3017-16	MC0KT2	SAM	05/23/16 17:10		OK
118	H3017-17	MC0KX8	SAM	05/23/16 17:13		OK
119	H3017-18	MC0L03	SAM	05/23/16 17:17		OK
120	H3017-19	MC0L05	SAM	05/23/16 17:20		OK
121	H3017-20	MC0L06	SAM	05/23/16 17:23		OK
122	H3017-21	MC0KY0	SAM	05/23/16 17:26		OK
123	CCV032	CCV032	CCV	05/23/16 17:33		OK
124	CCB032	CCB032	CCB	05/23/16 17:37		OK
125	PB90731BL	PBW007	MB	05/23/16 17:40	CCV33 fail for Cu	Not Ok
126	PB90731BS	LCS007	LCS	05/23/16 17:43	CCV33 fail for Cu	Not Ok
127	PB90732BL	PBW007	MB	05/23/16 17:47	CCV33 fail for Cu	Not Ok
128	PB90732BS	LCS007	LCS	05/23/16 17:57	CCV33 fail for Cu	Not Ok
129	H3017-22	MC0KY2	SAM	05/23/16 18:00	CCV33 fail for Cu	Not Ok
130	H3060-01	MC0KQ3	SAM	05/23/16 18:03	CCV33 fail for Cu	Not Ok
131	H3060-02	MC0KQ9	SAM	05/23/16 18:06	CCV33 fail for Cu	Not Ok
132	H3060-03	MC0KR9	SAM	05/23/16 18:09	CCV33 fail for Cu	Not Ok
133	H3060-04	MC0KS1	SAM	05/23/16 18:12	CCV33 fail for Cu	Not Ok
134	H3060-05	MC0KS5	SAM	05/23/16 18:15	CCV33 fail for Cu	Not Ok
135	H3060-06	MC0KX7	SAM	05/23/16 18:18	CCV33 fail for Cu	Not Ok
136	H3060-07	MC0KT1	SAM	05/23/16 18:21	CCV33 fail for Cu	Not Ok

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ICV Standard	MP33844
CCV Standard	MP33847
ICSA Standard	MP33845,MP33846
CRI Standard	
Chk Standard	MP33848,MP33850,MP33851

137	H3060-08	MC0KT3	SAM	05/23/16 18:25	CCV33 fail for Cu	Not Ok
138	H3060-09	MC0KX9	SAM	05/23/16 18:28	CCV33 fail for Cu	Not Ok
139	H3060-10	MC0L02	SAM	05/23/16 18:31	CCV33 fail for Cu	Not Ok
140	H3060-11	MC0KW7	SAM	05/23/16 18:34	CCV33 fail for Cu	Not Ok
141	H3060-12	MC0KW7D	DUP	05/23/16 18:37	CCV33 fail for Cu	Not Ok
142	H3060-13	MC0KW7S	MS	05/23/16 18:40	CCV33 fail for Cu	Not Ok
143	H3060-11L	MC0KW7L	SD	05/23/16 18:43	CCV33 fail for Cu	Not Ok
144	H3060-14	MC0KX1	SAM	05/23/16 18:46	CCV33 fail for Cu	Not Ok
145	H3060-15	MC0KX3	SAM	05/23/16 18:49	CCV33 fail for Cu	Not Ok
146	H3060-16	MC0KX5	SAM	05/23/16 18:52	CCV33 fail for Cu	Not Ok
147	H3060-17	MC0L04	SAM	05/23/16 18:55	CCV33 fail for Cu	Not Ok
148	H3060-18	MC0KY1	SAM	05/23/16 18:59	CCV33 fail for Cu	Not Ok
149	CCV033	CCV033	CCV	05/23/16 19:08	Fail for Copper	OK
150	CCB033	CCB033	CCB	05/23/16 19:11		OK
151	H3060-19	MC0KY3	SAM	05/23/16 19:14	CCV33 fail for Cu	Not Ok
152	H3060-20	MC0KY8	SAM	05/23/16 19:17	CCV33 fail for Cu	Not Ok
153	H3060-21	MC0KZ0	SAM	05/23/16 19:20	CCV33 fail for Cu	Not Ok
154	H3060-22	MC0KZ2	SAM	05/23/16 19:23	CCV33 fail for Cu	Not Ok
155	H3113-01	MJHBY2	SAM	05/23/16 19:26	CCV33 fail for Cu	Not Ok
156	H3113-02	MJHBY3	SAM	05/23/16 19:29	CCV33 fail for Cu	Not Ok
157	H3113-03	MJHBY4	SAM	05/23/16 19:33	CCV33 fail for Cu	Not Ok
158	H3113-04	MJHBY5	SAM	05/23/16 19:36	CCV33 fail for Cu	Not Ok
159	H3113-05	MJHBY6	SAM	05/23/16 19:39	CCV33 fail for Cu	Not Ok

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ICV Standard	MP33844
CCV Standard	MP33847
ICSA Standard	MP33845,MP33846
CRI Standard	
Chk Standard	MP33848,MP33850,MP33851

160	H3113-06	MJHBY7	SAM	05/23/16 19:42	CCV33 fail for Cu	Not Ok
161	H3113-07	MJHBY8	SAM	05/23/16 19:45	CCV33 fail for Cu	Not Ok
162	H3113-08	MJHBY8D	DUP	05/23/16 19:48	CCV33 fail for Cu	Not Ok
163	H3113-09	MJHBY8S	MS	05/23/16 19:51	CCV33 fail for Cu	Not Ok
164	H3113-10	MJHBY9	SAM	05/23/16 19:54	CCV33 fail for Cu	Not Ok
165	H3113-07L	MJHBY8L	SD	05/23/16 19:58	CCV33 fail for Cu	Not Ok
166	H3114-01	MJHBZ0	SAM	05/23/16 20:01	CCV33 fail for Cu	Not Ok
167	H3114-02	MJHBZ1	SAM	05/23/16 20:04	CCV33 fail for Cu	Not Ok
168	H3114-03	MJHBZ2	SAM	05/23/16 20:07	CCV33 fail for Cu	Not Ok
169	H3114-04	MJHBZ3	SAM	05/23/16 20:10	CCV33 fail for Cu	Not Ok
170	H3114-05	MJHBZ4	SAM	05/23/16 20:13	CCV33 fail for Cu	Not Ok
171	CCV034	CCV034	CCV	05/23/16 20:22	fail for cu	OK
172	CCB034	CCB034	CCB	05/23/16 20:25		OK
173	H3114-06	MJHBZ5	SAM	05/23/16 20:28	CCV34 fail for Cu	Not Ok
174	H3114-07	MJHBZ6	SAM	05/23/16 20:32	CCV34 fail for Cu	Not Ok
175	H3114-08	MJHBZ6D	DUP	05/23/16 20:35	CCV34 fail for Cu	Not Ok
176	H3114-09	MJHBZ6S	MS	05/23/16 20:38	CCV34 fail for Cu	Not Ok
177	H3114-10	MJHBZ7	SAM	05/23/16 20:41	CCV34 fail for Cu	Not Ok
178	H3114-07L	MJHBZ6L	SD	05/23/16 20:44	CCV34 fail for Cu	Not Ok
179	CCV035	CCV035	CCV	05/23/16 20:53		OK
180	CCB035	CCB035	CCB	05/23/16 20:56		OK
181	H3065-07	SS043MW039-16051	SAM	05/23/16 21:00	Not used	Not Ok
182	H3065-08	AOC50MW002-1605	SAM	05/23/16 21:03	Not used	Not Ok

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ICV Standard	MP33844
CCV Standard	MP33847
ICSA Standard	MP33845,MP33846
CRI Standard	
Chk Standard	MP33848,MP33850,MP33851

183	H3065-10	LF017MW005-16051	SAM	05/23/16 21:06	Not used	Not Ok
184	H3065-11	SS043MW009-16051	SAM	05/23/16 21:09	Not used	Not Ok
185	H3065-13	SS043MW010-16051	SAM	05/23/16 21:12	Not used	Not Ok
186	H3065-14	AOC50MW002-1605	SAM	05/23/16 21:15	Not used	Not Ok
187	H3065-15	LF015MW047-16051	SAM	05/23/16 21:18	Not used	Not Ok
188	H3065-16	SS043MW009-16051	SAM	05/23/16 21:21	Not used	Not Ok
189	H3084-01	KY032MW006-16051	SAM	05/23/16 21:24	Not used	Not Ok
190	H3084-02	LF001MW001-16051	SAM	05/23/16 21:28	Not used	Not Ok
191	CCV036	CCV036	CCV	05/23/16 21:37	Fail for Copper	OK
192	CCB036	CCB036	CCB	05/23/16 21:40		OK
193	H3084-03	LF016MW001-16051	SAM	05/23/16 21:43	Not used	Not Ok
194	H3084-04	LF001MW002-16051	SAM	05/23/16 21:46	Not used	Not Ok
195	H3084-06	SS043MW011-16051	SAM	05/23/16 21:49	Not used	Not Ok
196	H3084-06DUP	SS043MW011-16051	DUP	05/23/16 21:53	Not used	Not Ok
197	H3084-06L	SS043MW011-16051	SD	05/23/16 21:56	Not used	Not Ok
198	H3084-07MS	SS043MW011-16051	MS	05/23/16 21:59	Not used	Not Ok
199	H3084-08MSD	SS043MW011-16051	MSD	05/23/16 22:02	Not used	Not Ok
200	H3084-15	LF017MW004-16051	SAM	05/23/16 22:05	Not used	Not Ok
201	H3084-16	LF017MW003-16051	SAM	05/23/16 22:08	Not used	Not Ok
202	H3021-17DL2	LF015MW006-16051	SAM	05/23/16 22:11	Not used	Not Ok
203	CCV037	CCV037	CCV	05/23/16 22:21	Co,Cu fail	OK
204	CCB037	CCB037	CCB	05/23/16 22:23		OK
205	H3084-21	LF017MW001-16051	SAM	05/23/16 22:27	Not used	Not Ok

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ICV Standard	MP33844
CCV Standard	MP33847
ICSA Standard	MP33845,MP33846
CRI Standard	
Chk Standard	MP33848,MP33850,MP33851

206	H3084-22	LF017MW004-16051	SAM	05/23/16 22:30	Not used	Not Ok
207	H3084-23	LF017MW003-16051	SAM	05/23/16 22:33	Not used	Not Ok
208	H3084-24	LF015RW009-16051	SAM	05/23/16 22:36	Not used	Not Ok
209	H3084-25	LF015RW009-16051	MS	05/23/16 22:39	Not used	Not Ok
210	H3084-26	LF015RW009-16051	MSD	05/23/16 22:42	Not used	Not Ok
211	H3084-06A	SS043MW011-16051	PS	05/23/16 22:45	Not used	Not Ok
212	H3084-24A	LF015RW009-16051	PS	05/23/16 22:48	Not used	Not Ok
213	H3062-01	MC0KR0	SAM	05/23/16 22:51	CCV038 fail for Co,Cu,Zn	Not Ok
214	H3062-02	MC0KW6	SAM	05/23/16 22:54	CCV038 fail for Co,Cu,Zn	Not Ok
215	CCV038	CCV038	CCV	05/23/16 23:03	Co,cu,Zn fail	OK
216	CCB038	CCB038	CCB	05/23/16 23:06		OK
217	H3062-03	MC0KW6D	DUP	05/23/16 23:10	CCV038 fail for Co,Cu,Zn	Not Ok
218	H3062-04	MC0KW6S	MS	05/23/16 23:13	CCV038 fail for Co,Cu,Zn	Not Ok
219	H3062-02L	MC0KW6L	SD	05/23/16 23:16	CCV038 fail for Co,Cu,Zn	Not Ok
220	H3062-05	MC0KX0	SAM	05/23/16 23:19	CCV038 fail for Co,Cu,Zn	Not Ok
221	H3062-06	MC0KX2	SAM	05/23/16 23:22	CCV038 fail for Co,Cu,Zn	Not Ok
222	H3062-07	MC0KX4	SAM	05/23/16 23:25	CCV038 fail for Co,Cu,Zn	Not Ok
223	H3062-08	MC0KR4	SAM	05/23/16 23:28	CCV038 fail for Co,Cu,Zn	Not Ok
224	H3062-09	MC0KT8	SAM	05/23/16 23:31	CCV038 fail for Co,Cu,Zn	Not Ok
225	H3062-09DL	MC0KT8	SAM	05/23/16 23:35	CCV038 fail for Co,Cu,Zn	Not Ok
226	H3062-10DL	MC0KW2	SAM	05/23/16 23:38	CCV038 fail for Co,Cu,Zn	Not Ok
227	H3062-10	MC0KW2	SAM	05/23/16 23:41	CCV038 fail for Co,Cu,Zn	Not Ok
228	H3062-11	MC0KW4	SAM	05/23/16 23:44	CCV038 fail for Co,Cu,Zn	Not Ok

CHEMTECH

Instrument ID: P7

Daily Analysis Runlog For Sequence/QCBatch ID # LB81731

Review By	BIN	Review On	5/23/2016 2:13:54 PM

STD. NAME	STD REF.#
ICAL Standard	MP33818,MP33819,MP33607,MP33820,MP33821,MP33822,MP33823,MP33825,MP33826
ICV Standard	MP33844
CCV Standard	MP33847
ICSA Standard	MP33845,MP33846
CRI Standard	
Chk Standard	MP33848,MP33850,MP33851

229	H3062-11DL	MC0KW4	SAM	05/23/16 23:47	CCV038 fail for Co,Cu,Zn	Not Ok
230	H3062-12	MC0KW8	SAM	05/23/16 23:50	CCV038 fail for Co,Cu,Zn	Not Ok
231	CCV039	CCV039	CCV	05/24/16 00:06	Co,cu,Zn fail	OK
232	CCB039	CCB039	CCB	05/24/16 00:09		OK

EPA SAMPLE NO.

MH4005

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-01

% Solids: Date Received: 05/06/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/17/2016	1507

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4097

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-02

% Solids: Date Received: 05/06/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/17/2016	1509

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4106

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-03

% Solids: Date Received: 05/06/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/17/2016	1511

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4107

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-04

% Solids: Date Received: 05/06/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.86		05/17/2016	1513

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MH4137

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix: WATER Lab Sample ID: H2948-05

% Solids: Date Received: 05/06/2016

Analytical Method: CVAA

Concentration Units (µg/L, mg/L, mg/kg dry weight or µg) : ug/L

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	05/17/2016	1515

NOTE: Hardness (total) is reported in mg/L

Comments:

FORM 2 - IN

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Initial Calibration Verification Source : EPA-0508

Continuing Calibration Verification Source : MP33717

Run Batch: LB81637 Analytical Method: CVAA

Concentration Units: µg/L

	Initial Calibration Verification				Continuing Calibration Verification						
	ID: ICV				ID: CCV041				ID: CCV042		
Analyte	True	Found	%R	%RSD	True	Found	%R	%RSD	Found	%R	%RSD
Mercury	4.0	3.8	95		5.0	4.9	98		4.8	96	

FORM 3 - IN
BLANKS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Preparation Blank Matrix : WATER

Preparation Blank Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg): ug/L

Analytical Method: CVAA Preparation Batch: PB90642

Run Batch: LB81637 Preparation Method: 7470A

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank/Leachate Extraction	
	ID: ICB	Q	ID: CCB041	Q	ID: CCB042	Q	ID:	Q	ID: PBW003	Q
Mercury	0.2	U	0.2	U	0.2	U			0.2	U

EPA SAMPLE NO.

MH4137S

FORM 5A - IN

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix : WATER Analytical Method: CVAA

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Q	Sample Result (SR)	Q	Spike Added (SA)	%R	Q
Mercury	75 - 125	0.96		0.2	U	1.0	96	

EPA SAMPLE NO.

MH4137D

FORM 6 - IN
DUPLICATES

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No. : SDG No.: MH4005

Matrix : WATER Analytical Method: CVAA

% Solids:

Concentration Units (µg/L, mg/L or mg/kg dry weight): ug/L

Analyte	Control Limit	Sample (S)	Q	Duplicate (D)	Q	RPD	Q
Mercury		0.2	U	0.2	U		

FORM 9-IN

METHOD DETECTION LIMIT

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4005

Analytical Method: CVAA Instrument ID: CV1

Preparation Method: 7470A

Concentration Units (µg/L, µg or mg/kg): ug/L

Analyte	Wavelength/Mass	MDL	Date Analyzed
Mercury	253.70	0.043	12/09/2015

FORM 12-IN

ANALYSIS LOG

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4005

Instrument ID: CV1 Analytical Method: CVAA

Start Date: 05/17/2016 End Date: 05/17/2016

Run Batch: LB81637

EPA Sample No.	D/F	Time	Analytes																										
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN		
S0.0	1.0	1443															X												
S0.2	1.0	1445															X												
S2.5	1.0	1447															X												
S5.0	1.0	1449															X												
S7.5	1.0	1451															X												
S10.0	1.0	1453															X												
ICV	1.0	1456															X												
ICB	1.0	1458															X												
CCV041	1.0	1500															X												
CCB041	1.0	1502															X												
PBW003	1.0	1504															X												
MH4005	1.0	1507															X												
MH4097	1.0	1509															X												
MH4106	1.0	1511															X												
MH4107	1.0	1513															X												
MH4137	1.0	1515															X												
MH4137D	1.0	1517															X												
MH4137S	1.0	1519															X												
ZZZZZZ	1.0	1521																											
ZZZZZZ	1.0	1524																											
ZZZZZZ	1.0	1526																											
ZZZZZZ	1.0	1528																											
ZZZZZZ	1.0	1530																											
ZZZZZZ	1.0	1532																											
ZZZZZZ	1.0	1534																											
ZZZZZZ	1.0	1536																											
ZZZZZZ	1.0	1538																											
ZZZZZZ	1.0	1541																											
ZZZZZZ	1.0	1543																											
ZZZZZZ	1.0	1545																											
CCV042	1.0	1547															X												
CCB042	1.0	1549															X												

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4005

Instrument ID: CV1 Start Date: 05/17/2016

Analytical Method: CVAA Run Batch: LB81637

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Mercury	0	0.016	0	0.2	0.2	0	2.5	2.6	-4

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: _____ SDG No.: MH4005

Instrument ID: CV1 Start Date: 05/17/2016

Analytical Method: CVAA Run Batch: LB81637

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Mercury	5	4.9	2	7.5	7.5	0	10	10.0	0

FORM 16-IN

INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: MH4005

Instrument ID: CV1 Start Date : 05/17/2016

Analytical Method: CVAA Run Batch : LB81637

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Mercury	0.999871	0.999987	5.3364e-005	Lin. Reg	NONE

CHEMTECH 284 Sheffield Street Mountainside, NJ 07092

MERCURY ANALYSIS LOGBOOK

Date	Case Number	Batch Number	Start Time	BLK	STD1	STD2	STD3	STD4
05/17/16 (7470)	H2967	PB 90635	8:26	26	490	8393	10419	26416
	H2992							
	H3038							
	H 3074	PB 90636						
	H2969	PB 90637						
	H3018							
05/17/16 (7471)	H 3038	PB 90654	12:34	-57	1044	12247	24453	36177
	H3057							
	H3085							
	H3115							
05/17/16 Cismet	H2948	PB 90642	14:43	84	870	10934	20849	32232
	H 3015	PB 90643						
	H 3017	PB 90644						
	H 3060	PB 90650						
	H-2996	PB 90653						

CHEMTECH 284 Sheffield Street Mountainside, NJ 07092

MERCURY ANALYSIS LOGBOOK

STD 5	End Time	Correlation Coeficient	Stannous Chloride Prep log #	Comment	Analyst	Supervisor Signature
36208	10:36	0.999811	MP33724	ICVIB - 42 CCVIB - 32-36	MB	
					MB	
					MB	
					MB	
					MB	
					MB	
48383	14:21	0.999831	MP33924	ICVIB - 43 CCVIB - 37-40	MB	
					MB	
					MB	
					MB	
42858	18:39	0.999816	MP33924	ICVIB - CCVIB - 041-046	MB	
					MB	
					MB	
					MB	
					MB	

Reviewed By:mohan On:5/19/2016 8:06:43 AM Inst Id :CV1

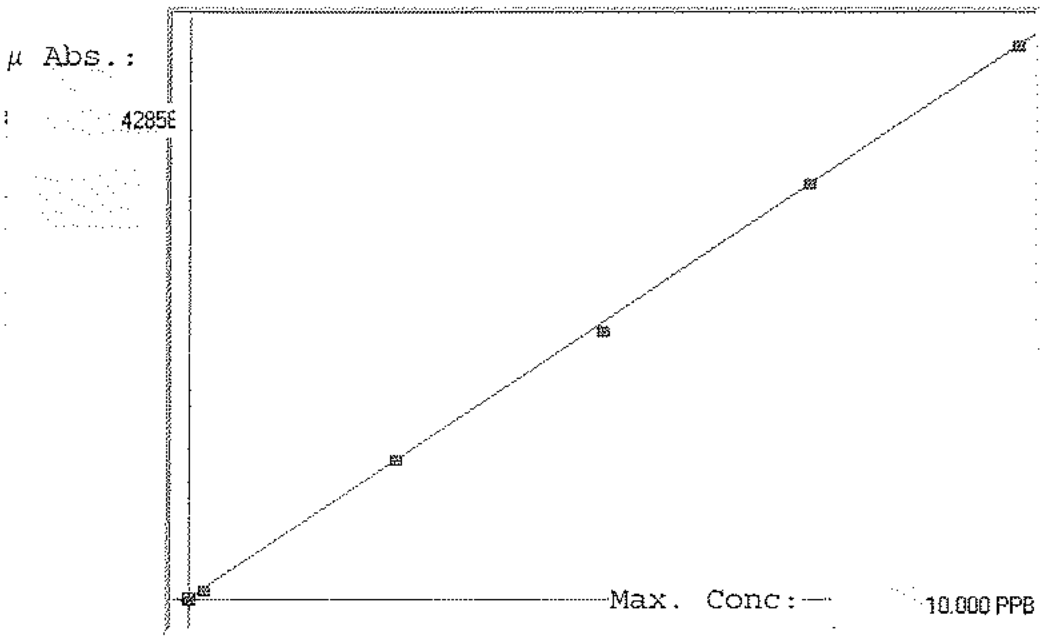
Reviewed By:mohan
On:5/19/2016 8:06:43 AM
Inst Id :CV1

LB81637

ISM02.2

INSTRUMENT ID: CV1

Linear



A= 0.0000e+000

B= 2.3390e-004 slope

C= -3.5070e-003 y-intercept

Rho= 0.9998716

Accept=Accepted

Std ID	Conc	Calc	Dev	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	%D
0.0	0.000	0.016	0.016	84	0.000	84					-
0.2	0.200	0.200	-0.000	870	0.0 %	870					0
2.5	2.500	2.554	0.054	10934	0.0 %	10934					2
5.0	5.000	4.873	-0.127	20849	0.0 %	20849					-3
7.5	7.500	7.536	0.036	32232	0.0 %	32232					0
10.0	10.000	10.021	0.021	42858	0.0 %	42858					0

MB
5/19/16

Reviewed By:mohan
On:5/19/2016 8:06:43 AM
Inst Id :CV1

LB81637

INSTRUMENT ID : CV1

Sample ID	Extended ID	µ Abs.	Conc.		Stnd Conc	Method	Units	Date	Type
0	S0	84	-		0	ISM02.2	PPB	5/17/2016 14:43	Std
0.2	S0.2	870	-		0.2	ISM02.2	PPB	5/17/2016 14:45	Std
2.5	S2.5	10934	-		2.5	ISM02.2	PPB	5/17/2016 14:47	Std
5	S5	20849	-		5	ISM02.2	PPB	5/17/2016 14:49	Std
7.5	S7.5	32232	-		7.5	ISM02.2	PPB	5/17/2016 14:51	Std
10	S10	42858	-		10	ISM02.2	PPB	5/17/2016 14:53	Std
ICV	ICV	16437	3.8412	-		ISM02.2	PPB	5/17/2016 14:56	SMPL
ICB	ICB	-71	-0.0201	-		ISM02.2	PPB	5/17/2016 14:58	SMPL
CCV041	CCV041	20963	4.8998	-		ISM02.2	PPB	5/17/2016 15:00	SMPL
CCB041	CCB041	-67	-0.0192	-		ISM02.2	PPB	5/17/2016 15:02	SMPL
PB90642BL	PBW003	73	0.0136	-		ISM02.2	PPB	5/17/2016 15:04	SMPL
H2948-01	MH4005	110	0.0222	-		ISM02.2	PPB	5/17/2016 15:07	SMPL
H2948-02	MH4097	108	0.0218	-		ISM02.2	PPB	5/17/2016 15:09	SMPL
H2948-03	MH4106	90	0.0175	-		ISM02.2	PPB	5/17/2016 15:11	SMPL
H2948-04	MH4107	3689	0.8594	-		ISM02.2	PPB	5/17/2016 15:13	SMPL
H2948-05	MH4137	-178	-0.0451	-		ISM02.2	PPB	5/17/2016 15:15	SMPL
H2948-06	MH4137D	24	0.0021	-		ISM02.2	PPB	5/17/2016 15:17	SMPL
H2948-07	MH4137S	4097	0.9548	-		ISM02.2	PPB	5/17/2016 15:19	SMPL
PB90643BL	PBW003	29	0.0033	-		ISM02.2	PPB	5/17/2016 15:21	SMPL
H3015-01	MC0KQ5	61	0.0108	-		ISM02.2	PPB	5/17/2016 15:24	SMPL
H3015-02	MC0KQ7	106	0.0213	-		ISM02.2	PPB	5/17/2016 15:26	SMPL
H3015-03	MC0KS9	-7	-0.0051	-		ISM02.2	PPB	5/17/2016 15:28	SMPL
H3015-04	MC0KT5	43	0.0066	-		ISM02.2	PPB	5/17/2016 15:30	SMPL
H3015-05	MC0KT7	69	0.0126	-		ISM02.2	PPB	5/17/2016 15:32	SMPL
H3015-06	MC0KW1	86	0.0166	-		ISM02.2	PPB	5/17/2016 15:34	SMPL
H3015-07	MC0KW1D	177	0.0379	-		ISM02.2	PPB	5/17/2016 15:36	SMPL
H3015-08	MC0KW1S	3842	0.8951	-		ISM02.2	PPB	5/17/2016 15:38	SMPL
H3015-09	MC0KY4	78	0.0147	-		ISM02.2	PPB	5/17/2016 15:41	SMPL
H3015-10	MC0KY5	195	0.0421	-		ISM02.2	PPB	5/17/2016 15:43	SMPL
H3015-11	MC0KY6	116	0.0236	-		ISM02.2	PPB	5/17/2016 15:45	SMPL
CCV042	CCV042	20335	4.7529	-		ISM02.2	PPB	5/17/2016 15:47	SMPL
CCB042	CCB042	-44	-0.0138	-		ISM02.2	PPB	5/17/2016 15:49	SMPL
H3015-12	MC0KY7	134	0.0278	-		ISM02.2	PPB	5/17/2016 15:51	SMPL
H3015-13	MC0KY9	129	0.0267	-		ISM02.2	PPB	5/17/2016 15:53	SMPL
H3015-14	MC0KZ1	121	0.0248	-		ISM02.2	PPB	5/17/2016 15:55	SMPL
H3015-15	MC0KZ3	141	0.0295	-		ISM02.2	PPB	5/17/2016 15:58	SMPL
H3015-16	MC0KZ6	133	0.0276	-		ISM02.2	PPB	5/17/2016 16:00	SMPL
H3015-17	MC0KZ7	161	0.0342	-		ISM02.2	PPB	5/17/2016 16:02	SMPL
H3015-18	MC0KZ8	120	0.0246	-		ISM02.2	PPB	5/17/2016 16:04	SMPL
H3015-19	MC0L01	107	0.0215	-		ISM02.2	PPB	5/17/2016 16:06	SMPL
H3015-20	MC0KZ4	68	0.0124	-		ISM02.2	PPB	5/17/2016 16:08	SMPL
H3015-21	MC0KZ5	77	0.0145	-		ISM02.2	PPB	5/17/2016 16:10	SMPL
H3015-22	MC0KZ9	90	0.0175	-		ISM02.2	PPB	5/17/2016 16:12	SMPL
PB90644BL	PBW003	66	0.0119	-		ISM02.2	PPB	5/17/2016 16:15	SMPL
H3017-01	MC0KQ4	54	0.0091	-		ISM02.2	PPB	5/17/2016 16:17	SMPL
H3017-02	MC0KQ6	49	0.008	-		ISM02.2	PPB	5/17/2016 16:19	SMPL

Reviewed By:mohan
On:5/19/2016 8:06:43 AM
Inst Id :CV1

H3017-03	MC0KS8	35	0.0047	-	ISM02.2	PPB	5/17/2016 16:21	SMPL
H3017-04	MC0KT4	56	0.0096	-	ISM02.2	PPB	5/17/2016 16:23	SMPL
H3017-05	MC0KT6	41	0.0061	-	ISM02.2	PPB	5/17/2016 16:25	SMPL
H3017-06	MC0KW0	66	0.0119	-	ISM02.2	PPB	5/17/2016 16:27	SMPL
H3017-07	MC0KW0D	42	0.0063	-	ISM02.2	PPB	5/17/2016 16:29	SMPL
H3017-08	MC0KW0S	4245	0.9894	-	ISM02.2	PPB	5/17/2016 16:31	SMPL
CCV043	CCV043	20574	4.8088	-	ISM02.2	PPB	5/17/2016 16:34	SMPL
CCB043	CCB043	-35	-0.0117	-	ISM02.2	PPB	5/17/2016 16:36	SMPL
H3017-09	MC0KQ2	60	0.0105	-	ISM02.2	PPB	5/17/2016 16:38	SMPL
H3017-10	MC0KQ8	73	0.0136	-	ISM02.2	PPB	5/17/2016 16:40	SMPL
H3017-11	MC0KR8	59	0.0103	-	ISM02.2	PPB	5/17/2016 16:42	SMPL
H3017-12	MC0KS0	69	0.0126	-	ISM02.2	PPB	5/17/2016 16:44	SMPL
H3017-13	MC0KS4	47	0.0075	-	ISM02.2	PPB	5/17/2016 16:46	SMPL
H3017-14	MC0KX6	70	0.0129	-	ISM02.2	PPB	5/17/2016 16:48	SMPL
H3017-15	MC0KT0	67	0.0122	-	ISM02.2	PPB	5/17/2016 16:51	SMPL
H3017-16	MC0KT2	40	0.0058	-	ISM02.2	PPB	5/17/2016 16:53	SMPL
H3017-17	MC0KX8	52	0.0087	-	ISM02.2	PPB	5/17/2016 16:55	SMPL
H3017-18	MC0L03	87	0.0168	-	ISM02.2	PPB	5/17/2016 16:57	SMPL
H3017-19	MC0L05	85	0.0164	-	ISM02.2	PPB	5/17/2016 16:59	SMPL
H3017-20	MC0L06	64	0.0115	-	ISM02.2	PPB	5/17/2016 17:01	SMPL
H3017-21	MC0KY0	60	0.0105	-	ISM02.2	PPB	5/17/2016 17:03	SMPL
H3017-22	MC0KY2	48	0.0077	-	ISM02.2	PPB	5/17/2016 17:06	SMPL
PB90650BL	PBW003	55	0.0094	-	ISM02.2	PPB	5/17/2016 17:08	SMPL
H3060-01	MC0KQ3	80	0.0152	-	ISM02.2	PPB	5/17/2016 17:10	SMPL
H3060-02	MC0KQ9	50	0.0082	-	ISM02.2	PPB	5/17/2016 17:12	SMPL
H3060-03	MC0KR9	64	0.0115	-	ISM02.2	PPB	5/17/2016 17:14	SMPL
H3060-04	MC0KS1	81	0.0154	-	ISM02.2	PPB	5/17/2016 17:16	SMPL
H3060-05	MC0KS5	58	0.0101	-	ISM02.2	PPB	5/17/2016 17:18	SMPL
CCV044	CCV044	20170	4.7143	-	ISM02.2	PPB	5/17/2016 17:20	SMPL
CCB044	CCB044	-38	-0.0124	-	ISM02.2	PPB	5/17/2016 17:23	SMPL
H3060-06	MC0KX7	54	0.0091	-	ISM02.2	PPB	5/17/2016 17:25	SMPL
H3060-07	MC0KT1	54	0.0091	-	ISM02.2	PPB	5/17/2016 17:27	SMPL
H3060-08	MC0KT3	64	0.0115	-	ISM02.2	PPB	5/17/2016 17:29	SMPL
H3060-09	MC0KX9	49	0.008	-	ISM02.2	PPB	5/17/2016 17:31	SMPL
H3060-10	MC0L02	99	0.0196	-	ISM02.2	PPB	5/17/2016 17:33	SMPL
H3060-11	MC0KW7	58	0.0101	-	ISM02.2	PPB	5/17/2016 17:35	SMPL
H3060-12	MC0KW7D	55	0.0094	-	ISM02.2	PPB	5/17/2016 17:37	SMPL
H3060-13	MC0KW7S	4035	0.9403	-	ISM02.2	PPB	5/17/2016 17:40	SMPL
H3060-14	MC0KX1	88	0.0171	-	ISM02.2	PPB	5/17/2016 17:42	SMPL
H3060-15	MC0KX3	60	0.0105	-	ISM02.2	PPB	5/17/2016 17:44	SMPL
H3060-16	MC0KX5	56	0.0096	-	ISM02.2	PPB	5/17/2016 17:46	SMPL
H3060-17	MC0L04	24	0.0021	-	ISM02.2	PPB	5/17/2016 17:48	SMPL
H3060-18	MC0KY1	-25	-0.0094	-	ISM02.2	PPB	5/17/2016 17:50	SMPL
H3060-19	MC0KY3	5	-0.0023	-	ISM02.2	PPB	5/17/2016 17:52	SMPL
H3060-20	MC0KY8	30	0.0035	-	ISM02.2	PPB	5/17/2016 17:54	SMPL
H3060-21	MC0KZ0	62	0.011	-	ISM02.2	PPB	5/17/2016 17:57	SMPL
H3060-22	MC0KZ2	50	0.0082	-	ISM02.2	PPB	5/17/2016 17:59	SMPL

Reviewed By:mohan
On:5/19/2016 8:06:43 AM
Inst Id :CV1

LB81637

INSTRUMENT ID : CV1

PB90653BL	PBW003	61	0.0108	-	ISM02.2	PPB	5/17/2016 18:01	SMPL
H2896-02	MBD3J6	36	0.0049	-	ISM02.2	PPB	5/17/2016 18:03	SMPL
H2896-03	MBD3E5	45	0.007	-	ISM02.2	PPB	5/17/2016 18:05	SMPL
CCV045	CCV045	19954	4.6638	-	ISM02.2	PPB	5/17/2016 18:07	SMPL
CCB045	CCB045	-29	-0.0103	-	ISM02.2	PPB	5/17/2016 18:09	SMPL
H2896-04	MBD3E6	37	0.0051	-	ISM02.2	PPB	5/17/2016 18:11	SMPL
H2896-05	MBD3E7	30	0.0035	-	ISM02.2	PPB	5/17/2016 18:14	SMPL
H2896-06	MBD3E7D	25	0.0023	-	ISM02.2	PPB	5/17/2016 18:16	SMPL
H2896-07	MBD3E7S	4628	1.079	-	ISM02.2	PPB	5/17/2016 18:18	SMPL
H2896-08	MBD3E8	20	0.0012	-	ISM02.2	PPB	5/17/2016 18:20	SMPL
H2896-09	MBD3E9	39	0.0056	-	ISM02.2	PPB	5/17/2016 18:22	SMPL
H2896-10	MBD3F0	46	0.0073	-	ISM02.2	PPB	5/17/2016 18:24	SMPL
H2896-11	MBD3F2	23	0.0019	-	ISM02.2	PPB	5/17/2016 18:26	SMPL
H2896-12	MBD3H9	4700	1.0958	-	ISM02.2	PPB	5/17/2016 18:29	SMPL
H2896-13	MBD3J0	-13	-0.0065	-	ISM02.2	PPB	5/17/2016 18:31	SMPL
H2896-14	MBD3J7	1	-0.0033	-	ISM02.2	PPB	5/17/2016 18:33	SMPL
H2896-15	MBD3J8	-6	-0.0049	-	ISM02.2	PPB	5/17/2016 18:35	SMPL
CCV046	CCV046	20414	4.7714	-	ISM02.2	PPB	5/17/2016 18:37	SMPL
CCB046	CCB046	-74	-0.0208	-	ISM02.2	PPB	5/17/2016 18:39	SMPL

CHEMTECH **MERCURY PREPARATION WORKSHEET** **PB90642**

SOP: M 1SM02.2 Revision: M1SM02.2 – Mercury Ion Water -01

Prep code: 7470A

Batch # PB90642

Bath Temprature: —

Block Temprature: 95°C

PH STRIP: M35-84 NB 5/16/16

Digestion Time: In: 14:40 Out: 16:40

Supervisor Signature: [signature]

Balance Check: (0.2G): —

~~Acceptance Range 0.199-0.201 gram~~

Dig Technician Signature: NB

Date: 05/16/16 Time: 13:42 Final Volume: 100ML

Sample Received By: NB

STANDARD NAME	MLS USED	STD REF. # FROM LOG
ICV	100mL	MP33715
CCV	100mL	MP33717
Matrix Spike	0.40mL	MP33708

NB 5/16/16

CHEMICAL USED	ML/SAMPLE USED	LOT NUMBER
HNO3/H2SO4 1:2	5.0mL	MP33427
KMN04	15.0mL	MP33706
K2S2O8	8.0mL	MP33668
Hydroxylamine HCL	6.0mL	MP33707

NB 5/16/16

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	Wt(g)/Vol(ml)	COMMENTS
BLK 0.0 ppb	S0	WATER	100ML	MP33709
Std1 0.2 ppb	S0.2			MP33710
Std2 2.5 ppb	S2.5			MP33711
Std3 5.0 ppb	S5.0			MP33712
Std4 7.5 ppb	S7.5			MP33713
Std5 10.0 ppb	S10.0			MP33714
ICV	ICV			MP33715
ICB	ICB			MP33716
CCV	CCV			MP33717
CCB	CCB			MP33718
~~CRI~~	~~CRA / CRI~~			
~~CHK STD~~	~~CHK STD~~			

NB 5/16/16

Date/Time	Received By	Relinquished By	Location
	Analysis Group	Digestion Group	
			NB 5/16/16

CHEMTECH

MERCURY PREPARATION WORKSHEET

PB90642

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST	MATRIX	Wt(g) Vol(ml)	PH	COMMENTS	PREP Pos
H2948-01	MH4005	Mercury	Water	100	<2		
H2948-02	MH4097	Mercury	Water	100	<2		
H2948-03	MH4106	Mercury	Water	100	<2		
H2948-04	MH4107	Mercury	Water	100	<2		
H2948-05	MH4137	Mercury	Water	100	<2		
H2948-06	MH4137D	Mercury	Water	100	<2		
H2948-07	MH4137S	Mercury	Water	100	<2	MP33908	
PB90642BL	PBW 003	Mercury	Water	100	<2		

MB
5/8/16

* BL=Blank * BS=Blank Spike * TB=TCLP Blank

CHEMTECH

MERCURY PREPARATION WORKSHEET

PB90642

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST	MATRIX	Wt(g) Vol(ml)	PH	COMMENTS	Prep Pos
H2948-01	MH4005	Mercury	Water	100	<2		
H2948-02	MH4097	Mercury	Water	100	<2		
H2948-03	MH4106	Mercury	Water	100	<2		
H2948-04	MH4107	Mercury	Water	100	<2		
H2948-05	MH4137	Mercury	Water	100	<2		
H2948-06	MH4137D	Mercury	Water	100	<2		
H2948-07	MH4137S	Mercury	Water	100	<2	MP33705	
PB90642BL	PBW 003	Mercury	Water	100	<2		

DAB
5/16/16

* BL=Blank * BS=Blank Spike * TB=TCLP Blank

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Prep Standard - Chemical Standard Summary

Order ID : H2948

Test : Mercury

Prepbatch ID : PB90642,

Sequence ID/Qc Batch ID: LB81637,

Standard ID :
MP33427,MP33668,MP33706,MP33707,MP33708,MP33709,MP33710,MP33711,MP33712,MP33713,MP33714,MP33715,
MP33716,MP33717,MP33718,MP33724,

Chemical ID :
M2211,M3287,M3374,M3429,M3556,M3565,M3567,M3578,M3581,M3588,M3603,W1152,

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
896	2:1 H2SO4 : HN03	MP33427	04/27/2016	09/17/2016	mohan

FROM 450.000ml of M3567 + 900.000ml of M3578 = Final Quantity: 2400.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
66	POTASSIUM PERSULFATE SOLUTION 5 %	MP33668	05/10/2016	11/10/2016	mohan

FROM 100.000gram of M2211 + 2000.000ml of W1152 = Final Quantity: 2000.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP33706	05/16/2016	11/16/2016	mohan

FROM 100.000gram of M3287 + 2000.000ml of W1152 = Final Quantity: 2000.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
67	SODIUM CHLORIDE - HYDROXYL-CHLORIDE SOLUTION	MP33707	05/16/2016	11/16/2016	mohan

FROM 2000.000ml of W1152 + 240.000gram of M3429 + 240.000gram of M3556 = Final Quantity: 2000.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP33708	05/16/2016	05/17/2016	mohan

FROM 1.000ml of M3603 + 2.500ml of M3565 + 96.500ml of W1152 = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1340	Hg 0.00 PPB STD	MP33709	05/16/2016	05/17/2016	mohan

FROM 2.500ml of M3603 + 247.500ml of W1152 = Final Quantity: 250.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1341	Hg 0.2 PPB STD	MP33710	05/16/2016	05/17/2016	mohan

FROM 2.500ml of M3603 + 247.300ml of W1152 + 0.200ml of MP33708 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1342	Hg 2.5 PPB STD	MP33711	05/16/2016	05/17/2016	mohan

FROM 2.500ml of M3603 + 245.000ml of W1152 + 2.500ml of MP33708 = Final Quantity: 250.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1343	Hg 5.0 PPB STD	MP33712	05/16/2016	05/17/2016	mohan

FROM 2.500ml of M3603 + 242.500ml of W1152 + 5.000ml of MP33708 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1344	Hg 7.5 PPB STD	MP33713	05/16/2016	05/17/2016	mohan

FROM 2.500ml of M3603 + 240.000ml of W1152 + 7.500ml of MP33708 = Final Quantity: 250.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1345	Hg 10.0 PPB STD	MP33714	05/16/2016	05/17/2016	mohan

FROM 2.500ml of M3603 + 237.500ml of W1152 + 10.000ml of MP33708 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1346	Hg ICV SOLUTION	MP33715	05/16/2016	05/17/2016	mohan

FROM 2.500ml of M3374 + 2.500ml of M3603 + 245.000ml of W1152 = Final Quantity: 250.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP33716	05/16/2016	05/17/2016	mohan

FROM 2.500ml of M3603 + 247.500ml of W1152 = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP33717	05/16/2016	05/17/2016	mohan

FROM 485.000ml of W1152 + 5.000ml of M3603 + 10.000ml of MP33708 = Final Quantity: 500.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP33718	05/16/2016	05/17/2016	mohan

FROM 495.000ml of W1152 + 5.000ml of M3603 = Final Quantity: 500.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
68	STANNOUS CHLORIDE SOLUTION	MP33724	05/17/2016	05/18/2016	mohan

FROM 450.000ml of W1152 + 50.000gram of M3581 + 50.000ml of M3588 = Final Quantity: 500.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3238-05 / Potassium Persulfate (2.5kg)	K42631	12/16/2016	06/04/2015 / mohan	12/16/2011 / ALPA	M2211

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3227-05 / Potassium Permanganate (2.5kg)	0000031168	11/05/2019	01/06/2015 / mohan	11/05/2014 / mohan	M3287

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV5-0508	08/26/2016	02/26/2016 / mohan	03/20/2015 / mohan	M3374

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000101324	06/04/2020	06/04/2015 / mohan	06/04/2015 / mohan	M3429

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-2196-01 / Hydroxylamine Hydrochloride, Crystal (cs/4x500g)	0000121677	01/29/2021	02/26/2016 / mohan	01/29/2016 / mohan	M3556

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCl 125mL 10ug/mL	J2-HG02138	08/19/2018	03/28/2016 / mohan	02/19/2016 / mohan	M3565

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	0000131530	09/17/2016	03/17/2016 / fabian	03/02/2016 / fabian	M3567

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	0000122181	06/09/2020	04/27/2016 /	04/04/2016 / mohan	M3578

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)		08/12/2016	04/28/2016 / mohan	04/13/2016 / mohan	M3581

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)		01/13/2021	05/05/2016 / bhadresh	04/04/2016 / bhadresh	M3588

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	0000137345	02/21/2021	05/13/2016 / bhadresh	05/11/2016 / bhadresh	M3603

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	DIW / DI Water	Lab certified	02/23/2025	02/23/2010 /	02/23/2010 / divya	W1152

QATS LABORATORY INORGANIC REFERENCE MATERIAL
INITIAL CALIBRATION VERIFICATION SOLUTIONS
(ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with CLP SOWs and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

M3371
M3372
M3373
M3374
M3375

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

Received on 03/20/15
(Exp 03/20/20
NB

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-0307", "ICV5-0508", and "ICV6-0400", respectively.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain-of-custody record. Report any problems to Mr. Keith Strout, CB&I Federal Services LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
CB&I Federal Services LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-0307 For ICP-AES use: dilute the ICV1 concentrate 10-fold with 2% (v/v) nitric acid; pipet 10 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

For ICP-MS use: dilute the ICV1 concentrate 50-fold with 1% (v/v) nitric acid; pipet 2 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0508 For the cold vapor analysis of mercury by AA: dilute the ICV5 concentrate 100-fold with 2% (v/v) nitric acid; pipet 1 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide: dilute the ICV6 concentrate 100-fold with Type II water; pipet 1 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-0307		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2521	504
Sb	994	199
As	999	200
Ba	497	99
Be	495	99
Cd	496	99
Ca	10026	2005
Cr	490	98
Co	499	100
Cu	492	98
Fe	5082	1016
Pb	1002	200
Mg	6074	1215
Mn	499	100
Ni	503	101
K	10021	2004
Se	1029	206
Ag	501	100
Na	10097	2019
Tl	1028	206
V	501	100
Zn	1025	205

ICV5-0508		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

Material No.: 3624-05
Batch No.: 0000101324
Manufactured Date: 2014/09/25
Retest Date: 2021/09/23

Certificate of Analysis

m 3624
06-04-15
09-23-2021

Meets ACS Reagent Chemical Requirements.

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	>= 99.0 %	100.8
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
ACS - Insoluble Matter	<= 0.005 %	0.002
Iodide (I)	<= 0.002 %	< 0.002
Bromide (Br)	<= 0.01 %	< 0.01
Chlorate and Nitrate (as NO_3)	<= 0.003 %	< 0.003
ACS - Phosphate (PO_4)	<= 5 ppm	< 5
Sulfate (SO_4)	<= 0.004 %	< 0.004
Barium (Ba)	Passes Test	PT
ACS - Heavy Metals (as Pb)	<= 5 ppm	< 5
Iron (Fe)	<= 2 ppm	< 2
Calcium (Ca)	<= 0.002 %	0.001
Magnesium (Mg)	<= 0.001 %	< 0.001
Potassium (K)	<= 0.005 %	0.003

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008, 17025:2005
Selangor, Malaysia 9001:2008
Dashrathpur, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Paroli, India 9001:2008

Richard M Siberski
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600

Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(hydroxylammonium chloride)

M3556
Rec'd on 01/29/2016
Exp. 01/29/2021
MS

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 2196-01
Batch No.: 0000121677
Manufactured Date: 2013/12/11
Retest Date: 2020/12/09

Certificate of Analysis

Meets ACS Reagent Chemical Requirements.

Test	Specification	Result
Assay ($NH_2OH \cdot HCl$) (by $KMnO_4$ titrn)	>= 96.0 %	99.2
Clarity of Alcohol Solution	Passes Test	PT
Residue after Ignition	<= 0.050 %	0.035
Titrable Free Acid (meq/g)	<= 0.25	0.20
Ammonium (NH_4)	Passes Test	PT
Sulfur Compounds (as SO_4)	<= 0.005 %	0.005
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	3
Trace Impurities - Iron (Fe)	<= 5 ppm	3
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	< 0.005

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED ACCREDITED

M 3565
Received on
02/19/16
NB

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	J2-HG02138
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Hg
Starting Material:	Hg metal
Starting Material Lot#:	1780
Starting Material Purity:	99.9997%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value:	10.000 ± 0.052 µg/mL
Certified Density:	1.020 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods | **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance.

$w_a = (1/u_{char\ a})^2 / [(1/u_{char\ a})^2 + (1/u_{char\ b})^2]$;

$w_b = (1/u_{char\ b})^2 / [(1/u_{char\ a})^2 + (1/u_{char\ b})^2]$

CRM/RM Expanded Uncertainty (±) $= U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) $= U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.006542	M	Eu	<	0.000218	O	Na		0.000005	O	Se	<	0.030000	O	Zn	<	0.000400
O	Al	<	0.001000	O	Fe	<	0.000800	M	Nb	<	0.002180	O	Si		0.000006	O	Zr	<	0.001000
M	As	<	0.006542	M	Ga	<	0.000436	M	Nd	<	0.000218	M	Sm	<	0.000218				
M	Au	<	0.004361	M	Gd	<	0.000218	O	Ni	<	0.002000	O	Sn	<	0.002000				
M	B	<	0.004361	M	Ge	<	0.001090	n	Os	<		O	Sr	<	0.000200				
O	Ba	<	0.000260	M	Hf	<	0.006542	O	P	<	0.030000	M	Ta	<	0.001090				
O	Be	<	0.000180	s	Hg	<		M	Pb	<	0.002180	M	Tb	<	0.000218				
M	Bi	<	0.002180	M	Ho	<	0.000218	M	Pd	<	0.008723	M	Te	<	0.010904				
O	Ca		0.000017	M	In	<	0.000218	M	Pr	<	0.000218	M	Th	<	0.000436				
O	Cd	<	0.000500	M	Ir	<	0.000218	M	Pt	<	0.000218	O	Ti	<	0.000600				
M	Ce	<	0.000218	O	K		0.000003	M	Rb	<	0.000218	O	Tl	<	0.010000				
M	Co	<	0.000436	M	La	<	0.000218	M	Re	<	0.000218	M	Tm	<	0.000218				
O	Cr	<	0.002000	O	Li	<	0.000040	M	Rh	<	0.000218	M	U	<	0.000218				
M	Cs	<	0.001090	M	Lu	<	0.000218	M	Ru	<	0.000218	O	V	<	0.000550				
M	Cu	<	0.002180	O	Mg		0.000003	O	S	<	0.030000	M	W	<	0.004361				
M	Dy	<	0.000218	O	Mn	<	0.000160	M	Sb	<	0.001090	M	Y	<	0.000218				
M	Er	<	0.000218	O	Mo	<	0.001500	O	Sc	<	0.000600	M	Yb	<	0.000218				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference

n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 19, 2015

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 19, 2018

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

James King Jr
Product Documentation Supervisor

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Nitric Acid, 69.0-70.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M3567
rec. date: 3/9/16
exp. date: 12/16/20

Material No.: 9598-34
Batch No.: 0000131530
Manufactured Date: 2015/12/18
Retest Date: 2020/12/16

Certificate of Analysis

Test	Specification	Result
ACS - Assay (HNO_3)	69.0 - 70.0 %	69.8
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 2 ppm	< 1
ACS - Specific Gravity at 60°/60°F	1.416 - 1.420	1.420
Chloride (Cl)	<= 0.04 ppm	< 0.03
Phosphate (PO_4)	<= 0.1 ppm	<0.01
Sulfate (SO_4)	<= 0.4 ppm	< 0.2
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 2
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 1.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 4.0 ppb	0.7
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	1.0
Trace Impurities - Chromium (Cr)	<= 10.0 ppb	3.0
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 20.0 ppb	< 0.2
Trace Impurities - Germanium (Ge)	<= 4.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 10.0 ppb	0.5

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9598-34
Batch No.: 0000131530

Test	Specification	Result
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	< 0.2
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	< 0.1
Trace Impurities - Molybdenum (Mo)	<= 5.0 ppb	< 3.0
Trace Impurities - Nickel (Ni)	<= 1.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	0.3
Trace Impurities - Potassium (K)	<= 5.0 ppb	< 2.0
Trace Impurities - Silicon (Si)	<= 20.0 ppb	0.5
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 200.0 ppb	< 0.5
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 2.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	< 0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	0.2

For Laboratory, Research or Manufacturing Use
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Parroli, India 9001:2008

James Ethler
Jamie Ethler
Vice President Global Quality

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Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M3578
04/04/16

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9673-33
Batch No.: 0000122181
Manufactured Date: 2015/09/08
Retest Date: 2020/09/06

Certificate of Analysis

Test	Specification	Result
ACS - Assay (H_2SO_4)	95.0 - 98.0 %	96.6
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	< 1
ACS - Substances Reducing Permanganate (as SO_2)	<= 2 ppm	< 2
Ammonium (NH_4)	<= 1 ppm	< 1
Chloride (Cl)	<= 0.1 ppm	< 0.1
Nitrate (NO_3)	<= 0.2 ppm	< 0.1
Phosphate (PO_4)	<= 0.5 ppm	< 0.1
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	0.4
Arsenic and Antimony (as As)	<= 4 ppb	< 2
Trace Impurities - Barium (Ba)	<= 10.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 10.0 ppb	< 1.0
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 10.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 2.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	2.0
Trace Impurities - Chromium (Cr)	<= 6.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 0.5 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 10.0 ppb	< 0.2
Trace Impurities - Germanium (Ge)	<= 10.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 10.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 500 ppb	< 100

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Avantor ™ Performance Materials Inc.
3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9673-33
Batch No.: 0000122181

Test	Specification	Result
Trace Impurities - Iron (Fe)	<= 50.0 ppb	6.0
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 10.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	0.2
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.3
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 2.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 10.0 ppb	< 1.0
Trace Impurities - Potassium (K)	<= 500.0 ppb	< 2.0
Trace Impurities - Selenium (Se)	<= 50.0 ppb	24.9
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 500.0 ppb	0.9
Trace Impurities - Strontium (Sr)	<= 5.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 10.0 ppb	< 5.0
Trace Impurities - Thallium (Tl)	<= 20.0 ppb	< 5.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 10.0 ppb	< 1.0
Trace Impurities - Vanadium (V)	<= 10.0 ppb	< 1.0
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	< 0.3
Trace Impurities - Zirconium (Zr)	<= 10.0 ppb	< 1.0

For Laboratory, Research or Manufacturing Use

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, 5S5S 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dahrtadun, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
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Stannous Chloride, Dihydrate, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(tin(II) chloride, dihydrate)

M3581
Rec'd on 01/13/16
MS

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 3980-01
Batch No.: 0000120505
Manufactured Date: 2015/08/13
Expiration Date: 2016/08/12

Certificate of Analysis

Meets ACS Reagent Chemical Requirements.

Test	Specification	Result
Assay ($SnCl_2 \cdot 2H_2O$)	98.0 - 103.0 %	99.0
Solubility in HCl	Passes Test	PT
Sulfate (SO_4)	Passes Test	PT
Calcium (Ca)	<= 0.005 %	<0.005
Iron (Fe)	<= 0.003 %	0.002
Lead (Pb)	<= 0.01 %	< 0.01
Magnesium (Mg)	<= 0.01 %	< 0.01
Potassium (K)	<= 0.005 %	0.001
Sodium (Na)	<= 0.01 %	<0.001
Trace Impurities - Arsenic (As)	<= 2.000 ppm	< 2.000
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	0.002

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dahvadun, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Panoli, India 9001:2008

James F. Ehrler
Jamie Ehrler
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Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

J.T.Baker

Part of AVANTOR™ PERFORMANCE MATERIALS

M 3588
Rec. 04/28/16
Exp : 01/13/21

Material No.: 9530-33
Batch No.: 0000134218
Manufactured Date: 2016/01/15
Retest Date: 2021/01/13

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.7
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.191
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	< 1
ACS - Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.4
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	8.3
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9530-33
Batch No.: 0000134218

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	4.0
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	1.0
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	1.0
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.2
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	0.3
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	< 0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

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Nitric Acid, 69.0-70.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

J.T.Baker

Part of AVANTOR PERFORMANCE MATERIALS

M3603
Rec. 05/11/16
Exp: - 02/21/2021

Material No.: 9598-34
Batch No.: 0000137345
Manufactured Date: 2016/02/23
Retest Date: 2021/02/21

Certificate of Analysis

Test	Specification	Result
ACS - Assay (HNO_3)	69.0 - 70.0 %	69.3
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 2 ppm	< 1
ACS - Specific Gravity at 60°/60°F	1.416 - 1.420	1.417
Chloride (Cl)	<= 0.04 ppm	< 0.03
Phosphate (PO_4)	<= 0.1 ppm	<0.01
Sulfate (SO_4)	<= 0.4 ppm	< 0.2
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 2
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 1.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 4.0 ppb	0.9
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	0.4
Trace Impurities - Chromium (Cr)	<= 10.0 ppb	3.0
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	0.1
Trace Impurities - Gallium (Ga)	<= 20.0 ppb	< 0.2
Trace Impurities - Germanium (Ge)	<= 4.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 10.0 ppb	0.6

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Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 , Fax: 610.573.2610

Material No.: 9598-34
Batch No.: 0000137345

Test	Specification	Result
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	< 0.2
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 5.0 ppb	< 3.0
Trace Impurities - Nickel (Ni)	<= 1.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	0.2
Trace Impurities - Potassium (K)	<= 5.0 ppb	< 2.0
Trace Impurities - Silicon (Si)	<= 20.0 ppb	0.6
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 200.0 ppb	< 0.5
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 2.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	< 0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Panoli, India 9001:2008

Jamie Ethier
Vice President Global Quality

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CHEMTECH

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB81637

Review By mohan Review On 5/19/2016 8:06:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP33708,MP33709,MP33710,MP33711,MP33712,MP33713,MP33714
ICV Standard	MP33715
CCV Standard	MP33717
ICSA Standard	
CRI Standard	
Chk Standard	MP33716,MP33718,MP33724

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	S0	S0.0	CAL1	05/17/16 14:43		OK
2	S0.2	S0.2	CAL2	05/17/16 14:45		OK
3	S2.5	S2.5	CAL3	05/17/16 14:47		OK
4	S5	S5.0	CAL4	05/17/16 14:49		OK
5	S7.5	S7.5	CAL5	05/17/16 14:51		OK
6	S10	S10.0	CAL6	05/17/16 14:53		OK
7	ICV	ICV	ICV	05/17/16 14:56		OK
8	ICB	ICB	ICB	05/17/16 14:58		OK
9	CCV041	CCV041	CCV	05/17/16 15:00		OK
10	CCB041	CCB041	CCB	05/17/16 15:02		OK
11	PB90642BL	PBW003	MB	05/17/16 15:04		OK
12	H2948-01	MH4005	SAM	05/17/16 15:07		OK
13	H2948-02	MH4097	SAM	05/17/16 15:09		OK
14	H2948-03	MH4106	SAM	05/17/16 15:11		OK
15	H2948-04	MH4107	SAM	05/17/16 15:13		OK
16	H2948-05	MH4137	SAM	05/17/16 15:15		OK
17	H2948-06	MH4137D	DUP	05/17/16 15:17		OK
18	H2948-07	MH4137S	MS	05/17/16 15:19		OK
19	PB90643BL	PBW003	MB	05/17/16 15:21		OK
20	H3015-01	MC0KQ5	SAM	05/17/16 15:24		OK
21	H3015-02	MC0KQ7	SAM	05/17/16 15:26		OK

CHEMTECH

Instrument ID: CV1

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STD. NAME	STD REF.#
ICAL Standard	MP33708,MP33709,MP33710,MP33711,MP33712,MP33713,MP33714
ICV Standard	MP33715
CCV Standard	MP33717
ICSA Standard	
CRI Standard	
Chk Standard	MP33716,MP33718,MP33724

22	H3015-03	MC0KS9	SAM	05/17/16 15:28		OK
23	H3015-04	MC0KT5	SAM	05/17/16 15:30		OK
24	H3015-05	MC0KT7	SAM	05/17/16 15:32		OK
25	H3015-06	MC0KW1	SAM	05/17/16 15:34		OK
26	H3015-07	MC0KW1D	DUP	05/17/16 15:36		OK
27	H3015-08	MC0KW1S	MS	05/17/16 15:38		OK
28	H3015-09	MC0KY4	SAM	05/17/16 15:41		OK
29	H3015-10	MC0KY5	SAM	05/17/16 15:43		OK
30	H3015-11	MC0KY6	SAM	05/17/16 15:45		OK
31	CCV042	CCV042	CCV	05/17/16 15:47		OK
32	CCB042	CCB042	CCB	05/17/16 15:49		OK
33	H3015-12	MC0KY7	SAM	05/17/16 15:51		OK
34	H3015-13	MC0KY9	SAM	05/17/16 15:53		OK
35	H3015-14	MC0KZ1	SAM	05/17/16 15:55		OK
36	H3015-15	MC0KZ3	SAM	05/17/16 15:58		OK
37	H3015-16	MC0KZ6	SAM	05/17/16 16:00		OK
38	H3015-17	MC0KZ7	SAM	05/17/16 16:02		OK
39	H3015-18	MC0KZ8	SAM	05/17/16 16:04		OK
40	H3015-19	MC0L01	SAM	05/17/16 16:06		OK
41	H3015-20	MC0KZ4	SAM	05/17/16 16:08		OK
42	H3015-21	MC0KZ5	SAM	05/17/16 16:10		OK
43	H3015-22	MC0KZ9	SAM	05/17/16 16:12		OK
44	PB90644BL	PBW003	MB	05/17/16 16:15		OK

CHEMTECH

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STD. NAME	STD REF.#
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ICV Standard	MP33715
CCV Standard	MP33717
ICSA Standard	
CRI Standard	
Chk Standard	MP33716,MP33718,MP33724

45	H3017-01	MC0KQ4	SAM	05/17/16 16:17		OK
46	H3017-02	MC0KQ6	SAM	05/17/16 16:19		OK
47	H3017-03	MC0KS8	SAM	05/17/16 16:21		OK
48	H3017-04	MC0KT4	SAM	05/17/16 16:23		OK
49	H3017-05	MC0KT6	SAM	05/17/16 16:25		OK
50	H3017-06	MC0KW0	SAM	05/17/16 16:27		OK
51	H3017-07	MC0KW0D	DUP	05/17/16 16:29		OK
52	H3017-08	MC0KW0S	MS	05/17/16 16:31		OK
53	CCV043	CCV043	CCV	05/17/16 16:34		OK
54	CCB043	CCB043	CCB	05/17/16 16:36		OK
55	H3017-09	MC0KQ2	SAM	05/17/16 16:38		OK
56	H3017-10	MC0KQ8	SAM	05/17/16 16:40		OK
57	H3017-11	MC0KR8	SAM	05/17/16 16:42		OK
58	H3017-12	MC0KS0	SAM	05/17/16 16:44		OK
59	H3017-13	MC0KS4	SAM	05/17/16 16:46		OK
60	H3017-14	MC0KX6	SAM	05/17/16 16:48		OK
61	H3017-15	MC0KT0	SAM	05/17/16 16:51		OK
62	H3017-16	MC0KT2	SAM	05/17/16 16:53		OK
63	H3017-17	MC0KX8	SAM	05/17/16 16:55		OK
64	H3017-18	MC0L03	SAM	05/17/16 16:57		OK
65	H3017-19	MC0L05	SAM	05/17/16 16:59		OK
66	H3017-20	MC0L06	SAM	05/17/16 17:01		OK
67	H3017-21	MC0KY0	SAM	05/17/16 17:03		OK

CHEMTECH

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB81637

Review By	mohan	Review On	5/19/2016 8:06:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP33708,MP33709,MP33710,MP33711,MP33712,MP33713,MP33714
ICV Standard	MP33715
CCV Standard	MP33717
ICSA Standard	
CRI Standard	
Chk Standard	MP33716,MP33718,MP33724

68	H3017-22	MC0KY2	SAM	05/17/16 17:06		OK
69	PB90650BL	PBW003	MB	05/17/16 17:08		OK
70	H3060-01	MC0KQ3	SAM	05/17/16 17:10		OK
71	H3060-02	MC0KQ9	SAM	05/17/16 17:12		OK
72	H3060-03	MC0KR9	SAM	05/17/16 17:14		OK
73	H3060-04	MC0KS1	SAM	05/17/16 17:16		OK
74	H3060-05	MC0KS5	SAM	05/17/16 17:18		OK
75	CCV044	CCV044	CCV	05/17/16 17:20		OK
76	CCB044	CCB044	CCB	05/17/16 17:23		OK
77	H3060-06	MC0KX7	SAM	05/17/16 17:25		OK
78	H3060-07	MC0KT1	SAM	05/17/16 17:27		OK
79	H3060-08	MC0KT3	SAM	05/17/16 17:29		OK
80	H3060-09	MC0KX9	SAM	05/17/16 17:31		OK
81	H3060-10	MC0L02	SAM	05/17/16 17:33		OK
82	H3060-11	MC0KW7	SAM	05/17/16 17:35		OK
83	H3060-12	MC0KW7D	DUP	05/17/16 17:37		OK
84	H3060-13	MC0KW7S	MS	05/17/16 17:40		OK
85	H3060-14	MC0KX1	SAM	05/17/16 17:42		OK
86	H3060-15	MC0KX3	SAM	05/17/16 17:44		OK
87	H3060-16	MC0KX5	SAM	05/17/16 17:46		OK
88	H3060-17	MC0L04	SAM	05/17/16 17:48		OK
89	H3060-18	MC0KY1	SAM	05/17/16 17:50		OK
90	H3060-19	MC0KY3	SAM	05/17/16 17:52		OK

CHEMTECH

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB81637

Review By	mohan	Review On	5/19/2016 8:06:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP33708,MP33709,MP33710,MP33711,MP33712,MP33713,MP33714
ICV Standard	MP33715
CCV Standard	MP33717
ICSA Standard	
CRI Standard	
Chk Standard	MP33716,MP33718,MP33724

91	H3060-20	MC0KY8	SAM	05/17/16 17:54		OK
92	H3060-21	MC0KZ0	SAM	05/17/16 17:57		OK
93	H3060-22	MC0KZ2	SAM	05/17/16 17:59		OK
94	PB90653BL	PBW003	MB	05/17/16 18:01		OK
95	H2896-02	MBD3J6	SAM	05/17/16 18:03		OK
96	H2896-03	MBD3E5	SAM	05/17/16 18:05		OK
97	CCV045	CCV045	CCV	05/17/16 18:07		OK
98	CCB045	CCB045	CCB	05/17/16 18:09		OK
99	H2896-04	MBD3E6	SAM	05/17/16 18:11		OK
100	H2896-05	MBD3E7	SAM	05/17/16 18:14		OK
101	H2896-06	MBD3E7D	DUP	05/17/16 18:16		OK
102	H2896-07	MBD3E7S	MS	05/17/16 18:18		OK
103	H2896-08	MBD3E8	SAM	05/17/16 18:20		OK
104	H2896-09	MBD3E9	SAM	05/17/16 18:22		OK
105	H2896-10	MBD3F0	SAM	05/17/16 18:24		OK
106	H2896-11	MBD3F2	SAM	05/17/16 18:26		OK
107	H2896-12	MBD3H9	SAM	05/17/16 18:29		OK
108	H2896-13	MBD3J0	SAM	05/17/16 18:31		OK
109	H2896-14	MBD3J7	SAM	05/17/16 18:33		OK
110	H2896-15	MBD3J8	SAM	05/17/16 18:35		OK
111	CCV046	CCV046	CCV	05/17/16 18:37		OK
112	CCB046	CCB046	CCB	05/17/16 18:39		OK

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Copy
Original Documents are included in CSF H4010

C. M. Todd
Signature

5/6/16
Date

284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Login Summary Report

Order ID :	H2948	Order Date :	5/6/2016 12:35:00 PM	Project Mgr :	Mohammad
Client :	USEPA CLP SMO	Project :	46114	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	5/6/2016 12:35:00 PM	EDD Type :	EPA CLP
Date Sign Off :	5/13/2016 4:37:00 PM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
H2948-01	MH4005	Water	05/04/2016						
				Mercury		ISM02.2_HG	15	05/27/2016	05/27/2016
				Metals CLP MS		ISM02.2_MS	15	05/27/2016	05/27/2016
H2948-02	MH4097	Water	05/04/2016						
				Mercury		ISM02.2_HG	15	05/27/2016	05/27/2016
				Metals CLP MS		ISM02.2_MS	15	05/27/2016	05/27/2016
H2948-03	MH4106	Water	05/04/2016						
				Mercury		ISM02.2_HG	15	05/27/2016	05/27/2016
				Metals CLP MS		ISM02.2_MS	15	05/27/2016	05/27/2016
H2948-04	MH4107	Water	05/04/2016						
				Mercury		ISM02.2_HG	15	05/27/2016	05/27/2016
				Metals CLP MS		ISM02.2_MS	15	05/27/2016	05/27/2016
H2948-05	MH4137	Water	05/04/2016						
				Mercury		ISM02.2_HG	15	05/27/2016	05/27/2016
				Metals CLP MS		ISM02.2_MS	15	05/27/2016	05/27/2016
H2948-06	MH4137D	Water	05/04/2016						
				Mercury		ISM02.2_HG	15	05/27/2016	05/27/2016
				Metals CLP MS		ISM02.2_MS	15	05/27/2016	05/27/2016
H2948-07	MH4137S	Water	05/04/2016						
				Mercury		ISM02.2_HG	15	05/27/2016	05/27/2016
				Metals CLP MS		ISM02.2_MS	15	05/27/2016	05/27/2016

WORKLIST(Hardcopy Internal Chain)

WorkList Name : H2948_HgW WorkList ID : 87106 Date : 5/16/2016 9:36:57 AM

Due Date	Matrix	Sample	Test	Preservative	Customer	Storage Location	Customer Sample	Collect Date	Method
05/18/2016	Water	H2948-01	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4005	05/04/2016	ISM02.2_HG
05/18/2016	Water	H2948-02	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4097	05/04/2016	ISM02.2_HG
05/18/2016	Water	H2948-03	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4106	05/04/2016	ISM02.2_HG
05/18/2016	Water	H2948-04	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4107	05/04/2016	ISM02.2_HG
05/18/2016	Water	H2948-05	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4137	05/04/2016	ISM02.2_HG
05/18/2016	Water	H2948-06	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4137D	05/04/2016	ISM02.2_HG
05/18/2016	Water	H2948-07	Mercury	1:1 HNO3 to p	USEP01	Q11	MH4137S	05/04/2016	ISM02.2_HG

298

Date/Time 05/16/16 @ 13:05
Received by: MB
Relinquished by:

Date/Time 05/16/16 @ 15:30
Received by: CP
Relinquished by: MB

WORKLIST(Hardcopy Internal Chain)

WorkList Name : h2948wms WorkList ID : 87220 Date : 5/18/2016 10:14:43 AM

Due Date	Matrix	Sample	Test	Preservative	Customer	Storage Location	Customer Sample	Collect Date	Method
05/20/2016	Water	H2948-01	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4005	05/04/2016	ISM02.2_MS
05/20/2016	Water	H2948-02	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4097	05/04/2016	ISM02.2_MS
05/20/2016	Water	H2948-03	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4106	05/04/2016	ISM02.2_MS
05/20/2016	Water	H2948-04	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4107	05/04/2016	ISM02.2_MS
05/20/2016	Water	H2948-05	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4137	05/04/2016	ISM02.2_MS
05/20/2016	Water	H2948-06	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4137D	05/04/2016	ISM02.2_MS
05/20/2016	Water	H2948-07	Metals CLP MS	1:1 HNO3 to p	USEP01	Q11	MH4137S	05/04/2016	ISM02.2_MS

Date/Time 05/18/16 10:20
Received by: PB
Relinquished by:

Date/Time 05/19/16
Received by:
Relinquished by: PB

From: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Sent: Wednesday, May 11, 2016 13:13
To: epa@chemtech.net
Cc: "Goodrich, Donald"; Moss, Pamela
Subject: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC | FINAL

Good afternoon,

Issue: Mercury analysis is scheduled for the water and soil samples; however, the analysis key on the COC only lists DMet=Dissolved Metals and TMet=Total Metals. The laboratory would like to confirm that the samples should also be analyzed for Mercury with Total Metals and Dissolved Metals.
Resolution: Per Region 8, mercury is required for all total and dissolved water samples, and for soil samples for this Case. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Please let me know if you have any questions. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2, 7, and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
www.csra.com

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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Wednesday, May 11, 2016 1:12 PM
To: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Hi Ali, the proposed resolution is also acceptable.
Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687

cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Wednesday, May 11, 2016 11:10 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Hi Don,

Please advise if the Region approves of the proposed resolution below.

Issue: Mercury analysis is scheduled for the water and soil samples; however, the analysis key on the COC only lists DMet=Dissolved Metals and TMet=Total Metals. The laboratory would like to confirm that the samples should also be analyzed for Mercury with Total Metals and Dissolved Metals.

PROPOSED Resolution: Per Region 8, mercury is required for all total and dissolved water samples, and for soil samples for this Case. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2, 7, and 8
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6361 Walker Lane, Alexandria, VA 22310
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From: Moss, Pamela [mailto:pmoss@eaest.com]
Sent: Wednesday, May 11, 2016 12:52 PM
To: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>; "Goodrich, Donald" <Goodrich.Donald@epa.gov>
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Yes mercury is required for a analysis on all total and dissolved water samples, and for soil samples. thank you.

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Wednesday, May 11, 2016 10:47 AM
To: "Goodrich, Donald"
Cc: Moss, Pamela
Subject: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Good afternoon Don,

CHM is reporting the following issue regarding Case 46114. Please advise.

Issue: Mercury analysis is scheduled for the water and soil samples; however, the analysis key on the COC only lists DMet=Dissolved Metals and TMet=Total Metals. The laboratory would like to confirm that the samples should also be analyzed for Mercury with Total Metals and Dissolved Metals.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2, 7, and 8
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6361 Walker Lane, Alexandria, VA 22310
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From: Sohil Jodhani [mailto:Sohil@chemtech.net]
Sent: Wednesday, May 11, 2016 12:17 PM
To: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Cc: Mohammad@chemtech.net
Subject: Region 08 | Case 46114 | Lab CHM | SDG Multiple | Issue Analysis Key

Hi Alexandra,

Lab would like to confirm below.

Issue: As per ASR, Mercury analysis is scheduled for water & soil samples but analysis key written on the DMet=Dissolved Metals, TMet=Total Metals only so lab would like to confirm that Lab is following the ASR and doing analysis for Mercury with Total Metals and Dissolved Metals, Please advise.

This issue is addressing for all previous shipments also.

Please see attachment for you reference.

Thanks & Regards,

Sohil Jodhani
QC-Analyst
Direct Line: (908)728-3148
General Number: (908)789-8900
Fax: (908)789-8922

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From: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Sent: Monday, May 16, 2016 10:34
To: epa@chemtech.net
Cc: "Goodrich, Donald"; Moss, Pamela
Subject: Region 08 | Case 46114 | Lab CHM | Issue Insufficient/inappropriate designation of laboratory QC | FINAL

Good morning,

Issue: Laboratory QC is required for Metals analysis for this Case; however, no samples is designated for QC on the COC. The laboratory would like to use samples MH4137 for QC as they have sufficient volume.
Resolution: Per Region 8, the sample chosen for laboratory QC is acceptable to the Region. the sample chosen for laboratory QC is acceptable to the Region.

Please let me know if you have any questions. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2, 7, and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Monday, May 16, 2016 10:15 AM
To: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Cc: Moss, Pamela <pmoss@eaest.com>
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Insufficient/inappropriate designation of laboratory QC

Hi Ali, the sample chosen for laboratory QC is acceptable to the Region.
Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687

cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Friday, May 13, 2016 7:13 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Cc: Moss, Pamela <pmoss@eaest.com>
Subject: Region 08 | Case 46114 | Lab CHM | Issue Insufficient/inappropriate designation of laboratory QC

Good morning Don,

CHM is reporting the following issue regarding Case 46114. Please advise.

Issue: Laboratory QC is required for Metals analysis for this Case; however, no samples is designated for QC on the COC. The laboratory would like to use samples MH4137 for QC as they have sufficient volume.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2, 7, and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
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From: Sohil Jodhani [mailto:Sohil@chemtech.net]
Sent: Thursday, May 12, 2016 4:44 PM
To: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Cc: Mohammad@chemtech.net; DASSsupport <DASSsupport@csgov.com>; 'Moody, Brett' <Moody.Brett@epa.gov>; 'KEVIN' <cofield.kevin@epa.gov>; 'Kim' <Brandon-Bazile.Kim@epa.gov>
Subject: Region 08 | Case 46114 | Lab CHM | SDG MH4005 | Issue Insufficient/inappropriate designation of laboratory QC

Hi Alexandra,

After further review of 05/06 shipment and found below discrepancy,

Issue 1: As per ASR, Lab QC is required for Metals analysis but there is no samples designated for Lab QC on the COC so Lab would like to have permission to use samples MH4137 for Lab QC as lab have sufficient volume, however this SDG is open since 6 days and lab can close this SDG with Lab QC. Please advise.

Thanks & Regards,

Sohil Jodhani
QC-Analyst
Direct Line: (908)728-3148
General Number: (908)789-8900
Fax: (908)789-8922

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SDG COVER PAGE

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Cas No.: 46114 MA No. : SDG No.: H4023

SOW No. : SOM02.3

EPA Sample No.	Lab Sample ID	Analysis Method: Trace VOA	Low Med VOA	SVOA	SVOA SIM	PEST	ARO
H4023	H3056-01	X					
H4024	H3056-02	X					
H4092	H3056-03	X					
H4093	H3056-04	X					
H4095	H3056-05	X					
H4100	H3056-06	X					
H4107	H3056-07	X					
H4107MS	H3056-08	X					
H4107MSD	H3056-09	X					
H4114	H3056-10	X					
H4119	H3056-11	X					
H4128	H3056-12	X					
VHBLK01	H3056-13	X					

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative.Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee,as verified by the following signature.

Signature: Miguel Vargas Name: Miguel Vargas

Date: 5/13/16 Title: Chemist

SDG # H4023

USEPA CLP COC (LAB COPY)
DateShipped: 5/11/2016
CarrierName: FedEx
AirbillNo: 776280222257

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050616-081129-0023
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-TB-011	H4023	Water/ Kristin Lazzeri		VOC(21)	1566 (HCL), 1567 (HCL), 1568 (HCL) (3)	A-TB-011	05/09/2016 07:00	
A-FB-004	H4024	Water/ Kristin Lazzeri		VOC(21)	1569 (HCL), 1570 (HCL), 1571 (HCL) (3)	A-FB-004	05/09/2016 07:45	
A-SW-002	H4092	Surface Water/ Kristin Lazzeri	Grab	VOC(21)	1135 (HCL), 1136 (HCL), 1137 (HCL) (3)	A-SW-02	05/11/2016 09:10	
A-SW-003	H4093	Surface Water/ Kristin Lazzeri	Grab	VOC(21)	1138 (HCL), 1139 (HCL), 1140 (HCL) (3)	A-SW-03	05/11/2016 09:20	
A-SW-005	H4095	Surface Water/ Kristin Lazzeri	Grab	VOC(21)	1144 (HCL), 1145 (HCL), 1146 (HCL) (3)	A-SW-05	05/11/2016 07:57	
A-SW-010	H4100	Surface Water/ Kristin Lazzeri	Grab	VOC(21)	1159 (HCL), 1160 (HCL), 1161 (HCL) (3)	A-SW-10	05/11/2016 08:40	
A-SW-017	H4107	Surface Water/ Kristin Lazzeri	Grab	VOC(21)	1180 (HCL), 1181 (HCL), 1182 (HCL) (3)	A-SW-17	05/11/2016 10:18	
A-SW-017-MS	H4107MS	Surface Water/ Kristin Lazzeri	Grab	VOC(21)	1572 (HCL), 1573 (HCL), 1574 (HCL) (3)	A-SW-17	05/11/2016 10:18	
A-SW-017-MSD	H4107MSD	Surface Water/ Kristin Lazzeri	Grab	VOC(21)	1583 (HCL), 1584 (HCL), 1585 (HCL) (3)	A-SW-17	05/11/2016 10:18	
A-SW-024	H4114	Surface Water/ Kristin Lazzeri	Grab	VOC(21)	1201 (HCL), 1202 (HCL), 1203 (HCL) (3)	A-SW-24	05/11/2016 09:25	

Special Instructions:

Shipment for Case Complete? Y

Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Kristin Lazzeri EA Engineering	5/11/16 1600	FedEx		
	FedEx	9:15 5-12-16		9:15 5-12-16	3° C

2

SDG # H4023

USEPA CLP COC (LAB COPY)
DateShipped: 5/11/2016
CarrierName: FedEx
AirbillNo: 776280222257

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050616-081129-0023
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-029	H4119	Surface Water/ Kristin Lazzeri	Grab	VOC(21)	1216 (HCL), 1217 (HCL), 1218 (HCL) (3)	A-SW-29	05/11/2016 09:35	1
A-SW-038	H4128	Surface Water/ Kristin Lazzeri	Grab	VOC(21)	1243 (HCL), 1244 (HCL), 1245 (HCL) (3)	A-SW-38	05/11/2016 08:10	1

Special Instructions:

Shipment for Case Complete? Y
Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Kristin Lazzeri EA Engineering	5/11/16 1600	FedEx		
	FEDEX	9:15 5-12-16	C Vesta	9:15 5-12-16	3°C

W

Sample Delivery Group (SDG) Cover Sheet

SDG Number	H4023	Case Number	46114	Contract Number	EP-W-14-030
Lab Code	CHM	SDG Turnaround	[illegible]	Delivery CLIN(s)	[illegible]

First Sample Received in SDG	H4023	Last Sample Received in SDG	H4128
First Sample Receipt Date	5/12/2016 9:15:00 AM	Last Sample Receipt Date	5/12/2016 9:15:00 AM

USEPA Sample Numbers in SDG (Listed in Numerical Order)

CLP Sample ID	Sample Type	Requested Analytical CLIN(s)/SubCLIN(s)	Solicitation Number	MA Number(s)
H4023	Field Blank	0011AB	N/A	N/A
H4024	Field Blank	0011AB	N/A	N/A
H4092	Field Sample	0011AB	N/A	N/A
H4093	Field Sample	0011AB	N/A	N/A
H4095	Field Sample	0011AB	N/A	N/A
H4100	Field Sample	0011AB	N/A	N/A
H4107	Field Sample	0011AB	N/A	N/A
H4107MS	Field Sample	0011AB	N/A	N/A
H4107MSD	Field Sample	0011AB	N/A	N/A
H4114	Field Sample	0011AB	N/A	N/A
H4119	Field Sample	0011AB	N/A	N/A
H4128	Field Sample	0011AB	N/A	N/A

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature [illegible] Date [illegible]

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 1 of 1
Received By (Print Name)		Log-in Date **5/12/2016**
Received By (Signature)		
Case Number 46114	SDG No. H4023	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776280222257
6. Sample Tags Sample Tag #	N/A
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	3.0 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/12/2016
12.Time Received	09:15

	EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H4023	1566,67,68	H3056-01	Sample
2	H4024	1569,70,71	H3056-02	
3	H4092	1135,36,37	H3056-03	
4	H4093	1138,39,40	H3056-04	
5	H4095	1144,45,46	H3056-05	
6	H4100	1159,60,61	H3056-06	
7	H4107	1180,81,82	H3056-07	
8	H4107MS	1572,73,74	H3056-08	
9	H4107MSD	1583,84,85	H3056-09	
10	H4114	1201,02,03	H3056-10	
11	H4119	1216,17,18	H3056-11	
12	H4128	1243,44,45	H3056-12	
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				

* Contact SMO and attach record of resolution

Reviewed By	Logbook No.
Date	Logbook Page No.

FORM DC-2

FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME CHEMTECH CONSULTING GROUP

LAB CODE CHM

CONTRACT NO. EPW14030

CASE NO. 46114 SDG NO. H4023

MA NO.

SOW NO. SOM02.3

All documents delivered in the complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.4)

		PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
1.	SDG Cover Page	1	1	✓	
2.	Traffic Report/Chain of Custody Record(s)	2	4	✓	
3.	Sample Log-In Sheet (DC-1)	5	5	✓	
4.	CSF Inventory Sheet (DC-2)	6	12	✓	
5.	SDG Narrative	13	23	✓	
Organic Analysis					
Trace Volatiles					
	Quality Control Summary				
6.	Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	24	27	✓	
7.	Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR)(if requeste by the EPA Region)	28	28	✓	
8.	Method Blank Summary (Form 4-OR)	29	32	✓	
9.	GC/MS Instrument Performance Check (Form 5-OR)	33	38	✓	
10.	Internal Standard Area and Retention Summary (Form 8A-OR)	39	42	✓	
	Sample Data				
11.	TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	43	202	✓	
12.	Tentatively Identified Compounds (Form 1B-OR)			✓	
13.	Raw Data for each sample:			✓	
	Reconstructed total ion chromatograms (RICs) for each sample			✓	
	Raw Spectra and bacground-subtracted mass spectra of target analytes identified			✓	
	Quantitation Reports			✓	
	Mass Spectra of all reported TICs with three best library matches			✓	
	Standards Data (All Instruments)				
14.	GC/MS Initial Calibration Data (Form 6A-OR)	203	279	✓	
15.	RICs and Quantitation Reports for all Standards			✓	

FORM DC-2

FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
16. Continuing Calibration Verification for GC/MS (Form 7-OR)	280	368	✓	
17. RICs and Quantitation Reports for all Standards			✓	
Quality Control Data				
18. Performance Check	369	416	✓	
19. Blank Data	417	476	✓	
20. Matrix Spike/Matrix Spike Duplicate Data (Form 3A-OR) (if requested by EPA Region)	477	492	✓	
21. Original Preparation and analysis forms or copies of preparation and analysis logbook pages (including screening records if applicable)	493	540	✓	
Low-Medium Volatiles				
Quality Control Summary				
22. Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	NA	NA	✓	
23. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by EPA Region)	NA	NA	✓	
24. Method Blank Summary (Form 4-OR)	NA	NA	✓	
25. GC/MS Instrument Performance Check (Form 5-OR)	NA	NA	✓	
26. Internal Standard Area and Retention Time Summary (Form 8A-OR)	NA	NA	✓	
Sample Data				
27. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	
28. Tentatively Identified Compounds (Form 1B-OR)				
29. Raw Data for Each Sample:				
Reconstructed total ion chromatograms (RICs) for each sample				
Raw Spectra and background-subtracted mass spectra of target analytes identified				
Quantitation Reports				
Mass Spectra of all reported TICs with three best library matches				
Standards Data (All Instruments)				
30. GC/MS Initial Calibration Data (Form 6A-OR)	NA	NA	✓	
31. RICs and Quantitation Reports for all Standards				
32. Continuing Calibration Verification for GC/MS (Form 7A-OR)	NA	NA	✓	
33. RICs and Quantitation Reports for all Standards				
Quality Control Data				
34. Performance Check	NA	NA	✓	

FORM DC-2

FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
35. Blank Data	NA	NA	✓	
36. Matrix Spike/Matrix Spike Duplicate Data (if requested by EPA Region)	NA	NA	✓	
37. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	NA	NA	✓	
Semivolatiles				
Quality Control Summary				
38. Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	NA	NA	✓	
39. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by EPA Region)	NA	NA	✓	
40. Method Blank Summary (Form 4-OR)	NA	NA	✓	
41. GC/MS Instrument Performance Check (Form 5-OR)	NA	NA	✓	
42. Internal Standard Area and Retention Time Summary (Form 8A-OR)	NA	NA	✓	
Sample Data				
43. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	
44. Tentatively Identified Compounds (Form 1B-OR)				
45. Raw Data for Each sample:				
Reconstructed total ion chromatograms (RICs) for each sample	NA	NA	✓	
Raw Spectra and background-subtracted mass spectra of target analytes identified				
Quantitation Reports				
Mass Spectra of all reported TICs with three best library matches				
GPC chromatograms (if GPC is required)				
Standards Data (All Instruments)				
46. GC/MS Initial Calibration Data (Form 6A-OR)	NA	NA	✓	
47. RICs and Quantitation Reports for all Standards				
48. Continuing Calibration Verification for GC/MS (Form 7A-OR)	NA	NA	✓	
49. RICs and Quantitation Reports for all Standards				
Quality Control Data				
50. Performance Check	NA	NA	✓	
51. Blank Data	NA	NA	✓	
52. Matrix Spike/Matrix Spike Duplicate Data (if requested by EPA Region)	NA	NA	✓	

FORM DC-2

FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
53. Raw GPC Data	NA	NA	✓	
54. For SIM analysis (if requested), at the same sequence as listed above, except for that Form 1B-OR and TIC spectra data which are not required for SIM method.	NA	NA	✓	
55. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	NA	NA	✓	
Pesticides				
Quality Control Summary				
56. Surrogate Recovery (Form 2C-OR)	NA	NA	✓	
57. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR each columns)	NA	NA	✓	
58. Laboratory Control Sample Recovery (Form 3B-OR each column)	NA	NA	✓	
59. Method Blank Summary (Form 4-OR)	NA	NA	✓	
Sample Data				
60. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	
61. Raw Data for Each Sample:				
Chromatograms (Primary Column)				
Chromatograms (Secondary Column)				
Quantitation Reports				
Manual Worksheets				
62. For Pesticides by GC/MS Confirmation:				
Copies of raw spectra and copies of background-subtracted mass spectra of target analytes (samples & standards)				
Standards Data				
63. Initial Calibration of Single Component Analytes (Form 6B-OR and 6C-OR)	NA	NA	✓	
64. Initial Calibration of Multicomponent Analytes (Form 6D-OR and 6E-OR)	NA	NA	✓	
65. Analyte Resolution Summary (Form 6G-OR)	NA	NA	✓	
66. Pesticide Performance Evaluation Mixture Calibration Verification Summary (Form 7B-OR)	NA	NA	✓	

FORM DC-2

FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
67. Continuing Calibration Verification Summary (Form 7C-OR)	NA	NA	✓	
68. Multicomponent Coninuing Calibration Verification Summary (Form 7D-OR)	NA	NA	✓	
69. Analytical Sequence (Form 8B-OR)	NA	NA	✓	
70. Florisil Cartridge Check (Form 9A-OR)	NA	NA	✓	
71. GPC Calibration Verification (Form 9B-OR)	NA	NA	✓	
72. Identification Summary for Single Component Analytes (Form 10A-OR)	NA	NA	✓	
73. Identification Summary for Multicomponent Analytes (Form 10B-OR)				
74. Chromatograms and Quantitation Reports:	NA	NA	✓	
A printout of Retention Times and corresponding peak areas or peak heights				
Quality Control Data				
75. Blank Data	NA	NA	✓	
76. Matrix Spike/Matrix Spike Duplicate Data	NA	NA	✓	
77. Laboratory Control Sample	NA	NA	✓	
78. Raw GPC Data	NA	NA	✓	
79. Raw Florisil Data	NA	NA	✓	
80. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	NA	NA	✓	
Aroclor Data				
Quality Control Summary				
81. Surrogate Recovery (Form 2C-OR)	NA	NA	✓	
82. Matrix Spike/Matrix Spike Duplicate Summary (Form 3A-OR)	NA	NA	✓	
83. Laboratory Control Sample Recovery (Form 3B-OR for each column)	NA	NA	✓	
84. Method Blank Summary (Form 4-OR)	NA	NA	✓	
Sample Data				
85. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	

FORM DC-2

FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
86. Raw Data for Each Sample:	NA	NA	✓	
Chromatograms (Primary Column)	NA	NA	✓	
Chromatograms (Secondary Column)	NA	NA	✓	
Quantitation Reports	NA	NA	✓	
Manual Worksheets	NA	NA	✓	
87. For Aroclors by GC/MS Confirmation:	NA	NA	✓	
Copies of raw spectra and copies of background-subtracted mass spectra of target analytes (samples & standards)	NA	NA	✓	
Standards Data				
88. Initial Calibration of Multicomponent Analytes(Form 6D-OR, Form 6E-OR, and Form 6F-OR)	NA	NA	✓	
89. Multicomponent Continuing Calibration Verification Summary (Form 7D-OR)	NA	NA	✓	
90. Analytical Sequence (Form 8B-OR)	NA	NA	✓	
91. Identification Summary for Multicomponent Analytes (Form 10B-OR)	NA	NA	✓	
92. Chromatograms and data system printouts:	NA	NA	✓	
A printout of Retention Times and corresponding peak areas or peak heights				
Qaulity Control Data				
93. Blank Data	NA	NA	✓	
94. Matrix Spike/Matrix Spike Duplicate Data	NA	NA	✓	
95. Laboratory Control Sample (LCS) Data	NA	NA	✓	
96. Raw GPC Data (if performed)	NA	NA	✓	
97. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including Percent Solid Determinations logs and screening records if applicable)	NA	NA	✓	
Additional				
98. EPA Shipping/Receiving Documents Airbills (No. of shipments 1)	541	541	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab)	542	542	✓	

FORM DC-2

FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
99. Misc. Shipping/Receiving Records (list all individual records) Communication Logs	NA	NA	✓	
100. Internal Lab Sample Transfer Records & Tracking Sheets (describe or list)	NA	NA	✓	
101. PE/PT Instruction Forms	NA	NA	✓	
102. Other Records (describe or list)				
Communication Log	543	546	✓	

103. Comments

Completed by: [signature] [printed name/title] [date]
(CLP Lab) (Signature) (Printed Name/Title) (Date)

Audited by: _____ _____ _____
(EPA) (Signature) (Printed Name/Title) (Date)

SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE# 46114
SDG# H4023
CONTRACT# EPW14030
LAB CODE: CHM
CHEMTECH PROJECT # H3056
MODIFICATION REF. NUMBER: N/A

Sample ID	EPA Sample ID	pH
H3056-01	H4023	1.0
H3056-02	H4024	1.0
H3056-02DL	H4024DL	1.0
H3056-03	H4092	1.0
H3056-04	H4093	1.0
H3056-05	H4095	1.0
H3056-06	H4100	1.0
H3056-07	H4107	1.0
H3056-08	H4107MS	1.0
H3056-09	H4107MSD	1.0
H3056-10	H4114	1.0
H3056-11	H4119	1.0
H3056-11DL	H4119DL	1.0
H3056-12	H4128	1.0

12 Water samples were delivered to the laboratory intact on 05/12/2016.

Test requested on the Chain of Custody was Volatile Organic by Method SOM02.3.

Samples for Volatile Organic analyses were transferred unopened to the Volatile Laboratory. Sample Tags were not received with the samples.

The temperature of the samples was measured using an I R Gun. The samples temperature was 3.0 degrees Celsius.

Shipping Discrepancies and/or QC issues:

Issue 1 : Sample tags were not received with samples at the laboratory. Sample tag numbers may or may not be listed on the TR/COC.

Resolution 1: In accordance with previous direction from Region 2, the laboratory will note the issue in the SDG Narrative, and proceed with the analysis of the sample. The Resolution will be applied to all samples received for this Case.

Issue 2: The water samples for this Case are scheduled for 86 TVOA and 17 SVOA analysis; however, the COCs list VOA=TCL VOCs by CLP.

Resolution 2: Per Region 8, the samples in question shall be analyzed as scheduled for TVOA. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples. This resolution may be applied to all COCs received for this Case with this issue.

Trace Volatiles:

The analysis performed on instrument MSVOA_I were done using C column RXI-624 30m 0.25mm 1.4um 872456. The Trap was supplied by OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.

The analysis performed on instrument MSVOA_R were done using GC column RXI-624SIL MS 30m 0.25mm 1.4um 872456. The Trap was supplied by OI Analytical, OI #10 Trap, OI Eclipse 4660 Concentrator.

The analysis of VOC-Low Level -15 was based on method SOM02.3_Trace.

Surrogate recoveries met the criteria except for the followings:
H4024 [2-Butanone-d5 - 133%,Chloroform-d-131%],
H4092 [2-Butanone-d5 - 131%],
H4093 [2-Butanone-d5 - 131%, 2-Hexanone-d5 - 133%],
As per method, up to 3 surrogates are allowed to fail; therefore no corrective action was required for above mention sample.
Holding Times were met.
Instrument Performance Check met requirements.
The MS { H4107MS } recoveries met the requirements.
The MSD { H4107MSD} recoveries met the requirements.
The RPD recoveries met criteria
Retention Times met requirements.
The Internal Standards Areas met requirements.
The Initial Calibration met the requirements.
The Continuing Calibration met the requirements.

The Blank analysis did not indicate the presence of lab contamination.

The Storage Blank did not indicate the presence of lab contamination
Samples H4024 and H4119 were diluted due to high concentrations.

The sample # H4092 was analyzed follow the analysis of H4024 has concentration above calibration levels for Chloroform but the sample # H4092 had no positive hit for this compound therefore No instrument Blank was analyzed.

The sample # H4107 was analyzed follow the analysis of H4119 has concentration above calibration levels for Tetrachloroethene but the sample # H4092 had no positive hit for this compound therefore No instrument Blank was analyzed.

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Calculation:

$$\text{Concentration in ug/L} = \frac{(Ax)\,(Is)\,(DF)}{(Ais)\,(\overline{RRF})\,(Vo)}$$

Where,

Ax = Area of the characteristic ion (EICP) for the compound to be measured.
Ais = Area of the characteristic ion (EICP) for the internal standard.
Is = Amount of internal standard added in ng.

$\overline{RRF}$ = Mean Relative Response Factor from the initial calibration standard.
Vo = Total volume of water purged, in mL.
DF = Dilution Factor.

Example Calculation for sample # H4024 for Chloroform:

Ax= 4231617
Is= 250
RRF= 0.804
DF=1
Ais=1075382
Vo= 50

$$\text{Concentration in ug/L} = \frac{(4231617)\ (250)\ (5)}{(1075382)(0.804)\ (50)}$$

$$= 24.47 \text{ ug/L}$$

Reported Result = 24 ug/L

Relative Response Factor = Chloroform: RUN # VI050416 for 5 ppb

RRF= Area of compound / Area of Internal Standard X Conc. of Internal Standard / Conc. of Compound

RRF= 1114407 / 1387511 X 5.0 / 5.0 = 0.8031

RRF= 0.803

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature _____ Name: Mildred V. Reyes

Date: 6/3/16 Title: Document Control Officer

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Manual Integration Report

Sequence:	VI050416	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005EC/ VSTD00539	VI049243.D	cis-1,2-Dichloroethene	lisa	5/5/2016 8:52:38 AM	mohammad	5/5/2016 9:01:16 AM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	vi051216	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005/ VSTD00527	VI049349.D	cis-1,2-Dichloroethene	lisa	5/13/2016 9:17:32 AM	feifei	5/13/2016 12:27:53 PM	Peak Integrated by Software incorrectly
VI0512WBL01/ VBLK35	VI049350.D	1,2-Dichloroethane-d4	lisa	5/13/2016 9:17:39 AM	feifei	5/13/2016 12:27:55 PM	Peak Integrated by Software incorrectly
H3056-04/ H4093	VI049357.D	Chloroethane-d5	lisa	5/13/2016 9:17:36 AM	feifei	5/13/2016 12:27:57 PM	Peak Integrated by Software incorrectly
VSTDCCC005EC/ VSTD00528	VI049360.D	cis-1,2-Dichloroethene	lisa	5/13/2016 9:17:37 AM	feifei	5/13/2016 12:27:59 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VR051116	Instrument	MSVOA_r

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTD0.551/ VSTD0.551	VR019127.D	1,1-Dichloroethene	feifei	5/12/2016 9:54:19 AM	sam	5/12/2016 10:08:41 AM	Peak Integrated by Software incorrectly
VSTD0.551/ VSTD0.551	VR019127.D	1,1-Dichloroethene-d2	feifei	5/12/2016 9:54:19 AM	sam	5/12/2016 10:08:41 AM	Peak Integrated by Software incorrectly
VSTD0.551/ VSTD0.551	VR019127.D	2-Butanone-d5	feifei	5/12/2016 9:54:19 AM	sam	5/12/2016 10:08:41 AM	Peak Integrated by Software incorrectly
VSTD0.551/ VSTD0.551	VR019127.D	Carbon disulfide	feifei	5/12/2016 9:54:19 AM	sam	5/12/2016 10:08:41 AM	Peak Integrated by Software incorrectly
VSTD0.551/ VSTD0.551	VR019127.D	Methyl Acetate	feifei	5/12/2016 9:54:19 AM	sam	5/12/2016 10:08:41 AM	Peak Integrated by Software incorrectly
VSTD0.551/ VSTD0.551	VR019127.D	Trichlorofluoromethane	feifei	5/12/2016 9:54:19 AM	sam	5/12/2016 10:08:41 AM	Peak Integrated by Software incorrectly
VSTD00152/ VSTD00152	VR019128.D	1,1-Dichloroethene	feifei	5/12/2016 9:54:20 AM	sam	5/12/2016 10:08:47 AM	Peak Integrated by Software incorrectly
VSTD00152/ VSTD00152	VR019128.D	1,1-Dichloroethene-d2	feifei	5/12/2016 9:54:20 AM	sam	5/12/2016 10:08:47 AM	Peak Integrated by Software incorrectly
VSTD00152/ VSTD00152	VR019128.D	Carbon disulfide	feifei	5/12/2016 9:54:20 AM	sam	5/12/2016 10:08:47 AM	Peak Integrated by Software incorrectly
VSTD00152/ VSTD00152	VR019128.D	Trichlorofluoromethane	feifei	5/12/2016 9:54:20 AM	sam	5/12/2016 10:08:47 AM	Peak Integrated by Software incorrectly
VSTD00553/ VSTD00553	VR019129.D	Trichlorofluoromethane	feifei	5/12/2016 9:54:23 AM	sam	5/12/2016 10:08:53 AM	Peak Integrated by Software incorrectly
VSTD01054/ VSTD01054	VR019130.D	Carbon disulfide	feifei	5/12/2016 9:54:24 AM	sam	5/12/2016 10:09:12 AM	Peak Integrated by Software incorrectly
VSTD01054/ VSTD01054	VR019130.D	Trichlorofluoromethane	feifei	5/12/2016 9:54:24 AM	sam	5/12/2016 10:09:12 AM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VR051116	Instrument	MSVOA_r

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTD02055/ VSTD02055	VR019131.D	Trichlorofluoromethane	feifei	5/12/2016 9:54:26 AM	sam	5/12/2016 10:08:59 AM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VR051216	Instrument	MSVOA_r

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005/ VSTD00556	VR019133.D	Trichlorofluoromethane	lisa	5/13/2016 9:16:44 AM	feifei	5/13/2016 12:28:09 PM	Peak Integrated by Software incorrectly
H3056-11/ H4119	VR019141.D	1,1-Dichloroethene-d2	lisa	5/13/2016 9:16:45 AM	feifei	5/13/2016 12:28:11 PM	Peak Integrated by Software incorrectly
VSTDCCC005EC/ VSTD00557	VR019146.D	Methylene chloride	lisa	5/13/2016 9:16:49 AM	feifei	5/13/2016 12:28:14 PM	Peak Integrated by Software incorrectly
VSTDCCC005EC/ VSTD00557	VR019146.D	Trichlorofluoromethane	lisa	5/13/2016 9:16:49 AM	feifei	5/13/2016 12:28:14 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VR051316	Instrument	MSVOA_r

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005/ VSTD00558	VR019148.D	1,1-Dichloroethene	feifei	5/16/2016 10:44:00 AM	mmdadoda	5/16/2016 6:51:32 PM	Peak Integrated by Software incorrectly
VSTDCCC005/ VSTD00558	VR019148.D	Trichlorofluoromethane	feifei	5/16/2016 10:44:00 AM	mmdadoda	5/16/2016 6:51:32 PM	Peak Integrated by Software incorrectly
VR0513WBL01/ VBLK52	VR019149.D	1,1-Dichloroethene-d2	feifei	5/16/2016 10:44:01 AM	mmdadoda	5/16/2016 6:51:34 PM	Peak Integrated by Software incorrectly
VSTDCCC005EC/ VSTD00559	VR019160.D	Methylene chloride	feifei	5/16/2016 10:44:07 AM	mmdadoda	5/16/2016 6:51:41 PM	Peak Integrated by Software incorrectly
VSTDCCC005EC/ VSTD00559	VR019160.D	Trichlorofluoromethane	feifei	5/16/2016 10:44:07 AM	mmdadoda	5/16/2016 6:51:41 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VR051616	Instrument	MSVOA_r

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005EC/ VSTD00561	VR019170.D	Trichlorofluoromethane	lisa	5/17/2016 10:00:30 AM	MMDadoda	5/17/2016 10:54:45 AM	Peak Integrated by Software incorrectly

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4023

Analytical Method : Trace VOA Level : _____

Matrix : Water

EPA Sample No .	DMC1 (VCL)	DMC2 (CLA)	DMC3 (DCE)	DMC4 (BUT)	DMC5 (CLF)	DMC6 (DCA)	DMC7 (BEN)	DMC8 (DPA)
VBLK51	87	91	64	85	86	88	96	96
H4114	83	87	65	96	107	98	100	101
H4119	98	101	75	107	100	105	104	106
H4107	81	86	64	101	90	97	94	95
H4107MS	92	93	90	107	93	103	93	95
H4107MSD	85	88	88	109	93	106	96	100

	QC LIMITS
DMC1 (VCL) = Vinyl Chloride-d3	(40-130)
DMC2 (CLA) = Chloroethane-d5	(65-130)
DMC3 (DCE) = 1,1-Dichloroethene-d2	(60-125)
DMC4 (BUT) = 2-Butanone-d5	(40-130)
DMC5 (CLF) = Chloroform-d	(70-125)
DMC6 (DCA) = 1,2-Dichloroethane-d4	(70-130)
DMC7 (BEN) = Benzene-d6	(70-125)
DMC8 (DPA) = 1,2-Dichloropropane-d6	(60-140)

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4023

Analytical Method : Trace VOA Level : _____

Matrix : Water

EPA Sample No .	DMC1 (VCL)	DMC2 (CLA)	DMC3 (DCE)	DMC4 (BUT)	DMC5 (CLF)	DMC6 (DCA)	DMC7 (BEN)	DMC8 (DPA)
VBLK35	73	89	60	107	87	95	90	93
H4023	86	98	68	111	85	108	102	106
H4024	92	105	73	133 *	131 *	121	110	111
H4092	89	105	72	131 *	110	118	111	111
H4093	88	110	73	131 *	109	118	109	110
H4095	85	104	69	88	102	110	112	112
H4100	86	103	69	125	101	115	109	112
VBLK52	105	108	72	84	89	92	87	87
H4128	86	96	64	82	85	85	89	90
H4024DL	94	100	66	105	98	101	102	104
H4119DL	94	102	64	105	95	102	104	106
VBLK53	104	111	72	88	93	93	101	101
VHBLK01	87	101	60	104	93	100	95	99

	QC LIMITS
DMC1 (VCL) = Vinyl Chloride-d3	(40-130)
DMC2 (CLA) = Chloroethane-d5	(65-130)
DMC3 (DCE) = 1,1-Dichloroethene-d2	(60-125)
DMC4 (BUT) = 2-Butanone-d5	(40-130)
DMC5 (CLF) = Chloroform-d	(70-125)
DMC6 (DCA) = 1,2-Dichloroethane-d4	(70-130)
DMC7 (BEN) = Benzene-d6	(70-125)
DMC8 (DPA) = 1,2-Dichloropropane-d6	(60-140)

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4023
Analytical Method : Trace VOA Level : _____
Matrix : Water

EPA Sample No .	DMC9 (TOL)	DMC10 (TDP)	DMC11 (HEX)	DMC12 (TCA)	DMC13 (DCZ)	DMC14	DMC15	DMC16	TOT OUT
VBLK51	96	81	87	79	94				0
H4114	99	95	103	83	96				0
H4119	104	96	111	94	100				0
H4107	95	86	103	81	93				0
H4107MS	94	87	105	92	99				0
H4107MSD	97	85	108	90	100				0

	QC LIMITS
DMC9 (TOL) = Toluene-d8	(70-130)
DMC10 (TDP) = trans-1,3-Dichloropropene-d4	(55-130)
DMC11 (HEX) = 2-Hexanone-d5	(45-130)
DMC12 (TCA) = 1,1,2,2-Tetrachloroethane-d2	(65-120)
DMC13 (DCZ) = 1,2-Dichlorobenzene-d4	(80-120)

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4023
Analytical Method : Trace VOA Level : _____
Matrix : Water

EPA Sample No .	DMC9 (TOL)	DMC10 (TDP)	DMC11 (HEX)	DMC12 (TCA)	DMC13 (DCZ)	DMC14	DMC15	DMC16	TOT OUT
VBLK35	87	85	101	91	89				0
H4023	101	95	117	108	106				0
H4024	107	96	120	112	114				2
H4092	108	102	123	113	112				1
H4093	105	96	122	113	109				1
H4095	109	93	110	105	99				0
H4100	106	98	122	113	106				0
VBLK52	88	76	85	86	92				0
H4128	90	72	85	76	89				0
H4024DL	101	86	109	92	104				0
H4119DL	103	89	109	90	104				0
VBLK53	100	83	85	83	96				0
VHBLK01	96	84	103	89	97				0

	QC LIMITS
DMC9 (TOL) = Toluene-d8	(70-130)
DMC10 (TDP) = trans-1,3-Dichloropropene-d4	(55-130)
DMC11 (HEX) = 2-Hexanone-d5	(45-130)
DMC12 (TCA) = 1,1,2,2-Tetrachloroethane-d2	(65-120)
DMC13 (DCZ) = 1,2-Dichlorobenzene-d4	(80-120)

FORM 3A-OR
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No. : 46114 MA No .: _____ SDG No. : H4023

Analytical Method : Trace VOA Level : _____

Matrix Water

EPA Sample No.(Matrix Spike/Metrix Spike Duplicate): H4107

Instrument ID : MSVOA_R GC Column RXI-624 ID : 0.25 (mm)

Concentration Units (ug/L,mg/L ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %R #	QC Limits %R
1,1-Dichloroethene	5	0	4.1	82	61 - 145
Benzene	5	0	4.9	98	76 - 127
Trichloroethene	5	0	5.1	102	71 - 120
Toluene	5	0	5	100	76 - 125
Chlorobenzene	5	0	4.9	98	75 - 130

ANALYTE	SPIKE AADDED	MSD CONCENTRATION	MSD %R #	RPD	QC Limits	
					RPD	%R
1,1-Dichloroethene	5	4	80	2	14	61 - 145
Benzene	5	5	100	2	11	76 - 127
Trichloroethene	5	5.2	104	2	14	71 - 120
Toluene	5	5.2	104	4	13	76 - 125
Chlorobenzene	5	5	100	2	13	75 - 130

EPA SAMPLE NO.

VBLK35

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4023
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0512WBL01
Instrument ID: MSVOA_I
Lab File ID : VI049350.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/12/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 14:23
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4023	H3056-01	VI049354.D	05/12/2016 16:51
H4024	H3056-02	VI049355.D	05/12/2016 17:22
H4092	H3056-03	VI049356.D	05/12/2016 17:54
H4093	H3056-04	VI049357.D	05/12/2016 18:27
H4095	H3056-05	VI049358.D	05/12/2016 18:58
H4100	H3056-06	VI049359.D	05/12/2016 19:31

EPA SAMPLE NO.

VBLK51

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VR0512WBL01
Instrument ID: MSVOA_R
Lab File ID : VR019134.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/12/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 13:25
Heated Purge: (Y/N) N Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4114	H3056-10	VR019140.D	05/12/2016 17:04
H4119	H3056-11	VR019141.D	05/12/2016 17:37
H4107	H3056-07	VR019143.D	05/12/2016 18:42
H4107MS	H3056-08MS	VR019144.D	05/12/2016 19:14
H4107MSD	H3056-09MSD	VR019145.D	05/12/2016 19:47

EPA SAMPLE NO.

VBLK52

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4023
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VR0513WBL01
Instrument ID: MSVOA_R
Lab File ID : VR019149.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/13/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 11:59
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4128	H3056-12	VR019150.D	05/13/2016 12:43
H4024DL	H3056-02DL	VR019153.D	05/13/2016 14:27
H4119DL	H3056-11DL	VR019154.D	05/13/2016 14:59

EPA SAMPLE NO.

VBLK53

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VR0516WBL01
Instrument ID: MSVOA_R
Lab File ID : VR019163.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/16/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 11:22
Heated Purge: (Y/N) N Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
VHBLK01	H3056-13	VR019168.D	05/16/2016 14:45

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB32

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method : Trace VOA Lab File ID : VI049219.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/04/2016 Injection Time: 08:57

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	29.8	
75	30.0 - 80.0% of mass 95	62.3	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.6	
173	Less than 2.0% of mass 174	0.3(0.4)	1
174	50.0 - 120% of mass 95	77.4	
175	5.0 - 9.0% of mass 174	5.5(7.1)	1
176	95.0 - 101% of mass 174	73.5(95)	1
177	5.0 - 9.0% of mass 176	4.9(6.7)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD0.533	VSTD0.533	VI049220.D	05/04/2016	11:27
VSTD00134	VSTD00134	VI049221.D	05/04/2016	11:58
VSTD00535	VSTD00535	VI049222.D	05/04/2016	12:30
VSTD01036	VSTD01036	VI049223.D	05/04/2016	13:02
VSTD02037	VSTD02037	VI049224.D	05/04/2016	13:33

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB38

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method : Trace VOA Lab File ID : VI049348.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/12/2016 Injection Time: 09:58

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	27.7	
75	30.0 - 80.0% of mass 95	58.8	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.9	
173	Less than 2.0% of mass 174	0.4(0.5)	1
174	50.0 - 120% of mass 95	81	
175	5.0 - 9.0% of mass 174	5.6(6.9)	1
176	95.0 - 101% of mass 174	79(97.6)	1
177	5.0 - 9.0% of mass 176	5.5(7)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00527	VSTDCCC005	VI049349.D	05/12/2016	12:03
VBLK35	VI0512WBL01	VI049350.D	05/12/2016	14:23
H4023	H3056-01	VI049354.D	05/12/2016	16:51
H4024	H3056-02	VI049355.D	05/12/2016	17:22
H4092	H3056-03	VI049356.D	05/12/2016	17:54
H4093	H3056-04	VI049357.D	05/12/2016	18:27
H4095	H3056-05	VI049358.D	05/12/2016	18:58
H4100	H3056-06	VI049359.D	05/12/2016	19:31
VSTD00528	VSTDCCC005EC	VI049360.D	05/12/2016	20:37

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB51

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method : Trace VOA Lab File ID : VR019126.D

Instrument ID: MSVOA_R BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/11/2016 Injection Time: 10:18

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	18.6	
75	30.0 - 80.0% of mass 95	50.6	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6	
173	Less than 2.0% of mass 174	0.0(0.0)	1
174	50.0 - 120% of mass 95	77	
175	5.0 - 9.0% of mass 174	6(7.8)	1
176	95.0 - 101% of mass 174	75.9(98.5)	1
177	5.0 - 9.0% of mass 176	5.5(7.2)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD0.551	VSTD0.551	VR019127.D	05/11/2016	10:57
VSTD00152	VSTD00152	VR019128.D	05/11/2016	11:29
VSTD00553	VSTD00553	VR019129.D	05/11/2016	12:02
VSTD01054	VSTD01054	VR019130.D	05/11/2016	12:34
VSTD02055	VSTD02055	VR019131.D	05/11/2016	13:07

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB52

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method : Trace VOA Lab File ID : VR019132.D

Instrument ID: MSVOA_R BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/12/2016 Injection Time: 09:59

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	18.5	
75	30.0 - 80.0% of mass 95	50.6	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.9	
173	Less than 2.0% of mass 174	0.0(0.0)	1
174	50.0 - 120% of mass 95	78.9	
175	5.0 - 9.0% of mass 174	6.1(7.8)	1
176	95.0 - 101% of mass 174	77.3(97.9)	1
177	5.0 - 9.0% of mass 176	5.6(7.2)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00556	VSTDCCC005	VR019133.D	05/12/2016	10:41
VBLK51	VR0512WBL01	VR019134.D	05/12/2016	13:25
H4114	H3056-10	VR019140.D	05/12/2016	17:04
H4119	H3056-11	VR019141.D	05/12/2016	17:37
H4107	H3056-07	VR019143.D	05/12/2016	18:42
H4107MS	H3056-08MS	VR019144.D	05/12/2016	19:14
H4107MSD	H3056-09MSD	VR019145.D	05/12/2016	19:47
VSTD00557	VSTDCCC005EC	VR019146.D	05/12/2016	20:19

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB53

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method : Trace VOA Lab File ID : VR019147.D

Instrument ID: MSVOA_R BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/13/2016 Injection Time: 10:29

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	18.8	
75	30.0 - 80.0% of mass 95	51.4	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.2	
173	Less than 2.0% of mass 174	0.2(0.2)	1
174	50.0 - 120% of mass 95	76.1	
175	5.0 - 9.0% of mass 174	5.7(7.5)	1
176	95.0 - 101% of mass 174	75.1(98.7)	1
177	5.0 - 9.0% of mass 176	5(6.7)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00558	VSTDCCC005	VR019148.D	05/13/2016	11:17
VBLK52	VR0513WBL01	VR019149.D	05/13/2016	11:59
H4128	H3056-12	VR019150.D	05/13/2016	12:43
H4024DL	H3056-02DL	VR019153.D	05/13/2016	14:27
H4119DL	H3056-11DL	VR019154.D	05/13/2016	14:59
VSTD00559	VSTDCCC005EC	VR019160.D	05/13/2016	18:14

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB54

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method : Trace VOA Lab File ID : VR019161.D

Instrument ID: MSVOA_R BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/16/2016 Injection Time: 10:00

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	19.4	
75	30.0 - 80.0% of mass 95	51.8	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.7	
173	Less than 2.0% of mass 174	0.2(0.3)	1
174	50.0 - 120% of mass 95	77.1	
175	5.0 - 9.0% of mass 174	5.6(7.3)	1
176	95.0 - 101% of mass 174	75.2(97.6)	1
177	5.0 - 9.0% of mass 176	4.6(6.1)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00560	VSTDCCC005	VR019162.D	05/16/2016	10:39
VBLK53	VR0516WBL01	VR019163.D	05/16/2016	11:22
VHBLK01	H3056-13	VR019168.D	05/16/2016	14:45
VSTD00561	VSTDCCC005EC	VR019170.D	05/16/2016	16:02

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4023
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00527 | Lab File ID (Standard) : VI049349.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 05/04/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/12/2016
Heated Purge: (Y/N) N | Time Analyzed : 12:03

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1295570	7.91	928274	11.20	374949	13.41
UPPER LIMIT	2591130	8.08	1856550	11.37	749898	13.58
LOWER LIMIT	647783	7.74	464137	11.03	187475	13.24
EPA SAMPLE NO.						
VBLK35	1318748	7.91	908211	11.21	356452	13.41
H4023	1113587	7.91	777559	11.20	298685	13.41
H4024	1075382	7.92	765128	11.21	288068	13.41
H4092	1079207	7.91	741569	11.20	288043	13.42
H4093	1066324	7.91	749824	11.21	285845	13.41
H4095	1084908	7.90	715756	11.20	242218	13.42
H4100	1069250	7.91	751294	11.20	293124	13.41

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4023
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00556 | Lab File ID (Standard) : VR019133.D
Instrument ID : MSVOA_R | Init.Calib.Date(s): 05/11/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/12/2016
Heated Purge: (Y/N) N | Time Analyzed : 10:41

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	557655	8.33	429934	11.18	157419	13.13
UPPER LIMIT	1115310	8.5	859868	11.35	314838	13.3
LOWER LIMIT	278828	8.16	214967	11.01	78709.5	12.96
EPA SAMPLE NO.						
VBLK51	578406	8.33	420028	11.18	141364	13.13
H4114	618753	8.33	443734	11.18	153159	13.13
H4119	577819	8.33	422300	11.18	157081	13.13
H4107	577011	8.34	429539	11.18	142932	13.13
H4107MS	526670	8.33	402874	11.18	152742	13.13
H4107MSD	545786	8.33	410092	11.18	140472	13.13

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4023
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00558 | Lab File ID (Standard) : VR019148.D
Instrument ID : MSVOA_R | Init.Calib.Date(s): 05/11/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/13/2016
Heated Purge: (Y/N) N | Time Analyzed : 11:17

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	580349	8.33	422960	11.18	157025	13.13
UPPER LIMIT	1160700	8.5	845920	11.35	314050	13.3
LOWER LIMIT	290175	8.16	211480	11.01	78512.5	12.96
EPA SAMPLE NO.						
VBLK52	499915	8.33	392537	11.18	154543	13.13
H4128	596781	8.33	431772	11.18	151735	13.13
H4024DL	550261	8.33	391903	11.18	130578	13.13
H4119DL	529884	8.33	376946	11.18	128677	13.13

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4023
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00560 | Lab File ID (Standard) : VR019162.D
Instrument ID : MSVOA_R | Init.Calib.Date(s): 05/11/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/16/2016
Heated Purge: (Y/N) N | Time Analyzed : 10:39

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	578355	8.33	422376	11.18	157177	13.12
UPPER LIMIT	1156710	8.5	844752	11.35	314354	13.29
LOWER LIMIT	289178	8.16	211188	11.01	78588.5	12.95
EPA SAMPLE NO.						
VBLK53	521546	8.33	366617	11.18	135415	13.13
VHBLK01	524805	8.33	385236	11.18	132889	13.13

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4023

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049354.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.93	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4023

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049354.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4023

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049354.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4023

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049354.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.2	0.45	JN
2	E966796	Total Alkanes	N/A	0.0	

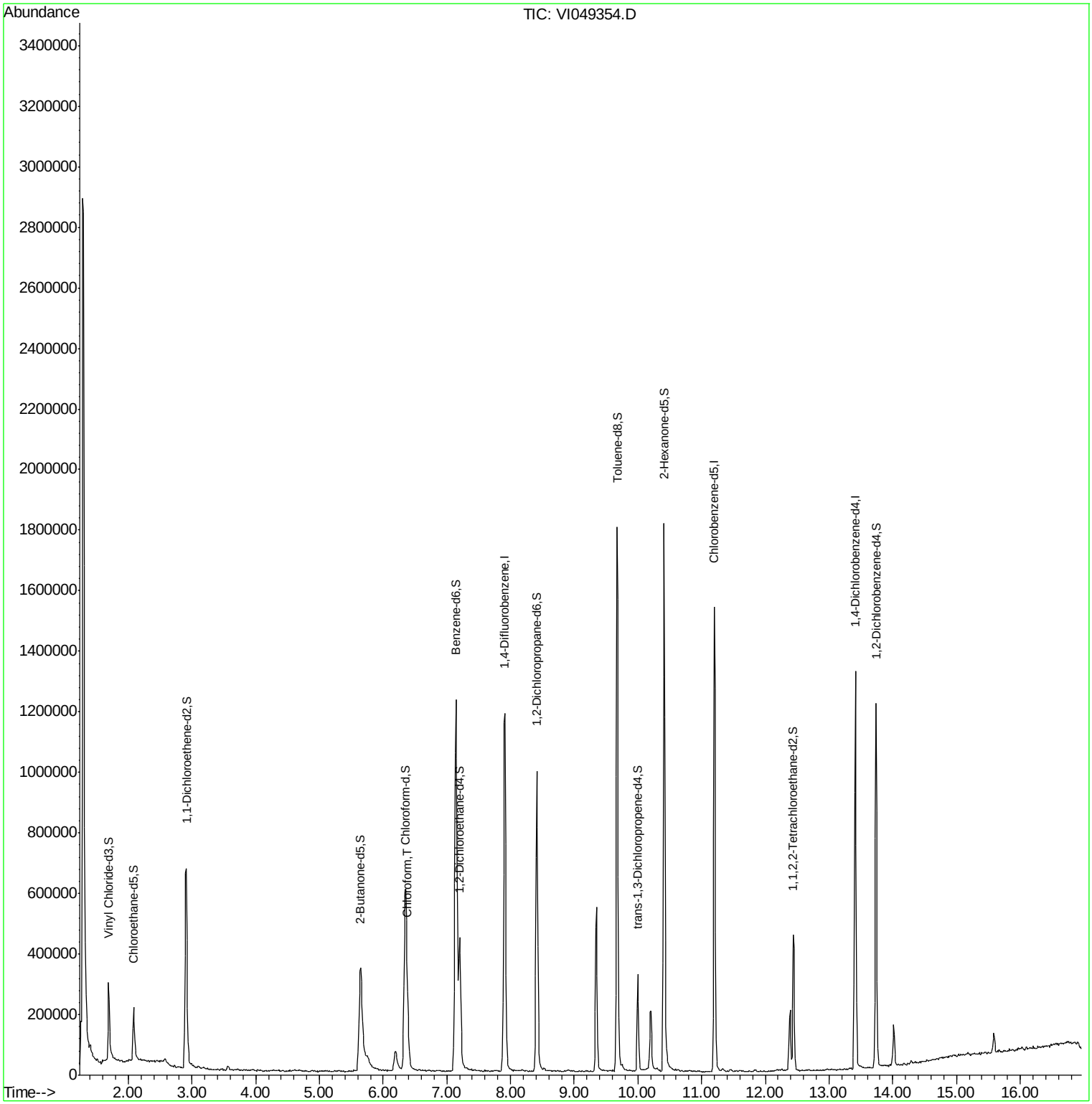
EPA-designated Registry Number.

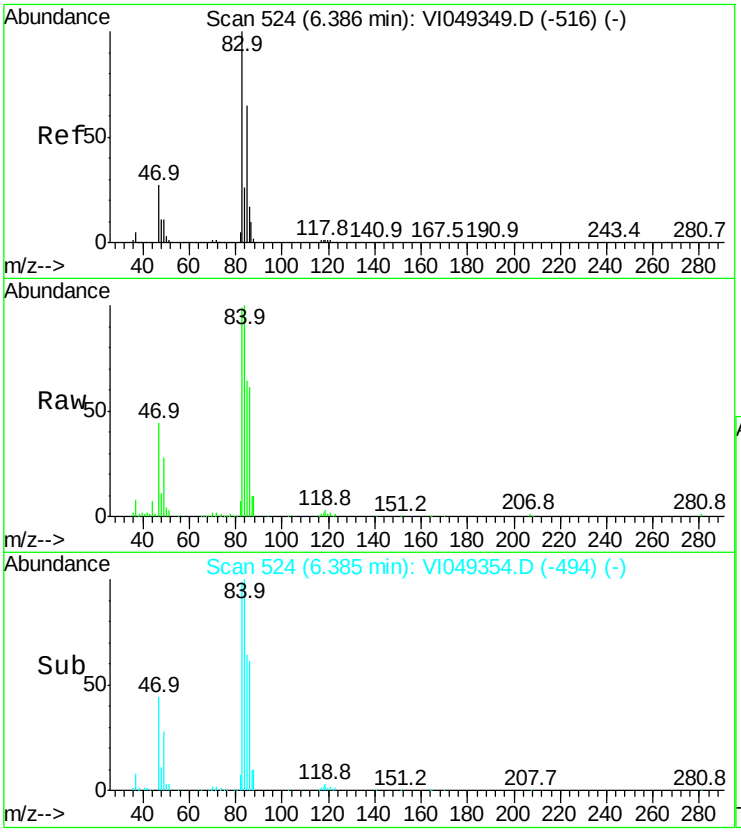
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049354.D
Acq On : 12 May 2016 16:51
Operator : FY/SY
Sample : H3056-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4023

Quant Time: May 13 04:48:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

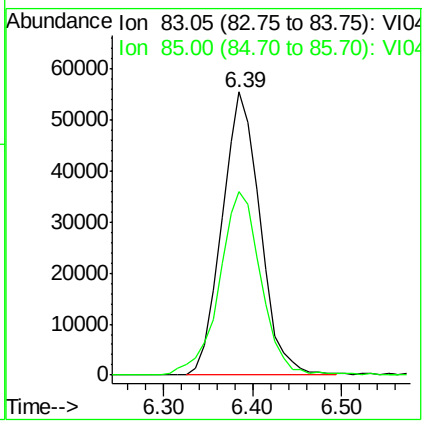




#25
Chloroform
Concen: 0.93 ug/L
RT: 6.39 min Scan# 524
Delta R.T. -0.00 min
Lab File: VI049354.D
Acq: 12 May 2016 16:51

Tgt Ion: 83 Resp: 165811

Ion	Ratio	Lower	Upper
83	100		
85	64.9	47.3	87.8



Instrument :
MSVOA_I
ClientSampleId :
H4023

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049354.D
Acq On : 12 May 2016 16:51
Operator : FY/SY
Sample : H3056-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4023

Quant Time: May 13 04:48:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1113587	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	777559	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	298685	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	293232	4.28	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 85.60%			
7) Chloroethane-d5	2.08	69	186161	4.90	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 98.00%			
11) 1,1-Dichloroethene-d2	2.90	63	548288	3.39	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 67.80%			
20) 2-Butanone-d5	5.65	46	822519	55.42	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 110.84%			
24) Chloroform-d	6.35	84	745485	4.27	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 85.40%			
26) 1,2-Dichloroethane-d4	7.20	65	386329	5.41	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 108.20%			
32) Benzene-d6	7.14	84	1549932	5.12	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.40%			
36) 1,2-Dichloropropane-d6	8.41	67	451565	5.30	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 106.00%			
41) Toluene-d8	9.67	98	1128368	5.05	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.00%			
43) trans-1,3-Dichloropropene-	10.00	79	158910	4.74	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 94.80%			
46) 2-Hexanone-d5	10.41	63	619554	58.53	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 117.06%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	209732	5.41	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 108.20%			
63) 1,2-Dichlorobenzene-d4	13.74	152	276928	5.29	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 105.80%			
Target Compounds						Qvalue
25) Chloroform	6.39	83	165811	0.93	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049354.D
Acq On : 12 May 2016 16:51
Operator : FY/SY
Sample : H3056-01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4023

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.287	4	6	16	rVB	2803659	5696383	100.00%	14.832%
2	1.592	35	37	38	rBV2	14393	15596	0.27%	0.041%
3	1.690	44	47	58	rVB	254184	457209	8.03%	1.190%
4	1.966	73	75	78	rBV4	6056	13300	0.23%	0.035%
5	2.084	84	87	97	rVB	174404	329869	5.79%	0.859%
6	2.399	117	119	121	rVB3	6057	7467	0.13%	0.019%
7	2.517	129	131	133	rBV3	5698	10807	0.19%	0.028%
8	2.576	135	137	148	rVB2	25659	78312	1.37%	0.204%
9	2.724	150	152	155	rVB4	6803	9223	0.16%	0.024%
10	2.911	166	171	178	rBV	659683	1540822	27.05%	4.012%
11	3.098	188	190	195	rVB6	8369	20234	0.36%	0.053%
12	3.177	195	198	202	rVV5	6098	14402	0.25%	0.037%
13	3.403	220	221	224	rVB3	6013	6586	0.12%	0.017%
14	3.452	224	226	227	rBV	6504	8048	0.14%	0.021%
15	3.472	227	228	230	rVB2	5717	6066	0.11%	0.016%
16	3.560	234	237	241	rBV4	12793	25250	0.44%	0.066%
17	3.718	252	253	256	rVB3	4097	4503	0.08%	0.012%
18	4.003	280	282	283	rVB2	4255	4995	0.09%	0.013%
19	4.023	283	284	286	rBV	5647	7217	0.13%	0.019%
20	4.072	286	289	290	rBV3	3334	5175	0.09%	0.013%
21	4.171	296	299	300	rBV2	3719	6056	0.11%	0.016%
22	4.240	303	306	308	rBV4	2702	4743	0.08%	0.012%
23	4.279	308	310	313	rVB3	3011	5808	0.10%	0.015%
24	4.367	315	319	320	rVB3	3994	7217	0.13%	0.019%
25	4.614	341	344	348	rVB3	3361	7137	0.13%	0.019%
26	4.682	348	351	353	rBV3	3058	6395	0.11%	0.017%
27	4.889	369	372	374	rBV4	3501	6061	0.11%	0.016%
28	5.007	381	384	387	rBV4	5727	13580	0.24%	0.035%
29	5.234	406	407	410	rVB3	3382	4843	0.09%	0.013%
30	5.293	412	413	417	rVB4	2491	5288	0.09%	0.014%
31	5.381	420	422	424	rVB3	4896	6426	0.11%	0.017%
32	5.421	424	426	427	rBV2	3631	5524	0.10%	0.014%
33	5.539	436	438	439	rBV	6815	5808	0.10%	0.015%
34	5.647	442	449	459	rBV2	339062	1367722	24.01%	3.561%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049354.D
Acq On : 12 May 2016 16:51
Operator : FY/SY
Sample : H3056-01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4023

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	5.952	478	480	482	rVB3	3900	6202	0.11%	0.016%
36	6.001	482	485	486	rVB3	2971	4544	0.08%	0.012%
37	6.041	486	489	491	rVB3	3711	6116	0.11%	0.016%
38	6.070	491	492	497	rBV5	3973	7871	0.14%	0.020%
39	6.198	497	505	513	rBV	64366	244234	4.29%	0.636%
40	6.356	514	521	532	rVB2	595271	2106527	36.98%	5.485%
41	6.661	550	552	553	rVB2	5606	5680	0.10%	0.015%
42	6.700	553	556	557	rBV3	4031	6589	0.12%	0.017%
43	6.857	568	572	573	rBV3	3071	7174	0.13%	0.019%
44	7.143	594	601	605	rBV	1227303	3300156	57.93%	8.593%
45	7.202	605	607	615	rVB	430870	957676	16.81%	2.494%
46	7.655	651	653	656	rVB3	3304	5431	0.10%	0.014%
47	7.911	672	679	691	rBV	1184921	2713937	47.64%	7.067%
48	8.186	705	707	711	rVB5	5415	9786	0.17%	0.025%
49	8.413	725	730	739	rBV	991294	2133351	37.45%	5.555%
50	8.521	739	741	746	rVB5	8983	18888	0.33%	0.049%
51	8.747	761	764	766	rVB3	2719	4414	0.08%	0.011%
52	8.846	771	774	776	rBV4	2740	4445	0.08%	0.012%
53	8.983	787	788	790	rBV2	4211	4883	0.09%	0.013%
54	9.121	800	802	804	rBV3	3179	5219	0.09%	0.014%
55	9.348	820	825	834	rBV	541030	1018002	17.87%	2.651%
56	9.672	854	858	864	rBV	1795533	3257714	57.19%	8.482%
57	9.751	864	866	871	rVB2	17591	33805	0.59%	0.088%
58	9.889	879	880	883	rVB3	3461	5774	0.10%	0.015%
59	9.938	883	885	887	rBV3	3347	4624	0.08%	0.012%
60	9.997	887	891	896	rBV	320694	542698	9.53%	1.413%
61	10.204	907	912	919	rVB	190867	410436	7.21%	1.069%
62	10.302	920	922	929	rVB7	8495	11146	0.20%	0.029%
63	10.410	929	933	947	rBV	1805739	3223505	56.59%	8.393%
64	10.637	953	956	959	rVB5	4902	11563	0.20%	0.030%
65	10.735	964	966	969	rVB2	4191	5123	0.09%	0.013%
66	10.794	969	972	976	rBV6	2776	8161	0.14%	0.021%
67	10.962	986	989	991	rBV4	3831	5379	0.09%	0.014%
68	11.198	1009	1013	1023	rBV	1532482	2603294	45.70%	6.778%
69	11.326	1023	1026	1032	rVB7	9181	20191	0.35%	0.053%
70	11.464	1036	1040	1044	rVB6	7198	17336	0.30%	0.045%
71	11.542	1047	1048	1050	rVB2	4906	5193	0.09%	0.014%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049354.D
Acq On : 12 May 2016 16:51
Operator : FY/SY
Sample : H3056-01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4023

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.601	1050	1054	1057	rBV5	5092	12489	0.22%	0.033%
73	11.641	1057	1058	1062	rVB3	4051	4930	0.09%	0.013%
74	11.749	1066	1069	1072	rBV5	3126	6034	0.11%	0.016%
75	11.828	1075	1077	1078	rBV2	4364	5693	0.10%	0.015%
76	11.975	1089	1092	1095	rBV5	4333	9003	0.16%	0.023%
77	12.172	1108	1112	1115	rBV3	5848	14259	0.25%	0.037%
78	12.261	1118	1121	1123	rBV4	4430	7962	0.14%	0.021%
79	12.389	1126	1134	1136	rBV	200728	377730	6.63%	0.984%
80	12.438	1136	1139	1147	rVB	449671	787138	13.82%	2.050%
81	12.674	1160	1163	1168	rBV6	4315	11422	0.20%	0.030%
82	12.763	1170	1172	1175	rVB4	3500	5705	0.10%	0.015%
83	12.822	1175	1178	1179	rBV3	3235	5124	0.09%	0.013%
84	12.900	1183	1186	1187	rBV3	2620	4808	0.08%	0.013%
85	13.068	1202	1203	1208	rVB5	3442	6030	0.11%	0.016%
86	13.166	1211	1213	1216	rBV4	3063	5375	0.09%	0.014%
87	13.324	1225	1229	1230	rBV4	6162	9729	0.17%	0.025%
88	13.353	1230	1232	1233	rVB2	4914	4924	0.09%	0.013%
89	13.412	1233	1238	1250	rBV	1315149	2162722	37.97%	5.631%
90	13.639	1260	1261	1264	rBV3	3157	5173	0.09%	0.013%
91	13.737	1267	1271	1281	rVV	1200378	2032958	35.69%	5.293%
92	13.924	1288	1290	1291	rVB2	6072	5648	0.10%	0.015%
93	13.963	1291	1294	1295	rBV3	9825	15445	0.27%	0.040%
94	14.013	1295	1299	1305	rVV2	137042	262247	4.60%	0.683%
95	14.180	1314	1316	1320	rVB5	5221	9512	0.17%	0.025%
96	14.239	1320	1322	1323	rBV2	5350	7306	0.13%	0.019%
97	14.288	1324	1327	1329	rBV4	12281	23375	0.41%	0.061%
98	14.465	1342	1345	1346	rBV3	6263	12484	0.22%	0.033%
99	14.534	1350	1352	1355	rVV4	7115	12975	0.23%	0.034%
100	15.587	1455	1459	1463	rBV	64572	126317	2.22%	0.329%

Sum of corrected areas: 38405656

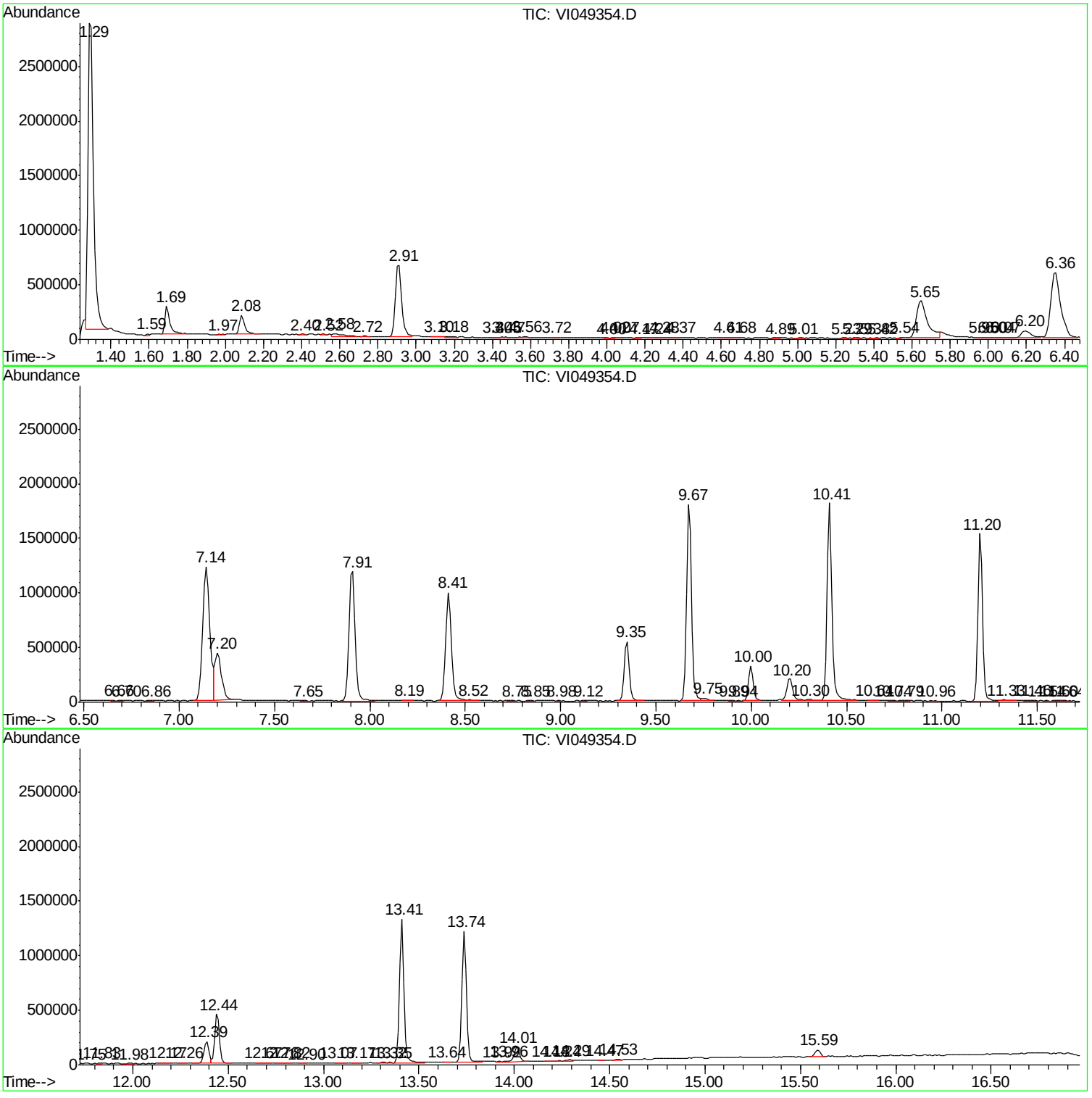
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049354.D
Acq On : 12 May 2016 16:51
Operator : FY/SY
Sample : H3056-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4023

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049354.D
Acq On : 12 May 2016 16:51
Operator : FY/SY
Sample : H3056-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4023

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

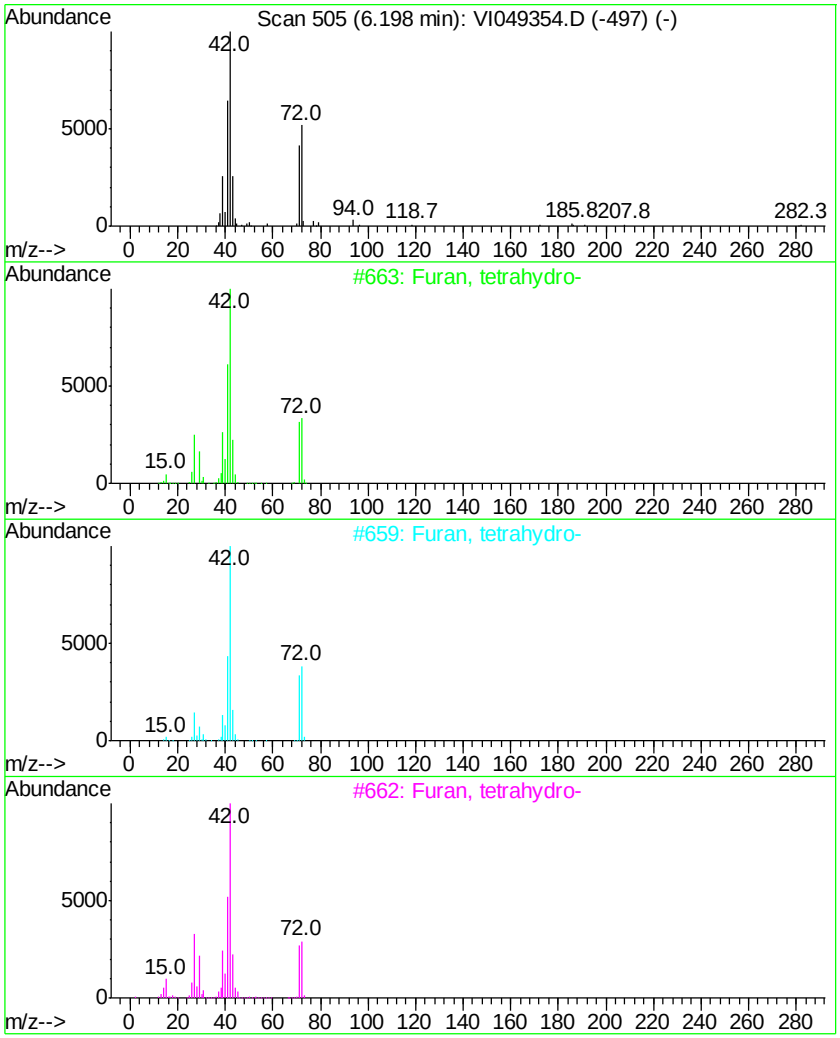
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

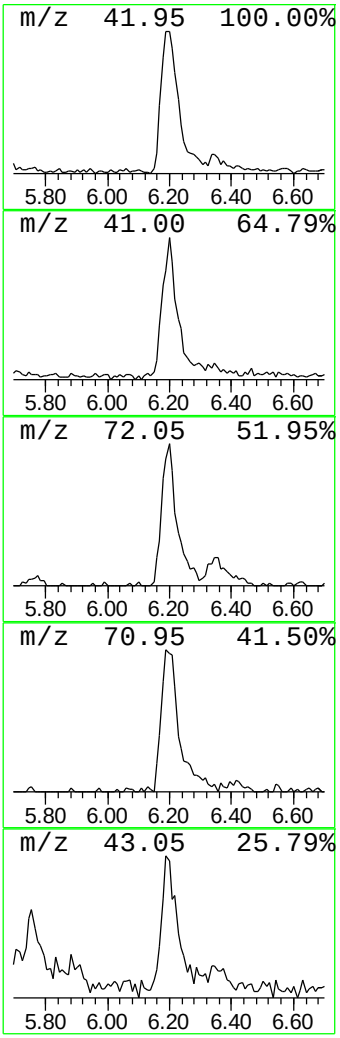
****

Peak Number 2 Furan, tetrahydro- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.20	0.45 ug/L	244234	1,4-Difluorobenzene	7.91

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Furan, tetrahydro-	72	C4H8O	000109-99-9	86
2	Furan, tetrahydro-	72	C4H8O	000109-99-9	78
3	Furan, tetrahydro-	72	C4H8O	000109-99-9	78
4	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	52
5	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	52





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049354.D
Acq On : 12 May 2016 16:51
Operator : FY/SY
Sample : H3056-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4023

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Furan, tetrahydro-	6.20	0.5	ug/L	244234	1	7.91	2713940	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4024

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049355.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	24	E
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4024

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049355.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	3.8	
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.75	
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4024

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049355.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4024

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049355.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	018952-41-5	Formamide, N-methylthio	5.78	0.34	JN
2	000109-99-9	Furan, tetrahydro-	6.22	0.35	JN
3	E966796	Total Alkanes	N/A	0.0	

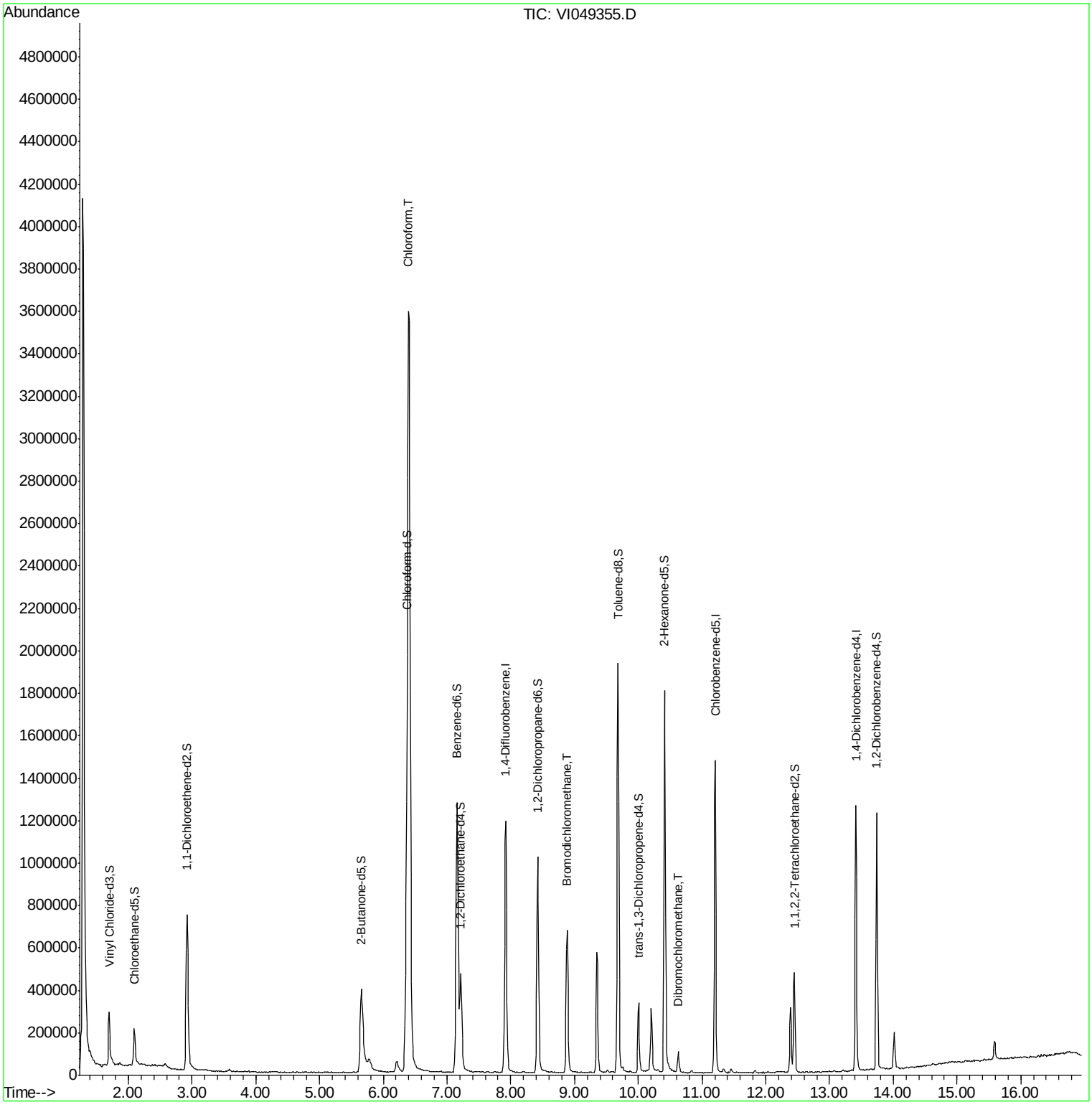
EPA-designated Registry Number.

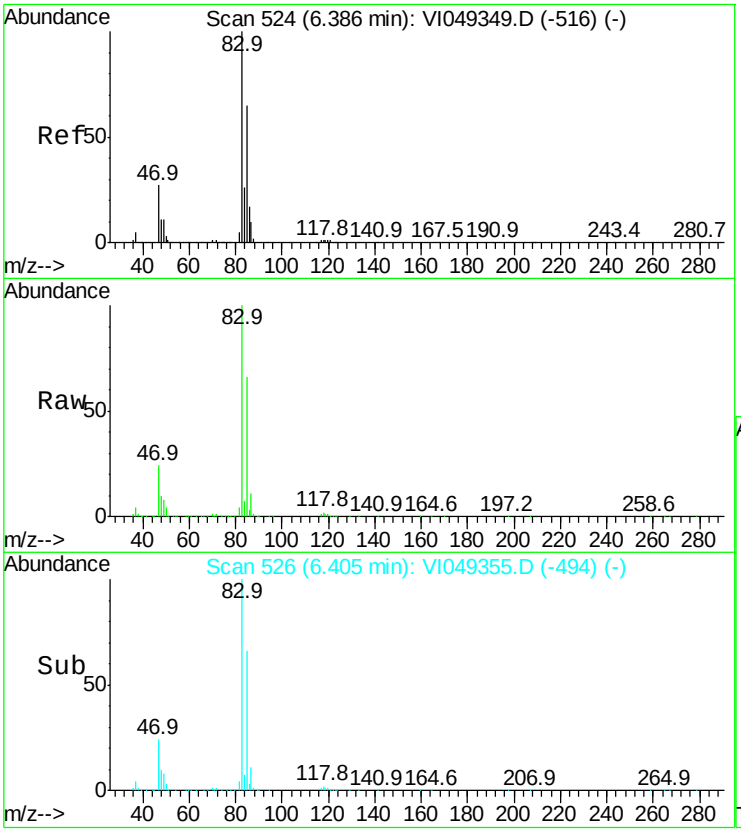
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049355.D
Acq On : 12 May 2016 17:22
Operator : FY/SY
Sample : H3056-02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4024

Quant Time: May 13 04:49:38 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration



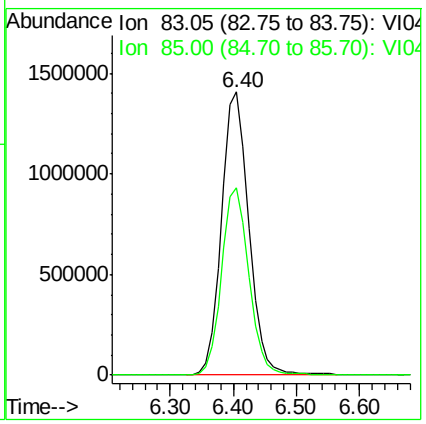


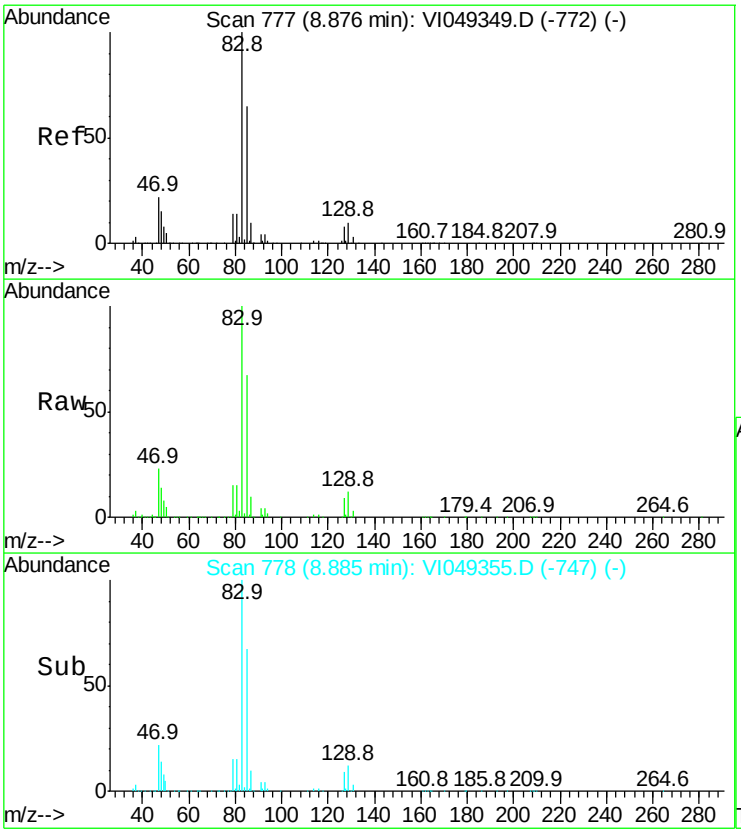
#25
Chloroform
Concen: 24.47 ug/L
RT: 6.40 min Scan# 526
Delta R.T. 0.02 min
Lab File: VI049355.D
Acq: 12 May 2016 17:22

Instrument :
MSVOA_I
ClientSampleId :
H4024

Tgt Ion: 83 Resp: 4231617

Ion	Ratio	Lower	Upper
83	100		
85	66.1	47.3	87.8

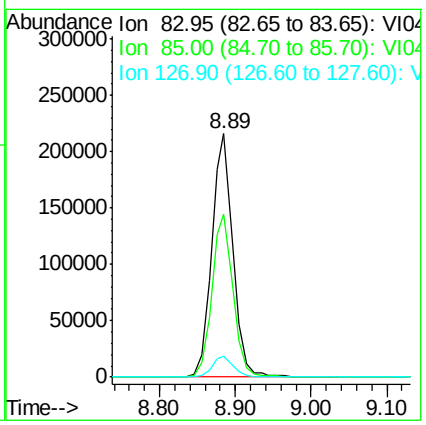


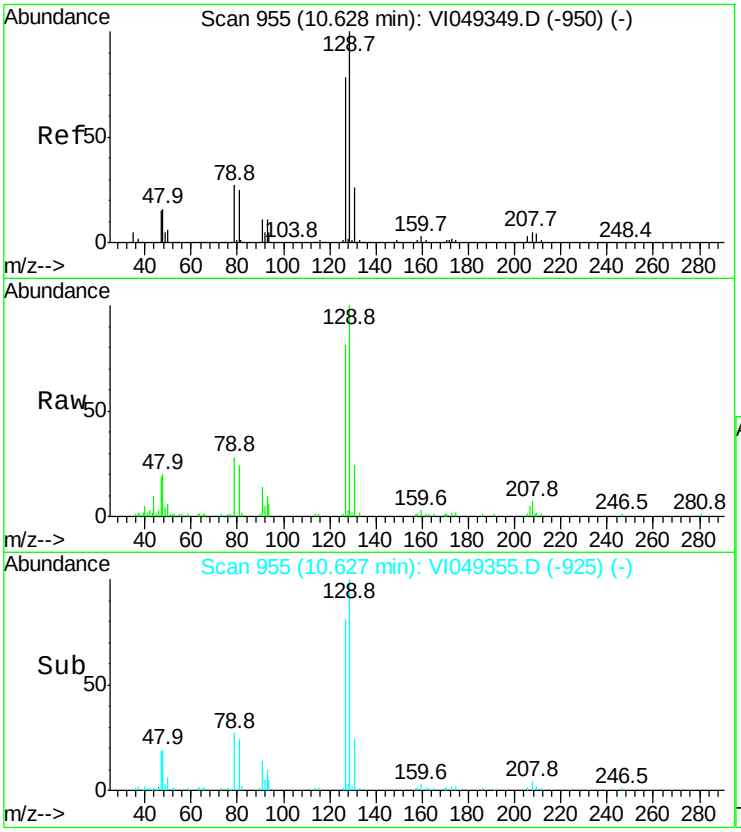


#38
Bromodichloromethane
Concen: 3.78 ug/L
RT: 8.89 min Scan# 778
Delta R.T. 0.01 min
Lab File: VI049355.D
Acq: 12 May 2016 17:22

Tgt Ion: 83 Resp: 423645

Ion	Ratio	Lower	Upper
83	100		
85	66.7	44.7	83.1
127	8.8	6.6	9.8



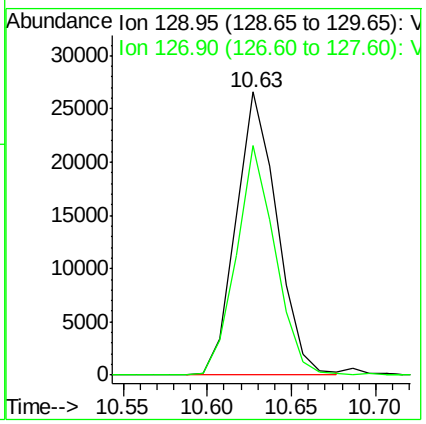


#49
Dibromochloromethane
Concen: 0.75 ug/L
RT: 10.63 min Scan# 955
Delta R.T. -0.00 min
Lab File: VI049355.D
Acq: 12 May 2016 17:22

Tgt Ion:129 Resp: 44886

Ion	Ratio	Lower	Upper
129	100		
127	81.0	53.9	100.1

Instrument :
MSVOA_I
ClientSampleId :
H4024



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049355.D
Acq On : 12 May 2016 17:22
Operator : FY/SY
Sample : H3056-02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4024

Quant Time: May 13 04:49:38 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1075382	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	765128	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	288068	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	303096	4.58	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 91.60%			
7) Chloroethane-d5	2.09	69	192018	5.24	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 104.80%			
11) 1,1-Dichloroethene-d2	2.92	63	570141	3.66	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 73.20%			
20) 2-Butanone-d5	5.66	46	954770	66.61	ug/L	0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 133.22%#			
24) Chloroform-d	6.37	84	1100492	6.53	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 130.60%#			
26) 1,2-Dichloroethane-d4	7.21	65	415955	6.04	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 120.80%			
32) Benzene-d6	7.15	84	1633839	5.48	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 109.60%			
36) 1,2-Dichloropropane-d6	8.42	67	464642	5.54	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 110.80%			
41) Toluene-d8	9.68	98	1181106	5.37	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.40%			
43) trans-1,3-Dichloropropene-	10.01	79	158915	4.81	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 96.20%			
46) 2-Hexanone-d5	10.41	63	625629	60.07	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 120.14%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	214034	5.62	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 112.40%			
63) 1,2-Dichlorobenzene-d4	13.75	152	286877	5.68	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 113.60%			
Target Compounds						Qvalue
25) Chloroform	6.40	83	4231617	24.47	ug/L	98
38) Bromodichloromethane	8.89	83	423645	3.78	ug/L	97
49) Dibromochloromethane	10.63	129	44886	0.75	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049355.D
Acq On : 12 May 2016 17:22
Operator : FY/SY
Sample : H3056-02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4024

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.287	3	6	16	rVB	4022558	8606947	68.77%	15.806%
2	1.602	36	38	39	rBV2	11501	14194	0.11%	0.026%
3	1.700	45	48	57	rVB	251940	481145	3.84%	0.884%
4	1.868	63	65	72	rVB3	13677	28279	0.23%	0.052%
5	2.094	84	88	96	rBV	170413	348959	2.79%	0.641%
6	2.576	134	137	149	rVB6	25372	85572	0.68%	0.157%
7	2.773	155	157	159	rBV3	5431	7389	0.06%	0.014%
8	2.822	159	162	166	rVV4	4442	7998	0.06%	0.015%
9	2.921	167	172	188	rVB	733048	1658913	13.25%	3.046%
10	3.383	217	219	221	rBV3	4756	6369	0.05%	0.012%
11	3.531	233	234	235	rBV	5320	4648	0.04%	0.009%
12	3.580	237	239	245	rVB6	12221	25974	0.21%	0.048%
13	3.649	245	246	250	rBV3	4336	6110	0.05%	0.011%
14	3.885	268	270	272	rVB3	5742	6877	0.05%	0.013%
15	3.925	272	274	275	rBV2	4104	4218	0.03%	0.008%
16	3.954	275	277	279	rBV3	3159	6801	0.05%	0.012%
17	4.053	286	287	290	rVB2	4679	4677	0.04%	0.009%
18	4.220	300	304	305	rBV4	3334	7703	0.06%	0.014%
19	4.279	308	310	311	rVV2	3786	4466	0.04%	0.008%
20	4.318	312	314	317	rVB4	5546	9581	0.08%	0.018%
21	4.446	323	327	328	rBV2	3420	6554	0.05%	0.012%
22	4.584	338	341	343	rVB4	3194	4244	0.03%	0.008%
23	4.643	346	347	352	rBV4	3809	6993	0.06%	0.013%
24	4.909	371	374	375	rBV3	4175	4810	0.04%	0.009%
25	4.938	375	377	379	rVB3	3653	5022	0.04%	0.009%
26	4.988	379	382	384	rBV3	5099	9140	0.07%	0.017%
27	5.096	387	393	394	rBV5	2931	6569	0.05%	0.012%
28	5.185	399	402	403	rVB3	3568	4801	0.04%	0.009%
29	5.234	403	407	408	rBV3	2907	4387	0.04%	0.008%
30	5.539	436	438	441	rVB4	4885	6486	0.05%	0.012%
31	5.588	441	443	444	rBV2	4666	5335	0.04%	0.010%
32	5.657	444	450	458	rBV	390926	1370384	10.95%	2.517%
33	5.775	459	462	470	rVB2	50568	178928	1.43%	0.329%
34	5.942	478	479	483	rVB4	5607	10891	0.09%	0.020%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049355.D
Acq On : 12 May 2016 17:22
Operator : FY/SY
Sample : H3056-02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4024

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.218	499	507	515	rBV	50604	182481	1.46%	0.335%
36	6.395	515	525	538	rBV2	3580686	12516294	100.00%	22.985%
37	7.153	596	602	606	rBV	1270061	3371098	26.93%	6.191%
38	7.212	606	608	619	rVB	458140	1093535	8.74%	2.008%
39	7.429	627	630	633	rBV4	2923	6168	0.05%	0.011%
40	7.547	640	642	647	rVB6	4545	9115	0.07%	0.017%
41	7.625	647	650	652	rBV3	3352	7081	0.06%	0.013%
42	7.753	659	663	666	rBV6	6136	15968	0.13%	0.029%
43	7.852	670	673	674	rBV3	3822	4797	0.04%	0.009%
44	7.921	674	680	688	rBV	1188390	2613464	20.88%	4.799%
45	8.177	704	706	708	rVV3	3329	6008	0.05%	0.011%
46	8.206	708	709	716	rVB6	5867	6907	0.06%	0.013%
47	8.423	725	731	738	rBV	1018757	2199709	17.57%	4.040%
48	8.521	740	741	749	rVB8	8797	23131	0.18%	0.042%
49	8.678	755	757	761	rBV5	3658	6247	0.05%	0.011%
50	8.885	772	778	788	rBV	669717	1336147	10.68%	2.454%
51	9.043	793	794	797	rBV3	3289	4905	0.04%	0.009%
52	9.190	807	809	811	rBV2	3024	4826	0.04%	0.009%
53	9.259	813	816	818	rVB3	4412	7146	0.06%	0.013%
54	9.348	820	825	833	rBV	567047	1067508	8.53%	1.960%
55	9.515	838	842	846	rVB5	11332	27664	0.22%	0.051%
56	9.574	846	848	849	rBV	5298	8880	0.07%	0.016%
57	9.682	854	859	865	rBV	1926059	3370690	26.93%	6.190%
58	9.751	865	866	873	rVB3	22275	45453	0.36%	0.083%
59	9.830	873	874	877	rVB3	3624	4808	0.04%	0.009%
60	9.869	877	878	881	rVB3	6305	6255	0.05%	0.011%
61	10.007	888	892	898	rBV	328840	586911	4.69%	1.078%
62	10.135	903	905	907	rBV3	5304	11119	0.09%	0.020%
63	10.204	907	912	920	rVB	290916	563960	4.51%	1.036%
64	10.411	929	933	950	rBV	1794863	3261955	26.06%	5.990%
65	10.627	950	955	962	rVB	100141	183681	1.47%	0.337%
66	10.755	967	968	970	rVB2	3975	4600	0.04%	0.008%
67	10.844	970	977	980	rBV7	13051	34604	0.28%	0.064%
68	10.952	986	988	990	rBV3	3805	6317	0.05%	0.012%
69	11.031	995	996	998	rBV2	3094	4320	0.03%	0.008%
70	11.208	1009	1014	1023	rVV	1473036	2562491	20.47%	4.706%
71	11.336	1024	1027	1034	rVB3	19604	47226	0.38%	0.087%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049355.D
Acq On : 12 May 2016 17:22
Operator : FY/SY
Sample : H3056-02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4024

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.454	1036	1039	1043	rBV3	19237	38591	0.31%	0.071%
73	11.592	1051	1053	1056	rVB4	3941	7348	0.06%	0.013%
74	11.631	1056	1057	1061	rBV4	3428	6572	0.05%	0.012%
75	11.680	1061	1062	1066	rVB4	3532	4752	0.04%	0.009%
76	11.769	1069	1071	1074	rVB4	2621	4204	0.03%	0.008%
77	11.828	1074	1077	1083	rBV4	12336	28324	0.23%	0.052%
78	11.956	1089	1090	1092	rBV2	5788	6119	0.05%	0.011%
79	12.044	1095	1099	1101	rVB3	5605	7205	0.06%	0.013%
80	12.103	1103	1105	1108	rVB4	2589	5495	0.04%	0.010%
81	12.172	1110	1112	1115	rBV3	6443	15426	0.12%	0.028%
82	12.389	1128	1134	1137	rVV	306499	561914	4.49%	1.032%
83	12.448	1137	1140	1149	rVB	469758	791302	6.32%	1.453%
84	12.625	1156	1158	1163	rVB5	2287	5881	0.05%	0.011%
85	12.773	1171	1173	1175	rBV3	3006	5284	0.04%	0.010%
86	12.881	1183	1184	1185	rBV	4645	4229	0.03%	0.008%
87	12.970	1190	1193	1195	rBV5	3647	6611	0.05%	0.012%
88	13.058	1198	1202	1209	rVB9	3933	12108	0.10%	0.022%
89	13.216	1214	1218	1221	rBV5	8653	17367	0.14%	0.032%
90	13.344	1230	1231	1234	rVB3	5192	6697	0.05%	0.012%
91	13.412	1234	1238	1249	rBV	1253581	2090012	16.70%	3.838%
92	13.590	1254	1256	1258	rBV3	6101	7049	0.06%	0.013%
93	13.659	1258	1263	1265	rBV5	4322	10983	0.09%	0.020%
94	13.737	1267	1271	1276	rBV	1208093	2081125	16.63%	3.822%
95	14.013	1294	1299	1303	rBV2	173681	335635	2.68%	0.616%
96	14.131	1308	1311	1314	rBV4	5017	9440	0.08%	0.017%
97	14.623	1358	1361	1364	rBV5	8325	19667	0.16%	0.036%
98	15.430	1441	1443	1445	rBV3	10336	13720	0.11%	0.025%
99	15.588	1455	1459	1463	rBV	84422	172332	1.38%	0.316%
100	16.316	1532	1533	1535	rBV2	12959	13221	0.11%	0.024%

Sum of corrected areas: 54453446

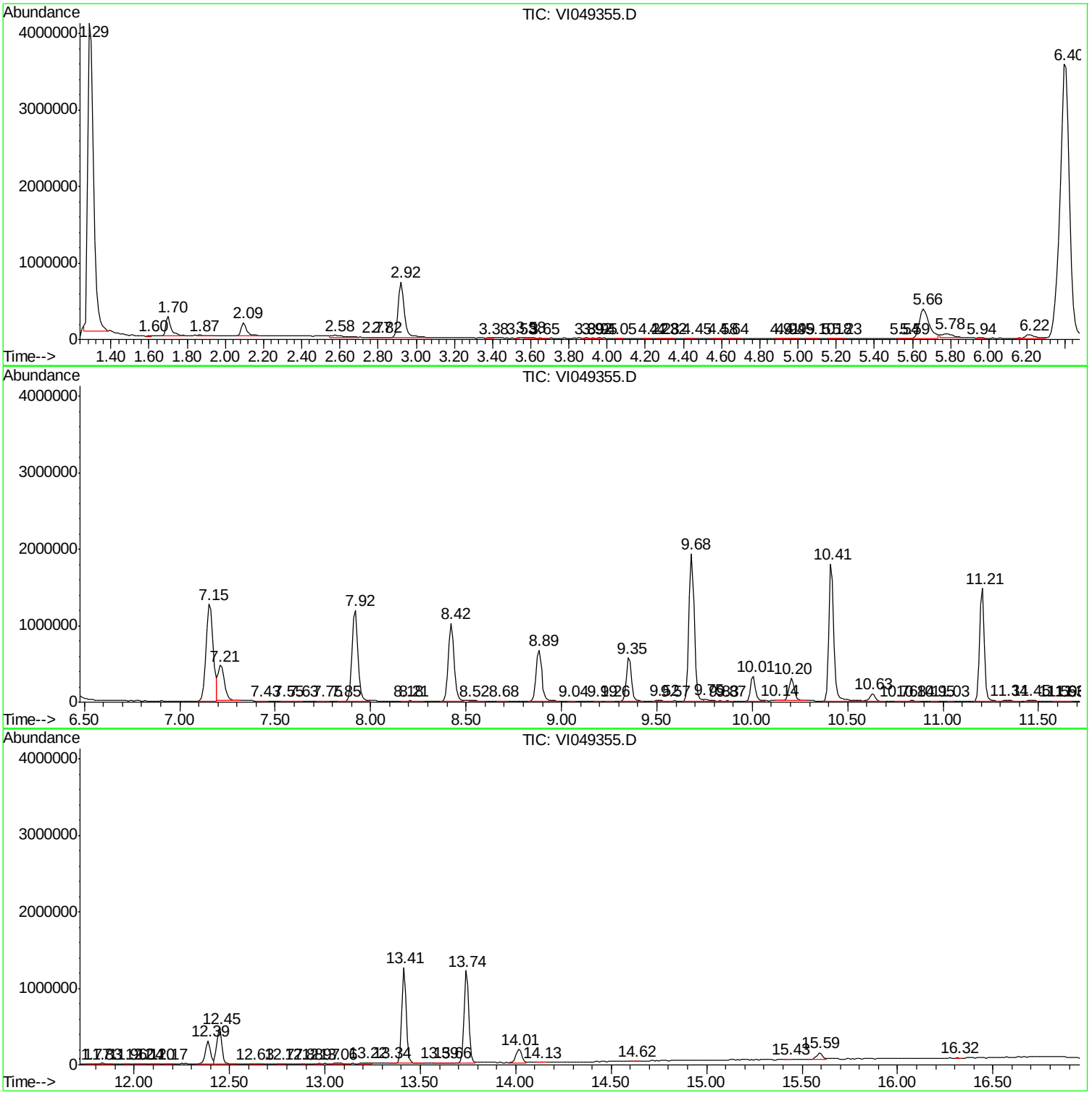
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049355.D
Acq On : 12 May 2016 17:22
Operator : FY/SY
Sample : H3056-02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4024

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049355.D
Acq On : 12 May 2016 17:22
Operator : FY/SY
Sample : H3056-02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4024

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

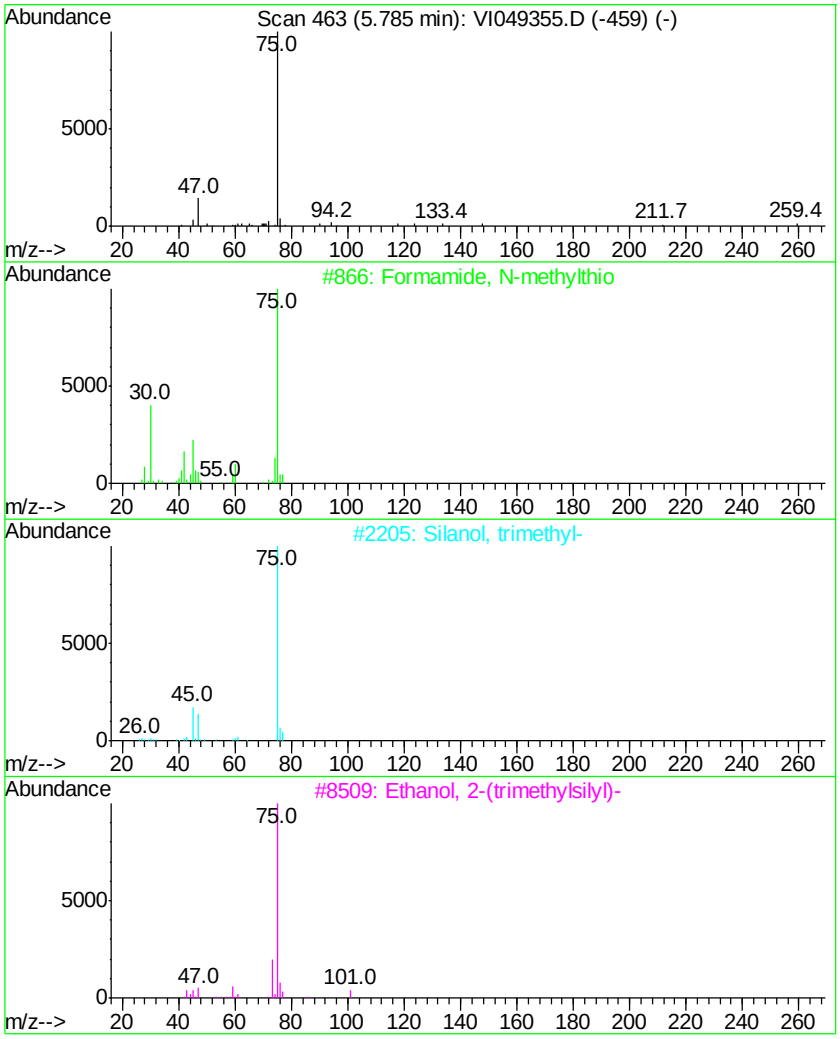
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

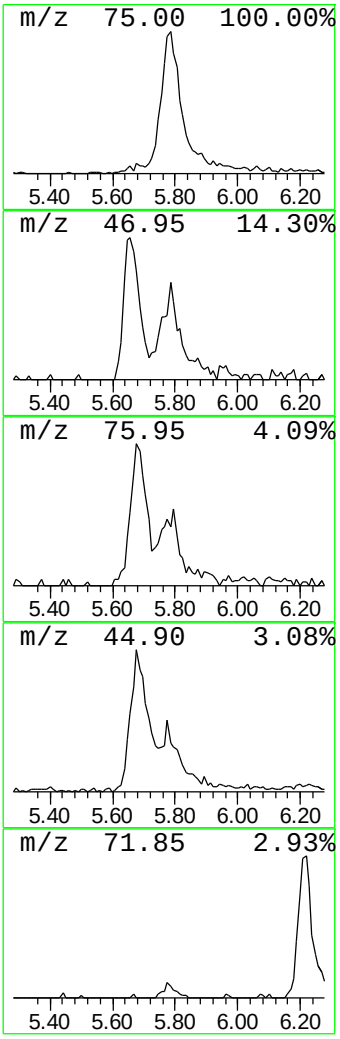
****

Peak Number 2 Formamide, N-methylthio Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.78	0.34 ug/L	178928	1,4-Difluorobenzene	7.92

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Formamide, N-methylthio	75	C2H5NS	018952-41-5	56
2	Silanol, trimethyl-	90	C3H10OSi	001066-40-6	56
3	Ethanol, 2-(trimethylsilyl)-	118	C5H14OSi	002916-68-9	45
4	Dimethyl(isopropyl)silyloxycyclo...	200	C11H24OSi	213737-69-0	40
5	Chloromethyldimethylisopropoxysi...	166	C6H15ClOSi	018171-11-4	40





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049355.D
Acq On : 12 May 2016 17:22
Operator : FY/SY
Sample : H3056-02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4024

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

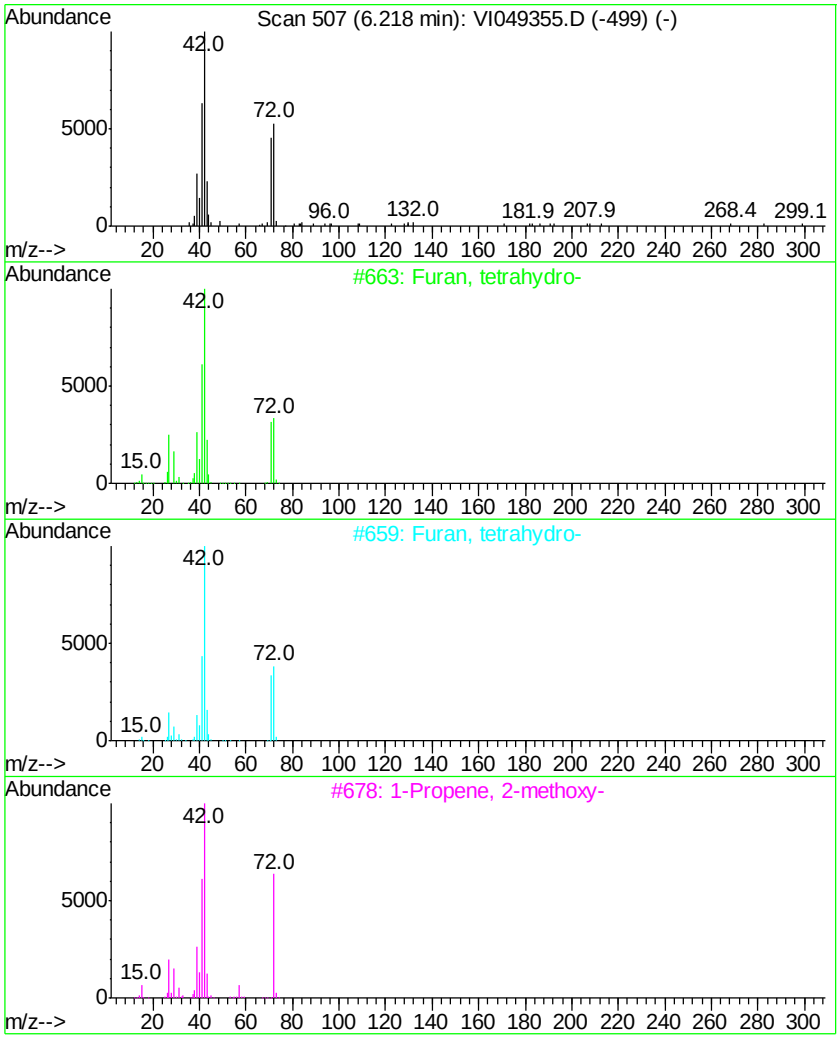
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

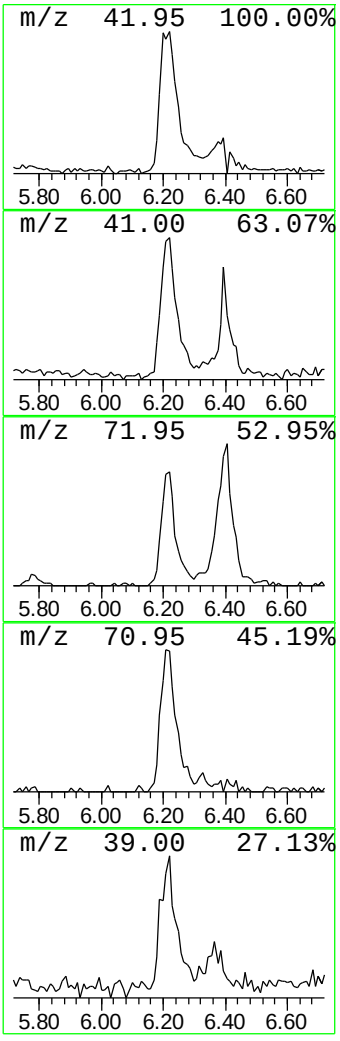
****

Peak Number 3 Furan, tetrahydro- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.22	0.35 ug/L	182481	1,4-Difluorobenzene	7.92

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Furan, tetrahydro-	72	C4H8O	000109-99-9	90
2	Furan, tetrahydro-	72	C4H8O	000109-99-9	86
3	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	52
4	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	52
5	Formaldehyde, dimethylhydrazone	72	C3H8N2	002035-89-4	45





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049355.D
Acq On : 12 May 2016 17:22
Operator : FY/SY
Sample : H3056-02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4024

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Formamide, N-meth...	5.78	0.3	ug/L	178928	1	7.92	2613460	5.0
Furan, tetrahydro-	6.22	0.3	ug/L	182481	1	7.92	2613460	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4024DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019153.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	21	D
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4024DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019153.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	3.1	D
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	2.5	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	0.55	JD
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4024DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019153.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4024DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-02DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019153.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/13/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 5.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

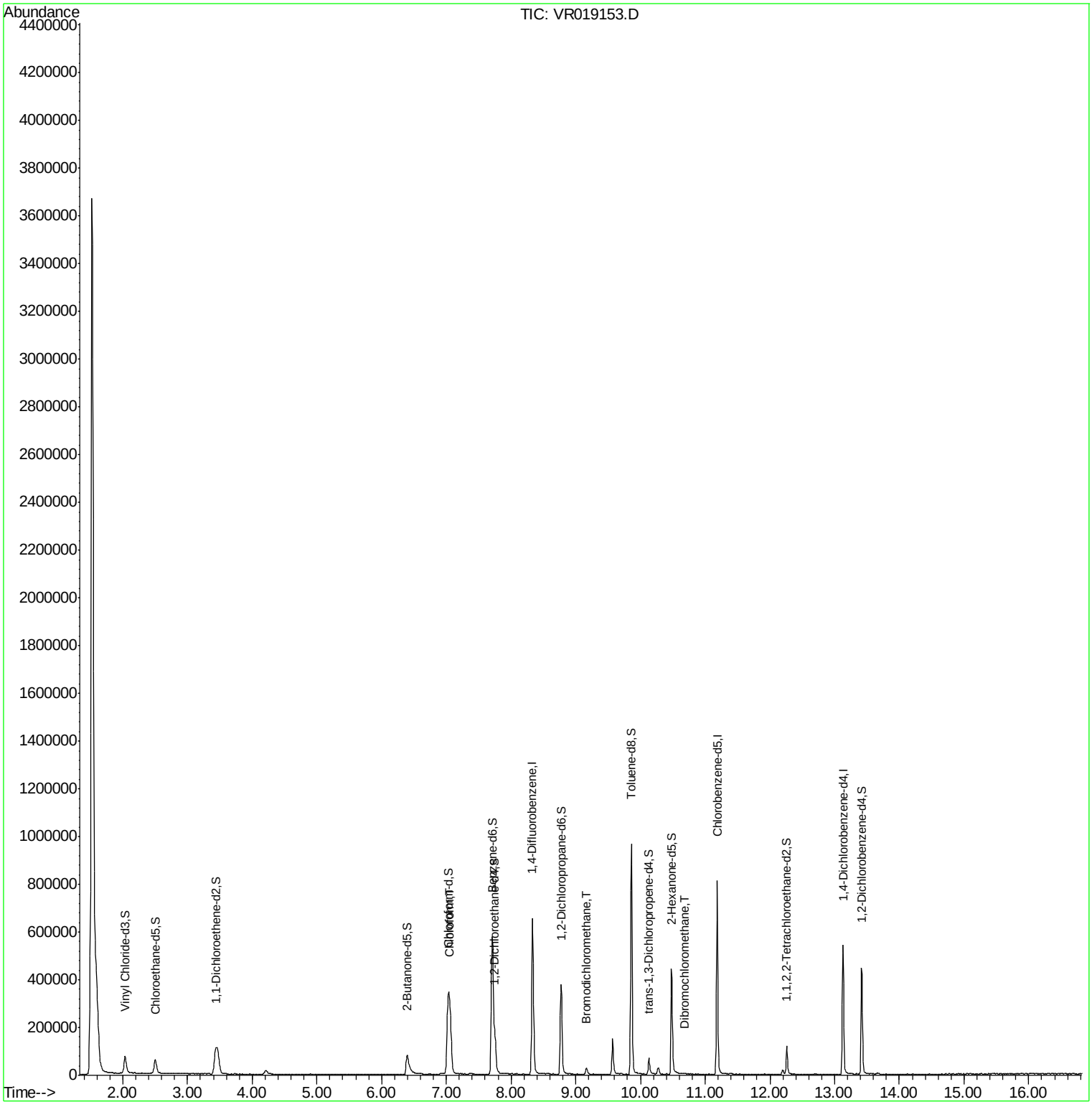
EPA-designated Registry Number.

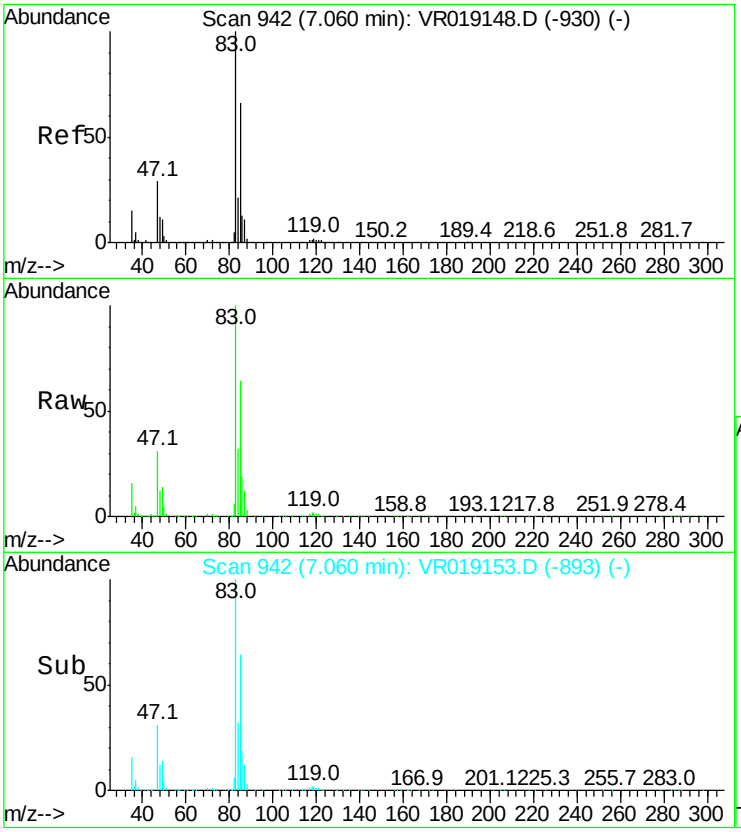
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019153.D
Acq On : 13 May 2016 14:27
Operator : MD\SY
Sample : H3056-02DL 5X
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4024DL

Quant Time: May 14 01:30:53 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration



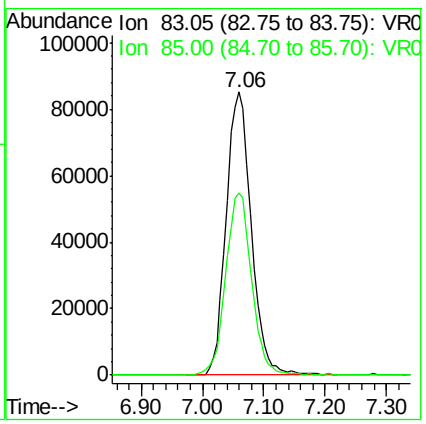


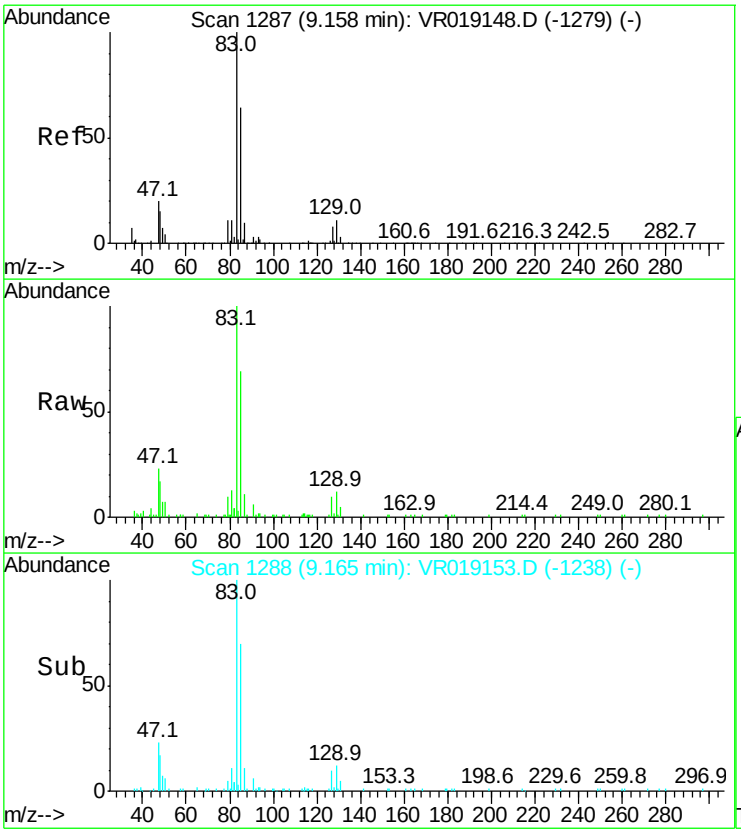
#25
Chloroform
Concen: 4.25 ug/L
RT: 7.06 min Scan# 942
Delta R.T. -0.00 min
Lab File: VR019153.D
Acq: 13 May 2016 14:27

Instrument : MSVOA_R
ClientSampleId : H4024DL

Tgt Ion: 83 Resp: 239213

Ion	Ratio	Lower	Upper
83	100		
85	64.3	46.0	85.4

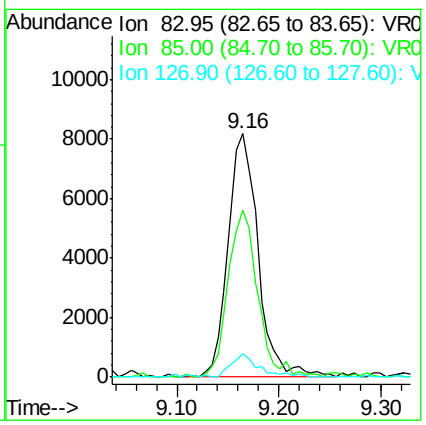


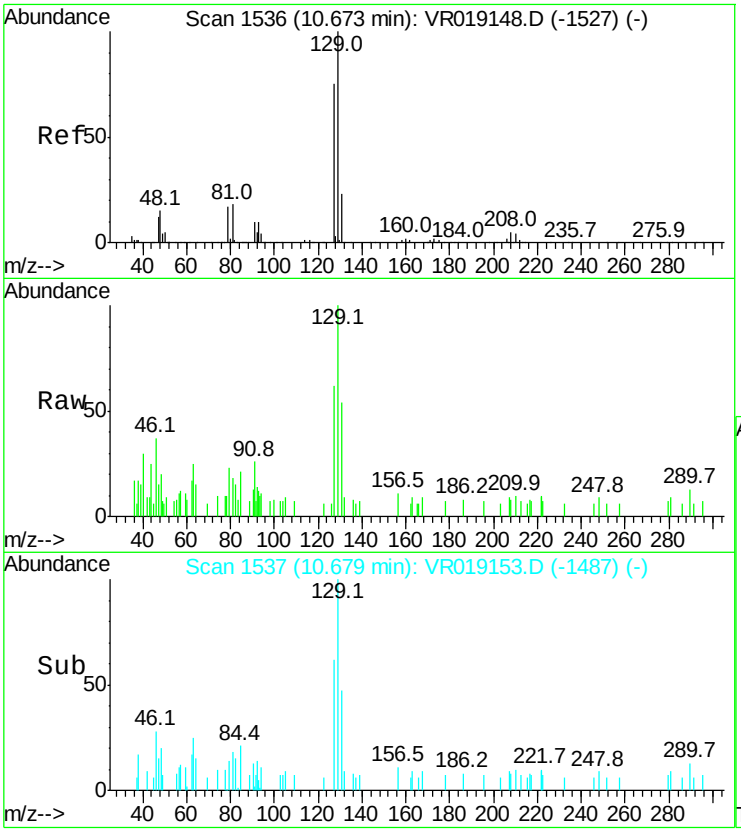


#38
Bromodichloromethane
Concen: 0.62 ug/L
RT: 9.16 min Scan# 1288
Delta R.T. 0.01 min
Lab File: VR019153.D
Acq: 13 May 2016 14:27

Tgt Ion: 83 Resp: 16566

Ion	Ratio	Lower	Upper
83	100		
85	68.6	44.4	82.4
127	9.8	7.2	10.8



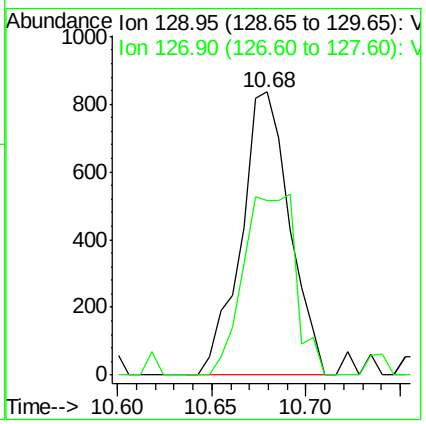


#49
Dibromochloromethane
Concen: 0.11 ug/L
RT: 10.68 min Scan# 1537
Delta R.T. 0.01 min
Lab File: VR019153.D
Acq: 13 May 2016 14:27

Instrument :
MSVOA_R
ClientSampleId :
H4024DL

Tgt Ion:129 Resp: 1493

Ion	Ratio	Lower	Upper
129	100		
127	61.6	49.5	91.9



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019153.D
Acq On : 13 May 2016 14:27
Operator : MD\SY
Sample : H3056-02DL 5X
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4024DL

Quant Time: May 14 01:30:53 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	550261	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	391903	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	130578	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	116032	4.68	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 93.60%			
7) Chloroethane-d5	2.50	69	87773	4.99	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 99.80%			
11) 1,1-Dichloroethene-d2	3.45	63	189700	3.32	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 66.40%			
20) 2-Butanone-d5	6.40	46	167305	52.62	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 105.24%			
24) Chloroform-d	7.03	84	300483	4.92	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.40%			
26) 1,2-Dichloroethane-d4	7.75	65	121957	5.05	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.00%			
32) Benzene-d6	7.71	84	640712	5.10	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.00%			
36) 1,2-Dichloropropane-d6	8.78	67	169890	5.22	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.40%			
41) Toluene-d8	9.86	98	597031	5.05	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.00%			
43) trans-1,3-Dichloropropene-	10.13	79	36738	4.30	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 86.00%			
46) 2-Hexanone-d5	10.48	63	145562	54.37	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 108.74%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	53762	4.62	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 92.40%			
63) 1,2-Dichlorobenzene-d4	13.42	152	112228	5.19	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 103.80%			
Target Compounds						Qvalue
25) Chloroform	7.06	83	239213	4.25	ug/L	98
38) Bromodichloromethane	9.16	83	16566	0.62	ug/L	94
49) Dibromochloromethane	10.68	129	1493	0.11	ug/L	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019153.D
Acq On : 13 May 2016 14:27
Operator : MD\SY
Sample : H3056-02DL 5X
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4024DL

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	17	32	64	rBV	3668895	11060581	100.00%	48.846%
2	2.035	108	116	128	rBV	70978	182893	1.65%	0.808%
3	2.503	179	193	204	rBV	60225	178100	1.61%	0.787%
4	3.440	336	347	349	rBV4	111101	288765	2.61%	1.275%
5	6.396	827	833	847	rBV	79307	263451	2.38%	1.163%
6	7.035	927	938	957	rBV4	342745	1341713	12.13%	5.925%
7	7.711	1039	1049	1068	rBV2	576624	1667505	15.08%	7.364%
8	8.331	1143	1151	1167	rBV	652942	1305365	11.80%	5.765%
9	8.775	1216	1224	1239	rBV	375612	752913	6.81%	3.325%
10	9.566	1349	1354	1364	rBV	148855	262796	2.38%	1.161%
11	9.858	1396	1402	1413	rBV	964930	1577053	14.26%	6.965%
12	10.132	1440	1447	1457	rBV	68309	126982	1.15%	0.561%
13	10.479	1498	1504	1515	rBV	441485	715485	6.47%	3.160%
14	11.184	1614	1620	1634	rBV	810832	1211972	10.96%	5.352%
15	12.261	1792	1797	1809	rVB2	117615	186617	1.69%	0.824%
16	13.131	1932	1940	1955	rBV	541619	825380	7.46%	3.645%
17	13.417	1981	1987	1999	rBV	446473	696334	6.30%	3.075%

Sum of corrected areas: 22643905

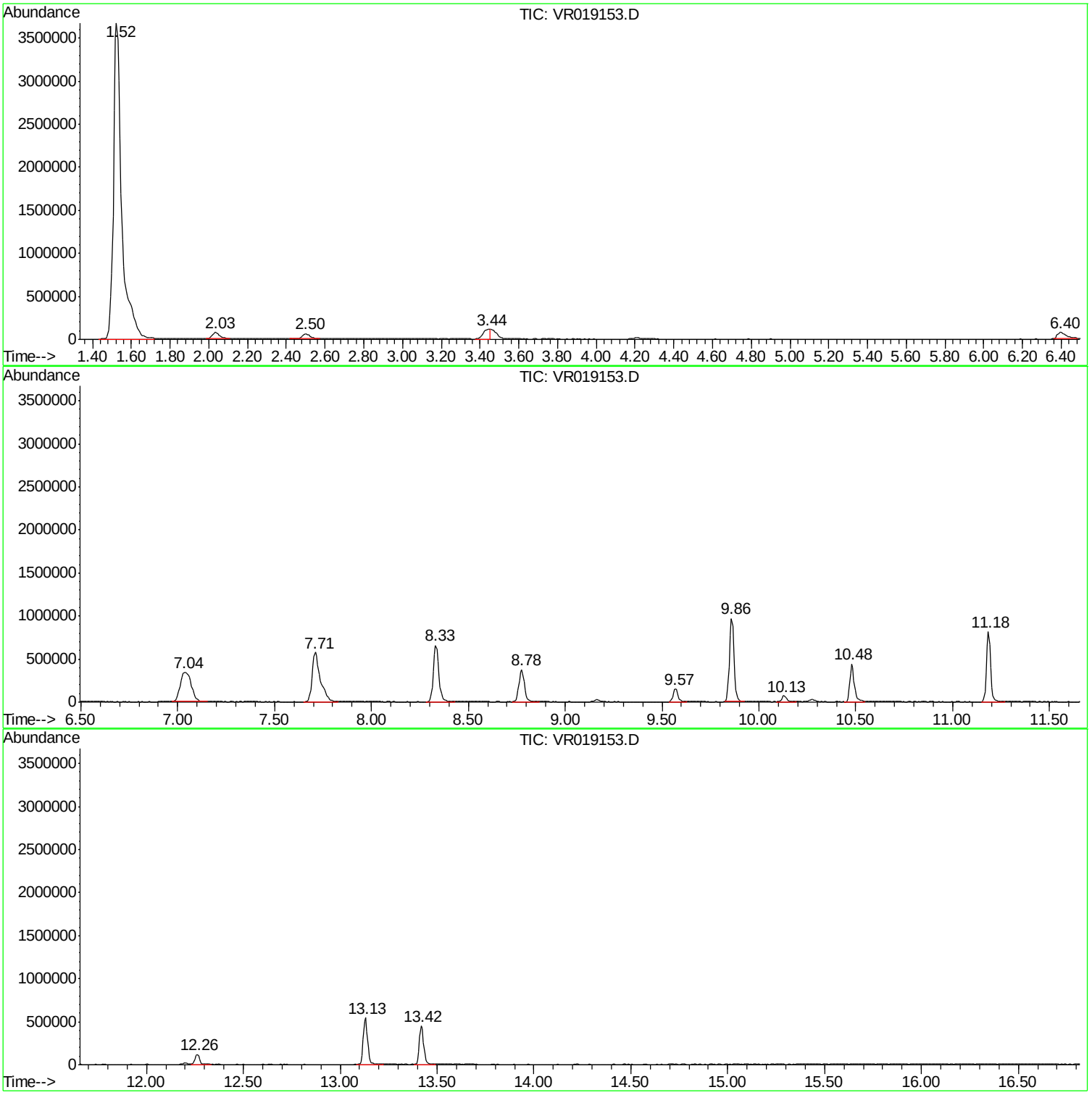
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019153.D
Acq On : 13 May 2016 14:27
Operator : MD\SY
Sample : H3056-02DL 5X
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4024DL

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019153.D
Acq On : 13 May 2016 14:27
Operator : MD\SY
Sample : H3056-02DL 5X
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H4024DL

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019153.D
Acq On : 13 May 2016 14:27
Operator : MD\SY
Sample : H3056-02DL 5X
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4024DL

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4092

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-03
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049356.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4092

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-03
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049356.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4092

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-03
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049356.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4092

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-03
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049356.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	010032-05-0	Heptane, 1,1-dimethoxy-	5.77	1.1	JN
2	E966796	Total Alkanes	N/A	0.0	

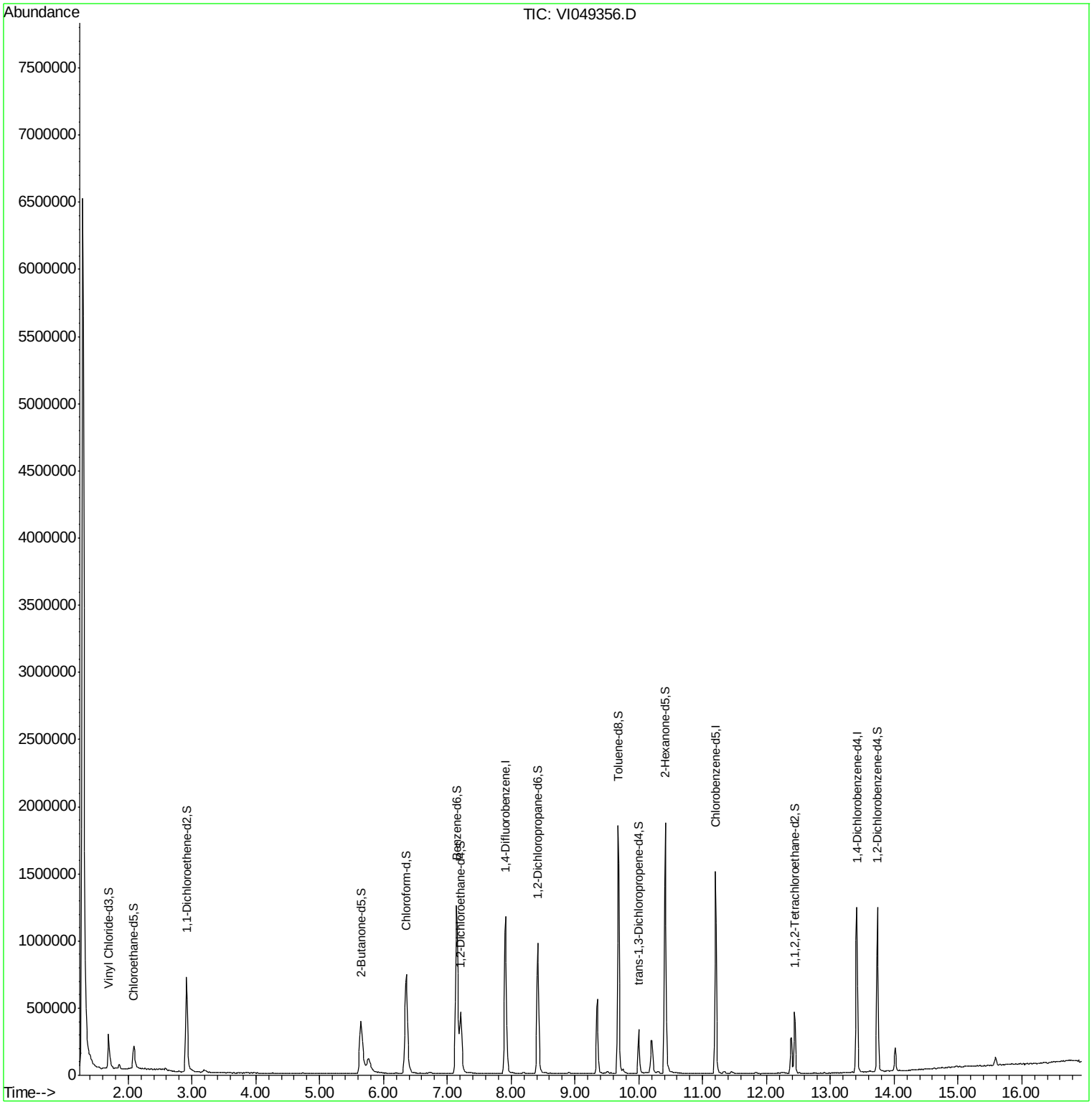
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049356.D
Acq On : 12 May 2016 17:54
Operator : FY/SY
Sample : H3056-03
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4092

Quant Time: May 13 04:53:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049356.D
Acq On : 12 May 2016 17:54
Operator : FY/SY
Sample : H3056-03
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4092

Quant Time: May 13 04:53:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1079207	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	741569	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	288043	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	297170	4.47	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 89.40%			
7) Chloroethane-d5	2.09	69	193383	5.26	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 105.20%			
11) 1,1-Dichloroethene-d2	2.91	63	561604	3.59	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 71.80%			
20) 2-Butanone-d5	5.65	46	941724	65.47	ug/L	0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 130.94%#			
24) Chloroform-d	6.36	84	929776	5.50	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 110.00%			
26) 1,2-Dichloroethane-d4	7.21	65	408592	5.91	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 118.20%			
32) Benzene-d6	7.15	84	1601116	5.54	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 110.80%			
36) 1,2-Dichloropropane-d6	8.42	67	450338	5.54	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 110.80%			
41) Toluene-d8	9.68	98	1148861	5.39	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.80%			
43) trans-1,3-Dichloropropene-	10.00	79	163735	5.12	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 102.40%			
46) 2-Hexanone-d5	10.41	63	619493	61.37	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 122.74%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	209553	5.67	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 113.40%			
63) 1,2-Dichlorobenzene-d4	13.74	152	283913	5.62	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 112.40%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049356.D
Acq On : 12 May 2016 17:54
Operator : FY/SY
Sample : H3056-03
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4092

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.290	3	6	30	rVB	6470173	16193124	100.00%	32.345%
2	1.595	35	37	44	rBV7	8014	25145	0.16%	0.050%
3	1.694	44	47	55	rVB	258529	464706	2.87%	0.928%
4	1.861	61	64	68	rVB2	33484	60312	0.37%	0.120%
5	2.009	77	79	80	rBV2	8637	9401	0.06%	0.019%
6	2.087	84	87	94	rVV	171778	356510	2.20%	0.712%
7	2.265	103	105	107	rVB3	9862	13102	0.08%	0.026%
8	2.304	107	109	112	rVB4	7005	12836	0.08%	0.026%
9	2.373	112	116	118	rBV5	7165	14324	0.09%	0.029%
10	2.452	122	124	125	rBV2	6786	6857	0.04%	0.014%
11	2.579	135	137	142	rVB2	19104	39865	0.25%	0.080%
12	2.796	157	159	163	rVB4	7975	16044	0.10%	0.032%
13	2.855	163	165	166	rBV2	3440	5010	0.03%	0.010%
14	2.914	166	171	177	rBV	706490	1553603	9.59%	3.103%
15	3.190	194	199	206	rVB3	18434	55504	0.34%	0.111%
16	3.396	218	220	223	rVB4	4470	7461	0.05%	0.015%
17	3.574	234	238	240	rBV5	6648	15306	0.09%	0.031%
18	3.662	243	247	250	rVB6	4459	6821	0.04%	0.014%
19	3.879	268	269	271	rVB3	5086	4868	0.03%	0.010%
20	3.928	271	274	276	rBV4	2849	7460	0.05%	0.015%
21	4.164	296	298	302	rBV4	4208	8067	0.05%	0.016%
22	4.912	372	374	378	rBV5	2948	6026	0.04%	0.012%
23	5.070	387	390	393	rVB4	4414	7929	0.05%	0.016%
24	5.129	393	396	397	rBV3	3487	6379	0.04%	0.013%
25	5.217	403	405	408	rBV4	3667	8348	0.05%	0.017%
26	5.266	408	410	414	rVV5	3963	8729	0.05%	0.017%
27	5.345	416	418	421	rVV4	4112	7418	0.05%	0.015%
28	5.434	424	427	428	rBV2	4494	8184	0.05%	0.016%
29	5.650	442	449	456	rBV	391993	1380298	8.52%	2.757%
30	5.768	456	461	475	rVV	109613	542642	3.35%	1.084%
31	5.916	475	476	477	rVV	9155	6868	0.04%	0.014%
32	5.936	477	478	481	rVV3	4564	8417	0.05%	0.017%
33	6.192	503	504	507	rVB3	4677	5482	0.03%	0.011%
34	6.270	510	512	514	rVB3	3266	4782	0.03%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049356.D
Acq On : 12 May 2016 17:54
Operator : FY/SY
Sample : H3056-03
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4092

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.359	514	521	534	rBV	735560	2242165	13.85%	4.479%
36	6.575	541	543	546	rBV4	3605	6232	0.04%	0.012%
37	6.723	554	558	565	rVB7	8018	24855	0.15%	0.050%
38	6.880	572	574	578	rVB5	5127	10566	0.07%	0.021%
39	6.989	583	585	587	rVB3	3082	4474	0.03%	0.009%
40	7.038	587	590	591	rBV2	4226	5683	0.04%	0.011%
41	7.058	591	592	595	rVB2	3990	5950	0.04%	0.012%
42	7.146	595	601	605	rBV	1256306	3327251	20.55%	6.646%
43	7.205	605	607	617	rVV	450958	1070125	6.61%	2.138%
44	7.323	617	619	623	rVB4	4538	7669	0.05%	0.015%
45	7.609	645	648	649	rVB3	3777	4549	0.03%	0.009%
46	7.628	649	650	653	rBV3	4978	7216	0.04%	0.014%
47	7.717	656	659	660	rBV2	2595	4755	0.03%	0.009%
48	7.914	673	679	690	rVV	1167487	2593834	16.02%	5.181%
49	8.189	702	707	710	rVB7	7143	18538	0.11%	0.037%
50	8.416	725	730	739	rBV	971179	2157719	13.32%	4.310%
51	8.524	739	741	747	rVV7	9053	22554	0.14%	0.045%
52	8.613	747	750	752	rVV4	4840	8053	0.05%	0.016%
53	8.721	757	761	762	rBV5	3571	4888	0.03%	0.010%
54	8.908	775	780	783	rVB5	9126	21094	0.13%	0.042%
55	9.233	810	813	815	rBV4	4025	6837	0.04%	0.014%
56	9.302	817	820	821	rBV3	3504	5459	0.03%	0.011%
57	9.351	821	825	834	rVV	555293	1030749	6.37%	2.059%
58	9.459	834	836	837	rVV2	5588	5728	0.04%	0.011%
59	9.508	837	841	845	rVV	14467	37542	0.23%	0.075%
60	9.557	845	846	851	rVB5	5981	9400	0.06%	0.019%
61	9.676	854	858	864	rVV	1844084	3287578	20.30%	6.567%
62	9.754	864	866	872	rVV2	35577	65658	0.41%	0.131%
63	10.000	887	891	899	rBV	329753	573636	3.54%	1.146%
64	10.109	899	902	903	rVV3	9011	19738	0.12%	0.039%
65	10.128	903	904	906	rVV2	12165	19917	0.12%	0.040%
66	10.197	906	911	919	rVV	248353	590751	3.65%	1.180%
67	10.305	919	922	925	rVV4	15309	39846	0.25%	0.080%
68	10.355	925	927	929	rVV3	4815	8896	0.05%	0.018%
69	10.414	929	933	949	rVV	1871176	3306536	20.42%	6.605%
70	10.581	949	950	953	rVV3	9787	15841	0.10%	0.032%
71	10.620	953	954	957	rVV3	8316	10066	0.06%	0.020%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049356.D
Acq On : 12 May 2016 17:54
Operator : FY/SY
Sample : H3056-03
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4092

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	10.660	957	958	961	rVV3	6307	7749	0.05%	0.015%
73	10.965	985	989	990	rBV4	2892	5452	0.03%	0.011%
74	11.014	992	994	998	rVB4	2936	5061	0.03%	0.010%
75	11.201	1009	1013	1020	rVV	1504875	2472036	15.27%	4.938%
76	11.339	1023	1027	1030	rVB4	16054	35855	0.22%	0.072%
77	11.418	1033	1035	1036	rBV	4408	5852	0.04%	0.012%
78	11.457	1036	1039	1045	rVB4	14094	27545	0.17%	0.055%
79	11.526	1045	1046	1050	rVB4	3420	6477	0.04%	0.013%
80	11.634	1053	1057	1063	rVB6	4374	10725	0.07%	0.021%
81	11.841	1074	1078	1082	rBV7	8119	24624	0.15%	0.049%
82	11.920	1085	1086	1088	rBV2	3743	5660	0.03%	0.011%
83	12.067	1099	1101	1105	rVB5	2704	5597	0.03%	0.011%
84	12.175	1110	1112	1115	rBV3	7411	13672	0.08%	0.027%
85	12.225	1115	1117	1118	rBV2	3546	4750	0.03%	0.009%
86	12.392	1129	1134	1136	rVV	268859	524348	3.24%	1.047%
87	12.441	1136	1139	1144	rVV	455243	785318	4.85%	1.569%
88	12.500	1144	1145	1151	rVB4	5117	11385	0.07%	0.023%
89	12.776	1170	1173	1175	rVB3	3500	5501	0.03%	0.011%
90	12.904	1183	1186	1188	rBV4	4229	7013	0.04%	0.014%
91	13.209	1214	1217	1219	rBV4	5310	9355	0.06%	0.019%
92	13.347	1225	1231	1233	rBV6	8663	22565	0.14%	0.045%
93	13.416	1234	1238	1247	rVV	1226025	2048566	12.65%	4.092%
94	13.612	1253	1258	1259	rBV5	9348	17427	0.11%	0.035%
95	13.740	1266	1271	1278	rBV	1224657	2081690	12.86%	4.158%
96	13.947	1290	1292	1293	rBV2	4948	7906	0.05%	0.016%
97	14.016	1295	1299	1303	rVB	173573	299197	1.85%	0.598%
98	14.183	1314	1316	1319	rVB4	4668	7067	0.04%	0.014%
99	14.232	1319	1321	1323	rBV2	6727	9900	0.06%	0.020%
100	15.591	1455	1459	1463	rVB	65859	135575	0.84%	0.271%

Sum of corrected areas: 50064044

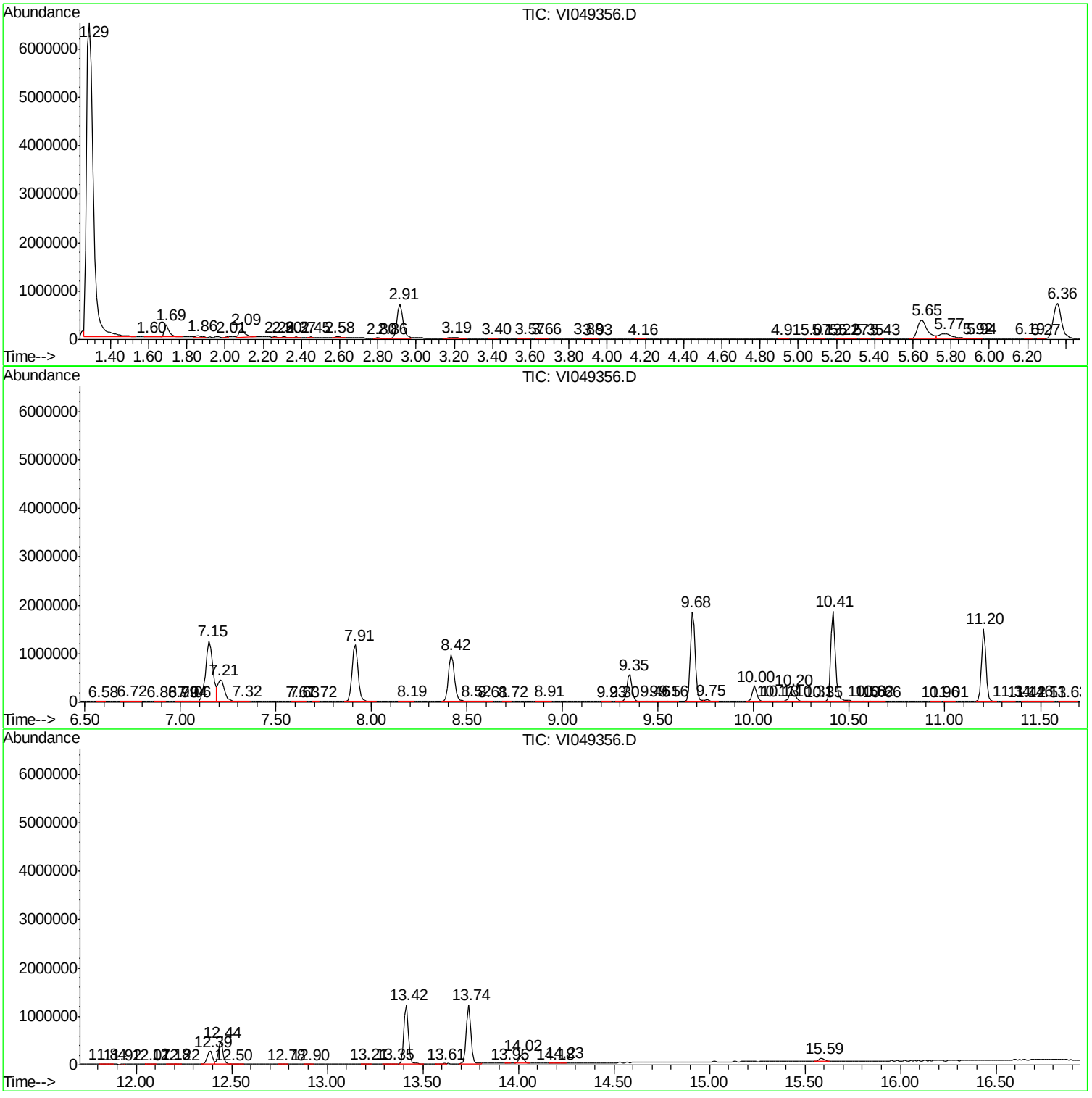
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049356.D
Acq On : 12 May 2016 17:54
Operator : FY/SY
Sample : H3056-03
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4092

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049356.D
Acq On : 12 May 2016 17:54
Operator : FY/SY
Sample : H3056-03
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4092

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

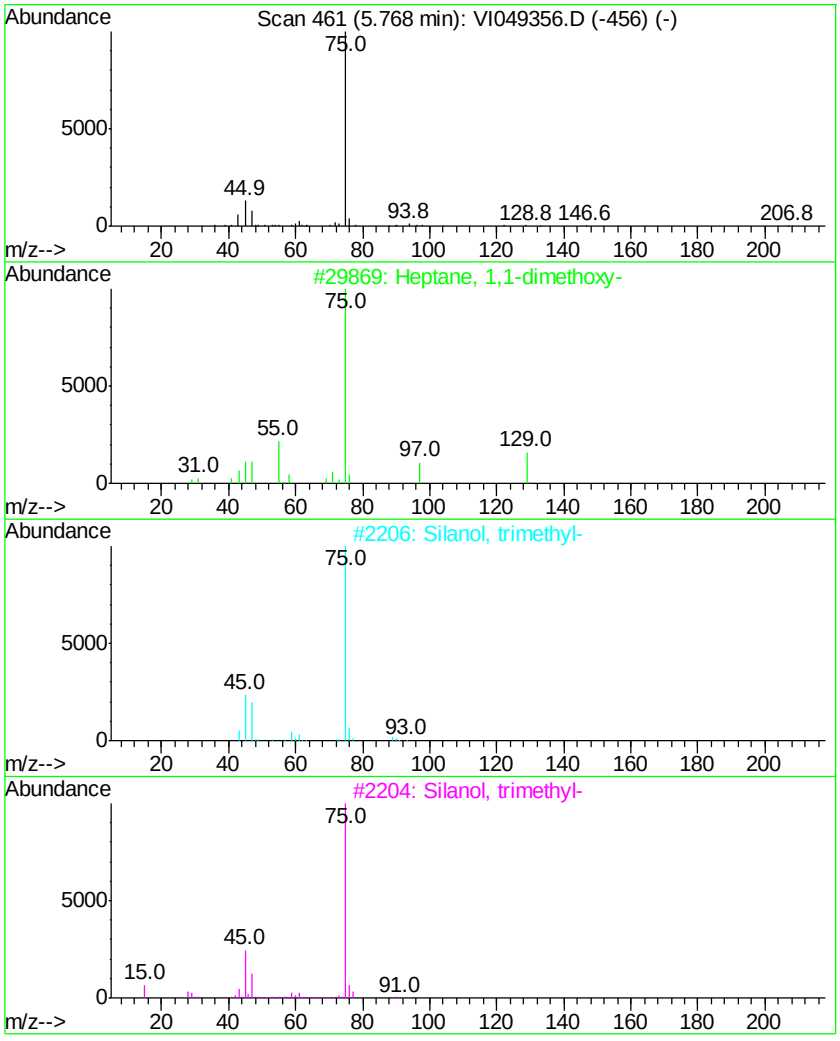
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

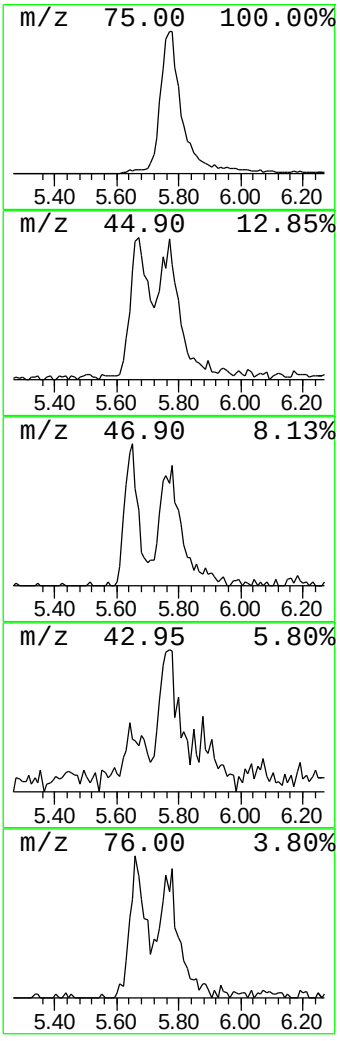
****

Peak Number 2 Heptane, 1,1-dimethoxy- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.77	1.05 ug/L	542642	1,4-Difluorobenzene	7.91

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptane, 1,1-dimethoxy-	160	C9H20O2	010032-05-0	64
2	Silanol, trimethyl-	90	C3H10OSi	001066-40-6	64
3	Silanol, trimethyl-	90	C3H10OSi	001066-40-6	59
4	2-Propanone, 1,1-dimethoxy-	118	C5H10O3	006342-56-9	43
5	Octanal dimethyl acetal	174	C10H22O2	010022-28-3	40





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049356.D
Acq On : 12 May 2016 17:54
Operator : FY/SY
Sample : H3056-03
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4092

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Heptane, 1,1-dime...	5.77	1.1	ug/L	542642	1	7.91	2593830	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4093

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049357.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4093

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049357.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4093

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049357.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4093

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049357.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

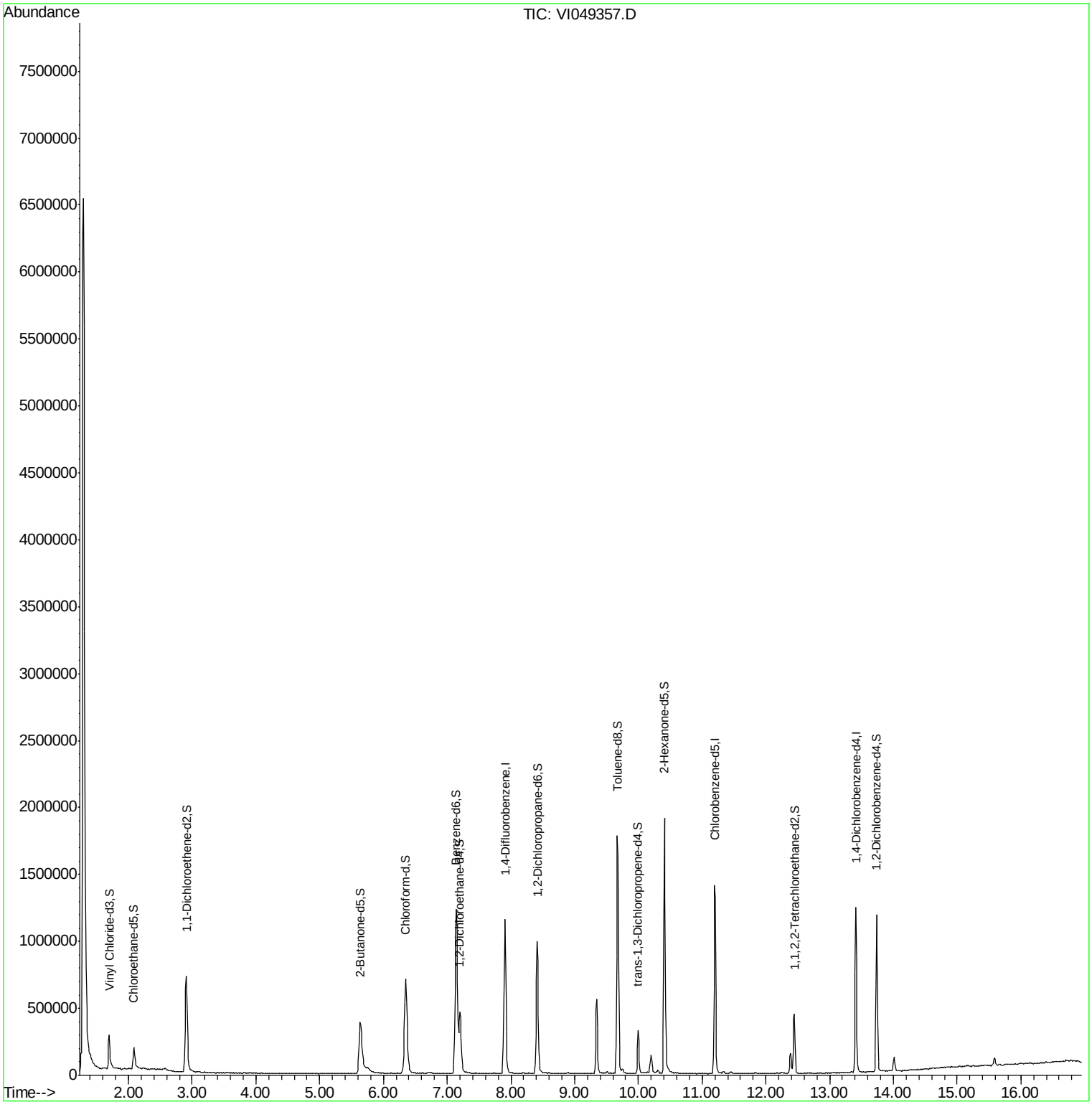
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049357.D
Acq On : 12 May 2016 18:27
Operator : FY/SY
Sample : H3056-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 04:55:44 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4093

Manual Integrations APPROVED
feifei
5/13/2016 12:27:57 PM



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049357.D
Acq On : 12 May 2016 18:27
Operator : FY/SY
Sample : H3056-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4093

Manual Integrations APPROVED
feifei
5/13/2016 12:27:57 PM

Quant Time: May 13 04:55:44 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1066324	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	749824	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	285845	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	288215	4.39	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 87.80%			
7) Chloroethane-d5	2.08	69	200161m	5.50	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 110.00%			
11) 1,1-Dichloroethene-d2	2.91	63	561006	3.63	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 72.60%			
20) 2-Butanone-d5	5.64	46	931185	65.52	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 131.04%#			
24) Chloroform-d	6.34	84	909164	5.44	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 108.80%			
26) 1,2-Dichloroethane-d4	7.20	65	401955	5.88	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 117.60%			
32) Benzene-d6	7.14	84	1593599	5.46	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 109.20%			
36) 1,2-Dichloropropane-d6	8.41	67	452755	5.51	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 110.20%			
41) Toluene-d8	9.67	98	1127926	5.23	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.60%			
43) trans-1,3-Dichloropropene-	10.00	79	155843	4.82	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 96.40%			
46) 2-Hexanone-d5	10.41	63	622474	60.98	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 121.96%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	210153	5.63	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 112.60%			
63) 1,2-Dichlorobenzene-d4	13.74	152	272574	5.44	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 108.80%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049357.D
Acq On : 12 May 2016 18:27
Operator : FY/SY
Sample : H3056-04
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4093

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.295	3	7	35	rVB	6504978	16428844	100.00%	33.594%
2	1.600	35	38	41	rBV3	9903	26425	0.16%	0.054%
3	1.699	45	48	57	rBV	250662	470731	2.87%	0.963%
4	1.935	71	72	73	rBV	6828	5284	0.03%	0.011%
5	2.082	84	87	99	rVB	158467	360203	2.19%	0.737%
6	2.348	112	114	115	rBV2	6002	7701	0.05%	0.016%
7	2.486	126	128	129	rVB2	7896	9121	0.06%	0.019%
8	2.575	135	137	143	rVB4	19606	47413	0.29%	0.097%
9	2.791	158	159	166	rVB4	4120	9850	0.06%	0.020%
10	2.909	166	171	177	rBV	717198	1559571	9.49%	3.189%
11	3.195	198	200	202	rVB3	5174	5233	0.03%	0.011%
12	3.411	218	222	223	rBV2	4137	8922	0.05%	0.018%
13	3.450	223	226	228	rVB3	5911	9832	0.06%	0.020%
14	3.480	228	229	232	rBV3	3469	5317	0.03%	0.011%
15	3.559	232	237	241	rVB8	7653	18804	0.11%	0.038%
16	3.824	260	264	266	rBV4	3824	6557	0.04%	0.013%
17	4.090	290	291	294	rVB3	4435	5723	0.03%	0.012%
18	4.277	307	310	313	rBV5	2984	5601	0.03%	0.011%
19	4.622	344	345	348	rVB3	3470	5474	0.03%	0.011%
20	4.700	352	353	355	rVB2	4231	4853	0.03%	0.010%
21	4.819	360	365	366	rBV4	3155	6894	0.04%	0.014%
22	5.006	382	384	386	rBV2	4189	7352	0.04%	0.015%
23	5.084	389	392	393	rBV2	4800	9299	0.06%	0.019%
24	5.311	414	415	420	rVB4	3355	5837	0.04%	0.012%
25	5.635	441	448	458	rBV	387123	1422687	8.66%	2.909%
26	5.980	482	483	488	rVB4	3216	5655	0.03%	0.012%
27	6.059	488	491	495	rVB4	2823	7587	0.05%	0.016%
28	6.344	513	520	531	rBV	705311	2209652	13.45%	4.518%
29	6.462	531	532	534	rVV2	6879	6920	0.04%	0.014%
30	6.620	545	548	550	rVB3	5995	7779	0.05%	0.016%
31	6.708	552	557	561	rBV6	9158	25405	0.15%	0.052%
32	6.856	569	572	573	rBV3	3447	4867	0.03%	0.010%
33	7.141	594	601	605	rBV	1227716	3335029	20.30%	6.820%
34	7.200	605	607	616	rVV	458354	1044494	6.36%	2.136%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049357.D
Acq On : 12 May 2016 18:27
Operator : FY/SY
Sample : H3056-04
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4093

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.299	616	617	621	rVB3	4807	7997	0.05%	0.016%
36	7.623	647	650	654	rVB4	4568	10196	0.06%	0.021%
37	7.732	657	661	664	rVB4	5819	9639	0.06%	0.020%
38	7.791	664	667	670	rBV5	3459	6967	0.04%	0.014%
39	7.909	673	679	695	rBV	1150638	2597185	15.81%	5.311%
40	8.184	704	707	710	rVB4	6269	14705	0.09%	0.030%
41	8.283	714	717	718	rBV3	4987	5668	0.03%	0.012%
42	8.312	718	720	723	rVB3	2897	4873	0.03%	0.010%
43	8.411	725	730	739	rBV	987844	2151755	13.10%	4.400%
44	8.509	739	740	745	rVV5	8052	17563	0.11%	0.036%
45	8.608	747	750	752	rVB4	5005	7656	0.05%	0.016%
46	8.686	756	758	761	rBV4	3132	5657	0.03%	0.012%
47	8.844	771	774	775	rBV3	3165	5247	0.03%	0.011%
48	8.883	775	778	783	rVB6	8225	21080	0.13%	0.043%
49	8.962	783	786	788	rVB4	3048	4857	0.03%	0.010%
50	9.129	799	803	806	rBV6	3121	8140	0.05%	0.017%
51	9.208	810	811	816	rVB4	2901	5449	0.03%	0.011%
52	9.346	821	825	830	rVV	553838	1016260	6.19%	2.078%
53	9.405	830	831	834	rVV3	5922	9870	0.06%	0.020%
54	9.503	838	841	845	rVV4	15130	27737	0.17%	0.057%
55	9.562	845	847	849	rVV2	5862	6741	0.04%	0.014%
56	9.671	854	858	864	rBV	1773965	3279292	19.96%	6.706%
57	9.749	864	866	869	rVV	32085	60935	0.37%	0.125%
58	9.799	869	871	875	rVB5	5381	9307	0.06%	0.019%
59	9.995	886	891	898	rBV	325392	566538	3.45%	1.158%
60	10.094	898	901	903	rVV3	8537	21135	0.13%	0.043%
61	10.143	903	906	908	rVV3	12312	27822	0.17%	0.057%
62	10.202	908	912	919	rVV	139239	324419	1.97%	0.663%
63	10.301	919	922	925	rVV5	27479	54459	0.33%	0.111%
64	10.409	929	933	948	rVV	1908065	3287148	20.01%	6.722%
65	10.576	948	950	952	rVV3	4780	8660	0.05%	0.018%
66	10.763	966	969	972	rBV6	3637	8017	0.05%	0.016%
67	10.832	972	976	978	rVV4	3478	7750	0.05%	0.016%
68	10.950	984	988	991	rBV5	3536	6405	0.04%	0.013%
69	11.058	997	999	1002	rVB2	3189	5224	0.03%	0.011%
70	11.196	1009	1013	1022	rVV	1409347	2513803	15.30%	5.140%
71	11.334	1024	1027	1032	rVV2	17900	34024	0.21%	0.070%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049357.D
Acq On : 12 May 2016 18:27
Operator : FY/SY
Sample : H3056-04
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4093

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.452	1033	1039	1044	rVV4	17559	36386	0.22%	0.074%
73	11.531	1044	1047	1052	rVB7	4663	9658	0.06%	0.020%
74	11.590	1052	1053	1056	rBV3	4211	5128	0.03%	0.010%
75	11.639	1056	1058	1062	rVB5	3266	5375	0.03%	0.011%
76	11.836	1074	1078	1083	rBV6	10905	25154	0.15%	0.051%
77	11.974	1088	1092	1095	rBV5	2558	4819	0.03%	0.010%
78	12.033	1095	1098	1101	rBV5	3228	5571	0.03%	0.011%
79	12.180	1109	1113	1116	rBV4	5810	11373	0.07%	0.023%
80	12.259	1116	1121	1126	rBV7	7184	25118	0.15%	0.051%
81	12.387	1128	1134	1137	rVV	152200	302126	1.84%	0.618%
82	12.446	1137	1140	1145	rVV	445571	764928	4.66%	1.564%
83	12.672	1160	1163	1166	rVB5	4630	9238	0.06%	0.019%
84	12.712	1166	1167	1170	rBV3	3970	6154	0.04%	0.013%
85	12.810	1173	1177	1178	rBV3	4145	8877	0.05%	0.018%
86	12.978	1192	1194	1195	rBV2	3924	4986	0.03%	0.010%
87	13.017	1195	1198	1199	rBV3	3556	5071	0.03%	0.010%
88	13.066	1199	1203	1204	rVV3	3234	6919	0.04%	0.014%
89	13.204	1211	1217	1219	rBV7	3937	8702	0.05%	0.018%
90	13.332	1226	1230	1234	rBV6	8521	23328	0.14%	0.048%
91	13.411	1234	1238	1244	rBV	1233210	2024190	12.32%	4.139%
92	13.598	1255	1257	1258	rBV2	3332	5637	0.03%	0.012%
93	13.735	1267	1271	1278	rBV	1171114	2006079	12.21%	4.102%
94	14.011	1295	1299	1303	rVB	104742	184007	1.12%	0.376%
95	14.149	1311	1313	1315	rBV3	7526	13420	0.08%	0.027%
96	14.572	1354	1356	1358	rBV3	7144	9961	0.06%	0.020%
97	14.601	1358	1359	1360	rBV	8530	8826	0.05%	0.018%
98	14.670	1364	1366	1369	rBV4	11405	24117	0.15%	0.049%
99	14.808	1378	1380	1381	rVB	8658	9305	0.06%	0.019%
100	15.586	1456	1459	1463	rVB	48974	87953	0.54%	0.180%

Sum of corrected areas: 48903502

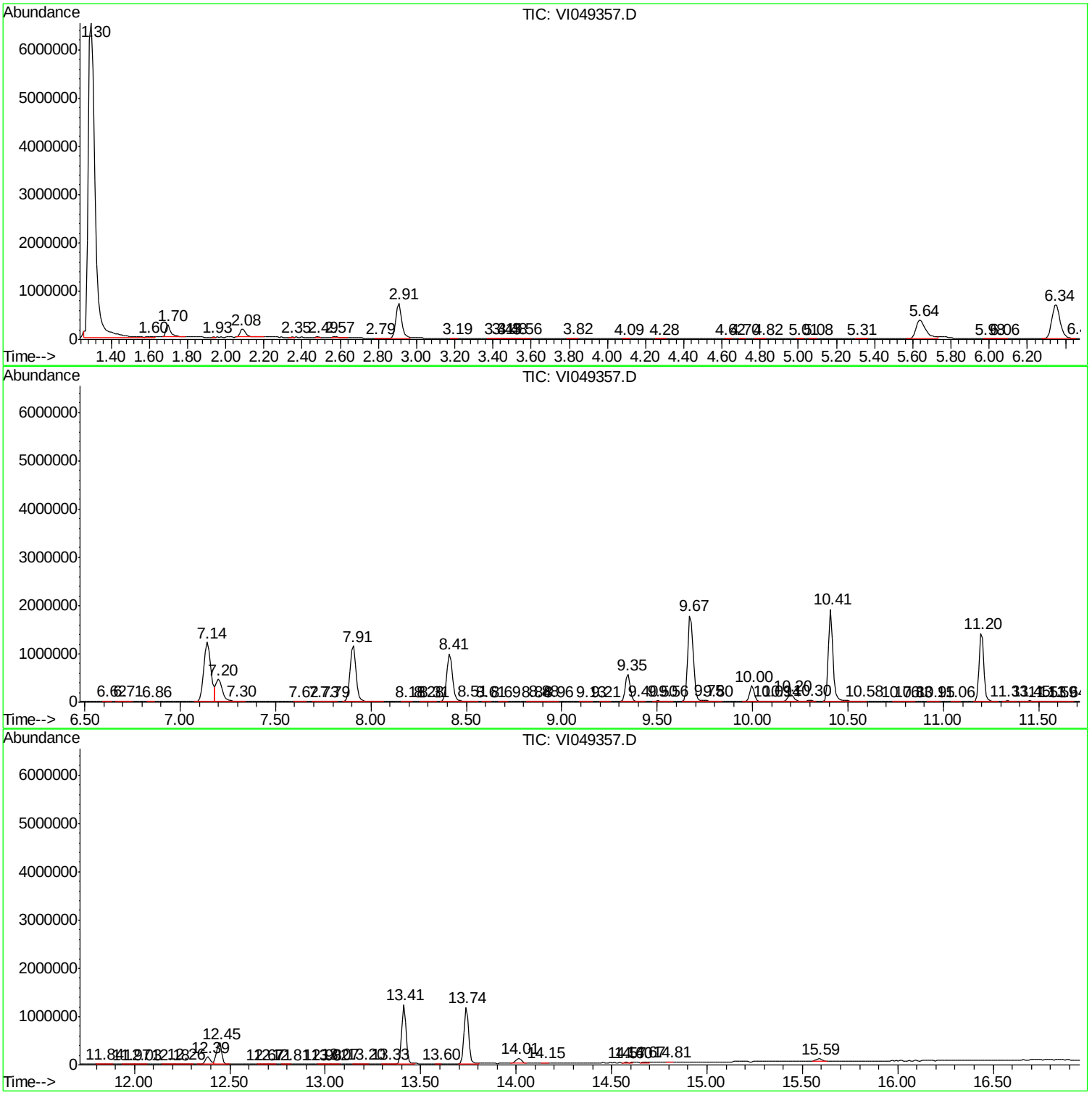
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049357.D
Acq On : 12 May 2016 18:27
Operator : FY/SY
Sample : H3056-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4093

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049357.D
Acq On : 12 May 2016 18:27
Operator : FY/SY
Sample : H3056-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4093

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049357.D
Acq On : 12 May 2016 18:27
Operator : FY/SY
Sample : H3056-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4093

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

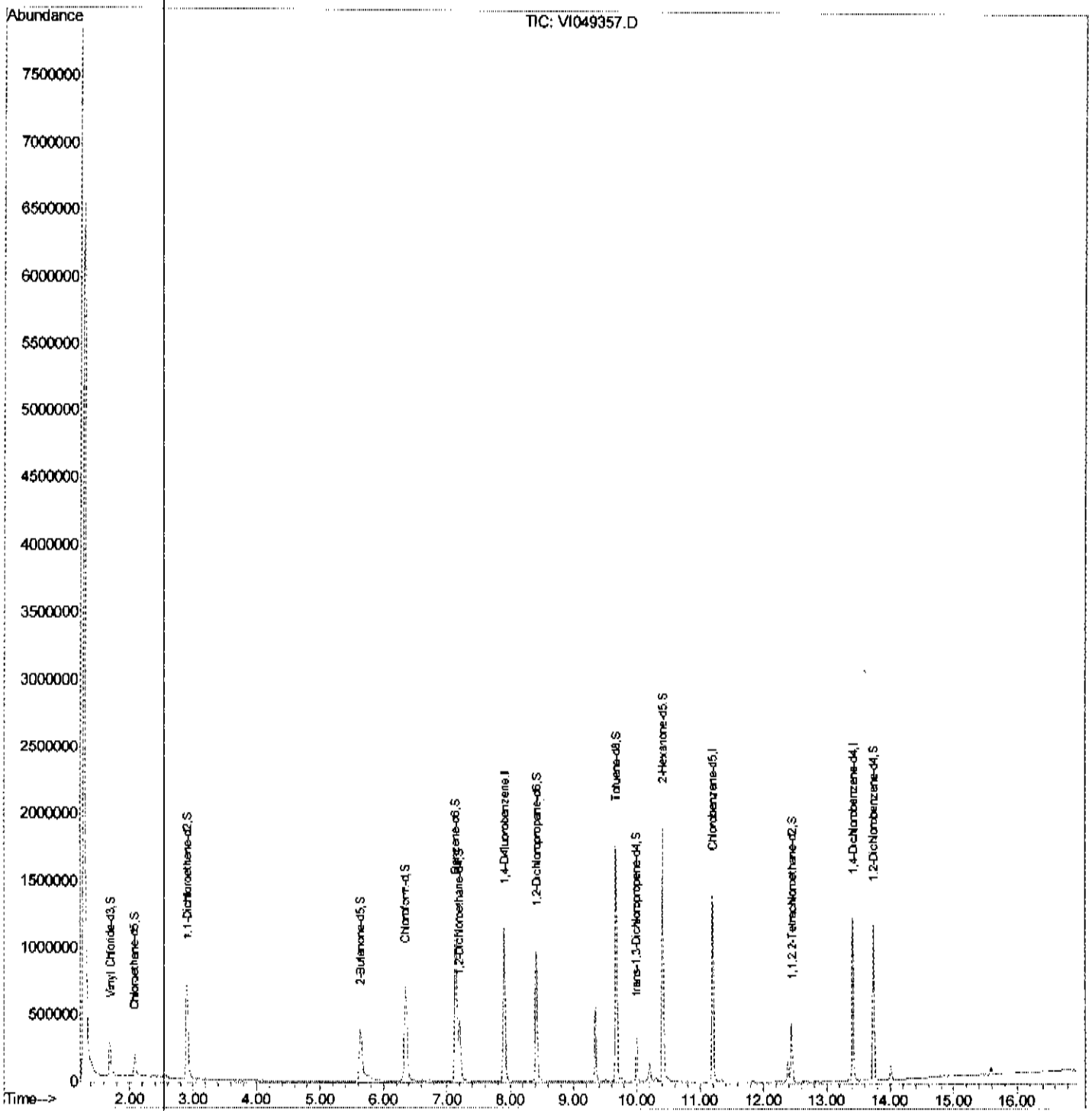
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049357.D
Acq On : 12 May 2016 18:27
Operator : FY/SY
Sample : H3056-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 04:55:44 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4093

Manual Integrations APPROVED
feifei
5/13/2016 12:27:57 PM



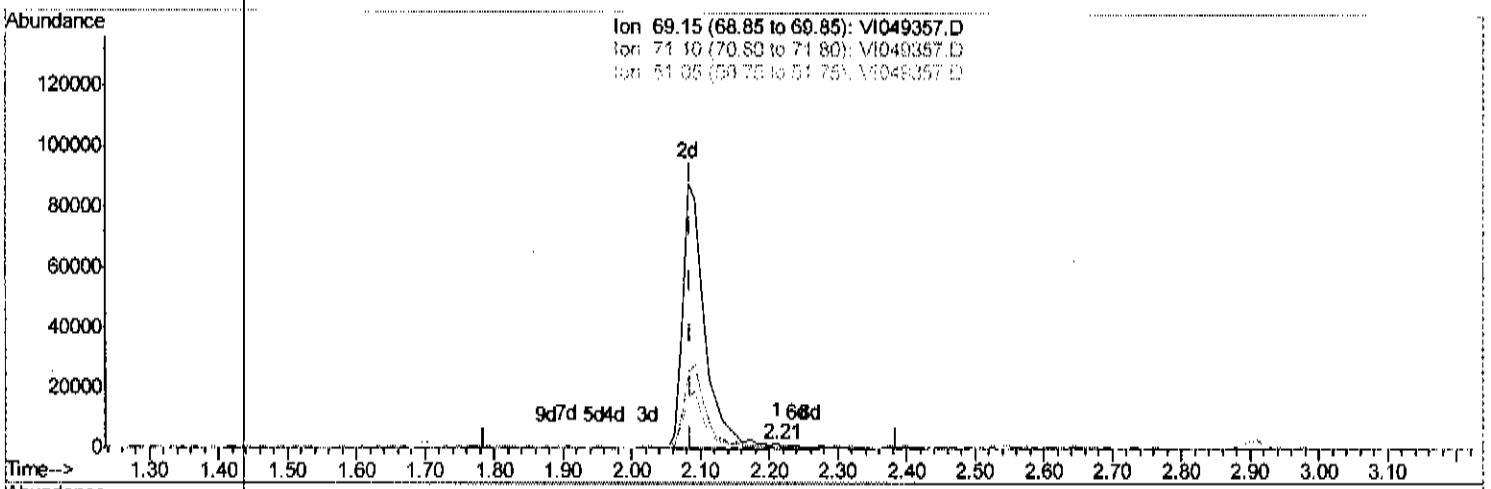
Quantitation Report (Qedit)

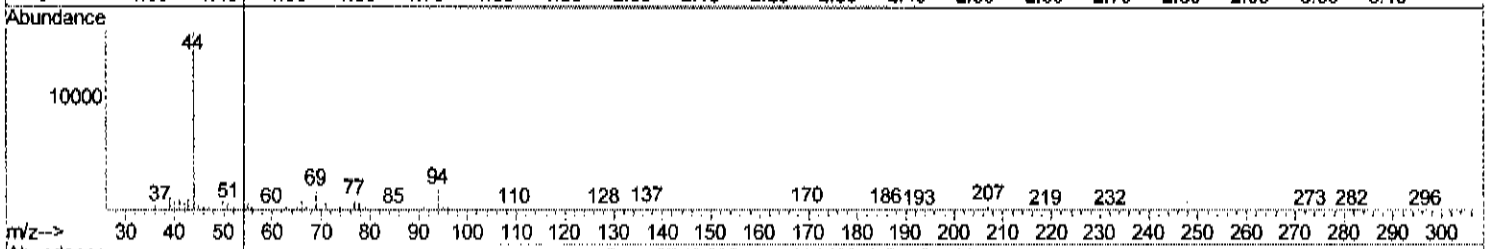
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049357.D
Acq On : 12 May 2016 18:27
Operator : FY/SY
Sample : H3056-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

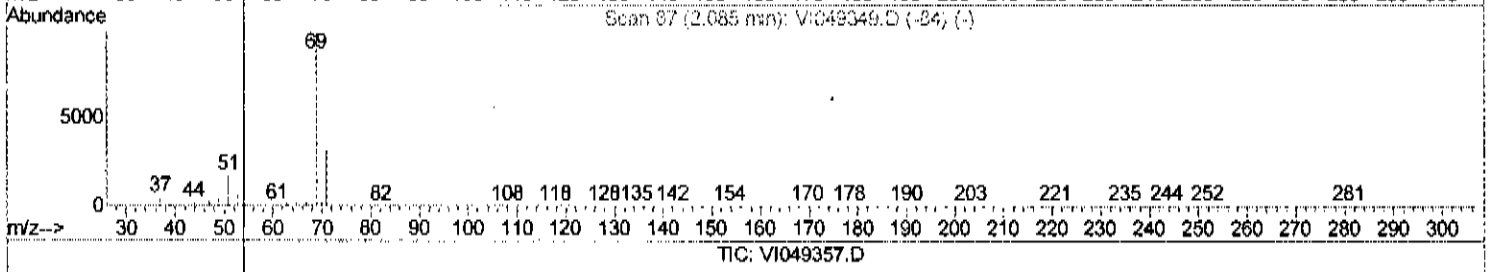
Quant Time: May 13 04:33:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4093

Manual Integrations APPROVED
feifei
5/13/2016 12:27:57 PM







TIC: VI049357.D

(7) Chloroethane-d5 (S)

2.210min (+0.125) 0.04ug/L

response 1412

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	25.99
51.05	32.70	34.42
0.00	0.00	0.00

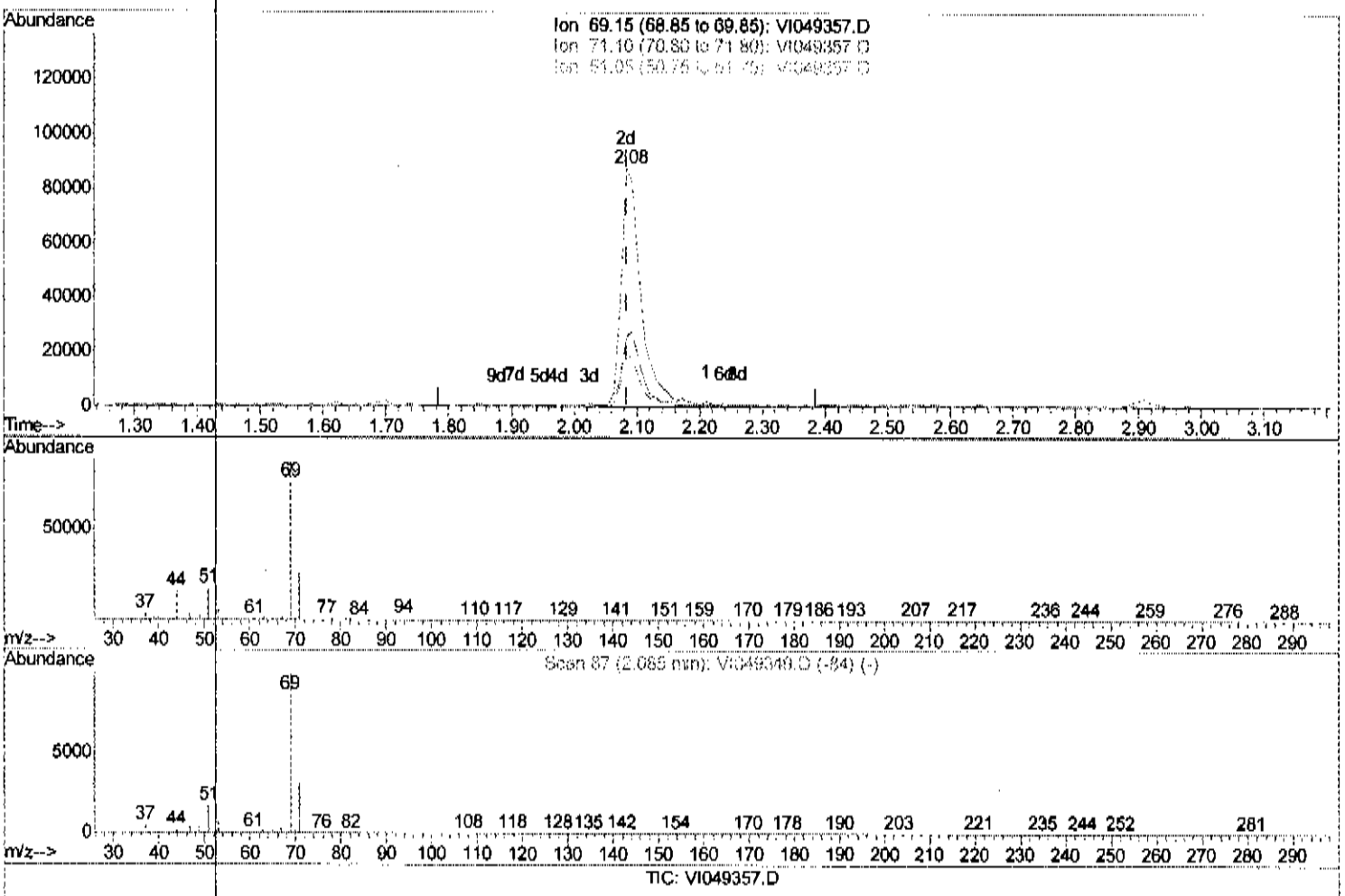
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049357.D
Acq On : 12 May 2016 18:27
Operator : FY/SY
Sample : H3056-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 04:33:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4093

Manual Integrations APPROVED
feifei
5/13/2016 12:27:57 PM



TIC: VI049357.D

(7) Chloroethane-d5 (S)

2.082min (-0.003) 5.50ug/L m

response 200161

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.18#
51.05	32.70	0.24#
0.00	0.00	0.00

> 05/14/16 SY

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049357.D
Acq On : 12 May 2016 18:27
Operator : FY/SY
Sample : H3056-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 04:55:44 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4093

Manual Integrations APPROVED
feifei
5/13/2016 12:27:57 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1066324	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	749824	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	285845	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	288215	4.39	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 87.80%			
7) Chloroethane-d5	2.08	69	200161m	5.50	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 110.00%			
11) 1,1-Dichloroethene-d2	2.91	63	561006	3.63	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 72.60%			
20) 2-Butanone-d5	5.64	46	931185	65.52	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 131.04%#			
24) Chloroform-d	6.34	84	909164	5.44	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 108.80%			
26) 1,2-Dichloroethane-d4	7.20	65	401955	5.88	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 117.60%			
32) Benzene-d6	7.14	84	1593599	5.46	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 109.20%			
36) 1,2-Dichloropropane-d6	8.41	67	452755	5.51	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 110.20%			
41) Toluene-d8	9.67	98	1127926	5.23	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.60%			
43) trans-1,3-Dichloropropene-	10.00	79	155843	4.82	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 96.40%			
46) 2-Hexanone-d5	10.41	63	622474	60.98	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 121.96%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	210153	5.63	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 112.60%			
63) 1,2-Dichlorobenzene-d4	13.74	152	272574	5.44	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 108.80%			

Target Compounds	Qvalue

(#) - qualifier out of range (m) = manual integration (+) = signals summed

05/14/16 sg

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4095

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049358.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.13	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4095

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049358.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.7	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.38	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.15	J
95-47-6	o-Xylene	0.24	J
179601-23-1	m,p-Xylene	0.74	
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4095

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049358.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4095

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049358.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

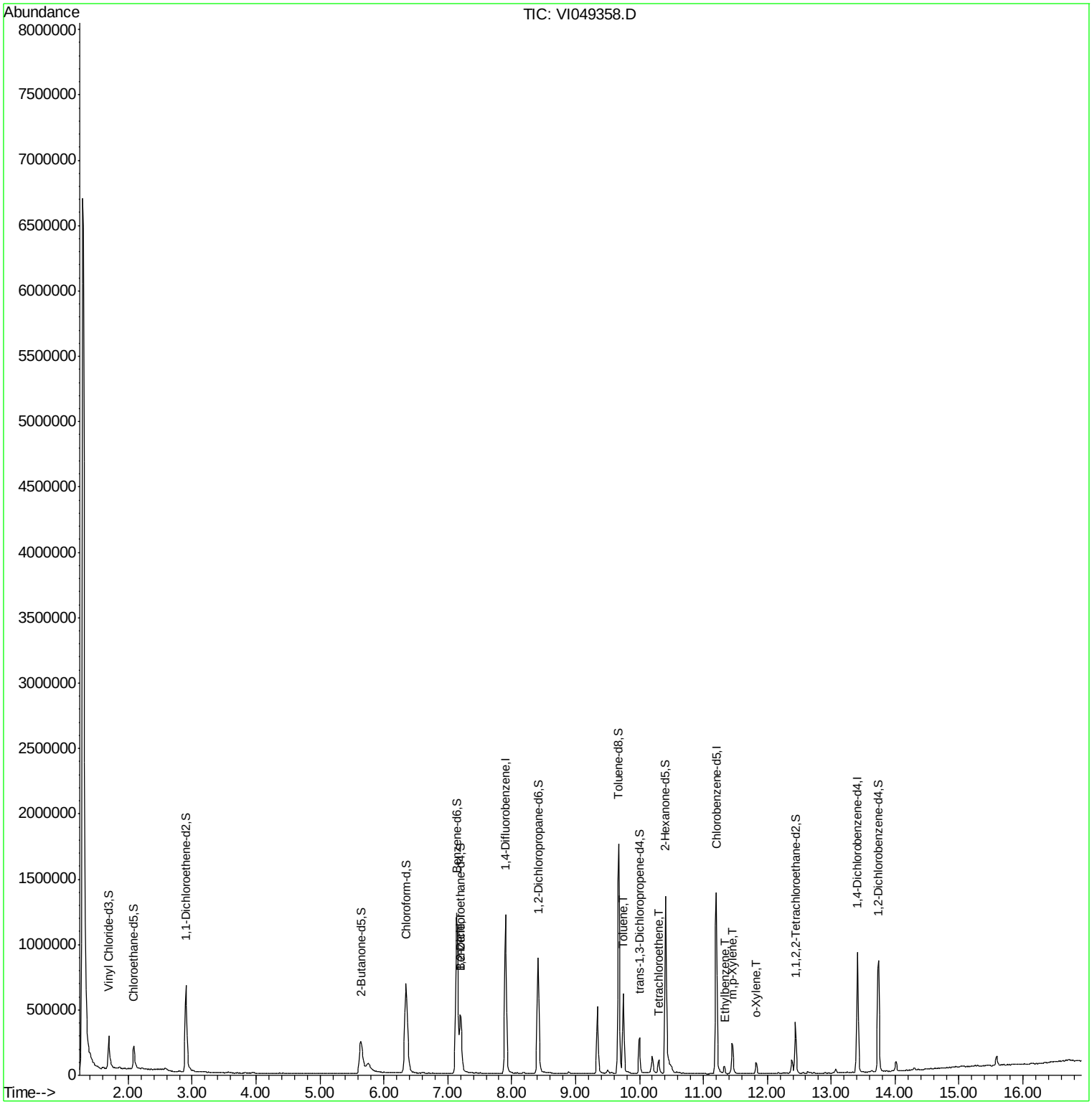
EPA-designated Registry Number.

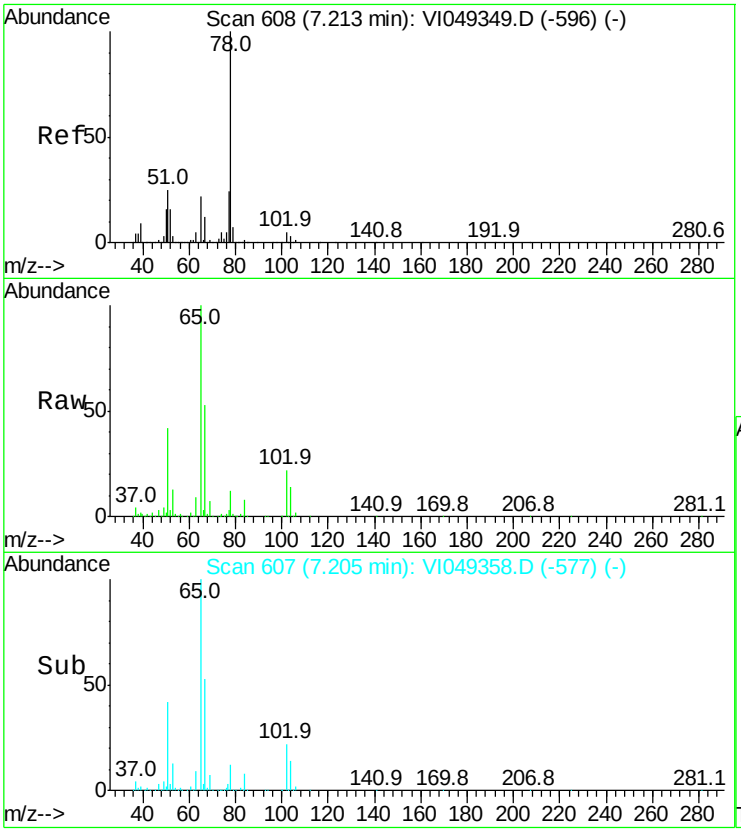
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049358.D
Acq On : 12 May 2016 18:58
Operator : FY/SY
Sample : H3056-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4095

Quant Time: May 13 04:57:21 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

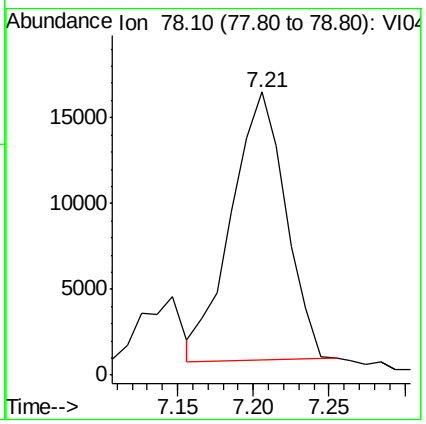


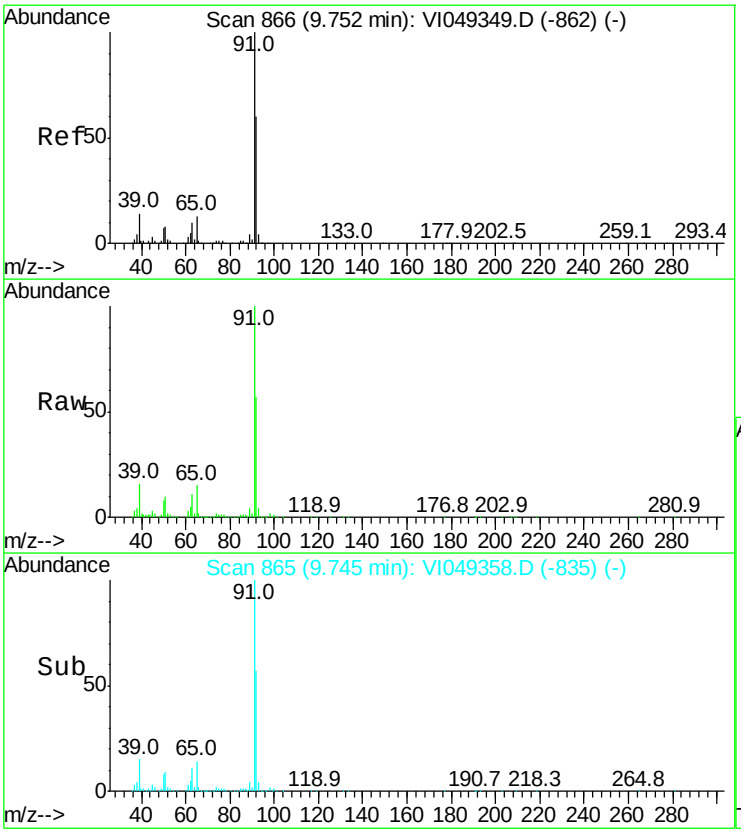


#33
Benzene
Concen: 0.13 ug/L
RT: 7.21 min Scan# 607
Delta R.T. -0.01 min
Lab File: VI049358.D
Acq: 12 May 2016 18:58

Instrument :
MSVOA_I
ClientSampleId :
H4095

Tgt Ion: 78 Resp: 38814

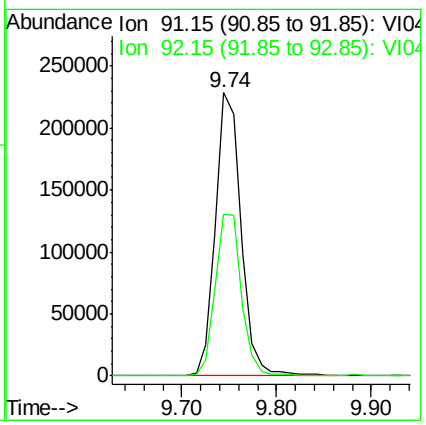


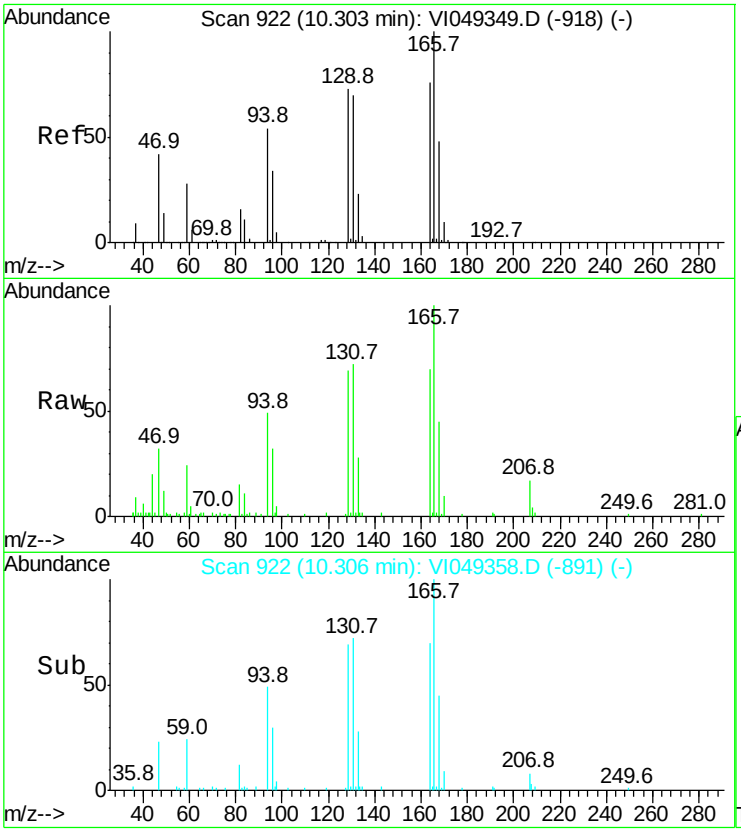


#42
Toluene
Concen: 1.66 ug/L
RT: 9.74 min Scan# 865
Delta R.T. -0.01 min
Lab File: VI049358.D
Acq: 12 May 2016 18:58

Tgt Ion: 91 Resp: 430299

Ion	Ratio	Lower	Upper
91	100		
92	57.4	41.2	76.4



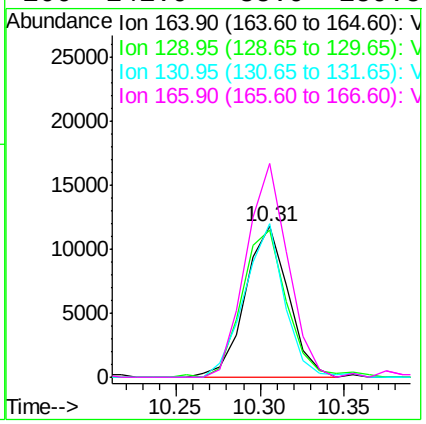


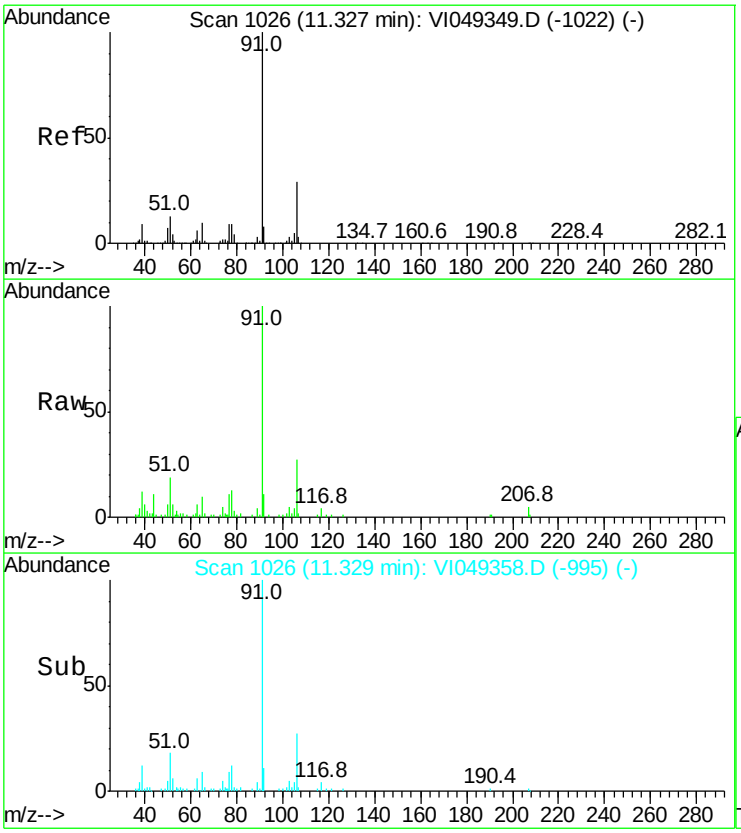
#47
Tetrachloroethene
Concen: 0.38 ug/L
RT: 10.31 min Scan# 922
Delta R.T. 0.00 min
Lab File: VI049358.D
Acq: 12 May 2016 18:58

Instrument : MSVOA_I
ClientSampleId : H4095

Tgt Ion:164 Resp: 21000

Ion	Ratio	Lower	Upper
164	100		
129	98.0	62.1	115.3
131	102.1	60.6	112.6
166	141.9	85.9	159.5

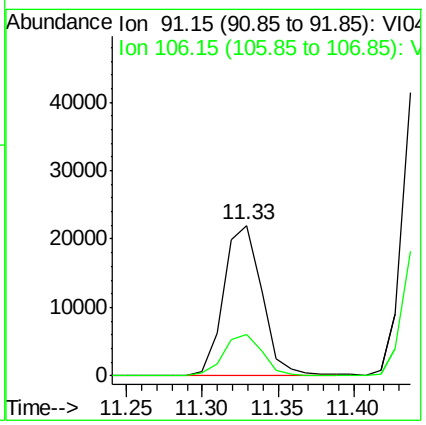


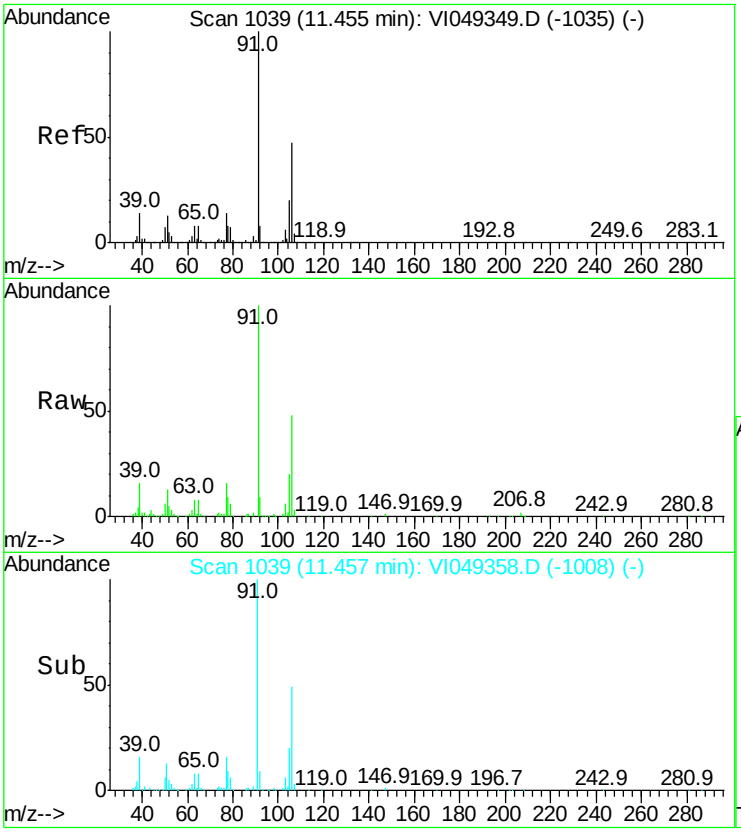


#52
Ethylbenzene
Concen: 0.15 ug/L
RT: 11.33 min Scan# 1026
Delta R.T. 0.00 min
Lab File: VI049358.D
Acq: 12 May 2016 18:58

Tgt Ion: 91 Resp: 38946

Ion	Ratio	Lower	Upper
91	100		
106	27.4	20.5	38.1



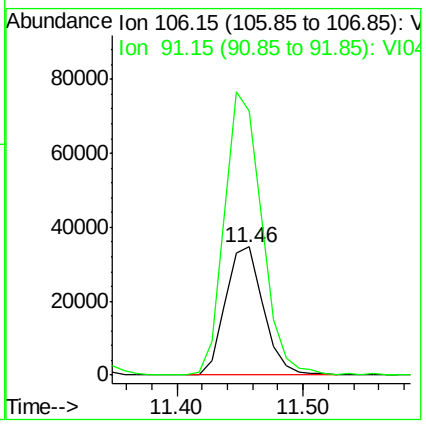


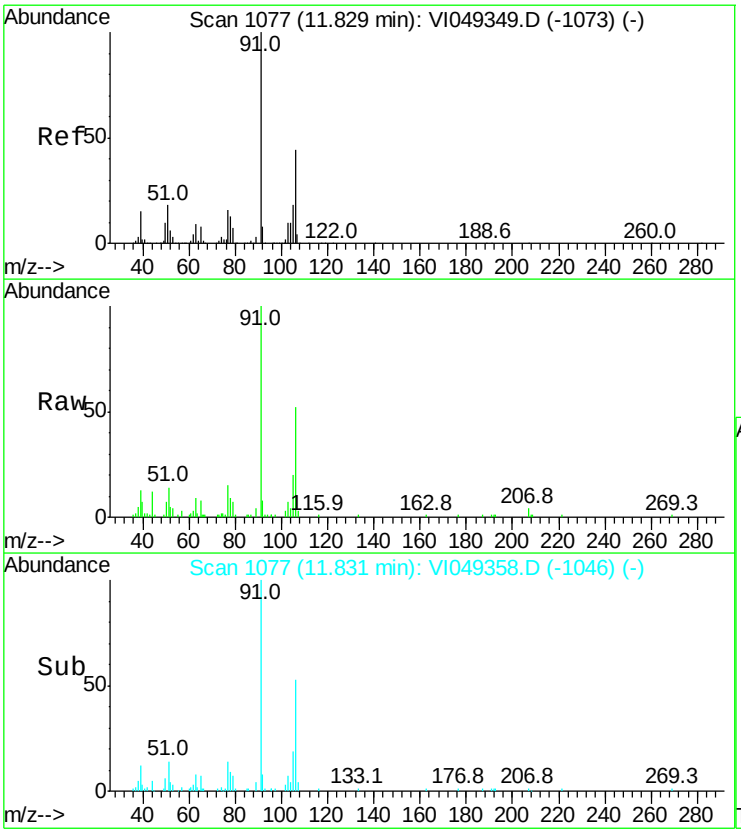
#53
m,p-Xylene
Concen: 0.74 ug/L
RT: 11.46 min Scan# 1039
Delta R.T. 0.00 min
Lab File: VI049358.D
Acq: 12 May 2016 18:58

Instrument : MSVOA_I
ClientSampleId : H4095

Tgt Ion:106 Resp: 72038

Ion	Ratio	Lower	Upper
106	100		
91	206.5	155.0	287.9

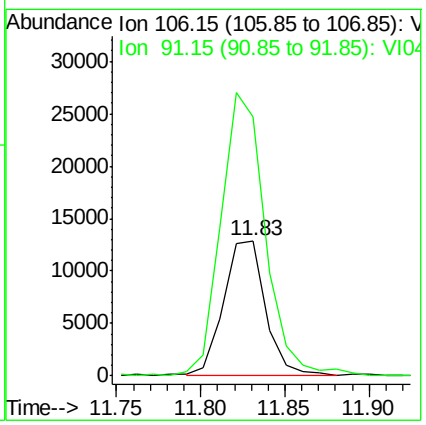




#54
o-Xylene
Concen: 0.24 ug/L
RT: 11.83 min Scan# 1077
Delta R.T. 0.00 min
Lab File: VI049358.D
Acq: 12 May 2016 18:58

Tgt Ion:106 Resp: 22243

Ion	Ratio	Lower	Upper
106	100		
91	191.8	158.8	295.0



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049358.D
Acq On : 12 May 2016 18:58
Operator : FY/SY
Sample : H3056-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4095

Quant Time: May 13 04:57:21 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1084908	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	715756	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	242218	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	283622	4.25	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 85.00%			
7) Chloroethane-d5	2.09	69	192525	5.20	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 104.00%			
11) 1,1-Dichloroethene-d2	2.90	63	545210	3.47	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 69.40%			
20) 2-Butanone-d5	5.64	46	633151	43.78	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 87.56%			
24) Chloroform-d	6.35	84	867915	5.11	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.20%			
26) 1,2-Dichloroethane-d4	7.20	65	382232	5.50	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 110.00%			
32) Benzene-d6	7.14	84	1564725	5.61	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 112.20%			
36) 1,2-Dichloropropane-d6	8.41	67	437755	5.58	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 111.60%			
41) Toluene-d8	9.68	98	1116321	5.43	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 108.60%			
43) trans-1,3-Dichloropropene-	10.00	79	143239	4.64	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.80%			
46) 2-Hexanone-d5	10.40	63	537904	55.21	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 110.42%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	187431	5.26	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 105.20%			
63) 1,2-Dichlorobenzene-d4	13.74	152	211190	4.97	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 99.40%			
Target Compounds						Qvalue
33) Benzene	7.21	78	38814	0.13	ug/L	100
42) Toluene	9.74	91	430299	1.66	ug/L	98
47) Tetrachloroethene	10.31	164	21000	0.38	ug/L	85
52) Ethylbenzene	11.33	91	38946	0.15	ug/L	97
53) m,p-Xylene	11.46	106	72038	0.74	ug/L	91
54) o-Xylene	11.83	106	22243	0.24	ug/L	79

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049358.D
Acq On : 12 May 2016 18:58
Operator : FY/SY
Sample : H3056-05
Misc : 25mL/MSVOA I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4095

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.290	3	6	35	rVB	6657296	18105128	100.00%	35.721%
2	1.595	35	37	41	rVV4	10850	21581	0.12%	0.043%
3	1.694	44	47	62	rVV	251538	517629	2.86%	1.021%
4	1.861	62	64	69	rVB5	13400	26302	0.15%	0.052%
5	1.999	76	78	79	rBV2	9793	9200	0.05%	0.018%
6	2.087	83	87	94	rBV	175197	363186	2.01%	0.717%
7	2.481	125	127	128	rBV2	5307	7022	0.04%	0.014%
8	2.580	135	137	142	rVB5	18973	39982	0.22%	0.079%
9	2.904	165	170	179	rBV	664453	1513978	8.36%	2.987%
10	3.111	189	191	195	rVB4	5939	11408	0.06%	0.023%
11	3.259	205	206	210	rVB4	7565	14717	0.08%	0.029%
12	3.328	210	213	214	rVV3	2930	5406	0.03%	0.011%
13	3.357	214	216	218	rVV2	3732	4781	0.03%	0.009%
14	3.475	225	228	231	rVB3	4825	9386	0.05%	0.019%
15	3.524	231	233	234	rBV2	4362	4419	0.02%	0.009%
16	3.564	236	237	244	rVB7	8865	14514	0.08%	0.029%
17	3.938	273	275	281	rVB6	6973	17618	0.10%	0.035%
18	4.194	300	301	305	rVB4	3362	4520	0.02%	0.009%
19	4.371	315	319	322	rBV4	4723	11554	0.06%	0.023%
20	4.420	322	324	327	rVB4	6165	7837	0.04%	0.015%
21	4.558	335	338	341	rVB5	4449	7846	0.04%	0.015%
22	4.607	341	343	345	rBV3	3424	5922	0.03%	0.012%
23	4.666	348	349	355	rVB5	2871	8549	0.05%	0.017%
24	4.735	355	356	359	rVB3	5820	6195	0.03%	0.012%
25	5.640	442	448	455	rBV	247884	917494	5.07%	1.810%
26	5.749	456	459	471	rVB2	64520	292322	1.61%	0.577%
27	6.093	492	494	496	rVB3	4242	6689	0.04%	0.013%
28	6.349	512	520	533	rBV	680908	2136878	11.80%	4.216%
29	6.625	544	548	551	rVB6	6153	15413	0.09%	0.030%
30	6.703	554	556	559	rVB4	3604	6598	0.04%	0.013%
31	6.861	569	572	576	rBV6	3921	10709	0.06%	0.021%
32	6.979	582	584	587	rBV3	4456	5271	0.03%	0.010%
33	7.136	592	600	604	rBV	1196138	3226411	17.82%	6.366%
34	7.195	604	606	620	rVV	446814	1157388	6.39%	2.284%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049358.D
Acq On : 12 May 2016 18:58
Operator : FY/SY
Sample : H3056-05
Misc : 25mL/MSVOA I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4095

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.373	622	624	627	rVB4	3754	5849	0.03%	0.012%
36	7.432	629	630	635	rVB5	4978	7620	0.04%	0.015%
37	7.501	635	637	641	rVB4	3897	5072	0.03%	0.010%
38	7.628	645	650	652	rBV5	1816	5056	0.03%	0.010%
39	7.717	657	659	662	rBV4	3006	6533	0.04%	0.013%
40	7.786	662	666	669	rVB5	3184	8154	0.05%	0.016%
41	7.904	669	678	692	rBV	1217007	2632211	14.54%	5.193%
42	8.081	695	696	699	rBV3	4676	6161	0.03%	0.012%
43	8.190	702	707	711	rBV6	9494	24774	0.14%	0.049%
44	8.416	724	730	739	rBV	882453	2083991	11.51%	4.112%
45	8.554	743	744	746	rVV2	9165	11475	0.06%	0.023%
46	8.603	748	749	754	rVV5	6665	12019	0.07%	0.024%
47	8.839	769	773	774	rBV4	2456	4884	0.03%	0.010%
48	8.888	774	778	783	rBV4	12467	33792	0.19%	0.067%
49	9.046	791	794	795	rBV2	3940	5918	0.03%	0.012%
50	9.144	803	804	807	rVB3	4155	5682	0.03%	0.011%
51	9.223	807	812	813	rBV5	3606	8656	0.05%	0.017%
52	9.341	818	824	833	rBV	510593	928894	5.13%	1.833%
53	9.498	835	840	844	rBV	24313	53372	0.29%	0.105%
54	9.558	844	846	851	rVB5	9255	17739	0.10%	0.035%
55	9.676	853	858	862	rBV	1756440	3152037	17.41%	6.219%
56	9.745	862	865	879	rVB	613676	1188058	6.56%	2.344%
57	9.912	879	882	884	rVB3	2415	5137	0.03%	0.010%
58	10.000	887	891	897	rBV	268651	485050	2.68%	0.957%
59	10.099	900	901	902	rBV	5527	6222	0.03%	0.012%
60	10.197	907	911	917	rVV	129745	283347	1.57%	0.559%
61	10.306	917	922	928	rVB	104948	208600	1.15%	0.412%
62	10.404	928	932	947	rBV	1357507	2934522	16.21%	5.790%
63	10.581	947	950	958	rVV5	10541	30893	0.17%	0.061%
64	10.778	967	970	972	rVB4	3509	6946	0.04%	0.014%
65	10.827	972	975	980	rBV7	5515	14879	0.08%	0.029%
66	10.945	985	987	990	rVB4	4800	6499	0.04%	0.013%
67	11.024	994	995	999	rVB3	4050	5138	0.03%	0.010%
68	11.093	1001	1002	1005	rBV3	3794	6051	0.03%	0.012%
69	11.201	1008	1013	1022	rBV	1382762	2427485	13.41%	4.789%
70	11.329	1022	1026	1031	rVB	60639	113377	0.63%	0.224%
71	11.398	1031	1033	1034	rBV2	6040	8753	0.05%	0.017%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049358.D
Acq On : 12 May 2016 18:58
Operator : FY/SY
Sample : H3056-05
Misc : 25mL/MSVOA I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4095

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.447	1034	1038	1044	rBV	230116	465819	2.57%	0.919%
73	11.782	1067	1072	1073	rBV4	3997	7222	0.04%	0.014%
74	11.821	1073	1076	1085	rVB	88541	162787	0.90%	0.321%
75	11.920	1085	1086	1089	rBV3	4412	7389	0.04%	0.015%
76	12.057	1095	1100	1104	rBV5	4711	14597	0.08%	0.029%
77	12.176	1108	1112	1115	rBV4	8108	14680	0.08%	0.029%
78	12.244	1115	1119	1122	rBV6	5545	11579	0.06%	0.023%
79	12.284	1122	1123	1126	rVB3	5983	8043	0.04%	0.016%
80	12.382	1126	1133	1136	rBV	108997	217160	1.20%	0.428%
81	12.441	1136	1139	1147	rVB	390512	683595	3.78%	1.349%
82	12.559	1149	1151	1155	rBV6	4805	10707	0.06%	0.021%
83	12.638	1156	1159	1161	rBV3	14368	22009	0.12%	0.043%
84	12.668	1161	1162	1165	rVB3	7296	9938	0.05%	0.020%
85	12.727	1165	1168	1171	rVB3	6004	11198	0.06%	0.022%
86	12.825	1174	1178	1179	rBV4	2944	4803	0.03%	0.009%
87	12.855	1179	1181	1184	rBV3	3057	6741	0.04%	0.013%
88	12.894	1184	1185	1190	rBV5	7964	13176	0.07%	0.026%
89	13.071	1195	1203	1208	rBV2	36977	76906	0.42%	0.152%
90	13.248	1218	1221	1223	rVB3	6091	9613	0.05%	0.019%
91	13.337	1228	1230	1233	rVV4	5255	6576	0.04%	0.013%
92	13.406	1233	1237	1249	rBV	918841	1725746	9.53%	3.405%
93	13.632	1252	1260	1262	rBV8	10952	34280	0.19%	0.068%
94	13.740	1266	1271	1276	rBV	847864	1555438	8.59%	3.069%
95	13.858	1282	1283	1286	rVB3	4934	6886	0.04%	0.014%
96	13.957	1289	1293	1295	rBV4	7558	18560	0.10%	0.037%
97	14.016	1295	1299	1305	rVB2	72379	141747	0.78%	0.280%
98	14.301	1324	1328	1331	rBV6	13181	31976	0.18%	0.063%
99	14.469	1343	1345	1346	rBV2	6027	7506	0.04%	0.015%
100	15.591	1455	1459	1463	rVB	68754	133268	0.74%	0.263%

Sum of corrected areas: 50684644

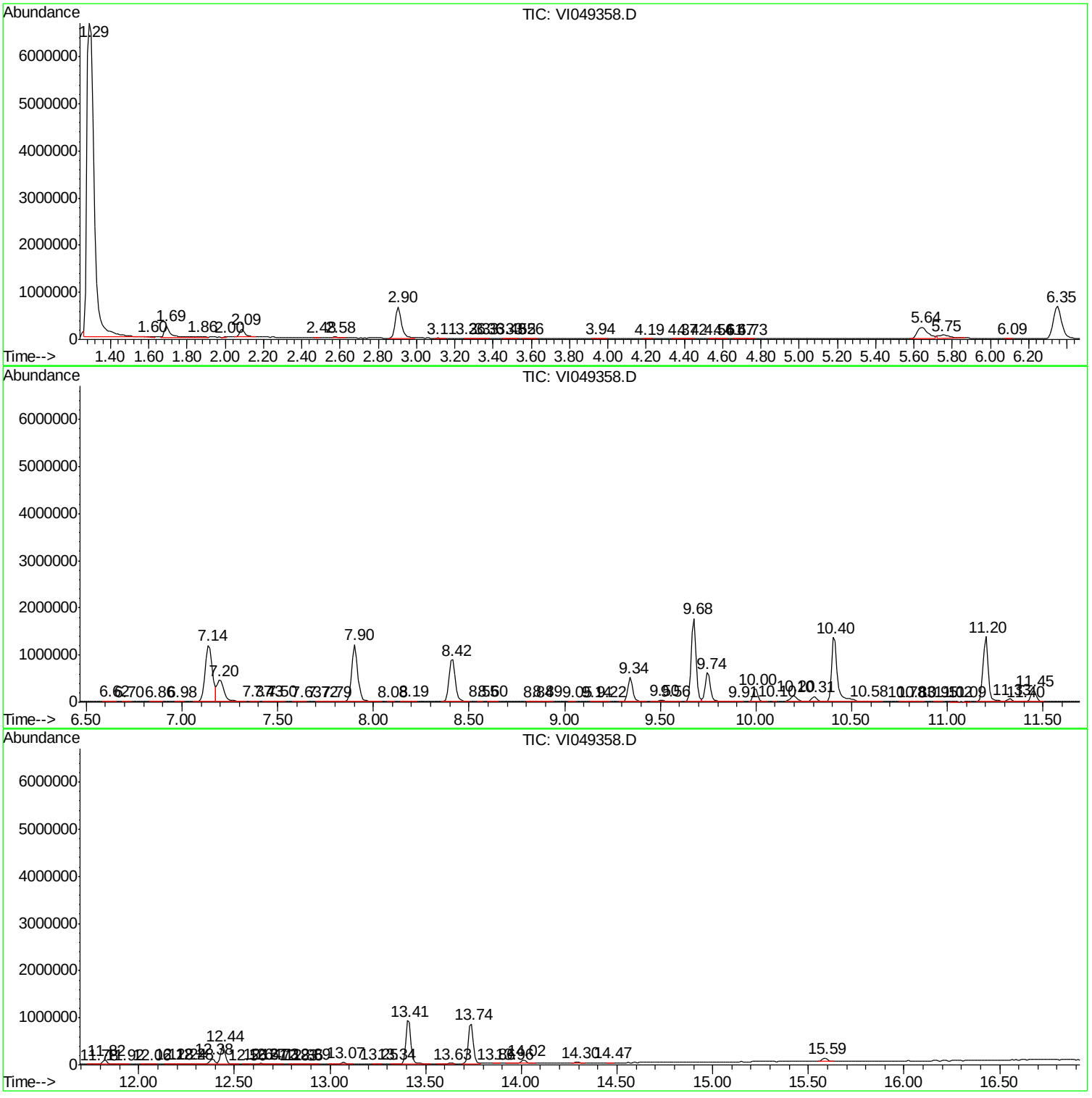
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049358.D
Acq On : 12 May 2016 18:58
Operator : FY/SY
Sample : H3056-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4095

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049358.D
Acq On : 12 May 2016 18:58
Operator : FY/SY
Sample : H3056-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4095

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049358.D
Acq On : 12 May 2016 18:58
Operator : FY/SY
Sample : H3056-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4095

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4100

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049359.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.11	J
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4100

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049359.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4100

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049359.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4100

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049359.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	018952-41-5	Formamide, N-methylthio	5.75	0.55	JN
2	100025-44-3	5H-Naphtho[2,3-c]carbazole, 5-meth	12.38	5.6	JN
3	E966796	Total Alkanes	N/A	0.0	

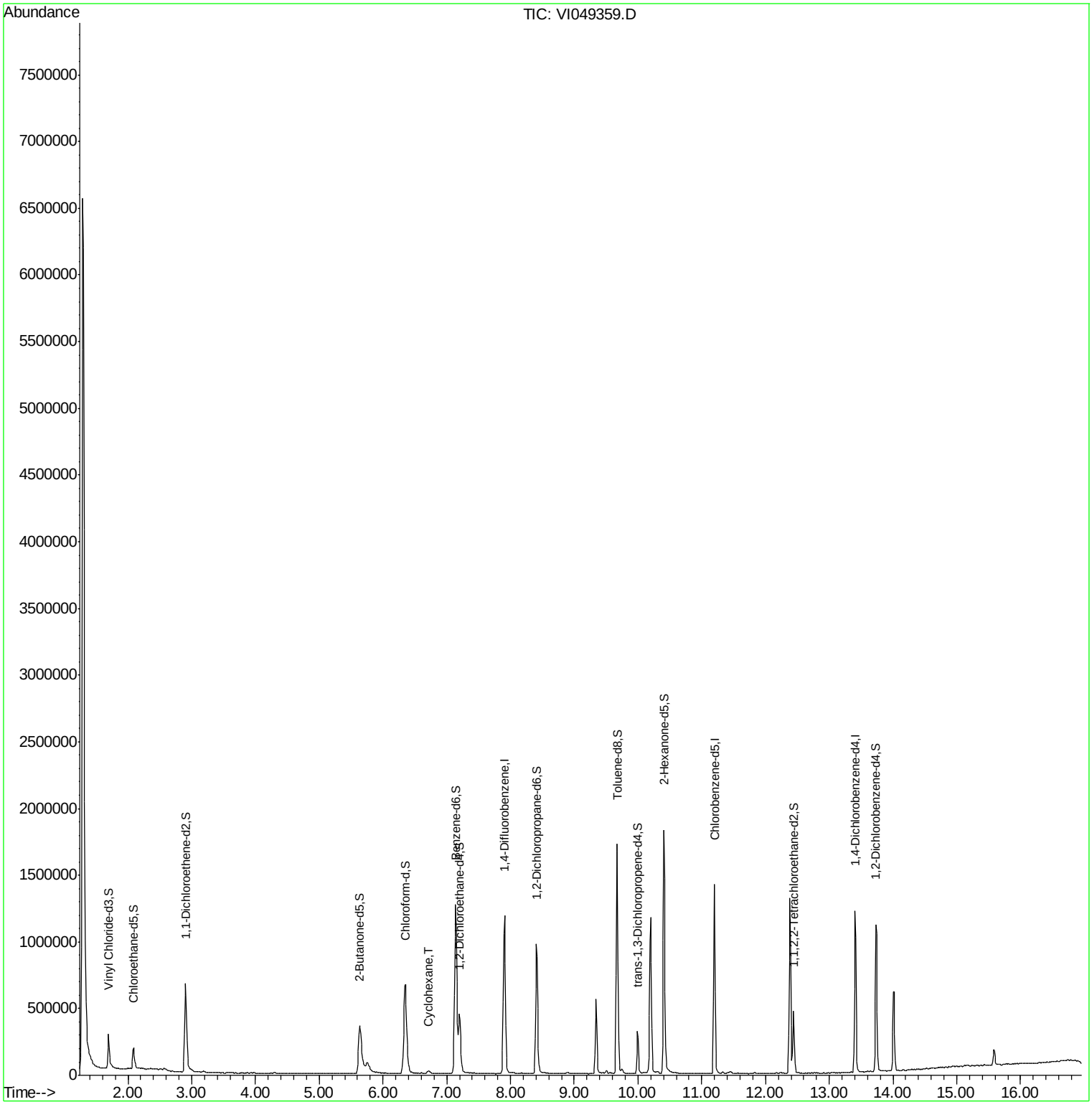
EPA-designated Registry Number.

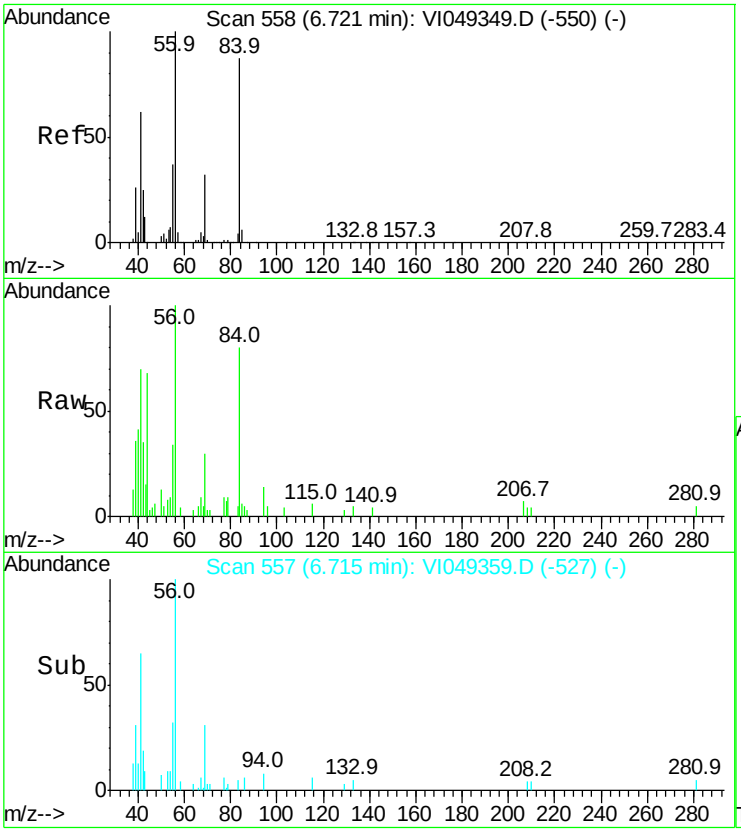
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049359.D
Acq On : 12 May 2016 19:31
Operator : FY/SY
Sample : H3056-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4100

Quant Time: May 13 04:59:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

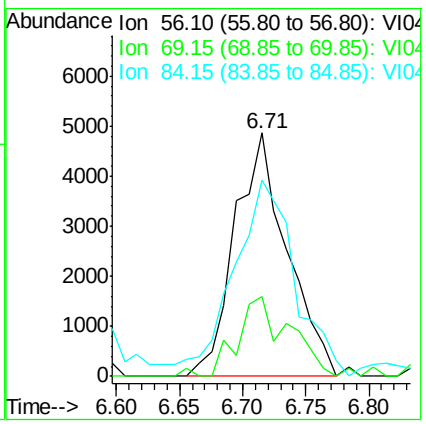




#30
Cyclohexane
Concen: 0.11 ug/L
RT: 6.71 min Scan# 557
Delta R.T. -0.01 min
Lab File: VI049359.D
Acq: 12 May 2016 19:31

Tgt Ion: 56 Resp: 13981

Ion	Ratio	Lower	Upper
56	100		
69	20.7	25.4	38.0#
84	90.0	71.4	107.0



Instrument :
MSVOA_I
ClientSampleId :
H4100

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049359.D
Acq On : 12 May 2016 19:31
Operator : FY/SY
Sample : H3056-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4100

Quant Time: May 13 04:59:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1069250	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	751294	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	293124	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	283461	4.31	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 86.20%			
7) Chloroethane-d5	2.09	69	188293	5.16	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 103.20%			
11) 1,1-Dichloroethene-d2	2.91	63	535343	3.45	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 69.00%			
20) 2-Butanone-d5	5.63	46	889503	62.41	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 124.82%			
24) Chloroform-d	6.35	84	849307	5.07	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.40%			
26) 1,2-Dichloroethane-d4	7.20	65	394110	5.75	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 115.00%			
32) Benzene-d6	7.14	84	1587968	5.43	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 108.60%			
36) 1,2-Dichloropropane-d6	8.41	67	461215	5.60	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 112.00%			
41) Toluene-d8	9.68	98	1139139	5.28	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.60%			
43) trans-1,3-Dichloropropene-	9.99	79	159654	4.92	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.40%			
46) 2-Hexanone-d5	10.41	63	625608	61.17	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 122.34%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	211107	5.64	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 112.80%			
63) 1,2-Dichlorobenzene-d4	13.74	152	272469	5.30	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 106.00%			
Target Compounds						Qvalue
30) Cyclohexane	6.71	56	13981	0.11	ug/L #	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049359.D
Acq On : 12 May 2016 19:31
Operator : FY/SY
Sample : H3056-06
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4100

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.292	3	6	26	rVB	6506301	16262784	100.00%	30.041%
2	1.695	44	47	56	rBV	251927	447784	2.75%	0.827%
3	2.089	83	87	93	rBV	160082	351373	2.16%	0.649%
4	2.561	133	135	147	rVB5	24833	84556	0.52%	0.156%
5	2.739	151	153	155	rBV2	3820	7048	0.04%	0.013%
6	2.906	164	170	184	rBV	663064	1557978	9.58%	2.878%
7	3.162	194	196	197	rBV2	4727	8308	0.05%	0.015%
8	3.181	197	198	204	rVV5	9595	17333	0.11%	0.032%
9	3.280	207	208	209	rBV	4791	4341	0.03%	0.008%
10	3.487	226	229	232	rBV4	2694	4742	0.03%	0.009%
11	3.565	232	237	242	rBV7	5619	15831	0.10%	0.029%
12	3.683	247	249	252	rBV4	3720	4657	0.03%	0.009%
13	3.782	258	259	263	rBV4	2973	4966	0.03%	0.009%
14	3.929	272	274	276	rVB3	3177	4406	0.03%	0.008%
15	3.979	276	279	283	rVB6	5251	11468	0.07%	0.021%
16	4.028	283	284	287	rBV2	3293	4738	0.03%	0.009%
17	4.313	312	313	317	rVB4	5597	5817	0.04%	0.011%
18	4.402	321	322	326	rBV3	3819	7871	0.05%	0.015%
19	4.481	326	330	331	rBV3	3606	8206	0.05%	0.015%
20	4.569	336	339	342	rBV5	2588	5383	0.03%	0.010%
21	4.687	348	351	354	rBV4	4588	9848	0.06%	0.018%
22	4.766	357	359	361	rBV3	2804	4329	0.03%	0.008%
23	4.855	363	368	369	rBV5	3353	7693	0.05%	0.014%
24	5.051	385	388	391	rBV4	4800	11211	0.07%	0.021%
25	5.091	391	392	398	rVB4	3952	9177	0.06%	0.017%
26	5.238	404	407	408	rVB3	3847	5750	0.04%	0.011%
27	5.268	408	410	411	rBV2	5690	6910	0.04%	0.013%
28	5.376	416	421	422	rBV4	4325	8635	0.05%	0.016%
29	5.425	425	426	429	rBV3	4102	5303	0.03%	0.010%
30	5.632	440	447	456	rBV	357916	1371783	8.44%	2.534%
31	5.750	456	459	473	rVB2	70900	282443	1.74%	0.522%
32	5.977	481	482	486	rVB4	3639	4750	0.03%	0.009%
33	6.026	486	487	490	rVB2	4718	6053	0.04%	0.011%
34	6.351	510	520	533	rBV	668945	2181789	13.42%	4.030%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049359.D
Acq On : 12 May 2016 19:31
Operator : FY/SY
Sample : H3056-06
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4100

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.547	539	540	543	rVB3	3311	4345	0.03%	0.008%
36	6.607	543	546	547	rVB3	3751	6044	0.04%	0.011%
37	6.715	552	557	563	rVB3	22460	72283	0.44%	0.134%
38	6.872	571	573	575	rVB3	4696	7344	0.05%	0.014%
39	6.981	581	584	585	rVB3	4145	5972	0.04%	0.011%
40	7.020	585	588	592	rBV4	3077	6012	0.04%	0.011%
41	7.138	592	600	604	rBV	1267477	3334294	20.50%	6.159%
42	7.197	604	606	618	rVB	440413	1028968	6.33%	1.901%
43	7.423	627	629	632	rVB4	4046	6606	0.04%	0.012%
44	7.630	647	650	652	rVB3	4381	7266	0.04%	0.013%
45	7.660	652	653	655	rBV2	4271	5035	0.03%	0.009%
46	7.748	661	662	664	rVB2	5994	5782	0.04%	0.011%
47	7.778	664	665	670	rBV5	4103	8861	0.05%	0.016%
48	7.906	672	678	688	rBV	1182455	2589872	15.93%	4.784%
49	8.171	704	705	711	rVB4	4842	9180	0.06%	0.017%
50	8.408	724	729	737	rBV	971184	2135480	13.13%	3.945%
51	8.723	757	761	762	rBV3	3249	6388	0.04%	0.012%
52	8.900	775	779	782	rBV5	10710	24643	0.15%	0.046%
53	9.047	793	794	797	rBV3	3032	4664	0.03%	0.009%
54	9.244	812	814	816	rBV3	5634	9418	0.06%	0.017%
55	9.343	819	824	833	rBV	558483	1032902	6.35%	1.908%
56	9.441	833	834	837	rVV3	5452	11911	0.07%	0.022%
57	9.510	837	841	844	rVV2	20407	41240	0.25%	0.076%
58	9.569	844	847	848	rVV2	5271	8872	0.05%	0.016%
59	9.589	848	849	853	rVV4	4170	5170	0.03%	0.010%
60	9.677	853	858	863	rVV	1720243	3243526	19.94%	5.992%
61	9.746	863	865	873	rVV	34779	70352	0.43%	0.130%
62	9.992	886	890	897	rBV	316187	549814	3.38%	1.016%
63	10.100	897	901	902	rVV4	7627	14007	0.09%	0.026%
64	10.199	905	911	919	rVV	1170481	2409135	14.81%	4.450%
65	10.297	919	921	926	rVB5	12308	28733	0.18%	0.053%
66	10.406	928	932	945	rVV	1824494	3276455	20.15%	6.052%
67	10.583	949	950	953	rVB3	3752	6138	0.04%	0.011%
68	10.770	967	969	971	rVB3	4406	6798	0.04%	0.013%
69	10.829	971	975	977	rBV5	5034	10055	0.06%	0.019%
70	10.947	985	987	989	rVB3	4177	6664	0.04%	0.012%
71	11.065	997	999	1002	rVB3	2122	4327	0.03%	0.008%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049359.D
Acq On : 12 May 2016 19:31
Operator : FY/SY
Sample : H3056-06
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4100

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.203	1008	1013	1021	rBV	1420138	2547527	15.66%	4.706%
73	11.331	1023	1026	1030	rVB3	13237	28484	0.18%	0.053%
74	11.400	1030	1033	1036	rBV5	7047	17267	0.11%	0.032%
75	11.459	1036	1039	1044	rVV2	13966	29891	0.18%	0.055%
76	11.567	1046	1050	1055	rVB8	3781	8903	0.05%	0.016%
77	11.724	1063	1066	1067	rVB3	4273	5581	0.03%	0.010%
78	11.754	1067	1069	1071	rBV3	3088	5551	0.03%	0.010%
79	11.823	1073	1076	1081	rVB6	10442	21251	0.13%	0.039%
80	11.970	1088	1091	1094	rBV4	3112	6291	0.04%	0.012%
81	12.167	1108	1111	1115	rBV6	6309	13437	0.08%	0.025%
82	12.246	1115	1119	1121	rBV5	6191	11921	0.07%	0.022%
83	12.384	1128	1133	1136	rBV	1310719	2315108	14.24%	4.277%
84	12.443	1136	1139	1144	rVB	459704	781930	4.81%	1.444%
85	12.669	1159	1162	1163	rBV2	5065	6111	0.04%	0.011%
86	12.728	1166	1168	1170	rVB3	4346	6430	0.04%	0.012%
87	12.777	1170	1173	1174	rBV3	3315	7142	0.04%	0.013%
88	12.915	1184	1187	1188	rVB3	4203	6229	0.04%	0.012%
89	12.964	1190	1192	1193	rBV2	3885	4939	0.03%	0.009%
90	13.211	1213	1217	1219	rBV5	6817	16813	0.10%	0.031%
91	13.338	1228	1230	1233	rVB3	6097	9555	0.06%	0.018%
92	13.407	1233	1237	1245	rBV	1214334	2079835	12.79%	3.842%
93	13.604	1255	1257	1259	rVB3	6192	6945	0.04%	0.013%
94	13.644	1259	1261	1262	rBV2	6123	5204	0.03%	0.010%
95	13.732	1266	1270	1279	rBV	1103723	2022425	12.44%	3.736%
96	13.919	1287	1289	1291	rBV3	4579	5195	0.03%	0.010%
97	14.008	1294	1298	1304	rVV2	594263	1147967	7.06%	2.121%
98	14.165	1311	1314	1317	rBV4	6849	14685	0.09%	0.027%
99	14.874	1384	1386	1389	rBV4	8748	19257	0.12%	0.036%
100	15.582	1454	1458	1463	rBV	115240	242972	1.49%	0.449%

Sum of corrected areas: 54134666

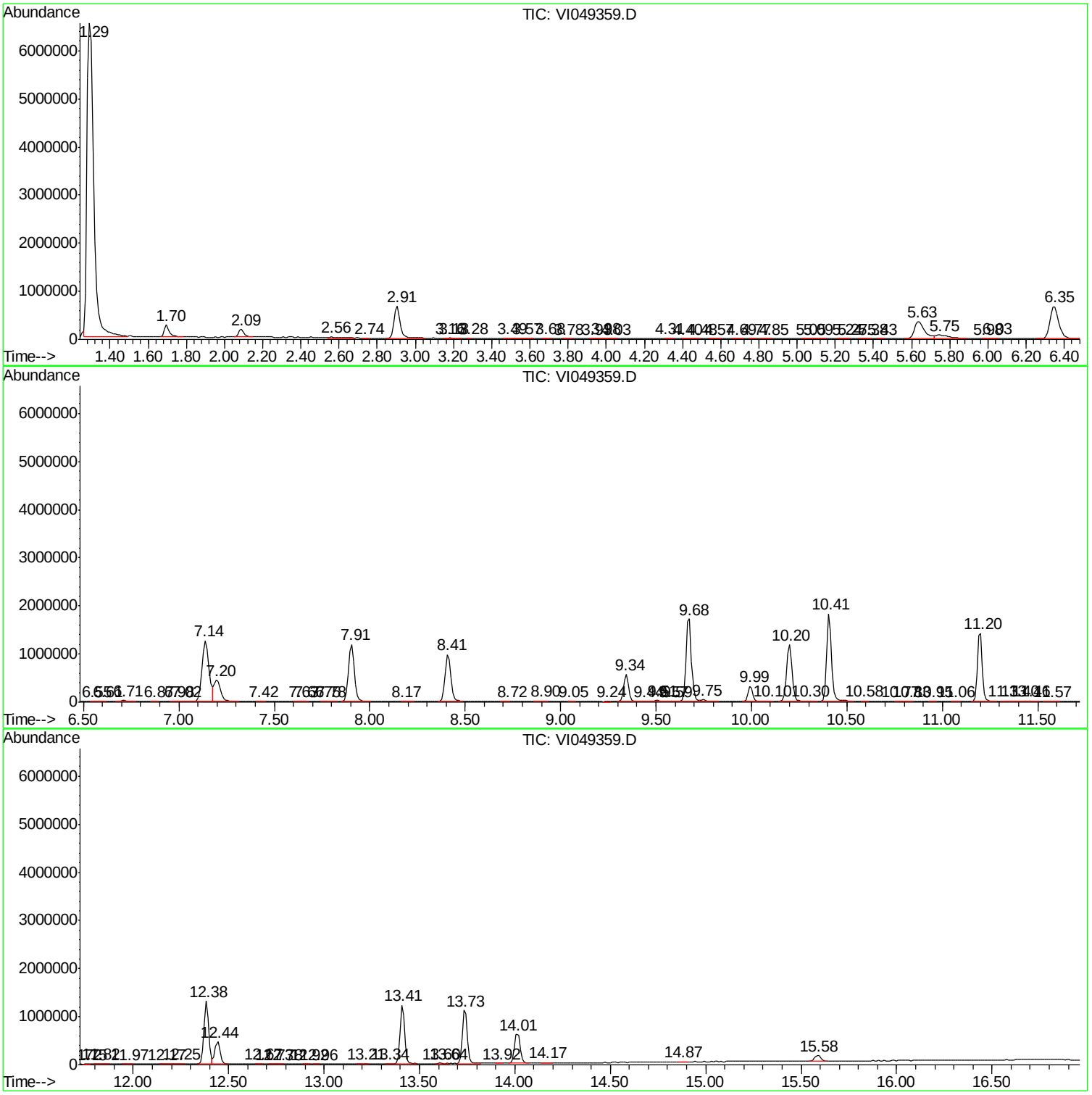
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049359.D
Acq On : 12 May 2016 19:31
Operator : FY/SY
Sample : H3056-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4100

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049359.D
Acq On : 12 May 2016 19:31
Operator : FY/SY
Sample : H3056-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4100

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

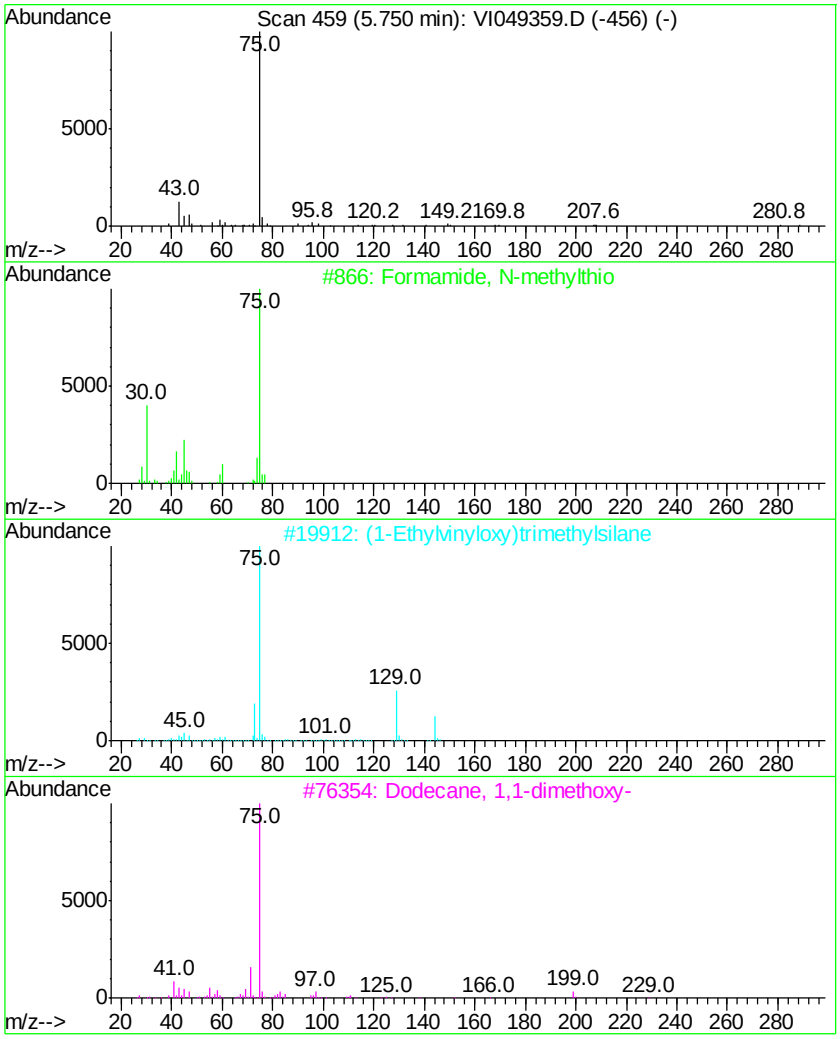
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

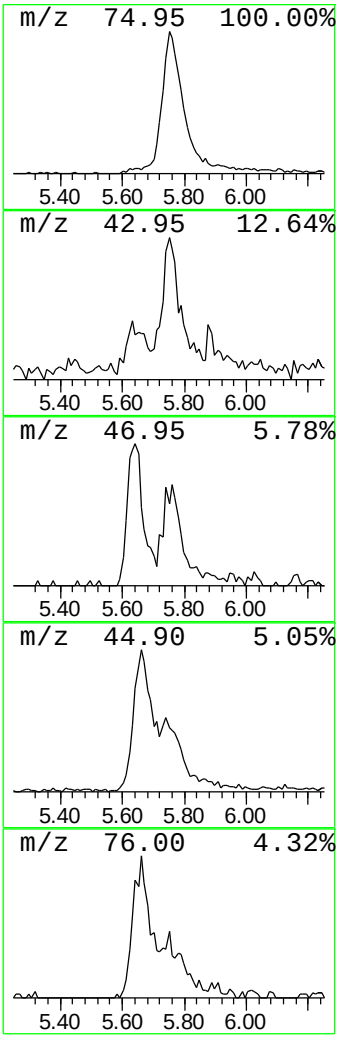
****

Peak Number 2 Formamide, N-methylthio Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.75	0.55 ug/L	282443	1,4-Difluorobenzene	7.91

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Formamide, N-methylthio	75	C2H5NS	018952-41-5	56
2	(1-Ethylvinyloxy)trimethylsilane	144	C7H16OSi	006651-40-7	40
3	Dodecane, 1,1-dimethoxy-	230	C14H30O2	014620-52-1	40
4	Ethanol, 2-(trimethylsilyl)-	118	C5H14OSi	002916-68-9	39
5	Acetic acid, dimethoxy-, methyl ...	134	C5H10O4	000089-91-8	39





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049359.D
Acq On : 12 May 2016 19:31
Operator : FY/SY
Sample : H3056-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4100

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

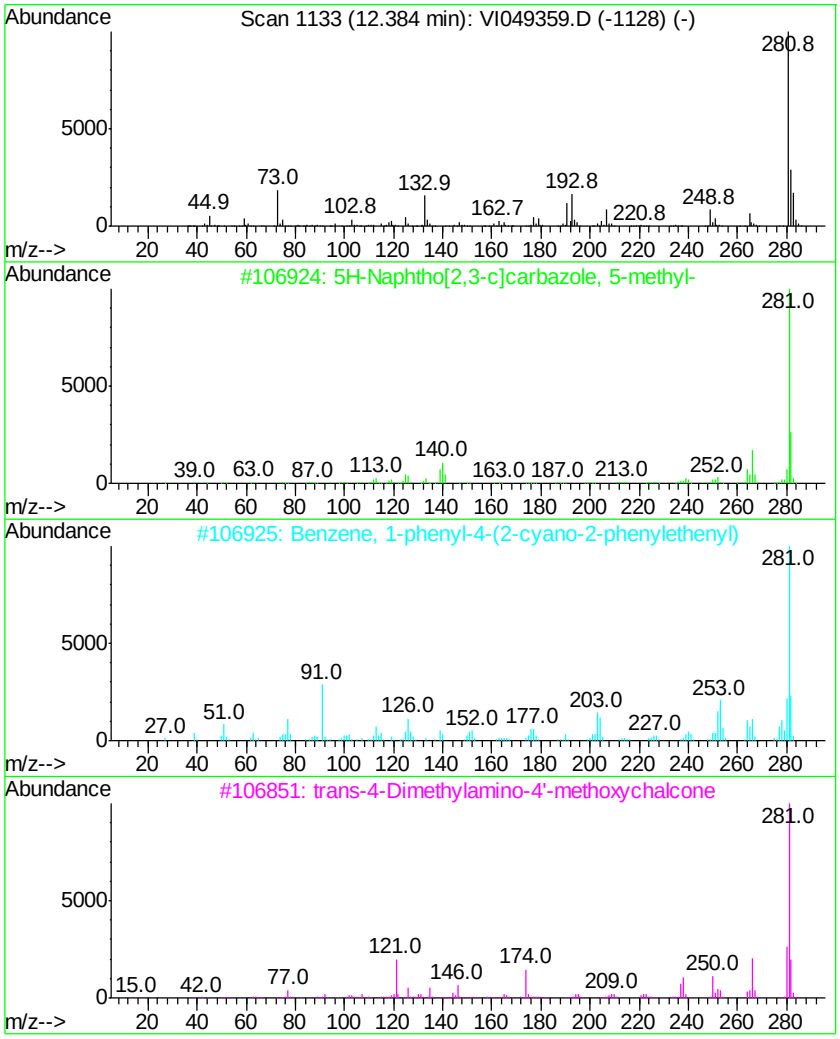
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

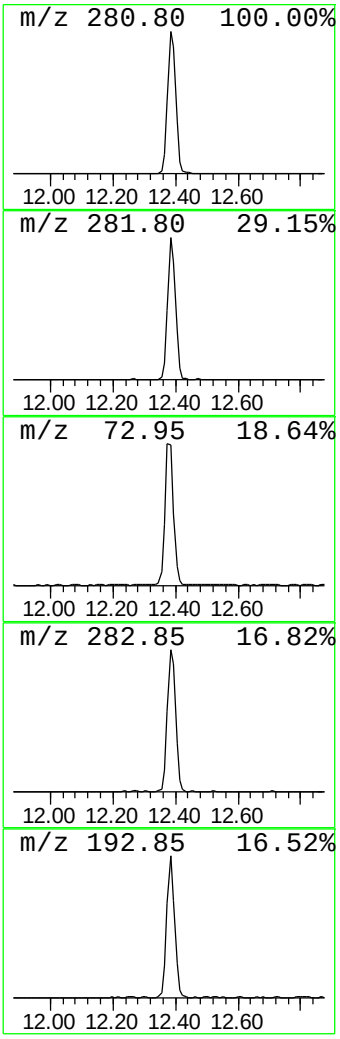
****

Peak Number 5 5H-Naphtho[2,3-c]carbazole,... Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.38	5.57 ug/L	2315110	1,4-Dichlorobenzene-d4	13.41

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	5H-Naphtho[2,3-c]carbazole, 5-me...	281	C21H15N	100025-44-3	53
2	Benzene, 1-phenyl-4-(2-cyano-2-p...	281	C21H15N	027869-56-3	50
3	trans-4-Dimethylamino-4'-methoxy...	281	C18H19NO2	052119-37-6	50
4	Cyclotetrasiloxane, octamethyl-	296	C8H24O4Si4	000556-67-2	47
5	4H-1,2,4-Triazole-3-thiol, 4-all...	281	C16H15N3S	031803-13-1	47





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049359.D
Acq On : 12 May 2016 19:31
Operator : FY/SY
Sample : H3056-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4100

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Formamide, N-meth...	5.75	0.6	ug/L	282443	1	7.91	2589870	5.0
5H-Naphtho[2,3-c]...	12.38	5.6	ug/L	2315110	3	13.41	2079840	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4107

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019143.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4107

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019143.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4107

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019143.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4107

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-07
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019143.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

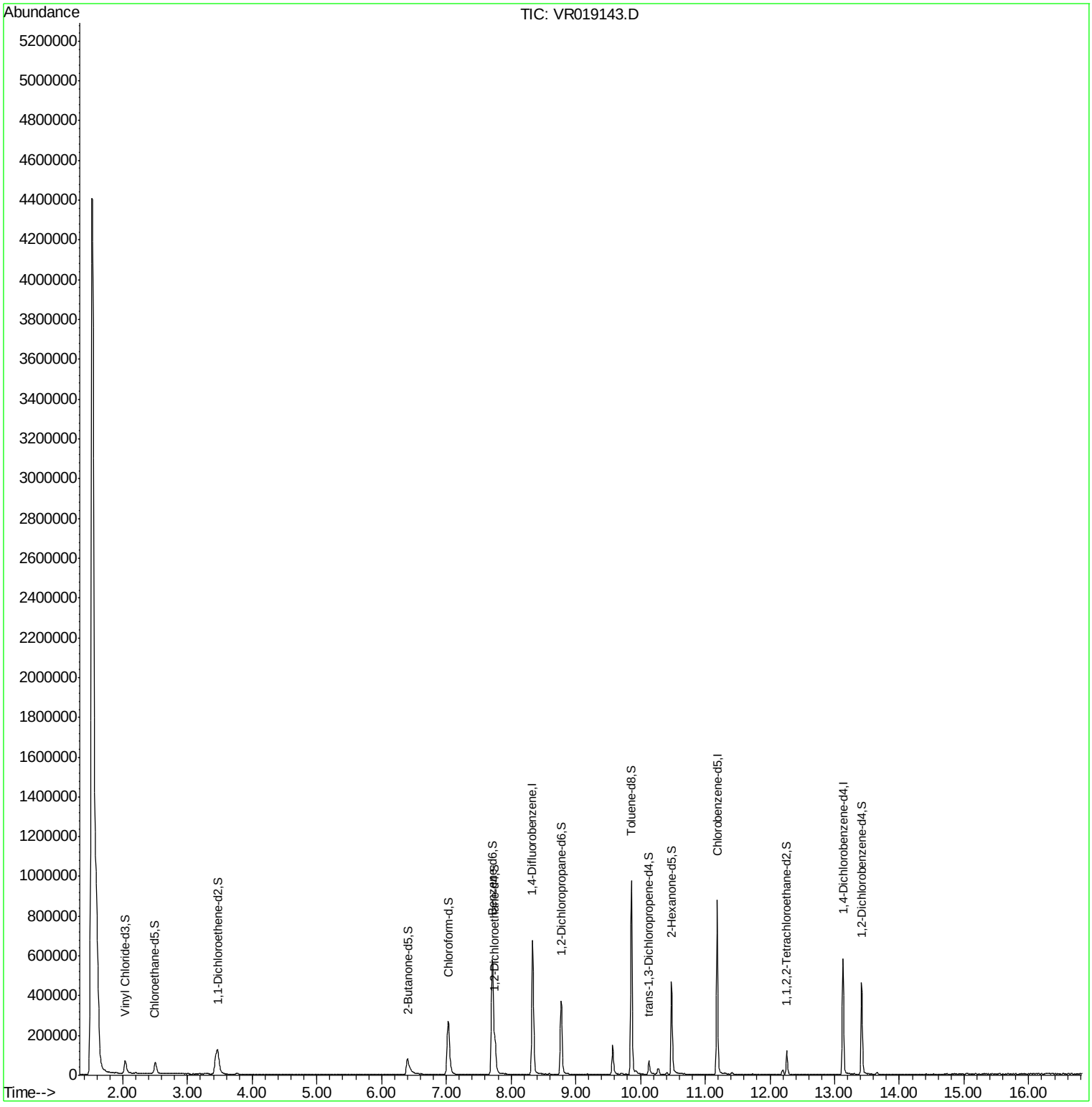
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019143.D
Acq On : 12 May 2016 18:42
Operator : MD\SY
Sample : H3056-07
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4107

Quant Time: May 13 06:38:36 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019143.D
Acq On : 12 May 2016 18:42
Operator : MD\SY
Sample : H3056-07
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4107

Quant Time: May 13 06:38:36 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.34	114	577011	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	429539	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	142932	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	104869	4.04	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 80.80%			
7) Chloroethane-d5	2.50	69	79254	4.30	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 86.00%			
11) 1,1-Dichloroethene-d2	3.46	63	191113	3.19	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.80%			
20) 2-Butanone-d5	6.40	46	168073	50.42	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 100.84%			
24) Chloroform-d	7.03	84	289214	4.52	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.40%			
26) 1,2-Dichloroethane-d4	7.75	65	122966	4.86	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 97.20%			
32) Benzene-d6	7.71	84	649076	4.71	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.20%			
36) 1,2-Dichloropropane-d6	8.78	67	170162	4.77	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 95.40%			
41) Toluene-d8	9.86	98	613780	4.73	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
43) trans-1,3-Dichloropropene-	10.13	79	40264	4.30	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 86.00%			
46) 2-Hexanone-d5	10.48	63	150726	51.37	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 102.74%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	51920	4.07	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 81.40%			
63) 1,2-Dichlorobenzene-d4	13.42	152	110288	4.66	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.20%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019143.D
Acq On : 12 May 2016 18:42
Operator : MD\SY
Sample : H3056-07
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4107

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	18	32	69	rBV	4405312	16678078	100.00%	59.615%
2	2.035	109	116	129	rBV	63651	170867	1.02%	0.611%
3	3.464	337	351	370	rBV4	124632	531391	3.19%	1.899%
4	6.403	827	834	852	rBV	78489	284909	1.71%	1.018%
5	7.029	926	937	951	rBV	266705	758059	4.55%	2.710%
6	7.711	1041	1049	1068	rBV2	577408	1676043	10.05%	5.991%
7	8.331	1143	1151	1169	rBV	676100	1381555	8.28%	4.938%
8	8.775	1215	1224	1239	rBV	371388	754968	4.53%	2.699%
9	9.566	1346	1354	1366	rBV	148324	277072	1.66%	0.990%
10	9.858	1395	1402	1411	rBV	976367	1622599	9.73%	5.800%
11	10.479	1498	1504	1519	rBV	464693	746047	4.47%	2.667%
12	11.184	1614	1620	1636	rBV	875630	1318028	7.90%	4.711%
13	12.261	1791	1797	1807	rVB2	120706	181186	1.09%	0.648%
14	13.131	1932	1940	1949	rBV	584020	887160	5.32%	3.171%
15	13.417	1979	1987	1997	rBV	463085	708237	4.25%	2.532%

Sum of corrected areas: 27976199

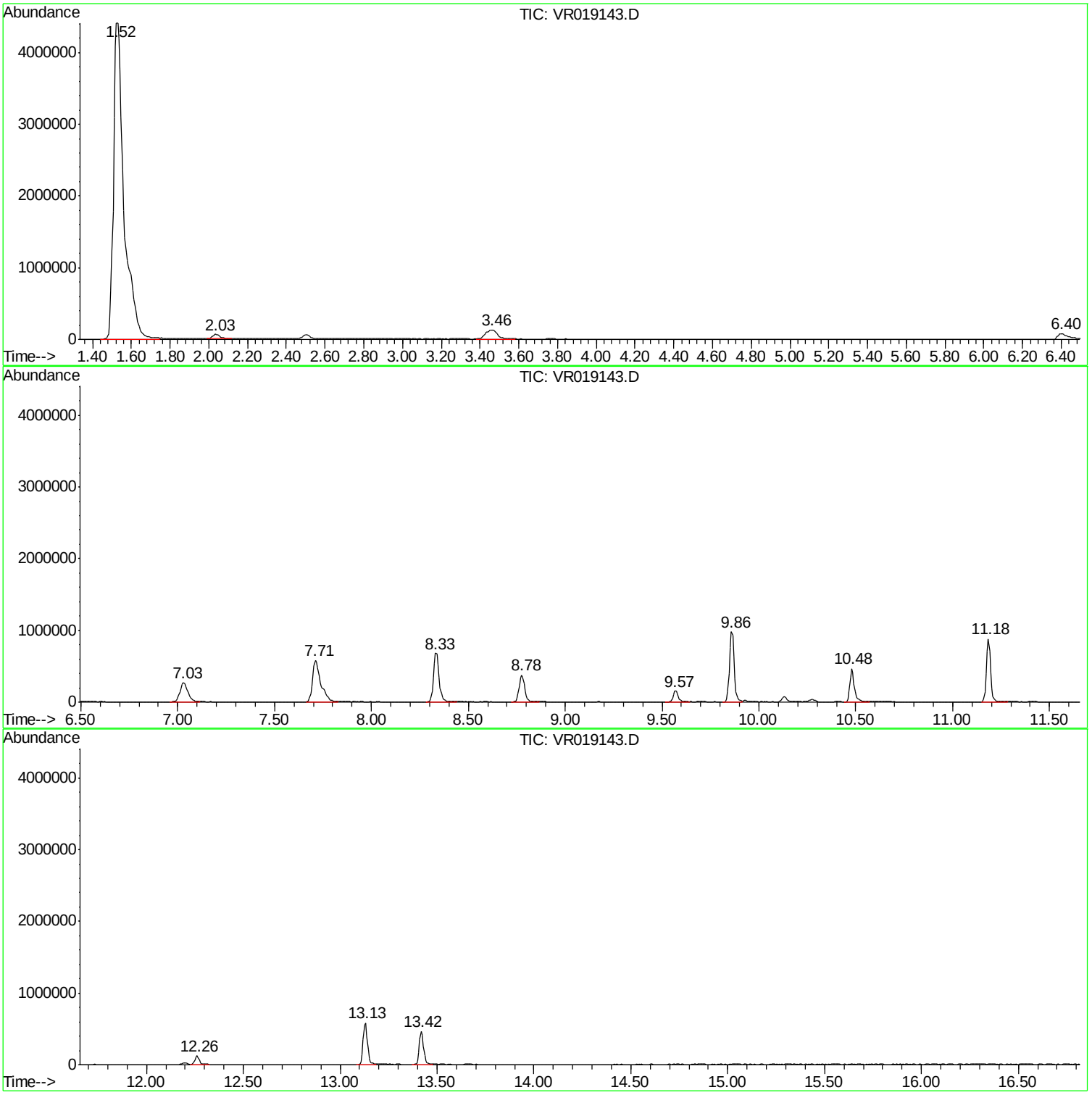
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019143.D
Acq On : 12 May 2016 18:42
Operator : MD\SY
Sample : H3056-07
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4107

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019143.D
Acq On : 12 May 2016 18:42
Operator : MD\SY
Sample : H3056-07
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H4107

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019143.D
Acq On : 12 May 2016 18:42
Operator : MD\SY
Sample : H3056-07
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4107

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4114

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019140.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.2	
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	16	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4114

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019140.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	2.6	
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.38	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.52	
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.21	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4114

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019140.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4114

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019140.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

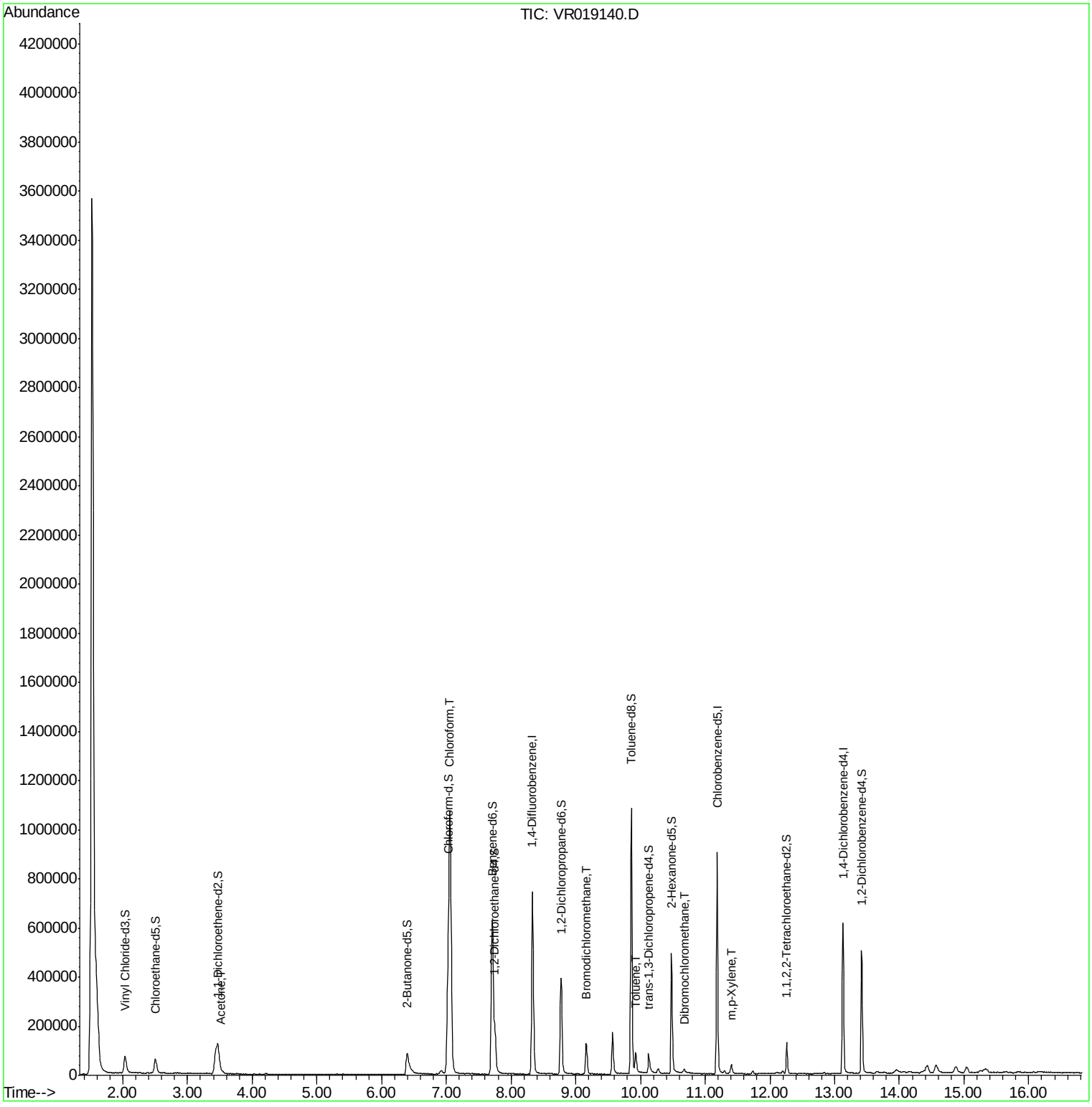
EPA-designated Registry Number.

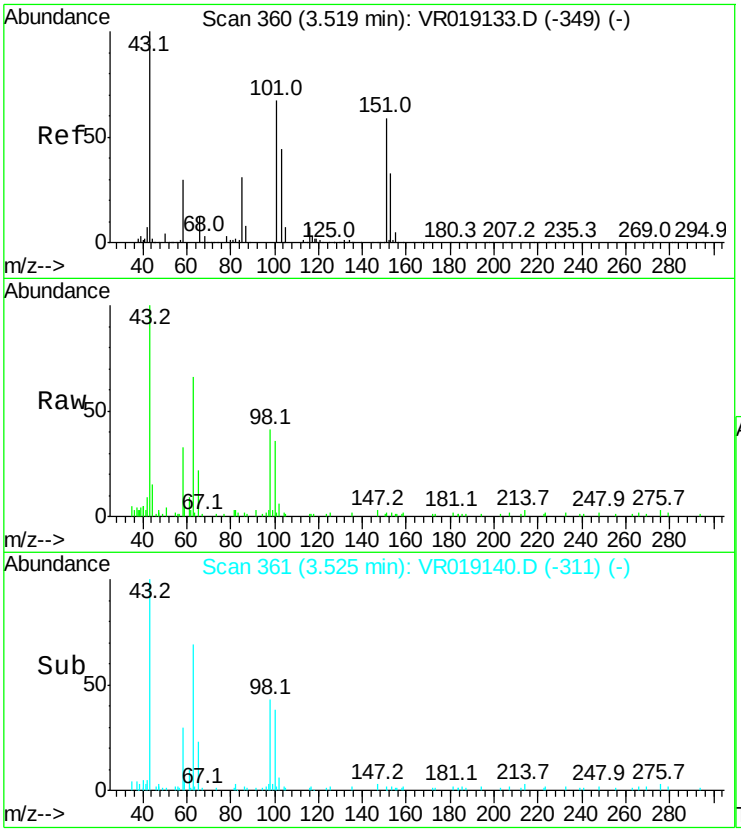
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019140.D
Acq On : 12 May 2016 17:04
Operator : MD\SY
Sample : H3056-10
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4114

Quant Time: May 13 06:23:29 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration



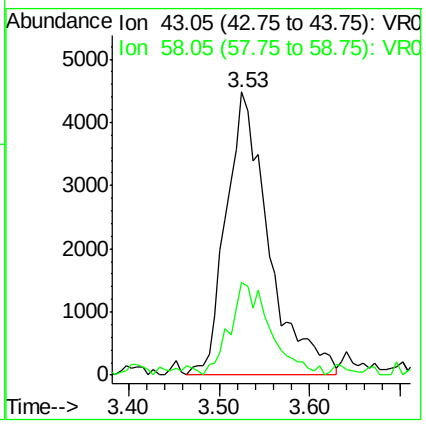


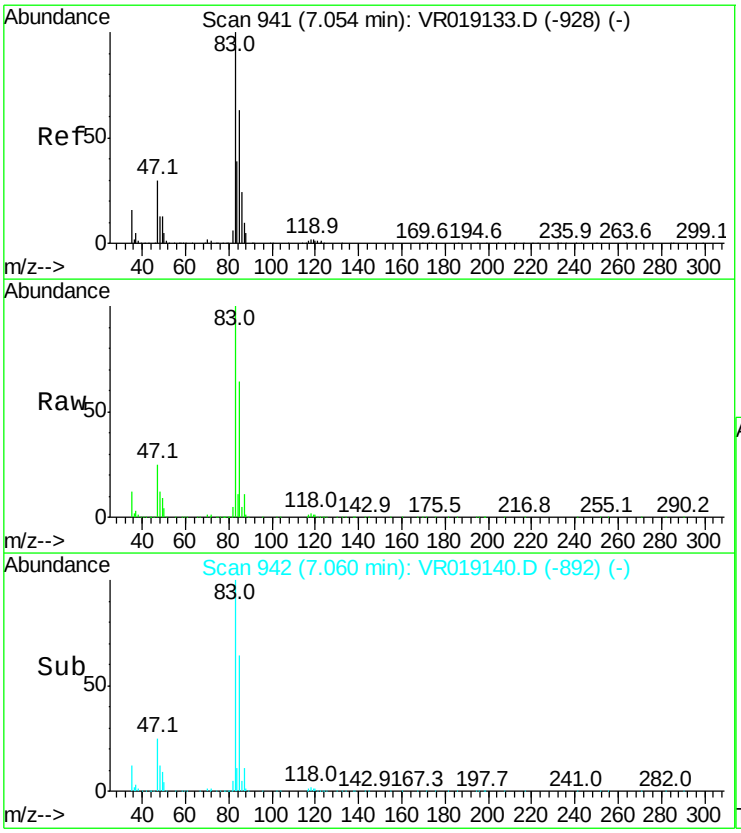
#13
Acetone
Concen: 5.22 ug/L
RT: 3.53 min Scan# 361
Delta R.T. 0.01 min
Lab File: VR019140.D
Acq: 12 May 2016 17:04

Instrument : MSVOA_R
ClientSampleId : H4114

Tgt Ion: 43 Resp: 14633

Ion	Ratio	Lower	Upper
43	100		
58	30.9	0.0	57.8

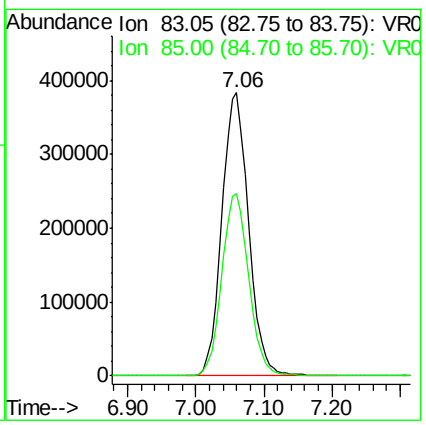


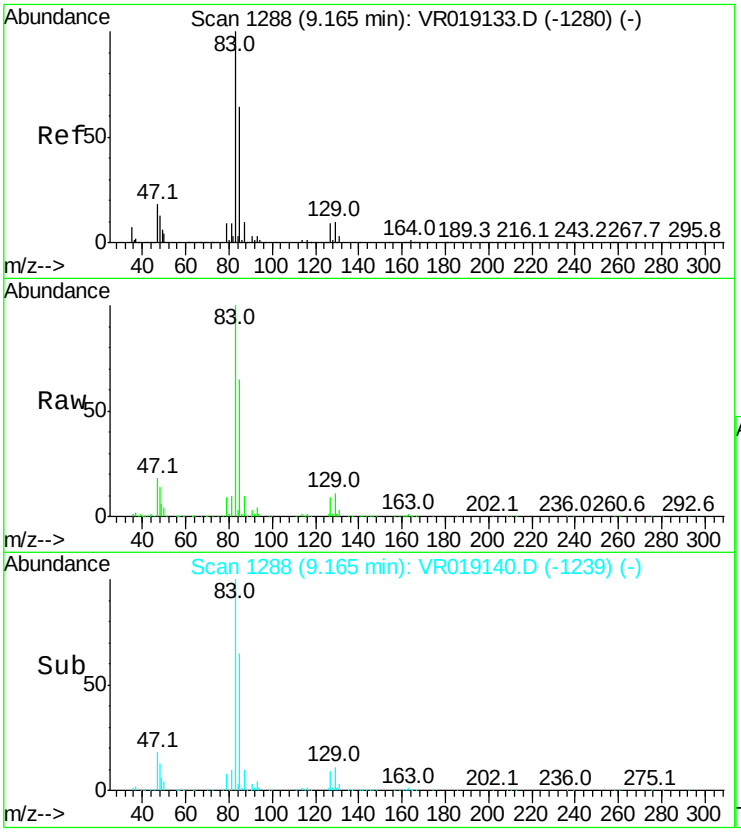


#25
Chloroform
Concen: 16.47 ug/L
RT: 7.06 min Scan# 942
Delta R.T. 0.01 min
Lab File: VR019140.D
Acq: 12 May 2016 17:04

Tgt Ion: 83 Resp: 1041749

Ion	Ratio	Lower	Upper
83	100		
85	64.5	46.0	85.4



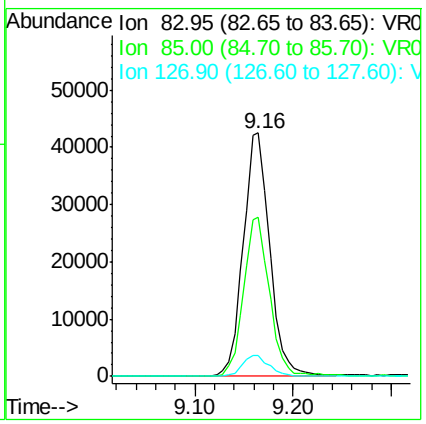


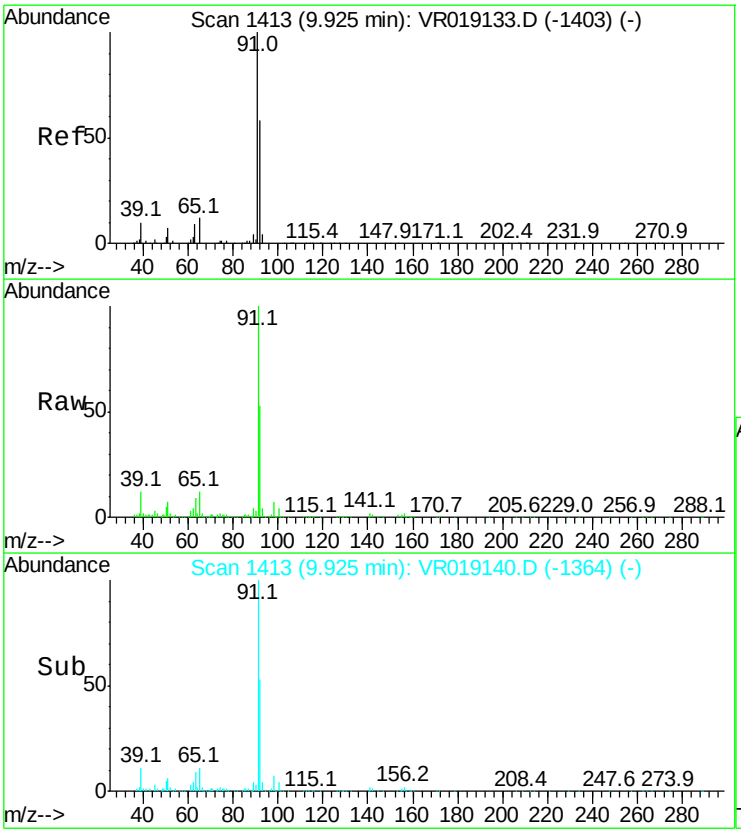
#38
Bromodichloromethane
Concen: 2.64 ug/L
RT: 9.16 min Scan# 1288
Delta R.T. 0.00 min
Lab File: VR019140.D
Acq: 12 May 2016 17:04

Instrument :
MSVOA_R
ClientSampleId :
H4114

Tgt Ion: 83 Resp: 79987

Ion	Ratio	Lower	Upper
83	100		
85	65.2	44.4	82.4
127	8.8	7.2	10.8

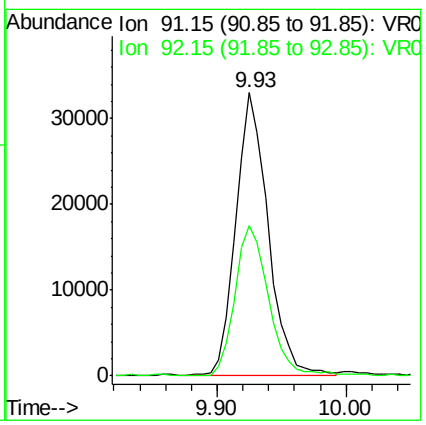


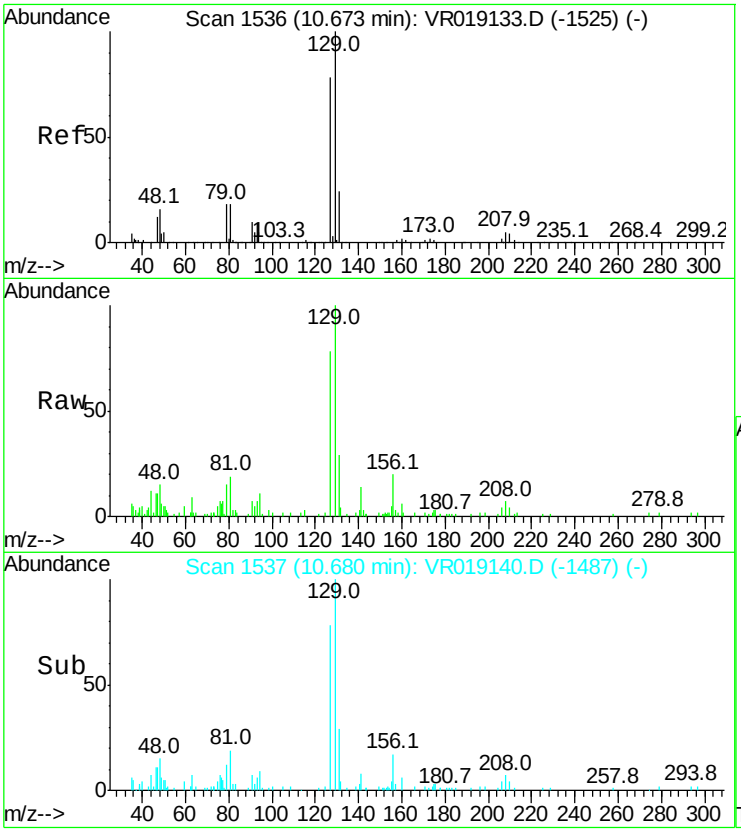


#42
Toluene
Concen: 0.38 ug/L
RT: 9.93 min Scan# 1413
Delta R.T. 0.00 min
Lab File: VR019140.D
Acq: 12 May 2016 17:04

Tgt Ion: 91 Resp: 56790

Ion	Ratio	Lower	Upper
91	100		
92	53.3	40.5	75.3



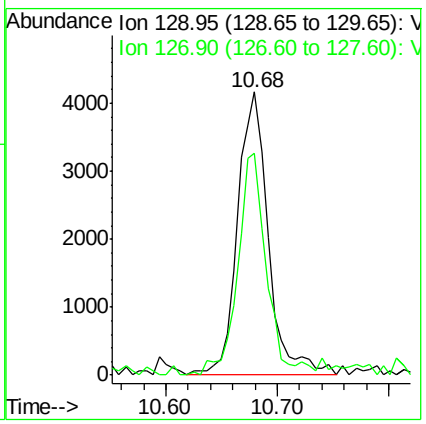


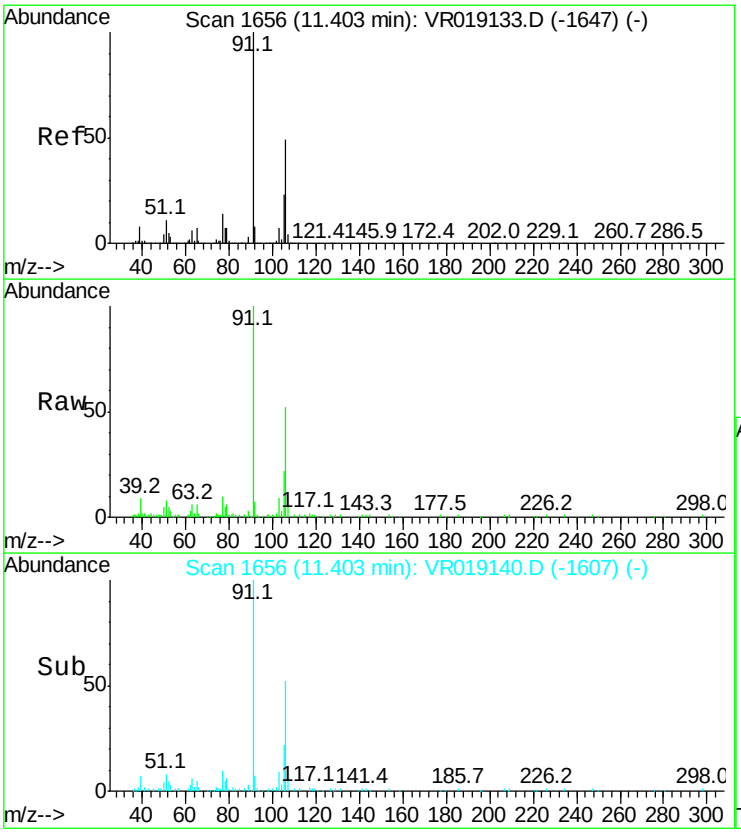
#49
Dibromochloromethane
Concen: 0.52 ug/L
RT: 10.68 min Scan# 1537
Delta R.T. 0.01 min
Lab File: VR019140.D
Acq: 12 May 2016 17:04

Instrument : MSVOA_R
ClientSampleId : H4114

Tgt Ion:129 Resp: 7965

Ion	Ratio	Lower	Upper
129	100		
127	78.2	49.5	91.9

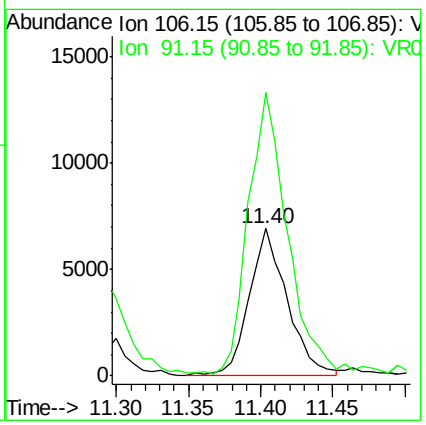




#53
m,p-Xylene
Concen: 0.21 ug/L
RT: 11.40 min Scan# 1656
Delta R.T. 0.00 min
Lab File: VR019140.D
Acq: 12 May 2016 17:04

Tgt Ion:106 Resp: 12611

Ion	Ratio	Lower	Upper
106	100		
91	192.3	146.4	271.8



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019140.D
Acq On : 12 May 2016 17:04
Operator : MD\SY
Sample : H3056-10
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4114

Quant Time: May 13 06:23:29 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	618753	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	443734	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	153159	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	115660	4.15	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 83.00%			
7) Chloroethane-d5	2.50	69	86399	4.37	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 87.40%			
11) 1,1-Dichloroethene-d2	3.47	63	207025	3.23	ug/L	0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 64.60%			
20) 2-Butanone-d5	6.40	46	172193	48.17	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 96.34%			
24) Chloroform-d	7.03	84	367668	5.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 107.20%			
26) 1,2-Dichloroethane-d4	7.75	65	133230	4.91	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.20%			
32) Benzene-d6	7.71	84	709998	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.80%			
36) 1,2-Dichloropropane-d6	8.78	67	185354	5.03	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 100.60%			
41) Toluene-d8	9.86	98	663960	4.96	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.20%			
43) trans-1,3-Dichloropropene-	10.13	79	45841	4.74	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 94.80%			
46) 2-Hexanone-d5	10.48	63	156059	51.49	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 102.98%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	54872	4.17	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 83.40%			
63) 1,2-Dichlorobenzene-d4	13.42	152	122369	4.82	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 96.40%			
Target Compounds						Qvalue
13) Acetone	3.53	43	14633	5.22	ug/L	96
25) Chloroform	7.06	83	1041749	16.47	ug/L	98
38) Bromodichloromethane	9.16	83	79987	2.64	ug/L	98
42) Toluene	9.93	91	56790	0.38	ug/L	94
49) Dibromochloromethane	10.68	129	7965	0.52	ug/L	91
53) m,p-Xylene	11.40	106	12611	0.21	ug/L	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019140.D
Acq On : 12 May 2016 17:04
Operator : MD\SY
Sample : H3056-10
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4114

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	18	32	66	rBV	3565501	10606751	100.00%	40.619%
2	2.035	106	116	128	rBV	71238	199131	1.88%	0.763%
3	2.503	182	193	207	rVB	59380	166217	1.57%	0.637%
4	3.470	336	352	369	rBV	126286	595658	5.62%	2.281%
5	6.397	824	833	854	rBV	88046	324675	3.06%	1.243%
6	7.054	927	941	956	rVV2	1068438	3468985	32.71%	13.284%
7	7.711	1039	1049	1068	rBV2	626270	1840896	17.36%	7.050%
8	8.331	1143	1151	1167	rBV	743460	1473057	13.89%	5.641%
9	8.775	1215	1224	1239	rBV	391256	812963	7.66%	3.113%
10	9.159	1280	1287	1297	rBV	125869	232258	2.19%	0.889%
11	9.566	1348	1354	1366	rBV	172958	318150	3.00%	1.218%
12	9.858	1395	1402	1409	rBV	1080081	1744825	16.45%	6.682%
13	9.925	1409	1413	1421	rVB	80571	145747	1.37%	0.558%
14	10.126	1441	1446	1458	rVB	77837	144747	1.36%	0.554%
15	10.479	1499	1504	1517	rBV	489553	754368	7.11%	2.889%
16	11.184	1613	1620	1633	rBV	902643	1374197	12.96%	5.262%
17	12.261	1792	1797	1806	rVB2	127544	195836	1.85%	0.750%
18	13.131	1933	1940	1957	rBV	613141	961267	9.06%	3.681%
19	13.417	1981	1987	1998	rBV	499244	753328	7.10%	2.885%

Sum of corrected areas: 26113056

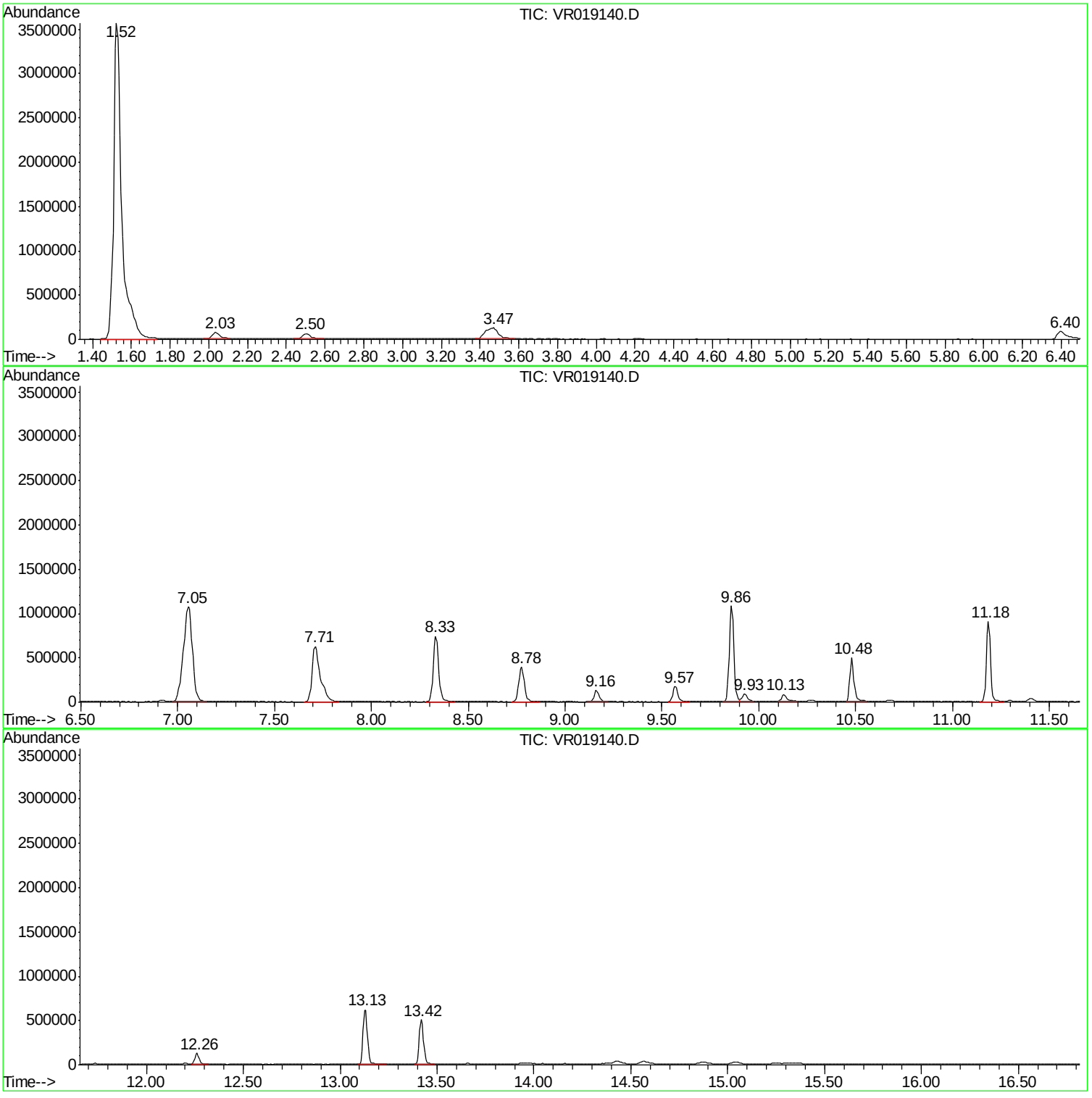
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019140.D
Acq On : 12 May 2016 17:04
Operator : MD\SY
Sample : H3056-10
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4114

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019140.D
Acq On : 12 May 2016 17:04
Operator : MD\SY
Sample : H3056-10
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H4114

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019140.D
Acq On : 12 May 2016 17:04
Operator : MD\SY
Sample : H3056-10
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4114

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4119

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019141.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.88	
71-55-6	1,1,1-Trichloroethane	0.34	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.28	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4119

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019141.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	28	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4119

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019141.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4119

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019141.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

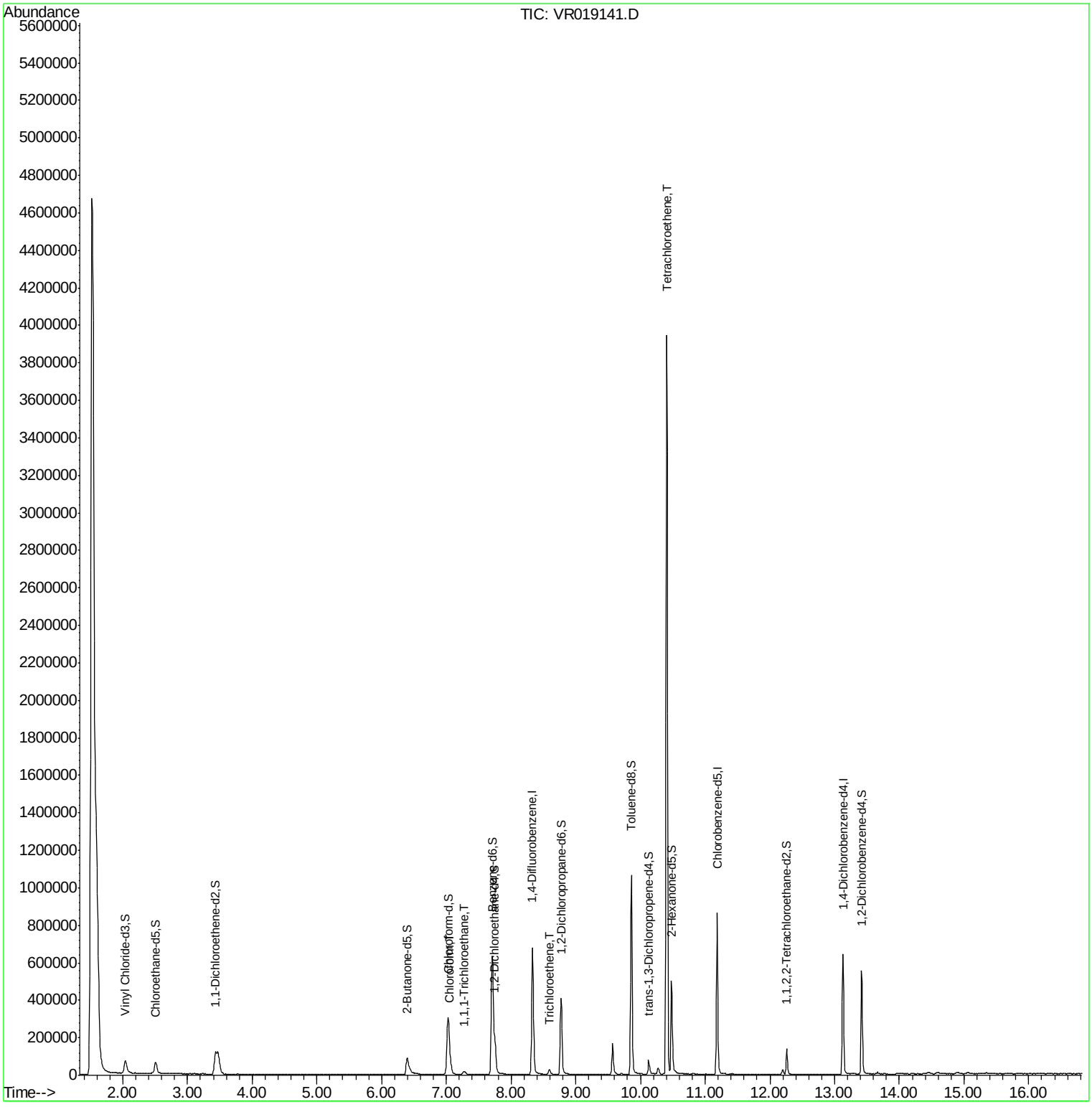
Quantitation Report (QT/LSC Reviewed)

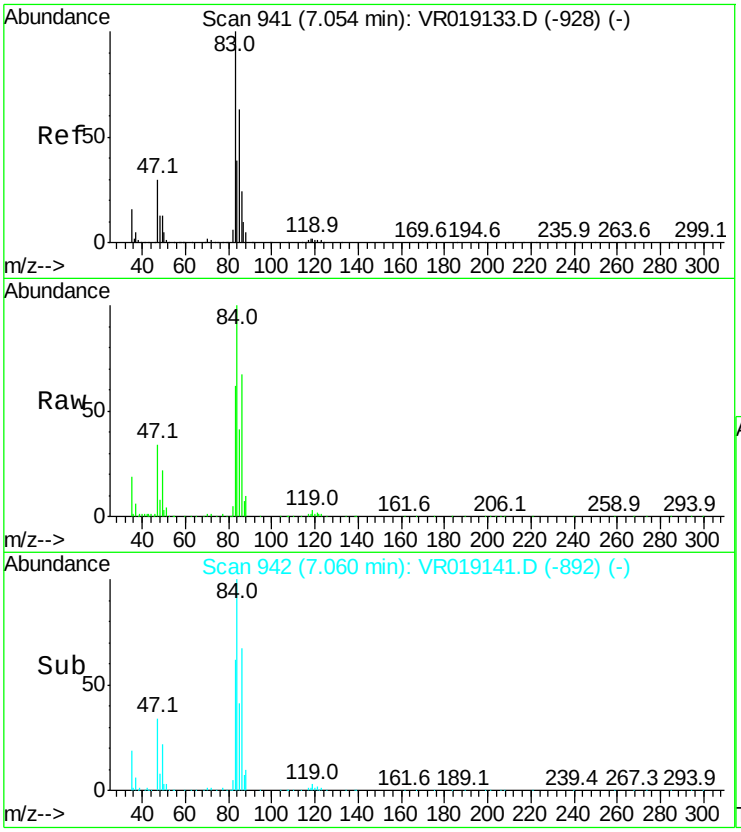
Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019141.D
Acq On : 12 May 2016 17:37
Operator : MD\SY
Sample : H3056-11
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 06:28:08 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
H4119

Manual Integrations APPROVED
feifei
5/13/2016 12:28:11 PM

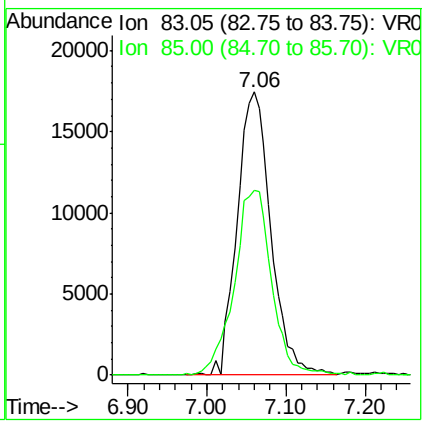




#25
Chloroform
Concen: 0.88 ug/L
RT: 7.06 min Scan# 942
Delta R.T. 0.01 min
Lab File: VR019141.D
Acq: 12 May 2016 17:37

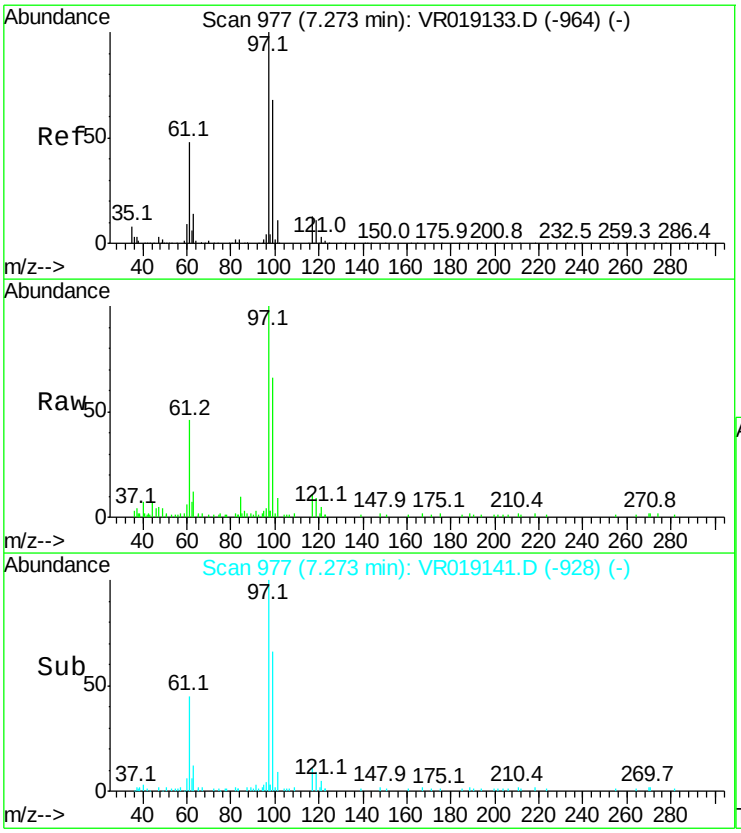
Tgt Ion: 83 Resp: 51815

Ion	Ratio	Lower	Upper
83	100		
85	65.2	46.0	85.4



Instrument :
MSVOA_R
ClientSampleId :
H4119

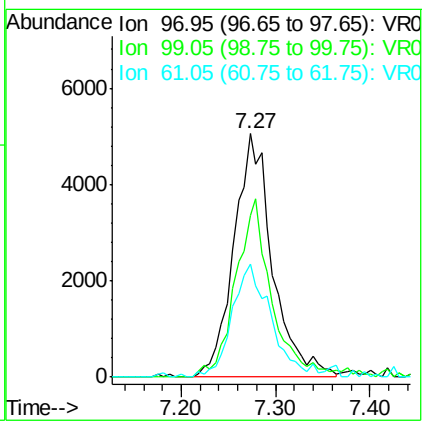
Manual Integrations APPROVED
feifei
5/13/2016 12:28:11 PM

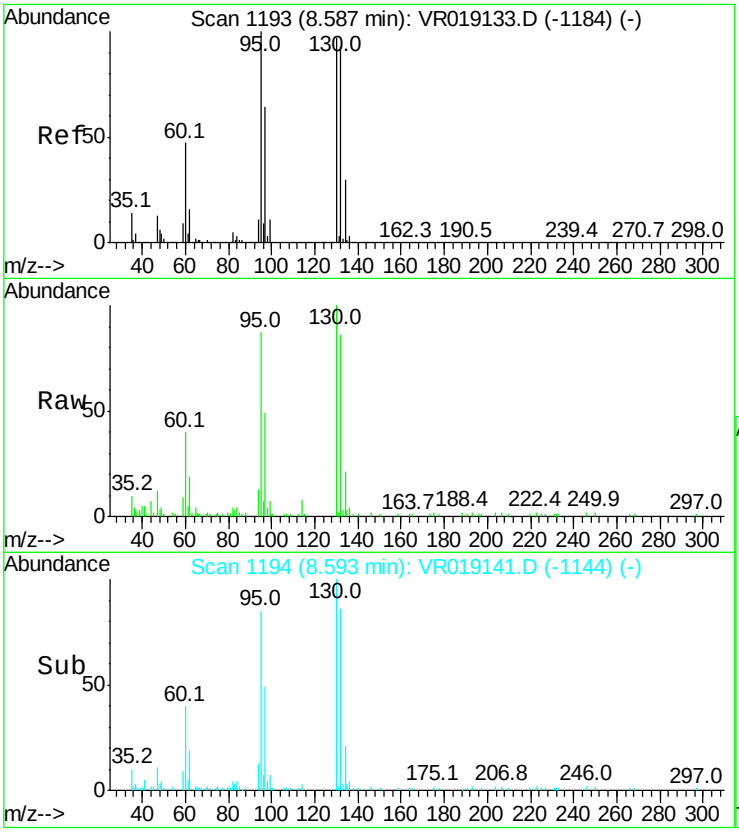


#29
1,1,1-Trichloroethane
Concen: 0.34 ug/L
RT: 7.27 min Scan# 977
Delta R.T. 0.00 min
Lab File: VR019141.D
Acq: 12 May 2016 17:37

Tgt Ion: 97 Resp: 14399

Ion	Ratio	Lower	Upper
97	100		
99	67.5	51.2	76.8
61	46.1	37.1	55.7

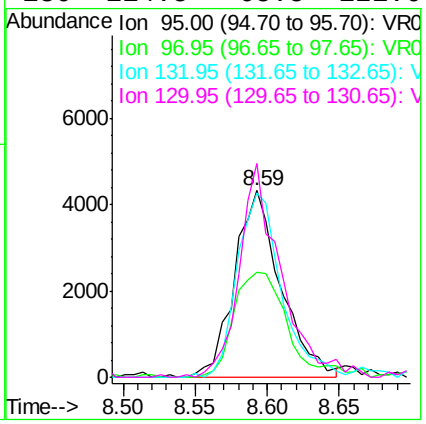




#34
Trichloroethene
Concen: 0.28 ug/L
RT: 8.59 min Scan# 1194
Delta R.T. 0.01 min
Lab File: VR019141.D
Acq: 12 May 2016 17:37

Tgt Ion: 95 Resp: 9643

Ion	Ratio	Lower	Upper
95	100		
97	56.5	43.3	80.5
132	98.7	65.2	121.2
130	114.5	65.5	121.6



Instrument :
MSVOA_R
ClientSampleId :
H4119

Manual Integrations APPROVED
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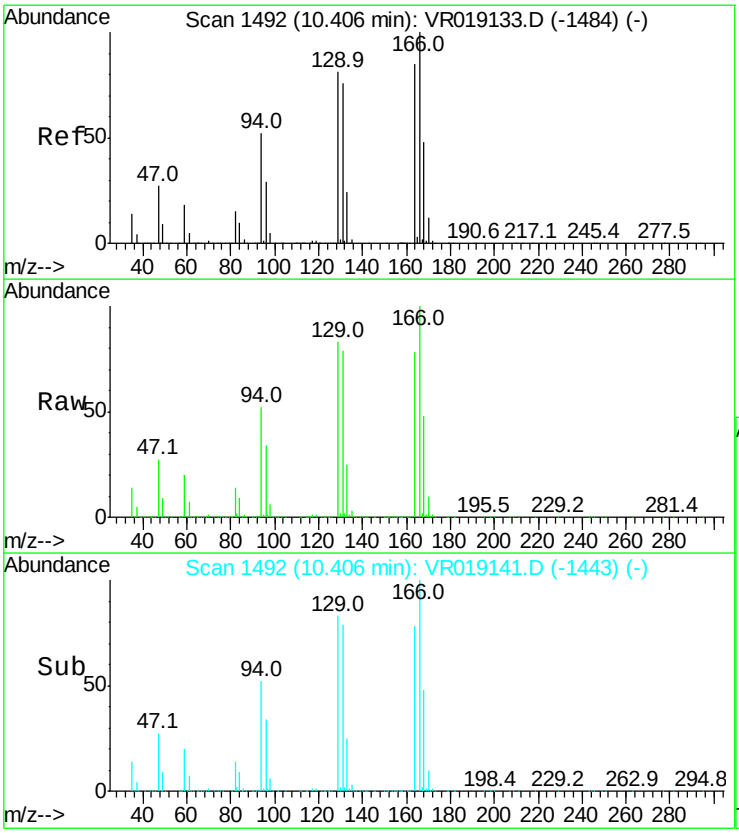
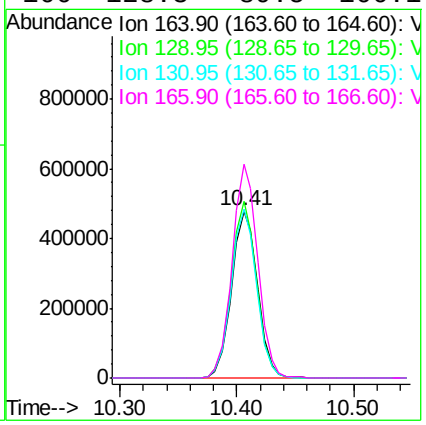
5/13/2016 12:28:11 PM



#47
Tetrachloroethene
Concen: 28.30 ug/L
RT: 10.41 min Scan# 1492
Delta R.T. 0.00 min
Lab File: VR019141.D
Acq: 12 May 2016 17:37

Tgt Ion:164 Resp: 742054

Ion	Ratio	Lower	Upper
164	100		
129	105.9	73.7	136.9
131	101.7	67.8	125.8
166	128.3	89.5	166.1



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019141.D
Acq On : 12 May 2016 17:37
Operator : MD\SY
Sample : H3056-11
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4119

Manual Integrations APPROVED
feifei
5/13/2016 12:28:11 PM

Quant Time: May 13 06:28:08 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	577819	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	422300	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	157081	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	127012	4.88	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 97.60%			
7) Chloroethane-d5	2.51	69	92994	5.03	ug/L	0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 100.60%			
11) 1,1-Dichloroethene-d2	3.44	63	225069m	3.75	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 125		Recovery = 75.00%			
20) 2-Butanone-d5	6.40	46	178243	53.39	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 106.78%			
24) Chloroform-d	7.03	84	321974	5.02	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.40%			
26) 1,2-Dichloroethane-d4	7.75	65	132769	5.24	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.80%			
32) Benzene-d6	7.71	84	705561	5.21	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.20%			
36) 1,2-Dichloropropane-d6	8.78	67	185499	5.29	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 105.80%			
41) Toluene-d8	9.86	98	666258	5.22	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.40%			
43) trans-1,3-Dichloropropene-	10.13	79	44353	4.82	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 96.40%			
46) 2-Hexanone-d5	10.48	63	159986	55.46	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 110.92%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	59137	4.72	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 94.40%			
63) 1,2-Dichlorobenzene-d4	13.42	152	130270	5.01	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 100.20%			
Target Compounds						Qvalue
25) Chloroform	7.06	83	51815	0.88	ug/L	99
29) 1,1,1-Trichloroethane	7.27	97	14399	0.34	ug/L	97
34) Trichloroethene	8.59	95	9643	0.28	ug/L	88
47) Tetrachloroethene	10.41	164	742054	28.30	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019141.D
Acq On : 12 May 2016 17:37
Operator : MD\SY
Sample : H3056-11
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4119

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	19	32	71	rBV	4673114	20324215	100.00%	53.003%
2	2.041	110	117	135	rVB	69719	210384	1.04%	0.549%
3	3.434	333	346	349	rBV	120461	307306	1.51%	0.801%
4	6.397	826	833	851	rBV	86974	305532	1.50%	0.797%
5	7.029	925	937	956	rBV2	302994	933559	4.59%	2.435%
6	7.711	1040	1049	1069	rBV2	632597	1831746	9.01%	4.777%
7	8.331	1144	1151	1167	rBV	678712	1376014	6.77%	3.588%
8	8.775	1214	1224	1236	rBV	407524	811983	4.00%	2.118%
9	9.566	1347	1354	1367	rBV	168588	299361	1.47%	0.781%
10	9.858	1395	1402	1412	rBV	1062685	1757294	8.65%	4.583%
11	10.406	1485	1492	1499	rBV	3937684	6032925	29.68%	15.733%
12	10.479	1499	1504	1522	rVB	494118	809869	3.98%	2.112%
13	11.184	1613	1620	1635	rBV	863191	1324245	6.52%	3.453%
14	12.261	1792	1797	1810	rVB2	134846	213023	1.05%	0.556%
15	13.131	1933	1940	1952	rBV	640078	977245	4.81%	2.549%
16	13.417	1981	1987	1998	rBV	550130	830604	4.09%	2.166%

Sum of corrected areas: 38345305

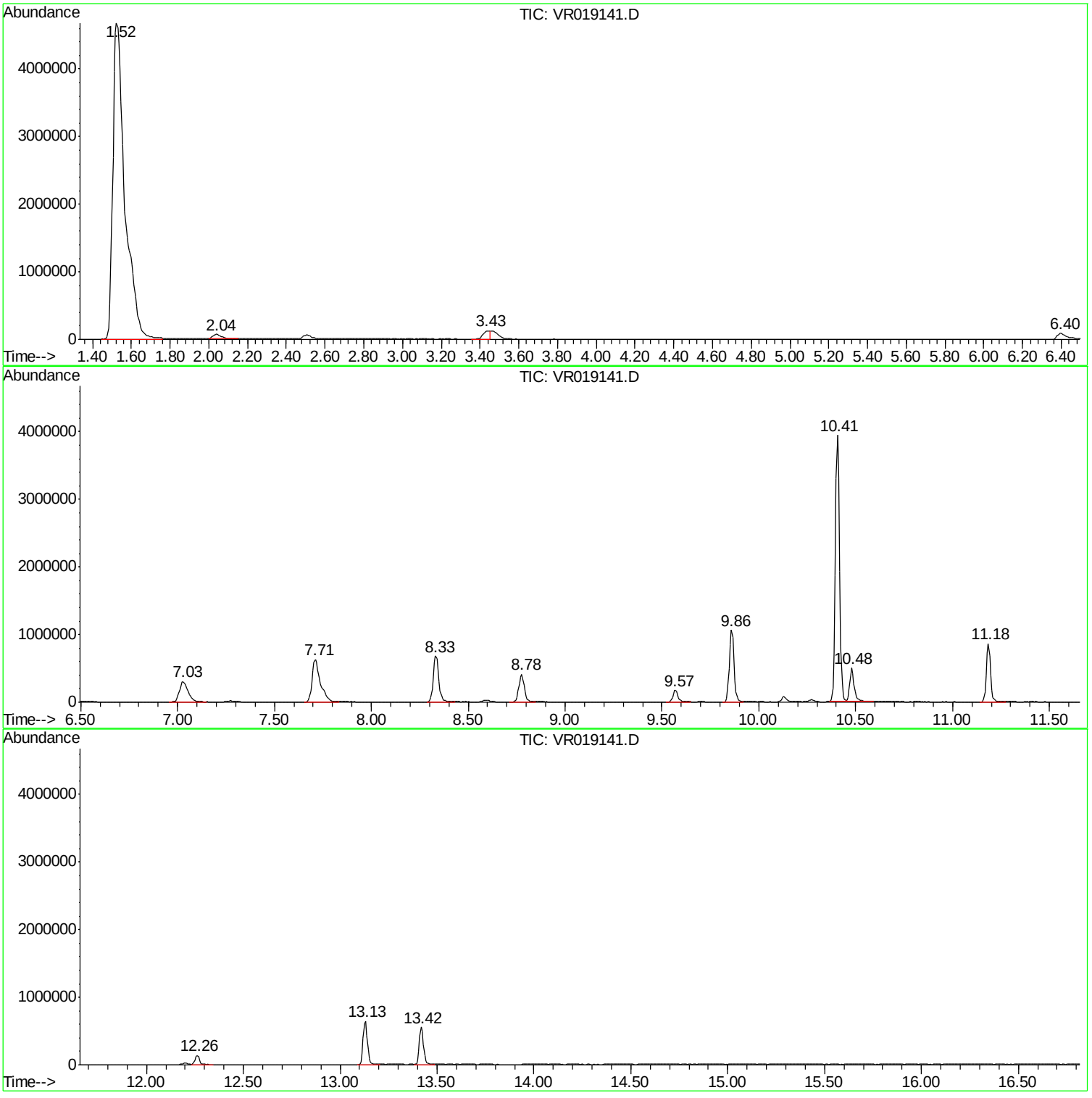
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019141.D
Acq On : 12 May 2016 17:37
Operator : MD\SY
Sample : H3056-11
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4119

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019141.D
Acq On : 12 May 2016 17:37
Operator : MD\SY
Sample : H3056-11
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H4119

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019141.D
Acq On : 12 May 2016 17:37
Operator : MD\SY
Sample : H3056-11
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4119

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019141.D
Acq On : 12 May 2016 17:37
Operator : MD\SY
Sample : H3056-11
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 06:28:08 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
H4119

Manual Integrations APPROVED
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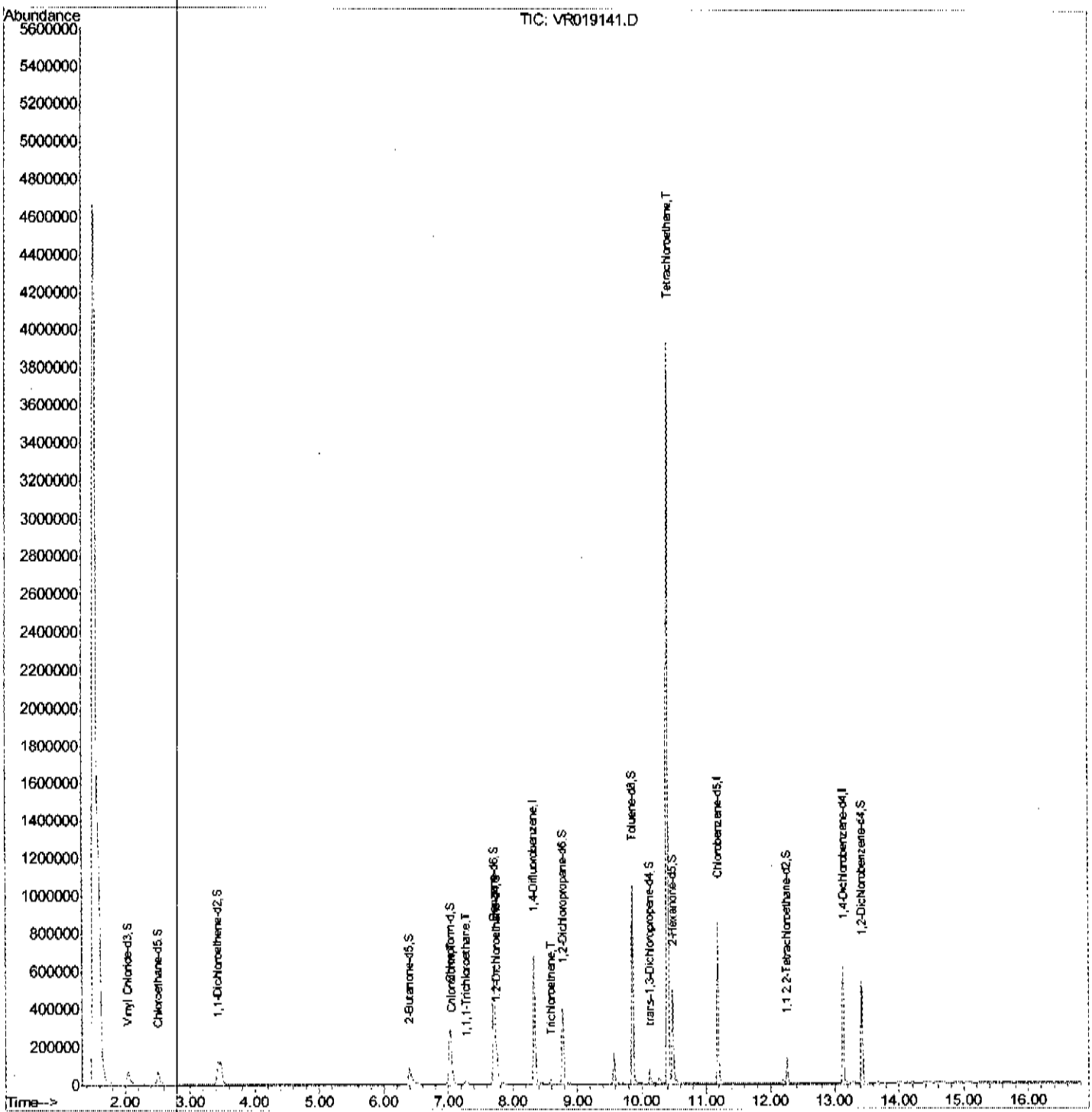


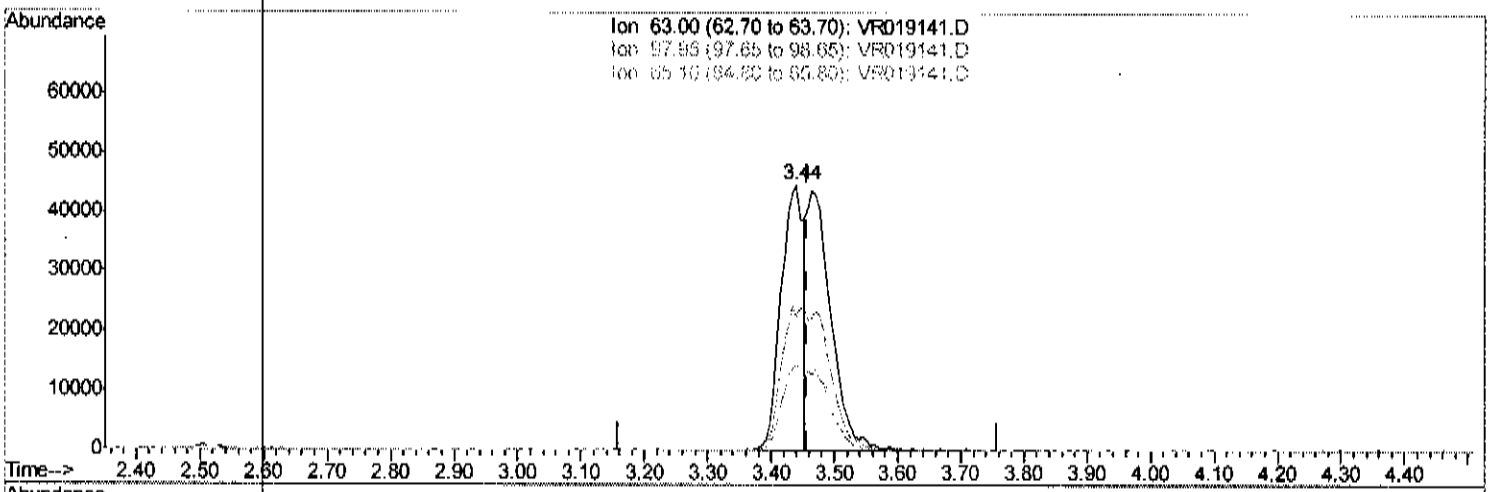
Quantitation Report (Qedit)

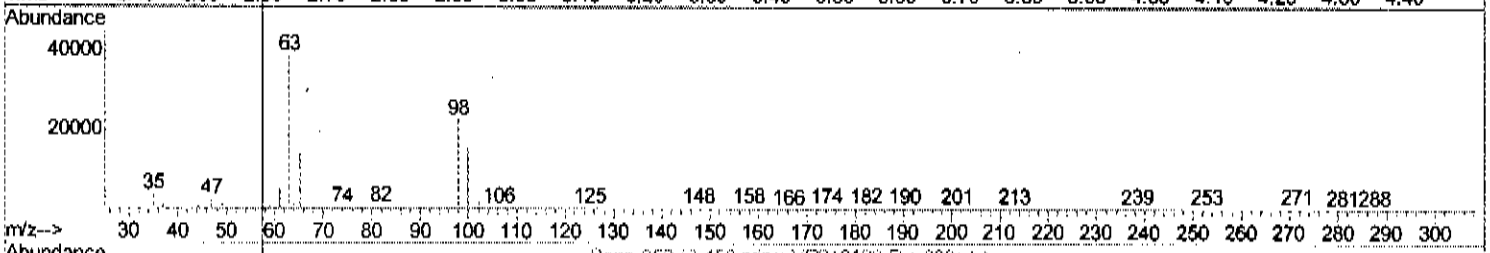
Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019141.D
Acq On : 12 May 2016 17:37
Operator : MD\SY
Sample : H3056-11
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 05:36:02 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

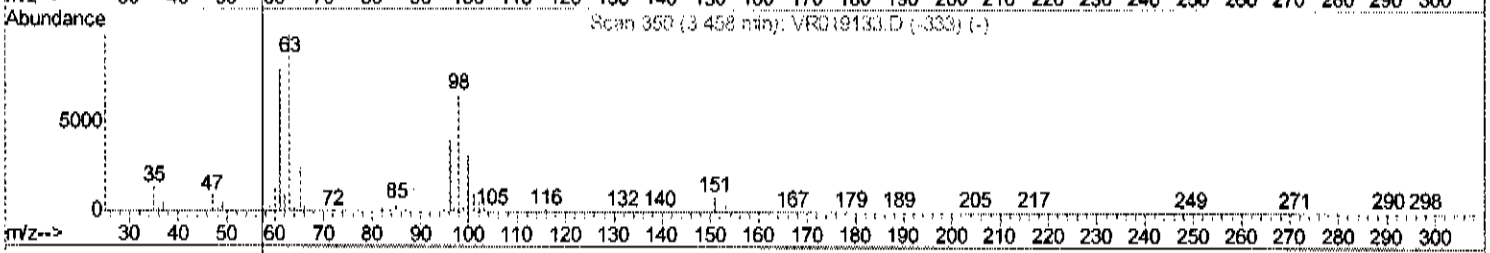
Instrument :
MSVOA_R
ClientSampleId :
H4119

Manual Integrations APPROVED
feifei
5/13/2016 12:28:11 PM





Scan 350 (3.458 min): VR019133.D (-333) (-)



TIC: VR019141.D

(11) 1,1-Dichloroethene-d2 (S)

3.440min (-0.018) 1.84ug/L

response 110158

Ion	Exp%	Act%
63.00	100	100
97.95	72.60	62.61
65.10	23.80	31.46#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019141.D
Acq On : 12 May 2016 17:37
Operator : MD\SY
Sample : H3056-11
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 05:36:02 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
H4119

Manual Integrations APPROVED
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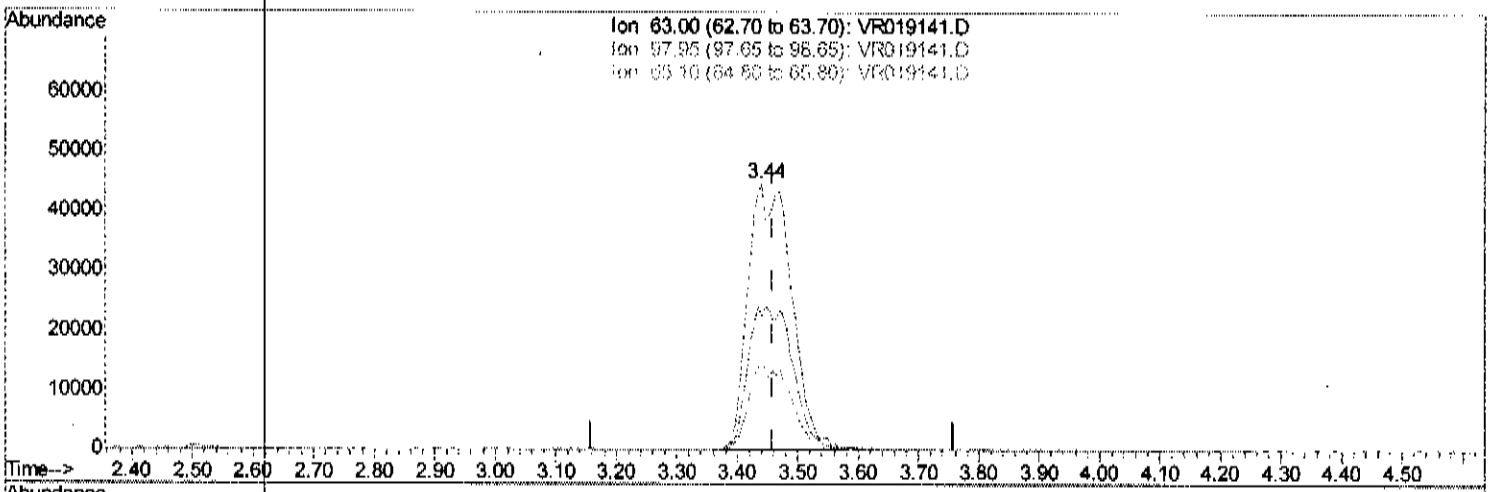
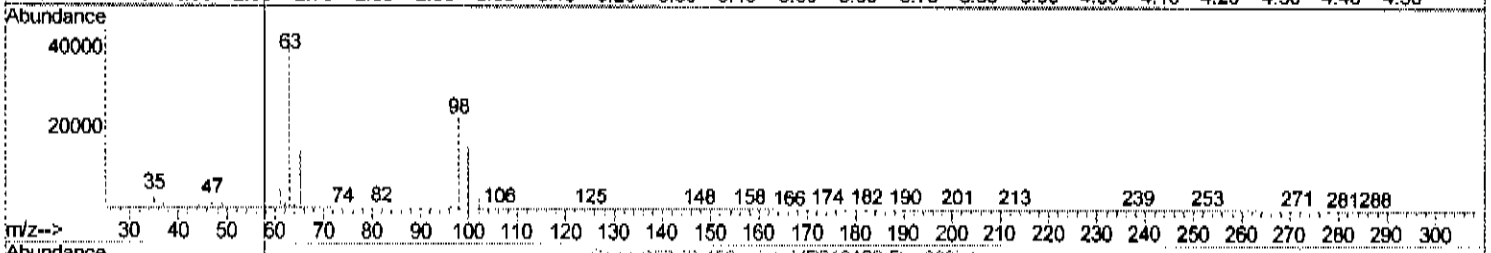
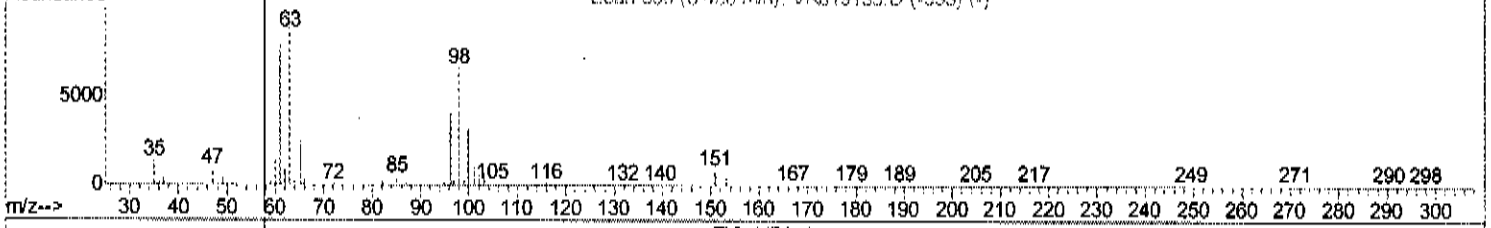
5/13/2016 12:28:11 PM





Scan 359 (3.458 min): VR019133.D (-333) (-)



TIC: VR019141.D

(11) 1,1-Dichloroethene-d2 (S)

3.440min (-0.018) 3.75ug/L m

response 225069

E.M 05.16.16

Ion	Exp%	Act%
63.00	100	100
97.95	72.60	30.64#
65.10	23.80	15.40#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019141.D
Acq On : 12 May 2016 17:37
Operator : MD\SY
Sample : H3056-11
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 06:28:08 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : H4119

Manual Integrations APPROVED
feifei
5/13/2016 12:28:11 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	577819	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	422300	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	157081	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	127012	4.88	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 97.60%			
7) Chloroethane-d5	2.51	69	92994	5.03	ug/L	0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 100.60%			
11) 1,1-Dichloroethene-d2	3.44	63	225069m	3.75	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 125		Recovery = 75.00%			
20) 2-Butanone-d5	6.40	46	178243	53.39	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 106.78%			
24) Chloroform-d	7.03	84	321974	5.02	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.40%			
26) 1,2-Dichloroethane-d4	7.75	65	132769	5.24	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.80%			
32) Benzene-d6	7.71	84	705561	5.21	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.20%			
36) 1,2-Dichloropropane-d6	8.78	67	185499	5.29	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 105.80%			
41) Toluene-d8	9.86	98	666258	5.22	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.40%			
43) trans-1,3-Dichloropropene-	10.13	79	44353	4.82	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 96.40%			
46) 2-Hexanone-d5	10.48	43	159986	55.46	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 110.92%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	59137	4.72	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 94.40%			
63) 1,2-Dichlorobenzene-d4	13.42	152	130270	5.01	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 100.20%			
Target Compounds						Qvalue
25) Chloroform	7.06	83	51815	0.88	ug/L	99
29) 1,1,1-Trichloroethane	7.27	97	14399	0.34	ug/L	97
34) Trichloroethene	8.59	95	9643	0.28	ug/L	88
47) Tetrachloroethene	10.41	164	742054	28.30	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

E.M. 05.16.16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4119DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019154.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4119DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019154.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	26	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4119DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019154.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4119DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-11DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019154.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/13/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 5.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

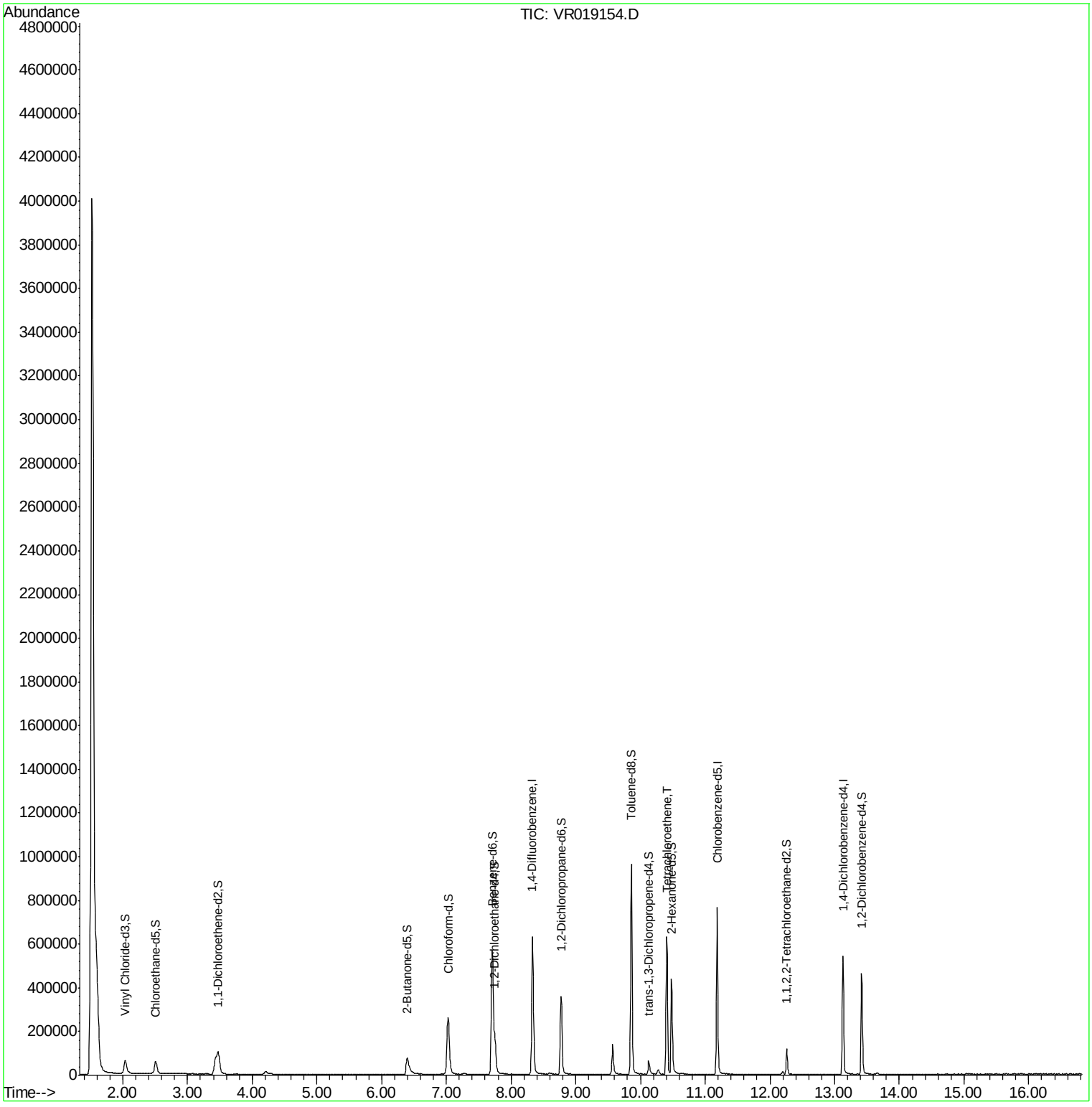
EPA-designated Registry Number.

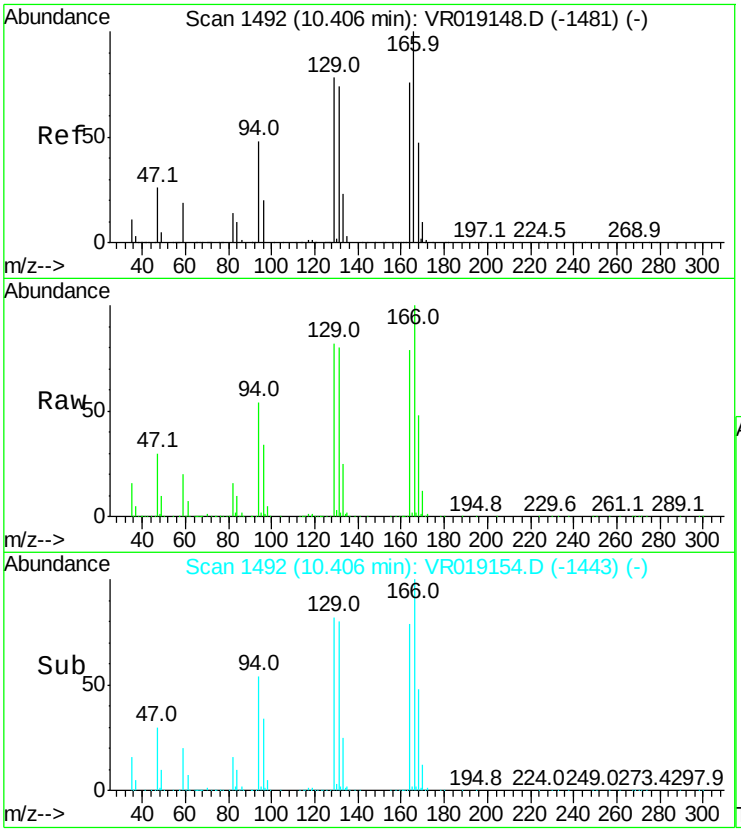
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019154.D
Acq On : 13 May 2016 14:59
Operator : MD\SY
Sample : H3056-11DL 5X
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4119DL

Quant Time: May 14 01:29:26 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration



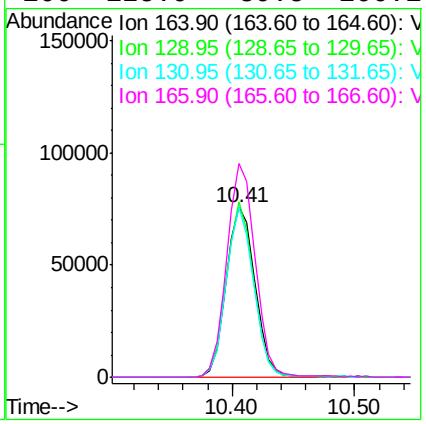


#47
Tetrachloroethene
Concen: 5.28 ug/L
RT: 10.41 min Scan# 1492
Delta R.T. 0.00 min
Lab File: VR019154.D
Acq: 13 May 2016 14:59

Instrument :
MSVOA_R
ClientSampleId :
H4119DL

Tgt Ion:164 Resp: 123462

Ion	Ratio	Lower	Upper
164	100		
129	103.7	73.7	136.9
131	100.2	67.8	125.8
166	125.9	89.5	166.1



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019154.D
Acq On : 13 May 2016 14:59
Operator : MD\SY
Sample : H3056-11DL 5X
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4119DL

Quant Time: May 14 01:29:26 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Internal Standards		R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene		8.33	114	529884	5.00	ug/L	0.00
28) Chlorobenzene-d5		11.18	117	376946	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4		13.13	152	128677	5.00	ug/L	0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3		2.04	65	112505	4.72	ug/L	0.00
Spiked Amount	5.000	Range	40 - 130	Recovery	=	94.40%	
7) Chloroethane-d5		2.50	69	86266	5.09	ug/L	0.00
Spiked Amount	5.000	Range	65 - 130	Recovery	=	101.80%	
11) 1,1-Dichloroethene-d2		3.48	63	177215	3.22	ug/L	0.02
Spiked Amount	5.000	Range	60 - 125	Recovery	=	64.40%	
20) 2-Butanone-d5		6.39	46	161028	52.60	ug/L	0.00
Spiked Amount	50.000	Range	40 - 130	Recovery	=	105.20%	
24) Chloroform-d		7.03	84	278703	4.74	ug/L	0.00
Spiked Amount	5.000	Range	70 - 125	Recovery	=	94.80%	
26) 1,2-Dichloroethane-d4		7.75	65	119138	5.12	ug/L	0.00
Spiked Amount	5.000	Range	70 - 130	Recovery	=	102.40%	
32) Benzene-d6		7.71	84	627306	5.19	ug/L	0.00
Spiked Amount	5.000	Range	70 - 125	Recovery	=	103.80%	
36) 1,2-Dichloropropane-d6		8.78	67	165298	5.29	ug/L	0.00
Spiked Amount	5.000	Range	60 - 140	Recovery	=	105.80%	
41) Toluene-d8		9.86	98	585793	5.15	ug/L	0.00
Spiked Amount	5.000	Range	70 - 130	Recovery	=	103.00%	
43) trans-1,3-Dichloropropene-		10.13	79	36572	4.45	ug/L	0.00
Spiked Amount	5.000	Range	55 - 130	Recovery	=	89.00%	
46) 2-Hexanone-d5		10.48	63	140652	54.62	ug/L	0.00
Spiked Amount	50.000	Range	45 - 130	Recovery	=	109.24%	
57) 1,1,2,2-Tetrachloroethane-		12.26	84	50502	4.52	ug/L	0.00
Spiked Amount	5.000	Range	65 - 120	Recovery	=	90.40%	
63) 1,2-Dichlorobenzene-d4		13.42	152	111179	5.22	ug/L	0.00
Spiked Amount	5.000	Range	80 - 120	Recovery	=	104.40%	
Target Compounds							Qvalue
47) Tetrachloroethene		10.41	164	123462	5.28	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA R\DATA\VR051316\
Data File : VR019154.D
Acq On : 13 May 2016 14:59
Operator : MD\SY
Sample : H3056-11DL 5X
Misc : 25mL/MSVOA R/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4119DL

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	16	32	65	rBV	4008349	13057026	100.00%	52.525%
2	2.035	106	116	131	rBV	59504	180390	1.38%	0.726%
3	2.503	186	193	205	rVB	53127	146346	1.12%	0.589%
4	3.476	335	353	368	rBV2	103019	506850	3.88%	2.039%
5	6.397	827	833	851	rBV2	73844	266486	2.04%	1.072%
6	7.029	925	937	957	rVB	258787	727851	5.57%	2.928%
7	7.711	1040	1049	1068	rBV2	565282	1631008	12.49%	6.561%
8	8.331	1142	1151	1172	rBV	631616	1252462	9.59%	5.038%
9	8.775	1216	1224	1235	rBV	359036	725394	5.56%	2.918%
10	9.566	1349	1354	1366	rBV	139028	250942	1.92%	1.009%
11	9.858	1395	1402	1420	rBV	960616	1569780	12.02%	6.315%
12	10.406	1484	1492	1499	rBV	630782	989491	7.58%	3.980%
13	10.479	1499	1504	1520	rVB	434684	688470	5.27%	2.770%
14	11.184	1613	1620	1631	rBV	764817	1165481	8.93%	4.688%
15	12.261	1792	1797	1804	rBV2	118750	182620	1.40%	0.735%
16	13.131	1933	1940	1954	rBV	544468	824572	6.32%	3.317%
17	13.417	1982	1987	1996	rBV	462414	693351	5.31%	2.789%

Sum of corrected areas: 24858520

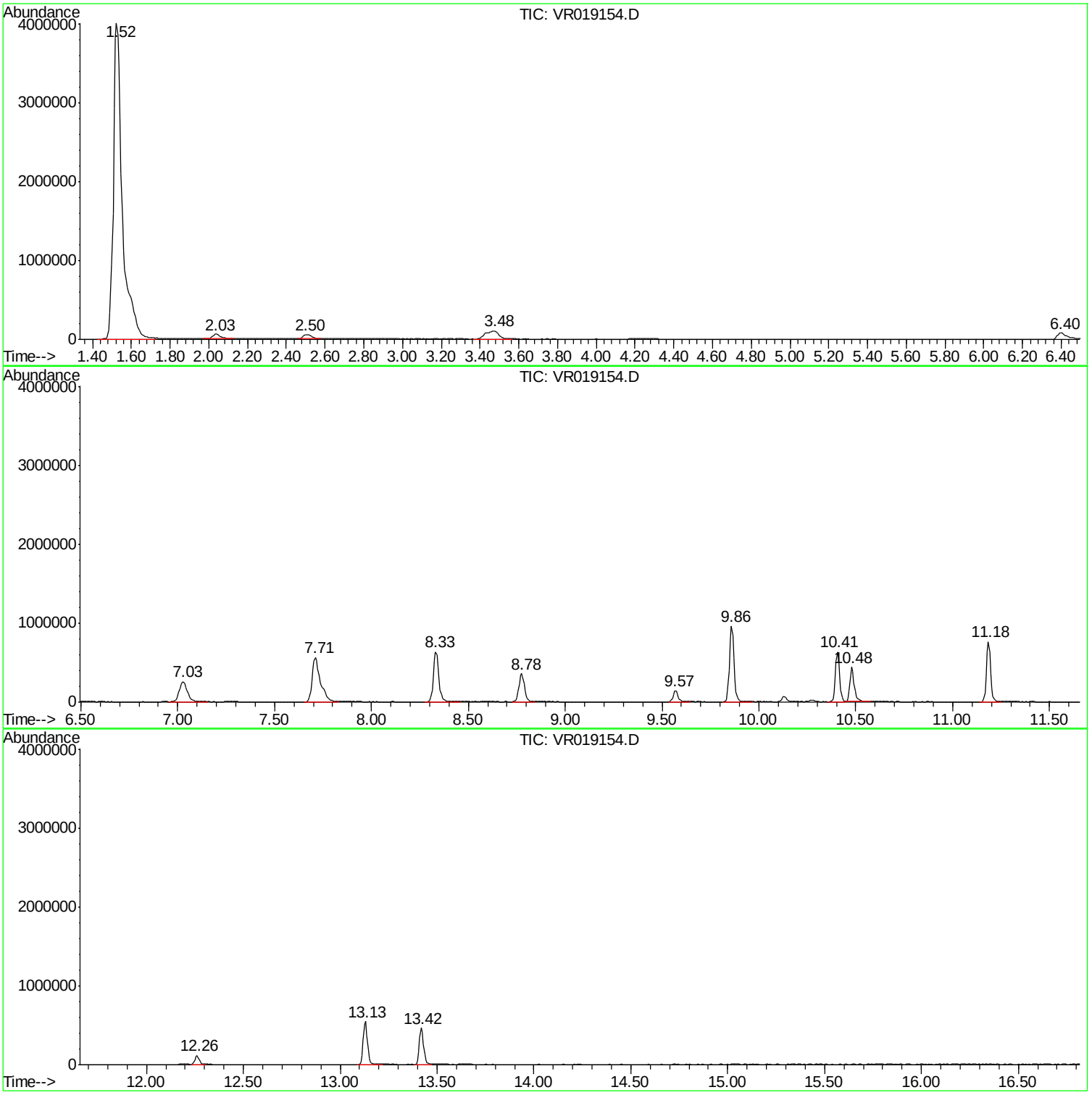
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019154.D
Acq On : 13 May 2016 14:59
Operator : MD\SY
Sample : H3056-11DL 5X
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4119DL

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019154.D
Acq On : 13 May 2016 14:59
Operator : MD\SY
Sample : H3056-11DL 5X
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H4119DL

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019154.D
Acq On : 13 May 2016 14:59
Operator : MD\SY
Sample : H3056-11DL 5X
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4119DL

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4128

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019150.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.79	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.22	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4128

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019150.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.22	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	6.0	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.10	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4128

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019150.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4128

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019150.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/13/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

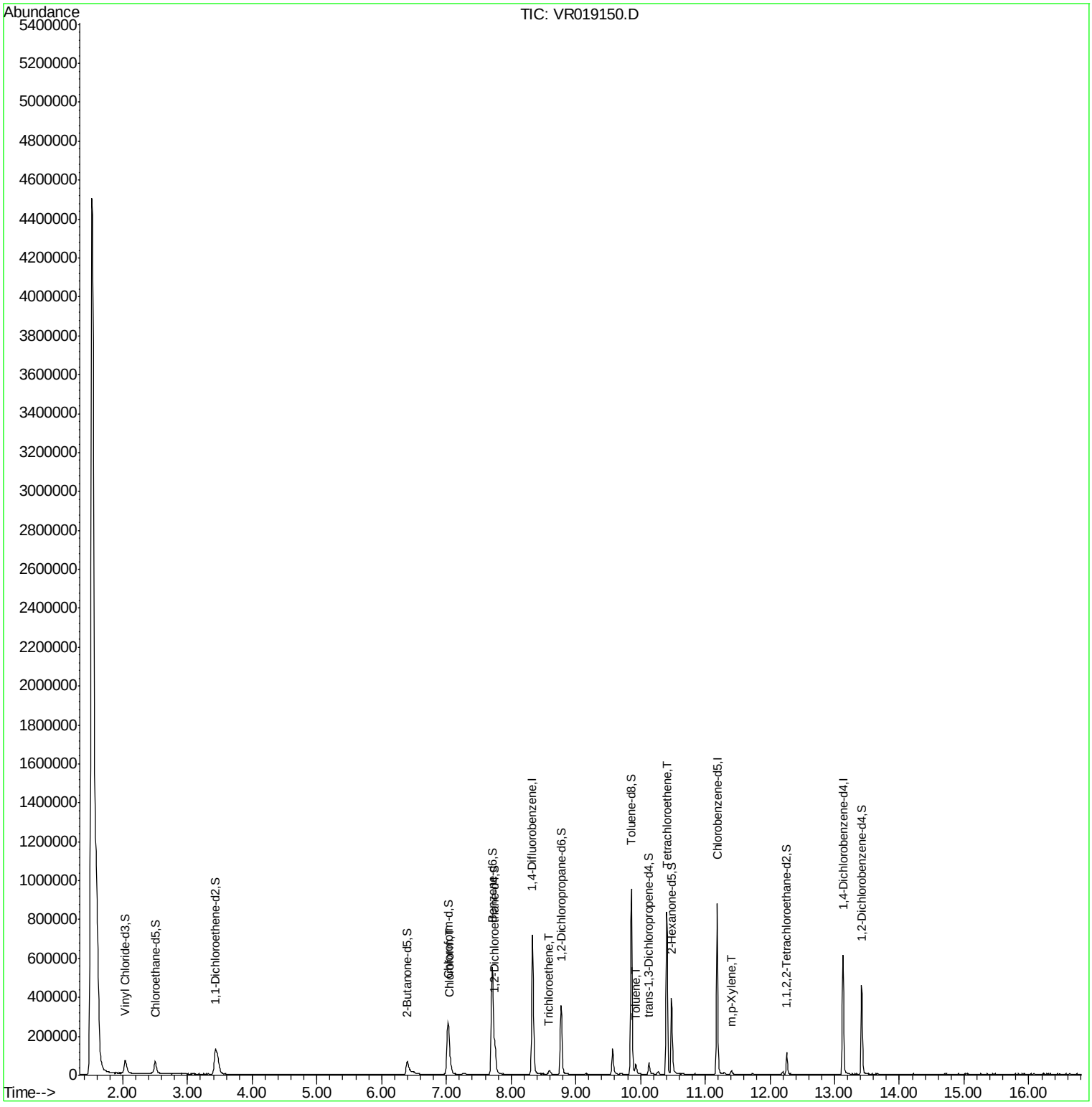
EPA-designated Registry Number.

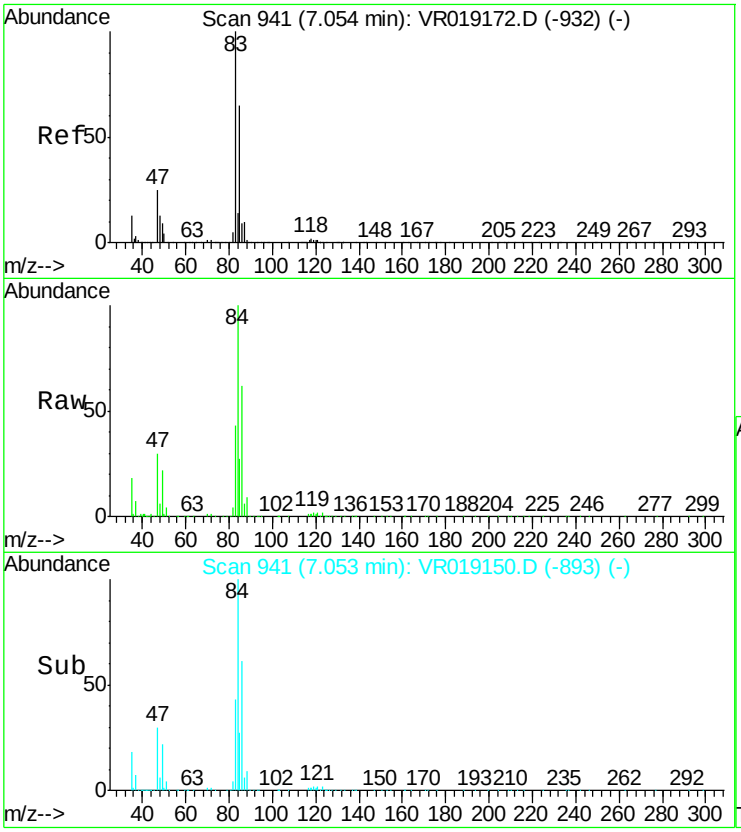
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019150.D
Acq On : 13 May 2016 12:43
Operator : MD\SY
Sample : H3056-12
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H4128

Quant Time: May 28 06:55:13 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration



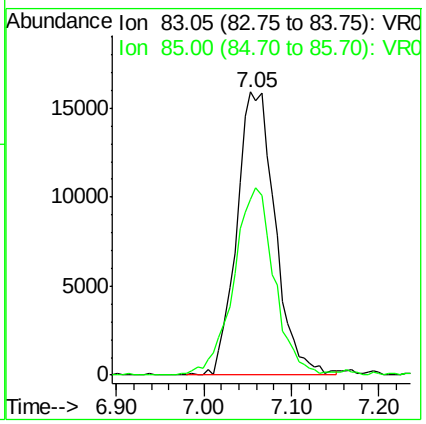


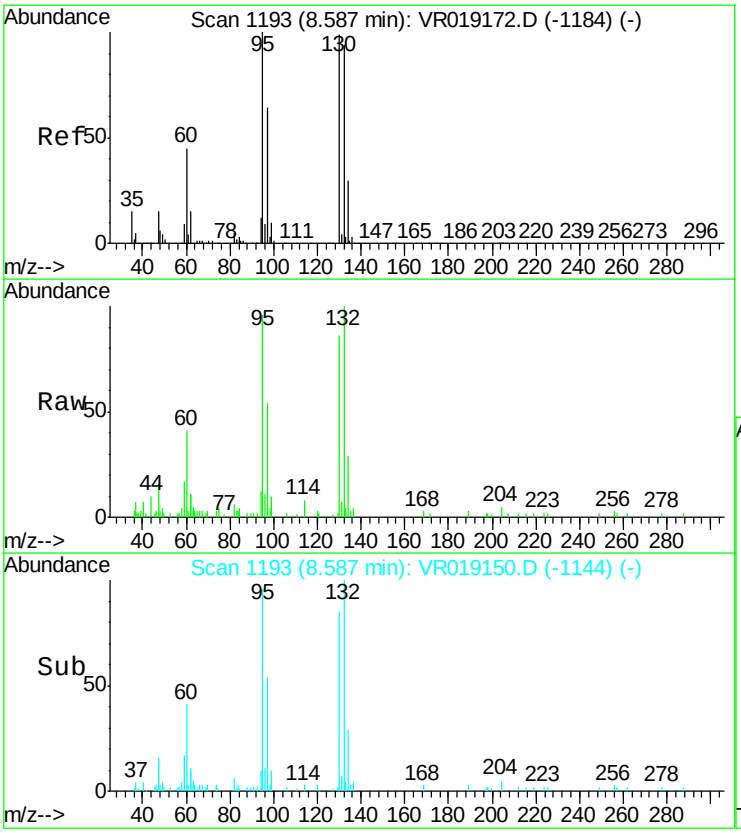
#25
Chloroform
Concen: 0.79 ug/L
RT: 7.05 min Scan# 941
Delta R.T. -0.01 min
Lab File: VR019150.D
Acq: 13 May 2016 12:43

Instrument : MSVOA_R
ClientSampleId : H4128

Tgt Ion: 83 Resp: 48395

Ion	Ratio	Lower	Upper
83	100		
85	62.0	46.0	85.4

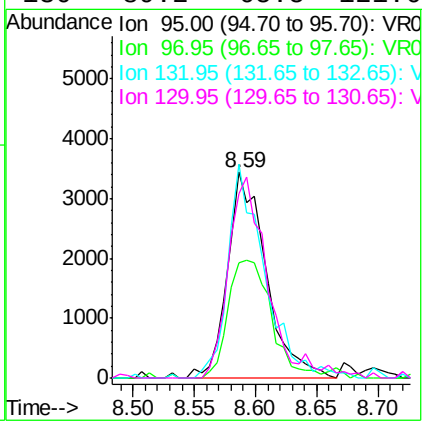


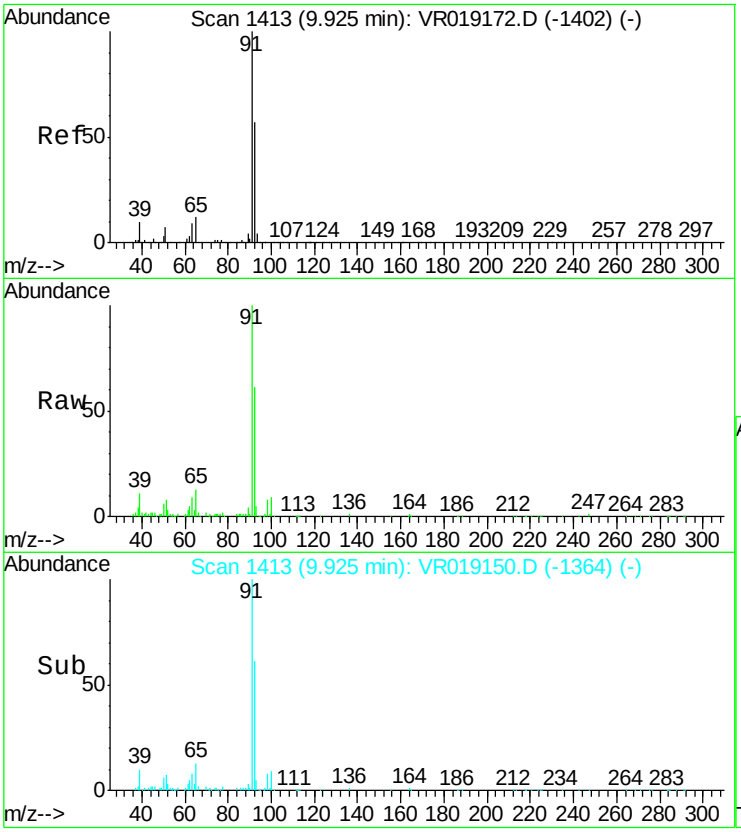


#34
Trichloroethene
Concen: 0.22 ug/L
RT: 8.59 min Scan# 1193
Delta R.T. -0.00 min
Lab File: VR019150.D
Acq: 13 May 2016 12:43

Tgt Ion: 95 Resp: 7496

Ion	Ratio	Lower	Upper
95	100		
97	56.0	43.3	80.5
132	103.7	65.2	121.2
130	89.2	65.5	121.6



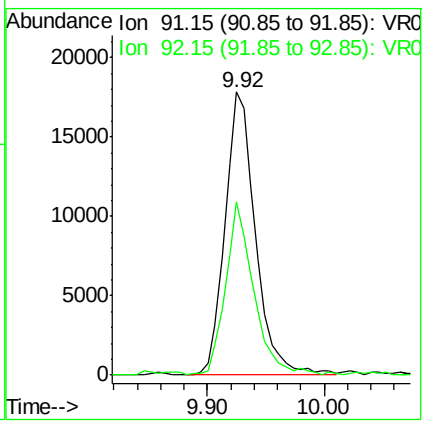


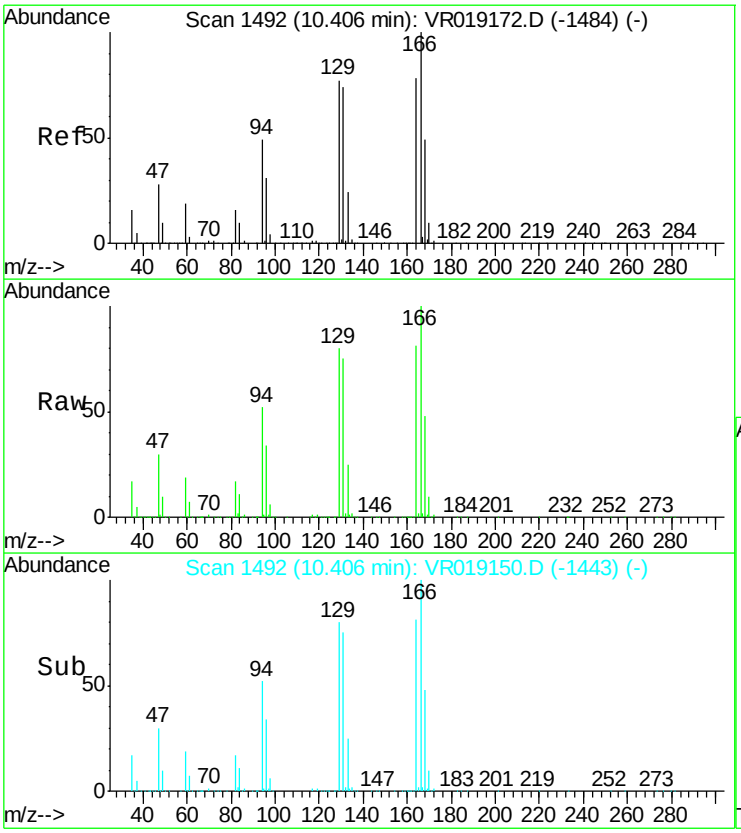
#42
Toluene
Concen: 0.22 ug/L
RT: 9.92 min Scan# 1413
Delta R.T. -0.00 min
Lab File: VR019150.D
Acq: 13 May 2016 12:43

Instrument : MSVOA_R
ClientSampleId : H4128

Tgt Ion: 91 Resp: 32294

Ion	Ratio	Lower	Upper
91	100		
92	61.4	40.5	75.3

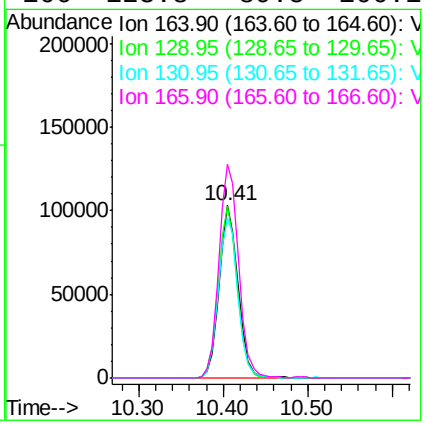


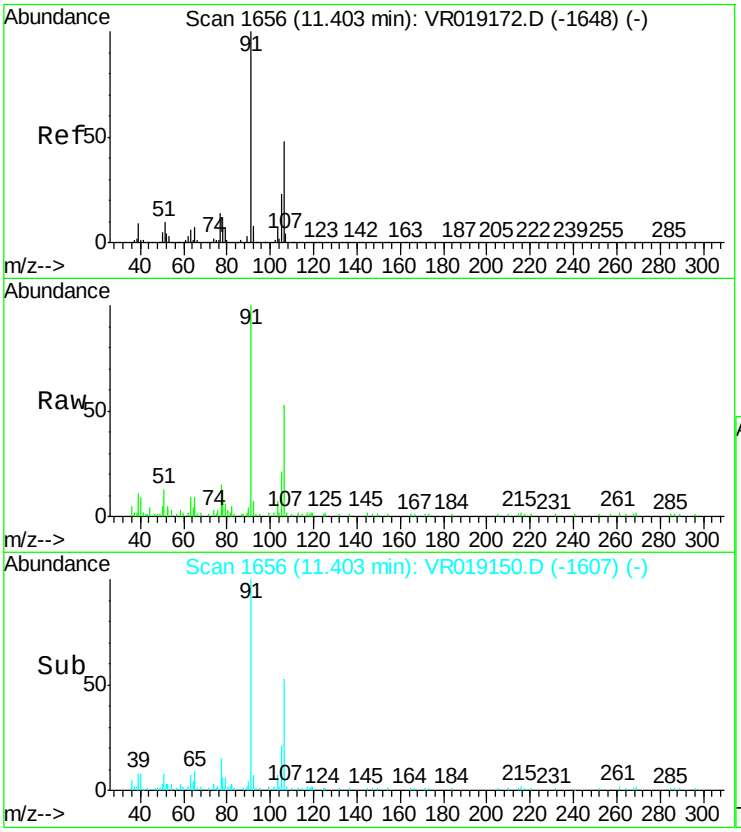


#47
Tetrachloroethene
Concen: 5.98 ug/L
RT: 10.41 min Scan# 1492
Delta R.T. -0.00 min
Lab File: VR019150.D
Acq: 13 May 2016 12:43

Tgt Ion:164 Resp: 160188

Ion	Ratio	Lower	Upper
164	100		
129	99.6	73.7	136.9
131	93.0	67.8	125.8
166	123.8	89.5	166.1



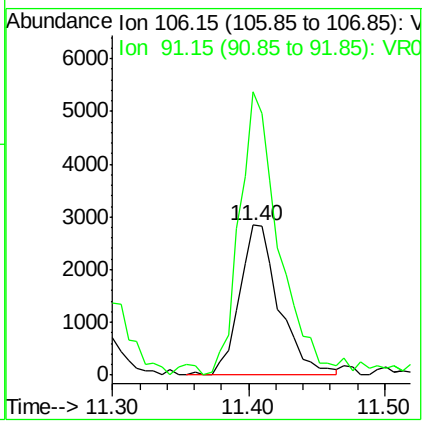


#53
m,p-Xylene
Concen: 0.10 ug/L
RT: 11.40 min Scan# 1656
Delta R.T. -0.00 min
Lab File: VR019150.D
Acq: 13 May 2016 12:43

Instrument :
MSVOA_R
ClientSampleId :
H4128

Tgt Ion:106 Resp: 5791

Ion	Ratio	Lower	Upper
106	100		
91	188.6	146.4	271.8



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019150.D
Acq On : 13 May 2016 12:43
Operator : MD\SY
Sample : H3056-12
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4128

Quant Time: May 28 06:55:13 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	596781	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	431772	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	151735	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	115465	4.30	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 86.00%			
7) Chloroethane-d5	2.50	69	91848	4.81	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 96.20%			
11) 1,1-Dichloroethene-d2	3.43	63	198999	3.21	ug/L	-0.03
Spiked Amount 5.000	Range 60 - 125		Recovery = 64.20%			
20) 2-Butanone-d5	6.40	46	140514	40.75	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 81.50%			
24) Chloroform-d	7.02	84	281381	4.25	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 85.00%			
26) 1,2-Dichloroethane-d4	7.75	65	111195	4.25	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 85.00%			
32) Benzene-d6	7.71	84	615702	4.45	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.00%			
36) 1,2-Dichloropropane-d6	8.78	67	161567	4.51	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 90.20%			
41) Toluene-d8	9.86	98	588861	4.52	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 90.40%			
43) trans-1,3-Dichloropropene-	10.13	79	34053	3.62	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 72.40%			
46) 2-Hexanone-d5	10.48	63	125704	42.62	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 85.24%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	48502	3.79	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 75.80%			
63) 1,2-Dichlorobenzene-d4	13.42	152	111586	4.44	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.80%			
Target Compounds						Qvalue
25) Chloroform	7.05	83	48395	0.79	ug/L	95
34) Trichloroethene	8.59	95	7496	0.22	ug/L	92
42) Toluene	9.92	91	32294	0.22	ug/L	95
47) Tetrachloroethene	10.41	164	160188	5.98	ug/L	96
53) m,p-Xylene	11.40	106	5791	0.10	ug/L	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019150.D
Acq On : 13 May 2016 12:43
Operator : MD\SY
Sample : H3056-12
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4128

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	18	32	63	rBV	4501278	18416007	100.00%	60.198%
2	2.041	108	117	133	rVB2	65632	184618	1.00%	0.603%
3	3.434	336	346	366	rBV2	132075	562616	3.06%	1.839%
4	6.396	825	833	845	rBV2	65644	225156	1.22%	0.736%
5	7.029	926	937	955	rBV3	264417	824266	4.48%	2.694%
6	7.710	1040	1049	1071	rBV2	551840	1588702	8.63%	5.193%
7	8.331	1143	1151	1166	rBV	716454	1416409	7.69%	4.630%
8	8.775	1215	1224	1235	rBV	352127	706464	3.84%	2.309%
9	9.566	1345	1354	1363	rBV	134843	248830	1.35%	0.813%
10	9.858	1395	1402	1410	rBV	952062	1559562	8.47%	5.098%
11	10.406	1484	1492	1499	rBV	833539	1302500	7.07%	4.258%
12	10.479	1499	1504	1515	rVV	382470	597445	3.24%	1.953%
13	11.184	1614	1620	1632	rBV	875954	1332068	7.23%	4.354%
14	13.131	1933	1940	1952	rBV	614547	936878	5.09%	3.062%
15	13.417	1981	1987	1996	rBV	457252	690941	3.75%	2.259%

Sum of corrected areas: 30592462

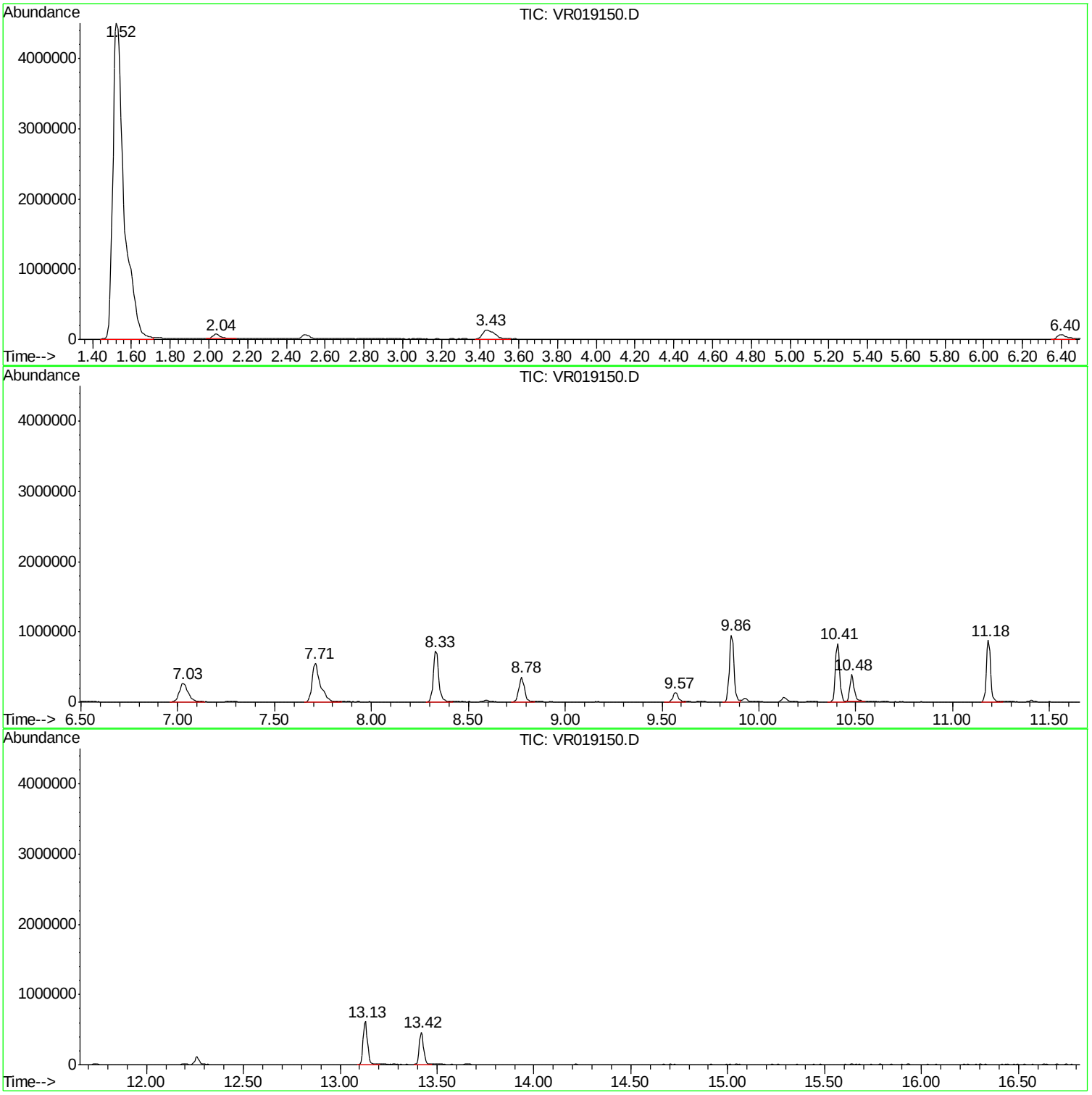
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019150.D
Acq On : 13 May 2016 12:43
Operator : MD\SY
Sample : H3056-12
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4128

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019150.D
Acq On : 13 May 2016 12:43
Operator : MD\SY
Sample : H3056-12
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
H4128

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019150.D
Acq On : 13 May 2016 12:43
Operator : MD\SY
Sample : H3056-12
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4128

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method : Trace VOA Level :

Instrument ID: MSVOA_I Calibration Date(s): 05/04/2016 05/04/2016

GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 11:27 13:33

Length : 30 (m)

Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VI049220.D RRF1.0 = VI049221.D
RRF5.0 = VI049222.D RRF10 = VI049223.D RRF20 = VI049224.D

ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.538	0.547	0.574	0.556	0.601	0.563	4.4
Chloromethane	0.493	0.504	0.475	0.470	0.469	0.482	3.2
Vinyl chloride	0.321	0.358	0.339	0.328	0.340	0.337	4.1
Bromomethane	0.200	0.198	0.157	0.144	0.117	0.163	22
Chloroethane	0.146	0.171	0.149	0.134	0.120	0.144	13.2
Trichlorofluoromethane	0.468	0.496	0.470	0.459	0.462	0.471	3.1
1,1-Dichloroethene	0.384	0.433	0.405	0.395	0.401	0.404	4.6
1,1,2-Trichloro-1,2,2-trifluoroetha	0.416	0.419	0.439	0.421	0.461	0.431	4.4
Acetone	0.042	0.036	0.041	0.043	0.045	0.041	8.1
Carbon disulfide	1.391	1.508	1.497	1.445	1.477	1.463	3.2
Methyl Acetate	0.106	0.118	0.119	0.120	0.127	0.118	6.6
Methylene chloride	0.439	0.475	0.440	0.425	0.446	0.445	4.1
trans-1,2-Dichloroethene	0.423	0.465	0.449	0.431	0.462	0.446	4.2
Methyl tert-butyl Ether	0.679	0.759	0.754	0.720	0.775	0.737	5.2
1,1-Dichloroethane	0.720	0.797	0.761	0.728	0.775	0.756	4.2
cis-1,2-Dichloroethene	0.440	0.472	0.458	0.444	0.480	0.459	3.8
2-Butanone	0.066	0.070	0.079	0.077	0.082	0.075	8.8
Bromochloromethane	0.181	0.188	0.184	0.178	0.189	0.184	2.6
Chloroform	0.778	0.854	0.803	0.771	0.815	0.804	4.1
1,1,1-Trichloroethane	0.896	1.076	0.958	0.890	0.926	0.949	8
Cyclohexane	0.783	0.891	0.849	0.799	0.865	0.837	5.4
Carbon tetrachloride	0.773	0.908	0.846	0.793	0.827	0.829	6.3
Benzene	2.033	2.369	2.170	2.042	2.090	2.141	6.5
1,2-Dichloroethane	0.386	0.427	0.406	0.391	0.417	0.405	4.2
Trichloroethene	0.569	0.665	0.592	0.553	0.591	0.594	7.3
Methylcyclohexane	0.681	0.714	0.757	0.722	0.791	0.733	5.8
1,2-Dichloropropane	0.476	0.549	0.505	0.480	0.500	0.502	5.8
Bromodichloromethane	0.669	0.810	0.737	0.698	0.744	0.732	7.3
cis-1,3-Dichloropropene	0.669	0.828	0.743	0.702	0.757	0.740	8.1
4-Methyl-2-pentanone	0.240	0.286	0.271	0.250	0.245	0.258	7.4
Toluene	1.676	1.953	1.825	1.770	1.806	1.806	5.6
trans-1,3-Dichloropropene	0.505	0.582	0.575	0.564	0.609	0.567	6.8

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method : Trace VOA Level :

Instrument ID: MSVOA_I Calibration Date(s): 05/04/2016 05/04/2016

GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 11:27 13:33

Length : 30 (m)

Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VI049220.D RRF1.0 = VI049221.D
RRF5.0 = VI049222.D RRF10 = VI049223.D RRF20 = VI049224.D

ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
1,1,2-Trichloroethane	0.231	0.272	0.264	0.256	0.281	0.261	7.3
Tetrachloroethene	0.370	0.406	0.388	0.379	0.408	0.390	4.3
2-Hexanone	0.152	0.188	0.178	0.170	0.176	0.173	7.6
Dibromochloromethane	0.329	0.406	0.402	0.395	0.436	0.393	10
1,2-Dibromoethane	0.238	0.287	0.280	0.264	0.292	0.272	8.1
Chlorobenzene	1.011	1.096	1.100	1.067	1.142	1.083	4.5
Ethylbenzene	1.706	1.812	1.947	1.894	1.973	1.866	5.8
o-Xylene	0.558	0.568	0.655	0.656	0.742	0.636	11.9
m,p-Xylene	0.591	0.626	0.704	0.699	0.780	0.680	10.8
Styrene	0.868	0.950	1.112	1.111	1.232	1.055	13.7
Bromoform	0.390	0.501	0.470	0.466	0.504	0.466	9.9
Isopropylbenzene	1.439	1.487	1.741	1.740	1.833	1.648	10.6
1,1,2,2-Tetrachloroethane	0.238	0.235	0.251	0.248	0.287	0.252	8.2
1,3-Dichlorobenzene	1.574	1.685	1.711	1.692	1.820	1.696	5.1
1,4-Dichlorobenzene	1.707	1.775	1.689	1.715	1.825	1.742	3.2
1,2-Dichlorobenzene	1.294	1.371	1.411	1.406	1.545	1.405	6.5
1,2-Dibromo-3-chloropropane	0.065	0.110	0.078	0.082	0.092	0.086	19.7
1,2,4-trichlorobenzene	0.732	0.603	0.766	0.760	0.892	0.751	13.7
1,2,3-Trichlorobenzene	0.568	0.460	0.549	0.552	0.649	0.556	12.1
Vinyl Chloride-d3	0.303	0.324	0.307	0.316	0.289	0.308	4.3
Chloroethane-d5	0.188	0.202	0.174	0.164	0.124	0.170	17.4
1,1-Dichloroethene-d2	0.713	0.755	0.738	0.729	0.691	0.725	3.4
2-Butanone-d5	0.051	0.066	0.072	0.074	0.071	0.067	13.8
Chloroform-d	0.737	0.815	0.799	0.802	0.761	0.783	4.2
1,2-Dichloroethane-d4	0.312	0.337	0.329	0.325	0.299	0.320	4.7
Benzene-d6	1.834	2.173	2.000	1.949	1.783	1.948	7.9
1,2-Dichloropropane-d6	0.519	0.607	0.558	0.545	0.509	0.548	7
Toluene-d8	1.341	1.543	1.488	1.459	1.354	1.437	6.1
trans-1,3-Dichloropropene-d4	0.181	0.227	0.226	0.226	0.219	0.216	9.2
2-Hexanone-d5	0.055	0.072	0.071	0.071	0.071	0.068	10.6
1,1,2,2-Tetrachloroethane-d2	0.218	0.235	0.256	0.263	0.274	0.249	9
1,2-Dichlorobenzene-d4	0.859	0.849	0.869	0.912	0.893	0.877	2.9

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023
Analytical Method : Trace VOA Level :
Instrument ID: MSVOA_R Calibration Date(s): 05/11/2016 05/11/2016
GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 10:57 13:07
Length : 30 (m)
Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VR019127.D RRF1.0 = VR019128.D
RRF5.0 = VR019129.D RRF10 = VR019130.D RRF20 = VR019131.D

ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.210	0.246	0.214	0.219	0.198	0.218	8.2
Chloromethane	0.272	0.275	0.218	0.226	0.202	0.239	13.9
Vinyl chloride	0.252	0.261	0.214	0.220	0.197	0.229	11.6
Bromomethane	0.150	0.146	0.124	0.121	0.109	0.130	13.4
Chloroethane	0.149	0.151	0.122	0.126	0.107	0.131	14.2
Trichlorofluoromethane	0.319	0.328	0.315	0.311	0.287	0.312	4.8
1,1-Dichloroethene	0.271	0.269	0.232	0.248	0.241	0.252	6.9
1,1,2-Trichloro-1,2,2-trifluoroetha	0.259	0.271	0.225	0.229	0.222	0.241	9.2
Acetone	0.025	0.022	0.021	0.023	0.022	0.023	6.1
Carbon disulfide	0.483	0.473	0.488	0.537	0.539	0.504	6.3
Methyl Acetate	0.043	0.035	0.047	0.056	0.057	0.048	19.4
Methylene chloride	0.256	0.248	0.209	0.225	0.212	0.230	9.2
trans-1,2-Dichloroethene	0.278	0.275	0.269	0.293	0.283	0.280	3.2
Methyl tert-butyl Ether	0.318	0.319	0.298	0.361	0.363	0.332	8.7
1,1-Dichloroethane	0.532	0.536	0.508	0.552	0.541	0.534	3.1
cis-1,2-Dichloroethene	0.278	0.266	0.277	0.303	0.299	0.285	5.5
2-Butanone	0.019	0.026	0.031	0.036	0.039	0.030	27
Bromochloromethane	0.094	0.091	0.088	0.096	0.093	0.092	3.3
Chloroform	0.507	0.514	0.481	0.530	0.524	0.511	3.8
1,1,1-Trichloroethane	0.504	0.495	0.481	0.510	0.494	0.497	2.2
Cyclohexane	0.563	0.571	0.538	0.567	0.507	0.549	4.9
Carbon tetrachloride	0.445	0.439	0.438	0.473	0.452	0.450	3.1
Benzene	1.718	1.604	1.524	1.614	1.592	1.610	4.3
1,2-Dichloroethane	0.235	0.216	0.222	0.244	0.247	0.233	5.8
Trichloroethene	0.432	0.392	0.380	0.406	0.397	0.402	4.9
Methylcyclohexane	0.609	0.582	0.531	0.550	0.509	0.556	7.2
1,2-Dichloropropane	0.377	0.335	0.336	0.360	0.371	0.356	5.5
Bromodichloromethane	0.325	0.298	0.329	0.373	0.385	0.342	10.5
cis-1,3-Dichloropropene	0.330	0.332	0.412	0.461	0.484	0.404	17.7
4-Methyl-2-pentanone	0.096	0.097	0.112	0.126	0.127	0.112	13.3
Toluene	1.789	1.673	1.668	1.720	1.666	1.703	3.1
trans-1,3-Dichloropropene	0.178	0.214	0.287	0.330	0.351	0.272	27.3

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method : Trace VOA Level :

Instrument ID: MSVOA_R Calibration Date(s): 05/11/2016 05/11/2016

GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 10:57 13:07

Length : 30 (m)

Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VR019127.D RRF1.0 = VR019128.D
RRF5.0 = VR019129.D RRF10 = VR019130.D RRF20 = VR019131.D

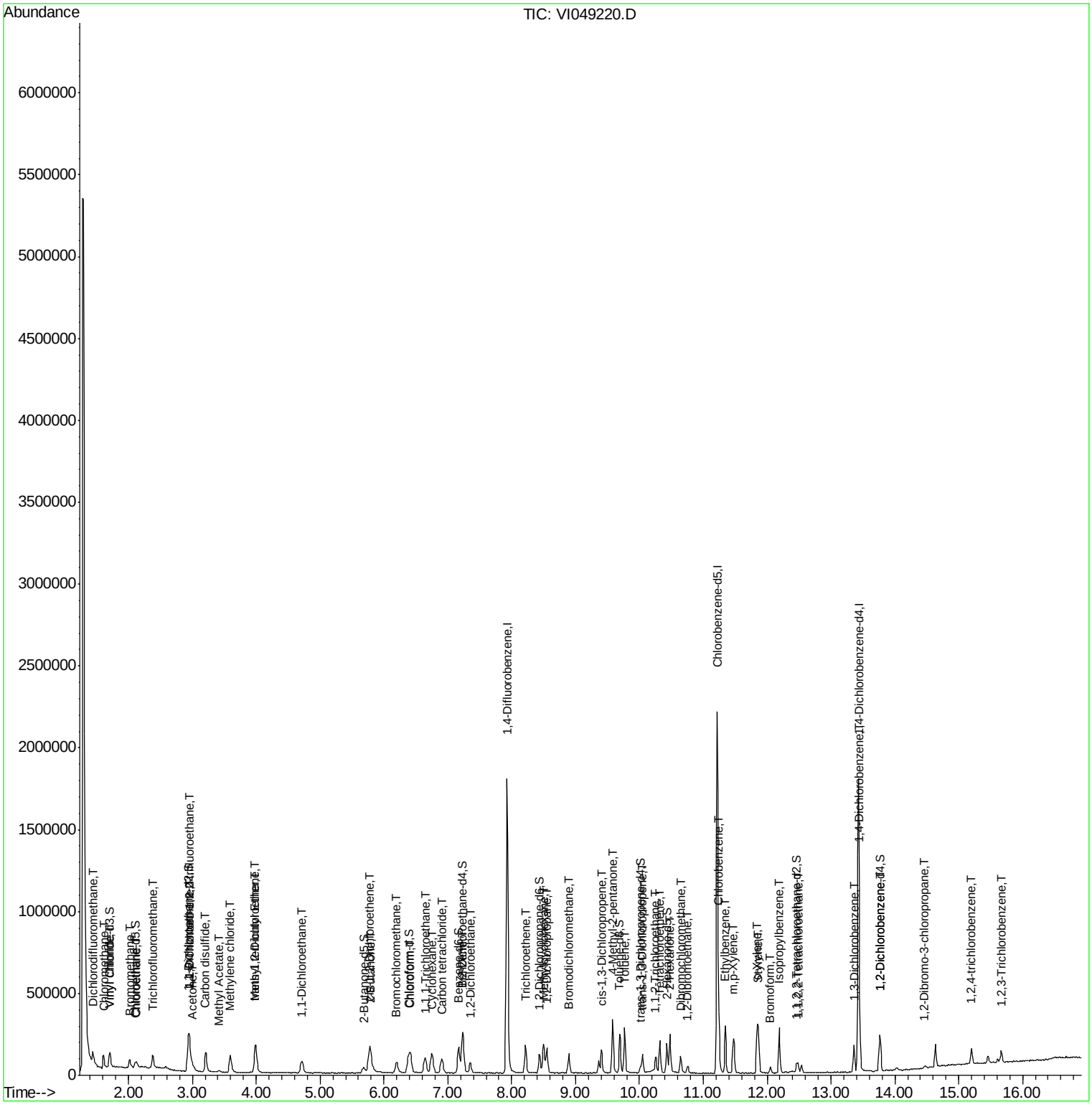
ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
1,1,2-Trichloroethane	0.174	0.171	0.165	0.173	0.170	0.170	2.1
Tetrachloroethene	0.373	0.325	0.289	0.290	0.275	0.310	12.7
2-Hexanone	0.062	0.066	0.076	0.087	0.091	0.076	16.7
Dibromochloromethane	0.149	0.145	0.170	0.193	0.201	0.171	14.8
1,2-Dibromoethane	0.136	0.148	0.134	0.147	0.147	0.142	4.7
Chlorobenzene	1.051	0.993	0.939	0.961	0.952	0.979	4.6
Ethylbenzene	1.895	1.841	1.843	1.896	1.799	1.855	2.2
o-Xylene	0.576	0.584	0.589	0.647	0.631	0.605	5.2
m,p-Xylene	0.657	0.677	0.676	0.707	0.702	0.684	3
Styrene	0.798	0.877	0.929	1.061	1.056	0.944	12.1
Bromoform	0.144	0.117	0.157	0.168	0.194	0.156	18.4
Isopropylbenzene	1.522	1.572	1.534	1.663	1.559	1.570	3.5
1,1,2,2-Tetrachloroethane	0.131	0.142	0.128	0.147	0.145	0.139	6
1,3-Dichlorobenzene	1.564	1.496	1.479	1.458	1.464	1.492	2.9
1,4-Dichlorobenzene	1.774	1.554	1.481	1.459	1.433	1.540	9
1,2-Dichlorobenzene	1.336	1.210	1.217	1.216	1.193	1.234	4.7
1,2-Dibromo-3-chloropropane	0.035	0.021	0.035	0.034	0.040	0.033	22.4
1,2,4-trichlorobenzene	0.784	0.718	0.705	0.690	0.657	0.711	6.6
1,2,3-Trichlorobenzene	0.583	0.518	0.535	0.514	0.489	0.528	6.6
Vinyl Chloride-d3	0.237	0.262	0.210	0.217	0.200	0.225	11
Chloroethane-d5	0.181	0.168	0.157	0.157	0.138	0.160	9.9
1,1-Dichloroethene-d2	0.522	0.548	0.485	0.522	0.515	0.519	4.4
2-Butanone-d5	0.022	0.024	0.029	0.034	0.036	0.029	22
Chloroform-d	0.540	0.553	0.524	0.574	0.581	0.555	4.2
1,2-Dichloroethane-d4	0.200	0.208	0.209	0.238	0.243	0.219	8.9
Benzene-d6	1.668	1.609	1.522	1.612	1.609	1.604	3.3
1,2-Dichloropropane-d6	0.428	0.397	0.396	0.422	0.431	0.415	4.1
Toluene-d8	1.482	1.466	1.483	1.569	1.548	1.510	3
trans-1,3-Dichloropropene-d4	0.092	0.087	0.108	0.121	0.137	0.109	19.1
2-Hexanone-d5	0.021	0.025	0.036	0.042	0.047	0.034	32.4
1,1,2,2-Tetrachloroethane-d2	0.143	0.148	0.138	0.157	0.155	0.148	5.4
1,2-Dichlorobenzene-d4	0.868	0.828	0.805	0.823	0.816	0.828	2.9

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049220.D
Acq On : 4 May 2016 11:27
Operator : FY/SY
Sample : VSTD0.533
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD0.533

Quant Time: May 04 12:54:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049220.D
Acq On : 4 May 2016 11:27
Operator : FY/SY
Sample : VSTD0.533
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD0.533

Quant Time: May 04 12:54:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1583520	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.22	117	1071757	5.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	393159	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	1.70	65	47940	0.56	ug/L		-0.01
7) Chloroethane-d5	2.09	69	29838	0.59	ug/L		-0.01
11) 1,1-Dichloroethene-d2	2.93	63	112957	0.52	ug/L		0.00
20) 2-Butanone-d5	5.69	46	80851	4.28	ug/L		0.02
24) Chloroform-d	6.38	84	116714	0.48	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.23	65	49329	0.51	ug/L		0.00
32) Benzene-d6	7.17	84	196516	0.49	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.44	67	55574	0.48	ug/L		0.00
41) Toluene-d8	9.69	98	143683	0.46	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.02	79	19375	0.41	ug/L		0.00
46) 2-Hexanone-d5	10.43	63	59088	3.89	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	23375	0.38	ug/L		0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	33778	0.45	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.44	85	85244	0.57	ug/L		97
3) Chloromethane	1.61	50	78014	0.61	ug/L		98
5) Vinyl chloride	1.71	62	50865	0.57	ug/L		94
6) Bromomethane	2.02	94	31645	0.69	ug/L		99
8) Chloroethane	2.12	64	23186	0.57	ug/L		95
9) Trichlorofluoromethane	2.38	101	74151	0.61	ug/L		99
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	65845	0.57	ug/L		97
12) 1,1-Dichloroethene	2.95	96	60731	0.51	ug/L		95
13) Acetone	3.01	43	65787	6.14	ug/L		92
14) Carbon disulfide	3.21	76	220279	0.50	ug/L		97
15) Methyl Acetate	3.41	43	16711	0.50	ug/L		94
16) Methylene chloride	3.59	84	69501	0.53	ug/L		92
17) Methyl tert-butyl Ether	3.98	73	107503	0.50	ug/L		99
18) trans-1,2-Dichloroethene	3.99	96	66984	0.50	ug/L		92
19) 1,1-Dichloroethane	4.71	63	113985	0.52	ug/L		96
21) 2-Butanone	5.79	43	105165	5.28	ug/L		95
22) cis-1,2-Dichloroethene	5.77	96	69641	0.49	ug/L		82
23) Bromochloromethane	6.21	128	28643	0.53	ug/L		92
25) Chloroform	6.41	83	123168	0.51	ug/L		95
27) 1,2-Dichloroethane	7.36	62	61137	0.51	ug/L	#	92
29) 1,1,1-Trichloroethane	6.64	97	96055	0.54	ug/L		97
30) Cyclohexane	6.75	56	83902	0.58	ug/L		100
31) Carbon tetrachloride	6.91	117	82897	0.55	ug/L		96
33) Benzene	7.23	78	217861	0.52	ug/L		100
34) Trichloroethene	8.22	95	60940	0.52	ug/L		92
35) Methylcyclohexane	8.50	83	72953	0.54	ug/L		96
37) 1,2-Dichloropropane	8.55	63	51040	0.50	ug/L	#	97
38) Bromodichloromethane	8.89	83	71718	0.49	ug/L		98
39) cis-1,3-Dichloropropene	9.41	75	71745	0.48	ug/L		99
40) 4-Methyl-2-pentanone	9.58	43	257723	4.99	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049220.D
Acq On : 4 May 2016 11:27
Operator : FY/SY
Sample : VSTD0.533
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD0.533

Quant Time: May 04 12:54:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.77	91	179579	0.47	ug/L		98
44) trans-1,3-Dichloropropene	10.05	75	54124	0.45	ug/L		94
45) 1,1,2-Trichloroethane	10.25	97	24736	0.43	ug/L		92
47) Tetrachloroethene	10.32	164	39614	0.49	ug/L		93
48) 2-Hexanone	10.48	43	163129	4.52	ug/L		99
49) Dibromochloromethane	10.65	129	35222	0.43	ug/L		99
50) 1,2-Dibromoethane	10.75	107	25463	0.43	ug/L		99
51) Chlorobenzene	11.25	112	108303	0.46	ug/L		99
52) Ethylbenzene	11.34	91	182792	0.45	ug/L		98
53) m,p-Xylene	11.47	106	63389	0.42	ug/L		95
54) o-Xylene	11.85	106	59773	0.42	ug/L		100
55) Styrene	11.87	104	93024	0.39	ug/L		92
56) Isopropylbenzene	12.19	105	154217	0.42	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.49	83	25473	0.43	ug/L		86
60) Bromoform	12.05	173	15337	0.44	ug/L	#	97
61) 1,3-Dichlorobenzene	13.36	146	61886	0.46	ug/L		95
62) 1,4-Dichlorobenzene	13.45	146	67101	0.48	ug/L		94
64) 1,2-Dichlorobenzene	13.78	146	50866	0.44	ug/L		90
65) 1,2-Dibromo-3-chloropropan	14.47	75	2575	0.38	ug/L	#	76
66) 1,2,4-trichlorobenzene	15.20	180	28774	0.43	ug/L		98
67) 1,2,3-Trichlorobenzene	15.67	180	22326	0.44	ug/L		94

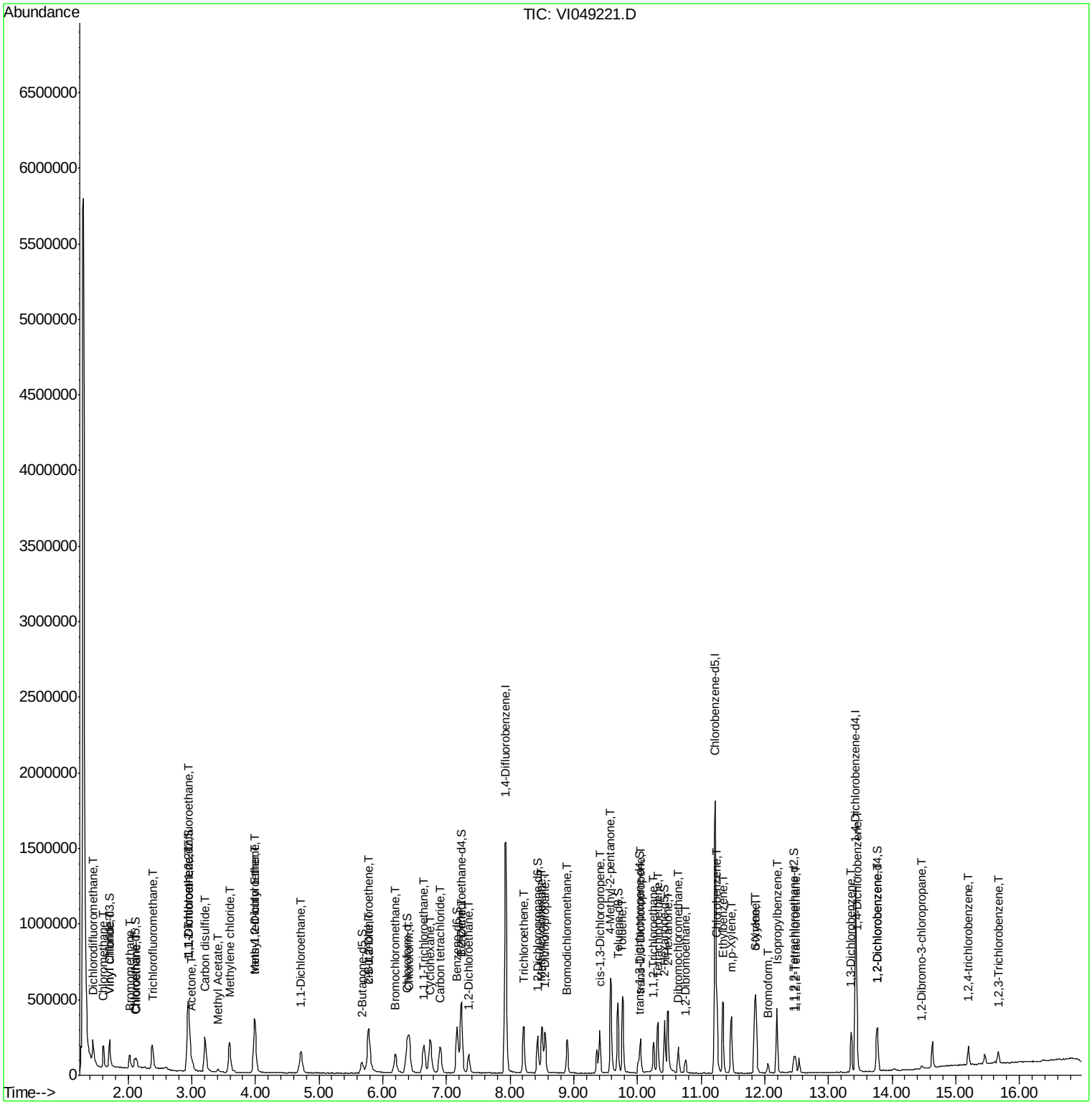
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049221.D
Acq On : 4 May 2016 11:58
Operator : FY/SY
Sample : VSTD00134
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00134

Quant Time: May 04 12:54:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049221.D
Acq On : 4 May 2016 11:58
Operator : FY/SY
Sample : VSTD00134
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00134

Quant Time: May 04 12:54:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1425657	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	907600	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	278770	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	92417	1.21	ug/L	0.00
7) Chloroethane-d5	2.11	69	57615	1.26	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	215352	1.11	ug/L	0.00
20) 2-Butanone-d5	5.67	46	187185	11.00	ug/L	0.00
24) Chloroform-d	6.38	84	232456	1.06	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.24	65	96053	1.10	ug/L	0.00
32) Benzene-d6	7.17	84	394446	1.16	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.44	67	110173	1.13	ug/L	0.00
41) Toluene-d8	9.70	98	280045	1.05	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	41222	1.03	ug/L	0.00
46) 2-Hexanone-d5	10.42	63	130255	10.11	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	42601	0.83	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	47353	0.90	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	156022	1.16	ug/L	96
3) Chloromethane	1.61	50	143674	1.25	ug/L	98
5) Vinyl chloride	1.71	62	101996	1.27	ug/L	99
6) Bromomethane	2.03	94	56541	1.37	ug/L	98
8) Chloroethane	2.13	64	48739	1.34	ug/L	99
9) Trichlorofluoromethane	2.38	101	141354	1.29	ug/L	97
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	119467	1.15	ug/L	97
12) 1,1-Dichloroethene	2.95	96	123513	1.15	ug/L	91
13) Acetone	3.00	43	103310	10.71	ug/L	90
14) Carbon disulfide	3.21	76	429844	1.08	ug/L	100
15) Methyl Acetate	3.42	43	33612	1.12	ug/L	97
16) Methylene chloride	3.59	84	135396	1.14	ug/L	96
17) Methyl tert-butyl Ether	3.99	73	216315	1.13	ug/L	99
18) trans-1,2-Dichloroethene	3.99	96	132532	1.09	ug/L	94
19) 1,1-Dichloroethane	4.72	63	227155	1.15	ug/L	100
21) 2-Butanone	5.79	43	198667	11.09	ug/L	99
22) cis-1,2-Dichloroethene	5.77	96	134700	1.06	ug/L	98
23) Bromochloromethane	6.20	128	53734	1.11	ug/L	94
25) Chloroform	6.42	83	243369	1.12	ug/L	95
27) 1,2-Dichloroethane	7.35	62	121724	1.14	ug/L	99
29) 1,1,1-Trichloroethane	6.64	97	195365	1.29	ug/L	98
30) Cyclohexane	6.75	56	161808	1.32	ug/L	97
31) Carbon tetrachloride	6.90	117	164739	1.30	ug/L	99
33) Benzene	7.24	78	429953	1.21	ug/L	100
34) Trichloroethene	8.21	95	120761	1.21	ug/L	98
35) Methylcyclohexane	8.49	83	129531	1.14	ug/L	95
37) 1,2-Dichloropropane	8.54	63	99691	1.15	ug/L	98
38) Bromodichloromethane	8.90	83	147018	1.18	ug/L	95
39) cis-1,3-Dichloropropene	9.41	75	150303	1.18	ug/L	99
40) 4-Methyl-2-pentanone	9.58	43	518603	11.86	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049221.D
Acq On : 4 May 2016 11:58
Operator : FY/SY
Sample : VSTD00134
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00134

Quant Time: May 04 12:54:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

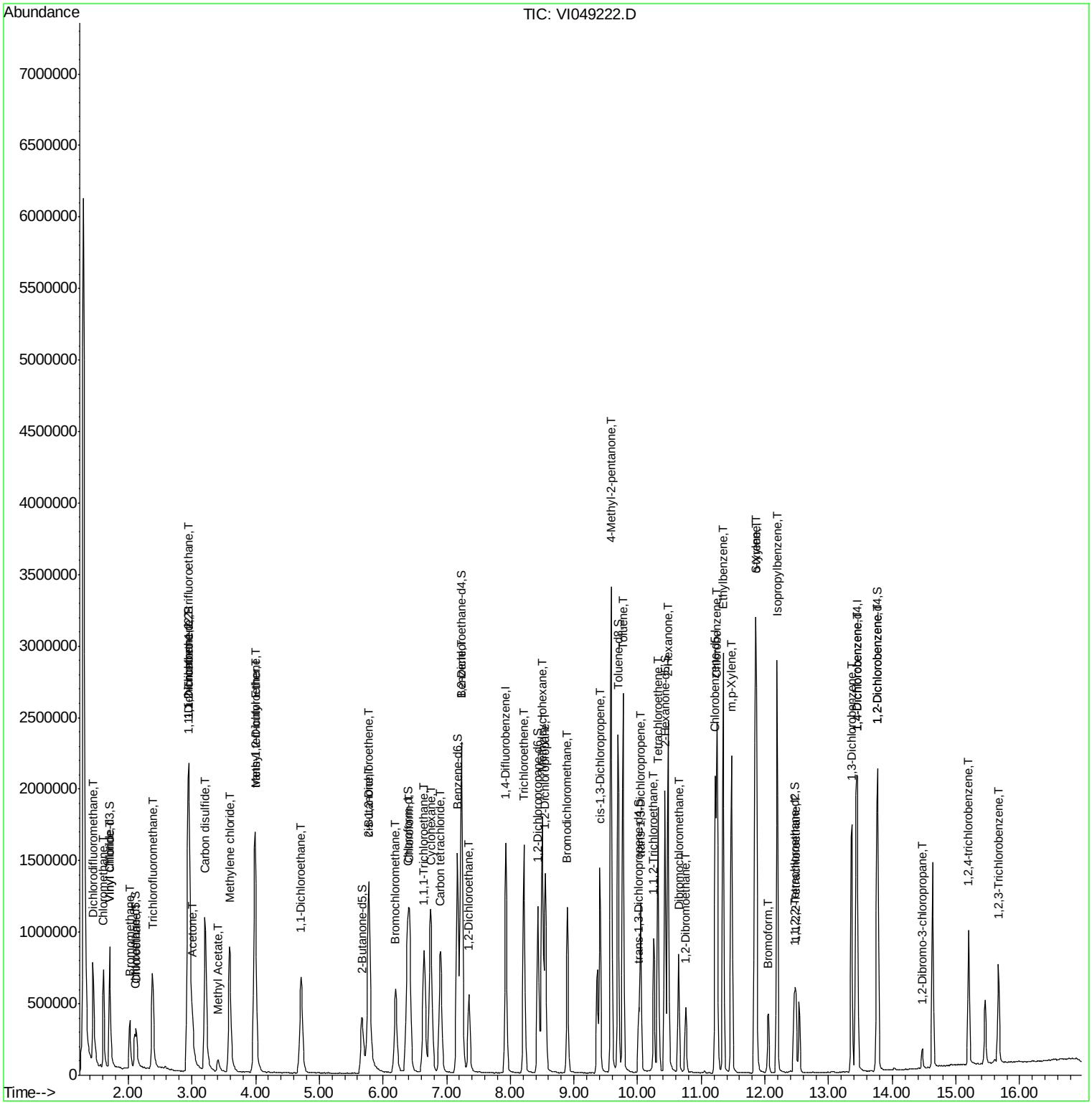
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.76	91	354465	1.11	ug/L		98
44) trans-1,3-Dichloropropene	10.05	75	105643	1.04	ug/L		98
45) 1,1,2-Trichloroethane	10.26	97	49376	1.00	ug/L		96
47) Tetrachloroethene	10.33	164	73746	1.08	ug/L		97
48) 2-Hexanone	10.47	43	341156	11.16	ug/L		93
49) Dibromochloromethane	10.64	129	73641	1.05	ug/L		94
50) 1,2-Dibromoethane	10.76	107	52051	1.03	ug/L		94
51) Chlorobenzene	11.25	112	198885	1.00	ug/L		97
52) Ethylbenzene	11.35	91	328935	0.95	ug/L		97
53) m,p-Xylene	11.48	106	113672	0.89	ug/L		100
54) o-Xylene	11.84	106	103152	0.86	ug/L		92
55) Styrene	11.86	104	172395	0.86	ug/L		98
56) Isopropylbenzene	12.20	105	269919	0.87	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.48	83	42726	0.85	ug/L		96
60) Bromoform	12.05	173	27954	1.14	ug/L		98
61) 1,3-Dichlorobenzene	13.36	146	93938	0.98	ug/L		95
62) 1,4-Dichlorobenzene	13.46	146	98975	1.00	ug/L		95
64) 1,2-Dichlorobenzene	13.78	146	76464	0.93	ug/L		95
65) 1,2-Dibromo-3-chloropropan	14.47	75	6160	1.27	ug/L	#	77
66) 1,2,4-trichlorobenzene	15.20	180	33635	0.70	ug/L		99
67) 1,2,3-Trichlorobenzene	15.67	180	25667	0.72	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049222.D
Acq On : 4 May 2016 12:30
Operator : FY/SY
Sample : VSTD00535
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00535

Quant Time: May 04 12:54:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049222.D
Acq On : 4 May 2016 12:30
Operator : FY/SY
Sample : VSTD00535
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00535

Quant Time: May 04 12:54:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1387511	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	966164	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	378132	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	425291	5.71	ug/L	0.00
7) Chloroethane-d5	2.10	69	241187	5.42	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	1024075	5.42	ug/L	0.00
20) 2-Butanone-d5	5.67	46	995120	60.10	ug/L	0.00
24) Chloroform-d	6.38	84	1109276	5.18	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.23	65	457025	5.37	ug/L	0.00
32) Benzene-d6	7.17	84	1932549	5.33	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.43	67	539585	5.18	ug/L	0.00
41) Toluene-d8	9.69	98	1438042	5.08	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	218683	5.13	ug/L	0.00
46) 2-Hexanone-d5	10.43	63	686533	50.08	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	247288	4.50	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	328714	4.58	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	796877	6.06	ug/L	98
3) Chloromethane	1.61	50	659513	5.88	ug/L	98
5) Vinyl chloride	1.71	62	470430	6.01	ug/L	99
6) Bromomethane	2.02	94	217759	5.41	ug/L	100
8) Chloroethane	2.12	64	206953	5.84	ug/L	93
9) Trichlorofluoromethane	2.38	101	652640	6.12	ug/L	97
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	609280	6.02	ug/L	99
12) 1,1-Dichloroethene	2.95	96	561763	5.39	ug/L	95
13) Acetone	3.01	43	564267	60.13	ug/L	98
14) Carbon disulfide	3.21	76	2076484	5.35	ug/L	100
15) Methyl Acetate	3.41	43	165335	5.67	ug/L	98
16) Methylene chloride	3.59	84	610472	5.27	ug/L	96
17) Methyl tert-butyl Ether	3.98	73	1046212	5.61	ug/L	99
18) trans-1,2-Dichloroethene	3.99	96	623257	5.28	ug/L	95
19) 1,1-Dichloroethane	4.71	63	1055265	5.49	ug/L	97
21) 2-Butanone	5.78	43	1090421	62.52	ug/L	97
22) cis-1,2-Dichloroethene	5.77	96	634938	5.14	ug/L	98
23) Bromochloromethane	6.20	128	255349	5.40	ug/L	92
25) Chloroform	6.41	83	1114407	5.29	ug/L	97
27) 1,2-Dichloroethane	7.35	62	563870	5.41	ug/L	100
29) 1,1,1-Trichloroethane	6.65	97	925756	5.76	ug/L	98
30) Cyclohexane	6.75	56	820242	6.27	ug/L	98
31) Carbon tetrachloride	6.91	117	817207	6.06	ug/L	100
33) Benzene	7.23	78	2096710	5.54	ug/L	100
34) Trichloroethene	8.22	95	571727	5.39	ug/L	96
35) Methylcyclohexane	8.50	83	731179	6.04	ug/L	99
37) 1,2-Dichloropropane	8.55	63	488269	5.31	ug/L	98
38) Bromodichloromethane	8.89	83	712248	5.38	ug/L	100
39) cis-1,3-Dichloropropene	9.41	75	717788	5.29	ug/L	100
40) 4-Methyl-2-pentanone	9.58	43	2615758	56.21	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049222.D
Acq On : 4 May 2016 12:30
Operator : FY/SY
Sample : VSTD00535
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00535

Quant Time: May 04 12:54:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.77	91	1763408	5.17	ug/L	100
44) trans-1,3-Dichloropropene	10.05	75	555982	5.12	ug/L	100
45) 1,1,2-Trichloroethane	10.25	97	255422	4.88	ug/L	98
47) Tetrachloroethene	10.32	164	374867	5.15	ug/L	96
48) 2-Hexanone	10.48	43	1718206	52.79	ug/L	100
49) Dibromochloromethane	10.65	129	387930	5.19	ug/L	98
50) 1,2-Dibromoethane	10.75	107	270504	5.03	ug/L	94
51) Chlorobenzene	11.25	112	1063006	5.03	ug/L	98
52) Ethylbenzene	11.35	91	1881376	5.08	ug/L	100
53) m,p-Xylene	11.47	106	679743	5.00	ug/L	98
54) o-Xylene	11.85	106	632711	4.94	ug/L	96
55) Styrene	11.87	104	1074496	5.04	ug/L	100
56) Isopropylbenzene	12.19	105	1682173	5.11	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.49	83	242821	4.56	ug/L	96
60) Bromoform	12.05	173	177627	5.35	ug/L	99
61) 1,3-Dichlorobenzene	13.36	146	646942	4.97	ug/L	98
62) 1,4-Dichlorobenzene	13.45	146	638743	4.76	ug/L	98
64) 1,2-Dichlorobenzene	13.78	146	533683	4.80	ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.47	75	29452	4.47	ug/L	88
66) 1,2,4-trichlorobenzene	15.20	180	289805	4.48	ug/L	96
67) 1,2,3-Trichlorobenzene	15.67	180	207658	4.29	ug/L	98

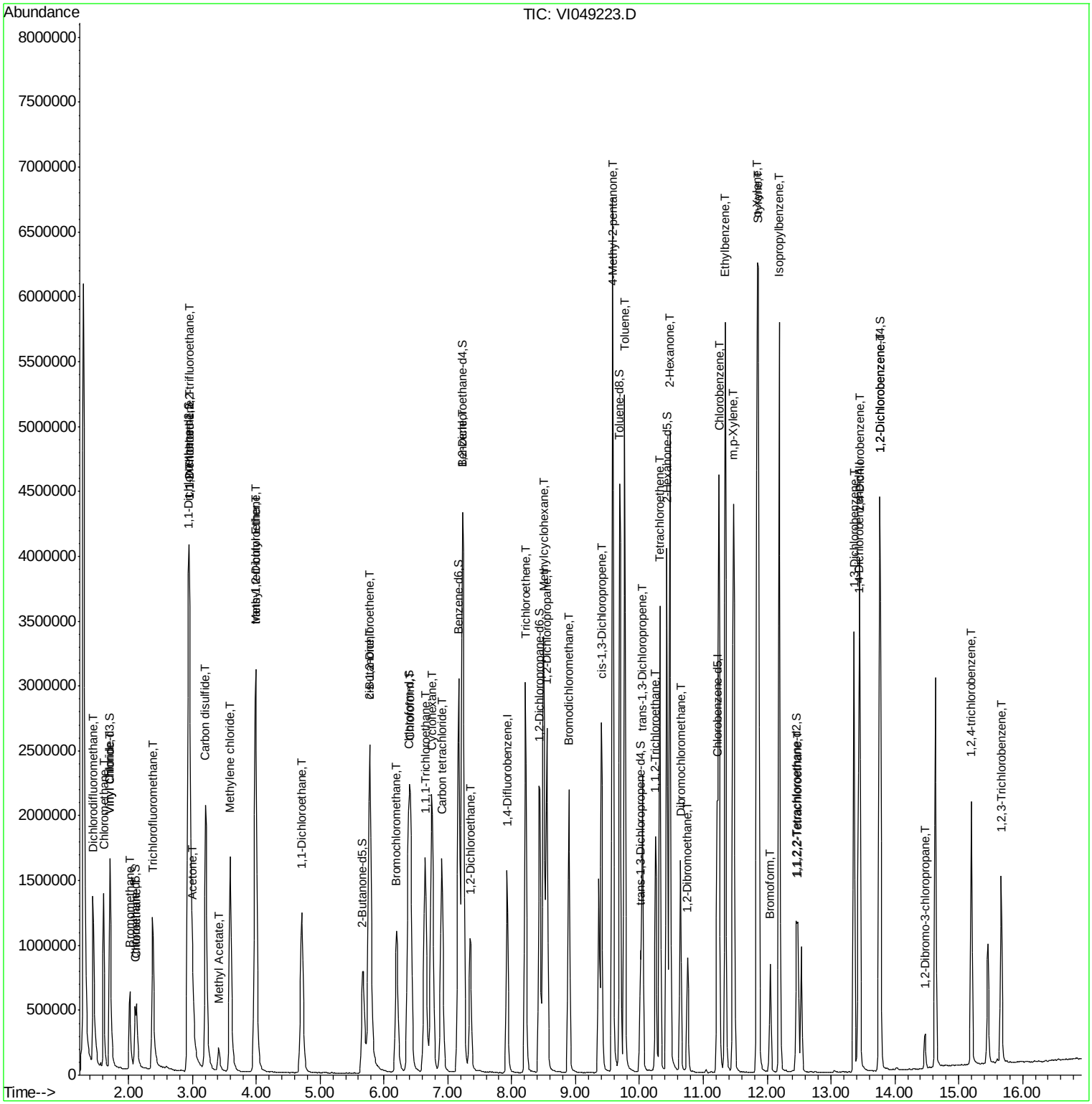
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049223.D
Acq On : 4 May 2016 13:02
Operator : FY/SY
Sample : VSTD01036
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01036

Quant Time: May 04 13:22:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:02:09 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049223.D
Acq On : 4 May 2016 13:02
Operator : FY/SY
Sample : VSTD01036
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01036

Quant Time: May 04 13:22:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:02:09 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1346932	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	978979	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	391643	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	852545	10.17	ug/L	0.00
7) Chloroethane-d5	2.10	69	441331	8.71	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	1962568	9.90	ug/L	0.00
20) 2-Butanone-d5	5.67	46	1983326	117.22	ug/L	0.00
24) Chloroform-d	6.38	84	2161653	10.24	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.23	65	876015	9.98	ug/L	0.00
32) Benzene-d6	7.17	84	3815591	9.73	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.43	67	1067054	9.71	ug/L	0.00
41) Toluene-d8	9.69	98	2856146	10.01	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	441531	10.67	ug/L	0.00
46) 2-Hexanone-d5	10.43	63	1398322	108.24	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	515068	11.14	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	714609	10.62	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	1496448	10.04	ug/L	98
3) Chloromethane	1.61	50	1264869	9.57	ug/L	97
5) Vinyl chloride	1.71	62	882275	9.65	ug/L	99
6) Bromomethane	2.02	94	387232	7.77	ug/L	97
8) Chloroethane	2.12	64	361250	8.62	ug/L	96
9) Trichlorofluoromethane	2.38	101	1236936	9.60	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	1132918	9.90	ug/L	99
12) 1,1-Dichloroethene	2.95	96	1065279	9.71	ug/L	99
13) Acetone	3.01	43	1154285	108.53	ug/L	94
14) Carbon disulfide	3.21	76	3891847	9.86	ug/L	99
15) Methyl Acetate	3.41	43	324256	10.54	ug/L	95
16) Methylene chloride	3.59	84	1144292	9.41	ug/L	96
17) Methyl tert-butyl Ether	3.98	73	1940115	9.86	ug/L	99
18) trans-1,2-Dichloroethene	3.99	96	1161176	9.67	ug/L	97
19) 1,1-Dichloroethane	4.71	63	1961074	9.59	ug/L	100
21) 2-Butanone	5.78	43	2069517	107.36	ug/L	100
22) cis-1,2-Dichloroethene	5.77	96	1197407	9.73	ug/L	96
23) Bromochloromethane	6.20	128	479204	9.64	ug/L	95
25) Chloroform	6.41	83	2076321	9.50	ug/L	98
27) 1,2-Dichloroethane	7.35	62	1054465	9.63	ug/L	98
29) 1,1,1-Trichloroethane	6.65	97	1742986	9.11	ug/L	98
30) Cyclohexane	6.75	56	1563911	9.50	ug/L	97
31) Carbon tetrachloride	6.91	117	1553503	9.42	ug/L	99
33) Benzene	7.23	78	3997279	9.32	ug/L	100
34) Trichloroethene	8.22	95	1082122	9.08	ug/L	98
35) Methylcyclohexane	8.50	83	1414618	10.08	ug/L	99
37) 1,2-Dichloropropane	8.55	63	940352	9.41	ug/L	99
38) Bromodichloromethane	8.89	83	1366909	9.45	ug/L	98
39) cis-1,3-Dichloropropene	9.41	75	1374976	9.40	ug/L	99
40) 4-Methyl-2-pentanone	9.58	43	4902699	94.26	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049223.D
Acq On : 4 May 2016 13:02
Operator : FY/SY
Sample : VSTD01036
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01036

Quant Time: May 04 13:22:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:02:09 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.77	91	3465077	9.74	ug/L	98
44) trans-1,3-Dichloropropene	10.05	75	1105184	10.19	ug/L	99
45) 1,1,2-Trichloroethane	10.25	97	500341	9.99	ug/L	98
47) Tetrachloroethene	10.32	164	742833	9.78	ug/L	95
48) 2-Hexanone	10.48	43	3335204	98.66	ug/L	98
49) Dibromochloromethane	10.65	129	773201	10.43	ug/L	99
50) 1,2-Dibromoethane	10.75	107	516165	9.83	ug/L	100
51) Chlorobenzene	11.25	112	2088636	9.98	ug/L	98
52) Ethylbenzene	11.34	91	3709193	10.40	ug/L	98
53) m,p-Xylene	11.47	106	1367664	10.91	ug/L	96
54) o-Xylene	11.85	106	1284417	11.05	ug/L	94
55) Styrene	11.87	104	2175319	11.38	ug/L	100
56) Isopropylbenzene	12.19	105	3406235	11.18	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.49	83	486520	10.29	ug/L	99
60) Bromoform	12.05	173	364966	10.27	ug/L	100
61) 1,3-Dichlorobenzene	13.36	146	1325420	10.21	ug/L	99
62) 1,4-Dichlorobenzene	13.45	146	1343241	9.95	ug/L	98
64) 1,2-Dichlorobenzene	13.78	146	1101321	10.35	ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.46	75	64450	9.72	ug/L	89
66) 1,2,4-trichlorobenzene	15.20	180	595041	10.84	ug/L	99
67) 1,2,3-Trichlorobenzene	15.67	180	432037	10.49	ug/L	97

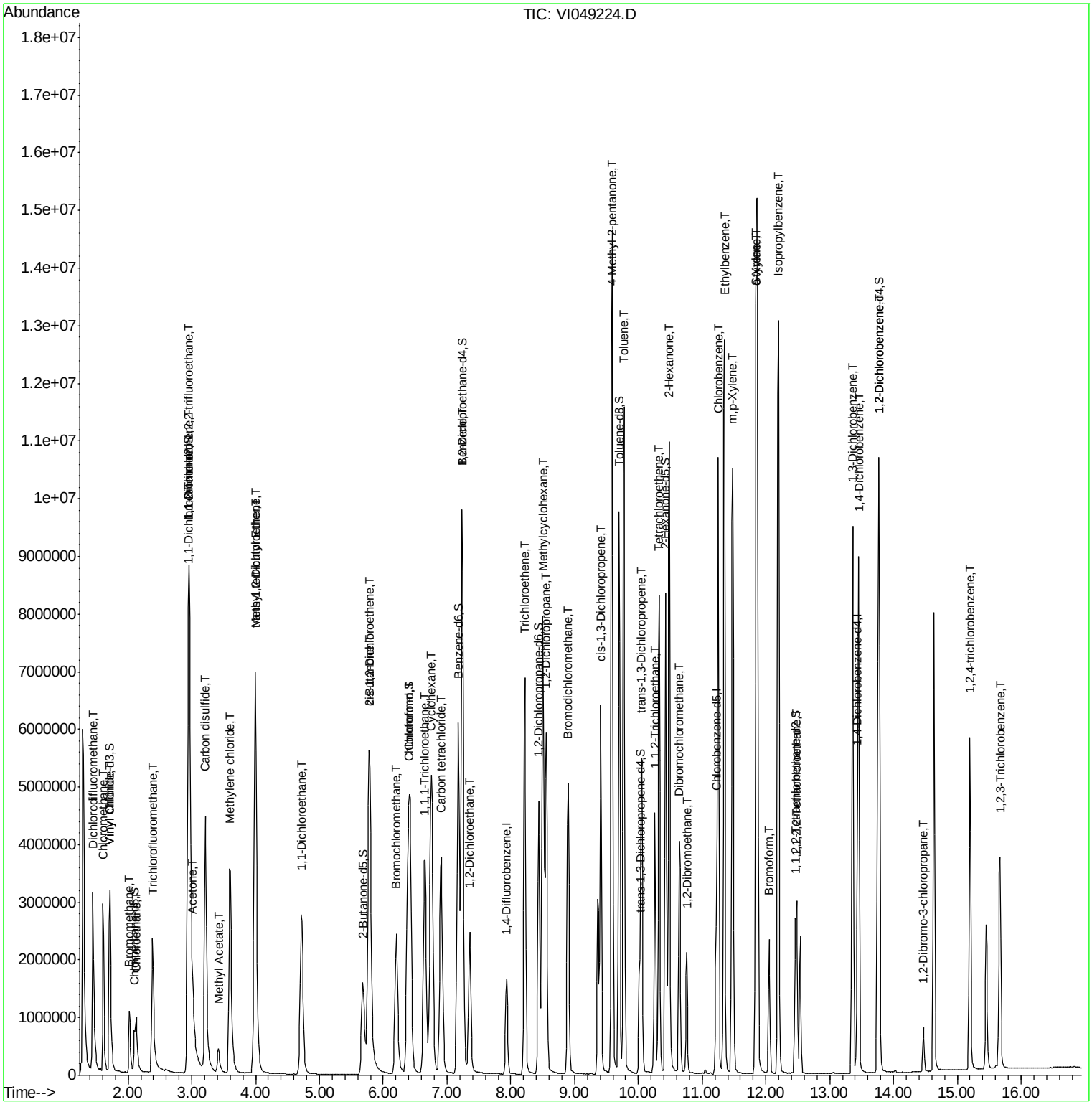
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049224.D
Acq On : 4 May 2016 13:33
Operator : FY/SY
Sample : VSTD02037
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02037

Quant Time: May 04 13:56:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:27:51 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049224.D
Acq On : 4 May 2016 13:33
Operator : FY/SY
Sample : VSTD02037
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02037

Quant Time: May 04 13:56:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:27:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1461579	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	1086543	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	471623	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	1691207	18.52	ug/L	0.00
7) Chloroethane-d5	2.10	69	726792	13.66	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	4036999	18.82	ug/L	0.00
20) 2-Butanone-d5	5.68	46	4160883	217.27	ug/L	0.01
24) Chloroform-d	6.39	84	4451409	19.31	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.24	65	1748807	18.37	ug/L	0.00
32) Benzene-d6	7.18	84	7749910	17.93	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.44	67	2214284	18.29	ug/L	0.00
41) Toluene-d8	9.70	98	5885440	18.58	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	952520	20.39	ug/L	0.00
46) 2-Hexanone-d5	10.42	63	3083599	210.72	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	1189030	22.52	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	1684802	20.47	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	3513178	21.70	ug/L	99
3) Chloromethane	1.61	50	2740270	19.31	ug/L	97
5) Vinyl chloride	1.71	62	1989115	20.23	ug/L	99
6) Bromomethane	2.02	94	681315	13.34	ug/L	95
8) Chloroethane	2.13	64	699614	15.94	ug/L	96
9) Trichlorofluoromethane	2.38	101	2703301	19.54	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	2693766	21.75	ug/L	99
12) 1,1-Dichloroethene	2.95	96	2344375	19.84	ug/L	98
13) Acetone	3.01	43	2651705	224.97	ug/L	96
14) Carbon disulfide	3.21	76	8635675	20.23	ug/L	98
15) Methyl Acetate	3.42	43	742482	21.95	ug/L	94
16) Methylene chloride	3.60	84	2605444	20.05	ug/L	99
17) Methyl tert-butyl Ether	3.99	73	4528073	21.28	ug/L	99
18) trans-1,2-Dichloroethene	4.00	96	2702539	20.92	ug/L	98
19) 1,1-Dichloroethane	4.72	63	4528793	20.62	ug/L	99
21) 2-Butanone	5.79	43	4815478	226.05	ug/L	99
22) cis-1,2-Dichloroethene	5.78	96	2805467	21.16	ug/L	97
23) Bromochloromethane	6.20	128	1105137	20.68	ug/L	92
25) Chloroform	6.42	83	4766471	20.35	ug/L	99
27) 1,2-Dichloroethane	7.35	62	2435376	20.69	ug/L	98
29) 1,1,1-Trichloroethane	6.65	97	4024599	19.39	ug/L	98
30) Cyclohexane	6.75	56	3759993	20.83	ug/L	99
31) Carbon tetrachloride	6.91	117	3593861	19.92	ug/L	98
33) Benzene	7.24	78	9083823	19.41	ug/L	100
34) Trichloroethene	8.22	95	2570250	19.89	ug/L	96
35) Methylcyclohexane	8.51	83	3435954	22.01	ug/L	99
37) 1,2-Dichloropropane	8.55	63	2175167	19.91	ug/L	100
38) Bromodichloromethane	8.90	83	3234934	20.43	ug/L	97
39) cis-1,3-Dichloropropene	9.41	75	3290905	20.59	ug/L	97
40) 4-Methyl-2-pentanone	9.59	43	10638557	186.98	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049224.D
Acq On : 4 May 2016 13:33
Operator : FY/SY
Sample : VSTD02037
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02037

Quant Time: May 04 13:56:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:27:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.77	91	7848741	20.00	ug/L	91
44) trans-1,3-Dichloropropene	10.05	75	2646058	21.87	ug/L	96
45) 1,1,2-Trichloroethane	10.26	97	1219815	21.95	ug/L	98
47) Tetrachloroethene	10.33	164	1772171	21.14	ug/L	95
48) 2-Hexanone	10.48	43	7635735	204.19	ug/L	96
49) Dibromochloromethane	10.64	129	1894342	22.78	ug/L	98
50) 1,2-Dibromoethane	10.76	107	1270502	21.90	ug/L	99
51) Chlorobenzene	11.25	112	4962671	21.38	ug/L	97
52) Ethylbenzene	11.35	91	8575376	21.45	ug/L	90
53) m,p-Xylene	11.48	106	3390654	23.82	ug/L	89
54) o-Xylene	11.84	106	3225706	24.37	ug/L	93
55) Styrene	11.86	104	5354222	24.39	ug/L	90
56) Isopropylbenzene	12.20	105	7966938	22.89	ug/L	95
58) 1,1,2,2-Tetrachloroethane	12.48	83	1245644	23.57	ug/L	99
60) Bromoform	12.05	173	949899	22.05	ug/L	100
61) 1,3-Dichlorobenzene	13.36	146	3432822	21.85	ug/L	96
62) 1,4-Dichlorobenzene	13.46	146	3442102	21.20	ug/L	98
64) 1,2-Dichlorobenzene	13.77	146	2913858	22.54	ug/L	96
65) 1,2-Dibromo-3-chloropropan	14.47	75	173184	21.85	ug/L	89
66) 1,2,4-trichlorobenzene	15.20	180	1682098	24.93	ug/L	99
67) 1,2,3-Trichlorobenzene	15.67	180	1223545	24.37	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

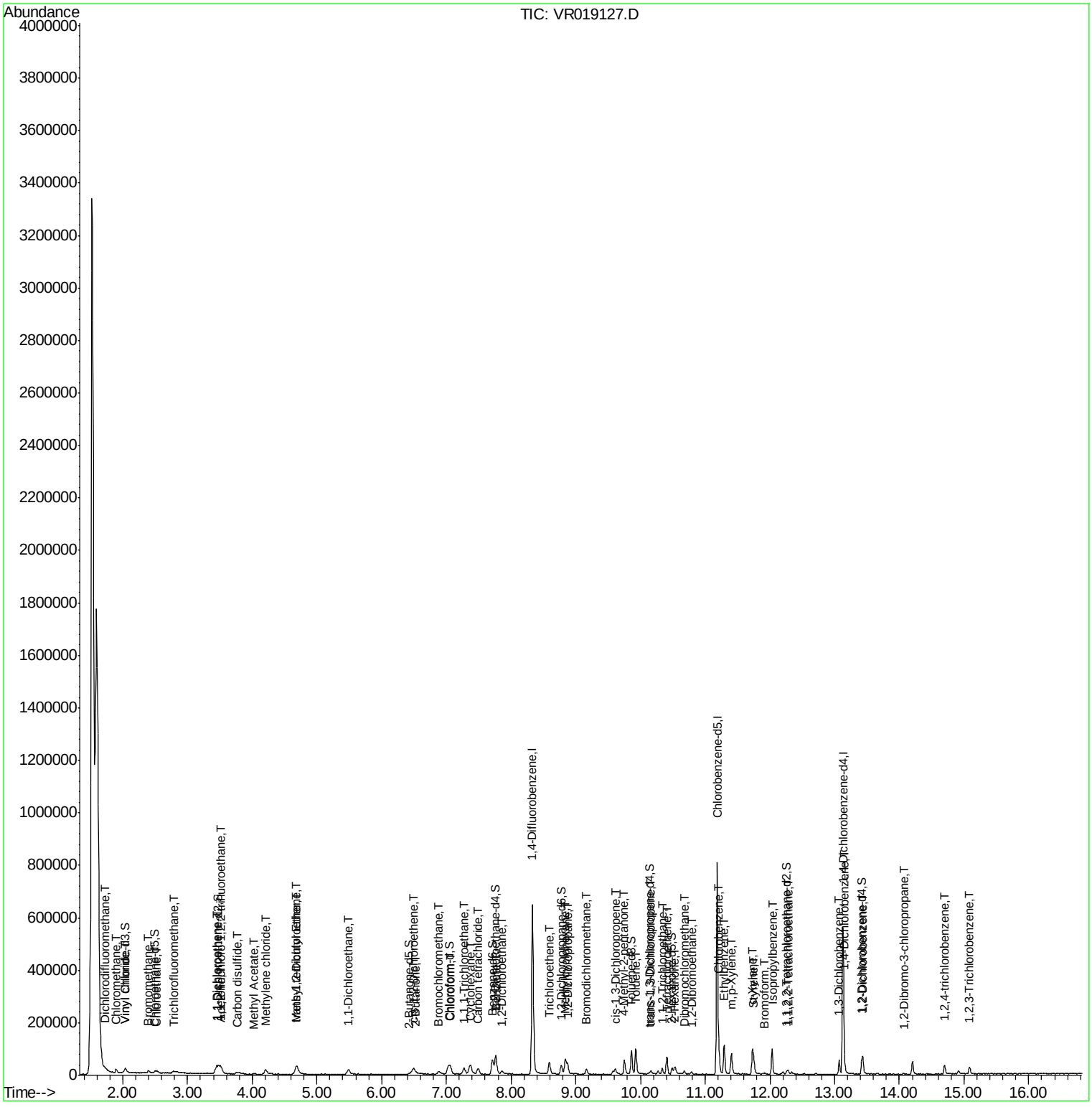
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:42:27 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM

Quant Time: May 11 12:42:27 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	548561	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	391257	5.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	136317	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.03	65	13015	0.18	ug/L		0.00
7) Chloroethane-d5	2.50	69	9905	0.18	ug/L		0.00
11) 1,1-Dichloroethene-d2	3.46	63	28645m	0.37	ug/L		0.00
20) 2-Butanone-d5	6.43	46	11795m	2.60	ug/L		0.03
24) Chloroform-d	7.04	84	29641	0.44	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	10949	0.39	ug/L		0.00
32) Benzene-d6	7.71	84	65257	0.44	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.78	67	16752	0.41	ug/L		0.00
41) Toluene-d8	9.86	98	57999	0.41	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	3586	0.34	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	8117	2.30	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	5612	0.44	ug/L		0.00
63) 1,2-Dichlorobenzene-d4	13.42	152	11829	0.50	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.73	85	11520	0.37	ug/L		94
3) Chloromethane	1.90	50	14915	0.20	ug/L		99
5) Vinyl chloride	2.05	62	13826	0.18	ug/L		94
6) Bromomethane	2.39	94	8234	0.21	ug/L		89
8) Chloroethane	2.53	64	8198	0.19	ug/L		94
9) Trichlorofluoromethane	2.79	101	17496m	0.25	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	14200	0.50	ug/L		95
12) 1,1-Dichloroethene	3.45	96	14885m	0.45	ug/L		
13) Acetone	3.53	43	13500	4.06	ug/L		94
14) Carbon disulfide	3.77	76	26515m	0.30	ug/L		
15) Methyl Acetate	4.02	43	2334m	0.30	ug/L		
16) Methylene chloride	4.21	84	14063	0.49	ug/L		90
17) Methyl tert-butyl Ether	4.68	73	17421	0.39	ug/L		99
18) trans-1,2-Dichloroethene	4.68	96	15273	0.43	ug/L		85
19) 1,1-Dichloroethane	5.48	63	29205	0.39	ug/L		96
21) 2-Butanone	6.53	43	10166	2.18	ug/L		93
22) cis-1,2-Dichloroethene	6.49	96	15277	0.43	ug/L	#	76
23) Bromochloromethane	6.88	128	5152	0.55	ug/L		85
25) Chloroform	7.07	83	27793	0.45	ug/L		92
27) 1,2-Dichloroethane	7.86	62	12894	0.43	ug/L	#	93
29) 1,1,1-Trichloroethane	7.27	97	19715	0.45	ug/L		99
30) Cyclohexane	7.38	56	22031	0.35	ug/L		95
31) Carbon tetrachloride	7.50	117	17430	0.46	ug/L		94
33) Benzene	7.77	78	67237	0.44	ug/L		100
34) Trichloroethene	8.59	95	16914	0.46	ug/L		93
35) Methylcyclohexane	8.84	83	23843	0.43	ug/L		96
37) 1,2-Dichloropropane	8.87	63	14764	0.41	ug/L	#	91
38) Bromodichloromethane	9.16	83	12724	0.41	ug/L		90
39) cis-1,3-Dichloropropene	9.61	75	12898	0.31	ug/L		97
40) 4-Methyl-2-pentanone	9.75	43	37620	3.12	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM

Quant Time: May 11 12:42:27 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.92	91	70005	0.44	ug/L		92
44) trans-1,3-Dichloropropene	10.16	75	6981	0.25	ug/L		98
45) 1,1,2-Trichloroethane	10.34	97	6811	0.49	ug/L		94
47) Tetrachloroethene	10.41	164	14597	0.60	ug/L		85
48) 2-Hexanone	10.53	43	24063	3.06	ug/L		92
49) Dibromochloromethane	10.68	129	5813	0.44	ug/L		92
50) 1,2-Dibromoethane	10.79	107	5303	0.48	ug/L	#	98
51) Chlorobenzene	11.21	112	41126	0.51	ug/L		96
52) Ethylbenzene	11.29	91	74141	0.44	ug/L		99
53) m,p-Xylene	11.40	106	25710	0.42	ug/L		92
54) o-Xylene	11.73	106	22535	0.41	ug/L		90
55) Styrene	11.75	104	31223	0.37	ug/L		99
56) Isopropylbenzene	12.04	105	59533	0.42	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	5144	0.43	ug/L		85
60) Bromoform	11.91	173	1958	0.42	ug/L	#	86
61) 1,3-Dichlorobenzene	13.07	146	21317	0.48	ug/L		97
62) 1,4-Dichlorobenzene	13.15	146	24178	0.54	ug/L		97
64) 1,2-Dichlorobenzene	13.44	146	18211	0.52	ug/L		98
65) 1,2-Dibromo-3-chloropropan	14.06	75	481	0.39	ug/L	#	84
66) 1,2,4-trichlorobenzene	14.70	180	10686	0.56	ug/L		98
67) 1,2,3-Trichlorobenzene	15.08	180	7953	0.56	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

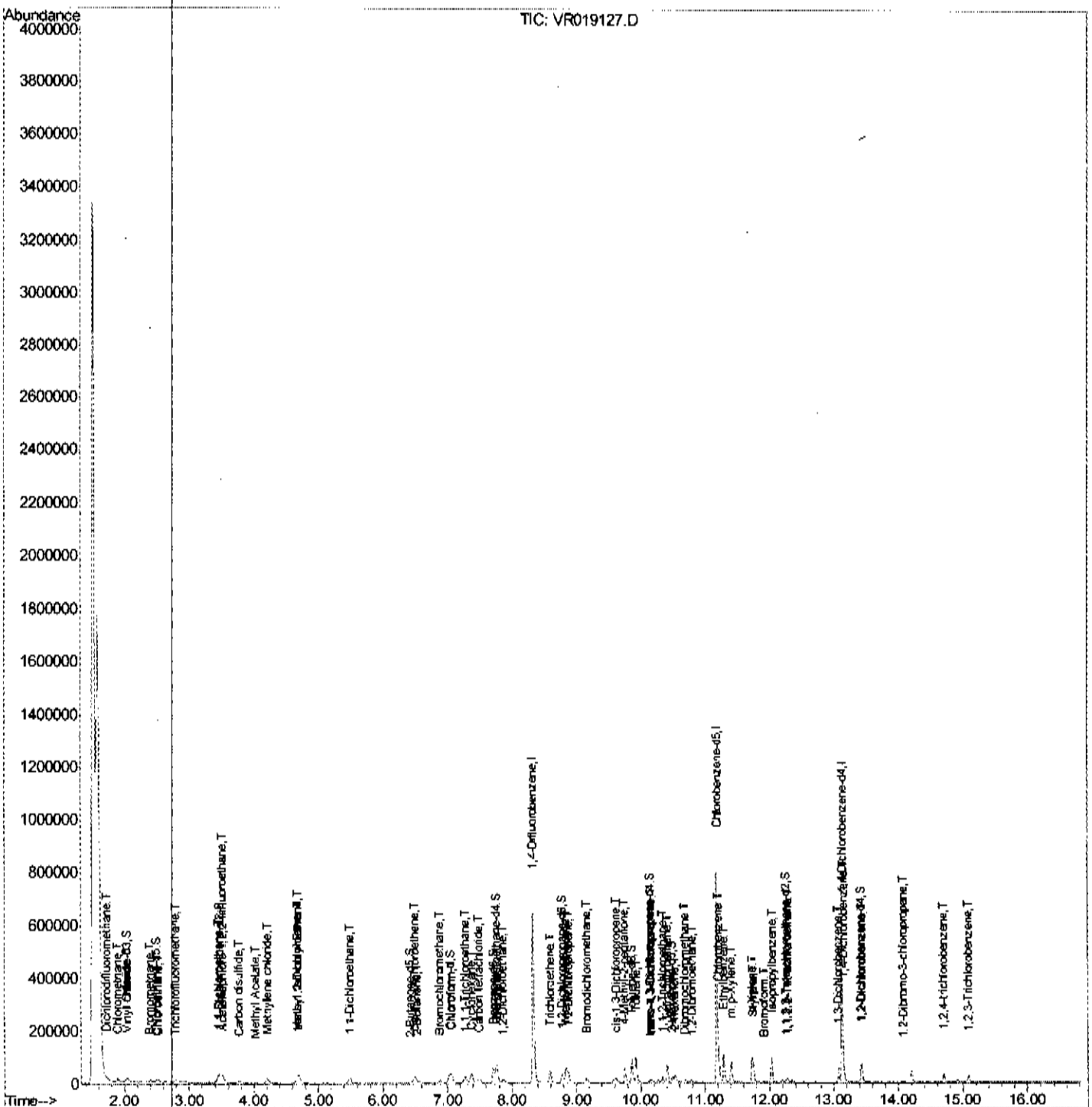
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:42:27 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM



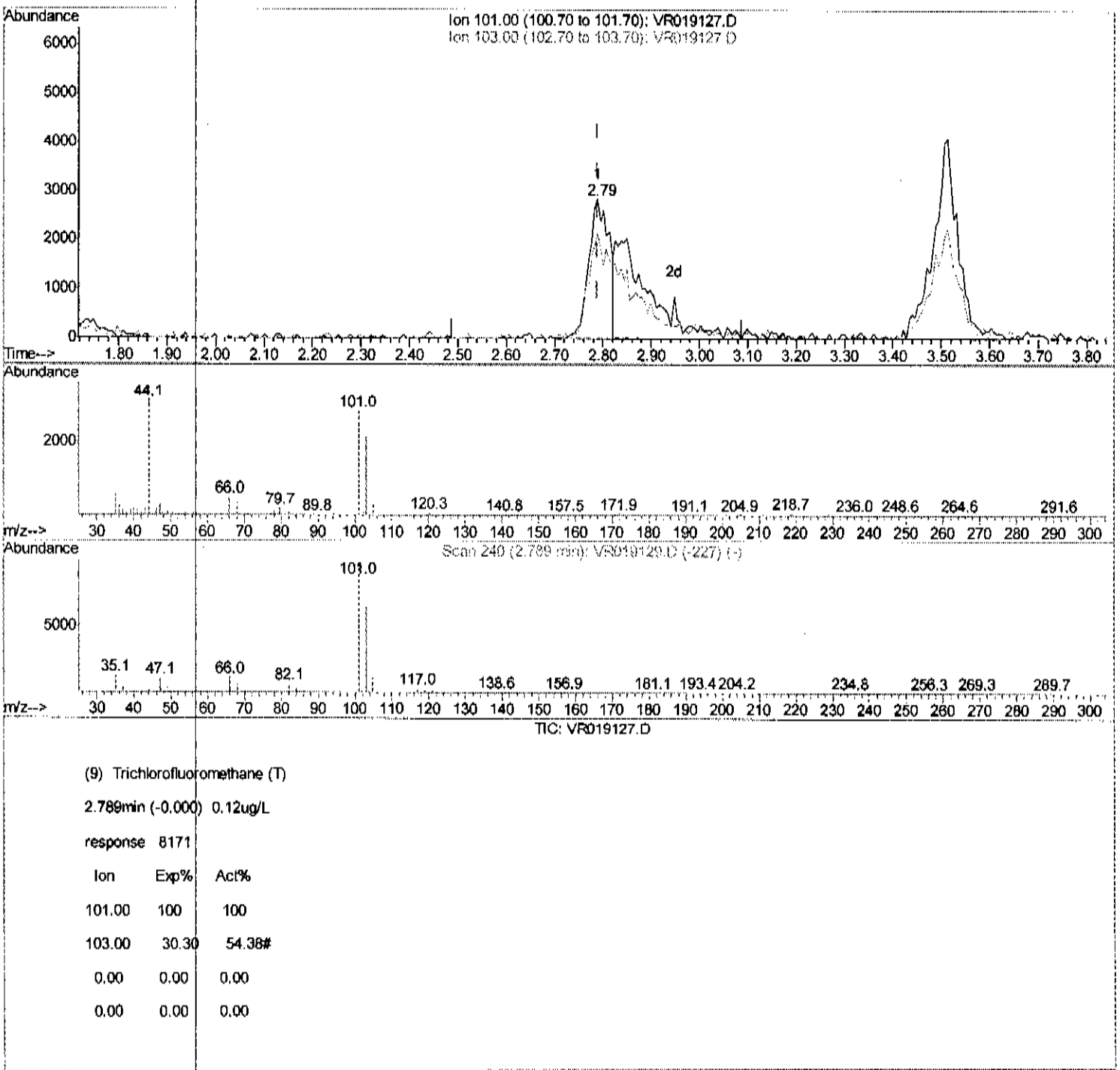
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:34:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM



TIC: VR019127.D

(9) Trichlorofluoromethane (T)

2.789min (-0.000) 0.12ug/L

response 8171

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	54.38#
0.00	0.00	0.00
0.00	0.00	0.00

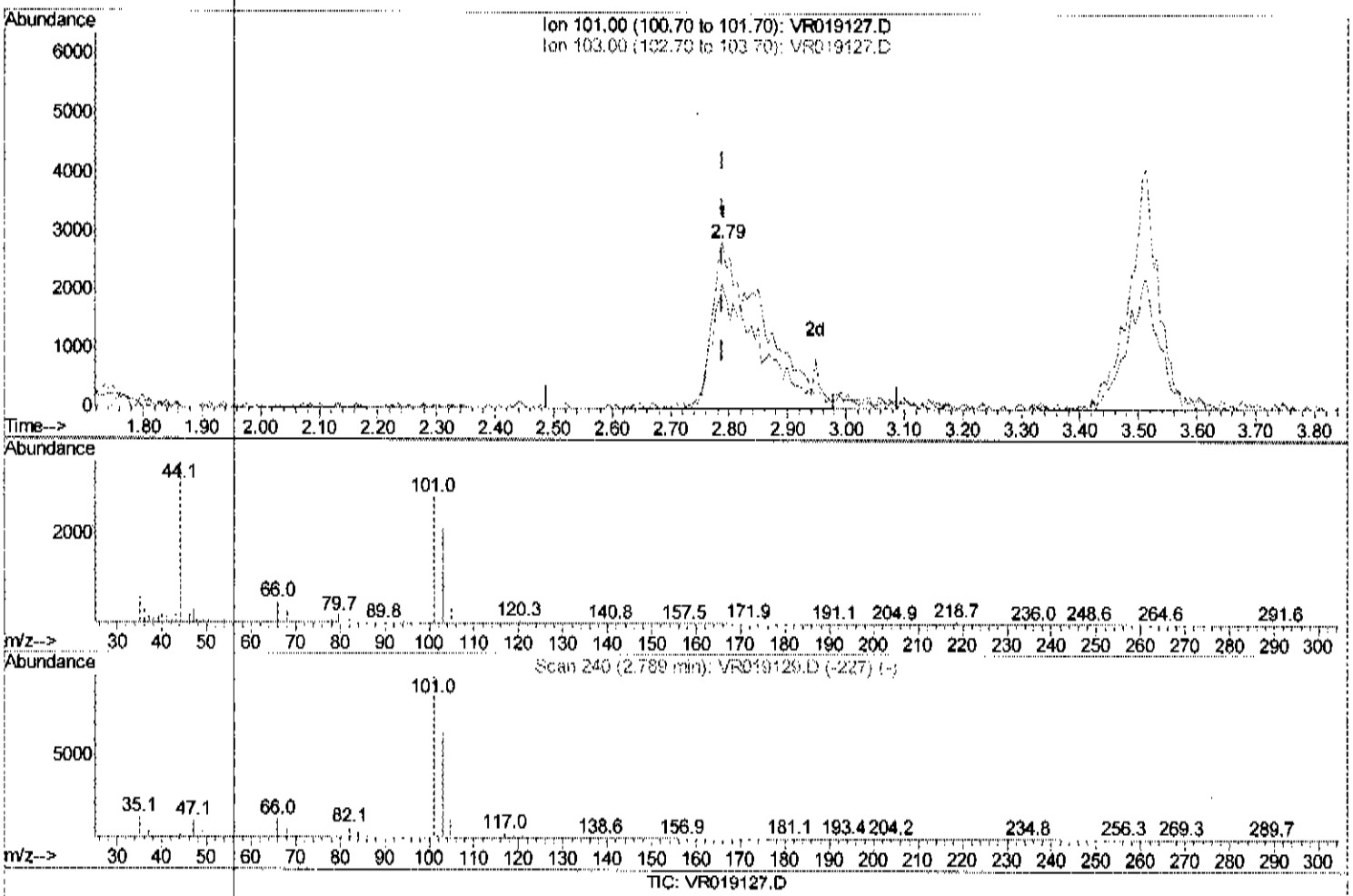
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:34:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM



TIC: VR019127.D

(9) Trichlorofluoromethane (T)

2.789min (-0.000) 0.25ug/L m ? 051116 SM

response 17496

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	25.39
0.00	0.00	0.00
0.00	0.00	0.00

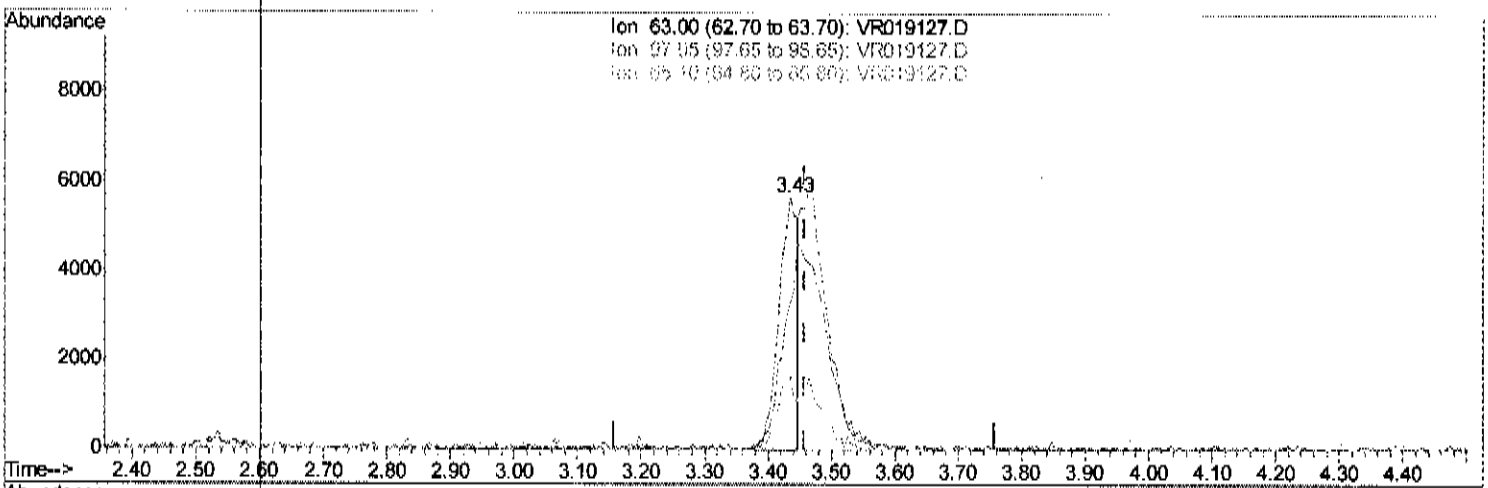
Quantitation Report (Qedit)

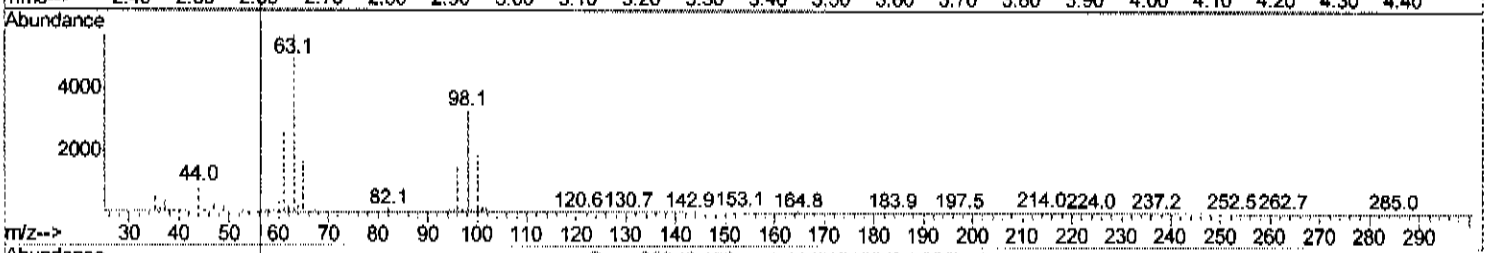
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:34:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

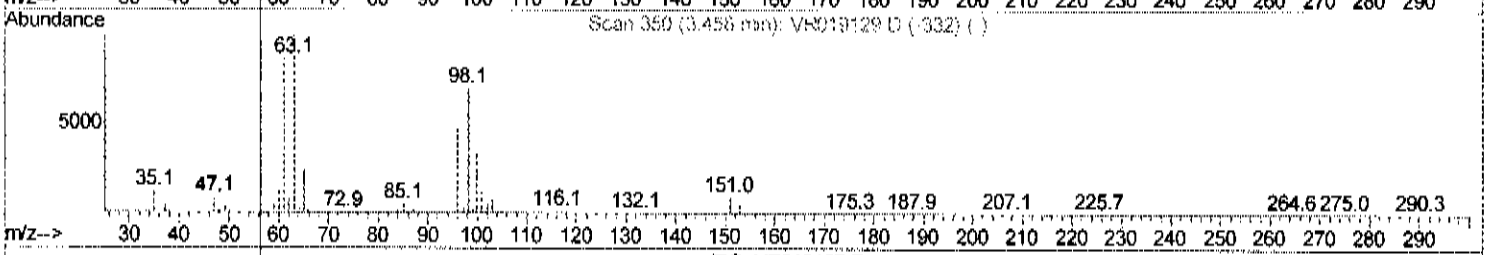
Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM





Scan 360 (3.456 min): VR019129.D (-332) (-)



TIC: VR019127.D

(11) 1,1-Dichloroethene-d2 (S)

3.434min (-0.024) 0.15ug/L

response 11676

Ion	Exp%	Act%
63.00	100	100
97.95	72.60	179.69#
65.10	23.80	28.47
0.00	0.00	0.00

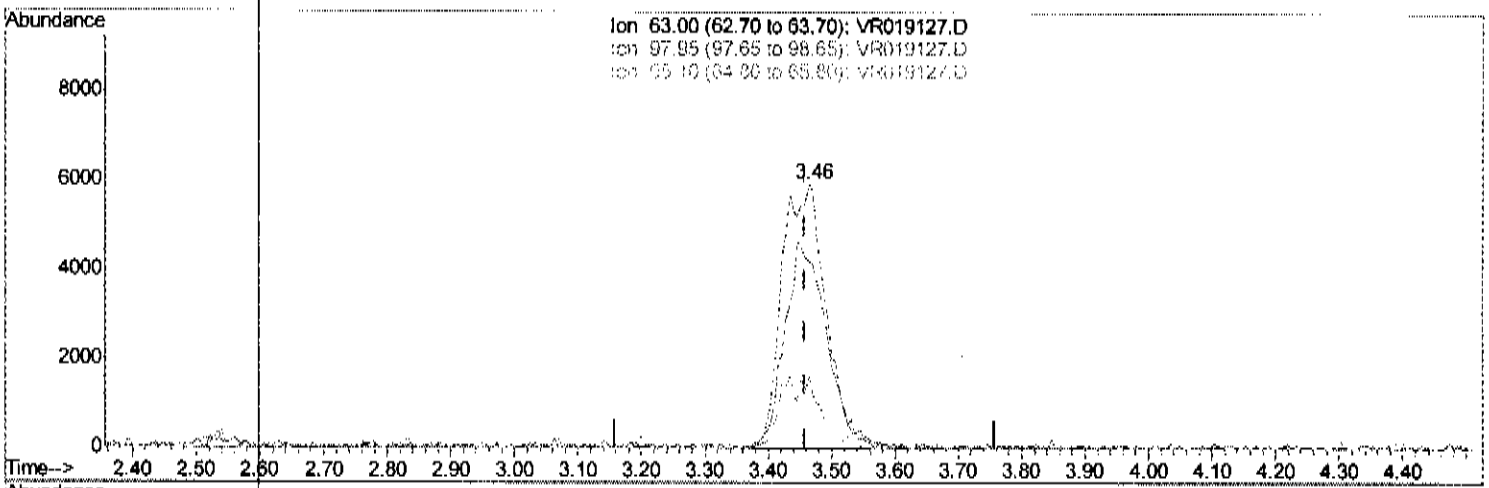
Quantitation Report (Qedit)

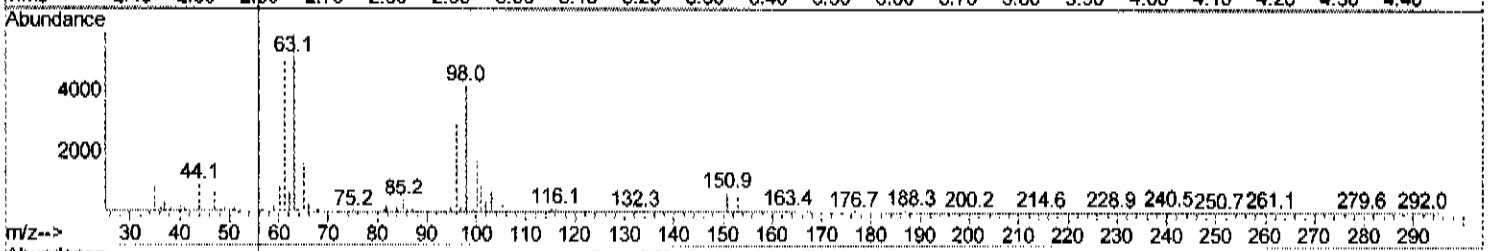
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:34:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

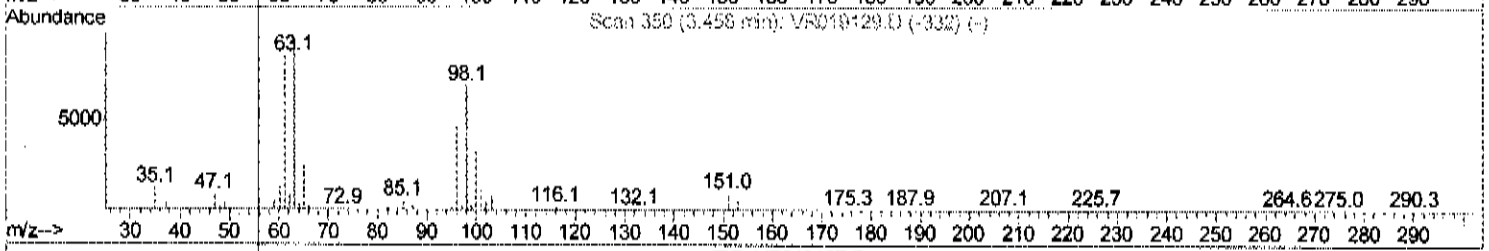
Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM





Scan 350 (3.458 min): VR019129.D (-332) (-)



TIC: VR019127.D

(11) 1,1-Dichloroethene-d2 (S)

3.464min (+0.006) 0.37ug/L m > 05/11/16 SY

response 28645

Ion	Exp%	Act%
63.00	100	100
97.95	72.60	73.24
65.10	23.80	11.60#
0.00	0.00	0.00

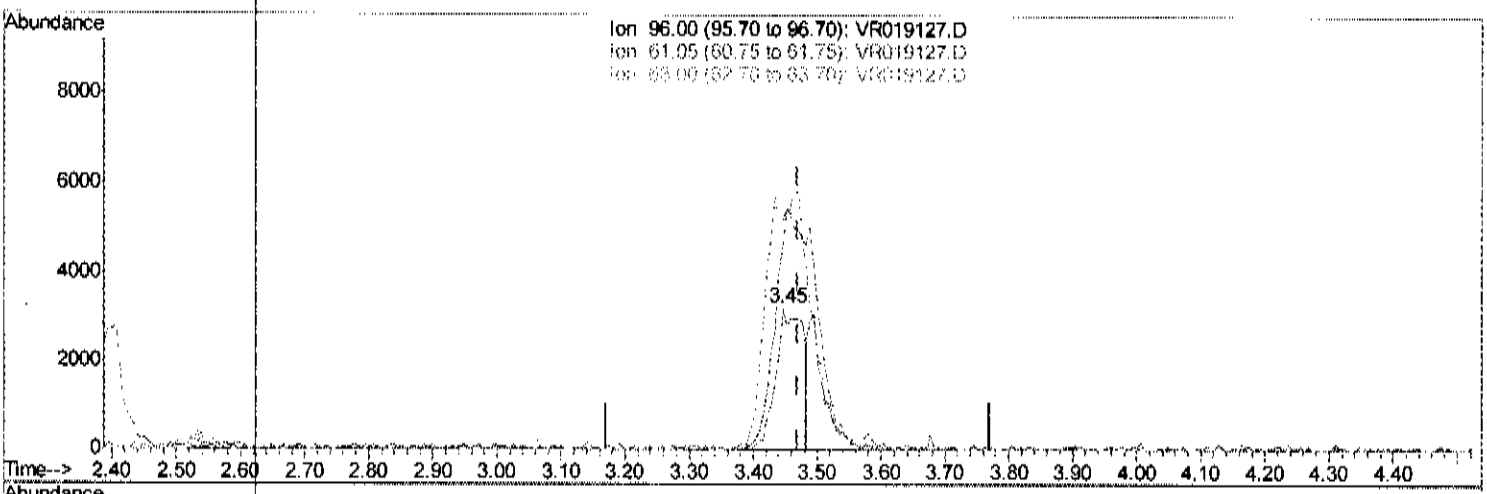
Quantitation Report (Qedit)

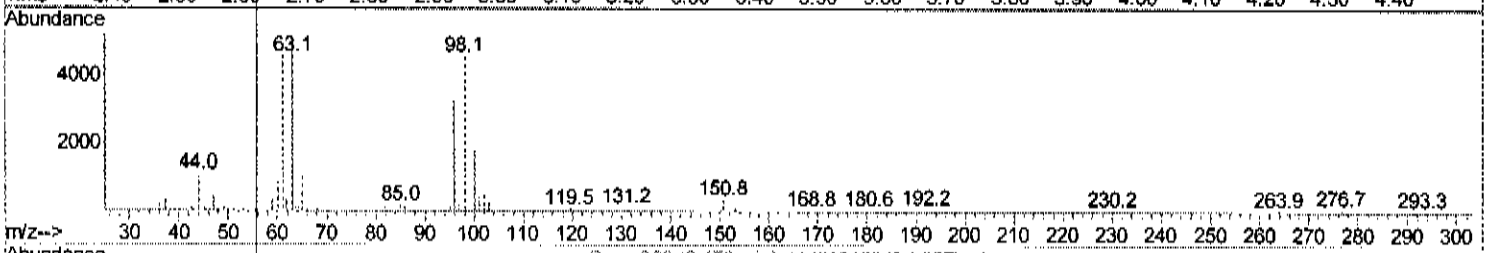
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:34:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

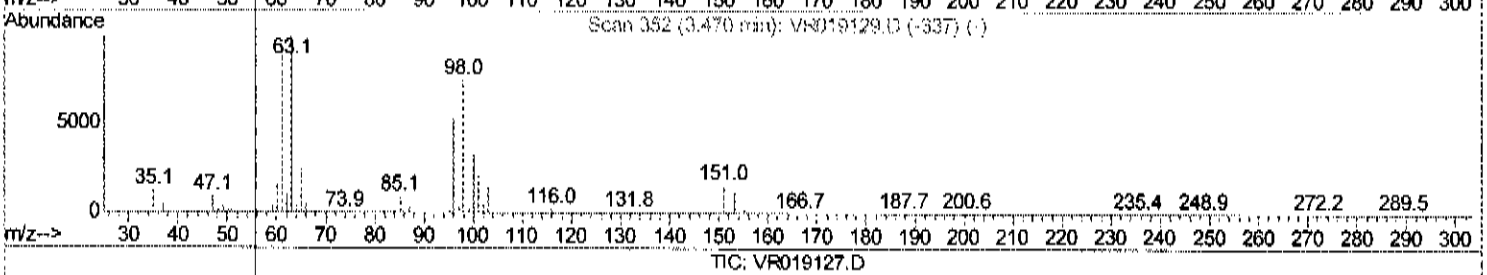
Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM





Scan 352 (3.470 min): VR019129.D (-337) (-)



TIC: VR019127.D

(12) 1,1-Dichloroethene (T)

3.446min (-0.024) 0.29ug/L

response 9624

Ion	Exp%	Act%
96.00	100	100
61.05	177.10	145.34
63.00	190.70	161.98
0.00	0.00	0.00

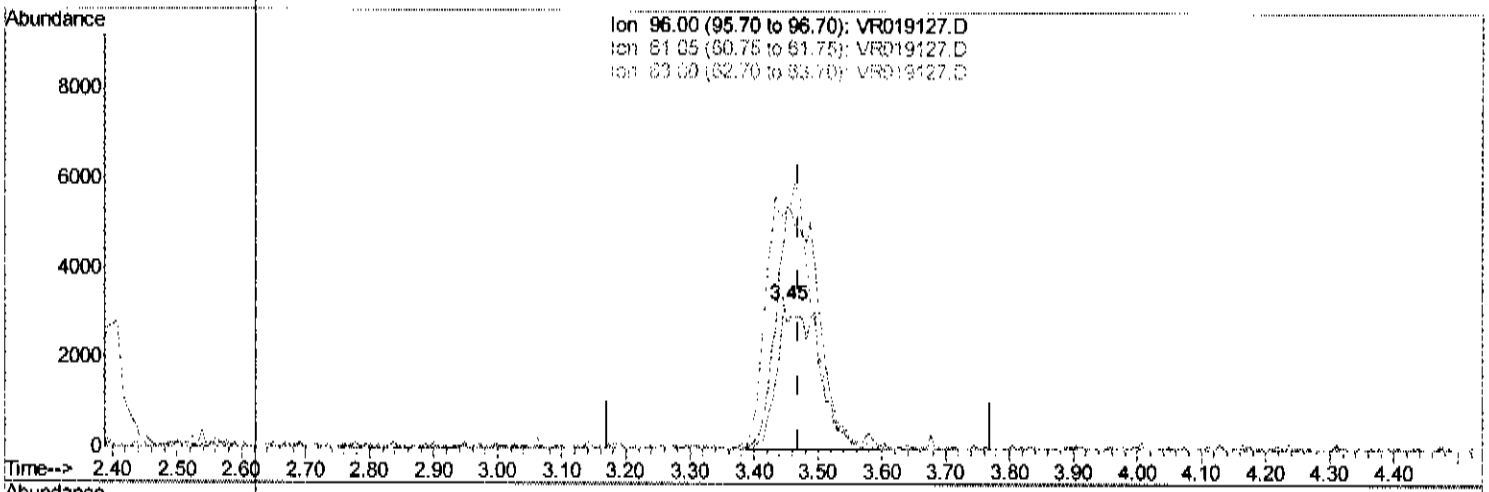
Quantitation Report (Qedit)

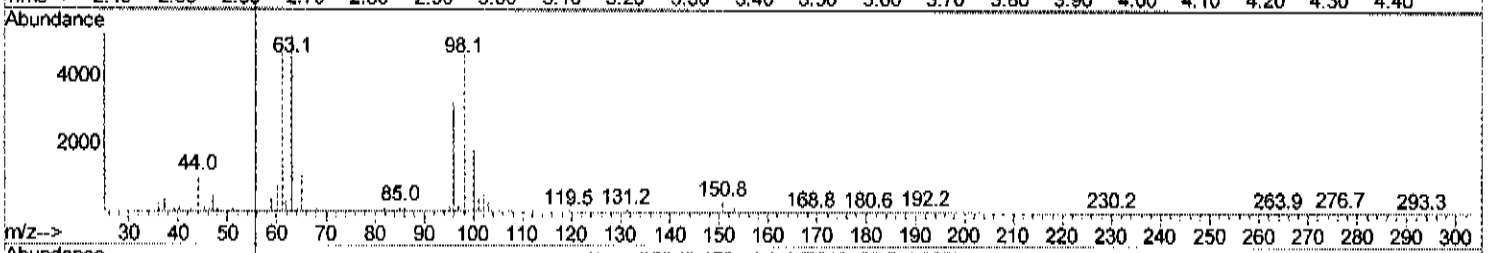
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

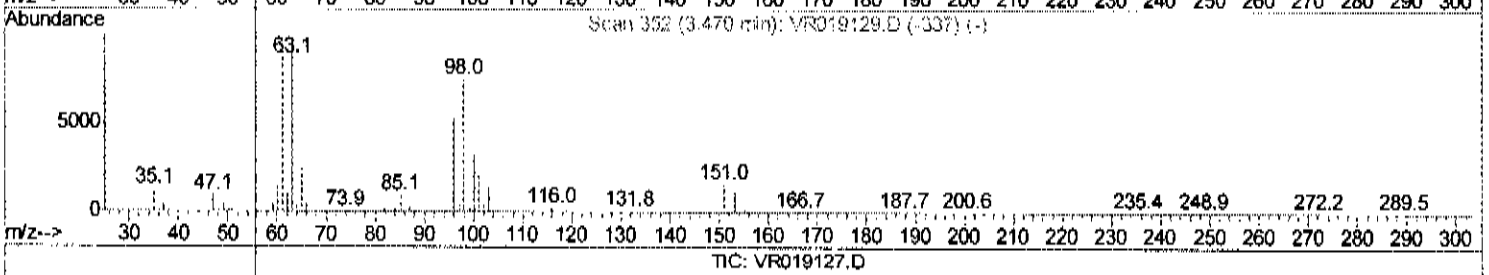
Quant Time: May 11 12:34:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM







TIC: VR019127.D

(12) 1,1-Dichloroethene (T)

3.446min (-0.024) 0.45ug/L m > 051116 89

response 14885

Ion	Exp%	Act%
96.00	100	100
61.05	177.10	145.34
63.00	190.70	161.98
0.00	0.00	0.00

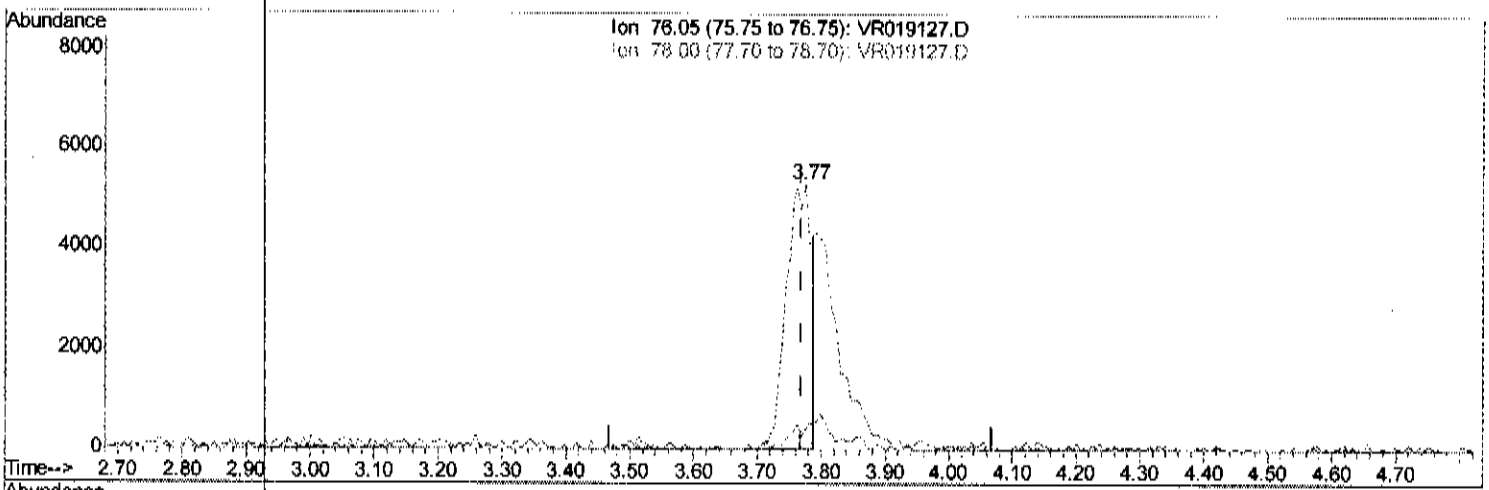
Quantitation Report (Qedit)

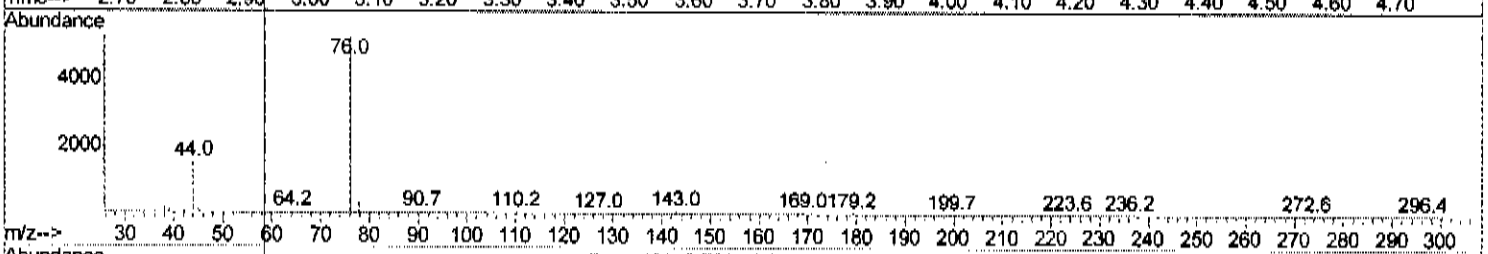
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:34:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

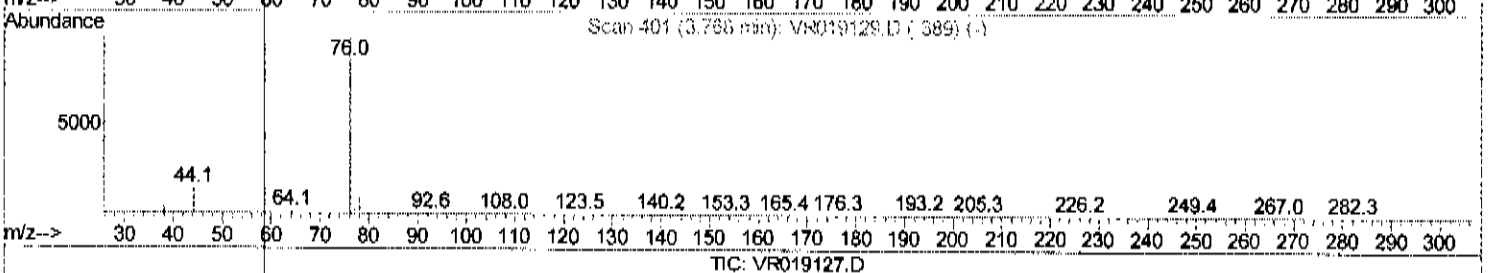
Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM





Scan 401 (3.786 min): VR019129.D (389) (-)



TIC: VR019127.D

(14) Carbon disulfide (T)

3.774min (+0.006) 0.16ug/L

response 14745

Ion	Exp%	Act%
76.05	100	100
78.00	9.70	8.02
0.00	0.00	0.00
0.00	0.00	0.00

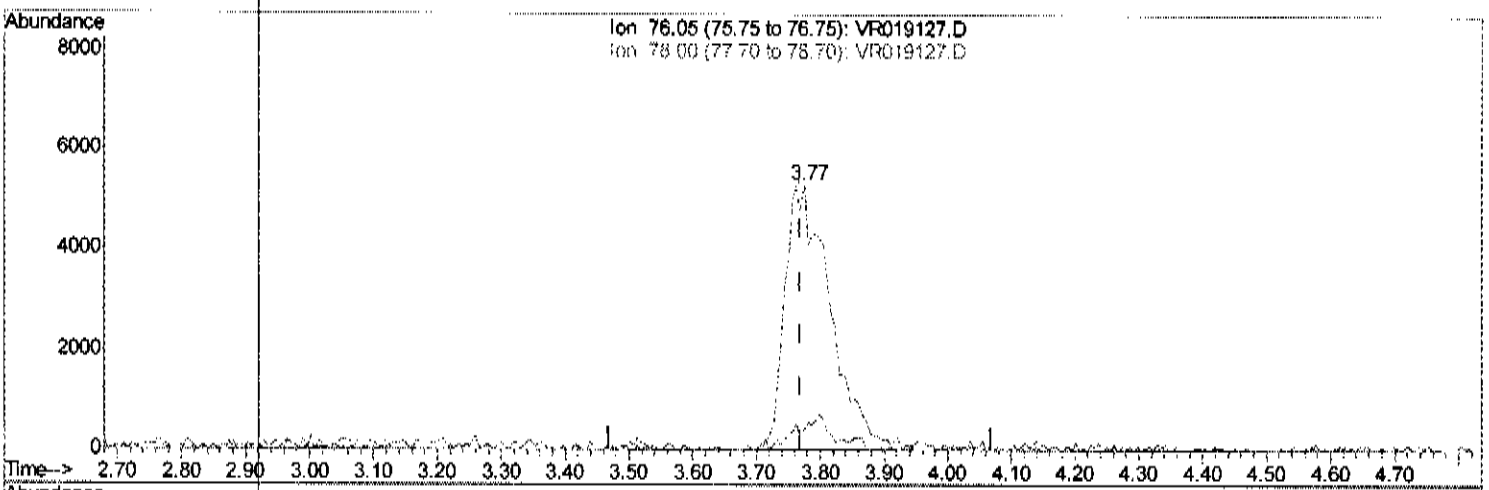
Quantitation Report (Qedit)

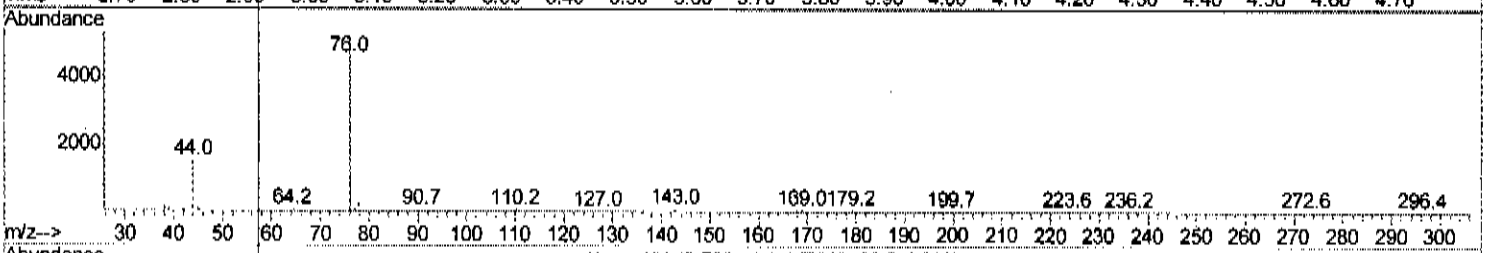
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

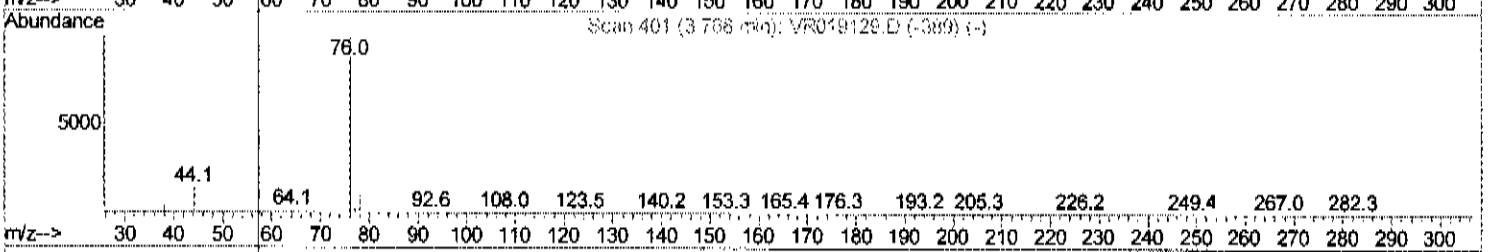
Quant Time: May 11 12:34:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Titlc : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM







Scan 401 (3.768 min): VR019128.D (-389) (-)

TIC: VR019127.D

(14) Carbon disulfide (T)

3.774min (+0.006) 0.30ug/L m > 05/11/16 SY

response 26515

Ion	Exp%	Act%
76.05	100	100
78.00	9.70	8.02
0.00	0.00	0.00
0.00	0.00	0.00

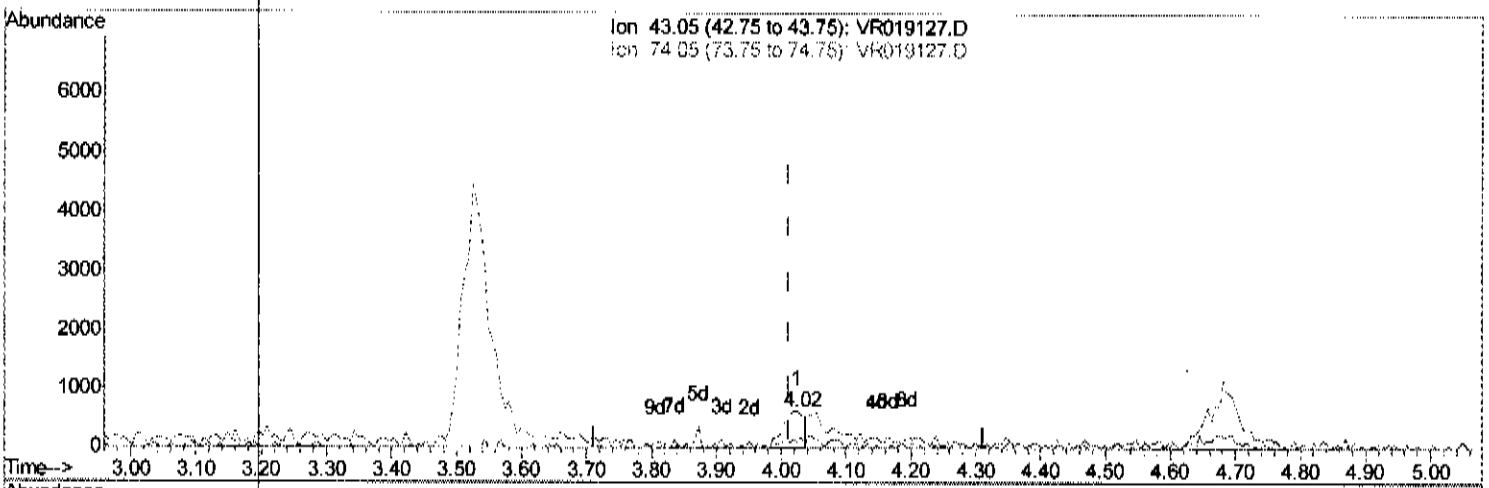
Quantitation Report (Qedit)

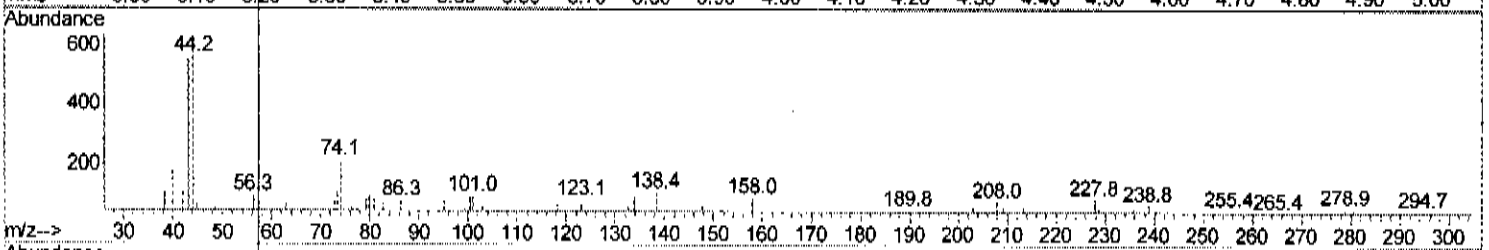
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

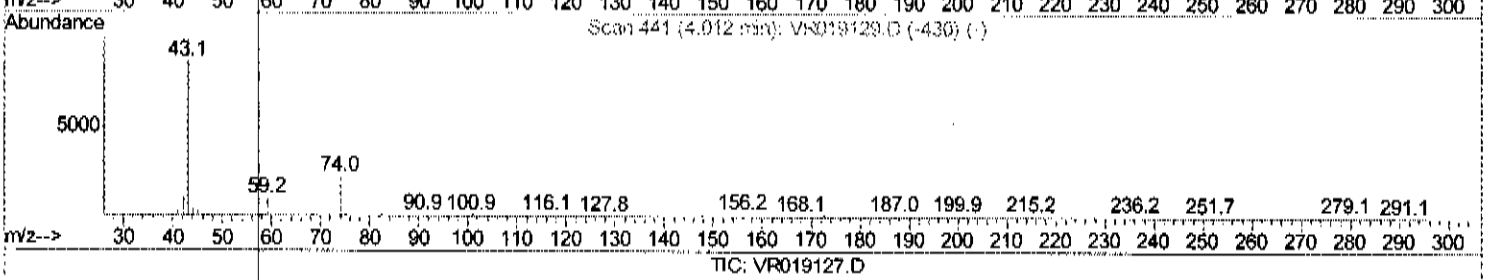
Quant Time: May 11 12:34:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM







(15) Methyl Acetate (T)

4.024min (+0.012) 0.19ug/L

response 1456

Ion	Exp%	Act%
43.05	100	100
74.05	23.70	19.30
0.00	0.00	0.00
0.00	0.00	0.00

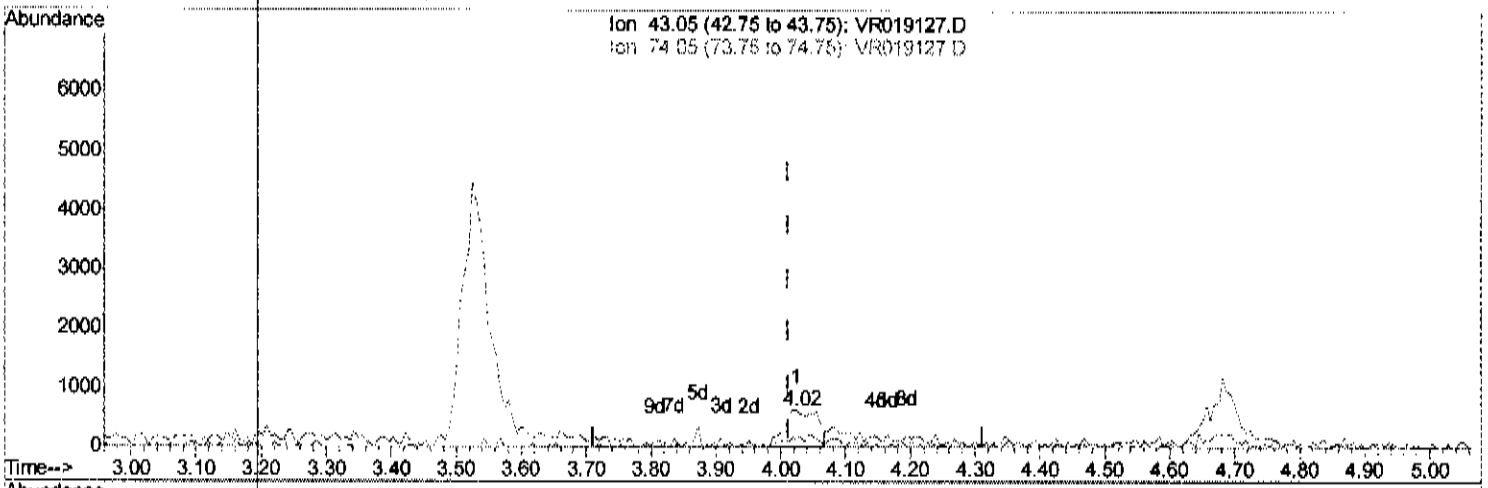
Quantitation Report (Qedit)

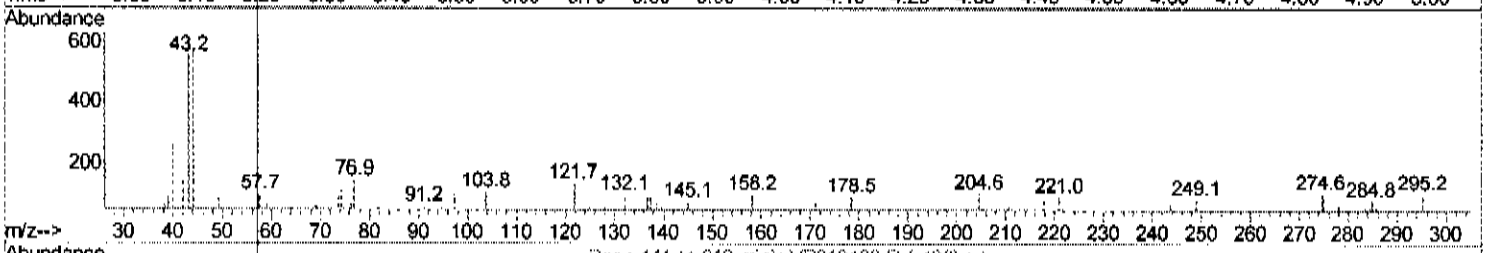
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

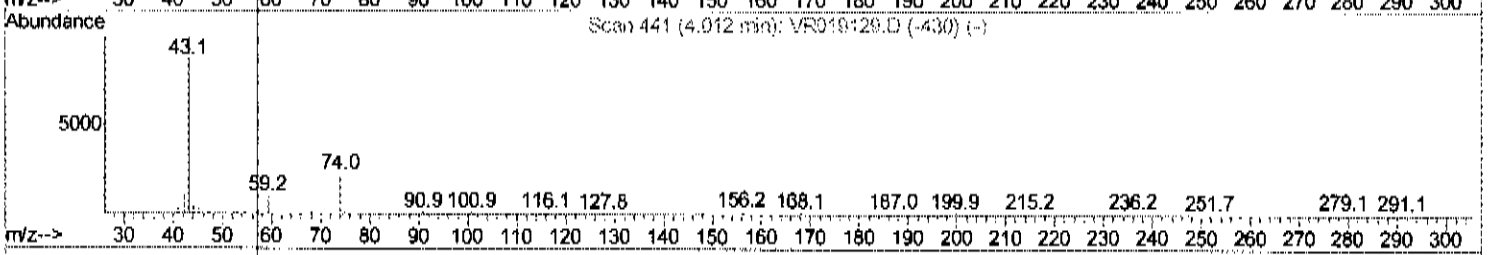
Quant Time: May 11 12:34:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM







TIC: VR019127.D

(15) Methyl Acetate (T)

4.024min (+0.012) 0.30ug/L m

response 2334

Ion	Exp%	Act%
43.05	100	100
74.05	23.70	12.04#
0.00	0.00	0.00
0.00	0.00	0.00

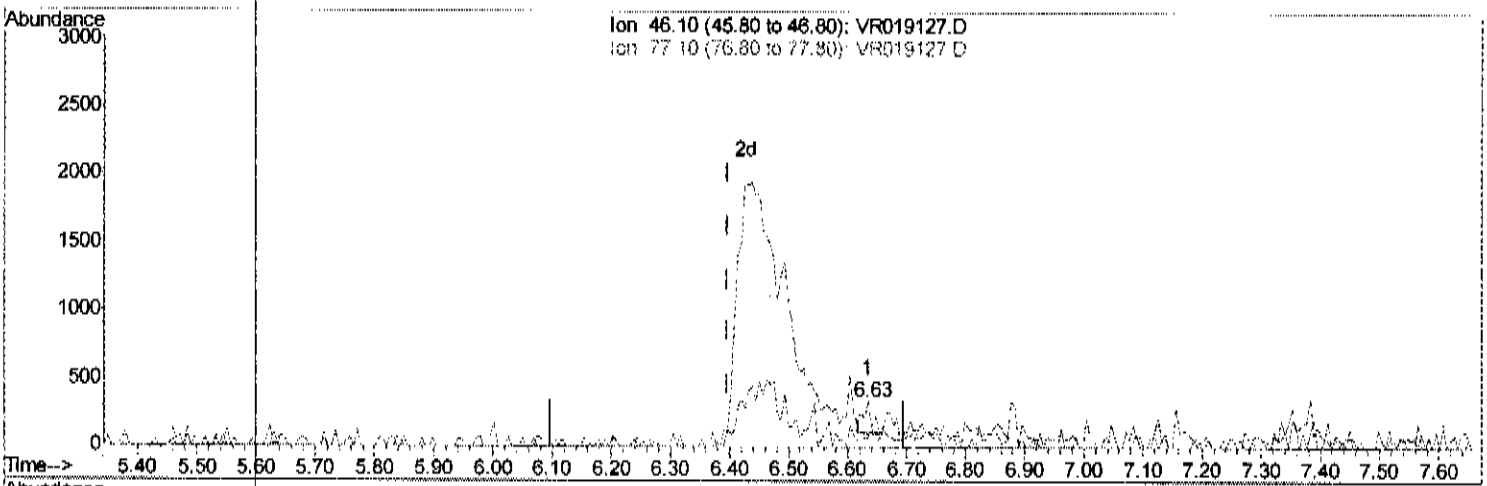
Quantitation Report (Qedit)

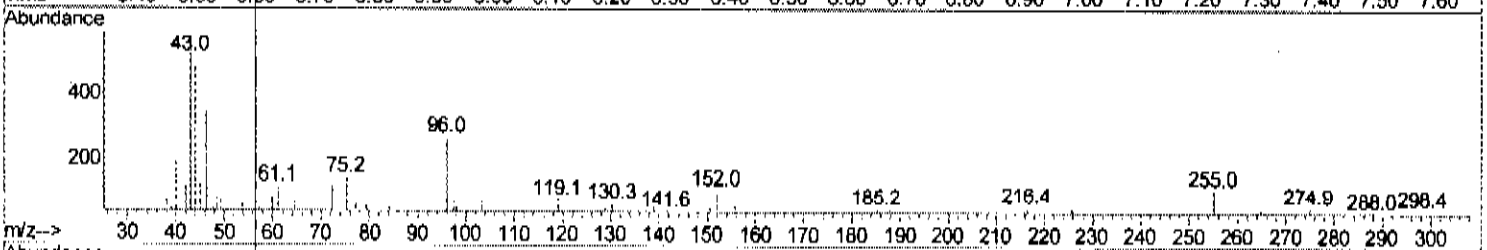
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:34:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

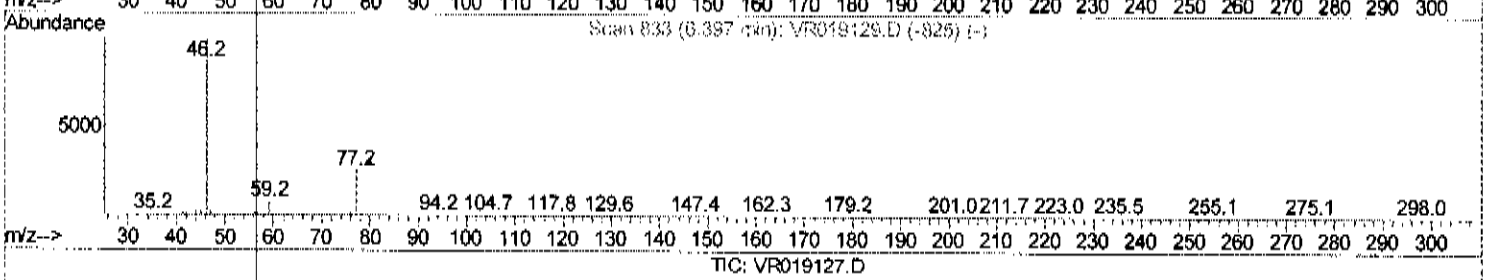
Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM





Scan 833 (6.387 min): VR019129.D (-825) (-)



TIC: VR019127.D

(20) 2-Butanone-d5 (S)

6.634min (+0.237) 0.05ug/L

response 249

Ion	Exp%	Act%
46.10	100	100
77.10	23.60	25.70
0.00	0.00	0.00
0.00	0.00	0.00

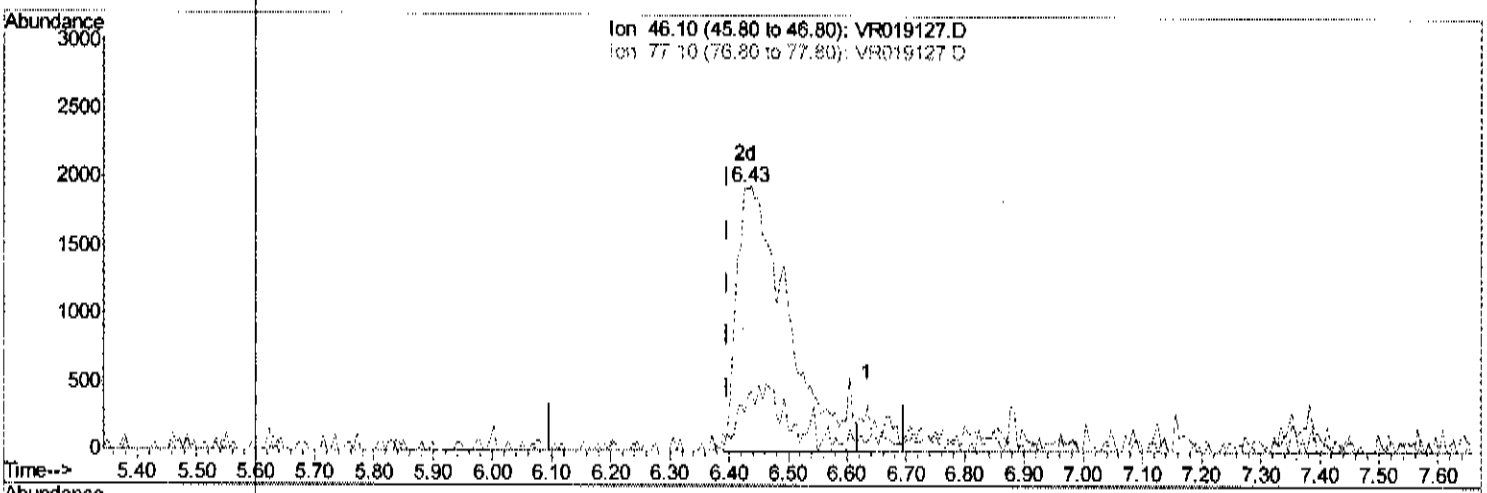
Quantitation Report (Qedit)

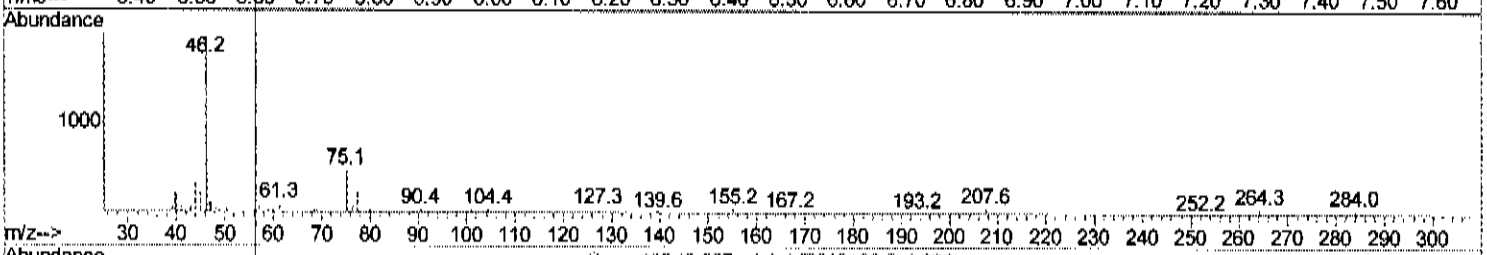
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

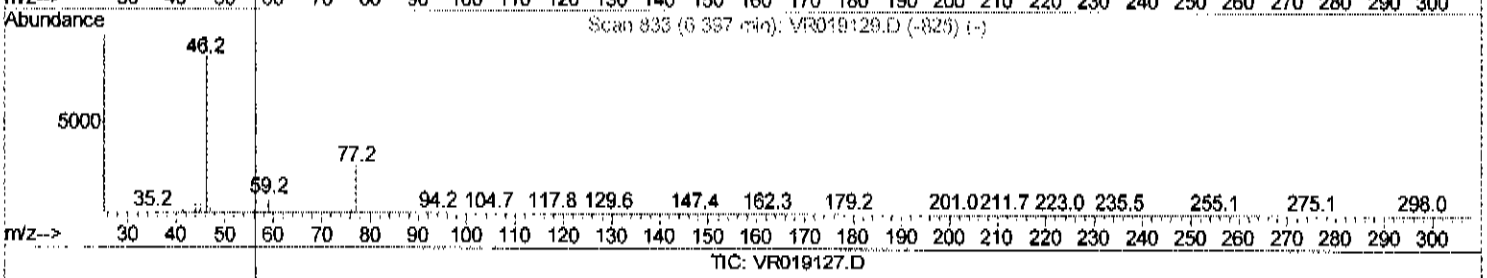
Quant Time: May 11 12:34:55 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM







Scan 833 (6.337 min): VR019129.D (-825) (-)

TIC: VR019127.D

(20) 2-Butanone-d5 (S)

6.427min (+0.030) 2.60ug/L m

response 11795

Ion	Exp%	Act%
46.10	100	100
77.10	23.60	0.54#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:42:27 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	548561	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	391257	5.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	136317	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.03	65	13015	0.18	ug/L		0.00
7) Chloroethane-d5	2.50	69	9905	0.18	ug/L		0.00
11) 1,1-Dichloroethene-d2	3.46	63	28645m	0.37	ug/L		0.00
20) 2-Butanone-d5	6.43	46	11795m	2.60	ug/L		0.03
24) Chloroform-d	7.04	84	29641	0.44	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	10949	0.39	ug/L		0.00
32) Benzene-d6	7.71	84	65257	0.44	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.78	67	16752	0.41	ug/L		0.00
41) Toluene-d8	9.86	98	57999	0.41	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	3586	0.34	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	8117	2.30	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	5612	0.44	ug/L		0.00
63) 1,2-Dichlorobenzene-d4	13.42	152	11829	0.50	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.73	85	11520	0.37	ug/L		94
3) Chloromethane	1.90	50	14915	0.20	ug/L		99
5) Vinyl chloride	2.05	62	13826	0.18	ug/L		94
6) Bromomethane	2.39	94	8234	0.21	ug/L		89
8) Chloroethane	2.53	64	8198	0.19	ug/L		94
9) Trichlorofluoromethane	2.79	101	17496m	0.25	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	14200	0.50	ug/L		95
12) 1,1-Dichloroethene	3.45	96	14885m	0.45	ug/L		
13) Acetone	3.53	43	13500	4.06	ug/L		94
14) Carbon disulfide	3.77	76	26515m	0.30	ug/L		
15) Methyl Acetate	4.02	43	2334m	0.30	ug/L		
16) Methylene chloride	4.21	84	14063	0.49	ug/L		90
17) Methyl tert-butyl Ether	4.68	73	17421	0.39	ug/L		99
18) trans-1,2-Dichloroethene	4.68	96	15273	0.43	ug/L		85
19) 1,1-Dichloroethane	5.48	63	29205	0.39	ug/L		96
21) 2-Butanone	6.53	43	10166	2.18	ug/L		93
22) cis-1,2-Dichloroethene	6.49	96	15277	0.43	ug/L	#	76
23) Bromochloromethane	6.88	128	5152	0.55	ug/L		85
25) Chloroform	7.07	83	27793	0.45	ug/L		92
27) 1,2-Dichloroethane	7.86	62	12894	0.43	ug/L	#	93
29) 1,1,1-Trichloroethane	7.27	97	19715	0.45	ug/L		99
30) Cyclohexane	7.38	56	22031	0.35	ug/L		95
31) Carbon tetrachloride	7.50	117	17430	0.46	ug/L		94
33) Benzene	7.77	78	67237	0.44	ug/L		100
34) Trichloroethene	8.59	95	16914	0.46	ug/L		93
35) Methylcyclohexane	8.84	83	23843	0.43	ug/L		96
37) 1,2-Dichloropropane	8.87	63	14764	0.41	ug/L	#	91
38) Bromodichloromethane	9.16	83	12724	0.41	ug/L		90
39) cis-1,3-Dichloropropene	9.61	75	12898	0.31	ug/L		97
40) 4-Methyl-2-pentanone	9.75	43	37620	3.12	ug/L		94

05/11/16 SG

05/11/16 JG

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019127.D
Acq On : 11 May 2016 10:57
Operator : MD\SY
Sample : VSTD0.551
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:42:27 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD0.551

Manual Integrations APPROVED
sam
5/12/2016 10:08:41 AM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.92	91	70005	0.44	ug/L		92
44) trans-1,3-Dichloropropene	10.16	75	6981	0.25	ug/L		98
45) 1,1,2-Trichloroethane	10.34	97	6811	0.49	ug/L		94
47) Tetrachloroethene	10.41	164	14597	0.60	ug/L		85
48) 2-Hexanone	10.53	43	24063	3.06	ug/L		92
49) Dibromochloromethane	10.68	129	5813	0.44	ug/L		92
50) 1,2-Dibromoethane	10.79	107	5303	0.48	ug/L	#	98
51) Chlorobenzene	11.21	112	41126	0.51	ug/L		96
52) Ethylbenzene	11.29	91	74141	0.44	ug/L		99
53) m,p-Xylene	11.40	106	25710	0.42	ug/L		92
54) o-Xylene	11.73	106	22535	0.41	ug/L		90
55) Styrene	11.75	104	31223	0.37	ug/L		99
56) Isopropylbenzene	12.04	105	59533	0.42	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	5144	0.43	ug/L		85
60) Bromoform	11.91	173	1958	0.42	ug/L	#	86
61) 1,3-Dichlorobenzene	13.07	146	21317	0.48	ug/L		97
62) 1,4-Dichlorobenzene	13.15	146	24178	0.54	ug/L		97
64) 1,2-Dichlorobenzene	13.44	146	18211	0.52	ug/L		98
65) 1,2-Dibromo-3-chloropropan	14.06	75	481	0.39	ug/L	#	84
66) 1,2,4-trichlorobenzene	14.70	180	10686	0.56	ug/L		98
67) 1,2,3-Trichlorobenzene	15.08	180	7953	0.56	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

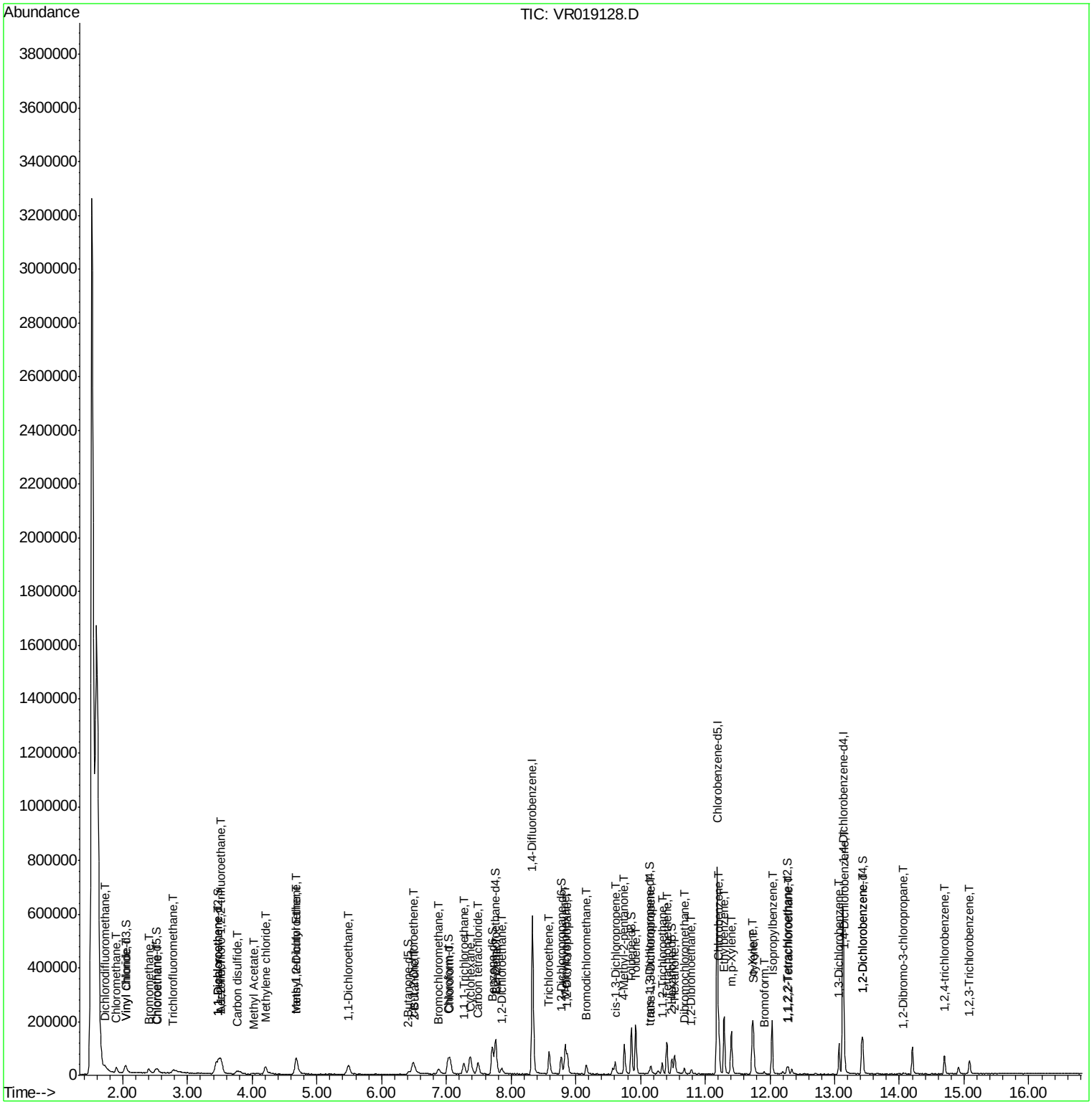
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019128.D
Acq On : 11 May 2016 11:29
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 11 12:37:39 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
sam
5/12/2016 10:08:47 AM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019128.D
Acq On : 11 May 2016 11:29
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
sam
5/12/2016 10:08:47 AM

Quant Time: May 11 12:37:39 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	498109	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	380182	5.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	149513	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.04	65	26096	0.39	ug/L		0.00
7) Chloroethane-d5	2.51	69	16694	0.34	ug/L		0.01
11) 1,1-Dichloroethene-d2	3.46	63	54642m	0.77	ug/L		0.00
20) 2-Butanone-d5	6.42	46	23538	5.70	ug/L		0.02
24) Chloroform-d	7.03	84	55114	0.89	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	20724	0.81	ug/L		0.00
32) Benzene-d6	7.71	84	122366	0.85	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.78	67	30202	0.75	ug/L		0.00
41) Toluene-d8	9.86	98	111443	0.82	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	6611	0.65	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	18968	5.53	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	11268	0.91	ug/L		0.00
63) 1,2-Dichlorobenzene-d4	13.42	152	24764	0.95	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.73	85	24543	0.86	ug/L		93
3) Chloromethane	1.90	50	27444	0.41	ug/L		94
5) Vinyl chloride	2.05	62	25998	0.37	ug/L		97
6) Bromomethane	2.40	94	14495	0.41	ug/L		93
8) Chloroethane	2.54	64	15013	0.38	ug/L		92
9) Trichlorofluoromethane	2.78	101	32628m	0.52	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	26993	1.06	ug/L		98
12) 1,1-Dichloroethene	3.46	96	26833m	0.90	ug/L		
13) Acetone	3.52	43	22288	7.38	ug/L		93
14) Carbon disulfide	3.76	76	47090m	0.58	ug/L		
15) Methyl Acetate	4.02	43	3536	0.51	ug/L	#	89
16) Methylene chloride	4.20	84	24736	0.94	ug/L		97
17) Methyl tert-butyl Ether	4.68	73	31765	0.78	ug/L		96
18) trans-1,2-Dichloroethene	4.67	96	27353	0.85	ug/L		96
19) 1,1-Dichloroethane	5.49	63	53368	0.79	ug/L		99
21) 2-Butanone	6.51	43	26157	6.18	ug/L		97
22) cis-1,2-Dichloroethene	6.48	96	26486	0.83	ug/L	#	94
23) Bromochloromethane	6.88	128	9088	1.08	ug/L		89
25) Chloroform	7.06	83	51178	0.91	ug/L		100
27) 1,2-Dichloroethane	7.86	62	21566	0.80	ug/L	#	91
29) 1,1,1-Trichloroethane	7.27	97	37659	0.89	ug/L		98
30) Cyclohexane	7.37	56	43440	0.70	ug/L		99
31) Carbon tetrachloride	7.49	117	33402	0.90	ug/L		96
33) Benzene	7.77	78	121967	0.81	ug/L		100
34) Trichloroethene	8.59	95	29826	0.84	ug/L		94
35) Methylcyclohexane	8.84	83	44231	0.82	ug/L		96
37) 1,2-Dichloropropane	8.87	63	25497	0.74	ug/L	#	96
38) Bromodichloromethane	9.16	83	22652	0.75	ug/L		98
39) cis-1,3-Dichloropropene	9.61	75	25219	0.62	ug/L		98
40) 4-Methyl-2-pentanone	9.75	43	73886	6.31	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019128.D
Acq On : 11 May 2016 11:29
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00152

Manual Integrations APPROVED
sam
5/12/2016 10:08:47 AM

Quant Time: May 11 12:37:39 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.92	91	127190	0.82	ug/L		97
44) trans-1,3-Dichloropropene	10.16	75	16241	0.61	ug/L		100
45) 1,1,2-Trichloroethane	10.33	97	12991	0.97	ug/L		89
47) Tetrachloroethene	10.41	164	24692	1.04	ug/L		93
48) 2-Hexanone	10.53	43	50014	6.55	ug/L	#	90
49) Dibromochloromethane	10.68	129	10998	0.86	ug/L		96
50) 1,2-Dibromoethane	10.79	107	11220	1.04	ug/L	#	81
51) Chlorobenzene	11.21	112	75522	0.97	ug/L		96
52) Ethylbenzene	11.29	91	139963	0.85	ug/L		94
53) m,p-Xylene	11.40	106	51497	0.87	ug/L		87
54) o-Xylene	11.73	106	44388	0.83	ug/L		96
55) Styrene	11.75	104	66651	0.81	ug/L		94
56) Isopropylbenzene	12.04	105	119558	0.87	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.29	83	10810	0.93	ug/L	#	87
60) Bromoform	11.91	173	3486	0.69	ug/L		96
61) 1,3-Dichlorobenzene	13.07	146	44743	0.92	ug/L		96
62) 1,4-Dichlorobenzene	13.15	146	46456	0.94	ug/L		98
64) 1,2-Dichlorobenzene	13.44	146	36196	0.94	ug/L		96
65) 1,2-Dibromo-3-chloropropan	14.06	75	615	0.45	ug/L	#	26
66) 1,2,4-trichlorobenzene	14.70	180	21463	1.02	ug/L		99
67) 1,2,3-Trichlorobenzene	15.08	180	15502	0.99	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019128.D
Acq On : 11 May 2016 11:29
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 11 12:37:39 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
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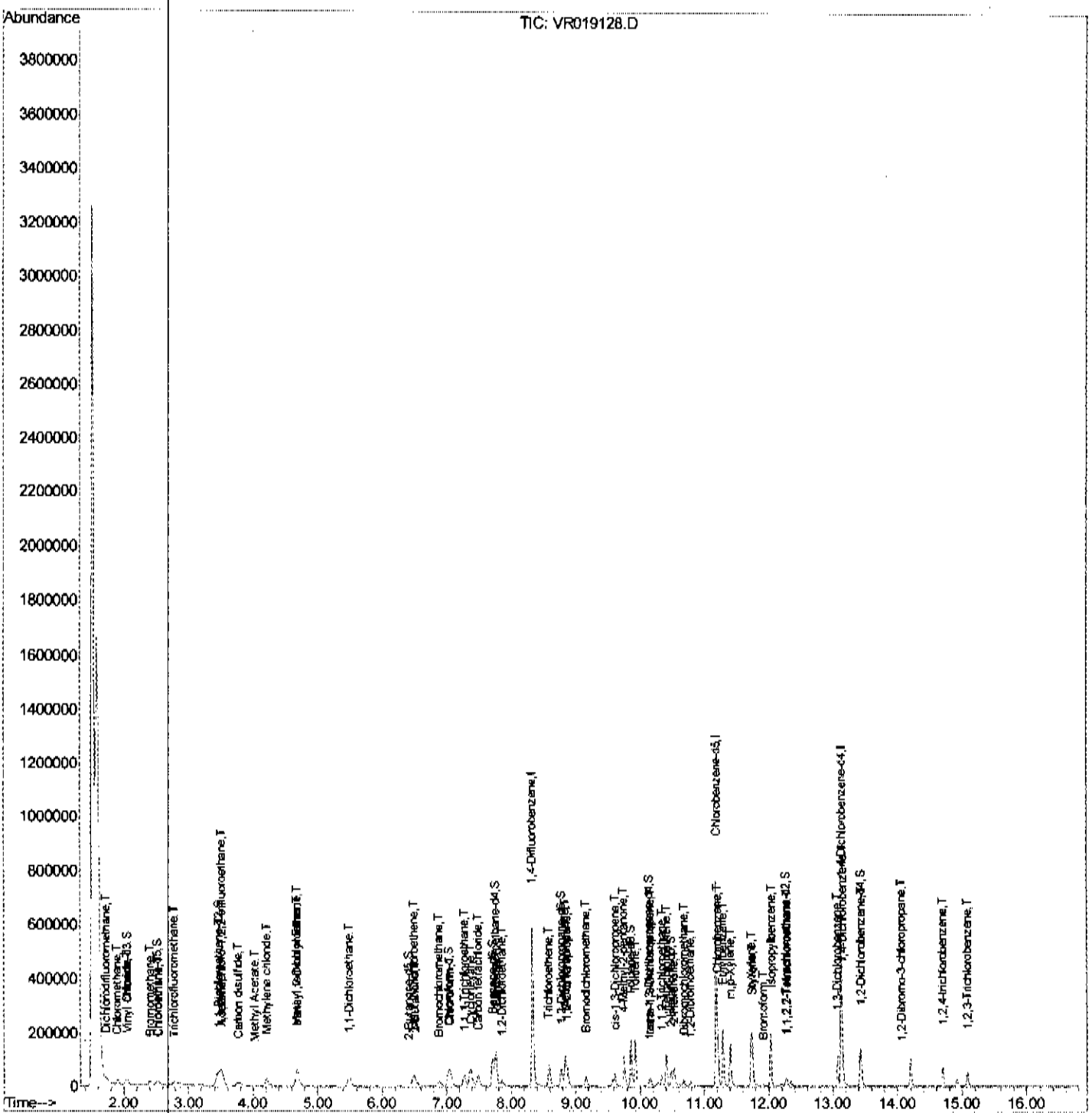


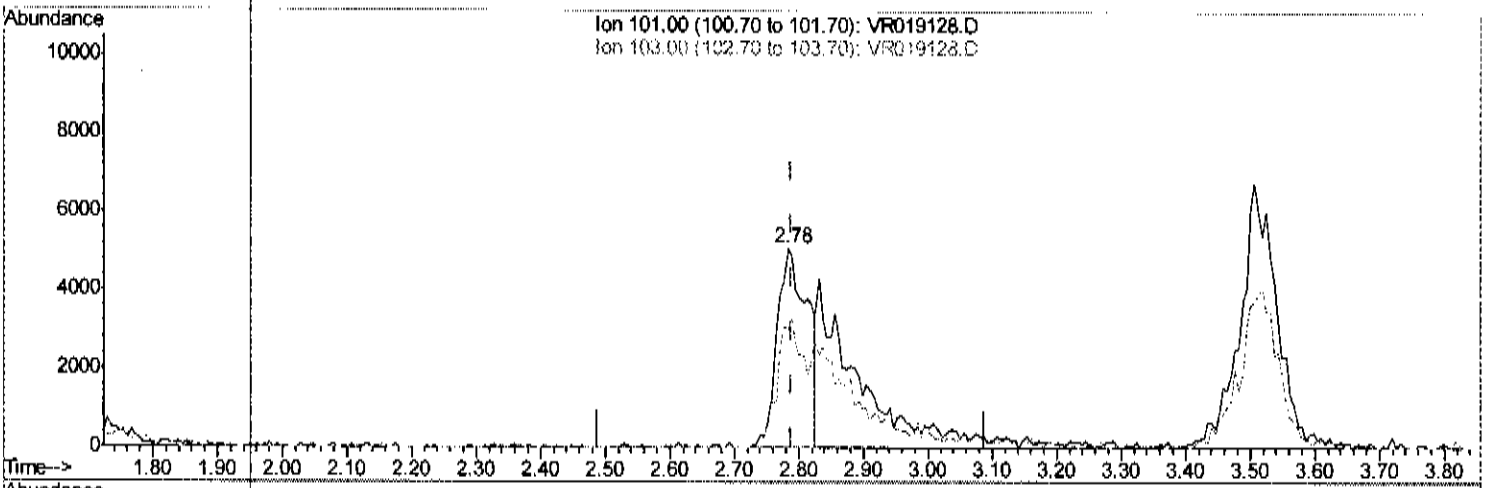
Quantitation Report (Qedit)

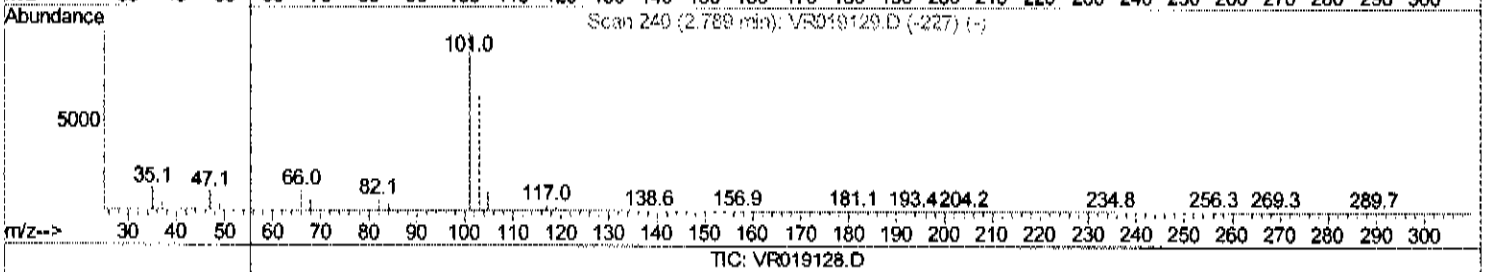
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019128.D
Acq On : 11 May 2016 11:29
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 11 12:35:44 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
sam
5/12/2016 10:08:47 AM





TIC: VR019128.D

(9) Trichlorofluoromethane (T)

2.783min (-0.006) 0.27ug/L

response 16774

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	53.58#
0.00	0.00	0.00
0.00	0.00	0.00

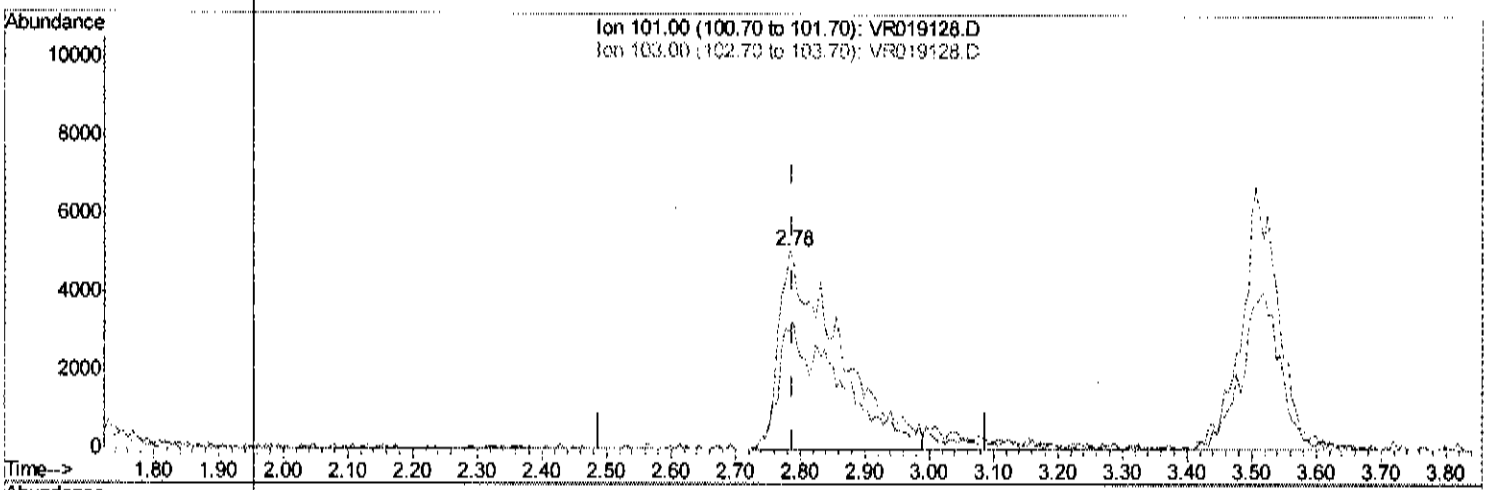
Quantitation Report (Qedit)

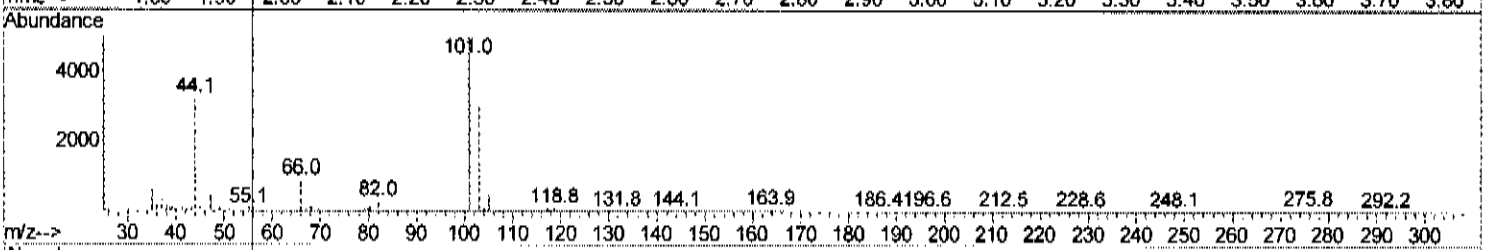
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019128.D
Acq On : 11 May 2016 11:29
Operator : MC\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

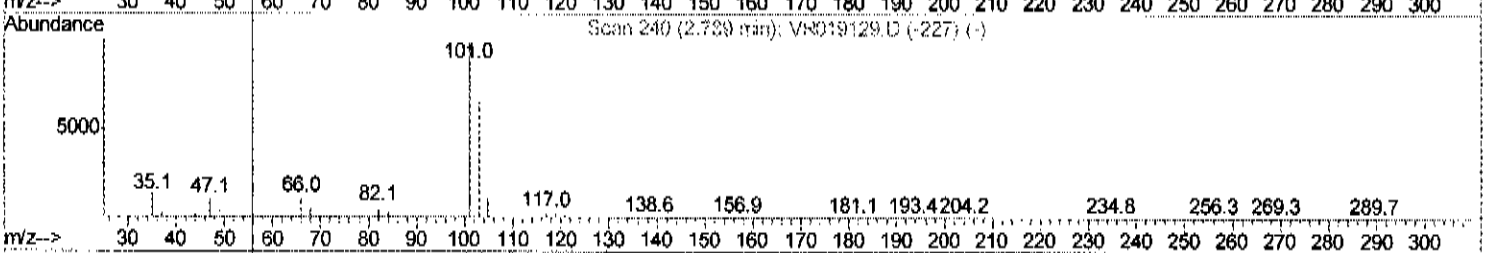
Quant Time: May 11 12:35:44 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
sam
5/12/2016 10:08:47 AM







TIC: VR019128.D

(9) Trichlorofluoromethane (T)

2.783min (-0.006) 0.52ug/L m > 05/11/16 EY

response 32628

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	27.55
0.00	0.00	0.00
0.00	0.00	0.00

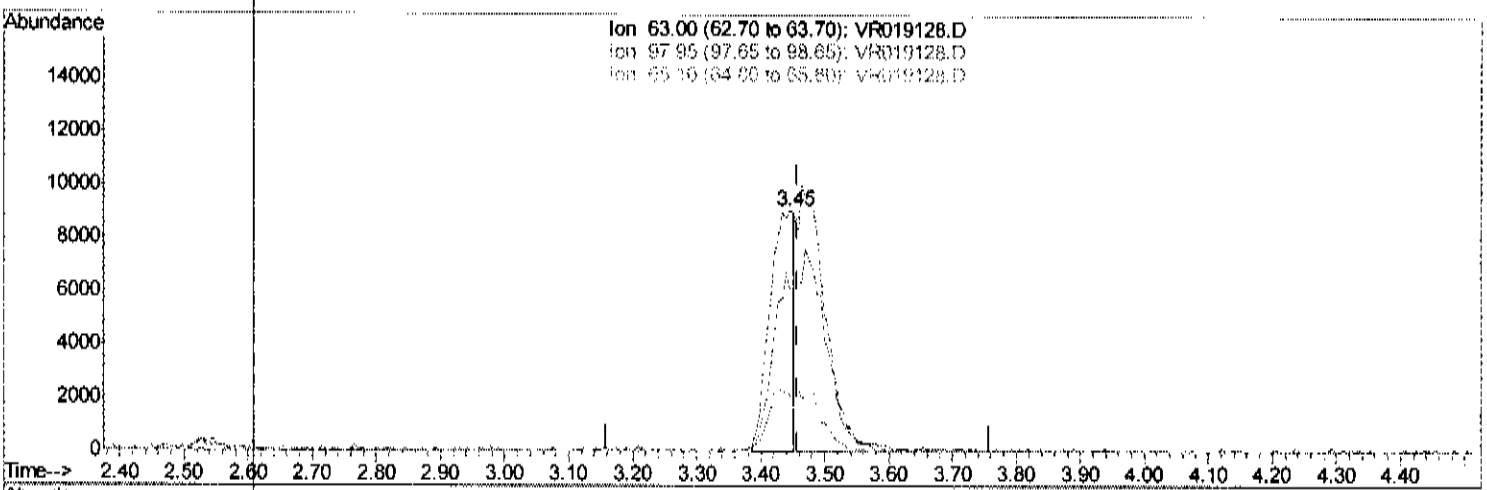
Quantitation Report (Qedit)

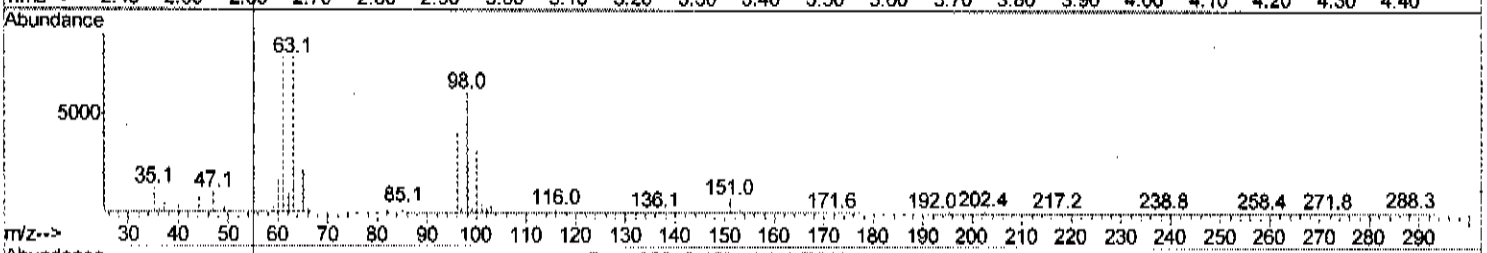
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019128.D
Acq On : 11 May 2016 11:29
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 11 12:35:44 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

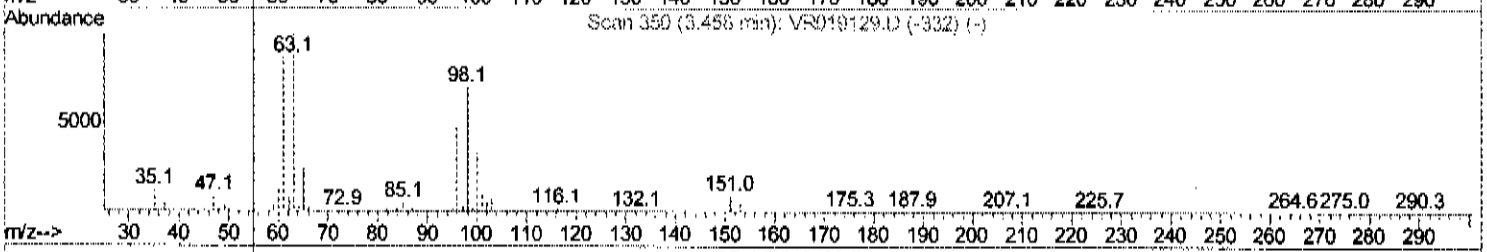
Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
sam
5/12/2016 10:08:47 AM





Scan 350 (3.458 min): VR019129.D (-332) (-)



TIC: VR019128.D

(11) 1,1-Dichloroethene-d2 (S)

3.446min (-0.012) 0.34ug/L

response 24243

Ion	Exp%	Act%
63.00	100	100
97.95	72.60	163.35#
65.10	23.80	25.68
0.00	0.00	0.00

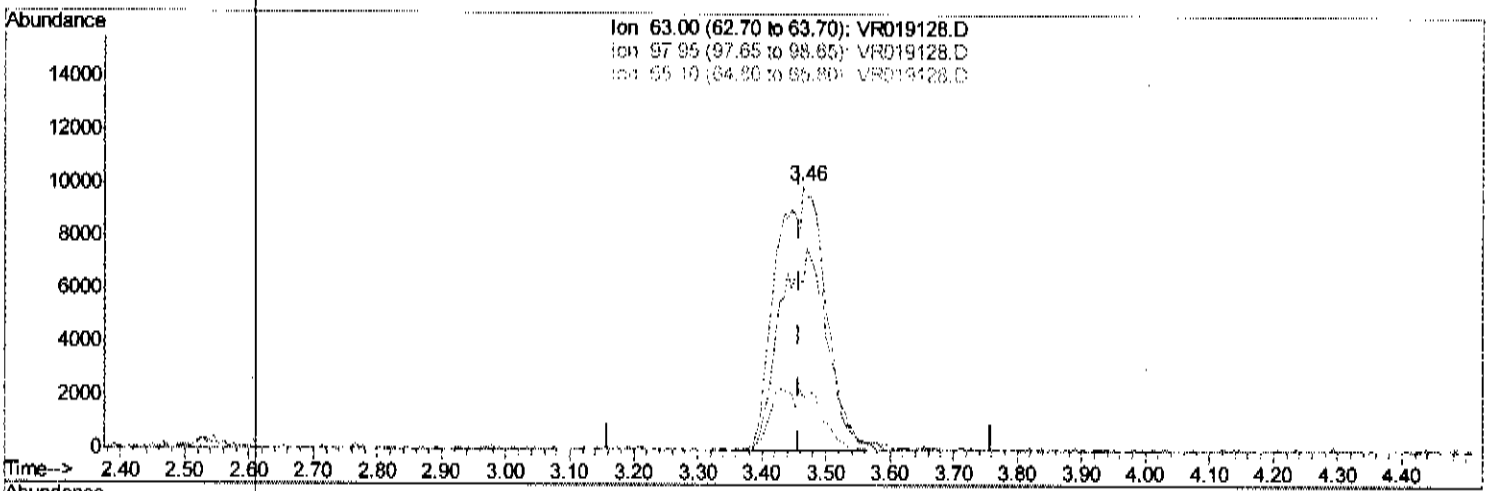
Quantitation Report (Qedit)

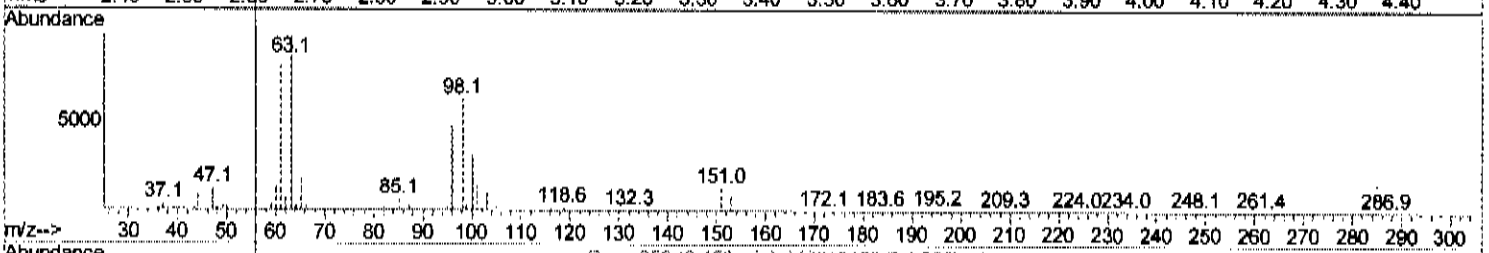
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019128.D
Acq On : 11 May 2016 11:29
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 11 12:35:44 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

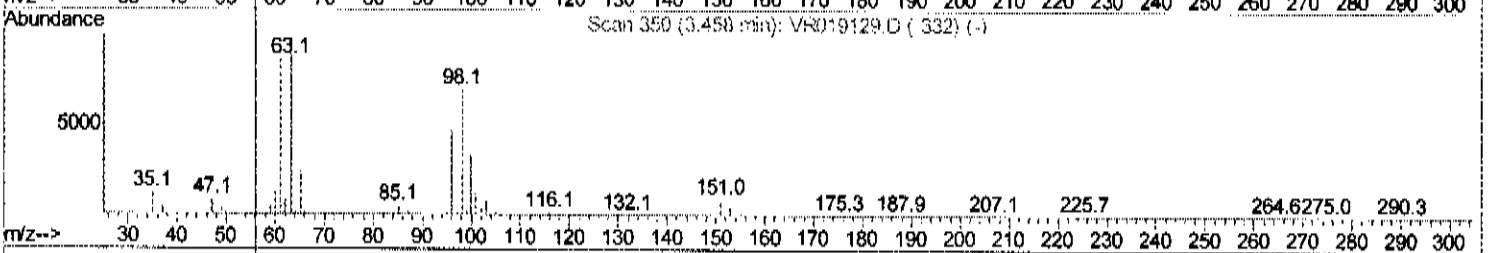
Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
sam
5/12/2016 10:08:47 AM





Scan 350 (3.458 min): VR019129.D (332) (-)



TIC: VR019128.D

(11) 1,1-Dichloroethene-d2 (S)

3.464min (+0.006) 0.77ug/L m > 05/11/16 SY

response 54642

Ion	Exp%	Act%
63.00	100	100
97.95	72.60	72.47
65.10	23.80	11.39#
0.00	0.00	0.00

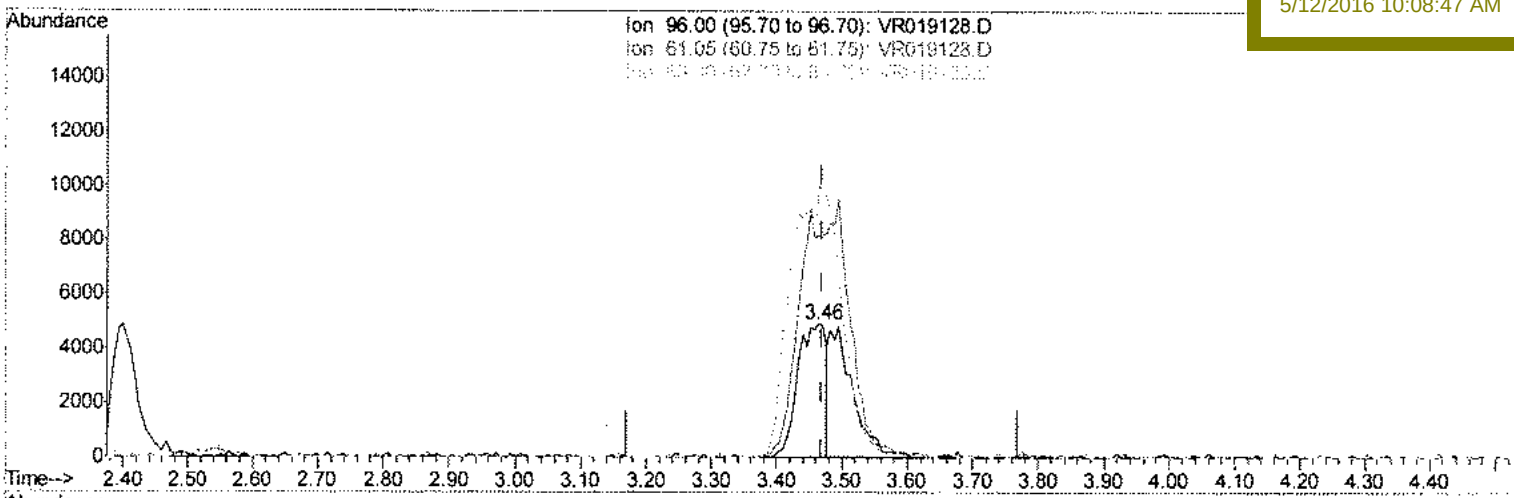
Quantitation Report (Qedit)

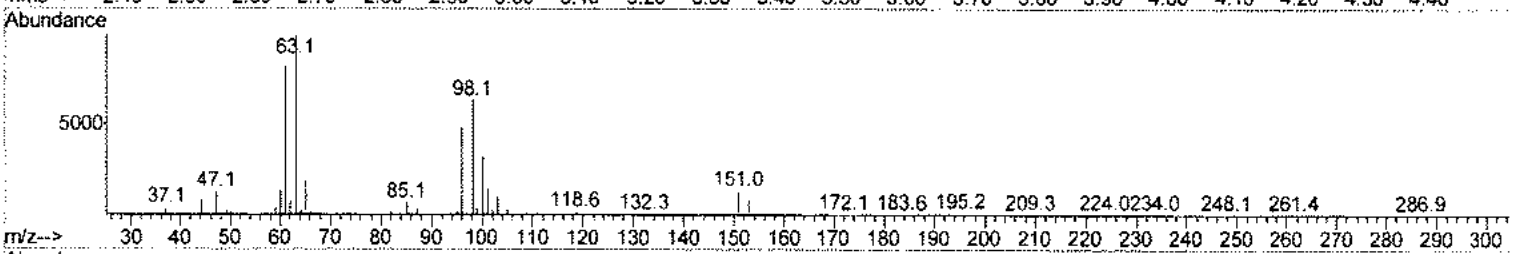
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019128.D
Acq On : 11 May 2016 11:29
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

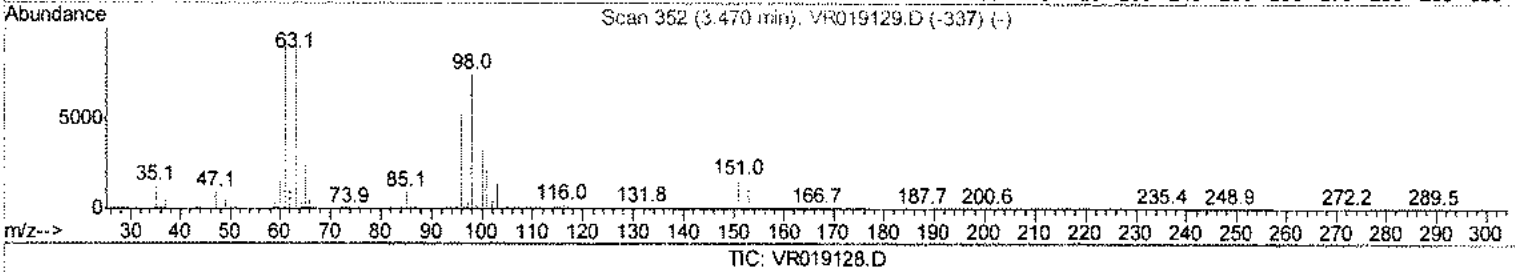
Quant Time: May 11 12:35:44 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
sam
5/12/2016 10:08:47 AM







TIC: VR019128.D

(12) 1,1-Dichloroethene (T)

3.464min (-0.006) 0.50ug/L

response 14760

Ion	Exp%	Act%
96.00	100	100
61.05	177.10	167.65
63.00	190.70	204.31
0.00	0.00	0.00

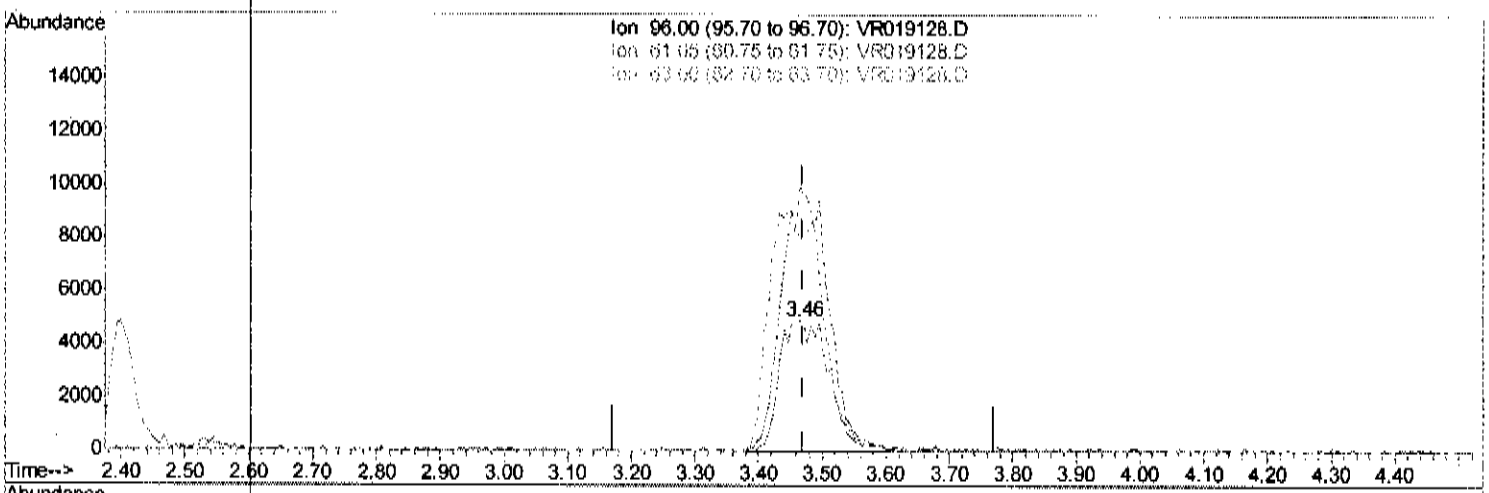
Quantitation Report (Qedit)

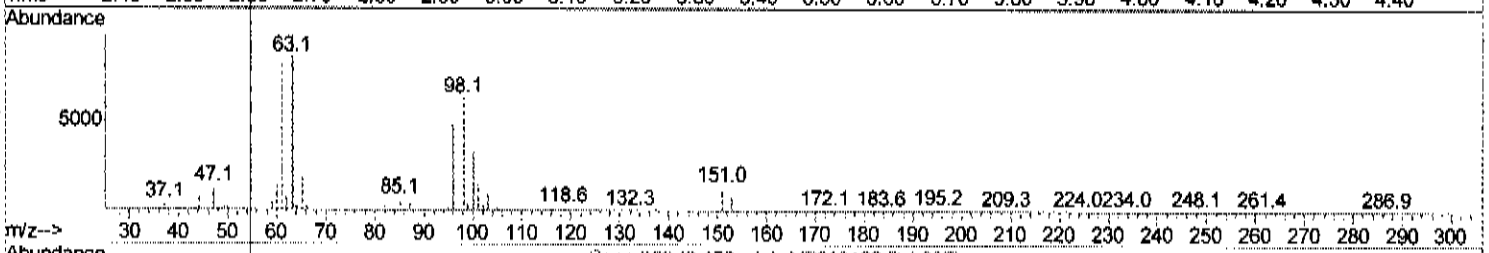
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019128.D
Acq On : 11 May 2016 11:29
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 11 12:35:44 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

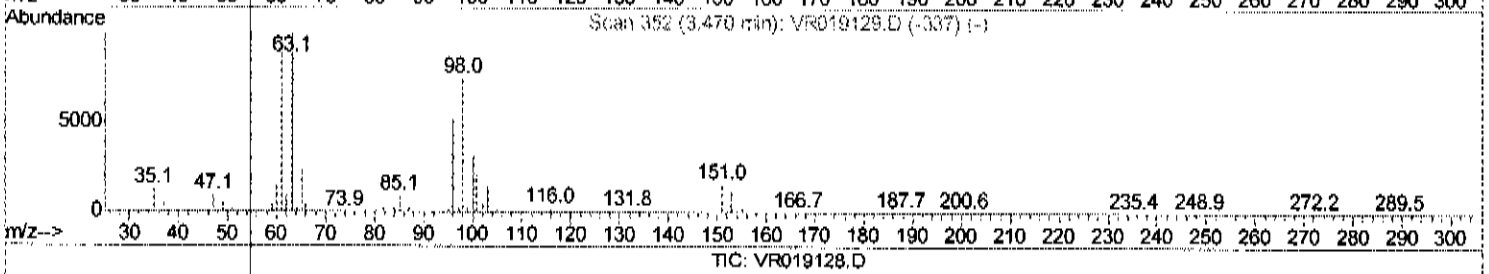
Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
sam
5/12/2016 10:08:47 AM





Scan 352 (3.470 min): VR019128.D (-337) (-)



TIC: VR019128.D

(12) 1,1-Dichloroethene (T)

3.464min (-0.006) 0.90ug/L m 05/11/16 SY

response 26833

Ion	Exp%	Act%
96.00	100	100
61.05	177.10	167.65
63.00	190.70	204.31
0.00	0.00	0.00

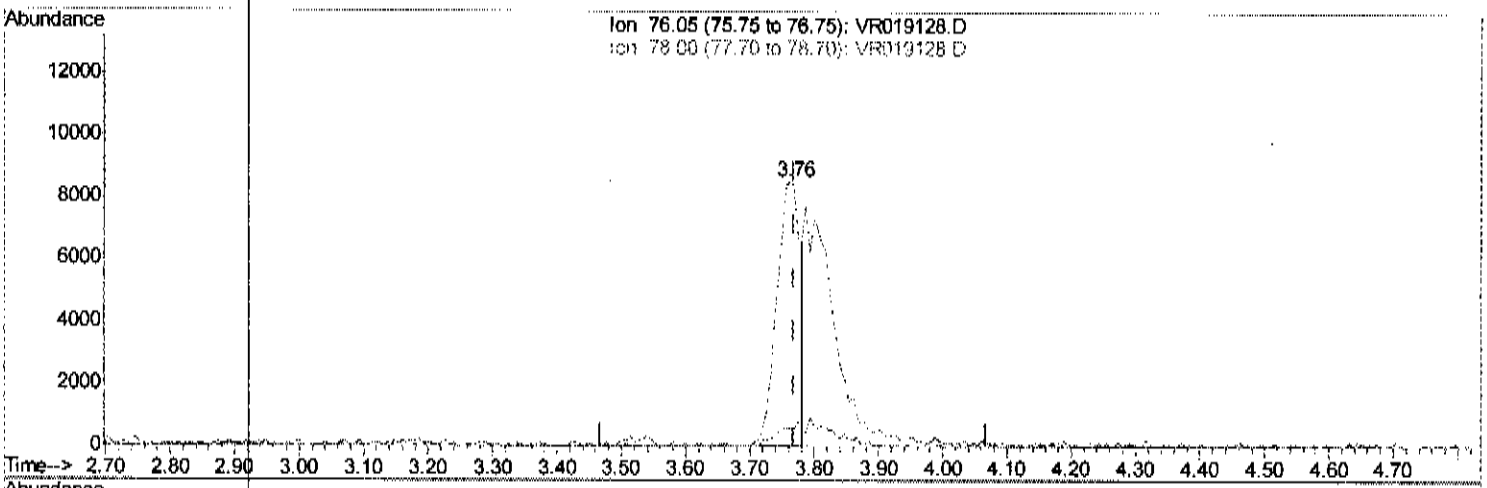
Quantitation Report (Qedit)

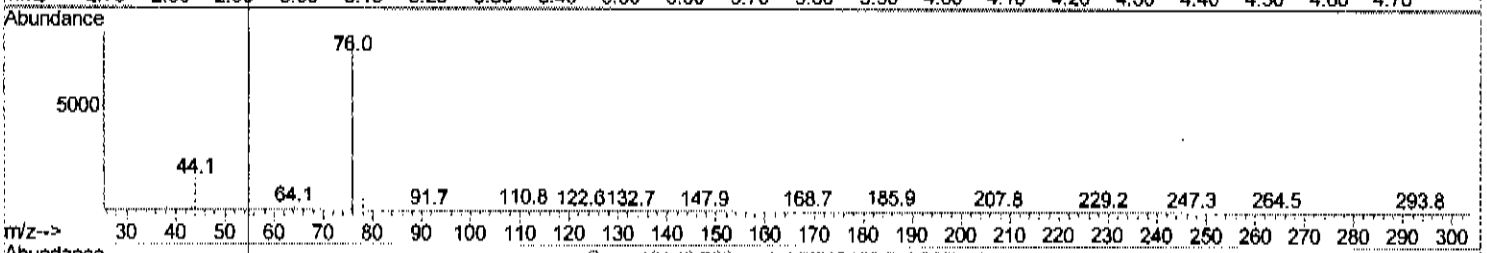
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019128.D
Acq On : 11 May 2016 11:29
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 11 12:35:44 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

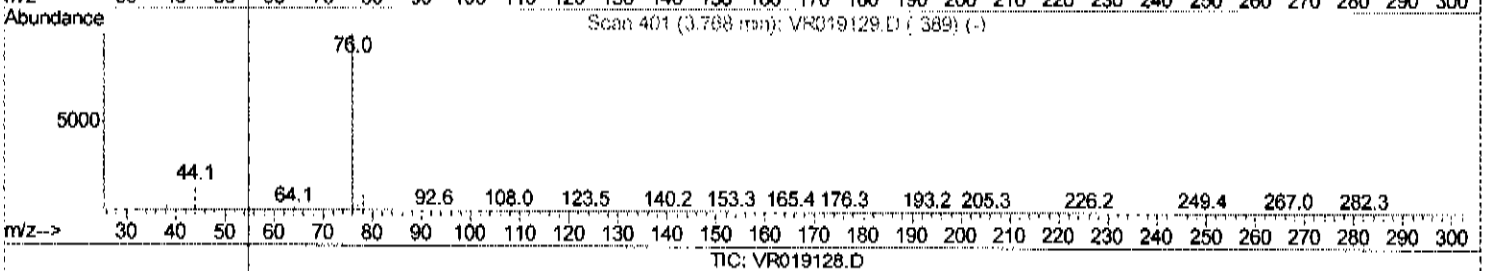
Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
sam
5/12/2016 10:08:47 AM





Scan 401 (3.768 min): VR019129.D (389) (-)



TIC: VR019128.D

(14) Carbon disulfide (T)

3.762min (-0.006) 0.27ug/L

response 21850

Ion	Exp%	Act%
76.05	100	100
78.00	9.70	6.95#
0.00	0.00	0.00
0.00	0.00	0.00

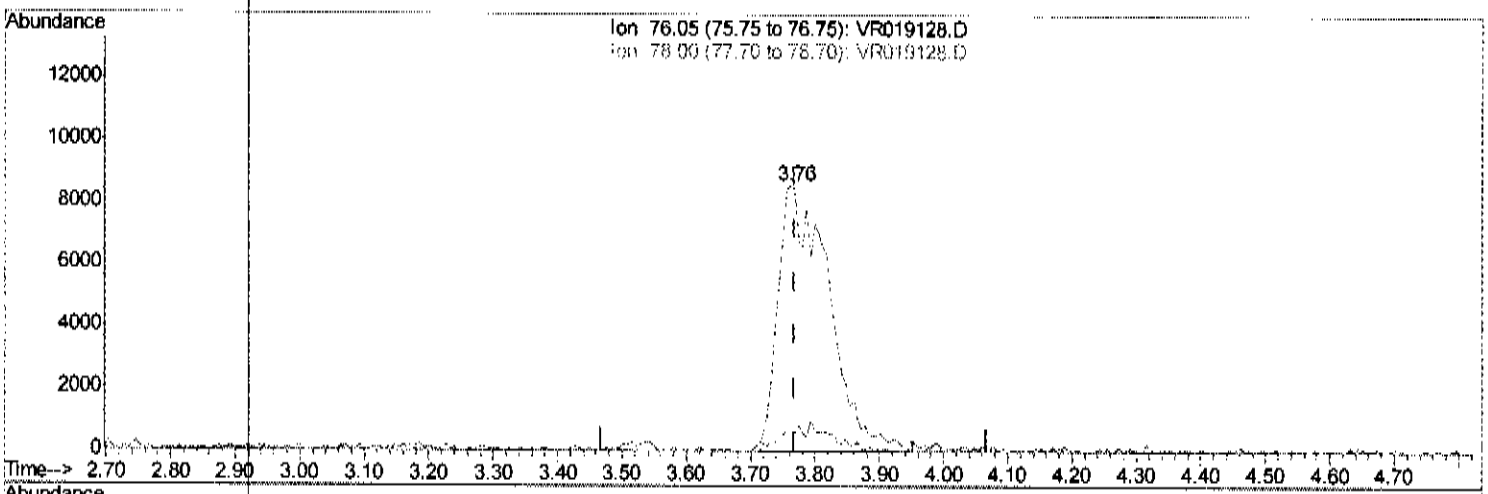
Quantitation Report (Qedit)

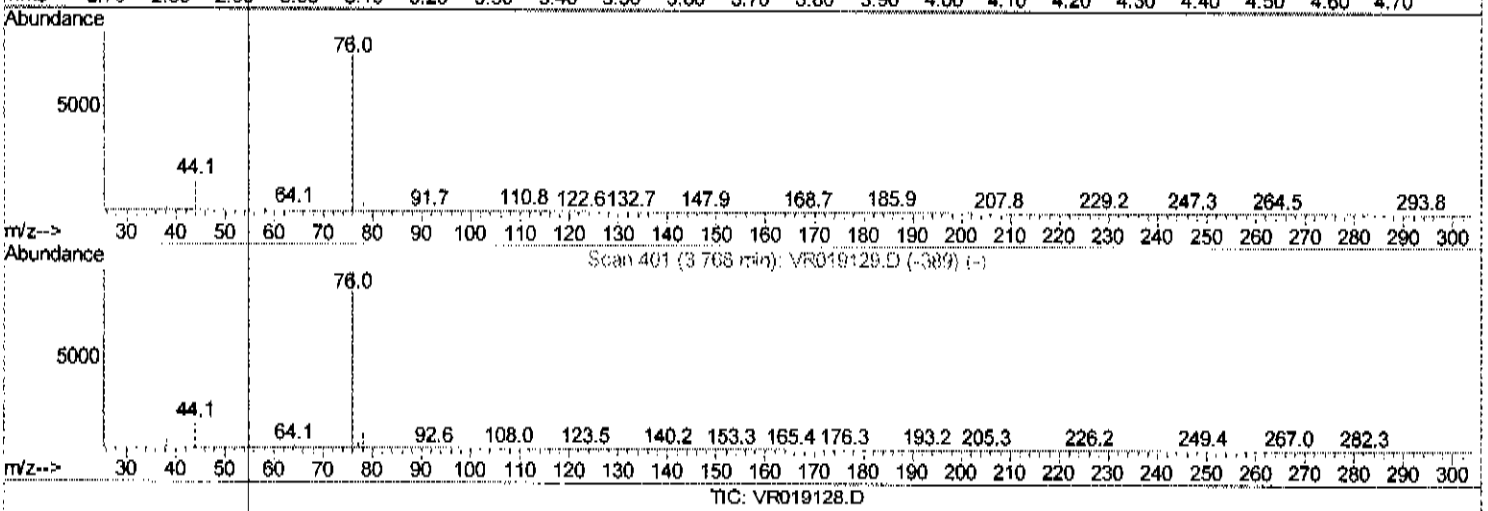
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019128.D
Acq On : 11 May 2016 11:29
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 11 12:35:44 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00152

Manual Integrations APPROVED
sam
5/12/2016 10:08:47 AM





Scan 401 (3.768 min): VR019128.D (-389) (-)

TIC: VR019128.D

(14) Carbon disulfide (T)

3.762min (-0.006) 0.58ug/L m 05/11/16 SY

response 47090

Ion	Exp%	Act%
76.05	100	100
78.00	9.70	6.95#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019128.D
Acq On : 11 May 2016 11:29
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 11 12:37:39 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00152

Manual Integrations APPROVED
sam
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Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	498109	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	380182	5.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	149513	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.04	65	26096	0.39	ug/L		0.00
7) Chloroethane-d5	2.51	69	16694	0.34	ug/L		0.01
11) 1,1-Dichloroethene-d2	3.46	63	54642m	0.77	ug/L		0.00
20) 2-Butanone-d5	6.42	46	23538	5.70	ug/L		0.02
24) Chloroform-d	7.03	84	55114	0.89	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	20724	0.81	ug/L		0.00
32) Benzene-d6	7.71	84	122366	0.85	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.78	67	30202	0.75	ug/L		0.00
41) Toluene-d8	9.86	98	111443	0.82	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	6611	0.65	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	18968	5.53	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	11268	0.91	ug/L		0.00
63) 1,2-Dichlorobenzene-d4	13.42	152	24764	0.95	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.73	85	24543	0.86	ug/L		93
3) Chloromethane	1.90	50	27444	0.41	ug/L		94
5) Vinyl chloride	2.05	62	25998	0.37	ug/L		97
6) Bromomethane	2.40	94	14495	0.41	ug/L		93
8) Chloroethane	2.54	64	15013	0.38	ug/L		92
9) Trichlorofluoromethane	2.78	101	32628m	0.52	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	26993	1.06	ug/L		98
12) 1,1-Dichloroethene	3.46	96	26833m	0.90	ug/L		
13) Acetone	3.52	43	22288	7.38	ug/L		93
14) Carbon disulfide	3.76	76	47090m	0.58	ug/L		
15) Methyl Acetate	4.02	43	3536	0.51	ug/L	#	89
16) Methylene chloride	4.20	84	24736	0.94	ug/L		97
17) Methyl tert-butyl Ether	4.68	73	31765	0.78	ug/L		96
18) trans-1,2-Dichloroethene	4.67	96	27353	0.85	ug/L		96
19) 1,1-Dichloroethane	5.19	63	53368	0.79	ug/L		99
21) 2-Butanone	6.51	43	26157	6.18	ug/L		97
22) cis-1,2-Dichloroethene	6.48	96	26486	0.83	ug/L	#	94
23) Bromochloromethane	6.88	128	9088	1.08	ug/L		89
25) Chloroform	7.06	83	51178	0.91	ug/L		100
27) 1,2-Dichloroethane	7.86	62	21566	0.80	ug/L	#	91
29) 1,1,1-Trichloroethane	7.27	97	37659	0.89	ug/L		98
30) Cyclohexane	7.37	56	43440	0.70	ug/L		99
31) Carbon tetrachloride	7.49	117	33402	0.90	ug/L		96
33) Benzene	7.77	78	121967	0.81	ug/L		100
34) Trichloroethene	8.59	95	29826	0.84	ug/L		94
35) Methylcyclohexane	8.84	83	44231	0.82	ug/L		96
37) 1,2-Dichloropropane	8.87	63	25497	0.74	ug/L	#	96
38) Bromodichloromethane	9.16	83	22652	0.75	ug/L		98
39) cis-1,3-Dichloropropene	9.61	75	25219	0.62	ug/L		98
40) 4-Methyl-2-pentanone	9.75	43	73886	6.31	ug/L		98

05/11/16 SM

05/11/16 SM

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019128.D
Acq On : 11 May 2016 11:29
Operator : MD\SY
Sample : VSTD00152
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 11 12:37:39 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00152

Manual Integrations APPROVED
sam
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Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.92	91	127190	0.82	ug/L		97
44) trans-1,3-Dichloropropene	10.16	75	16241	0.61	ug/L		100
45) 1,1,2-Trichloroethane	10.33	97	12991	0.97	ug/L		89
47) Tetrachloroethene	10.41	164	24692	1.04	ug/L		93
48) 2-Hexanone	10.53	43	50014	6.55	ug/L	#	90
49) Dibromochloromethane	10.68	129	10998	0.86	ug/L		96
50) 1,2-Dibromoethane	10.79	107	11220	1.04	ug/L	#	81
51) Chlorobenzene	11.21	112	75522	0.97	ug/L		96
52) Ethylbenzene	11.29	91	139963	0.85	ug/L		94
53) m,p-Xylene	11.40	106	51497	0.87	ug/L		87
54) o-Xylene	11.73	106	44388	0.83	ug/L		96
55) Styrene	11.75	104	66651	0.81	ug/L		94
56) Isopropylbenzene	12.04	105	119558	0.87	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.29	83	10810	0.93	ug/L	#	87
60) Bromoform	11.91	173	3486	0.69	ug/L		96
61) 1,3-Dichlorobenzene	13.07	146	44743	0.92	ug/L		96
62) 1,4-Dichlorobenzene	13.15	146	46456	0.94	ug/L		98
64) 1,2-Dichlorobenzene	13.44	146	36196	0.94	ug/L		96
65) 1,2-Dibromo-3-chloropropan	14.06	75	615	0.45	ug/L	#	26
66) 1,2,4-trichlorobenzene	14.70	180	21463	1.02	ug/L		99
67) 1,2,3-Trichlorobenzene	15.08	180	15502	0.99	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019129.D
Acq On : 11 May 2016 12:02
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 11 12:33:30 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00553

Manual Integrations APPROVED
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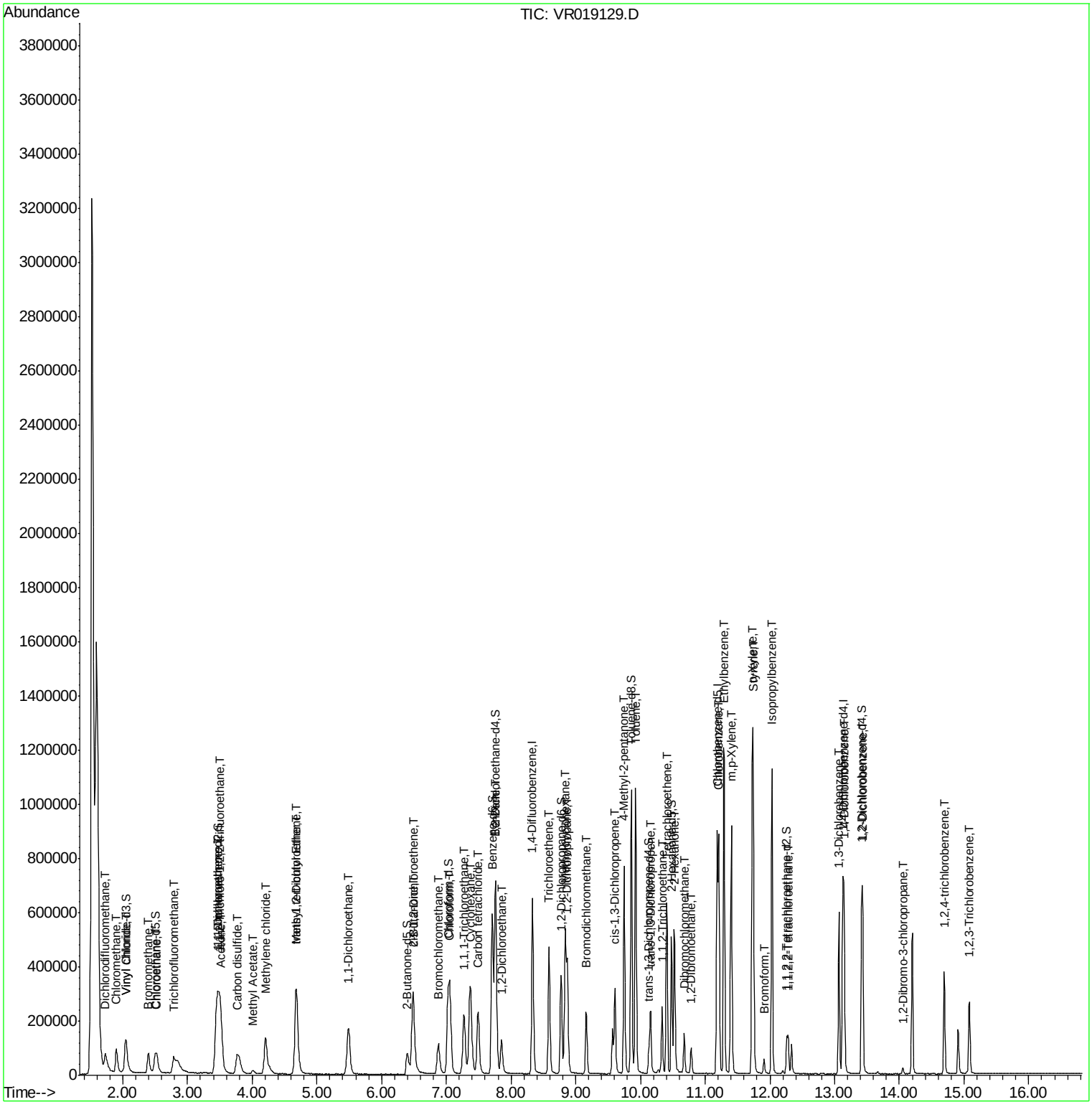

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019129.D
Acq On : 11 May 2016 12:02
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00553

Manual Integrations APPROVED
sam
5/12/2016 10:08:53 AM

Quant Time: May 11 12:33:30 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	552038	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	422871	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	146774	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	115754	1.56	ug/L	0.00
7) Chloroethane-d5	2.50	69	86441	1.58	ug/L	0.00
11) 1,1-Dichloroethene-d2	3.46	63	267872	3.43	ug/L	0.00
20) 2-Butanone-d5	6.40	46	160617	35.12	ug/L	0.00
24) Chloroform-d	7.03	84	289286	4.23	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.75	65	115255	4.07	ug/L	0.00
32) Benzene-d6	7.71	84	643511	4.01	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.78	67	167408	3.75	ug/L	0.00
41) Toluene-d8	9.86	98	627294	4.14	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.13	79	45521	3.99	ug/L	0.00
46) 2-Hexanone-d5	10.48	63	153804	40.29	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	58369	4.22	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.42	152	118216	4.62	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	118334	3.76	ug/L	100
3) Chloromethane	1.90	50	120134	1.61	ug/L	100
5) Vinyl chloride	2.05	62	118382	1.54	ug/L	100
6) Bromomethane	2.39	94	68250	1.75	ug/L	100
8) Chloroethane	2.53	64	67520	1.55	ug/L	100
9) Trichlorofluoromethane	2.79	101	173706m	2.48	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	124030	4.38	ug/L	100
12) 1,1-Dichloroethene	3.47	96	128055	3.88	ug/L	100
13) Acetone	3.53	43	114860	34.30	ug/L	100
14) Carbon disulfide	3.77	76	269240	2.99	ug/L	100
15) Methyl Acetate	4.01	43	25808	3.33	ug/L	100
16) Methylene chloride	4.20	84	115474	3.97	ug/L	100
17) Methyl tert-butyl Ether	4.68	73	164496	3.65	ug/L	100
18) trans-1,2-Dichloroethene	4.68	96	148739	4.16	ug/L	100
19) 1,1-Dichloroethane	5.49	63	280278	3.73	ug/L	100
21) 2-Butanone	6.49	43	171805	36.62	ug/L	100
22) cis-1,2-Dichloroethene	6.48	96	152940	4.31	ug/L	100
23) Bromochloromethane	6.87	128	48565	5.20	ug/L	100
25) Chloroform	7.06	83	265298	4.26	ug/L	100
27) 1,2-Dichloroethane	7.85	62	122406	4.09	ug/L	100
29) 1,1,1-Trichloroethane	7.27	97	203570	4.30	ug/L	100
30) Cyclohexane	7.37	56	227703	3.32	ug/L	100
31) Carbon tetrachloride	7.49	117	185227	4.49	ug/L	100
33) Benzene	7.76	78	644658	3.87	ug/L	100
34) Trichloroethene	8.59	95	160791	4.05	ug/L	100
35) Methylcyclohexane	8.84	83	224650	3.74	ug/L	100
37) 1,2-Dichloropropane	8.87	63	142160	3.68	ug/L	100
38) Bromodichloromethane	9.16	83	139153	4.12	ug/L	100
39) cis-1,3-Dichloropropene	9.60	75	174228	3.87	ug/L	100
40) 4-Methyl-2-pentanone	9.75	43	472827	36.32	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019129.D
Acq On : 11 May 2016 12:02
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00553

Manual Integrations APPROVED
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5/12/2016 10:08:53 AM

Quant Time: May 11 12:33:30 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.93	91	705500	4.10	ug/L	100
44) trans-1,3-Dichloropropene	10.16	75	121420	4.09	ug/L	100
45) 1,1,2-Trichloroethane	10.33	97	69658	4.67	ug/L	100
47) Tetrachloroethene	10.41	164	122373	4.62	ug/L	100
48) 2-Hexanone	10.52	43	320765	37.78	ug/L	100
49) Dibromochloromethane	10.67	129	71870	5.03	ug/L	100
50) 1,2-Dibromoethane	10.78	107	56708	4.72	ug/L	100
51) Chlorobenzene	11.21	112	397197	4.59	ug/L	100
52) Ethylbenzene	11.29	91	779357	4.27	ug/L	100
53) m,p-Xylene	11.40	106	285658	4.32	ug/L	100
54) o-Xylene	11.73	106	248867	4.17	ug/L	100
55) Styrene	11.74	104	392722	4.28	ug/L	100
56) Isopropylbenzene	12.03	105	648796	4.25	ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.28	83	54238	4.19	ug/L	100
60) Bromoform	11.91	173	23073	4.63	ug/L	100
61) 1,3-Dichlorobenzene	13.06	146	217040	4.54	ug/L	100
62) 1,4-Dichlorobenzene	13.15	146	217352	4.47	ug/L	100
64) 1,2-Dichlorobenzene	13.44	146	178662	4.71	ug/L	100
65) 1,2-Dibromo-3-chloropropan	14.06	75	5129	3.85	ug/L	100
66) 1,2,4-trichlorobenzene	14.69	180	103517	4.99	ug/L	100
67) 1,2,3-Trichlorobenzene	15.08	180	78543	5.12	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

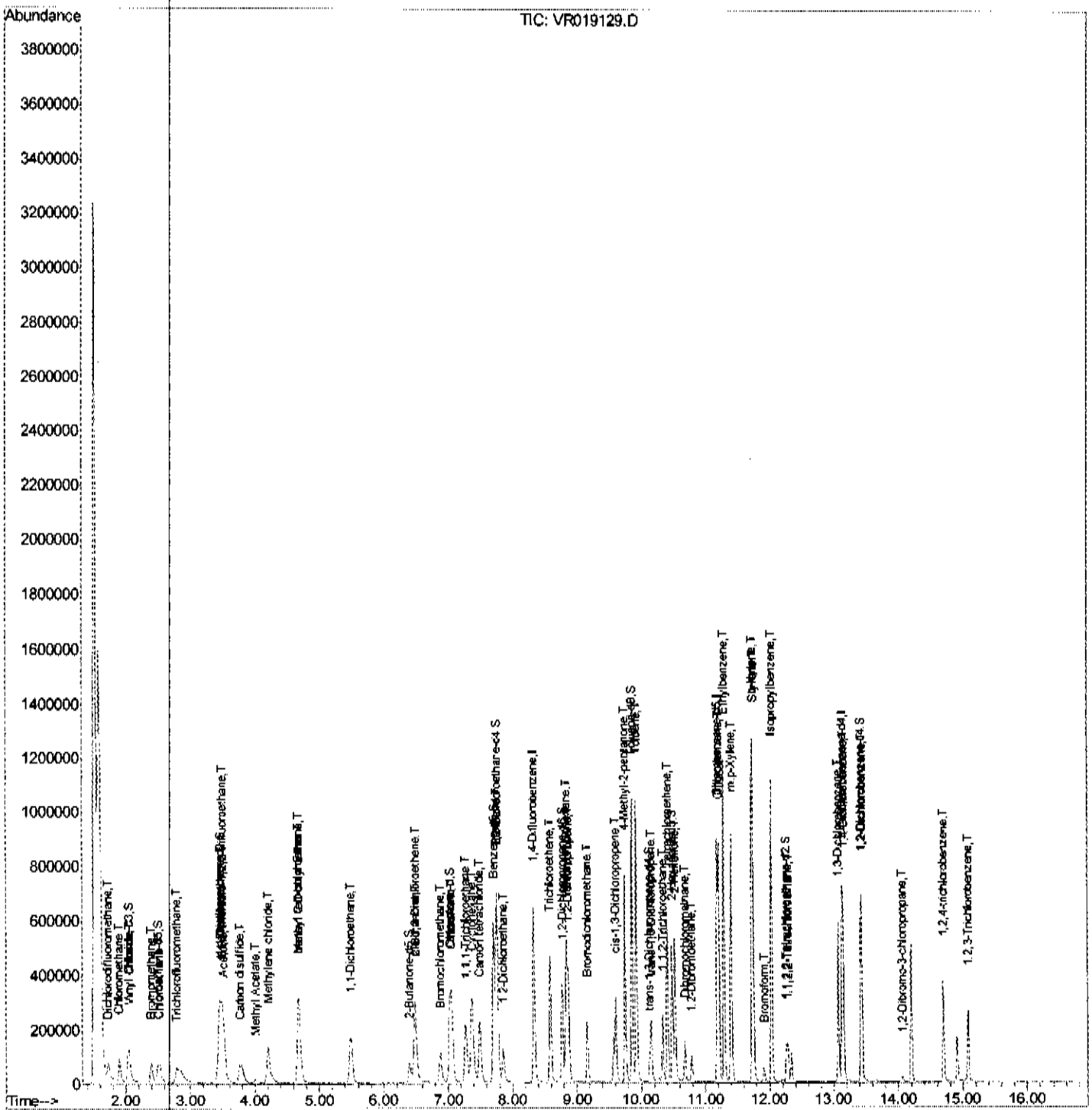
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019129.D
Acq On : 11 May 2016 12:02
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 11 12:33:30 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00553

Manual Integrations APPROVED
sam
5/12/2016 10:08:53 AM



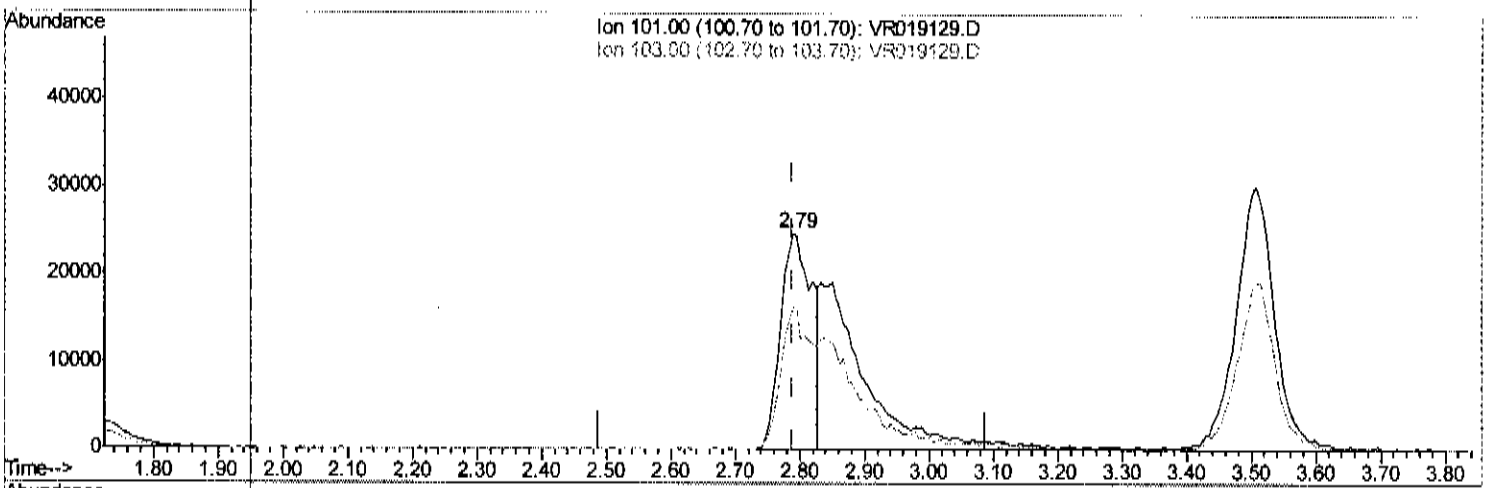
Quantitation Report (Qedit)

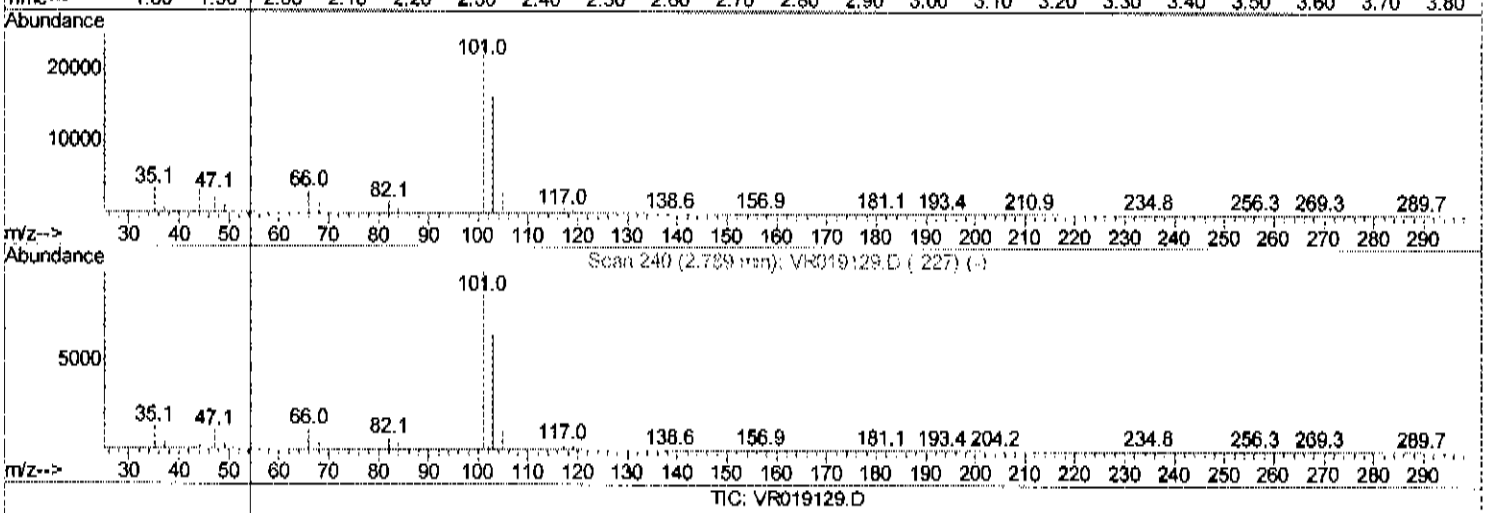
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019129.D
Acq On : 11 May 2016 12:02
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 11 12:32:18 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00553

Manual Integrations APPROVED
sam
5/12/2016 10:08:53 AM





Scan 240 (2.789 min): VR019129.D (227) (-)

TIC: VR019129.D

(9) Trichlorofluoromethane (T)

2.789min (0.000) 1.18ug/L

response 82800

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	64.36#
0.00	0.00	0.00
0.00	0.00	0.00

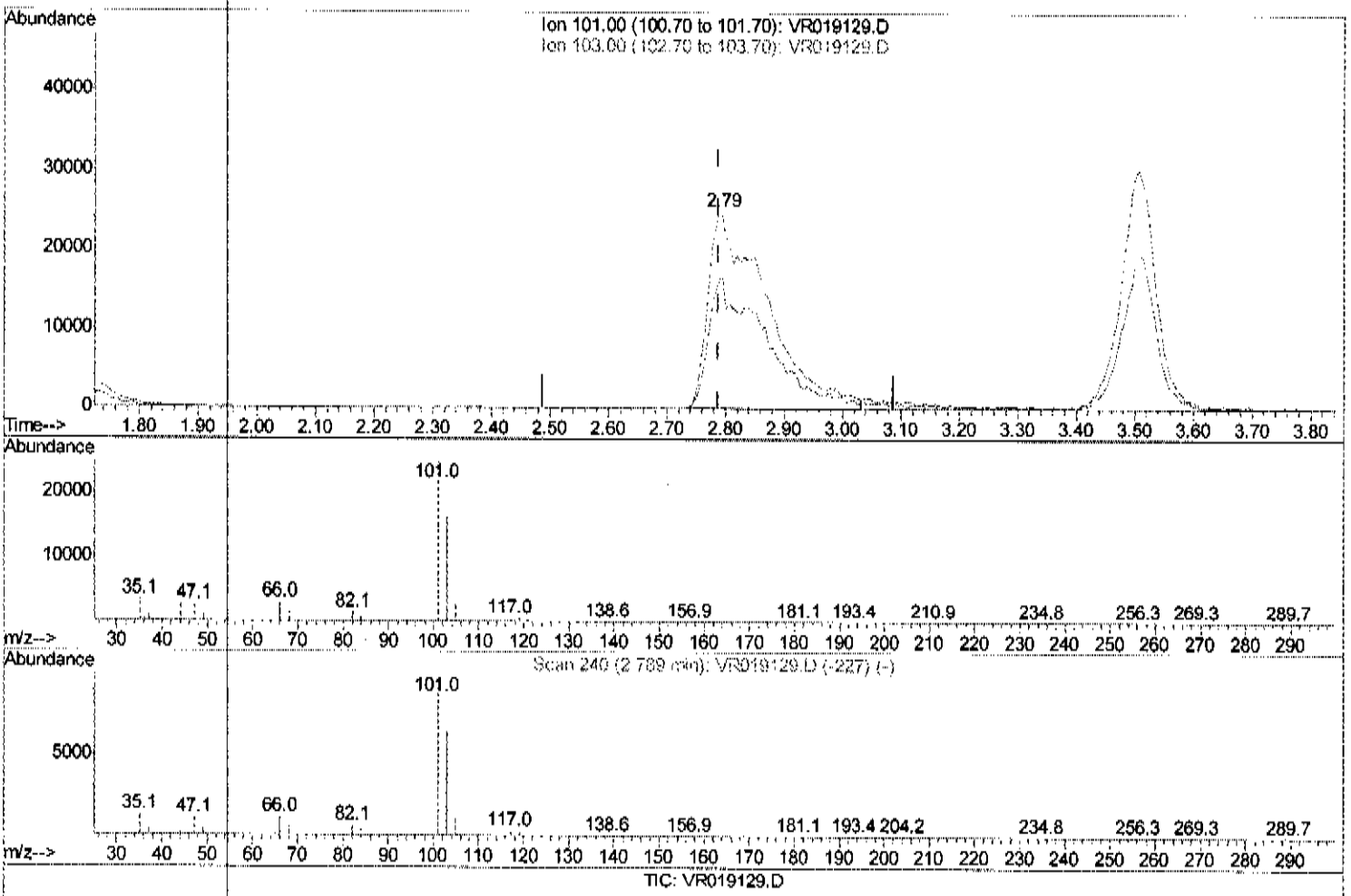
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019129.D
Acq On : 11 May 2016 12:02
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 11 12:32:18 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00553

Manual Integrations APPROVED
sam
5/12/2016 10:08:53 AM



(9) Trichlorofluoromethane (T)

2.789min (0.000) 2.48ug/L m > a 5/11/16 dy

response 173706

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	30.68
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019129.D
Acq On : 11 May 2016 12:02
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 11 12:33:30 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00553

Manual Integrations APPROVED
sam
5/12/2016 10:08:53 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	552038	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	422871	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	146774	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	115754	1.56	ug/L	0.00
7) Chloroethane-d5	2.50	69	86441	1.58	ug/L	0.00
11) 1,1-Dichloroethene-d2	3.46	63	267872	3.43	ug/L	0.00
20) 2-Butanone-d5	6.40	46	160617	35.12	ug/L	0.00
24) Chloroform-d	7.03	84	289286	4.23	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.75	65	115255	4.07	ug/L	0.00
32) Benzene-d6	7.71	84	643511	4.01	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.78	67	167408	3.75	ug/L	0.00
41) Toluene-d8	9.86	98	627294	4.14	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.13	79	45521	3.99	ug/L	0.00
46) 2-Hexanone-d5	10.48	63	153804	40.29	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	58369	4.22	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.42	152	118216	4.62	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	118334	3.76	ug/L	100
3) Chloromethane	1.90	50	120134	1.61	ug/L	100
5) Vinyl chloride	2.05	62	118382	1.54	ug/L	100
6) Bromomethane	2.39	94	68250	1.75	ug/L	100
8) Chloroethane	2.53	64	67520	1.55	ug/L	100
9) Trichlorofluoromethane	2.79	101	173706m	2.48	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	124030	4.38	ug/L	100
12) 1,1-Dichloroethene	3.47	96	128055	3.88	ug/L	100
13) Acetone	3.53	43	114860	34.30	ug/L	100
14) Carbon disulfide	3.77	76	269240	2.99	ug/L	100
15) Methyl Acetate	4.01	43	25808	3.33	ug/L	100
16) Methylene chloride	4.20	84	115474	3.97	ug/L	100
17) Methyl tert-butyl Ether	4.68	73	164496	3.65	ug/L	100
18) trans-1,2-Dichloroethene	4.68	96	148739	4.16	ug/L	100
19) 1,1-Dichloroethane	5.49	63	280278	3.73	ug/L	100
21) 2-Butanone	6.49	43	171805	36.62	ug/L	100
22) cis-1,2-Dichloroethene	6.48	96	152940	4.31	ug/L	100
23) Bromochloromethane	6.87	128	48565	5.20	ug/L	100
25) Chloroform	7.06	83	265298	4.26	ug/L	100
27) 1,2-Dichloroethane	7.85	62	122406	4.09	ug/L	100
29) 1,1,1-Trichloroethane	7.27	97	203570	4.30	ug/L	100
30) Cyclohexane	7.37	56	227703	3.32	ug/L	100
31) Carbon tetrachloride	7.49	117	185227	4.49	ug/L	100
33) Benzene	7.76	78	644658	3.87	ug/L	100
34) Trichloroethene	8.59	95	160791	4.05	ug/L	100
35) Methylcyclohexane	8.84	83	224650	3.74	ug/L	100
37) 1,2-Dichloropropane	8.87	63	142160	3.68	ug/L	100
38) Bromodichloromethane	9.16	83	139153	4.12	ug/L	100
39) cis-1,3-Dichloropropene	9.60	75	174228	3.87	ug/L	100
40) 4-Methyl-2-pentanone	9.75	43	472827	36.32	ug/L	100

5/12/16 SZ

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019129.D
Acq On : 11 May 2016 12:02
Operator : MD\SY
Sample : VSTD00553
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 11 12:33:30 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00553

Manual Integrations APPROVED
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5/12/2016 10:08:53 AM

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
42) Toluene	9.93	91	705500	4.10 ug/L	100
44) trans-1,3-Dichloropropene	10.16	75	121420	4.09 ug/L	100
45) 1,1,2-Trichloroethane	10.33	97	69658	4.67 ug/L	100
47) Tetrachloroethene	10.41	164	122373	4.62 ug/L	100
48) 2-Hexanone	10.52	43	320765	37.78 ug/L	100
49) Dibromochloromethane	10.67	129	71870	5.03 ug/L	100
50) 1,2-Dibromoethane	10.78	107	56708	4.72 ug/L	100
51) Chlorobenzene	11.21	112	397197	4.59 ug/L	100
52) Ethylbenzene	11.29	91	779357	4.27 ug/L	100
53) m,p-Xylene	11.40	106	285658	4.32 ug/L	100
54) o-Xylene	11.73	106	248867	4.17 ug/L	100
55) Styrene	11.74	104	392722	4.28 ug/L	100
56) Isopropylbenzene	12.03	105	648796	4.25 ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.28	83	54238	4.19 ug/L	100
60) Bromoform	11.91	173	23073	4.63 ug/L	100
61) 1,3-Dichlorobenzene	13.06	146	217040	4.54 ug/L	100
62) 1,4-Dichlorobenzene	13.15	146	217352	4.47 ug/L	100
64) 1,2-Dichlorobenzene	13.44	146	178662	4.71 ug/L	100
65) 1,2-Dibromo-3-chloropropan	14.06	75	5129	3.85 ug/L	100
66) 1,2,4-trichlorobenzene	14.69	180	103517	4.99 ug/L	100
67) 1,2,3-Trichlorobenzene	15.08	180	78543	5.12 ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

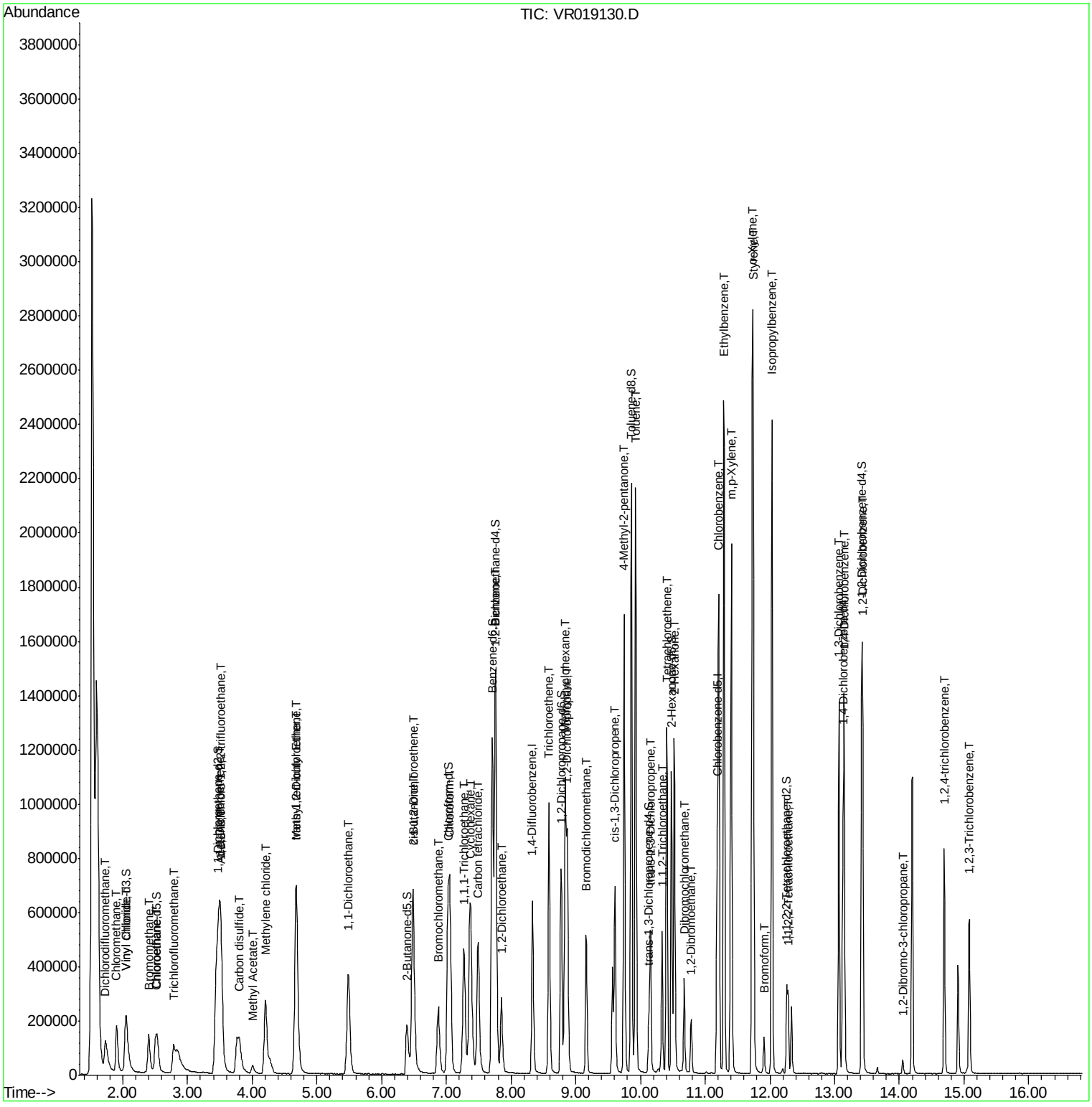
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019130.D
Acq On : 11 May 2016 12:34
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 11 12:59:28 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD01054

Manual Integrations APPROVED
sam
5/12/2016 10:09:12 AM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019130.D
Acq On : 11 May 2016 12:34
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD01054

Manual Integrations APPROVED
sam
5/12/2016 10:09:12 AM

Quant Time: May 11 12:59:28 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	534902	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	415392	5.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	160055	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.05	65	232299	3.23	ug/L		0.00
7) Chloroethane-d5	2.51	69	168071	3.16	ug/L		0.01
11) 1,1-Dichloroethene-d2	3.47	63	558509	7.38	ug/L		0.01
20) 2-Butanone-d5	6.39	46	364333	82.21	ug/L		0.00
24) Chloroform-d	7.02	84	613598	9.26	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	254102	9.26	ug/L		0.00
32) Benzene-d6	7.71	84	1339325	8.49	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.78	67	350817	8.00	ug/L		0.00
41) Toluene-d8	9.86	98	1303834	8.76	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	100863	9.01	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	349207	93.11	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	130588	9.61	ug/L		0.00
63) 1,2-Dichlorobenzene-d4	13.42	152	263524	9.45	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.73	85	234353	7.68	ug/L		91
3) Chloromethane	1.90	50	241316	3.33	ug/L		99
5) Vinyl chloride	2.05	62	235267	3.16	ug/L		98
6) Bromomethane	2.40	94	129777	3.43	ug/L		91
8) Chloroethane	2.53	64	134896	3.20	ug/L		98
9) Trichlorofluoromethane	2.79	101	333106m	4.92	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	245333	8.94	ug/L		99
12) 1,1-Dichloroethene	3.49	96	264927	8.28	ug/L		81
13) Acetone	3.52	43	247506	76.27	ug/L		97
14) Carbon disulfide	3.79	76	574066m	6.57	ug/L		
15) Methyl Acetate	4.01	43	60302	8.03	ug/L		99
16) Methylene chloride	4.20	84	240350	8.52	ug/L		97
17) Methyl tert-butyl Ether	4.68	73	385865	8.84	ug/L		99
18) trans-1,2-Dichloroethene	4.68	96	313193	9.05	ug/L		96
19) 1,1-Dichloroethane	5.48	63	590386	8.12	ug/L		99
21) 2-Butanone	6.49	43	389232	85.62	ug/L		99
22) cis-1,2-Dichloroethene	6.48	96	324043	9.43	ug/L	#	96
23) Bromochloromethane	6.88	128	102915	11.37	ug/L		95
25) Chloroform	7.06	83	566466	9.39	ug/L		98
27) 1,2-Dichloroethane	7.85	62	261281	9.02	ug/L		97
29) 1,1,1-Trichloroethane	7.27	97	424032	9.12	ug/L		99
30) Cyclohexane	7.37	56	471420	6.99	ug/L		98
31) Carbon tetrachloride	7.49	117	392764	9.70	ug/L		98
33) Benzene	7.77	78	1340652	8.20	ug/L		100
34) Trichloroethene	8.59	95	337551	8.65	ug/L		97
35) Methylcyclohexane	8.84	83	457133	7.75	ug/L		98
37) 1,2-Dichloropropane	8.87	63	299007	7.89	ug/L		99
38) Bromodichloromethane	9.16	83	309535	9.33	ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	382750	8.66	ug/L		97
40) 4-Methyl-2-pentanone	9.75	43	1045422	81.75	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019130.D
Acq On : 11 May 2016 12:34
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD01054

Manual Integrations APPROVED
sam
5/12/2016 10:09:12 AM

Quant Time: May 11 12:59:28 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.92	91	1429339	8.46	ug/L		100
44) trans-1,3-Dichloropropene	10.16	75	274434	9.41	ug/L		100
45) 1,1,2-Trichloroethane	10.33	97	143382	9.78	ug/L		98
47) Tetrachloroethene	10.41	164	240749	9.24	ug/L		97
48) 2-Hexanone	10.52	43	718900	86.20	ug/L		98
49) Dibromochloromethane	10.67	129	160105	11.42	ug/L		92
50) 1,2-Dibromoethane	10.78	107	121891	10.33	ug/L		99
51) Chlorobenzene	11.21	112	798636	9.39	ug/L		100
52) Ethylbenzene	11.29	91	1575536	8.78	ug/L		97
53) m,p-Xylene	11.40	106	587186	9.03	ug/L		100
54) o-Xylene	11.73	106	537627	9.16	ug/L		98
55) Styrene	11.74	104	881714	9.79	ug/L		99
56) Isopropylbenzene	12.03	105	1381626	9.21	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	122188	9.61	ug/L	#	99
60) Bromoform	11.91	173	53928	9.93	ug/L		96
61) 1,3-Dichlorobenzene	13.06	146	466627	8.96	ug/L		97
62) 1,4-Dichlorobenzene	13.15	146	467057	8.81	ug/L		99
64) 1,2-Dichlorobenzene	13.44	146	389171	9.40	ug/L		99
65) 1,2-Dibromo-3-chloropropan	14.06	75	10894	7.49	ug/L		94
66) 1,2,4-trichlorobenzene	14.69	180	220903	9.77	ug/L		99
67) 1,2,3-Trichlorobenzene	15.08	180	164694	9.84	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019130.D
Acq On : 11 May 2016 12:34
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 11 12:59:28 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD01054

Manual Integrations APPROVED
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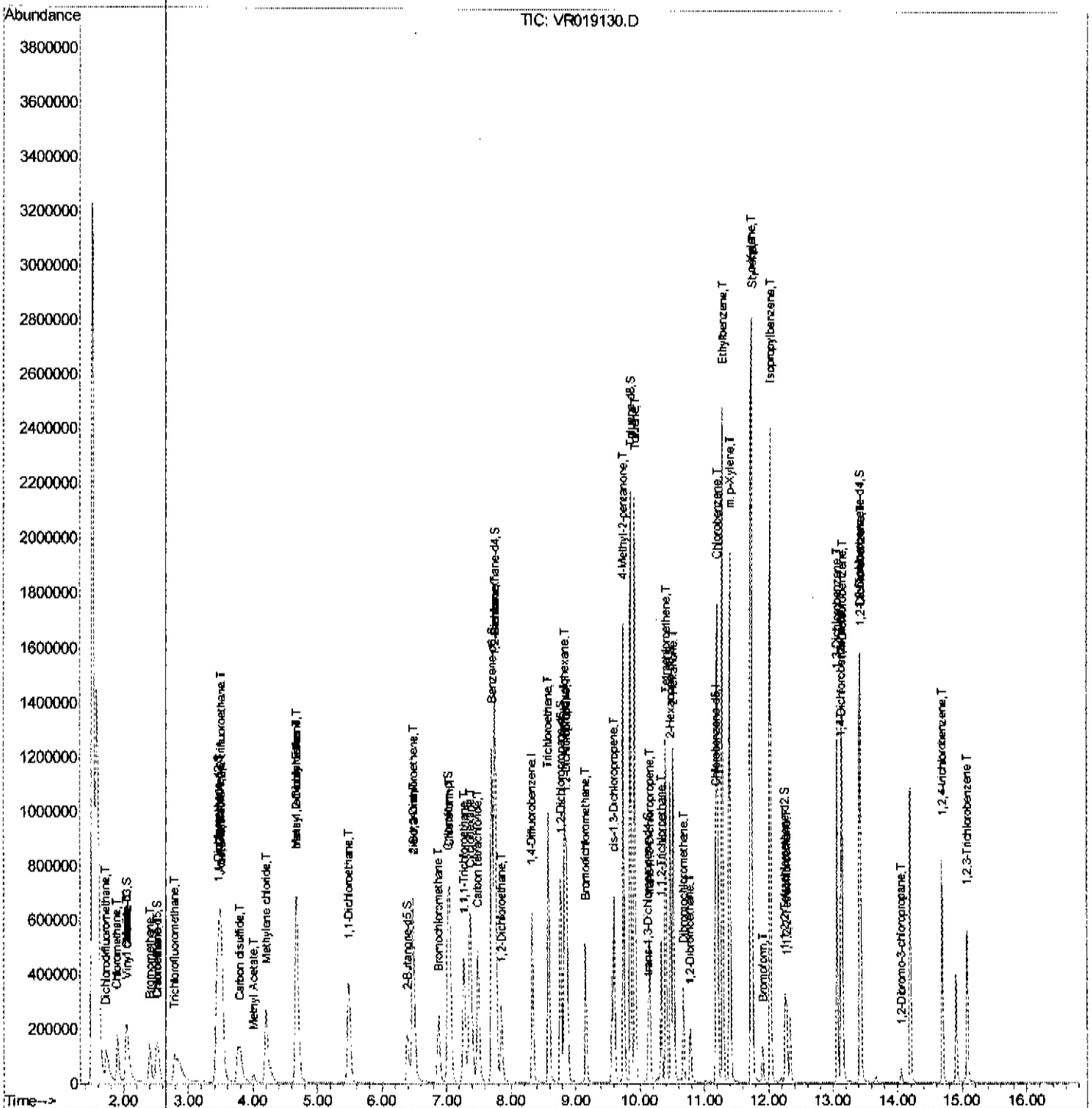


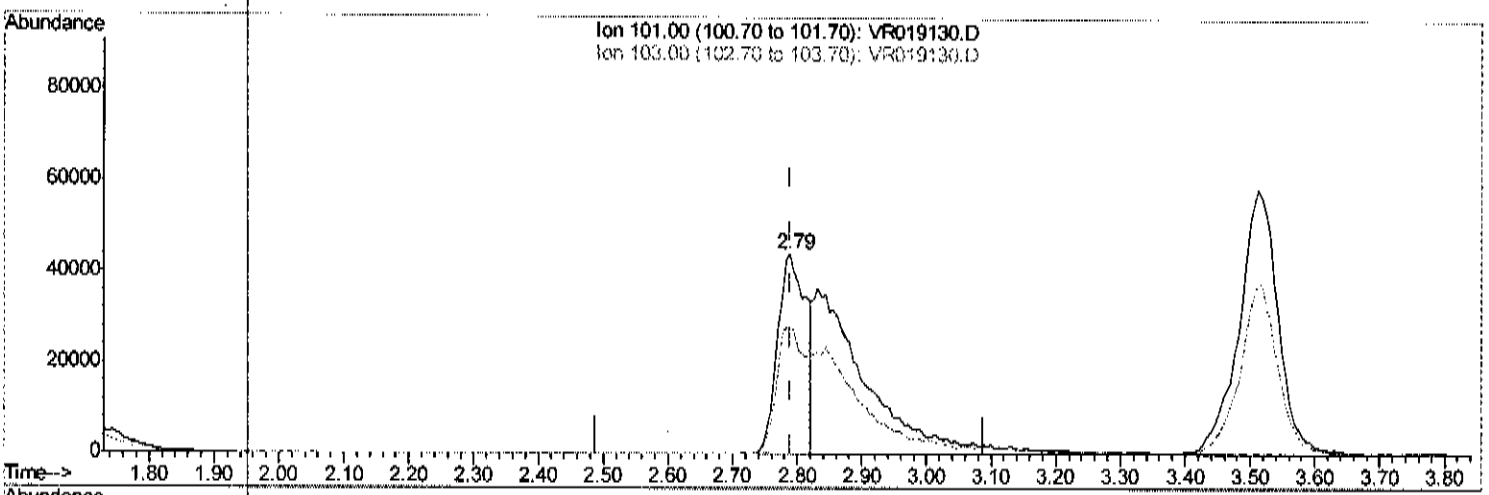
Quantitation Report (Qedit)

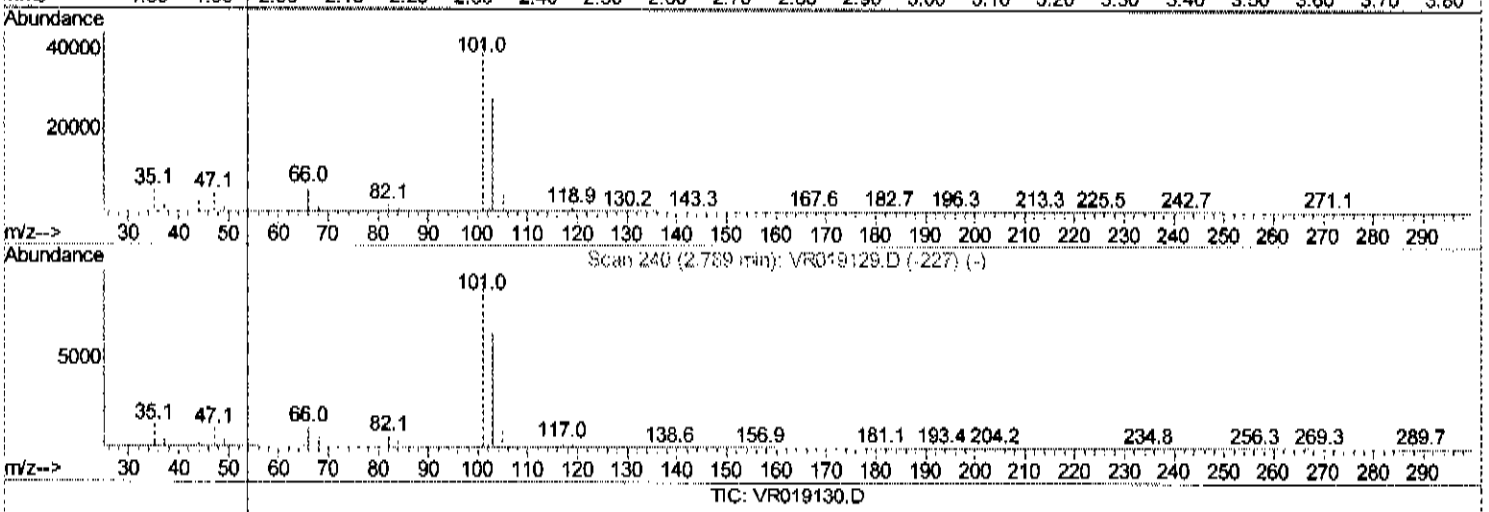
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019130.D
Acq On : 11 May 2016 12:34
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 11 12:57:44 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD01054

Manual Integrations APPROVED
sam
5/12/2016 10:09:12 AM





TIC: VR019130.D

(9) Trichlorofluoromethane (T)

2.789min (-0.000) 1.98ug/L

response 133922

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	59.94#
0.00	0.00	0.00
0.00	0.00	0.00

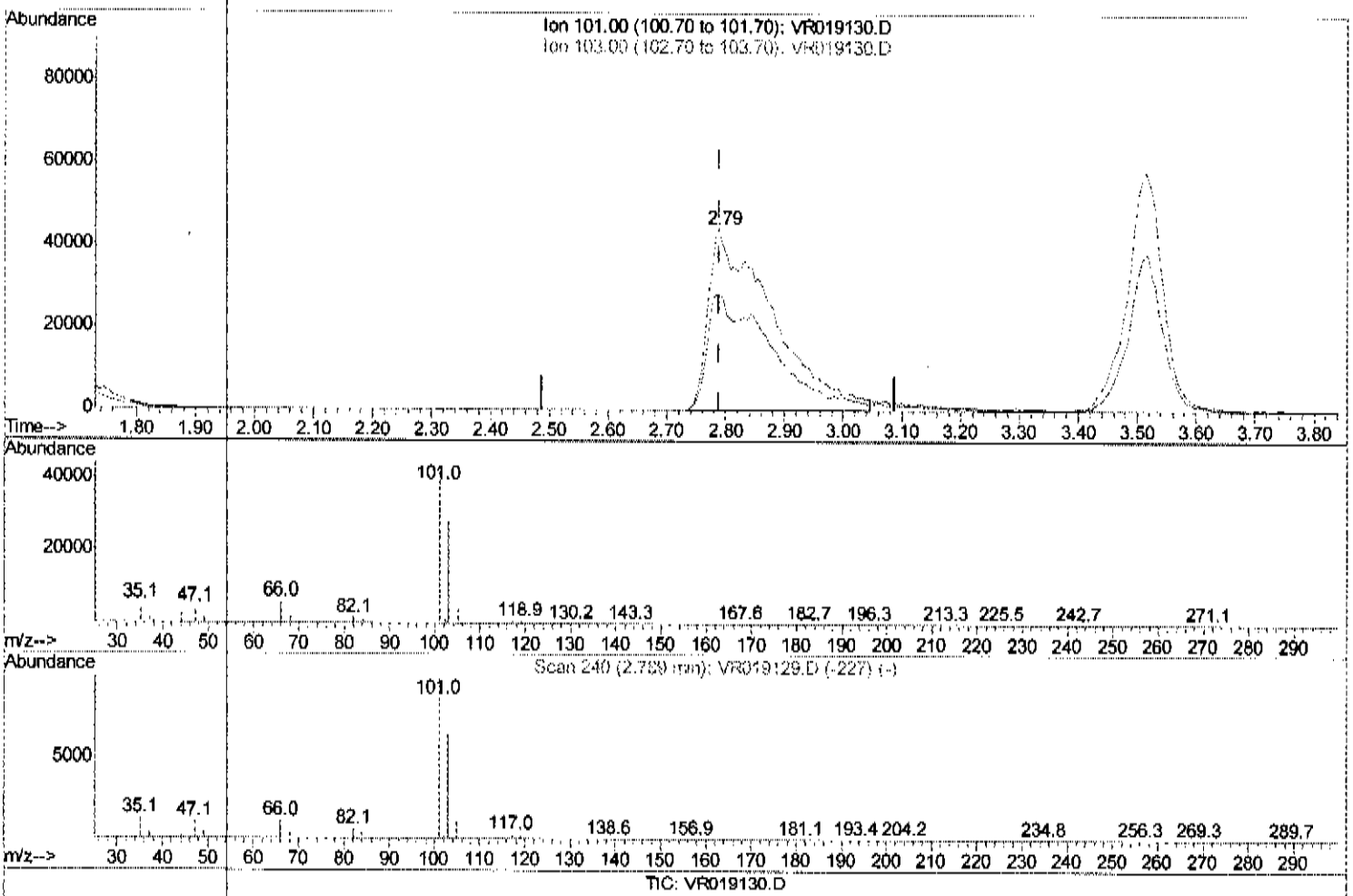
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019130.D
Acq On : 11 May 2016 12:34
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 11 12:57:44 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD01054

Manual Integrations APPROVED
sam
5/12/2016 10:09:12 AM



(9) Trichlorofluoromethane (T)

2.789min (-0.000) 4.92ug/L m > 05/11/16 SY

response 333106

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	24.10#
0.00	0.00	0.00
0.00	0.00	0.00

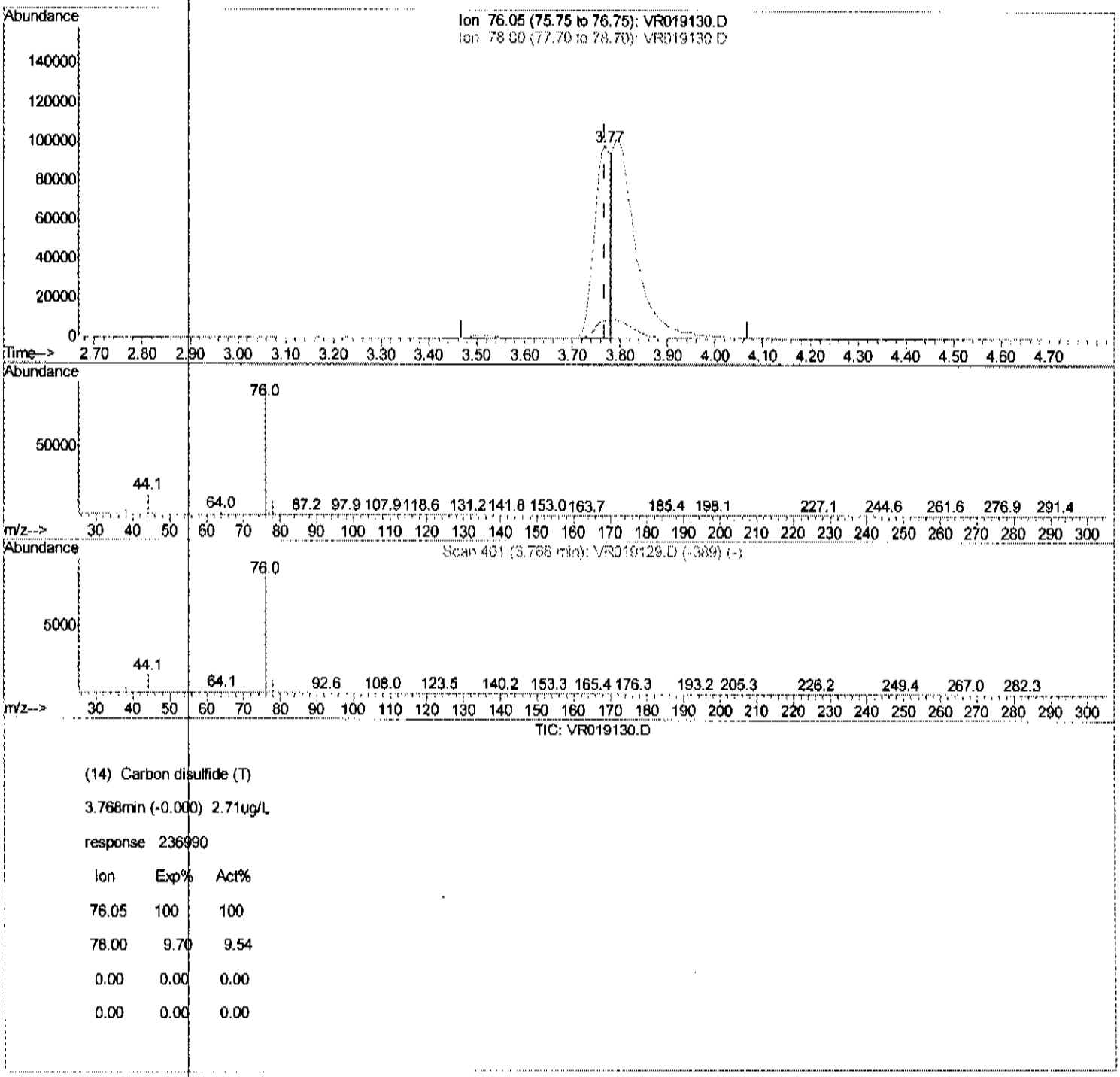
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019130.D
Acq On : 11 May 2016 12:34
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 11 12:57:44 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD01054

Manual Integrations APPROVED
sam
5/12/2016 10:09:12 AM



(14) Carbon disulfide (T)

3.768min (-0.000) 2.71ug/L

response 236990

Ion	Exp%	Act%
76.05	100	100
78.00	9.70	9.54
0.00	0.00	0.00
0.00	0.00	0.00

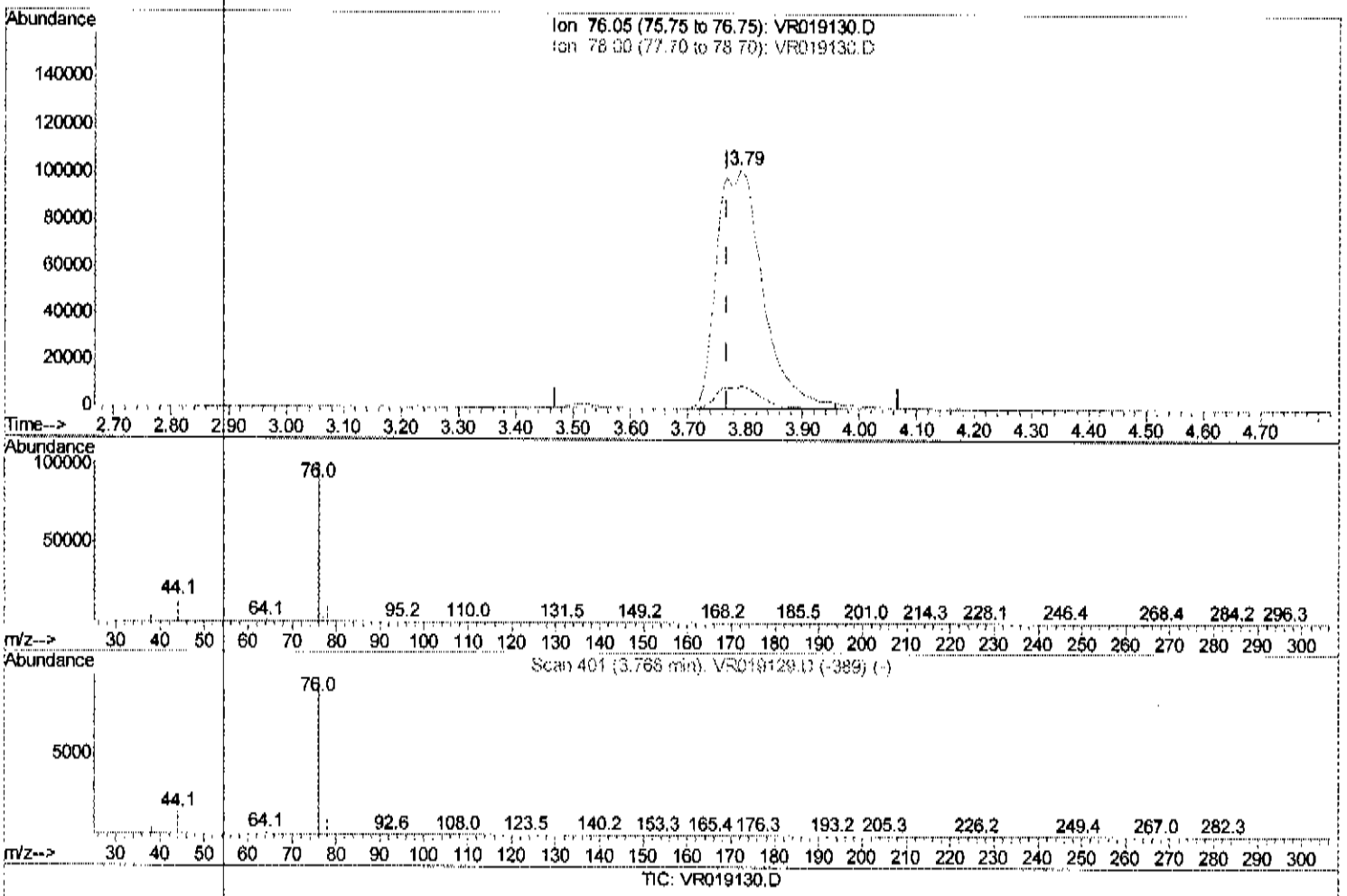
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019130.D
Acq On : 11 May 2016 12:34
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 11 12:57:44 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD01054

Manual Integrations APPROVED
sam
5/12/2016 10:09:12 AM



(14) Carbon disulfide (T)

3.793min (+0.024) 6.57ug/L m) 05/11/16 SY

response 574066

Ion	Exp%	Act%
76.05	100	100
78.00	9.70	9.36
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019130.D
Acq On : 11 May 2016 12:34
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 11 12:59:28 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD01054

Manual Integrations APPROVED
sam
5/12/2016 10:09:12 AM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	534902	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	415392	5.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	160055	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.05	65	232299	3.23	ug/L		0.00
7) Chloroethane-d5	2.51	69	168071	3.16	ug/L		0.01
11) 1,1-Dichloroethene-d2	3.47	63	558509	7.38	ug/L		0.01
20) 2-Butanone-d5	6.39	46	364333	82.21	ug/L		0.00
24) Chloroform-d	7.02	84	613598	9.26	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	254102	9.26	ug/L		0.00
32) Benzene-d6	7.71	84	1339325	8.49	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.78	67	350817	8.00	ug/L		0.00
41) Toluene-d8	9.86	98	1303834	8.76	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	100863	9.01	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	349207	93.11	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	130588	9.61	ug/L		0.00
63) 1,2-Dichlorobenzene-d4	13.42	152	263524	9.45	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.73	85	234353	7.68	ug/L		91
3) Chloromethane	1.90	50	241316	3.33	ug/L		99
5) Vinyl chloride	2.05	62	235267	3.16	ug/L		98
6) Bromomethane	2.40	94	129777	3.43	ug/L		91
8) Chloroethane	2.53	64	134896	3.20	ug/L		98
9) Trichlorofluoromethane	2.79	101	333106m	4.92	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	245333	8.94	ug/L		99
12) 1,1-Dichloroethene	3.49	96	264927	8.28	ug/L		81
13) Acetone	3.52	43	247506	76.27	ug/L		97
14) Carbon disulfide	3.79	76	574066m	6.57	ug/L		
15) Methyl Acetate	4.01	43	60302	8.03	ug/L		99
16) Methylene chloride	4.20	84	240350	8.52	ug/L		97
17) Methyl tert-butyl Ether	4.68	73	385865	8.84	ug/L		99
18) trans-1,2-Dichloroethene	4.68	96	313193	9.05	ug/L		96
19) 1,1-Dichloroethane	5.48	63	590386	8.12	ug/L		99
21) 2-Butanone	6.49	43	389232	85.62	ug/L		99
22) cis-1,2-Dichloroethene	6.48	96	324043	9.43	ug/L	#	96
23) Bromochloromethane	6.88	128	102915	11.37	ug/L		95
25) Chloroform	7.06	83	566466	9.39	ug/L		98
27) 1,2-Dichloroethane	7.85	62	261281	9.02	ug/L		97
29) 1,1,1-Trichloroethane	7.27	97	424032	9.12	ug/L		99
30) Cyclohexane	7.37	56	471420	6.99	ug/L		98
31) Carbon tetrachloride	7.49	117	392764	9.70	ug/L		98
33) Benzene	7.77	78	1340652	8.20	ug/L		100
34) Trichloroethene	8.59	95	337551	8.65	ug/L		97
35) Methylcyclohexane	8.84	83	457133	7.75	ug/L		98
37) 1,2-Dichloropropane	8.87	63	299007	7.89	ug/L		99
38) Bromodichloromethane	9.16	83	309535	9.33	ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	382750	8.66	ug/L		97
40) 4-Methyl-2-pentanone	9.75	43	1045422	81.75	ug/L		100

05/11/16 EY

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019130.D
Acq On : 11 May 2016 12:34
Operator : MD\SY
Sample : VSTD01054
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 11 12:59:28 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD01054

Manual Integrations APPROVED
sam
5/12/2016 10:09:12 AM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.92	91	1429339	8.46	ug/L		100
44) trans-1,3-Dichloropropene	10.16	75	274434	9.41	ug/L		100
45) 1,1,2-Trichloroethane	10.33	97	143382	9.78	ug/L		98
47) Tetrachloroethene	10.41	164	240749	9.24	ug/L		97
48) 2-Hexanone	10.52	43	718900	86.20	ug/L		98
49) Dibromochloromethane	10.67	129	160105	11.42	ug/L		92
50) 1,2-Dibromoethane	10.78	107	121891	10.33	ug/L		99
51) Chlorobenzene	11.21	112	798636	9.39	ug/L		100
52) Ethylbenzene	11.29	91	1575536	8.78	ug/L		97
53) m,p-Xylene	11.40	106	587186	9.03	ug/L		100
54) o-Xylene	11.73	106	537627	9.16	ug/L		98
55) Styrene	11.74	104	881714	9.79	ug/L		99
56) Isopropylbenzene	12.03	105	1381626	9.21	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	122188	9.61	ug/L	#	99
60) Bromoform	11.91	173	53928	9.93	ug/L		96
61) 1,3-Dichlorobenzene	13.06	146	466627	8.96	ug/L		97
62) 1,4-Dichlorobenzene	13.15	146	467057	8.81	ug/L		99
64) 1,2-Dichlorobenzene	13.44	146	389171	9.40	ug/L		99
65) 1,2-Dibromo-3-chloropropan	14.06	75	10894	7.49	ug/L		94
66) 1,2,4-trichlorobenzene	14.69	180	220903	9.77	ug/L		99
67) 1,2,3-Trichlorobenzene	15.08	180	164694	9.84	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019131.D
Acq On : 11 May 2016 13:07
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 11 13:32:48 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD02055

Manual Integrations APPROVED
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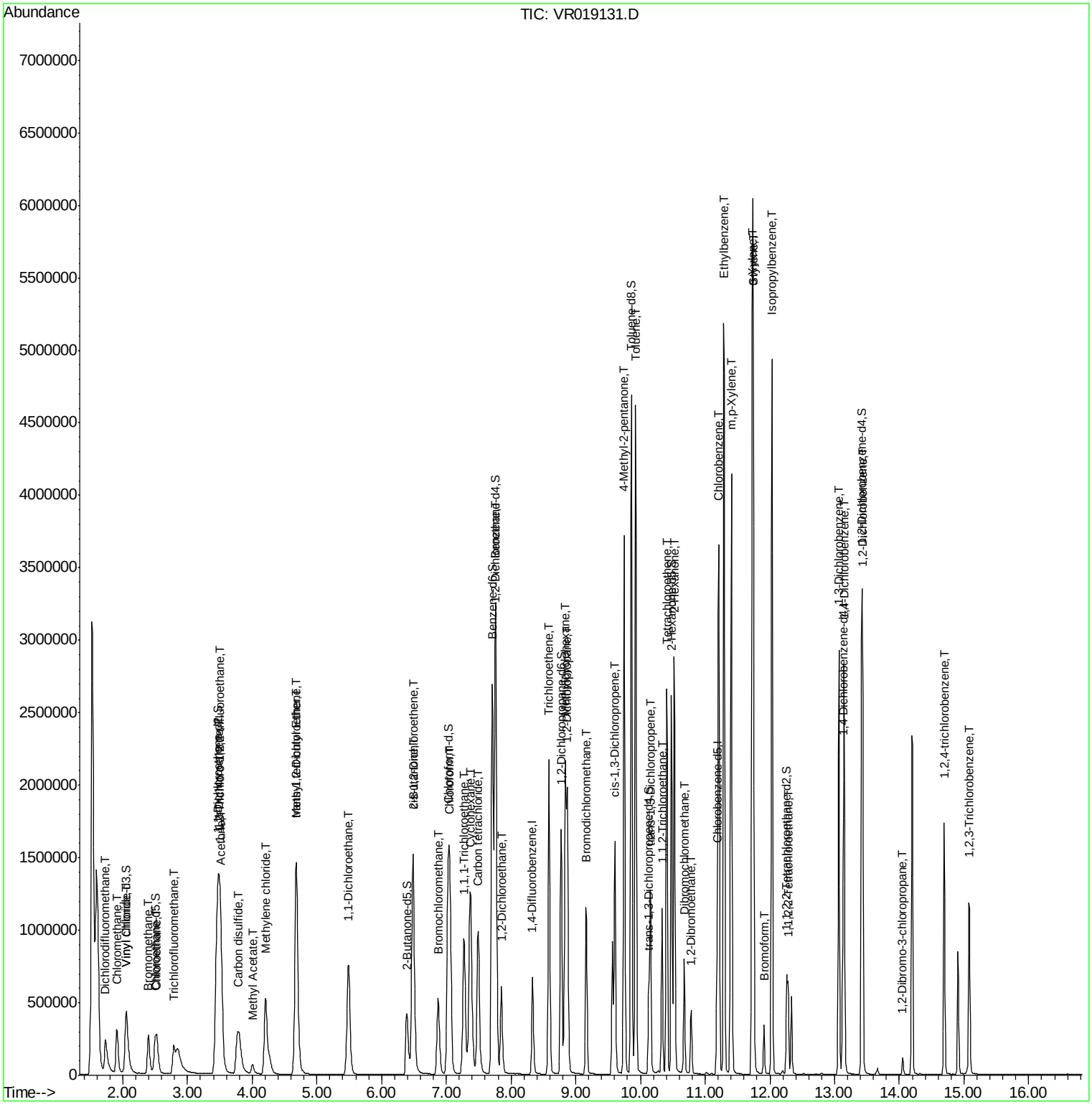
5/12/2016 10:08:59 AM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019131.D
Acq On : 11 May 2016 13:07
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 11 13:32:48 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD02055

Manual Integrations APPROVED
sam
5/12/2016 10:08:59 AM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	565630	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.18	117	446717	5.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	168007	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	2.05	65	451508	5.94	ug/L		0.01
7) Chloroethane-d5	2.50	69	311345	5.54	ug/L		0.00
11) 1,1-Dichloroethene-d2	3.46	63	1166096	14.56	ug/L		0.00
20) 2-Butanone-d5	6.38	46	818148	174.57	ug/L		-0.01
24) Chloroform-d	7.03	84	1315535	18.77	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	550297	18.96	ug/L		0.00
32) Benzene-d6	7.71	84	2875205	16.96	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.78	67	769807	16.33	ug/L		0.00
41) Toluene-d8	9.86	98	2766375	17.29	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	245027	20.35	ug/L		0.00
46) 2-Hexanone-d5	10.48	63	834057	206.80	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	276894	18.94	ug/L		0.00
63) 1,2-Dichlorobenzene-d4	13.42	152	548602	18.74	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.73	85	448318	13.90	ug/L		92
3) Chloromethane	1.91	50	457450	5.98	ug/L		100
5) Vinyl chloride	2.06	62	446693	5.67	ug/L		100
6) Bromomethane	2.39	94	245855	6.15	ug/L		92
8) Chloroethane	2.53	64	242834	5.45	ug/L		98
9) Trichlorofluoromethane	2.79	101	649896m	9.07	ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	502910	17.32	ug/L		98
12) 1,1-Dichloroethene	3.48	96	546218	16.14	ug/L		88
13) Acetone	3.52	43	503532	146.74	ug/L		96
14) Carbon disulfide	3.78	76	1220507	13.21	ug/L		99
15) Methyl Acetate	4.01	43	129475	16.30	ug/L		98
16) Methylene chloride	4.21	84	480647	16.12	ug/L		94
17) Methyl tert-butyl Ether	4.69	73	821526	17.80	ug/L		98
18) trans-1,2-Dichloroethene	4.68	96	639244	17.46	ug/L		91
19) 1,1-Dichloroethane	5.49	63	1224153	15.92	ug/L		98
21) 2-Butanone	6.49	43	881628	183.40	ug/L		100
22) cis-1,2-Dichloroethene	6.49	96	677095	18.63	ug/L	#	100
23) Bromochloromethane	6.87	128	210594	21.99	ug/L		94
25) Chloroform	7.06	83	1186542	18.59	ug/L		100
27) 1,2-Dichloroethane	7.85	62	559704	18.27	ug/L		98
29) 1,1,1-Trichloroethane	7.27	97	882346	17.65	ug/L		100
30) Cyclohexane	7.37	56	906117	12.50	ug/L		99
31) Carbon tetrachloride	7.49	117	808245	18.56	ug/L		97
33) Benzene	7.77	78	2843842	16.17	ug/L		100
34) Trichloroethene	8.59	95	708945	16.90	ug/L		97
35) Methylcyclohexane	8.84	83	908947	14.33	ug/L		98
37) 1,2-Dichloropropane	8.87	63	663148	16.27	ug/L		99
38) Bromodichloromethane	9.16	83	687513	19.27	ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	864046	18.18	ug/L		98
40) 4-Methyl-2-pentanone	9.75	43	2264488	164.67	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051116\
Data File : VR019131.D
Acq On : 11 May 2016 13:07
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD02055

Manual Integrations APPROVED
sam
5/12/2016 10:08:59 AM

Quant Time: May 11 13:32:48 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.93	91	2976708	16.39	ug/L		95
44) trans-1,3-Dichloropropene	10.15	75	627336	20.00	ug/L		100
45) 1,1,2-Trichloroethane	10.33	97	303159	19.23	ug/L		98
47) Tetrachloroethene	10.41	164	491746	17.56	ug/L		98
48) 2-Hexanone	10.52	43	1620860	180.72	ug/L		100
49) Dibromochloromethane	10.67	129	359399	23.83	ug/L		90
50) 1,2-Dibromoethane	10.78	107	262525	20.70	ug/L	#	98
51) Chlorobenzene	11.21	112	1701824	18.60	ug/L		98
52) Ethylbenzene	11.29	91	3215253	16.66	ug/L		94
53) m,p-Xylene	11.40	106	1254674	17.95	ug/L		94
54) o-Xylene	11.73	106	1127578	17.86	ug/L		91
55) Styrene	11.74	104	1886411	19.48	ug/L		99
56) Isopropylbenzene	12.03	105	2786255	17.28	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.28	83	258519	18.92	ug/L		96
60) Bromoform	11.91	173	130134	22.83	ug/L		99
61) 1,3-Dichlorobenzene	13.06	146	983742	18.00	ug/L		99
62) 1,4-Dichlorobenzene	13.15	146	963295	17.31	ug/L		99
64) 1,2-Dichlorobenzene	13.44	146	801571	18.44	ug/L		97
65) 1,2-Dibromo-3-chloropropan	14.05	75	27153	17.79	ug/L	#	74
66) 1,2,4-trichlorobenzene	14.69	180	441813	18.62	ug/L		99
67) 1,2,3-Trichlorobenzene	15.08	180	328615	18.70	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

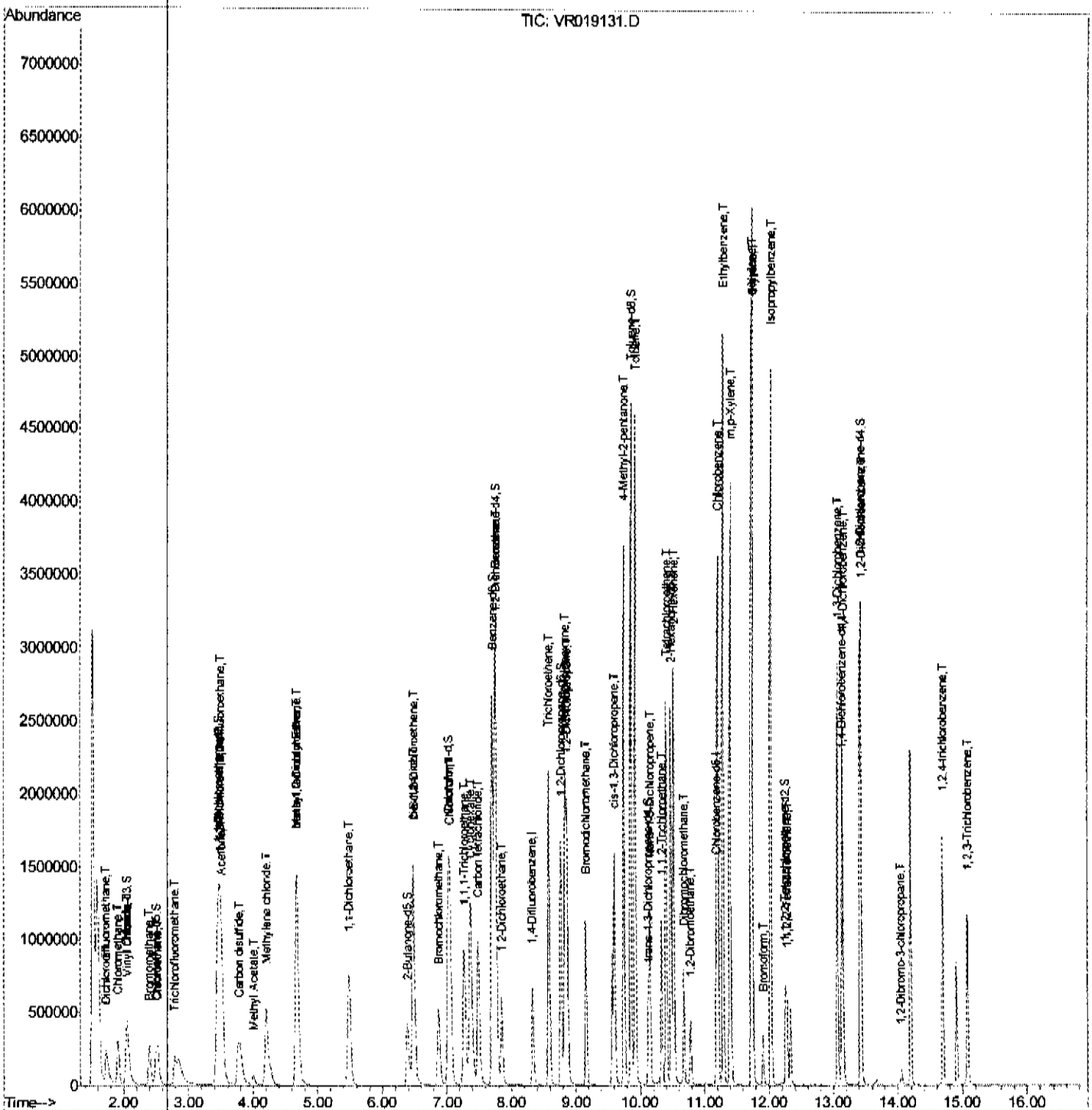
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019131.D
Acq On : 11 May 2016 13:07
Operator : MD\SY
Sample : V$TD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 11 13:32:48 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD02055

Manual Integrations APPROVED
sam
5/12/2016 10:08:59 AM



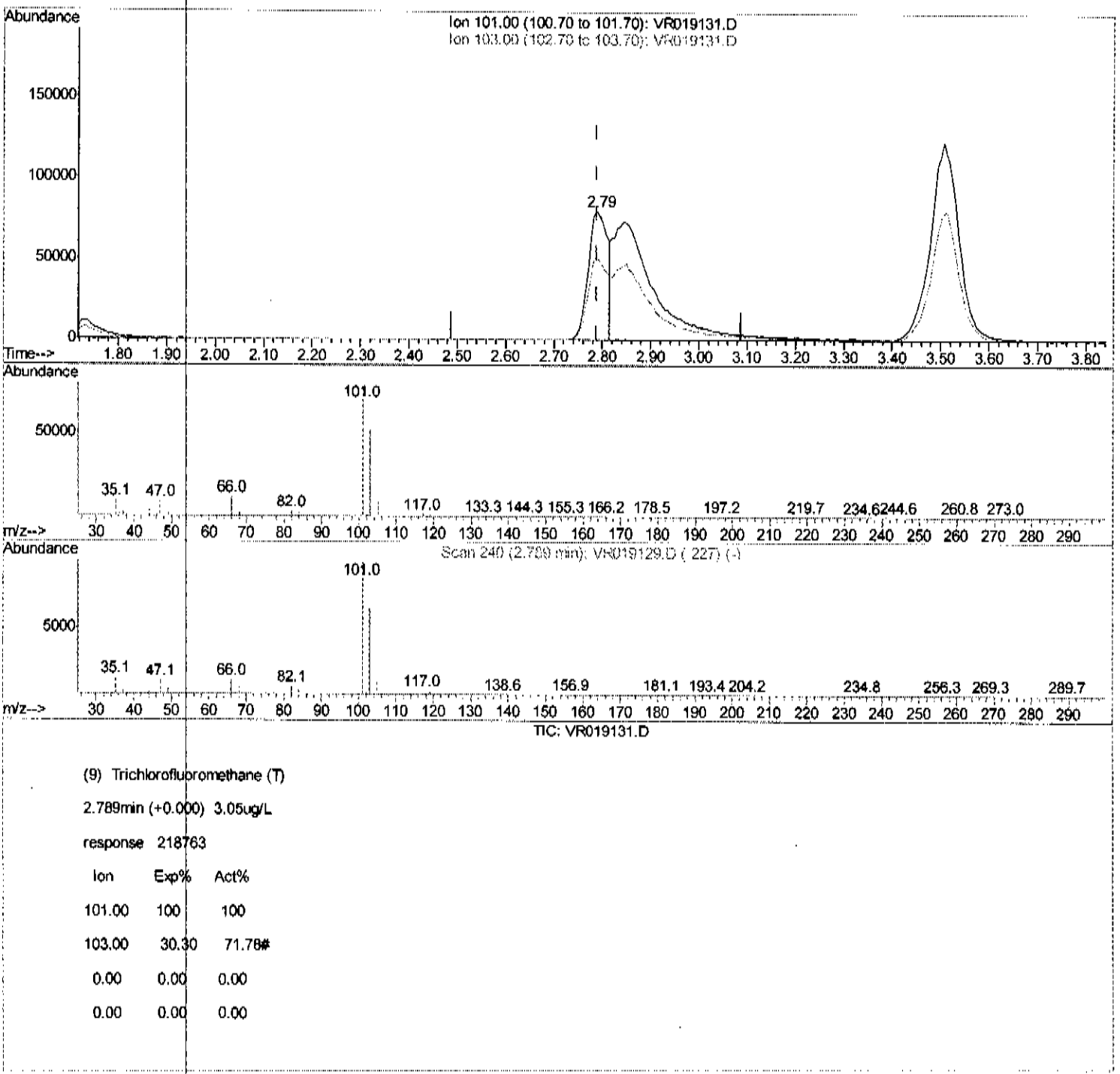
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019131.D
Acq On : 11 May 2016 13:07
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 11 13:29:50 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD02055

Manual Integrations APPROVED
sam
5/12/2016 10:08:59 AM



(9) Trichlorofluoromethane (T)

2.789min (+0.000) 3.05ug/L

response 218763

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	71.78#
0.00	0.00	0.00
0.00	0.00	0.00

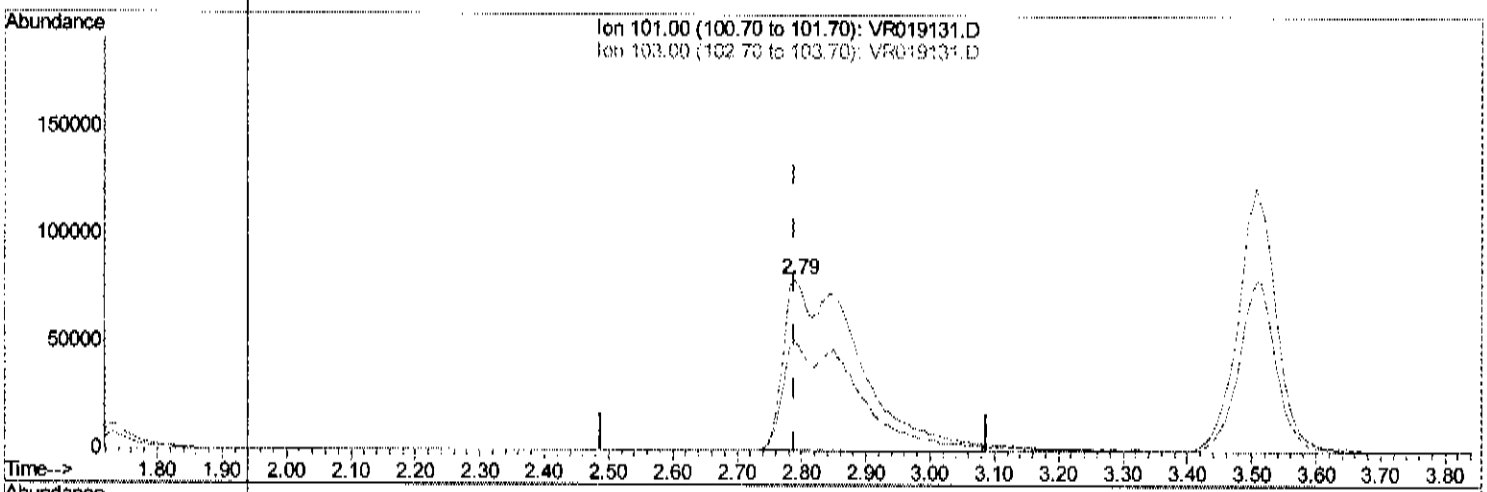
Quantitation Report (Qedit)

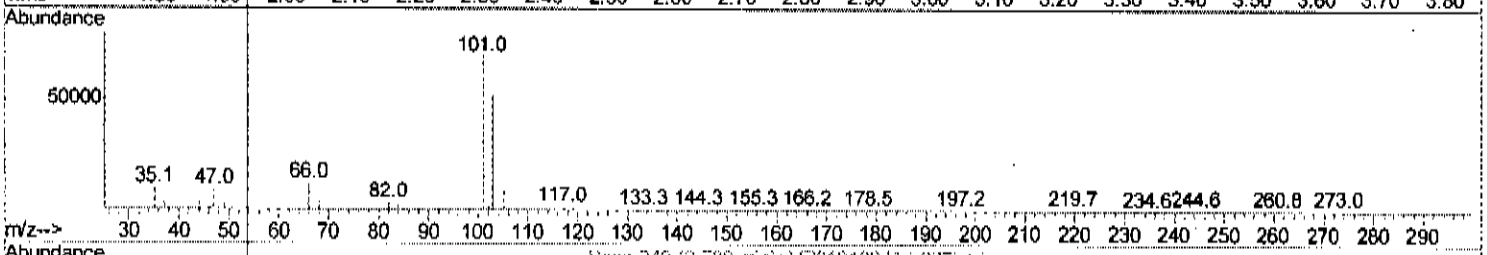
Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019131.D
Acq On : 11 May 2016 13:07
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

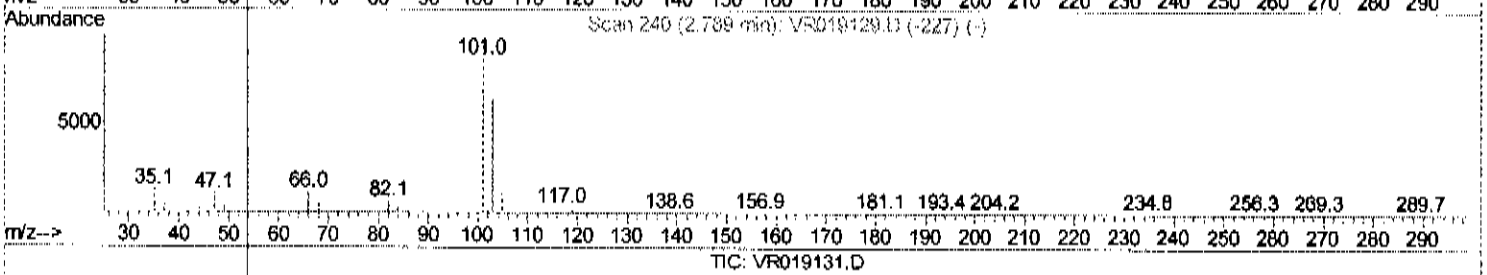
Quant Time: May 11 13:29:50 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD02055

Manual Integrations APPROVED
sam
5/12/2016 10:08:59 AM







(9) Trichlorofluoromethane (T)

2.789min (+0.000) 9.07ug/L m) 05/11/16 EM

response 649696

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	24.16#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DaLa\VR051116\
Data File : VR019131.D
Acq On : 11 May 2016 13:07
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 11 13:32:48 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD02055

Manual Integrations APPROVED
sam
5/12/2016 10:08:59 AM

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	565630	5.00 ug/L		0.00
28) Chlorobenzene-d5	11.18	117	446717	5.00 ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	168007	5.00 ug/L		0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.05	65	451508	5.94 ug/L		0.01
7) Chloroethane-d5	2.50	69	311345	5.54 ug/L		0.00
11) 1,1-Dichloroethene-d2	3.46	63	1166096	14.56 ug/L		0.00
20) 2-Butanone-d5	6.38	46	818148	174.57 ug/L		-0.01
24) Chloroform-d	7.03	84	1315535	18.77 ug/L		0.00
26) 1,2-Dichloroethane-d4	7.75	65	550297	18.96 ug/L		0.00
32) Benzene-d6	7.71	84	2875205	16.96 ug/L		0.00
36) 1,2-Dichloropropane-d6	8.78	67	769807	16.33 ug/L		0.00
41) Toluene-d8	9.86	98	2766375	17.29 ug/L		0.00
43) trans-1,3-Dichloropropene-	10.13	79	245027	20.35 ug/L		0.00
46) 2-Hexanone-d5	10.48	63	831057	206.80 ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.26	84	276894	18.94 ug/L		0.00
63) 1,2-Dichlorobenzene-d4	13.42	152	548602	18.74 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	448318	13.90 ug/L		92
3) Chloromethane	1.91	50	457450	5.98 ug/L		100
5) Vinyl chloride	2.06	62	446693	5.67 ug/L		100
6) Bromomethane	2.39	94	245055	6.15 ug/L		92
8) Chloroethane	2.53	64	242834	5.45 ug/L		98
9) Trichlorofluoromethane	2.79	101	649896m	9.07 ug/L		
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	502910	17.32 ug/L		98
12) 1,1-Dichloroethene	3.48	96	546218	16.14 ug/L		88
13) Acetone	3.52	43	503532	146.74 ug/L		96
14) Carbon disulfide	3.78	76	1220507	13.21 ug/L		99
15) Methyl Acetate	4.01	43	129475	16.30 ug/L		98
16) Methylene chloride	4.21	84	480647	16.12 ug/L		94
17) Methyl tert-butyl Ether	4.69	73	821526	17.80 ug/L		98
18) trans-1,2-Dichloroethene	4.68	96	639244	17.46 ug/L		91
19) 1,1-Dichloroethane	5.49	63	1224153	15.92 ug/L		98
21) 2-Butanone	6.49	43	881628	183.40 ug/L		100
22) cis-1,2-Dichloroethene	6.49	96	677095	18.63 ug/L	#	100
23) Bromochloromethane	6.87	128	210594	21.99 ug/L		94
25) Chloroform	7.06	83	1186542	18.59 ug/L		100
27) 1,2-Dichloroethane	7.85	62	559704	18.27 ug/L		98
29) 1,1,1-Trichloroethane	7.27	97	882346	17.65 ug/L		100
30) Cyclohexane	7.37	56	906117	12.50 ug/L		99
31) Carbon tetrachloride	7.49	117	808245	18.56 ug/L		97
33) Benzene	7.77	78	2843842	16.17 ug/L		100
34) Trichloroethene	8.59	95	708945	16.90 ug/L		97
35) Methylcyclohexane	8.84	83	908947	14.33 ug/L		98
37) 1,2-Dichloropropane	8.87	63	663148	16.27 ug/L		99
38) Bromodichloromethane	9.16	83	687513	19.27 ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	864046	18.18 ug/L		98
40) 4-Methyl-2-pentanone	9.75	43	2264488	164.67 ug/L		98

5/11/16 SY

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019131.D
Acq On : 11 May 2016 13:07
Operator : MD\SY
Sample : VSTD02055
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 11 13:32:48 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 12:32:11 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD02055

Manual Integrations APPROVED
sam
5/12/2016 10:08:59 AM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.93	91	2976708	16.39	ug/L		95
44) trans-1,3-Dichloropropene	10.15	75	627336	20.00	ug/L		100
45) 1,1,2-Trichloroethane	10.33	97	303159	19.23	ug/L		98
47) Tetrachloroethene	10.41	164	491746	17.56	ug/L		98
48) 2-Hexanone	10.52	43	1620860	180.72	ug/L		100
49) Dibromochloromethane	10.67	129	359399	23.83	ug/L		90
50) 1,2-Dibromoethane	10.78	107	262525	20.70	ug/L	#	98
51) Chlorobenzene	11.21	112	1701824	18.60	ug/L		98
52) Ethylbenzene	11.29	91	3215253	16.66	ug/L		94
53) m,p-Xylene	11.40	106	1254674	17.95	ug/L		94
54) o-Xylene	11.73	106	1127578	17.86	ug/L		91
55) Styrene	11.74	104	1886411	19.48	ug/L		99
56) Isopropylbenzene	12.03	105	2786255	17.28	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.28	83	258519	18.92	ug/L		96
60) Bromoform	11.91	173	130134	22.83	ug/L		99
61) 1,3-Dichlorobenzene	13.06	146	983742	18.00	ug/L		99
62) 1,4-Dichlorobenzene	13.15	146	963295	17.31	ug/L		99
64) 1,2-Dichlorobenzene	13.44	146	801571	18.44	ug/L		97
65) 1,2-Dibromo-3-chloropropan	14.05	75	27153	17.79	ug/L	#	74
66) 1,2,4-trichlorobenzene	14.69	180	441013	18.62	ug/L		99
67) 1,2,3-Trichlorobenzene	15.08	180	328615	18.70	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 12:03

Lab File ID: VI049349.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00527 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.537	0.01	-4.7	± 40.0
Chloromethane	0.482	0.406	0.01	-15.7	± 30.0
Vinyl chloride	0.337	0.319	0.01	-5.5	± 30.0
Bromomethane	0.163	0.149	0.01	-8.8	± 30.0
Chloroethane	0.144	0.146	0.01	1.5	± 30.0
Trichlorofluoromethane	0.471	0.468	0.01	-0.7	± 30.0
1,1-Dichloroethene	0.404	0.401	0.02	-0.5	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.437	0.01	1.4	± 30.0
Acetone	0.041	0.041	0.01	0.2	± 40.0
Carbon disulfide	1.463	1.393	0.01	-4.8	± 25.0
Methyl Acetate	0.118	0.121	0.01	2.7	± 40.0
Methylene chloride	0.445	0.435	0.01	-2.3	± 30.0
trans-1,2-Dichloroethene	0.446	0.452	0.07	1.3	± 20.0
Methyl tert-butyl Ether	0.737	0.742	0.01	0.7	± 30.0
1,1-Dichloroethane	0.756	0.753	0.1	-0.5	± 20.0
cis-1,2-Dichloroethene	0.459	0.466	0.1	1.5	± 20.0
2-Butanone	0.075	0.079	0.01	5.2	± 40.0
Bromochloromethane	0.184	0.181	0.02	-1.8	± 20.0
Chloroform	0.804	0.826	0.04	2.7	± 20.0
1,1,1-Trichloroethane	0.949	0.926	0.05	-2.4	± 20.0
Cyclohexane	0.837	0.810	0.1	-3.3	± 25.0
Carbon tetrachloride	0.829	0.814	0.02	-1.8	± 25.0
Benzene	2.141	2.127	0.3	-0.7	± 20.0
1,2-Dichloroethane	0.405	0.391	0.01	-3.7	± 25.0
Trichloroethene	0.594	0.579	0.1	-2.5	± 20.0
Methylcyclohexane	0.733	0.734	0.2	0.1	± 25.0
1,2-Dichloropropane	0.502	0.489	0.1	-2.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 12:03

Lab File ID: VI049349.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00527 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.731	0.09	-0.2	± 20.0
cis-1,3-Dichloropropene	0.740	0.728	0.1	-1.6	± 20.0
4-Methyl-2-pentanone	0.258	0.262	0.01	1.3	± 30.0
Toluene	1.806	1.815	0.4	0.5	± 20.0
trans-1,3-Dichloropropene	0.567	0.562	0.01	-1	± 20.0
1,1,2-Trichloroethane	0.261	0.265	0.04	1.8	± 20.0
Tetrachloroethene	0.390	0.393	0.1	0.7	± 20.0
2-Hexanone	0.173	0.176	0.01	1.7	± 40.0
Dibromochloromethane	0.393	0.406	0.05	3.1	± 20.0
1,2-Dibromoethane	0.272	0.273	0.01	0.5	± 20.0
Chlorobenzene	1.083	1.103	0.4	1.9	± 20.0
Ethylbenzene	1.866	1.944	0.5	4.1	± 20.0
o-Xylene	0.636	0.651	0.3	2.4	± 20.0
m,p-Xylene	0.680	0.699	0.2	2.8	± 20.0
Styrene	1.055	1.096	0.2	3.9	± 20.0
Bromoform	0.466	0.460	0.01	-1.2	± 30.0
Isopropylbenzene	1.648	1.772	0.7	7.5	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.252	0.05	0.0	± 25.0
1,3-Dichlorobenzene	1.696	1.745	0.5	2.9	± 20.0
1,4-Dichlorobenzene	1.742	1.791	0.7	2.8	± 20.0
1,2-Dichlorobenzene	1.405	1.435	0.4	2.1	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.083	0.01	-2.7	± 40.0
1,2,4-trichlorobenzene	0.751	0.814	0.3	8.5	± 30.0
1,2,3-Trichlorobenzene	0.556	0.598	0.2	7.7	± 40.0
Vinyl Chloride-d3	0.308	0.255	0.01	-17.3	± 30.0
Chloroethane-d5	0.170	0.163	0.01	-4.2	± 30.0
1,1-Dichloroethene-d2	0.725	0.667	0.01	-8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 12:03

Lab File ID: VI049349.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00527 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.080	0.01	19.8	± 40.0
Chloroform-d	0.783	0.798	0.01	1.8	± 20.0
1,2-Dichloroethane-d4	0.320	0.332	0.01	3.5	± 25.0
Benzene-d6	1.948	1.945	0.03	-0.1	± 20.0
1,2-Dichloropropane-d6	0.548	0.553	0.1	1.0	± 20.0
Toluene-d8	1.437	1.414	0.2	-1.6	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.215	0.01	-0.3	± 25.0
2-Hexanone-d5	0.068	0.078	0.01	14.2	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.278	0.01	11.5	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.892	0.06	1.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 20:37

Lab File ID: VI049360.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00528 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.532	0.01	-5.6	± 50.0
Chloromethane	0.482	0.416	0.01	-13.8	± 50.0
Vinyl chloride	0.337	0.331	0.01	-1.8	± 50.0
Bromomethane	0.163	0.149	0.01	-8.5	± 50.0
Chloroethane	0.144	0.150	0.01	4.2	± 50.0
Trichlorofluoromethane	0.471	0.451	0.01	-4.4	± 50.0
1,1-Dichloroethene	0.404	0.417	0.02	3.3	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.446	0.01	3.4	± 50.0
Acetone	0.041	0.043	0.01	5.3	± 50.0
Carbon disulfide	1.463	1.425	0.01	-2.6	± 25.0
Methyl Acetate	0.118	0.127	0.01	7.5	± 50.0
Methylene chloride	0.445	0.447	0.01	0.5	± 50.0
trans-1,2-Dichloroethene	0.446	0.467	0.07	4.6	± 25.0
Methyl tert-butyl Ether	0.737	0.792	0.01	7.5	± 50.0
1,1-Dichloroethane	0.756	0.794	0.1	5.0	± 25.0
cis-1,2-Dichloroethene	0.459	0.491	0.1	7.1	± 25.0
2-Butanone	0.075	0.082	0.01	9.9	± 50.0
Bromochloromethane	0.184	0.185	0.02	0.8	± 25.0
Chloroform	0.804	0.868	0.04	8.0	± 25.0
1,1,1-Trichloroethane	0.949	0.982	0.05	3.4	± 25.0
Cyclohexane	0.837	0.809	0.1	-3.4	± 50.0
Carbon tetrachloride	0.829	0.846	0.02	2.0	± 50.0
Benzene	2.141	2.218	0.3	3.6	± 25.0
1,2-Dichloroethane	0.405	0.419	0.01	3.2	± 50.0
Trichloroethene	0.594	0.600	0.1	1.1	± 25.0
Methylcyclohexane	0.733	0.711	0.2	-2.9	± 50.0
1,2-Dichloropropane	0.502	0.503	0.1	0.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 20:37

Lab File ID: VI049360.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00528 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.734	0.09	0.3	± 25.0
cis-1,3-Dichloropropene	0.740	0.731	0.1	-1.3	± 25.0
4-Methyl-2-pentanone	0.258	0.268	0.01	3.9	± 50.0
Toluene	1.806	1.891	0.4	4.7	± 25.0
trans-1,3-Dichloropropene	0.567	0.572	0.01	0.9	± 25.0
1,1,2-Trichloroethane	0.261	0.277	0.04	6.1	± 25.0
Tetrachloroethene	0.390	0.407	0.1	4.3	± 25.0
2-Hexanone	0.173	0.178	0.01	2.8	± 50.0
Dibromochloromethane	0.393	0.426	0.05	8.4	± 25.0
1,2-Dibromoethane	0.272	0.284	0.01	4.5	± 25.0
Chlorobenzene	1.083	1.172	0.4	8.2	± 25.0
Ethylbenzene	1.866	2.034	0.5	9.0	± 25.0
o-Xylene	0.636	0.696	0.3	9.4	± 25.0
m,p-Xylene	0.680	0.739	0.2	8.7	± 25.0
Styrene	1.055	1.170	0.2	10.9	± 25.0
Bromoform	0.466	0.462	0.01	-1	± 50.0
Isopropylbenzene	1.648	1.885	0.7	14.4	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.271	0.05	7.6	± 25.0
1,3-Dichlorobenzene	1.696	1.792	0.5	5.7	± 25.0
1,4-Dichlorobenzene	1.742	1.767	0.7	1.4	± 25.0
1,2-Dichlorobenzene	1.405	1.520	0.4	8.2	± 25.0
1,2-Dibromo-3-chloropropane	0.086	0.092	0.01	7.7	± 50.0
1,2,4-trichlorobenzene	0.751	0.842	0.3	12.2	± 50.0
1,2,3-Trichlorobenzene	0.556	0.632	0.2	13.8	± 50.0
Vinyl Chloride-d3	0.308	0.254	0.01	-17.4	± 50.0
Chloroethane-d5	0.170	0.160	0.01	-6.2	± 50.0
1,1-Dichloroethene-d2	0.725	0.690	0.01	-4.9	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 20:37

Lab File ID: VI049360.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00528 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.088	0.01	31.5	± 50.0
Chloroform-d	0.783	0.859	0.01	9.7	± 25.0
1,2-Dichloroethane-d4	0.320	0.350	0.01	9.2	± 25.0
Benzene-d6	1.948	2.022	0.03	3.8	± 25.0
1,2-Dichloropropane-d6	0.548	0.580	0.1	5.8	± 25.0
Toluene-d8	1.437	1.475	0.2	2.7	± 25.0
trans-1,3-Dichloropropene-d4	0.216	0.219	0.01	1.6	± 25.0
2-Hexanone-d5	0.068	0.083	0.01	21.4	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.300	0.01	20.6	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.944	0.06	7.7	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/12/2016 Time: 10:41

Lab File ID: VR019133.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00556 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.218	0.214	0.01	-1.5	± 40.0
Chloromethane	0.239	0.217	0.01	-9.2	± 30.0
Vinyl chloride	0.229	0.216	0.01	-5.7	± 30.0
Bromomethane	0.130	0.119	0.01	-8.3	± 30.0
Chloroethane	0.131	0.125	0.01	-4.5	± 30.0
Trichlorofluoromethane	0.312	0.322	0.01	3.2	± 30.0
1,1-Dichloroethene	0.252	0.235	0.02	-7.1	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.241	0.232	0.01	-3.7	± 30.0
Acetone	0.023	0.021	0.01	-8.8	± 40.0
Carbon disulfide	0.504	0.508	0.01	0.7	± 25.0
Methyl Acetate	0.048	0.050	0.01	4.4	± 40.0
Methylene chloride	0.230	0.215	0.01	-6.6	± 30.0
trans-1,2-Dichloroethene	0.280	0.275	0.07	-1.5	± 20.0
Methyl tert-butyl Ether	0.332	0.308	0.01	-7.2	± 30.0
1,1-Dichloroethane	0.534	0.513	0.1	-3.8	± 20.0
cis-1,2-Dichloroethene	0.285	0.280	0.1	-1.5	± 20.0
2-Butanone	0.030	0.031	0.01	3.0	± 40.0
Bromochloromethane	0.092	0.088	0.02	-5.2	± 20.0
Chloroform	0.511	0.487	0.04	-4.8	± 20.0
1,1,1-Trichloroethane	0.497	0.492	0.05	-0.9	± 20.0
Cyclohexane	0.549	0.541	0.1	-1.6	± 25.0
Carbon tetrachloride	0.450	0.448	0.02	-0.4	± 25.0
Benzene	1.610	1.508	0.3	-6.3	± 20.0
1,2-Dichloroethane	0.233	0.221	0.01	-5.2	± 25.0
Trichloroethene	0.402	0.386	0.1	-4	± 20.0
Methylcyclohexane	0.556	0.530	0.2	-4.6	± 25.0
1,2-Dichloropropane	0.356	0.339	0.1	-4.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/12/2016 Time: 10:41

Lab File ID: VR019133.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00556 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.342	0.335	0.09	-1.9	± 20.0
cis-1,3-Dichloropropene	0.404	0.419	0.1	4.0	± 20.0
4-Methyl-2-pentanone	0.112	0.108	0.01	-3.1	± 30.0
Toluene	1.703	1.638	0.4	-3.8	± 20.0
trans-1,3-Dichloropropene	0.272	0.286	0.01	5.2	± 20.0
1,1,2-Trichloroethane	0.170	0.157	0.04	-8.1	± 20.0
Tetrachloroethene	0.310	0.299	0.1	-3.7	± 20.0
2-Hexanone	0.076	0.074	0.01	-2.4	± 40.0
Dibromochloromethane	0.171	0.165	0.05	-3.9	± 20.0
1,2-Dibromoethane	0.142	0.135	0.01	-5	± 20.0
Chlorobenzene	0.979	0.910	0.4	-7.1	± 20.0
Ethylbenzene	1.855	1.805	0.5	-2.7	± 20.0
o-Xylene	0.605	0.579	0.3	-4.4	± 20.0
m,p-Xylene	0.684	0.654	0.2	-4.4	± 20.0
Styrene	0.944	0.914	0.2	-3.2	± 20.0
Bromoform	0.156	0.151	0.01	-3.4	± 30.0
Isopropylbenzene	1.570	1.536	0.7	-2.2	± 25.0
1,1,2,2-Tetrachloroethane	0.139	0.128	0.05	-7.6	± 25.0
1,3-Dichlorobenzene	1.492	1.400	0.5	-6.2	± 20.0
1,4-Dichlorobenzene	1.540	1.410	0.7	-8.4	± 20.0
1,2-Dichlorobenzene	1.234	1.152	0.4	-6.7	± 20.0
1,2-Dibromo-3-chloropropane	0.033	0.033	0.01	1.2	± 40.0
1,2,4-trichlorobenzene	0.711	0.675	0.3	-5.1	± 30.0
1,2,3-Trichlorobenzene	0.528	0.522	0.2	-1.1	± 40.0
Vinyl Chloride-d3	0.225	0.211	0.01	-6.4	± 30.0
Chloroethane-d5	0.160	0.155	0.01	-3.1	± 30.0
1,1-Dichloroethene-d2	0.519	0.484	0.01	-6.8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/12/2016 Time: 10:41

Lab File ID: VR019133.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00556 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.029	0.029	0.01	0.7	± 40.0
Chloroform-d	0.555	0.538	0.01	-3	± 20.0
1,2-Dichloroethane-d4	0.219	0.215	0.01	-1.9	± 25.0
Benzene-d6	1.604	1.521	0.03	-5.2	± 20.0
1,2-Dichloropropane-d6	0.415	0.395	0.1	-4.7	± 20.0
Toluene-d8	1.510	1.481	0.2	-1.9	± 20.0
trans-1,3-Dichloropropene-d4	0.109	0.110	0.01	1.4	± 25.0
2-Hexanone-d5	0.034	0.035	0.01	3.5	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.148	0.136	0.01	-8.3	± 25.0
1,2-Dichlorobenzene-d4	0.828	0.766	0.06	-7.5	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/12/2016 Time: 20:19

Lab File ID: VR019146.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00557 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.218	0.199	0.01	-8.8	± 50.0
Chloromethane	0.239	0.208	0.01	-12.6	± 50.0
Vinyl chloride	0.229	0.203	0.01	-11.3	± 50.0
Bromomethane	0.130	0.114	0.01	-12.3	± 50.0
Chloroethane	0.131	0.117	0.01	-10.6	± 50.0
Trichlorofluoromethane	0.312	0.273	0.01	-12.4	± 50.0
1,1-Dichloroethene	0.252	0.217	0.02	-14	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.241	0.196	0.01	-18.8	± 50.0
Acetone	0.023	0.021	0.01	-4.9	± 50.0
Carbon disulfide	0.504	0.416	0.01	-17.6	± 25.0
Methyl Acetate	0.048	0.052	0.01	9.0	± 50.0
Methylene chloride	0.230	0.203	0.01	-11.8	± 50.0
trans-1,2-Dichloroethene	0.280	0.253	0.07	-9.6	± 25.0
Methyl tert-butyl Ether	0.332	0.345	0.01	4.2	± 50.0
1,1-Dichloroethane	0.534	0.496	0.1	-7.1	± 25.0
cis-1,2-Dichloroethene	0.285	0.268	0.1	-5.8	± 25.0
2-Butanone	0.030	0.033	0.01	7.9	± 50.0
Bromochloromethane	0.092	0.086	0.02	-6.6	± 25.0
Chloroform	0.511	0.477	0.04	-6.6	± 25.0
1,1,1-Trichloroethane	0.497	0.468	0.05	-5.8	± 25.0
Cyclohexane	0.549	0.467	0.1	-14.9	± 50.0
Carbon tetrachloride	0.450	0.412	0.02	-8.3	± 50.0
Benzene	1.610	1.407	0.3	-12.6	± 25.0
1,2-Dichloroethane	0.233	0.233	0.01	0.0	± 50.0
Trichloroethene	0.402	0.355	0.1	-11.7	± 25.0
Methylcyclohexane	0.556	0.459	0.2	-17.4	± 50.0
1,2-Dichloropropane	0.356	0.323	0.1	-9.2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/12/2016 Time: 20:19

Lab File ID: VR019146.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00557 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.342	0.332	0.09	-3	± 25.0
cis-1,3-Dichloropropene	0.404	0.393	0.1	-2.6	± 25.0
4-Methyl-2-pentanone	0.112	0.118	0.01	5.6	± 50.0
Toluene	1.703	1.473	0.4	-13.5	± 25.0
trans-1,3-Dichloropropene	0.272	0.275	0.01	1.3	± 25.0
1,1,2-Trichloroethane	0.170	0.158	0.04	-7.2	± 25.0
Tetrachloroethene	0.310	0.254	0.1	-18.3	± 25.0
2-Hexanone	0.076	0.079	0.01	4.1	± 50.0
Dibromochloromethane	0.171	0.163	0.05	-5	± 25.0
1,2-Dibromoethane	0.142	0.136	0.01	-4.5	± 25.0
Chlorobenzene	0.979	0.852	0.4	-13.1	± 25.0
Ethylbenzene	1.855	1.616	0.5	-12.9	± 25.0
o-Xylene	0.605	0.554	0.3	-8.5	± 25.0
m,p-Xylene	0.684	0.601	0.2	-12	± 25.0
Styrene	0.944	0.875	0.2	-7.3	± 25.0
Bromoform	0.156	0.138	0.01	-11.7	± 50.0
Isopropylbenzene	1.570	1.432	0.7	-8.8	± 25.0
1,1,2,2-Tetrachloroethane	0.139	0.136	0.05	-1.7	± 25.0
1,3-Dichlorobenzene	1.492	1.355	0.5	-9.2	± 25.0
1,4-Dichlorobenzene	1.540	1.372	0.7	-10.9	± 25.0
1,2-Dichlorobenzene	1.234	1.122	0.4	-9.1	± 25.0
1,2-Dibromo-3-chloropropane	0.033	0.036	0.01	7.6	± 50.0
1,2,4-trichlorobenzene	0.711	0.664	0.3	-6.5	± 50.0
1,2,3-Trichlorobenzene	0.528	0.510	0.2	-3.4	± 50.0
Vinyl Chloride-d3	0.225	0.194	0.01	-13.6	± 50.0
Chloroethane-d5	0.160	0.146	0.01	-8.8	± 50.0
1,1-Dichloroethene-d2	0.519	0.451	0.01	-13.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/12/2016 Time: 20:19

Lab File ID: VR019146.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00557 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.029	0.033	0.01	12.8	± 50.0
Chloroform-d	0.555	0.517	0.01	-6.9	± 25.0
1,2-Dichloroethane-d4	0.219	0.217	0.01	-1.3	± 25.0
Benzene-d6	1.604	1.404	0.03	-12.5	± 25.0
1,2-Dichloropropane-d6	0.415	0.373	0.1	-10.1	± 25.0
Toluene-d8	1.510	1.332	0.2	-11.8	± 25.0
trans-1,3-Dichloropropene-d4	0.109	0.102	0.01	-6.3	± 25.0
2-Hexanone-d5	0.034	0.038	0.01	12.3	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.148	0.145	0.01	-2	± 25.0
1,2-Dichlorobenzene-d4	0.828	0.756	0.06	-8.7	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/13/2016 Time: 11:17

Lab File ID: VR019148.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00558 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.218	0.194	0.01	-10.7	± 40.0
Chloromethane	0.239	0.209	0.01	-12.4	± 30.0
Vinyl chloride	0.229	0.203	0.01	-11.3	± 30.0
Bromomethane	0.130	0.113	0.01	-12.6	± 30.0
Chloroethane	0.131	0.120	0.01	-8.3	± 30.0
Trichlorofluoromethane	0.312	0.302	0.01	-3	± 30.0
1,1-Dichloroethene	0.252	0.222	0.02	-11.9	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.241	0.205	0.01	-15.1	± 30.0
Acetone	0.023	0.019	0.01	-15.5	± 40.0
Carbon disulfide	0.504	0.451	0.01	-10.6	± 25.0
Methyl Acetate	0.048	0.046	0.01	-4.4	± 40.0
Methylene chloride	0.230	0.198	0.01	-13.9	± 30.0
trans-1,2-Dichloroethene	0.280	0.255	0.07	-8.9	± 20.0
Methyl tert-butyl Ether	0.332	0.288	0.01	-13.1	± 30.0
1,1-Dichloroethane	0.534	0.478	0.1	-10.5	± 20.0
cis-1,2-Dichloroethene	0.285	0.259	0.1	-9.2	± 20.0
2-Butanone	0.030	0.028	0.01	-6.6	± 40.0
Bromochloromethane	0.092	0.082	0.02	-10.9	± 20.0
Chloroform	0.511	0.460	0.04	-9.9	± 20.0
1,1,1-Trichloroethane	0.497	0.491	0.05	-1.2	± 20.0
Cyclohexane	0.549	0.517	0.1	-5.9	± 25.0
Carbon tetrachloride	0.450	0.451	0.02	0.3	± 25.0
Benzene	1.610	1.473	0.3	-8.6	± 20.0
1,2-Dichloroethane	0.233	0.213	0.01	-8.6	± 25.0
Trichloroethene	0.402	0.383	0.1	-4.7	± 20.0
Methylcyclohexane	0.556	0.523	0.2	-6	± 25.0
1,2-Dichloropropane	0.356	0.321	0.1	-9.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/13/2016 Time: 11:17

Lab File ID: VR019148.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00558 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.342	0.332	0.09	-2.8	± 20.0
cis-1,3-Dichloropropene	0.404	0.401	0.1	-0.5	± 20.0
4-Methyl-2-pentanone	0.112	0.104	0.01	-6.6	± 30.0
Toluene	1.703	1.556	0.4	-8.7	± 20.0
trans-1,3-Dichloropropene	0.272	0.265	0.01	-2.8	± 20.0
1,1,2-Trichloroethane	0.170	0.146	0.04	-14.4	± 20.0
Tetrachloroethene	0.310	0.283	0.1	-8.9	± 20.0
2-Hexanone	0.076	0.069	0.01	-9.2	± 40.0
Dibromochloromethane	0.171	0.165	0.05	-3.6	± 20.0
1,2-Dibromoethane	0.142	0.125	0.01	-12	± 20.0
Chlorobenzene	0.979	0.880	0.4	-10.1	± 20.0
Ethylbenzene	1.855	1.707	0.5	-7.9	± 20.0
o-Xylene	0.605	0.567	0.3	-6.4	± 20.0
m,p-Xylene	0.684	0.631	0.2	-7.8	± 20.0
Styrene	0.944	0.870	0.2	-7.9	± 20.0
Bromoform	0.156	0.144	0.01	-7.5	± 30.0
Isopropylbenzene	1.570	1.496	0.7	-4.7	± 25.0
1,1,2,2-Tetrachloroethane	0.139	0.120	0.05	-13.1	± 25.0
1,3-Dichlorobenzene	1.492	1.380	0.5	-7.5	± 20.0
1,4-Dichlorobenzene	1.540	1.354	0.7	-12.1	± 20.0
1,2-Dichlorobenzene	1.234	1.089	0.4	-11.8	± 20.0
1,2-Dibromo-3-chloropropane	0.033	0.032	0.01	-4.2	± 40.0
1,2,4-trichlorobenzene	0.711	0.584	0.3	-17.9	± 30.0
1,2,3-Trichlorobenzene	0.528	0.419	0.2	-20.7	± 40.0
Vinyl Chloride-d3	0.225	0.198	0.01	-11.9	± 30.0
Chloroethane-d5	0.160	0.147	0.01	-8	± 30.0
1,1-Dichloroethene-d2	0.519	0.459	0.01	-11.5	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/13/2016 Time: 11:17

Lab File ID: VR019148.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00558 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.029	0.028	0.01	-2.8	± 40.0
Chloroform-d	0.555	0.525	0.01	-5.3	± 20.0
1,2-Dichloroethane-d4	0.219	0.215	0.01	-2.1	± 25.0
Benzene-d6	1.604	1.524	0.03	-5	± 20.0
1,2-Dichloropropane-d6	0.415	0.397	0.1	-4.2	± 20.0
Toluene-d8	1.510	1.450	0.2	-4	± 20.0
trans-1,3-Dichloropropene-d4	0.109	0.108	0.01	-1.4	± 25.0
2-Hexanone-d5	0.034	0.035	0.01	1.8	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.148	0.138	0.01	-7.1	± 25.0
1,2-Dichlorobenzene-d4	0.828	0.761	0.06	-8.1	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/13/2016 Time: 18:14

Lab File ID: VR019160.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00559 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.218	0.202	0.01	-7	± 50.0
Chloromethane	0.239	0.202	0.01	-15.2	± 50.0
Vinyl chloride	0.229	0.210	0.01	-8.3	± 50.0
Bromomethane	0.130	0.116	0.01	-10.6	± 50.0
Chloroethane	0.131	0.122	0.01	-7.4	± 50.0
Trichlorofluoromethane	0.312	0.307	0.01	-1.6	± 50.0
1,1-Dichloroethene	0.252	0.217	0.02	-14.2	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.241	0.206	0.01	-14.7	± 50.0
Acetone	0.023	0.021	0.01	-8	± 50.0
Carbon disulfide	0.504	0.397	0.01	-21.2	± 25.0
Methyl Acetate	0.048	0.046	0.01	-3.1	± 50.0
Methylene chloride	0.230	0.198	0.01	-14	± 50.0
trans-1,2-Dichloroethene	0.280	0.268	0.07	-4.2	± 25.0
Methyl tert-butyl Ether	0.332	0.321	0.01	-3.1	± 50.0
1,1-Dichloroethane	0.534	0.514	0.1	-3.8	± 25.0
cis-1,2-Dichloroethene	0.285	0.273	0.1	-4.2	± 25.0
2-Butanone	0.030	0.031	0.01	2.0	± 50.0
Bromochloromethane	0.092	0.086	0.02	-6.7	± 25.0
Chloroform	0.511	0.494	0.04	-3.3	± 25.0
1,1,1-Trichloroethane	0.497	0.498	0.05	0.1	± 25.0
Cyclohexane	0.549	0.529	0.1	-3.8	± 50.0
Carbon tetrachloride	0.450	0.459	0.02	2.1	± 50.0
Benzene	1.610	1.510	0.3	-6.2	± 25.0
1,2-Dichloroethane	0.233	0.229	0.01	-1.9	± 50.0
Trichloroethene	0.402	0.392	0.1	-2.5	± 25.0
Methylcyclohexane	0.556	0.527	0.2	-5.3	± 50.0
1,2-Dichloropropane	0.356	0.336	0.1	-5.5	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/13/2016 Time: 18:14

Lab File ID: VR019160.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00559 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.342	0.338	0.09	-1.2	± 25.0
cis-1,3-Dichloropropene	0.404	0.411	0.1	1.8	± 25.0
4-Methyl-2-pentanone	0.112	0.114	0.01	2.0	± 50.0
Toluene	1.703	1.613	0.4	-5.3	± 25.0
trans-1,3-Dichloropropene	0.272	0.272	0.01	-0.2	± 25.0
1,1,2-Trichloroethane	0.170	0.161	0.04	-5.5	± 25.0
Tetrachloroethene	0.310	0.286	0.1	-7.9	± 25.0
2-Hexanone	0.076	0.075	0.01	-1.7	± 50.0
Dibromochloromethane	0.171	0.165	0.05	-3.6	± 25.0
1,2-Dibromoethane	0.142	0.130	0.01	-8.4	± 25.0
Chlorobenzene	0.979	0.889	0.4	-9.3	± 25.0
Ethylbenzene	1.855	1.764	0.5	-4.9	± 25.0
o-Xylene	0.605	0.578	0.3	-4.5	± 25.0
m,p-Xylene	0.684	0.643	0.2	-5.9	± 25.0
Styrene	0.944	0.902	0.2	-4.5	± 25.0
Bromoform	0.156	0.137	0.01	-12.3	± 50.0
Isopropylbenzene	1.570	1.510	0.7	-3.8	± 25.0
1,1,2,2-Tetrachloroethane	0.139	0.129	0.05	-6.6	± 25.0
1,3-Dichlorobenzene	1.492	1.434	0.5	-3.9	± 25.0
1,4-Dichlorobenzene	1.540	1.409	0.7	-8.5	± 25.0
1,2-Dichlorobenzene	1.234	1.171	0.4	-5.2	± 25.0
1,2-Dibromo-3-chloropropane	0.033	0.033	0.01	-0.3	± 50.0
1,2,4-trichlorobenzene	0.711	0.700	0.3	-1.6	± 50.0
1,2,3-Trichlorobenzene	0.528	0.526	0.2	-0.5	± 50.0
Vinyl Chloride-d3	0.225	0.195	0.01	-13.5	± 50.0
Chloroethane-d5	0.160	0.151	0.01	-5.8	± 50.0
1,1-Dichloroethene-d2	0.519	0.434	0.01	-16.2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/13/2016 Time: 18:14

Lab File ID: VR019160.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00559 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.029	0.032	0.01	11.1	± 50.0
Chloroform-d	0.555	0.542	0.01	-2.2	± 25.0
1,2-Dichloroethane-d4	0.219	0.223	0.01	1.9	± 25.0
Benzene-d6	1.604	1.521	0.03	-5.2	± 25.0
1,2-Dichloropropane-d6	0.415	0.398	0.1	-4	± 25.0
Toluene-d8	1.510	1.428	0.2	-5.4	± 25.0
trans-1,3-Dichloropropene-d4	0.109	0.104	0.01	-4.6	± 25.0
2-Hexanone-d5	0.034	0.037	0.01	8.5	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.148	0.142	0.01	-4.2	± 25.0
1,2-Dichlorobenzene-d4	0.828	0.791	0.06	-4.5	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/16/2016 Time: 10:39

Lab File ID: VR019162.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00560 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.218	0.196	0.01	-9.9	± 40.0
Chloromethane	0.239	0.221	0.01	-7.4	± 30.0
Vinyl chloride	0.229	0.227	0.01	-0.7	± 30.0
Bromomethane	0.130	0.126	0.01	-2.9	± 30.0
Chloroethane	0.131	0.138	0.01	5.3	± 30.0
Trichlorofluoromethane	0.312	0.353	0.01	13	± 30.0
1,1-Dichloroethene	0.252	0.233	0.02	-7.8	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.241	0.215	0.01	-10.9	± 30.0
Acetone	0.023	0.016	0.01	-27	± 40.0
Carbon disulfide	0.504	0.513	0.01	1.7	± 25.0
Methyl Acetate	0.048	0.041	0.01	-13.2	± 40.0
Methylene chloride	0.230	0.193	0.01	-16.2	± 30.0
trans-1,2-Dichloroethene	0.280	0.244	0.07	-12.6	± 20.0
Methyl tert-butyl Ether	0.332	0.252	0.01	-24	± 30.0
1,1-Dichloroethane	0.534	0.464	0.1	-13.1	± 20.0
cis-1,2-Dichloroethene	0.285	0.245	0.1	-13.8	± 20.0
2-Butanone	0.030	0.025	0.01	-18.2	± 40.0
Bromochloromethane	0.092	0.075	0.02	-18.7	± 20.0
Chloroform	0.511	0.441	0.04	-13.6	± 20.0
1,1,1-Trichloroethane	0.497	0.475	0.05	-4.4	± 20.0
Cyclohexane	0.549	0.503	0.1	-8.4	± 25.0
Carbon tetrachloride	0.450	0.441	0.02	-2	± 25.0
Benzene	1.610	1.433	0.3	-11	± 20.0
1,2-Dichloroethane	0.233	0.196	0.01	-15.8	± 25.0
Trichloroethene	0.402	0.380	0.1	-5.4	± 20.0
Methylcyclohexane	0.556	0.495	0.2	-11	± 25.0
1,2-Dichloropropane	0.356	0.312	0.1	-12.3	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/16/2016 Time: 10:39

Lab File ID: VR019162.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00560 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.342	0.325	0.09	-4.9	± 20.0
cis-1,3-Dichloropropene	0.404	0.399	0.1	-1	± 20.0
4-Methyl-2-pentanone	0.112	0.090	0.01	-18.9	± 30.0
Toluene	1.703	1.546	0.4	-9.2	± 20.0
trans-1,3-Dichloropropene	0.272	0.262	0.01	-3.6	± 20.0
1,1,2-Trichloroethane	0.170	0.142	0.04	-16.5	± 20.0
Tetrachloroethene	0.310	0.286	0.1	-7.8	± 20.0
2-Hexanone	0.076	0.061	0.01	-20	± 40.0
Dibromochloromethane	0.171	0.154	0.05	-10	± 20.0
1,2-Dibromoethane	0.142	0.117	0.01	-17.6	± 20.0
Chlorobenzene	0.979	0.861	0.4	-12.1	± 20.0
Ethylbenzene	1.855	1.717	0.5	-7.4	± 20.0
o-Xylene	0.605	0.545	0.3	-9.9	± 20.0
m,p-Xylene	0.684	0.626	0.2	-8.4	± 20.0
Styrene	0.944	0.851	0.2	-9.9	± 20.0
Bromoform	0.156	0.134	0.01	-14	± 30.0
Isopropylbenzene	1.570	1.487	0.7	-5.3	± 25.0
1,1,2,2-Tetrachloroethane	0.139	0.110	0.05	-20.3	± 25.0
1,3-Dichlorobenzene	1.492	1.324	0.5	-11.3	± 20.0
1,4-Dichlorobenzene	1.540	1.300	0.7	-15.6	± 20.0
1,2-Dichlorobenzene	1.234	1.065	0.4	-13.7	± 20.0
1,2-Dibromo-3-chloropropane	0.033	0.029	0.01	-11.5	± 40.0
1,2,4-trichlorobenzene	0.711	0.610	0.3	-14.2	± 30.0
1,2,3-Trichlorobenzene	0.528	0.469	0.2	-11.2	± 40.0
Vinyl Chloride-d3	0.225	0.213	0.01	-5.4	± 30.0
Chloroethane-d5	0.160	0.167	0.01	4.6	± 30.0
1,1-Dichloroethene-d2	0.519	0.485	0.01	-6.5	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/16/2016 Time: 10:39

Lab File ID: VR019162.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00560 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.029	0.026	0.01	-10	± 40.0
Chloroform-d	0.555	0.498	0.01	-10.3	± 20.0
1,2-Dichloroethane-d4	0.219	0.196	0.01	-10.8	± 25.0
Benzene-d6	1.604	1.472	0.03	-8.2	± 20.0
1,2-Dichloropropane-d6	0.415	0.377	0.1	-9.2	± 20.0
Toluene-d8	1.510	1.422	0.2	-5.8	± 20.0
trans-1,3-Dichloropropene-d4	0.109	0.099	0.01	-9	± 25.0
2-Hexanone-d5	0.034	0.031	0.01	-8.8	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.148	0.126	0.01	-14.9	± 25.0
1,2-Dichlorobenzene-d4	0.828	0.726	0.06	-12.3	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/16/2016 Time: 16:02

Lab File ID: VR019170.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00561 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.218	0.226	0.01	4.0	± 50.0
Chloromethane	0.239	0.231	0.01	-3.1	± 50.0
Vinyl chloride	0.229	0.244	0.01	6.8	± 50.0
Bromomethane	0.130	0.136	0.01	5.1	± 50.0
Chloroethane	0.131	0.145	0.01	10.5	± 50.0
Trichlorofluoromethane	0.312	0.383	0.01	22.7	± 50.0
1,1-Dichloroethene	0.252	0.252	0.02	-0.2	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.241	0.249	0.01	3.4	± 50.0
Acetone	0.023	0.022	0.01	-4.9	± 50.0
Carbon disulfide	0.504	0.483	0.01	-4.3	± 25.0
Methyl Acetate	0.048	0.051	0.01	7.3	± 50.0
Methylene chloride	0.230	0.232	0.01	0.6	± 50.0
trans-1,2-Dichloroethene	0.280	0.296	0.07	5.9	± 25.0
Methyl tert-butyl Ether	0.332	0.320	0.01	-3.5	± 50.0
1,1-Dichloroethane	0.534	0.566	0.1	6.1	± 25.0
cis-1,2-Dichloroethene	0.285	0.302	0.1	6.0	± 25.0
2-Butanone	0.030	0.032	0.01	5.6	± 50.0
Bromochloromethane	0.092	0.094	0.02	1.9	± 25.0
Chloroform	0.511	0.543	0.04	6.3	± 25.0
1,1,1-Trichloroethane	0.497	0.567	0.05	14	± 25.0
Cyclohexane	0.549	0.597	0.1	8.6	± 50.0
Carbon tetrachloride	0.450	0.532	0.02	18.3	± 50.0
Benzene	1.610	1.695	0.3	5.3	± 25.0
1,2-Dichloroethane	0.233	0.245	0.01	5.1	± 50.0
Trichloroethene	0.402	0.445	0.1	10.9	± 25.0
Methylcyclohexane	0.556	0.608	0.2	9.3	± 50.0
1,2-Dichloropropane	0.356	0.375	0.1	5.3	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/16/2016 Time: 16:02

Lab File ID: VR019170.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00561 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.342	0.383	0.09	12	± 25.0
cis-1,3-Dichloropropene	0.404	0.471	0.1	16.8	± 25.0
4-Methyl-2-pentanone	0.112	0.121	0.01	8.3	± 50.0
Toluene	1.703	1.837	0.4	7.8	± 25.0
trans-1,3-Dichloropropene	0.272	0.321	0.01	18	± 25.0
1,1,2-Trichloroethane	0.170	0.173	0.04	1.6	± 25.0
Tetrachloroethene	0.310	0.333	0.1	7.3	± 25.0
2-Hexanone	0.076	0.082	0.01	8.3	± 50.0
Dibromochloromethane	0.171	0.190	0.05	11.1	± 25.0
1,2-Dibromoethane	0.142	0.144	0.01	1.4	± 25.0
Chlorobenzene	0.979	1.017	0.4	3.8	± 25.0
Ethylbenzene	1.855	2.027	0.5	9.3	± 25.0
o-Xylene	0.605	0.638	0.3	5.5	± 25.0
m,p-Xylene	0.684	0.737	0.2	7.8	± 25.0
Styrene	0.944	1.016	0.2	7.6	± 25.0
Bromoform	0.156	0.159	0.01	2.2	± 50.0
Isopropylbenzene	1.570	1.726	0.7	9.9	± 25.0
1,1,2,2-Tetrachloroethane	0.139	0.137	0.05	-1.5	± 25.0
1,3-Dichlorobenzene	1.492	1.575	0.5	5.5	± 25.0
1,4-Dichlorobenzene	1.540	1.588	0.7	3.1	± 25.0
1,2-Dichlorobenzene	1.234	1.277	0.4	3.5	± 25.0
1,2-Dibromo-3-chloropropane	0.033	0.032	0.01	-2.1	± 50.0
1,2,4-trichlorobenzene	0.711	0.699	0.3	-1.6	± 50.0
1,2,3-Trichlorobenzene	0.528	0.515	0.2	-2.5	± 50.0
Vinyl Chloride-d3	0.225	0.215	0.01	-4.7	± 50.0
Chloroethane-d5	0.160	0.171	0.01	7.0	± 50.0
1,1-Dichloroethene-d2	0.519	0.497	0.01	-4.2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4023

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_R Date Analyzed: 05/16/2016 Time: 16:02

Lab File ID: VR019170.D Init. Calib Date(s): 05/11/2016 05/11/2016

EPA Sample No.: VSTD00561 Init. Calib Time(s): 10:57 13:07

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.029	0.032	0.01	12.5	± 50.0
Chloroform-d	0.555	0.592	0.01	6.8	± 25.0
1,2-Dichloroethane-d4	0.219	0.235	0.01	7.3	± 25.0
Benzene-d6	1.604	1.684	0.03	5.0	± 25.0
1,2-Dichloropropane-d6	0.415	0.434	0.1	4.6	± 25.0
Toluene-d8	1.510	1.590	0.2	5.3	± 25.0
trans-1,3-Dichloropropene-d4	0.109	0.118	0.01	8.3	± 25.0
2-Hexanone-d5	0.034	0.041	0.01	19	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.148	0.152	0.01	2.7	± 25.0
1,2-Dichlorobenzene-d4	0.828	0.848	0.06	2.4	± 25.0

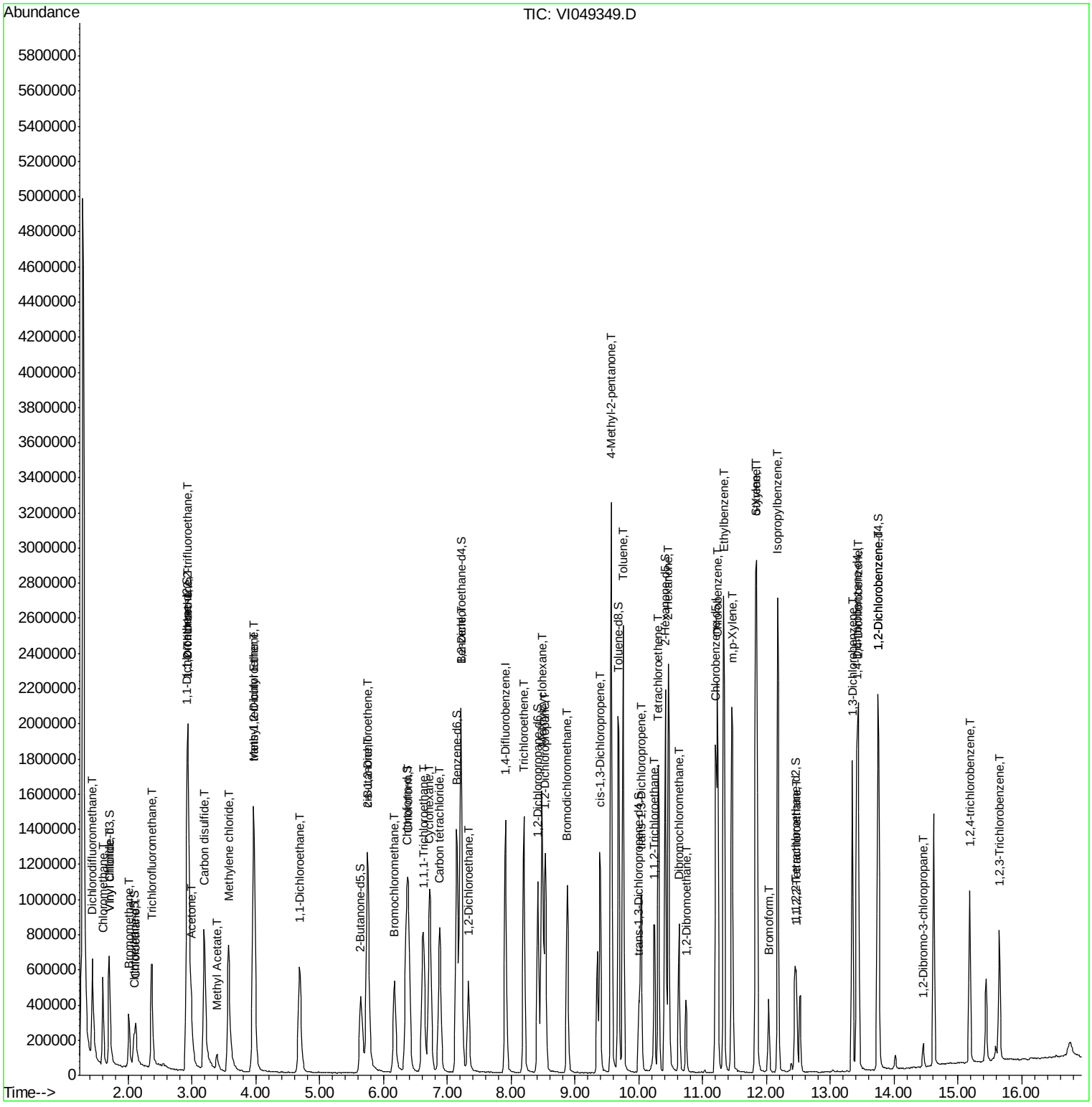
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
feifei
5/13/2016 12:27:53 PM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
feifei
5/13/2016 12:27:53 PM

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1295565	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	928274	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	374949	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	329772	4.13	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.60%			
7) Chloroethane-d5	2.08	69	211682	4.79	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.80%			
11) 1,1-Dichloroethene-d2	2.91	63	864483	4.60	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 92.00%			
20) 2-Butanone-d5	5.64	46	1034175	59.89	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 119.78%			
24) Chloroform-d	6.36	84	1033260	5.09	ug/L	0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.80%			
26) 1,2-Dichloroethane-d4	7.21	65	429502	5.17	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.40%			
32) Benzene-d6	7.14	84	1805395	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.80%			
36) 1,2-Dichloropropane-d6	8.41	67	513478	5.05	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.00%			
41) Toluene-d8	9.68	98	1312649	4.92	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.40%			
43) trans-1,3-Dichloropropene-	10.00	79	199797	4.99	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 99.80%			
46) 2-Hexanone-d5	10.41	63	722525	57.18	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 114.36%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	257869	5.58	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 111.60%			
63) 1,2-Dichlorobenzene-d4	13.74	152	334415	5.09	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	695673	4.77	ug/L	96
3) Chloromethane	1.60	50	526629	4.22	ug/L	100
5) Vinyl chloride	1.70	62	412648	4.72	ug/L	99
6) Bromomethane	2.01	94	192838	4.56	ug/L	97
8) Chloroethane	2.11	64	189504	5.08	ug/L	94
9) Trichlorofluoromethane	2.37	101	606296	4.97	ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	566400	5.07	ug/L	100
12) 1,1-Dichloroethene	2.93	96	520038	4.97	ug/L	95
13) Acetone	2.99	43	536964	50.14	ug/L	97
14) Carbon disulfide	3.19	76	1805293	4.76	ug/L	99
15) Methyl Acetate	3.39	43	156983	5.13	ug/L	98
16) Methylene chloride	3.57	84	563110	4.89	ug/L	98
17) Methyl tert-butyl Ether	3.96	73	961419	5.03	ug/L	98
18) trans-1,2-Dichloroethene	3.96	96	585645	5.07	ug/L	94
19) 1,1-Dichloroethane	4.68	63	974959	4.98	ug/L	96
21) 2-Butanone	5.76	43	1019124	52.60	ug/L	99
22) cis-1,2-Dichloroethene	5.75	96	603288m	5.07	ug/L	

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
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Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.17	128	234146	4.91	ug/L	97
25) Chloroform	6.39	83	1069679	5.13	ug/L	97
27) 1,2-Dichloroethane	7.33	62	505978	4.82	ug/L	97
29) 1,1,1-Trichloroethane	6.62	97	859724	4.88	ug/L	99
30) Cyclohexane	6.72	56	751873	4.84	ug/L	99
31) Carbon tetrachloride	6.88	117	755838	4.91	ug/L	100
33) Benzene	7.21	78	1974065	4.97	ug/L	100
34) Trichloroethene	8.20	95	537504	4.87	ug/L	96
35) Methylcyclohexane	8.48	83	681007	5.01	ug/L	99
37) 1,2-Dichloropropane	8.53	63	453558	4.86	ug/L	100
38) Bromodichloromethane	8.88	83	678172	4.99	ug/L	98
39) cis-1,3-Dichloropropene	9.39	75	675768	4.92	ug/L	99
40) 4-Methyl-2-pentanone	9.56	43	2430671	50.66	ug/L	99
42) Toluene	9.75	91	1684845	5.03	ug/L	98
44) trans-1,3-Dichloropropene	10.04	75	521293	4.95	ug/L	96
45) 1,1,2-Trichloroethane	10.24	97	246420	5.09	ug/L	96
47) Tetrachloroethene	10.30	164	364808	5.04	ug/L	93
48) 2-Hexanone	10.46	43	1630946	50.84	ug/L	99
49) Dibromochloromethane	10.63	129	376461	5.16	ug/L	99
50) 1,2-Dibromoethane	10.74	107	253859	5.03	ug/L	96
51) Chlorobenzene	11.23	112	1024301	5.09	ug/L	97
52) Ethylbenzene	11.33	91	1804270	5.21	ug/L	100
53) m,p-Xylene	11.45	106	648903	5.14	ug/L	96
54) o-Xylene	11.83	106	604496	5.12	ug/L	100
55) Styrene	11.85	104	1017342	5.20	ug/L	99
56) Isopropylbenzene	12.17	105	1644835	5.38	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	233788	5.00	ug/L	96
60) Bromoform	12.04	173	172649	4.94	ug/L	97
61) 1,3-Dichlorobenzene	13.34	146	654328	5.14	ug/L	98
62) 1,4-Dichlorobenzene	13.43	146	671508	5.14	ug/L	98
64) 1,2-Dichlorobenzene	13.76	146	537966	5.10	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.46	75	31225	4.86	ug/L	92
66) 1,2,4-trichlorobenzene	15.18	180	305336	5.42	ug/L	97
67) 1,2,3-Trichlorobenzene	15.65	180	224205	5.38	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
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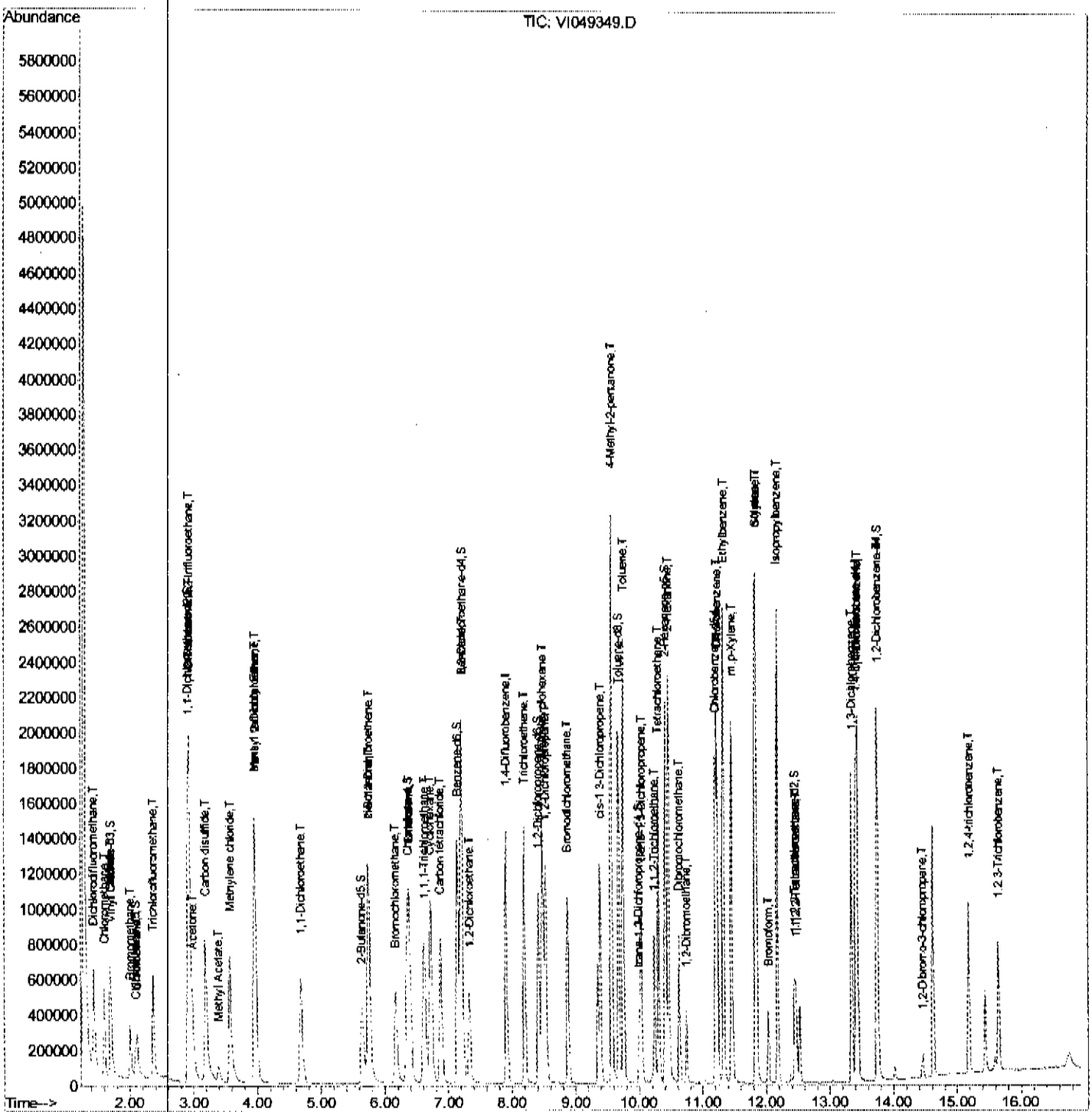

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
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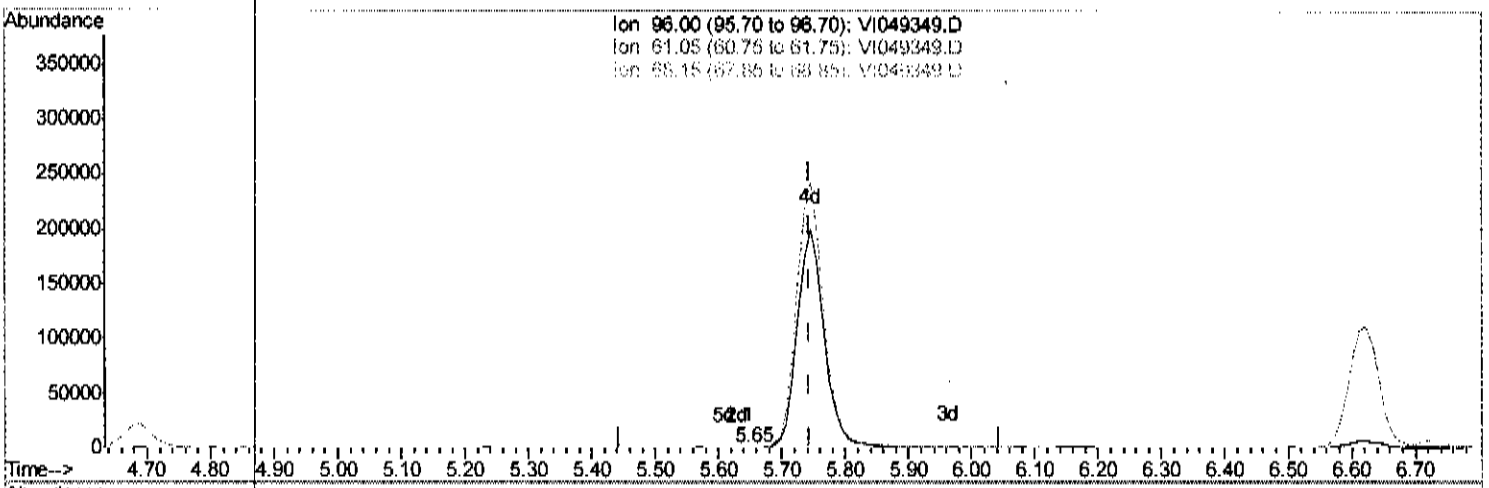

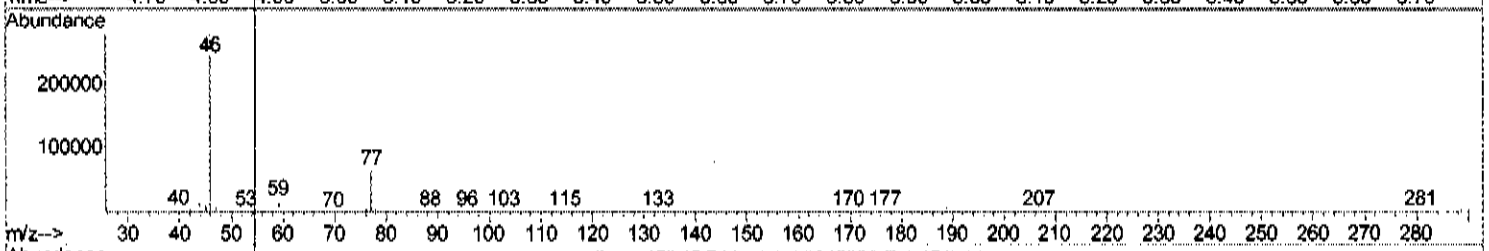

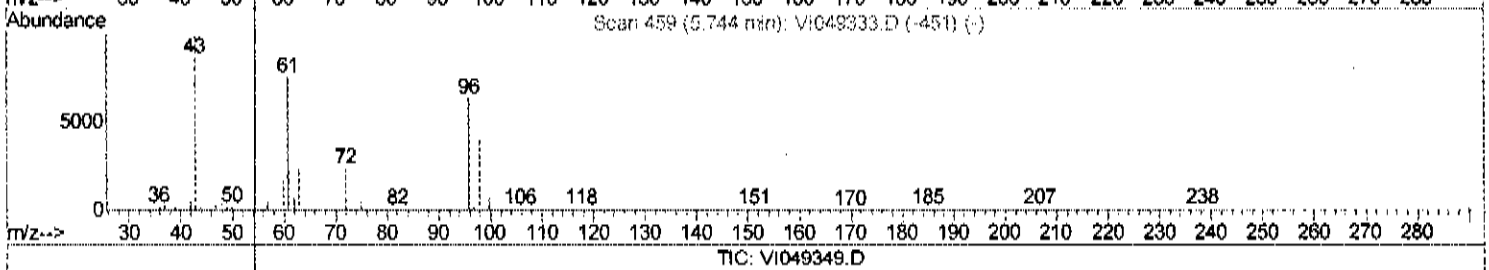

TIC: VI049349.D

(22) cis-1,2-Dichloroethene (T)

5.648min (-0.096) 0.00ug/L

response 424

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	128.57
68.15	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
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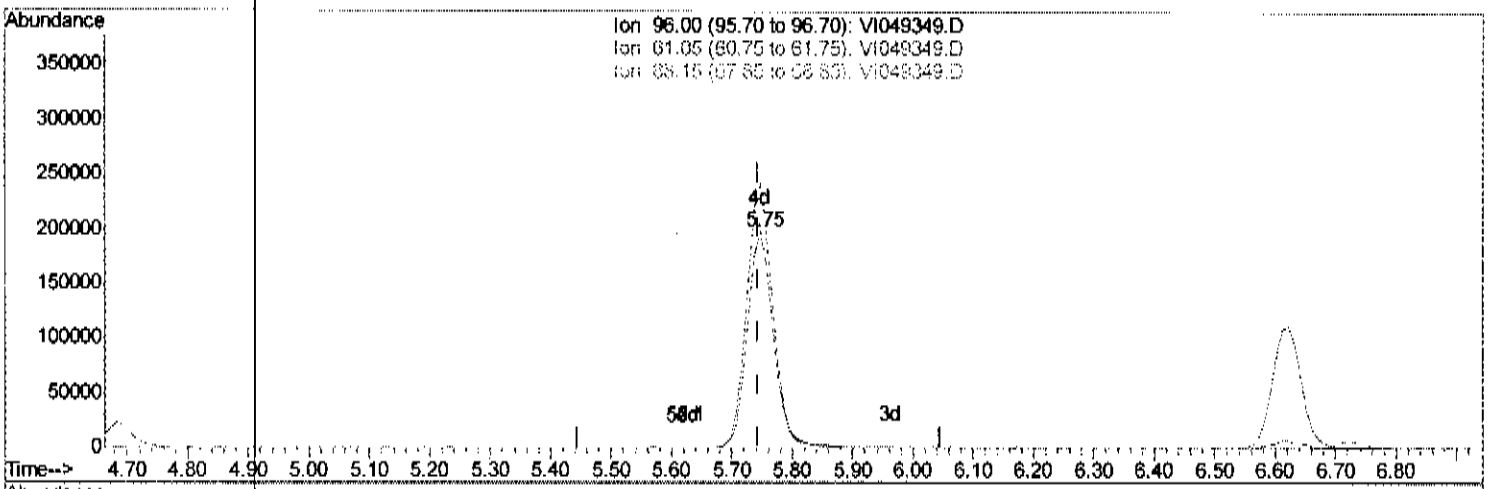

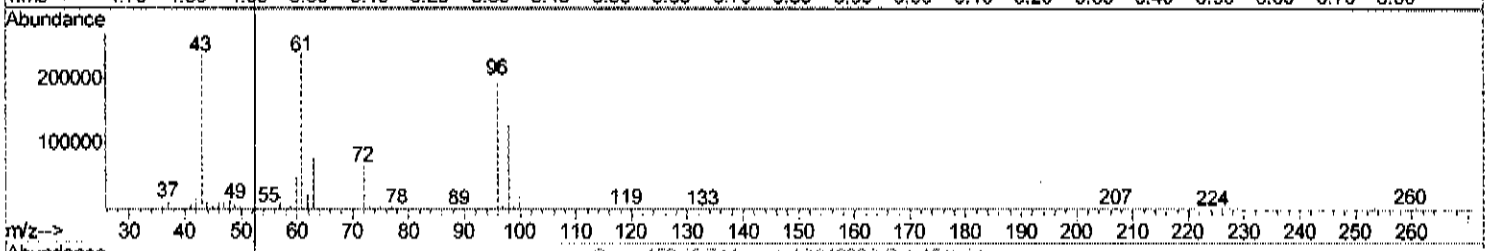

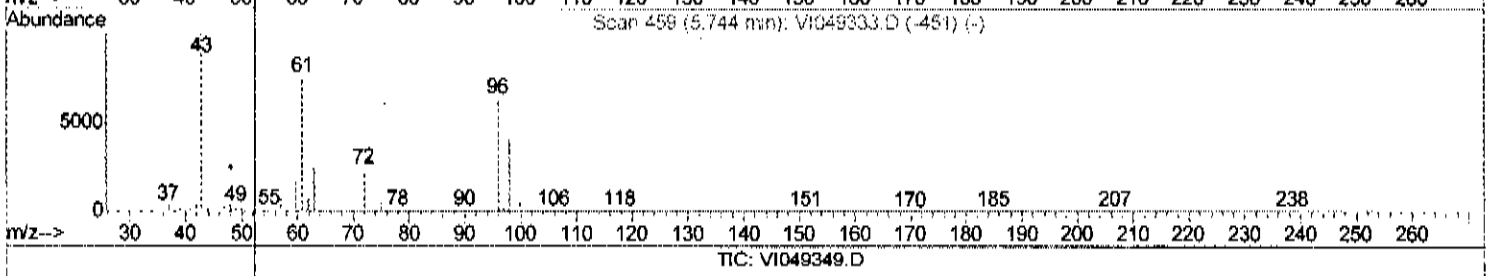

TIC: VI049349.D

(22) cis-1,2-Dichloroethene (T)

5.746min (+0.002) 5.07ug/L m

response 603288

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	121.72
68.15	0.00	0.14#
0.00	0.00	0.00

05/14/16 SY

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00527

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1295565	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	928274	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	374949	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	329772	4.13	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.60%			
7) Chloroethane-d5	2.08	69	211682	4.79	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.80%			
11) 1,1-Dichloroethene-d2	2.91	63	864483	4.60	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 92.00%			
20) 2-Butanone-d5	5.64	46	1034175	59.89	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 119.78%			
24) Chloroform-d	6.36	84	1033260	5.09	ug/L	0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.80%			
26) 1,2-Dichloroethane-d4	7.21	65	429502	5.17	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.40%			
32) Benzene-d6	7.14	84	1805395	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.80%			
36) 1,2-Dichloropropane-d6	8.41	67	513478	5.05	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.00%			
41) Toluene-d8	9.68	98	1312649	4.92	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.40%			
43) trans-1,3-Dichloropropene-	10.00	79	199797	4.99	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 99.80%			
46) 2-Hexanone-d5	10.41	63	722525	57.18	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 114.36%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	257869	5.58	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 111.60%			
63) 1,2-Dichlorobenzene-d4	13.74	152	334415	5.09	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	695673	4.77	ug/L	96
3) Chloromethane	1.60	50	526629	4.22	ug/L	100
5) Vinyl chloride	1.70	62	412648	4.72	ug/L	99
6) Bromomethane	2.01	94	192838	4.56	ug/L	97
8) Chloroethane	2.11	64	189504	5.08	ug/L	94
9) Trichlorofluoromethane	2.37	101	606296	4.97	ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	566400	5.07	ug/L	100
12) 1,1-Dichloroethene	2.93	96	520038	4.97	ug/L	95
13) Acetone	2.99	43	536964	50.14	ug/L	97
14) Carbon disulfide	3.19	76	1805293	4.76	ug/L	99
15) Methyl Acetate	3.39	43	156983	5.13	ug/L	98
16) Methylene chloride	3.57	84	563110	4.89	ug/L	98
17) Methyl tert-butyl Ether	3.96	73	961419	5.03	ug/L	98
18) trans-1,2-Dichloroethene	3.96	96	585645	5.07	ug/L	94
19) 1,1-Dichloroethane	4.68	63	974959	4.98	ug/L	96
21) 2-Butanone	5.76	43	1019124	52.60	ug/L	99
22) cis-1,2-Dichloroethene	5.75	96	603288m	5.07	ug/L	

05/14/16 FY

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00527

Manual Integrations APPROVED
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5/13/2016 12:27:53 PM

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
23) Bromochloromethane	6.17	128	234146	4.91 ug/L	97
25) Chloroform	6.39	83	1069679	5.13 ug/L	97
27) 1,2-Dichloroethane	7.33	62	505978	4.82 ug/L	97
29) 1,1,1-Trichloroethane	6.62	97	859724	4.88 ug/L	99
30) Cyclohexane	6.72	56	751873	4.84 ug/L	99
31) Carbon tetrachloride	6.88	117	755838	4.91 ug/L	100
33) Benzene	7.21	78	1974065	4.97 ug/L	100
34) Trichloroethene	8.20	95	537504	4.87 ug/L	96
35) Methylcyclohexane	8.48	83	681007	5.01 ug/L	99
37) 1,2-Dichloropropane	8.53	63	453558	4.86 ug/L	100
38) Bromodichloromethane	8.88	83	678172	4.99 ug/L	98
39) cis-1,3-Dichloropropene	9.39	75	675768	4.92 ug/L	99
40) 4-Methyl-2-pentanone	9.56	43	2430671	50.66 ug/L	99
42) Toluene	9.75	91	1684845	5.03 ug/L	98
44) trans-1,3-Dichloropropene	10.04	75	521293	4.95 ug/L	96
45) 1,1,2-Trichloroethane	10.24	97	246420	5.09 ug/L	96
47) Tetrachloroethene	10.30	164	364808	5.04 ug/L	93
48) 2-Hexanone	10.46	43	1630946	50.84 ug/L	99
49) Dibromochloromethane	10.63	129	376461	5.16 ug/L	99
50) 1,2-Dibromoethane	10.74	107	253859	5.03 ug/L	96
51) Chlorobenzene	11.23	112	1024301	5.09 ug/L	97
52) Ethylbenzene	11.33	91	1804270	5.21 ug/L	100
53) m,p-Xylene	11.45	106	648903	5.14 ug/L	96
54) o-Xylene	11.83	106	604496	5.12 ug/L	100
55) Styrene	11.85	104	1017342	5.20 ug/L	99
56) Isopropylbenzene	12.17	105	1644835	5.38 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	233788	5.00 ug/L	96
60) Bromoform	12.04	173	172649	4.94 ug/L	97
61) 1,3-Dichlorobenzene	13.34	146	654328	5.14 ug/L	98
62) 1,4-Dichlorobenzene	13.43	146	671508	5.14 ug/L	98
64) 1,2-Dichlorobenzene	13.76	146	537966	5.10 ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.46	75	31225	4.86 ug/L	92
66) 1,2,4-trichlorobenzene	15.18	180	305336	5.42 ug/L	97
67) 1,2,3-Trichlorobenzene	15.65	180	224205	5.38 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00528

Manual Integrations APPROVED
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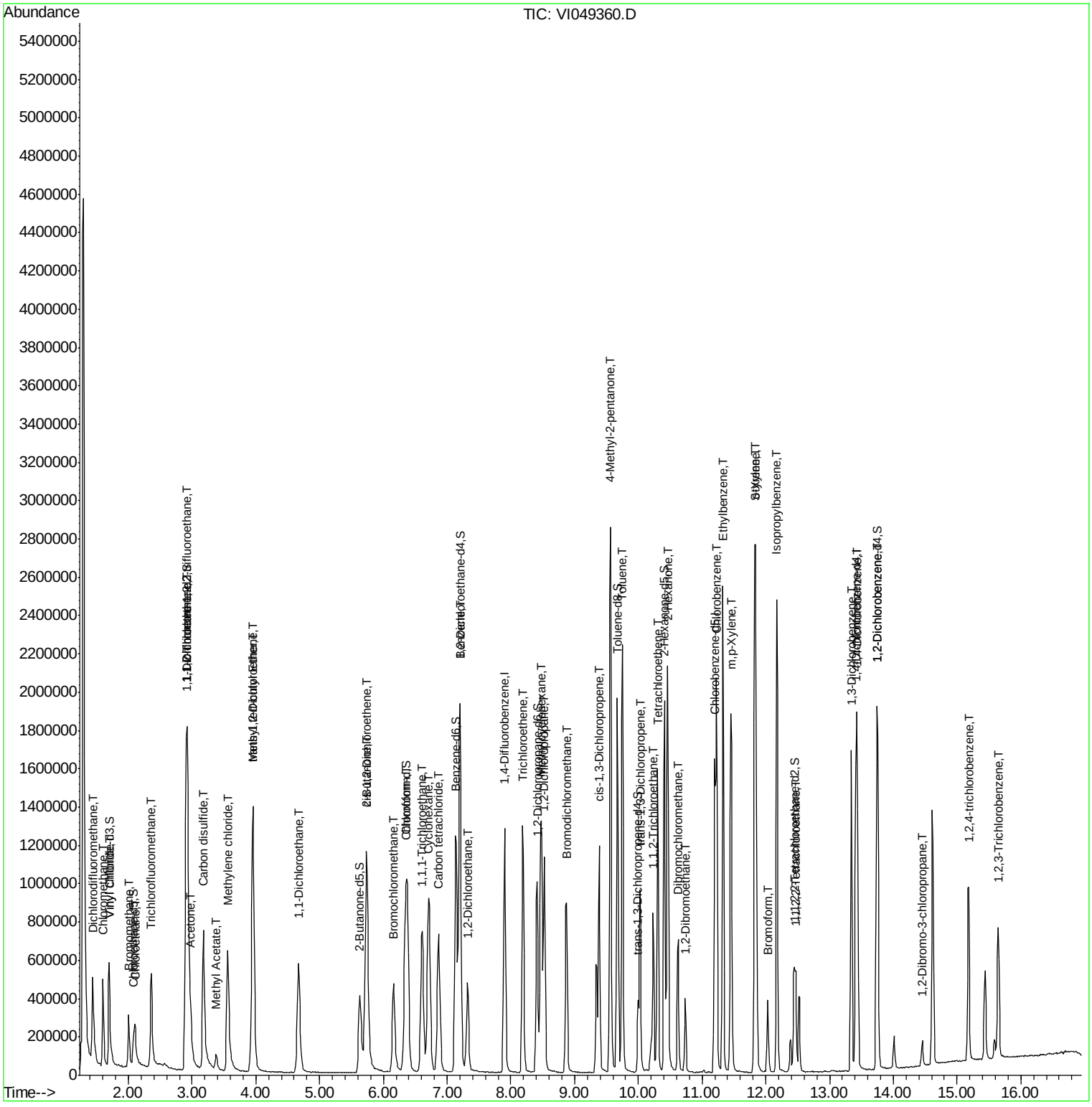

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Manual Integrations APPROVED
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Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1130489	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.20	117	808102	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	342879	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	287302	4.13	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.60%			
7) Chloroethane-d5	2.08	69	180739	4.69	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.80%			
11) 1,1-Dichloroethene-d2	2.90	63	779926	4.76	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 95.20%			
20) 2-Butanone-d5	5.63	46	990072	65.71	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 131.42%#			
24) Chloroform-d	6.34	84	971192	5.49	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 109.80%			
26) 1,2-Dichloroethane-d4	7.20	65	395559	5.46	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.20%			
32) Benzene-d6	7.13	84	1633659	5.19	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.80%			
36) 1,2-Dichloropropane-d6	8.41	67	468384	5.29	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 105.80%			
41) Toluene-d8	9.67	98	1192019	5.13	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.60%			
43) trans-1,3-Dichloropropene-	10.00	79	177131	5.08	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 101.60%			
46) 2-Hexanone-d5	10.41	63	668111	60.74	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 121.48%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	242675	6.03	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 120.60%#			
63) 1,2-Dichlorobenzene-d4	13.74	152	323596	5.38	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 107.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	601225	4.72	ug/L	99
3) Chloromethane	1.60	50	469986	4.31	ug/L	95
5) Vinyl chloride	1.70	62	374086	4.91	ug/L	99
6) Bromomethane	2.00	94	168687	4.58	ug/L	100
8) Chloroethane	2.11	64	169719	5.21	ug/L	99
9) Trichlorofluoromethane	2.36	101	509339	4.78	ug/L	100
10) 1,1,2-Trichloro-1,2,2-trif	2.93	101	503775	5.17	ug/L	99
12) 1,1-Dichloroethene	2.92	96	471346	5.17	ug/L	91
13) Acetone	2.98	43	491417	52.59	ug/L	98
14) Carbon disulfide	3.18	76	1611278	4.87	ug/L	99
15) Methyl Acetate	3.37	43	143503	5.38	ug/L	96
16) Methylene chloride	3.56	84	505487	5.03	ug/L	99
17) Methyl tert-butyl Ether	3.95	73	895763	5.37	ug/L	98
18) trans-1,2-Dichloroethene	3.95	96	527516	5.23	ug/L	97
19) 1,1-Dichloroethane	4.67	63	897405	5.25	ug/L	99
21) 2-Butanone	5.74	43	928701	54.93	ug/L	99
22) cis-1,2-Dichloroethene	5.73	96	555428m	5.35	ug/L	

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Manual Integrations APPROVED
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5/13/2016 12:27:59 PM

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.16	128	209657	5.04	ug/L		97
25) Chloroform	6.37	83	981326	5.40	ug/L		98
27) 1,2-Dichloroethane	7.32	62	473209	5.16	ug/L		97
29) 1,1,1-Trichloroethane	6.61	97	793676	5.17	ug/L		99
30) Cyclohexane	6.71	56	653440	4.83	ug/L		100
31) Carbon tetrachloride	6.87	117	683478	5.10	ug/L		99
33) Benzene	7.20	78	1792270	5.18	ug/L		100
34) Trichloroethene	8.19	95	485204	5.05	ug/L		97
35) Methylcyclohexane	8.48	83	574862	4.85	ug/L		99
37) 1,2-Dichloropropane	8.52	63	406410	5.01	ug/L		99
38) Bromodichloromethane	8.87	83	593029	5.01	ug/L		99
39) cis-1,3-Dichloropropene	9.39	75	590353	4.94	ug/L		100
40) 4-Methyl-2-pentanone	9.56	43	2169012	51.93	ug/L		100
42) Toluene	9.75	91	1528146	5.24	ug/L		98
44) trans-1,3-Dichloropropene	10.03	75	462356	5.04	ug/L		97
45) 1,1,2-Trichloroethane	10.23	97	223574	5.31	ug/L		95
47) Tetrachloroethene	10.30	164	328912	5.22	ug/L		96
48) 2-Hexanone	10.46	43	1435500	51.40	ug/L		99
49) Dibromochloromethane	10.63	129	344430	5.42	ug/L		98
50) 1,2-Dibromoethane	10.73	107	229770	5.23	ug/L		97
51) Chlorobenzene	11.23	112	946789	5.41	ug/L		98
52) Ethylbenzene	11.33	91	1643567	5.45	ug/L		99
53) m,p-Xylene	11.45	106	597153	5.43	ug/L		94
54) o-Xylene	11.83	106	562263	5.47	ug/L		99
55) Styrene	11.85	104	945478	5.55	ug/L		99
56) Isopropylbenzene	12.17	105	1522900	5.72	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.47	83	218971	5.38	ug/L		98
60) Bromoform	12.03	173	158286	4.95	ug/L		99
61) 1,3-Dichlorobenzene	13.34	146	614579	5.28	ug/L		99
62) 1,4-Dichlorobenzene	13.43	146	605763	5.07	ug/L		99
64) 1,2-Dichlorobenzene	13.76	146	521275	5.41	ug/L		97
65) 1,2-Dibromo-3-chloropropan	14.45	75	31604	5.38	ug/L	#	77
66) 1,2,4-trichlorobenzene	15.18	180	288703	5.61	ug/L		97
67) 1,2,3-Trichlorobenzene	15.65	180	216837	5.69	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_1\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00528

Manual Integrations APPROVED
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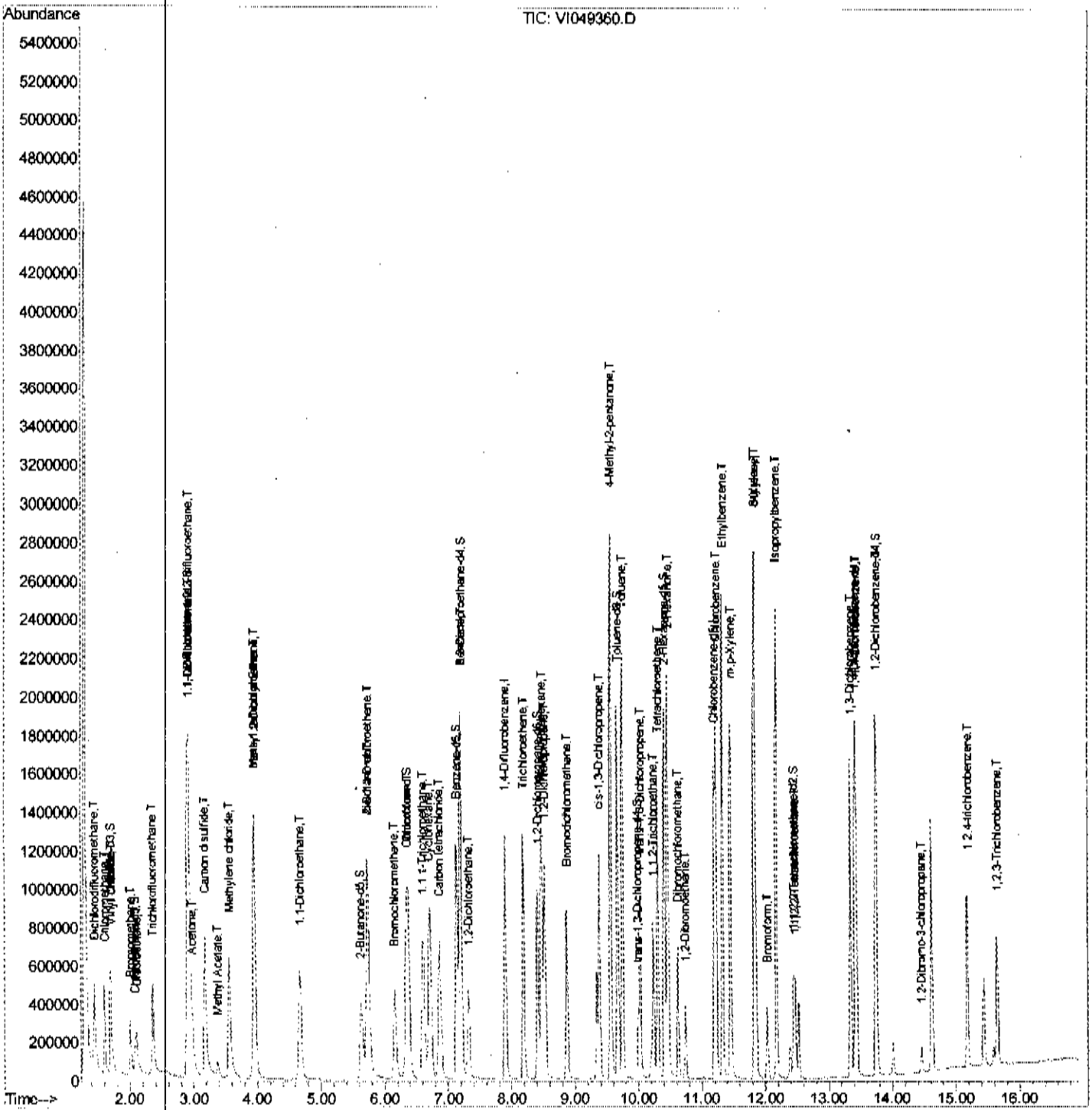

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:14 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00528

Manual Integrations APPROVED
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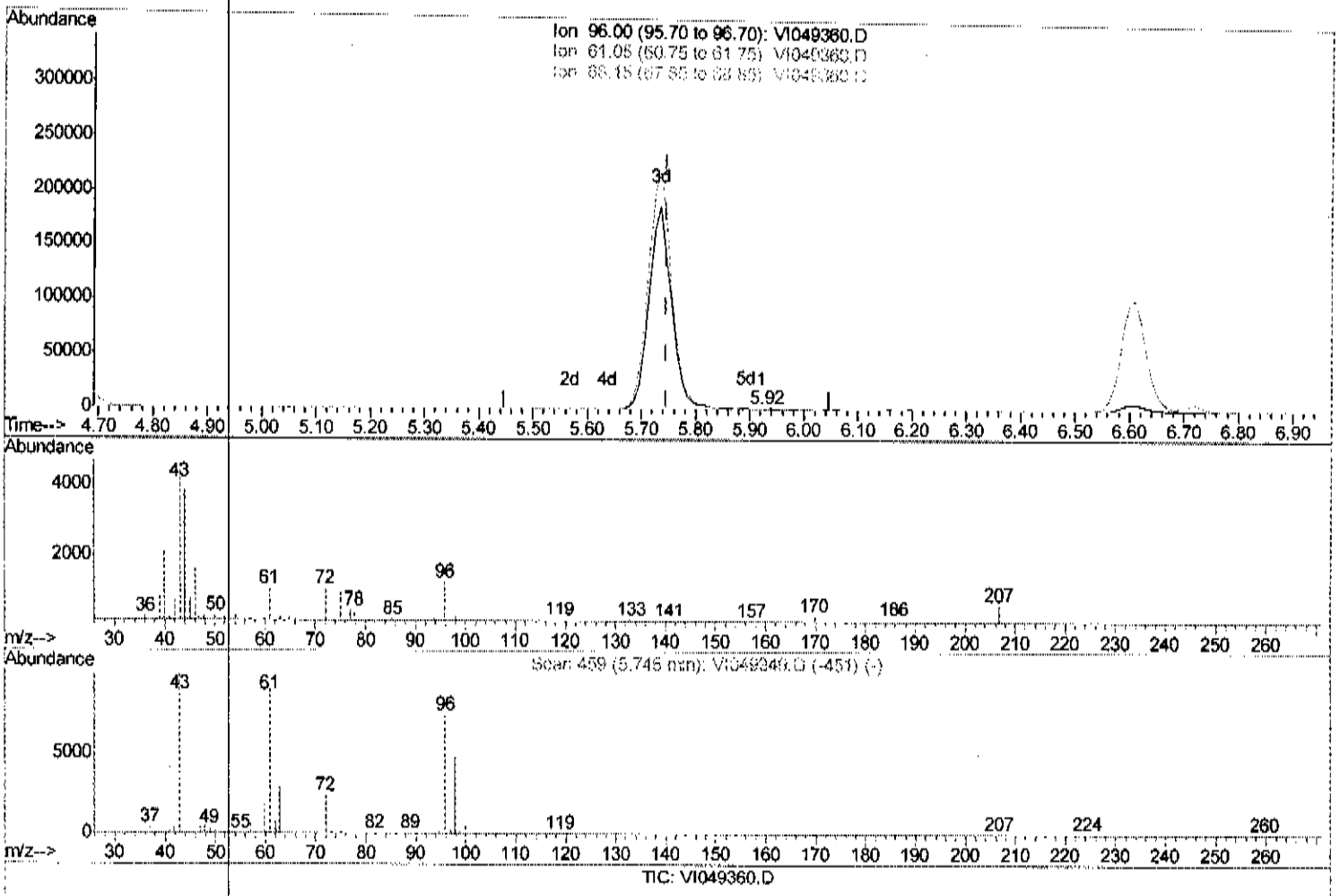

(22) cis-1,2-Dichloroethene (T)

5.922min (+0.176) 0.01ug/L

response 1364

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	83.74
68.15	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:14 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00528

Manual Integrations APPROVED
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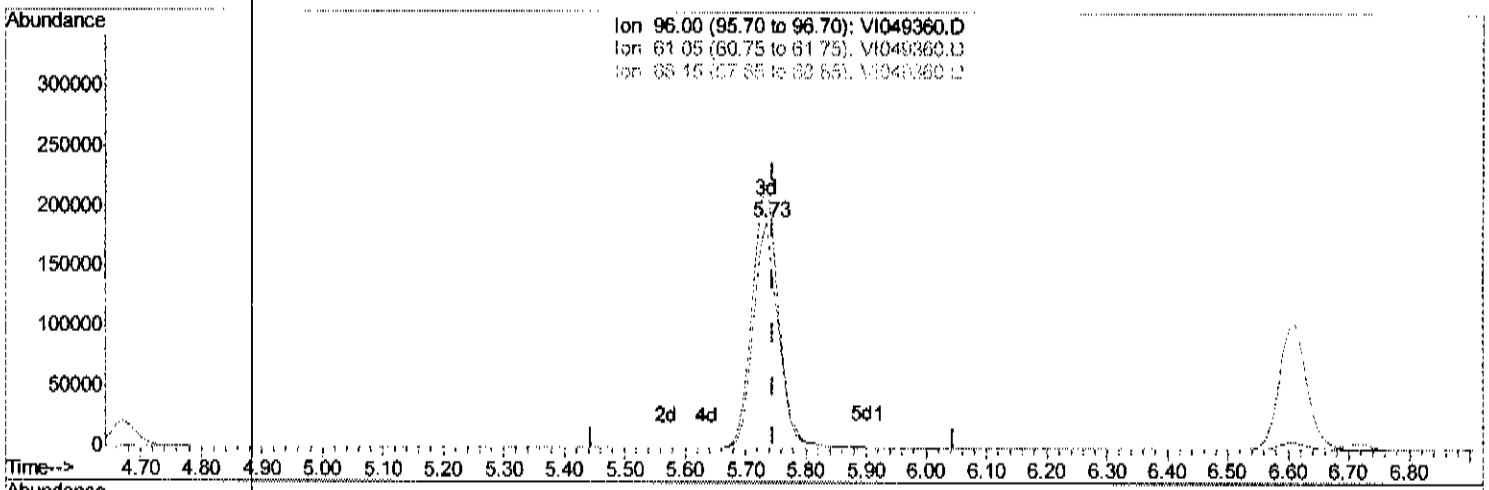

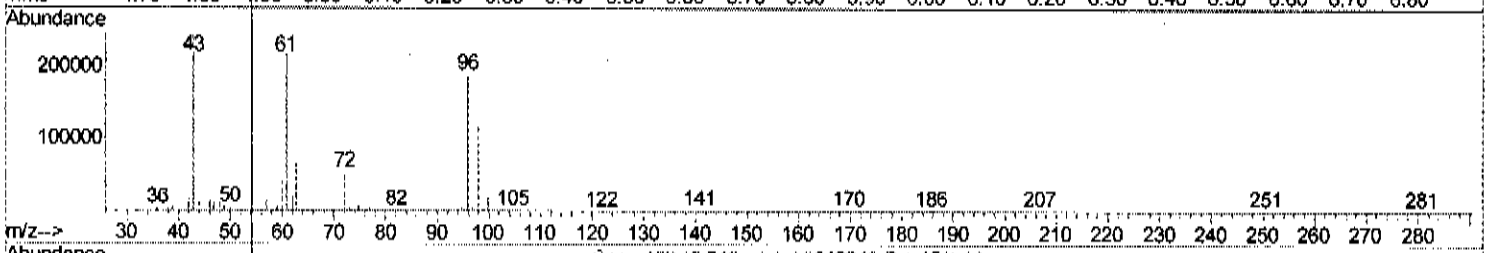

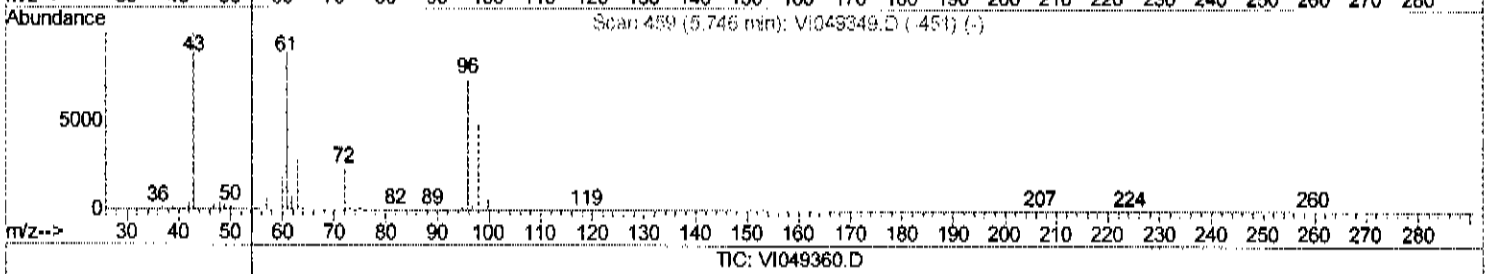

TIC: VI049360.D

(22) cis-1,2-Dichloroethene (T)

5.735min (-0.011) 5.35ug/L m) 05/14/16 FY

response 555428

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	116.76
68.15	0.00	0.11#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VT051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1130489	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.20	117	808102	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	342879	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	287302	4.13	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.60%			
7) Chloroethane-d5	2.08	69	180739	4.69	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.80%			
11) 1,1-Dichloroethene-d2	2.90	63	779926	4.76	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 95.20%			
20) 2-Butanone-d5	5.63	46	990072	65.71	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 131.42%#			
24) Chloroform-d	6.34	84	971192	5.49	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 109.80%			
26) 1,2-Dichloroethane-d4	7.20	65	395559	5.46	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.20%			
32) Benzene-d6	7.13	84	1633659	5.19	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.80%			
36) 1,2-Dichloropropane-d6	8.41	67	468384	5.29	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 105.80%			
41) Toluene-d8	9.67	98	1192019	5.13	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.60%			
43) trans-1,3-Dichloropropene-	10.00	79	177131	5.08	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 101.60%			
46) 2-Hexanone-d5	10.41	63	668111	60.74	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 121.48%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	242675	6.03	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 120.60%#			
63) 1,2-Dichlorobenzene-d4	13.74	152	323596	5.38	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 107.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	601225	4.72	ug/L	99
3) Chloromethane	1.60	50	469986	4.31	ug/L	95
5) Vinyl chloride	1.70	62	374086	4.91	ug/L	99
6) Bromomethane	2.00	94	168687	4.58	ug/L	100
8) Chloroethane	2.11	64	169719	5.21	ug/L	99
9) Trichlorofluoromethane	2.36	101	509339	4.78	ug/L	100
10) 1,1,2-Trichloro-1,2,2-trif	2.93	101	503775	5.17	ug/L	99
12) 1,1-Dichloroethene	2.92	96	471346	5.17	ug/L	91
13) Acetone	2.98	43	491417	52.59	ug/L	98
14) Carbon disulfide	3.18	76	1611278	4.87	ug/L	99
15) Methyl Acetate	3.37	43	143503	5.38	ug/L	96
16) Methylene chloride	3.56	84	505487	5.03	ug/L	99
17) Methyl tert-butyl Ether	3.95	73	895763	5.37	ug/L	98
18) trans-1,2-Dichloroethene	3.95	96	527516	5.23	ug/L	97
19) 1,1-Dichloroethane	4.67	63	897405	5.25	ug/L	99
21) 2-Butanone	5.74	43	928701	54.93	ug/L	99
22) cis-1,2-Dichloroethene	5.73	96	555428m	5.35	ug/L	

05/14/16 SY

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Manual Integrations APPROVED
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5/13/2016 12:27:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.16	128	209657	5.04	ug/L		97
25) Chloroform	6.37	83	981326	5.40	ug/L		98
27) 1,2-Dichloroethane	7.32	62	473209	5.16	ug/L		97
29) 1,1,1-Trichloroethane	6.61	97	793676	5.17	ug/L		99
30) Cyclohexane	6.71	56	653440	4.83	ug/L		100
31) Carbon tetrachloride	6.87	117	683478	5.10	ug/L		99
33) Benzene	7.20	78	1792270	5.18	ug/L		100
34) Trichloroethene	8.19	95	485204	5.05	ug/L		97
35) Methylcyclohexane	8.48	83	574862	4.85	ug/L		99
37) 1,2-Dichloropropane	8.52	63	406410	5.01	ug/L		99
38) Bromodichloromethane	8.87	83	593029	5.01	ug/L		99
39) cis-1,3-Dichloropropene	9.39	75	590353	4.94	ug/L		100
40) 4-Methyl-2-pentanone	9.56	43	2169012	51.93	ug/L		100
42) Toluene	9.75	91	1528146	5.24	ug/L		98
44) trans-1,3-Dichloropropene	10.03	75	462356	5.04	ug/L		97
45) 1,1,2-Trichloroethane	10.23	97	223574	5.31	ug/L		95
47) Tetrachloroethene	10.30	164	328912	5.22	ug/L		96
48) 2-Hexanone	10.46	43	1435500	51.40	ug/L		99
49) Dibromochloromethane	10.63	129	344430	5.42	ug/L		98
50) 1,2-Dibromoethane	10.73	107	229770	5.23	ug/L		97
51) Chlorobenzene	11.23	112	946789	5.41	ug/L		98
52) Ethylbenzene	11.33	91	1643567	5.45	ug/L		99
53) m,p-Xylene	11.45	106	597153	5.43	ug/L		94
54) o-Xylene	11.83	106	562263	5.47	ug/L		99
55) Styrene	11.85	104	945478	5.55	ug/L		99
56) Isopropylbenzene	12.17	105	1522900	5.72	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.47	83	218971	5.38	ug/L		98
60) Bromoform	12.03	173	158286	4.95	ug/L		99
61) 1,3-Dichlorobenzene	13.34	146	614579	5.28	ug/L		99
62) 1,4-Dichlorobenzene	13.43	146	605763	5.07	ug/L		99
64) 1,2-Dichlorobenzene	13.76	146	521275	5.41	ug/L		97
65) 1,2-Dibromo-3-chloropropan	14.45	75	31604	5.38	ug/L	#	77
66) 1,2,4-trichlorobenzene	15.18	180	288703	5.61	ug/L		97
67) 1,2,3-Trichlorobenzene	15.65	180	216837	5.69	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051216\
Data File : VR019133.D
Acq On : 12 May 2016 10:41
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 05:28:09 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 14:30:04 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00556

Manual Integrations APPROVED
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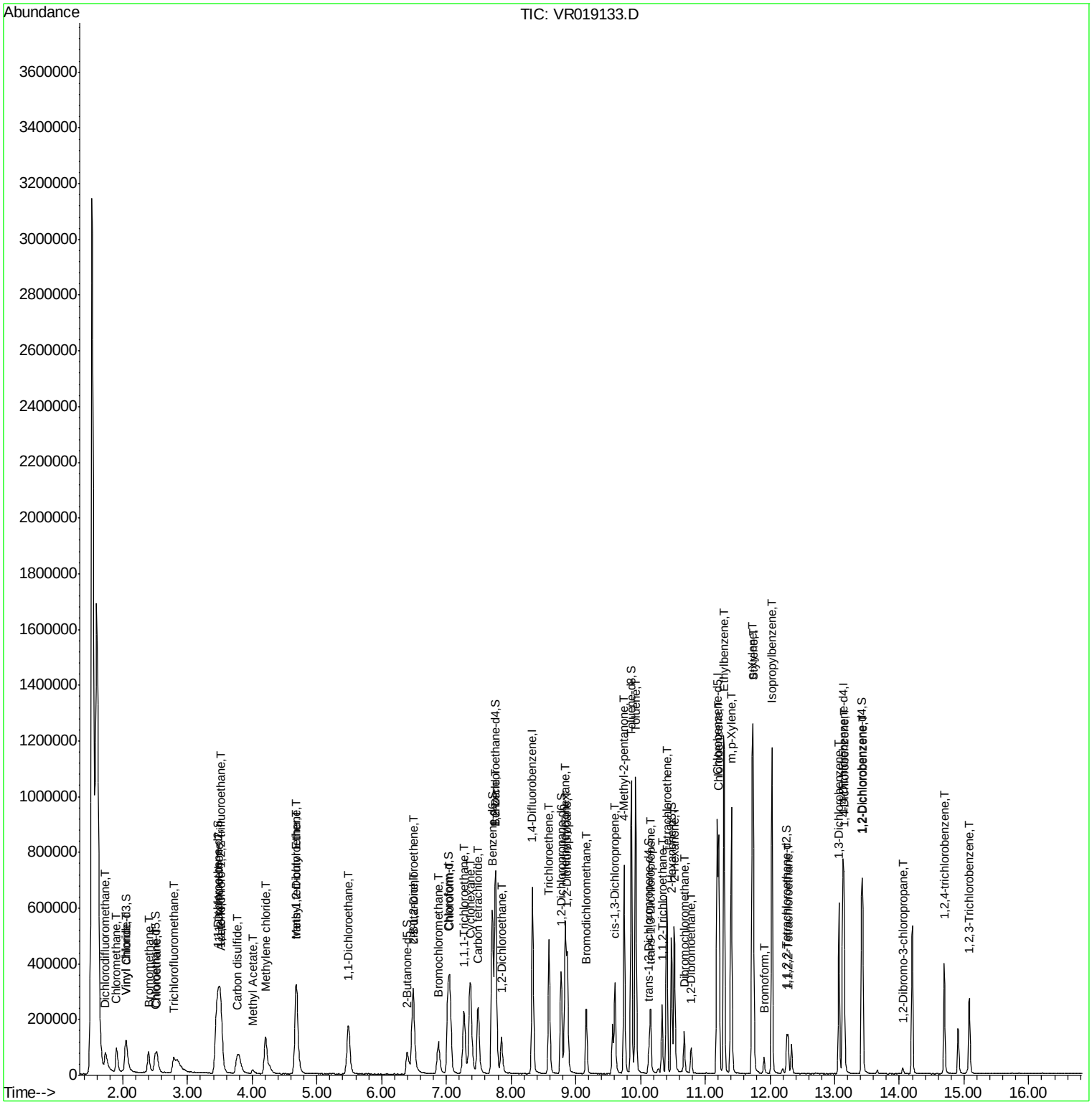

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051216\
Data File : VR019133.D
Acq On : 12 May 2016 10:41
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00556

Manual Integrations APPROVED
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5/13/2016 12:28:09 PM

Quant Time: May 13 05:28:09 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 14:30:04 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	557655	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	429934	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	157419	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.05	65	117480	4.68	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 93.60%			
7) Chloroethane-d5	2.50	69	86357	4.84	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 96.80%			
11) 1,1-Dichloroethene-d2	3.46	63	269687	4.66	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 93.20%			
20) 2-Butanone-d5	6.40	46	162384	50.40	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 100.80%			
24) Chloroform-d	7.03	84	299981	4.85	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.00%			
26) 1,2-Dichloroethane-d4	7.75	65	120040	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
32) Benzene-d6	7.71	84	654026	4.74	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.80%			
36) 1,2-Dichloropropane-d6	8.78	67	170038	4.77	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 95.40%			
41) Toluene-d8	9.86	98	636752	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
43) trans-1,3-Dichloropropene-	10.13	79	47494	5.07	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 101.40%			
46) 2-Hexanone-d5	10.48	63	152220	51.83	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 103.66%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	58507	4.59	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.80%			
63) 1,2-Dichlorobenzene-d4	13.42	152	120584	4.62	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 92.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	119490	4.92	ug/L	95
3) Chloromethane	1.90	50	120777	4.54	ug/L	100
5) Vinyl chloride	2.05	62	120395	4.71	ug/L	99
6) Bromomethane	2.40	94	66364	4.58	ug/L	83
8) Chloroethane	2.53	64	69853	4.77	ug/L	94
9) Trichlorofluoromethane	2.79	101	179474m	5.16	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	129495	4.81	ug/L	100
12) 1,1-Dichloroethene	3.48	96	130778	4.65	ug/L	84
13) Acetone	3.52	43	115075	45.58	ug/L	99
14) Carbon disulfide	3.77	76	283018	5.04	ug/L	96
15) Methyl Acetate	4.01	43	27766	5.22	ug/L	99
16) Methylene chloride	4.21	84	119950	4.67	ug/L	97
17) Methyl tert-butyl Ether	4.68	73	171642	4.64	ug/L	99
18) trans-1,2-Dichloroethene	4.68	96	153563	4.93	ug/L	98
19) 1,1-Dichloroethane	5.48	63	286234	4.81	ug/L	97
21) 2-Butanone	6.49	43	173771	51.50	ug/L	98
22) cis-1,2-Dichloroethene	6.49	96	156403	4.93	ug/L #	100

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051216\
Data File : VR019133.D
Acq On : 12 May 2016 10:41
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00556

Manual Integrations APPROVED
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5/13/2016 12:28:09 PM

Quant Time: May 13 05:28:09 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 14:30:04 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.87	128	48901	4.74	ug/L		97
25) Chloroform	7.05	83	271381	4.76	ug/L		97
27) 1,2-Dichloroethane	7.85	62	123194	4.74	ug/L		97
29) 1,1,1-Trichloroethane	7.27	97	211680	4.95	ug/L		99
30) Cyclohexane	7.36	56	232409	4.92	ug/L		99
31) Carbon tetrachloride	7.49	117	192630	4.98	ug/L		97
33) Benzene	7.77	78	648536	4.68	ug/L		100
34) Trichloroethene	8.59	95	165813	4.80	ug/L		98
35) Methylcyclohexane	8.84	83	228073	4.77	ug/L		100
37) 1,2-Dichloropropane	8.87	63	145830	4.76	ug/L		100
38) Bromodichloromethane	9.16	83	144176	4.90	ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	180342	5.20	ug/L		99
40) 4-Methyl-2-pentanone	9.75	43	464288	48.41	ug/L		99
42) Toluene	9.93	91	704338	4.81	ug/L		99
44) trans-1,3-Dichloropropene	10.16	75	123065	5.26	ug/L		99
45) 1,1,2-Trichloroethane	10.33	97	67324	4.60	ug/L		98
47) Tetrachloroethene	10.41	164	128469	4.81	ug/L		91
48) 2-Hexanone	10.52	43	319297	48.81	ug/L		96
49) Dibromochloromethane	10.67	129	70810	4.80	ug/L		91
50) 1,2-Dibromoethane	10.78	107	58103	4.75	ug/L	#	92
51) Chlorobenzene	11.21	112	391213	4.65	ug/L		100
52) Ethylbenzene	11.29	91	776183	4.87	ug/L		99
53) m,p-Xylene	11.40	106	281089	4.78	ug/L		97
54) o-Xylene	11.73	106	248881	4.78	ug/L		98
55) Styrene	11.74	104	392978	4.84	ug/L		97
56) Isopropylbenzene	12.03	105	660358	4.89	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	55084	4.62	ug/L		97
60) Bromoform	11.91	173	23704	4.83	ug/L		98
61) 1,3-Dichlorobenzene	13.06	146	220355	4.69	ug/L		99
62) 1,4-Dichlorobenzene	13.15	146	222018	4.58	ug/L		99
64) 1,2-Dichlorobenzene	13.44	146	181289	4.66	ug/L		100
65) 1,2-Dibromo-3-chloropropan	14.06	75	5256	5.05	ug/L		85
66) 1,2,4-trichlorobenzene	14.69	180	106223	4.75	ug/L		99
67) 1,2,3-Trichlorobenzene	15.08	180	82216	4.94	ug/L		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019133.D
Acq On : 12 May 2016 10:41
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 05:28:09 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 14:30:04 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00556

Manual Integrations APPROVED
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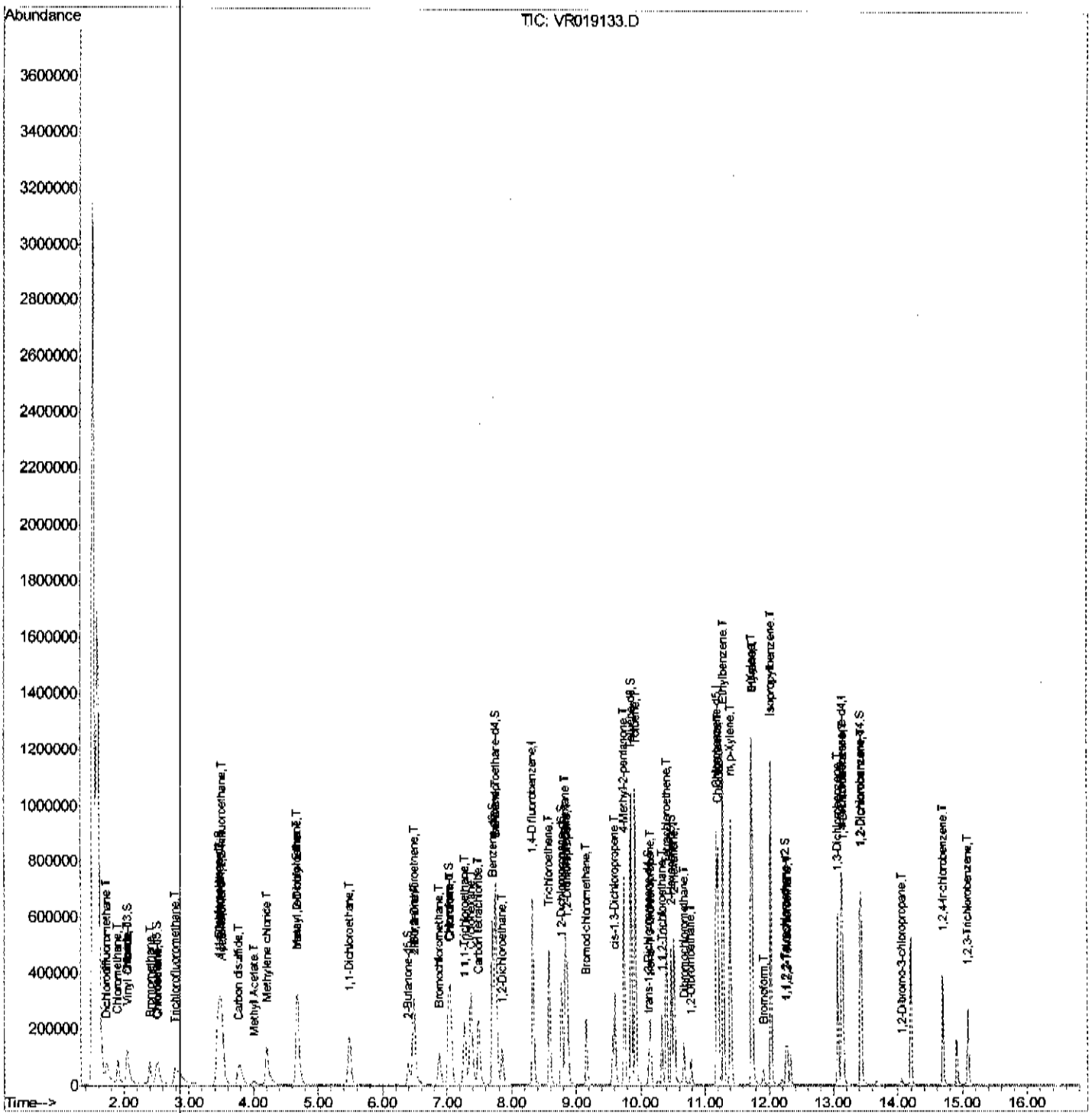

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019133.D
Acq On : 12 May 2016 10:41
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 05:26:23 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 14:30:04 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00556

Manual Integrations APPROVED
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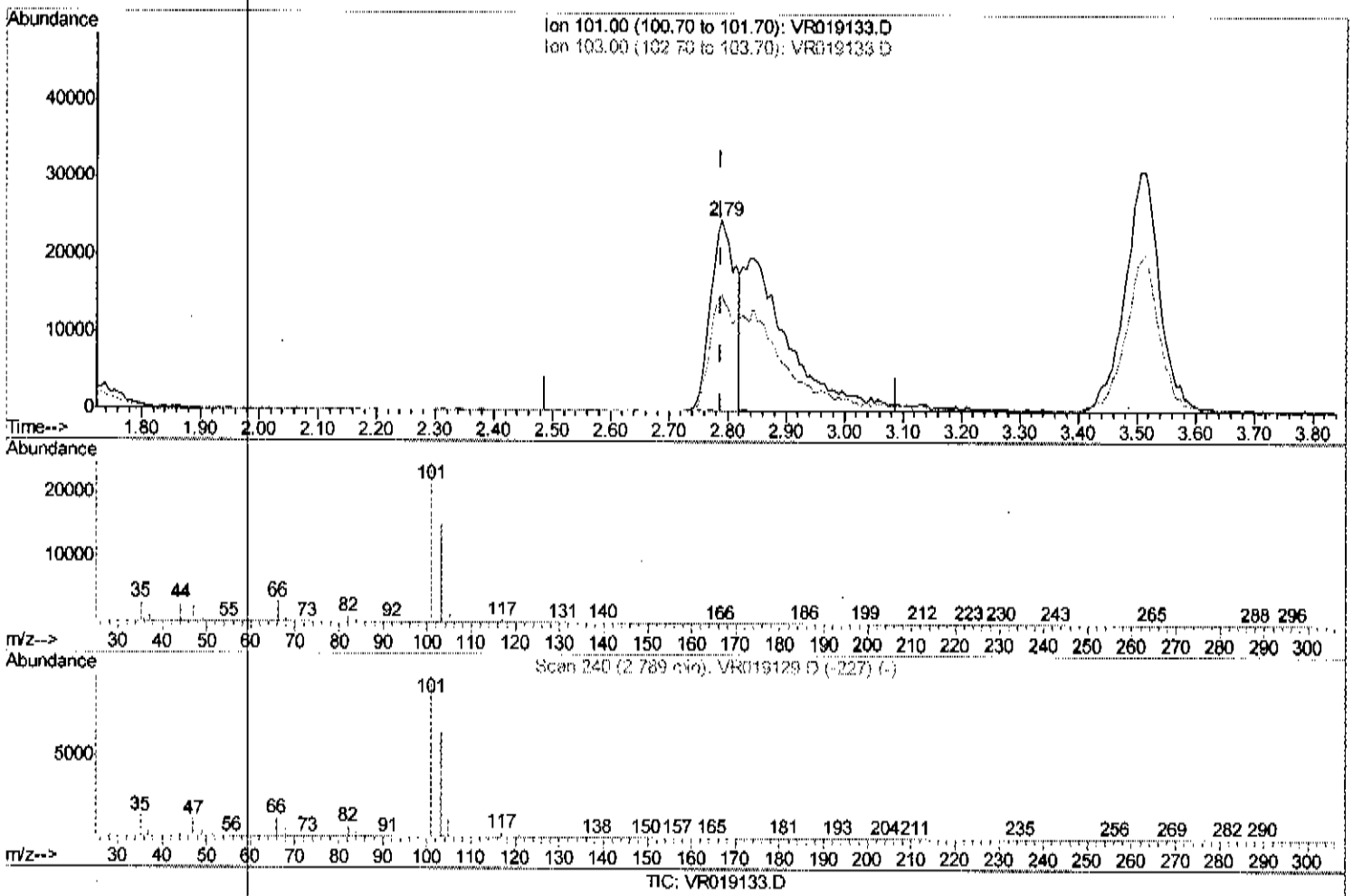
5/13/2016 12:28:09 PM



TIC: VR019133.D

(9) Trichlorofluoromethane (T)

2.789min (+0.000) 2.11ug/L

response 73344

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	62.93#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019133.D
Acq On : 12 May 2016 10:41
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 05:26:23 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 14:30:04 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00556

Manual Integrations APPROVED
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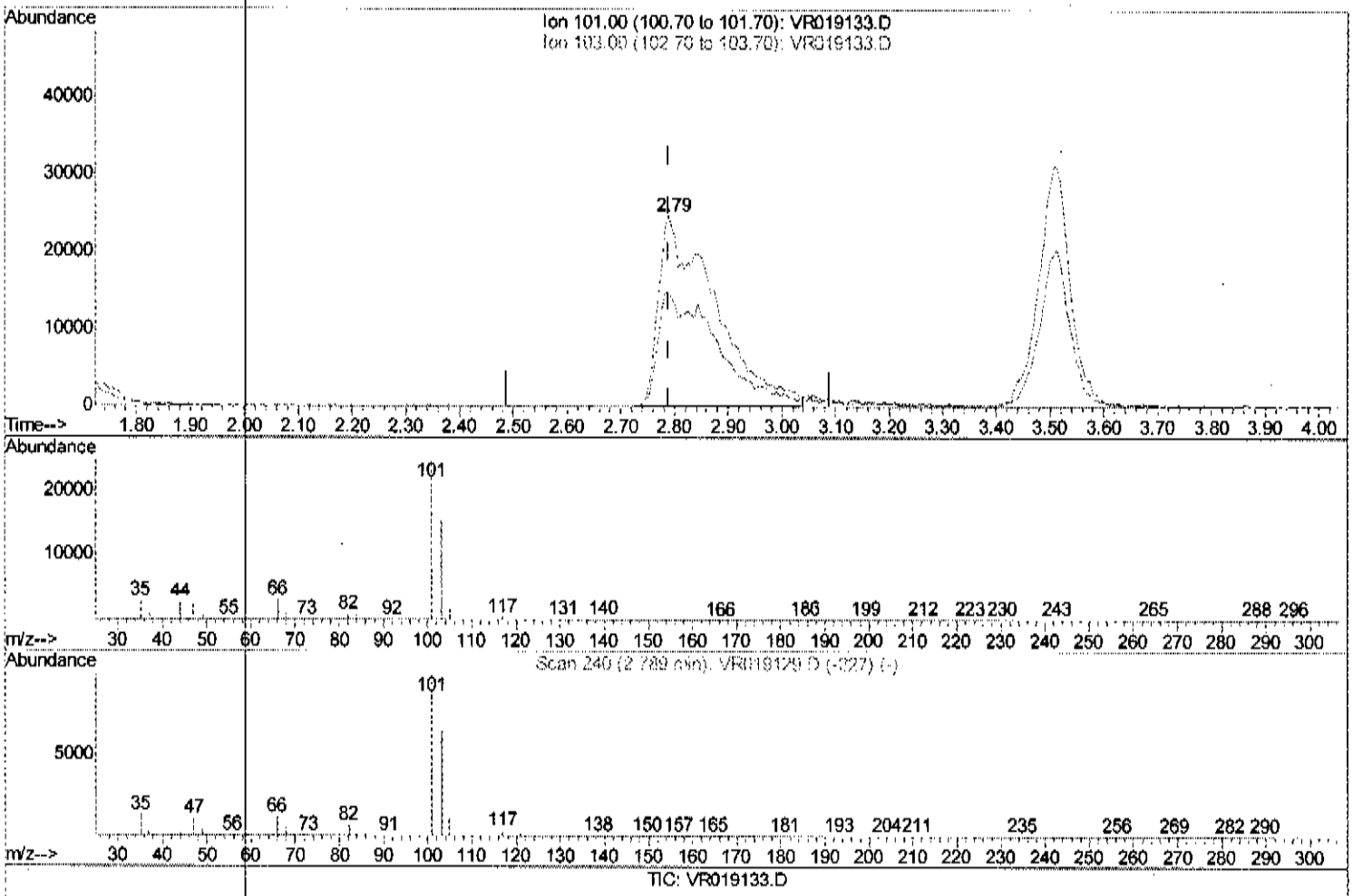

(9) Trichlorofluoromethane (T)

2.789min (+0.000) 5.16ug/L m

response 179474

E.M 05.16.16

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	25.72
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019133.D
Acq On : 12 May 2016 10:41
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 05:28:09 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 14:30:04 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00556

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	557655	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	429934	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	157419	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.05	65	117480	4.68	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 93.60%			
7) Chloroethane-d5	2.50	69	86357	4.84	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 96.80%			
11) 1,1-Dichloroethene-d2	3.46	63	269687	4.66	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 93.20%			
20) 2-Butanone-d5	6.40	46	162384	50.40	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 100.80%			
24) Chloroform-d	7.03	84	299981	4.85	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.00%			
26) 1,2-Dichloroethane-d4	7.75	65	120040	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
32) Benzene-d6	7.71	84	654026	4.74	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.80%			
36) 1,2-Dichloropropane-d6	8.78	67	170038	4.77	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 95.40%			
41) Toluene-d8	9.86	98	636752	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
43) trans-1,3-Dichloropropene-	10.13	79	47494	5.07	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 101.40%			
46) 2-Hexanone-d5	10.48	63	152220	51.83	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 103.66%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	58507	4.59	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.80%			
63) 1,2-Dichlorobenzene-d4	13.42	152	120584	4.62	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 92.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	119490	4.92	ug/L	95
3) Chloromethane	1.90	50	120777	4.54	ug/L	100
5) Vinyl chloride	2.05	62	120395	4.71	ug/L	99
6) Bromomethane	2.40	94	66364	4.58	ug/L	83
8) Chloroethane	2.53	64	69853	4.77	ug/L	94
9) Trichlorofluoromethane	2.79	101	179474m	5.16	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	129495	4.81	ug/L	100
12) 1,1-Dichloroethene	3.48	96	130778	4.65	ug/L	84
13) Acetone	3.52	43	115075	45.58	ug/L	99
14) Carbon disulfide	3.77	76	283018	5.04	ug/L	96
15) Methyl Acetate	4.01	43	27766	5.22	ug/L	99
16) Methylene chloride	4.21	84	119950	4.67	ug/L	97
17) Methyl tert-butyl Ether	4.68	73	171642	4.64	ug/L	99
18) trans-1,2-Dichloroethene	4.68	96	153563	4.93	ug/L	98
19) 1,1-Dichloroethane	5.18	63	286234	4.81	ug/L	97
21) 2-Butanone	6.49	43	173771	51.50	ug/L	98
22) cis-1,2-Dichloroethene	6.49	96	156403	4.93	ug/L #	100

E.M 05.16.16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019133.D
Acq On : 12 May 2016 10:41
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 05:28:09 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 14:30:04 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00556

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.87	128	48901	4.74	ug/L		97
25) Chloroform	7.05	83	271381	4.76	ug/L		97
27) 1,2-Dichloroethane	7.85	62	123194	4.74	ug/L		97
29) 1,1,1-Trichloroethane	7.27	97	211680	4.95	ug/L		99
30) Cyclohexane	7.36	56	232409	4.92	ug/L		99
31) Carbon tetrachloride	7.49	117	192630	4.98	ug/L		97
33) Benzene	7.77	78	648536	4.68	ug/L		100
34) Trichloroethene	8.59	95	165813	4.80	ug/L		98
35) Methylcyclohexane	8.84	83	228073	4.77	ug/L		100
37) 1,2-Dichloropropane	8.87	63	145830	4.76	ug/L		100
38) Bromodichloromethane	9.16	83	144176	4.90	ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	180342	5.20	ug/L		99
40) 4-Methyl-2-pentanone	9.75	43	464288	48.41	ug/L		99
42) Toluene	9.93	91	704338	4.81	ug/L		99
44) trans-1,3-Dichloropropene	10.16	75	123065	5.26	ug/L		99
45) 1,1,2-Trichloroethane	10.33	97	67324	4.60	ug/L		98
47) Tetrachloroethene	10.41	164	128469	4.81	ug/L		91
48) 2-Hexanone	10.52	43	319297	48.81	ug/L		96
49) Dibromochloromethane	10.67	129	70810	4.80	ug/L		91
50) 1,2-Dibromoethane	10.78	107	58103	4.75	ug/L	#	92
51) Chlorobenzene	11.21	112	391213	4.65	ug/L		100
52) Ethylbenzene	11.29	91	776183	4.87	ug/L		99
53) m,p-Xylene	11.40	106	281089	4.78	ug/L		97
54) o-Xylene	11.73	106	248881	4.78	ug/L		98
55) Styrene	11.74	104	392978	4.84	ug/L		97
56) Isopropylbenzene	12.03	105	660358	4.89	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	55084	4.62	ug/L		97
60) Bromoform	11.91	173	23704	4.83	ug/L		98
61) 1,3-Dichlorobenzene	13.06	146	220355	4.69	ug/L		99
62) 1,4-Dichlorobenzene	13.15	146	222018	4.58	ug/L		99
64) 1,2-Dichlorobenzene	13.44	146	181289	4.66	ug/L		100
65) 1,2-Dibromo-3-chloropropan	14.06	75	5256	5.05	ug/L		85
66) 1,2,4-trichlorobenzene	14.69	180	106223	4.75	ug/L		99
67) 1,2,3-Trichlorobenzene	15.08	180	82216	4.94	ug/L		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019146.D
Acq On : 12 May 2016 20:19
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 13 06:42:57 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00557

Manual Integrations APPROVED
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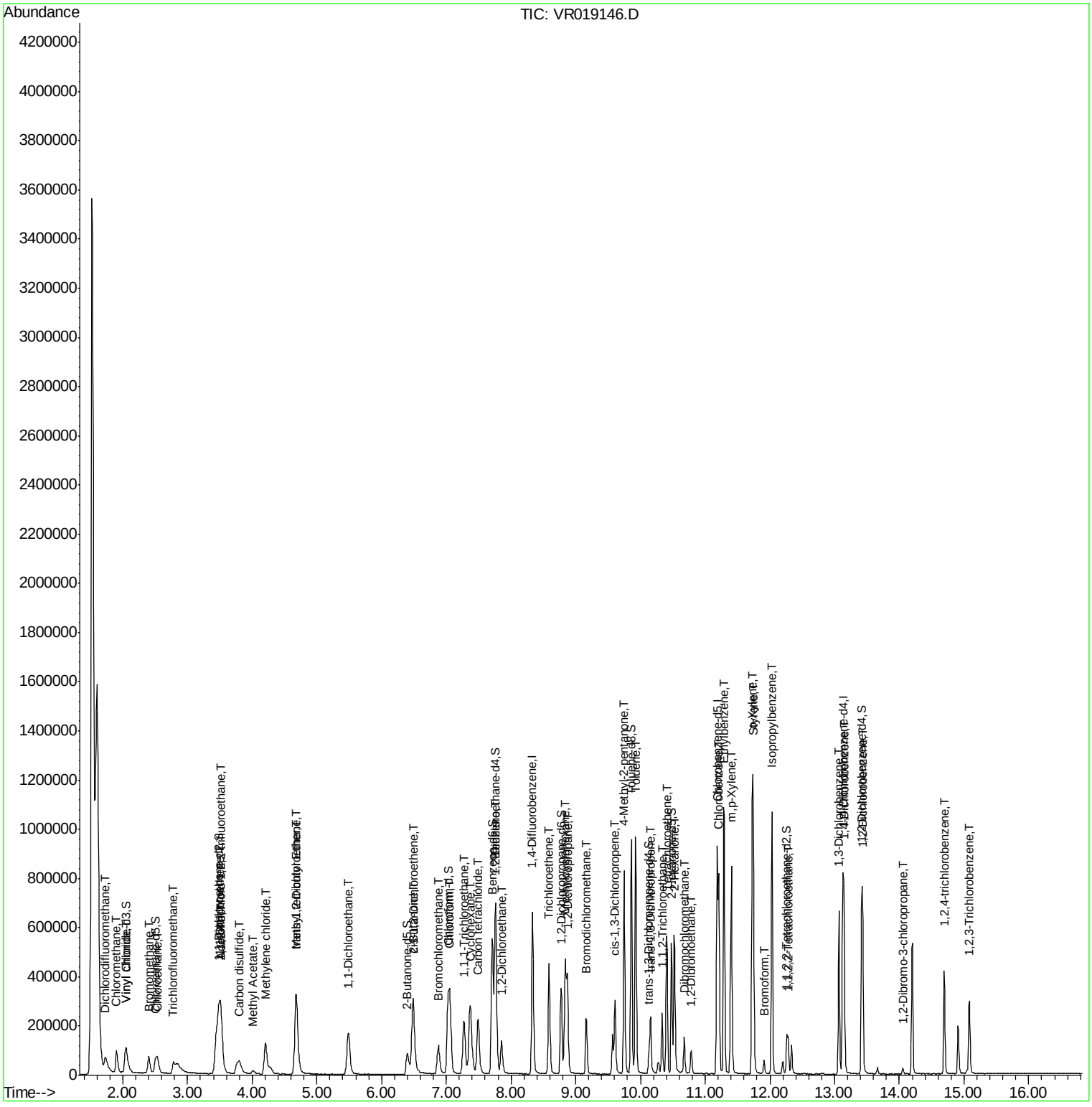

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019146.D
Acq On : 12 May 2016 20:19
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00557

Manual Integrations APPROVED
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5/13/2016 12:28:14 PM

Quant Time: May 13 06:42:57 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	560456	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	431784	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	168118	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.05	65	108930	4.32	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 86.40%			
7) Chloroethane-d5	2.50	69	81698	4.56	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 91.20%			
11) 1,1-Dichloroethene-d2	3.48	63	252626	4.35	ug/L	0.02
Spiked Amount 5.000	Range 60 - 125		Recovery = 87.00%			
20) 2-Butanone-d5	6.40	46	182819	56.46	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 112.92%			
24) Chloroform-d	7.03	84	289498	4.66	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.20%			
26) 1,2-Dichloroethane-d4	7.75	65	121376	4.93	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.60%			
32) Benzene-d6	7.71	84	606073	4.38	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 87.60%			
36) 1,2-Dichloropropane-d6	8.78	67	160966	4.49	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 89.80%			
41) Toluene-d8	9.86	98	575016	4.41	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.20%			
43) trans-1,3-Dichloropropene-	10.13	79	44070	4.68	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 93.60%			
46) 2-Hexanone-d5	10.48	63	165625	56.15	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 112.30%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	62818	4.90	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.00%			
63) 1,2-Dichlorobenzene-d4	13.42	152	127071	4.56	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 91.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	111277	4.56	ug/L	93
3) Chloromethane	1.90	50	116848	4.37	ug/L	97
5) Vinyl chloride	2.05	62	113823	4.44	ug/L	99
6) Bromomethane	2.41	94	63756	4.38	ug/L	89
8) Chloroethane	2.54	64	65748	4.47	ug/L	96
9) Trichlorofluoromethane	2.78	101	153170m	4.38	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	109784	4.06	ug/L	97
12) 1,1-Dichloroethene	3.49	96	121609	4.30	ug/L	81
13) Acetone	3.52	43	120414	47.46	ug/L	100
14) Carbon disulfide	3.80	76	232897	4.12	ug/L	98
15) Methyl Acetate	4.01	43	29158	5.46	ug/L	91
16) Methylene chloride	4.21	84	113751m	4.41	ug/L	
17) Methyl tert-butyl Ether	4.68	73	193615	5.21	ug/L	99
18) trans-1,2-Dichloroethene	4.68	96	141635	4.52	ug/L	98
19) 1,1-Dichloroethane	5.48	63	277899	4.64	ug/L	98
21) 2-Butanone	6.49	43	183455	54.10	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	150368	4.71	ug/L #	97

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019146.D
Acq On : 12 May 2016 20:19
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VSTD00557

Manual Integrations APPROVED
feifei
5/13/2016 12:28:14 PM

Quant Time: May 13 06:42:57 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.88	128	48405	4.67	ug/L		90
25) Chloroform	7.06	83	267370	4.67	ug/L		99
27) 1,2-Dichloroethane	7.86	62	130568	5.00	ug/L		100
29) 1,1,1-Trichloroethane	7.27	97	202119	4.71	ug/L		99
30) Cyclohexane	7.36	56	201857	4.25	ug/L		99
31) Carbon tetrachloride	7.49	117	178035	4.59	ug/L		95
33) Benzene	7.77	78	607523	4.37	ug/L		100
34) Trichloroethene	8.59	95	153111	4.42	ug/L		96
35) Methylcyclohexane	8.84	83	198302	4.13	ug/L		99
37) 1,2-Dichloropropane	8.87	63	139511	4.54	ug/L		99
38) Bromodichloromethane	9.16	83	143216	4.85	ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	169784	4.87	ug/L		98
40) 4-Methyl-2-pentanone	9.75	43	508054	52.74	ug/L		99
42) Toluene	9.93	91	636034	4.32	ug/L		100
44) trans-1,3-Dichloropropene	10.16	75	118954	5.06	ug/L		95
45) 1,1,2-Trichloroethane	10.33	97	68258	4.64	ug/L		100
47) Tetrachloroethene	10.41	164	109495	4.08	ug/L		99
48) 2-Hexanone	10.52	43	341890	52.04	ug/L		97
49) Dibromochloromethane	10.67	129	70311	4.75	ug/L		95
50) 1,2-Dibromoethane	10.78	107	58653	4.78	ug/L	#	98
51) Chlorobenzene	11.21	112	367719	4.35	ug/L		99
52) Ethylbenzene	11.29	91	697816	4.36	ug/L		99
53) m,p-Xylene	11.40	106	259715	4.40	ug/L		100
54) o-Xylene	11.73	106	239043	4.57	ug/L		99
55) Styrene	11.74	104	377916	4.64	ug/L		97
56) Isopropylbenzene	12.03	105	618474	4.56	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	58869	4.91	ug/L		93
60) Bromoform	11.91	173	23155	4.42	ug/L		98
61) 1,3-Dichlorobenzene	13.06	146	227871	4.54	ug/L		99
62) 1,4-Dichlorobenzene	13.15	146	230717	4.46	ug/L		96
64) 1,2-Dichlorobenzene	13.44	146	188692	4.55	ug/L		99
65) 1,2-Dibromo-3-chloropropan	14.06	75	5972	5.37	ug/L		92
66) 1,2,4-trichlorobenzene	14.69	180	111712	4.67	ug/L		99
67) 1,2,3-Trichlorobenzene	15.08	180	85805	4.83	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019146.D
Acq On : 12 May 2016 20:19
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 13 06:42:57 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00557

Manual Integrations APPROVED
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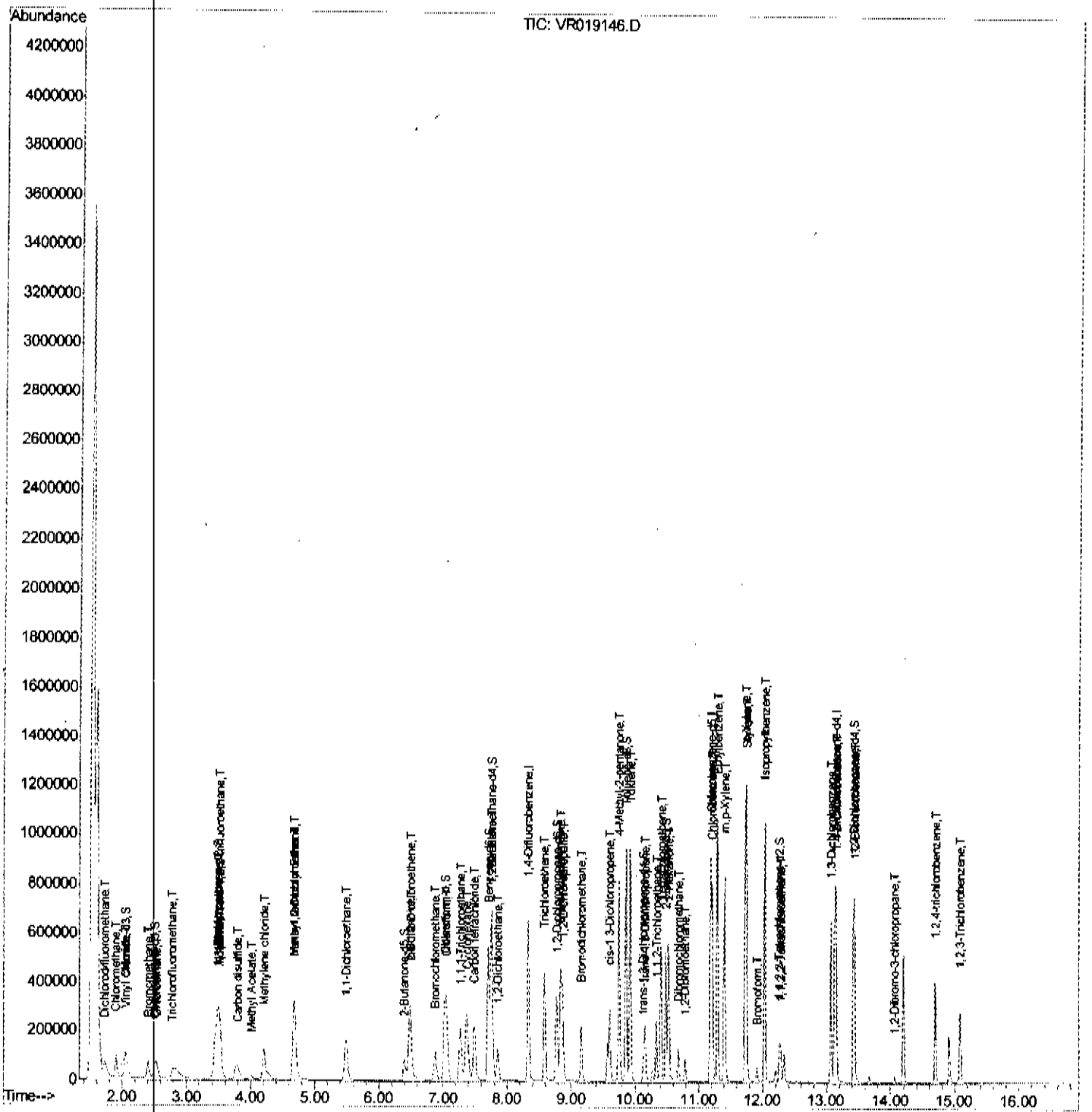

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019146.D
Acq On : 12 May 2016 20:19
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 13 05:36:43 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00557

Manual Integrations APPROVED
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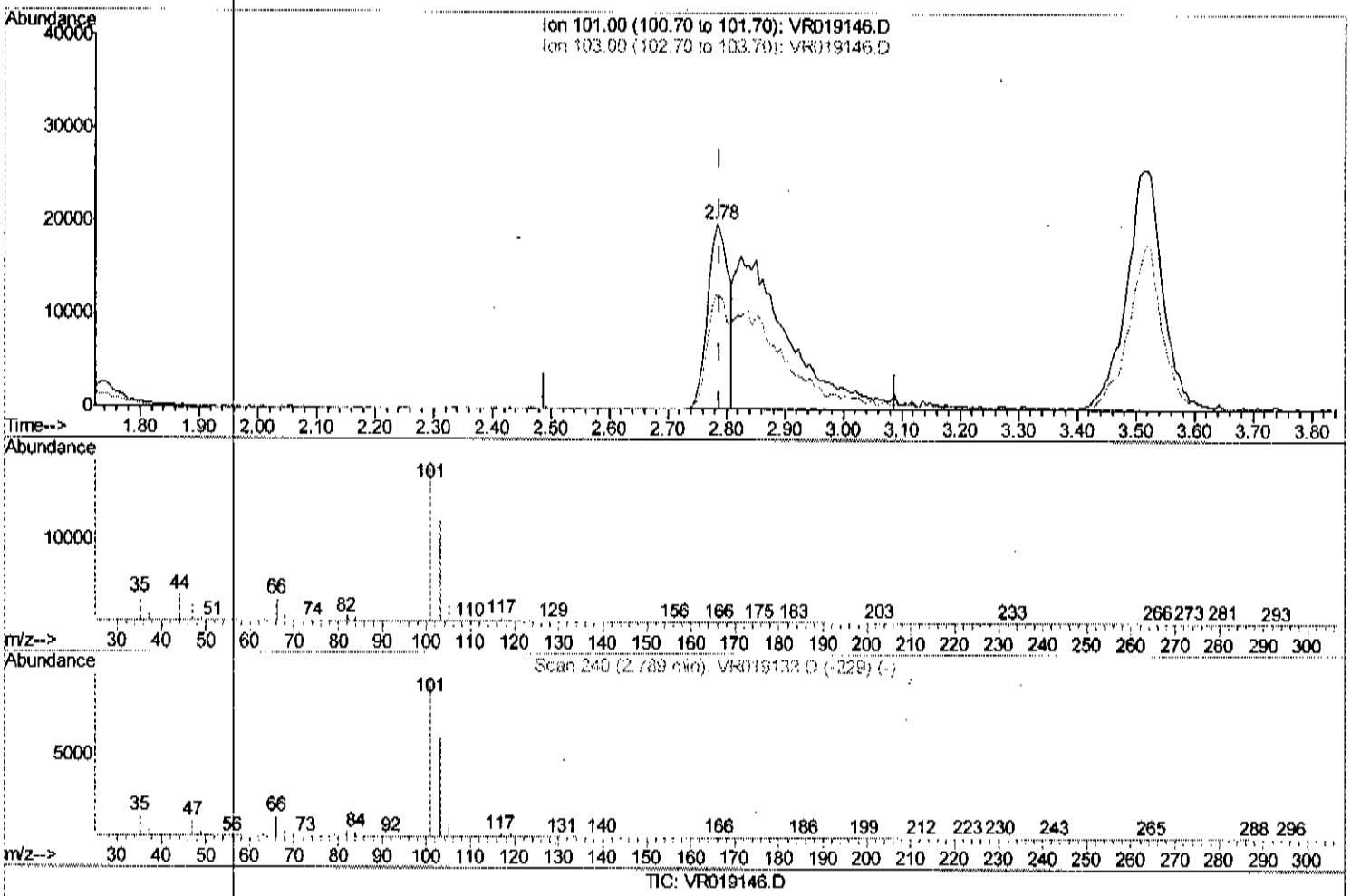
5/13/2016 12:28:14 PM



(9) Trichlorofluoromethane (T)

2.783min (-0.006) 1.40ug/L

response 48838

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	64.58#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019146.D
Acq On : 12 May 2016 20:19
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 13 05:36:13 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00557

Manual Integrations APPROVED
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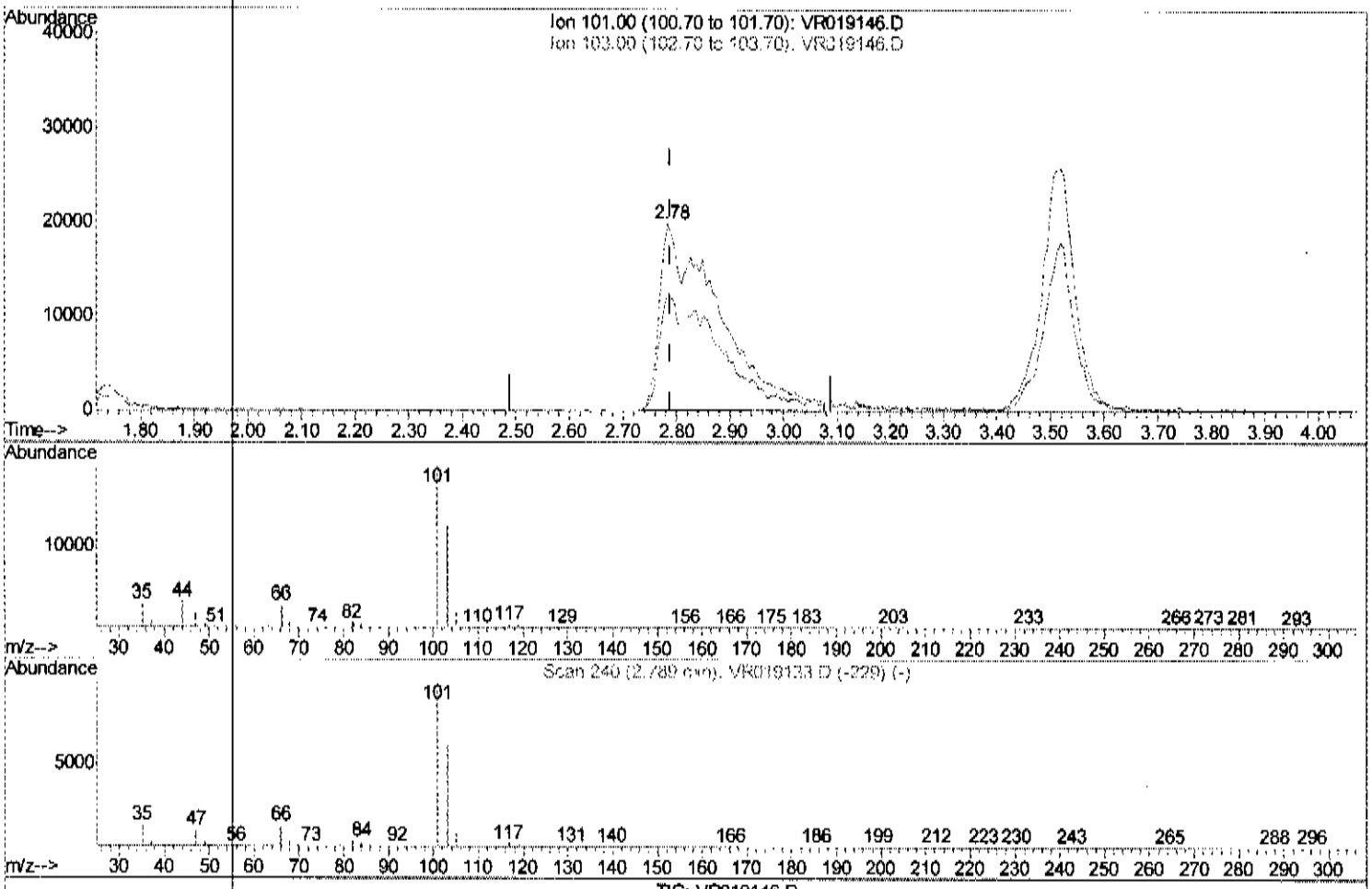

TIC: VR019146.D

(9) Trichlorofluoromethane (T)

2.783min (-0.006) 4.38ug/L m

response 153170

E.M 05.16.16

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	20.59#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019146.D
Acq On : 12 May 2016 20:19
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 13 05:36:43 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00557

Manual Integrations APPROVED
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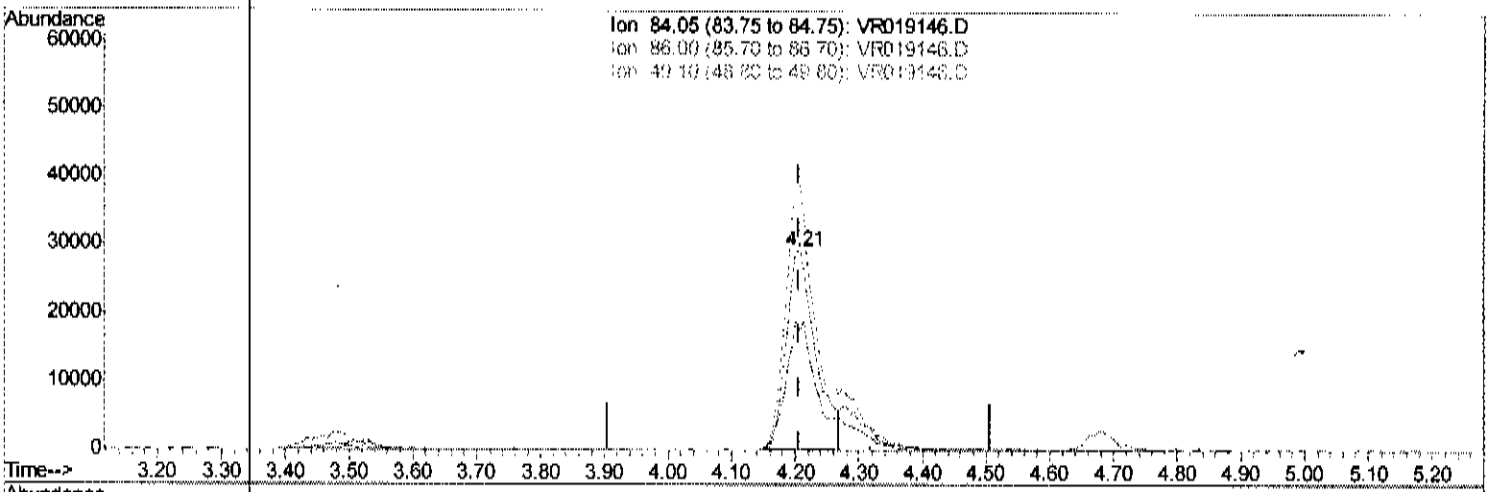
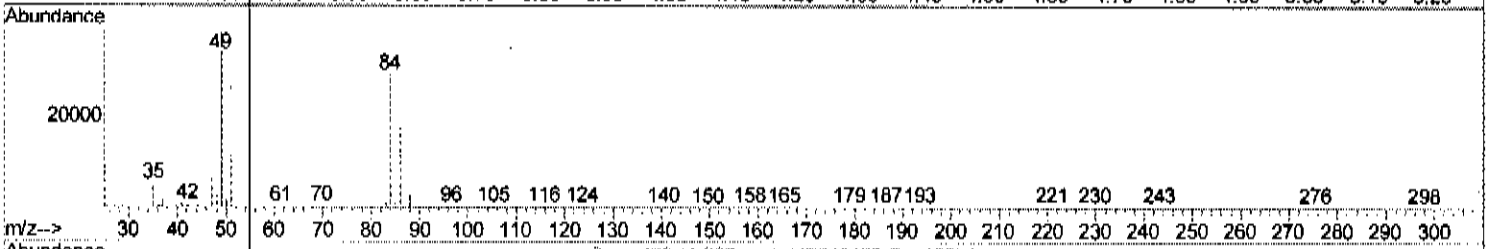
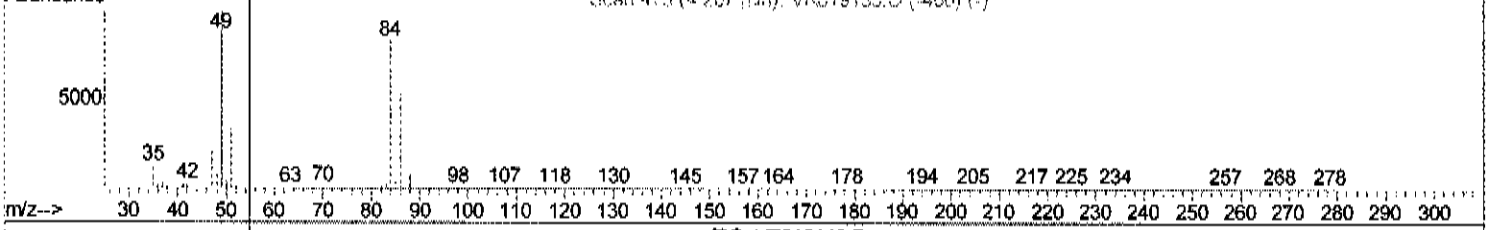
5/13/2016 12:28:14 PM





Scan 473 (4.207 min): VR019133.D (-460) (-)



TIC: VR019146.D

(16) Methylene chloride (T)

4.207min (0.000) 3.66ug/L

response 94894

Ion	Exp%	Act%
84.05	100	100
86.00	59.30	60.44
49.10	123.00	133.50
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019146.D
Acq On : 12 May 2016 20:19
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 13 05:36:43 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00557

Manual Integrations APPROVED
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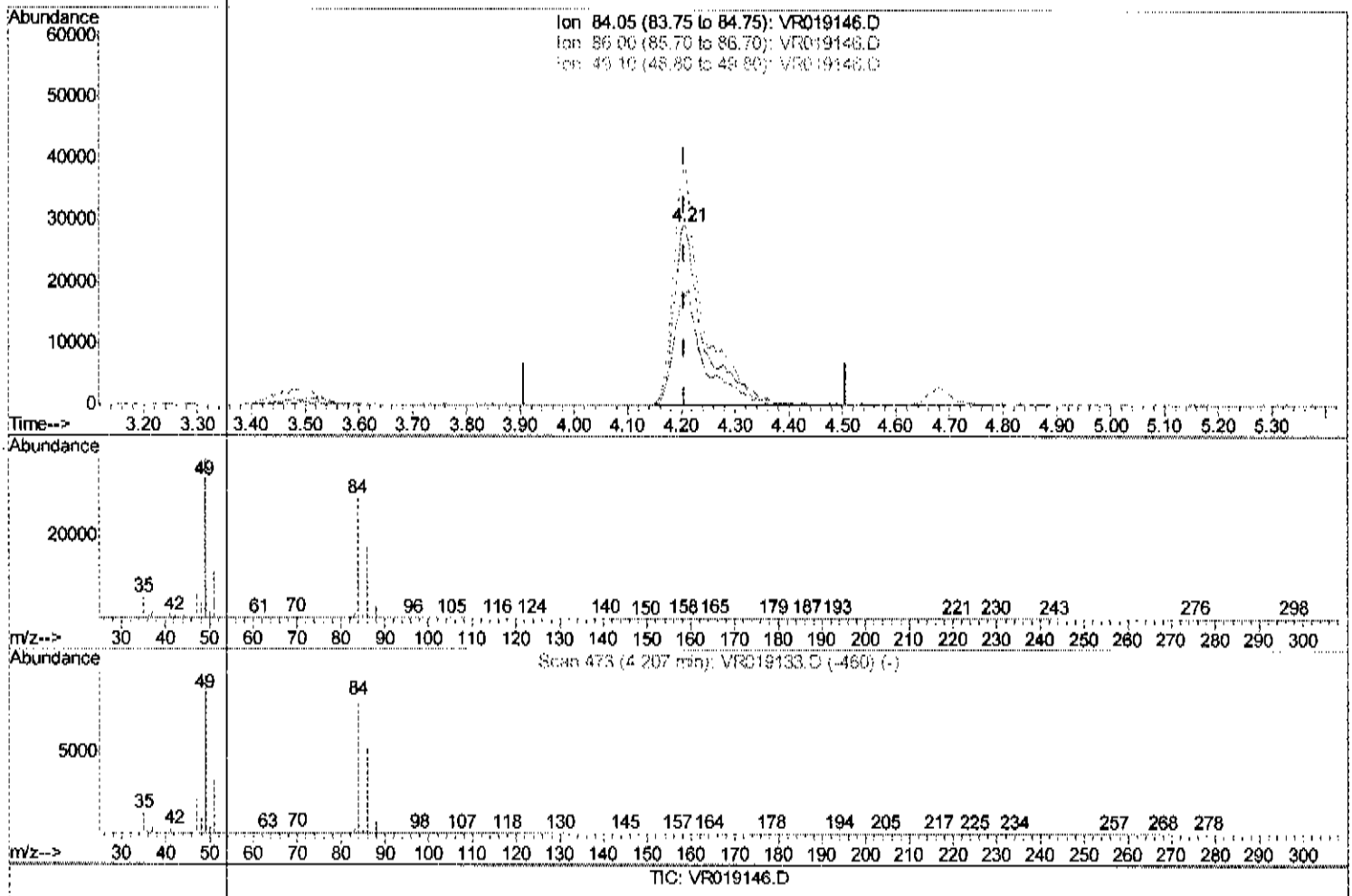
5/13/2016 12:28:14 PM



TIC: VR019146.D

(16) Methylene chloride (T)

4.207min (0.000) 4.41ug/L m

response 113751

E.M 05.16.16.

Ion	Exp%	Act%
84.05	100	100
86.00	59.30	60.44
49.10	123.00	133.50
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019146.D
Acq On : 12 May 2016 20:19
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 13 06:42:57 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00557

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	560456	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	431784	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	168118	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.05	65	108930	4.32	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 86.40%			
7) Chloroethane-d5	2.50	69	81698	4.56	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 91.20%			
11) 1,1-Dichloroethene-d2	3.48	63	252626	4.35	ug/L	0.02
Spiked Amount 5.000	Range 60 - 125		Recovery = 87.00%			
20) 2-Butanone-d5	6.40	46	182819	56.46	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 112.92%			
24) Chloroform-d	7.03	84	289498	4.66	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.20%			
26) 1,2-Dichloroethane-d4	7.75	65	121376	4.93	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.60%			
32) Benzene-d6	7.71	84	606073	4.38	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 87.60%			
36) 1,2-Dichloropropane-d6	8.78	67	160966	4.49	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 89.80%			
41) Toluene-d8	9.86	98	575016	4.41	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.20%			
43) trans-1,3-Dichloropropene-	10.13	79	44070	4.68	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 93.60%			
46) 2-Hexanone-d5	10.48	63	165625	56.15	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 112.30%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	62818	4.90	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.00%			
63) 1,2-Dichlorobenzene-d4	13.42	152	127071	4.56	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 91.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	111277	4.56	ug/L	93
3) Chloromethane	1.90	50	116848	4.37	ug/L	97
5) Vinyl chloride	2.05	62	113823	4.44	ug/L	99
6) Bromomethane	2.41	94	63756	4.38	ug/L	89
8) Chloroethane	2.54	64	65748	4.47	ug/L	96
9) Trichlorofluoromethane	2.78	101	153170m	4.38	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	109784	4.06	ug/L	97
12) 1,1-Dichloroethene	3.49	96	121609	4.30	ug/L	81
13) Acetone	3.52	43	120414	47.46	ug/L	100
14) Carbon disulfide	3.80	76	232897	4.12	ug/L	98
15) Methyl Acetate	4.01	43	29158	5.46	ug/L	91
16) Methylene chloride	4.21	84	113751m	4.41	ug/L	
17) Methyl tert-butyl Ether	4.68	73	193615	5.21	ug/L	99
18) trans-1,2-Dichloroethene	4.68	96	141635	4.52	ug/L	98
19) 1,1-Dichloroethane	5.48	63	277899	4.64	ug/L	98
21) 2-Butanone	6.49	43	183455	54.10	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	150368	4.71	ug/L #	97

E.M 05.16.16

E.M 05.16.16

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019146.D
Acq On : 12 May 2016 20:19
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 13 06:42:57 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00557

Manual Integrations APPROVED
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5/13/2016 12:28:14 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.88	128	48405	4.67	ug/L		90
25) Chloroform	7.06	83	267370	4.67	ug/L		99
27) 1,2-Dichloroethane	7.86	62	130568	5.00	ug/L		100
29) 1,1,1-Trichloroethane	7.27	97	202119	4.71	ug/L		99
30) Cyclohexane	7.36	56	201857	4.25	ug/L		99
31) Carbon tetrachloride	7.49	117	178035	4.59	ug/L		95
33) Benzene	7.77	78	607523	4.37	ug/L		100
34) Trichloroethene	8.59	95	153111	4.42	ug/L		96
35) Methylcyclohexane	8.84	83	198302	4.13	ug/L		99
37) 1,2-Dichloropropane	8.87	63	139511	4.54	ug/L		99
38) Bromodichloromethane	9.16	83	143216	4.85	ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	169784	4.87	ug/L		98
40) 4-Methyl-2-pentanone	9.75	43	508054	52.74	ug/L		99
42) Toluene	9.93	91	636034	4.32	ug/L		100
44) trans-1,3-Dichloropropene	10.16	75	118954	5.06	ug/L		95
45) 1,1,2-Trichloroethane	10.33	97	68258	4.64	ug/L		100
47) Tetrachloroethene	10.41	164	109495	4.08	ug/L		99
48) 2-Hexanone	10.52	43	341890	52.04	ug/L		97
49) Dibromochloromethane	10.67	129	70311	4.75	ug/L		95
50) 1,2-Dibromoethane	10.78	107	58653	4.78	ug/L	#	98
51) Chlorobenzene	11.21	112	367719	4.35	ug/L		99
52) Ethylbenzene	11.29	91	697816	4.36	ug/L		99
53) m,p-Xylene	11.40	106	259715	4.40	ug/L		100
54) o-Xylene	11.73	106	239043	4.57	ug/L		99
55) Styrene	11.74	104	377916	4.64	ug/L		97
56) Isopropylbenzene	12.03	105	618474	4.56	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	58869	4.91	ug/L		93
60) Bromoform	11.91	173	23155	4.42	ug/L		98
61) 1,3-Dichlorobenzene	13.06	146	227871	4.54	ug/L		99
62) 1,4-Dichlorobenzene	13.15	146	230717	4.46	ug/L		96
64) 1,2-Dichlorobenzene	13.44	146	188692	4.55	ug/L		99
65) 1,2-Dibromo-3-chloropropan	14.06	75	5972	5.37	ug/L		92
66) 1,2,4-trichlorobenzene	14.69	180	111712	4.67	ug/L		99
67) 1,2,3-Trichlorobenzene	15.08	180	85805	4.83	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019148.D
Acq On : 13 May 2016 11:17
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:44:26 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00558

Manual Integrations APPROVED
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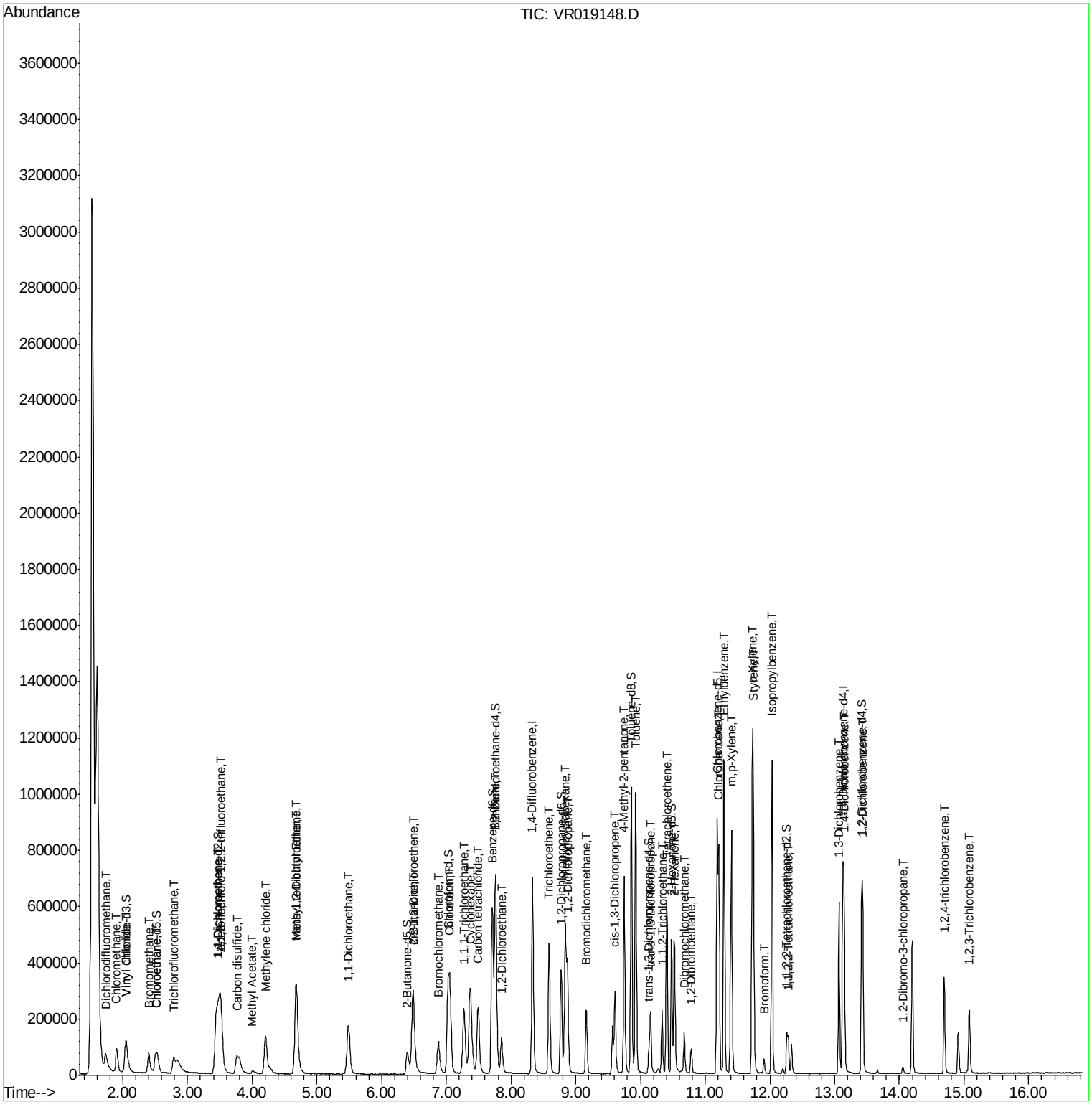

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019148.D
Acq On : 13 May 2016 11:17
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:44:26 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00558

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	580349	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	422960	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	157025	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	115118	4.41	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 88.20%			
7) Chloroethane-d5	2.51	69	85357	4.60	ug/L	0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 92.00%			
11) 1,1-Dichloroethene-d2	3.46	63	266362	4.42	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 88.40%			
20) 2-Butanone-d5	6.40	46	163225	48.68	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 97.36%			
24) Chloroform-d	7.03	84	304813	4.74	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.80%			
26) 1,2-Dichloroethane-d4	7.75	65	124708	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
32) Benzene-d6	7.71	84	644741	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
36) 1,2-Dichloropropane-d6	8.78	67	168126	4.79	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 95.80%			
41) Toluene-d8	9.86	98	613217	4.80	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.00%			
43) trans-1,3-Dichloropropene-	10.13	79	45483	4.93	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.60%			
46) 2-Hexanone-d5	10.48	63	147220	50.95	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 101.90%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	58309	4.65	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 93.00%			
63) 1,2-Dichlorobenzene-d4	13.42	152	119462	4.59	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 91.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.74	85	112750	4.46	ug/L	94
3) Chloromethane	1.90	50	121319	4.38	ug/L	94
5) Vinyl chloride	2.05	62	117870	4.44	ug/L	99
6) Bromomethane	2.40	94	65860	4.37	ug/L	94
8) Chloroethane	2.53	64	69844	4.59	ug/L	96
9) Trichlorofluoromethane	2.79	101	175548m	4.85	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	118875	4.25	ug/L	98
12) 1,1-Dichloroethene	3.46	96	128959m	4.40	ug/L	
13) Acetone	3.52	43	110938	42.22	ug/L	98
14) Carbon disulfide	3.77	76	261464	4.47	ug/L	99
15) Methyl Acetate	4.01	43	26476	4.78	ug/L	92
16) Methylene chloride	4.21	84	114941	4.30	ug/L	96
17) Methyl tert-butyl Ether	4.69	73	167301	4.35	ug/L	99
18) trans-1,2-Dichloroethene	4.68	96	147727	4.55	ug/L	97
19) 1,1-Dichloroethane	5.49	63	277132	4.47	ug/L	98
21) 2-Butanone	6.49	43	164113	46.74	ug/L	97
22) cis-1,2-Dichloroethene	6.48	96	150050	4.54	ug/L #	96

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019148.D
Acq On : 13 May 2016 11:17
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VSTD00558

Manual Integrations APPROVED
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Quant Time: May 14 00:44:26 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.88	128	47815	4.45	ug/L		97
25) Chloroform	7.06	83	267238	4.51	ug/L		100
27) 1,2-Dichloroethane	7.85	62	123548	4.57	ug/L		96
29) 1,1,1-Trichloroethane	7.27	97	207693	4.94	ug/L		98
30) Cyclohexane	7.37	56	218617	4.70	ug/L		99
31) Carbon tetrachloride	7.49	117	190747	5.02	ug/L		95
33) Benzene	7.77	78	622912	4.57	ug/L		100
34) Trichloroethene	8.59	95	161932	4.77	ug/L		97
35) Methylcyclohexane	8.84	83	221116	4.70	ug/L		99
37) 1,2-Dichloropropane	8.87	63	135910	4.51	ug/L		100
38) Bromodichloromethane	9.16	83	140534	4.86	ug/L		99
39) cis-1,3-Dichloropropene	9.60	75	169721	4.97	ug/L		99
40) 4-Methyl-2-pentanone	9.75	43	440199	46.65	ug/L		98
42) Toluene	9.92	91	658021	4.57	ug/L		99
44) trans-1,3-Dichloropropene	10.16	75	111901	4.86	ug/L		97
45) 1,1,2-Trichloroethane	10.33	97	61708	4.28	ug/L		96
47) Tetrachloroethene	10.41	164	119606	4.55	ug/L		98
48) 2-Hexanone	10.52	43	292136	45.40	ug/L		98
49) Dibromochloromethane	10.67	129	69861	4.82	ug/L		95
50) 1,2-Dibromoethane	10.78	107	52947	4.40	ug/L	#	90
51) Chlorobenzene	11.21	112	372309	4.49	ug/L		99
52) Ethylbenzene	11.29	91	722190	4.60	ug/L		98
53) m,p-Xylene	11.40	106	266751	4.61	ug/L		97
54) o-Xylene	11.73	106	239626	4.68	ug/L		98
55) Styrene	11.74	104	367888	4.61	ug/L		97
56) Isopropylbenzene	12.03	105	632591	4.76	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.29	83	50956	4.34	ug/L		100
60) Bromoform	11.91	173	22649	4.63	ug/L		98
61) 1,3-Dichlorobenzene	13.06	146	216763	4.63	ug/L		99
62) 1,4-Dichlorobenzene	13.15	146	212617	4.40	ug/L		99
64) 1,2-Dichlorobenzene	13.44	146	171034	4.41	ug/L		98
65) 1,2-Dibromo-3-chloropropan	14.05	75	4965	4.78	ug/L	#	79
66) 1,2,4-trichlorobenzene	14.69	180	91628	4.10	ug/L		99
67) 1,2,3-Trichlorobenzene	15.08	180	65794	3.97	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019148.D
Acq On : 13 May 2016 11:17
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:44:26 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00558

Manual Integrations APPROVED
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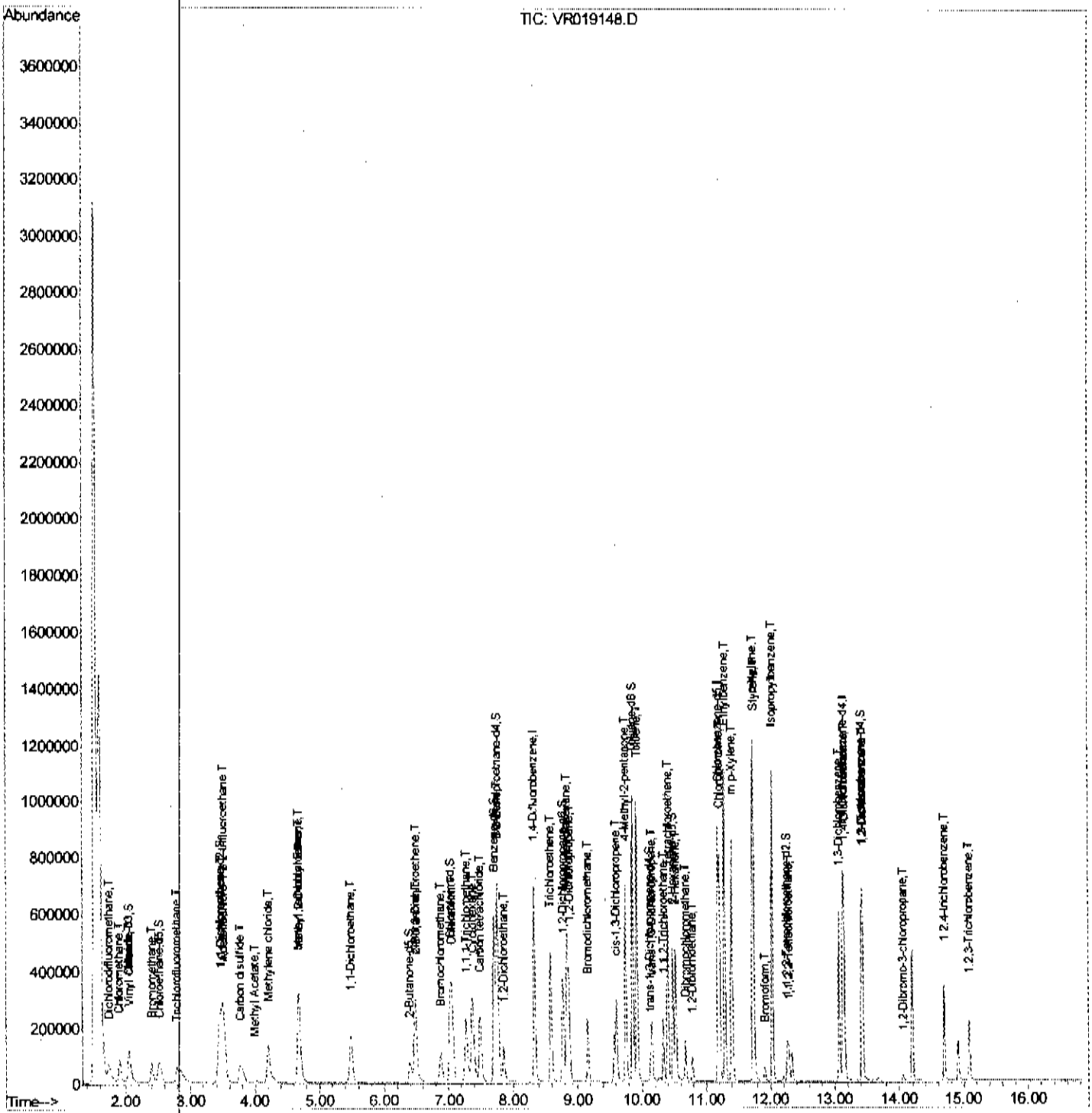
5/16/2016 6:51:32 PM



Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019148.D
Acq On : 13 May 2016 11:17
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:43:28 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00558

Manual Integrations APPROVED
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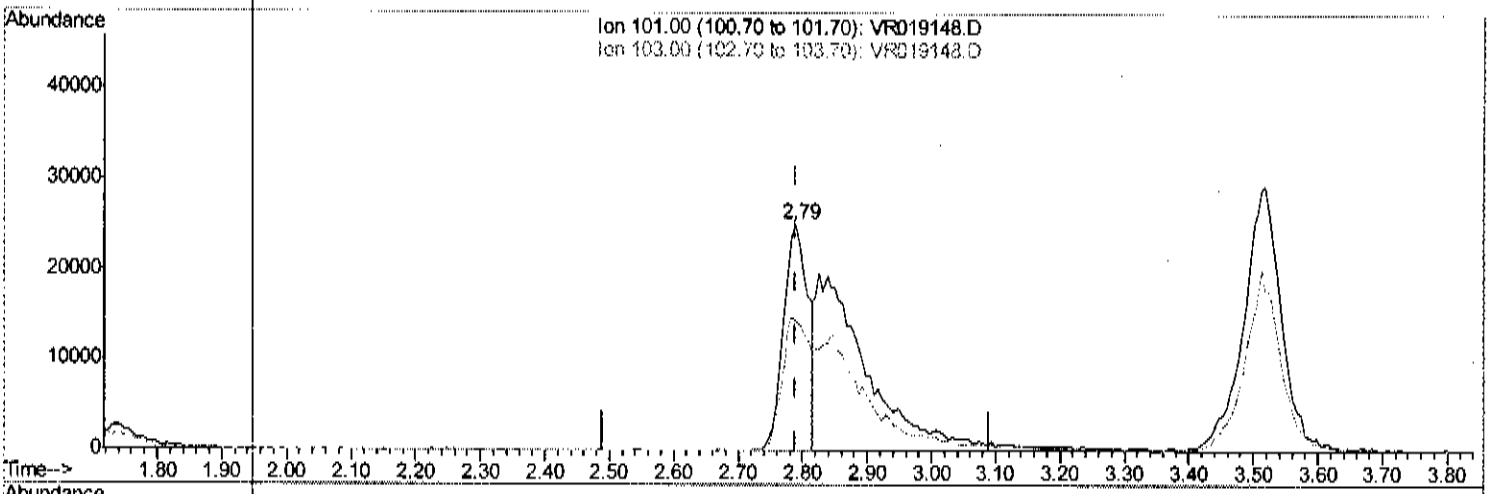
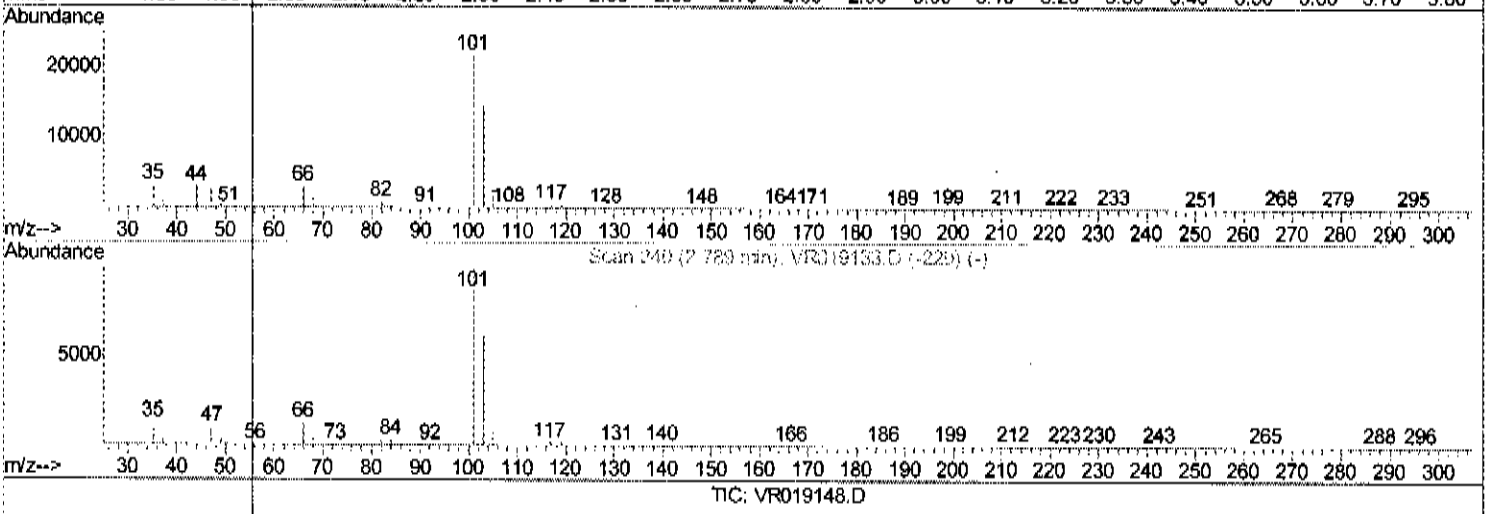
5/16/2016 6:51:32 PM





Scan 240 (2.789 min): VR019133.D (-229) (-)

TIC: VR019148.D

(9) Trichlorofluoromethane (T)

2.789min (-0.000) 1.80ug/L

response 65242

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	70.91#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019148.D
Acq On : 13 May 2016 11:17
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:43:28 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00558

Manual Integrations APPROVED
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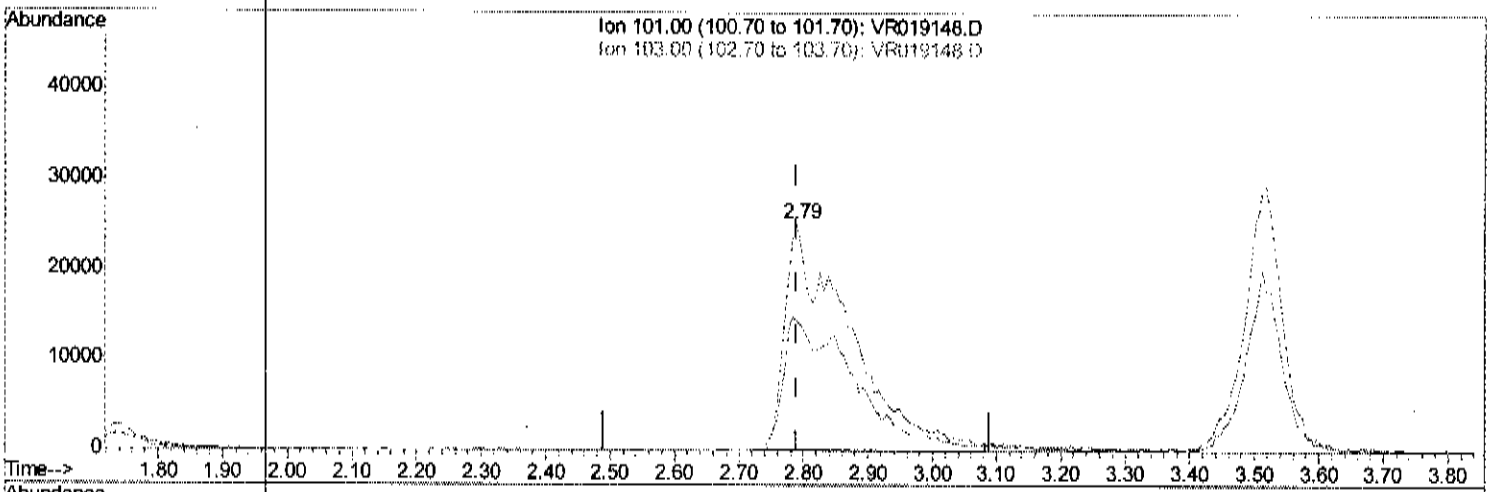
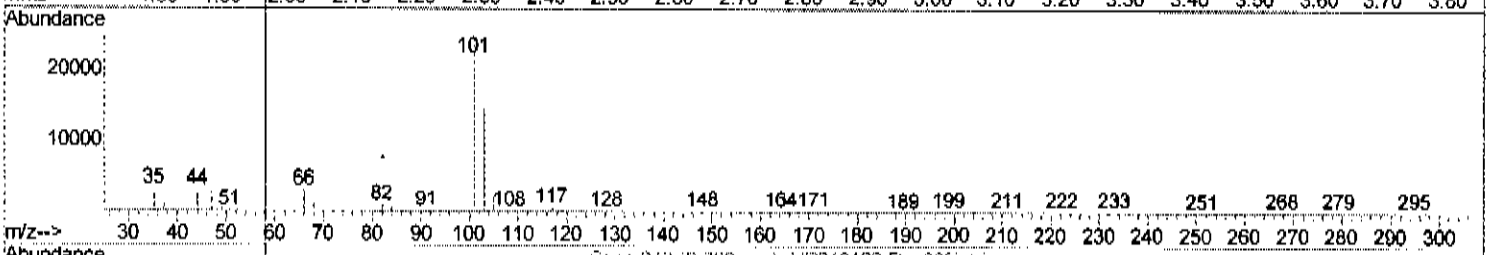
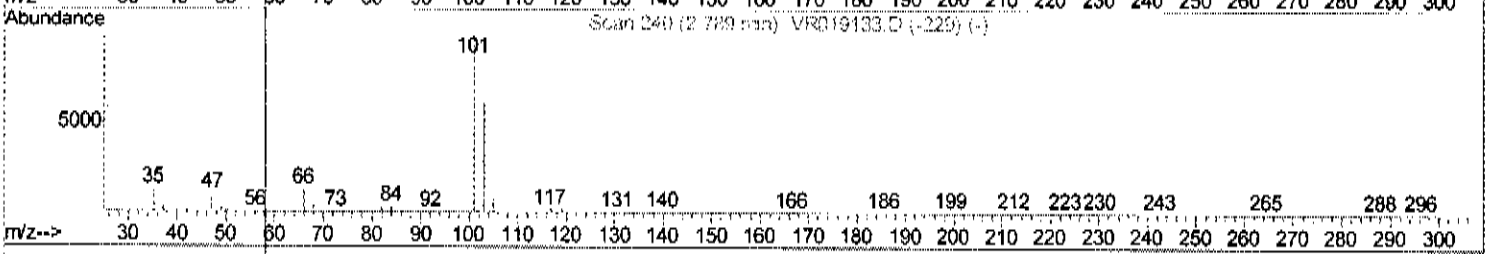
5/16/2016 6:51:32 PM





Scan 240 (2.789 min): VR019133.D (-229) (-)



TIC: VR019148.D

(9) Trichlorofluoromethane (T)

2.789min (-0.000) 4.85ug/L m

response 175548

E-M 05.16.16.

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	26.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019148.D
Acq On : 13 May 2016 11:17
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:43:28 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00558

Manual Integrations APPROVED
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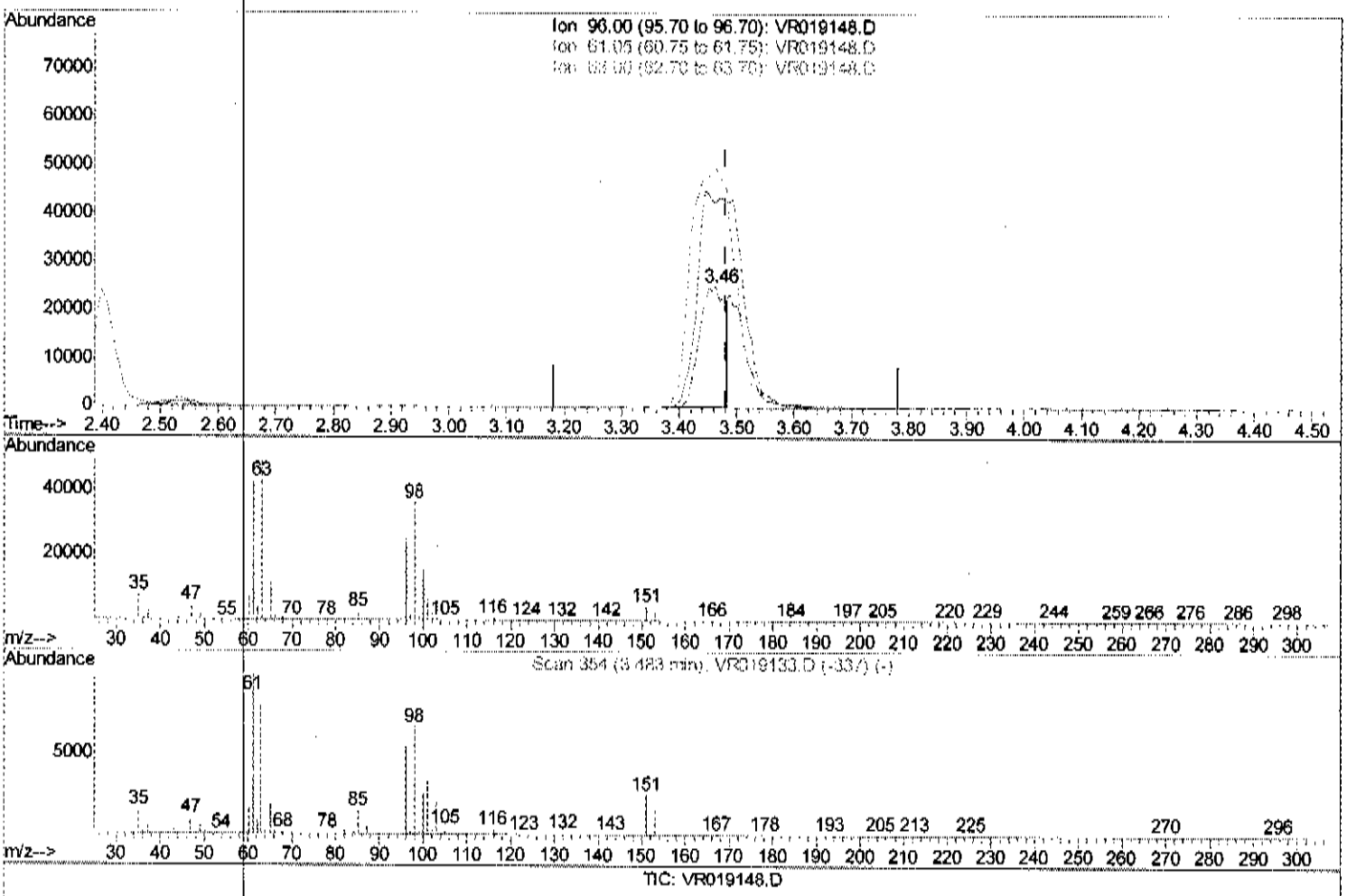
5/16/2016 6:51:32 PM



(12) 1,1-Dichloroethene (T)

3.484min (-0.018) 2.70ug/L

response 79205

Ion	Exp%	Act%
96.00	100	100
61.05	177.10	168.76
63.00	190.70	196.16
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019148.D
Acq On : 13 May 2016 11:17
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:43:28 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00558

Manual Integrations APPROVED
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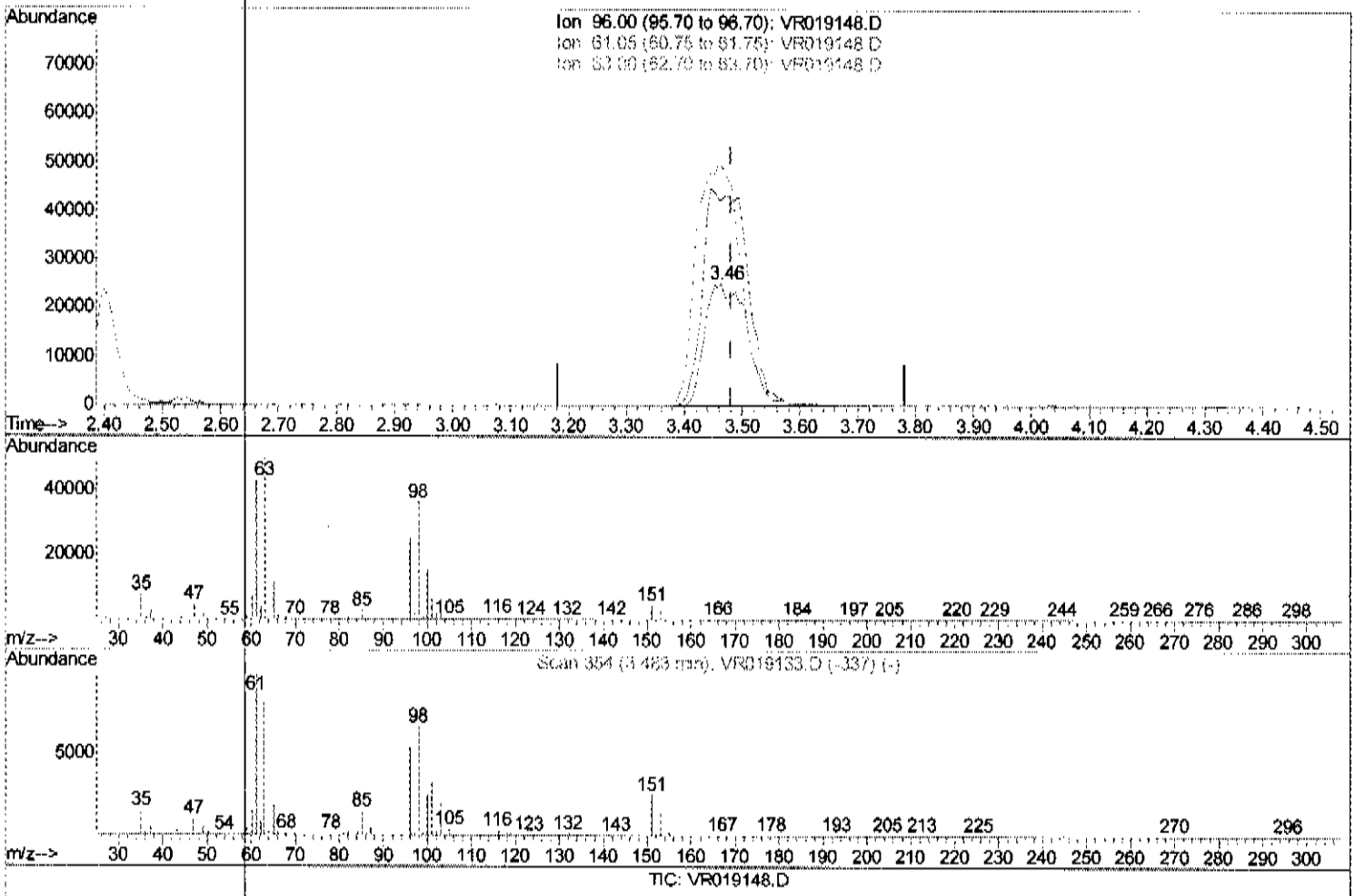
5/16/2016 6:51:32 PM



TIC: VR019148.D

(12) 1,1-Dichloroethene (T)

3.464min (-0.018) 4.40ug/L m

response 128959

E.M 05.16.16.

Ion	Exp%	Act%
96.00	100	100
61.05	177.10	168.76
63.00	190.70	196.16
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019148.D
Acq On : 13 May 2016 11:17
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:44:26 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00558

Manual Integrations APPROVED
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5/16/2016 6:51:32 PM

Internal Standards	R.T.	QTon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	580349	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	422960	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	157025	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	115118	4.41	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 88.20%			
7) Chloroethane-d5	2.51	69	85357	4.60	ug/L	0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 92.00%			
11) 1,1-Dichloroethene-d2	3.46	63	266362	4.42	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 88.40%			
20) 2-Butanone-d5	6.40	46	163225	48.68	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 97.36%			
24) Chloroform-d	7.03	84	304813	4.74	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.80%			
26) 1,2-Dichloroethane-d4	7.75	65	124708	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
32) Benzene-d6	7.71	84	644741	4.75	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.00%			
36) 1,2-Dichloropropane-d6	8.78	67	168126	4.79	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 95.80%			
41) Toluene-d8	9.86	98	613217	4.80	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.00%			
43) trans-1,3-Dichloropropene-	10.13	79	45483	4.93	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.60%			
46) 2-Hexanone-d5	10.48	63	147220	50.95	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 101.90%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	58309	4.65	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 93.00%			
63) 1,2-Dichlorobenzene-d4	13.42	152	119462	4.59	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 91.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.74	85	112750	4.46	ug/L	94
3) Chloromethane	1.90	50	121319	4.38	ug/L	94
5) Vinyl chloride	2.05	62	117870	4.44	ug/L	99
6) Bromomethane	2.40	94	65860	4.37	ug/L	94
8) Chloroethane	2.53	64	69844	4.59	ug/L	96
9) Trichlorofluoromethane	2.79	101	175548m	4.85	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	118875	4.25	ug/L	98
12) 1,1-Dichloroethene	3.46	96	128959m	4.40	ug/L	
13) Acetone	3.52	43	110938	42.22	ug/L	98
14) Carbon disulfide	3.77	76	261464	4.47	ug/L	99
15) Methyl Acetate	4.01	43	26476	4.78	ug/L	92
16) Methylene chloride	4.21	84	114941	4.30	ug/L	96
17) Methyl tert-butyl Ether	4.69	73	167301	4.35	ug/L	99
18) trans-1,2-Dichloroethene	4.68	96	147727	4.55	ug/L	97
19) 1,1-Dichloroethane	5.49	63	277132	4.47	ug/L	98
21) 2-Butanone	6.49	43	164113	46.74	ug/L	97
22) cis-1,2-Dichloroethene	6.48	96	150050	4.54	ug/L #	96

E.M 05.16.16

E.M 05.16.16.

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019148.D
Acq On : 13 May 2016 11:17
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 00:44:26 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00558

Manual Integrations APPROVED
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5/16/2016 6:51:32 PM

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
23) Bromochloromethane	6.88	128	47815	4.45 ug/L	97
25) Chloroform	7.06	83	267238	4.51 ug/L	100
27) 1,2-Dichloroethane	7.85	62	123548	4.57 ug/L	96
29) 1,1,1-Trichloroethane	7.27	97	207693	4.94 ug/L	98
30) Cyclohexane	7.37	56	218617	4.70 ug/L	99
31) Carbon tetrachloride	7.49	117	190747	5.02 ug/L	95
33) Benzene	7.77	78	622912	4.57 ug/L	100
34) Trichloroethene	8.59	95	161932	4.77 ug/L	97
35) Methylcyclohexane	8.84	83	221116	4.70 ug/L	99
37) 1,2-Dichloropropane	8.87	63	135910	4.51 ug/L	100
38) Bromodichloromethane	9.16	83	140534	4.86 ug/L	99
39) cis-1,3-Dichloropropene	9.60	75	169721	4.97 ug/L	99
40) 4-Methyl-2-pentanone	9.75	43	440199	46.65 ug/L	98
42) Toluene	9.92	91	658021	4.57 ug/L	99
44) trans-1,3-Dichloropropene	10.16	75	111901	4.86 ug/L	97
45) 1,1,2-Trichloroethane	10.33	97	61708	4.28 ug/L	96
47) Tetrachloroethene	10.41	164	119606	4.55 ug/L	98
48) 2-Hexanone	10.52	43	292136	45.10 ug/L	98
49) Dibromochloromethane	10.67	129	69861	4.82 ug/L	95
50) 1,2-Dibromoethane	10.78	107	52947	4.40 ug/L #	90
51) Chlorobenzene	11.21	112	372309	4.49 ug/L	99
52) Ethylbenzene	11.29	91	722190	4.60 ug/L	98
53) m,p-Xylene	11.40	106	266751	4.61 ug/L	97
54) o-Xylene	11.73	106	239626	4.68 ug/L	98
55) Styrene	11.74	104	367888	4.61 ug/L	97
56) Isopropylbenzene	12.03	105	632591	4.76 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.29	83	50956	4.34 ug/L	100
60) Bromoform	11.91	173	22649	4.63 ug/L	98
61) 1,3-Dichlorobenzene	13.06	146	216763	4.63 ug/L	99
62) 1,4-Dichlorobenzene	13.15	146	212617	4.40 ug/L	99
64) 1,2-Dichlorobenzene	13.44	146	171034	4.41 ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.05	75	4965	4.78 ug/L #	79
66) 1,2,4-trichlorobenzene	14.69	180	91628	4.10 ug/L	99
67) 1,2,3-Trichlorobenzene	15.08	180	65794	3.97 ug/L	96

(#) = qualifier out of range (m) - manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019160.D
Acq On : 13 May 2016 18:14
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 09:58:24 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00559

Manual Integrations APPROVED
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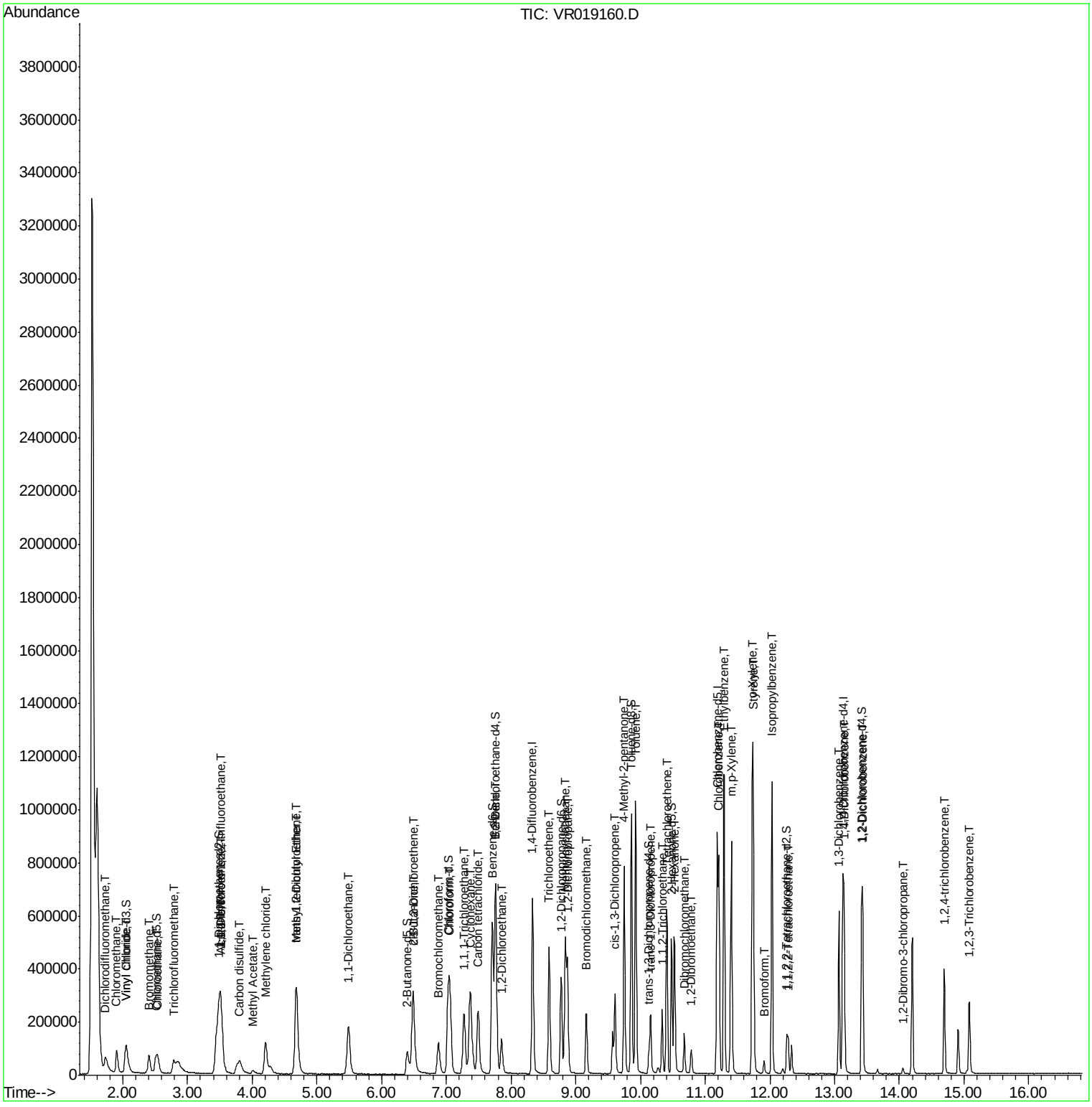

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019160.D
Acq On : 13 May 2016 18:14
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VSTD00559

Manual Integrations APPROVED
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Quant Time: May 14 09:58:24 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	560106	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	419707	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	152513	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.05	65	109104	4.33	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 86.60%			
7) Chloroethane-d5	2.51	69	84368	4.71	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 94.20%			
11) 1,1-Dichloroethene-d2	3.48	63	243348	4.19	ug/L	0.02
Spiked Amount 5.000	Range 60 - 125		Recovery = 83.80%			
20) 2-Butanone-d5	6.40	46	179904	55.59	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 111.18%			
24) Chloroform-d	7.03	84	303649	4.89	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.80%			
26) 1,2-Dichloroethane-d4	7.75	65	125159	5.09	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.80%			
32) Benzene-d6	7.71	84	638539	4.74	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.80%			
36) 1,2-Dichloropropane-d6	8.78	67	167153	4.80	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 96.00%			
41) Toluene-d8	9.86	98	599325	4.73	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
43) trans-1,3-Dichloropropene-	10.13	79	43643	4.77	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 95.40%			
46) 2-Hexanone-d5	10.48	63	155532	54.25	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 108.50%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	59682	4.79	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.80%			
63) 1,2-Dichlorobenzene-d4	13.42	152	120687	4.78	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 95.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	113330	4.65	ug/L	97
3) Chloromethane	1.91	50	113370	4.24	ug/L	95
5) Vinyl chloride	2.05	62	117633	4.59	ug/L	96
6) Bromomethane	2.41	94	64972	4.47	ug/L	91
8) Chloroethane	2.54	64	68078	4.63	ug/L	97
9) Trichlorofluoromethane	2.79	101	171855m	4.92	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	115213	4.26	ug/L	98
12) 1,1-Dichloroethene	3.50	96	121277	4.29	ug/L #	72
13) Acetone	3.53	43	116714	46.03	ug/L	100
14) Carbon disulfide	3.80	76	222442	3.94	ug/L	100
15) Methyl Acetate	4.01	43	25881	4.85	ug/L	98
16) Methylene chloride	4.21	84	110900m	4.30	ug/L	
17) Methyl tert-butyl Ether	4.68	73	179997	4.85	ug/L	99
18) trans-1,2-Dichloroethene	4.68	96	149998	4.79	ug/L	99
19) 1,1-Dichloroethane	5.49	63	287636	4.81	ug/L	98
21) 2-Butanone	6.49	43	173048	51.06	ug/L	98
22) cis-1,2-Dichloroethene	6.49	96	152741	4.79	ug/L #	97

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019160.D
Acq On : 13 May 2016 18:14
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00559

Manual Integrations APPROVED
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5/16/2016 6:51:41 PM

Quant Time: May 14 09:58:24 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.88	128	48314	4.66	ug/L		91
25) Chloroform	7.06	83	276642	4.83	ug/L		99
27) 1,2-Dichloroethane	7.85	62	127984	4.90	ug/L		97
29) 1,1,1-Trichloroethane	7.27	97	208821	5.01	ug/L		99
30) Cyclohexane	7.37	56	221948	4.81	ug/L		99
31) Carbon tetrachloride	7.49	117	192661	5.11	ug/L		95
33) Benzene	7.77	78	633867	4.69	ug/L		100
34) Trichloroethene	8.59	95	164344	4.88	ug/L		99
35) Methylcyclohexane	8.84	83	221116	4.74	ug/L		100
37) 1,2-Dichloropropane	8.87	63	141161	4.72	ug/L		99
38) Bromodichloromethane	9.16	83	141745	4.94	ug/L		99
39) cis-1,3-Dichloropropene	9.61	75	172313	5.09	ug/L		97
40) 4-Methyl-2-pentanone	9.75	43	477351	50.98	ug/L		98
42) Toluene	9.92	91	676842	4.73	ug/L		99
44) trans-1,3-Dichloropropene	10.16	75	113981	4.99	ug/L		95
45) 1,1,2-Trichloroethane	10.33	97	67584	4.73	ug/L		95
47) Tetrachloroethene	10.41	164	120016	4.61	ug/L		98
48) 2-Hexanone	10.52	43	314137	49.19	ug/L		98
49) Dibromochloromethane	10.68	129	69343	4.82	ug/L		92
50) 1,2-Dibromoethane	10.78	107	54669	4.58	ug/L	#	96
51) Chlorobenzene	11.21	112	372912	4.54	ug/L		99
52) Ethylbenzene	11.29	91	740300	4.75	ug/L		99
53) m,p-Xylene	11.40	106	269961	4.70	ug/L		99
54) o-Xylene	11.73	106	242682	4.78	ug/L		96
55) Styrene	11.74	104	378401	4.78	ug/L		99
56) Isopropylbenzene	12.03	105	633708	4.81	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	54335	4.67	ug/L		98
60) Bromoform	11.91	173	20867	4.39	ug/L		99
61) 1,3-Dichlorobenzene	13.06	146	218661	4.80	ug/L		99
62) 1,4-Dichlorobenzene	13.15	146	214877	4.57	ug/L		96
64) 1,2-Dichlorobenzene	13.44	146	178568	4.74	ug/L		99
65) 1,2-Dibromo-3-chloropropan	14.06	75	5021	4.98	ug/L	#	77
66) 1,2,4-trichlorobenzene	14.69	180	106693	4.92	ug/L		98
67) 1,2,3-Trichlorobenzene	15.08	180	80168	4.98	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019160.D
Acq On : 13 May 2016 18:14
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 14 09:58:24 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00559

Manual Integrations APPROVED
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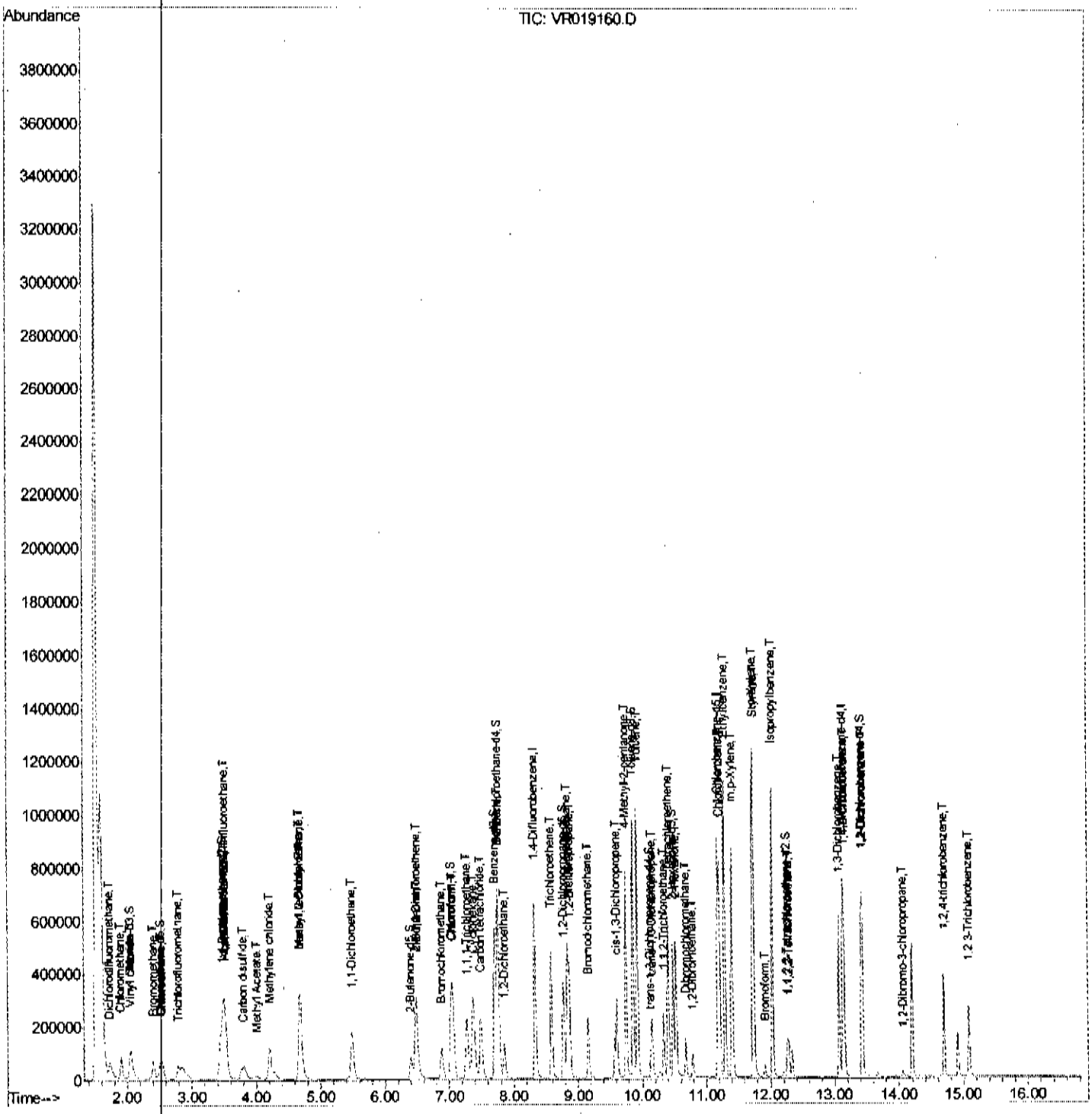

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019160.D
Acq On : 13 May 2016 18:14
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 09:47:45 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00559

Manual Integrations APPROVED
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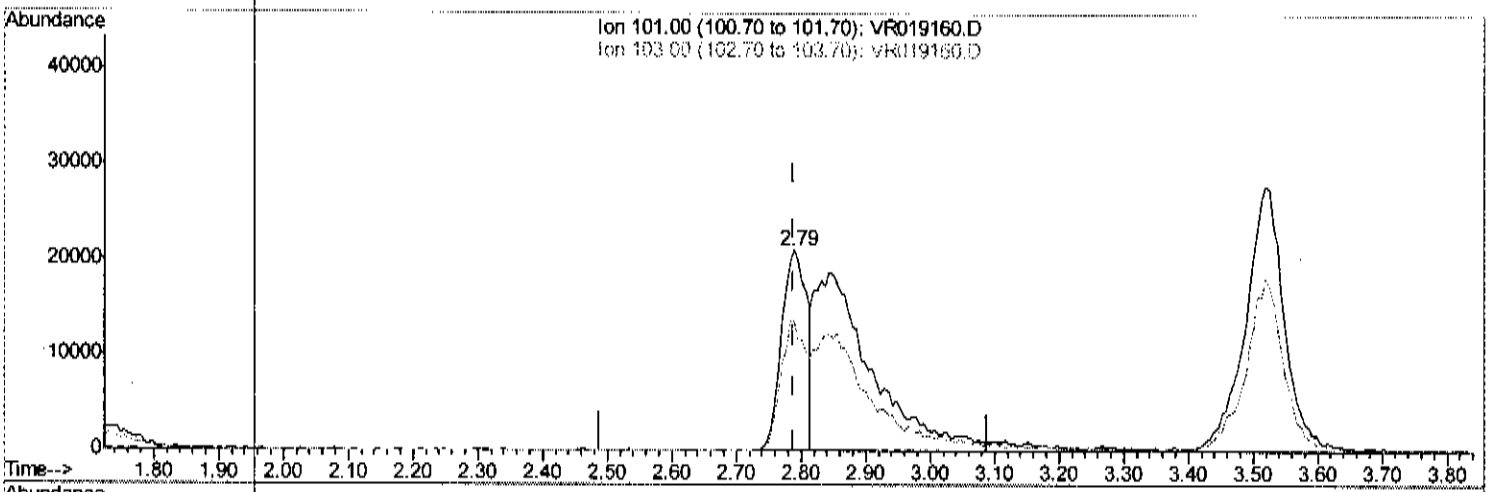
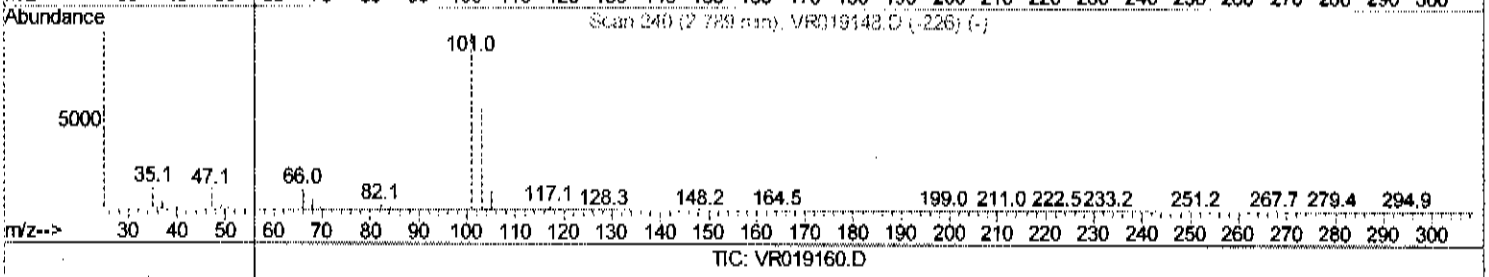
5/16/2016 6:51:41 PM





TIC: VR019160.D

(9) Trichlorofluoromethane (T)

2.789min (+0.000) 1.65ug/L

response 57747

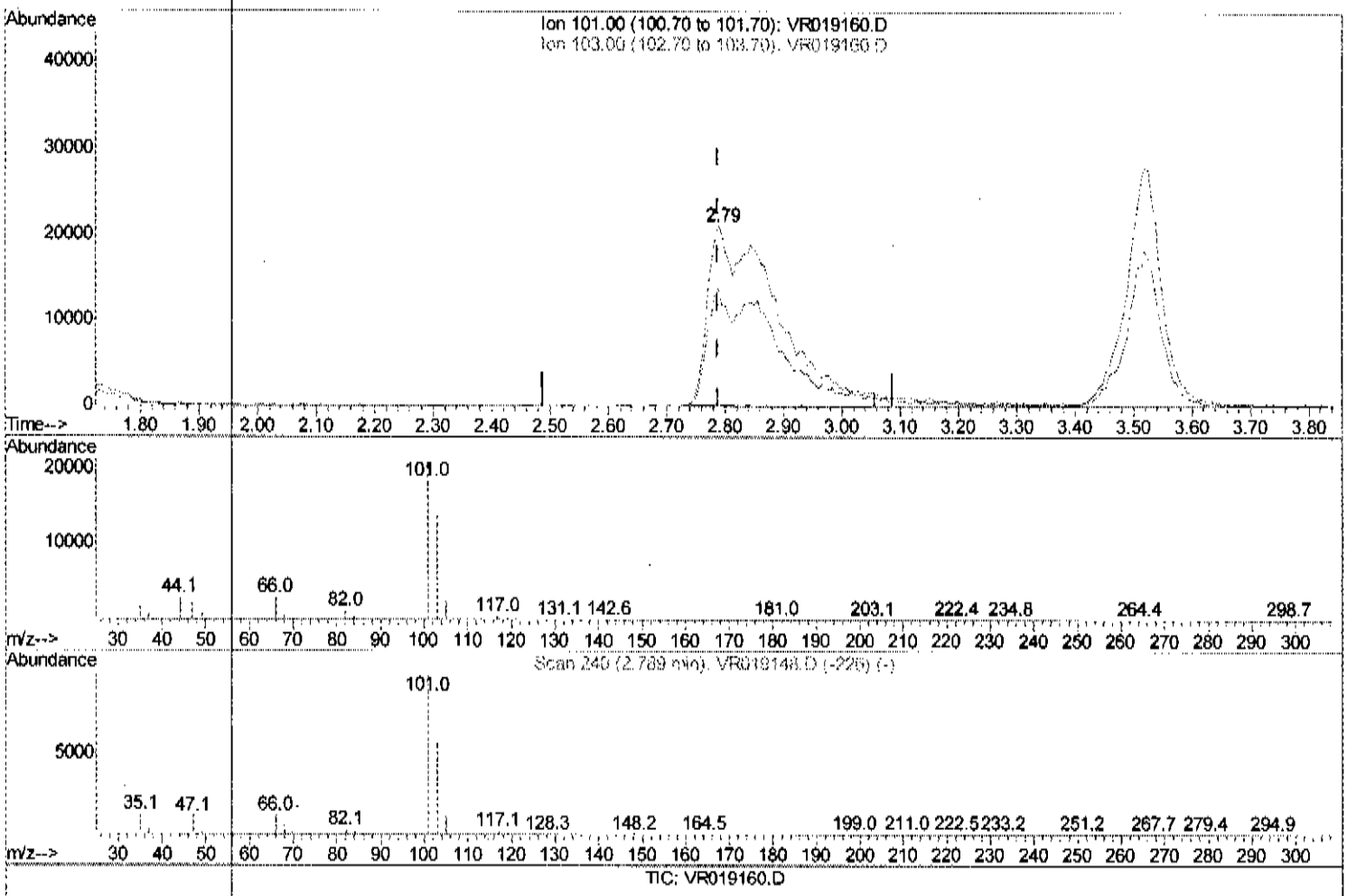
Ion	Exp%	Act%
101.00	100	100
103.00	30.30	64.97#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019160.D
Acq On : 13 May 2016 18:14
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 09:47:45 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00559

Manual Integrations APPROVED
mmdadoda
5/16/2016 6:51:41 PM



(9) Trichlorofluoromethane (T)

2.789min (+0.000) 4.92ug/L m

response 171855

E.M 05.16.16.

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	21.83#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019160.D
Acq On : 13 May 2016 18:14
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 09:47:45 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00559

Manual Integrations APPROVED
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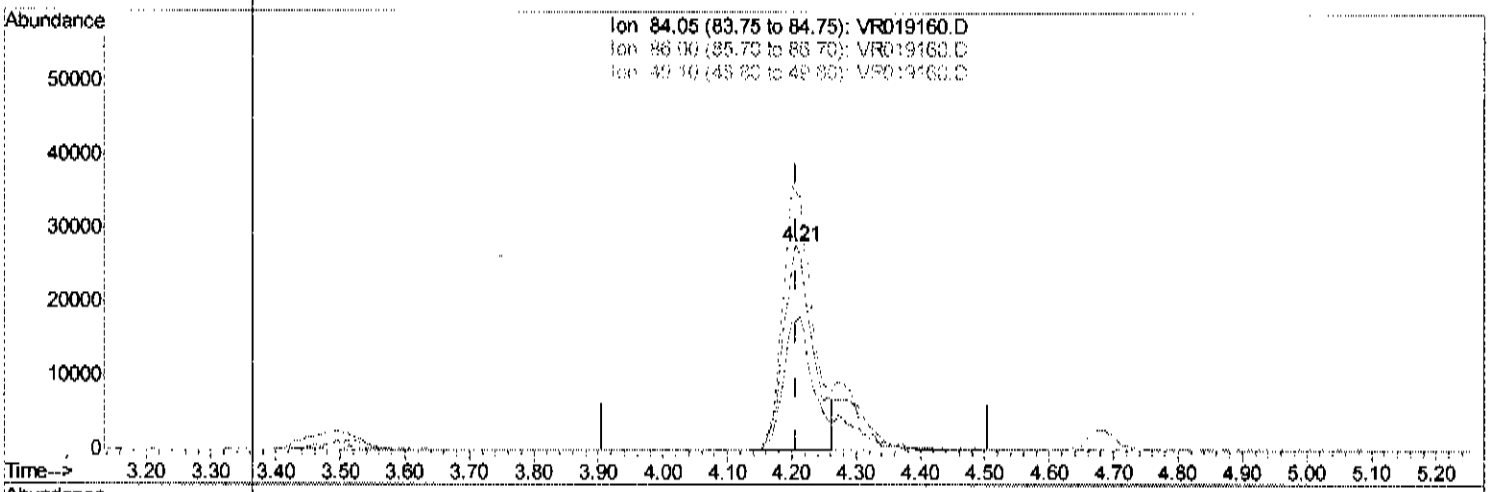
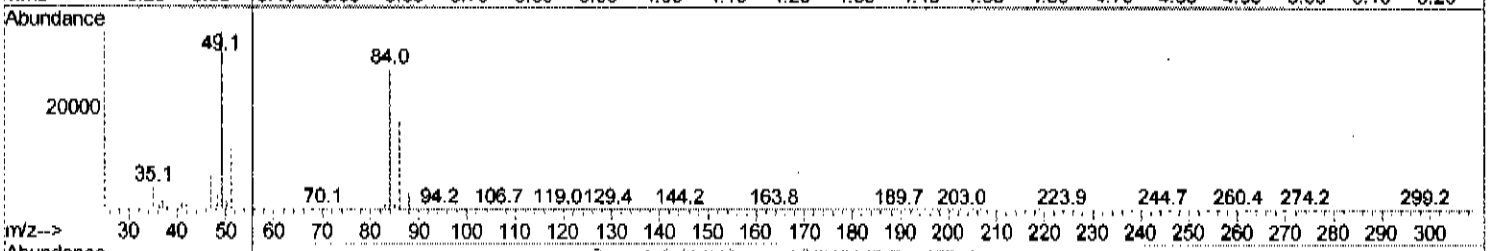
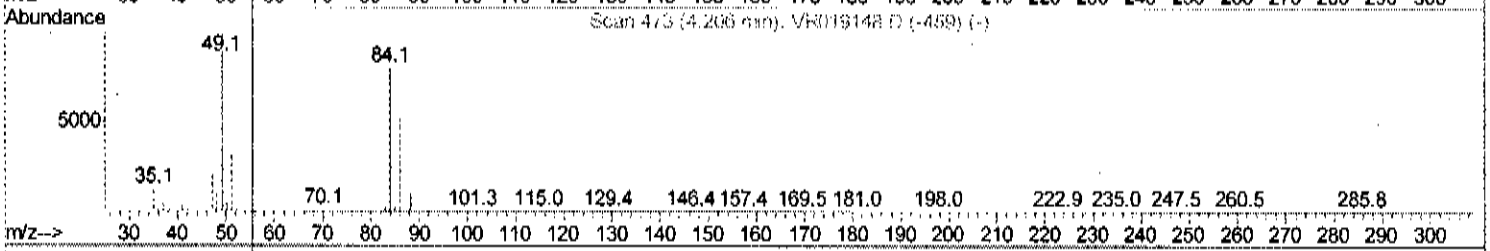
5/16/2016 6:51:41 PM





Scan 473 (4.206 min): VR019148.D (-459) (-)



TIC: VR019160.D

(16) Methylene chloride (T)

4.206min (0.000) 3.40ug/L

response 87574

Ion	Exp%	Act%
84.05	100	100
86.00	59.30	62.60
49.10	123.00	126.23
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019160.D
Acq On : 13 May 2016 18:14
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 09:47:45 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00559

Manual Integrations APPROVED
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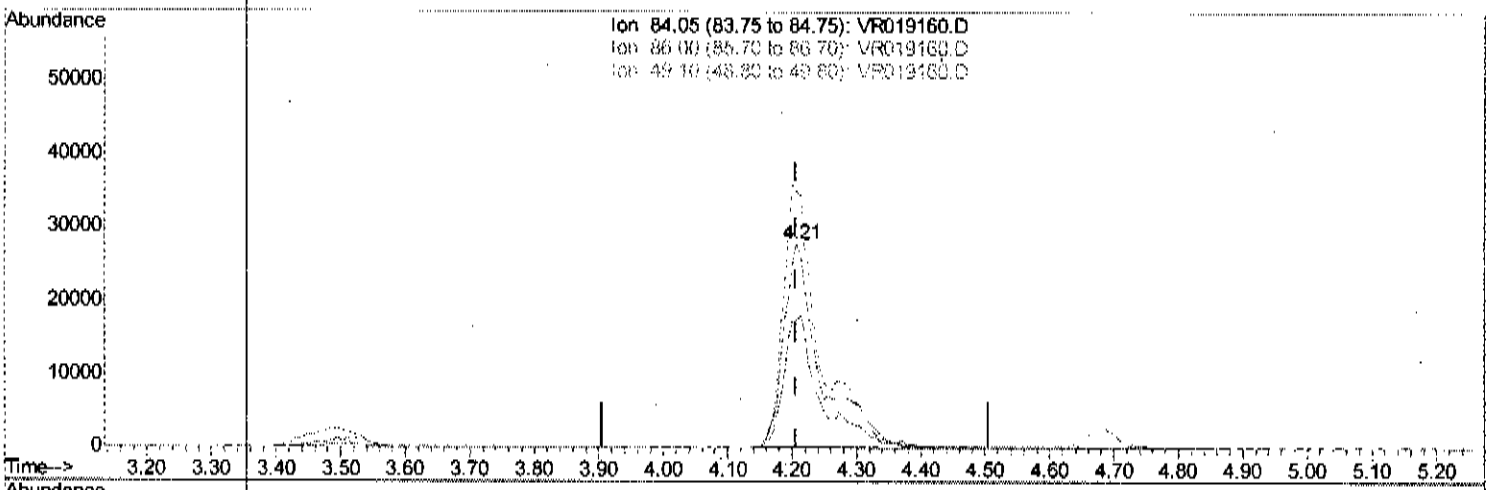
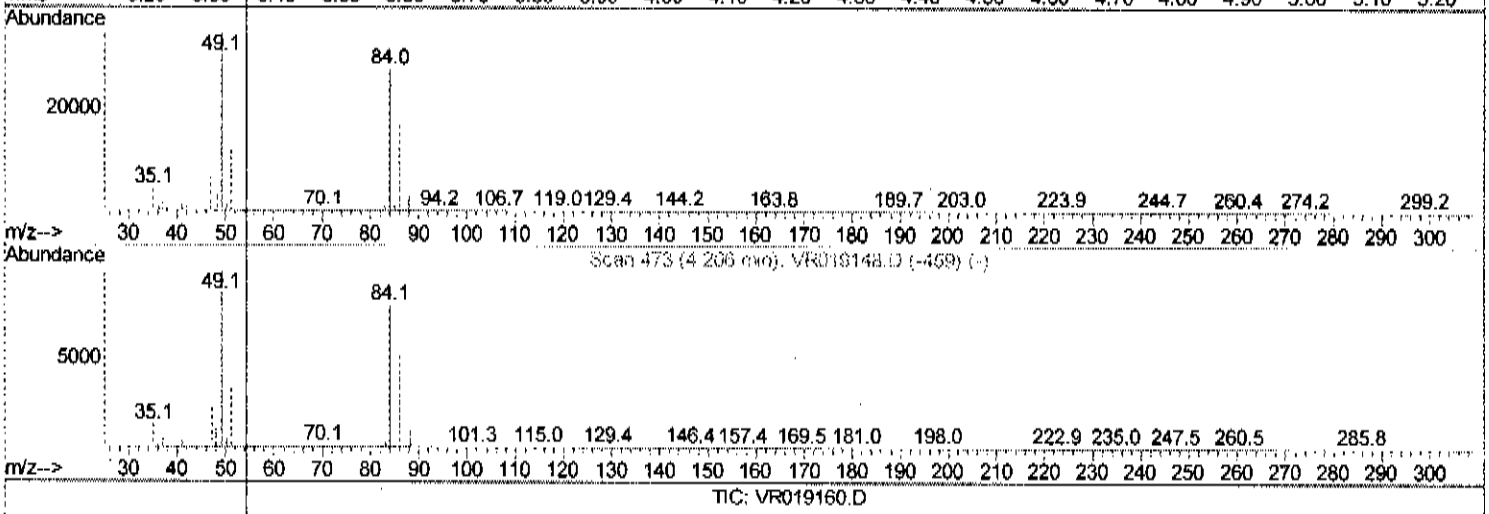
5/16/2016 6:51:41 PM





Scan 473 (4.206 min): VR019148.D (-469) (-)

TIC: VR019160.D

(16) Methylene chloride (T)

4.206min (0.000) 4.30ug/L m

response 110900

E.M 05.16.16.

Ion	Exp%	Act%
84.05	100	100
86.00	59.30	62.60
49.10	123.00	126.23
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019160.D
Acq On : 13 May 2016 18:14
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 09:58:24 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00559

Manual Integrations APPROVED
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5/16/2016 6:51:41 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	560106	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	419707	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	152513	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.05	65	109104	4.33	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 86.60%			
7) Chloroethane-d5	2.51	69	84368	4.71	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 94.20%			
11) 1,1-Dichloroethene-d2	3.48	63	243348	4.19	ug/L	0.02
Spiked Amount 5.000	Range 60 - 125		Recovery = 83.80%			
20) 2-Butanone-d5	6.40	46	179904	55.59	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 111.18%			
24) Chloroform-d	7.03	84	303649	4.89	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.80%			
26) 1,2-Dichloroethane-d4	7.75	65	125159	5.09	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.80%			
32) Benzene-d6	7.71	84	638539	4.74	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.80%			
36) 1,2-Dichloropropane-d6	8.78	67	167153	4.80	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 96.00%			
41) Toluene-d8	9.86	98	599325	4.73	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
43) trans-1,3-Dichloropropene-	10.13	79	43643	4.77	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 95.40%			
46) 2-Hexanone-d5	10.48	43	155532	54.25	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 108.50%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	59682	4.79	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.80%			
63) 1,2-Dichlorobenzene-d4	13.42	152	120687	4.78	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 95.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	113330	4.65	ug/L	97
3) Chloromethane	1.91	50	113370	4.24	ug/L	95
5) Vinyl chloride	2.05	62	117633	4.59	ug/L	96
6) Bromomethane	2.41	94	64972	4.47	ug/L	91
8) Chloroethane	2.54	64	68078	4.63	ug/L	97
9) Trichlorofluoromethane	2.79	101	171855m	4.92	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.52	101	115213	4.26	ug/L	98
12) 1,1-Dichloroethene	3.50	96	121277	4.29	ug/L #	72
13) Acetone	3.53	43	116714	46.03	ug/L	100
14) Carbon disulfide	3.80	76	222442	3.94	ug/L	100
15) Methyl Acetate	4.01	43	25881	4.85	ug/L	98
16) Methylene chloride	4.21	84	110900m	4.30	ug/L	
17) Methyl tert-butyl Ether	4.68	73	179997	4.85	ug/L	99
18) trans-1,2-Dichloroethene	4.68	96	149998	4.79	ug/L	99
19) 1,1-Dichloroethane	5.49	63	287636	4.81	ug/L	98
21) 2-Butanone	6.49	43	173048	51.06	ug/L	98
22) cis-1,2-Dichloroethene	6.49	96	152741	4.79	ug/L #	97

E.M 05.16.16

E.M 05.16.16.

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019160.D
Acq On : 13 May 2016 18:14
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 09:58:24 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00559

Manual Integrations APPROVED
mmdadoda
5/16/2016 6:51:41 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.88	128	48314	4.66	ug/L		91
25) Chloroform	7.06	83	276642	4.83	ug/L		99
27) 1,2-Dichloroethane	7.85	62	127984	4.90	ug/L		97
29) 1,1,1-Trichloroethane	7.27	97	208821	5.01	ug/L		99
30) Cyclohexane	7.37	56	221948	4.81	ug/L		99
31) Carbon tetrachloride	7.49	117	192661	5.11	ug/L		95
33) Benzene	7.77	78	633867	4.69	ug/L		100
34) Trichloroethene	8.59	95	164344	4.88	ug/L		99
35) Methylcyclohexane	8.84	83	221116	4.74	ug/L		100
37) 1,2-Dichloropropane	8.87	63	141161	4.72	ug/L		99
38) Bromodichloromethane	9.16	83	141745	4.94	ug/L		99
39) cis-1,3-Dichloropropene	9.61	75	172313	5.09	ug/L		97
40) 4-Methyl-2-pentanone	9.75	43	477351	50.98	ug/L		98
42) Toluene	9.92	91	676842	4.73	ug/L		99
44) trans-1,3-Dichloropropene	10.16	75	113981	4.99	ug/L		95
45) 1,1,2-Trichloroethane	10.33	97	67584	4.73	ug/L		95
47) Tetrachloroethene	10.41	164	120016	4.61	ug/L		98
48) 2-Hexanone	10.52	43	314137	49.19	ug/L		98
49) Dibromochloromethane	10.68	129	69343	4.82	ug/L		92
50) 1,2-Dibromoethane	10.78	107	54669	4.58	ug/L	#	96
51) Chlorobenzene	11.21	112	372912	4.54	ug/L		99
52) Ethylbenzene	11.29	91	740300	4.75	ug/L		99
53) m,p-Xylene	11.40	106	269961	4.70	ug/L		99
54) o-Xylene	11.73	106	242682	4.78	ug/L		96
55) Styrene	11.74	104	378401	4.78	ug/L		99
56) Isopropylbenzene	12.03	105	633708	4.81	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	54335	4.67	ug/L		98
60) Bromoform	11.91	173	20867	4.39	ug/L		99
61) 1,3-Dichlorobenzene	13.06	146	218661	4.80	ug/L		99
62) 1,4-Dichlorobenzene	13.15	146	214877	4.57	ug/L		96
64) 1,2-Dichlorobenzene	13.44	146	178568	4.74	ug/L		99
65) 1,2-Dibromo-3-chloropropan	14.06	75	5021	4.98	ug/L	#	77
66) 1,2,4-trichlorobenzene	14.69	180	106693	4.92	ug/L		98
67) 1,2,3-Trichlorobenzene	15.08	180	80168	4.98	ug/L		97

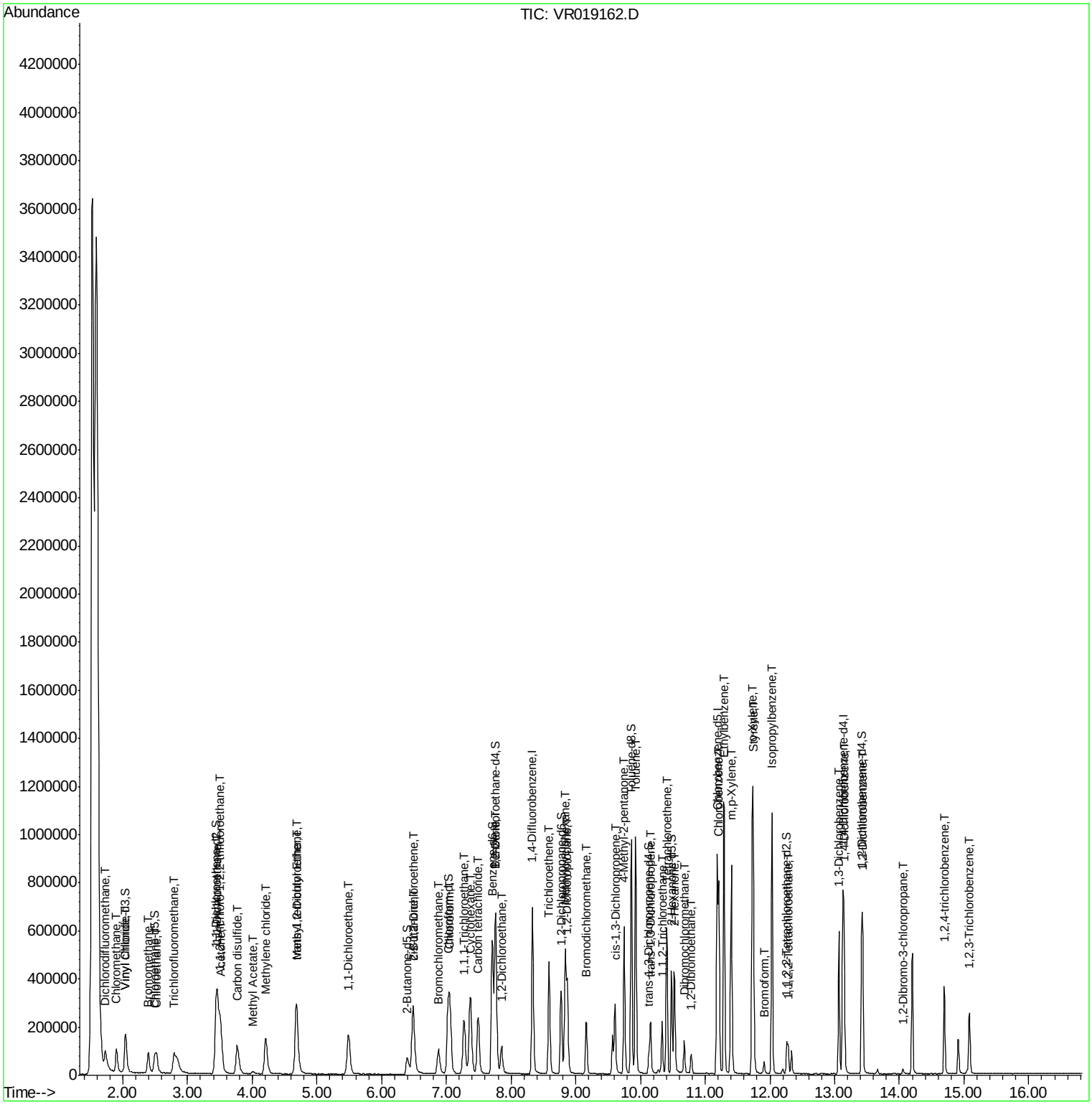
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051616\
Data File : VR019162.D
Acq On : 16 May 2016 10:39
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00560

Quant Time: May 17 01:50:15 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051616\
Data File : VR019162.D
Acq On : 16 May 2016 10:39
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00560

Quant Time: May 17 01:50:15 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	578355	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	422376	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.12	152	157177	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	123128	4.73	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 94.60%			
7) Chloroethane-d5	2.49	69	96677	5.23	ug/L	-0.02
Spiked Amount 5.000	Range 65 - 130		Recovery = 104.60%			
11) 1,1-Dichloroethene-d2	3.44	63	280421	4.67	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 125		Recovery = 93.40%			
20) 2-Butanone-d5	6.40	46	150584	45.06	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 90.12%			
24) Chloroform-d	7.02	84	287770	4.49	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.80%			
26) 1,2-Dichloroethane-d4	7.75	65	113120	4.46	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 89.20%			
32) Benzene-d6	7.71	84	621892	4.59	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 91.80%			
36) 1,2-Dichloropropane-d6	8.78	67	159134	4.54	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 90.80%			
41) Toluene-d8	9.86	98	600615	4.71	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.20%			
43) trans-1,3-Dichloropropene-	10.13	79	41918	4.55	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.00%			
46) 2-Hexanone-d5	10.48	63	131801	45.68	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 91.36%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	53355	4.26	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 85.20%			
63) 1,2-Dichlorobenzene-d4	13.42	152	114111	4.38	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 87.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	113343	4.50	ug/L	95
3) Chloromethane	1.90	50	127772	4.63	ug/L	99
5) Vinyl chloride	2.05	62	131561	4.97	ug/L	99
6) Bromomethane	2.39	94	72847	4.85	ug/L	90
8) Chloroethane	2.53	64	79937	5.27	ug/L	95
9) Trichlorofluoromethane	2.80	101	203875	5.65	ug/L	91
10) 1,1,2-Trichloro-1,2,2-trif	3.51	101	124229	4.45	ug/L	100
12) 1,1-Dichloroethene	3.46	96	134592	4.61	ug/L	86
13) Acetone	3.52	43	95293	36.39	ug/L	99
14) Carbon disulfide	3.77	76	296602	5.09	ug/L	100
15) Methyl Acetate	4.01	43	23967	4.35	ug/L #	82
16) Methylene chloride	4.21	84	111609	4.19	ug/L	94
17) Methyl tert-butyl Ether	4.69	73	145789	3.80	ug/L	99
18) trans-1,2-Dichloroethene	4.68	96	141331	4.37	ug/L	92
19) 1,1-Dichloroethane	5.49	63	268354	4.35	ug/L	97
21) 2-Butanone	6.49	43	143507	41.01	ug/L	98
22) cis-1,2-Dichloroethene	6.49	96	141932	4.31	ug/L #	98

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051616\
Data File : VR019162.D
Acq On : 16 May 2016 10:39
Operator : MD\SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VSTD00560

Quant Time: May 17 01:50:15 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.88	128	43496	4.07	ug/L		99
25) Chloroform	7.06	83	255228	4.32	ug/L		98
27) 1,2-Dichloroethane	7.86	62	113505	4.21	ug/L		100
29) 1,1,1-Trichloroethane	7.27	97	200723	4.78	ug/L		98
30) Cyclohexane	7.37	56	212538	4.58	ug/L		99
31) Carbon tetrachloride	7.49	117	186106	4.90	ug/L		95
33) Benzene	7.77	78	605107	4.45	ug/L		100
34) Trichloroethene	8.59	95	160420	4.73	ug/L		94
35) Methylcyclohexane	8.84	83	209156	4.45	ug/L		99
37) 1,2-Dichloropropane	8.87	63	131847	4.38	ug/L		99
38) Bromodichloromethane	9.16	83	137335	4.75	ug/L		96
39) cis-1,3-Dichloropropene	9.61	75	168719	4.95	ug/L		97
40) 4-Methyl-2-pentanone	9.75	43	381989	40.54	ug/L		98
42) Toluene	9.93	91	653146	4.54	ug/L		98
44) trans-1,3-Dichloropropene	10.16	75	110837	4.82	ug/L		97
45) 1,1,2-Trichloroethane	10.33	97	60053	4.17	ug/L		98
47) Tetrachloroethene	10.41	164	120825	4.61	ug/L		97
48) 2-Hexanone	10.52	43	257359	40.05	ug/L		98
49) Dibromochloromethane	10.68	129	65151	4.50	ug/L		91
50) 1,2-Dibromoethane	10.78	107	49516	4.12	ug/L		89
51) Chlorobenzene	11.21	112	363546	4.39	ug/L		97
52) Ethylbenzene	11.29	91	725406	4.63	ug/L		100
53) m,p-Xylene	11.40	106	264570	4.58	ug/L		98
54) o-Xylene	11.73	106	230366	4.51	ug/L		100
55) Styrene	11.74	104	359439	4.51	ug/L		100
56) Isopropylbenzene	12.03	105	628004	4.73	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.28	83	46658	3.98	ug/L		98
60) Bromoform	11.91	173	21064	4.30	ug/L		99
61) 1,3-Dichlorobenzene	13.06	146	208112	4.44	ug/L		99
62) 1,4-Dichlorobenzene	13.15	146	204390	4.22	ug/L		97
64) 1,2-Dichlorobenzene	13.44	146	167397	4.31	ug/L		97
65) 1,2-Dibromo-3-chloropropan	14.06	75	4590	4.42	ug/L	#	86
66) 1,2,4-trichlorobenzene	14.69	180	95877	4.29	ug/L		99
67) 1,2,3-Trichlorobenzene	15.08	180	73680	4.44	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

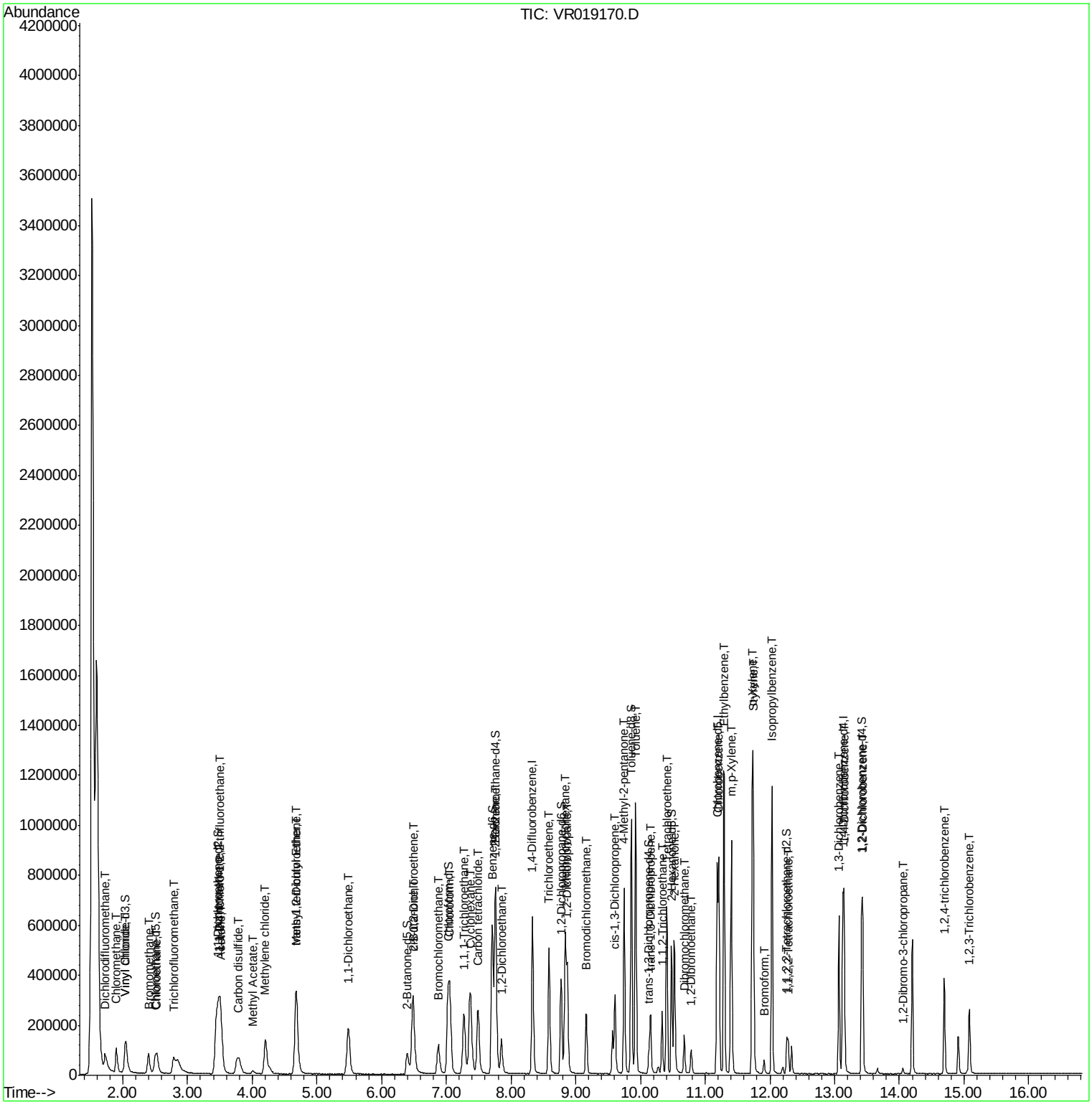
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019170.D
Acq On : 16 May 2016 16:02
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 02:34:21 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 17 01:58:26 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00561

Manual Integrations APPROVED
MMDadoda
5/17/2016 10:54:45 AM



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019170.D
Acq On : 16 May 2016 16:02
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VSTD00561

Manual Integrations APPROVED
MMDadoda
5/17/2016 10:54:45 AM

Quant Time: May 17 02:34:21 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 17 01:58:26 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	526440	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	388032	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	144575	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	112939	4.76	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 95.20%			
7) Chloroethane-d5	2.50	69	90072	5.35	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 107.00%			
11) 1,1-Dichloroethene-d2	3.46	63	261502	4.79	ug/L	0.02
Spiked Amount 5.000	Range 60 - 125		Recovery = 95.80%			
20) 2-Butanone-d5	6.39	46	170841	56.17	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 112.34%			
24) Chloroform-d	7.02	84	311717	5.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 106.80%			
26) 1,2-Dichloroethane-d4	7.75	65	123907	5.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.20%			
32) Benzene-d6	7.71	84	653601	5.25	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 105.00%			
36) 1,2-Dichloropropane-d6	8.78	67	168462	5.23	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.60%			
41) Toluene-d8	9.86	98	616793	5.26	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.20%			
43) trans-1,3-Dichloropropene-	10.13	79	45828	5.42	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 108.40%			
46) 2-Hexanone-d5	10.48	63	157797	59.53	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 119.06%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	59146	5.14	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 102.80%			
63) 1,2-Dichlorobenzene-d4	13.42	152	122570	5.12	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 102.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	119162	5.20	ug/L	93
3) Chloromethane	1.90	50	121738	4.85	ug/L	98
5) Vinyl chloride	2.05	62	128704	5.34	ug/L	95
6) Bromomethane	2.40	94	71784	5.25	ug/L	88
8) Chloroethane	2.53	64	76321	5.53	ug/L	95
9) Trichlorofluoromethane	2.78	101	201494m	6.13	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.50	101	131272	5.17	ug/L	99
12) 1,1-Dichloroethene	3.48	96	132519	4.99	ug/L	82
13) Acetone	3.52	43	113406	47.58	ug/L	99
14) Carbon disulfide	3.78	76	254029	4.79	ug/L	97
15) Methyl Acetate	4.01	43	26956	5.37	ug/L	98
16) Methylene chloride	4.20	84	121925	5.03	ug/L	98
17) Methyl tert-butyl Ether	4.69	73	168439	4.82	ug/L	98
18) trans-1,2-Dichloroethene	4.68	96	155807	5.29	ug/L	99
19) 1,1-Dichloroethane	5.48	63	298057	5.30	ug/L	99
21) 2-Butanone	6.49	43	168574	52.92	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	158868	5.30	ug/L #	96

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019170.D
Acq On : 16 May 2016 16:02
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VSTD00561

Manual Integrations APPROVED
MMDadoda
5/17/2016 10:54:45 AM

Quant Time: May 17 02:34:21 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 17 01:58:26 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.88	128	49645	5.10	ug/L		93
25) Chloroform	7.05	83	285957	5.32	ug/L		97
27) 1,2-Dichloroethane	7.85	62	128895	5.25	ug/L		96
29) 1,1,1-Trichloroethane	7.27	97	219913	5.70	ug/L		98
30) Cyclohexane	7.38	56	231469	5.43	ug/L		100
31) Carbon tetrachloride	7.49	117	206311	5.91	ug/L		95
33) Benzene	7.77	78	657875	5.26	ug/L		100
34) Trichloroethene	8.59	95	172757	5.54	ug/L		93
35) Methylcyclohexane	8.84	83	235974	5.47	ug/L		98
37) 1,2-Dichloropropane	8.87	63	145412	5.26	ug/L		99
38) Bromodichloromethane	9.16	83	148607	5.60	ug/L		100
39) cis-1,3-Dichloropropene	9.61	75	182905	5.84	ug/L		99
40) 4-Methyl-2-pentanone	9.75	43	468313	54.10	ug/L		98
42) Toluene	9.93	91	712688	5.39	ug/L		99
44) trans-1,3-Dichloropropene	10.16	75	124636	5.90	ug/L		99
45) 1,1,2-Trichloroethane	10.33	97	67216	5.08	ug/L		97
47) Tetrachloroethene	10.41	164	129207	5.36	ug/L		96
48) 2-Hexanone	10.52	43	319856	54.18	ug/L		97
49) Dibromochloromethane	10.68	129	73875	5.55	ug/L		95
50) 1,2-Dibromoethane	10.78	107	55937	5.07	ug/L	#	91
51) Chlorobenzene	11.21	112	394673	5.19	ug/L		98
52) Ethylbenzene	11.29	91	786598	5.46	ug/L		99
53) m,p-Xylene	11.40	106	286090	5.39	ug/L		98
54) o-Xylene	11.73	106	247730	5.27	ug/L		99
55) Styrene	11.74	104	394079	5.38	ug/L		97
56) Isopropylbenzene	12.03	105	669607	5.50	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.29	83	53010	4.92	ug/L		96
60) Bromoform	11.91	173	23047	5.11	ug/L		97
61) 1,3-Dichlorobenzene	13.07	146	227660	5.28	ug/L		97
62) 1,4-Dichlorobenzene	13.15	146	229597	5.16	ug/L		98
64) 1,2-Dichlorobenzene	13.44	146	184633	5.17	ug/L		97
65) 1,2-Dibromo-3-chloropropan	14.06	75	4675	4.89	ug/L		97
66) 1,2,4-trichlorobenzene	14.69	180	101093	4.92	ug/L		98
67) 1,2,3-Trichlorobenzene	15.08	180	74433	4.87	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

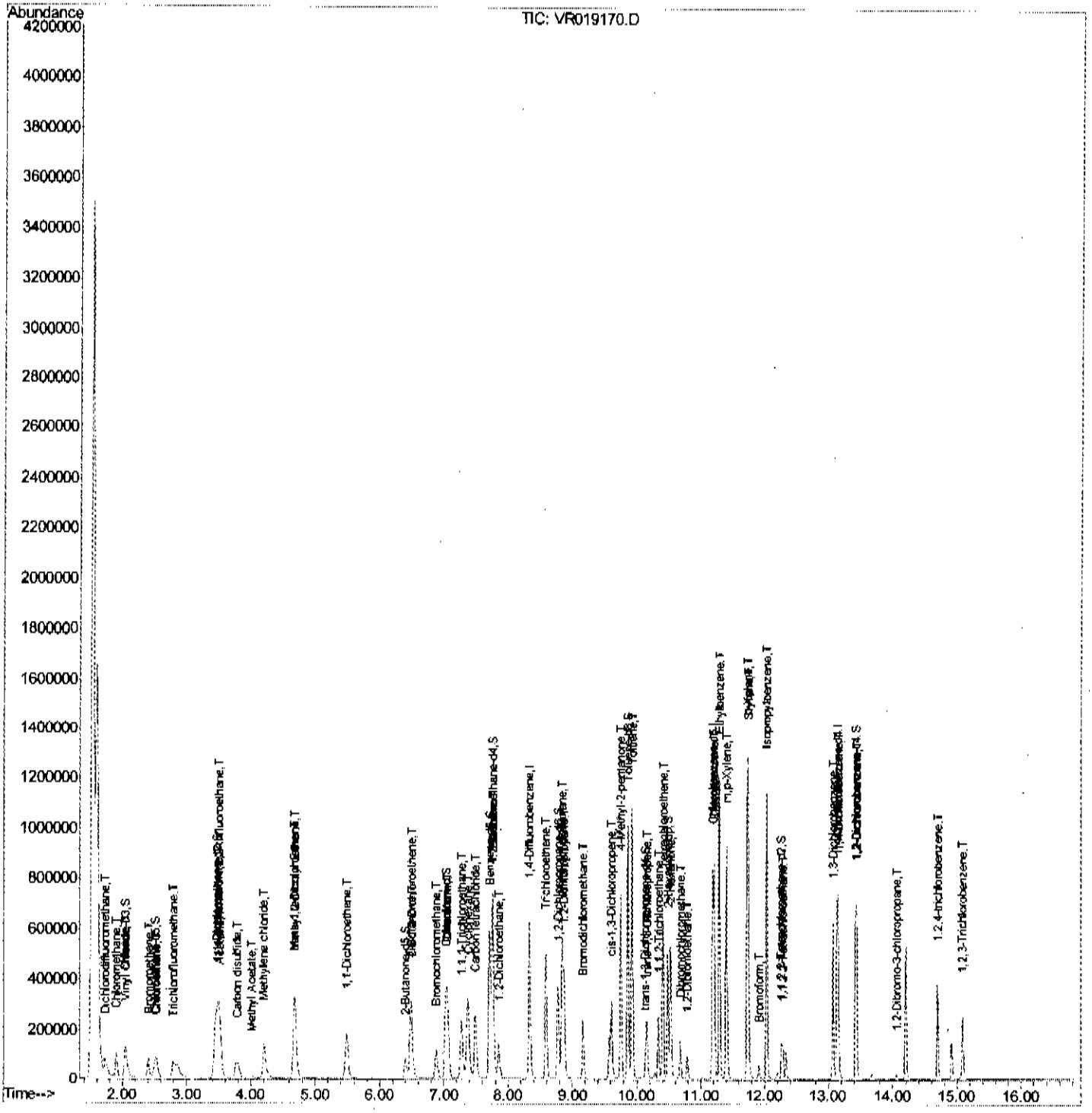
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019170.D
Acq On : 16 May 2016 16:02
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 02:34:21 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 17 01:58:26 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00561

Manual Integrations APPROVED
MMDadoda
5/17/2016 10:54:45 AM



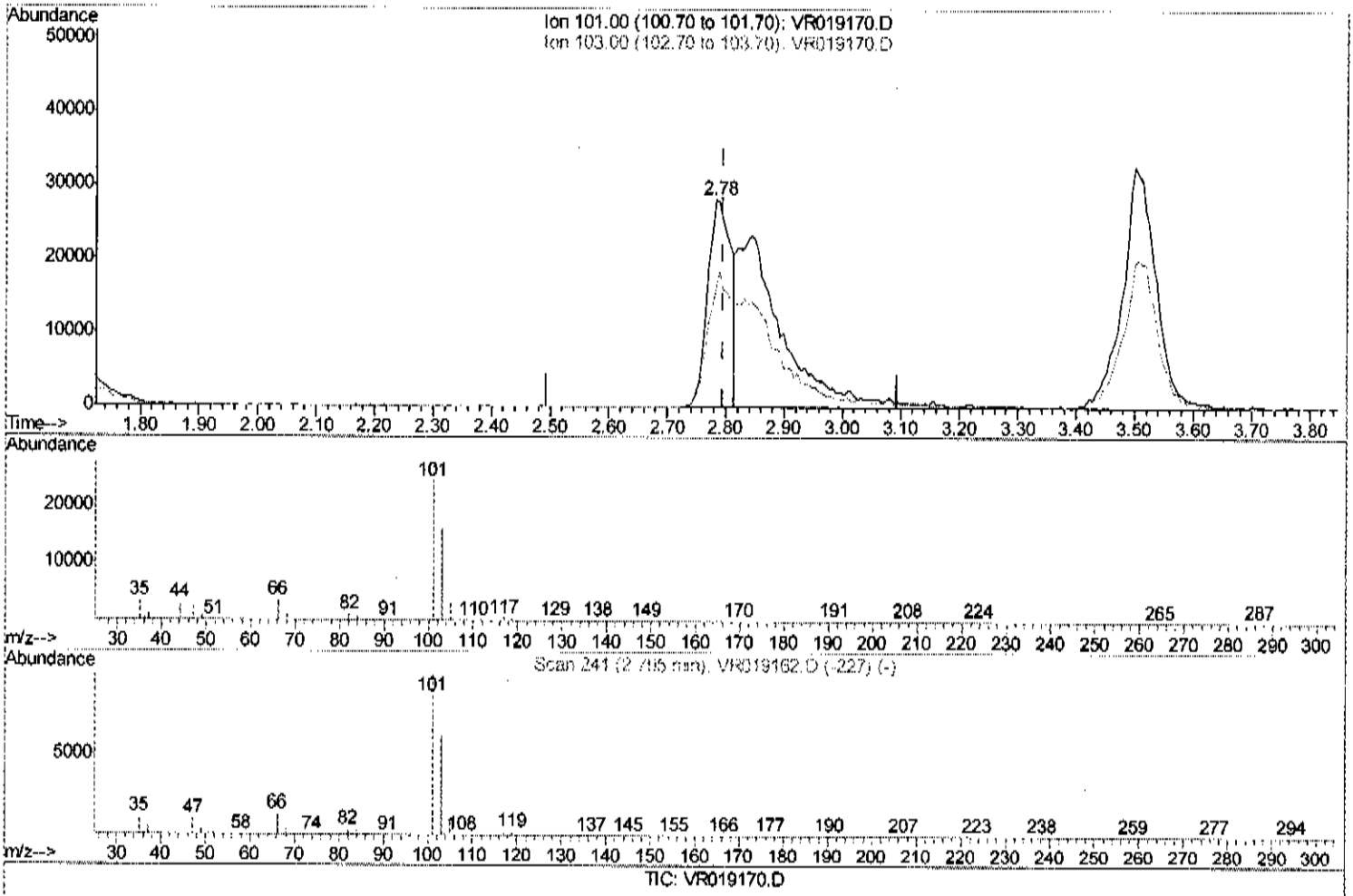
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019170.D
Acq On : 16 May 2016 16:02
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 01:59:46 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 17 01:58:26 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VSTD00561

Manual Integrations APPROVED
MMDadoda
5/17/2016 10:54:45 AM



(9) Trichlorofluoromethane (T)

2.783min (-0.012) 2.40ug/L

response 78782

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	77.02#
0.00	0.00	0.00
0.00	0.00	0.00

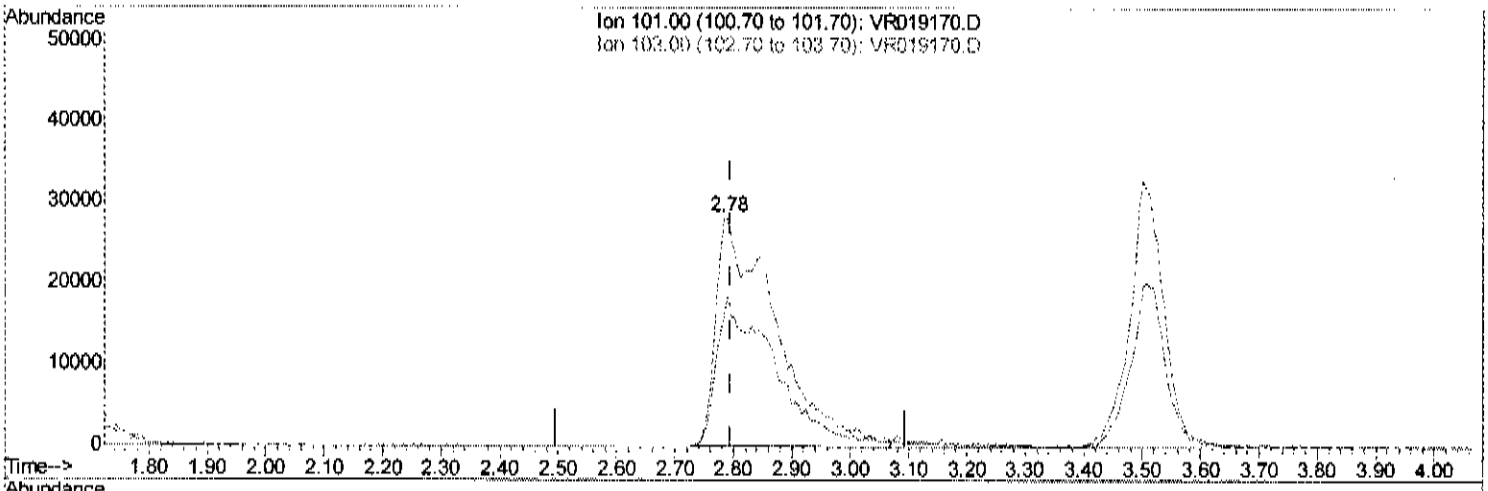
Quantitation Report (Qedit)

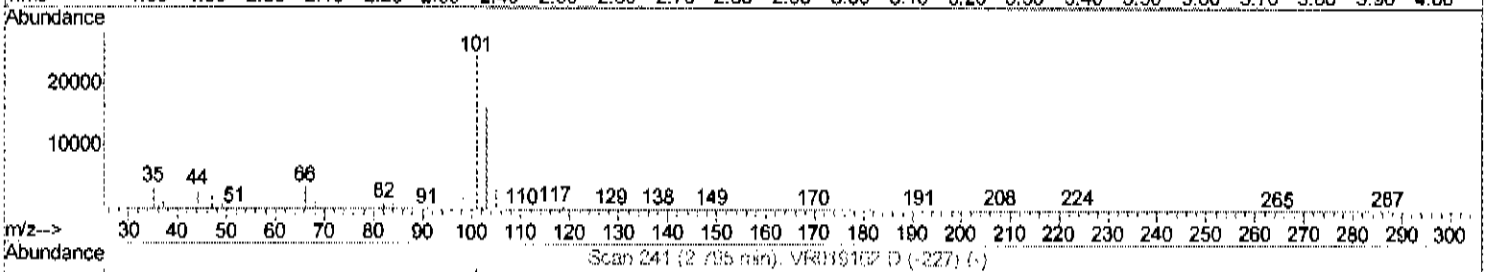
Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019170.D
Acq On : 16 May 2016 16:02
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 01:59:46 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 17 01:58:26 2016
Response via : Initial Calibration

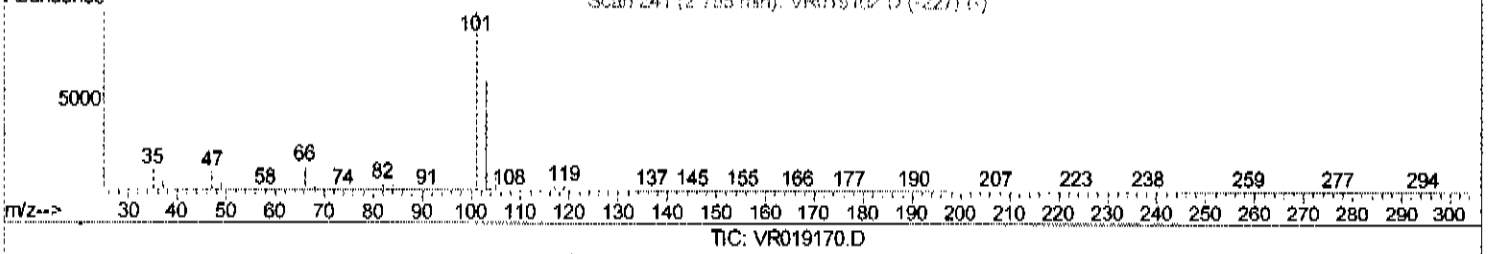
Instrument :
MSVOA_R
ClientSampleId :
VSTD00561

Manual Integrations APPROVED
MMDadoda
5/17/2016 10:54:45 AM





Scan 241 (2.785 min): VR019167.D (-227) (-)



TIC: VR019170.D

(9) Trichlorofluoromethane (T)

2.783min (-0.012) 6.13ug/L m

response 201494

Ion	Exp%	Act%
101.00	100	100
103.00	30.30	30.11
0.00	0.00	0.00
0.00	0.00	0.00

FT

5/18/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019170.D
Acq On : 16 May 2016 16:02
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 02:34:21 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 17 01:58:26 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00561

Manual Integrations APPROVED
MMDadoda
5/17/2016 10:54:45 AM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	526440	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	388032	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	144575	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	112939	4.76	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 95.20%			
7) Chloroethane-d5	2.50	69	90072	5.35	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 107.00%			
11) 1,1-Dichloroethene-d2	3.46	63	261502	4.79	ug/L	0.02
Spiked Amount 5.000	Range 60 - 125		Recovery = 95.80%			
20) 2-Butanone-d5	6.39	46	170841	56.17	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 112.34%			
24) Chloroform-d	7.02	84	311717	5.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 106.80%			
26) 1,2-Dichloroethane-d4	7.75	65	123907	5.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.20%			
32) Benzene-d6	7.71	84	653601	5.25	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 105.00%			
36) 1,2-Dichloropropane-d6	8.78	67	168462	5.23	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.60%			
41) Toluene-d8	9.86	98	616793	5.26	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.20%			
43) trans-1,3-Dichloropropene-	10.13	79	45828	5.42	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 108.40%			
46) 2-Hexanone-d5	10.48	63	157797	59.53	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 119.06%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	59146	5.14	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 102.80%			
63) 1,2-Dichlorobenzene-d4	13.42	152	122570	5.12	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 102.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	119162	5.20	ug/L	93
3) Chloromethane	1.90	50	121738	4.85	ug/L	98
5) Vinyl chloride	2.05	62	128704	5.34	ug/L	95
6) Bromomethane	2.40	94	71784	5.25	ug/L	88
8) Chloroethane	2.53	64	76321	5.53	ug/L	95
9) Trichlorofluoromethane	2.78	101	201494m	6.13	ug/L	
10) 1,1,2-Trichloro-1,2,2-trif	3.50	101	131272	5.17	ug/L	99
12) 1,1-Dichloroethene	3.48	96	132519	4.99	ug/L	82
13) Acetone	3.52	43	113406	47.58	ug/L	99
14) Carbon disulfide	3.78	76	254029	4.79	ug/L	97
15) Methyl Acetate	4.01	43	26956	5.37	ug/L	98
16) Methylene chloride	4.20	84	121925	5.03	ug/L	98
17) Methyl tert-butyl Ether	4.69	73	168439	4.82	ug/L	98
18) trans-1,2-Dichloroethene	4.68	96	155807	5.29	ug/L	99
19) 1,1-Dichloroethane	5.48	63	298057	5.30	ug/L	99
21) 2-Butanone	6.49	43	168574	52.92	ug/L	99
22) cis-1,2-Dichloroethene	6.48	96	158868	5.30	ug/L #	96

FT 5/18/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019170.D
Acq On : 16 May 2016 16:02
Operator : MD\SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 02:34:21 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 17 01:58:26 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VSTD00561

Manual Integrations APPROVED
MMDadoda
5/17/2016 10:54:45 AM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.88	128	49645	5.10	ug/L		93
25) Chloroform	7.05	83	285957	5.32	ug/L		97
27) 1,2-Dichloroethane	7.85	62	128895	5.25	ug/L		96
29) 1,1,1-Trichloroethane	7.27	97	219913	5.70	ug/L		98
30) Cyclohexane	7.38	56	231469	5.43	ug/L		100
31) Carbon tetrachloride	7.49	117	206311	5.91	ug/L		95
33) Benzene	7.77	78	657875	5.26	ug/L		100
34) Trichloroethene	8.59	95	172757	5.54	ug/L		93
35) Methylcyclohexane	8.84	83	235974	5.47	ug/L		98
37) 1,2-Dichloropropane	8.87	63	145412	5.26	ug/L		99
38) Bromodichloromethane	9.16	83	148607	5.60	ug/L		100
39) cis-1,3-Dichloropropene	9.61	75	182905	5.84	ug/L		99
40) 4-Methyl-2-pentanone	9.75	43	468313	54.10	ug/L		98
42) Toluene	9.93	91	712688	5.39	ug/L		99
44) trans-1,3-Dichloropropene	10.16	75	124636	5.90	ug/L		99
45) 1,1,2-Trichloroethane	10.33	97	67216	5.08	ug/L		97
47) Tetrachloroethene	10.41	164	129207	5.36	ug/L		96
48) 2-Hexanone	10.52	43	319856	54.18	ug/L		97
49) Dibromochloromethane	10.68	129	73875	5.55	ug/L		95
50) 1,2-Dibromoethane	10.78	107	55937	5.07	ug/L	#	91
51) Chlorobenzene	11.21	112	394673	5.19	ug/L		98
52) Ethylbenzene	11.29	91	786598	5.46	ug/L		99
53) m,p-Xylene	11.40	106	286090	5.39	ug/L		98
54) o-Xylene	11.73	106	247730	5.27	ug/L		99
55) Styrene	11.74	104	394079	5.38	ug/L		97
56) Isopropylbenzene	12.03	105	669607	5.50	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.29	83	53010	4.92	ug/L		96
60) Bromoform	11.91	173	23047	5.11	ug/L		97
61) 1,3-Dichlorobenzene	13.07	146	227660	5.28	ug/L		97
62) 1,4-Dichlorobenzene	13.15	146	229597	5.16	ug/L		98
64) 1,2-Dichlorobenzene	13.44	146	184633	5.17	ug/L		97
65) 1,2-Dibromo-3-chloropropan	14.06	75	4675	4.89	ug/L		97
66) 1,2,4-trichlorobenzene	14.69	180	101093	4.92	ug/L		98
67) 1,2,3-Trichlorobenzene	15.08	180	74433	4.87	ug/L		97

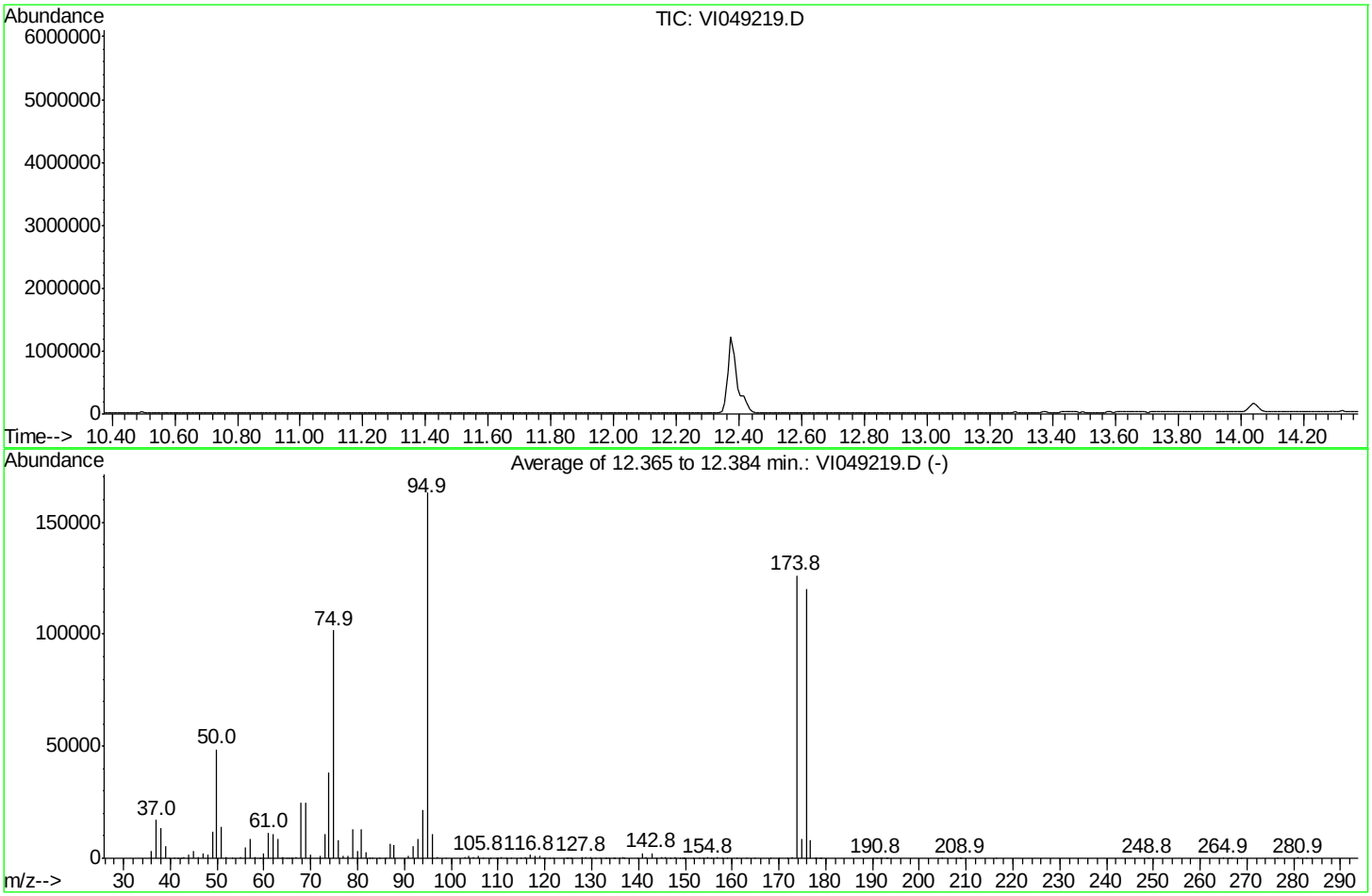
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050416\
Data File : VI049219.D
Acq On : 4 May 2016 8:57
Operator : FY/SY
Sample : BFB32
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB32

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Thu May 05 05:21:45 2016



AutoFind: Scans 1131, 1132, 1133; Background Corrected with Scan 1127

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	29.8	48658	PASS
75	95	30	80	62.3	101623	PASS
95	95	100	100	100.0	163138	PASS
96	95	5	9	6.6	10709	PASS
173	174	0.00	2	0.4	466	PASS
174	95	50	120	77.4	126261	PASS
175	174	5	9	7.1	8907	PASS
176	174	95	101	95.0	119986	PASS
177	176	5	9	6.7	8043	PASS

Scan 1127 (12.325 min): VI049219.D
BFB32

m/z	Abundance
35.95	298.0
39.00	695.0
39.90	1003.0
40.90	193.0
41.85	163.0
42.95	315.0
43.95	3257.0
44.75	335.0
50.95	353.0
51.85	155.0
52.30	169.0
55.00	175.0
58.95	188.0
59.80	152.0
60.70	181.0
62.60	204.0
63.85	210.0
64.95	244.0
69.70	179.0
70.65	165.0
72.95	1105.0
74.90	318.0
77.15	237.0
78.15	292.0
90.50	157.0
93.95	184.0
95.90	208.0
96.20	201.0
103.90	168.0
118.60	197.0
128.25	182.0
132.90	470.0
170.15	200.0
190.95	569.0
192.65	240.0
192.85	237.0
193.85	188.0
196.80	210.0
206.85	2279.0
207.95	227.0
208.80	215.0
248.45	210.0
259.70	198.0
260.10	177.0
266.70	256.0
279.30	193.0
280.90	939.0
282.00	618.0
282.70	217.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

Scan 1131 (12.365 min): VI049219.D
BFB32

Instrument :
MSVOA_I
ClientSampleId :
BFB32

m/z	Abundance
35.95	3387.0
36.95	16400.0
37.90	12574.0
39.00	5397.0
39.90	994.0
40.90	333.0
41.45	151.0
42.85	382.0
43.95	4353.0
44.90	2396.0
45.90	430.0
47.00	1397.0
48.00	1273.0
48.95	10427.0
49.95	40832.0
50.95	11832.0
51.95	573.0
54.90	696.0
55.95	4145.0
56.95	6496.0
57.95	425.0
58.85	195.0
59.05	204.0
60.00	1842.0
60.90	7636.0
61.90	8896.0
62.95	6635.0
63.75	777.0
65.35	189.0
65.85	161.0
66.90	732.0
67.90	19888.0
69.00	18984.0
69.95	2323.0
70.65	184.0
71.85	883.0
72.95	8029.0
73.90	31672.0
74.90	80968.0
75.90	5440.0
76.85	924.0
77.85	1029.0
78.85	10120.0
79.85	2196.0
80.80	10141.0
81.90	1487.0
83.00	323.0
86.85	4766.0
87.80	4132.0
90.80	743.0
91.85	4453.0
92.85	6191.0
93.95	15779.0
94.90	117320.0
95.90	9075.0
97.00	340.0
102.90	379.0
103.80	1179.0
104.90	343.0
105.75	930.0
109.70	471.0
111.70	194.0
114.85	216.0
115.90	472.0
116.80	1033.0
117.80	685.0
118.70	565.0
121.85	154.0
124.70	208.0
125.80	199.0
127.95	490.0
128.85	436.0
129.75	354.0
130.90	334.0
132.90	615.0
134.65	235.0
135.85	367.0
136.75	256.0
140.85	1126.0
141.65	217.0
142.75	1473.0
145.00	166.0
145.80	362.0
147.70	268.0
149.45	160.0
151.60	170.0
152.90	200.0
154.80	391.0
156.85	237.0
160.90	222.0
169.85	307.0
171.85	202.0

173.80	65312.0
174.80	4793.0
175.80	65368.0
176.75	4902.0
178.65	172.0
190.10	160.0
190.75	566.0
191.65	190.0
192.95	236.0
193.15	214.0
206.85	1761.0
207.95	262.0
208.70	271.0
266.70	442.0
276.55	157.0
280.90	946.0
282.75	152.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

Scan 1132 (12.374 min): VI049219.D
BFB32

Instrument :
MSVOA_I
ClientSampleId :
BFB32

m/z	Abundance
35.85	4655.0
36.95	19600.0
37.90	18296.0
39.00	7284.0
39.90	1195.0
40.90	673.0
42.45	214.0
42.95	431.0
43.95	6160.0
44.90	4370.0
45.90	515.0
46.90	3092.0
48.00	1961.0
48.95	15554.0
49.95	65416.0
50.95	18432.0
52.10	1007.0
53.30	154.0
54.90	840.0
55.85	6955.0
56.95	11209.0
57.95	647.0
58.85	350.0
59.90	3284.0
61.00	16251.0
61.90	13481.0
62.95	12315.0
63.95	1166.0
64.65	165.0
65.05	173.0
66.15	164.0
66.80	661.0
67.90	31992.0
68.90	35312.0
69.85	2042.0
71.95	1466.0
72.95	14442.0
73.90	49128.0
74.90	133120.0
76.00	12095.0
76.85	1193.0
77.85	926.0
78.85	17856.0
79.95	4684.0
80.80	17176.0
81.90	3445.0
82.60	238.0
86.85	8701.0
87.80	7453.0
90.80	1627.0
91.95	6924.0
92.95	12441.0
93.95	29432.0
94.90	210944.0
95.90	14756.0
96.90	329.0
102.90	365.0
103.80	1365.0
104.80	518.0
105.85	1424.0
106.95	382.0
108.35	158.0
109.90	192.0
110.80	350.0
111.80	275.0
112.65	399.0
114.95	211.0
115.85	936.0
116.80	1561.0
117.80	1332.0
118.90	1283.0
119.65	245.0
124.90	184.0
125.40	293.0
127.85	934.0
128.85	838.0
129.75	638.0
130.90	272.0
131.70	158.0
132.80	366.0
133.10	385.0
133.75	238.0
134.85	484.0
136.85	631.0
139.70	193.0
140.75	2515.0
141.75	473.0
142.85	2401.0
144.80	347.0
145.90	426.0
146.90	225.0
147.70	484.0

149.65	210.0
149.95	198.0
151.50	193.0
152.70	183.0
154.95	407.0
156.85	439.0
158.90	235.0
160.90	226.0
172.80	783.0
173.80	161024.0
174.80	10973.0
175.80	150400.0
176.85	10045.0
177.95	425.0
190.95	483.0
192.75	305.0
206.85	2070.0
207.85	328.0
208.70	384.0
248.85	277.0
266.60	313.0
268.85	298.0
281.00	1268.0
282.00	427.0
282.85	313.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

Scan 1133 (12.384 min): VI049219.D
BFB32

Instrument :
MSVOA_I
ClientSampleId :
BFB32

m/z	Abundance
35.95	2668.0
36.95	15616.0
37.90	9791.0
39.00	5131.0
39.80	1471.0
40.90	413.0
41.95	173.0
42.95	1060.0
43.85	4958.0
44.90	3509.0
45.70	203.0
47.00	1887.0
47.90	1572.0
48.95	10424.0
49.95	39728.0
50.95	12734.0
51.85	482.0
55.00	825.0
55.95	4090.0
56.95	7627.0
58.05	189.0
59.05	544.0
59.80	1876.0
60.90	10057.0
62.00	9237.0
62.95	6707.0
64.05	455.0
64.95	465.0
65.65	211.0
67.90	23032.0
69.00	19328.0
69.85	1535.0
70.75	158.0
71.85	765.0
72.95	12688.0
73.90	33488.0
74.90	91736.0
76.00	6961.0
76.85	1161.0
77.85	572.0
78.85	11286.0
79.85	3582.0
80.80	12245.0
81.80	3778.0
83.10	300.0
84.65	198.0
85.85	249.0
86.85	6705.0
87.80	6129.0
90.90	1207.0
91.95	5420.0
92.95	7957.0
93.95	20096.0
94.90	161152.0
95.90	8922.0
97.00	250.0
98.75	175.0
102.90	577.0
103.80	857.0
104.80	535.0
105.95	967.0
106.75	254.0
109.80	206.0
110.70	638.0
111.90	289.0
112.75	263.0
114.75	168.0
115.90	645.0
116.90	1655.0
117.90	808.0
118.90	1711.0
119.95	235.0
120.95	174.0
124.60	243.0
125.70	210.0
127.75	467.0
128.75	347.0
129.75	843.0
130.70	179.0
132.90	1031.0
133.65	316.0
134.65	393.0
137.05	551.0
140.85	2300.0
141.75	353.0
142.75	2711.0
143.75	213.0
144.80	378.0
145.70	203.0
146.70	398.0
147.80	307.0
148.95	199.0

149.55	179.0
152.90	192.0
153.80	185.0
154.80	521.0
155.45	210.0
156.85	276.0
157.75	173.0
158.70	174.0
160.90	394.0
163.05	258.0
164.75	183.0
168.20	153.0
172.70	615.0
173.80	152448.0
174.80	10955.0
175.80	144192.0
176.85	9184.0
177.65	362.0
178.95	221.0
190.85	691.0
191.95	296.0
192.95	678.0
204.85	357.0
206.95	2760.0
207.95	341.0
208.90	487.0
216.40	277.0
248.85	248.0
264.95	512.0
266.10	240.0
266.80	222.0
280.90	2231.0
281.80	453.0
282.95	438.0
283.75	210.0

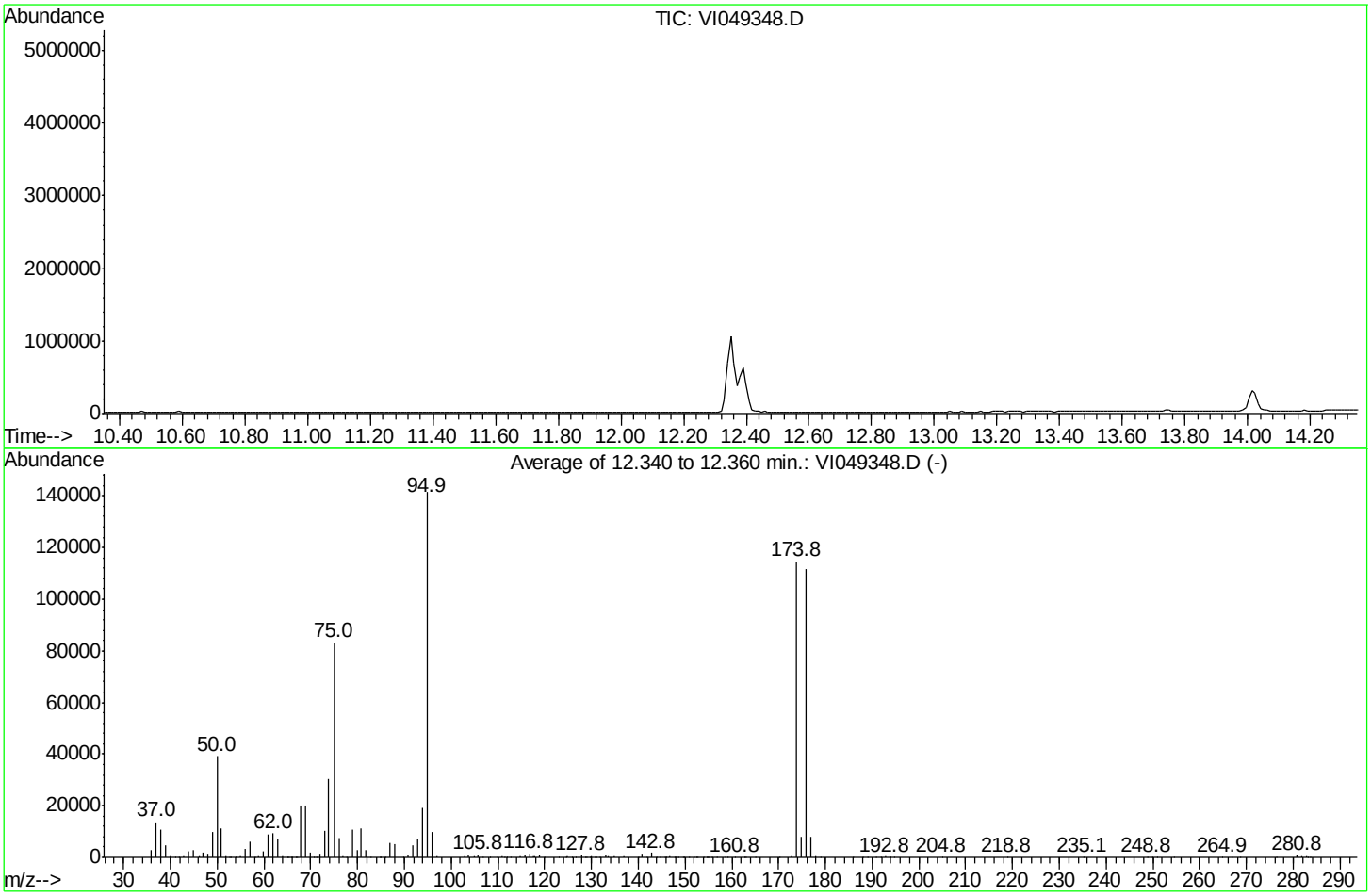
Instrument :
MSVOA_I
ClientSampleId :
BFB32

Data Path : W:\HPCHEM1\MSVOA I\Data\VI051216\
Data File : VI049348.D
Acq On : 12 May 2016 9:58
Operator : FY/SY
Sample : BFB38
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB38

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Fri May 13 04:31:36 2016



AutoFind: Scans 1129, 1130, 1131; Background Corrected with Scan 1125

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.7	39208	PASS
75	95	30	80	58.8	83152	PASS
95	95	100	100	100.0	141482	PASS
96	95	5	9	6.9	9729	PASS
173	174	0.00	2	0.5	586	PASS
174	95	50	120	81.0	114557	PASS
175	174	5	9	6.9	7853	PASS
176	174	95	101	97.6	111770	PASS
177	176	5	9	7.0	7795	PASS

Scan 1125 (12.301 min): VI049348.D
BFB38

m/z	Abundance
35.65	246.0
36.25	178.0
38.00	334.0
38.90	518.0
39.90	784.0
40.90	388.0
42.95	472.0
43.95	2165.0
45.00	290.0
45.90	217.0
49.95	176.0
50.85	284.0
54.90	219.0
55.95	201.0
61.60	163.0
62.10	176.0
72.95	835.0
76.85	477.0
77.85	376.0
78.95	197.0
82.80	164.0
94.15	301.0
96.10	327.0
97.70	188.0
98.55	211.0
102.80	242.0
103.90	160.0
109.90	184.0
132.80	448.0
147.80	236.0
169.85	190.0
190.75	523.0
192.75	322.0
206.85	2203.0
207.85	609.0
209.00	252.0
222.80	163.0
248.85	164.0
261.10	171.0
266.90	209.0
280.80	1306.0
282.00	232.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

Scan 1129 (12.340 min): VI049348.D
BFB38

m/z	Abundance
35.95	2705.0
36.95	14958.0
38.00	13425.0
39.00	5592.0
39.90	1163.0
40.90	647.0
42.05	372.0
42.85	465.0
43.85	4577.0
44.90	3347.0
45.80	330.0
47.00	2293.0
47.90	1658.0
48.95	9385.0
49.95	39768.0
50.95	12085.0
52.10	647.0
55.00	745.0
55.95	3968.0
56.95	5959.0
58.05	162.0
58.95	312.0
59.90	2053.0
61.00	8326.0
62.00	9975.0
62.95	6965.0
63.95	584.0
66.80	680.0
67.90	21064.0
69.00	19248.0
69.95	2099.0
71.15	154.0
71.95	1231.0
72.95	8655.0
73.90	29464.0
75.00	78816.0
76.00	7725.0
76.80	1083.0
77.75	931.0
78.85	10378.0
79.95	2748.0
80.80	10858.0
81.80	2818.0
84.75	170.0
85.85	165.0
86.85	4704.0
87.90	3935.0
90.80	909.0
91.85	3400.0
92.95	6124.0
93.95	16082.0
94.90	123920.0
95.90	9211.0
96.90	594.0
102.80	191.0
103.90	1455.0
104.90	210.0
105.95	886.0
106.65	160.0
108.45	181.0
110.80	267.0
112.75	263.0
114.75	407.0
115.65	404.0
116.70	1129.0
117.70	466.0
119.00	483.0
119.95	231.0
124.60	168.0
125.90	180.0
127.85	715.0
128.75	245.0
129.65	663.0
132.80	560.0
134.85	278.0
136.85	564.0
140.75	1438.0
142.75	1743.0
145.70	173.0
147.00	285.0
147.70	366.0
152.50	182.0
154.10	178.0
154.95	279.0
172.70	396.0
173.80	78472.0
174.80	5361.0
175.80	73992.0
176.85	5400.0
185.95	234.0
189.10	156.0
190.85	289.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

191.75	166.0
192.95	428.0
206.85	1625.0
207.95	429.0
208.90	277.0
222.70	168.0
248.75	256.0
266.80	385.0
276.25	161.0
280.90	893.0
281.90	191.0
283.05	187.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

Scan 1130 (12.350 min): VI049348.D
BFB38

m/z	Abundance
35.95	3753.0
36.95	17648.0
38.00	12834.0
39.00	5406.0
40.00	792.0
41.10	548.0
41.85	235.0
42.85	856.0
43.95	4710.0
44.90	3012.0
46.20	477.0
46.90	2167.0
48.00	1963.0
48.95	13122.0
49.95	51640.0
50.95	14864.0
51.95	742.0
54.00	167.0
55.00	730.0
55.95	4714.0
56.95	7344.0
58.85	283.0
60.00	2639.0
60.90	12704.0
61.90	11739.0
62.95	9074.0
63.95	652.0
64.95	319.0
65.85	311.0
67.90	25104.0
69.00	28088.0
69.95	1888.0
71.05	240.0
71.95	1796.0
72.95	12146.0
73.90	37952.0
74.90	107888.0
76.00	9782.0
76.85	934.0
77.75	698.0
78.85	15130.0
79.95	3753.0
80.80	15332.0
81.80	3213.0
82.90	342.0
84.95	285.0
85.65	166.0
86.85	6940.0
87.80	7116.0
90.90	911.0
91.85	6685.0
92.95	8572.0
93.95	27080.0
94.90	190464.0
95.90	12777.0
96.90	564.0
102.90	634.0
103.80	1367.0
104.90	366.0
105.75	1250.0
106.75	294.0
109.70	392.0
110.90	239.0
111.90	243.0
112.75	272.0
114.75	200.0
115.75	1420.0
116.80	1946.0
117.90	801.0
118.80	1345.0
122.95	191.0
127.85	906.0
128.95	248.0
129.85	670.0
130.70	267.0
131.00	277.0
133.00	775.0
133.75	220.0
134.85	366.0
136.85	706.0
140.75	1516.0
141.95	188.0
142.85	1943.0
144.70	181.0
145.70	385.0
146.80	412.0
147.80	528.0
149.65	258.0
149.95	198.0
152.90	166.0
154.70	704.0
156.75	217.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

158.60	174.0
160.80	532.0
162.75	224.0
170.15	155.0
172.80	731.0
173.80	149888.0
174.90	10880.0
175.80	146944.0
176.85	9647.0
177.95	473.0
188.00	167.0
190.65	251.0
192.75	296.0
206.95	1632.0
207.75	476.0
208.70	158.0
264.85	182.0
266.60	284.0
280.80	1106.0
282.00	200.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

Scan 1131 (12.360 min): VI049348.D
BFB38

Instrument :
MSVOA_I
ClientSampleId :
BFB38

m/z	Abundance
35.85	2399.0
36.95	8754.0
37.90	6467.0
39.00	3971.0
39.90	1175.0
42.95	969.0
43.95	4407.0
45.00	3414.0
46.00	411.0
47.00	1572.0
48.00	1195.0
48.95	6588.0
49.95	26744.0
50.95	7053.0
51.95	260.0
52.70	197.0
53.00	176.0
55.00	685.0
55.95	2280.0
56.95	4832.0
57.95	380.0
58.95	849.0
60.00	1841.0
60.90	6012.0
62.00	6205.0
62.95	4896.0
64.05	458.0
65.15	210.0
66.05	352.0
67.00	559.0
67.90	14574.0
68.90	13403.0
69.95	1006.0
70.65	155.0
71.95	864.0
72.95	13200.0
73.90	23976.0
74.90	62752.0
76.00	5343.0
76.85	858.0
78.85	7220.0
79.95	2367.0
80.80	8034.0
81.90	1755.0
83.00	456.0
85.85	168.0
86.85	5117.0
87.80	4379.0
89.70	226.0
90.80	1233.0
91.95	4610.0
92.95	6068.0
93.95	15275.0
94.90	110064.0
95.90	8180.0
96.90	357.0
102.90	830.0
103.70	1038.0
105.00	333.0
105.75	828.0
109.80	307.0
111.00	398.0
111.50	289.0
112.00	229.0
112.55	217.0
114.75	503.0
115.85	596.0
116.70	1345.0
117.60	746.0
118.90	1317.0
124.90	1064.0
125.80	314.0
126.55	152.0
127.75	612.0
128.75	278.0
129.85	652.0
131.90	152.0
132.90	2048.0
133.60	650.0
134.85	873.0
136.85	373.0
137.80	169.0
139.90	184.0
140.85	1308.0
141.85	264.0
142.75	1498.0
143.85	263.0
144.80	218.0
145.90	475.0
146.70	523.0
147.60	445.0
147.95	315.0

148.65	221.0
149.85	157.0
150.75	178.0
152.00	152.0
152.70	334.0
153.90	252.0
154.80	549.0
155.65	152.0
156.75	206.0
159.00	347.0
160.60	182.0
162.65	184.0
163.05	185.0
164.95	180.0
172.70	631.0
173.80	115312.0
174.80	7320.0
175.80	114376.0
176.75	8338.0
177.75	593.0
178.85	477.0
190.85	1243.0
191.85	267.0
192.75	1459.0
193.85	257.0
194.60	264.0
204.85	223.0
206.85	3228.0
207.95	496.0
208.90	258.0
218.80	176.0
235.05	200.0
248.75	483.0
249.85	160.0
250.80	159.0
254.35	156.0
264.95	350.0
266.70	368.0
268.65	151.0
280.80	4107.0
281.90	1514.0
282.75	931.0
283.65	171.0

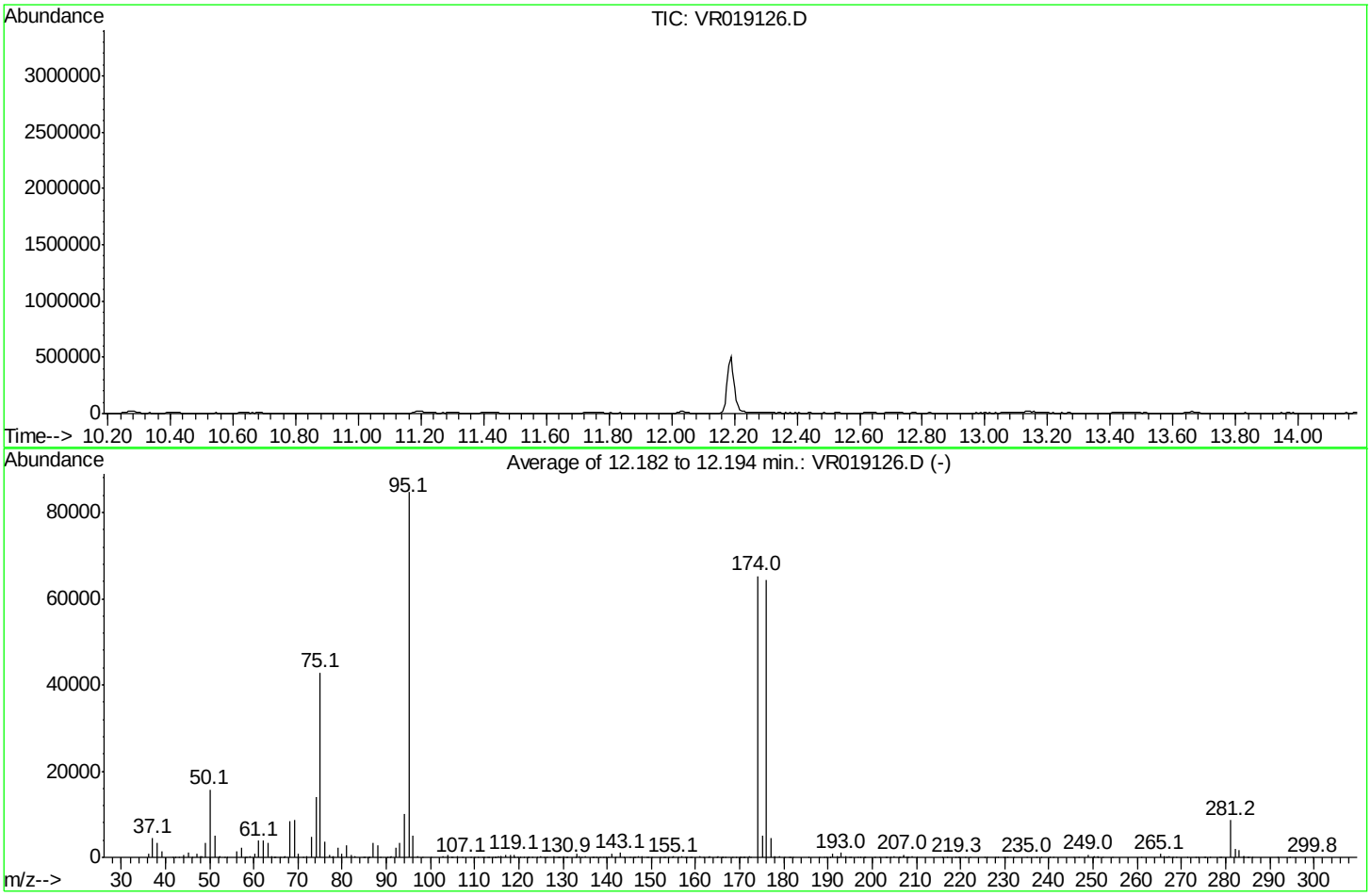
Instrument :
MSVOA_I
ClientSampleId :
BFB38

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051116\
Data File : VR019126.D
Acq On : 11 May 2016 10:18
Operator : MD\SY
Sample : BFB51
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
BFB51

Integration File: rteint.p

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Title : TRACE VOA SOM01.0
Last Update : Wed May 11 10:57:22 2016



AutoFind: Scans 1784, 1785, 1786; Background Corrected with Scan 1777

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.6	15779	PASS
75	95	30	80	50.6	42853	PASS
95	95	100	100	100.0	84725	PASS
96	95	5	9	6.0	5104	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	77.0	65250	PASS
175	174	5	9	7.8	5107	PASS
176	174	95	101	98.5	64293	PASS
177	176	5	9	7.2	4624	PASS

Scan 1777 (12.139 min): VR019126.D
BFB51

m/z	Abundance
39.00	157.0
39.80	191.0
40.10	260.0
40.80	66.0
42.40	71.0
42.80	116.0
44.10	284.0
47.10	56.0
53.10	50.0
62.80	57.0
63.60	52.0
63.80	53.0
65.40	52.0
70.70	62.0
71.50	57.0
75.50	50.0
76.30	60.0
77.00	86.0
78.20	73.0
80.40	68.0
89.60	54.0
91.40	84.0
93.20	53.0
95.20	64.0
98.80	57.0
104.70	54.0
106.70	109.0
110.10	93.0
118.70	81.0
122.70	144.0
123.50	52.0
130.70	50.0
136.50	57.0
140.90	146.0
141.40	50.0
145.30	55.0
150.50	106.0
163.30	55.0
164.10	75.0
167.70	51.0
169.00	102.0
172.70	68.0
173.50	64.0
192.10	56.0
195.40	98.0
200.30	81.0
227.50	52.0
233.50	57.0
234.90	50.0
237.90	50.0
254.00	89.0
267.70	51.0
283.20	91.0

Instrument :
MSVOA_R
ClientSampleId :
BFB51

Scan 1784 (12.182 min): VR019126.D
BFB51

Instrument :
MSVOA_R
ClientSampleId :
BFB51

m/z	Abundance
36.20	964.0
37.10	5170.0
38.10	3961.0
39.20	1949.0
40.10	333.0
44.10	881.0
45.10	1020.0
47.20	914.0
48.00	612.0
49.10	3470.0
50.10	17824.0
51.10	5122.0
52.20	223.0
54.90	253.0
56.10	1249.0
57.10	2745.0
58.00	236.0
59.10	194.0
60.10	988.0
61.10	4569.0
62.10	3974.0
63.10	3169.0
64.20	425.0
65.00	85.0
66.10	100.0
67.20	249.0
68.10	8858.0
69.10	8997.0
70.10	1104.0
71.00	125.0
72.00	311.0
73.10	4601.0
74.10	15368.0
75.10	44176.0
76.20	4154.0
77.20	623.0
78.00	367.0
79.00	2829.0
80.00	707.0
81.00	2591.0
82.00	528.0
83.00	225.0
84.90	70.0
85.90	158.0
87.10	3574.0
88.10	2561.0
88.70	247.0
89.60	65.0
91.20	282.0
92.10	2409.0
93.10	3693.0
94.10	10773.0
95.10	85200.0
96.10	5193.0
97.20	231.0
103.00	227.0
103.90	534.0
104.90	51.0
105.20	58.0
106.20	399.0
107.10	186.0
110.00	221.0
110.90	104.0
111.80	63.0
112.90	150.0
114.60	60.0
115.30	104.0
115.90	262.0
116.90	371.0
118.00	467.0
118.90	504.0
119.10	518.0
120.30	75.0
121.10	119.0
122.30	73.0
123.00	80.0
124.20	103.0
125.00	285.0
125.70	171.0
126.30	114.0
128.00	328.0
128.80	98.0
129.00	95.0
129.30	63.0
130.00	544.0
130.80	165.0
132.90	396.0
133.70	133.0
134.20	102.0
135.10	247.0
136.60	107.0
137.10	174.0

138.20	82.0
139.80	119.0
141.00	1106.0
142.00	127.0
143.00	897.0
145.40	127.0
146.00	50.0
147.10	361.0
148.00	234.0
149.20	172.0
150.20	115.0
153.00	139.0
154.70	120.0
155.10	235.0
156.10	136.0
157.00	286.0
157.70	54.0
158.00	59.0
158.70	89.0
161.00	199.0
162.80	64.0
163.20	96.0
164.70	84.0
165.20	69.0
166.20	125.0
168.40	51.0
171.20	90.0
172.10	316.0
174.00	62096.0
175.00	4734.0
176.00	59504.0
177.00	4136.0
178.00	268.0
179.10	109.0
181.40	57.0
189.10	97.0
190.50	106.0
191.00	302.0
192.30	217.0
193.10	408.0
194.20	145.0
194.80	109.0
200.70	101.0
201.70	56.0
203.10	68.0
203.40	64.0
205.90	75.0
206.20	83.0
207.00	409.0
208.10	93.0
209.00	60.0
210.00	67.0
219.60	52.0
225.90	96.0
228.00	65.0
229.80	52.0
230.60	55.0
232.00	58.0
237.20	82.0
240.90	62.0
249.10	289.0
250.00	94.0
250.90	111.0
265.00	374.0
266.10	182.0
267.10	135.0
268.00	61.0
269.00	91.0
271.40	72.0
275.00	60.0
275.50	82.0
276.50	70.0
279.00	50.0
281.20	3344.0
282.20	1002.0
283.20	766.0
284.10	207.0
285.00	80.0
291.70	54.0

Instrument :
MSVOA_R
ClientSampleId :
BFB51

Scan 1785 (12.188 min): VR019126.D
BFB51

Instrument :
MSVOA_R
ClientSampleId :
BFB51

m/z	Abundance
36.20	670.0
37.10	4635.0
38.20	3875.0
39.20	1617.0
40.00	176.0
41.00	94.0
41.60	73.0
42.10	58.0
42.40	55.0
43.00	113.0
44.10	778.0
45.20	1167.0
46.20	176.0
47.20	880.0
48.20	608.0
49.10	3931.0
50.10	18088.0
51.10	5960.0
51.90	256.0
52.30	243.0
53.10	130.0
55.10	166.0
56.10	1634.0
57.10	2606.0
58.20	213.0
59.10	198.0
60.10	872.0
61.10	4298.0
62.10	4694.0
63.10	4375.0
64.00	209.0
64.70	62.0
65.20	93.0
66.00	84.0
67.10	249.0
68.10	9590.0
69.10	10304.0
70.10	990.0
72.10	445.0
73.10	5615.0
74.10	15629.0
75.10	51712.0
76.10	4447.0
77.10	595.0
78.10	372.0
79.00	2317.0
80.00	941.0
81.10	3237.0
81.80	514.0
82.00	540.0
83.00	206.0
85.10	75.0
86.20	199.0
87.10	3909.0
88.10	3280.0
90.80	320.0
92.10	2509.0
93.10	3617.0
94.10	12355.0
95.10	99272.0
96.10	6249.0
97.20	262.0
100.10	50.0
102.90	342.0
104.00	615.0
104.70	230.0
106.10	426.0
109.20	72.0
110.80	245.0
112.20	130.0
112.90	139.0
114.00	52.0
114.80	133.0
115.20	89.0
115.40	82.0
116.10	336.0
116.90	542.0
117.90	625.0
119.00	811.0
119.80	74.0
121.10	53.0
122.90	59.0
125.10	445.0
125.70	166.0
128.00	443.0
129.00	166.0
130.00	416.0
131.00	232.0
131.90	91.0
133.10	1248.0
134.10	141.0
135.00	229.0

135.20	221.0
136.90	165.0
139.00	123.0
140.10	162.0
141.00	837.0
141.90	157.0
143.00	1147.0
143.90	103.0
145.10	121.0
145.90	178.0
146.90	233.0
147.90	238.0
148.90	113.0
150.00	71.0
150.80	52.0
152.70	95.0
153.90	121.0
155.00	269.0
156.00	141.0
156.90	251.0
158.90	136.0
161.00	165.0
161.70	50.0
163.00	297.0
164.10	155.0
165.00	146.0
165.90	57.0
168.30	53.0
168.90	58.0
169.90	174.0
171.10	166.0
172.20	447.0
172.50	347.0
174.00	75144.0
175.10	5431.0
176.00	75008.0
177.00	5696.0
177.90	318.0
179.10	238.0
180.00	119.0
181.10	56.0
185.60	76.0
191.10	1142.0
192.00	212.0
193.10	848.0
194.10	320.0
194.70	100.0
197.40	55.0
198.00	98.0
198.40	63.0
203.10	119.0
205.00	95.0
206.00	65.0
207.20	1112.0
207.70	148.0
208.30	338.0
209.10	173.0
215.90	76.0
219.30	122.0
225.30	76.0
228.30	70.0
235.10	137.0
245.60	65.0
249.00	697.0
250.20	194.0
251.00	308.0
254.10	75.0
260.90	71.0
265.10	642.0
266.10	346.0
267.20	189.0
268.20	117.0
268.80	67.0
269.00	71.0
279.10	55.0
281.20	8763.0
282.10	1795.0
283.10	1548.0
283.90	316.0
285.00	238.0
286.00	91.0
294.40	73.0
299.80	106.0

Instrument :
MSVOA_R
ClientSampleId :
BFB51

Scan 1786 (12.194 min): VR019126.D
BFB51

Instrument :
MSVOA_R
ClientSampleId :
BFB51

m/z	Abundance
36.10	607.0
37.10	3298.0
38.20	2438.0
39.10	982.0
40.00	155.0
43.10	251.0
44.10	768.0
45.10	1036.0
46.10	162.0
47.10	518.0
48.20	466.0
49.20	2507.0
50.10	11427.0
51.10	3901.0
52.20	151.0
53.40	70.0
54.00	74.0
55.20	206.0
56.10	1006.0
57.10	1760.0
58.20	156.0
59.00	440.0
60.10	633.0
61.10	2810.0
62.10	2898.0
63.10	2834.0
64.20	294.0
65.00	79.0
65.90	72.0
66.70	76.0
68.10	6402.0
69.10	6825.0
70.00	619.0
71.10	96.0
72.20	457.0
73.10	4208.0
74.10	10888.0
75.10	32672.0
76.10	2668.0
77.00	425.0
77.60	114.0
78.20	275.0
79.00	1917.0
80.10	511.0
81.00	2330.0
82.10	548.0
83.00	85.0
86.00	139.0
87.10	2762.0
88.10	2481.0
90.30	72.0
91.00	279.0
92.10	1932.0
93.10	3188.0
94.10	7531.0
95.10	69896.0
96.10	3871.0
97.20	284.0
98.20	55.0
98.80	56.0
103.00	333.0
104.00	248.0
105.00	259.0
106.00	300.0
106.90	64.0
107.20	56.0
110.10	192.0
110.90	91.0
111.60	117.0
111.90	131.0
113.10	90.0
115.20	335.0
115.80	287.0
116.00	278.0
117.00	556.0
118.10	387.0
119.10	706.0
121.20	152.0
122.00	53.0
125.10	261.0
126.30	167.0
128.10	357.0
130.00	325.0
130.90	94.0
132.10	118.0
133.10	1180.0
133.80	403.0
135.10	175.0
136.70	98.0
137.60	76.0
141.00	1057.0
143.10	941.0

Instrument :
MSVOA_R
ClientSampleId :
BFB51

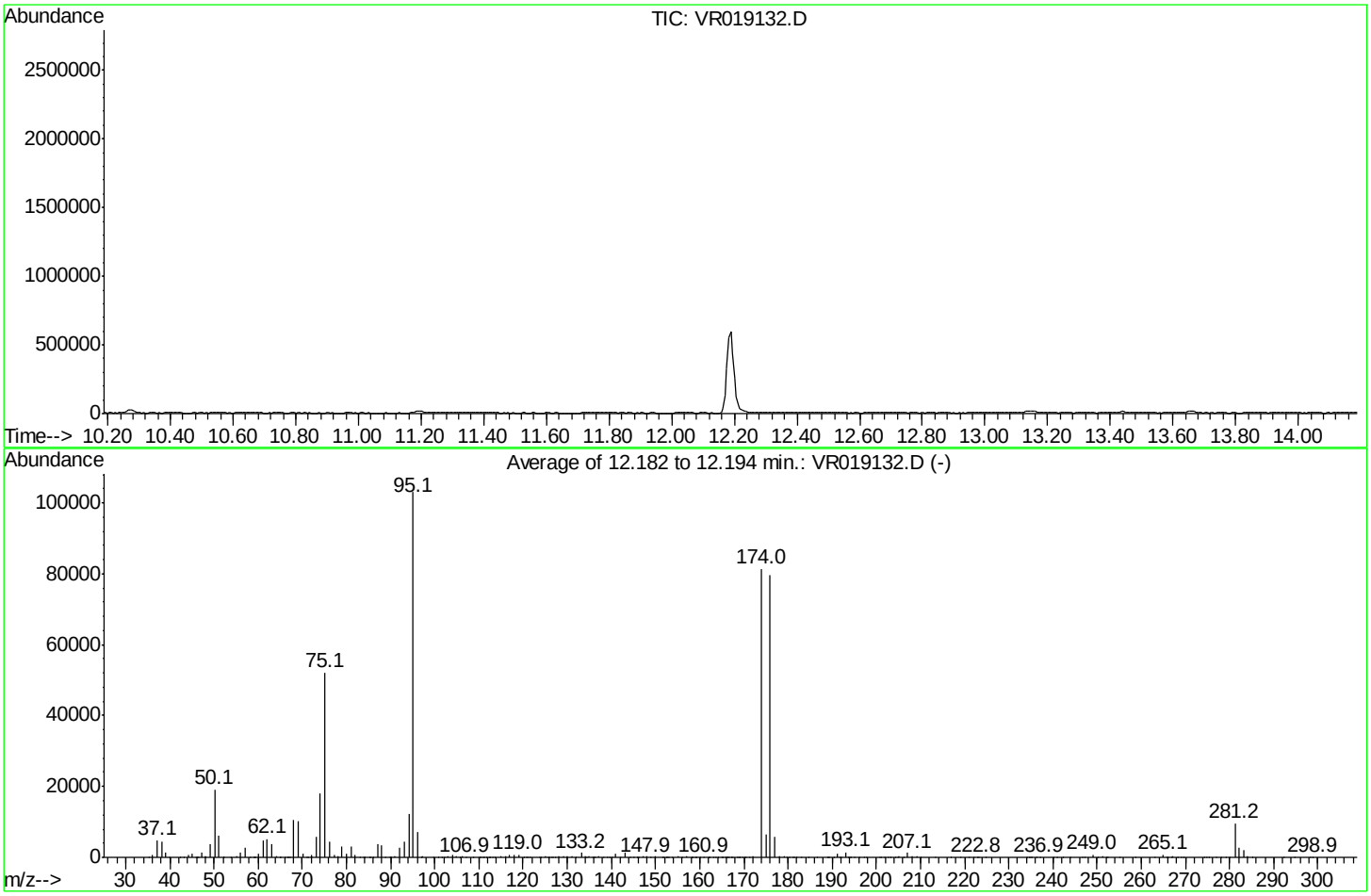
145.00	73.0
145.20	69.0
145.70	106.0
146.10	136.0
147.00	298.0
148.00	151.0
149.00	132.0
149.90	79.0
150.60	51.0
152.10	98.0
152.80	93.0
154.00	90.0
155.00	277.0
156.90	97.0
159.00	229.0
160.90	222.0
163.10	309.0
165.10	267.0
166.80	106.0
167.90	80.0
169.10	99.0
170.20	144.0
170.70	118.0
171.30	160.0
172.00	180.0
174.00	58512.0
175.10	5157.0
176.00	58368.0
177.00	4041.0
177.90	243.0
179.00	434.0
180.00	88.0
181.00	50.0
182.10	53.0
188.10	52.0
189.00	238.0
189.70	82.0
191.10	1497.0
192.00	487.0
192.90	1999.0
194.00	457.0
194.70	157.0
195.10	154.0
196.70	57.0
201.80	53.0
203.10	120.0
204.10	50.0
205.00	506.0
206.00	59.0
207.00	1725.0
208.00	336.0
209.20	318.0
217.00	66.0
219.00	101.0
219.70	66.0
221.10	72.0
222.10	88.0
227.90	63.0
230.00	51.0
234.90	103.0
235.20	115.0
238.20	57.0
240.10	65.0
246.80	84.0
248.90	963.0
250.10	331.0
251.20	462.0
252.10	157.0
254.30	74.0
265.20	1138.0
266.20	344.0
266.70	235.0
267.00	257.0
268.40	97.0
273.10	67.0
273.70	67.0
278.80	101.0
281.20	13616.0
282.10	3161.0
283.10	2878.0
284.20	692.0
285.30	63.0
286.00	109.0

Data Path : W:\HPCHEM1\MSVOA R\Data\VR051216\
Data File : VR019132.D
Acq On : 12 May 2016 9:59
Operator : MD\SY
Sample : BFB52
Misc : 25mL/MSVOA R/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : BFB52

Integration File: rteint.p

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Title : TRACE VOA SOM01.0
Last Update : Fri May 13 05:34:03 2016



AutoFind: Scans 1784, 1785, 1786; Background Corrected with Scan 1777

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.5	19052	PASS
75	95	30	80	50.6	52125	PASS
95	95	100	100	100.0	103037	PASS
96	95	5	9	6.9	7089	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	78.9	81344	PASS
175	174	5	9	7.8	6326	PASS
176	174	95	101	97.9	79597	PASS
177	176	5	9	7.2	5737	PASS

Scan 1777 (12.140 min): VR019132.D
BFB52

m/z	Abundance
39.10	260.0
40.10	187.0
41.20	151.0
42.00	57.0
43.20	113.0
43.40	103.0
44.20	281.0
45.30	66.0
46.90	54.0
48.70	129.0
52.90	65.0
53.40	89.0
53.60	90.0
55.30	71.0
56.50	85.0
58.20	63.0
64.60	63.0
69.00	52.0
72.70	68.0
80.70	96.0
82.00	71.0
82.80	75.0
98.00	61.0
103.30	70.0
105.10	67.0
106.90	55.0
107.70	55.0
111.70	74.0
124.60	62.0
131.50	90.0
139.80	86.0
141.80	171.0
153.30	77.0
154.00	86.0
154.90	53.0
156.50	73.0
161.00	53.0
162.80	78.0
169.20	57.0
186.20	60.0
198.60	78.0
201.90	57.0
203.20	77.0
203.80	53.0
207.60	56.0
212.60	51.0
217.90	63.0
241.80	89.0
243.30	55.0
257.20	57.0
260.10	52.0
264.60	51.0
273.30	50.0
285.10	50.0
288.90	62.0
290.30	58.0
297.00	70.0

Instrument :
MSVOA_R
ClientSampleId :
BFB52

Scan 1784 (12.182 min): VR019132.D
BFB52

Instrument :
MSVOA_R
ClientSampleId :
BFB52

m/z	Abundance
36.10	930.0
37.10	5425.0
38.20	5276.0
39.10	1777.0
40.20	200.0
41.30	116.0
43.10	242.0
44.10	1189.0
45.10	795.0
46.20	105.0
46.40	91.0
47.10	1240.0
47.90	466.0
49.10	4120.0
50.10	22656.0
51.20	7752.0
52.00	296.0
55.10	338.0
56.10	2002.0
57.10	3373.0
58.20	144.0
59.00	286.0
60.10	1170.0
61.10	5147.0
62.10	6460.0
63.10	4419.0
64.10	325.0
64.90	262.0
66.10	83.0
66.60	118.0
68.10	12232.0
69.10	11294.0
70.10	986.0
71.30	96.0
72.00	692.0
72.20	716.0
73.10	6078.0
74.10	20960.0
75.10	60448.0
76.10	4540.0
77.20	466.0
78.00	403.0
79.00	3496.0
80.00	915.0
81.00	3520.0
82.00	793.0
83.10	226.0
85.10	58.0
85.90	111.0
87.10	3836.0
88.10	3938.0
89.70	50.0
91.00	592.0
92.00	2892.0
93.10	5168.0
94.10	13584.0
95.10	112584.0
96.10	8061.0
96.90	289.0
97.10	305.0
99.70	52.0
103.10	109.0
104.00	797.0
105.00	185.0
106.00	463.0
107.00	74.0
107.80	56.0
108.80	76.0
110.00	94.0
110.40	78.0
110.90	265.0
112.10	214.0
113.00	148.0
115.00	191.0
116.00	340.0
117.00	761.0
118.00	503.0
119.00	719.0
120.10	94.0
120.70	79.0
120.90	70.0
121.70	65.0
123.70	67.0
124.90	215.0
125.60	176.0
126.10	84.0
126.40	60.0
128.10	494.0
129.10	294.0
130.00	438.0
131.20	166.0
133.20	693.0

134.00	273.0
135.10	306.0
135.70	79.0
136.20	133.0
137.10	325.0
139.10	107.0
140.20	158.0
141.00	1208.0
142.00	145.0
143.00	1353.0
145.00	113.0
145.90	133.0
147.90	294.0
149.10	127.0
150.00	156.0
151.90	114.0
152.50	58.0
153.00	116.0
153.80	69.0
155.10	348.0
156.00	156.0
157.10	351.0
158.90	158.0
160.90	123.0
162.00	66.0
163.00	56.0
163.60	68.0
165.20	100.0
166.30	136.0
168.70	63.0
169.00	75.0
169.70	108.0
171.20	144.0
172.10	516.0
174.00	81352.0
175.00	6666.0
176.00	79200.0
177.00	5880.0
178.00	295.0
179.20	108.0
180.20	51.0
182.00	52.0
188.90	115.0
189.30	127.0
190.30	60.0
191.20	425.0
192.10	155.0
193.00	870.0
193.60	243.0
193.80	231.0
194.90	75.0
197.80	50.0
201.10	72.0
201.70	63.0
202.70	52.0
204.90	124.0
207.10	562.0
208.10	149.0
209.20	117.0
216.80	62.0
222.80	92.0
234.10	81.0
249.00	458.0
251.10	223.0
258.50	51.0
263.20	81.0
265.00	358.0
266.10	87.0
266.80	73.0
267.20	122.0
269.60	54.0
274.10	63.0
278.10	98.0
281.20	4065.0
282.20	1115.0
283.10	567.0
284.20	182.0
294.80	60.0
298.90	58.0

Instrument :
MSVOA_R
ClientSampleId :
BFB52

Scan 1785 (12.188 min): VR019132.D
BFB52

Instrument :
MSVOA_R
ClientSampleId :
BFB52

m/z	Abundance
35.10	77.0
36.00	646.0
37.20	5820.0
38.10	4864.0
39.10	2127.0
40.20	248.0
41.10	102.0
42.40	75.0
43.10	242.0
44.10	799.0
45.10	1328.0
45.90	102.0
46.30	161.0
47.20	1713.0
48.10	613.0
49.10	4474.0
50.10	20984.0
51.10	6842.0
52.20	262.0
53.90	50.0
55.00	352.0
56.00	1791.0
57.10	2984.0
58.10	76.0
58.90	215.0
59.30	201.0
60.10	1407.0
61.10	5536.0
62.10	6182.0
63.20	4221.0
64.20	592.0
65.10	222.0
66.60	91.0
67.20	371.0
68.10	11770.0
69.10	11404.0
70.10	1168.0
71.30	137.0
72.10	398.0
73.10	6194.0
74.10	20408.0
75.10	58024.0
76.10	5273.0
77.20	955.0
78.10	294.0
79.00	3267.0
80.10	1425.0
81.00	3536.0
81.90	664.0
83.00	212.0
83.80	50.0
85.00	105.0
87.10	4470.0
88.00	3932.0
89.90	70.0
91.10	560.0
92.10	2999.0
93.10	4899.0
94.10	13558.0
95.10	118176.0
96.10	8185.0
96.80	199.0
97.20	219.0
100.80	85.0
102.10	76.0
103.10	245.0
103.90	865.0
104.80	291.0
106.10	588.0
106.90	150.0
109.90	253.0
110.80	258.0
111.70	256.0
112.80	168.0
113.00	172.0
113.70	81.0
115.10	258.0
116.10	288.0
117.00	760.0
118.10	660.0
119.00	836.0
120.80	50.0
121.50	79.0
125.00	488.0
126.10	100.0
127.30	56.0
128.10	546.0
129.00	344.0
130.00	442.0
131.00	153.0
132.00	87.0
133.10	1420.0

134.30	263.0
134.90	242.0
136.30	54.0
137.20	169.0
139.50	97.0
140.90	1241.0
142.00	175.0
143.00	1214.0
144.20	138.0
145.10	172.0
146.10	180.0
147.10	292.0
147.90	270.0
149.00	103.0
150.10	122.0
151.50	89.0
151.90	89.0
152.80	61.0
154.00	190.0
155.20	305.0
156.00	90.0
156.30	108.0
156.90	265.0
158.40	66.0
159.10	122.0
159.90	133.0
161.00	175.0
161.80	157.0
163.10	205.0
164.00	211.0
165.10	279.0
165.80	52.0
166.00	55.0
167.00	59.0
169.00	123.0
170.00	71.0
170.50	84.0
171.90	239.0
174.00	91176.0
175.10	7173.0
176.00	90320.0
177.00	6444.0
178.10	201.0
179.10	344.0
179.80	74.0
180.20	73.0
181.30	53.0
183.10	76.0
184.50	56.0
186.50	52.0
188.80	82.0
189.40	128.0
191.10	1029.0
191.80	363.0
193.10	1398.0
193.90	320.0
195.00	89.0
196.10	74.0
200.70	79.0
202.00	57.0
203.20	147.0
204.30	82.0
205.10	301.0
207.20	1251.0
208.20	198.0
209.20	331.0
213.30	83.0
220.90	86.0
223.10	84.0
235.00	153.0
236.90	94.0
240.00	56.0
240.90	52.0
242.20	87.0
243.10	77.0
243.90	52.0
249.10	707.0
250.00	270.0
251.10	219.0
252.30	74.0
265.10	911.0
265.80	107.0
267.20	135.0
275.30	57.0
280.00	61.0
281.10	9558.0
282.10	3008.0
283.10	2539.0
284.00	367.0
285.00	175.0
298.90	69.0

Instrument :
MSVOA_R
ClientSampleId :
BFB52

Scan 1786 (12.194 min): VR019132.D
BFB52

Instrument :
MSVOA_R
ClientSampleId :
BFB52

m/z	Abundance
35.20	58.0
36.20	632.0
37.10	3339.0
38.10	3235.0
39.10	1376.0
39.80	197.0
41.10	68.0
42.00	91.0
43.20	190.0
44.10	935.0
45.10	986.0
46.30	143.0
47.20	699.0
48.20	519.0
49.20	2783.0
50.10	13518.0
51.10	3725.0
52.10	116.0
55.00	274.0
56.10	785.0
57.10	2109.0
59.10	428.0
60.00	482.0
61.10	3149.0
62.20	3018.0
63.10	2654.0
64.20	274.0
64.80	77.0
66.90	244.0
68.10	7177.0
69.10	8133.0
70.00	805.0
70.90	81.0
71.10	99.0
72.30	461.0
73.10	4639.0
74.10	12306.0
75.10	37904.0
76.10	3466.0
77.00	376.0
78.10	328.0
78.90	2287.0
80.00	788.0
81.00	2515.0
82.00	633.0
82.80	162.0
83.20	74.0
84.10	82.0
85.20	141.0
85.50	124.0
87.00	2870.0
88.10	2697.0
88.80	331.0
90.10	55.0
90.90	346.0
92.10	2073.0
93.10	3049.0
94.10	9137.0
95.10	78352.0
96.10	5023.0
97.20	165.0
101.70	82.0
102.90	347.0
104.00	480.0
104.70	148.0
105.20	116.0
105.80	203.0
106.20	236.0
106.80	161.0
110.00	171.0
111.20	296.0
112.10	286.0
112.60	71.0
114.90	214.0
116.10	412.0
117.00	574.0
118.00	764.0
119.00	569.0
120.10	69.0
120.60	76.0
124.10	104.0
125.00	378.0
125.90	148.0
126.70	73.0
128.00	217.0
129.90	371.0
131.00	330.0
133.10	1652.0
134.10	335.0
135.00	285.0
135.90	102.0
137.00	187.0

138.30	53.0
140.10	67.0
141.00	897.0
142.00	215.0
143.10	1099.0
144.10	109.0
145.00	107.0
146.00	188.0
147.10	331.0
148.00	286.0
148.90	242.0
150.00	292.0
151.30	53.0
152.70	118.0
152.90	115.0
153.80	109.0
155.00	258.0
156.10	76.0
157.00	194.0
158.00	82.0
159.10	121.0
161.00	167.0
162.20	74.0
163.00	270.0
164.10	58.0
164.90	156.0
165.70	86.0
166.50	73.0
167.50	205.0
168.40	71.0
170.10	73.0
170.40	100.0
171.00	123.0
172.00	265.0
174.00	71504.0
175.10	5140.0
176.00	69272.0
177.10	4889.0
178.10	248.0
179.10	455.0
179.70	138.0
181.00	155.0
186.60	69.0
189.10	189.0
190.20	52.0
191.10	1639.0
192.10	291.0
193.10	2279.0
194.10	418.0
195.10	183.0
197.10	62.0
203.10	101.0
205.00	259.0
206.20	220.0
207.10	1959.0
208.10	283.0
209.10	370.0
209.90	82.0
216.70	58.0
219.10	76.0
222.00	99.0
222.60	55.0
224.80	65.0
234.60	52.0
235.20	116.0
236.10	63.0
237.00	86.0
246.70	97.0
247.10	69.0
249.00	1230.0
250.10	123.0
251.20	402.0
252.00	258.0
255.00	67.0
263.00	59.0
265.00	1156.0
266.00	380.0
267.20	357.0
268.10	114.0
269.10	130.0
269.70	88.0
274.80	75.0
275.40	64.0
277.00	60.0
279.20	50.0
281.20	15192.0
282.20	3975.0
283.10	3391.0
284.10	684.0
285.20	285.0
292.20	70.0
298.20	56.0

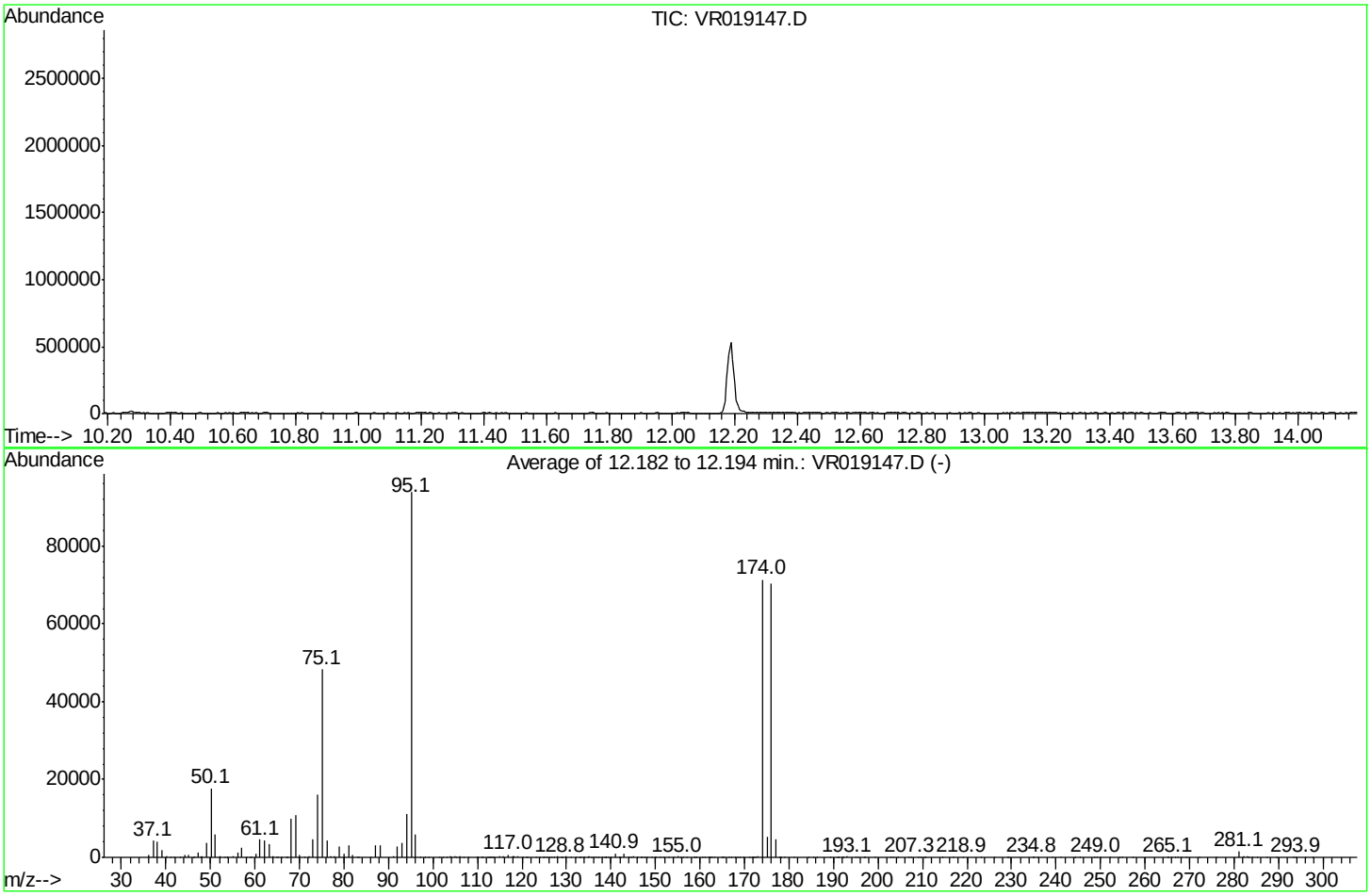
Instrument :
MSVOA_R
ClientSampleId :
BFB52

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051316\
Data File : VR019147.D
Acq On : 13 May 2016 10:29
Operator : MD\SY
Sample : BFB53
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : BFB53

Integration File: rteint.p

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Title : TRACE VOA SOM01.0
Last Update : Sat May 14 00:46:32 2016



AutoFind: Scans 1784, 1785, 1786; Background Corrected with Scan 1774

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.8	17680	PASS
75	95	30	80	51.4	48261	PASS
95	95	100	100	100.0	93864	PASS
96	95	5	9	6.2	5866	PASS
173	174	0.00	2	0.2	173	PASS
174	95	50	120	76.1	71402	PASS
175	174	5	9	7.5	5347	PASS
176	174	95	101	98.7	70485	PASS
177	176	5	9	6.7	4730	PASS

Scan 1774 (12.121 min): VR019147.D
BFB53

m/z	Abundance
36.40	95.0
38.00	62.0
39.00	61.0
39.80	160.0
41.40	73.0
42.10	172.0
43.90	151.0
44.20	152.0
47.30	51.0
49.30	130.0
51.70	50.0
52.20	50.0
56.50	55.0
67.80	69.0
72.30	60.0
72.90	79.0
78.20	55.0
79.00	62.0
85.20	74.0
88.70	81.0
96.90	52.0
98.40	69.0
101.70	63.0
103.50	99.0
104.40	80.0
105.50	53.0
120.40	52.0
124.10	77.0
129.50	55.0
136.70	55.0
142.10	58.0
143.60	59.0
148.00	75.0
148.60	54.0
151.40	130.0
153.50	88.0
156.80	98.0
166.00	55.0
167.50	64.0
170.60	50.0
172.30	53.0
182.60	63.0
183.80	51.0
187.60	52.0
193.90	102.0
196.30	51.0
200.90	51.0
204.00	70.0
205.30	67.0
222.00	57.0
230.40	53.0
231.80	50.0
234.00	55.0
234.20	55.0
243.30	130.0
244.80	57.0
262.00	64.0
262.80	50.0
290.80	69.0
291.20	103.0
296.80	52.0

Instrument :
MSVOA_R
ClientSampleId :
BFB53

Scan 1784 (12.182 min): VR019147.D
BFB53

Instrument :
MSVOA_R
ClientSampleId :
BFB53

m/z	Abundance
36.20	754.0
37.10	4853.0
38.10	4627.0
39.20	2136.0
40.10	201.0
41.00	95.0
41.80	63.0
43.20	67.0
44.20	948.0
45.10	945.0
46.00	63.0
47.10	1737.0
48.00	455.0
49.10	4029.0
50.10	17952.0
51.20	6380.0
52.00	240.0
53.20	106.0
53.60	60.0
53.80	54.0
55.10	283.0
56.10	1118.0
57.10	2501.0
58.40	59.0
58.80	56.0
59.00	56.0
60.10	859.0
61.10	4885.0
62.00	4093.0
63.10	3763.0
64.00	338.0
65.20	385.0
65.80	72.0
67.00	319.0
68.10	10494.0
69.10	11552.0
70.00	631.0
71.00	56.0
72.20	586.0
73.10	4504.0
74.10	17320.0
75.10	47824.0
76.10	4442.0
77.10	508.0
77.90	361.0
79.00	2836.0
80.10	877.0
81.00	3065.0
82.00	756.0
83.00	207.0
85.90	78.0
87.10	3218.0
88.10	3170.0
91.00	407.0
92.10	2522.0
93.10	3961.0
94.10	12061.0
95.10	92952.0
96.10	6029.0
97.20	158.0
101.30	81.0
102.20	92.0
102.90	158.0
103.90	409.0
104.80	160.0
105.10	161.0
106.00	373.0
107.00	69.0
107.90	53.0
110.90	132.0
112.90	78.0
113.20	77.0
115.10	268.0
115.90	247.0
117.00	600.0
117.90	509.0
119.00	422.0
120.80	77.0
123.90	125.0
124.80	164.0
125.60	96.0
126.50	99.0
127.20	85.0
128.10	341.0
129.10	167.0
129.90	249.0
130.90	236.0
132.00	102.0
133.20	91.0
133.60	101.0
134.10	67.0
135.10	353.0

135.60	91.0
136.00	127.0
136.80	137.0
137.10	106.0
138.20	66.0
138.80	66.0
139.00	57.0
139.40	51.0
140.90	930.0
142.10	111.0
143.00	1035.0
143.90	112.0
144.40	50.0
145.10	98.0
145.80	125.0
146.90	116.0
148.00	202.0
149.80	51.0
153.00	80.0
155.00	253.0
156.00	106.0
156.90	148.0
158.90	74.0
160.60	181.0
162.10	76.0
162.30	82.0
162.80	71.0
166.40	78.0
168.50	90.0
171.10	141.0
172.20	350.0
172.90	520.0
174.00	63760.0
175.00	4917.0
176.00	62472.0
177.00	4208.0
177.80	50.0
186.20	51.0
190.80	52.0
191.10	90.0
193.00	217.0
200.70	51.0
202.80	56.0
216.90	56.0
223.10	111.0
229.00	61.0
231.70	52.0
235.00	55.0
239.20	66.0
241.00	82.0
243.40	52.0
244.20	105.0
249.10	72.0
261.90	53.0
265.00	72.0
268.20	57.0
269.20	57.0
281.10	625.0
282.00	436.0
283.00	140.0
283.30	139.0
289.60	54.0
297.70	63.0

Instrument :
MSVOA_R
ClientSampleId :
BFB53

Scan 1785 (12.188 min): VR019147.D
BFB53

Instrument :
MSVOA_R
ClientSampleId :
BFB53

m/z	Abundance
36.00	885.0
37.10	4403.0
38.20	4686.0
39.10	1919.0
39.90	244.0
41.10	67.0
43.10	96.0
44.10	688.0
45.20	755.0
46.10	198.0
47.20	1171.0
48.10	751.0
49.10	4667.0
50.10	20264.0
51.10	7043.0
52.00	377.0
53.10	118.0
55.10	460.0
56.00	1553.0
57.10	3113.0
58.20	267.0
59.10	188.0
60.10	977.0
61.10	4747.0
62.10	4949.0
63.20	4035.0
64.00	399.0
65.10	109.0
66.80	57.0
68.10	11963.0
69.10	11874.0
70.10	1146.0
71.10	96.0
72.10	534.0
73.00	5224.0
74.10	17920.0
75.10	55800.0
76.10	4742.0
77.10	539.0
78.00	297.0
79.00	3399.0
80.10	1092.0
81.00	3851.0
81.90	689.0
83.00	117.0
83.40	97.0
85.30	57.0
86.00	117.0
87.10	3923.0
88.00	3815.0
91.10	465.0
92.00	3354.0
93.10	4438.0
94.10	12368.0
95.10	110512.0
96.10	6637.0
97.10	138.0
98.20	72.0
98.40	73.0
99.10	60.0
101.40	101.0
103.00	116.0
103.90	672.0
104.90	121.0
106.00	407.0
107.00	178.0
109.90	152.0
111.10	203.0
112.20	64.0
112.40	61.0
112.80	139.0
113.40	51.0
115.10	200.0
115.90	359.0
117.00	736.0
118.10	573.0
119.10	420.0
120.00	79.0
123.20	54.0
124.00	117.0
125.00	82.0
126.10	114.0
127.20	114.0
127.90	367.0
128.80	268.0
130.00	324.0
131.00	183.0
131.80	76.0
132.10	53.0
132.90	214.0
133.90	175.0
134.80	214.0

135.20	172.0
137.10	305.0
138.00	61.0
138.90	60.0
139.90	98.0
141.00	1163.0
142.10	242.0
143.00	1273.0
145.10	255.0
145.80	215.0
146.60	105.0
147.50	87.0
148.00	176.0
149.00	131.0
150.00	132.0
151.10	74.0
151.90	128.0
153.00	71.0
154.10	230.0
155.00	206.0
156.10	91.0
157.00	330.0
158.90	193.0
161.10	143.0
161.80	80.0
163.10	52.0
165.00	133.0
167.10	133.0
167.90	68.0
168.30	59.0
169.00	102.0
169.70	58.0
170.90	110.0
171.10	102.0
171.50	146.0
172.50	454.0
174.00	82520.0
175.10	6233.0
176.00	79720.0
177.00	4967.0
178.00	188.0
179.00	96.0
184.40	59.0
185.50	88.0
186.20	62.0
189.10	57.0
190.80	68.0
191.20	100.0
192.20	150.0
193.00	165.0
194.10	126.0
195.50	74.0
196.10	80.0
197.20	90.0
199.20	66.0
204.40	72.0
205.30	53.0
206.80	109.0
207.30	156.0
209.50	94.0
210.40	55.0
210.60	51.0
214.30	68.0
218.90	112.0
222.00	69.0
229.40	56.0
234.70	98.0
243.50	122.0
245.40	55.0
248.70	99.0
249.90	70.0
254.80	54.0
257.30	79.0
265.20	116.0
266.80	94.0
267.30	55.0
272.20	54.0
276.00	56.0
281.10	1413.0
282.10	234.0
283.00	202.0
285.10	74.0
287.30	99.0
293.40	78.0

Instrument :
MSVOA_R
ClientSampleId :
BFB53

Scan 1786 (12.194 min): VR019147.D
BFB53

Instrument :
MSVOA_R
ClientSampleId :
BFB53

m/z	Abundance
36.00	544.0
37.10	3435.0
38.10	2851.0
39.20	1283.0
40.10	159.0
42.20	71.0
43.10	60.0
44.20	879.0
45.00	527.0
46.40	71.0
47.10	673.0
47.80	470.0
49.10	2909.0
50.10	14824.0
51.10	4515.0
52.20	166.0
55.00	174.0
55.20	156.0
56.10	1147.0
57.10	2166.0
58.10	152.0
59.20	71.0
60.10	555.0
61.10	4061.0
62.10	4046.0
63.10	2695.0
64.10	341.0
64.90	59.0
67.20	417.0
68.10	7431.0
69.10	8777.0
70.00	401.0
72.00	299.0
73.10	4427.0
74.10	12955.0
75.10	41160.0
76.10	3808.0
77.20	339.0
78.00	409.0
79.00	2370.0
80.10	754.0
81.00	2649.0
82.00	570.0
83.10	147.0
87.00	2413.0
88.00	2762.0
90.90	357.0
92.10	2473.0
93.10	2659.0
94.10	8707.0
95.10	78128.0
96.10	4932.0
97.20	206.0
103.10	80.0
103.80	260.0
104.10	290.0
104.90	227.0
106.00	406.0
106.80	63.0
110.20	156.0
112.10	139.0
112.80	90.0
113.70	90.0
115.10	101.0
115.80	293.0
117.00	700.0
118.10	224.0
118.90	574.0
120.10	119.0
121.10	104.0
123.80	57.0
124.60	61.0
126.00	172.0
127.80	340.0
128.10	296.0
128.70	117.0
130.00	436.0
133.20	231.0
133.70	83.0
135.20	235.0
136.90	183.0
138.50	55.0
141.00	993.0
141.70	92.0
141.90	100.0
142.90	630.0
143.90	76.0
144.10	68.0
144.90	163.0
146.00	208.0
148.00	234.0
150.00	184.0

151.10	61.0
151.60	87.0
153.00	188.0
153.70	55.0
155.00	136.0
155.60	90.0
157.00	115.0
158.60	54.0
159.10	92.0
160.50	55.0
161.10	213.0
164.70	64.0
165.40	56.0
170.40	92.0
171.20	57.0
171.80	292.0
174.00	67928.0
175.10	4893.0
176.00	69264.0
177.10	5016.0
177.80	109.0
178.20	125.0
178.80	92.0
181.00	50.0
189.20	87.0
190.90	140.0
191.80	139.0
193.10	498.0
193.90	96.0
194.90	65.0
196.80	93.0
202.70	72.0
203.20	58.0
205.10	74.0
207.20	319.0
209.00	130.0
210.40	54.0
226.20	51.0
233.90	50.0
234.80	137.0
235.90	54.0
249.00	244.0
250.00	92.0
252.00	95.0
254.30	86.0
265.10	204.0
265.90	54.0
266.80	61.0
267.20	89.0
268.20	93.0
281.10	2373.0
282.20	691.0
283.10	438.0
284.10	86.0
285.00	82.0
293.90	123.0
295.90	67.0

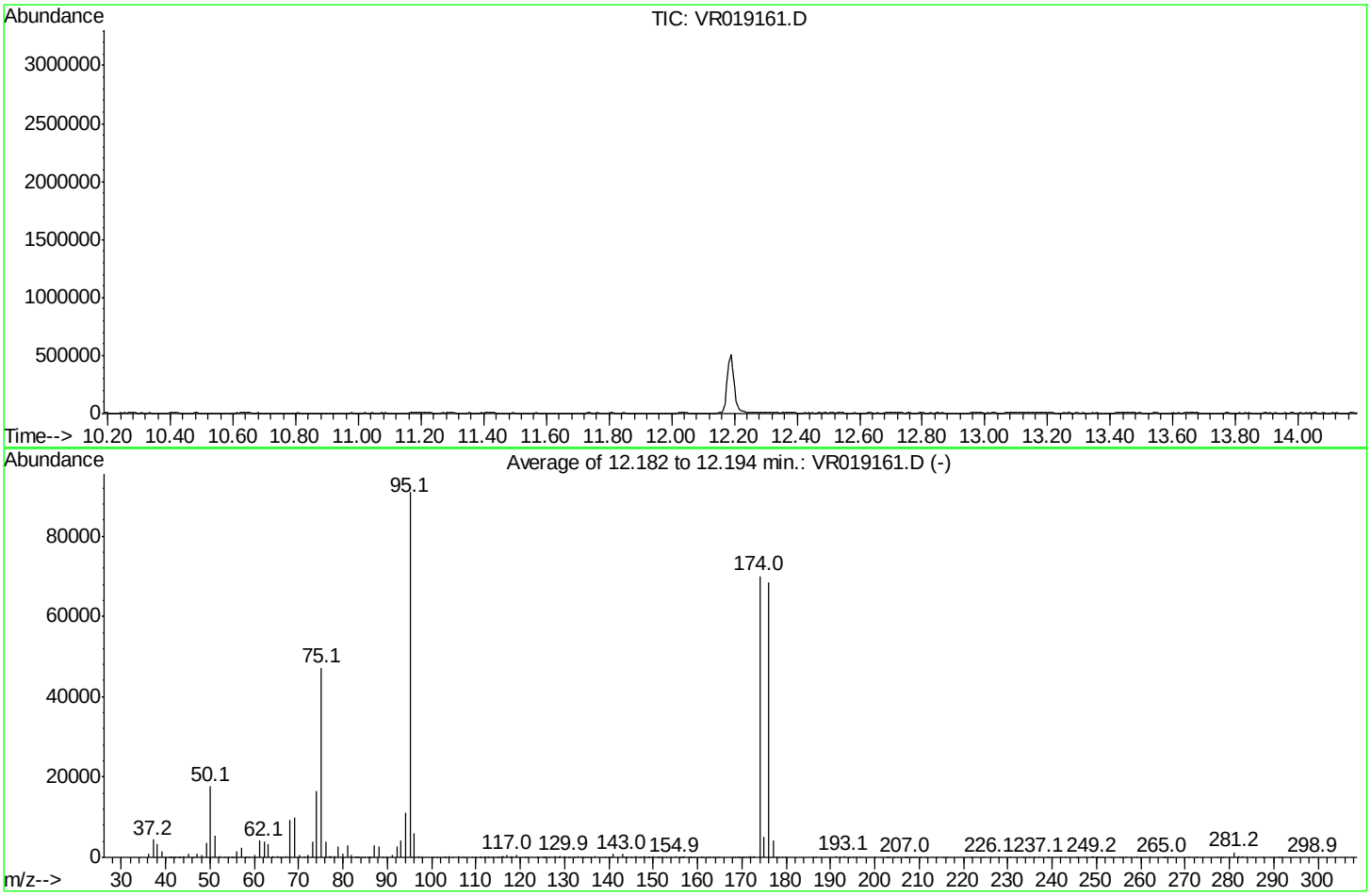
Instrument :
MSVOA_R
ClientSampleId :
BFB53

Data Path : W:\HPCHEM1\MSVOA_R\Data\VR051616\
Data File : VR019161.D
Acq On : 16 May 2016 10:00
Operator : MD\SY
Sample : BFB54
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : BFB54

Integration File: rteint.p

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Title : TRACE VOA SOM01.0
Last Update : Tue May 17 01:58:26 2016



AutoFind: Scans 1784, 1785, 1786; Background Corrected with Scan 1777

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.4	17635	PASS
75	95	30	80	51.8	47146	PASS
95	95	100	100	100.0	90928	PASS
96	95	5	9	6.7	6123	PASS
173	174	0.00	2	0.3	222	PASS
174	95	50	120	77.1	70081	PASS
175	174	5	9	7.3	5136	PASS
176	174	95	101	97.6	68378	PASS
177	176	5	9	6.1	4152	PASS

Scan 1777 (12.139 min): VR019161.D
BFB54

m/z	Abundance
37.50	52.0
38.30	95.0
39.10	178.0
40.10	290.0
41.10	73.0
44.20	262.0
49.70	50.0
51.20	77.0
52.90	72.0
55.30	68.0
59.10	90.0
61.40	79.0
64.70	57.0
70.10	87.0
73.00	57.0
74.10	79.0
82.00	51.0
85.50	69.0
101.80	52.0
105.30	66.0
108.20	145.0
110.00	66.0
113.40	58.0
120.30	56.0
124.70	72.0
127.60	100.0
130.20	50.0
137.10	52.0
141.30	56.0
154.30	74.0
154.80	59.0
156.00	69.0
172.30	73.0
174.00	55.0
179.50	86.0
188.40	93.0
189.40	51.0
194.90	50.0
197.80	83.0
201.00	63.0
204.70	50.0
213.50	78.0
217.50	60.0
219.70	87.0
221.30	64.0
226.50	50.0
227.40	59.0
228.60	57.0
238.40	53.0
239.60	66.0
246.30	133.0
257.00	75.0
270.30	66.0
273.60	51.0
277.90	59.0
284.50	59.0
287.20	58.0
288.00	65.0
292.80	66.0

Instrument :
MSVOA_R
ClientSampleId :
BFB54

Scan 1784 (12.182 min): VR019161.D
BFB54

Instrument :
MSVOA_R
ClientSampleId :
BFB54

m/z	Abundance
36.10	806.0
37.20	5089.0
38.10	4028.0
39.10	1968.0
40.10	428.0
41.20	246.0
42.90	72.0
43.10	78.0
44.10	832.0
45.10	820.0
46.40	169.0
47.20	952.0
48.10	727.0
49.10	3858.0
50.10	19272.0
51.10	5964.0
52.20	406.0
53.30	99.0
55.20	154.0
56.10	1660.0
57.20	2356.0
58.00	140.0
59.30	69.0
60.20	417.0
61.10	4444.0
62.10	4377.0
63.20	3359.0
64.10	385.0
65.10	216.0
67.00	222.0
68.10	10063.0
69.10	10443.0
70.10	1073.0
71.10	88.0
72.00	533.0
73.10	3936.0
74.10	17392.0
75.10	48368.0
76.20	4421.0
76.90	464.0
77.10	469.0
78.10	416.0
79.00	2795.0
80.10	602.0
81.00	2968.0
82.00	600.0
82.70	108.0
83.00	85.0
84.40	50.0
85.30	64.0
85.70	66.0
85.90	68.0
87.10	3138.0
88.10	3081.0
89.00	68.0
89.90	99.0
91.00	412.0
92.10	2833.0
93.10	3977.0
94.10	11797.0
95.10	88296.0
96.10	6287.0
97.20	212.0
102.80	53.0
104.10	371.0
104.90	166.0
106.00	406.0
107.00	131.0
109.20	73.0
110.00	142.0
110.90	96.0
112.70	189.0
114.90	137.0
115.90	540.0
117.00	590.0
118.10	481.0
119.00	520.0
120.10	88.0
121.20	77.0
123.70	64.0
124.10	136.0
124.80	57.0
125.10	56.0
125.40	56.0
127.90	274.0
129.10	189.0
130.00	261.0
131.00	115.0
132.20	71.0
133.10	168.0
133.80	90.0
134.70	72.0

Instrument :
MSVOA_R
ClientSampleId :
BFB54

135.20	169.0
135.80	64.0
137.00	247.0
139.20	80.0
140.40	223.0
141.00	628.0
142.00	203.0
143.00	708.0
143.70	70.0
144.00	72.0
145.00	114.0
146.10	186.0
147.00	111.0
147.80	106.0
148.20	161.0
149.20	75.0
150.00	213.0
151.90	62.0
153.00	67.0
154.00	86.0
155.00	179.0
156.20	89.0
156.80	126.0
157.10	187.0
158.40	50.0
159.20	56.0
160.80	145.0
162.70	76.0
164.50	56.0
167.90	51.0
169.20	91.0
170.30	57.0
170.80	84.0
172.20	332.0
174.00	61488.0
175.10	4594.0
176.00	61248.0
177.00	3932.0
178.20	162.0
179.30	75.0
179.80	53.0
191.20	172.0
193.20	187.0
194.30	83.0
194.90	60.0
196.00	66.0
200.00	61.0
203.30	58.0
204.40	69.0
205.20	72.0
206.80	83.0
207.40	143.0
208.80	138.0
211.30	108.0
214.00	93.0
234.70	91.0
238.90	52.0
241.90	74.0
247.60	53.0
249.00	70.0
249.20	69.0
255.20	86.0
262.00	56.0
265.60	66.0
277.20	60.0
277.80	53.0
281.10	550.0
282.10	103.0
283.10	196.0
285.10	50.0
291.20	51.0

Scan 1785 (12.188 min): VR019161.D
BFB54

Instrument :
MSVOA_R
ClientSampleId :
BFB54

m/z	Abundance
36.10	822.0
37.20	4688.0
38.10	3788.0
39.10	1640.0
40.10	277.0
40.90	60.0
42.20	92.0
43.30	54.0
44.10	756.0
45.20	1244.0
46.20	132.0
47.10	1192.0
47.90	735.0
49.10	4426.0
50.10	20224.0
51.10	6274.0
52.10	286.0
55.10	420.0
56.10	2004.0
57.10	3058.0
58.20	90.0
60.10	1310.0
61.10	4531.0
62.10	4522.0
63.10	3788.0
64.10	455.0
65.20	153.0
66.00	133.0
67.10	285.0
68.10	10484.0
69.10	11524.0
70.10	752.0
71.20	130.0
72.10	580.0
73.10	5237.0
74.10	18504.0
75.10	54488.0
76.10	4861.0
77.20	317.0
78.00	330.0
79.00	3519.0
80.10	999.0
81.00	3387.0
82.00	665.0
82.90	188.0
83.20	174.0
83.40	171.0
85.80	96.0
86.20	95.0
87.00	3366.0
87.90	2821.0
91.00	609.0
92.10	3034.0
93.00	4991.0
94.20	11689.0
95.10	104088.0
96.10	7439.0
97.20	229.0
101.90	102.0
102.80	158.0
104.00	445.0
104.80	239.0
105.90	524.0
107.10	256.0
109.90	104.0
111.10	161.0
111.90	106.0
112.10	111.0
113.00	131.0
113.70	65.0
115.10	255.0
116.10	380.0
117.00	998.0
117.70	257.0
118.10	208.0
119.10	608.0
121.60	85.0
124.90	91.0
125.80	88.0
128.00	326.0
129.00	294.0
130.00	431.0
130.90	106.0
131.20	106.0
133.10	366.0
134.00	112.0
135.10	127.0
137.00	262.0
139.00	83.0
139.90	122.0
141.00	1066.0
142.10	266.0

143.00	940.0
145.10	143.0
146.00	230.0
148.00	213.0
149.20	81.0
150.00	186.0
151.10	66.0
151.30	61.0
152.20	69.0
153.00	85.0
154.00	78.0
155.00	450.0
156.10	73.0
157.00	176.0
158.10	109.0
158.80	153.0
161.10	220.0
162.20	58.0
163.50	82.0
164.30	72.0
165.00	50.0
168.90	68.0
170.50	121.0
172.00	285.0
172.50	482.0
174.00	81992.0
175.10	6237.0
176.00	79952.0
177.10	4513.0
177.80	78.0
186.00	82.0
186.60	88.0
191.30	143.0
193.00	425.0
196.70	50.0
201.10	93.0
202.80	96.0
205.20	60.0
206.80	143.0
209.30	85.0
216.20	68.0
221.70	78.0
228.80	77.0
230.60	52.0
233.40	54.0
234.00	83.0
242.90	61.0
245.30	75.0
249.20	245.0
250.10	123.0
251.30	73.0
253.40	67.0
259.00	68.0
265.30	109.0
266.60	50.0
270.70	57.0
281.20	1296.0
281.90	307.0
283.10	248.0
283.70	125.0
287.50	55.0
298.90	88.0

Instrument :
MSVOA_R
ClientSampleId :
BFB54

Scan 1786 (12.194 min): VR019161.D
BFB54

Instrument :
MSVOA_R
ClientSampleId :
BFB54

m/z	Abundance
36.10	723.0
37.20	3518.0
38.10	2848.0
39.20	1219.0
40.00	295.0
41.40	182.0
41.90	57.0
43.10	91.0
44.10	533.0
45.10	576.0
46.20	107.0
47.20	684.0
48.10	470.0
49.10	2782.0
50.10	13409.0
51.10	4414.0
52.20	311.0
54.00	71.0
54.90	147.0
56.20	1230.0
57.10	1875.0
58.10	95.0
58.70	58.0
60.10	477.0
61.10	3440.0
62.20	3122.0
63.10	2516.0
64.20	135.0
65.00	59.0
65.30	53.0
65.90	66.0
66.40	102.0
67.10	202.0
68.10	7100.0
69.10	7355.0
70.10	554.0
71.30	154.0
72.10	704.0
73.10	2915.0
74.10	13795.0
75.10	38584.0
76.20	2876.0
77.00	592.0
78.10	297.0
79.00	2262.0
80.00	732.0
81.00	2378.0
81.90	646.0
82.70	182.0
84.80	56.0
85.70	92.0
86.30	192.0
87.10	2827.0
88.10	2658.0
90.90	289.0
91.10	316.0
92.10	2672.0
93.10	3568.0
94.10	10271.0
95.10	80400.0
96.10	4645.0
97.10	409.0
97.70	79.0
100.50	77.0
101.20	114.0
102.80	144.0
103.00	138.0
104.10	328.0
105.20	148.0
106.10	276.0
107.00	62.0
107.40	76.0
108.20	51.0
109.90	90.0
110.90	73.0
111.70	56.0
112.20	107.0
112.80	77.0
115.10	71.0
116.00	263.0
116.90	489.0
118.00	264.0
119.10	480.0
125.10	111.0
125.70	141.0
126.60	85.0
128.00	290.0
128.80	229.0
129.90	285.0
131.00	174.0
133.10	320.0
134.00	173.0

135.00	163.0
136.90	251.0
139.00	60.0
141.00	773.0
143.00	916.0
143.70	99.0
145.20	71.0
146.10	145.0
147.00	84.0
148.00	197.0
148.90	120.0
150.00	158.0
151.90	56.0
153.00	75.0
155.00	228.0
155.80	94.0
156.20	81.0
156.40	90.0
157.10	122.0
158.10	85.0
158.60	148.0
161.10	101.0
162.10	71.0
164.30	71.0
164.50	82.0
164.80	59.0
168.30	112.0
169.60	117.0
170.40	112.0
170.90	157.0
171.40	158.0
172.00	337.0
172.80	668.0
174.00	66928.0
175.00	4579.0
176.10	63936.0
177.00	4011.0
178.00	98.0
178.90	66.0
179.90	70.0
191.20	344.0
192.00	129.0
193.00	316.0
194.10	113.0
195.10	54.0
201.20	55.0
203.00	79.0
205.20	170.0
207.00	322.0
208.20	90.0
210.40	57.0
215.40	57.0
224.50	62.0
226.10	134.0
227.90	52.0
236.00	72.0
237.10	66.0
239.10	54.0
245.80	54.0
249.10	240.0
250.30	52.0
251.00	70.0
255.80	50.0
256.70	128.0
261.80	60.0
265.00	293.0
266.20	51.0
267.10	59.0
270.80	53.0
272.70	60.0
277.30	58.0
278.10	51.0
278.60	74.0
281.20	1872.0
282.20	839.0
283.10	551.0
291.70	163.0
298.80	54.0

Instrument :
MSVOA_R
ClientSampleId :
BFB54

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK35

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049350.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK35

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049350.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK35

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049350.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK35

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049350.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

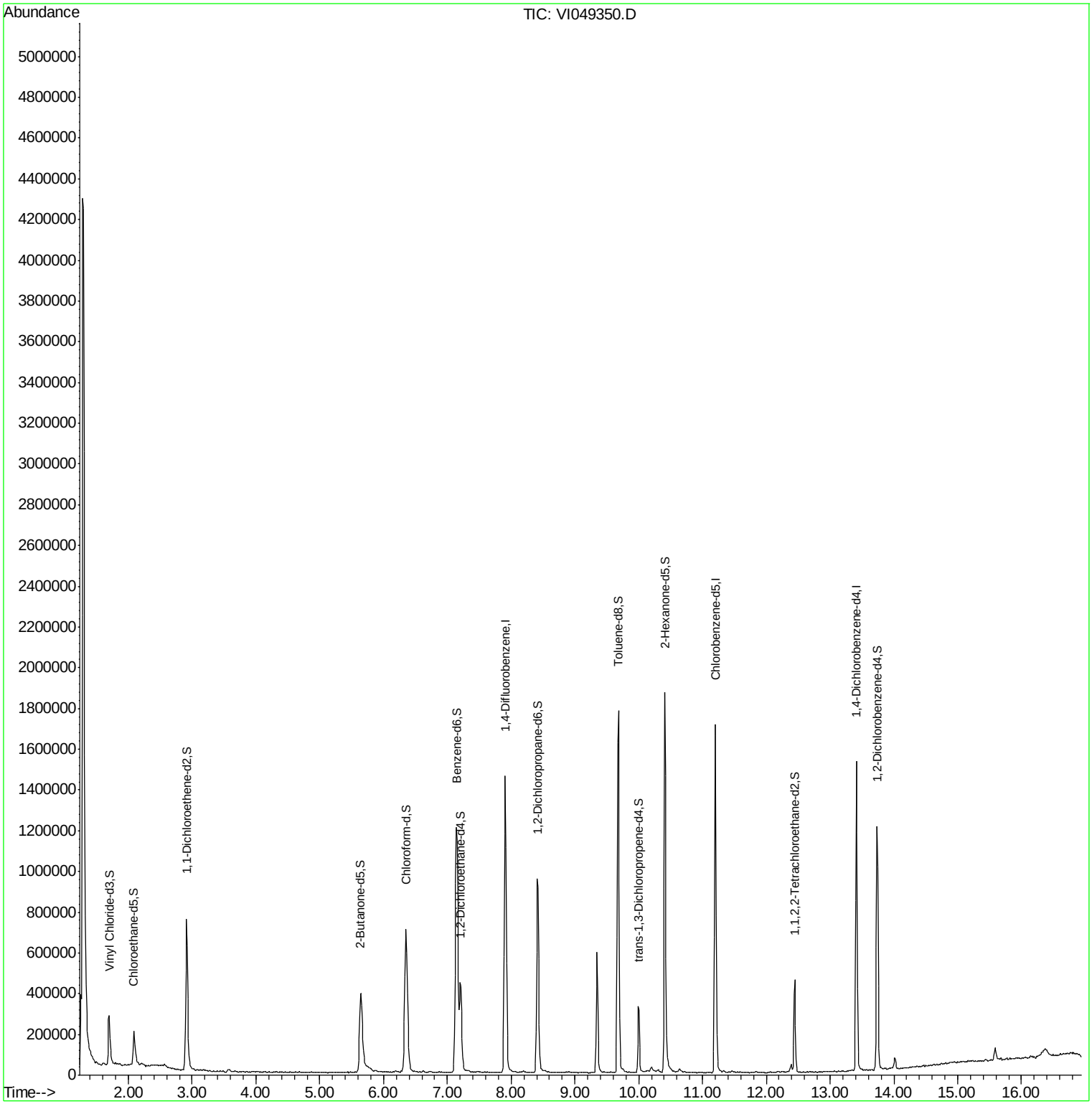
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 04:38:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM

Quant Time: May 13 04:38:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1318748	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	908211	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	356452	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	295730	3.64	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 72.80%			
7) Chloroethane-d5	2.09	69	200151	4.45	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 89.00%			
11) 1,1-Dichloroethene-d2	2.91	63	573760	3.00	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 60.00%			
20) 2-Butanone-d5	5.64	46	938482	53.39	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 106.78%			
24) Chloroform-d	6.35	84	896059	4.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 86.80%			
26) 1,2-Dichloroethane-d4	7.20	65	400003m	4.73	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
32) Benzene-d6	7.14	84	1589239	4.49	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.80%			
36) 1,2-Dichloropropane-d6	8.41	67	460649	4.63	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 92.60%			
41) Toluene-d8	9.68	98	1136770	4.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.20%			
43) trans-1,3-Dichloropropene-	10.00	79	165888	4.23	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 84.60%			
46) 2-Hexanone-d5	10.41	63	621684	50.29	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 100.58%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	206284	4.56	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.20%			
63) 1,2-Dichlorobenzene-d4	13.74	152	276712	4.43	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	4	6	26	rVB	4244553	10182202	100.00%	23.240%
2	1.600	35	38	39	rBV3	10493	16308	0.16%	0.037%
3	1.699	45	48	54	rBV	238732	457032	4.49%	1.043%
4	2.083	84	87	96	rVB	167306	374526	3.68%	0.855%
5	2.565	134	136	141	rVB3	20543	46227	0.45%	0.106%
6	2.693	147	149	155	rVB6	7172	17292	0.17%	0.039%
7	2.831	162	163	166	rBV3	4348	9050	0.09%	0.021%
8	2.909	166	171	185	rVV	745216	1661722	16.32%	3.793%
9	3.087	185	189	190	rVV4	5006	11022	0.11%	0.025%
10	3.136	192	194	195	rVV2	4906	5907	0.06%	0.013%
11	3.185	195	199	200	rVV3	3942	9146	0.09%	0.021%
12	3.244	203	205	206	rVB2	5592	5585	0.05%	0.013%
13	3.264	206	207	210	rBV3	5959	10197	0.10%	0.023%
14	3.333	210	214	217	rVB6	4401	7791	0.08%	0.018%
15	3.392	217	220	223	rBV5	5486	10964	0.11%	0.025%
16	3.480	228	229	233	rVB4	5148	5996	0.06%	0.014%
17	3.559	233	237	242	rBV6	12917	38966	0.38%	0.089%
18	3.953	273	277	278	rBV3	3739	8622	0.08%	0.020%
19	3.982	278	280	281	rVB2	4860	5275	0.05%	0.012%
20	4.002	281	282	285	rBV2	3897	7877	0.08%	0.018%
21	4.140	294	296	300	rVB4	2644	4706	0.05%	0.011%
22	4.681	348	351	352	rBV3	4785	6535	0.06%	0.015%
23	5.114	393	395	396	rVB2	5078	5874	0.06%	0.013%
24	5.134	396	397	399	rBV2	3109	4596	0.05%	0.010%
25	5.173	399	401	405	rVB5	2420	4802	0.05%	0.011%
26	5.272	410	411	415	rBV4	2998	4803	0.05%	0.011%
27	5.439	425	428	429	rVB3	5293	6820	0.07%	0.016%
28	5.478	429	432	434	rBV3	5298	11603	0.11%	0.026%
29	5.557	438	440	441	rBV2	3627	4533	0.04%	0.010%
30	5.636	441	448	458	rBV	388677	1397996	13.73%	3.191%
31	5.931	477	478	482	rVB4	3385	4700	0.05%	0.011%
32	6.187	502	504	507	rBV4	4912	7679	0.08%	0.018%
33	6.226	507	508	512	rVB2	6199	7316	0.07%	0.017%
34	6.275	512	513	514	rBV	8277	6539	0.06%	0.015%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.354	514	521	533	rVV	701712	2148022	21.10%	4.903%
36	6.482	533	534	538	rVV4	4291	6673	0.07%	0.015%
37	6.620	545	548	551	rVB5	6406	11484	0.11%	0.026%
38	6.708	553	557	558	rBV3	3041	4522	0.04%	0.010%
39	6.866	570	573	575	rBV4	4403	7229	0.07%	0.016%
40	7.142	594	601	605	rBV	1202887	3281552	32.23%	7.490%
41	7.201	605	607	617	rVB	431931	1056078	10.37%	2.410%
42	7.555	640	643	644	rBV3	2646	4927	0.05%	0.011%
43	7.624	647	650	652	rVB4	3554	6198	0.06%	0.014%
44	7.673	652	655	658	rVB5	2619	4988	0.05%	0.011%
45	7.909	673	679	694	rBV	1455673	3180931	31.24%	7.260%
46	8.195	705	708	710	rVB4	5846	11517	0.11%	0.026%
47	8.332	719	722	725	rBV4	2652	7182	0.07%	0.016%
48	8.411	725	730	739	rBV	950367	2169547	21.31%	4.952%
49	8.893	777	779	783	rVB5	3892	6348	0.06%	0.014%
50	9.071	795	797	798	rBV2	4079	4611	0.05%	0.011%
51	9.179	805	808	811	rVB5	2982	6814	0.07%	0.016%
52	9.267	814	817	820	rBV4	4615	10077	0.10%	0.023%
53	9.346	820	825	834	rBV	592523	1080345	10.61%	2.466%
54	9.464	834	837	839	rVV4	4647	7695	0.08%	0.018%
55	9.681	854	859	864	rBV	1774853	3254412	31.96%	7.428%
56	9.750	864	866	875	rVB5	18882	53427	0.52%	0.122%
57	9.947	882	886	887	rBV4	3627	5427	0.05%	0.012%
58	9.996	887	891	897	rBV	323302	575150	5.65%	1.313%
59	10.153	899	907	908	rVV7	9274	35867	0.35%	0.082%
60	10.202	908	912	916	rVV	27083	74232	0.73%	0.169%
61	10.311	918	923	929	rVV8	14636	38081	0.37%	0.087%
62	10.409	929	933	950	rVV	1865314	3217118	31.60%	7.343%
63	10.635	952	956	962	rVV5	17402	44957	0.44%	0.103%
64	10.704	962	963	966	rVV3	3764	6850	0.07%	0.016%
65	10.941	984	987	990	rBV4	2650	6932	0.07%	0.016%
66	11.118	1001	1005	1008	rVV6	3636	7350	0.07%	0.017%
67	11.206	1009	1014	1024	rVV	1708979	3098438	30.43%	7.072%
68	11.324	1024	1026	1032	rVV4	9958	29629	0.29%	0.068%
69	11.462	1036	1040	1043	rVV5	9193	24036	0.24%	0.055%
70	11.551	1047	1049	1051	rVV2	5467	7878	0.08%	0.018%
71	11.590	1051	1053	1056	rVV4	4477	7965	0.08%	0.018%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.836	1073	1078	1081	rBV5	7389	20279	0.20%	0.046%
73	11.954	1089	1090	1095	rVB4	2514	5325	0.05%	0.012%
74	12.023	1095	1097	1100	rBV4	3604	8205	0.08%	0.019%
75	12.063	1100	1101	1105	rBV4	5024	6114	0.06%	0.014%
76	12.171	1108	1112	1117	rBV7	7633	21787	0.21%	0.050%
77	12.387	1129	1134	1136	rVV2	38196	72643	0.71%	0.166%
78	12.446	1136	1140	1146	rVB	455325	779998	7.66%	1.780%
79	12.525	1146	1148	1152	rBV4	2643	4472	0.04%	0.010%
80	12.633	1157	1159	1161	rVB3	4037	4683	0.05%	0.011%
81	12.692	1161	1165	1166	rVB3	3616	4940	0.05%	0.011%
82	12.732	1166	1169	1171	rVB4	3820	5716	0.06%	0.013%
83	12.761	1171	1172	1175	rBV2	3219	5646	0.06%	0.013%
84	12.850	1180	1181	1184	rBV3	3217	4943	0.05%	0.011%
85	12.909	1184	1187	1191	rBV4	3440	8027	0.08%	0.018%
86	12.968	1191	1193	1196	rVB4	2704	5233	0.05%	0.012%
87	13.047	1198	1201	1202	rBV3	3518	7238	0.07%	0.017%
88	13.135	1207	1210	1211	rBV3	4955	8085	0.08%	0.018%
89	13.303	1225	1227	1228	rBV	5245	6557	0.06%	0.015%
90	13.342	1229	1231	1234	rVB4	7753	9912	0.10%	0.023%
91	13.411	1234	1238	1245	rBV	1519904	2544761	24.99%	5.808%
92	13.736	1266	1271	1276	rBV	1196345	2079984	20.43%	4.747%
93	13.933	1287	1291	1292	rBV4	4777	10245	0.10%	0.023%
94	13.962	1292	1294	1295	rVV2	6597	9108	0.09%	0.021%
95	14.011	1295	1299	1303	rVV2	56358	118718	1.17%	0.271%
96	14.110	1307	1309	1312	rBV4	6619	11094	0.11%	0.025%
97	14.257	1322	1324	1325	rBV2	5792	5337	0.05%	0.012%
98	14.287	1325	1327	1331	rBV5	5112	12541	0.12%	0.029%
99	14.503	1347	1349	1352	rBV4	6179	11415	0.11%	0.026%
100	15.586	1454	1459	1463	rBV	64270	146019	1.43%	0.333%

Sum of corrected areas: 43813723

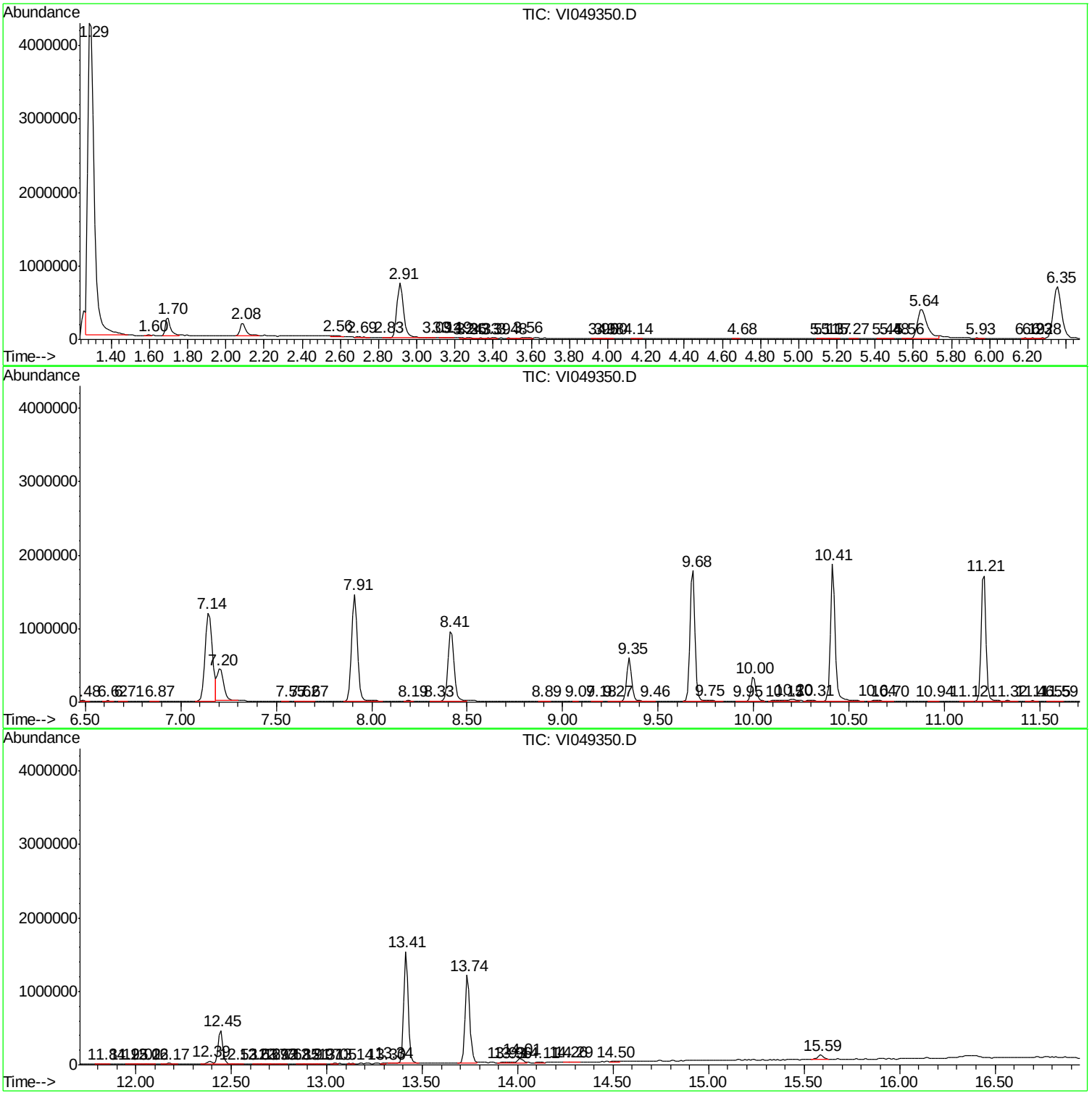
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 04:38:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Manual Integrations APPROVED
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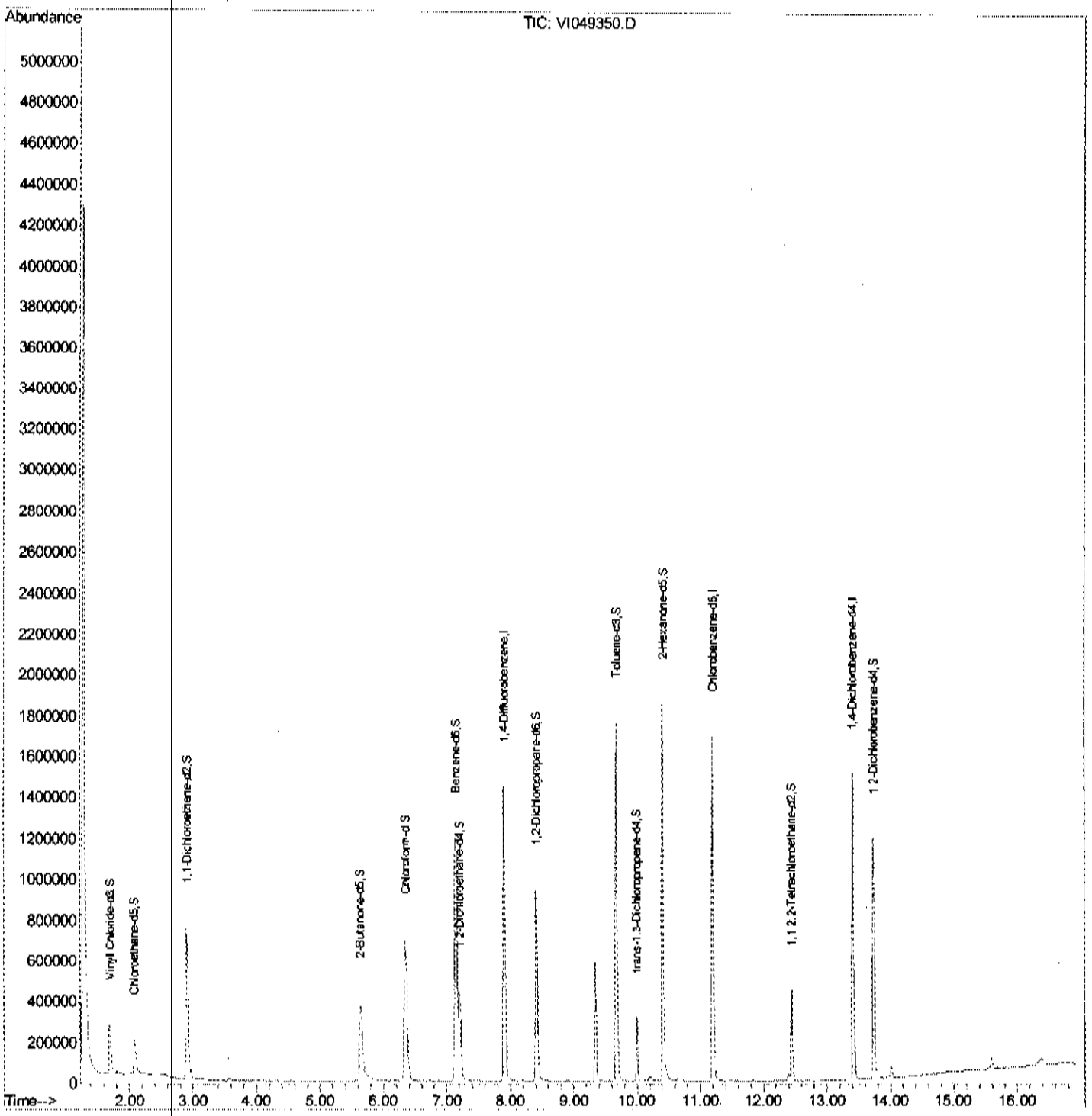
5/13/2016 12:27:55 PM



Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 04:32:13 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Manual Integrations APPROVED
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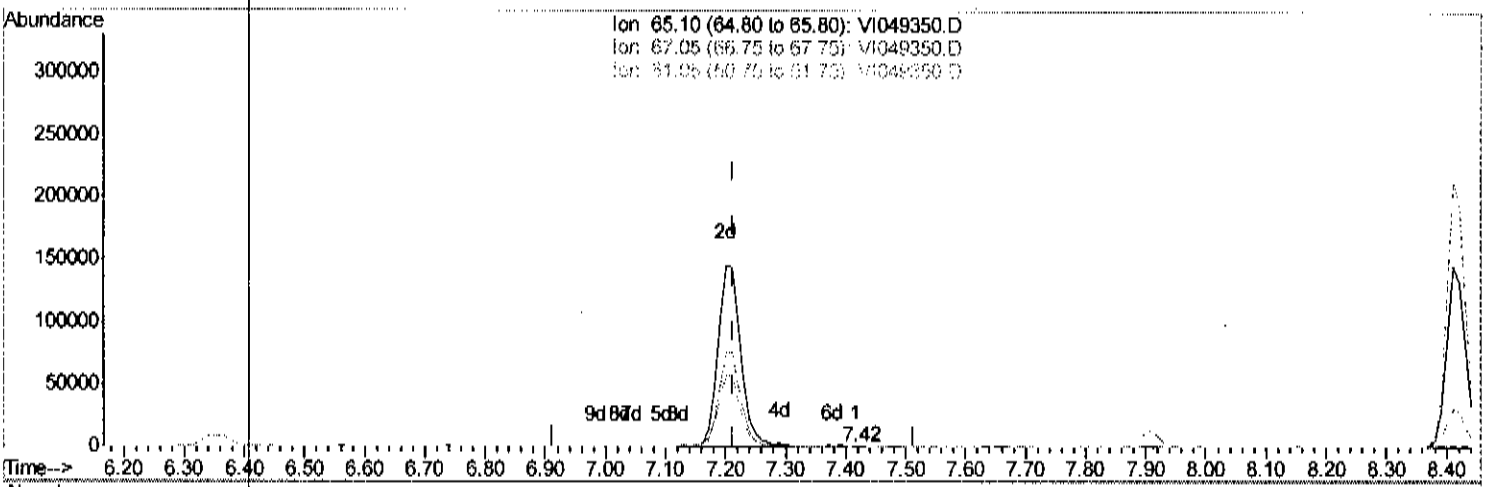
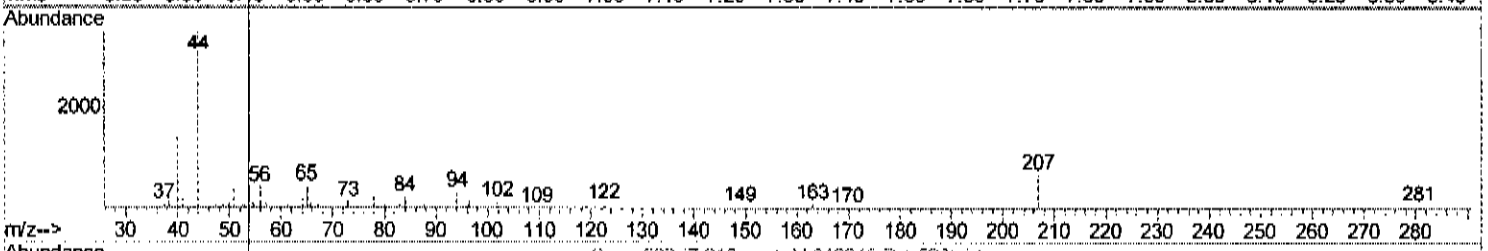
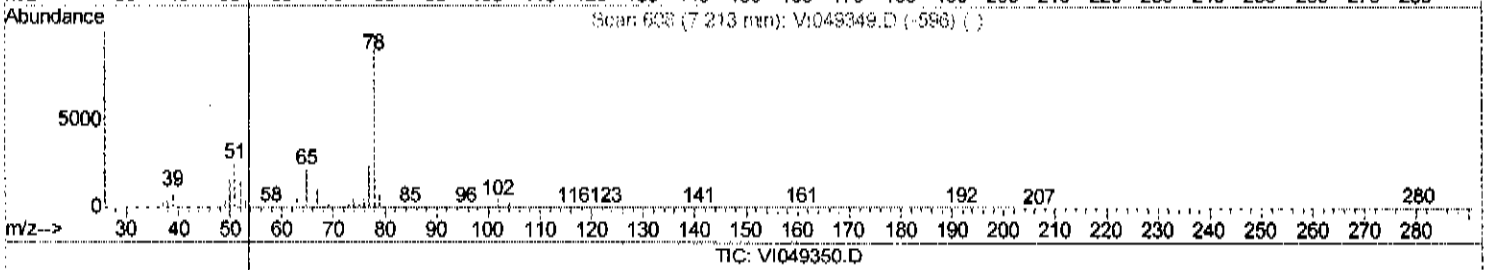
5/13/2016 12:27:55 PM







TIC: VI049350.D

(26) 1,2-Dichloroethane-d4 (S)

7.417min (+0.204) 0.01ug/L

response 584

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	47.26
51.05	123.20	95.21
0.00	0.00	0.00

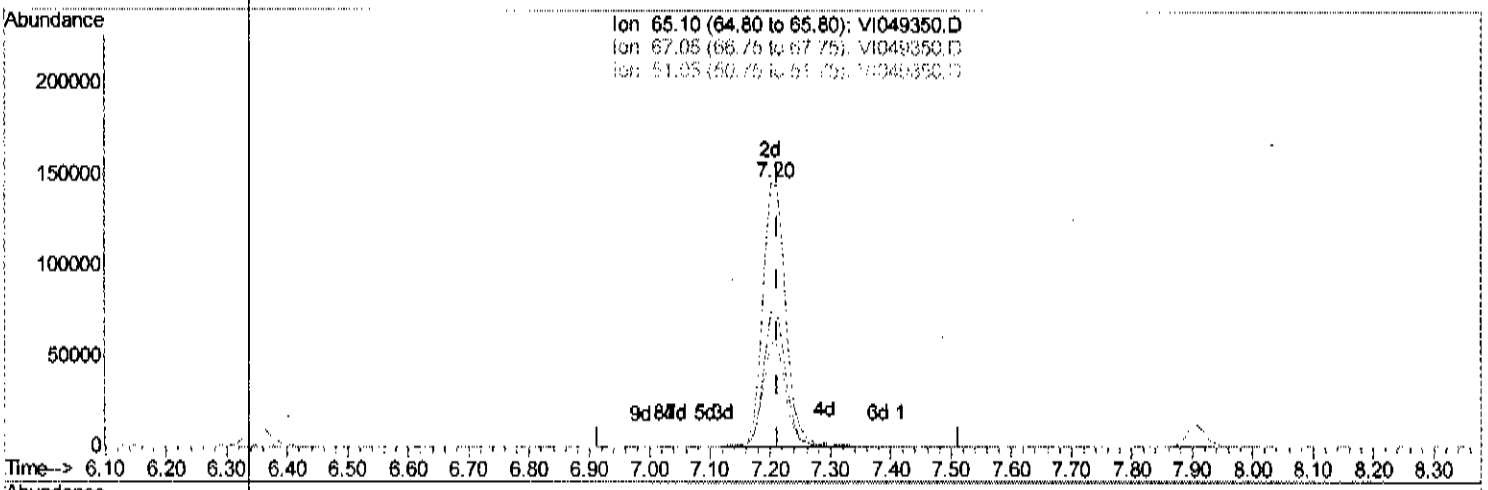
Quantitation Report (Qedit)

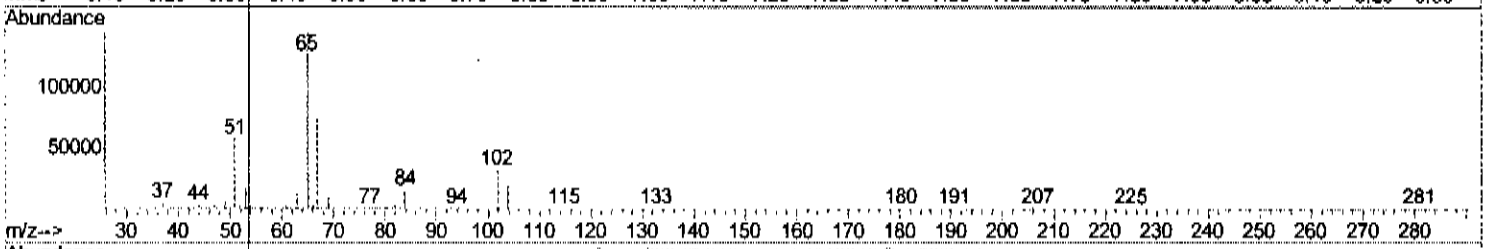
Data Path : W:\HPCHEM1\MSVOA_1\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

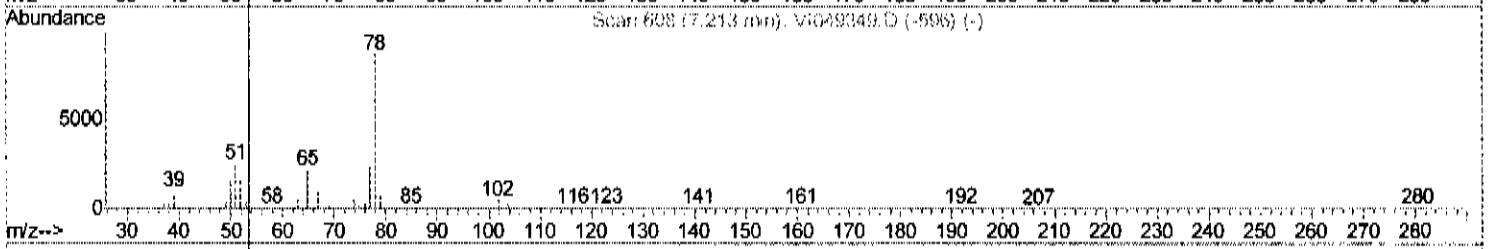
Quant Time: May 13 04:32:13 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM







TIC: VI049350.D

(26) 1,2-Dichloroethane-d4 (S)

7.201min (-0.012) 4.73ug/L m

response 400003

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.07#
51.05	123.20	0.14#
0.00	0.00	0.00

> 05/14/16 SY

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 04:38:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1318748	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	908211	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	356452	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	295730	3.64	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 72.80%			
7) Chloroethane-d5	2.09	69	200151	4.45	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 89.00%			
11) 1,1-Dichloroethene-d2	2.91	63	573760	3.00	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 60.00%			
20) 2-Butanone-d5	5.64	46	938482	53.39	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 106.78%			
24) Chloroform-d	6.35	84	896059	4.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 86.80%			
26) 1,2-Dichloroethane-d4	7.20	65	400003m	4.73	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
32) Benzene-d6	7.14	84	1589239	4.49	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.80%			
36) 1,2-Dichloropropane-d6	8.41	67	460649	4.63	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 92.60%			
41) Toluene-d8	9.68	98	1136770	4.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.20%			
43) trans-1,3-Dichloropropene-	10.00	79	165888	4.23	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 84.60%			
46) 2-Hexanone-d5	10.41	63	621684	50.29	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 100.58%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	206284	4.56	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.20%			
63) 1,2-Dichlorobenzene-d4	13.74	152	276712	4.43	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

05/14/16 dq

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK51

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019134.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK51

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019134.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK51

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019134.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK51

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019134.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

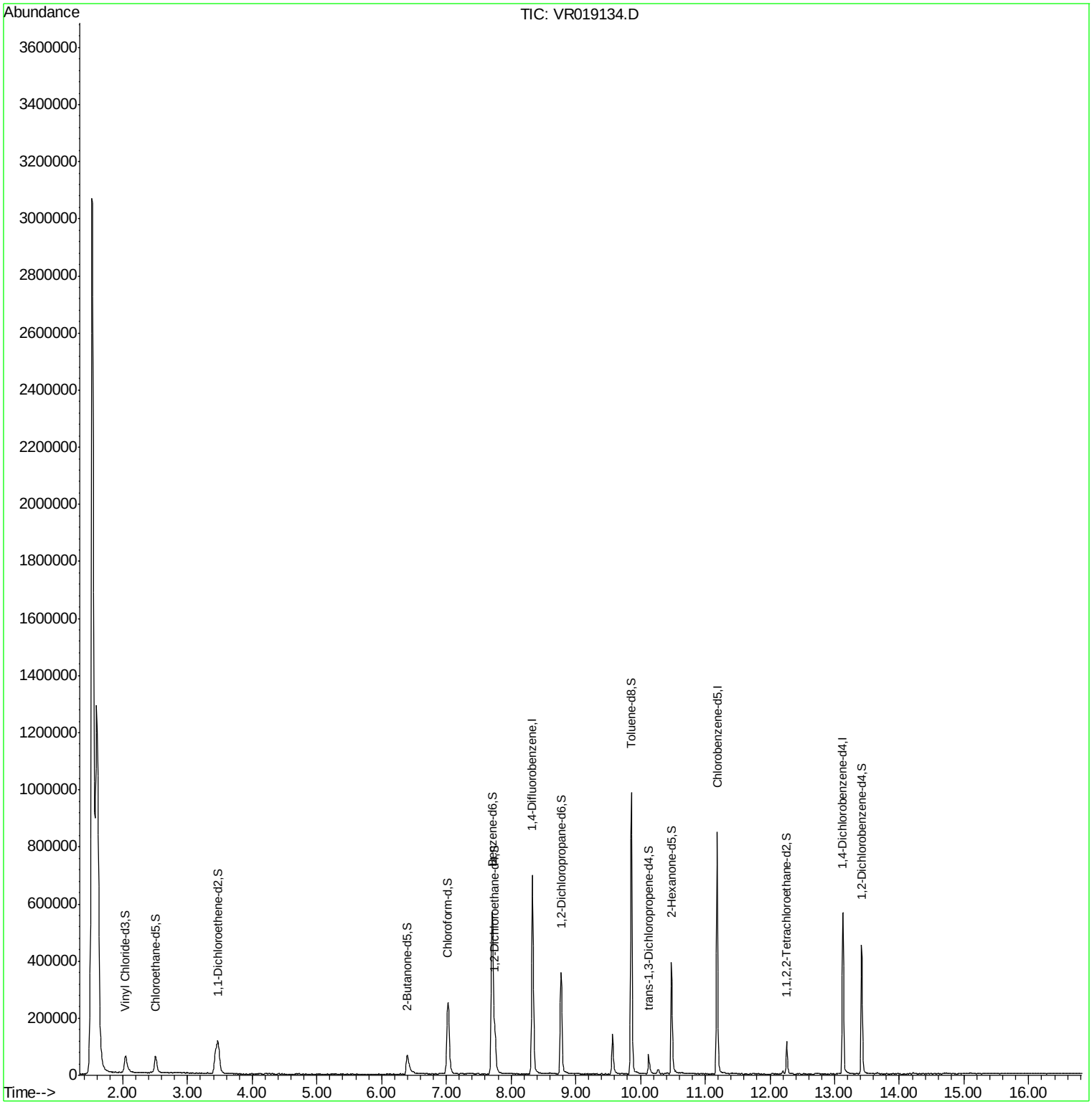
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019134.D
Acq On : 12 May 2016 13:25
Operator : MD\SY
Sample : VR0512WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK51

Quant Time: May 13 05:38:12 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019134.D
Acq On : 12 May 2016 13:25
Operator : MD\SY
Sample : VR0512WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK51

Quant Time: May 13 05:38:12 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	578406	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	420028	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	141364	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.04	65	113011	4.34	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 86.80%			
7) Chloroethane-d5	2.50	69	84203	4.55	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 91.00%			
11) 1,1-Dichloroethene-d2	3.47	63	191823	3.20	ug/L	0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 64.00%			
20) 2-Butanone-d5	6.40	46	142434	42.62	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 85.24%			
24) Chloroform-d	7.03	84	276837	4.32	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 86.40%			
26) 1,2-Dichloroethane-d4	7.75	65	111212	4.38	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.60%			
32) Benzene-d6	7.71	84	643911	4.78	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.60%			
36) 1,2-Dichloropropane-d6	8.78	67	166598	4.78	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 95.60%			
41) Toluene-d8	9.86	98	609999	4.81	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.20%			
43) trans-1,3-Dichloropropene-	10.13	79	36895	4.03	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 80.60%			
46) 2-Hexanone-d5	10.48	63	125272	43.66	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 87.32%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	49205	3.95	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 79.00%			
63) 1,2-Dichlorobenzene-d4	13.42	152	110112	4.70	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 94.00%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019134.D
Acq On : 12 May 2016 13:25
Operator : MD\SY
Sample : VR0512WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK51

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	16	32	40	rBV	3067427	8439297	100.00%	36.109%
2	1.597	41	44	69	rVB	1281856	3729011	44.19%	15.955%
3	2.041	109	117	138	rVB	56354	188347	2.23%	0.806%
4	2.503	184	193	204	rVB	56024	147068	1.74%	0.629%
5	3.470	337	352	366	rBV2	116103	532951	6.32%	2.280%
6	6.397	826	833	854	rBV	67349	250580	2.97%	1.072%
7	7.023	927	936	953	rVB	248766	680832	8.07%	2.913%
8	7.711	1040	1049	1069	rBV2	569866	1646322	19.51%	7.044%
9	8.331	1143	1151	1168	rBV	695175	1359582	16.11%	5.817%
10	8.775	1216	1224	1234	rBV	355807	724324	8.58%	3.099%
11	9.566	1346	1354	1367	rBV	140188	265295	3.14%	1.135%
12	9.858	1395	1402	1424	rBV	986426	1619008	19.18%	6.927%
13	10.126	1440	1446	1456	rBV	68596	123879	1.47%	0.530%
14	10.479	1498	1504	1519	rBV	392124	629231	7.46%	2.692%
15	11.184	1613	1620	1635	rBV	847836	1301991	15.43%	5.571%
16	12.261	1792	1797	1806	rVB	113413	171100	2.03%	0.732%
17	13.125	1934	1939	1950	rBV	563836	868192	10.29%	3.715%
18	13.417	1979	1987	1999	rBV	452649	694625	8.23%	2.972%

Sum of corrected areas: 23371635

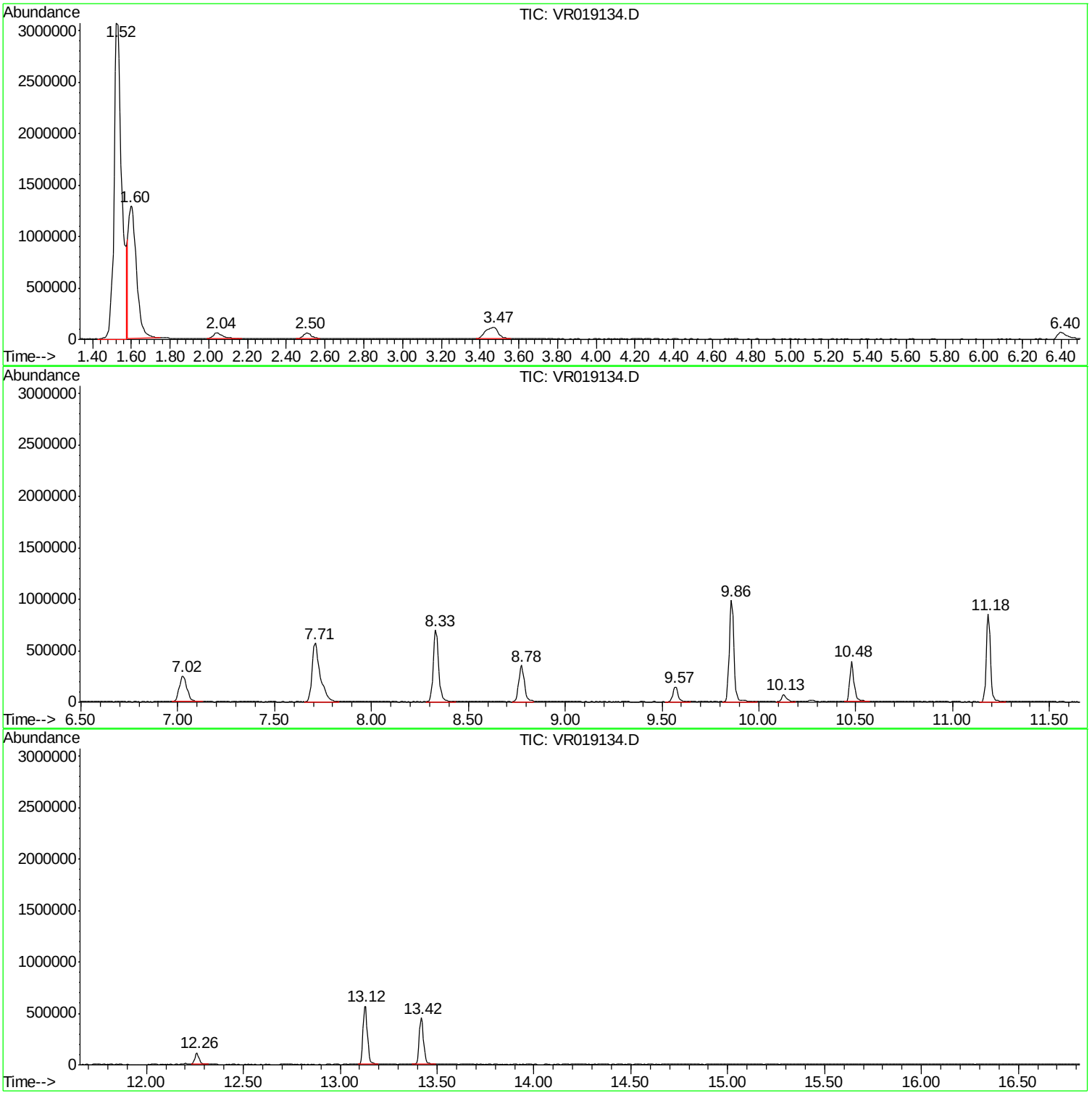
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019134.D
Acq On : 12 May 2016 13:25
Operator : MD\SY
Sample : VR0512WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK51

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019134.D
Acq On : 12 May 2016 13:25
Operator : MD\SY
Sample : VR0512WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VBLK51

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019134.D
Acq On : 12 May 2016 13:25
Operator : MD\SY
Sample : VR0512WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK51

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK52

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0513WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019149.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK52

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0513WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019149.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK52

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0513WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019149.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/13/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK52

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0513WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019149.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/13/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

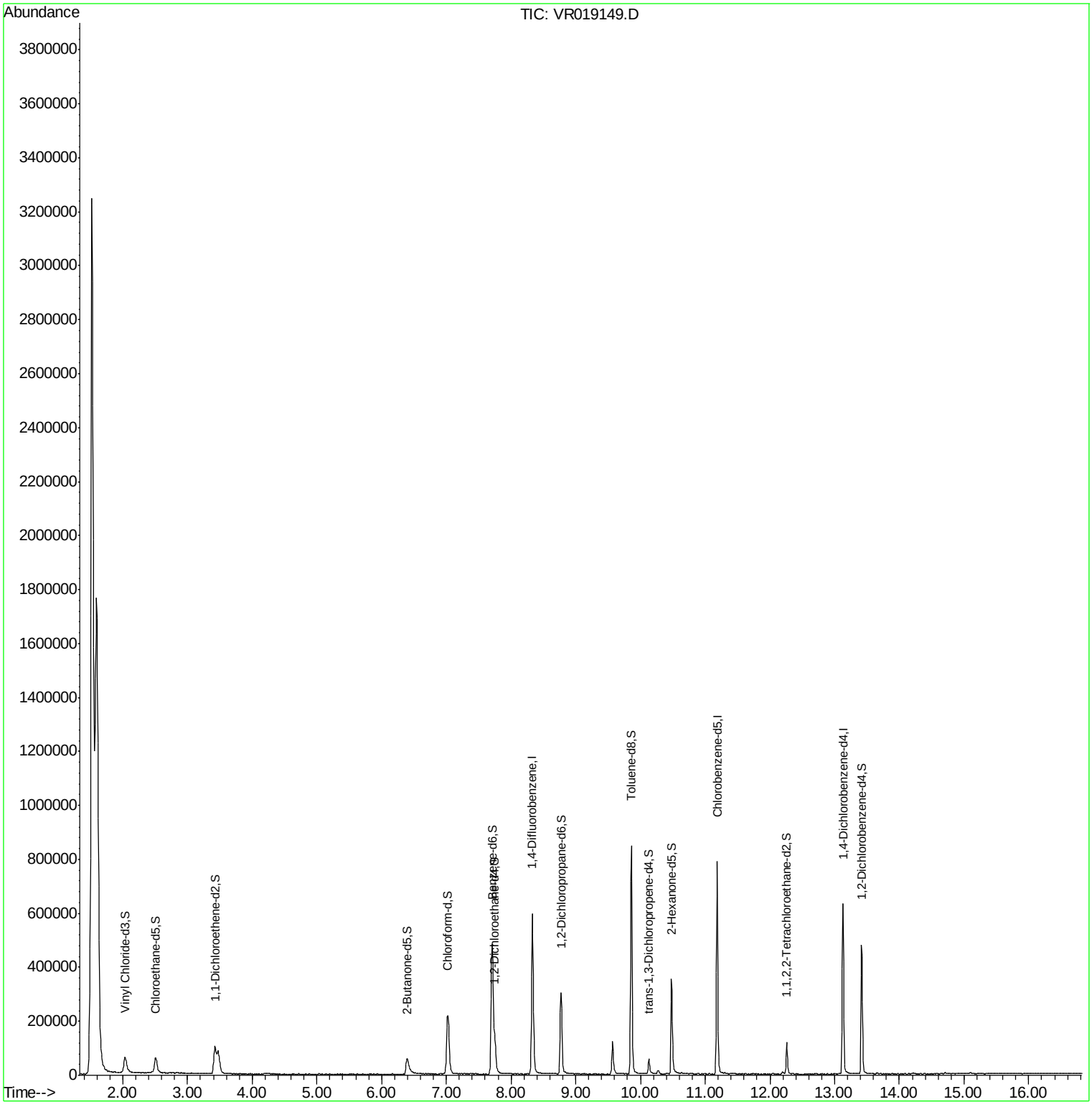
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019149.D
Acq On : 13 May 2016 11:59
Operator : MD\SY
Sample : VR0513WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 00:50:14 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VBLK52

Manual Integrations APPROVED
mmdadoda
5/16/2016 6:51:34 PM



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019149.D
Acq On : 13 May 2016 11:59
Operator : MD\SY
Sample : VR0513WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK52

Manual Integrations APPROVED
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5/16/2016 6:51:34 PM

Quant Time: May 14 00:50:14 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	499915	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	392537	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	154543	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	117988	5.24	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 104.80%			
7) Chloroethane-d5	2.51	69	86192	5.39	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 107.80%			
11) 1,1-Dichloroethene-d2	3.43	63	187758m	3.62	ug/L	-0.03
Spiked Amount 5.000	Range 60 - 125		Recovery = 72.40%			
20) 2-Butanone-d5	6.40	46	121659	42.12	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 84.24%			
24) Chloroform-d	7.02	84	246801	4.45	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.00%			
26) 1,2-Dichloroethane-d4	7.75	65	100860	4.60	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.00%			
32) Benzene-d6	7.71	84	548004	4.35	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 87.00%			
36) 1,2-Dichloropropane-d6	8.77	67	142473	4.37	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 87.40%			
41) Toluene-d8	9.86	98	521836	4.40	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.00%			
43) trans-1,3-Dichloropropene-	10.13	79	32432	3.79	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 75.80%			
46) 2-Hexanone-d5	10.48	63	114354	42.65	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 85.30%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	50154	4.31	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 86.20%			
63) 1,2-Dichlorobenzene-d4	13.42	152	117185	4.58	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 91.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019149.D
Acq On : 13 May 2016 11:59
Operator : MD\SY
Sample : VR0513WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK52

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.518	15	31	39	rBV	3244823	9285757	100.00%	37.145%
2	1.597	39	44	66	rVB	1751955	5649606	60.84%	22.600%
3	2.035	107	116	132	rBV	55791	189569	2.04%	0.758%
4	2.509	186	194	212	rVB2	55298	170092	1.83%	0.680%
5	3.428	335	345	349	rBV	102884	286696	3.09%	1.147%
6	6.391	825	832	851	rBV	56772	205177	2.21%	0.821%
7	7.023	923	936	950	rBV2	217549	618169	6.66%	2.473%
8	7.711	1036	1049	1069	rBV2	483359	1420948	15.30%	5.684%
9	8.331	1143	1151	1164	rBV	595545	1178183	12.69%	4.713%
10	8.775	1216	1224	1234	rBV	299974	617568	6.65%	2.470%
11	9.566	1348	1354	1365	rBV	122286	222558	2.40%	0.890%
12	9.858	1395	1402	1411	rBV	846700	1375429	14.81%	5.502%
13	10.132	1440	1447	1459	rBV	57282	107233	1.15%	0.429%
14	10.479	1498	1504	1518	rBV	353114	582764	6.28%	2.331%
15	11.184	1614	1620	1631	rBV	787862	1203091	12.96%	4.813%
16	12.261	1791	1797	1808	rVB	119261	186868	2.01%	0.748%
17	13.131	1934	1940	1954	rBV	629620	964485	10.39%	3.858%
18	13.417	1981	1987	1996	rBV	478459	734491	7.91%	2.938%

Sum of corrected areas: 24998684

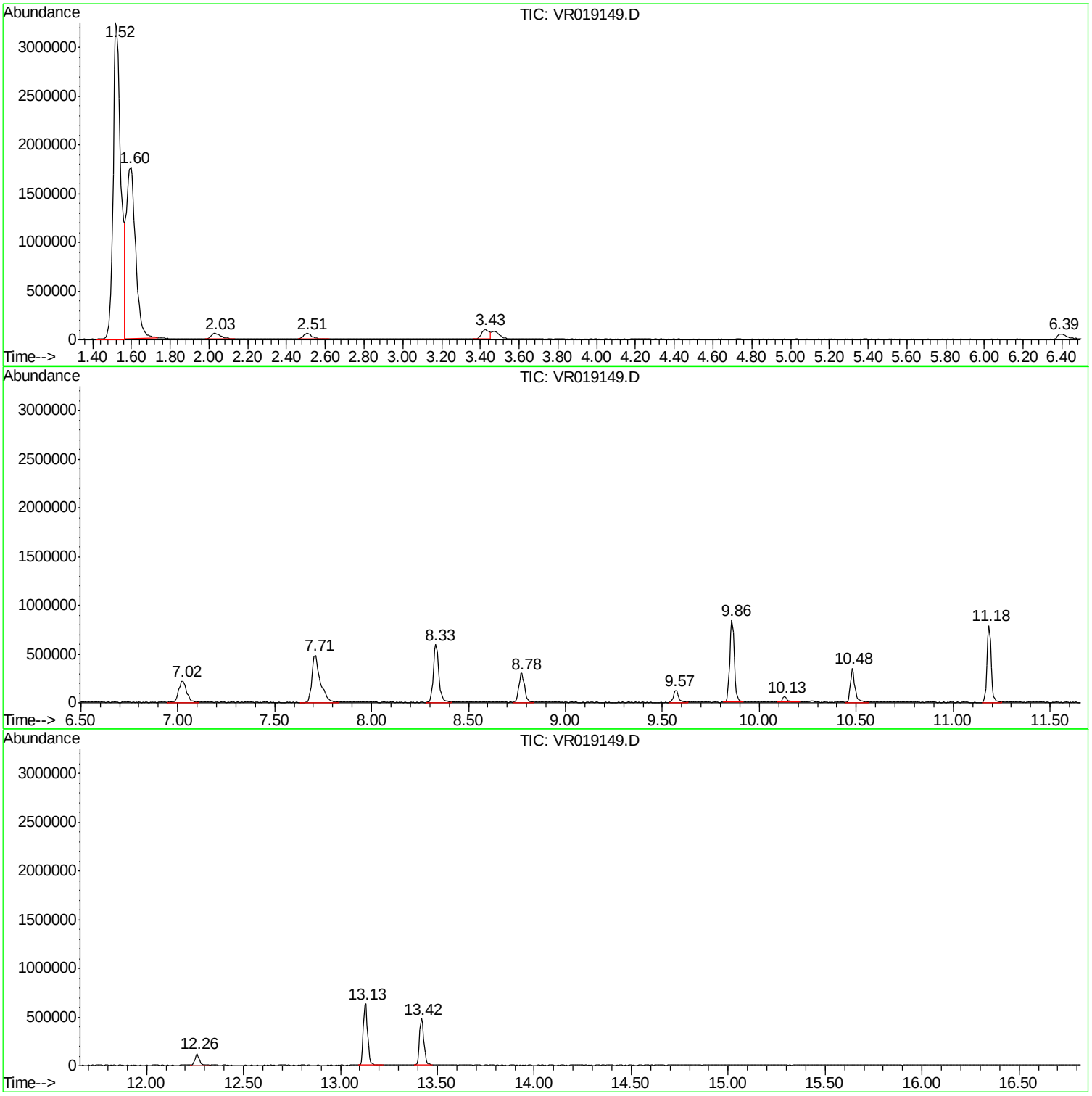
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019149.D
Acq On : 13 May 2016 11:59
Operator : MD\SY
Sample : VR0513WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK52

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019149.D
Acq On : 13 May 2016 11:59
Operator : MD\SY
Sample : VR0513WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VBLK52

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019149.D
Acq On : 13 May 2016 11:59
Operator : MD\SY
Sample : VR0513WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK52

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

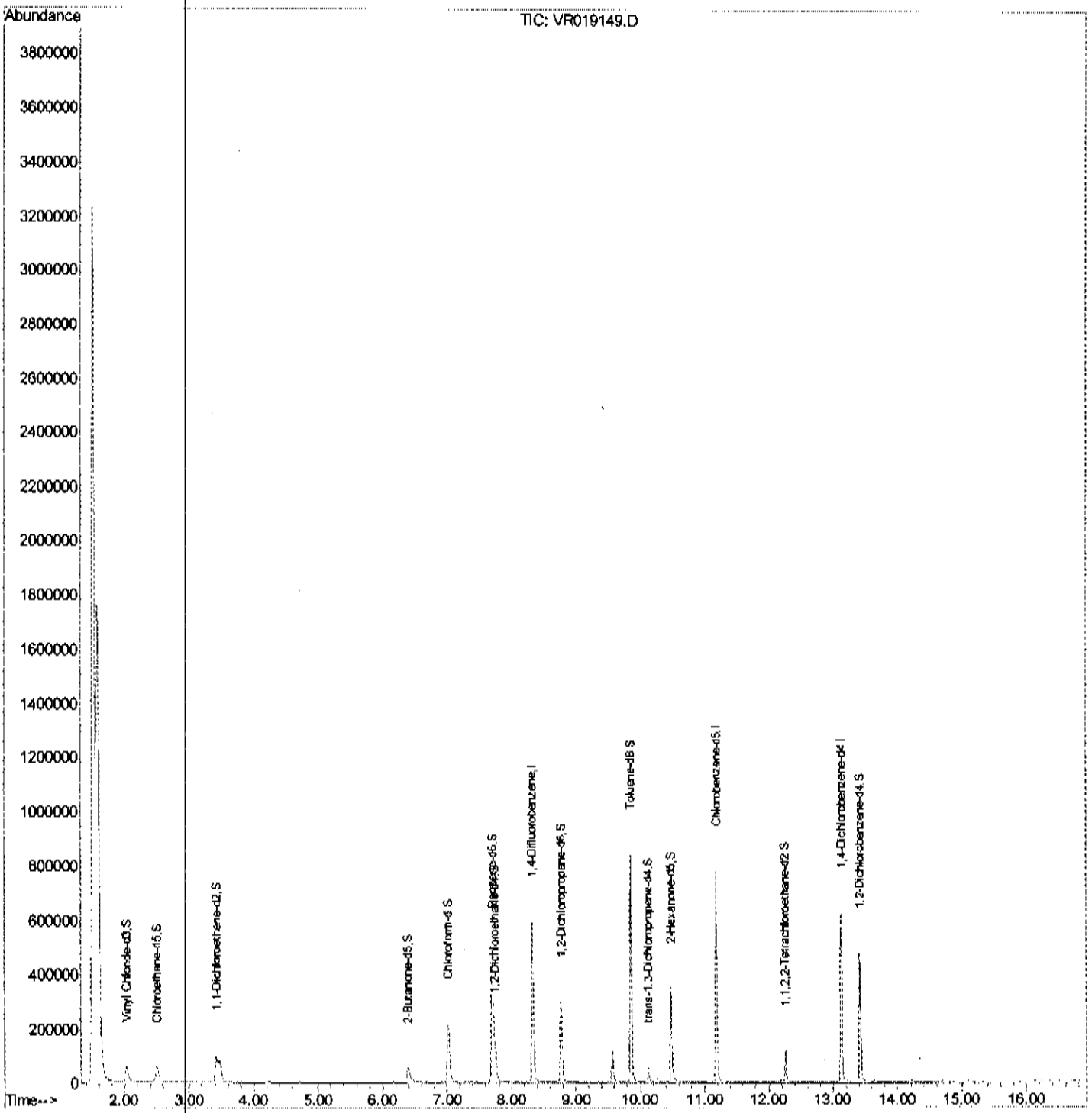
					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019149.D
Acq On : 13 May 2016 11:59
Operator : MD\SY
Sample : VR0513WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 00:50:14 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VBLK52

Manual Integrations APPROVED
mmdadoda
5/16/2016 6:51:34 PM



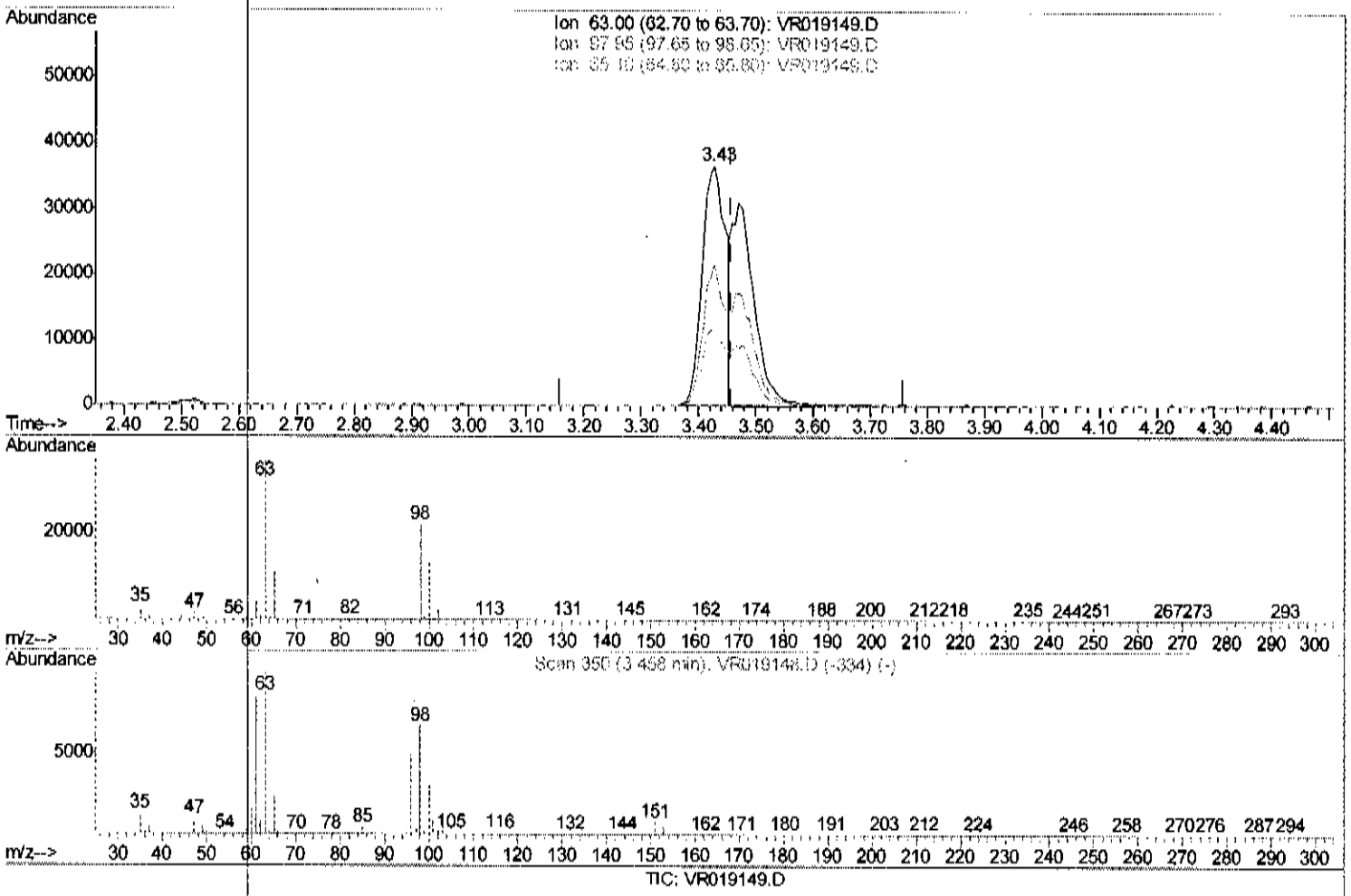
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019149.D
Acq On : 13 May 2016 11:59
Operator : MD\SY
Sample : VR0513WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 00:46:58 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VBLK52

Manual Integrations APPROVED
mmdadoda
5/16/2016 6:51:34 PM



(11) 1,1-Dichloroethene-d2 (S)

3.428min (-0.030) 1.99ug/L

response 103181

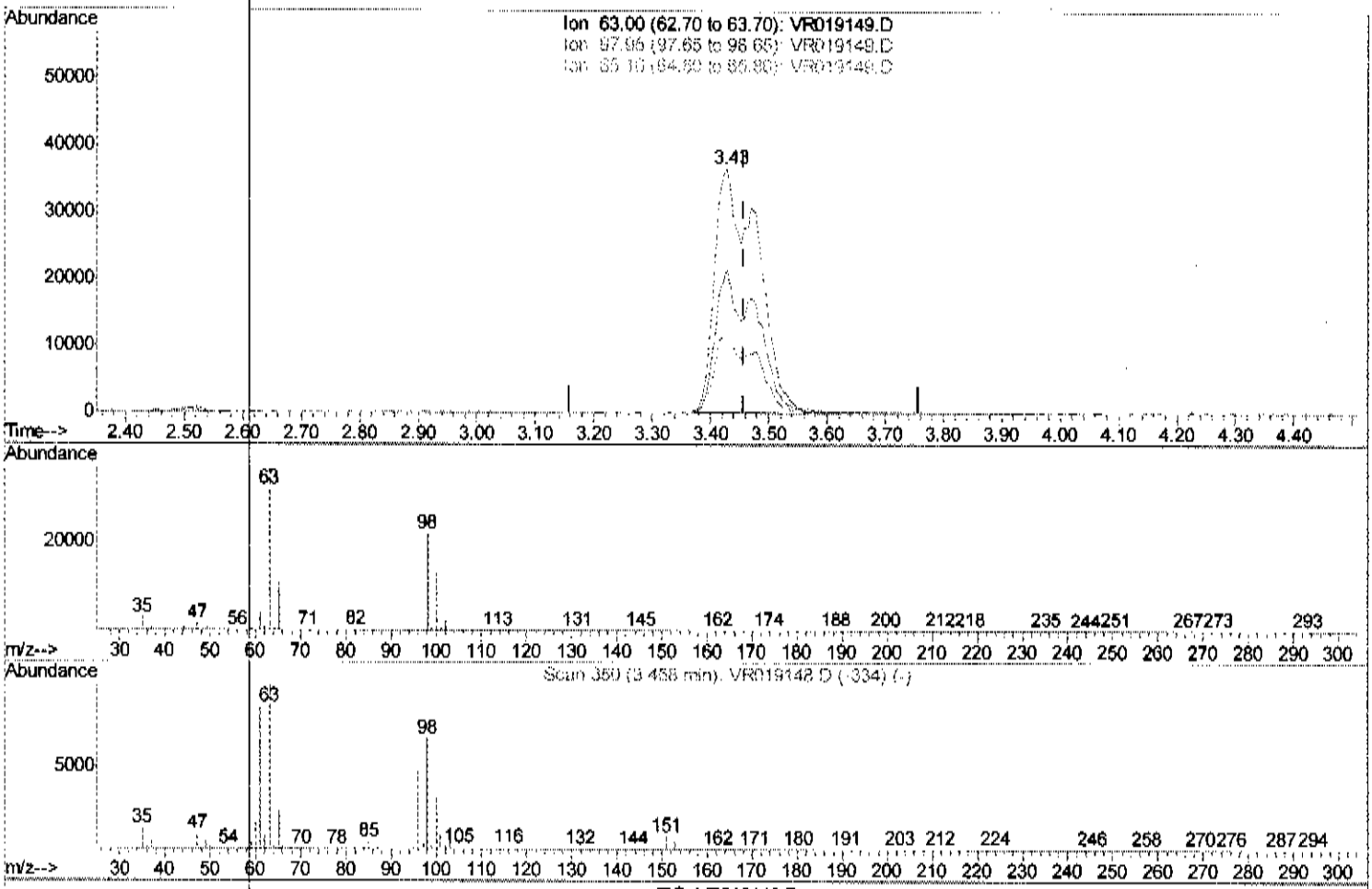
Ion	Exp%	Act%
63.00	100	100
97.95	72.60	55.28
65.10	23.80	34.68#
0.00	0.00	0.00

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019149.D
Acq On : 13 May 2016 11:59
Operator : MD\SY
Sample : VR0513WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 00:46:58 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Instrument :
MSVOA_R
ClientSampleId :
VBLK52

Manual Integrations APPROVED
mmdadoda
5/16/2016 6:51:34 PM



(11) 1,1-Dichloroethene-d2 (S)
3.428min (-0.030) 3.62ug/L m
response 187758

Ion	Exp%	Act%
63.00	100	100
97.95	72.60	30.38#
65.10	23.80	19.06
0.00	0.00	0.00

E.M
05.16.16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051316\
Data File : VR019149.D
Acq On : 13 May 2016 11:59
Operator : MD\SY
Sample : VR0513WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 00:50:14 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
QLast Update : Sat May 14 00:46:32 2016
Response via : Initial Calibration

Instrument : MSVOA_R
ClientSampleId : VBLK52

Manual Integrations APPROVED
mmdadoda
5/16/2016 6:51:34 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	499915	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	392537	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	154543	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	117988	5.24	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 104.80%			
7) Chloroethane-d5	2.51	69	86192	5.39	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 107.80%			
11) 1,1-Dichloroethene-d2	3.43	63	187758m	3.62	ug/L	-0.03
Spiked Amount 5.000	Range 60 - 125		Recovery = 72.40%			
20) 2-Butanone-d5	6.40	46	121659	42.12	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 84.24%			
24) Chloroform-d	7.02	84	246801	4.45	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.00%			
26) 1,2-Dichloroethane-d4	7.75	65	100860	4.60	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.00%			
32) Benzene-d6	7.71	84	548004	4.35	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 87.00%			
36) 1,2-Dichloropropane-d6	8.77	67	142473	4.37	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 87.40%			
41) Toluene-d8	9.86	98	521836	4.40	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.00%			
43) trans-1,3-Dichloropropene-	10.13	79	32432	3.79	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 75.80%			
46) 2-Hexanone-d5	10.48	63	114354	42.65	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 85.30%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	50154	4.31	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 86.20%			
63) 1,2-Dichlorobenzene-d4	13.42	152	117185	4.58	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 91.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

E.M 05.16.16.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK53

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0516WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019163.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/16/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK53

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0516WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019163.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/16/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK53

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0516WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019163.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/16/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLK53

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VR0516WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019163.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/16/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

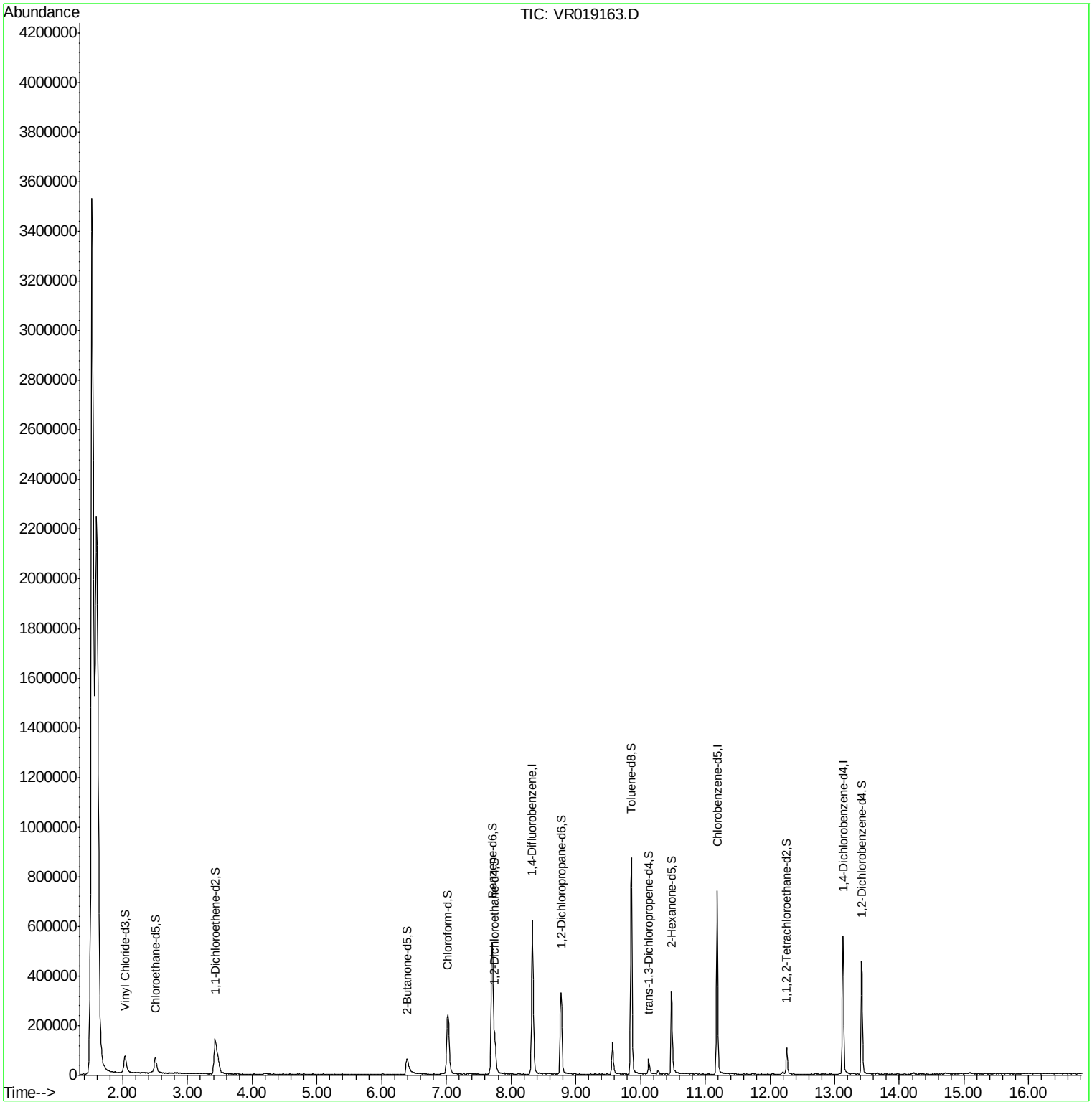
EPA-designated Registry Number.

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019163.D
Acq On : 16 May 2016 11:22
Operator : MD\SY
Sample : VR0516WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VBLK53

Quant Time: May 17 02:01:56 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 17 01:58:26 2016
Response via : Initial Calibration



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019163.D
Acq On : 16 May 2016 11:22
Operator : MD\SY
Sample : VR0516WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK53

Quant Time: May 17 02:01:56 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 17 01:58:26 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	521546	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	366617	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	135415	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	121935	5.19	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 103.80%			
7) Chloroethane-d5	2.50	69	92644	5.55	ug/L	0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 111.00%			
11) 1,1-Dichloroethene-d2	3.43	63	194602	3.60	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 72.00%			
20) 2-Butanone-d5	6.39	46	131818	43.75	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 87.50%			
24) Chloroform-d	7.03	84	268165	4.64	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 92.80%			
26) 1,2-Dichloroethane-d4	7.75	65	106498	4.65	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.00%			
32) Benzene-d6	7.71	84	593518	5.05	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.00%			
36) 1,2-Dichloropropane-d6	8.78	67	153455	5.04	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 100.80%			
41) Toluene-d8	9.86	98	551858	4.98	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.60%			
43) trans-1,3-Dichloropropene-	10.13	79	33104	4.14	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 82.80%			
46) 2-Hexanone-d5	10.48	63	106389	42.48	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 84.96%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	45188	4.15	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 83.00%			
63) 1,2-Dichlorobenzene-d4	13.42	152	107472	4.79	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 95.80%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019163.D
Acq On : 16 May 2016 11:22
Operator : MD\SY
Sample : VR0516WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK53

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	17	32	38	rBV	3528614	9760029	100.00%	35.454%
2	1.597	39	44	74	rVB	2240722	7340774	75.21%	26.666%
3	2.035	107	116	129	rBV	68851	204432	2.09%	0.743%
4	2.503	180	193	203	rBV	61462	176461	1.81%	0.641%
5	3.428	335	345	362	rBV	142928	563536	5.77%	2.047%
6	6.390	826	832	850	rBV2	62758	217989	2.23%	0.792%
7	7.023	926	936	952	rBV	239162	666946	6.83%	2.423%
8	7.711	1040	1049	1069	rBV2	530690	1536016	15.74%	5.580%
9	8.331	1144	1151	1167	rBV	620985	1228461	12.59%	4.462%
10	8.775	1215	1224	1242	rBV	327301	680323	6.97%	2.471%
11	9.566	1348	1354	1368	rBV	129586	240850	2.47%	0.875%
12	9.858	1396	1402	1412	rBV	871466	1455033	14.91%	5.285%
13	10.126	1442	1446	1455	rBV	59215	104793	1.07%	0.381%
14	10.479	1498	1504	1519	rBV	332096	548988	5.62%	1.994%
15	11.184	1613	1620	1632	rBV	739156	1127841	11.56%	4.097%
16	12.261	1791	1797	1806	rBV2	106704	162944	1.67%	0.592%
17	13.131	1933	1940	1951	rBV	557214	833182	8.54%	3.027%
18	13.417	1981	1987	2000	rBV	452716	680466	6.97%	2.472%

Sum of corrected areas: 27529064

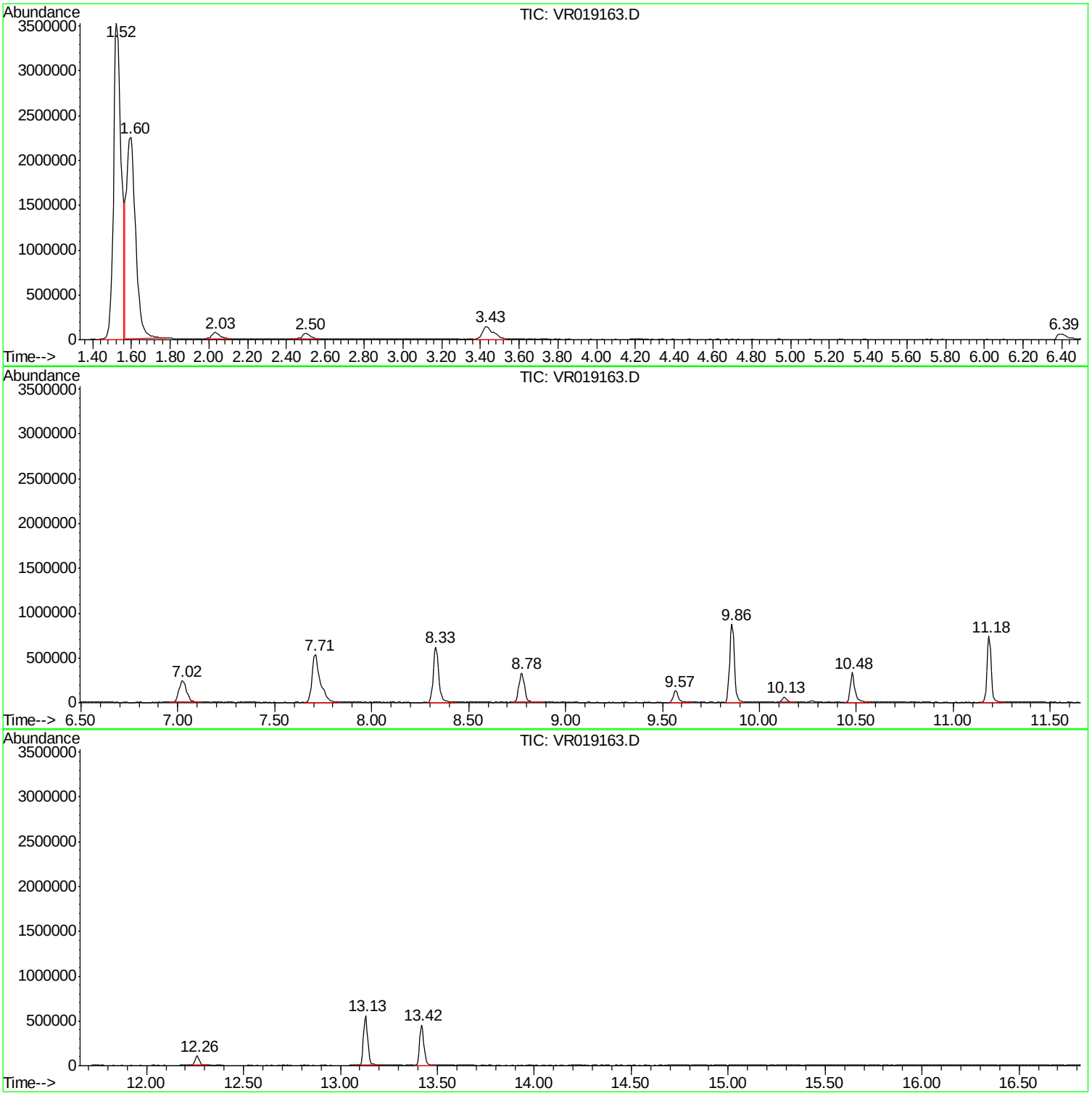
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019163.D
Acq On : 16 May 2016 11:22
Operator : MD\SY
Sample : VR0516WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK53

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019163.D
Acq On : 16 May 2016 11:22
Operator : MD\SY
Sample : VR0516WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VBLK53

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019163.D
Acq On : 16 May 2016 11:22
Operator : MD\SY
Sample : VR0516WBL01
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VBLK53

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019168.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/16/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019168.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/16/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019168.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/16/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019168.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/16/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

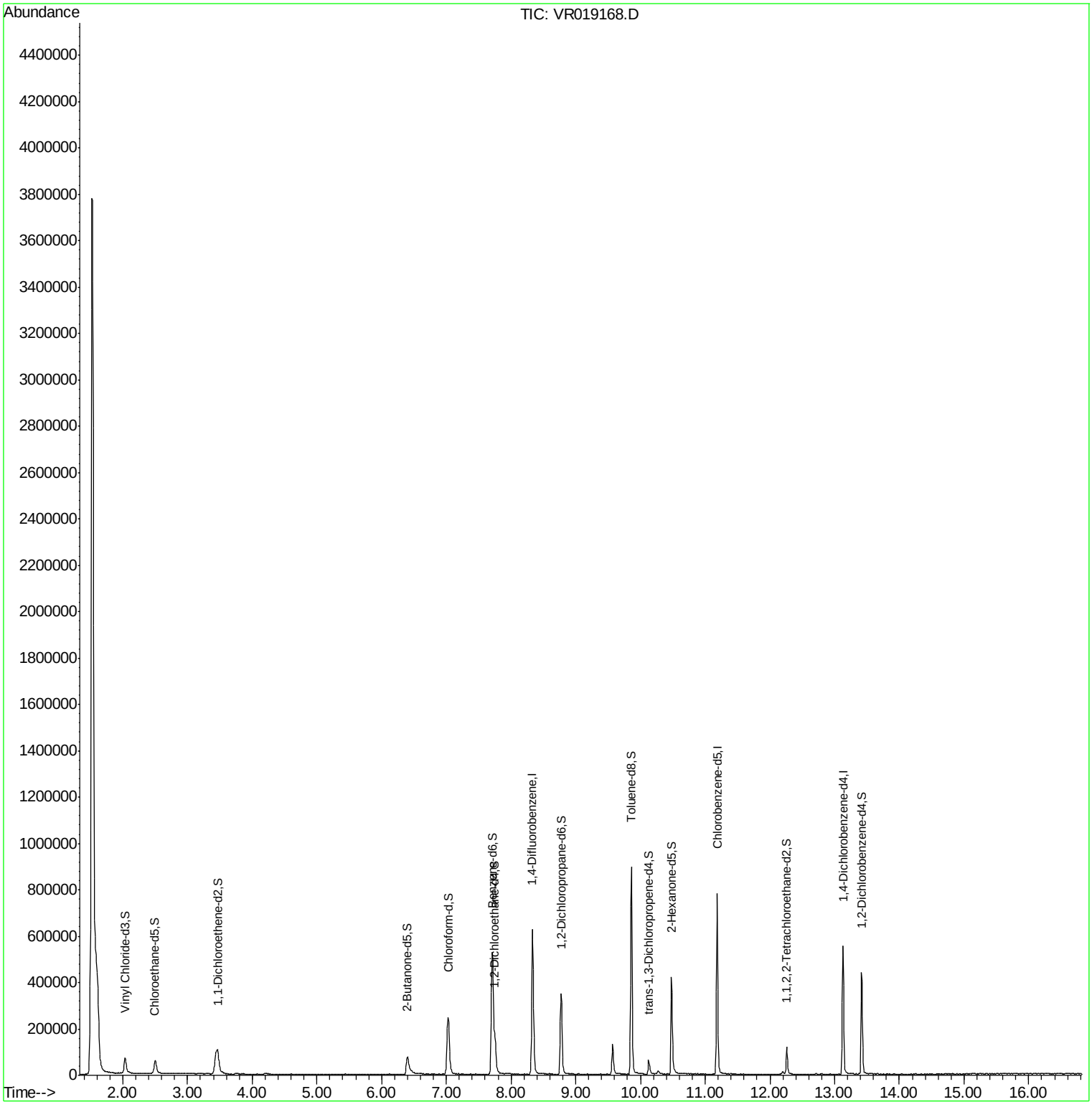
EPA-designated Registry Number.

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019168.D
Acq On : 16 May 2016 14:45
Operator : MD\SY
Sample : H3056-13
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VHBLK01

Quant Time: May 17 02:29:32 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 17 01:58:26 2016
Response via : Initial Calibration



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019168.D
Acq On : 16 May 2016 14:45
Operator : MD\SY
Sample : H3056-13
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VHBLK01

Quant Time: May 17 02:29:32 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 17 01:58:26 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	524805	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	385236	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	132889	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	103140	4.37	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 87.40%			
7) Chloroethane-d5	2.50	69	84470	5.03	ug/L	0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 100.60%			
11) 1,1-Dichloroethene-d2	3.46	63	164610	3.02	ug/L	0.02
Spiked Amount 5.000	Range 60 - 125		Recovery = 60.40%			
20) 2-Butanone-d5	6.40	46	158068	52.13	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 104.26%			
24) Chloroform-d	7.03	84	270024	4.64	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 92.80%			
26) 1,2-Dichloroethane-d4	7.75	65	115677	5.02	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.40%			
32) Benzene-d6	7.71	84	586310	4.74	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.80%			
36) 1,2-Dichloropropane-d6	8.78	67	157941	4.94	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 98.80%			
41) Toluene-d8	9.86	98	555873	4.78	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.60%			
43) trans-1,3-Dichloropropene-	10.13	79	35456	4.22	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 84.40%			
46) 2-Hexanone-d5	10.48	63	135772	51.59	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 103.18%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	50972	4.46	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 89.20%			
63) 1,2-Dichlorobenzene-d4	13.42	152	106345	4.83	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 96.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019168.D
Acq On : 16 May 2016 14:45
Operator : MD\SY
Sample : H3056-13
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VHBLK01

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.524	18	32	67	rBV	3778044	11408484	100.00%	51.924%
2	2.035	107	116	133	rVB	67449	172611	1.51%	0.786%
3	2.497	184	192	209	rVB	56542	154843	1.36%	0.705%
4	3.464	335	351	361	rBV2	105966	450203	3.95%	2.049%
5	6.397	825	833	848	rBV	77264	258158	2.26%	1.175%
6	7.029	928	937	952	rBV	244966	668212	5.86%	3.041%
7	7.711	1039	1049	1069	rBV2	527697	1541697	13.51%	7.017%
8	8.331	1144	1151	1166	rBV	624350	1238637	10.86%	5.637%
9	8.775	1214	1224	1235	rBV	347782	696820	6.11%	3.171%
10	9.572	1349	1355	1364	rBV	130272	244845	2.15%	1.114%
11	9.858	1396	1402	1415	rBV	895068	1468838	12.87%	6.685%
12	10.126	1441	1446	1456	rBV	63400	116002	1.02%	0.528%
13	10.479	1498	1504	1518	rBV	417644	676991	5.93%	3.081%
14	11.184	1613	1620	1632	rBV	780744	1191488	10.44%	5.423%
15	12.261	1791	1797	1809	rVB	117991	183043	1.60%	0.833%
16	13.131	1933	1940	1951	rBV	554132	835389	7.32%	3.802%
17	13.417	1982	1987	1999	rBV	435574	665233	5.83%	3.028%

Sum of corrected areas: 21971494

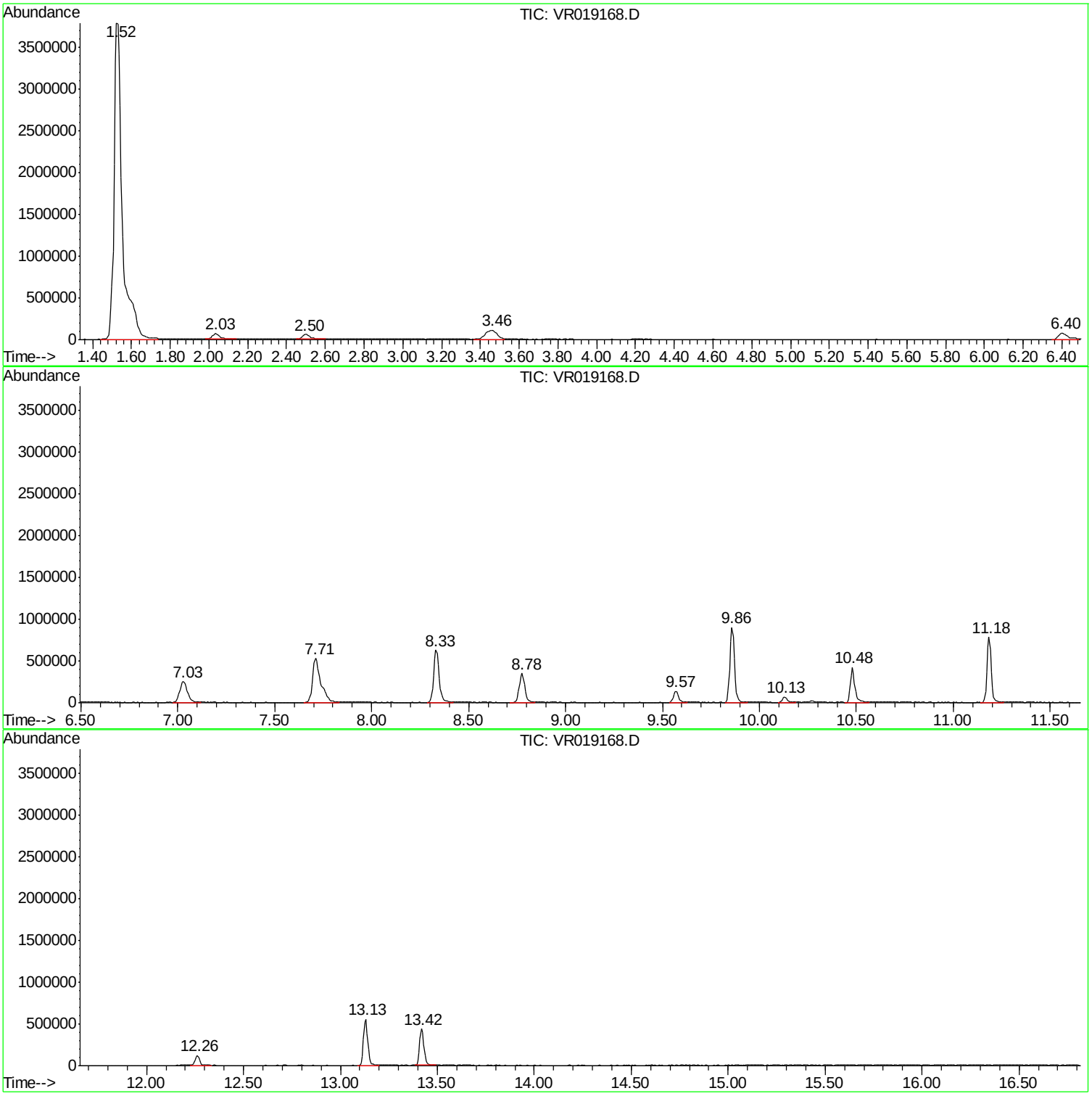
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019168.D
Acq On : 16 May 2016 14:45
Operator : MD\SY
Sample : H3056-13
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019168.D
Acq On : 16 May 2016 14:45
Operator : MD\SY
Sample : H3056-13
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_R
ClientSampleId :
VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051616\
Data File : VR019168.D
Acq On : 16 May 2016 14:45
Operator : MD\SY
Sample : H3056-13
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4107MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-08MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019144.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	4.1	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	4.9	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	5.1	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4107MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-08MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019144.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	4.9	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4107MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-08MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019144.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

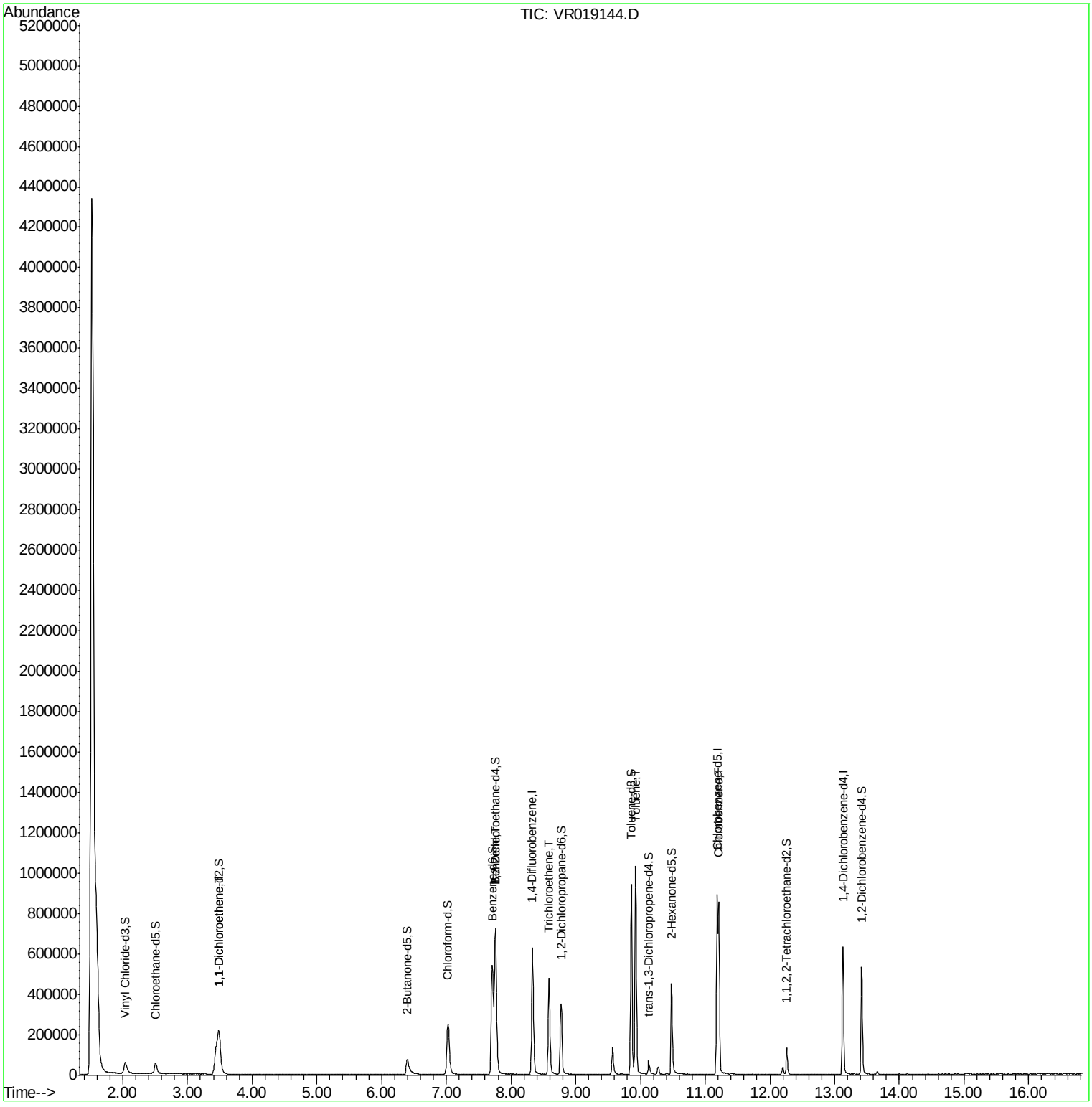
CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

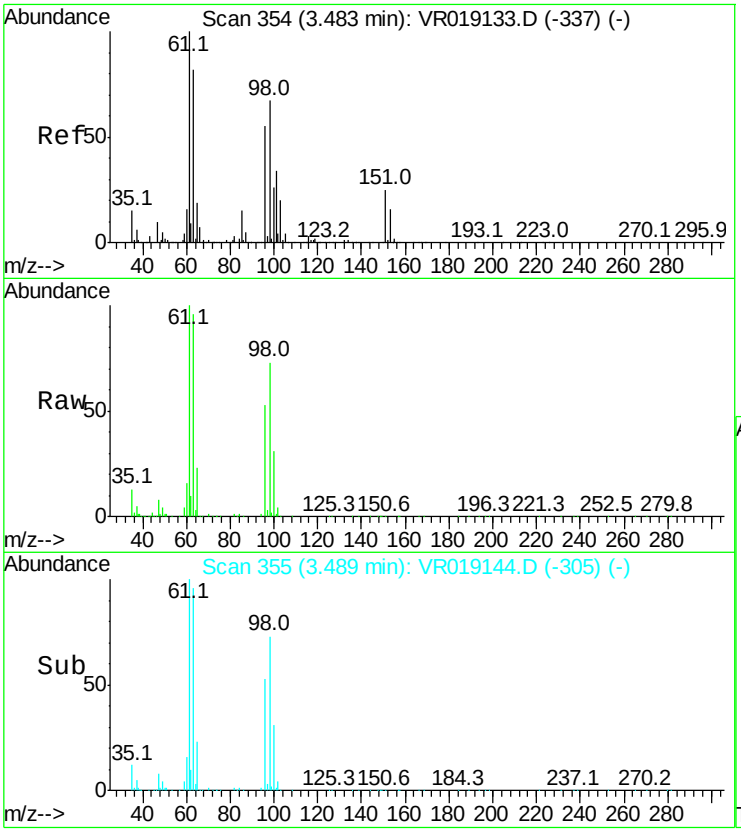
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019144.D
Acq On : 12 May 2016 19:14
Operator : MD\SY
Sample : H3056-08MS
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4107MS

Quant Time: May 13 06:40:05 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration



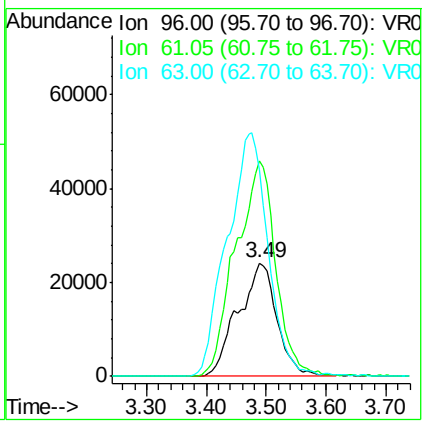


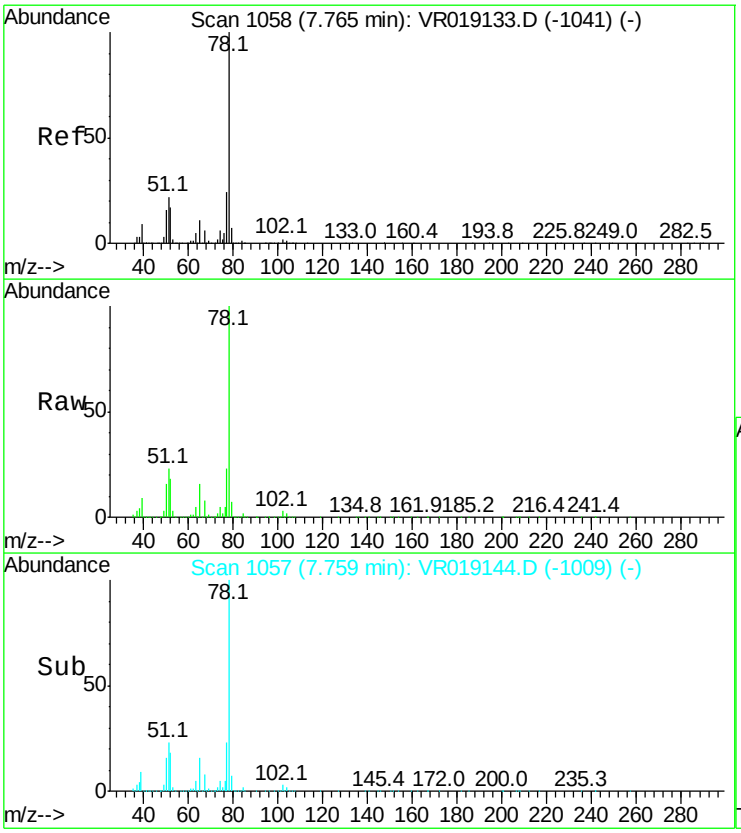
#12
1,1-Dichloroethene
Concen: 4.10 ug/L
RT: 3.49 min Scan# 355
Delta R.T. 0.01 min
Lab File: VR019144.D
Acq: 12 May 2016 19:14

Instrument : MSVOA_R
ClientSampleId : H4107MS

Tgt Ion: 96 Resp: 109080

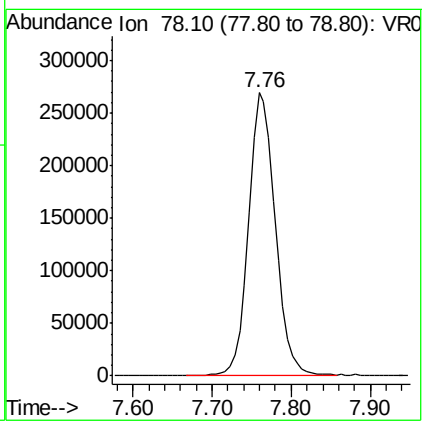
Ion	Ratio	Lower	Upper
96	100		
61	190.2	124.0	230.2
63	182.7	133.5	247.9

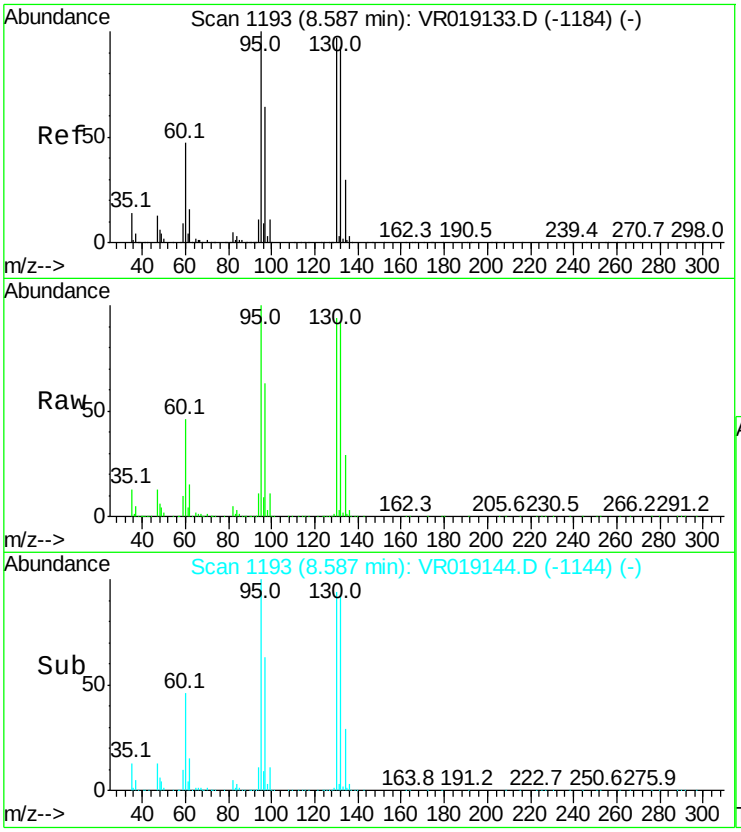




#33
Benzene
Concen: 4.88 ug/L
RT: 7.76 min Scan# 1057
Delta R.T. -0.01 min
Lab File: VR019144.D
Acq: 12 May 2016 19:14

Tgt Ion: 78 Resp: 633279



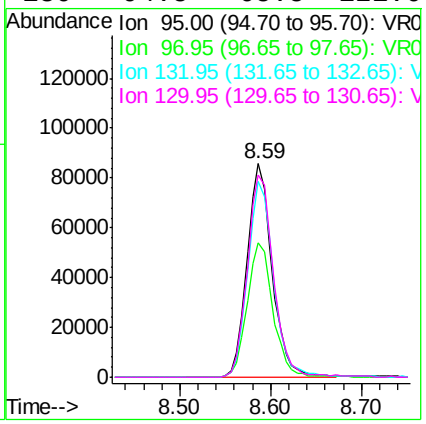


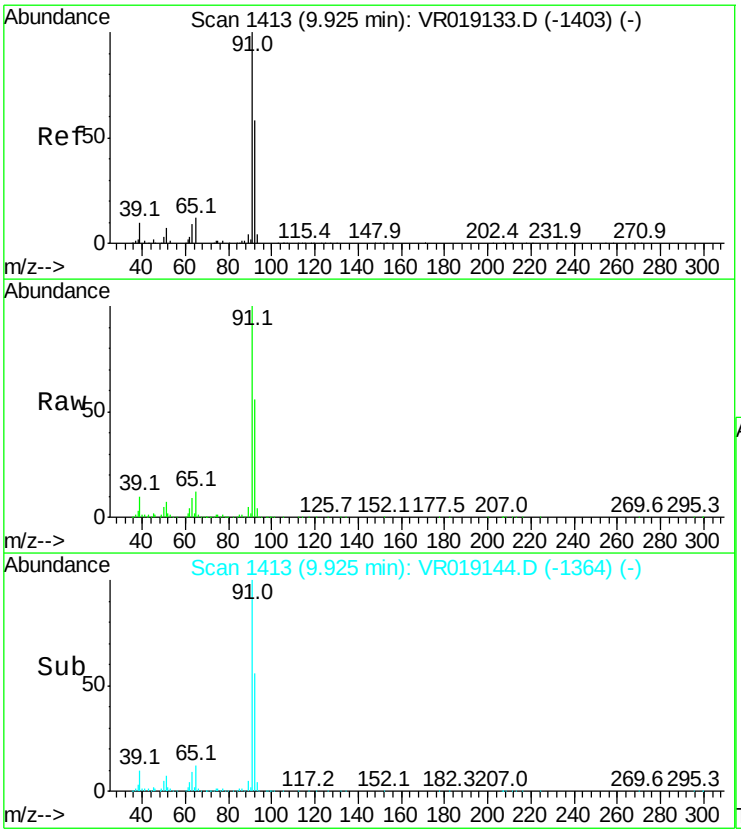
#34
Trichloroethene
Concen: 5.05 ug/L
RT: 8.59 min Scan# 1193
Delta R.T. -0.00 min
Lab File: VR019144.D
Acq: 12 May 2016 19:14

Instrument : MSVOA_R
ClientSampleId : H4107MS

Tgt Ion: 95 Resp: 163278

Ion	Ratio	Lower	Upper
95	100		
97	62.7	43.3	80.5
132	91.5	65.2	121.2
130	94.5	65.5	121.6

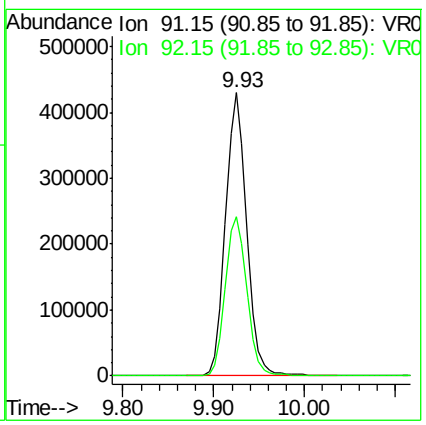


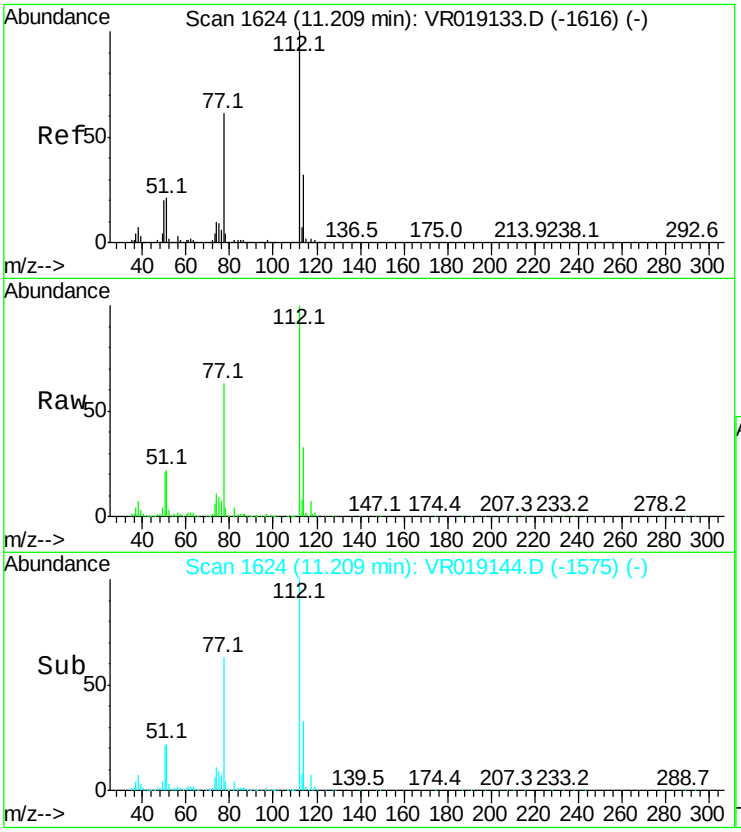


#42
Toluene
Concen: 5.04 ug/L
RT: 9.93 min Scan# 1413
Delta R.T. -0.00 min
Lab File: VR019144.D
Acq: 12 May 2016 19:14

Tgt Ion: 91 Resp: 692263

Ion	Ratio	Lower	Upper
91	100		
92	56.0	40.5	75.3



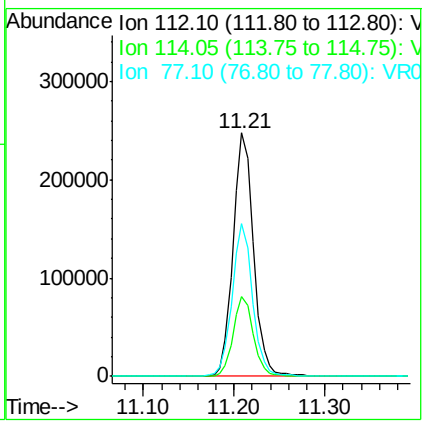


#51
Chlorobenzene
Concen: 4.92 ug/L
RT: 11.21 min Scan# 1624
Delta R.T. -0.00 min
Lab File: VR019144.D
Acq: 12 May 2016 19:14

Instrument :
MSVOA_R
ClientSampleId :
H4107MS

Tgt Ion:112 Resp: 388121

Ion	Ratio	Lower	Upper
112	100		
114	33.0	22.3	41.3
77	62.6	48.6	73.0



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019144.D
Acq On : 12 May 2016 19:14
Operator : MD\SY
Sample : H3056-08MS
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4107MS

Quant Time: May 13 06:40:05 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.33	114	526670	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.18	117	402874	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.13	152	152742	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.03	65	109182	4.60	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 92.00%			
7) Chloroethane-d5	2.50	69	78108	4.64	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 92.80%			
11) 1,1-Dichloroethene-d2	3.48	63	245187	4.49	ug/L	0.02
Spiked Amount 5.000	Range 60 - 125		Recovery = 89.80%			
20) 2-Butanone-d5	6.39	46	163211	53.64	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 107.28%			
24) Chloroform-d	7.02	84	272240	4.66	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.20%			
26) 1,2-Dichloroethane-d4	7.75	65	118882	5.14	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.80%			
32) Benzene-d6	7.71	84	602101	4.66	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.20%			
36) 1,2-Dichloropropane-d6	8.78	67	158025	4.73	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 94.60%			
41) Toluene-d8	9.86	98	573482	4.71	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.20%			
43) trans-1,3-Dichloropropene-	10.13	79	38356	4.37	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 87.40%			
46) 2-Hexanone-d5	10.48	63	145056	52.71	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 105.42%			
57) 1,1,2,2-Tetrachloroethane-	12.26	84	55282	4.62	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 92.40%			
63) 1,2-Dichlorobenzene-d4	13.42	152	124692	4.93	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.60%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	3.49	96	109080	4.10	ug/L	93
33) Benzene	7.76	78	633279	4.88	ug/L	100
34) Trichloroethene	8.59	95	163278	5.05	ug/L	99
42) Toluene	9.93	91	692263	5.04	ug/L	98
51) Chlorobenzene	11.21	112	388121	4.92	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4107MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-09MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019145.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	4.0	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	5.0	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	5.2	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4107MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-09MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019145.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.2	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	5.0	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4107MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4023
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H3056-09MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VR019145.D
% Solids :
Date Received : 05/12/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

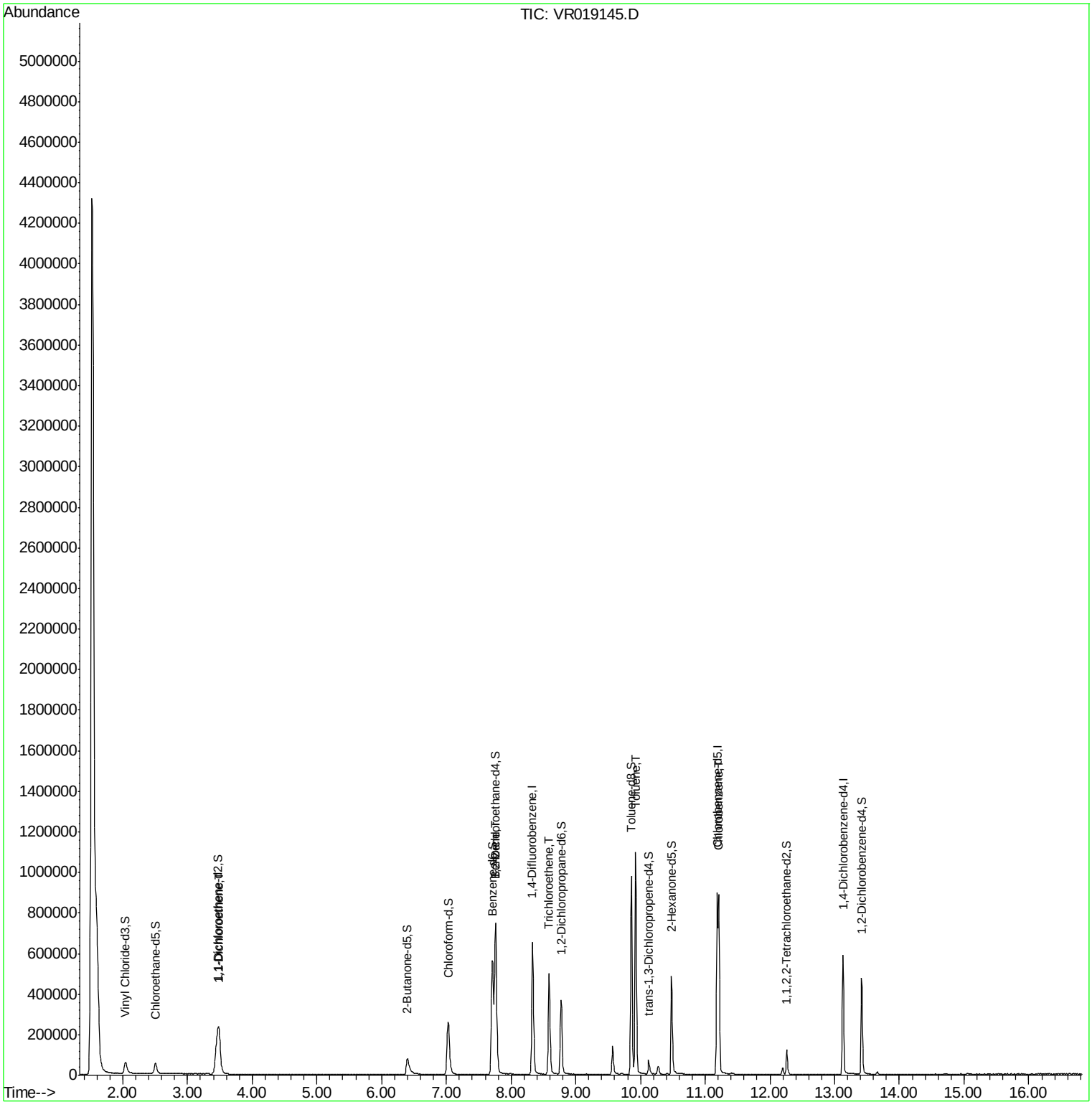
CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

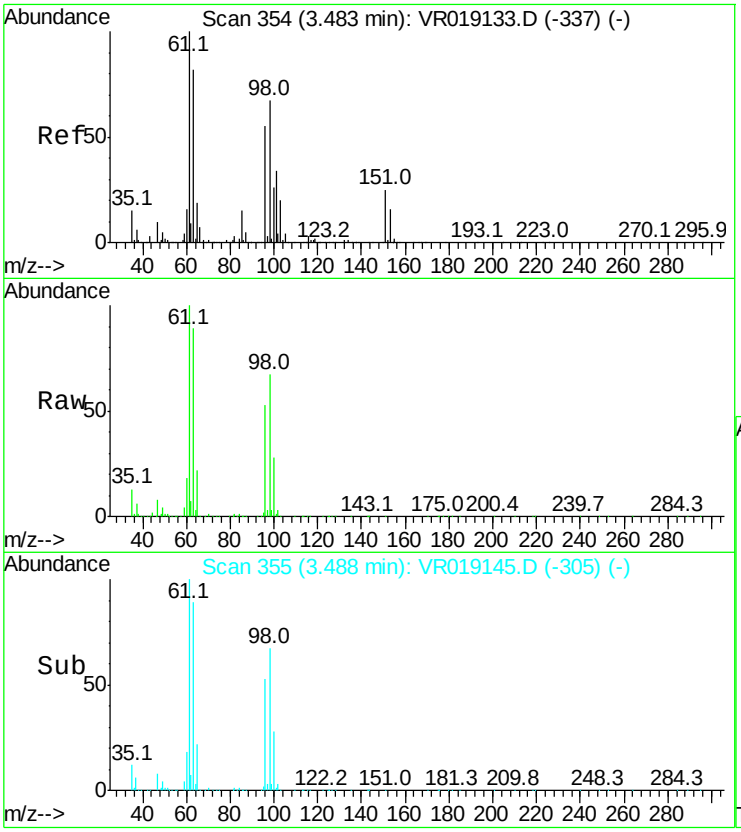
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019145.D
Acq On : 12 May 2016 19:47
Operator : MD\SY
Sample : H3056-09MSD
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4107MSD

Quant Time: May 13 06:41:56 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration



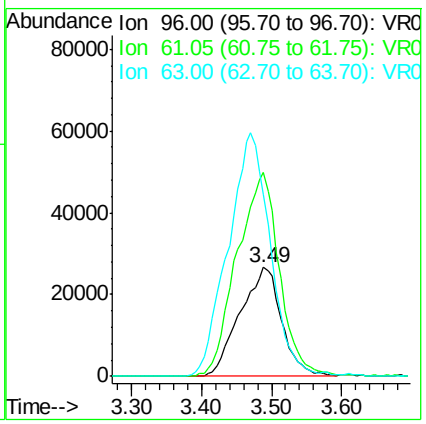


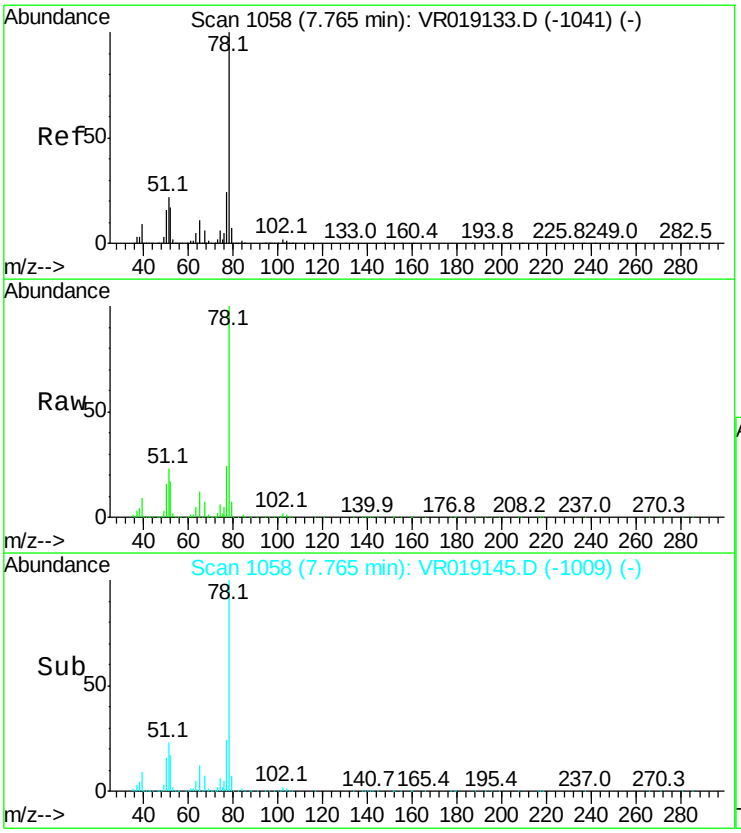
#12
1,1-Dichloroethene
Concen: 4.00 ug/L
RT: 3.49 min Scan# 355
Delta R.T. 0.01 min
Lab File: VR019145.D
Acq: 12 May 2016 19:47

Instrument : MSVOA_R
ClientSampleId : H4107MSD

Tgt Ion: 96 Resp: 110259

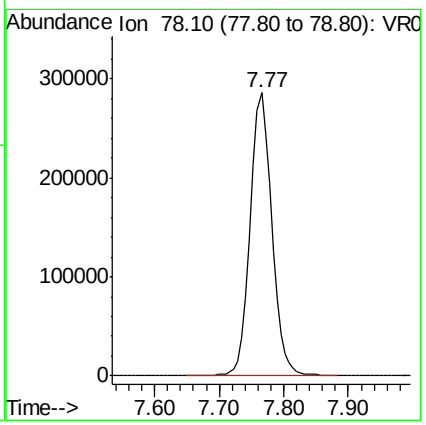
Ion	Ratio	Lower	Upper
96	100		
61	187.3	124.0	230.2
63	166.9	133.5	247.9

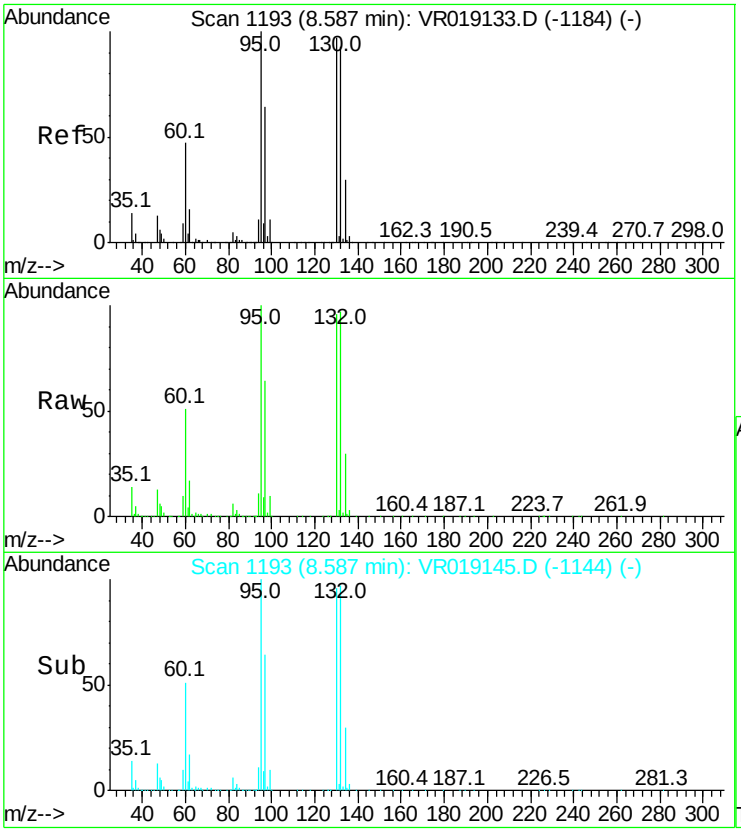




#33
Benzene
Concen: 4.97 ug/L
RT: 7.77 min Scan# 1058
Delta R.T. -0.00 min
Lab File: VR019145.D
Acq: 12 May 2016 19:47

Tgt Ion: 78 Resp: 656980



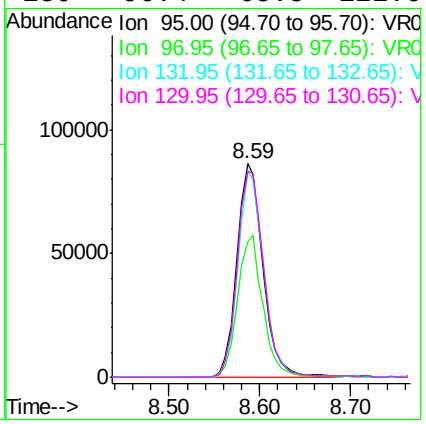


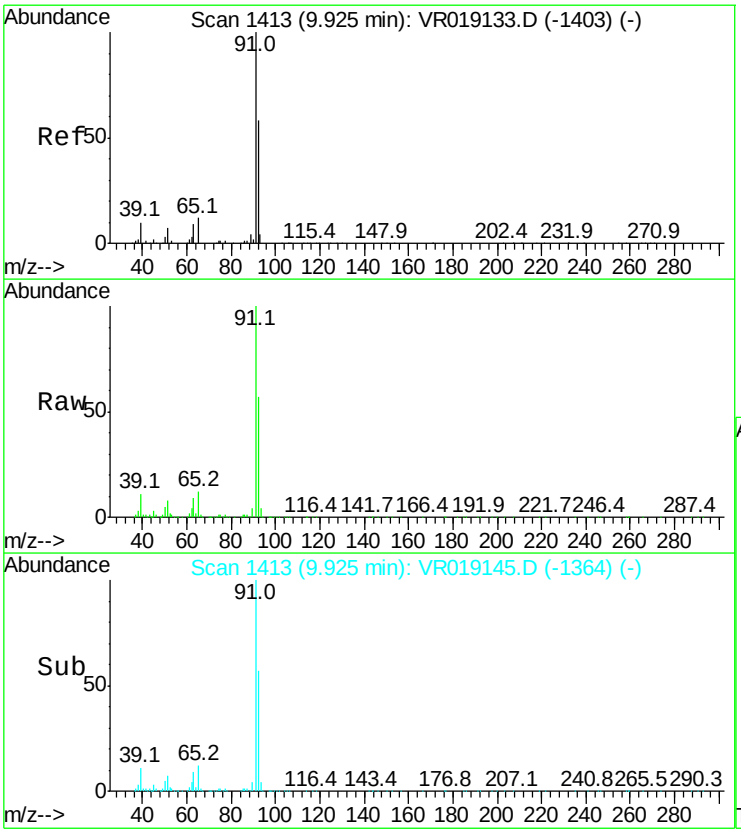
#34
Trichloroethene
Concen: 5.20 ug/L
RT: 8.59 min Scan# 1193
Delta R.T. -0.00 min
Lab File: VR019145.D
Acq: 12 May 2016 19:47

Instrument : MSVOA_R
ClientSampleId : H4107MSD

Tgt Ion: 95 Resp: 171389

Ion	Ratio	Lower	Upper
95	100		
97	63.8	43.3	80.5
132	96.6	65.2	121.2
130	96.4	65.5	121.6

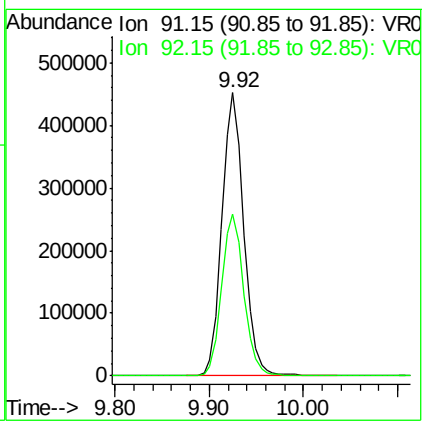


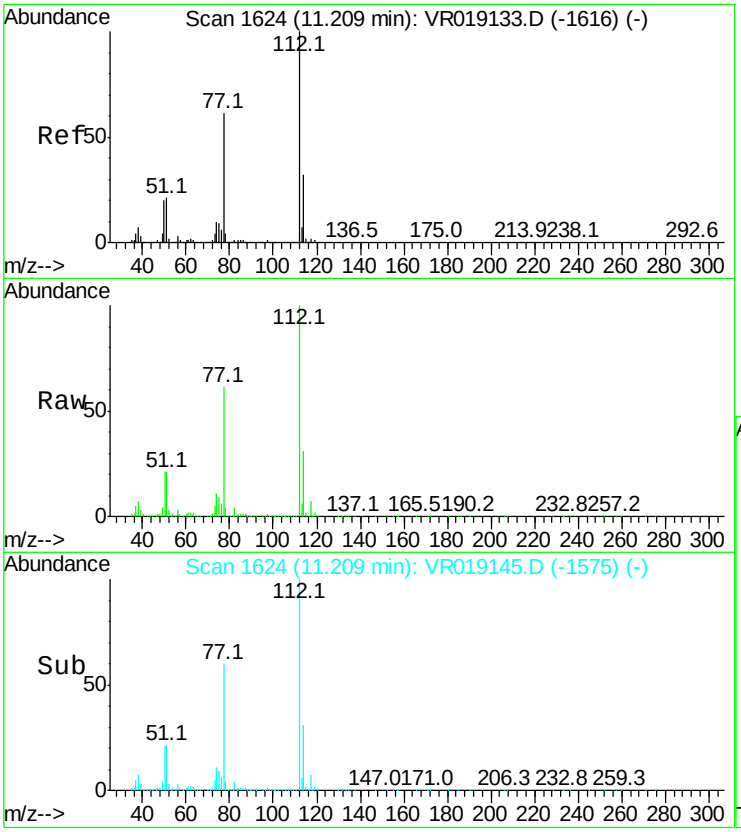


#42
Toluene
Concen: 5.20 ug/L
RT: 9.92 min Scan# 1413
Delta R.T. -0.00 min
Lab File: VR019145.D
Acq: 12 May 2016 19:47

Tgt Ion: 91 Resp: 725919

Ion	Ratio	Lower	Upper
91	100		
92	57.2	40.5	75.3



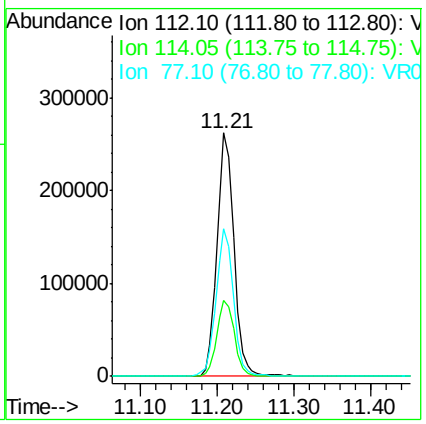


#51
Chlorobenzene
Concen: 5.04 ug/L
RT: 11.21 min Scan# 1624
Delta R.T. -0.00 min
Lab File: VR019145.D
Acq: 12 May 2016 19:47

Instrument :
MSVOA_R
ClientSampleId :
H4107MSD

Tgt Ion:112 Resp: 404707

Ion	Ratio	Lower	Upper
112	100		
114	31.4	22.3	41.3
77	60.5	48.6	73.0



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR051216\
Data File : VR019145.D
Acq On : 12 May 2016 19:47
Operator : MD\SY
Sample : H3056-09MSD
Misc : 25mL/MSVOA_R/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_R
ClientSampleId : H4107MSD

Quant Time: May 13 06:41:56 2016
Quant Method : W:\HPCHEM1\MSVOA_R\METHODS\SOMRTR051116W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 05:34:03 2016
Response via : Initial Calibration

Internal Standards		R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene		8.33	114	545786	5.00	ug/L	0.00
28) Chlorobenzene-d5		11.18	117	410092	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4		13.13	152	140472	5.00	ug/L	0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3		2.05	65	104436	4.25	ug/L	0.00
Spiked Amount	5.000	Range	40 - 130	Recovery	=	85.00%	
7) Chloroethane-d5		2.50	69	77196	4.42	ug/L	0.00
Spiked Amount	5.000	Range	65 - 130	Recovery	=	88.40%	
11) 1,1-Dichloroethene-d2		3.47	63	248504	4.39	ug/L	0.01
Spiked Amount	5.000	Range	60 - 125	Recovery	=	87.80%	
20) 2-Butanone-d5		6.40	46	171361	54.34	ug/L	0.00
Spiked Amount	50.000	Range	40 - 130	Recovery	=	108.68%	
24) Chloroform-d		7.03	84	280970	4.64	ug/L	0.00
Spiked Amount	5.000	Range	70 - 125	Recovery	=	92.80%	
26) 1,2-Dichloroethane-d4		7.75	65	127542	5.32	ug/L	0.00
Spiked Amount	5.000	Range	70 - 130	Recovery	=	106.40%	
32) Benzene-d6		7.71	84	632399	4.81	ug/L	0.00
Spiked Amount	5.000	Range	70 - 125	Recovery	=	96.20%	
36) 1,2-Dichloropropane-d6		8.78	67	170509	5.01	ug/L	0.00
Spiked Amount	5.000	Range	60 - 140	Recovery	=	100.20%	
41) Toluene-d8		9.86	98	597565	4.83	ug/L	0.00
Spiked Amount	5.000	Range	70 - 130	Recovery	=	96.60%	
43) trans-1,3-Dichloropropene-		10.13	79	38029	4.26	ug/L	0.00
Spiked Amount	5.000	Range	55 - 130	Recovery	=	85.20%	
46) 2-Hexanone-d5		10.48	63	150695	53.79	ug/L	0.00
Spiked Amount	50.000	Range	45 - 130	Recovery	=	107.58%	
57) 1,1,2,2-Tetrachloroethane-		12.26	84	54590	4.49	ug/L	0.00
Spiked Amount	5.000	Range	65 - 120	Recovery	=	89.80%	
63) 1,2-Dichlorobenzene-d4		13.42	152	116286	5.00	ug/L	0.00
Spiked Amount	5.000	Range	80 - 120	Recovery	=	100.00%	
Target Compounds							Qvalue
12) 1,1-Dichloroethene		3.49	96	110259	4.00	ug/L	88
33) Benzene		7.77	78	656980	4.97	ug/L	100
34) Trichloroethene		8.59	95	171389	5.20	ug/L	97
42) Toluene		9.92	91	725919	5.20	ug/L	99
51) Chlorobenzene		11.21	112	404707	5.04	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Prep Standard - Chemical Standard Summary

Order ID : H3056

Test : VOC-Low Level -15

Prepbatch ID :

Sequence ID/Qc Batch ID: VI051216,VR051216,VR051316,VR051616,VI050416,VR051116

Standard ID :
VP47998,VP52019,VP52036,VP52453,VP52662,VP52664,VP52665,VP52666,VP52667,VP52668,VP52669,VP52670,VP52905,VP52910,VP52911,VP52912,VP52913,VP52914,VP52950,VP52951,VP52952,VP52953,VP52954,VP52955,VP52982,VP52983,VP52984,VP52990,VP53035,VP53036,VP53037,

Chemical ID :
V1456,V5218,V5740,V5948,V6161,V6285,V6330,V6355,V6373,V6406,V6419,V6493,V6580,V6583,V6588,V6592,V6593,V6671,V6674,

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
218	BFB, 25PPM	VP47998	11/13/2015	05/13/2016	sam

FROM 0.500ml of V5218 + 49.500ml of V6285 = Final Quantity: 50.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1721	SOM01.2 TRACE-Calibration Mix,25 PPM	VP52019	04/15/2016	05/16/2016	sam

FROM 0.125ml of V5948 + 0.125ml of V6161 + 0.125ml of V6355 + 0.250ml of V6406 + 0.250ml of V6419 + 0.500ml of V6373 + 8.625ml of V6493 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1896	Trace internal standard 50 ppm	VP52036	04/15/2016	05/16/2016	sam

FROM 0.200ml of V5740 + 9.800ml of V6493 = Final Quantity: 10.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1897	Trace surrogate mix 25 ppm	VP52453	04/28/2016	05/28/2016	sam

FROM 0.200ml of V6593 + 0.500ml of V6330 + 1.200ml of V6580 + 1.200ml of V6583 + 1.200ml of V6588 + 1.200ml of V6592 + 4.500ml of V6671 = Final Quantity: 10.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52662	05/04/2016	05/05/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1722	0.5 PPB ICC SOM01.2 Trace	VP52664	05/04/2016	05/05/2016	feifei

FROM 39.990ml of V1456 + 0.001ml of VP52019 + 0.001ml of VP52453 + 0.004ml of VP52036 = Final Quantity: 40.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1723	1 PPB ICC SOM01.2 Trace	VP52665	05/04/2016	05/05/2016	feifei

FROM 39.990ml of V1456 + 0.002ml of VP52019 + 0.002ml of VP52453 + 0.004ml of VP52036 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1724	5 PPB ICC SOM01.2 Trace	VP52666	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1725	10 PPB ICC SOM01.2 Trace	VP52667	05/04/2016	05/05/2016	feifei

FROM 39.960ml of V1456 + 0.004ml of VP52036 + 0.016ml of VP52019 + 0.016ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1726	20 PPB ICC SOM01.2 Trace	VP52668	05/04/2016	05/05/2016	feifei

FROM 39.930ml of V1456 + 0.004ml of VP52036 + 0.032ml of VP52019 + 0.032ml of VP52453 = Final Quantity: 40.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52669	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52670	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52905	05/11/2016	05/12/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1722	0.5 PPB ICC SOM01.2 Trace	VP52910	05/11/2016	05/12/2016	feifei

FROM 39.990ml of V1456 + 0.001ml of VP52019 + 0.001ml of VP52453 + 0.004ml of VP52036 = Final Quantity: 40.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1723	1 PPB ICC SOM01.2 Trace	VP52911	05/11/2016	05/12/2016	feifei

FROM 39.990ml of V1456 + 0.002ml of VP52019 + 0.002ml of VP52453 + 0.004ml of VP52036 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1724	5 PPB ICC SOM01.2 Trace	VP52912	05/11/2016	05/12/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1725	10 PPB ICC SOM01.2 Trace	VP52913	05/11/2016	05/12/2016	feifei

FROM 39.960ml of V1456 + 0.004ml of VP52036 + 0.016ml of VP52019 + 0.016ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1726	20 PPB ICC SOM01.2 Trace	VP52914	05/11/2016	05/12/2016	feifei

FROM 39.930ml of V1456 + 0.004ml of VP52036 + 0.032ml of VP52019 + 0.032ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52950	05/12/2016	05/13/2016	lisa

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52951	05/12/2016	05/13/2016	lisa

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52952	05/12/2016	05/13/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52953	05/12/2016	05/13/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52954	05/12/2016	05/13/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52955	05/12/2016	05/13/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52982	05/13/2016	05/13/2016	lisa

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52983	05/13/2016	05/14/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52984	05/13/2016	05/14/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
218	BFB, 25PPM	VP52990	05/13/2016	11/04/2016	sam

FROM 0.500ml of V5218 + 49.500ml of V6674 = Final Quantity: 50.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP53035	05/16/2016	05/17/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP52990 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP53036	05/16/2016	05/16/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP53037	05/16/2016	05/16/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	DIW / DI Water	DAILY	12/31/2019	03/01/2010 / apatel	03/02/2010 / apatel	V1456

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30067 / BFB tuneing solution	A0102518	04/30/2019	11/13/2015 / sam	07/14/2014 / sam	V5218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30091 / VOA Mix, CLP method L/C Internal Std 2500uq/ml, PT&M, 1ml/ampul	A099377	10/31/2018	04/13/2016 / sam	03/27/2015 / sam	V5740

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30429 / 1,2,3-Trichloropropane Standard, 2,000 ug/ml	A0108463	01/31/2020	12/11/2015 / sam	06/04/2015 / sam	V5948

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30492 / VOA Mix, OLC 03.2 VOA Mega Mix, 1mL, 2000ug/mL, P&TM	A0102833	04/30/2017	03/16/2016 / sam	09/24/2015 / sam	V6161

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	118655	07/13/2017	11/13/2015 / sam	11/04/2015 / sam	V6285

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30624 / VOA Stock Standard, OLC 3.2 VOA non-ketone, deuterated monitoring compounds, 1mL, 500ug/mL, Methanol-d	A0113615	08/31/2018	04/22/2016 / sam	10/28/2015 / sam	V6330

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30042 / VOA Mix,500 series method 502.2 Calibration Std #1 gases, 2000uq/ml, PTM, 1ml	A0114018	05/31/2022	04/14/2016 / sam	10/28/2015 / sam	V6355

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A0110042	07/31/2018	03/16/2016 / sam	10/28/2015 / sam	V6373

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31280 / Naphthalene, 1000 PPM in Methanol	A0111730	05/31/2021	01/13/2016 / sam	11/17/2015 / sam	V6406

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31081 / 1,3,5-Trichlorobenzene	A0109767	03/31/2020	04/14/2016 / sam	11/19/2015 / sam	V6419

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	127999	10/27/2017	04/05/2016 / sam	01/13/2016 / sam	V6493

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6580

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6583

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6588

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6592

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6593

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	0000127999	10/27/2017	04/28/2016 / sam	04/12/2016 / sam	V6671

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	0000127999	10/27/2017	05/04/2016 / sam	04/12/2016 / sam	V6674

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Certificate of Analysis

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30492 **Lot No.:** A0102833

Description : OLC 03.2 VOA Mega Mix

OLC 03.2 VOA Mega Mix 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2017 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.: K=2)		
1	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 (Lot Q9B-87) **Purity** 98%	2,006.1 µg/mL	+/- 11.7727 +/- 106.7701 +/- 106.8878	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	1,1-dichloroethene **CAS #** 75-35-4 (Lot 33096BKV) **Purity** 99%	2,001.3 µg/mL	+/- 15.4296 +/- 106.9831 +/- 107.1000	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Methyl acetate **CAS #** 79-20-9 (Lot 56696JMV) **Purity** 99%	2,001.5 µg/mL	+/- 11.7459 +/- 106.5274 +/- 106.6448	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Methylene chloride (dichloromethane) **CAS #** 75-09-2 (Lot SHBC7917V) **Purity** 99%	2,001.8 µg/mL	+/- 15.4334 +/- 107.0098 +/- 107.1268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Carbon disulfide **CAS #** 75-15-0 (Lot C30Y997) **Purity** 98%	2,003.6 µg/mL	+/- 11.7583 +/- 106.6397 +/- 106.7573	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Methyl-tert-butyl ether (MTBE) **CAS #** 1634-04-4 (Lot SHBD2980V) **Purity** 99%	2,001.0 µg/mL	+/- 11.7430 +/- 106.5008 +/- 106.6182	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	trans-1,2-Dichloroethene **CAS #** 156-60-5 (Lot 09431AEV) **Purity** 99%	2,005.0 µg/mL	+/- 15.4585 +/- 107.1836 +/- 107.3007	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
8	1,1-Dichloroethane **CAS #** 75-34-3 (Lot Q179-33) **Purity** 98%	2,003.0 µg/mL	+/- 15.4429 +/- 107.0752 +/- 107.1923	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

25	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBD2073V)	2,000.2	µg/mL	+/- +/- +/-	15.4213 106.9257 107.0425	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	dibromochloromethane **CAS #** 124-48-1 **Purity** 98%	(Lot MKBP0459V)	2,000.4	µg/mL	+/- +/- +/-	15.4234 106.9403 107.0572	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	1,2-Dibromoethane (EDB) **CAS #** 106-93-4 **Purity** 99%	(Lot BCBH3877V)	2,004.0	µg/mL	+/- +/- +/-	11.7606 106.6604 106.7780	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Chlorobenzene **CAS #** 108-90-7 **Purity** 99%	(Lot SHBD3200V)	2,002.3	µg/mL	+/- +/- +/-	15.4373 107.0366 107.1536	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Ethylbenzene **CAS #** 100-41-4 **Purity** 99%	(Lot SHBC9001V)	2,005.0	µg/mL	+/- +/- +/-	11.7665 106.7137 106.8313	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot H08Y016)	1,005.5	µg/mL	+/- +/- +/-	5.9008 53.5165 53.5755	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	p-Xylene **CAS #** 106-42-3 **Purity** 99%	(Lot SHBC6261V)	1,004.0	µg/mL	+/- +/- +/-	5.8920 53.4367 53.4956	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	o-Xylene **CAS #** 95-47-6 **Purity** 99%	(Lot SHBC4667V)	2,000.0	µg/mL	+/- +/- +/-	11.7371 106.4475 106.5649	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	Styrene **CAS #** 100-42-5 **Purity** 99%	(Lot 10174567)	2,002.5	µg/mL	+/- +/- +/-	11.7518 106.5806 106.6981	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Isopropylbenzene (cumene) **CAS #** 98-82-8 **Purity** 99%	(Lot 10169400)	2,006.5	µg/mL	+/- +/- +/-	11.7753 106.7935 106.9112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	bromoform **CAS #** 75-25-2 **Purity** 99%	(Lot SHBC3410V)	2,005.1	µg/mL	+/- +/- +/-	15.4593 107.1889 107.3061	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	1,1,2,2-Tetrachloroethane **CAS #** 79-34-5 **Purity** 99%	(Lot I29W026)	2,001.9	µg/mL	+/- +/- +/-	15.4342 107.0152 107.1322	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBC1891V)	2,003.2	µg/mL	+/- +/- +/-	15.4448 107.0887 107.2057	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBL3891V)	2,007.4	µg/mL	+/- +/- +/-	15.4766 107.3092 107.4265	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot 68996CMV)	2,002.6	µg/mL	+/- +/- +/-	15.4400 107.0553 107.1723	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
40	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8 **Purity** 99%	(Lot FBL01)	2,000.5	µg/mL	+/- +/- +/-	11.7401 106.4742 106.5916	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

J.T.Baker

Part of AVANTOR PERFORMANCE MATERIALS

Material No.:9077-02
Batch No.: 0000118655
Manufactured Date:2015/07/16
Expiration Date:2017/07/13

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.3000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	0.1
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

For Laboratory, Research or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India. 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

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Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9077-02
Batch No.: 0000127999
Manufactured Date: 2015/10/30
Expiration Date: 2017/10/27

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.7000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	<0.01
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

For Laboratory, Research or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 11485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 11485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James T Ethier
Jamie Ethier
Vice President Global Quality

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30625 **Lot No.:** A0114355

Description : OLC 3.2 VOA Deuterated Monitoring Compounds

OLC 3.2 VOA Ketone Deuterated Monitoring Compounds 500µg/mL, Deuterium Oxide, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Butanone-d5 **CAS #** 24313-50-6 (Lot M276P24) **Purity** 99%	501.0 µg/mL	+/- 2.9758 +/- 26.6691 +/- 26.6985	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Hexanone-d5 **CAS #** 4840-82-8 (Lot I500P2) **Purity** 99%	501.0 µg/mL	+/- 2.9758 +/- 26.6691 +/- 26.6985	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Deuterium Oxide
CAS # 7789-20-0
Purity 99%

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Certificate of Analysis

5 vials.

ACCREDITED ISO Guide 34 Accredited Reference Material Producer Certificate #3222.01

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ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3122.02

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30429 **Lot No.:** A0108463

Description : 1,2,3-Trichloropropane Standard

1,2,3-Trichloropropane 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2,3-Trichloropropane (Lot 1428739V) **CAS #** 96-18-4 **Purity** 99%	2,012.0 µg/mL	+/- 18.7105 µg/mL +/- 26.9814 µg/mL +/- 29.9140 µg/mL		Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30006 **Lot No.:** A0110042

Description : VOA Calibration Mix #1

VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acetone **CAS #** 67-64-1 **Purity** 99% (Lot 07196AK)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 **Purity** 99% (Lot BCBH7802V)	5,000.3 µg/mL	+/- 29.0722 +/- 266.1049 +/- 266.3984	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 **Purity** 99% (Lot SHBD1798V)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 **Purity** 99% (Lot MKBN7380V)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

12 14

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Batch No.: 0000127999
Manufactured Date: 2015/10/30
Expiration Date: 2017/10/27

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Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.7000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	<0.01
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

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846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
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3477 Corporate Parkway, Suite #200, Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

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5 vials

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 30067 **Lot No.:** A0102518

Description: 4-Bromofluorobenzene Standard

4-Bromofluorobenzene Standard 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size: 2 mL **Pkg Amt:** > 1 mL

Expiration Date: April 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	1-Bromo-4-fluorobenzene (BFB)	2,506.0 µg/mL	+/- 14.7066	µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 01127COV)		+/- 28.3294	µg/mL	Unstressed
	Purity 99%		+/- 32.5790	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 31081 **Lot No.:** A0109767

Description : 1,3,5-Trichlorobenzene Standard

1,3,5-Trichlorobenzene Standard 1,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,3,5-Trichlorobenzene	1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 108-70-3 (Lot 11319AS)		+/- 11.4324	µg/mL	Unstressed
	Purity 99%		+/- 13.1369	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 31280 **Lot No.:** A0111730

Description : Naphthalene Standard

Naphthalene Standard 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2021 **Storage:** 25°C nominal

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L. ; K=2)		
1	Naphthalene **CAS #** 91-20-3 **Purity** 99% (Lot MKBH4351V)	1,004.0 µg/mL	+/- 5.9635 +/- 44.6249 +/- 49.0256	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 30624 **Lot No.:** A0113615

Description : SOM 01.1 VOA DMC Non-Ketones Standard

OLC 3.2 VOA Non-Ketone Deuterated Monitoring Compounds
500µg/mL, Methanol-OD, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Vinyl Chloride-d3 **CAS #** 6745-35-3 (Lot PR-21820) **Purity** 98%	523.4 µg/mL	+/- 35.2305 µg/mL +/- 35.5916 µg/mL +/- 35.7499 µg/mL	Gravimetric Unstressed Stressed
2	Chloroethane-d5 **CAS #** 19199-91-8 (Lot F243P15) **Purity** 99%	509.0 µg/mL	+/- 19.1030 µg/mL +/- 19.7259 µg/mL +/- 19.9947 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethylene-d2 **CAS #** 22280-73-5 (Lot PR-21050) **Purity** 99%	501.0 µg/mL	+/- 2.9758 µg/mL +/- 5.6822 µg/mL +/- 6.5294 µg/mL	Gravimetric Unstressed Stressed
4	Chloroform-d **CAS #** 865-49-6 (Lot A021968500l) **Purity** 99%	503.0 µg/mL	+/- 2.9877 µg/mL +/- 5.7049 µg/mL +/- 6.5554 µg/mL	Gravimetric Unstressed Stressed
5	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot 14C-191) **Purity** 99%	504.0 µg/mL	+/- 2.9936 µg/mL +/- 5.7162 µg/mL +/- 6.5685 µg/mL	Gravimetric Unstressed Stressed
6	Benzene-d6 **CAS #** 1076-43-3 (Lot 14G-554) **Purity** 99%	500.0 µg/mL	+/- 2.9698 µg/mL +/- 5.6709 µg/mL +/- 6.5163 µg/mL	Gravimetric Unstressed Stressed
7	1,2-Dichloropropane-d6 **CAS #** 93952-08-0 (Lot Z322P8) **Purity** 99%	502.0 µg/mL	+/- 2.9817 µg/mL +/- 5.6935 µg/mL +/- 6.5424 µg/mL	Gravimetric Unstressed Stressed

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30042 **Lot No.:** A0114018

Description : 502.2 Calibration Mix #1

502.2 Calibration Mix #1 2,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot Q167-08) **Purity** 99%	2,013.4 µg/mL	+/- 14.1778 +/- 24.0720 -/- 27.3231	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBF7067V) **Purity** 99%	2,014.0 µg/mL	+/- 15.9346 +/- 25.1511 +/- 28.2800	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 25LPST) **Purity** 99%	2,018.2 µg/mL	+/- 15.9614 +/- 25.1997 +/- 28.3356	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,018.8 µg/mL	+/- 15.1008 +/- 24.6679 +/- 27.8655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	2,006.0 µg/mL	-/- 12.7193 +/- 23.1828 +/- 26.5198	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Trichlorofluoromethane (CFC-11) **CAS #** 75-69-4 (Lot SHBF6387V) **Purity** 99%	2,014.0 µg/mL	+/- 15.3697 +/- 24.7970 +/- 27.9656	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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Catalog No. : 30091 **Lot No.:** A099377

Description : L/C VOA Internal Standard Mix

L/C Internal Std 2500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Difluorobenzene **CAS #** 540-36-3 (Lot 13105AO) **Purity** 99%	2,500.5 µg/mL	+/- 14.6743 µg/mL +/- 26.5411 µg/mL +/- 30.8641 µg/mL	Gravimetric Unstressed Stressed
2	Chlorobenzene-d5 **CAS #** 3114-55-4 (Lot PR-22736) **Purity** 99%	2,499.0 µg/mL	+/- 14.6655 µg/mL +/- 26.5252 µg/mL +/- 30.8456 µg/mL	Gravimetric Unstressed Stressed
3	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-18488) **Purity** 99%	2,504.5 µg/mL	+/- 14.6978 µg/mL +/- 26.5836 µg/mL +/- 30.9135 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050416

Review By	mohammad	Review On	5/5/2016 9:02:17 AM		
SubDirectory	VI050416	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52662
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52669,VP52670
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB32	VI049219.D	4 May 2016 8:57	FY/SY	Ok
2	VSTD0.533	VI049220.D	4 May 2016 11:27	FY/SY	Ok
3	VSTD00134	VI049221.D	4 May 2016 11:58	FY/SY	Ok
4	VSTD00535	VI049222.D	4 May 2016 12:30	FY/SY	Ok
5	VSTD01036	VI049223.D	4 May 2016 13:02	FY/SY	Ok
6	VSTD02037	VI049224.D	4 May 2016 13:33	FY/SY	Ok
7	VSTDCCC005	VI049225.D	4 May 2016 14:05	FY/SY	Ok
8	VI0504WBL01	VI049226.D	4 May 2016 15:13	FY/SY	Ok
9	H2799-02DL2	VI049227.D	4 May 2016 15:45	FY/SY	Ok,M
10	H2743-14	VI049228.D	4 May 2016 16:17	FY/SY	Ok
11	H2743-15	VI049229.D	4 May 2016 16:49	FY/SY	Ok,M
12	H2743-09DL	VI049230.D	4 May 2016 17:20	FY/SY	Ok
13	H2743-10DL	VI049231.D	4 May 2016 17:52	FY/SY	Ok,M
14	H2743-13DL	VI049232.D	4 May 2016 18:23	FY/SY	Ok
15	H2834-04	VI049233.D	4 May 2016 18:55	FY/SY	Ok,M
16	H2834-01	VI049234.D	4 May 2016 19:27	FY/SY	Dilution
17	H2834-02	VI049235.D	4 May 2016 19:58	FY/SY	Not Ok
18	H2834-03	VI049236.D	4 May 2016 20:30	FY/SY	Not Ok
19	H2834-05	VI049237.D	4 May 2016 21:02	FY/SY	Dilution
20	H2834-06	VI049238.D	4 May 2016 21:33	FY/SY	Dilution
21	H2834-07	VI049239.D	4 May 2016 22:05	FY/SY	Dilution
22	H2834-08	VI049240.D	4 May 2016 22:37	FY/SY	ReRun
23	H2834-09	VI049241.D	4 May 2016 23:08	FY/SY	Ok
24	H2834-10	VI049242.D	4 May 2016 23:40	FY/SY	Ok,M
25	VSTDCCC005EC	VI049243.D	5 May 2016 00:11	FY/SY	Ok,M

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI051216

Review By	feifei	Review On	5/13/2016 12:28:48 PM		
SubDirectory	VI051216	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52951
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52954,VP52955
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB38	VI049348.D	12 May 2016 9:58	FY/SY	Ok
2	VSTDCCC005	VI049349.D	12 May 2016 12:03	FY/SY	Ok,M
3	VI0512WBL01	VI049350.D	12 May 2016 14:23	FY/SY	Ok,M
4	H2843-06	VI049351.D	12 May 2016 15:14	FY/SY	Ok
5	H2874-15	VI049352.D	12 May 2016 15:46	FY/SY	Ok
6	H2943-11	VI049353.D	12 May 2016 16:18	FY/SY	Ok
7	H3056-01	VI049354.D	12 May 2016 16:51	FY/SY	Ok
8	H3056-02	VI049355.D	12 May 2016 17:22	FY/SY	Dilution
9	H3056-03	VI049356.D	12 May 2016 17:54	FY/SY	Ok
10	H3056-04	VI049357.D	12 May 2016 18:27	FY/SY	Ok,M
11	H3056-05	VI049358.D	12 May 2016 18:58	FY/SY	Ok
12	H3056-06	VI049359.D	12 May 2016 19:31	FY/SY	Ok
13	VSTDCCC005EC	VI049360.D	12 May 2016 20:37	FY/SY	Ok,M

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR051116

Review By	sam	Review On	5/12/2016 12:57:39 PM		
SubDirectory	VR051116	HP Acquire Method	MOONMOON	HP Processing Method	somrtr051116w.m

STD. NAME	STD REF.#
Tune/Reschk	VP52905
Initial Calibration Stds	VP52910,VP52911,VP52912,VP52913,VP52914
CCC	N/A
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB51	VR019126.D	11 May 2016 10:18	MD\SY	Ok
2	VSTD0.551	VR019127.D	11 May 2016 10:57	MD\SY	Ok,M
3	VSTD00152	VR019128.D	11 May 2016 11:29	MD\SY	Ok,M
4	VSTD00553	VR019129.D	11 May 2016 12:02	MD\SY	Ok,M
5	VSTD01054	VR019130.D	11 May 2016 12:34	MD\SY	Ok,M
6	VSTD02055	VR019131.D	11 May 2016 13:07	MD\SY	Ok,M

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR051216

Review By	feifei	Review On	5/13/2016 12:29:14 PM		
SubDirectory	VR051216	HP Acquire Method	MOONMOON	HP Processing Method	SOMRTR051116W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52950
Initial Calibration Stds	VP52910,VP52911,VP52912,VP52913,VP52914
CCC	VP52952,VP52953
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB52	VR019132.D	12 May 2016 9:59	MD\SY	Ok
2	VSTDCCC005	VR019133.D	12 May 2016 10:41	MD\SY	Ok,M
3	VR0512WBL01	VR019134.D	12 May 2016 13:25	MD\SY	Ok
4	H3055-01	VR019135.D	12 May 2016 14:22	MD\SY	Not Ok
5	H3055-02	VR019136.D	12 May 2016 14:54	MD\SY	Dilution
6	H3055-03	VR019137.D	12 May 2016 15:27	MD\SY	Dilution
7	H3055-04	VR019138.D	12 May 2016 15:59	MD\SY	Dilution
8	VIBLK52	VR019139.D	12 May 2016 16:32	MD\SY	Ok
9	H3056-10	VR019140.D	12 May 2016 17:04	MD\SY	Ok
10	H3056-11	VR019141.D	12 May 2016 17:37	MD\SY	Dilution
11	H3056-12	VR019142.D	12 May 2016 18:10	MD\SY	ReRun
12	H3056-07	VR019143.D	12 May 2016 18:42	MD\SY	Ok
13	H3056-08MS	VR019144.D	12 May 2016 19:14	MD\SY	Ok
14	H3056-09MSD	VR019145.D	12 May 2016 19:47	MD\SY	Ok
15	VSTDCCC005EC	VR019146.D	12 May 2016 20:19	MD\SY	Ok,M

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR051316

Review By	feifei	Review On	5/16/2016 10:43:52 AM		
SubDirectory	VR051316	HP Acquire Method	MOONMOON	HP Processing Method	SOMRTR051116W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52982
Initial Calibration Stds	VP52910,VP52911,VP52912,VP52913,VP52914
CCC	VP52983,VP52984
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB53	VR019147.D	13 May 2016 10:29	MD\SY	Ok
2	VSTDCCC005	VR019148.D	13 May 2016 11:17	MD\SY	Ok,M
3	VR0513WBL01	VR019149.D	13 May 2016 11:59	MD\SY	Ok,M
4	H3056-12	VR019150.D	13 May 2016 12:43	MD\SY	Ok
5	H3058-05	VR019151.D	13 May 2016 13:16	MD\SY	Ok
6	H3055-01	VR019152.D	13 May 2016 13:54	MD\SY	Dilution
7	H3056-02DL	VR019153.D	13 May 2016 14:27	MD\SY	Ok
8	H3056-11DL	VR019154.D	13 May 2016 14:59	MD\SY	Ok
9	H3055-02DL	VR019155.D	13 May 2016 15:32	MD\SY	Ok
10	H3055-04DL	VR019156.D	13 May 2016 16:04	MD\SY	Ok
11	H3055-03DL	VR019157.D	13 May 2016 16:37	MD\SY	Not Ok
12	H3055-01DL	VR019158.D	13 May 2016 17:10	MD\SY	Ok
13	H3058-13	VR019159.D	13 May 2016 17:42	MD\SY	Ok
14	VSTDCCC005EC	VR019160.D	13 May 2016 18:14	MD\SY	Ok,M

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR051616

Review By	MMDadoda	Review On	5/17/2016 10:55:11 AM		
SubDirectory	VR051616	HP Acquire Method	MOONMOON	HP Processing Method	SOMRTR051116W.M

STD. NAME	STD REF.#
Tune/Reschk	VP53035
Initial Calibration Stds	VP52910,VP52911,VP52912,VP52913,VP52914
CCC	VP53036,VP53037
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB54	VR019161.D	16 May 2016 10:00	MD\SY	Ok
2	VSTDCCC005	VR019162.D	16 May 2016 10:39	MD\SY	Ok
3	VR0516WBL01	VR019163.D	16 May 2016 11:22	MD\SY	Ok
4	H3058-22	VR019164.D	16 May 2016 12:04	MD\SY	Ok
5	H3055-05	VR019165.D	16 May 2016 12:59	MD\SY	Not Ok
6	H3055-03DL	VR019166.D	16 May 2016 13:40	MD\SY	Ok
7	H3058-07	VR019167.D	16 May 2016 14:13	MD\SY	Ok
8	H3056-13	VR019168.D	16 May 2016 14:45	MD\SY	Ok
9	H3055-05	VR019169.D	16 May 2016 15:18	MD\SY	Ok
10	VSTDCCC005EC	VR019170.D	16 May 2016 16:02	MD\SY	Ok,M

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050416

Review By	mohammad	Review On	5/5/2016 9:02:17 AM		
SubDirectory	VI050416	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52662
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52669,VP52670
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB32	BFB32	VI049219.D		Ok
2	VSTD0.533	VSTD0.533	VI049220.D		Ok
3	VSTD00134	VSTD00134	VI049221.D		Ok
4	VSTD00535	VSTD00535	VI049222.D		Ok
5	VSTD01036	VSTD01036	VI049223.D	(V#6390)	Ok
6	VSTD02037	VSTD02037	VI049224.D		Ok
7	VSTDCCC005	VSTD00538	VI049225.D		Ok
8	VI0504WBL01	VBLK27	VI049226.D		Ok
9	H2799-02DL2	C0H63DL2	VI049227.D	pH#1.0 vial C	Ok,M
10	H2743-14	H4015	VI049228.D	pH#1.0 vial B	Ok
11	H2743-15	H4017	VI049229.D	pH#1.0 vial B	Ok,M
12	H2743-09DL	H4009DL	VI049230.D	pH#1.0 vial B	Ok
13	H2743-10DL	H4011DL	VI049231.D	pH#1.0 vial B	Ok,M
14	H2743-13DL	H4007DL	VI049232.D	pH#1.0 vial B	Ok
15	H2834-04	H4006	VI049233.D	pH#1.0 vial A	Ok,M
16	H2834-01	H4002	VI049234.D	pH#1.0A need 5X	Dilution
17	H2834-02	H4002	VI049235.D	pH#1.0A Need 5x,MS not spike	Not Ok
18	H2834-03	H4002	VI049236.D	pH#1.0A Need 5x,MSD not spike	Not Ok
19	H2834-05	H4094	VI049237.D	pH#1.0A Need 5x	Dilution
20	H2834-06	H4121	VI049238.D	pH#1.0A Need 2x	Dilution
21	H2834-07	H4123	VI049239.D	pH#1.0A Need 5x	Dilution
22	H2834-08	H4124	VI049240.D	pH#1.0A E flag in previous sample	ReRun

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050416

Review By	mohammad	Review On	5/5/2016 9:02:17 AM		
SubDirectory	VI050416	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52662
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52669,VP52670
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

23	H2834-09	H4132	VI049241.D	pH#1.0 vial A	Ok
24	H2834-10	H4133	VI049242.D	pH#1.0 vial A	Ok,M
25	VSTDCCC005EC	VSTD00539	VI049243.D		Ok,M

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI051216

Review By	feifei	Review On	5/13/2016 12:28:48 PM		
SubDirectory	VI051216	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52951
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52954,VP52955
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB38	BFB38	VI049348.D		Ok
2	VSTDCCC005	VSTD00527	VI049349.D		Ok,M
3	VI0512WBL01	VBLK35	VI049350.D	(V#6390)	Ok,M
4	H2843-06	VHBLK01	VI049351.D	pH#1.6A SB	Ok
5	H2874-15	VHBLK01	VI049352.D	pH#1.6B SB	Ok
6	H2943-11	VHBLK01	VI049353.D	pH#1.6A SB	Ok
7	H3056-01	H4023	VI049354.D	pH#1.0 vial A	Ok
8	H3056-02	H4024	VI049355.D	pH#1.0A Need 5x	Dilution
9	H3056-03	H4092	VI049356.D	pH#1.0 vial A	Ok
10	H3056-04	H4093	VI049357.D	pH#1.0 vial A	Ok,M
11	H3056-05	H4095	VI049358.D	pH#1.0 vial A	Ok
12	H3056-06	H4100	VI049359.D	pH#1.0 vial A	Ok
13	VSTDCCC005EC	VSTD00528	VI049360.D		Ok,M

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR051116

Review By	sam	Review On	5/12/2016 12:57:39 PM		
SubDirectory	VR051116	HP Acquire Method	MOONMOON	HP Processing Method	somrtr051116w.m

STD. NAME	STD REF.#
Tune/Reschk	VP52905
Initial Calibration Stds	VP52910,VP52911,VP52912,VP52913,VP52914
CCC	N/A
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB51	BFB51	VR019126.D		Ok
2	VSTD0.551	VSTD0.551	VR019127.D		Ok,M
3	VSTD00152	VSTD00152	VR019128.D		Ok,M
4	VSTD00553	VSTD00553	VR019129.D		Ok,M
5	VSTD01054	VSTD01054	VR019130.D		Ok,M
6	VSTD02055	VSTD02055	VR019131.D		Ok,M

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR051216

Review By	feifei	Review On	5/13/2016 12:29:14 PM		
SubDirectory	VR051216	HP Acquire Method	MOONMOON	HP Processing Method	SOMRTR051116W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52950
Initial Calibration Stds	VP52910,VP52911,VP52912,VP52913,VP52914
CCC	VP52952,VP52953
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB52	BFB52	VR019132.D		Ok
2	VSTDCCC005	VSTD00556	VR019133.D		Ok,M
3	VR0512WBL01	VBLK51	VR019134.D	(V#6390)	Ok
4	H3055-01	C0AG9	VR019135.D	pH#1.0A Need 2x,concertration confirmation	Not Ok
5	H3055-02	C0AH0	VR019136.D	pH#1.0A Need 5x	Dilution
6	H3055-03	C0AH1	VR019137.D	pH#1.0A Need 20x	Dilution
7	H3055-04	C0AH2	VR019138.D	pH#1.0A Need 5x	Dilution
8	VIBLK52	VIBLK52	VR019139.D		Ok
9	H3056-10	H4114	VR019140.D	pH#1.0 vial A	Ok
10	H3056-11	H4119	VR019141.D	pH#1.0A Need 5x	Dilution
11	H3056-12	H4128	VR019142.D	pH#1.0A Surrogate Fail ,E flag in previou sample	ReRun
12	H3056-07	H4107	VR019143.D	pH#1.0 vial A	Ok
13	H3056-08MS	H4107MS	VR019144.D	pH#1.0 vial A	Ok
14	H3056-09MSD	H4107MSD	VR019145.D	pH#1.0 vial A	Ok
15	VSTDCCC005EC	VSTD00557	VR019146.D		Ok,M

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR051316

Review By	feifei	Review On	5/16/2016 10:43:52 AM		
SubDirectory	VR051316	HP Acquire Method	MOONMOON	HP Processing Method	SOMRTR051116W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52982
Initial Calibration Stds	VP52910,VP52911,VP52912,VP52913,VP52914
CCC	VP52983,VP52984
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB53	BFB53	VR019147.D		Ok
2	VSTDCCC005	VSTD00558	VR019148.D		Ok,M
3	VR0513WBL01	VBLK52	VR019149.D	(V#6390)	Ok,M
4	H3056-12	H4128	VR019150.D	pH#1.0 vial B	Ok
5	H3058-05	BD3K3	VR019151.D	pH#1.0 vial A	Ok
6	H3055-01	C0AG9	VR019152.D	pH#1.0B need 4x	Dilution
7	H3056-02DL	H4024DL	VR019153.D	pH#1.0 vial B	Ok
8	H3056-11DL	H4119DL	VR019154.D	pH#1.0 vial B	Ok
9	H3055-02DL	C0AH0DL	VR019155.D	pH#1.0 vial B	Ok
10	H3055-04DL	C0AH2DL	VR019156.D	pH#1.0 vial B	Ok
11	H3055-03DL	C0AH1DL	VR019157.D	pH#1.0 vial A, comfirm concertation	Not Ok
12	H3055-01DL	C0AG9DL	VR019158.D	pH#1.0 vial A	Ok
13	H3058-13	BD3K4	VR019159.D	pH#1.0 vial A	Ok
14	VSTDCCC005EC	VSTD00559	VR019160.D		Ok,M

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Instrument ID: MSVOA_R

Daily Analysis Runlog For Sequence/QCBatch ID # VR051616

Review By	MMDadoda	Review On	5/17/2016 10:55:11 AM		
SubDirectory	VR051616	HP Acquire Method	MOONMOON	HP Processing Method	SOMRTR051116W.M

STD. NAME	STD REF.#
Tune/Reschk	VP53035
Initial Calibration Stds	VP52910,VP52911,VP52912,VP52913,VP52914
CCC	VP53036,VP53037
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB54	BFB54	VR019161.D		Ok
2	VSTDCCC005	VSTD00560	VR019162.D	(V#6390)	Ok
3	VR0516WBL01	VBLK53	VR019163.D		Ok
4	H3058-22	BD3K5	VR019164.D	pH#1.6 vial A	Ok
5	H3055-05	VHBLK01	VR019165.D	pH#1.6A SB,Surrogate Fail	Not Ok
6	H3055-03DL	C0AH1DL	VR019166.D	pH#1.0 vial B	Ok
7	H3058-07	VHBLK02	VR019167.D	pH#1.6A SB	Ok
8	H3056-13	VHBLK01	VR019168.D	pH#1.6A SB	Ok
9	H3055-05	VHBLK01	VR019169.D	pH#1.6B SB	Ok
10	VSTDCCC005EC	VSTD00561	VR019170.D		Ok,M

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Login Summary Report

Order ID :	H3056	Order Date :	5/12/2016 9:15:00 AM	Project Mgr :	Mohammad
Client :	USEPA CLP Organics	Project :	46114	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	5/12/2016 9:15:00 AM	EDD Type :	EPA CLP
Date Sign Off :	5/12/2016 4:19:02 PM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
H3056-01	H4023	Water	05/09/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	06/02/2016	06/02/2016
H3056-02	H4024	Water	05/09/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	06/02/2016	06/02/2016
H3056-03	H4092	Water	05/11/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	06/02/2016	06/02/2016
H3056-04	H4093	Water	05/11/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	06/02/2016	06/02/2016
H3056-05	H4095	Water	05/11/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	06/02/2016	06/02/2016
H3056-06	H4100	Water	05/11/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	06/02/2016	06/02/2016
H3056-07	H4107	Water	05/11/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	06/02/2016	06/02/2016
H3056-08	H4107MS	Water	05/11/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	06/02/2016	06/02/2016
H3056-09	H4107MSD	Water	05/11/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	06/02/2016	06/02/2016
H3056-10	H4114	Water	05/11/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	06/02/2016	06/02/2016
H3056-11	H4119	Water	05/11/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	06/02/2016	06/02/2016
H3056-12	H4128	Water	05/11/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	06/02/2016	06/02/2016
H3056-13	VHBLK01	Water	05/11/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	06/02/2016	06/02/2016

mildred V. Reyes

From: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Sent: Monday, May 09, 2016 11:20 AM
To: epa@chemtech.net
Cc: "Goodrich, Donald"; Moss, Pamela
Subject: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC | FINAL
Attachments: 46114-0507.pdf

Sohil,

Issue: The water samples for this Case are scheduled for 86 TVOA and 17 SVOA analysis; however, the COCs list VOA=TCL VOCs by CLP.

Resolution: Per Region 8, the samples in question shall be analyzed as scheduled for TVOA. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples. This resolution may be applied to all COCs received for this Case with this issue.

Please let me know if you have any questions. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2, 7, and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
www.csra.com

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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Monday, May 09, 2016 11:15 AM
To: Vanaman, Alexandra
Cc: Moss, Pamela
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Correct, thanks.
-dgg

Don Goodrich

US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Monday, May 09, 2016 9:14 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Cc: Moss, Pamela <pmoss@eaest.com>
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Hi Don,

Should this resolution be applied to all COCs received for this Case with this issue?

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2, 7, and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Monday, May 09, 2016 11:12 AM
To: Vanaman, Alexandra
Cc: Moss, Pamela
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Ali, the samples in question shall be analyzed as scheduled for TVOA.

Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Monday, May 09, 2016 7:52 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>

Cc: Moss, Pamela <pmoss@eaest.com>
Subject: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Good morning,

CHM is reporting the following issue regarding Case 46114. Please advise.

Issue: The water samples for this Case are scheduled for 86 TVOA and 17 SVOA analysis; however, the COCs list VOA=TCL VOCs by CLP.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
www.csra.com

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From: Sohil Jodhani [mailto:Sohil@chemtech.net]
Sent: Saturday, May 07, 2016 11:29 AM
To: Vanaman, Alexandra
Cc: DASSsupport; Mohammad@chemtech.net
Subject: Region 08 | Case 46114 | Lab CHM | SDG multiple | Issue Discrepancies with tags, jars, and/or COC

Hi Alexandra,

Samples received today with 05/07 shipment and lab would like to confirm below.

Issue: As per ASR, water samples are scheduled for TVOA analysis but analysis key written on the COC is VOA=TCL VOCs by CLP so lab would like to confirm that Lab is following the ASR and doing analysis for TVOA for water samples, Please advise.

This issue is addressing for all previous shipments also.

Thanks & Regards,

Sohil Jodhani
QC-Analyst
Direct Line: (908)728-3148
General Number: (908)789-8900
Fax: (908)789-8922

CHEMTECH
284 Sheffield Street,
Mountainside, New Jersey 07092
Phone: (908) 789 8900
Fax: (908) 789 8922

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DoD ELAP

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SDG COVER PAGE

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Cas No.: 46114 MA No. : SDG No.: H4104

SOW No. : SOM02.3

EPA Sample No.	Lab Sample ID	Analysis Method: Trace VOA	Low Med VOA	SVOA	SVOA SIM	PEST	ARO
H4104	H2943-01	X					
H4105	H2943-02	X		X			
H4106	H2943-03	X		X			
H4109	H2943-04	X					
H4125	H2943-05	X					
H4134	H2943-06	X					
H4134MS	H2943-07	X					
H4134MSD	H2943-08	X					
H4137	H2943-09	X		X			
H4138	H2943-10	X					
VHBLK01	H2943-11	X					
H4021	H2943-12	X					
H4022	H2943-13	X					
H4108	H2943-14	X					
H4110	H2943-15	X					
H4115	H2943-16	X					
H4122	H2943-17	X					
H4127	H2943-18	X					
H4130	H2943-19	X					
H4131	H2943-20	X					
H4135	H2943-21	X					
H4136	H2943-22	X					
H4139	H2943-23	X					

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative.Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee,as verified by the following signature.

Signature: [signature] Name: Michael Reyes

Date: 08/26/16 Title: Department Contract Officer

SDG # H4104

USEPA CLP COC (LAB COPY)
DateShipped: 5/5/2016
CarrierName: FedEx
AirbillNo: 776268141330

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050516-130827-0021
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-014	H4104	Surface Water/ Ned Lundvall	Grab	VOC(21)	1171 (HCL), 1172 (HCL), 1173 (HCL) (3)	A-SW-14	05/04/2016 09:00	2
A-SW-015	H4105	Surface Water/ Ned Lundvall	Grab	VOC(21)	1174 (HCL), 1175 (HCL), 1176 (HCL) (3)	A-SW-15	05/04/2016 11:30	2
A-SW-016	H4106	Surface Water/ Ned Lundvall	Grab	VOC(21)	1177 (HCL), 1178 (HCL), 1179 (HCL) (3)	A-SW-16	05/04/2016 13:20	2
A-SW-019	H4109	Surface Water/ Ned Lundvall	Grab	VOC(21)	1186 (HCL), 1187 (HCL), 1188 (HCL) (3)	A-SW-19	05/04/2016 08:20	2
A-SW-035	H4125	Surface Water/ Ned Lundvall	Grab	VOC(21)	1234 (HCL), 1235 (HCL), 1236 (HCL) (3)	A-SW-35	05/04/2016 09:30	2
A-SW-044	H4134	Surface Water/ Ned Lundvall	Grab	VOC(21)	1261 (HCL), 1262 (HCL), 1263 (HCL) (3)	A-SW-44	05/04/2016 14:30	2
A-SW-044-MS	H4134MS	Surface Water/ Ned Lundvall	Grab	VOC(21)	1534 (HCL), 1535 (HCL), 1536 (HCL) (3)	A-SW-44	05/04/2016 14:30	2
A-SW-044-MSD	H4134MSD	Surface Water/ Ned Lundvall	Grab	VOC(21)	1538 (HCL), 1539 (HCL), 1540 (HCL) (3)	A-SW-44	05/04/2016 14:30	2
A-SW-047	H4137	Surface Water/ Ned Lundvall	Grab	VOC(21)	1270 (HCL), 1271 (HCL), 1272 (HCL) (3)	A-SW-47	05/04/2016 08:40	2
A-SW-048	H4138	Surface Water/ Ned Lundvall	Grab	VOC(21)	1273 (HCL), 1274 (HCL), 1275 (HCL) (3)	A-SW-48	05/04/2016 09:50	2

Sample(s) to be used for Lab QC: A-SW-044-MS Tag 1534, A-SW-044-MS Tag 1535, A-SW-044-MS Tag 1536, A-SW-044-MSD Tag 1538, A-SW-044-MSD Tag 1539, A-SW-044-MSD Tag 1540, A-SW-048-MS Tag 1512, A-SW-048-MS Tag 1513, A-SW-048-MS Tag 1514

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/5/16 1340	FedEx		
	FEDEX	12:35 5-6-16		12:35 5-6-16	3.7 C

2

SDG # H4104

USEPA CLP COC (LAB COPY)
DateShipped: 5/5/2016
CarrierName: FedEx
AirbillNo: 776268141330

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050516-130827-0021
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-048-MS	H4138MS	Surface Water/ Ned Lundvall	Grab	VOC(21)	1512 (HCL), 1513 (HCL), 1514 (HCL) (3)	A-SW-48	05/04/2016 09:50	2
A-SW-048-MSD	H4138MSD	Surface Water/ Ned Lundvall	Grab	VOC(21)	1516 (HCL), 1517 (HCL), 1518 (HCL) (3)	A-SW-48	05/04/2016 09:50	2
A-SW-007-D	MH4005	Surface Water/ Ned Lundvall	Grab	TMet(21)	1497 (HNO3 pH<2) (1)	A-SW-07	05/04/2016 11:00	2
A-SW-007	MH4097	Surface Water/ Ned Lundvall	Grab	TMet(21)	1488 (HNO3 pH<2) (1)	A-SW-07	05/04/2016 11:00	2
A-SW-016	MH4106	Surface Water/ Ned Lundvall	Grab	TMet(21)	1521 (HNO3 pH<2) (1)	A-SW-16	05/04/2016 13:20	2
A-SW-015	MH4107	Surface Water/ Ned Lundvall	Grab	TMet(21)	1505 (HNO3 pH<2) (1)	A-SW-15	05/04/2016 11:30	2
A-SW-047	MH4137	Surface Water/ Ned Lundvall	Grab	TMet(21)	1480 (HNO3 pH<2) (1)	A-SW-47	05/04/2016 08:40	2

Sample(s) to be used for Lab QC: A-SW-048-MS Tag 1514, A-SW-048-MSD Tag 1516, A-SW-048-MSD Tag 1518

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP, TMet=Total Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	5/5/16 1330	Fedex		
	FedEx	12:35 5-6-16	[signature]	12:35 5-6-16	3.7° C

W

USEPA CLP COC (LAB COPY)
DateShipped: 5/5/2016
CarrierName: FedEx
AirbillNo: 776268140300

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050516-130156-0020
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-007-D	H4013	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1495 (6 C), 1496 (6 C) (2)	A-SW-07	05/04/2016 11:00	1
A-SW-007	H4097	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1486 (6 C), 1487 (6 C) (2)	A-SW-07	05/04/2016 11:00	1
A-SW-015	H4105	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1500 (6 C), 1501 (6 C) (2)	A-SW-15	05/04/2016 11:30	
A-SW-016	H4106	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1519 (6 C), 1520 (6 C) (2)	A-SW-16	05/04/2016 13:20	
A-SW-047	H4137	Surface Water/ Ned Lundvall	Grab	SVOC(21)	1478 (6 C), 1479 (6 C) (2)	A-SW-47	05/04/2016 08:40	

Copy Original Documents are included in CSF — Signature — Date

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: SVOC=TCL SVOCs by CLP

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Edward Kendall	5/5/16 1340	Fedex		
	FEDEX	12:35 5-6-16		12:35 5-6-16	4°C

SDG # H4304

USEPA CLP COC (LAB COPY)
DateShipped: 5/6/2016
CarrierName: FedEx
AirbillNo: 776278490256

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050516-183407-0022
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-018-D	H4021	Surface Water/ Ned Lundvall	Grab	VOC(21)	1550 (HCL), 1551 (HCL), 1552 (HCL) (3)	A-SW-18	05/05/2016 09:10	
A-TB-010	H4022	Water/ Ned Lundvall		VOC(21)	1559 (HCL), 1560 (HCL), 1561 (HCL) (3)	A-TB-010	05/06/2016 07:45	
A-SW-018	H4108	Surface Water/ Ned Lundvall	Grab	VOC(21)	1183 (HCL), 1184 (HCL), 1185 (HCL) (3)	A-SW-18	05/05/2016 09:10	
A-SW-020	H4110	Surface Water/ Ned Lundvall	Grab	VOC(21)	1189 (HCL), 1190 (HCL), 1191 (HCL) (3)	A-SW-20	05/05/2016 10:30	
A-SW-025	H4115	Surface Water/ Ned Lundvall	Grab	VOC(21)	1204 (HCL), 1205 (HCL), 1206 (HCL) (3)	A-SW-25	05/05/2016 18:00	
A-SW-032	H4122	Surface Water/ Ned Lundvall	Grab	VOC(21)	1225 (HCL), 1226 (HCL), 1227 (HCL) (3)	A-SW-32	05/05/2016 11:20	
A-SW-037	H4127	Surface Water/ Ned Lundvall	Grab	VOC(21)	1240 (HCL), 1241 (HCL), 1242 (HCL) (3)	A-SW-37	05/05/2016 18:15	
A-SW-040	H4130	Surface Water/ Ned Lundvall	Grab	VOC(21)	1249 (HCL), 1250 (HCL), 1251 (HCL) (3)	A-SW-40	05/05/2016 17:45	
A-SW-041	H4131	Surface Water/ Ned Lundvall	Grab	VOC(21)	1252 (HCL), 1253 (HCL), 1254 (HCL) (3)	A-SW-41	05/05/2016 11:00	
A-SW-045	H4135	Surface Water/ Ned Lundvall	Grab	VOC(21)	1264 (HCL), 1265 (HCL), 1266 (HCL) (3)	A-SW-45	05/05/2016 10:00	

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/6/16		5/7/16 10:15	on ice
					X10 Return Cooler

Jay Sic

5 Dec # H4136-9

USEPA CLP COC (LAB COPY)
DateShipped: 5/6/2016
CarrierName: FedEx
AirbillNo: 776278490256

CHAIN OF CUSTODY RECORD

Case #: 46114

No: 8-050516-183407-0022
Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A-SW-046	H4136	Surface Water/ Ned Lundvall	Grab	VOC(21)	1267 (HCL), 1268 (HCL), 1269 (HCL) (3)	A-SW-46	05/05/2016 17:30	
A-SW-049	H4139	Surface Water/ Ned Lundvall	Grab	VOC(21)	1276 (HCL), 1277 (HCL), 1278 (HCL) (3)	A-SW-49	05/05/2016 10:40	

Special Instructions:

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: VOC=TCL VOCs by CLP

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		5/6/16		5/7/16 10:45	cnice

Temp 5°C

Sample Delivery Group (SDG) Cover Sheet

SDG Number	H4104	Case Number	46114	Contract Number	EP-W-14-030
Lab Code	CHM	SDG Turnaround	21 DAYS	Delivery CLIN(s)	1

First Sample Received in SDG	H4104	Last Sample Received in SDG	H4139
First Sample Receipt Date	5/6/2016 12:35:00 PM	Last Sample Receipt Date	5/7/2016 10:15:00 AM

USEPA Sample Numbers in SDG (Listed in Numerical Order)

CLP Sample ID	Sample Type	Requested Analytical CLIN(s)/SubCLIN(s)	Solicitation Number	MA Number(s)
H4104	Field Sample	0011AB	N/A	N/A
H4105	Field Sample	0014AB,0011AB	N/A	N/A
H4106	Field Sample	0014AB,0011AB	N/A	N/A
H4109	Field Sample	0011AB	N/A	N/A
H4125	Field Sample	0011AB	N/A	N/A
H4134	Field Sample	0011AB	N/A	N/A
H4134MS	Field Sample	0011AB	N/A	N/A
H4134MSD	Field Sample	0011AB	N/A	N/A
H4137	Field Sample	0014AB,0011AB	N/A	N/A
H4138	Field Sample	0011AB	N/A	N/A
H4021	Field Sample	0011AB	N/A	N/A
H4022	Field Sample	0011AB	N/A	N/A
H4108	Field Sample	0011AB	N/A	N/A
H4110	Field Sample	0011AB	N/A	N/A
H4115	Field Sample	0011AB	N/A	N/A
H4122	Field Sample	0011AB	N/A	N/A
H4127	Field Sample	0011AB	N/A	N/A
H4130	Field Sample	0011AB	N/A	N/A
H4131	Field Sample	0011AB	N/A	N/A
H4135	Field Sample	0011AB	N/A	N/A
H4136	Field Sample	0011AB	N/A	N/A
H4139	Field Sample	0011AB	N/A	N/A

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature _____ Date _____

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 1 of 5
Received By (Print Name)		Log-in Date **5/6/2016**
Received By (Signature)		
Case Number 46114	SDG No. H4104	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776268141330
6. Sample Tags Sample Tag #	N/A
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	3.7 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/06/2016
12.Time Received	12:35

	EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H4104	1171,72,73	H2943-01	
2	H4105	1174,75,76,1500,01	H2943-02	
3	H4106	1177,78,79,1519,20	H2943-03	
4	H4109	1186,87,88	H2943-04	
5	H4125	1234,35,36	H2943-05	
6	H4134	1261,62,63	H2943-06	
7	H4134MS	1534,35,36	H2943-07	
8	H4134MSD	1538,39,40	H2943-08	
9	H4137	1270,71,72,1478,79	H2943-09	
10	H4138	1273,74,75	H2943-10	
11				
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25				
26				

* Contact SMO and attach record of resolution

Reviewed By	Logbook No. -
Date	Logbook Page No.

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page 1 of 1
Received By (Print Name)		Log-in Date **5/6/2016**
Received By (Signature)		
Case Number 46114	SDG No. H4104	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776268140300
6. Sample Tags Sample Tag #	N/A
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	4.0 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/06/2016
12.Time Received	12:35

	EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H4105	1174,75,76,1500,01	H2943-02	
2	H4106	1177,78,79,1519,20	H2943-03	
3	H4137	1270,71,72,1478,79	H2943-09	

* Contact SMO and attach record of resolution

Reviewed By	Logbook No.
Date	Logbook Page No.

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name CHEMTECH CONSULTING GROUP		Page__of__
Received By (Print Name)		Log-in Date **5/7/2016**
Received By (Signature)		
Case Number 46114	SDG No. H4104	MA No. N/A

Remarks:	
1. Custody Seal (s)	Yes
2. Custody Seal Nos.	N/A
3. Traffic Reports/Chain Of Custody Records	Yes
4. Airbill	Airbill
5. Airbill No.	776278490256
6. Sample Tags Sample Tag #	N/A
7. Sample Condition	Yes
8. Shipping Container Temperature Indicator Bottle	Present
9. Shipping Container Temperature	5.0 Degree C
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	05/07/2016
12.Time Received	10:15

	EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample shipment, etc.
1	H4021	1550,51,52	H2943-12	
2	H4022	1559,60,61	H2943-13	
3	H4108	1183,84,85	H2943-14	
4	H4110	1189,90,91	H2943-15	
5	H4115	1204,05,06	H2943-16	
6	H4122	1225,26,27	H2943-17	
7	H4127	1240,41,42	H2943-18	
8	H4130	1249,50,51	H2943-19	
9	H4131	1252,53,54	H2943-20	
10	H4135	1264,65,66	H2943-21	
11	H4136	1267,68,69	H2943-22	
12	H4139	1276,77,78	H2943-23	
13				
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21				
22				
23				

* Contact SMO and attach record of resolution

Reviewed By	Logbook No.
Date	Logbook Page No.

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME CHEMTECH CONSULTING GROUP
LAB CODE CHM
CONTRACT NO. EPW14030
CASE NO. 46114 SDG NO. H4104
MA NO.
SOW NO. SOM02.3

All documents delivered in the complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.4)

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
1. SDG Cover Page	1	1	✓	
2. Traffic Report/Chain of Custody Record(s)	2	7	✓	
3. Sample Log-In Sheet (DC-1)	8	10	✓	
4. CSF Inventory Sheet (DC-2)	11	17	✓	
5. SDG Narrative	18	30	✓	
Organic Analysis				
Trace Volatiles				
Quality Control Summary				
6. Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	31	32	✓	
7. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR)(if requeste by the EPA Region)	33	33	✓	
8. Method Blank Summary (Form 4-OR)	34	37	✓	
9. GC/MS Instrument Performance Check (Form 5-OR)	38	42	✓	
10. Internal Standard Area and Retention Summary (Form 8A-OR)	43	46	✓	
Sample Data				
11. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	47	380	✓	
12. Tentatively Identified Compounds (Form 1B-OR)				
13. Raw Data for each sample:				
Reconstructed total ion chromatograms (RICs) for each sample				
Raw Spectra and bacground-subtracted mass spectra of target analytes identified				
Quantitation Reports				
Mass Spectra of all reported TICs with three best library matches				
Standards Data (All Instruments)				
14. GC/MS Initial Calibration Data (Form 6A-OR)	381	397	✓	
15. RICs and Quantitation Reports for all Standards				

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
16. Continuing Calibration Verification for GC/MS (Form 7-OR)	398	476	✓	
17. RICs and Quantitation Reports for all Standards				
Quality Control Data				
18. Performance Check	477	516	✓	
19. Blank Data	517	593	✓	
20. Matrix Spike/Matrix Spike Duplicate Data (Form 3A-OR) (if requested by EPA Region)	594	613	✓	
21. Original Preparation and analysis forms or copies of preparation and analysis logbook pages (including screening records if applicable)	809	920	✓	
Low-Medium Volatiles				
Quality Control Summary				
22. Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	NA	NA	✓	
23. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by EPA Region)	NA	NA	✓	
24. Method Blank Summary (Form 4-OR)	NA	NA	✓	
25. GC/MS Instrument Performance Check (Form 5-OR)	NA	NA	✓	
26. Internal Standard Area and Retention Time Summary (Form 8A-OR)	NA	NA	✓	
Sample Data				
27. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	
28. Tentatively Identified Compounds (Form 1B-OR)				
29. Raw Data for Each Sample:				
Reconstructed total ion chromatograms (RICs) for each sample				
Raw Spectra and background-subtracted mass spectra of target analytes identified				
Quantitation Reports				
Mass Spectra of all reported TICs with three best library matches				
Standards Data (All Instruments)				
30. GC/MS Initial Calibration Data (Form 6A-OR)	NA	NA	✓	
31. RICs and Quantitation Reports for all Standards				
32. Continuing Calibration Verification for GC/MS (Form 7A-OR)	NA	NA	✓	
33. RICs and Quantitation Reports for all Standards				
Quality Control Data				
34. Performance Check	NA	NA	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
35. Blank Data	NA	NA	✓	
36. Matrix Spike/Matrix Spike Duplicate Data (if requested by EPA Region)	NA	NA	✓	
37. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	NA	NA	✓	
Semivolatiles				
Quality Control Summary				
38. Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	614	615	✓	
39. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by EPA Region)	NA	NA	✓	
40. Method Blank Summary (Form 4-OR)	616	616	✓	
41. GC/MS Instrument Performance Check (Form 5-OR)	617	619	✓	
42. Internal Standard Area and Retention Time Summary (Form 8A-OR)	620	623	✓	
Sample Data				
43. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	624	661	✓	
44. Tentatively Identified Compounds (Form 1B-OR)				
45. Raw Data for Each sample:				
Reconstructed total ion chromatograms (RICs) for each sample	NA	NA	✓	
Raw Spectra and background-subtracted mass spectra of target analytes identified				
Quantitation Reports				
Mass Spectra of all reported TICs with three best library matches				
GPC chromatograms (if GPC is required)				
Standards Data (All Instruments)				
46. GC/MS Initial Calibration Data (Form 6A-OR)	662	704	✓	
47. RICs and Quantitation Reports for all Standards				
48. Continuing Calibration Verification for GC/MS (Form 7A-OR)	705	766	✓	
49. RICs and Quantitation Reports for all Standards				
Quality Control Data				
50. Performance Check	766	798	✓	
51. Blank Data	799	808	✓	
52. Matrix Spike/Matrix Spike Duplicate Data (if requested by EPA Region)	NA	NA	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
53. Raw GPC Data	NA	NA	✓	
54. For SIM analysis (if requested), at the same sequence as listed above, except for that Form 1B-OR and TIC spectra data which are not required for SIM method.	NA	NA	✓	
55. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	809	920	✓	
Pesticides				
Quality Control Summary				
56. Surrogate Recovery (Form 2C-OR)	NA	NA	✓	
57. Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR each columns)	NA	NA	✓	
58. Laboratory Control Sample Recovery (Form 3B-OR each column)	NA	NA	✓	
59. Method Blank Summary (Form 4-OR)	NA	NA	✓	
Sample Data				
60. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	
61. Raw Data for Each Sample:				
Chromatograms (Primary Column)				
Chromatograms (Secondary Column)				
Quantitation Reports				
Manual Worksheets				
62. For Pesticides by GC/MS Confirmation:				
Copies of raw spectra and copies of background-subtracted mass spectra of target analytes (samples & standards)				
Standards Data				
63. Initial Calibration of Single Component Analytes (Form 6B-OR and 6C-OR)	NA	NA	✓	
64. Initial Calibration of Multicomponent Analytes (Form 6D-OR and 6E-OR)	NA	NA	✓	
65. Analyte Resolution Summary (Form 6G-OR)	NA	NA	✓	
66. Pesticide Performance Evaluation Mixture Calibration Verification Summary (Form 7B-OR)	NA	NA	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
67. Continuing Calibration Verification Summary (Form 7C-OR)	NA	NA	✓	
68. Multicomponent Coninuing Calibration Verification Summary (Form 7D-OR)	NA	NA	✓	
69. Analytical Sequence (Form 8B-OR)	NA	NA	✓	
70. Florisil Cartridge Check (Form 9A-OR)	NA	NA	✓	
71. GPC Calibration Verification (Form 9B-OR)	NA	NA	✓	
72. Identification Summary for Single Component Analytes (Form 10A-OR)	NA	NA	✓	
73. Identification Summary for Multicomponent Analytes (Form 10B-OR)				
74. Chromatograms and Quantitation Reports:	NA	NA	✓	
A printout of Retention Times and corresponding peak areas or peak heights				
Quality Control Data				
75. Blank Data	NA	NA	✓	
76. Matrix Spike/Matrix Spike Duplicate Data	NA	NA	✓	
77. Laboratory Control Sample	NA	NA	✓	
78. Raw GPC Data	NA	NA	✓	
79. Raw Florisil Data	NA	NA	✓	
80. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including TCLP/SPLP logs, Percent Solid Determinations logs, and screening records if applicable)	NA	NA	✓	
Aroclor Data				
Quality Control Summary				
81. Surrogate Recovery (Form 2C-OR)	NA	NA	✓	
82. Matrix Spike/Matrix Spike Duplicate Summary (Form 3A-OR)	NA	NA	✓	
83. Laboratory Control Sample Recovery (Form 3B-OR for each column)	NA	NA	✓	
84. Method Blank Summary (Form 4-OR)	NA	NA	✓	
Sample Data				
85. TAL Results - Organics Analysis Data Sheet (Form 1A-OR)	NA	NA	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
86. Raw Data for Each Sample:	NA	NA	✓	
Chromatograms (Primary Column)	NA	NA	✓	
Chromatograms (Secondary Column)	NA	NA	✓	
Quantitation Reports	NA	NA	✓	
Manual Worksheets	NA	NA	✓	
87. For Aroclors by GC/MS Confirmation:	NA	NA	✓	
Copies of raw spectra and copies of background-subtracted mass spectra of target analytes (samples & standards)	NA	NA	✓	
Standards Data				
88. Initial Calibration of Multicomponent Analytes(Form 6D-OR, Form 6E-OR, and Form 6F-OR)	NA	NA	✓	
89. Multicomponent Continuing Calibration Verification Summary (Form 7D-OR)	NA	NA	✓	
90. Analytical Sequence (Form 8B-OR)	NA	NA	✓	
91. Identification Summary for Multicomponent Analytes (Form 10B-OR)	NA	NA	✓	
92. Chromatograms and data system printouts:	NA	NA	✓	
A printout of Retention Times and corresponding peak areas or peak heights				
Qaulity Control Data				
93. Blank Data	NA	NA	✓	
94. Matrix Spike/Matrix Spike Duplicate Data	NA	NA	✓	
95. Laboratory Control Sample (LCS) Data	NA	NA	✓	
96. Raw GPC Data (if performed)	NA	NA	✓	
97. Original preparation and analysis forms or copies of preparation and analysis logbook pages (including Percent Solid Determinations logs and screening records if applicable)	809	920	✓	
Additional				
98. EPA Shipping/Receiving Documents Airbills (No. of shipments 3)	921	923	✓	
Sample Tags	NA	NA		
Sample Log-In Sheet (Lab)	924	924	✓	

FORM DC-2
FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
99. Misc. Shipping/Receiving Records (list all individual records) Communication Logs	NA	NA	✓	
100. Internal Lab Sample Transfer Records & Tracking Sheets (describe or list)	925	929	✓	
101. PE/PT Instruction Forms	NA	NA	✓	
102. Other Records (describe or list)				
Communication Log	930	933	✓	

103. Comments

Completed by: (CLP Lab) [signature] (Signature) [illegible] (Printed Name/Title) 6/26/16 (Date)

Audited by: (EPA) (Signature) (Printed Name/Title) (Date)

SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE# 46114
SDG# H4104
CONTRACT# EPW14030
LAB CODE: CHM
CHEMTECH PROJECT # H2943
MODIFICATION REF. NUMBER: N/A

Sample ID	Test	EPA Sample ID	pH
H2943-01		H4104	1.0
H2943-02		H4105	1.0
H2943-03		H4106	1.0
H2943-04		H4109	1.0
H2943-05		H4125	1.0
H2943-05DL	VOC	H4125DL	1.0
H2943-06		H4134	1.0
H2943-07		H4134MS	1.0
H2943-08		H4134MSD	1.0
H2943-09		H4137	1.0
H2943-10		H4138	1.0
H2943-12		H4021	1.0
H2943-13		H4022	1.0
H2943-14		H4108	1.0
H2943-15		H4110	1.0
H2943-16		H4115	1.0
H2943-17		H4122	1.0
H2943-18		H4127	1.0
H2943-19DL	VOC	H4130DL	1.0
H2943-20		H4131	1.0
H2943-21		H4135	1.0
H2943-22		H4136	1.0
H2943-23		H4139	1.0

10 Water samples were delivered to the laboratory intact on 05/06/2016.
12 Water samples were delivered to the laboratory intact on 05/07/2016.

Test requested on the Chain of Custody was Volatile Organic and Semi Volatile Organic by Method SOM02.3.

Samples for Volatile Organic analyses were transferred unopened to the Volatile Laboratory. Sample Tags were not received with the samples.

The temperature of the samples was measured using an I R Gun. The samples temperature was 3.7 and 4.0 degrees Celsius for the samples received on 05/06/2016 and 5.0 degrees Celsius for the samples received on 05/06/2016.

Shipping Discrepancies and/or QC issues:

Issue 1 : Sample tags were not received with samples at the laboratory. Sample tag numbers may or may not be listed on the TR/COC.

Resolution 1: In accordance with previous direction from Region 8, the laboratory will note the issue in the SDG Narrative, and proceed with the analysis of the sample. The Resolution will be applied to all samples received for this Case.

Issue 2: The water samples for this Case are scheduled for 86 TVOA and 17 SVOA analysis; however, the COCs list VOA=TCL VOCs by CLP.

Resolution 2: Per Region 8, the samples in question shall be analyzed as scheduled for TVOA. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples. This resolution may be applied to all COCs received for this Case with this issue.

Trace Volatiles:

The analysis performed on instrument MSVOA_I were done using C column RXI-624 30m 0.25mm 1.4um 872456. The Trap was supplied by OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.

The analysis of VOC-Low Level -15 was based on method SOM02.3_Trace.

Surrogate recoveries met the criteria except for the followings:
H4021 [1,1-Dichloroethene-d2 - 58%],
H4022 [1,1-Dichloroethene-d2 - 59%],,
H4130DL 1,1-Dichloroethene-d2- 54%]
As per method, up to 3 surrogates are allowed to fail; therefore no corrective action was required for above mention sample.
Holding Times were met.
Instrument Performance Check met requirements.
Retention Times met requirements.
The MS {H4134MS} recoveries met the requirements.

The MSD {H4134 MSD} recoveries met the acceptable requirements.
The RPD recoveries met criteria
The Internal Standards Areas met requirements.
The initial Calibration met the requirements.
The Continuing Calibration met the requirements.
The Blank analysis did not indicate the presence of lab contamination.
The Storage Blank did not indicate the presence of lab contamination
.
Samples H4125 and H4130 were diluted due to high concentrations.

The sample H4131 was analyzed following the analysis of H4130.
The sample (H4130) had concentration above calibration levels for Tetrachloroethene therefore, this sample was re-analyzed diluted. And the following sample H4131 had concentration of this compound is below CRQL, respectively therefore, No instrument blank was analyzed.

The sample # H4104 was analyzed following the analysis of H4125. The sample # H4125 had concentration above calibration levels for Tetrachloroethene and the following sample has positive hit for that compound, therefore the instrument Blank (VIBLK51, VI049345.D) was analyzed between sample # H4104 and H4125.

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Calculation:

$$\text{Concentration in ug/L} = \frac{(Ax)\,(Is)\,(DF)}{(Ais)\,(RRF)\,(Vo)}$$

Where,
Ax = Area of the characteristic ion (EICP) for the compound to be measured.
Ais = Area of the characteristic ion (EICP) for the internal standard.
Is = Amount of internal standard added in ng.
RRF = Mean Relative Response Factor from the initial calibration standard.
Vo = Total volume of water purged, in mL.
DF = Dilution Factor.

Example Calculation for sample # H4021 for Tetrachloroethene:

Ax= 1038677
Is= 250
RRF= 0.390
DF=1
Ais=881841
VO.= 50

$$\text{Concentration in ug/L} = \frac{(1038677)\ \ (250\ )\ \ (1\ \ )}{(881841)(\ 0.390)\ (50\ )}$$

= 15.1 ug/L

Reported Result = 15 ug/L

Relative Response Factor =:Tetrachloroethene: RUN # VI050416 for 5 ppb

$$RRF = \frac{\text{Area of compound}}{\text{Area of Internal Standard}} \times \frac{\text{Conc. of Internal Standard}}{\text{Conc. of Compound}}$$

$$RRF = \frac{374867}{966164} \times \frac{5.0}{5.0} = 0.3879$$

RRF= 0.388

Semivolatiles

The samples were analyzed on instrument BNA_M using GC Column ZB-Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

Semi volatile Organic Samples for water extracted by Method SOM02.3 on 05/08/16.

The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for H4105 [1,4-Dioxane-d8 - 20%], H4106 [1,4-Dioxane-d8 - 16%], H4137 [1 and4-Dioxane-d8 - 20%]. As per method four surrogates are allowed to fail. No further corrective action was taken.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements.

The Continuous Calibration (SSTD02062 and SSTD02064) met the requirements except Butylbenzylphthalate. As per method four compounds are allowed to fail, not exceed 40%. No further corrective action was taken.
The Tuning criteria met requirements.

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Concentration of Water Sample:

Concentration ug/L = $\frac{(Ax)\ (Is)\ (Vt)\ (DF)\ (GPC)}{(Ais)\ (\overline{RRF})\ (Vo)\ (Vi)}$

Where,

Ax = Area of the characteristic ion for the compound to be measured.
Ais = Area of the characteristic ion for the internal standard.
Is = Amount of internal standard injected in ng.
Vo = Volume of water extracted in mL.
Vi = Volume of extract injected in uL.
Vt = Volume of the concentrated extract in uL

$\overline{RRF}$ = Mean Relative Response Factor determined from the initial calibration standard.
GPC = $\frac{Vin}{Vout}$ = GPC factor (If no GPC is performed, GPC=1)

No compounds were detected on the samples.

RRF Calculation of standard 20 ppb for Dimethylphthalate with M instrument for method 05/05/16

RRF= Area of compound / Area of Internal Standard X Conc. of Internal Standard / Conc. of Compound

= 434026/ 259664 X 20/20

= 1.671 (Reported RRF)

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature _____ Name: Mildred V. Reyes

Date: 05/26/16 Title: Document Control Officer

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Manual Integration Report

Sequence:	VI050416	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005EC/ VSTD00539	VI049243.D	cis-1,2-Dichloroethene	lisa	5/5/2016 8:52:38 AM	mohammad	5/5/2016 9:01:16 AM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VI050916	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005/ VSTD00545	VI049291.D	cis-1,2-Dichloroethene	lisa	5/10/2016 11:42:11 AM	feifei	5/10/2016 1:38:20 PM	Peak Integrated by Software incorrectly
H2943-14/ H4108	VI049307.D	1,2-Dichloroethane-d4	lisa	5/10/2016 11:42:23 AM	feifei	5/10/2016 1:38:15 PM	Peak Integrated by Software incorrectly
H2943-19/ H4130	VI049312.D	Chloroethane-d5	lisa	5/10/2016 11:42:25 AM	feifei	5/10/2016 1:38:17 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VI051016	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005/ VSTD00548	VI049319.D	cis-1,2-Dichloroethene	lisa	5/11/2016 9:15:59 AM	feifei	5/11/2016 12:05:11 PM	Peak Integrated by Software incorrectly
H2943-07MS/ H4134MS	VI049327.D	Chloroethane-d5	lisa	5/11/2016 9:16:03 AM	feifei	5/11/2016 12:05:15 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	VI051116	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005/ VSTD00550	VI049333.D	cis-1,2-Dichloroethene	feifei	5/12/2016 10:20:42 AM	mmdadoda	5/12/2016 6:14:28 PM	Peak Integrated by Software incorrectly
H2943-04/ H4109	VI049336.D	1,2-Dichloroethane-d4	feifei	5/12/2016 10:20:45 AM	mmdadoda	5/12/2016 6:14:30 PM	Peak Integrated by Software incorrectly
H2943-09/ H4137	VI049337.D	1,1-Dichloroethene-d2	feifei	5/12/2016 10:20:47 AM	mmdadoda	5/12/2016 6:14:32 PM	Peak Integrated by Software incorrectly
H2943-10/ H4138	VI049338.D	Chloroethane-d5	feifei	5/12/2016 10:20:49 AM	mmdadoda	5/12/2016 6:14:34 PM	Peak Integrated by Software incorrectly
H2943-05DL/ H4125DL	VI049341.D	1,2-Dichloroethane-d4	feifei	5/12/2016 10:20:51 AM	mmdadoda	5/12/2016 6:14:35 PM	Peak Integrated by Software incorrectly
H2943-05/ H4125	VI049344.D	Chloroethane-d5	feifei	5/12/2016 10:20:56 AM	mmdadoda	5/12/2016 6:14:39 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	vi051216	Instrument	MSVOA_i

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC005/ VSTD00527	VI049349.D	cis-1,2-Dichloroethene	lisa	5/13/2016 9:17:32 AM	feifei	5/13/2016 12:27:53 PM	Peak Integrated by Software incorrectly
VI0512WBL01/ VBLK35	VI049350.D	1,2-Dichloroethane-d4	lisa	5/13/2016 9:17:39 AM	feifei	5/13/2016 12:27:55 PM	Peak Integrated by Software incorrectly
VSTDCCC005EC/ VSTD00528	VI049360.D	cis-1,2-Dichloroethene	lisa	5/13/2016 9:17:37 AM	feifei	5/13/2016 12:27:59 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	BM050516	Instrument	BNA_m

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTD02042/ SSTD02042	BM005233.D	Caprolactam	umangi	5/6/2016 7:10:46 PM	sohil	5/6/2016 7:14:59 PM	Peak Integrated by Software incorrectly
SSTD04043/ SSTD04043	BM005234.D	Caprolactam	umangi	5/6/2016 7:10:47 PM	sohil	5/6/2016 7:15:02 PM	Peak Integrated by Software incorrectly
SSTD08044/ SSTD08044	BM005235.D	Caprolactam	umangi	5/6/2016 7:10:48 PM	sohil	5/6/2016 7:15:03 PM	Peak Integrated by Software incorrectly
SSTD16045/ SSTD16045	BM005236.D	Benzaldehyde	umangi	5/6/2016 7:10:52 PM	sohil	5/6/2016 7:15:04 PM	Peak Integrated by Software incorrectly
SSTD16045/ SSTD16045	BM005236.D	Caprolactam	umangi	5/6/2016 7:10:52 PM	sohil	5/6/2016 7:15:04 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02046	BM005237.D	Caprolactam	umangi	5/6/2016 7:10:49 PM	sohil	5/6/2016 7:15:05 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02047	BM005251.D	Caprolactam	umangi	5/6/2016 7:11:03 PM	sohil	5/6/2016 7:15:20 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02048	BM005263.D	Caprolactam	umangi	5/6/2016 7:11:14 PM	sohil	5/6/2016 7:15:24 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02049	BM005274.D	Caprolactam	umangi	5/6/2016 7:11:10 PM	sohil	5/6/2016 7:15:25 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	bm051116	Instrument	BNA_m

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTDCCC020/ SSTD02061	BM005380.D	Caprolactam	umangi	5/12/2016 10:12:29 AM	sohil	5/12/2016 7:01:17 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02062	BM005393.D	4-Nitroaniline	umangi	5/12/2016 10:12:34 AM	sohil	5/12/2016 7:07:51 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02062	BM005393.D	Caprolactam	umangi	5/12/2016 10:12:34 AM	sohil	5/12/2016 7:07:51 PM	Peak Integrated by Software incorrectly
H2943-02/ H4105	BM005408.D	4-Nitrophenol-d4	umangi	5/12/2016 10:12:42 AM	sohil	5/12/2016 7:20:53 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02063	BM005409.D	4-Nitroaniline	umangi	5/12/2016 10:12:44 AM	sohil	5/12/2016 7:20:59 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02063	BM005409.D	Caprolactam	umangi	5/12/2016 10:12:44 AM	sohil	5/12/2016 7:20:59 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	bm051216	Instrument	BNA_m

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
H2943-09/ H4137	BM005420.D	4-Nitrophenol-d4	umangi	5/13/2016 12:23:58 PM	sohil	5/13/2016 8:02:20 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02065	BM005425.D	4-Nitroaniline	umangi	5/13/2016 12:24:00 PM	sohil	5/13/2016 8:02:55 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02065	BM005425.D	Caprolactam	umangi	5/13/2016 12:24:00 PM	sohil	5/13/2016 8:02:55 PM	Peak Integrated by Software incorrectly

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4104

Analytical Method : Trace VOA Level : _____

Matrix : Water

EPA Sample No .	DMC1 (VCL)	DMC2 (CLA)	DMC3 (DCE)	DMC4 (BUT)	DMC5 (CLF)	DMC6 (DCA)	DMC7 (BEN)	DMC8 (DPA)
VBLK32	76	89	60	108	88	98	93	95
H4021	76	89	58 *	114	91	98	95	97
H4022	73	91	59 *	107	85	96	93	98
H4108	79	98	64	122	99	108	103	107
H4110	76	95	60	115	93	103	99	102
H4115	77	95	62	114	94	104	99	104
H4122	82	100	63	115	99	109	105	108
H4127	80	98	61	116	94	104	102	104
H4130	80	99	61	116	97	104	105	107
H4131	81	96	62	118	98	105	103	105
H4135	79	95	60	119	95	105	101	105
H4136	78	96	61	116	94	102	102	104
H4139	79	103	62	122	98	108	104	109
VBLK33	92	102	69	104	90	99	100	102
H4134	95	106	73	113	97	104	109	109
H4134MS	99	103	97	114	98	106	108	107
H4134MSD	101	106	99	118	100	107	112	110
H4105	92	103	67	108	91	102	105	104
H4106	95	110	71	118	102	109	110	111
VBLK34	83	93	64	108	85	97	94	97
H4109	89	100	70	118	103	113	107	107
H4137	87	99	68	113	96	104	104	105
H4138	88	105	71	119	103	109	106	107
H4130DL	68	79	54 D	93	81	87	85	84
H4125DL	87	103	69	118	103	112	108	108
H4125	84	101	71	121	103	103	105	104
VIBLK51	83	101	66	118	97	104	99	101
H4104	82	98	66	117	100	104	99	99
VBLK35	73	89	60	107	87	95	90	93
VHBLK01	87	104	69	115	95	114	107	108

	QC LIMITS
DMC1 (VCL) = Vinyl Chloride-d3	(40-130)
DMC2 (CLA) = Chloroethane-d5	(65-130)
DMC3 (DCE) = 1,1-Dichloroethene-d2	(60-125)
DMC4 (BUT) = 2-Butanone-d5	(40-130)
DMC5 (CLF) = Chloroform-d	(70-125)
DMC6 (DCA) = 1,2-Dichloroethane-d4	(70-130)
DMC7 (BEN) = Benzene-d6	(70-125)
DMC8 (DPA) = 1,2-Dichloropropane-d6	(60-140)

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4104
Analytical Method : Trace VOA Level : _____
Matrix : Water

EPA Sample No .	DMC9 (TOL)	DMC10 (TDP)	DMC11 (HEX)	DMC12 (TCA)	DMC13 (DCZ)	DMC14	DMC15	DMC16	TOT OUT
VBLK32	88	83	104	94	89				0
H4021	88	87	110	96	91				1
H4022	87	86	105	94	93				1
H4108	96	93	117	104	100				0
H4110	92	88	110	98	97				0
H4115	94	85	113	99	97				0
H4122	97	89	116	104	104				0
H4127	92	91	117	102	98				0
H4130	95	94	116	102	98				0
H4131	95	92	114	104	100				0
H4135	92	86	110	99	99				0
H4136	94	89	111	100	97				0
H4139	95	95	115	100	100				0
VBLK33	96	92	101	93	94				0
H4134	103	97	111	98	102				0
H4134MS	102	94	108	99	103				0
H4134MSD	107	100	116	102	105				0
H4105	98	90	108	95	95				0
H4106	104	98	114	105	104				0
VBLK34	91	90	102	95	90				0
H4109	101	94	114	103	101				0
H4137	98	93	110	100	100				0
H4138	102	92	111	106	105				0
H4130DL	80	74	88	83	81				1
H4125DL	103	96	114	105	106				0
H4125	99	96	115	103	103				0
VIBLK51	94	92	110	99	100				0
H4104	95	89	110	101	99				0
VBLK35	87	85	101	91	89				0
VHBLK01	105	99	118	110	108				0

	QC LIMITS
DMC9 (TOL) = Toluene-d8	(70-130)
DMC10 (TDP) = trans-1,3-Dichloropropene-d4	(55-130)
DMC11 (HEX) = 2-Hexanone-d5	(45-130)
DMC12 (TCA) = 1,1,2,2-Tetrachloroethane-d2	(65-120)
DMC13 (DCZ) = 1,2-Dichlorobenzene-d4	(80-120)

FORM 3A-OR
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No. : 46114 MA No .: SDG No. : H4104

Analytical Method : Trace VOA Level :

Matrix Water

EPA Sample No.(Matrix Spike/Metrix Spike Duplicate): H4134

Instrument ID : MSVOA_I GC Column RXI-624 ID : 0.25 (mm)

Concentration Units (ug/L,mg/L ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %R #	QC Limits %R
1,1-Dichloroethene	5	0	4.7	94	61 - 145
Benzene	5	0	5.6	112	76 - 127
Trichloroethene	5	0	5.5	110	71 - 120
Toluene	5	0	5.5	110	76 - 125
Chlorobenzene	5	0	5.4	108	75 - 130

ANALYTE	SPIKE AADDED	MSD CONCENTRATION	MSD %R #	RPD	QC Limits	
					RPD	%R
1,1-Dichloroethene	5	4.9	98	4	14	61 - 145
Benzene	5	5.9	118	5	11	76 - 127
Trichloroethene	5	5.6	112	2	14	71 - 120
Toluene	5	5.7	114	4	13	76 - 125
Chlorobenzene	5	5.7	114	5	13	75 - 130

EPA SAMPLE NO.

VBLK32

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4104
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0509WBL02
Instrument ID: MSVOA_I
Lab File ID : VI049304.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/09/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 19:05
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4021	H2943-12	VI049305.D	05/09/2016 19:54
H4022	H2943-13	VI049306.D	05/09/2016 20:25
H4108	H2943-14	VI049307.D	05/09/2016 20:57
H4110	H2943-15	VI049308.D	05/09/2016 21:28
H4115	H2943-16	VI049309.D	05/09/2016 22:00
H4122	H2943-17	VI049310.D	05/09/2016 22:32
H4127	H2943-18	VI049311.D	05/09/2016 23:03
H4130	H2943-19	VI049312.D	05/09/2016 23:35
H4131	H2943-20	VI049313.D	05/10/2016 00:07
H4135	H2943-21	VI049314.D	05/10/2016 00:38
H4136	H2943-22	VI049315.D	05/10/2016 01:10
H4139	H2943-23	VI049316.D	05/10/2016 01:41

EPA SAMPLE NO.

VBLK33

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4104
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0510WBL01
Instrument ID: MSVOA_I
Lab File ID : VI049320.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/10/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 12:34
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4134	H2943-06	VI049326.D	05/10/2016 16:00
H4134MS	H2943-07MS	VI049327.D	05/10/2016 16:31
H4134MSD	H2943-08MSD	VI049328.D	05/10/2016 17:03
H4105	H2943-02	VI049329.D	05/10/2016 17:34
H4106	H2943-03	VI049330.D	05/10/2016 18:06

EPA SAMPLE NO.

VBLK34

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4104
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0511WBL01
Instrument ID: MSVOA_I
Lab File ID : VI049334.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/11/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 11:25
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
H4109	H2943-04	VI049336.D	05/11/2016 12:37
H4137	H2943-09	VI049337.D	05/11/2016 13:09
H4138	H2943-10	VI049338.D	05/11/2016 13:41
H4130DL	H2943-19DL	VI049340.D	05/11/2016 14:45
H4125DL	H2943-05DL	VI049341.D	05/11/2016 15:17
H4125	H2943-05	VI049344.D	05/11/2016 16:53
VIBLK51	VIBLK51	VI049345.D	05/11/2016 17:27
H4104	H2943-01	VI049346.D	05/11/2016 17:59

EPA SAMPLE NO.

VBLK35

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM
Case No.: 46114
MA No. :
SDG No.: H4104
Analytical Method: Trace VOA
Level :
Matrix : Water
Lab Sample ID: VI0512WBL01
Instrument ID: MSVOA_I
Lab File ID : VI049350.D
Extraction Type : PT
Date Extracted :
GC Column ( ) : RXI-624 ID : 0.25 (mm)
Date Analyzed : 05/12/2016
GC Column ( ) : ID : (mm)
Time Analyzed : 14:23
Heated Purge: (Y/N) N
Cleanup(Y/N):
Cleanup Types :

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
VHBLK01	H2943-11	VI049353.D	05/12/2016 16:18

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB32

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method : Trace VOA Lab File ID : VI049219.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/04/2016 Injection Time: 08:57

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	29.8	
75	30.0 - 80.0% of mass 95	62.3	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.6	
173	Less than 2.0% of mass 174	0.3(0.4)	1
174	50.0 - 120% of mass 95	77.4	
175	5.0 - 9.0% of mass 174	5.5(7.1)	1
176	95.0 - 101% of mass 174	73.5(95)	1
177	5.0 - 9.0% of mass 176	4.9(6.7)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD0.533	VSTD0.533	VI049220.D	05/04/2016	11:27
VSTD00134	VSTD00134	VI049221.D	05/04/2016	11:58
VSTD00535	VSTD00535	VI049222.D	05/04/2016	12:30
VSTD01036	VSTD01036	VI049223.D	05/04/2016	13:02
VSTD02037	VSTD02037	VI049224.D	05/04/2016	13:33

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB35

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method : Trace VOA Lab File ID : VI049290.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/09/2016 Injection Time: 09:50

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	29.9	
75	30.0 - 80.0% of mass 95	61.4	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.7	
173	Less than 2.0% of mass 174	0.4(0.5)	1
174	50.0 - 120% of mass 95	76.6	
175	5.0 - 9.0% of mass 174	5.5(7.2)	1
176	95.0 - 101% of mass 174	73.6(96)	1
177	5.0 - 9.0% of mass 176	5.6(7.6)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00545	VSTDCCC005	VI049291.D	05/09/2016	11:03
VSTD00546	VSTDCCC005	VI049303.D	05/09/2016	18:15
VBLK32	VI0509WBL02	VI049304.D	05/09/2016	19:05
H4021	H2943-12	VI049305.D	05/09/2016	19:54
H4022	H2943-13	VI049306.D	05/09/2016	20:25
H4108	H2943-14	VI049307.D	05/09/2016	20:57
H4110	H2943-15	VI049308.D	05/09/2016	21:28
H4115	H2943-16	VI049309.D	05/09/2016	22:00
H4122	H2943-17	VI049310.D	05/09/2016	22:32
H4127	H2943-18	VI049311.D	05/09/2016	23:03
H4130	H2943-19	VI049312.D	05/09/2016	23:35
H4131	H2943-20	VI049313.D	05/10/2016	00:07
H4135	H2943-21	VI049314.D	05/10/2016	00:38
H4136	H2943-22	VI049315.D	05/10/2016	01:10
H4139	H2943-23	VI049316.D	05/10/2016	01:41
VSTD00547	VSTDCCC005EC	VI049317.D	05/10/2016	02:13

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB36

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method : Trace VOA Lab File ID : VI049318.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/10/2016 Injection Time: 10:13

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	29.2	
75	30.0 - 80.0% of mass 95	62.5	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.6	
173	Less than 2.0% of mass 174	0.4(0.5)	1
174	50.0 - 120% of mass 95	82.2	
175	5.0 - 9.0% of mass 174	5.9(7.2)	1
176	95.0 - 101% of mass 174	79.2(96.3)	1
177	5.0 - 9.0% of mass 176	5.5(7)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00548	VSTDCCC005	VI049319.D	05/10/2016	11:53
VBLK33	VI0510WBL01	VI049320.D	05/10/2016	12:34
H4134	H2943-06	VI049326.D	05/10/2016	16:00
H4134MS	H2943-07MS	VI049327.D	05/10/2016	16:31
H4134MSD	H2943-08MSD	VI049328.D	05/10/2016	17:03
H4105	H2943-02	VI049329.D	05/10/2016	17:34
H4106	H2943-03	VI049330.D	05/10/2016	18:06
VSTD00549	VSTDCCC005EC	VI049331.D	05/10/2016	18:38

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB37

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method : Trace VOA Lab File ID : VI049332.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/11/2016 Injection Time: 10:00

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	30	
75	30.0 - 80.0% of mass 95	62.5	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.9	
173	Less than 2.0% of mass 174	0.2(0.2)	1
174	50.0 - 120% of mass 95	77.7	
175	5.0 - 9.0% of mass 174	5.6(7.2)	1
176	95.0 - 101% of mass 174	74.5(95.9)	1
177	5.0 - 9.0% of mass 176	5(6.8)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00550	VSTDCCC005	VI049333.D	05/11/2016	10:42
VBLK34	VI0511WBL01	VI049334.D	05/11/2016	11:25
H4109	H2943-04	VI049336.D	05/11/2016	12:37
H4137	H2943-09	VI049337.D	05/11/2016	13:09
H4138	H2943-10	VI049338.D	05/11/2016	13:41
H4130DL	H2943-19DL	VI049340.D	05/11/2016	14:45
H4125DL	H2943-05DL	VI049341.D	05/11/2016	15:17
H4125	H2943-05	VI049344.D	05/11/2016	16:53
VIBLK51	VIBLK51	VI049345.D	05/11/2016	17:27
H4104	H2943-01	VI049346.D	05/11/2016	17:59
VSTD00526	VSTDCCC005EC	VI049347.D	05/11/2016	18:32

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFB38

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method : Trace VOA Lab File ID : VI049348.D

Instrument ID: MSVOA_I BFB / DFTPP : BFB

GC Column : RXI-624 ID : 0.25 (mm) :

Injection Date : 05/12/2016 Injection Time: 09:58

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	27.7	
75	30.0 - 80.0% of mass 95	58.8	
95	Base Peak, 100% relative abundance	100	
96	5.0 - 9.0% of mass 95	6.9	
173	Less than 2.0% of mass 174	0.4(0.5)	1
174	50.0 - 120% of mass 95	81	
175	5.0 - 9.0% of mass 174	5.6(6.9)	1
176	95.0 - 101% of mass 174	79(97.6)	1
177	5.0 - 9.0% of mass 176	5.5(7)	2

EPA SAMPLE NO.	LAB SAMPLE	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD00527	VSTDCCC005	VI049349.D	05/12/2016	12:03
VBLK35	VI0512WBL01	VI049350.D	05/12/2016	14:23
VHBLK01	H2943-11	VI049353.D	05/12/2016	16:18
VSTD00528	VSTDCCC005EC	VI049360.D	05/12/2016	20:37

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4104
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00546 | Lab File ID (Standard) : VI049303.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 05/04/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/09/2016
Heated Purge: (Y/N) N | Time Analyzed : 18:15

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1268200	7.91	859906	11.21	343318	13.42
UPPER LIMIT	2536400	8.08	1719810	11.38	686636	13.59
LOWER LIMIT	634100	7.74	429953	11.04	171659	13.25
EPA SAMPLE NO.						
VBLK32	1283482	7.91	856551	11.21	324066	13.42
H4021	1347991	7.91	881841	11.21	322503	13.42
H4022	1284323	7.91	843254	11.20	304558	13.42
H4108	1159964	7.91	752493	11.21	280259	13.41
H4110	1193385	7.90	771578	11.20	282549	13.41
H4115	1158501	7.91	756036	11.20	278384	13.41
H4122	1182307	7.91	775674	11.20	280619	13.41
H4127	1184931	7.91	763081	11.20	284720	13.41
H4130	1219586	7.91	778839	11.20	278717	13.41
H4131	1154740	7.91	747020	11.20	275288	13.41
H4135	1184178	7.91	773729	11.20	281075	13.41
H4136	1172559	7.91	746446	11.20	277078	13.41
H4139	1177501	7.90	767275	11.20	281005	13.41

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4104
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00548 | Lab File ID (Standard) : VI049319.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 05/04/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/10/2016
Heated Purge: (Y/N) N | Time Analyzed : 11:53

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1290910	7.90	872917	11.20	340138	13.40
UPPER LIMIT	2581820	8.07	1745830	11.37	680276	13.57
LOWER LIMIT	645456	7.73	436459	11.03	170069	13.23
EPA SAMPLE NO.						
VBLK33	1274771	7.89	851987	11.19	318195	13.40
H4134	1152670	7.90	743427	11.19	275908	13.41
H4134MS	1140996	7.90	756995	11.20	276055	13.40
H4134MSD	1154932	7.90	751085	11.19	277062	13.41
H4105	1189697	7.90	767357	11.19	286320	13.41
H4106	1117286	7.91	721708	11.19	264860	13.41

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4104
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00550 | Lab File ID (Standard) : VI049333.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 05/04/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/11/2016
Heated Purge: (Y/N) N | Time Analyzed : 10:42

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1319730	7.91	924898	11.20	367134	13.41
UPPER LIMIT	2639460	8.08	1849800	11.37	734268	13.58
LOWER LIMIT	659866	7.74	462449	11.03	183567	13.24
EPA SAMPLE NO.						
VBLK34	1290350	7.90	859838	11.20	331353	13.41
H4109	1137354	7.91	758307	11.21	287644	13.43
H4137	1157376	7.91	762590	11.19	287585	13.41
H4138	1092710	7.91	740633	11.20	275181	13.41
H4130DL	1205800	7.90	808551	11.20	304074	13.41
H4125DL	1092648	7.91	726548	11.19	274968	13.41
H4125	1083954	7.91	732229	11.20	267538	13.41
VIBLK51	1099927	7.90	761594	11.20	275126	13.41
H4104	1100611	7.91	763889	11.20	283232	13.41

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4104
Analytical Method: Trace VOA | Level :
EPA Sample No. : VSTD00527 | Lab File ID (Standard) : VI049349.D
Instrument ID : MSVOA_I | Init.Calib.Date(s): 05/04/2016
GC Column : RXI-624 | ID: 0.25 (mm) | Date Analyzed : 05/12/2016
Heated Purge: (Y/N) N | Time Analyzed : 12:03

	IS1 (DFB) AREA	RT	IS2 (CBZ) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1295570	7.91	928274	11.20	374949	13.41
UPPER LIMIT	2591130	8.08	1856550	11.37	749898	13.58
LOWER LIMIT	647783	7.74	464137	11.03	187475	13.24
EPA SAMPLE NO.						
VBLK35	1318748	7.91	908211	11.21	356452	13.41
VHBLK01	1127422	7.91	793872	11.20	307524	13.41

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene -d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4021

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049305.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.31	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.5	
71-55-6	1,1,1-Trichloroethane	0.25	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.41	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4021

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049305.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.10	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	15	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4021

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049305.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4021

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-12
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049305.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	9.35	1.7	J
2	E966796	Total Alkanes	N/A	0.0	

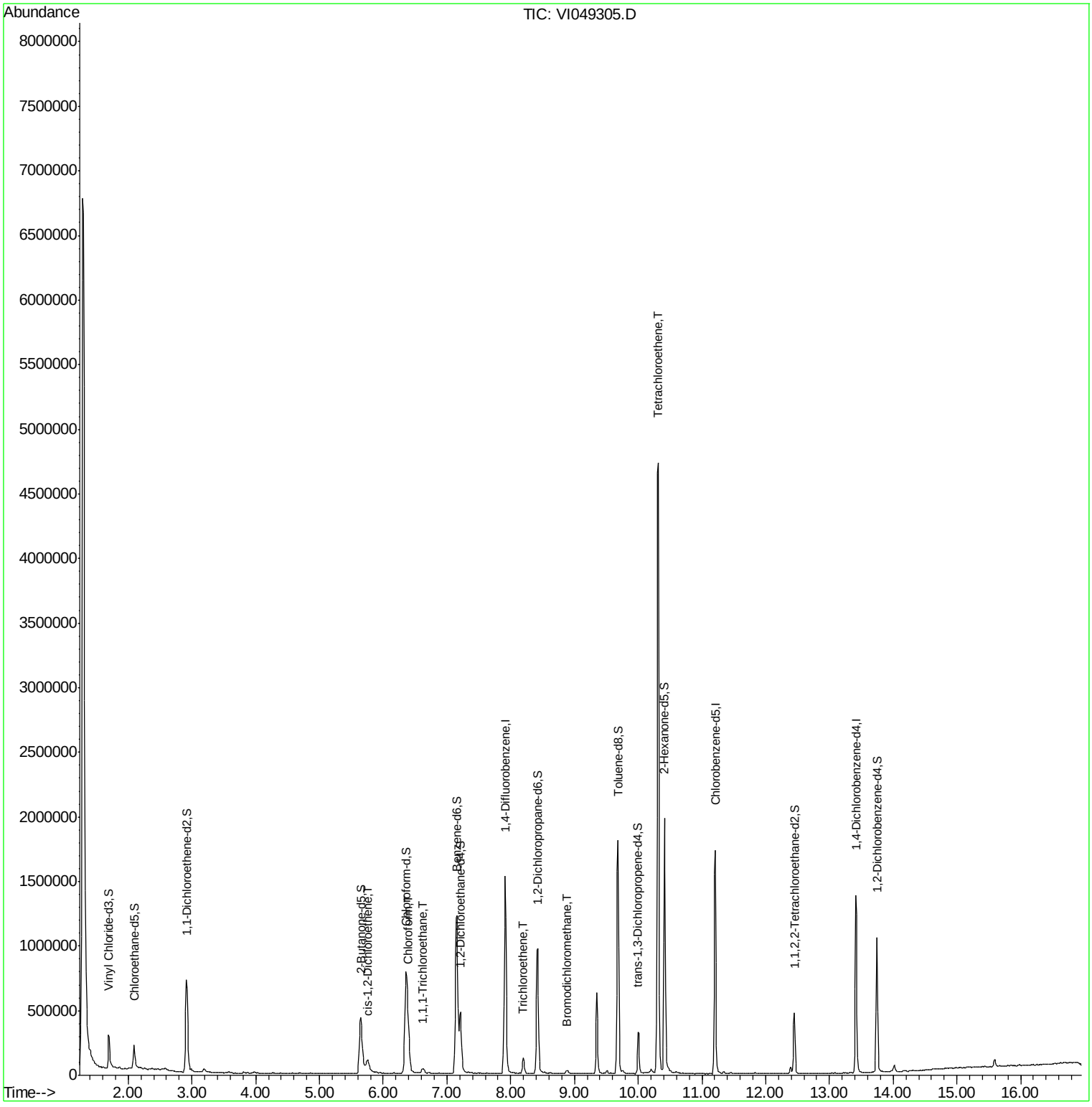
EPA-designated Registry Number.

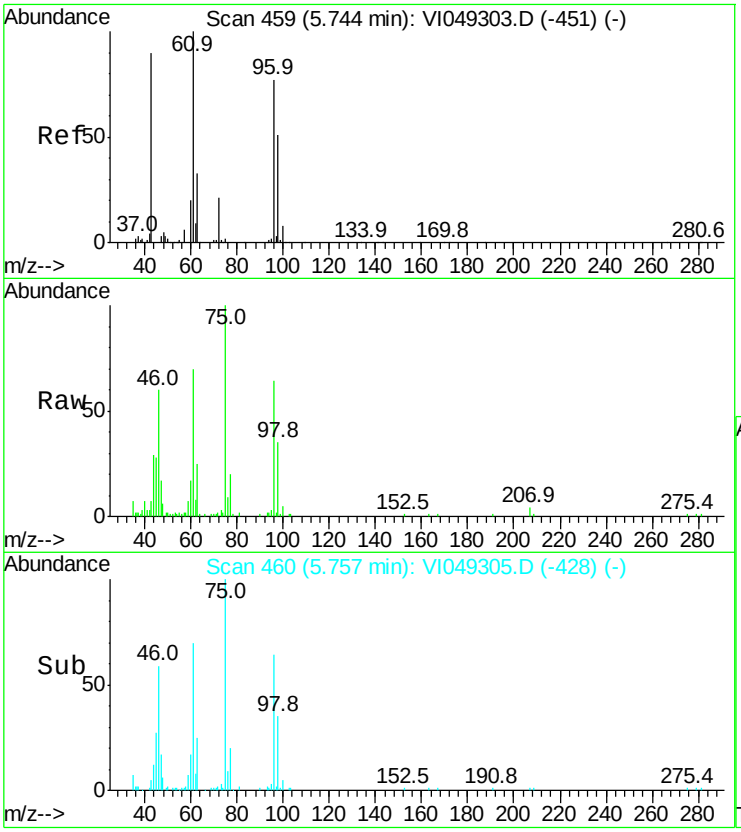
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049305.D
Acq On : 9 May 2016 19:54
Operator : FY/SY
Sample : H2943-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4021

Quant Time: May 10 06:40:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration



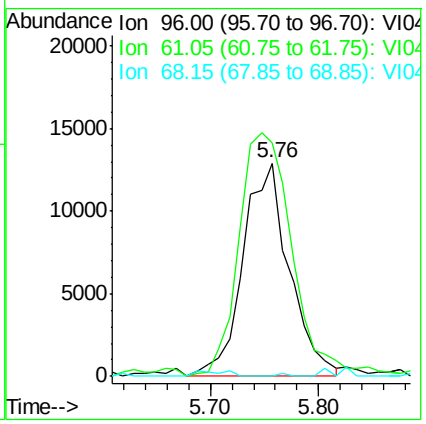


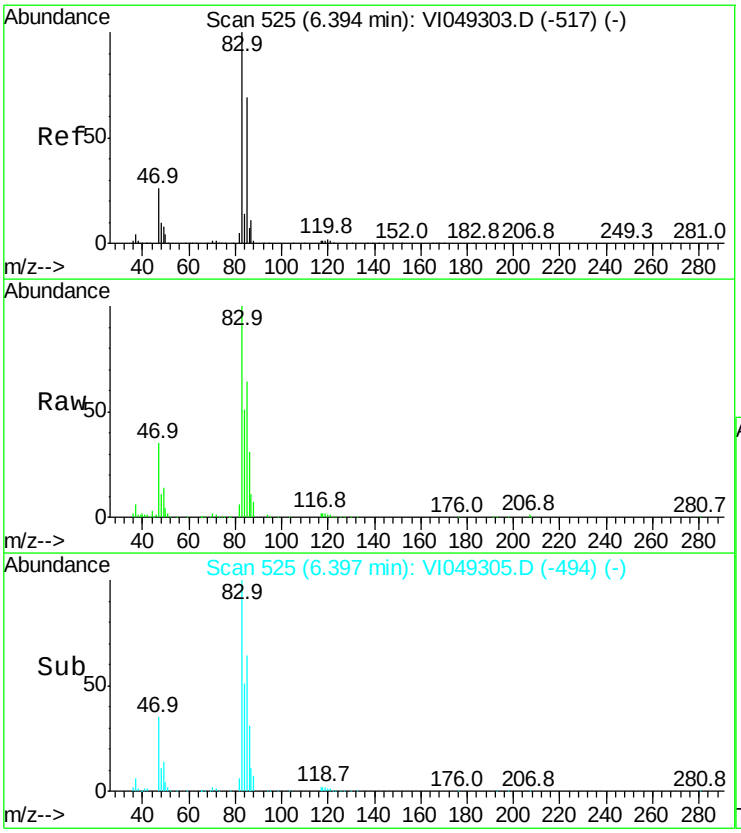
#22
cis-1,2-Dichloroethene
Concen: 0.31 ug/L
RT: 5.76 min Scan# 460
Delta R.T. 0.01 min
Lab File: VI049305.D
Acq: 9 May 2016 19:54

Instrument : MSVOA_I
ClientSampleId : H4021

Tgt Ion: 96 Resp: 38302

Ion	Ratio	Lower	Upper
96	100		
61	109.5	82.1	152.5
68	0.0	0.0	0.0

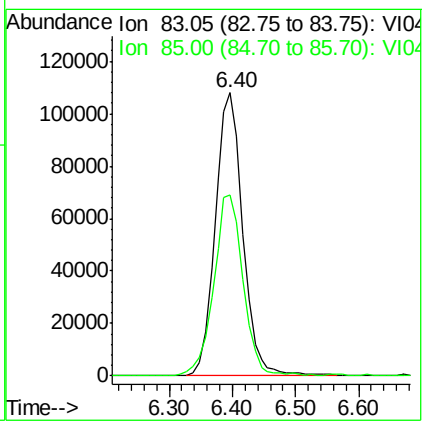


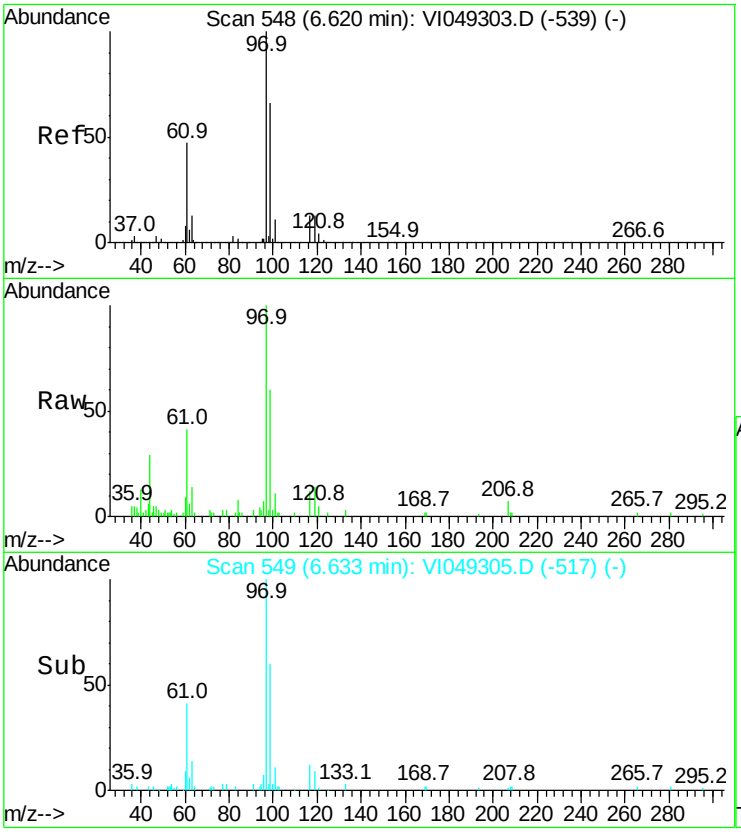


#25
Chloroform
Concen: 1.51 ug/L
RT: 6.40 min Scan# 525
Delta R.T. 0.00 min
Lab File: VI049305.D
Acq: 9 May 2016 19:54

Tgt Ion: 83 Resp: 328128

Ion	Ratio	Lower	Upper
83	100		
85	63.7	47.3	87.8



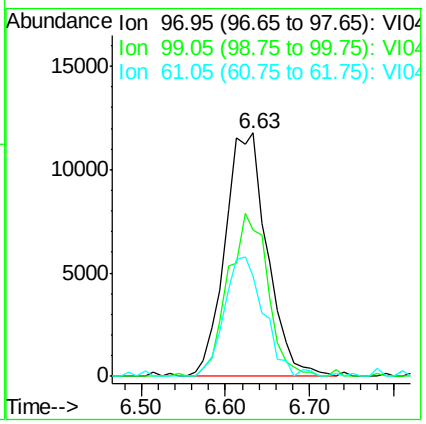


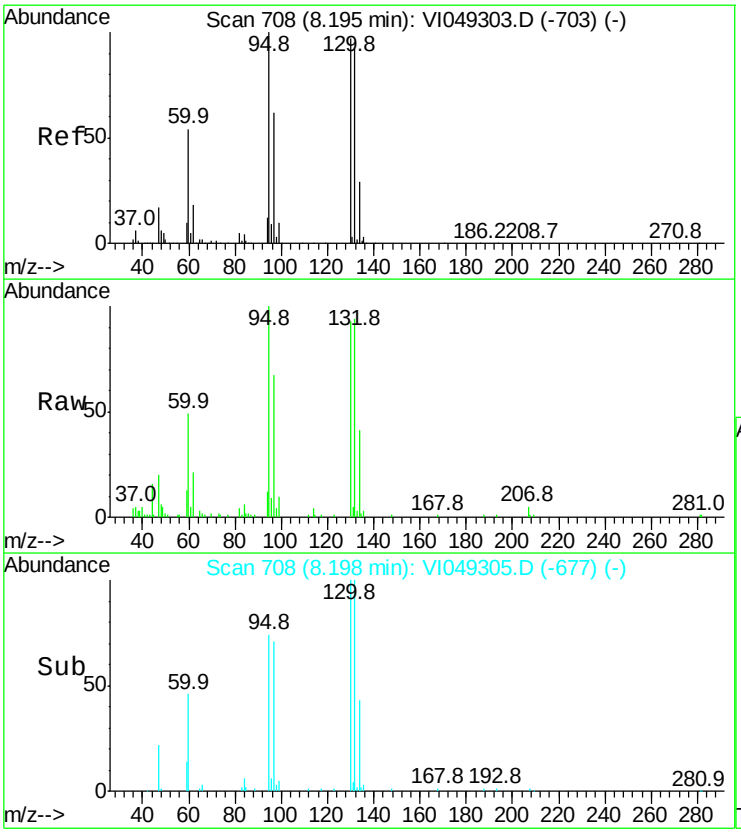
#29
1,1,1-Trichloroethane
Concen: 0.25 ug/L
RT: 6.63 min Scan# 549
Delta R.T. 0.01 min
Lab File: VI049305.D
Acq: 9 May 2016 19:54

Instrument : MSVOA_I
ClientSampleId : H4021

Tgt Ion: 97 Resp: 41228

Ion	Ratio	Lower	Upper
97	100		
99	62.3	51.1	76.7
61	45.2	33.3	49.9

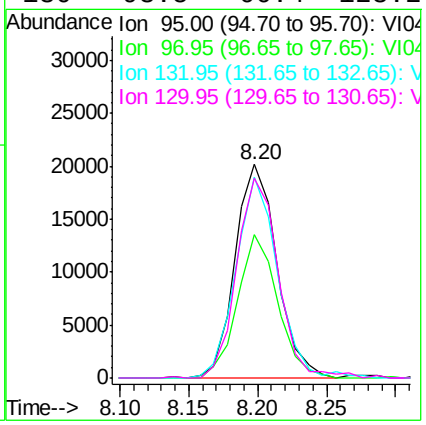


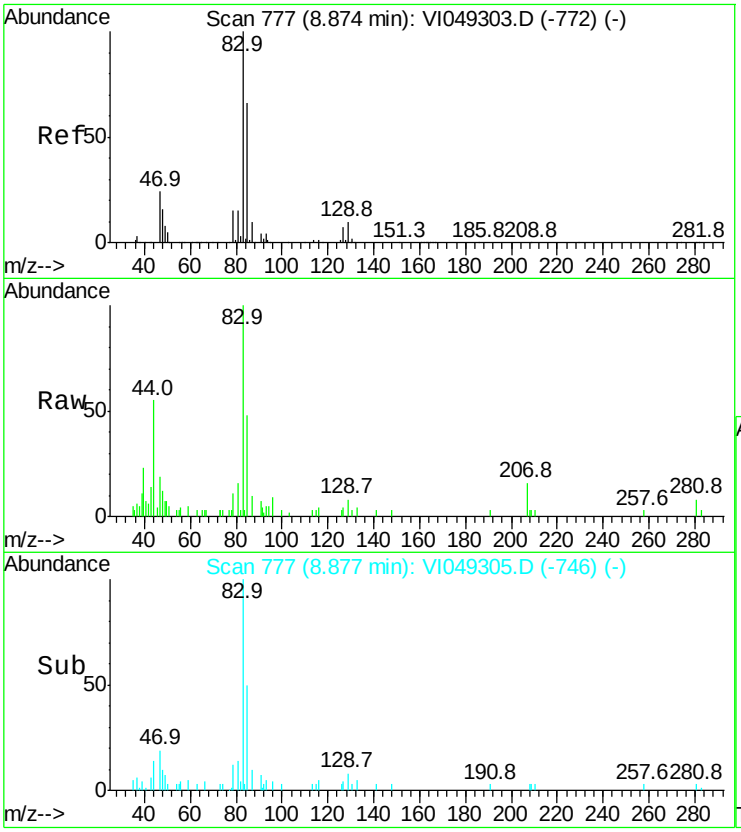


#34
Trichloroethene
Concen: 0.41 ug/L
RT: 8.20 min Scan# 708
Delta R.T. 0.00 min
Lab File: VI049305.D
Acq: 9 May 2016 19:54

Tgt Ion: 95 Resp: 42743

Ion	Ratio	Lower	Upper
95	100		
97	67.0	45.8	85.2
132	93.9	63.9	118.7
130	93.5	66.4	123.2



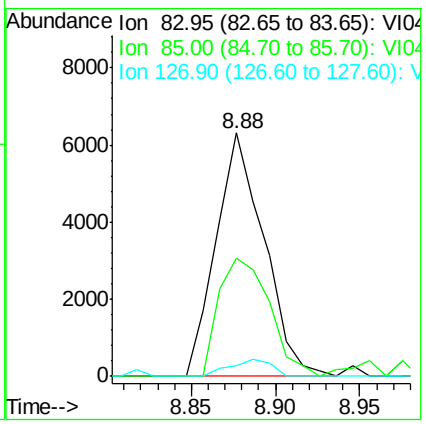


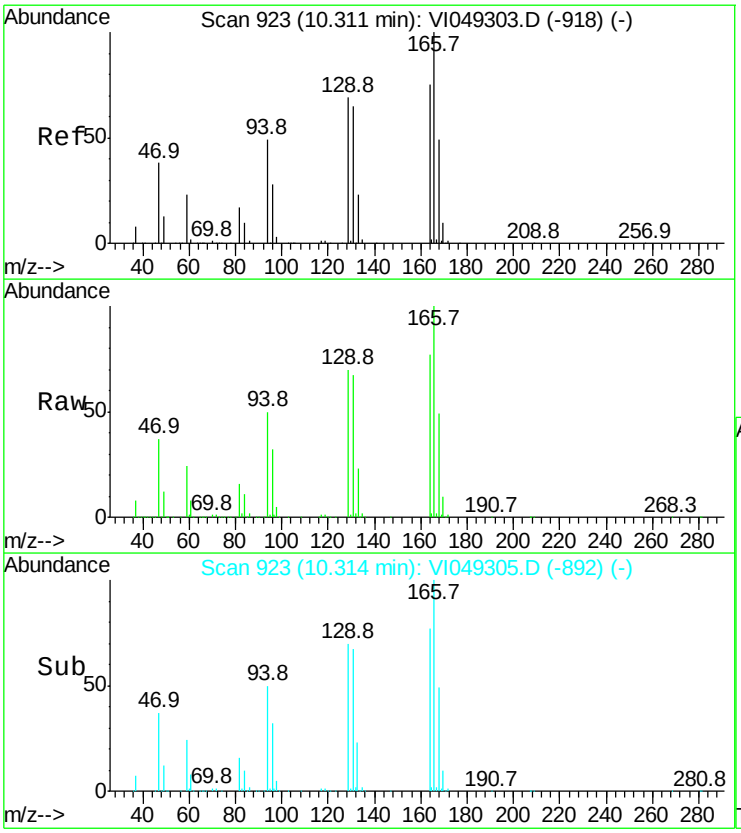
#38
Bromodichloromethane
Concen: 0.10 ug/L
RT: 8.88 min Scan# 777
Delta R.T. 0.00 min
Lab File: VI049305.D
Acq: 9 May 2016 19:54

Instrument : MSVOA_I
ClientSampleId : H4021

Tgt Ion: 83 Resp: 12451

Ion	Ratio	Lower	Upper
83	100		
85	48.4	44.7	83.1
127	4.3	6.6	9.8#

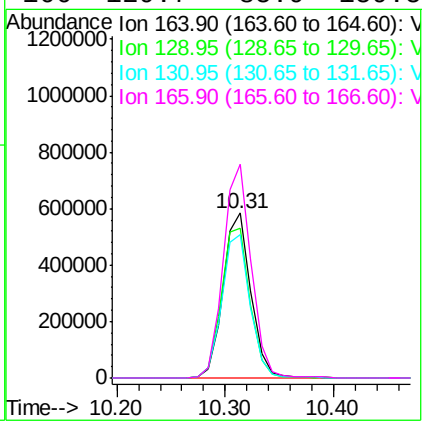




#47
Tetrachloroethene
Concen: 15.09 ug/L
RT: 10.31 min Scan# 923
Delta R.T. 0.00 min
Lab File: VI049305.D
Acq: 9 May 2016 19:54

Tgt Ion:164 Resp: 1038677

Ion	Ratio	Lower	Upper
164	100		
129	91.2	62.1	115.3
131	87.2	60.6	112.6
166	129.7	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049305.D
Acq On : 9 May 2016 19:54
Operator : FY/SY
Sample : H2943-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4021

Quant Time: May 10 06:40:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1347991	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	881841	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	322503	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	314249	3.79	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 75.80%			
7) Chloroethane-d5	2.10	69	205016	4.46	ug/L	0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 89.20%			
11) 1,1-Dichloroethene-d2	2.91	63	569215	2.91	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 58.20%#			
20) 2-Butanone-d5	5.65	46	1022428	56.91	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 113.82%			
24) Chloroform-d	6.36	84	964839	4.57	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 91.40%			
26) 1,2-Dichloroethane-d4	7.21	65	423529	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
32) Benzene-d6	7.15	84	1624005	4.73	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.60%			
36) 1,2-Dichloropropane-d6	8.41	67	469895	4.86	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.20%			
41) Toluene-d8	9.68	98	1111291	4.38	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.60%			
43) trans-1,3-Dichloropropene-	10.00	79	165913	4.36	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 87.20%			
46) 2-Hexanone-d5	10.41	63	658813	54.88	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 109.76%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	210897	4.80	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 96.00%			
63) 1,2-Dichlorobenzene-d4	13.75	152	256372	4.53	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 90.60%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.76	96	38302	0.31	ug/L	93
25) Chloroform	6.40	83	328128	1.51	ug/L	95
29) 1,1,1-Trichloroethane	6.63	97	41228	0.25	ug/L	97
34) Trichloroethene	8.20	95	42743	0.41	ug/L	98
38) Bromodichloromethane	8.88	83	12451	0.10	ug/L #	81
47) Tetrachloroethene	10.31	164	1038677	15.09	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049305.D
Acq On : 9 May 2016 19:54
Operator : FY/SY
Sample : H2943-12
Misc : 25mL/MSVOA I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4021

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.289	3	6	31	rVB	6723018	19321130	100.00%	30.181%
2	1.692	45	47	54	rBV	253989	472227	2.44%	0.738%
3	1.859	62	64	71	rVB	17750	40395	0.21%	0.063%
4	1.948	71	73	74	rBV2	6891	6891	0.04%	0.011%
5	1.997	74	78	79	rBV4	9158	16864	0.09%	0.026%
6	2.096	84	88	95	rVV	176479	373819	1.93%	0.584%
7	2.519	129	131	135	rBV3	10237	28289	0.15%	0.044%
8	2.578	135	137	145	rVB3	19738	47349	0.25%	0.074%
9	2.913	166	171	177	rBV	715764	1611454	8.34%	2.517%
10	3.070	184	187	191	rVV5	3265	8773	0.05%	0.014%
11	3.129	191	193	195	rVV3	5633	5101	0.03%	0.008%
12	3.188	195	199	208	rVV3	25330	80244	0.42%	0.125%
13	3.287	208	209	212	rVB3	7267	5792	0.03%	0.009%
14	3.572	236	238	241	rVB3	7526	12982	0.07%	0.020%
15	3.808	260	262	264	rVV	14300	13576	0.07%	0.021%
16	3.975	275	279	283	rBV5	8016	18445	0.10%	0.029%
17	4.113	292	293	296	rVB2	3805	5998	0.03%	0.009%
18	4.261	306	308	310	rBV2	3665	7057	0.04%	0.011%
19	4.389	320	321	323	rBV2	4828	5438	0.03%	0.008%
20	4.477	327	330	333	rVB4	3347	5402	0.03%	0.008%
21	4.576	336	340	343	rBV6	3839	10100	0.05%	0.016%
22	5.127	393	396	398	rVB4	2961	5131	0.03%	0.008%
23	5.186	398	402	405	rBV3	4315	9877	0.05%	0.015%
24	5.462	428	430	433	rVB4	4105	7118	0.04%	0.011%
25	5.649	442	449	456	rBV	432230	1486662	7.69%	2.322%
26	5.757	456	460	471	rVB3	95389	359260	1.86%	0.561%
27	5.944	477	479	482	rVB4	4869	8293	0.04%	0.013%
28	6.170	499	502	503	rVB3	4552	6311	0.03%	0.010%
29	6.357	512	521	536	rBV2	789761	3052150	15.80%	4.768%
30	6.623	541	548	554	rVV2	37363	128119	0.66%	0.200%
31	6.721	556	558	566	rVB7	6695	23054	0.12%	0.036%
32	6.879	572	574	579	rVB5	5073	11360	0.06%	0.018%
33	7.154	595	602	605	rBV	1222476	3310839	17.14%	5.172%
34	7.213	605	608	617	rVV	472932	1181181	6.11%	1.845%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049305.D
Acq On : 9 May 2016 19:54
Operator : FY/SY
Sample : H2943-12
Misc : 25mL/MSVOA I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4021

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.332	619	620	622	rVB2	8382	8129	0.04%	0.013%
36	7.371	622	624	629	rVB4	4592	10886	0.06%	0.017%
37	7.538	640	641	645	rVB4	4841	9077	0.05%	0.014%
38	7.607	645	648	649	rBV3	4725	8933	0.05%	0.014%
39	7.735	657	661	662	rBV3	3994	8516	0.04%	0.013%
40	7.912	673	679	688	rBV	1528234	3254951	16.85%	5.085%
41	8.198	703	708	713	rVB	116831	246714	1.28%	0.385%
42	8.424	725	731	740	rBV	963575	2245277	11.62%	3.507%
43	8.621	750	751	754	rVB3	6332	7720	0.04%	0.012%
44	8.877	774	777	784	rBV4	20298	58807	0.30%	0.092%
45	9.034	790	793	795	rVB3	3243	6430	0.03%	0.010%
46	9.349	821	825	833	rVV	623697	1083526	5.61%	1.693%
47	9.438	833	834	836	rVV2	3726	5952	0.03%	0.009%
48	9.467	836	837	838	rVV	5241	5051	0.03%	0.008%
49	9.507	838	841	844	rVV2	23452	44667	0.23%	0.070%
50	9.566	844	847	854	rVB7	7080	13960	0.07%	0.022%
51	9.684	854	859	864	rBV	1804057	3228754	16.71%	5.044%
52	9.753	864	866	873	rVB4	22154	51716	0.27%	0.081%
53	9.999	886	891	899	rBV	326095	623568	3.23%	0.974%
54	10.097	899	901	903	rVV3	8170	16155	0.08%	0.025%
55	10.127	903	904	905	rVV	8558	9487	0.05%	0.015%
56	10.205	905	912	918	rVV	34407	122655	0.63%	0.192%
57	10.314	918	923	929	rVV	4730991	8854680	45.83%	13.832%
58	10.412	929	933	946	rVV	1978093	3540949	18.33%	5.531%
59	10.560	946	948	949	rVV2	10550	16747	0.09%	0.026%
60	10.589	949	951	954	rVV4	16353	33989	0.18%	0.053%
61	10.629	954	955	957	rVV2	9459	12408	0.06%	0.019%
62	10.698	961	962	965	rVV3	6196	8075	0.04%	0.013%
63	10.747	965	967	969	rVV3	4907	8102	0.04%	0.013%
64	10.845	972	977	978	rVV5	3551	8057	0.04%	0.013%
65	10.904	981	983	986	rBV4	3985	6118	0.03%	0.010%
66	11.209	1009	1014	1024	rBV	1733953	3078875	15.94%	4.809%
67	11.337	1024	1027	1032	rVB2	18273	39950	0.21%	0.062%
68	11.446	1036	1038	1044	rVB5	10590	27490	0.14%	0.043%
69	11.790	1070	1073	1074	rVV3	2658	5191	0.03%	0.008%
70	11.829	1074	1077	1082	rVB5	9442	21887	0.11%	0.034%
71	12.046	1095	1099	1102	rBV5	4284	10763	0.06%	0.017%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049305.D
Acq On : 9 May 2016 19:54
Operator : FY/SY
Sample : H2943-12
Misc : 25mL/MSVOA I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4021

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	12.085	1102	1103	1107	rVB4	4106	6278	0.03%	0.010%
73	12.184	1110	1113	1115	rVB4	5385	11044	0.06%	0.017%
74	12.243	1115	1119	1120	rBV4	4507	7933	0.04%	0.012%
75	12.390	1130	1134	1136	rVV	46995	84582	0.44%	0.132%
76	12.449	1136	1140	1145	rVV	469727	795306	4.12%	1.242%
77	12.538	1145	1149	1151	rVB4	2893	5169	0.03%	0.008%
78	12.568	1151	1152	1158	rVB5	4011	6819	0.04%	0.011%
79	12.646	1158	1160	1162	rBV3	4529	6708	0.03%	0.010%
80	12.932	1187	1189	1192	rBV4	2987	5412	0.03%	0.008%
81	13.089	1201	1205	1206	rVB3	5765	10405	0.05%	0.016%
82	13.119	1206	1208	1209	rBV2	3093	5240	0.03%	0.008%
83	13.227	1216	1219	1220	rBV3	5038	7085	0.04%	0.011%
84	13.306	1225	1227	1228	rBV2	4560	5505	0.03%	0.009%
85	13.355	1228	1232	1234	rVB5	5222	6290	0.03%	0.010%
86	13.414	1234	1238	1249	rBV	1376929	2396669	12.40%	3.744%
87	13.749	1267	1272	1279	rVV	1042042	1939127	10.04%	3.029%
88	13.975	1293	1295	1296	rVV2	5291	6812	0.04%	0.011%
89	14.024	1296	1300	1303	rVB2	45071	84854	0.44%	0.133%
90	14.172	1312	1315	1316	rBV3	4620	9115	0.05%	0.014%
91	14.260	1322	1324	1326	rBV3	4599	5424	0.03%	0.008%
92	14.310	1326	1329	1331	rBV4	6653	14080	0.07%	0.022%
93	14.398	1336	1338	1339	rBV2	4348	5159	0.03%	0.008%
94	14.428	1339	1341	1343	rBV2	5652	9047	0.05%	0.014%
95	14.506	1347	1349	1350	rBV2	5055	5675	0.03%	0.009%
96	14.536	1350	1352	1354	rBV3	4972	6359	0.03%	0.010%
97	14.615	1359	1360	1364	rBV4	5941	12243	0.06%	0.019%
98	15.156	1413	1415	1417	rBV3	9536	15945	0.08%	0.025%
99	15.599	1456	1460	1463	rVB	50348	102635	0.53%	0.160%
100	15.835	1483	1484	1485	rBV	9796	9184	0.05%	0.014%

Sum of corrected areas: 64016997

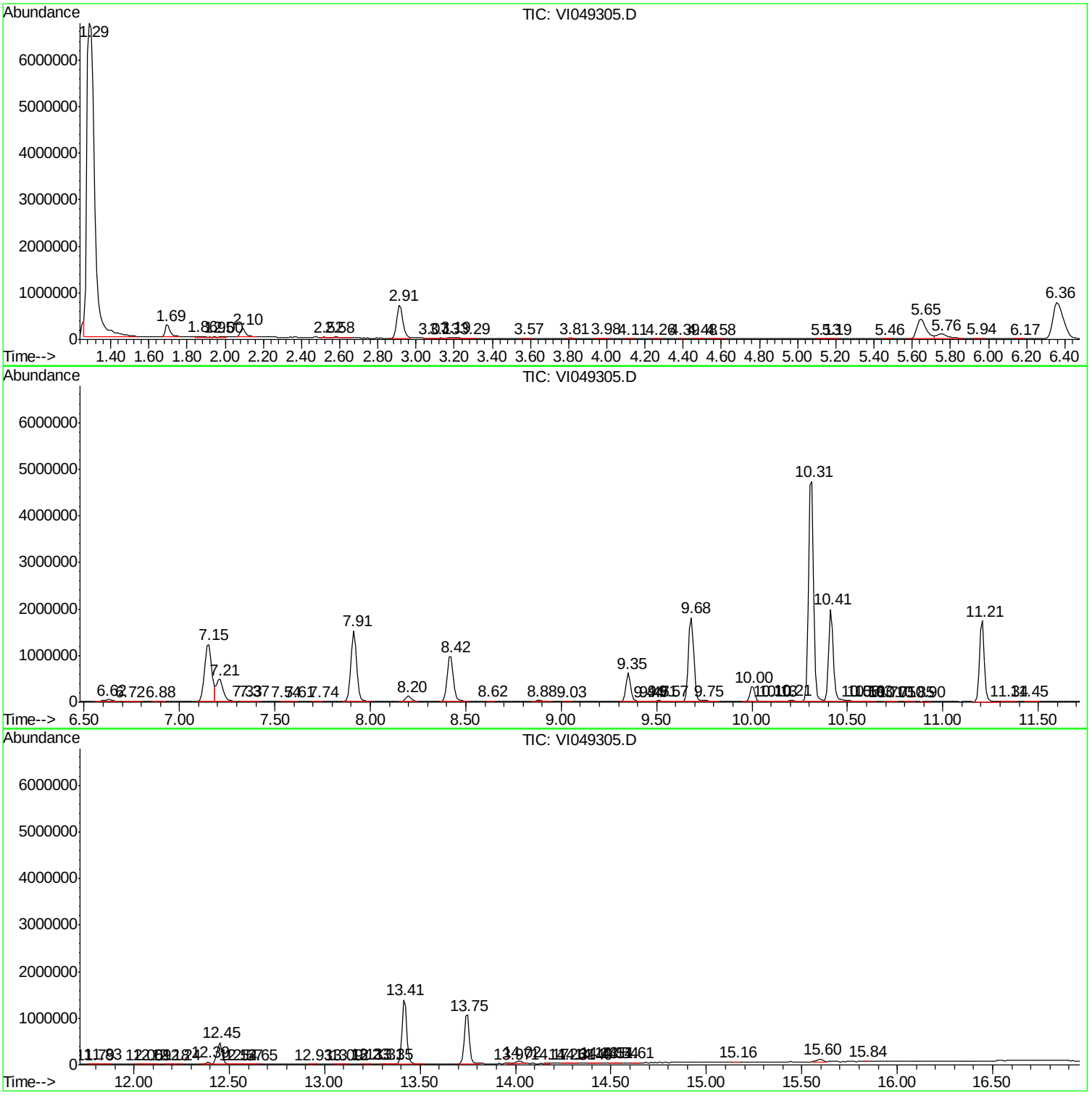
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049305.D
Acq On : 9 May 2016 19:54
Operator : FY/SY
Sample : H2943-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4021

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049305.D
Acq On : 9 May 2016 19:54
Operator : FY/SY
Sample : H2943-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4021

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

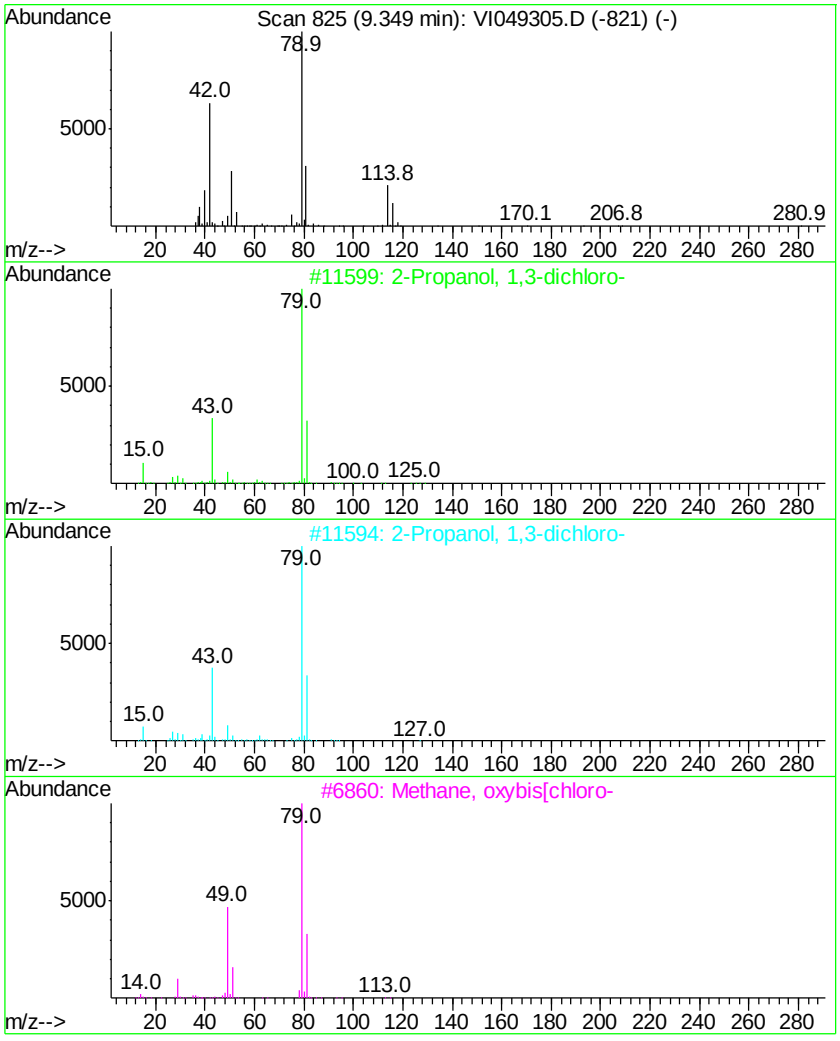
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

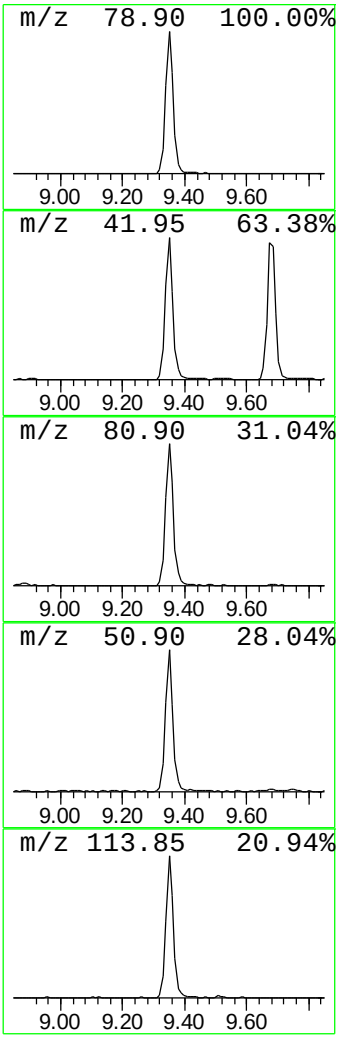
****

Peak Number 2 unknown-01 Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.35	1.66 ug/L	1083530	1,4-Difluorobenzene	7.91

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Propanol, 1,3-dichloro-	128	C3H6Cl2O	000096-23-1	17
2	2-Propanol, 1,3-dichloro-	128	C3H6Cl2O	000096-23-1	12
3	Methane, oxybis[chloro-	114	C2H4Cl2O	000542-88-1	9
4	Cyclopropane	42	C3H6	000075-19-4	9
5	Cyclopropane	42	C3H6	000075-19-4	9





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049305.D
Acq On : 9 May 2016 19:54
Operator : FY/SY
Sample : H2943-12
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4021

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
unknown-01	9.35	1.7	ug/L	1083530	1	7.91	3254950	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4022

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049306.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4022

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049306.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4022

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049306.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4022

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-13
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049306.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000109-99-9	Furan, tetrahydro-	6.2	0.43	JN
2	E966796	Total Alkanes	N/A	0.0	

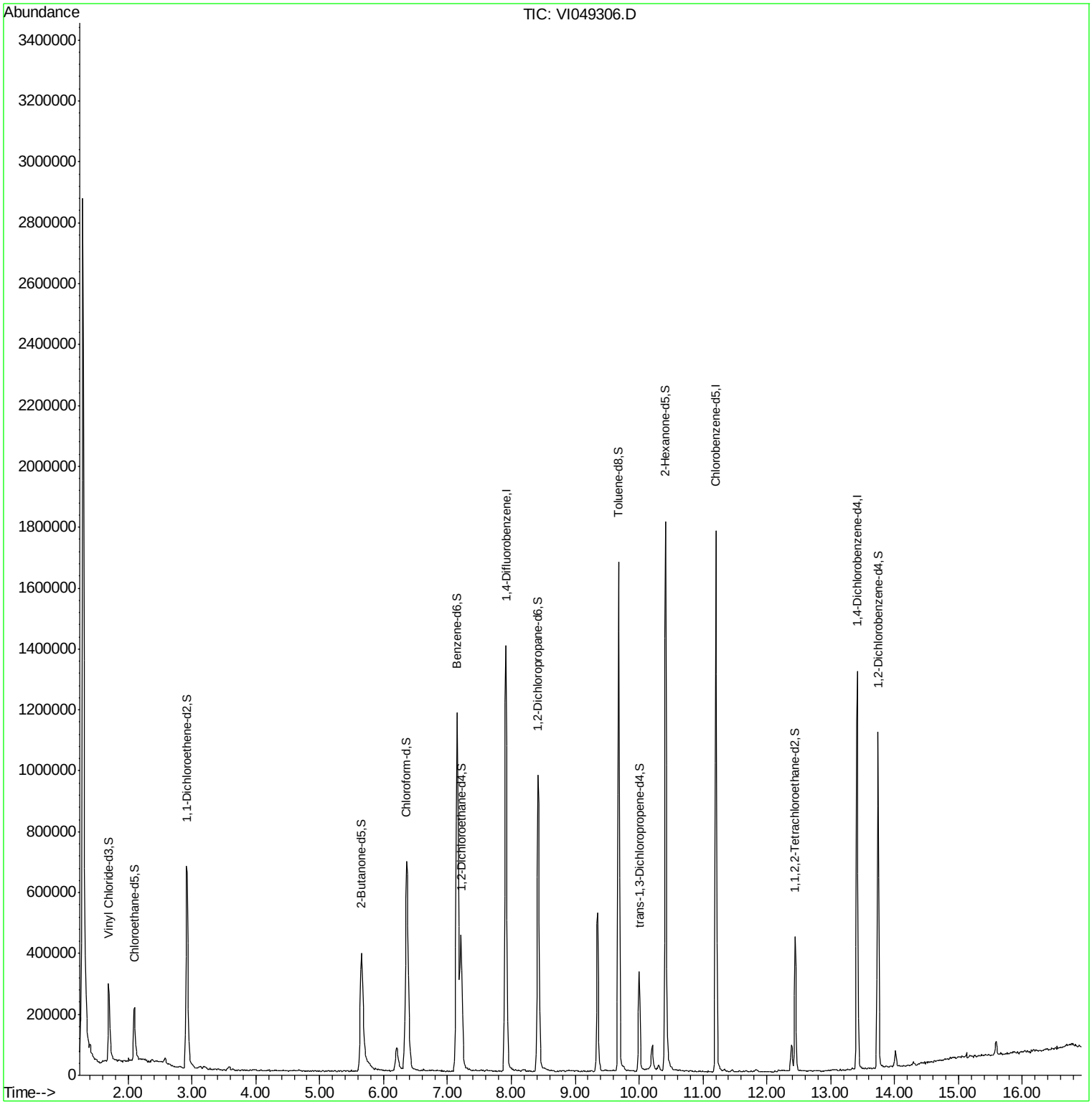
EPA-designated Registry Number.

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049306.D
Acq On : 9 May 2016 20:25
Operator : FY/SY
Sample : H2943-13
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 17 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4022

Quant Time: May 10 06:42:55 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049306.D
Acq On : 9 May 2016 20:25
Operator : FY/SY
Sample : H2943-13
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 17 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4022

Quant Time: May 10 06:42:55 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1284323	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	843254	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	304558	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	290090	3.67	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 73.40%			
7) Chloroethane-d5	2.10	69	199659	4.56	ug/L	0.02
Spiked Amount 5.000	Range 65 - 130		Recovery = 91.20%			
11) 1,1-Dichloroethene-d2	2.92	63	547735	2.94	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 58.80%#			
20) 2-Butanone-d5	5.65	46	913360	53.36	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 106.72%			
24) Chloroform-d	6.36	84	853495	4.24	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 84.80%			
26) 1,2-Dichloroethane-d4	7.22	65	396800	4.82	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.40%			
32) Benzene-d6	7.15	84	1534857	4.67	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.40%			
36) 1,2-Dichloropropane-d6	8.42	67	452925	4.90	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 98.00%			
41) Toluene-d8	9.68	98	1052275	4.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 86.80%			
43) trans-1,3-Dichloropropene-	10.00	79	155960	4.29	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 85.80%			
46) 2-Hexanone-d5	10.41	63	604501	52.66	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 105.32%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	196496	4.68	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 93.60%			
63) 1,2-Dichlorobenzene-d4	13.74	152	247850	4.64	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 92.80%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049306.D
Acq On : 9 May 2016 20:25
Operator : FY/SY
Sample : H2943-13
Misc : 25mL/MSVOA I/WATER
ALS Vial : 17 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4022

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.291	3	6	16	rVB	2788297	5794135	100.00%	15.023%
2	1.606	36	38	39	rBV2	6289	9148	0.16%	0.024%
3	1.695	44	47	59	rVV	256677	495836	8.56%	1.286%
4	2.010	78	79	80	rBV	11261	8216	0.14%	0.021%
5	2.098	84	88	95	rVV	176146	380674	6.57%	0.987%
6	2.374	114	116	121	rBV5	8959	23985	0.41%	0.062%
7	2.581	133	137	141	rVB2	20632	47827	0.83%	0.124%
8	2.915	166	171	185	rVV	662615	1551981	26.79%	4.024%
9	3.112	188	191	192	rVV3	6215	11179	0.19%	0.029%
10	3.181	196	198	205	rVB2	9623	30890	0.53%	0.080%
11	3.279	207	208	210	rBV2	6150	6803	0.12%	0.018%
12	3.407	218	221	223	rVB4	4487	7450	0.13%	0.019%
13	3.506	228	231	233	rBV4	2907	5693	0.10%	0.015%
14	3.978	274	279	280	rVV4	3635	10332	0.18%	0.027%
15	4.008	280	282	283	rVB2	4217	4562	0.08%	0.012%
16	4.086	287	290	294	rVB5	4346	8879	0.15%	0.023%
17	4.204	301	302	304	rVB2	3982	4678	0.08%	0.012%
18	4.293	310	311	315	rBV4	3924	7342	0.13%	0.019%
19	4.460	327	328	333	rVB6	3036	4650	0.08%	0.012%
20	4.667	343	349	352	rVB7	3446	8482	0.15%	0.022%
21	4.874	369	370	373	rBV3	3466	4880	0.08%	0.013%
22	4.923	373	375	378	rBV2	3788	6394	0.11%	0.017%
23	5.090	391	392	394	rVB2	4101	4689	0.08%	0.012%
24	5.139	394	397	399	rBV3	3603	7339	0.13%	0.019%
25	5.189	399	402	404	rBV3	3056	5905	0.10%	0.015%
26	5.326	414	416	418	rBV3	3650	5558	0.10%	0.014%
27	5.366	418	420	424	rBV3	2928	6396	0.11%	0.017%
28	5.494	432	433	437	rVB4	5167	7299	0.13%	0.019%
29	5.563	437	440	442	rBV4	4757	8232	0.14%	0.021%
30	5.651	442	449	470	rBV	388609	1533325	26.46%	3.976%
31	5.868	470	471	475	rVV2	7256	13672	0.24%	0.035%
32	5.947	478	479	483	rVB3	3556	5704	0.10%	0.015%
33	6.202	499	505	513	rBV2	78000	269265	4.65%	0.698%
34	6.360	515	521	536	rVV	687628	2184929	37.71%	5.665%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049306.D
Acq On : 9 May 2016 20:25
Operator : FY/SY
Sample : H2943-13
Misc : 25mL/MSVOA I/WATER
ALS Vial : 17 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4022

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.626	546	548	551	rVB3	5029	7573	0.13%	0.020%
36	6.842	568	570	572	rVB3	3298	4922	0.08%	0.013%
37	6.911	576	577	580	rVB3	6638	5812	0.10%	0.015%
38	7.078	591	594	595	rBV3	3361	5332	0.09%	0.014%
39	7.147	595	601	605	rBV	1177057	3167934	54.67%	8.214%
40	7.216	605	608	616	rVV	444699	1126249	19.44%	2.920%
41	7.334	619	620	625	rVV4	5161	9534	0.16%	0.025%
42	7.561	641	643	645	rVB3	3736	5360	0.09%	0.014%
43	7.620	645	649	652	rBV5	4901	11098	0.19%	0.029%
44	7.738	658	661	663	rBV3	4239	5128	0.09%	0.013%
45	7.915	673	679	692	rBV	1397349	3097817	53.46%	8.032%
46	8.053	692	693	697	rVB3	4011	6324	0.11%	0.016%
47	8.190	703	707	711	rVB6	6759	21421	0.37%	0.056%
48	8.240	711	712	715	rVB3	4386	5291	0.09%	0.014%
49	8.289	715	717	718	rBV2	3583	5048	0.09%	0.013%
50	8.417	725	730	740	rBV	971192	2146554	37.05%	5.566%
51	8.751	762	764	767	rVB3	2411	4779	0.08%	0.012%
52	8.899	774	779	780	rBV5	5326	8379	0.14%	0.022%
53	9.263	813	816	819	rVB5	4013	6279	0.11%	0.016%
54	9.352	819	825	834	rBV	522335	1016957	17.55%	2.637%
55	9.677	854	858	872	rBV	1672704	3076205	53.09%	7.976%
56	9.824	872	873	876	rVB3	3869	4926	0.09%	0.013%
57	9.883	876	879	882	rVB4	2621	4778	0.08%	0.012%
58	10.001	887	891	897	rBV	327152	556965	9.61%	1.444%
59	10.100	899	901	902	rVV2	4838	5131	0.09%	0.013%
60	10.139	902	905	906	rVV3	5168	9536	0.16%	0.025%
61	10.208	906	912	918	rVV	81556	191478	3.30%	0.496%
62	10.297	918	921	929	rVV9	15738	33971	0.59%	0.088%
63	10.415	929	933	947	rVB	1802460	3129802	54.02%	8.115%
64	10.641	954	956	959	rVB4	3747	5289	0.09%	0.014%
65	10.690	959	961	963	rVB3	3824	4958	0.09%	0.013%
66	10.740	963	966	967	rBV3	3008	4929	0.09%	0.013%
67	10.789	970	971	975	rVB3	2243	4717	0.08%	0.012%
68	11.202	1009	1013	1024	rBV	1775659	2920899	50.41%	7.574%
69	11.340	1024	1027	1030	rVB2	6556	12268	0.21%	0.032%
70	11.458	1035	1039	1043	rVB5	7356	17458	0.30%	0.045%
71	11.566	1048	1050	1053	rBV3	3267	4861	0.08%	0.013%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049306.D
Acq On : 9 May 2016 20:25
Operator : FY/SY
Sample : H2943-13
Misc : 25mL/MSVOA I/WATER
ALS Vial : 17 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4022

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.675	1059	1061	1063	rBV2	3281	4649	0.08%	0.012%
73	11.842	1074	1078	1081	rVB6	6491	16743	0.29%	0.043%
74	12.039	1095	1098	1102	rVB6	2993	8065	0.14%	0.021%
75	12.127	1102	1107	1108	rBV5	3505	7015	0.12%	0.018%
76	12.186	1110	1113	1115	rBV3	5194	9293	0.16%	0.024%
77	12.265	1119	1121	1124	rVB4	3309	4796	0.08%	0.012%
78	12.383	1129	1133	1136	rBV	85615	163108	2.82%	0.423%
79	12.442	1136	1139	1146	rVB	439139	734845	12.68%	1.905%
80	12.590	1152	1154	1157	rVB4	3069	5201	0.09%	0.013%
81	12.678	1159	1163	1164	rBV4	2447	4566	0.08%	0.012%
82	12.806	1173	1176	1181	rVB6	2135	5232	0.09%	0.014%
83	12.915	1185	1187	1189	rBV3	2714	5324	0.09%	0.014%
84	13.023	1196	1198	1200	rBV3	3510	6331	0.11%	0.016%
85	13.151	1208	1211	1212	rBV3	5001	5094	0.09%	0.013%
86	13.200	1212	1216	1217	rBV4	3455	5664	0.10%	0.015%
87	13.269	1219	1223	1225	rBV5	3685	8775	0.15%	0.023%
88	13.338	1225	1230	1233	rBV7	6236	14690	0.25%	0.038%
89	13.417	1233	1238	1246	rBV	1308175	2246787	38.78%	5.826%
90	13.535	1249	1250	1253	rBV2	4773	6439	0.11%	0.017%
91	13.604	1253	1257	1258	rVB4	4430	7787	0.13%	0.020%
92	13.633	1258	1260	1262	rBV3	4205	6346	0.11%	0.016%
93	13.682	1262	1265	1266	rVB3	4071	5884	0.10%	0.015%
94	13.741	1266	1271	1277	rBV	1107536	1904090	32.86%	4.937%
95	14.017	1294	1299	1303	rVV2	54112	108526	1.87%	0.281%
96	14.293	1325	1327	1332	rVB6	10075	16811	0.29%	0.044%
97	14.420	1337	1340	1341	rBV3	7102	11424	0.20%	0.030%
98	15.129	1411	1412	1413	rVB	20229	11945	0.21%	0.031%
99	15.592	1455	1459	1462	rBV	41865	75079	1.30%	0.195%
100	16.143	1513	1515	1516	rBV2	10937	14507	0.25%	0.038%

Sum of corrected areas: 38567307

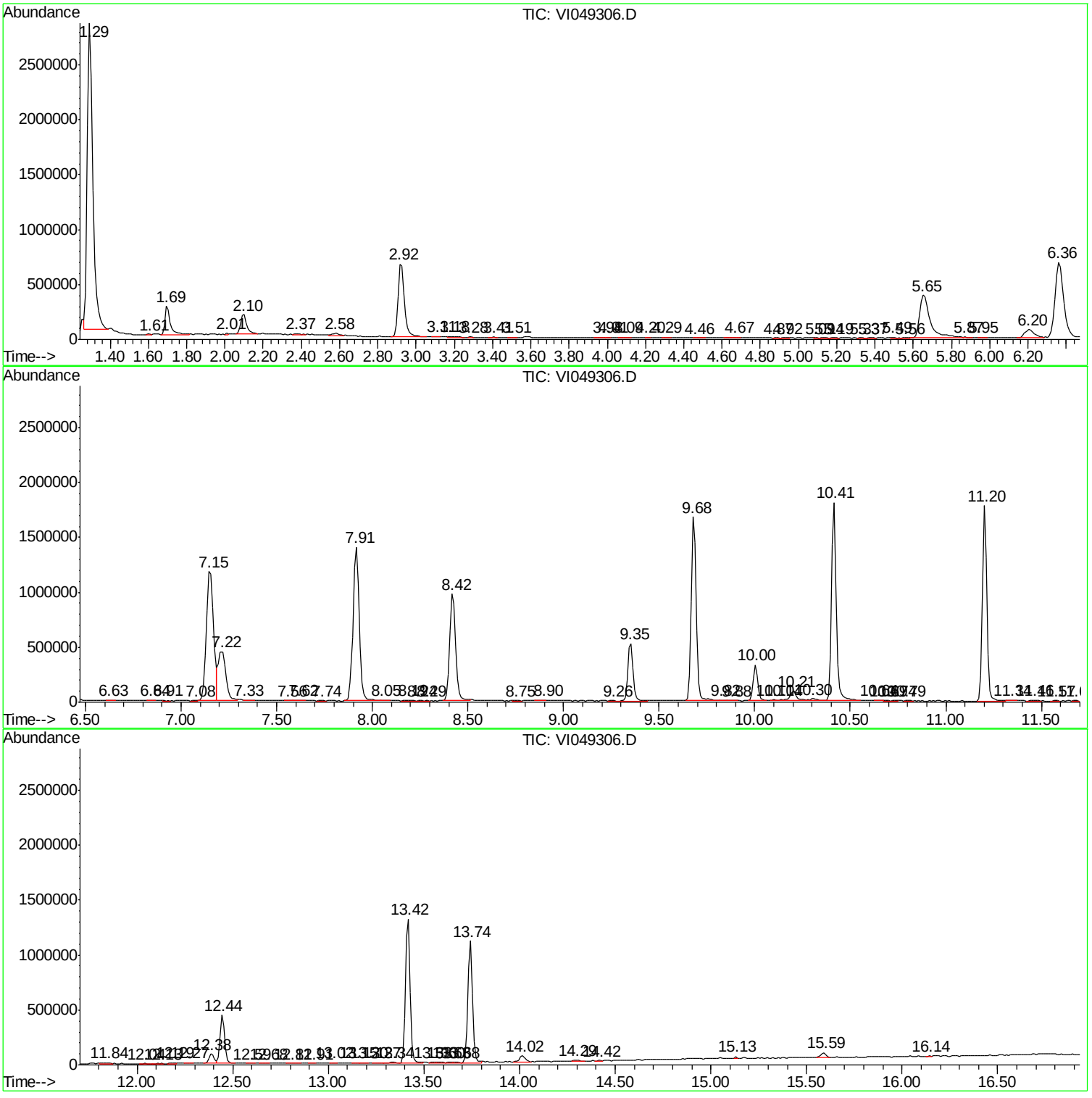
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049306.D
Acq On : 9 May 2016 20:25
Operator : FY/SY
Sample : H2943-13
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 17 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4022

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049306.D
Acq On : 9 May 2016 20:25
Operator : FY/SY
Sample : H2943-13
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 17 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4022

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

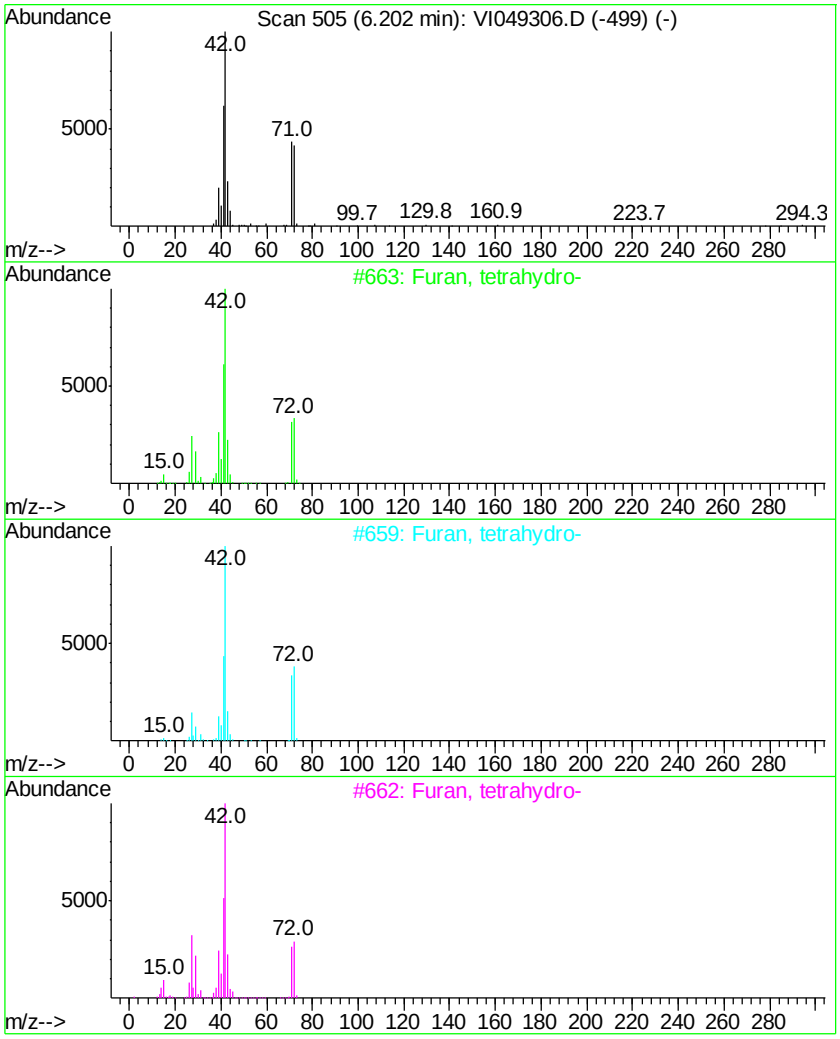
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

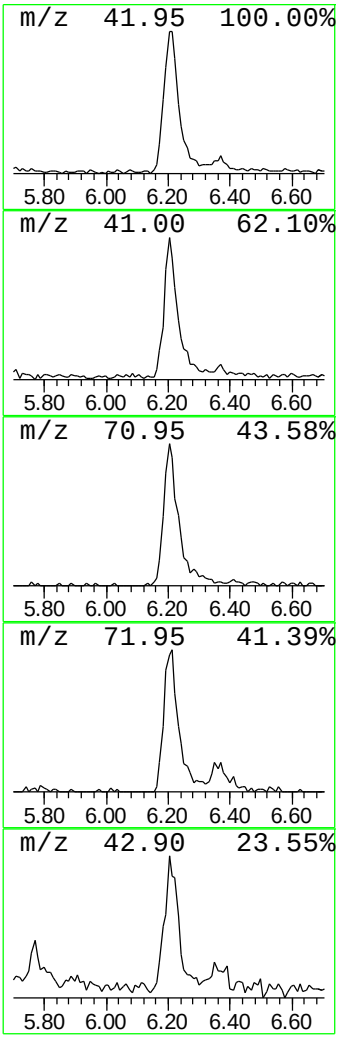
****

Peak Number 2 Furan, tetrahydro- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.20	0.43 ug/L	269265	1,4-Difluorobenzene	7.91

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Furan, tetrahydro-	72	C4H8O	000109-99-9	90
2	Furan, tetrahydro-	72	C4H8O	000109-99-9	86
3	Furan, tetrahydro-	72	C4H8O	000109-99-9	64
4	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	40
5	1-Propene, 2-methoxy-	72	C4H8O	000116-11-0	40





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049306.D
Acq On : 9 May 2016 20:25
Operator : FY/SY
Sample : H2943-13
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 17 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4022

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Furan, tetrahydro-	6.20	0.4	ug/L	269265	1	7.91	3097820	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4104

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049346.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.9	
71-55-6	1,1,1-Trichloroethane	0.23	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.53	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4104

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049346.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	18	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4104

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049346.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H4104

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049346.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000067-63-0	Isopropyl Alcohol	3.17	0.30	JN
2	E966796	Total Alkanes	N/A	0.0	

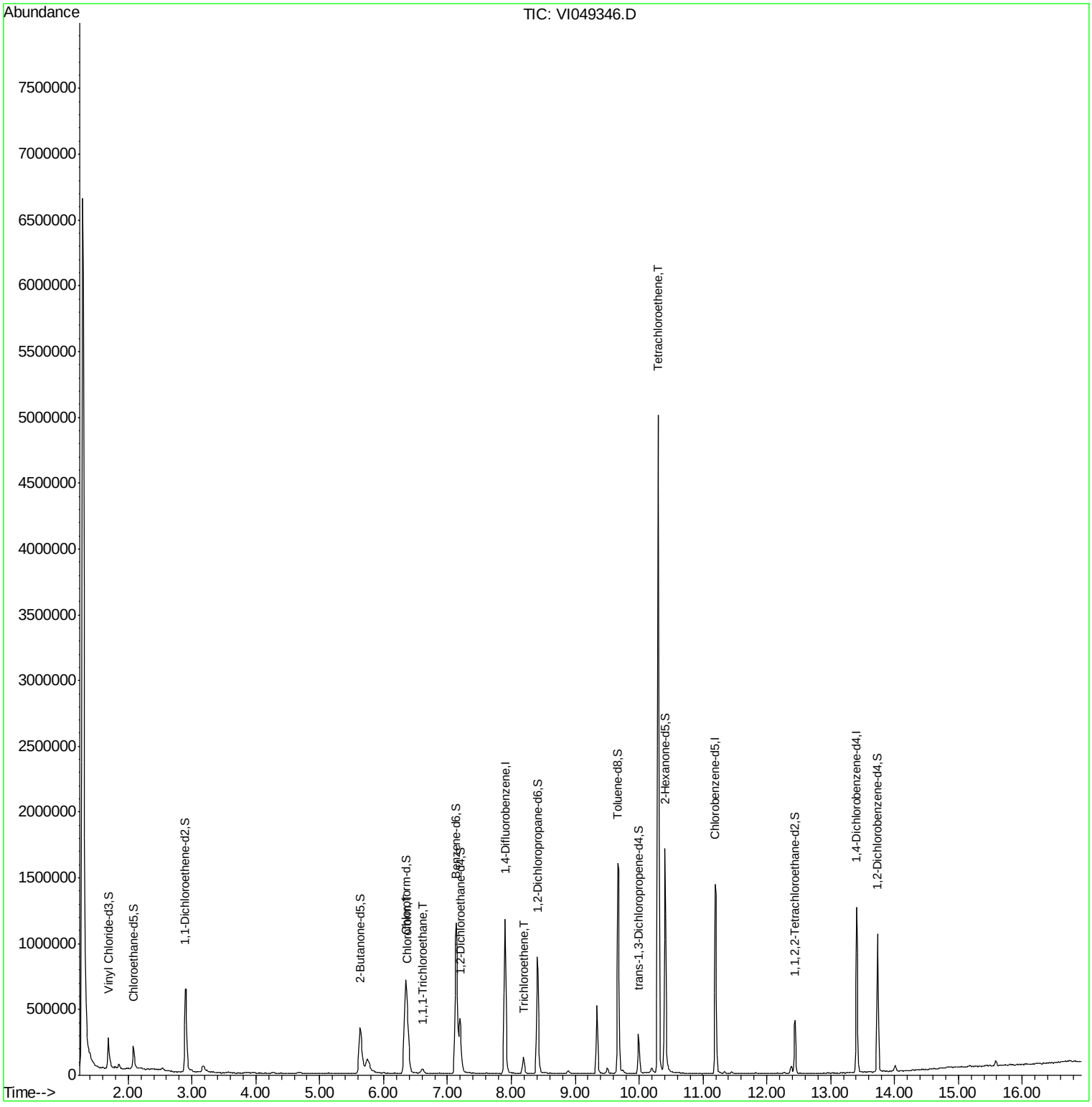
EPA-designated Registry Number.

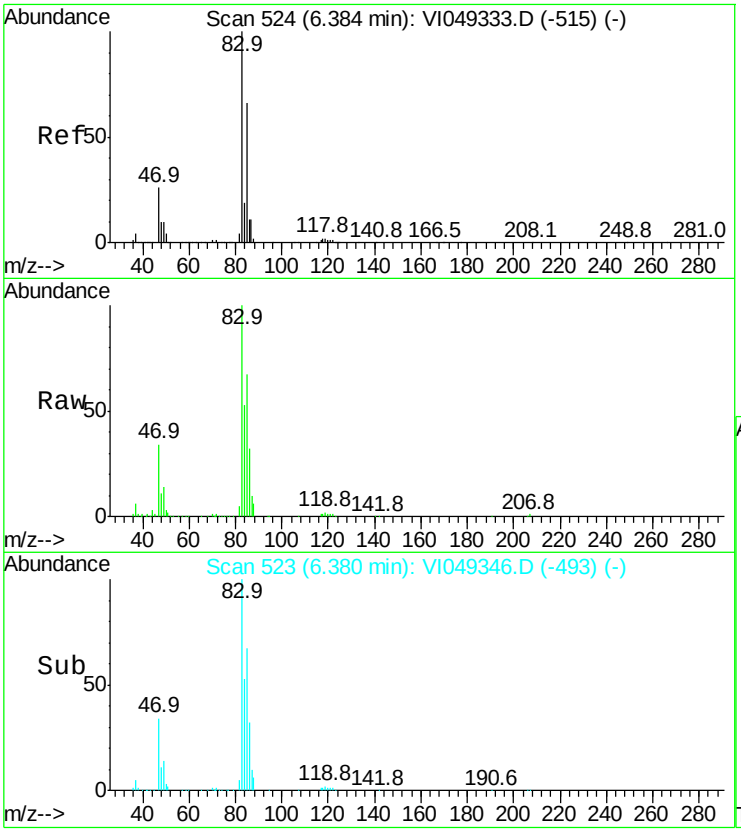
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049346.D
Acq On : 11 May 2016 17:59
Operator : FY/SY
Sample : H2943-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4104

Quant Time: May 12 06:49:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration



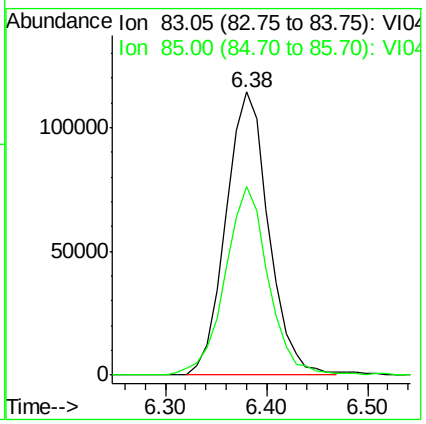


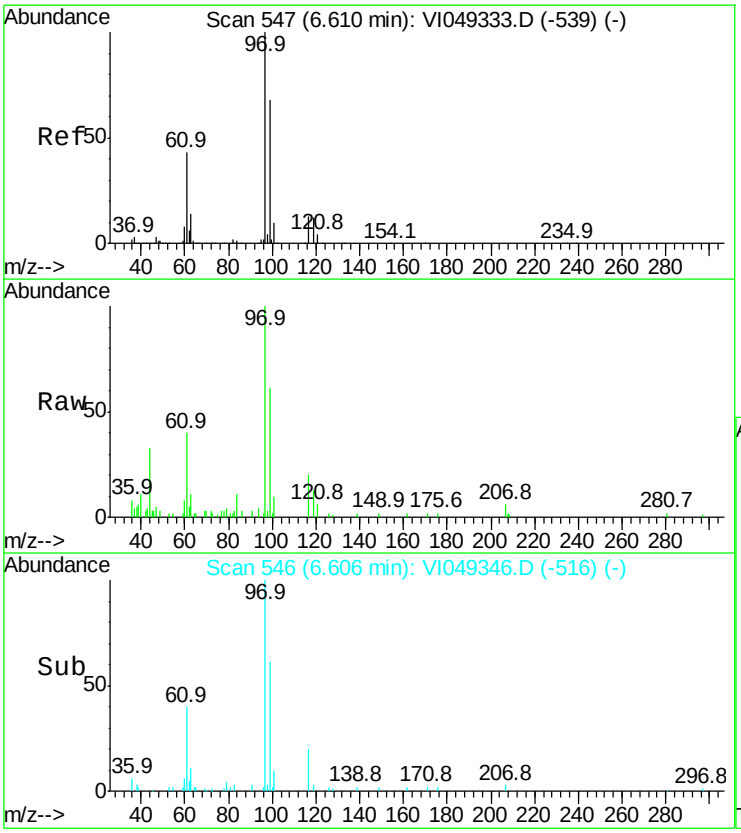
#25
Chloroform
Concen: 1.90 ug/L
RT: 6.38 min Scan# 523
Delta R.T. -0.00 min
Lab File: VI049346.D
Acq: 11 May 2016 17:59

Instrument : MSVOA_I
ClientSampleId : H4104

Tgt Ion: 83 Resp: 337169

Ion	Ratio	Lower	Upper
83	100		
85	66.5	47.3	87.8

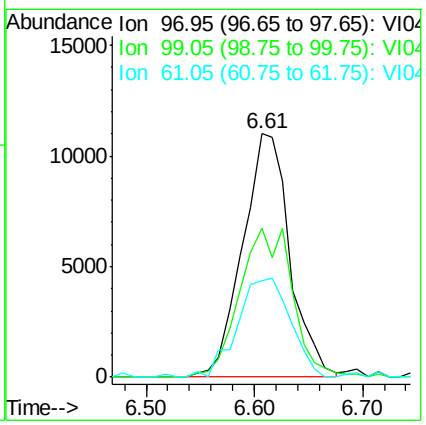


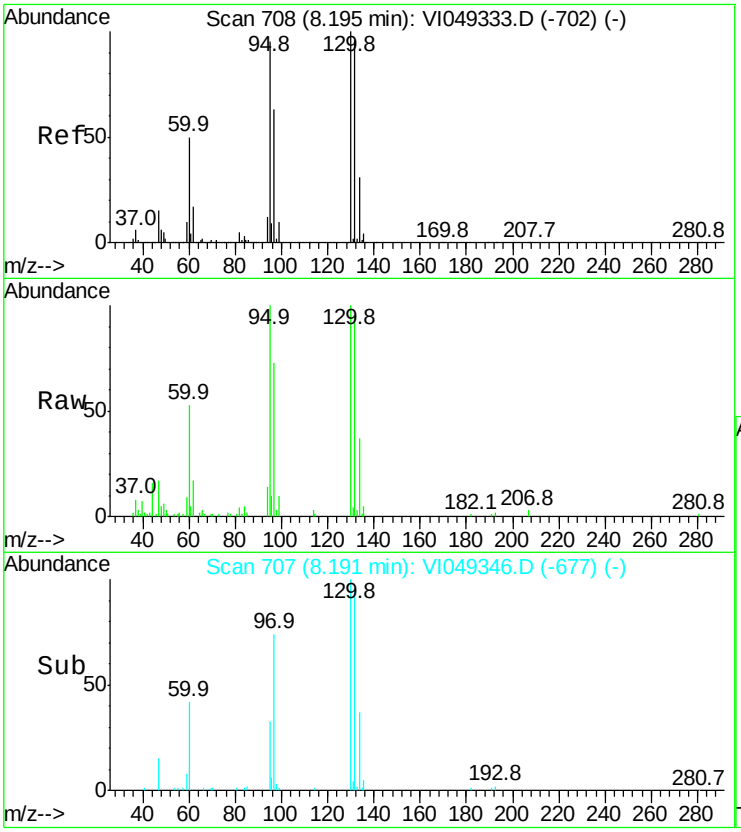


#29
1,1,1-Trichloroethane
Concen: 0.23 ug/L
RT: 6.61 min Scan# 546
Delta R.T. -0.00 min
Lab File: VI049346.D
Acq: 11 May 2016 17:59

Tgt Ion: 97 Resp: 33595

Ion	Ratio	Lower	Upper
97	100		
99	44.4	51.1	76.7#
61	45.0	33.3	49.9



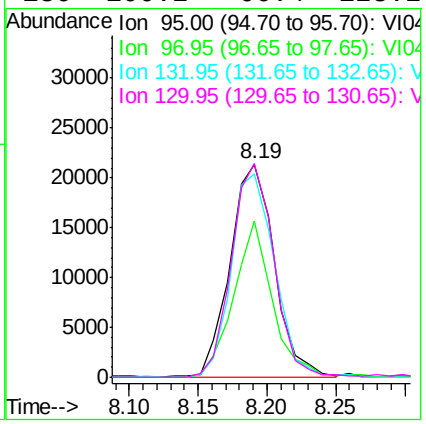


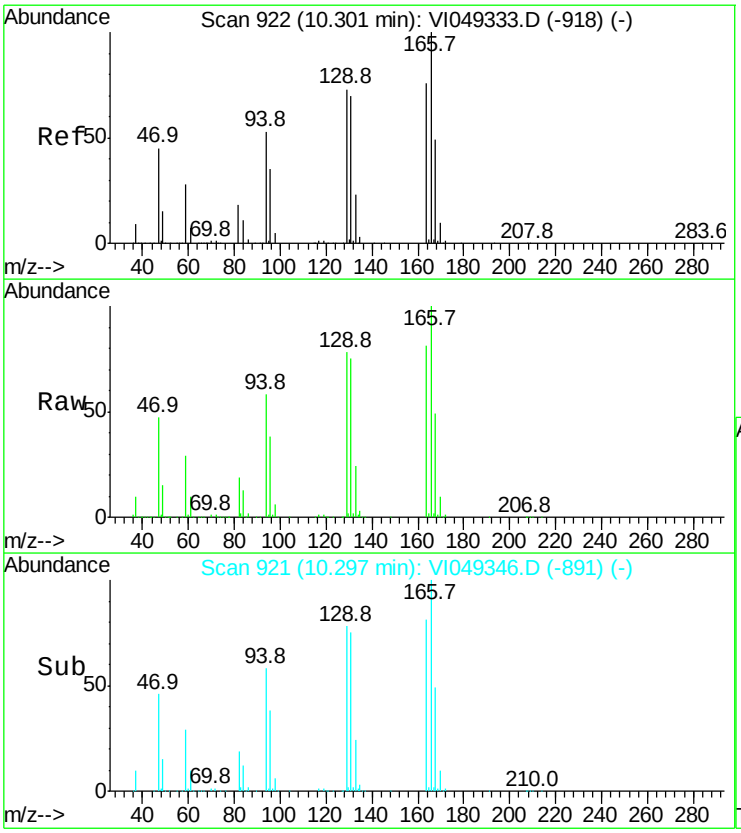
#34
Trichloroethene
Concen: 0.53 ug/L
RT: 8.19 min Scan# 707
Delta R.T. -0.00 min
Lab File: VI049346.D
Acq: 11 May 2016 17:59

Instrument : MSVOA_I
ClientSampleId : H4104

Tgt Ion: 95 Resp: 47972

Ion	Ratio	Lower	Upper
95	100		
97	73.2	45.8	85.2
132	95.4	63.9	118.7
130	100.2	66.4	123.2

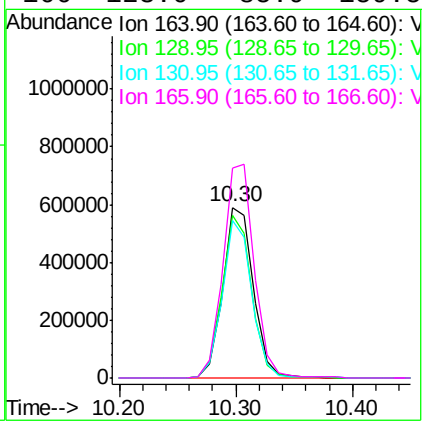




#47
Tetrachloroethene
Concen: 17.96 ug/L
RT: 10.30 min Scan# 921
Delta R.T. -0.00 min
Lab File: VI049346.D
Acq: 11 May 2016 17:59

Tgt Ion:164 Resp: 1070882

Ion	Ratio	Lower	Upper
164	100		
129	95.8	62.1	115.3
131	92.7	60.6	112.6
166	123.0	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049346.D
Acq On : 11 May 2016 17:59
Operator : FY/SY
Sample : H2943-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4104

Quant Time: May 12 06:49:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1100611	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	763889	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	283232	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	279309	4.12	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.40%			
7) Chloroethane-d5	2.08	69	183150	4.88	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 97.60%			
11) 1,1-Dichloroethene-d2	2.90	63	530639	3.32	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 66.40%			
20) 2-Butanone-d5	5.63	46	858901	58.55	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 117.10%			
24) Chloroform-d	6.34	84	861977	5.00	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.00%			
26) 1,2-Dichloroethane-d4	7.20	65	367313	5.21	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.20%			
32) Benzene-d6	7.14	84	1469398	4.94	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.80%			
36) 1,2-Dichloropropane-d6	8.41	67	415255	4.96	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 99.20%			
41) Toluene-d8	9.67	98	1045915	4.76	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.20%			
43) trans-1,3-Dichloropropene-	9.99	79	147502	4.47	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 89.40%			
46) 2-Hexanone-d5	10.41	63	569778	54.79	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 109.58%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	191569	5.03	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 100.60%			
63) 1,2-Dichlorobenzene-d4	13.73	152	246725	4.97	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 99.40%			
Target Compounds						Qvalue
25) Chloroform	6.38	83	337169	1.90	ug/L	99
29) 1,1,1-Trichloroethane	6.61	97	33595	0.23	ug/L #	83
34) Trichloroethene	8.19	95	47972	0.53	ug/L	94
47) Tetrachloroethene	10.30	164	1070882	17.96	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049346.D
Acq On : 11 May 2016 17:59
Operator : FY/SY
Sample : H2943-01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4104

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.292	3	6	33	rVB	6606723	17527468	100.00%	30.192%
2	1.695	43	47	55	rBV	233644	450488	2.57%	0.776%
3	1.794	55	57	61	rVV2	16145	35147	0.20%	0.061%
4	1.853	61	63	66	rVB2	34931	63521	0.36%	0.109%
5	2.079	83	86	95	rVB	168638	312510	1.78%	0.538%
6	2.542	130	133	138	rVB3	20570	42821	0.24%	0.074%
7	2.680	145	147	151	rVB3	11820	19060	0.11%	0.033%
8	2.739	151	153	156	rVB4	5599	9301	0.05%	0.016%
9	2.778	156	157	158	rBV	4404	4844	0.03%	0.008%
10	2.896	164	169	177	rBV	631672	1491553	8.51%	2.569%
11	3.103	186	190	191	rBV3	7622	13033	0.07%	0.022%
12	3.172	192	197	205	rBV2	45573	160106	0.91%	0.276%
13	3.339	212	214	217	rVB4	4268	4664	0.03%	0.008%
14	3.565	234	237	240	rVV4	8036	14908	0.09%	0.026%
15	3.624	240	243	244	rVB3	3717	5521	0.03%	0.010%
16	3.664	244	247	251	rVB5	3720	8567	0.05%	0.015%
17	3.900	270	271	273	rVB2	4447	5141	0.03%	0.009%
18	3.929	273	274	275	rBV	5105	4789	0.03%	0.008%
19	4.146	294	296	299	rVB4	5251	6973	0.04%	0.012%
20	4.195	299	301	304	rBV4	3658	8482	0.05%	0.015%
21	4.274	304	309	311	rBV5	4855	13310	0.08%	0.023%
22	4.677	346	350	356	rVB3	10039	26252	0.15%	0.045%
23	4.914	370	374	378	rBV5	4606	10387	0.06%	0.018%
24	5.268	406	410	413	rVB5	3314	8556	0.05%	0.015%
25	5.455	427	429	431	rVB3	4529	5756	0.03%	0.010%
26	5.504	431	434	436	rVB3	4516	6417	0.04%	0.011%
27	5.553	436	439	441	rBV4	4248	8785	0.05%	0.015%
28	5.632	441	447	454	rBV	350270	1228411	7.01%	2.116%
29	5.750	455	459	467	rVB2	92799	346995	1.98%	0.598%
30	5.937	476	478	480	rVB3	4376	5201	0.03%	0.009%
31	5.986	482	483	488	rVB5	4392	10139	0.06%	0.017%
32	6.065	488	491	492	rBV3	4644	5873	0.03%	0.010%
33	6.351	512	520	531	rBV2	714514	2801930	15.99%	4.826%
34	6.606	541	546	553	rVB2	33261	104267	0.59%	0.180%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049346.D
Acq On : 11 May 2016 17:59
Operator : FY/SY
Sample : H2943-01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4104

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.843	566	570	571	rBV3	3655	5642	0.03%	0.010%
36	6.872	571	573	574	rVB2	4993	4990	0.03%	0.009%
37	6.971	580	583	585	rVB4	2693	4743	0.03%	0.008%
38	7.138	592	600	604	rBV	1145872	3113215	17.76%	5.363%
39	7.197	604	606	614	rVB	409459	902543	5.15%	1.555%
40	7.394	625	626	629	rVB2	4954	6651	0.04%	0.011%
41	7.610	647	648	650	rBV2	6938	6235	0.04%	0.011%
42	7.719	657	659	662	rVB4	4766	7792	0.04%	0.013%
43	7.797	664	667	671	rVB4	4639	12155	0.07%	0.021%
44	7.906	671	678	686	rBV	1178928	2670620	15.24%	4.600%
45	8.024	689	690	692	rVV2	6263	8054	0.05%	0.014%
46	8.191	702	707	713	rVB2	127453	281184	1.60%	0.484%
47	8.329	719	721	724	rVB3	3362	6090	0.03%	0.010%
48	8.408	724	729	740	rBV	888680	1990285	11.36%	3.428%
49	8.604	747	749	755	rVB4	4491	9312	0.05%	0.016%
50	8.673	755	756	761	rVB4	4730	8782	0.05%	0.015%
51	8.890	773	778	782	rBV6	21956	55062	0.31%	0.095%
52	9.057	794	795	798	rBV3	2983	5124	0.03%	0.009%
53	9.136	800	803	804	rVB3	3977	5643	0.03%	0.010%
54	9.165	804	806	809	rBV4	3057	5760	0.03%	0.010%
55	9.224	811	812	814	rBV2	4523	5848	0.03%	0.010%
56	9.343	819	824	832	rBV	516431	945978	5.40%	1.629%
57	9.500	836	840	844	rVV	41172	81793	0.47%	0.141%
58	9.667	853	857	863	rVV	1596232	2986233	17.04%	5.144%
59	9.746	863	865	868	rVV	22578	38940	0.22%	0.067%
60	9.854	874	876	878	rBV3	4501	7108	0.04%	0.012%
61	9.933	881	884	886	rBV4	2383	5355	0.03%	0.009%
62	9.992	886	890	897	rBV	300493	507253	2.89%	0.874%
63	10.110	899	902	903	rBV4	4360	6589	0.04%	0.011%
64	10.199	907	911	917	rVV	38724	87598	0.50%	0.151%
65	10.297	917	921	928	rVV	4994615	8844736	50.46%	15.235%
66	10.405	928	932	947	rVB	1702841	2970186	16.95%	5.116%
67	10.583	947	950	952	rBV4	3922	7784	0.04%	0.013%
68	10.868	978	979	982	rVB2	4175	5046	0.03%	0.009%
69	10.996	991	992	997	rBV5	3271	7692	0.04%	0.013%
70	11.193	1008	1012	1023	rBV	1440300	2567008	14.65%	4.422%
71	11.331	1023	1026	1032	rVB3	16294	34790	0.20%	0.060%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049346.D
Acq On : 11 May 2016 17:59
Operator : FY/SY
Sample : H2943-01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4104

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.449	1034	1038	1042	rVB5	11656	20905	0.12%	0.036%
73	11.764	1068	1070	1073	rVB3	4337	6413	0.04%	0.011%
74	11.833	1073	1077	1081	rBV6	7415	20001	0.11%	0.034%
75	11.911	1081	1085	1088	rBV4	2253	5605	0.03%	0.010%
76	12.020	1092	1096	1097	rVB3	4647	5260	0.03%	0.009%
77	12.167	1108	1111	1115	rBV5	6608	15026	0.09%	0.026%
78	12.236	1115	1118	1119	rBV2	3757	5824	0.03%	0.010%
79	12.266	1119	1121	1125	rVB5	7207	14099	0.08%	0.024%
80	12.325	1125	1127	1129	rBV3	2899	5616	0.03%	0.010%
81	12.384	1129	1133	1135	rBV	52311	89359	0.51%	0.154%
82	12.443	1135	1139	1144	rVB	400333	701786	4.00%	1.209%
83	12.522	1144	1147	1149	rBV3	4024	6150	0.04%	0.011%
84	12.748	1169	1170	1173	rVB3	4271	5974	0.03%	0.010%
85	12.955	1187	1191	1192	rBV3	3543	6816	0.04%	0.012%
86	13.161	1208	1212	1214	rBV4	5689	11606	0.07%	0.020%
87	13.210	1214	1217	1218	rBV3	4348	6517	0.04%	0.011%
88	13.250	1218	1221	1223	rBV4	2743	5187	0.03%	0.009%
89	13.299	1223	1226	1227	rBV3	3347	7268	0.04%	0.013%
90	13.329	1227	1229	1233	rVB5	4003	7090	0.04%	0.012%
91	13.407	1233	1237	1244	rBV	1259161	2033649	11.60%	3.503%
92	13.516	1247	1248	1253	rVB5	4643	7128	0.04%	0.012%
93	13.604	1253	1257	1263	rVB9	6894	20648	0.12%	0.036%
94	13.673	1263	1264	1266	rBV2	7115	8171	0.05%	0.014%
95	13.732	1266	1270	1278	rBV	1048725	1821630	10.39%	3.138%
96	14.008	1292	1298	1304	rBV2	50079	114242	0.65%	0.197%
97	14.283	1324	1326	1329	rVB4	7177	11532	0.07%	0.020%
98	14.342	1329	1332	1334	rBV4	7729	14403	0.08%	0.025%
99	14.490	1345	1347	1348	rBV2	5566	6920	0.04%	0.012%
100	15.582	1455	1458	1462	rVB	40196	77761	0.44%	0.134%

Sum of corrected areas: 58053581

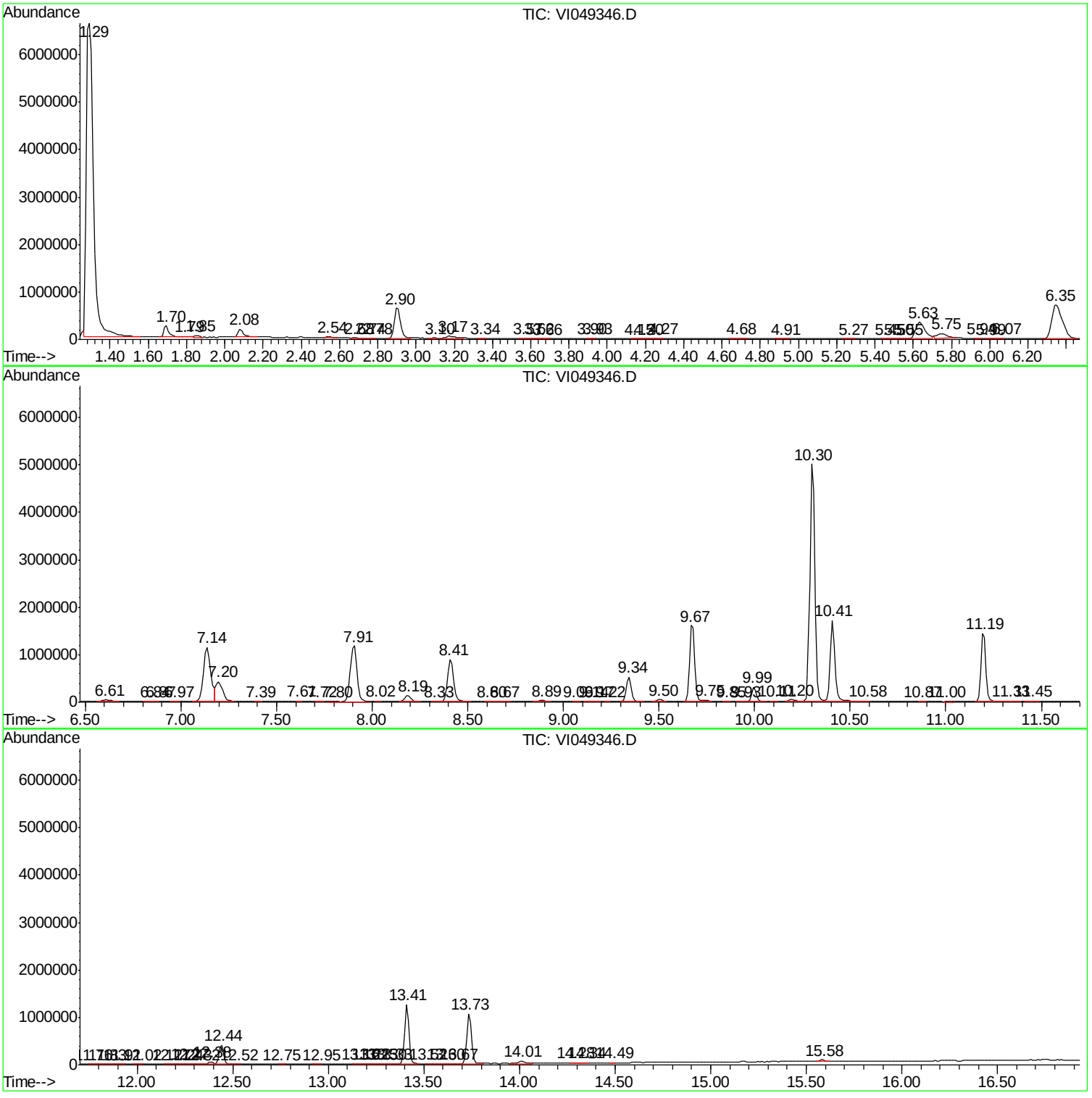
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049346.D
Acq On : 11 May 2016 17:59
Operator : FY/SY
Sample : H2943-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4104

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049346.D
Acq On : 11 May 2016 17:59
Operator : FY/SY
Sample : H2943-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4104

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

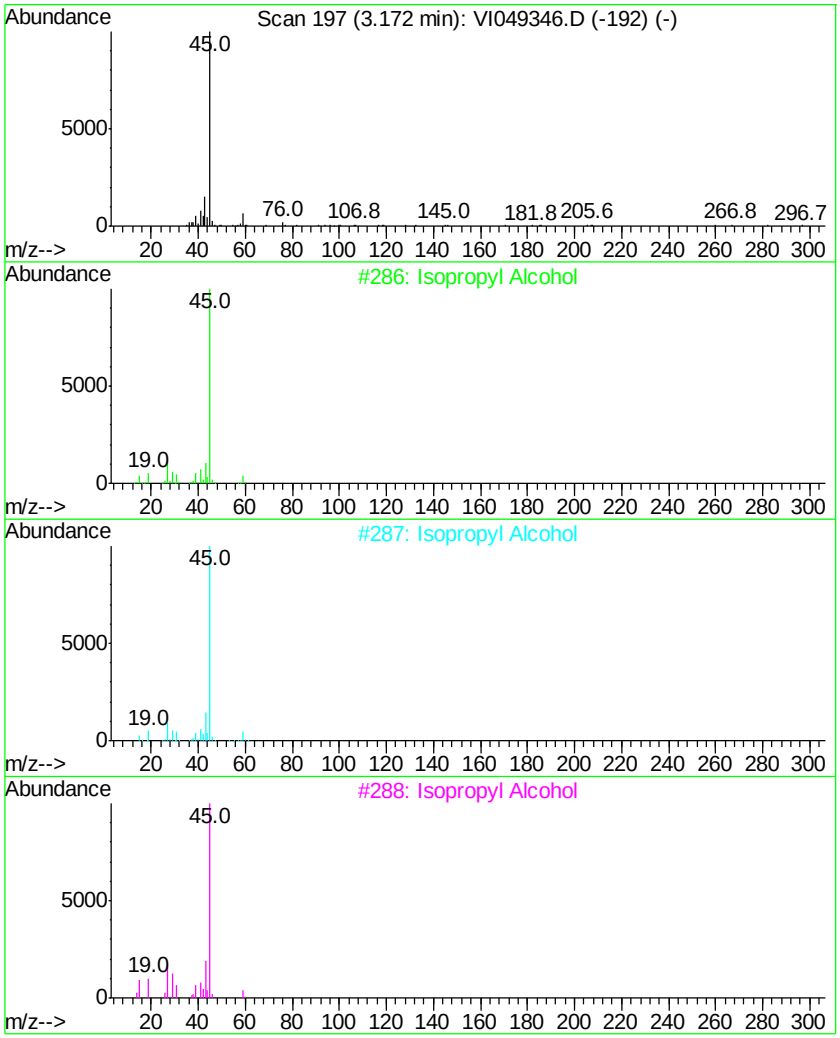
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

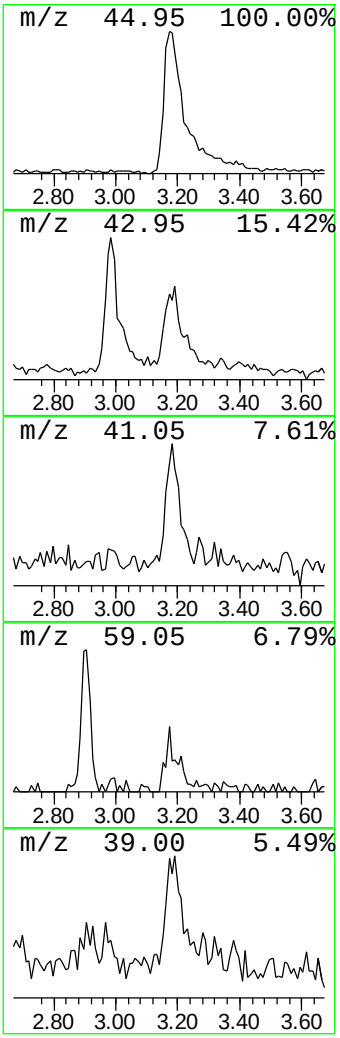
****

Peak Number 2 Isopropyl Alcohol Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.17	0.30 ug/L	160106	1,4-Difluorobenzene	7.91

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isopropyl Alcohol	60	C3H8O	000067-63-0	72
2	Isopropyl Alcohol	60	C3H8O	000067-63-0	72
3	Isopropyl Alcohol	60	C3H8O	000067-63-0	64
4	2-Propanol, 1-chloro-	94	C3H7ClO	000127-00-4	64
5	2-Propanol, 1-chloro-	94	C3H7ClO	000127-00-4	50





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049346.D
Acq On : 11 May 2016 17:59
Operator : FY/SY
Sample : H2943-01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4104

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Isopropyl Alcohol	3.17	0.3	ug/L	160106	1	7.91	2670620	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4105

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049329.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.18	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.32	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4105

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049329.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	14	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4105

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049329.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4105

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049329.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/10/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

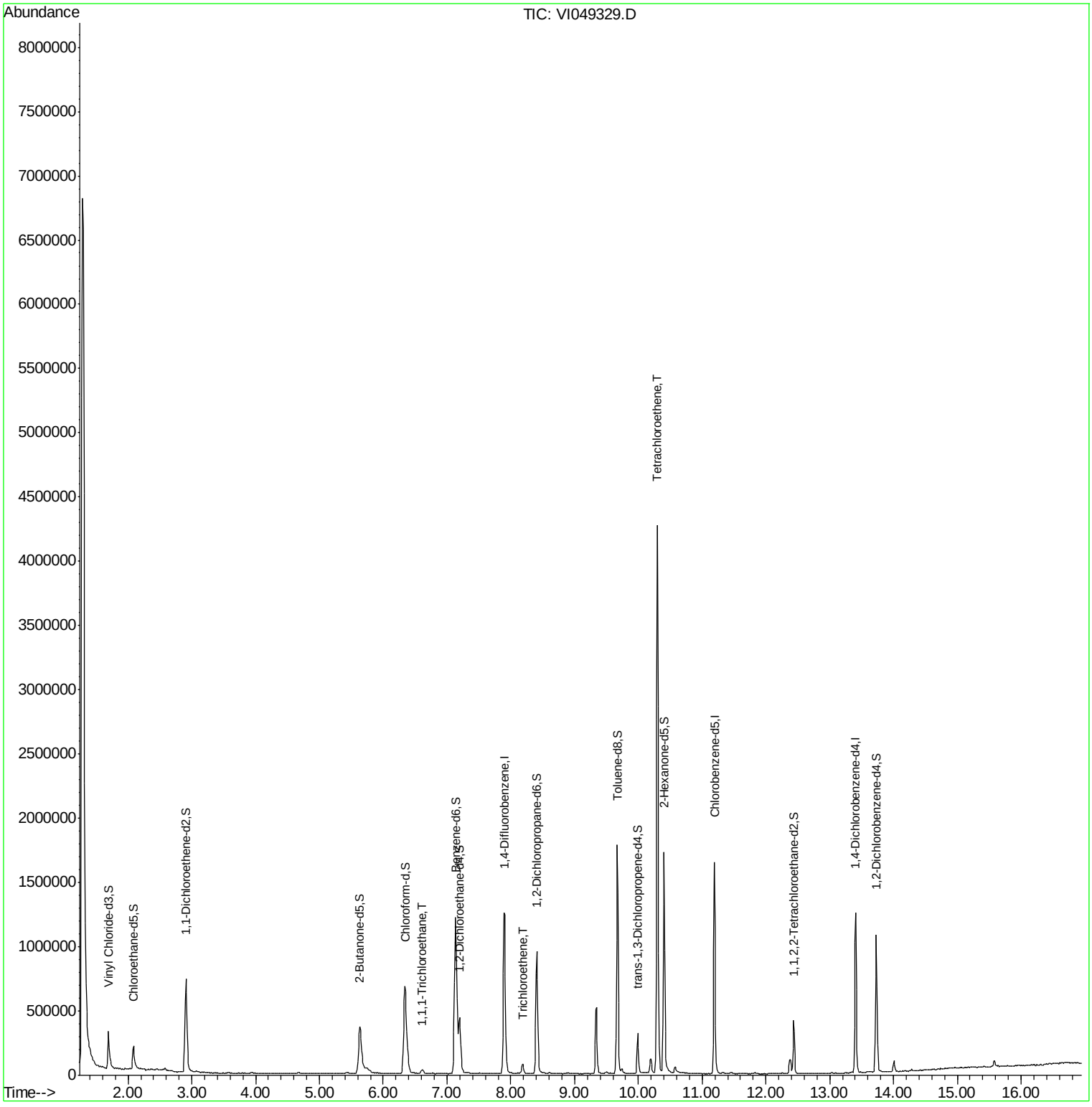
EPA-designated Registry Number.

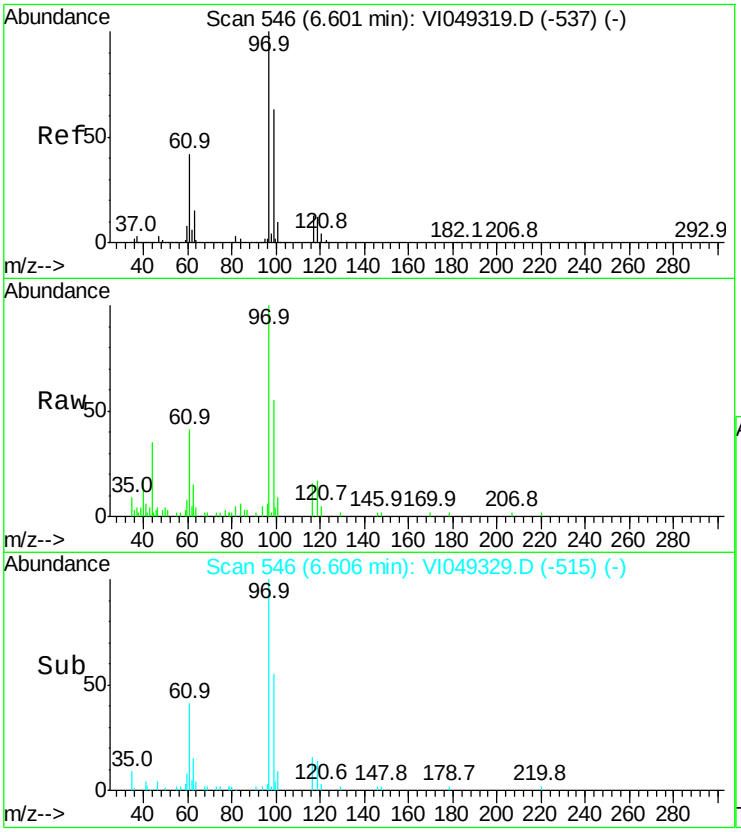
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049329.D
Acq On : 10 May 2016 17:34
Operator : FY/SY
Sample : H2943-02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4105

Quant Time: May 11 12:04:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration



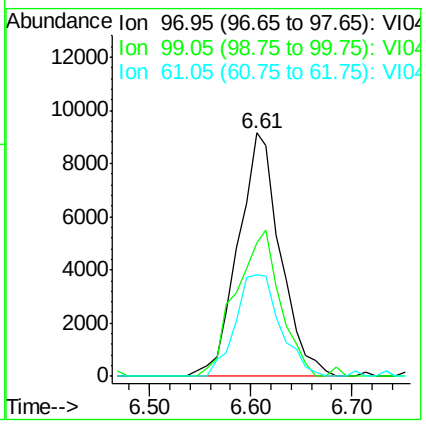


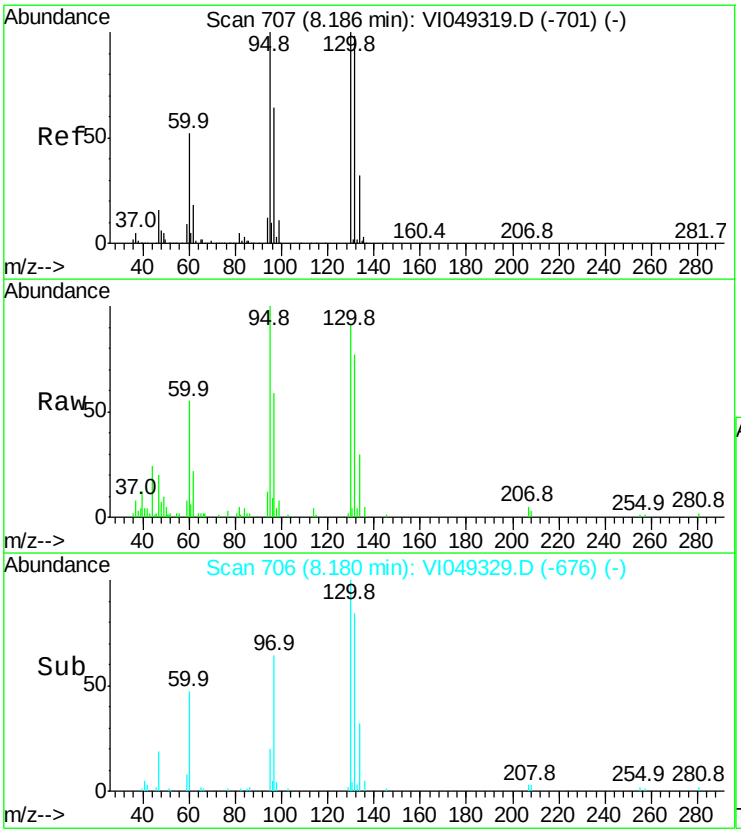
#29
1,1,1-Trichloroethane
Concen: 0.18 ug/L
RT: 6.61 min Scan# 546
Delta R.T. 0.00 min
Lab File: VI049329.D
Acq: 10 May 2016 17:34

Instrument : MSVOA_I
ClientSampleId : H4105

Tgt Ion: 97 Resp: 26675

Ion	Ratio	Lower	Upper
97	100		
99	62.8	51.1	76.7
61	44.1	33.3	49.9

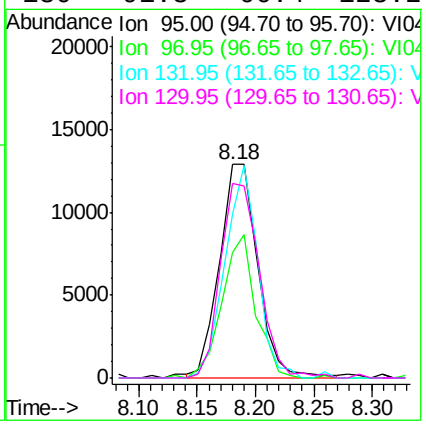


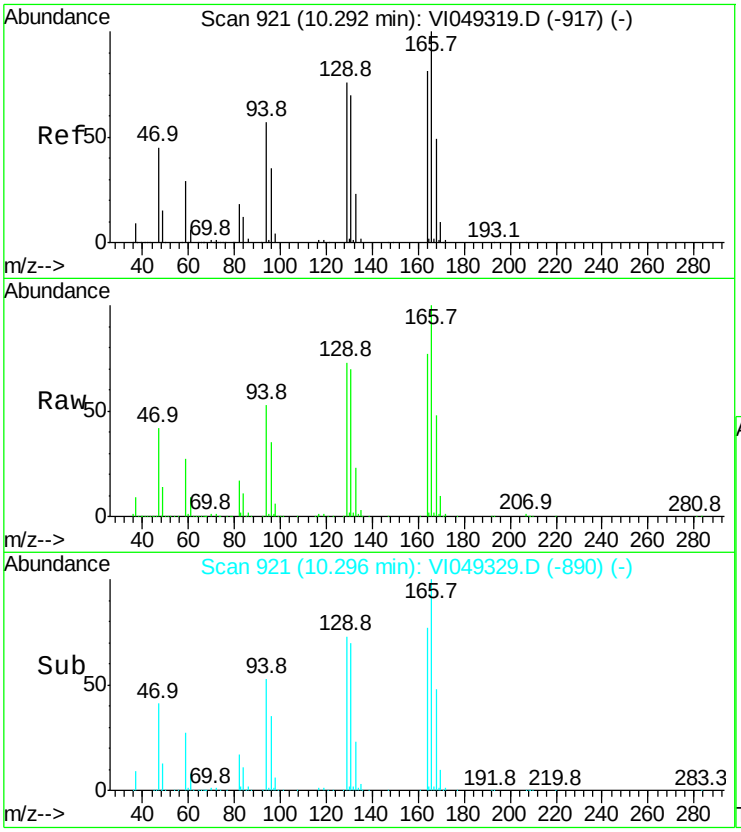


#34
Trichloroethene
Concen: 0.32 ug/L
RT: 8.18 min Scan# 706
Delta R.T. -0.01 min
Lab File: VI049329.D
Acq: 10 May 2016 17:34

Tgt Ion: 95 Resp: 29510

Ion	Ratio	Lower	Upper
95	100		
97	58.5	45.8	85.2
132	76.8	63.9	118.7
130	91.3	66.4	123.2



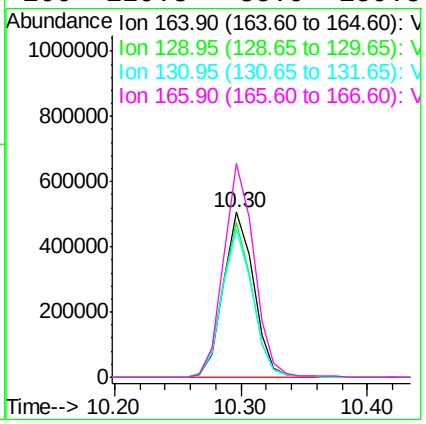


#47
Tetrachloroethene
Concen: 14.05 ug/L
RT: 10.30 min Scan# 921
Delta R.T. 0.00 min
Lab File: VI049329.D
Acq: 10 May 2016 17:34

Instrument :
MSVOA_I
ClientSampleId :
H4105

Tgt Ion:164 Resp: 841462

Ion	Ratio	Lower	Upper
164	100		
129	94.1	62.1	115.3
131	90.4	60.6	112.6
166	129.8	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049329.D
Acq On : 10 May 2016 17:34
Operator : FY/SY
Sample : H2943-02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4105

Quant Time: May 11 12:04:37 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1189697	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	767357	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	286320	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	337235	4.60	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 92.00%			
7) Chloroethane-d5	2.09	69	207906	5.13	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 102.60%			
11) 1,1-Dichloroethene-d2	2.91	63	581729	3.37	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 67.40%			
20) 2-Butanone-d5	5.63	46	854287	53.87	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 107.74%			
24) Chloroform-d	6.34	84	847707	4.55	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 91.00%			
26) 1,2-Dichloroethane-d4	7.20	65	388048	5.09	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.80%			
32) Benzene-d6	7.14	84	1566180	5.24	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.80%			
36) 1,2-Dichloropropane-d6	8.41	67	439108	5.22	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.40%			
41) Toluene-d8	9.67	98	1075638	4.88	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 97.60%			
43) trans-1,3-Dichloropropene-	9.99	79	149242	4.51	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 90.20%			
46) 2-Hexanone-d5	10.40	63	563630	53.96	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 107.92%			
57) 1,1,2,2-Tetrachloroethane-	12.43	84	182292	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.40%			
63) 1,2-Dichlorobenzene-d4	13.73	152	237369	4.73	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 94.60%			
Target Compounds						Qvalue
29) 1,1,1-Trichloroethane	6.61	97	26675	0.18	ug/L	98
34) Trichloroethene	8.18	95	29510	0.32	ug/L	91
47) Tetrachloroethene	10.30	164	841462	14.05	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051016\
Data File : VI049329.D
Acq On : 10 May 2016 17:34
Operator : FY/SY
Sample : H2943-02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4105

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.281	3	5	29	rVB	6746647	20924737	100.00%	34.616%
2	1.596	35	37	42	rVB3	15597	23790	0.11%	0.039%
3	1.694	44	47	56	rVB	289588	551058	2.63%	0.912%
4	1.803	56	58	60	rBV2	7693	9906	0.05%	0.016%
5	1.950	71	73	76	rBV3	7767	9801	0.05%	0.016%
6	2.000	76	78	80	rBV3	6226	10203	0.05%	0.017%
7	2.088	83	87	97	rVB	180215	389964	1.86%	0.645%
8	2.315	106	110	113	rBV6	8214	26517	0.13%	0.044%
9	2.442	122	123	126	rBV2	8709	14848	0.07%	0.025%
10	2.580	135	137	144	rVB2	21687	48280	0.23%	0.080%
11	2.698	147	149	153	rVB4	9618	13395	0.06%	0.022%
12	2.787	156	158	159	rBV2	4687	6689	0.03%	0.011%
13	2.826	159	162	164	rVB4	3869	5465	0.03%	0.009%
14	2.905	165	170	185	rVB	725333	1669061	7.98%	2.761%
15	3.072	185	187	190	rBV4	6715	9578	0.05%	0.016%
16	3.486	226	229	231	rBV4	2533	5374	0.03%	0.009%
17	3.564	235	237	242	rVB3	6752	10751	0.05%	0.018%
18	3.791	258	260	263	rBV4	4237	9415	0.04%	0.016%
19	3.919	269	273	275	rBV5	3546	7945	0.04%	0.013%
20	4.037	284	285	288	rBV3	4678	6110	0.03%	0.010%
21	4.096	288	291	294	rBV5	2761	6353	0.03%	0.011%
22	4.224	302	304	306	rBV3	4064	7858	0.04%	0.013%
23	4.322	311	314	317	rVB5	3132	5329	0.03%	0.009%
24	4.401	320	322	326	rVB4	3700	8182	0.04%	0.014%
25	4.549	333	337	338	rBV4	4424	7274	0.03%	0.012%
26	4.667	345	349	355	rVB3	8154	30252	0.14%	0.050%
27	4.795	360	362	365	rBV4	4089	5885	0.03%	0.010%
28	4.982	379	381	384	rBV4	3843	6581	0.03%	0.011%
29	5.444	420	428	430	rBV5	10913	32776	0.16%	0.054%
30	5.631	440	447	457	rBV	364688	1345202	6.43%	2.225%
31	6.114	493	496	498	rBV3	2561	5005	0.02%	0.008%
32	6.232	506	508	512	rVB6	3395	7620	0.04%	0.013%
33	6.340	512	519	531	rBV	682804	2264743	10.82%	3.747%
34	6.478	531	533	535	rVB3	3847	5045	0.02%	0.008%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051016\
Data File : VI049329.D
Acq On : 10 May 2016 17:34
Operator : FY/SY
Sample : H2943-02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4105

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.606	541	546	554	rVB	27373	87973	0.42%	0.146%
36	6.724	554	558	561	rVB5	3968	9751	0.05%	0.016%
37	6.773	561	563	567	rVB4	7821	12819	0.06%	0.021%
38	6.852	567	571	573	rBV5	4718	11830	0.06%	0.020%
39	7.009	584	587	588	rVB3	3241	5002	0.02%	0.008%
40	7.049	588	591	592	rBV3	2884	5800	0.03%	0.010%
41	7.137	594	600	604	rVV	1218537	3331961	15.92%	5.512%
42	7.196	604	606	615	rVV	438541	975645	4.66%	1.614%
43	7.324	617	619	622	rVV4	9638	18487	0.09%	0.031%
44	7.491	634	636	637	rBV2	3910	5050	0.02%	0.008%
45	7.511	637	638	641	rVV3	4850	6705	0.03%	0.011%
46	7.895	671	677	690	rBV	1249348	2882558	13.78%	4.769%
47	8.043	690	692	695	rVV3	4336	7489	0.04%	0.012%
48	8.190	700	707	713	rVV2	75343	172793	0.83%	0.286%
49	8.407	723	729	738	rBV	952998	2110570	10.09%	3.491%
50	8.505	738	739	746	rVV7	9193	22923	0.11%	0.038%
51	8.604	746	749	754	rVB6	7255	16493	0.08%	0.027%
52	8.692	756	758	761	rBV4	2561	5383	0.03%	0.009%
53	8.791	765	768	770	rVB4	4185	6697	0.03%	0.011%
54	8.899	773	779	781	rBV4	6732	18471	0.09%	0.031%
55	9.066	792	796	797	rVB3	3498	6426	0.03%	0.011%
56	9.263	814	816	819	rBV3	3692	6938	0.03%	0.011%
57	9.342	819	824	833	rBV	518704	1003304	4.79%	1.660%
58	9.499	836	840	844	rVB3	15886	31276	0.15%	0.052%
59	9.558	844	846	848	rBV2	5064	6259	0.03%	0.010%
60	9.667	853	857	862	rBV	1777700	3108899	14.86%	5.143%
61	9.735	862	864	871	rVB	34777	73808	0.35%	0.122%
62	9.991	885	890	895	rBV	315854	536505	2.56%	0.888%
63	10.119	902	903	905	rVV2	5344	5093	0.02%	0.008%
64	10.198	905	911	917	rVV	111011	250224	1.20%	0.414%
65	10.296	917	921	928	rVV	4260032	7143218	34.14%	11.817%
66	10.405	928	932	944	rVV	1716200	2974684	14.22%	4.921%
67	10.582	946	950	957	rVB	43666	111586	0.53%	0.185%
68	10.838	973	976	978	rVB4	3038	5923	0.03%	0.010%
69	10.956	986	988	993	rVB4	5197	13635	0.07%	0.023%
70	11.015	993	994	997	rBV3	4307	5350	0.03%	0.009%
71	11.192	1008	1012	1021	rBV	1647529	2661370	12.72%	4.403%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051016\
Data File : VI049329.D
Acq On : 10 May 2016 17:34
Operator : FY/SY
Sample : H2943-02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4105

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.330	1021	1026	1032	rVB7	11310	29803	0.14%	0.049%
73	11.448	1035	1038	1041	rVB3	11005	23762	0.11%	0.039%
74	11.497	1041	1043	1045	rVB2	4447	5648	0.03%	0.009%
75	11.596	1048	1053	1054	rBV4	4589	9582	0.05%	0.016%
76	11.694	1058	1063	1066	rVB5	3050	6865	0.03%	0.011%
77	11.822	1073	1076	1081	rVB6	8314	21065	0.10%	0.035%
78	12.038	1095	1098	1102	rBV4	5716	10523	0.05%	0.017%
79	12.166	1108	1111	1115	rBV6	4692	13890	0.07%	0.023%
80	12.235	1115	1118	1119	rBV2	3756	6481	0.03%	0.011%
81	12.275	1121	1122	1126	rVB3	4246	7384	0.04%	0.012%
82	12.383	1126	1133	1135	rBV	110326	227087	1.09%	0.376%
83	12.432	1135	1138	1145	rVB	413432	685442	3.28%	1.134%
84	12.511	1145	1146	1150	rBV4	2514	5007	0.02%	0.008%
85	12.599	1152	1155	1156	rBV3	3097	6077	0.03%	0.010%
86	12.668	1159	1162	1163	rVB3	3287	5538	0.03%	0.009%
87	12.727	1163	1168	1171	rBV6	4294	8296	0.04%	0.014%
88	12.954	1189	1191	1194	rBV4	4305	8025	0.04%	0.013%
89	13.033	1197	1199	1203	rBV4	4724	11309	0.05%	0.019%
90	13.092	1203	1205	1208	rVB3	3746	5942	0.03%	0.010%
91	13.239	1218	1220	1223	rBV4	3388	7762	0.04%	0.013%
92	13.328	1226	1229	1230	rBV3	4727	7992	0.04%	0.013%
93	13.406	1233	1237	1243	rBV	1239827	2080527	9.94%	3.442%
94	13.584	1251	1255	1260	rBV6	9357	33325	0.16%	0.055%
95	13.731	1265	1270	1276	rBV	1070170	1776473	8.49%	2.939%
96	14.007	1293	1298	1302	rVV2	84642	159889	0.76%	0.265%
97	14.105	1306	1308	1310	rBV3	3491	5216	0.02%	0.009%
98	14.282	1320	1326	1329	rBV7	17180	38000	0.18%	0.063%
99	14.332	1329	1331	1332	rVB2	5319	5319	0.03%	0.009%
100	15.582	1455	1458	1463	rVB	47551	86745	0.41%	0.144%

Sum of corrected areas: 60448864

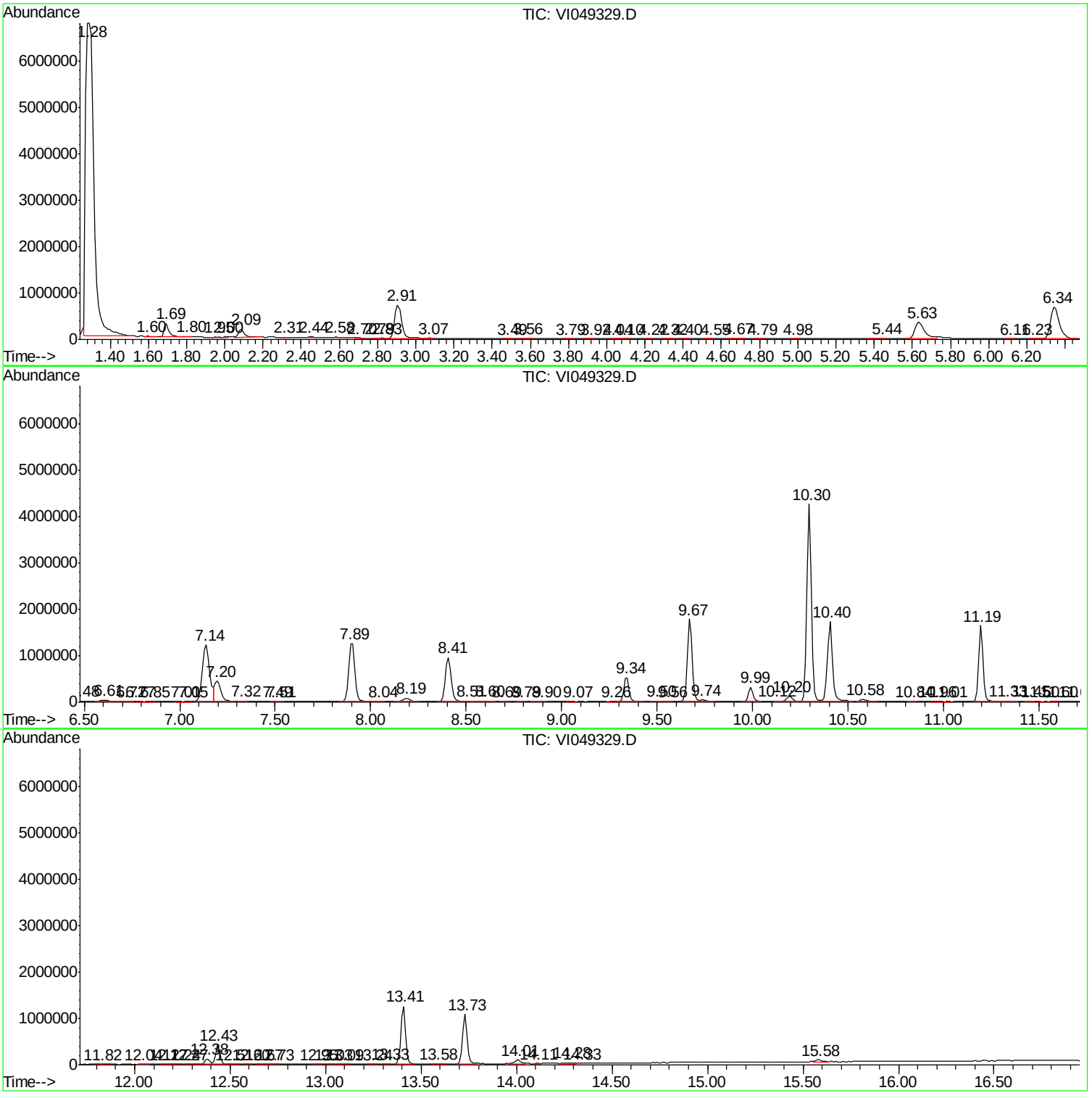
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049329.D
Acq On : 10 May 2016 17:34
Operator : FY/SY
Sample : H2943-02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4105

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049329.D
Acq On : 10 May 2016 17:34
Operator : FY/SY
Sample : H2943-02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4105

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049329.D
Acq On : 10 May 2016 17:34
Operator : FY/SY
Sample : H2943-02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4105

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4106

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-03
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049330.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	6.3	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4106

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-03
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049330.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.68	
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4106

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-03
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049330.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4106

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-03
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049330.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/10/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

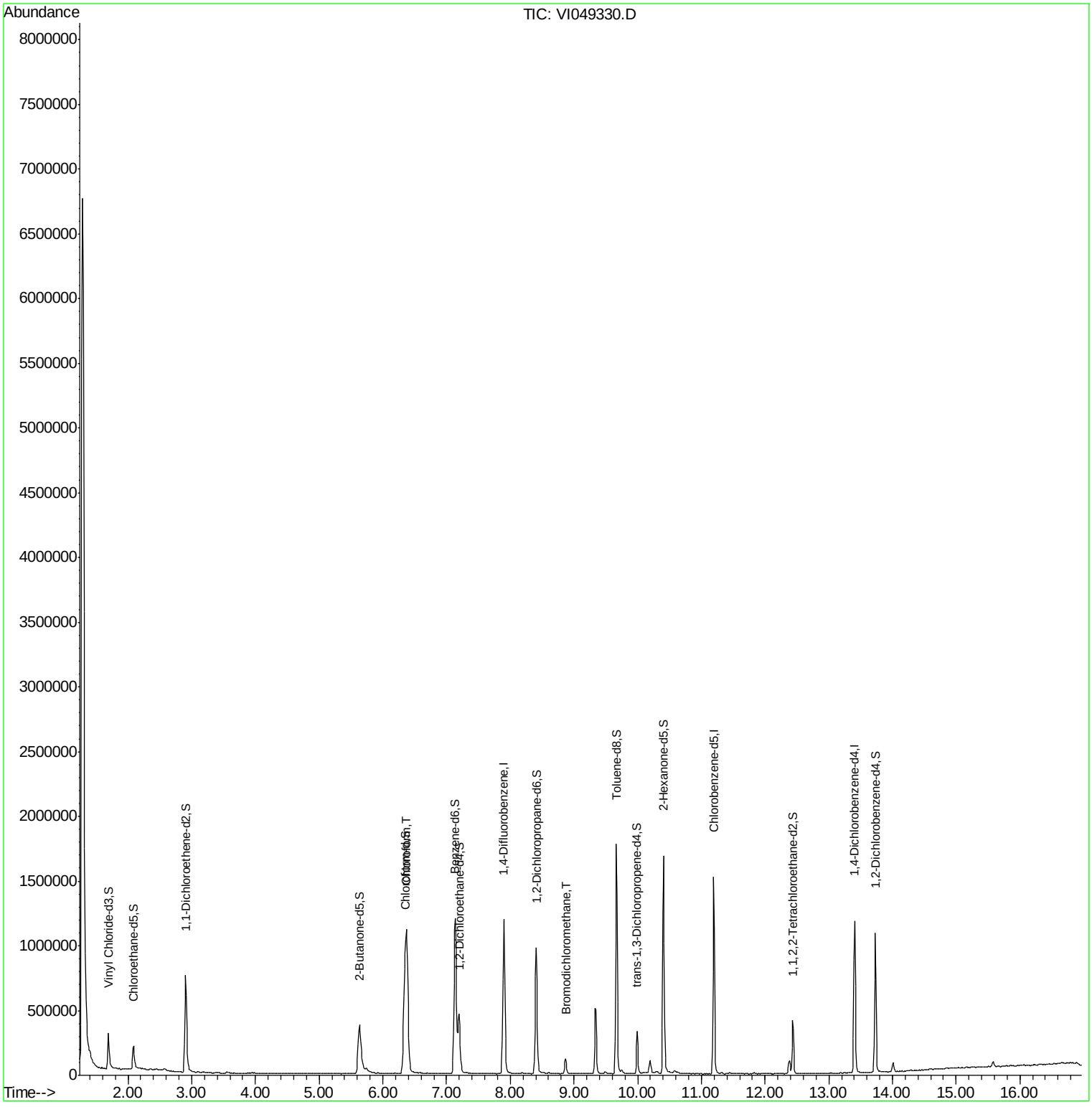
EPA-designated Registry Number.

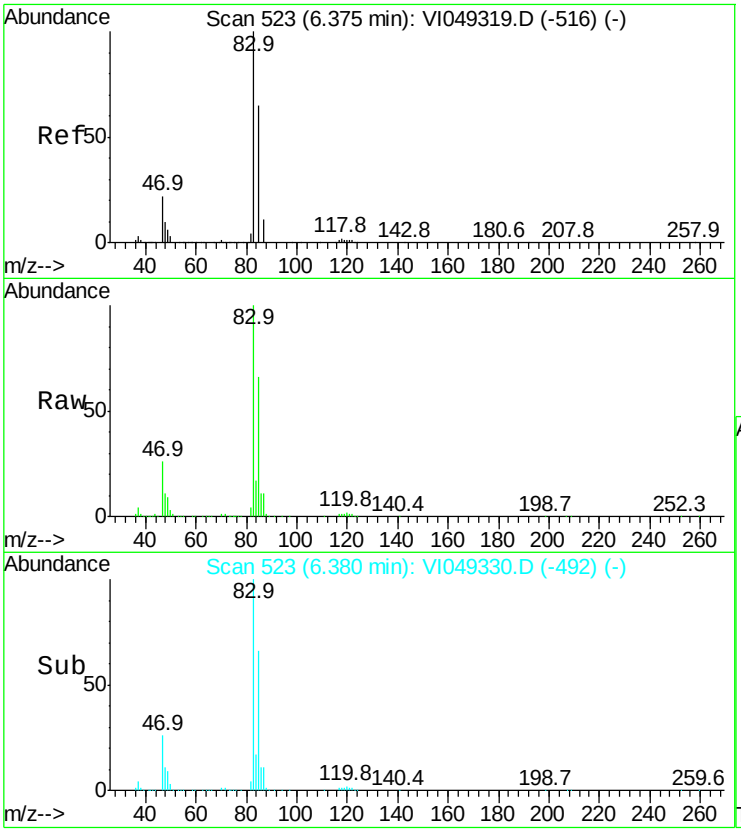
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049330.D
Acq On : 10 May 2016 18:06
Operator : FY/SY
Sample : H2943-03
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4106

Quant Time: May 11 04:42:44 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration



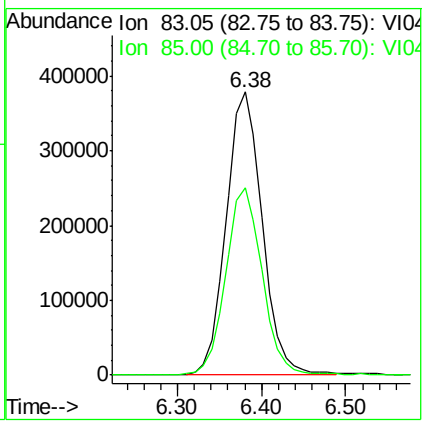


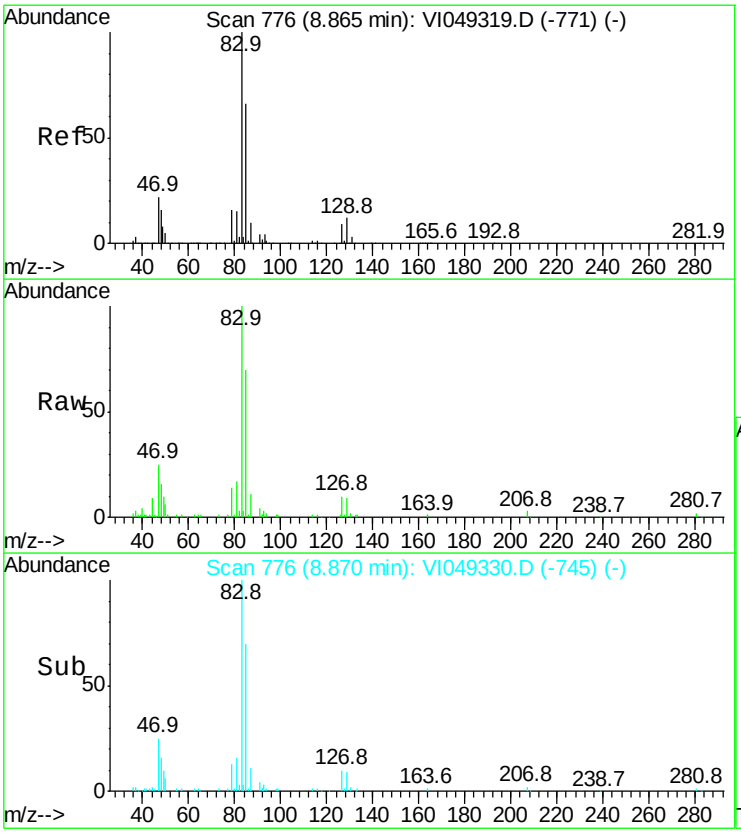
#25
Chloroform
Concen: 6.27 ug/L
RT: 6.38 min Scan# 523
Delta R.T. 0.01 min
Lab File: VI049330.D
Acq: 10 May 2016 18:06

Instrument : MSVOA_I
ClientSampleId : H4106

Tgt Ion: 83 Resp: 1126969

Ion	Ratio	Lower	Upper
83	100		
85	66.0	47.3	87.8

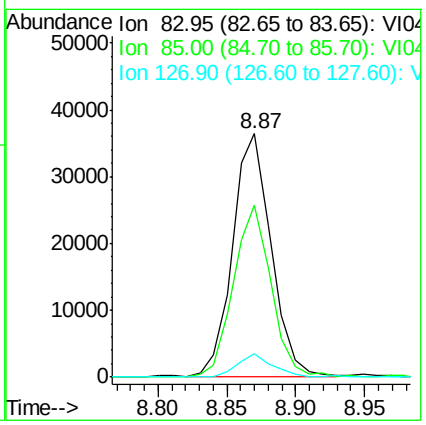




#38
Bromodichloromethane
Concen: 0.68 ug/L
RT: 8.87 min Scan# 776
Delta R.T. 0.01 min
Lab File: VI049330.D
Acq: 10 May 2016 18:06

Tgt Ion: 83 Resp: 71504

Ion	Ratio	Lower	Upper
83	100		
85	70.5	44.7	83.1
127	9.6	6.6	9.8



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049330.D
Acq On : 10 May 2016 18:06
Operator : FY/SY
Sample : H2943-03
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4106

Quant Time: May 11 04:42:44 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1117286	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	721708	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	264860	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	327819	4.77	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 95.40%			
7) Chloroethane-d5	2.09	69	209489	5.50	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 110.00%			
11) 1,1-Dichloroethene-d2	2.91	63	578113	3.57	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 71.40%			
20) 2-Butanone-d5	5.63	46	881747	59.21	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 118.42%			
24) Chloroform-d	6.34	84	896683	5.12	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.40%			
26) 1,2-Dichloroethane-d4	7.20	65	389759	5.44	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 108.80%			
32) Benzene-d6	7.14	84	1544689	5.49	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 109.80%			
36) 1,2-Dichloropropane-d6	8.41	67	438831	5.55	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 111.00%			
41) Toluene-d8	9.67	98	1074211	5.18	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.60%			
43) trans-1,3-Dichloropropene-	9.99	79	153309	4.92	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.40%			
46) 2-Hexanone-d5	10.41	63	559576	56.96	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 113.92%			
57) 1,1,2,2-Tetrachloroethane-	12.43	84	188483	5.24	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 104.80%			
63) 1,2-Dichlorobenzene-d4	13.73	152	240488	5.18	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 103.60%			
Target Compounds						Qvalue
25) Chloroform	6.38	83	1126969	6.27	ug/L	98
38) Bromodichloromethane	8.87	83	71504	0.68	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051016\
Data File : VI049330.D
Acq On : 10 May 2016 18:06
Operator : FY/SY
Sample : H2943-03
Misc : 25mL/MSVOA I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4106

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.282	3	5	35	rVB	6721990	19729245	100.00%	36.658%
2	1.587	35	36	38	rVB2	8651	9519	0.05%	0.018%
3	1.695	44	47	55	rBV	276553	526841	2.67%	0.979%
4	1.902	67	68	69	rBV	5265	4539	0.02%	0.008%
5	2.089	83	87	94	rBV	179206	391638	1.99%	0.728%
6	2.679	145	147	149	rBV2	7018	9355	0.05%	0.017%
7	2.788	157	158	161	rBV3	5487	6482	0.03%	0.012%
8	2.906	165	170	182	rBV	752009	1683653	8.53%	3.128%
9	3.083	186	188	192	rVB5	4890	8889	0.05%	0.017%
10	3.260	204	206	210	rBV5	2818	5257	0.03%	0.010%
11	3.555	233	236	241	rVV6	10882	24666	0.13%	0.046%
12	3.664	244	247	248	rVB3	4657	6167	0.03%	0.011%
13	3.723	248	253	257	rBV7	3696	11495	0.06%	0.021%
14	3.959	273	277	278	rBV3	4552	10376	0.05%	0.019%
15	3.988	278	280	283	rVB3	3769	5267	0.03%	0.010%
16	4.225	303	304	306	rBV	3243	5262	0.03%	0.010%
17	4.254	306	307	310	rBV3	3481	5644	0.03%	0.010%
18	4.362	312	318	320	rBV5	1917	6266	0.03%	0.012%
19	4.727	352	355	356	rVB3	3914	5577	0.03%	0.010%
20	4.786	358	361	363	rBV4	3230	5820	0.03%	0.011%
21	4.992	379	382	385	rVB4	2679	5443	0.03%	0.010%
22	5.051	385	388	389	rBV3	4877	5809	0.03%	0.011%
23	5.091	389	392	393	rBV3	3867	5914	0.03%	0.011%
24	5.317	414	415	418	rVB3	3331	4668	0.02%	0.009%
25	5.632	439	447	456	rBV	374927	1341839	6.80%	2.493%
26	5.917	474	476	478	rVB3	5717	5676	0.03%	0.011%
27	6.193	501	504	506	rBV3	5033	8314	0.04%	0.015%
28	6.370	512	522	531	rBV4	1115373	4754706	24.10%	8.834%
29	6.616	546	547	550	rVB2	4184	5140	0.03%	0.010%
30	6.695	553	555	557	rBV3	5084	7208	0.04%	0.013%
31	6.862	570	572	575	rBV4	3946	7673	0.04%	0.014%
32	7.030	586	589	592	rVB4	2476	5591	0.03%	0.010%
33	7.138	592	600	604	rBV	1202812	3320141	16.83%	6.169%
34	7.197	604	606	615	rVB	455573	948382	4.81%	1.762%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051016\
Data File : VI049330.D
Acq On : 10 May 2016 18:06
Operator : FY/SY
Sample : H2943-03
Misc : 25mL/MSVOA I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4106

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.512	635	638	640	rBV3	2753	5857	0.03%	0.011%
36	7.630	646	650	652	rVB4	4156	9447	0.05%	0.018%
37	7.669	652	654	657	rBV3	3380	5663	0.03%	0.011%
38	7.719	657	659	661	rBV3	2565	4572	0.02%	0.008%
39	7.896	670	677	691	rBV	1195128	2695044	13.66%	5.008%
40	8.063	691	694	696	rBV3	2042	4732	0.02%	0.009%
41	8.181	703	706	710	rVB6	7764	16595	0.08%	0.031%
42	8.260	710	714	715	rBV4	3027	5990	0.03%	0.011%
43	8.299	717	718	721	rVB2	3683	5848	0.03%	0.011%
44	8.408	723	729	738	rBV	974687	2083656	10.56%	3.872%
45	8.516	738	740	745	rVB5	10479	20076	0.10%	0.037%
46	8.604	745	749	754	rBV5	7168	19753	0.10%	0.037%
47	8.870	772	776	783	rVB	114855	232007	1.18%	0.431%
48	8.959	783	785	787	rVB3	3180	5036	0.03%	0.009%
49	9.333	819	823	833	rVV	508620	997388	5.06%	1.853%
50	9.490	835	839	843	rVV4	13957	34228	0.17%	0.064%
51	9.549	843	845	851	rVB5	6932	18201	0.09%	0.034%
52	9.667	853	857	863	rVV	1777502	3116120	15.79%	5.790%
53	9.746	863	865	871	rVV	28634	69409	0.35%	0.129%
54	9.825	871	873	875	rVV3	5420	9553	0.05%	0.018%
55	9.903	879	881	882	rVV2	3866	5551	0.03%	0.010%
56	9.992	886	890	896	rVV	328404	543148	2.75%	1.009%
57	10.061	896	897	898	rVV	8282	8274	0.04%	0.015%
58	10.081	898	899	901	rVV2	7877	13600	0.07%	0.025%
59	10.120	901	903	904	rVV2	9051	15496	0.08%	0.029%
60	10.199	906	911	917	rVV	103458	255391	1.29%	0.475%
61	10.297	918	921	928	rVV7	20126	69980	0.35%	0.130%
62	10.405	928	932	944	rVV	1687684	2988141	15.15%	5.552%
63	10.583	947	950	959	rVV4	27632	99023	0.50%	0.184%
64	10.681	959	960	963	rVV2	6291	11166	0.06%	0.021%
65	10.730	963	965	966	rVV2	5015	6528	0.03%	0.012%
66	10.760	966	968	970	rVV3	4441	6314	0.03%	0.012%
67	10.829	972	975	976	rVB3	5264	7891	0.04%	0.015%
68	10.878	978	980	982	rVV2	3632	5178	0.03%	0.010%
69	10.947	984	987	989	rVV4	5001	7768	0.04%	0.014%
70	10.986	989	991	994	rVB4	2869	5910	0.03%	0.011%
71	11.055	994	998	999	rBV3	2820	4999	0.03%	0.009%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051016\
Data File : VI049330.D
Acq On : 10 May 2016 18:06
Operator : FY/SY
Sample : H2943-03
Misc : 25mL/MSVOA I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4106

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.193	1008	1012	1018	rBV	1522621	2455007	12.44%	4.562%
73	11.331	1023	1026	1030	rVB4	11626	24229	0.12%	0.045%
74	11.380	1030	1031	1033	rBV2	3373	5198	0.03%	0.010%
75	11.449	1035	1038	1042	rVV2	10846	18315	0.09%	0.034%
76	11.714	1061	1065	1068	rVB3	2239	6037	0.03%	0.011%
77	11.833	1072	1077	1082	rVB6	9975	24245	0.12%	0.045%
78	12.039	1093	1098	1105	rVB9	4556	14370	0.07%	0.027%
79	12.147	1107	1109	1110	rBV2	4472	6267	0.03%	0.012%
80	12.177	1110	1112	1115	rVV4	4383	6539	0.03%	0.012%
81	12.275	1121	1122	1125	rVB3	4947	6122	0.03%	0.011%
82	12.384	1125	1133	1135	rBV	104158	209345	1.06%	0.389%
83	12.433	1135	1138	1146	rVB	409033	708652	3.59%	1.317%
84	12.640	1156	1159	1161	rBV4	2321	5360	0.03%	0.010%
85	12.827	1174	1178	1180	rBV5	3449	6913	0.04%	0.013%
86	13.023	1192	1198	1201	rBV6	5743	15729	0.08%	0.029%
87	13.191	1212	1215	1218	rBV4	3998	7266	0.04%	0.014%
88	13.240	1218	1220	1223	rBV3	4221	7770	0.04%	0.014%
89	13.309	1225	1227	1228	rBV2	4616	6297	0.03%	0.012%
90	13.407	1233	1237	1246	rVV	1173551	1932436	9.79%	3.591%
91	13.732	1266	1270	1276	rBV	1074393	1769922	8.97%	3.289%
92	13.968	1290	1294	1295	rBV3	6614	16066	0.08%	0.030%
93	14.008	1295	1298	1303	rVB2	67986	129564	0.66%	0.241%
94	14.283	1323	1326	1330	rBV5	9967	19115	0.10%	0.036%
95	14.352	1331	1333	1335	rBV2	5223	7963	0.04%	0.015%
96	14.500	1346	1348	1350	rBV3	5260	7122	0.04%	0.013%
97	14.578	1354	1356	1357	rBV2	6494	7482	0.04%	0.014%
98	14.834	1380	1382	1383	rBV2	8068	9399	0.05%	0.017%
99	15.090	1406	1408	1409	rVB2	9979	7242	0.04%	0.013%
100	15.582	1455	1458	1463	rVB	40635	78137	0.40%	0.145%

Sum of corrected areas: 53820104

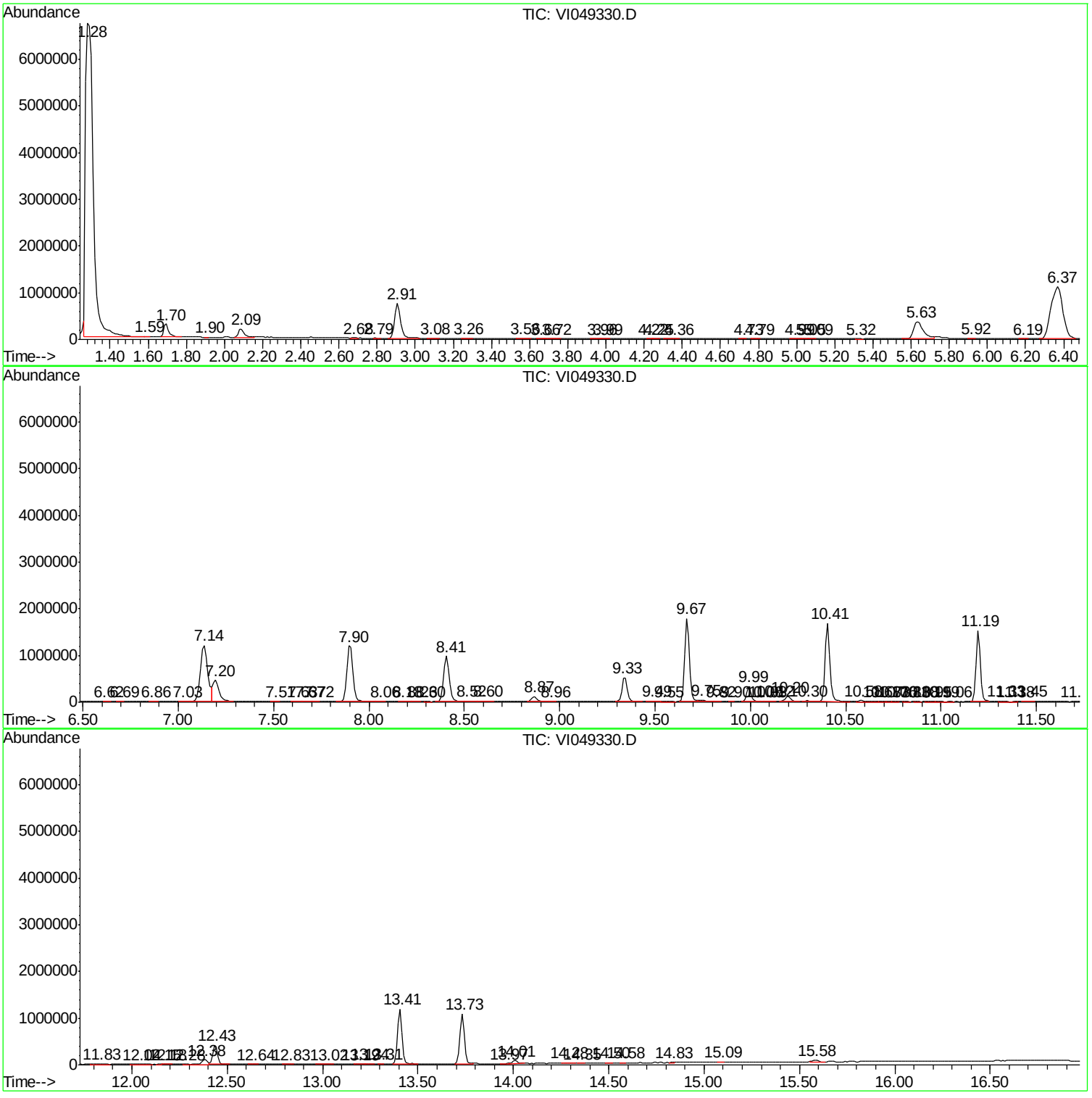
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049330.D
Acq On : 10 May 2016 18:06
Operator : FY/SY
Sample : H2943-03
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4106

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049330.D
Acq On : 10 May 2016 18:06
Operator : FY/SY
Sample : H2943-03
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4106

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049330.D
Acq On : 10 May 2016 18:06
Operator : FY/SY
Sample : H2943-03
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4106

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4108

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-14
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049307.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.35	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.8	
71-55-6	1,1,1-Trichloroethane	0.30	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.43	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4108

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-14
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049307.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.090	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	17	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4108

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-14
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049307.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4108

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-14
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049307.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

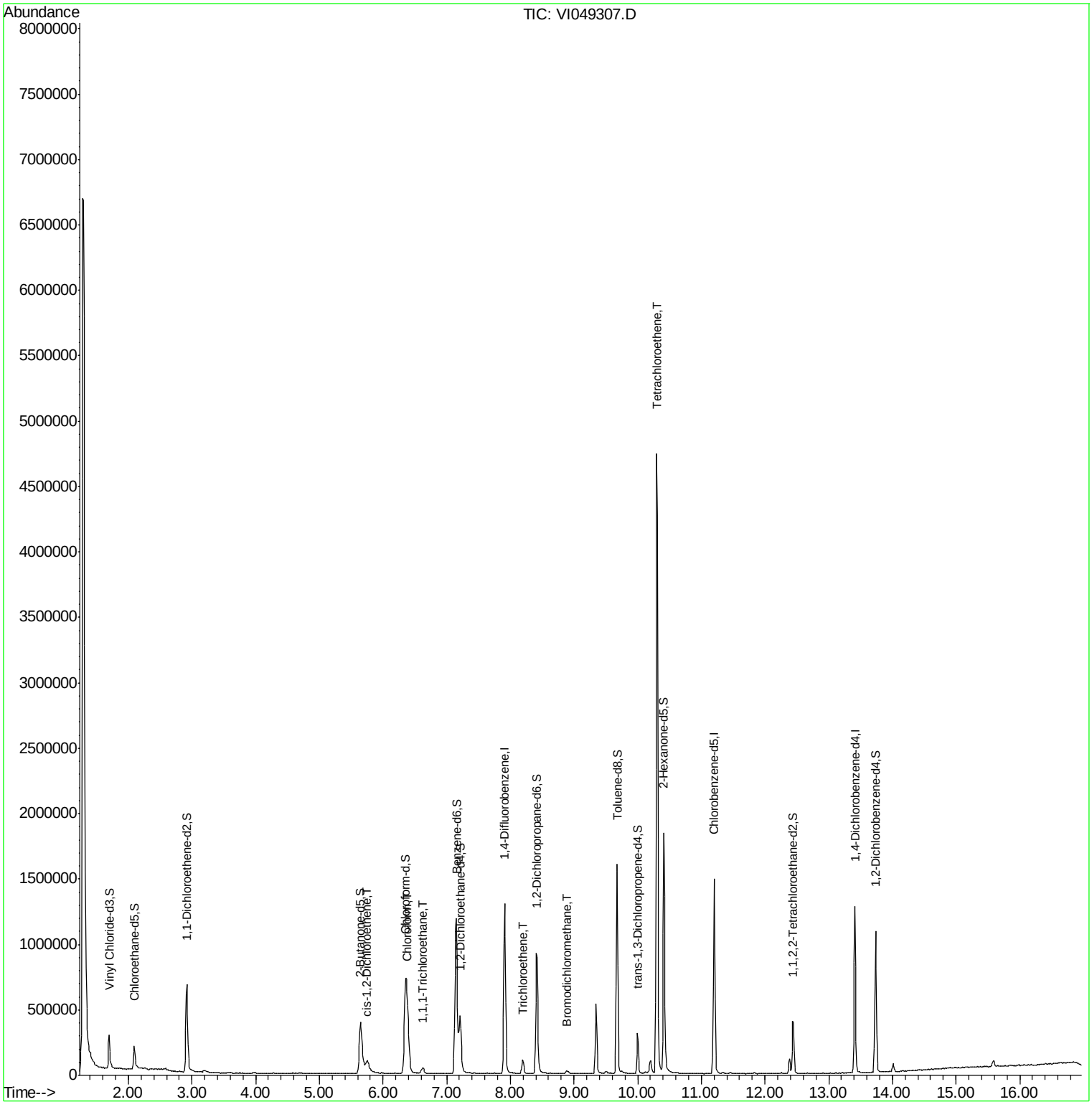
Quantitation Report (LSC Reviewed)

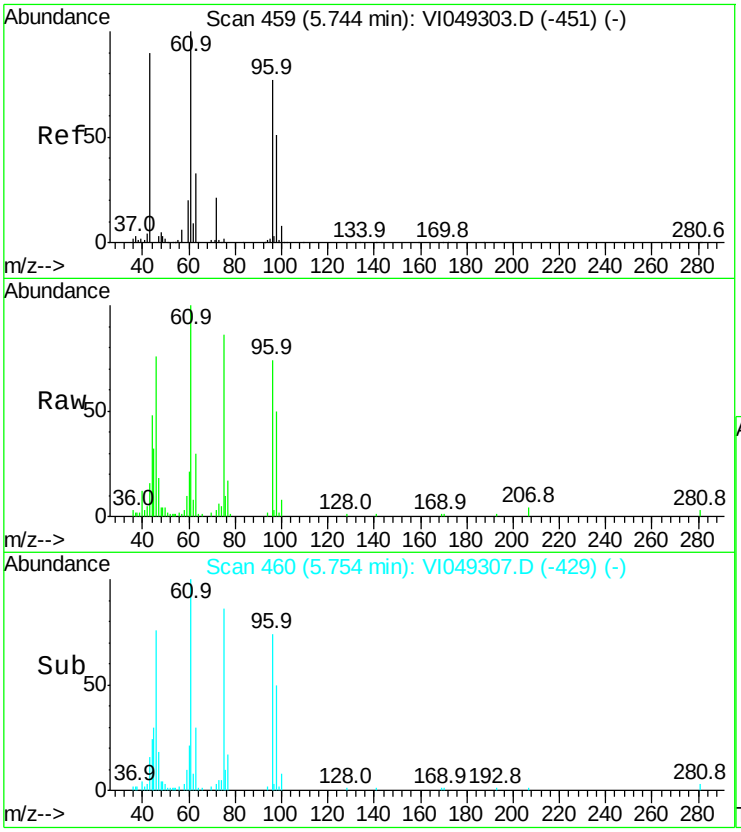
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049307.D
Acq On : 9 May 2016 20:57
Operator : FY/SY
Sample : H2943-14
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 10 06:45:15 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4108

Manual Integrations APPROVED
feifei
5/10/2016 1:38:15 PM

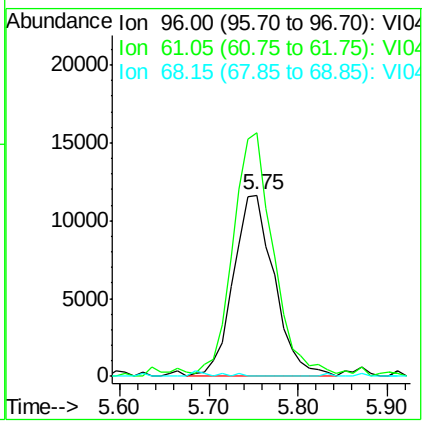




#22
cis-1,2-Dichloroethene
Concen: 0.35 ug/L
RT: 5.75 min Scan# 460
Delta R.T. 0.01 min
Lab File: VI049307.D
Acq: 9 May 2016 20:57

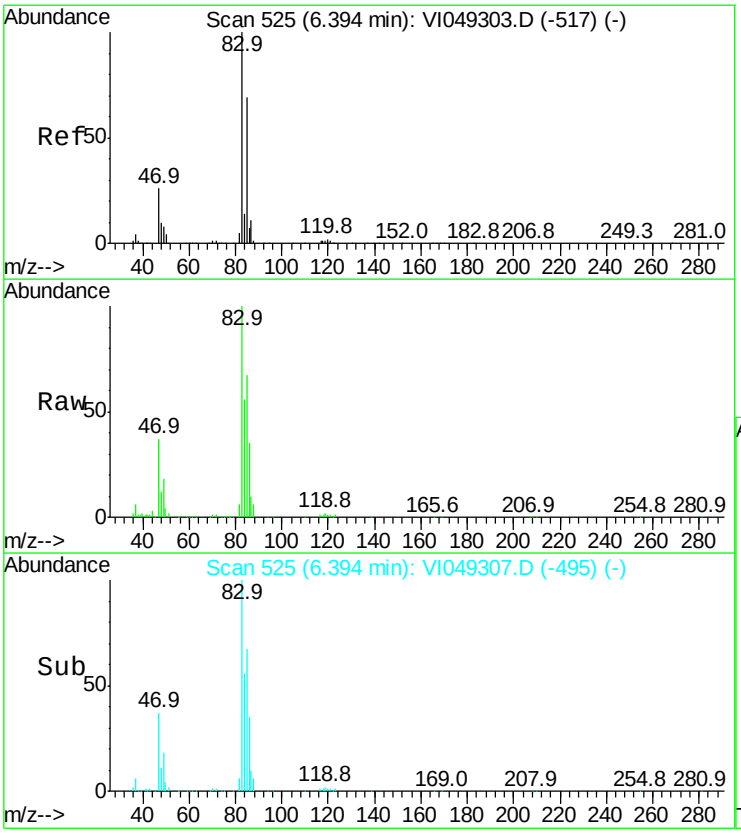
Tgt Ion: 96 Resp: 37148

Ion	Ratio	Lower	Upper
96	100		
61	134.5	82.1	152.5
68	0.0	0.0	0.0



Instrument :
MSVOA_I
ClientSampleId :
H4108

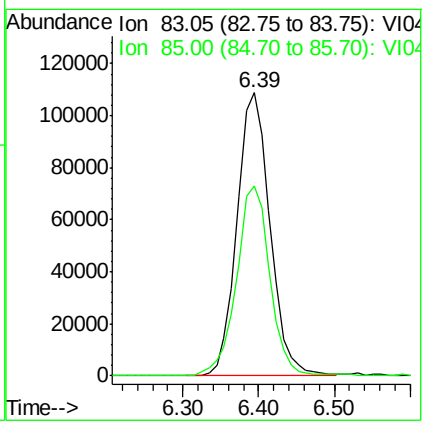
Manual Integrations APPROVED
feifei
5/10/2016 1:38:15 PM

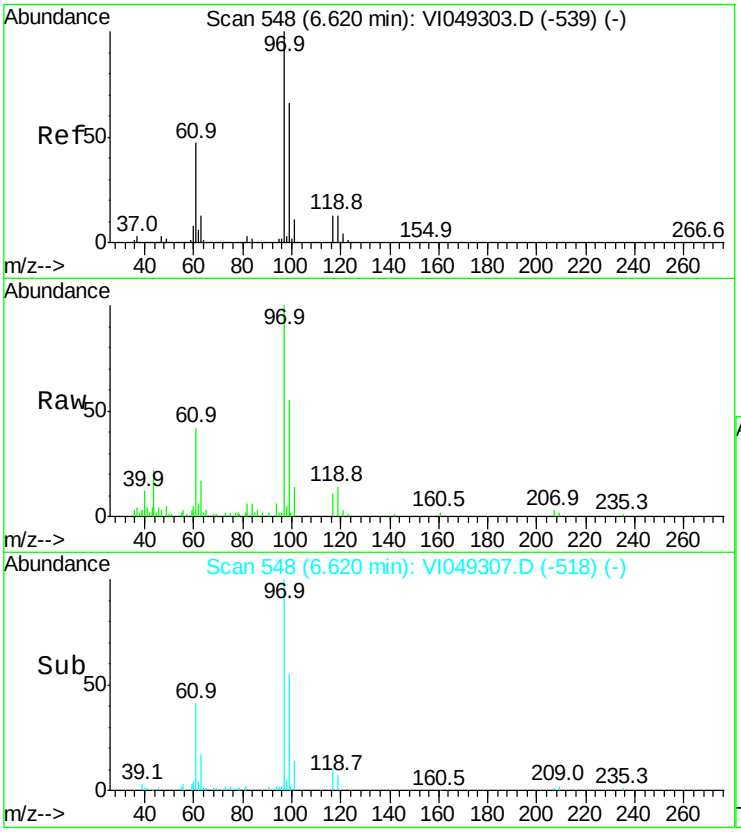


#25
Chloroform
Concen: 1.77 ug/L
RT: 6.39 min Scan# 525
Delta R.T. -0.00 min
Lab File: VI049307.D
Acq: 9 May 2016 20:57

Tgt Ion: 83 Resp: 329805

Ion	Ratio	Lower	Upper
83	100		
85	67.3	47.3	87.8

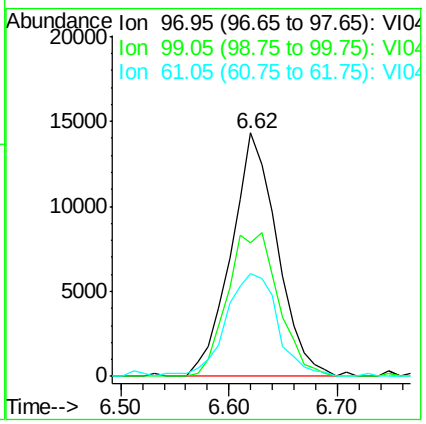




#29
1,1,1-Trichloroethane
Concen: 0.30 ug/L
RT: 6.62 min Scan# 548
Delta R.T. -0.00 min
Lab File: VI049307.D
Acq: 9 May 2016 20:57

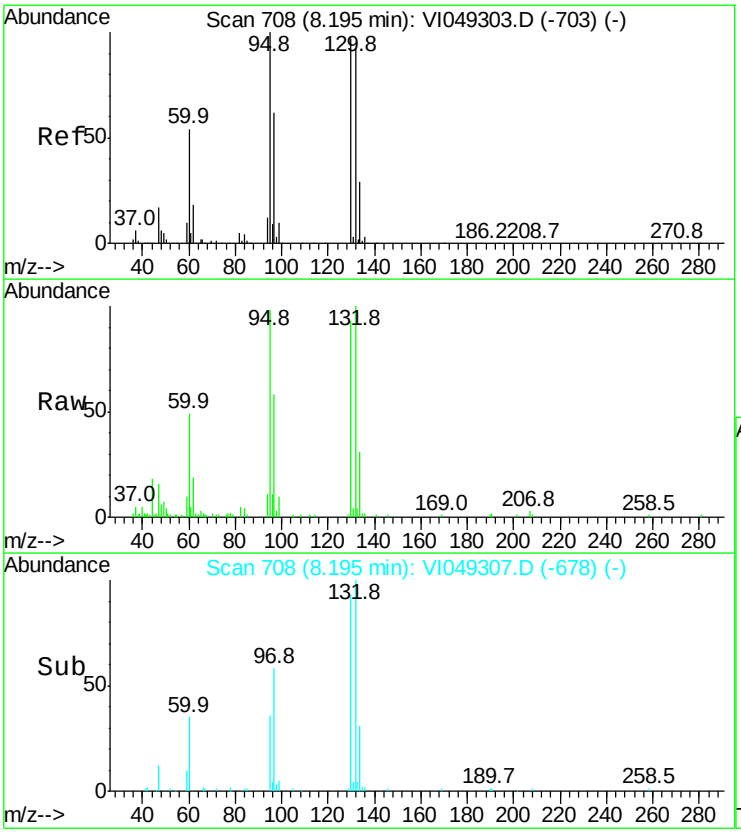
Tgt Ion: 97 Resp: 42402

Ion	Ratio	Lower	Upper
97	100		
99	65.5	51.1	76.7
61	46.5	33.3	49.9



Instrument :
MSVOA_I
ClientSampleId :
H4108

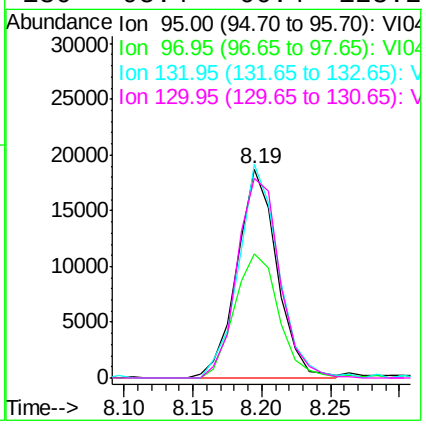
Manual Integrations APPROVED
feifei
5/10/2016 1:38:15 PM

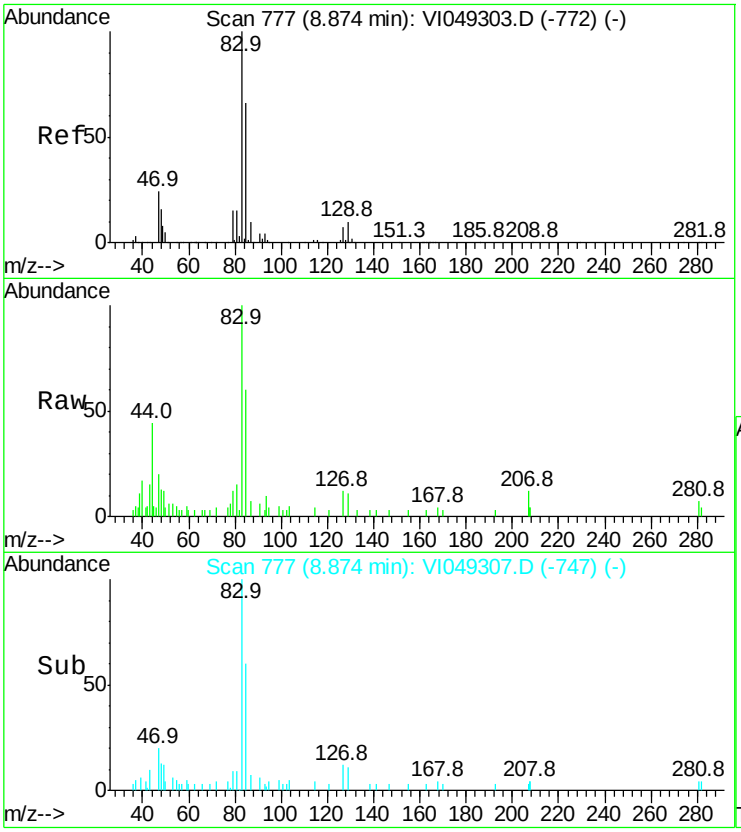


#34
Trichloroethene
Concen: 0.43 ug/L
RT: 8.19 min Scan# 708
Delta R.T. -0.00 min
Lab File: VI049307.D
Acq: 9 May 2016 20:57

Tgt Ion: 95 Resp: 38006

Ion	Ratio	Lower	Upper
95	100		
97	59.3	45.8	85.2
132	102.3	63.9	118.7
130	95.4	66.4	123.2

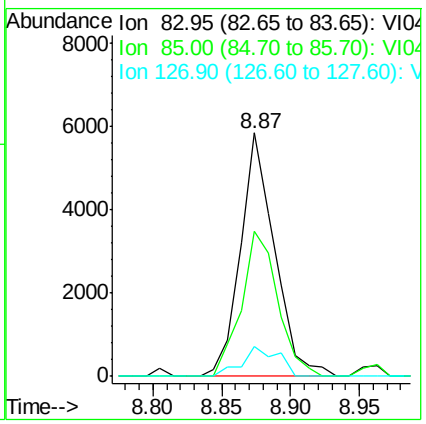




#38
Bromodichloromethane
Concen: 0.09 ug/L
RT: 8.87 min Scan# 777
Delta R.T. -0.00 min
Lab File: VI049307.D
Acq: 9 May 2016 20:57

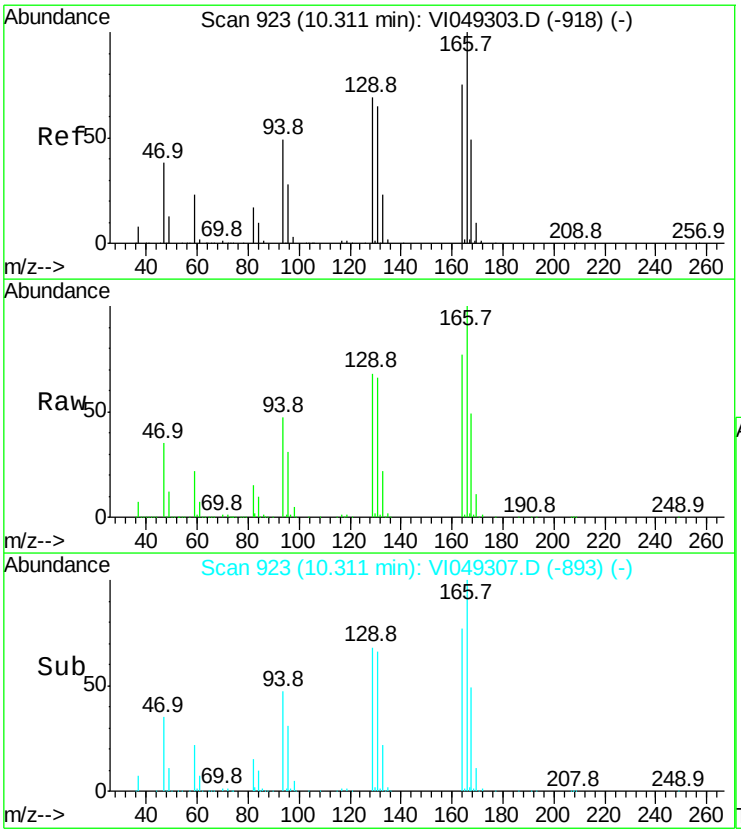
Tgt Ion: 83 Resp: 10141

Ion	Ratio	Lower	Upper
83	100		
85	59.8	44.7	83.1
127	12.3	6.6	9.8#



Instrument :
MSVOA_I
ClientSampleId :
H4108

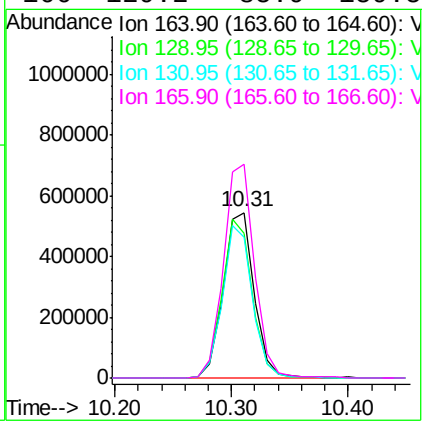
Manual Integrations APPROVED
feifei
5/10/2016 1:38:15 PM



#47
Tetrachloroethene
Concen: 17.04 ug/L
RT: 10.31 min Scan# 923
Delta R.T. -0.00 min
Lab File: VI049307.D
Acq: 9 May 2016 20:57

Tgt Ion:164 Resp: 1000801

Ion	Ratio	Lower	Upper
164	100		
129	87.4	62.1	115.3
131	85.2	60.6	112.6
166	129.2	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049307.D
Acq On : 9 May 2016 20:57
Operator : FY/SY
Sample : H2943-14
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4108

Manual Integrations APPROVED
feifei
5/10/2016 1:38:15 PM

Quant Time: May 10 06:45:15 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1159964	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	752493	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	280259	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	281621	3.94	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 78.80%			
7) Chloroethane-d5	2.09	69	194036	4.91	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 98.20%			
11) 1,1-Dichloroethene-d2	2.92	63	534932	3.18	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.60%			
20) 2-Butanone-d5	5.65	46	941941	60.92	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 121.84%			
24) Chloroform-d	6.35	84	896011	4.93	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.60%			
26) 1,2-Dichloroethane-d4	7.21	65	402946m	5.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 108.40%			
32) Benzene-d6	7.15	84	1511300	5.16	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.20%			
36) 1,2-Dichloropropane-d6	8.41	67	440281	5.34	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 106.80%			
41) Toluene-d8	9.68	98	1039275	4.81	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.20%			
43) trans-1,3-Dichloropropene-	10.00	79	151012	4.65	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 93.00%			
46) 2-Hexanone-d5	10.41	63	601153	58.69	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 117.38%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	194892	5.20	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 104.00%			
63) 1,2-Dichlorobenzene-d4	13.74	152	245752	5.00	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 100.00%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.75	96	37148	0.35	ug/L	84
25) Chloroform	6.39	83	329805	1.77	ug/L	100
29) 1,1,1-Trichloroethane	6.62	97	42402	0.30	ug/L	96
34) Trichloroethene	8.19	95	38006	0.43	ug/L	94
38) Bromodichloromethane	8.87	83	10141	0.09	ug/L #	94
47) Tetrachloroethene	10.31	164	1000801	17.04	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049307.D
Acq On : 9 May 2016 20:57
Operator : FY/SY
Sample : H2943-14
Misc : 25mL/MSVOA I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4108

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	3	6	34	rVB	6643415	18404955	100.00%	30.731%
2	1.699	45	48	57	rVB	259284	443888	2.41%	0.741%
3	1.984	75	77	78	rBV2	5828	8619	0.05%	0.014%
4	2.093	84	88	98	rBV	179445	391392	2.13%	0.654%
5	2.477	125	127	129	rBV2	6288	10736	0.06%	0.018%
6	2.801	157	160	162	rBV3	5998	12384	0.07%	0.021%
7	2.919	167	172	186	rVB	667336	1527413	8.30%	2.550%
8	3.097	188	190	191	rVB2	4213	4733	0.03%	0.008%
9	3.195	197	200	203	rBV3	10521	28053	0.15%	0.047%
10	3.313	211	212	214	rVB2	5031	5357	0.03%	0.009%
11	3.559	235	237	238	rBV2	6214	8448	0.05%	0.014%
12	3.687	248	250	255	rVB5	3875	7674	0.04%	0.013%
13	3.973	276	279	283	rBV4	6874	18331	0.10%	0.031%
14	4.219	302	304	306	rVV3	2939	4699	0.03%	0.008%
15	4.406	318	323	327	rVB7	4504	16153	0.09%	0.027%
16	4.543	332	337	340	rBV5	4869	13360	0.07%	0.022%
17	4.632	345	346	347	rBV	6805	5406	0.03%	0.009%
18	4.681	347	351	352	rBV4	4245	10495	0.06%	0.018%
19	4.701	352	353	356	rVB3	4230	5593	0.03%	0.009%
20	5.134	396	397	399	rVB	6402	5783	0.03%	0.010%
21	5.183	399	402	403	rBV3	4069	6679	0.04%	0.011%
22	5.498	429	434	437	rBV6	5195	15668	0.09%	0.026%
23	5.547	437	439	440	rVB2	3542	4127	0.02%	0.007%
24	5.646	443	449	456	rBV	393409	1336052	7.26%	2.231%
25	5.744	456	459	476	rVB3	91132	398589	2.17%	0.666%
26	6.354	513	521	535	rBV2	729735	2882198	15.66%	4.812%
27	6.512	535	537	539	rVV3	5211	6293	0.03%	0.011%
28	6.620	542	548	556	rVB2	44784	144579	0.79%	0.241%
29	6.718	556	558	561	rBV4	2699	5611	0.03%	0.009%
30	6.876	569	574	576	rBV5	2574	5614	0.03%	0.009%
31	7.152	595	602	605	rBV	1184389	3072668	16.69%	5.130%
32	7.211	605	608	619	rVB	437162	1119489	6.08%	1.869%
33	7.417	627	629	630	rBV2	3837	4333	0.02%	0.007%
34	7.535	640	641	644	rVB3	4020	6147	0.03%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049307.D
Acq On : 9 May 2016 20:57
Operator : FY/SY
Sample : H2943-14
Misc : 25mL/MSVOA I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4108

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.634	649	651	654	rVB2	5501	6580	0.04%	0.011%
36	7.732	657	661	662	rBV3	3776	6351	0.03%	0.011%
37	7.752	662	663	667	rVB4	6587	10572	0.06%	0.018%
38	7.811	667	669	671	rBV3	3929	7260	0.04%	0.012%
39	7.909	673	679	691	rBV	1299566	2816225	15.30%	4.702%
40	8.096	696	698	701	rVB4	4645	6721	0.04%	0.011%
41	8.195	701	708	713	rBV2	109852	250857	1.36%	0.419%
42	8.264	713	715	718	rVV2	3950	6163	0.03%	0.010%
43	8.411	725	730	739	rBV	920508	2088423	11.35%	3.487%
44	8.687	756	758	761	rVB4	3901	6702	0.04%	0.011%
45	8.775	765	767	770	rBV2	1753	4367	0.02%	0.007%
46	8.884	774	778	783	rVB5	21068	64338	0.35%	0.107%
47	8.982	783	788	790	rBV6	3335	10069	0.05%	0.017%
48	9.159	802	806	807	rBV3	3546	5383	0.03%	0.009%
49	9.268	816	817	820	rVB3	4235	6083	0.03%	0.010%
50	9.346	820	825	832	rBV	536310	989054	5.37%	1.651%
51	9.504	837	841	846	rBV4	15452	38220	0.21%	0.064%
52	9.573	846	848	851	rVB3	4672	5569	0.03%	0.009%
53	9.681	854	859	864	rBV	1597828	3011010	16.36%	5.027%
54	9.750	864	866	870	rVV4	17772	39310	0.21%	0.066%
55	9.848	874	876	883	rVB7	5812	18452	0.10%	0.031%
56	9.937	883	885	887	rBV3	3586	4784	0.03%	0.008%
57	9.996	887	891	899	rBV	311838	540705	2.94%	0.903%
58	10.124	901	904	906	rVV4	10016	19562	0.11%	0.033%
59	10.203	907	912	918	rVV	97968	248532	1.35%	0.415%
60	10.301	918	922	929	rVV	4739876	8477195	46.06%	14.154%
61	10.409	929	933	949	rVV	1834498	3263952	17.73%	5.450%
62	10.577	949	950	952	rVV2	7435	9767	0.05%	0.016%
63	10.616	952	954	960	rVB7	6720	15220	0.08%	0.025%
64	10.832	972	976	979	rBV5	6470	16697	0.09%	0.028%
65	10.872	979	980	982	rVV2	5242	5188	0.03%	0.009%
66	10.951	985	988	991	rVB4	5086	9120	0.05%	0.015%
67	11.010	991	994	997	rVB4	3274	6405	0.03%	0.011%
68	11.049	997	998	1001	rBV3	3303	4533	0.02%	0.008%
69	11.197	1009	1013	1023	rVV	1488461	2640662	14.35%	4.409%
70	11.334	1023	1027	1032	rVV6	10800	27927	0.15%	0.047%
71	11.452	1035	1039	1042	rBV6	7778	17173	0.09%	0.029%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049307.D
Acq On : 9 May 2016 20:57
Operator : FY/SY
Sample : H2943-14
Misc : 25mL/MSVOA I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4108

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.492	1042	1043	1046	rVB3	4453	6207	0.03%	0.010%
73	11.531	1046	1047	1049	rBV2	3113	4466	0.02%	0.007%
74	11.728	1064	1067	1068	rBV4	3456	4918	0.03%	0.008%
75	11.826	1075	1077	1082	rVB5	10940	21895	0.12%	0.037%
76	11.895	1082	1084	1086	rBV3	4410	6644	0.04%	0.011%
77	12.171	1109	1112	1115	rBV5	4145	10131	0.06%	0.017%
78	12.260	1118	1121	1125	rBV3	5662	15549	0.08%	0.026%
79	12.387	1130	1134	1136	rVV	108886	192471	1.05%	0.321%
80	12.437	1136	1139	1151	rVB	401191	736089	4.00%	1.229%
81	12.574	1151	1153	1157	rVB5	3979	7802	0.04%	0.013%
82	12.643	1157	1160	1161	rBV3	3882	5293	0.03%	0.009%
83	12.663	1161	1162	1166	rVB4	4840	4345	0.02%	0.007%
84	12.722	1166	1168	1170	rVB2	3859	4707	0.03%	0.008%
85	12.771	1170	1173	1176	rBV5	4507	9173	0.05%	0.015%
86	12.820	1176	1178	1180	rBV3	3449	5073	0.03%	0.008%
87	12.978	1191	1194	1195	rVB3	3887	4871	0.03%	0.008%
88	13.027	1195	1199	1200	rBV3	5019	8675	0.05%	0.014%
89	13.116	1206	1208	1210	rVB3	4750	5587	0.03%	0.009%
90	13.165	1210	1213	1215	rBV3	3944	6490	0.04%	0.011%
91	13.204	1215	1217	1220	rVB3	4158	6170	0.03%	0.010%
92	13.263	1220	1223	1224	rBV2	4359	5445	0.03%	0.009%
93	13.313	1224	1228	1230	rBV5	4850	12608	0.07%	0.021%
94	13.411	1234	1238	1247	rBV	1274813	2084161	11.32%	3.480%
95	13.687	1262	1266	1267	rBV4	3553	8436	0.05%	0.014%
96	13.736	1267	1271	1280	rVV	1079135	1852653	10.07%	3.093%
97	13.844	1280	1282	1286	rVB5	3970	10360	0.06%	0.017%
98	14.011	1296	1299	1305	rVB2	62693	109956	0.60%	0.184%
99	14.504	1345	1349	1350	rBV4	7107	14076	0.08%	0.024%
100	15.586	1456	1459	1463	rVB	44320	80171	0.44%	0.134%

Sum of corrected areas: 59891072

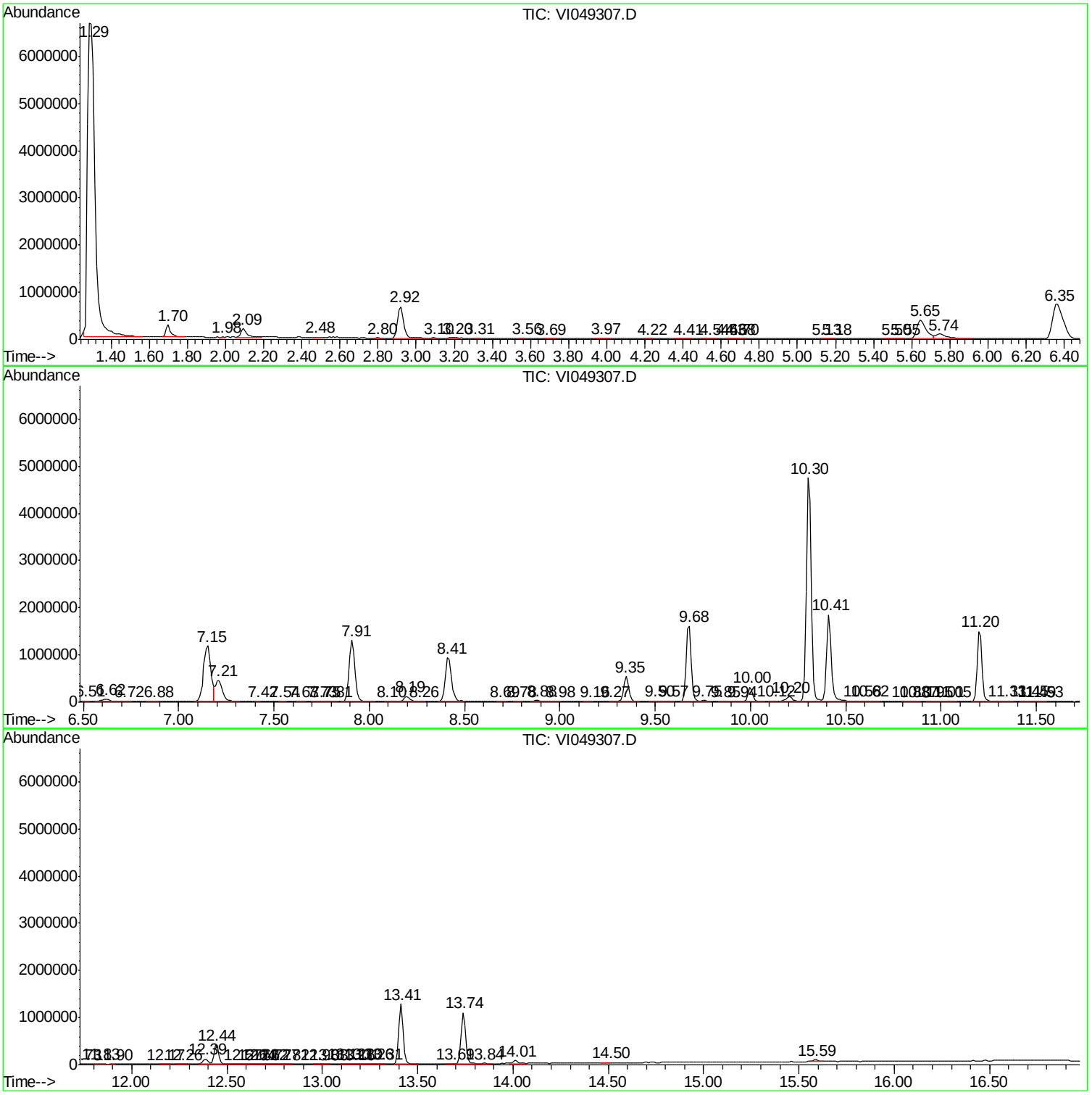
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049307.D
Acq On : 9 May 2016 20:57
Operator : FY/SY
Sample : H2943-14
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4108

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049307.D
Acq On : 9 May 2016 20:57
Operator : FY/SY
Sample : H2943-14
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4108

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049307.D
Acq On : 9 May 2016 20:57
Operator : FY/SY
Sample : H2943-14
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4108

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

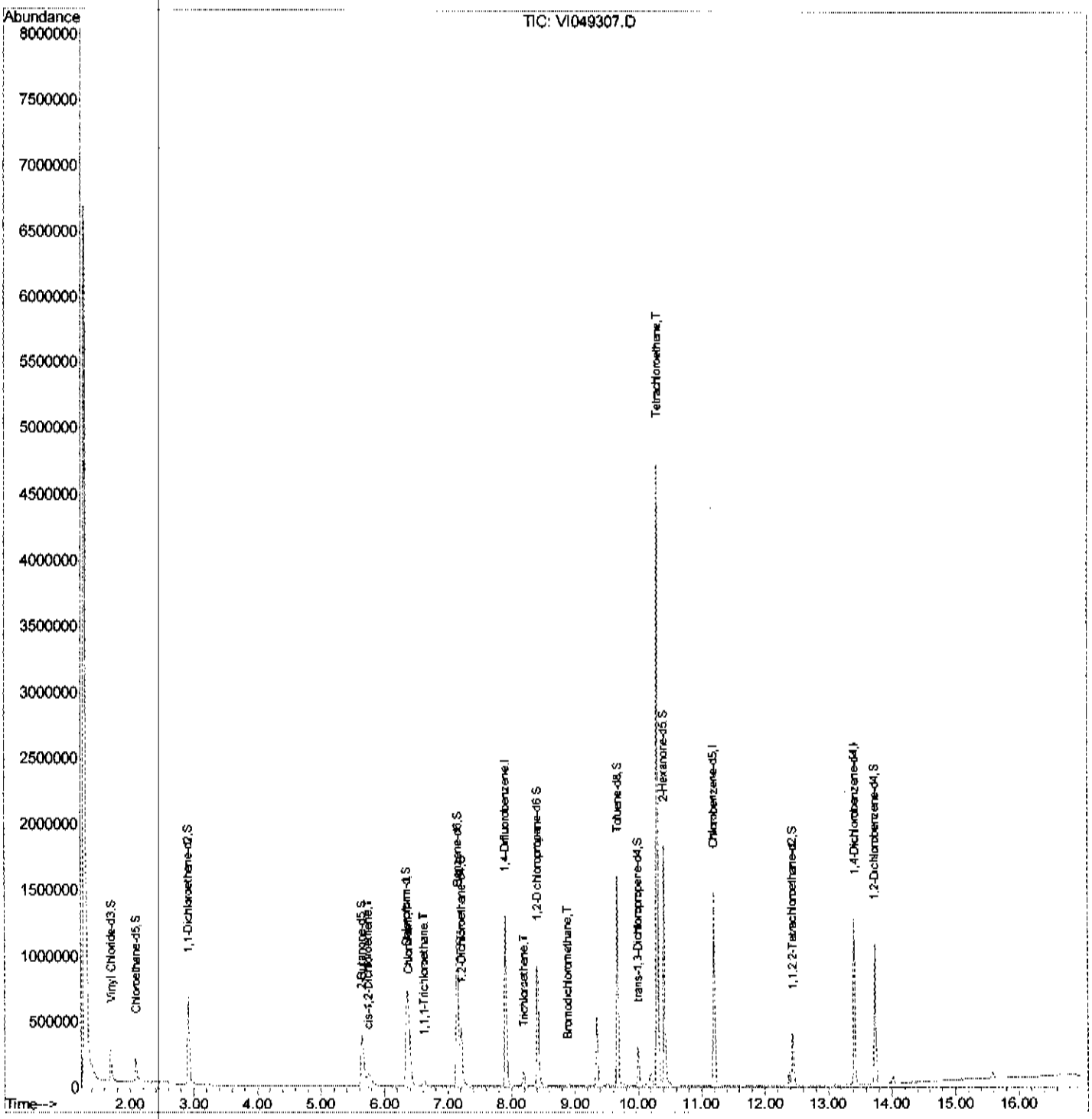
Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049307.D
Acq On : 9 May 2016 20:57
Operator : FY/SY
Sample : H2943-14
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 10 06:45:15 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4108

Manual Integrations APPROVED
feifei
5/10/2016 1:38:15 PM



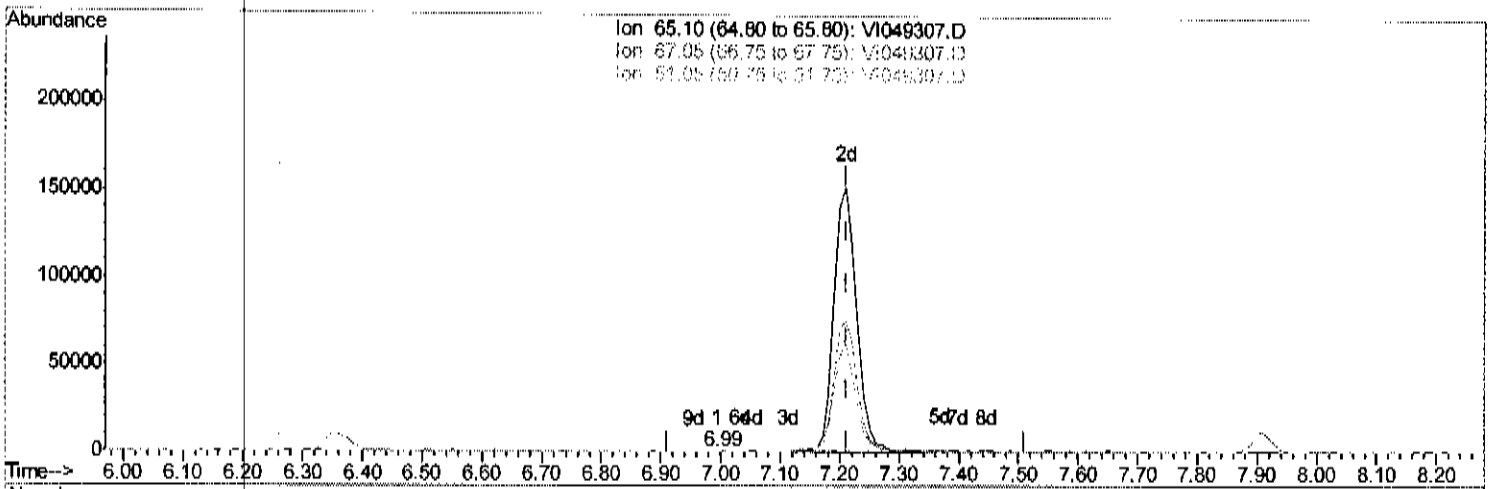
Quantitation Report (Qedit)

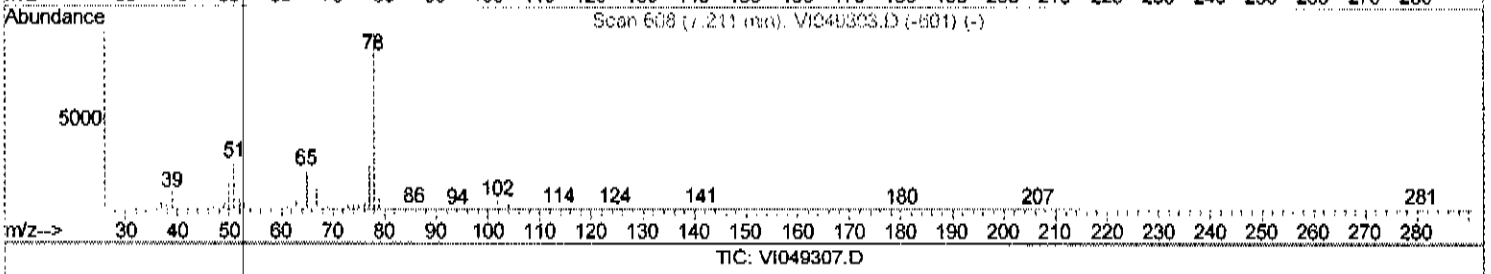
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049307.D
Acq On : 9 May 2016 20:57
Operator : FY/SY
Sample : H2943-14
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 10 06:12:29 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4108

Manual Integrations APPROVED
feifei
5/10/2016 1:38:15 PM





TIC: VI049307.D

(26) 1,2-Dichloroethane-d4 (S)

6.994min (-0.217) 0.01ug/L

response 469

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	42.64
51.05	123.20	150.96
0.00	0.00	0.00

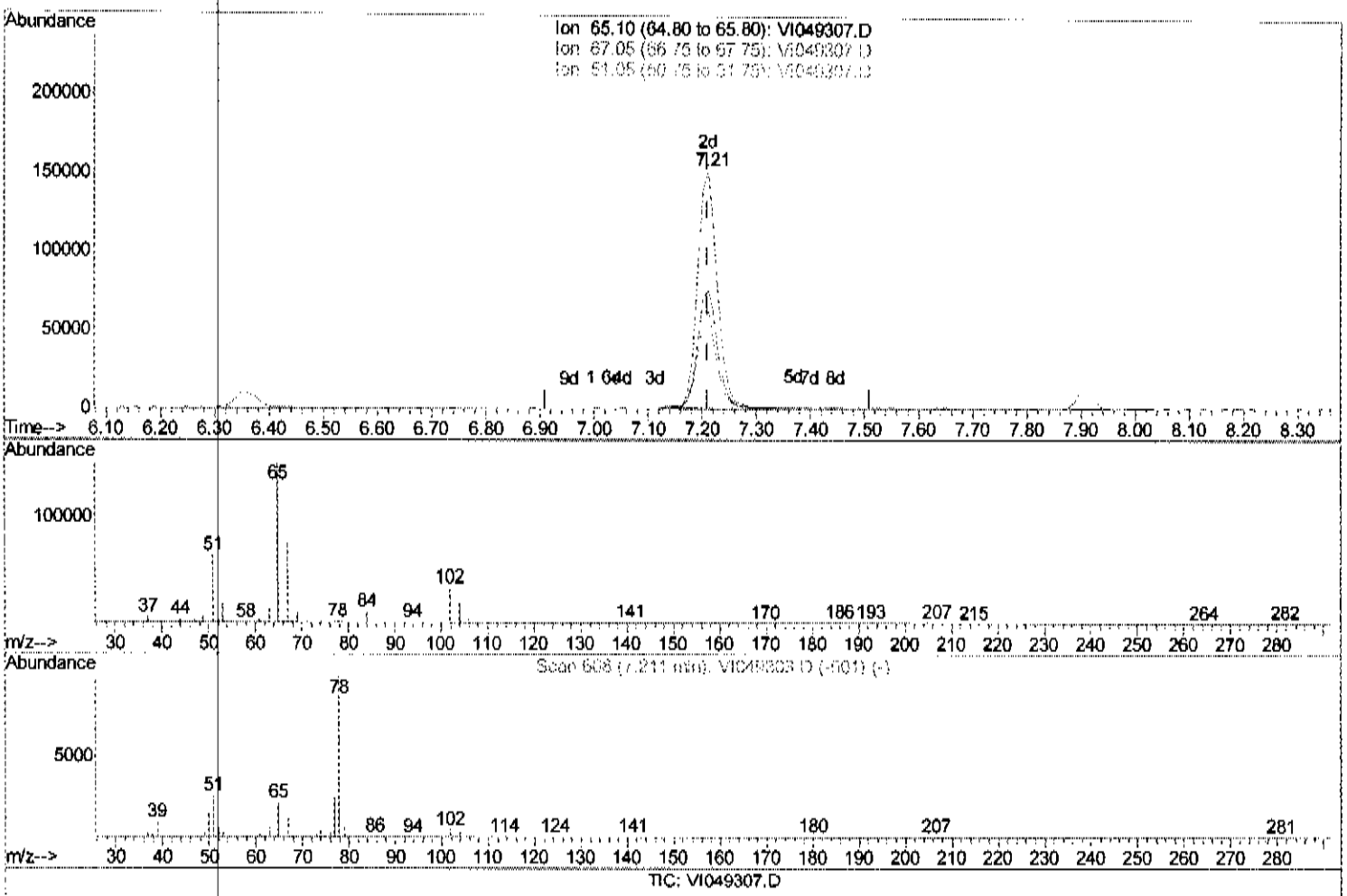
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049307.D
Acq On : 9 May 2016 20:57
Operator : FY/SY
Sample : H2943-14
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 10 06:12:29 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4108

Manual Integrations APPROVED
feifei
5/10/2016 1:38:15 PM



(26) 1,2-Dichloroethane-d4 (S)

7.211min (-0.000) 5.42ug/L m

response 402946

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.05#
51.05	123.20	0.18#
0.00	0.00	0.00

FY
5/10/2016

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049307.D
Acq On : 9 May 2016 20:57
Operator : FY/SY
Sample : 82943-14
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 10 06:45:15 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4108

Manual Integrations APPROVED
feifei
5/10/2016 1:38:15 PM

Internal Standards		R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene		7.91	114	1159964	5.00	ug/L	0.00
28) Chlorobenzene-d5		11.21	117	752493	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4		13.41	152	280259	5.00	ug/L	0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3		1.70	65	281621	3.94	ug/L	0.00
Spiked Amount	5.000	Range 40 - 130		Recovery =	78.80%		
7) Chloroethane-d5		2.09	69	194036	4.91	ug/L	0.00
Spiked Amount	5.000	Range 65 - 130		Recovery =	98.20%		
11) 1,1-Dichloroethene-d2		2.92	63	534932	3.18	ug/L	0.00
Spiked Amount	5.000	Range 60 - 125		Recovery =	63.60%		
20) 2-Butanone-d5		5.65	46	941941	60.92	ug/L	0.00
Spiked Amount	50.000	Range 40 - 130		Recovery =	121.84%		
24) Chloroform-d		6.35	84	896011	4.93	ug/L	0.00
Spiked Amount	5.000	Range 70 - 125		Recovery =	98.60%		
26) 1,2-Dichloroethane-d4		7.21	65	402946m	5.42	ug/L	0.00
Spiked Amount	5.000	Range 70 - 130		Recovery =	108.40%		
32) Benzene-d6		7.15	84	1511300	5.16	ug/L	0.00
Spiked Amount	5.000	Range 70 - 125		Recovery =	103.20%		
36) 1,2-Dichloropropane-d6		8.41	67	440281	5.34	ug/L	0.00
Spiked Amount	5.000	Range 60 - 140		Recovery =	106.80%		
41) Toluene-d8		9.68	98	1039275	4.81	ug/L	0.00
Spiked Amount	5.000	Range 70 - 130		Recovery =	96.20%		
43) trans-1,3-Dichloropropene-	10.00	79	151012	4.65	ug/L	0.00	
Spiked Amount	5.000	Range 55 - 130		Recovery =	93.00%		
46) 2-Hexanone-d5		10.41	63	601153	58.69	ug/L	0.00
Spiked Amount	50.000	Range 45 - 130		Recovery =	117.38%		
57) 1,1,2,2-Tetrachloroethane-	12.44	84	194892	5.20	ug/L	0.00	
Spiked Amount	5.000	Range 65 - 120		Recovery =	104.00%		
63) 1,2-Dichlorobenzene-d4		13.74	152	245752	5.00	ug/L	0.00
Spiked Amount	5.000	Range 80 - 120		Recovery =	100.00%		
Target Compounds							Qvalue
22) cis-1,2-Dichloroethene		5.75	96	37148	0.35	ug/L	84
25) Chloroform		6.39	83	329805	1.77	ug/L	100
29) 1,1,1-Trichloroethane		6.62	97	42402	0.30	ug/L	96
34) Trichloroethene		8.19	95	38006	0.43	ug/L	94
38) Bromodichloromethane		8.87	83	10141	0.09	ug/L #	94
47) Tetrachloroethene		10.31	164	1000801	17.04	ug/L	97

(#) = qualifier out of range (m) manual integration (+) = signals summed

FT 5/10/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4109

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049336.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	3.0	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4109

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049336.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.18	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4109

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049336.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4109

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-04
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049336.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

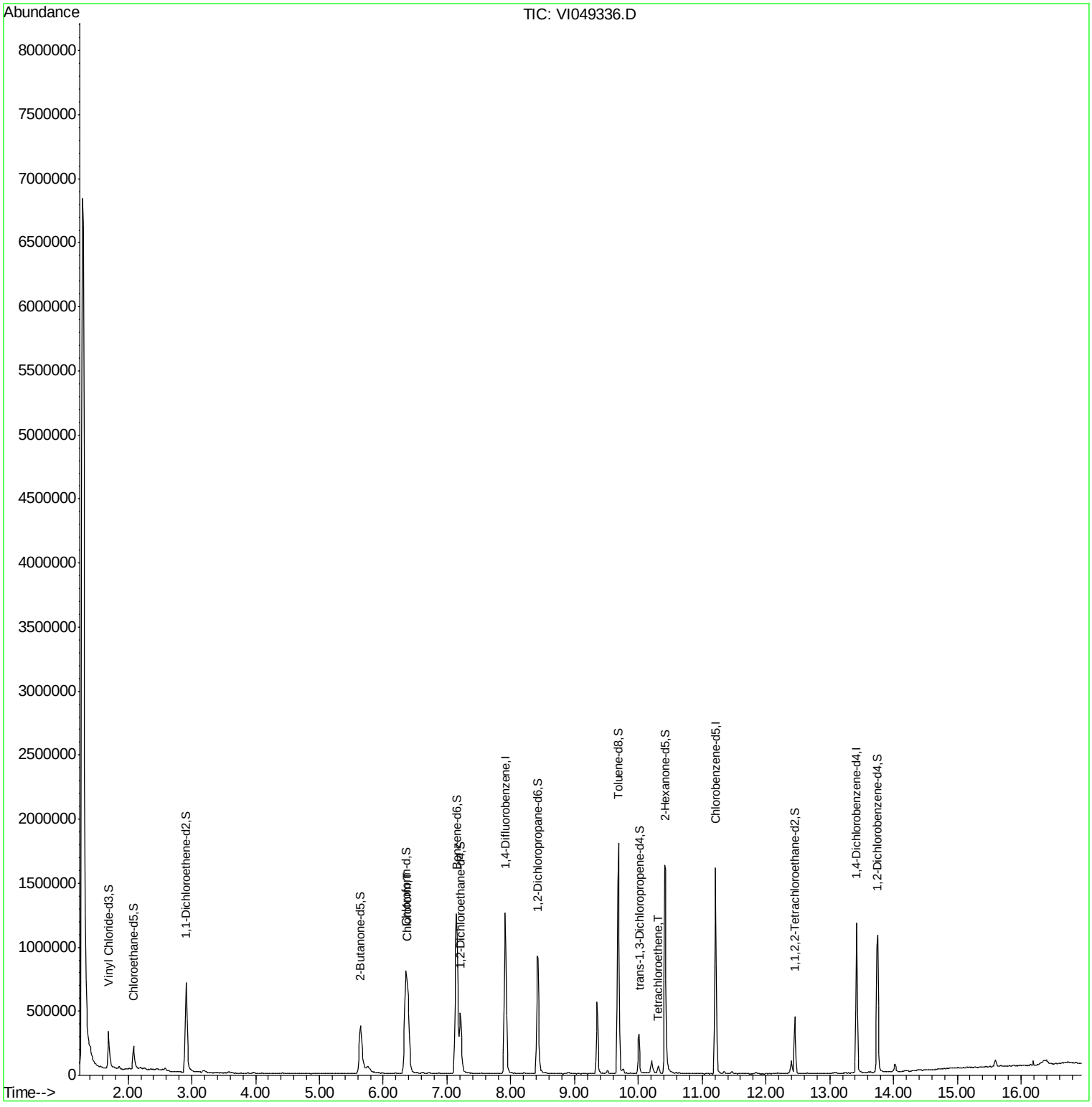
Quantitation Report (LSC Reviewed)

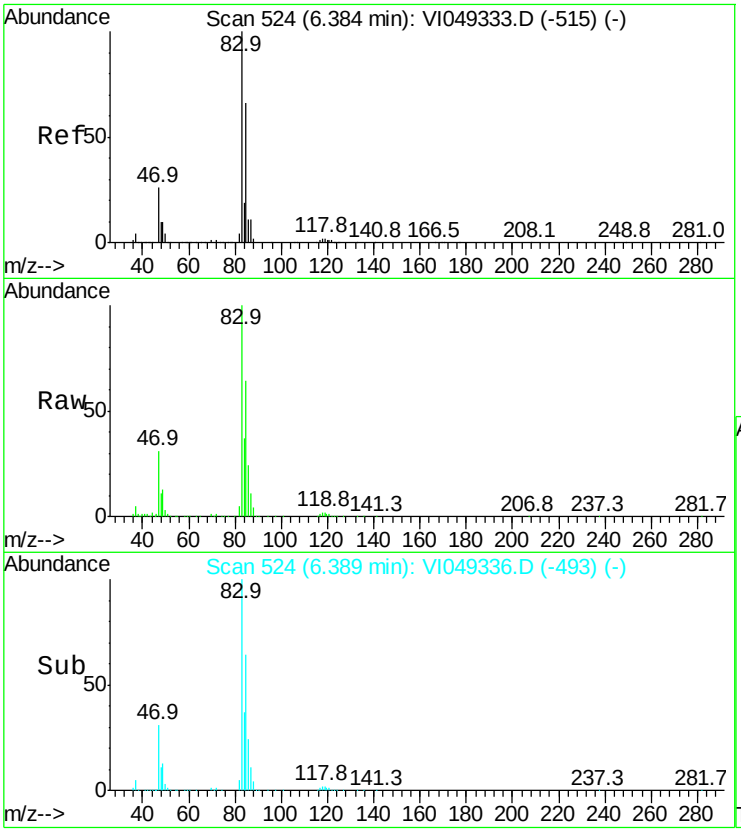
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049336.D
Acq On : 11 May 2016 12:37
Operator : FY/SY
Sample : H2943-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 12 06:40:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4109

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:30 PM

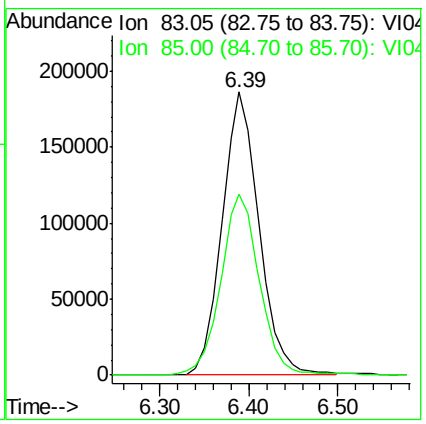




#25
Chloroform
Concen: 2.95 ug/L
RT: 6.39 min Scan# 524
Delta R.T. 0.01 min
Lab File: VI049336.D
Acq: 11 May 2016 12:37

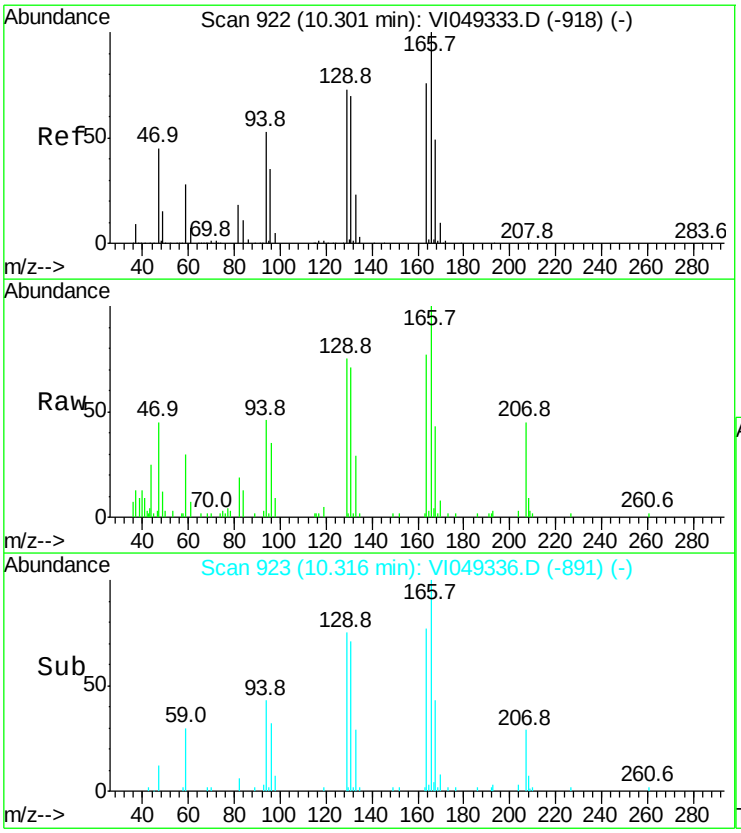
Tgt Ion: 83 Resp: 539474

Ion	Ratio	Lower	Upper
83	100		
85	64.0	47.3	87.8



Instrument :
MSVOA_I
ClientSampleId :
H4109

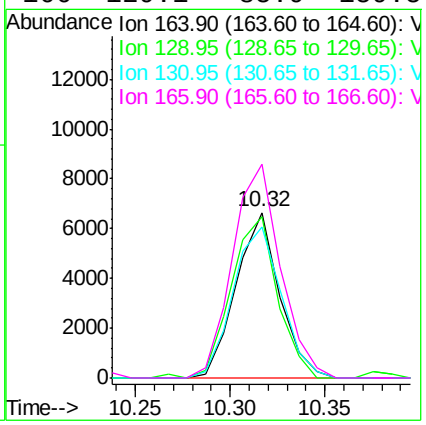
Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:30 PM



#47
Tetrachloroethene
Concen: 0.18 ug/L
RT: 10.32 min Scan# 923
Delta R.T. 0.02 min
Lab File: VI049336.D
Acq: 11 May 2016 12:37

Tgt Ion:164 Resp: 10618

Ion	Ratio	Lower	Upper
164	100		
129	97.4	62.1	115.3
131	91.7	60.6	112.6
166	129.1	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049336.D
Acq On : 11 May 2016 12:37
Operator : FY/SY
Sample : H2943-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4109

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:30 PM

Quant Time: May 12 06:40:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1137354	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	758307	5.00	ug/L	0.02
59) 1,4-Dichlorobenzene-d4	13.43	152	287644	5.00	ug/L	0.02
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	311186	4.44	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 88.80%			
7) Chloroethane-d5	2.09	69	194731	5.02	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 100.40%			
11) 1,1-Dichloroethene-d2	2.91	63	574804	3.48	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 69.60%			
20) 2-Butanone-d5	5.64	46	897920	59.23	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 118.46%			
24) Chloroform-d	6.36	84	917797	5.15	ug/L	0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.00%			
26) 1,2-Dichloroethane-d4	7.21	65	411106m	5.64	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 112.80%			
32) Benzene-d6	7.15	84	1577893	5.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 106.80%			
36) 1,2-Dichloropropane-d6	8.43	67	444932	5.36	ug/L	0.02
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.20%			
41) Toluene-d8	9.69	98	1100735	5.05	ug/L	0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.00%			
43) trans-1,3-Dichloropropene-	10.01	79	153289	4.68	ug/L	0.02
Spiked Amount 5.000	Range 55 - 130		Recovery = 93.60%			
46) 2-Hexanone-d5	10.41	63	585905	56.76	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 113.52%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	195024	5.16	ug/L	0.02
Spiked Amount 5.000	Range 65 - 120		Recovery = 103.20%			
63) 1,2-Dichlorobenzene-d4	13.75	152	253856	5.03	ug/L	0.02
Spiked Amount 5.000	Range 80 - 120		Recovery = 100.60%			
Target Compounds						Qvalue
25) Chloroform	6.39	83	539474	2.95	ug/L	96
47) Tetrachloroethene	10.32	164	10618	0.18	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049336.D
Acq On : 11 May 2016 12:37
Operator : FY/SY
Sample : H2943-04
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4109

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.291	3	6	32	rVB	6781834	21409859	100.00%	38.891%
2	1.567	32	34	39	rVB3	15781	26095	0.12%	0.047%
3	1.695	44	47	55	rBV	289876	498068	2.33%	0.905%
4	1.862	62	64	69	rVB	24194	38133	0.18%	0.069%
5	2.088	83	87	94	rBV	182832	370180	1.73%	0.672%
6	2.315	108	110	111	rVB2	6565	4959	0.02%	0.009%
7	2.581	134	137	142	rVB2	18717	45051	0.21%	0.082%
8	2.905	165	170	185	rBV	698416	1672305	7.81%	3.038%
9	3.181	195	198	205	rVB2	16310	50139	0.23%	0.091%
10	3.525	230	233	234	rBV3	3443	5244	0.02%	0.010%
11	3.575	234	238	242	rBV7	11469	26242	0.12%	0.048%
12	3.850	264	266	267	rBV2	3172	5361	0.03%	0.010%
13	3.949	273	276	284	rVB8	8093	28987	0.14%	0.053%
14	4.096	288	291	293	rBV3	5057	7318	0.03%	0.013%
15	4.303	311	312	314	rBV2	3767	5703	0.03%	0.010%
16	4.382	316	320	322	rBV3	3740	9883	0.05%	0.018%
17	4.421	322	324	329	rVB4	5844	11890	0.06%	0.022%
18	4.687	350	351	355	rVB4	5921	11136	0.05%	0.020%
19	4.785	358	361	362	rVB3	4096	4852	0.02%	0.009%
20	4.893	369	372	374	rBV4	5154	8275	0.04%	0.015%
21	5.080	388	391	394	rVB5	3907	8674	0.04%	0.016%
22	5.179	400	401	407	rBV3	2856	6555	0.03%	0.012%
23	5.277	407	411	413	rBV4	3066	5140	0.02%	0.009%
24	5.405	419	424	427	rVB5	3119	9974	0.05%	0.018%
25	5.445	427	428	432	rVB4	4580	7243	0.03%	0.013%
26	5.513	432	435	436	rBV3	4594	7535	0.04%	0.014%
27	5.641	442	448	457	rBV	375727	1351080	6.31%	2.454%
28	6.094	491	494	497	rVB5	3839	8879	0.04%	0.016%
29	6.143	497	499	501	rBV3	2631	5610	0.03%	0.010%
30	6.193	501	504	508	rVB6	3732	10493	0.05%	0.019%
31	6.360	513	521	537	rBV2	803525	3463193	16.18%	6.291%
32	6.537	537	539	544	rVB4	3659	5942	0.03%	0.011%
33	6.596	544	545	547	rBV2	4777	6753	0.03%	0.012%
34	6.704	551	556	557	rBV5	4330	7924	0.04%	0.014%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049336.D
Acq On : 11 May 2016 12:37
Operator : FY/SY
Sample : H2943-04
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4109

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.872	571	573	575	rVV2	9969	10940	0.05%	0.020%
36	7.019	587	588	589	rBV	5599	4872	0.02%	0.009%
37	7.147	592	601	605	rBV	1250150	3299927	15.41%	5.994%
38	7.206	605	607	618	rVV	471078	1100225	5.14%	1.999%
39	7.374	622	624	626	rVV3	5918	9349	0.04%	0.017%
40	7.620	646	649	651	rBV4	4032	8297	0.04%	0.015%
41	7.748	659	662	665	rVB5	4358	6989	0.03%	0.013%
42	7.915	673	679	693	rBV	1254168	2767997	12.93%	5.028%
43	8.181	701	706	707	rBV4	5151	9942	0.05%	0.018%
44	8.200	707	708	711	rVB3	4651	6570	0.03%	0.012%
45	8.328	719	721	723	rBV2	3426	4848	0.02%	0.009%
46	8.417	725	730	740	rBV	920385	2145121	10.02%	3.897%
47	8.663	754	755	758	rVB2	5617	6211	0.03%	0.011%
48	8.840	770	773	774	rBV3	4045	6480	0.03%	0.012%
49	8.889	774	778	783	rBV7	7486	23296	0.11%	0.042%
50	9.007	788	790	792	rVB3	4520	6294	0.03%	0.011%
51	9.126	799	802	803	rBV3	4587	8345	0.04%	0.015%
52	9.185	806	808	810	rVB3	3647	4914	0.02%	0.009%
53	9.234	810	813	816	rBV4	3378	6808	0.03%	0.012%
54	9.352	820	825	832	rBV	562129	1020132	4.76%	1.853%
55	9.440	832	834	837	rVV3	5178	7615	0.04%	0.014%
56	9.509	837	841	845	rVB	20097	42279	0.20%	0.077%
57	9.568	845	847	851	rVB4	6388	12419	0.06%	0.023%
58	9.687	854	859	864	rBV	1797656	3190450	14.90%	5.795%
59	9.765	864	867	870	rVV	34242	72388	0.34%	0.131%
60	9.814	870	872	875	rVV4	4877	8229	0.04%	0.015%
61	9.874	877	878	880	rVB2	5033	5050	0.02%	0.009%
62	10.011	888	892	899	rBV	309074	552357	2.58%	1.003%
63	10.090	899	900	902	rVV2	6947	9729	0.05%	0.018%
64	10.120	902	903	904	rVV	8781	9134	0.04%	0.017%
65	10.149	904	906	907	rVV2	8464	13047	0.06%	0.024%
66	10.208	907	912	919	rVV	98462	234730	1.10%	0.426%
67	10.307	919	922	927	rVB2	61703	125641	0.59%	0.228%
68	10.415	929	933	949	rVV	1627618	3095285	14.46%	5.623%
69	10.602	949	952	953	rVV2	6749	11487	0.05%	0.021%
70	10.641	953	956	957	rVV3	4593	8444	0.04%	0.015%
71	10.759	966	968	970	rVB3	4573	6497	0.03%	0.012%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049336.D
Acq On : 11 May 2016 12:37
Operator : FY/SY
Sample : H2943-04
Misc : 25mL/MSVOA I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4109

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	10.799	970	972	975	rBV4	2814	5191	0.02%	0.009%
73	10.976	985	990	992	rBV6	2673	6668	0.03%	0.012%
74	11.212	1009	1014	1025	rBV	1607460	2630238	12.29%	4.778%
75	11.350	1025	1028	1031	rVB3	13750	25437	0.12%	0.046%
76	11.458	1034	1039	1043	rBV3	15622	36708	0.17%	0.067%
77	11.635	1054	1057	1060	rBV4	3395	5222	0.02%	0.009%
78	11.842	1071	1078	1085	rBV6	10004	34151	0.16%	0.062%
79	11.990	1091	1093	1095	rBV2	2923	5235	0.02%	0.010%
80	12.058	1097	1100	1102	rVB3	2920	4845	0.02%	0.009%
81	12.186	1110	1113	1116	rBV4	8775	16771	0.08%	0.030%
82	12.393	1128	1134	1137	rBV2	97158	189158	0.88%	0.344%
83	12.452	1137	1140	1146	rVV	447173	742387	3.47%	1.349%
84	12.649	1155	1160	1161	rBV5	5487	8651	0.04%	0.016%
85	13.082	1201	1204	1205	rBV3	6521	12715	0.06%	0.023%
86	13.220	1215	1218	1219	rBV2	3637	5387	0.03%	0.010%
87	13.259	1219	1222	1223	rVV3	4217	5860	0.03%	0.011%
88	13.289	1223	1225	1229	rVB4	3489	4854	0.02%	0.009%
89	13.358	1229	1232	1234	rBV4	4821	10939	0.05%	0.020%
90	13.417	1234	1238	1245	rVV	1171239	2072031	9.68%	3.764%
91	13.535	1249	1250	1252	rBV2	4740	7457	0.03%	0.014%
92	13.604	1256	1257	1259	rBV2	5765	8834	0.04%	0.016%
93	13.751	1267	1272	1277	rBV	1069305	1906792	8.91%	3.464%
94	13.958	1291	1293	1295	rBV3	4160	8207	0.04%	0.015%
95	14.027	1296	1300	1305	rVB2	61139	124799	0.58%	0.227%
96	14.293	1325	1327	1328	rBV	6514	7121	0.03%	0.013%
97	14.371	1333	1335	1338	rBV4	7704	16637	0.08%	0.030%
98	14.489	1343	1347	1348	rBV4	5941	12547	0.06%	0.023%
99	15.602	1456	1460	1464	rBV	53533	106718	0.50%	0.194%
100	16.192	1519	1520	1521	rVB	38131	22516	0.11%	0.041%

Sum of corrected areas: 55051089

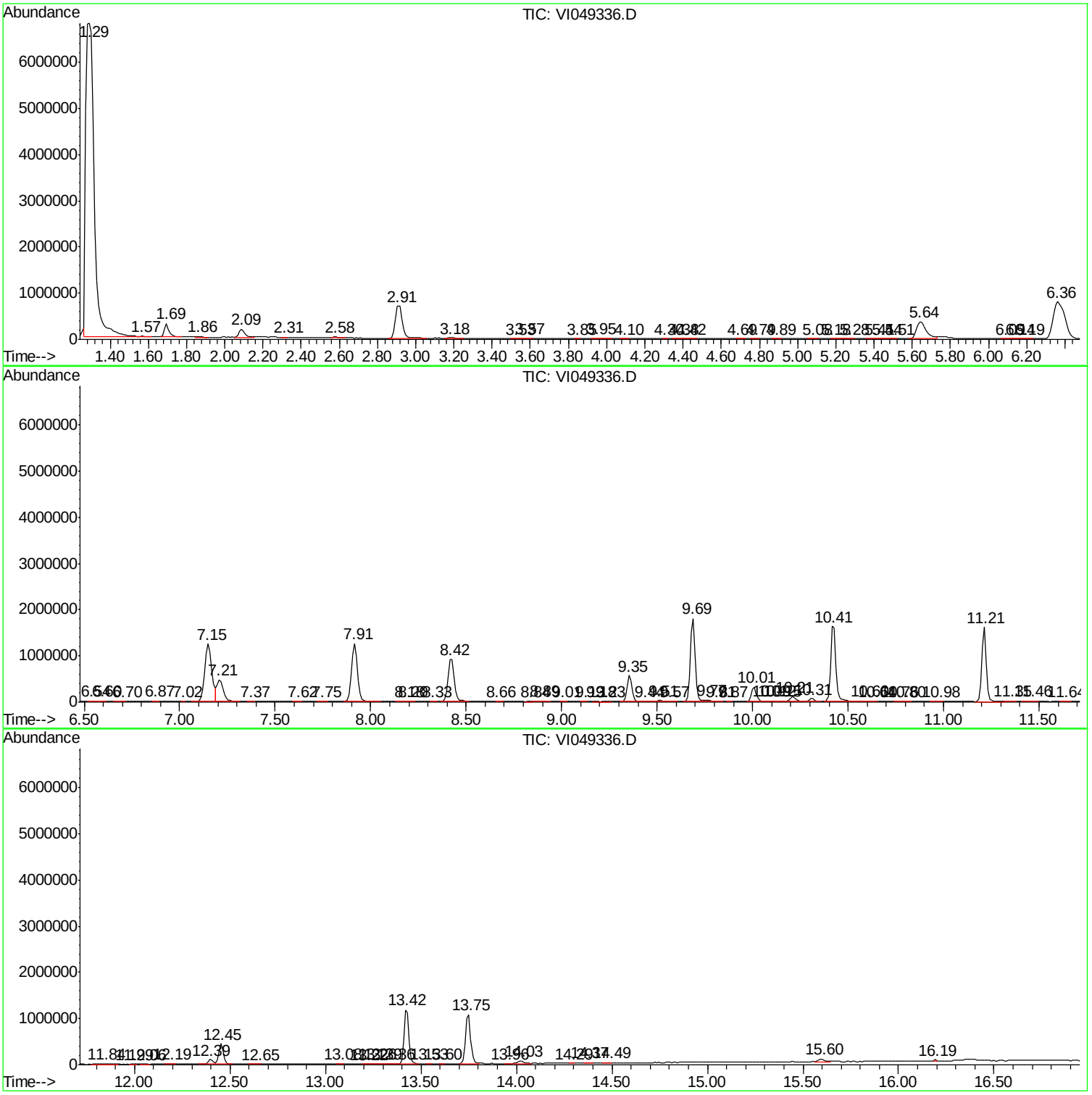
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049336.D
Acq On : 11 May 2016 12:37
Operator : FY/SY
Sample : H2943-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4109

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049336.D
Acq On : 11 May 2016 12:37
Operator : FY/SY
Sample : H2943-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4109

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049336.D
Acq On : 11 May 2016 12:37
Operator : FY/SY
Sample : H2943-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4109

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

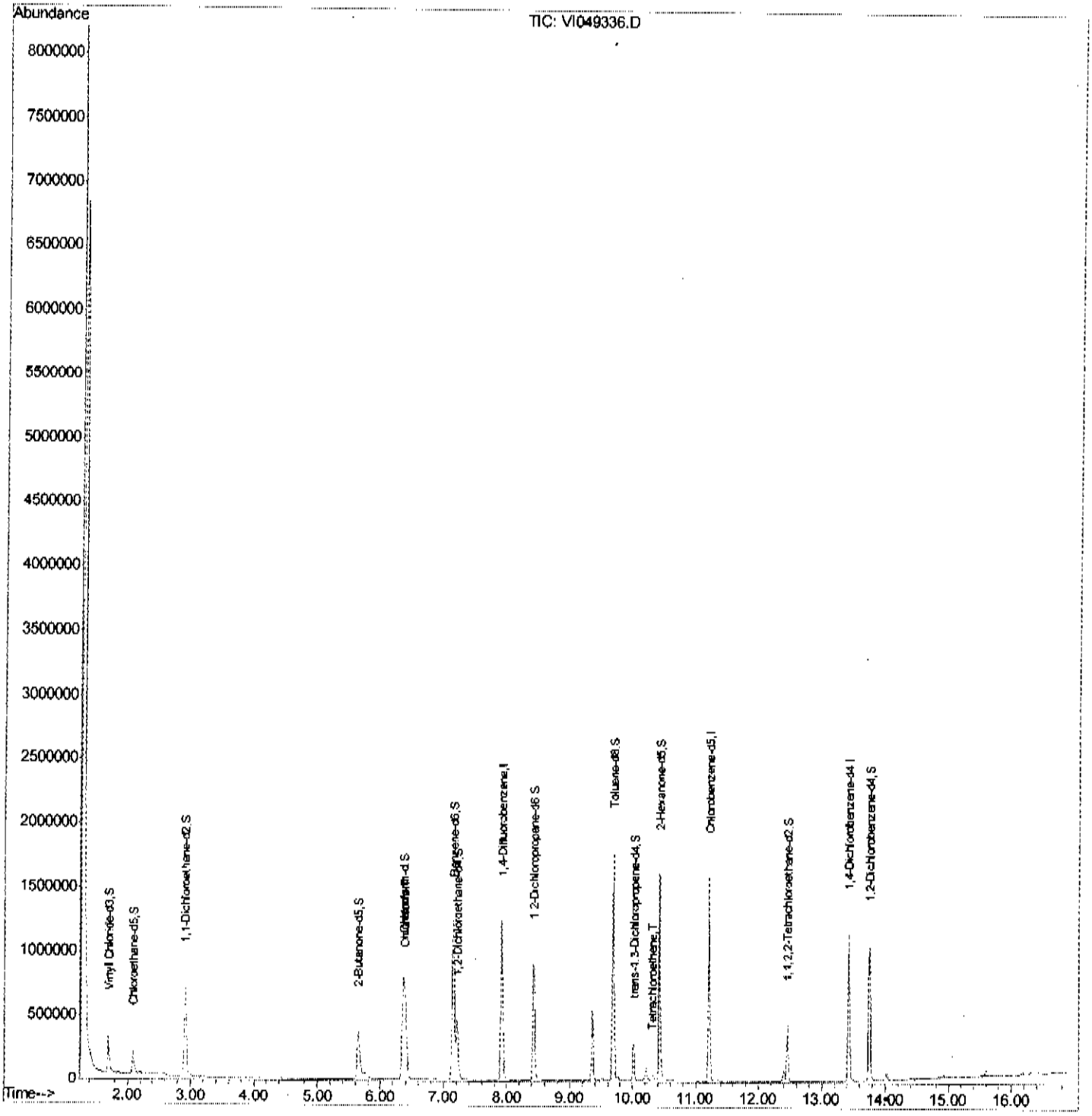
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049336.D
Acq On : 11 May 2016 12:37
Operator : FY/SY
Sample : H2943-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 12 06:40:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4109

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:30 PM



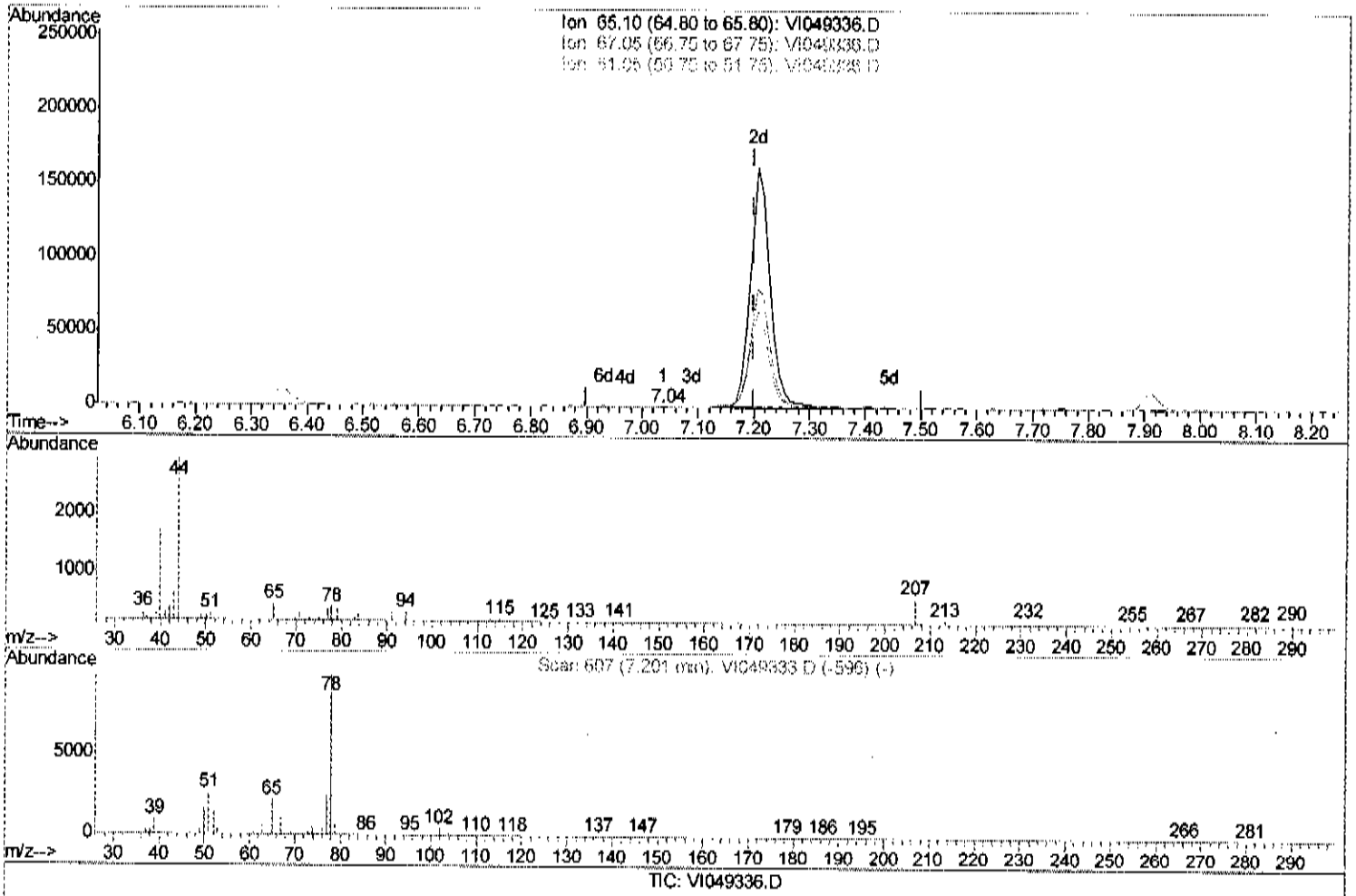
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049336.D
Acq On : 11 May 2016 12:37
Operator : FY/SY
Sample : H2943-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 12 06:04:28 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4109

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:30 PM



TIC: VI049336.D

(26) 1,2-Dichloroethane-d4 (S)

7.039min (-0.162) 0.01ug/L

response 379

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	42.22
51.05	123.20	95.78
0.00	0.00	0.00

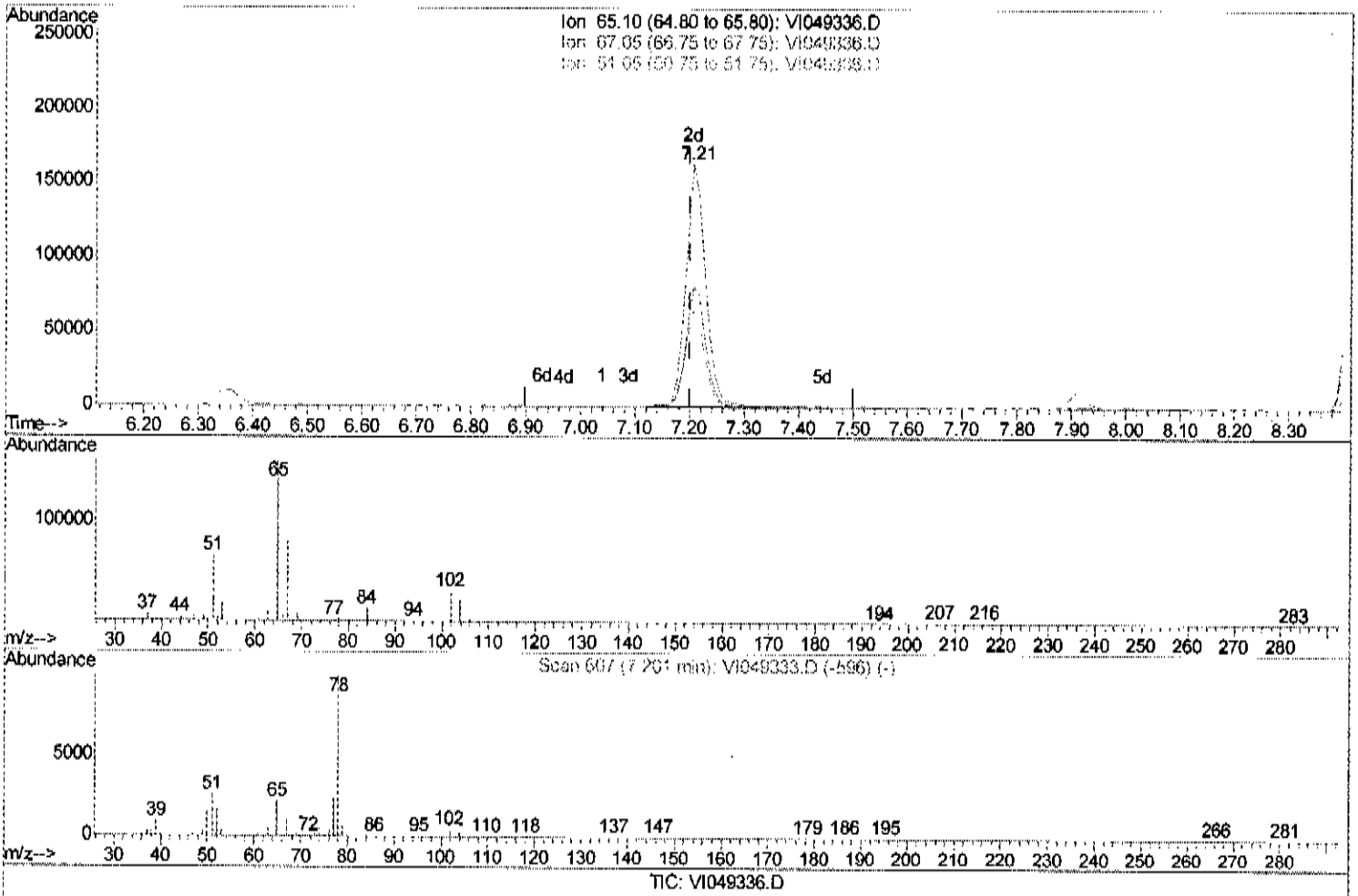
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049336.D
Acq On : 11 May 2016 12:37
Operator : FY/SY
Sample : H2943-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 12 06:04:28 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4109

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:30 PM



TIC: VI049336.D

(26) 1,2-Dichloroethane-d4 (S)

7.206min (+0.006) 5.64ug/L m

response 411106

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.04#
51.05	123.20	0.09#
0.00	0.00	0.00

FY
5/16/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049336.D
Acq On : 11 May 2016 12:37
Operator : FY/SY
Sample : H2943-04
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 12 06:40:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4109

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:30 PM

Internal Standards	R.T.	Qlon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1137354	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	758307	5.00	ug/L	0.02
59) 1,4-Dichlorobenzene-d4	13.43	152	287644	5.00	ug/L	0.02
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	311186	4.44	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 88.80%			
7) Chloroethane-d5	2.09	69	194731	5.02	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 100.40%			
11) 1,1-Dichloroethene-d2	2.91	63	574804	3.48	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 69.60%			
20) 2-Butanone-d5	5.64	46	897920	59.23	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 118.46%			
24) Chloroform-d	6.36	84	917797	5.15	ug/L	0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.00%			
26) 1,2-Dichloroethane-d4	7.21	65	411106m	5.64	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 112.80%			
32) Benzene-d6	7.15	84	1577893	5.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 106.80%			
36) 1,2-Dichloropropane-d6	8.43	67	444932	5.36	ug/L	0.02
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.20%			
41) Toluene-d8	9.69	98	1100735	5.05	ug/L	0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.00%			
43) trans-1,3-Dichloropropene-	10.01	79	153289	4.68	ug/L	0.02
Spiked Amount 5.000	Range 55 - 130		Recovery = 93.60%			
46) 2-Hexanone-d5	10.41	63	585905	56.76	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 113.52%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	195024	5.16	ug/L	0.02
Spiked Amount 5.000	Range 65 - 120		Recovery = 103.20%			
63) 1,2-Dichlorobenzene-d4	13.75	152	253856	5.03	ug/L	0.02
Spiked Amount 5.000	Range 80 - 120		Recovery = 100.60%			
Target Compounds						Qvalue
25) Chloroform	6.39	83	539474	2.95	ug/L	96
47) Tetrachloroethene	10.32	164	10618	0.18	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FY 5/16/2016

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4110

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049308.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.60	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4110

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049308.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.11	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.23	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4110

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049308.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4110

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-15
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049308.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

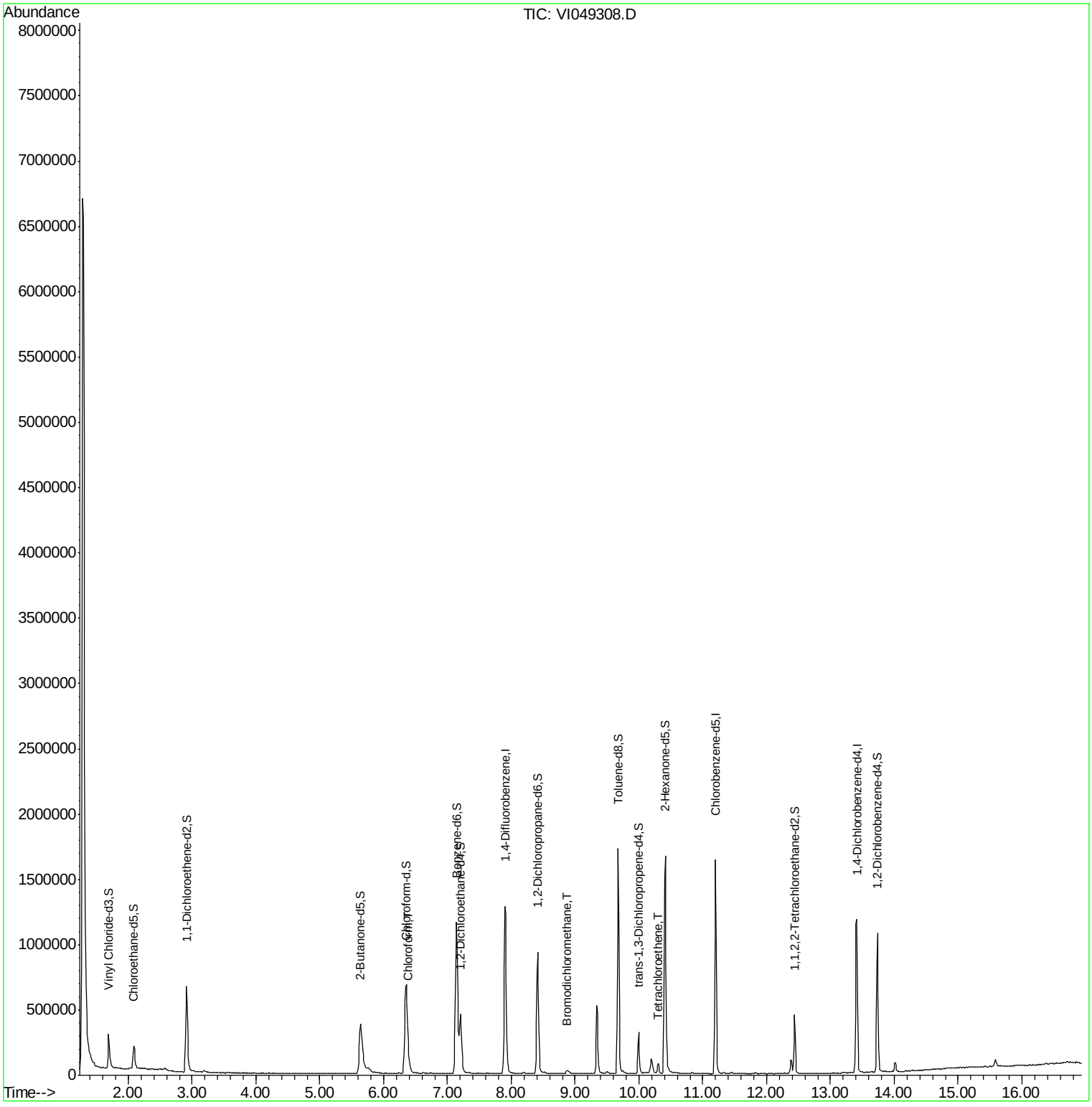
EPA-designated Registry Number.

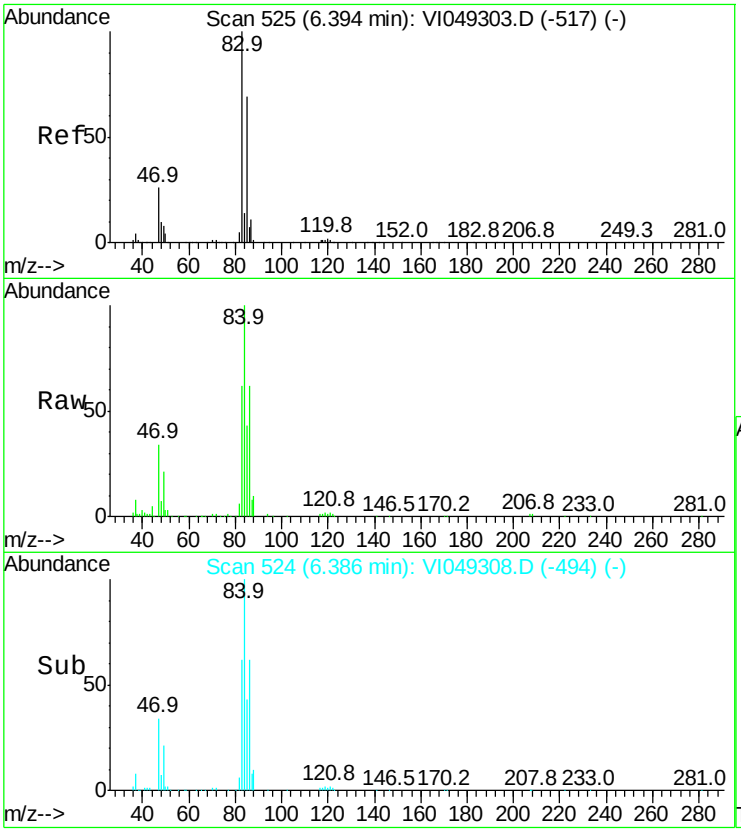
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049308.D
Acq On : 9 May 2016 21:28
Operator : FY/SY
Sample : H2943-15
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4110

Quant Time: May 10 06:48:11 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration



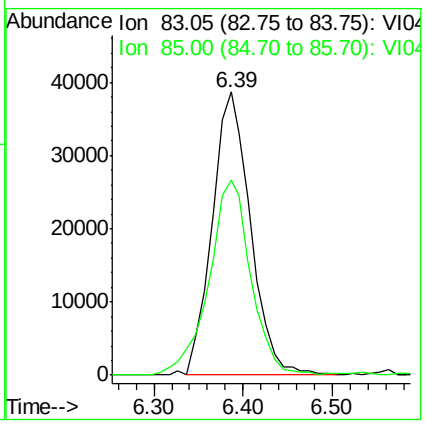


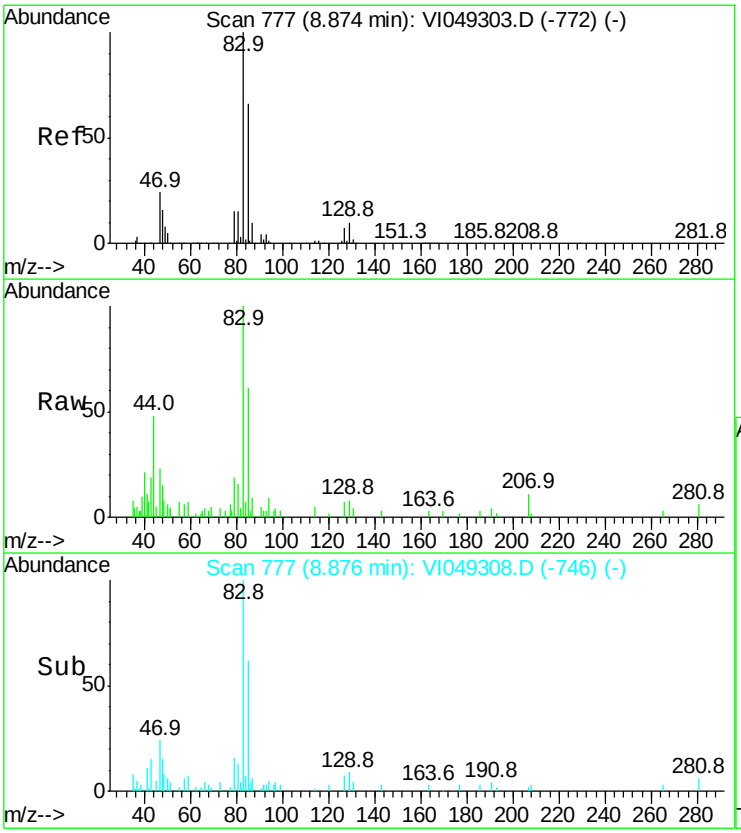
#25
Chloroform
Concen: 0.60 ug/L
RT: 6.39 min Scan# 524
Delta R.T. -0.01 min
Lab File: VI049308.D
Acq: 9 May 2016 21:28

Instrument :
MSVOA_I
ClientSampleId :
H4110

Tgt Ion: 83 Resp: 115723

Ion	Ratio	Lower	Upper
83	100		
85	69.1	47.3	87.8

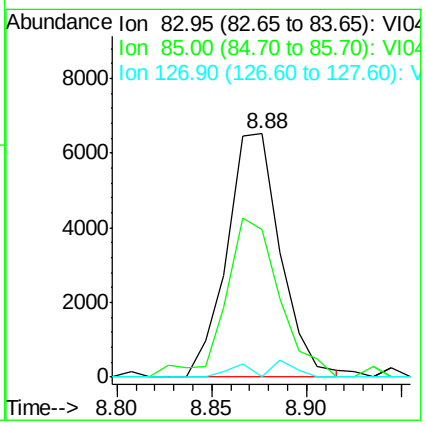


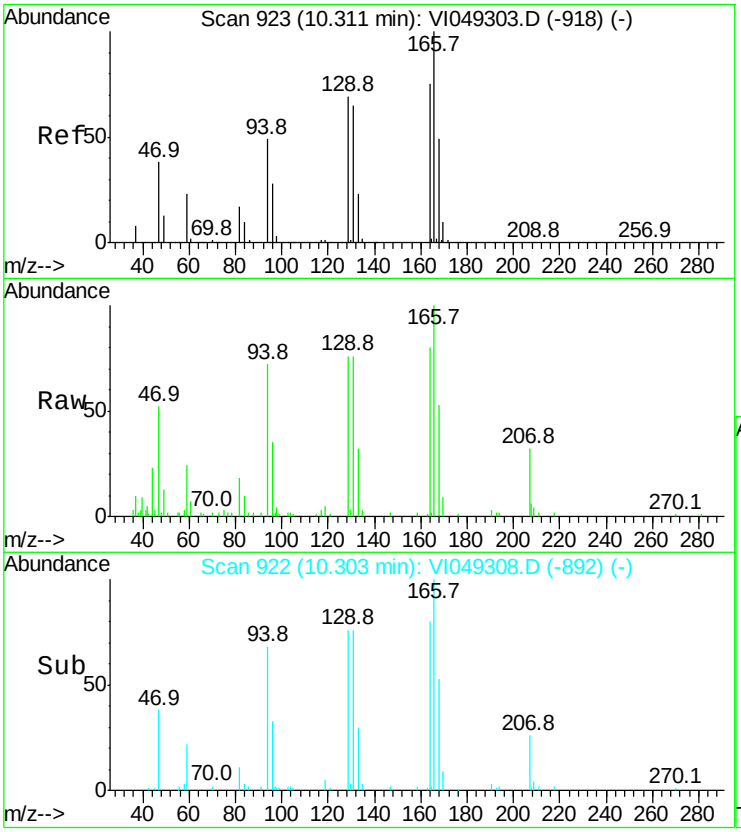


#38
Bromodichloromethane
Concen: 0.11 ug/L
RT: 8.88 min Scan# 777
Delta R.T. 0.00 min
Lab File: VI049308.D
Acq: 9 May 2016 21:28

Tgt Ion: 83 Resp: 12765

Ion	Ratio	Lower	Upper
83	100		
85	60.7	44.7	83.1
127	0.0	6.6	9.8#



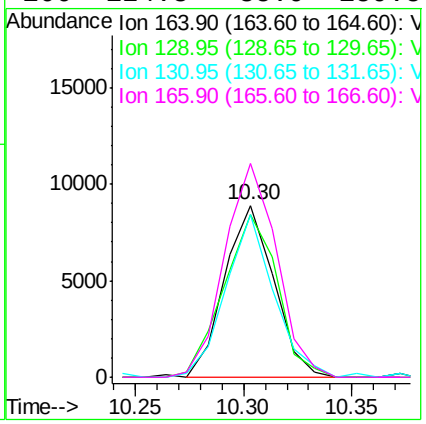


#47
Tetrachloroethene
Concen: 0.23 ug/L
RT: 10.30 min Scan# 922
Delta R.T. -0.01 min
Lab File: VI049308.D
Acq: 9 May 2016 21:28

Instrument :
MSVOA_I
ClientSampleId :
H4110

Tgt Ion:164 Resp: 14105

Ion	Ratio	Lower	Upper
164	100		
129	94.9	62.1	115.3
131	94.6	60.6	112.6
166	124.3	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049308.D
Acq On : 9 May 2016 21:28
Operator : FY/SY
Sample : H2943-15
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4110

Quant Time: May 10 06:48:11 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1193385	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	771578	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	282549	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	279619	3.81	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 76.20%			
7) Chloroethane-d5	2.09	69	194034	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.40%			
11) 1,1-Dichloroethene-d2	2.91	63	518385	3.00	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 60.00%			
20) 2-Butanone-d5	5.64	46	913642	57.44	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 114.88%			
24) Chloroform-d	6.36	84	872049	4.67	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.40%			
26) 1,2-Dichloroethane-d4	7.20	65	392401	5.13	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.60%			
32) Benzene-d6	7.14	84	1484906	4.94	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.80%			
36) 1,2-Dichloropropane-d6	8.41	67	430539	5.09	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.80%			
41) Toluene-d8	9.67	98	1025132	4.62	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.40%			
43) trans-1,3-Dichloropropene-	10.00	79	146178	4.39	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 87.80%			
46) 2-Hexanone-d5	10.41	63	577370	54.97	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 109.94%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	187412	4.88	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 97.60%			
63) 1,2-Dichlorobenzene-d4	13.74	152	239030	4.83	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 96.60%			
Target Compounds						Qvalue
25) Chloroform	6.39	83	115723	0.60	ug/L	98
38) Bromodichloromethane	8.88	83	12765	0.11	ug/L #	94
47) Tetrachloroethene	10.30	164	14105	0.23	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049308.D
Acq On : 9 May 2016 21:28
Operator : FY/SY
Sample : H2943-15
Misc : 25mL/MSVOA I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4110

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.288	3	6	30	rVB	6653318	17959883	100.00%	36.192%
2	1.593	35	37	41	rVB5	11750	19555	0.11%	0.039%
3	1.692	44	47	56	rVV	260536	440586	2.45%	0.888%
4	1.800	56	58	62	rVB4	8512	11663	0.06%	0.024%
5	2.085	84	87	92	rBV	169611	321406	1.79%	0.648%
6	2.351	113	114	117	rBV3	8094	18213	0.10%	0.037%
7	2.479	126	127	128	rBV	6757	5251	0.03%	0.011%
8	2.577	135	137	145	rVB6	22582	55805	0.31%	0.112%
9	2.912	166	171	179	rBV	657286	1488259	8.29%	2.999%
10	3.099	188	190	196	rVB5	5963	10111	0.06%	0.020%
11	3.187	196	199	206	rVB4	16454	42973	0.24%	0.087%
12	3.502	228	231	233	rVB4	3554	5789	0.03%	0.012%
13	3.552	233	236	237	rBV3	4333	6306	0.04%	0.013%
14	3.571	237	238	243	rVV5	6261	11530	0.06%	0.023%
15	4.044	283	286	287	rBV2	3141	5037	0.03%	0.010%
16	4.201	300	302	306	rVB4	4458	6177	0.03%	0.012%
17	4.496	331	332	334	rBV2	3994	6194	0.03%	0.012%
18	4.654	345	348	354	rVB7	5061	12941	0.07%	0.026%
19	4.762	357	359	364	rVB5	3854	8074	0.04%	0.016%
20	4.930	372	376	378	rBV3	3210	5697	0.03%	0.011%
21	5.008	381	384	387	rBV4	3306	6692	0.04%	0.013%
22	5.244	405	408	411	rVB3	3975	5540	0.03%	0.011%
23	5.481	431	432	437	rVB4	3384	5251	0.03%	0.011%
24	5.638	441	448	458	rBV	380137	1419111	7.90%	2.860%
25	5.904	473	475	479	rVB5	6129	13476	0.08%	0.027%
26	5.963	479	481	484	rVV4	3022	5874	0.03%	0.012%
27	6.150	496	500	503	rVB4	2371	6739	0.04%	0.014%
28	6.239	508	509	511	rVB2	5899	6877	0.04%	0.014%
29	6.357	513	521	537	rVV2	680887	2326748	12.96%	4.689%
30	6.534	537	539	540	rVV2	5960	7697	0.04%	0.016%
31	6.632	544	549	552	rVB7	5636	14206	0.08%	0.029%
32	6.740	557	560	561	rVB3	4234	6073	0.03%	0.012%
33	6.859	570	572	574	rBV3	3926	6739	0.04%	0.014%
34	6.957	578	582	584	rVB5	3450	8072	0.04%	0.016%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049308.D
Acq On : 9 May 2016 21:28
Operator : FY/SY
Sample : H2943-15
Misc : 25mL/MSVOA I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4110

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.006	584	587	588	rBV3	3484	4909	0.03%	0.010%
36	7.075	590	594	595	rBV4	2971	5305	0.03%	0.011%
37	7.144	595	601	605	rBV	1160803	3129070	17.42%	6.306%
38	7.203	605	607	617	rVB	451150	966055	5.38%	1.947%
39	7.400	625	627	631	rVB5	2714	4925	0.03%	0.010%
40	7.626	649	650	653	rVB3	3962	5137	0.03%	0.010%
41	7.902	672	678	687	rBV	1284483	2888225	16.08%	5.820%
42	8.187	704	707	711	rVV6	7125	17017	0.09%	0.034%
43	8.414	723	730	738	rBV	932118	2048803	11.41%	4.129%
44	8.512	738	740	744	rVV4	11431	26413	0.15%	0.053%
45	8.591	747	748	751	rVV3	3488	6164	0.03%	0.012%
46	8.640	751	753	756	rVV4	3334	7116	0.04%	0.014%
47	8.817	768	771	772	rBV3	3179	5011	0.03%	0.010%
48	8.876	772	777	784	rVV4	23897	74804	0.42%	0.151%
49	9.053	792	795	798	rVB5	2649	5618	0.03%	0.011%
50	9.122	798	802	803	rVB3	4187	6624	0.04%	0.013%
51	9.152	803	805	810	rBV6	4146	9723	0.05%	0.020%
52	9.221	810	812	817	rVB4	3009	5700	0.03%	0.011%
53	9.339	820	824	833	rBV	517758	958296	5.34%	1.931%
54	9.437	833	834	837	rBV3	3376	5150	0.03%	0.010%
55	9.506	837	841	845	rVB4	13367	30684	0.17%	0.062%
56	9.575	845	848	849	rVB3	4809	7954	0.04%	0.016%
57	9.673	853	858	864	rBV	1722520	2967820	16.52%	5.981%
58	9.742	864	865	871	rVB2	19826	37994	0.21%	0.077%
59	9.998	887	891	897	rBV	319270	525196	2.92%	1.058%
60	10.077	897	899	900	rVV2	7912	11360	0.06%	0.023%
61	10.126	902	904	905	rVV2	8937	13608	0.08%	0.027%
62	10.195	905	911	918	rVV	112814	283872	1.58%	0.572%
63	10.303	918	922	928	rVV2	79299	149406	0.83%	0.301%
64	10.412	928	933	944	rVV	1667027	3079777	17.15%	6.206%
65	10.579	948	950	953	rVV4	7556	14484	0.08%	0.029%
66	10.618	953	954	958	rVV4	6664	8059	0.04%	0.016%
67	10.835	973	976	980	rVB6	11159	20554	0.11%	0.041%
68	10.953	986	988	993	rVB4	3899	7298	0.04%	0.015%
69	11.199	1009	1013	1023	rVB	1634152	2656362	14.79%	5.353%
70	11.337	1023	1027	1031	rVB5	7222	15229	0.08%	0.031%
71	11.445	1036	1038	1042	rVB5	11507	23733	0.13%	0.048%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049308.D
Acq On : 9 May 2016 21:28
Operator : FY/SY
Sample : H2943-15
Misc : 25mL/MSVOA I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4110

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.819	1074	1076	1082	rVB7	9208	19364	0.11%	0.039%
73	11.908	1082	1085	1089	rBV5	5633	10045	0.06%	0.020%
74	12.026	1094	1097	1099	rBV4	5646	8230	0.05%	0.017%
75	12.144	1106	1109	1110	rBV3	2882	6025	0.03%	0.012%
76	12.173	1110	1112	1113	rBV2	3526	5778	0.03%	0.012%
77	12.380	1127	1133	1136	rBV	105566	203537	1.13%	0.410%
78	12.439	1136	1139	1145	rVB	446653	716486	3.99%	1.444%
79	12.537	1148	1149	1152	rVB3	4465	6172	0.03%	0.012%
80	12.596	1152	1155	1158	rVB5	4494	10465	0.06%	0.021%
81	12.783	1172	1174	1176	rBV3	3646	7134	0.04%	0.014%
82	12.921	1185	1188	1191	rBV5	3513	8035	0.04%	0.016%
83	13.069	1201	1203	1206	rVB4	4083	5606	0.03%	0.011%
84	13.335	1226	1230	1233	rBV6	4379	12648	0.07%	0.025%
85	13.413	1233	1238	1244	rBV	1172925	2103975	11.71%	4.240%
86	13.561	1252	1253	1255	rBV2	5018	6056	0.03%	0.012%
87	13.591	1255	1256	1257	rVV	5506	4884	0.03%	0.010%
88	13.630	1257	1260	1264	rVV4	6649	19468	0.11%	0.039%
89	13.738	1266	1271	1276	rVV	1065408	1819322	10.13%	3.666%
90	13.837	1279	1281	1282	rVV2	8351	12429	0.07%	0.025%
91	13.866	1282	1284	1286	rVV3	10130	14819	0.08%	0.030%
92	13.925	1289	1290	1292	rVV2	4970	8217	0.05%	0.017%
93	14.014	1296	1299	1303	rVV2	71579	147708	0.82%	0.298%
94	14.063	1303	1304	1306	rVB2	8357	6863	0.04%	0.014%
95	14.181	1314	1316	1318	rBV3	3815	6704	0.04%	0.014%
96	14.260	1322	1324	1325	rBV2	6270	6182	0.03%	0.012%
97	14.289	1325	1327	1331	rVV5	6316	12129	0.07%	0.024%
98	14.525	1349	1351	1352	rBV2	7065	7443	0.04%	0.015%
99	14.585	1355	1357	1358	rBV2	6421	9942	0.06%	0.020%
100	15.588	1455	1459	1465	rBV	49515	104243	0.58%	0.210%

Sum of corrected areas: 49623909

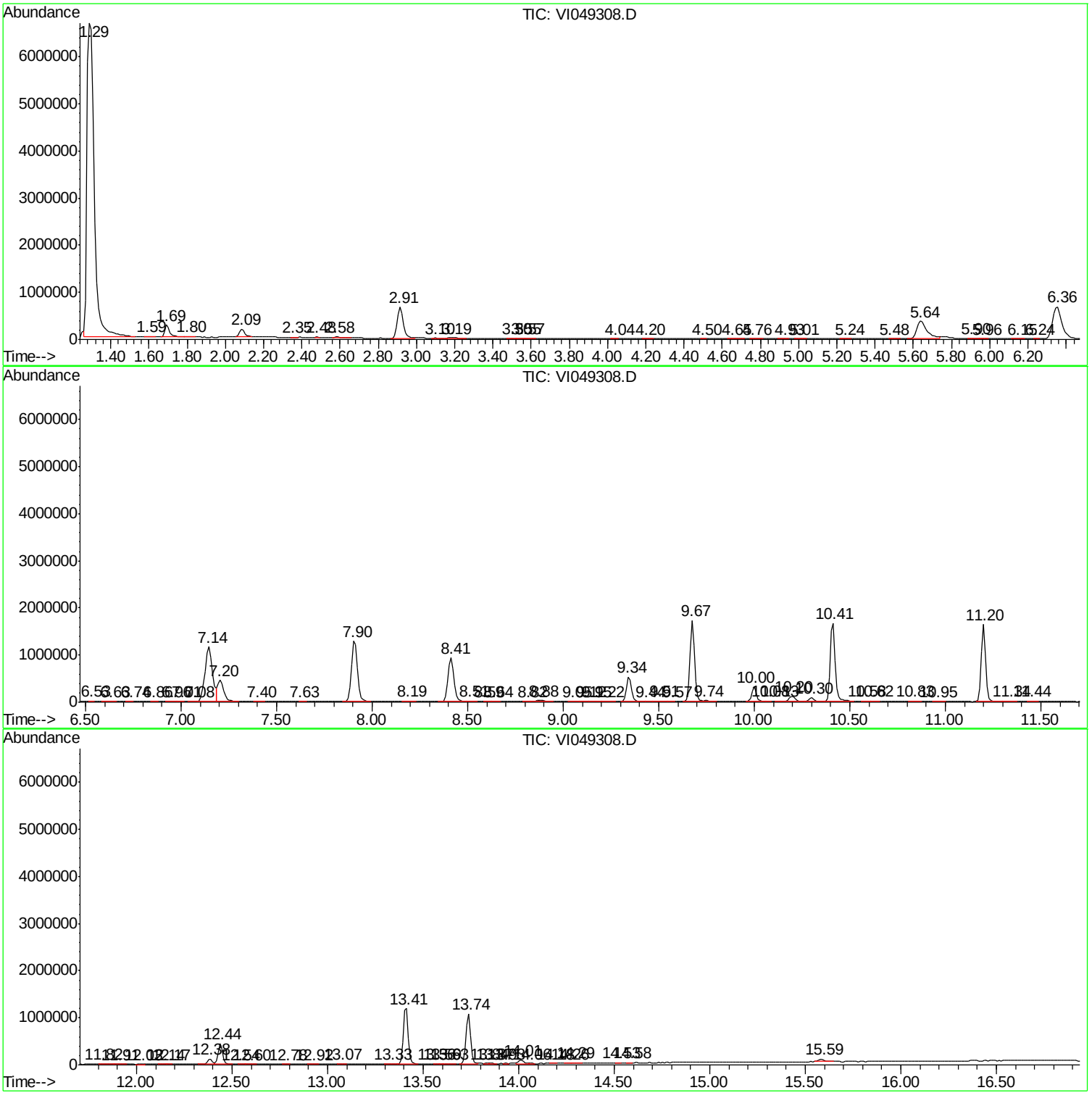
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049308.D
Acq On : 9 May 2016 21:28
Operator : FY/SY
Sample : H2943-15
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4110

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049308.D
Acq On : 9 May 2016 21:28
Operator : FY/SY
Sample : H2943-15
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4110

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049308.D
Acq On : 9 May 2016 21:28
Operator : FY/SY
Sample : H2943-15
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 19 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4110

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4115

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049309.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	3.3	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4115

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049309.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.4	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4115

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049309.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4115

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-16
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049309.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

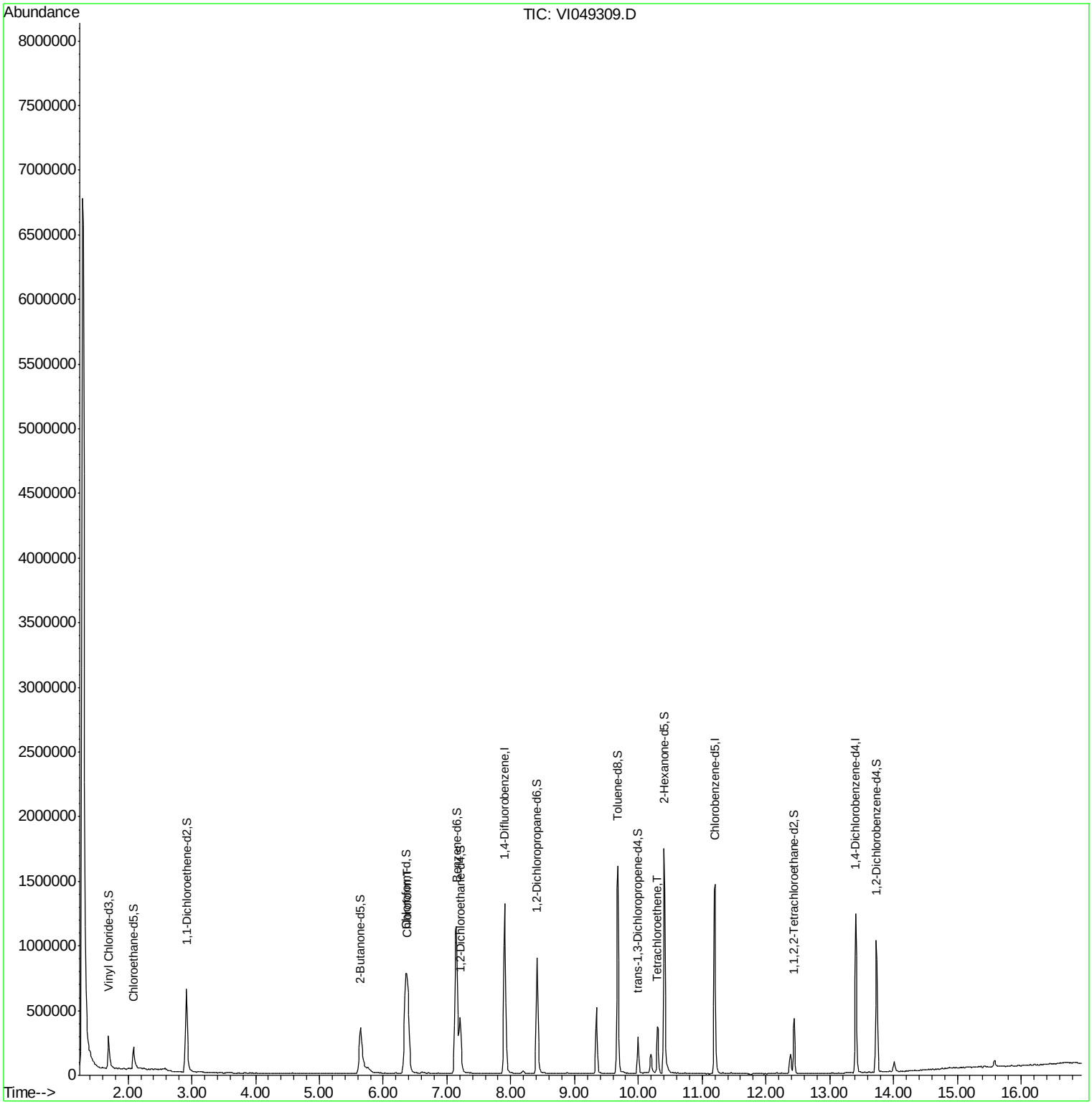
EPA-designated Registry Number.

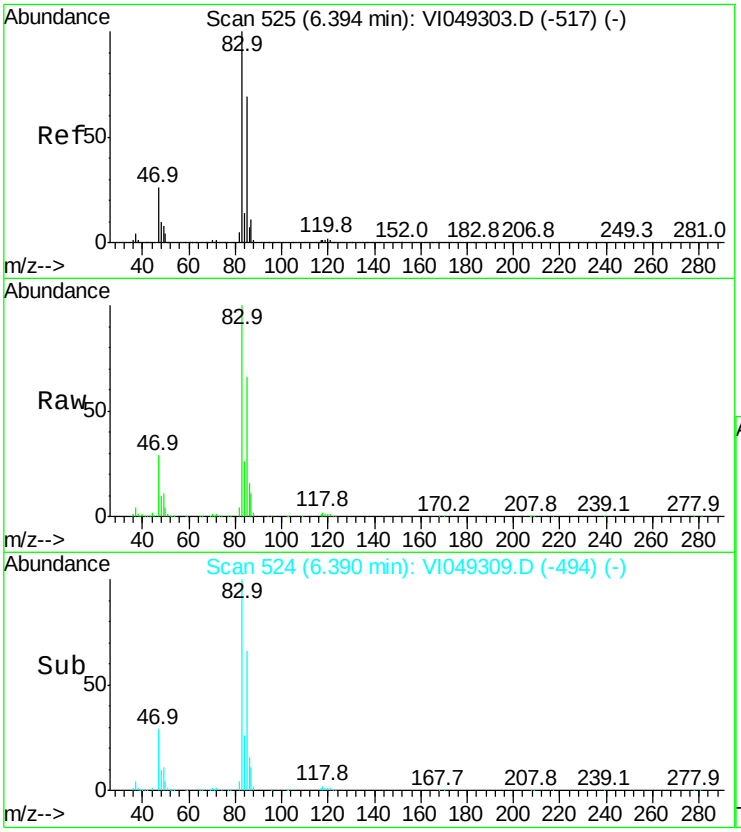
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049309.D
Acq On : 9 May 2016 22:00
Operator : FY/SY
Sample : H2943-16
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4115

Quant Time: May 10 06:50:11 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration



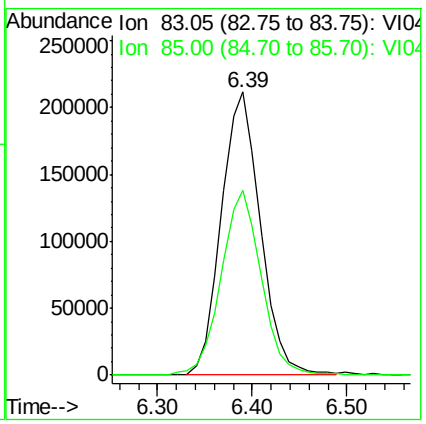


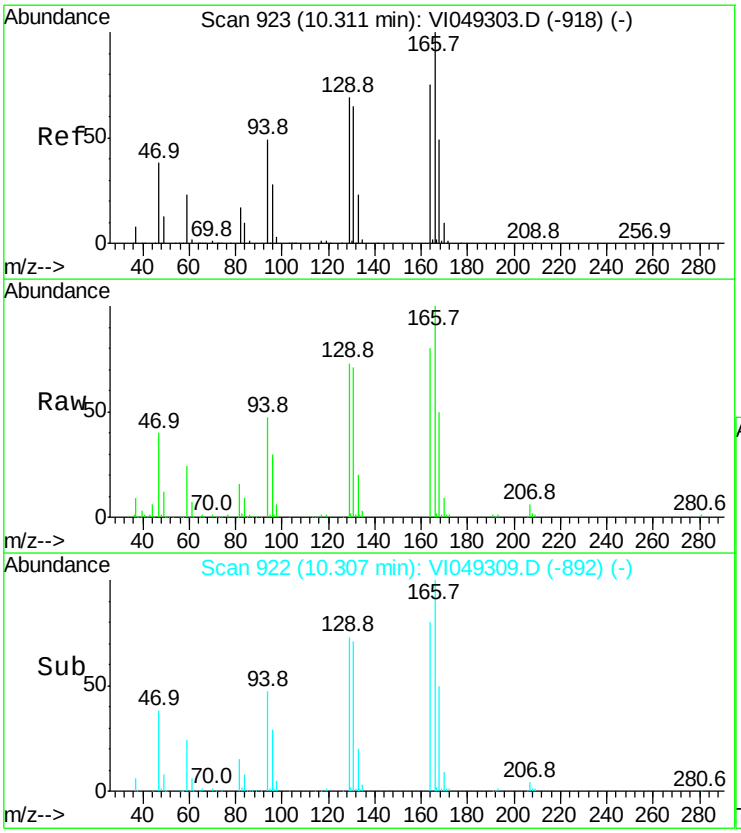
#25
Chloroform
Concen: 3.25 ug/L
RT: 6.39 min Scan# 524
Delta R.T. -0.00 min
Lab File: VI049309.D
Acq: 9 May 2016 22:00

Instrument : MSVOA_I
ClientSampleId : H4115

Tgt Ion: 83 Resp: 605764

Ion	Ratio	Lower	Upper
83	100		
85	65.5	47.3	87.8

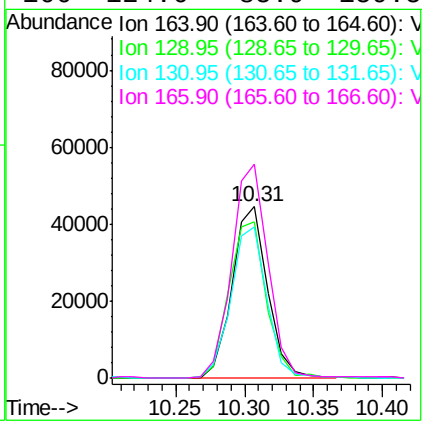




#47
Tetrachloroethene
Concen: 1.35 ug/L
RT: 10.31 min Scan# 922
Delta R.T. -0.00 min
Lab File: VI049309.D
Acq: 9 May 2016 22:00

Tgt Ion:164 Resp: 79880

Ion	Ratio	Lower	Upper
164	100		
129	91.3	62.1	115.3
131	88.0	60.6	112.6
166	124.6	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049309.D
Acq On : 9 May 2016 22:00
Operator : FY/SY
Sample : H2943-16
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4115

Quant Time: May 10 06:50:11 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1158501	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	756036	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	278384	5.00	ug/L	-0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	276189	3.87	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 77.40%			
7) Chloroethane-d5	2.09	69	186749	4.73	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 94.60%			
11) 1,1-Dichloroethene-d2	2.92	63	518932	3.09	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 61.80%			
20) 2-Butanone-d5	5.64	46	878437	56.89	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 113.78%			
24) Chloroform-d	6.35	84	855359	4.71	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.20%			
26) 1,2-Dichloroethane-d4	7.21	65	385127	5.19	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.80%			
32) Benzene-d6	7.15	84	1462234	4.96	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.20%			
36) 1,2-Dichloropropane-d6	8.41	67	428813	5.18	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 103.60%			
41) Toluene-d8	9.68	98	1025559	4.72	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.40%			
43) trans-1,3-Dichloropropene-	9.99	79	139091	4.26	ug/L	-0.01
Spiked Amount 5.000	Range 55 - 130		Recovery = 85.20%			
46) 2-Hexanone-d5	10.41	63	580606	56.42	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 112.84%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	186382	4.95	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 99.00%			
63) 1,2-Dichlorobenzene-d4	13.73	152	236746	4.85	ug/L	-0.01
Spiked Amount 5.000	Range 80 - 120		Recovery = 97.00%			
Target Compounds						Qvalue
25) Chloroform	6.39	83	605764	3.25	ug/L	98
47) Tetrachloroethene	10.31	164	79880	1.35	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049309.D
Acq On : 9 May 2016 22:00
Operator : FY/SY
Sample : H2943-16
Misc : 25mL/MSVOA I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4115

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.292	3	6	35	rVB	6727977	19802528	100.00%	37.374%
2	1.597	35	37	38	rBV2	8769	7533	0.04%	0.014%
3	1.695	44	47	57	rVB	254202	459646	2.32%	0.868%
4	2.050	81	83	84	rBV2	6716	9470	0.05%	0.018%
5	2.089	84	87	94	rVV	172400	353327	1.78%	0.667%
6	2.581	135	137	144	rVB	21493	50125	0.25%	0.095%
7	2.916	166	171	182	rBV	643255	1494426	7.55%	2.820%
8	3.329	212	213	217	rBV4	2199	4714	0.02%	0.009%
9	3.565	233	237	245	rBV7	7823	24541	0.12%	0.046%
10	3.831	261	264	267	rVB5	4431	7822	0.04%	0.015%
11	3.949	274	276	279	rVV4	4428	6227	0.03%	0.012%
12	4.284	305	310	313	rBV6	3834	9906	0.05%	0.019%
13	4.382	318	320	322	rBV4	3909	6116	0.03%	0.012%
14	4.510	330	333	334	rBV3	3409	4708	0.02%	0.009%
15	4.579	338	340	342	rVB3	5610	5198	0.03%	0.010%
16	4.687	348	351	352	rBV3	5009	6245	0.03%	0.012%
17	4.874	368	370	373	rVB3	3445	7412	0.04%	0.014%
18	4.933	373	376	377	rBV3	3868	6919	0.03%	0.013%
19	5.012	382	384	387	rBV2	4526	4976	0.03%	0.009%
20	5.071	387	390	393	rBV3	3202	8090	0.04%	0.015%
21	5.475	426	431	436	rVB6	4476	13866	0.07%	0.026%
22	5.642	442	448	458	rBV	349578	1328125	6.71%	2.507%
23	5.859	469	470	475	rVB4	5578	11236	0.06%	0.021%
24	6.173	499	502	503	rBV2	3606	6989	0.04%	0.013%
25	6.203	503	505	506	rVB2	4363	4825	0.02%	0.009%
26	6.361	512	521	534	rBV2	775380	3522835	17.79%	6.649%
27	6.607	542	546	550	rBV7	9265	23998	0.12%	0.045%
28	6.715	554	557	562	rVB7	5254	11701	0.06%	0.022%
29	6.794	562	565	566	rVB3	3864	6409	0.03%	0.012%
30	6.823	566	568	569	rBV2	4800	4443	0.02%	0.008%
31	6.862	569	572	575	rVB4	7965	9538	0.05%	0.018%
32	6.902	575	576	579	rBV2	4244	6436	0.03%	0.012%
33	6.961	579	582	583	rVB2	3684	4402	0.02%	0.008%
34	7.148	593	601	604	rBV	1134737	3008729	15.19%	5.679%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049309.D
Acq On : 9 May 2016 22:00
Operator : FY/SY
Sample : H2943-16
Misc : 25mL/MSVOA I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4115

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.207	604	607	617	rVB	427891	1057559	5.34%	1.996%
36	7.404	626	627	629	rBV2	4014	4369	0.02%	0.008%
37	7.492	634	636	639	rVB5	3759	6022	0.03%	0.011%
38	7.601	644	647	649	rVB2	4347	5849	0.03%	0.011%
39	7.630	649	650	653	rBV3	4012	5696	0.03%	0.011%
40	7.906	671	678	689	rBV	1315110	2853538	14.41%	5.386%
41	8.191	702	707	711	rVB5	19527	46420	0.23%	0.088%
42	8.250	711	713	714	rVB2	4045	4606	0.02%	0.009%
43	8.408	724	729	738	rBV	896549	2016768	10.18%	3.806%
44	8.516	738	740	744	rVB6	7345	13570	0.07%	0.026%
45	8.713	757	760	761	rBV2	3250	4464	0.02%	0.008%
46	8.742	761	763	768	rVB5	3353	7749	0.04%	0.015%
47	8.890	773	778	783	rBV7	6198	20847	0.11%	0.039%
48	8.959	783	785	789	rVB5	3553	5842	0.03%	0.011%
49	9.126	800	802	804	rBV3	5739	7215	0.04%	0.014%
50	9.175	804	807	810	rBV4	1962	4497	0.02%	0.008%
51	9.343	819	824	835	rBV	513152	946249	4.78%	1.786%
52	9.480	835	838	839	rBV3	2548	4370	0.02%	0.008%
53	9.579	846	848	849	rVB2	4428	5103	0.03%	0.010%
54	9.677	853	858	863	rBV	1609630	2953017	14.91%	5.573%
55	9.913	878	882	883	rBV4	3422	5742	0.03%	0.011%
56	9.992	886	890	898	rVV	286803	512496	2.59%	0.967%
57	10.091	898	900	901	rVV2	10670	15179	0.08%	0.029%
58	10.110	901	902	905	rVV2	9910	22709	0.11%	0.043%
59	10.199	907	911	916	rVV	153057	330708	1.67%	0.624%
60	10.297	916	921	928	rVV2	367063	709147	3.58%	1.338%
61	10.406	928	932	943	rVV	1745142	3115433	15.73%	5.880%
62	10.553	946	947	948	rVV	7078	6611	0.03%	0.012%
63	10.583	948	950	952	rVV3	6175	10744	0.05%	0.020%
64	10.612	952	953	957	rVV4	5990	10424	0.05%	0.020%
65	10.661	957	958	962	rVV4	3911	8498	0.04%	0.016%
66	10.730	964	965	967	rVV2	5088	5305	0.03%	0.010%
67	10.937	984	986	988	rBV3	4996	8653	0.04%	0.016%
68	11.045	994	997	999	rVB3	2847	4619	0.02%	0.009%
69	11.203	1008	1013	1023	rVV	1466876	2626946	13.27%	4.958%
70	11.321	1023	1025	1030	rVV4	9619	21751	0.11%	0.041%
71	11.449	1036	1038	1043	rVB4	8152	19458	0.10%	0.037%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049309.D
Acq On : 9 May 2016 22:00
Operator : FY/SY
Sample : H2943-16
Misc : 25mL/MSVOA I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4115

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.508	1043	1044	1046	rBV2	4648	5272	0.03%	0.010%
73	11.843	1072	1078	1083	rBV8	7805	30687	0.15%	0.058%
74	12.059	1095	1100	1101	rBV3	3984	9724	0.05%	0.018%
75	12.148	1105	1109	1110	rBV3	3817	7003	0.04%	0.013%
76	12.177	1110	1112	1114	rBV3	7387	8957	0.05%	0.017%
77	12.246	1114	1119	1122	rBV5	5761	14915	0.08%	0.028%
78	12.384	1128	1133	1136	rVV	146210	275001	1.39%	0.519%
79	12.443	1136	1139	1144	rVV	424551	701604	3.54%	1.324%
80	12.571	1150	1152	1154	rBV3	2631	4349	0.02%	0.008%
81	12.709	1164	1166	1170	rVB4	3221	5563	0.03%	0.010%
82	12.787	1173	1174	1177	rBV3	4907	6128	0.03%	0.012%
83	12.846	1177	1180	1183	rVB5	2807	5754	0.03%	0.011%
84	12.925	1183	1188	1189	rBV5	3919	7526	0.04%	0.014%
85	13.240	1218	1220	1223	rBV4	3179	7615	0.04%	0.014%
86	13.348	1227	1231	1233	rVB5	6822	15906	0.08%	0.030%
87	13.407	1233	1237	1243	rBV	1231705	2065536	10.43%	3.898%
88	13.486	1243	1245	1247	rVB2	8327	8806	0.04%	0.017%
89	13.604	1253	1257	1261	rBV7	4595	14514	0.07%	0.027%
90	13.673	1262	1264	1266	rBV3	4203	4662	0.02%	0.009%
91	13.732	1266	1270	1276	rVV	1022367	1782712	9.00%	3.365%
92	13.801	1276	1277	1282	rVB5	6827	10455	0.05%	0.020%
93	13.939	1289	1291	1293	rBV3	6878	7473	0.04%	0.014%
94	14.008	1294	1298	1303	rVV	79693	164108	0.83%	0.310%
95	14.185	1314	1316	1317	rBV2	7652	6095	0.03%	0.012%
96	14.283	1325	1326	1328	rBV	5429	7216	0.04%	0.014%
97	14.480	1342	1346	1349	rBV5	6162	21002	0.11%	0.040%
98	15.100	1407	1409	1411	rBV3	8027	14909	0.08%	0.028%
99	15.415	1439	1441	1442	rBV2	10675	15496	0.08%	0.029%
100	15.582	1454	1458	1462	rBV	47429	103893	0.52%	0.196%

Sum of corrected areas: 52984515

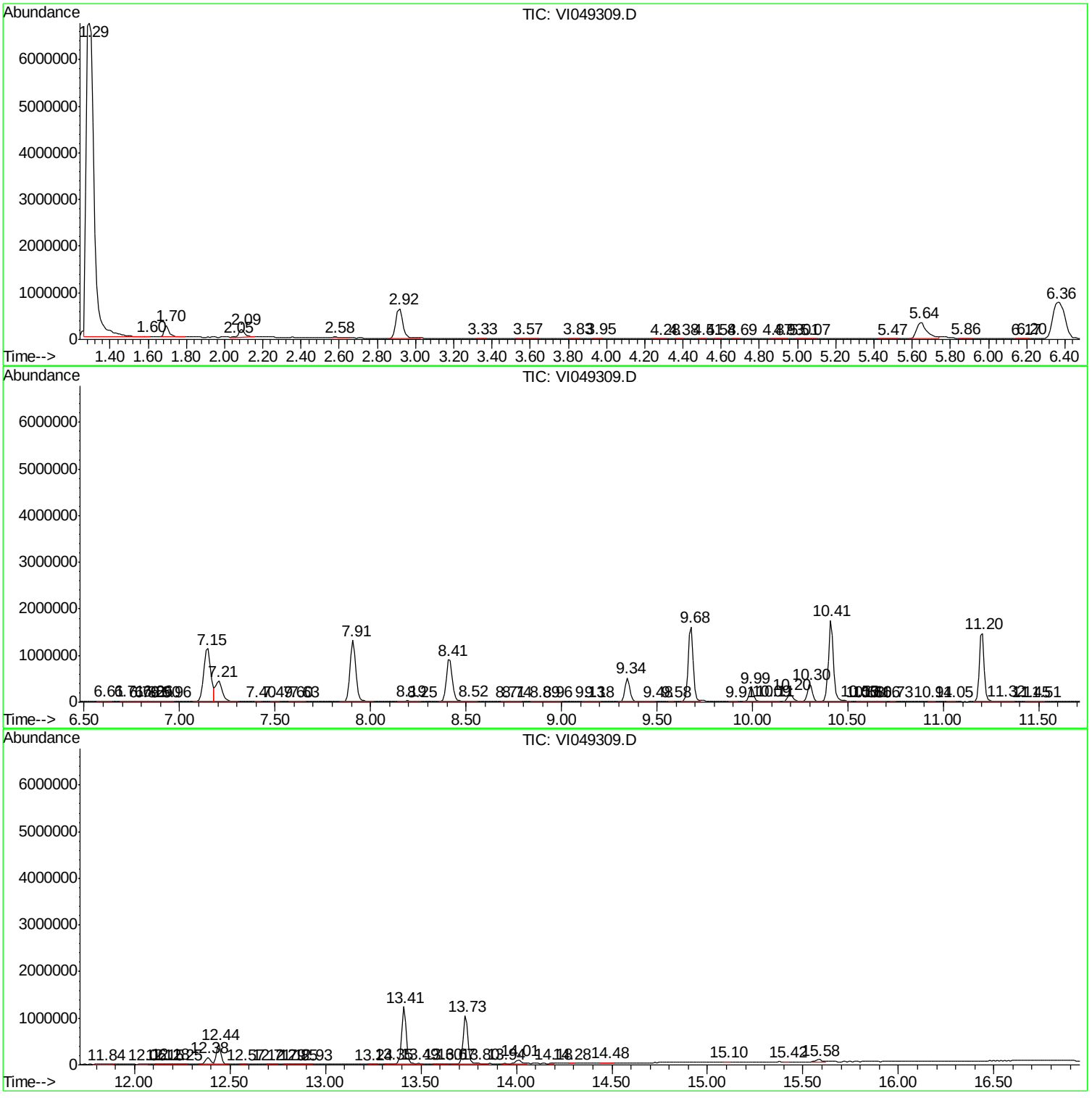
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049309.D
Acq On : 9 May 2016 22:00
Operator : FY/SY
Sample : H2943-16
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4115

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049309.D
Acq On : 9 May 2016 22:00
Operator : FY/SY
Sample : H2943-16
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4115

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049309.D
Acq On : 9 May 2016 22:00
Operator : FY/SY
Sample : H2943-16
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 20 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4115

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4122

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049310.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.2	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4122

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049310.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.36	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.46	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4122

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049310.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4122

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-17
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049310.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

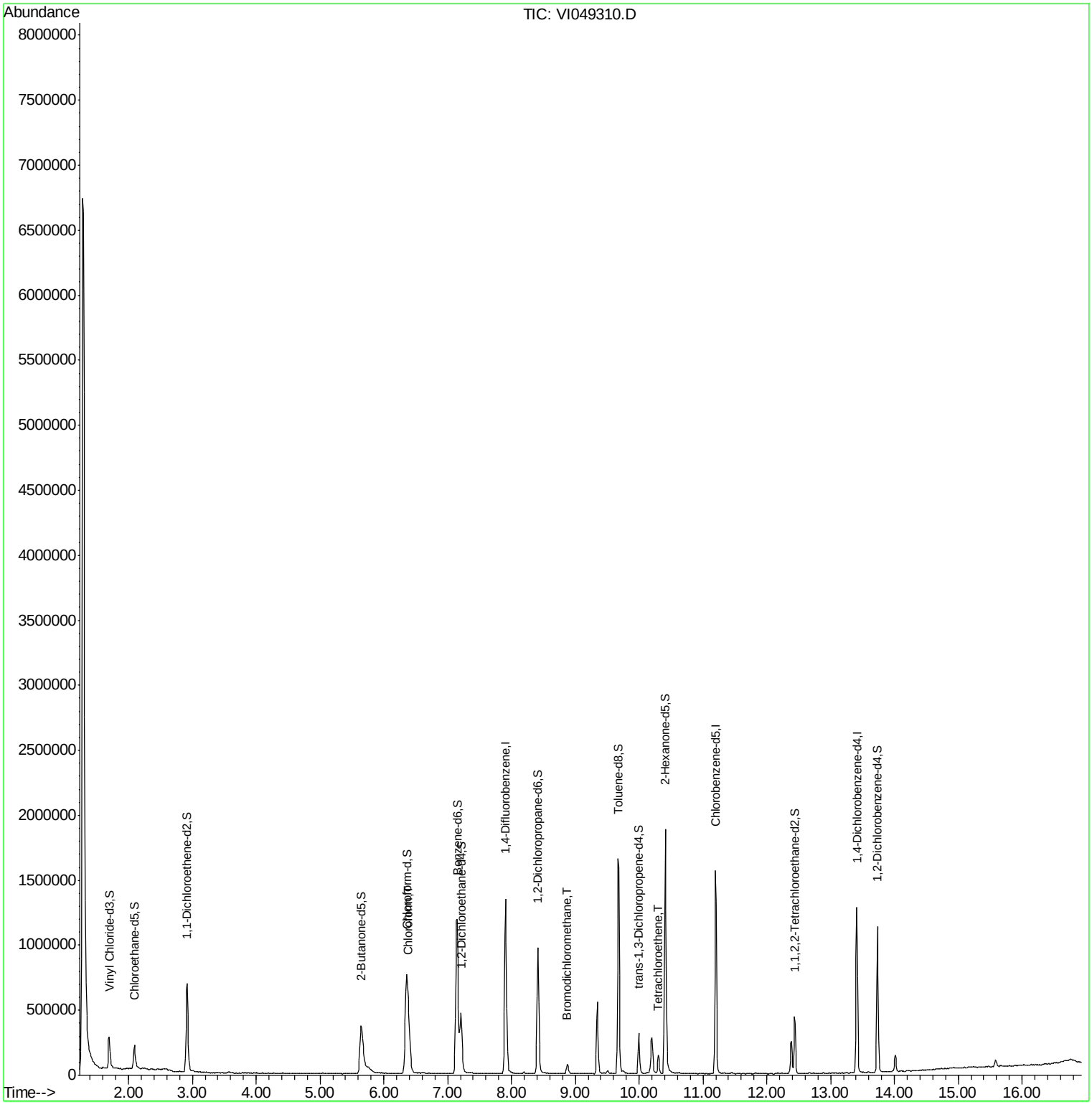
EPA-designated Registry Number.

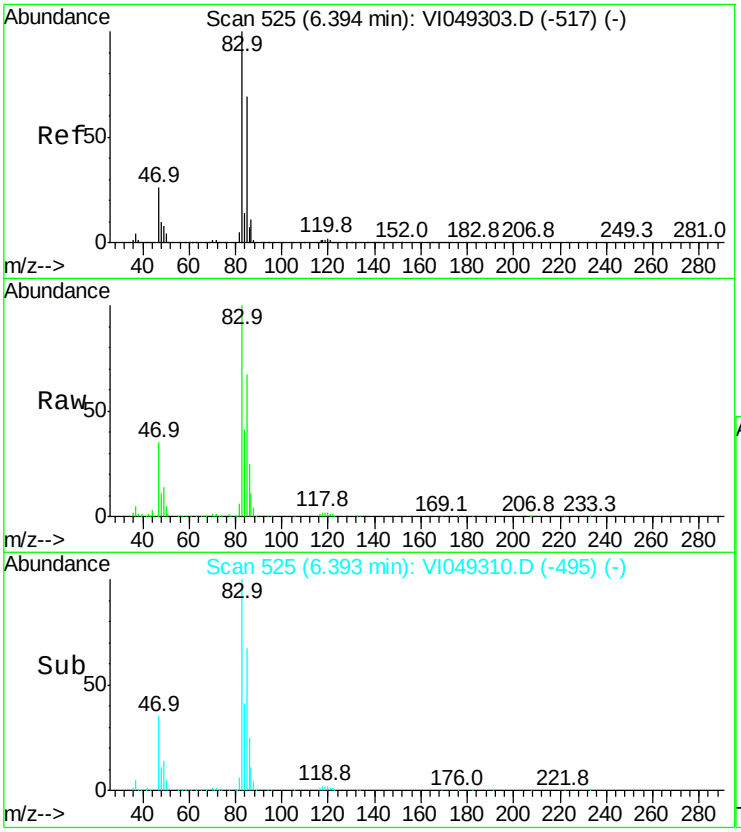
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049310.D
Acq On : 9 May 2016 22:32
Operator : FY/SY
Sample : H2943-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4122

Quant Time: May 10 06:51:27 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration



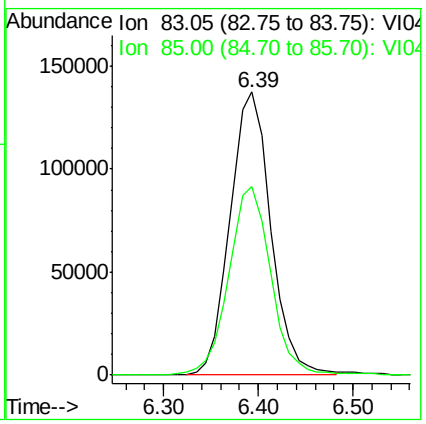


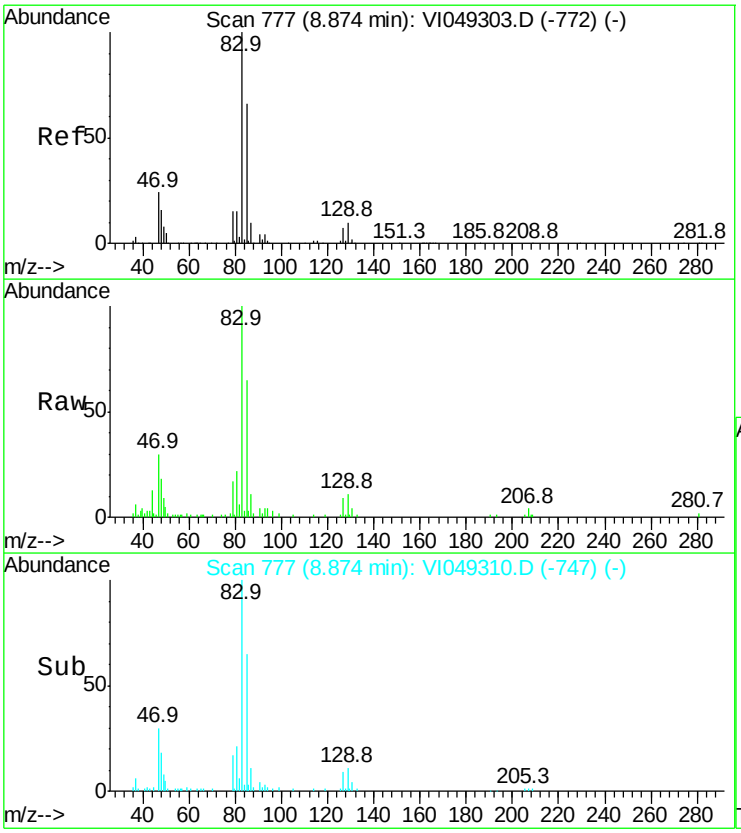
#25
Chloroform
Concen: 2.16 ug/L
RT: 6.39 min Scan# 525
Delta R.T. -0.00 min
Lab File: VI049310.D
Acq: 9 May 2016 22:32

Instrument :
MSVOA_I
ClientSampleId :
H4122

Tgt Ion: 83 Resp: 409966

Ion	Ratio	Lower	Upper
83	100		
85	66.5	47.3	87.8

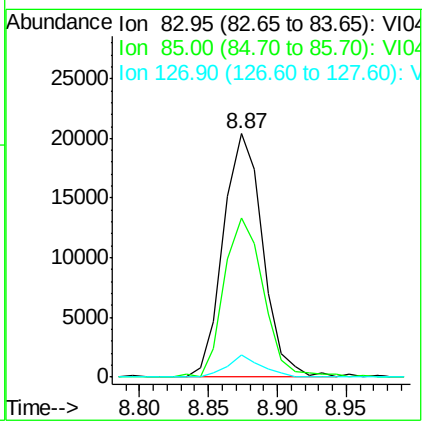


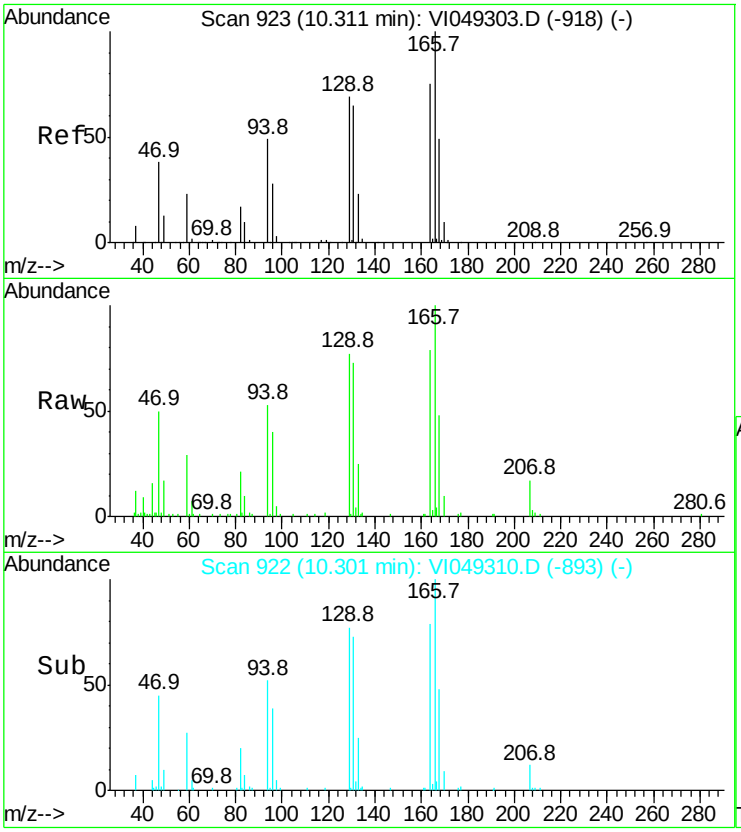


#38
Bromodichloromethane
Concen: 0.36 ug/L
RT: 8.87 min Scan# 777
Delta R.T. -0.00 min
Lab File: VI049310.D
Acq: 9 May 2016 22:32

Tgt Ion: 83 Resp: 40729

Ion	Ratio	Lower	Upper
83	100		
85	65.3	44.7	83.1
127	9.2	6.6	9.8



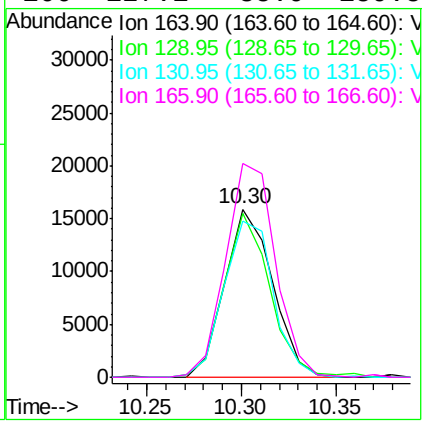


#47
Tetrachloroethene
Concen: 0.46 ug/L
RT: 10.30 min Scan# 922
Delta R.T. -0.01 min
Lab File: VI049310.D
Acq: 9 May 2016 22:32

Instrument :
MSVOA_I
ClientSampleId :
H4122

Tgt Ion:164 Resp: 27816

Ion	Ratio	Lower	Upper
164	100		
129	97.6	62.1	115.3
131	93.0	60.6	112.6
166	127.1	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049310.D
Acq On : 9 May 2016 22:32
Operator : FY/SY
Sample : H2943-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4122

Quant Time: May 10 06:51:27 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1182307	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	775674	5.00	ug/L	-0.01
59) 1,4-Dichlorobenzene-d4	13.41	152	280619	5.00	ug/L	-0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	298393	4.10	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.00%			
7) Chloroethane-d5	2.09	69	202036	5.01	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 100.20%			
11) 1,1-Dichloroethene-d2	2.92	63	537156	3.13	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 62.60%			
20) 2-Butanone-d5	5.65	46	902601	57.28	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 114.56%			
24) Chloroform-d	6.35	84	916570	4.95	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.00%			
26) 1,2-Dichloroethane-d4	7.21	65	411747	5.43	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 108.60%			
32) Benzene-d6	7.15	84	1585851	5.25	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 105.00%			
36) 1,2-Dichloropropane-d6	8.41	67	457139	5.38	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.60%			
41) Toluene-d8	9.67	98	1080606	4.85	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 97.00%			
43) trans-1,3-Dichloropropene-	10.00	79	149195	4.46	ug/L	-0.01
Spiked Amount 5.000	Range 55 - 130		Recovery = 89.20%			
46) 2-Hexanone-d5	10.41	63	612363	57.99	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 115.98%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	201584	5.22	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 120		Recovery = 104.40%			
63) 1,2-Dichlorobenzene-d4	13.74	152	255275	5.19	ug/L	-0.01
Spiked Amount 5.000	Range 80 - 120		Recovery = 103.80%			
Target Compounds						Qvalue
25) Chloroform	6.39	83	409966	2.16	ug/L	99
38) Bromodichloromethane	8.87	83	40729	0.36	ug/L	98
47) Tetrachloroethene	10.30	164	27816	0.46	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049310.D
Acq On : 9 May 2016 22:32
Operator : FY/SY
Sample : H2943-17
Misc : 25mL/MSVOA I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4122

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.285	3	6	25	rVB	6659285	18375057	100.00%	34.871%
2	1.699	45	48	55	rBV	243201	439660	2.39%	0.834%
3	2.092	85	88	99	rVB	185267	376608	2.05%	0.715%
4	2.801	159	160	161	rBV	6794	5180	0.03%	0.010%
5	2.919	167	172	179	rBV	679035	1515934	8.25%	2.877%
6	3.067	186	187	190	rVV3	4397	5384	0.03%	0.010%
7	3.106	190	191	194	rVV3	7885	10752	0.06%	0.020%
8	3.185	197	199	201	rVV3	5866	7790	0.04%	0.015%
9	3.264	205	207	209	rVB3	5054	6250	0.03%	0.012%
10	3.588	234	240	244	rBV6	9299	25983	0.14%	0.049%
11	3.785	258	260	262	rBV3	7163	9920	0.05%	0.019%
12	3.825	262	264	266	rBV3	3546	7063	0.04%	0.013%
13	3.903	271	272	275	rVB3	5265	6077	0.03%	0.012%
14	3.972	277	279	280	rBV	5822	6765	0.04%	0.013%
15	4.140	294	296	298	rBV3	2841	5210	0.03%	0.010%
16	4.189	298	301	303	rVB3	4128	4705	0.03%	0.009%
17	4.602	340	343	346	rBV4	4221	8946	0.05%	0.017%
18	4.710	351	354	359	rVB7	2777	6185	0.03%	0.012%
19	4.848	365	368	369	rBV3	3310	5821	0.03%	0.011%
20	4.897	372	373	376	rBV3	3514	4535	0.02%	0.009%
21	5.006	383	384	387	rBV3	2690	4981	0.03%	0.009%
22	5.065	389	390	393	rVB3	4450	4607	0.03%	0.009%
23	5.301	411	414	415	rBV3	4040	4761	0.03%	0.009%
24	5.557	437	440	442	rBV3	2242	5079	0.03%	0.010%
25	5.645	443	449	459	rBV	369909	1421303	7.73%	2.697%
26	6.197	503	505	511	rVB6	3219	7503	0.04%	0.014%
27	6.364	514	522	534	rBV2	764440	3128375	17.03%	5.937%
28	6.620	546	548	551	rVB4	8551	12155	0.07%	0.023%
29	6.708	555	557	561	rBV4	3466	5825	0.03%	0.011%
30	6.886	573	575	578	rVB4	3773	5350	0.03%	0.010%
31	7.033	589	590	593	rBV3	3140	6327	0.03%	0.012%
32	7.151	595	602	605	rBV	1186073	3228974	17.57%	6.128%
33	7.210	605	608	616	rVV	463079	1154369	6.28%	2.191%
34	7.309	616	618	619	rVV2	7028	10449	0.06%	0.020%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049310.D
Acq On : 9 May 2016 22:32
Operator : FY/SY
Sample : H2943-17
Misc : 25mL/MSVOA I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4122

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.378	623	625	630	rVB6	4836	9243	0.05%	0.018%
36	7.574	643	645	647	rBV3	5136	8622	0.05%	0.016%
37	7.791	666	667	671	rVB4	3939	7234	0.04%	0.014%
38	7.909	671	679	695	rBV	1346979	2927484	15.93%	5.556%
39	8.195	705	708	713	rVB7	12654	26775	0.15%	0.051%
40	8.411	725	730	739	rVV	966770	2182562	11.88%	4.142%
41	8.519	739	741	744	rVV4	9824	18581	0.10%	0.035%
42	8.559	744	745	748	rVB3	7260	7468	0.04%	0.014%
43	8.608	748	750	755	rBV5	2237	6026	0.03%	0.011%
44	8.874	772	777	783	rBV	71276	155777	0.85%	0.296%
45	9.002	787	790	791	rBV2	2379	4552	0.02%	0.009%
46	9.120	801	802	805	rBV3	3615	5275	0.03%	0.010%
47	9.267	815	817	820	rVB3	3394	5840	0.03%	0.011%
48	9.346	820	825	832	rBV	555236	1007776	5.48%	1.913%
49	9.504	838	841	845	rVB3	21737	47054	0.26%	0.089%
50	9.563	845	847	849	rVB3	6692	7916	0.04%	0.015%
51	9.602	849	851	854	rBV3	3608	5106	0.03%	0.010%
52	9.671	854	858	864	rBV	1650217	3114071	16.95%	5.910%
53	9.750	864	866	870	rVB4	17970	35173	0.19%	0.067%
54	9.937	882	885	887	rBV3	2643	5170	0.03%	0.010%
55	9.996	887	891	899	rBV	312134	535622	2.91%	1.016%
56	10.124	899	904	906	rVV5	9168	24869	0.14%	0.047%
57	10.202	906	912	917	rVV	276338	593066	3.23%	1.125%
58	10.301	918	922	927	rVV	142571	263952	1.44%	0.501%
59	10.409	929	933	948	rVV	1881324	3297673	17.95%	6.258%
60	10.596	950	952	953	rVV2	6299	9522	0.05%	0.018%
61	10.626	953	955	959	rVB5	7540	15724	0.09%	0.030%
62	10.940	985	987	991	rBV3	4293	9026	0.05%	0.017%
63	11.049	996	998	1001	rVB4	3453	5507	0.03%	0.010%
64	11.196	1009	1013	1019	rBV	1562420	2661220	14.48%	5.050%
65	11.314	1023	1025	1026	rVV2	6179	8092	0.04%	0.015%
66	11.334	1026	1027	1030	rVV3	8661	9135	0.05%	0.017%
67	11.423	1033	1036	1037	rVV3	3659	5571	0.03%	0.011%
68	11.452	1037	1039	1045	rVB5	11033	25865	0.14%	0.049%
69	11.629	1056	1057	1061	rVB2	3377	6094	0.03%	0.012%
70	11.708	1061	1065	1067	rBV3	2572	6122	0.03%	0.012%
71	11.826	1073	1077	1081	rBV6	7360	19530	0.11%	0.037%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049310.D
Acq On : 9 May 2016 22:32
Operator : FY/SY
Sample : H2943-17
Misc : 25mL/MSVOA I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4122

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.984	1090	1093	1096	rVB4	4398	10361	0.06%	0.020%
73	12.043	1096	1099	1102	rBV4	3607	9084	0.05%	0.017%
74	12.141	1106	1109	1111	rBV3	3256	7545	0.04%	0.014%
75	12.171	1111	1112	1114	rVB2	6253	6170	0.03%	0.012%
76	12.240	1118	1119	1125	rVB5	5645	14253	0.08%	0.027%
77	12.387	1129	1134	1137	rVV	246173	491546	2.68%	0.933%
78	12.436	1137	1139	1146	rVB	438930	737865	4.02%	1.400%
79	12.535	1147	1149	1153	rVB5	3383	6149	0.03%	0.012%
80	12.673	1160	1163	1168	rVB6	5010	8939	0.05%	0.017%
81	12.850	1178	1181	1183	rBV4	3384	6047	0.03%	0.011%
82	12.879	1183	1184	1188	rBV4	4376	9477	0.05%	0.018%
83	13.017	1195	1198	1199	rBV3	5379	7250	0.04%	0.014%
84	13.135	1207	1210	1212	rBV5	3955	6603	0.04%	0.013%
85	13.175	1212	1214	1217	rBV4	4557	7365	0.04%	0.014%
86	13.243	1219	1221	1225	rBV4	7679	17228	0.09%	0.033%
87	13.342	1225	1231	1234	rBV8	9089	35913	0.20%	0.068%
88	13.411	1234	1238	1247	rVV	1273041	2052192	11.17%	3.895%
89	13.588	1255	1256	1259	rBV3	4744	8245	0.04%	0.016%
90	13.736	1267	1271	1278	rBV	1121605	1875808	10.21%	3.560%
91	13.893	1285	1287	1290	rVB4	4922	5387	0.03%	0.010%
92	14.011	1295	1299	1304	rVB2	130404	255463	1.39%	0.485%
93	14.080	1304	1306	1307	rBV2	6595	5911	0.03%	0.011%
94	14.208	1314	1319	1320	rBV5	4089	12241	0.07%	0.023%
95	14.297	1324	1328	1329	rBV3	6336	12721	0.07%	0.024%
96	14.611	1358	1360	1362	rVB2	7482	7137	0.04%	0.014%
97	14.651	1362	1364	1365	rBV2	8206	11711	0.06%	0.022%
98	14.700	1368	1369	1371	rBV2	6490	4866	0.03%	0.009%
99	14.739	1371	1373	1376	rBV4	7003	13567	0.07%	0.026%
100	15.586	1455	1459	1465	rBV2	58343	128940	0.70%	0.245%

Sum of corrected areas: 52694162

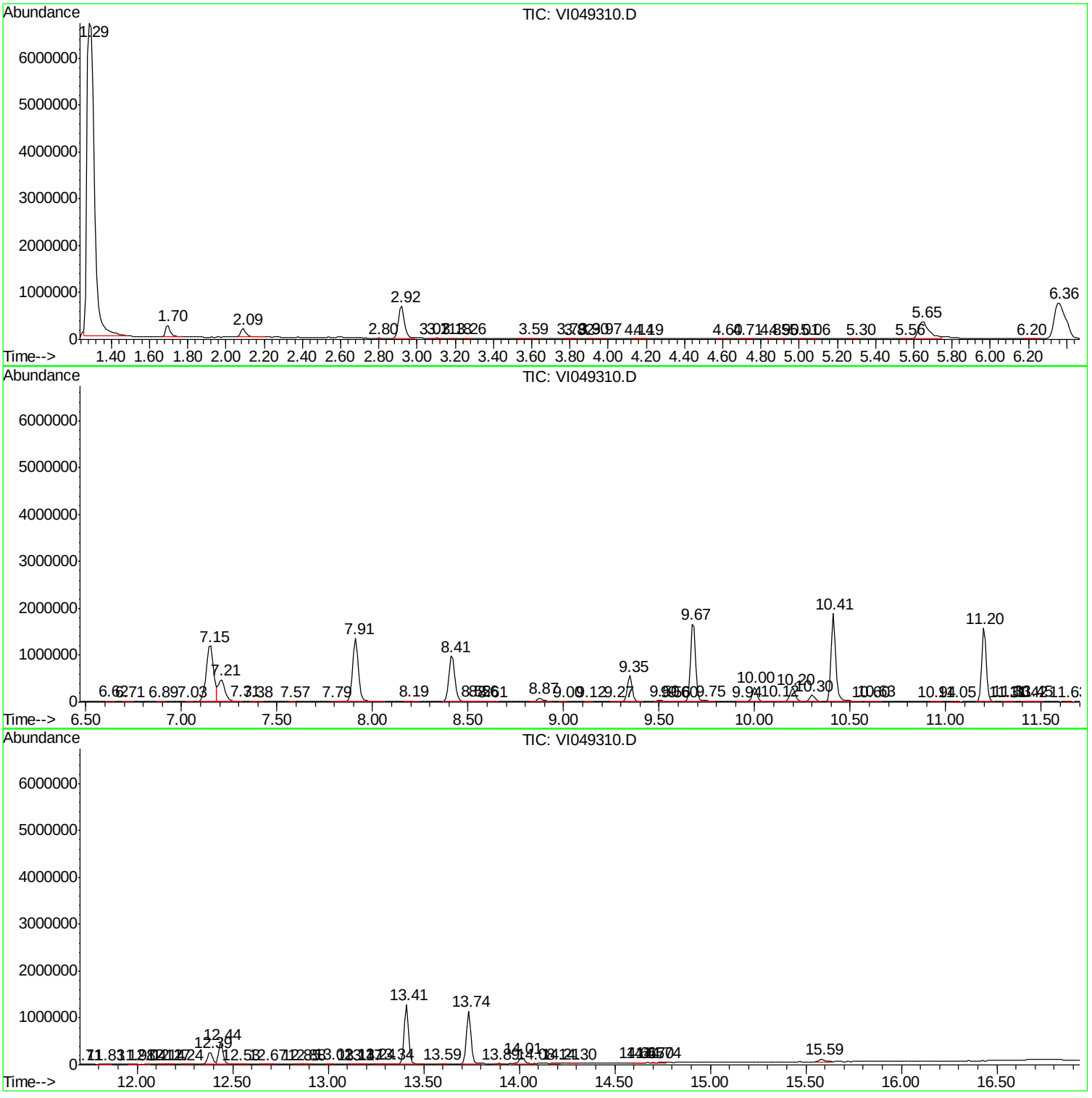
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049310.D
Acq On : 9 May 2016 22:32
Operator : FY/SY
Sample : H2943-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4122

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049310.D
Acq On : 9 May 2016 22:32
Operator : FY/SY
Sample : H2943-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4122

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049310.D
Acq On : 9 May 2016 22:32
Operator : FY/SY
Sample : H2943-17
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 21 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4122

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4125

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049344.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.54	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	3.3	
71-55-6	1,1,1-Trichloroethane	1.1	
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.23	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.67	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4125

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049344.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.27	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.29	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	77	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.10	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4125

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049344.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4125

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049344.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	000075-68-3	Ethane, 1-chloro-1,1-difluoro-	1.57	0.27	JN
2	000066-25-1	Hexanal	10.58	0.64	JN
3	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

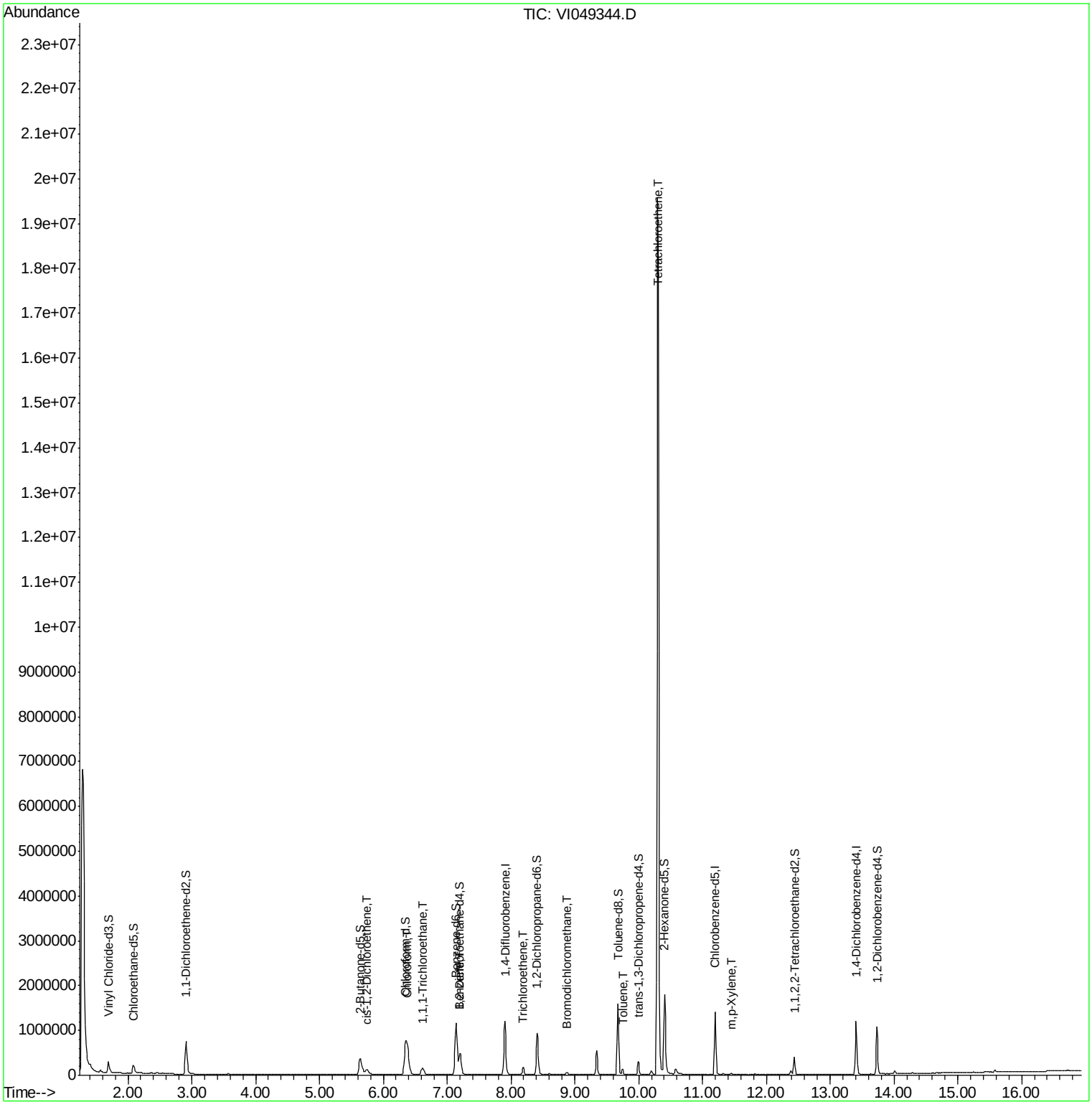
Quantitation Report (LSC Reviewed)

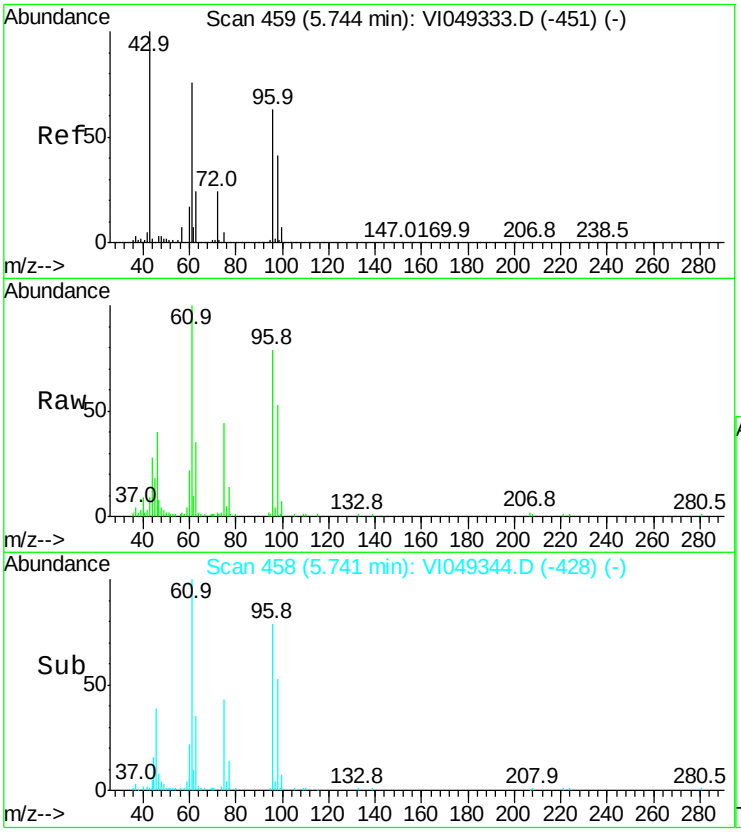
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049344.D
Acq On : 11 May 2016 16:53
Operator : FY/SY
Sample : H2943-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 12 06:55:16 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4125

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:39 PM

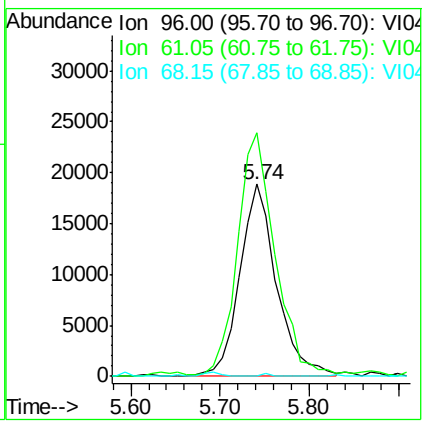




#22
cis-1,2-Dichloroethene
Concen: 0.54 ug/L
RT: 5.74 min Scan# 458
Delta R.T. -0.00 min
Lab File: VI049344.D
Acq: 11 May 2016 16:53

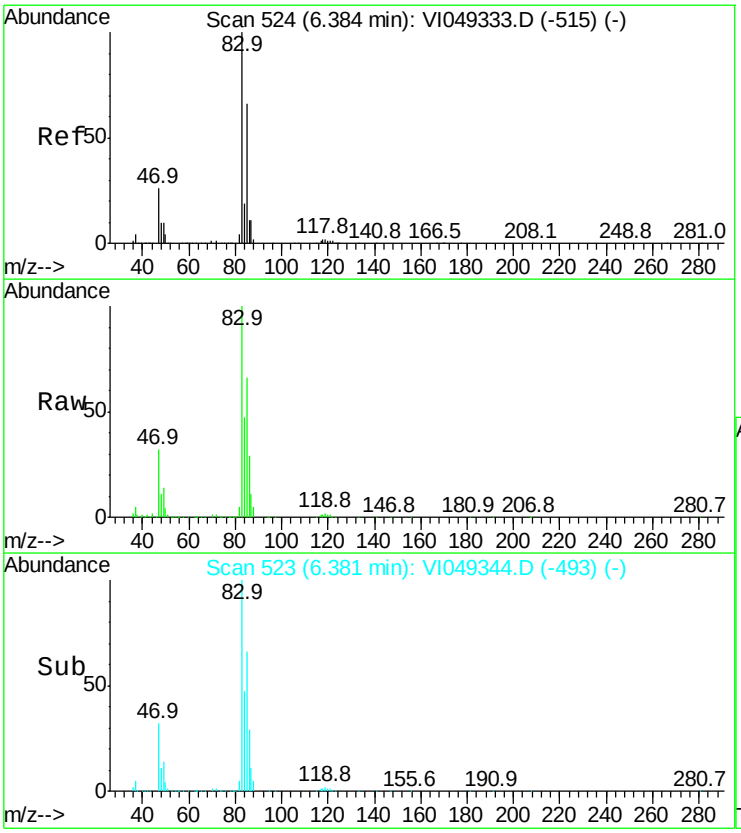
Tgt Ion: 96 Resp: 53779

Ion	Ratio	Lower	Upper
96	100		
61	126.9	82.1	152.5
68	0.0	0.0	0.0



Instrument :
MSVOA_I
ClientSampleId :
H4125

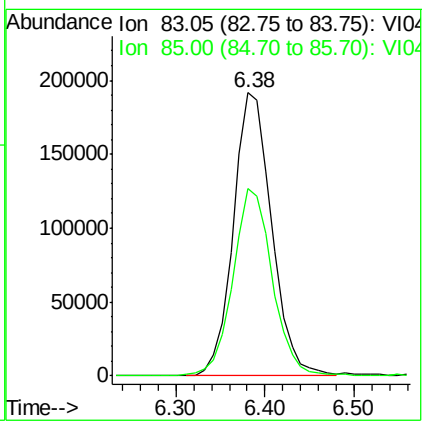
Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:39 PM

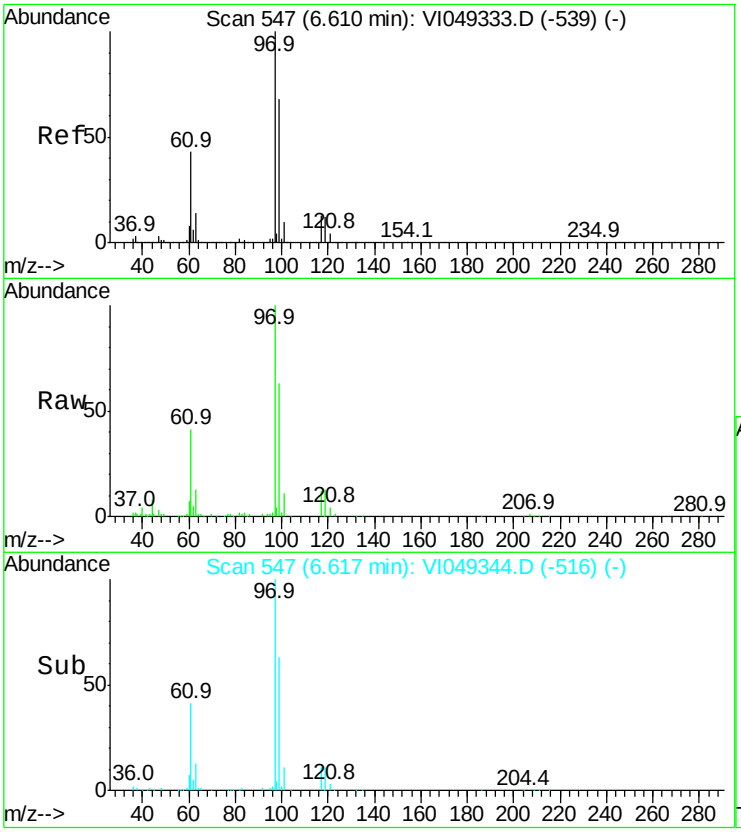


#25
Chloroform
Concen: 3.28 ug/L
RT: 6.38 min Scan# 523
Delta R.T. -0.00 min
Lab File: VI049344.D
Acq: 11 May 2016 16:53

Tgt Ion: 83 Resp: 571400

Ion	Ratio	Lower	Upper
83	100		
85	66.1	47.3	87.8

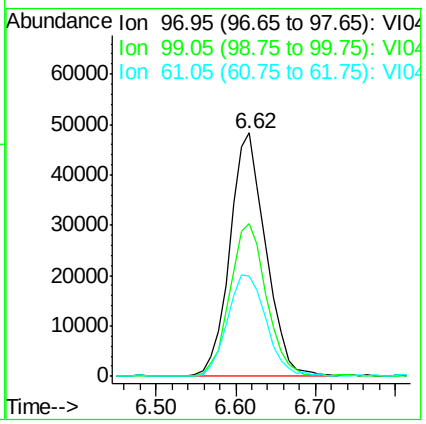




#29
1,1,1-Trichloroethane
Concen: 1.09 ug/L
RT: 6.62 min Scan# 547
Delta R.T. 0.01 min
Lab File: VI049344.D
Acq: 11 May 2016 16:53

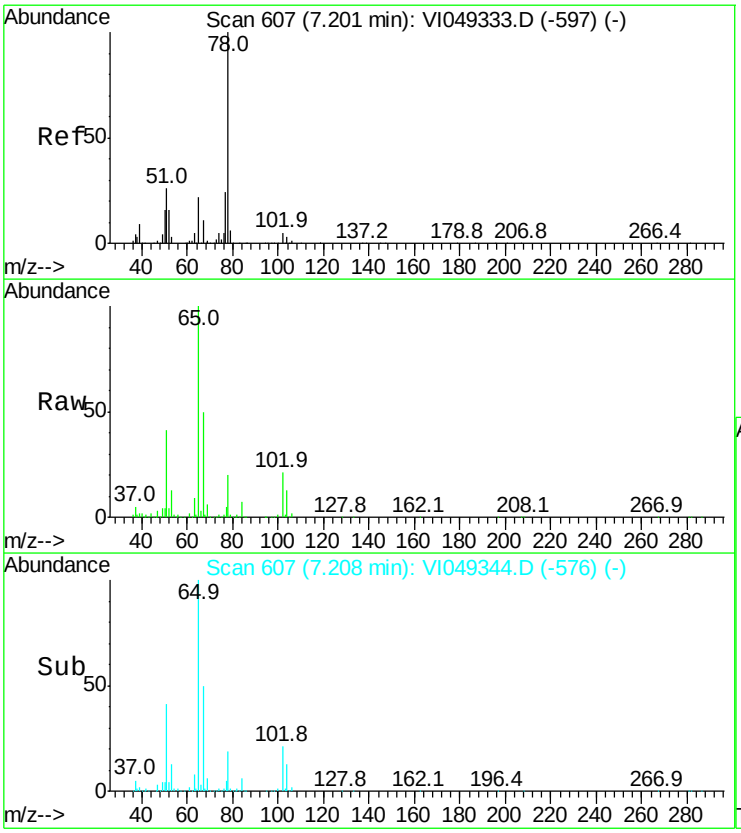
Tgt Ion: 97 Resp: 151129

Ion	Ratio	Lower	Upper
97	100		
99	63.5	51.1	76.7
61	45.1	33.3	49.9



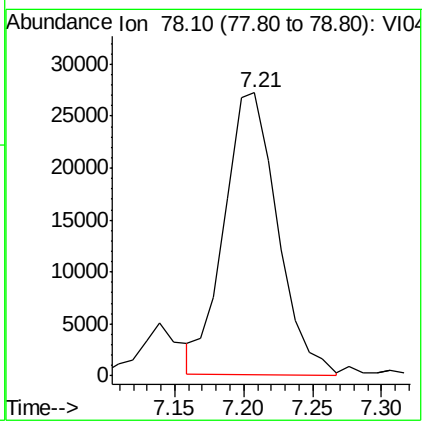
Instrument :
MSVOA_I
ClientSampleId :
H4125

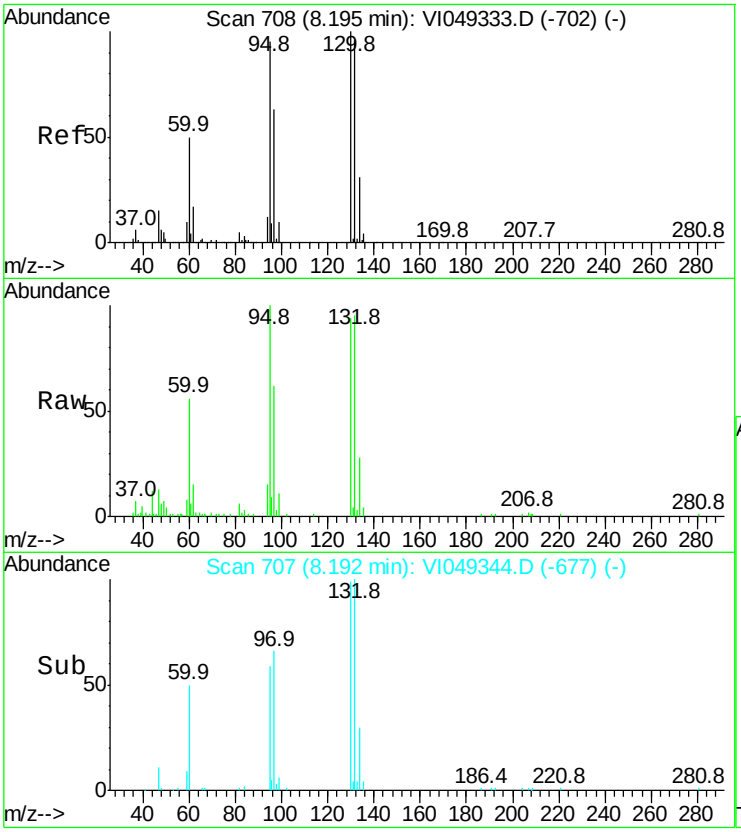
Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:39 PM



#33
Benzene
Concen: 0.23 ug/L
RT: 7.21 min Scan# 607
Delta R.T. 0.01 min
Lab File: VI049344.D
Acq: 11 May 2016 16:53

Tgt Ion: 78 Resp: 72952

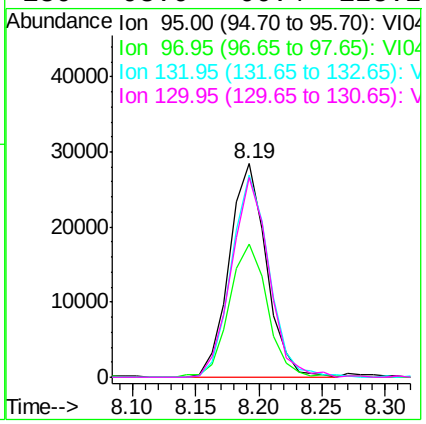




#34
Trichloroethene
Concen: 0.67 ug/L
RT: 8.19 min Scan# 707
Delta R.T. -0.00 min
Lab File: VI049344.D
Acq: 11 May 2016 16:53

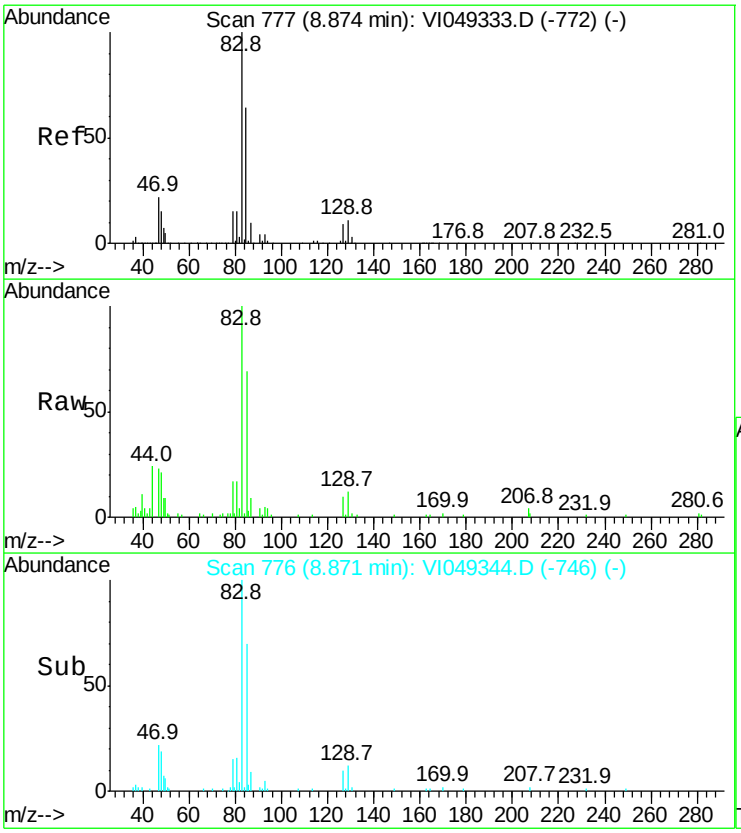
Tgt Ion: 95 Resp: 57875

Ion	Ratio	Lower	Upper
95	100		
97	62.3	45.8	85.2
132	94.8	63.9	118.7
130	93.6	66.4	123.2



Instrument :
MSVOA_I
ClientSampleId :
H4125

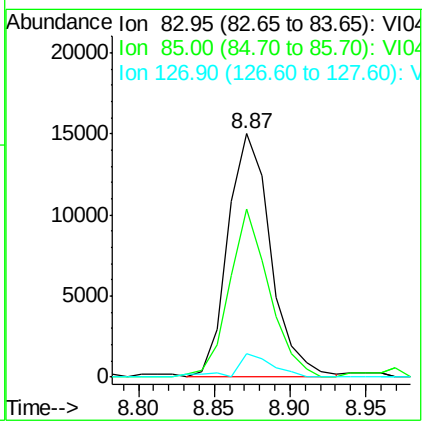
Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:39 PM

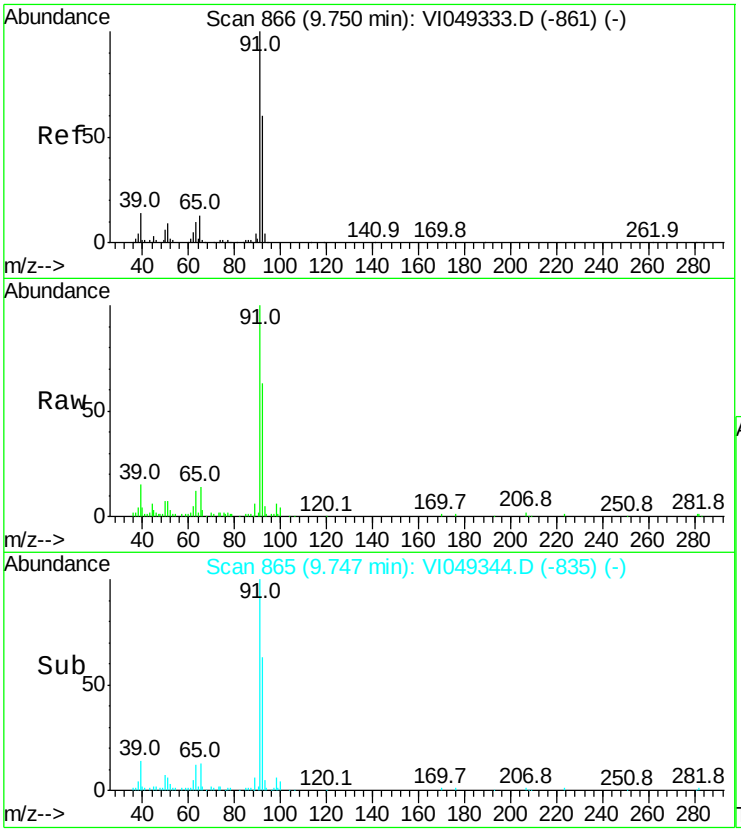


#38
Bromodichloromethane
Concen: 0.27 ug/L
RT: 8.87 min Scan# 776
Delta R.T. -0.00 min
Lab File: VI049344.D
Acq: 11 May 2016 16:53

Tgt Ion: 83 Resp: 29419

Ion	Ratio	Lower	Upper
83	100		
85	69.1	44.7	83.1
127	9.5	6.6	9.8

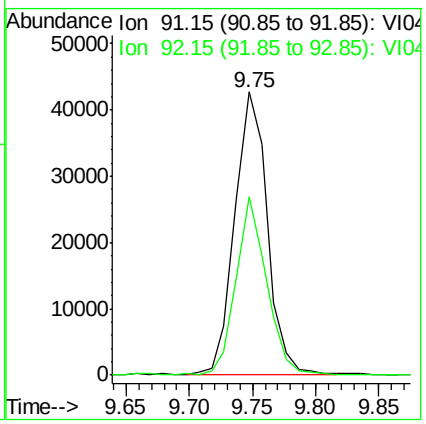




#42
Toluene
Concen: 0.29 ug/L
RT: 9.75 min Scan# 865
Delta R.T. -0.00 min
Lab File: VI049344.D
Acq: 11 May 2016 16:53

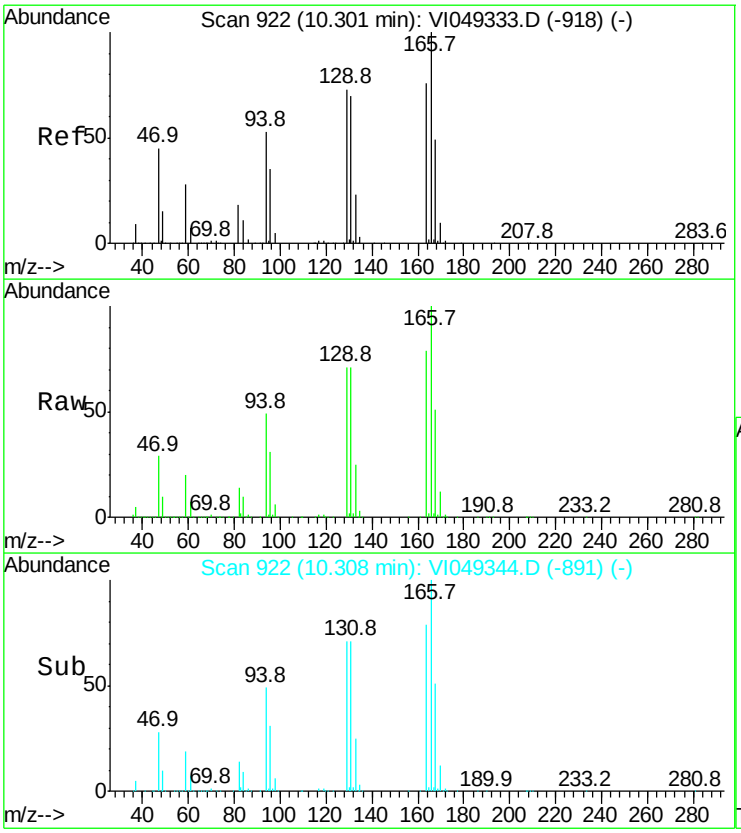
Tgt Ion: 91 Resp: 76353

Ion	Ratio	Lower	Upper
91	100		
92	62.9	41.2	76.4



Instrument :
MSVOA_I
ClientSampleId :
H4125

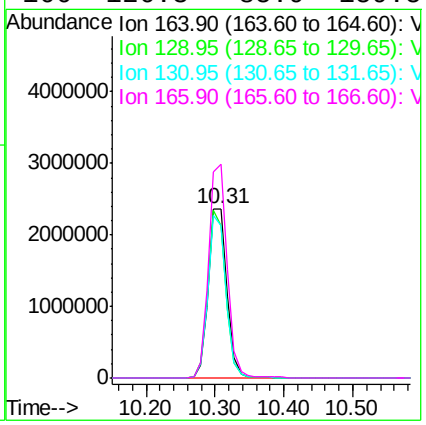
Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:39 PM

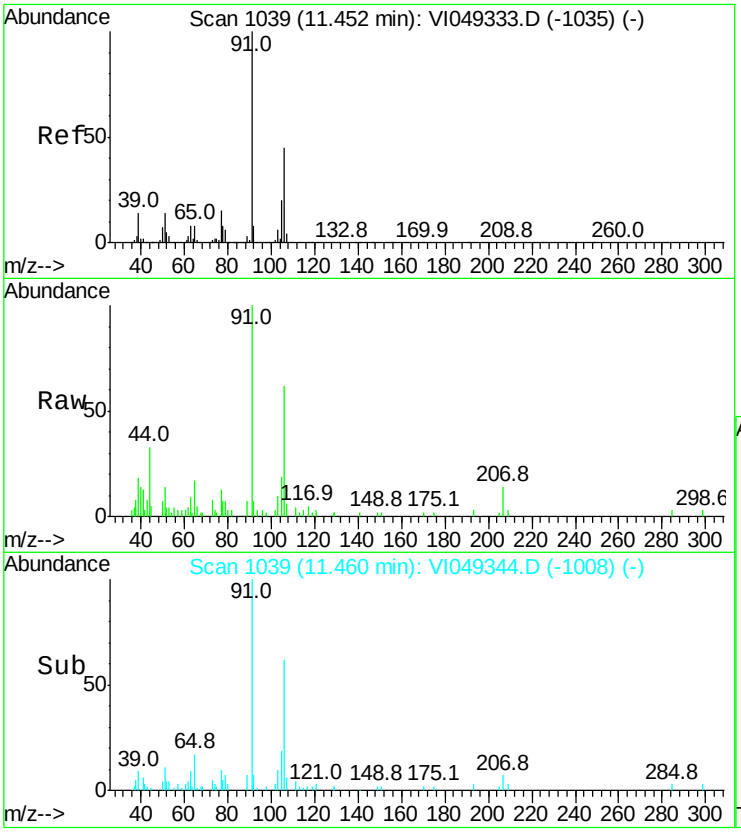


#47
Tetrachloroethene
Concen: 77.44 ug/L
RT: 10.31 min Scan# 922
Delta R.T. 0.01 min
Lab File: VI049344.D
Acq: 11 May 2016 16:53

Tgt Ion:164 Resp: 4425003

Ion	Ratio	Lower	Upper
164	100		
129	90.2	62.1	115.3
131	90.3	60.6	112.6
166	126.3	85.9	159.5

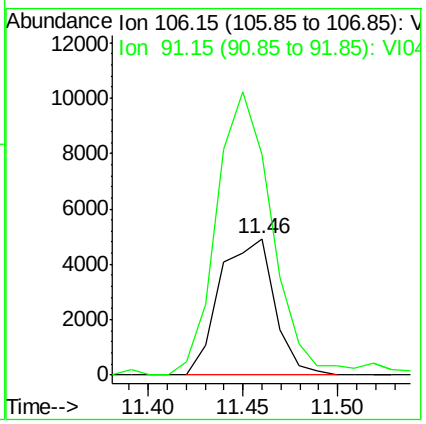




#53
m,p-Xylene
Concen: 0.10 ug/L
RT: 11.46 min Scan# 1039
Delta R.T. 0.01 min
Lab File: VI049344.D
Acq: 11 May 2016 16:53

Tgt Ion:106 Resp: 9835

Ion	Ratio	Lower	Upper
106	100		
91	161.3	155.0	287.9



Instrument :
MSVOA_I
ClientSampleId :
H4125

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:39 PM

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049344.D
Acq On : 11 May 2016 16:53
Operator : FY/SY
Sample : H2943-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4125

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:39 PM

Quant Time: May 12 06:55:16 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1083954	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	732229	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	267538	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	279839	4.19	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 83.80%			
7) Chloroethane-d5	2.08	69	186880m	5.06	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.20%			
11) 1,1-Dichloroethene-d2	2.91	63	554480	3.53	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 70.60%			
20) 2-Butanone-d5	5.63	46	877142	60.71	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 121.42%			
24) Chloroform-d	6.35	84	872404	5.14	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.80%			
26) 1,2-Dichloroethane-d4	7.21	65	359323	5.17	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.40%			
32) Benzene-d6	7.14	84	1491417	5.23	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.60%			
36) 1,2-Dichloropropane-d6	8.41	67	417888	5.21	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.20%			
41) Toluene-d8	9.68	98	1039739	4.94	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.80%			
43) trans-1,3-Dichloropropene-	9.99	79	151419	4.79	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 95.80%			
46) 2-Hexanone-d5	10.41	63	573162	57.50	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 115.00%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	188487	5.17	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 103.40%			
63) 1,2-Dichlorobenzene-d4	13.73	152	242008	5.16	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 103.20%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.74	96	53779	0.54	ug/L	91
25) Chloroform	6.38	83	571400	3.28	ug/L	98
29) 1,1,1-Trichloroethane	6.62	97	151129	1.09	ug/L	97
33) Benzene	7.21	78	72952	0.23	ug/L	100
34) Trichloroethene	8.19	95	57875	0.67	ug/L	97
38) Bromodichloromethane	8.87	83	29419	0.27	ug/L	94
42) Toluene	9.75	91	76353	0.29	ug/L	95
47) Tetrachloroethene	10.31	164	4425003	77.44	ug/L	97
53) m,p-Xylene	11.46	106	9835	0.10	ug/L	63

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049344.D
Acq On : 11 May 2016 16:53
Operator : FY/SY
Sample : H2943-05
Misc : 25mL/MSVOA I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4125

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.283	3	5	16	rVB	6586699	19247822	53.56%	21.419%
2	1.568	31	34	43	rVB2	68467	140214	0.39%	0.156%
3	1.696	43	47	55	rBV	255722	483558	1.35%	0.538%
4	2.080	83	86	94	rBV	180645	381047	1.06%	0.424%
5	2.198	94	98	104	rVB3	25610	69923	0.19%	0.078%
6	2.346	111	113	114	rBV2	7101	7883	0.02%	0.009%
7	2.454	121	124	131	rVV4	17422	51114	0.14%	0.057%
8	2.543	131	133	136	rVB2	20393	29772	0.08%	0.033%
9	2.789	154	158	160	rBV4	6113	14240	0.04%	0.016%
10	2.848	160	164	165	rVV4	5729	11252	0.03%	0.013%
11	2.907	165	170	185	rVV	727431	1743660	4.85%	1.940%
12	3.074	185	187	188	rVV2	6583	5990	0.02%	0.007%
13	3.104	188	190	193	rVB4	6418	11825	0.03%	0.013%
14	3.192	195	199	208	rVB3	12509	50750	0.14%	0.056%
15	3.330	212	213	216	rVB2	3879	6313	0.02%	0.007%
16	3.429	221	223	225	rBV3	4074	6216	0.02%	0.007%
17	3.566	232	237	243	rBV5	16762	57276	0.16%	0.064%
18	3.822	260	263	265	rVV4	4501	6636	0.02%	0.007%
19	3.881	268	269	272	rVB2	5107	7196	0.02%	0.008%
20	3.970	272	278	280	rBV6	7962	24990	0.07%	0.028%
21	4.285	306	310	314	rVB6	6745	17963	0.05%	0.020%
22	4.344	314	316	318	rBV3	3702	7436	0.02%	0.008%
23	4.423	318	324	328	rVB4	7325	16825	0.05%	0.019%
24	4.728	353	355	357	rVB2	4279	6121	0.02%	0.007%
25	4.797	361	362	366	rVB4	4038	6218	0.02%	0.007%
26	4.895	369	372	375	rBV4	3332	9576	0.03%	0.011%
27	4.964	377	379	382	rVB4	3547	6472	0.02%	0.007%
28	5.092	388	392	394	rBV5	4958	13022	0.04%	0.014%
29	5.436	417	427	431	rBV7	12444	50825	0.14%	0.057%
30	5.525	434	436	440	rVB4	7357	15392	0.04%	0.017%
31	5.633	440	447	454	rBV	364242	1247892	3.47%	1.389%
32	5.741	454	458	469	rVB2	109359	393416	1.09%	0.438%
33	5.909	474	475	476	rVV	7195	6196	0.02%	0.007%
34	5.958	479	480	485	rVV4	6192	9467	0.03%	0.011%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049344.D
Acq On : 11 May 2016 16:53
Operator : FY/SY
Sample : H2943-05
Misc : 25mL/MSVOA I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4125

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.037	487	488	492	rVB4	5025	7457	0.02%	0.008%
36	6.106	492	495	498	rVB4	5099	8230	0.02%	0.009%
37	6.165	498	501	503	rBV4	4217	8949	0.02%	0.010%
38	6.352	512	520	538	rBV3	768820	3447967	9.60%	3.837%
39	6.548	538	540	541	rVV2	5390	7845	0.02%	0.009%
40	6.617	541	547	556	rVV	142809	473478	1.32%	0.527%
41	6.726	556	558	561	rVB4	5436	7920	0.02%	0.009%
42	6.932	578	579	582	rVB3	4893	6086	0.02%	0.007%
43	6.982	582	584	585	rBV2	4547	6193	0.02%	0.007%
44	7.139	593	600	604	rBV	1160747	3095274	8.61%	3.444%
45	7.198	604	606	615	rVB	465904	1111468	3.09%	1.237%
46	7.395	624	626	628	rVB3	5731	6471	0.02%	0.007%
47	7.483	633	635	636	rBV	5678	7603	0.02%	0.008%
48	7.533	638	640	646	rVB5	11841	27341	0.08%	0.030%
49	7.631	646	650	651	rBV3	3784	7674	0.02%	0.009%
50	7.739	657	661	663	rVB4	8597	19776	0.06%	0.022%
51	7.838	667	671	672	rBV4	4212	6940	0.02%	0.008%
52	7.907	672	678	691	rBV	1203442	2618778	7.29%	2.914%
53	8.192	701	707	719	rBV2	163623	366199	1.02%	0.408%
54	8.409	724	729	738	rVV	920437	2009216	5.59%	2.236%
55	8.527	739	741	745	rVB4	10911	17481	0.05%	0.019%
56	8.596	745	748	753	rBV3	20019	50217	0.14%	0.056%
57	8.724	759	761	764	rVB4	5857	8765	0.02%	0.010%
58	8.871	769	776	785	rBV2	50062	118556	0.33%	0.132%
59	9.344	819	824	831	rBV	550532	967775	2.69%	1.077%
60	9.501	837	840	844	rVB2	15724	30322	0.08%	0.034%
61	9.560	844	846	853	rVB7	4480	7486	0.02%	0.008%
62	9.678	853	858	862	rBV	1582932	3001589	8.35%	3.340%
63	9.747	862	865	872	rVB	118437	224242	0.62%	0.250%
64	9.865	875	877	879	rVB3	4750	6357	0.02%	0.007%
65	9.993	886	890	898	rBV	296247	534884	1.49%	0.595%
66	10.121	901	903	904	rBV2	6109	6839	0.02%	0.008%
67	10.200	906	911	917	rVV	82365	171922	0.48%	0.191%
68	10.298	917	921	928	rVV2	19547144	35934978	100.00%	39.989%
69	10.407	928	932	945	rVV	1772923	3241985	9.02%	3.608%
70	10.584	946	950	964	rVB	128208	319450	0.89%	0.355%
71	10.820	973	974	977	rBV2	5592	7686	0.02%	0.009%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049344.D
Acq On : 11 May 2016 16:53
Operator : FY/SY
Sample : H2943-05
Misc : 25mL/MSVOA I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4125

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	10.958	984	988	991	rVB6	4512	10271	0.03%	0.011%
73	11.066	997	999	1001	rVB3	5246	8536	0.02%	0.009%
74	11.194	1008	1012	1022	rVV	1396970	2499346	6.96%	2.781%
75	11.322	1022	1025	1030	rVV2	27935	61962	0.17%	0.069%
76	11.450	1034	1038	1042	rVB2	29323	60666	0.17%	0.068%
77	11.824	1072	1076	1084	rVB4	22558	55492	0.15%	0.062%
78	11.912	1084	1085	1088	rBV3	3823	6872	0.02%	0.008%
79	12.050	1095	1099	1102	rBV4	9666	26995	0.08%	0.030%
80	12.178	1108	1112	1114	rVB5	8185	12004	0.03%	0.013%
81	12.247	1114	1119	1120	rBV5	4849	13509	0.04%	0.015%
82	12.385	1129	1133	1135	rVV	89241	164890	0.46%	0.183%
83	12.444	1135	1139	1145	rVB	388335	707714	1.97%	0.788%
84	12.562	1148	1151	1155	rVB5	5930	10715	0.03%	0.012%
85	12.641	1155	1159	1160	rBV4	9917	17940	0.05%	0.020%
86	12.719	1165	1167	1169	rVB3	6013	8278	0.02%	0.009%
87	12.838	1177	1179	1182	rBV4	3991	7509	0.02%	0.008%
88	12.887	1182	1184	1186	rBV3	4681	8154	0.02%	0.009%
89	13.064	1196	1202	1205	rBV4	14863	37348	0.10%	0.042%
90	13.123	1205	1208	1210	rBV4	3513	7238	0.02%	0.008%
91	13.241	1215	1220	1225	rBV6	12625	33714	0.09%	0.038%
92	13.408	1233	1237	1245	rVV	1181173	1948844	5.42%	2.169%
93	13.615	1255	1258	1259	rBV2	5986	11753	0.03%	0.013%
94	13.635	1259	1260	1263	rVB3	11913	12856	0.04%	0.014%
95	13.684	1263	1265	1266	rBV2	6827	9976	0.03%	0.011%
96	13.733	1266	1270	1279	rVV	1055238	1783805	4.96%	1.985%
97	14.009	1294	1298	1303	rBV2	66474	128224	0.36%	0.143%
98	14.137	1309	1311	1314	rBV4	4534	9818	0.03%	0.011%
99	14.284	1323	1326	1330	rBV6	20245	42645	0.12%	0.047%
100	15.583	1455	1458	1462	rBV	42701	89507	0.25%	0.100%

Sum of corrected areas: 89862478

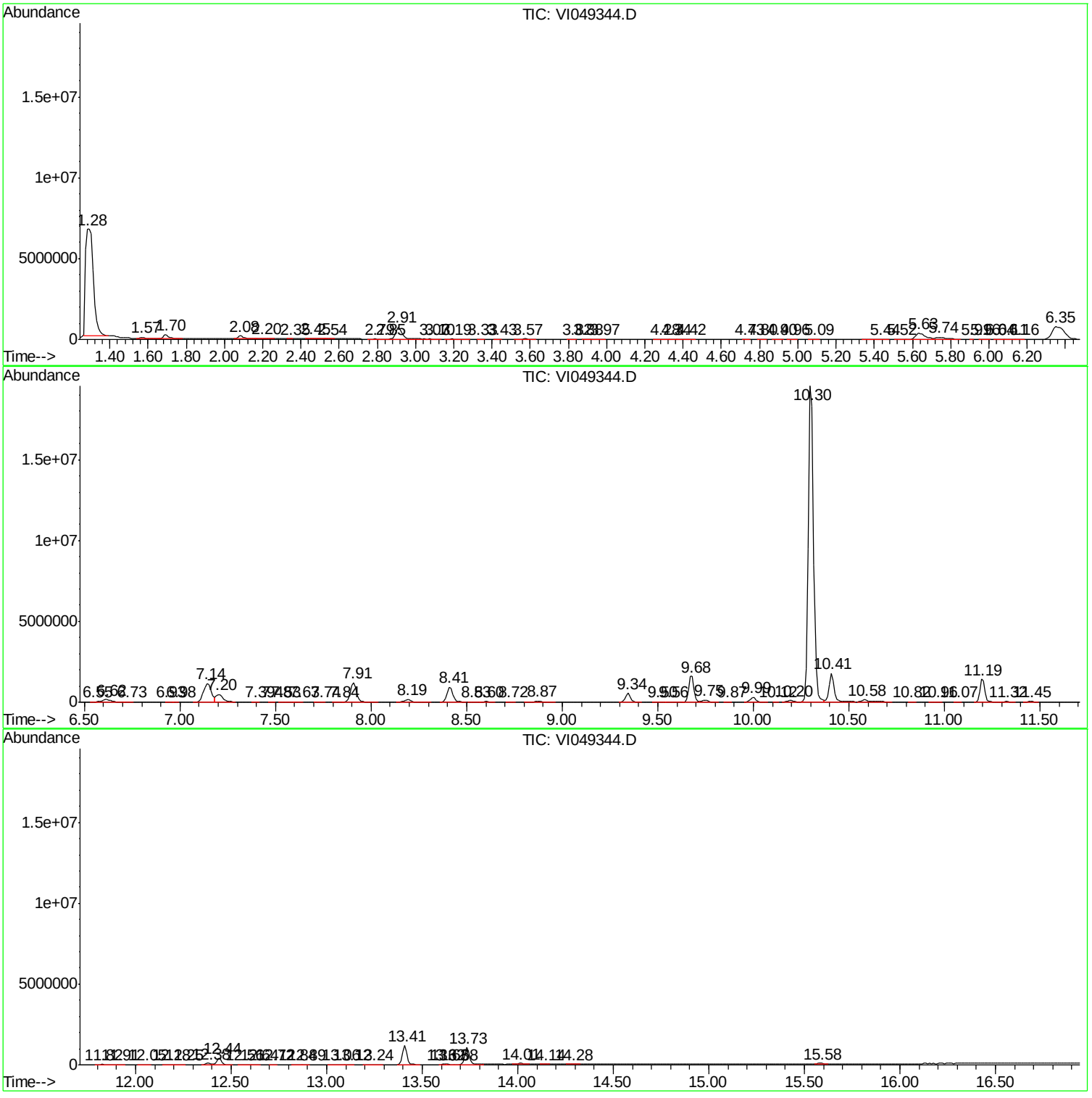
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049344.D
Acq On : 11 May 2016 16:53
Operator : FY/SY
Sample : H2943-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4125

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049344.D
Acq On : 11 May 2016 16:53
Operator : FY/SY
Sample : H2943-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4125

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

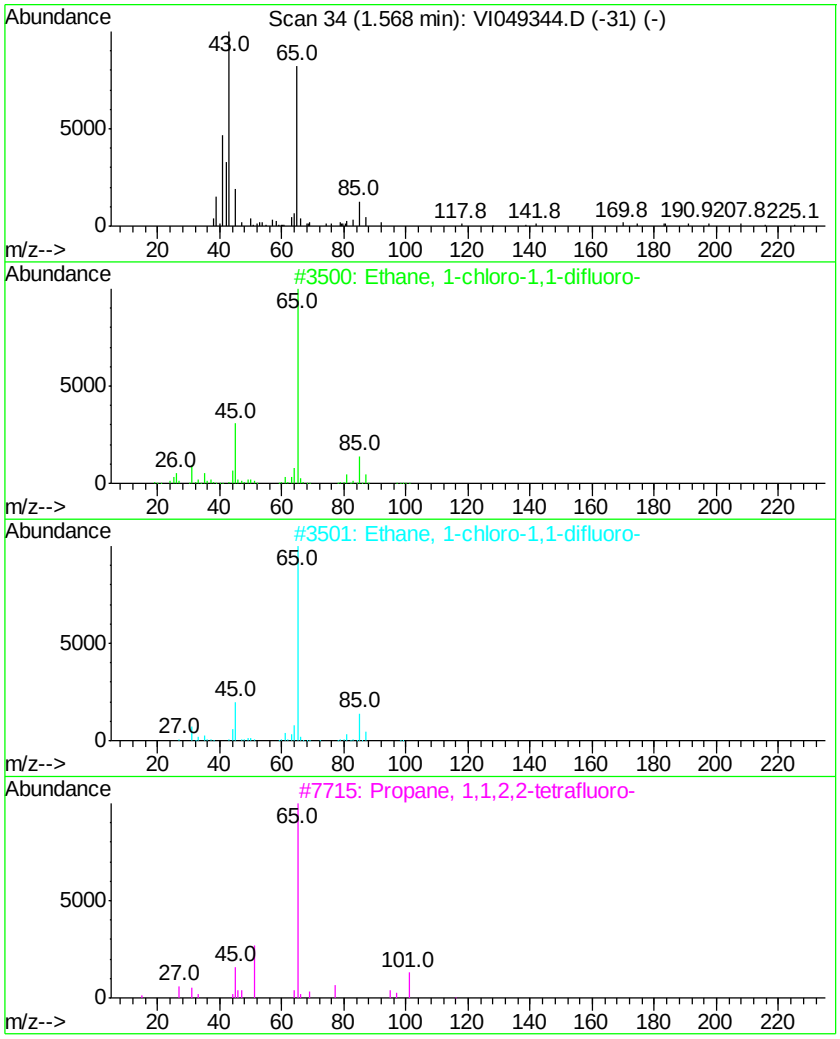
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

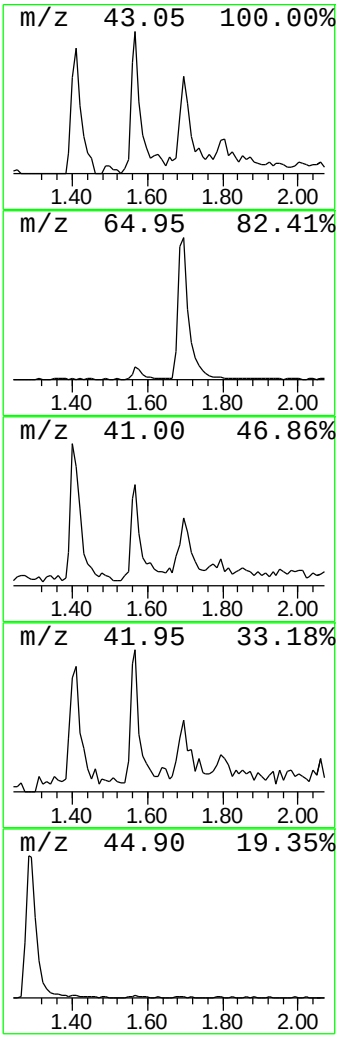
****

Peak Number 2 Ethane, 1-chloro-1,1-difluoro- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.57	0.27 ug/L	140214	1,4-Difluorobenzene	7.91

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethane, 1-chloro-1,1-difluoro-	100	C2H3ClF2	000075-68-3	64
2	Ethane, 1-chloro-1,1-difluoro-	100	C2H3ClF2	000075-68-3	43
3	Propane, 1,1,2,2-tetrafluoro-	116	C3H4F4	040723-63-5	4
4	Propane, 2,2-difluoro-	80	C3H6F2	000420-45-1	4
5	Propane, 2,2-difluoro-	80	C3H6F2	000420-45-1	4





Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049344.D
Acq On : 11 May 2016 16:53
Operator : FY/SY
Sample : H2943-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4125

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

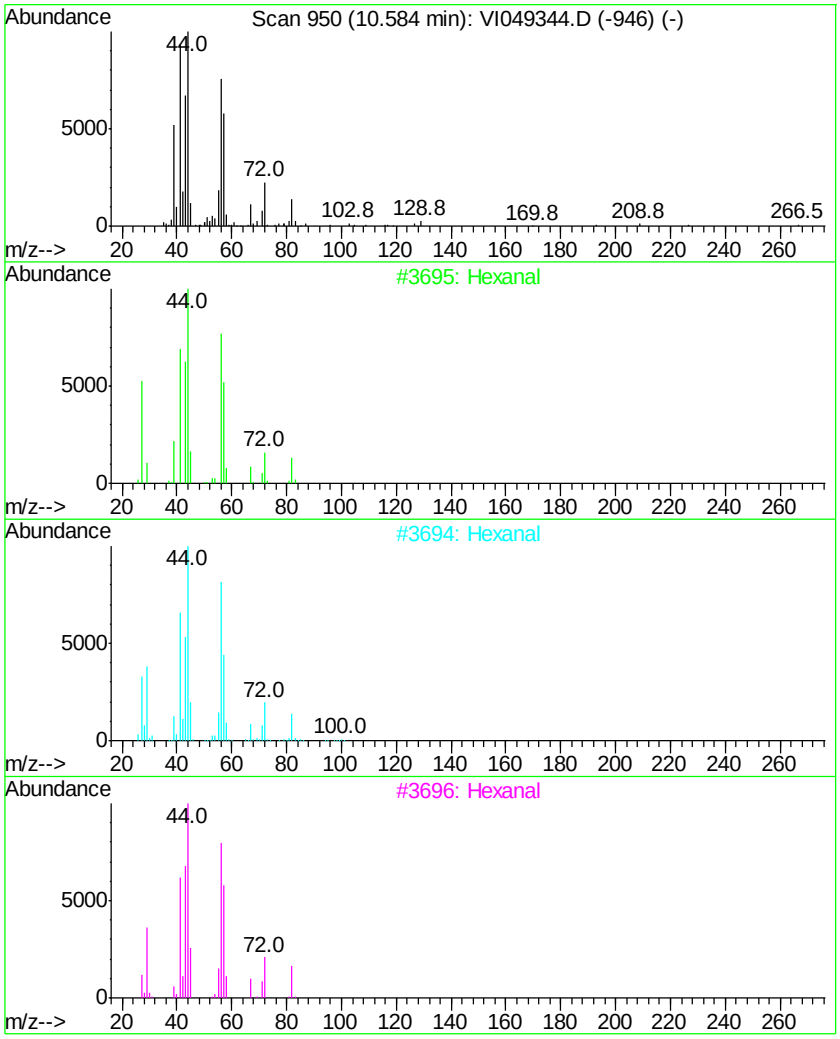
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

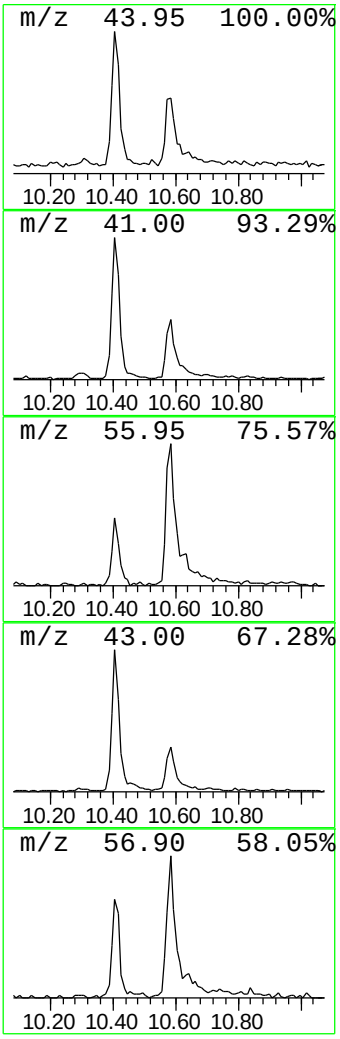
****

Peak Number 5 Hexanal Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.58	0.64 ug/L	319450	Chlorobenzene-d5	11.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexanal	100	C6H12O	000066-25-1	59
2	Hexanal	100	C6H12O	000066-25-1	50
3	Hexanal	100	C6H12O	000066-25-1	50
4	Cyclobutanol, 2-ethyl-	100	C6H12O	035301-43-0	40
5	Butanal	72	C4H8O	000123-72-8	30





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049344.D
Acq On : 11 May 2016 16:53
Operator : FY/SY
Sample : H2943-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4125

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Ethane, 1-chloro-...	1.57	0.3	ug/L	140214	1	7.91	2618780	5.0
Hexanal	10.58	0.6	ug/L	319450	2	11.20	2499350	5.0

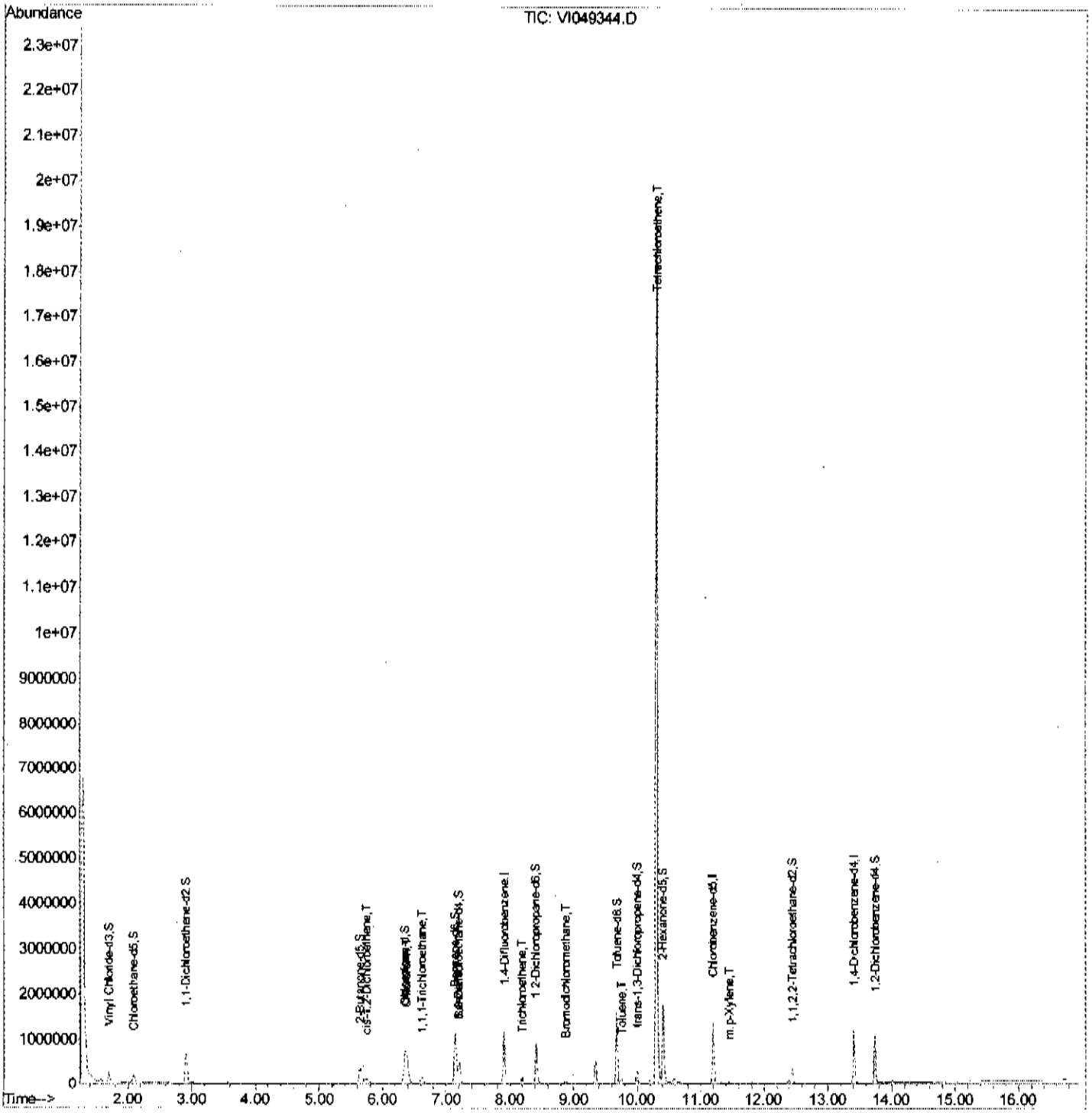
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049344.D
Acq On : 11 May 2016 16:53
Operator : FY/SY
Sample : H2943-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 12 06:55:16 2016
Quant Method : W:\HPCHEM1\MSVOA_1\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4125

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:39 PM

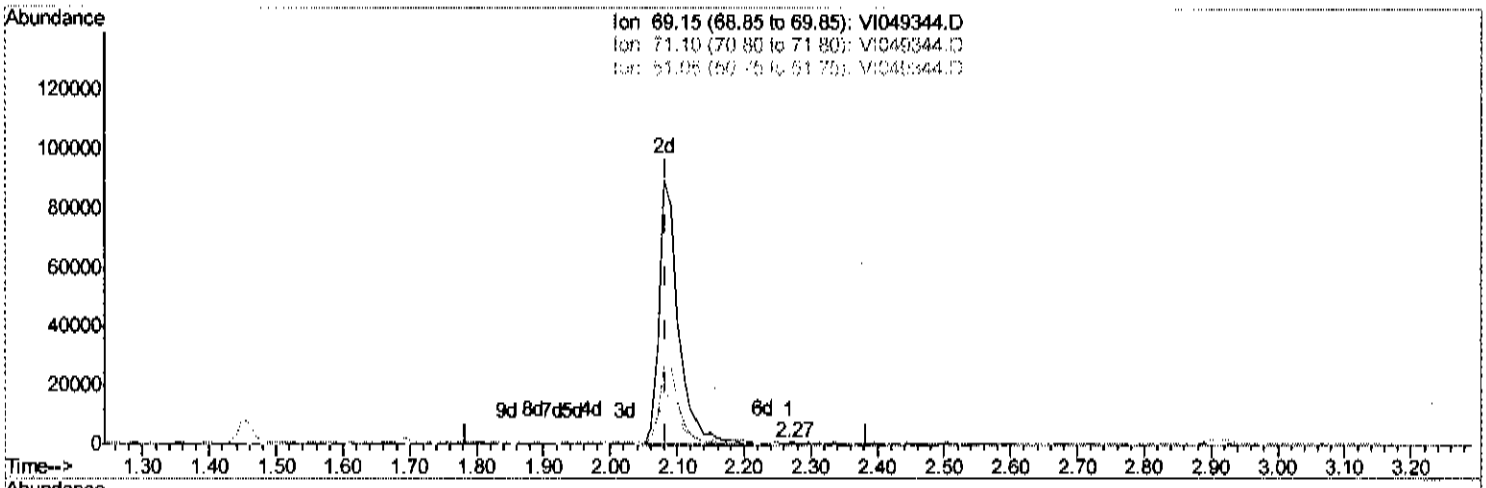


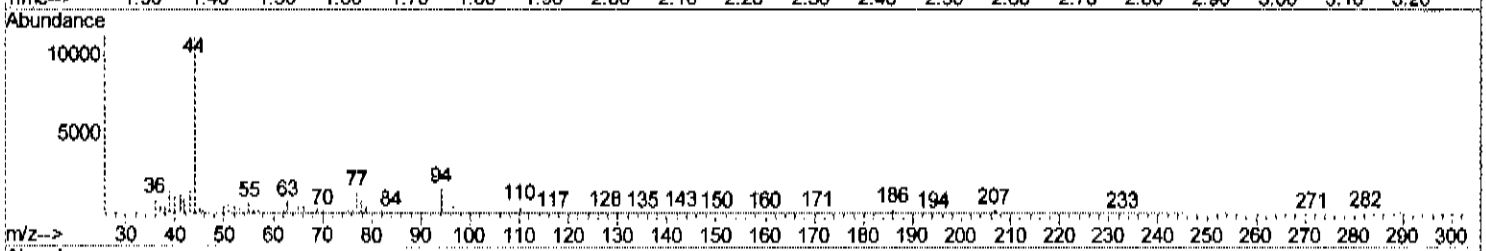
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049344.D
Acq On : 11 May 2016 16:53
Operator : FY/SY
Sample : H2943-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

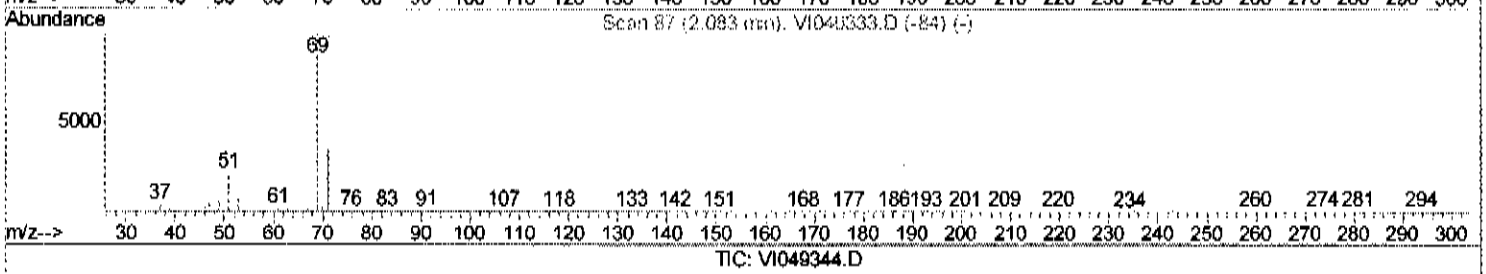
Quant Time: May 12 06:05:28 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4125

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:39 PM







TIC: VI049344.D

(7) Chloroethane-d5 (S)

2.267min (+0.184) 0.05ug/L

response 1676

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	28.70
51.05	32.70	29.53
0.00	0.00	0.00

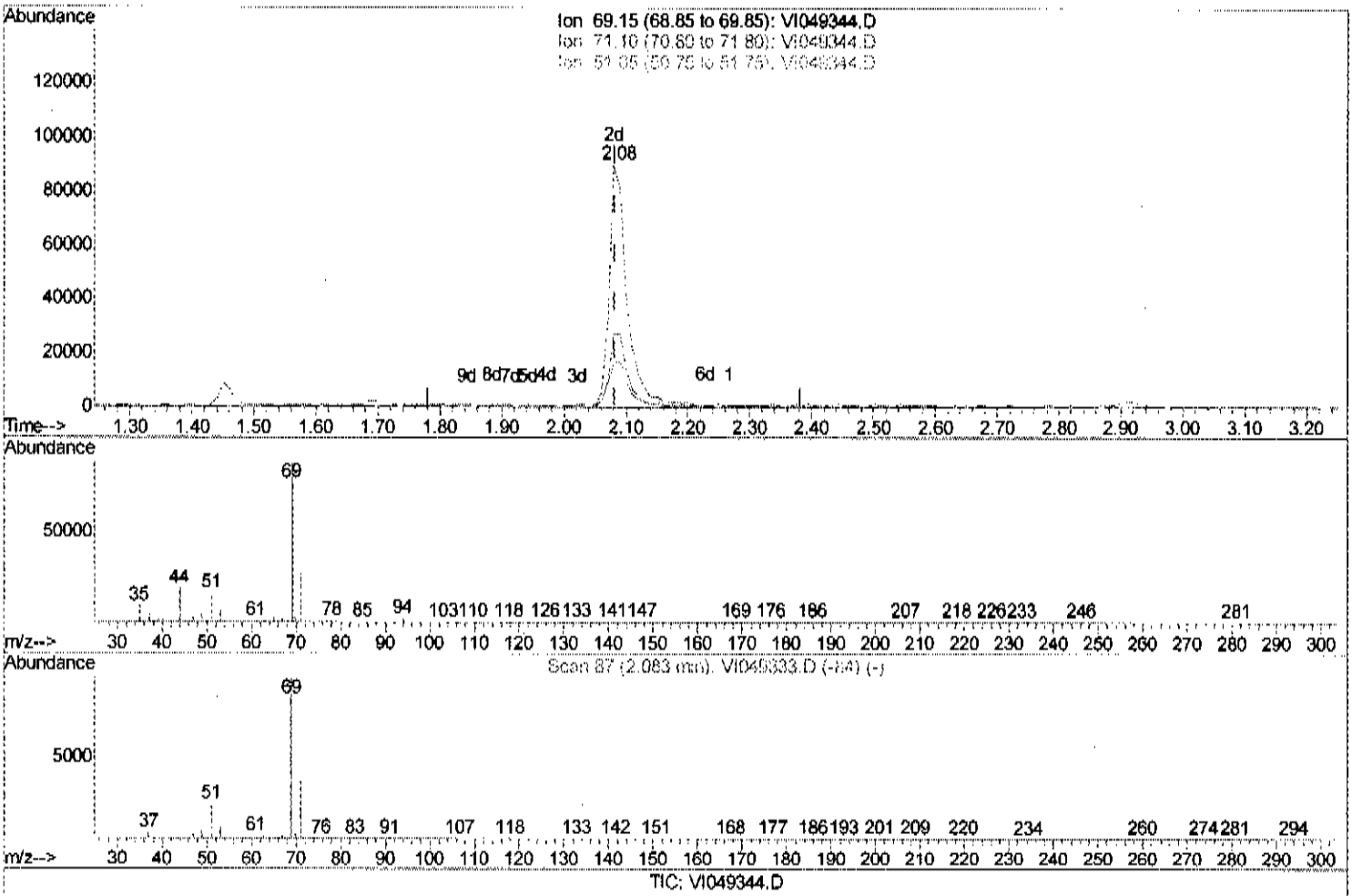
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049344.D
Acq On : 11 May 2016 16:53
Operator : FY/SY
Sample : H2943-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 12 06:05:28 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMTTR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4125

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:39 PM



(7) Chloroethane-d5 (S)

2.080min (-0.003) 5.06ug/L m

response 186880

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.26#
51.05	32.70	0.26#
0.00	0.00	0.00

FY
5/16/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049344.D
Acq On : 11 May 2016 16:53
Operator : FY/SY
Sample : H2943-05
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 12 06:55:16 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4125

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:39 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1083954	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	732229	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	267538	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	279839	4.19	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 83.80%			
7) Chloroethane-d5	2.08	69	186880m	5.06	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.20%			
11) 1,1-Dichloroethene-d2	2.91	63	554480	3.53	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 70.60%			
20) 2-Butanone-d5	5.63	46	877142	60.71	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 121.42%			
24) Chloroform-d	6.35	84	872404	5.14	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.80%			
26) 1,2-Dichloroethane-d4	7.21	65	359323	5.17	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.40%			
32) Benzene-d6	7.14	84	1491417	5.23	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.60%			
36) 1,2-Dichloropropane-d6	8.41	67	417888	5.21	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.20%			
41) Toluene-d8	9.68	98	1039739	4.94	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.80%			
43) trans-1,3-Dichloropropene-	9.99	79	151419	4.79	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 95.80%			
46) 2-Hexanone-d5	10.41	63	573162	57.50	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 115.00%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	188487	5.17	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 103.40%			
63) 1,2-Dichlorobenzene-d4	13.73	152	242008	5.16	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 103.20%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.74	96	53779	0.54	ug/L	91
25) Chloroform	6.38	83	571400	3.28	ug/L	98
29) 1,1,1-Trichloroethane	6.62	97	151129	1.09	ug/L	97
33) Benzene	7.21	78	72952	0.23	ug/L	100
34) Trichloroethene	8.19	95	57875	0.67	ug/L	97
38) Bromodichloromethane	8.87	83	29419	0.27	ug/L	94
42) Toluene	9.75	91	76353	0.29	ug/L	95
47) Tetrachloroethene	10.31	164	4425003	77.44	ug/L	97
53) m,p-Xylene	11.46	106	9835	0.10	ug/L	63

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FT 5/16/2016

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4125DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049341.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	50	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4125DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049341.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	82	D
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-trichlorobenzene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4125DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049341.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 10.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4125DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-05DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049341.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 10.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

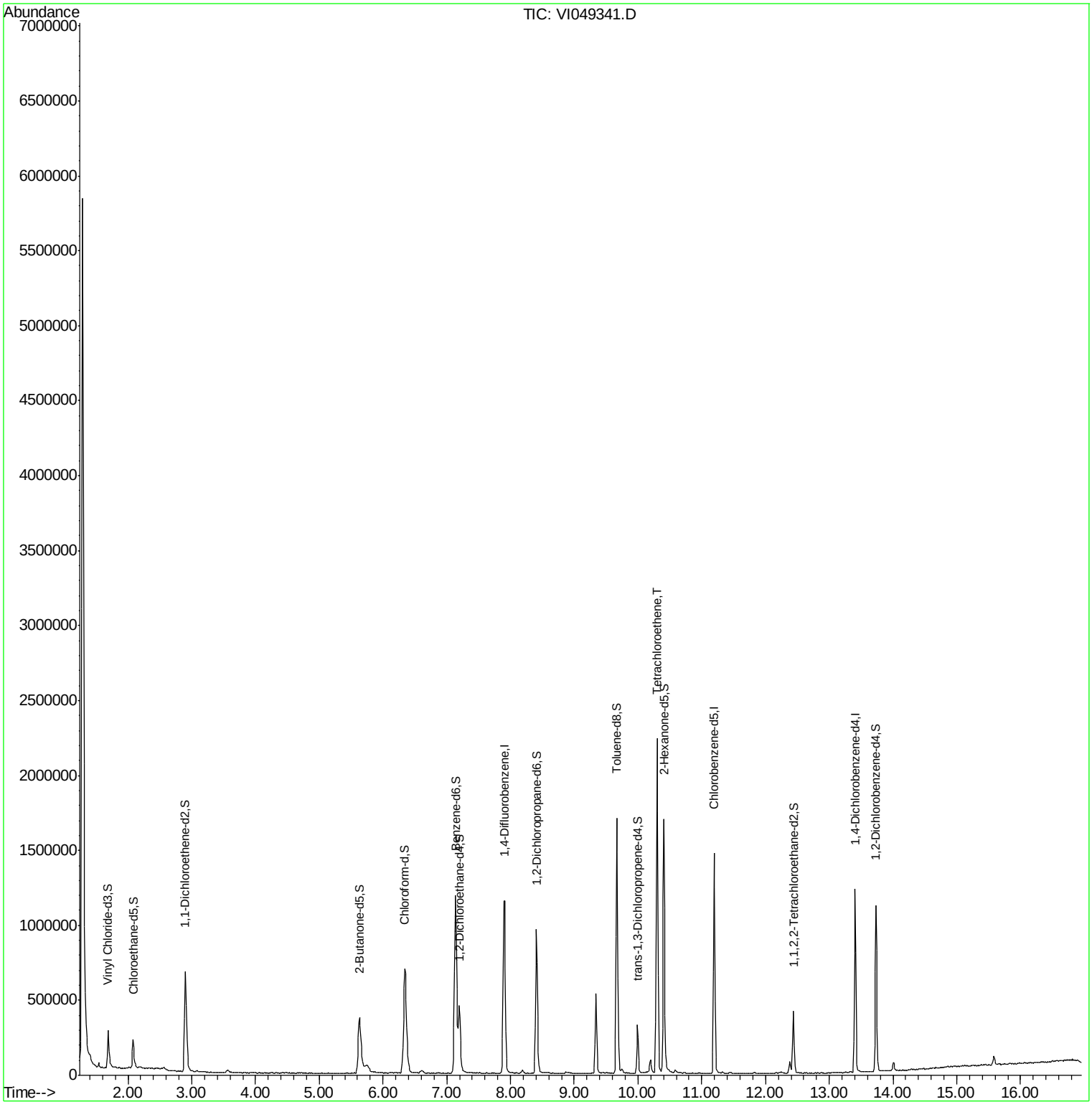
Quantitation Report (LSC Reviewed)

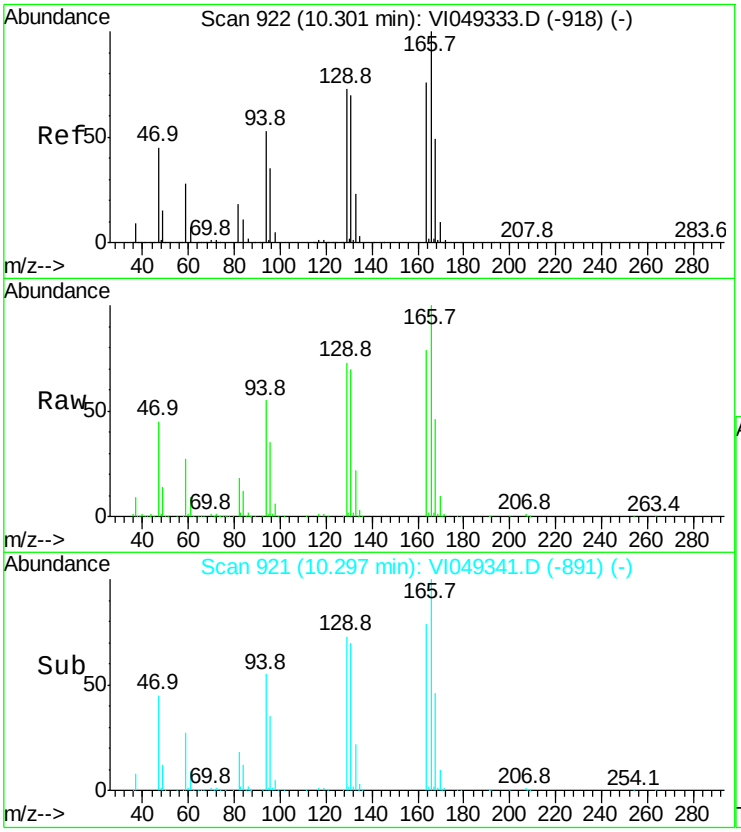
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049341.D
Acq On : 11 May 2016 15:17
Operator : FY/SY
Sample : H2943-05DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 12 06:58:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4125DL

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:35 PM

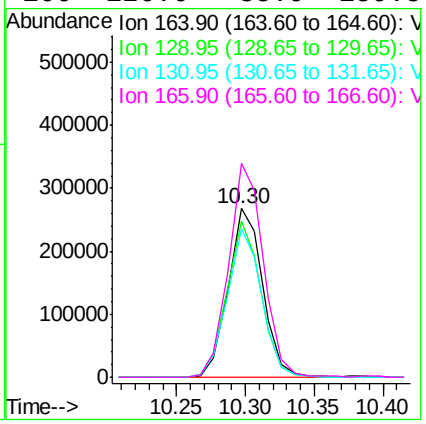




#47
Tetrachloroethene
Concen: 8.21 ug/L
RT: 10.30 min Scan# 921
Delta R.T. -0.00 min
Lab File: VI049341.D
Acq: 11 May 2016 15:17

Tgt Ion:164 Resp: 465767

Ion	Ratio	Lower	Upper
164	100		
129	92.9	62.1	115.3
131	88.2	60.6	112.6
166	126.6	85.9	159.5



Instrument :
MSVOA_I
ClientSampleId :
H4125DL

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:35 PM

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049341.D
Acq On : 11 May 2016 15:17
Operator : FY/SY
Sample : H2943-05DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4125DL

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:35 PM

Quant Time: May 12 06:58:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1092648	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	726548	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	274968	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	292355	4.35	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 87.00%			
7) Chloroethane-d5	2.08	69	192057	5.15	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 103.00%			
11) 1,1-Dichloroethene-d2	2.90	63	544673	3.44	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 68.80%			
20) 2-Butanone-d5	5.63	46	861689	59.17	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 118.34%			
24) Chloroform-d	6.34	84	878708	5.13	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.60%			
26) 1,2-Dichloroethane-d4	7.20	65	392924m	5.61	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 112.20%			
32) Benzene-d6	7.14	84	1534761	5.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 108.40%			
36) 1,2-Dichloropropane-d6	8.41	67	429588	5.40	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 108.00%			
41) Toluene-d8	9.67	98	1070312	5.13	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.60%			
43) trans-1,3-Dichloropropene-	9.99	79	150831	4.81	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 96.20%			
46) 2-Hexanone-d5	10.41	63	561449	56.77	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 113.54%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	190242	5.26	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 105.20%			
63) 1,2-Dichlorobenzene-d4	13.73	152	256496	5.32	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 106.40%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.30	164	465767	8.21	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049341.D
Acq On : 11 May 2016 15:17
Operator : FY/SY
Sample : H2943-05DL 10X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4125DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.282	3	5	28	rVB	5793149	13718761	100.00%	28.206%
2	1.537	29	31	35	rVB	34015	42371	0.31%	0.087%
3	1.685	43	46	55	rBV	252735	478520	3.49%	0.984%
4	2.079	83	86	93	rVB	188330	341239	2.49%	0.702%
5	2.561	133	135	140	rVB2	17226	32198	0.23%	0.066%
6	2.777	155	157	159	rBV3	4769	5539	0.04%	0.011%
7	2.896	164	169	180	rBV	668042	1588960	11.58%	3.267%
8	3.073	185	187	192	rVB5	6165	15908	0.12%	0.033%
9	3.181	196	198	203	rVB5	8218	18964	0.14%	0.039%
10	3.329	211	213	216	rVB4	4022	5608	0.04%	0.012%
11	3.417	220	222	225	rVB4	3521	4987	0.04%	0.010%
12	3.565	231	237	241	rBV	19808	54715	0.40%	0.112%
13	3.693	248	250	255	rVB6	2272	4820	0.04%	0.010%
14	3.880	267	269	271	rVB3	4539	5532	0.04%	0.011%
15	3.949	273	276	277	rBV3	4727	8089	0.06%	0.017%
16	4.313	310	313	316	rBV5	3682	5532	0.04%	0.011%
17	4.431	320	325	327	rBV5	3631	8026	0.06%	0.017%
18	4.520	333	334	338	rVB4	3556	4682	0.03%	0.010%
19	4.598	340	342	345	rBV4	3743	5866	0.04%	0.012%
20	4.657	345	348	350	rBV4	2998	6566	0.05%	0.013%
21	4.756	356	358	360	rVB3	4061	5331	0.04%	0.011%
22	4.785	360	361	364	rBV3	4215	6740	0.05%	0.014%
23	4.844	364	367	369	rVB3	3473	6501	0.05%	0.013%
24	5.140	395	397	399	rVB3	4957	5137	0.04%	0.011%
25	5.268	409	410	413	rVB3	3393	4455	0.03%	0.009%
26	5.317	413	415	418	rBV3	3425	7183	0.05%	0.015%
27	5.425	424	426	431	rVB5	5217	9756	0.07%	0.020%
28	5.632	441	447	454	rBV	371085	1262427	9.20%	2.596%
29	5.976	481	482	486	rVB3	6055	7567	0.06%	0.016%
30	6.252	508	510	512	rBV2	4596	7241	0.05%	0.015%
31	6.340	512	519	531	rBV	696011	2250871	16.41%	4.628%
32	6.606	541	546	553	rVB3	19250	60883	0.44%	0.125%
33	6.793	563	565	569	rBV5	4239	9504	0.07%	0.020%
34	7.019	587	588	590	rBV	4464	5477	0.04%	0.011%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049341.D
Acq On : 11 May 2016 15:17
Operator : FY/SY
Sample : H2943-05DL 10X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4125DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.138	593	600	604	rBV	1187417	3240861	23.62%	6.663%
36	7.197	604	606	619	rVB	448231	975976	7.11%	2.007%
37	7.630	646	650	651	rBV3	3613	6465	0.05%	0.013%
38	7.708	657	658	660	rBV	4259	5419	0.04%	0.011%
39	7.905	670	678	684	rBV	1152049	2611073	19.03%	5.368%
40	8.102	696	698	701	rVB3	3092	4861	0.04%	0.010%
41	8.191	701	707	714	rVB5	21454	53364	0.39%	0.110%
42	8.338	719	722	723	rVB3	4617	5471	0.04%	0.011%
43	8.407	723	729	738	rBV	959123	2050212	14.94%	4.215%
44	8.506	738	739	744	rVV4	6291	14571	0.11%	0.030%
45	8.594	746	748	753	rVB4	4403	8854	0.06%	0.018%
46	8.752	763	764	769	rVB5	3357	5967	0.04%	0.012%
47	8.870	772	776	780	rBV5	10797	21072	0.15%	0.043%
48	9.037	790	793	795	rBV4	2845	5312	0.04%	0.011%
49	9.214	807	811	812	rVV3	2613	4553	0.03%	0.009%
50	9.263	812	816	817	rVV3	2204	5063	0.04%	0.010%
51	9.342	819	824	832	rVV	530908	999923	7.29%	2.056%
52	9.441	832	834	835	rVV2	6466	9410	0.07%	0.019%
53	9.470	835	837	838	rVV2	5663	8324	0.06%	0.017%
54	9.490	838	839	845	rVV6	6469	18169	0.13%	0.037%
55	9.559	845	846	848	rVV2	5685	6076	0.04%	0.012%
56	9.667	853	857	863	rVV	1705088	3104202	22.63%	6.382%
57	9.746	863	865	871	rVV2	30336	67285	0.49%	0.138%
58	9.913	881	882	886	rVB4	3723	4711	0.03%	0.010%
59	9.992	886	890	897	rBV	325767	557855	4.07%	1.147%
60	10.090	897	900	901	rVV3	7939	13137	0.10%	0.027%
61	10.129	901	904	905	rVV2	9758	17432	0.13%	0.036%
62	10.198	905	911	917	rVV	91349	218612	1.59%	0.449%
63	10.297	917	921	928	rVV	2234083	3852628	28.08%	7.921%
64	10.405	928	932	943	rVV	1694249	2961313	21.59%	6.088%
65	10.582	947	950	958	rVV3	20913	61662	0.45%	0.127%
66	10.681	958	960	962	rVB3	4795	5946	0.04%	0.012%
67	10.730	962	965	968	rBV3	2454	5335	0.04%	0.011%
68	10.858	976	978	981	rBV3	4635	5678	0.04%	0.012%
69	11.005	990	993	994	rBV2	2868	5138	0.04%	0.011%
70	11.192	1008	1012	1023	rBV	1467218	2484160	18.11%	5.107%
71	11.320	1023	1025	1030	rVB3	10537	22920	0.17%	0.047%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049341.D
Acq On : 11 May 2016 15:17
Operator : FY/SY
Sample : H2943-05DL 10X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4125DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.448	1032	1038	1042	rBV5	8791	26176	0.19%	0.054%
73	11.606	1050	1054	1055	rVB3	2700	5359	0.04%	0.011%
74	11.655	1057	1059	1062	rVB4	3827	6036	0.04%	0.012%
75	11.832	1073	1077	1080	rBV6	11000	22112	0.16%	0.045%
76	12.108	1101	1105	1108	rVB5	3847	9547	0.07%	0.020%
77	12.177	1108	1112	1113	rBV4	7744	15124	0.11%	0.031%
78	12.246	1117	1119	1120	rVB2	6163	4916	0.04%	0.010%
79	12.383	1125	1133	1135	rBV	82017	159472	1.16%	0.328%
80	12.442	1135	1139	1144	rVB	408403	717870	5.23%	1.476%
81	12.620	1153	1157	1158	rBV4	4109	5848	0.04%	0.012%
82	12.639	1158	1159	1161	rVB2	4702	4794	0.03%	0.010%
83	12.688	1161	1164	1166	rBV3	4407	7108	0.05%	0.015%
84	12.718	1166	1167	1171	rBV4	5753	8607	0.06%	0.018%
85	12.885	1179	1184	1185	rBV5	3589	5292	0.04%	0.011%
86	13.033	1198	1199	1201	rBV2	4785	7312	0.05%	0.015%
87	13.230	1217	1219	1220	rBV2	4675	6654	0.05%	0.014%
88	13.328	1225	1229	1233	rBV7	5502	17393	0.13%	0.036%
89	13.407	1233	1237	1244	rBV	1221423	1991194	14.51%	4.094%
90	13.525	1247	1249	1252	rVB4	4579	4782	0.03%	0.010%
91	13.732	1266	1270	1276	rBV	1111837	1876858	13.68%	3.859%
92	13.869	1283	1284	1287	rVB3	5646	5127	0.04%	0.011%
93	13.919	1287	1289	1291	rBV3	4322	5957	0.04%	0.012%
94	14.007	1294	1298	1303	rVV2	54099	112097	0.82%	0.230%
95	14.293	1325	1327	1328	rBV2	8051	7791	0.06%	0.016%
96	14.401	1336	1338	1340	rBV3	5182	7410	0.05%	0.015%
97	14.509	1348	1349	1351	rBV2	5266	7387	0.05%	0.015%
98	14.578	1354	1356	1358	rBV2	5731	8259	0.06%	0.017%
99	15.159	1413	1415	1418	rBV4	8848	13592	0.10%	0.028%
100	15.582	1454	1458	1463	rBV	57098	112842	0.82%	0.232%

Sum of corrected areas: 48637882

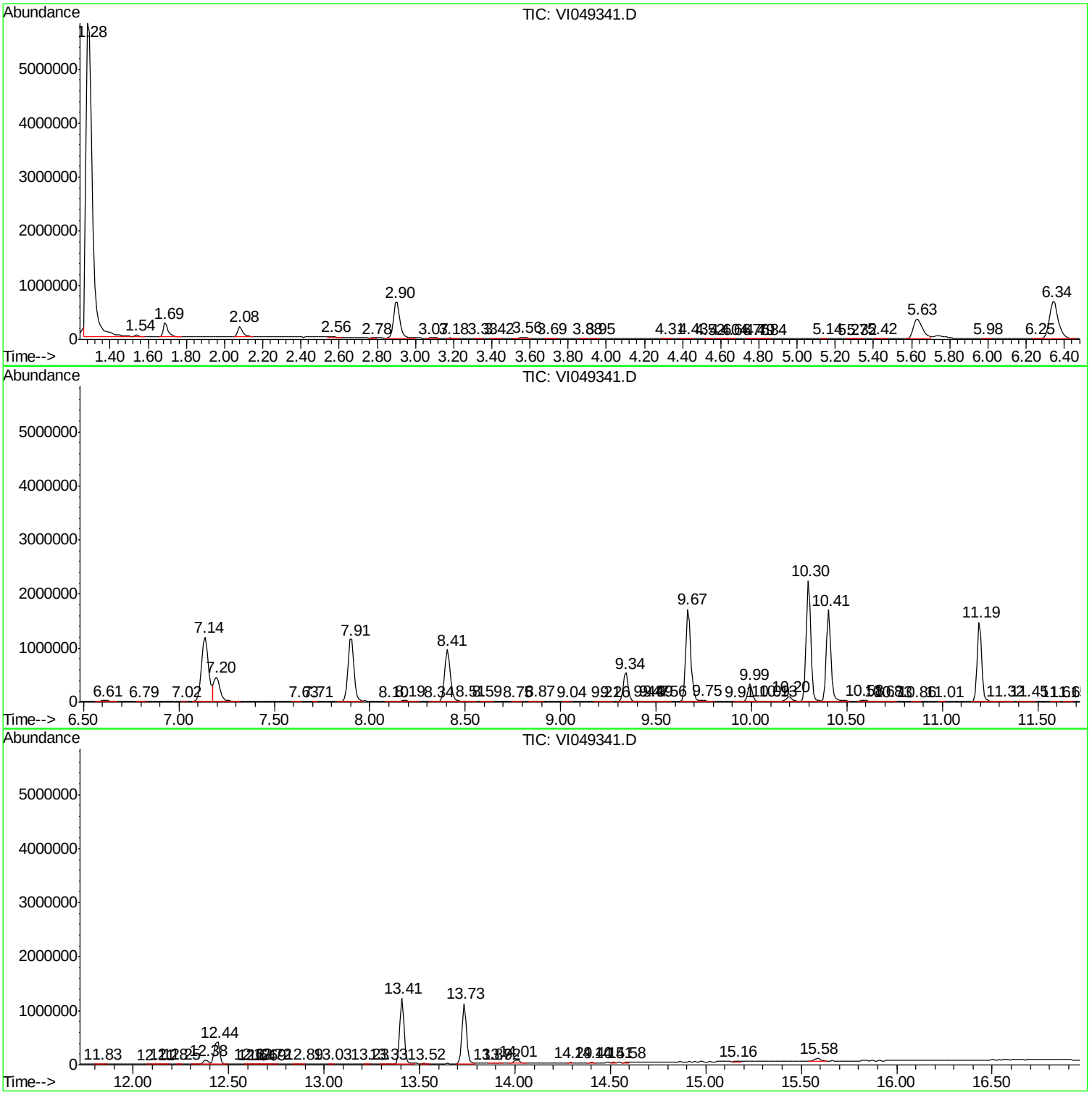
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049341.D
Acq On : 11 May 2016 15:17
Operator : FY/SY
Sample : H2943-05DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4125DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049341.D
Acq On : 11 May 2016 15:17
Operator : FY/SY
Sample : H2943-05DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4125DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049341.D
Acq On : 11 May 2016 15:17
Operator : FY/SY
Sample : H2943-05DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4125DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

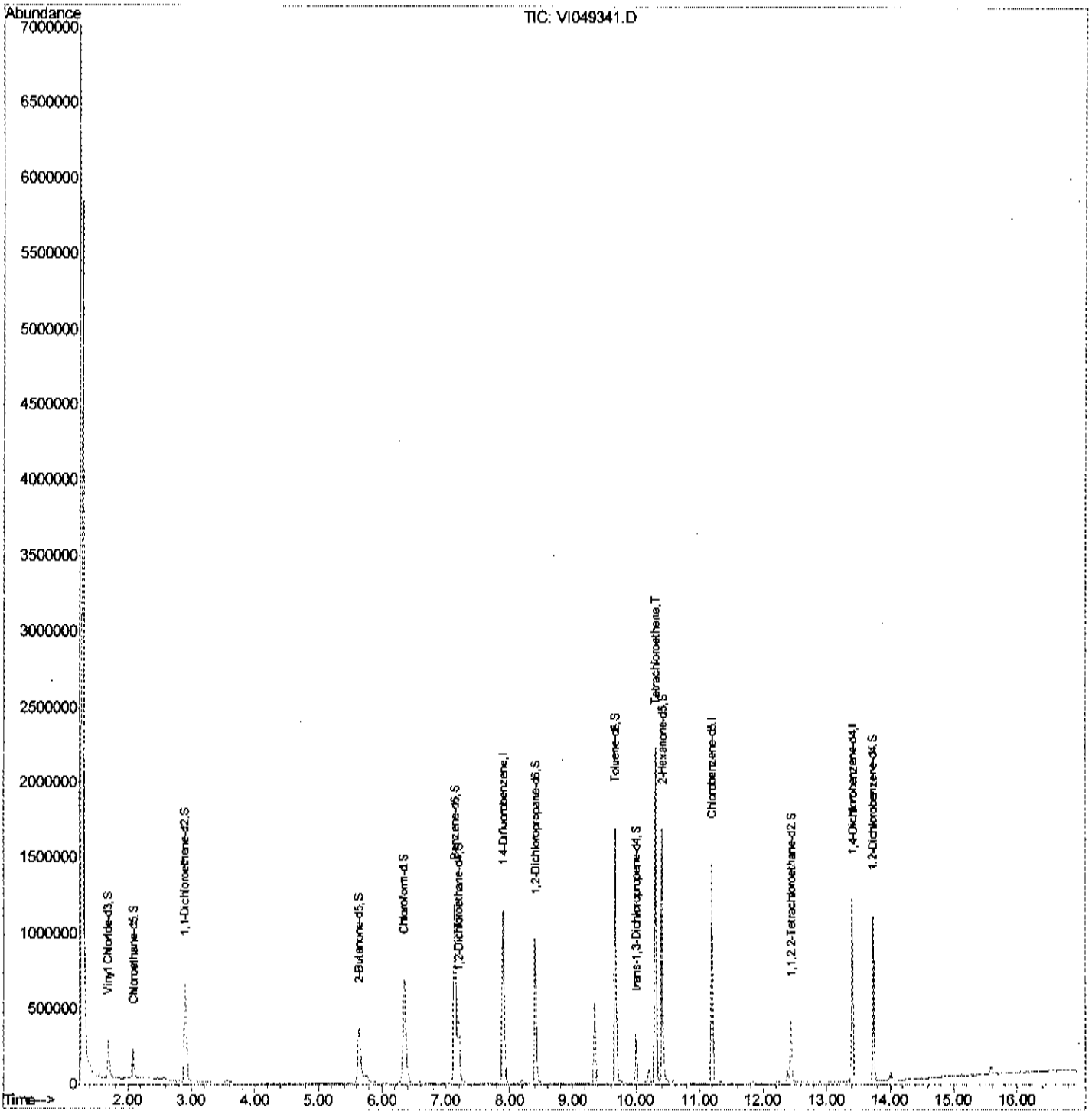
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_1\Data\VI051116\
Data File : VI049341.D
Acq On : 11 May 2016 15:17
Operator : FY/SY
Sample : H2943-05DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 12 06:58:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4125DL

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:35 PM



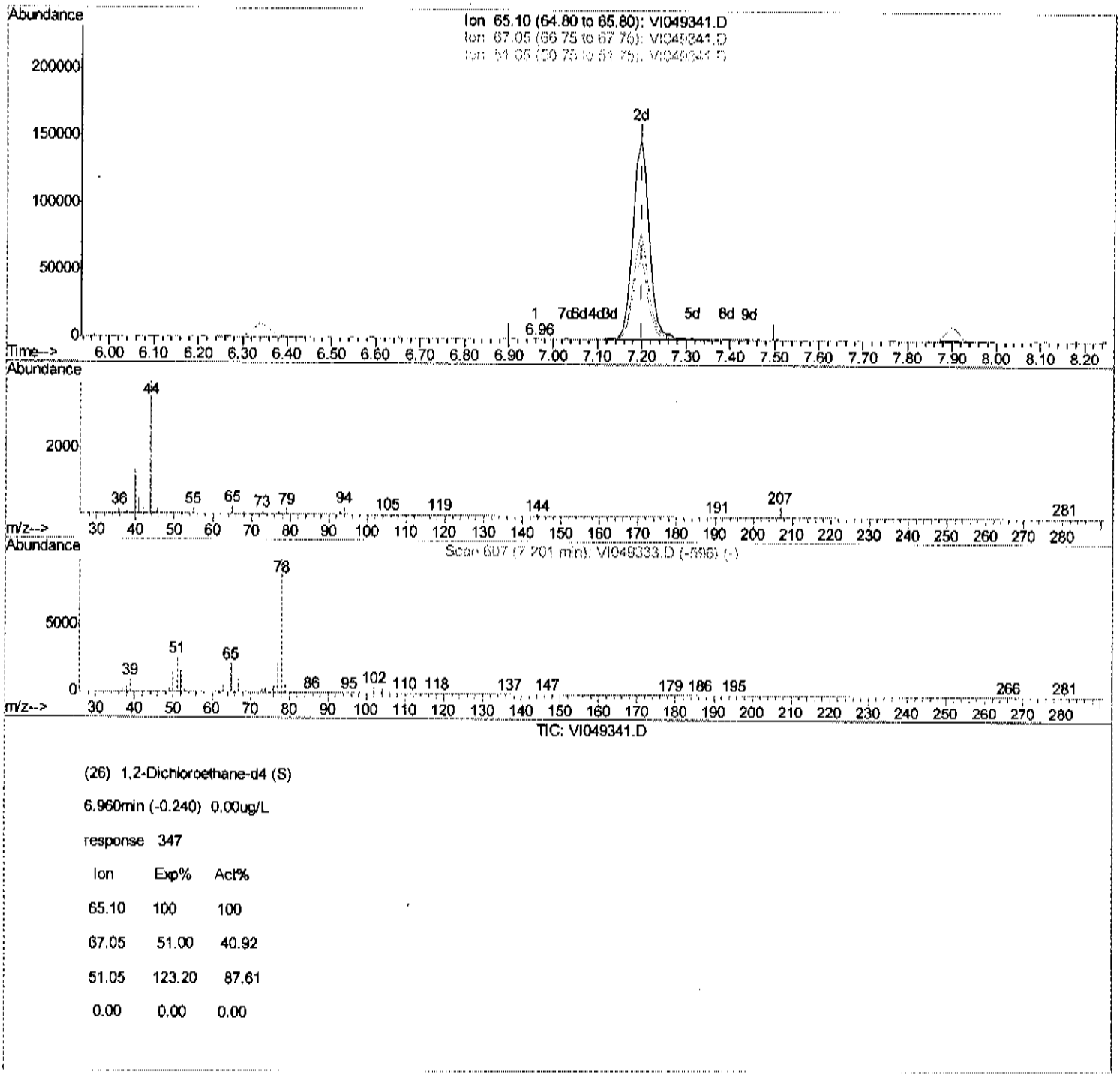
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049341.D
Acq On : 11 May 2016 15:17
Operator : FY/SY
Sample : H2943-05DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 12 06:05:04 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4125DL

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:35 PM



(26) 1,2-Dichloroethane-d4 (S)

6.960min (-0.240) 0.00ug/L

response 347

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	40.92
51.05	123.20	87.61
0.00	0.00	0.00

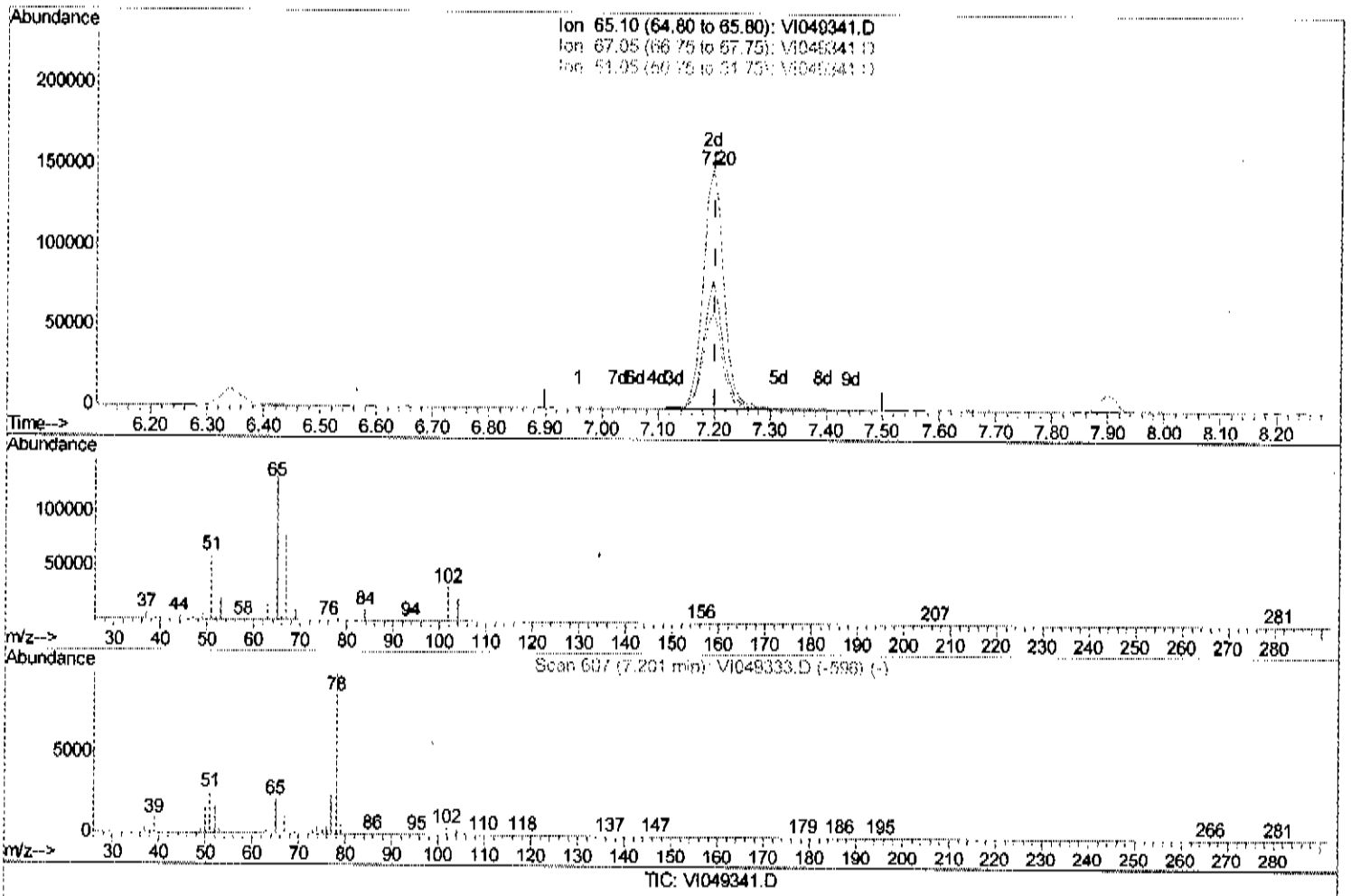
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049341.D
Acq On : 11 May 2016 15:17
Operator : FY/SY
Sample : H2943-05DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 12 06:05:04 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4125DL

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:35 PM



TIC: VI049341.D

(26) 1,2-Dichloroethane-d4 (S)

7.197min (-0.004) 5.61ug/L m

response 392924

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.04#
51.05	123.20	0.08#
0.00	0.00	0.00

FY 5/16/2016

Quantitation Report (QT Reviewed)

Instrument :
MSVOA_I
ClientSampleId :
H4125DL

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:35 PM

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049341.D
Acq On : 11 May 2016 15:17
Operator : FY/SY
Sample : H2943-05DL 10X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 12 06:58:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1092648	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	726548	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	274968	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	292355	4.35	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery =	87.00%		
7) Chloroethane-d5	2.08	69	192057	5.15	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery =	103.00%		
11) 1,1-Dichloroethene-d2	2.90	63	544673	3.44	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery =	68.80%		
20) 2-Butanone-d5	5.63	46	861689	59.17	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery =	118.34%		
24) Chloroform-d	6.34	84	878708	5.13	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery =	102.60%		
26) 1,2-Dichloroethane-d4	7.20	65	392924m	5.61	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery =	112.20%		
32) Benzene-d6	7.14	84	1534761	5.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery =	108.40%		
36) 1,2-Dichloropropane-d6	8.41	67	429588	5.40	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery =	108.00%		
41) Toluene-d8	9.67	98	1070312	5.13	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery =	102.60%		
43) trans-1,3-Dichloropropene-	9.99	79	150831	4.81	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery =	96.20%		
46) 2-Hexanone-d5	10.41	43	561449	56.77	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery =	113.54%		
57) 1,1,2,2-Tetrachloroethane-	12.44	84	190242	5.26	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery =	105.20%		
63) 1,2-Dichlorobenzene-d4	13.73	152	256496	5.32	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery =	106.40%		
Target Compounds						Qvalue
47) Tetrachloroethene	10.30	164	465767	8.21	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FY 5/16/2016

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4127

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049311.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.24	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.6	
71-55-6	1,1,1-Trichloroethane	0.22	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.39	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4127

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049311.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.25	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	15	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4127

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049311.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4127

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-18
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049311.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

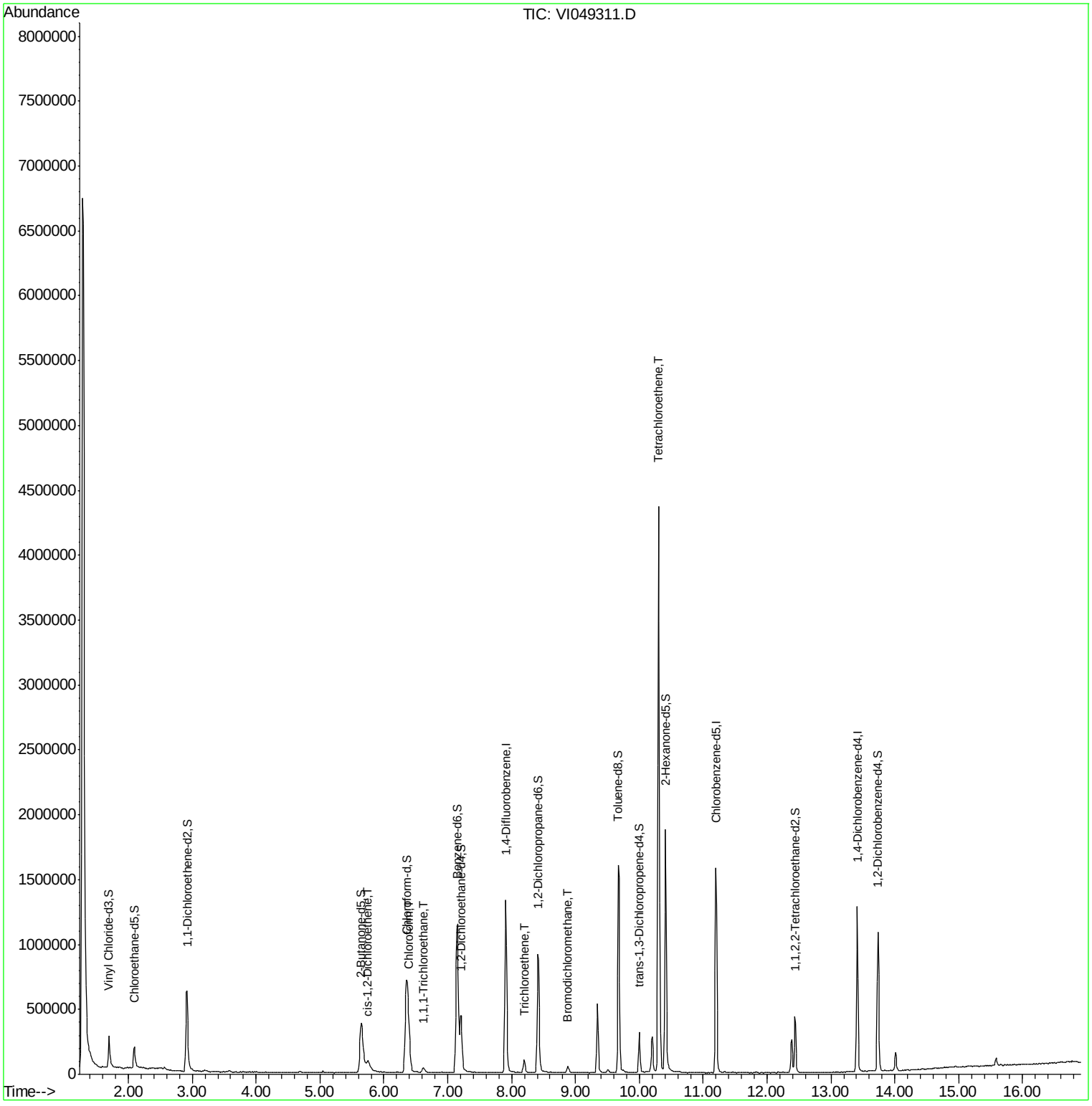
EPA-designated Registry Number.

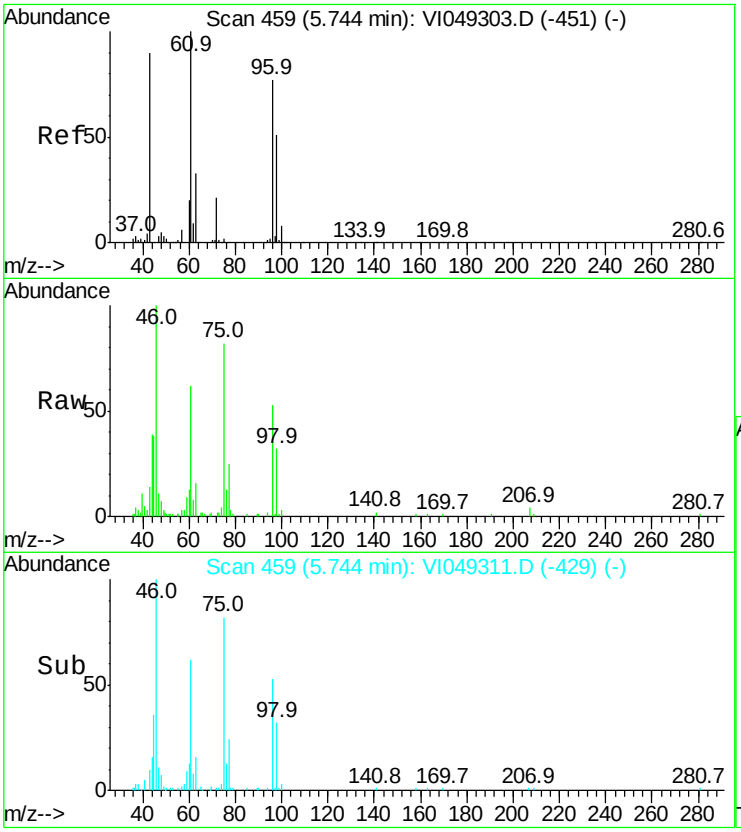
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049311.D
Acq On : 9 May 2016 23:03
Operator : FY/SY
Sample : H2943-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4127

Quant Time: May 10 06:53:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration



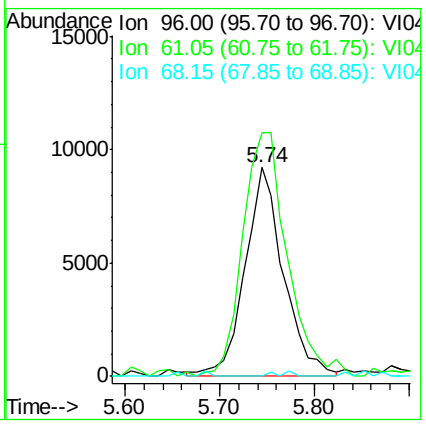


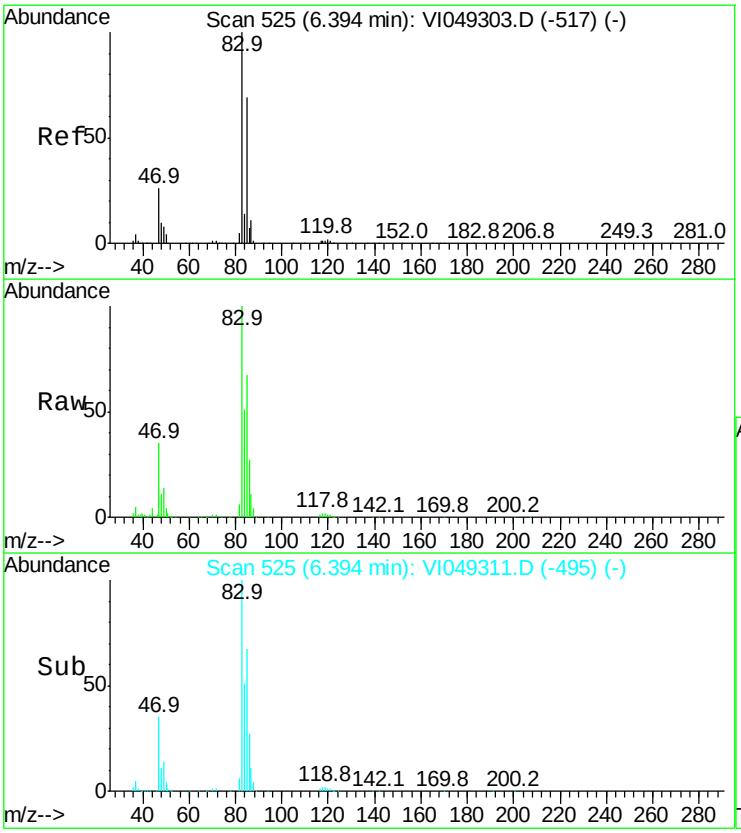
#22
cis-1,2-Dichloroethene
Concen: 0.24 ug/L
RT: 5.74 min Scan# 459
Delta R.T. -0.00 min
Lab File: VI049311.D
Acq: 9 May 2016 23:03

Instrument :
MSVOA_I
ClientSampleId :
H4127

Tgt Ion: 96 Resp: 26040

Ion	Ratio	Lower	Upper
96	100		
61	116.8	82.1	152.5
68	0.0	0.0	0.0

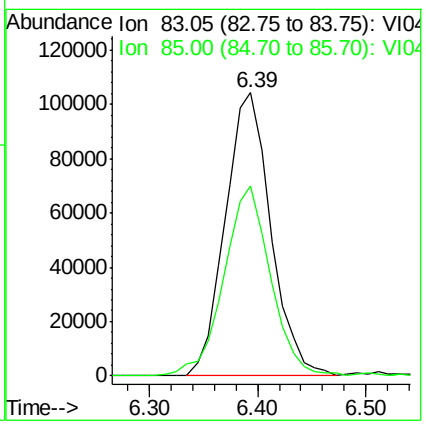


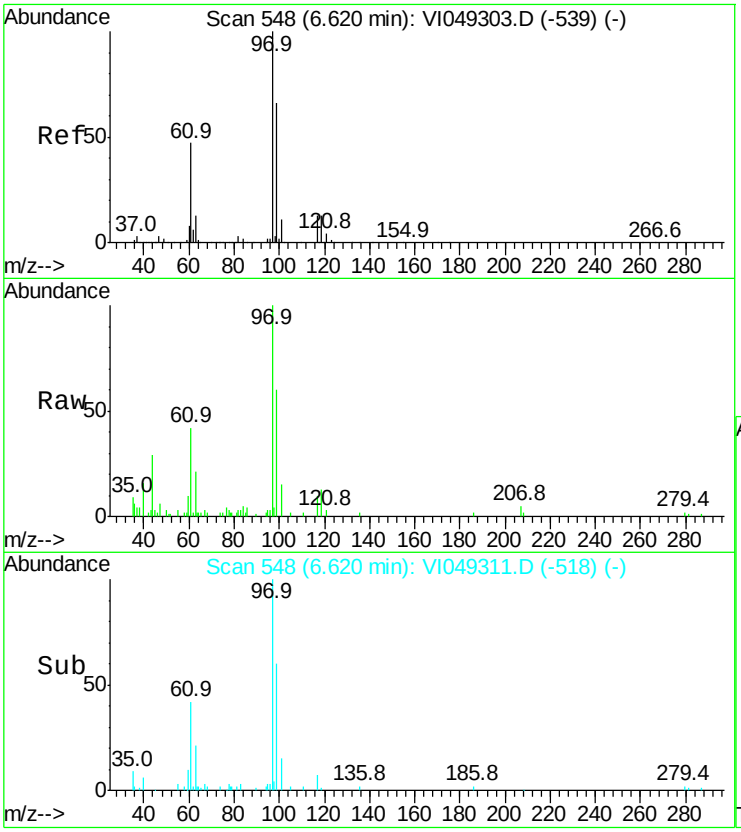


#25
Chloroform
Concen: 1.60 ug/L
RT: 6.39 min Scan# 525
Delta R.T. -0.00 min
Lab File: VI049311.D
Acq: 9 May 2016 23:03

Tgt Ion: 83 Resp: 304138

Ion	Ratio	Lower	Upper
83	100		
85	66.9	47.3	87.8



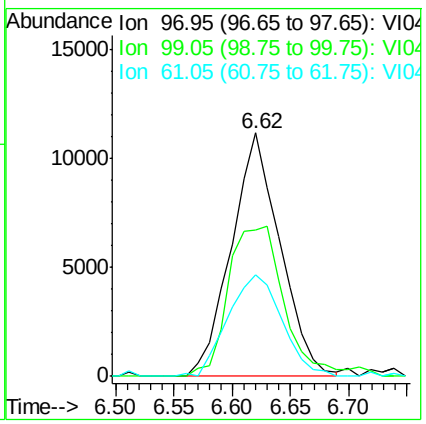


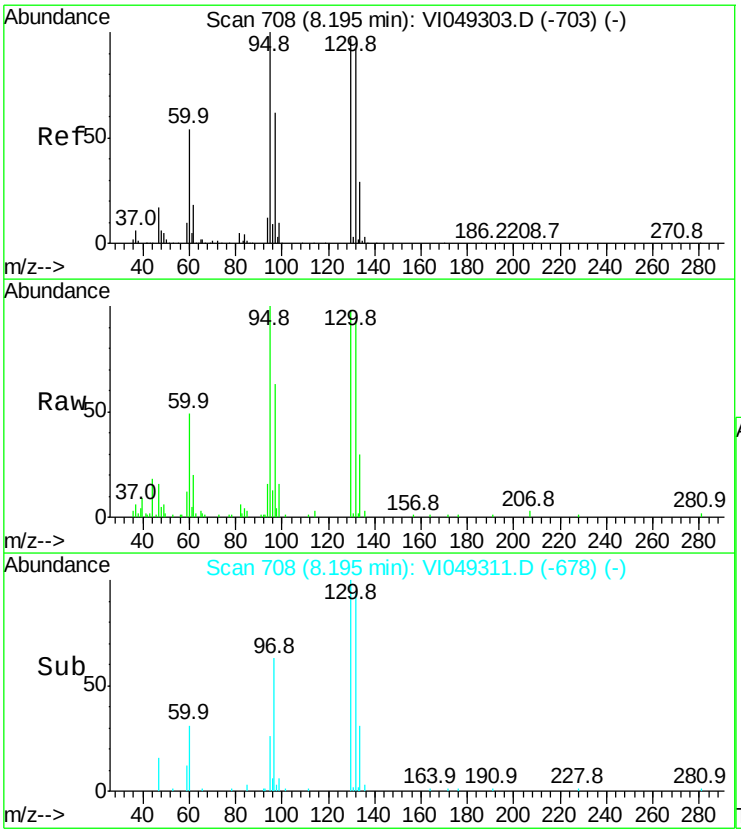
#29
1,1,1-Trichloroethane
Concen: 0.22 ug/L
RT: 6.62 min Scan# 548
Delta R.T. -0.00 min
Lab File: VI049311.D
Acq: 9 May 2016 23:03

Instrument : MSVOA_I
ClientSampleId : H4127

Tgt Ion: 97 Resp: 32379

Ion	Ratio	Lower	Upper
97	100		
99	69.2	51.1	76.7
61	45.6	33.3	49.9

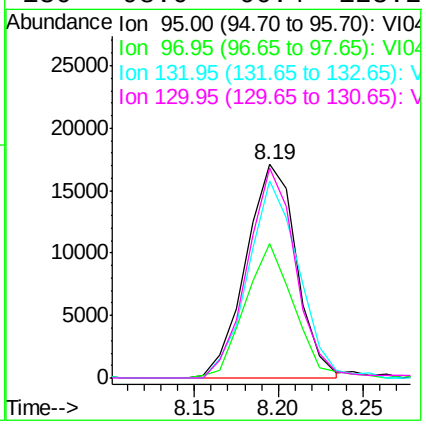


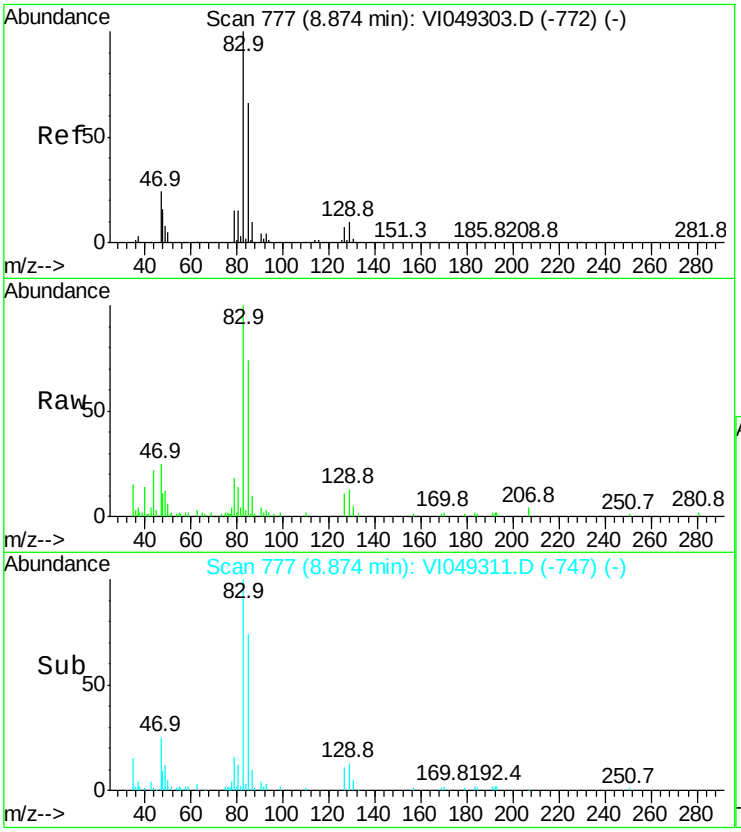


#34
Trichloroethene
Concen: 0.39 ug/L
RT: 8.19 min Scan# 708
Delta R.T. -0.00 min
Lab File: VI049311.D
Acq: 9 May 2016 23:03

Tgt Ion: 95 Resp: 35647

Ion	Ratio	Lower	Upper
95	100		
97	62.9	45.8	85.2
132	92.6	63.9	118.7
130	98.0	66.4	123.2



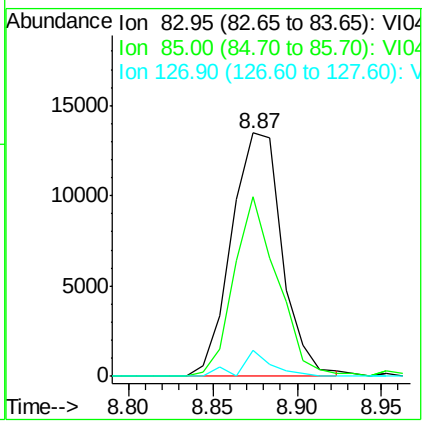


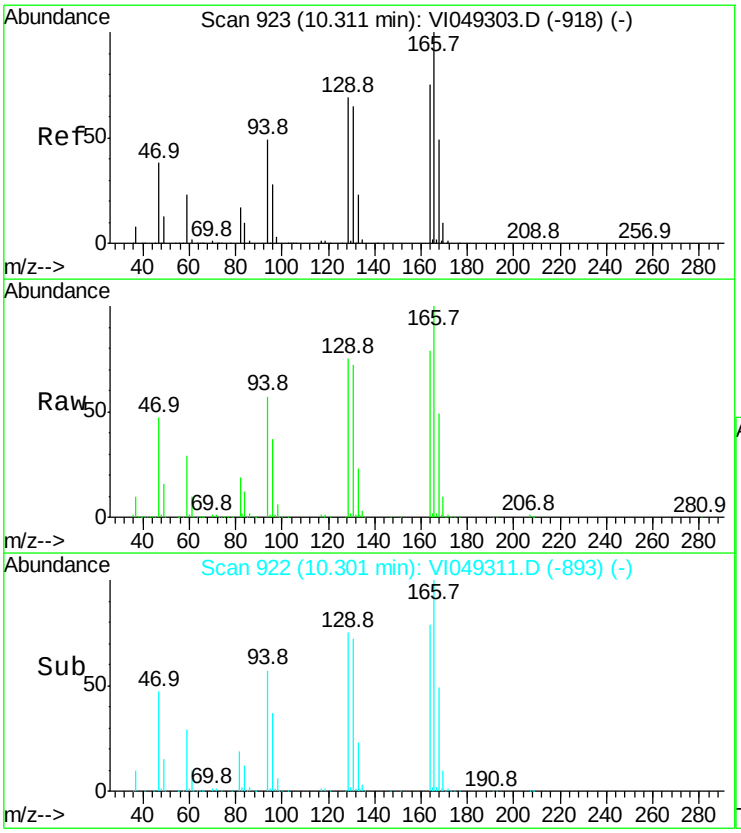
#38
Bromodichloromethane
Concen: 0.25 ug/L
RT: 8.87 min Scan# 777
Delta R.T. -0.00 min
Lab File: VI049311.D
Acq: 9 May 2016 23:03

Instrument : MSVOA_I
ClientSampleId : H4127

Tgt Ion: 83 Resp: 28091

Ion	Ratio	Lower	Upper
83	100		
85	73.9	44.7	83.1
127	10.7	6.6	9.8#

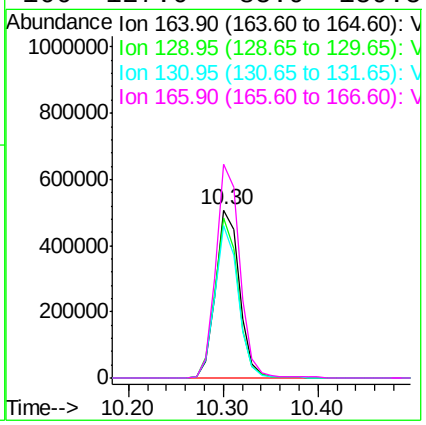




#47
Tetrachloroethene
Concen: 14.97 ug/L
RT: 10.30 min Scan# 922
Delta R.T. -0.01 min
Lab File: VI049311.D
Acq: 9 May 2016 23:03

Tgt Ion:164 Resp: 891347

Ion	Ratio	Lower	Upper
164	100		
129	95.5	62.1	115.3
131	90.9	60.6	112.6
166	127.0	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049311.D
Acq On : 9 May 2016 23:03
Operator : FY/SY
Sample : H2943-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4127

Quant Time: May 10 06:53:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1184931	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	763081	5.00	ug/L	-0.01
59) 1,4-Dichlorobenzene-d4	13.41	152	284720	5.00	ug/L	-0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	292864	4.01	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 80.20%			
7) Chloroethane-d5	2.09	69	197688	4.89	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 97.80%			
11) 1,1-Dichloroethene-d2	2.91	63	520267	3.03	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 60.60%			
20) 2-Butanone-d5	5.65	46	915292	57.95	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 115.90%			
24) Chloroform-d	6.35	84	868296	4.68	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.60%			
26) 1,2-Dichloroethane-d4	7.21	65	393479	5.18	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.60%			
32) Benzene-d6	7.15	84	1510350	5.08	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.60%			
36) 1,2-Dichloropropane-d6	8.41	67	436448	5.22	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.40%			
41) Toluene-d8	9.67	98	1013581	4.62	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.40%			
43) trans-1,3-Dichloropropene-	10.00	79	149851	4.55	ug/L	-0.01
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.00%			
46) 2-Hexanone-d5	10.41	63	605701	58.31	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 116.62%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	193817	5.10	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 120		Recovery = 102.00%			
63) 1,2-Dichlorobenzene-d4	13.74	152	243495	4.88	ug/L	-0.01
Spiked Amount 5.000	Range 80 - 120		Recovery = 97.60%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.74	96	26040	0.24	ug/L	100
25) Chloroform	6.39	83	304138	1.60	ug/L	99
29) 1,1,1-Trichloroethane	6.62	97	32379	0.22	ug/L	93
34) Trichloroethene	8.19	95	35647	0.39	ug/L	97
38) Bromodichloromethane	8.87	83	28091	0.25	ug/L #	88
47) Tetrachloroethene	10.30	164	891347	14.97	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049311.D
Acq On : 9 May 2016 23:03
Operator : FY/SY
Sample : H2943-18
Misc : 25mL/MSVOA I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4127

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	3	6	32	rVB	6693507	18822771	100.00%	31.353%
2	1.591	35	37	38	rBV	9531	8805	0.05%	0.015%
3	1.689	44	47	58	rVB	244785	451379	2.40%	0.752%
4	2.093	84	88	97	rBV	162798	352694	1.87%	0.587%
5	2.358	114	115	118	rBV3	7402	15779	0.08%	0.026%
6	2.565	133	136	144	rVB2	22264	62290	0.33%	0.104%
7	2.703	148	150	153	rVB4	5715	9468	0.05%	0.016%
8	2.919	167	172	178	rBV	618813	1461167	7.76%	2.434%
9	3.087	187	189	193	rVB5	6734	13156	0.07%	0.022%
10	3.195	197	200	207	rVB4	11648	33273	0.18%	0.055%
11	3.313	211	212	215	rBV3	3354	4826	0.03%	0.008%
12	3.392	217	220	224	rVB6	6079	13017	0.07%	0.022%
13	3.579	235	239	242	rBV4	10174	21352	0.11%	0.036%
14	3.746	254	256	258	rVB2	4459	5078	0.03%	0.008%
15	3.805	258	262	263	rBV3	3911	7228	0.04%	0.012%
16	4.002	281	282	286	rVB3	5372	8462	0.04%	0.014%
17	4.150	296	297	299	rBV2	5014	6347	0.03%	0.011%
18	4.455	326	328	331	rVB4	3224	5211	0.03%	0.009%
19	4.553	335	338	340	rBV3	3900	8755	0.05%	0.015%
20	4.691	347	352	355	rBV6	4702	13641	0.07%	0.023%
21	5.045	386	388	389	rBV	18689	11422	0.06%	0.019%
22	5.232	406	407	409	rBV2	3216	5502	0.03%	0.009%
23	5.528	435	437	439	rBV2	3623	5037	0.03%	0.008%
24	5.646	441	449	457	rBV	384077	1422302	7.56%	2.369%
25	5.744	457	459	471	rVB3	80803	281387	1.49%	0.469%
26	5.990	482	484	487	rVV3	3229	6064	0.03%	0.010%
27	6.197	501	505	506	rBV4	4916	10754	0.06%	0.018%
28	6.354	514	521	532	rVV2	717446	2756534	14.64%	4.591%
29	6.620	543	548	554	rBV	34872	110223	0.59%	0.184%
30	6.709	554	557	559	rVV4	2604	5233	0.03%	0.009%
31	6.866	571	573	576	rBV3	3746	8244	0.04%	0.014%
32	6.905	576	577	580	rVB3	6323	5657	0.03%	0.009%
33	6.994	583	586	588	rVB4	4774	7635	0.04%	0.013%
34	7.151	595	602	605	rBV	1150062	3115154	16.55%	5.189%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049311.D
Acq On : 9 May 2016 23:03
Operator : FY/SY
Sample : H2943-18
Misc : 25mL/MSVOA I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4127

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.201	605	607	624	rVV	435245	1138844	6.05%	1.897%
36	7.476	633	635	639	rVB4	4078	7578	0.04%	0.013%
37	7.575	641	645	647	rBV4	2619	6863	0.04%	0.011%
38	7.683	654	656	657	rBV2	3341	5004	0.03%	0.008%
39	7.732	659	661	664	rVB3	3864	5920	0.03%	0.010%
40	7.791	664	667	670	rBV5	3731	7636	0.04%	0.013%
41	7.850	670	673	674	rBV3	2656	5004	0.03%	0.008%
42	7.909	674	679	687	rBV	1331853	2868621	15.24%	4.778%
43	8.008	687	689	691	rVB3	4950	5418	0.03%	0.009%
44	8.195	703	708	713	rVV	97137	211245	1.12%	0.352%
45	8.264	713	715	716	rVB2	4643	4991	0.03%	0.008%
46	8.313	716	720	723	rBV5	3660	8163	0.04%	0.014%
47	8.411	725	730	738	rBV	915364	2095428	11.13%	3.490%
48	8.529	741	742	749	rVV7	10615	19643	0.10%	0.033%
49	8.608	749	750	754	rVB3	4683	6888	0.04%	0.011%
50	8.726	760	762	764	rVB3	4093	5605	0.03%	0.009%
51	8.756	764	765	768	rVB3	4040	4809	0.03%	0.008%
52	8.825	768	772	773	rBV4	2936	5908	0.03%	0.010%
53	8.874	773	777	784	rBV3	47364	110236	0.59%	0.184%
54	9.199	808	810	812	rVB3	3462	5751	0.03%	0.010%
55	9.238	812	814	815	rBV2	4939	6433	0.03%	0.011%
56	9.346	820	825	832	rBV	528258	958703	5.09%	1.597%
57	9.464	832	837	838	rVV5	3592	10083	0.05%	0.017%
58	9.504	838	841	846	rVV2	24725	52335	0.28%	0.087%
59	9.671	854	858	865	rBV	1596939	2966449	15.76%	4.941%
60	9.750	865	866	870	rVV3	21235	33689	0.18%	0.056%
61	9.799	870	871	876	rVV5	4547	9367	0.05%	0.016%
62	9.858	876	877	880	rVB3	4544	5505	0.03%	0.009%
63	9.996	887	891	897	rVV	314011	523344	2.78%	0.872%
64	10.065	897	898	899	rVV	6426	5538	0.03%	0.009%
65	10.114	899	903	906	rVV6	9956	26485	0.14%	0.044%
66	10.203	906	912	918	rVV	279050	605835	3.22%	1.009%
67	10.301	918	922	929	rVV	4364339	7483289	39.76%	12.465%
68	10.409	929	933	945	rVV	1874358	3320458	17.64%	5.531%
69	10.586	949	951	952	rVV2	7881	11272	0.06%	0.019%
70	10.616	952	954	962	rVB6	8877	26030	0.14%	0.043%
71	10.744	965	967	968	rVB2	5602	6354	0.03%	0.011%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049311.D
Acq On : 9 May 2016 23:03
Operator : FY/SY
Sample : H2943-18
Misc : 25mL/MSVOA I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4127

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.197	1009	1013	1025	rBV	1583967	2694843	14.32%	4.489%
73	11.325	1025	1026	1030	rVV4	9915	17406	0.09%	0.029%
74	11.393	1031	1033	1035	rVB2	4011	5491	0.03%	0.009%
75	11.462	1035	1040	1043	rBV7	7056	20161	0.11%	0.034%
76	11.571	1049	1051	1055	rVV4	4326	6111	0.03%	0.010%
77	11.630	1055	1057	1060	rVB3	3705	6236	0.03%	0.010%
78	11.679	1060	1062	1067	rVB5	3196	9628	0.05%	0.016%
79	11.826	1071	1077	1078	rBV5	7736	14072	0.07%	0.023%
80	12.072	1100	1102	1105	rBV4	2965	5180	0.03%	0.009%
81	12.171	1109	1112	1115	rBV4	9770	22321	0.12%	0.037%
82	12.220	1115	1117	1118	rVV2	5767	8186	0.04%	0.014%
83	12.250	1118	1120	1121	rVV2	7515	8471	0.05%	0.014%
84	12.269	1121	1122	1127	rVV4	5018	11983	0.06%	0.020%
85	12.387	1127	1134	1137	rVV	256070	509004	2.70%	0.848%
86	12.437	1137	1139	1146	rVV	435689	725785	3.86%	1.209%
87	12.535	1146	1149	1150	rVV3	3697	5235	0.03%	0.009%
88	12.732	1166	1169	1174	rBV7	2880	8909	0.05%	0.015%
89	12.840	1177	1180	1185	rBV6	3716	10970	0.06%	0.018%
90	13.037	1194	1200	1201	rBV6	5773	15285	0.08%	0.025%
91	13.165	1210	1213	1214	rBV3	4000	5611	0.03%	0.009%
92	13.204	1214	1217	1219	rBV3	5193	7278	0.04%	0.012%
93	13.411	1234	1238	1246	rBV	1272886	2083408	11.07%	3.470%
94	13.588	1254	1256	1257	rBV2	7982	11412	0.06%	0.019%
95	13.736	1267	1271	1277	rBV	1070868	1784777	9.48%	2.973%
96	13.933	1289	1291	1292	rBV2	5038	5562	0.03%	0.009%
97	14.011	1295	1299	1304	rVB	141996	244798	1.30%	0.408%
98	14.287	1321	1327	1328	rBV5	8577	23572	0.13%	0.039%
99	14.415	1338	1340	1341	rBV2	8066	9402	0.05%	0.016%
100	15.586	1456	1459	1463	rVB	58413	97986	0.52%	0.163%

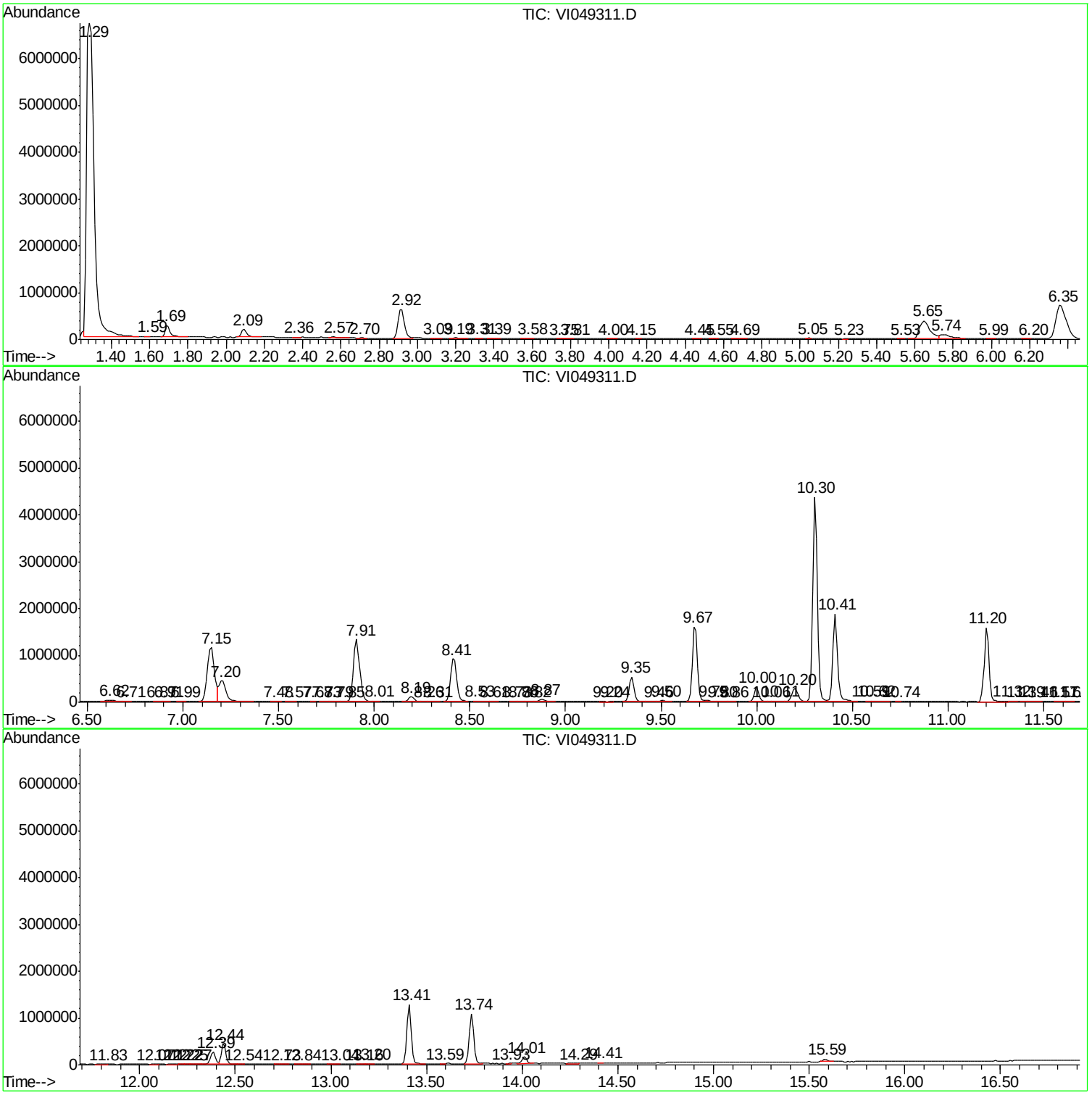
Sum of corrected areas: 60035654

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049311.D
Acq On : 9 May 2016 23:03
Operator : FY/SY
Sample : H2943-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4127

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049311.D
Acq On : 9 May 2016 23:03
Operator : FY/SY
Sample : H2943-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4127

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049311.D
Acq On : 9 May 2016 23:03
Operator : FY/SY
Sample : H2943-18
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 22 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4127

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4130

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049312.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	4.2	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.18	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.0	
71-55-6	1,1,1-Trichloroethane	0.39	J
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.38	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4130

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049312.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.18	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.14	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	31	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4130

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049312.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4130

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-19
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049312.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

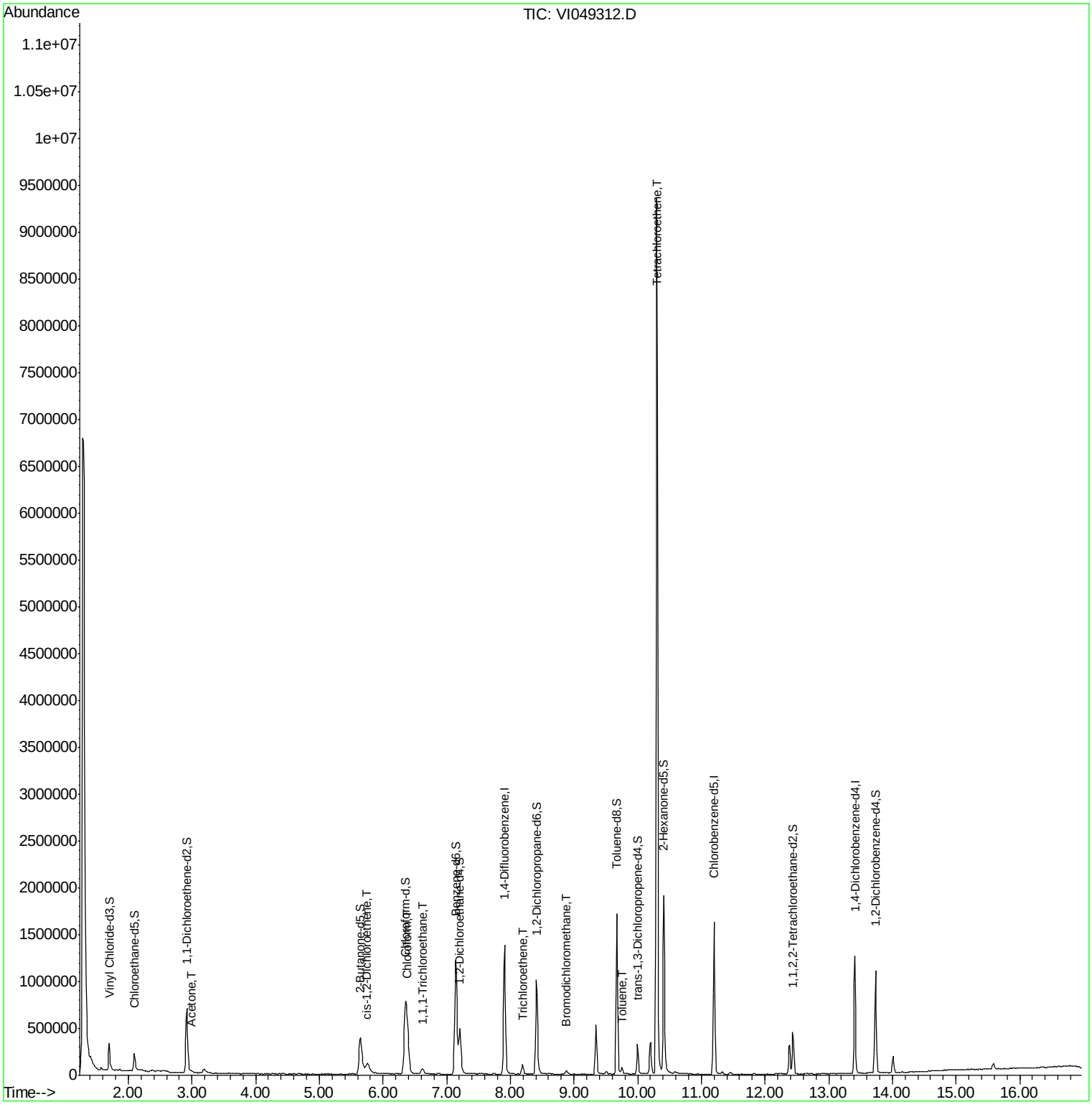
Quantitation Report (LSC Reviewed)

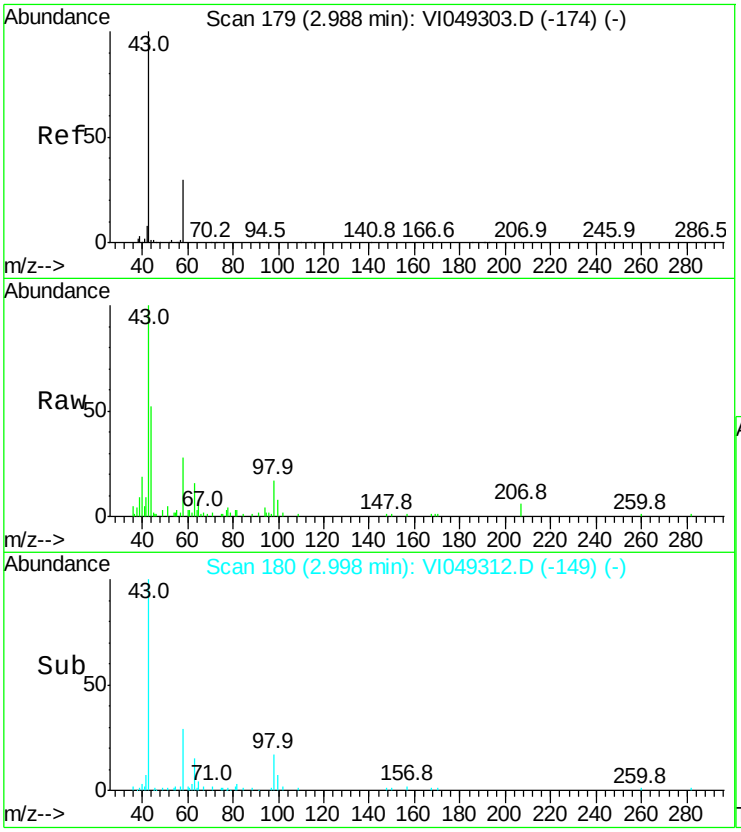
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049312.D
Acq On : 9 May 2016 23:35
Operator : FY/SY
Sample : H2943-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Quant Time: May 10 13:37:23 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4130

Manual Integrations APPROVED
feifei
5/10/2016 1:38:17 PM

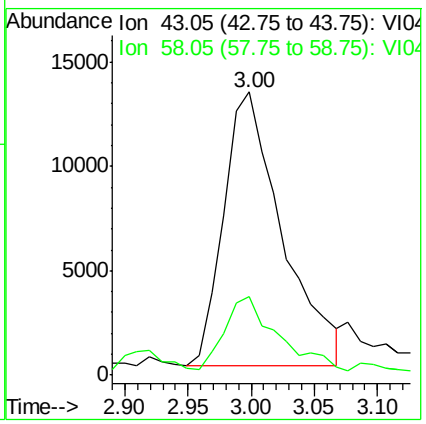




#13
Acetone
Concen: 4.19 ug/L
RT: 3.00 min Scan# 180
Delta R.T. 0.01 min
Lab File: VI049312.D
Acq: 9 May 2016 23:35

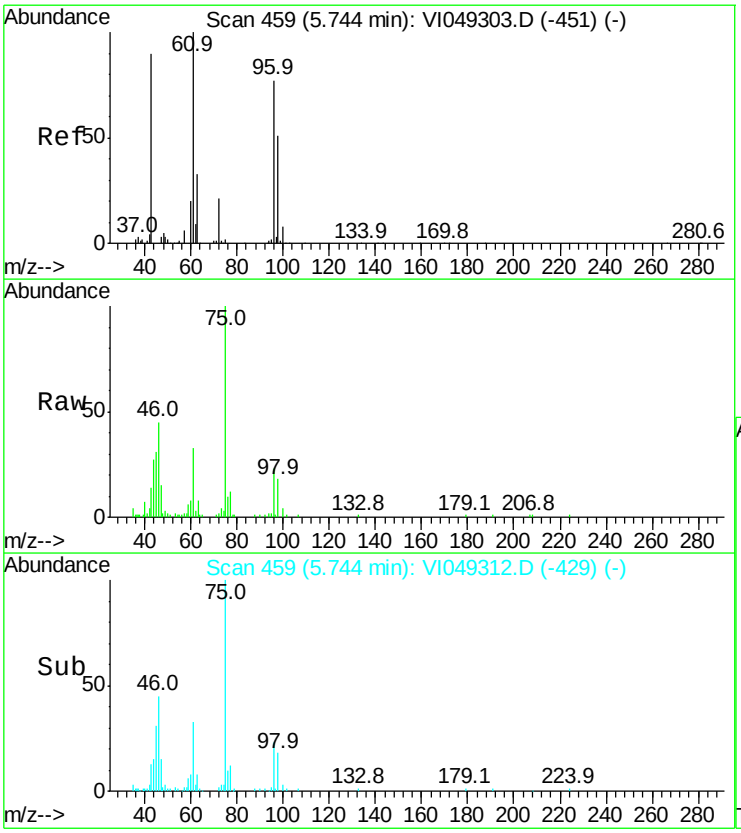
Tgt Ion: 43 Resp: 42289

Ion	Ratio	Lower	Upper
43	100		
58	23.2	0.0	62.0



Instrument :
MSVOA_I
ClientSampleId :
H4130

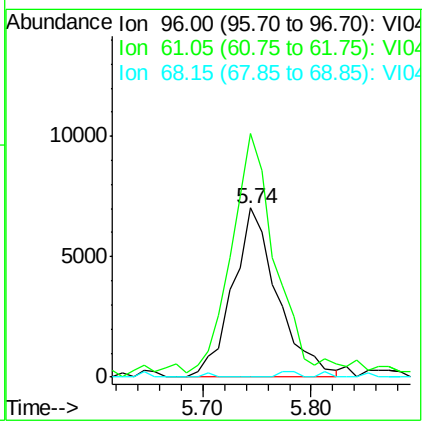
Manual Integrations APPROVED
feifei
5/10/2016 1:38:17 PM

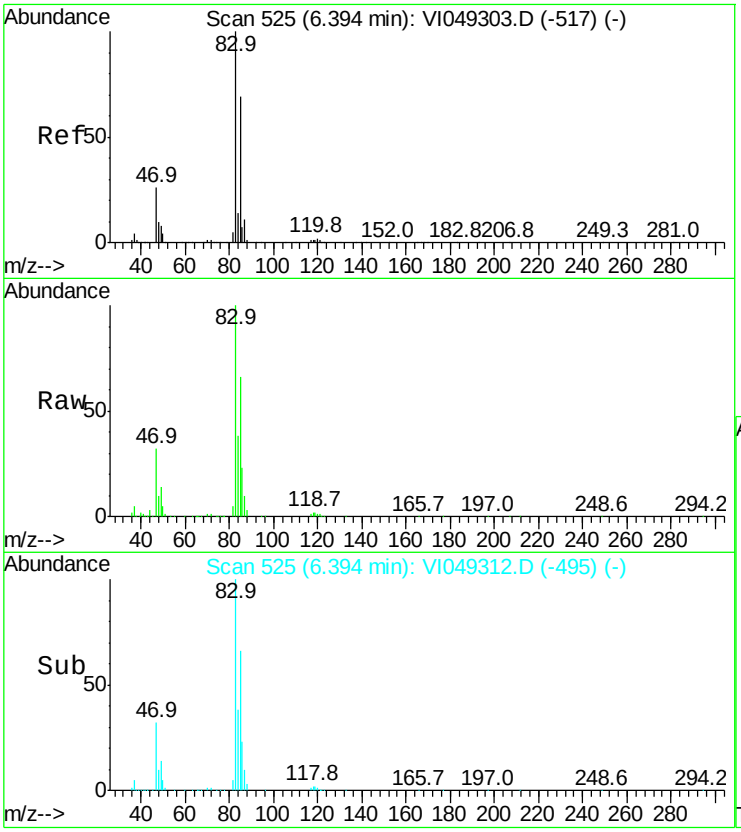


#22
cis-1,2-Dichloroethene
Concen: 0.18 ug/L
RT: 5.74 min Scan# 459
Delta R.T. -0.00 min
Lab File: VI049312.D
Acq: 9 May 2016 23:35

Tgt Ion: 96 Resp: 20284

Ion	Ratio	Lower	Upper
96	100		
61	139.7	82.1	152.5
68	0.0	0.0	0.0

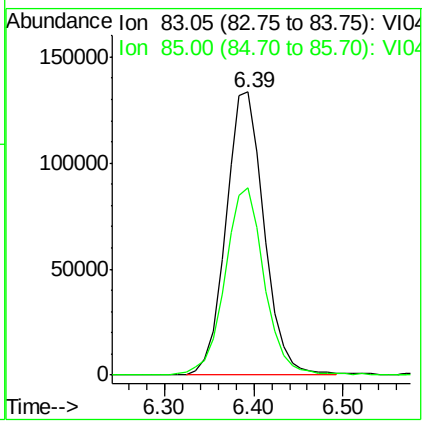




#25
Chloroform
Concen: 2.03 ug/L
RT: 6.39 min Scan# 525
Delta R.T. -0.00 min
Lab File: VI049312.D
Acq: 9 May 2016 23:35

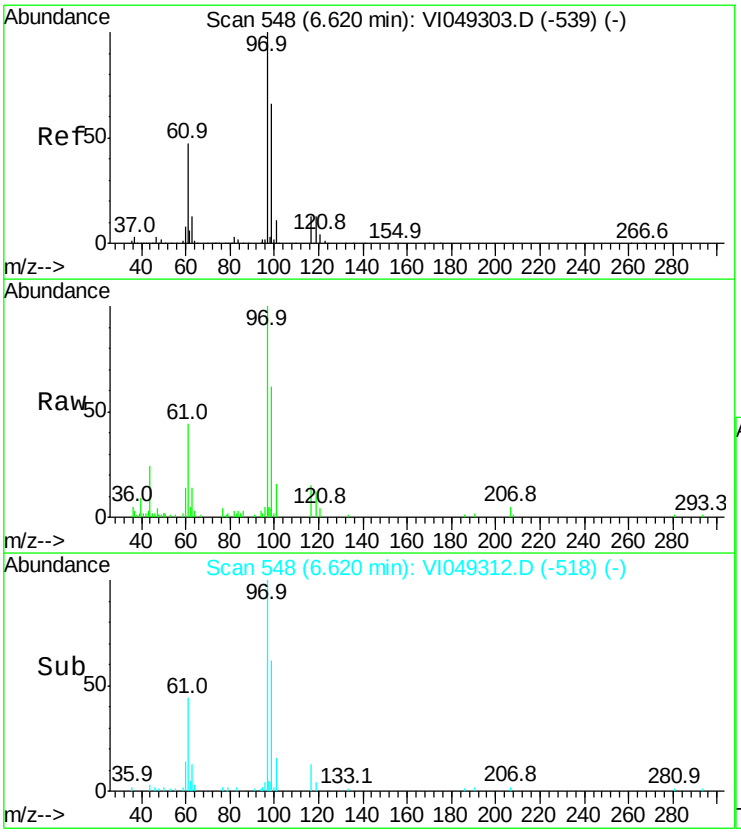
Tgt Ion: 83 Resp: 398388

Ion	Ratio	Lower	Upper
83	100		
85	66.3	47.3	87.8



Instrument :
MSVOA_I
ClientSampleId :
H4130

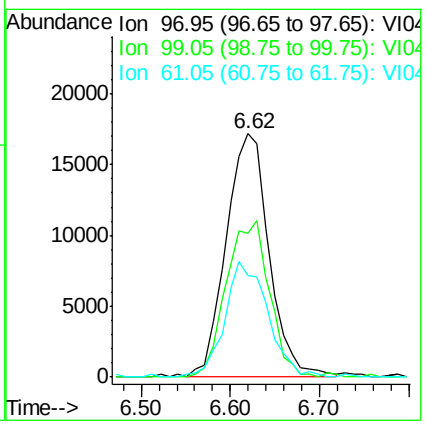
Manual Integrations APPROVED
feifei
5/10/2016 1:38:17 PM

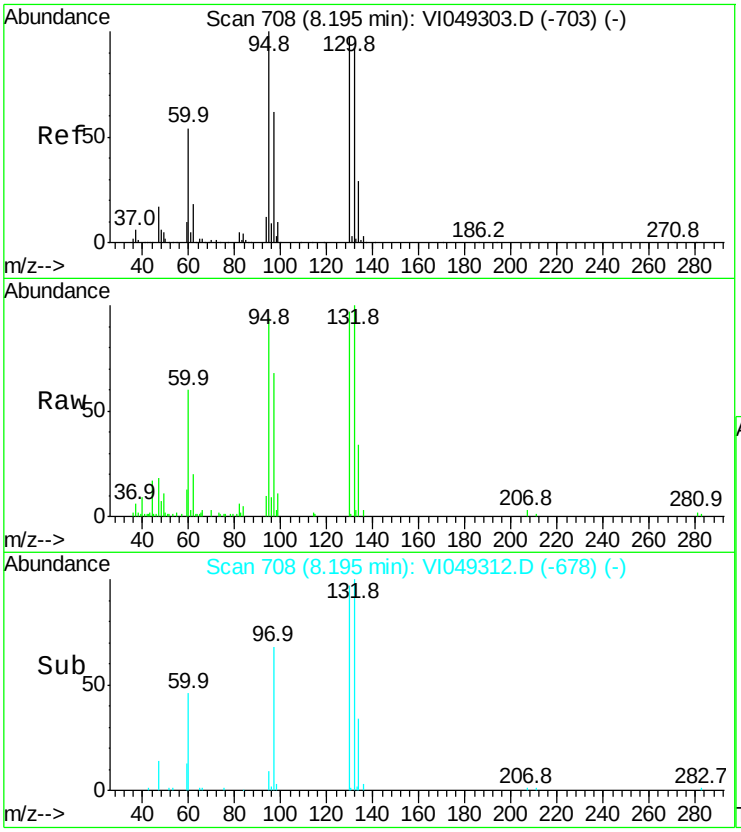


#29
1,1,1-Trichloroethane
Concen: 0.39 ug/L
RT: 6.62 min Scan# 548
Delta R.T. -0.00 min
Lab File: VI049312.D
Acq: 9 May 2016 23:35

Tgt Ion: 97 Resp: 57755

Ion	Ratio	Lower	Upper
97	100		
99	63.9	51.1	76.7
61	46.6	33.3	49.9

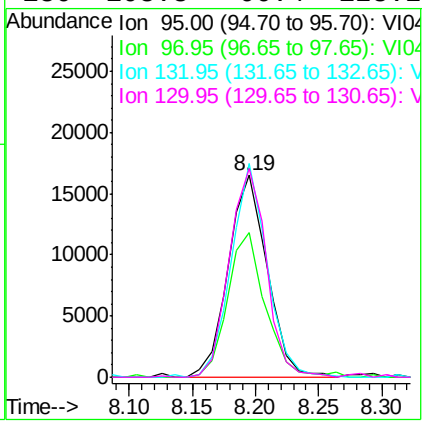




#34
Trichloroethene
Concen: 0.38 ug/L
RT: 8.19 min Scan# 708
Delta R.T. -0.00 min
Lab File: VI049312.D
Acq: 9 May 2016 23:35

Tgt Ion: 95 Resp: 35219

Ion	Ratio	Lower	Upper
95	100		
97	71.8	45.8	85.2
132	105.9	63.9	118.7
130	103.3	66.4	123.2



Instrument :
MSVOA_I
ClientSampleId :
H4130

Manual Integrations APPROVED
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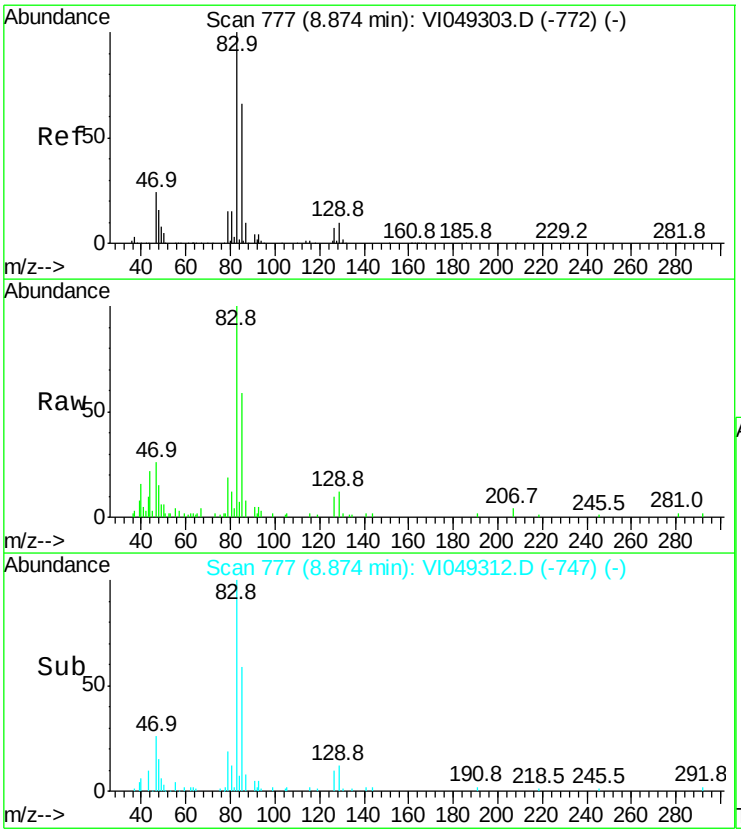
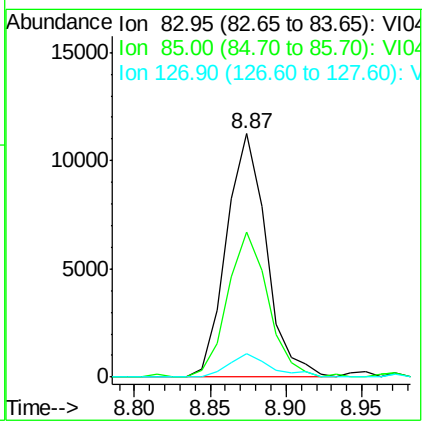
5/10/2016 1:38:17 PM

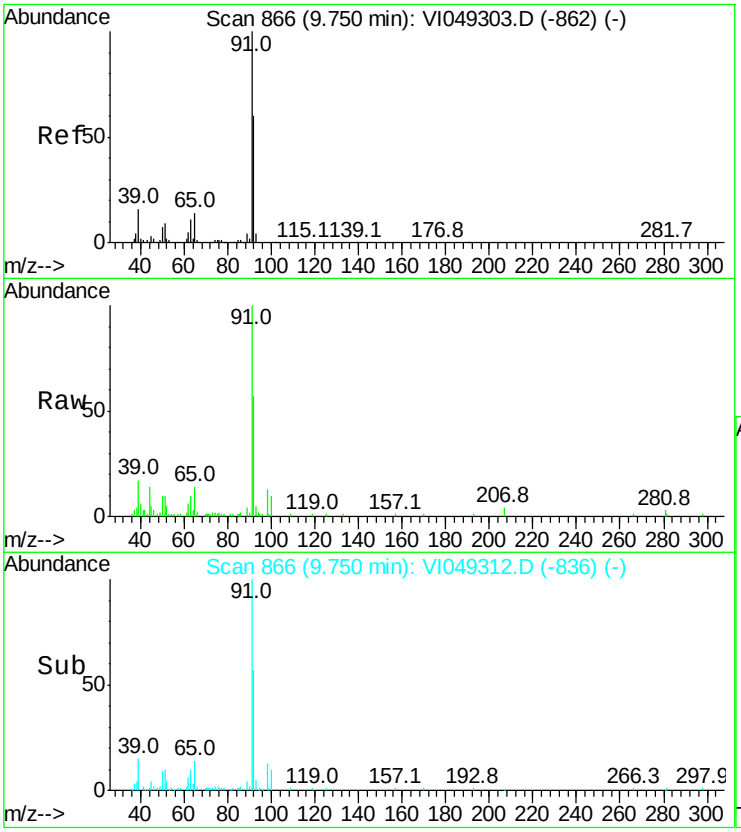


#38
Bromodichloromethane
Concen: 0.18 ug/L
RT: 8.87 min Scan# 777
Delta R.T. -0.00 min
Lab File: VI049312.D
Acq: 9 May 2016 23:35

Tgt Ion: 83 Resp: 20636

Ion	Ratio	Lower	Upper
83	100		
85	59.4	44.7	83.1
127	9.7	6.6	9.8

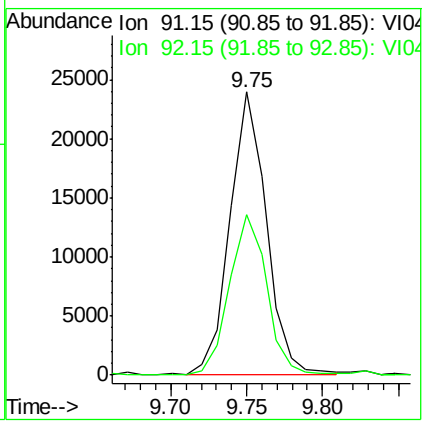




#42
Toluene
Concen: 0.14 ug/L
RT: 9.75 min Scan# 866
Delta R.T. -0.00 min
Lab File: VI049312.D
Acq: 9 May 2016 23:35

Tgt Ion: 91 Resp: 40217

Ion	Ratio	Lower	Upper
91	100		
92	56.8	41.2	76.4



Instrument :
MSVOA_I
ClientSampleId :
H4130

Manual Integrations APPROVED
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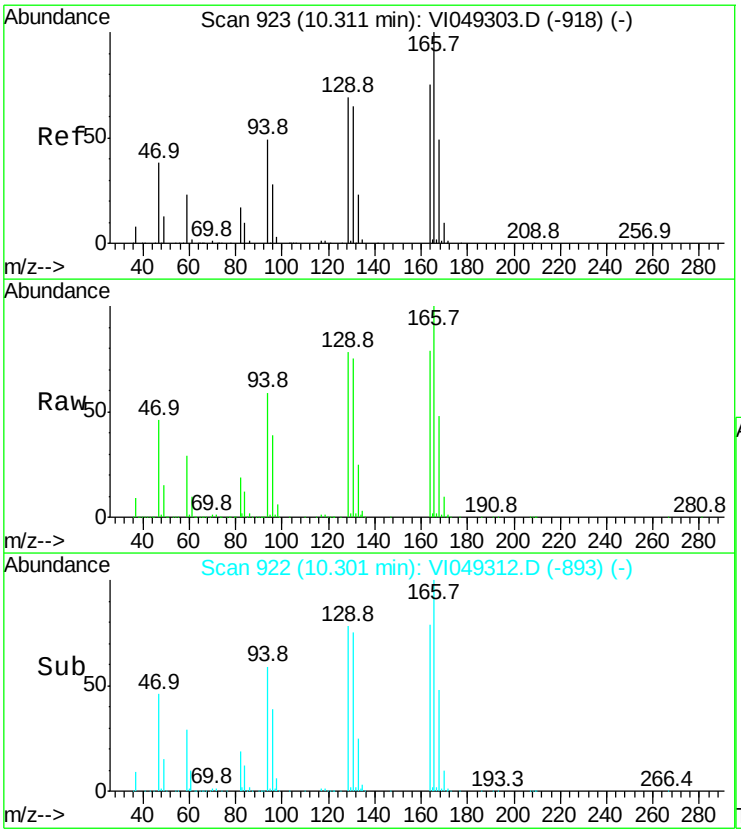
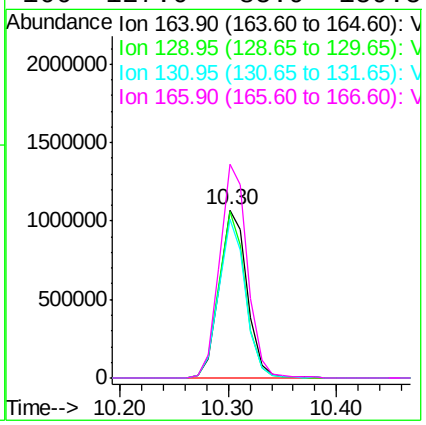
5/10/2016 1:38:17 PM



#47
Tetrachloroethene
Concen: 31.32 ug/L
RT: 10.30 min Scan# 922
Delta R.T. -0.01 min
Lab File: VI049312.D
Acq: 9 May 2016 23:35

Tgt Ion:164 Resp: 1903412

Ion	Ratio	Lower	Upper
164	100		
129	98.9	62.1	115.3
131	94.7	60.6	112.6
166	127.0	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049312.D
Acq On : 9 May 2016 23:35
Operator : FY/SY
Sample : H2943-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4130

Manual Integrations APPROVED
feifei
5/10/2016 1:38:17 PM

Quant Time: May 10 13:37:23 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1219586	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	778839	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	278717	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	301972	4.02	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 80.40%			
7) Chloroethane-d5	2.09	69	205394m	4.94	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 98.80%			
11) 1,1-Dichloroethene-d2	2.92	63	541406	3.06	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 61.20%			
20) 2-Butanone-d5	5.65	46	942729	57.99	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 115.98%			
24) Chloroform-d	6.35	84	928082	4.86	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.20%			
26) 1,2-Dichloroethane-d4	7.20	65	406808	5.21	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.20%			
32) Benzene-d6	7.14	84	1587168	5.23	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.60%			
36) 1,2-Dichloropropane-d6	8.41	67	458089	5.37	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.40%			
41) Toluene-d8	9.67	98	1058982	4.73	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
43) trans-1,3-Dichloropropene-	10.00	79	157416	4.68	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 93.60%			
46) 2-Hexanone-d5	10.41	63	615114	58.02	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 116.04%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	197845	5.10	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 102.00%			
63) 1,2-Dichlorobenzene-d4	13.74	152	239763	4.91	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.20%			
Target Compounds						Qvalue
13) Acetone	3.00	43	42289	4.19	ug/L	86
22) cis-1,2-Dichloroethene	5.74	96	20284	0.18	ug/L	80
25) Chloroform	6.39	83	398388	2.03	ug/L	98
29) 1,1,1-Trichloroethane	6.62	97	57755	0.39	ug/L	97
34) Trichloroethene	8.19	95	35219	0.38	ug/L	89
38) Bromodichloromethane	8.87	83	20636	0.18	ug/L	94
42) Toluene	9.75	91	40217	0.14	ug/L	97
47) Tetrachloroethene	10.30	164	1903412	31.32	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049312.D
Acq On : 9 May 2016 23:35
Operator : FY/SY
Sample : H2943-19
Misc : 25mL/MSVOA I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4130

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	3	6	17	rBV	6610983	18645584	100.00%	26.477%
2	1.571	33	35	42	rVV2	28428	50768	0.27%	0.072%
3	1.699	45	48	57	rVB	293028	512338	2.75%	0.728%
4	1.866	63	65	70	rVB4	16662	24073	0.13%	0.034%
5	1.994	76	78	79	rBV2	7256	10232	0.05%	0.015%
6	2.093	84	88	96	rVV	189789	388619	2.08%	0.552%
7	2.467	123	126	130	rVB6	9250	22671	0.12%	0.032%
8	2.575	135	137	141	rVB4	16380	33492	0.18%	0.048%
9	2.919	167	172	179	rBV	685944	1558461	8.36%	2.213%
10	3.106	190	191	193	rBV2	5340	6335	0.03%	0.009%
11	3.195	195	200	208	rVV	40466	141497	0.76%	0.201%
12	3.372	216	218	219	rVB2	7544	7394	0.04%	0.010%
13	3.402	219	221	222	rBV2	5305	5115	0.03%	0.007%
14	3.549	233	236	237	rBV3	6862	12059	0.06%	0.017%
15	3.579	237	239	245	rVB7	8759	21151	0.11%	0.030%
16	3.746	253	256	257	rVB3	4222	6553	0.04%	0.009%
17	3.864	264	268	269	rBV4	5402	11197	0.06%	0.016%
18	3.943	272	276	277	rBV3	2799	6901	0.04%	0.010%
19	4.081	288	290	294	rVB5	4875	7534	0.04%	0.011%
20	4.140	294	296	298	rBV3	3032	5589	0.03%	0.008%
21	4.199	301	302	305	rBV3	3196	5331	0.03%	0.008%
22	4.278	309	310	312	rVB2	6453	5593	0.03%	0.008%
23	4.307	312	313	316	rVB3	3645	4741	0.03%	0.007%
24	4.376	316	320	322	rBV4	3874	8118	0.04%	0.012%
25	4.425	322	325	333	rVB6	6534	20388	0.11%	0.029%
26	4.543	333	337	338	rBV4	5334	8825	0.05%	0.013%
27	4.681	350	351	354	rVV2	3439	6231	0.03%	0.009%
28	4.721	354	355	358	rVB3	4465	5414	0.03%	0.008%
29	4.898	372	373	376	rVB3	4388	4958	0.03%	0.007%
30	5.045	384	388	389	rVB4	4374	7730	0.04%	0.011%
31	5.085	389	392	394	rBV3	4298	9591	0.05%	0.014%
32	5.528	435	437	441	rVB3	5544	7814	0.04%	0.011%
33	5.646	441	449	456	rBV	393711	1419279	7.61%	2.015%
34	5.744	456	459	471	rVB2	105228	450197	2.41%	0.639%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049312.D
Acq On : 9 May 2016 23:35
Operator : FY/SY
Sample : H2943-19
Misc : 25mL/MSVOA I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4130

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.207	502	506	507	rBV3	4816	7777	0.04%	0.011%
36	6.354	513	521	540	rBV2	779181	3134083	16.81%	4.450%
37	6.620	540	548	556	rVB2	52420	186488	1.00%	0.265%
38	6.866	568	573	574	rBV4	5292	11036	0.06%	0.016%
39	6.965	581	583	586	rBV4	3550	6285	0.03%	0.009%
40	7.142	594	601	605	rBV	1210931	3275408	17.57%	4.651%
41	7.201	605	607	616	rVB	475100	1135148	6.09%	1.612%
42	7.575	643	645	647	rVB3	5790	5930	0.03%	0.008%
43	7.663	652	654	656	rBV3	2616	5271	0.03%	0.007%
44	7.732	659	661	666	rVB5	7945	14232	0.08%	0.020%
45	7.909	673	679	687	rBV	1383545	2980122	15.98%	4.232%
46	8.047	691	693	696	rVB4	5652	8884	0.05%	0.013%
47	8.195	702	708	716	rVB	101609	220248	1.18%	0.313%
48	8.411	725	730	739	rBV	1004251	2161622	11.59%	3.069%
49	8.588	746	748	749	rBV2	5131	7256	0.04%	0.010%
50	8.618	749	751	754	rVB3	7868	13163	0.07%	0.019%
51	8.756	763	765	767	rBV3	3204	5049	0.03%	0.007%
52	8.874	772	777	784	rVB3	37196	102028	0.55%	0.145%
53	9.120	800	802	805	rVB4	4050	6591	0.04%	0.009%
54	9.346	820	825	832	rBV	528154	998710	5.36%	1.418%
55	9.504	836	841	845	rVB	24781	53729	0.29%	0.076%
56	9.553	845	846	850	rVB3	5987	9587	0.05%	0.014%
57	9.671	854	858	863	rBV	1713577	3068786	16.46%	4.358%
58	9.750	863	866	869	rVB	65974	116513	0.62%	0.165%
59	9.996	887	891	900	rBV	313854	541135	2.90%	0.768%
60	10.134	904	905	907	rBV2	3987	5172	0.03%	0.007%
61	10.203	907	912	918	rBV	328982	678506	3.64%	0.963%
62	10.301	918	922	929	rVV	9332345	16078792	86.23%	22.832%
63	10.409	929	933	948	rVB	1900296	3364775	18.05%	4.778%
64	10.586	948	951	953	rBV2	19927	35781	0.19%	0.051%
65	10.665	958	959	962	rVB3	4525	5410	0.03%	0.008%
66	10.744	965	967	973	rVB7	5979	13705	0.07%	0.019%
67	10.832	973	976	977	rBV2	3817	5503	0.03%	0.008%
68	10.941	986	987	990	rVB2	4381	5991	0.03%	0.009%
69	11.138	1005	1007	1009	rBV2	2843	5167	0.03%	0.007%
70	11.197	1009	1013	1020	rBV	1623048	2714854	14.56%	3.855%
71	11.334	1023	1027	1030	rVB2	22870	44311	0.24%	0.063%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049312.D
Acq On : 9 May 2016 23:35
Operator : FY/SY
Sample : H2943-19
Misc : 25mL/MSVOA I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4130

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.452	1036	1039	1045	rVB3	21180	44933	0.24%	0.064%
73	11.630	1056	1057	1061	rVB3	4502	7003	0.04%	0.010%
74	11.826	1073	1077	1082	rVB3	11091	24892	0.13%	0.035%
75	12.004	1090	1095	1096	rBV4	2989	5981	0.03%	0.008%
76	12.053	1099	1100	1103	rVB3	3534	5761	0.03%	0.008%
77	12.181	1107	1113	1115	rBV7	5245	12918	0.07%	0.018%
78	12.220	1115	1117	1119	rBV3	3581	7421	0.04%	0.011%
79	12.387	1129	1134	1136	rBV	311620	578276	3.10%	0.821%
80	12.437	1136	1139	1147	rVB	443414	773083	4.15%	1.098%
81	12.604	1153	1156	1157	rBV3	3331	5568	0.03%	0.008%
82	12.673	1157	1163	1165	rBV7	6847	17580	0.09%	0.025%
83	12.732	1165	1169	1171	rVB5	5389	10977	0.06%	0.016%
84	12.889	1182	1185	1189	rBV5	3960	9839	0.05%	0.014%
85	13.027	1197	1199	1200	rBV2	4636	4915	0.03%	0.007%
86	13.126	1208	1209	1212	rBV3	3740	5159	0.03%	0.007%
87	13.244	1218	1221	1222	rBV2	4697	7260	0.04%	0.010%
88	13.322	1226	1229	1230	rBV3	3409	5462	0.03%	0.008%
89	13.411	1234	1238	1245	rBV	1253502	2052113	11.01%	2.914%
90	13.637	1258	1261	1264	rBV5	4655	10990	0.06%	0.016%
91	13.736	1267	1271	1281	rBV	1089936	1821579	9.77%	2.587%
92	13.844	1281	1282	1285	rBV3	5948	8735	0.05%	0.012%
93	13.933	1288	1291	1292	rVB3	6291	8389	0.04%	0.012%
94	14.011	1292	1299	1304	rBV2	182803	357260	1.92%	0.507%
95	14.228	1319	1321	1322	rBV2	5537	7125	0.04%	0.010%
96	14.356	1332	1334	1335	rBV2	5526	5376	0.03%	0.008%
97	14.385	1335	1337	1338	rBV2	4463	6083	0.03%	0.009%
98	14.622	1358	1361	1362	rBV3	5507	10614	0.06%	0.015%
99	14.818	1378	1381	1382	rBV3	7801	12354	0.07%	0.018%
100	15.586	1455	1459	1464	rBV	61029	120652	0.65%	0.171%

Sum of corrected areas: 70423119

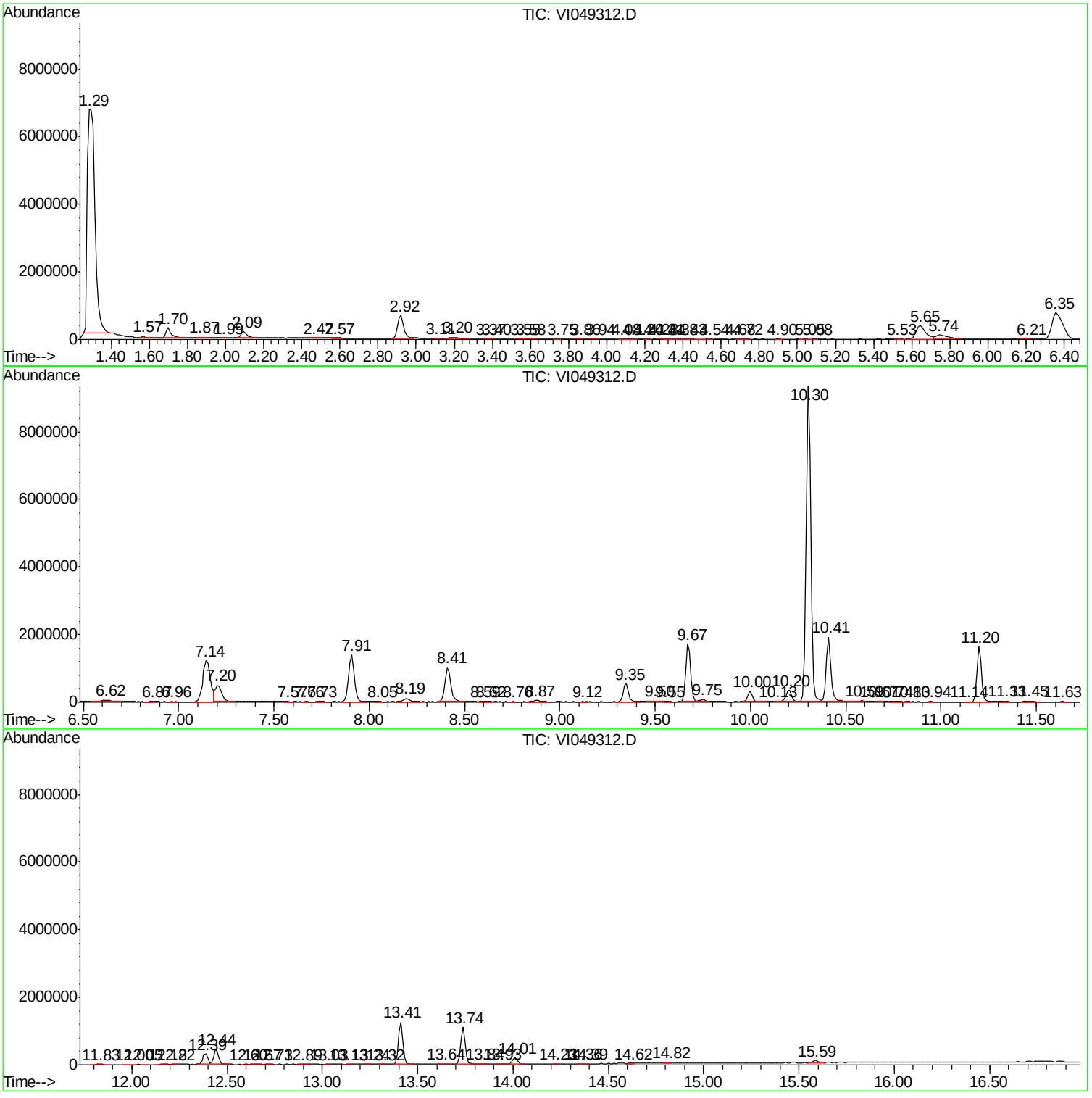
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049312.D
Acq On : 9 May 2016 23:35
Operator : FY/SY
Sample : H2943-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4130

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049312.D
Acq On : 9 May 2016 23:35
Operator : FY/SY
Sample : H2943-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4130

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049312.D
Acq On : 9 May 2016 23:35
Operator : FY/SY
Sample : H2943-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4130

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

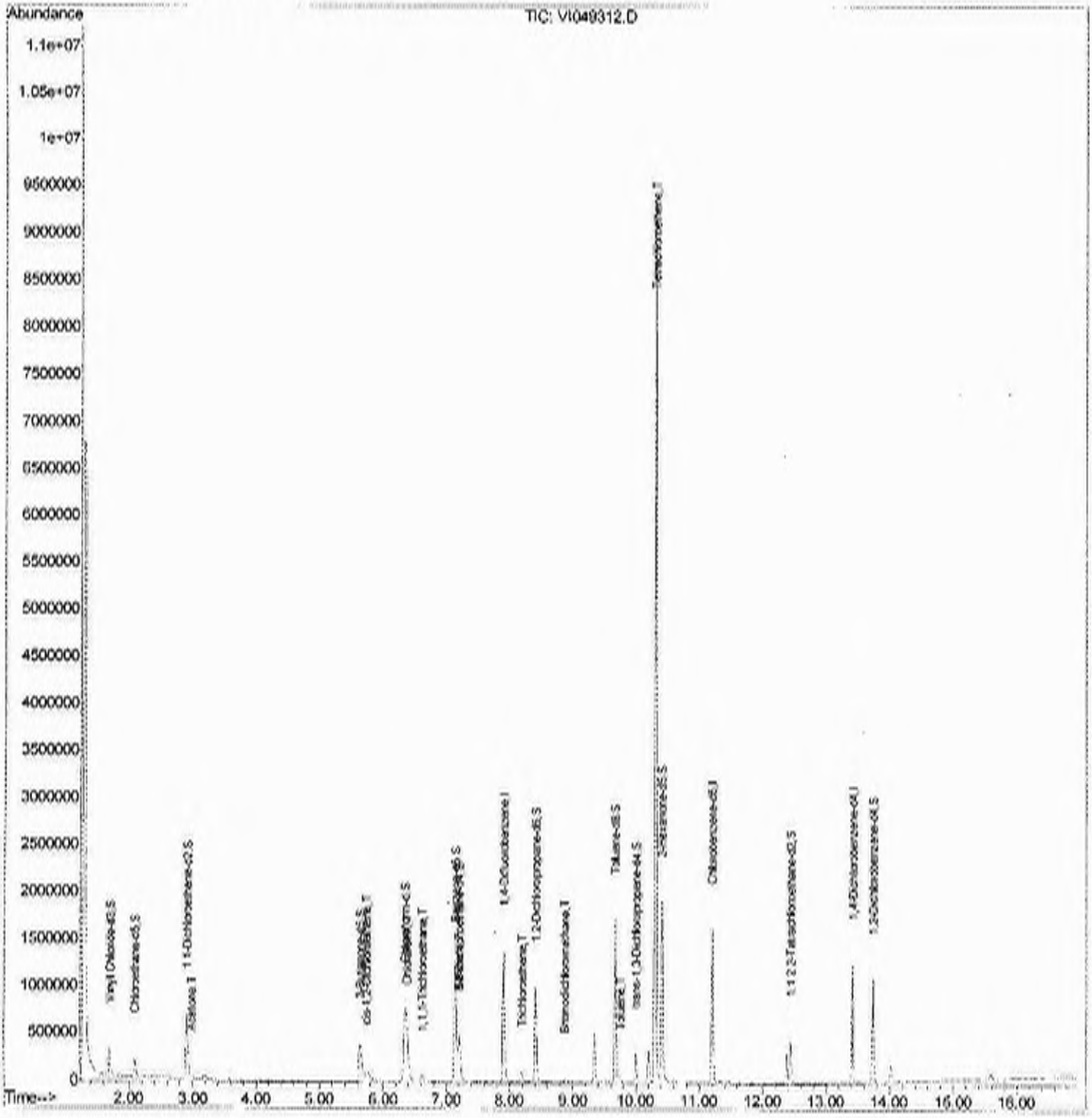
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049312.D
Acq On : 9 May 2016 23:35
Operator : FY/SY
Sample : H2943-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Quant Time: May 10 06:56:41 2016
Quant Method : w:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4130

Manual Integrations APPROVED
feifei
5/10/2016 1:38:17 PM



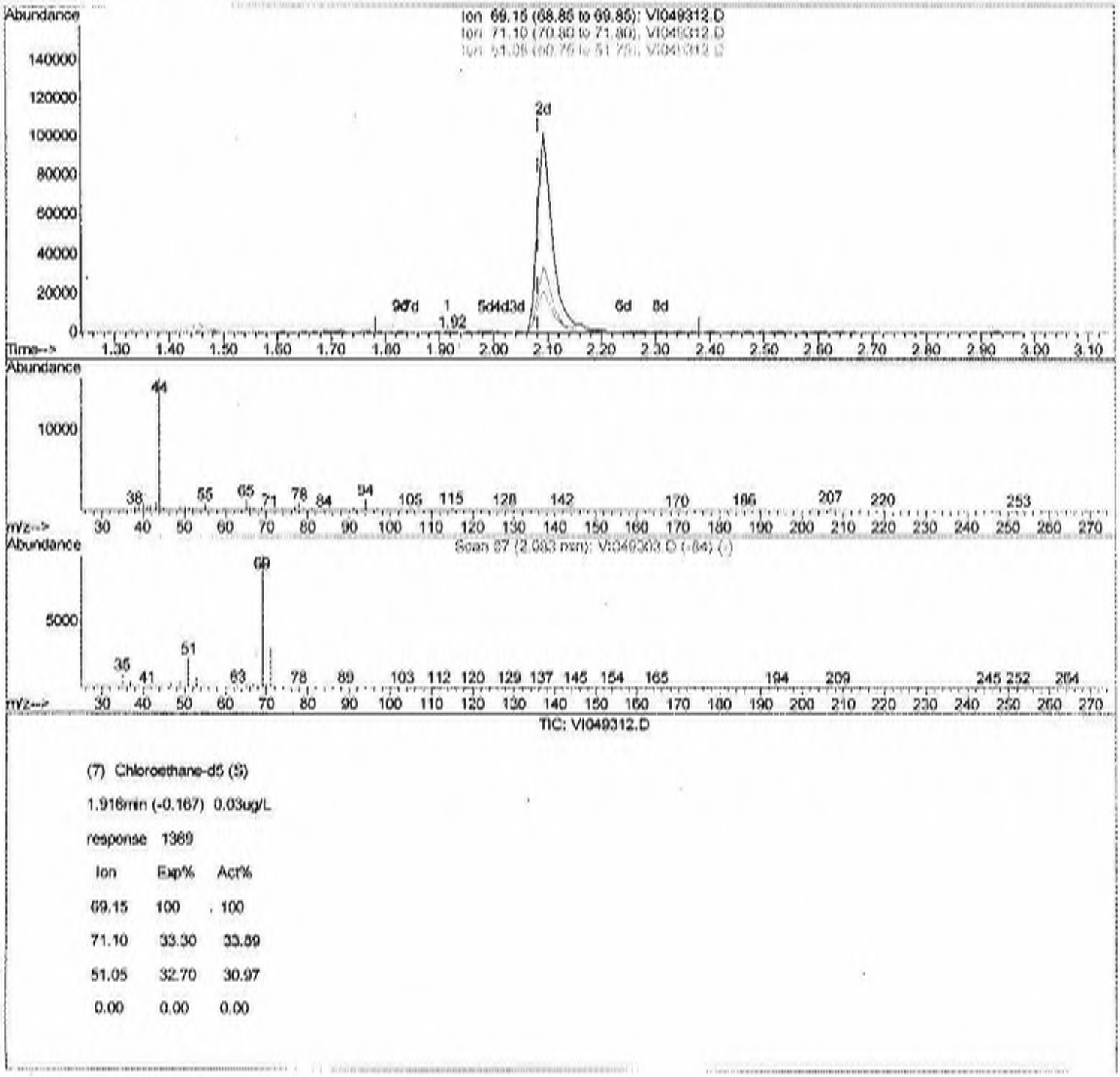
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049312.D
Acq On : 9 May 2016 23:35
Operator : FY/SY
Sample : H2943-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Quant Time: May 10 06:13:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4130

Manual Integrations APPROVED
feifei
5/10/2016 1:38:17 PM



(7) Chloroethane-d5 (S)

1.916min (-0.167) 0.03ug/L

response 1369

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	33.89
51.05	32.70	30.97
0.00	0.00	0.00

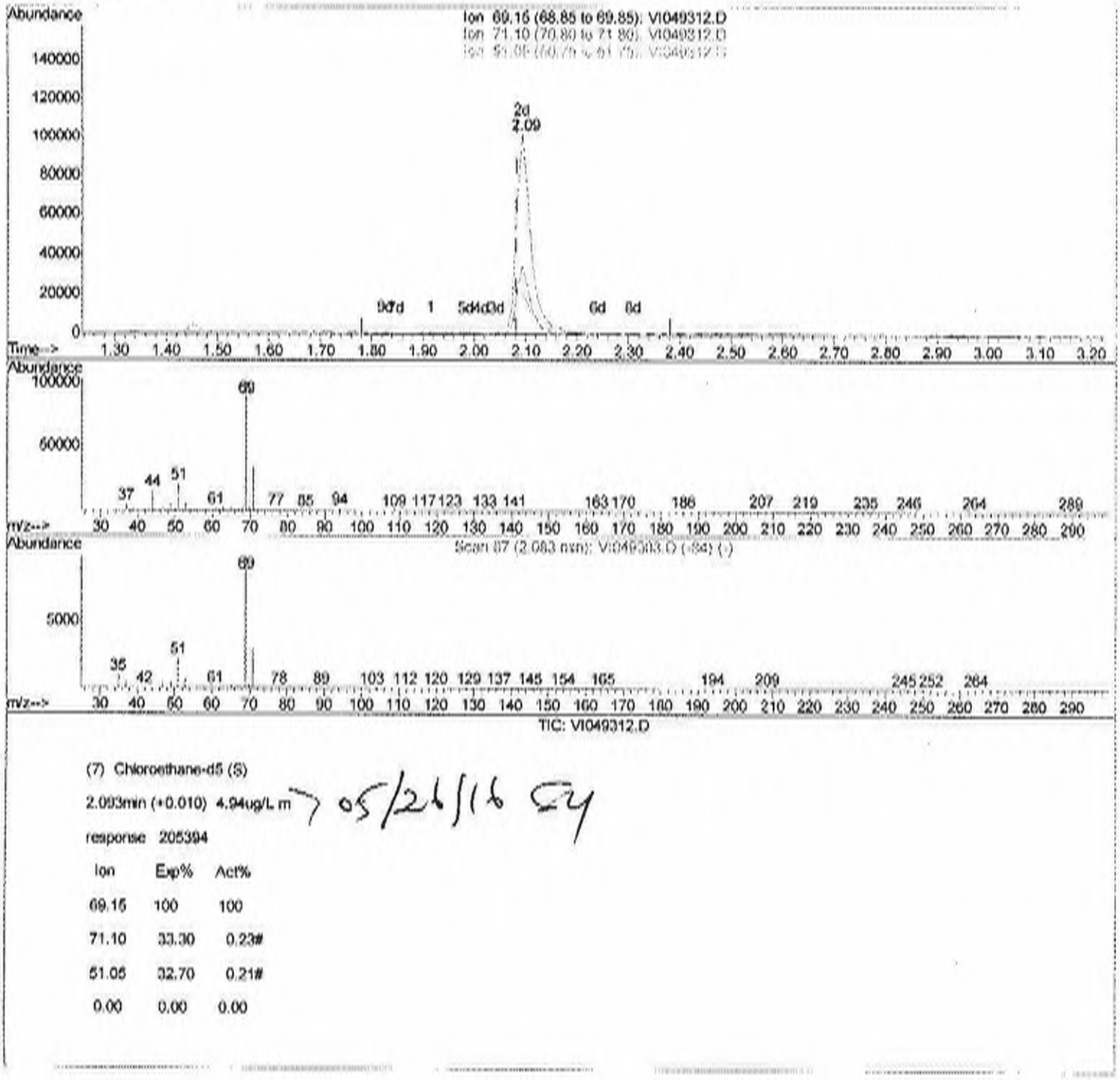
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049312.D
Acq On : 9 May 2016 23:35
Operator : FY/SY
Sample : H2943-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Quant Time: May 10 06:13:05 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4130

Manual Integrations APPROVED
feifei
5/10/2016 1:38:17 PM



(7) Chloroethane-d5 (S)

2.093min (+0.010) 4.94ug/L m → 05/24/16 FY

response 205394

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.23#
51.05	32.70	0.21#
0.00	0.00	0.00

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049312.D
Acq On : 9 May 2016 23:35
Operator : FY/SY
Sample : H2943-19
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 23 Sample Multiplier: 1

Quant Time: May 10 13:37:23 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4130

Manual Integrations APPROVED
feifei
5/10/2016 1:38:17 PM

Internal Standards	R.T.	Qion	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1219586	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	778839	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	278717	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	301972	4.02	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 80.40%			
7) Chloroethane-d5	2.09	69	205394m	4.94	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 98.80%			
11) 1,1-Dichloroethene-d2	2.92	63	541406	3.06	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 61.20%			
20) 2-Butanone-d5	5.65	46	942729	57.99	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 115.98%			
24) Chloroform-d	6.35	84	928082	4.86	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.20%			
26) 1,2-Dichloroethane-d4	7.20	65	406808	5.21	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.20%			
32) Benzene-d6	7.14	84	1587168	5.23	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.60%			
36) 1,2-Dichloropropane-d6	8.41	67	458089	5.37	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.40%			
41) Toluene-d8	9.67	98	1050982	4.73	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
43) trans-1,3-Dichloropropene-	10.00	79	157416	4.68	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 93.60%			
46) 2-Hexanone-d5	10.41	63	615114	58.02	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 116.04%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	197845	5.10	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 102.00%			
63) 1,2-Dichlorobenzene-d4	13.74	152	239763	4.91	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.20%			
Target Compounds						Qvalue
13) Acetone	3.00	43	42289	4.19	ug/L	86
22) cis-1,2-Dichloroethene	5.74	96	20284	0.18	ug/L	80
25) Chloroform	6.39	83	398388	2.03	ug/L	98
29) 1,1,1-Trichloroethane	6.62	97	57755	0.39	ug/L	97
34) Trichloroethene	8.19	95	35219	0.38	ug/L	89
38) Bromodichloromethane	8.87	83	20636	0.18	ug/L	94
42) Toluene	9.75	91	40217	0.14	ug/L	97
47) Tetrachloroethene	10.30	164	1903412	31.32	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

05/26/16 84

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4130DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049340.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl Acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl Ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4130DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049340.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	28	D
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-trichlorobenzene	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4130DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049340.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 5.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4130DL

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-19DL
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049340.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 5.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

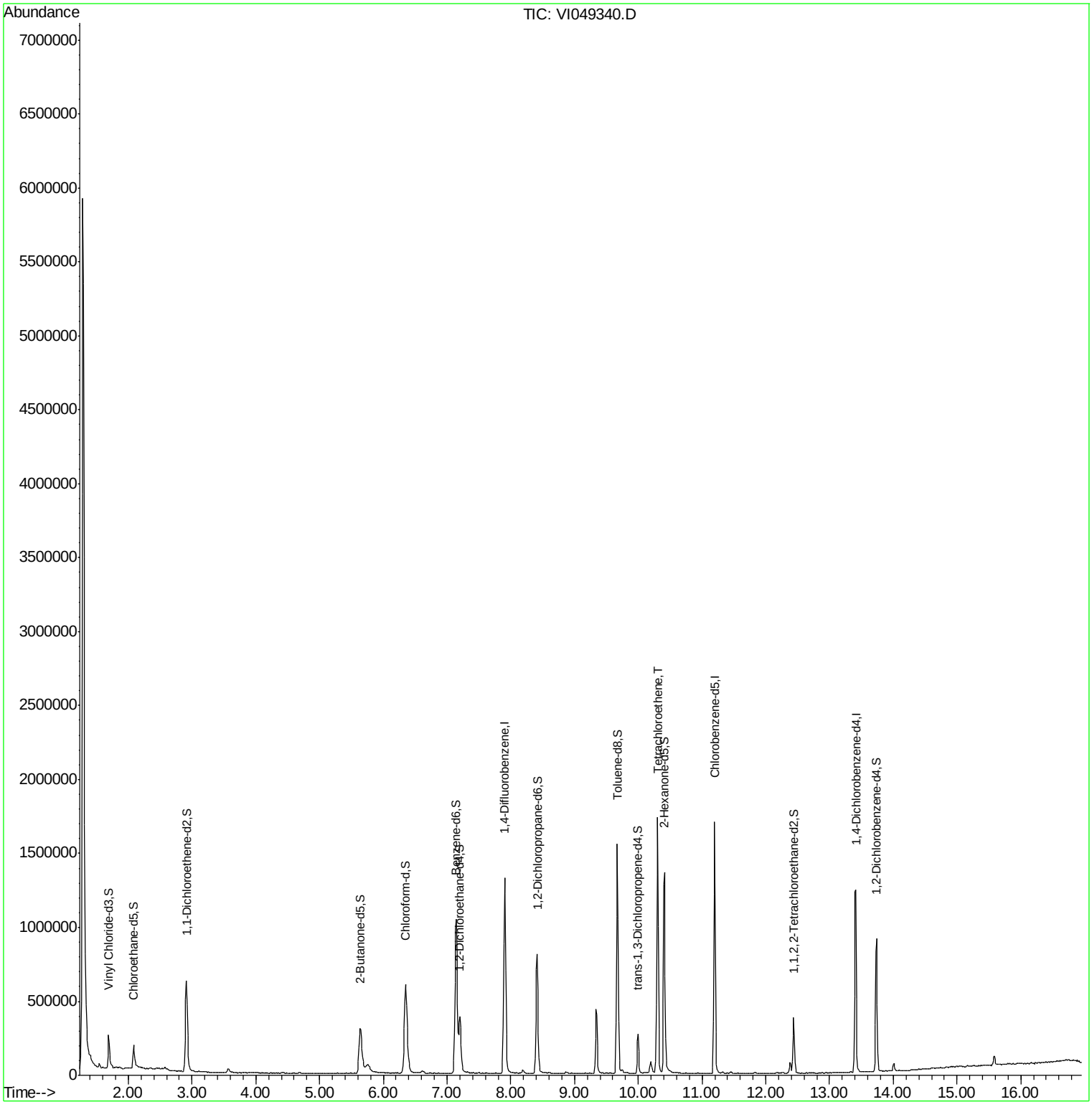
EPA-designated Registry Number.

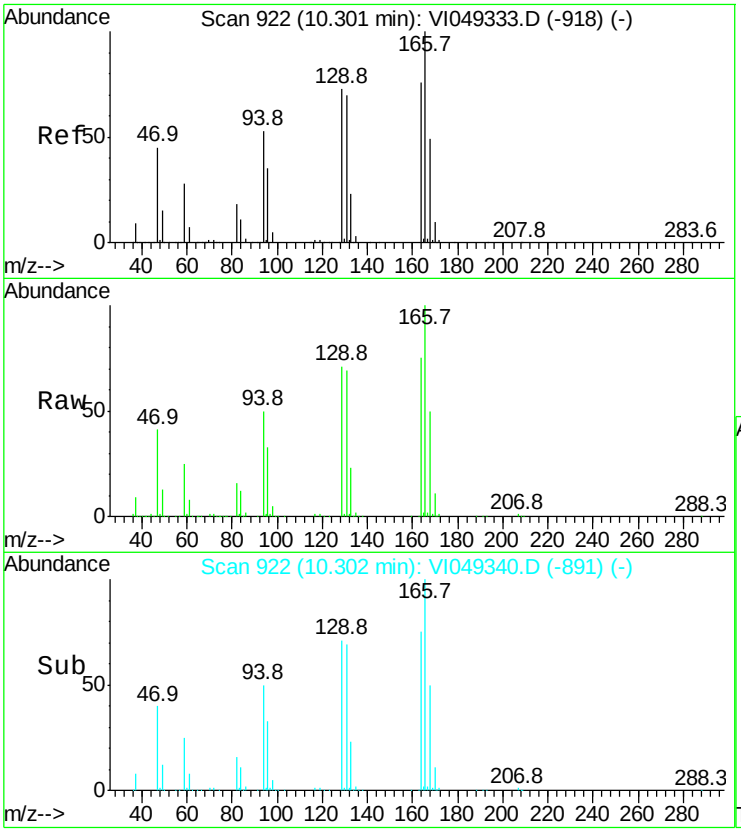
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049340.D
Acq On : 11 May 2016 14:45
Operator : FY/SY
Sample : H2943-19DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4130DL

Quant Time: May 12 06:52:36 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration



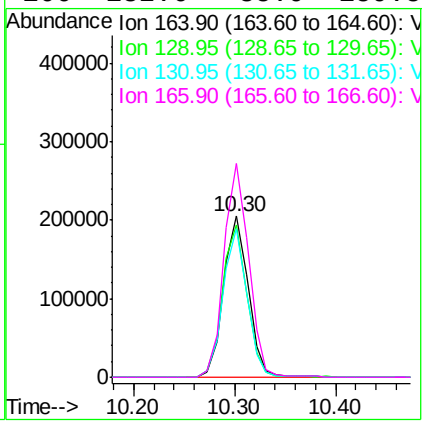


#47
Tetrachloroethene
Concen: 5.53 ug/L
RT: 10.30 min Scan# 922
Delta R.T. 0.00 min
Lab File: VI049340.D
Acq: 11 May 2016 14:45

Instrument :
MSVOA_I
ClientSampleId :
H4130DL

Tgt Ion:164 Resp: 348780

Ion	Ratio	Lower	Upper
164	100		
129	94.2	62.1	115.3
131	91.9	60.6	112.6
166	132.6	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049340.D
Acq On : 11 May 2016 14:45
Operator : FY/SY
Sample : H2943-19DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4130DL

Quant Time: May 12 06:52:36 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1205800	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	808551	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	304074	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	251320	3.39	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 67.80%			
7) Chloroethane-d5	2.08	69	161431	3.93	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 78.60%			
11) 1,1-Dichloroethene-d2	2.91	63	476019	2.72	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 54.40%#			
20) 2-Butanone-d5	5.64	46	746237	46.43	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 92.86%			
24) Chloroform-d	6.35	84	760197	4.03	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 80.60%			
26) 1,2-Dichloroethane-d4	7.20	65	335470	4.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 86.80%			
32) Benzene-d6	7.14	84	1340684	4.26	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 85.20%			
36) 1,2-Dichloropropane-d6	8.41	67	373625	4.22	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 84.40%			
41) Toluene-d8	9.67	98	929755	4.00	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 80.00%			
43) trans-1,3-Dichloropropene-	10.00	79	129259	3.70	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 74.00%			
46) 2-Hexanone-d5	10.41	63	484399	44.01	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 88.02%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	166790	4.14	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 82.80%			
63) 1,2-Dichlorobenzene-d4	13.74	152	215839	4.05	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 81.00%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.30	164	348780	5.53	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049340.D
Acq On : 11 May 2016 14:45
Operator : FY/SY
Sample : H2943-19DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4130DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.287	3	6	30	rVB	5874861	13565311	100.00%	29.733%
2	1.542	30	32	35	rVB2	30128	44024	0.32%	0.096%
3	1.690	44	47	54	rBV	224587	396846	2.93%	0.870%
4	2.084	84	87	96	rBV	155577	307591	2.27%	0.674%
5	2.576	135	137	145	rVB4	27927	74313	0.55%	0.163%
6	2.792	157	159	161	rBV3	4387	7110	0.05%	0.016%
7	2.910	166	171	180	rBV	616892	1349902	9.95%	2.959%
8	3.186	197	199	204	rVB5	7258	14806	0.11%	0.032%
9	3.285	207	209	213	rVB4	2904	5903	0.04%	0.013%
10	3.471	226	228	230	rVB2	4750	5091	0.04%	0.011%
11	3.570	233	238	243	rBV3	26225	75171	0.55%	0.165%
12	3.806	258	262	265	rBV6	3511	11597	0.09%	0.025%
13	3.914	270	273	274	rVV3	3363	6836	0.05%	0.015%
14	3.944	274	276	278	rVV3	4685	8997	0.07%	0.020%
15	4.141	293	296	299	rVB5	3253	7040	0.05%	0.015%
16	4.239	302	306	308	rBV5	4780	8010	0.06%	0.018%
17	4.269	308	309	312	rVB2	3852	5387	0.04%	0.012%
18	4.318	312	314	316	rBV3	2539	4356	0.03%	0.010%
19	4.407	321	323	325	rBV3	3321	5777	0.04%	0.013%
20	4.485	328	331	332	rVB3	4143	4328	0.03%	0.009%
21	4.672	348	350	351	rBV2	2680	4464	0.03%	0.010%
22	4.859	367	369	373	rVB4	2734	4315	0.03%	0.009%
23	5.076	387	391	392	rVB3	3965	7685	0.06%	0.017%
24	5.105	392	394	395	rBV2	3260	4631	0.03%	0.010%
25	5.401	420	424	425	rBV4	2227	4412	0.03%	0.010%
26	5.548	435	439	441	rVB4	3542	6324	0.05%	0.014%
27	5.637	441	448	456	rBV	306612	1110859	8.19%	2.435%
28	5.755	456	460	469	rVB3	50771	213044	1.57%	0.467%
29	6.129	497	498	501	rBV3	2919	4797	0.04%	0.011%
30	6.217	506	507	511	rVB4	5051	7553	0.06%	0.017%
31	6.345	513	520	537	rVV2	597755	1987502	14.65%	4.356%
32	6.611	542	547	552	rVB5	13609	42210	0.31%	0.093%
33	6.798	564	566	569	rVB3	3605	7193	0.05%	0.016%
34	6.936	578	580	582	rBV3	3578	5408	0.04%	0.012%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049340.D
Acq On : 11 May 2016 14:45
Operator : FY/SY
Sample : H2943-19DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4130DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.005	584	587	588	rVB2	4122	6001	0.04%	0.013%
36	7.034	588	590	593	rBV4	3317	8345	0.06%	0.018%
37	7.143	593	601	605	rBV	1044232	2852751	21.03%	6.253%
38	7.202	605	607	617	rVB	377804	792229	5.84%	1.736%
39	7.398	626	627	630	rVB2	3234	4847	0.04%	0.011%
40	7.497	634	637	639	rVB4	3574	7083	0.05%	0.016%
41	7.625	646	650	654	rVB8	6864	21890	0.16%	0.048%
42	7.694	654	657	660	rBV6	4795	12713	0.09%	0.028%
43	7.900	670	678	690	rBV	1321224	2951492	21.76%	6.469%
44	8.028	690	691	694	rVB3	4996	5056	0.04%	0.011%
45	8.186	703	707	712	rVB4	24015	53251	0.39%	0.117%
46	8.255	712	714	716	rBV3	2341	4390	0.03%	0.010%
47	8.412	722	730	738	rBV	809875	1797662	13.25%	3.940%
48	8.599	746	749	753	rVB5	5982	13108	0.10%	0.029%
49	8.717	759	761	766	rVB6	3967	9367	0.07%	0.021%
50	8.865	773	776	781	rVB3	9543	16559	0.12%	0.036%
51	9.003	788	790	795	rVB4	3409	4663	0.03%	0.010%
52	9.111	798	801	802	rBV3	3126	4735	0.03%	0.010%
53	9.170	806	807	808	rVB	7566	4468	0.03%	0.010%
54	9.190	808	809	812	rBV3	4413	7011	0.05%	0.015%
55	9.239	812	814	815	rVB2	5868	4761	0.04%	0.010%
56	9.337	820	824	833	rBV	433731	831498	6.13%	1.823%
57	9.505	836	841	844	rVB7	3582	7824	0.06%	0.017%
58	9.564	844	847	848	rBV3	5345	6344	0.05%	0.014%
59	9.672	853	858	864	rBV	1548514	2688035	19.82%	5.892%
60	9.751	864	866	869	rVB	21561	34574	0.25%	0.076%
61	9.918	881	883	885	rVV3	3779	4456	0.03%	0.010%
62	9.997	887	891	898	rVV	266881	468171	3.45%	1.026%
63	10.076	898	899	900	rVV2	6999	7136	0.05%	0.016%
64	10.125	900	904	905	rVV4	8969	23068	0.17%	0.051%
65	10.194	907	911	917	rVV	79495	194241	1.43%	0.426%
66	10.302	917	922	929	rVV	1733414	2983663	21.99%	6.540%
67	10.410	929	933	945	rVV	1358324	2580407	19.02%	5.656%
68	10.587	948	951	956	rVV6	8726	28670	0.21%	0.063%
69	10.656	956	958	961	rVV4	5188	7669	0.06%	0.017%
70	10.745	965	967	970	rVV4	2938	4387	0.03%	0.010%
71	10.892	979	982	985	rBV5	1972	4551	0.03%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049340.D
Acq On : 11 May 2016 14:45
Operator : FY/SY
Sample : H2943-19DL 5X
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4130DL

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	10.932	985	986	990	rVB4	5158	7368	0.05%	0.016%
73	11.197	1008	1013	1022	rBV	1699538	2785267	20.53%	6.105%
74	11.325	1022	1026	1031	rVB3	9850	23232	0.17%	0.051%
75	11.394	1031	1033	1036	rBV3	3010	4919	0.04%	0.011%
76	11.453	1036	1039	1045	rVB7	10409	23677	0.17%	0.052%
77	11.611	1053	1055	1057	rVB3	4305	5702	0.04%	0.012%
78	11.827	1072	1077	1081	rBV5	8445	20664	0.15%	0.045%
79	12.123	1106	1107	1110	rBV2	3800	6833	0.05%	0.015%
80	12.182	1110	1113	1115	rVB4	6871	12280	0.09%	0.027%
81	12.231	1115	1118	1119	rBV3	5319	8391	0.06%	0.018%
82	12.260	1119	1121	1125	rBV5	3381	6774	0.05%	0.015%
83	12.379	1128	1133	1136	rBV2	72663	146566	1.08%	0.321%
84	12.438	1136	1139	1146	rVB	376791	621169	4.58%	1.362%
85	12.634	1157	1159	1162	rBV3	2505	4372	0.03%	0.010%
86	12.762	1171	1172	1175	rVB3	5714	5595	0.04%	0.012%
87	12.802	1175	1176	1178	rBV2	2698	4515	0.03%	0.010%
88	12.880	1182	1184	1186	rBV2	4041	5727	0.04%	0.013%
89	12.999	1195	1196	1199	rBV3	4130	6800	0.05%	0.015%
90	13.067	1199	1203	1206	rBV6	3390	8736	0.06%	0.019%
91	13.343	1225	1231	1233	rBV7	6308	17391	0.13%	0.038%
92	13.412	1233	1238	1245	rBV	1236107	2213304	16.32%	4.851%
93	13.619	1257	1259	1260	rBV2	3810	4678	0.03%	0.010%
94	13.737	1266	1271	1277	rBV	899691	1612398	11.89%	3.534%
95	13.884	1283	1286	1288	rBV4	3788	7070	0.05%	0.015%
96	14.012	1295	1299	1303	rVV2	49125	97007	0.72%	0.213%
97	14.091	1306	1307	1310	rVV3	4620	4738	0.03%	0.010%
98	14.396	1337	1338	1340	rBV2	6677	8466	0.06%	0.019%
99	15.587	1454	1459	1463	rBV	65045	159500	1.18%	0.350%
100	16.237	1523	1525	1526	rBV2	11686	14665	0.11%	0.032%

Sum of corrected areas: 45623673

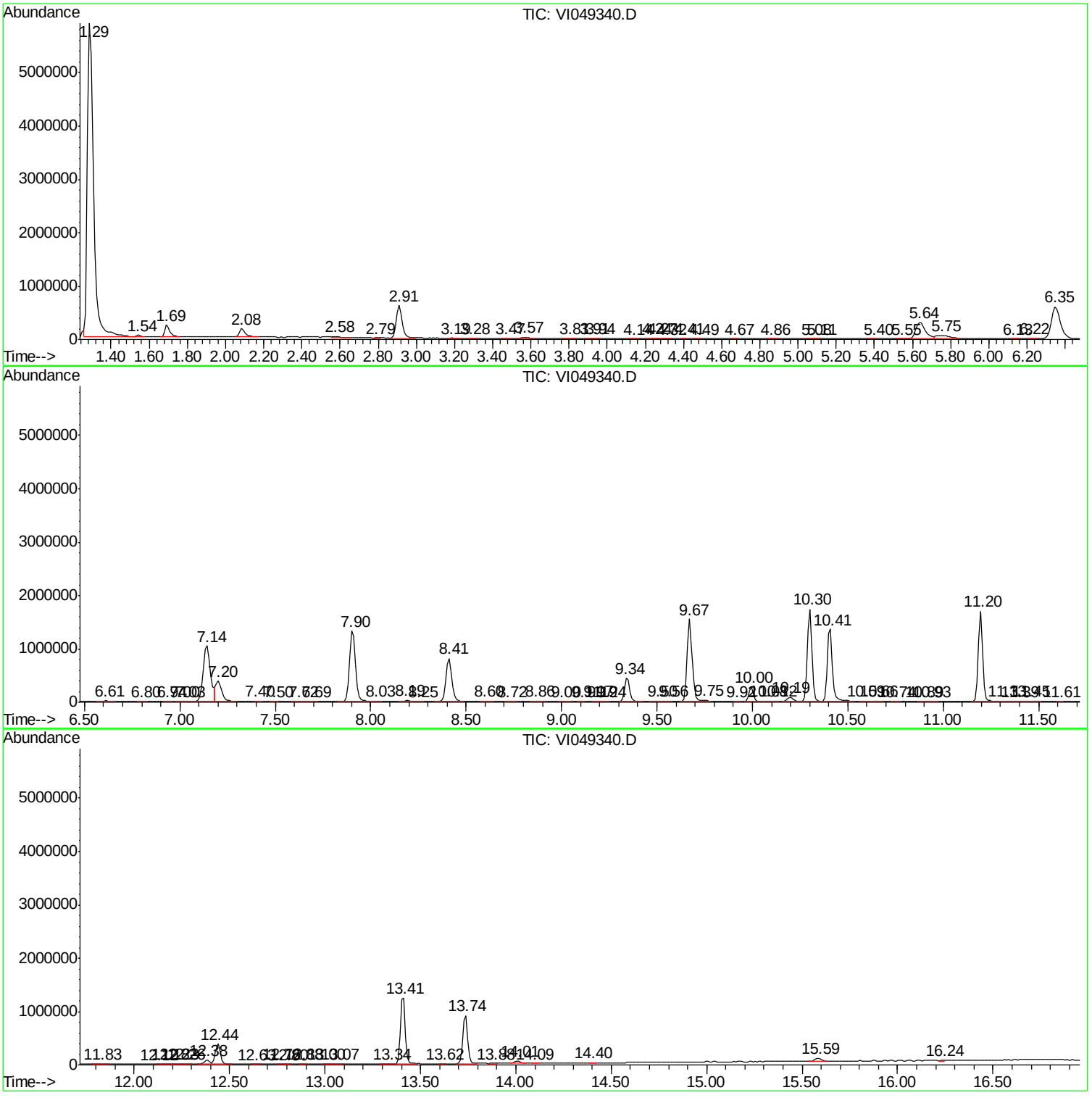
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049340.D
Acq On : 11 May 2016 14:45
Operator : FY/SY
Sample : H2943-19DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4130DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049340.D
Acq On : 11 May 2016 14:45
Operator : FY/SY
Sample : H2943-19DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4130DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049340.D
Acq On : 11 May 2016 14:45
Operator : FY/SY
Sample : H2943-19DL 5X
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4130DL

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4131

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049313.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	3.1	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4131

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049313.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.55	
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.49	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4131

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049313.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4131

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-20
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049313.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/10/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1		unknown-01	9.34	1.7	J
2	E966796	Total Alkanes	N/A	0.0	

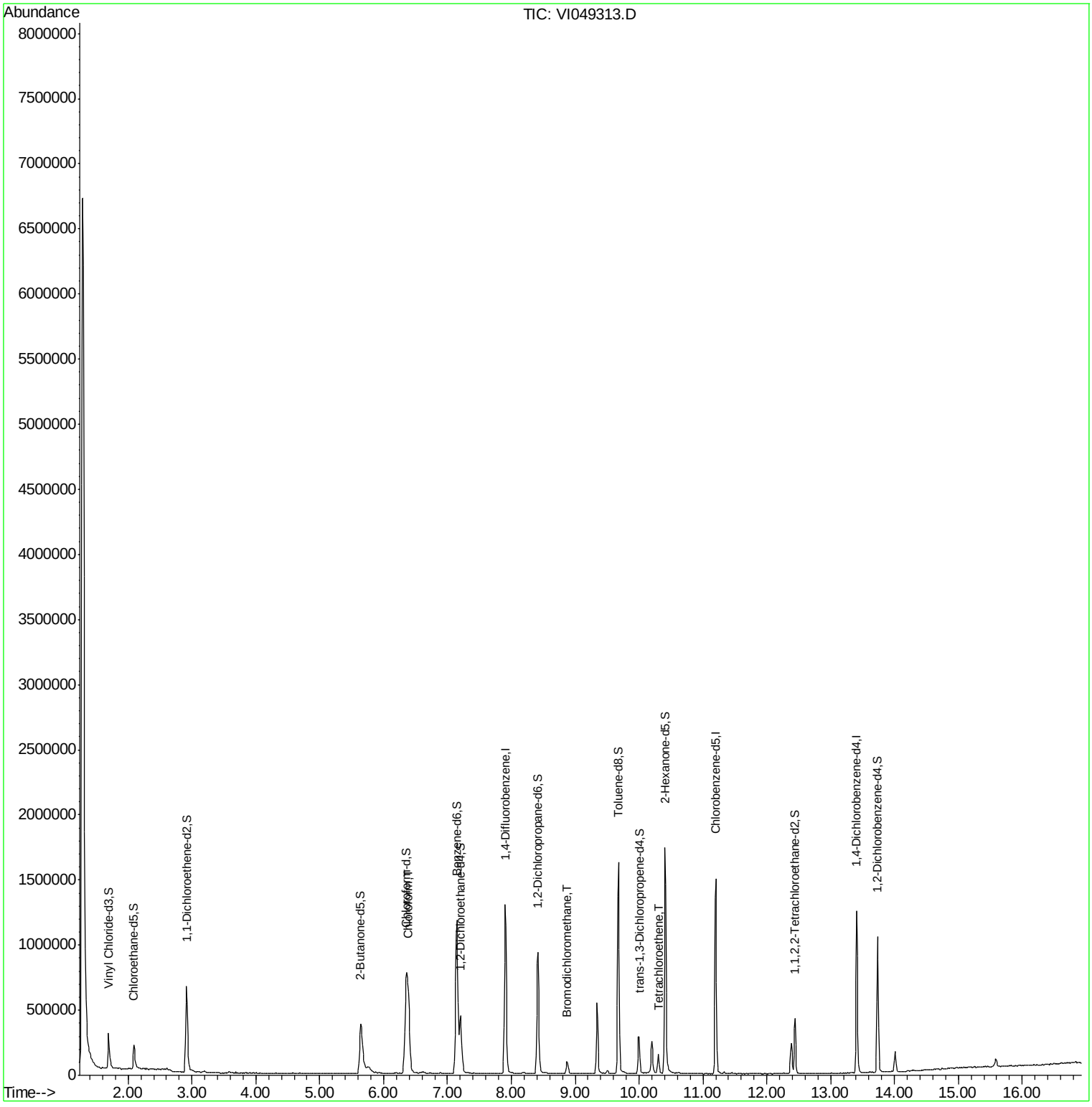
EPA-designated Registry Number.

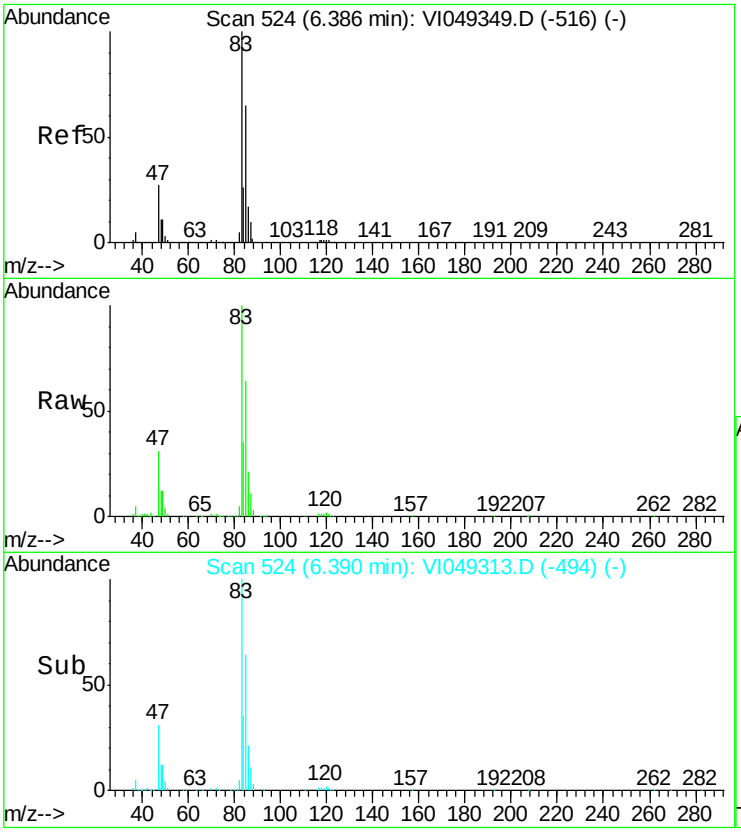
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050916\
Data File : VI049313.D
Acq On : 10 May 2016 00:07
Operator : FY/SY
Sample : H2943-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4131

Quant Time: May 26 13:00:28 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration



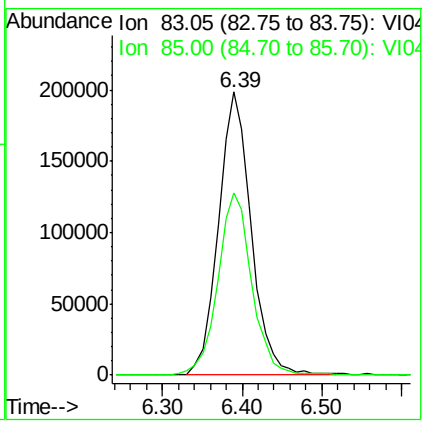


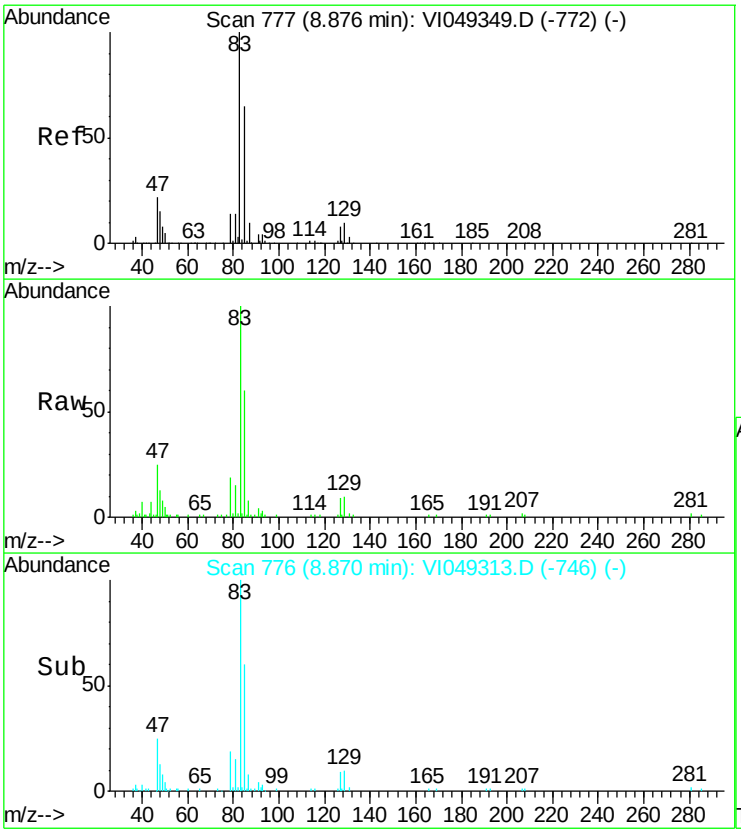
#25
Chloroform
Concen: 3.07 ug/L
RT: 6.39 min Scan# 524
Delta R.T. -0.00 min
Lab File: VI049313.D
Acq: 10 May 2016 00:07

Instrument : MSVOA_I
ClientSampleId : H4131

Tgt Ion: 83 Resp: 570348

Ion	Ratio	Lower	Upper
83	100		
85	64.4	47.3	87.8

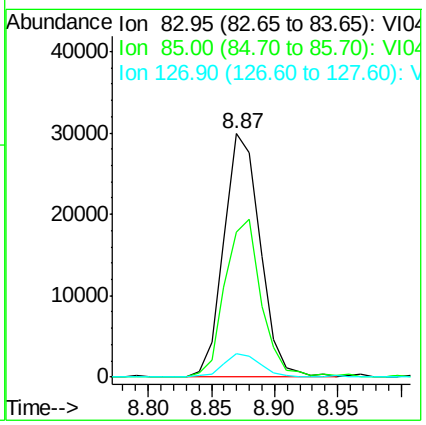


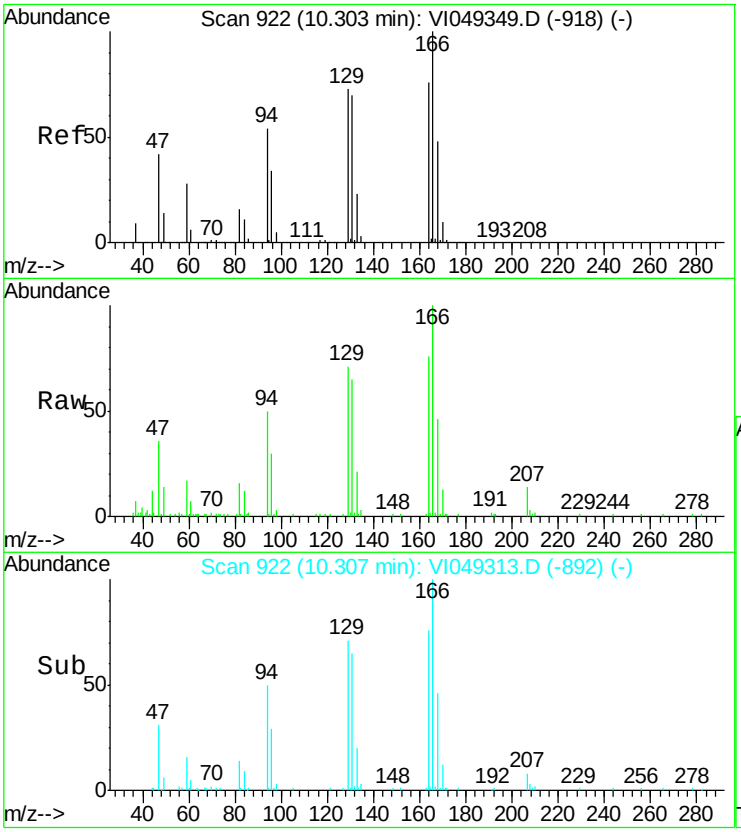


#38
Bromodichloromethane
Concen: 0.55 ug/L
RT: 8.87 min Scan# 776
Delta R.T. -0.00 min
Lab File: VI049313.D
Acq: 10 May 2016 00:07

Tgt Ion: 83 Resp: 59695

Ion	Ratio	Lower	Upper
83	100		
85	59.7	44.7	83.1
127	9.4	6.6	9.8



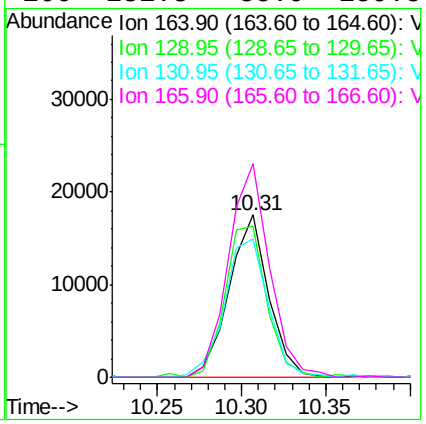


#47
Tetrachloroethene
Concen: 0.49 ug/L
RT: 10.31 min Scan# 922
Delta R.T. -0.00 min
Lab File: VI049313.D
Acq: 10 May 2016 00:07

Instrument :
MSVOA_I
ClientSampleId :
H4131

Tgt Ion:164 Resp: 28481

Ion	Ratio	Lower	Upper
164	100		
129	93.5	62.1	115.3
131	85.3	60.6	112.6
166	131.8	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050916\
Data File : VI049313.D
Acq On : 10 May 2016 00:07
Operator : FY/SY
Sample : H2943-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4131

Quant Time: May 26 13:00:28 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1154740	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	747020	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	275288	5.00	ug/L	-0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	287245	4.04	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 80.80%			
7) Chloroethane-d5	2.09	69	189305	4.81	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 96.20%			
11) 1,1-Dichloroethene-d2	2.92	63	519942	3.10	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 62.00%			
20) 2-Butanone-d5	5.64	46	905120	58.81	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 117.62%			
24) Chloroform-d	6.35	84	883457	4.88	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.60%			
26) 1,2-Dichloroethane-d4	7.21	65	389804	5.27	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.40%			
32) Benzene-d6	7.15	84	1495000	5.14	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.80%			
36) 1,2-Dichloropropane-d6	8.42	67	427853	5.23	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.60%			
41) Toluene-d8	9.68	98	1020941	4.76	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.20%			
43) trans-1,3-Dichloropropene-	10.00	79	149047	4.62	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.40%			
46) 2-Hexanone-d5	10.41	63	581128	57.15	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 114.30%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	192851	5.18	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 103.60%			
63) 1,2-Dichlorobenzene-d4	13.73	152	241330	5.00	ug/L	-0.01
Spiked Amount 5.000	Range 80 - 120		Recovery = 100.00%			
Target Compounds						Qvalue
25) Chloroform	6.39	83	570348	3.07	ug/L	96
38) Bromodichloromethane	8.87	83	59695	0.55	ug/L	95
47) Tetrachloroethene	10.31	164	28481	0.49	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049313.D
Acq On : 10 May 2016 00:07
Operator : FY/SY
Sample : H2943-20
Misc : 25mL/MSVOA I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4131

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.291	3	6	30	rVB	6671860	19230231	100.00%	36.465%
2	1.597	35	37	39	rBV3	12725	20180	0.10%	0.038%
3	1.695	44	47	54	rBV	266394	434798	2.26%	0.824%
4	2.089	83	87	94	rBV	181644	378404	1.97%	0.718%
5	2.335	110	112	113	rBV2	5389	6083	0.03%	0.012%
6	2.453	123	124	129	rVB3	8655	18428	0.10%	0.035%
7	2.610	138	140	143	rVB	13530	19102	0.10%	0.036%
8	2.915	166	171	186	rVV	661668	1542688	8.02%	2.925%
9	3.102	186	190	195	rVV8	5804	22002	0.11%	0.042%
10	3.191	195	199	203	rVV4	12628	32618	0.17%	0.062%
11	3.280	207	208	210	rBV2	5732	6059	0.03%	0.011%
12	3.329	210	213	215	rBV4	2474	5665	0.03%	0.011%
13	3.585	235	239	243	rVV4	11235	30747	0.16%	0.058%
14	3.644	243	245	248	rVV3	3661	5561	0.03%	0.011%
15	3.683	248	249	250	rVV	12684	7814	0.04%	0.015%
16	3.752	254	256	259	rVB4	4815	7309	0.04%	0.014%
17	3.909	270	272	274	rBV3	3727	4698	0.02%	0.009%
18	3.998	280	281	287	rVB5	4146	7650	0.04%	0.015%
19	4.392	318	321	322	rBV2	4179	5065	0.03%	0.010%
20	4.520	329	334	335	rBV4	4351	12080	0.06%	0.023%
21	4.579	339	340	346	rVB4	4421	8486	0.04%	0.016%
22	4.825	363	365	368	rVB3	2663	4564	0.02%	0.009%
23	4.874	368	370	371	rBV2	3540	4850	0.03%	0.009%
24	4.904	371	373	377	rVB5	2353	4445	0.02%	0.008%
25	5.327	414	416	418	rVB3	3586	5061	0.03%	0.010%
26	5.415	421	425	427	rBV4	5306	8483	0.04%	0.016%
27	5.455	427	429	431	rVB2	2784	4534	0.02%	0.009%
28	5.484	431	432	435	rBV3	4460	6422	0.03%	0.012%
29	5.533	435	437	438	rBV	4723	4864	0.03%	0.009%
30	5.642	441	448	457	rBV	380802	1369261	7.12%	2.596%
31	6.055	489	490	494	rVB4	4317	6804	0.04%	0.013%
32	6.114	494	496	499	rBV4	4110	5836	0.03%	0.011%
33	6.173	499	502	503	rBV3	4149	7891	0.04%	0.015%
34	6.360	513	521	533	rBV3	777232	3418886	17.78%	6.483%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049313.D
Acq On : 10 May 2016 00:07
Operator : FY/SY
Sample : H2943-20
Misc : 25mL/MSVOA I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4131

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.626	544	548	553	rVB3	10492	30405	0.16%	0.058%
36	6.882	573	574	579	rVB4	5899	9440	0.05%	0.018%
37	6.970	581	583	586	rVB4	4126	5330	0.03%	0.010%
38	7.020	586	588	589	rBV2	4602	5992	0.03%	0.011%
39	7.049	589	591	594	rVB2	5114	6753	0.04%	0.013%
40	7.147	594	601	605	rBV	1176969	3216090	16.72%	6.098%
41	7.207	605	607	615	rVB	437029	915622	4.76%	1.736%
42	7.620	647	649	652	rBV3	3053	7231	0.04%	0.014%
43	7.659	652	653	656	rVB3	3896	4669	0.02%	0.009%
44	7.797	664	667	670	rVB4	3121	4465	0.02%	0.008%
45	7.905	673	678	687	rBV	1298581	2812183	14.62%	5.333%
46	8.043	691	692	695	rVB3	4318	5586	0.03%	0.011%
47	8.191	702	707	713	rBV8	10615	33325	0.17%	0.063%
48	8.329	719	721	724	rBV3	2417	4782	0.02%	0.009%
49	8.417	724	730	739	rBV	928813	2062146	10.72%	3.910%
50	8.693	756	758	760	rVB2	3516	4492	0.02%	0.009%
51	8.870	772	776	784	rBV	91440	210621	1.10%	0.399%
52	8.958	784	785	787	rBV2	5125	5335	0.03%	0.010%
53	9.077	794	797	799	rBV3	2939	5142	0.03%	0.010%
54	9.244	810	814	817	rVB6	3108	6776	0.04%	0.013%
55	9.342	817	824	833	rBV	542229	978901	5.09%	1.856%
56	9.500	836	840	844	rVB3	20444	48289	0.25%	0.092%
57	9.569	844	847	849	rBV4	3997	6145	0.03%	0.012%
58	9.677	853	858	864	rBV	1623226	2940301	15.29%	5.575%
59	9.874	875	878	881	rBV4	3419	7619	0.04%	0.014%
60	9.943	883	885	886	rBV2	3284	5182	0.03%	0.010%
61	10.002	886	891	898	rVV	283965	532280	2.77%	1.009%
62	10.090	898	900	902	rVV3	6581	12592	0.07%	0.024%
63	10.120	902	903	906	rVV3	8392	18377	0.10%	0.035%
64	10.199	906	911	917	rVV	245921	520218	2.71%	0.986%
65	10.307	917	922	928	rVV	146327	290642	1.51%	0.551%
66	10.405	928	932	947	rVV	1732550	3115206	16.20%	5.907%
67	10.582	947	950	951	rVV3	5298	9298	0.05%	0.018%
68	10.622	951	954	957	rVV5	9814	16324	0.08%	0.031%
69	10.720	959	964	966	rBV6	5174	11793	0.06%	0.022%
70	10.769	968	969	972	rVB2	4653	6940	0.04%	0.013%
71	10.937	983	986	989	rBV5	2029	4451	0.02%	0.008%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049313.D
Acq On : 10 May 2016 00:07
Operator : FY/SY
Sample : H2943-20
Misc : 25mL/MSVOA I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4131

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.202	1008	1013	1022	rBV	1499764	2607027	13.56%	4.944%
73	11.330	1022	1026	1030	rVB4	15120	26689	0.14%	0.051%
74	11.448	1036	1038	1042	rBV4	10022	17755	0.09%	0.034%
75	11.508	1042	1044	1046	rVB2	4134	4670	0.02%	0.009%
76	11.675	1059	1061	1064	rVB5	4948	9296	0.05%	0.018%
77	11.832	1072	1077	1078	rBV4	5027	10234	0.05%	0.019%
78	12.039	1094	1098	1100	rBV5	3416	8754	0.05%	0.017%
79	12.167	1110	1111	1114	rVB3	5520	6597	0.03%	0.013%
80	12.236	1116	1118	1120	rBV3	3750	7365	0.04%	0.014%
81	12.265	1120	1121	1126	rVB4	6626	9435	0.05%	0.018%
82	12.383	1128	1133	1136	rBV	234372	428231	2.23%	0.812%
83	12.443	1136	1139	1143	rVB	420594	697624	3.63%	1.323%
84	12.600	1154	1155	1159	rVB3	3737	5243	0.03%	0.010%
85	12.846	1178	1180	1184	rBV5	2925	5616	0.03%	0.011%
86	13.013	1194	1197	1199	rBV4	4915	7617	0.04%	0.014%
87	13.063	1199	1202	1204	rVV3	3106	5918	0.03%	0.011%
88	13.151	1208	1211	1214	rBV5	3159	7539	0.04%	0.014%
89	13.348	1229	1231	1233	rVB3	5764	6496	0.03%	0.012%
90	13.407	1233	1237	1244	rBV	1243175	2050167	10.66%	3.888%
91	13.624	1254	1259	1261	rBV5	5464	16397	0.09%	0.031%
92	13.653	1261	1262	1264	rVB2	5553	5023	0.03%	0.010%
93	13.732	1266	1270	1277	rBV	1039820	1802703	9.37%	3.418%
94	14.007	1294	1298	1305	rVB2	152555	286555	1.49%	0.543%
95	14.194	1315	1317	1321	rBV3	3659	6285	0.03%	0.012%
96	14.253	1321	1323	1324	rBV2	4056	5573	0.03%	0.011%
97	14.283	1324	1326	1327	rBV2	6658	6903	0.04%	0.013%
98	14.618	1358	1360	1362	rVB3	7167	7526	0.04%	0.014%
99	14.746	1371	1373	1376	rBV3	8882	15708	0.08%	0.030%
100	15.582	1454	1458	1464	rBV	59736	122928	0.64%	0.233%

Sum of corrected areas: 52736386

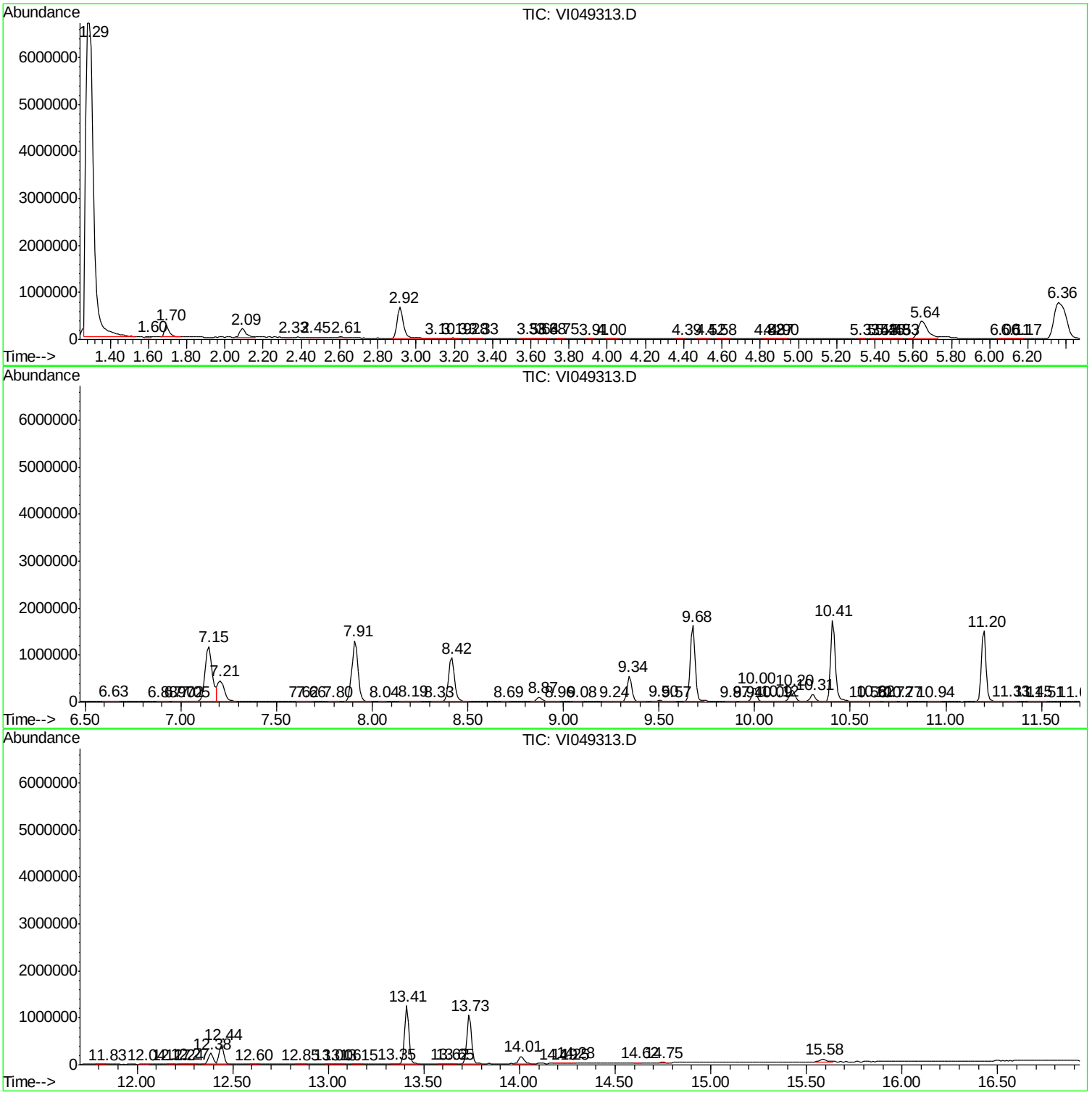
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049313.D
Acq On : 10 May 2016 00:07
Operator : FY/SY
Sample : H2943-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4131

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049313.D
Acq On : 10 May 2016 00:07
Operator : FY/SY
Sample : H2943-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4131

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

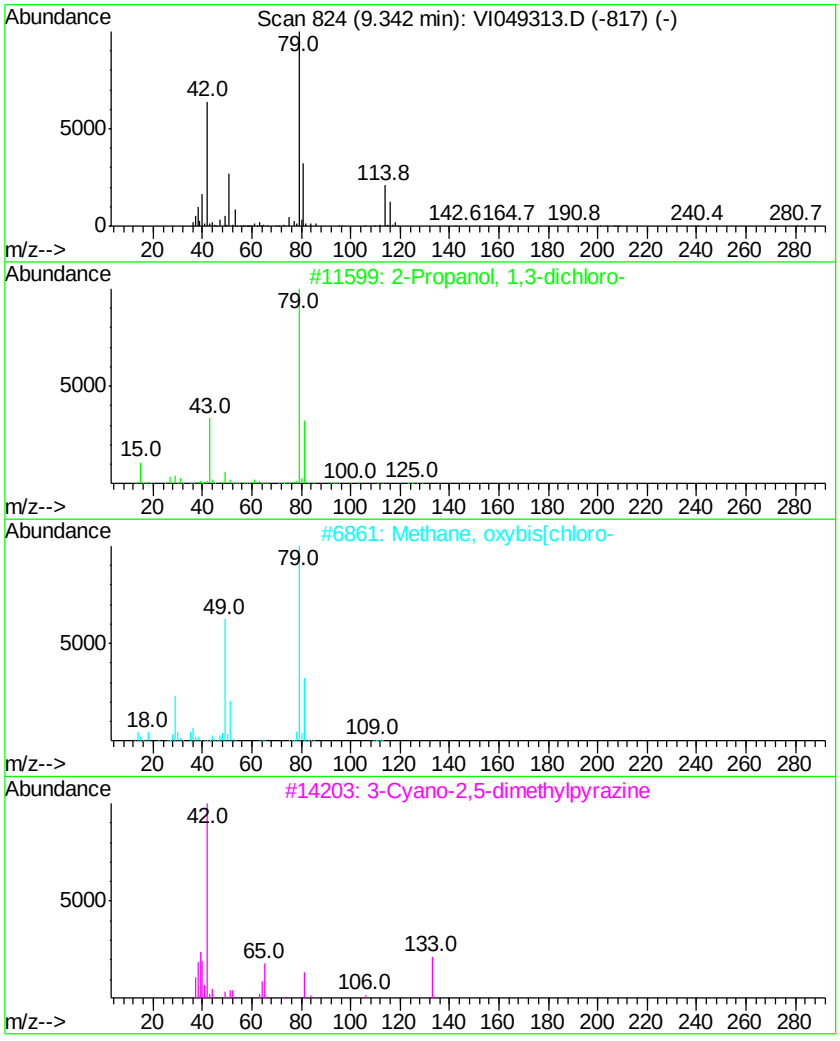
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

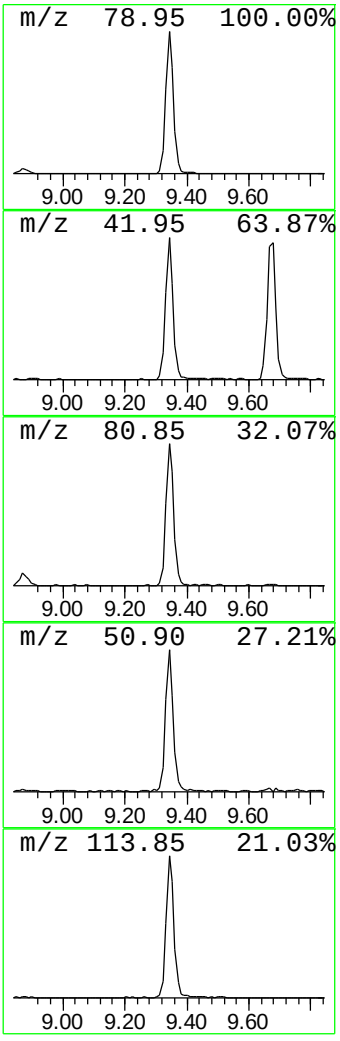
****

Peak Number 2 unknown-01 Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.34	1.74 ug/L	978901	1,4-Difluorobenzene	7.91

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Propanol, 1,3-dichloro-	128	C3H6Cl2O	000096-23-1	17
2	Methane, oxybis[chloro-	114	C2H4Cl2O	000542-88-1	9
3	3-Cyano-2,5-dimethylpyrazine	133	C7H7N3	002435-47-4	9
4	.alpha.,.alpha.-Dichloromethyl m...	114	C2H4Cl2O	004885-02-3	9
5	5-Dimethylamino-2-methyl-4-oxazo...	151	C7H9N3O	049837-48-1	9





Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049313.D
Acq On : 10 May 2016 00:07
Operator : FY/SY
Sample : H2943-20
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4131

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
unknown-01	9.34	1.7	ug/L	978901	1	7.91	2812180	5.0

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4134

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049326.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4134

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049326.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.2	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4134

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049326.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4134

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-06
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049326.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/10/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

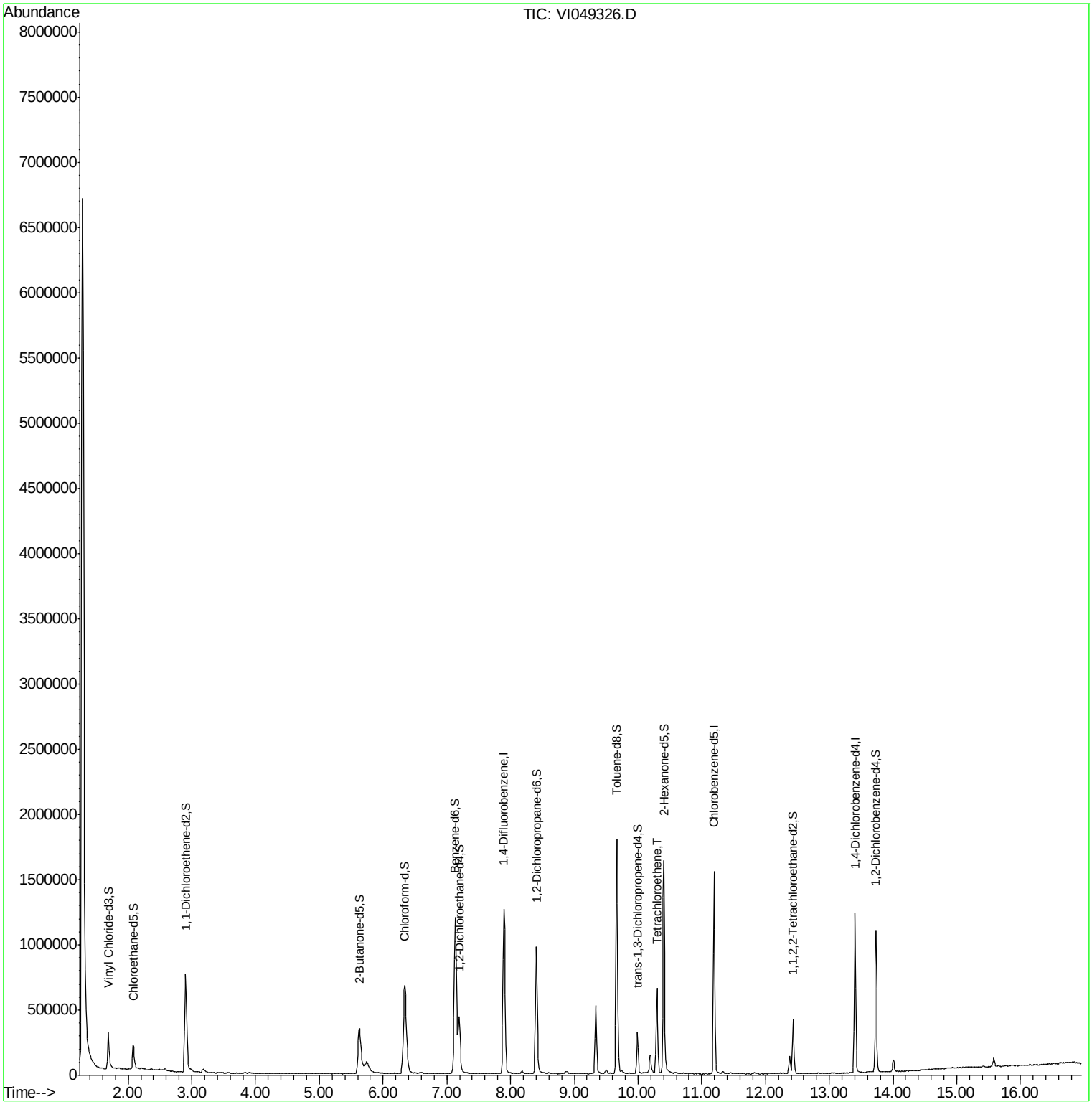
EPA-designated Registry Number.

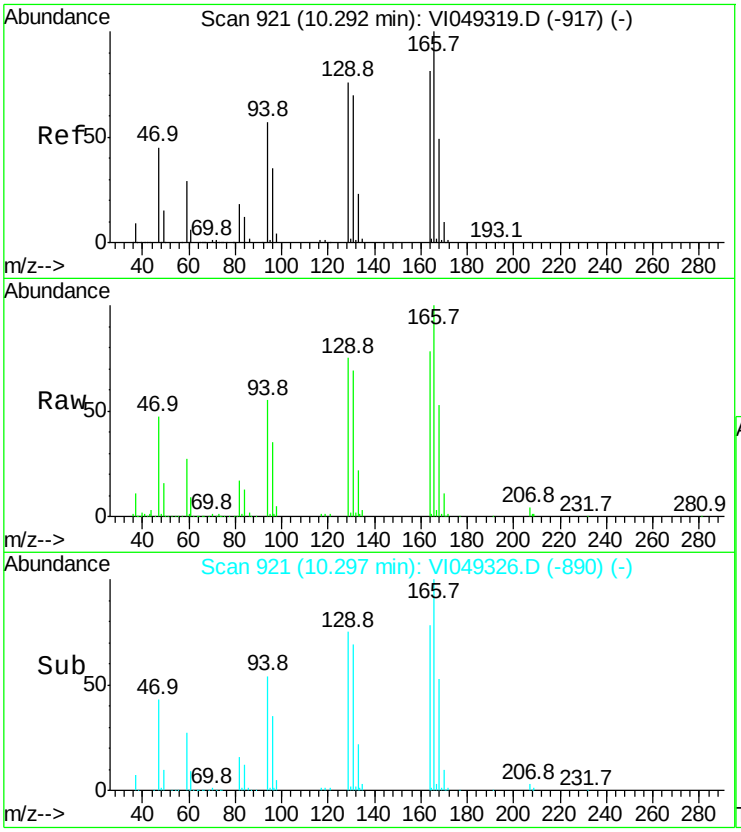
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049326.D
Acq On : 10 May 2016 16:00
Operator : FY/SY
Sample : H2943-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4134

Quant Time: May 11 12:03:25 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration



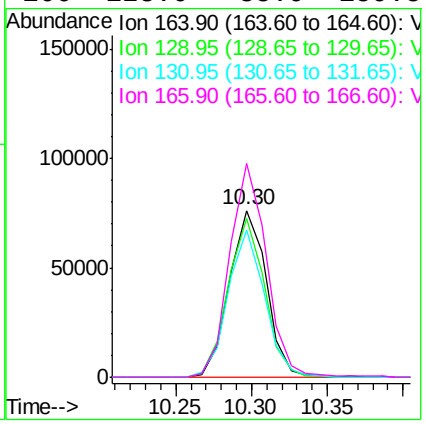


#47
Tetrachloroethene
Concen: 2.23 ug/L
RT: 10.30 min Scan# 921
Delta R.T. 0.00 min
Lab File: VI049326.D
Acq: 10 May 2016 16:00

Instrument :
MSVOA_I
ClientSampleId :
H4134

Tgt Ion:164 Resp: 129396

Ion	Ratio	Lower	Upper
164	100		
129	95.4	62.1	115.3
131	88.5	60.6	112.6
166	128.0	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049326.D
Acq On : 10 May 2016 16:00
Operator : FY/SY
Sample : H2943-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4134

Quant Time: May 11 12:03:25 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1152670	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	743427	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	275908	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	335515	4.73	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 94.60%			
7) Chloroethane-d5	2.08	69	208073	5.29	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 105.80%			
11) 1,1-Dichloroethene-d2	2.91	63	609499	3.65	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 73.00%			
20) 2-Butanone-d5	5.63	46	864895	56.29	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 112.58%			
24) Chloroform-d	6.34	84	871174	4.83	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.60%			
26) 1,2-Dichloroethane-d4	7.20	65	385480	5.22	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.40%			
32) Benzene-d6	7.13	84	1582330	5.46	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 109.20%			
36) 1,2-Dichloropropane-d6	8.41	67	445339	5.47	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 109.40%			
41) Toluene-d8	9.67	98	1101555	5.16	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.20%			
43) trans-1,3-Dichloropropene-	9.99	79	155928	4.86	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 97.20%			
46) 2-Hexanone-d5	10.40	63	560370	55.37	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 110.74%			
57) 1,1,2,2-Tetrachloroethane-	12.43	84	181810	4.91	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.20%			
63) 1,2-Dichlorobenzene-d4	13.73	152	246570	5.10	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 102.00%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.30	164	129396	2.23	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051016\
Data File : VI049326.D
Acq On : 10 May 2016 16:00
Operator : FY/SY
Sample : H2943-06
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4134

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.281	3	5	27	rVB	6655636	18202192	100.00%	35.032%
2	1.695	43	47	54	rBV	278421	537987	2.96%	1.035%
3	2.079	83	86	93	rBV	182625	382440	2.10%	0.736%
4	2.521	129	131	132	rBV	5457	6359	0.03%	0.012%
5	2.797	157	159	161	rBV2	4842	6531	0.04%	0.013%
6	2.905	165	170	186	rBV	751227	1778662	9.77%	3.423%
7	3.082	186	188	190	rVV3	6124	11409	0.06%	0.022%
8	3.181	194	198	206	rVB	23621	74076	0.41%	0.143%
9	3.417	218	222	223	rBV4	3540	8104	0.04%	0.016%
10	3.584	235	239	242	rVB5	5723	14522	0.08%	0.028%
11	3.702	250	251	254	rVB3	3385	4903	0.03%	0.009%
12	3.801	258	261	262	rBV2	3886	5417	0.03%	0.010%
13	3.958	276	277	283	rVB4	6800	11008	0.06%	0.021%
14	4.096	288	291	292	rVV3	3669	5760	0.03%	0.011%
15	4.185	298	300	304	rVV4	3824	8987	0.05%	0.017%
16	4.273	306	309	313	rVV6	3303	8546	0.05%	0.016%
17	4.569	337	339	344	rBV6	4168	9725	0.05%	0.019%
18	4.933	373	376	378	rBV3	3662	6538	0.04%	0.013%
19	5.002	382	383	387	rVV4	3927	5374	0.03%	0.010%
20	5.090	390	392	396	rVV5	4014	4994	0.03%	0.010%
21	5.169	398	400	403	rVB3	5349	8203	0.05%	0.016%
22	5.248	405	408	411	rVB4	2391	4736	0.03%	0.009%
23	5.395	420	423	426	rBV4	3784	9056	0.05%	0.017%
24	5.484	428	432	434	rVB4	4042	6579	0.04%	0.013%
25	5.631	439	447	454	rBV	349809	1271220	6.98%	2.447%
26	5.740	455	458	471	rVV	87517	396897	2.18%	0.764%
27	5.917	475	476	479	rVV3	6836	9629	0.05%	0.019%
28	6.183	502	503	506	rBV3	4347	5029	0.03%	0.010%
29	6.232	506	508	509	rVB2	4650	5303	0.03%	0.010%
30	6.340	512	519	533	rBV2	674636	2299628	12.63%	4.426%
31	6.862	568	572	575	rVB4	2646	7491	0.04%	0.014%
32	6.960	579	582	584	rBV3	4307	8498	0.05%	0.016%
33	7.127	592	599	603	rBV	1196073	3257118	17.89%	6.269%
34	7.196	603	606	616	rVV	436631	1100976	6.05%	2.119%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051016\
Data File : VI049326.D
Acq On : 10 May 2016 16:00
Operator : FY/SY
Sample : H2943-06
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4134

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	7.314	616	618	620	rVB2	7535	9952	0.05%	0.019%
36	7.452	629	632	635	rVB4	4510	9734	0.05%	0.019%
37	7.551	639	642	644	rVB4	3933	6578	0.04%	0.013%
38	7.600	644	647	650	rBV4	4791	10428	0.06%	0.020%
39	7.718	656	659	661	rBV4	2295	5004	0.03%	0.010%
40	7.895	672	677	687	rBV	1259663	2776599	15.25%	5.344%
41	8.121	698	700	703	rBV3	4147	8676	0.05%	0.017%
42	8.181	703	706	712	rVB5	21670	47257	0.26%	0.091%
43	8.289	713	717	721	rBV5	2177	6868	0.04%	0.013%
44	8.407	723	729	739	rBV	971972	2125896	11.68%	4.091%
45	8.604	746	749	752	rVB4	8212	14153	0.08%	0.027%
46	8.801	766	769	770	rBV3	5041	8047	0.04%	0.015%
47	8.870	773	776	784	rVV6	16965	51095	0.28%	0.098%
48	9.096	797	799	804	rVB5	3830	6232	0.03%	0.012%
49	9.184	807	808	812	rVB3	3057	5309	0.03%	0.010%
50	9.234	812	813	817	rBV4	3148	6225	0.03%	0.012%
51	9.332	819	823	832	rVV	526185	1014015	5.57%	1.952%
52	9.499	836	840	843	rVV2	31293	65793	0.36%	0.127%
53	9.558	845	846	848	rVV2	7248	5784	0.03%	0.011%
54	9.667	852	857	863	rVV	1795031	3189430	17.52%	6.138%
55	9.745	863	865	871	rVV	26876	54099	0.30%	0.104%
56	9.834	871	874	875	rVV3	4650	8514	0.05%	0.016%
57	9.864	875	877	879	rVV3	5255	7893	0.04%	0.015%
58	9.992	886	890	896	rVV	319625	546471	3.00%	1.052%
59	10.070	896	898	900	rVV3	6559	12685	0.07%	0.024%
60	10.110	900	902	903	rVV2	8519	12702	0.07%	0.024%
61	10.139	903	905	906	rVV2	10178	15827	0.09%	0.030%
62	10.188	906	910	916	rVV	143881	333684	1.83%	0.642%
63	10.297	916	921	926	rVV	656358	1121494	6.16%	2.158%
64	10.405	928	932	947	rVV	1637217	2970345	16.32%	5.717%
65	10.572	947	949	959	rVV6	10492	36645	0.20%	0.071%
66	10.710	962	963	964	rVB	12058	7120	0.04%	0.014%
67	10.808	972	973	976	rBV2	3780	6070	0.03%	0.012%
68	10.956	984	988	989	rVB4	2795	5840	0.03%	0.011%
69	10.976	989	990	993	rVB2	3591	5183	0.03%	0.010%
70	11.025	993	995	997	rBV3	4714	6945	0.04%	0.013%
71	11.192	1008	1012	1022	rBV	1549784	2563366	14.08%	4.933%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051016\
Data File : VI049326.D
Acq On : 10 May 2016 16:00
Operator : FY/SY
Sample : H2943-06
Misc : 25mL/MSVOA I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4134

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.330	1022	1026	1031	rVB2	15926	36240	0.20%	0.070%
73	11.448	1035	1038	1042	rVB4	8580	15098	0.08%	0.029%
74	11.497	1042	1043	1047	rBV3	2892	5755	0.03%	0.011%
75	11.822	1069	1076	1080	rBV6	10145	33373	0.18%	0.064%
76	11.980	1090	1092	1095	rBV4	3897	5789	0.03%	0.011%
77	12.058	1097	1100	1102	rBV4	4638	8174	0.04%	0.016%
78	12.167	1109	1111	1114	rBV3	5407	7525	0.04%	0.014%
79	12.235	1116	1118	1121	rBV3	6177	12498	0.07%	0.024%
80	12.275	1121	1122	1125	rVB3	4937	7117	0.04%	0.014%
81	12.383	1125	1133	1135	rBV	135408	261551	1.44%	0.503%
82	12.432	1135	1138	1143	rVV	415061	709395	3.90%	1.365%
83	12.600	1152	1155	1157	rBV3	2485	5480	0.03%	0.011%
84	12.649	1157	1160	1163	rBV4	2599	7291	0.04%	0.014%
85	12.708	1165	1166	1169	rVB2	4656	7108	0.04%	0.014%
86	12.757	1169	1171	1173	rBV3	4150	6099	0.03%	0.012%
87	12.885	1181	1184	1185	rBV2	4301	4811	0.03%	0.009%
88	13.338	1226	1230	1233	rBV5	6626	17840	0.10%	0.034%
89	13.407	1233	1237	1248	rVB	1226519	2057409	11.30%	3.960%
90	13.525	1248	1249	1251	rBV2	4338	4749	0.03%	0.009%
91	13.584	1253	1255	1256	rBV2	3821	5583	0.03%	0.011%
92	13.731	1263	1270	1278	rBV	1088107	1849743	10.16%	3.560%
93	13.850	1280	1282	1285	rBV4	4039	7507	0.04%	0.014%
94	14.007	1294	1298	1303	rVB2	90411	156627	0.86%	0.301%
95	14.233	1319	1321	1322	rVB2	5374	4837	0.03%	0.009%
96	14.263	1322	1324	1325	rBV2	4115	5491	0.03%	0.011%
97	14.292	1325	1327	1329	rBV3	6298	8716	0.05%	0.017%
98	14.391	1335	1337	1338	rBV2	4530	5502	0.03%	0.011%
99	14.568	1353	1355	1356	rBV2	6534	8216	0.05%	0.016%
100	15.582	1454	1458	1462	rBV	63556	122114	0.67%	0.235%

Sum of corrected areas: 51959493

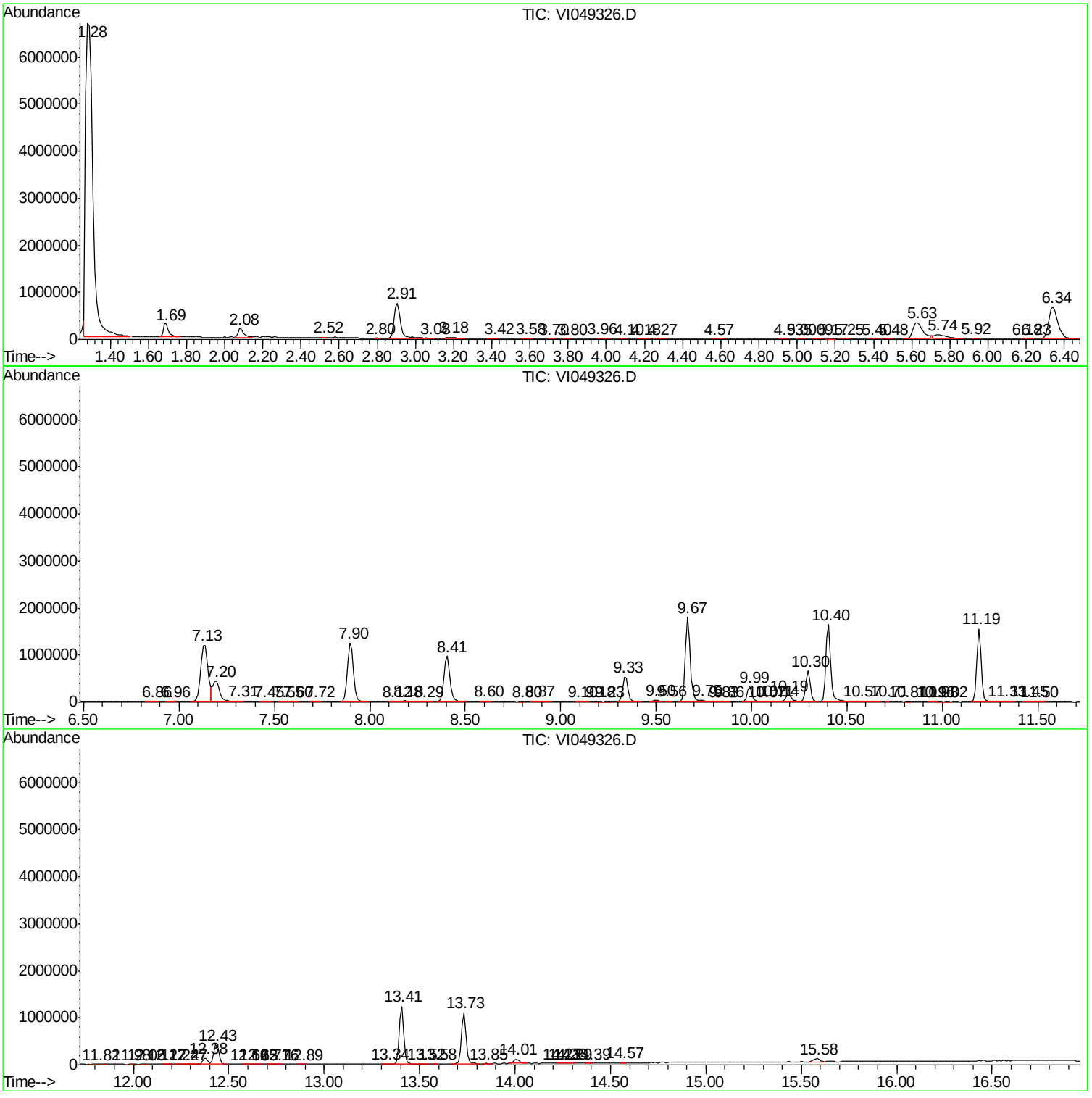
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049326.D
Acq On : 10 May 2016 16:00
Operator : FY/SY
Sample : H2943-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4134

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049326.D
Acq On : 10 May 2016 16:00
Operator : FY/SY
Sample : H2943-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4134

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049326.D
Acq On : 10 May 2016 16:00
Operator : FY/SY
Sample : H2943-06
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4134

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4135

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049314.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.11	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.94	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.11	J

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4135

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049314.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.10	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	3.1	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4135

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049314.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4135

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-21
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049314.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/10/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

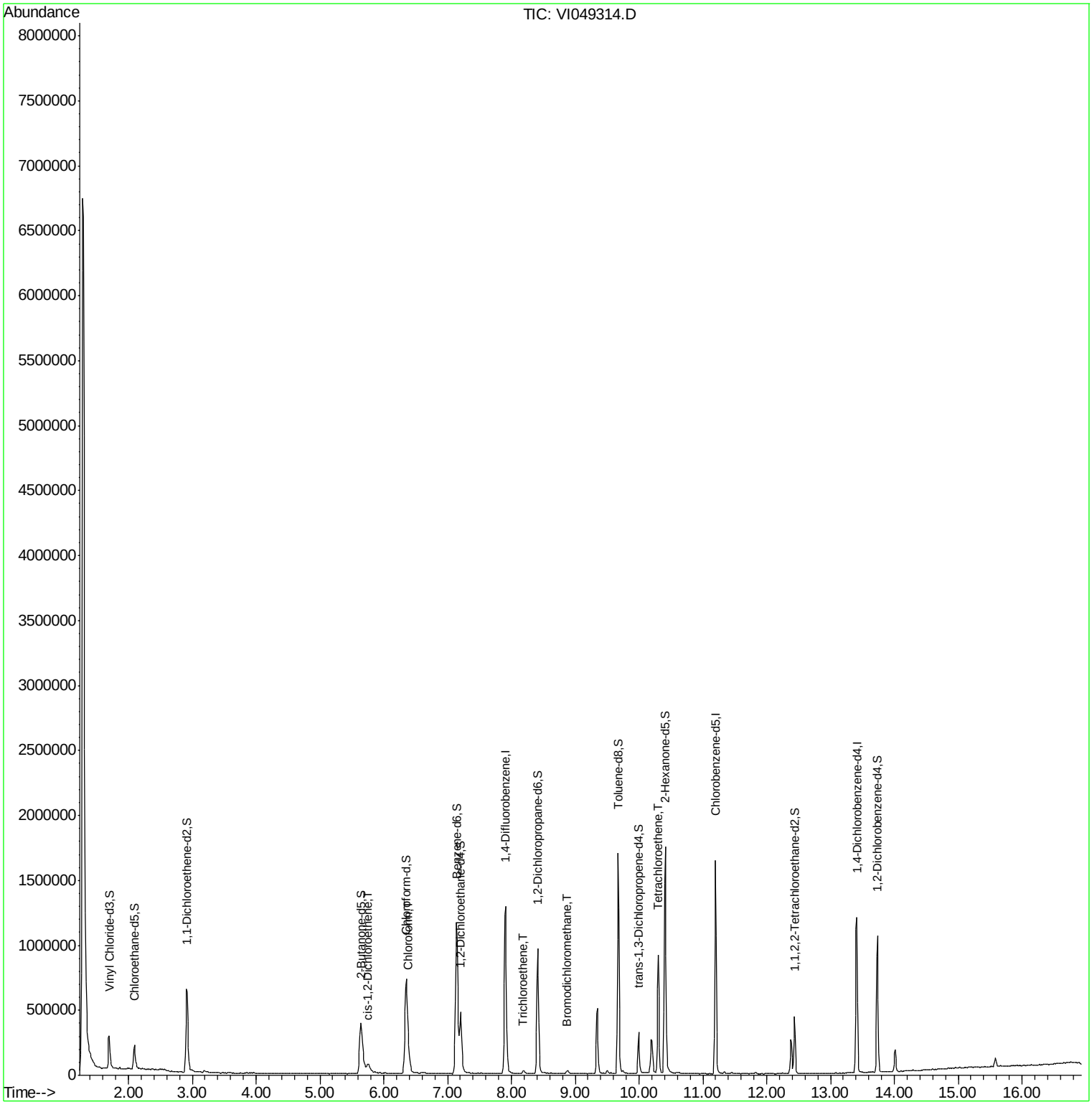
EPA-designated Registry Number.

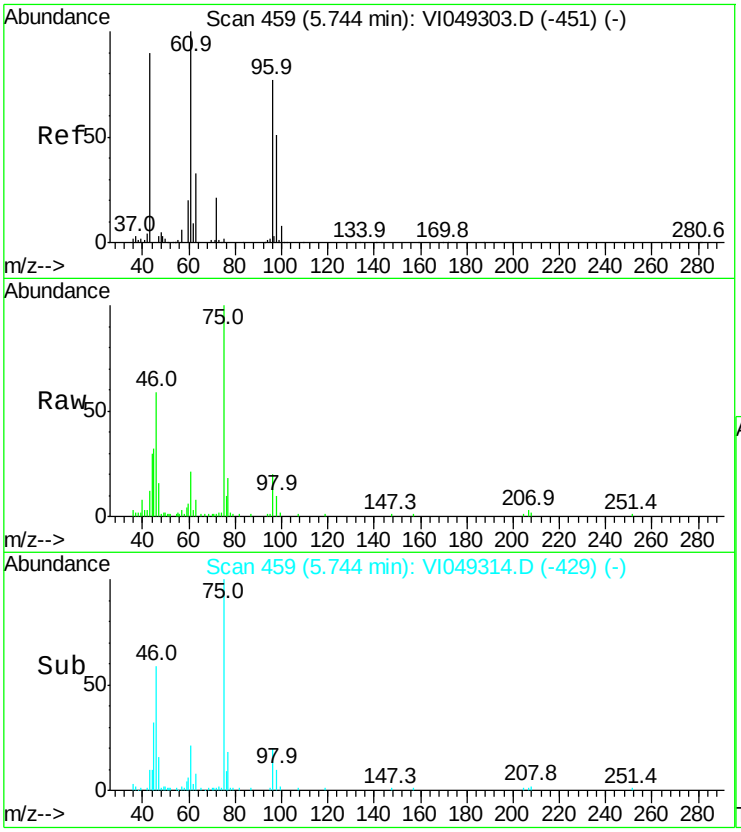
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049314.D
Acq On : 10 May 2016 00:38
Operator : FY/SY
Sample : H2943-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4135

Quant Time: May 10 07:06:02 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration



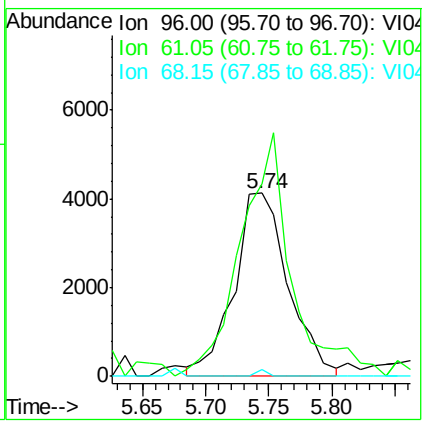


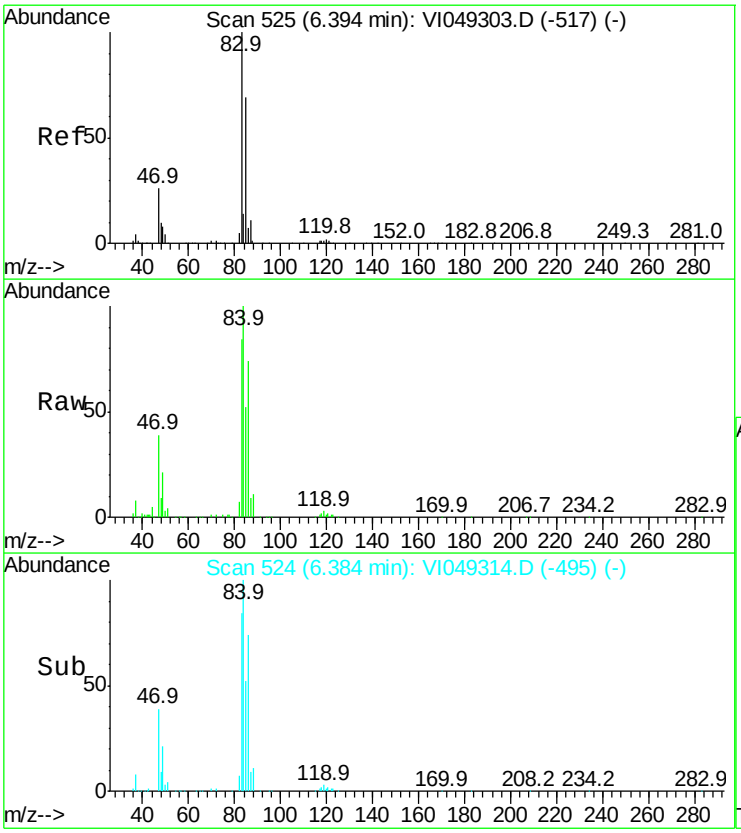
#22
cis-1,2-Dichloroethene
Concen: 0.11 ug/L
RT: 5.74 min Scan# 459
Delta R.T. -0.00 min
Lab File: VI049314.D
Acq: 10 May 2016 00:38

Instrument : MSVOA_I
ClientSampleId : H4135

Tgt Ion: 96 Resp: 12369

Ion	Ratio	Lower	Upper
96	100		
61	105.4	82.1	152.5
68	4.0	0.0	0.0#

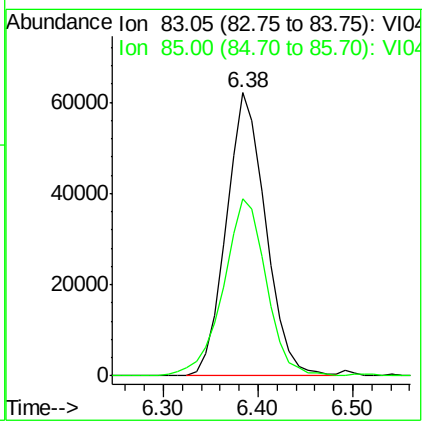


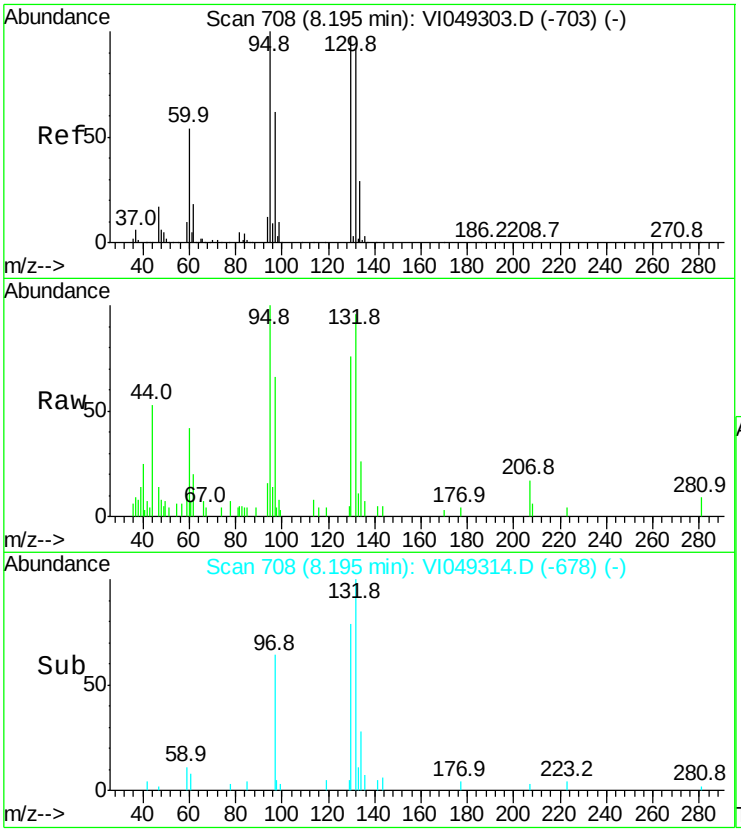


#25
Chloroform
Concen: 0.94 ug/L
RT: 6.38 min Scan# 524
Delta R.T. -0.01 min
Lab File: VI049314.D
Acq: 10 May 2016 00:38

Tgt Ion: 83 Resp: 178226

Ion	Ratio	Lower	Upper
83	100		
85	62.4	47.3	87.8



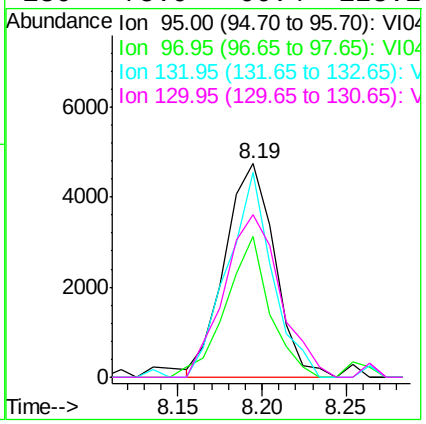


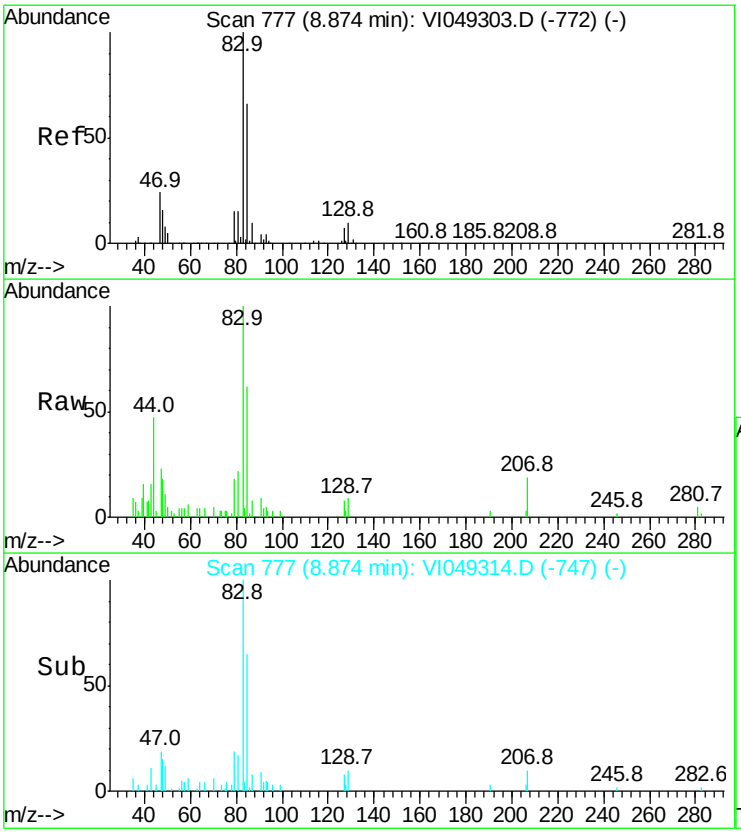
#34
Trichloroethene
Concen: 0.11 ug/L
RT: 8.19 min Scan# 708
Delta R.T. -0.00 min
Lab File: VI049314.D
Acq: 10 May 2016 00:38

Instrument :
MSVOA_I
ClientSampleId :
H4135

Tgt Ion: 95 Resp: 9775

Ion	Ratio	Lower	Upper
95	100		
97	65.8	45.8	85.2
132	95.6	63.9	118.7
130	75.9	66.4	123.2

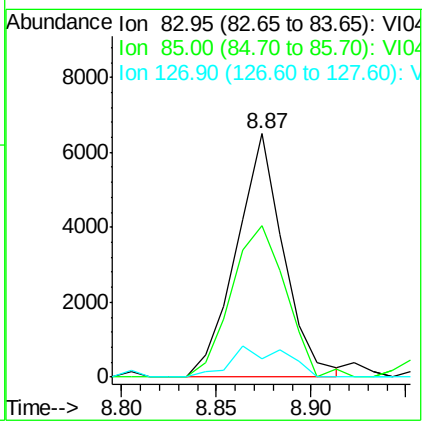


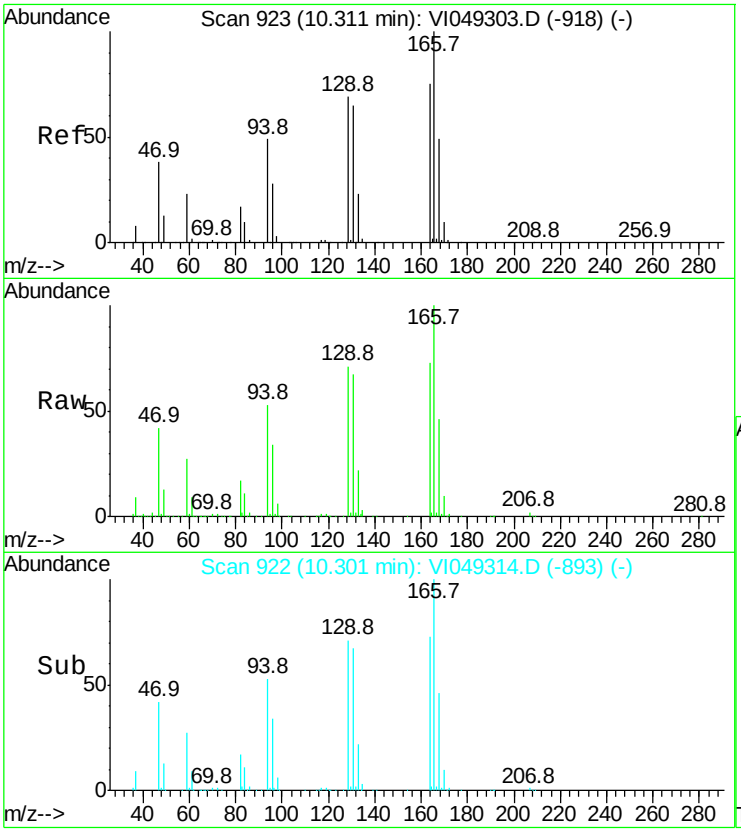


#38
Bromodichloromethane
Concen: 0.10 ug/L
RT: 8.87 min Scan# 777
Delta R.T. -0.00 min
Lab File: VI049314.D
Acq: 10 May 2016 00:38

Tgt Ion: 83 Resp: 11231

Ion	Ratio	Lower	Upper
83	100		
85	62.3	44.7	83.1
127	7.7	6.6	9.8



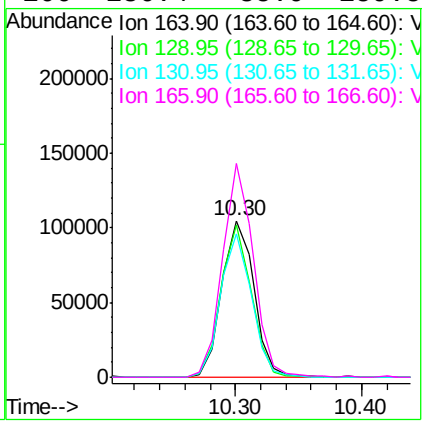


#47
Tetrachloroethene
Concen: 3.05 ug/L
RT: 10.30 min Scan# 922
Delta R.T. -0.01 min
Lab File: VI049314.D
Acq: 10 May 2016 00:38

Instrument :
MSVOA_I
ClientSampleId :
H4135

Tgt Ion:164 Resp: 184054

Ion	Ratio	Lower	Upper
164	100		
129	97.2	62.1	115.3
131	91.5	60.6	112.6
166	136.4	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049314.D
Acq On : 10 May 2016 00:38
Operator : FY/SY
Sample : H2943-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4135

Quant Time: May 10 07:06:02 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1184178	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	773729	5.00	ug/L	-0.01
59) 1,4-Dichlorobenzene-d4	13.41	152	281075	5.00	ug/L	-0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	288836	3.96	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 79.20%			
7) Chloroethane-d5	2.09	69	192279	4.76	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.20%			
11) 1,1-Dichloroethene-d2	2.91	63	516380	3.01	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 60.20%			
20) 2-Butanone-d5	5.65	46	941448	59.65	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 119.30%			
24) Chloroform-d	6.35	84	877826	4.73	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.60%			
26) 1,2-Dichloroethane-d4	7.20	65	396734	5.23	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.60%			
32) Benzene-d6	7.14	84	1516628	5.03	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.60%			
36) 1,2-Dichloropropane-d6	8.41	67	444552	5.25	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 140		Recovery = 105.00%			
41) Toluene-d8	9.67	98	1019561	4.59	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 91.80%			
43) trans-1,3-Dichloropropene-	10.00	79	143909	4.31	ug/L	-0.01
Spiked Amount 5.000	Range 55 - 130		Recovery = 86.20%			
46) 2-Hexanone-d5	10.41	63	578323	54.91	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 109.82%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	191059	4.96	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 120		Recovery = 99.20%			
63) 1,2-Dichlorobenzene-d4	13.74	152	244743	4.97	ug/L	-0.01
Spiked Amount 5.000	Range 80 - 120		Recovery = 99.40%			
Target Compounds						Qvalue
22) cis-1,2-Dichloroethene	5.74	96	12369	0.11	ug/L #	89
25) Chloroform	6.38	83	178226	0.94	ug/L	94
34) Trichloroethene	8.19	95	9775	0.11	ug/L	91
38) Bromodichloromethane	8.87	83	11231	0.10	ug/L	98
47) Tetrachloroethene	10.30	164	184054	3.05	ug/L	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049314.D
Acq On : 10 May 2016 00:38
Operator : FY/SY
Sample : H2943-21
Misc : 25mL/MSVOA I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4135

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	3	6	27	rVB	6676410	18135292	100.00%	34.488%
2	1.699	45	48	56	rVB	250344	453881	2.50%	0.863%
3	1.866	62	65	67	rVB2	14973	22803	0.13%	0.043%
4	2.093	84	88	94	rBV	187246	385062	2.12%	0.732%
5	2.368	114	116	119	rVB4	9822	15615	0.09%	0.030%
6	2.565	134	136	139	rVB3	15362	19874	0.11%	0.038%
7	2.811	158	161	162	rBV3	5079	8897	0.05%	0.017%
8	2.910	167	171	178	rBV	638373	1471117	8.11%	2.798%
9	3.185	197	199	206	rVB2	15137	42692	0.24%	0.081%
10	3.402	220	221	226	rVB3	6705	11548	0.06%	0.022%
11	3.461	226	227	231	rBV4	3271	7614	0.04%	0.014%
12	3.520	231	233	235	rVB2	3071	4823	0.03%	0.009%
13	3.569	235	238	239	rBV3	8020	13288	0.07%	0.025%
14	3.756	254	257	259	rVV3	5125	5825	0.03%	0.011%
15	3.825	261	264	265	rVV3	4134	5718	0.03%	0.011%
16	3.854	265	267	269	rVV3	4159	6931	0.04%	0.013%
17	3.904	269	272	273	rVV3	4460	6752	0.04%	0.013%
18	3.963	276	278	284	rVB4	6455	13898	0.08%	0.026%
19	4.041	284	286	289	rVB4	2759	4959	0.03%	0.009%
20	4.110	291	293	296	rVB4	4155	6938	0.04%	0.013%
21	4.209	299	303	305	rBV3	4455	9665	0.05%	0.018%
22	4.248	305	307	310	rBV2	3286	5911	0.03%	0.011%
23	4.287	310	311	314	rVB3	2960	4818	0.03%	0.009%
24	4.406	320	323	326	rBV4	2277	4855	0.03%	0.009%
25	4.671	346	350	351	rBV4	2651	4742	0.03%	0.009%
26	5.301	410	414	417	rBV5	3080	7994	0.04%	0.015%
27	5.360	417	420	423	rBV2	3902	8129	0.04%	0.015%
28	5.409	423	425	427	rVB3	3562	5232	0.03%	0.010%
29	5.439	427	428	430	rBV2	4334	5968	0.03%	0.011%
30	5.537	436	438	440	rVB3	4266	5100	0.03%	0.010%
31	5.646	442	449	456	rBV	388158	1377430	7.60%	2.619%
32	5.754	456	460	469	rVB3	61686	258695	1.43%	0.492%
33	5.931	476	478	482	rVB3	5191	11202	0.06%	0.021%
34	6.029	486	488	489	rVB2	5933	6168	0.03%	0.012%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049314.D
Acq On : 10 May 2016 00:38
Operator : FY/SY
Sample : H2943-21
Misc : 25mL/MSVOA I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4135

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.049	489	490	493	rBV3	3672	5827	0.03%	0.011%
36	6.167	498	502	503	rBV4	3146	5587	0.03%	0.011%
37	6.354	513	521	537	rBV2	727394	2506647	13.82%	4.767%
38	6.610	543	547	553	rVB6	10352	37469	0.21%	0.071%
39	6.689	553	555	557	rBV3	3781	5512	0.03%	0.010%
40	6.728	557	559	565	rVB5	5046	12517	0.07%	0.024%
41	6.817	565	568	569	rVB3	4959	6898	0.04%	0.013%
42	6.886	571	575	576	rBV3	4702	8333	0.05%	0.016%
43	6.905	576	577	583	rVB6	2829	6195	0.03%	0.012%
44	7.053	590	592	594	rVB2	3408	5781	0.03%	0.011%
45	7.142	594	601	605	rBV	1162780	3186587	17.57%	6.060%
46	7.201	605	607	620	rVB	466968	1028415	5.67%	1.956%
47	7.525	637	640	642	rBV3	4045	5393	0.03%	0.010%
48	7.634	647	651	654	rVB5	4154	10769	0.06%	0.020%
49	7.722	657	660	661	rBV2	4497	5218	0.03%	0.010%
50	7.752	661	663	666	rVB4	4405	7647	0.04%	0.015%
51	7.791	666	667	670	rBV3	3413	5150	0.03%	0.010%
52	7.909	673	679	692	rBV	1284734	2904910	16.02%	5.524%
53	8.057	692	694	699	rVB6	4144	8348	0.05%	0.016%
54	8.185	703	707	713	rVB4	26082	65501	0.36%	0.125%
55	8.411	723	730	737	rBV	963407	2078456	11.46%	3.953%
56	8.618	748	751	753	rVB4	3838	5449	0.03%	0.010%
57	8.785	764	768	769	rBV4	4552	8006	0.04%	0.015%
58	8.874	773	777	783	rBV3	20696	54007	0.30%	0.103%
59	9.346	820	825	833	rBV	501928	967870	5.34%	1.841%
60	9.494	837	840	844	rBV2	18621	39183	0.22%	0.075%
61	9.563	844	847	850	rVB4	8852	16306	0.09%	0.031%
62	9.671	854	858	864	rBV	1692002	2960830	16.33%	5.631%
63	9.750	864	866	870	rVB3	23266	39832	0.22%	0.076%
64	9.799	870	871	874	rVB3	3419	4705	0.03%	0.009%
65	9.868	877	878	883	rVB3	5799	6887	0.04%	0.013%
66	9.996	886	891	896	rBV	319048	537566	2.96%	1.022%
67	10.193	906	911	917	rVV	259277	558144	3.08%	1.061%
68	10.301	917	922	929	rVV	910563	1558224	8.59%	2.963%
69	10.409	929	933	944	rVV	1739085	3053883	16.84%	5.808%
70	10.763	967	969	972	rBV3	2768	4675	0.03%	0.009%
71	10.823	972	975	977	rVB3	2878	5317	0.03%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049314.D
Acq On : 10 May 2016 00:38
Operator : FY/SY
Sample : H2943-21
Misc : 25mL/MSVOA I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4135

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.029	992	996	999	rVB5	3249	8159	0.04%	0.016%
73	11.197	1009	1013	1023	rBV	1645292	2688789	14.83%	5.113%
74	11.334	1023	1027	1032	rBV6	12812	24121	0.13%	0.046%
75	11.452	1035	1039	1042	rVB5	11056	19783	0.11%	0.038%
76	11.698	1062	1064	1066	rVB2	4153	5156	0.03%	0.010%
77	11.817	1074	1076	1083	rVB6	11067	29783	0.16%	0.057%
78	12.112	1103	1106	1109	rVB4	3095	6454	0.04%	0.012%
79	12.171	1109	1112	1115	rBV5	6925	16248	0.09%	0.031%
80	12.250	1117	1120	1123	rBV4	4455	7325	0.04%	0.014%
81	12.378	1127	1133	1136	rBV	263223	495126	2.73%	0.942%
82	12.437	1136	1139	1146	rVB	440564	723365	3.99%	1.376%
83	12.801	1173	1176	1179	rVB5	3544	6950	0.04%	0.013%
84	12.879	1179	1184	1185	rBV4	5166	9238	0.05%	0.018%
85	12.919	1185	1188	1190	rBV3	2690	5637	0.03%	0.011%
86	13.027	1196	1199	1200	rBV3	4639	7311	0.04%	0.014%
87	13.076	1200	1204	1207	rVB5	5139	9104	0.05%	0.017%
88	13.145	1209	1211	1213	rBV3	3731	4920	0.03%	0.009%
89	13.194	1215	1216	1219	rVB3	3801	5044	0.03%	0.010%
90	13.342	1228	1231	1233	rBV4	4646	7905	0.04%	0.015%
91	13.411	1233	1238	1243	rBV	1196036	2084541	11.49%	3.964%
92	13.568	1251	1254	1256	rBV4	5053	11628	0.06%	0.022%
93	13.667	1262	1264	1266	rVB3	5348	6660	0.04%	0.013%
94	13.736	1266	1271	1277	rBV	1052365	1832473	10.10%	3.485%
95	13.883	1284	1286	1289	rBV4	3391	5016	0.03%	0.010%
96	14.011	1295	1299	1302	rVV	168215	300182	1.66%	0.571%
97	14.110	1305	1309	1311	rBV4	5851	18549	0.10%	0.035%
98	14.287	1325	1327	1330	rVB4	8590	14933	0.08%	0.028%
99	14.454	1342	1344	1345	rBV2	7344	8547	0.05%	0.016%
100	15.586	1455	1459	1464	rBV	68606	133514	0.74%	0.254%

Sum of corrected areas: 52583941

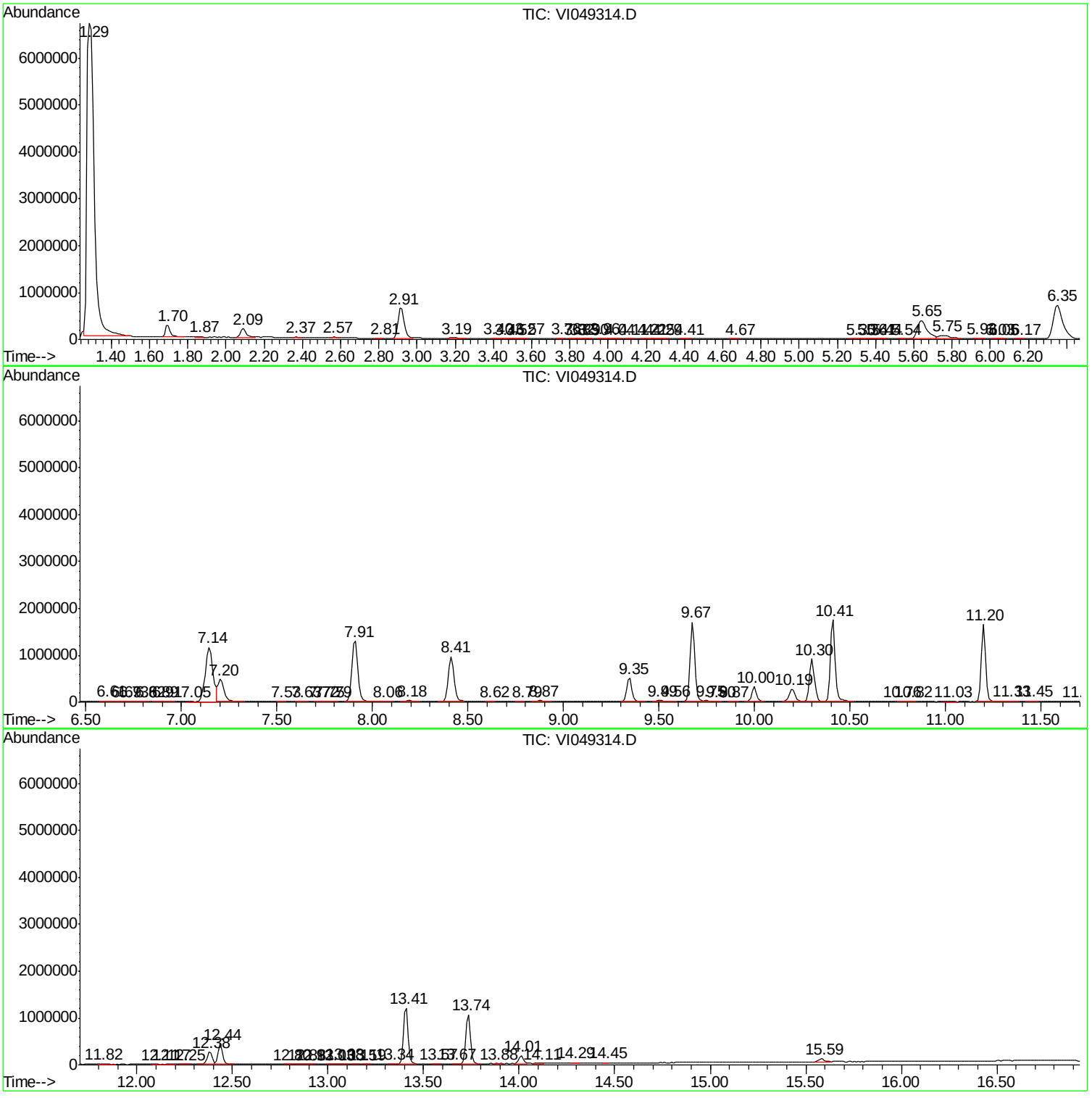
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049314.D
Acq On : 10 May 2016 00:38
Operator : FY/SY
Sample : H2943-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4135

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049314.D
Acq On : 10 May 2016 00:38
Operator : FY/SY
Sample : H2943-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4135

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049314.D
Acq On : 10 May 2016 00:38
Operator : FY/SY
Sample : H2943-21
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4135

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4136

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-22
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049315.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.67	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4136

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-22
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049315.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.090	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.4	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4136

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-22
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049315.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4136

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-22
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049315.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/10/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

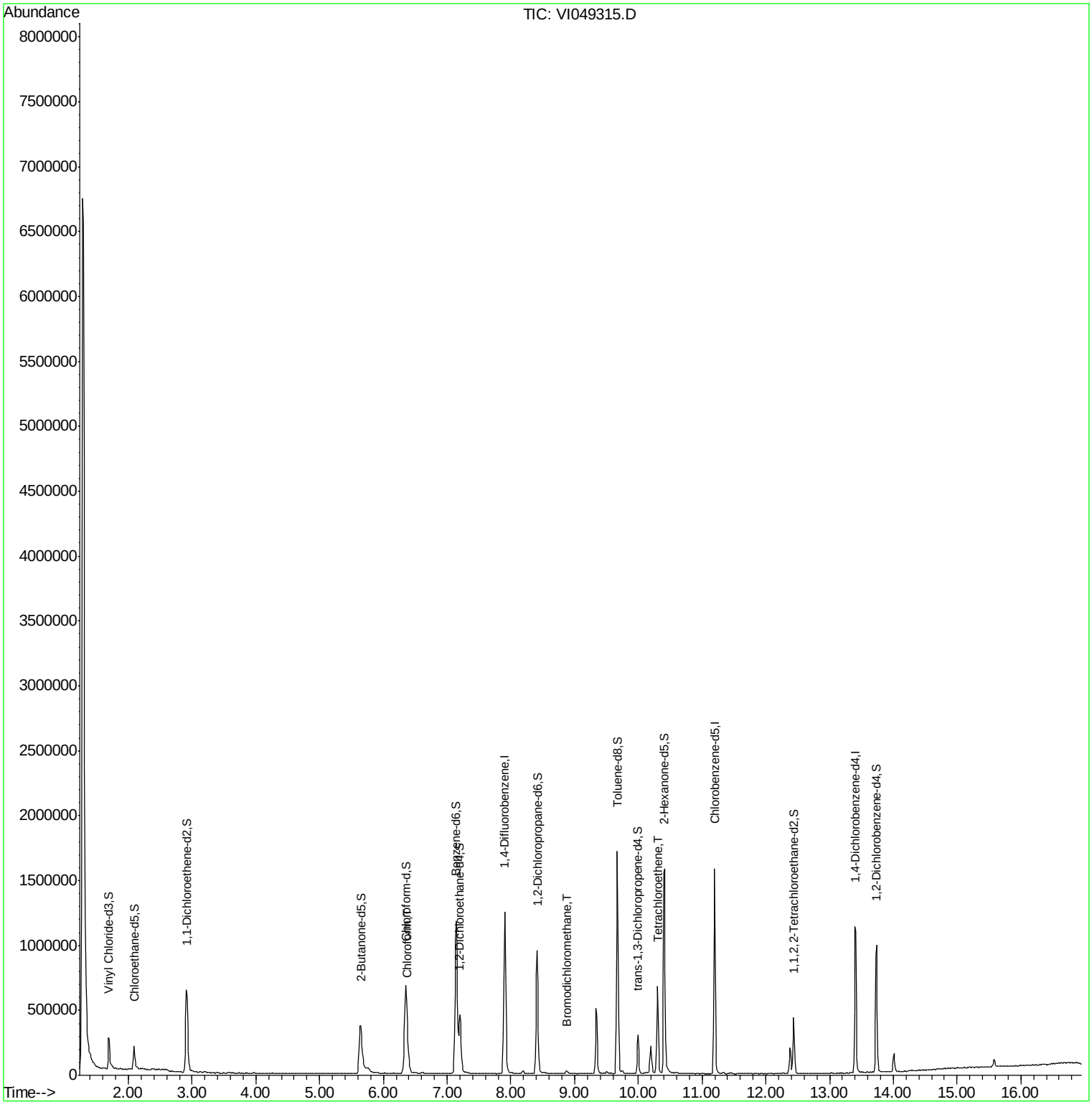
EPA-designated Registry Number.

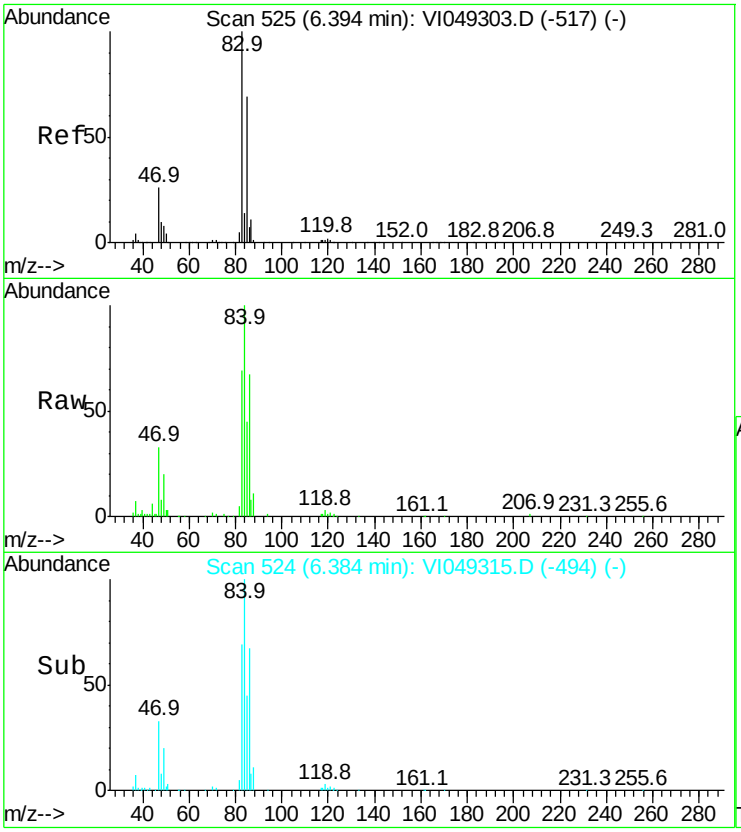
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049315.D
Acq On : 10 May 2016 1:10
Operator : FY/SY
Sample : H2943-22
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4136

Quant Time: May 10 07:10:12 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration



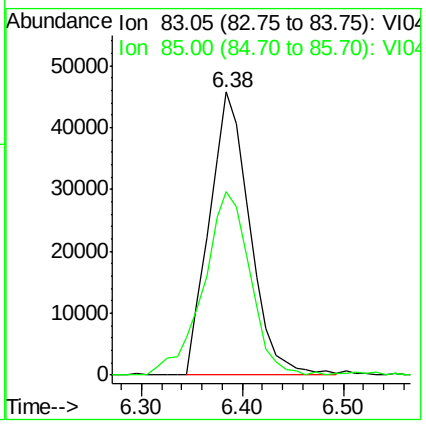


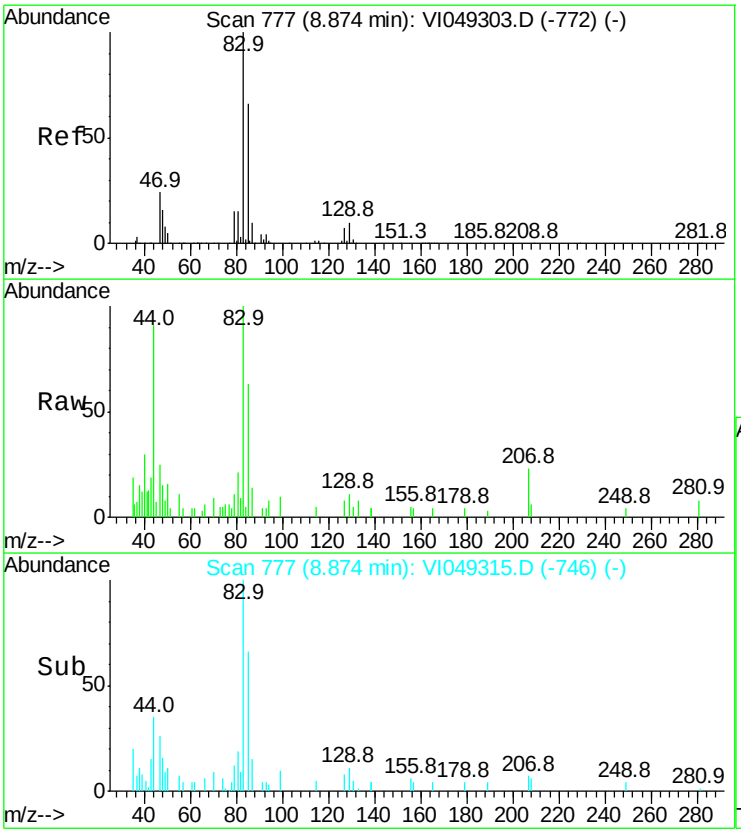
#25
Chloroform
Concen: 0.67 ug/L
RT: 6.38 min Scan# 524
Delta R.T. -0.01 min
Lab File: VI049315.D
Acq: 10 May 2016 1:10

Instrument : MSVOA_I
ClientSampleId : H4136

Tgt Ion: 83 Resp: 126956

Ion	Ratio	Lower	Upper
83	100		
85	65.0	47.3	87.8

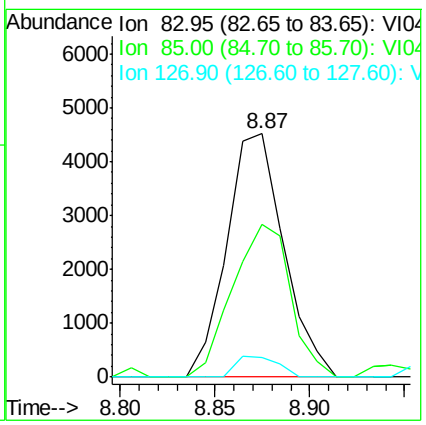


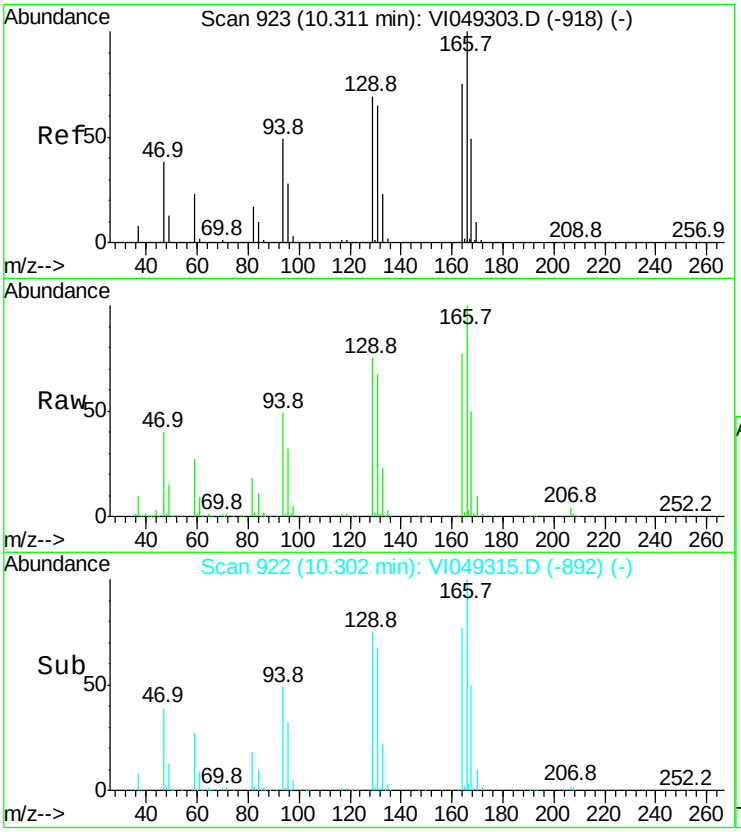


#38
Bromodichloromethane
Concen: 0.09 ug/L
RT: 8.87 min Scan# 777
Delta R.T. 0.00 min
Lab File: VI049315.D
Acq: 10 May 2016 1:10

Tgt Ion: 83 Resp: 9442

Ion	Ratio	Lower	Upper
83	100		
85	62.8	44.7	83.1
127	7.9	6.6	9.8



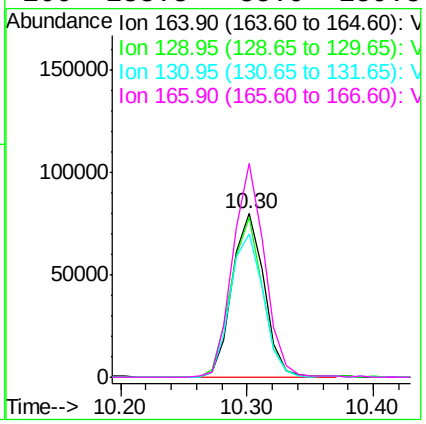


#47
Tetrachloroethene
Concen: 2.41 ug/L
RT: 10.30 min Scan# 922
Delta R.T. -0.01 min
Lab File: VI049315.D
Acq: 10 May 2016 1:10

Instrument :
MSVOA_I
ClientSampleId :
H4136

Tgt Ion:164 Resp: 140348

Ion	Ratio	Lower	Upper
164	100		
129	97.7	62.1	115.3
131	87.6	60.6	112.6
166	133.8	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049315.D
Acq On : 10 May 2016 1:10
Operator : FY/SY
Sample : H2943-22
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4136

Quant Time: May 10 07:10:12 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1172559	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	746446	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	277078	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	282270	3.91	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 78.20%			
7) Chloroethane-d5	2.09	69	191628	4.79	ug/L	0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.80%			
11) 1,1-Dichloroethene-d2	2.91	63	514979	3.03	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 60.60%			
20) 2-Butanone-d5	5.64	46	904673	57.88	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 115.76%			
24) Chloroform-d	6.35	84	860705	4.69	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.80%			
26) 1,2-Dichloroethane-d4	7.20	65	381609	5.08	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.60%			
32) Benzene-d6	7.14	84	1483221	5.10	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.00%			
36) 1,2-Dichloropropane-d6	8.41	67	425945	5.21	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.20%			
41) Toluene-d8	9.67	98	1004985	4.68	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.60%			
43) trans-1,3-Dichloropropene-	10.00	79	144005	4.47	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 89.40%			
46) 2-Hexanone-d5	10.41	63	565329	55.64	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 111.28%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	186822	5.02	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 100.40%			
63) 1,2-Dichlorobenzene-d4	13.74	152	235581	4.85	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 97.00%			
Target Compounds						Qvalue
25) Chloroform	6.38	83	126956	0.67	ug/L	97
38) Bromodichloromethane	8.87	83	9442	0.09	ug/L	99
47) Tetrachloroethene	10.30	164	140348	2.41	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049315.D
Acq On : 10 May 2016 1:10
Operator : FY/SY
Sample : H2943-22
Misc : 25mL/MSVOA I/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4136

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	3	6	28	rVB	6691439	18464537	100.00%	36.091%
2	1.582	35	36	37	rBV	10847	12333	0.07%	0.024%
3	1.690	44	47	56	rBV	239958	469060	2.54%	0.917%
4	1.995	76	78	79	rBV2	6916	8012	0.04%	0.016%
5	2.093	84	88	95	rVV	175397	348852	1.89%	0.682%
6	2.359	113	115	116	rBV2	6673	6226	0.03%	0.012%
7	2.585	136	138	145	rVB4	23147	53543	0.29%	0.105%
8	2.812	158	161	166	rVB5	8465	19912	0.11%	0.039%
9	2.910	166	171	178	rBV	636440	1440682	7.80%	2.816%
10	3.186	197	199	201	rBV3	5302	8438	0.05%	0.016%
11	3.333	211	214	216	rBV3	3738	6779	0.04%	0.013%
12	3.373	216	218	221	rBV3	4556	7248	0.04%	0.014%
13	3.501	229	231	234	rVB3	4468	8601	0.05%	0.017%
14	3.579	234	239	243	rBV6	7185	27181	0.15%	0.053%
15	3.688	248	250	252	rBV3	2647	4510	0.02%	0.009%
16	3.727	252	254	258	rVB5	4257	7524	0.04%	0.015%
17	3.776	258	259	262	rVB3	4598	6605	0.04%	0.013%
18	3.865	265	268	269	rBV3	4925	7209	0.04%	0.014%
19	3.953	272	277	282	rVB8	5346	18068	0.10%	0.035%
20	4.032	282	285	289	rVB5	4350	8947	0.05%	0.017%
21	4.101	289	292	296	rBV5	3758	11211	0.06%	0.022%
22	4.308	311	313	317	rVB4	2444	5495	0.03%	0.011%
23	4.652	345	348	350	rBV4	5079	8466	0.05%	0.017%
24	4.800	360	363	366	rBV4	2736	4867	0.03%	0.010%
25	4.928	374	376	378	rVB2	2976	5150	0.03%	0.010%
26	5.085	388	392	394	rBV4	3249	5211	0.03%	0.010%
27	5.115	394	395	399	rVB3	4342	5711	0.03%	0.011%
28	5.184	399	402	405	rVB4	2763	5217	0.03%	0.010%
29	5.243	405	408	410	rBV4	2252	4669	0.03%	0.009%
30	5.351	416	419	423	rVB3	3940	7899	0.04%	0.015%
31	5.400	423	424	428	rBV3	3061	6039	0.03%	0.012%
32	5.646	439	449	459	rBV	370002	1426719	7.73%	2.789%
33	5.912	474	476	480	rVB5	6699	12889	0.07%	0.025%
34	5.991	482	484	486	rVV2	2615	5079	0.03%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049315.D
Acq On : 10 May 2016 1:10
Operator : FY/SY
Sample : H2943-22
Misc : 25mL/MSVOA I/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4136

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.158	499	501	503	rBV3	3757	5525	0.03%	0.011%
36	6.247	509	510	513	rBV3	2741	5084	0.03%	0.010%
37	6.355	513	521	535	rVV2	680443	2341316	12.68%	4.576%
38	6.611	542	547	553	rBV5	7189	20714	0.11%	0.040%
39	6.886	571	575	577	rVB4	3448	7466	0.04%	0.015%
40	7.034	587	590	591	rBV2	4301	5600	0.03%	0.011%
41	7.142	594	601	605	rBV	1180089	3176591	17.20%	6.209%
42	7.201	605	607	618	rVB	444821	974939	5.28%	1.906%
43	7.654	650	653	655	rVB2	3577	7057	0.04%	0.014%
44	7.802	665	668	671	rBV4	4452	10265	0.06%	0.020%
45	7.900	672	678	694	rBV	1248316	2835781	15.36%	5.543%
46	8.077	694	696	698	rVV3	3978	5848	0.03%	0.011%
47	8.195	702	708	712	rVB4	21789	52066	0.28%	0.102%
48	8.412	725	730	739	rBV	944178	2009809	10.88%	3.928%
49	8.874	772	777	784	rVB6	20799	55620	0.30%	0.109%
50	9.337	820	824	831	rVV	504062	930970	5.04%	1.820%
51	9.504	838	841	845	rVB	13887	24002	0.13%	0.047%
52	9.563	845	847	848	rVB2	6152	5673	0.03%	0.011%
53	9.583	848	849	851	rVB2	5108	5850	0.03%	0.011%
54	9.672	853	858	863	rBV	1708964	2916624	15.80%	5.701%
55	9.741	863	865	869	rVV2	18658	40850	0.22%	0.080%
56	9.839	873	875	878	rVB3	4454	8084	0.04%	0.016%
57	9.996	885	891	896	rBV	299293	514799	2.79%	1.006%
58	10.134	901	905	906	rVV4	7173	10043	0.05%	0.020%
59	10.193	906	911	917	rVV	208187	437000	2.37%	0.854%
60	10.302	917	922	928	rVV	670211	1204777	6.52%	2.355%
61	10.410	928	933	946	rVV	1574726	3006549	16.28%	5.877%
62	10.823	970	975	977	rBV6	5501	9374	0.05%	0.018%
63	10.872	977	980	982	rVB3	3235	5087	0.03%	0.010%
64	10.941	982	987	989	rVB6	4101	8013	0.04%	0.016%
65	10.971	989	990	993	rBV3	4829	5782	0.03%	0.011%
66	11.197	1009	1013	1023	rBV	1579229	2570047	13.92%	5.023%
67	11.335	1023	1027	1032	rVB6	9984	29211	0.16%	0.057%
68	11.414	1032	1035	1036	rBV3	3412	5712	0.03%	0.011%
69	11.453	1036	1039	1044	rVB7	9907	23115	0.13%	0.045%
70	11.542	1046	1048	1053	rBV5	3324	9065	0.05%	0.018%
71	11.827	1074	1077	1081	rBV5	8435	22836	0.12%	0.045%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049315.D
Acq On : 10 May 2016 1:10
Operator : FY/SY
Sample : H2943-22
Misc : 25mL/MSVOA I/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4136

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.955	1086	1090	1091	rVB3	3092	5704	0.03%	0.011%
73	11.975	1091	1092	1096	rVB4	2856	4977	0.03%	0.010%
74	12.083	1102	1103	1107	rVB4	2632	4891	0.03%	0.010%
75	12.191	1110	1114	1115	rBV4	4788	11562	0.06%	0.023%
76	12.231	1115	1118	1119	rBV3	3757	4962	0.03%	0.010%
77	12.270	1119	1122	1125	rVB5	5043	7833	0.04%	0.015%
78	12.378	1129	1133	1136	rBV	200307	378351	2.05%	0.740%
79	12.437	1136	1139	1147	rVB	430857	712448	3.86%	1.393%
80	12.536	1147	1149	1153	rVB4	2381	4237	0.02%	0.008%
81	12.752	1168	1171	1174	rVB5	3435	5943	0.03%	0.012%
82	12.821	1177	1178	1181	rVB2	3931	5222	0.03%	0.010%
83	12.880	1181	1184	1186	rBV3	4872	8782	0.05%	0.017%
84	12.998	1194	1196	1197	rBV2	4412	5813	0.03%	0.011%
85	13.038	1197	1200	1203	rVB5	5133	12557	0.07%	0.025%
86	13.097	1203	1206	1208	rBV4	2644	6256	0.03%	0.012%
87	13.126	1208	1209	1210	rBV	5957	4352	0.02%	0.009%
88	13.274	1222	1224	1226	rBV3	3977	5404	0.03%	0.011%
89	13.333	1226	1230	1233	rBV5	6971	18748	0.10%	0.037%
90	13.402	1233	1237	1245	rBV	1125350	2013892	10.91%	3.936%
91	13.736	1266	1271	1279	rBV	980973	1774197	9.61%	3.468%
92	13.953	1291	1293	1295	rBV3	6018	8798	0.05%	0.017%
93	14.012	1295	1299	1305	rVV2	138837	258877	1.40%	0.506%
94	14.229	1319	1321	1323	rBV3	4929	7329	0.04%	0.014%
95	14.258	1323	1324	1326	rVV2	6362	6533	0.04%	0.013%
96	14.288	1326	1327	1329	rVB2	8028	7625	0.04%	0.015%
97	14.406	1337	1339	1340	rVB2	6994	7047	0.04%	0.014%
98	14.553	1352	1354	1355	rBV2	4867	4977	0.03%	0.010%
99	14.888	1386	1388	1389	rVB2	6856	5155	0.03%	0.010%
100	15.587	1455	1459	1464	rBV	51942	102764	0.56%	0.201%

Sum of corrected areas: 51161269

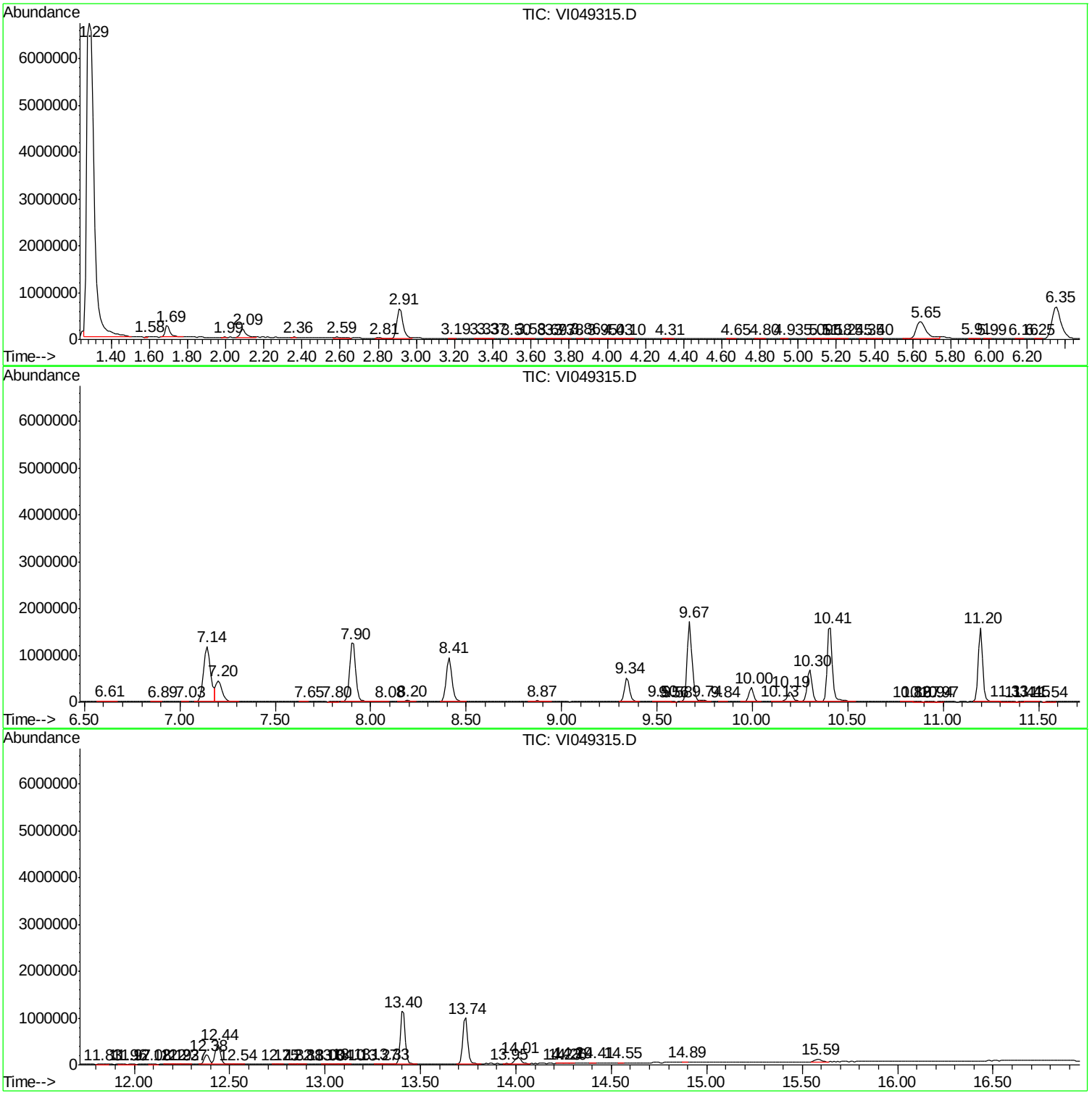
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049315.D
Acq On : 10 May 2016 1:10
Operator : FY/SY
Sample : H2943-22
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4136

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049315.D
Acq On : 10 May 2016 1:10
Operator : FY/SY
Sample : H2943-22
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4136

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049315.D
Acq On : 10 May 2016 1:10
Operator : FY/SY
Sample : H2943-22
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4136

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4137

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049337.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4137

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049337.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4137

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049337.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4137

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-09
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049337.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

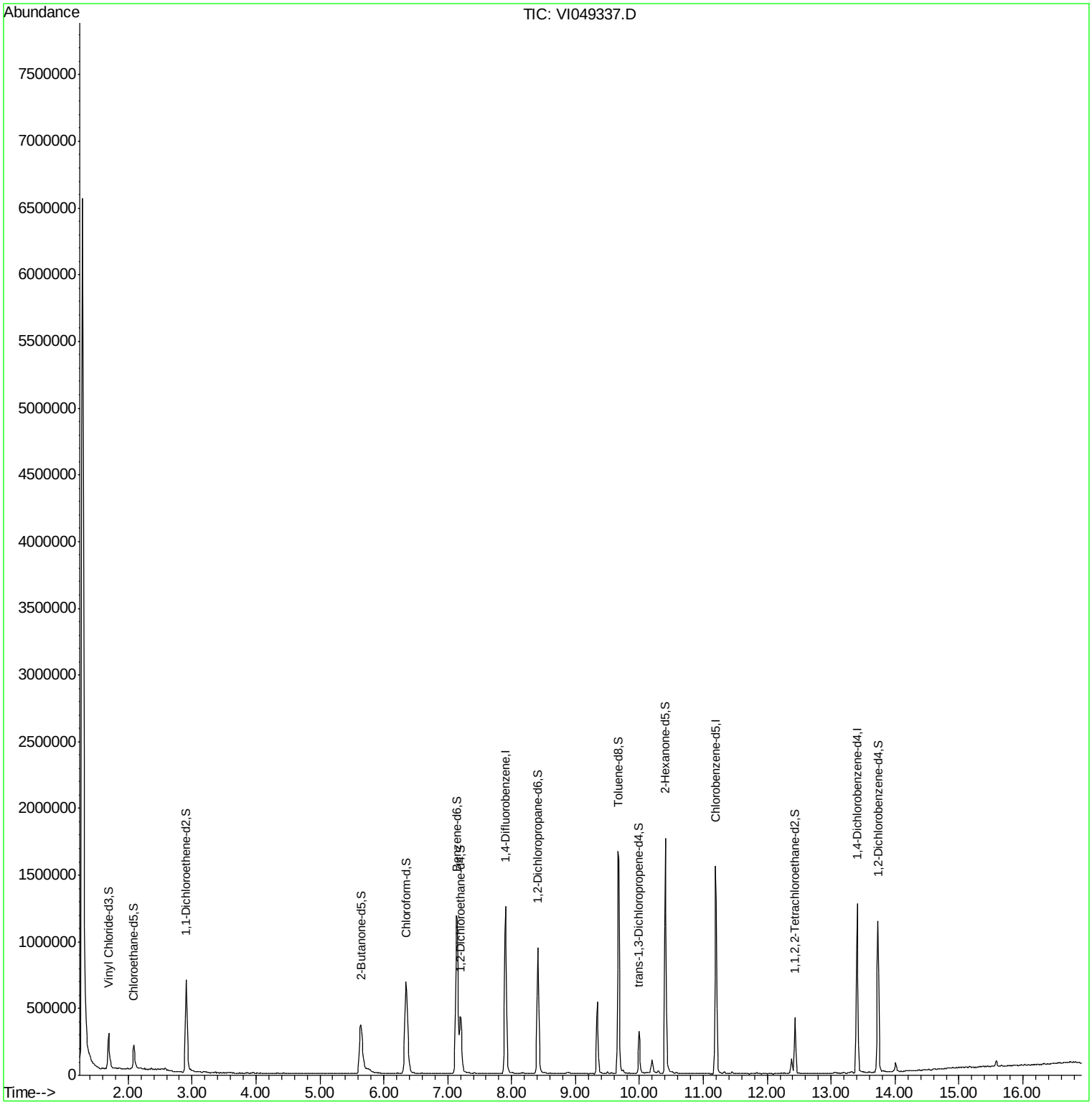
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049337.D
Acq On : 11 May 2016 13:09
Operator : FY/SY
Sample : H2943-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 12 06:42:59 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4137

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:32 PM



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049337.D
Acq On : 11 May 2016 13:09
Operator : FY/SY
Sample : H2943-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4137

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:32 PM

Quant Time: May 12 06:42:59 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1157376	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	762590	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	287585	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	309530	4.34	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 86.80%			
7) Chloroethane-d5	2.09	69	195691	4.96	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 99.20%			
11) 1,1-Dichloroethene-d2	2.91	63	573757m	3.42	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 68.40%			
20) 2-Butanone-d5	5.64	46	873766	56.64	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 113.28%			
24) Chloroform-d	6.35	84	869294	4.80	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.00%			
26) 1,2-Dichloroethane-d4	7.20	65	384177	5.18	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.60%			
32) Benzene-d6	7.14	84	1547741	5.21	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.20%			
36) 1,2-Dichloropropane-d6	8.41	67	437719	5.24	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.80%			
41) Toluene-d8	9.68	98	1074701	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
43) trans-1,3-Dichloropropene-	9.99	79	152602	4.64	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.80%			
46) 2-Hexanone-d5	10.40	63	573240	55.22	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 110.44%			
57) 1,1,2,2-Tetrachloroethane-	12.43	84	190786	5.02	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 100.40%			
63) 1,2-Dichlorobenzene-d4	13.73	152	252215	5.00	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 100.00%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049337.D
Acq On : 11 May 2016 13:09
Operator : FY/SY
Sample : H2943-09
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4137

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.281	3	5	35	rVB	6525502	16472217	100.00%	34.323%
2	1.596	35	37	38	rBV2	10967	12261	0.07%	0.026%
3	1.695	43	47	58	rBV	270633	524164	3.18%	1.092%
4	2.088	83	87	94	rVB	176060	349423	2.12%	0.728%
5	2.325	109	111	113	rBV3	6108	7563	0.05%	0.016%
6	2.364	113	115	117	rVB3	9101	10858	0.07%	0.023%
7	2.580	135	137	139	rVB3	15315	23376	0.14%	0.049%
8	2.905	165	170	181	rBV	691180	1630483	9.90%	3.397%
9	3.092	188	189	192	rBV3	4904	6468	0.04%	0.013%
10	3.171	196	197	198	rBV	6083	4937	0.03%	0.010%
11	3.260	205	206	209	rVB3	6568	6648	0.04%	0.014%
12	3.338	212	214	216	rVV3	4127	7308	0.04%	0.015%
13	3.368	216	217	218	rVV	8628	5400	0.03%	0.011%
14	3.407	218	221	223	rVV4	4092	7056	0.04%	0.015%
15	3.437	223	224	227	rVB3	3377	4843	0.03%	0.010%
16	3.486	227	229	231	rVB3	3512	4651	0.03%	0.010%
17	3.565	234	237	244	rVV7	5779	17067	0.10%	0.036%
18	3.742	253	255	258	rBV3	3122	4842	0.03%	0.010%
19	3.949	274	276	280	rVV4	3814	7093	0.04%	0.015%
20	4.067	286	288	289	rVB2	5374	4681	0.03%	0.010%
21	4.106	289	292	298	rBV6	4539	14074	0.09%	0.029%
22	4.234	302	305	306	rBV3	3719	6402	0.04%	0.013%
23	4.283	306	310	314	rBV4	2568	4844	0.03%	0.010%
24	4.362	316	318	320	rVB3	3535	4988	0.03%	0.010%
25	4.401	320	322	324	rBV3	2768	4884	0.03%	0.010%
26	4.490	327	331	333	rBV5	2525	4970	0.03%	0.010%
27	4.539	333	336	339	rVB3	3405	4740	0.03%	0.010%
28	5.317	412	415	416	rBV3	4113	5325	0.03%	0.011%
29	5.513	434	435	442	rBV6	4052	9336	0.06%	0.019%
30	5.641	442	448	456	rBV	368394	1299053	7.89%	2.707%
31	5.858	468	470	471	rVB2	4844	5286	0.03%	0.011%
32	6.015	484	486	487	rVB2	4141	4657	0.03%	0.010%
33	6.035	487	488	491	rBV2	3444	5036	0.03%	0.010%
34	6.350	512	520	538	rBV	689270	2162965	13.13%	4.507%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049337.D
Acq On : 11 May 2016 13:09
Operator : FY/SY
Sample : H2943-09
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4137

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.596	542	545	548	rVV5	5883	10266	0.06%	0.021%
36	6.704	555	556	559	rVB3	3532	4976	0.03%	0.010%
37	6.881	568	574	576	rBV5	4097	11860	0.07%	0.025%
38	6.990	584	585	588	rVB3	4289	5542	0.03%	0.012%
39	7.137	592	600	604	rBV	1184316	3203797	19.45%	6.676%
40	7.196	604	606	616	rVB	421598	1045419	6.35%	2.178%
41	7.629	649	650	652	rVB2	5443	6116	0.04%	0.013%
42	7.669	652	654	657	rBV2	5442	6885	0.04%	0.014%
43	7.748	657	662	667	rBV9	5171	15022	0.09%	0.031%
44	7.905	670	678	688	rBV	1253109	2771071	16.82%	5.774%
45	8.013	688	689	693	rVB3	8273	9997	0.06%	0.021%
46	8.062	693	694	697	rBV3	4424	6540	0.04%	0.014%
47	8.151	702	703	704	rBV	5400	5136	0.03%	0.011%
48	8.181	704	706	709	rVB4	4155	6652	0.04%	0.014%
49	8.299	716	718	720	rVB3	3383	5296	0.03%	0.011%
50	8.407	723	729	738	rBV	944024	2084523	12.65%	4.344%
51	8.604	747	749	752	rBV4	3941	7512	0.05%	0.016%
52	8.643	752	753	756	rVB3	4269	5276	0.03%	0.011%
53	8.702	756	759	761	rVB2	4398	6373	0.04%	0.013%
54	8.761	761	765	766	rBV4	2535	5657	0.03%	0.012%
55	8.889	774	778	784	rBV8	8456	31854	0.19%	0.066%
56	8.997	787	789	792	rBV4	2755	6027	0.04%	0.013%
57	9.057	794	795	798	rBV3	3317	5219	0.03%	0.011%
58	9.165	805	806	810	rVB4	4456	8268	0.05%	0.017%
59	9.342	819	824	833	rBV	543408	1023857	6.22%	2.133%
60	9.460	835	836	838	rVV2	4308	6462	0.04%	0.013%
61	9.499	838	840	844	rVV2	14155	24222	0.15%	0.050%
62	9.558	844	846	848	rVB3	5892	8055	0.05%	0.017%
63	9.667	853	857	863	rBV	1664251	3107803	18.87%	6.476%
64	9.745	863	865	873	rVB2	23806	50986	0.31%	0.106%
65	9.834	873	874	879	rVB5	4862	6491	0.04%	0.014%
66	9.992	886	890	899	rBV	316887	546490	3.32%	1.139%
67	10.198	905	911	918	rVB2	98135	204834	1.24%	0.427%
68	10.297	918	921	925	rVB5	22689	43186	0.26%	0.090%
69	10.405	928	932	941	rBV	1762282	2998709	18.20%	6.248%
70	10.582	946	950	952	rBV5	7914	15802	0.10%	0.033%
71	10.621	952	954	960	rVB7	3503	8448	0.05%	0.018%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049337.D
Acq On : 11 May 2016 13:09
Operator : FY/SY
Sample : H2943-09
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4137

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	10.946	984	987	989	rBV4	4707	6993	0.04%	0.015%
73	11.045	995	997	998	rBV2	3261	4789	0.03%	0.010%
74	11.192	1008	1012	1023	rBV	1557682	2627694	15.95%	5.475%
75	11.330	1023	1026	1029	rVB4	12363	23743	0.14%	0.049%
76	11.448	1036	1038	1043	rVB4	14853	21987	0.13%	0.046%
77	11.615	1053	1055	1058	rBV4	2098	4923	0.03%	0.010%
78	11.743	1066	1068	1071	rBV4	2897	6805	0.04%	0.014%
79	11.832	1071	1077	1082	rBV8	8654	25440	0.15%	0.053%
80	11.921	1085	1086	1090	rBV4	6331	9362	0.06%	0.020%
81	12.167	1107	1111	1113	rBV4	5616	13961	0.08%	0.029%
82	12.383	1126	1133	1135	rBV	109963	207841	1.26%	0.433%
83	12.432	1135	1138	1145	rVV	418191	725332	4.40%	1.511%
84	12.531	1145	1148	1150	rVB4	3206	5917	0.04%	0.012%
85	12.836	1177	1179	1182	rBV4	3180	4786	0.03%	0.010%
86	12.964	1191	1192	1196	rBV4	4391	9920	0.06%	0.021%
87	13.043	1196	1200	1201	rBV4	3323	7233	0.04%	0.015%
88	13.072	1201	1203	1205	rVB2	3909	6349	0.04%	0.013%
89	13.121	1205	1208	1209	rBV3	2743	4849	0.03%	0.010%
90	13.200	1213	1216	1220	rBV6	4050	6063	0.04%	0.013%
91	13.308	1224	1227	1232	rVB6	10770	29356	0.18%	0.061%
92	13.407	1232	1237	1246	rBV	1268904	2109174	12.80%	4.395%
93	13.604	1253	1257	1259	rVB4	3426	5338	0.03%	0.011%
94	13.731	1265	1270	1276	rBV	1133405	1890925	11.48%	3.940%
95	13.820	1276	1279	1280	rVB3	8048	13714	0.08%	0.029%
96	13.840	1280	1281	1285	rBV3	5956	13052	0.08%	0.027%
97	14.007	1292	1298	1302	rBV2	68711	129703	0.79%	0.270%
98	14.381	1332	1336	1337	rBV4	6446	12424	0.08%	0.026%
99	14.824	1379	1381	1384	rBV4	7681	20026	0.12%	0.042%
100	15.582	1454	1458	1461	rBV	40131	75394	0.46%	0.157%

Sum of corrected areas: 47991621

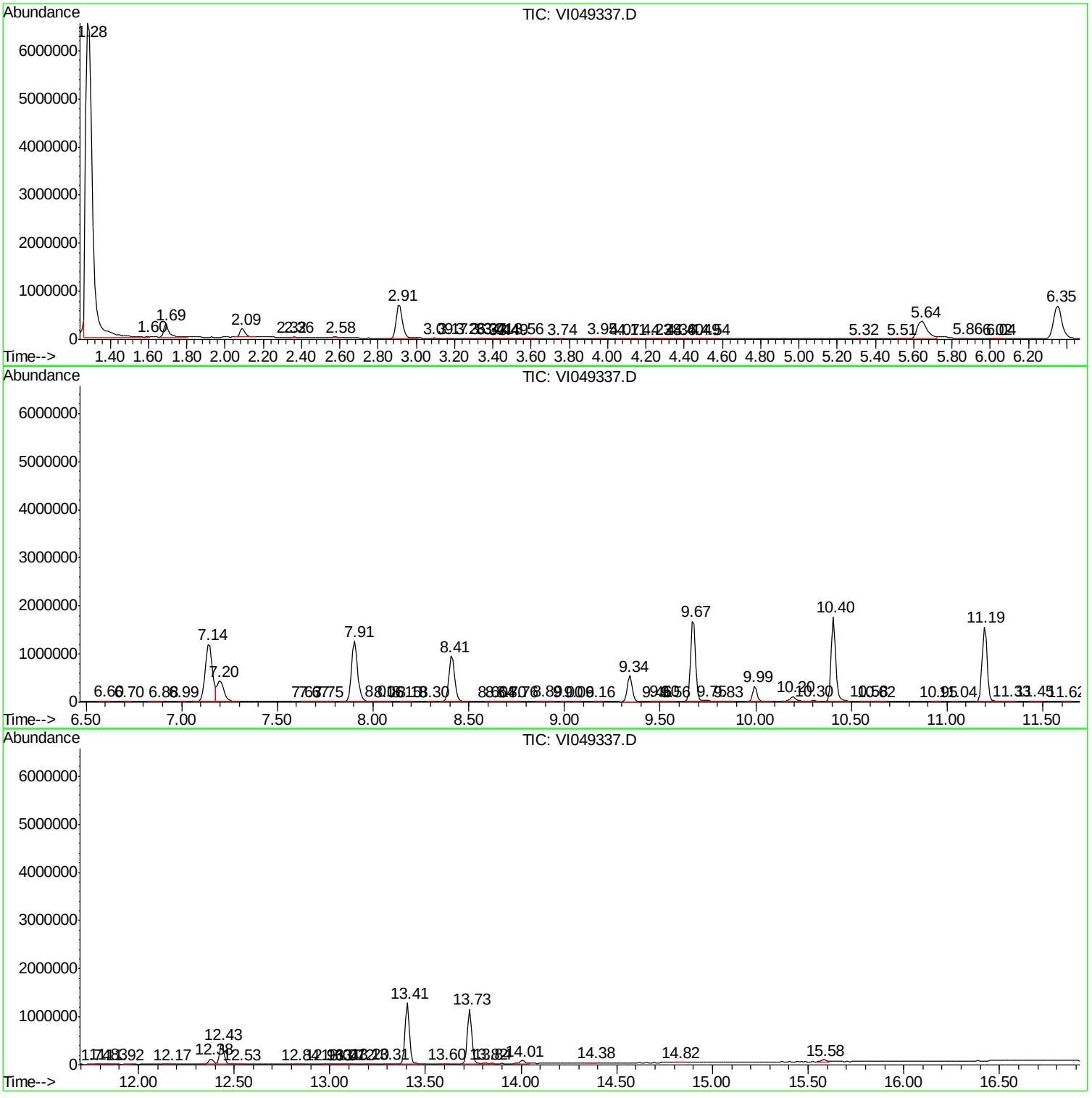
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049337.D
Acq On : 11 May 2016 13:09
Operator : FY/SY
Sample : H2943-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4137

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049337.D
Acq On : 11 May 2016 13:09
Operator : FY/SY
Sample : H2943-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4137

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049337.D
Acq On : 11 May 2016 13:09
Operator : FY/SY
Sample : H2943-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4137

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

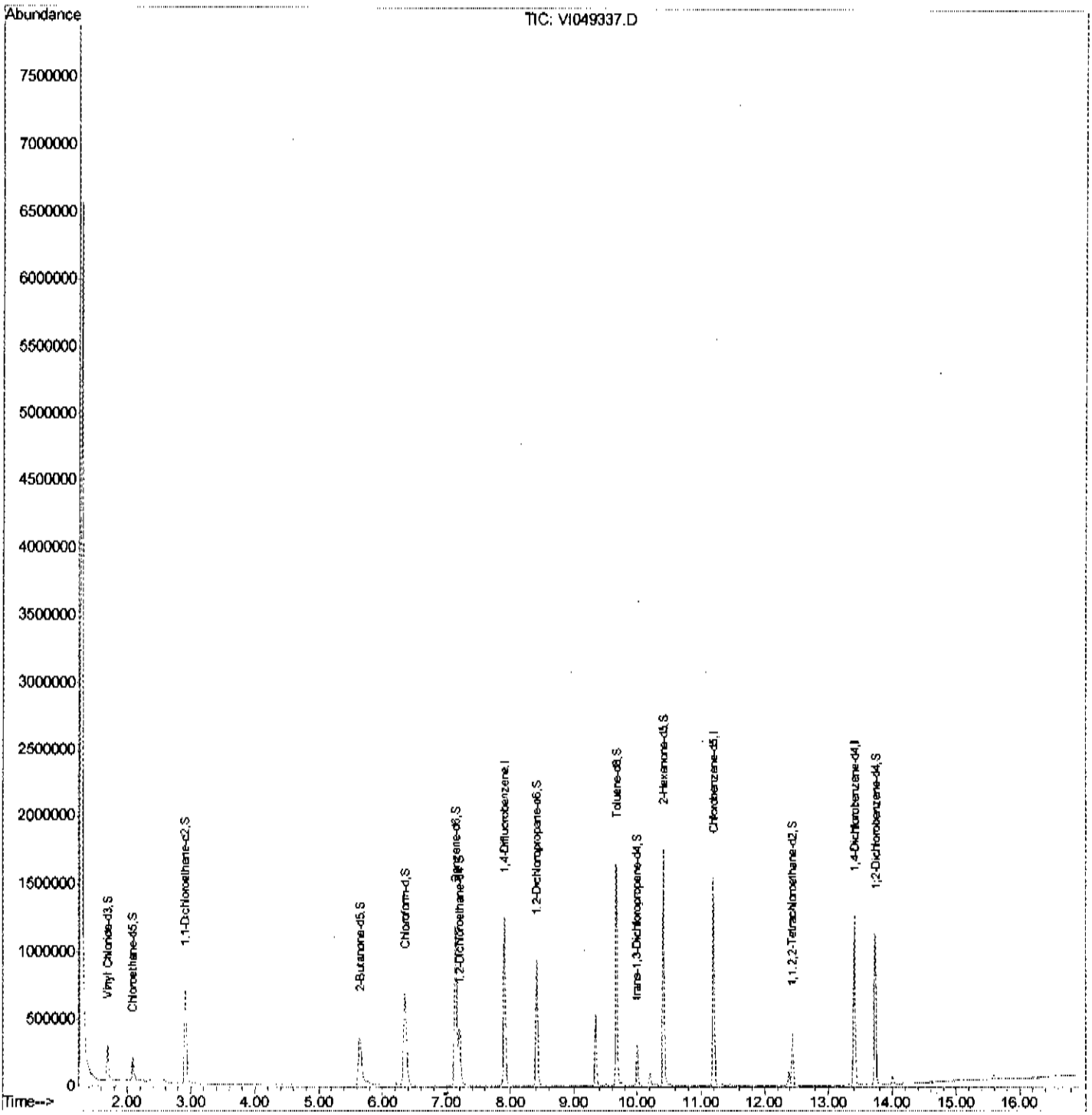
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049337.D
Acq On : 11 May 2016 13:09
Operator : FY/SY
Sample : H2943-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 12 06:42:59 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4137

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:32 PM



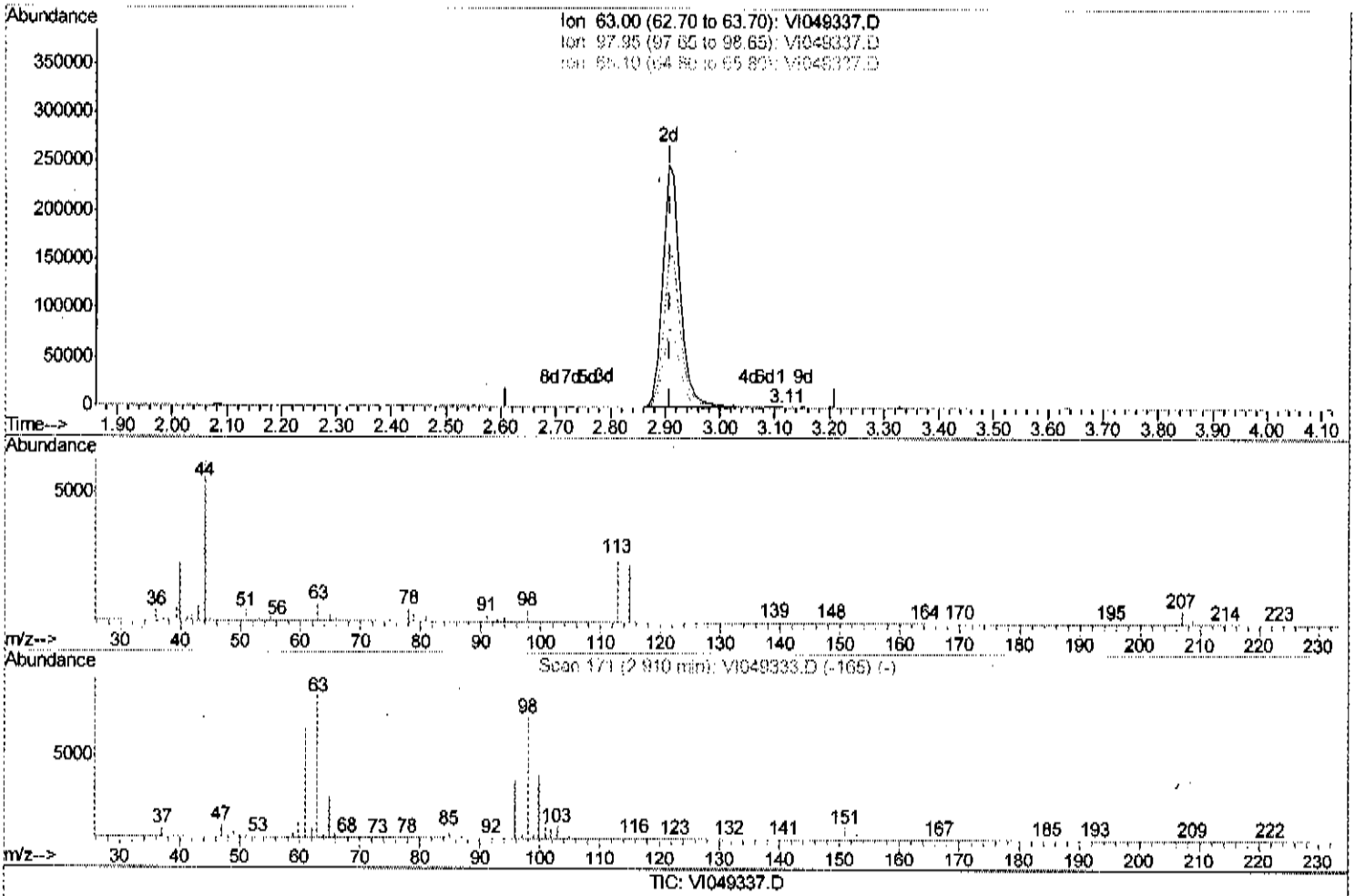
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049337.D
Acq On : 11 May 2016 13:09
Operator : FY/SY
Sample : H2943-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 12 06:04:35 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4137

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:32 PM



TIC: VI049337.D

(11) 1,1-Dichloroethene-d2 (S)

3.112min (+0.202) 0.00ug/L

response 785

Ion	Exp%	Act%
63.00	100	100
97.95	85.40	66.11
65.10	23.80	28.15
0.00	0.00	0.00

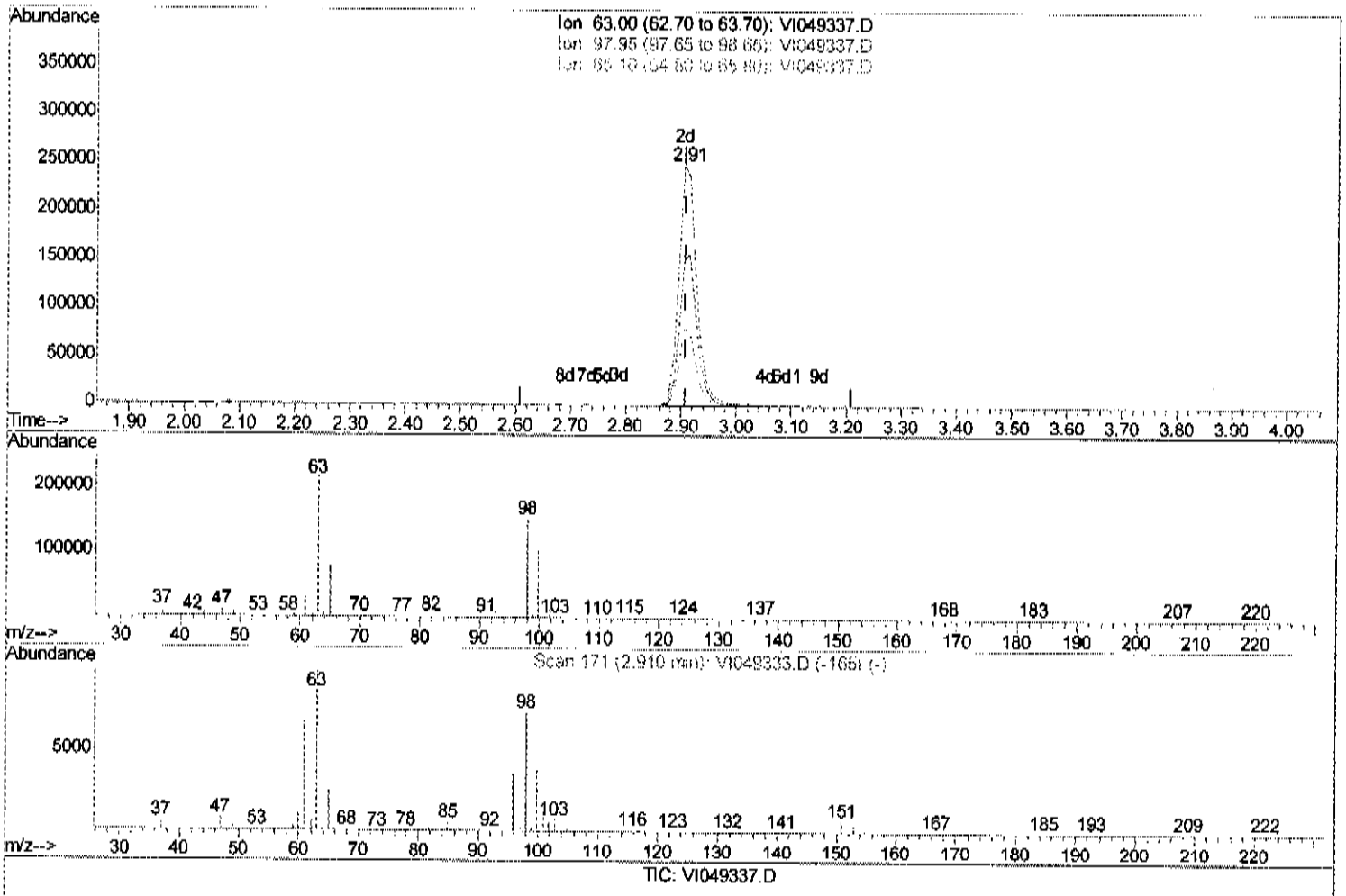
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049337.D
Acq On : 11 May 2016 13:09
Operator : FY/SY
Sample : H2943-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 12 06:04:35 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMTTR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4137

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:32 PM



TIC: VI049337.D

(11) 1,1-Dichloroethene-d2 (S)

2.905min (-0.004) 3.42ug/L m

response 573757

FY 5/16/2016

Ion	Exp%	Act%
63.00	100	100
97.95	85.40	0.09#
65.10	23.80	0.04#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049337.D
Acq On : 11 May 2016 13:09
Operator : FY/SY
Sample : H2943-09
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 12 06:42:59 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4137

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:32 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1157376	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	762590	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	287585	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	309530	4.34	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 86.80%			
7) Chloroethane-d5	2.09	69	195691	4.96	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 99.20%			
11) 1,1-Dichloroethene-d2	2.91	63	573757m	3.42	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 68.40%			
20) 2-Butanone-d5	5.64	46	873766	56.64	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 113.28%			
24) Chloroform-d	6.35	84	869294	4.80	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 96.00%			
26) 1,2-Dichloroethane-d4	7.20	65	384177	5.18	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.60%			
32) Benzene-d6	7.14	84	1547741	5.21	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 104.20%			
36) 1,2-Dichloropropane-d6	8.41	67	437719	5.24	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 104.80%			
41) Toluene-d8	9.68	98	1074701	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
43) trans-1,3-Dichloropropene-	9.99	79	152602	4.64	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.80%			
46) 2-Hexanone-d5	10.40	63	573240	55.22	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 110.44%			
57) 1,1,2,2-Tetrachloroethane-	12.43	84	190786	5.02	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 100.40%			
63) 1,2-Dichlorobenzene-d4	13.73	152	252215	5.00	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 100.00%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FY 5/16/2016

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4138

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049338.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	2.3	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4138

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049338.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.11	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4138

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049338.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4138

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-10
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049338.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

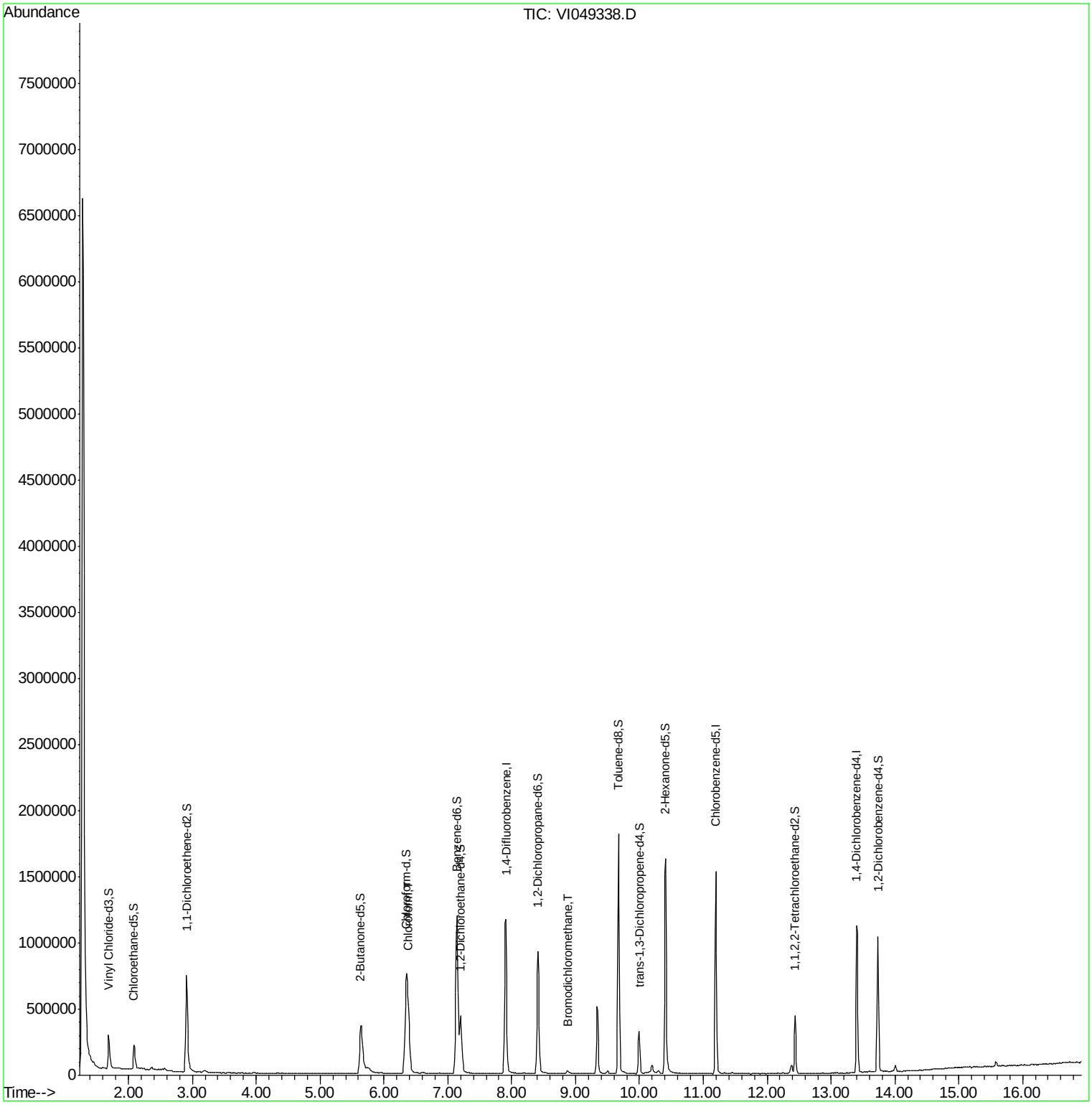
Quantitation Report (LSC Reviewed)

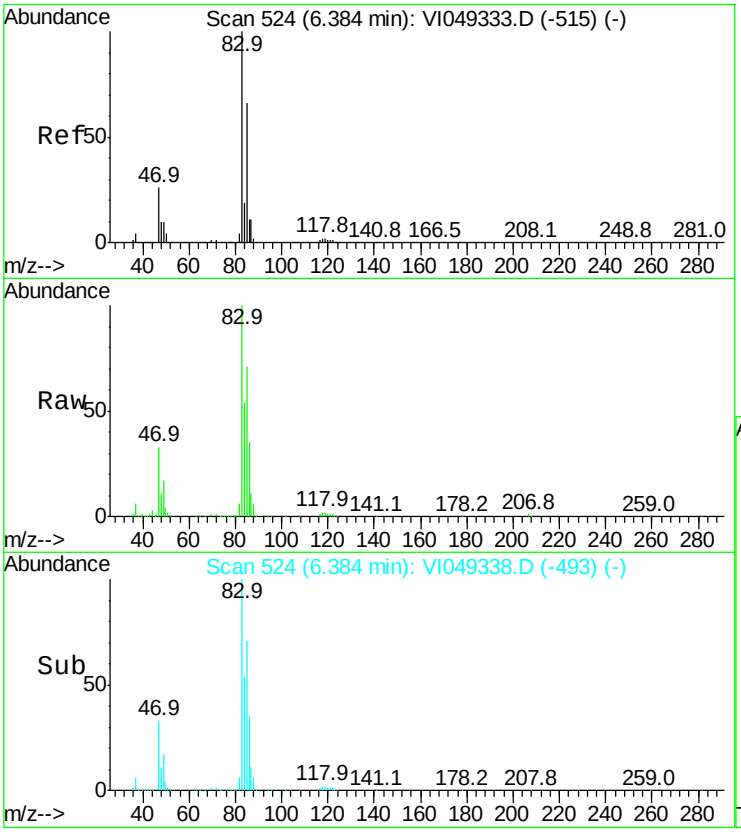
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049338.D
Acq On : 11 May 2016 13:41
Operator : FY/SY
Sample : H2943-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 12 10:16:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4138

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:34 PM

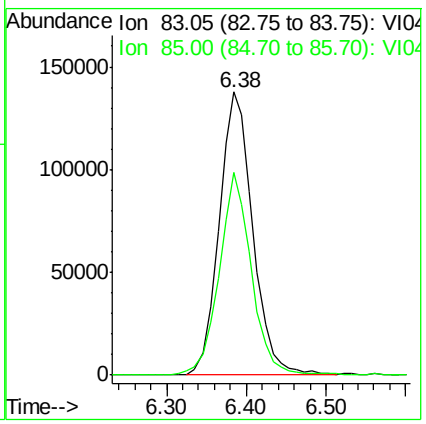




#25
Chloroform
Concen: 2.30 ug/L
RT: 6.38 min Scan# 524
Delta R.T. 0.00 min
Lab File: VI049338.D
Acq: 11 May 2016 13:41

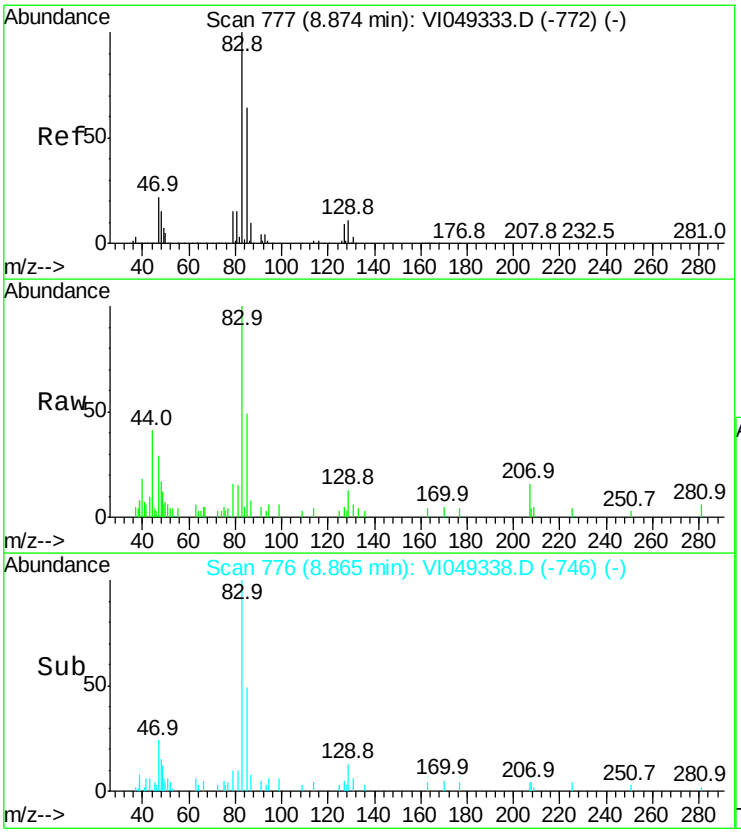
Tgt Ion: 83 Resp: 404728

Ion	Ratio	Lower	Upper
83	100		
85	71.5	47.3	87.8



Instrument :
MSVOA_I
ClientSampleId :
H4138

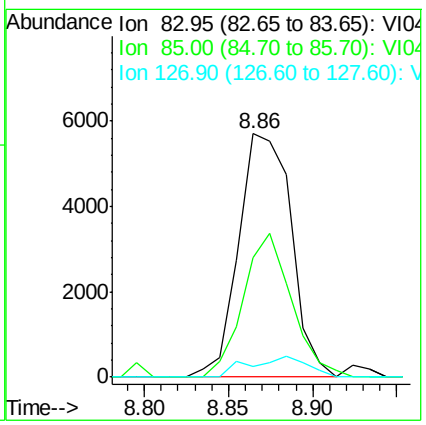
Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:34 PM



#38
Bromodichloromethane
Concen: 0.11 ug/L
RT: 8.86 min Scan# 776
Delta R.T. -0.01 min
Lab File: VI049338.D
Acq: 11 May 2016 13:41

Tgt Ion: 83 Resp: 12332

Ion	Ratio	Lower	Upper
83	100		
85	49.2	44.7	83.1
127	4.6	6.6	9.8#



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049338.D
Acq On : 11 May 2016 13:41
Operator : FY/SY
Sample : H2943-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4138

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:34 PM

Quant Time: May 12 10:16:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1092710	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	740633	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	275181	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	297493	4.42	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 88.40%			
7) Chloroethane-d5	2.08	69	195763m	5.25	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 105.00%			
11) 1,1-Dichloroethene-d2	2.91	63	565364	3.57	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 71.40%			
20) 2-Butanone-d5	5.64	46	865853	59.45	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 118.90%			
24) Chloroform-d	6.35	84	883877	5.16	ug/L	0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.20%			
26) 1,2-Dichloroethane-d4	7.20	65	381741	5.45	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.00%			
32) Benzene-d6	7.14	84	1524104	5.28	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 105.60%			
36) 1,2-Dichloropropane-d6	8.41	67	432744	5.33	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 106.60%			
41) Toluene-d8	9.67	98	1090593	5.12	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.40%			
43) trans-1,3-Dichloropropene-	10.00	79	146909	4.60	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.00%			
46) 2-Hexanone-d5	10.41	63	558831	55.43	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 110.86%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	196255	5.32	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 106.40%			
63) 1,2-Dichlorobenzene-d4	13.74	152	254147	5.27	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 105.40%			
Target Compounds						Qvalue
25) Chloroform	6.38	83	404728	2.30	ug/L	95
38) Bromodichloromethane	8.86	83	12332	0.11	ug/L #	82

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049338.D
Acq On : 11 May 2016 13:41
Operator : FY/SY
Sample : H2943-10
Misc : 25mL/MSVOA I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4138

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	3	6	22	rVB	6532952	16535092	100.00%	34.151%
2	1.690	44	47	58	rBV	256652	462889	2.80%	0.956%
3	2.083	84	87	95	rBV	181279	370338	2.24%	0.765%
4	2.369	112	116	120	rBV7	21193	53797	0.33%	0.111%
5	2.566	134	136	140	rVB	16520	31222	0.19%	0.064%
6	2.910	166	171	181	rBV	732220	1677203	10.14%	3.464%
7	3.196	196	200	202	rBV2	9907	19018	0.12%	0.039%
8	3.491	226	230	234	rVB6	3817	9547	0.06%	0.020%
9	3.570	234	238	242	rBV6	8316	25872	0.16%	0.053%
10	3.717	251	253	255	rBV3	4923	8312	0.05%	0.017%
11	3.786	257	260	261	rVB2	6946	9701	0.06%	0.020%
12	3.835	263	265	268	rBV4	3115	7002	0.04%	0.014%
13	3.944	273	276	278	rBV2	5871	12580	0.08%	0.026%
14	4.131	294	295	299	rVB2	2958	5628	0.03%	0.012%
15	4.199	299	302	304	rBV3	4603	8239	0.05%	0.017%
16	4.268	307	309	312	rVV3	3402	6070	0.04%	0.013%
17	4.347	314	317	322	rVB7	4406	9724	0.06%	0.020%
18	4.564	337	339	342	rVB3	3388	3925	0.02%	0.008%
19	4.908	373	374	377	rVB3	3602	5653	0.03%	0.012%
20	4.947	377	378	382	rBV3	3287	7402	0.04%	0.015%
21	5.144	396	398	400	rVB3	3951	4309	0.03%	0.009%
22	5.302	410	414	415	rBV4	4697	9231	0.06%	0.019%
23	5.420	422	426	428	rBV4	4288	11048	0.07%	0.023%
24	5.499	431	434	436	rVB3	2917	4340	0.03%	0.009%
25	5.528	436	437	439	rBV2	4394	4206	0.03%	0.009%
26	5.636	442	448	457	rBV	359897	1306273	7.90%	2.698%
27	6.069	490	492	493	rVB2	3877	4028	0.02%	0.008%
28	6.148	497	500	501	rBV3	3676	3949	0.02%	0.008%
29	6.355	513	521	535	rBV2	755511	3034185	18.35%	6.267%
30	6.532	538	539	541	rVB2	5459	3871	0.02%	0.008%
31	6.591	543	545	547	rBV3	6256	12574	0.08%	0.026%
32	6.719	555	558	560	rVV4	2131	4497	0.03%	0.009%
33	6.867	569	573	574	rBV3	4831	4789	0.03%	0.010%
34	6.886	574	575	581	rVB5	4280	5470	0.03%	0.011%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049338.D
Acq On : 11 May 2016 13:41
Operator : FY/SY
Sample : H2943-10
Misc : 25mL/MSVOA I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4138

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.955	581	582	585	rVB3	3769	4874	0.03%	0.010%
36	7.004	585	587	589	rBV3	4007	5711	0.03%	0.012%
37	7.142	595	601	605	rBV	1196375	3208417	19.40%	6.627%
38	7.201	605	607	618	rVB	430761	957800	5.79%	1.978%
39	7.398	625	627	629	rVB3	3334	5287	0.03%	0.011%
40	7.605	647	648	651	rBV3	3247	4966	0.03%	0.010%
41	7.654	651	653	655	rVB3	5659	7323	0.04%	0.015%
42	7.684	655	656	658	rBV	4707	4508	0.03%	0.009%
43	7.733	658	661	664	rBV5	3928	6198	0.04%	0.013%
44	7.910	673	679	690	rBV	1167206	2640187	15.97%	5.453%
45	8.176	703	706	707	rBV3	5261	8296	0.05%	0.017%
46	8.412	724	730	738	rBV	925563	2064361	12.48%	4.264%
47	8.510	738	740	744	rVV6	10117	26323	0.16%	0.054%
48	8.609	747	750	753	rVV5	3405	8676	0.05%	0.018%
49	8.786	765	768	769	rBV3	2642	4995	0.03%	0.010%
50	8.874	774	777	785	rBV5	20482	57143	0.35%	0.118%
51	8.963	785	786	788	rVB2	5341	4315	0.03%	0.009%
52	8.993	788	789	792	rBV3	3084	5012	0.03%	0.010%
53	9.071	794	797	799	rVB4	2603	4912	0.03%	0.010%
54	9.337	820	824	832	rBV	508459	987595	5.97%	2.040%
55	9.504	836	841	844	rVB3	18215	40736	0.25%	0.084%
56	9.573	844	848	849	rBV4	3806	7653	0.05%	0.016%
57	9.672	853	858	873	rBV	1812681	3167888	19.16%	6.543%
58	9.908	880	882	884	rVB3	3187	3943	0.02%	0.008%
59	9.996	886	891	899	rBV	322503	571670	3.46%	1.181%
60	10.124	899	904	905	rBV4	6579	18420	0.11%	0.038%
61	10.193	905	911	918	rVV	60644	151074	0.91%	0.312%
62	10.302	918	922	928	rVB4	23505	52550	0.32%	0.109%
63	10.410	928	933	948	rBV	1623550	3016655	18.24%	6.231%
64	10.626	953	955	959	rVB5	4697	10527	0.06%	0.022%
65	10.695	959	962	963	rVB2	3143	4032	0.02%	0.008%
66	10.813	973	974	977	rBV3	3178	5505	0.03%	0.011%
67	10.951	986	988	992	rBV5	4804	11049	0.07%	0.023%
68	11.197	1009	1013	1022	rBV	1531213	2515351	15.21%	5.195%
69	11.325	1025	1026	1030	rVB3	7676	13269	0.08%	0.027%
70	11.453	1036	1039	1043	rVB4	7110	15690	0.09%	0.032%
71	11.601	1052	1054	1055	rBV2	3974	4481	0.03%	0.009%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049338.D
Acq On : 11 May 2016 13:41
Operator : FY/SY
Sample : H2943-10
Misc : 25mL/MSVOA I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4138

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.827	1073	1077	1081	rBV6	6049	16666	0.10%	0.034%
73	11.896	1083	1084	1086	rBV2	3803	3856	0.02%	0.008%
74	11.955	1086	1090	1093	rVB6	5328	10767	0.07%	0.022%
75	12.093	1102	1104	1107	rBV4	4963	7486	0.05%	0.015%
76	12.172	1110	1112	1115	rVB4	5347	7652	0.05%	0.016%
77	12.250	1115	1120	1123	rBV5	6451	18089	0.11%	0.037%
78	12.378	1127	1133	1136	rBV2	61539	132073	0.80%	0.273%
79	12.437	1136	1139	1144	rVB	439216	718657	4.35%	1.484%
80	12.545	1148	1150	1153	rVB4	3187	5728	0.03%	0.012%
81	12.703	1164	1166	1172	rVB5	3603	9149	0.06%	0.019%
82	12.821	1175	1178	1180	rVB4	2158	4642	0.03%	0.010%
83	12.949	1190	1191	1194	rVB3	4111	4850	0.03%	0.010%
84	13.028	1196	1199	1201	rBV3	5840	10148	0.06%	0.021%
85	13.057	1201	1202	1204	rVB2	6845	6924	0.04%	0.014%
86	13.106	1204	1207	1209	rBV3	5405	10915	0.07%	0.023%
87	13.146	1209	1211	1213	rBV3	4913	6250	0.04%	0.013%
88	13.244	1220	1221	1224	rBV2	3201	4709	0.03%	0.010%
89	13.313	1226	1228	1229	rBV2	7074	5256	0.03%	0.011%
90	13.333	1229	1230	1233	rBV3	3911	5440	0.03%	0.011%
91	13.402	1233	1237	1244	rBV	1112134	1992587	12.05%	4.115%
92	13.510	1246	1248	1251	rBV4	3093	6883	0.04%	0.014%
93	13.599	1254	1257	1260	rBV5	8905	16411	0.10%	0.034%
94	13.736	1266	1271	1279	rBV	1025314	1891029	11.44%	3.906%
95	13.835	1279	1281	1288	rVB7	4676	16694	0.10%	0.034%
96	14.012	1293	1299	1302	rVB	45956	90084	0.54%	0.186%
97	14.140	1310	1312	1314	rBV3	3941	5223	0.03%	0.011%
98	14.573	1354	1356	1357	rBV2	6614	6859	0.04%	0.014%
99	14.602	1357	1359	1362	rVV4	5762	12020	0.07%	0.025%
100	15.577	1455	1458	1463	rBV2	36709	80910	0.49%	0.167%

Sum of corrected areas: 48417333

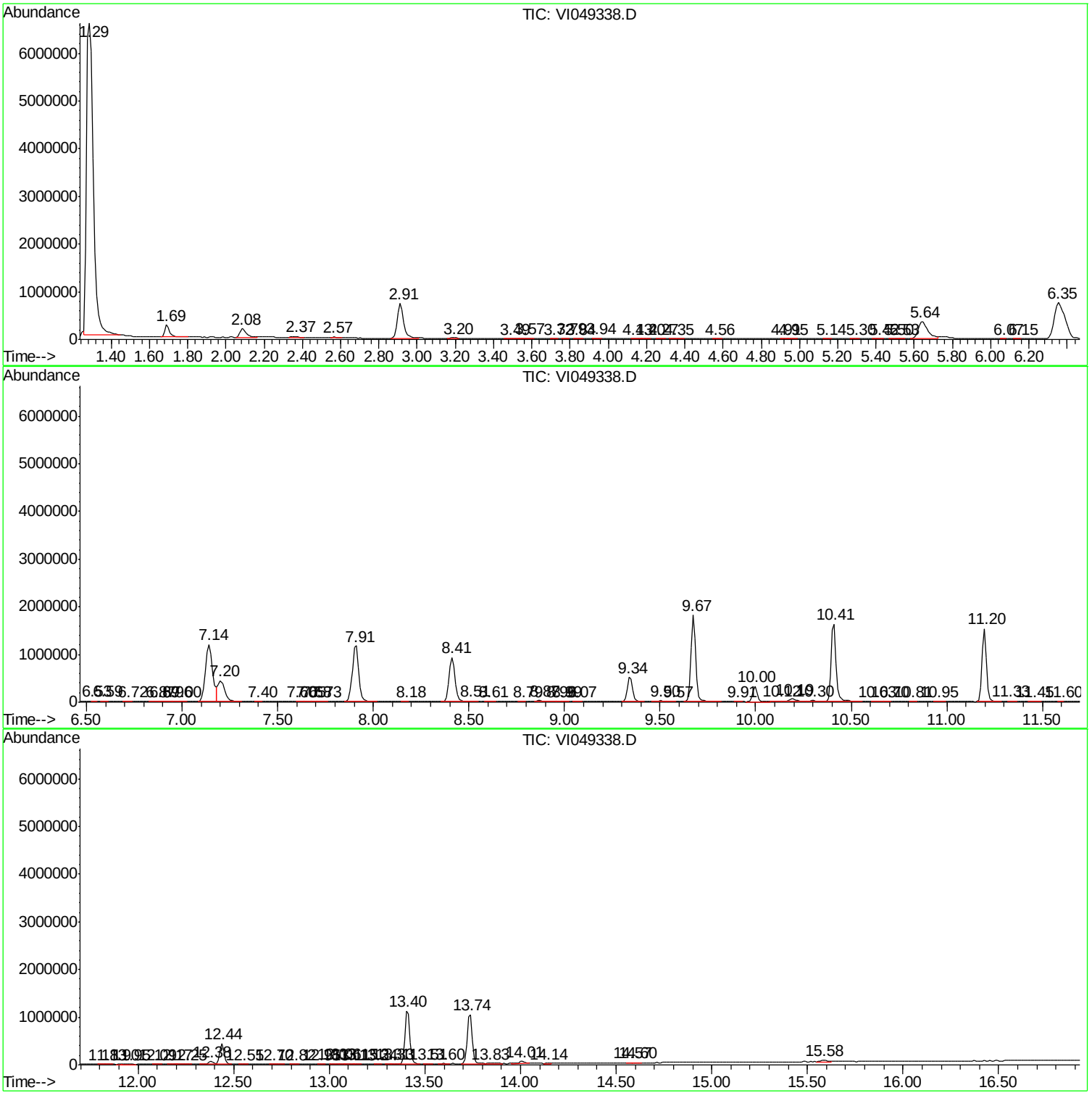
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049338.D
Acq On : 11 May 2016 13:41
Operator : FY/SY
Sample : H2943-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4138

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049338.D
Acq On : 11 May 2016 13:41
Operator : FY/SY
Sample : H2943-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4138

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049338.D
Acq On : 11 May 2016 13:41
Operator : FY/SY
Sample : H2943-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4138

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

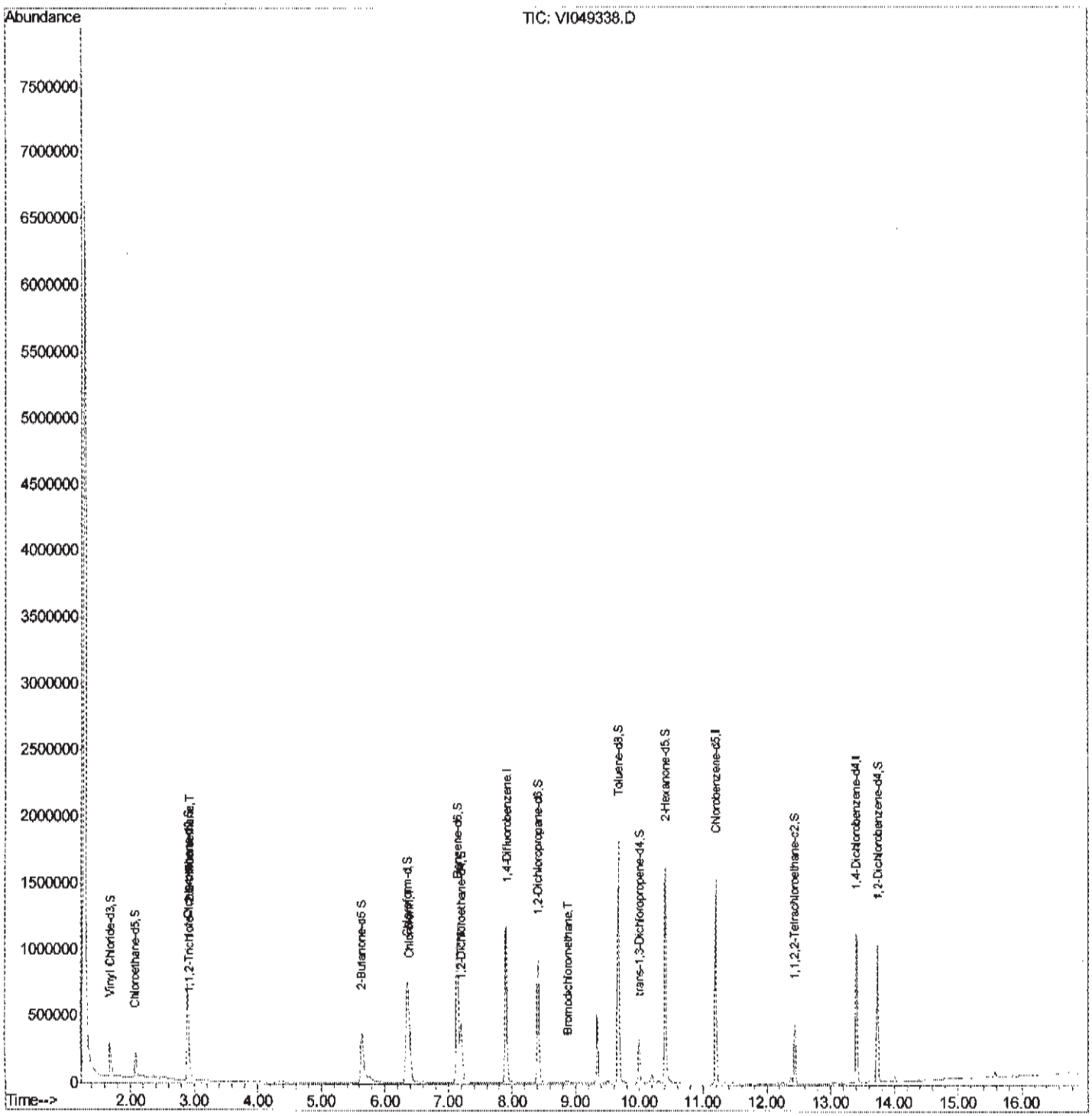
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049338.D
Acq On : 11 May 2016 13:41
Operator : FY/SY
Sample : H2943-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 12 06:45:03 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4138

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:34 PM



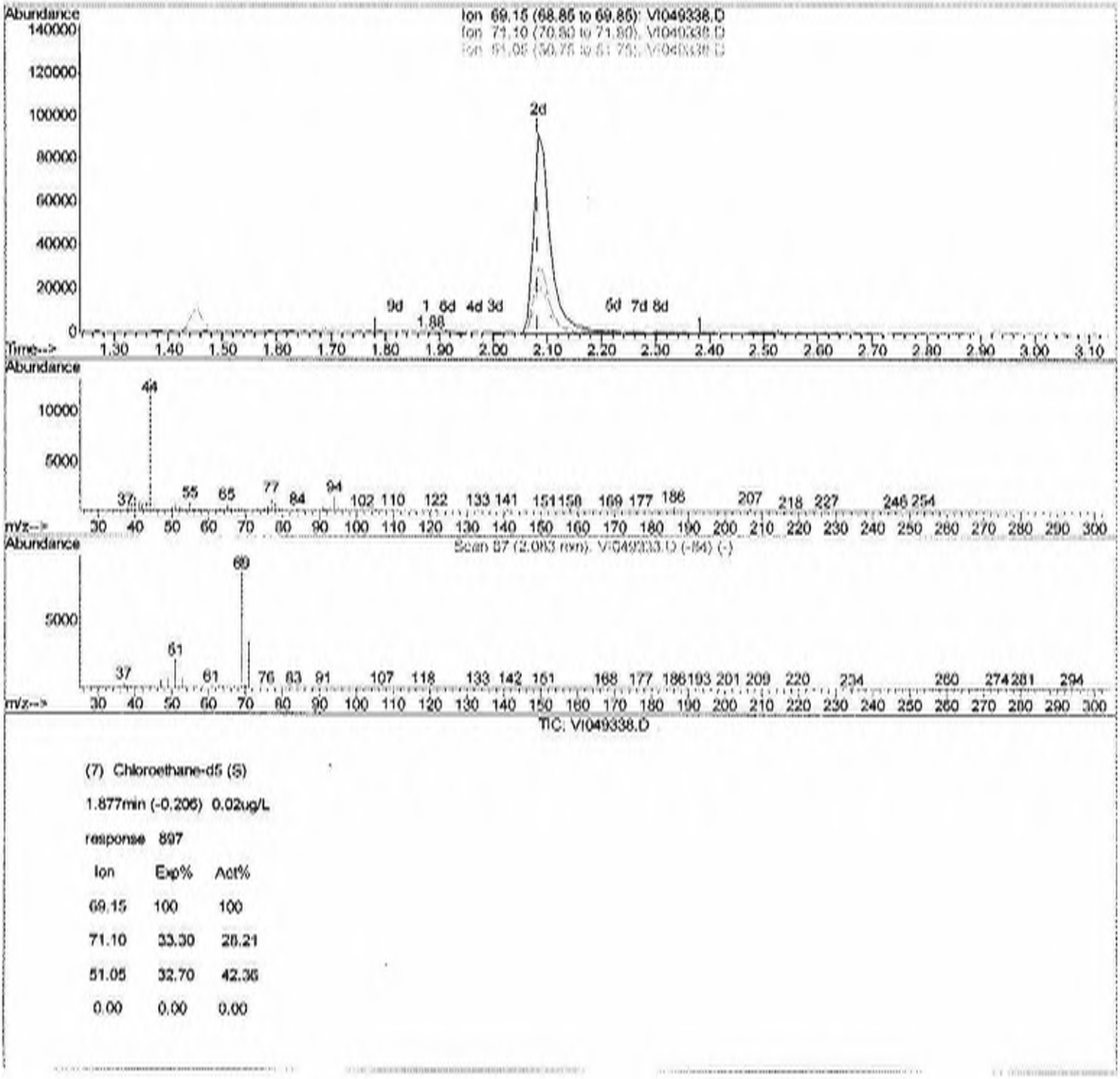
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049338.D
Acq On : 11 May 2016 13:41
Operator : FY/SY
Sample : H2943-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 12 06:04:41 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4138

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:34 PM



TIC: VI049338.D

(7) Chloroethane-d5 (S)

1.877min (-0.206) 0.02ug/L

response 897

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	28.21
51.05	32.70	42.36
0.00	0.00	0.00

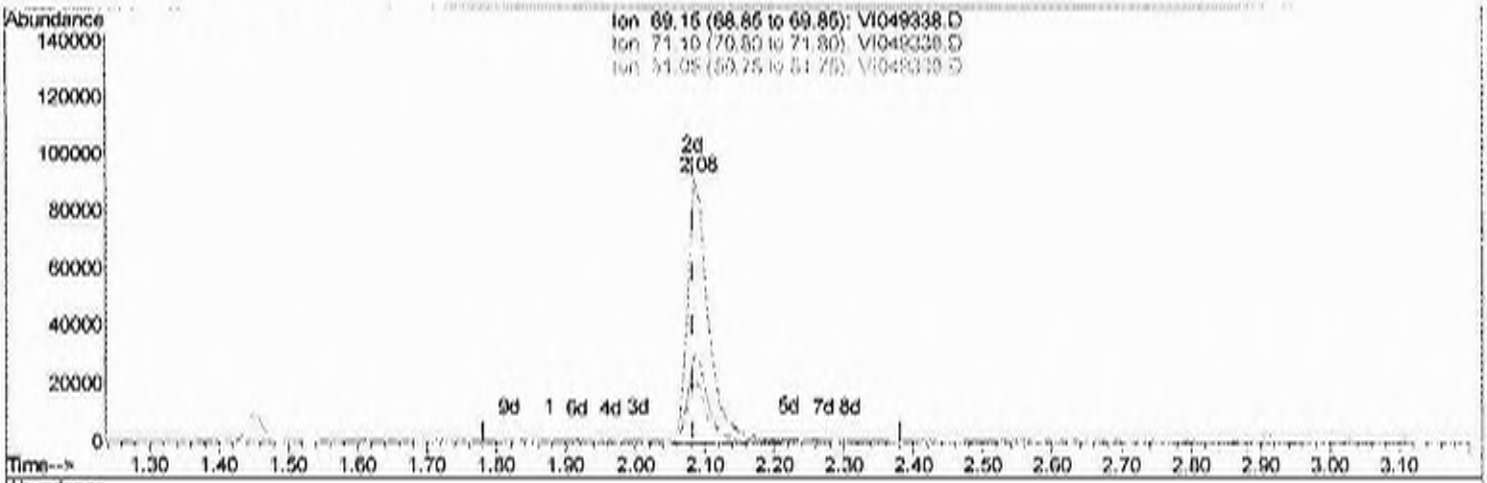
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049338.D
Acq On : 11 May 2016 13:41
Operator : FY/SY
Sample : H2943-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 12 06:04:41 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOM1TR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4138

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:34 PM



TIC: VI049338.D

(7) Chloroethane-d5 (S)

2.083min (+0.001) 5.25ug/L m

response 195763

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.13#
51.05	32.70	0.19#
0.00	0.00	0.00

> 05/26/16 84

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049338.D
Acq On : 11 May 2016 13:41
Operator : FY/SY
Sample : H2943-10
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 12 10:16:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : H4138

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:34 PM

Internal Standards			R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene			7.91	114	1092710	5.00	ug/L	0.00
28) Chlorobenzene-d5			11.20	117	740633	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4			13.41	152	275181	5.00	ug/L	0.00
System Monitoring Compounds								
4) Vinyl Chloride-d3			1.69	65	297493	4.42	ug/L	0.00
Spiked Amount	5.000	Range 40 - 130			Recovery =	88.40%		
7) Chloroethane-d5			2.08	69	195763m	5.25	ug/L	0.00
Spiked Amount	5.000	Range 65 - 130			Recovery =	105.00%		
11) 1,1-Dichloroethene-d2			2.91	63	565364	3.57	ug/L	0.00
Spiked Amount	5.000	Range 60 - 125			Recovery =	71.40%		
20) 2-Butanone-d5			5.64	46	865853	59.45	ug/L	0.00
Spiked Amount	50.000	Range 40 - 130			Recovery =	118.90%		
24) Chloroform-d			6.35	84	883877	5.16	ug/L	0.01
Spiked Amount	5.000	Range 70 - 125			Recovery =	103.20%		
26) 1,2-Dichloroethane-d4			7.20	65	381741	5.45	ug/L	0.00
Spiked Amount	5.000	Range 70 - 130			Recovery =	109.00%		
32) Benzene-d6			7.14	84	1524104	5.28	ug/L	0.00
Spiked Amount	5.000	Range 70 - 125			Recovery =	105.60%		
36) 1,2-Dichloropropane-d6			8.41	67	432744	5.33	ug/L	0.00
Spiked Amount	5.000	Range 60 - 140			Recovery =	106.60%		
41) Toluene-d8			9.67	98	1090593	5.12	ug/L	0.00
Spiked Amount	5.000	Range 70 - 130			Recovery =	102.40%		
43) trans-1,3-Dichloropropene-			10.00	79	146909	4.60	ug/L	0.00
Spiked Amount	5.000	Range 55 - 130			Recovery =	92.00%		
46) 2-Hexanone-d5			10.41	63	558831	55.43	ug/L	0.00
Spiked Amount	50.000	Range 45 - 130			Recovery =	110.86%		
57) 1,1,2,2-Tetrachloroethane-			12.44	84	196255	5.32	ug/L	0.00
Spiked Amount	5.000	Range 65 - 120			Recovery =	106.40%		
63) 1,2-Dichlorobenzene-d4			13.74	152	254147	5.27	ug/L	0.00
Spiked Amount	5.000	Range 80 - 120			Recovery =	105.40%		
Target Compounds								Qvalue
25) Chloroform			6.38	83	404728	2.30	ug/L	95
38) Bromodichloromethane			8.86	83	12332	0.11	ug/L #	82

(#) qualifier out of range (m) = manual integration (+) = signals summed

05/26/16 SY

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4139

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-23
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049316.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4139

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-23
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049316.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.21	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4139

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-23
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049316.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4139

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-23
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049316.D
% Solids :
Date Received : 05/07/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/10/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.0 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

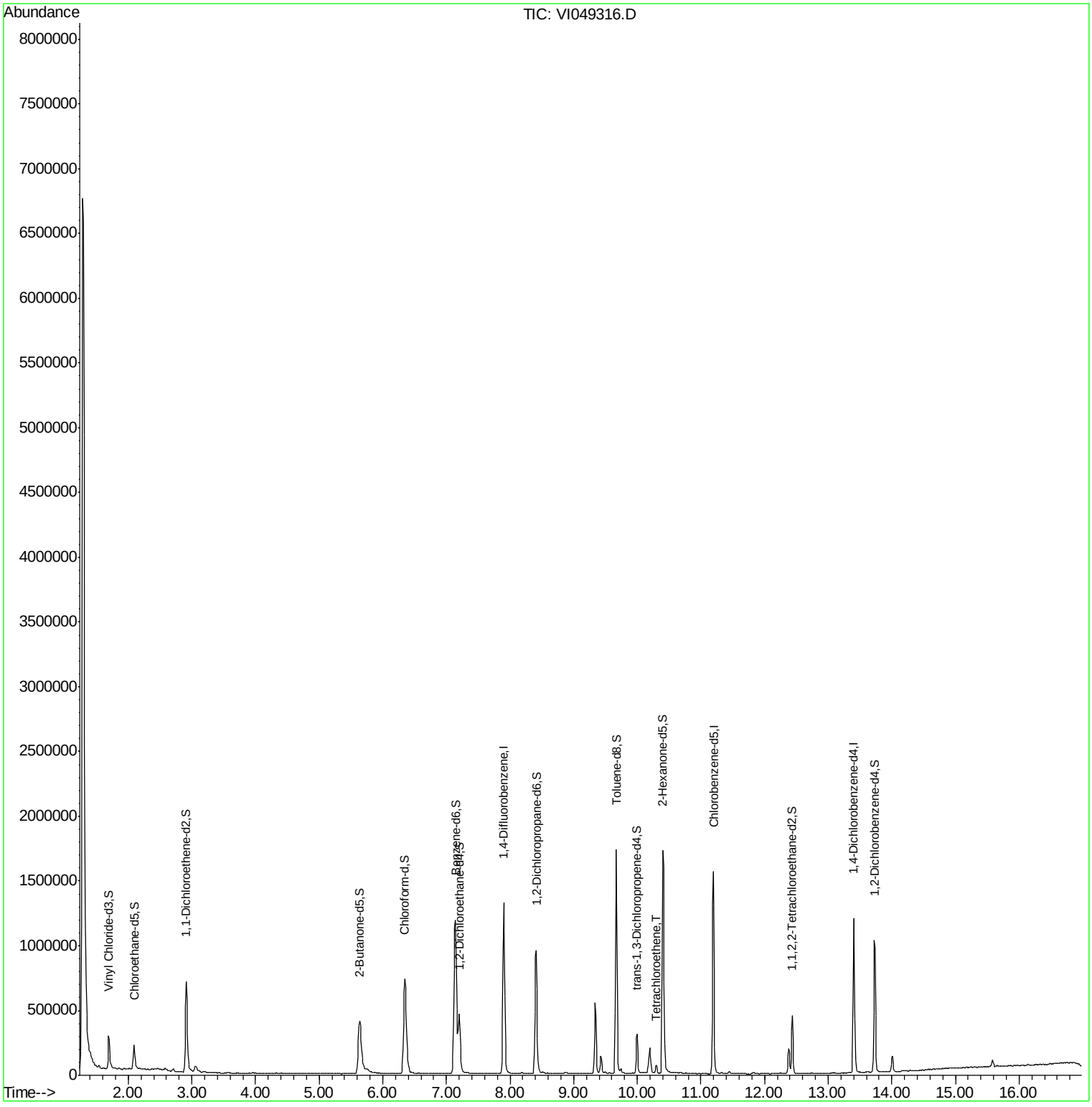
EPA-designated Registry Number.

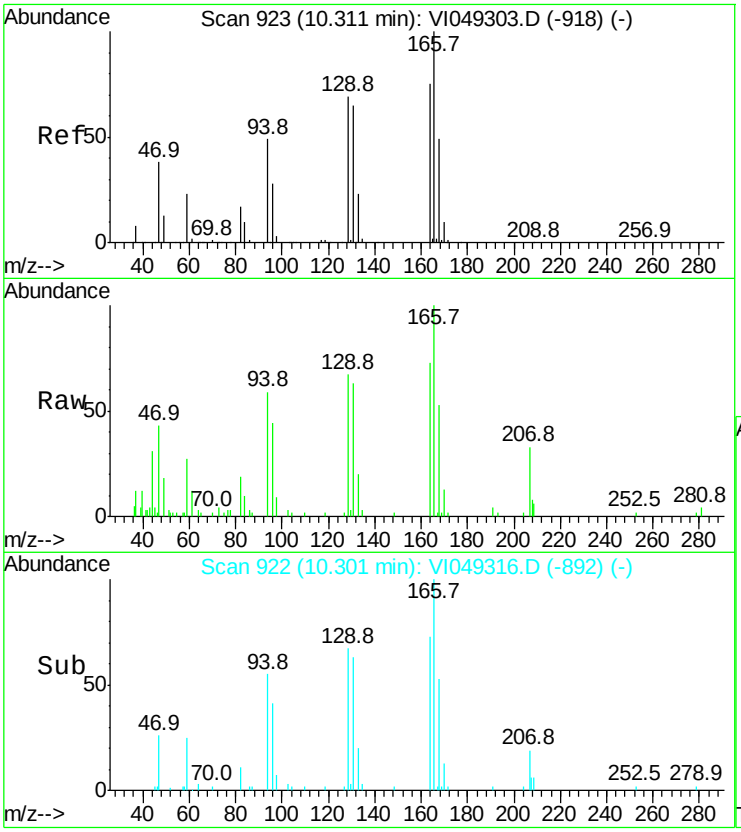
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049316.D
Acq On : 10 May 2016 1:41
Operator : FY/SY
Sample : H2943-23
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4139

Quant Time: May 10 07:12:11 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration



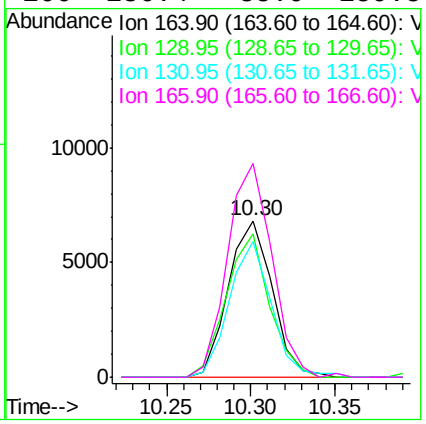


#47
Tetrachloroethene
Concen: 0.21 ug/L
RT: 10.30 min Scan# 922
Delta R.T. -0.01 min
Lab File: VI049316.D
Acq: 10 May 2016 1:41

Instrument :
MSVOA_I
ClientSampleId :
H4139

Tgt Ion:164 Resp: 12347

Ion	Ratio	Lower	Upper
164	100		
129	95.6	62.1	115.3
131	86.6	60.6	112.6
166	136.4	85.9	159.5



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049316.D
Acq On : 10 May 2016 1:41
Operator : FY/SY
Sample : H2943-23
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4139

Quant Time: May 10 07:12:11 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1177501	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	767275	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	281005	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	288098	3.97	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 79.40%			
7) Chloroethane-d5	2.09	69	206256	5.14	ug/L	0.01
Spiked Amount 5.000	Range 65 - 130		Recovery = 102.80%			
11) 1,1-Dichloroethene-d2	2.91	63	530613	3.11	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 62.20%			
20) 2-Butanone-d5	5.64	46	956554	60.95	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 121.90%			
24) Chloroform-d	6.34	84	908027	4.92	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.40%			
26) 1,2-Dichloroethane-d4	7.20	65	406337	5.38	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.60%			
32) Benzene-d6	7.14	84	1548449	5.18	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.60%			
36) 1,2-Dichloropropane-d6	8.41	67	457086	5.44	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 108.80%			
41) Toluene-d8	9.67	98	1046074	4.74	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.80%			
43) trans-1,3-Dichloropropene-	10.00	79	157025	4.74	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 94.80%			
46) 2-Hexanone-d5	10.40	63	602853	57.72	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 115.44%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	191726	5.02	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 100.40%			
63) 1,2-Dichlorobenzene-d4	13.74	152	247413	5.02	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 100.40%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.30	164	12347	0.21	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049316.D
Acq On : 10 May 2016 1:41
Operator : FY/SY
Sample : H2943-23
Misc : 25mL/MSVOA I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4139

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	3	6	29	rVB	6708786	18730195	100.00%	36.183%
2	1.542	30	32	36	rVB2	26963	50348	0.27%	0.097%
3	1.601	36	38	43	rVB5	12490	26836	0.14%	0.052%
4	1.690	44	47	55	rBV	248534	448578	2.39%	0.867%
5	1.936	70	72	74	rBV3	6927	8444	0.05%	0.016%
6	2.093	84	88	95	rBV	186698	382362	2.04%	0.739%
7	2.378	114	117	119	rBV4	9227	21514	0.11%	0.042%
8	2.457	124	125	129	rVB4	15883	20985	0.11%	0.041%
9	2.575	136	137	143	rVB2	19658	36151	0.19%	0.070%
10	2.703	146	150	156	rVB2	20680	53047	0.28%	0.102%
11	2.910	166	171	182	rBV	701670	1558330	8.32%	3.010%
12	3.058	182	186	195	rVV3	45790	157761	0.84%	0.305%
13	3.186	195	199	203	rVB4	8467	22355	0.12%	0.043%
14	3.569	235	238	241	rVV4	6308	14366	0.08%	0.028%
15	3.609	241	242	245	rVB3	5179	5440	0.03%	0.011%
16	3.668	245	248	251	rBV3	2847	6272	0.03%	0.012%
17	3.727	251	254	256	rVB4	6253	10729	0.06%	0.021%
18	3.766	256	258	260	rBV3	3942	6611	0.04%	0.013%
19	3.904	270	272	274	rBV2	4697	6103	0.03%	0.012%
20	3.963	274	278	279	rBV4	4697	11320	0.06%	0.022%
21	4.199	300	302	305	rVB4	3124	4809	0.03%	0.009%
22	4.327	313	315	316	rVB2	6309	5957	0.03%	0.012%
23	4.357	316	318	320	rBV3	2789	4860	0.03%	0.009%
24	4.406	320	323	328	rVB4	6073	14201	0.08%	0.027%
25	4.475	328	330	333	rBV4	3756	5575	0.03%	0.011%
26	4.672	347	350	354	rBV5	3906	9327	0.05%	0.018%
27	4.760	357	359	363	rVB4	5470	9126	0.05%	0.018%
28	4.849	366	368	369	rBV2	3195	5354	0.03%	0.010%
29	5.046	384	388	389	rBV4	3641	6236	0.03%	0.012%
30	5.095	389	393	394	rBV4	2889	5473	0.03%	0.011%
31	5.124	394	396	399	rVB2	5422	9513	0.05%	0.018%
32	5.174	399	401	403	rBV2	3552	5849	0.03%	0.011%
33	5.370	419	421	423	rBV3	6125	8441	0.05%	0.016%
34	5.636	442	448	457	rBV	404075	1424914	7.61%	2.753%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049316.D
Acq On : 10 May 2016 1:41
Operator : FY/SY
Sample : H2943-23
Misc : 25mL/MSVOA I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4139

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.128	496	498	499	rBV	4726	6863	0.04%	0.013%
36	6.345	512	520	529	rBV	729933	2322735	12.40%	4.487%
37	6.561	540	542	544	rVB3	5760	7841	0.04%	0.015%
38	6.601	544	546	547	rBV2	4774	6475	0.03%	0.013%
39	6.739	554	560	561	rBV5	4420	14385	0.08%	0.028%
40	6.866	570	573	580	rVB7	4472	12978	0.07%	0.025%
41	7.142	594	601	604	rBV	1189085	3157313	16.86%	6.099%
42	7.201	604	607	617	rVV	457637	1158187	6.18%	2.237%
43	7.319	617	619	626	rVV7	7059	20747	0.11%	0.040%
44	7.546	640	642	647	rBV6	3353	8366	0.04%	0.016%
45	7.624	649	650	655	rVB4	5059	11964	0.06%	0.023%
46	7.693	655	657	659	rBV3	2850	6248	0.03%	0.012%
47	7.831	668	671	672	rBV3	2832	4719	0.03%	0.009%
48	7.900	672	678	689	rBV	1319816	2860752	15.27%	5.526%
49	8.028	689	691	695	rVB2	3845	8365	0.04%	0.016%
50	8.077	695	696	700	rVB4	3699	5571	0.03%	0.011%
51	8.175	703	706	710	rVB5	6855	16653	0.09%	0.032%
52	8.264	712	715	716	rBV3	4724	6709	0.04%	0.013%
53	8.412	724	730	738	rVV	954605	2148095	11.47%	4.150%
54	8.510	738	740	744	rVV4	10102	19359	0.10%	0.037%
55	8.805	768	770	773	rBV4	2594	5814	0.03%	0.011%
56	8.874	773	777	782	rBV7	12179	36461	0.19%	0.070%
57	9.081	796	798	801	rVB4	3822	5111	0.03%	0.010%
58	9.179	805	808	810	rBV4	2757	4771	0.03%	0.009%
59	9.337	820	824	830	rBV	547384	994299	5.31%	1.921%
60	9.425	830	833	839	rVV	129927	255344	1.36%	0.493%
61	9.494	839	840	844	rVB4	12283	16696	0.09%	0.032%
62	9.553	844	846	853	rVB6	5856	7374	0.04%	0.014%
63	9.671	853	858	863	rBV	1726369	3033462	16.20%	5.860%
64	9.740	863	865	874	rVB2	34857	79173	0.42%	0.153%
65	9.996	886	891	896	rBV	303842	543693	2.90%	1.050%
66	10.134	901	905	906	rVV4	3067	5996	0.03%	0.012%
67	10.193	906	911	918	rVV	195227	404022	2.16%	0.780%
68	10.301	918	922	926	rVB	63111	120004	0.64%	0.232%
69	10.400	928	932	945	rBV	1722596	3174917	16.95%	6.133%
70	10.695	957	962	964	rVV5	3838	11788	0.06%	0.023%
71	10.764	967	969	972	rVV3	4387	6008	0.03%	0.012%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049316.D
Acq On : 10 May 2016 1:41
Operator : FY/SY
Sample : H2943-23
Misc : 25mL/MSVOA I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4139

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	10.823	973	975	978	rVB4	3203	4841	0.03%	0.009%
73	11.099	1002	1003	1006	rVB3	4410	5007	0.03%	0.010%
74	11.197	1008	1013	1022	rVV	1562523	2647578	14.14%	5.115%
75	11.325	1022	1026	1029	rVB4	11040	20288	0.11%	0.039%
76	11.443	1036	1038	1045	rVB3	14862	31784	0.17%	0.061%
77	11.827	1071	1077	1081	rBV6	11402	30982	0.17%	0.060%
78	11.896	1081	1084	1086	rVB3	3542	5808	0.03%	0.011%
79	11.945	1086	1089	1090	rBV3	2645	4697	0.03%	0.009%
80	12.122	1103	1107	1108	rBV3	3121	4819	0.03%	0.009%
81	12.171	1110	1112	1115	rBV4	4680	9137	0.05%	0.018%
82	12.378	1129	1133	1136	rBV	193984	374819	2.00%	0.724%
83	12.437	1136	1139	1144	rVB	447186	718718	3.84%	1.388%
84	12.654	1158	1161	1162	rBV3	2431	4852	0.03%	0.009%
85	12.742	1168	1170	1174	rVB4	6036	9825	0.05%	0.019%
86	12.959	1189	1192	1193	rBV3	3436	5364	0.03%	0.010%
87	13.067	1202	1203	1205	rVV2	3864	4953	0.03%	0.010%
88	13.215	1215	1218	1219	rBV3	2943	5431	0.03%	0.010%
89	13.343	1228	1231	1233	rBV4	6294	13617	0.07%	0.026%
90	13.402	1233	1237	1246	rBV	1192245	2042322	10.90%	3.945%
91	13.559	1251	1253	1254	rVB2	5019	5737	0.03%	0.011%
92	13.589	1254	1256	1257	rBV2	6694	9278	0.05%	0.018%
93	13.618	1257	1259	1264	rBV6	4024	9330	0.05%	0.018%
94	13.726	1266	1270	1275	rBV	1015325	1826454	9.75%	3.528%
95	14.012	1295	1299	1304	rVB2	116715	217888	1.16%	0.421%
96	14.159	1312	1314	1315	rBV2	4381	5066	0.03%	0.010%
97	14.287	1324	1327	1330	rBV5	8004	16188	0.09%	0.031%
98	14.484	1344	1347	1348	rBV3	5239	7129	0.04%	0.014%
99	15.577	1455	1458	1462	rVB	50290	99095	0.53%	0.191%
100	15.931	1492	1494	1496	rBV3	11866	18202	0.10%	0.035%

Sum of corrected areas: 51765849

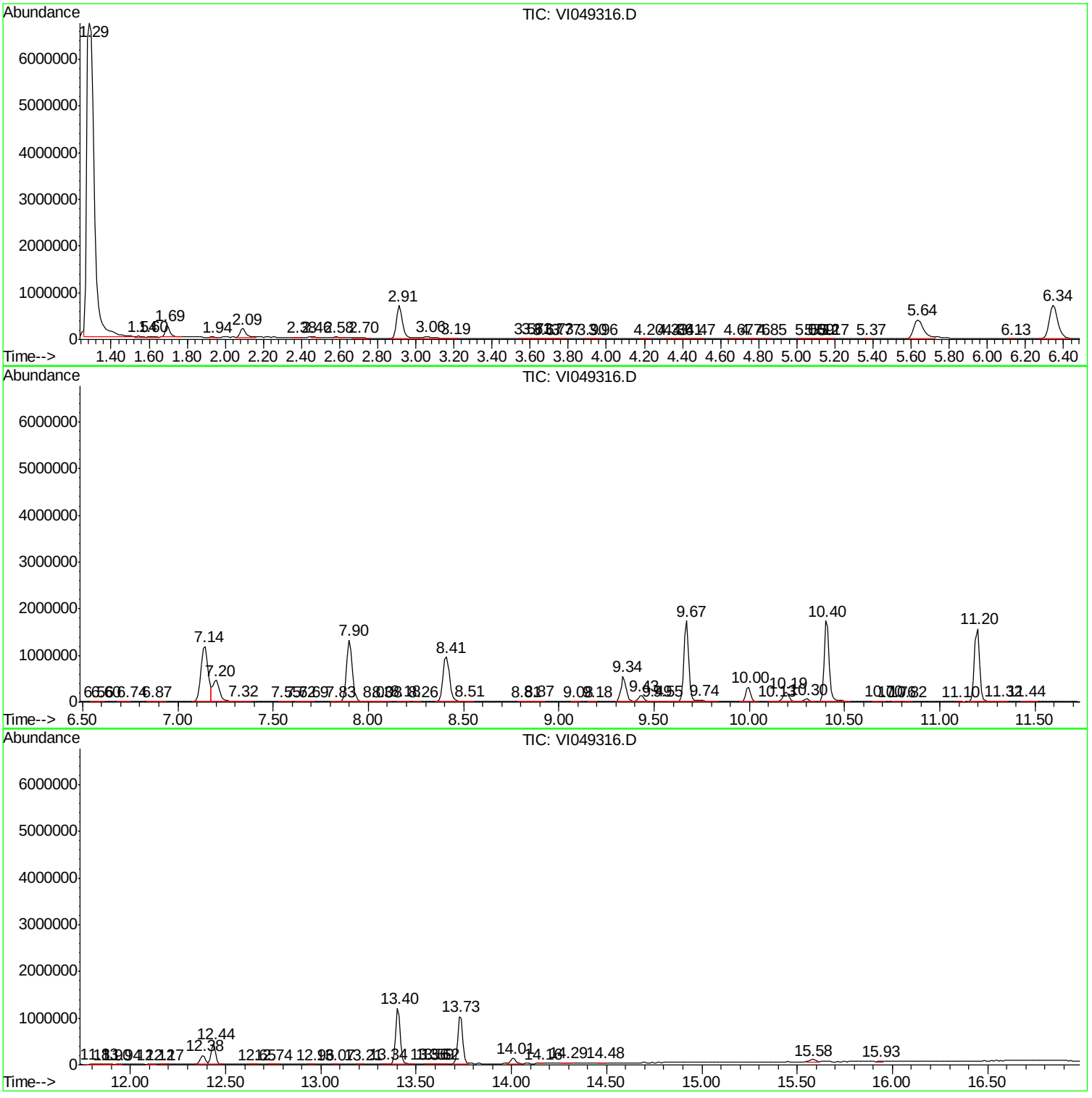
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049316.D
Acq On : 10 May 2016 1:41
Operator : FY/SY
Sample : H2943-23
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4139

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049316.D
Acq On : 10 May 2016 1:41
Operator : FY/SY
Sample : H2943-23
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4139

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049316.D
Acq On : 10 May 2016 1:41
Operator : FY/SY
Sample : H2943-23
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 27 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4139

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104
Analytical Method : Trace VOA Level :
Instrument ID: MSVOA_I Calibration Date(s): 05/04/2016 05/04/2016
GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 11:27 13:33
Length : 30 (m)
Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VI049220.D RRF1.0 = VI049221.D
RRF5.0 = VI049222.D RRF10 = VI049223.D RRF20 = VI049224.D

ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.538	0.547	0.574	0.556	0.601	0.563	4.4
Chloromethane	0.493	0.504	0.475	0.470	0.469	0.482	3.2
Vinyl chloride	0.321	0.358	0.339	0.328	0.340	0.337	4.1
Bromomethane	0.200	0.198	0.157	0.144	0.117	0.163	22
Chloroethane	0.146	0.171	0.149	0.134	0.120	0.144	13.2
Trichlorofluoromethane	0.468	0.496	0.470	0.459	0.462	0.471	3.1
1,1-Dichloroethene	0.384	0.433	0.405	0.395	0.401	0.404	4.6
1,1,2-Trichloro-1,2,2-trifluoroetha	0.416	0.419	0.439	0.421	0.461	0.431	4.4
Acetone	0.042	0.036	0.041	0.043	0.045	0.041	8.1
Carbon disulfide	1.391	1.508	1.497	1.445	1.477	1.463	3.2
Methyl Acetate	0.106	0.118	0.119	0.120	0.127	0.118	6.6
Methylene chloride	0.439	0.475	0.440	0.425	0.446	0.445	4.1
trans-1,2-Dichloroethene	0.423	0.465	0.449	0.431	0.462	0.446	4.2
Methyl tert-butyl Ether	0.679	0.759	0.754	0.720	0.775	0.737	5.2
1,1-Dichloroethane	0.720	0.797	0.761	0.728	0.775	0.756	4.2
cis-1,2-Dichloroethene	0.440	0.472	0.458	0.444	0.480	0.459	3.8
2-Butanone	0.066	0.070	0.079	0.077	0.082	0.075	8.8
Bromochloromethane	0.181	0.188	0.184	0.178	0.189	0.184	2.6
Chloroform	0.778	0.854	0.803	0.771	0.815	0.804	4.1
1,1,1-Trichloroethane	0.896	1.076	0.958	0.890	0.926	0.949	8
Cyclohexane	0.783	0.891	0.849	0.799	0.865	0.837	5.4
Carbon tetrachloride	0.773	0.908	0.846	0.793	0.827	0.829	6.3
Benzene	2.033	2.369	2.170	2.042	2.090	2.141	6.5
1,2-Dichloroethane	0.386	0.427	0.406	0.391	0.417	0.405	4.2
Trichloroethene	0.569	0.665	0.592	0.553	0.591	0.594	7.3
Methylcyclohexane	0.681	0.714	0.757	0.722	0.791	0.733	5.8
1,2-Dichloropropane	0.476	0.549	0.505	0.480	0.500	0.502	5.8
Bromodichloromethane	0.669	0.810	0.737	0.698	0.744	0.732	7.3
cis-1,3-Dichloropropene	0.669	0.828	0.743	0.702	0.757	0.740	8.1
4-Methyl-2-pentanone	0.240	0.286	0.271	0.250	0.245	0.258	7.4
Toluene	1.676	1.953	1.825	1.770	1.806	1.806	5.6
trans-1,3-Dichloropropene	0.505	0.582	0.575	0.564	0.609	0.567	6.8

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method : Trace VOA Level :

Instrument ID: MSVOA_I Calibration Date(s): 05/04/2016 05/04/2016

GC Column: RXI-624 ID: 0.25 (mm) Calibration Time(s): 11:27 13:33

Length : 30 (m)

Heated Purge: (Y/N): N Purge Volume : 25 (mL)

LAB FILE ID: RRF0.5 = VI049220.D RRF1.0 = VI049221.D
RRF5.0 = VI049222.D RRF10 = VI049223.D RRF20 = VI049224.D

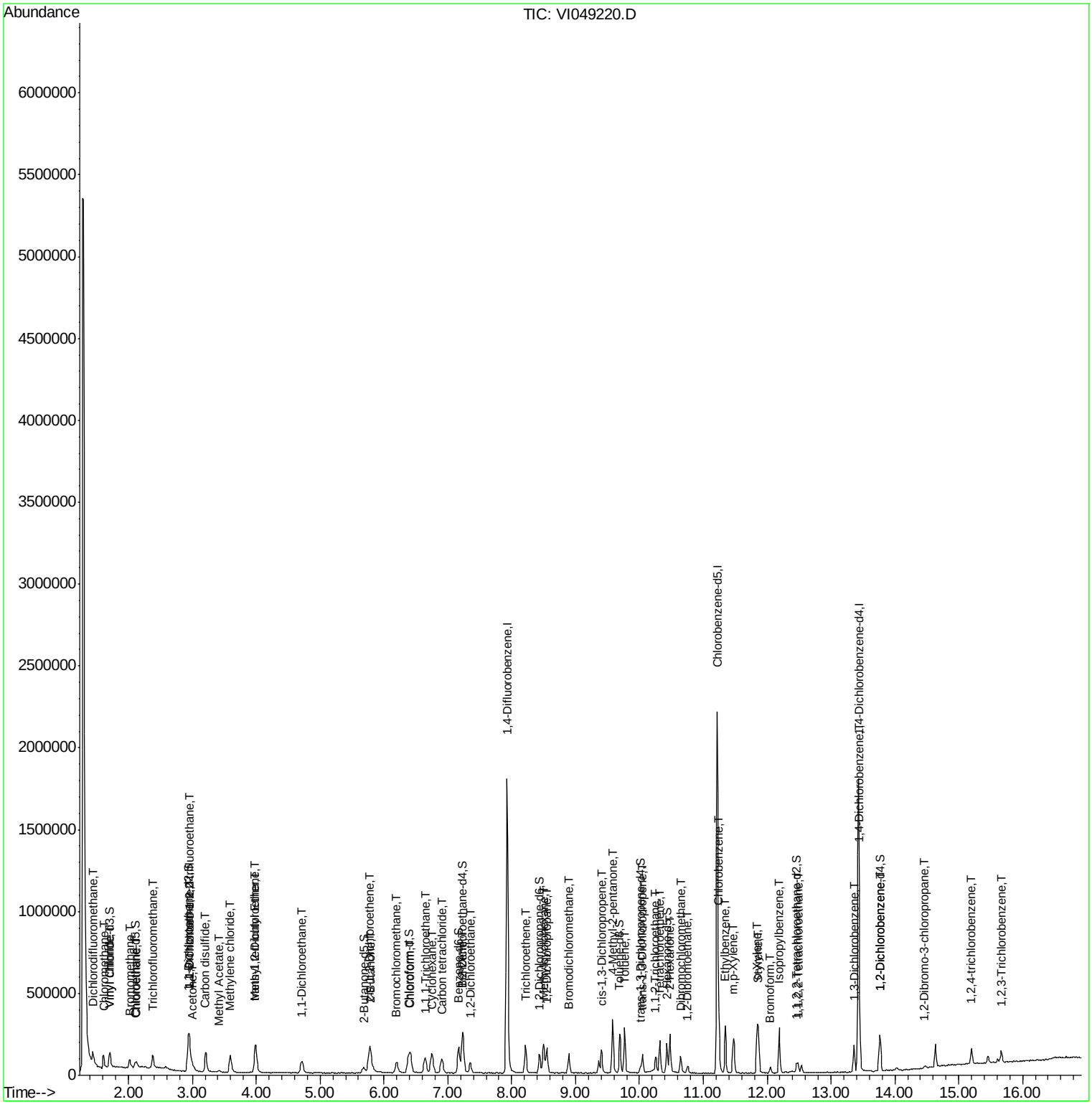
ANALYTE	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	% RSD
1,1,2-Trichloroethane	0.231	0.272	0.264	0.256	0.281	0.261	7.3
Tetrachloroethene	0.370	0.406	0.388	0.379	0.408	0.390	4.3
2-Hexanone	0.152	0.188	0.178	0.170	0.176	0.173	7.6
Dibromochloromethane	0.329	0.406	0.402	0.395	0.436	0.393	10
1,2-Dibromoethane	0.238	0.287	0.280	0.264	0.292	0.272	8.1
Chlorobenzene	1.011	1.096	1.100	1.067	1.142	1.083	4.5
Ethylbenzene	1.706	1.812	1.947	1.894	1.973	1.866	5.8
o-Xylene	0.558	0.568	0.655	0.656	0.742	0.636	11.9
m,p-Xylene	0.591	0.626	0.704	0.699	0.780	0.680	10.8
Styrene	0.868	0.950	1.112	1.111	1.232	1.055	13.7
Bromoform	0.390	0.501	0.470	0.466	0.504	0.466	9.9
Isopropylbenzene	1.439	1.487	1.741	1.740	1.833	1.648	10.6
1,1,2,2-Tetrachloroethane	0.238	0.235	0.251	0.248	0.287	0.252	8.2
1,3-Dichlorobenzene	1.574	1.685	1.711	1.692	1.820	1.696	5.1
1,4-Dichlorobenzene	1.707	1.775	1.689	1.715	1.825	1.742	3.2
1,2-Dichlorobenzene	1.294	1.371	1.411	1.406	1.545	1.405	6.5
1,2-Dibromo-3-chloropropane	0.065	0.110	0.078	0.082	0.092	0.086	19.7
1,2,4-trichlorobenzene	0.732	0.603	0.766	0.760	0.892	0.751	13.7
1,2,3-Trichlorobenzene	0.568	0.460	0.549	0.552	0.649	0.556	12.1
Vinyl Chloride-d3	0.303	0.324	0.307	0.316	0.289	0.308	4.3
Chloroethane-d5	0.188	0.202	0.174	0.164	0.124	0.170	17.4
1,1-Dichloroethene-d2	0.713	0.755	0.738	0.729	0.691	0.725	3.4
2-Butanone-d5	0.051	0.066	0.072	0.074	0.071	0.067	13.8
Chloroform-d	0.737	0.815	0.799	0.802	0.761	0.783	4.2
1,2-Dichloroethane-d4	0.312	0.337	0.329	0.325	0.299	0.320	4.7
Benzene-d6	1.834	2.173	2.000	1.949	1.783	1.948	7.9
1,2-Dichloropropane-d6	0.519	0.607	0.558	0.545	0.509	0.548	7
Toluene-d8	1.341	1.543	1.488	1.459	1.354	1.437	6.1
trans-1,3-Dichloropropene-d4	0.181	0.227	0.226	0.226	0.219	0.216	9.2
2-Hexanone-d5	0.055	0.072	0.071	0.071	0.071	0.068	10.6
1,1,2,2-Tetrachloroethane-d2	0.218	0.235	0.256	0.263	0.274	0.249	9
1,2-Dichlorobenzene-d4	0.859	0.849	0.869	0.912	0.893	0.877	2.9

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049220.D
Acq On : 4 May 2016 11:27
Operator : FY/SY
Sample : VSTD0.533
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD0.533

Quant Time: May 04 12:54:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049220.D
Acq On : 4 May 2016 11:27
Operator : FY/SY
Sample : VSTD0.533
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD0.533

Quant Time: May 04 12:54:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1583520	5.00	ug/L		0.00
28) Chlorobenzene-d5	11.22	117	1071757	5.00	ug/L		0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	393159	5.00	ug/L		0.00
System Monitoring Compounds							
4) Vinyl Chloride-d3	1.70	65	47940	0.56	ug/L		-0.01
7) Chloroethane-d5	2.09	69	29838	0.59	ug/L		-0.01
11) 1,1-Dichloroethene-d2	2.93	63	112957	0.52	ug/L		0.00
20) 2-Butanone-d5	5.69	46	80851	4.28	ug/L		0.02
24) Chloroform-d	6.38	84	116714	0.48	ug/L		0.00
26) 1,2-Dichloroethane-d4	7.23	65	49329	0.51	ug/L		0.00
32) Benzene-d6	7.17	84	196516	0.49	ug/L		0.00
36) 1,2-Dichloropropane-d6	8.44	67	55574	0.48	ug/L		0.00
41) Toluene-d8	9.69	98	143683	0.46	ug/L		0.00
43) trans-1,3-Dichloropropene-	10.02	79	19375	0.41	ug/L		0.00
46) 2-Hexanone-d5	10.43	63	59088	3.89	ug/L		0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	23375	0.38	ug/L		0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	33778	0.45	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.44	85	85244	0.57	ug/L		97
3) Chloromethane	1.61	50	78014	0.61	ug/L		98
5) Vinyl chloride	1.71	62	50865	0.57	ug/L		94
6) Bromomethane	2.02	94	31645	0.69	ug/L		99
8) Chloroethane	2.12	64	23186	0.57	ug/L		95
9) Trichlorofluoromethane	2.38	101	74151	0.61	ug/L		99
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	65845	0.57	ug/L		97
12) 1,1-Dichloroethene	2.95	96	60731	0.51	ug/L		95
13) Acetone	3.01	43	65787	6.14	ug/L		92
14) Carbon disulfide	3.21	76	220279	0.50	ug/L		97
15) Methyl Acetate	3.41	43	16711	0.50	ug/L		94
16) Methylene chloride	3.59	84	69501	0.53	ug/L		92
17) Methyl tert-butyl Ether	3.98	73	107503	0.50	ug/L		99
18) trans-1,2-Dichloroethene	3.99	96	66984	0.50	ug/L		92
19) 1,1-Dichloroethane	4.71	63	113985	0.52	ug/L		96
21) 2-Butanone	5.79	43	105165	5.28	ug/L		95
22) cis-1,2-Dichloroethene	5.77	96	69641	0.49	ug/L		82
23) Bromochloromethane	6.21	128	28643	0.53	ug/L		92
25) Chloroform	6.41	83	123168	0.51	ug/L		95
27) 1,2-Dichloroethane	7.36	62	61137	0.51	ug/L	#	92
29) 1,1,1-Trichloroethane	6.64	97	96055	0.54	ug/L		97
30) Cyclohexane	6.75	56	83902	0.58	ug/L		100
31) Carbon tetrachloride	6.91	117	82897	0.55	ug/L		96
33) Benzene	7.23	78	217861	0.52	ug/L		100
34) Trichloroethene	8.22	95	60940	0.52	ug/L		92
35) Methylcyclohexane	8.50	83	72953	0.54	ug/L		96
37) 1,2-Dichloropropane	8.55	63	51040	0.50	ug/L	#	97
38) Bromodichloromethane	8.89	83	71718	0.49	ug/L		98
39) cis-1,3-Dichloropropene	9.41	75	71745	0.48	ug/L		99
40) 4-Methyl-2-pentanone	9.58	43	257723	4.99	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049220.D
Acq On : 4 May 2016 11:27
Operator : FY/SY
Sample : VSTD0.533
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD0.533

Quant Time: May 04 12:54:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.77	91	179579	0.47	ug/L		98
44) trans-1,3-Dichloropropene	10.05	75	54124	0.45	ug/L		94
45) 1,1,2-Trichloroethane	10.25	97	24736	0.43	ug/L		92
47) Tetrachloroethene	10.32	164	39614	0.49	ug/L		93
48) 2-Hexanone	10.48	43	163129	4.52	ug/L		99
49) Dibromochloromethane	10.65	129	35222	0.43	ug/L		99
50) 1,2-Dibromoethane	10.75	107	25463	0.43	ug/L		99
51) Chlorobenzene	11.25	112	108303	0.46	ug/L		99
52) Ethylbenzene	11.34	91	182792	0.45	ug/L		98
53) m,p-Xylene	11.47	106	63389	0.42	ug/L		95
54) o-Xylene	11.85	106	59773	0.42	ug/L		100
55) Styrene	11.87	104	93024	0.39	ug/L		92
56) Isopropylbenzene	12.19	105	154217	0.42	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.49	83	25473	0.43	ug/L		86
60) Bromoform	12.05	173	15337	0.44	ug/L	#	97
61) 1,3-Dichlorobenzene	13.36	146	61886	0.46	ug/L		95
62) 1,4-Dichlorobenzene	13.45	146	67101	0.48	ug/L		94
64) 1,2-Dichlorobenzene	13.78	146	50866	0.44	ug/L		90
65) 1,2-Dibromo-3-chloropropan	14.47	75	2575	0.38	ug/L	#	76
66) 1,2,4-trichlorobenzene	15.20	180	28774	0.43	ug/L		98
67) 1,2,3-Trichlorobenzene	15.67	180	22326	0.44	ug/L		94

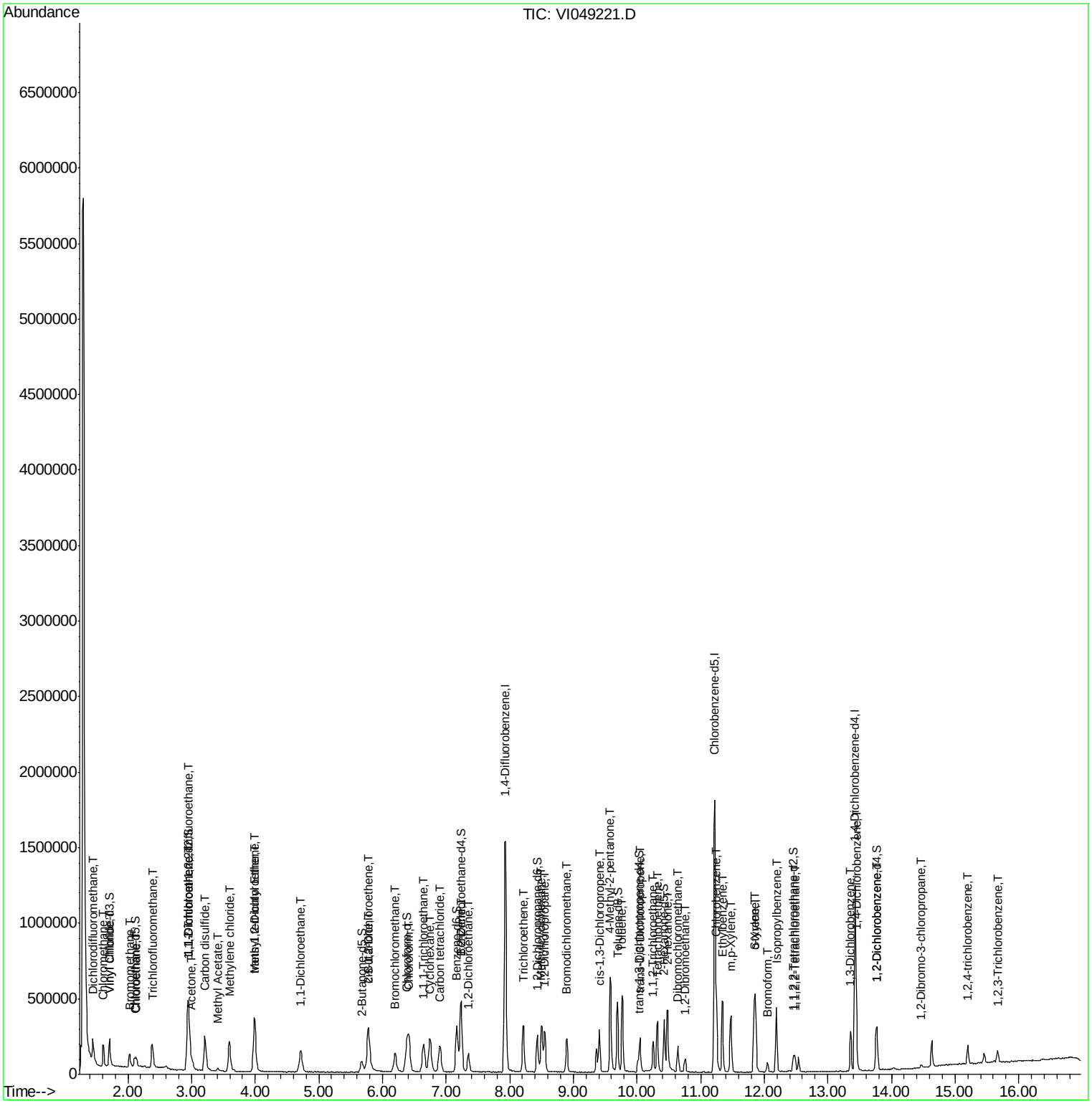
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049221.D
Acq On : 4 May 2016 11:58
Operator : FY/SY
Sample : VSTD00134
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00134

Quant Time: May 04 12:54:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049221.D
Acq On : 4 May 2016 11:58
Operator : FY/SY
Sample : VSTD00134
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00134

Quant Time: May 04 12:54:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1425657	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	907600	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	278770	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	92417	1.21	ug/L	0.00
7) Chloroethane-d5	2.11	69	57615	1.26	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	215352	1.11	ug/L	0.00
20) 2-Butanone-d5	5.67	46	187185	11.00	ug/L	0.00
24) Chloroform-d	6.38	84	232456	1.06	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.24	65	96053	1.10	ug/L	0.00
32) Benzene-d6	7.17	84	394446	1.16	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.44	67	110173	1.13	ug/L	0.00
41) Toluene-d8	9.70	98	280045	1.05	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	41222	1.03	ug/L	0.00
46) 2-Hexanone-d5	10.42	63	130255	10.11	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	42601	0.83	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	47353	0.90	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	156022	1.16	ug/L	96
3) Chloromethane	1.61	50	143674	1.25	ug/L	98
5) Vinyl chloride	1.71	62	101996	1.27	ug/L	99
6) Bromomethane	2.03	94	56541	1.37	ug/L	98
8) Chloroethane	2.13	64	48739	1.34	ug/L	99
9) Trichlorofluoromethane	2.38	101	141354	1.29	ug/L	97
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	119467	1.15	ug/L	97
12) 1,1-Dichloroethene	2.95	96	123513	1.15	ug/L	91
13) Acetone	3.00	43	103310	10.71	ug/L	90
14) Carbon disulfide	3.21	76	429844	1.08	ug/L	100
15) Methyl Acetate	3.42	43	33612	1.12	ug/L	97
16) Methylene chloride	3.59	84	135396	1.14	ug/L	96
17) Methyl tert-butyl Ether	3.99	73	216315	1.13	ug/L	99
18) trans-1,2-Dichloroethene	3.99	96	132532	1.09	ug/L	94
19) 1,1-Dichloroethane	4.72	63	227155	1.15	ug/L	100
21) 2-Butanone	5.79	43	198667	11.09	ug/L	99
22) cis-1,2-Dichloroethene	5.77	96	134700	1.06	ug/L	98
23) Bromochloromethane	6.20	128	53734	1.11	ug/L	94
25) Chloroform	6.42	83	243369	1.12	ug/L	95
27) 1,2-Dichloroethane	7.35	62	121724	1.14	ug/L	99
29) 1,1,1-Trichloroethane	6.64	97	195365	1.29	ug/L	98
30) Cyclohexane	6.75	56	161808	1.32	ug/L	97
31) Carbon tetrachloride	6.90	117	164739	1.30	ug/L	99
33) Benzene	7.24	78	429953	1.21	ug/L	100
34) Trichloroethene	8.21	95	120761	1.21	ug/L	98
35) Methylcyclohexane	8.49	83	129531	1.14	ug/L	95
37) 1,2-Dichloropropane	8.54	63	99691	1.15	ug/L	98
38) Bromodichloromethane	8.90	83	147018	1.18	ug/L	95
39) cis-1,3-Dichloropropene	9.41	75	150303	1.18	ug/L	99
40) 4-Methyl-2-pentanone	9.58	43	518603	11.86	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049221.D
Acq On : 4 May 2016 11:58
Operator : FY/SY
Sample : VSTD00134
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00134

Quant Time: May 04 12:54:50 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Toluene	9.76	91	354465	1.11	ug/L		98
44) trans-1,3-Dichloropropene	10.05	75	105643	1.04	ug/L		98
45) 1,1,2-Trichloroethane	10.26	97	49376	1.00	ug/L		96
47) Tetrachloroethene	10.33	164	73746	1.08	ug/L		97
48) 2-Hexanone	10.47	43	341156	11.16	ug/L		93
49) Dibromochloromethane	10.64	129	73641	1.05	ug/L		94
50) 1,2-Dibromoethane	10.76	107	52051	1.03	ug/L		94
51) Chlorobenzene	11.25	112	198885	1.00	ug/L		97
52) Ethylbenzene	11.35	91	328935	0.95	ug/L		97
53) m,p-Xylene	11.48	106	113672	0.89	ug/L		100
54) o-Xylene	11.84	106	103152	0.86	ug/L		92
55) Styrene	11.86	104	172395	0.86	ug/L		98
56) Isopropylbenzene	12.20	105	269919	0.87	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.48	83	42726	0.85	ug/L		96
60) Bromoform	12.05	173	27954	1.14	ug/L		98
61) 1,3-Dichlorobenzene	13.36	146	93938	0.98	ug/L		95
62) 1,4-Dichlorobenzene	13.46	146	98975	1.00	ug/L		95
64) 1,2-Dichlorobenzene	13.78	146	76464	0.93	ug/L		95
65) 1,2-Dibromo-3-chloropropan	14.47	75	6160	1.27	ug/L	#	77
66) 1,2,4-trichlorobenzene	15.20	180	33635	0.70	ug/L		99
67) 1,2,3-Trichlorobenzene	15.67	180	25667	0.72	ug/L		99

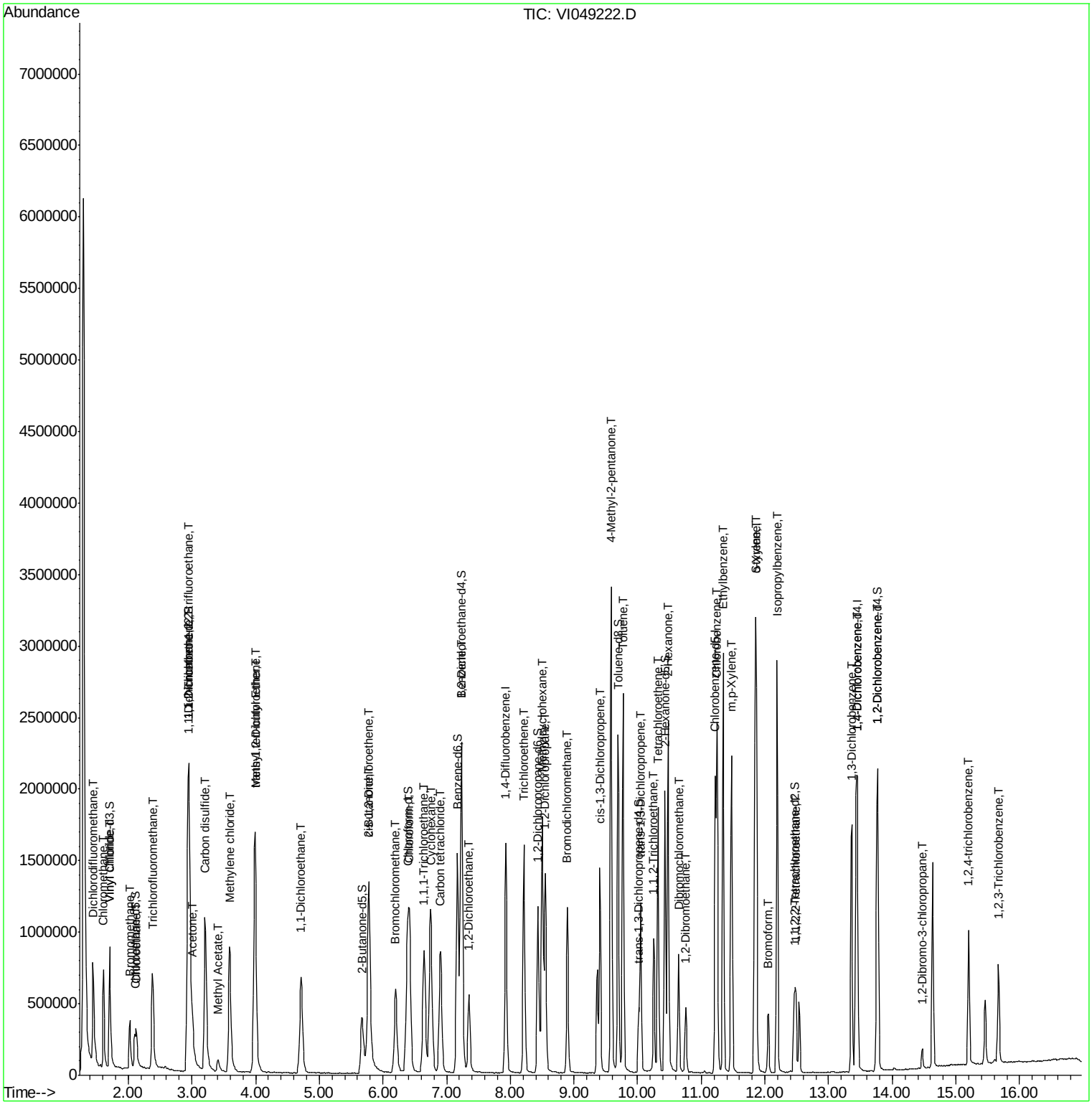
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049222.D
Acq On : 4 May 2016 12:30
Operator : FY/SY
Sample : VSTD00535
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00535

Quant Time: May 04 12:54:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049222.D
Acq On : 4 May 2016 12:30
Operator : FY/SY
Sample : VSTD00535
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00535

Quant Time: May 04 12:54:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1387511	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	966164	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	378132	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	425291	5.71	ug/L	0.00
7) Chloroethane-d5	2.10	69	241187	5.42	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	1024075	5.42	ug/L	0.00
20) 2-Butanone-d5	5.67	46	995120	60.10	ug/L	0.00
24) Chloroform-d	6.38	84	1109276	5.18	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.23	65	457025	5.37	ug/L	0.00
32) Benzene-d6	7.17	84	1932549	5.33	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.43	67	539585	5.18	ug/L	0.00
41) Toluene-d8	9.69	98	1438042	5.08	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	218683	5.13	ug/L	0.00
46) 2-Hexanone-d5	10.43	63	686533	50.08	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	247288	4.50	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	328714	4.58	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	796877	6.06	ug/L	98
3) Chloromethane	1.61	50	659513	5.88	ug/L	98
5) Vinyl chloride	1.71	62	470430	6.01	ug/L	99
6) Bromomethane	2.02	94	217759	5.41	ug/L	100
8) Chloroethane	2.12	64	206953	5.84	ug/L	93
9) Trichlorofluoromethane	2.38	101	652640	6.12	ug/L	97
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	609280	6.02	ug/L	99
12) 1,1-Dichloroethene	2.95	96	561763	5.39	ug/L	95
13) Acetone	3.01	43	564267	60.13	ug/L	98
14) Carbon disulfide	3.21	76	2076484	5.35	ug/L	100
15) Methyl Acetate	3.41	43	165335	5.67	ug/L	98
16) Methylene chloride	3.59	84	610472	5.27	ug/L	96
17) Methyl tert-butyl Ether	3.98	73	1046212	5.61	ug/L	99
18) trans-1,2-Dichloroethene	3.99	96	623257	5.28	ug/L	95
19) 1,1-Dichloroethane	4.71	63	1055265	5.49	ug/L	97
21) 2-Butanone	5.78	43	1090421	62.52	ug/L	97
22) cis-1,2-Dichloroethene	5.77	96	634938	5.14	ug/L	98
23) Bromochloromethane	6.20	128	255349	5.40	ug/L	92
25) Chloroform	6.41	83	1114407	5.29	ug/L	97
27) 1,2-Dichloroethane	7.35	62	563870	5.41	ug/L	100
29) 1,1,1-Trichloroethane	6.65	97	925756	5.76	ug/L	98
30) Cyclohexane	6.75	56	820242	6.27	ug/L	98
31) Carbon tetrachloride	6.91	117	817207	6.06	ug/L	100
33) Benzene	7.23	78	2096710	5.54	ug/L	100
34) Trichloroethene	8.22	95	571727	5.39	ug/L	96
35) Methylcyclohexane	8.50	83	731179	6.04	ug/L	99
37) 1,2-Dichloropropane	8.55	63	488269	5.31	ug/L	98
38) Bromodichloromethane	8.89	83	712248	5.38	ug/L	100
39) cis-1,3-Dichloropropene	9.41	75	717788	5.29	ug/L	100
40) 4-Methyl-2-pentanone	9.58	43	2615758	56.21	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049222.D
Acq On : 4 May 2016 12:30
Operator : FY/SY
Sample : VSTD00535
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00535

Quant Time: May 04 12:54:52 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 12:58:54 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.77	91	1763408	5.17	ug/L	100
44) trans-1,3-Dichloropropene	10.05	75	555982	5.12	ug/L	100
45) 1,1,2-Trichloroethane	10.25	97	255422	4.88	ug/L	98
47) Tetrachloroethene	10.32	164	374867	5.15	ug/L	96
48) 2-Hexanone	10.48	43	1718206	52.79	ug/L	100
49) Dibromochloromethane	10.65	129	387930	5.19	ug/L	98
50) 1,2-Dibromoethane	10.75	107	270504	5.03	ug/L	94
51) Chlorobenzene	11.25	112	1063006	5.03	ug/L	98
52) Ethylbenzene	11.35	91	1881376	5.08	ug/L	100
53) m,p-Xylene	11.47	106	679743	5.00	ug/L	98
54) o-Xylene	11.85	106	632711	4.94	ug/L	96
55) Styrene	11.87	104	1074496	5.04	ug/L	100
56) Isopropylbenzene	12.19	105	1682173	5.11	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.49	83	242821	4.56	ug/L	96
60) Bromoform	12.05	173	177627	5.35	ug/L	99
61) 1,3-Dichlorobenzene	13.36	146	646942	4.97	ug/L	98
62) 1,4-Dichlorobenzene	13.45	146	638743	4.76	ug/L	98
64) 1,2-Dichlorobenzene	13.78	146	533683	4.80	ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.47	75	29452	4.47	ug/L	88
66) 1,2,4-trichlorobenzene	15.20	180	289805	4.48	ug/L	96
67) 1,2,3-Trichlorobenzene	15.67	180	207658	4.29	ug/L	98

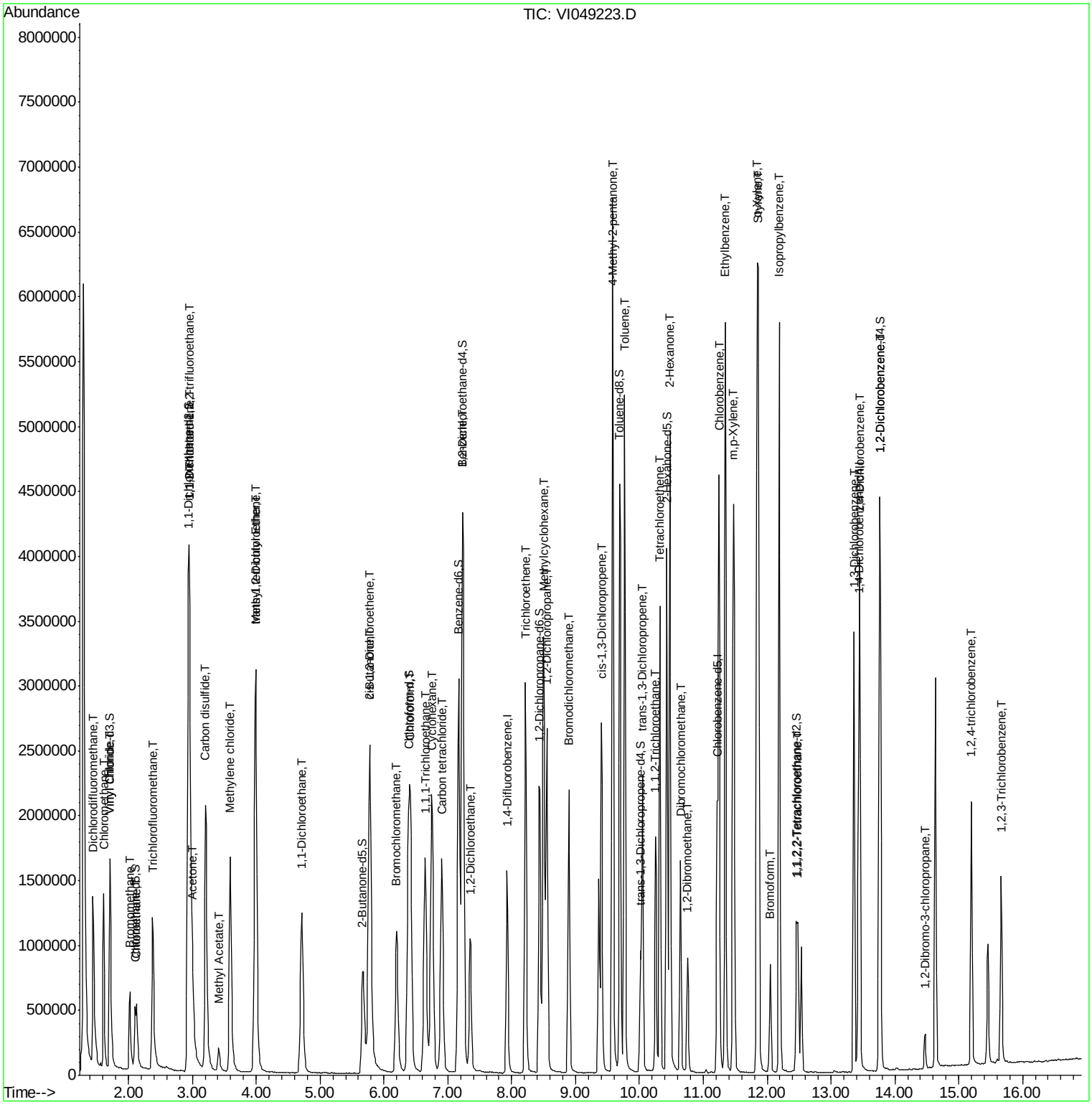
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049223.D
Acq On : 4 May 2016 13:02
Operator : FY/SY
Sample : VSTD01036
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01036

Quant Time: May 04 13:22:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:02:09 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049223.D
Acq On : 4 May 2016 13:02
Operator : FY/SY
Sample : VSTD01036
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01036

Quant Time: May 04 13:22:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:02:09 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1346932	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	978979	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	391643	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.71	65	852545	10.17	ug/L	0.00
7) Chloroethane-d5	2.10	69	441331	8.71	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	1962568	9.90	ug/L	0.00
20) 2-Butanone-d5	5.67	46	1983326	117.22	ug/L	0.00
24) Chloroform-d	6.38	84	2161653	10.24	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.23	65	876015	9.98	ug/L	0.00
32) Benzene-d6	7.17	84	3815591	9.73	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.43	67	1067054	9.71	ug/L	0.00
41) Toluene-d8	9.69	98	2856146	10.01	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	441531	10.67	ug/L	0.00
46) 2-Hexanone-d5	10.43	63	1398322	108.24	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	515068	11.14	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	714609	10.62	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	1496448	10.04	ug/L	98
3) Chloromethane	1.61	50	1264869	9.57	ug/L	97
5) Vinyl chloride	1.71	62	882275	9.65	ug/L	99
6) Bromomethane	2.02	94	387232	7.77	ug/L	97
8) Chloroethane	2.12	64	361250	8.62	ug/L	96
9) Trichlorofluoromethane	2.38	101	1236936	9.60	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	1132918	9.90	ug/L	99
12) 1,1-Dichloroethene	2.95	96	1065279	9.71	ug/L	99
13) Acetone	3.01	43	1154285	108.53	ug/L	94
14) Carbon disulfide	3.21	76	3891847	9.86	ug/L	99
15) Methyl Acetate	3.41	43	324256	10.54	ug/L	95
16) Methylene chloride	3.59	84	1144292	9.41	ug/L	96
17) Methyl tert-butyl Ether	3.98	73	1940115	9.86	ug/L	99
18) trans-1,2-Dichloroethene	3.99	96	1161176	9.67	ug/L	97
19) 1,1-Dichloroethane	4.71	63	1961074	9.59	ug/L	100
21) 2-Butanone	5.78	43	2069517	107.36	ug/L	100
22) cis-1,2-Dichloroethene	5.77	96	1197407	9.73	ug/L	96
23) Bromochloromethane	6.20	128	479204	9.64	ug/L	95
25) Chloroform	6.41	83	2076321	9.50	ug/L	98
27) 1,2-Dichloroethane	7.35	62	1054465	9.63	ug/L	98
29) 1,1,1-Trichloroethane	6.65	97	1742986	9.11	ug/L	98
30) Cyclohexane	6.75	56	1563911	9.50	ug/L	97
31) Carbon tetrachloride	6.91	117	1553503	9.42	ug/L	99
33) Benzene	7.23	78	3997279	9.32	ug/L	100
34) Trichloroethene	8.22	95	1082122	9.08	ug/L	98
35) Methylcyclohexane	8.50	83	1414618	10.08	ug/L	99
37) 1,2-Dichloropropane	8.55	63	940352	9.41	ug/L	99
38) Bromodichloromethane	8.89	83	1366909	9.45	ug/L	98
39) cis-1,3-Dichloropropene	9.41	75	1374976	9.40	ug/L	99
40) 4-Methyl-2-pentanone	9.58	43	4902699	94.26	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049223.D
Acq On : 4 May 2016 13:02
Operator : FY/SY
Sample : VSTD01036
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD01036

Quant Time: May 04 13:22:30 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:02:09 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.77	91	3465077	9.74	ug/L	98
44) trans-1,3-Dichloropropene	10.05	75	1105184	10.19	ug/L	99
45) 1,1,2-Trichloroethane	10.25	97	500341	9.99	ug/L	98
47) Tetrachloroethene	10.32	164	742833	9.78	ug/L	95
48) 2-Hexanone	10.48	43	3335204	98.66	ug/L	98
49) Dibromochloromethane	10.65	129	773201	10.43	ug/L	99
50) 1,2-Dibromoethane	10.75	107	516165	9.83	ug/L	100
51) Chlorobenzene	11.25	112	2088636	9.98	ug/L	98
52) Ethylbenzene	11.34	91	3709193	10.40	ug/L	98
53) m,p-Xylene	11.47	106	1367664	10.91	ug/L	96
54) o-Xylene	11.85	106	1284417	11.05	ug/L	94
55) Styrene	11.87	104	2175319	11.38	ug/L	100
56) Isopropylbenzene	12.19	105	3406235	11.18	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.49	83	486520	10.29	ug/L	99
60) Bromoform	12.05	173	364966	10.27	ug/L	100
61) 1,3-Dichlorobenzene	13.36	146	1325420	10.21	ug/L	99
62) 1,4-Dichlorobenzene	13.45	146	1343241	9.95	ug/L	98
64) 1,2-Dichlorobenzene	13.78	146	1101321	10.35	ug/L	99
65) 1,2-Dibromo-3-chloropropan	14.46	75	64450	9.72	ug/L	89
66) 1,2,4-trichlorobenzene	15.20	180	595041	10.84	ug/L	99
67) 1,2,3-Trichlorobenzene	15.67	180	432037	10.49	ug/L	97

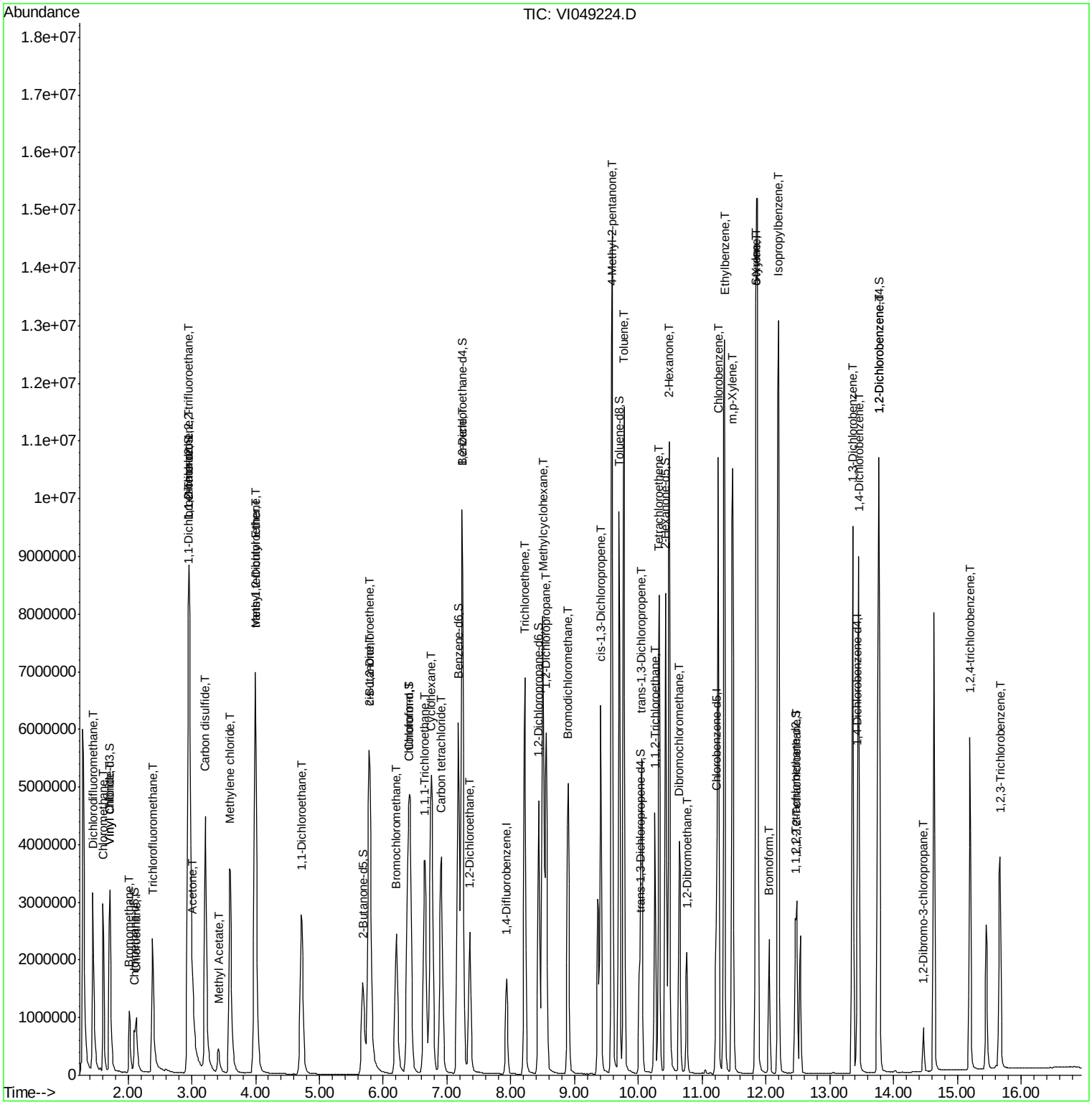
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049224.D
Acq On : 4 May 2016 13:33
Operator : FY/SY
Sample : VSTD02037
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02037

Quant Time: May 04 13:56:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:27:51 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049224.D
Acq On : 4 May 2016 13:33
Operator : FY/SY
Sample : VSTD02037
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02037

Quant Time: May 04 13:56:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:27:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.93	114	1461579	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.22	117	1086543	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.43	152	471623	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	1691207	18.52	ug/L	0.00
7) Chloroethane-d5	2.10	69	726792	13.66	ug/L	0.00
11) 1,1-Dichloroethene-d2	2.93	63	4036999	18.82	ug/L	0.00
20) 2-Butanone-d5	5.68	46	4160883	217.27	ug/L	0.01
24) Chloroform-d	6.39	84	4451409	19.31	ug/L	0.00
26) 1,2-Dichloroethane-d4	7.24	65	1748807	18.37	ug/L	0.00
32) Benzene-d6	7.18	84	7749910	17.93	ug/L	0.00
36) 1,2-Dichloropropane-d6	8.44	67	2214284	18.29	ug/L	0.00
41) Toluene-d8	9.70	98	5885440	18.58	ug/L	0.00
43) trans-1,3-Dichloropropene-	10.02	79	952520	20.39	ug/L	0.00
46) 2-Hexanone-d5	10.42	63	3083599	210.72	ug/L	0.00
57) 1,1,2,2-Tetrachloroethane-	12.46	84	1189030	22.52	ug/L	0.00
63) 1,2-Dichlorobenzene-d4	13.76	152	1684802	20.47	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.45	85	3513178	21.70	ug/L	99
3) Chloromethane	1.61	50	2740270	19.31	ug/L	97
5) Vinyl chloride	1.71	62	1989115	20.23	ug/L	99
6) Bromomethane	2.02	94	681315	13.34	ug/L	95
8) Chloroethane	2.13	64	699614	15.94	ug/L	96
9) Trichlorofluoromethane	2.38	101	2703301	19.54	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.96	101	2693766	21.75	ug/L	99
12) 1,1-Dichloroethene	2.95	96	2344375	19.84	ug/L	98
13) Acetone	3.01	43	2651705	224.97	ug/L	96
14) Carbon disulfide	3.21	76	8635675	20.23	ug/L	98
15) Methyl Acetate	3.42	43	742482	21.95	ug/L	94
16) Methylene chloride	3.60	84	2605444	20.05	ug/L	99
17) Methyl tert-butyl Ether	3.99	73	4528073	21.28	ug/L	99
18) trans-1,2-Dichloroethene	4.00	96	2702539	20.92	ug/L	98
19) 1,1-Dichloroethane	4.72	63	4528793	20.62	ug/L	99
21) 2-Butanone	5.79	43	4815478	226.05	ug/L	99
22) cis-1,2-Dichloroethene	5.78	96	2805467	21.16	ug/L	97
23) Bromochloromethane	6.20	128	1105137	20.68	ug/L	92
25) Chloroform	6.42	83	4766471	20.35	ug/L	99
27) 1,2-Dichloroethane	7.35	62	2435376	20.69	ug/L	98
29) 1,1,1-Trichloroethane	6.65	97	4024599	19.39	ug/L	98
30) Cyclohexane	6.75	56	3759993	20.83	ug/L	99
31) Carbon tetrachloride	6.91	117	3593861	19.92	ug/L	98
33) Benzene	7.24	78	9083823	19.41	ug/L	100
34) Trichloroethene	8.22	95	2570250	19.89	ug/L	96
35) Methylcyclohexane	8.51	83	3435954	22.01	ug/L	99
37) 1,2-Dichloropropane	8.55	63	2175167	19.91	ug/L	100
38) Bromodichloromethane	8.90	83	3234934	20.43	ug/L	97
39) cis-1,3-Dichloropropene	9.41	75	3290905	20.59	ug/L	97
40) 4-Methyl-2-pentanone	9.59	43	10638557	186.98	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049224.D
Acq On : 4 May 2016 13:33
Operator : FY/SY
Sample : VSTD02037
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD02037

Quant Time: May 04 13:56:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 04 13:27:51 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Toluene	9.77	91	7848741	20.00	ug/L	91
44) trans-1,3-Dichloropropene	10.05	75	2646058	21.87	ug/L	96
45) 1,1,2-Trichloroethane	10.26	97	1219815	21.95	ug/L	98
47) Tetrachloroethene	10.33	164	1772171	21.14	ug/L	95
48) 2-Hexanone	10.48	43	7635735	204.19	ug/L	96
49) Dibromochloromethane	10.64	129	1894342	22.78	ug/L	98
50) 1,2-Dibromoethane	10.76	107	1270502	21.90	ug/L	99
51) Chlorobenzene	11.25	112	4962671	21.38	ug/L	97
52) Ethylbenzene	11.35	91	8575376	21.45	ug/L	90
53) m,p-Xylene	11.48	106	3390654	23.82	ug/L	89
54) o-Xylene	11.84	106	3225706	24.37	ug/L	93
55) Styrene	11.86	104	5354222	24.39	ug/L	90
56) Isopropylbenzene	12.20	105	7966938	22.89	ug/L	95
58) 1,1,2,2-Tetrachloroethane	12.48	83	1245644	23.57	ug/L	99
60) Bromoform	12.05	173	949899	22.05	ug/L	100
61) 1,3-Dichlorobenzene	13.36	146	3432822	21.85	ug/L	96
62) 1,4-Dichlorobenzene	13.46	146	3442102	21.20	ug/L	98
64) 1,2-Dichlorobenzene	13.77	146	2913858	22.54	ug/L	96
65) 1,2-Dibromo-3-chloropropan	14.47	75	173184	21.85	ug/L	89
66) 1,2,4-trichlorobenzene	15.20	180	1682098	24.93	ug/L	99
67) 1,2,3-Trichlorobenzene	15.67	180	1223545	24.37	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/09/2016 Time: 11:03

Lab File ID: VI049291.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00545 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.544	0.01	-3.4	± 40.0
Chloromethane	0.482	0.398	0.01	-17.3	± 30.0
Vinyl chloride	0.337	0.313	0.01	-7	± 30.0
Bromomethane	0.163	0.132	0.01	-19.3	± 30.0
Chloroethane	0.144	0.140	0.01	-2.7	± 30.0
Trichlorofluoromethane	0.471	0.456	0.01	-3.2	± 30.0
1,1-Dichloroethene	0.404	0.379	0.02	-6.2	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.432	0.01	0.2	± 30.0
Acetone	0.041	0.041	0.01	0.0	± 40.0
Carbon disulfide	1.463	1.337	0.01	-8.6	± 25.0
Methyl Acetate	0.118	0.119	0.01	0.9	± 40.0
Methylene chloride	0.445	0.411	0.01	-7.5	± 30.0
trans-1,2-Dichloroethene	0.446	0.421	0.07	-5.6	± 20.0
Methyl tert-butyl Ether	0.737	0.705	0.01	-4.3	± 30.0
1,1-Dichloroethane	0.756	0.700	0.1	-7.4	± 20.0
cis-1,2-Dichloroethene	0.459	0.431	0.1	-6.1	± 20.0
2-Butanone	0.075	0.076	0.01	1.3	± 40.0
Bromochloromethane	0.184	0.169	0.02	-8	± 20.0
Chloroform	0.804	0.761	0.04	-5.3	± 20.0
1,1,1-Trichloroethane	0.949	0.889	0.05	-6.4	± 20.0
Cyclohexane	0.837	0.826	0.1	-1.3	± 25.0
Carbon tetrachloride	0.829	0.785	0.02	-5.4	± 25.0
Benzene	2.141	2.075	0.3	-3.1	± 20.0
1,2-Dichloroethane	0.405	0.381	0.01	-6.1	± 25.0
Trichloroethene	0.594	0.566	0.1	-4.8	± 20.0
Methylcyclohexane	0.733	0.740	0.2	1.0	± 25.0
1,2-Dichloropropane	0.502	0.490	0.1	-2.4	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/09/2016 Time: 11:03

Lab File ID: VI049291.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00545 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.712	0.09	-2.7	± 20.0
cis-1,3-Dichloropropene	0.740	0.719	0.1	-2.8	± 20.0
4-Methyl-2-pentanone	0.258	0.265	0.01	2.4	± 30.0
Toluene	1.806	1.761	0.4	-2.5	± 20.0
trans-1,3-Dichloropropene	0.567	0.563	0.01	-0.8	± 20.0
1,1,2-Trichloroethane	0.261	0.256	0.04	-1.8	± 20.0
Tetrachloroethene	0.390	0.385	0.1	-1.4	± 20.0
2-Hexanone	0.173	0.181	0.01	4.9	± 40.0
Dibromochloromethane	0.393	0.399	0.05	1.4	± 20.0
1,2-Dibromoethane	0.272	0.260	0.01	-4.6	± 20.0
Chlorobenzene	1.083	1.060	0.4	-2.1	± 20.0
Ethylbenzene	1.866	1.860	0.5	-0.4	± 20.0
o-Xylene	0.636	0.627	0.3	-1.3	± 20.0
m,p-Xylene	0.680	0.671	0.2	-1.4	± 20.0
Styrene	1.055	1.035	0.2	-1.8	± 20.0
Bromoform	0.466	0.451	0.01	-3.2	± 30.0
Isopropylbenzene	1.648	1.655	0.7	0.4	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.247	0.05	-1.9	± 25.0
1,3-Dichlorobenzene	1.696	1.677	0.5	-1.1	± 20.0
1,4-Dichlorobenzene	1.742	1.657	0.7	-4.9	± 20.0
1,2-Dichlorobenzene	1.405	1.376	0.4	-2.1	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.079	0.01	-7.6	± 40.0
1,2,4-trichlorobenzene	0.751	0.762	0.3	1.5	± 30.0
1,2,3-Trichlorobenzene	0.556	0.541	0.2	-2.5	± 40.0
Vinyl Chloride-d3	0.308	0.230	0.01	-25.2	± 30.0
Chloroethane-d5	0.170	0.146	0.01	-14.3	± 30.0
1,1-Dichloroethene-d2	0.725	0.605	0.01	-16.6	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/09/2016 Time: 11:03

Lab File ID: VI049291.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00545 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.069	0.01	3.3	± 40.0
Chloroform-d	0.783	0.712	0.01	-9.1	± 20.0
1,2-Dichloroethane-d4	0.320	0.297	0.01	-7.2	± 25.0
Benzene-d6	1.948	1.728	0.03	-11.3	± 20.0
1,2-Dichloropropane-d6	0.548	0.509	0.1	-7	± 20.0
Toluene-d8	1.437	1.261	0.2	-12.2	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.200	0.01	-7.5	± 25.0
2-Hexanone-d5	0.068	0.071	0.01	4.3	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.245	0.01	-1.5	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.781	0.06	-10.9	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/09/2016 Time: 18:15

Lab File ID: VI049303.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00546 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.551	0.01	-2.2	± 40.0
Chloromethane	0.482	0.395	0.01	-18	± 30.0
Vinyl chloride	0.337	0.330	0.01	-2.2	± 30.0
Bromomethane	0.163	0.115	0.01	-29.4	± 30.0
Chloroethane	0.144	0.148	0.01	2.9	± 30.0
Trichlorofluoromethane	0.471	0.461	0.01	-2.3	± 30.0
1,1-Dichloroethene	0.404	0.401	0.02	-0.6	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.438	0.01	1.6	± 30.0
Acetone	0.041	0.043	0.01	5.1	± 40.0
Carbon disulfide	1.463	1.385	0.01	-5.4	± 25.0
Methyl Acetate	0.118	0.121	0.01	2.8	± 40.0
Methylene chloride	0.445	0.440	0.01	-1.1	± 30.0
trans-1,2-Dichloroethene	0.446	0.443	0.07	-0.7	± 20.0
Methyl tert-butyl Ether	0.737	0.729	0.01	-1.1	± 30.0
1,1-Dichloroethane	0.756	0.754	0.1	-0.3	± 20.0
cis-1,2-Dichloroethene	0.459	0.448	0.1	-2.3	± 20.0
2-Butanone	0.075	0.079	0.01	5.6	± 40.0
Bromochloromethane	0.184	0.170	0.02	-7.5	± 20.0
Chloroform	0.804	0.809	0.04	0.7	± 20.0
1,1,1-Trichloroethane	0.949	0.960	0.05	1.1	± 20.0
Cyclohexane	0.837	0.812	0.1	-3	± 25.0
Carbon tetrachloride	0.829	0.845	0.02	1.9	± 25.0
Benzene	2.141	2.188	0.3	2.2	± 20.0
1,2-Dichloroethane	0.405	0.404	0.01	-0.4	± 25.0
Trichloroethene	0.594	0.582	0.1	-2	± 20.0
Methylcyclohexane	0.733	0.729	0.2	-0.6	± 25.0
1,2-Dichloropropane	0.502	0.496	0.1	-1.3	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/09/2016 Time: 18:15

Lab File ID: VI049303.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00546 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.707	0.09	-3.4	± 20.0
cis-1,3-Dichloropropene	0.740	0.684	0.1	-7.5	± 20.0
4-Methyl-2-pentanone	0.258	0.265	0.01	2.5	± 30.0
Toluene	1.806	1.823	0.4	1.0	± 20.0
trans-1,3-Dichloropropene	0.567	0.533	0.01	-6	± 20.0
1,1,2-Trichloroethane	0.261	0.253	0.04	-3.1	± 20.0
Tetrachloroethene	0.390	0.389	0.1	-0.3	± 20.0
2-Hexanone	0.173	0.178	0.01	3.1	± 40.0
Dibromochloromethane	0.393	0.376	0.05	-4.3	± 20.0
1,2-Dibromoethane	0.272	0.267	0.01	-2	± 20.0
Chlorobenzene	1.083	1.071	0.4	-1.1	± 20.0
Ethylbenzene	1.866	1.893	0.5	1.4	± 20.0
o-Xylene	0.636	0.632	0.3	-0.6	± 20.0
m,p-Xylene	0.680	0.679	0.2	-0.1	± 20.0
Styrene	1.055	1.067	0.2	1.2	± 20.0
Bromoform	0.466	0.397	0.01	-14.8	± 30.0
Isopropylbenzene	1.648	1.671	0.7	1.4	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.246	0.05	-2.3	± 25.0
1,3-Dichlorobenzene	1.696	1.673	0.5	-1.3	± 20.0
1,4-Dichlorobenzene	1.742	1.678	0.7	-3.7	± 20.0
1,2-Dichlorobenzene	1.405	1.380	0.4	-1.8	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.077	0.01	-10.4	± 40.0
1,2,4-trichlorobenzene	0.751	0.735	0.3	-2.1	± 30.0
1,2,3-Trichlorobenzene	0.556	0.545	0.2	-1.8	± 40.0
Vinyl Chloride-d3	0.308	0.236	0.01	-23.5	± 30.0
Chloroethane-d5	0.170	0.150	0.01	-12.1	± 30.0
1,1-Dichloroethene-d2	0.725	0.615	0.01	-15.2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/09/2016 Time: 18:15

Lab File ID: VI049303.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00546 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.073	0.01	9.3	± 40.0
Chloroform-d	0.783	0.731	0.01	-6.7	± 20.0
1,2-Dichloroethane-d4	0.320	0.302	0.01	-5.8	± 25.0
Benzene-d6	1.948	1.803	0.03	-7.4	± 20.0
1,2-Dichloropropane-d6	0.548	0.515	0.1	-5.9	± 20.0
Toluene-d8	1.437	1.270	0.2	-11.6	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.181	0.01	-16.2	± 25.0
2-Hexanone-d5	0.068	0.071	0.01	4.1	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.238	0.01	-4.6	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.758	0.06	-13.6	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/10/2016 Time: 02:13

Lab File ID: VI049317.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00547 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.529	0.01	-6.1	± 50.0
Chloromethane	0.482	0.476	0.01	-1.2	± 50.0
Vinyl chloride	0.337	0.366	0.01	8.7	± 50.0
Bromomethane	0.163	0.160	0.01	-1.8	± 50.0
Chloroethane	0.144	0.162	0.01	12.6	± 50.0
Trichlorofluoromethane	0.471	0.495	0.01	5.0	± 50.0
1,1-Dichloroethene	0.404	0.408	0.02	1.0	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.425	0.01	-1.4	± 50.0
Acetone	0.041	0.048	0.01	15	± 50.0
Carbon disulfide	1.463	1.433	0.01	-2.1	± 25.0
Methyl Acetate	0.118	0.133	0.01	13.1	± 50.0
Methylene chloride	0.445	0.472	0.01	6.0	± 50.0
trans-1,2-Dichloroethene	0.446	0.461	0.07	3.3	± 25.0
Methyl tert-butyl Ether	0.737	0.805	0.01	9.1	± 50.0
1,1-Dichloroethane	0.756	0.813	0.1	7.5	± 25.0
cis-1,2-Dichloroethene	0.459	0.481	0.1	4.8	± 25.0
2-Butanone	0.075	0.084	0.01	13	± 50.0
Bromochloromethane	0.184	0.190	0.02	3.0	± 25.0
Chloroform	0.804	0.862	0.04	7.2	± 25.0
1,1,1-Trichloroethane	0.949	1.032	0.05	8.7	± 25.0
Cyclohexane	0.837	0.820	0.1	-2.1	± 50.0
Carbon tetrachloride	0.829	0.870	0.02	4.9	± 50.0
Benzene	2.141	2.369	0.3	10.7	± 25.0
1,2-Dichloroethane	0.405	0.440	0.01	8.5	± 50.0
Trichloroethene	0.594	0.620	0.1	4.3	± 25.0
Methylcyclohexane	0.733	0.703	0.2	-4.1	± 50.0
1,2-Dichloropropane	0.502	0.555	0.1	10.5	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/10/2016 Time: 02:13

Lab File ID: VI049317.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00547 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.789	0.09	7.8	± 25.0
cis-1,3-Dichloropropene	0.740	0.750	0.1	1.4	± 25.0
4-Methyl-2-pentanone	0.258	0.295	0.01	14.4	± 50.0
Toluene	1.806	1.907	0.4	5.6	± 25.0
trans-1,3-Dichloropropene	0.567	0.579	0.01	2.2	± 25.0
1,1,2-Trichloroethane	0.261	0.292	0.04	12	± 25.0
Tetrachloroethene	0.390	0.384	0.1	-1.6	± 25.0
2-Hexanone	0.173	0.195	0.01	12.8	± 50.0
Dibromochloromethane	0.393	0.412	0.05	4.7	± 25.0
1,2-Dibromoethane	0.272	0.291	0.01	7.1	± 25.0
Chlorobenzene	1.083	1.134	0.4	4.7	± 25.0
Ethylbenzene	1.866	1.914	0.5	2.6	± 25.0
o-Xylene	0.636	0.640	0.3	0.7	± 25.0
m,p-Xylene	0.680	0.683	0.2	0.4	± 25.0
Styrene	1.055	1.082	0.2	2.6	± 25.0
Bromoform	0.466	0.455	0.01	-2.3	± 50.0
Isopropylbenzene	1.648	1.651	0.7	0.2	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.264	0.05	4.9	± 25.0
1,3-Dichlorobenzene	1.696	1.741	0.5	2.7	± 25.0
1,4-Dichlorobenzene	1.742	1.776	0.7	1.9	± 25.0
1,2-Dichlorobenzene	1.405	1.468	0.4	4.5	± 25.0
1,2-Dibromo-3-chloropropane	0.086	0.085	0.01	-0.5	± 50.0
1,2,4-trichlorobenzene	0.751	0.803	0.3	6.9	± 50.0
1,2,3-Trichlorobenzene	0.556	0.583	0.2	5.0	± 50.0
Vinyl Chloride-d3	0.308	0.254	0.01	-17.6	± 50.0
Chloroethane-d5	0.170	0.158	0.01	-7.5	± 50.0
1,1-Dichloroethene-d2	0.725	0.629	0.01	-13.3	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/10/2016 Time: 02:13

Lab File ID: VI049317.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00547 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.082	0.01	23.3	± 50.0
Chloroform-d	0.783	0.783	0.01	0.0	± 25.0
1,2-Dichloroethane-d4	0.320	0.339	0.01	5.7	± 25.0
Benzene-d6	1.948	1.973	0.03	1.3	± 25.0
1,2-Dichloropropane-d6	0.548	0.578	0.1	5.6	± 25.0
Toluene-d8	1.437	1.344	0.2	-6.5	± 25.0
trans-1,3-Dichloropropene-d4	0.216	0.202	0.01	-6.6	± 25.0
2-Hexanone-d5	0.068	0.084	0.01	22.9	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.280	0.01	12.2	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.866	0.06	-1.2	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/10/2016 Time: 11:53

Lab File ID: VI049319.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00548 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.608	0.01	7.9	± 40.0
Chloromethane	0.482	0.456	0.01	-5.3	± 30.0
Vinyl chloride	0.337	0.368	0.01	9.3	± 30.0
Bromomethane	0.163	0.158	0.01	-3.1	± 30.0
Chloroethane	0.144	0.158	0.01	9.7	± 30.0
Trichlorofluoromethane	0.471	0.536	0.01	13.8	± 30.0
1,1-Dichloroethene	0.404	0.430	0.02	6.6	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.493	0.01	14.5	± 30.0
Acetone	0.041	0.045	0.01	9.0	± 40.0
Carbon disulfide	1.463	1.526	0.01	4.3	± 25.0
Methyl Acetate	0.118	0.126	0.01	6.4	± 40.0
Methylene chloride	0.445	0.463	0.01	4.1	± 30.0
trans-1,2-Dichloroethene	0.446	0.470	0.07	5.3	± 20.0
Methyl tert-butyl Ether	0.737	0.784	0.01	6.3	± 30.0
1,1-Dichloroethane	0.756	0.800	0.1	5.9	± 20.0
cis-1,2-Dichloroethene	0.459	0.497	0.1	8.4	± 20.0
2-Butanone	0.075	0.080	0.01	7.4	± 40.0
Bromochloromethane	0.184	0.195	0.02	5.8	± 20.0
Chloroform	0.804	0.851	0.04	5.8	± 20.0
1,1,1-Trichloroethane	0.949	1.048	0.05	10.4	± 20.0
Cyclohexane	0.837	0.938	0.1	12	± 25.0
Carbon tetrachloride	0.829	0.925	0.02	11.5	± 25.0
Benzene	2.141	2.359	0.3	10.2	± 20.0
1,2-Dichloroethane	0.405	0.420	0.01	3.6	± 25.0
Trichloroethene	0.594	0.639	0.1	7.7	± 20.0
Methylcyclohexane	0.733	0.840	0.2	14.6	± 25.0
1,2-Dichloropropane	0.502	0.547	0.1	8.9	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/10/2016 Time: 11:53

Lab File ID: VI049319.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00548 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.789	0.09	7.8	± 20.0
cis-1,3-Dichloropropene	0.740	0.778	0.1	5.2	± 20.0
4-Methyl-2-pentanone	0.258	0.282	0.01	9.1	± 30.0
Toluene	1.806	1.943	0.4	7.6	± 20.0
trans-1,3-Dichloropropene	0.567	0.616	0.01	8.6	± 20.0
1,1,2-Trichloroethane	0.261	0.283	0.04	8.7	± 20.0
Tetrachloroethene	0.390	0.437	0.1	11.9	± 20.0
2-Hexanone	0.173	0.189	0.01	9.5	± 40.0
Dibromochloromethane	0.393	0.436	0.05	10.7	± 20.0
1,2-Dibromoethane	0.272	0.291	0.01	6.8	± 20.0
Chlorobenzene	1.083	1.174	0.4	8.4	± 20.0
Ethylbenzene	1.866	2.064	0.5	10.6	± 20.0
o-Xylene	0.636	0.690	0.3	8.5	± 20.0
m,p-Xylene	0.680	0.745	0.2	9.5	± 20.0
Styrene	1.055	1.152	0.2	9.2	± 20.0
Bromoform	0.466	0.489	0.01	4.9	± 30.0
Isopropylbenzene	1.648	1.855	0.7	12.5	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.260	0.05	3.3	± 25.0
1,3-Dichlorobenzene	1.696	1.874	0.5	10.5	± 20.0
1,4-Dichlorobenzene	1.742	1.867	0.7	7.2	± 20.0
1,2-Dichlorobenzene	1.405	1.560	0.4	11	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.085	0.01	-0.5	± 40.0
1,2,4-trichlorobenzene	0.751	0.843	0.3	12.3	± 30.0
1,2,3-Trichlorobenzene	0.556	0.630	0.2	13.4	± 40.0
Vinyl Chloride-d3	0.308	0.274	0.01	-10.9	± 30.0
Chloroethane-d5	0.170	0.168	0.01	-1.4	± 30.0
1,1-Dichloroethene-d2	0.725	0.681	0.01	-6.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/10/2016 Time: 11:53

Lab File ID: VI049319.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00548 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.071	0.01	6.6	± 40.0
Chloroform-d	0.783	0.739	0.01	-5.6	± 20.0
1,2-Dichloroethane-d4	0.320	0.306	0.01	-4.5	± 25.0
Benzene-d6	1.948	1.894	0.03	-2.7	± 20.0
1,2-Dichloropropane-d6	0.548	0.533	0.1	-2.7	± 20.0
Toluene-d8	1.437	1.351	0.2	-6	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.203	0.01	-6	± 25.0
2-Hexanone-d5	0.068	0.069	0.01	0.7	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.246	0.01	-1.2	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.817	0.06	-6.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/10/2016 Time: 18:38

Lab File ID: VI049331.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00549 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.548	0.01	-2.7	± 50.0
Chloromethane	0.482	0.425	0.01	-11.9	± 50.0
Vinyl chloride	0.337	0.344	0.01	2.0	± 50.0
Bromomethane	0.163	0.159	0.01	-2.5	± 50.0
Chloroethane	0.144	0.149	0.01	3.7	± 50.0
Trichlorofluoromethane	0.471	0.492	0.01	4.4	± 50.0
1,1-Dichloroethene	0.404	0.409	0.02	1.4	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.450	0.01	4.5	± 50.0
Acetone	0.041	0.043	0.01	4.6	± 50.0
Carbon disulfide	1.463	1.412	0.01	-3.5	± 25.0
Methyl Acetate	0.118	0.117	0.01	-0.8	± 50.0
Methylene chloride	0.445	0.436	0.01	-1.9	± 50.0
trans-1,2-Dichloroethene	0.446	0.451	0.07	1.2	± 25.0
Methyl tert-butyl Ether	0.737	0.733	0.01	-0.6	± 50.0
1,1-Dichloroethane	0.756	0.752	0.1	-0.5	± 25.0
cis-1,2-Dichloroethene	0.459	0.457	0.1	-0.4	± 25.0
2-Butanone	0.075	0.078	0.01	3.9	± 50.0
Bromochloromethane	0.184	0.176	0.02	-4.5	± 25.0
Chloroform	0.804	0.822	0.04	2.2	± 25.0
1,1,1-Trichloroethane	0.949	0.980	0.05	3.2	± 25.0
Cyclohexane	0.837	0.874	0.1	4.4	± 50.0
Carbon tetrachloride	0.829	0.866	0.02	4.4	± 50.0
Benzene	2.141	2.242	0.3	4.7	± 25.0
1,2-Dichloroethane	0.405	0.404	0.01	-0.5	± 50.0
Trichloroethene	0.594	0.599	0.1	0.9	± 25.0
Methylcyclohexane	0.733	0.753	0.2	2.8	± 50.0
1,2-Dichloropropane	0.502	0.520	0.1	3.4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/10/2016 Time: 18:38

Lab File ID: VI049331.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00549 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.715	0.09	-2.2	± 25.0
cis-1,3-Dichloropropene	0.740	0.722	0.1	-2.5	± 25.0
4-Methyl-2-pentanone	0.258	0.260	0.01	0.5	± 50.0
Toluene	1.806	1.852	0.4	2.6	± 25.0
trans-1,3-Dichloropropene	0.567	0.535	0.01	-5.7	± 25.0
1,1,2-Trichloroethane	0.261	0.264	0.04	1.2	± 25.0
Tetrachloroethene	0.390	0.398	0.1	2.1	± 25.0
2-Hexanone	0.173	0.170	0.01	-1.4	± 50.0
Dibromochloromethane	0.393	0.380	0.05	-3.3	± 25.0
1,2-Dibromoethane	0.272	0.274	0.01	0.8	± 25.0
Chlorobenzene	1.083	1.099	0.4	1.5	± 25.0
Ethylbenzene	1.866	1.931	0.5	3.5	± 25.0
o-Xylene	0.636	0.645	0.3	1.4	± 25.0
m,p-Xylene	0.680	0.694	0.2	2.0	± 25.0
Styrene	1.055	1.081	0.2	2.5	± 25.0
Bromoform	0.466	0.423	0.01	-9.2	± 50.0
Isopropylbenzene	1.648	1.710	0.7	3.8	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.250	0.05	-0.9	± 25.0
1,3-Dichlorobenzene	1.696	1.730	0.5	2.0	± 25.0
1,4-Dichlorobenzene	1.742	1.725	0.7	-1	± 25.0
1,2-Dichlorobenzene	1.405	1.410	0.4	0.3	± 25.0
1,2-Dibromo-3-chloropropane	0.086	0.076	0.01	-11.3	± 50.0
1,2,4-trichlorobenzene	0.751	0.772	0.3	2.8	± 50.0
1,2,3-Trichlorobenzene	0.556	0.547	0.2	-1.6	± 50.0
Vinyl Chloride-d3	0.308	0.275	0.01	-10.6	± 50.0
Chloroethane-d5	0.170	0.169	0.01	-0.8	± 50.0
1,1-Dichloroethene-d2	0.725	0.671	0.01	-7.4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/10/2016 Time: 18:38

Lab File ID: VI049331.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00549 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.070	0.01	5.6	± 50.0
Chloroform-d	0.783	0.745	0.01	-4.8	± 25.0
1,2-Dichloroethane-d4	0.320	0.310	0.01	-3.4	± 25.0
Benzene-d6	1.948	1.941	0.03	-0.3	± 25.0
1,2-Dichloropropane-d6	0.548	0.545	0.1	-0.5	± 25.0
Toluene-d8	1.437	1.371	0.2	-4.6	± 25.0
trans-1,3-Dichloropropene-d4	0.216	0.190	0.01	-12.1	± 25.0
2-Hexanone-d5	0.068	0.069	0.01	1.2	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.239	0.01	-4.1	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.811	0.06	-7.4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/11/2016 Time: 10:42

Lab File ID: VI049333.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00550 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.625	0.01	11	± 40.0
Chloromethane	0.482	0.454	0.01	-5.8	± 30.0
Vinyl chloride	0.337	0.365	0.01	8.4	± 30.0
Bromomethane	0.163	0.167	0.01	2.5	± 30.0
Chloroethane	0.144	0.161	0.01	12	± 30.0
Trichlorofluoromethane	0.471	0.537	0.01	14	± 30.0
1,1-Dichloroethene	0.404	0.447	0.02	10.7	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.507	0.01	17.7	± 30.0
Acetone	0.041	0.050	0.01	20.8	± 40.0
Carbon disulfide	1.463	1.548	0.01	5.8	± 25.0
Methyl Acetate	0.118	0.141	0.01	19.4	± 40.0
Methylene chloride	0.445	0.469	0.01	5.5	± 30.0
trans-1,2-Dichloroethene	0.446	0.491	0.07	10	± 20.0
Methyl tert-butyl Ether	0.737	0.820	0.01	11.2	± 30.0
1,1-Dichloroethane	0.756	0.827	0.1	9.3	± 20.0
cis-1,2-Dichloroethene	0.459	0.513	0.1	11.9	± 20.0
2-Butanone	0.075	0.089	0.01	19.4	± 40.0
Bromochloromethane	0.184	0.202	0.02	9.7	± 20.0
Chloroform	0.804	0.902	0.04	12.2	± 20.0
1,1,1-Trichloroethane	0.949	1.056	0.05	11.2	± 20.0
Cyclohexane	0.837	0.946	0.1	13	± 25.0
Carbon tetrachloride	0.829	0.916	0.02	10.4	± 25.0
Benzene	2.141	2.384	0.3	11.4	± 20.0
1,2-Dichloroethane	0.405	0.444	0.01	9.6	± 25.0
Trichloroethene	0.594	0.637	0.1	7.2	± 20.0
Methylcyclohexane	0.733	0.833	0.2	13.7	± 25.0
1,2-Dichloropropane	0.502	0.551	0.1	9.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/11/2016 Time: 10:42

Lab File ID: VI049333.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00550 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.813	0.09	11.1	± 20.0
cis-1,3-Dichloropropene	0.740	0.785	0.1	6.1	± 20.0
4-Methyl-2-pentanone	0.258	0.296	0.01	14.5	± 30.0
Toluene	1.806	1.994	0.4	10.4	± 20.0
trans-1,3-Dichloropropene	0.567	0.621	0.01	9.5	± 20.0
1,1,2-Trichloroethane	0.261	0.294	0.04	12.9	± 20.0
Tetrachloroethene	0.390	0.427	0.1	9.4	± 20.0
2-Hexanone	0.173	0.199	0.01	15	± 40.0
Dibromochloromethane	0.393	0.443	0.05	12.6	± 20.0
1,2-Dibromoethane	0.272	0.307	0.01	12.9	± 20.0
Chlorobenzene	1.083	1.188	0.4	9.7	± 20.0
Ethylbenzene	1.866	2.108	0.5	12.9	± 20.0
o-Xylene	0.636	0.710	0.3	11.7	± 20.0
m,p-Xylene	0.680	0.760	0.2	11.8	± 20.0
Styrene	1.055	1.172	0.2	11.1	± 20.0
Bromoform	0.466	0.495	0.01	6.1	± 30.0
Isopropylbenzene	1.648	1.895	0.7	15	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.284	0.05	12.8	± 25.0
1,3-Dichlorobenzene	1.696	1.896	0.5	11.8	± 20.0
1,4-Dichlorobenzene	1.742	1.880	0.7	7.9	± 20.0
1,2-Dichlorobenzene	1.405	1.573	0.4	11.9	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.084	0.01	-2.1	± 40.0
1,2,4-trichlorobenzene	0.751	0.860	0.3	14.6	± 30.0
1,2,3-Trichlorobenzene	0.556	0.613	0.2	10.3	± 40.0
Vinyl Chloride-d3	0.308	0.276	0.01	-10.2	± 30.0
Chloroethane-d5	0.170	0.162	0.01	-4.9	± 30.0
1,1-Dichloroethene-d2	0.725	0.708	0.01	-2.4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/11/2016 Time: 10:42

Lab File ID: VI049333.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00550 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.079	0.01	17.9	± 40.0
Chloroform-d	0.783	0.805	0.01	2.8	± 20.0
1,2-Dichloroethane-d4	0.320	0.337	0.01	5.2	± 25.0
Benzene-d6	1.948	1.950	0.03	0.1	± 20.0
1,2-Dichloropropane-d6	0.548	0.556	0.1	1.5	± 20.0
Toluene-d8	1.437	1.407	0.2	-2.1	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.214	0.01	-0.7	± 25.0
2-Hexanone-d5	0.068	0.078	0.01	13.8	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.272	0.01	9.0	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.866	0.06	-1.2	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/11/2016 Time: 18:32

Lab File ID: VI049347.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00526 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.518	0.01	-8	± 50.0
Chloromethane	0.482	0.396	0.01	-17.9	± 50.0
Vinyl chloride	0.337	0.319	0.01	-5.4	± 50.0
Bromomethane	0.163	0.138	0.01	-15.3	± 50.0
Chloroethane	0.144	0.138	0.01	-4	± 50.0
Trichlorofluoromethane	0.471	0.430	0.01	-8.7	± 50.0
1,1-Dichloroethene	0.404	0.396	0.02	-2	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.415	0.01	-3.7	± 50.0
Acetone	0.041	0.044	0.01	7.3	± 50.0
Carbon disulfide	1.463	1.349	0.01	-7.8	± 25.0
Methyl Acetate	0.118	0.124	0.01	5.0	± 50.0
Methylene chloride	0.445	0.450	0.01	1.2	± 50.0
trans-1,2-Dichloroethene	0.446	0.439	0.07	-1.5	± 25.0
Methyl tert-butyl Ether	0.737	0.783	0.01	6.1	± 50.0
1,1-Dichloroethane	0.756	0.771	0.1	2.0	± 25.0
cis-1,2-Dichloroethene	0.459	0.470	0.1	2.4	± 25.0
2-Butanone	0.075	0.082	0.01	10	± 50.0
Bromochloromethane	0.184	0.183	0.02	-0.7	± 25.0
Chloroform	0.804	0.851	0.04	5.9	± 25.0
1,1,1-Trichloroethane	0.949	0.938	0.05	-1.2	± 25.0
Cyclohexane	0.837	0.800	0.1	-4.5	± 50.0
Carbon tetrachloride	0.829	0.818	0.02	-1.4	± 50.0
Benzene	2.141	2.216	0.3	3.5	± 25.0
1,2-Dichloroethane	0.405	0.418	0.01	3.0	± 50.0
Trichloroethene	0.594	0.583	0.1	-1.8	± 25.0
Methylcyclohexane	0.733	0.688	0.2	-6.1	± 50.0
1,2-Dichloropropane	0.502	0.514	0.1	2.4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/11/2016 Time: 18:32

Lab File ID: VI049347.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00526 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.716	0.09	-2.1	± 25.0
cis-1,3-Dichloropropene	0.740	0.702	0.1	-5.1	± 25.0
4-Methyl-2-pentanone	0.258	0.278	0.01	7.7	± 50.0
Toluene	1.806	1.828	0.4	1.2	± 25.0
trans-1,3-Dichloropropene	0.567	0.540	0.01	-4.7	± 25.0
1,1,2-Trichloroethane	0.261	0.275	0.04	5.4	± 25.0
Tetrachloroethene	0.390	0.391	0.1	0.3	± 25.0
2-Hexanone	0.173	0.182	0.01	5.3	± 50.0
Dibromochloromethane	0.393	0.393	0.05	-0.1	± 25.0
1,2-Dibromoethane	0.272	0.286	0.01	5.0	± 25.0
Chlorobenzene	1.083	1.121	0.4	3.5	± 25.0
Ethylbenzene	1.866	1.934	0.5	3.6	± 25.0
o-Xylene	0.636	0.656	0.3	3.2	± 25.0
m,p-Xylene	0.680	0.693	0.2	1.9	± 25.0
Styrene	1.055	1.107	0.2	5.0	± 25.0
Bromoform	0.466	0.430	0.01	-7.8	± 50.0
Isopropylbenzene	1.648	1.749	0.7	6.1	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.265	0.05	5.1	± 25.0
1,3-Dichlorobenzene	1.696	1.691	0.5	-0.3	± 25.0
1,4-Dichlorobenzene	1.742	1.740	0.7	-0.1	± 25.0
1,2-Dichlorobenzene	1.405	1.435	0.4	2.1	± 25.0
1,2-Dibromo-3-chloropropane	0.086	0.079	0.01	-7.7	± 50.0
1,2,4-trichlorobenzene	0.751	0.780	0.3	3.9	± 50.0
1,2,3-Trichlorobenzene	0.556	0.575	0.2	3.4	± 50.0
Vinyl Chloride-d3	0.308	0.241	0.01	-21.8	± 50.0
Chloroethane-d5	0.170	0.154	0.01	-9.6	± 50.0
1,1-Dichloroethene-d2	0.725	0.648	0.01	-10.6	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/11/2016 Time: 18:32

Lab File ID: VI049347.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00526 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.074	0.01	11.1	± 50.0
Chloroform-d	0.783	0.765	0.01	-2.3	± 25.0
1,2-Dichloroethane-d4	0.320	0.319	0.01	-0.5	± 25.0
Benzene-d6	1.948	1.913	0.03	-1.8	± 25.0
1,2-Dichloropropane-d6	0.548	0.540	0.1	-1.3	± 25.0
Toluene-d8	1.437	1.376	0.2	-4.3	± 25.0
trans-1,3-Dichloropropene-d4	0.216	0.197	0.01	-8.9	± 25.0
2-Hexanone-d5	0.068	0.074	0.01	8.2	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.271	0.01	8.7	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.841	0.06	-4.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 12:03

Lab File ID: VI049349.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00527 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.537	0.01	-4.7	± 40.0
Chloromethane	0.482	0.406	0.01	-15.7	± 30.0
Vinyl chloride	0.337	0.319	0.01	-5.5	± 30.0
Bromomethane	0.163	0.149	0.01	-8.8	± 30.0
Chloroethane	0.144	0.146	0.01	1.5	± 30.0
Trichlorofluoromethane	0.471	0.468	0.01	-0.7	± 30.0
1,1-Dichloroethene	0.404	0.401	0.02	-0.5	± 20.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.437	0.01	1.4	± 30.0
Acetone	0.041	0.041	0.01	0.2	± 40.0
Carbon disulfide	1.463	1.393	0.01	-4.8	± 25.0
Methyl Acetate	0.118	0.121	0.01	2.7	± 40.0
Methylene chloride	0.445	0.435	0.01	-2.3	± 30.0
trans-1,2-Dichloroethene	0.446	0.452	0.07	1.3	± 20.0
Methyl tert-butyl Ether	0.737	0.742	0.01	0.7	± 30.0
1,1-Dichloroethane	0.756	0.753	0.1	-0.5	± 20.0
cis-1,2-Dichloroethene	0.459	0.466	0.1	1.5	± 20.0
2-Butanone	0.075	0.079	0.01	5.2	± 40.0
Bromochloromethane	0.184	0.181	0.02	-1.8	± 20.0
Chloroform	0.804	0.826	0.04	2.7	± 20.0
1,1,1-Trichloroethane	0.949	0.926	0.05	-2.4	± 20.0
Cyclohexane	0.837	0.810	0.1	-3.3	± 25.0
Carbon tetrachloride	0.829	0.814	0.02	-1.8	± 25.0
Benzene	2.141	2.127	0.3	-0.7	± 20.0
1,2-Dichloroethane	0.405	0.391	0.01	-3.7	± 25.0
Trichloroethene	0.594	0.579	0.1	-2.5	± 20.0
Methylcyclohexane	0.733	0.734	0.2	0.1	± 25.0
1,2-Dichloropropane	0.502	0.489	0.1	-2.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 12:03

Lab File ID: VI049349.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00527 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.731	0.09	-0.2	± 20.0
cis-1,3-Dichloropropene	0.740	0.728	0.1	-1.6	± 20.0
4-Methyl-2-pentanone	0.258	0.262	0.01	1.3	± 30.0
Toluene	1.806	1.815	0.4	0.5	± 20.0
trans-1,3-Dichloropropene	0.567	0.562	0.01	-1	± 20.0
1,1,2-Trichloroethane	0.261	0.265	0.04	1.8	± 20.0
Tetrachloroethene	0.390	0.393	0.1	0.7	± 20.0
2-Hexanone	0.173	0.176	0.01	1.7	± 40.0
Dibromochloromethane	0.393	0.406	0.05	3.1	± 20.0
1,2-Dibromoethane	0.272	0.273	0.01	0.5	± 20.0
Chlorobenzene	1.083	1.103	0.4	1.9	± 20.0
Ethylbenzene	1.866	1.944	0.5	4.1	± 20.0
o-Xylene	0.636	0.651	0.3	2.4	± 20.0
m,p-Xylene	0.680	0.699	0.2	2.8	± 20.0
Styrene	1.055	1.096	0.2	3.9	± 20.0
Bromoform	0.466	0.460	0.01	-1.2	± 30.0
Isopropylbenzene	1.648	1.772	0.7	7.5	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.252	0.05	0.0	± 25.0
1,3-Dichlorobenzene	1.696	1.745	0.5	2.9	± 20.0
1,4-Dichlorobenzene	1.742	1.791	0.7	2.8	± 20.0
1,2-Dichlorobenzene	1.405	1.435	0.4	2.1	± 20.0
1,2-Dibromo-3-chloropropane	0.086	0.083	0.01	-2.7	± 40.0
1,2,4-trichlorobenzene	0.751	0.814	0.3	8.5	± 30.0
1,2,3-Trichlorobenzene	0.556	0.598	0.2	7.7	± 40.0
Vinyl Chloride-d3	0.308	0.255	0.01	-17.3	± 30.0
Chloroethane-d5	0.170	0.163	0.01	-4.2	± 30.0
1,1-Dichloroethene-d2	0.725	0.667	0.01	-8	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 12:03

Lab File ID: VI049349.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00527 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.080	0.01	19.8	± 40.0
Chloroform-d	0.783	0.798	0.01	1.8	± 20.0
1,2-Dichloroethane-d4	0.320	0.332	0.01	3.5	± 25.0
Benzene-d6	1.948	1.945	0.03	-0.1	± 20.0
1,2-Dichloropropane-d6	0.548	0.553	0.1	1.0	± 20.0
Toluene-d8	1.437	1.414	0.2	-1.6	± 20.0
trans-1,3-Dichloropropene-d4	0.216	0.215	0.01	-0.3	± 25.0
2-Hexanone-d5	0.068	0.078	0.01	14.2	± 40.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.278	0.01	11.5	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.892	0.06	1.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 20:37

Lab File ID: VI049360.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00528 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.563	0.532	0.01	-5.6	± 50.0
Chloromethane	0.482	0.416	0.01	-13.8	± 50.0
Vinyl chloride	0.337	0.331	0.01	-1.8	± 50.0
Bromomethane	0.163	0.149	0.01	-8.5	± 50.0
Chloroethane	0.144	0.150	0.01	4.2	± 50.0
Trichlorofluoromethane	0.471	0.451	0.01	-4.4	± 50.0
1,1-Dichloroethene	0.404	0.417	0.02	3.3	± 25.0
1,1,2-Trichloro-1,2,2-trifluoroet	0.431	0.446	0.01	3.4	± 50.0
Acetone	0.041	0.043	0.01	5.3	± 50.0
Carbon disulfide	1.463	1.425	0.01	-2.6	± 25.0
Methyl Acetate	0.118	0.127	0.01	7.5	± 50.0
Methylene chloride	0.445	0.447	0.01	0.5	± 50.0
trans-1,2-Dichloroethene	0.446	0.467	0.07	4.6	± 25.0
Methyl tert-butyl Ether	0.737	0.792	0.01	7.5	± 50.0
1,1-Dichloroethane	0.756	0.794	0.1	5.0	± 25.0
cis-1,2-Dichloroethene	0.459	0.491	0.1	7.1	± 25.0
2-Butanone	0.075	0.082	0.01	9.9	± 50.0
Bromochloromethane	0.184	0.185	0.02	0.8	± 25.0
Chloroform	0.804	0.868	0.04	8.0	± 25.0
1,1,1-Trichloroethane	0.949	0.982	0.05	3.4	± 25.0
Cyclohexane	0.837	0.809	0.1	-3.4	± 50.0
Carbon tetrachloride	0.829	0.846	0.02	2.0	± 50.0
Benzene	2.141	2.218	0.3	3.6	± 25.0
1,2-Dichloroethane	0.405	0.419	0.01	3.2	± 50.0
Trichloroethene	0.594	0.600	0.1	1.1	± 25.0
Methylcyclohexane	0.733	0.711	0.2	-2.9	± 50.0
1,2-Dichloropropane	0.502	0.503	0.1	0.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 20:37

Lab File ID: VI049360.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00528 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Bromodichloromethane	0.732	0.734	0.09	0.3	± 25.0
cis-1,3-Dichloropropene	0.740	0.731	0.1	-1.3	± 25.0
4-Methyl-2-pentanone	0.258	0.268	0.01	3.9	± 50.0
Toluene	1.806	1.891	0.4	4.7	± 25.0
trans-1,3-Dichloropropene	0.567	0.572	0.01	0.9	± 25.0
1,1,2-Trichloroethane	0.261	0.277	0.04	6.1	± 25.0
Tetrachloroethene	0.390	0.407	0.1	4.3	± 25.0
2-Hexanone	0.173	0.178	0.01	2.8	± 50.0
Dibromochloromethane	0.393	0.426	0.05	8.4	± 25.0
1,2-Dibromoethane	0.272	0.284	0.01	4.5	± 25.0
Chlorobenzene	1.083	1.172	0.4	8.2	± 25.0
Ethylbenzene	1.866	2.034	0.5	9.0	± 25.0
o-Xylene	0.636	0.696	0.3	9.4	± 25.0
m,p-Xylene	0.680	0.739	0.2	8.7	± 25.0
Styrene	1.055	1.170	0.2	10.9	± 25.0
Bromoform	0.466	0.462	0.01	-1	± 50.0
Isopropylbenzene	1.648	1.885	0.7	14.4	± 25.0
1,1,2,2-Tetrachloroethane	0.252	0.271	0.05	7.6	± 25.0
1,3-Dichlorobenzene	1.696	1.792	0.5	5.7	± 25.0
1,4-Dichlorobenzene	1.742	1.767	0.7	1.4	± 25.0
1,2-Dichlorobenzene	1.405	1.520	0.4	8.2	± 25.0
1,2-Dibromo-3-chloropropane	0.086	0.092	0.01	7.7	± 50.0
1,2,4-trichlorobenzene	0.751	0.842	0.3	12.2	± 50.0
1,2,3-Trichlorobenzene	0.556	0.632	0.2	13.8	± 50.0
Vinyl Chloride-d3	0.308	0.254	0.01	-17.4	± 50.0
Chloroethane-d5	0.170	0.160	0.01	-6.2	± 50.0
1,1-Dichloroethene-d2	0.725	0.690	0.01	-4.9	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: Trace VOA Level:

Instrument ID: MSVOA_I Date Analyzed: 05/12/2016 Time: 20:37

Lab File ID: VI049360.D Init. Calib Date(s): 05/04/2016 05/04/2016

EPA Sample No.: VSTD00528 Init. Calib Time(s): 11:27 13:33

GC Column: RXI-624 ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) N Purge Volume: 25 (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF5.0	MIN RRF	%D	MAX %D
2-Butanone-d5	0.067	0.088	0.01	31.5	± 50.0
Chloroform-d	0.783	0.859	0.01	9.7	± 25.0
1,2-Dichloroethane-d4	0.320	0.350	0.01	9.2	± 25.0
Benzene-d6	1.948	2.022	0.03	3.8	± 25.0
1,2-Dichloropropane-d6	0.548	0.580	0.1	5.8	± 25.0
Toluene-d8	1.437	1.475	0.2	2.7	± 25.0
trans-1,3-Dichloropropene-d4	0.216	0.219	0.01	1.6	± 25.0
2-Hexanone-d5	0.068	0.083	0.01	21.4	± 50.0
1,1,2,2-Tetrachloroethane-d2	0.249	0.300	0.01	20.6	± 25.0
1,2-Dichlorobenzene-d4	0.877	0.944	0.06	7.7	± 25.0

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050916\
Data File : VI049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 05:34:33 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00545

Manual Integrations APPROVED
feifei
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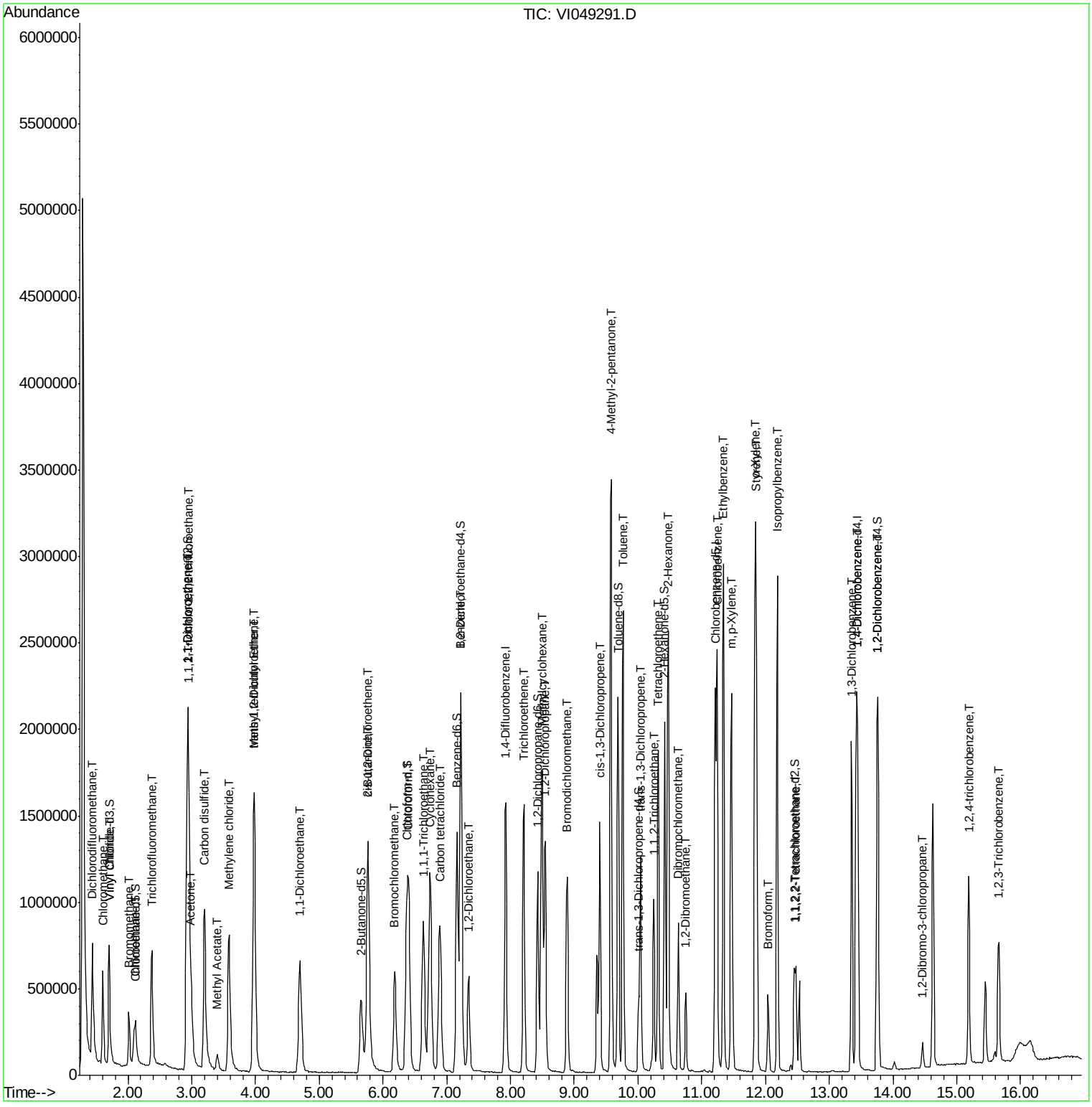

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050916\
Data File : VI049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00545

Manual Integrations APPROVED
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Quant Time: May 10 05:34:33 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1472789	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.21	117	1026159	5.00	ug/L	-0.01
59) 1,4-Dichlorobenzene-d4	13.43	152	402955	5.00	ug/L	-0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	338835	3.74	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 74.80%			
7) Chloroethane-d5	2.10	69	215126	4.28	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 85.60%			
11) 1,1-Dichloroethene-d2	2.93	63	890844	4.17	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 83.40%			
20) 2-Butanone-d5	5.65	46	1013174	51.61	ug/L	-0.03
Spiked Amount 50.000	Range 40 - 130		Recovery = 103.22%			
24) Chloroform-d	6.37	84	1048224	4.54	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.80%			
26) 1,2-Dichloroethane-d4	7.22	65	437770	4.64	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.80%			
32) Benzene-d6	7.16	84	1772921	4.44	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 88.80%			
36) 1,2-Dichloropropane-d6	8.43	67	522784	4.65	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 140		Recovery = 93.00%			
41) Toluene-d8	9.69	98	1294111	4.39	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.80%			
43) trans-1,3-Dichloropropene-	10.01	79	204811	4.62	ug/L	-0.01
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.40%			
46) 2-Hexanone-d5	10.41	63	728533	52.15	ug/L	-0.02
Spiked Amount 50.000	Range 45 - 130		Recovery = 104.30%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	251704	4.92	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.40%			
63) 1,2-Dichlorobenzene-d4	13.75	152	314844	4.46	ug/L	-0.01
Spiked Amount 5.000	Range 80 - 120		Recovery = 89.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	801065	4.83	ug/L	98
3) Chloromethane	1.61	50	586688	4.13	ug/L	99
5) Vinyl chloride	1.70	62	461514	4.65	ug/L	99
6) Bromomethane	2.01	94	193848	4.04	ug/L	97
8) Chloroethane	2.12	64	206539	4.87	ug/L	95
9) Trichlorofluoromethane	2.37	101	671857	4.84	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.95	101	635733	5.01	ug/L	99
12) 1,1-Dichloroethene	2.94	96	557775	4.69	ug/L	98
13) Acetone	2.99	43	607878	49.93	ug/L	98
14) Carbon disulfide	3.20	76	1969103	4.57	ug/L	100
15) Methyl Acetate	3.40	43	175467	5.05	ug/L	98
16) Methylene chloride	3.58	84	605869	4.62	ug/L	99
17) Methyl tert-butyl Ether	3.97	73	1038949	4.78	ug/L	100
18) trans-1,2-Dichloroethene	3.98	96	620155	4.72	ug/L	98
19) 1,1-Dichloroethane	4.70	63	1031094	4.63	ug/L	99
21) 2-Butanone	5.77	43	1115934	50.67	ug/L	100
22) cis-1,2-Dichloroethene	5.76	96	634608m	4.70	ug/L	

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI050916\
Data File : VI049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00545

Manual Integrations APPROVED
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5/10/2016 1:38:20 PM

Quant Time: May 10 05:34:33 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.18	128	249365	4.60	ug/L	94
25) Chloroform	6.40	83	1121013	4.73	ug/L	99
27) 1,2-Dichloroethane	7.34	62	560605	4.69	ug/L	98
29) 1,1,1-Trichloroethane	6.64	97	912359	4.68	ug/L	97
30) Cyclohexane	6.73	56	847820	4.93	ug/L	97
31) Carbon tetrachloride	6.89	117	805548	4.73	ug/L	99
33) Benzene	7.23	78	2129158	4.85	ug/L	100
34) Trichloroethene	8.21	95	580305	4.76	ug/L	93
35) Methylcyclohexane	8.50	83	759632	5.05	ug/L	98
37) 1,2-Dichloropropane	8.54	63	503182	4.88	ug/L	98
38) Bromodichloromethane	8.89	83	730199	4.86	ug/L	98
39) cis-1,3-Dichloropropene	9.40	75	738049	4.86	ug/L	99
40) 4-Methyl-2-pentanone	9.58	43	2715473	51.20	ug/L	99
42) Toluene	9.77	91	1807323	4.88	ug/L	100
44) trans-1,3-Dichloropropene	10.04	75	577504	4.96	ug/L	97
45) 1,1,2-Trichloroethane	10.25	97	262822	4.91	ug/L	98
47) Tetrachloroethene	10.32	164	394722	4.93	ug/L	98
48) 2-Hexanone	10.47	43	1859372	52.43	ug/L	98
49) Dibromochloromethane	10.63	129	409341	5.07	ug/L	99
50) 1,2-Dibromoethane	10.75	107	266512	4.77	ug/L	96
51) Chlorobenzene	11.24	112	1087726	4.89	ug/L	98
52) Ethylbenzene	11.34	91	1908317	4.98	ug/L	98
53) m,p-Xylene	11.47	106	688048	4.93	ug/L	97
54) o-Xylene	11.83	106	643711	4.93	ug/L	96
55) Styrene	11.86	104	1062306	4.91	ug/L	99
56) Isopropylbenzene	12.19	105	1698408	5.02	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	253513	4.90	ug/L	98
60) Bromoform	12.04	173	181811	4.84	ug/L	100
61) 1,3-Dichlorobenzene	13.35	146	675760	4.94	ug/L	97
62) 1,4-Dichlorobenzene	13.45	146	667531	4.75	ug/L	96
64) 1,2-Dichlorobenzene	13.77	146	554462	4.90	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.46	75	31876	4.62	ug/L	92
66) 1,2,4-trichlorobenzene	15.19	180	306892	5.07	ug/L	97
67) 1,2,3-Trichlorobenzene	15.66	180	218176	4.87	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 05:34:33 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00545

Manual Integrations APPROVED
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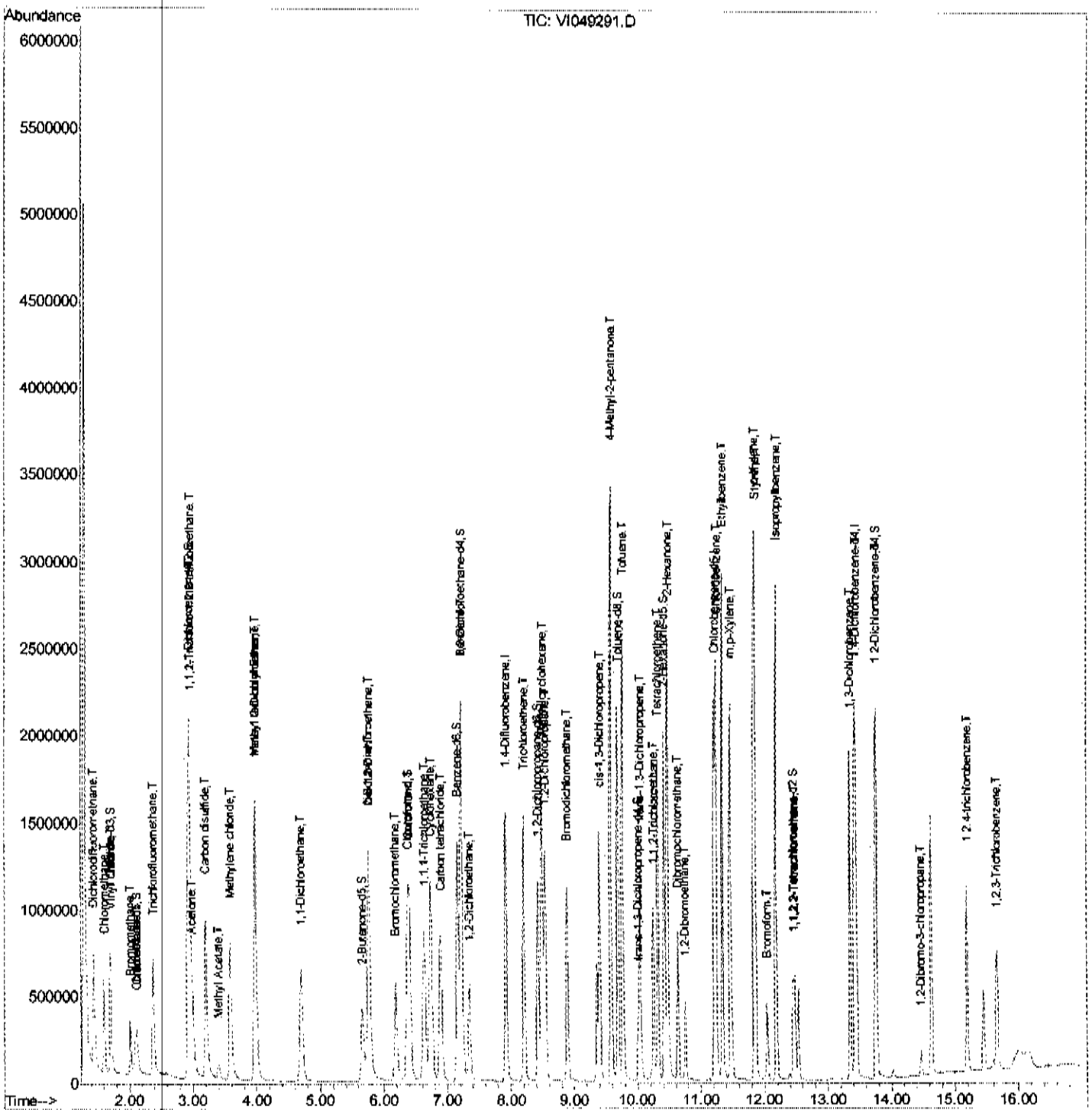


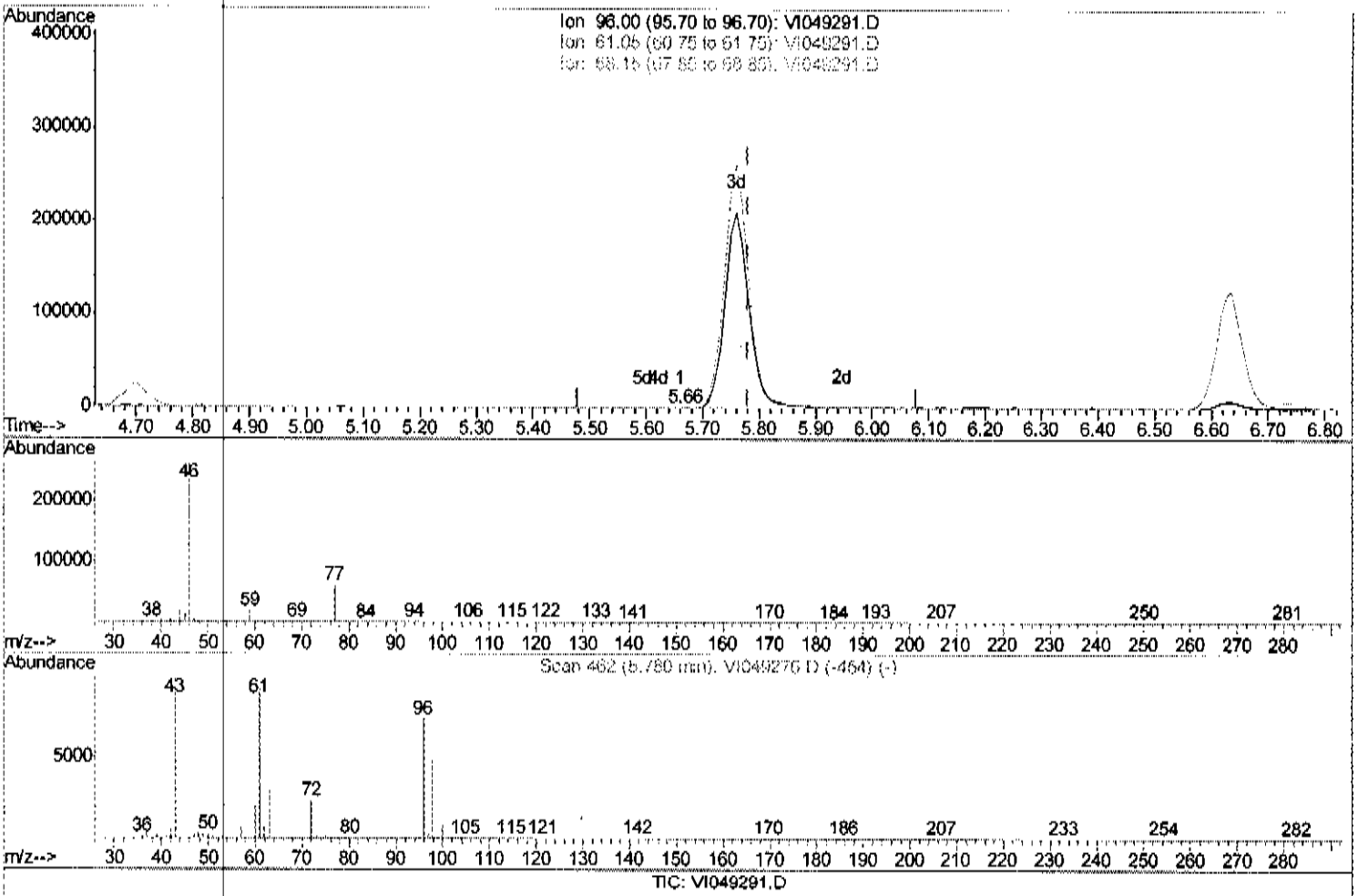
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VI050916\
Data File : VI049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 05:33:53 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00545

Manual Integrations APPROVED
feifei
5/10/2016 1:38:20 PM



Scan 462 (5.780 min): VI049276.D (-464) (-)

TIC: VI049291.D

(22) cis-1,2-Dichloroethene (T)

5.661min (-0.118) 0.00ug/L

response 571

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	117.79
68.15	0.00	0.00
0.00	0.00	0.00

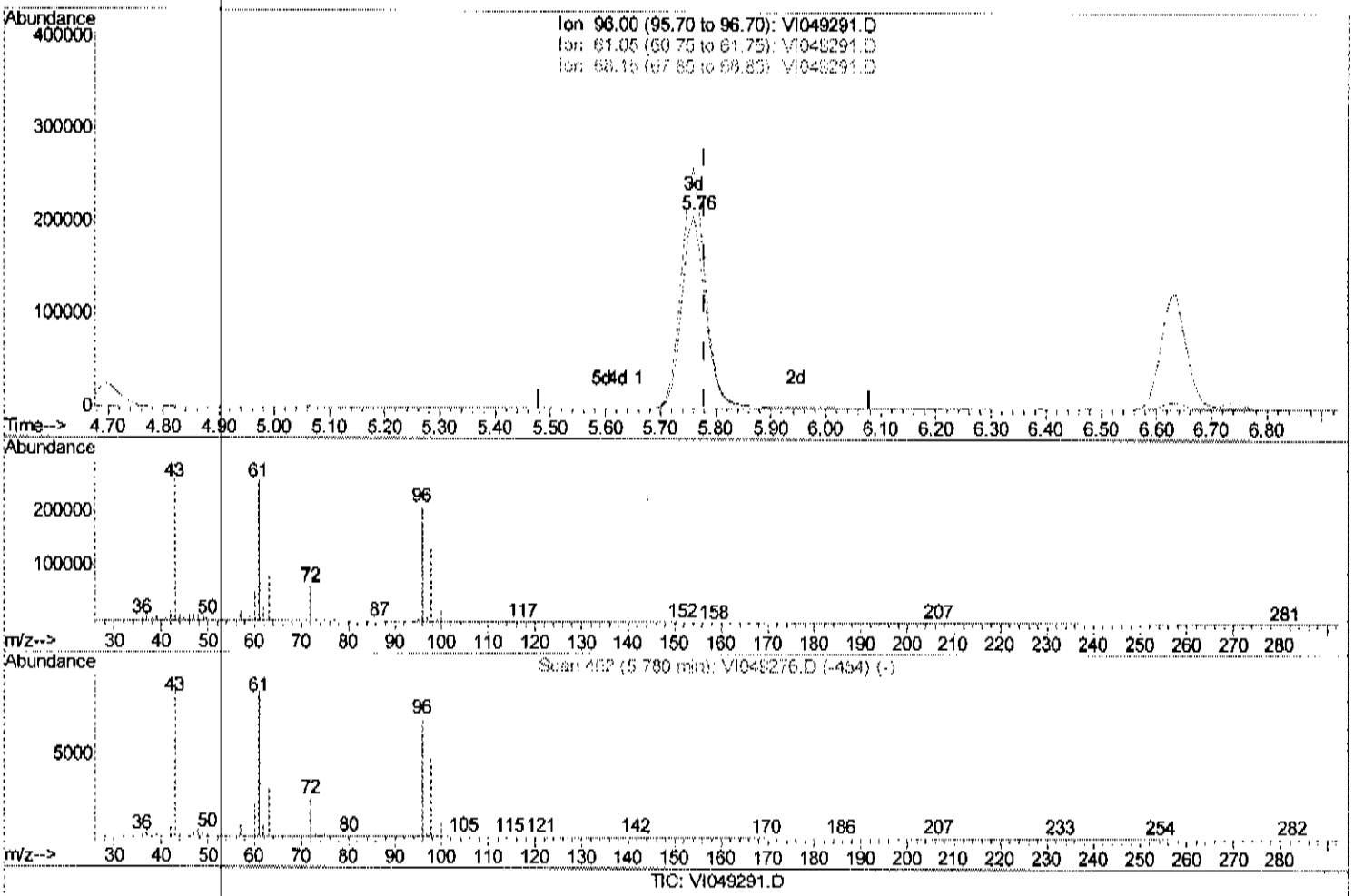
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 05:33:53 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMTTR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00545

Manual Integrations APPROVED
feifei
5/10/2016 1:38:20 PM



TIC: VI049291.D

(22) cis-1,2-Dichloroethene (T)

5.760min (-0.020) 4.70ug/L m

response 634608

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	123.95
68.15	0.00	0.07#
0.00	0.00	0.00

FT
5/10/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VT049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 05:34:33 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00545

Manual Integrations APPROVED
feifei
5/10/2016 1:38:20 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.92	114	1472789	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.21	117	1026159	5.00	ug/L	-0.01
59) 1,4-Dichlorobenzene-d4	13.43	152	402955	5.00	ug/L	-0.01
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	338835	3.74	ug/L	-0.01
Spiked Amount 5.000	Range 40 - 130		Recovery = 74.80%			
7) Chloroethane-d5	2.10	69	215126	4.28	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 85.60%			
11) 1,1-Dichloroethene-d2	2.93	63	890844	4.17	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 83.40%			
20) 2-Butanone-d5	5.65	46	1013174	51.61	ug/L	-0.03
Spiked Amount 50.000	Range 40 - 130		Recovery = 103.22%			
24) Chloroform-d	6.37	84	1048224	4.54	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.80%			
26) 1,2-Dichloroethane-d4	7.22	65	437770	4.64	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.80%			
32) Benzene-d6	7.16	84	1772921	4.44	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 88.80%			
36) 1,2-Dichloropropane-d6	8.43	67	522784	4.65	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 140		Recovery = 93.00%			
41) Toluene-d8	9.69	98	1294111	4.39	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.80%			
43) trans-1,3-Dichloropropene-	10.01	79	204811	4.62	ug/L	-0.01
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.40%			
46) 2-Hexanone-d5	10.41	63	728533	52.15	ug/L	-0.02
Spiked Amount 50.000	Range 45 - 130		Recovery = 104.30%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	251704	4.92	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.40%			
63) 1,2-Dichlorobenzene-d4	13.75	152	314844	4.46	ug/L	-0.01
Spiked Amount 5.000	Range 80 - 120		Recovery = 89.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	801065	4.83	ug/L	98
3) Chloromethane	1.61	50	586688	4.13	ug/L	99
5) Vinyl chloride	1.70	62	461514	4.65	ug/L	99
6) Bromomethane	2.01	94	193848	4.04	ug/L	97
8) Chloroethane	2.12	64	206539	4.87	ug/L	95
9) Trichlorofluoromethane	2.37	101	671857	4.84	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.95	101	635733	5.01	ug/L	99
12) 1,1-Dichloroethene	2.94	96	557775	4.69	ug/L	98
13) Acetone	2.99	43	607878	49.93	ug/L	98
14) Carbon disulfide	3.20	76	1969103	4.57	ug/L	100
15) Methyl Acetate	3.40	43	175467	5.05	ug/L	98
16) Methylene chloride	3.58	84	605869	4.62	ug/L	99
17) Methyl tert-butyl Ether	3.97	73	1038949	4.78	ug/L	100
18) trans-1,2-Dichloroethene	3.98	96	620155	4.72	ug/L	98
19) 1,1-Dichloroethane	4.70	63	1031094	4.63	ug/L	99
21) 2-Butanone	5.77	43	1115934	50.67	ug/L	100
22) cis-1,2-Dichloroethene	5.76	96	634608m	4.70	ug/L	

FT
5/10/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_1\DATA\VI050916\
Data File : VI049291.D
Acq On : 9 May 2016 11:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 05:34:33 2016
Quant Method : W:\HPCHEM1\MSVOA_1\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Sat May 07 04:11:41 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00545

Manual Integrations APPROVED
feifei
5/10/2016 1:38:20 PM

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
23) Bromochloromethane	6.18	128	249365	4.60 ug/L	94
25) Chloroform	6.40	83	1121013	4.73 ug/L	99
27) 1,2-Dichloroethane	7.34	62	560605	4.69 ug/L	98
29) 1,1,1-Trichloroethane	6.64	97	912359	4.68 ug/L	97
30) Cyclohexane	6.73	56	847820	4.93 ug/L	97
31) Carbon tetrachloride	6.89	117	805548	4.73 ug/L	99
33) Benzene	7.23	78	2129158	4.85 ug/L	100
34) Trichloroethene	8.21	95	580305	4.76 ug/L	93
35) Methylcyclohexane	8.50	83	759632	5.05 ug/L	98
37) 1,2-Dichloropropane	8.54	63	503182	4.88 ug/L	98
38) Bromodichloromethane	8.89	83	730199	4.86 ug/L	98
39) cis-1,3-Dichloropropene	9.40	75	738049	4.86 ug/L	99
40) 4-Methyl-2-pentanone	9.58	43	2715473	51.20 ug/L	99
42) Toluene	9.77	91	1807323	4.88 ug/L	100
44) trans-1,3-Dichloropropene	10.04	75	577504	4.96 ug/L	97
45) 1,1,2-Trichloroethane	10.25	97	262822	4.91 ug/L	98
47) Tetrachloroethene	10.32	164	394722	4.93 ug/L	98
48) 2-Hexanone	10.47	43	1859372	52.43 ug/L	98
49) Dibromochloromethane	10.63	129	409341	5.07 ug/L	99
50) 1,2-Dibromoethane	10.75	107	266512	4.77 ug/L	96
51) Chlorobenzene	11.24	112	1087726	4.89 ug/L	98
52) Ethylbenzene	11.34	91	1908317	4.98 ug/L	98
53) m,p-Xylene	11.47	106	688048	4.93 ug/L	97
54) o-Xylene	11.83	106	643711	4.93 ug/L	96
55) Styrene	11.86	104	1062306	4.91 ug/L	99
56) Isopropylbenzene	12.19	105	1698408	5.02 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	253513	4.90 ug/L	98
60) Bromoform	12.04	173	181811	4.84 ug/L	100
61) 1,3-Dichlorobenzene	13.35	146	675760	4.94 ug/L	97
62) 1,4-Dichlorobenzene	13.45	146	667531	4.75 ug/L	96
64) 1,2-Dichlorobenzene	13.77	146	554462	4.90 ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.46	75	31876	4.62 ug/L	92
66) 1,2,4-trichlorobenzene	15.19	180	306892	5.07 ug/L	97
67) 1,2,3-Trichlorobenzene	15.66	180	218176	4.87 ug/L	97

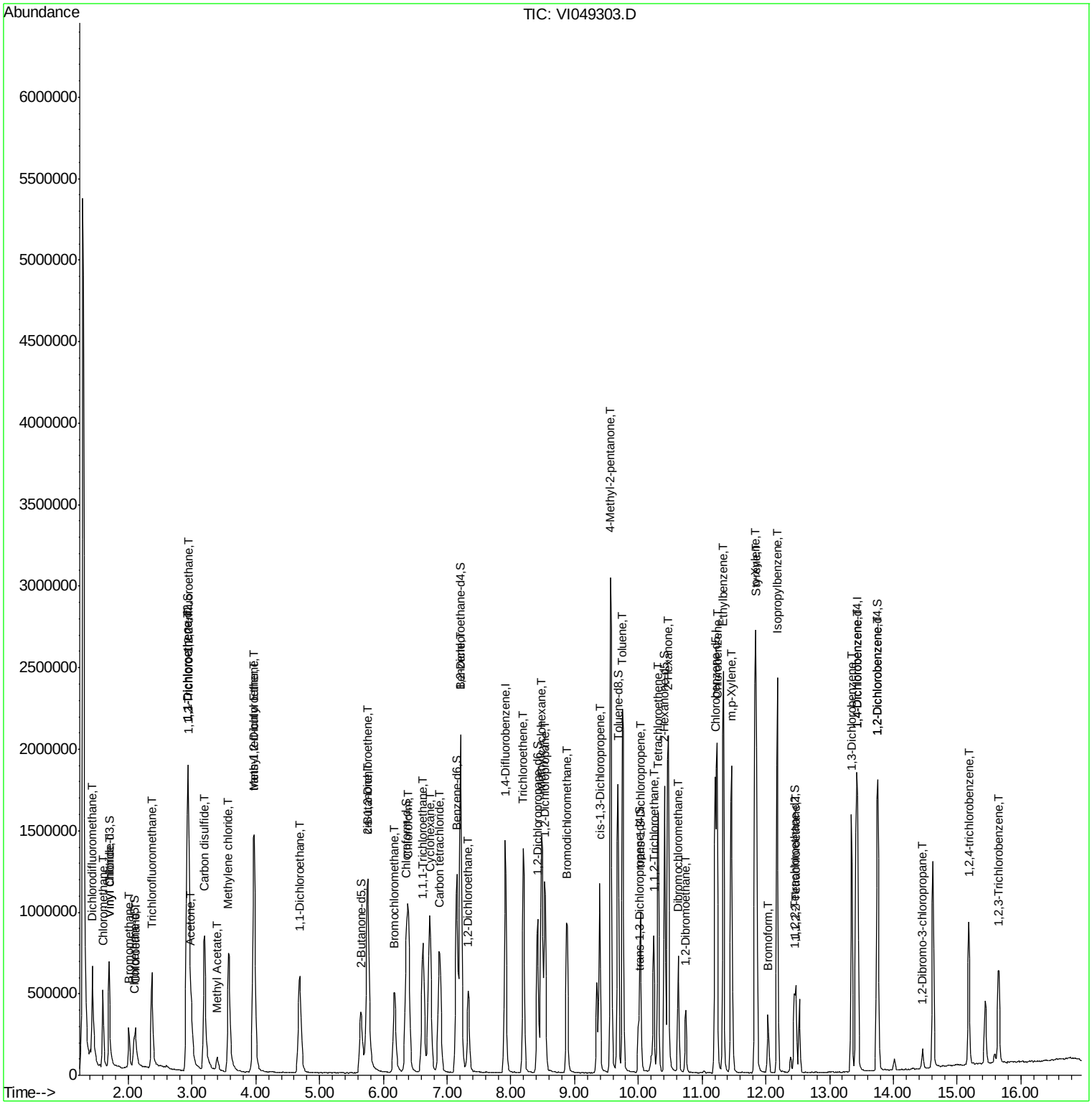
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049303.D
Acq On : 9 May 2016 18:15
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00546

Quant Time: May 10 05:38:18 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049303.D
Acq On : 9 May 2016 18:15
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00546

Quant Time: May 10 05:38:18 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1268200	5.00	ug/L	-0.02
28) Chlorobenzene-d5	11.21	117	859906	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	343318	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	298676	3.83	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 76.60%			
7) Chloroethane-d5	2.08	69	190081	4.40	ug/L	-0.02
Spiked Amount 5.000	Range 65 - 130		Recovery = 88.00%			
11) 1,1-Dichloroethene-d2	2.92	63	779830	4.24	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 84.80%			
20) 2-Butanone-d5	5.65	46	923602	54.64	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 109.28%			
24) Chloroform-d	6.35	84	926448	4.66	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.20%			
26) 1,2-Dichloroethane-d4	7.21	65	382767	4.71	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.20%			
32) Benzene-d6	7.15	84	1550297	4.63	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 92.60%			
36) 1,2-Dichloropropane-d6	8.42	67	443265	4.71	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 94.20%			
41) Toluene-d8	9.68	98	1092479	4.42	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.40%			
43) trans-1,3-Dichloropropene-	10.01	79	155465	4.19	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 83.80%			
46) 2-Hexanone-d5	10.41	63	609373	52.06	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 104.12%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	204347	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.40%			
63) 1,2-Dichlorobenzene-d4	13.75	152	260080	4.32	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 86.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	698723	4.89	ug/L	98
3) Chloromethane	1.60	50	501485	4.10	ug/L	98
5) Vinyl chloride	1.70	62	418117	4.89	ug/L	97
6) Bromomethane	2.00	94	146153	3.53	ug/L	94
8) Chloroethane	2.11	64	188069	5.15	ug/L	99
9) Trichlorofluoromethane	2.37	101	584175	4.89	ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.95	101	555525	5.08	ug/L	99
12) 1,1-Dichloroethene	2.93	96	508674	4.97	ug/L	96
13) Acetone	2.99	43	550705	52.53	ug/L	95
14) Carbon disulfide	3.20	76	1755877	4.73	ug/L	99
15) Methyl Acetate	3.39	43	153892	5.14	ug/L	96
16) Methylene chloride	3.58	84	557575	4.94	ug/L	96
17) Methyl tert-butyl Ether	3.96	73	924892	4.95	ug/L	98
18) trans-1,2-Dichloroethene	3.97	96	561559	4.96	ug/L	97
19) 1,1-Dichloroethane	4.69	63	956237	4.99	ug/L	98
21) 2-Butanone	5.76	43	1002206	52.84	ug/L	96
22) cis-1,2-Dichloroethene	5.74	96	568230	4.88	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049303.D
Acq On : 9 May 2016 18:15
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00546

Quant Time: May 10 05:38:18 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 05:36:17 2016
Response via : Initial Calibration

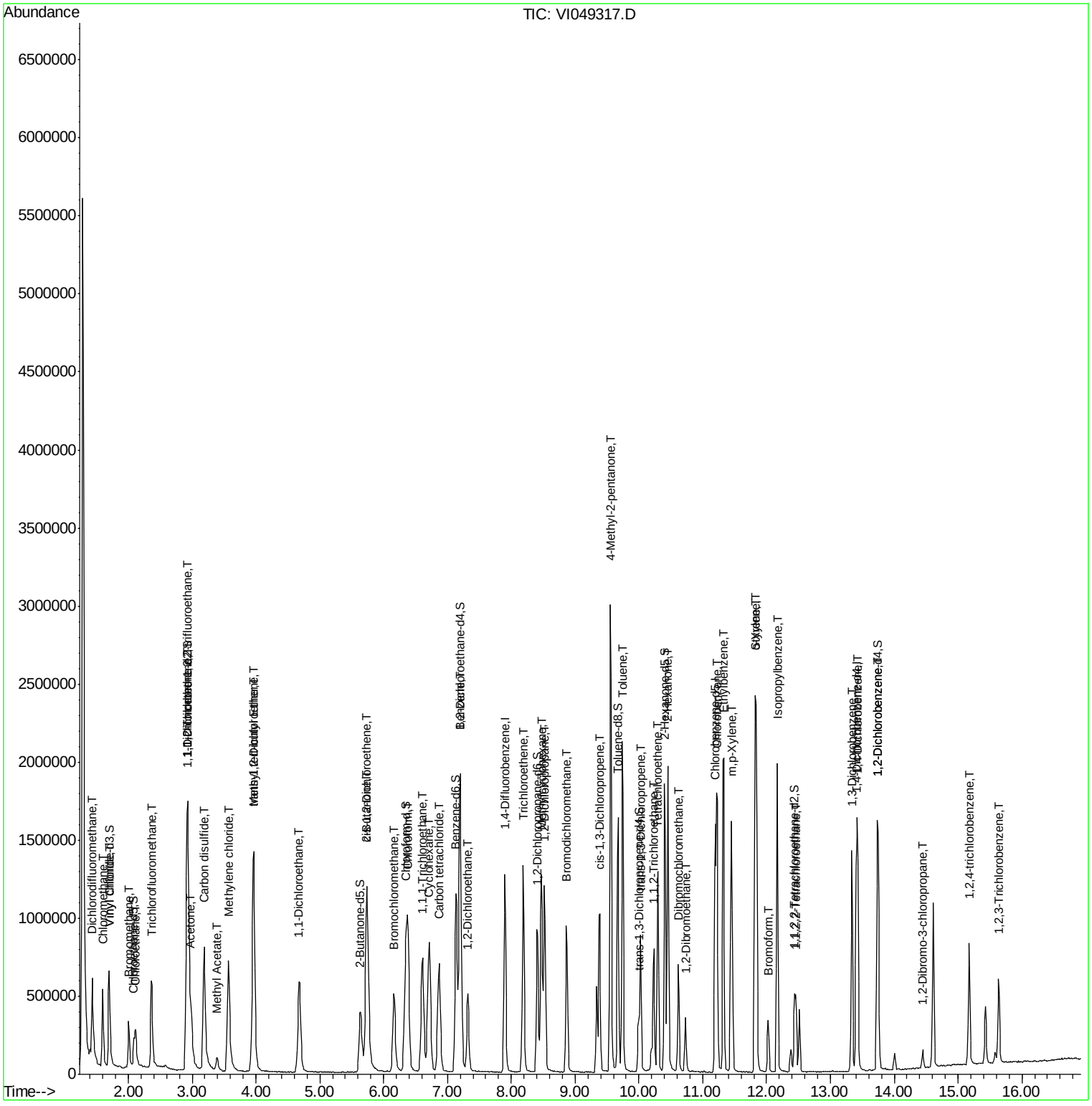
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.17	128	215867	4.62	ug/L		91
25) Chloroform	6.39	83	1026473	5.03	ug/L		97
27) 1,2-Dichloroethane	7.33	62	512115	4.98	ug/L		100
29) 1,1,1-Trichloroethane	6.62	97	825665	5.06	ug/L		97
30) Cyclohexane	6.72	56	698459	4.85	ug/L		98
31) Carbon tetrachloride	6.89	117	726686	5.09	ug/L		99
33) Benzene	7.21	78	1881737	5.11	ug/L		100
34) Trichloroethene	8.19	95	500306	4.90	ug/L		98
35) Methylcyclohexane	8.48	83	626542	4.97	ug/L		99
37) 1,2-Dichloropropane	8.53	63	426467	4.94	ug/L		100
38) Bromodichloromethane	8.87	83	608044	4.83	ug/L		98
39) cis-1,3-Dichloropropene	9.40	75	588484	4.62	ug/L		98
40) 4-Methyl-2-pentanone	9.56	43	2278063	51.26	ug/L		100
42) Toluene	9.75	91	1567855	5.05	ug/L		99
44) trans-1,3-Dichloropropene	10.04	75	458152	4.70	ug/L		100
45) 1,1,2-Trichloroethane	10.24	97	217140	4.84	ug/L		99
47) Tetrachloroethene	10.31	164	334407	4.98	ug/L		95
48) 2-Hexanone	10.47	43	1532331	51.56	ug/L		98
49) Dibromochloromethane	10.63	129	323631	4.78	ug/L		99
50) 1,2-Dibromoethane	10.74	107	229208	4.90	ug/L	#	99
51) Chlorobenzene	11.24	112	921215	4.95	ug/L		98
52) Ethylbenzene	11.33	91	1627549	5.07	ug/L		98
53) m,p-Xylene	11.46	106	584060	4.99	ug/L		95
54) o-Xylene	11.83	106	543189	4.97	ug/L		96
55) Styrene	11.86	104	917630	5.06	ug/L		99
56) Isopropylbenzene	12.18	105	1436516	5.07	ug/L		98
58) 1,1,2,2-Tetrachloroethane	12.47	83	211691	4.89	ug/L		97
60) Bromoform	12.03	173	136408	4.26	ug/L		98
61) 1,3-Dichlorobenzene	13.34	146	574529	4.93	ug/L		97
62) 1,4-Dichlorobenzene	13.44	146	576140	4.82	ug/L		98
64) 1,2-Dichlorobenzene	13.77	146	473743	4.91	ug/L		99
65) 1,2-Dibromo-3-chloropropan	14.45	75	26341	4.48	ug/L		94
66) 1,2,4-trichlorobenzene	15.18	180	252172	4.89	ug/L		97
67) 1,2,3-Trichlorobenzene	15.66	180	187201	4.91	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049317.D
Acq On : 10 May 2016 2:13
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 28 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00547

Quant Time: May 10 06:13:43 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049317.D
Acq On : 10 May 2016 2:13
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 28 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00547

Quant Time: May 10 06:13:43 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1146676	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	747294	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.40	152	282783	5.00	ug/L	-0.02
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	290932	4.12	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.40%			
7) Chloroethane-d5	2.08	69	180795	4.62	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 92.40%			
11) 1,1-Dichloroethene-d2	2.91	63	720864	4.33	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 86.60%			
20) 2-Butanone-d5	5.63	46	941892	61.63	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 123.26%			
24) Chloroform-d	6.35	84	898171	5.00	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.00%			
26) 1,2-Dichloroethane-d4	7.19	65	388514	5.29	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.80%			
32) Benzene-d6	7.13	84	1474586	5.07	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.40%			
36) 1,2-Dichloropropane-d6	8.40	67	432192	5.28	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 140		Recovery = 105.60%			
41) Toluene-d8	9.67	98	1004537	4.68	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.60%			
43) trans-1,3-Dichloropropene-	10.00	79	150615	4.67	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 93.40%			
46) 2-Hexanone-d5	10.40	63	625660	61.50	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 123.00%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	208976	5.61	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 112.20%			
63) 1,2-Dichlorobenzene-d4	13.73	152	244852	4.94	ug/L	-0.02
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	606524	4.70	ug/L	97
3) Chloromethane	1.60	50	545866	4.94	ug/L	99
5) Vinyl chloride	1.70	62	420046	5.43	ug/L	97
6) Bromomethane	2.01	94	183585	4.91	ug/L	96
8) Chloroethane	2.11	64	185967	5.63	ug/L	98
9) Trichlorofluoromethane	2.36	101	567109	5.25	ug/L	100
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	487453	4.93	ug/L	100
12) 1,1-Dichloroethene	2.93	96	467414	5.05	ug/L	90
13) Acetone	2.98	43	545204	57.52	ug/L	93
14) Carbon disulfide	3.19	76	1642690	4.89	ug/L	99
15) Methyl Acetate	3.38	43	152958	5.65	ug/L	99
16) Methylene chloride	3.57	84	540740	5.30	ug/L	97
17) Methyl tert-butyl Ether	3.95	73	922778	5.46	ug/L	98
18) trans-1,2-Dichloroethene	3.96	96	528377	5.17	ug/L	98
19) 1,1-Dichloroethane	4.67	63	932031	5.38	ug/L	99
21) 2-Butanone	5.75	43	968662	56.49	ug/L	99
22) cis-1,2-Dichloroethene	5.74	96	551165	5.24	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049317.D
Acq On : 10 May 2016 2:13
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 28 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00547

Quant Time: May 10 06:13:43 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.16	128	217361	5.15	ug/L	93
25) Chloroform	6.37	83	988015	5.36	ug/L	96
27) 1,2-Dichloroethane	7.32	62	504491	5.43	ug/L	99
29) 1,1,1-Trichloroethane	6.61	97	771262	5.44	ug/L	99
30) Cyclohexane	6.72	56	612759	4.90	ug/L	98
31) Carbon tetrachloride	6.87	117	650163	5.24	ug/L	100
33) Benzene	7.20	78	1770428	5.53	ug/L	100
34) Trichloroethene	8.19	95	463006	5.22	ug/L	97
35) Methylcyclohexane	8.47	83	525098	4.79	ug/L	99
37) 1,2-Dichloropropane	8.52	63	414660	5.52	ug/L	100
38) Bromodichloromethane	8.86	83	589355	5.39	ug/L	97
39) cis-1,3-Dichloropropene	9.39	75	560695	5.07	ug/L	100
40) 4-Methyl-2-pentanone	9.55	43	2208132	57.17	ug/L	99
42) Toluene	9.74	91	1425224	5.28	ug/L	100
44) trans-1,3-Dichloropropene	10.03	75	433056	5.11	ug/L	100
45) 1,1,2-Trichloroethane	10.23	97	218168	5.60	ug/L	96
47) Tetrachloroethene	10.30	164	286982	4.92	ug/L	95
48) 2-Hexanone	10.45	43	1456503	56.39	ug/L	98
49) Dibromochloromethane	10.62	129	307712	5.23	ug/L	100
50) 1,2-Dibromoethane	10.73	107	217790	5.36	ug/L	97
51) Chlorobenzene	11.23	112	847506	5.24	ug/L	96
52) Ethylbenzene	11.33	91	1430483	5.13	ug/L	98
53) m,p-Xylene	11.45	106	510042	5.02	ug/L	93
54) o-Xylene	11.82	106	478341	5.03	ug/L	100
55) Styrene	11.84	104	808410	5.13	ug/L	93
56) Isopropylbenzene	12.17	105	1233886	5.01	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.46	83	197520	5.25	ug/L	98
60) Bromoform	12.02	173	128768	4.88	ug/L	99
61) 1,3-Dichlorobenzene	13.33	146	492436	5.13	ug/L	98
62) 1,4-Dichlorobenzene	13.43	146	502156	5.10	ug/L	98
64) 1,2-Dichlorobenzene	13.75	146	415187	5.22	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.45	75	24089	4.98	ug/L	99
66) 1,2,4-trichlorobenzene	15.17	180	226988	5.35	ug/L	97
67) 1,2,3-Trichlorobenzene	15.64	180	164851	5.25	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051016\
Data File : VI049319.D
Acq On : 10 May 2016 11:53
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 03:48:43 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00548

Manual Integrations APPROVED
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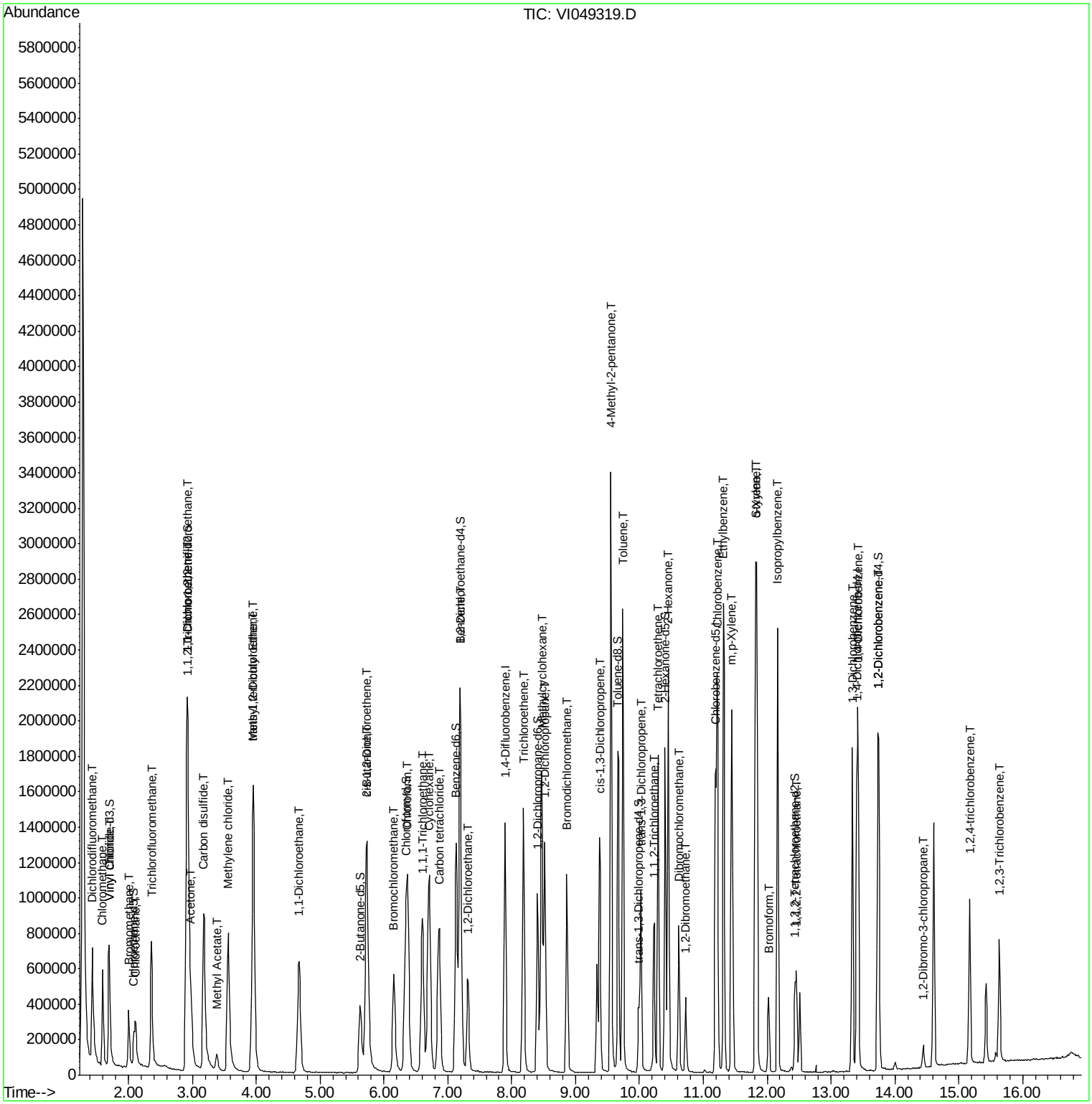

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051016\
Data File : VI049319.D
Acq On : 10 May 2016 11:53
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00548

Manual Integrations APPROVED
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Quant Time: May 11 03:48:43 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1290912	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	872917	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.40	152	340138	5.00	ug/L	-0.02
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	354067	4.46	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 89.20%			
7) Chloroethane-d5	2.08	69	216951	4.93	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 98.60%			
11) 1,1-Dichloroethene-d2	2.91	63	879083	4.70	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 94.00%			
20) 2-Butanone-d5	5.63	46	916115	53.24	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 106.48%			
24) Chloroform-d	6.34	84	953801	4.72	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.40%			
26) 1,2-Dichloroethane-d4	7.19	65	395041	4.78	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.60%			
32) Benzene-d6	7.13	84	1653630	4.86	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.20%			
36) 1,2-Dichloropropane-d6	8.40	67	465274	4.87	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.40%			
41) Toluene-d8	9.67	98	1179559	4.70	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.00%			
43) trans-1,3-Dichloropropene-	9.99	79	177135	4.70	ug/L	-0.02
Spiked Amount 5.000	Range 55 - 130		Recovery = 94.00%			
46) 2-Hexanone-d5	10.40	63	598758	50.39	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 100.78%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	214727	4.94	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.80%			
63) 1,2-Dichlorobenzene-d4	13.73	152	278046	4.66	ug/L	-0.02
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	784891	5.40	ug/L	97
3) Chloromethane	1.59	50	588991	4.73	ug/L	98
5) Vinyl chloride	1.70	62	475538	5.46	ug/L	99
6) Bromomethane	2.00	94	204024	4.85	ug/L	97
8) Chloroethane	2.11	64	204112	5.49	ug/L	94
9) Trichlorofluoromethane	2.36	101	692177	5.69	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	636788	5.72	ug/L	99
12) 1,1-Dichloroethene	2.92	96	555652	5.33	ug/L	97
13) Acetone	2.98	43	581308	54.48	ug/L	100
14) Carbon disulfide	3.18	76	1970220	5.21	ug/L	99
15) Methyl Acetate	3.38	43	162135	5.32	ug/L	95
16) Methylene chloride	3.56	84	597969	5.21	ug/L	98
17) Methyl tert-butyl Ether	3.95	73	1011495	5.31	ug/L	98
18) trans-1,2-Dichloroethene	3.95	96	606474	5.27	ug/L	96
19) 1,1-Dichloroethane	4.67	63	1032924	5.29	ug/L	96
21) 2-Butanone	5.74	43	1036557	53.69	ug/L	99
22) cis-1,2-Dichloroethene	5.73	96	641806m	5.42	ug/L	

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051016\
Data File : VI049319.D
Acq On : 10 May 2016 11:53
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00548

Manual Integrations APPROVED
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Quant Time: May 11 03:48:43 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.15	128	251365	5.29	ug/L	91
25) Chloroform	6.37	83	1098118	5.29	ug/L	97
27) 1,2-Dichloroethane	7.31	62	542536	5.18	ug/L	99
29) 1,1,1-Trichloroethane	6.60	97	915067	5.52	ug/L	99
30) Cyclohexane	6.71	56	819069	5.60	ug/L	99
31) Carbon tetrachloride	6.87	117	807337	5.58	ug/L	99
33) Benzene	7.19	78	2059300	5.51	ug/L	100
34) Trichloroethene	8.19	95	558107	5.38	ug/L	95
35) Methylcyclohexane	8.47	83	732914	5.73	ug/L	99
37) 1,2-Dichloropropane	8.52	63	477362	5.44	ug/L	99
38) Bromodichloromethane	8.86	83	688588	5.39	ug/L	97
39) cis-1,3-Dichloropropene	9.38	75	679488	5.26	ug/L	99
40) 4-Methyl-2-pentanone	9.55	43	2459672	54.52	ug/L	99
42) Toluene	9.74	91	1695944	5.38	ug/L	98
44) trans-1,3-Dichloropropene	10.03	75	537765	5.43	ug/L	97
45) 1,1,2-Trichloroethane	10.23	97	247452	5.44	ug/L	95
47) Tetrachloroethene	10.29	164	381183	5.60	ug/L	98
48) 2-Hexanone	10.45	43	1651268	54.73	ug/L	99
49) Dibromochloromethane	10.62	129	380157	5.54	ug/L	99
50) 1,2-Dibromoethane	10.72	107	253700	5.34	ug/L	100
51) Chlorobenzene	11.22	112	1024904	5.42	ug/L	98
52) Ethylbenzene	11.32	91	1801409	5.53	ug/L	99
53) m,p-Xylene	11.45	106	649989	5.48	ug/L	90
54) o-Xylene	11.82	106	602137	5.42	ug/L	99
55) Styrene	11.84	104	1005420	5.46	ug/L	97
56) Isopropylbenzene	12.17	105	1618954	5.63	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.46	83	227236	5.17	ug/L	99
60) Bromoform	12.02	173	166306	5.24	ug/L	99
61) 1,3-Dichlorobenzene	13.33	146	637562	5.52	ug/L	98
62) 1,4-Dichlorobenzene	13.43	146	635150	5.36	ug/L	96
64) 1,2-Dichlorobenzene	13.75	146	530468	5.55	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.45	75	28989	4.98	ug/L	99
66) 1,2,4-trichlorobenzene	15.17	180	286802	5.62	ug/L	97
67) 1,2,3-Trichlorobenzene	15.64	180	214181	5.67	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049319.D
Acq On : 10 May 2016 11:53
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 03:48:43 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00548

Manual Integrations APPROVED
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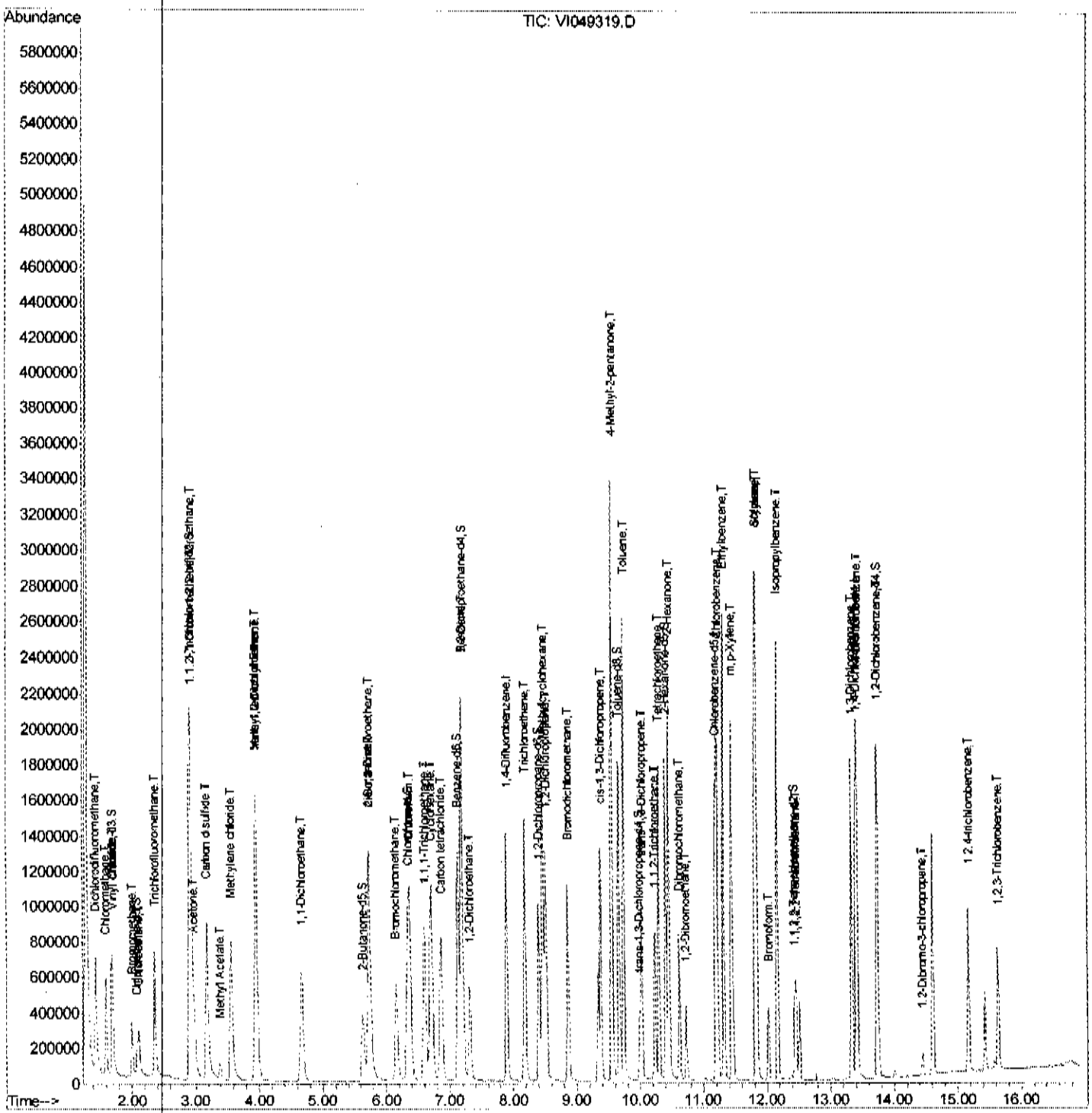

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049319.D
Acq On : 10 May 2016 11:53
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 03:47:45 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00548

Manual Integrations APPROVED
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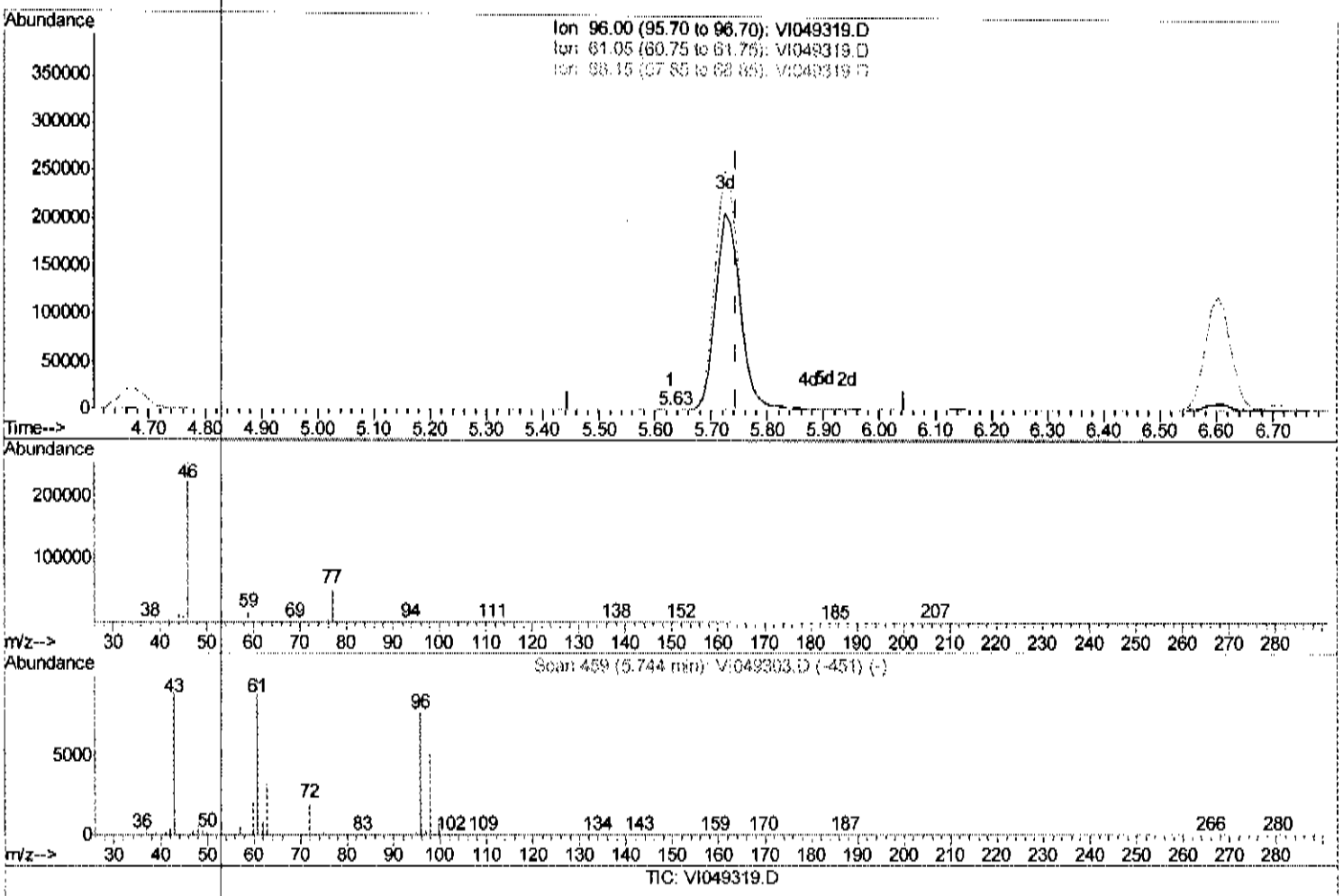

(22) cis-1,2-Dichloroethene (T)

5.627min (-0.117) 0.00ug/L

response 333

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	111.19
68.15	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_1\DATA\VI051016\
Data File : VI049319.D
Acq On : 10 May 2016 11:53
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 03:47:45 2016
Quant Method : W:\HPCHEM1\MSVOA_1\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00548

Manual Integrations APPROVED
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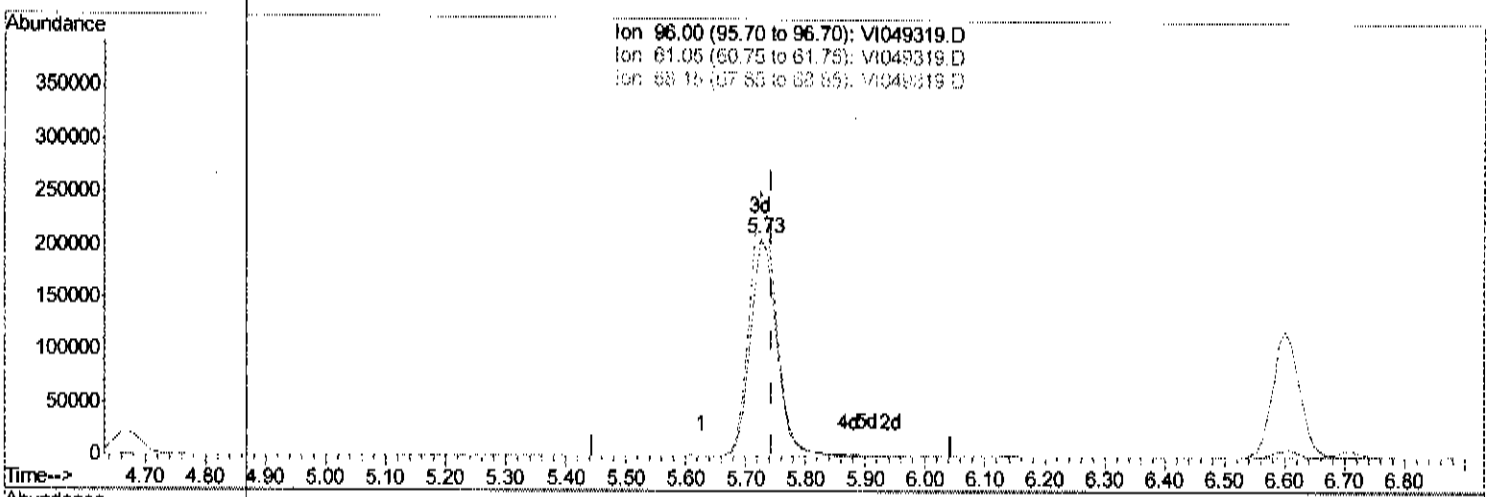

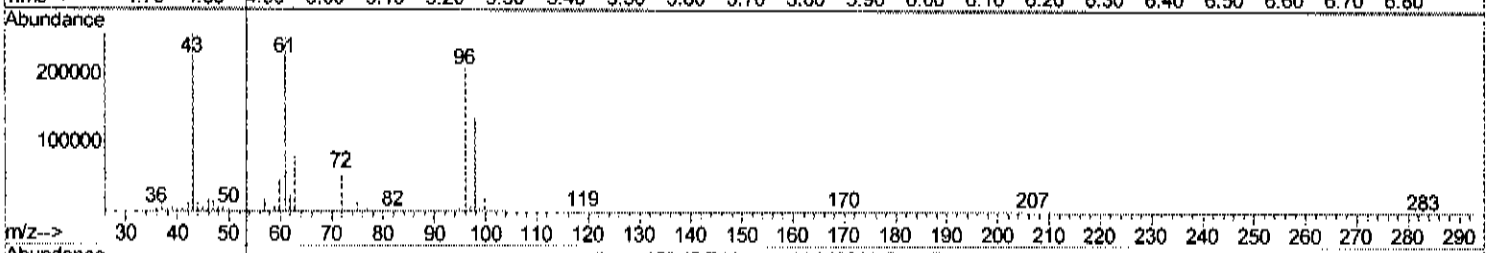

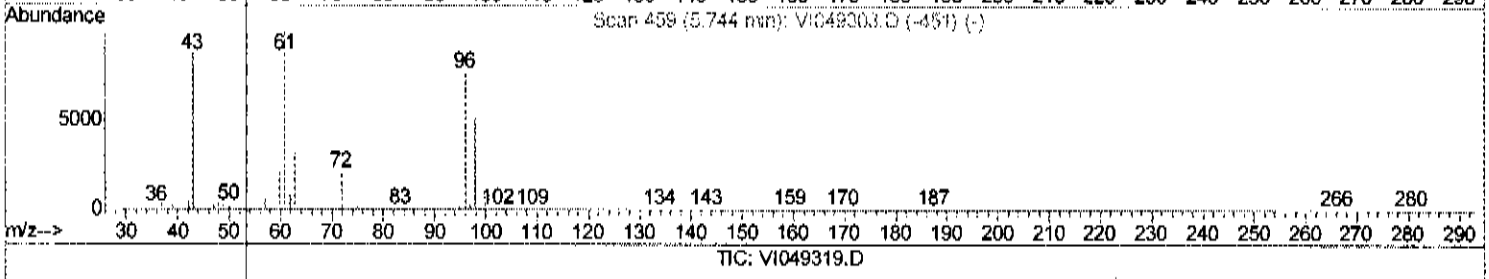

TIC: VI049319.D

(22) cis-1,2-Dichloroethene (T)

5.725min (-0.019) 5.42ug/L m 05/11/16 SY

response 641806

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	121.41
68.15	0.00	0.10#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049319.D
Acq On : 10 May 2016 11:53
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 03:48:43 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00548

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1290912	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	872917	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.40	152	340138	5.00	ug/L	-0.02
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	354067	4.46	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 89.20%			
7) Chloroethane-d5	2.08	69	216951	4.93	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 98.60%			
11) 1,1-Dichloroethene-d2	2.91	63	879083	4.70	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 94.00%			
20) 2-Butanone-d5	5.63	46	916115	53.24	ug/L	-0.02
Spiked Amount 50.000	Range 40 - 130		Recovery = 106.48%			
24) Chloroform-d	6.34	84	953801	4.72	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.40%			
26) 1,2-Dichloroethane-d4	7.19	65	395041	4.78	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.60%			
32) Benzene-d6	7.13	84	1653630	4.86	ug/L	-0.02
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.20%			
36) 1,2-Dichloropropane-d6	8.40	67	465274	4.87	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 140		Recovery = 97.40%			
41) Toluene-d8	9.67	98	1179559	4.70	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.00%			
43) trans-1,3-Dichloropropene-	9.99	79	177135	4.70	ug/L	-0.02
Spiked Amount 5.000	Range 55 - 130		Recovery = 94.00%			
46) 2-Hexanone-d5	10.40	63	598758	50.39	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 100.78%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	214727	4.94	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.80%			
63) 1,2-Dichlorobenzene-d4	13.73	152	278046	4.66	ug/L	-0.02
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	784891	5.40	ug/L	97
3) Chloromethane	1.59	50	588991	4.73	ug/L	98
5) Vinyl chloride	1.70	62	475538	5.46	ug/L	99
6) Bromomethane	2.00	94	204024	4.85	ug/L	97
8) Chloroethane	2.11	64	204112	5.49	ug/L	94
9) Trichlorofluoromethane	2.36	101	692177	5.69	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	636788	5.72	ug/L	99
12) 1,1-Dichloroethene	2.92	96	555652	5.33	ug/L	97
13) Acetone	2.98	43	581308	54.48	ug/L	100
14) Carbon disulfide	3.18	76	1970220	5.21	ug/L	99
15) Methyl Acetate	3.38	43	162135	5.32	ug/L	95
16) Methylene chloride	3.56	84	597969	5.21	ug/L	98
17) Methyl tert-butyl Ether	3.95	73	1011495	5.31	ug/L	98
18) trans-1,2-Dichloroethene	3.95	96	606474	5.27	ug/L	96
19) 1,1-Dichloroethane	4.67	63	1032924	5.29	ug/L	96
21) 2-Butanone	5.74	43	1036557	53.69	ug/L	99
22) cis-1,2-Dichloroethene	5.73	96	641806m?	5.42	ug/L	

05/11/16

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VI051016\
Data File : VI049319.D
Acq On : 10 May 2016 11:53
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 03:48:43 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00548

Manual Integrations APPROVED
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5/11/2016 12:05:11 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.15	128	251365	5.29	ug/L	91
25) Chloroform	6.37	83	1098118	5.29	ug/L	97
27) 1,2-Dichloroethane	7.31	62	542536	5.18	ug/L	99
29) 1,1,1-Trichloroethane	6.60	97	915067	5.52	ug/L	99
30) Cyclohexane	6.71	56	819069	5.60	ug/L	99
31) Carbon tetrachloride	6.87	117	807337	5.58	ug/L	99
33) Benzene	7.19	78	2059300	5.51	ug/L	100
34) Trichloroethene	8.19	95	558107	5.38	ug/L	95
35) Methylcyclohexane	8.47	83	732914	5.73	ug/L	99
37) 1,2-Dichloropropane	8.52	63	477362	5.44	ug/L	99
38) Bromodichloromethane	8.86	83	688588	5.39	ug/L	97
39) cis-1,3-Dichloropropene	9.38	75	679488	5.26	ug/L	99
40) 4-Methyl-2-pentanone	9.55	43	2459672	54.52	ug/L	99
42) Toluene	9.74	91	1695944	5.38	ug/L	98
44) trans-1,3-Dichloropropene	10.03	75	537765	5.43	ug/L	97
45) 1,1,2-Trichloroethane	10.23	97	247452	5.44	ug/L	95
47) Tetrachloroethene	10.29	164	381183	5.60	ug/L	98
48) 2-Hexanone	10.45	43	1651268	54.73	ug/L	99
49) Dibromochloromethane	10.62	129	380157	5.54	ug/L	99
50) 1,2-Dibromoethane	10.72	107	253700	5.34	ug/L	100
51) Chlorobenzene	11.22	112	1024904	5.42	ug/L	98
52) Ethylbenzene	11.32	91	1801409	5.53	ug/L	99
53) m,p-Xylene	11.45	106	649989	5.48	ug/L	90
54) o-Xylene	11.82	106	602137	5.42	ug/L	99
55) Styrene	11.84	104	1005420	5.46	ug/L	97
56) Isopropylbenzene	12.17	105	1618954	5.63	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.46	83	227236	5.17	ug/L	99
60) Bromoform	12.02	173	166306	5.24	ug/L	99
61) 1,3-Dichlorobenzene	13.33	146	637562	5.52	ug/L	98
62) 1,4-Dichlorobenzene	13.43	146	635150	5.36	ug/L	96
64) 1,2-Dichlorobenzene	13.75	146	530468	5.55	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.45	75	28989	4.98	ug/L	99
66) 1,2,4-trichlorobenzene	15.17	180	286802	5.62	ug/L	97
67) 1,2,3-Trichlorobenzene	15.64	180	214181	5.67	ug/L	98

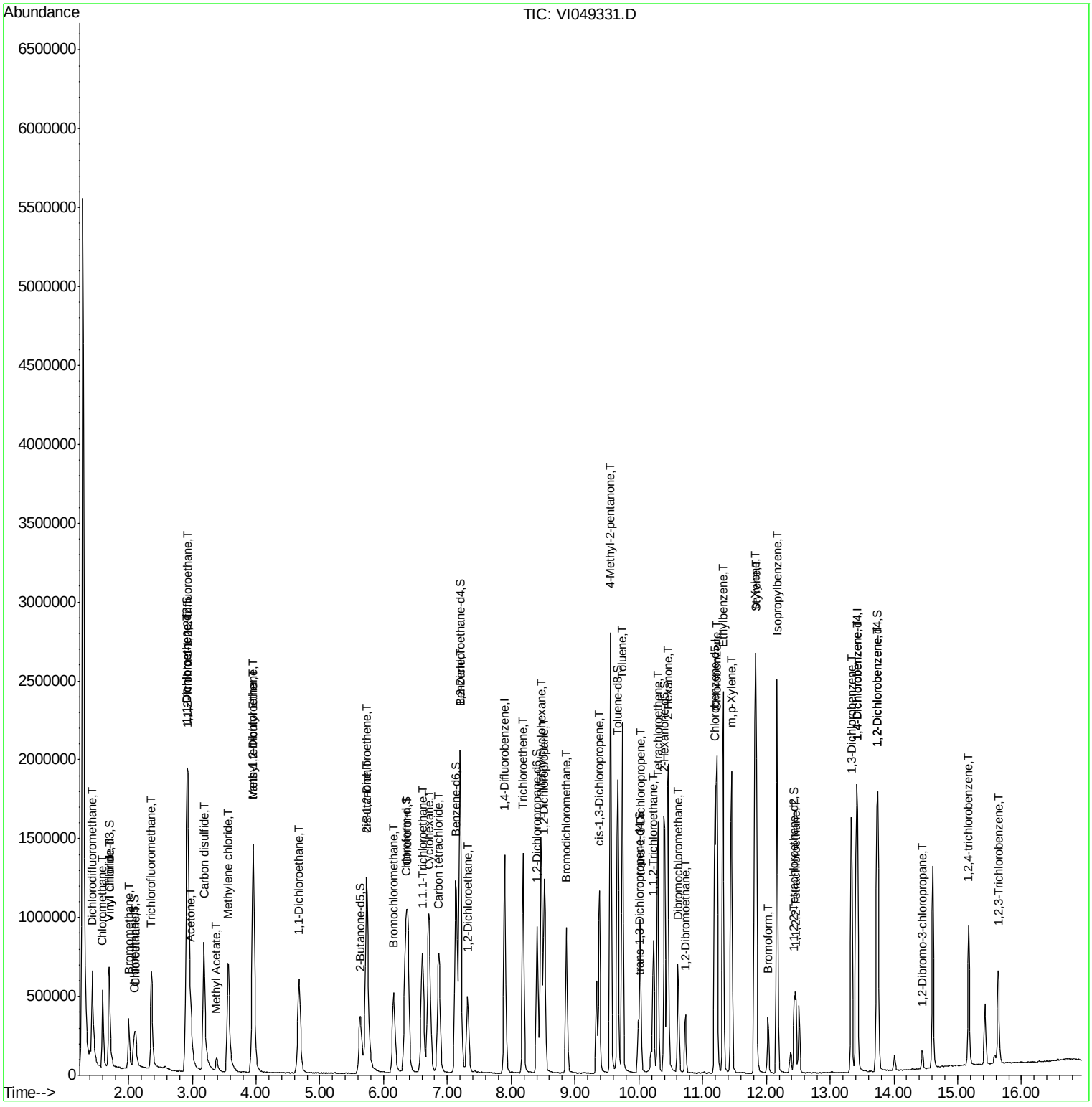
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049331.D
Acq On : 10 May 2016 18:38
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00549

Quant Time: May 11 03:52:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049331.D
Acq On : 10 May 2016 18:38
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00549

Quant Time: May 11 03:52:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1251713	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	837097	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	328904	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	344528	4.47	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 89.40%			
7) Chloroethane-d5	2.08	69	211790	4.96	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 99.20%			
11) 1,1-Dichloroethene-d2	2.91	63	840274	4.63	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 92.60%			
20) 2-Butanone-d5	5.64	46	879667	52.73	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 105.46%			
24) Chloroform-d	6.34	84	932848	4.76	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.20%			
26) 1,2-Dichloroethane-d4	7.20	65	387451	4.83	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.60%			
32) Benzene-d6	7.13	84	1625028	4.98	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.60%			
36) 1,2-Dichloropropane-d6	8.41	67	456137	4.97	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 99.40%			
41) Toluene-d8	9.67	98	1147997	4.77	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.40%			
43) trans-1,3-Dichloropropene-	10.00	79	158764	4.39	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 87.80%			
46) 2-Hexanone-d5	10.40	63	576965	50.63	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 101.26%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	200005	4.80	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 96.00%			
63) 1,2-Dichlorobenzene-d4	13.74	152	266851	4.63	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 92.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	686006	4.87	ug/L	98
3) Chloromethane	1.59	50	531675	4.41	ug/L	99
5) Vinyl chloride	1.70	62	430196	5.10	ug/L	98
6) Bromomethane	2.00	94	199115	4.88	ug/L	98
8) Chloroethane	2.11	64	187093	5.19	ug/L	97
9) Trichlorofluoromethane	2.36	101	615933	5.22	ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	563690	5.22	ug/L	99
12) 1,1-Dichloroethene	2.92	96	512046	5.07	ug/L	88
13) Acetone	2.98	43	540797	52.27	ug/L	99
14) Carbon disulfide	3.18	76	1767157	4.82	ug/L	99
15) Methyl Acetate	3.38	43	146412	4.96	ug/L	93
16) Methylene chloride	3.57	84	546081	4.90	ug/L	98
17) Methyl tert-butyl Ether	3.95	73	917758	4.97	ug/L	98
18) trans-1,2-Dichloroethene	3.95	96	565093	5.06	ug/L	97
19) 1,1-Dichloroethane	4.67	63	941275	4.97	ug/L	99
21) 2-Butanone	5.74	43	972106	51.93	ug/L	98
22) cis-1,2-Dichloroethene	5.73	96	572132	4.98	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049331.D
Acq On : 10 May 2016 18:38
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00549

Quant Time: May 11 03:52:48 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.16	128	220153	4.78	ug/L	88
25) Chloroform	6.37	83	1029059	5.11	ug/L	99
27) 1,2-Dichloroethane	7.32	62	505114	4.98	ug/L	99
29) 1,1,1-Trichloroethane	6.60	97	820297	5.16	ug/L	98
30) Cyclohexane	6.71	56	731538	5.22	ug/L	98
31) Carbon tetrachloride	6.87	117	725123	5.22	ug/L	99
33) Benzene	7.20	78	1876512	5.24	ug/L	100
34) Trichloroethene	8.18	95	501520	5.04	ug/L	97
35) Methylcyclohexane	8.47	83	630668	5.14	ug/L	100
37) 1,2-Dichloropropane	8.52	63	434886	5.17	ug/L	99
38) Bromodichloromethane	8.86	83	598934	4.89	ug/L	98
39) cis-1,3-Dichloropropene	9.39	75	604216	4.88	ug/L	97
40) 4-Methyl-2-pentanone	9.55	43	2173223	50.23	ug/L	99
42) Toluene	9.75	91	1550349	5.13	ug/L	99
44) trans-1,3-Dichloropropene	10.03	75	447800	4.72	ug/L	98
45) 1,1,2-Trichloroethane	10.23	97	220722	5.06	ug/L	98
47) Tetrachloroethene	10.30	164	333441	5.10	ug/L	97
48) 2-Hexanone	10.46	43	1425520	49.27	ug/L	98
49) Dibromochloromethane	10.62	129	318442	4.84	ug/L	100
50) 1,2-Dibromoethane	10.73	107	229576	5.04	ug/L	93
51) Chlorobenzene	11.23	112	920221	5.08	ug/L	97
52) Ethylbenzene	11.32	91	1616321	5.17	ug/L	99
53) m,p-Xylene	11.45	106	580892	5.10	ug/L	95
54) o-Xylene	11.82	106	539953	5.07	ug/L	99
55) Styrene	11.85	104	905046	5.13	ug/L	97
56) Isopropylbenzene	12.17	105	1431720	5.19	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	208911	4.95	ug/L	99
60) Bromoform	12.02	173	139219	4.54	ug/L	99
61) 1,3-Dichlorobenzene	13.33	146	569122	5.10	ug/L	98
62) 1,4-Dichlorobenzene	13.43	146	567385	4.95	ug/L	99
64) 1,2-Dichlorobenzene	13.76	146	463607	5.01	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.44	75	24949	4.43	ug/L	97
66) 1,2,4-trichlorobenzene	15.17	180	253864	5.14	ug/L	97
67) 1,2,3-Trichlorobenzene	15.64	180	179810	4.92	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:55:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00550

Manual Integrations APPROVED
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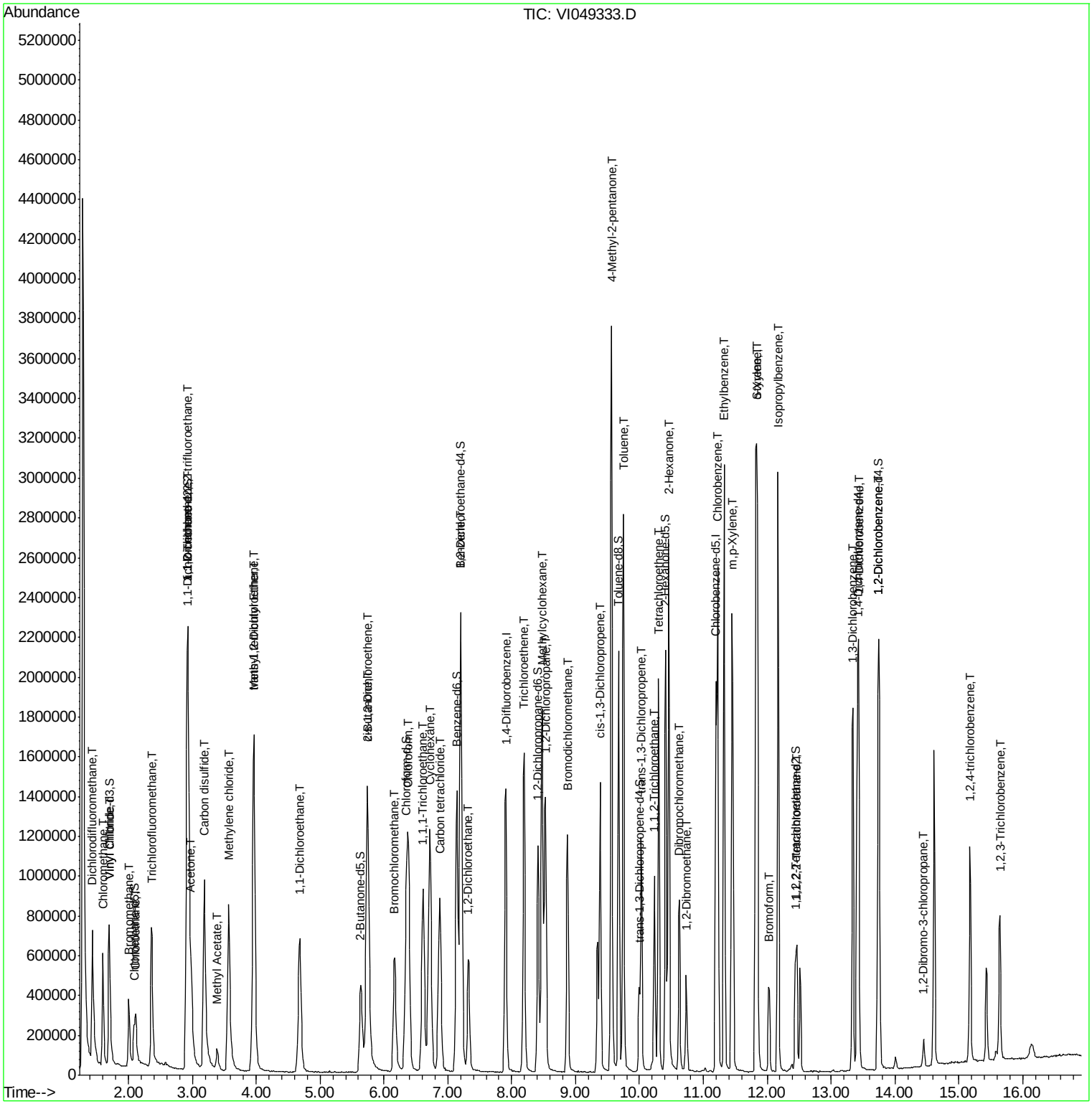

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00550

Manual Integrations APPROVED
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Quant Time: May 12 05:55:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1319731	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	924898	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	367134	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	364759	4.49	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 89.80%			
7) Chloroethane-d5	2.08	69	214088	4.76	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.20%			
11) 1,1-Dichloroethene-d2	2.91	63	934213	4.88	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 97.60%			
20) 2-Butanone-d5	5.64	46	1036391	58.92	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 117.84%			
24) Chloroform-d	6.34	84	1062410	5.14	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 102.80%			
26) 1,2-Dichloroethane-d4	7.20	65	444833	5.26	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 105.20%			
32) Benzene-d6	7.14	84	1803960	5.01	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 100.20%			
36) 1,2-Dichloropropane-d6	8.41	67	514068	5.07	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.40%			
41) Toluene-d8	9.67	98	1301171	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
43) trans-1,3-Dichloropropene-	10.00	79	198140	4.96	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 99.20%			
46) 2-Hexanone-d5	10.41	63	716853	56.94	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 113.88%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	251218	5.45	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 109.00%			
63) 1,2-Dichlorobenzene-d4	13.74	152	318069	4.94	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 98.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	825181	5.55	ug/L	98
3) Chloromethane	1.60	50	599121	4.71	ug/L	96
5) Vinyl chloride	1.70	62	482228	5.42	ug/L	99
6) Bromomethane	2.00	94	220648	5.13	ug/L	98
8) Chloroethane	2.11	64	212957	5.60	ug/L	96
9) Trichlorofluoromethane	2.36	101	709022	5.70	ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	669509	5.88	ug/L	99
12) 1,1-Dichloroethene	2.93	96	589693	5.54	ug/L	92
13) Acetone	2.98	43	658976	60.41	ug/L	96
14) Carbon disulfide	3.19	76	2043518	5.29	ug/L	100
15) Methyl Acetate	3.38	43	185891	5.97	ug/L	100
16) Methylene chloride	3.57	84	619476	5.28	ug/L	98
17) Methyl tert-butyl Ether	3.96	73	1081617	5.56	ug/L	98
18) trans-1,2-Dichloroethene	3.96	96	647787	5.50	ug/L	99
19) 1,1-Dichloroethane	4.68	63	1090772	5.47	ug/L	98
21) 2-Butanone	5.74	43	1179036	59.74	ug/L	100
22) cis-1,2-Dichloroethene	5.74	96	677240m	5.59	ug/L	

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00550

Manual Integrations APPROVED
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5/12/2016 6:14:28 PM

Quant Time: May 12 05:55:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.17	128	266517	5.49	ug/L	95
25) Chloroform	6.38	83	1190640	5.61	ug/L	98
27) 1,2-Dichloroethane	7.32	62	586440	5.48	ug/L	99
29) 1,1,1-Trichloroethane	6.61	97	976256	5.56	ug/L	99
30) Cyclohexane	6.72	56	875103	5.65	ug/L	98
31) Carbon tetrachloride	6.88	117	846827	5.52	ug/L	100
33) Benzene	7.20	78	2204948	5.57	ug/L	100
34) Trichloroethene	8.19	95	588744	5.36	ug/L	92
35) Methylcyclohexane	8.48	83	770813	5.69	ug/L	97
37) 1,2-Dichloropropane	8.53	63	509570	5.48	ug/L	100
38) Bromodichloromethane	8.87	83	751913	5.55	ug/L	100
39) cis-1,3-Dichloropropene	9.39	75	725883	5.30	ug/L	98
40) 4-Methyl-2-pentanone	9.56	43	2737043	57.26	ug/L	99
42) Toluene	9.75	91	1843815	5.52	ug/L	98
44) trans-1,3-Dichloropropene	10.03	75	574584	5.48	ug/L	99
45) 1,1,2-Trichloroethane	10.23	97	272276	5.65	ug/L	97
47) Tetrachloroethene	10.30	164	394649	5.47	ug/L	93
48) 2-Hexanone	10.46	43	1838604	57.52	ug/L	99
49) Dibromochloromethane	10.63	129	409658	5.63	ug/L	100
50) 1,2-Dibromoethane	10.73	107	284178	5.65	ug/L	99
51) Chlorobenzene	11.23	112	1098615	5.48	ug/L	99
52) Ethylbenzene	11.32	91	1949363	5.65	ug/L	100
53) m,p-Xylene	11.45	106	703222	5.59	ug/L	100
54) o-Xylene	11.83	106	656724	5.58	ug/L	100
55) Styrene	11.85	104	1083736	5.56	ug/L	99
56) Isopropylbenzene	12.17	105	1752472	5.75	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	262742	5.64	ug/L	99
60) Bromoform	12.03	173	181618	5.31	ug/L	100
61) 1,3-Dichlorobenzene	13.34	146	696104	5.59	ug/L	99
62) 1,4-Dichlorobenzene	13.43	146	690080	5.39	ug/L	99
64) 1,2-Dichlorobenzene	13.76	146	577380	5.59	ug/L	100
65) 1,2-Dibromo-3-chloropropan	14.44	75	30764	4.90	ug/L	99
66) 1,2,4-trichlorobenzene	15.17	180	315843	5.73	ug/L	98
67) 1,2,3-Trichlorobenzene	15.65	180	224937	5.51	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:55:31 2016
Quant Method : W:\HPCHEM1\MSVOA_T\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00550

Manual Integrations APPROVED
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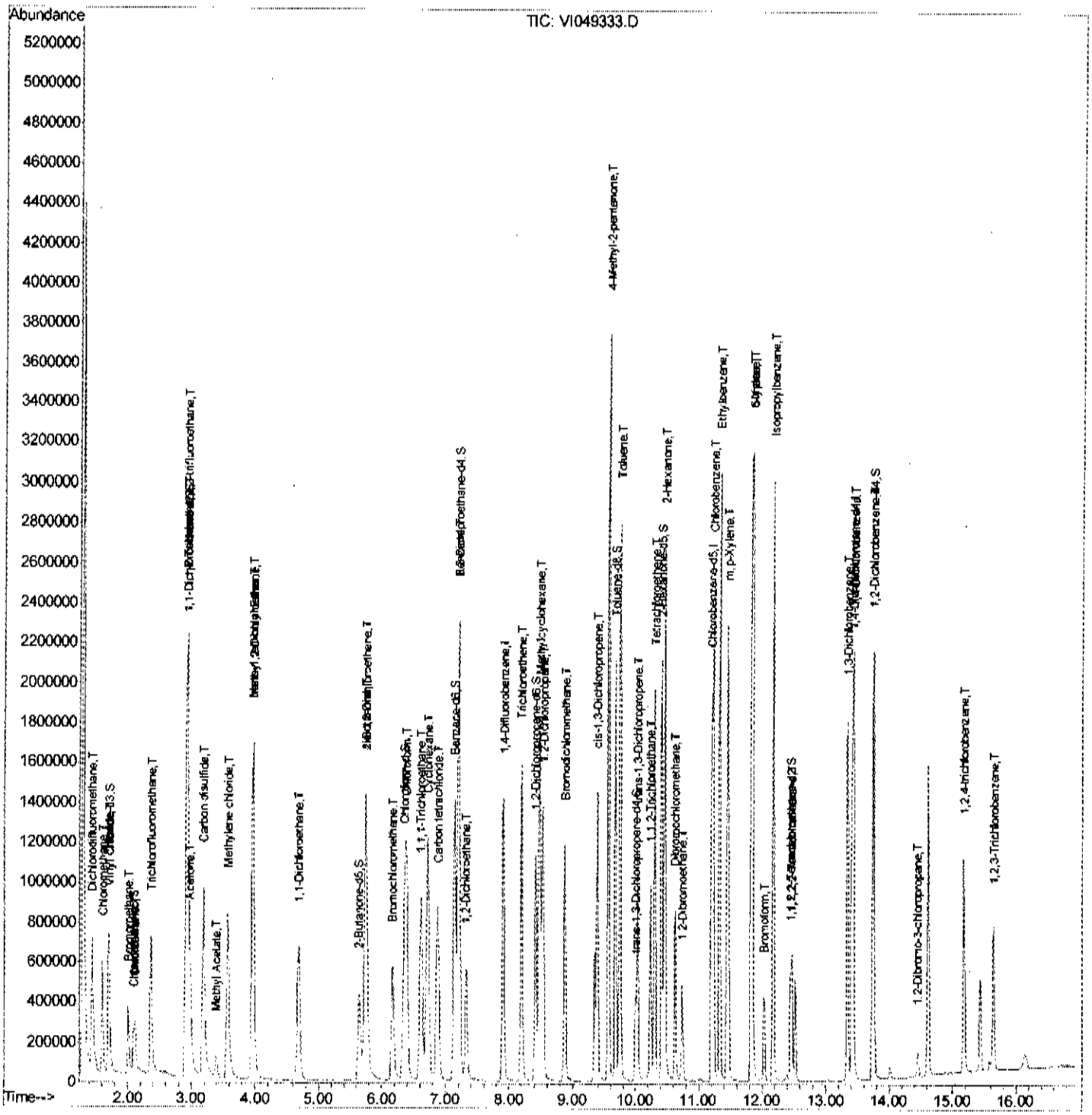
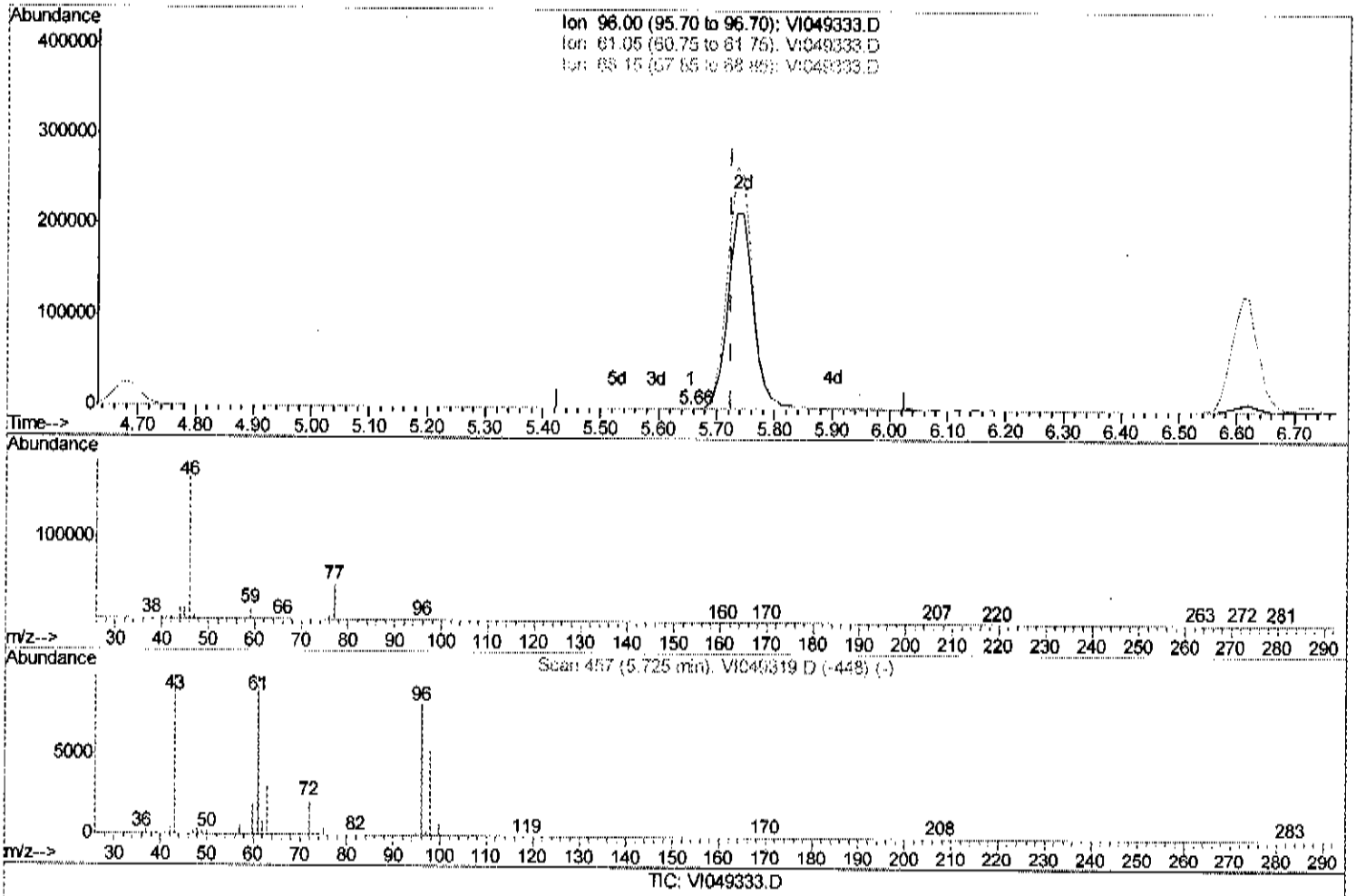


Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:54:38 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00550

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:28 PM



TIC: VI049333.D

(22) cis-1,2-Dichloroethene (T)

5.655min (-0.070) 0.00ug/L

response 476

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	85.99
68.15	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:54:38 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00550

Manual Integrations APPROVED
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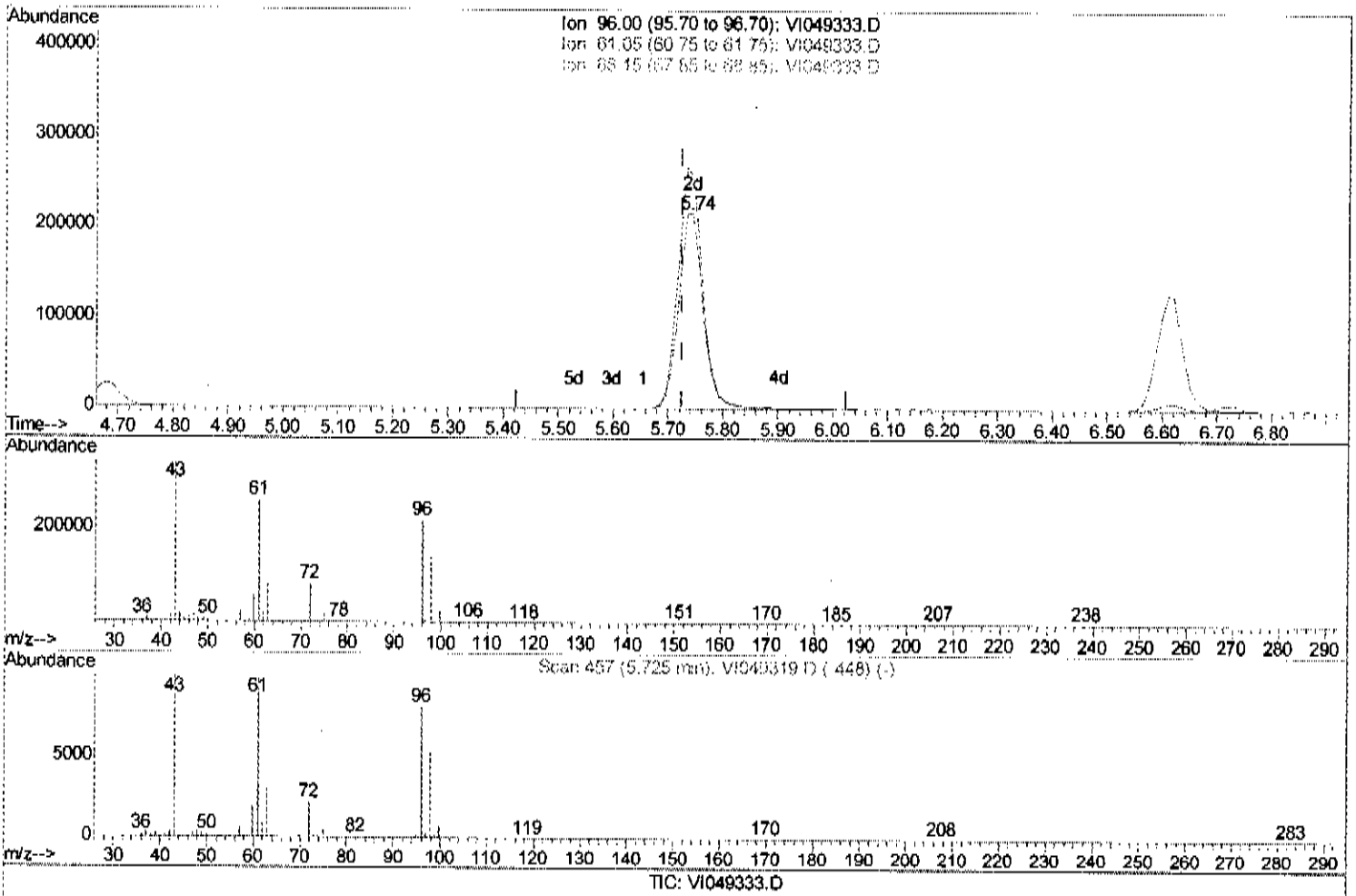
5/12/2016 6:14:28 PM



(22) cis-1,2-Dichloroethene (T)

5.744min (+0.019) 5.59ug/L m

response 677240

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	119.53
68.15	0.00	0.11#
0.00	0.00	0.00

FY
5/16/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:55:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00550

Manual Integrations APPROVED
mmdadoda
5/12/2016 6:14:28 PM

Internal Standards			R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene			7.91	114	1319731	5.00	ug/L	0.00
28) Chlorobenzene-d5			11.20	117	924898	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4			13.41	152	367134	5.00	ug/L	0.00
System Monitoring Compounds								
4) Vinyl Chloride-d3			1.69	65	364759	4.49	ug/L	0.00
Spiked Amount	5.000	Range 40 - 130			Recovery =	89.80%		
7) Chloroethane-d5			2.08	69	214088	4.76	ug/L	0.00
Spiked Amount	5.000	Range 65 - 130			Recovery =	95.20%		
11) 1,1-Dichloroethene-d2			2.91	63	934213	4.88	ug/L	0.00
Spiked Amount	5.000	Range 60 - 125			Recovery =	97.60%		
20) 2-Butanone-d5			5.64	46	1036391	58.92	ug/L	0.00
Spiked Amount	50.000	Range 40 - 130			Recovery =	117.84%		
24) Chloroform-d			6.34	84	1062410	5.14	ug/L	0.00
Spiked Amount	5.000	Range 70 - 125			Recovery =	102.80%		
26) 1,2-Dichloroethane-d4			7.20	65	444833	5.26	ug/L	0.00
Spiked Amount	5.000	Range 70 - 130			Recovery =	105.20%		
32) Benzene-d6			7.14	84	1803960	5.01	ug/L	0.00
Spiked Amount	5.000	Range 70 - 125			Recovery =	100.20%		
36) 1,2-Dichloropropane-d6			8.41	67	514068	5.07	ug/L	0.00
Spiked Amount	5.000	Range 60 - 140			Recovery =	101.40%		
41) Toluene-d8			9.67	98	1301171	4.90	ug/L	0.00
Spiked Amount	5.000	Range 70 - 130			Recovery =	98.00%		
43) trans-1,3-Dichloropropene-			10.00	79	198140	4.96	ug/L	0.00
Spiked Amount	5.000	Range 55 - 130			Recovery =	99.20%		
46) 2-Hexanone-d5			10.41	63	716853	56.94	ug/L	0.00
Spiked Amount	50.000	Range 45 - 130			Recovery =	113.88%		
57) 1,1,2,2-Tetrachloroethane-			12.44	84	251218	5.45	ug/L	0.00
Spiked Amount	5.000	Range 65 - 120			Recovery =	109.00%		
63) 1,2-Dichlorobenzene-d4			13.74	152	318069	4.94	ug/L	0.00
Spiked Amount	5.000	Range 80 - 120			Recovery =	98.80%		

Target Compounds				Qvalue
2) Dichlorodifluoromethane	1.43	85	825181	5.55 ug/L	98
3) Chloromethane	1.60	50	599121	4.71 ug/L	96
5) Vinyl chloride	1.70	62	482228	5.42 ug/L	99
6) Bromomethane	2.00	94	220648	5.13 ug/L	98
8) Chloroethane	2.11	64	212957	5.60 ug/L	96
9) Trichlorofluoromethane	2.36	101	709022	5.70 ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	669509	5.88 ug/L	99
12) 1,1-Dichloroethene	2.93	96	589693	5.54 ug/L	92
13) Acetone	2.98	43	658976	60.41 ug/L	96
14) Carbon disulfide	3.19	76	2043518	5.29 ug/L	100
15) Methyl Acetate	3.38	43	185891	5.97 ug/L	100
16) Methylene chloride	3.57	84	619476	5.28 ug/L	98
17) Methyl tert-butyl Ether	3.96	73	1081617	5.56 ug/L	98
18) trans-1,2-Dichloroethene	3.96	96	647787	5.50 ug/L	99
19) 1,1-Dichloroethane	4.68	63	1090772	5.47 ug/L	98
21) 2-Butanone	5.74	43	1179036	59.74 ug/L	100
22) cis-1,2-Dichloroethene	5.74	96	677240m	5.59 ug/L	

FT 5/12/2016

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049333.D
Acq On : 11 May 2016 10:42
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:55:31 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00550

Manual Integrations APPROVED
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5/12/2016 6:14:28 PM

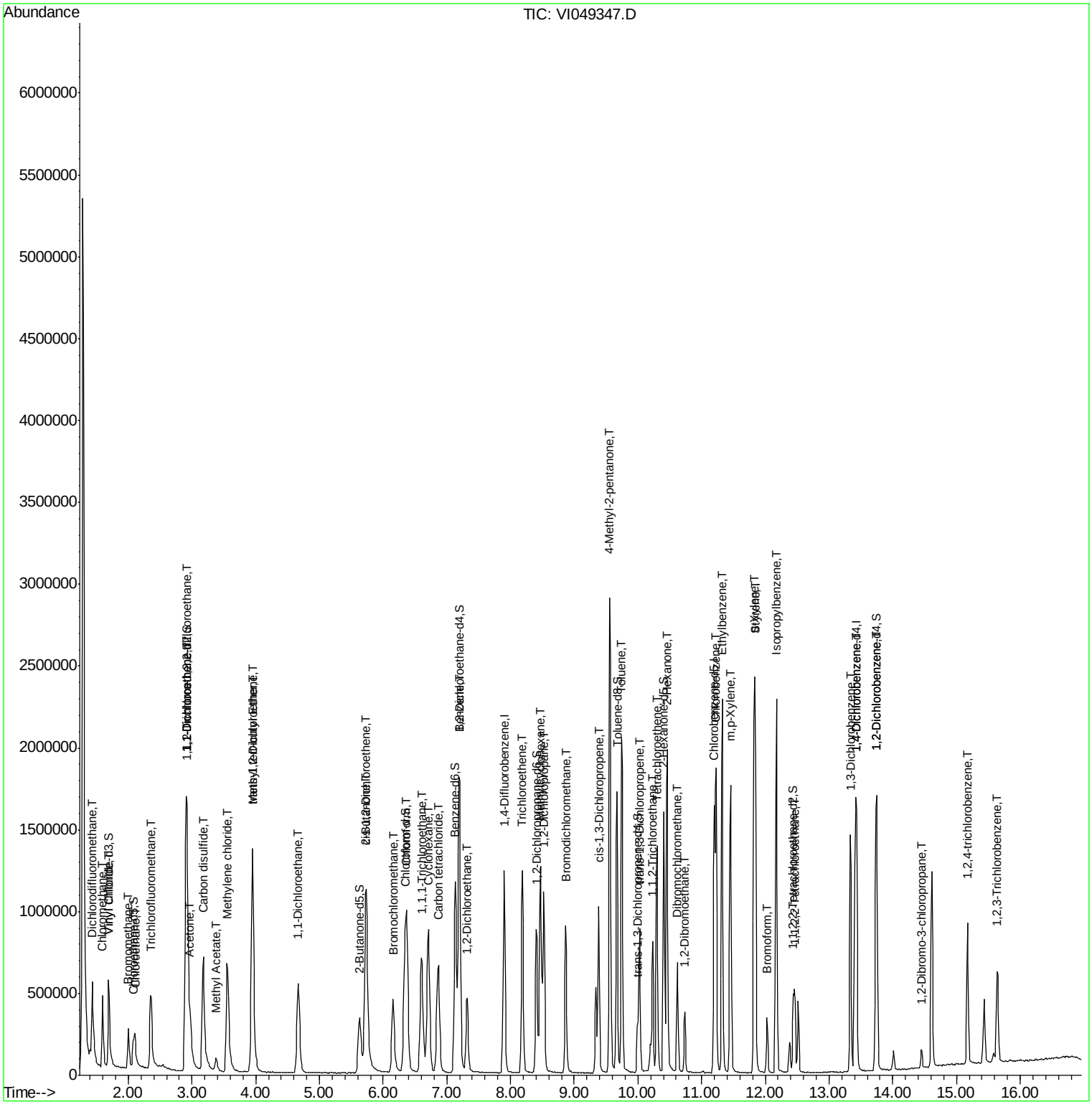
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
23) Bromochloromethane	6.17	128	266517	5.49 ug/L	95
25) Chloroform	6.38	83	1190640	5.61 ug/L	98
27) 1,2-Dichloroethane	7.32	62	586440	5.48 ug/L	99
29) 1,1,1-Trichloroethane	6.61	97	976256	5.56 ug/L	99
30) Cyclohexane	6.72	56	875103	5.65 ug/L	98
31) Carbon tetrachloride	6.88	117	846827	5.52 ug/L	100
33) Benzene	7.20	78	2204948	5.57 ug/L	100
34) Trichloroethene	8.19	95	588744	5.36 ug/L	92
35) Methylcyclohexane	8.48	83	770813	5.69 ug/L	97
37) 1,2-Dichloropropane	8.53	63	509570	5.48 ug/L	100
38) Bromodichloromethane	8.87	83	751913	5.55 ug/L	100
39) cis-1,3-Dichloropropene	9.39	75	725883	5.30 ug/L	98
40) 4-Methyl-2-pentanone	9.56	43	2737043	57.26 ug/L	99
42) Toluene	9.75	91	1843815	5.52 ug/L	98
44) trans-1,3-Dichloropropene	10.03	75	574584	5.48 ug/L	99
45) 1,1,2-Trichloroethane	10.23	97	272276	5.65 ug/L	97
47) Tetrachloroethene	10.30	164	394649	5.47 ug/L	93
48) 2-Hexanone	10.46	43	1838604	57.52 ug/L	99
49) Dibromochloromethane	10.63	129	409658	5.63 ug/L	100
50) 1,2-Dibromoethane	10.73	107	284178	5.65 ug/L	99
51) Chlorobenzene	11.23	112	1098615	5.48 ug/L	99
52) Ethylbenzene	11.32	91	1949363	5.65 ug/L	100
53) m,p-Xylene	11.45	106	703222	5.59 ug/L	100
54) o-Xylene	11.83	106	656724	5.58 ug/L	100
55) Styrene	11.85	104	1083736	5.56 ug/L	99
56) Isopropylbenzene	12.17	105	1752472	5.75 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	262742	5.64 ug/L	99
60) Bromoform	12.03	173	181618	5.31 ug/L	100
61) 1,3-Dichlorobenzene	13.34	146	696104	5.59 ug/L	99
62) 1,4-Dichlorobenzene	13.43	146	690080	5.39 ug/L	99
64) 1,2-Dichlorobenzene	13.76	146	577380	5.59 ug/L	100
65) 1,2-Dibromo-3-chloropropan	14.44	75	30764	4.90 ug/L	99
66) 1,2,4-trichlorobenzene	15.17	180	315843	5.73 ug/L	98
67) 1,2,3-Trichlorobenzene	15.65	180	224937	5.51 ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049347.D
Acq On : 11 May 2016 18:32
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00526

Quant Time: May 12 06:05:53 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049347.D
Acq On : 11 May 2016 18:32
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00526

Quant Time: May 12 06:05:53 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1137201	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	779060	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	317837	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	273577	3.91	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 78.20%			
7) Chloroethane-d5	2.07	69	175348	4.52	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 90.40%			
11) 1,1-Dichloroethene-d2	2.90	63	737029	4.47	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 89.40%			
20) 2-Butanone-d5	5.63	46	841448	55.51	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 111.02%			
24) Chloroform-d	6.34	84	870212	4.89	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.80%			
26) 1,2-Dichloroethane-d4	7.19	65	362413	4.97	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.40%			
32) Benzene-d6	7.13	84	1490714	4.91	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.20%			
36) 1,2-Dichloropropane-d6	8.40	67	420983	4.93	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 98.60%			
41) Toluene-d8	9.67	98	1071844	4.79	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.80%			
43) trans-1,3-Dichloropropene-	9.99	79	153271	4.56	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.20%			
46) 2-Hexanone-d5	10.40	63	574390	54.16	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 108.32%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	210897	5.43	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 108.60%			
63) 1,2-Dichlorobenzene-d4	13.74	152	267306	4.80	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 96.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.43	85	589558	4.60	ug/L	98
3) Chloromethane	1.59	50	450245	4.11	ug/L	100
5) Vinyl chloride	1.70	62	362697	4.73	ug/L	98
6) Bromomethane	2.00	94	157161	4.24	ug/L	97
8) Chloroethane	2.10	64	157270	4.80	ug/L	98
9) Trichlorofluoromethane	2.35	101	489166	4.56	ug/L	99
10) 1,1,2-Trichloro-1,2,2-trif	2.93	101	472108	4.82	ug/L	98
12) 1,1-Dichloroethene	2.91	96	450011	4.90	ug/L	94
13) Acetone	2.97	43	503258	53.54	ug/L	97
14) Carbon disulfide	3.18	76	1534168	4.61	ug/L	99
15) Methyl Acetate	3.37	43	140929	5.25	ug/L	92
16) Methylene chloride	3.55	84	512006	5.06	ug/L	99
17) Methyl tert-butyl Ether	3.95	73	889894	5.31	ug/L	97
18) trans-1,2-Dichloroethene	3.95	96	499744	4.93	ug/L	99
19) 1,1-Dichloroethane	4.66	63	877116	5.10	ug/L	98
21) 2-Butanone	5.75	43	935729	55.02	ug/L	99
22) cis-1,2-Dichloroethene	5.73	96	534498	5.12	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049347.D
Acq On : 11 May 2016 18:32
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00526

Quant Time: May 12 06:05:53 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.16	128	207951	4.97	ug/L	97
25) Chloroform	6.38	83	967939	5.29	ug/L	96
27) 1,2-Dichloroethane	7.31	62	474801	5.15	ug/L	99
29) 1,1,1-Trichloroethane	6.60	97	731034	4.94	ug/L	96
30) Cyclohexane	6.71	56	622882	4.77	ug/L	98
31) Carbon tetrachloride	6.87	117	636995	4.93	ug/L	99
33) Benzene	7.20	78	1726465	5.18	ug/L	100
34) Trichloroethene	8.19	95	454267	4.91	ug/L	97
35) Methylcyclohexane	8.47	83	535814	4.69	ug/L	99
37) 1,2-Dichloropropane	8.52	63	400648	5.12	ug/L	99
38) Bromodichloromethane	8.87	83	557801	4.89	ug/L	95
39) cis-1,3-Dichloropropene	9.39	75	547053	4.74	ug/L	100
40) 4-Methyl-2-pentanone	9.55	43	2167724	53.84	ug/L	100
42) Toluene	9.74	91	1423913	5.06	ug/L	100
44) trans-1,3-Dichloropropene	10.03	75	420820	4.76	ug/L	98
45) 1,1,2-Trichloroethane	10.23	97	213987	5.27	ug/L	97
47) Tetrachloroethene	10.30	164	304982	5.02	ug/L	97
48) 2-Hexanone	10.46	43	1416893	52.62	ug/L	100
49) Dibromochloromethane	10.62	129	306061	4.99	ug/L	96
50) 1,2-Dibromoethane	10.74	107	222502	5.25	ug/L	99
51) Chlorobenzene	11.23	112	873024	5.17	ug/L	97
52) Ethylbenzene	11.33	91	1506690	5.18	ug/L	98
53) m,p-Xylene	11.45	106	539806	5.09	ug/L	95
54) o-Xylene	11.82	106	511332	5.16	ug/L	96
55) Styrene	11.85	104	862765	5.25	ug/L	96
56) Isopropylbenzene	12.17	105	1362299	5.31	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	206179	5.25	ug/L	97
60) Bromoform	12.02	173	136616	4.61	ug/L	100
61) 1,3-Dichlorobenzene	13.33	146	537372	4.98	ug/L	98
62) 1,4-Dichlorobenzene	13.43	146	552971	4.99	ug/L	98
64) 1,2-Dichlorobenzene	13.76	146	456198	5.11	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.45	75	25107	4.61	ug/L	91
66) 1,2,4-trichlorobenzene	15.17	180	247839	5.19	ug/L	96
67) 1,2,3-Trichlorobenzene	15.65	180	182608	5.17	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
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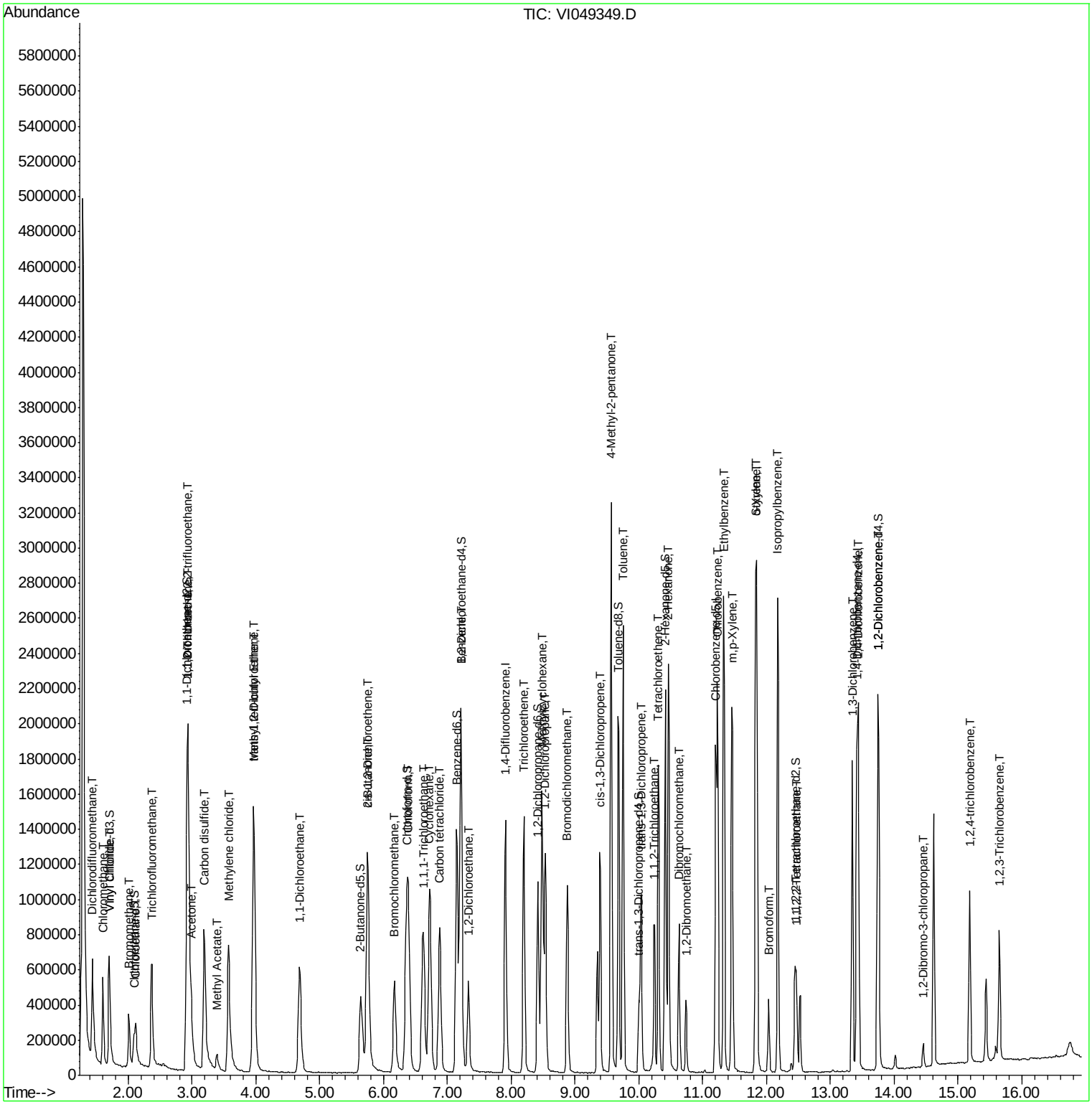

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
feifei
5/13/2016 12:27:53 PM

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1295565	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	928274	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	374949	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	329772	4.13	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.60%			
7) Chloroethane-d5	2.08	69	211682	4.79	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.80%			
11) 1,1-Dichloroethene-d2	2.91	63	864483	4.60	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 92.00%			
20) 2-Butanone-d5	5.64	46	1034175	59.89	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 119.78%			
24) Chloroform-d	6.36	84	1033260	5.09	ug/L	0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.80%			
26) 1,2-Dichloroethane-d4	7.21	65	429502	5.17	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.40%			
32) Benzene-d6	7.14	84	1805395	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.80%			
36) 1,2-Dichloropropane-d6	8.41	67	513478	5.05	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.00%			
41) Toluene-d8	9.68	98	1312649	4.92	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.40%			
43) trans-1,3-Dichloropropene-	10.00	79	199797	4.99	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 99.80%			
46) 2-Hexanone-d5	10.41	63	722525	57.18	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 114.36%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	257869	5.58	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 111.60%			
63) 1,2-Dichlorobenzene-d4	13.74	152	334415	5.09	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	695673	4.77	ug/L	96
3) Chloromethane	1.60	50	526629	4.22	ug/L	100
5) Vinyl chloride	1.70	62	412648	4.72	ug/L	99
6) Bromomethane	2.01	94	192838	4.56	ug/L	97
8) Chloroethane	2.11	64	189504	5.08	ug/L	94
9) Trichlorofluoromethane	2.37	101	606296	4.97	ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	566400	5.07	ug/L	100
12) 1,1-Dichloroethene	2.93	96	520038	4.97	ug/L	95
13) Acetone	2.99	43	536964	50.14	ug/L	97
14) Carbon disulfide	3.19	76	1805293	4.76	ug/L	99
15) Methyl Acetate	3.39	43	156983	5.13	ug/L	98
16) Methylene chloride	3.57	84	563110	4.89	ug/L	98
17) Methyl tert-butyl Ether	3.96	73	961419	5.03	ug/L	98
18) trans-1,2-Dichloroethene	3.96	96	585645	5.07	ug/L	94
19) 1,1-Dichloroethane	4.68	63	974959	4.98	ug/L	96
21) 2-Butanone	5.76	43	1019124	52.60	ug/L	99
22) cis-1,2-Dichloroethene	5.75	96	603288m	5.07	ug/L	

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
feifei
5/13/2016 12:27:53 PM

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) Bromochloromethane	6.17	128	234146	4.91	ug/L	97
25) Chloroform	6.39	83	1069679	5.13	ug/L	97
27) 1,2-Dichloroethane	7.33	62	505978	4.82	ug/L	97
29) 1,1,1-Trichloroethane	6.62	97	859724	4.88	ug/L	99
30) Cyclohexane	6.72	56	751873	4.84	ug/L	99
31) Carbon tetrachloride	6.88	117	755838	4.91	ug/L	100
33) Benzene	7.21	78	1974065	4.97	ug/L	100
34) Trichloroethene	8.20	95	537504	4.87	ug/L	96
35) Methylcyclohexane	8.48	83	681007	5.01	ug/L	99
37) 1,2-Dichloropropane	8.53	63	453558	4.86	ug/L	100
38) Bromodichloromethane	8.88	83	678172	4.99	ug/L	98
39) cis-1,3-Dichloropropene	9.39	75	675768	4.92	ug/L	99
40) 4-Methyl-2-pentanone	9.56	43	2430671	50.66	ug/L	99
42) Toluene	9.75	91	1684845	5.03	ug/L	98
44) trans-1,3-Dichloropropene	10.04	75	521293	4.95	ug/L	96
45) 1,1,2-Trichloroethane	10.24	97	246420	5.09	ug/L	96
47) Tetrachloroethene	10.30	164	364808	5.04	ug/L	93
48) 2-Hexanone	10.46	43	1630946	50.84	ug/L	99
49) Dibromochloromethane	10.63	129	376461	5.16	ug/L	99
50) 1,2-Dibromoethane	10.74	107	253859	5.03	ug/L	96
51) Chlorobenzene	11.23	112	1024301	5.09	ug/L	97
52) Ethylbenzene	11.33	91	1804270	5.21	ug/L	100
53) m,p-Xylene	11.45	106	648903	5.14	ug/L	96
54) o-Xylene	11.83	106	604496	5.12	ug/L	100
55) Styrene	11.85	104	1017342	5.20	ug/L	99
56) Isopropylbenzene	12.17	105	1644835	5.38	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	233788	5.00	ug/L	96
60) Bromoform	12.04	173	172649	4.94	ug/L	97
61) 1,3-Dichlorobenzene	13.34	146	654328	5.14	ug/L	98
62) 1,4-Dichlorobenzene	13.43	146	671508	5.14	ug/L	98
64) 1,2-Dichlorobenzene	13.76	146	537966	5.10	ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.46	75	31225	4.86	ug/L	92
66) 1,2,4-trichlorobenzene	15.18	180	305336	5.42	ug/L	97
67) 1,2,3-Trichlorobenzene	15.65	180	224205	5.38	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
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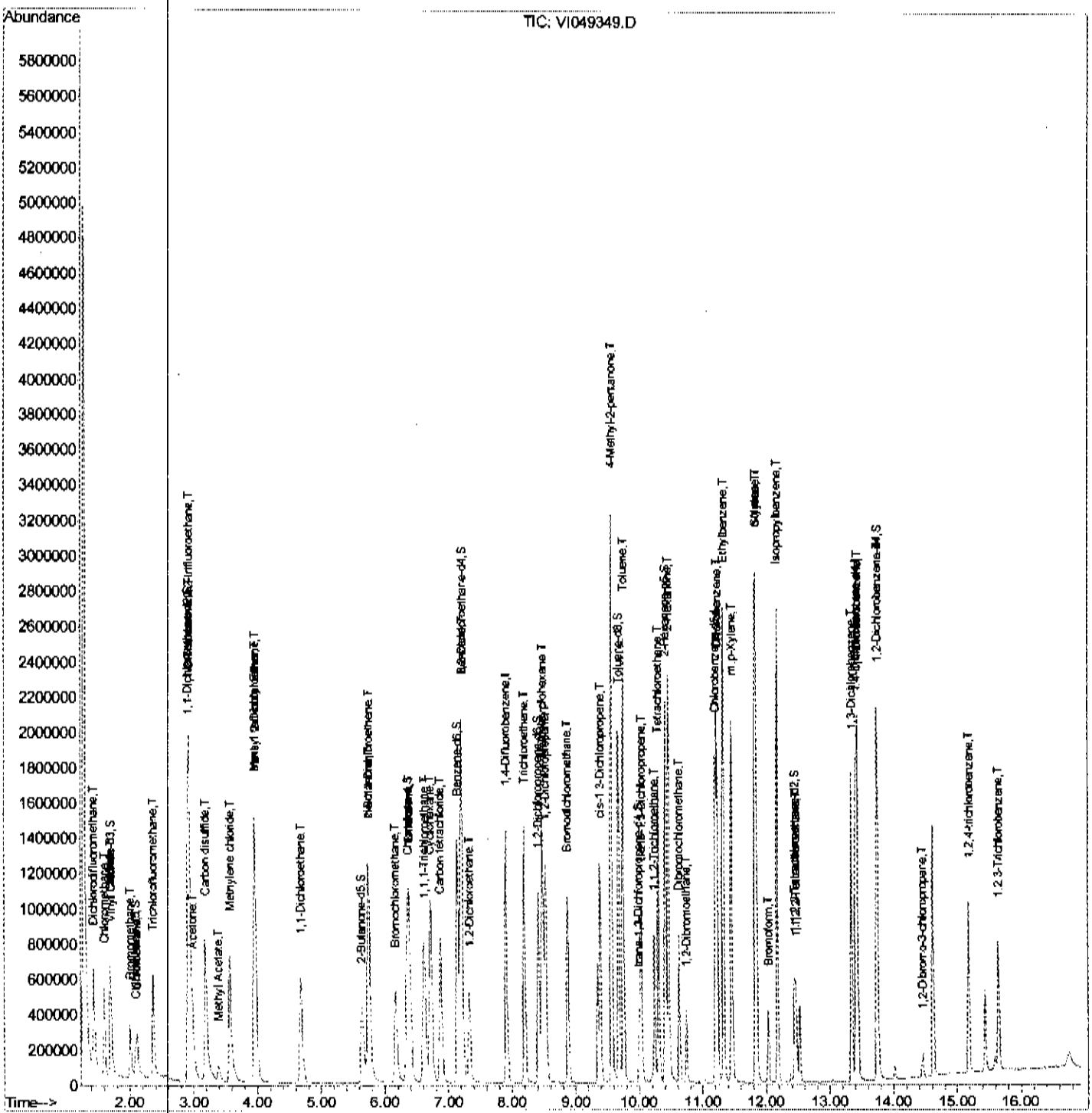


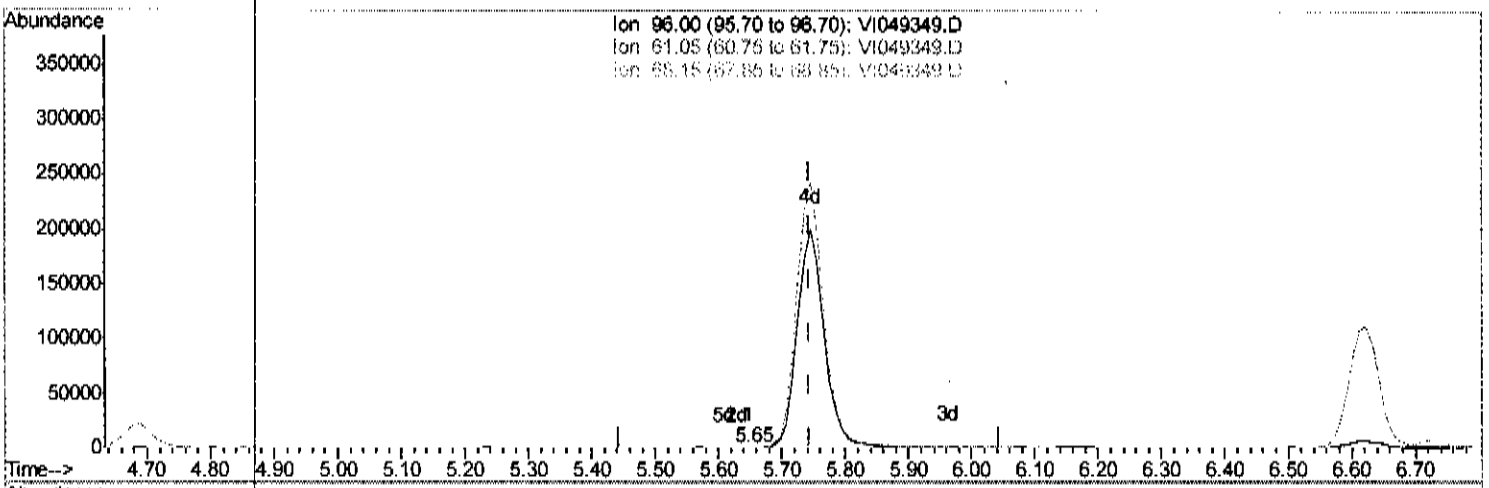
Quantitation Report (Qedit)

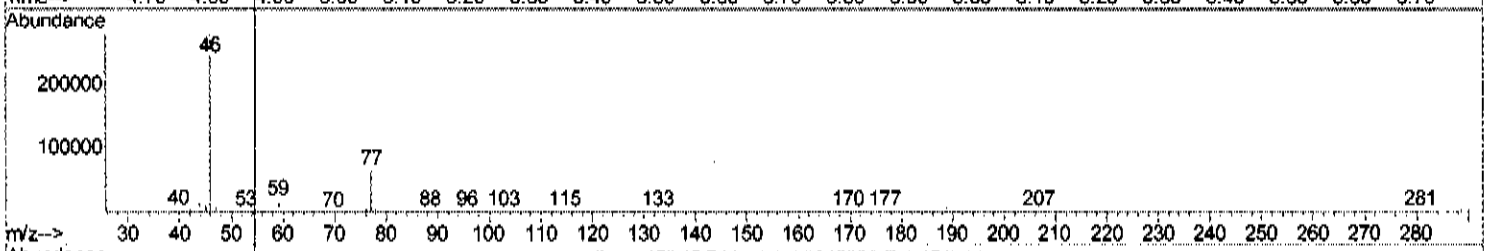
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

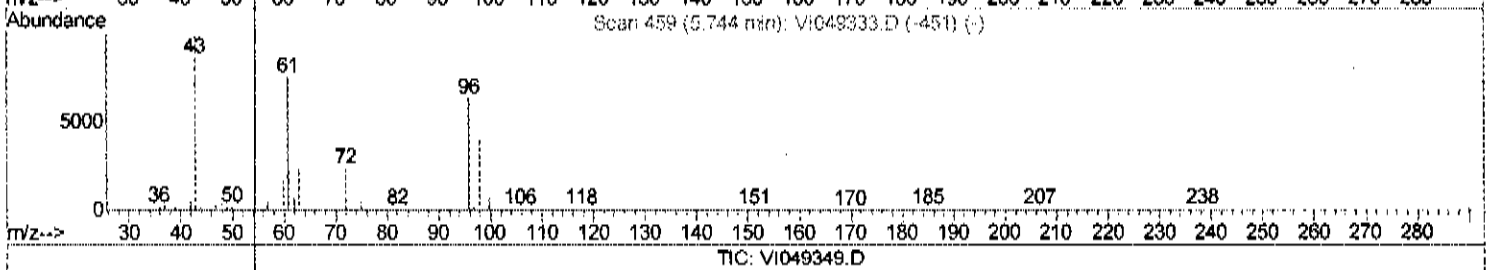
Quant Time: May 13 04:29:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
feifei
5/13/2016 12:27:53 PM







TIC: VI049349.D

(22) cis-1,2-Dichloroethene (T)

5.648min (-0.096) 0.00ug/L

response 424

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	128.57
68.15	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:19 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00527

Manual Integrations APPROVED
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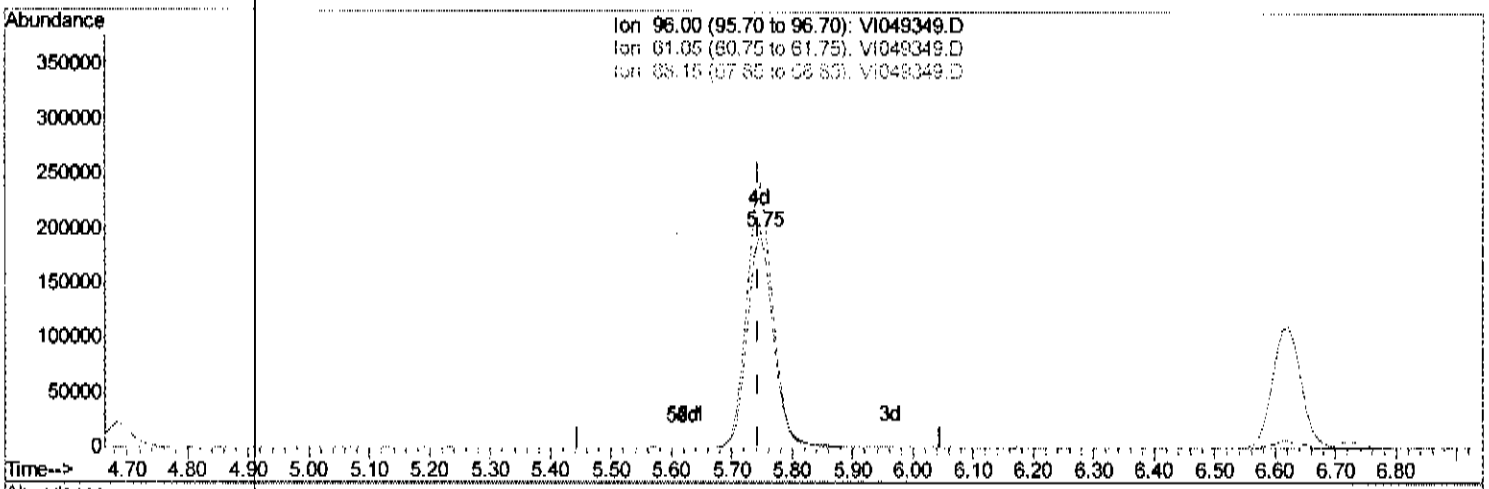

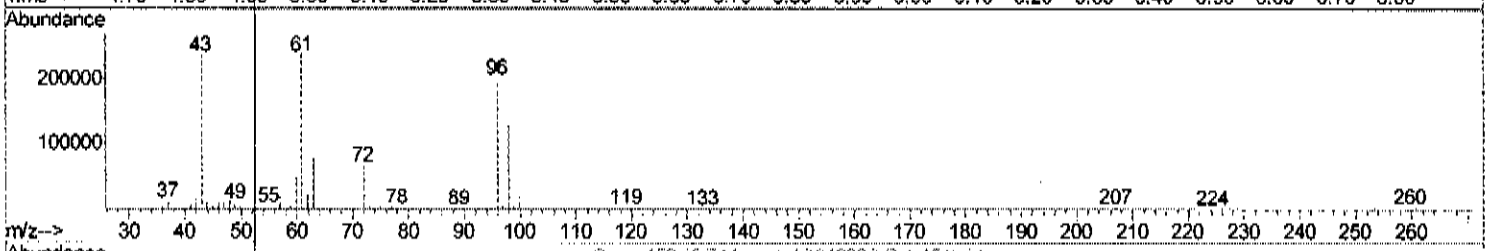

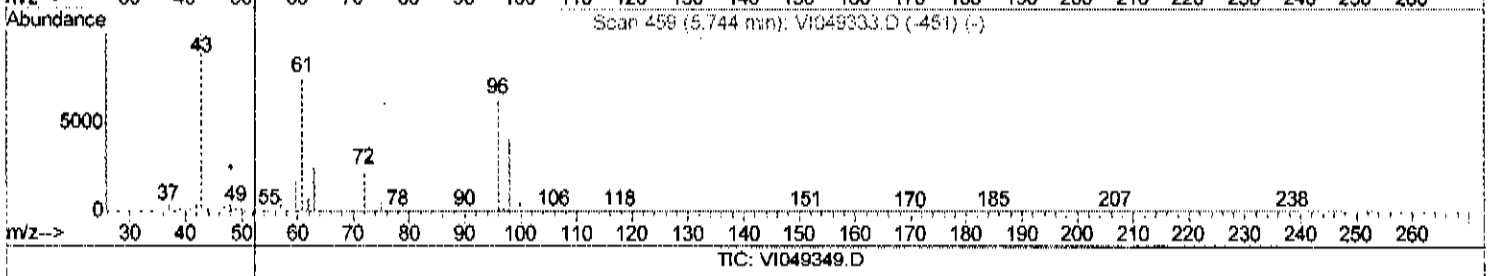

TIC: VI049349.D

(22) cis-1,2-Dichloroethene (T)

5.746min (+0.002) 5.07ug/L m

05/14/16 SY

response 603288

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	121.72
68.15	0.00	0.14#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00527

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1295565	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	928274	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	374949	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	329772	4.13	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.60%			
7) Chloroethane-d5	2.08	69	211682	4.79	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 95.80%			
11) 1,1-Dichloroethene-d2	2.91	63	864483	4.60	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 92.00%			
20) 2-Butanone-d5	5.64	46	1034175	59.89	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 119.78%			
24) Chloroform-d	6.36	84	1033260	5.09	ug/L	0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 101.80%			
26) 1,2-Dichloroethane-d4	7.21	65	429502	5.17	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.40%			
32) Benzene-d6	7.14	84	1805395	4.99	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.80%			
36) 1,2-Dichloropropane-d6	8.41	67	513478	5.05	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.00%			
41) Toluene-d8	9.68	98	1312649	4.92	ug/L	0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.40%			
43) trans-1,3-Dichloropropene-	10.00	79	199797	4.99	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 99.80%			
46) 2-Hexanone-d5	10.41	63	722525	57.18	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 114.36%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	257869	5.58	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 111.60%			
63) 1,2-Dichlorobenzene-d4	13.74	152	334415	5.09	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 101.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	695673	4.77	ug/L	96
3) Chloromethane	1.60	50	526629	4.22	ug/L	100
5) Vinyl chloride	1.70	62	412648	4.72	ug/L	99
6) Bromomethane	2.01	94	192838	4.56	ug/L	97
8) Chloroethane	2.11	64	189504	5.08	ug/L	94
9) Trichlorofluoromethane	2.37	101	606296	4.97	ug/L	98
10) 1,1,2-Trichloro-1,2,2-trif	2.94	101	566400	5.07	ug/L	100
12) 1,1-Dichloroethene	2.93	96	520038	4.97	ug/L	95
13) Acetone	2.99	43	536964	50.14	ug/L	97
14) Carbon disulfide	3.19	76	1805293	4.76	ug/L	99
15) Methyl Acetate	3.39	43	156983	5.13	ug/L	98
16) Methylene chloride	3.57	84	563110	4.89	ug/L	98
17) Methyl tert-butyl Ether	3.96	73	961419	5.03	ug/L	98
18) trans-1,2-Dichloroethene	3.96	96	585645	5.07	ug/L	94
19) 1,1-Dichloroethane	4.68	63	974959	4.98	ug/L	96
21) 2-Butanone	5.76	43	1019124	52.60	ug/L	99
22) cis-1,2-Dichloroethene	5.75	96	603288m	5.07	ug/L	

05/14/16 FY

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049349.D
Acq On : 12 May 2016 12:03
Operator : FY/SY
Sample : VSTDCCC005
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:29:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00527

Manual Integrations APPROVED
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5/13/2016 12:27:53 PM

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
23) Bromochloromethane	6.17	128	234146	4.91 ug/L	97
25) Chloroform	6.39	83	1069679	5.13 ug/L	97
27) 1,2-Dichloroethane	7.33	62	505978	4.82 ug/L	97
29) 1,1,1-Trichloroethane	6.62	97	859724	4.88 ug/L	99
30) Cyclohexane	6.72	56	751873	4.84 ug/L	99
31) Carbon tetrachloride	6.88	117	755838	4.91 ug/L	100
33) Benzene	7.21	78	1974065	4.97 ug/L	100
34) Trichloroethene	8.20	95	537504	4.87 ug/L	96
35) Methylcyclohexane	8.48	83	681007	5.01 ug/L	99
37) 1,2-Dichloropropane	8.53	63	453558	4.86 ug/L	100
38) Bromodichloromethane	8.88	83	678172	4.99 ug/L	98
39) cis-1,3-Dichloropropene	9.39	75	675768	4.92 ug/L	99
40) 4-Methyl-2-pentanone	9.56	43	2430671	50.66 ug/L	99
42) Toluene	9.75	91	1684845	5.03 ug/L	98
44) trans-1,3-Dichloropropene	10.04	75	521293	4.95 ug/L	96
45) 1,1,2-Trichloroethane	10.24	97	246420	5.09 ug/L	96
47) Tetrachloroethene	10.30	164	364808	5.04 ug/L	93
48) 2-Hexanone	10.46	43	1630946	50.84 ug/L	99
49) Dibromochloromethane	10.63	129	376461	5.16 ug/L	99
50) 1,2-Dibromoethane	10.74	107	253859	5.03 ug/L	96
51) Chlorobenzene	11.23	112	1024301	5.09 ug/L	97
52) Ethylbenzene	11.33	91	1804270	5.21 ug/L	100
53) m,p-Xylene	11.45	106	648903	5.14 ug/L	96
54) o-Xylene	11.83	106	604496	5.12 ug/L	100
55) Styrene	11.85	104	1017342	5.20 ug/L	99
56) Isopropylbenzene	12.17	105	1644835	5.38 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.47	83	233788	5.00 ug/L	96
60) Bromoform	12.04	173	172649	4.94 ug/L	97
61) 1,3-Dichlorobenzene	13.34	146	654328	5.14 ug/L	98
62) 1,4-Dichlorobenzene	13.43	146	671508	5.14 ug/L	98
64) 1,2-Dichlorobenzene	13.76	146	537966	5.10 ug/L	98
65) 1,2-Dibromo-3-chloropropan	14.46	75	31225	4.86 ug/L	92
66) 1,2,4-trichlorobenzene	15.18	180	305336	5.42 ug/L	97
67) 1,2,3-Trichlorobenzene	15.65	180	224205	5.38 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00528

Manual Integrations APPROVED
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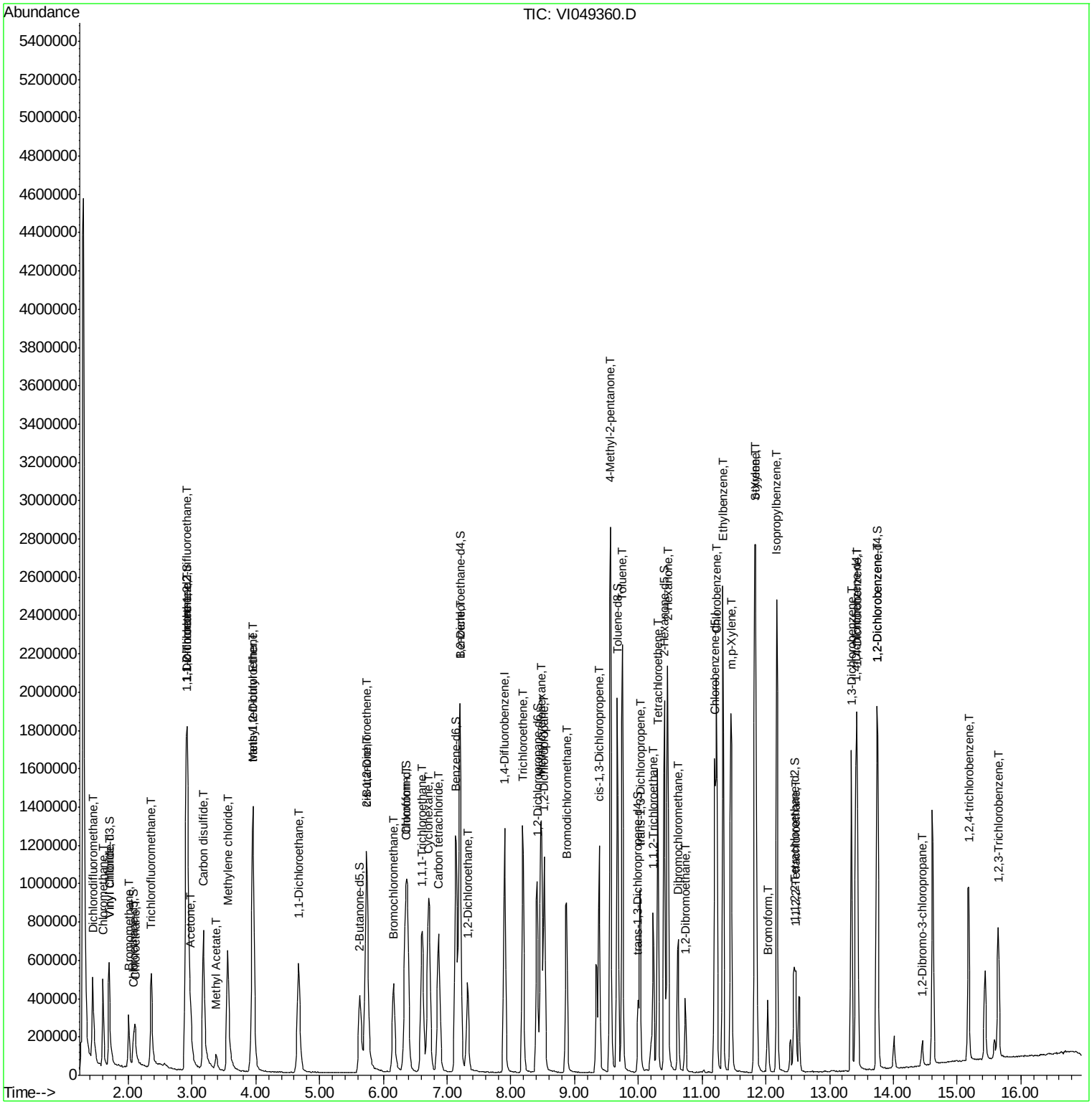

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Manual Integrations APPROVED
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5/13/2016 12:27:59 PM

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1130489	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.20	117	808102	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	342879	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	287302	4.13	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.60%			
7) Chloroethane-d5	2.08	69	180739	4.69	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.80%			
11) 1,1-Dichloroethene-d2	2.90	63	779926	4.76	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 95.20%			
20) 2-Butanone-d5	5.63	46	990072	65.71	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 131.42%#			
24) Chloroform-d	6.34	84	971192	5.49	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 109.80%			
26) 1,2-Dichloroethane-d4	7.20	65	395559	5.46	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.20%			
32) Benzene-d6	7.13	84	1633659	5.19	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.80%			
36) 1,2-Dichloropropane-d6	8.41	67	468384	5.29	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 105.80%			
41) Toluene-d8	9.67	98	1192019	5.13	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.60%			
43) trans-1,3-Dichloropropene-	10.00	79	177131	5.08	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 101.60%			
46) 2-Hexanone-d5	10.41	63	668111	60.74	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 121.48%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	242675	6.03	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 120.60%#			
63) 1,2-Dichlorobenzene-d4	13.74	152	323596	5.38	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 107.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	601225	4.72	ug/L	99
3) Chloromethane	1.60	50	469986	4.31	ug/L	95
5) Vinyl chloride	1.70	62	374086	4.91	ug/L	99
6) Bromomethane	2.00	94	168687	4.58	ug/L	100
8) Chloroethane	2.11	64	169719	5.21	ug/L	99
9) Trichlorofluoromethane	2.36	101	509339	4.78	ug/L	100
10) 1,1,2-Trichloro-1,2,2-trif	2.93	101	503775	5.17	ug/L	99
12) 1,1-Dichloroethene	2.92	96	471346	5.17	ug/L	91
13) Acetone	2.98	43	491417	52.59	ug/L	98
14) Carbon disulfide	3.18	76	1611278	4.87	ug/L	99
15) Methyl Acetate	3.37	43	143503	5.38	ug/L	96
16) Methylene chloride	3.56	84	505487	5.03	ug/L	99
17) Methyl tert-butyl Ether	3.95	73	895763	5.37	ug/L	98
18) trans-1,2-Dichloroethene	3.95	96	527516	5.23	ug/L	97
19) 1,1-Dichloroethane	4.67	63	897405	5.25	ug/L	99
21) 2-Butanone	5.74	43	928701	54.93	ug/L	99
22) cis-1,2-Dichloroethene	5.73	96	555428m	5.35	ug/L	

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Manual Integrations APPROVED
feifei
5/13/2016 12:27:59 PM

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.16	128	209657	5.04	ug/L		97
25) Chloroform	6.37	83	981326	5.40	ug/L		98
27) 1,2-Dichloroethane	7.32	62	473209	5.16	ug/L		97
29) 1,1,1-Trichloroethane	6.61	97	793676	5.17	ug/L		99
30) Cyclohexane	6.71	56	653440	4.83	ug/L		100
31) Carbon tetrachloride	6.87	117	683478	5.10	ug/L		99
33) Benzene	7.20	78	1792270	5.18	ug/L		100
34) Trichloroethene	8.19	95	485204	5.05	ug/L		97
35) Methylcyclohexane	8.48	83	574862	4.85	ug/L		99
37) 1,2-Dichloropropane	8.52	63	406410	5.01	ug/L		99
38) Bromodichloromethane	8.87	83	593029	5.01	ug/L		99
39) cis-1,3-Dichloropropene	9.39	75	590353	4.94	ug/L		100
40) 4-Methyl-2-pentanone	9.56	43	2169012	51.93	ug/L		100
42) Toluene	9.75	91	1528146	5.24	ug/L		98
44) trans-1,3-Dichloropropene	10.03	75	462356	5.04	ug/L		97
45) 1,1,2-Trichloroethane	10.23	97	223574	5.31	ug/L		95
47) Tetrachloroethene	10.30	164	328912	5.22	ug/L		96
48) 2-Hexanone	10.46	43	1435500	51.40	ug/L		99
49) Dibromochloromethane	10.63	129	344430	5.42	ug/L		98
50) 1,2-Dibromoethane	10.73	107	229770	5.23	ug/L		97
51) Chlorobenzene	11.23	112	946789	5.41	ug/L		98
52) Ethylbenzene	11.33	91	1643567	5.45	ug/L		99
53) m,p-Xylene	11.45	106	597153	5.43	ug/L		94
54) o-Xylene	11.83	106	562263	5.47	ug/L		99
55) Styrene	11.85	104	945478	5.55	ug/L		99
56) Isopropylbenzene	12.17	105	1522900	5.72	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.47	83	218971	5.38	ug/L		98
60) Bromoform	12.03	173	158286	4.95	ug/L		99
61) 1,3-Dichlorobenzene	13.34	146	614579	5.28	ug/L		99
62) 1,4-Dichlorobenzene	13.43	146	605763	5.07	ug/L		99
64) 1,2-Dichlorobenzene	13.76	146	521275	5.41	ug/L		97
65) 1,2-Dibromo-3-chloropropan	14.45	75	31604	5.38	ug/L	#	77
66) 1,2,4-trichlorobenzene	15.18	180	288703	5.61	ug/L		97
67) 1,2,3-Trichlorobenzene	15.65	180	216837	5.69	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

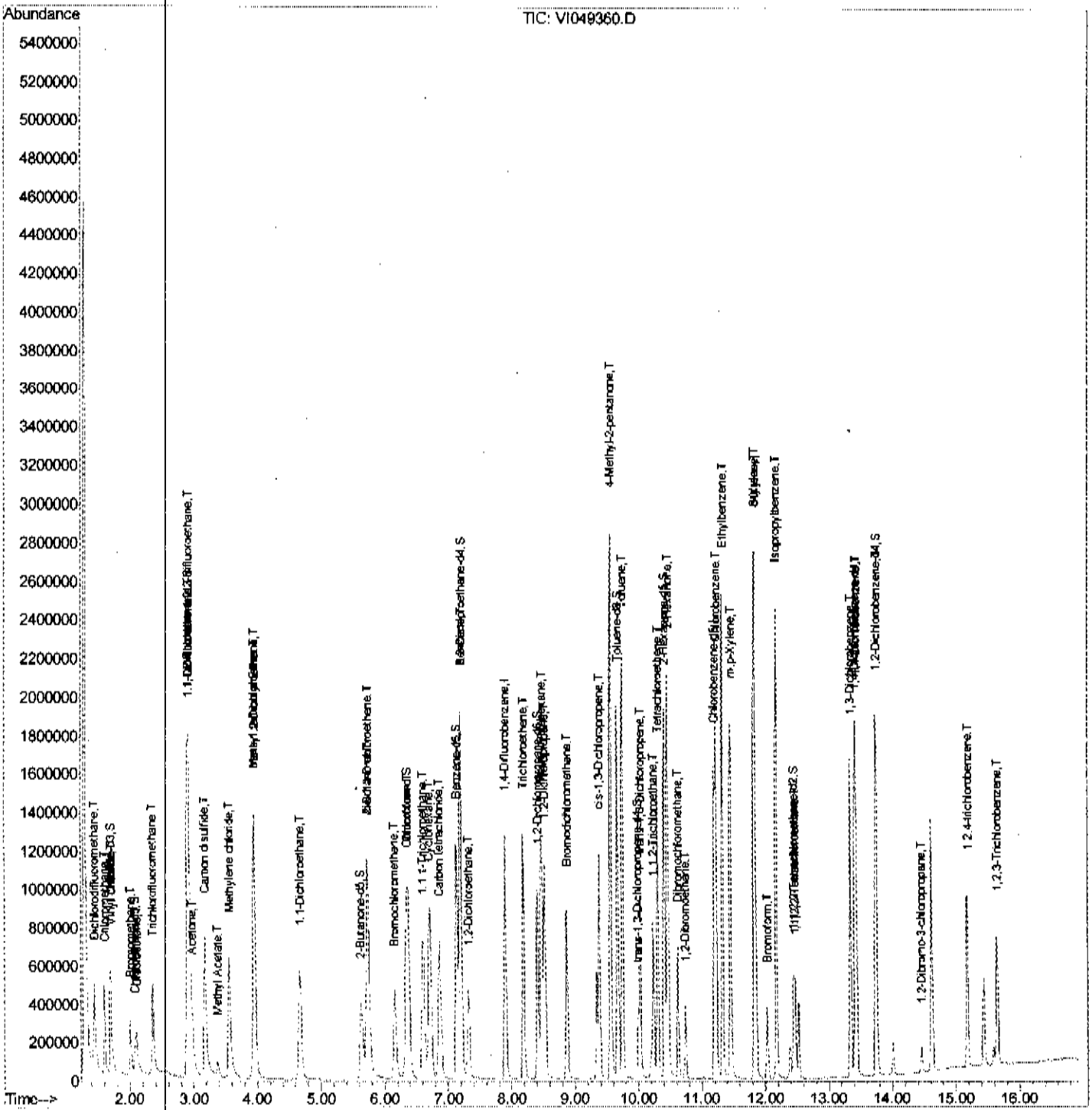
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_1\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00528

Manual Integrations APPROVED
feifei
5/13/2016 12:27:59 PM



Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:14 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00528

Manual Integrations APPROVED
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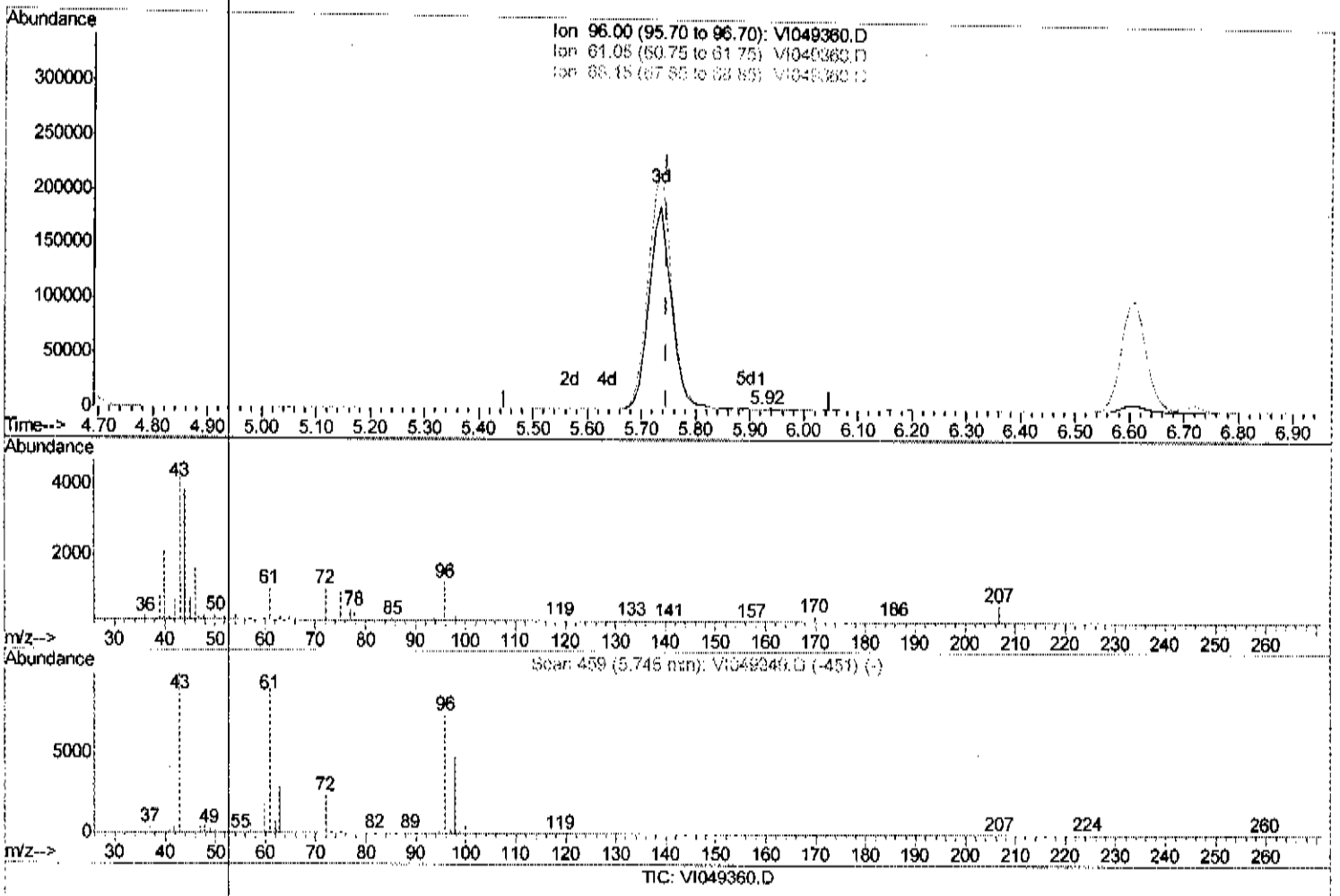
5/13/2016 12:27:59 PM



(22) cis-1,2-Dichloroethene (T)

5.922min (+0.176) 0.01ug/L

response 1364

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	83.74
68.15	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_T\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:14 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VSTD00528

Manual Integrations APPROVED
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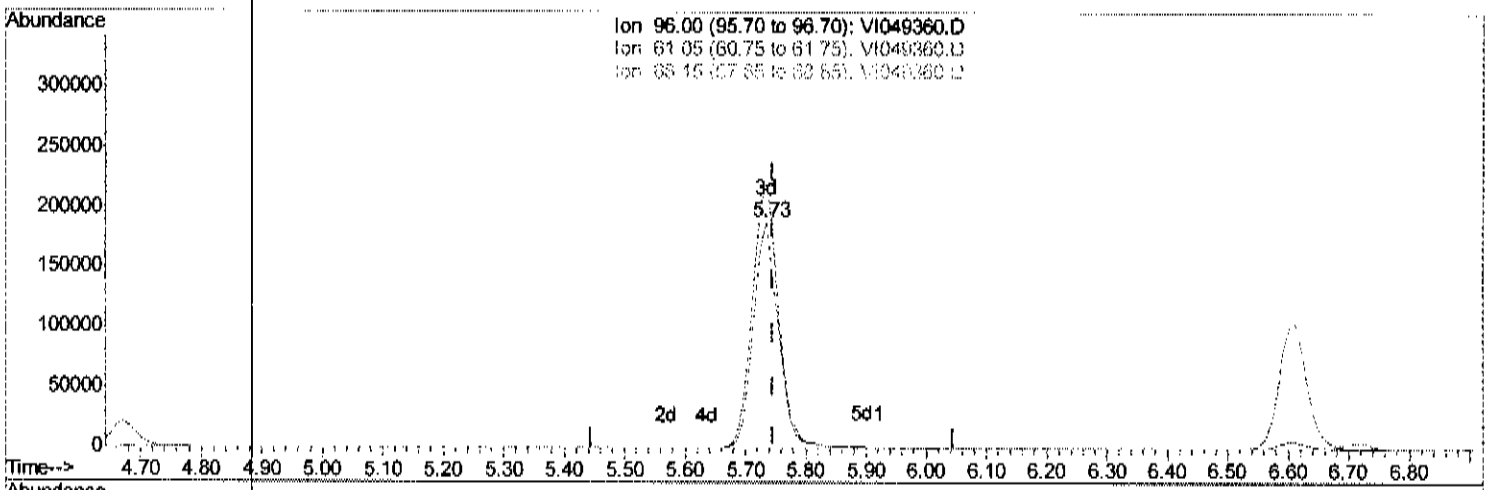
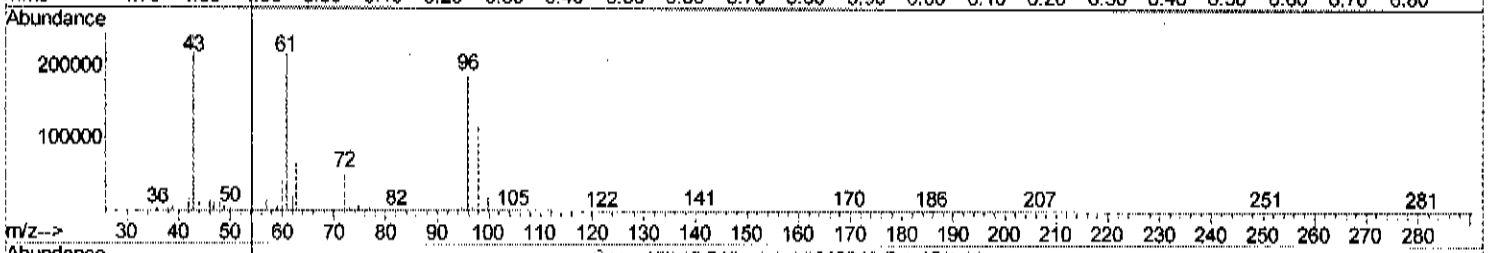
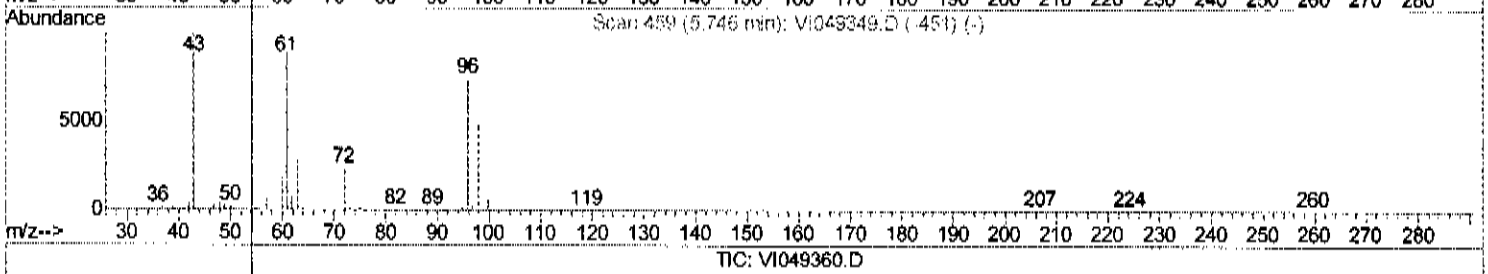
5/13/2016 12:27:59 PM







TIC: VI049360.D

(22) cis-1,2-Dichloroethene (T)

5.735min (-0.011) 5.35ug/L m 05/14/16

response 555428

Ion	Exp%	Act%
96.00	100	100
61.05	117.30	116.76
68.15	0.00	0.11#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VT051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Manual Integrations APPROVED
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5/13/2016 12:27:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1130489	5.00	ug/L	-0.01
28) Chlorobenzene-d5	11.20	117	808102	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	342879	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	287302	4.13	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 82.60%			
7) Chloroethane-d5	2.08	69	180739	4.69	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.80%			
11) 1,1-Dichloroethene-d2	2.90	63	779926	4.76	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 95.20%			
20) 2-Butanone-d5	5.63	46	990072	65.71	ug/L	-0.01
Spiked Amount 50.000	Range 40 - 130		Recovery = 131.42%#			
24) Chloroform-d	6.34	84	971192	5.49	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 109.80%			
26) 1,2-Dichloroethane-d4	7.20	65	395559	5.46	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.20%			
32) Benzene-d6	7.13	84	1633659	5.19	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 103.80%			
36) 1,2-Dichloropropane-d6	8.41	67	168384	5.29	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 105.80%			
41) Toluene-d8	9.67	98	1192019	5.13	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.60%			
43) trans-1,3-Dichloropropene-	10.00	79	177131	5.08	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 101.60%			
46) 2-Hexanone-d5	10.41	63	668111	60.74	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 121.48%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	242675	6.03	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 120.60%#			
63) 1,2-Dichlorobenzene-d4	13.74	152	323596	5.38	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 107.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.44	85	601225	4.72	ug/L	99
3) Chloromethane	1.60	50	469986	4.31	ug/L	95
5) Vinyl chloride	1.70	62	374086	4.91	ug/L	99
6) Bromomethane	2.00	94	168687	4.58	ug/L	100
8) Chloroethane	2.11	64	169719	5.21	ug/L	99
9) Trichlorofluoromethane	2.36	101	509339	4.78	ug/L	100
10) 1,1,2-Trichloro-1,2,2-trif	2.93	101	503775	5.17	ug/L	99
12) 1,1-Dichloroethene	2.92	96	471346	5.17	ug/L	91
13) Acetone	2.98	43	491417	52.59	ug/L	98
14) Carbon disulfide	3.18	76	1611278	4.87	ug/L	99
15) Methyl Acetate	3.37	43	143503	5.38	ug/L	96
16) Methylene chloride	3.56	84	505487	5.03	ug/L	99
17) Methyl tert-butyl Ether	3.95	73	895763	5.37	ug/L	98
18) trans-1,2-Dichloroethene	3.95	96	527516	5.23	ug/L	97
19) 1,1-Dichloroethane	4.67	63	897405	5.25	ug/L	99
21) 2-Butanone	5.74	43	928701	54.93	ug/L	99
22) cis-1,2-Dichloroethene	5.73	96	555428m	5.35	ug/L	

05/14/16 SY

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049360.D
Acq On : 12 May 2016 20:37
Operator : FY/SY
Sample : VSTDCCC005EC
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 05:06:54 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VSTD00528

Manual Integrations APPROVED
feifei
5/13/2016 12:27:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Bromochloromethane	6.16	128	209657	5.04	ug/L		97
25) Chloroform	6.37	83	981326	5.40	ug/L		98
27) 1,2-Dichloroethane	7.32	62	473209	5.16	ug/L		97
29) 1,1,1-Trichloroethane	6.61	97	793676	5.17	ug/L		99
30) Cyclohexane	6.71	56	653440	4.83	ug/L		100
31) Carbon tetrachloride	6.87	117	683478	5.10	ug/L		99
33) Benzene	7.20	78	1792270	5.18	ug/L		100
34) Trichloroethene	8.19	95	485204	5.05	ug/L		97
35) Methylcyclohexane	8.48	83	574862	4.85	ug/L		99
37) 1,2-Dichloropropane	8.52	63	406410	5.01	ug/L		99
38) Bromodichloromethane	8.87	83	593029	5.01	ug/L		99
39) cis-1,3-Dichloropropene	9.39	75	590353	4.94	ug/L		100
40) 4-Methyl-2-pentanone	9.56	43	2169012	51.93	ug/L		100
42) Toluene	9.75	91	1528146	5.24	ug/L		98
44) trans-1,3-Dichloropropene	10.03	75	462356	5.04	ug/L		97
45) 1,1,2-Trichloroethane	10.23	97	223574	5.31	ug/L		95
47) Tetrachloroethene	10.30	164	328912	5.22	ug/L		96
48) 2-Hexanone	10.46	43	1435500	51.40	ug/L		99
49) Dibromochloromethane	10.63	129	344430	5.42	ug/L		98
50) 1,2-Dibromoethane	10.73	107	229770	5.23	ug/L		97
51) Chlorobenzene	11.23	112	946789	5.41	ug/L		98
52) Ethylbenzene	11.33	91	1643567	5.45	ug/L		99
53) m,p-Xylene	11.45	106	597153	5.43	ug/L		94
54) o-Xylene	11.83	106	562263	5.47	ug/L		99
55) Styrene	11.85	104	945478	5.55	ug/L		99
56) Isopropylbenzene	12.17	105	1522900	5.72	ug/L		99
58) 1,1,2,2-Tetrachloroethane	12.47	83	218971	5.38	ug/L		98
60) Bromoform	12.03	173	158286	4.95	ug/L		99
61) 1,3-Dichlorobenzene	13.34	146	614579	5.28	ug/L		99
62) 1,4-Dichlorobenzene	13.43	146	605763	5.07	ug/L		99
64) 1,2-Dichlorobenzene	13.76	146	521275	5.41	ug/L		97
65) 1,2-Dibromo-3-chloropropan	14.45	75	31604	5.38	ug/L	#	77
66) 1,2,4-trichlorobenzene	15.18	180	288703	5.61	ug/L		97
67) 1,2,3-Trichlorobenzene	15.65	180	216837	5.69	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

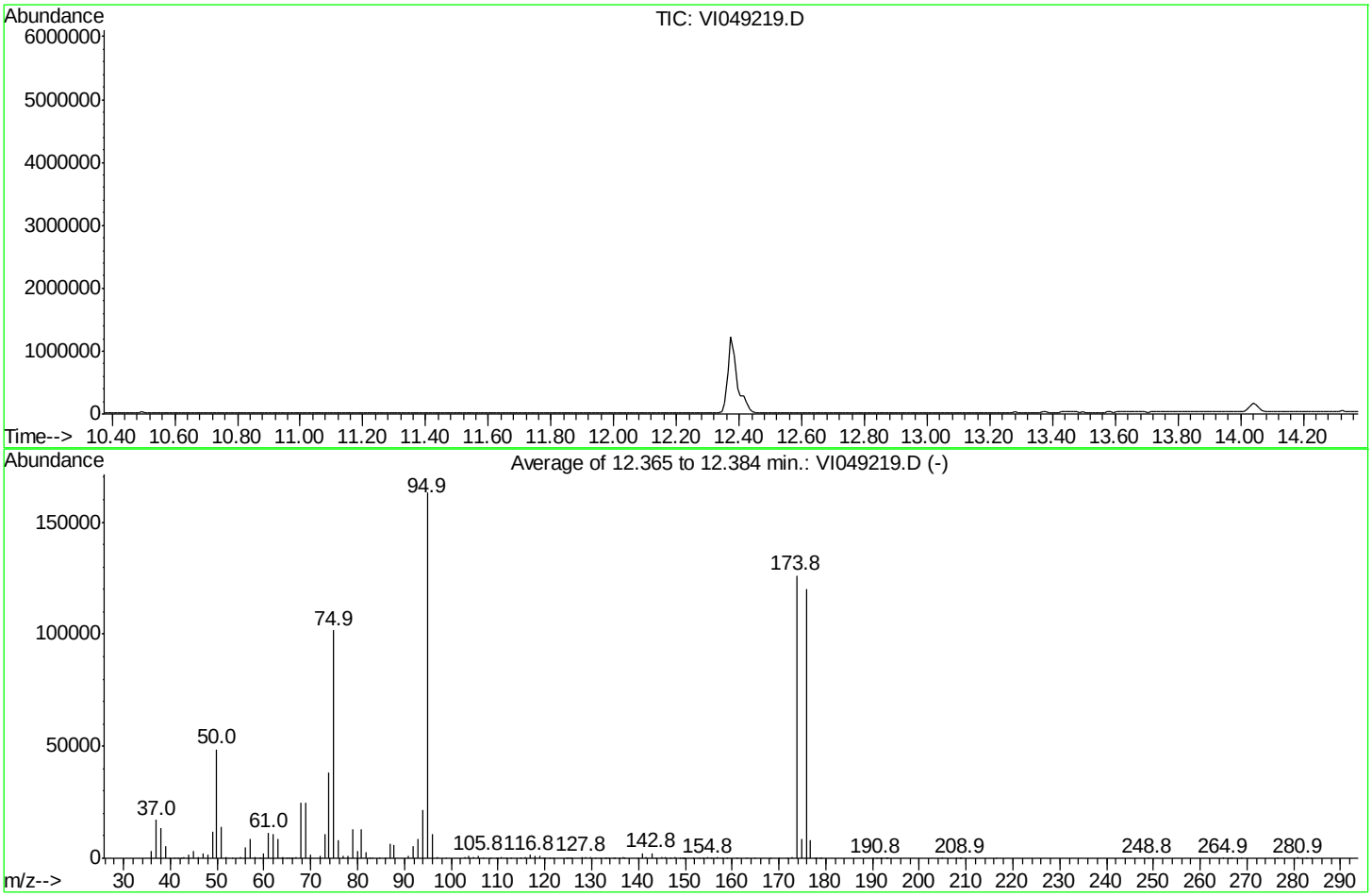
BFB

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050416\
Data File : VI049219.D
Acq On : 4 May 2016 8:57
Operator : FY/SY
Sample : BFB32
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB32

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Thu May 05 05:21:45 2016



AutoFind: Scans 1131, 1132, 1133; Background Corrected with Scan 1127

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	29.8	48658	PASS
75	95	30	80	62.3	101623	PASS
95	95	100	100	100.0	163138	PASS
96	95	5	9	6.6	10709	PASS
173	174	0.00	2	0.4	466	PASS
174	95	50	120	77.4	126261	PASS
175	174	5	9	7.1	8907	PASS
176	174	95	101	95.0	119986	PASS
177	176	5	9	6.7	8043	PASS

Scan 1127 (12.325 min): VI049219.D
BFB32

m/z	Abundance
35.95	298.0
39.00	695.0
39.90	1003.0
40.90	193.0
41.85	163.0
42.95	315.0
43.95	3257.0
44.75	335.0
50.95	353.0
51.85	155.0
52.30	169.0
55.00	175.0
58.95	188.0
59.80	152.0
60.70	181.0
62.60	204.0
63.85	210.0
64.95	244.0
69.70	179.0
70.65	165.0
72.95	1105.0
74.90	318.0
77.15	237.0
78.15	292.0
90.50	157.0
93.95	184.0
95.90	208.0
96.20	201.0
103.90	168.0
118.60	197.0
128.25	182.0
132.90	470.0
170.15	200.0
190.95	569.0
192.65	240.0
192.85	237.0
193.85	188.0
196.80	210.0
206.85	2279.0
207.95	227.0
208.80	215.0
248.45	210.0
259.70	198.0
260.10	177.0
266.70	256.0
279.30	193.0
280.90	939.0
282.00	618.0
282.70	217.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

Scan 1131 (12.365 min): VI049219.D
BFB32

Instrument :
MSVOA_I
ClientSampleId :
BFB32

m/z	Abundance
35.95	3387.0
36.95	16400.0
37.90	12574.0
39.00	5397.0
39.90	994.0
40.90	333.0
41.45	151.0
42.85	382.0
43.95	4353.0
44.90	2396.0
45.90	430.0
47.00	1397.0
48.00	1273.0
48.95	10427.0
49.95	40832.0
50.95	11832.0
51.95	573.0
54.90	696.0
55.95	4145.0
56.95	6496.0
57.95	425.0
58.85	195.0
59.05	204.0
60.00	1842.0
60.90	7636.0
61.90	8896.0
62.95	6635.0
63.75	777.0
65.35	189.0
65.85	161.0
66.90	732.0
67.90	19888.0
69.00	18984.0
69.95	2323.0
70.65	184.0
71.85	883.0
72.95	8029.0
73.90	31672.0
74.90	80968.0
75.90	5440.0
76.85	924.0
77.85	1029.0
78.85	10120.0
79.85	2196.0
80.80	10141.0
81.90	1487.0
83.00	323.0
86.85	4766.0
87.80	4132.0
90.80	743.0
91.85	4453.0
92.85	6191.0
93.95	15779.0
94.90	117320.0
95.90	9075.0
97.00	340.0
102.90	379.0
103.80	1179.0
104.90	343.0
105.75	930.0
109.70	471.0
111.70	194.0
114.85	216.0
115.90	472.0
116.80	1033.0
117.80	685.0
118.70	565.0
121.85	154.0
124.70	208.0
125.80	199.0
127.95	490.0
128.85	436.0
129.75	354.0
130.90	334.0
132.90	615.0
134.65	235.0
135.85	367.0
136.75	256.0
140.85	1126.0
141.65	217.0
142.75	1473.0
145.00	166.0
145.80	362.0
147.70	268.0
149.45	160.0
151.60	170.0
152.90	200.0
154.80	391.0
156.85	237.0
160.90	222.0
169.85	307.0
171.85	202.0

173.80	65312.0
174.80	4793.0
175.80	65368.0
176.75	4902.0
178.65	172.0
190.10	160.0
190.75	566.0
191.65	190.0
192.95	236.0
193.15	214.0
206.85	1761.0
207.95	262.0
208.70	271.0
266.70	442.0
276.55	157.0
280.90	946.0
282.75	152.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

Scan 1132 (12.374 min): VI049219.D
BFB32

Instrument :
MSVOA_I
ClientSampleId :
BFB32

m/z	Abundance
35.85	4655.0
36.95	19600.0
37.90	18296.0
39.00	7284.0
39.90	1195.0
40.90	673.0
42.45	214.0
42.95	431.0
43.95	6160.0
44.90	4370.0
45.90	515.0
46.90	3092.0
48.00	1961.0
48.95	15554.0
49.95	65416.0
50.95	18432.0
52.10	1007.0
53.30	154.0
54.90	840.0
55.85	6955.0
56.95	11209.0
57.95	647.0
58.85	350.0
59.90	3284.0
61.00	16251.0
61.90	13481.0
62.95	12315.0
63.95	1166.0
64.65	165.0
65.05	173.0
66.15	164.0
66.80	661.0
67.90	31992.0
68.90	35312.0
69.85	2042.0
71.95	1466.0
72.95	14442.0
73.90	49128.0
74.90	133120.0
76.00	12095.0
76.85	1193.0
77.85	926.0
78.85	17856.0
79.95	4684.0
80.80	17176.0
81.90	3445.0
82.60	238.0
86.85	8701.0
87.80	7453.0
90.80	1627.0
91.95	6924.0
92.95	12441.0
93.95	29432.0
94.90	210944.0
95.90	14756.0
96.90	329.0
102.90	365.0
103.80	1365.0
104.80	518.0
105.85	1424.0
106.95	382.0
108.35	158.0
109.90	192.0
110.80	350.0
111.80	275.0
112.65	399.0
114.95	211.0
115.85	936.0
116.80	1561.0
117.80	1332.0
118.90	1283.0
119.65	245.0
124.90	184.0
125.40	293.0
127.85	934.0
128.85	838.0
129.75	638.0
130.90	272.0
131.70	158.0
132.80	366.0
133.10	385.0
133.75	238.0
134.85	484.0
136.85	631.0
139.70	193.0
140.75	2515.0
141.75	473.0
142.85	2401.0
144.80	347.0
145.90	426.0
146.90	225.0
147.70	484.0

149.65	210.0
149.95	198.0
151.50	193.0
152.70	183.0
154.95	407.0
156.85	439.0
158.90	235.0
160.90	226.0
172.80	783.0
173.80	161024.0
174.80	10973.0
175.80	150400.0
176.85	10045.0
177.95	425.0
190.95	483.0
192.75	305.0
206.85	2070.0
207.85	328.0
208.70	384.0
248.85	277.0
266.60	313.0
268.85	298.0
281.00	1268.0
282.00	427.0
282.85	313.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

Scan 1133 (12.384 min): VI049219.D
BFB32

Instrument :
MSVOA_I
ClientSampleId :
BFB32

m/z	Abundance
35.95	2668.0
36.95	15616.0
37.90	9791.0
39.00	5131.0
39.80	1471.0
40.90	413.0
41.95	173.0
42.95	1060.0
43.85	4958.0
44.90	3509.0
45.70	203.0
47.00	1887.0
47.90	1572.0
48.95	10424.0
49.95	39728.0
50.95	12734.0
51.85	482.0
55.00	825.0
55.95	4090.0
56.95	7627.0
58.05	189.0
59.05	544.0
59.80	1876.0
60.90	10057.0
62.00	9237.0
62.95	6707.0
64.05	455.0
64.95	465.0
65.65	211.0
67.90	23032.0
69.00	19328.0
69.85	1535.0
70.75	158.0
71.85	765.0
72.95	12688.0
73.90	33488.0
74.90	91736.0
76.00	6961.0
76.85	1161.0
77.85	572.0
78.85	11286.0
79.85	3582.0
80.80	12245.0
81.80	3778.0
83.10	300.0
84.65	198.0
85.85	249.0
86.85	6705.0
87.80	6129.0
90.90	1207.0
91.95	5420.0
92.95	7957.0
93.95	20096.0
94.90	161152.0
95.90	8922.0
97.00	250.0
98.75	175.0
102.90	577.0
103.80	857.0
104.80	535.0
105.95	967.0
106.75	254.0
109.80	206.0
110.70	638.0
111.90	289.0
112.75	263.0
114.75	168.0
115.90	645.0
116.90	1655.0
117.90	808.0
118.90	1711.0
119.95	235.0
120.95	174.0
124.60	243.0
125.70	210.0
127.75	467.0
128.75	347.0
129.75	843.0
130.70	179.0
132.90	1031.0
133.65	316.0
134.65	393.0
137.05	551.0
140.85	2300.0
141.75	353.0
142.75	2711.0
143.75	213.0
144.80	378.0
145.70	203.0
146.70	398.0
147.80	307.0
148.95	199.0

149.55	179.0
152.90	192.0
153.80	185.0
154.80	521.0
155.45	210.0
156.85	276.0
157.75	173.0
158.70	174.0
160.90	394.0
163.05	258.0
164.75	183.0
168.20	153.0
172.70	615.0
173.80	152448.0
174.80	10955.0
175.80	144192.0
176.85	9184.0
177.65	362.0
178.95	221.0
190.85	691.0
191.95	296.0
192.95	678.0
204.85	357.0
206.95	2760.0
207.95	341.0
208.90	487.0
216.40	277.0
248.85	248.0
264.95	512.0
266.10	240.0
266.80	222.0
280.90	2231.0
281.80	453.0
282.95	438.0
283.75	210.0

Instrument :
MSVOA_I
ClientSampleId :
BFB32

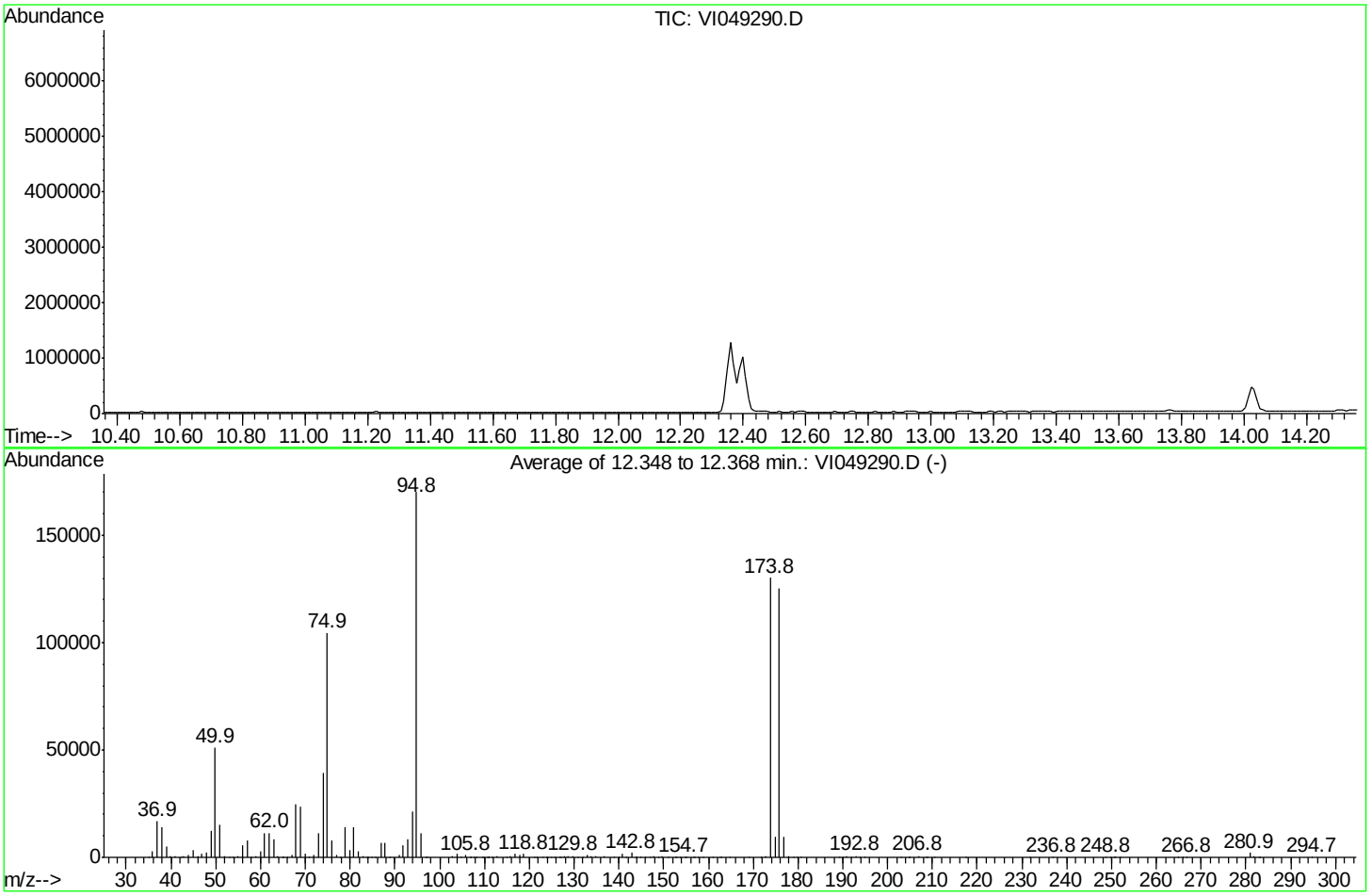
BFB

Data Path : W:\HPCHEM1\MSVOA I\Data\VI050916\
Data File : VI049290.D
Acq On : 9 May 2016 9:50
Operator : FY/SY
Sample : BFB35
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB35

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Tue May 10 06:11:38 2016



AutoFind: Scans 1130, 1131, 1132; Background Corrected with Scan 1126

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	29.9	50925	PASS
75	95	30	80	61.4	104469	PASS
95	95	100	100	100.0	170060	PASS
96	95	5	9	6.7	11422	PASS
173	174	0.00	2	0.5	648	PASS
174	95	50	120	76.6	130256	PASS
175	174	5	9	7.2	9369	PASS
176	174	95	101	96.0	125084	PASS
177	176	5	9	7.6	9536	PASS

Scan 1126 (12.309 min): VI049290.D
BFB35

m/z	Abundance
35.75	434.0
36.35	158.0
36.75	200.0
37.90	382.0
38.40	323.0
39.00	440.0
39.90	754.0
40.90	643.0
41.75	378.0
42.95	705.0
43.95	3669.0
44.85	762.0
47.00	176.0
47.60	173.0
49.75	171.0
50.95	252.0
54.80	461.0
57.05	313.0
58.85	496.0
59.90	187.0
62.85	366.0
65.05	355.0
66.60	165.0
72.95	4254.0
73.90	364.0
74.90	349.0
77.05	231.0
77.85	461.0
79.05	313.0
80.90	193.0
84.75	167.0
87.70	199.0
90.10	192.0
92.05	225.0
92.65	271.0
93.85	172.0
94.70	158.0
95.90	295.0
97.70	195.0
102.80	311.0
104.90	243.0
114.75	190.0
115.85	212.0
118.60	199.0
124.80	215.0
126.10	290.0
130.70	202.0
132.90	687.0
136.85	184.0
146.90	364.0
154.10	152.0
156.95	222.0
169.95	207.0
175.90	180.0
176.95	309.0
181.00	156.0
189.70	172.0
190.85	331.0
192.95	396.0
195.10	188.0
205.75	173.0
206.95	1950.0
207.85	663.0
217.80	205.0
220.85	173.0
222.60	233.0
231.80	170.0
260.00	271.0
264.65	155.0
266.70	190.0
280.90	859.0
281.60	214.0
281.90	193.0
282.95	166.0
283.85	172.0

Instrument :
MSVOA_I
ClientSampleId :
BFB35

Scan 1130 (12.348 min): VI049290.D
BFB35

Instrument :
MSVOA_I
ClientSampleId :
BFB35

m/z	Abundance
35.95	3657.0
36.95	17104.0
37.90	14263.0
39.00	5888.0
39.90	1612.0
40.80	338.0
41.10	382.0
41.85	492.0
42.95	1005.0
43.95	4753.0
44.90	3238.0
46.00	258.0
46.90	1626.0
47.90	2359.0
48.95	11648.0
49.95	48616.0
50.95	14728.0
51.85	609.0
53.00	172.0
53.90	239.0
55.00	998.0
55.95	4630.0
56.95	7591.0
57.85	243.0
58.95	642.0
59.90	2048.0
60.90	10781.0
62.00	9843.0
62.95	9485.0
63.95	979.0
64.75	260.0
65.25	189.0
67.00	1055.0
67.90	23296.0
68.90	21512.0
69.85	2151.0
70.85	204.0
71.85	1104.0
72.95	11484.0
73.90	32680.0
74.90	89184.0
76.00	7574.0
76.80	1281.0
77.75	665.0
78.85	12121.0
79.85	2513.0
80.80	13051.0
81.80	2454.0
82.90	315.0
84.85	267.0
85.75	176.0
86.85	5739.0
87.90	4549.0
90.90	1009.0
91.95	5454.0
92.95	7213.0
93.95	18080.0
94.90	142848.0
95.90	10247.0
96.80	428.0
102.90	376.0
103.90	1500.0
104.80	399.0
105.75	842.0
106.75	300.0
107.65	179.0
108.15	204.0
109.90	478.0
110.60	218.0
112.75	269.0
114.85	220.0
116.00	1051.0
116.80	1313.0
117.90	855.0
118.80	1298.0
121.05	169.0
121.85	196.0
126.10	151.0
127.85	526.0
128.85	475.0
129.75	719.0
130.90	332.0
131.90	158.0
132.90	1044.0
134.85	413.0
136.95	730.0
140.75	1677.0
142.85	1000.0
145.80	150.0
146.90	347.0
147.80	249.0
149.75	189.0

154.70	308.0
156.65	229.0
157.85	187.0
158.80	153.0
162.55	373.0
172.90	504.0
173.80	77296.0
174.90	5271.0
175.80	74224.0
176.75	5415.0
177.85	261.0
190.85	498.0
191.75	205.0
192.95	230.0
194.90	165.0
204.75	172.0
206.85	1922.0
207.85	393.0
208.60	401.0
231.90	241.0
250.55	168.0
266.70	232.0
280.80	620.0
281.80	402.0
283.05	154.0
294.70	155.0

Instrument :
MSVOA_I
ClientSampleId :
BFB35

Scan 1131 (12.358 min): VI049290.D
BFB35

m/z	Abundance
35.05	170.0
35.95	3706.0
36.95	21632.0
37.90	19256.0
39.00	6802.0
40.00	1337.0
41.00	637.0
42.15	531.0
42.85	1021.0
43.95	5439.0
44.90	4031.0
45.90	477.0
46.90	2532.0
47.90	2551.0
48.95	16920.0
49.95	66768.0
50.95	20744.0
51.95	1226.0
53.00	300.0
55.00	1741.0
55.95	7867.0
56.95	10308.0
57.85	430.0
58.95	555.0
59.90	4083.0
61.00	14409.0
62.00	14279.0
62.95	10074.0
63.95	789.0
64.95	257.0
65.95	184.0
66.90	876.0
67.90	32872.0
69.00	30432.0
69.85	2743.0
70.95	349.0
71.95	1540.0
72.95	18960.0
73.90	54400.0
74.90	139904.0
76.00	11123.0
76.85	2127.0
77.85	946.0
78.85	18432.0
79.85	4186.0
80.80	17536.0
81.90	4166.0
82.90	500.0
84.05	177.0
86.85	9807.0
87.80	8777.0
90.90	1723.0
91.95	7363.0
92.95	11042.0
93.95	26864.0
94.90	221568.0
95.90	15184.0
96.80	407.0
102.90	478.0
103.80	2147.0
104.70	589.0
105.85	1304.0
106.95	224.0
109.80	214.0
110.80	438.0
111.80	398.0
112.75	381.0
114.85	235.0
115.85	1248.0
116.80	2359.0
117.80	1012.0
118.80	2225.0
121.65	161.0
122.95	223.0
124.00	179.0
124.80	174.0
125.80	167.0
126.00	184.0
126.65	244.0
127.75	721.0
128.75	593.0
129.85	857.0
130.90	600.0
131.80	219.0
132.80	874.0
133.75	553.0
134.85	1133.0
136.85	856.0
139.80	229.0
140.75	2476.0
141.65	388.0
142.75	2869.0

Instrument :
MSVOA_I
ClientSampleId :
BFB35

143.85	165.0
144.80	241.0
145.80	219.0
146.80	521.0
147.85	690.0
148.85	281.0
149.65	419.0
151.05	170.0
152.50	232.0
153.80	236.0
154.70	522.0
156.85	647.0
158.80	344.0
160.80	284.0
162.85	219.0
164.75	185.0
169.85	346.0
171.75	168.0
172.80	653.0
173.80	174976.0
174.80	13493.0
175.80	161600.0
176.75	12967.0
177.75	701.0
190.95	424.0
191.85	195.0
192.95	492.0
193.85	313.0
204.95	157.0
206.85	2692.0
207.95	463.0
208.90	494.0
217.50	151.0
231.70	179.0
236.80	187.0
266.80	226.0
280.80	893.0
281.90	461.0
283.15	153.0

Instrument :
MSVOA_I
ClientSampleId :
BFB35

Scan 1132 (12.368 min): VI049290.D
BFB35

Instrument :
MSVOA_I
ClientSampleId :
BFB35

m/z	Abundance
35.95	2656.0
36.95	12344.0
37.90	9828.0
39.00	4107.0
39.90	1502.0
41.00	933.0
41.85	530.0
42.85	1132.0
43.95	4767.0
44.90	4885.0
46.00	875.0
46.90	1678.0
47.90	1070.0
48.85	9299.0
49.95	37904.0
50.95	10858.0
51.95	443.0
52.80	209.0
55.00	1183.0
55.85	3709.0
56.95	7017.0
58.85	1982.0
60.00	2469.0
61.00	9314.0
62.00	10437.0
62.95	6505.0
63.85	702.0
64.95	432.0
66.90	682.0
67.90	18744.0
68.90	19448.0
69.85	900.0
72.05	1304.0
72.95	16584.0
73.90	32704.0
74.90	85368.0
76.00	5730.0
76.95	1367.0
77.85	682.0
78.85	12255.0
79.85	3216.0
80.80	11479.0
81.90	2667.0
82.90	207.0
83.70	185.0
84.85	541.0
85.65	269.0
86.85	5284.0
87.80	6754.0
88.80	570.0
90.00	168.0
90.90	591.0
91.85	5086.0
92.95	7312.0
93.95	19664.0
94.90	146240.0
96.00	9720.0
97.10	245.0
102.90	1483.0
103.80	1641.0
104.80	590.0
105.85	666.0
106.85	350.0
109.50	428.0
111.00	505.0
111.60	251.0
112.85	311.0
114.85	788.0
115.75	814.0
116.80	1063.0
117.90	1082.0
118.80	1946.0
120.95	156.0
123.70	175.0
124.90	1312.0
126.00	240.0
126.95	218.0
127.85	468.0
128.65	399.0
129.85	966.0
130.70	209.0
131.80	155.0
132.90	2821.0
133.85	679.0
134.95	842.0
136.95	868.0
138.90	183.0
139.90	164.0
140.85	1618.0
141.65	195.0
142.85	2487.0
144.05	215.0

144.80	190.0
145.70	194.0
146.80	837.0
147.85	480.0
148.75	440.0
149.85	318.0
152.80	276.0
154.20	162.0
154.95	251.0
156.75	576.0
157.75	184.0
158.70	212.0
160.90	504.0
162.95	481.0
164.85	478.0
169.00	249.0
169.95	151.0
172.70	788.0
173.80	138496.0
174.80	9344.0
175.80	139968.0
176.85	11153.0
177.75	452.0
178.85	847.0
179.80	204.0
180.70	155.0
189.20	276.0
190.10	158.0
190.85	1778.0
191.85	384.0
192.85	2185.0
193.85	571.0
194.80	202.0
202.80	215.0
204.85	345.0
206.85	3038.0
208.05	571.0
209.00	271.0
210.50	187.0
231.80	232.0
248.75	595.0
249.75	154.0
250.75	176.0
251.90	157.0
259.80	184.0
264.75	809.0
265.90	174.0
266.80	664.0
280.90	7180.0
281.90	2064.0
282.85	1265.0
283.85	343.0

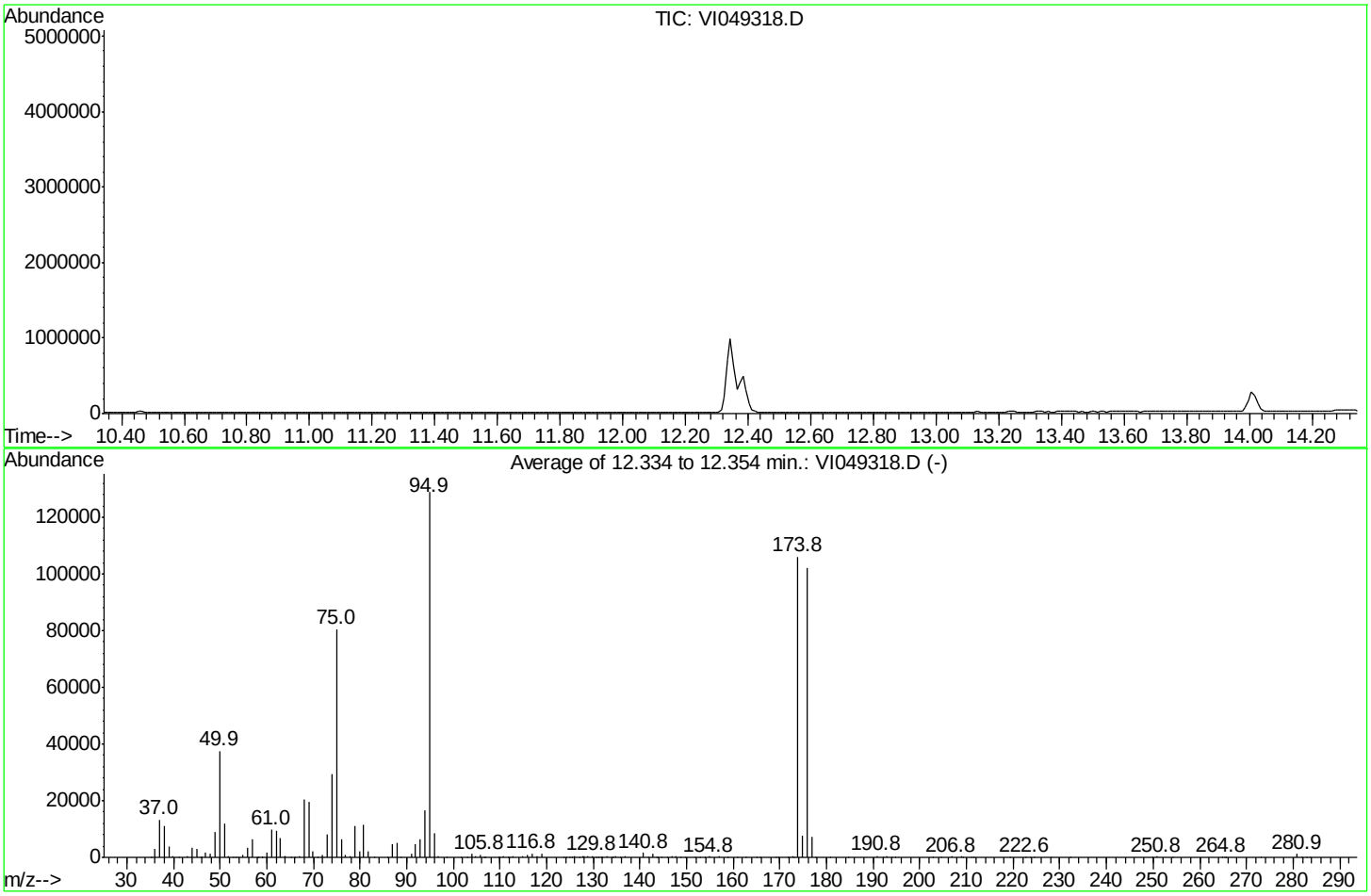
Instrument :
MSVOA_I
ClientSampleId :
BFB35

Data Path : W:\HPCHEM1\MSVOA I\Data\VI051016\
Data File : VI049318.D
Acq On : 10 May 2016 10:13
Operator : FY/SY
Sample : BFB36
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB36

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Wed May 11 03:50:36 2016



AutoFind: Scans 1128, 1129, 1130; Background Corrected with Scan 1124

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	29.2	37676	PASS
75	95	30	80	62.5	80565	PASS
95	95	100	100	100.0	128893	PASS
96	95	5	9	6.6	8570	PASS
173	174	0.00	2	0.5	502	PASS
174	95	50	120	82.2	106000	PASS
175	174	5	9	7.2	7598	PASS
176	174	95	101	96.3	102042	PASS
177	176	5	9	7.0	7094	PASS

Scan 1124 (12.294 min): VI049318.D
BFB36

m/z	Abundance
35.65	195.0
38.80	276.0
39.80	669.0
40.90	618.0
42.05	263.0
43.15	191.0
43.95	1805.0
44.90	235.0
48.00	190.0
49.85	225.0
50.95	357.0
52.00	169.0
59.05	154.0
60.70	192.0
65.15	160.0
69.50	155.0
73.05	1267.0
73.80	344.0
74.90	219.0
75.70	232.0
77.95	202.0
81.80	220.0
94.05	187.0
96.00	429.0
98.85	162.0
103.00	224.0
117.90	187.0
119.75	186.0
132.90	267.0
134.75	170.0
178.95	322.0
191.05	384.0
192.65	188.0
206.85	1484.0
207.95	503.0
218.60	178.0
220.65	170.0
224.00	168.0
226.75	158.0
232.70	155.0
248.75	163.0
266.70	272.0
280.80	767.0
281.90	349.0
282.75	285.0

Instrument :
MSVOA_I
ClientSampleId :
BFB36

Scan 1128 (12.334 min): VI049318.D
BFB36

Instrument :
MSVOA_I
ClientSampleId :
BFB36

m/z	Abundance
35.95	3472.0
36.95	15493.0
38.00	12875.0
39.00	4030.0
39.90	867.0
40.80	670.0
42.95	464.0
43.95	4981.0
44.90	2841.0
46.10	267.0
46.90	2194.0
47.90	2168.0
48.95	9984.0
49.95	43088.0
50.95	13487.0
51.85	574.0
53.20	165.0
55.00	691.0
55.95	4067.0
56.95	7094.0
57.85	335.0
59.90	1844.0
61.00	10215.0
62.00	9871.0
62.95	6543.0
63.75	558.0
64.05	560.0
64.95	299.0
65.95	332.0
67.00	369.0
67.90	20112.0
69.00	21912.0
69.95	2066.0
70.85	294.0
71.95	1069.0
72.95	8966.0
73.90	28944.0
75.00	84760.0
76.00	6891.0
76.95	862.0
77.85	672.0
78.85	11035.0
79.85	1984.0
80.80	12316.0
81.80	2511.0
82.90	404.0
85.95	314.0
86.85	4158.0
87.90	5085.0
90.90	996.0
91.85	4706.0
92.95	5899.0
93.95	15307.0
94.90	124568.0
95.90	8826.0
96.80	420.0
98.45	171.0
101.55	166.0
103.90	1388.0
104.90	313.0
105.85	1156.0
106.55	173.0
109.80	312.0
110.80	219.0
112.00	204.0
114.95	171.0
115.90	523.0
116.80	1326.0
118.00	255.0
118.90	957.0
123.70	158.0
124.90	181.0
125.80	163.0
127.75	514.0
128.85	265.0
129.75	492.0
132.90	338.0
134.85	341.0
135.75	219.0
137.05	308.0
140.85	1274.0
141.75	250.0
142.75	1134.0
143.55	202.0
146.70	160.0
147.70	301.0
148.75	326.0
152.90	162.0
153.80	323.0
154.80	228.0
160.80	261.0
165.70	196.0

169.00	169.0
171.65	156.0
172.65	307.0
173.80	76288.0
174.80	5989.0
175.80	74544.0
176.85	4983.0
177.75	173.0
190.85	342.0
192.95	333.0
194.00	281.0
206.85	1533.0
207.85	442.0
208.90	289.0
223.60	169.0
224.50	179.0
250.90	178.0
273.10	194.0
281.00	477.0

Instrument :
MSVOA_I
ClientSampleId :
BFB36

Scan 1129 (12.344 min): VI049318.D
BFB36

Instrument :
MSVOA_I
ClientSampleId :
BFB36

m/z	Abundance
35.15	258.0
35.95	3886.0
36.95	15413.0
38.00	13754.0
39.00	5349.0
39.90	1100.0
41.10	317.0
42.85	453.0
43.95	6491.0
44.90	3327.0
45.80	296.0
46.90	1831.0
47.90	1484.0
48.95	10837.0
49.95	46552.0
50.95	14688.0
51.85	862.0
53.90	176.0
54.90	1130.0
55.95	4620.0
56.95	8482.0
57.95	355.0
58.85	241.0
60.00	2415.0
60.90	12465.0
62.00	12194.0
62.95	9608.0
63.85	1045.0
65.05	336.0
65.95	231.0
67.00	618.0
67.90	26032.0
68.90	23840.0
69.95	2486.0
71.95	871.0
72.95	11353.0
73.90	39024.0
75.00	100568.0
76.00	7818.0
76.80	1049.0
77.95	1149.0
78.85	13719.0
79.95	3233.0
80.80	14155.0
81.80	3256.0
83.00	180.0
86.85	6399.0
87.80	6723.0
91.00	1529.0
91.85	5430.0
92.95	8510.0
93.95	23720.0
94.90	164928.0
95.90	11401.0
96.80	463.0
102.80	184.0
103.80	1470.0
104.80	684.0
105.75	988.0
106.75	454.0
109.90	326.0
110.80	439.0
111.60	230.0
112.75	453.0
114.85	571.0
115.75	976.0
116.80	1401.0
117.80	922.0
118.80	1081.0
124.00	192.0
125.00	151.0
125.90	593.0
127.05	200.0
127.65	569.0
127.95	484.0
128.95	445.0
129.75	661.0
130.80	404.0
131.60	244.0
132.80	518.0
134.15	282.0
134.85	583.0
136.85	397.0
140.75	2298.0
142.85	2243.0
143.85	201.0
145.70	370.0
146.80	327.0
147.80	509.0
148.65	175.0
149.75	264.0
151.70	196.0

152.70	153.0
154.90	515.0
156.85	615.0
158.80	265.0
160.70	351.0
164.95	154.0
171.85	364.0
172.70	602.0
172.90	614.0
173.80	140288.0
174.80	10516.0
175.80	133952.0
176.75	8956.0
177.65	173.0
190.75	466.0
192.75	261.0
206.95	1908.0
207.95	372.0
208.80	289.0
211.60	155.0
222.60	202.0
228.15	159.0
250.80	176.0
264.75	199.0
281.00	974.0
282.75	180.0

Instrument :
MSVOA_I
ClientSampleId :
BFB36

Scan 1130 (12.354 min): VI049318.D
BFB36

Instrument :
MSVOA_I
ClientSampleId :
BFB36

m/z	Abundance
35.85	1436.0
37.05	8768.0
37.90	7072.0
39.00	2771.0
39.90	1001.0
40.80	236.0
41.85	444.0
42.95	859.0
43.85	4336.0
44.90	3408.0
45.90	362.0
46.90	1127.0
47.80	942.0
48.95	5733.0
49.95	24064.0
50.95	8087.0
51.75	243.0
52.10	437.0
52.80	166.0
55.00	909.0
55.95	2034.0
56.95	3885.0
58.15	214.0
59.05	724.0
59.80	1196.0
61.00	6496.0
62.00	6236.0
62.95	4686.0
63.95	349.0
66.90	390.0
67.90	14987.0
69.00	13009.0
69.95	1975.0
70.75	303.0
71.95	826.0
72.95	8367.0
73.90	21136.0
74.90	57024.0
75.90	4346.0
76.85	752.0
77.75	485.0
78.85	8304.0
79.85	1739.0
80.80	8370.0
81.80	1781.0
86.95	3115.0
87.90	3600.0
88.80	322.0
91.00	1143.0
91.95	3480.0
92.95	4775.0
93.95	11982.0
94.90	97184.0
95.90	6772.0
96.90	292.0
102.90	544.0
103.90	1235.0
104.80	339.0
105.65	530.0
106.75	168.0
109.60	256.0
110.70	280.0
111.80	166.0
112.55	253.0
114.85	807.0
115.75	435.0
115.90	442.0
116.90	1208.0
117.80	686.0
118.80	1697.0
124.90	283.0
125.50	210.0
127.85	395.0
128.85	414.0
129.85	502.0
130.60	286.0
131.20	257.0
131.80	263.0
132.90	1498.0
133.85	426.0
134.75	454.0
136.75	287.0
140.85	1286.0
141.75	219.0
142.75	1118.0
144.60	161.0
145.80	233.0
146.70	426.0
147.70	396.0
149.55	303.0
153.80	231.0
154.70	288.0

156.85	216.0
158.90	231.0
162.75	382.0
164.85	301.0
169.75	227.0
172.70	597.0
173.80	101424.0
174.80	6289.0
175.80	97632.0
176.75	7345.0
177.75	232.0
178.95	382.0
180.70	150.0
184.75	161.0
190.75	1079.0
192.15	491.0
192.95	900.0
194.00	325.0
194.80	190.0
202.70	203.0
204.65	208.0
206.95	2237.0
207.85	546.0
208.80	428.0
209.30	267.0
210.90	294.0
219.15	153.0
232.20	163.0
248.75	291.0
249.85	214.0
250.65	396.0
254.30	152.0
264.75	233.0
265.20	189.0
265.60	168.0
266.70	227.0
280.90	4278.0
281.90	1195.0
282.85	740.0
283.75	183.0

Instrument :
MSVOA_I
ClientSampleId :
BFB36

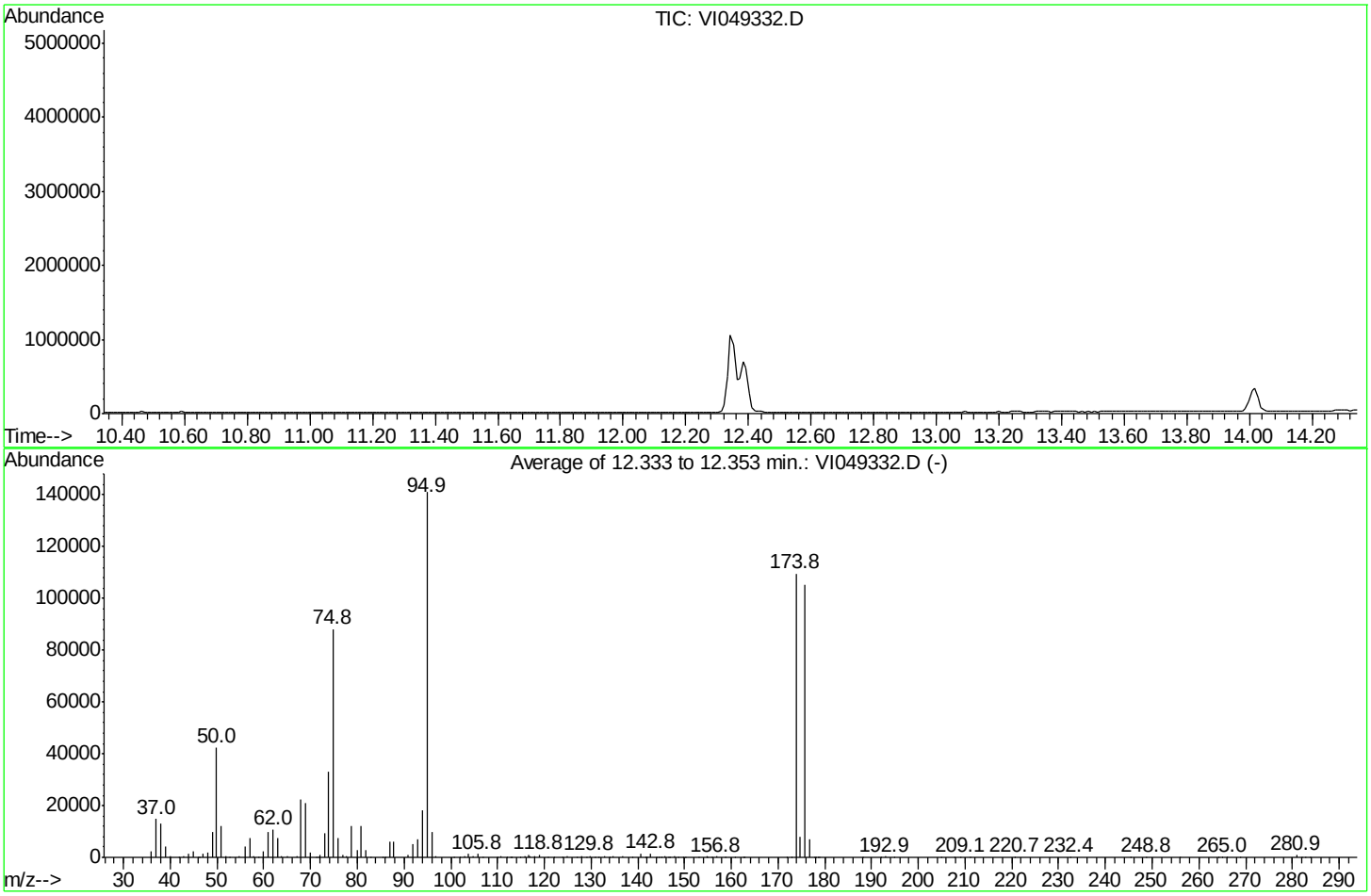
BFB

Data Path : W:\HPCHEM1\MSVOA I\Data\VI051116\
Data File : VI049332.D
Acq On : 11 May 2016 10:00
Operator : FY/SY
Sample : BFB37
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB37

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Thu May 12 06:03:43 2016



AutoFind: Scans 1128, 1129, 1130; Background Corrected with Scan 1124

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	30.0	42346	PASS
75	95	30	80	62.5	88238	PASS
95	95	100	100	100.0	141072	PASS
96	95	5	9	6.9	9702	PASS
173	174	0.00	2	0.2	240	PASS
174	95	50	120	77.7	109669	PASS
175	174	5	9	7.2	7865	PASS
176	174	95	101	95.9	105146	PASS
177	176	5	9	6.8	7103	PASS

Scan 1124 (12.294 min): VI049332.D
BFB37

m/z	Abundance
35.55	285.0
35.95	294.0
37.45	306.0
38.90	539.0
39.90	488.0
41.00	588.0
41.85	200.0
42.95	305.0
43.85	3577.0
45.00	483.0
46.10	227.0
48.65	207.0
50.95	518.0
52.00	202.0
53.10	236.0
54.00	188.0
55.00	308.0
58.75	320.0
65.95	177.0
69.00	236.0
72.95	1168.0
74.80	308.0
76.85	283.0
77.15	261.0
77.95	267.0
78.75	193.0
88.90	168.0
94.05	367.0
95.90	264.0
104.70	158.0
108.25	227.0
119.00	339.0
125.70	258.0
128.85	167.0
132.70	342.0
134.05	209.0
151.35	163.0
164.95	187.0
169.55	206.0
176.85	225.0
184.25	174.0
190.85	651.0
192.75	376.0
206.85	1995.0
207.95	368.0
208.80	230.0
231.70	164.0
243.45	342.0
249.05	160.0
266.80	447.0
267.80	170.0
277.65	197.0
280.80	864.0
282.00	249.0
282.70	240.0
295.30	177.0

Instrument :
MSVOA_I
ClientSampleId :
BFB37

Scan 1128 (12.333 min): VI049332.D
BFB37

Instrument :
MSVOA_I
ClientSampleId :
BFB37

m/z	Abundance
35.85	2377.0
36.95	12487.0
37.90	9436.0
39.00	4169.0
39.90	1039.0
41.00	373.0
41.95	406.0
42.95	395.0
43.95	3608.0
44.90	1948.0
46.00	348.0
46.90	1166.0
47.90	987.0
48.95	8269.0
49.95	30280.0
50.95	9090.0
51.95	381.0
54.80	267.0
55.95	2329.0
56.95	5451.0
57.85	632.0
59.90	1642.0
61.00	6174.0
62.00	7406.0
62.95	5525.0
63.85	706.0
65.05	371.0
67.00	436.0
67.90	14280.0
69.00	15782.0
69.95	1178.0
71.15	202.0
71.85	680.0
72.95	6643.0
73.90	22448.0
74.90	62120.0
75.90	5800.0
76.85	736.0
77.85	424.0
78.85	8817.0
79.95	1732.0
80.80	8182.0
81.80	1541.0
82.80	163.0
85.35	169.0
86.85	3328.0
87.80	4592.0
90.80	878.0
91.95	2976.0
92.85	4173.0
93.95	12150.0
94.90	88176.0
95.90	7218.0
96.90	331.0
102.90	271.0
103.90	525.0
104.90	356.0
105.85	615.0
106.75	200.0
110.80	152.0
112.95	157.0
114.95	244.0
115.90	408.0
116.70	701.0
117.80	432.0
118.80	878.0
122.15	219.0
123.80	233.0
124.90	161.0
127.05	198.0
127.95	323.0
129.75	442.0
130.90	191.0
132.90	162.0
133.85	229.0
134.75	338.0
136.85	481.0
140.85	622.0
141.75	433.0
142.85	746.0
146.60	177.0
147.70	204.0
154.70	202.0
154.90	208.0
156.85	365.0
160.80	220.0
172.70	322.0
173.80	49520.0
174.80	2833.0
175.80	45584.0
176.75	3176.0
188.00	167.0

190.75	493.0
192.75	564.0
206.85	1701.0
207.75	318.0
245.40	152.0
265.10	160.0
266.90	188.0
268.85	163.0
280.70	567.0
281.10	460.0
281.90	254.0
282.85	183.0

Instrument :
MSVOA_I
ClientSampleId :
BFB37

Scan 1129 (12.343 min): VI049332.D
BFB37

Instrument :
MSVOA_I
ClientSampleId :
BFB37

m/z	Abundance
35.95	3887.0
36.95	19328.0
38.00	17488.0
38.90	5483.0
40.00	1273.0
40.90	596.0
41.75	161.0
42.85	1175.0
43.95	5933.0
44.90	2995.0
46.20	537.0
46.90	2154.0
47.90	2307.0
48.95	13880.0
49.95	57088.0
50.95	15625.0
51.85	463.0
54.80	885.0
55.85	4897.0
56.95	10148.0
57.85	763.0
58.95	311.0
60.00	2679.0
61.00	13053.0
62.00	13813.0
62.95	10004.0
63.85	701.0
64.95	398.0
66.15	178.0
67.00	855.0
67.90	29792.0
68.90	25792.0
69.85	2462.0
72.05	1985.0
72.95	12344.0
73.90	44080.0
74.90	113424.0
76.00	8921.0
76.85	1605.0
77.85	1156.0
78.85	16013.0
79.85	3502.0
80.80	16976.0
81.90	3350.0
85.85	161.0
86.85	7074.0
87.90	6191.0
90.80	1687.0
91.95	6438.0
92.95	9499.0
93.95	22632.0
94.90	185536.0
95.90	12112.0
96.90	443.0
100.75	213.0
102.00	196.0
102.80	262.0
103.80	1412.0
104.80	585.0
105.85	1610.0
106.85	250.0
109.90	469.0
110.70	401.0
112.00	391.0
112.65	322.0
114.75	265.0
115.90	812.0
116.90	1534.0
117.80	501.0
118.90	1230.0
123.80	276.0
127.85	913.0
128.75	336.0
129.75	771.0
130.80	215.0
131.50	164.0
132.90	528.0
133.85	156.0
134.75	253.0
136.75	540.0
138.80	182.0
140.75	2150.0
141.95	299.0
142.85	2123.0
143.85	170.0
144.60	192.0
145.80	517.0
146.90	224.0
147.80	653.0
152.90	175.0
154.80	504.0
156.75	510.0

158.90	345.0
162.55	297.0
164.75	169.0
171.85	154.0
173.80	138240.0
174.80	10410.0
175.80	130464.0
176.75	8839.0
177.95	215.0
178.65	154.0
190.85	172.0
192.55	181.0
206.95	1326.0
207.95	277.0
209.20	184.0
232.40	189.0
266.80	243.0
280.70	699.0
281.90	260.0
282.70	159.0

Instrument :
MSVOA_I
ClientSampleId :
BFB37

Scan 1130 (12.353 min): VI049332.D
BFB37

Instrument :
MSVOA_I
ClientSampleId :
BFB37

m/z	Abundance
35.95	2114.0
36.95	12664.0
37.90	12026.0
38.90	4085.0
39.80	916.0
40.90	788.0
41.95	253.0
42.95	838.0
43.95	5621.0
45.00	3670.0
46.10	299.0
46.90	1522.0
47.90	1855.0
48.95	7944.0
49.95	39672.0
50.95	12763.0
51.95	963.0
52.60	170.0
53.80	151.0
54.90	874.0
55.85	5332.0
56.95	7107.0
57.95	415.0
58.85	792.0
60.00	2078.0
61.00	9499.0
62.00	10427.0
62.95	7546.0
63.95	385.0
67.00	284.0
67.90	22768.0
68.90	21704.0
69.85	1880.0
71.95	1387.0
72.95	12744.0
73.90	32944.0
74.90	90096.0
76.00	7966.0
76.95	1072.0
77.75	914.0
78.85	11985.0
79.85	3374.0
80.80	11722.0
81.90	2909.0
82.80	339.0
86.85	7984.0
87.80	7834.0
88.90	239.0
90.90	850.0
91.95	5367.0
92.95	7874.0
93.95	21256.0
94.90	149504.0
95.90	10568.0
96.90	551.0
102.80	526.0
103.80	1615.0
104.70	335.0
105.75	1349.0
109.90	212.0
110.80	324.0
111.90	318.0
112.85	248.0
114.75	206.0
115.90	568.0
116.70	1472.0
117.80	1200.0
118.90	1846.0
120.85	186.0
124.80	684.0
127.85	713.0
128.95	397.0
129.75	694.0
130.90	336.0
132.90	1262.0
133.95	328.0
134.75	594.0
136.85	636.0
140.75	1988.0
142.75	1898.0
143.95	197.0
145.00	189.0
145.70	298.0
146.70	244.0
147.85	334.0
148.75	433.0
149.75	182.0
150.05	249.0
154.80	355.0
155.75	153.0
156.85	422.0
158.70	395.0

160.80	318.0
162.75	280.0
164.85	334.0
171.95	172.0
172.80	399.0
173.80	141248.0
174.80	10353.0
175.80	139392.0
176.75	9970.0
177.65	357.0
178.85	184.0
190.85	946.0
191.85	334.0
192.95	1089.0
194.80	166.0
204.75	302.0
206.85	2131.0
207.85	786.0
209.00	411.0
211.00	185.0
220.65	164.0
231.80	202.0
248.75	395.0
255.85	161.0
264.05	160.0
264.95	186.0
266.10	161.0
266.80	293.0
280.90	2324.0
281.80	918.0
282.85	481.0
283.85	215.0

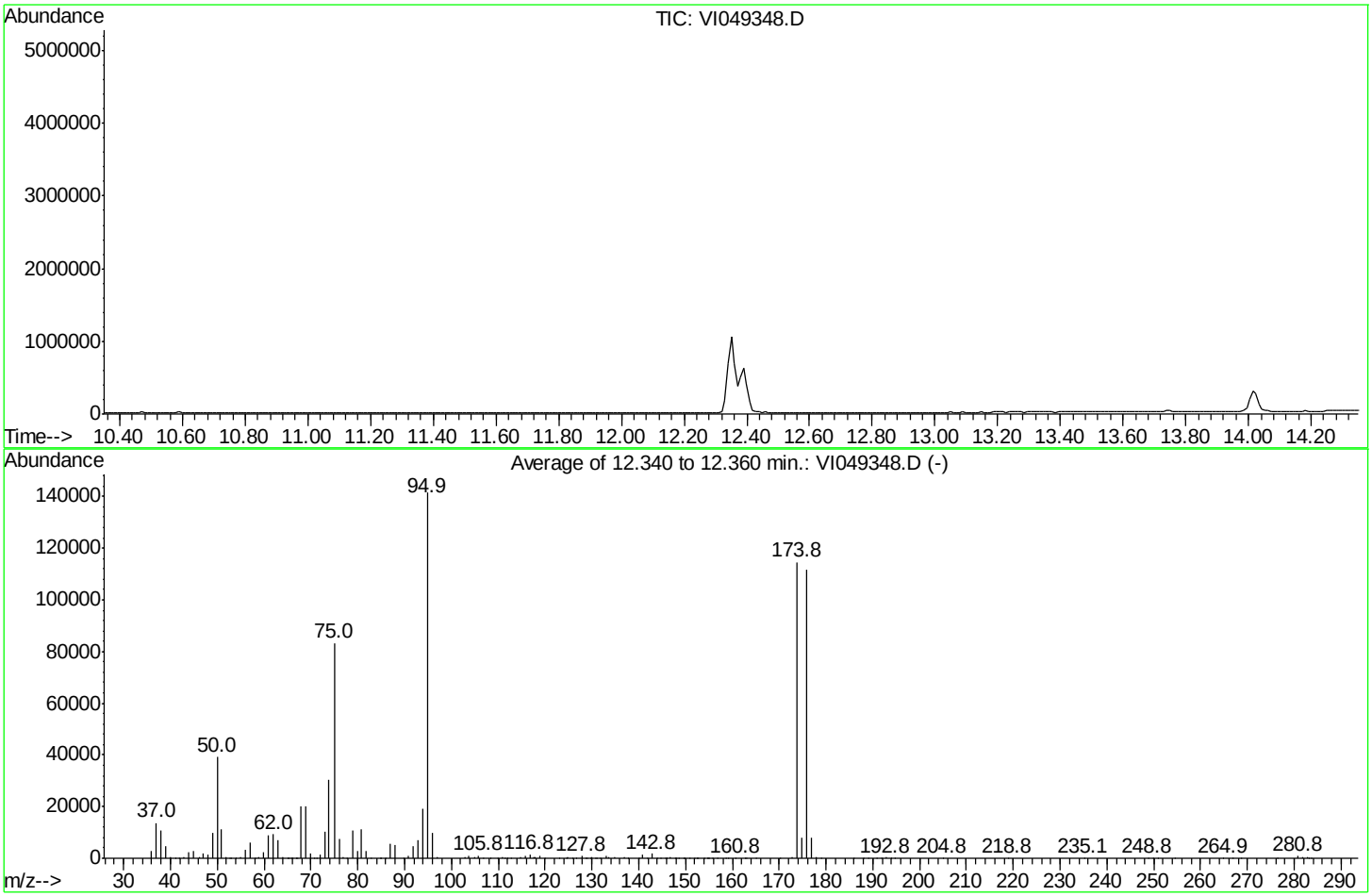
Instrument :
MSVOA_I
ClientSampleId :
BFB37

Data Path : W:\HPCHEM1\MSVOA I\Data\VI051216\
Data File : VI049348.D
Acq On : 12 May 2016 9:58
Operator : FY/SY
Sample : BFB38
Misc : 25mL/MSVOA I/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : BFB38

Integration File: LSCINT.P

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0
Last Update : Fri May 13 04:31:36 2016



AutoFind: Scans 1129, 1130, 1131; Background Corrected with Scan 1125

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.7	39208	PASS
75	95	30	80	58.8	83152	PASS
95	95	100	100	100.0	141482	PASS
96	95	5	9	6.9	9729	PASS
173	174	0.00	2	0.5	586	PASS
174	95	50	120	81.0	114557	PASS
175	174	5	9	6.9	7853	PASS
176	174	95	101	97.6	111770	PASS
177	176	5	9	7.0	7795	PASS

Scan 1125 (12.301 min): VI049348.D
BFB38

m/z	Abundance
35.65	246.0
36.25	178.0
38.00	334.0
38.90	518.0
39.90	784.0
40.90	388.0
42.95	472.0
43.95	2165.0
45.00	290.0
45.90	217.0
49.95	176.0
50.85	284.0
54.90	219.0
55.95	201.0
61.60	163.0
62.10	176.0
72.95	835.0
76.85	477.0
77.85	376.0
78.95	197.0
82.80	164.0
94.15	301.0
96.10	327.0
97.70	188.0
98.55	211.0
102.80	242.0
103.90	160.0
109.90	184.0
132.80	448.0
147.80	236.0
169.85	190.0
190.75	523.0
192.75	322.0
206.85	2203.0
207.85	609.0
209.00	252.0
222.80	163.0
248.85	164.0
261.10	171.0
266.90	209.0
280.80	1306.0
282.00	232.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

Scan 1129 (12.340 min): VI049348.D
BFB38

m/z	Abundance
35.95	2705.0
36.95	14958.0
38.00	13425.0
39.00	5592.0
39.90	1163.0
40.90	647.0
42.05	372.0
42.85	465.0
43.85	4577.0
44.90	3347.0
45.80	330.0
47.00	2293.0
47.90	1658.0
48.95	9385.0
49.95	39768.0
50.95	12085.0
52.10	647.0
55.00	745.0
55.95	3968.0
56.95	5959.0
58.05	162.0
58.95	312.0
59.90	2053.0
61.00	8326.0
62.00	9975.0
62.95	6965.0
63.95	584.0
66.80	680.0
67.90	21064.0
69.00	19248.0
69.95	2099.0
71.15	154.0
71.95	1231.0
72.95	8655.0
73.90	29464.0
75.00	78816.0
76.00	7725.0
76.80	1083.0
77.75	931.0
78.85	10378.0
79.95	2748.0
80.80	10858.0
81.80	2818.0
84.75	170.0
85.85	165.0
86.85	4704.0
87.90	3935.0
90.80	909.0
91.85	3400.0
92.95	6124.0
93.95	16082.0
94.90	123920.0
95.90	9211.0
96.90	594.0
102.80	191.0
103.90	1455.0
104.90	210.0
105.95	886.0
106.65	160.0
108.45	181.0
110.80	267.0
112.75	263.0
114.75	407.0
115.65	404.0
116.70	1129.0
117.70	466.0
119.00	483.0
119.95	231.0
124.60	168.0
125.90	180.0
127.85	715.0
128.75	245.0
129.65	663.0
132.80	560.0
134.85	278.0
136.85	564.0
140.75	1438.0
142.75	1743.0
145.70	173.0
147.00	285.0
147.70	366.0
152.50	182.0
154.10	178.0
154.95	279.0
172.70	396.0
173.80	78472.0
174.80	5361.0
175.80	73992.0
176.85	5400.0
185.95	234.0
189.10	156.0
190.85	289.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

191.75	166.0
192.95	428.0
206.85	1625.0
207.95	429.0
208.90	277.0
222.70	168.0
248.75	256.0
266.80	385.0
276.25	161.0
280.90	893.0
281.90	191.0
283.05	187.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

Scan 1130 (12.350 min): VI049348.D
BFB38

Instrument :
MSVOA_I
ClientSampleId :
BFB38

m/z	Abundance
35.95	3753.0
36.95	17648.0
38.00	12834.0
39.00	5406.0
40.00	792.0
41.10	548.0
41.85	235.0
42.85	856.0
43.95	4710.0
44.90	3012.0
46.20	477.0
46.90	2167.0
48.00	1963.0
48.95	13122.0
49.95	51640.0
50.95	14864.0
51.95	742.0
54.00	167.0
55.00	730.0
55.95	4714.0
56.95	7344.0
58.85	283.0
60.00	2639.0
60.90	12704.0
61.90	11739.0
62.95	9074.0
63.95	652.0
64.95	319.0
65.85	311.0
67.90	25104.0
69.00	28088.0
69.95	1888.0
71.05	240.0
71.95	1796.0
72.95	12146.0
73.90	37952.0
74.90	107888.0
76.00	9782.0
76.85	934.0
77.75	698.0
78.85	15130.0
79.95	3753.0
80.80	15332.0
81.80	3213.0
82.90	342.0
84.95	285.0
85.65	166.0
86.85	6940.0
87.80	7116.0
90.90	911.0
91.85	6685.0
92.95	8572.0
93.95	27080.0
94.90	190464.0
95.90	12777.0
96.90	564.0
102.90	634.0
103.80	1367.0
104.90	366.0
105.75	1250.0
106.75	294.0
109.70	392.0
110.90	239.0
111.90	243.0
112.75	272.0
114.75	200.0
115.75	1420.0
116.80	1946.0
117.90	801.0
118.80	1345.0
122.95	191.0
127.85	906.0
128.95	248.0
129.85	670.0
130.70	267.0
131.00	277.0
133.00	775.0
133.75	220.0
134.85	366.0
136.85	706.0
140.75	1516.0
141.95	188.0
142.85	1943.0
144.70	181.0
145.70	385.0
146.80	412.0
147.80	528.0
149.65	258.0
149.95	198.0
152.90	166.0
154.70	704.0
156.75	217.0

158.60	174.0
160.80	532.0
162.75	224.0
170.15	155.0
172.80	731.0
173.80	149888.0
174.90	10880.0
175.80	146944.0
176.85	9647.0
177.95	473.0
188.00	167.0
190.65	251.0
192.75	296.0
206.95	1632.0
207.75	476.0
208.70	158.0
264.85	182.0
266.60	284.0
280.80	1106.0
282.00	200.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

Scan 1131 (12.360 min): VI049348.D
BFB38

Instrument :
MSVOA_I
ClientSampleId :
BFB38

m/z	Abundance
35.85	2399.0
36.95	8754.0
37.90	6467.0
39.00	3971.0
39.90	1175.0
42.95	969.0
43.95	4407.0
45.00	3414.0
46.00	411.0
47.00	1572.0
48.00	1195.0
48.95	6588.0
49.95	26744.0
50.95	7053.0
51.95	260.0
52.70	197.0
53.00	176.0
55.00	685.0
55.95	2280.0
56.95	4832.0
57.95	380.0
58.95	849.0
60.00	1841.0
60.90	6012.0
62.00	6205.0
62.95	4896.0
64.05	458.0
65.15	210.0
66.05	352.0
67.00	559.0
67.90	14574.0
68.90	13403.0
69.95	1006.0
70.65	155.0
71.95	864.0
72.95	13200.0
73.90	23976.0
74.90	62752.0
76.00	5343.0
76.85	858.0
78.85	7220.0
79.95	2367.0
80.80	8034.0
81.90	1755.0
83.00	456.0
85.85	168.0
86.85	5117.0
87.80	4379.0
89.70	226.0
90.80	1233.0
91.95	4610.0
92.95	6068.0
93.95	15275.0
94.90	110064.0
95.90	8180.0
96.90	357.0
102.90	830.0
103.70	1038.0
105.00	333.0
105.75	828.0
109.80	307.0
111.00	398.0
111.50	289.0
112.00	229.0
112.55	217.0
114.75	503.0
115.85	596.0
116.70	1345.0
117.60	746.0
118.90	1317.0
124.90	1064.0
125.80	314.0
126.55	152.0
127.75	612.0
128.75	278.0
129.85	652.0
131.90	152.0
132.90	2048.0
133.60	650.0
134.85	873.0
136.85	373.0
137.80	169.0
139.90	184.0
140.85	1308.0
141.85	264.0
142.75	1498.0
143.85	263.0
144.80	218.0
145.90	475.0
146.70	523.0
147.60	445.0
147.95	315.0

148.65	221.0
149.85	157.0
150.75	178.0
152.00	152.0
152.70	334.0
153.90	252.0
154.80	549.0
155.65	152.0
156.75	206.0
159.00	347.0
160.60	182.0
162.65	184.0
163.05	185.0
164.95	180.0
172.70	631.0
173.80	115312.0
174.80	7320.0
175.80	114376.0
176.75	8338.0
177.75	593.0
178.85	477.0
190.85	1243.0
191.85	267.0
192.75	1459.0
193.85	257.0
194.60	264.0
204.85	223.0
206.85	3228.0
207.95	496.0
208.90	258.0
218.80	176.0
235.05	200.0
248.75	483.0
249.85	160.0
250.80	159.0
254.35	156.0
264.95	350.0
266.70	368.0
268.65	151.0
280.80	4107.0
281.90	1514.0
282.75	931.0
283.65	171.0

Instrument :
MSVOA_I
ClientSampleId :
BFB38

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK32

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0509WBL02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049304.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK32

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0509WBL02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049304.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK32

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0509WBL02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049304.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/09/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK32

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0509WBL02
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049304.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/09/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

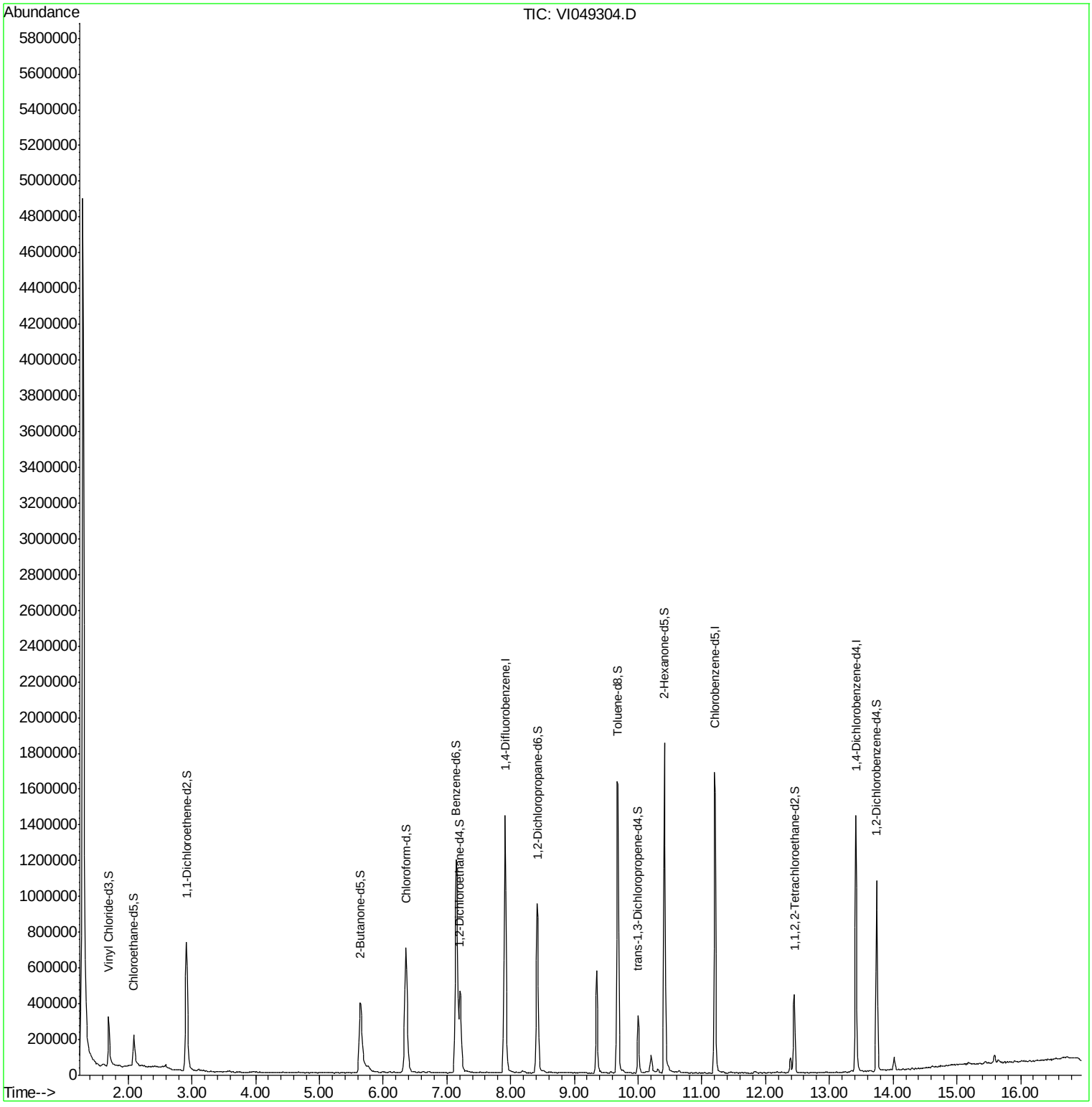
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049304.D
Acq On : 9 May 2016 19:05
Operator : FY/SY
Sample : VI0509WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK32

Quant Time: May 10 06:37:08 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049304.D
Acq On : 9 May 2016 19:05
Operator : FY/SY
Sample : VI0509WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK32

Quant Time: May 10 06:37:08 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Tue May 10 06:11:38 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1283482	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	856551	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.42	152	324066	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	302024	3.82	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 76.40%			
7) Chloroethane-d5	2.09	69	195083	4.46	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 89.20%			
11) 1,1-Dichloroethene-d2	2.91	63	559864	3.01	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 60.20%			
20) 2-Butanone-d5	5.64	46	926405	54.15	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 108.30%			
24) Chloroform-d	6.36	84	881841	4.39	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 87.80%			
26) 1,2-Dichloroethane-d4	7.20	65	403086	4.90	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.00%			
32) Benzene-d6	7.15	84	1559257	4.67	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 93.40%			
36) 1,2-Dichloropropane-d6	8.42	67	447595	4.77	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 95.40%			
41) Toluene-d8	9.69	98	1081145	4.39	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.80%			
43) trans-1,3-Dichloropropene-	10.00	79	154221	4.17	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 83.40%			
46) 2-Hexanone-d5	10.41	63	608634	52.20	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 104.40%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	200328	4.69	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 93.80%			
63) 1,2-Dichlorobenzene-d4	13.74	152	251697	4.43	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049304.D
Acq On : 9 May 2016 19:05
Operator : FY/SY
Sample : VI0509WBL02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK32

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.290	3	6	27	rVB	4839879	11030294	100.00%	25.016%
2	1.595	35	37	39	rBV3	8236	13054	0.12%	0.030%
3	1.693	44	47	62	rVB	273381	506822	4.59%	1.149%
4	2.038	79	82	84	rBV4	7540	16279	0.15%	0.037%
5	2.087	84	87	96	rVB	172829	384014	3.48%	0.871%
6	2.589	136	138	142	rVB4	21012	31534	0.29%	0.072%
7	2.914	166	171	185	rVB	721615	1618494	14.67%	3.671%
8	3.071	185	187	188	rVV2	5817	8068	0.07%	0.018%
9	3.111	189	191	193	rVV3	11969	19702	0.18%	0.045%
10	3.180	196	198	201	rVV3	7341	10715	0.10%	0.024%
11	3.219	201	202	206	rVB4	4093	6327	0.06%	0.014%
12	3.298	208	210	212	rVB3	4904	5398	0.05%	0.012%
13	3.367	216	217	221	rBV3	3139	7648	0.07%	0.017%
14	3.494	229	230	234	rBV4	3265	7180	0.07%	0.016%
15	3.563	235	237	238	rVV2	8102	8518	0.08%	0.019%
16	3.583	238	239	243	rVB4	7081	10819	0.10%	0.025%
17	3.928	271	274	275	rBV3	3585	6489	0.06%	0.015%
18	3.957	275	277	278	rVV2	5885	7116	0.06%	0.016%
19	4.006	281	282	287	rVB5	6502	10157	0.09%	0.023%
20	4.429	323	325	327	rVB3	5550	5741	0.05%	0.013%
21	4.489	327	331	333	rBV5	2932	7216	0.07%	0.016%
22	4.754	356	358	360	rVB2	4749	5790	0.05%	0.013%
23	4.813	360	364	367	rBV4	2819	7817	0.07%	0.018%
24	5.040	384	387	389	rBV4	3562	6566	0.06%	0.015%
25	5.177	400	401	406	rVB5	4531	8305	0.08%	0.019%
26	5.286	406	412	413	rBV5	4455	11031	0.10%	0.025%
27	5.384	418	422	424	rVB2	5658	10833	0.10%	0.025%
28	5.414	424	425	426	rBV	5298	5338	0.05%	0.012%
29	5.640	442	448	458	rBV	389907	1414066	12.82%	3.207%
30	5.886	471	473	477	rVB2	5246	10196	0.09%	0.023%
31	5.984	481	483	486	rBV3	4289	6039	0.05%	0.014%
32	6.112	492	496	498	rVB4	4134	8437	0.08%	0.019%
33	6.162	498	501	504	rBV4	4230	10253	0.09%	0.023%
34	6.231	506	508	511	rVB4	3692	7063	0.06%	0.016%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049304.D
Acq On : 9 May 2016 19:05
Operator : FY/SY
Sample : VI0509WBL02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK32

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.359	511	521	534	rBV	699338	2171429	19.69%	4.925%
36	6.624	545	548	553	rVB7	6950	17749	0.16%	0.040%
37	6.713	553	557	560	rBV5	7042	15921	0.14%	0.036%
38	6.870	572	573	576	rVV3	3716	5416	0.05%	0.012%
39	6.988	584	585	588	rVB3	4852	5992	0.05%	0.014%
40	7.057	588	592	594	rBV4	3896	11241	0.10%	0.025%
41	7.146	594	601	605	rBV	1193578	3216508	29.16%	7.295%
42	7.205	605	607	615	rVV	454468	1081766	9.81%	2.453%
43	7.293	615	616	618	rVV2	8347	12611	0.11%	0.029%
44	7.628	648	650	653	rBV3	4004	6284	0.06%	0.014%
45	7.914	673	679	689	rBV	1440732	3124670	28.33%	7.087%
46	8.179	703	706	709	rBV4	8650	21420	0.19%	0.049%
47	8.337	720	722	725	rBV4	3502	6168	0.06%	0.014%
48	8.415	725	730	745	rBV	945592	2153621	19.52%	4.884%
49	8.632	750	752	756	rVB5	5336	8406	0.08%	0.019%
50	8.740	762	763	766	rBV3	4973	7534	0.07%	0.017%
51	8.898	777	779	783	rVB5	2795	6533	0.06%	0.015%
52	8.957	783	785	787	rVB3	4739	6421	0.06%	0.015%
53	9.065	795	796	801	rBV4	3158	6387	0.06%	0.014%
54	9.173	805	807	811	rVB4	2840	6885	0.06%	0.016%
55	9.350	820	825	836	rBV	571228	1042972	9.46%	2.365%
56	9.478	836	838	842	rVB4	3553	7890	0.07%	0.018%
57	9.567	844	847	854	rBV6	7098	14053	0.13%	0.032%
58	9.675	854	858	865	rBV	1631152	3118018	28.27%	7.071%
59	10.000	887	891	898	rBV	322651	563731	5.11%	1.279%
60	10.138	900	905	906	rVV4	7623	21575	0.20%	0.049%
61	10.207	906	912	917	rVV	99237	237102	2.15%	0.538%
62	10.305	919	922	926	rVV5	23729	50504	0.46%	0.115%
63	10.413	929	933	945	rVV	1844590	3214657	29.14%	7.291%
64	10.541	945	946	949	rVV3	9387	16135	0.15%	0.037%
65	10.600	949	952	953	rVV2	7234	13928	0.13%	0.032%
66	10.640	953	956	961	rVV4	14489	37063	0.34%	0.084%
67	10.748	964	967	968	rVV3	5405	7180	0.07%	0.016%
68	10.837	973	976	978	rVB4	4079	5414	0.05%	0.012%
69	10.965	987	989	990	rBV2	5492	5825	0.05%	0.013%
70	11.201	1009	1013	1024	rBV	1682497	2986860	27.08%	6.774%
71	11.339	1024	1027	1030	rVB5	10252	18978	0.17%	0.043%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI050916\
Data File : VI049304.D
Acq On : 9 May 2016 19:05
Operator : FY/SY
Sample : VI0509WBL02
Misc : 25mL/MSVOA I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK32

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.457	1036	1039	1045	rVB6	6417	13384	0.12%	0.030%
73	11.555	1045	1049	1051	rVB4	4214	6821	0.06%	0.015%
74	11.673	1059	1061	1063	rVB3	4017	5881	0.05%	0.013%
75	11.703	1063	1064	1067	rBV3	3712	6112	0.06%	0.014%
76	11.850	1073	1079	1082	rBV6	10395	30458	0.28%	0.069%
77	11.978	1089	1092	1094	rVB4	5533	9649	0.09%	0.022%
78	12.047	1094	1099	1100	rBV5	4874	12489	0.11%	0.028%
79	12.185	1110	1113	1116	rVB4	7910	11930	0.11%	0.027%
80	12.254	1118	1120	1121	rBV	5302	5971	0.05%	0.014%
81	12.283	1121	1123	1126	rVB3	4956	6955	0.06%	0.016%
82	12.392	1126	1134	1136	rBV	85213	160575	1.46%	0.364%
83	12.451	1136	1140	1145	rVB	432115	742167	6.73%	1.683%
84	12.716	1163	1167	1168	rBV3	4443	8193	0.07%	0.019%
85	12.795	1172	1175	1176	rVB3	4239	5679	0.05%	0.013%
86	12.825	1176	1178	1182	rBV4	4547	9390	0.09%	0.021%
87	12.894	1182	1185	1186	rBV3	4516	6250	0.06%	0.014%
88	12.943	1189	1190	1193	rVB3	5347	6758	0.06%	0.015%
89	13.041	1196	1200	1201	rBV4	3276	5686	0.05%	0.013%
90	13.346	1227	1231	1234	rBV5	9516	21546	0.20%	0.049%
91	13.415	1234	1238	1246	rBV	1434135	2355613	21.36%	5.342%
92	13.740	1267	1271	1279	rBV	1067583	1895235	17.18%	4.298%
93	13.907	1286	1288	1289	rBV2	5647	7375	0.07%	0.017%
94	14.016	1295	1299	1304	rBV2	73544	136851	1.24%	0.310%
95	14.163	1310	1314	1315	rBV4	5074	10274	0.09%	0.023%
96	14.252	1319	1323	1325	rBV5	6428	13847	0.13%	0.031%
97	14.301	1325	1328	1331	rBV5	8293	16718	0.15%	0.038%
98	14.350	1331	1333	1334	rBV2	5791	7043	0.06%	0.016%
99	14.518	1348	1350	1351	rBV	4895	5335	0.05%	0.012%
100	15.590	1456	1459	1462	rBV2	42067	80565	0.73%	0.183%

Sum of corrected areas: 44092916

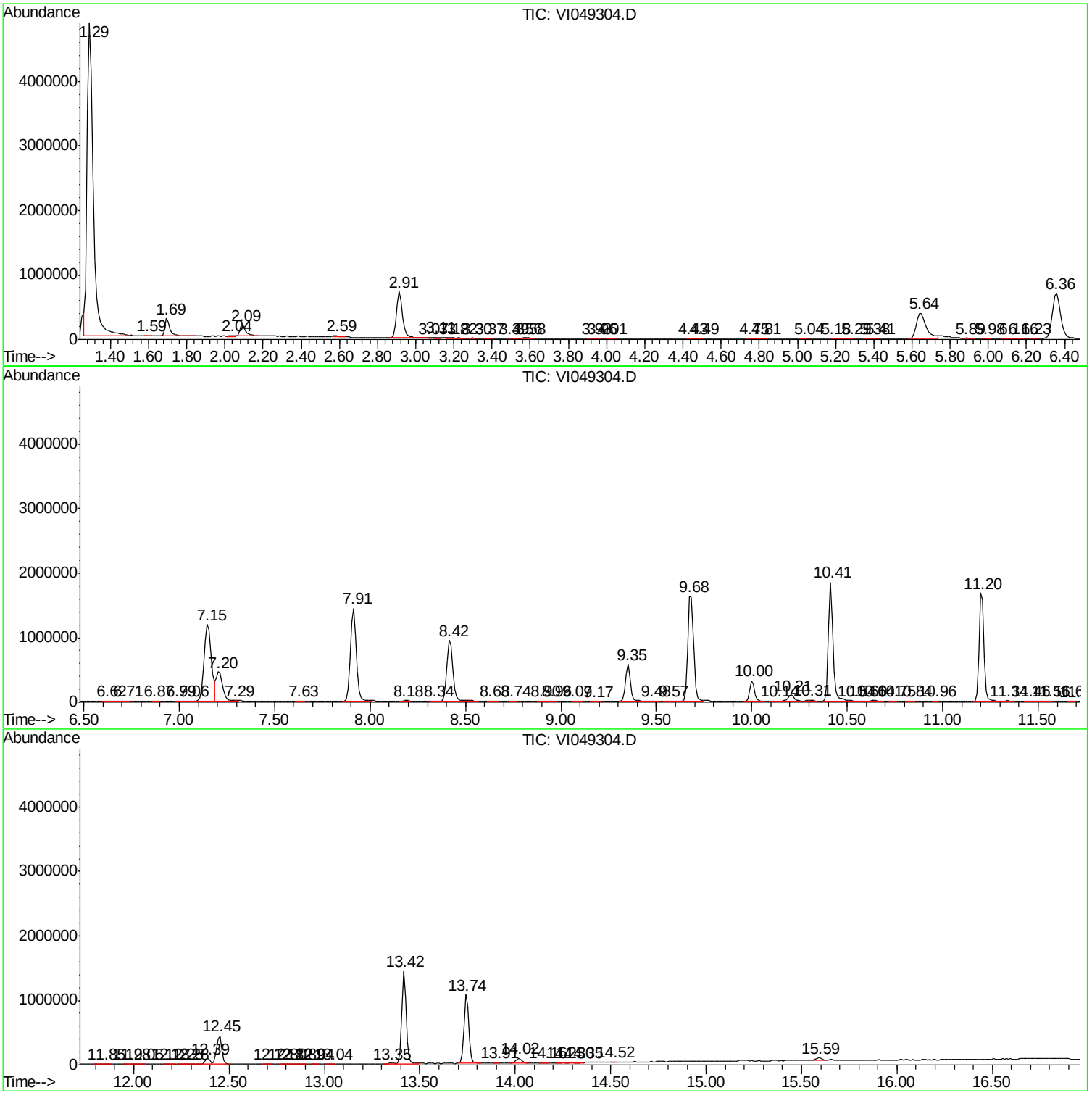
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049304.D
Acq On : 9 May 2016 19:05
Operator : FY/SY
Sample : VI0509WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK32

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049304.D
Acq On : 9 May 2016 19:05
Operator : FY/SY
Sample : VI0509WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK32

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI050916\
Data File : VI049304.D
Acq On : 9 May 2016 19:05
Operator : FY/SY
Sample : VI0509WBL02
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK32

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK33

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0510WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049320.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK33

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0510WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049320.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK33

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0510WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049320.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK33

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0510WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049320.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/10/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

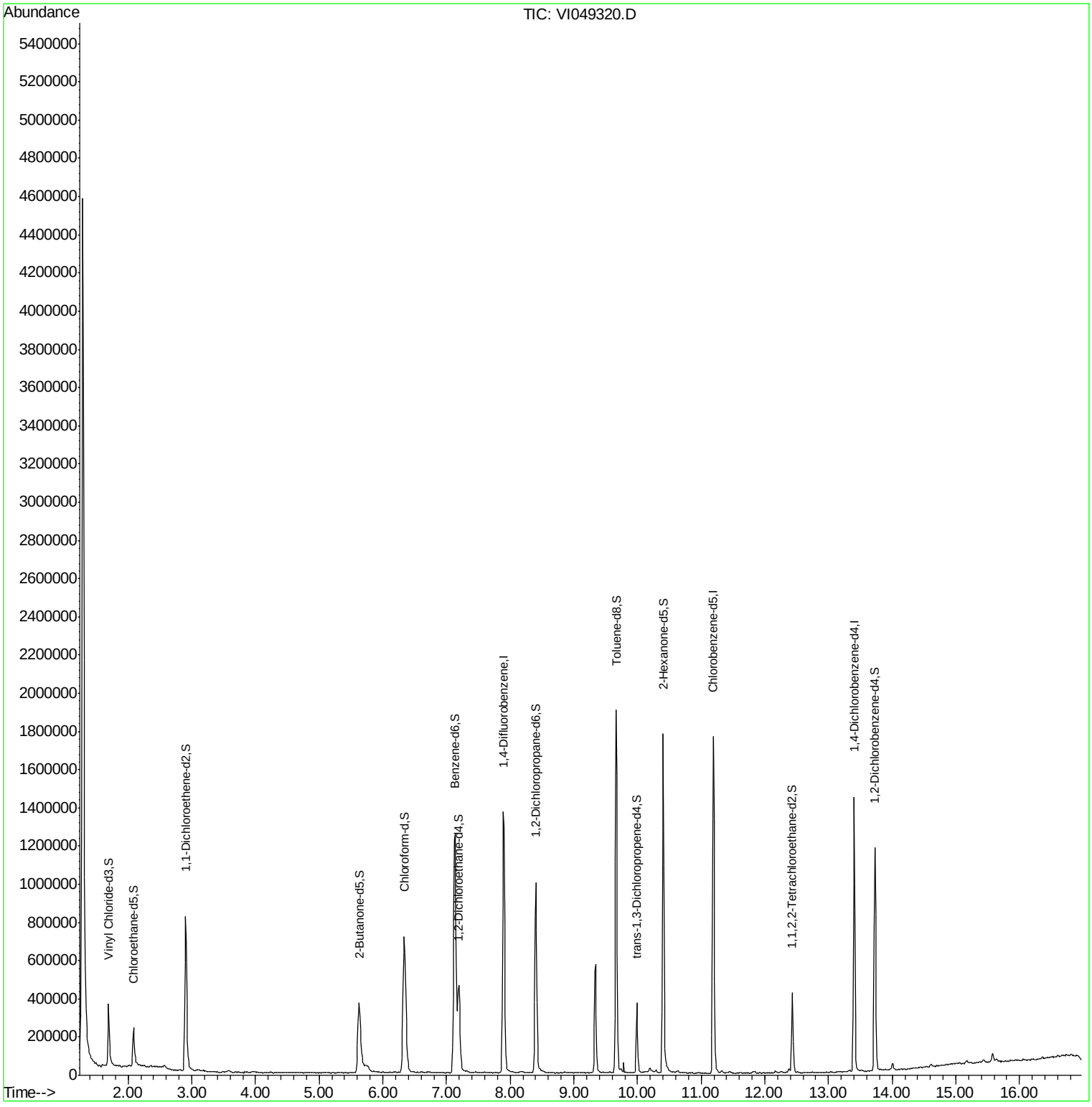
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049320.D
Acq On : 10 May 2016 12:34
Operator : FY/SY
Sample : VI0510WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK33

Quant Time: May 11 03:57:11 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049320.D
Acq On : 10 May 2016 12:34
Operator : FY/SY
Sample : VI0510WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK33

Quant Time: May 11 03:57:11 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.89	114	1274771	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	851987	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.40	152	318195	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	361895	4.61	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 92.20%			
7) Chloroethane-d5	2.09	69	220886	5.08	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.60%			
11) 1,1-Dichloroethene-d2	2.90	63	635066	3.44	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 68.80%			
20) 2-Butanone-d5	5.63	46	882402	51.93	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 103.86%			
24) Chloroform-d	6.34	84	900174	4.51	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 90.20%			
26) 1,2-Dichloroethane-d4	7.19	65	403859	4.94	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 98.80%			
32) Benzene-d6	7.13	84	1653831	4.98	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.60%			
36) 1,2-Dichloropropane-d6	8.40	67	474195	5.08	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.60%			
41) Toluene-d8	9.66	98	1175702	4.80	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.00%			
43) trans-1,3-Dichloropropene-	9.99	79	170039	4.62	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 92.40%			
46) 2-Hexanone-d5	10.40	63	584951	50.44	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 100.88%			
57) 1,1,2,2-Tetrachloroethane-	12.43	84	197444	4.65	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 93.00%			
63) 1,2-Dichlorobenzene-d4	13.73	152	261525	4.69	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 93.80%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051016\
Data File : VI049320.D
Acq On : 10 May 2016 12:34
Operator : FY/SY
Sample : VI0510WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK33

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.289	3	6	25	rVB	4528511	10550834	100.00%	23.877%
2	1.594	34	37	39	rBV3	11695	21441	0.20%	0.049%
3	1.692	44	47	56	rVB	324240	575156	5.45%	1.302%
4	1.997	76	78	79	rBV2	8288	10539	0.10%	0.024%
5	2.086	83	87	95	rVV	201083	422766	4.01%	0.957%
6	2.302	108	109	111	rBV2	6032	6671	0.06%	0.015%
7	2.568	134	136	143	rVB4	21283	51807	0.49%	0.117%
8	2.903	165	170	185	rVV	809033	1808586	17.14%	4.093%
9	3.100	188	190	195	rVV5	9069	19566	0.19%	0.044%
10	3.188	197	199	200	rVB2	6489	5990	0.06%	0.014%
11	3.562	232	237	242	rBV6	6822	22852	0.22%	0.052%
12	3.621	242	243	246	rVB3	5110	5607	0.05%	0.013%
13	3.680	246	249	251	rBV4	3153	6239	0.06%	0.014%
14	3.798	259	261	263	rVB2	5023	7337	0.07%	0.017%
15	3.838	263	265	266	rBV2	6225	9818	0.09%	0.022%
16	3.946	271	276	280	rBV7	7291	23891	0.23%	0.054%
17	4.094	288	291	293	rVB3	4201	6148	0.06%	0.014%
18	4.123	293	294	297	rBV3	4237	7276	0.07%	0.016%
19	4.172	297	299	301	rBV3	2727	5232	0.05%	0.012%
20	4.399	318	322	323	rBV5	3759	8665	0.08%	0.020%
21	4.576	337	340	344	rVB4	2832	6043	0.06%	0.014%
22	4.773	358	360	365	rBV5	3302	6275	0.06%	0.014%
23	5.196	401	403	408	rVB5	2952	7281	0.07%	0.016%
24	5.284	410	412	414	rBV3	3091	6041	0.06%	0.014%
25	5.353	417	419	422	rVB3	2861	5218	0.05%	0.012%
26	5.403	422	424	428	rBV4	3852	7401	0.07%	0.017%
27	5.481	430	432	434	rBV3	2939	6009	0.06%	0.014%
28	5.629	440	447	455	rBV	366775	1304517	12.36%	2.952%
29	5.993	482	484	487	rVB4	4271	7318	0.07%	0.017%
30	6.072	490	492	494	rBV3	3328	5207	0.05%	0.012%
31	6.151	497	500	501	rBV3	3592	6347	0.06%	0.014%
32	6.190	503	504	508	rVB3	6347	9224	0.09%	0.021%
33	6.338	511	519	534	rBV	713322	2250608	21.33%	5.093%
34	6.495	534	535	538	rVB2	6525	6180	0.06%	0.014%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049320.D
Acq On : 10 May 2016 12:34
Operator : FY/SY
Sample : VI0510WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK33

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.544	538	540	542	rVB3	4617	5425	0.05%	0.012%
36	6.593	542	545	553	rBV10	4388	17747	0.17%	0.040%
37	6.712	553	557	561	rVB4	5737	15386	0.15%	0.035%
38	6.849	568	571	572	rBV3	3413	5801	0.05%	0.013%
39	7.046	588	591	592	rVB3	4964	5535	0.05%	0.013%
40	7.135	592	600	604	rBV	1254138	3538591	33.54%	8.008%
41	7.194	604	606	617	rVB	451036	944791	8.95%	2.138%
42	7.706	656	658	660	rVB3	4241	6260	0.06%	0.014%
43	7.765	660	664	666	rBV5	5120	13204	0.13%	0.030%
44	7.893	672	677	689	rBV	1363920	3065443	29.05%	6.937%
45	8.178	700	706	713	rVB9	9301	34007	0.32%	0.077%
46	8.404	723	729	746	rBV	997422	2217835	21.02%	5.019%
47	8.670	755	756	760	rVB4	4089	6042	0.06%	0.014%
48	8.729	760	762	766	rVB4	3901	7596	0.07%	0.017%
49	8.857	771	775	776	rBV3	6291	8191	0.08%	0.019%
50	9.339	819	824	830	rVV	566999	1089507	10.33%	2.466%
51	9.457	833	836	838	rVV4	4324	8398	0.08%	0.019%
52	9.556	842	846	850	rVB5	9072	14582	0.14%	0.033%
53	9.664	853	857	863	rBV	1900479	3407767	32.30%	7.712%
54	9.733	863	864	868	rVV4	21620	43589	0.41%	0.099%
55	9.782	868	869	870	rVV	55401	33837	0.32%	0.077%
56	9.812	870	872	874	rVV3	4322	6993	0.07%	0.016%
57	9.841	874	875	880	rVB5	3884	6739	0.06%	0.015%
58	9.989	886	890	899	rBV	366032	600842	5.69%	1.360%
59	10.127	899	904	905	rVV5	7876	21843	0.21%	0.049%
60	10.196	907	911	917	rVV2	24214	81107	0.77%	0.184%
61	10.294	918	921	924	rVV5	14590	33881	0.32%	0.077%
62	10.402	928	932	947	rVV	1775641	3113177	29.51%	7.045%
63	10.560	947	948	951	rVV3	7374	11498	0.11%	0.026%
64	10.629	951	955	959	rVV6	12586	36224	0.34%	0.082%
65	10.727	963	965	968	rVV5	3153	5706	0.05%	0.013%
66	10.855	976	978	981	rBV4	3623	5693	0.05%	0.013%
67	10.944	983	987	989	rBV5	3257	6451	0.06%	0.015%
68	11.062	997	999	1002	rVB3	3458	6700	0.06%	0.015%
69	11.111	1002	1004	1008	rBV2	3216	7823	0.07%	0.018%
70	11.190	1008	1012	1022	rVV	1763091	2933469	27.80%	6.638%
71	11.318	1022	1025	1031	rVV5	12481	26792	0.25%	0.061%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051016\
Data File : VI049320.D
Acq On : 10 May 2016 12:34
Operator : FY/SY
Sample : VI0510WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK33

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.387	1031	1032	1035	rVV3	3348	6060	0.06%	0.014%
73	11.455	1035	1039	1043	rVB3	10196	23085	0.22%	0.052%
74	11.820	1069	1076	1078	rBV4	10703	25086	0.24%	0.057%
75	11.977	1089	1092	1096	rBV5	2751	7904	0.07%	0.018%
76	12.164	1107	1111	1115	rBV3	12337	23461	0.22%	0.053%
77	12.243	1118	1119	1123	rVV4	4707	9885	0.09%	0.022%
78	12.381	1130	1133	1135	rVV2	19218	41072	0.39%	0.093%
79	12.430	1135	1138	1144	rVB	416482	728741	6.91%	1.649%
80	12.518	1144	1147	1148	rVB3	4703	6748	0.06%	0.015%
81	12.873	1179	1183	1185	rBV5	2761	7923	0.08%	0.018%
82	12.902	1185	1186	1190	rVB4	3402	6314	0.06%	0.014%
83	12.971	1190	1193	1195	rBV3	4534	8083	0.08%	0.018%
84	13.040	1197	1200	1203	rBV5	4881	8200	0.08%	0.019%
85	13.138	1207	1210	1211	rBV3	4498	7235	0.07%	0.016%
86	13.335	1225	1230	1232	rBV4	10410	19711	0.19%	0.045%
87	13.404	1233	1237	1246	rVV	1438949	2338443	22.16%	5.292%
88	13.512	1246	1248	1249	rVV2	5946	7060	0.07%	0.016%
89	13.631	1257	1260	1261	rBV3	5279	8011	0.08%	0.018%
90	13.729	1266	1270	1277	rVV	1166256	1981396	18.78%	4.484%
91	13.818	1277	1279	1280	rVV2	5432	6170	0.06%	0.014%
92	13.936	1288	1291	1292	rBV2	4332	7162	0.07%	0.016%
93	14.005	1294	1298	1305	rVB2	35062	77020	0.73%	0.174%
94	14.132	1309	1311	1314	rBV3	4110	10376	0.10%	0.023%
95	14.418	1338	1340	1341	rBV2	6277	7328	0.07%	0.017%
96	14.615	1356	1360	1365	rBV7	15878	43278	0.41%	0.098%
97	14.703	1367	1369	1370	rBV2	7149	9503	0.09%	0.022%
98	15.166	1413	1416	1421	rBV6	18568	52501	0.50%	0.119%
99	15.432	1441	1443	1447	rVB5	13355	24666	0.23%	0.056%
100	15.579	1454	1458	1461	rBV	43930	82179	0.78%	0.186%

Sum of corrected areas: 44189163

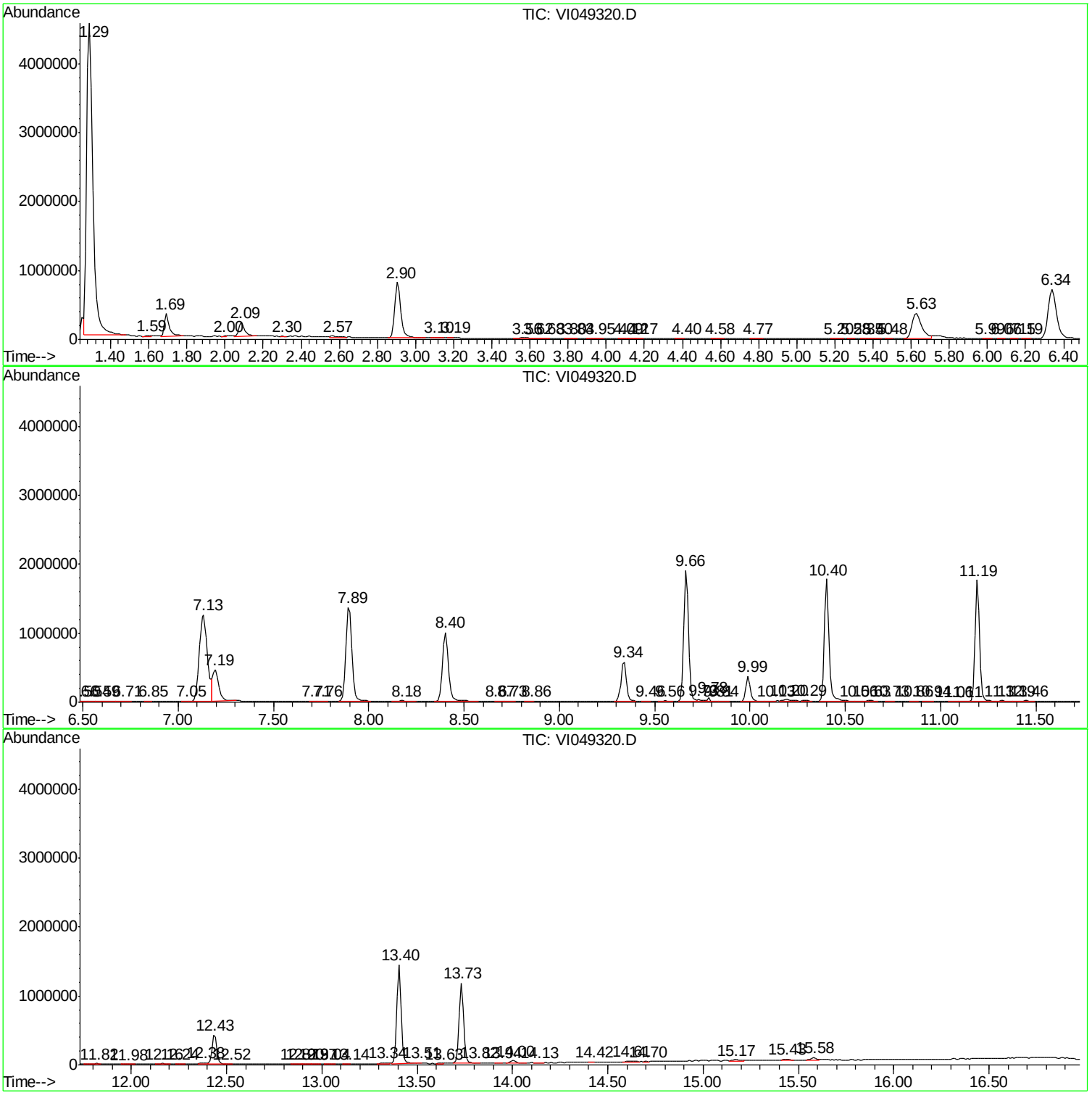
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049320.D
Acq On : 10 May 2016 12:34
Operator : FY/SY
Sample : VI0510WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK33

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049320.D
Acq On : 10 May 2016 12:34
Operator : FY/SY
Sample : VI0510WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK33

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049320.D
Acq On : 10 May 2016 12:34
Operator : FY/SY
Sample : VI0510WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK33

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK34

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0511WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049334.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK34

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0511WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049334.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK34

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0511WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049334.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLK34

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0511WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049334.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

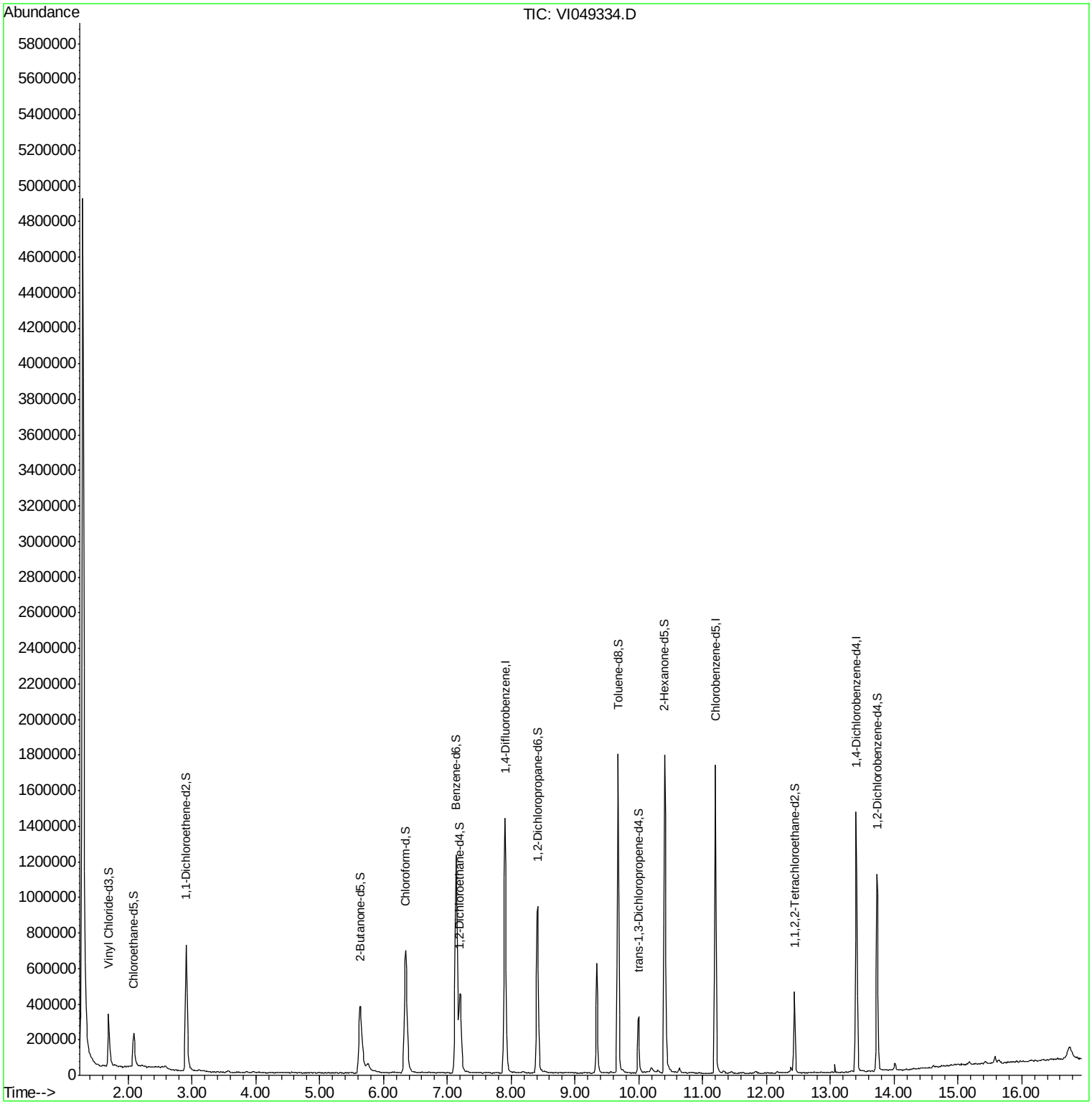
EPA-designated Registry Number.

Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK34

Quant Time: May 12 06:31:56 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK34

Quant Time: May 12 06:31:56 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1290350	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	859838	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	331353	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	331503	4.17	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 83.40%			
7) Chloroethane-d5	2.09	69	205230	4.66	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 93.20%			
11) 1,1-Dichloroethene-d2	2.90	63	595721	3.18	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 63.60%			
20) 2-Butanone-d5	5.63	46	928282	53.97	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 107.94%			
24) Chloroform-d	6.35	84	863429	4.27	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 85.40%			
26) 1,2-Dichloroethane-d4	7.20	65	399375	4.83	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.60%			
32) Benzene-d6	7.14	84	1579370	4.72	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 94.40%			
36) 1,2-Dichloropropane-d6	8.42	67	455223	4.83	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 96.60%			
41) Toluene-d8	9.68	98	1126854	4.56	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 91.20%			
43) trans-1,3-Dichloropropene-	10.00	79	167580	4.52	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 90.40%			
46) 2-Hexanone-d5	10.40	63	598038	51.09	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 102.18%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	204472	4.77	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 95.40%			
63) 1,2-Dichlorobenzene-d4	13.74	152	261717	4.50	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 90.00%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK34

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.290	3	6	28	rVB	4869073	11528440	100.00%	25.607%
2	1.693	44	47	54	rBV	293909	506475	4.39%	1.125%
3	1.989	75	77	78	rBV2	6829	8857	0.08%	0.020%
4	2.087	83	87	97	rVV	190056	406641	3.53%	0.903%
5	2.205	97	99	102	rVV4	6660	13628	0.12%	0.030%
6	2.589	134	138	146	rVB6	21352	72917	0.63%	0.162%
7	2.746	152	154	156	rVB3	4360	5864	0.05%	0.013%
8	2.904	166	170	182	rVB	710399	1677429	14.55%	3.726%
9	3.120	189	192	197	rVB6	7712	18084	0.16%	0.040%
10	3.189	197	199	201	rVB3	6049	8827	0.08%	0.020%
11	3.229	201	203	207	rVB4	5155	8549	0.07%	0.019%
12	3.396	218	220	221	rBV2	2979	5125	0.04%	0.011%
13	3.573	233	238	241	rVB7	8345	19410	0.17%	0.043%
14	3.701	247	251	252	rBV4	3088	4965	0.04%	0.011%
15	3.947	274	276	278	rBV3	4540	8822	0.08%	0.020%
16	4.233	302	305	308	rVV3	4140	11370	0.10%	0.025%
17	4.321	311	314	315	rBV3	3912	5865	0.05%	0.013%
18	4.410	319	323	327	rBV5	3344	9458	0.08%	0.021%
19	4.518	332	334	336	rVB2	3899	5630	0.05%	0.013%
20	4.557	336	338	343	rBV7	6347	11353	0.10%	0.025%
21	4.636	343	346	347	rVB3	3416	5043	0.04%	0.011%
22	4.676	347	350	352	rBV3	3867	4865	0.04%	0.011%
23	4.744	355	357	359	rVB3	3921	4828	0.04%	0.011%
24	4.813	362	364	366	rVB3	6086	8654	0.08%	0.019%
25	4.882	368	371	372	rVB3	4824	7311	0.06%	0.016%
26	4.902	372	373	374	rBV	4241	4441	0.04%	0.010%
27	5.325	413	416	420	rVB4	3489	9093	0.08%	0.020%
28	5.394	420	423	426	rBV4	3874	7900	0.07%	0.018%
29	5.473	429	431	433	rBV3	2696	5048	0.04%	0.011%
30	5.640	441	448	456	rBV	376270	1365347	11.84%	3.033%
31	5.758	456	460	470	rVB3	42417	163028	1.41%	0.362%
32	6.142	496	499	500	rBV3	4700	5384	0.05%	0.012%
33	6.172	500	502	503	rVB2	4640	4707	0.04%	0.010%
34	6.191	503	504	506	rBV2	3640	4713	0.04%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK34

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.349	512	520	534	rBV	688060	2175378	18.87%	4.832%
36	6.713	555	557	558	rBV2	5291	5514	0.05%	0.012%
37	6.929	576	579	583	rVB6	4592	9044	0.08%	0.020%
38	7.136	593	600	604	rBV	1229573	3263997	28.31%	7.250%
39	7.195	604	606	616	rVB	437487	1068441	9.27%	2.373%
40	7.431	627	630	633	rVB4	3008	5381	0.05%	0.012%
41	7.608	646	648	650	rBV3	4092	4705	0.04%	0.010%
42	7.658	652	653	657	rVB4	4260	7172	0.06%	0.016%
43	7.904	672	678	690	rBV	1434157	3134708	27.19%	6.963%
44	8.169	702	705	713	rVB9	10573	35201	0.31%	0.078%
45	8.415	724	730	736	rBV	937835	2126742	18.45%	4.724%
46	8.858	770	775	778	rBV5	3883	11042	0.10%	0.025%
47	8.898	778	779	784	rVV5	4800	8506	0.07%	0.019%
48	9.341	819	824	834	rBV	614207	1066047	9.25%	2.368%
49	9.557	843	846	848	rBV2	8405	13668	0.12%	0.030%
50	9.675	853	858	864	rBV	1793481	3255044	28.23%	7.230%
51	9.793	869	870	873	rVB3	5505	6266	0.05%	0.014%
52	9.921	882	883	886	rVB3	3428	4793	0.04%	0.011%
53	10.000	886	891	897	rBV	320192	592774	5.14%	1.317%
54	10.118	902	903	905	rVV2	8785	14465	0.13%	0.032%
55	10.197	908	911	917	rVV2	31039	94321	0.82%	0.210%
56	10.295	917	921	925	rVV5	16015	42847	0.37%	0.095%
57	10.404	928	932	944	rVV	1787114	3154954	27.37%	7.008%
58	10.532	944	945	948	rVV2	9409	14082	0.12%	0.031%
59	10.571	948	949	951	rVV2	6392	8699	0.08%	0.019%
60	10.640	951	956	962	rVB2	27006	62621	0.54%	0.139%
61	10.846	975	977	980	rVB4	2566	4949	0.04%	0.011%
62	10.945	985	987	989	rBV3	3546	6367	0.06%	0.014%
63	11.014	991	994	995	rVB3	4015	5147	0.04%	0.011%
64	11.063	995	999	1001	rBV5	3965	10728	0.09%	0.024%
65	11.201	1008	1013	1023	rBV	1731582	2988524	25.92%	6.638%
66	11.329	1023	1026	1031	rVB3	13096	32946	0.29%	0.073%
67	11.417	1031	1035	1036	rBV4	3881	9276	0.08%	0.021%
68	11.457	1036	1039	1043	rVB4	8559	15174	0.13%	0.034%
69	11.624	1054	1056	1060	rBV5	2964	4448	0.04%	0.010%
70	11.831	1073	1077	1080	rBV4	10487	25740	0.22%	0.057%
71	11.880	1080	1082	1085	rVB3	3688	5576	0.05%	0.012%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK34

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.968	1088	1091	1094	rBV5	4124	10298	0.09%	0.023%
73	12.175	1106	1112	1115	rBV4	12598	29791	0.26%	0.066%
74	12.234	1115	1118	1119	rBV3	4318	6214	0.05%	0.014%
75	12.283	1121	1123	1126	rVB4	3403	4631	0.04%	0.010%
76	12.382	1126	1133	1135	rBV3	33535	64024	0.56%	0.142%
77	12.441	1135	1139	1144	rVB	451691	740876	6.43%	1.646%
78	12.579	1150	1153	1156	rBV5	2997	7368	0.06%	0.016%
79	12.746	1167	1170	1176	rVB7	3873	8675	0.08%	0.019%
80	12.854	1178	1181	1182	rBV3	4717	5170	0.04%	0.011%
81	12.972	1190	1193	1194	rBV3	3699	5887	0.05%	0.013%
82	13.031	1196	1199	1201	rBV3	3018	5284	0.05%	0.012%
83	13.071	1201	1203	1204	rVB	47171	31327	0.27%	0.070%
84	13.100	1204	1206	1209	rBV4	4043	4799	0.04%	0.011%
85	13.179	1213	1214	1217	rVB3	4173	4914	0.04%	0.011%
86	13.238	1217	1220	1221	rBV3	3932	6203	0.05%	0.014%
87	13.307	1223	1227	1228	rBV3	4394	7325	0.06%	0.016%
88	13.336	1228	1230	1233	rBV4	7272	11853	0.10%	0.026%
89	13.405	1233	1237	1243	rBV	1460616	2412585	20.93%	5.359%
90	13.583	1253	1255	1256	rBV2	3543	4396	0.04%	0.010%
91	13.612	1256	1258	1260	rVB3	4430	4619	0.04%	0.010%
92	13.642	1260	1261	1264	rBV3	3805	5539	0.05%	0.012%
93	13.730	1266	1270	1278	rBV	1109268	1987852	17.24%	4.415%
94	14.016	1295	1299	1303	rBV2	39306	75127	0.65%	0.167%
95	14.193	1313	1317	1322	rBV8	5317	21905	0.19%	0.049%
96	14.616	1356	1360	1362	rBV5	16148	29461	0.26%	0.065%
97	14.744	1371	1373	1375	rBV3	8931	16398	0.14%	0.036%
98	15.049	1403	1404	1405	rBV	9180	6503	0.06%	0.014%
99	15.580	1455	1458	1461	rVB	35928	61833	0.54%	0.137%
100	16.752	1573	1577	1584	rVB	52795	206578	1.79%	0.459%

Sum of corrected areas: 45020793

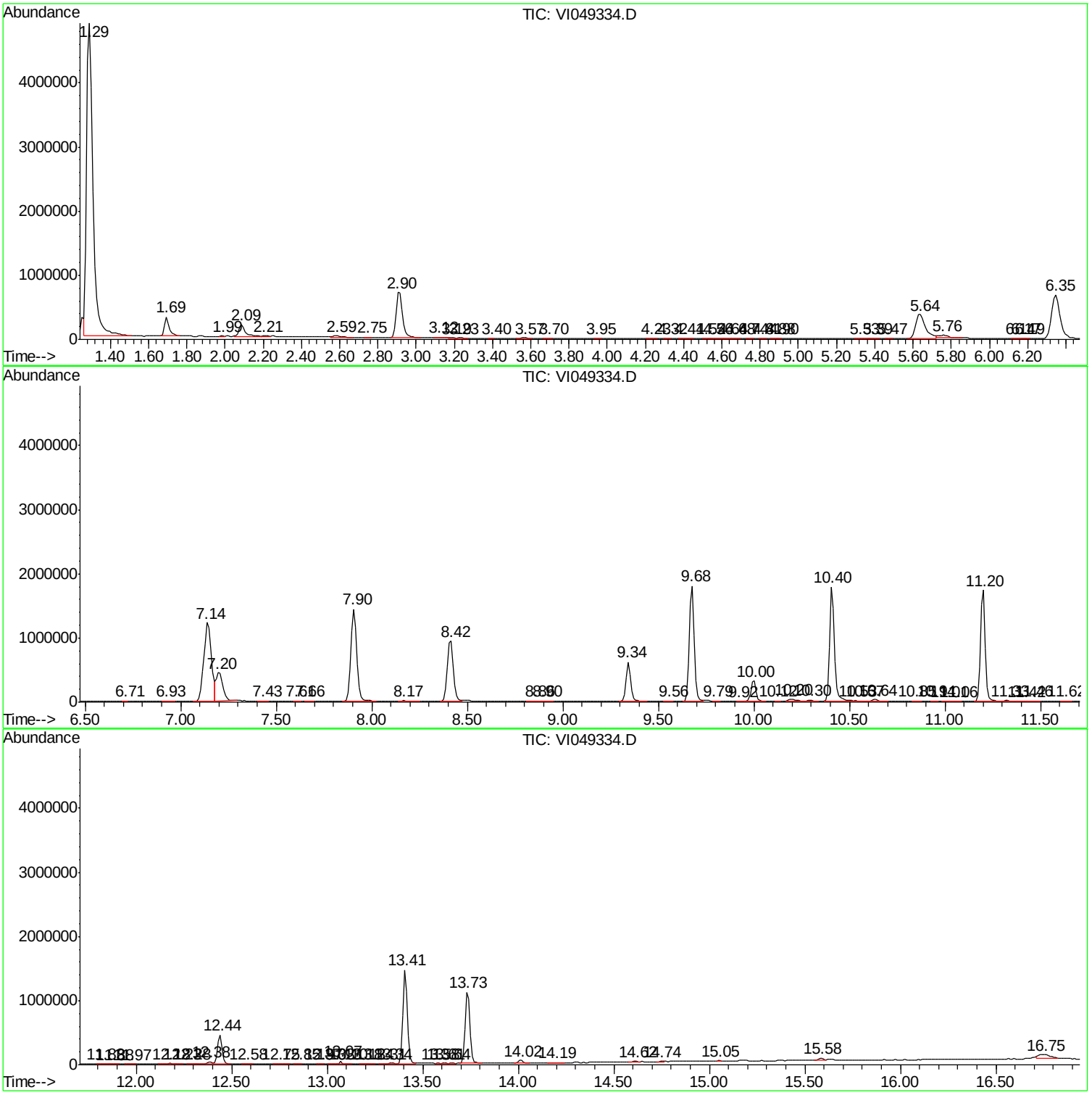
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK34

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK34

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049334.D
Acq On : 11 May 2016 11:25
Operator : FY/SY
Sample : VI0511WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK34

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK35

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049350.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK35

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049350.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLK35

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049350.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLK35

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VI0512WBL01
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049350.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

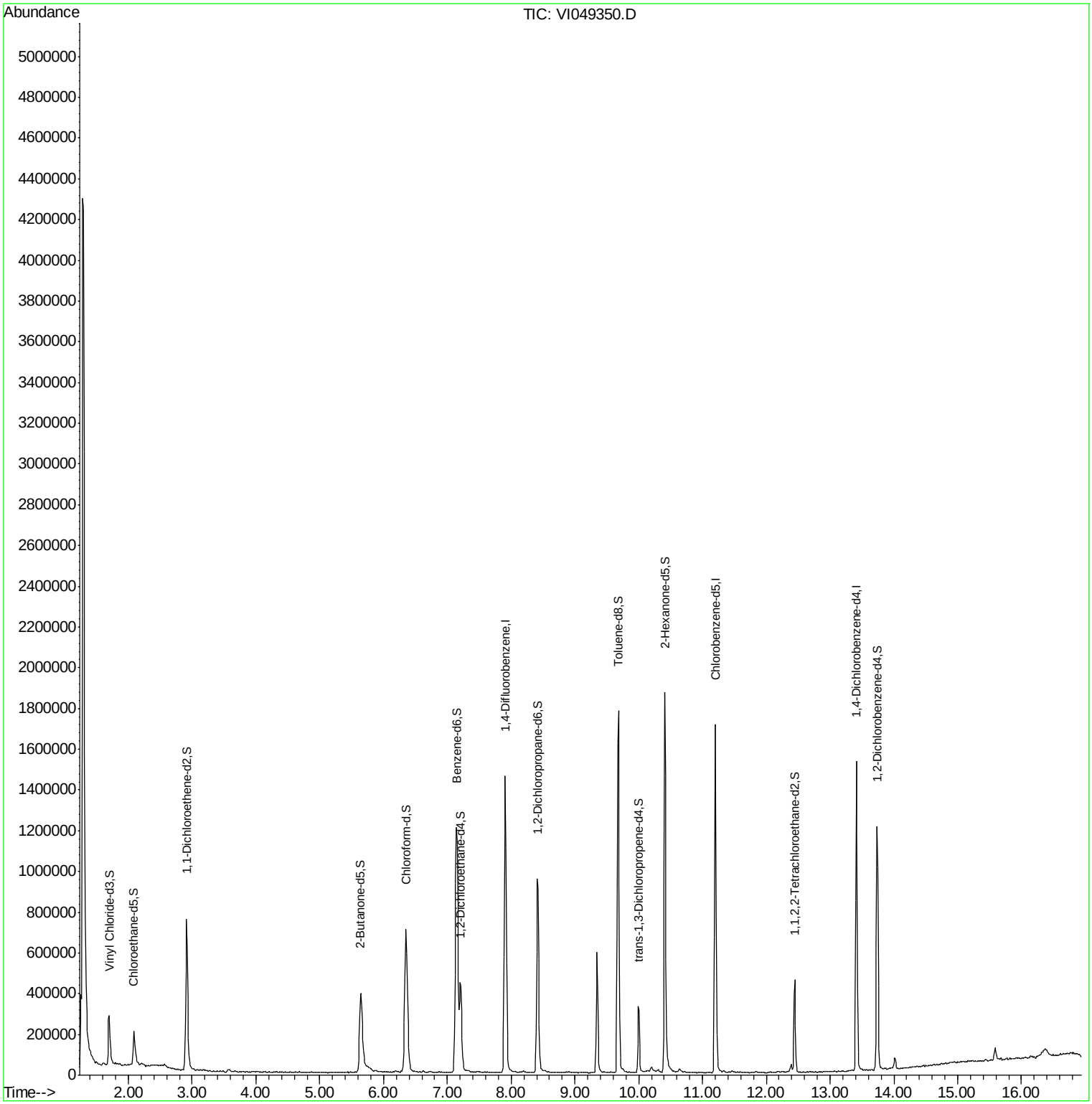
Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 04:38:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM



Quantitation Report (LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM

Quant Time: May 13 04:38:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1318748	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	908211	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	356452	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	295730	3.64	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 72.80%			
7) Chloroethane-d5	2.09	69	200151	4.45	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 89.00%			
11) 1,1-Dichloroethene-d2	2.91	63	573760	3.00	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 60.00%			
20) 2-Butanone-d5	5.64	46	938482	53.39	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 106.78%			
24) Chloroform-d	6.35	84	896059	4.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 86.80%			
26) 1,2-Dichloroethane-d4	7.20	65	400003m	4.73	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
32) Benzene-d6	7.14	84	1589239	4.49	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.80%			
36) 1,2-Dichloropropane-d6	8.41	67	460649	4.63	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 92.60%			
41) Toluene-d8	9.68	98	1136770	4.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.20%			
43) trans-1,3-Dichloropropene-	10.00	79	165888	4.23	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 84.60%			
46) 2-Hexanone-d5	10.41	63	621684	50.29	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 100.58%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	206284	4.56	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.20%			
63) 1,2-Dichlorobenzene-d4	13.74	152	276712	4.43	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	4	6	26	rVB	4244553	10182202	100.00%	23.240%
2	1.600	35	38	39	rBV3	10493	16308	0.16%	0.037%
3	1.699	45	48	54	rBV	238732	457032	4.49%	1.043%
4	2.083	84	87	96	rVB	167306	374526	3.68%	0.855%
5	2.565	134	136	141	rVB3	20543	46227	0.45%	0.106%
6	2.693	147	149	155	rVB6	7172	17292	0.17%	0.039%
7	2.831	162	163	166	rBV3	4348	9050	0.09%	0.021%
8	2.909	166	171	185	rVV	745216	1661722	16.32%	3.793%
9	3.087	185	189	190	rVV4	5006	11022	0.11%	0.025%
10	3.136	192	194	195	rVV2	4906	5907	0.06%	0.013%
11	3.185	195	199	200	rVV3	3942	9146	0.09%	0.021%
12	3.244	203	205	206	rVB2	5592	5585	0.05%	0.013%
13	3.264	206	207	210	rBV3	5959	10197	0.10%	0.023%
14	3.333	210	214	217	rVB6	4401	7791	0.08%	0.018%
15	3.392	217	220	223	rBV5	5486	10964	0.11%	0.025%
16	3.480	228	229	233	rVB4	5148	5996	0.06%	0.014%
17	3.559	233	237	242	rBV6	12917	38966	0.38%	0.089%
18	3.953	273	277	278	rBV3	3739	8622	0.08%	0.020%
19	3.982	278	280	281	rVB2	4860	5275	0.05%	0.012%
20	4.002	281	282	285	rBV2	3897	7877	0.08%	0.018%
21	4.140	294	296	300	rVB4	2644	4706	0.05%	0.011%
22	4.681	348	351	352	rBV3	4785	6535	0.06%	0.015%
23	5.114	393	395	396	rVB2	5078	5874	0.06%	0.013%
24	5.134	396	397	399	rBV2	3109	4596	0.05%	0.010%
25	5.173	399	401	405	rVB5	2420	4802	0.05%	0.011%
26	5.272	410	411	415	rBV4	2998	4803	0.05%	0.011%
27	5.439	425	428	429	rVB3	5293	6820	0.07%	0.016%
28	5.478	429	432	434	rBV3	5298	11603	0.11%	0.026%
29	5.557	438	440	441	rBV2	3627	4533	0.04%	0.010%
30	5.636	441	448	458	rBV	388677	1397996	13.73%	3.191%
31	5.931	477	478	482	rVB4	3385	4700	0.05%	0.011%
32	6.187	502	504	507	rBV4	4912	7679	0.08%	0.018%
33	6.226	507	508	512	rVB2	6199	7316	0.07%	0.017%
34	6.275	512	513	514	rBV	8277	6539	0.06%	0.015%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.354	514	521	533	rVV	701712	2148022	21.10%	4.903%
36	6.482	533	534	538	rVV4	4291	6673	0.07%	0.015%
37	6.620	545	548	551	rVB5	6406	11484	0.11%	0.026%
38	6.708	553	557	558	rBV3	3041	4522	0.04%	0.010%
39	6.866	570	573	575	rBV4	4403	7229	0.07%	0.016%
40	7.142	594	601	605	rBV	1202887	3281552	32.23%	7.490%
41	7.201	605	607	617	rVB	431931	1056078	10.37%	2.410%
42	7.555	640	643	644	rBV3	2646	4927	0.05%	0.011%
43	7.624	647	650	652	rVB4	3554	6198	0.06%	0.014%
44	7.673	652	655	658	rVB5	2619	4988	0.05%	0.011%
45	7.909	673	679	694	rBV	1455673	3180931	31.24%	7.260%
46	8.195	705	708	710	rVB4	5846	11517	0.11%	0.026%
47	8.332	719	722	725	rBV4	2652	7182	0.07%	0.016%
48	8.411	725	730	739	rBV	950367	2169547	21.31%	4.952%
49	8.893	777	779	783	rVB5	3892	6348	0.06%	0.014%
50	9.071	795	797	798	rBV2	4079	4611	0.05%	0.011%
51	9.179	805	808	811	rVB5	2982	6814	0.07%	0.016%
52	9.267	814	817	820	rBV4	4615	10077	0.10%	0.023%
53	9.346	820	825	834	rBV	592523	1080345	10.61%	2.466%
54	9.464	834	837	839	rVV4	4647	7695	0.08%	0.018%
55	9.681	854	859	864	rBV	1774853	3254412	31.96%	7.428%
56	9.750	864	866	875	rVB5	18882	53427	0.52%	0.122%
57	9.947	882	886	887	rBV4	3627	5427	0.05%	0.012%
58	9.996	887	891	897	rBV	323302	575150	5.65%	1.313%
59	10.153	899	907	908	rVV7	9274	35867	0.35%	0.082%
60	10.202	908	912	916	rVV	27083	74232	0.73%	0.169%
61	10.311	918	923	929	rVV8	14636	38081	0.37%	0.087%
62	10.409	929	933	950	rVV	1865314	3217118	31.60%	7.343%
63	10.635	952	956	962	rVV5	17402	44957	0.44%	0.103%
64	10.704	962	963	966	rVV3	3764	6850	0.07%	0.016%
65	10.941	984	987	990	rBV4	2650	6932	0.07%	0.016%
66	11.118	1001	1005	1008	rVV6	3636	7350	0.07%	0.017%
67	11.206	1009	1014	1024	rVV	1708979	3098438	30.43%	7.072%
68	11.324	1024	1026	1032	rVV4	9958	29629	0.29%	0.068%
69	11.462	1036	1040	1043	rVV5	9193	24036	0.24%	0.055%
70	11.551	1047	1049	1051	rVV2	5467	7878	0.08%	0.018%
71	11.590	1051	1053	1056	rVV4	4477	7965	0.08%	0.018%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.836	1073	1078	1081	rBV5	7389	20279	0.20%	0.046%
73	11.954	1089	1090	1095	rVB4	2514	5325	0.05%	0.012%
74	12.023	1095	1097	1100	rBV4	3604	8205	0.08%	0.019%
75	12.063	1100	1101	1105	rBV4	5024	6114	0.06%	0.014%
76	12.171	1108	1112	1117	rBV7	7633	21787	0.21%	0.050%
77	12.387	1129	1134	1136	rVV2	38196	72643	0.71%	0.166%
78	12.446	1136	1140	1146	rVB	455325	779998	7.66%	1.780%
79	12.525	1146	1148	1152	rBV4	2643	4472	0.04%	0.010%
80	12.633	1157	1159	1161	rVB3	4037	4683	0.05%	0.011%
81	12.692	1161	1165	1166	rVB3	3616	4940	0.05%	0.011%
82	12.732	1166	1169	1171	rVB4	3820	5716	0.06%	0.013%
83	12.761	1171	1172	1175	rBV2	3219	5646	0.06%	0.013%
84	12.850	1180	1181	1184	rBV3	3217	4943	0.05%	0.011%
85	12.909	1184	1187	1191	rBV4	3440	8027	0.08%	0.018%
86	12.968	1191	1193	1196	rVB4	2704	5233	0.05%	0.012%
87	13.047	1198	1201	1202	rBV3	3518	7238	0.07%	0.017%
88	13.135	1207	1210	1211	rBV3	4955	8085	0.08%	0.018%
89	13.303	1225	1227	1228	rBV	5245	6557	0.06%	0.015%
90	13.342	1229	1231	1234	rVB4	7753	9912	0.10%	0.023%
91	13.411	1234	1238	1245	rBV	1519904	2544761	24.99%	5.808%
92	13.736	1266	1271	1276	rBV	1196345	2079984	20.43%	4.747%
93	13.933	1287	1291	1292	rBV4	4777	10245	0.10%	0.023%
94	13.962	1292	1294	1295	rVV2	6597	9108	0.09%	0.021%
95	14.011	1295	1299	1303	rVV2	56358	118718	1.17%	0.271%
96	14.110	1307	1309	1312	rBV4	6619	11094	0.11%	0.025%
97	14.257	1322	1324	1325	rBV2	5792	5337	0.05%	0.012%
98	14.287	1325	1327	1331	rBV5	5112	12541	0.12%	0.029%
99	14.503	1347	1349	1352	rBV4	6179	11415	0.11%	0.026%
100	15.586	1454	1459	1463	rBV	64270	146019	1.43%	0.333%

Sum of corrected areas: 43813723

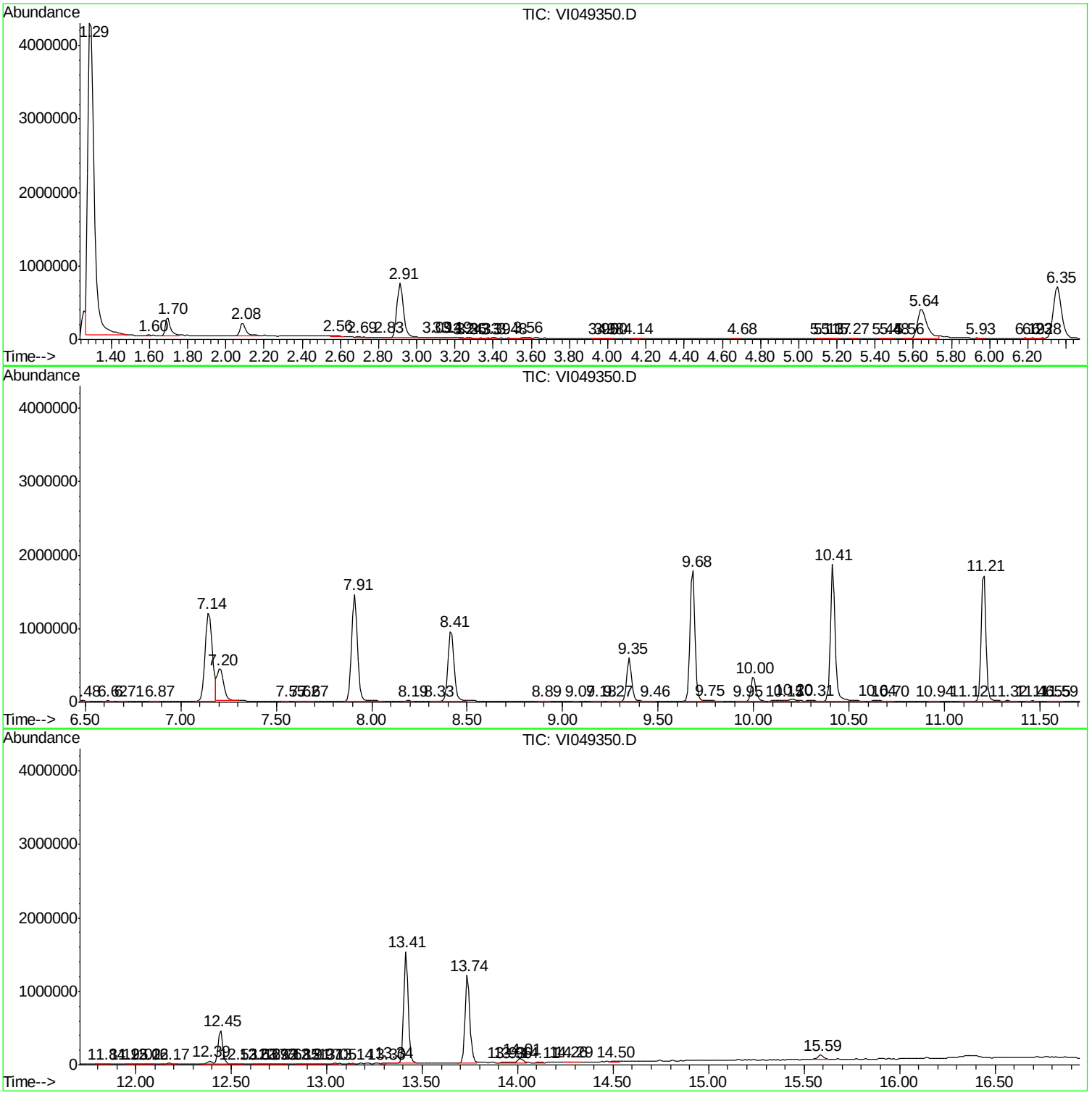
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VBLK35

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

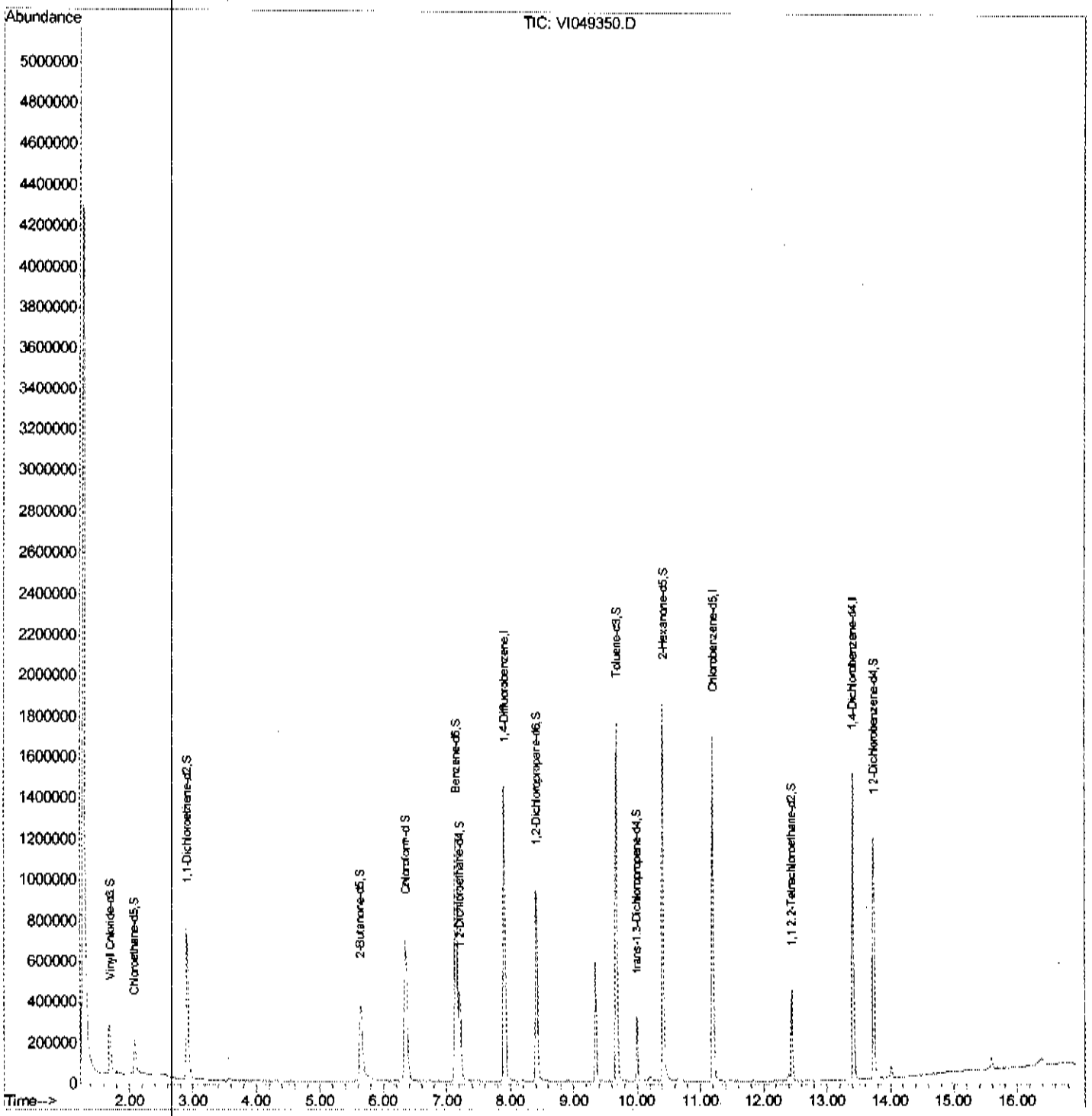
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 04:38:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM



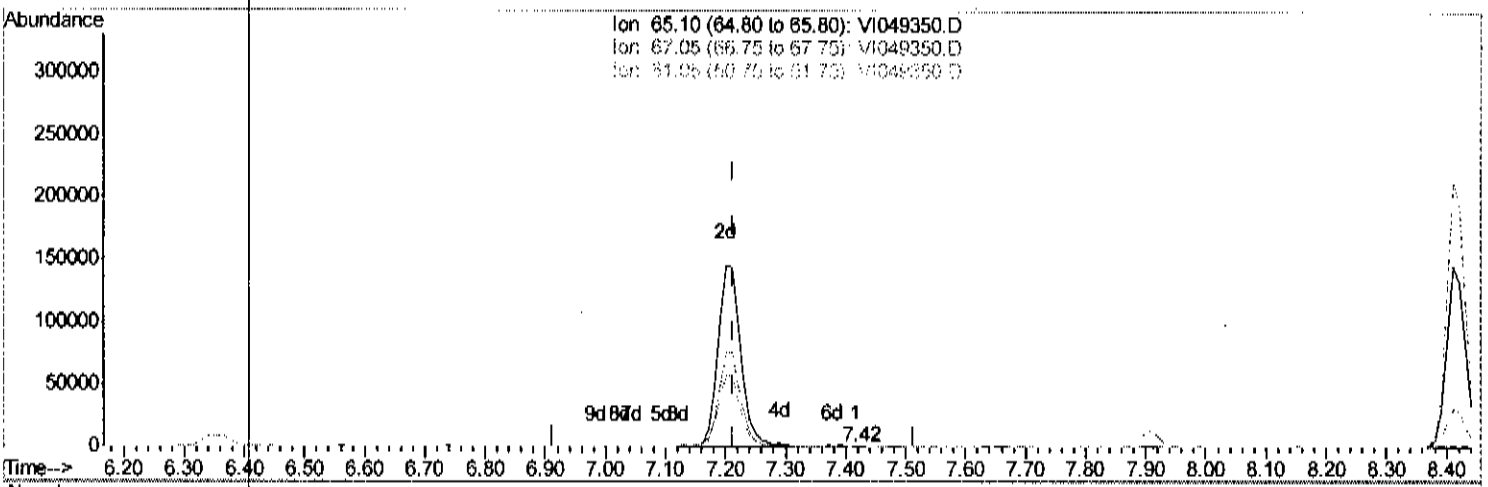
Quantitation Report (Qedit)

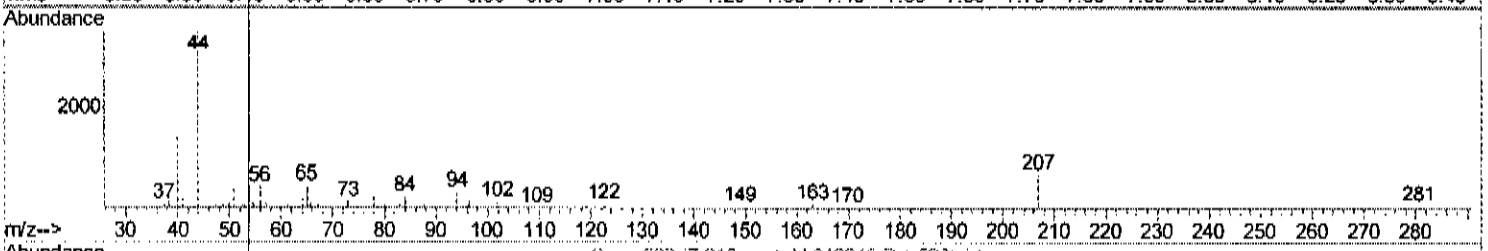
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

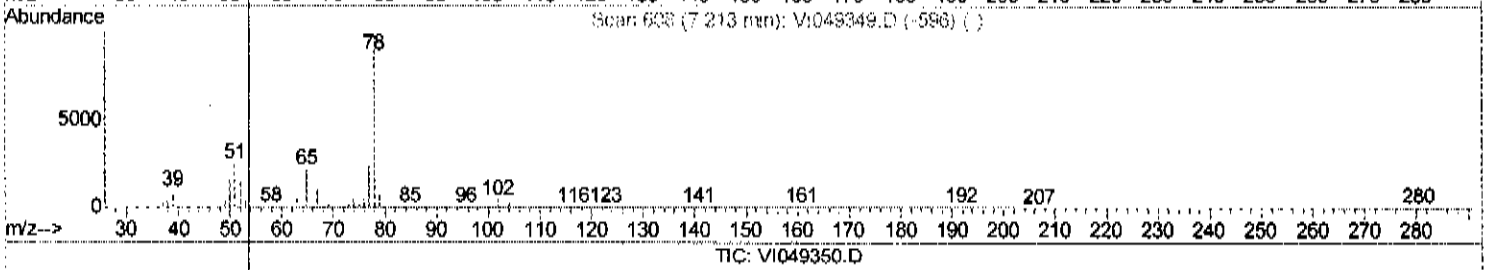
Quant Time: May 13 04:32:13 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM







TIC: VI049350.D

(26) 1,2-Dichloroethane-d4 (S)

7.417min (+0.204) 0.01ug/L

response 584

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	47.26
51.05	123.20	95.21
0.00	0.00	0.00

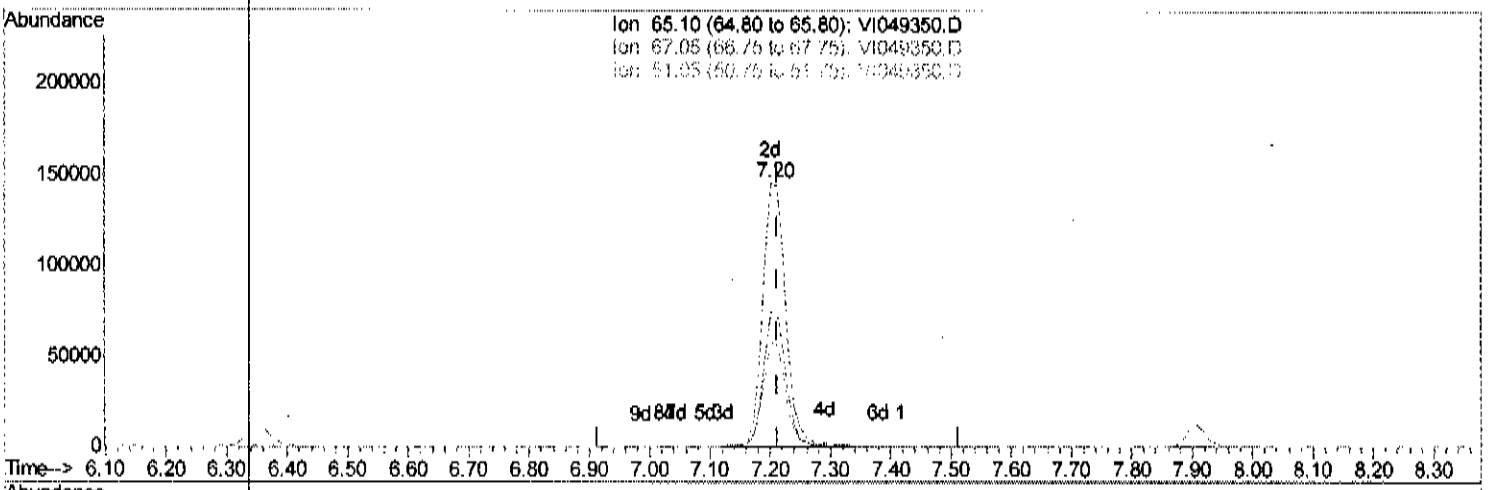
Quantitation Report (Qedit)

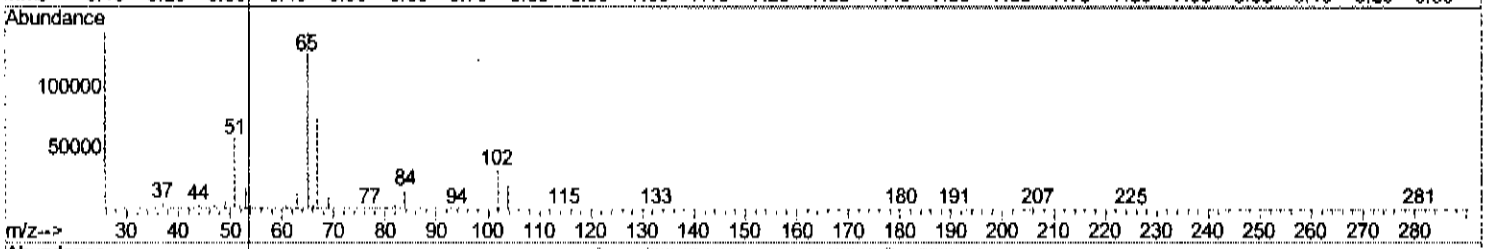
Data Path : W:\HPCHEM1\MSVOA_1\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

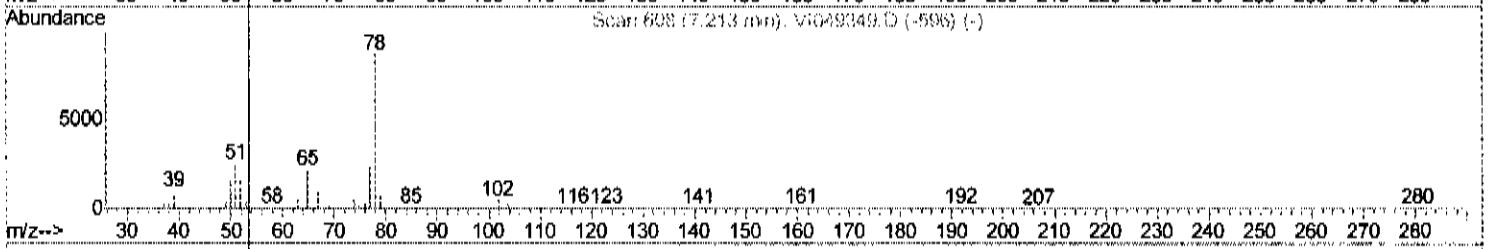
Quant Time: May 13 04:32:13 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM







TIC: VI049350.D

(26) 1,2-Dichloroethane-d4 (S)

7.201min (-0.012) 4.73ug/L m > 05/14/16 SY

response 400003

Ion	Exp%	Act%
65.10	100	100
67.05	51.00	0.07#
51.05	123.20	0.14#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049350.D
Acq On : 12 May 2016 14:23
Operator : FY/SY
Sample : VI0512WBL01
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 04:38:51 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Instrument : MSVOA_I
ClientSampleId : VBLK35

Manual Integrations APPROVED
feifei
5/13/2016 12:27:55 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1318748	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.21	117	908211	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	356452	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	295730	3.64	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 72.80%			
7) Chloroethane-d5	2.09	69	200151	4.45	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 89.00%			
11) 1,1-Dichloroethene-d2	2.91	63	573760	3.00	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 60.00%			
20) 2-Butanone-d5	5.64	46	938482	53.39	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 106.78%			
24) Chloroform-d	6.35	84	896059	4.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 86.80%			
26) 1,2-Dichloroethane-d4	7.20	65	400003m	4.73	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.60%			
32) Benzene-d6	7.14	84	1589239	4.49	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 89.80%			
36) 1,2-Dichloropropane-d6	8.41	67	460649	4.63	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 92.60%			
41) Toluene-d8	9.68	98	1136770	4.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.20%			
43) trans-1,3-Dichloropropene-	10.00	79	165888	4.23	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 84.60%			
46) 2-Hexanone-d5	10.41	63	621684	50.29	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 100.58%			
57) 1,1,2,2-Tetrachloroethane-	12.45	84	206284	4.56	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 91.20%			
63) 1,2-Dichlorobenzene-d4	13.74	152	276712	4.43	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 88.60%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

05/14/16 dq

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VIBLK51

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VIBLK51
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049345.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VIBLK51

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VIBLK51
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049345.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.14	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VIBLK51

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VIBLK51
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049345.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/11/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VIBLK51

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : VIBLK51
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049345.D
% Solids :
Date Received :
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/11/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

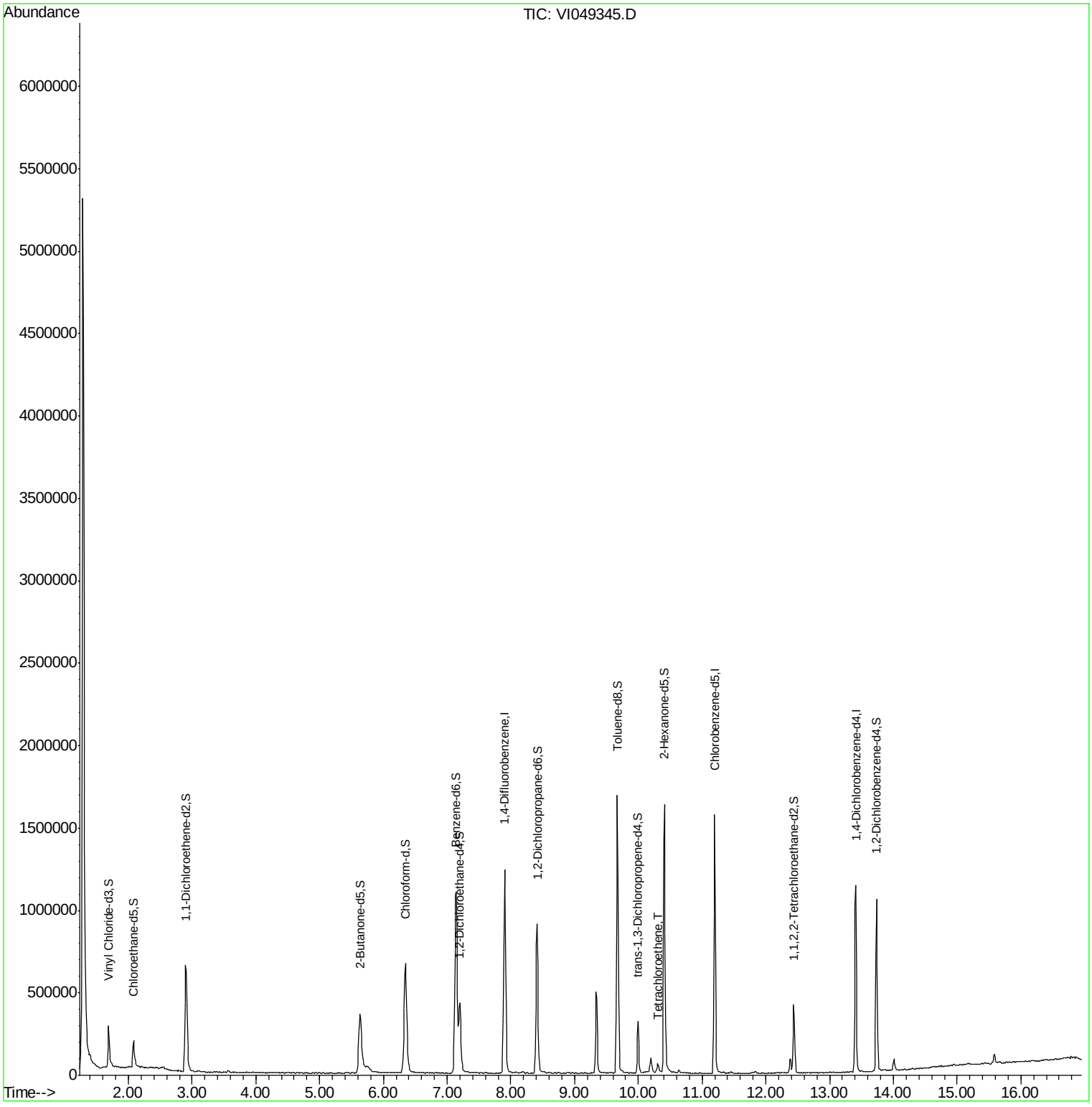
EPA-designated Registry Number.

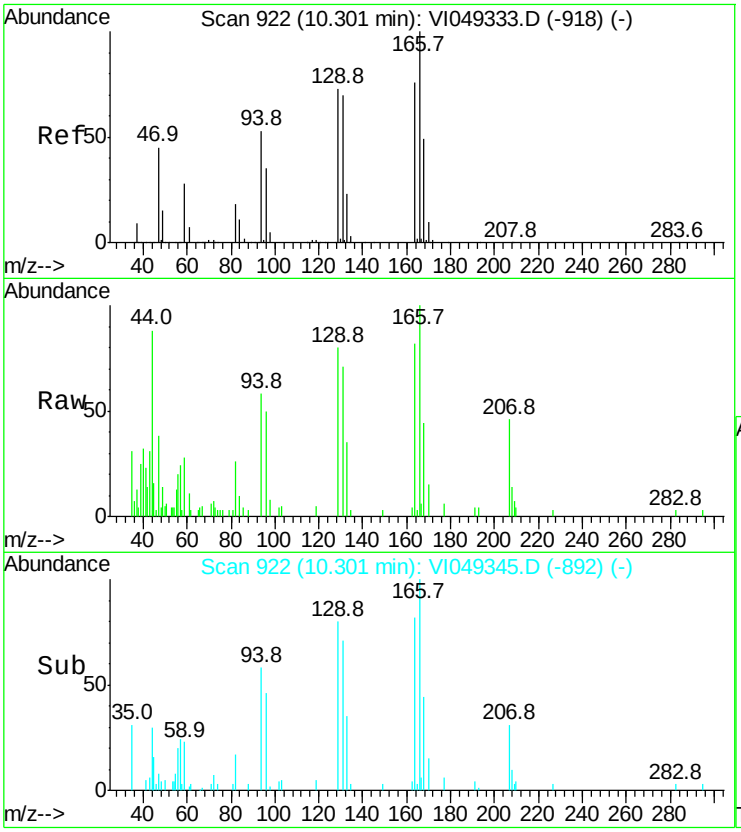
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049345.D
Acq On : 11 May 2016 17:27
Operator : FY/SY
Sample : VIBLK51
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VIBLK51

Quant Time: May 12 07:10:02 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration



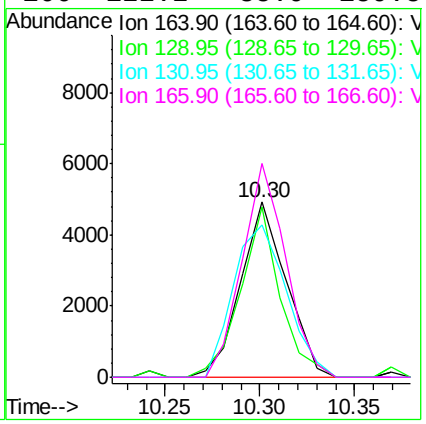


#47
Tetrachloroethene
Concen: 0.14 ug/L
RT: 10.30 min Scan# 922
Delta R.T. -0.00 min
Lab File: VI049345.D
Acq: 11 May 2016 17:27

Instrument :
MSVOA_I
ClientSampleId :
VIBLK51

Tgt Ion:164 Resp: 8262

Ion	Ratio	Lower	Upper
164	100		
129	97.3	62.1	115.3
131	86.8	60.6	112.6
166	122.2	85.9	159.5



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051116\
Data File : VI049345.D
Acq On : 11 May 2016 17:27
Operator : FY/SY
Sample : VIBLK51
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VIBLK51

Quant Time: May 12 07:10:02 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Thu May 12 06:03:43 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1099927	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	761594	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	275126	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	282552	4.17	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 83.40%			
7) Chloroethane-d5	2.08	69	189330	5.05	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 101.00%			
11) 1,1-Dichloroethene-d2	2.90	63	523471	3.28	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 65.60%			
20) 2-Butanone-d5	5.64	46	868145	59.22	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 118.44%			
24) Chloroform-d	6.34	84	835533	4.85	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 97.00%			
26) 1,2-Dichloroethane-d4	7.20	65	367958	5.22	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.40%			
32) Benzene-d6	7.14	84	1468547	4.95	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.00%			
36) 1,2-Dichloropropane-d6	8.41	67	421912	5.06	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 101.20%			
41) Toluene-d8	9.67	98	1023601	4.68	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.60%			
43) trans-1,3-Dichloropropene-	10.00	79	150524	4.58	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 91.60%			
46) 2-Hexanone-d5	10.41	63	569677	54.95	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 109.90%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	187521	4.94	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.80%			
63) 1,2-Dichlorobenzene-d4	13.74	152	241743	5.01	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 100.20%			
Target Compounds						Qvalue
47) Tetrachloroethene	10.30	164	8262	0.14	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\Data\VI051116\
Data File : VI049345.D
Acq On : 11 May 2016 17:27
Operator : FY/SY
Sample : VIBLK51
Misc : 25mL/MSVOA I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VIBLK51

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	3	6	27	rVB	5265460	11507559	100.00%	27.718%
2	1.591	35	37	40	rBV4	6966	13938	0.12%	0.034%
3	1.689	44	47	56	rVV	253248	449504	3.91%	1.083%
4	2.083	83	87	97	rVB	165917	361750	3.14%	0.871%
5	2.201	97	99	103	rVB3	11331	23794	0.21%	0.057%
6	2.260	103	105	108	rBV3	5216	7523	0.07%	0.018%
7	2.427	120	122	123	rBV2	5831	5418	0.05%	0.013%
8	2.516	129	131	132	rBV2	5935	7872	0.07%	0.019%
9	2.781	157	158	165	rVB6	7146	11574	0.10%	0.028%
10	2.900	165	170	179	rBV	642646	1465905	12.74%	3.531%
11	3.293	209	210	213	rBV3	3885	7676	0.07%	0.018%
12	3.342	213	215	217	rVV3	4688	8002	0.07%	0.019%
13	3.382	217	219	222	rVV3	3359	7408	0.06%	0.018%
14	3.421	222	223	225	rVB2	4388	4677	0.04%	0.011%
15	3.559	233	237	241	rBV6	11484	29226	0.25%	0.070%
16	3.707	249	252	254	rBV4	2842	5067	0.04%	0.012%
17	3.825	260	264	265	rBV4	3905	5806	0.05%	0.014%
18	3.953	274	277	278	rVB3	4711	7180	0.06%	0.017%
19	4.425	323	325	327	rVB2	5043	6816	0.06%	0.016%
20	4.474	327	330	332	rBV3	4668	8360	0.07%	0.020%
21	4.602	340	343	344	rVB3	5017	6785	0.06%	0.016%
22	4.651	344	348	351	rBV3	5308	13769	0.12%	0.033%
23	4.711	353	354	358	rVB2	4712	6553	0.06%	0.016%
24	4.898	370	373	375	rVB4	4759	5382	0.05%	0.013%
25	4.937	375	377	379	rBV3	3012	4317	0.04%	0.010%
26	4.976	379	381	385	rVB5	2671	6387	0.06%	0.015%
27	5.065	385	390	391	rBV5	3812	7536	0.07%	0.018%
28	5.173	400	401	407	rVB4	3313	8128	0.07%	0.020%
29	5.291	409	413	416	rBV6	3878	11187	0.10%	0.027%
30	5.409	421	425	426	rBV3	3947	6813	0.06%	0.016%
31	5.636	440	448	456	rBV	363073	1293189	11.24%	3.115%
32	5.980	480	483	484	rVB3	3359	4433	0.04%	0.011%
33	6.177	501	503	509	rVB7	3183	7475	0.06%	0.018%
34	6.344	513	520	533	rBV	664542	2024280	17.59%	4.876%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049345.D
Acq On : 11 May 2016 17:27
Operator : FY/SY
Sample : VIBLK51
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VIBLK51

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.600	544	546	549	rVV4	2883	5156	0.04%	0.012%
36	6.699	552	556	558	rBV5	3699	7801	0.07%	0.019%
37	6.856	571	572	576	rVB3	4371	6011	0.05%	0.014%
38	7.141	592	601	604	rBV	1102089	2993230	26.01%	7.210%
39	7.201	604	607	616	rVB	417304	1019991	8.86%	2.457%
40	7.466	631	634	638	rVB5	3738	8175	0.07%	0.020%
41	7.614	643	649	651	rVB5	5876	15475	0.13%	0.037%
42	7.643	651	652	654	rBV2	3887	4605	0.04%	0.011%
43	7.811	666	669	672	rBV3	3773	7117	0.06%	0.017%
44	7.899	673	678	685	rBV	1234845	2652104	23.05%	6.388%
45	8.076	694	696	698	rBV3	5101	4960	0.04%	0.012%
46	8.145	701	703	704	rBV2	4940	4216	0.04%	0.010%
47	8.175	704	706	712	rVB5	9552	25052	0.22%	0.060%
48	8.264	712	715	716	rBV2	3762	6463	0.06%	0.016%
49	8.411	723	730	737	rBV	904031	1977939	17.19%	4.764%
50	8.598	745	749	751	rBV4	3406	6421	0.06%	0.015%
51	8.677	755	757	760	rVB4	4739	7643	0.07%	0.018%
52	8.746	760	764	768	rBV5	3394	11065	0.10%	0.027%
53	8.903	777	780	784	rVB4	4425	9264	0.08%	0.022%
54	8.972	784	787	789	rBV4	2516	4937	0.04%	0.012%
55	9.110	798	801	803	rVB4	3108	4495	0.04%	0.011%
56	9.159	803	806	810	rBV6	2483	6446	0.06%	0.016%
57	9.336	820	824	832	rBV	492575	933935	8.12%	2.250%
58	9.464	835	837	840	rVB4	2943	5426	0.05%	0.013%
59	9.671	854	858	864	rBV	1683257	2940515	25.55%	7.083%
60	9.996	887	891	896	rBV	318499	532742	4.63%	1.283%
61	10.094	899	901	902	rVV2	5129	5369	0.05%	0.013%
62	10.124	902	904	907	rVV3	5259	12421	0.11%	0.030%
63	10.193	907	911	917	rVV	88715	192650	1.67%	0.464%
64	10.301	918	922	929	rVV4	55251	119342	1.04%	0.287%
65	10.409	929	933	945	rVB	1625466	2904326	25.24%	6.996%
66	10.635	953	956	959	rBV3	17803	26668	0.23%	0.064%
67	10.813	973	974	976	rVB2	4627	4574	0.04%	0.011%
68	10.862	976	979	981	rBV4	3272	5770	0.05%	0.014%
69	10.970	983	990	991	rBV6	4744	13261	0.12%	0.032%
70	11.108	1001	1004	1009	rBV5	1928	5824	0.05%	0.014%
71	11.196	1009	1013	1023	rVV	1569944	2572251	22.35%	6.196%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\Data\VI051116\
Data File : VI049345.D
Acq On : 11 May 2016 17:27
Operator : FY/SY
Sample : VIBLK51
Misc : 25mL/MSVOA I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VIBLK51

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.334	1023	1027	1030	rVB6	7480	16460	0.14%	0.040%
73	11.452	1036	1039	1046	rVB7	10321	24714	0.21%	0.060%
74	11.649	1057	1059	1061	rVB3	4562	5953	0.05%	0.014%
75	11.689	1061	1063	1065	rBV3	5167	6866	0.06%	0.017%
76	11.767	1068	1071	1073	rBV4	3552	6747	0.06%	0.016%
77	11.826	1073	1077	1081	rVB6	9093	19917	0.17%	0.048%
78	11.954	1085	1090	1094	rBV6	4573	12285	0.11%	0.030%
79	12.043	1094	1099	1100	rVB4	3044	7183	0.06%	0.017%
80	12.082	1100	1103	1105	rBV4	2952	6170	0.05%	0.015%
81	12.171	1110	1112	1114	rBV2	3867	8399	0.07%	0.020%
82	12.200	1114	1115	1117	rVB	4513	4422	0.04%	0.011%
83	12.250	1117	1120	1121	rBV3	4001	7852	0.07%	0.019%
84	12.387	1130	1134	1136	rVV2	85133	165727	1.44%	0.399%
85	12.437	1136	1139	1146	rVV	413077	704143	6.12%	1.696%
86	12.653	1158	1161	1163	rBV4	2408	4798	0.04%	0.012%
87	12.722	1166	1168	1171	rBV3	2765	6846	0.06%	0.016%
88	12.840	1178	1180	1184	rBV5	3307	7041	0.06%	0.017%
89	12.889	1184	1185	1187	rVB2	4156	4683	0.04%	0.011%
90	13.283	1220	1225	1227	rBV5	4032	10474	0.09%	0.025%
91	13.342	1227	1231	1233	rVB4	7630	16355	0.14%	0.039%
92	13.411	1233	1238	1245	rBV	1137423	2006105	17.43%	4.832%
93	13.736	1267	1271	1279	rBV	1045391	1774500	15.42%	4.274%
94	14.011	1294	1299	1304	rBV2	69970	134630	1.17%	0.324%
95	14.297	1326	1328	1330	rBV3	5572	7022	0.06%	0.017%
96	14.385	1334	1337	1338	rBV3	5818	8561	0.07%	0.021%
97	14.612	1357	1360	1361	rBV3	8232	15354	0.13%	0.037%
98	14.749	1372	1374	1375	rVB2	7386	5529	0.05%	0.013%
99	14.779	1375	1377	1378	rBV2	6643	6609	0.06%	0.016%
100	15.586	1455	1459	1463	rBV	52933	96186	0.84%	0.232%

Sum of corrected areas: 41516460

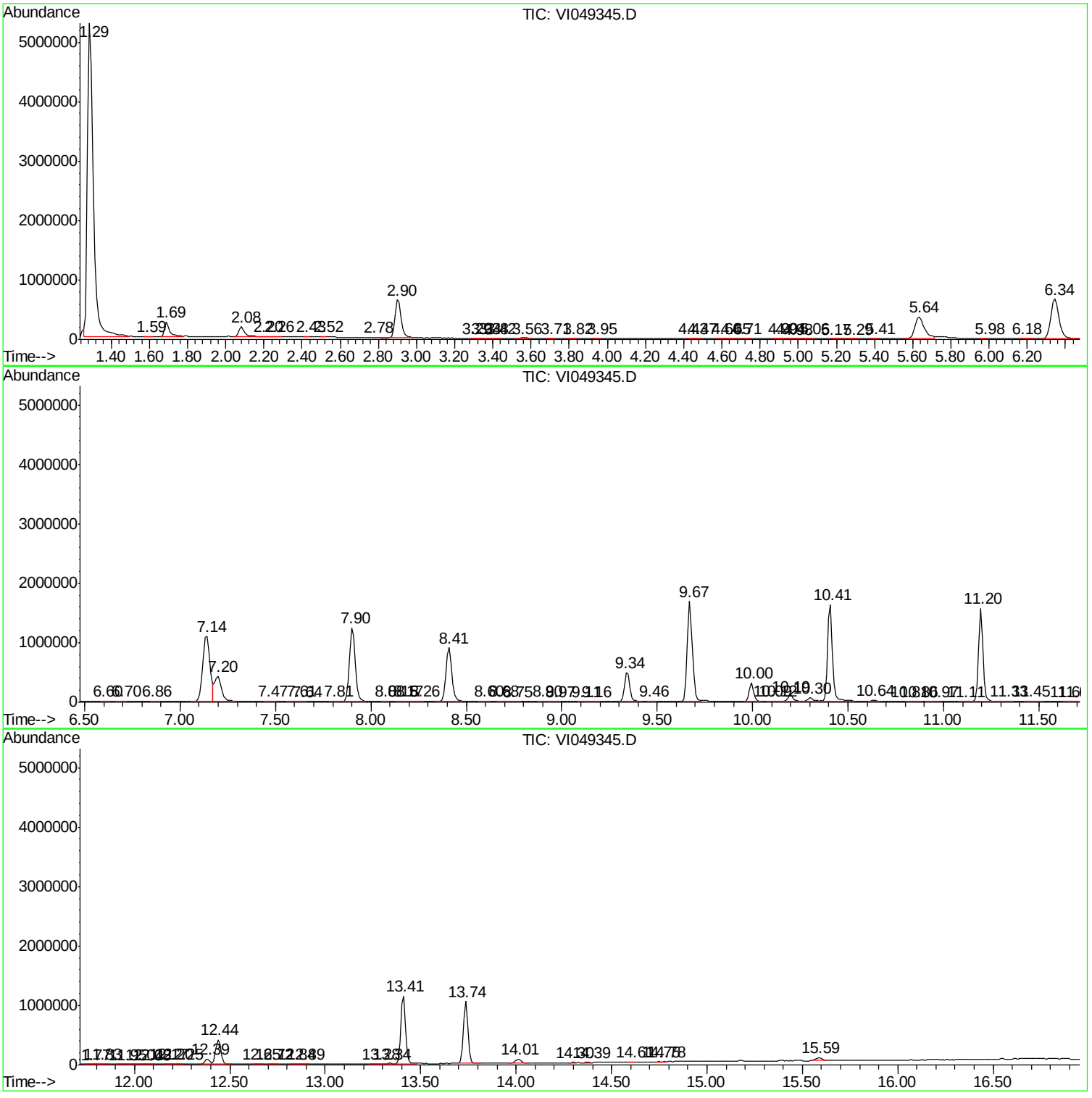
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049345.D
Acq On : 11 May 2016 17:27
Operator : FY/SY
Sample : VIBLK51
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VIBLK51

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049345.D
Acq On : 11 May 2016 17:27
Operator : FY/SY
Sample : VIBLK51
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VIBLK51

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051116\
Data File : VI049345.D
Acq On : 11 May 2016 17:27
Operator : FY/SY
Sample : VIBLK51
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 14 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VIBLK51

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049353.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049353.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049353.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VHBLK01

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-11
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049353.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
Extract Concentrated : (Y / N)
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : (µL)
Heated Purge : (Y / N) N
Extraction Type : PT
Purge Volume : 25 (mL)
Injection Volume : (µL)
Cleanup Types :
pH : 1.6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor :

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

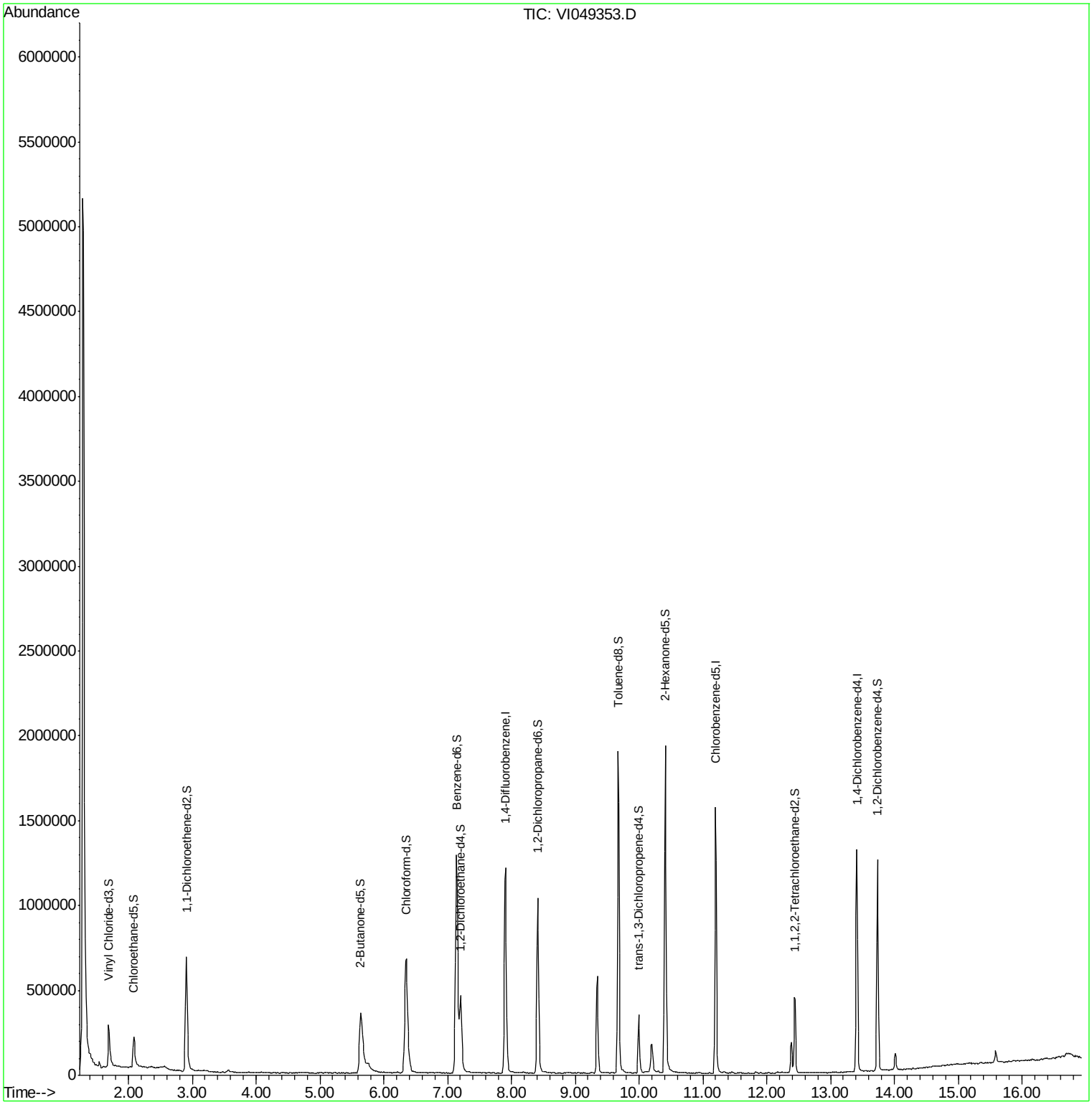
EPA-designated Registry Number.

Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049353.D
Acq On : 12 May 2016 16:18
Operator : FY/SY
Sample : H2943-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Quant Time: May 13 12:24:35 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration



Quantitation Report (QT/LSC Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049353.D
Acq On : 12 May 2016 16:18
Operator : FY/SY
Sample : H2943-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Quant Time: May 13 12:24:35 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Fri May 13 04:31:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.91	114	1127422	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	793872	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	307524	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	301848	4.35	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 87.00%			
7) Chloroethane-d5	2.08	69	198955	5.18	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 103.60%			
11) 1,1-Dichloroethene-d2	2.90	63	567741	3.47	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 125		Recovery = 69.40%			
20) 2-Butanone-d5	5.64	46	862803	57.42	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 114.84%			
24) Chloroform-d	6.34	84	842722	4.77	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 125		Recovery = 95.40%			
26) 1,2-Dichloroethane-d4	7.20	65	412438	5.71	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 114.20%			
32) Benzene-d6	7.14	84	1655213	5.35	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 107.00%			
36) 1,2-Dichloropropane-d6	8.41	67	467427	5.38	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.60%			
41) Toluene-d8	9.67	98	1193331	5.23	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.60%			
43) trans-1,3-Dichloropropene-	10.00	79	169319	4.94	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 98.80%			
46) 2-Hexanone-d5	10.41	63	636935	58.94	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 117.88%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	216563	5.48	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 109.60%			
63) 1,2-Dichlorobenzene-d4	13.74	152	291551	5.41	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 108.20%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049353.D
Acq On : 12 May 2016 16:18
Operator : FY/SY
Sample : H2943-11
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.286	3	6	30	rVB	5111222	11674091	100.00%	25.764%
2	1.542	30	32	36	rVB2	36890	55007	0.47%	0.121%
3	1.611	36	39	41	rBV4	10451	20504	0.18%	0.045%
4	1.690	44	47	56	rBV	244563	464340	3.98%	1.025%
5	2.083	84	87	98	rBV	178024	377965	3.24%	0.834%
6	2.447	123	124	127	rBV3	5439	7515	0.06%	0.017%
7	2.566	134	136	144	rVB2	23396	65153	0.56%	0.144%
8	2.762	154	156	158	rBV3	4057	6327	0.05%	0.014%
9	2.910	166	171	185	rBV	671417	1619933	13.88%	3.575%
10	3.186	195	199	201	rBV4	7382	14028	0.12%	0.031%
11	3.314	209	212	214	rVB4	4490	6347	0.05%	0.014%
12	3.402	219	221	224	rVB4	3714	4684	0.04%	0.010%
13	3.481	227	229	231	rVB3	4696	5245	0.04%	0.012%
14	3.569	233	238	247	rVB3	13224	49906	0.43%	0.110%
15	3.806	261	262	266	rBV4	2678	4651	0.04%	0.010%
16	3.884	266	270	271	rBV3	2841	4396	0.04%	0.010%
17	3.953	274	277	278	rBV3	2906	5059	0.04%	0.011%
18	4.042	285	286	289	rVB3	4241	4956	0.04%	0.011%
19	4.081	289	290	292	rBV2	4574	4705	0.04%	0.010%
20	4.308	311	313	314	rVB2	5313	5635	0.05%	0.012%
21	4.337	314	316	320	rBV5	4397	8916	0.08%	0.020%
22	4.416	320	324	326	rBV4	5349	10578	0.09%	0.023%
23	4.534	333	336	338	rBV3	6120	8114	0.07%	0.018%
24	4.672	347	350	351	rBV3	3459	4998	0.04%	0.011%
25	5.085	389	392	394	rBV4	2938	6714	0.06%	0.015%
26	5.154	397	399	403	rVB4	2470	5276	0.05%	0.012%
27	5.233	403	407	410	rBV5	2671	6483	0.06%	0.014%
28	5.302	410	414	416	rVB5	3465	5306	0.05%	0.012%
29	5.361	419	420	423	rVB3	5500	5623	0.05%	0.012%
30	5.528	434	437	439	rBV4	2596	5564	0.05%	0.012%
31	5.636	442	448	459	rBV	356929	1440009	12.34%	3.178%
32	5.961	479	481	484	rVB4	4715	5503	0.05%	0.012%
33	6.148	498	500	502	rBV2	3462	6616	0.06%	0.015%
34	6.217	506	507	511	rVB3	5854	7791	0.07%	0.017%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049353.D
Acq On : 12 May 2016 16:18
Operator : FY/SY
Sample : H2943-11
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

35	6.355	513	521	532	rBV2	669724	2237592	19.17%	4.938%
36	6.611	545	547	549	rBV3	3846	6144	0.05%	0.014%
37	6.729	555	559	562	rBV4	4387	12437	0.11%	0.027%
38	6.876	571	574	577	rVB5	3876	8210	0.07%	0.018%
39	6.985	583	585	587	rVB3	4112	5349	0.05%	0.012%
40	7.063	590	593	594	rBV2	2311	4589	0.04%	0.010%
41	7.142	594	601	605	rBV	1287310	3489434	29.89%	7.701%
42	7.201	605	607	616	rVB	446632	1028856	8.81%	2.271%
43	7.585	641	646	647	rVB4	1944	4409	0.04%	0.010%
44	7.910	672	679	688	rBV	1212637	2713474	23.24%	5.989%
45	8.018	688	690	694	rVV4	6335	15801	0.14%	0.035%
46	8.185	704	707	712	rVB6	8352	13665	0.12%	0.030%
47	8.303	718	719	722	rVB3	4500	4484	0.04%	0.010%
48	8.412	722	730	738	rBV	1034481	2242997	19.21%	4.950%
49	8.510	738	740	747	rVV7	9558	31676	0.27%	0.070%
50	8.835	768	773	774	rVB4	2666	5563	0.05%	0.012%
51	8.864	774	776	777	rBV2	4352	5788	0.05%	0.013%
52	8.894	777	779	780	rVV2	3838	4914	0.04%	0.011%
53	8.973	784	787	788	rVB3	3645	5511	0.05%	0.012%
54	8.992	788	789	792	rBV3	2914	5350	0.05%	0.012%
55	9.248	810	815	819	rBV3	4467	16595	0.14%	0.037%
56	9.347	820	825	833	rBV	569848	1082621	9.27%	2.389%
57	9.465	835	837	840	rVB4	4031	6693	0.06%	0.015%
58	9.514	840	842	845	rVB4	3892	7256	0.06%	0.016%
59	9.553	845	846	850	rBV4	5877	11535	0.10%	0.025%
60	9.671	854	858	865	rBV	1895152	3415552	29.26%	7.538%
61	9.937	883	885	887	rBV3	2572	5413	0.05%	0.012%
62	9.996	887	891	898	rBV	345020	597360	5.12%	1.318%
63	10.085	898	900	901	rVV2	5611	6485	0.06%	0.014%
64	10.114	901	903	904	rVV	6242	9539	0.08%	0.021%
65	10.144	904	906	907	rVV2	8048	10946	0.09%	0.024%
66	10.203	907	912	918	rVV	168491	384318	3.29%	0.848%
67	10.272	918	919	920	rVV	5800	5711	0.05%	0.013%
68	10.301	920	922	924	rVB3	7647	12039	0.10%	0.027%
69	10.410	929	933	946	rVV	1928531	3354176	28.73%	7.403%
70	10.961	984	989	994	rVB8	5618	18231	0.16%	0.040%
71	11.108	1002	1004	1007	rBV4	3357	4466	0.04%	0.010%

LSC Area Percent Report

Data Path : W:\HPCHEM1\MSVOA I\DATA\VI051216\
Data File : VI049353.D
Acq On : 12 May 2016 16:18
Operator : FY/SY
Sample : H2943-11
Misc : 25mL/MSVOA I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Title : TRACE VOA SOM01.0

72	11.197	1009	1013	1023	rBV	1567437	2658026	22.77%	5.866%
73	11.335	1024	1027	1031	rVB4	8226	16082	0.14%	0.035%
74	11.453	1037	1039	1045	rVB5	9794	17698	0.15%	0.039%
75	11.551	1045	1049	1050	rBV3	6065	6549	0.06%	0.014%
76	11.709	1064	1065	1070	rVB5	3370	6654	0.06%	0.015%
77	11.827	1075	1077	1083	rBV4	9422	25120	0.22%	0.055%
78	11.906	1083	1085	1087	rVB3	3748	5003	0.04%	0.011%
79	11.935	1087	1088	1092	rVB3	2951	4759	0.04%	0.011%
80	12.093	1101	1104	1106	rVB4	4004	6117	0.05%	0.014%
81	12.171	1106	1112	1116	rBV8	10576	27885	0.24%	0.062%
82	12.388	1129	1134	1136	rVV2	176490	318848	2.73%	0.704%
83	12.437	1136	1139	1145	rVV	446058	806213	6.91%	1.779%
84	12.644	1157	1160	1163	rBV4	3552	6669	0.06%	0.015%
85	12.683	1163	1164	1167	rBV3	4518	4941	0.04%	0.011%
86	12.791	1172	1175	1178	rVB4	3032	6513	0.06%	0.014%
87	12.880	1181	1184	1186	rBV4	4097	6635	0.06%	0.015%
88	12.978	1191	1194	1196	rBV4	2986	6924	0.06%	0.015%
89	13.018	1196	1198	1199	rBV2	2975	4793	0.04%	0.011%
90	13.067	1201	1203	1207	rBV5	3842	6158	0.05%	0.014%
91	13.165	1212	1213	1217	rBV4	3129	7581	0.06%	0.017%
92	13.411	1234	1238	1244	rBV	1310165	2141293	18.34%	4.726%
93	13.628	1258	1260	1264	rVB5	6172	12461	0.11%	0.028%
94	13.736	1267	1271	1280	rVV	1242464	2118337	18.15%	4.675%
95	14.012	1295	1299	1304	rVB2	96407	183312	1.57%	0.405%
96	14.189	1315	1317	1319	rBV3	5350	10053	0.09%	0.022%
97	14.297	1325	1328	1330	rBV4	9696	17815	0.15%	0.039%
98	14.356	1333	1334	1336	rBV2	6357	6377	0.05%	0.014%
99	14.494	1346	1348	1349	rBV2	7244	9093	0.08%	0.020%
100	15.587	1455	1459	1464	rBV	70690	139903	1.20%	0.309%

Sum of corrected areas: 45310929

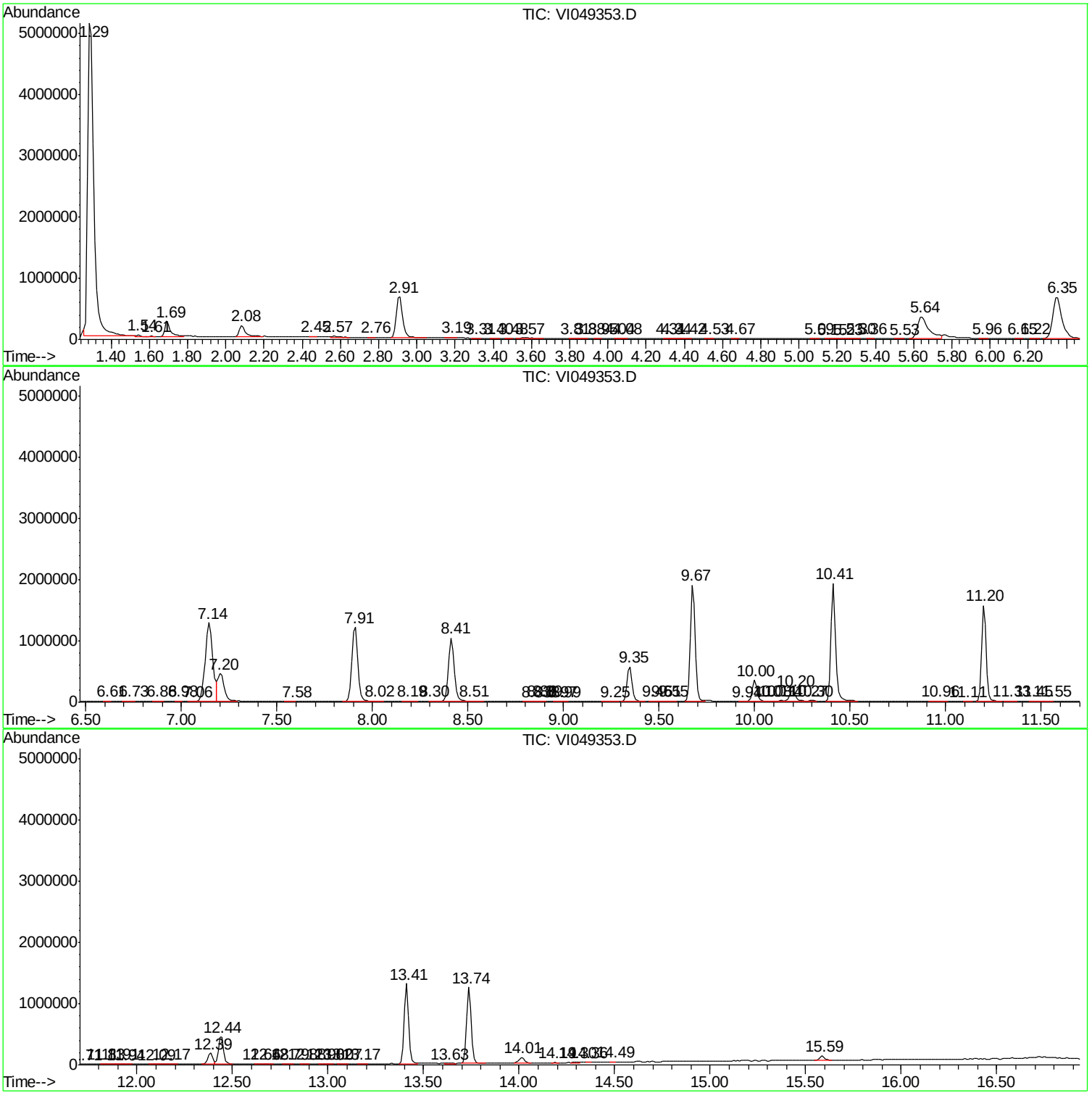
LSC Report - Integrated Chromatogram

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049353.D
Acq On : 12 May 2016 16:18
Operator : FY/SY
Sample : H2943-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049353.D
Acq On : 12 May 2016 16:18
Operator : FY/SY
Sample : H2943-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051216\
Data File : VI049353.D
Acq On : 12 May 2016 16:18
Operator : FY/SY
Sample : H2943-11
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : VHBLK01

Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4134MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-07MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049327.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	4.7	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	5.6	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	5.5	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4134MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-07MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049327.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.5	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.4	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	5.4	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4134MS

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-07MS
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049327.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

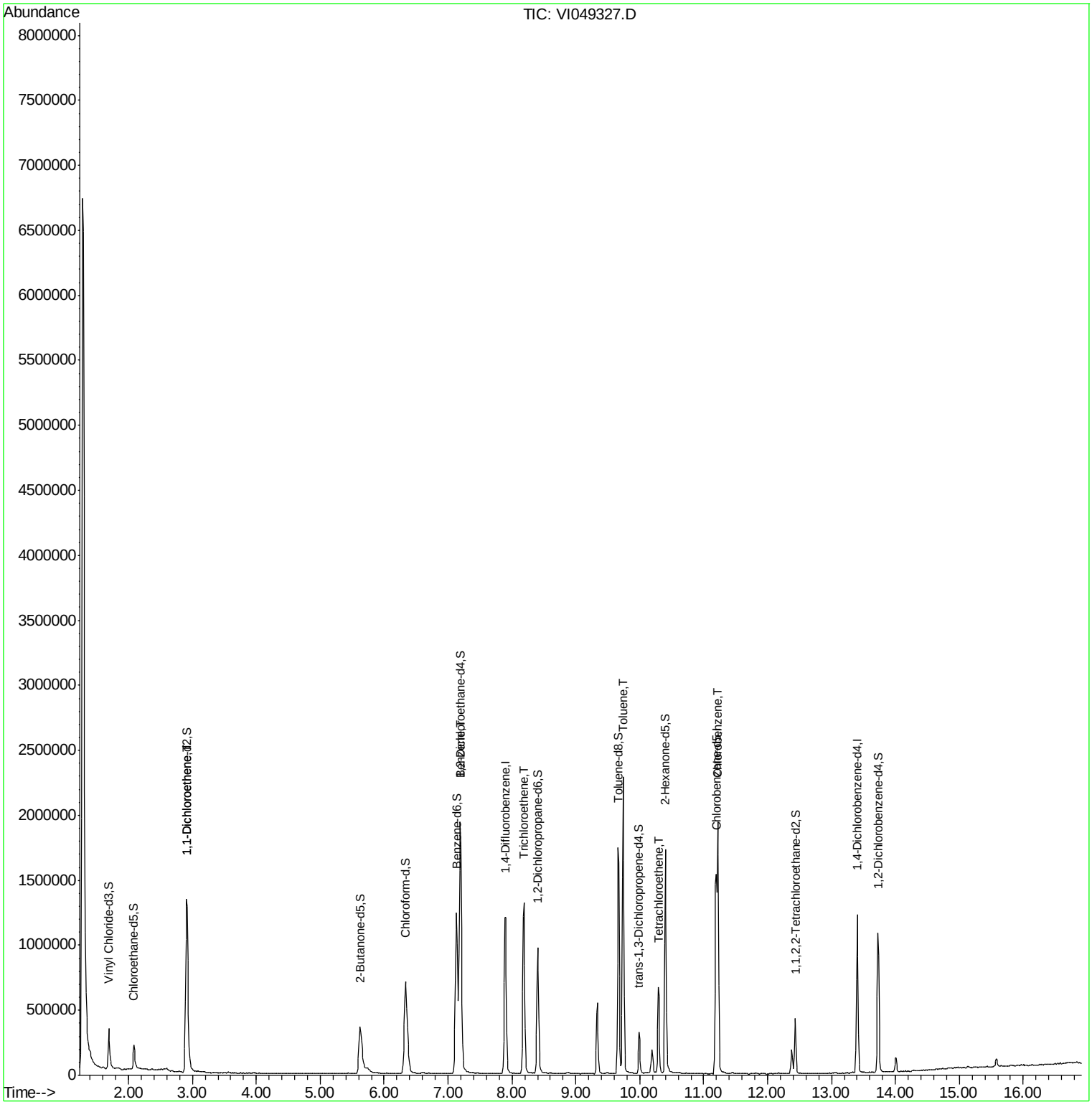
Quantitation Report (QT Reviewed)

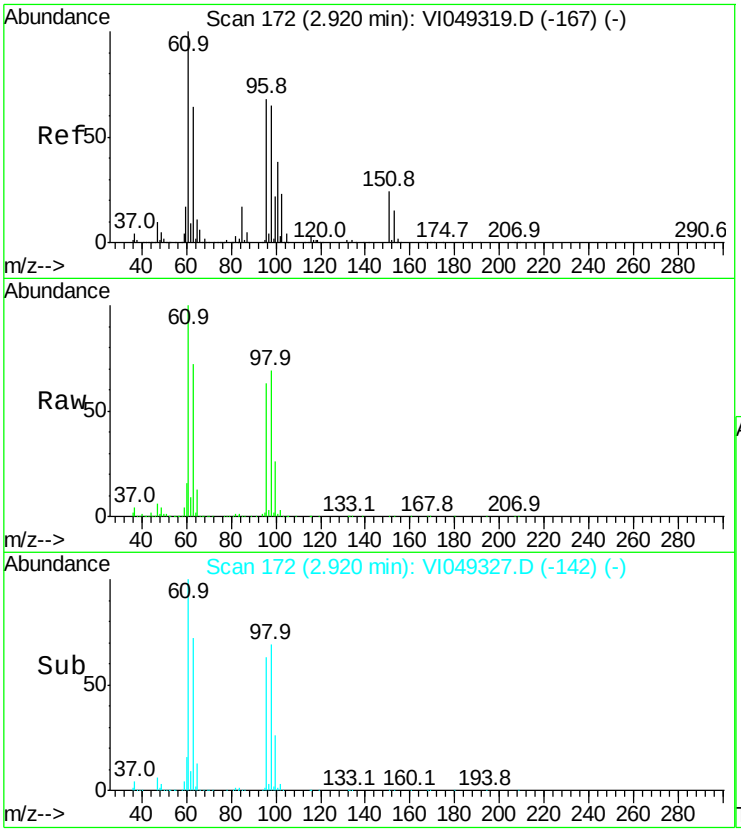
Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049327.D
Acq On : 10 May 2016 16:31
Operator : FY/SY
Sample : H2943-07MS
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 11 12:03:43 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4134MS

Manual Integrations APPROVED
feifei
5/11/2016 12:05:15 PM

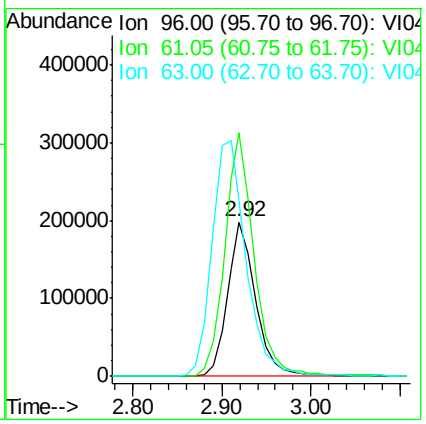




#12
1,1-Dichloroethene
Concen: 4.69 ug/L
RT: 2.92 min Scan# 172
Delta R.T. -0.00 min
Lab File: VI049327.D
Acq: 10 May 2016 16:31

Tgt Ion: 96 Resp: 432324

Ion	Ratio	Lower	Upper
96	100		
61	157.9	104.6	194.2
63	114.3	73.0	135.6



Instrument :
MSVOA_I
ClientSampleId :
H4134MS

Manual Integrations APPROVED
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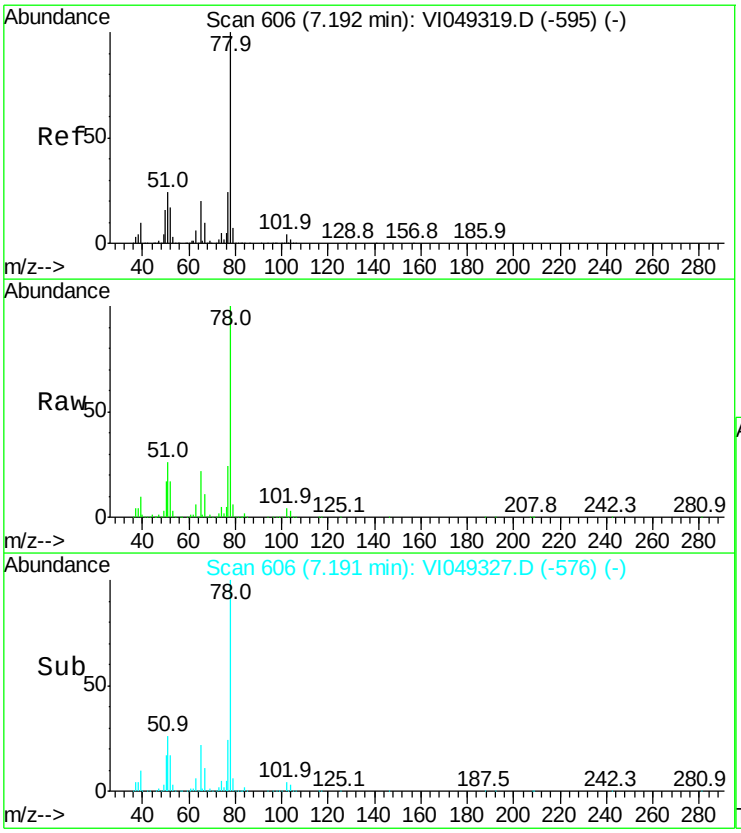
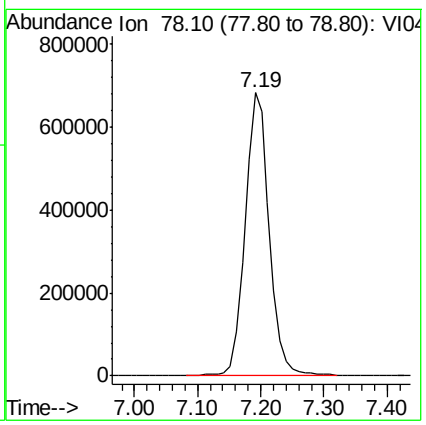
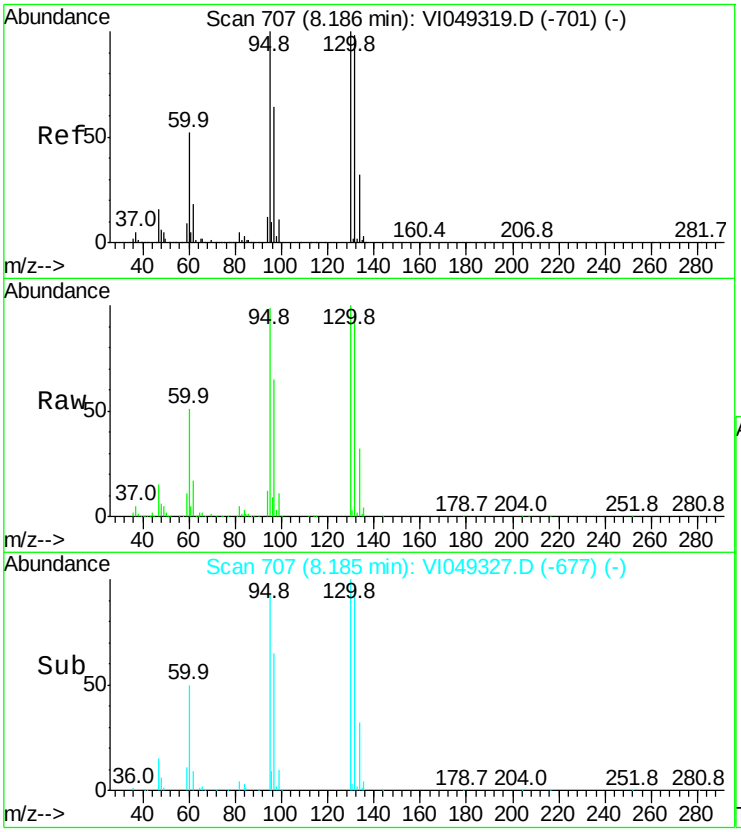
5/11/2016 12:05:15 PM



#33
Benzene
Concen: 5.58 ug/L
RT: 7.19 min Scan# 606
Delta R.T. -0.00 min
Lab File: VI049327.D
Acq: 10 May 2016 16:31

Tgt Ion: 78 Resp: 1808674

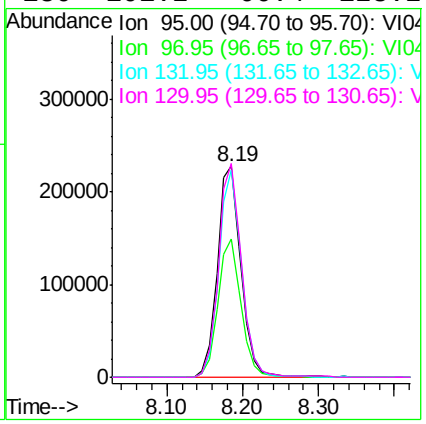




#34
Trichloroethene
Concen: 5.47 ug/L
RT: 8.19 min Scan# 707
Delta R.T. -0.00 min
Lab File: VI049327.D
Acq: 10 May 2016 16:31

Tgt Ion: 95 Resp: 492002

Ion	Ratio	Lower	Upper
95	100		
97	65.5	45.8	85.2
132	98.4	63.9	118.7
130	101.2	66.4	123.2



Instrument :
MSVOA_I
ClientSampleId :
H4134MS

Manual Integrations APPROVED
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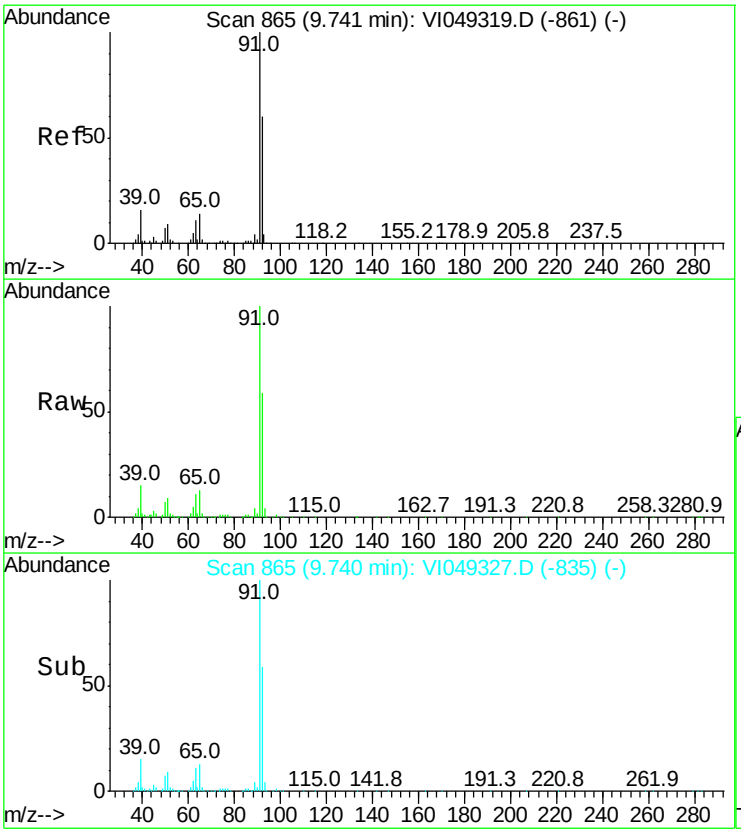
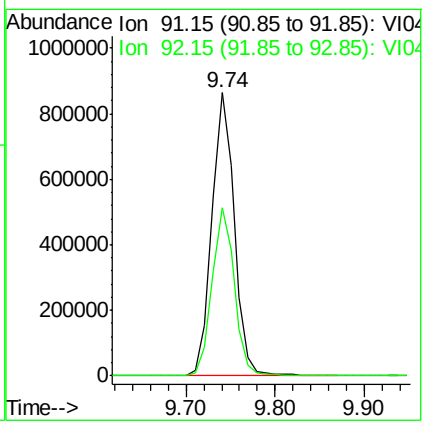
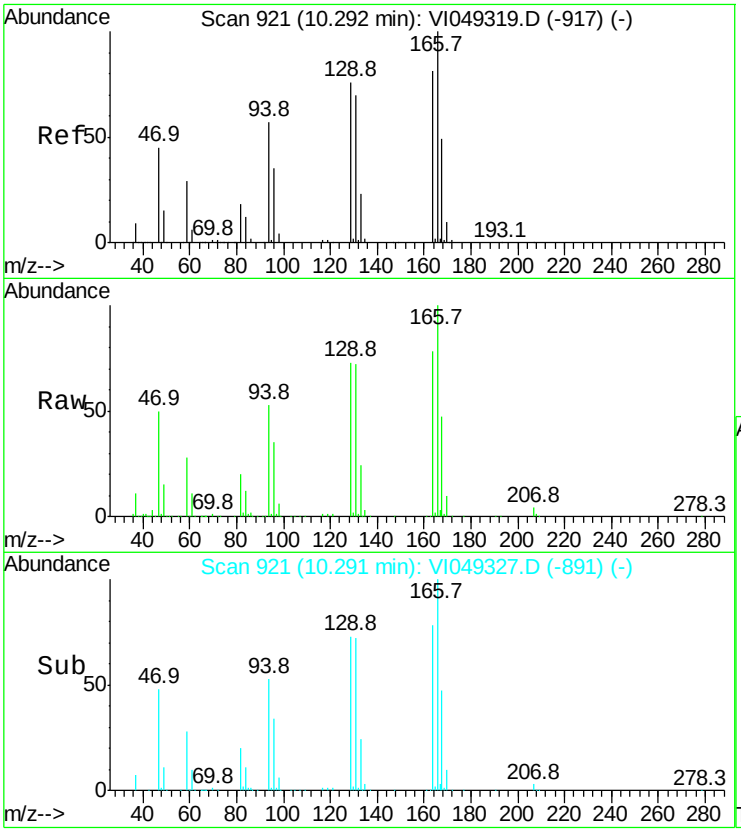


#42
Toluene
Concen: 5.51 ug/L
RT: 9.74 min Scan# 865
Delta R.T. -0.00 min
Lab File: VI049327.D
Acq: 10 May 2016 16:31

Tgt Ion: 91 Resp: 1507585

Ion	Ratio	Lower	Upper
91	100		
92	59.4	41.2	76.4

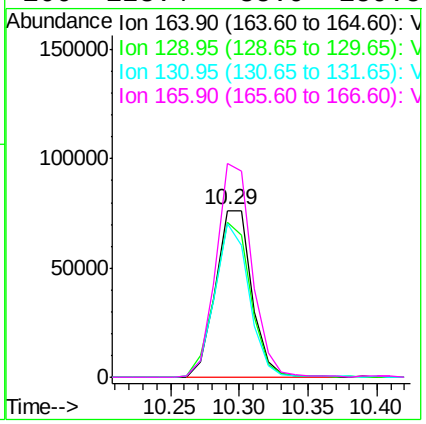




#47
Tetrachloroethene
Concen: 2.35 ug/L
RT: 10.29 min Scan# 921
Delta R.T. -0.00 min
Lab File: VI049327.D
Acq: 10 May 2016 16:31

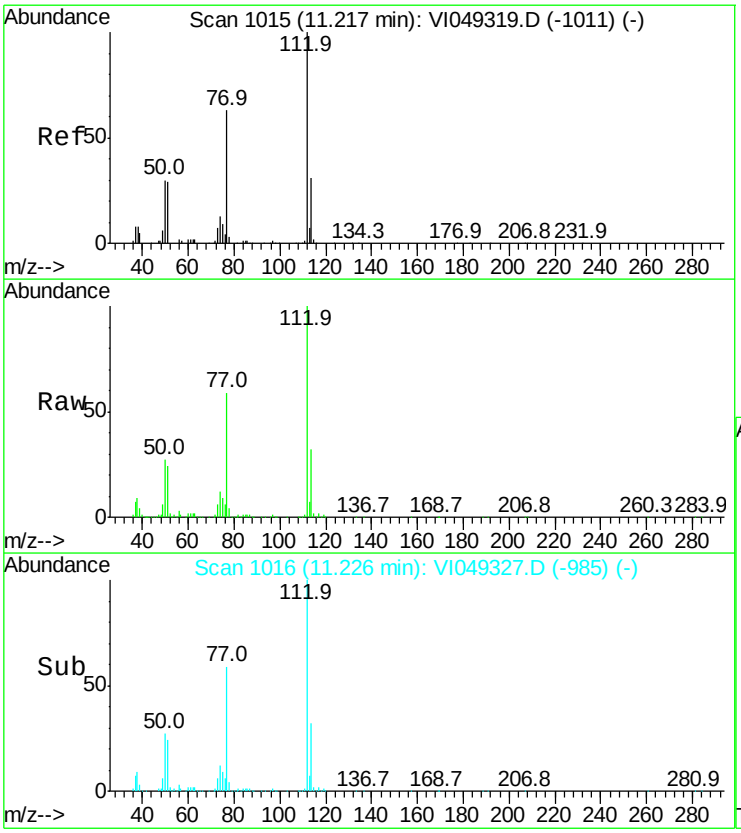
Tgt Ion:164 Resp: 139056

Ion	Ratio	Lower	Upper
164	100		
129	93.3	62.1	115.3
131	92.3	60.6	112.6
166	128.4	85.9	159.5



Instrument :
MSVOA_I
ClientSampleId :
H4134MS

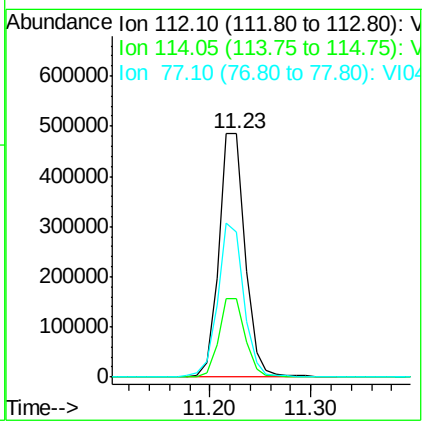
Manual Integrations APPROVED
feifei
5/11/2016 12:05:15 PM



#51
Chlorobenzene
Concen: 5.37 ug/L
RT: 11.23 min Scan# 1016
Delta R.T. 0.01 min
Lab File: VI049327.D
Acq: 10 May 2016 16:31

Tgt Ion:112 Resp: 880344

Ion	Ratio	Lower	Upper
112	100		
114	32.2	23.2	43.2
77	59.4	50.3	75.5



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049327.D
Acq On : 10 May 2016 16:31
Operator : FY/SY
Sample : H2943-07MS
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4134MS

Manual Integrations APPROVED
feifei
5/11/2016 12:05:15 PM

Quant Time: May 11 12:03:43 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1140996	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	756995	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.40	152	276055	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	348807	4.97	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 99.40%			
7) Chloroethane-d5	2.08	69	201003m	5.17	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 103.40%			
11) 1,1-Dichloroethene-d2	2.91	63	804085	4.86	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 97.20%			
20) 2-Butanone-d5	5.63	46	870487	57.24	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 114.48%			
24) Chloroform-d	6.33	84	877885	4.91	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.20%			
26) 1,2-Dichloroethane-d4	7.19	65	387915	5.31	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 106.20%			
32) Benzene-d6	7.13	84	1595261	5.41	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 108.20%			
36) 1,2-Dichloropropane-d6	8.40	67	444157	5.36	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.20%			
41) Toluene-d8	9.66	98	1105169	5.08	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.60%			
43) trans-1,3-Dichloropropene-	9.99	79	153658	4.70	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 94.00%			
46) 2-Hexanone-d5	10.40	63	554099	53.77	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 107.54%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	186359	4.94	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.80%			
63) 1,2-Dichlorobenzene-d4	13.73	152	250071	5.17	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 103.40%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	2.92	96	432324	4.69	ug/L	92
33) Benzene	7.19	78	1808674	5.58	ug/L	100
34) Trichloroethene	8.19	95	492002	5.47	ug/L	95
42) Toluene	9.74	91	1507585	5.51	ug/L	99
47) Tetrachloroethene	10.29	164	139056	2.35	ug/L	95
51) Chlorobenzene	11.23	112	880344	5.37	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

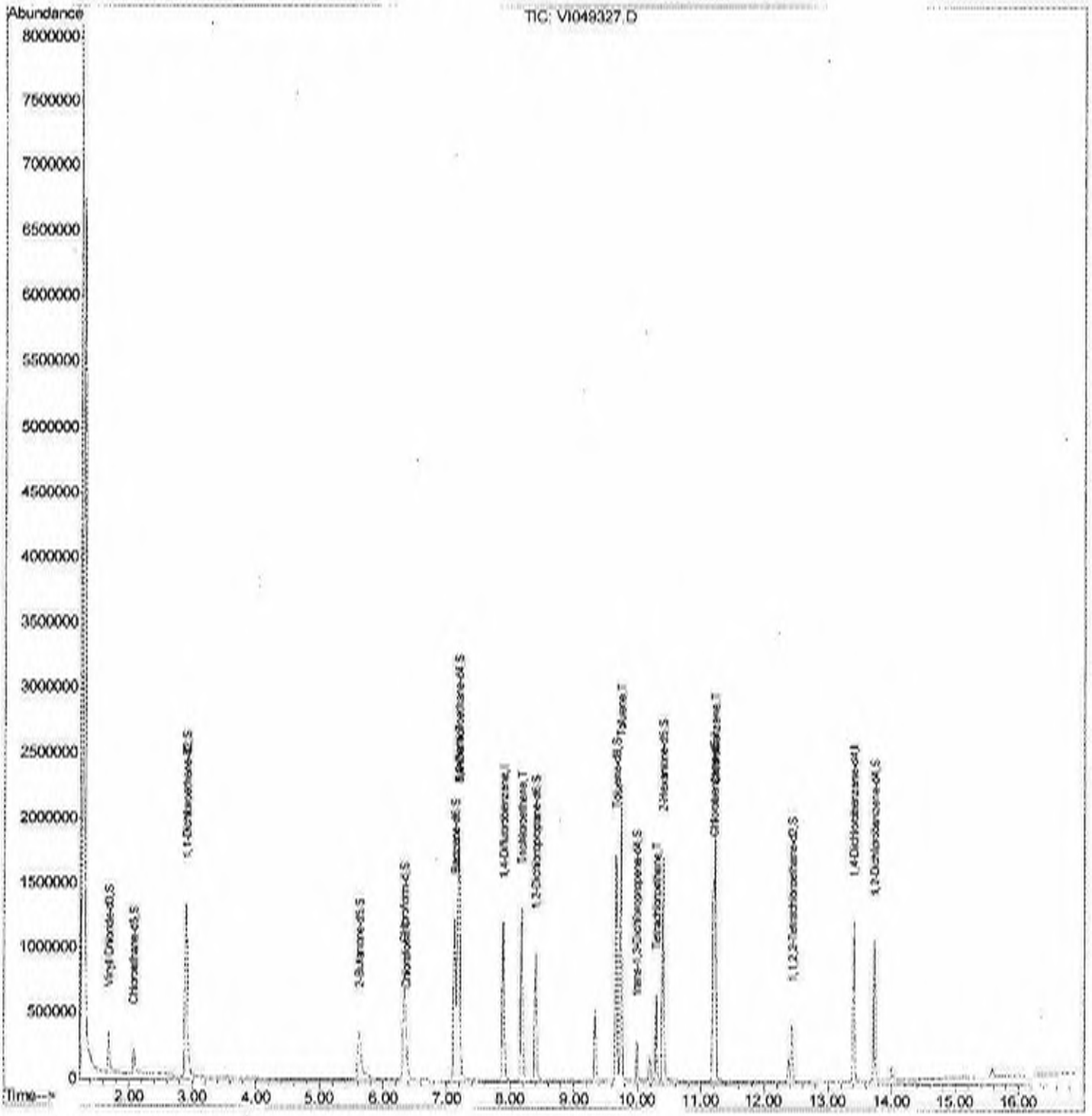
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051016\
Data File : VI049327.D
Acq On : 10 May 2016 16:31
Operator : FY/SY
Sample : H2943-07MS
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 11 04:43:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4134MS

Manual Integrations APPROVED
feifei
5/11/2016 12:05:15 PM



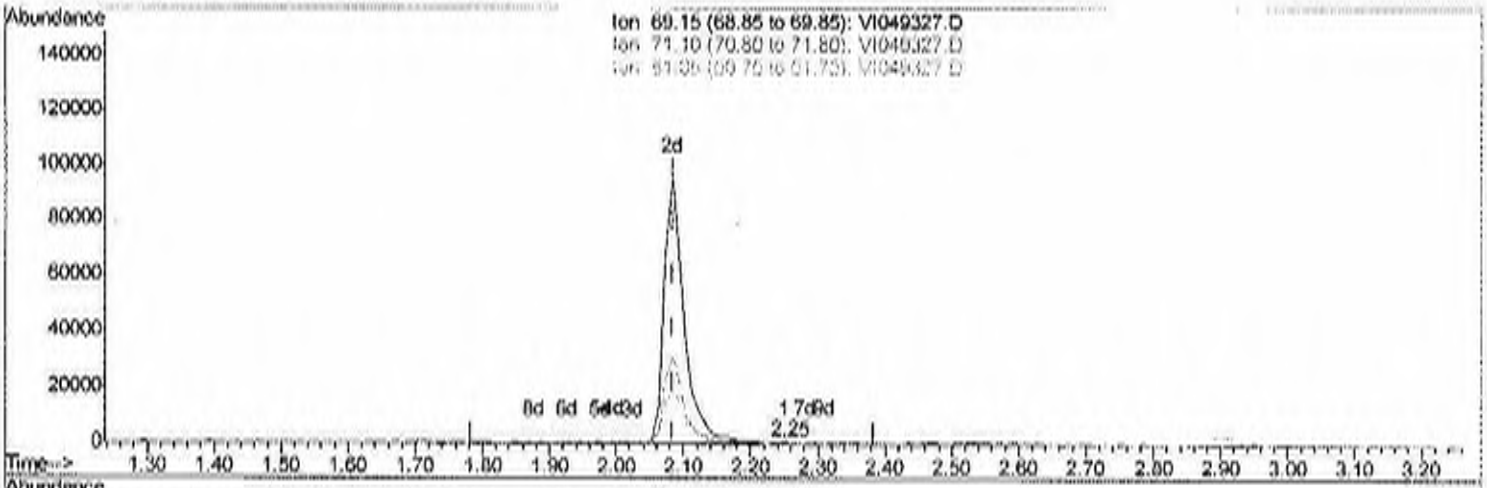
Quantitation Report (Qedit)

Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051016\
Data File : VI049327.D
Acq On : 10 May 2016 16:31
Operator : FY/SY
Sample : H2943-07MS
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 11 03:52:13 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4134MS

Manual Integrations APPROVED
feifei
5/11/2016 12:05:15 PM



(7) Chloroethane-d5 (S)

2.250min (+0.167) 0.05ug/L

response 2090

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	38.61
51.05	32.70	37.70
0.00	0.00	0.00

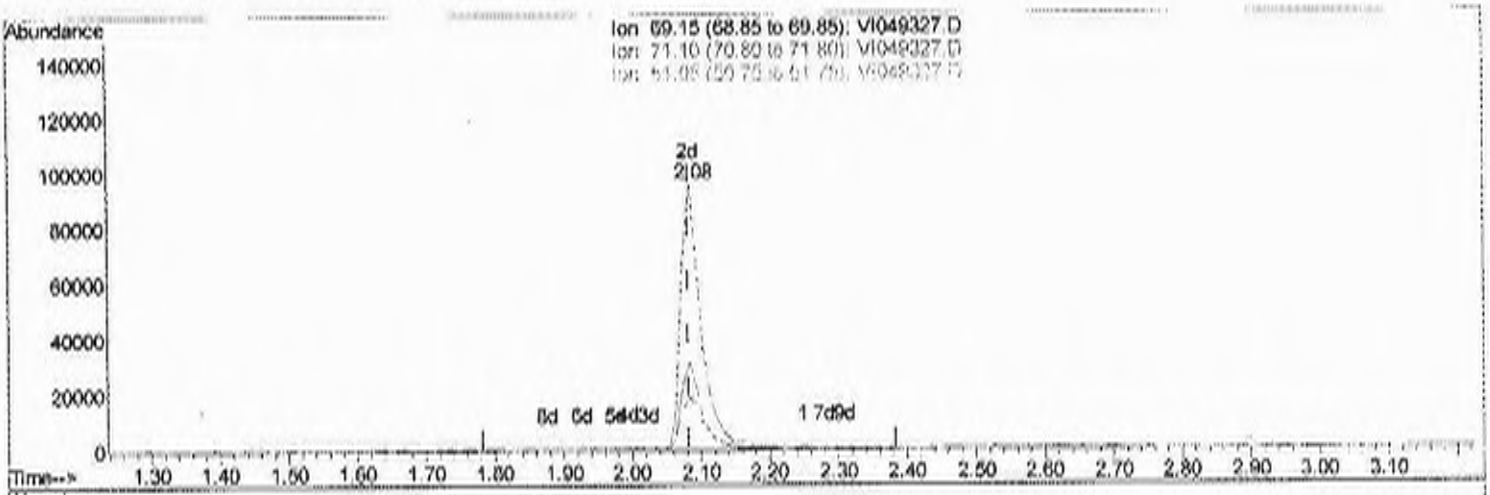
Quantitation Report (Qedit)

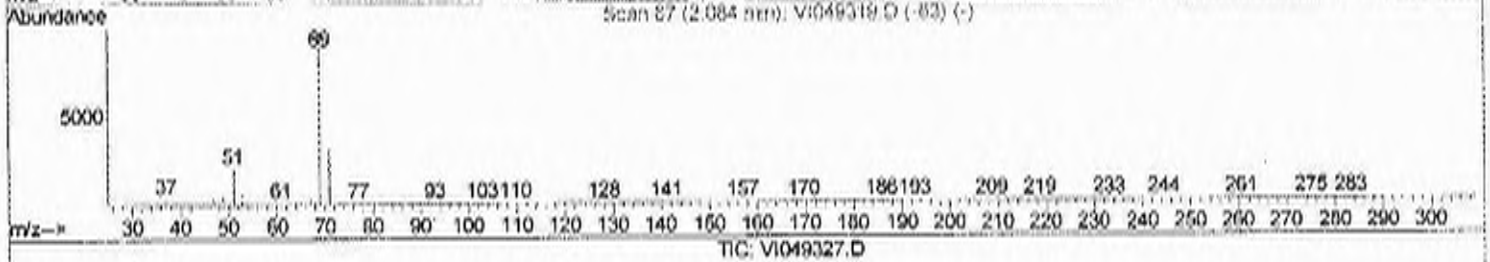
Data Path : W:\HPCHEM1\MSVOA_I\Data\VI051016\
Data File : VI049327.D
Acq On : 10 May 2016 16:31
Operator : FY/SY
Sample : H2943-07MS
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 11 03:52:13 2016
Quant Method : W:\HPCHEM1\MSVOA_1\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Instrument :
MSVOA_I
ClientSampleId :
H4134MS

Manual Integrations APPROVED
feifei
5/11/2016 12:05:15 PM





(7) Chloroethane-d5 (S)

2.083min (-0.000) 5.17ug/L m

response 201003

Ion	Exp%	Act%
69.15	100	100
71.10	33.30	0.40#
51.05	32.70	0.39#
0.00	0.00	0.00

SOMITR050416W.M Wed May 11 04:24:31 2016 Page: 1

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049327.D
Acq On : 10 May 2016 16:31
Operator : FY/SY
Sample : H2943-07MS
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_I
ClientSampleId :
H4134MS

Manual Integrations APPROVED
feifei
5/11/2016 12:05:15 PM

Quant Time: May 11 12:03:43 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	Qlon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1140996	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.20	117	756995	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.40	152	276055	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.69	65	348807	4.97	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 99.40%			
7) Chloroethane-d5	2.08	69	201003m	5.17	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 103.40%			
11) 1,1-Dichloroethene-d2	2.91	63	804085	4.86	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 97.20%			
20) 2-Butanone-d5	5.63	46	870487	57.24	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 114.48%			
24) Chloroform-d	6.33	84	877885	4.91	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 98.20%			
26) 1,2-Dichloroethane-d4	7.19	65	387915	5.31	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 106.20%			
32) Benzene-d6	7.13	84	1595261	5.41	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 108.20%			
36) 1,2-Dichloropropane-d6	8.40	67	444157	5.36	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 107.20%			
41) Toluene-d8	9.66	98	1105169	5.08	ug/L	-0.01
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.60%			
43) trans-1,3-Dichloropropene-	9.99	79	153658	4.70	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 94.00%			
46) 2-Hexanone-d5	10.40	63	554099	53.77	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 107.54%			
57) 1,1,2,2-Tetrachloroethane-	12.44	84	186359	4.94	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 98.80%			
63) 1,2-Dichlorobenzene-d4	13.73	152	250071	5.17	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 103.40%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	2.92	96	432324	4.69	ug/L	92
33) Benzene	7.19	78	1808674	5.58	ug/L	100
34) Trichloroethene	8.19	95	492002	5.47	ug/L	95
42) Toluene	9.74	91	1507585	5.51	ug/L	99
47) Tetrachloroethene	10.29	164	139056	2.35	ug/L	95
51) Chlorobenzene	11.23	112	880344	5.37	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

05/26/16

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4134MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-08MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049328.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	4.9	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	5.9	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	5.6	

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4134MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-08MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049328.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.7	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.3	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	5.7	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-trichlorobenzene	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4134MSD

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : Trace VOA
Level :
Matrix : Water
Lab Sample ID : H2943-08MSD
Sample wt/vol : 25.0 (g/mL): mL
Lab File ID : VI049328.D
% Solids :
Date Received : 05/06/2016
GC Column : RXI-624 ID : 0.25 (mm)
Date Extracted :
GC Column : ID : (mm)
Date Analyzed : 05/10/2016
Extract Concentrated :(Y / N)
Extract Volume : (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : PT
Heated Purge : (Y / N) N
Injection Volume : (µL)
Purge Volume : 25 (mL)
pH : 1.0 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor :
Concentration Units (µg/L,mg/L,µg/kg): µg/L

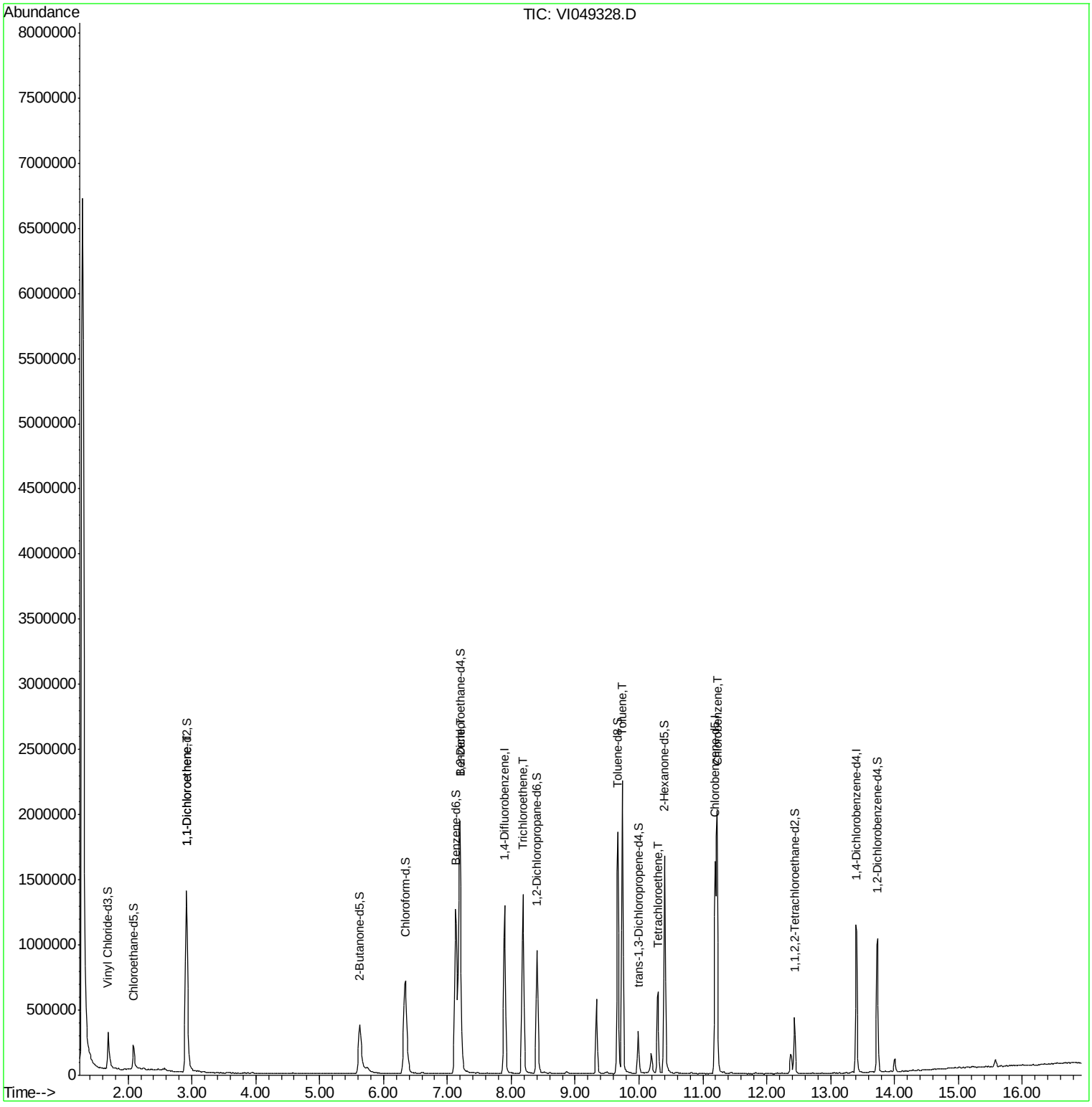
CAS NO.	ANALYTE	CONCENTRATION	Q
87-61-6	1,2,3-Trichlorobenzene	0.50	U

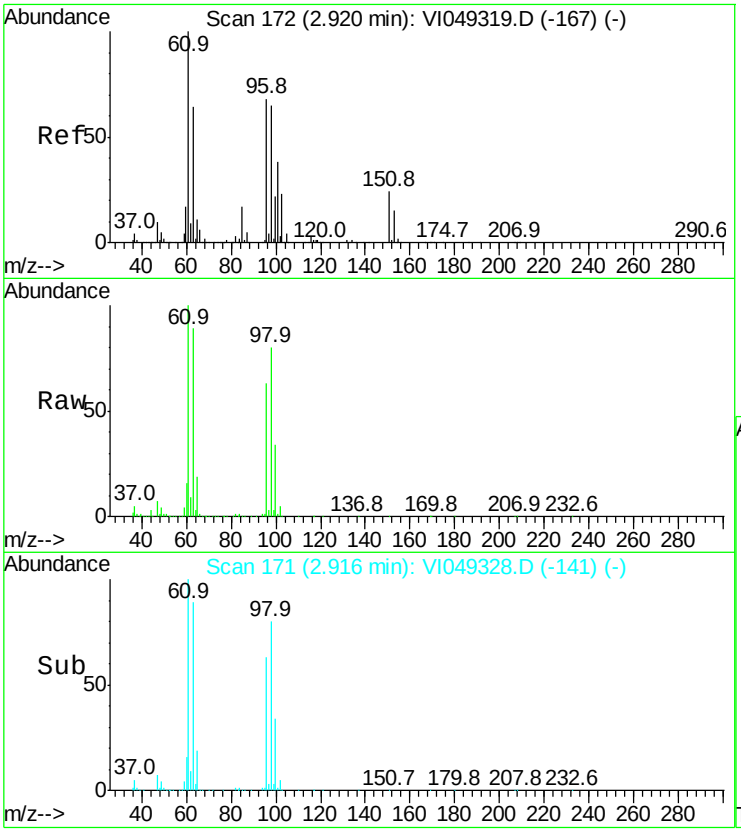
Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049328.D
Acq On : 10 May 2016 17:03
Operator : FY/SY
Sample : H2943-08MSD
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4134MSD

Quant Time: May 11 12:03:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration



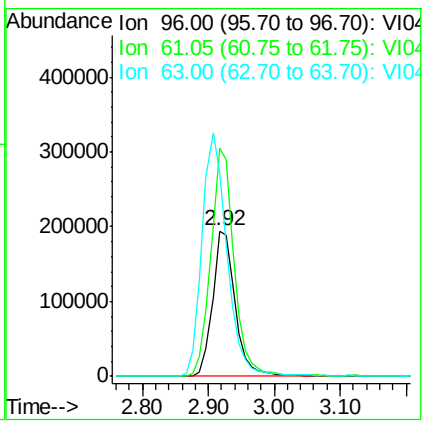


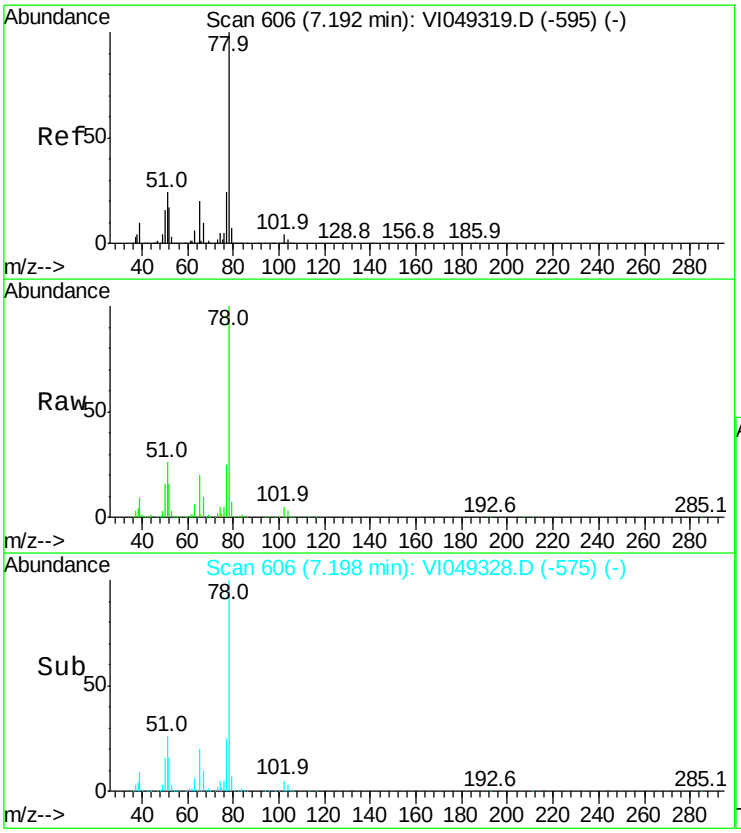
#12
1,1-Dichloroethene
Concen: 4.90 ug/L
RT: 2.92 min Scan# 171
Delta R.T. -0.00 min
Lab File: VI049328.D
Acq: 10 May 2016 17:03

Instrument : MSVOA_I
ClientSampleId : H4134MSD

Tgt Ion: 96 Resp: 457193

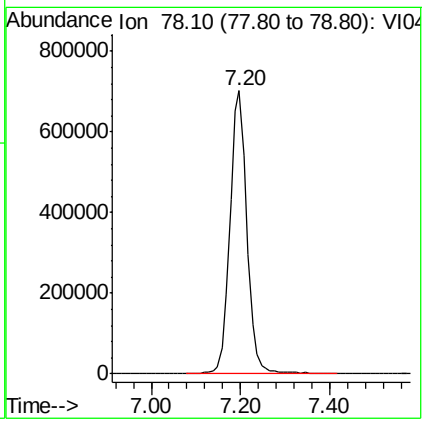
Ion	Ratio	Lower	Upper
96	100		
61	157.6	104.6	194.2
63	140.0	73.0	135.6#

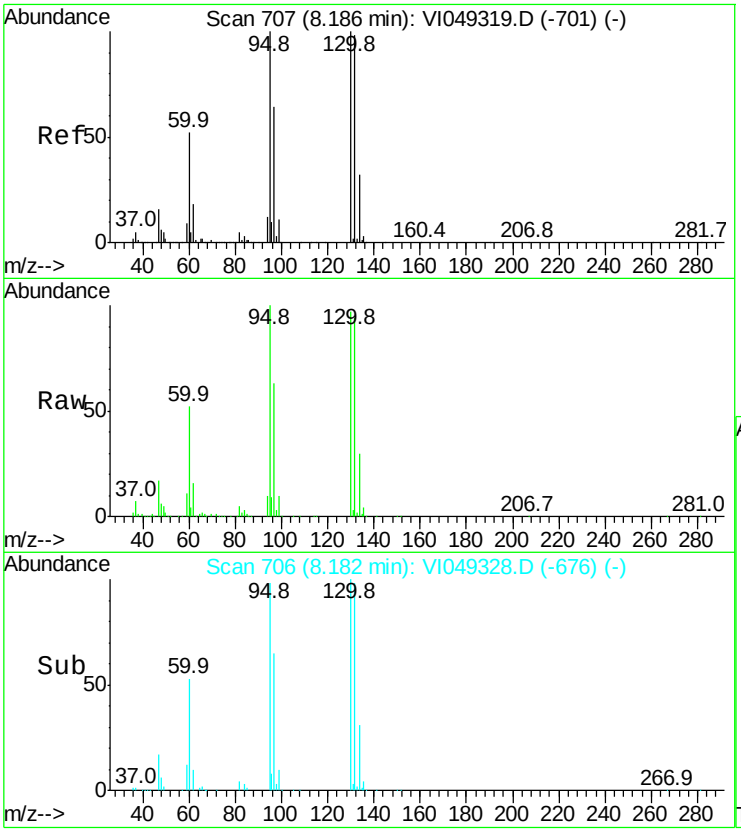




#33
Benzene
Concen: 5.85 ug/L
RT: 7.20 min Scan# 606
Delta R.T. 0.01 min
Lab File: VI049328.D
Acq: 10 May 2016 17:03

Tgt Ion: 78 Resp: 1882160



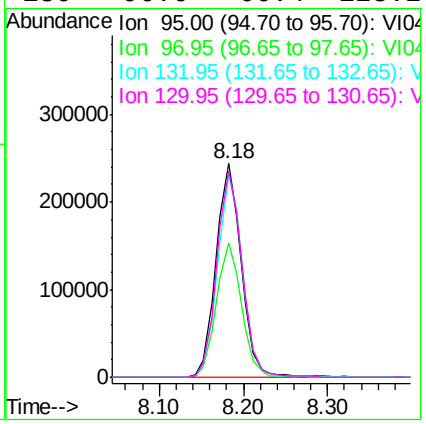


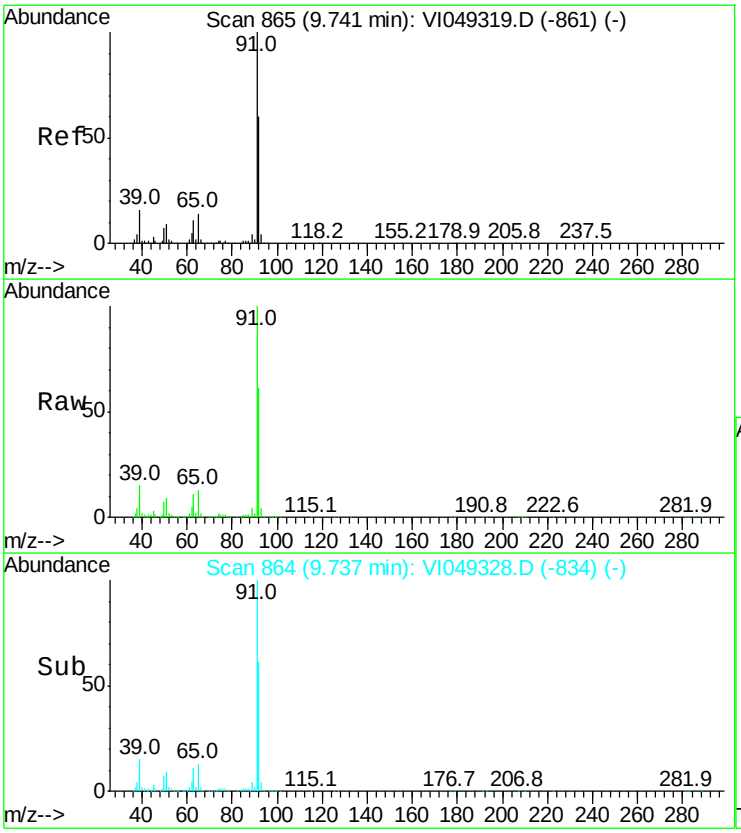
#34
Trichloroethene
Concen: 5.62 ug/L
RT: 8.18 min Scan# 706
Delta R.T. -0.00 min
Lab File: VI049328.D
Acq: 10 May 2016 17:03

Instrument : MSVOA_I
ClientSampleId : H4134MSD

Tgt Ion: 95 Resp: 501823

Ion	Ratio	Lower	Upper
95	100		
97	63.0	45.8	85.2
132	94.5	63.9	118.7
130	96.6	66.4	123.2

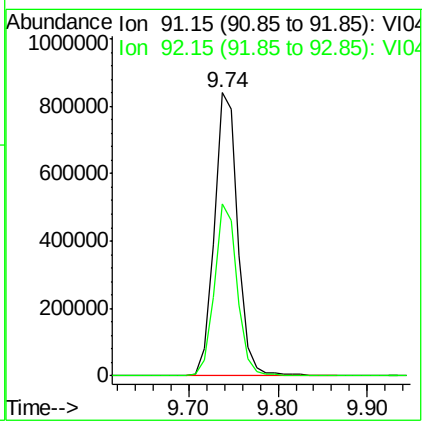


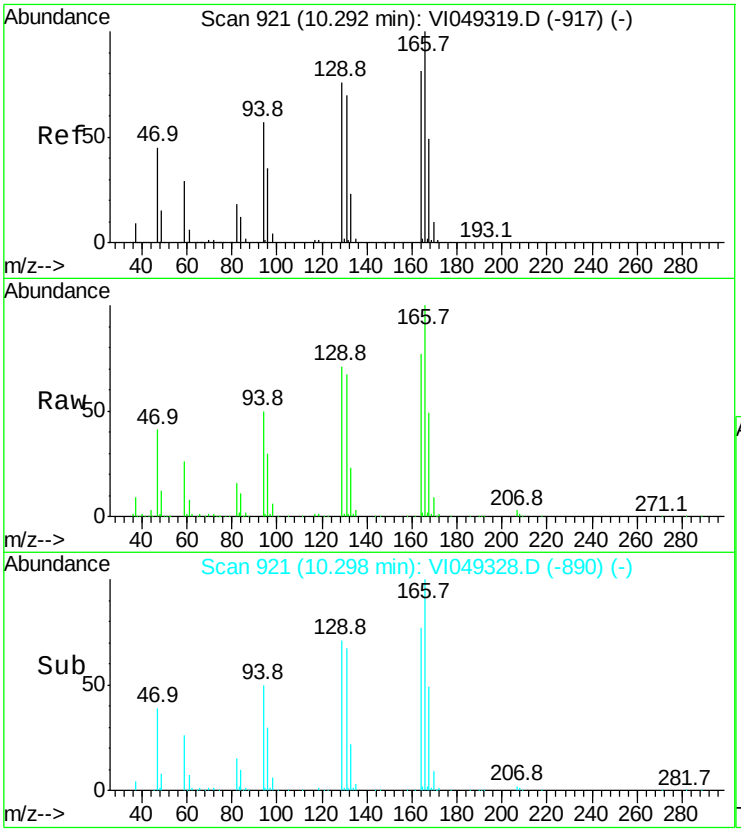


#42
Toluene
Concen: 5.68 ug/L
RT: 9.74 min Scan# 864
Delta R.T. -0.00 min
Lab File: VI049328.D
Acq: 10 May 2016 17:03

Tgt Ion: 91 Resp: 1540310

Ion	Ratio	Lower	Upper
91	100		
92	60.9	41.2	76.4



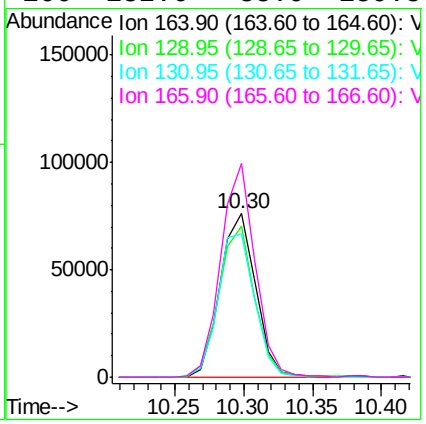


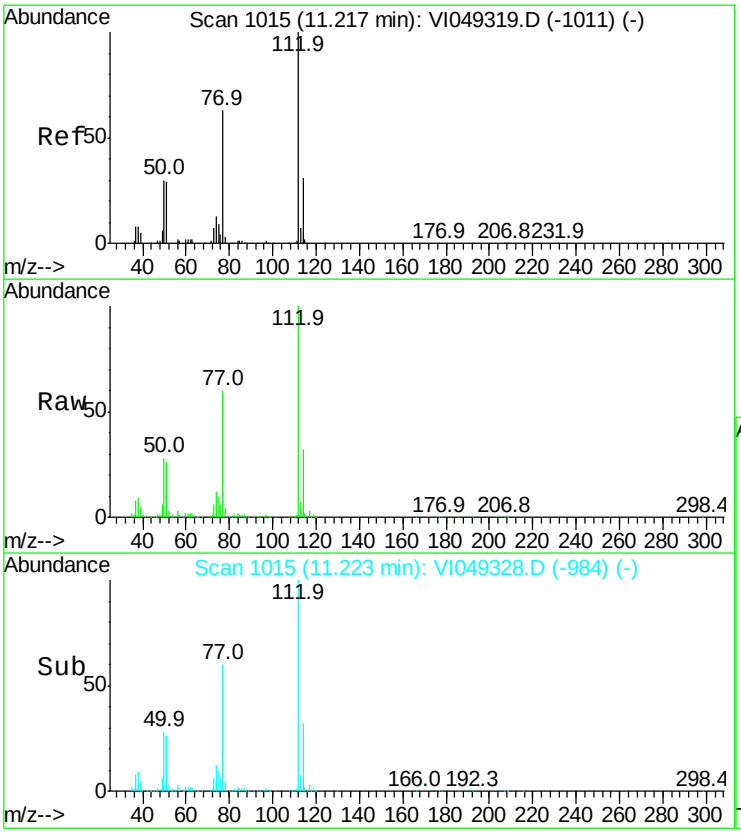
#47
Tetrachloroethene
Concen: 2.33 ug/L
RT: 10.30 min Scan# 921
Delta R.T. 0.01 min
Lab File: VI049328.D
Acq: 10 May 2016 17:03

Instrument : MSVOA_I
ClientSampleId : H4134MSD

Tgt Ion:164 Resp: 136801

Ion	Ratio	Lower	Upper
164	100		
129	92.1	62.1	115.3
131	87.8	60.6	112.6
166	132.6	85.9	159.5

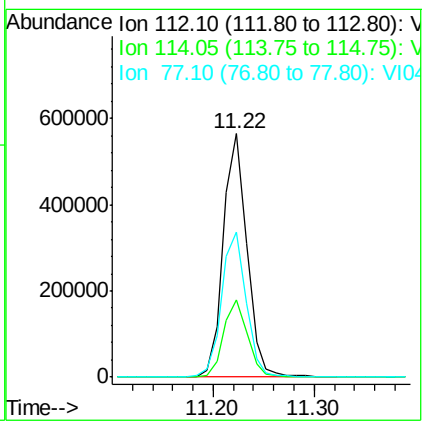




#51
Chlorobenzene
Concen: 5.67 ug/L
RT: 11.22 min Scan# 1015
Delta R.T. 0.01 min
Lab File: VI049328.D
Acq: 10 May 2016 17:03

Tgt Ion:112 Resp: 922925

Ion	Ratio	Lower	Upper
112	100		
114	31.9	23.2	43.2
77	59.6	50.3	75.5



Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_I\DATA\VI051016\
Data File : VI049328.D
Acq On : 10 May 2016 17:03
Operator : FY/SY
Sample : H2943-08MSD
Misc : 25mL/MSVOA_I/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument : MSVOA_I
ClientSampleId : H4134MSD

Quant Time: May 11 12:03:58 2016
Quant Method : W:\HPCHEM1\MSVOA_I\METHODS\SOMITR050416W.M
Quant Title : TRACE VOA SOM01.0
QLast Update : Wed May 11 03:50:36 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	7.90	114	1154932	5.00	ug/L	0.00
28) Chlorobenzene-d5	11.19	117	751085	5.00	ug/L	0.00
59) 1,4-Dichlorobenzene-d4	13.41	152	277062	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	1.70	65	357595	5.03	ug/L	0.00
Spiked Amount 5.000	Range 40 - 130		Recovery = 100.60%			
7) Chloroethane-d5	2.08	69	207833	5.28	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 105.60%			
11) 1,1-Dichloroethene-d2	2.91	63	826334	4.93	ug/L	0.00
Spiked Amount 5.000	Range 60 - 125		Recovery = 98.60%			
20) 2-Butanone-d5	5.62	46	909923	59.11	ug/L	0.00
Spiked Amount 50.000	Range 40 - 130		Recovery = 118.22%			
24) Chloroform-d	6.34	84	900447	4.98	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 99.60%			
26) 1,2-Dichloroethane-d4	7.19	65	395281	5.34	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 106.80%			
32) Benzene-d6	7.13	84	1634716	5.59	ug/L	0.00
Spiked Amount 5.000	Range 70 - 125		Recovery = 111.80%			
36) 1,2-Dichloropropane-d6	8.41	67	453703	5.51	ug/L	0.00
Spiked Amount 5.000	Range 60 - 140		Recovery = 110.20%			
41) Toluene-d8	9.67	98	1156073	5.36	ug/L	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.20%			
43) trans-1,3-Dichloropropene-	9.99	79	162290	5.01	ug/L	0.00
Spiked Amount 5.000	Range 55 - 130		Recovery = 100.20%			
46) 2-Hexanone-d5	10.40	63	594836	58.18	ug/L	0.00
Spiked Amount 50.000	Range 45 - 130		Recovery = 116.36%			
57) 1,1,2,2-Tetrachloroethane-	12.43	84	191479	5.12	ug/L	0.00
Spiked Amount 5.000	Range 65 - 120		Recovery = 102.40%			
63) 1,2-Dichlorobenzene-d4	13.73	152	255220	5.25	ug/L	0.00
Spiked Amount 5.000	Range 80 - 120		Recovery = 105.00%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	2.92	96	457193	4.90	ug/L #	82
33) Benzene	7.20	78	1882160	5.85	ug/L	100
34) Trichloroethene	8.18	95	501823	5.62	ug/L	97
42) Toluene	9.74	91	1540310	5.68	ug/L	97
47) Tetrachloroethene	10.30	164	136801	2.33	ug/L	95
51) Chlorobenzene	11.22	112	922925	5.67	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract: EPW14030

Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4104

Analytical Method : SVOA Level : _____

Matrix : Water

EPA Sample No .	DMC1 (DXE)	DMC2 (PHL)	DMC3 (BCE)	DMC4 (2CP)	DMC5 (4MP)	DMC6 (NBZ)	DMC7 (2NP)	DMC8 (DCP)	DMC9 (4CA)
H4105	20 *	22	86	74	51	90	94	87	2
H4106	16 *	17	89	71	44	95	96	88	5
H4137	20 *	19	83	70	44	90	91	83	1
SBLK04	64	64	67	67	66	69	70	68	54

	QC LIMITS
DMC1 (DXE) = 1,4-Dioxane-d8	40 - 110
DMC2 (PHL) = Phenol-d5	10 - 130
DMC3 (BCE) = Bis(2-Chloroethyl)ether-d8	25 - 120
DMC4 (2CP) = 2-Chlorophenol-d4	20 - 130
DMC5 (4MP) = 4-Methylphenol-d8	25 - 125
DMC6 (NBZ) = Nitrobenzene-d5	20 - 125
DMC7 (2NP) = 2-Nitrophenol-d4	20 - 130
DMC8 (DCP) = 2,4-Dichlorophenol-d3	20 - 120
DMC9 (4CA) = 4-Chloroaniline-d4	1 - 146

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 46114 MA No.: _____ SDG No.: H4104
Analytical Method : SVOA Level : _____
Matrix : Water

EPA Sample No .	DMC10 (DMP)	DMC11 ACY	DMC12 (4NP)	DMC13 (FLR)	DMC14 (NMP)	DMC15 (ANC)	DMC16 (PYR)	DMC17 (BAP)	Tot Out
H4105	89	90	17	89	81	91	90	89	1
H4106	92	94	11	94	75	96	92	97	1
H4137	87	88	13	88	74	89	87	89	1
SBLK04	70	69	52	70	40	72	75	73	0

	QC LIMITS
DMC10 (DMP) = Dimethylphthalate-d6	25 - 130
DMC11 (ACY) = Acenaphthylene-d8	10 - 130
DMC12 (4NP) = 4-Nitrophenol-d4	10 - 150
DMC13 (FLR) = Fluorene-d10	25 - 125
DMC14 (NMP) = 4,6-Dinitro-2-methylphenol-d2	10 - 130
DMC15 (ANC) = Anthracene-d10	25 - 130
DMC16 (PYR) = Pyrene-d10	15 - 130
DMC17 (BAP) = Benzo(a)pyrene-d12	20 - 130

EPA SAMPLE NO.

SBLK04

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : _____ sdg no.: H4104
Analytical Method: SVOA
Level : _____
Matrix : Water
Lab Sample ID: PB90404BL
Instrument ID: BNA_M
Lab File ID : BM005418.D
Extraction Type : CONH
Date Extracted : 05/08/2016
GC Column ( ) : ZB-GR ID : 0.25 (mm)
Date Analyzed : 05/12/2016
GC Column ( ) : _____ ID : _____ (mm)
Time Analyzed : 13:51
Heated Purge: (Y/N) _____ Cleanup(Y/N): N
Cleanup Types : _____

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
H4105	H2943-02	BM005408.D	05/12/2016 03:58
H4106	H2943-03	BM005419.D	05/12/2016 14:27
H4137	H2943-09	BM005420.D	05/12/2016 15:04

FORM 5-OR
GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.
DFTPP64

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Lab File ID : BM005230.D
Instrument ID: BNA_M
BFB / DFTPP : DFTPP
GC Column : ZB-GR ID : 0.25 (mm)
Injection Date : 05/05/2016
Injection Time : 10:23

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	31
68	Less than 2.0% of mass 69	0.6(1.8) 1
69	Present	32.4
70	Less than 2.0% of mass 69	0.0(0.0) 1
127	10.0 - 80.0% of mass 198	43.1
197	Less than 2.0% of mass 198	0.7
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	25.7
365	Greater than 1% of mass 198	3.2
441	Present, but less than mass 443	12.6
442	Greater than 50.0% of mass 198	81.3
443	15.0 - 24.0% of mass 442	15.9(19.5) 2

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD00540	SSTD00540	BM005231.D	05/05/2016	11:09
SSTD01041	SSTD01041	BM005232.D	05/05/2016	11:45
SSTD02042	SSTD02042	BM005233.D	05/05/2016	12:21
SSTD04043	SSTD04043	BM005234.D	05/05/2016	12:57
SSTD08044	SSTD08044	BM005235.D	05/05/2016	13:33
SSTD16045	SSTD16045	BM005236.D	05/05/2016	15:53

FORM 5-OR
GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.
DFTPP36

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code: CHM Case No.: 46114 MA No. : SDG No.: H4104
Analytical Method : SVOA Lab File ID : BM005379.D
Instrument ID: BNA_M BFB / DFTPP : DFTPP
GC Column : ZB-GR ID : 0.25 (mm)
Injection Date : 05/11/2016 Injection Time : 08:24

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	28.4
68	Less than 2.0% of mass 69	0.6(1.9) 1
69	Present	29.9
70	Less than 2.0% of mass 69	0.2(0.6) 1
127	10.0 - 80.0% of mass 198	41.6
197	Less than 2.0% of mass 198	0.8
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	28.2
365	Greater than 1% of mass 198	3.7
441	Present, but less than mass 443	14.7
442	Greater than 50.0% of mass 198	95.4
443	15.0 - 24.0% of mass 442	18.2(19.1) 2

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD02061	SSTDCCC020	BM005380.D	05/11/2016	09:01
SSTD02062	SSTDCCC020	BM005393.D	05/11/2016	18:52
H4105	H2943-02	BM005408.D	05/12/2016	03:58
SSTD02063	SSTDCCC020EC	BM005409.D	05/12/2016	05:11

FORM 5-OR
GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.
DFTPP37

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Lab File ID : BM005410.D
Instrument ID: BNA_M
BFB / DFTPP : DFTPP
GC Column : ZB-GR ID : 0.25 (mm)
Injection Date : 05/12/2016
Injection Time : 07:36

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	30
68	Less than 2.0% of mass 69	0.6(2) 1
69	Present	32.2
70	Less than 2.0% of mass 69	0.2(0.6) 1
127	10.0 - 80.0% of mass 198	43.6
197	Less than 2.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	27.4
365	Greater than 1% of mass 198	3.5
441	Present, but less than mass 443	13.6
442	Greater than 50.0% of mass 198	87.3
443	15.0 - 24.0% of mass 442	17.1(19.5) 2

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD02064	SSTDCCC020	BM005411.D	05/12/2016	09:36
SBLK04	PB90404BL	BM005418.D	05/12/2016	13:51
H4106	H2943-03	BM005419.D	05/12/2016	14:27
H4137	H2943-09	BM005420.D	05/12/2016	15:04
SSTD02065	SSTDCCC020EC	BM005425.D	05/12/2016	18:40

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104
Analytical Method: SVOA Level :
EPA Sample No. : SSTD02062 Lab File ID (Standard) : BM005393.D
Instrument ID : BNA_M Init.Calib.Date(s): 05/05/2016
GC Column : ZB-GR ID: 0.25 (mm) Date Analyzed : 05/11/2016
Heated Purge: Time Analyzed : 18:52

	IS1 (DCB) AREA	RT	IS2 (NPT) AREA	RT	IS3 (ANT) AREA	RT
12 HOUR STD	115496	7.76	551013	10.55	351891	14.40
UPPER LIMIT	230992	8.26	1102030	11.05	703782	14.9
LOWER LIMIT	57748	7.26	275507	10.05	175946	13.9
EPA SAMPLE NO.						
H4105	64433	7.76	317731	10.55	215305	14.4

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

FORM 8B-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4104
Analytical Method: SVOA | Level :
EPA Sample No. : SSTD02062 | Lab File ID (Standard) : BM005393.D
Instrument ID : BNA_M | Init.Calib.Date(s): 05/05/2016
GC Column : ZB-GR | ID: 0.25 (mm) | Date Analyzed : 05/11/2016
Heated Purge: | Time Analyzed : 18:52

	IS4 (PHN) AREA	RT	IS5 (CRY) AREA	RT	IS6 (PRY) AREA	RT
12 HOUR STD	834042	17.16	747722	21.34	612165	23.61
UPPER LIMIT	1668080	17.6	1495440	21.84	1224330	24.11
LOWER LIMIT	417021	16.6	373861	20.84	306083	23.11
EPA SAMPLE NO.						
H4105	514741	17.15	549615	21.34	408735	23.61

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

FORM 8A-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group Contract: EPW14030
Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104
Analytical Method: SVOA Level :
EPA Sample No. : SSTD02064 Lab File ID (Standard) : BM005411.D
Instrument ID : BNA_M Init.Calib.Date(s): 05/05/2016
GC Column : ZB-GR ID: 0.25 (mm) Date Analyzed : 05/12/2016
Heated Purge: Time Analyzed : 09:36

	IS1 (DCB) AREA	RT	IS2 (NPT) AREA	RT	IS3 (ANT) AREA	RT
12 HOUR STD	54492	7.757	264642	10.55	171012	14.40
UPPER LIMIT	108984	8.25	529284	11.04	342024	14.89
LOWER LIMIT	27246	7.25	132321	10.04	85506	13.89
EPA SAMPLE NO.						
H4106	65909	7.76	322788	10.55	220374	14.4
H4137	77306	7.76	364302	10.55	239050	14.4
SBLK04	62930	7.76	300453	10.55	204048	14.4

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

FORM 8B-OR
INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Chemtech Consulting Group | Contract: EPW14030
Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4104
Analytical Method: SVOA | Level :
EPA Sample No. : SSTD02064 | Lab File ID (Standard) : BM005411.D
Instrument ID : BNA_M | Init.Calib.Date(s): 05/05/2016
GC Column : ZB-GR | ID: 0.25 (mm) | Date Analyzed : 05/12/2016
Heated Purge: | Time Analyzed : 09:36

	IS4 (PHN) AREA	RT	IS5 (CRY) AREA	RT	IS6 (PRY) AREA	RT
12 HOUR STD	411859	17.15	371272	21.34	290773	23.60
UPPER LIMIT	823718	17.6	742544	21.84	581546	24.10
LOWER LIMIT	205930	16.6	185636	20.84	145387	23.10
EPA SAMPLE NO.						
H4106	541921	17.15	630731	21.34	499579	23.61
H4137	575578	17.15	657848	21.34	509016	23.61
SBLK04	502848	17.15	545310	21.34	411177	23.61

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4105

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-02
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005408.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4105

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-02
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005408.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4105

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-02
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005408.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4105

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-02
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005408.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : 6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	2.4	

EPA-designated Registry Number.

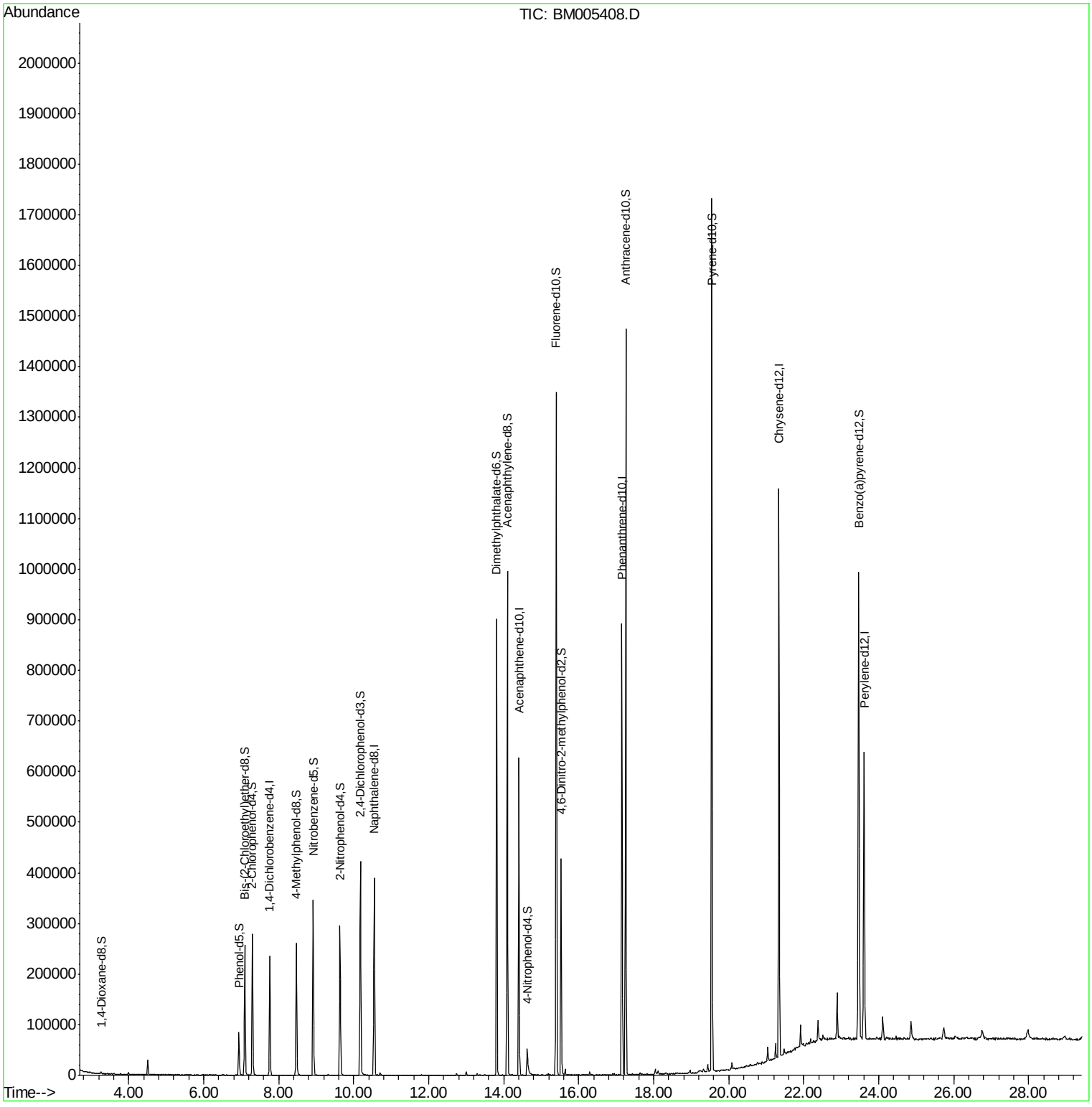
Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005408.D
Acq On : 12 May 2016 03:58
Operator : UM/SJ
Sample : H2943-02
Misc :
ALS Vial : 48 Sample Multiplier: 1

Quant Time: May 12 05:39:16 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4105

Manual Integrations APPROVED
sohil
5/12/2016 7:20:53 PM



Quantitation Report (LSC Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005408.D
Acq On : 12 May 2016 03:58
Operator : UM/SJ
Sample : H2943-02
Misc :
ALS Vial : 48 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4105

Manual Integrations APPROVED
sohil
5/12/2016 7:20:53 PM

Quant Time: May 12 05:39:16 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	64433	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	317731	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	215305	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	514741	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	549615	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	408735	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	2215	1.62	ng/uL	0.00
5) Phenol-d5	6.94	99	52389	8.96	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	114801	34.43	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	131001	29.68	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	98802	20.46	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	82088	36.19	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	96530	37.58	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	165674	34.71	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	4319	0.75	ng/ul	0.02
43) Dimethylphthalate-d6	13.81	166	614218	35.59	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	724811	35.81	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	21875m	6.94	ng/ul	0.01
57) Fluorene-d10	15.40	176	527829	35.42	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	94384	32.60	ng/ul	0.00
70) Anthracene-d10	17.25	188	831534	36.55	ng/ul	0.00
76) Pyrene-d10	19.55	212	911968	35.95	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	644794	35.64	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005408.D
Acq On : 12 May 2016 03:58
Operator : UM/SJ
Sample : H2943-02
Misc :
ALS Vial : 48 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4105

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.510	305	310	314	rBV	29363	43333	1.76%	0.203%
2	6.940	717	723	734	rBV	84240	138663	5.63%	0.649%
3	7.092	743	749	763	rVB	258092	402907	16.36%	1.885%
4	7.292	778	783	795	rBV	279734	456728	18.55%	2.136%
5	7.757	856	862	875	rVB	234758	381634	15.50%	1.785%
6	8.469	977	983	993	rBV	261060	417854	16.97%	1.954%
7	8.916	1053	1059	1073	rBV	345959	562467	22.84%	2.631%
8	9.633	1175	1181	1190	rBV	295605	487501	19.80%	2.280%
9	10.175	1266	1273	1287	rBV	421851	744440	30.23%	3.482%
10	10.545	1329	1336	1350	rVB	388919	649043	26.36%	3.036%
11	13.810	1885	1891	1902	rBV	901271	1298345	52.72%	6.073%
12	14.092	1932	1939	1949	rBV	995568	1512903	61.43%	7.076%
13	14.404	1985	1992	2001	rVB2	627345	988200	40.13%	4.622%
14	14.627	2025	2030	2045	rBV	52765	116037	4.71%	0.543%
15	15.398	2154	2161	2169	rBV	1348508	1950441	79.20%	9.123%
16	15.527	2177	2183	2192	rBV	427258	611113	24.82%	2.858%
17	17.151	2453	2459	2469	rBV	891251	1269362	51.54%	5.937%
18	17.251	2469	2476	2487	rVV2	1473504	2143435	87.04%	10.026%
19	19.550	2860	2867	2874	rBV	1723440	2462658	100.00%	11.519%
20	21.039	3117	3120	3126	rVB	26562	32411	1.32%	0.152%
21	21.244	3151	3155	3159	rBV	31045	38272	1.55%	0.179%
22	21.339	3166	3171	3180	rBV	1123606	1494577	60.69%	6.991%
23	21.915	3265	3269	3273	rBV	41294	50062	2.03%	0.234%
24	22.380	3345	3348	3351	rBV	35712	40814	1.66%	0.191%
25	22.886	3430	3434	3439	rVB	90125	129822	5.27%	0.607%
26	23.462	3525	3532	3542	rBV2	920760	1776791	72.15%	8.311%
27	23.609	3550	3557	3569	rVB2	567845	1090318	44.27%	5.100%
28	24.103	3637	3641	3650	rVB2	45873	89514	3.63%	0.419%

Sum of corrected areas: 21379645

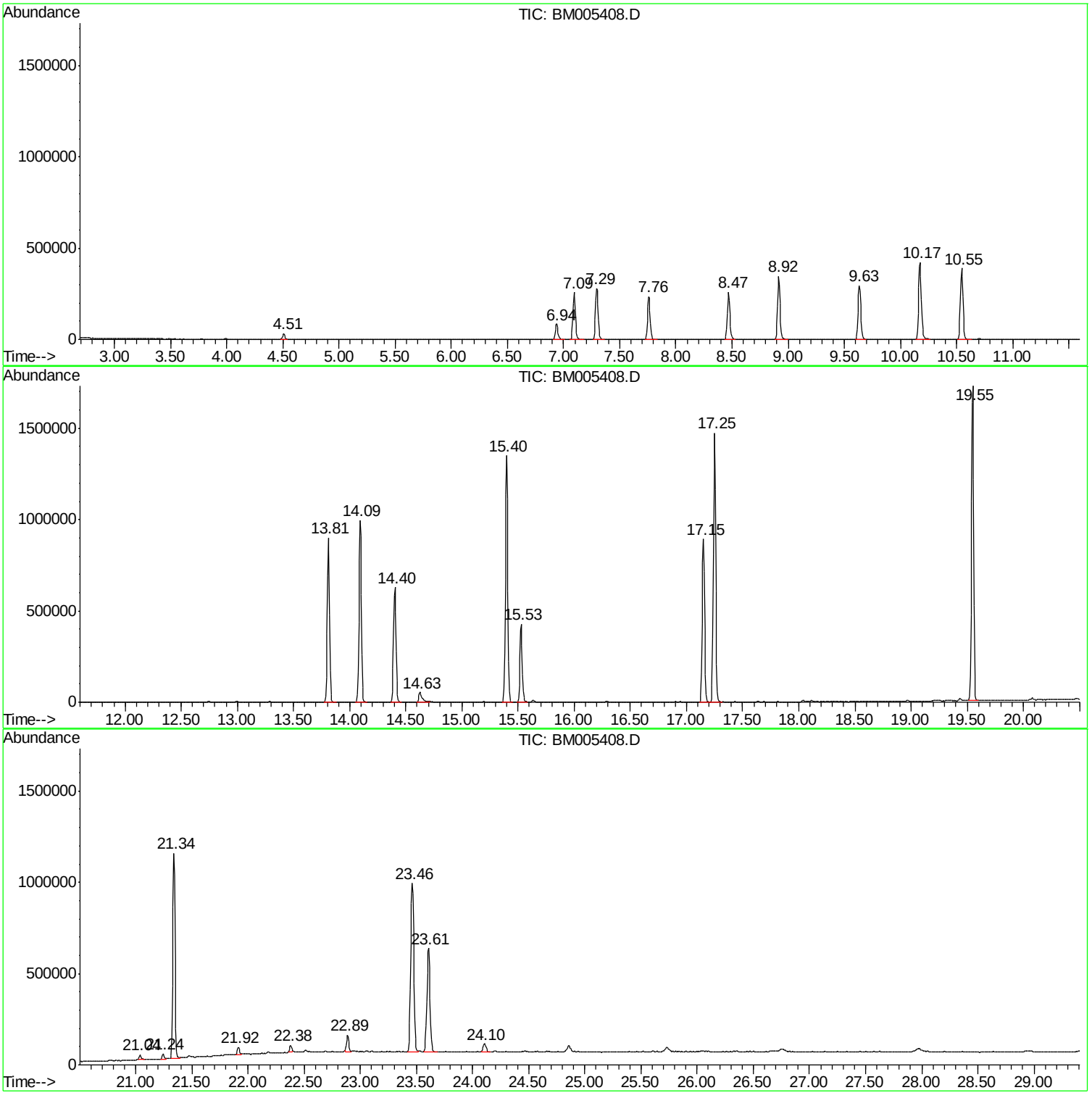
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005408.D
Acq On : 12 May 2016 03:58
Operator : UM/SJ
Sample : H2943-02
Misc :
ALS Vial : 48 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4105

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005408.D
Acq On : 12 May 2016 03:58
Operator : UM/SJ
Sample : H2943-02
Misc :
ALS Vial : 48 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4105

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

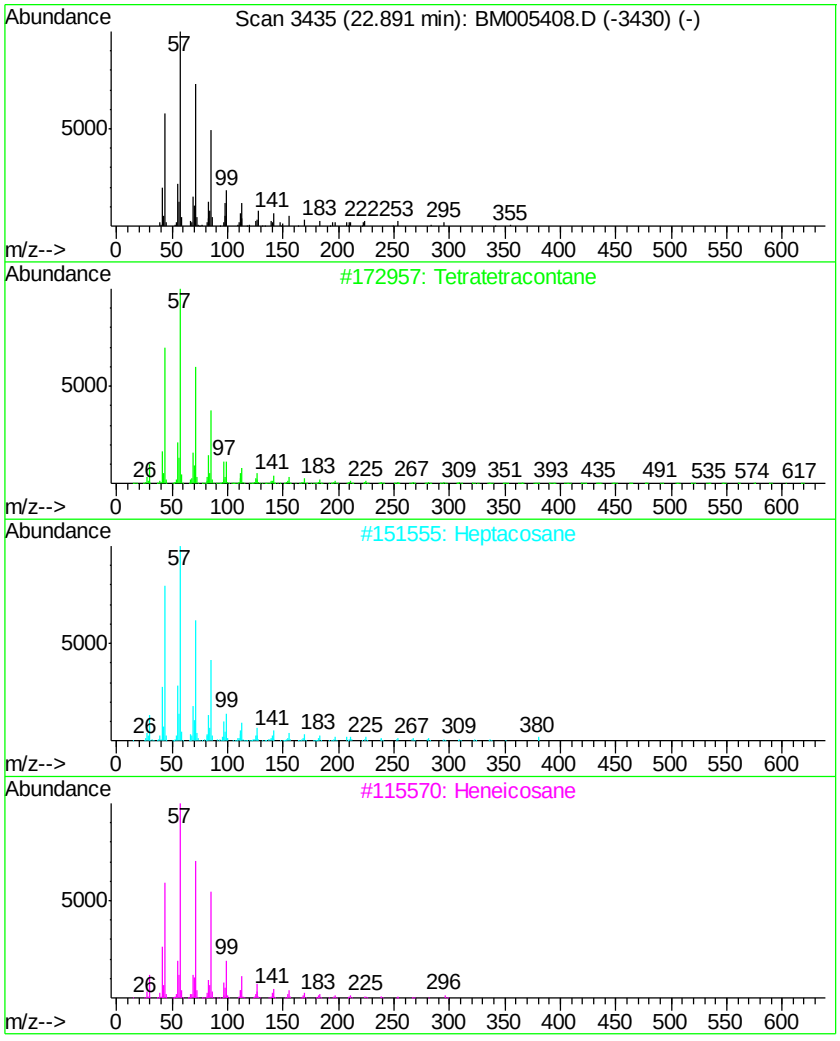
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

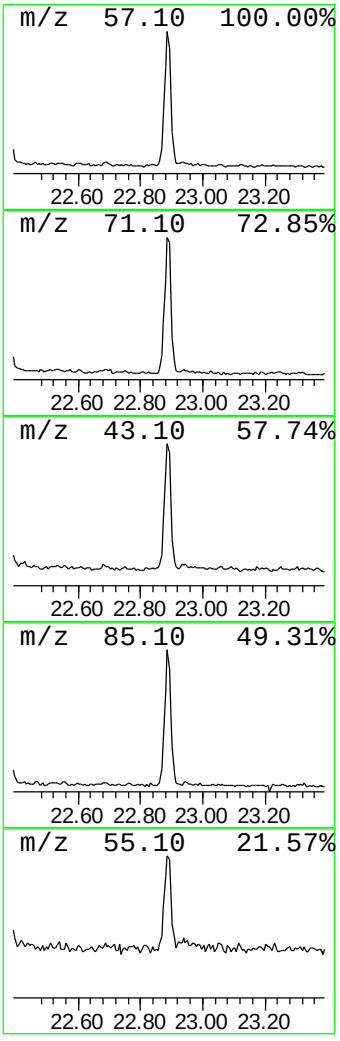
****

Peak Number 2 (DEL) Alkane: Straight-Chai... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
22.89	2.38 ng/ul	129822	Perylene-d12	23.61

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetratetracontane	619	C44H90	007098-22-8	91
2	Heptacosane	380	C27H56	000593-49-7	91
3	Heneicosane	296	C21H44	000629-94-7	91
4	Octacosane	394	C28H58	000630-02-4	91
5	Pentacosane	352	C25H52	000629-99-2	91





Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005408.D
Acq On : 12 May 2016 03:58
Operator : UM/SJ
Sample : H2943-02
Misc :
ALS Vial : 48 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4105

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
(DEL) Alkane: Str...	22.89	2.4	ng/ul	129822	6	23.61	1090320	20.0

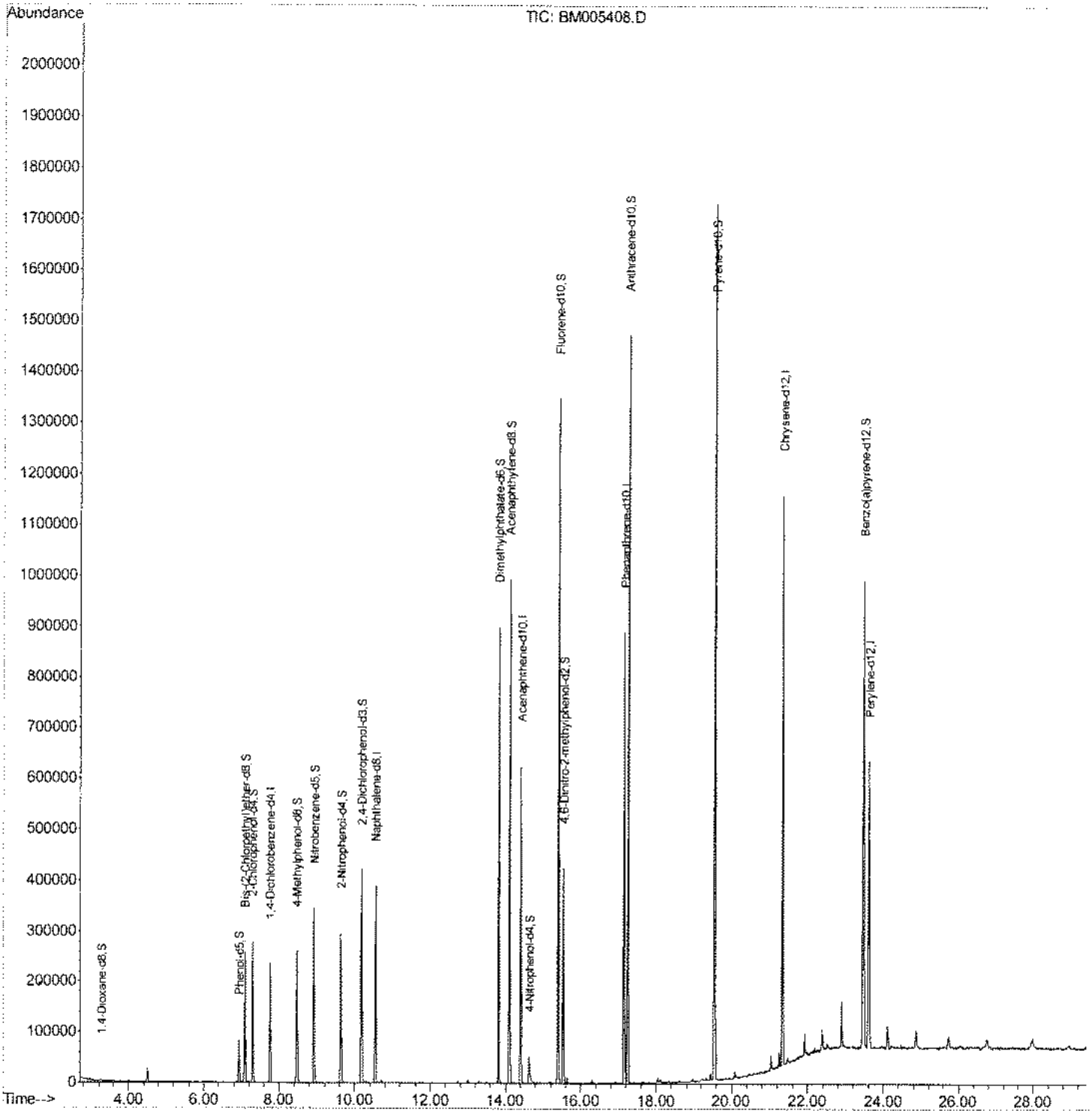
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005408.D
Acq On : 12 May 2016 03:58
Operator : UM/SJ
Sample : H2943-02
Misc :
ALS Vial : 48 Sample Multiplier: 1

Quant Time: May 12 05:39:16 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4105

Manual Integrations APPROVED
sohil
5/12/2016 7:20:53 PM



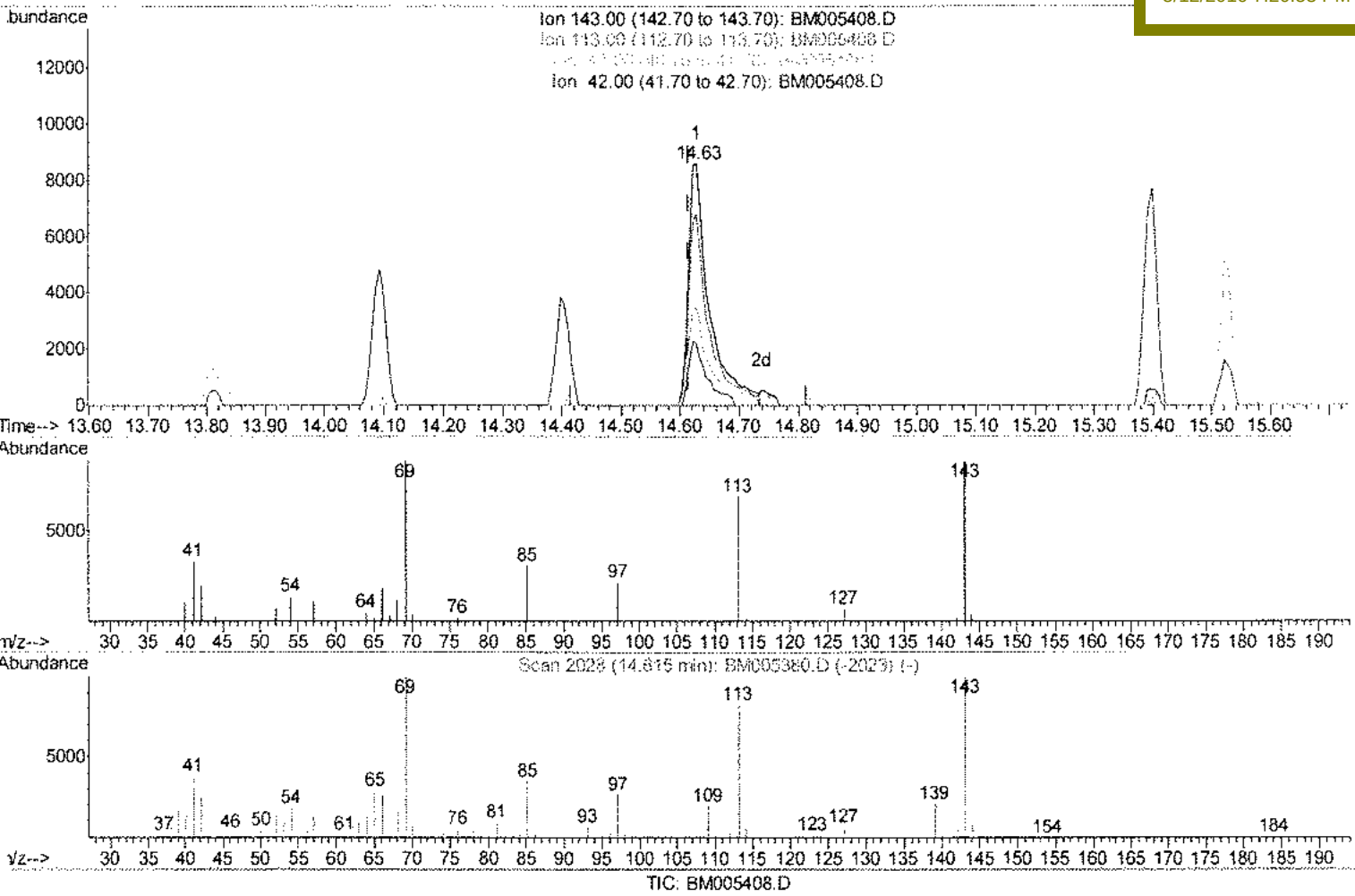
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005408.D
Acq On : 12 May 2016 03:58
Operator : UM/SJ
Sample : H2943-02
Misc :
ALS Vial : 48 Sample Multiplier: 1

Quant Time: May 12 05:19:38 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4105

Manual Integrations APPROVED
sohil
5/12/2016 7:20:53 PM



(51) 4-Nitrophenol-d4 (S)

14.627min (+0.012) 6.71ng/ul

response 21145

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	79.10
41.00	38.10	39.80
42.00	26.00	25.31

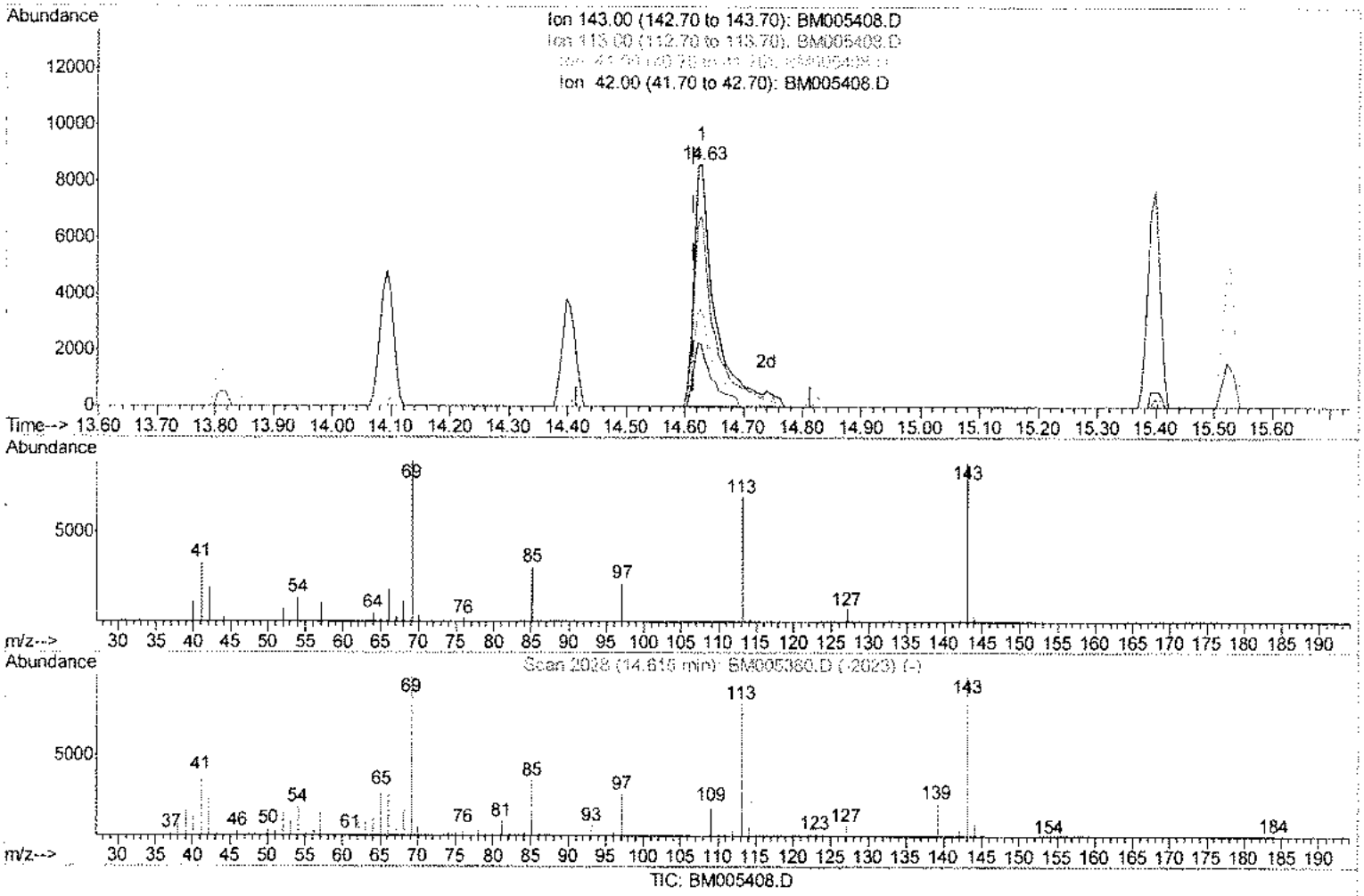
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005408.D
Acq On : 12 May 2016 03:58
Operator : UM/SJ
Sample : H2943-02
Misc :
ALS Vial : 48 Sample Multiplier: 1

Quant Time: May 12 05:19:38 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4105

Manual Integrations APPROVED
sohil
5/12/2016 7:20:53 PM



(51) 4-Nitrophenol-d4 (S)

14.627min (+0.012) 6.94ng/ul m

response 21875

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	79.10
41.00	38.10	39.80
42.00	26.00	25.31

U.M
05/16/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005408.D
Acq On : 12 May 2016 03:58
Operator : UM/SJ
Sample : H2943-02
Misc :
ALS Vial : 48 Sample Multiplier: 1

Quant Time: May 12 05:39:16 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4105

Manual Integrations APPROVED
sohil
5/12/2016 7:20:53 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	64433	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	317731	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	215305	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	514741	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	549615	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	408735	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	2215	1.62	ng/uL	0.00
5) Phenol-d5	6.94	99	52389	8.96	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	114801	34.43	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	131001	29.68	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	98802	20.46	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	82088	36.19	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	96530	37.58	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	165674	34.71	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	4319	0.75	ng/ul	0.02
43) Dimethylphthalate-d6	13.81	166	614218	35.59	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	724811	35.81	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	21875m	6.94	ng/ul	0.01
57) Fluorene-d10	15.40	176	527829	35.42	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	94384	32.60	ng/ul	0.00
70) Anthracene-d10	17.25	188	831534	36.55	ng/ul	0.00
76) Pyrene-d10	19.55	212	911968	35.95	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.46	264	644794	35.64	ng/ul	0.00

U.M 05/16/16

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4106

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-03
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005419.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4106

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-03
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005419.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4106

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-03
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005419.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4106

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-03
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005419.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : 6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

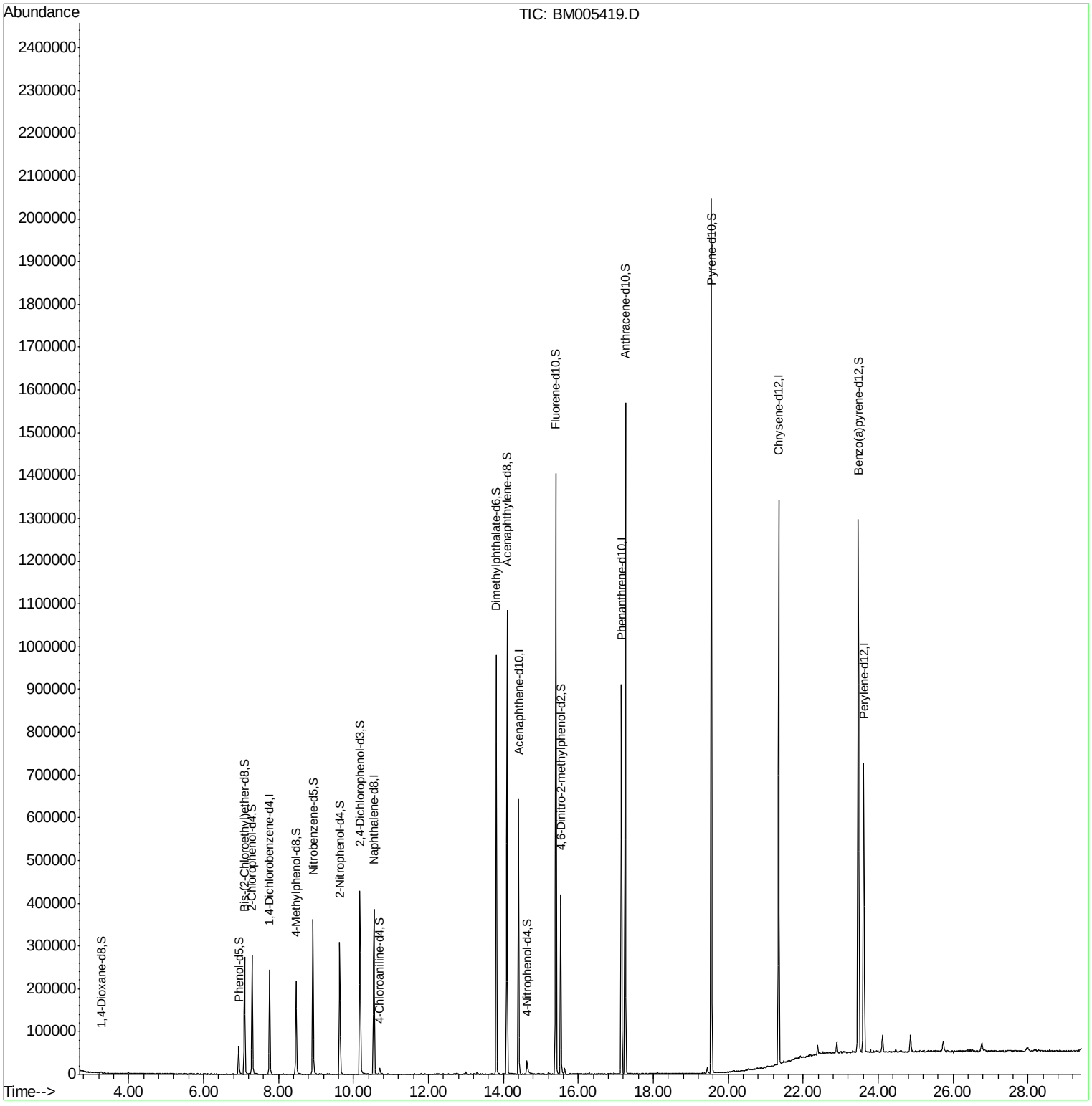
EPA-designated Registry Number.

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005419.D
Acq On : 12 May 2016 14:27
Operator : UM/SJ
Sample : H2943-03
Misc :
ALS Vial : 49 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4106

Quant Time: May 13 03:56:40 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005419.D
Acq On : 12 May 2016 14:27
Operator : UM/SJ
Sample : H2943-03
Misc :
ALS Vial : 49 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4106

Quant Time: May 13 03:56:40 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	65909	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	322788	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	220374	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	541921	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	630731	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	499579	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	1834	1.31	ng/uL	0.00
5) Phenol-d5	6.93	99	40128	6.71	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	121040	35.49	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	128273	28.41	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	86394	17.49	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	87600	38.01	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	100627	38.56	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	170900	35.24	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	11468	1.96	ng/ul	0.01
43) Dimethylphthalate-d6	13.81	166	652419	36.94	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	781217	37.71	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	13998	4.34	ng/ul	0.01
57) Fluorene-d10	15.40	176	573688	37.61	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	91944	30.16	ng/ul	0.00
70) Anthracene-d10	17.25	188	920626	38.43	ng/ul	0.00
76) Pyrene-d10	19.55	212	1075289	36.93	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	855994	38.71	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005419.D
Acq On : 12 May 2016 14:27
Operator : UM/SJ
Sample : H2943-03
Misc :
ALS Vial : 49 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4106

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.934	717	722	730	rBV	65076	102337	3.54%	0.441%
2	7.093	743	749	758	rBV	274471	423906	14.68%	1.829%
3	7.292	777	783	795	rBV	278120	447647	15.50%	1.931%
4	7.757	856	862	873	rVB	243556	390772	13.53%	1.686%
5	8.463	977	982	996	rBV	218522	362707	12.56%	1.565%
6	8.916	1052	1059	1072	rBV	361470	594406	20.59%	2.564%
7	9.634	1175	1181	1189	rBV	307977	508617	17.62%	2.194%
8	10.169	1266	1272	1289	rBV	428748	768527	26.62%	3.315%
9	10.545	1328	1336	1345	rBV	386344	659407	22.84%	2.845%
10	13.810	1884	1891	1899	rBV	979064	1376989	47.69%	5.940%
11	14.092	1932	1939	1951	rBV	1084707	1636329	56.67%	7.059%
12	14.404	1985	1992	2000	rVB2	641591	1010114	34.98%	4.358%
13	14.627	2025	2030	2041	rBV2	30598	67536	2.34%	0.291%
14	15.398	2154	2161	2173	rVB	1404231	2116942	73.32%	9.132%
15	15.527	2177	2183	2194	rBV	419207	593921	20.57%	2.562%
16	17.151	2452	2459	2465	rBV2	909670	1321832	45.78%	5.702%
17	17.251	2469	2476	2493	rVB2	1568280	2364005	81.88%	10.198%
18	19.551	2860	2867	2880	rBV	2044577	2887294	100.00%	12.456%
19	21.345	3166	3172	3181	rBV	1320607	1703030	58.98%	7.347%
20	22.891	3432	3435	3442	rVB2	26374	41600	1.44%	0.179%
21	23.468	3525	3533	3545	rVB2	1244796	2326783	80.59%	10.038%
22	23.615	3550	3558	3569	rVB2	673510	1323062	45.82%	5.708%
23	24.115	3638	3643	3649	rVB	40394	74494	2.58%	0.321%
24	24.856	3765	3769	3777	rVB	38087	78301	2.71%	0.338%

Sum of corrected areas: 23180558

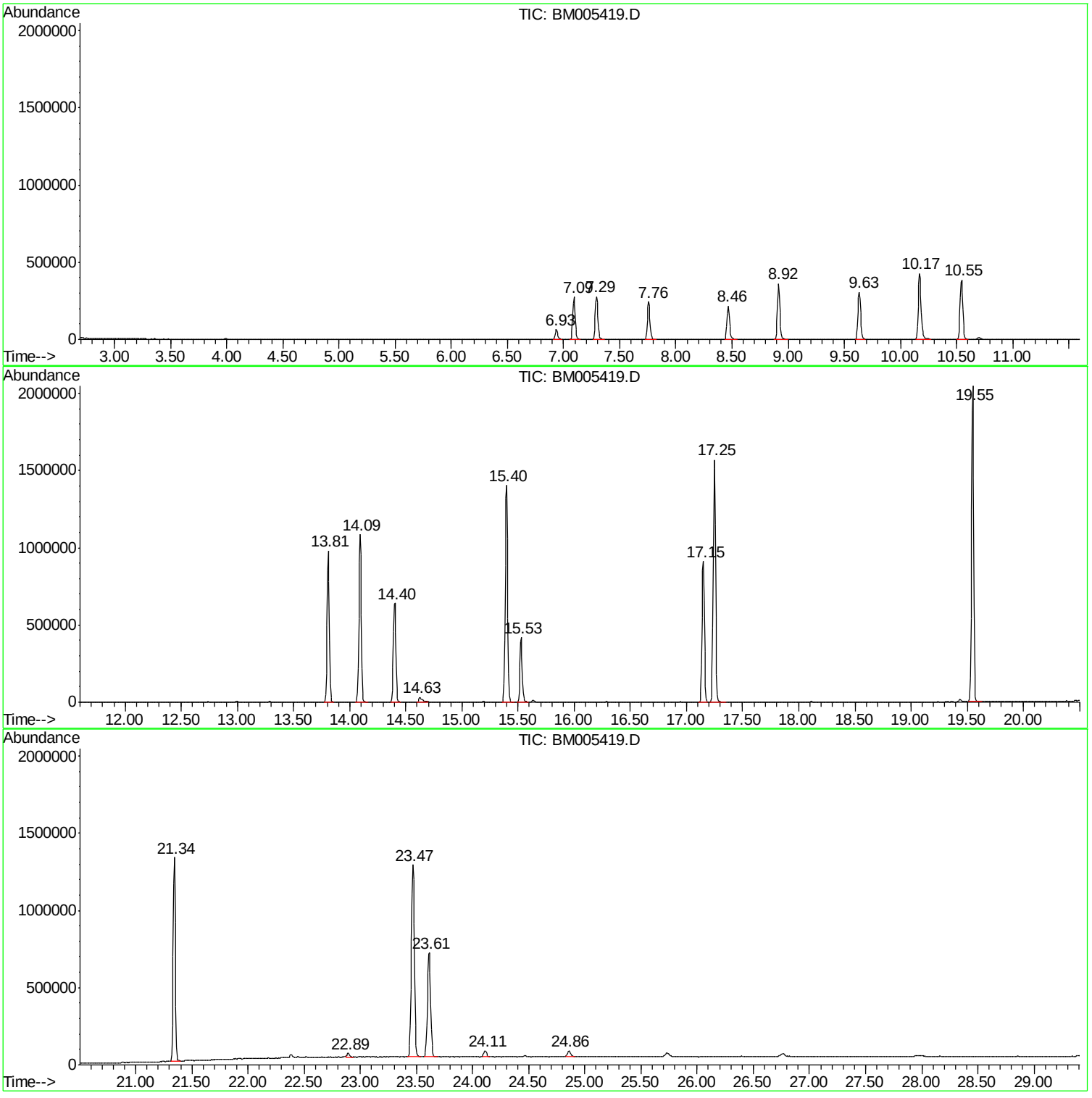
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005419.D
Acq On : 12 May 2016 14:27
Operator : UM/SJ
Sample : H2943-03
Misc :
ALS Vial : 49 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4106

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005419.D
Acq On : 12 May 2016 14:27
Operator : UM/SJ
Sample : H2943-03
Misc :
ALS Vial : 49 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H4106

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005419.D
Acq On : 12 May 2016 14:27
Operator : UM/SJ
Sample : H2943-03
Misc :
ALS Vial : 49 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4106

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4137

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-09
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005420.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4137

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-09
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005420.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
H4137

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-09
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005420.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : 6 Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H4137

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : H2943-09
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005420.D
% Solids :
Date Received : 05/06/2016
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : 6 Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

EPA-designated Registry Number.

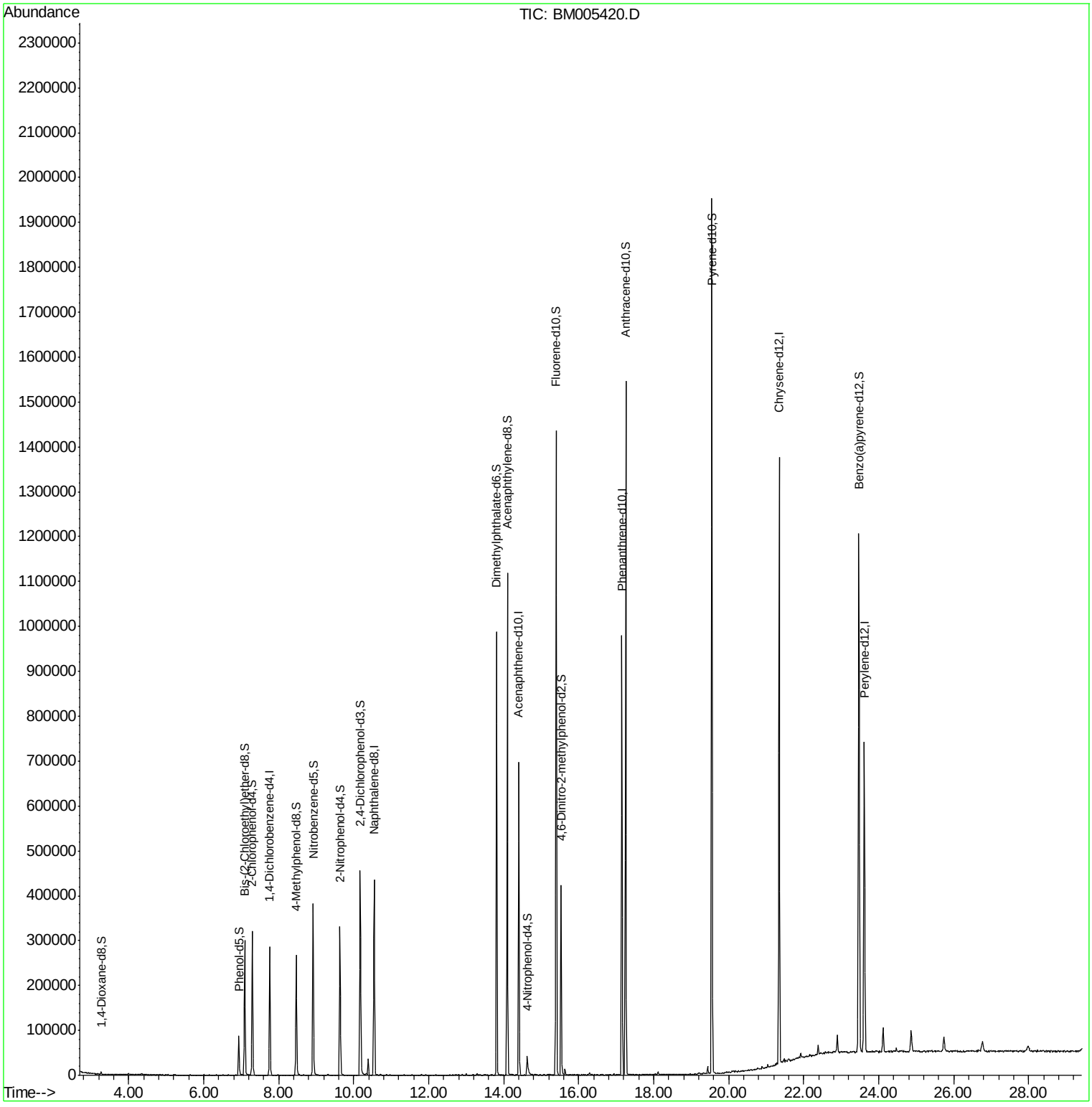
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005420.D
Acq On : 12 May 2016 15:04
Operator : UM/SJ
Sample : H2943-09
Misc :
ALS Vial : 50 Sample Multiplier: 1

Quant Time: May 13 03:58:09 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4137

Manual Integrations APPROVED
sohil
5/13/2016 8:02:20 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005420.D
Acq On : 12 May 2016 15:04
Operator : UM/SJ
Sample : H2943-09
Misc :
ALS Vial : 50 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4137

Manual Integrations APPROVED
sohil
5/13/2016 8:02:20 PM

Quant Time: May 13 03:58:09 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	77306	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	364302	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	239050	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	575578	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	657848	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	509016	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	2593	1.58	ng/uL	0.00
5) Phenol-d5	6.93	99	53348	7.61	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	132063	33.02	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	147563	27.87	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	102128	17.62	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	93582	35.98	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	107696	36.57	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	182700	33.38	ng/ul	0.00
29) 4-Chloroaniline-d4	10.71	131	1848	0.28	ng/ul	0.02
43) Dimethylphthalate-d6	13.81	166	663213	34.61	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	792474	35.26	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	17858m	5.11	ng/ul	0.00
57) Fluorene-d10	15.40	176	579506	35.02	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	95632	29.54	ng/ul	0.00
70) Anthracene-d10	17.25	188	902738	35.48	ng/ul	0.00
76) Pyrene-d10	19.55	212	1058597	34.86	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	804399	35.70	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005420.D
Acq On : 12 May 2016 15:04
Operator : UM/SJ
Sample : H2943-09
Misc :
ALS Vial : 50 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4137

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.934	716	722	735	rVB	86610	137866	4.85%	0.572%
2	7.092	743	749	758	rBV	299994	461939	16.25%	1.917%
3	7.292	777	783	795	rVB	320165	509640	17.93%	2.115%
4	7.757	856	862	873	rVB	286732	460067	16.18%	1.909%
5	8.463	977	982	992	rBV	267498	431765	15.19%	1.792%
6	8.916	1053	1059	1072	rBV	382513	636562	22.39%	2.642%
7	9.633	1175	1181	1194	rBV	330380	546399	19.22%	2.268%
8	10.169	1266	1272	1286	rBV	454603	817269	28.75%	3.392%
9	10.386	1304	1309	1315	rVB	36515	54304	1.91%	0.225%
10	10.545	1326	1336	1345	rBV	436219	750379	26.40%	3.114%
11	13.810	1885	1891	1902	rVB	986604	1400304	49.26%	5.811%
12	14.092	1932	1939	1949	rBV	1117164	1661693	58.46%	6.896%
13	14.398	1985	1991	2001	rVB2	697495	1107753	38.97%	4.597%
14	14.621	2024	2029	2047	rBV	42774	96199	3.38%	0.399%
15	15.398	2154	2161	2171	rBV	1434073	2132426	75.02%	8.850%
16	15.527	2177	2183	2194	rBV	422148	615507	21.65%	2.554%
17	17.151	2452	2459	2466	rBV	978150	1419546	49.94%	5.891%
18	17.251	2469	2476	2491	rVB	1545048	2327087	81.86%	9.658%
19	19.550	2860	2867	2879	rBV2	1949635	2842630	100.00%	11.797%
20	21.344	3166	3172	3181	rBV	1352377	1782610	62.71%	7.398%
21	22.891	3432	3435	3439	rVB	37167	51562	1.81%	0.214%
22	23.468	3525	3533	3546	rVV2	1154132	2220687	78.12%	9.216%
23	23.615	3550	3558	3569	rVB2	691265	1350559	47.51%	5.605%
24	24.115	3637	3643	3651	rVB	54180	104438	3.67%	0.433%
25	24.862	3765	3770	3780	rVB2	47228	100861	3.55%	0.419%
26	25.732	3913	3918	3931	rVB2	32337	75489	2.66%	0.313%

Sum of corrected areas: 24095541

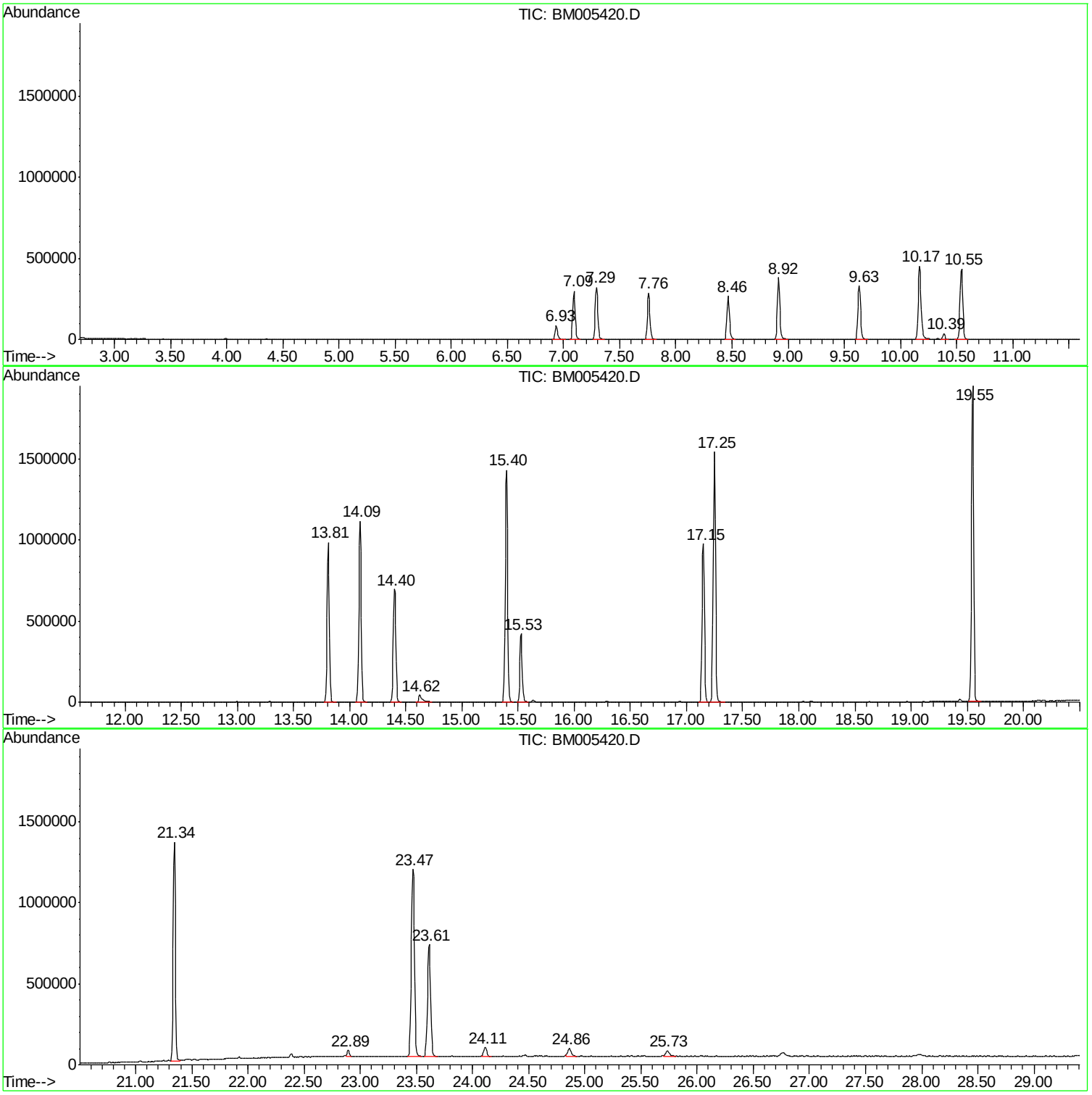
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005420.D
Acq On : 12 May 2016 15:04
Operator : UM/SJ
Sample : H2943-09
Misc :
ALS Vial : 50 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4137

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005420.D
Acq On : 12 May 2016 15:04
Operator : UM/SJ
Sample : H2943-09
Misc :
ALS Vial : 50 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
H4137

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005420.D
Acq On : 12 May 2016 15:04
Operator : UM/SJ
Sample : H2943-09
Misc :
ALS Vial : 50 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : H4137

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

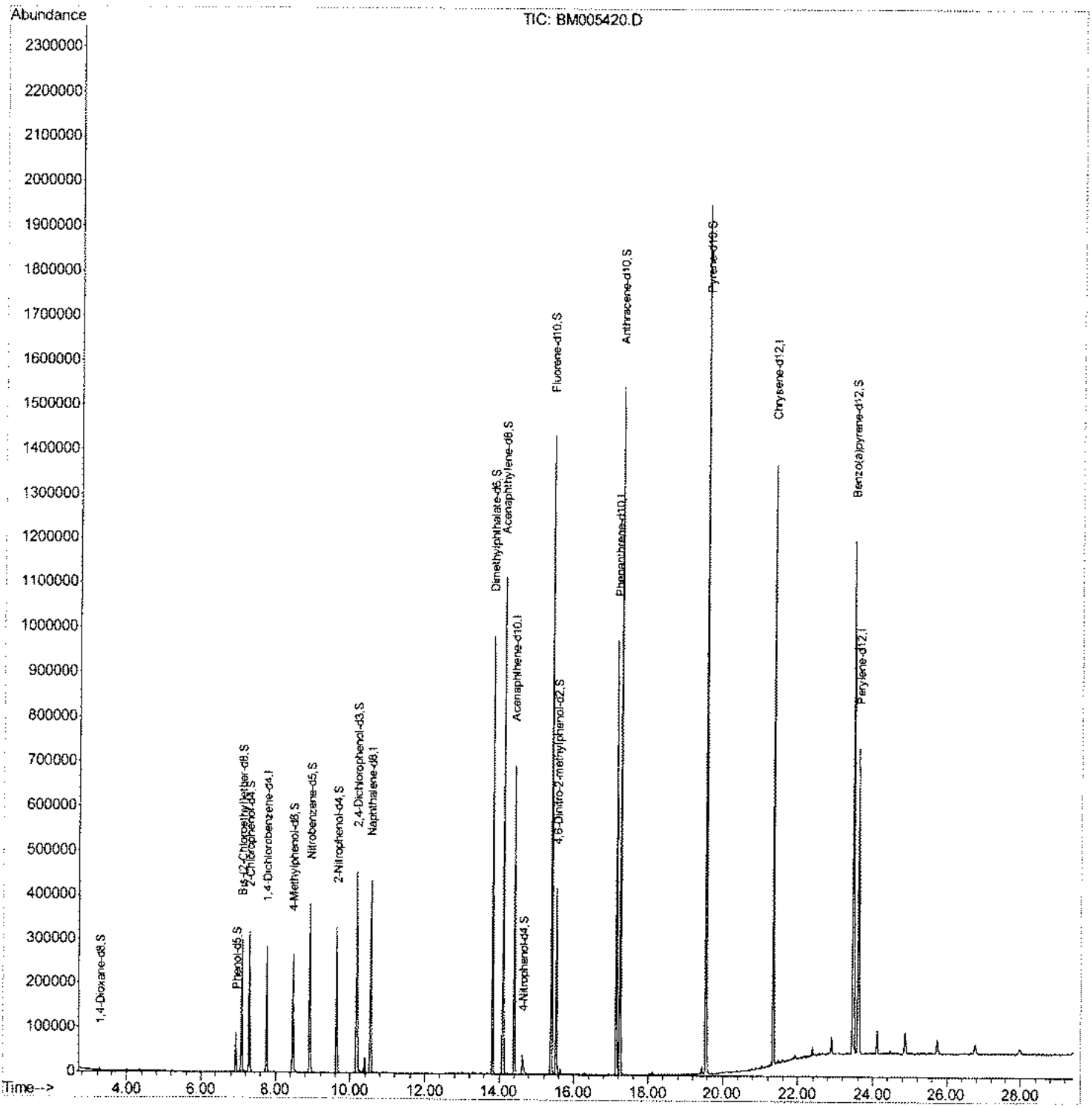
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005420.D
Acq On : 12 May 2016 15:04
Operator : UM/SJ
Sample : H2943-09
Misc :
ALS Vial : 50 Sample Multiplier: 1

Quant Time: May 13 03:58:09 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4137

Manual Integrations APPROVED
sohil
5/13/2016 8:02:20 PM



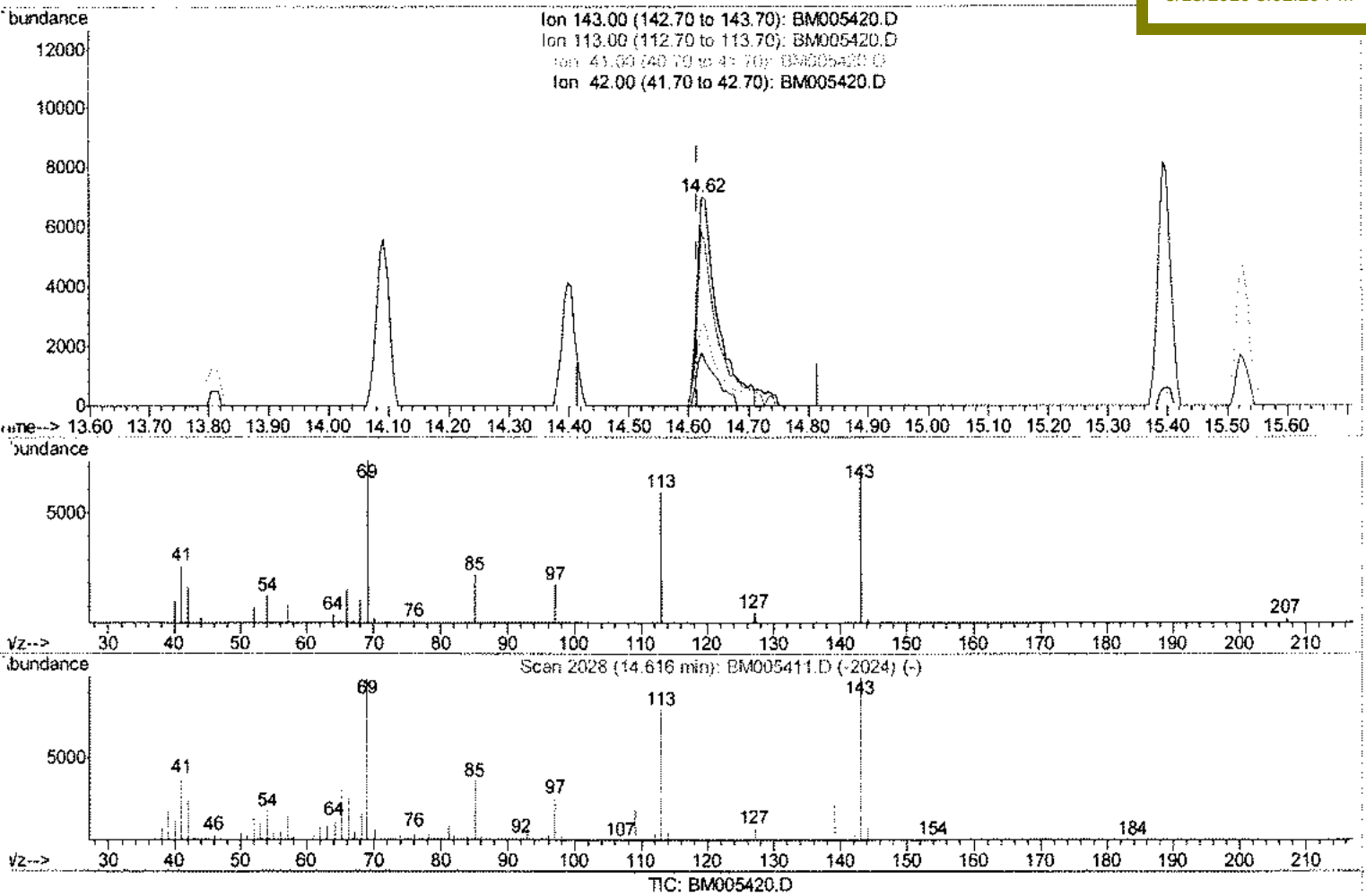
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005420.D
Acq On : 12 May 2016 15:04
Operator : UM/SJ
Sample : H2943-09
Misc :
ALS Vial : 50 Sample Multiplier: 1

Quant Time: May 13 03:24:05 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4137

Manual Integrations APPROVED
sohil
5/13/2016 8:02:20 PM



TIC: BM005420.D

(51) 4-Nitrophenol-d4 (S)

14.621min (+0.006) 4.83ng/ul

response 16900

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	83.26
41.00	38.10	38.86
42.00	26.00	25.69

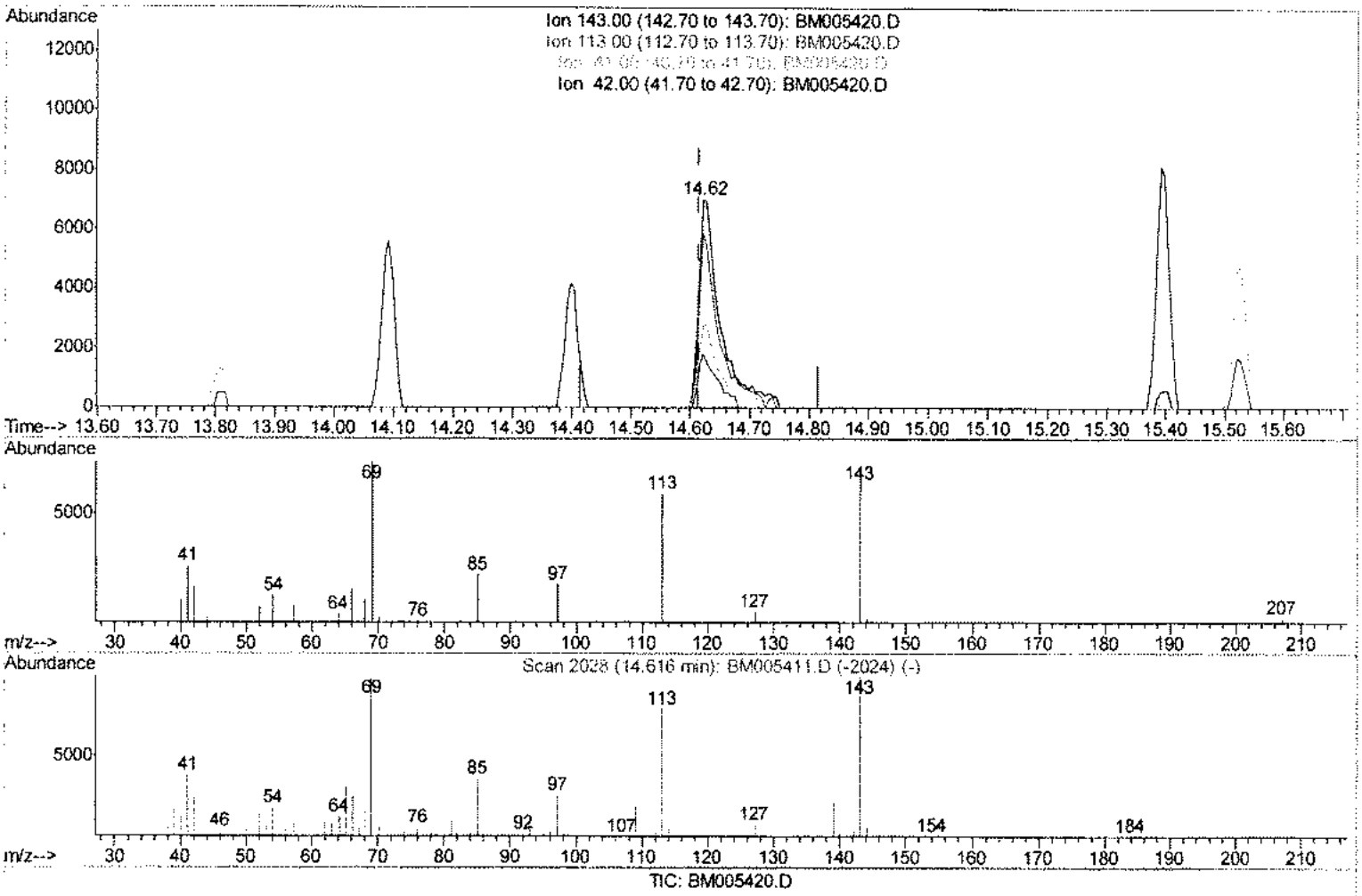
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005420.D
Acq On : 12 May 2016 15:04
Operator : UM/SJ
Sample : H2943-09
Misc :
ALS Vial : 50 Sample Multiplier: 1

Quant Time: May 13 03:24:05 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
H4137

Manual Integrations APPROVED
sohil
5/13/2016 8:02:20 PM



(51) 4-Nitrophenol-d4 (S)

14.621min (+0.006) 5.11ng/ul m

response 17858

> U. M 05/16/16

Ion	Exp%	Act%
143.00	100	100
113.00	75.60	83.26
41.00	38.10	38.86
42.00	26.00	25.69

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005420.D
Acq On : 12 May 2016 15:04
Operator : UM/SJ
Sample : H2943-09
Misc :
ALS Vial : 50 Sample Multiplier: 1

Quant Time: May 13 03:58:09 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : H4137

Manual Integrations APPROVED
sohil
5/13/2016 8:02:20 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	77306	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	364302	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	239050	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	575578	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	657848	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	509016	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	2593	1.58	ng/uL	0.00
5) Phenol-d5	6.93	99	53348	7.61	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	132063	33.02	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	147563	27.87	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	102128	17.62	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	93582	35.98	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	107696	36.57	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	182700	33.38	ng/ul	0.00
29) 4-Chloroaniline-d4	10.71	131	1848	0.28	ng/ul	0.02
43) Dimethylphthalate-d6	13.81	166	663213	34.61	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	792474	35.26	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	17858m	5.11	ng/ul	0.00
57) Fluorene-d10	15.40	176	579506	35.02	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	95632	29.54	ng/ul	0.00
70) Anthracene-d10	17.25	188	902738	35.48	ng/ul	0.00
76) Pyrene-d10	19.55	212	1058597	34.86	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	804399	35.70	ng/ul	0.00

U.M 05/16/16

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group | Contract: EPW14030

Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4104

Analytical Method : SVOA | Level :

Instrument ID: BNA_M | Calibration Date(s): 05/05/2016 05/05/2016

GC Column: ZB-GR | ID: 0.25 (mm) | Calibration Time(s): 11:09 15:53

Length : 30 (m)

Heated Purge: (Y/N) | Purge Volume : (mL)

LAB FILE ID: RRF005 =BM005231.D RRF010= BM005232.D RRF020 =BM005233.D
RRF040 =BM005234.D RRF080= BM005235.D RRF160 =BM005236.D

ANALYTE	RRF005	RRF010	RRF020	RRF040	RRF080	RRF160	$\overline{RRF}$	% RSD
1,4-Dioxane	0.797	0.789	0.828	0.752	0.710		0.776	5.8
Benzaldehyde		1.093	1.158	1.003	0.762	0.378	0.879	36.2
Phenol		1.841	1.952	1.887	1.887	1.807	1.875	2.9
Bis(2-Chloroethyl)ether		1.468	1.502	1.430	1.377	1.280	1.411	6.2
2-Chlorophenol	1.318	1.383	1.465	1.423	1.418		1.401	3.9
2-Methylphenol		1.394	1.492	1.483	1.475	1.401	1.449	3.3
2,2-oxybis(1-Chloropropane)		2.031	2.029	1.954	1.847	1.712	1.915	7.1
Acetophenone		2.412	2.419	2.193	2.125	1.958	2.221	8.9
4-Methylphenol		1.600	1.689	1.619	1.594	1.538	1.608	3.4
N-Nitroso-di-n-propylamine	1.134	1.218	1.227	1.144	1.080		1.161	5.3
Hexachloroethane	0.517	0.523	0.541	0.530	0.525		0.527	1.7
Nitrobenzene	0.340	0.354	0.369	0.362	0.363		0.357	3.1
Isophorone	0.643	0.681	0.723	0.716	0.708		0.694	4.7
2-Nitrophenol	0.155	0.169	0.181	0.182	0.183		0.174	7.0
2,4-Dimethylphenol	0.356	0.371	0.382	0.369	0.370		0.370	2.5
Bis(2-Chloroethoxy)methane	0.438	0.440	0.445	0.426	0.412		0.432	3.1
2,4-Dichlorophenol	0.290	0.301	0.320	0.316	0.311		0.308	4.0
Naphthalene	1.038	1.024	1.031	0.982	0.956		1.006	3.5
4-Chloroaniline		0.399	0.431	0.397	0.356	0.260	0.369	17.9
Hexachlorobutadiene	0.186	0.183	0.185	0.180	0.180		0.183	1.5
Caprolactam		0.097	0.114	0.121	0.122	0.120	0.115	9.0
4-Chloro-3-methylphenol	0.347	0.364	0.384	0.379	0.371		0.369	4.0
2-Methylnaphthalene	0.778	0.782	0.777	0.731	0.695		0.753	5.1
Hexachlorocyclopentadiene		0.237	0.296	0.330	0.356	0.335	0.311	15.0
2,4,6-Trichlorophenol	0.367	0.390	0.422	0.427	0.420		0.405	6.4
2,4,5-Trichlorophenol	0.408	0.440	0.462	0.477	0.461		0.450	5.9
1,1-Biphenyl	1.619	1.643	1.644	1.571	1.445		1.584	5.3
2-Chloronaphthalene	1.188	1.212	1.241	1.208	1.141		1.198	3.1
2-Nitroaniline	0.299	0.340	0.392	0.408	0.406		0.369	12.9
Dimethylphthalate	1.615	1.637	1.671	1.578	1.507		1.602	3.9
2,6-Dinitrotoluene	0.257	0.293	0.336	0.347	0.346		0.316	12.5
Acenaphthylene	2.003	2.081	2.082	1.949	1.832		1.989	5.2

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group | Contract: EPW14030

Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4104

Analytical Method : SVOA | Level :

Instrument ID: BNA_M | Calibration Date(s): 05/05/2016 05/05/2016

GC Column: ZB-GR | ID: 0.25 (mm) | Calibration Time(s): 11:09 15:53

Length : 30 (m)

Heated Purge: (Y/N) | Purge Volume : (mL)

LAB FILE ID: RRF005 =BM005231.D RRF010= BM005232.D RRF020 =BM005233.D
RRF040 =BM005234.D RRF080= BM005235.D RRF160 =BM005236.D

ANALYTE	RRF005	RRF010	RRF020	RRF040	RRF080	RRF160	$\overline{RRF}$	% RSD
3-Nitroaniline		0.305	0.370	0.360	0.344	0.305	0.337	9.1
Acenaphthene	1.361	1.374	1.343	1.270	1.206		1.311	5.4
2,4-Dinitrophenol		0.106	0.155	0.192	0.226	0.229	0.182	28.5
4-Nitrophenol		0.221	0.246	0.252	0.259	0.239	0.243	6.0
Dibenzofuran	1.992	1.988	1.979	1.850	1.701		1.902	6.7
2,4-Dinitrotoluene	0.397	0.463	0.498	0.507	0.490		0.471	9.5
Diethylphthalate	1.599	1.636	1.685	1.626	1.546		1.618	3.2
Fluorene	1.642	1.613	1.525	1.411	1.244		1.487	11.0
4-Chlorophenyl-phenylether	0.807	0.795	0.756	0.701	0.626		0.737	10.1
4-Nitroaniline		0.337	0.374	0.370	0.361	0.342	0.357	4.6
4,6-Dinitro-2-methylphenol		0.103	0.119	0.126	0.126	0.116	0.118	8.1
N-Nitrosodiphenylamine	0.571	0.581	0.563	0.534	0.489		0.548	6.7
4-Bromophenyl-phenylether	0.194	0.198	0.199	0.190	0.179		0.192	4.2
1,2,4,5-Tetrachlorobenzene	0.600	0.609	0.633	0.614	0.586		0.608	2.9
Hexachlorobenzene	0.219	0.222	0.223	0.212	0.199		0.215	4.6
Atrazine		0.208	0.218	0.210	0.194	0.169	0.200	9.7
Pentachlorophenol		0.101	0.118	0.126	0.129	0.124	0.120	9.3
Phenanthrene	1.130	1.111	1.095	1.012	0.911		1.052	8.6
Anthracene	1.133	1.118	1.084	1.010	0.898		1.048	9.2
Carbazole		1.028	1.027	0.953	0.867	0.738	0.922	13.3
Di-n-butylphthalate	1.097	1.153	1.199	1.137	1.040		1.125	5.3
Fluoranthene		1.346	1.339	1.213	1.059	0.868	1.165	17.4
Pyrene	1.201	1.193	1.200	1.142	1.065		1.160	5.1
Butylbenzylphthalate	0.419	0.452	0.502	0.524	0.512		0.482	9.3
3,3-Dichlorobenzidine		0.348	0.403	0.376	0.347	0.324	0.360	8.5
Benzo(a)anthracene	1.188	1.175	1.194	1.132	1.062		1.150	4.8
Chrysene	1.145	1.105	1.138	1.077	0.992		1.091	5.7
Bis(2-ethylhexyl)phthalate	0.618	0.665	0.728	0.697	0.637		0.669	6.6
Di-n-octyl phthalate		1.202	1.271	1.264	1.143	0.960	1.168	10.9
Benzo(b)fluoranthene	1.218	1.200	1.181	1.175	1.072		1.169	4.8
Benzo(k)fluoranthene	1.124	1.152	1.162	1.069	0.996		1.101	6.2
Benzo(a)pyrene	1.144	1.148	1.145	1.083	1.008		1.106	5.5

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group | Contract: EPW14030

Lab Code: CHM | Case No.: 46114 | MA No.: | SDG No.: H4104

Analytical Method : SVOA | Level :

Instrument ID: BNA_M | Calibration Date(s): 05/05/2016 05/05/2016

GC Column: ZB-GR | ID: 0.25 (mm) | Calibration Time(s): 11:09 15:53

Length : 30 (m)

Heated Purge: (Y/N) | Purge Volume : (mL)

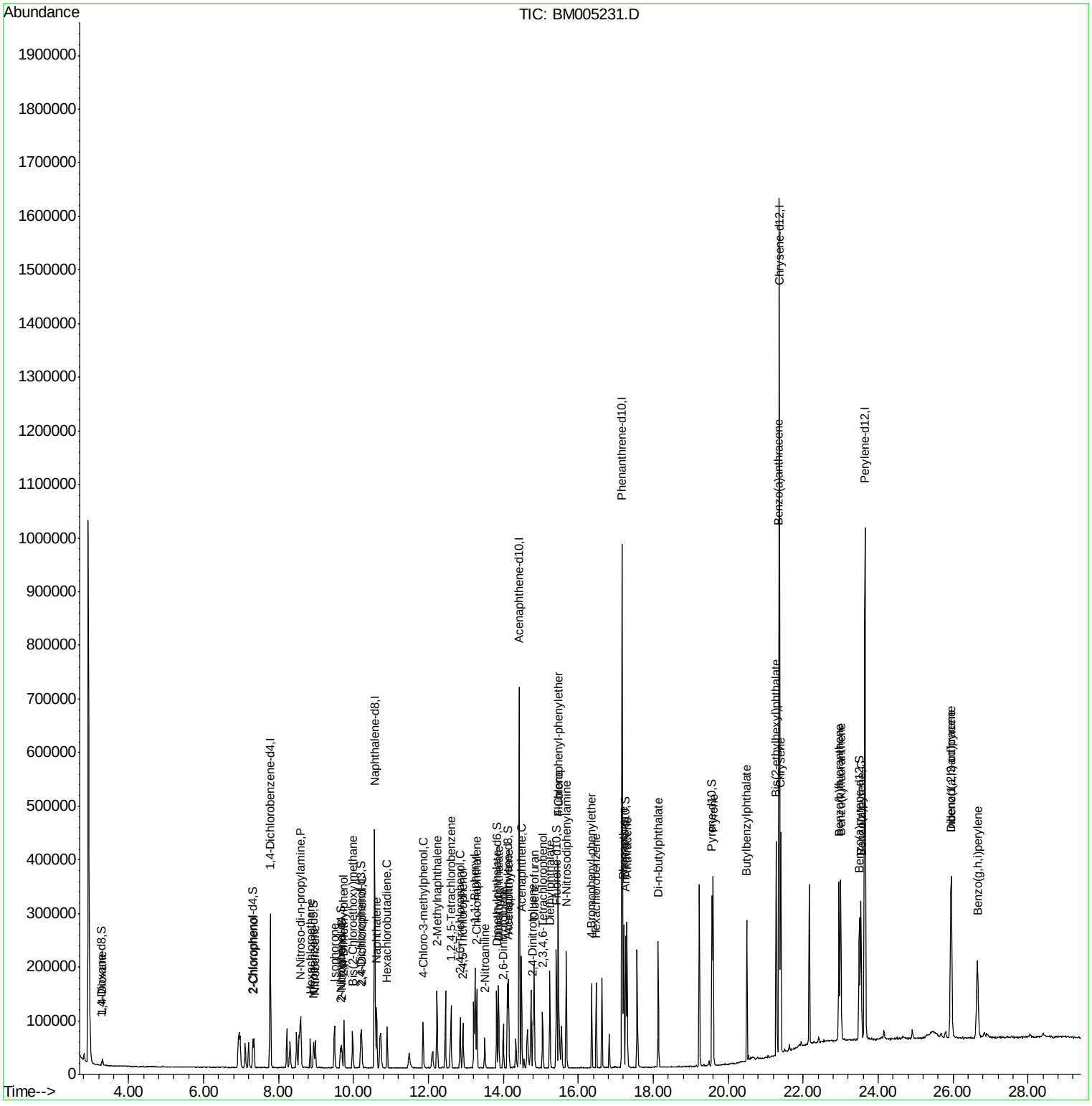
LAB FILE ID:	RRF005 =BM005231.D RRF040 =BM005234.D			RRF010= BM005232.D RRF080= BM005235.D			RRF020 =BM005233.D RRF160 =BM005236.D	
ANALYTE	RRF005	RRF010	RRF020	RRF040	RRF080	RRF160	$\overline{\text{RRF}}$	% RSD
Indeno(1,2,3-cd)pyrene	1.248	1.233	1.258	1.191	1.103		1.206	5.3
Dibenzo(a,h)anthracene	1.054	1.045	1.059	0.991	0.898		1.010	6.7
Benzo(g,h,i)perylene	1.040	1.020	1.050	1.032	0.968		1.022	3.2
2,3,4,6-Tetrachlorophenol	0.346	0.370	0.398	0.402	0.395		0.382	6.2
1,4-Dioxane-d8	0.444	0.437	0.438	0.413	0.395		0.425	4.8
Phenol-d5		1.743	1.864	1.843	1.830	1.791	1.814	2.6
Bis-(2-Chloroethyl)ether-d8		1.080	1.106	1.045	0.998	0.945	1.035	6.2
2-Chlorophenol-d4	1.275	1.328	1.426	1.408	1.413		1.370	4.8
4-Methylphenol-d8		1.440	1.536	1.531	1.513	1.476	1.499	2.7
Nitrobenzene-d5	0.126	0.135	0.147	0.151	0.154		0.143	8.4
2-Nitrophenol-d4	0.138	0.151	0.169	0.173	0.177		0.162	10.2
2,4-Dichlorophenol-d3	0.275	0.292	0.313	0.311	0.311		0.300	5.5
4-Chloroaniline-d4		0.383	0.426	0.396	0.351	0.252	0.362	18.5
Dimethylphthalate-d6	1.582	1.624	1.676	1.611	1.524		1.603	3.5
Acenaphthylene-d8	1.825	1.918	1.975	1.888	1.795		1.880	3.8
4-Nitrophenol-d4		0.254	0.303	0.308	0.311	0.288	0.293	7.9
Fluorene-d10	1.448	1.438	1.429	1.352	1.255		1.384	5.9
4,6-Dinitro-2-methylphenol-d2		0.095	0.111	0.120	0.123	0.113	0.113	9.6
Anthracene-d10	0.929	0.932	0.914	0.857	0.787		0.884	7.0
Pyrene-d10	0.912	0.934	0.954	0.929	0.886		0.923	2.8
Benzo(a)pyrene-d12	0.893	0.905	0.908	0.885	0.836		0.885	3.3

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005231.D
Acq On : 05 May 2016 11:09
Operator : UM/SJ
Sample : SSTD00540
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD00540

Quant Time: May 05 14:04:10 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005231.D
Acq On : 05 May 2016 11:09
Operator : UM/SJ
Sample : SSTD00540
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD00540

Quant Time: May 05 14:04:10 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	77482	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	367748	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	244001	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.16	188	591120	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	705171	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	699412	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	3441	2.27	ng/uL	0.00
5) Phenol-d5	0.00	99	0d	0.00	ng/ul	
7) Bis-(2-Chloroethyl)ether-d	0.00	67	0d	0.00	ng/ul	
9) 2-Chlorophenol-d4	7.31	132	24702	4.87	ng/ul	0.00
13) 4-Methylphenol-d8	0.00	113	0d	0.00	ng/ul	
19) Nitrobenzene-d5	8.93	128	11562	4.67	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	12686	4.63	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	25307	4.77	ng/ul	0.00
29) 4-Chloroaniline-d4	0.00	131	0d	0.00	ng/ul	
43) Dimethylphthalate-d6	13.82	166	96474	5.02	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	111352	4.91	ng/ul	0.00
51) 4-Nitrophenol-d4	0.00	143	0d	0.00	ng/ul	
57) Fluorene-d10	15.41	176	88310	5.18	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	0.00	200	0d	0.00	ng/ul	
70) Anthracene-d10	17.26	188	137322	5.18	ng/ul	0.00
76) Pyrene-d10	19.56	212	160760	5.15	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.50	264	156129	5.03	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	6177	2.19	ng/uL#	90
10) 2-Chlorophenol	7.34	128	25535	4.86	ng/ul	94
15) N-Nitroso-di-n-propylamine	8.57	70	21964	5.33	ng/ul	99
17) Hexachloroethane	8.85	117	10020	4.88	ng/ul	95
20) Nitrobenzene	8.97	77	31263	5.03	ng/ul	95
21) Isophorone	9.49	82	59080	5.02	ng/ul	96
23) 2-Nitrophenol	9.68	139	14268	4.76	ng/ul	96
24) 2,4-Dimethylphenol	9.74	107	32692	4.92	ng/ul	99
25) Bis(2-Chloroethoxy)methane	9.97	93	40257	5.44	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	26636	4.87	ng/ul	98
28) Naphthalene	10.62	128	95401	5.13	ng/ul	99
31) Hexachlorobutadiene	10.89	225	17113	4.80	ng/ul	99
33) 4-Chloro-3-methylphenol	11.86	107	31864	4.98	ng/ul	98
34) 2-Methylnaphthalene	12.23	142	71515	5.17	ng/ul	98
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	36606	4.93	ng/ul	97
38) 2,4,6-Trichlorophenol	12.85	196	22379	4.79	ng/ul	94
39) 2,4,5-Trichlorophenol	12.92	196	24890	4.74	ng/ul	95
40) 1,1'-Biphenyl	13.25	154	98762	5.18	ng/ul	98
41) 2-Chloronaphthalene	13.29	162	72471	4.97	ng/ul	99
42) 2-Nitroaniline	13.50	65	18246	4.68	ng/ul	89
44) Dimethylphthalate	13.87	163	98523	5.09	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	15678	4.33	ng/ul	97
47) Acenaphthylene	14.14	152	122204	5.05	ng/ul	100

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005231.D
Acq On : 05 May 2016 11:09
Operator : UM/SJ
Sample : SSTD00540
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD00540

Quant Time: May 05 14:04:10 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Acenaphthene	14.48	153	83035	5.18	ng/ul	99
53) Dibenzofuran	14.82	168	121528	5.13	ng/ul	98
54) 2,4-Dinitrotoluene	14.79	165	24205	4.28	ng/ul#	95
55) 2,3,4,6-Tetrachlorophenol	15.05	232	21133	4.59	ng/ul#	94
56) Diethylphthalate	15.24	149	97550	4.99	ng/ul	99
58) Fluorene	15.47	166	100154	5.37	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	49222	5.31	ng/ul	96
64) N-Nitrosodiphenylamine	15.67	169	84397	5.25	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	28617	5.08	ng/ul	96
66) Hexachlorobenzene	16.47	284	32365	5.03	ng/ul	97
69) Phenanthrene	17.21	178	166988	5.26	ng/ul	99
71) Anthracene	17.30	178	167417	5.25	ng/ul	99
73) Di-n-butylphthalate	18.13	149	162102	5.17	ng/ul	99
77) Pyrene	19.59	202	211675	5.32	ng/ul	99
78) Butylbenzylphthalate	20.49	149	73797	4.94	ng/ul	97
80) Benzo(a)anthracene	21.34	228	209481	5.21	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	108996	5.12	ng/ul	99
82) Chrysene	21.40	228	201866	5.22	ng/ul	99
85) Benzo(b)fluoranthene	22.96	252	212925	5.15	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	196555	4.88	ng/ul	98
88) Benzo(a)pyrene	23.54	252	200049	5.12	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.94	276	218199	5.55	ng/ul	99
90) Dibenzo(a,h)anthracene	25.95	278	184354	5.60	ng/ul	100
91) Benzo(g,h,i)perylene	26.64	276	181802	5.59	ng/ul	98

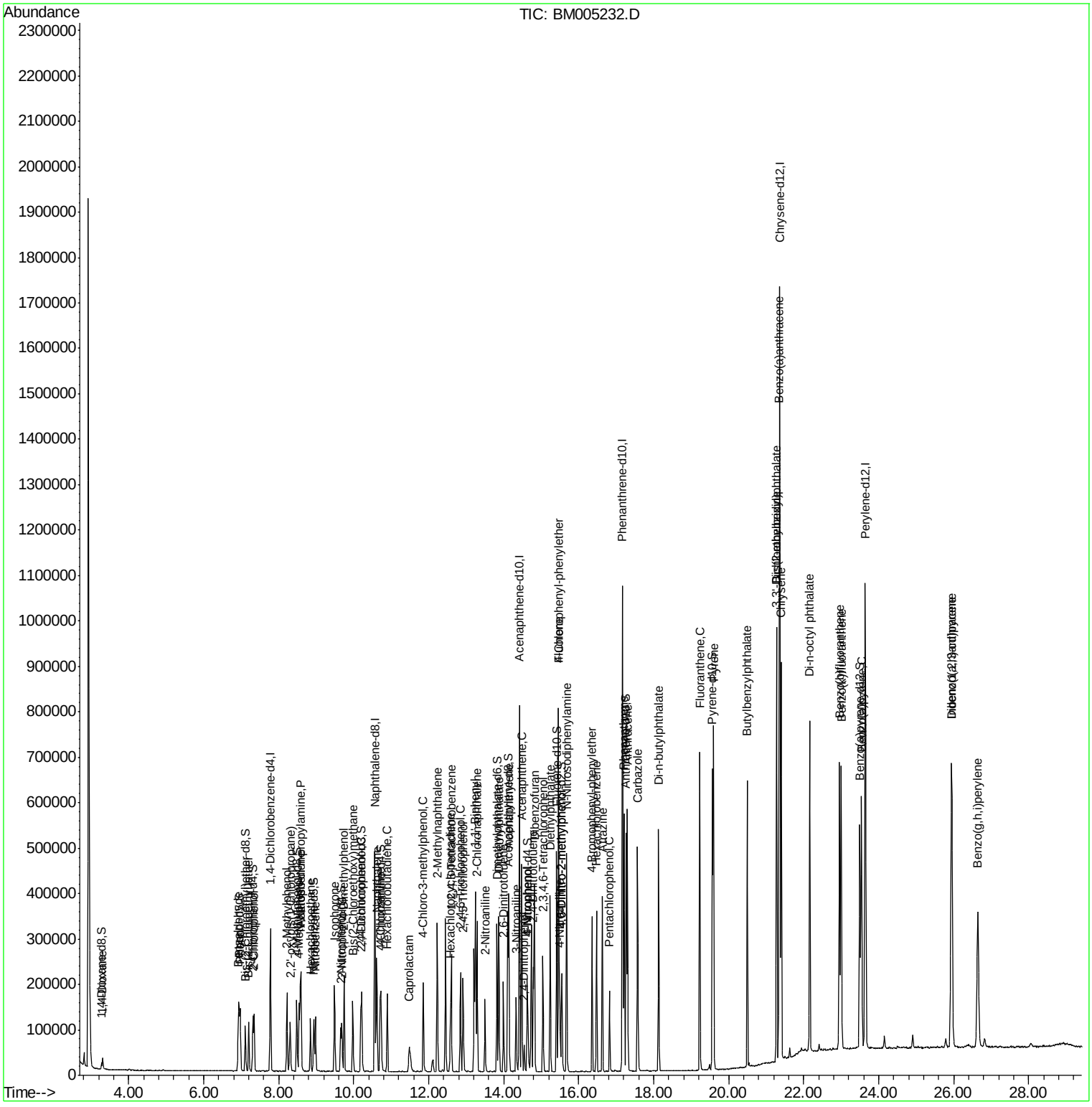
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005232.D
Acq On : 05 May 2016 11:45
Operator : UM/SJ
Sample : SSTD01041
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD01041

Quant Time: May 05 13:41:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005232.D
Acq On : 05 May 2016 11:45
Operator : UM/SJ
Sample : SSTD01041
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD01041

Quant Time: May 05 13:41:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	83684	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	405734	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	262777	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.16	188	633818	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	746308	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	730021	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	7315	4.47	ng/uL	0.00
5) Phenol-d5	6.95	99	72946	10.38	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	45177	11.23	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	55564	10.13	ng/ul	0.00
13) 4-Methylphenol-d8	8.48	113	60250	10.11	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	27391	10.04	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	30695	10.16	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	59213	10.12	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	77621	11.04	ng/ul	0.00
43) Dimethylphthalate-d6	13.82	166	213325	10.31	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	251940	10.31	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	33435	9.23	ng/ul	0.00
57) Fluorene-d10	15.41	176	188975	10.30	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.54	200	30123	8.66	ng/ul	0.00
70) Anthracene-d10	17.26	188	295453	10.40	ng/ul	0.00
76) Pyrene-d10	19.56	212	348652	10.56	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.49	264	330187	10.18	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	13212	4.35	ng/uL#	92
4) Benzaldehyde	6.92	77	45744	13.32	ng/ul	99
6) Phenol	6.97	94	77047	10.37	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.20	93	61411	10.91	ng/ul	99
10) 2-Chlorophenol	7.34	128	57858	10.19	ng/ul	98
11) 2-Methylphenol	8.22	108	58339	10.24	ng/ul	94
12) 2,2'-oxybis(1-Chloropropan	8.30	45	84980	11.55	ng/ul	99
14) Acetophenone	8.59	105	100927	11.12	ng/ul	98
15) N-Nitroso-di-n-propylamine	8.57	70	50947	11.44	ng/ul	100
16) 4-Methylphenol	8.54	108	66958	10.46	ng/ul	97
17) Hexachloroethane	8.85	117	21904	9.88	ng/ul	95
20) Nitrobenzene	8.97	77	71804	10.48	ng/ul	98
21) Isophorone	9.49	82	138221	10.64	ng/ul	99
23) 2-Nitrophenol	9.68	139	34272	10.36	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	75276	10.27	ng/ul	99
25) Bis(2-Chloroethoxy)methane	9.97	93	89304	10.93	ng/ul	99
27) 2,4-Dichlorophenol	10.21	162	61093	10.12	ng/ul	99
28) Naphthalene	10.61	128	207795	10.12	ng/ul	99
30) 4-Chloroaniline	10.73	127	80963	11.15	ng/ul	97
31) Hexachlorobutadiene	10.89	225	37051	9.42	ng/ul	98
32) Caprolactam	11.48	113	19669	9.33	ng/ul	91
33) 4-Chloro-3-methylphenol	11.85	107	73880	10.48	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	158715	10.41	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005232.D
Acq On : 05 May 2016 11:45
Operator : UM/SJ
Sample : SSTD01041
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD01041

Quant Time: May 05 13:41:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	80018	10.01	ng/ul	99
37) Hexachlorocyclopentadiene	12.57	237	31151	7.03	ng/ul	97
38) 2,4,6-Trichlorophenol	12.85	196	51267	10.19	ng/ul	94
39) 2,4,5-Trichlorophenol	12.92	196	57810	10.22	ng/ul	99
40) 1,1'-Biphenyl	13.25	154	215901	10.51	ng/ul	99
41) 2-Chloronaphthalene	13.29	162	159289	10.15	ng/ul	99
42) 2-Nitroaniline	13.50	65	44638	10.63	ng/ul	92
44) Dimethylphthalate	13.87	163	215050	10.32	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	38538	9.89	ng/ul	93
47) Acenaphthylene	14.13	152	273373	10.48	ng/ul	99
48) 3-Nitroaniline	14.33	138	40021	9.83	ng/ul	91
49) Acenaphthene	14.48	153	180502	10.46	ng/ul	99
50) 2,4-Dinitrophenol	14.55	184	13948	6.39	ng/ul	91
52) 4-Nitrophenol	14.64	109	28996	8.91	ng/ul	100
53) Dibenzofuran	14.82	168	261146	10.23	ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	60850	9.99	ng/ul	98
55) 2,3,4,6-Tetrachlorophenol	15.04	232	48553	9.79	ng/ul#	96
56) Diethylphthalate	15.24	149	214890	10.20	ng/ul	99
58) Fluorene	15.47	166	211993	10.56	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	104411	10.45	ng/ul	98
60) 4-Nitroaniline	15.49	138	44321	9.79	ng/ul	98
63) 4,6-Dinitro-2-methylphenol	15.55	198	32627	8.90	ng/ul#	91
64) N-Nitrosodiphenylamine	15.67	169	183981	10.68	ng/ul	100
65) 4-Bromophenyl-phenylether	16.36	248	62681	10.37	ng/ul	97
66) Hexachlorobenzene	16.47	284	70449	10.21	ng/ul	96
67) Atrazine	16.63	200	65970	10.50	ng/ul	97
68) Pentachlorophenol	16.82	266	31979	8.44	ng/ul	97
69) Phenanthrene	17.20	178	351982	10.35	ng/ul	100
71) Anthracene	17.30	178	354434	10.37	ng/ul	99
72) Carbazole	17.57	167	325779	10.96	ng/ul	100
73) Di-n-butylphthalate	18.13	149	365342	10.87	ng/ul	100
74) Fluoranthene	19.23	202	426671	11.23	ng/ul	100
77) Pyrene	19.59	202	445024	10.57	ng/ul	100
78) Butylbenzylphthalate	20.49	149	168630	10.66	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	129782	9.86	ng/ul	99
80) Benzo(a)anthracene	21.34	228	438607	10.31	ng/ul	100
81) Bis(2-ethylhexyl)phthalate	21.27	149	248130	11.01	ng/ul	98
82) Chrysene	21.40	228	412472	10.08	ng/ul	99
84) Di-n-octyl phthalate	22.16	149	438661	10.14	ng/ul	99
85) Benzo(b)fluoranthene	22.95	252	437833	10.14	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	420405	10.00	ng/ul	100
88) Benzo(a)pyrene	23.54	252	419087	10.27	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.94	276	449896	10.96	ng/ul	99
90) Dibenzo(a,h)anthracene	25.94	278	381529	11.10	ng/ul	99
91) Benzo(g,h,i)perylene	26.64	276	372189	10.97	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
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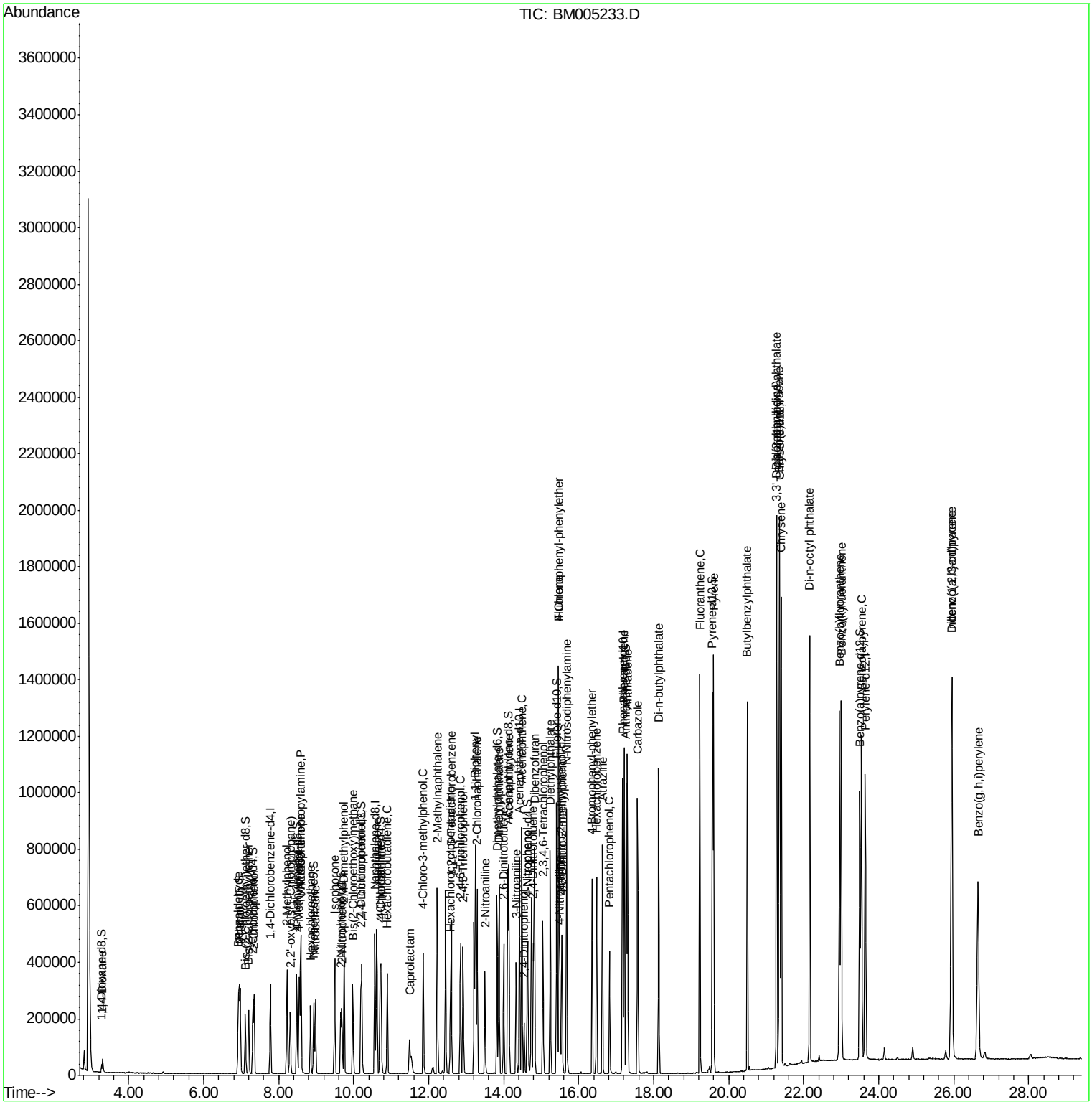

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
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5/6/2016 7:14:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	85340	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	410502	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	259664	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	638987	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	725743	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	742303	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	14937	8.95	ng/uL	0.00
5) Phenol-d5	6.95	99	159033	22.19	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	94416	23.02	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	121697	21.76	ng/ul	0.00
13) 4-Methylphenol-d8	8.48	113	131095	21.57	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	60545	21.92	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	69418	22.71	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	128474	21.71	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	175012	24.61	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	435081	21.29	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	512945	21.24	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	78607	21.96	ng/ul	0.00
57) Fluorene-d10	15.41	176	371068	20.47	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.54	200	71168	20.29	ng/ul	0.00
70) Anthracene-d10	17.26	188	584211	20.39	ng/ul	0.00
76) Pyrene-d10	19.56	212	692650	21.58	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.49	264	674114	20.45	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	28273	9.12	ng/uL	98
4) Benzaldehyde	6.92	77	98828	28.22	ng/ul	97
6) Phenol	6.97	94	166572	21.98	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	128185	22.34	ng/ul	97
10) 2-Chlorophenol	7.34	128	125006	21.60	ng/ul	98
11) 2-Methylphenol	8.22	108	127313	21.90	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.30	45	173188	23.08	ng/ul	99
14) Acetophenone	8.59	105	206418	22.31	ng/ul	100
15) N-Nitroso-di-n-propylamine	8.57	70	104699	23.05	ng/ul	99
16) 4-Methylphenol	8.55	108	144160	22.09	ng/ul	96
17) Hexachloroethane	8.85	117	46148	20.40	ng/ul	99
20) Nitrobenzene	8.97	77	151589	21.86	ng/ul	97
21) Isophorone	9.49	82	296803	22.59	ng/ul	99
23) 2-Nitrophenol	9.68	139	74467	22.26	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	156683	21.12	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.97	93	182804	22.11	ng/ul	99
27) 2,4-Dichlorophenol	10.21	162	131526	21.54	ng/ul	99
28) Naphthalene	10.61	128	423115	20.37	ng/ul	99
30) 4-Chloroaniline	10.73	127	176934	24.08	ng/ul	98
31) Hexachlorobutadiene	10.89	225	75992	19.11	ng/ul	99
32) Caprolactam	11.48	113	46902m	22.00	ng/ul	
33) 4-Chloro-3-methylphenol	11.85	107	157685	22.10	ng/ul	98
34) 2-Methylnaphthalene	12.23	142	318952	20.67	ng/ul	100

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
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5/6/2016 7:14:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	164451	20.82	ng/ul	99
37) Hexachlorocyclopentadiene	12.57	237	76874	17.55	ng/ul	93
38) 2,4,6-Trichlorophenol	12.84	196	109648	22.05	ng/ul	94
39) 2,4,5-Trichlorophenol	12.92	196	120034	21.48	ng/ul	100
40) 1,1'-Biphenyl	13.24	154	426795	21.03	ng/ul	100
41) 2-Chloronaphthalene	13.29	162	322157	20.78	ng/ul	99
42) 2-Nitroaniline	13.50	65	101733	24.51	ng/ul	95
44) Dimethylphthalate	13.87	163	434026	21.07	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	87306	22.68	ng/ul	91
47) Acenaphthylene	14.14	152	540693	20.98	ng/ul	100
48) 3-Nitroaniline	14.33	138	96063	23.88	ng/ul	97
49) Acenaphthene	14.48	153	348839	20.46	ng/ul	98
50) 2,4-Dinitrophenol	14.54	184	40323	18.69	ng/ul	95
52) 4-Nitrophenol	14.64	109	63917	19.87	ng/ul	99
53) Dibenzofuran	14.82	168	513939	20.38	ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	129322	21.49	ng/ul	94
55) 2,3,4,6-Tetrachlorophenol	15.04	232	103385	21.09	ng/ul#	93
56) Diethylphthalate	15.24	149	437479	21.02	ng/ul	99
58) Fluorene	15.47	166	396021	19.96	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	196258	19.88	ng/ul	99
60) 4-Nitroaniline	15.50	138	97225	21.74	ng/ul	98
63) 4,6-Dinitro-2-methylphenol	15.56	198	76247	20.64	ng/ul#	88
64) N-Nitrosodiphenylamine	15.67	169	359924	20.72	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	126984	20.85	ng/ul	96
66) Hexachlorobenzene	16.47	284	142418	20.47	ng/ul	98
67) Atrazine	16.63	200	139465	22.03	ng/ul	99
68) Pentachlorophenol	16.82	266	75332	19.72	ng/ul	98
69) Phenanthrene	17.21	178	699634	20.40	ng/ul	99
71) Anthracene	17.30	178	692458	20.10	ng/ul	99
72) Carbazole	17.57	167	656169	21.91	ng/ul	99
73) Di-n-butylphthalate	18.13	149	766300	22.62	ng/ul	100
74) Fluoranthene	19.23	202	855338	22.33	ng/ul	100
77) Pyrene	19.59	202	871228	21.28	ng/ul	99
78) Butylbenzylphthalate	20.49	149	364649	23.71	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	292510	22.85	ng/ul	98
80) Benzo(a)anthracene	21.34	228	866329	20.93	ng/ul	100
81) Bis(2-ethylhexyl)phthalate	21.27	149	528146	24.10	ng/ul	98
82) Chrysene	21.40	228	826013	20.76	ng/ul	99
84) Di-n-octyl phthalate	22.16	149	943740	21.45	ng/ul	100
85) Benzo(b)fluoranthene	22.96	252	876542	19.96	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	862599	20.18	ng/ul	100
88) Benzo(a)pyrene	23.54	252	849948	20.48	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.94	276	934142	22.37	ng/ul	98
90) Dibenzo(a,h)anthracene	25.95	278	785969	22.48	ng/ul	99
91) Benzo(g,h,i)perylene	26.64	276	779275	22.59	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
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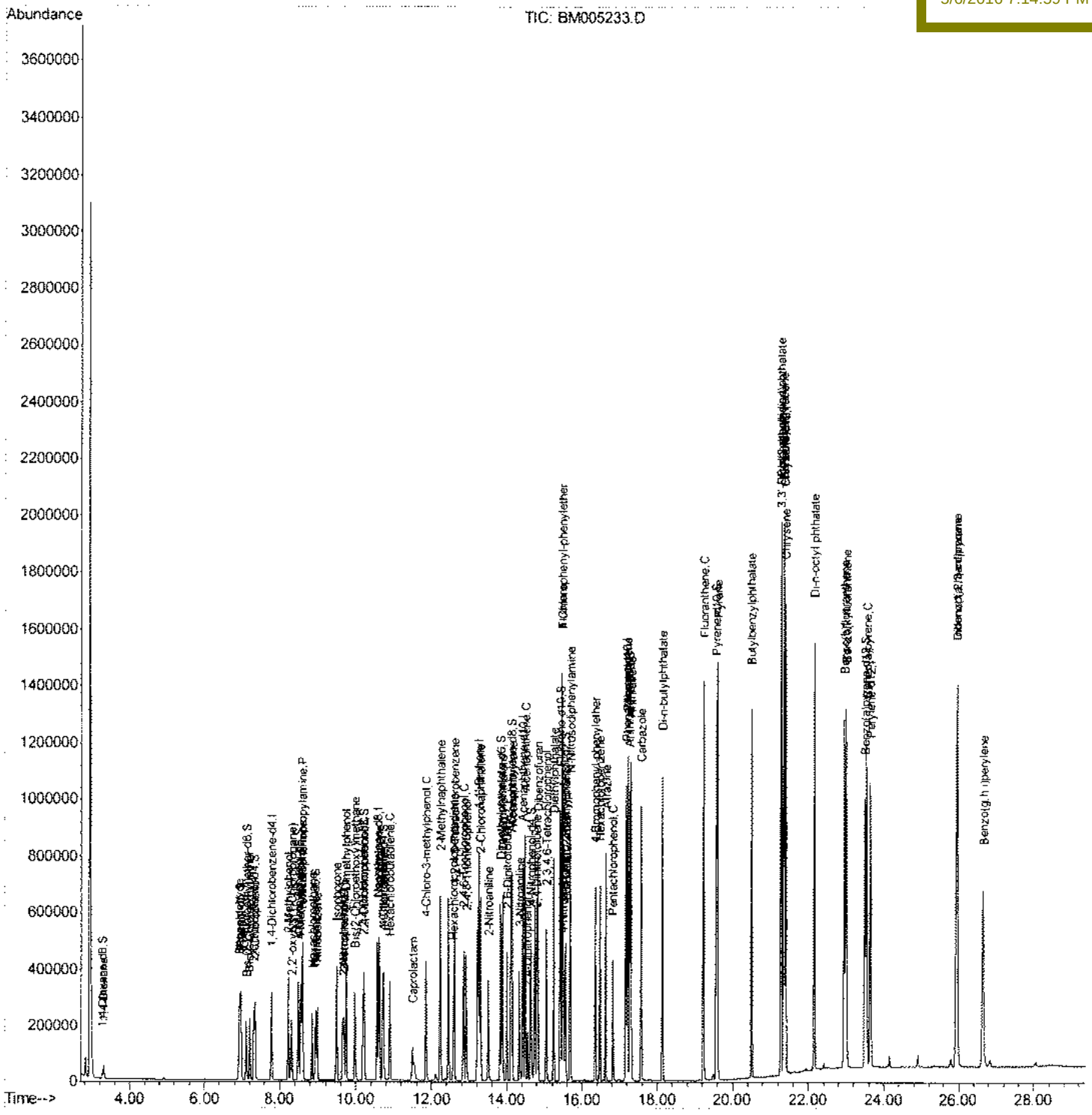

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:42:18 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
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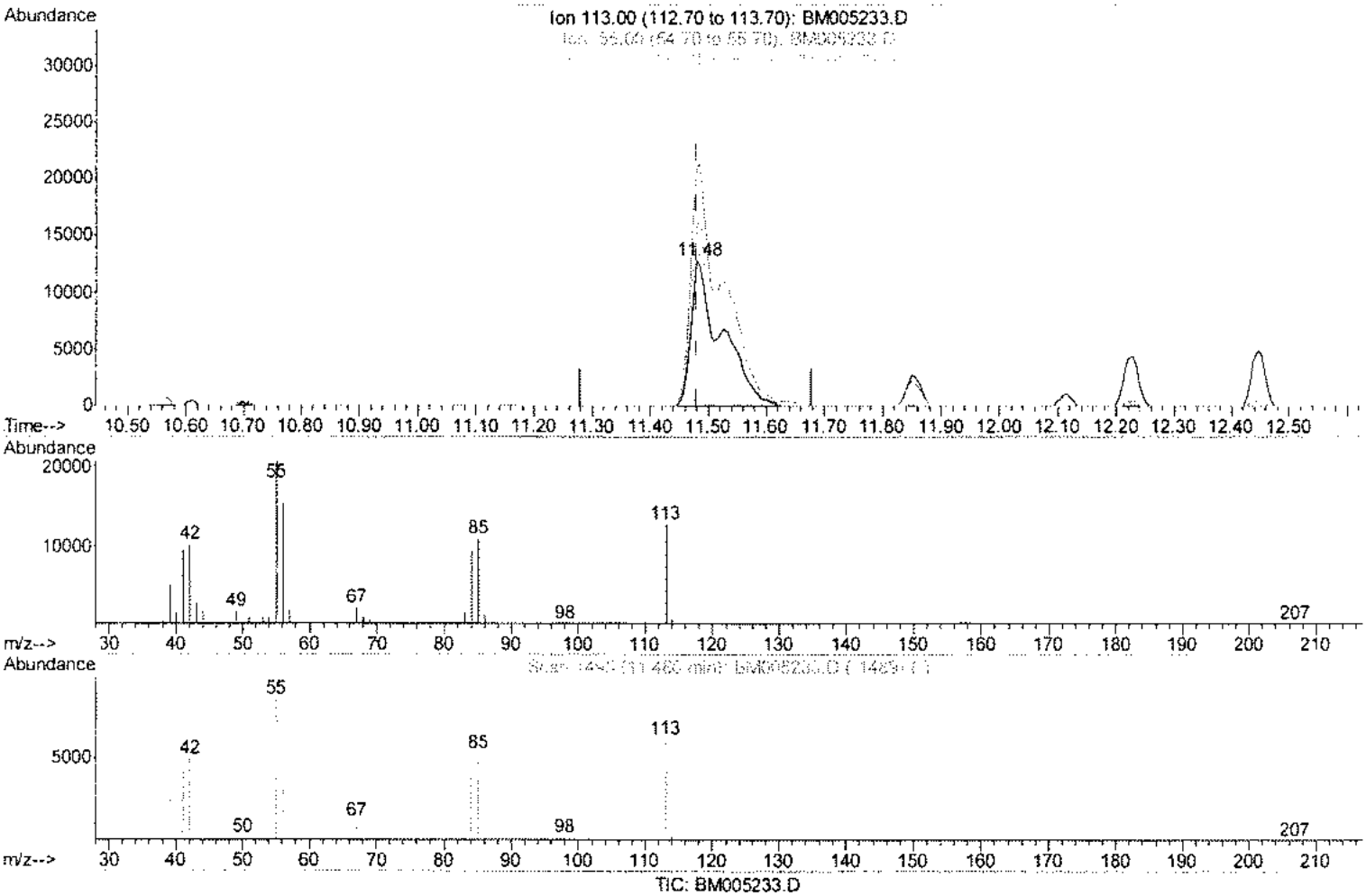

(32) Caprolactam

11.480min (0.000) 22.00ng/ul m UM 05/07/16

response 46902

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	161.31
56.00	120.80	120.84
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:42:18 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02042

Manual Integrations APPROVED
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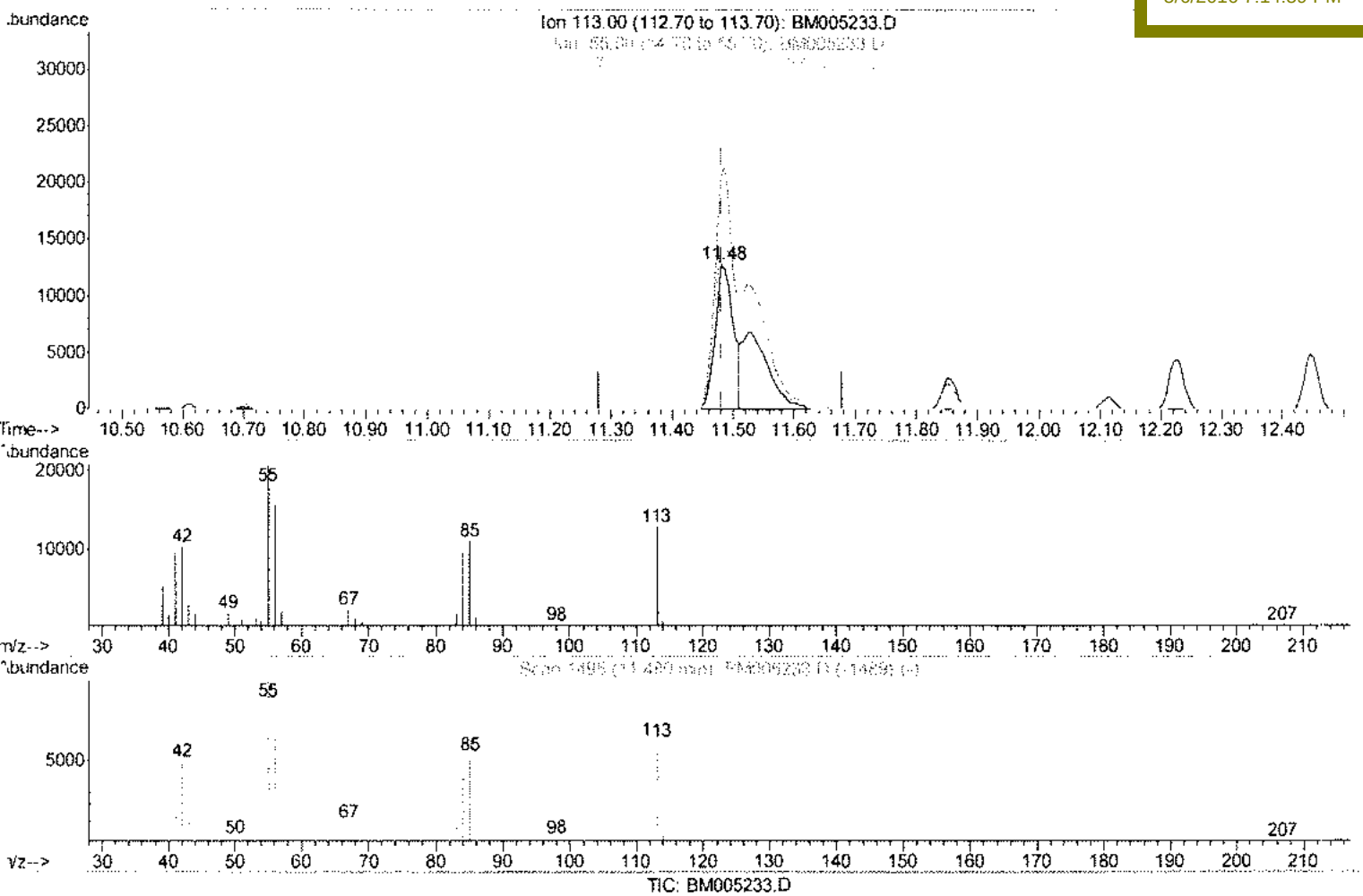
5/6/2016 7:14:59 PM



(32) Caprolactam

11.480min (0.000) 12.53ng/ul

response 26716

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	161.31
56.00	120.80	120.84
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02042

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	85340	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	410502	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	259664	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	638987	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	725743	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	742303	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	14937	8.95	ng/uL	0.00
5) Phenol-d5	6.95	99	159033	22.19	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	94416	23.02	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	121697	21.76	ng/ul	0.00
13) 4-Methylphenol-d8	8.48	113	131095	21.57	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	60545	21.92	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	69418	22.71	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	128474	21.71	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	175012	24.61	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	435081	21.29	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	512945	21.24	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	78607	21.96	ng/ul	0.00
57) Fluorene-d10	15.41	176	371068	20.47	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.54	200	71168	20.29	ng/ul	0.00
70) Anthracene-d10	17.26	188	584211	20.39	ng/ul	0.00
76) Pyrene-d10	19.56	212	692650	21.58	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.49	264	674114	20.45	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	28273	9.12	ng/uL	98
4) Benzaldehyde	6.92	77	98828	28.22	ng/ul	97
6) Phenol	6.97	94	166572	21.98	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	128185	22.34	ng/ul	97
10) 2-Chlorophenol	7.34	128	125006	21.60	ng/ul	98
11) 2-Methylphenol	8.22	108	127313	21.90	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.30	45	173188	23.08	ng/ul	99
14) Acetophenone	8.59	105	206418	22.31	ng/ul	100
15) N-Nitroso-di-n-propylamine	8.57	70	104699	23.05	ng/ul	99
16) 4-Methylphenol	8.55	108	144160	22.09	ng/ul	96
17) Hexachloroethane	8.85	117	46148	20.40	ng/ul	99
20) Nitrobenzene	8.97	77	151589	21.86	ng/ul	97
21) Isophorone	9.49	82	296803	22.59	ng/ul	99
23) 2-Nitrophenol	9.68	139	74467	22.26	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	156683	21.12	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.97	93	182804	22.11	ng/ul	99
27) 2,4-Dichlorophenol	10.21	162	131526	21.54	ng/ul	99
28) Naphthalene	10.61	128	423115	20.37	ng/ul	99
30) 4-Chloroaniline	10.73	127	176934	24.08	ng/ul	98
31) Hexachlorobutadiene	10.89	225	75992	19.11	ng/ul	99
32) Caprolactam	11.48	113	46902m	22.00	ng/ul	
33) 4-Chloro-3-methylphenol	11.85	107	157685	22.10	ng/ul	98
34) 2-Methylnaphthalene	12.23	142	318952	20.67	ng/ul	100

U.M 05/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005233.D
Acq On : 05 May 2016 12:21
Operator : UM/SJ
Sample : SSTD02042
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 13:53:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02042

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	164451	20.82	ng/ul	99
37) Hexachlorocyclopentadiene	12.57	237	76874	17.55	ng/ul	93
38) 2,4,6-Trichlorophenol	12.84	196	109648	22.05	ng/ul	94
39) 2,4,5-Trichlorophenol	12.92	196	120034	21.48	ng/ul	100
40) 1,1'-Biphenyl	13.24	154	426795	21.03	ng/ul	100
41) 2-Chloronaphthalene	13.29	162	322157	20.78	ng/ul	99
42) 2-Nitroaniline	13.50	65	101733	24.51	ng/ul	95
44) Dimethylphthalate	13.87	163	434026	21.07	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	87306	22.68	ng/ul	91
47) Acenaphthylene	14.14	152	540693	20.98	ng/ul	100
48) 3-Nitroaniline	14.33	138	96063	23.88	ng/ul	97
49) Acenaphthene	14.48	153	348839	20.46	ng/ul	98
50) 2,4-Dinitrophenol	14.54	184	40323	18.69	ng/ul	95
52) 4-Nitrophenol	14.64	109	63917	19.87	ng/ul	99
53) Dibenzofuran	14.82	168	513939	20.38	ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	129322	21.49	ng/ul	94
55) 2,3,4,6-Tetrachlorophenol	15.04	232	103385	21.09	ng/ul#	93
56) Diethylphthalate	15.24	149	437479	21.02	ng/ul	99
58) Fluorene	15.47	166	396021	19.96	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	196258	19.88	ng/ul	99
60) 4-Nitroaniline	15.50	138	97225	21.74	ng/ul	98
63) 4,6-Dinitro-2-methylphenol	15.56	198	76247	20.64	ng/ul#	88
64) N-Nitrosodiphenylamine	15.67	169	359924	20.72	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	126984	20.85	ng/ul	96
66) Hexachlorobenzene	16.47	284	142418	20.47	ng/ul	98
67) Atrazine	16.63	200	139465	22.03	ng/ul	99
68) Pentachlorophenol	16.82	266	75332	19.72	ng/ul	98
69) Phenanthrene	17.21	178	699634	20.40	ng/ul	99
71) Anthracene	17.30	178	692458	20.10	ng/ul	99
72) Carbazole	17.57	167	656169	21.91	ng/ul	99
73) Di-n-butylphthalate	18.13	149	766300	22.62	ng/ul	100
74) Fluoranthene	19.23	202	855338	22.33	ng/ul	100
77) Pyrene	19.59	202	871228	21.28	ng/ul	99
78) Butylbenzylphthalate	20.49	149	364649	23.71	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	292510	22.85	ng/ul	98
80) Benzo(a)anthracene	21.34	228	866329	20.93	ng/ul	100
81) Bis(2-ethylhexyl)phthalate	21.27	149	528146	24.10	ng/ul	98
82) Chrysene	21.40	228	826013	20.76	ng/ul	99
84) Di-n-octyl phthalate	22.16	149	943740	21.45	ng/ul	100
85) Benzo(b)fluoranthene	22.96	252	876542	19.96	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	862599	20.18	ng/ul	100
88) Benzo(a)pyrene	23.54	252	849948	20.48	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.94	276	934142	22.37	ng/ul	98
90) Dibenzo(a,h)anthracene	25.95	278	785969	22.48	ng/ul	99
91) Benzo(g,h,i)perylene	26.64	276	779275	22.59	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
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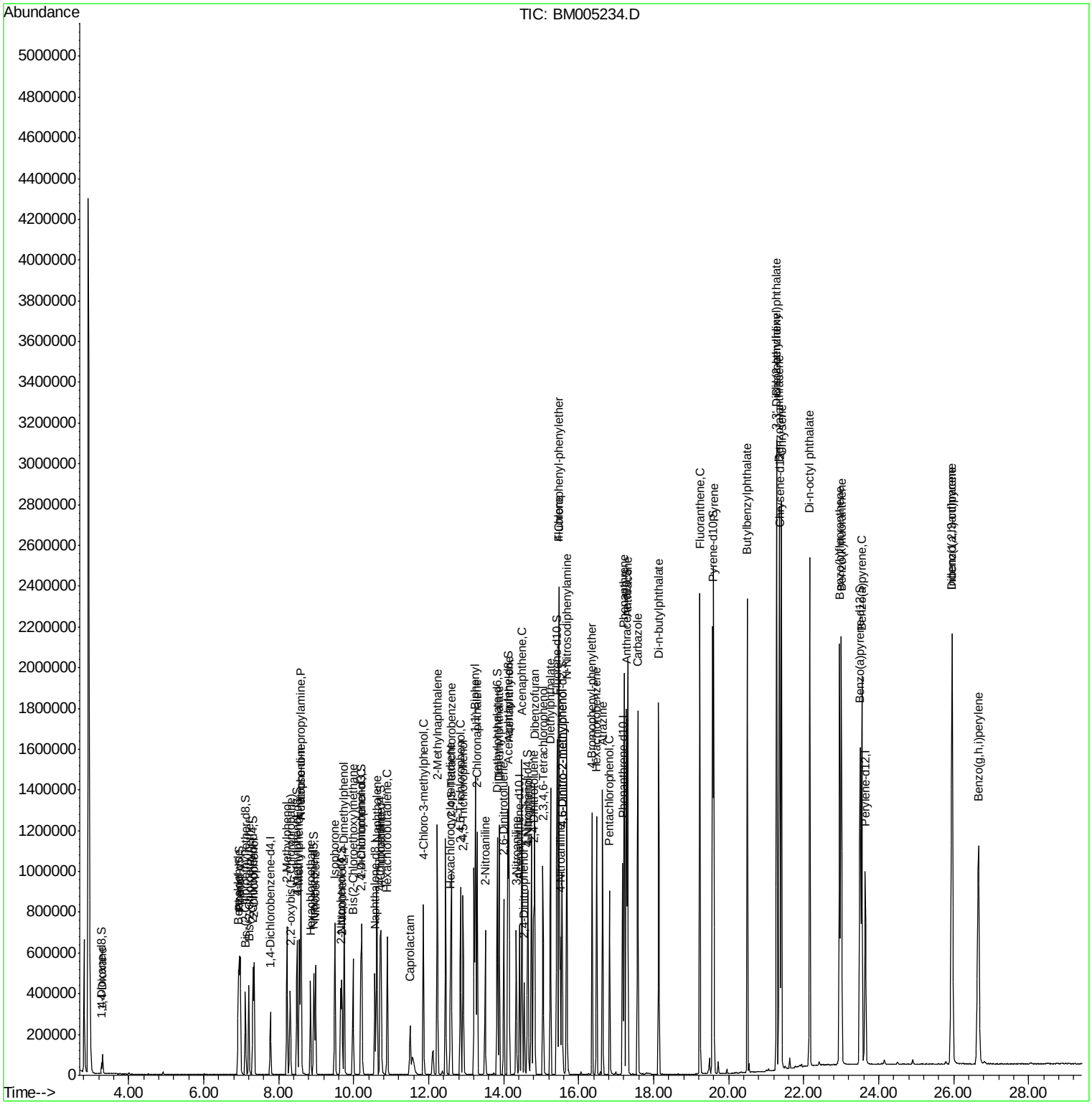
5/6/2016 7:15:02 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
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5/6/2016 7:15:02 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.78	152	84562	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	403635	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	251460	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	619996	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	654734	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	679108	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	27933	16.90	ng/uL	0.00
5) Phenol-d5	6.95	99	311622	43.88	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	176761	43.50	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	238066	42.96	ng/ul	0.00
13) 4-Methylphenol-d8	8.49	113	258926	43.00	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	122067	44.96	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	139600	46.44	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	251376	43.20	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	319946	45.75	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	810084	40.93	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	949365	40.60	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	154681	44.63	ng/ul	0.00
57) Fluorene-d10	15.42	176	679698	38.71	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.55	200	149006	43.78	ng/ul	0.00
70) Anthracene-d10	17.27	188	1063154	38.25	ng/ul	0.00
76) Pyrene-d10	19.57	212	1216425	42.00	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.50	264	1202409	39.87	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	50901	16.57	ng/uL	99
4) Benzaldehyde	6.92	77	169654	48.90	ng/ul	98
6) Phenol	6.98	94	319063	42.50	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	241856	42.53	ng/ul	99
10) 2-Chlorophenol	7.34	128	240670	41.96	ng/ul	97
11) 2-Methylphenol	8.22	108	250854	43.56	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.31	45	330391	44.43	ng/ul	98
14) Acetophenone	8.60	105	370892	40.45	ng/ul	100
15) N-Nitroso-di-n-propylamine	8.59	70	193546	43.00	ng/ul	97
16) 4-Methylphenol	8.55	108	273782	42.33	ng/ul	99
17) Hexachloroethane	8.85	117	89667	40.01	ng/ul	97
20) Nitrobenzene	8.97	77	291849	42.80	ng/ul	97
21) Isophorone	9.50	82	577750	44.71	ng/ul	99
23) 2-Nitrophenol	9.68	139	146919	44.66	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	297922	40.85	ng/ul	100
25) Bis(2-Chloroethoxy)methane	9.98	93	343635	42.27	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	254999	42.46	ng/ul	98
28) Naphthalene	10.62	128	792956	38.83	ng/ul	99
30) 4-Chloroaniline	10.73	127	320811	44.41	ng/ul	99
31) Hexachlorobutadiene	10.89	225	145369	37.17	ng/ul	99
32) Caprolactam	11.50	113	97338m	46.44	ng/ul	
33) 4-Chloro-3-methylphenol	11.86	107	305943	43.61	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	590164	38.89	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
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5/6/2016 7:15:02 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	308575	40.34	ng/ul	98
37) Hexachlorocyclopentadiene	12.57	237	165875	39.11	ng/ul	96
38) 2,4,6-Trichlorophenol	12.85	196	214651	44.57	ng/ul	95
39) 2,4,5-Trichlorophenol	12.92	196	239902	44.34	ng/ul	98
40) 1,1'-Biphenyl	13.25	154	790207	40.21	ng/ul	99
41) 2-Chloronaphthalene	13.29	162	607593	40.47	ng/ul	98
42) 2-Nitroaniline	13.50	65	205060	51.01	ng/ul	96
44) Dimethylphthalate	13.87	163	793709	39.79	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	174443	46.79	ng/ul#	88
47) Acenaphthylene	14.14	152	979969	39.27	ng/ul	99
48) 3-Nitroaniline	14.33	138	181153	46.50	ng/ul	98
49) Acenaphthene	14.48	153	638866	38.70	ng/ul	99
50) 2,4-Dinitrophenol	14.54	184	96796	46.32	ng/ul	94
52) 4-Nitrophenol	14.65	109	126938	40.75	ng/ul	97
53) Dibenzofuran	14.82	168	930477	38.11	ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	255030	43.76	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.05	232	202175	42.59	ng/ul#	100
56) Diethylphthalate	15.25	149	817513	40.56	ng/ul	99
58) Fluorene	15.47	166	709743	36.94	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.46	204	352607	36.88	ng/ul	99
60) 4-Nitroaniline	15.50	138	186037	42.96	ng/ul	97
63) 4,6-Dinitro-2-methylphenol	15.56	198	156691	43.71	ng/ul#	92
64) N-Nitrosodiphenylamine	15.68	169	662167	39.28	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	235524	39.85	ng/ul	98
66) Hexachlorobenzene	16.47	284	263031	38.96	ng/ul	99
67) Atrazine	16.63	200	260164	42.35	ng/ul	97
68) Pentachlorophenol	16.82	266	155897	42.07	ng/ul	98
69) Phenanthrene	17.21	178	1254576	37.70	ng/ul	99
71) Anthracene	17.30	178	1252211	37.46	ng/ul	100
72) Carbazole	17.57	167	1181972	40.67	ng/ul	100
73) Di-n-butylphthalate	18.13	149	1409761	42.89	ng/ul	100
74) Fluoranthene	19.23	202	1504599	40.49	ng/ul	99
77) Pyrene	19.60	202	1495200	40.49	ng/ul	99
78) Butylbenzylphthalate	20.49	149	685781	49.43	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	492093	42.60	ng/ul	99
80) Benzo(a)anthracene	21.35	228	1482911	39.72	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	913304	46.20	ng/ul	97
82) Chrysene	21.40	228	1409938	39.28	ng/ul	99
84) Di-n-octyl phthalate	22.16	149	1717400	42.67	ng/ul	98
85) Benzo(b)fluoranthene	22.96	252	1595664	39.71	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	1451729	37.12	ng/ul	99
88) Benzo(a)pyrene	23.54	252	1471288	38.75	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.95	276	1617052	42.34	ng/ul	99
90) Dibenzo(a,h)anthracene	25.96	278	1346332	42.09	ng/ul	99
91) Benzo(g,h,i)perylene	26.66	276	1401939	44.41	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
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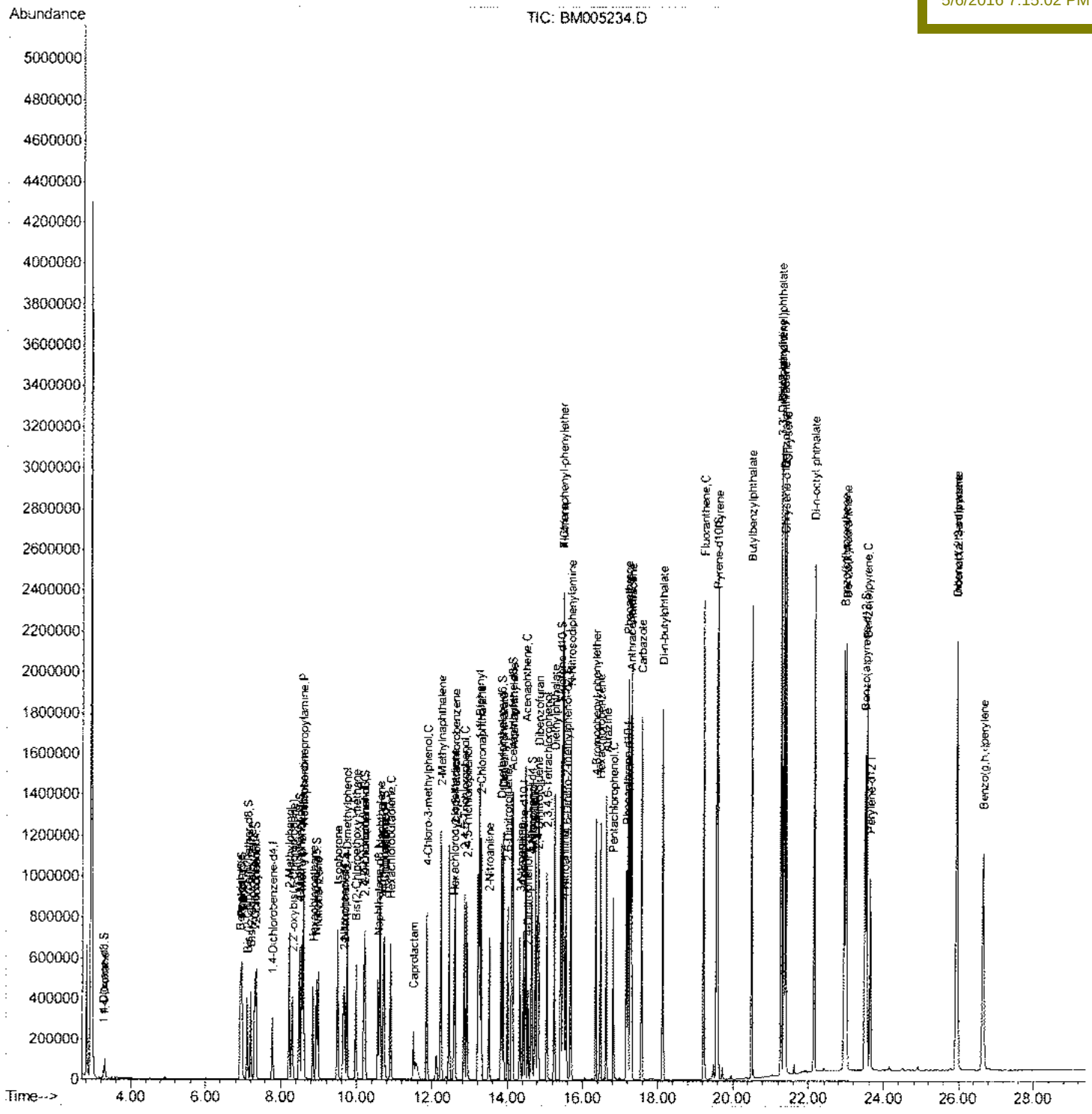


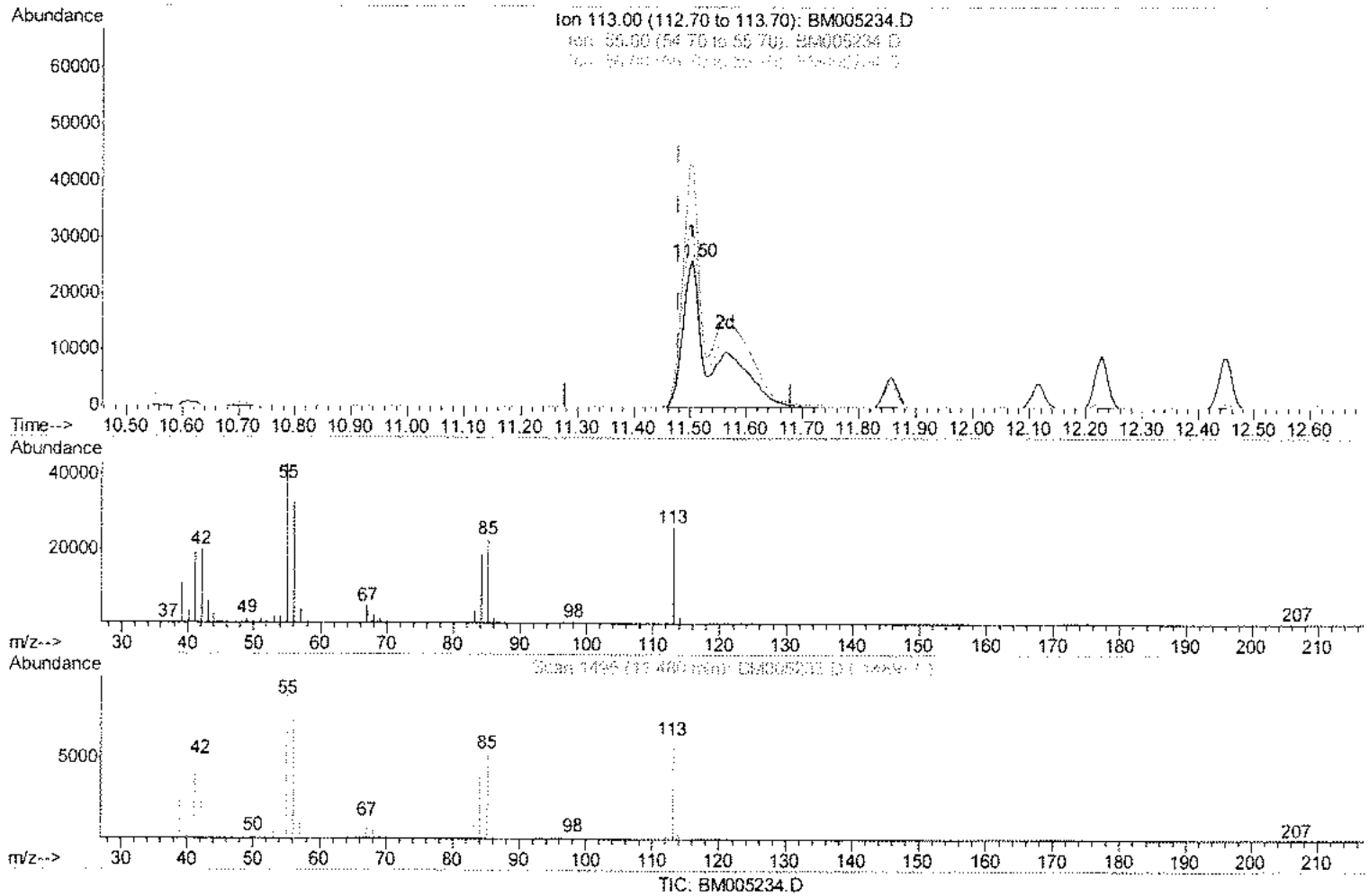
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:42:38 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
sohil
5/6/2016 7:15:02 PM



(32) Caprolactam

11.504min (+0.024) 46.44ng/ul m U.M 05/07/16

response 97338

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	165.66
56.00	120.80	125.31
0.00	0.00	0.00

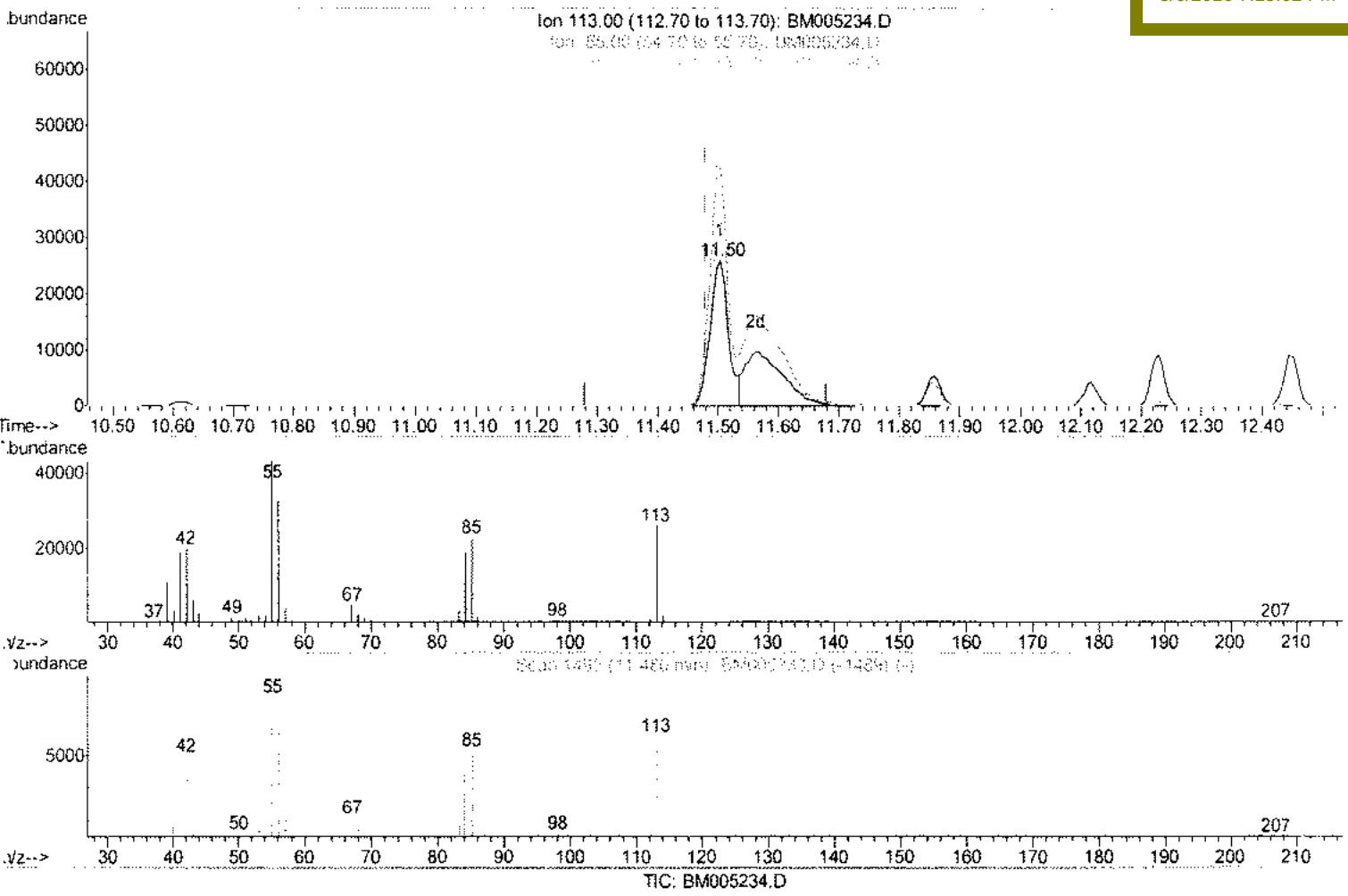
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:42:38 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD04043

Manual Integrations APPROVED
sohil
5/6/2016 7:15:02 PM



(32) Caprolactam

11.504min (+0.024) 25.82ng/ul

response 54124

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	165.66
56.00	120.80	125.31
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD04043

Manual Integrations APPROVED
sohil
5/6/2016 7:15:02 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.78	152	84562	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	403635	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	251460	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	619996	20.00	ng/ul	0.00
75) Chrysene-d12	21.36	240	654734	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	679108	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	27933	16.90	ng/uL	0.00
5) Phenol-d5	6.95	99	311622	43.88	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.11	67	176761	43.50	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	238066	42.96	ng/ul	0.00
13) 4-Methylphenol-d8	8.49	113	258926	43.00	ng/ul	0.00
19) Nitrobenzene-d5	8.93	128	122067	44.96	ng/ul	0.00
22) 2-Nitrophenol-d4	9.65	143	139600	46.44	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	251376	43.20	ng/ul	0.00
29) 4-Chloroaniline-d4	10.70	131	319946	45.75	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	810084	40.93	ng/ul	0.00
46) Acenaphthylene-d8	14.11	160	949365	40.60	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	154681	44.63	ng/ul	0.00
57) Fluorene-d10	15.42	176	679698	38.71	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.55	200	149006	43.78	ng/ul	0.00
70) Anthracene-d10	17.27	188	1063154	38.25	ng/ul	0.00
76) Pyrene-d10	19.57	212	1216425	42.00	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.50	264	1202409	39.87	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	50901	16.57	ng/uL	99
4) Benzaldehyde	6.92	77	169654	48.90	ng/ul	98
6) Phenol	6.98	94	319063	42.50	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	241856	42.53	ng/ul	99
10) 2-Chlorophenol	7.34	128	240670	41.96	ng/ul	97
11) 2-Methylphenol	8.22	108	250854	43.56	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.31	45	330391	44.43	ng/ul	98
14) Acetophenone	8.60	105	370892	40.45	ng/ul	100
15) N-Nitroso-di-n-propylamine	8.59	70	193546	43.00	ng/ul	97
16) 4-Methylphenol	8.55	108	273782	42.33	ng/ul	99
17) Hexachloroethane	8.85	117	89667	40.01	ng/ul	97
20) Nitrobenzene	8.97	77	291849	42.80	ng/ul	97
21) Isophorone	9.50	82	577750	44.71	ng/ul	99
23) 2-Nitrophenol	9.68	139	146919	44.66	ng/ul	99
24) 2,4-Dimethylphenol	9.74	107	297922	40.85	ng/ul	100
25) Bis(2-Chloroethoxy)methane	9.98	93	343635	42.27	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	254999	42.46	ng/ul	98
28) Naphthalene	10.62	128	792956	38.83	ng/ul	99
30) 4-Chloroaniline	10.73	127	320811	44.41	ng/ul	99
31) Hexachlorobutadiene	10.89	225	145369	37.17	ng/ul	99
32) Caprolactam	11.50	113	97338m	46.44	ng/ul	
33) 4-Chloro-3-methylphenol	11.86	107	305943	43.61	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	590164	38.89	ng/ul	99

U.M 05/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005234.D
Acq On : 05 May 2016 12:57
Operator : UM/SJ
Sample : SSTD04043
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:58:17 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:39:01 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD04043

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	308575	40.34	ng/ul	98
37) Hexachlorocyclopentadiene	12.57	237	165875	39.11	ng/ul	96
38) 2,4,6-Trichlorophenol	12.85	196	214651	44.57	ng/ul	95
39) 2,4,5-Trichlorophenol	12.92	196	239902	44.34	ng/ul	98
40) 1,1'-Biphenyl	13.25	154	790207	40.21	ng/ul	99
41) 2-Chloronaphthalene	13.29	162	607593	40.47	ng/ul	98
42) 2-Nitroaniline	13.50	65	205060	51.01	ng/ul	96
44) Dimethylphthalate	13.87	163	793709	39.79	ng/ul	99
45) 2,6-Dinitrotoluene	14.00	165	174443	46.79	ng/ul#	88
47) Acenaphthylene	14.14	152	979969	39.27	ng/ul	99
48) 3-Nitroaniline	14.33	138	181153	46.50	ng/ul	98
49) Acenaphthene	14.48	153	638866	38.70	ng/ul	99
50) 2,4-Dinitrophenol	14.54	184	96796	46.32	ng/ul	94
52) 4-Nitrophenol	14.65	109	126938	40.75	ng/ul	97
53) Dibenzofuran	14.82	168	930477	38.11	ng/ul	99
54) 2,4-Dinitrotoluene	14.79	165	255030	43.76	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.05	232	202175	42.59	ng/ul#	100
56) Diethylphthalate	15.25	149	817513	40.56	ng/ul	99
58) Fluorene	15.47	166	709743	36.94	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.46	204	352607	36.88	ng/ul	99
60) 4-Nitroaniline	15.50	138	186037	42.96	ng/ul	97
63) 4,6-Dinitro-2-methylphenol	15.56	198	156691	43.71	ng/ul#	92
64) N-Nitrosodiphenylamine	15.68	169	662167	39.28	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	235524	39.85	ng/ul	98
66) Hexachlorobenzene	16.47	284	263031	38.96	ng/ul	99
67) Atrazine	16.63	200	260164	42.35	ng/ul	97
68) Pentachlorophenol	16.82	266	155897	42.07	ng/ul	98
69) Phenanthrene	17.21	178	1254576	37.70	ng/ul	99
71) Anthracene	17.30	178	1252211	37.46	ng/ul	100
72) Carbazole	17.57	167	1181972	40.67	ng/ul	100
73) Di-n-butylphthalate	18.13	149	1409761	42.89	ng/ul	100
74) Fluoranthene	19.23	202	1504599	40.49	ng/ul	99
77) Pyrene	19.60	202	1495200	40.49	ng/ul	99
78) Butylbenzylphthalate	20.49	149	685781	49.43	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.28	252	492093	42.60	ng/ul	99
80) Benzo(a)anthracene	21.35	228	1482911	39.72	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	913304	46.20	ng/ul	97
82) Chrysene	21.40	228	1409938	39.28	ng/ul	99
84) Di-n-octyl phthalate	22.16	149	1717400	42.67	ng/ul	98
85) Benzo(b)fluoranthene	22.96	252	1595664	39.71	ng/ul	99
86) Benzo(k)fluoranthene	23.00	252	1451729	37.12	ng/ul	99
88) Benzo(a)pyrene	23.54	252	1471288	38.75	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.95	276	1617052	42.34	ng/ul	99
90) Dibenzo(a,h)anthracene	25.96	278	1346332	42.09	ng/ul	99
91) Benzo(g,h,i)perylene	26.66	276	1401939	44.41	ng/ul	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
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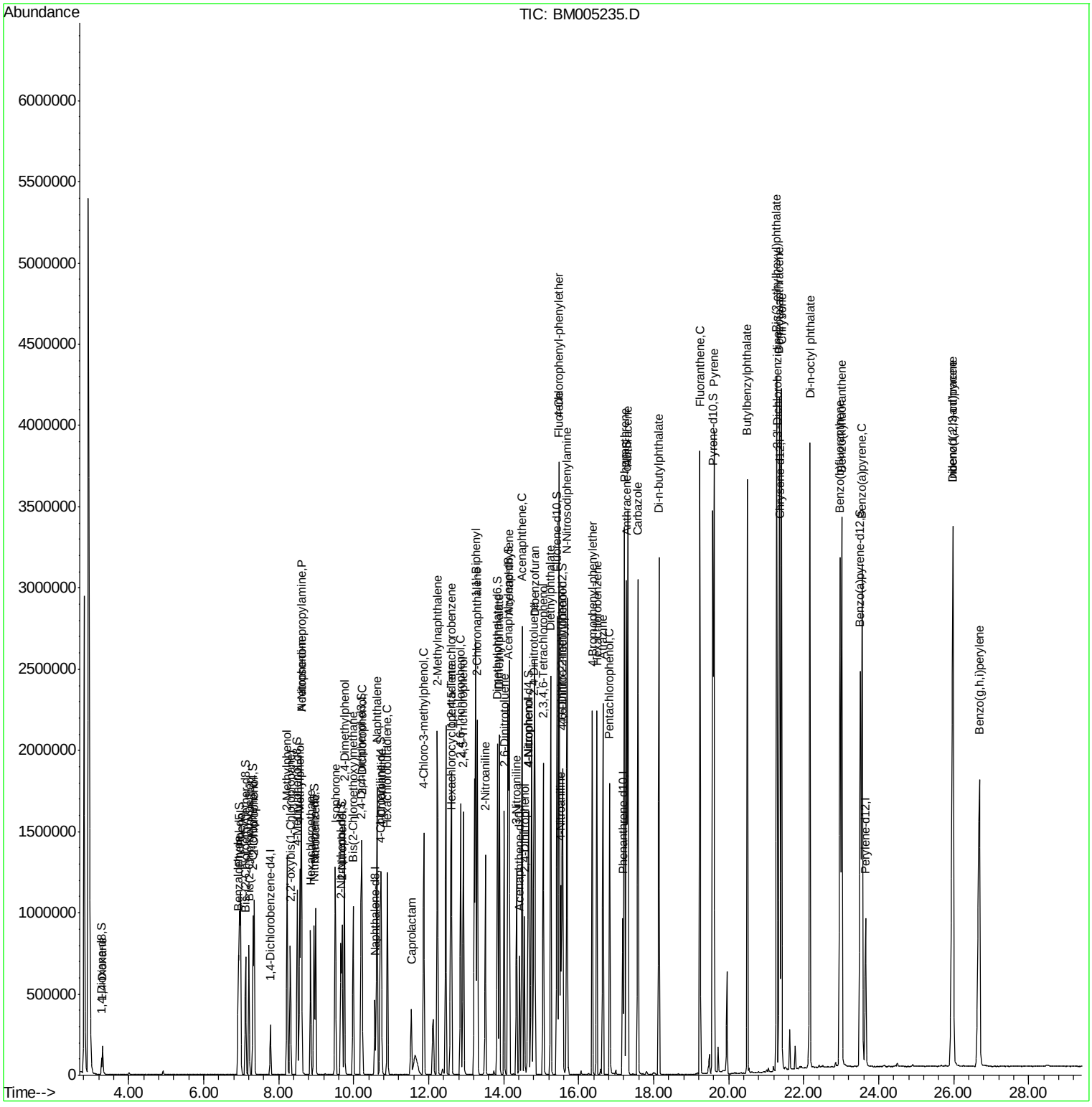

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
sohil
5/6/2016 7:15:03 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	83048	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	393148	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	246950	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	615677	20.00	ng/ul	0.00
75) Chrysene-d12	21.37	240	600527	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	644546	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	52514	32.35	ng/uL	0.00
5) Phenol-d5	6.95	99	607880	87.16	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.12	67	331598	83.08	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	469486	86.27	ng/ul	0.00
13) 4-Methylphenol-d8	8.49	113	502580	84.98	ng/ul	0.01
19) Nitrobenzene-d5	8.94	128	242925	91.85	ng/ul	0.00
22) 2-Nitrophenol-d4	9.66	143	278426	95.09	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	488977	86.28	ng/ul	0.00
29) 4-Chloroaniline-d4	10.71	131	552060	81.05	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	1505300	77.44	ng/ul	0.00
46) Acenaphthylene-d8	14.12	160	1773448	77.23	ng/ul	0.00
51) 4-Nitrophenol-d4	14.65	143	307075	90.22	ng/ul	0.02
57) Fluorene-d10	15.42	176	1239568	71.89	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.56	200	301685	89.26	ng/ul	0.02
70) Anthracene-d10	17.27	188	1938659	70.24	ng/ul	0.01
76) Pyrene-d10	19.57	212	2129410	80.16	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.51	264	2154188	75.25	ng/ul	0.02
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	94388	31.29	ng/uL	97
4) Benzaldehyde	6.92	77	253162	74.29	ng/ul	98
6) Phenol	6.98	94	626822	85.01	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	457552	81.93	ng/ul	99
10) 2-Chlorophenol	7.35	128	471091	83.63	ng/ul	99
11) 2-Methylphenol	8.22	108	489878	86.61	ng/ul	98
12) 2,2'-oxybis(1-Chloropropan	8.31	45	613586	84.03	ng/ul	99
14) Acetophenone	8.60	105	705900	78.40	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.60	70	358888	81.20	ng/ul	97
16) 4-Methylphenol	8.56	108	529578	83.38	ng/ul	95
17) Hexachloroethane	8.85	117	174404	79.24	ng/ul	96
20) Nitrobenzene	8.98	77	570370	85.88	ng/ul	96
21) Isophorone	9.51	82	1113543	88.47	ng/ul	98
23) 2-Nitrophenol	9.69	139	288558	90.06	ng/ul	99
24) 2,4-Dimethylphenol	9.75	107	582268	81.96	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.98	93	648690	81.93	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	489833	83.75	ng/ul	97
28) Naphthalene	10.62	128	1504056	75.61	ng/ul	99
30) 4-Chloroaniline	10.73	127	560036	79.59	ng/ul	98
31) Hexachlorobutadiene	10.90	225	283788	74.50	ng/ul	98
32) Caprolactam	11.54	113	191776m	93.93	ng/ul	
33) 4-Chloro-3-methylphenol	11.87	107	583313	85.36	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	1092687	73.93	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
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5/6/2016 7:15:03 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	578806	77.06	ng/ul	99
37) Hexachlorocyclopentadiene	12.58	237	351379	84.35	ng/ul	96
38) 2,4,6-Trichlorophenol	12.84	196	414809	87.70	ng/ul	95
39) 2,4,5-Trichlorophenol	12.93	196	455075	85.64	ng/ul	98
40) 1,1'-Biphenyl	13.25	154	1427149	73.94	ng/ul	99
41) 2-Chloronaphthalene	13.29	162	1126850	76.42	ng/ul	98
42) 2-Nitroaniline	13.51	65	400709	101.51	ng/ul	95
44) Dimethylphthalate	13.88	163	1488978	76.01	ng/ul	99
45) 2,6-Dinitrotoluene	14.01	165	341823	93.36	ng/ul#	88
47) Acenaphthylene	14.14	152	1809814	73.85	ng/ul	100
48) 3-Nitroaniline	14.34	138	339864	88.83	ng/ul	98
49) Acenaphthene	14.49	153	1191285	73.48	ng/ul	99
50) 2,4-Dinitrophenol	14.55	184	222750	108.54	ng/ul	92
52) 4-Nitrophenol	14.66	109	255508	83.53	ng/ul	96
53) Dibenzofuran	14.82	168	1680618	70.09	ng/ul	97
54) 2,4-Dinitrotoluene	14.80	165	484206	84.61	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.05	232	390197	83.71	ng/ul#	94
56) Diethylphthalate	15.25	149	1526647	77.12	ng/ul	99
58) Fluorene	15.48	166	1228930	65.13	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	618031	65.82	ng/ul	97
60) 4-Nitroaniline	15.52	138	356295	83.78	ng/ul	97
63) 4,6-Dinitro-2-methylphenol	15.57	198	310835	87.32	ng/ul#	86
64) N-Nitrosodiphenylamine	15.69	169	1205367	72.01	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	439906	74.95	ng/ul	97
66) Hexachlorobenzene	16.48	284	490128	73.10	ng/ul	97
67) Atrazine	16.64	200	478348	78.41	ng/ul	98
68) Pentachlorophenol	16.82	266	317223	86.20	ng/ul	98
69) Phenanthrene	17.22	178	2242657	67.87	ng/ul	99
71) Anthracene	17.31	178	2210378	66.58	ng/ul	100
72) Carbazole	17.58	167	2134031	73.94	ng/ul	99
73) Di-n-butylphthalate	18.13	149	2560656	78.45	ng/ul	100
74) Fluoranthene	19.23	202	2608839	70.70	ng/ul	98
77) Pyrene	19.60	202	2557222	75.49	ng/ul	98
78) Butylbenzylphthalate	20.49	149	1229136	96.59	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.29	252	833999	78.72	ng/ul	99
80) Benzo(a)anthracene	21.35	228	2552213	74.53	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	1530144	84.40	ng/ul#	98
82) Chrysene	21.41	228	2381747	72.34	ng/ul	98
84) Di-n-octyl phthalate	22.16	149	2946352	77.13	ng/ul#	96
85) Benzo(b)fluoranthene	22.97	252	2764613	72.49	ng/ul	99
86) Benzo(k)fluoranthene	23.01	252	2568479	69.20	ng/ul	99
88) Benzo(a)pyrene	23.56	252	2599043	72.13	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.97	276	2842888	78.42	ng/ul	97
90) Dibenzo(a,h)anthracene	25.98	278	2315960	76.29	ng/ul	98
91) Benzo(g,h,i)perylene	26.68	276	2494535	83.27	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
sohil
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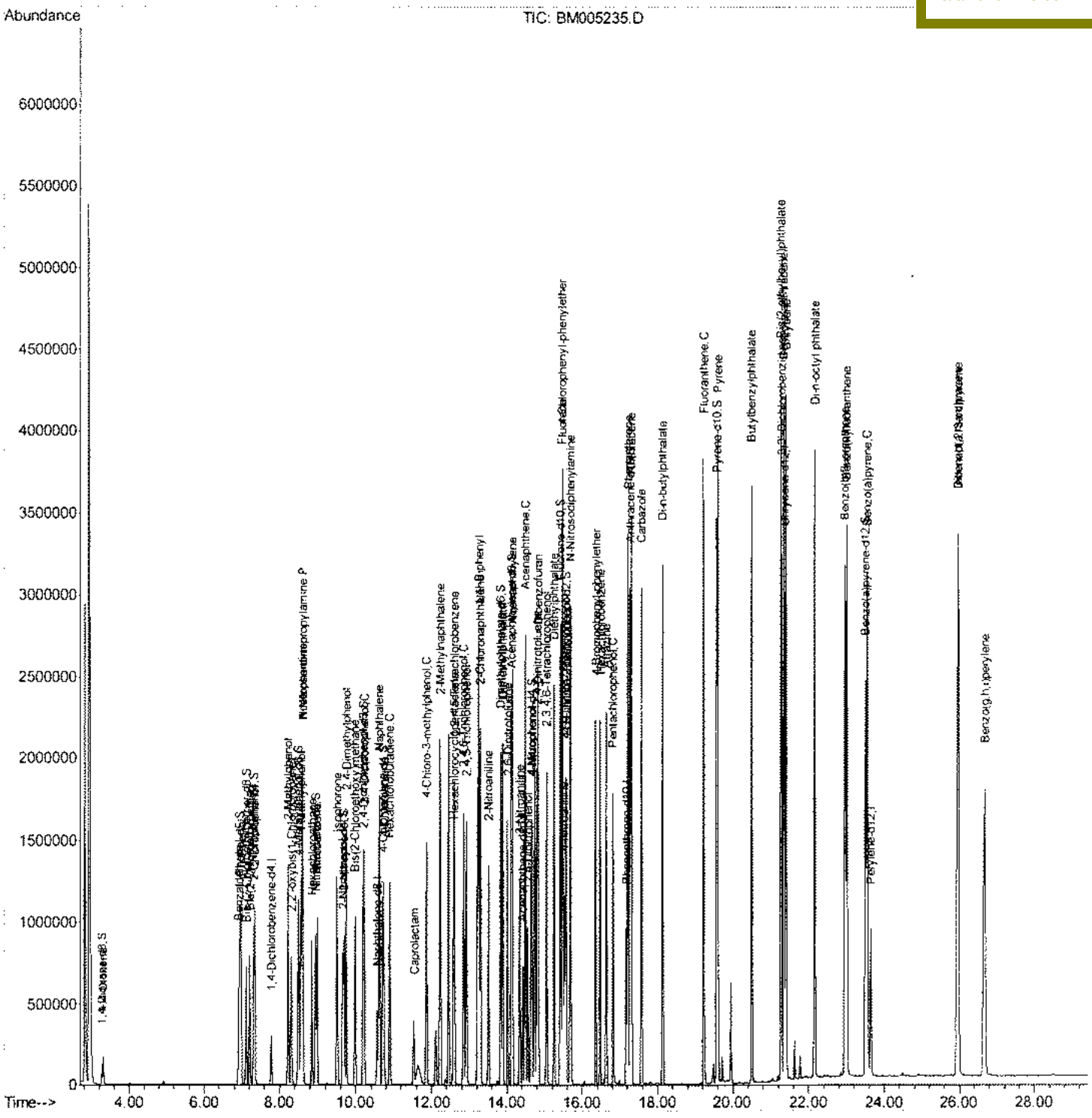


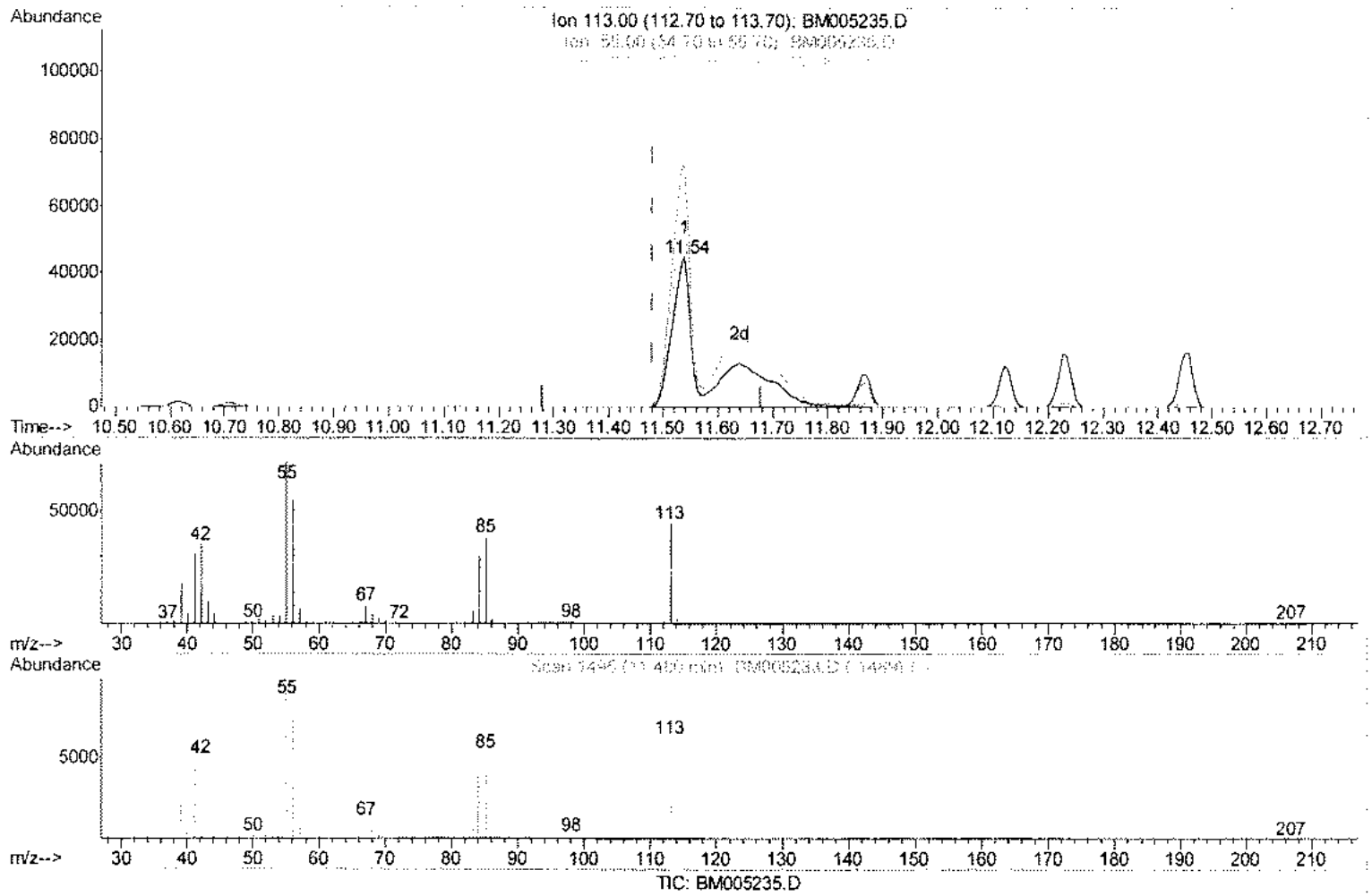
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:12:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
sohil
5/6/2016 7:15:03 PM



TIC: BM005235.D

(32) Caprolactam

11.539min (+0.059) 93.93ng/ul m U.M 05/07/16

response 191776

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	160.35
56.00	120.80	123.22
0.00	0.00	0.00

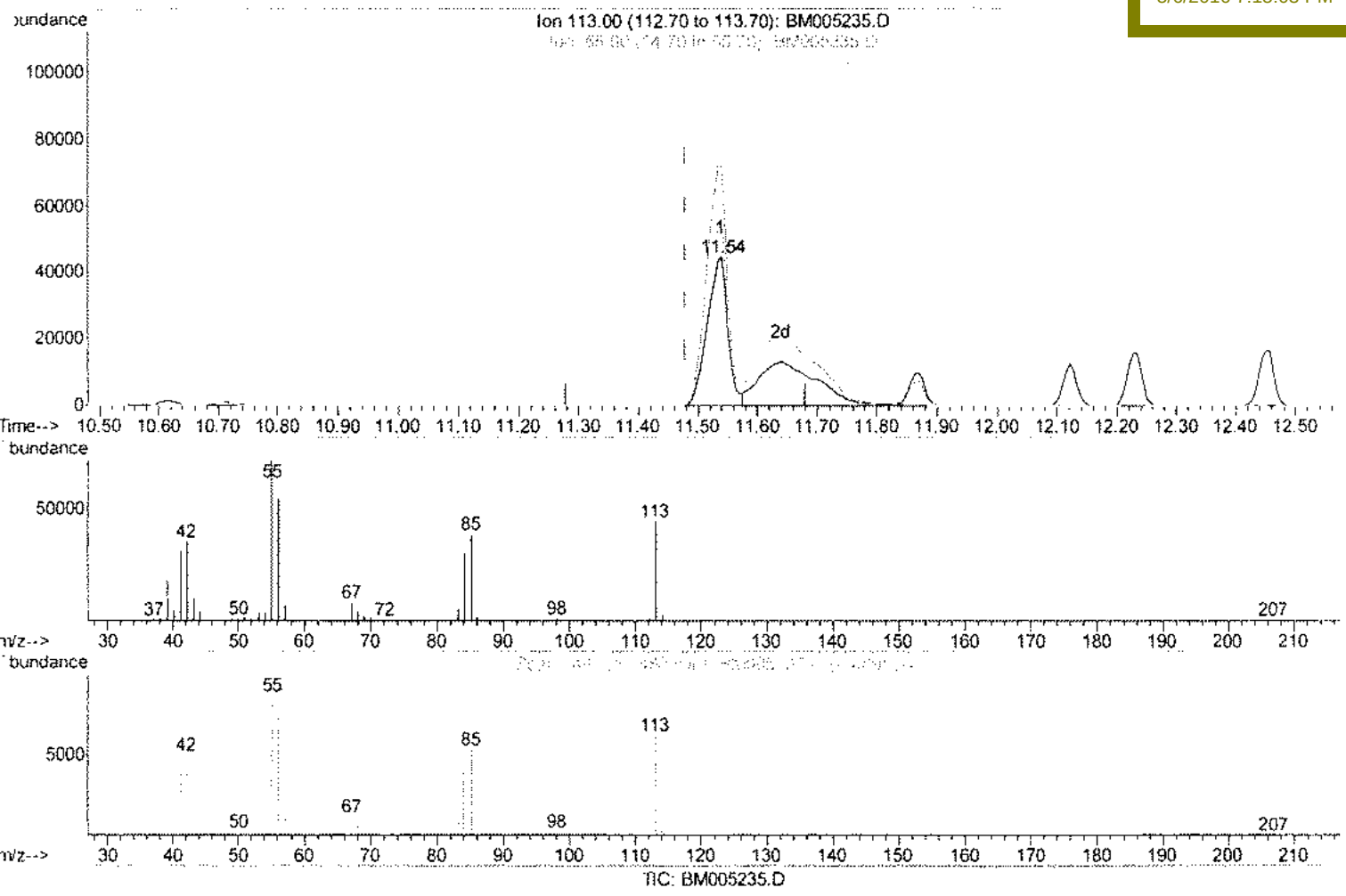
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:12:12 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD08044

Manual Integrations APPROVED
sohil
5/6/2016 7:15:03 PM



TIC: BM005235.D

(32) Caprolactam

11.539min (+0.059) 51.75ng/ul

response 105649

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	160.35
56.00	120.80	123.22
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD08044

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	83048	20.00	ng/ul	0.00
18) Naphthalene-d8	10.56	136	393148	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	246950	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	615677	20.00	ng/ul	0.00
75) Chrysene-d12	21.37	240	600527	20.00	ng/ul	0.00
83) Perylene-d12	23.64	264	644546	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.27	96	52514	32.35	ng/uL	0.00
5) Phenol-d5	6.95	99	607880	87.16	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.12	67	331598	83.08	ng/ul	0.00
9) 2-Chlorophenol-d4	7.31	132	469486	86.27	ng/ul	0.00
13) 4-Methylphenol-d8	8.49	113	502580	84.98	ng/ul	0.01
19) Nitrobenzene-d5	8.94	128	242925	91.85	ng/ul	0.00
22) 2-Nitrophenol-d4	9.66	143	278426	95.09	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.19	165	488977	86.28	ng/ul	0.00
29) 4-Chloroaniline-d4	10.71	131	552060	81.05	ng/ul	0.00
43) Dimethylphthalate-d6	13.83	166	1505300	77.44	ng/ul	0.00
46) Acenaphthylene-d8	14.12	160	1773448	77.23	ng/ul	0.00
51) 4-Nitrophenol-d4	14.65	143	307075	90.22	ng/ul	0.02
57) Fluorene-d10	15.42	176	1239568	71.89	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.56	200	301685	89.26	ng/ul	0.02
70) Anthracene-d10	17.27	188	1938659	70.24	ng/ul	0.01
76) Pyrene-d10	19.57	212	2129410	80.16	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.51	264	2154188	75.25	ng/ul	0.02
Target Compounds						Qvalue
2) 1,4-Dioxane	3.30	88	94388	31.29	ng/uL	97
4) Benzaldehyde	6.92	77	253162	74.29	ng/ul	98
6) Phenol	6.98	94	626822	85.01	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.20	93	457552	81.93	ng/ul	99
10) 2-Chlorophenol	7.35	128	471091	83.63	ng/ul	99
11) 2-Methylphenol	8.22	108	489878	86.61	ng/ul	98
12) 2,2'-oxybis(1-Chloropropan	8.31	45	613586	84.03	ng/ul	99
14) Acetophenone	8.60	105	705900	78.40	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.60	70	358888	81.20	ng/ul	97
16) 4-Methylphenol	8.56	108	529578	83.38	ng/ul	95
17) Hexachloroethane	8.85	117	174404	79.24	ng/ul	96
20) Nitrobenzene	8.98	77	570370	85.88	ng/ul	96
21) Isophorone	9.51	82	1113543	88.47	ng/ul	98
23) 2-Nitrophenol	9.69	139	288558	90.06	ng/ul	99
24) 2,4-Dimethylphenol	9.75	107	582268	81.96	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.98	93	648690	81.93	ng/ul	99
27) 2,4-Dichlorophenol	10.22	162	489833	83.75	ng/ul	97
28) Naphthalene	10.62	128	1504056	75.61	ng/ul	99
30) 4-Chloroaniline	10.73	127	560036	79.59	ng/ul	98
31) Hexachlorobutadiene	10.90	225	283788	74.50	ng/ul	98
32) Caprolactam	11.54	113	191776m	93.93	ng/ul	
33) 4-Chloro-3-methylphenol	11.87	107	583313	85.36	ng/ul	99
34) 2-Methylnaphthalene	12.23	142	1092687	73.93	ng/ul	99

U.M 05/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005235.D
Acq On : 05 May 2016 13:33
Operator : UM/SJ
Sample : SSTD08044
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:14:06 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 13:37:36 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD08044

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.60	216	578806	77.06	ng/ul	99
37) Hexachlorocyclopentadiene	12.58	237	351379	84.35	ng/ul	96
38) 2,4,6-Trichlorophenol	12.84	196	414809	87.70	ng/ul	95
39) 2,4,5-Trichlorophenol	12.93	196	455075	85.64	ng/ul	98
40) 1,1'-Biphenyl	13.25	154	1427149	73.94	ng/ul	99
41) 2-Chloronaphthalene	13.29	162	1126850	76.42	ng/ul	98
42) 2-Nitroaniline	13.51	65	400709	101.51	ng/ul	95
44) Dimethylphthalate	13.88	163	1488978	76.01	ng/ul	99
45) 2,6-Dinitrotoluene	14.01	165	341823	93.36	ng/ul#	88
47) Acenaphthylene	14.14	152	1809814	73.85	ng/ul	100
48) 3-Nitroaniline	14.34	138	339864	88.83	ng/ul	98
49) Acenaphthene	14.49	153	1191285	73.48	ng/ul	99
50) 2,4-Dinitrophenol	14.55	184	222750	108.54	ng/ul	92
52) 4-Nitrophenol	14.66	109	255508	83.53	ng/ul	96
53) Dibenzofuran	14.82	168	1680618	70.09	ng/ul	97
54) 2,4-Dinitrotoluene	14.80	165	484206	84.61	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.05	232	390197	83.71	ng/ul#	94
56) Diethylphthalate	15.25	149	1526647	77.12	ng/ul	99
58) Fluorene	15.48	166	1228930	65.13	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.46	204	618031	65.82	ng/ul	97
60) 4-Nitroaniline	15.52	138	356295	83.78	ng/ul	97
63) 4,6-Dinitro-2-methylphenol	15.57	198	310835	87.32	ng/ul#	86
64) N-Nitrosodiphenylamine	15.69	169	1205367	72.01	ng/ul	99
65) 4-Bromophenyl-phenylether	16.36	248	439906	74.95	ng/ul	97
66) Hexachlorobenzene	16.48	284	490128	73.10	ng/ul	97
67) Atrazine	16.64	200	478348	78.41	ng/ul	98
68) Pentachlorophenol	16.82	266	317223	86.20	ng/ul	98
69) Phenanthrene	17.22	178	2242657	67.87	ng/ul	99
71) Anthracene	17.31	178	2210378	66.58	ng/ul	100
72) Carbazole	17.58	167	2134031	73.94	ng/ul	99
73) Di-n-butylphthalate	18.13	149	2560656	78.45	ng/ul	100
74) Fluoranthene	19.23	202	2608839	70.70	ng/ul	98
77) Pyrene	19.60	202	2557222	75.49	ng/ul	98
78) Butylbenzylphthalate	20.49	149	1229136	96.59	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.29	252	833999	78.72	ng/ul	99
80) Benzo(a)anthracene	21.35	228	2552213	74.53	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.27	149	1530144	84.40	ng/ul#	98
82) Chrysene	21.41	228	2381747	72.34	ng/ul	98
84) Di-n-octyl phthalate	22.16	149	2946352	77.13	ng/ul#	96
85) Benzo(b)fluoranthene	22.97	252	2764613	72.49	ng/ul	99
86) Benzo(k)fluoranthene	23.01	252	2568479	69.20	ng/ul	99
88) Benzo(a)pyrene	23.56	252	2599043	72.13	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.97	276	2842888	78.42	ng/ul	97
90) Dibenzo(a,h)anthracene	25.98	278	2315960	76.29	ng/ul	98
91) Benzo(g,h,i)perylene	26.68	276	2494535	83.27	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
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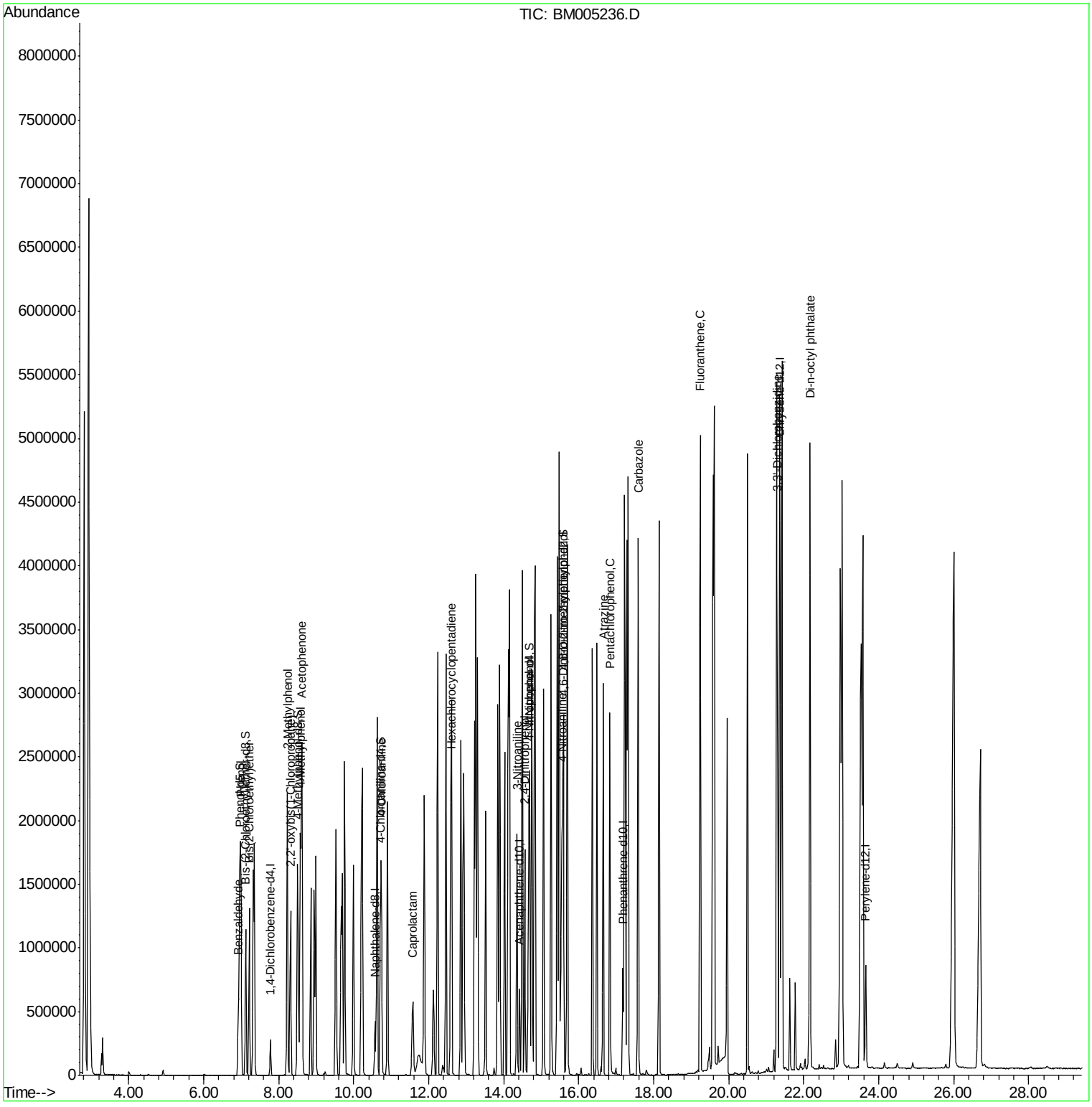
5/6/2016 7:15:04 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	75056	20.00	ng/ul	0.00
18) Naphthalene-d8	10.57	136	363283	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	233509	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	561822	20.00	ng/ul	0.00
75) Chrysene-d12	21.37	240	497720	20.00	ng/ul	0.01
83) Perylene-d12	23.65	264	563686	20.00	ng/ul	0.01
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0d	0.00	ng/uL	
5) Phenol-d5	6.96	99	1075165	158.15	ng/ul	0.01
7) Bis-(2-Chloroethyl)ether-d	7.12	67	567293	146.18	ng/ul	0.01
9) 2-Chlorophenol-d4	0.00	132	0d	0.00	ng/ul	
13) 4-Methylphenol-d8	8.50	113	886525	157.84	ng/ul	0.02
19) Nitrobenzene-d5	0.00	128	0d	0.00	ng/ul	
22) 2-Nitrophenol-d4	0.00	143	0d	0.00	ng/ul	
26) 2,4-Dichlorophenol-d3	0.00	165	0d	0.00	ng/ul	
29) 4-Chloroaniline-d4	10.71	131	732409	111.84	ng/ul	0.00
43) Dimethylphthalate-d6	0.00	166	0d	0.00	ng/ul	
46) Acenaphthylene-d8	0.00	160	0d	0.00	ng/ul	
51) 4-Nitrophenol-d4	14.67	143	537109	157.83	ng/ul	0.04
57) Fluorene-d10	0.00	176	0d	0.00	ng/ul	
62) 4,6-Dinitro-2-methylphenol	15.57	200	509862	162.21	ng/ul	0.03
70) Anthracene-d10	0.00	188	0d	0.00	ng/ul	
76) Pyrene-d10	0.00	212	0d	0.00	ng/ul	
87) Benzo(a)pyrene-d12	0.00	264	0d	0.00	ng/ul	
Target Compounds						Qvalue
4) Benzaldehyde	6.92	77	226824m	70.51	ng/ul	
6) Phenol	6.99	94	1085067	154.48	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.22	93	768562	145.00	ng/ul	98
11) 2-Methylphenol	8.23	108	841458	155.00	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.32	45	1027856	143.11	ng/ul	98
14) Acetophenone	8.61	105	1175531	141.43	ng/ul	99
16) 4-Methylphenol	8.58	108	923518	153.36	ng/ul	94
30) 4-Chloroaniline	10.74	127	757005	113.61	ng/ul	98
32) Caprolactam	11.58	113	347344m	163.70	ng/ul	
37) Hexachlorocyclopentadiene	12.58	237	626609	173.01	ng/ul	95
48) 3-Nitroaniline	14.36	138	569448	145.96	ng/ul	99
50) 2,4-Dinitrophenol	14.56	184	428328	202.75	ng/ul	93
52) 4-Nitrophenol	14.69	109	445714	157.24	ng/ul	92
60) 4-Nitroaniline	15.54	138	639334	154.35	ng/ul	93
63) 4,6-Dinitro-2-methylphenol	15.59	198	522473	157.93	ng/ul#	87
67) Atrazine	16.66	200	758834	135.68	ng/ul	99
68) Pentachlorophenol	16.83	266	558124	166.98	ng/ul	97
72) Carbazole	17.59	167	3315288	128.31	ng/ul	98
74) Fluoranthene	19.24	202	3900552	119.85	ng/ul	96
79) 3,3'-Dichlorobenzidine	21.29	252	1289339	144.50	ng/ul	98
84) Di-n-octyl phthalate	22.17	149	4331133	131.76	ng/ul#	94

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
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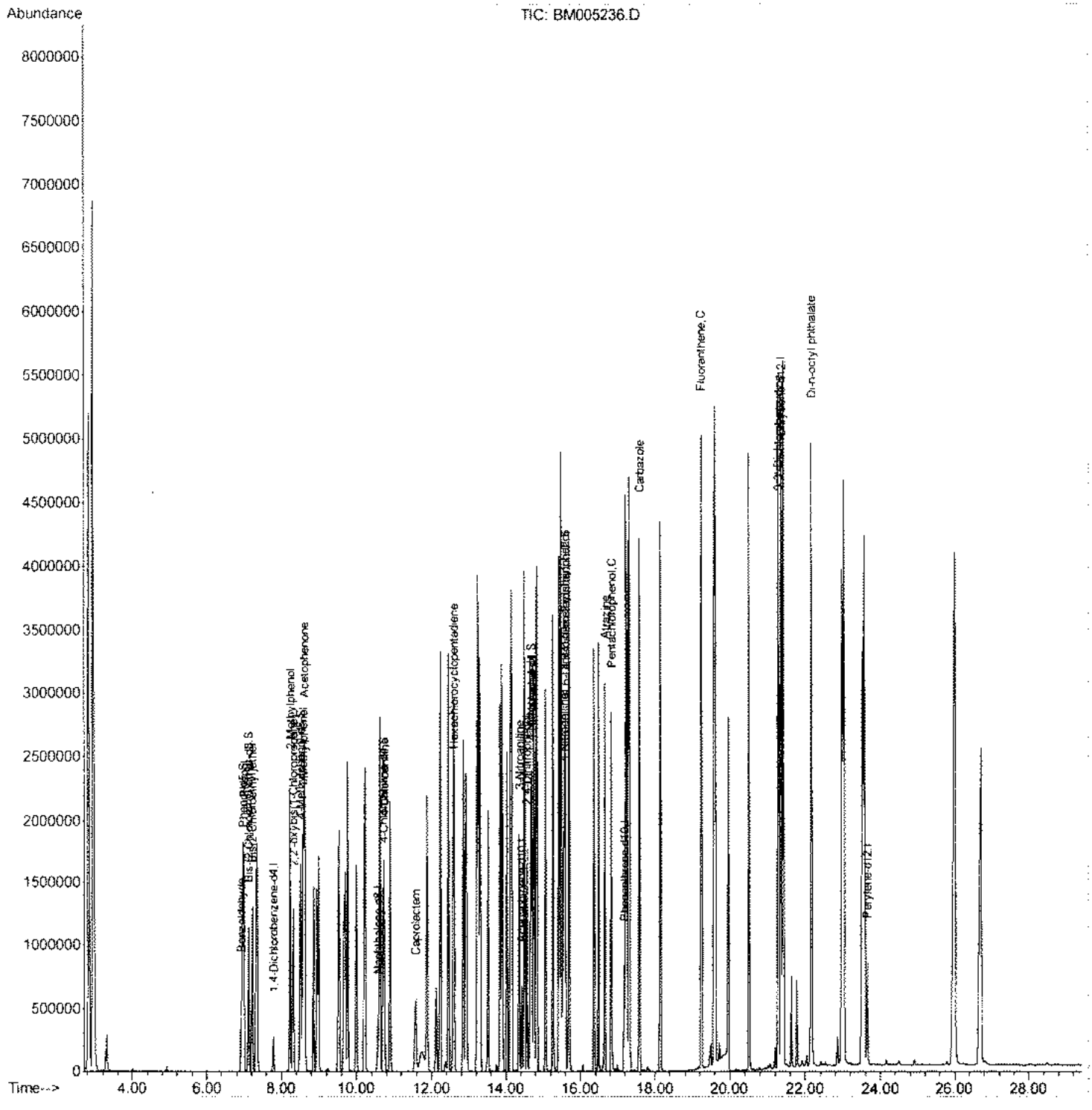


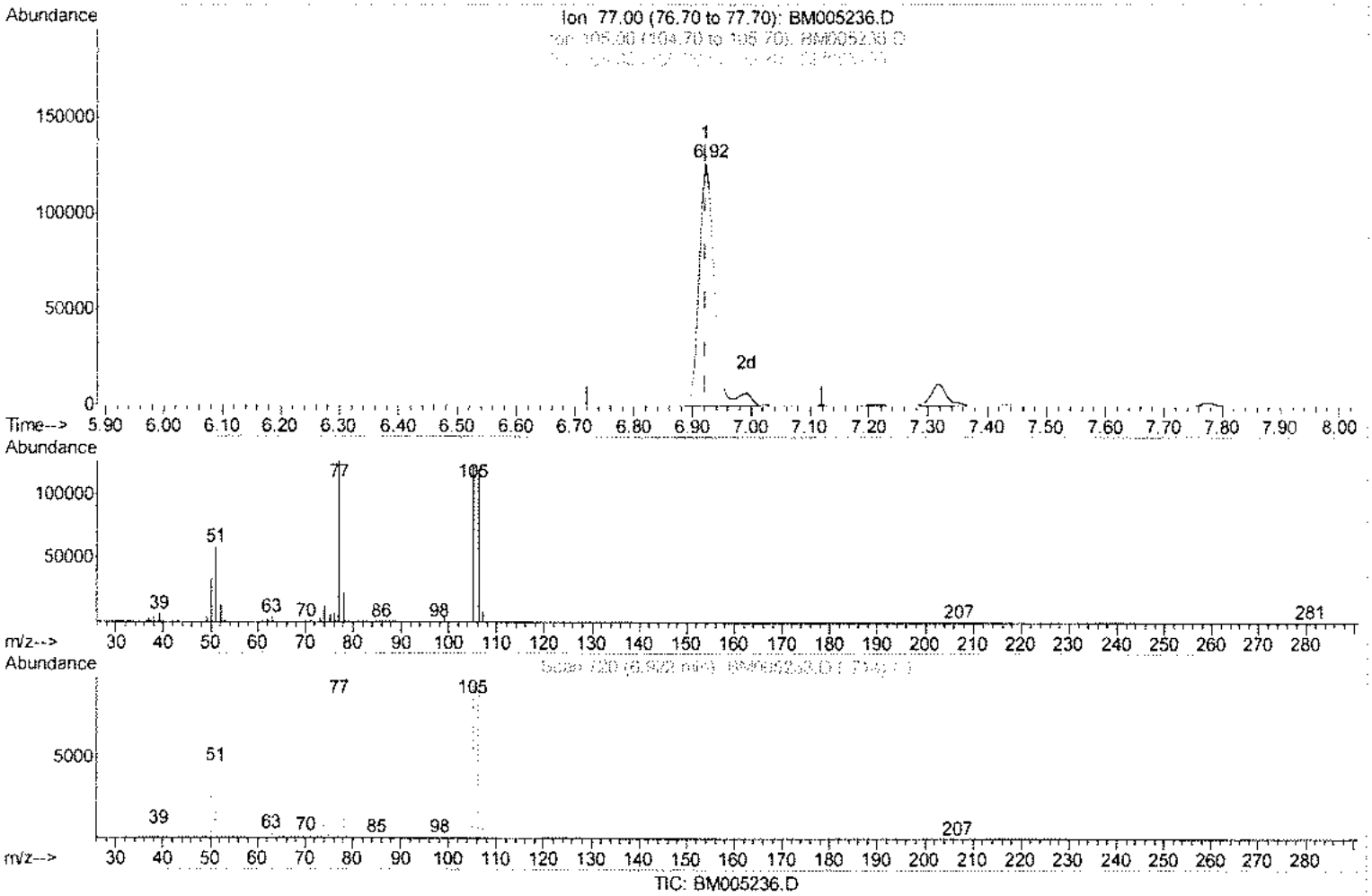
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:30:47 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM



TIC: BM005236.D

(4) Benzaldehyde

6.922min (+0.000) 70.51ng/ul m U.M 05/07/16

response 226824

Ion	Exp%	Act%
77.00	100	100
105.00	97.00	97.33
106.00	97.40	94.23
0.00	0.00	0.00

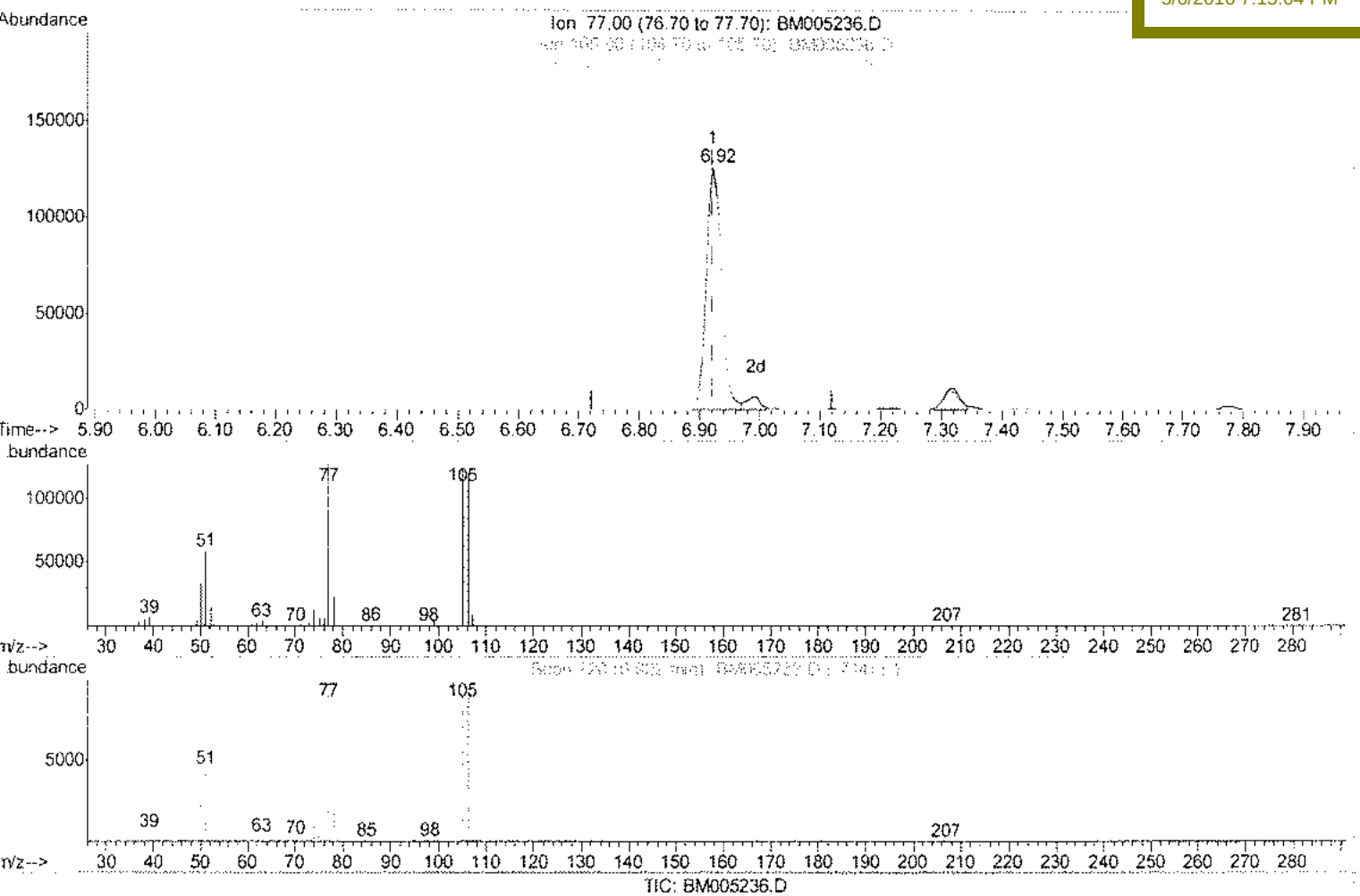
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:30:47 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM



TIC: BM005236.D

(4) Benzaldehyde

6.922min (+0.000) 66.89ng/ul

response 215195

Ion	Exp%	Act%
77.00	100	100
105.00	97.00	97.33
106.00	97.40	94.23
0.00	0.00	0.00

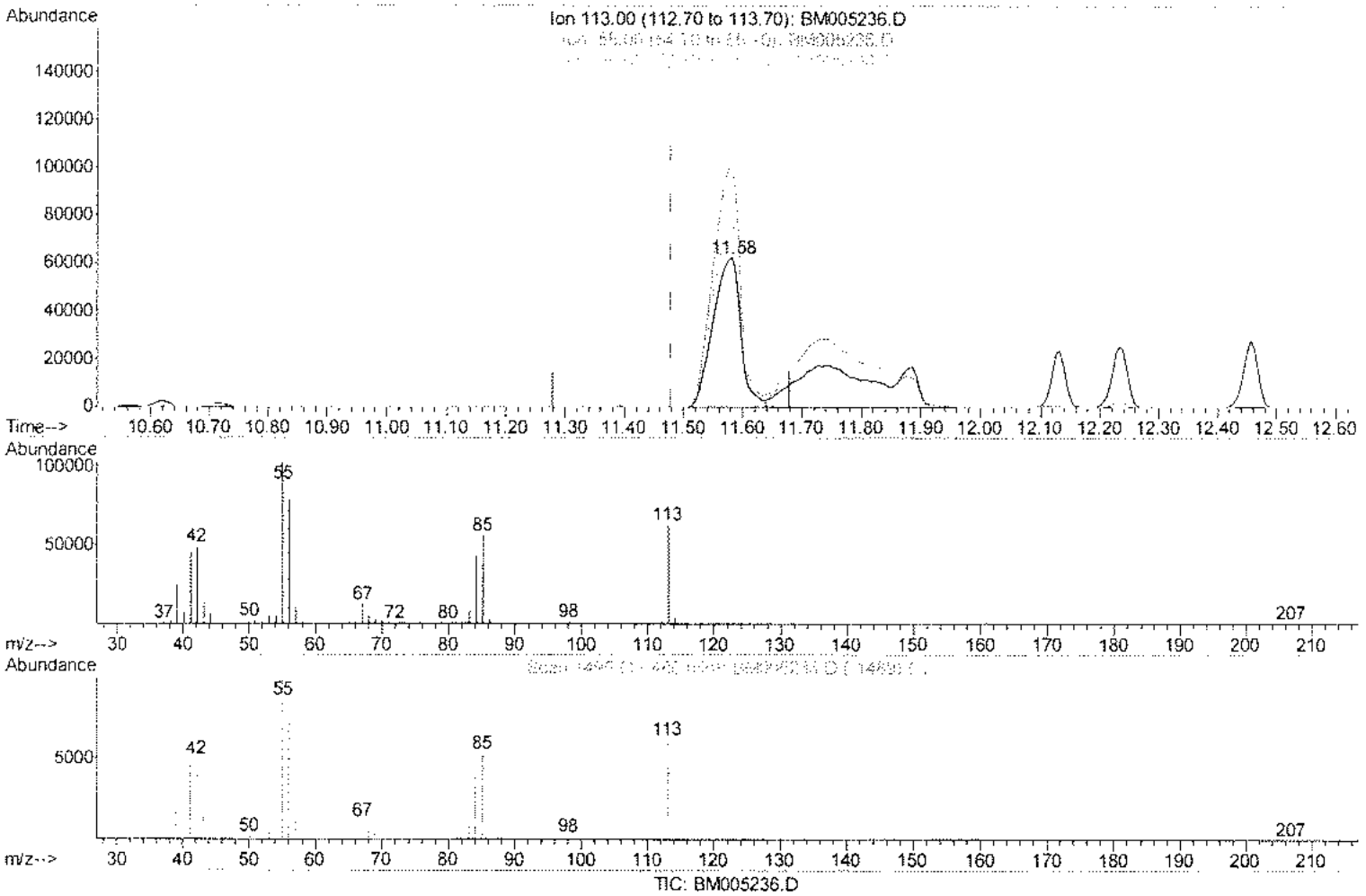
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:30:47 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM



(32) Caprolactam

11.581min (+0 100) 94.71ng/ul

response 200962

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	163.17
56.00	120.80	124.86
0.00	0.00	0.00

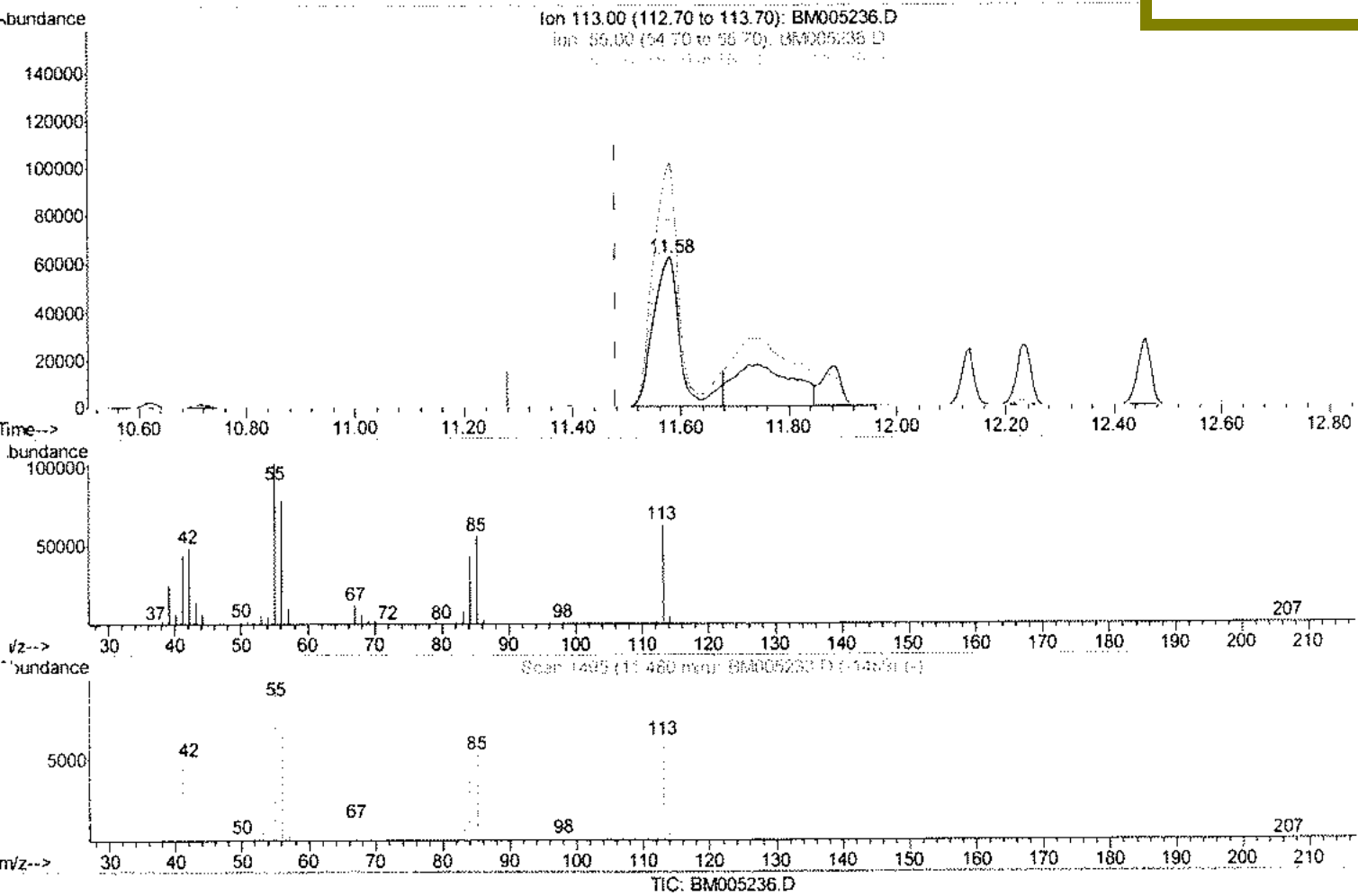
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:30:47 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM



(32) Caprolactam

11.581min (+0.100) 163.70ng/ul m U.M 05/07/16

response 347344

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	163.17
56.00	120.80	124.86
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD16045

Manual Integrations APPROVED
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5/6/2016 7:15:04 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.77	152	75056	20.00	ng/ul	0.00
18) Naphthalene-d8	10.57	136	363283	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.42	164	233509	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.17	188	561822	20.00	ng/ul	0.00
75) Chrysene-d12	21.37	240	497720	20.00	ng/ul	0.01
83) Perylene-d12	23.65	264	563686	20.00	ng/ul	0.01
System Monitoring Compounds						
3) 1,4-Dioxane-d8	0.00	96	0d	0.00	ng/uL	
5) Phenol-d5	6.96	99	1075165	158.15	ng/ul	0.01
7) Bis-(2-Chloroethyl)ether-d	7.12	67	567293	146.18	ng/ul	0.01
9) 2-Chlorophenol-d4	0.00	132	0d	0.00	ng/ul	
13) 4-Methylphenol-d8	8.50	113	886525	157.84	ng/ul	0.02
19) Nitrobenzene-d5	0.00	128	0d	0.00	ng/ul	
22) 2-Nitrophenol-d4	0.00	143	0d	0.00	ng/ul	
26) 2,4-Dichlorophenol-d3	0.00	165	0d	0.00	ng/ul	
29) 4-Chloroaniline-d4	10.71	131	732409	111.84	ng/ul	0.00
43) Dimethylphthalate-d6	0.00	166	0d	0.00	ng/ul	
46) Acenaphthylene-d8	0.00	160	0d	0.00	ng/ul	
51) 4-Nitrophenol-d4	14.67	143	537109	157.83	ng/ul	0.04
57) Fluorene-d10	0.00	176	0d	0.00	ng/ul	
62) 4,6-Dinitro-2-methylphenol	15.57	200	509862	162.21	ng/ul	0.03
70) Anthracene-d10	0.00	188	0d	0.00	ng/ul	
76) Pyrene-d10	0.00	212	0d	0.00	ng/ul	
87) Benzo(a)pyrene-d12	0.00	264	0d	0.00	ng/ul	
Target Compounds						Qvalue
4) Benzaldehyde	6.92	77	226824m	70.51	ng/ul	
6) Phenol	6.99	94	1085067	154.48	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.22	93	768562	145.00	ng/ul	98
11) 2-Methylphenol	8.23	108	841458	155.00	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.32	45	1027856	143.11	ng/ul	98
14) Acetophenone	8.61	105	1175531	141.43	ng/ul	99
16) 4-Methylphenol	8.58	108	923518	153.36	ng/ul	94
30) 4-Chloroaniline	10.74	127	757005	113.61	ng/ul	98
32) Caprolactam	11.58	113	347344m	163.70	ng/ul	
37) Hexachlorocyclopentadiene	12.58	237	626609	173.01	ng/ul	95
48) 3-Nitroaniline	14.36	138	569448	145.96	ng/ul	99
50) 2,4-Dinitrophenol	14.56	184	428328	202.75	ng/ul	93
52) 4-Nitrophenol	14.69	109	445714	157.24	ng/ul	92
60) 4-Nitroaniline	15.54	138	639334	154.35	ng/ul	93
63) 4,6-Dinitro-2-methylphenol	15.59	198	522473	157.93	ng/ul#	87
67) Atrazine	16.66	200	758834	135.68	ng/ul	99
68) Pentachlorophenol	16.83	266	558124	166.98	ng/ul	97
72) Carbazole	17.59	167	3315288	128.31	ng/ul	98
74) Fluoranthene	19.24	202	3900552	119.85	ng/ul	96
79) 3,3'-Dichlorobenzidine	21.29	252	1289339	144.50	ng/ul	98
84) Di-n-octyl phthalate	22.17	149	4331133	131.76	ng/ul#	94

U.M 05/07/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005236.D
Acq On : 05 May 2016 15:53
Operator : UM/SJ
Sample : SSTD16045
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 16:34:03 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 05 14:34:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD16045

Manual Integrations APPROVED
sohil
5/6/2016 7:15:04 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 09:01

Lab File ID: BM005380.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02061 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.776	0.723	0.01	-6.8	± 40.0
Benzaldehyde	0.879	1.149	0.10	30.7	± 40.0
Phenol	1.875	1.946	0.08	3.8	± 20.0
Bis(2-Chloroethyl)ether	1.411	1.412	0.10	0.1	± 20.0
2-Chlorophenol	1.401	1.431	0.20	2.1	± 20.0
2-Methylphenol	1.449	1.485	0.01	2.5	± 20.0
2,2-oxybis(1-Chloropropane)	1.915	1.953	0.01	2.0	± 25.0
Acetophenone	2.221	2.371	0.06	6.8	± 20.0
4-Methylphenol	1.608	1.650	0.01	2.6	± 20.0
N-Nitroso-di-n-propylamine	1.161	1.209	0.08	4.1	± 25.0
Hexachloroethane	0.527	0.553	0.10	4.9	± 20.0
Nitrobenzene	0.357	0.377	0.09	5.6	± 20.0
Isophorone	0.694	0.736	0.10	6.1	± 20.0
2-Nitrophenol	0.174	0.190	0.06	9.2	± 20.0
2,4-Dimethylphenol	0.370	0.398	0.05	7.6	± 25.0
Bis(2-Chloroethoxy)methane	0.432	0.428	0.08	-0.9	± 20.0
2,4-Dichlorophenol	0.308	0.325	0.06	5.5	± 20.0
Naphthalene	1.006	1.021	0.20	1.5	± 20.0
4-Chloroaniline	0.369	0.437	0.01	18.4	± 40.0
Hexachlorobutadiene	0.183	0.198	0.04	8.2	± 20.0
Caprolactam	0.115	0.118	0.01	2.6	± 30.0
4-Chloro-3-methylphenol	0.369	0.394	0.04	6.8	± 20.0
2-Methylnaphthalene	0.753	0.759	0.10	0.8	± 20.0
Hexachlorocyclopentadiene	0.311	0.304	0.01	-2.3	± 40.0
2,4,6-Trichlorophenol	0.405	0.426	0.09	5.2	± 20.0
2,4,5-Trichlorophenol	0.450	0.471	0.10	4.7	± 20.0
1,1-Biphenyl	1.584	1.580	0.20	-0.3	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 09:01

Lab File ID: BM005380.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02061 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
2-Chloronaphthalene	1.198	1.222	0.30	2.0	± 20.0
2-Nitroaniline	0.369	0.413	0.06	11.9	± 25.0
Dimethylphthalate	1.602	1.650	0.30	3.0	± 20.0
2,6-Dinitrotoluene	0.316	0.354	0.08	12.0	± 20.0
Acenaphthylene	1.989	2.058	0.40	3.5	± 20.0
3-Nitroaniline	0.337	0.384	0.01	13.9	± 25.0
Acenaphthene	1.311	1.341	0.20	2.3	± 20.0
2,4-Dinitrophenol	0.182	0.168	0.01	-7.7	± 50.0
4-Nitrophenol	0.243	0.267	0.01	9.9	± 40.0
Dibenzofuran	1.902	1.956	0.30	2.8	± 20.0
2,4-Dinitrotoluene	0.471	0.528	0.07	12.1	± 20.0
Diethylphthalate	1.618	1.685	0.30	4.1	± 20.0
Fluorene	1.487	1.517	0.20	2.0	± 20.0
4-Chlorophenyl-phenylether	0.737	0.755	0.10	2.4	± 20.0
4-Nitroaniline	0.357	0.408	0.01	14.3	± 40.0
4,6-Dinitro-2-methylphenol	0.118	0.129	0.01	9.3	± 30.0
N-Nitrosodiphenylamine	0.548	0.580	0.10	5.8	± 20.0
4-Bromophenyl-phenylether	0.192	0.208	0.07	8.3	± 20.0
1,2,4,5-Tetrachlorobenzene	0.608	0.633	0.10	4.1	± 20.0
Hexachlorobenzene	0.215	0.234	0.05	8.8	± 20.0
Atrazine	0.200	0.231	0.01	15.5	± 25.0
Pentachlorophenol	0.120	0.128	0.01	6.7	± 40.0
Phenanthrene	1.052	1.089	0.20	3.5	± 20.0
Anthracene	1.048	1.107	0.20	5.6	± 20.0
Carbazole	0.922	1.022	0.05	10.8	± 20.0
Di-n-butylphthalate	1.125	1.224	0.50	8.8	± 20.0
Fluoranthene	1.165	1.320	0.10	13.3	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 09:01

Lab File ID: BM005380.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02061 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
Pyrene	1.160	1.207	0.40	4.1	± 25.0
Butylbenzylphthalate	0.482	0.548	0.10	13.7	± 25.0
3,3-Dichlorobenzidine	0.360	0.397	0.01	10.3	± 40.0
Benzo(a)anthracene	1.150	1.202	0.30	4.5	± 20.0
Chrysene	1.091	1.159	0.20	6.2	± 20.0
Bis(2-ethylhexyl)phthalate	0.669	0.754	0.20	12.7	± 25.0
Di-n-octyl phthalate	1.168	1.355	0.01	16.0	± 40.0
Benzo(b)fluoranthene	1.169	1.204	0.01	3.0	± 25.0
Benzo(k)fluoranthene	1.101	1.187	0.01	7.8	± 25.0
Benzo(a)pyrene	1.106	1.153	0.01	4.3	± 20.0
Indeno(1,2,3-cd)pyrene	1.206	1.148	0.01	-4.8	± 25.0
Dibenzo(a,h)anthracene	1.010	0.964	0.01	-4.6	± 25.0
Benzo(g,h,i)perylene	1.022	0.944	0.01	-7.6	± 30.0
2,3,4,6-Tetrachlorophenol	0.382	0.416	0.04	8.9	± 20.0
1,4-Dioxane-d8	0.425	0.403	0.01	-5.2	± 25.0
Phenol-d5	1.814	1.855	0.01	2.3	± 25.0
Bis-(2-Chloroethyl)ether-d8	1.035	1.040	0.10	0.5	± 20.0
2-Chlorophenol-d4	1.370	1.426	0.20	4.1	± 20.0
4-Methylphenol-d8	1.499	1.546	0.01	3.1	± 20.0
Nitrobenzene-d5	0.143	0.155	0.05	8.4	± 20.0
2-Nitrophenol-d4	0.162	0.178	0.05	9.9	± 20.0
2,4-Dichlorophenol-d3	0.300	0.324	0.06	8.0	± 20.0
4-Chloroaniline-d4	0.362	0.434	0.01	19.9	± 40.0
Dimethylphthalate-d6	1.603	1.646	0.30	2.7	± 20.0
Acenaphthylene-d8	1.880	1.951	0.40	3.8	± 20.0
4-Nitrophenol-d4	0.293	0.298	0.01	1.7	± 40.0
Fluorene-d10	1.384	1.414	0.10	2.2	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 09:01

Lab File ID: BM005380.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02061 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
4,6-Dinitro-2-methylphenol-d2	0.113	0.124	0.01	9.7	± 30.0
Anthracene-d10	0.884	0.940	0.30	6.3	± 20.0
Pyrene-d10	0.923	0.970	0.30	5.1	± 25.0
Benzo(a)pyrene-d12	0.885	0.928	0.01	4.9	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 18:52

Lab File ID: BM005393.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02062 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.776	0.700	0.01	-9.8	± 40.0
Benzaldehyde	0.879	1.153	0.10	31.2	± 40.0
Phenol	1.875	1.906	0.08	1.7	± 20.0
Bis(2-Chloroethyl)ether	1.411	1.415	0.10	0.3	± 20.0
2-Chlorophenol	1.401	1.433	0.20	2.3	± 20.0
2-Methylphenol	1.449	1.478	0.01	2.0	± 20.0
2,2-oxybis(1-Chloropropane)	1.915	1.955	0.01	2.1	± 25.0
Acetophenone	2.221	2.353	0.06	5.9	± 20.0
4-Methylphenol	1.608	1.651	0.01	2.7	± 20.0
N-Nitroso-di-n-propylamine	1.161	1.229	0.08	5.9	± 25.0
Hexachloroethane	0.527	0.561	0.10	6.5	± 20.0
Nitrobenzene	0.357	0.378	0.09	5.9	± 20.0
Isophorone	0.694	0.752	0.10	8.4	± 20.0
2-Nitrophenol	0.174	0.193	0.06	10.9	± 20.0
2,4-Dimethylphenol	0.370	0.396	0.05	7.0	± 25.0
Bis(2-Chloroethoxy)methane	0.432	0.433	0.08	0.2	± 20.0
2,4-Dichlorophenol	0.308	0.328	0.06	6.5	± 20.0
Naphthalene	1.006	1.028	0.20	2.2	± 20.0
4-Chloroaniline	0.369	0.442	0.01	19.8	± 40.0
Hexachlorobutadiene	0.183	0.203	0.04	10.9	± 20.0
Caprolactam	0.115	0.125	0.01	8.7	± 30.0
4-Chloro-3-methylphenol	0.369	0.406	0.04	10.0	± 20.0
2-Methylnaphthalene	0.753	0.776	0.10	3.1	± 20.0
Hexachlorocyclopentadiene	0.311	0.308	0.01	-1.0	± 40.0
2,4,6-Trichlorophenol	0.405	0.449	0.09	10.9	± 20.0
2,4,5-Trichlorophenol	0.450	0.497	0.10	10.4	± 20.0
1,1-Biphenyl	1.584	1.615	0.20	2.0	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 18:52

Lab File ID: BM005393.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02062 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
2-Chloronaphthalene	1.198	1.248	0.30	4.2	± 20.0
2-Nitroaniline	0.369	0.427	0.06	15.7	± 25.0
Dimethylphthalate	1.602	1.674	0.30	4.5	± 20.0
2,6-Dinitrotoluene	0.316	0.366	0.08	15.8	± 20.0
Acenaphthylene	1.989	2.085	0.40	4.8	± 20.0
3-Nitroaniline	0.337	0.394	0.01	16.9	± 25.0
Acenaphthene	1.311	1.351	0.20	3.1	± 20.0
2,4-Dinitrophenol	0.182	0.201	0.01	10.4	± 50.0
4-Nitrophenol	0.243	0.267	0.01	9.9	± 40.0
Dibenzofuran	1.902	1.956	0.30	2.8	± 20.0
2,4-Dinitrotoluene	0.471	0.526	0.07	11.7	± 20.0
Diethylphthalate	1.618	1.700	0.30	5.1	± 20.0
Fluorene	1.487	1.504	0.20	1.1	± 20.0
4-Chlorophenyl-phenylether	0.737	0.761	0.10	3.3	± 20.0
4-Nitroaniline	0.357	0.409	0.01	14.6	± 40.0
4,6-Dinitro-2-methylphenol	0.118	0.139	0.01	17.8	± 30.0
N-Nitrosodiphenylamine	0.548	0.588	0.10	7.3	± 20.0
4-Bromophenyl-phenylether	0.192	0.212	0.07	10.4	± 20.0
1,2,4,5-Tetrachlorobenzene	0.608	0.642	0.10	5.6	± 20.0
Hexachlorobenzene	0.215	0.238	0.05	10.7	± 20.0
Atrazine	0.200	0.235	0.01	17.5	± 25.0
Pentachlorophenol	0.120	0.141	0.01	17.5	± 40.0
Phenanthrene	1.052	1.088	0.20	3.4	± 20.0
Anthracene	1.048	1.102	0.20	5.2	± 20.0
Carbazole	0.922	1.014	0.05	10.0	± 20.0
Di-n-butylphthalate	1.125	1.242	0.50	10.4	± 20.0
Fluoranthene	1.165	1.245	0.10	6.9	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 18:52

Lab File ID: BM005393.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02062 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
Pyrene	1.160	1.378	0.40	18.8	± 25.0
Butylbenzylphthalate	0.482	0.630	0.10	30.7	± 25.0
3,3-Dichlorobenzidine	0.360	0.396	0.01	10.0	± 40.0
Benzo(a)anthracene	1.150	1.207	0.30	5.0	± 20.0
Chrysene	1.091	1.151	0.20	5.5	± 20.0
Bis(2-ethylhexyl)phthalate	0.669	0.827	0.20	23.6	± 25.0
Di-n-octyl phthalate	1.168	1.614	0.01	38.2	± 40.0
Benzo(b)fluoranthene	1.169	1.305	0.01	11.6	± 25.0
Benzo(k)fluoranthene	1.101	1.161	0.01	5.4	± 25.0
Benzo(a)pyrene	1.106	1.162	0.01	5.1	± 20.0
Indeno(1,2,3-cd)pyrene	1.206	1.209	0.01	0.2	± 25.0
Dibenzo(a,h)anthracene	1.010	1.025	0.01	1.5	± 25.0
Benzo(g,h,i)perylene	1.022	1.023	0.01	0.1	± 30.0
2,3,4,6-Tetrachlorophenol	0.382	0.431	0.04	12.8	± 20.0
1,4-Dioxane-d8	0.425	0.382	0.01	-10.1	± 25.0
Phenol-d5	1.814	1.834	0.01	1.1	± 25.0
Bis-(2-Chloroethyl)ether-d8	1.035	1.034	0.10	-0.1	± 20.0
2-Chlorophenol-d4	1.370	1.421	0.20	3.7	± 20.0
4-Methylphenol-d8	1.499	1.554	0.01	3.7	± 20.0
Nitrobenzene-d5	0.143	0.157	0.05	9.8	± 20.0
2-Nitrophenol-d4	0.162	0.184	0.05	13.6	± 20.0
2,4-Dichlorophenol-d3	0.300	0.326	0.06	8.7	± 20.0
4-Chloroaniline-d4	0.362	0.441	0.01	21.8	± 40.0
Dimethylphthalate-d6	1.603	1.679	0.30	4.7	± 20.0
Acenaphthylene-d8	1.880	1.988	0.40	5.7	± 20.0
4-Nitrophenol-d4	0.293	0.303	0.01	3.4	± 40.0
Fluorene-d10	1.384	1.420	0.10	2.6	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/11/2016 Time: 18:52

Lab File ID: BM005393.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02062 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
4,6-Dinitro-2-methylphenol-d2	0.113	0.133	0.01	17.7	± 30.0
Anthracene-d10	0.884	0.937	0.30	6.0	± 20.0
Pyrene-d10	0.923	1.097	0.30	18.9	± 25.0
Benzo(a)pyrene-d12	0.885	0.935	0.01	5.7	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/12/2016 Time: 05:11

Lab File ID: BM005409.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02063 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.776	0.710	0.01	-8.5	± 50.0
Benzaldehyde	0.879	1.126	0.10	28.1	± 50.0
Phenol	1.875	1.861	0.08	-0.7	± 25.0
Bis(2-Chloroethyl)ether	1.411	1.378	0.10	-2.3	± 25.0
2-Chlorophenol	1.401	1.428	0.20	1.9	± 25.0
2-Methylphenol	1.449	1.437	0.01	-0.8	± 25.0
2,2-oxybis(1-Chloropropane)	1.915	1.898	0.01	-0.9	± 50.0
Acetophenone	2.221	2.257	0.06	1.6	± 25.0
4-Methylphenol	1.608	1.568	0.01	-2.5	± 25.0
N-Nitroso-di-n-propylamine	1.161	1.151	0.08	-0.9	± 25.0
Hexachloroethane	0.527	0.551	0.10	4.6	± 25.0
Nitrobenzene	0.357	0.377	0.09	5.6	± 25.0
Isophorone	0.694	0.726	0.10	4.6	± 25.0
2-Nitrophenol	0.174	0.191	0.06	9.8	± 25.0
2,4-Dimethylphenol	0.370	0.394	0.05	6.5	± 50.0
Bis(2-Chloroethoxy)methane	0.432	0.424	0.08	-1.9	± 25.0
2,4-Dichlorophenol	0.308	0.325	0.06	5.5	± 25.0
Naphthalene	1.006	1.027	0.20	2.1	± 25.0
4-Chloroaniline	0.369	0.429	0.01	16.3	± 50.0
Hexachlorobutadiene	0.183	0.206	0.04	12.6	± 25.0
Caprolactam	0.115	0.114	0.01	-0.9	± 50.0
4-Chloro-3-methylphenol	0.369	0.388	0.04	5.1	± 25.0
2-Methylnaphthalene	0.753	0.755	0.10	0.3	± 25.0
Hexachlorocyclopentadiene	0.311	0.274	0.01	-11.9	± 50.0
2,4,6-Trichlorophenol	0.405	0.443	0.09	9.4	± 25.0
2,4,5-Trichlorophenol	0.450	0.480	0.10	6.7	± 25.0
1,1-Biphenyl	1.584	1.616	0.20	2.0	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/12/2016 Time: 05:11

Lab File ID: BM005409.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02063 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
2-Chloronaphthalene	1.198	1.255	0.30	4.8	± 25.0
2-Nitroaniline	0.369	0.417	0.06	13.0	± 25.0
Dimethylphthalate	1.602	1.629	0.30	1.7	± 25.0
2,6-Dinitrotoluene	0.316	0.356	0.08	12.7	± 25.0
Acenaphthylene	1.989	2.061	0.40	3.6	± 25.0
3-Nitroaniline	0.337	0.379	0.01	12.5	± 50.0
Acenaphthene	1.311	1.349	0.20	2.9	± 25.0
2,4-Dinitrophenol	0.182	0.170	0.01	-6.6	± 50.0
4-Nitrophenol	0.243	0.243	0.01	0.0	± 50.0
Dibenzofuran	1.902	1.928	0.30	1.4	± 25.0
2,4-Dinitrotoluene	0.471	0.509	0.07	8.1	± 25.0
Diethylphthalate	1.618	1.671	0.30	3.3	± 25.0
Fluorene	1.487	1.492	0.20	0.3	± 25.0
4-Chlorophenyl-phenylether	0.737	0.750	0.10	1.8	± 25.0
4-Nitroaniline	0.357	0.391	0.01	9.5	± 50.0
4,6-Dinitro-2-methylphenol	0.118	0.130	0.01	10.2	± 50.0
N-Nitrosodiphenylamine	0.548	0.609	0.10	11.1	± 25.0
4-Bromophenyl-phenylether	0.192	0.217	0.07	13.0	± 25.0
1,2,4,5-Tetrachlorobenzene	0.608	0.653	0.10	7.4	± 25.0
Hexachlorobenzene	0.215	0.239	0.05	11.2	± 25.0
Atrazine	0.200	0.234	0.01	17.0	± 50.0
Pentachlorophenol	0.120	0.112	0.01	-6.7	± 50.0
Phenanthrene	1.052	1.084	0.20	3.0	± 25.0
Anthracene	1.048	1.099	0.20	4.9	± 25.0
Carbazole	0.922	0.986	0.05	6.9	± 25.0
Di-n-butylphthalate	1.125	1.231	0.50	9.4	± 25.0
Fluoranthene	1.165	1.190	0.10	2.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/12/2016 Time: 05:11

Lab File ID: BM005409.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02063 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
Pyrene	1.160	1.416	0.40	22.1	± 50.0
Butylbenzylphthalate	0.482	0.606	0.10	25.7	± 50.0
3,3-Dichlorobenzidine	0.360	0.381	0.01	5.8	± 50.0
Benzo(a)anthracene	1.150	1.202	0.30	4.5	± 25.0
Chrysene	1.091	1.131	0.20	3.7	± 50.0
Bis(2-ethylhexyl)phthalate	0.669	0.796	0.20	19.0	± 50.0
Di-n-octyl phthalate	1.168	1.409	0.01	20.6	± 50.0
Benzo(b)fluoranthene	1.169	1.241	0.01	6.2	± 50.0
Benzo(k)fluoranthene	1.101	1.141	0.01	3.6	± 50.0
Benzo(a)pyrene	1.106	1.153	0.01	4.3	± 50.0
Indeno(1,2,3-cd)pyrene	1.206	1.291	0.01	7.0	± 50.0
Dibenzo(a,h)anthracene	1.010	1.091	0.01	8.0	± 50.0
Benzo(g,h,i)perylene	1.022	1.099	0.01	7.5	± 50.0
2,3,4,6-Tetrachlorophenol	0.382	0.403	0.04	5.5	± 50.0
1,4-Dioxane-d8	0.425	0.395	0.01	-7.1	± 50.0
Phenol-d5	1.814	1.792	0.01	-1.2	± 25.0
Bis-(2-Chloroethyl)ether-d8	1.035	1.014	0.10	-2.0	± 25.0
2-Chlorophenol-d4	1.370	1.407	0.20	2.7	± 25.0
4-Methylphenol-d8	1.499	1.466	0.01	-2.2	± 25.0
Nitrobenzene-d5	0.143	0.156	0.05	9.1	± 25.0
2-Nitrophenol-d4	0.162	0.183	0.05	13.0	± 25.0
2,4-Dichlorophenol-d3	0.300	0.324	0.06	8.0	± 25.0
4-Chloroaniline-d4	0.362	0.428	0.01	18.2	± 50.0
Dimethylphthalate-d6	1.603	1.641	0.30	2.4	± 25.0
Acenaphthylene-d8	1.880	1.978	0.40	5.2	± 25.0
4-Nitrophenol-d4	0.293	0.281	0.01	-4.1	± 50.0
Fluorene-d10	1.384	1.402	0.10	1.3	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/12/2016 Time: 05:11

Lab File ID: BM005409.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02063 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
4,6-Dinitro-2-methylphenol-d2	0.113	0.125	0.01	10.6	± 50.0
Anthracene-d10	0.884	0.939	0.30	6.2	± 25.0
Pyrene-d10	0.923	1.136	0.30	23.1	± 50.0
Benzo(a)pyrene-d12	0.885	0.925	0.01	4.5	± 50.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/12/2016 Time: 09:36

Lab File ID: BM005411.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02064 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.776	0.771	0.01	-0.6	± 40.0
Benzaldehyde	0.879	1.109	0.10	26.2	± 40.0
Phenol	1.875	1.932	0.08	3.0	± 20.0
Bis(2-Chloroethyl)ether	1.411	1.427	0.10	1.1	± 20.0
2-Chlorophenol	1.401	1.433	0.20	2.3	± 20.0
2-Methylphenol	1.449	1.462	0.01	0.9	± 20.0
2,2-oxybis(1-Chloropropane)	1.915	1.988	0.01	3.8	± 25.0
Acetophenone	2.221	2.430	0.06	9.4	± 20.0
4-Methylphenol	1.608	1.662	0.01	3.4	± 20.0
N-Nitroso-di-n-propylamine	1.161	1.244	0.08	7.1	± 25.0
Hexachloroethane	0.527	0.547	0.10	3.8	± 20.0
Nitrobenzene	0.357	0.363	0.09	1.7	± 20.0
Isophorone	0.694	0.718	0.10	3.5	± 20.0
2-Nitrophenol	0.174	0.184	0.06	5.7	± 20.0
2,4-Dimethylphenol	0.370	0.391	0.05	5.7	± 25.0
Bis(2-Chloroethoxy)methane	0.432	0.432	0.08	0.0	± 20.0
2,4-Dichlorophenol	0.308	0.330	0.06	7.1	± 20.0
Naphthalene	1.006	1.028	0.20	2.2	± 20.0
4-Chloroaniline	0.369	0.427	0.01	15.7	± 40.0
Hexachlorobutadiene	0.183	0.196	0.04	7.1	± 20.0
Caprolactam	0.115	0.113	0.01	-1.7	± 30.0
4-Chloro-3-methylphenol	0.369	0.406	0.04	10.0	± 20.0
2-Methylnaphthalene	0.753	0.788	0.10	4.6	± 20.0
Hexachlorocyclopentadiene	0.311	0.218	0.01	-29.9	± 40.0
2,4,6-Trichlorophenol	0.405	0.434	0.09	7.2	± 20.0
2,4,5-Trichlorophenol	0.450	0.491	0.10	9.1	± 20.0
1,1-Biphenyl	1.584	1.638	0.20	3.4	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/12/2016 Time: 09:36

Lab File ID: BM005411.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02064 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
2-Chloronaphthalene	1.198	1.237	0.30	3.3	± 20.0
2-Nitroaniline	0.369	0.396	0.06	7.3	± 25.0
Dimethylphthalate	1.602	1.656	0.30	3.4	± 20.0
2,6-Dinitrotoluene	0.316	0.343	0.08	8.5	± 20.0
Acenaphthylene	1.989	2.077	0.40	4.4	± 20.0
3-Nitroaniline	0.337	0.356	0.01	5.6	± 25.0
Acenaphthene	1.311	1.355	0.20	3.4	± 20.0
2,4-Dinitrophenol	0.182	0.117	0.01	-35.7	± 50.0
4-Nitrophenol	0.243	0.222	0.01	-8.6	± 40.0
Dibenzofuran	1.902	1.977	0.30	3.9	± 20.0
2,4-Dinitrotoluene	0.471	0.505	0.07	7.2	± 20.0
Diethylphthalate	1.618	1.696	0.30	4.8	± 20.0
Fluorene	1.487	1.583	0.20	6.5	± 20.0
4-Chlorophenyl-phenylether	0.737	0.794	0.10	7.7	± 20.0
4-Nitroaniline	0.357	0.365	0.01	2.2	± 40.0
4,6-Dinitro-2-methylphenol	0.118	0.101	0.01	-14.4	± 30.0
N-Nitrosodiphenylamine	0.548	0.589	0.10	7.5	± 20.0
4-Bromophenyl-phenylether	0.192	0.213	0.07	10.9	± 20.0
1,2,4,5-Tetrachlorobenzene	0.608	0.646	0.10	6.3	± 20.0
Hexachlorobenzene	0.215	0.237	0.05	10.2	± 20.0
Atrazine	0.200	0.229	0.01	14.5	± 25.0
Pentachlorophenol	0.120	0.108	0.01	-10.0	± 40.0
Phenanthrene	1.052	1.108	0.20	5.3	± 20.0
Anthracene	1.048	1.121	0.20	7.0	± 20.0
Carbazole	0.922	1.006	0.05	9.1	± 20.0
Di-n-butylphthalate	1.125	1.242	0.50	10.4	± 20.0
Fluoranthene	1.165	1.289	0.10	10.6	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/12/2016 Time: 09:36

Lab File ID: BM005411.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02064 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
Pyrene	1.160	1.429	0.40	23.2	± 25.0
Butylbenzylphthalate	0.482	0.603	0.10	25.1	± 25.0
3,3-Dichlorobenzidine	0.360	0.354	0.01	-1.7	± 40.0
Benzo(a)anthracene	1.150	1.206	0.30	4.9	± 20.0
Chrysene	1.091	1.131	0.20	3.7	± 20.0
Bis(2-ethylhexyl)phthalate	0.669	0.818	0.20	22.3	± 25.0
Di-n-octyl phthalate	1.168	1.591	0.01	36.2	± 40.0
Benzo(b)fluoranthene	1.169	1.258	0.01	7.6	± 25.0
Benzo(k)fluoranthene	1.101	1.220	0.01	10.8	± 25.0
Benzo(a)pyrene	1.106	1.177	0.01	6.4	± 20.0
Indeno(1,2,3-cd)pyrene	1.206	1.257	0.01	4.2	± 25.0
Dibenzo(a,h)anthracene	1.010	1.065	0.01	5.4	± 25.0
Benzo(g,h,i)perylene	1.022	1.055	0.01	3.2	± 30.0
2,3,4,6-Tetrachlorophenol	0.382	0.410	0.04	7.3	± 20.0
1,4-Dioxane-d8	0.425	0.425	0.01	0.0	± 25.0
Phenol-d5	1.814	1.832	0.01	1.0	± 25.0
Bis-(2-Chloroethyl)ether-d8	1.035	1.048	0.10	1.3	± 20.0
2-Chlorophenol-d4	1.370	1.411	0.20	3.0	± 20.0
4-Methylphenol-d8	1.499	1.529	0.01	2.0	± 20.0
Nitrobenzene-d5	0.143	0.147	0.05	2.8	± 20.0
2-Nitrophenol-d4	0.162	0.169	0.05	4.3	± 20.0
2,4-Dichlorophenol-d3	0.300	0.327	0.06	9.0	± 20.0
4-Chloroaniline-d4	0.362	0.419	0.01	15.7	± 40.0
Dimethylphthalate-d6	1.603	1.661	0.30	3.6	± 20.0
Acenaphthylene-d8	1.880	1.980	0.40	5.3	± 20.0
4-Nitrophenol-d4	0.293	0.253	0.01	-13.7	± 40.0
Fluorene-d10	1.384	1.451	0.10	4.8	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/12/2016 Time: 09:36

Lab File ID: BM005411.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02064 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
4,6-Dinitro-2-methylphenol-d2	0.113	0.098	0.01	-13.3	± 30.0
Anthracene-d10	0.884	0.938	0.30	6.1	± 20.0
Pyrene-d10	0.923	1.137	0.30	23.2	± 25.0
Benzo(a)pyrene-d12	0.885	0.937	0.01	5.9	± 20.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/12/2016 Time: 18:40

Lab File ID: BM005425.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02065 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.776	0.765	0.01	-1.4	± 50.0
Benzaldehyde	0.879	1.109	0.10	26.2	± 50.0
Phenol	1.875	1.936	0.08	3.3	± 25.0
Bis(2-Chloroethyl)ether	1.411	1.431	0.10	1.4	± 25.0
2-Chlorophenol	1.401	1.435	0.20	2.4	± 25.0
2-Methylphenol	1.449	1.480	0.01	2.1	± 25.0
2,2-oxybis(1-Chloropropane)	1.915	2.017	0.01	5.3	± 50.0
Acetophenone	2.221	2.422	0.06	9.1	± 25.0
4-Methylphenol	1.608	1.671	0.01	3.9	± 25.0
N-Nitroso-di-n-propylamine	1.161	1.246	0.08	7.3	± 25.0
Hexachloroethane	0.527	0.554	0.10	5.1	± 25.0
Nitrobenzene	0.357	0.367	0.09	2.8	± 25.0
Isophorone	0.694	0.723	0.10	4.2	± 25.0
2-Nitrophenol	0.174	0.184	0.06	5.7	± 25.0
2,4-Dimethylphenol	0.370	0.396	0.05	7.0	± 50.0
Bis(2-Chloroethoxy)methane	0.432	0.435	0.08	0.7	± 25.0
2,4-Dichlorophenol	0.308	0.335	0.06	8.8	± 25.0
Naphthalene	1.006	1.042	0.20	3.6	± 25.0
4-Chloroaniline	0.369	0.432	0.01	17.1	± 50.0
Hexachlorobutadiene	0.183	0.201	0.04	9.8	± 25.0
Caprolactam	0.115	0.113	0.01	-1.7	± 50.0
4-Chloro-3-methylphenol	0.369	0.410	0.04	11.1	± 25.0
2-Methylnaphthalene	0.753	0.801	0.10	6.4	± 25.0
Hexachlorocyclopentadiene	0.311	0.213	0.01	-31.5	± 50.0
2,4,6-Trichlorophenol	0.405	0.427	0.09	5.4	± 25.0
2,4,5-Trichlorophenol	0.450	0.466	0.10	3.6	± 25.0
1,1-Biphenyl	1.584	1.600	0.20	1.0	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/12/2016 Time: 18:40

Lab File ID: BM005425.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02065 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
2-Chloronaphthalene	1.198	1.228	0.30	2.5	± 25.0
2-Nitroaniline	0.369	0.395	0.06	7.0	± 25.0
Dimethylphthalate	1.602	1.643	0.30	2.6	± 25.0
2,6-Dinitrotoluene	0.316	0.336	0.08	6.3	± 25.0
Acenaphthylene	1.989	2.068	0.40	4.0	± 25.0
3-Nitroaniline	0.337	0.358	0.01	6.2	± 50.0
Acenaphthene	1.311	1.346	0.20	2.7	± 25.0
2,4-Dinitrophenol	0.182	0.100	0.01	-45.1	± 50.0
4-Nitrophenol	0.243	0.210	0.01	-13.6	± 50.0
Dibenzofuran	1.902	1.972	0.30	3.7	± 25.0
2,4-Dinitrotoluene	0.471	0.501	0.07	6.4	± 25.0
Diethylphthalate	1.618	1.681	0.30	3.9	± 25.0
Fluorene	1.487	1.586	0.20	6.7	± 25.0
4-Chlorophenyl-phenylether	0.737	0.796	0.10	8.0	± 25.0
4-Nitroaniline	0.357	0.360	0.01	0.8	± 50.0
4,6-Dinitro-2-methylphenol	0.118	0.099	0.01	-16.1	± 50.0
N-Nitrosodiphenylamine	0.548	0.594	0.10	8.4	± 25.0
4-Bromophenyl-phenylether	0.192	0.211	0.07	9.9	± 25.0
1,2,4,5-Tetrachlorobenzene	0.608	0.631	0.10	3.8	± 25.0
Hexachlorobenzene	0.215	0.238	0.05	10.7	± 25.0
Atrazine	0.200	0.229	0.01	14.5	± 50.0
Pentachlorophenol	0.120	0.100	0.01	-16.7	± 50.0
Phenanthrene	1.052	1.107	0.20	5.2	± 25.0
Anthracene	1.048	1.121	0.20	7.0	± 25.0
Carbazole	0.922	1.001	0.05	8.6	± 25.0
Di-n-butylphthalate	1.125	1.224	0.50	8.8	± 25.0
Fluoranthene	1.165	1.310	0.10	12.4	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/12/2016 Time: 18:40

Lab File ID: BM005425.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02065 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{RRF}$	RRF020	MIN RRF	%D	MAX %D
Pyrene	1.160	1.396	0.40	20.3	± 50.0
Butylbenzylphthalate	0.482	0.590	0.10	22.4	± 50.0
3,3-Dichlorobenzidine	0.360	0.340	0.01	-5.6	± 50.0
Benzo(a)anthracene	1.150	1.189	0.30	3.4	± 25.0
Chrysene	1.091	1.130	0.20	3.6	± 50.0
Bis(2-ethylhexyl)phthalate	0.669	0.829	0.20	23.9	± 50.0
Di-n-octyl phthalate	1.168	1.717	0.01	47.0	± 50.0
Benzo(b)fluoranthene	1.169	1.302	0.01	11.4	± 50.0
Benzo(k)fluoranthene	1.101	1.224	0.01	11.2	± 50.0
Benzo(a)pyrene	1.106	1.183	0.01	7.0	± 50.0
Indeno(1,2,3-cd)pyrene	1.206	1.241	0.01	2.9	± 50.0
Dibenzo(a,h)anthracene	1.010	1.047	0.01	3.7	± 50.0
Benzo(g,h,i)perylene	1.022	1.045	0.01	2.3	± 50.0
2,3,4,6-Tetrachlorophenol	0.382	0.396	0.04	3.7	± 50.0
1,4-Dioxane-d8	0.425	0.426	0.01	0.2	± 50.0
Phenol-d5	1.814	1.847	0.01	1.8	± 25.0
Bis-(2-Chloroethyl)ether-d8	1.035	1.057	0.10	2.1	± 25.0
2-Chlorophenol-d4	1.370	1.415	0.20	3.3	± 25.0
4-Methylphenol-d8	1.499	1.546	0.01	3.1	± 25.0
Nitrobenzene-d5	0.143	0.150	0.05	4.9	± 25.0
2-Nitrophenol-d4	0.162	0.170	0.05	4.9	± 25.0
2,4-Dichlorophenol-d3	0.300	0.331	0.06	10.3	± 25.0
4-Chloroaniline-d4	0.362	0.424	0.01	17.1	± 50.0
Dimethylphthalate-d6	1.603	1.652	0.30	3.1	± 25.0
Acenaphthylene-d8	1.880	1.951	0.40	3.8	± 25.0
4-Nitrophenol-d4	0.293	0.237	0.01	-19.1	± 50.0
Fluorene-d10	1.384	1.441	0.10	4.1	± 25.0

FORM 7A-OR

CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 46114 MA No.: SDG No.: H4104

Analytical Method: SVOA Level:

Instrument ID: BNA_M Date Analyzed: 05/12/2016 Time: 18:40

Lab File ID: BM005425.D Init. Calib Date(s): 05/05/2016 05/05/2016

EPA Sample No.: SSTD02065 Init. Calib Time(s): 11:09 15:53

GC Column: ZB-GR ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Purge Volume: (mL)

ANALYTE	$\overline{\text{RRF}}$	RRF020	MIN RRF	%D	MAX %D
4,6-Dinitro-2-methylphenol-d2	0.113	0.093	0.01	-17.7	± 50.0
Anthracene-d10	0.884	0.935	0.30	5.8	± 25.0
Pyrene-d10	0.923	1.114	0.30	20.7	± 50.0
Benzo(a)pyrene-d12	0.885	0.942	0.01	6.4	± 50.0

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:29:28 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02061

Manual Integrations APPROVED
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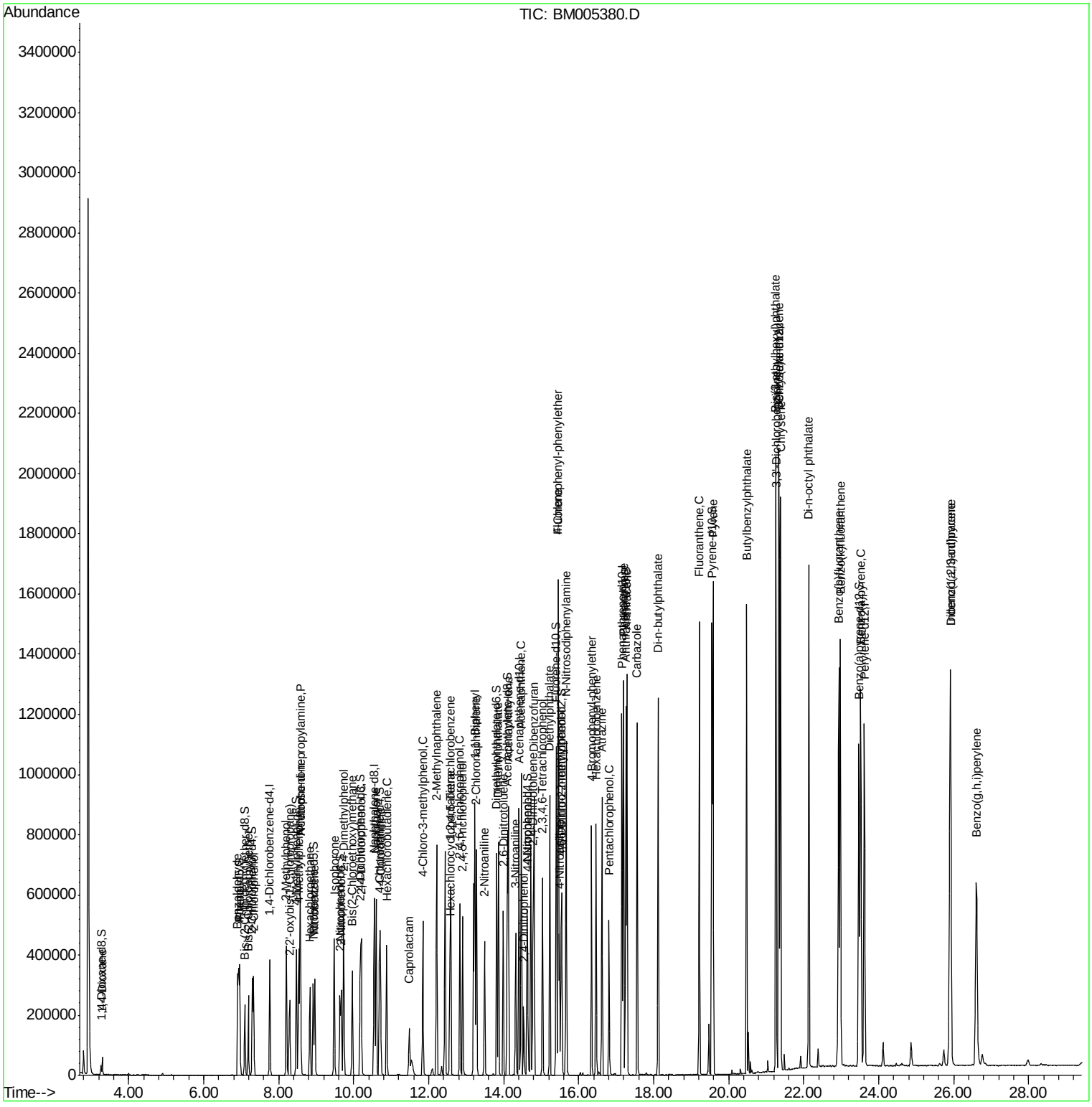

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:29:28 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02061

Manual Integrations APPROVED
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5/12/2016 7:01:17 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	100625	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	477106	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	305317	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	736650	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	814700	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	832126	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	16215	7.58	ng/uL	0.00
5) Phenol-d5	6.93	99	186678	20.45	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	104693	20.11	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	143532	20.82	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	155546	20.62	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	74037	21.74	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	85005	22.04	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	154380	21.54	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	207264	24.02	ng/ul	0.00
43) Dimethylphthalate-d6	13.81	166	502473	20.53	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	595621	20.75	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	90855	20.34	ng/ul	0.00
57) Fluorene-d10	15.40	176	431674	20.43	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	91455	22.07	ng/ul	0.00
70) Anthracene-d10	17.25	188	692797	21.28	ng/ul	0.00
76) Pyrene-d10	19.55	212	790515	21.02	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	772408	20.97	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	29090	7.46	ng/uL	95
4) Benzaldehyde	6.90	77	115615	26.15	ng/ul	98
6) Phenol	6.96	94	195767	20.75	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.19	93	142070	20.01	ng/ul	97
10) 2-Chlorophenol	7.33	128	144028	20.43	ng/ul	98
11) 2-Methylphenol	8.20	108	149383	20.49	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.29	45	196505	20.40	ng/ul	99
14) Acetophenone	8.58	105	238597	21.35	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.57	70	121666	20.84	ng/ul	98
16) 4-Methylphenol	8.53	108	166073	20.53	ng/ul	96
17) Hexachloroethane	8.83	117	55655	20.98	ng/ul	95
20) Nitrobenzene	8.96	77	179794	21.08	ng/ul	98
21) Isophorone	9.48	82	350989	21.20	ng/ul	99
23) 2-Nitrophenol	9.67	139	90715	21.83	ng/ul	97
24) 2,4-Dimethylphenol	9.73	107	189843	21.54	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.96	93	204117	19.79	ng/ul	99
27) 2,4-Dichlorophenol	10.20	162	155060	21.12	ng/ul	99
28) Naphthalene	10.60	128	487040	20.29	ng/ul	100
30) 4-Chloroaniline	10.71	127	208281	23.67	ng/ul	97
31) Hexachlorobutadiene	10.87	225	94273	21.61	ng/ul	98
32) Caprolactam	11.48	113	56270m	20.57	ng/ul	
33) 4-Chloro-3-methylphenol	11.84	107	187778	21.33	ng/ul	98
34) 2-Methylnaphthalene	12.21	142	362143	20.17	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:29:28 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02061

Manual Integrations APPROVED
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5/12/2016 7:01:17 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.59	216	193304	20.81	ng/ul	98
37) Hexachlorocyclopentadiene	12.56	237	92798	19.56	ng/ul	95
38) 2,4,6-Trichlorophenol	12.83	196	130050	21.02	ng/ul	94
39) 2,4,5-Trichlorophenol	12.90	196	143782	20.95	ng/ul	97
40) 1,1'-Biphenyl	13.23	154	482410	19.95	ng/ul	99
41) 2-Chloronaphthalene	13.27	162	373119	20.40	ng/ul	98
42) 2-Nitroaniline	13.49	65	126152	22.41	ng/ul	97
44) Dimethylphthalate	13.86	163	503915	20.61	ng/ul	99
45) 2,6-Dinitrotoluene	13.99	165	107981	22.39	ng/ul#	90
47) Acenaphthylene	14.12	152	628221	20.69	ng/ul	99
48) 3-Nitroaniline	14.32	138	117243	22.81	ng/ul	96
49) Acenaphthene	14.47	153	409340	20.45	ng/ul	99
50) 2,4-Dinitrophenol	14.53	184	51232	18.47	ng/ul	98
52) 4-Nitrophenol	14.63	109	81532	21.95	ng/ul	92
53) Dibenzofuran	14.80	168	597341	20.57	ng/ul	98
54) 2,4-Dinitrotoluene	14.78	165	161123	22.41	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.03	232	127003	21.77	ng/ul#	96
56) Diethylphthalate	15.23	149	514402	20.82	ng/ul	99
58) Fluorene	15.46	166	463176	20.40	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.44	204	230521	20.49	ng/ul	97
60) 4-Nitroaniline	15.49	138	124597	22.87	ng/ul	94
63) 4,6-Dinitro-2-methylphenol	15.54	198	95203	21.86	ng/ul#	92
64) N-Nitrosodiphenylamine	15.66	169	427204	21.18	ng/ul	100
65) 4-Bromophenyl-phenylether	16.34	248	153425	21.72	ng/ul	98
66) Hexachlorobenzene	16.46	284	172269	21.75	ng/ul	100
67) Atrazine	16.62	200	169843	23.07	ng/ul	99
68) Pentachlorophenol	16.80	266	94299	21.42	ng/ul	97
69) Phenanthrene	17.19	178	801884	20.70	ng/ul	100
71) Anthracene	17.29	178	815155	21.11	ng/ul	99
72) Carbazole	17.56	167	752941	22.16	ng/ul	99
73) Di-n-butylphthalate	18.12	149	901317	21.75	ng/ul	100
74) Fluoranthene	19.22	202	972076	22.65	ng/ul	97
77) Pyrene	19.58	202	983485	20.81	ng/ul	98
78) Butylbenzylphthalate	20.47	149	446440	22.75	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	323120	22.06	ng/ul	99
80) Benzo(a)anthracene	21.33	228	979327	20.90	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.25	149	614678	22.55	ng/ul#	97
82) Chrysene	21.38	228	943969	21.23	ng/ul	99
84) Di-n-octyl phthalate	22.13	149	1127624	23.20	ng/ul	98
85) Benzo(b)fluoranthene	22.93	252	1001915	20.60	ng/ul	99
86) Benzo(k)fluoranthene	22.97	252	987950	21.57	ng/ul	99
88) Benzo(a)pyrene	23.51	252	959835	20.86	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.90	276	955291	19.03	ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	802160	19.10	ng/ul	98
91) Benzo(g,h,i)perylene	26.60	276	785553	18.48	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:29:28 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02061

Manual Integrations APPROVED
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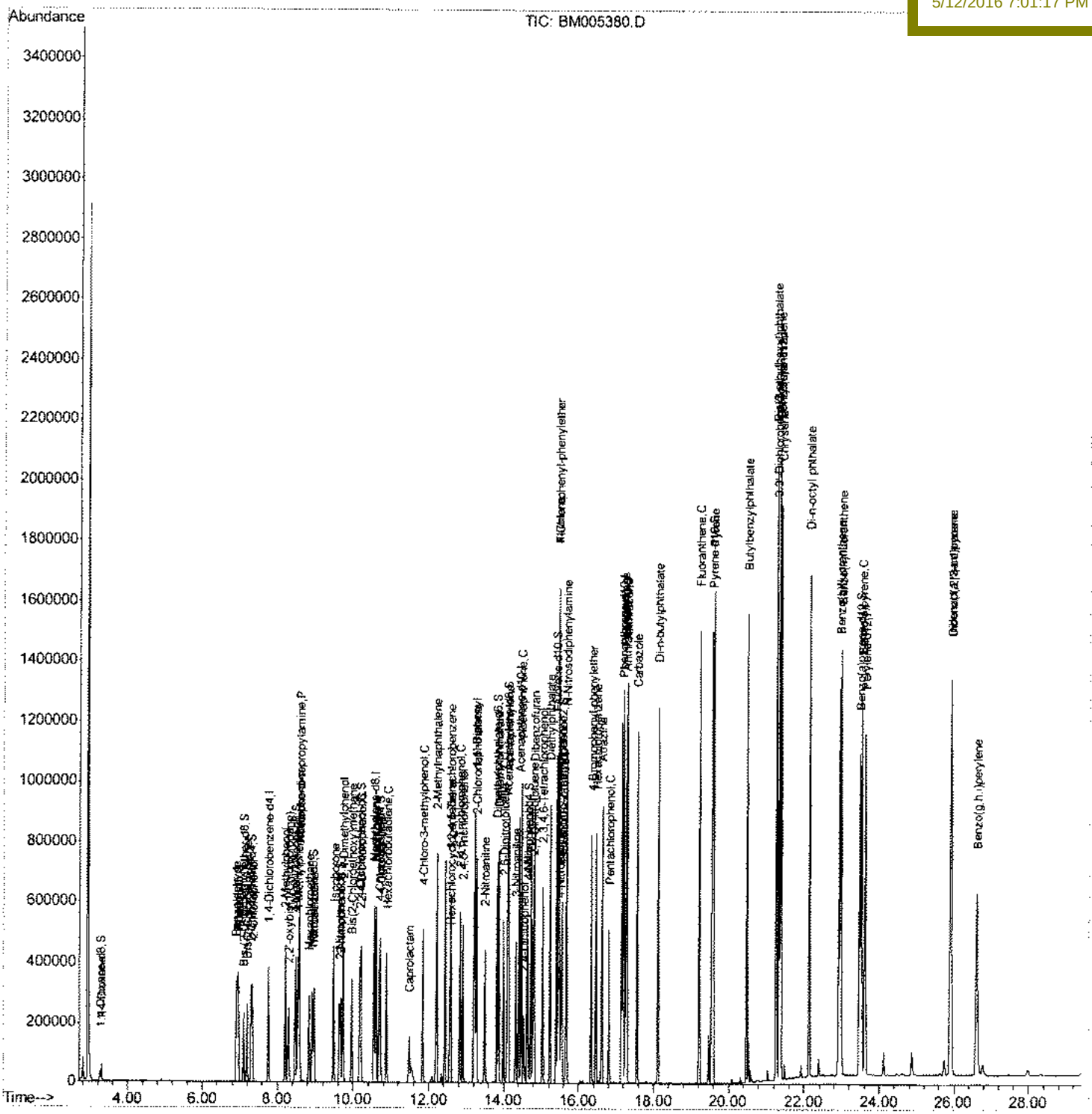

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:27:23 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02061

Manual Integrations APPROVED
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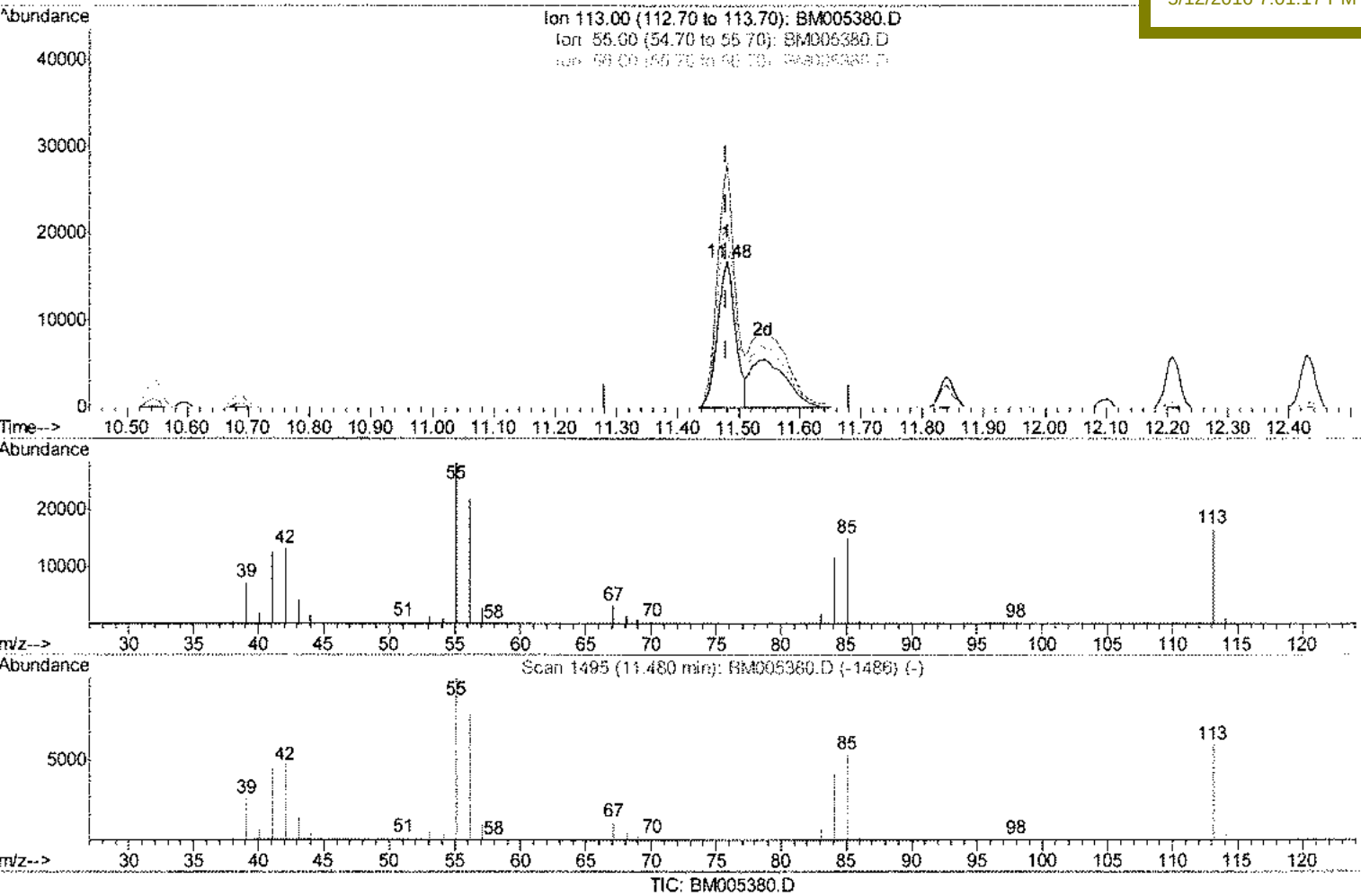

TIC: BM005380.D

(32) Caprolactam

11.480min (0.000) 12.36ng/ul

response 33808

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	168.01
56.00	120.80	130.03
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:27:23 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02061

Manual Integrations APPROVED
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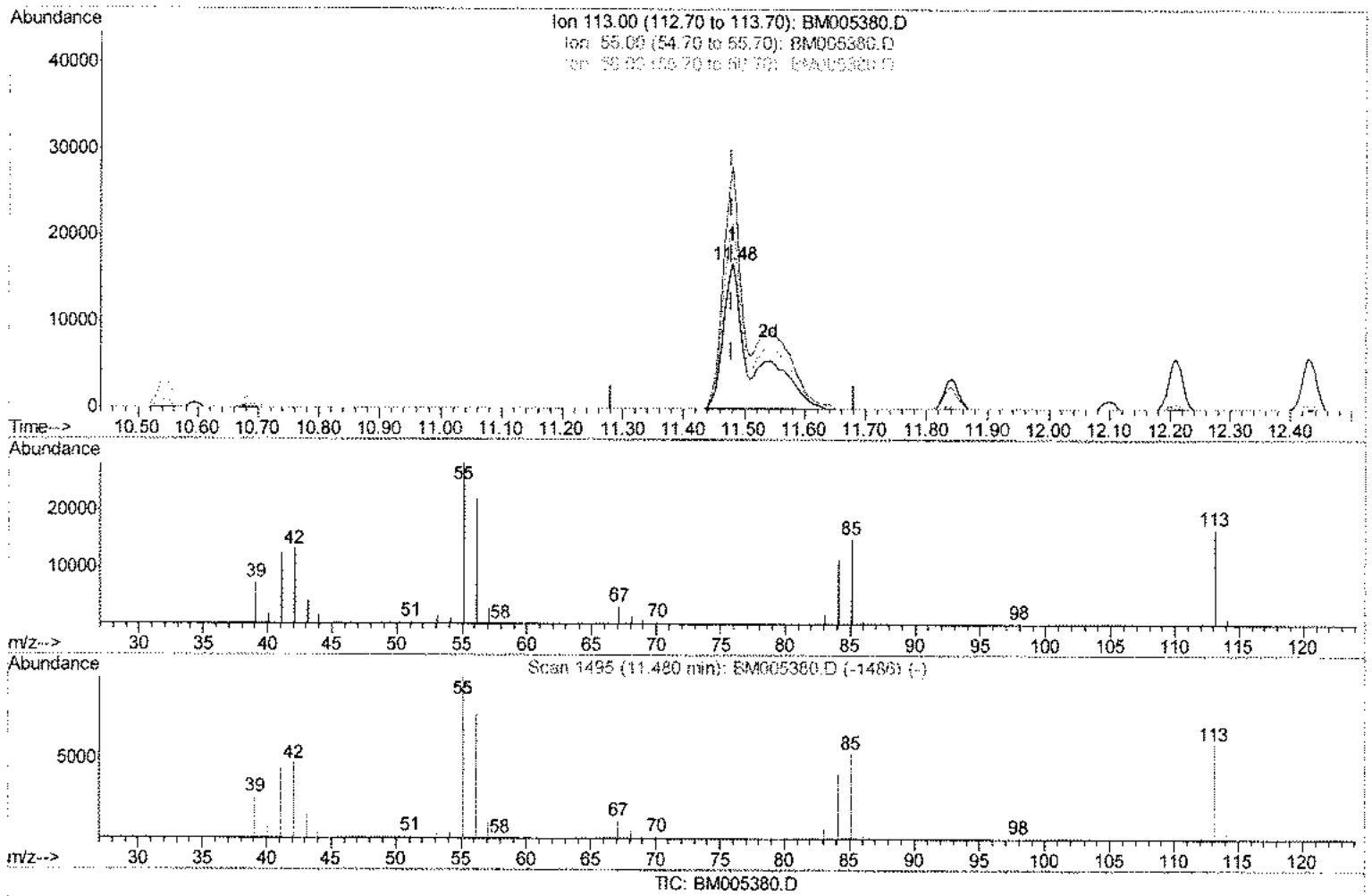
5/12/2016 7:01:17 PM



(32) Caprolactam

11.480min (0.000) 20.57ng/ul m

response 56270

> U.M 05/16/16

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	168.01
56.00	120.80	130.03
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:29:28 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02061

Manual Integrations APPROVED
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5/12/2016 7:01:17 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	100625	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	477106	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	305317	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	736650	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	814700	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	832126	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	16215	7.58	ng/uL	0.00
5) Phenol-d5	6.93	99	186678	20.45	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	104693	20.11	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	143532	20.82	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	155546	20.62	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	74037	21.74	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	85005	22.04	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	154380	21.54	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	207264	24.02	ng/ul	0.00
43) Dimethylphthalate-d6	13.81	166	502473	20.53	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	595621	20.75	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	90855	20.34	ng/ul	0.00
57) Fluorene-d10	15.40	176	431674	20.43	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	91455	22.07	ng/ul	0.00
70) Anthracene-d10	17.25	188	692797	21.28	ng/ul	0.00
76) Pyrene-d10	19.55	212	790515	21.02	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	772408	20.97	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	29090	7.46	ng/uL	95
4) Benzaldehyde	6.90	77	115615	26.15	ng/ul	98
6) Phenol	6.96	94	195767	20.75	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.19	93	142070	20.01	ng/ul	97
10) 2-Chlorophenol	7.33	128	144028	20.43	ng/ul	98
11) 2-Methylphenol	8.20	108	149383	20.49	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.29	45	196505	20.40	ng/ul	99
14) Acetophenone	8.58	105	238597	21.35	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.57	70	121666	20.84	ng/ul	98
16) 4-Methylphenol	8.53	108	166073	20.53	ng/ul	96
17) Hexachloroethane	8.83	117	55655	20.98	ng/ul	95
20) Nitrobenzene	8.96	77	179794	21.08	ng/ul	98
21) Isophorone	9.48	82	350989	21.20	ng/ul	99
23) 2-Nitrophenol	9.67	139	90715	21.83	ng/ul	97
24) 2,4-Dimethylphenol	9.73	107	189843	21.54	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.96	93	204117	19.79	ng/ul	99
27) 2,4-Dichlorophenol	10.20	162	155060	21.12	ng/ul	99
28) Naphthalene	10.60	128	487040	20.29	ng/ul	100
30) 4-Chloroaniline	10.71	127	208281	23.67	ng/ul	97
31) Hexachlorobutadiene	10.87	225	94273	21.61	ng/ul	98
32) Caprolactam	11.48	113	56270m	20.57	ng/ul	
33) 4-Chloro-3-methylphenol	11.84	107	187778	21.33	ng/ul	98
34) 2-Methylnaphthalene	12.21	142	362143	20.17	ng/ul	99

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Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\Data\BM051116\
Data File : BM005380.D
Acq On : 11 May 2016 09:01
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:29:28 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02061

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.59	216	193304	20.81	ng/ul	98
37) Hexachlorocyclopentadiene	12.56	237	92798	19.56	ng/ul	95
38) 2,4,6-Trichlorophenol	12.83	196	130050	21.02	ng/ul	94
39) 2,4,5-Trichlorophenol	12.90	196	143782	20.95	ng/ul	97
40) 1,1'-Biphenyl	13.23	154	482410	19.95	ng/ul	99
41) 2-Chloronaphthalene	13.27	162	373119	20.40	ng/ul	98
42) 2-Nitroaniline	13.49	65	126152	22.41	ng/ul	97
44) Dimethylphthalate	13.86	163	503915	20.61	ng/ul	99
45) 2,6-Dinitrotoluene	13.99	165	107981	22.39	ng/ul#	90
47) Acenaphthylene	14.12	152	628221	20.69	ng/ul	99
48) 3-Nitroaniline	14.32	138	117243	22.81	ng/ul	96
49) Acenaphthene	14.47	153	409340	20.45	ng/ul	99
50) 2,4-Dinitrophenol	14.53	184	51232	18.47	ng/ul	98
52) 4-Nitrophenol	14.63	109	81532	21.95	ng/ul	92
53) Dibenzofuran	14.80	168	597341	20.57	ng/ul	98
54) 2,4-Dinitrotoluene	14.78	165	161123	22.41	ng/ul	97
55) 2,3,4,6-Tetrachlorophenol	15.03	232	127003	21.77	ng/ul#	96
56) Diethylphthalate	15.23	149	514402	20.82	ng/ul	99
58) Fluorene	15.46	166	463176	20.40	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.44	204	230521	20.49	ng/ul	97
60) 4-Nitroaniline	15.49	138	124597	22.87	ng/ul	94
63) 4,6-Dinitro-2-methylphenol	15.54	198	95203	21.86	ng/ul#	92
64) N-Nitrosodiphenylamine	15.66	169	427204	21.18	ng/ul	100
65) 4-Bromophenyl-phenylether	16.34	248	153425	21.72	ng/ul	98
66) Hexachlorobenzene	16.46	284	172269	21.75	ng/ul	100
67) Atrazine	16.62	200	169843	23.07	ng/ul	99
68) Pentachlorophenol	16.80	266	94299	21.42	ng/ul	97
69) Phenanthrene	17.19	178	801884	20.70	ng/ul	100
71) Anthracene	17.29	178	815155	21.11	ng/ul	99
72) Carbazole	17.56	167	752941	22.16	ng/ul	99
73) Di-n-butylphthalate	18.12	149	901317	21.75	ng/ul	100
74) Fluoranthene	19.22	202	972076	22.65	ng/ul	97
77) Pyrene	19.58	202	983485	20.81	ng/ul	98
78) Butylbenzylphthalate	20.47	149	446440	22.75	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	323120	22.06	ng/ul	99
80) Benzo(a)anthracene	21.33	228	979327	20.90	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.25	149	614678	22.55	ng/ul#	97
82) Chrysene	21.38	228	943969	21.23	ng/ul	99
84) Di-n-octyl phthalate	22.13	149	1127624	23.20	ng/ul	98
85) Benzo(b)fluoranthene	22.93	252	1001915	20.60	ng/ul	99
86) Benzo(k)fluoranthene	22.97	252	987950	21.57	ng/ul	99
88) Benzo(a)pyrene	23.51	252	959835	20.86	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.90	276	955291	19.03	ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	802160	19.10	ng/ul	98
91) Benzo(g,h,i)perylene	26.60	276	785553	18.48	ng/ul	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 04:21:27 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02062

Manual Integrations APPROVED
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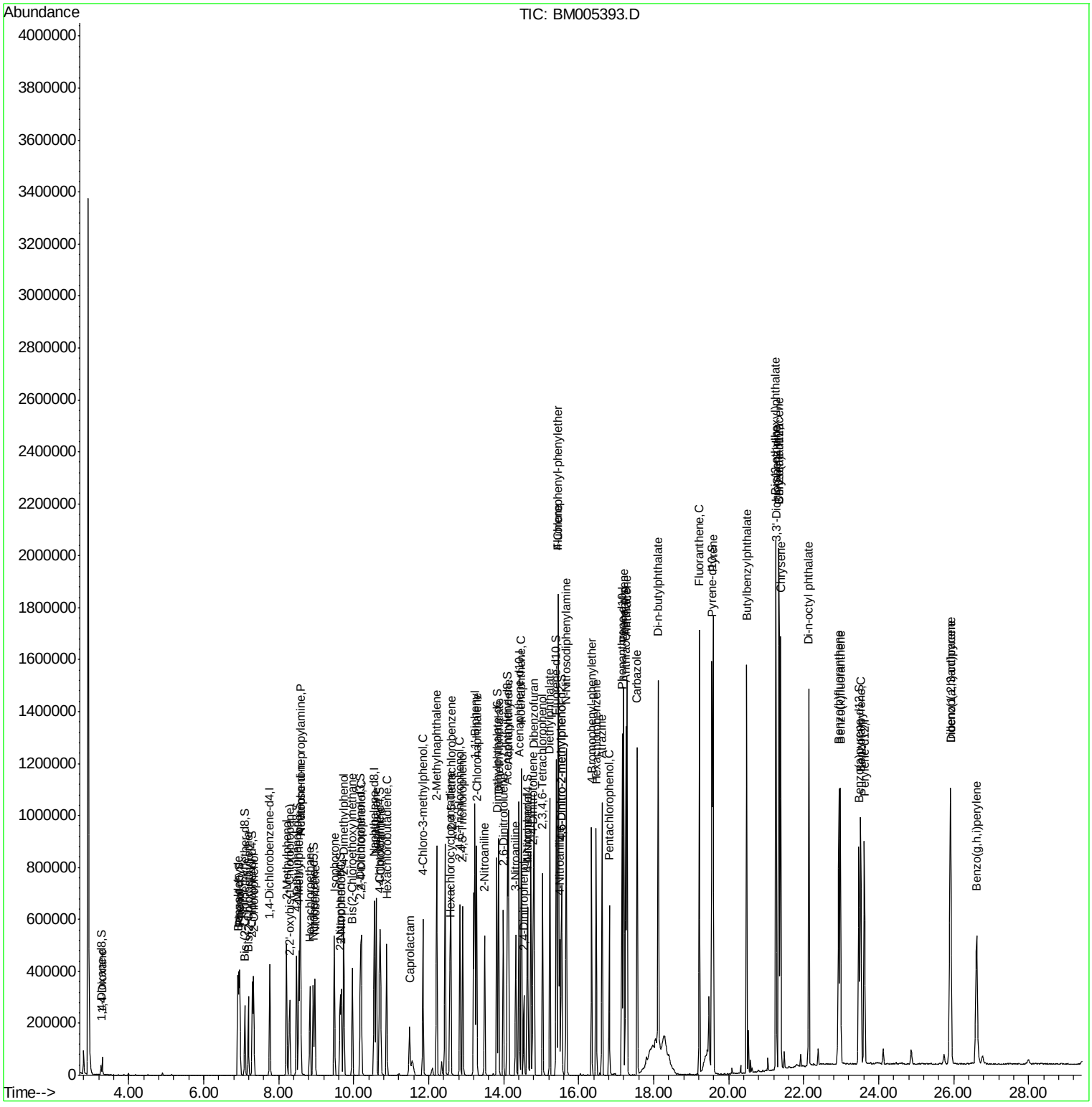
5/12/2016 7:07:51 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD02062

Manual Integrations APPROVED
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5/12/2016 7:07:51 PM

Quant Time: May 12 04:21:27 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	115496	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	551013	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	351891	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.16	188	834042	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	747722	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	612165	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	17639	7.18	ng/uL	0.00
5) Phenol-d5	6.93	99	211837	20.22	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	119408	19.98	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	164153	20.75	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	179457	20.73	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	86578	22.01	ng/ul	0.00
22) 2-Nitrophenol-d4	9.64	143	101628	22.82	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	179566	21.69	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	243116	24.40	ng/ul	0.00
43) Dimethylphthalate-d6	13.82	166	590999	20.95	ng/ul	0.00
46) Acenaphthylene-d8	14.10	160	699462	21.14	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	106522	20.69	ng/ul	0.00
57) Fluorene-d10	15.40	176	499714	20.52	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	111144	23.69	ng/ul	0.00
70) Anthracene-d10	17.25	188	781450	21.20	ng/ul	0.00
76) Pyrene-d10	19.55	212	819982	23.76	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	572408	21.12	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	32355	7.22	ng/uL	96
4) Benzaldehyde	6.90	77	133177	26.24	ng/ul	97
6) Phenol	6.96	94	220123	20.33	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.19	93	163401	20.05	ng/ul	98
10) 2-Chlorophenol	7.33	128	165457	20.45	ng/ul	98
11) 2-Methylphenol	8.20	108	170695	20.40	ng/ul	100
12) 2,2'-oxybis(1-Chloropropan	8.29	45	225840	20.43	ng/ul	99
14) Acetophenone	8.58	105	271815	21.19	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.57	70	141949	21.18	ng/ul	99
16) 4-Methylphenol	8.53	108	190667	20.53	ng/ul	98
17) Hexachloroethane	8.83	117	64846	21.29	ng/ul	95
20) Nitrobenzene	8.96	77	208054	21.12	ng/ul	96
21) Isophorone	9.48	82	414298	21.66	ng/ul	99
23) 2-Nitrophenol	9.67	139	106338	22.16	ng/ul	98
24) 2,4-Dimethylphenol	9.73	107	218114	21.42	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.96	93	238500	20.02	ng/ul	98
27) 2,4-Dichlorophenol	10.20	162	180937	21.34	ng/ul	99
28) Naphthalene	10.60	128	566276	20.43	ng/ul	99
30) 4-Chloroaniline	10.71	127	243797	23.99	ng/ul	99
31) Hexachlorobutadiene	10.87	225	111638	22.16	ng/ul	99
32) Caprolactam	11.49	113	68690m	21.75	ng/ul	
33) 4-Chloro-3-methylphenol	11.85	107	223786	22.02	ng/ul	98
34) 2-Methylnaphthalene	12.21	142	427632	20.62	ng/ul	97

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 04:21:27 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02062

Manual Integrations APPROVED
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5/12/2016 7:07:51 PM

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.59	216	225772	21.09 ng/ul	99
37) Hexachlorocyclopentadiene	12.56	237	108491	19.84 ng/ul	95
38) 2,4,6-Trichlorophenol	12.83	196	157938	22.15 ng/ul	98
39) 2,4,5-Trichlorophenol	12.90	196	174804	22.10 ng/ul	98
40) 1,1'-Biphenyl	13.23	154	568347	20.39 ng/ul	99
41) 2-Chloronaphthalene	13.27	162	439321	20.84 ng/ul	98
42) 2-Nitroaniline	13.49	65	150308	23.16 ng/ul	97
44) Dimethylphthalate	13.86	163	589092	20.90 ng/ul	100
45) 2,6-Dinitrotoluene	13.99	165	128863	23.19 ng/ul#	91
47) Acenaphthylene	14.13	152	733838	20.97 ng/ul	100
48) 3-Nitroaniline	14.32	138	138540	23.38 ng/ul	100
49) Acenaphthene	14.47	153	475546	20.62 ng/ul	98
50) 2,4-Dinitrophenol	14.53	184	70755	22.13 ng/ul	94
52) 4-Nitrophenol	14.64	109	94059	21.97 ng/ul	92
53) Dibenzofuran	14.80	168	688234	20.56 ng/ul	99
54) 2,4-Dinitrotoluene	14.78	165	185080	22.33 ng/ul	98
55) 2,3,4,6-Tetrachlorophenol	15.03	232	151808	22.57 ng/ul#	96
56) Diethylphthalate	15.23	149	598250	21.01 ng/ul	99
58) Fluorene	15.46	166	529313	20.23 ng/ul	100
59) 4-Chlorophenyl-phenylether	15.44	204	267712	20.65 ng/ul	97
60) 4-Nitroaniline	15.49	138	143799m	22.90 ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	115843	23.50 ng/ul#	93
64) N-Nitrosodiphenylamine	15.66	169	490433	21.47 ng/ul	99
65) 4-Bromophenyl-phenylether	16.34	248	176874	22.12 ng/ul	97
66) Hexachlorobenzene	16.46	284	198623	22.15 ng/ul	97
67) Atrazine	16.62	200	195995	23.52 ng/ul	99
68) Pentachlorophenol	16.81	266	117927	23.66 ng/ul	98
69) Phenanthrene	17.20	178	907451	20.69 ng/ul	99
71) Anthracene	17.29	178	918853	21.02 ng/ul	100
72) Carbazole	17.56	167	845738	21.99 ng/ul	99
73) Di-n-butylphthalate	18.12	149	1035602	22.07 ng/ul	100
74) Fluoranthene	19.22	202	1038053	21.36 ng/ul	97
77) Pyrene	19.58	202	1030507	23.76 ng/ul	98
78) Butylbenzylphthalate	20.47	149	471289	26.17 ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	296423	22.05 ng/ul	100
80) Benzo(a)anthracene	21.33	228	902530	20.98 ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.25	149	618650	24.73 ng/ul#	98
82) Chrysene	21.39	228	860567	21.09 ng/ul	100
84) Di-n-octyl phthalate	22.13	149	988141	27.64 ng/ul	99
85) Benzo(b)fluoranthene	22.93	252	799128	22.33 ng/ul	99
86) Benzo(k)fluoranthene	22.98	252	710948	21.10 ng/ul	99
88) Benzo(a)pyrene	23.51	252	711425	21.02 ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.91	276	740127	20.04 ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	627545	20.31 ng/ul	97
91) Benzo(g,h,i)perylene	26.61	276	626457	20.03 ng/ul	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

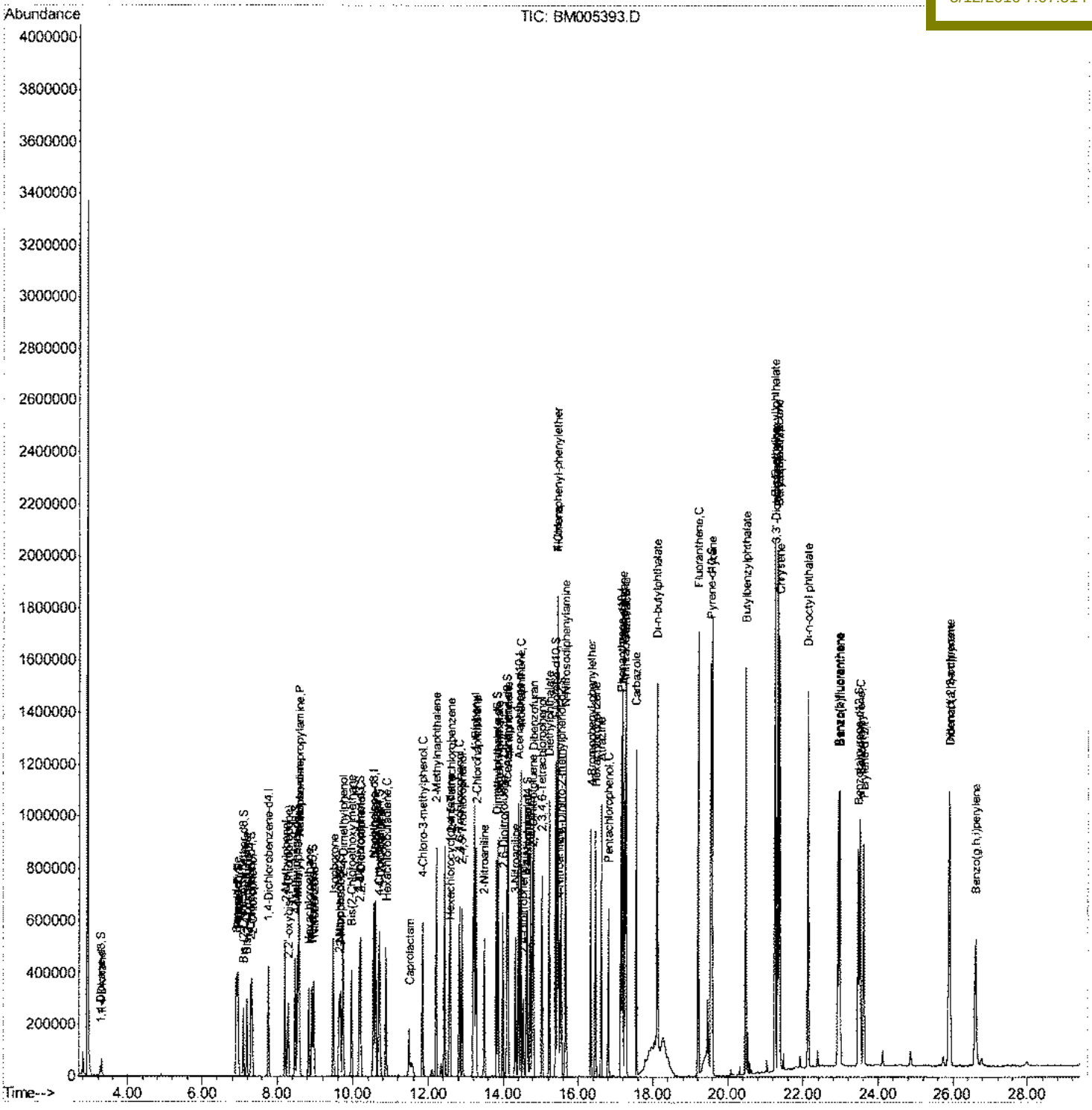
Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 04:21:27 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02062

Manual Integrations APPROVED
sohil
5/12/2016 7:07:51 PM



Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:33:11 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02062

Manual Integrations APPROVED
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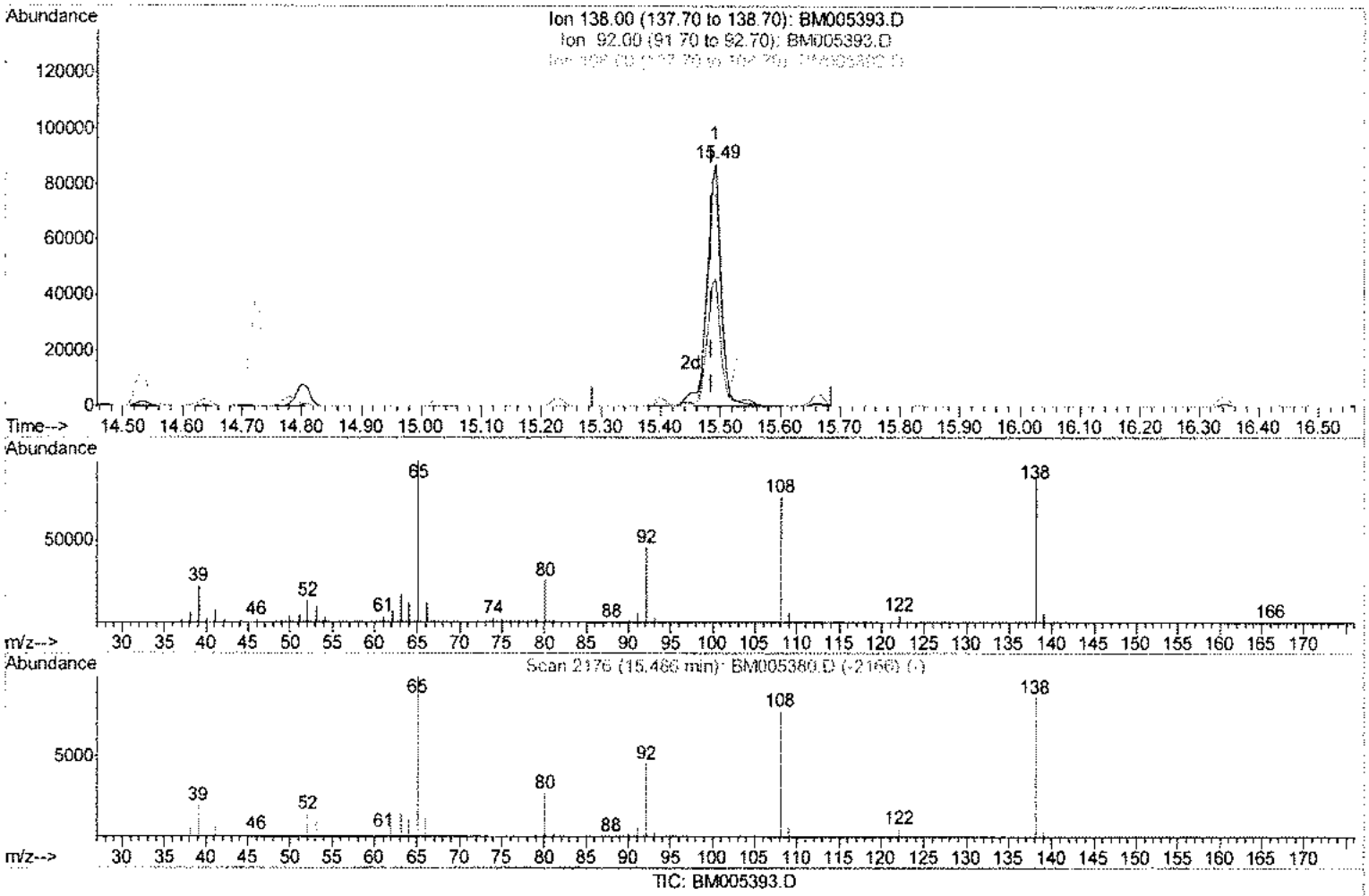

TIC: BM005393.D

(60) 4-Nitroaniline

15.492min (+0.006) 22.90ng/ul m

response 143799

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	52.22
108.00	82.90	87.48
0.00	0.00	0.00

U.M 05/16/16

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:33:11 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02062

Manual Integrations APPROVED
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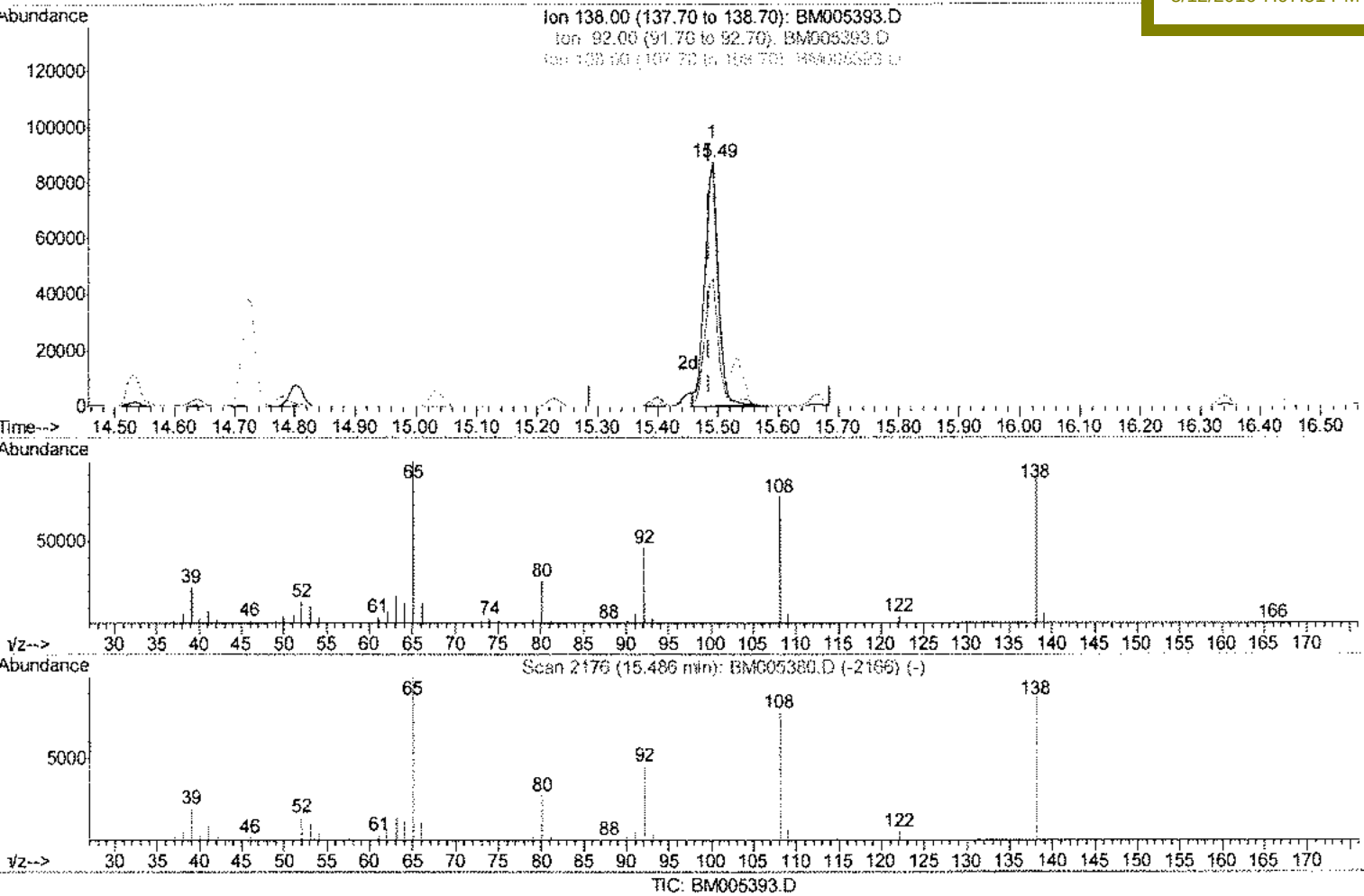

TIC: BM005393.D

(60) 4-Nitroaniline

15.492min (+0.006) 21.56ng/ul

response 135421

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	52.22
108.00	82.90	87.48
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:33:11 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02062

Manual Integrations APPROVED
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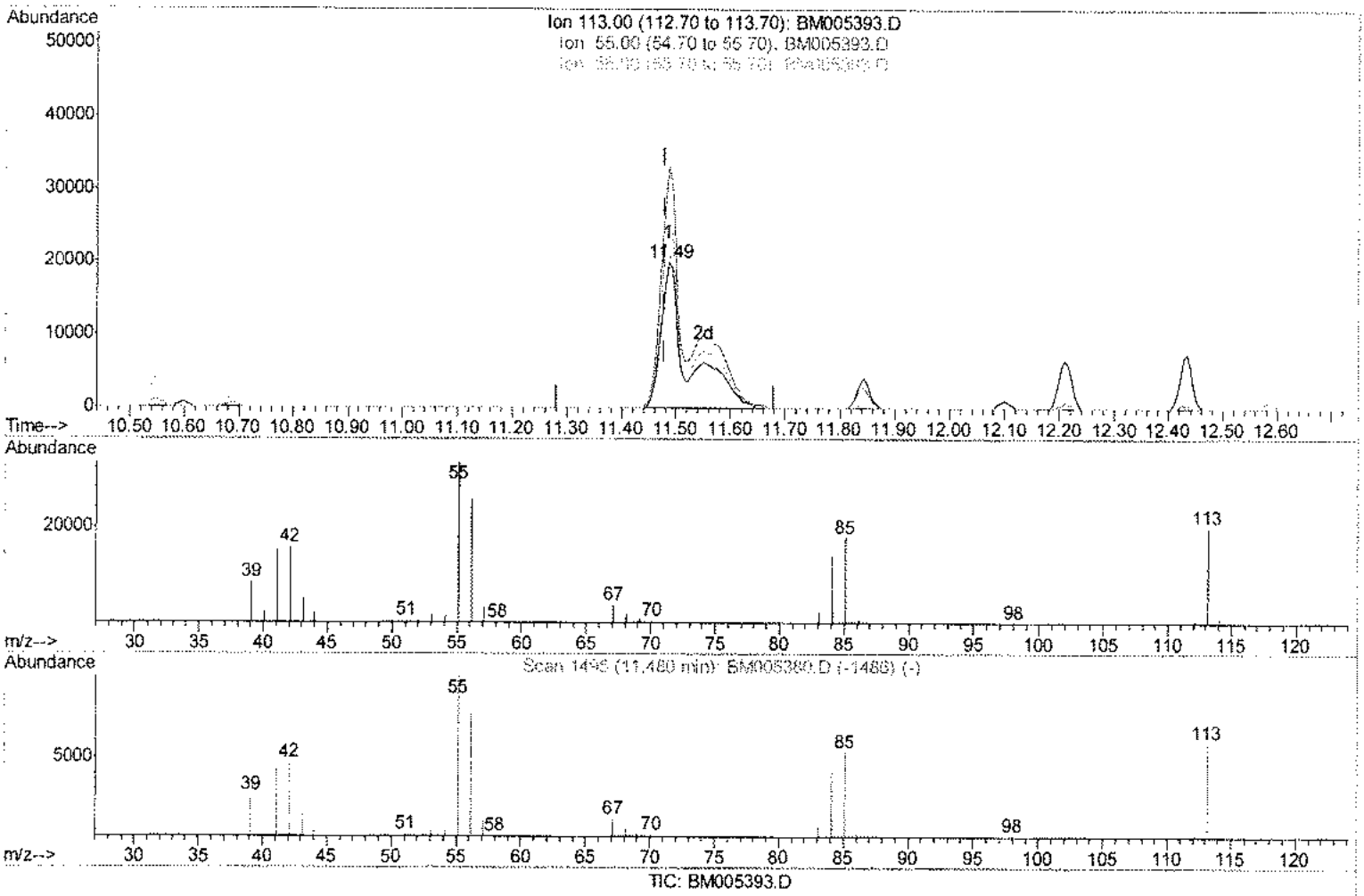
5/12/2016 7:07:51 PM



(32) Caprolactam

11.486min (+0.006) 21.75ng/ul m > U.M 05/16/16

response 68690

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	166.04
56.00	120.80	127.79
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 03:33:11 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02062

Manual Integrations APPROVED
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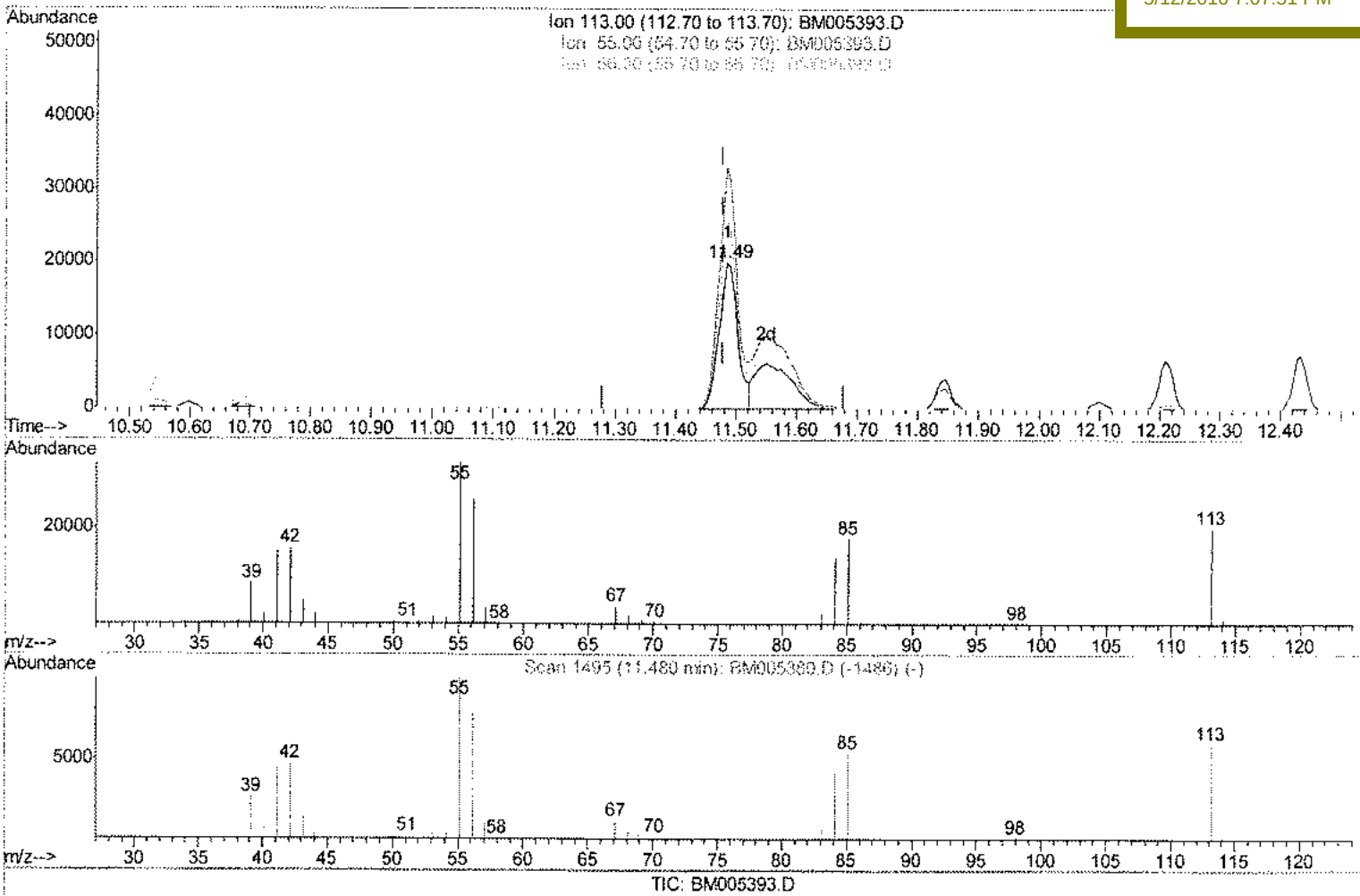
5/12/2016 7:07:51 PM



TIC: BM005393.D

(32) Caprolactam

11.486min (+0.006) 13.49ng/ul

response 42617

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	166.04
56.00	120.80	127.79
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 04:21:27 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02062

Manual Integrations APPROVED
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5/12/2016 7:07:51 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	115496	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	551013	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	351891	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.16	188	834042	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	747722	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	612165	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	17639	7.18	ng/uL	0.00
5) Phenol-d5	6.93	99	211837	20.22	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	119408	19.98	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	164153	20.75	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	179457	20.73	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	86578	22.01	ng/ul	0.00
22) 2-Nitrophenol-d4	9.64	143	101628	22.82	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	179566	21.69	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	243116	24.40	ng/ul	0.00
43) Dimethylphthalate-d6	13.82	166	590999	20.95	ng/ul	0.00
46) Acenaphthylene-d8	14.10	160	699462	21.14	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	106522	20.69	ng/ul	0.00
57) Fluorene-d10	15.40	176	499714	20.52	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	111144	23.69	ng/ul	0.00
70) Anthracene-d10	17.25	188	781450	21.20	ng/ul	0.00
76) Pyrene-d10	19.55	212	819982	23.76	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	572408	21.12	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	32355	7.22	ng/uL	96
4) Benzaldehyde	6.90	77	133177	26.24	ng/ul	97
6) Phenol	6.96	94	220123	20.33	ng/ul	99
8) Bis(2-Chloroethyl)ether	7.19	93	163401	20.05	ng/ul	98
10) 2-Chlorophenol	7.33	128	165457	20.45	ng/ul	98
11) 2-Methylphenol	8.20	108	170695	20.40	ng/ul	100
12) 2,2'-oxybis(1-Chloropropan	8.29	45	225840	20.43	ng/ul	99
14) Acetophenone	8.58	105	271815	21.19	ng/ul	99
15) N-Nitroso-di-n-propylamine	8.57	70	141949	21.18	ng/ul	99
16) 4-Methylphenol	8.53	108	190667	20.53	ng/ul	98
17) Hexachloroethane	8.83	117	64846	21.29	ng/ul	95
20) Nitrobenzene	8.96	77	208054	21.12	ng/ul	96
21) Isophorone	9.48	82	414298	21.66	ng/ul	99
23) 2-Nitrophenol	9.67	139	106338	22.16	ng/ul	98
24) 2,4-Dimethylphenol	9.73	107	218114	21.42	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.96	93	238500	20.02	ng/ul	98
27) 2,4-Dichlorophenol	10.20	162	180937	21.34	ng/ul	99
28) Naphthalene	10.60	128	566276	20.43	ng/ul	99
30) 4-Chloroaniline	10.71	127	243797	23.99	ng/ul	99
31) Hexachlorobutadiene	10.87	225	111638	22.16	ng/ul	99
32) Caprolactam	11.49	113	68690m	21.75	ng/ul	
33) 4-Chloro-3-methylphenol	11.85	107	223786	22.02	ng/ul	98
34) 2-Methylnaphthalene	12.21	142	427632	20.62	ng/ul	97

U.M 05/16/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005393.D
Acq On : 11 May 2016 18:52
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 04:21:27 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02062

Manual Integrations APPROVED
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5/12/2016 7:07:51 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.59	216	225772	21.09	ng/ul	99
37) Hexachlorocyclopentadiene	12.56	237	108491	19.84	ng/ul	95
38) 2,4,6-Trichlorophenol	12.83	196	157938	22.15	ng/ul	98
39) 2,4,5-Trichlorophenol	12.90	196	174804	22.10	ng/ul	98
40) 1,1'-Biphenyl	13.23	154	568347	20.39	ng/ul	99
41) 2-Chloronaphthalene	13.27	162	439321	20.84	ng/ul	98
42) 2-Nitroaniline	13.49	65	150308	23.16	ng/ul	97
44) Dimethylphthalate	13.86	163	589092	20.90	ng/ul	100
45) 2,6-Dinitrotoluene	13.99	165	128863	23.19	ng/ul#	91
47) Acenaphthylene	14.13	152	733838	20.97	ng/ul	100
48) 3-Nitroaniline	14.32	138	138540	23.38	ng/ul	100
49) Acenaphthene	14.47	153	475546	20.62	ng/ul	98
50) 2,4-Dinitrophenol	14.53	184	70755	22.13	ng/ul	94
52) 4-Nitrophenol	14.64	109	94059	21.97	ng/ul	92
53) Dibenzofuran	14.80	168	688234	20.56	ng/ul	99
54) 2,4-Dinitrotoluene	14.78	165	185080	22.33	ng/ul	98
55) 2,3,4,6-Tetrachlorophenol	15.03	232	151808	22.57	ng/ul#	96
56) Diethylphthalate	15.23	149	598250	21.01	ng/ul	99
58) Fluorene	15.46	166	529313	20.23	ng/ul	100
59) 4-Chlorophenyl-phenylether	15.44	204	267712	20.65	ng/ul	97
60) 4-Nitroaniline	15.49	138	143799m	22.90	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	115843	23.50	ng/ul#	93
64) N-Nitrosodiphenylamine	15.66	169	490433	21.47	ng/ul	99
65) 4-Bromophenyl-phenylether	16.34	248	176874	22.12	ng/ul	97
66) Hexachlorobenzene	16.46	284	198623	22.15	ng/ul	97
67) Atrazine	16.62	200	195995	23.52	ng/ul	99
68) Pentachlorophenol	16.81	266	117927	23.66	ng/ul	98
69) Phenanthrene	17.20	178	907451	20.69	ng/ul	99
71) Anthracene	17.29	178	918853	21.02	ng/ul	100
72) Carbazole	17.56	167	845738	21.99	ng/ul	99
73) Di-n-butylphthalate	18.12	149	1035602	22.07	ng/ul	100
74) Fluoranthene	19.22	202	1038053	21.36	ng/ul	97
77) Pyrene	19.58	202	1030507	23.76	ng/ul	98
78) Butylbenzylphthalate	20.47	149	471289	26.17	ng/ul	99
79) 3,3'-Dichlorobenzidine	21.26	252	296423	22.05	ng/ul	100
80) Benzo(a)anthracene	21.33	228	902530	20.98	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.25	149	618650	24.73	ng/ul#	98
82) Chrysene	21.39	228	860567	21.09	ng/ul	100
84) Di-n-octyl phthalate	22.13	149	988141	27.64	ng/ul	99
85) Benzo(b)fluoranthene	22.93	252	799128	22.33	ng/ul	99
86) Benzo(k)fluoranthene	22.98	252	710948	21.10	ng/ul	99
88) Benzo(a)pyrene	23.51	252	711425	21.02	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.91	276	740127	20.04	ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	627545	20.31	ng/ul	97
91) Benzo(g,h,i)perylene	26.61	276	626457	20.03	ng/ul	98

U.M 05/16/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005409.D
Acq On : 12 May 2016 05:11
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:44:01 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02063

Manual Integrations APPROVED
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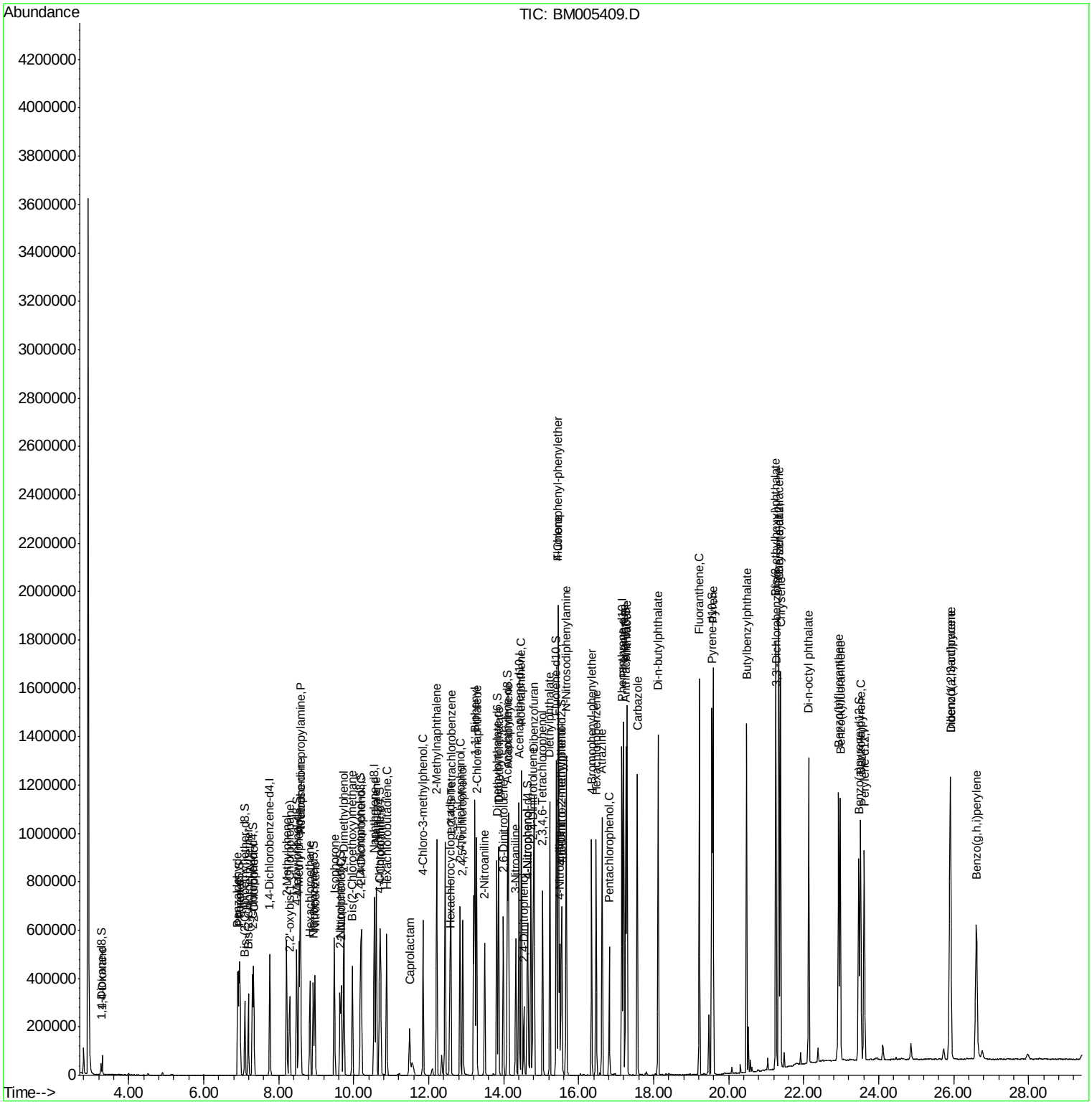
5/12/2016 7:20:59 PM



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005409.D
Acq On : 12 May 2016 05:11
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:44:01 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02063

Manual Integrations APPROVED
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5/12/2016 7:20:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	134370	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	613673	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	378599	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	846623	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	700058	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	643964	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	21252	7.44	ng/uL	0.00
5) Phenol-d5	6.94	99	240785	19.76	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.10	67	136275	19.60	ng/ul	0.00
9) 2-Chlorophenol-d4	7.30	132	189028	20.54	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	196963	19.55	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	95922	21.89	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	112417	22.66	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	198588	21.54	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	262603	23.66	ng/ul	0.00
43) Dimethylphthalate-d6	13.82	166	621343	20.48	ng/ul	0.00
46) Acenaphthylene-d8	14.10	160	748921	21.04	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	106546	19.23	ng/ul	0.01
57) Fluorene-d10	15.40	176	530877	20.26	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	105950	22.25	ng/ul	0.00
70) Anthracene-d10	17.25	188	794857	21.24	ng/ul	0.00
76) Pyrene-d10	19.55	212	794999	24.60	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	595981	20.91	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	38140	7.32	ng/uL	95
4) Benzaldehyde	6.90	77	151252	25.62	ng/ul	96
6) Phenol	6.96	94	250060	19.85	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.19	93	185103	19.52	ng/ul	99
10) 2-Chlorophenol	7.33	128	191829	20.37	ng/ul	98
11) 2-Methylphenol	8.20	108	193095	19.83	ng/ul	98
12) 2,2'-oxybis(1-Chloropropan	8.29	45	255095	19.83	ng/ul	99
14) Acetophenone	8.58	105	303306	20.32	ng/ul	98
15) N-Nitroso-di-n-propylamine	8.57	70	154703	19.84	ng/ul	99
16) 4-Methylphenol	8.54	108	210745	19.51	ng/ul	98
17) Hexachloroethane	8.83	117	74021	20.89	ng/ul	92
20) Nitrobenzene	8.96	77	231265	21.08	ng/ul	97
21) Isophorone	9.48	82	445461	20.91	ng/ul	99
23) 2-Nitrophenol	9.67	139	117499	21.98	ng/ul	99
24) 2,4-Dimethylphenol	9.73	107	241656	21.31	ng/ul	96
25) Bis(2-Chloroethoxy)methane	9.96	93	260233	19.62	ng/ul	99
27) 2,4-Dichlorophenol	10.20	162	199185	21.10	ng/ul	98
28) Naphthalene	10.60	128	630001	20.40	ng/ul	100
30) 4-Chloroaniline	10.72	127	263507	23.28	ng/ul	98
31) Hexachlorobutadiene	10.87	225	126204	22.49	ng/ul	98
32) Caprolactam	11.49	113	70177m	19.95	ng/ul	
33) 4-Chloro-3-methylphenol	11.85	107	238145	21.04	ng/ul	99
34) 2-Methylnaphthalene	12.21	142	463045	20.05	ng/ul	100

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005409.D
Acq On : 12 May 2016 05:11
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD02063

Manual Integrations APPROVED
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5/12/2016 7:20:59 PM

Quant Time: May 12 05:44:01 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.59	216	247135	21.46	ng/ul	98
37) Hexachlorocyclopentadiene	12.56	237	103603	17.61	ng/ul	97
38) 2,4,6-Trichlorophenol	12.83	196	167709	21.86	ng/ul	95
39) 2,4,5-Trichlorophenol	12.90	196	181620	21.34	ng/ul	97
40) 1,1'-Biphenyl	13.23	154	611896	20.40	ng/ul	99
41) 2-Chloronaphthalene	13.27	162	475116	20.95	ng/ul	98
42) 2-Nitroaniline	13.49	65	157790	22.60	ng/ul	96
44) Dimethylphthalate	13.86	163	616864	20.34	ng/ul	100
45) 2,6-Dinitrotoluene	13.99	165	134958	22.57	ng/ul#	88
47) Acenaphthylene	14.13	152	780372	20.72	ng/ul	99
48) 3-Nitroaniline	14.32	138	143446	22.50	ng/ul	100
49) Acenaphthene	14.47	153	510676	20.58	ng/ul	99
50) 2,4-Dinitrophenol	14.53	184	64514	18.75	ng/ul	94
52) 4-Nitrophenol	14.64	109	92118	20.00	ng/ul	92
53) Dibenzofuran	14.80	168	729953	20.27	ng/ul	98
54) 2,4-Dinitrotoluene	14.78	165	192567	21.60	ng/ul	99
55) 2,3,4,6-Tetrachlorophenol	15.03	232	152463	21.07	ng/ul#	95
56) Diethylphthalate	15.23	149	632475	20.65	ng/ul	99
58) Fluorene	15.46	166	564748	20.06	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.44	204	283874	20.35	ng/ul	96
60) 4-Nitroaniline	15.49	138	147881m	21.89	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.55	198	110416	22.06	ng/ul#	88
64) N-Nitrosodiphenylamine	15.66	169	515404	22.23	ng/ul	99
65) 4-Bromophenyl-phenylether	16.34	248	183784	22.64	ng/ul	97
66) Hexachlorobenzene	16.46	284	202766	22.27	ng/ul	97
67) Atrazine	16.62	200	197955	23.40	ng/ul	100
68) Pentachlorophenol	16.81	266	94665	18.71	ng/ul	96
69) Phenanthrene	17.20	178	917543	20.61	ng/ul	99
71) Anthracene	17.29	178	930081	20.96	ng/ul	100
72) Carbazole	17.56	167	834815	21.38	ng/ul	99
73) Di-n-butylphthalate	18.12	149	1041856	21.87	ng/ul	100
74) Fluoranthene	19.22	202	1007365	20.43	ng/ul	97
77) Pyrene	19.58	202	991192	24.41	ng/ul	97
78) Butylbenzylphthalate	20.47	149	424552	25.18	ng/ul	97
79) 3,3'-Dichlorobenzidine	21.26	252	266689	21.19	ng/ul	97
80) Benzo(a)anthracene	21.33	228	841160	20.89	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.24	149	557195	23.79	ng/ul	98
82) Chrysene	21.38	228	791988	20.73	ng/ul	99
84) Di-n-octyl phthalate	22.13	149	907483	24.13	ng/ul	98
85) Benzo(b)fluoranthene	22.93	252	799288	21.23	ng/ul	99
86) Benzo(k)fluoranthene	22.97	252	734675	20.73	ng/ul	99
88) Benzo(a)pyrene	23.51	252	742421	20.85	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.90	276	831659	21.41	ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	702447	21.61	ng/ul	98
91) Benzo(g,h,i)perylene	26.60	276	707432	21.50	ng/ul	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005409.D
Acq On : 12 May 2016 05:11
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:44:01 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02063

Manual Integrations APPROVED
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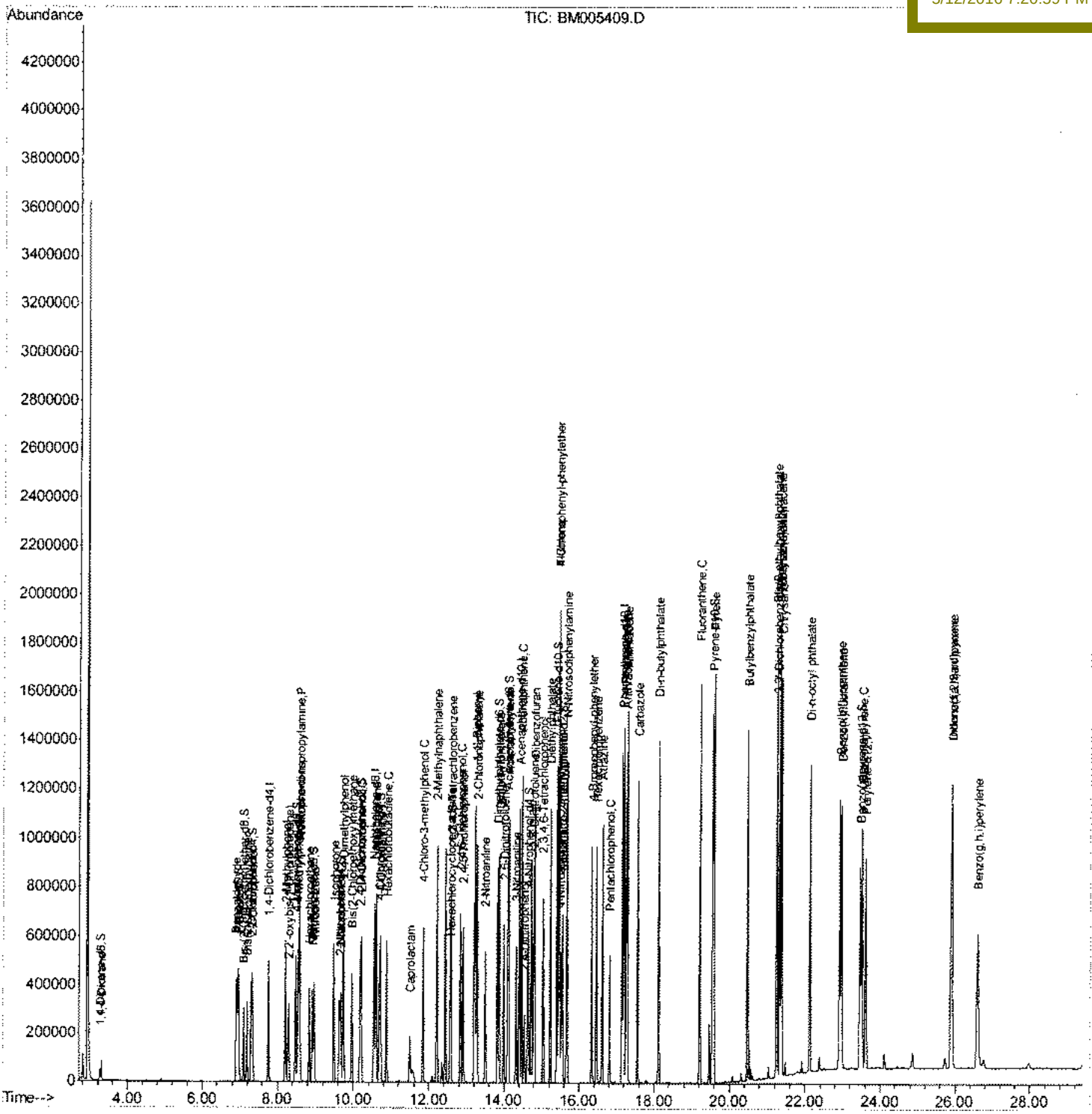
5/12/2016 7:20:59 PM



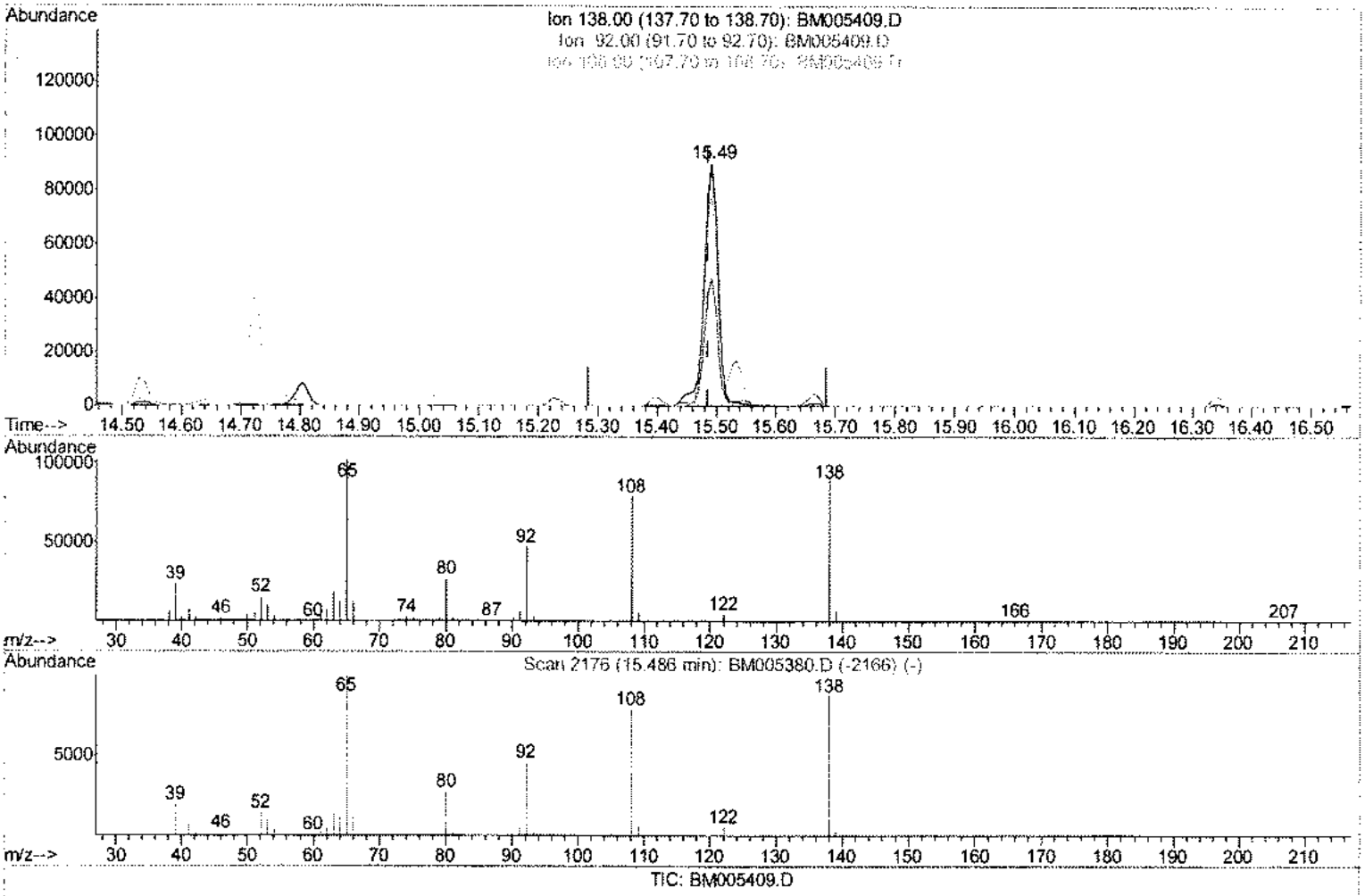
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005409.D
Acq On : 12 May 2016 05:11
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:42:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02063

Manual Integrations APPROVED
sohil
5/12/2016 7:20:59 PM



TIC: BM005409.D

(60) 4-Nitroaniline

15.492min (+0.006) 21.89ng/ul m

response 147881

> 0.M
051116116

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	52.57
108.00	82.90	87.83
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005409.D
Acq On : 12 May 2016 05:11
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:42:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02063

Manual Integrations APPROVED
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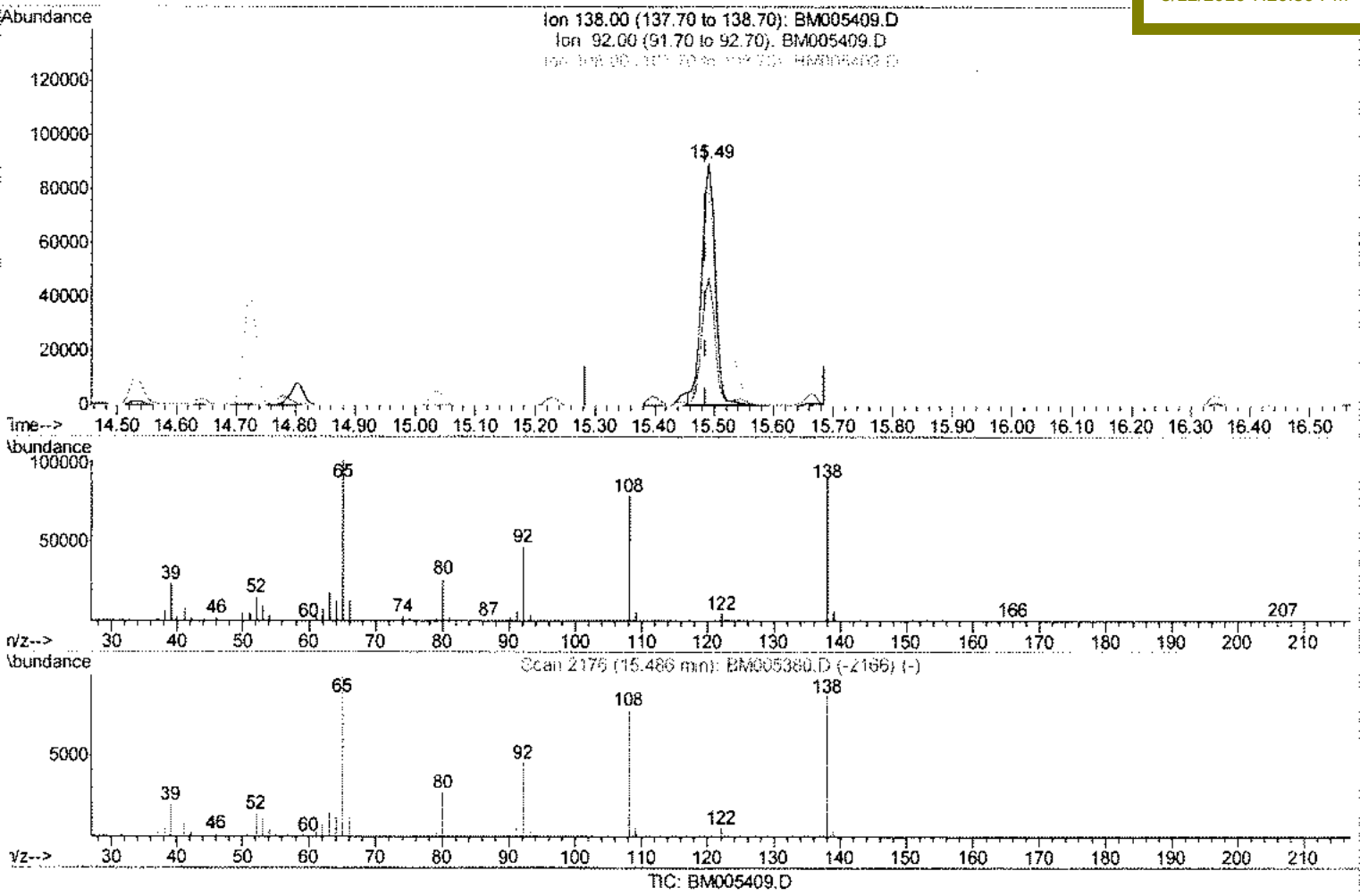

(60) 4-Nitroaniline

15.492min (+0.006) 20.54ng/ul

response 138789

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	52.57
108.00	82.90	87.83
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005409.D
Acq On : 12 May 2016 05:11
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:42:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02063

Manual Integrations APPROVED
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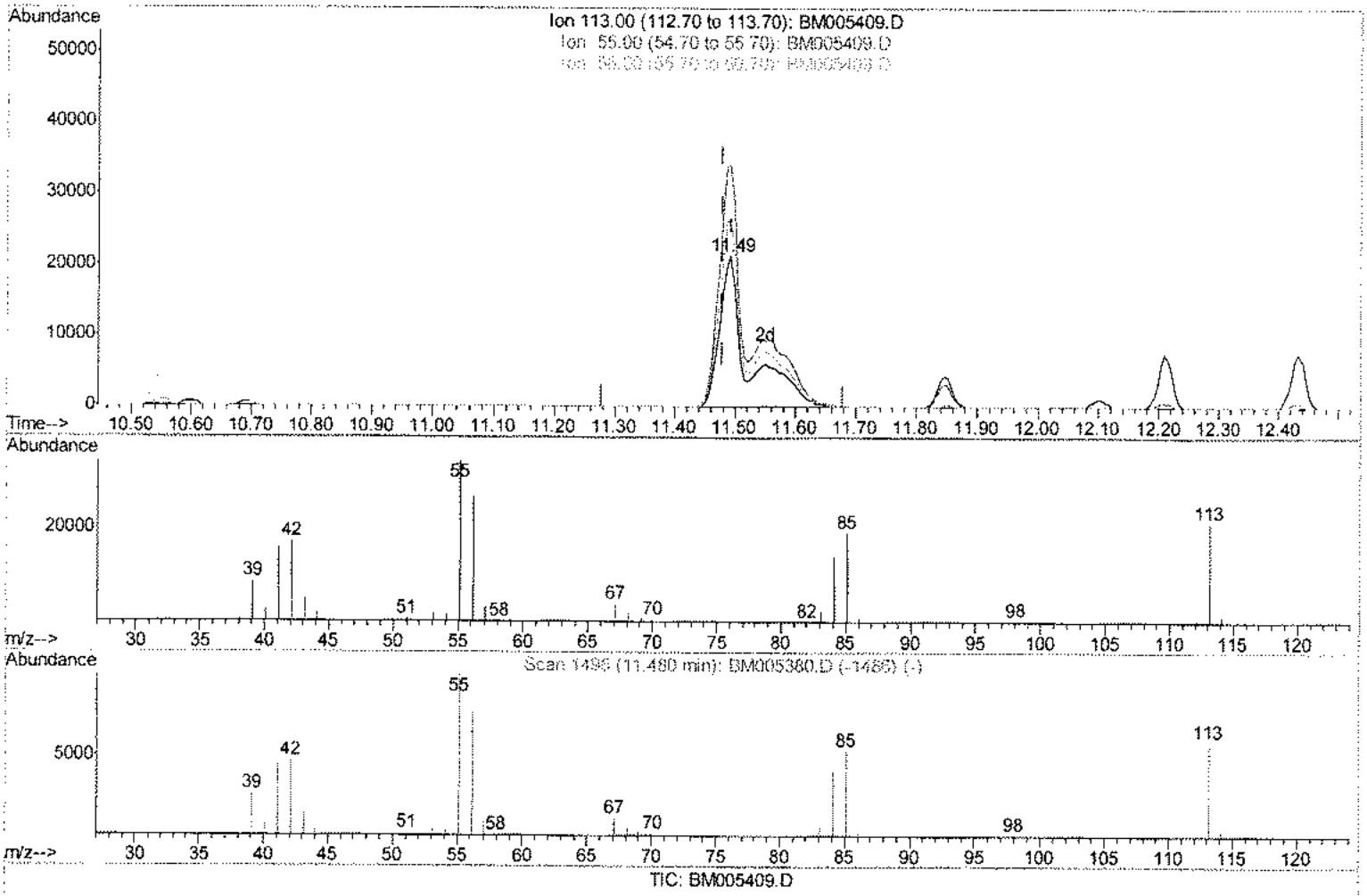
5/12/2016 7:20:59 PM



(32) Caprolactam

11.492min (+0.012) 19.95ng/ul m

response 70177

U.M 05/11/16

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	159.73
56.00	120.80	123.93
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005409.D
Acq On : 12 May 2016 05:11
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:42:21 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02063

Manual Integrations APPROVED
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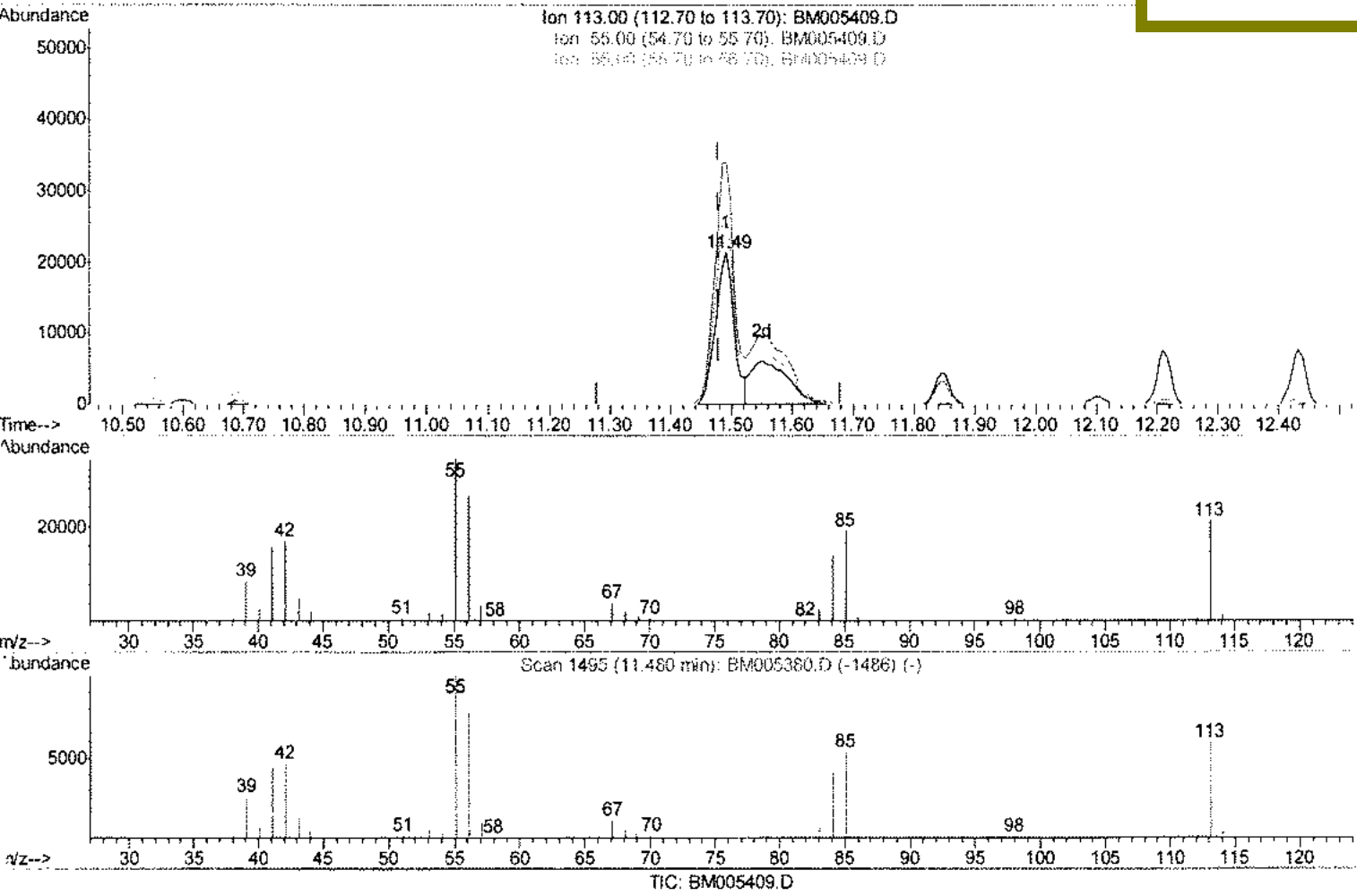
5/12/2016 7:20:59 PM



TIC: BM005409.D

(32) Caprolactam

11.492min (+0.012) 12.67ng/ul

response 44573

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	159.73
56.00	120.80	123.93
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005409.D
Acq On : 12 May 2016 05:11
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:44:01 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02063

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	134370	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	613673	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	378599	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	846623	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	700058	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	643964	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	21252	7.44	ng/uL	0.00
5) Phenol-d5	6.94	99	240785	19.76	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.10	67	136275	19.60	ng/ul	0.00
9) 2-Chlorophenol-d4	7.30	132	189028	20.54	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	196963	19.55	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	95922	21.89	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	112417	22.66	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	198588	21.54	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	262603	23.66	ng/ul	0.00
43) Dimethylphthalate-d6	13.82	166	621343	20.48	ng/ul	0.00
46) Acenaphthylene-d8	14.10	160	748921	21.04	ng/ul	0.00
51) 4-Nitrophenol-d4	14.63	143	106546	19.23	ng/ul	0.01
57) Fluorene-d10	15.40	176	530877	20.26	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	105950	22.25	ng/ul	0.00
70) Anthracene-d10	17.25	188	794857	21.24	ng/ul	0.00
76) Pyrene-d10	19.55	212	794999	24.60	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	595981	20.91	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	38140	7.32	ng/uL	95
4) Benzaldehyde	6.90	77	151252	25.62	ng/ul	96
6) Phenol	6.96	94	250060	19.85	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.19	93	185103	19.52	ng/ul	99
10) 2-Chlorophenol	7.33	128	191829	20.37	ng/ul	98
11) 2-Methylphenol	8.20	108	193095	19.83	ng/ul	98
12) 2,2'-oxybis(1-Chloropropan	8.29	45	255095	19.83	ng/ul	99
14) Acetophenone	8.58	105	303306	20.32	ng/ul	98
15) N-Nitroso-di-n-propylamine	8.57	70	154703	19.84	ng/ul	99
16) 4-Methylphenol	8.54	108	210745	19.51	ng/ul	98
17) Hexachloroethane	8.83	117	74021	20.89	ng/ul	92
20) Nitrobenzene	8.96	77	231265	21.08	ng/ul	97
21) Isophorone	9.48	82	445461	20.91	ng/ul	99
23) 2-Nitrophenol	9.67	139	117499	21.98	ng/ul	99
24) 2,4-Dimethylphenol	9.73	107	241656	21.31	ng/ul	96
25) Bis(2-Chloroethoxy)methane	9.96	93	260233	19.62	ng/ul	99
27) 2,4-Dichlorophenol	10.20	162	199185	21.10	ng/ul	98
28) Naphthalene	10.60	128	630001	20.40	ng/ul	100
30) 4-Chloroaniline	10.72	127	263507	23.28	ng/ul	98
31) Hexachlorobutadiene	10.87	225	126204	22.49	ng/ul	98
32) Caprolactam	11.49	113	70177m	19.95	ng/ul	
33) 4-Chloro-3-methylphenol	11.85	107	238145	21.04	ng/ul	99
34) 2-Methylnaphthalene	12.21	142	463045	20.05	ng/ul	100

U. M 05/16/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005409.D
Acq On : 12 May 2016 05:11
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 05:44:01 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02063

Manual Integrations APPROVED
sohil
5/12/2016 7:20:59 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.59	216	247135	21.46	ng/ul	98
37) Hexachlorocyclopentadiene	12.56	237	103603	17.61	ng/ul	97
38) 2,4,6-Trichlorophenol	12.83	196	167709	21.86	ng/ul	95
39) 2,4,5-Trichlorophenol	12.90	196	181620	21.34	ng/ul	97
40) 1,1'-Biphenyl	13.23	154	611896	20.40	ng/ul	99
41) 2-Chloronaphthalene	13.27	162	475116	20.95	ng/ul	98
42) 2-Nitroaniline	13.49	65	157790	22.60	ng/ul	96
44) Dimethylphthalate	13.86	163	616864	20.34	ng/ul	100
45) 2,6-Dinitrotoluene	13.99	165	134958	22.57	ng/ul#	88
47) Acenaphthylene	14.13	152	780372	20.72	ng/ul	99
48) 3-Nitroaniline	14.32	138	143446	22.50	ng/ul	100
49) Acenaphthene	14.47	153	510676	20.58	ng/ul	99
50) 2,4-Dinitrophenol	14.53	184	64514	18.75	ng/ul	94
52) 4-Nitrophenol	14.64	109	92118	20.00	ng/ul	92
53) Dibenzofuran	14.80	168	729953	20.27	ng/ul	98
54) 2,4-Dinitrotoluene	14.78	165	192567	21.60	ng/ul	99
55) 2,3,4,6-Tetrachlorophenol	15.03	232	152463	21.07	ng/ul#	95
56) Diethylphthalate	15.23	149	632475	20.65	ng/ul	99
58) Fluorene	15.46	166	564748	20.06	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.44	204	283874	20.35	ng/ul	96
60) 4-Nitroaniline	15.49	138	147881m	21.89	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.55	198	110416	22.06	ng/ul#	88
64) N-Nitrosodiphenylamine	15.66	169	515404	22.23	ng/ul	99
65) 4-Bromophenyl-phenylether	16.34	248	183784	22.64	ng/ul	97
66) Hexachlorobenzene	16.46	284	202766	22.27	ng/ul	97
67) Atrazine	16.62	200	197955	23.40	ng/ul	100
68) Pentachlorophenol	16.81	266	94665	18.71	ng/ul	96
69) Phenanthrene	17.20	178	917543	20.61	ng/ul	99
71) Anthracene	17.29	178	930081	20.96	ng/ul	100
72) Carbazole	17.56	167	834815	21.38	ng/ul	99
73) Di-n-butylphthalate	18.12	149	1041856	21.87	ng/ul	100
74) Fluoranthene	19.22	202	1007365	20.43	ng/ul	97
77) Pyrene	19.58	202	991192	24.41	ng/ul	97
78) Butylbenzylphthalate	20.47	149	424552	25.18	ng/ul	97
79) 3,3'-Dichlorobenzidine	21.26	252	266689	21.19	ng/ul	97
80) Benzo(a)anthracene	21.33	228	841160	20.89	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.24	149	557195	23.79	ng/ul	98
82) Chrysene	21.38	228	791988	20.73	ng/ul	99
84) Di-n-octyl phthalate	22.13	149	907483	24.13	ng/ul	98
85) Benzo(b)fluoranthene	22.93	252	799288	21.23	ng/ul	99
86) Benzo(k)fluoranthene	22.97	252	734675	20.73	ng/ul	99
88) Benzo(a)pyrene	23.51	252	742421	20.85	ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.90	276	831659	21.41	ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	702447	21.61	ng/ul	98
91) Benzo(g,h,i)perylene	26.60	276	707432	21.50	ng/ul	98

U.M 05/16/16

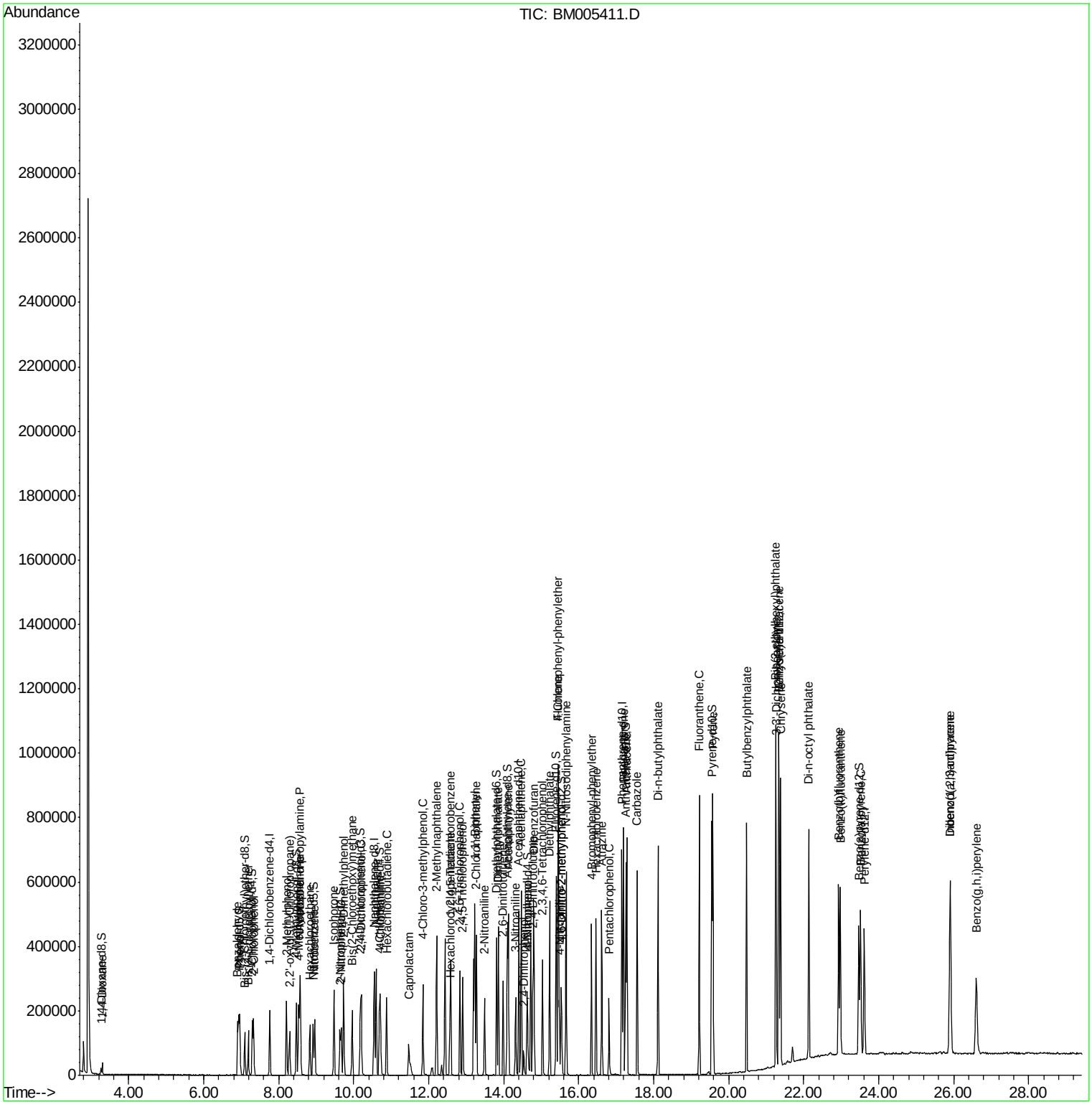
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005411.D
Acq On : 12 May 2016 09:36
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD02064

Quant Time: May 12 10:06:38 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005411.D
Acq On : 12 May 2016 09:36
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD02064

Quant Time: May 12 10:06:38 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	54492	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	264642	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	171012	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	411859	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	371272	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	290773	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	9253	7.98	ng/uL	0.00
5) Phenol-d5	6.93	99	99807	20.19	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	57130	20.26	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	76895	20.60	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	83316	20.40	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	39022	20.65	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	44683	20.89	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	86408	21.73	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	110843	23.16	ng/ul	0.00
43) Dimethylphthalate-d6	13.81	166	284062	20.72	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	338676	21.07	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	43243	17.28	ng/ul	0.00
57) Fluorene-d10	15.40	176	248223	20.97	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	40237	17.37	ng/ul	0.00
70) Anthracene-d10	17.25	188	386209	21.21	ng/ul	0.00
76) Pyrene-d10	19.54	212	422216	24.64	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	272394	21.16	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	16796	7.95	ng/uL	94
4) Benzaldehyde	6.90	77	60441	25.24	ng/ul	97
6) Phenol	6.96	94	105276	20.61	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.19	93	77744	20.22	ng/ul	99
10) 2-Chlorophenol	7.33	128	78105	20.46	ng/ul	97
11) 2-Methylphenol	8.20	108	79673	20.18	ng/ul	99
12) 2,2'-oxybis(1-Chloropropan	8.29	45	108337	20.77	ng/ul	99
14) Acetophenone	8.58	105	132391	21.87	ng/ul	98
15) N-Nitroso-di-n-propylamine	8.56	70	67768	21.43	ng/ul	99
16) 4-Methylphenol	8.53	108	90569	20.67	ng/ul	98
17) Hexachloroethane	8.83	117	29816	20.75	ng/ul	93
20) Nitrobenzene	8.96	77	96174	20.33	ng/ul	98
21) Isophorone	9.47	82	189993	20.68	ng/ul	98
23) 2-Nitrophenol	9.66	139	48654	21.11	ng/ul	97
24) 2,4-Dimethylphenol	9.73	107	103533	21.17	ng/ul	98
25) Bis(2-Chloroethoxy)methane	9.96	93	114453	20.01	ng/ul	99
27) 2,4-Dichlorophenol	10.20	162	87261	21.43	ng/ul	97
28) Naphthalene	10.59	128	272163	20.44	ng/ul	100
30) 4-Chloroaniline	10.71	127	113121	23.18	ng/ul	98
31) Hexachlorobutadiene	10.87	225	51861	21.43	ng/ul	99
32) Caprolactam	11.47	113	29863	19.68	ng/ul	94
33) 4-Chloro-3-methylphenol	11.84	107	107456	22.01	ng/ul	99
34) 2-Methylnaphthalene	12.21	142	208653	20.95	ng/ul	99

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005411.D
Acq On : 12 May 2016 09:36
Operator : UM/SJ
Sample : SSTDCCC020
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SSTD02064

Quant Time: May 12 10:06:38 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Thu May 12 02:20:05 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.58	216	110458	21.23 ng/ul	99
37) Hexachlorocyclopentadiene	12.56	237	37233	14.01 ng/ul	97
38) 2,4,6-Trichlorophenol	12.83	196	74202	21.42 ng/ul	94
39) 2,4,5-Trichlorophenol	12.90	196	83912	21.83 ng/ul	98
40) 1,1'-Biphenyl	13.23	154	280097	20.68 ng/ul	99
41) 2-Chloronaphthalene	13.27	162	211620	20.66 ng/ul	98
42) 2-Nitroaniline	13.49	65	67792	21.50 ng/ul	97
44) Dimethylphthalate	13.86	163	283252	20.68 ng/ul	100
45) 2,6-Dinitrotoluene	13.98	165	58647	21.71 ng/ul	92
47) Acenaphthylene	14.12	152	355182	20.88 ng/ul	99
48) 3-Nitroaniline	14.32	138	60914	21.16 ng/ul	95
49) Acenaphthene	14.46	153	231785	20.68 ng/ul	98
50) 2,4-Dinitrophenol	14.53	184	20016	12.88 ng/ul	95
52) 4-Nitrophenol	14.63	109	38000	18.27 ng/ul	96
53) Dibenzofuran	14.80	168	338148	20.79 ng/ul	98
54) 2,4-Dinitrotoluene	14.77	165	86393	21.45 ng/ul	99
55) 2,3,4,6-Tetrachlorophenol	15.03	232	70165	21.47 ng/ul#	99
56) Diethylphthalate	15.22	149	290019	20.96 ng/ul	99
58) Fluorene	15.45	166	270627	21.28 ng/ul	100
59) 4-Chlorophenyl-phenylether	15.45	204	135866	21.56 ng/ul	98
60) 4-Nitroaniline	15.48	138	62379	20.44 ng/ul	95
63) 4,6-Dinitro-2-methylphenol	15.54	198	41728	17.14 ng/ul#	94
64) N-Nitrosodiphenylamine	15.66	169	242435	21.50 ng/ul	100
65) 4-Bromophenyl-phenylether	16.34	248	87581	22.18 ng/ul	97
66) Hexachlorobenzene	16.46	284	97500	22.01 ng/ul	98
67) Atrazine	16.62	200	94357	22.93 ng/ul	99
68) Pentachlorophenol	16.80	266	44562	18.11 ng/ul	97
69) Phenanthrene	17.19	178	456307	21.07 ng/ul	99
71) Anthracene	17.28	178	461500	21.37 ng/ul	99
72) Carbazole	17.56	167	414281	21.81 ng/ul	99
73) Di-n-butylphthalate	18.11	149	511565	22.08 ng/ul	100
74) Fluoranthene	19.21	202	531086	22.14 ng/ul	99
77) Pyrene	19.57	202	530555	24.64 ng/ul	99
78) Butylbenzylphthalate	20.47	149	223732	25.02 ng/ul	98
79) 3,3'-Dichlorobenzidine	21.26	252	131404	19.69 ng/ul	99
80) Benzo(a)anthracene	21.33	228	447709	20.96 ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.25	149	303592	24.44 ng/ul#	99
82) Chrysene	21.38	228	419860	20.72 ng/ul	99
84) Di-n-octyl phthalate	22.13	149	462721	27.25 ng/ul	99
85) Benzo(b)fluoranthene	22.93	252	365834	21.52 ng/ul	99
86) Benzo(k)fluoranthene	22.97	252	354860	22.18 ng/ul	99
88) Benzo(a)pyrene	23.52	252	342320	21.29 ng/ul	99
89) Indeno(1,2,3-cd)pyrene	25.90	276	365437	20.83 ng/ul	97
90) Dibenzo(a,h)anthracene	25.91	278	309590	21.09 ng/ul	98
91) Benzo(g,h,i)perylene	26.60	276	306696	20.65 ng/ul	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005425.D
Acq On : 12 May 2016 18:40
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:08:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02065

Manual Integrations APPROVED
sohil
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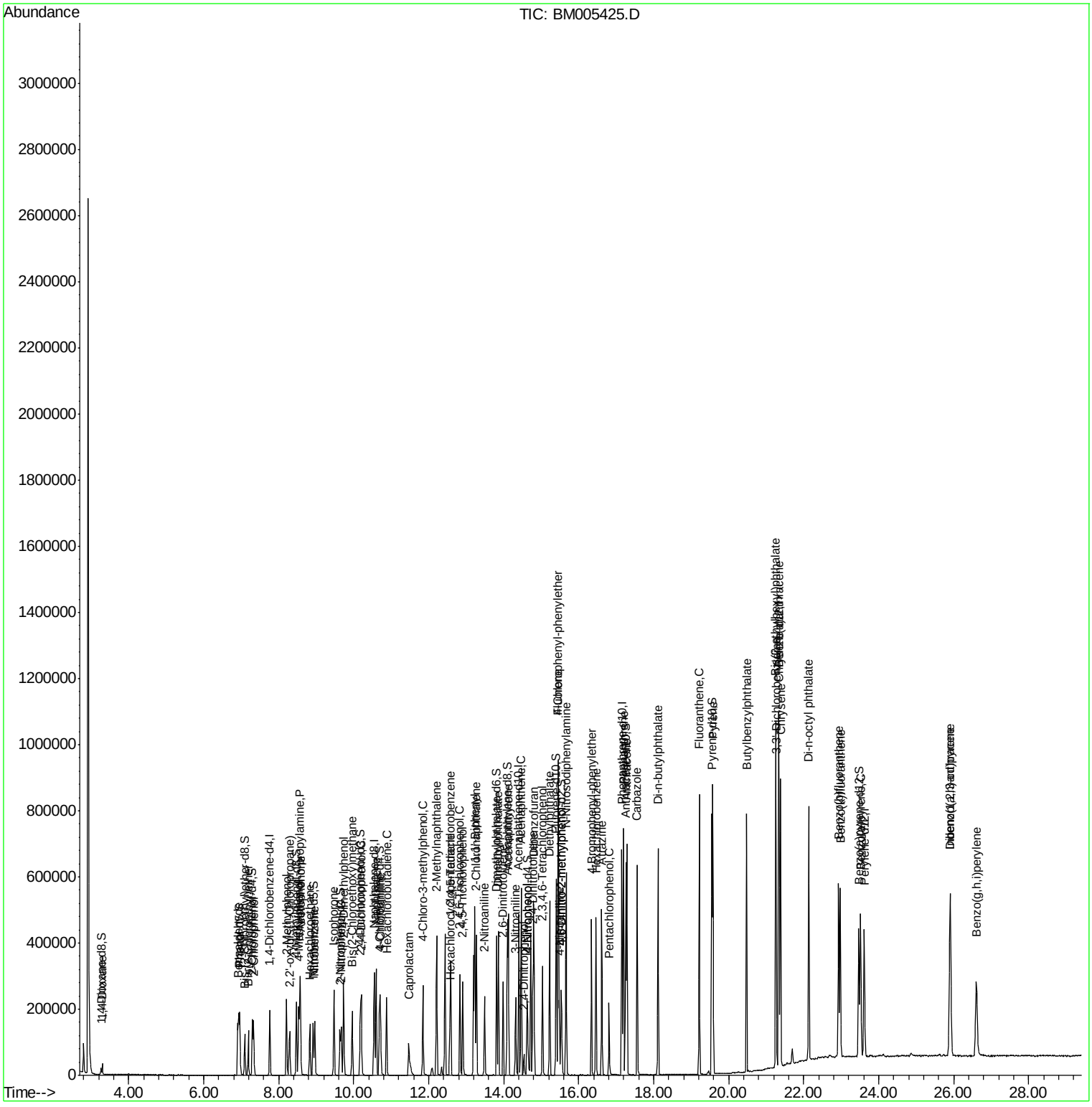

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005425.D
Acq On : 12 May 2016 18:40
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SSTD02065

Manual Integrations APPROVED
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5/13/2016 8:02:55 PM

Quant Time: May 13 04:08:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	52731	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	254300	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	168320	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	401493	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	377372	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	281568	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	8985	8.01	ng/uL	0.00
5) Phenol-d5	6.93	99	97373	20.36	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	55732	20.43	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	74617	20.66	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	81515	20.62	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	38018	20.94	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	43170	21.00	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	84152	22.03	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	107915	23.47	ng/ul	0.00
43) Dimethylphthalate-d6	13.81	166	278046	20.61	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	328342	20.75	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	39939	16.22	ng/ul	0.00
57) Fluorene-d10	15.40	176	242535	20.82	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	37336	16.53	ng/ul	0.00
70) Anthracene-d10	17.25	188	375552	21.16	ng/ul	0.00
76) Pyrene-d10	19.54	212	420517	24.14	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	265214	21.28	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	16145	7.90	ng/uL	95
4) Benzaldehyde	6.90	77	58471	25.23	ng/ul	99
6) Phenol	6.96	94	102075	20.65	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.19	93	75454	20.28	ng/ul	98
10) 2-Chlorophenol	7.33	128	75655	20.48	ng/ul	98
11) 2-Methylphenol	8.20	108	78056	20.43	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.29	45	106352	21.07	ng/ul	99
14) Acetophenone	8.57	105	127701	21.80	ng/ul	98
15) N-Nitroso-di-n-propylamine	8.56	70	65725	21.48	ng/ul	99
16) 4-Methylphenol	8.53	108	88131	20.79	ng/ul	98
17) Hexachloroethane	8.83	117	29207	21.01	ng/ul	92
20) Nitrobenzene	8.96	77	93295	20.52	ng/ul	98
21) Isophorone	9.47	82	183802	20.82	ng/ul#	98
23) 2-Nitrophenol	9.66	139	46688	21.08	ng/ul	96
24) 2,4-Dimethylphenol	9.73	107	100752	21.44	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.96	93	110722	20.14	ng/ul	100
27) 2,4-Dichlorophenol	10.20	162	85249	21.79	ng/ul	99
28) Naphthalene	10.59	128	265032	20.71	ng/ul	98
30) 4-Chloroaniline	10.71	127	109833	23.42	ng/ul	96
31) Hexachlorobutadiene	10.87	225	51043	21.95	ng/ul	98
32) Caprolactam	11.47	113	28807m	19.76	ng/ul	
33) 4-Chloro-3-methylphenol	11.84	107	104365	22.25	ng/ul	99
34) 2-Methylnaphthalene	12.21	142	203612	21.28	ng/ul	100

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005425.D
Acq On : 12 May 2016 18:40
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:08:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02065

Manual Integrations APPROVED
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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.58	216	106261	20.75	ng/ul	99
37) Hexachlorocyclopentadiene	12.56	237	35839	13.70	ng/ul	95
38) 2,4,6-Trichlorophenol	12.83	196	71793	21.05	ng/ul	96
39) 2,4,5-Trichlorophenol	12.90	196	78444	20.73	ng/ul	98
40) 1,1'-Biphenyl	13.23	154	269375	20.20	ng/ul	99
41) 2-Chloronaphthalene	13.27	162	206691	20.50	ng/ul	99
42) 2-Nitroaniline	13.49	65	66542	21.44	ng/ul	96
44) Dimethylphthalate	13.86	163	276571	20.52	ng/ul	100
45) 2,6-Dinitrotoluene	13.98	165	56562	21.28	ng/ul	94
47) Acenaphthylene	14.12	152	348111	20.79	ng/ul	100
48) 3-Nitroaniline	14.32	138	60311	21.28	ng/ul	97
49) Acenaphthene	14.46	153	226509	20.53	ng/ul	99
50) 2,4-Dinitrophenol	14.53	184	16763	10.96	ng/ul	94
52) 4-Nitrophenol	14.63	109	35299	17.24	ng/ul	98
53) Dibenzofuran	14.80	168	331872	20.73	ng/ul	99
54) 2,4-Dinitrotoluene	14.77	165	84318	21.27	ng/ul	100
55) 2,3,4,6-Tetrachlorophenol	15.03	232	66583	20.70	ng/ul#	97
56) Diethylphthalate	15.22	149	282961	20.78	ng/ul	99
58) Fluorene	15.45	166	266991	21.33	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.45	204	134034	21.61	ng/ul	99
60) 4-Nitroaniline	15.48	138	60552m	20.16	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	39838	16.79	ng/ul#	95
64) N-Nitrosodiphenylamine	15.66	169	238296	21.67	ng/ul	100
65) 4-Bromophenyl-phenylether	16.34	248	84907	22.06	ng/ul	97
66) Hexachlorobenzene	16.46	284	95410	22.10	ng/ul	97
67) Atrazine	16.62	200	92104	22.96	ng/ul	99
68) Pentachlorophenol	16.81	266	40241	16.77	ng/ul	94
69) Phenanthrene	17.19	178	444548	21.06	ng/ul	100
71) Anthracene	17.28	178	449957	21.38	ng/ul	99
72) Carbazole	17.56	167	402052	21.71	ng/ul	99
73) Di-n-butylphthalate	18.11	149	491264	21.75	ng/ul	100
74) Fluoranthene	19.21	202	525815	22.48	ng/ul	99
77) Pyrene	19.57	202	526647	24.06	ng/ul	99
78) Butylbenzylphthalate	20.47	149	222745	24.51	ng/ul	97
79) 3,3'-Dichlorobenzidine	21.26	252	128137	18.89	ng/ul	97
80) Benzo(a)anthracene	21.33	228	448664	20.67	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.25	149	312934	24.79	ng/ul#	97
82) Chrysene	21.38	228	426318	20.70	ng/ul	100
84) Di-n-octyl phthalate	22.13	149	483526	29.40	ng/ul	99
85) Benzo(b)fluoranthene	22.93	252	366664	22.28	ng/ul	99
86) Benzo(k)fluoranthene	22.97	252	344652	22.24	ng/ul	99
88) Benzo(a)pyrene	23.51	252	333087	21.40	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.90	276	349332	20.57	ng/ul	97
90) Dibenzo(a,h)anthracene	25.90	278	294678	20.73	ng/ul	99
91) Benzo(g,h,i)perylene	26.60	276	294178	20.45	ng/ul	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005425.D
Acq On : 12 May 2016 18:40
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:08:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02065

Manual Integrations APPROVED
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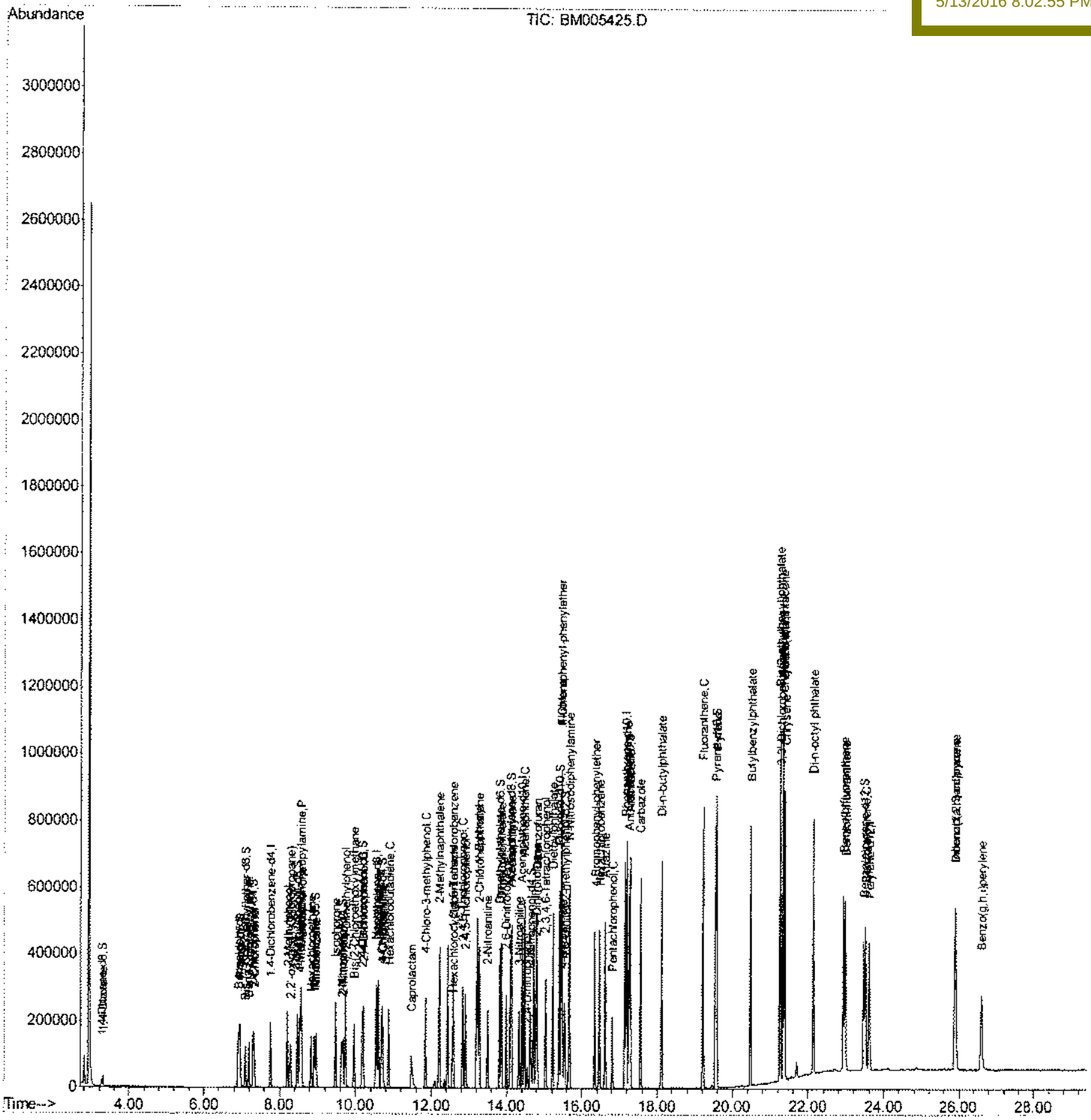
5/13/2016 8:02:55 PM



Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005425.D
Acq On : 12 May 2016 18:40
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 03:24:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02065

Manual Integrations APPROVED
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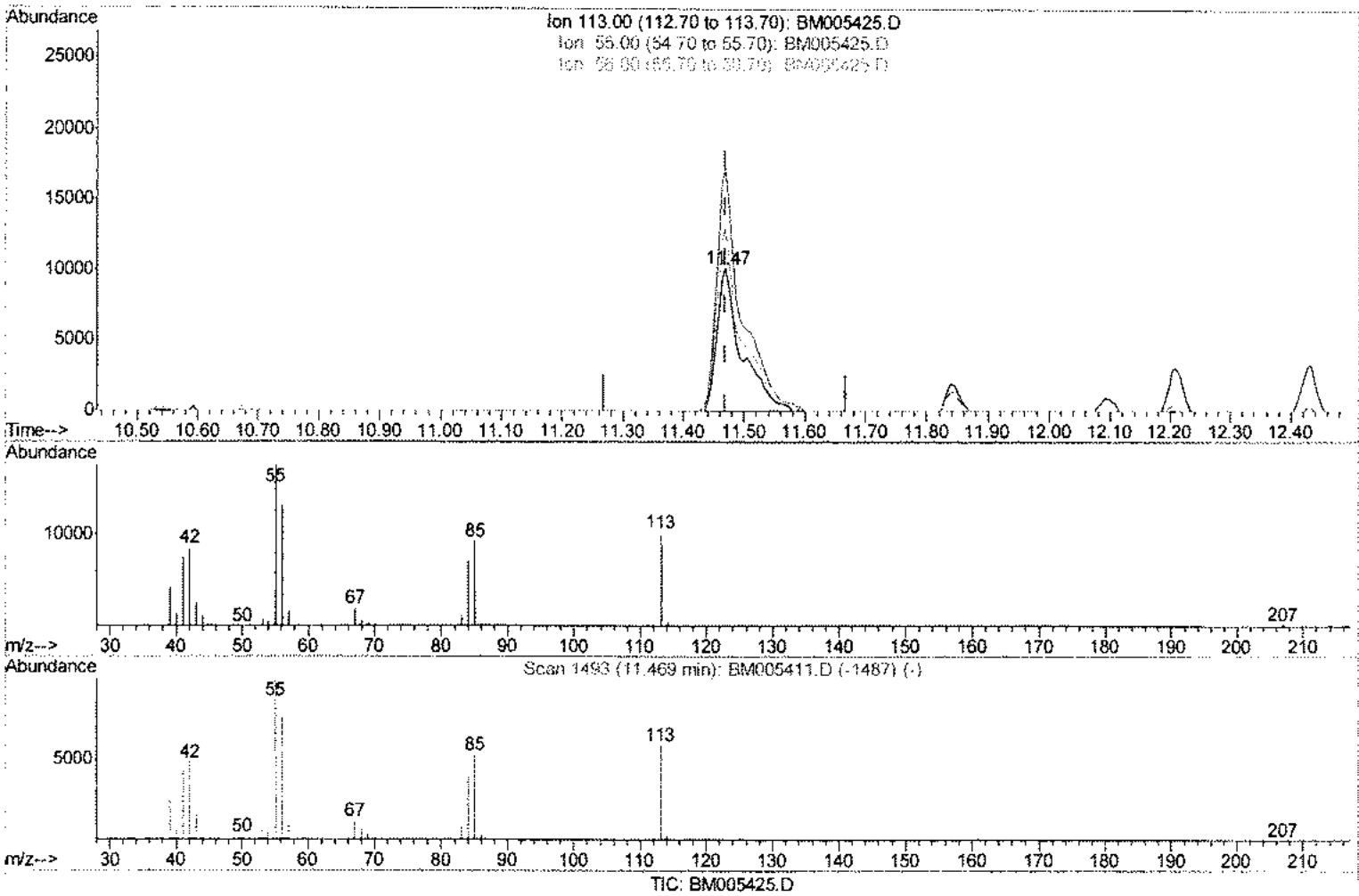
5/13/2016 8:02:55 PM



TIC: BM005425.D

(32) Caprolactam

11.469min (-0.000) 19.76ng/ul m

response 28807

> U.M 05/16/16

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	170.54
56.00	120.80	128.14
0.00	0.00	0.00

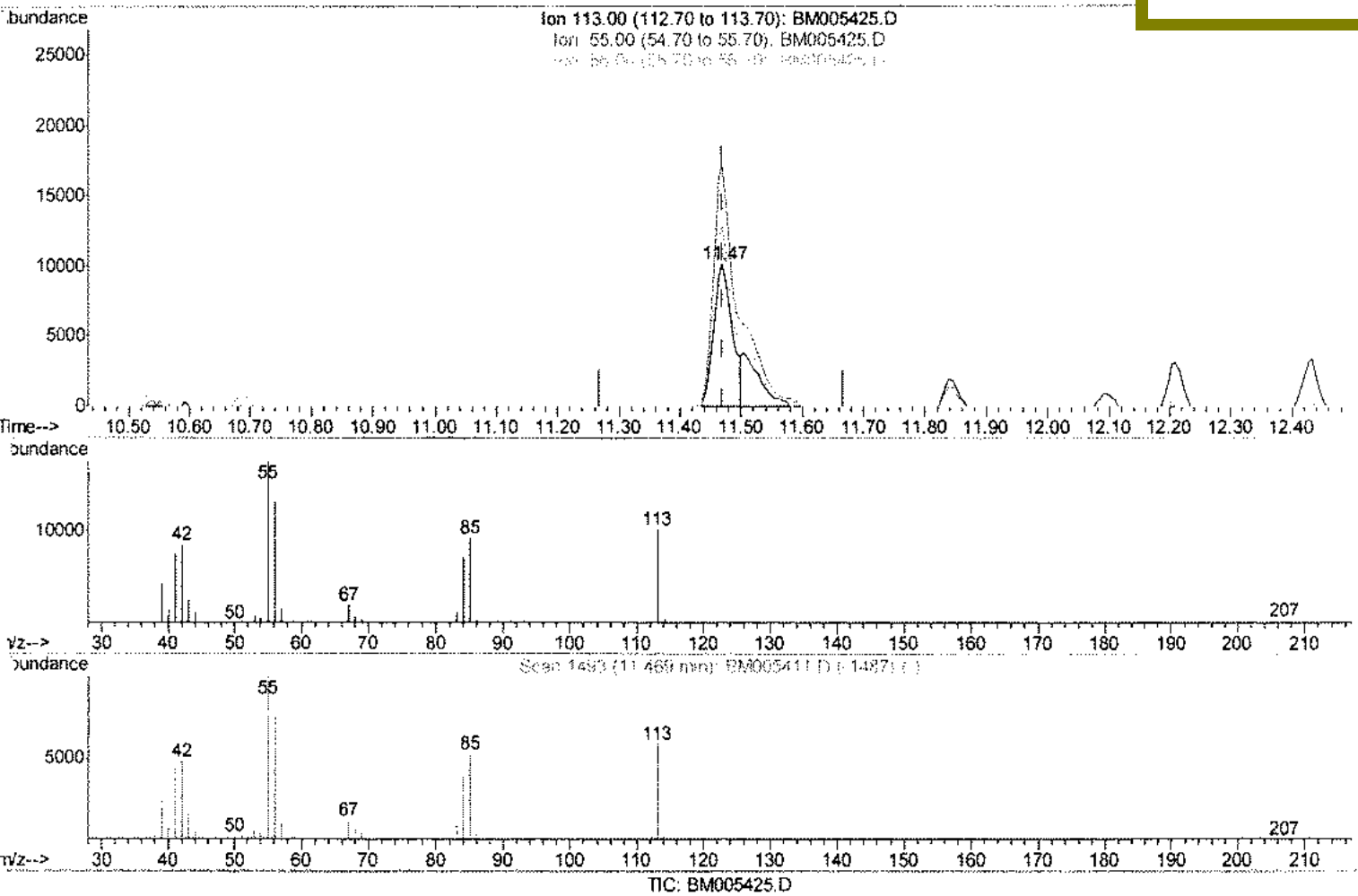
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005425.D
Acq On : 12 May 2016 18:40
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 03:24:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02065

Manual Integrations APPROVED
sohil
5/13/2016 8:02:55 PM



TIC: BM005425.D

(32) Caprolactam

11.469min (-0.000) 14.54ng/ul

response 21203

Ion	Exp%	Act%
113.00	100	100
55.00	168.20	170.54
56.00	120.80	128.14
0.00	0.00	0.00

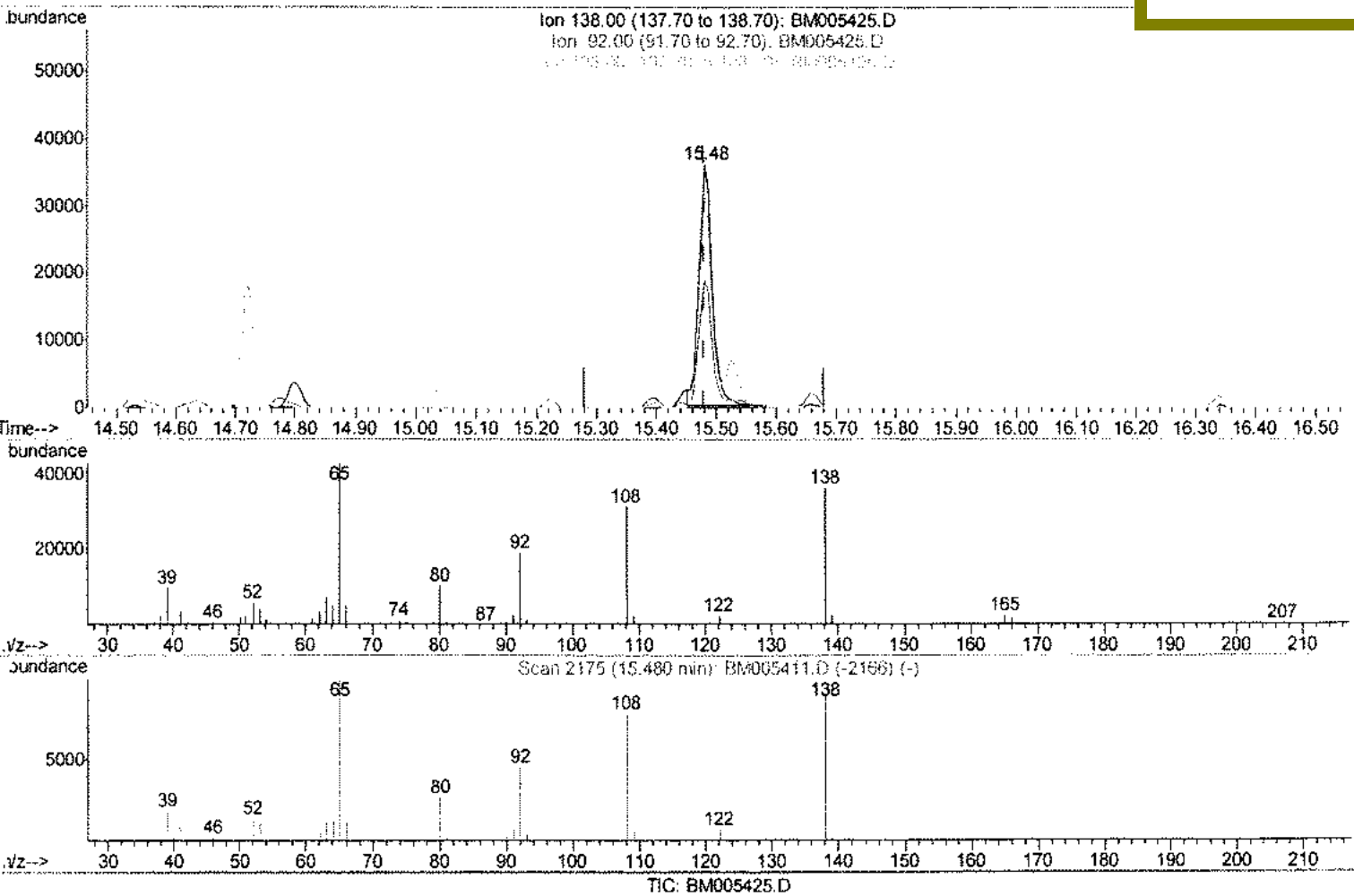
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005425.D
Acq On : 12 May 2016 18:40
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 03:24:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02065

Manual Integrations APPROVED
sohil
5/13/2016 8:02:55 PM



(60) 4-Nitroaniline

15.480min (-0.000) 18.35ng/ul

response 55125

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	52.28
108.00	82.90	86.41
0.00	0.00	0.00

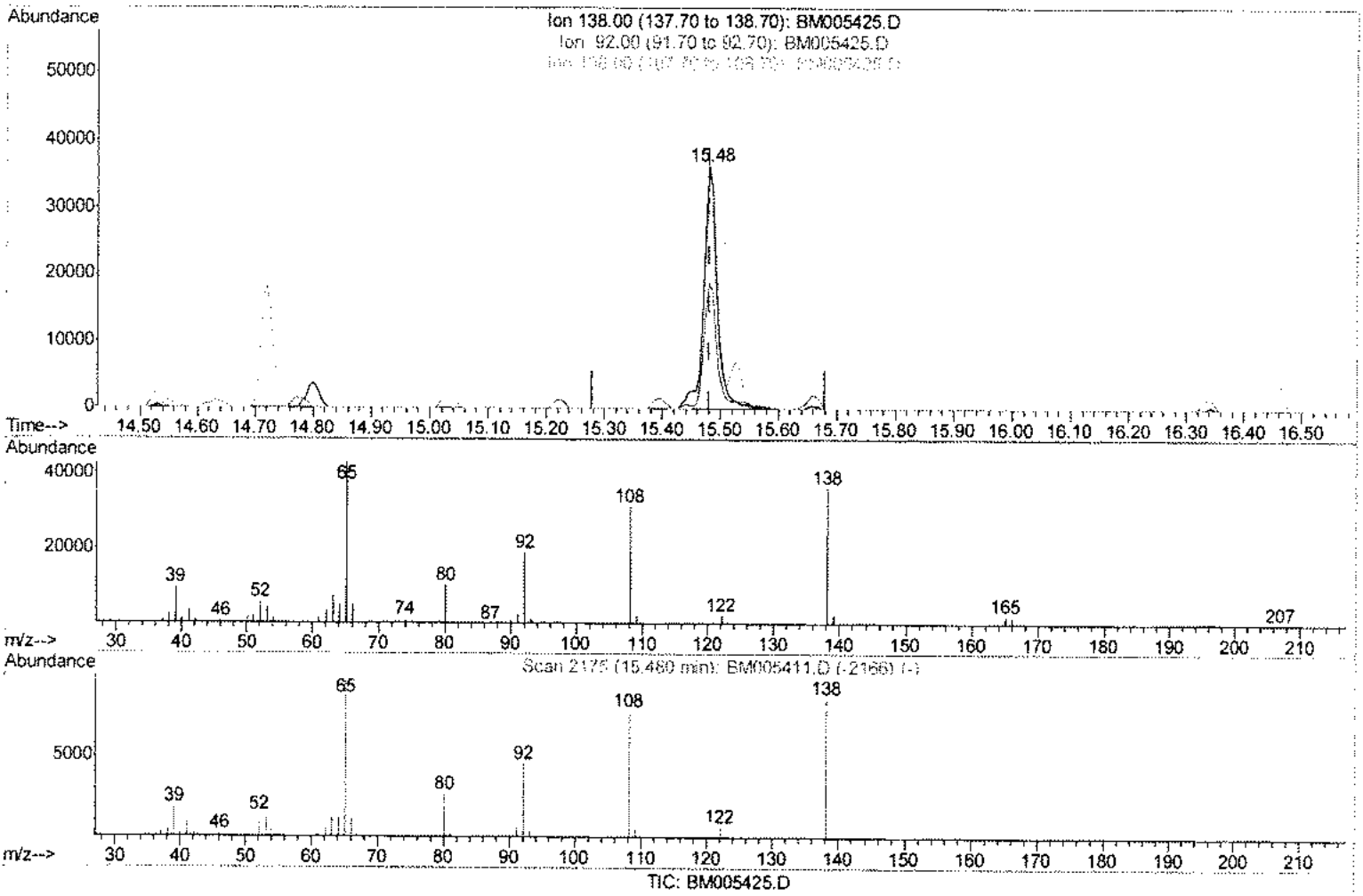
Quantitation Report (Qedit)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005425.D
Acq On : 12 May 2016 18:40
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 03:24:36 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument :
BNA_M
ClientSampleId :
SSTD02065

Manual Integrations APPROVED
sohil
5/13/2016 8:02:55 PM



TIC: BM005425.D

(60) 4-Nitroaniline

15.480min (-0.000) 20.16ng/ul m

response 60552

> U.M 05116116

Ion	Exp%	Act%
138.00	100	100
92.00	55.40	52.28
108.00	82.90	86.41
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005425.D
Acq On : 12 May 2016 18:40
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:08:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02065

Manual Integrations APPROVED
sohil
5/13/2016 8:02:55 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	52731	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	254300	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	168320	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	401493	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	377372	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	281568	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	8985	8.01	ng/uL	0.00
5) Phenol-d5	6.93	99	97373	20.36	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	55732	20.43	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	74617	20.66	ng/ul	0.00
13) 4-Methylphenol-d8	8.47	113	81515	20.62	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	38018	20.94	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	43170	21.00	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	84152	22.03	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	107915	23.47	ng/ul	0.00
43) Dimethylphthalate-d6	13.81	166	278046	20.61	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	328342	20.75	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	39939	16.22	ng/ul	0.00
57) Fluorene-d10	15.40	176	242535	20.82	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	37336	16.53	ng/ul	0.00
70) Anthracene-d10	17.25	188	375552	21.16	ng/ul	0.00
76) Pyrene-d10	19.54	212	420517	24.14	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	265214	21.28	ng/ul	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	3.29	88	16145	7.90	ng/uL	95
4) Benzaldehyde	6.90	77	58471	25.23	ng/ul	99
6) Phenol	6.96	94	102075	20.65	ng/ul	98
8) Bis(2-Chloroethyl)ether	7.19	93	75454	20.28	ng/ul	98
10) 2-Chlorophenol	7.33	128	75655	20.48	ng/ul	98
11) 2-Methylphenol	8.20	108	78056	20.43	ng/ul	97
12) 2,2'-oxybis(1-Chloropropan	8.29	45	106352	21.07	ng/ul	99
14) Acetophenone	8.57	105	127701	21.80	ng/ul	98
15) N-Nitroso-di-n-propylamine	8.56	70	65725	21.48	ng/ul	99
16) 4-Methylphenol	8.53	108	88131	20.79	ng/ul	98
17) Hexachloroethane	8.83	117	29207	21.01	ng/ul	92
20) Nitrobenzene	8.96	77	93295	20.52	ng/ul	98
21) Isophorone	9.47	82	183802	20.82	ng/ul#	98
23) 2-Nitrophenol	9.66	139	46688	21.08	ng/ul	96
24) 2,4-Dimethylphenol	9.73	107	100752	21.44	ng/ul	97
25) Bis(2-Chloroethoxy)methane	9.96	93	110722	20.14	ng/ul	100
27) 2,4-Dichlorophenol	10.20	162	85249	21.79	ng/ul	99
28) Naphthalene	10.59	128	265032	20.71	ng/ul	98
30) 4-Chloroaniline	10.71	127	109833	23.42	ng/ul	96
31) Hexachlorobutadiene	10.87	225	51043	21.95	ng/ul	98
32) Caprolactam	11.47	113	28807m	19.76	ng/ul	
33) 4-Chloro-3-methylphenol	11.84	107	104365	22.25	ng/ul	99
34) 2-Methylnaphthalene	12.21	142	203612	21.28	ng/ul	100

U.M 05/16/16

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005425.D
Acq On : 12 May 2016 18:40
Operator : UM/SJ
Sample : SSTDCCC020EC
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 04:08:57 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Instrument : BNA_M
ClientSampleId : SSTD02065

Manual Integrations APPROVED
sohil
5/13/2016 8:02:55 PM

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 1,2,4,5-Tetrachlorobenzene	12.58	216	106261	20.75	ng/ul	99
37) Hexachlorocyclopentadiene	12.56	237	35839	13.70	ng/ul	95
38) 2,4,6-Trichlorophenol	12.83	196	71793	21.05	ng/ul	96
39) 2,4,5-Trichlorophenol	12.90	196	78444	20.73	ng/ul	98
40) 1,1'-Biphenyl	13.23	154	269375	20.20	ng/ul	99
41) 2-Chloronaphthalene	13.27	162	206691	20.50	ng/ul	99
42) 2-Nitroaniline	13.49	65	66542	21.44	ng/ul	96
44) Dimethylphthalate	13.86	163	276571	20.52	ng/ul	100
45) 2,6-Dinitrotoluene	13.98	165	56562	21.28	ng/ul	94
47) Acenaphthylene	14.12	152	348111	20.79	ng/ul	100
48) 3-Nitroaniline	14.32	138	60311	21.28	ng/ul	97
49) Acenaphthene	14.46	153	226509	20.53	ng/ul	99
50) 2,4-Dinitrophenol	14.53	184	16763	10.96	ng/ul	94
52) 4-Nitrophenol	14.63	109	35299	17.24	ng/ul	98
53) Dibenzofuran	14.80	168	331872	20.73	ng/ul	99
54) 2,4-Dinitrotoluene	14.77	165	84318	21.27	ng/ul	100
55) 2,3,4,6-Tetrachlorophenol	15.03	232	66583	20.70	ng/ul#	97
56) Diethylphthalate	15.22	149	282961	20.78	ng/ul	99
58) Fluorene	15.45	166	266991	21.33	ng/ul	99
59) 4-Chlorophenyl-phenylether	15.45	204	134034	21.61	ng/ul	99
60) 4-Nitroaniline	15.48	138	60552m	20.16	ng/ul	
63) 4,6-Dinitro-2-methylphenol	15.54	198	39838	16.79	ng/ul#	95
64) N-Nitrosodiphenylamine	15.66	169	238296	21.67	ng/ul	100
65) 4-Bromophenyl-phenylether	16.34	248	84907	22.06	ng/ul	97
66) Hexachlorobenzene	16.46	284	95410	22.10	ng/ul	97
67) Atrazine	16.62	200	92104	22.96	ng/ul	99
68) Pentachlorophenol	16.81	266	40241	16.77	ng/ul	94
69) Phenanthrene	17.19	178	444548	21.06	ng/ul	100
71) Anthracene	17.28	178	449957	21.38	ng/ul	99
72) Carbazole	17.56	167	402052	21.71	ng/ul	99
73) Di-n-butylphthalate	18.11	149	491264	21.75	ng/ul	100
74) Fluoranthene	19.21	202	525815	22.48	ng/ul	99
77) Pyrene	19.57	202	526647	24.06	ng/ul	99
78) Butylbenzylphthalate	20.47	149	222745	24.51	ng/ul	97
79) 3,3'-Dichlorobenzidine	21.26	252	128137	18.89	ng/ul	97
80) Benzo(a)anthracene	21.33	228	448664	20.67	ng/ul	99
81) Bis(2-ethylhexyl)phthalate	21.25	149	312934	24.79	ng/ul#	97
82) Chrysene	21.38	228	426318	20.70	ng/ul	100
84) Di-n-octyl phthalate	22.13	149	483526	29.40	ng/ul	99
85) Benzo(b)fluoranthene	22.93	252	366664	22.28	ng/ul	99
86) Benzo(k)fluoranthene	22.97	252	344652	22.24	ng/ul	99
88) Benzo(a)pyrene	23.51	252	333087	21.40	ng/ul	100
89) Indeno(1,2,3-cd)pyrene	25.90	276	349332	20.57	ng/ul	97
90) Dibenzo(a,h)anthracene	25.90	278	294678	20.73	ng/ul	99
91) Benzo(g,h,i)perylene	26.60	276	294178	20.45	ng/ul	98

U.M 05/16/16

(#) = qualifier out of range (m) = manual integration (+) = signals summed

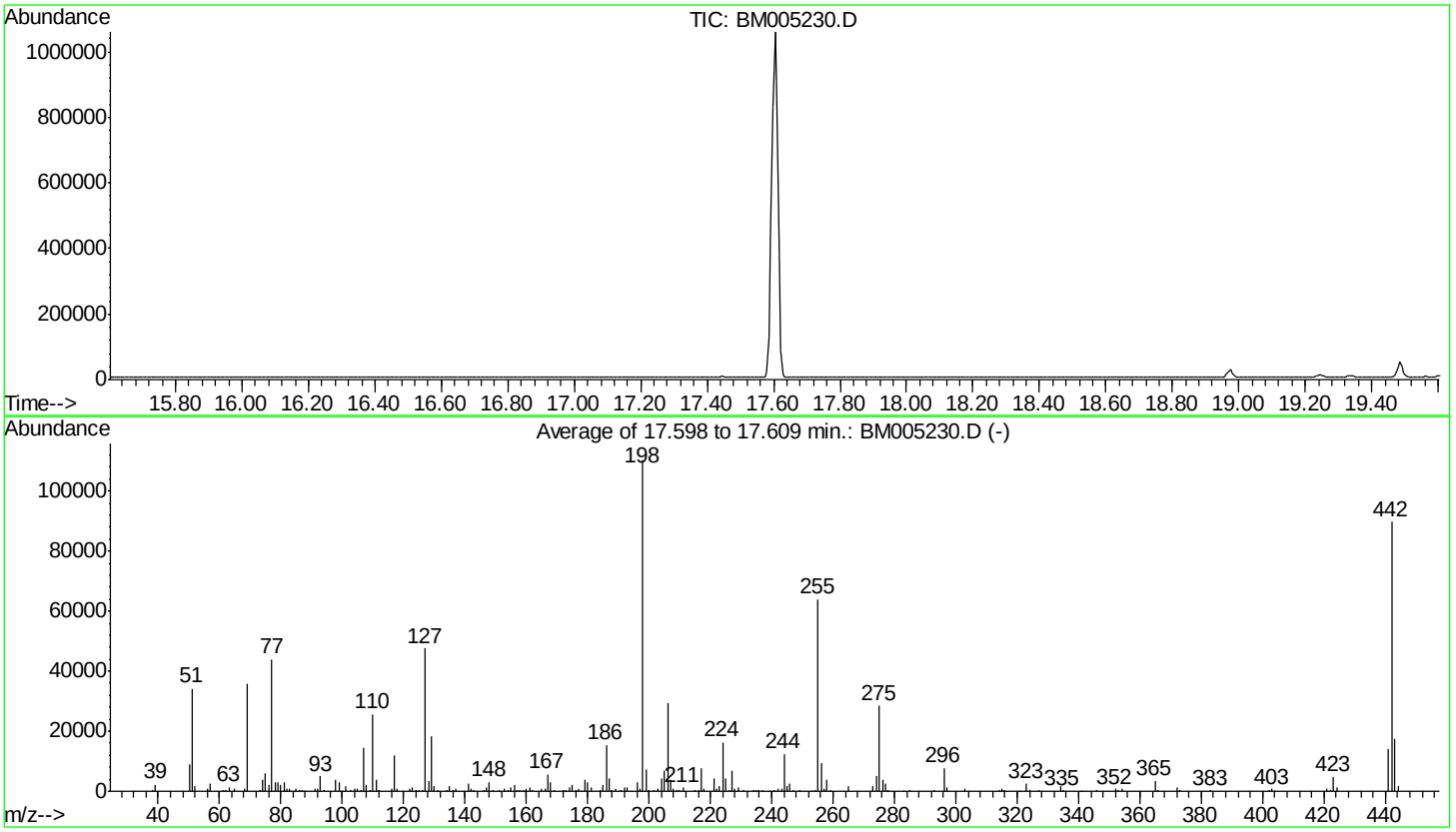
DFTPP

Data Path : Z:\HPCHEM1\BNA_M\Data\BM050516\
Data File : BM005230.D
Acq On : 05 May 2016 10:23
Operator : UM/SJ
Sample : DFTPP64
Misc :
ALS Vial : 1 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : DFTPP64

Integration File: LSCINT.P

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION
Last Update : Sat May 07 07:05:19 2016



AutoFind: Scans 2535, 2536, 2537; Background Corrected with Scan 2530

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	31.0	34217	PASS
68	69	0.00	2	1.8	659	PASS
69	198	0.00	100	32.4	35757	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	43.1	47546	PASS
197	198	0.00	2	0.7	792	PASS
198	198	100	100	100.0	110320	PASS
199	198	5	9	6.7	7441	PASS
275	198	10	60	25.7	28354	PASS
365	198	1	100	3.2	3476	PASS
441	443	0.01	100	79.3	13888	PASS
442	198	50	100	81.3	89733	PASS
443	442	15	24	19.5	17511	PASS

Scan 2530 (17.568 min): BM005230.D
DFTPP64

m/z	Abundance
44.00	519.0
47.00	617.0
49.00	2627.0
51.00	900.0
84.00	2048.0
86.00	1264.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

Scan 2535 (17.598 min): BM005230.D
DFTPP64

m/z	Abundance
38.00	406.0
39.10	2380.0
44.00	354.0
47.00	345.0
49.00	2022.0
50.10	9141.0
51.10	36032.0
52.10	1876.0
56.00	1048.0
57.00	2579.0
61.00	451.0
62.00	500.0
63.00	1540.0
65.10	757.0
68.00	668.0
69.00	35840.0
73.00	405.0
74.10	3676.0
75.00	6149.0
76.10	2327.0
77.10	45112.0
78.10	3248.0
79.00	3053.0
80.00	2218.0
81.00	3242.0
82.00	790.0
83.00	823.0
84.00	1527.0
85.00	673.0
86.00	1887.0
87.00	423.0
87.90	327.0
91.00	611.0
92.00	752.0
93.00	5149.0
94.00	321.0
98.00	3964.0
99.00	3167.0
101.00	1833.0
103.00	496.0
104.00	1015.0
105.00	1090.0
106.10	351.0
107.00	13953.0
108.00	2163.0
109.10	387.0
110.00	25256.0
111.00	3942.0
112.00	505.0
116.00	742.0
117.00	11558.0
118.00	927.0
122.00	841.0
123.00	1346.0
124.00	594.0
124.90	662.0
126.20	322.0
127.10	46136.0
128.00	3539.0
129.00	17656.0
130.00	1569.0
134.00	527.0
135.00	1362.0
136.00	598.0
137.10	852.0
141.00	2457.0
142.00	837.0
143.00	495.0
146.00	405.0
147.00	1262.0
148.00	2869.0
149.00	595.0
151.00	303.0
153.00	823.0
154.00	542.0
155.00	1384.0
156.00	2064.0
157.10	395.0
158.00	465.0
159.00	309.0
160.00	736.0
161.00	1172.0
162.00	312.0
165.00	936.0
166.10	725.0
167.00	5242.0
168.00	2705.0
169.00	469.0
172.00	373.0
173.00	607.0
174.00	1029.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

175.10	1947.0
176.10	544.0
177.00	920.0
179.00	3586.0
180.10	2706.0
181.00	1174.0
184.10	331.0
185.00	1711.0
186.10	14171.0
187.00	4055.0
188.00	538.0
189.00	852.0
191.00	395.0
192.00	1174.0
193.00	1409.0
194.10	318.0
196.00	2657.0
197.20	710.0
198.00	101448.0
199.00	7050.0
200.00	595.0
201.50	438.0
203.00	730.0
204.10	3526.0
205.10	6507.0
206.10	26568.0
207.10	3747.0
208.00	887.0
209.00	326.0
210.10	376.0
211.10	1027.0
216.00	613.0
217.00	7204.0
218.00	910.0
221.10	4006.0
221.80	896.0
223.00	1489.0
224.10	14596.0
225.10	3736.0
226.10	419.0
227.00	6253.0
228.00	917.0
229.00	1294.0
231.00	504.0
234.00	349.0
235.00	398.0
236.00	313.0
237.00	675.0
242.00	739.0
243.10	801.0
244.10	10751.0
245.10	1396.0
246.00	2293.0
247.00	419.0
249.00	397.0
254.20	610.0
255.10	55232.0
256.10	8495.0
257.10	608.0
258.00	3267.0
259.00	545.0
265.00	1351.0
273.00	1582.0
274.10	4311.0
275.10	24848.0
276.10	3422.0
277.00	2159.0
278.00	367.0
285.00	384.0
293.00	477.0
296.10	6372.0
297.00	980.0
303.00	795.0
315.00	736.0
316.00	419.0
323.10	2082.0
324.00	383.0
327.00	355.0
334.00	1295.0
335.00	312.0
346.00	470.0
352.00	596.0
353.00	408.0
354.10	694.0
365.00	2620.0
366.00	410.0
372.00	1049.0
402.00	402.0
403.00	595.0
421.00	509.0
422.00	457.0
423.10	3403.0
424.00	1020.0
441.10	9920.0
442.10	65048.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

443.10 13117.0
444.10 1258.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

Scan 2536 (17.604 min): BM005230.D
DFTPP64

Instrument :
BNA_M
ClientSampleId :
DFTPP64

m/z	Abundance
38.00	419.0
39.10	2594.0
44.00	336.0
47.00	334.0
49.00	1974.0
50.10	9883.0
51.10	39344.0
52.10	2013.0
56.00	1141.0
57.00	2770.0
61.00	485.0
62.00	650.0
63.10	1559.0
65.10	786.0
68.10	794.0
69.00	41640.0
73.00	414.0
74.10	4578.0
75.00	6712.0
76.10	2430.0
77.10	50088.0
78.10	3595.0
79.00	3328.0
80.00	2425.0
81.00	3377.0
82.00	898.0
83.00	895.0
84.00	1530.0
85.00	747.0
86.00	1848.0
87.00	492.0
88.00	305.0
91.00	839.0
92.00	908.0
93.00	5722.0
94.00	359.0
98.00	4719.0
99.00	3525.0
100.00	344.0
101.00	1980.0
103.00	717.0
104.00	1127.0
105.00	1216.0
106.10	422.0
107.00	16848.0
108.00	2481.0
109.00	470.0
110.00	29520.0
111.00	4312.0
112.00	556.0
116.00	892.0
117.00	13797.0
118.00	1014.0
122.00	1057.0
123.00	1669.0
124.00	772.0
125.00	728.0
126.20	404.0
127.10	54592.0
128.10	4249.0
129.00	20968.0
130.00	1932.0
131.00	342.0
134.00	665.0
135.00	1813.0
136.00	668.0
137.00	929.0
141.00	2953.0
142.00	924.0
143.00	591.0
146.00	531.0
147.00	1549.0
148.00	3527.0
149.00	721.0
151.10	438.0
153.00	1016.0
154.00	704.0
155.00	1868.0
156.10	2431.0
157.10	515.0
158.00	489.0
159.00	380.0
160.00	932.0
161.00	1304.0
162.00	389.0
165.00	1146.0
166.00	923.0
167.00	6343.0
168.00	3390.0
169.10	587.0
171.90	524.0

173.00	671.0
174.00	1420.0
175.10	2581.0
176.00	653.0
177.00	1158.0
178.00	409.0
179.00	4619.0
180.00	3299.0
181.00	1383.0
184.00	361.0
185.10	2457.0
186.10	18096.0
187.10	5077.0
188.00	544.0
189.00	1158.0
191.00	554.0
192.00	1558.0
193.10	1730.0
194.00	359.0
196.10	3377.0
197.10	989.0
198.00	127632.0
199.00	8581.0
200.00	726.0
201.60	531.0
203.00	932.0
204.10	4975.0
205.10	8001.0
206.10	34160.0
207.10	4686.0
208.00	1157.0
209.00	387.0
210.10	484.0
211.00	1270.0
215.00	390.0
216.00	706.0
217.00	8852.0
218.00	1261.0
221.10	4774.0
221.90	1113.0
223.00	2088.0
224.10	18704.0
225.10	5011.0
226.10	515.0
227.10	7957.0
228.00	1073.0
229.00	1580.0
231.00	680.0
234.00	468.0
235.00	573.0
236.00	399.0
237.10	605.0
239.00	302.0
241.00	447.0
242.00	950.0
243.10	1044.0
244.10	14804.0
245.10	1847.0
246.00	2994.0
247.00	590.0
249.00	509.0
253.00	361.0
254.20	748.0
255.10	75072.0
256.10	10580.0
257.00	925.0
258.00	4270.0
259.10	657.0
265.00	1686.0
273.00	2137.0
274.10	5897.0
275.10	32728.0
276.10	4369.0
277.00	2956.0
278.00	569.0
283.00	348.0
285.10	525.0
293.00	678.0
296.10	9230.0
297.00	1238.0
303.00	1116.0
314.10	457.0
315.00	1120.0
316.10	607.0
321.00	333.0
323.10	2972.0
324.00	562.0
326.90	552.0
334.10	1936.0
335.00	476.0
341.00	321.0
346.00	691.0
352.10	843.0
353.00	692.0
354.10	1002.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

365.00	4035.0
366.00	594.0
372.10	1404.0
373.10	420.0
383.00	408.0
402.00	659.0
403.00	845.0
404.00	350.0
421.10	734.0
422.00	779.0
423.10	5572.0
424.10	1393.0
441.10	15921.0
442.10	103408.0
443.10	20496.0
444.10	1951.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

Scan 2537 (17.609 min): BM005230.D
DFTPP64

Instrument :
BNA_M
ClientSampleId :
DFTPP64

m/z	Abundance
38.00	319.0
39.10	2000.0
44.00	420.0
46.90	406.0
49.00	2212.0
50.10	7343.0
51.10	29976.0
52.00	1412.0
56.00	885.0
57.00	2082.0
61.00	342.0
62.00	421.0
63.00	1147.0
65.00	647.0
68.00	515.0
69.00	29792.0
73.10	326.0
74.00	3172.0
75.00	4965.0
76.10	1791.0
77.10	36880.0
78.10	2547.0
79.00	2255.0
80.00	1635.0
81.00	2507.0
82.00	672.0
83.00	619.0
84.00	1668.0
85.00	575.0
86.00	1808.0
87.00	402.0
91.00	554.0
92.00	732.0
93.00	4178.0
94.00	311.0
98.00	3409.0
99.00	2683.0
101.00	1587.0
103.00	503.0
104.00	965.0
105.00	888.0
107.00	12040.0
108.00	1880.0
109.10	351.0
110.00	22032.0
111.00	3360.0
112.00	330.0
116.00	663.0
117.00	10030.0
118.00	776.0
122.00	788.0
123.00	1223.0
124.00	555.0
125.00	508.0
127.00	41912.0
128.00	3049.0
129.00	15742.0
130.00	1214.0
131.00	348.0
134.00	466.0
135.00	1384.0
136.00	506.0
137.00	678.0
141.00	2211.0
142.00	631.0
143.00	487.0
146.00	380.0
147.00	1110.0
148.00	2698.0
149.00	505.0
153.00	707.0
154.00	506.0
155.10	1241.0
156.10	1989.0
157.10	372.0
157.90	398.0
160.00	691.0
161.00	1017.0
162.00	334.0
165.00	834.0
166.00	734.0
167.00	5097.0
168.00	2387.0
169.00	372.0
172.00	452.0
173.00	577.0
174.00	980.0
175.10	2055.0
176.00	499.0
177.00	846.0
179.00	3431.0

180.00	2437.0
181.00	1168.0
185.10	1653.0
186.10	14153.0
187.10	3905.0
188.00	431.0
189.00	865.0
190.90	364.0
192.00	1118.0
193.00	1372.0
196.10	2820.0
197.10	677.0
198.00	101880.0
199.00	6692.0
200.00	522.0
201.50	445.0
203.00	697.0
204.10	3922.0
205.10	6423.0
206.10	26904.0
207.10	3684.0
208.00	937.0
209.00	317.0
210.20	378.0
211.10	1021.0
214.90	342.0
216.00	607.0
217.00	6882.0
218.00	975.0
221.10	4335.0
221.80	962.0
223.10	1544.0
224.10	15397.0
225.10	3782.0
226.00	445.0
227.10	6428.0
228.00	786.0
229.00	1347.0
231.00	606.0
234.00	346.0
235.00	475.0
237.00	565.0
241.00	323.0
242.00	726.0
243.10	935.0
244.10	12006.0
245.10	1522.0
246.00	2335.0
247.00	498.0
249.00	435.0
253.10	303.0
254.20	595.0
255.10	61520.0
256.10	8655.0
257.10	663.0
258.10	3496.0
259.00	584.0
265.00	1504.0
273.00	1896.0
274.00	4973.0
275.10	27488.0
276.10	3632.0
277.00	2495.0
278.00	468.0
285.00	421.0
293.00	576.0
296.00	7914.0
297.00	1166.0
303.00	897.0
314.00	392.0
315.00	949.0
316.00	509.0
323.10	2548.0
324.10	534.0
327.00	528.0
334.00	1582.0
335.00	462.0
346.00	571.0
352.00	852.0
353.00	501.0
354.10	862.0
365.00	3775.0
366.00	553.0
372.10	1439.0
373.10	339.0
383.00	351.0
402.00	609.0
403.10	817.0
421.00	779.0
422.00	694.0
423.10	5280.0
424.10	1272.0
441.10	15824.0
442.10	100744.0
443.10	18920.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

444.10 1722.0

Instrument :
BNA_M
ClientSampleId :
DFTPP64

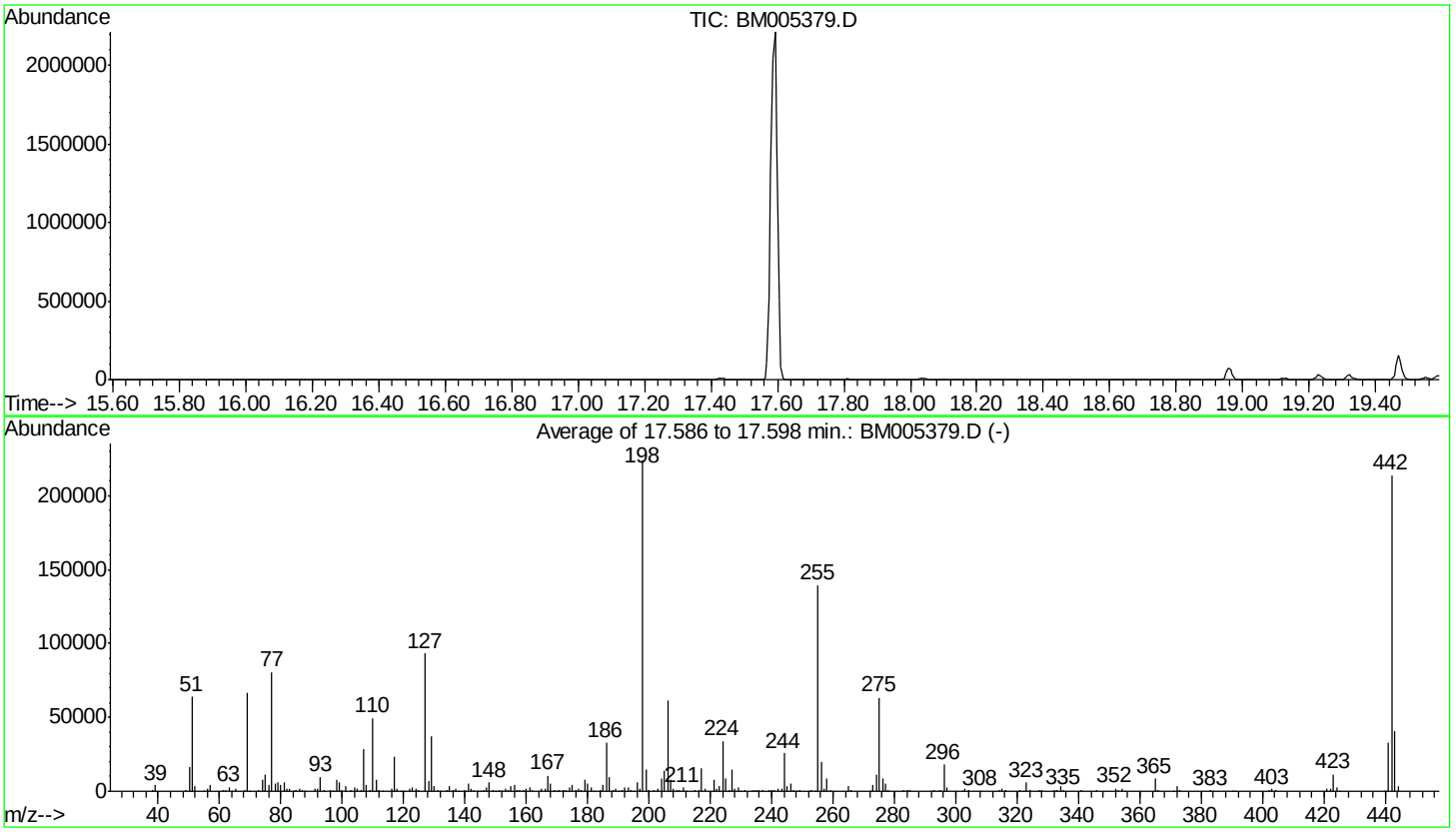
DFTPP

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051116\
Data File : BM005379.D
Acq On : 11 May 2016 08:24
Operator : UM/SJ
Sample : DFTPP36
Misc :
ALS Vial : 1 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : DFTPP36

Integration File: LSCINT.P

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION
Last Update : Thu May 12 02:20:05 2016



AutoFind: Scans 2533, 2534, 2535; Background Corrected with Scan 2527

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	28.4	63720	PASS
68	69	0.00	2	1.9	1278	PASS
69	198	0.00	100	29.9	66920	PASS
70	69	0.00	2	0.6	383	PASS
127	198	10	80	41.6	93237	PASS
197	198	0.00	2	0.8	1804	PASS
198	198	100	100	100.0	224170	PASS
199	198	5	9	6.6	14798	PASS
275	198	10	60	28.2	63258	PASS
365	198	1	100	3.7	8385	PASS
441	443	0.01	100	81.0	33034	PASS
442	198	50	100	95.4	213760	PASS
443	442	15	24	19.1	40762	PASS

Scan 2527 (17.551 min): BM005379.D
DFTPP36

m/z	Abundance
39.90	397.0
44.00	615.0
207.10	370.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

Scan 2533 (17.586 min): BM005379.D
DFTPP36

m/z	Abundance
38.00	812.0
39.10	4813.0
40.00	416.0
44.00	302.0
49.10	689.0
50.10	19376.0
51.10	74880.0
52.10	3875.0
55.00	462.0
56.00	2092.0
57.10	5201.0
61.00	1066.0
62.00	1039.0
63.10	3199.0
64.10	405.0
65.10	1720.0
68.10	1544.0
69.00	79752.0
70.00	409.0
73.00	747.0
74.10	8688.0
75.10	13347.0
76.10	4793.0
77.10	94456.0
78.10	6600.0
79.10	6798.0
80.00	4770.0
81.10	7211.0
82.00	1720.0
83.00	1747.0
84.00	314.0
85.00	1465.0
86.00	2255.0
87.00	973.0
91.00	1595.0
92.10	1778.0
93.00	11795.0
94.00	869.0
96.00	559.0
98.10	9353.0
99.00	6942.0
100.00	616.0
101.10	3949.0
103.00	1300.0
104.00	2625.0
105.00	2516.0
106.10	829.0
107.00	32736.0
108.00	4837.0
109.10	989.0
110.00	56576.0
111.10	8563.0
112.00	1059.0
113.10	411.0
116.00	1660.0
117.00	27576.0
118.00	1949.0
120.10	435.0
122.00	2052.0
123.00	3324.0
124.00	1584.0
125.00	1451.0
127.10	106480.0
128.10	7922.0
129.00	41696.0
130.00	3707.0
131.00	672.0
132.00	496.0
134.00	1300.0
135.10	3737.0
136.00	1432.0
137.10	1813.0
137.90	379.0
140.00	571.0
141.00	5789.0
142.00	1805.0
143.00	1353.0
144.00	362.0
145.00	331.0
146.10	1067.0
147.00	3111.0
148.00	7040.0
149.10	1482.0
150.00	371.0
151.00	683.0
152.10	445.0
153.10	1812.0
154.00	1354.0
155.10	3459.0
156.10	4608.0
157.10	837.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

158.00	895.0
159.00	910.0
160.00	1896.0
161.10	2876.0
162.10	742.0
165.00	2156.0
166.00	1736.0
167.10	12226.0
168.10	5907.0
169.10	983.0
170.00	376.0
170.90	505.0
172.00	1051.0
173.10	1386.0
174.10	2681.0
175.10	4731.0
176.00	1266.0
177.00	2363.0
178.10	677.0
179.00	8627.0
180.10	6240.0
181.10	2886.0
182.00	496.0
184.00	839.0
185.10	4401.0
186.10	35504.0
187.10	10083.0
188.10	1164.0
189.00	2189.0
189.90	351.0
191.10	884.0
192.00	2600.0
193.10	3109.0
194.10	936.0
195.10	390.0
196.10	6423.0
197.20	2118.0
198.00	243648.0
199.00	16544.0
200.00	1201.0
201.60	838.0
203.10	1828.0
204.10	9058.0
205.10	15434.0
206.10	65440.0
207.10	9461.0
208.10	2288.0
209.00	934.0
210.20	993.0
211.10	2494.0
211.80	531.0
215.00	752.0
216.10	1430.0
217.00	16960.0
218.10	2374.0
221.10	8270.0
222.00	2168.0
223.00	3744.0
224.10	35984.0
225.10	9973.0
226.10	1117.0
227.10	15859.0
228.00	2409.0
229.00	3024.0
230.00	442.0
231.00	1291.0
234.00	1003.0
235.00	1173.0
236.00	731.0
237.10	1252.0
239.00	685.0
240.10	547.0
241.00	968.0
242.10	1833.0
243.10	1946.0
244.10	26712.0
245.10	3326.0
246.00	5940.0
247.00	1165.0
249.00	934.0
252.10	319.0
253.10	604.0
255.10	145664.0
256.10	21496.0
257.00	1898.0
258.00	8346.0
259.10	1417.0
265.10	3537.0
266.00	510.0
272.10	433.0
273.00	4420.0
274.10	11397.0
275.10	65456.0
276.10	8937.0
277.10	5545.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

278.00	896.0
283.00	552.0
284.00	464.0
285.10	1044.0
293.00	1186.0
294.00	337.0
295.10	495.0
296.10	18120.0
297.10	2374.0
303.10	2153.0
304.10	560.0
314.10	865.0
315.10	2041.0
316.10	1145.0
321.00	541.0
323.10	5940.0
324.10	1044.0
327.00	1111.0
328.00	637.0
332.00	499.0
333.10	615.0
334.10	3612.0
335.00	995.0
341.00	643.0
346.10	1180.0
352.10	1631.0
353.00	1137.0
354.10	1756.0
355.10	423.0
365.00	7924.0
366.00	1147.0
371.00	391.0
372.10	2966.0
373.10	701.0
383.00	652.0
390.00	384.0
402.00	1059.0
403.10	1521.0
404.00	572.0
421.00	1549.0
422.10	1545.0
423.10	10338.0
424.10	2726.0
439.70	337.0
441.10	29200.0
442.10	191872.0
443.10	36688.0
444.10	3564.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

Scan 2534 (17.592 min): BM005379.D
DFTPP36

m/z	Abundance
38.00	802.0
39.10	4720.0
40.00	383.0
49.10	553.0
50.10	18320.0
51.10	72296.0
52.10	3377.0
55.00	510.0
56.00	2162.0
57.10	5177.0
61.00	993.0
62.10	1071.0
63.10	2997.0
64.10	454.0
65.10	1486.0
68.10	1452.0
69.00	75456.0
70.00	417.0
73.00	789.0
74.10	8604.0
75.00	13714.0
76.10	4555.0
77.10	92168.0
78.10	6175.0
79.00	6462.0
80.00	5025.0
81.00	6954.0
82.00	1563.0
83.00	1462.0
85.00	1483.0
86.00	2096.0
87.00	901.0
88.00	306.0
91.00	1591.0
92.00	1855.0
93.00	11419.0
94.00	875.0
96.10	541.0
97.00	310.0
98.00	9461.0
99.00	6740.0
100.00	498.0
101.00	4252.0
103.00	1378.0
104.00	2604.0
105.00	2344.0
106.20	838.0
107.00	32664.0
108.00	5060.0
109.00	998.0
110.00	57000.0
111.00	8708.0
112.00	999.0
113.10	359.0
116.10	1931.0
117.00	27176.0
118.00	1925.0
119.00	313.0
120.00	436.0
122.00	2282.0
123.00	3347.0
124.00	1517.0
125.00	1201.0
127.10	107680.0
128.10	8300.0
129.00	43624.0
130.00	3704.0
131.00	852.0
132.10	443.0
134.00	1305.0
135.00	3674.0
136.10	1464.0
137.10	1887.0
137.90	398.0
140.00	521.0
141.00	5847.0
142.10	1787.0
143.00	1384.0
144.00	327.0
145.00	359.0
146.00	1127.0
147.00	2998.0
148.00	6867.0
149.00	1528.0
150.00	374.0
151.10	708.0
151.80	427.0
153.00	1769.0
154.10	1385.0
155.10	3635.0
156.10	5231.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

157.10	960.0
158.00	1251.0
159.00	702.0
160.10	1917.0
161.10	2652.0
161.90	736.0
164.00	351.0
165.00	2620.0
166.00	1821.0
167.10	12355.0
168.00	6201.0
169.00	935.0
170.10	472.0
171.00	567.0
172.00	1344.0
173.00	1511.0
174.00	2743.0
175.10	5101.0
176.00	1362.0
177.00	2501.0
178.00	955.0
179.00	9263.0
180.10	6621.0
181.10	2981.0
182.10	458.0
184.00	809.0
185.10	4541.0
186.10	37920.0
187.10	10786.0
188.10	1106.0
189.00	2565.0
190.00	437.0
191.00	1044.0
192.10	2954.0
193.10	3643.0
194.10	705.0
195.10	349.0
196.10	6955.0
197.10	2104.0
198.00	257984.0
199.00	17144.0
200.10	1375.0
201.50	769.0
203.10	1957.0
204.10	10004.0
205.10	16568.0
206.10	71104.0
207.10	9650.0
208.00	2669.0
209.10	769.0
210.10	1098.0
211.10	2588.0
215.10	791.0
216.10	1619.0
217.00	18360.0
218.10	2207.0
221.10	9018.0
221.90	2560.0
223.00	4075.0
224.10	39280.0
225.10	10500.0
226.10	1248.0
227.10	17376.0
228.10	2518.0
229.00	3287.0
230.00	456.0
231.10	1448.0
233.10	328.0
234.10	1031.0
235.00	1219.0
236.00	781.0
237.10	1388.0
239.10	669.0
240.10	434.0
241.00	868.0
242.10	2017.0
243.10	2349.0
244.10	30408.0
245.10	3998.0
246.10	6511.0
247.10	1414.0
248.00	325.0
249.00	1091.0
253.10	824.0
255.10	161664.0
256.10	23808.0
257.00	2058.0
258.00	9883.0
259.10	1541.0
265.10	4081.0
266.00	557.0
272.00	369.0
273.00	4639.0
274.10	14039.0
275.10	73552.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

276.10	9861.0
277.10	6820.0
278.00	1220.0
283.00	691.0
284.00	521.0
285.10	1094.0
292.00	341.0
293.10	1442.0
294.10	396.0
295.10	612.0
296.10	21400.0
297.10	3034.0
302.00	390.0
303.10	2159.0
304.10	735.0
308.00	366.0
314.10	1068.0
315.10	2454.0
316.10	1294.0
321.00	792.0
322.10	380.0
323.10	6845.0
324.10	1245.0
327.00	1412.0
328.00	645.0
332.10	484.0
333.00	739.0
334.10	4499.0
335.10	1218.0
341.10	759.0
346.00	1417.0
352.10	2132.0
353.10	1549.0
354.10	2405.0
355.10	487.0
365.00	9775.0
366.10	1461.0
371.10	552.0
372.10	3811.0
373.10	832.0
383.10	987.0
384.00	309.0
390.10	418.0
391.00	324.0
402.10	1436.0
403.00	1998.0
404.00	865.0
421.10	1876.0
422.10	1844.0
423.10	13051.0
424.10	3209.0
425.20	356.0
441.10	39016.0
442.10	246528.0
443.10	47464.0
444.10	4136.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

Scan 2535 (17.598 min): BM005379.D
DFTPP36

m/z	Abundance
38.10	460.0
39.10	2780.0
40.00	344.0
44.00	402.0
49.00	393.0
50.10	10819.0
51.10	43984.0
52.10	2196.0
56.00	1339.0
57.00	3040.0
61.00	604.0
62.00	653.0
63.00	1703.0
65.10	862.0
68.10	840.0
69.00	45552.0
70.00	324.0
73.00	478.0
74.10	4892.0
75.10	7792.0
76.10	2932.0
77.10	55680.0
78.10	3719.0
79.10	3709.0
80.00	2761.0
81.00	3971.0
82.00	1072.0
83.00	925.0
85.00	871.0
86.00	1218.0
87.00	517.0
91.00	918.0
92.00	1078.0
93.00	6503.0
94.00	484.0
96.00	316.0
98.00	5293.0
99.00	4061.0
100.00	386.0
101.00	2668.0
103.00	825.0
104.00	1507.0
105.00	1491.0
106.10	485.0
107.10	19680.0
108.00	2708.0
109.00	542.0
110.00	34592.0
111.00	5249.0
112.00	731.0
116.10	1082.0
117.00	16383.0
118.00	1196.0
122.00	1285.0
123.10	2181.0
124.00	912.0
125.00	861.0
127.10	65552.0
128.10	5180.0
129.00	26200.0
130.00	2353.0
131.00	486.0
132.00	303.0
134.00	689.0
135.00	2290.0
136.00	808.0
137.10	1236.0
139.90	409.0
141.00	3782.0
142.00	991.0
143.10	783.0
146.00	618.0
147.00	1853.0
148.00	4175.0
149.00	781.0
151.00	443.0
151.80	312.0
153.00	1269.0
154.00	874.0
155.00	2241.0
156.10	3313.0
157.00	582.0
158.00	665.0
159.00	540.0
160.00	1202.0
161.00	1687.0
161.90	489.0
164.00	305.0
165.00	1547.0
166.00	1217.0
167.10	7847.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

168.00	3776.0
169.00	705.0
170.00	319.0
171.00	469.0
172.00	683.0
173.00	915.0
174.00	1764.0
175.10	3170.0
176.00	794.0
177.00	1470.0
178.00	472.0
179.00	6255.0
180.10	3950.0
181.10	1825.0
182.10	338.0
184.10	525.0
185.10	2886.0
186.10	24112.0
187.10	6997.0
188.10	811.0
189.10	1594.0
191.00	664.0
192.00	1875.0
193.10	2330.0
194.00	549.0
196.10	4919.0
197.20	1192.0
198.00	170880.0
199.00	10706.0
200.00	894.0
201.40	527.0
203.00	1285.0
204.10	6243.0
205.10	10814.0
206.10	47592.0
207.10	6556.0
208.10	1617.0
209.00	587.0
210.10	751.0
211.10	1818.0
211.90	303.0
215.00	585.0
216.00	870.0
217.00	12798.0
218.00	1499.0
221.10	5864.0
222.00	1623.0
223.10	2702.0
224.10	26272.0
225.10	6042.0
226.10	667.0
227.00	10915.0
228.10	1522.0
229.00	2433.0
230.00	384.0
231.10	788.0
234.00	749.0
235.00	859.0
236.00	499.0
237.00	912.0
239.00	550.0
240.00	419.0
241.00	555.0
242.00	1348.0
243.10	1318.0
244.10	20400.0
245.10	2721.0
246.00	4431.0
247.00	725.0
249.00	783.0
253.00	522.0
254.20	976.0
255.10	111096.0
256.10	15352.0
257.10	1182.0
258.00	6605.0
259.00	923.0
265.00	2680.0
266.00	358.0
273.10	3431.0
274.10	9145.0
275.10	50768.0
276.10	6338.0
277.00	4500.0
278.00	805.0
283.10	420.0
284.00	415.0
285.00	886.0
293.00	1065.0
295.20	374.0
296.10	14358.0
297.00	2056.0
302.00	323.0
303.10	1850.0
304.00	382.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

314.10	830.0
315.00	1741.0
316.10	772.0
321.00	425.0
323.10	5363.0
324.00	1082.0
327.00	912.0
328.00	425.0
332.00	427.0
333.00	454.0
334.10	3488.0
335.00	897.0
341.00	598.0
346.00	1132.0
352.00	1461.0
353.10	955.0
354.10	1619.0
365.00	7456.0
366.00	953.0
371.10	387.0
372.10	2861.0
373.10	602.0
383.10	808.0
390.10	412.0
391.10	330.0
402.10	1187.0
403.10	1583.0
404.10	684.0
421.00	1541.0
422.10	1497.0
423.10	10712.0
424.10	2495.0
425.00	306.0
440.20	551.0
441.10	30888.0
442.10	202880.0
443.10	38136.0
444.10	3356.0

Instrument :
BNA_M
ClientSampleId :
DFTPP36

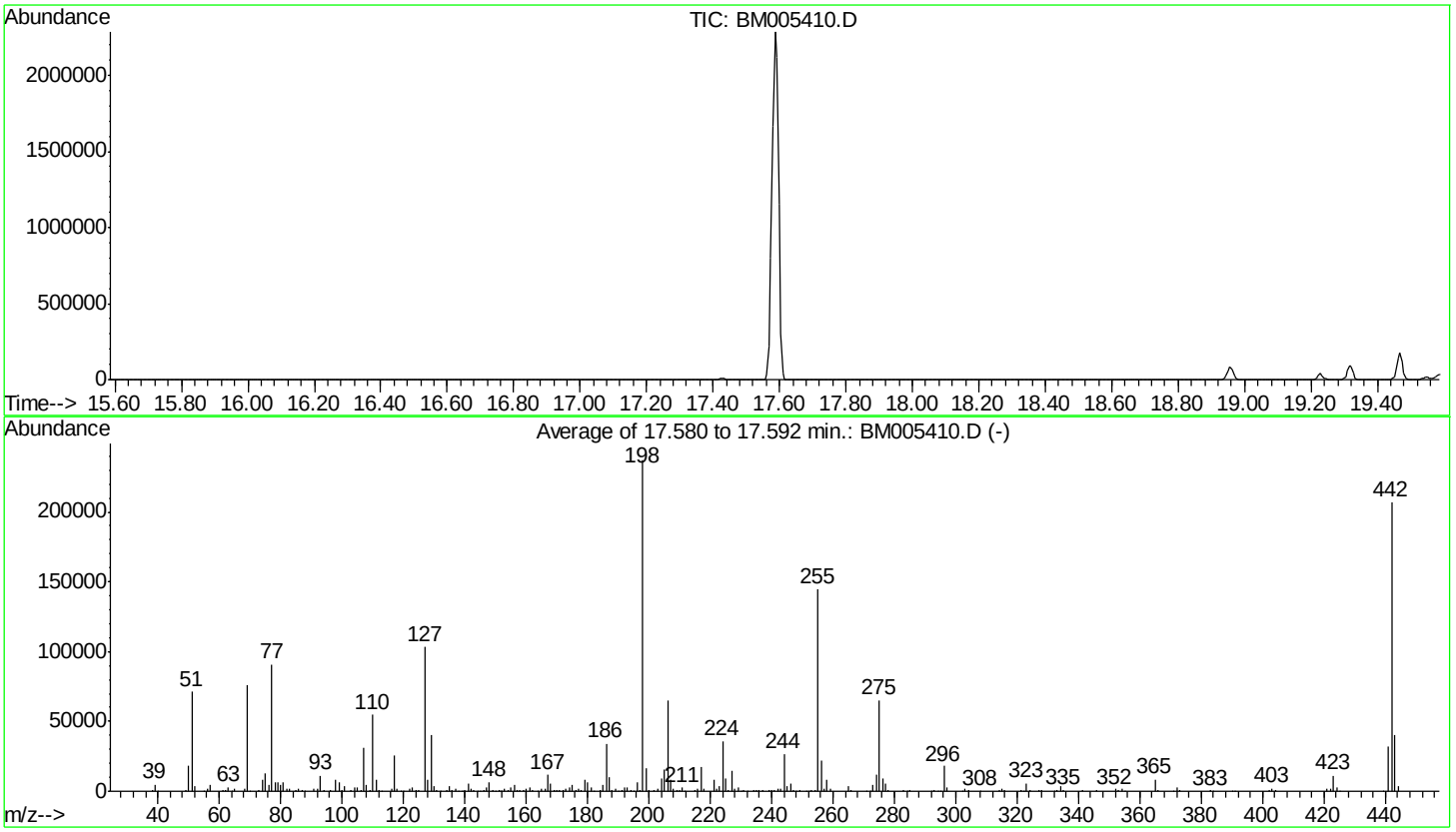
DFTPP

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005410.D
Acq On : 12 May 2016 07:36
Operator : UM/SJ
Sample : DFTPP37
Misc :
ALS Vial : 1 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : DFTPP37

Integration File: LSCINT.P

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM041416.M
Title : SVOA CALIBRATION
Last Update : Sat Apr 23 01:00:10 2016



AutoFind: Scans 2532, 2533, 2534; Background Corrected with Scan 2526

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	30.0	71042	PASS
68	69	0.00	2	2.0	1492	PASS
69	198	0.00	100	32.2	76312	PASS
70	69	0.00	2	0.6	442	PASS
127	198	10	80	43.6	103336	PASS
197	198	0.00	2	0.5	1133	PASS
198	198	100	100	100.0	237098	PASS
199	198	5	9	6.8	16081	PASS
275	198	10	60	27.4	65034	PASS
365	198	1	100	3.5	8375	PASS
441	443	0.01	100	79.9	32301	PASS
442	198	50	100	87.3	207061	PASS
443	442	15	24	19.5	40437	PASS

Scan 2526 (17.545 min): BM005410.D
DFTPP37

m/z	Abundance
44.00	536.0
207.10	492.0

Instrument :
BNA_M
ClientSampleId :
DFTPP37

Scan 2532 (17.580 min): BM005410.D
DFTPP37

m/z	Abundance
38.10	790.0
39.10	4615.0
40.10	369.0
44.00	374.0
49.10	588.0
50.10	17072.0
51.10	67016.0
52.10	3645.0
55.10	430.0
56.10	1957.0
57.00	4625.0
61.10	884.0
62.00	988.0
63.00	2653.0
64.00	424.0
65.10	1444.0
68.10	1400.0
69.00	71800.0
70.00	463.0
73.10	757.0
74.10	7713.0
75.00	12289.0
76.10	4195.0
77.10	84664.0
78.10	5969.0
79.00	5671.0
80.00	4183.0
81.00	6139.0
82.00	1596.0
83.00	1460.0
85.00	1155.0
86.00	1884.0
87.00	877.0
88.00	313.0
91.00	1334.0
92.00	1496.0
93.00	10124.0
94.00	682.0
96.00	547.0
98.00	7735.0
99.00	6175.0
100.00	553.0
101.00	3639.0
103.00	1182.0
104.00	2081.0
105.00	2079.0
106.10	715.0
107.10	27776.0
108.00	4139.0
109.20	831.0
110.00	49184.0
111.00	7405.0
112.00	909.0
113.00	352.0
116.00	1573.0
117.00	22936.0
118.00	1857.0
122.00	1701.0
123.10	2859.0
124.00	1116.0
125.00	1137.0
127.10	91896.0
128.00	7233.0
129.00	35616.0
130.00	3214.0
131.00	551.0
132.00	321.0
134.00	1038.0
135.00	3022.0
136.00	1273.0
137.00	1546.0
138.00	314.0
140.10	562.0
141.10	4674.0
142.10	1712.0
143.10	1208.0
144.00	333.0
146.10	973.0
147.10	2628.0
148.00	5805.0
149.00	1232.0
150.00	347.0
151.00	580.0
151.70	354.0
153.00	1674.0
154.00	1217.0
155.10	2673.0
156.10	4369.0
157.10	780.0
158.00	802.0
159.00	760.0

Instrument :
BNA_M
ClientSampleId :
DFTPP37

160.00	1672.0
161.10	2377.0
162.00	678.0
165.00	1930.0
166.00	1535.0
167.10	10184.0
168.10	5031.0
169.00	879.0
170.10	423.0
171.00	550.0
172.00	917.0
173.10	1173.0
174.10	2071.0
175.10	3973.0
176.10	941.0
177.00	1841.0
178.00	559.0
179.00	7231.0
180.10	5430.0
181.10	2404.0
182.10	388.0
184.10	592.0
185.10	3601.0
186.10	28144.0
187.10	8819.0
188.00	986.0
189.00	1885.0
191.00	878.0
192.00	2452.0
193.10	2552.0
194.00	628.0
195.10	359.0
196.00	5003.0
197.20	1348.0
198.00	198080.0
199.00	13863.0
200.00	1021.0
201.60	694.0
203.00	1507.0
204.10	7757.0
205.10	12880.0
206.10	53992.0
207.10	7423.0
208.00	2034.0
209.00	576.0
210.10	829.0
211.10	2075.0
215.00	629.0
216.10	1176.0
217.00	14197.0
218.00	1876.0
221.10	6412.0
221.90	1861.0
223.10	2863.0
224.10	29280.0
225.10	7517.0
226.00	822.0
227.10	11909.0
228.00	1806.0
229.00	2460.0
230.00	397.0
231.00	916.0
234.10	715.0
235.00	962.0
236.10	585.0
237.00	1126.0
239.00	540.0
240.00	498.0
241.00	694.0
242.10	1465.0
243.10	1505.0
244.10	21416.0
245.10	2992.0
246.10	4685.0
247.00	1076.0
249.00	725.0
253.00	486.0
254.20	1128.0
255.10	114728.0
256.10	17224.0
257.00	1285.0
258.10	6338.0
259.10	1126.0
265.00	2453.0
266.00	487.0
273.10	3306.0
274.10	8825.0
275.10	50168.0
276.10	6838.0
277.00	4606.0
278.00	893.0
283.00	498.0
284.00	391.0
285.10	825.0
293.00	1043.0

Instrument :
BNA_M
ClientSampleId :
DFTPP37

296.10	14005.0
297.00	2071.0
303.10	1609.0
304.10	471.0
314.00	551.0
315.00	1543.0
316.00	920.0
321.10	450.0
323.10	4083.0
324.00	766.0
327.00	712.0
328.00	461.0
332.10	321.0
333.10	421.0
334.10	2824.0
335.10	665.0
341.10	483.0
346.00	956.0
352.10	1096.0
353.10	905.0
354.10	1336.0
355.10	303.0
365.00	5746.0
366.00	736.0
371.10	351.0
372.10	2208.0
373.10	554.0
383.00	671.0
402.10	818.0
403.00	1353.0
404.10	489.0
421.00	1187.0
422.00	1058.0
423.10	7523.0
424.10	1919.0
441.10	21128.0
442.10	134400.0
443.10	27392.0
444.10	2743.0

Instrument :
BNA_M
ClientSampleId :
DFTPP37

Scan 2533 (17.586 min): BM005410.D
DFTPP37

Instrument :
BNA_M
ClientSampleId :
DFTPP37

m/z	Abundance
38.10	768.0
39.10	5140.0
40.00	359.0
44.00	342.0
49.10	530.0
50.10	20024.0
51.10	79760.0
52.10	4171.0
55.10	409.0
56.00	2291.0
57.00	5573.0
61.00	1118.0
62.00	1244.0
63.00	3296.0
64.00	497.0
65.10	1460.0
68.10	1749.0
69.00	85728.0
70.00	519.0
73.10	1012.0
74.10	9275.0
75.00	14084.0
76.10	4914.0
77.10	101120.0
78.10	7058.0
79.00	7018.0
80.00	5234.0
81.00	7238.0
82.00	1945.0
83.00	1789.0
85.00	1436.0
86.00	2337.0
87.00	973.0
88.00	328.0
91.00	1670.0
92.00	1840.0
93.00	12548.0
94.00	1028.0
96.10	556.0
98.00	10067.0
99.10	7398.0
100.00	624.0
101.00	4079.0
103.00	1468.0
104.00	3001.0
105.00	2795.0
106.00	942.0
107.00	35576.0
108.10	5265.0
109.10	1163.0
110.00	61984.0
111.10	9438.0
112.00	1051.0
112.90	367.0
116.10	2055.0
117.00	28952.0
118.00	2026.0
119.00	304.0
120.00	379.0
122.00	2109.0
123.00	3599.0
124.00	1620.0
125.00	1700.0
127.10	115824.0
128.10	9378.0
129.00	45640.0
130.00	3808.0
131.00	752.0
132.10	401.0
134.00	1478.0
135.00	4289.0
136.00	1571.0
137.00	1929.0
137.90	407.0
139.00	331.0
140.00	665.0
141.00	6612.0
142.00	2100.0
143.00	1459.0
144.00	470.0
145.00	343.0
146.10	993.0
147.10	3212.0
148.00	7350.0
149.00	1575.0
150.00	329.0
151.00	723.0
151.90	509.0
153.00	1987.0
154.00	1361.0
155.00	3707.0

156.10	5855.0
157.10	950.0
158.00	1083.0
159.00	810.0
160.00	2125.0
161.10	3045.0
162.00	858.0
163.90	357.0
165.00	2494.0
166.00	1924.0
167.10	13565.0
168.10	6391.0
169.00	1121.0
170.00	623.0
170.90	507.0
172.00	1221.0
173.10	1579.0
174.10	2736.0
175.10	5395.0
176.00	1381.0
177.00	2556.0
178.10	957.0
179.00	9769.0
180.10	6472.0
181.10	3021.0
182.10	470.0
184.00	901.0
185.10	4817.0
186.10	39000.0
187.10	11367.0
188.10	1108.0
189.00	2430.0
190.00	422.0
191.10	1197.0
192.10	3105.0
193.10	3584.0
194.10	823.0
195.10	448.0
196.00	7238.0
197.20	2051.0
198.00	266688.0
199.00	18392.0
200.10	1398.0
201.50	963.0
203.00	1757.0
204.10	10342.0
205.10	17016.0
206.10	74688.0
207.10	10140.0
208.00	2458.0
209.00	842.0
210.10	1039.0
211.00	2957.0
211.80	535.0
215.00	1114.0
216.10	1747.0
217.00	19568.0
218.00	2562.0
221.10	9335.0
221.90	2397.0
223.10	3956.0
224.10	41160.0
225.10	10334.0
226.10	1121.0
227.10	17328.0
228.00	2517.0
229.00	3588.0
230.00	474.0
231.10	1570.0
232.00	308.0
234.00	1032.0
235.00	1316.0
236.10	794.0
237.00	1311.0
239.00	645.0
240.00	624.0
241.00	1079.0
242.10	1912.0
243.10	2245.0
244.10	30712.0
245.10	4165.0
246.10	6643.0
247.00	1338.0
248.00	352.0
249.10	1154.0
251.10	303.0
252.00	340.0
253.00	713.0
255.10	163712.0
256.10	24768.0
257.10	1830.0
258.10	10301.0
259.00	1632.0
265.00	3672.0
266.10	540.0

Instrument :
BNA_M
ClientSampleId :
DFTPP37

270.90	412.0
272.20	449.0
273.10	4887.0
274.10	13611.0
275.10	73976.0
276.10	9852.0
277.00	6122.0
278.00	1124.0
283.10	692.0
284.00	438.0
285.00	1127.0
292.10	344.0
293.00	1458.0
294.00	399.0
295.20	617.0
296.10	20088.0
297.10	2780.0
302.10	334.0
303.10	2379.0
304.00	684.0
314.10	923.0
315.00	2368.0
316.00	1266.0
321.10	525.0
322.10	387.0
323.10	6830.0
324.10	1244.0
327.00	1265.0
328.00	545.0
332.00	487.0
333.00	636.0
334.10	4803.0
335.10	1213.0
341.10	685.0
346.00	1365.0
352.10	1889.0
353.10	1282.0
354.10	2398.0
355.10	525.0
365.00	9243.0
366.10	1267.0
371.10	538.0
372.10	3552.0
373.10	825.0
383.00	891.0
384.00	300.0
390.00	486.0
391.10	308.0
402.00	1394.0
403.00	2098.0
404.10	935.0
421.10	1847.0
422.10	1670.0
423.10	13024.0
424.10	2784.0
425.10	366.0
439.30	300.0
441.10	35528.0
442.10	232832.0
443.10	45744.0
444.10	3967.0

Instrument :
BNA_M
ClientSampleId :
DFTPP37

Scan 2534 (17.592 min): BM005410.D
DFTPP37

m/z	Abundance
38.10	769.0
39.10	4453.0
40.00	359.0
44.00	480.0
49.00	567.0
50.10	16728.0
51.10	66352.0
52.10	3681.0
55.00	462.0
56.00	1951.0
57.00	4541.0
61.00	896.0
62.00	977.0
63.00	2828.0
64.00	378.0
65.10	1448.0
68.20	1327.0
69.00	71408.0
70.00	346.0
73.00	762.0
74.10	7811.0
75.00	11883.0
76.10	4101.0
77.10	87240.0
78.10	5607.0
79.10	5920.0
80.00	4199.0
81.00	6328.0
82.00	1576.0
83.10	1554.0
85.00	1228.0
86.00	1768.0
87.00	902.0
88.00	339.0
91.00	1532.0
92.00	1628.0
93.00	10522.0
94.00	689.0
96.10	439.0
98.00	8161.0
99.00	6240.0
100.00	549.0
101.00	3811.0
103.00	1194.0
104.00	2362.0
105.00	2186.0
106.10	806.0
107.10	29840.0
108.10	4340.0
109.10	1005.0
110.00	52720.0
111.00	8000.0
112.00	1009.0
113.10	355.0
116.00	1809.0
117.00	24840.0
118.10	1934.0
120.10	446.0
122.00	1834.0
123.00	3244.0
124.00	1353.0
125.10	1242.0
127.10	102288.0
128.10	7277.0
129.00	39584.0
130.00	3123.0
131.00	641.0
131.90	338.0
134.00	1319.0
135.00	3548.0
136.00	1291.0
137.10	1598.0
137.90	434.0
140.10	592.0
141.00	5507.0
142.10	1822.0
143.10	1100.0
144.00	303.0
146.00	1019.0
147.00	3009.0
148.00	6668.0
149.00	1386.0
150.00	383.0
151.10	759.0
151.90	373.0
153.00	1877.0
154.10	1354.0
155.10	3300.0
156.10	4714.0
157.10	822.0
158.00	1050.0

Instrument :
BNA_M
ClientSampleId :
DFTPP37

Instrument :
BNA_M
ClientSampleId :
DFTPP37

159.00	790.0
160.00	2026.0
161.00	2681.0
162.00	807.0
165.00	2095.0
166.10	1739.0
167.10	11500.0
168.00	5607.0
169.10	973.0
170.10	423.0
171.00	455.0
172.00	1072.0
173.00	1494.0
174.10	2612.0
175.10	4945.0
176.10	1236.0
177.00	2357.0
178.00	724.0
179.00	8677.0
180.10	6454.0
181.10	2748.0
182.10	464.0
184.00	708.0
185.10	4522.0
186.10	35272.0
187.10	10446.0
188.10	1130.0
189.00	2297.0
190.00	395.0
191.00	1021.0
192.00	2873.0
193.10	3134.0
194.00	776.0
195.00	380.0
196.10	6374.0
198.00	246528.0
199.00	15988.0
200.00	1151.0
201.70	743.0
203.00	1873.0
204.10	9284.0
205.10	15704.0
206.10	67448.0
207.10	8839.0
208.00	2404.0
209.00	792.0
210.10	1011.0
211.10	2731.0
215.10	762.0
216.00	1405.0
217.00	17832.0
218.00	2288.0
221.10	8374.0
221.90	2493.0
223.10	3744.0
224.10	37912.0
225.10	9793.0
226.10	1042.0
227.00	16143.0
228.00	2422.0
229.10	3653.0
230.00	447.0
231.00	1237.0
234.00	1137.0
235.00	1300.0
236.00	823.0
237.10	1437.0
239.00	599.0
240.00	545.0
241.00	929.0
242.10	1903.0
243.10	1857.0
244.10	28840.0
245.10	3927.0
246.10	6607.0
247.00	1125.0
249.00	1073.0
252.10	341.0
253.10	730.0
254.20	1844.0
255.10	156288.0
256.10	23200.0
257.10	1703.0
258.00	9318.0
259.00	1497.0
265.00	3843.0
266.10	443.0
272.10	456.0
273.00	4649.0
274.10	13245.0
275.10	70960.0
276.10	9722.0
277.00	6608.0
278.00	1179.0
283.10	682.0

284.10	420.0
285.10	1171.0
293.00	1392.0
294.00	471.0
295.10	492.0
296.10	20576.0
297.00	2988.0
302.00	353.0
303.10	2401.0
304.10	645.0
308.00	320.0
314.10	980.0
315.00	2215.0
316.10	1284.0
321.10	667.0
322.10	389.0
323.10	6863.0
324.10	1169.0
327.00	1332.0
328.00	614.0
332.10	439.0
333.00	635.0
334.10	4497.0
335.10	1110.0
341.10	817.0
346.10	1487.0
352.00	2034.0
353.10	1395.0
354.10	2182.0
355.10	523.0
365.10	10137.0
366.00	1277.0
371.00	483.0
372.10	3857.0
373.00	923.0
383.00	956.0
384.00	302.0
390.00	482.0
391.10	350.0
402.10	1845.0
403.00	2234.0
404.10	794.0
421.10	1839.0
422.10	1731.0
423.10	13592.0
424.00	3015.0
425.00	382.0
441.10	40248.0
442.10	253952.0
443.10	48176.0
444.10	3963.0

Instrument :
BNA_M
ClientSampleId :
DFTPP37

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK04

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB90404BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005418.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
123-91-1	1,4-Dioxane	2.0	U
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-Chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK04

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB90404BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005418.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	5.0	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
SBLK04

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB90404BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005418.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
GC Column : ID : (mm)
Date Analyzed : 05/12/2016
Extract Concentrated :(Y / N) N
Extract Volume : 1000 (µL)
Soil Aliquot (VOA) : (µL)
Extraction Type : CONH
Heated Purge : (Y / N)
Injection Volume : 1.0 (µL)
Purge Volume : (mL)
pH : Dilution Factor : 1.0
Cleanup Types :
Cleanup Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L

CAS NO.	ANALYTE	CONCENTRATION	Q
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK04

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 46114
MA No. : SDG No.: H4104
Analytical Method : SVOA
Level :
Matrix : Water
Lab Sample ID : PB90404BL
Sample wt/vol : 1000 (g/mL): mL
Lab File ID : BM005418.D
% Solids :
Date Received :
GC Column : ZB-GR ID : 0.25 (mm)
Date Extracted : 05/08/2016
Extract Concentrated : (Y / N) N
Date Analyzed : 05/12/2016
Soil Aliquot (VOA) : (µL)
Extract Volume : 1000 (µL)
Heated Purge : (Y / N)
Extraction Type : CONH
Purge Volume : (mL)
Injection Volume : 1.0 (µL)
Cleanup Types :
pH : Dilution Factor : 1.0
Concentration Units (µg/L,mg/L,µg/kg): µg/L
Cleanup Factor : 1.0

	CAS NO.	ANALYTE	RT	EST. CONC.	Q
1	E966796	Total Alkanes	N/A	0.0	

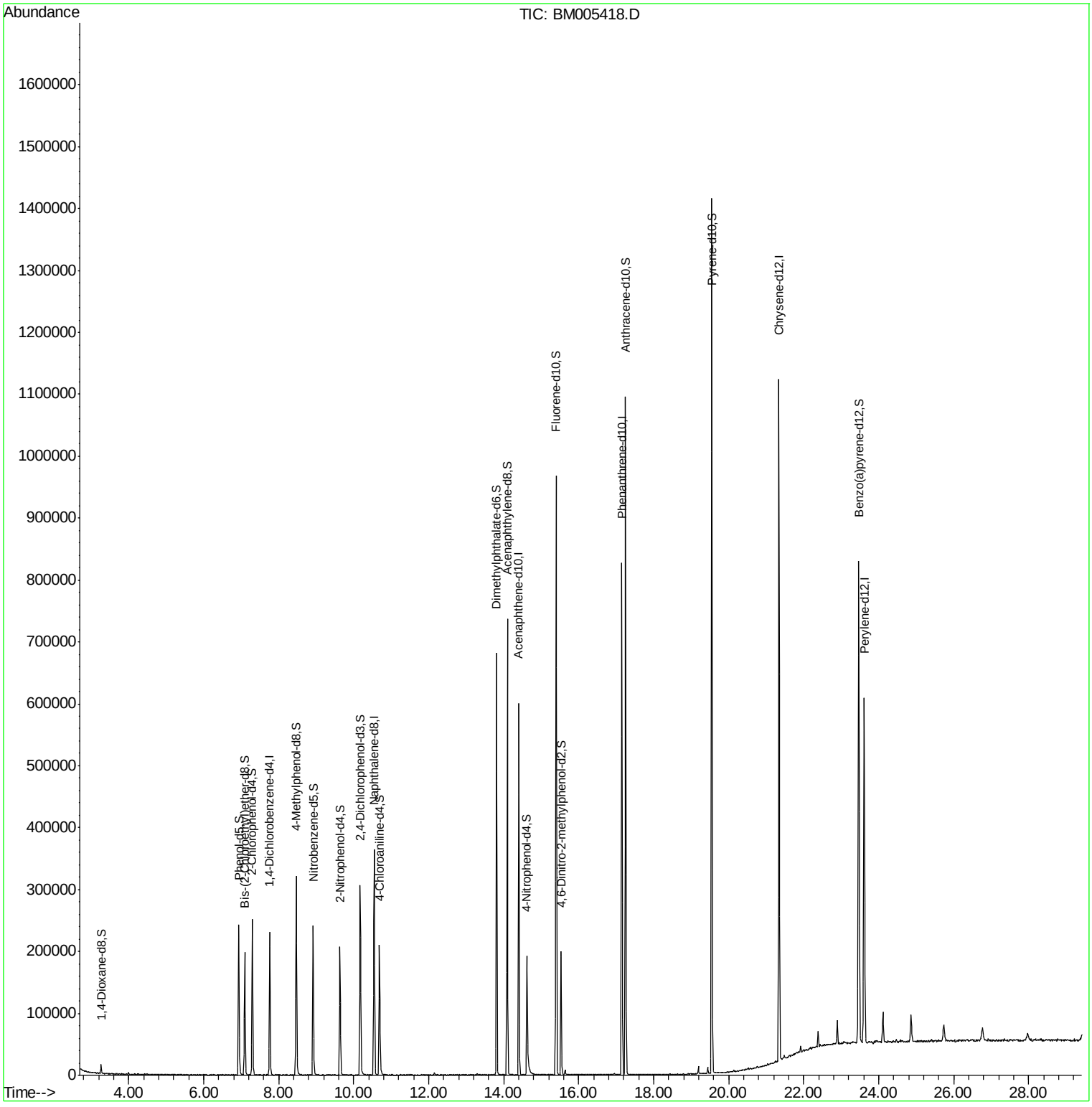
EPA-designated Registry Number.

Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005418.D
Acq On : 12 May 2016 13:51
Operator : UM/SJ
Sample : PB90404BL
Misc :
ALS Vial : 10 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK04

Quant Time: May 13 03:54:59 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005418.D
Acq On : 12 May 2016 13:51
Operator : UM/SJ
Sample : PB90404BL
Misc :
ALS Vial : 10 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK04

Quant Time: May 13 03:54:59 2016
Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION
QLast Update : Fri May 13 03:22:52 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.76	152	62930	20.00	ng/ul	0.00
18) Naphthalene-d8	10.55	136	300453	20.00	ng/ul	0.00
35) Acenaphthene-d10	14.40	164	204048	20.00	ng/ul	0.00
61) Phenanthrene-d10	17.15	188	502848	20.00	ng/ul	0.00
75) Chrysene-d12	21.34	240	545310	20.00	ng/ul	0.00
83) Perylene-d12	23.61	264	411177	20.00	ng/ul	0.00
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.26	96	6877	5.14	ng/uL	0.00
5) Phenol-d5	6.93	99	145576	25.51	ng/ul	0.00
7) Bis-(2-Chloroethyl)ether-d	7.09	67	87628	26.91	ng/ul	0.00
9) 2-Chlorophenol-d4	7.29	132	115492	26.79	ng/ul	0.00
13) 4-Methylphenol-d8	8.46	113	123977	26.28	ng/ul	0.00
19) Nitrobenzene-d5	8.92	128	59181	27.59	ng/ul	0.00
22) 2-Nitrophenol-d4	9.63	143	67551	27.81	ng/ul	0.00
26) 2,4-Dichlorophenol-d3	10.17	165	123197	27.29	ng/ul	0.00
29) 4-Chloroaniline-d4	10.69	131	118063	21.73	ng/ul	0.00
43) Dimethylphthalate-d6	13.81	166	458162	28.01	ng/ul	0.00
46) Acenaphthylene-d8	14.09	160	531788	27.72	ng/ul	0.00
51) 4-Nitrophenol-d4	14.62	143	62002	20.77	ng/ul	0.00
57) Fluorene-d10	15.39	176	397113	28.12	ng/ul	0.00
62) 4,6-Dinitro-2-methylphenol	15.53	200	44697	15.80	ng/ul	0.00
70) Anthracene-d10	17.24	188	640663	28.82	ng/ul	0.00
76) Pyrene-d10	19.54	212	751712	29.86	ng/ul	0.00
87) Benzo(a)pyrene-d12	23.47	264	529447	29.09	ng/ul	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005418.D
Acq On : 12 May 2016 13:51
Operator : UM/SJ
Sample : PB90404BL
Misc :
ALS Vial : 10 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK04

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Title : SVOA CALIBRATION

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.934	716	722	736	rBV	241988	388259	19.36%	2.084%
2	7.092	743	749	763	rVB	198269	305387	15.23%	1.640%
3	7.292	777	783	795	rVB	251491	399997	19.94%	2.147%
4	7.757	856	862	876	rBV	231409	370209	18.46%	1.988%
5	8.463	976	982	1003	rBV	321943	530273	26.44%	2.847%
6	8.916	1053	1059	1073	rBV	240808	402103	20.05%	2.159%
7	9.633	1175	1181	1189	rBV	206865	337802	16.84%	1.814%
8	10.169	1266	1272	1293	rBV	305781	543636	27.10%	2.919%
9	10.545	1329	1336	1346	rBV	364061	612911	30.56%	3.291%
10	10.686	1354	1360	1377	rBV	209693	369365	18.41%	1.983%
11	13.810	1884	1891	1901	rBV	681190	961941	47.96%	5.164%
12	14.092	1932	1939	1951	rBV	735720	1101288	54.91%	5.913%
13	14.398	1985	1991	2002	rBV2	600483	943489	47.04%	5.065%
14	14.616	2023	2028	2053	rBV	192022	373605	18.63%	2.006%
15	15.392	2153	2160	2173	rVB	967331	1456190	72.60%	7.818%
16	15.527	2177	2183	2196	rBV	198745	285735	14.25%	1.534%
17	17.151	2453	2459	2468	rVB	826097	1222373	60.94%	6.563%
18	17.245	2469	2475	2487	rVV	1094241	1635522	81.54%	8.781%
19	19.545	2860	2866	2877	rBV2	1413428	2005800	100.00%	10.769%
20	21.339	3166	3171	3180	rBV	1101349	1460357	72.81%	7.840%
21	22.380	3345	3348	3354	rVB2	25131	34570	1.72%	0.186%
22	22.891	3431	3435	3440	rVB	38253	53243	2.65%	0.286%
23	23.462	3525	3532	3543	rBV2	777590	1493321	74.45%	8.017%
24	23.609	3550	3557	3568	rVB	557247	1093397	54.51%	5.870%
25	24.109	3637	3642	3648	rVB2	46586	81514	4.06%	0.438%
26	24.856	3764	3769	3778	rVB	43785	95402	4.76%	0.512%
27	25.732	3913	3918	3928	rVB3	26862	68742	3.43%	0.369%

Sum of corrected areas: 18626431

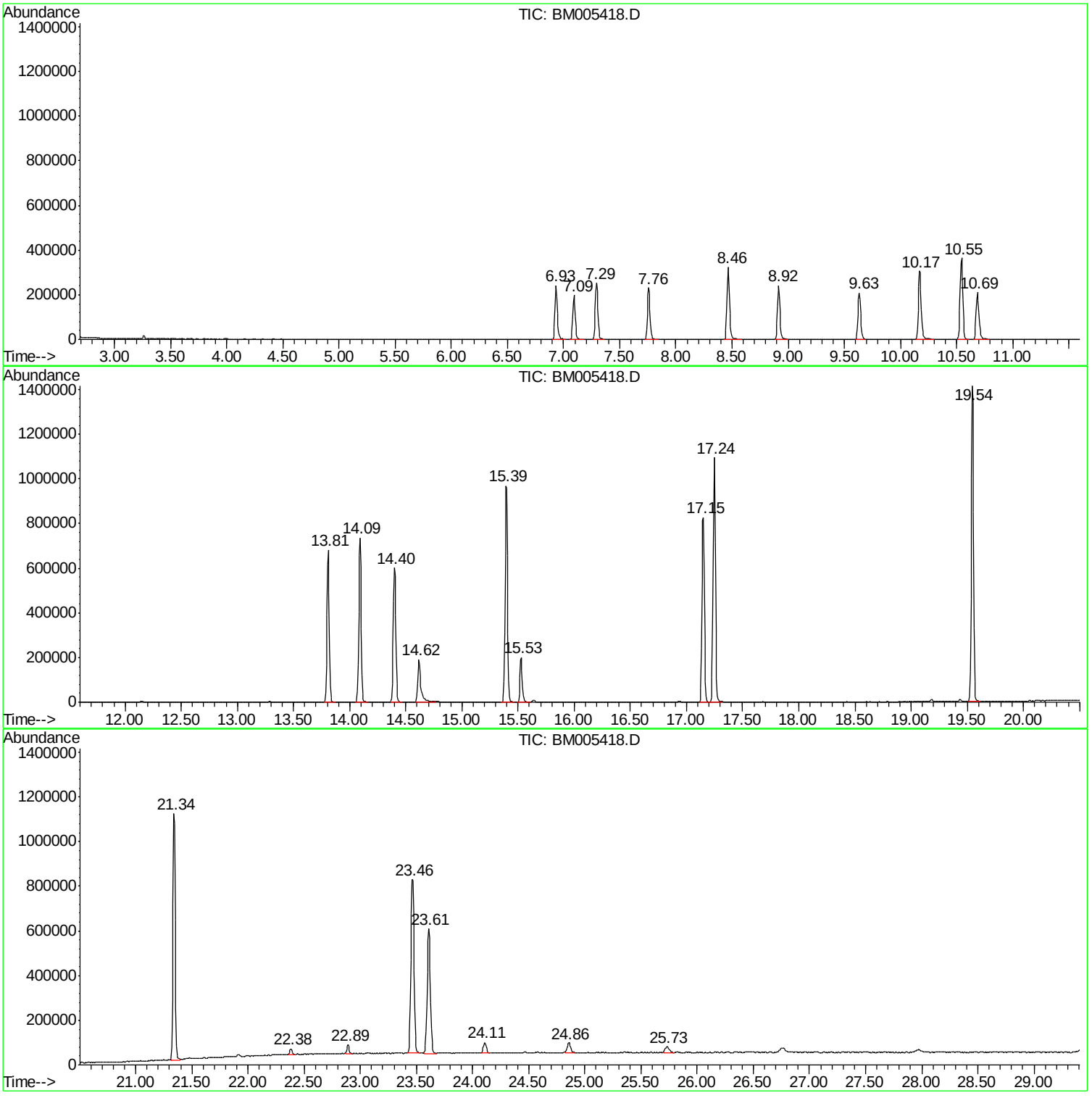
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005418.D
Acq On : 12 May 2016 13:51
Operator : UM/SJ
Sample : PB90404BL
Misc :
ALS Vial : 10 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK04

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005418.D
Acq On : 12 May 2016 13:51
Operator : UM/SJ
Sample : PB90404BL
Misc :
ALS Vial : 10 Sample Multiplier: 1

Instrument :
BNA_M
ClientSampleId :
SBLK04

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_M\DATA\BM051216\
Data File : BM005418.D
Acq On : 12 May 2016 13:51
Operator : UM/SJ
Sample : PB90404BL
Misc :
ALS Vial : 10 Sample Multiplier: 1

Instrument : BNA_M
ClientSampleId : SBLK04

Quant Method : Z:\HPCHEM1\BNA_M\METHODS\SOM02.2-EPA-BM050516.M
Quant Title : SVOA CALIBRATION

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

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Prep Standard - Chemical Standard Summary

Order ID : H2943

Test : VOC-Low Level -15

Prepbatch ID :

Sequence ID/Qc Batch ID: VI050916,VI051016,VI051116,VI051216,VI050416

Standard ID :
VP47998,VP52019,VP52036,VP52453,VP52662,VP52664,VP52665,VP52666,VP52667,VP52668,VP52669,VP52670,VP52815,VP52818,VP52819,VP52833,VP52834,VP52843,VP52844,VP52845,VP52906,VP52907,VP52951,VP52954,VP52955
,

Chemical ID :
V1456,V5218,V5740,V5948,V6161,V6285,V6330,V6355,V6373,V6406,V6419,V6493,V6580,V6583,V6588,V6592,V6593,V6671,

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
218	BFB, 25PPM	VP47998	11/13/2015	05/13/2016	sam

FROM 0.500ml of V5218 + 49.500ml of V6285 = Final Quantity: 50.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1721	SOM01.2 TRACE-Calibration Mix,25 PPM	VP52019	04/15/2016	05/16/2016	sam

FROM 0.125ml of V5948 + 0.125ml of V6161 + 0.125ml of V6355 + 0.250ml of V6406 + 0.250ml of V6419 + 0.500ml of V6373 + 8.625ml of V6493 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1896	Trace internal standard 50 ppm	VP52036	04/15/2016	05/16/2016	sam

FROM 0.200ml of V5740 + 9.800ml of V6493 = Final Quantity: 10.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1897	Trace surrogate mix 25 ppm	VP52453	04/28/2016	05/28/2016	sam

FROM 0.200ml of V6593 + 0.500ml of V6330 + 1.200ml of V6580 + 1.200ml of V6583 + 1.200ml of V6588 + 1.200ml of V6592 + 4.500ml of V6671 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52662	05/04/2016	05/05/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1722	0.5 PPB ICC SOM01.2 Trace	VP52664	05/04/2016	05/05/2016	feifei

FROM 39.990ml of V1456 + 0.001ml of VP52019 + 0.001ml of VP52453 + 0.004ml of VP52036 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1723	1 PPB ICC SOM01.2 Trace	VP52665	05/04/2016	05/05/2016	feifei

FROM 39.990ml of V1456 + 0.002ml of VP52019 + 0.002ml of VP52453 + 0.004ml of VP52036 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1724	5 PPB ICC SOM01.2 Trace	VP52666	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1725	10 PPB ICC SOM01.2 Trace	VP52667	05/04/2016	05/05/2016	feifei

FROM 39.960ml of V1456 + 0.004ml of VP52036 + 0.016ml of VP52019 + 0.016ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1726	20 PPB ICC SOM01.2 Trace	VP52668	05/04/2016	05/05/2016	feifei

FROM 39.930ml of V1456 + 0.004ml of VP52036 + 0.032ml of VP52019 + 0.032ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52669	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52670	05/04/2016	05/05/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52815	05/09/2016	05/10/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52818	05/09/2016	05/10/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52819	05/09/2016	05/10/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52833	05/09/2016	05/10/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52834	05/10/2016	05/11/2016	feifei

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52843	05/10/2016	05/11/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52844	05/10/2016	05/11/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52845	05/10/2016	05/11/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52906	05/11/2016	05/12/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52907	05/11/2016	05/12/2016	feifei

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1734	BFB TUNE SOM01.2 TRACE	VP52951	05/12/2016	05/13/2016	lisa

FROM 40.000ml of V1456 + 0.003ml of VP47998 = Final Quantity: 40.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52954	05/12/2016	05/13/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1727	5 PPB CCC-CCV SOM01.2 Trace	VP52955	05/12/2016	05/13/2016	lisa

FROM 39.980ml of V1456 + 0.004ml of VP52036 + 0.008ml of VP52019 + 0.008ml of VP52453 = Final Quantity: 40.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	DIW / DI Water	DAILY	12/31/2019	03/01/2010 / apatel	03/02/2010 / apatel	V1456

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30067 / BFB tuneing solution	A0102518	04/30/2019	11/13/2015 / sam	07/14/2014 / sam	V5218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30091 / VOA Mix, CLP method L/C Internal Std 2500uq/ml, PT&M, 1ml/ampul	A099377	10/31/2018	04/13/2016 / sam	03/27/2015 / sam	V5740

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30429 / 1,2,3-Trichloropropane Standard, 2,000 ug/ml	A0108463	01/31/2020	12/11/2015 / sam	06/04/2015 / sam	V5948

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30492 / VOA Mix, OLC 03.2 VOA Mega Mix, 1mL, 2000ug/mL, P&TM	A0102833	04/30/2017	03/16/2016 / sam	09/24/2015 / sam	V6161

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	118655	07/13/2017	11/13/2015 / sam	11/04/2015 / sam	V6285

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30624 / VOA Stock Standard, OLC 3.2 VOA non-ketone, deuterated monitoring compounds, 1mL, 500ug/mL, Methanol-d	A0113615	08/31/2018	04/22/2016 / sam	10/28/2015 / sam	V6330

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30042 / VOA Mix,500 series method 502.2 Calibration Std #1 gases, 2000uq/ml, PTM, 1ml	A0114018	05/31/2022	04/14/2016 / sam	10/28/2015 / sam	V6355

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A0110042	07/31/2018	03/16/2016 / sam	10/28/2015 / sam	V6373

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31280 / Naphthalene, 1000 PPM in Methanol	A0111730	05/31/2021	01/13/2016 / sam	11/17/2015 / sam	V6406

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31081 / 1,3,5-Trichlorobenzene	A0109767	03/31/2020	04/14/2016 / sam	11/19/2015 / sam	V6419

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	127999	10/27/2017	04/05/2016 / sam	01/13/2016 / sam	V6493

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6580

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6583

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6588

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6592

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30625 / VOA Stock Std, OLC 3.2 VOA Ketone Deuterated Monitoring Compounds, 1mL, 500ug/mL, d2O	A0114355	08/31/2017	04/28/2016 / sam	03/08/2016 / sam	V6593

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	0000127999	10/27/2017	04/28/2016 / sam	04/12/2016 / sam	V6671

RESTEK CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30492 **Lot No.:** A0102833

Description : OLC 03.2 VOA Mega Mix

OLC 03.2 VOA Mega Mix 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2017 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.: K=2)		
1	1,1,2-Trichlorotrifluoroethane (CFC-113)	2,006.1 µg/mL	+/- 11.7727	µg/mL	Gravimetric
	CAS # 76-13-1 (Lot Q9B-87)		+/- 106.7701	µg/mL	Unstressed
	Purity 98%		+/- 106.8878	µg/mL	Stressed
2	1,1-dichloroethene	2,001.3 µg/mL	+/- 15.4296	µg/mL	Gravimetric
	CAS # 75-35-4 (Lot 33096BKV)		+/- 106.9831	µg/mL	Unstressed
	Purity 99%		+/- 107.1000	µg/mL	Stressed
3	Methyl acetate	2,001.5 µg/mL	+/- 11.7459	µg/mL	Gravimetric
	CAS # 79-20-9 (Lot 56696JMV)		+/- 106.5274	µg/mL	Unstressed
	Purity 99%		+/- 106.6448	µg/mL	Stressed
4	Methylene chloride (dichloromethane)	2,001.8 µg/mL	+/- 15.4334	µg/mL	Gravimetric
	CAS # 75-09-2 (Lot SHBC7917V)		+/- 107.0098	µg/mL	Unstressed
	Purity 99%		+/- 107.1268	µg/mL	Stressed
5	Carbon disulfide	2,003.6 µg/mL	+/- 11.7583	µg/mL	Gravimetric
	CAS # 75-15-0 (Lot C30Y997)		+/- 106.6397	µg/mL	Unstressed
	Purity 98%		+/- 106.7573	µg/mL	Stressed
6	Methyl-tert-butyl ether (MTBE)	2,001.0 µg/mL	+/- 11.7430	µg/mL	Gravimetric
	CAS # 1634-04-4 (Lot SHBD2980V)		+/- 106.5008	µg/mL	Unstressed
	Purity 99%		+/- 106.6182	µg/mL	Stressed
7	trans-1,2-Dichloroethene	2,005.0 µg/mL	+/- 15.4585	µg/mL	Gravimetric
	CAS # 156-60-5 (Lot 09431AEV)		+/- 107.1836	µg/mL	Unstressed
	Purity 99%		+/- 107.3007	µg/mL	Stressed
8	1,1-Dichloroethane	2,003.0 µg/mL	+/- 15.4429	µg/mL	Gravimetric
	CAS # 75-34-3 (Lot Q179-33)		+/- 107.0752	µg/mL	Unstressed
	Purity 98%		+/- 107.1923	µg/mL	Stressed

25	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBD2073V)	2,000.2	µg/mL	+/- +/- +/-	15.4213 106.9257 107.0425	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	dibromochloromethane **CAS #** 124-48-1 **Purity** 98%	(Lot MKBP0459V)	2,000.4	µg/mL	+/- +/- +/-	15.4234 106.9403 107.0572	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	1,2-Dibromoethane (EDB) **CAS #** 106-93-4 **Purity** 99%	(Lot BCBH3877V)	2,004.0	µg/mL	+/- +/- +/-	11.7606 106.6604 106.7780	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Chlorobenzene **CAS #** 108-90-7 **Purity** 99%	(Lot SHBD3200V)	2,002.3	µg/mL	+/- +/- +/-	15.4373 107.0366 107.1536	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Ethylbenzene **CAS #** 100-41-4 **Purity** 99%	(Lot SHBC9001V)	2,005.0	µg/mL	+/- +/- +/-	11.7665 106.7137 106.8313	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot H08Y016)	1,005.5	µg/mL	+/- +/- +/-	5.9008 53.5165 53.5755	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	p-Xylene **CAS #** 106-42-3 **Purity** 99%	(Lot SHBC6261V)	1,004.0	µg/mL	+/- +/- +/-	5.8920 53.4367 53.4956	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	o-Xylene **CAS #** 95-47-6 **Purity** 99%	(Lot SHBC4667V)	2,000.0	µg/mL	+/- +/- +/-	11.7371 106.4475 106.5649	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	Styrene **CAS #** 100-42-5 **Purity** 99%	(Lot 10174567)	2,002.5	µg/mL	+/- +/- +/-	11.7518 106.5806 106.6981	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Isopropylbenzene (cumene) **CAS #** 98-82-8 **Purity** 99%	(Lot 10169400)	2,006.5	µg/mL	+/- +/- +/-	11.7753 106.7935 106.9112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	bromoform **CAS #** 75-25-2 **Purity** 99%	(Lot SHBC3410V)	2,005.1	µg/mL	+/- +/- +/-	15.4593 107.1889 107.3061	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	1,1,2,2-Tetrachloroethane **CAS #** 79-34-5 **Purity** 99%	(Lot I29W026)	2,001.9	µg/mL	+/- +/- +/-	15.4342 107.0152 107.1322	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBC1891V)	2,003.2	µg/mL	+/- +/- +/-	15.4448 107.0887 107.2057	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBL3891V)	2,007.4	µg/mL	+/- +/- +/-	15.4766 107.3092 107.4265	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot 68996CMV)	2,002.6	µg/mL	+/- +/- +/-	15.4400 107.0553 107.1723	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
40	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8 **Purity** 99%	(Lot FBL01)	2,000.5	µg/mL	+/- +/- +/-	11.7401 106.4742 106.5916	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

Material No.:9077-02
Batch No.: 0000118655
Manufactured Date:2015/07/16
Expiration Date:2017/07/13

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.3000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	0.1
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

For Laboratory, Research or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India. 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

12

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9077-02
Batch No.: 0000127999
Manufactured Date: 2015/10/30
Expiration Date: 2017/10/27

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.7000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	<0.01
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

For Laboratory, Research or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 11485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 11485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30625 **Lot No.:** A0114355

Description : OLC 3.2 VOA Deuterated Monitoring Compounds

OLC 3.2 VOA Ketone Deuterated Monitoring Compounds 500µg/mL, Deuterium Oxide, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Butanone-d5 **CAS #** 24313-50-6 (Lot M276P24) **Purity** 99%	501.0 µg/mL	+/- 2.9758 +/- 26.6691 +/- 26.6985	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Hexanone-d5 **CAS #** 4840-82-8 (Lot I500P2) **Purity** 99%	501.0 µg/mL	+/- 2.9758 +/- 26.6691 +/- 26.6985	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Deuterium Oxide
CAS # 7789-20-0
Purity 99%

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30429 **Lot No.:** A0108463

Description : 1,2,3-Trichloropropane Standard

1,2,3-Trichloropropane 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2,3-Trichloropropane **CAS #** 96-18-4 (Lot 1428739V) **Purity** 99%	2,012.0 µg/mL	+/- 18.7105 µg/mL +/- 26.9814 µg/mL +/- 29.9140 µg/mL		Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30006 **Lot No.:** A0110042

Description : VOA Calibration Mix #1

VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acetone **CAS #** 67-64-1 **Purity** 99% (Lot 07196AK)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 **Purity** 99% (Lot BCBH7802V)	5,000.3 µg/mL	+/- 29.0722 +/- 266.1049 +/- 266.3984	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 **Purity** 99% (Lot SHBD1798V)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 **Purity** 99% (Lot MKBN7380V)	5,000.7 µg/mL	+/- 29.0745 +/- 266.1262 +/- 266.4197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

12 14

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

J.T.Baker®

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Material No.: 9077-02
Batch No.: 0000127999
Manufactured Date: 2015/10/30
Expiration Date: 2017/10/27

Dee 11/3/16

V-6482 to V 6493 S4

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	>= 99.9 %	100.0
Residue after Evaporation	<= 1.0000 ppm	0.7000
Titrable Acid (µeq/g)	<= 0.3	0.3
Titrable Base (µeq/g)	<= 0.1	<0.01
Water (by KF, coulometric)	<= 0.08 %	< 0.01
Photoionization Detection (PID) Below CRQL	Passes Test	PT
Electroconductivity Detection (ELCD) Below CRQL	Passes Test	PT

For Laboratory, Research or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
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Vice President Global Quality

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Rec 07/14/14

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 30067 **Lot No.:** A0102518

Description: 4-Bromofluorobenzene Standard

4-Bromofluorobenzene Standard 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size: 2 mL **Pkg Amt:** > 1 mL

Expiration Date: April 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	1-Bromo-4-fluorobenzene (BFB)	2,506.0 µg/mL	+/- 14.7066	µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 01127COV)		+/- 28.3294	µg/mL	Unstressed
	Purity 99%		+/- 32.5790	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31081 **Lot No.:** A0109767

Description : 1,3,5-Trichlorobenzene Standard

1,3,5-Trichlorobenzene Standard 1,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,3,5-Trichlorobenzene	1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 108-70-3 (Lot 11319AS)		+/- 11.4324	µg/mL	Unstressed
	Purity 99%		+/- 13.1369	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 31280 **Lot No.:** A0111730

Description : Naphthalene Standard

Naphthalene Standard 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2021 **Storage:** 25°C nominal

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L. ; K=2)		
1	Naphthalene **CAS #** 91-20-3 **Purity** 99% (Lot MKBH4351V)	1,004.0 µg/mL	+/- 5.9635 +/- 44.6249 +/- 49.0256	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

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Catalog No. : 30624 **Lot No.:** A0113615

Description : SOM 01.1 VOA DMC Non-Ketones Standard

OLC 3.2 VOA Non-Ketone Deuterated Monitoring Compounds
500µg/mL, Methanol-OD, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Vinyl Chloride-d3 **CAS #** 6745-35-3 (Lot PR-21820) **Purity** 98%	523.4 µg/mL	+/- 35.2305 µg/mL +/- 35.5916 µg/mL +/- 35.7499 µg/mL	Gravimetric Unstressed Stressed
2	Chloroethane-d5 **CAS #** 19199-91-8 (Lot F243P15) **Purity** 99%	509.0 µg/mL	+/- 19.1030 µg/mL +/- 19.7259 µg/mL +/- 19.9947 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethylene-d2 **CAS #** 22280-73-5 (Lot PR-21050) **Purity** 99%	501.0 µg/mL	+/- 2.9758 µg/mL +/- 5.6822 µg/mL +/- 6.5294 µg/mL	Gravimetric Unstressed Stressed
4	Chloroform-d **CAS #** 865-49-6 (Lot A021968500l) **Purity** 99%	503.0 µg/mL	+/- 2.9877 µg/mL +/- 5.7049 µg/mL +/- 6.5554 µg/mL	Gravimetric Unstressed Stressed
5	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot 14C-191) **Purity** 99%	504.0 µg/mL	+/- 2.9936 µg/mL +/- 5.7162 µg/mL +/- 6.5685 µg/mL	Gravimetric Unstressed Stressed
6	Benzene-d6 **CAS #** 1076-43-3 (Lot 14G-554) **Purity** 99%	500.0 µg/mL	+/- 2.9698 µg/mL +/- 5.6709 µg/mL +/- 6.5163 µg/mL	Gravimetric Unstressed Stressed
7	1,2-Dichloropropane-d6 **CAS #** 93952-08-0 (Lot Z322P8) **Purity** 99%	502.0 µg/mL	+/- 2.9817 µg/mL +/- 5.6935 µg/mL +/- 6.5424 µg/mL	Gravimetric Unstressed Stressed

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30042 **Lot No.:** A0114018

Description : 502.2 Calibration Mix #1

502.2 Calibration Mix #1 2,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot Q167-08) **Purity** 99%	2,013.4 µg/mL	+/- 14.1778 +/- 24.0720 -/- 27.3231	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBF7067V) **Purity** 99%	2,014.0 µg/mL	+/- 15.9346 +/- 25.1511 +/- 28.2800	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 25LPST) **Purity** 99%	2,018.2 µg/mL	+/- 15.9614 +/- 25.1997 +/- 28.3356	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,018.8 µg/mL	+/- 15.1008 +/- 24.6679 +/- 27.8655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	2,006.0 µg/mL	-/- 12.7193 +/- 23.1828 +/- 26.5198	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Trichlorofluoromethane (CFC-11) **CAS #** 75-69-4 (Lot SHBF6387V) **Purity** 99%	2,014.0 µg/mL	+/- 15.3697 +/- 24.7970 +/- 27.9656	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30091 **Lot No.:** A099377

Description : L/C VOA Internal Standard Mix

L/C Internal Std 2500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Difluorobenzene	2,500.5 µg/mL	+/- 14.6743 µg/mL	Gravimetric
	CAS # 540-36-3 (Lot 13105AO)		+/- 26.5411 µg/mL	Unstressed
	Purity 99%		+/- 30.8641 µg/mL	Stressed
2	Chlorobenzene-d5	2,499.0 µg/mL	+/- 14.6655 µg/mL	Gravimetric
	CAS # 3114-55-4 (Lot PR-22736)		+/- 26.5252 µg/mL	Unstressed
	Purity 99%		+/- 30.8456 µg/mL	Stressed
3	1,4-Dichlorobenzene-d4	2,504.5 µg/mL	+/- 14.6978 µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/- 26.5836 µg/mL	Unstressed
	Purity 99%		+/- 30.9135 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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Prep Standard - Chemical Standard Summary

Order ID : H2943

Test : SVOC-TCL BNA -20

Prepbatch ID : PB90404,

Sequence ID/Qc Batch ID: bm051116,bm051216,BM050516

Standard ID :
EP1653,EP1663,SP3592,SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643,SP3682,

Chemical ID :
1ul IS/ 100ul sample,E2036,E2072,E2087,E2105,H1316,M3518,S3950,S3957,S4605,S4617,S4663,S4672,S4673,S4704,S4711,S4815,S4816,S4985,S4992,S4993,S4996,S5008,S5017,S5019,S5020,S5073,S5074,S5075,S5076,S5077,S5078,S5079,S5085,V4294,

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
256	BAKED SODIUM SULPHATE	EP1653	02/29/2016	08/29/2016	Rajesh

FROM 4000.000ml of E2036 = Final Quantity: 4000.000 gram

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
314	1.1 H2SO4 SOLN	EP1663	04/01/2016	10/01/2016	rajesh

FROM 1000.000ml of M3518 + 1000.000ml of V4294 = Final Quantity: 2000.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3334	50ug/ml SOM DFTPP	SP3592	02/08/2016	08/08/2016	UMANGI

FROM 0.200ml of S3957 + 9.800ml of E2072 = Final Quantity: 10.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3243	SOM02.2 STOCK 160 PPM	SP3637	03/16/2016	07/31/2016	UMANGI

FROM 0.320ml of S4605 + 0.320ml of S4617 + 0.320ml of S4663 + 0.320ml of S4704 + 0.400ml of S4992 + 0.600ml of S4672 + 0.800ml of S3950 + 0.800ml of S4711 + 0.800ml of S4996 + 0.800ml of S5085 + 1.000ml of S4673 + 1.200ml of S4993 + 2.320ml of E2087 = Final Quantity: 10.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3244	SSTD160 PPM	SP3638	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 1.000ml of SP3637 = Final Quantity: 1.010 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3245	SSTD80 PPM	SP3639	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.500ml of E2087 + 0.500ml of SP3637 = Final Quantity: 1.010 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3246	SSTD40 PPM	SP3640	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.725ml of E2087 + 0.250ml of SP3637 = Final Quantity: 1.010 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3247	SSTD20 PPM	SP3641	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.875ml of E2087 + 0.125ml of SP3637 = Final Quantity: 1.010 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3248	SSTD10 PPM	SP3642	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.500ml of E2087 + 0.500ml of SP3641 = Final Quantity: 1.010 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3249	SSTD005 PPM	SP3643	03/16/2016	07/31/2016	UMANGI

FROM 0.010ml of S5008 + 0.750ml of E2087 + 0.250ml of SP3641 = Final Quantity: 1.010 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3370	SOM02.3 Surrogate (80/1-4 D8@ 32)	SP3682	05/06/2016	11/06/2016	umangi

FROM 0.600ml of S4815 + 1.000ml of S4816 + 1.000ml of S4985 + 1.000ml of S5073 + 1.000ml of S5074 + 1.000ml of S5075 + 1.000ml of S5076 + 1.000ml of S5077 + 1.000ml of S5078 + 1.000ml of S5079 + 190.400ml of H1316 = Final Quantity: 200.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	/ Sodium sulfate (anhyhdrous)	433101	10/05/2020	10/30/2015 / rajesh	10/05/2015 / rajesh	E2036

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	0000131014	08/08/2016	02/09/2016 / rajesh	01/22/2016 / rajesh	E2072

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EMD Chemicals Inc.	DX0831CJ-38 / DCM, Cycle Tainer	56056	09/14/2016	03/15/2016 / rajesh	03/15/2016 / rajesh	E2087

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EMD Chemicals Inc.	DX0831CJ-38 / DCM, Cycle Tainer	56056	10/26/2016	04/27/2016 / rajesh	04/08/2016 / rajesh	E2105

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9093-03 / Methanol, HPLC (cs/4x4L)	0000119840	08/16/2020	02/23/2016 / umangi	01/22/2016 / UMANGI	H1316

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	0000095945	11/02/2019	11/20/2015 / mohan	11/18/2015 / mohan	M3518

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31833 / caprolactam, 2,000 µg/mL in methylene chloride, 1 mL/ampul	A0105455	08/31/2016	01/02/2015 / jung	10/16/2014 / TEJASKUMAR	S3950

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31001 / SV Tuning Compound Standard, 2500 ug/ml,	A0103386	05/31/2017	01/22/2015 / TEJASKUMAR	10/30/2014 / TEJASKUMAR	S3957

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31853 / 1,4-Dioxane, 2000 ug/ml , Solvent: Methylene Chloride	A0110448	04/30/2020	02/22/2016 / Sohil	07/07/2015 / TEJASKUMAR	S4605

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30614 / 1,4-Dioxane-D8 Standard	A0111152	05/31/2018	02/23/2016 / umangi	07/17/2015 / TEJASKUMAR	S4617

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	98496 / 1,2,3,4-Tetrachlorobenzene, 5000 ug/mL, in MeCl2	061115	06/11/2020	02/22/2016 / Sohil	08/12/2015 / umangi	S4663

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31900 / SOM01.1 Mega Mix, 500-1000 ug/ml	A01082223	07/31/2016	02/22/2016 / Sohil	08/14/2015 / umangi	S4672

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31900 / SOM01.1 Mega Mix, 500-1000 ug/ml	A0112856	07/31/2016	02/29/2016 / UMANGI	08/14/2015 / umangi	S4673

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	98495 / Pentachlorobenzene, 5000 ug/mL, in MeCl2	061115	06/11/2020	02/22/2016 / Sohil	08/31/2015 / umangi	S4704

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	33017 / Benzaldehyde, 2000 ug/ml	A0111289	05/31/2017	03/14/2016 / UMANGI	09/08/2015 / UMANGI	S4711

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30614 / 1,4-Dioxane-D8 Standard	A0111152	05/31/2018	03/28/2016 / umangi	10/20/2015 / nEVILKUMAR	S4815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30614 / 1,4-Dioxane-D8 Standard	A0111152	05/31/2018	05/06/2016 / umangi	10/20/2015 / nEVILKUMAR	S4816

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0112586	04/30/2019	03/28/2016 / umangi	11/13/2015 / Sohil	S4985

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32208 / atrazine, 1,000 µg/mL in acetone, 1 mL/ampul	A0112545	03/31/2019	02/22/2016 / Sohil	11/19/2015 / Sohil	S4992

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32208 / atrazine, 1,000 µg/mL in acetone, 1 mL/ampul	A0112545	03/31/2019	03/14/2016 / UMANGI	11/19/2015 / Sohil	S4993

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	90494 / 1-Methylnaphthalene, 2000 ug/mL, in methylene chloride	070314	07/03/2019	03/14/2016 / UMANGI	11/19/2015 / Sohil	S4996

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31206 / SV Mix, CLP method, Internal Std, 2000ug/mL, CH2Cl2, 1mL	A0115444	10/31/2021	03/16/2016 / UMANGI	12/18/2015 / Sohil	S5008

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31206 / SV Mix, CLP method, Internal Std, 2000ug/mL, CH2Cl2, 1mL	A0115444	05/09/2016	05/02/2016 / umangi	12/18/2015 / Sohil	S5017

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31206 / SV Mix, CLP method, Internal Std, 2000ug/mL, CH2Cl2, 1mL	A0115444	10/31/2021	05/04/2016 / umangi	12/18/2015 / Sohil	S5019

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31206 / SV Mix, CLP method, Internal Std, 2000ug/mL, CH2Cl2, 1mL	A0115444	10/31/2021	05/04/2016 / umangi	12/18/2015 / Sohil	S5020

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	05/06/2016 / umangi	01/28/2016 / Sohil	S5073

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	05/06/2016 / umangi	01/28/2016 / Sohil	S5074

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	05/06/2016 / umangi	01/28/2016 / Sohil	S5075

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	05/06/2016 / umangi	01/28/2016 / Sohil	S5076

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	05/06/2016 / umangi	01/28/2016 / Sohil	S5077

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	05/06/2016 / umangi	01/28/2016 / Sohil	S5078

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	05/06/2016 / umangi	01/28/2016 / Sohil	S5079

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31810 / SV Mix, OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL, 2000ug/mL, CH2Cl2	A0115813	09/30/2019	03/14/2016 / UMANGI	01/28/2016 / Sohil	S5085

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	200111-SCB-R2 / DI Water, Res-Kem	VOC-DailyChecke	12/31/2020	07/01/2013 / apatel	07/01/2013 / apatel	V4294

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number: 98495
Lot Number: 061115
Description: Pentachlorobenzene

Expiration Date: 061120
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000

Solvent(s):	Lot#
Methylene chloride	72062

S4703
S4704
S4705
S4706

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.002 Flask Uncertainty

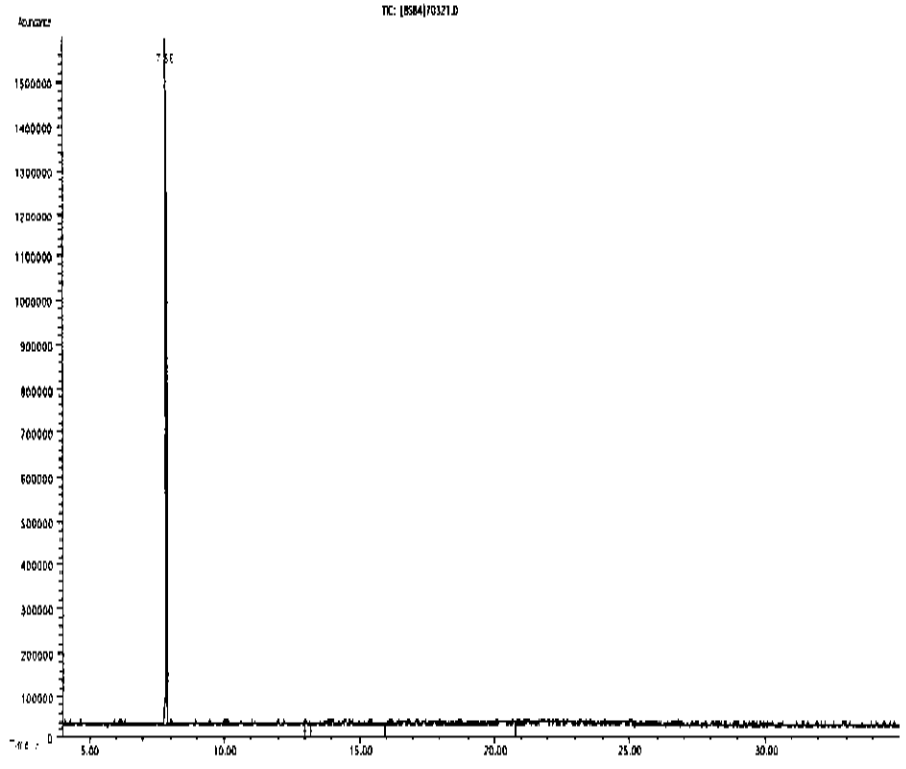
Paul Barron 061115
Formulated By: Paul Barron DATE

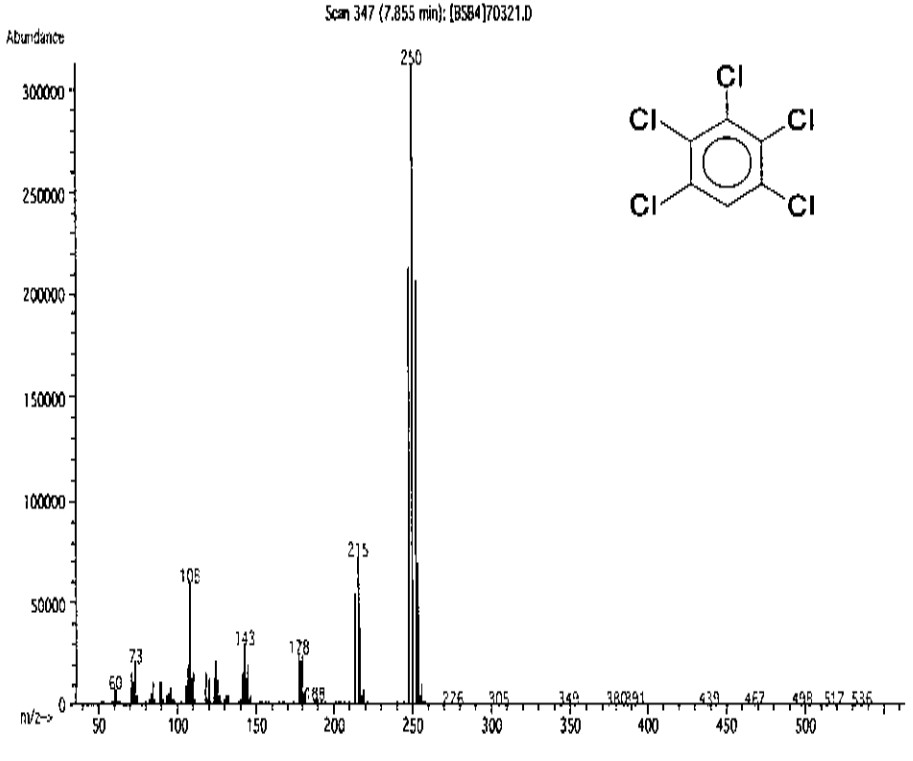
Pedro Rentas 061115
Reviewed By: Pedro L. Rentas DATE

MSDS Information
(Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. Pentachlorobenzene	321	2705100	5000	99.5	0.5	0.05024	0.05038	5013.7	0.0102	00608-93-5	N/A	orl-rat 1080mg/kg

Method GC7MSD-1.M: Column: SPB-608 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 150°C (4min.), Temp 2 = 290°C (13.5 min.), Rate = 8°C/min., Injector B= 200°C, Detector B = 290°C. Split Ratio = 100:1, Scan Rate = 2. Analysis performed by Candice Warren.





853

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Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

854

CERTIFIED WEIGHT REPORT

Part Number:	90494
Lot Number:	070314
Description:	1-Methylnaphthalene
Expiration Date:	070319
Recommended Storage:	Refrigerate (4 °C)
Nominal Concentration (µg/mL):	2000

Solvent(s):	**Lot#**
Methylene chloride	74359

S4996 SJ
↓ 11/23/15
S5000

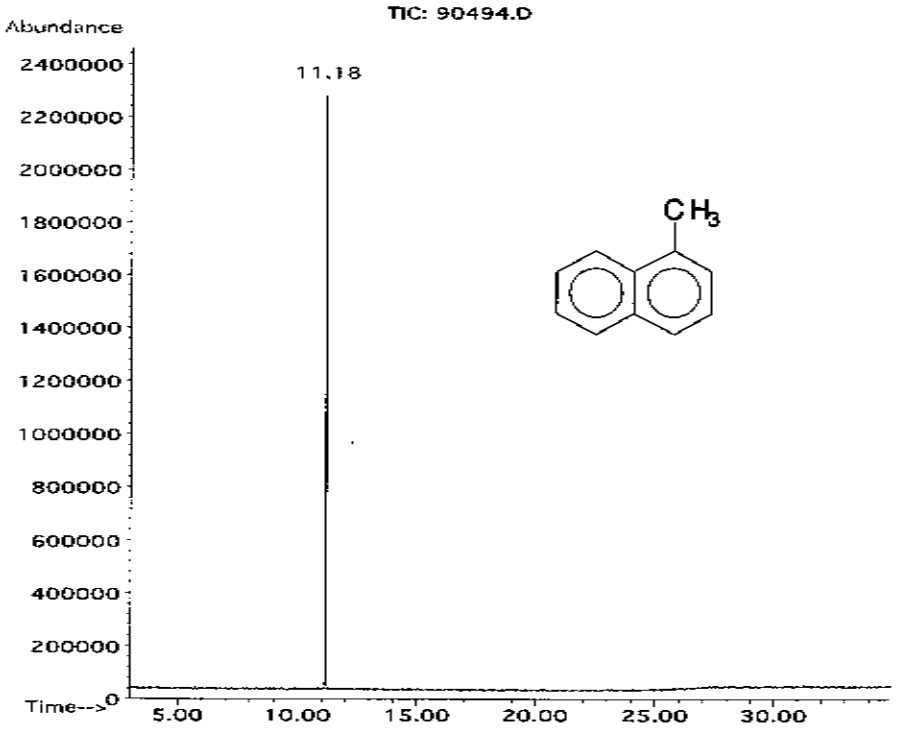
Formulated By:	Paul Barron	070314 DATE
Reviewed By:	Pedro L. Rentas	070314 DATE

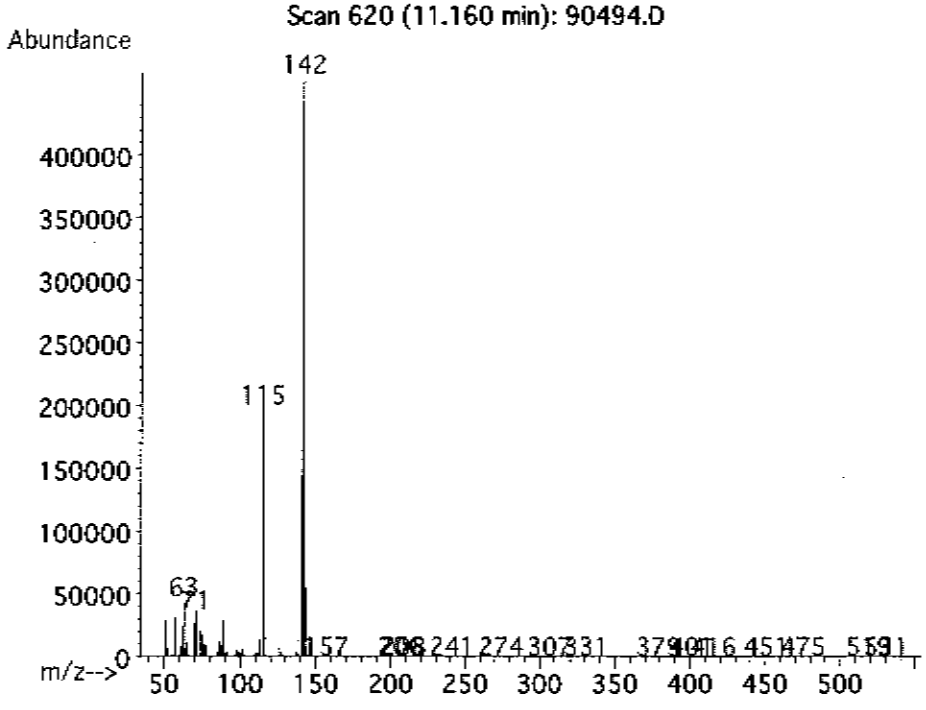
5E-05 Balance Uncertainty
0.003 Flask Uncertainty

Weight(s) shown below were combined and diluted to: 100.0

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 1-Methylnaphthalene	313	04413BX	2000	98	0.2	0.20410	0.20420	2001.0	0.0041	00090-12-0	N/A	orl-rat 1840mg/kg

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Gina McLane.



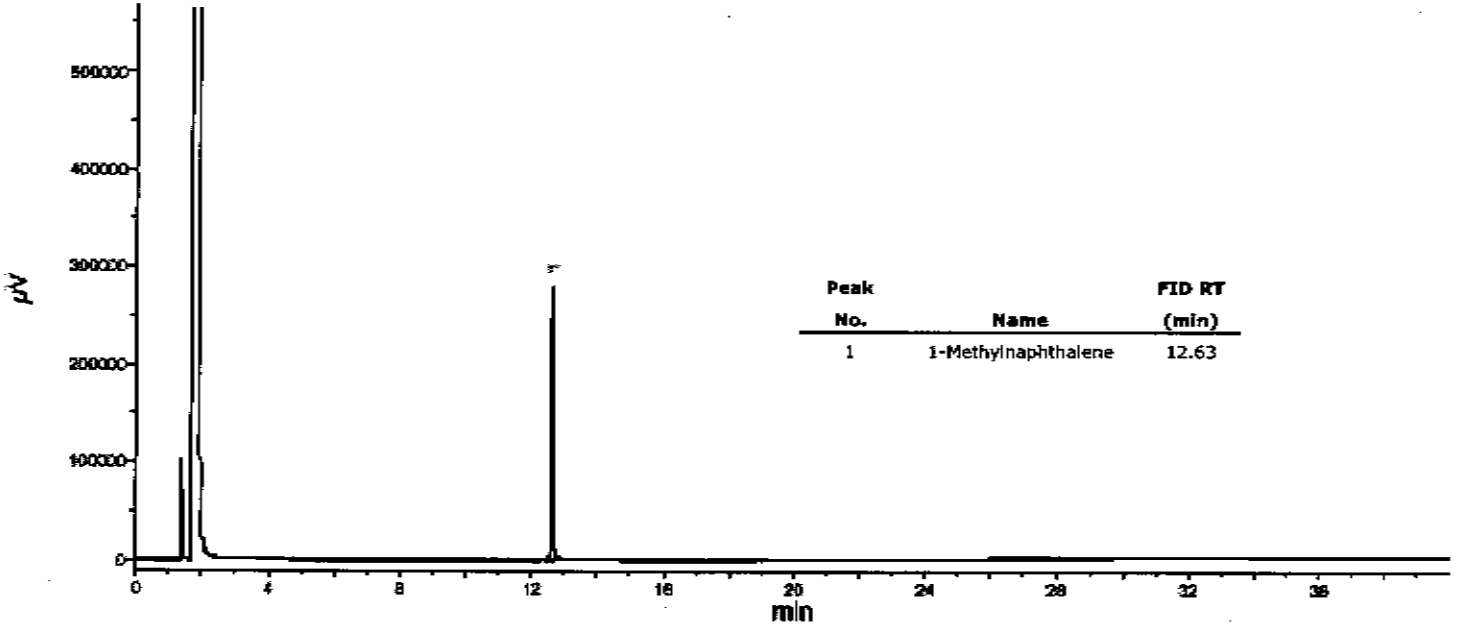


855

Run 49, "P90494 L070314 [2000µg/mL in MeCl2]"

Run Length: 39.99 min, 23997 points at 10 points/second.
Created: Thu, Jul 10, 2014 at 12:38:44 AM.
Sampled: Sequence "070814-GC9M2", Method "GC9-M2".
Analyzed using Method "GC9-M2".

Comments
GC9M2 Analysis by Melissa Stonier
SPB-5 30 meter x 0.53 µm x 1.5 df
Flow Rates; Total Flow = 300 mL/min, Helium (carrier)=6mL, Helium (makeup)=25mL, Hydrogen (detector)=30, Air (detector)=360
Oven Temp 1 = 50 C (1 min), Rate = 10 C/min, Oven Temp 2 = 300 (14 min), Total Run Time=40 min.
Injector Temp = 250 C, FID Temp = 300 C, FID Signal = Edaq Channel 1
Gas Chromatograph = HP5890, Injector = HP7673A, Standard Injection = 0.5 uL, Range = 4



Peak No.	Name	FID RT (min)
1	1-Methylnaphthalene	12.63

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

Rec Geo 7/17/15

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Materiel is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30614 **Lot No.:** A0111152

Description : 1,4-dioxane-d8 Standard

1,4-dioxane-d8 Standard 2000 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.I.; K=2)		
1	1,4-Dioxane-d8	2,004.0 µg/mL	+/- 11.7606	µg/mL	Gravimetric
	CAS # 17647-74-4 (Lot 1-19073)		+/- 42.5297	µg/mL	Unstressed
	Purity 99%		+/- 42.7181	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

54614
54615
54616
54617

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

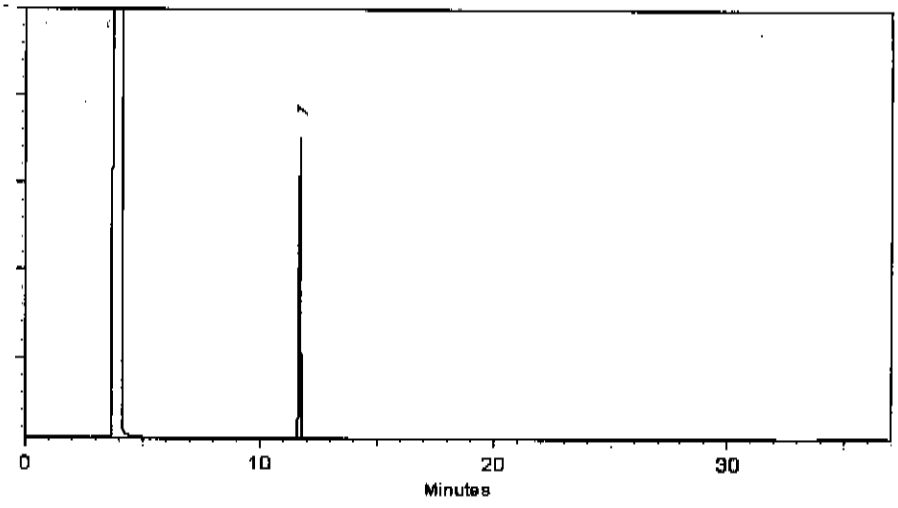
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Valerie S. Strohm - ARM R&D Chemist

Date Mixed: 15-May-2015 **Balance:** 1125113331

Jennifer L. Pollino - QC Analyst

Date Passed: 19-May-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommendad condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentretion of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes grevimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certifiad combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncartainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restak will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative fer details.
- If eny undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Rec. 10/30/14

Catalog No. : 31001 **Lot No.:** A0103386

Description : SV Tuning Compound Standard

Tuning Std Decafluorotriphenylphosphine 2500µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.: K=2)		
1	DFTPP (Decafluorotriphenylphosphine)	2,500.0 µg/mL	+/- 14.8492	µg/mL	Gravimetric
	CAS # 5074-71-5 (Lot 10109917)		+/- 111.1178	µg/mL	Unstressed
	Purity 99%		+/- 122.0757	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

S 3957

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

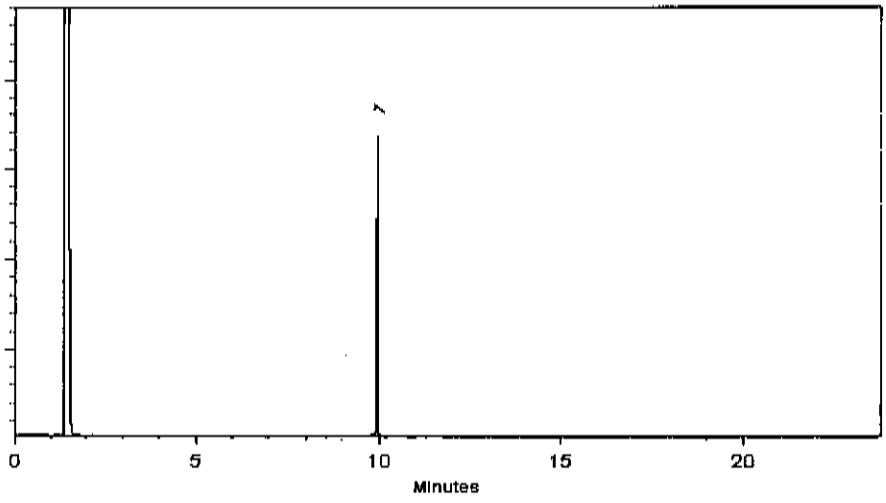
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 15-May-2014 **Balance:** 1128342313

Jennifer L. Pollino - QC Analyst

Date Passed: 19-May-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
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- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordanco with ISO Guides 34 and 35. The certified combined stressed uncortainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technicel Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space censtraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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Rec: 12/30/14
Lot

Catalog No. : 31833 **Lot No.:** A0105455

Description : Epsilon-Caprolactam Standard

Epsilon-caprolactam Std 2000µg/mL, Methylene Chloride(Methanol free), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2016 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	epsilon-Caprolactam	2,004.0 µg/mL	+/- 18.6361	µg/mL	Gravimetric
	CAS # 105-60-2 (Lot 10000218)		+/- 26.3242	µg/mL	Unstressed
	Purity 99%		+/- 39.9571	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

54066
54067

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

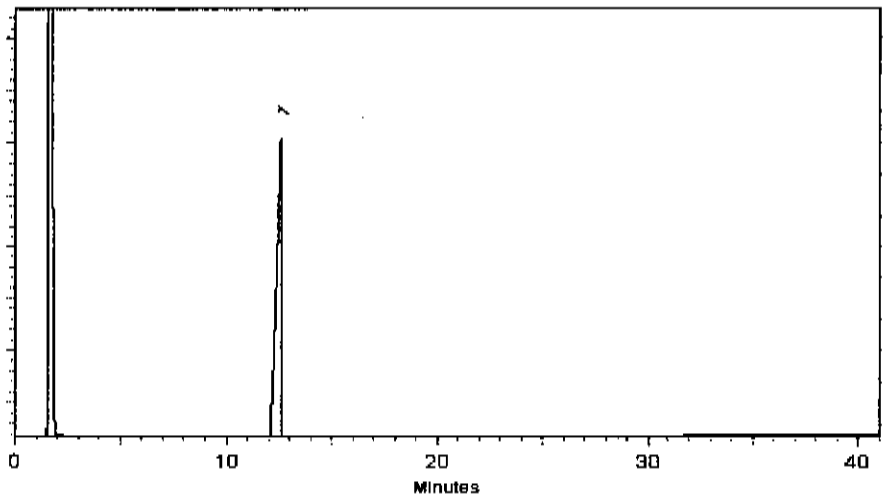
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Hauver

Date Mixed: 19-Aug-2014 **Balance:** 1128360905

Jodi E. Breon

Jodi E. Breon - QA Analyst

Date Passed: 27-Aug-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
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- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restok supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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UM
54671 OLM01.1S
54672

Catalog No. : 31900 **Lot No.:** A0108223

Description : OLM 01.1 Revised SV MegaMix

OLM 01.1 Revised SV MegaMix 500-1000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2016 **Storage:** 0°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Phenol **CAS #** 108-95-2 **Purity** 99%	(Lot SHBC6998V)	1,000.2 µg/mL	+/- 6.6856 µg/mL +/- 11.4365 µg/mL +/- 18.8643 µg/mL	Gravimetric Unstressed Stressed
2	Bis(2-chloroethyl)ether **CAS #** 111-44-4 **Purity** 99%	(Lot 45296HKV)	1,001.6 µg/mL	+/- 6.6949 µg/mL +/- 11.4525 µg/mL +/- 18.8907 µg/mL	Gravimetric Unstressed Stressed
3	2-Chlorophenol **CAS #** 95-57-8 **Purity** 99%	(Lot MKBD3900V)	1,000.1 µg/mL	+/- 6.6852 µg/mL +/- 11.4359 µg/mL +/- 18.8633 µg/mL	Gravimetric Unstressed Stressed
4	2,2'-oxybis(1-chloropropane) **CAS #** 108-60-1 **Purity** 99%	(Lot 7-XDD-199-6)	1,001.4 µg/mL	+/- 6.6936 µg/mL +/- 11.4502 µg/mL +/- 18.8869 µg/mL	Gravimetric Unstressed Stressed
5	2-Methylphenol (o-cresol) **CAS #** 95-48-7 **Purity** 99%	(Lot SHBC1479V)	1,002.4 µg/mL	+/- 6.7003 µg/mL +/- 11.4616 µg/mL +/- 18.9058 µg/mL	Gravimetric Unstressed Stressed
6	Acetophenone **CAS #** 98-86-2 **Purity** 99%	(Lot MKBR7156V)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 11.0159 µg/mL +/- 18.6105 µg/mL	Gravimetric Unstressed Stressed
7	Hexachloroethane **CAS #** 67-72-1 **Purity** 99%	(Lot 4H3SF)	1,003.0 µg/mL	+/- 6.7043 µg/mL +/- 11.4685 µg/mL +/- 18.9171 µg/mL	Gravimetric Unstressed Stressed

24	2,4,6-Trichlorophenol **CAS #** 88-06-2 **Purity** 99%	(Lot MKBH7393V)	1,000.3	µg/mL	+/- 6.6866 +/- 11.4382 +/- 18.8671	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4,5-Trichlorophenol **CAS #** 95-95-4 **Purity** 99%	(Lot FHM01)	1,000.1	µg/mL	+/- 6.6852 +/- 11.4359 +/- 18.8633	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	2-Chloronaphthalene **CAS #** 91-58-7 **Purity** 99%	(Lot FIJ01)	1,001.8	µg/mL	+/- 6.6963 +/- 11.4548 +/- 18.8944	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Biphenyl **CAS #** 92-52-4 **Purity** 99%	(Lot 1277976)	1,000.0	µg/mL	+/- 5.9397 +/- 11.0159 +/- 18.6105	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,000.5	µg/mL	+/- 6.7354 +/- 11.4683 +/- 18.8877	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Acenaphthylene **CAS #** 208-96-8 **Purity** 99%	(Lot ER030707-01)	1,000.9	µg/mL	+/- 6.6906 +/- 11.4451 +/- 18.8784	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,000.8	µg/mL	+/- 6.6896 +/- 11.4433 +/- 18.8756	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,000.5	µg/mL	+/- 6.6879 +/- 11.4405 +/- 18.8709	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKBJ4871V)	1,002.9	µg/mL	+/- 6.7040 +/- 11.4679 +/- 18.9161	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBH5131V)	1,002.5	µg/mL	+/- 6.7488 +/- 11.4912 +/- 18.9255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot MKBP5833V)	1,001.0	µg/mL	+/- 6.6909 +/- 11.4456 +/- 18.8794	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKBK2375V)	1,000.0	µg/mL	+/- 5.9397 +/- 11.0159 +/- 18.6105	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,002.5	µg/mL	+/- 6.7013 +/- 11.4634 +/- 18.9086	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	1,000.3	µg/mL	+/- 6.6863 +/- 11.4376 +/- 18.8662	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot FN10221307)	1,001.5	µg/mL	+/- 6.7421 +/- 11.4798 +/- 18.9066	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,000.9	µg/mL	+/- 6.6907 +/- 11.4453 +/- 18.8789	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Chrysene **CAS #** 218-01-9 **Purity** 99%	(Lot PR121912-01)	1,001.5	µg/mL	+/- 6.6943 +/- 11.4514 +/- 18.8888	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	3,3'-Dichlorobenzidine **CAS #** 91-94-1 **Purity** 99%	(Lot 141205JLM)	1,002.5	µg/mL	+/- 6.7488 +/- 11.4912 +/- 18.9255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	Bis(2-ethylhexyl)phthalate **CAS #** 117-81-7 **Purity** 99%	(Lot MKBK2695V)	1,006.9	µg/mL	+/- 6.7304 +/- 11.5131 +/- 18.9906	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	Di-n-octyl phthalate **CAS #** 117-84-0 **Purity** 99%	(Lot 3128600)	1,003.2	µg/mL	+/- 6.7060 +/- 11.4714 +/- 18.9218	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	Benzo(b)fluoranthene **CAS #** 205-99-2 **Purity** 99%	(Lot ER022008-02)	1,003.8	µg/mL	+/- 6.7100 +/- 11.4782 +/- 18.9331	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	Benzo(k)fluoranthene **CAS #** 207-08-9 **Purity** 99%	(Lot ER041513-01)	1,004.3	µg/mL	+/- 6.7130 +/- 11.4834 +/- 18.9416	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	Benzo(a)pyrene **CAS #** 50-32-8 **Purity** 99%	(Lot ER071309-02)	1,002.7	µg/mL	+/- 6.7026 +/- 11.4656 +/- 18.9124	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	Indeno(1,2,3-cd)pyrene **CAS #** 193-39-5 **Purity** 99%	(Lot ER082107-02)	1,002.9	µg/mL	+/- 6.7036 +/- 11.4674 +/- 18.9152	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	Dibenz(a,h)anthracene **CAS #** 53-70-3 **Purity** 99%	(Lot ER032211-01)	1,001.5	µg/mL	+/- 6.6943 +/- 11.4514 +/- 18.8888	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	Benzo(g,h,i)perylene **CAS #** 191-24-2 **Purity** 99%	(Lot ER020708-08)	1,004.3	µg/mL	+/- 6.7130 +/- 11.4834 +/- 18.9416	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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Certified Uncertainty Value Notes:

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Handling Notes:

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

04107715
UM

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Catalog No. : 31853 **Lot No.:** A0110448

Description : 1,4-dioxane

1,4-Dioxane 2,000µg/mL, Methylene Chloride, 1mL/ampul

S4604

S4605

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane	2,005.0 µg/mL	+/- 11.7665	µg/mL	Gravimetric
	CAS # 123-91-1 (Lot SHBF2002V)		+/- 42.5509	µg/mL	Unstressed
	Purity 99%		+/- 42.7394	µg/mL	Stressed

Solvent: Methylene Chloride (MEOH FREE)
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

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Purity Notes:

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- Purity values are rounded to the nearest whole number.

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
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- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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S4814
1
S4838
NP
10/20/15

Catalog No. : 30614 **Lot No.:** A0111152

Description : 1,4-dioxane-d8 Standard

1,4-dioxane-d8 Standard 2000 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane-d8	2,004.0 µg/mL	+/- 11.7606	µg/mL	Gravimetric
	CAS # 17647-74-4 (Lot 1-19073)		+/- 42.5297	µg/mL	Unstressed
	Purity 99%		+/- 42.7181	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

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S4709
S4710
S4711
S4712
S4713 um 09/09/15

Catalog No. : 33017 **Lot No.:** A0111289

Description : Benzaldehyde Standard

Benzaldehyde 2000µg/mL Methylene Chloride (Methanol free), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Benzaldehyde **CAS #** 100-52-7 (Lot SHBD3510V) **Purity** 99%	2,012.0 µg/mL	+/- 11.8075 µg/mL +/- 64.5160 µg/mL +/- 74.9913 µg/mL		Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK
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Bellefonte, PA 16823-8812
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

S4991 SJ 11/23/15 ↓ S4995

Catalog No. : 32208 **Lot No.:** A0112545

Description : Atrazine Standard

Atrazine Standard 1000 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav Conc. (weight/volume)	Expanded Uncertainty (95% C.L. ; K=2)		
1	Atrazine	1,009.4 µg/mL	+/- 5.9955	µg/mL	Gravimetric
	CAS # 1912-24-9 (Lot TZ8ED)		+/- 39.4963	µg/mL	Unstressed
	Purity 98%		+/- 62.6664	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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54976 – 54990

SJ
11/16/2015

Catalog No. : 31810 **Lot No.:** A0112586

Description : OLC03.2 SVOA Deuterated Monitoring Compounds Mix

OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL/ampul, Methylene Chloride, 2000µg/mL

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2019 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Phenol-d5	2,003.3 µg/mL	+/- 11.7567 µg/mL	Gravimetric
	CAS # 4165-62-2 (Lot X479P8)		+/- 49.9425 µg/mL	Unstressed
	Purity 99%		+/- 62.7939 µg/mL	Stressed
2	bis(2-Chloroethyl) ether-d8	2,005.3 µg/mL	+/- 11.7683 µg/mL	Gravimetric
	CAS # 93952-02-4 (Lot X485P12)		+/- 49.9919 µg/mL	Unstressed
	Purity 97%		+/- 62.8559 µg/mL	Stressed
3	2-Chlorophenol-d4	2,004.7 µg/mL	+/- 11.7645 µg/mL	Gravimetric
	CAS # 93951-73-6 (Lot PR-20630)		+/- 49.9758 µg/mL	Unstressed
	Purity 99%		+/- 62.8357 µg/mL	Stressed
4	4-Methylphenol-d8	2,004.0 µg/mL	+/- 11.7606 µg/mL	Gravimetric
	CAS # 190780-66-6 (Lot W519P30)		+/- 49.9591 µg/mL	Unstressed
	Purity 99%		+/- 62.8148 µg/mL	Stressed
5	Nitrobenzene-d5	2,005.3 µg/mL	+/- 11.7684 µg/mL	Gravimetric
	CAS # 4165-60-0 (Lot PR-24042)		+/- 49.9924 µg/mL	Unstressed
	Purity 99%		+/- 62.8566 µg/mL	Stressed
6	2-Nitrophenol-d4	2,002.0 µg/mL	+/- 11.7489 µg/mL	Gravimetric
	CAS # 93951-78-1 (Lot L184P31)		+/- 49.9093 µg/mL	Unstressed
	Purity 99%		+/- 62.7521 µg/mL	Stressed
7	2,4-Dichlorophenol-d3	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 93951-74-7 (Lot AB210P9)		+/- 49.8594 µg/mL	Unstressed
	Purity 99%		+/- 62.6894 µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

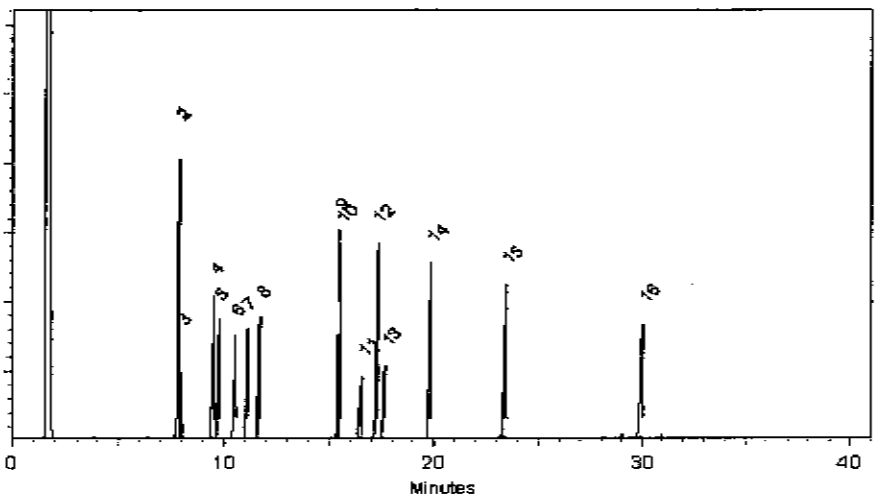
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Jennifer L. Pollino - QC Analyst

Date Mixed: 16-Jul-2015 **Balance:** 1128353505

Date Passed: 20-Jul-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

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Catalog No. : 31900 **Lot No.:** A0112856

Description : OLM 01.1 Revised SV MegaMix

OLM 01.1 Revised SV MegaMix 500-1000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2017 **Storage:** 0°C or colder

Handling: Sonication required. Mix is photosensitive.

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CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Phenol **CAS #** 108-95-2 **Purity** 99% (Lot SHBC6998V)	1,005.3 µg/mL.	+/- 6.7197 µg/mL +/- 11.4948 µg/mL +/- 18.9605 µg/mL	Gravimetric Unstressed Stressed
2	Bis(2-chlorocthyl)ether **CAS #** 111-44-4 **Purity** 99% (Lot 45296HKV)	1,005.7 µg/mL	+/- 6.7223 µg/mL +/- 11.4994 µg/mL +/- 18.9680 µg/mL	Gravimetric Unstressed Stressed
3	2-Chlorophenol **CAS #** 95-57-8 **Purity** 99% (Lot MKBD3900V)	1,000.0 µg/mL	+/- 6.6846 µg/mL +/- 11.4348 µg/mL +/- 18.8614 µg/mL	Gravimetric Unstressed Stressed
4	2,2'-oxybis(1-chloropropane) **CAS #** 108-60-1 **Purity** 99% (Lot 2-KMW-57-8)	1,004.5 µg/mL	+/- 6.7147 µg/mL +/- 11.4862 µg/mL +/- 18.9463 µg/mL	Gravimetric Unstressed Stressed
5	2-Methylphenol (o-cresol) **CAS #** 95-48-7 **Purity** 99% (Lot SHBC1479V)	1,001.8 µg/mL	+/- 6.6966 µg/mL +/- 11.4554 µg/mL +/- 18.8954 µg/mL	Gravimetric Unstressed Stressed
6	Acctophenone **CAS #** 98-86-2 **Purity** 99% (Lot MKBR7156V)	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 11.1040 µg/mL +/- 18.7594 µg/mL	Gravimetric Unstressed Stressed
7	Hexachloroethane **CAS #** 67-72-1 **Purity** 99% (Lot 4H3SF)	1,003.3 µg/mL	+/- 6.7066 µg/mL +/- 11.4725 µg/mL +/- 18.9237 µg/mL	Gravimetric Unstressed Stressed

8	N-Nitroso-di-n-propylamine		1,008.0	µg/mL	+/-	6.7859	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	11.5543	µg/mL	Unstressed
	Purity 99%				+/-	19.0293	µg/mL	Stressed
9	4-Methylphenol (p-cresol)		501.9	µg/mL	+/-	3.3547	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	5.7385	µg/mL	Unstressed
	Purity 99%				+/-	9.4656	µg/mL	Stressed
10	3-Methylphenol (m-cresol)		501.3	µg/mL	+/-	3.3506	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	5.7317	µg/mL	Unstressed
	Purity 99%				+/-	9.4543	µg/mL	Stressed
11	Nitrobenzene		1,003.2	µg/mL	+/-	6.7056	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBB0246V)			+/-	11.4708	µg/mL	Unstressed
	Purity 99%				+/-	18.9209	µg/mL	Stressed
12	Isophorone		1,004.1	µg/mL	+/-	6.7117	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	11.4811	µg/mL	Unstressed
	Purity 99%				+/-	18.9378	µg/mL	Stressed
13	2-Nitrophenol		1,002.1	µg/mL	+/-	6.6983	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	11.4582	µg/mL	Unstressed
	Purity 99%				+/-	18.9001	µg/mL	Stressed
14	2,4-Dimethylphenol		1,001.6	µg/mL	+/-	6.6953	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	11.4531	µg/mL	Unstressed
	Purity 99%				+/-	18.8916	µg/mL	Stressed
15	Bis(2-chloroethoxy)methane		1,002.9	µg/mL	+/-	6.7040	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 2238100)			+/-	11.4679	µg/mL	Unstressed
	Purity 99%				+/-	18.9161	µg/mL	Stressed
16	2,4-Dichlorophenol		1,003.2	µg/mL	+/-	6.7056	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	11.4708	µg/mL	Unstressed
	Purity 99%				+/-	18.9209	µg/mL	Stressed
17	Naphthalene		1,007.3	µg/mL	+/-	6.7334	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBH4351V)			+/-	11.5182	µg/mL	Unstressed
	Purity 99%				+/-	18.9991	µg/mL	Stressed
18	4-Chloroaniline		1,005.0	µg/mL	+/-	6.7657	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot 12528PH)			+/-	11.5199	µg/mL	Unstressed
	Purity 99%				+/-	18.9727	µg/mL	Stressed
19	Hexachlorobutadiene		1,001.4	µg/mL	+/-	6.6937	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	11.4504	µg/mL	Unstressed
	Purity 98%				+/-	18.8872	µg/mL	Stressed
20	2-Methylnaphthalene		1,000.4	µg/mL	+/-	6.7344	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	11.4666	µg/mL	Unstressed
	Purity 95%				+/-	18.8849	µg/mL	Stressed
21	4-Chloro-3-methylphenol		1,000.4	µg/mL	+/-	6.6873	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC0769V)			+/-	11.4393	µg/mL	Unstressed
	Purity 99%				+/-	18.8690	µg/mL	Stressed
22	1,2,4,5-Tetrachlorobenzene		1,008.5	µg/mL	+/-	6.7892	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot 06024AJV)			+/-	11.5600	µg/mL	Unstressed
	Purity 99%				+/-	19.0388	µg/mL	Stressed
23	Hexachlorocyclopentadiene		1,009.2	µg/mL	+/-	6.7457	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 3488800)			+/-	11.5394	µg/mL	Unstressed
	Purity 99%				+/-	19.0340	µg/mL	Stressed

24	2,4,6-Trichlorophenol **CAS #** 88-06-2 **Purity** 99%	(Lot MKBH17393V)	1,004.0	µg/mL	+/- 6.7110 +/- 11.4799 +/- 18.9359	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4,5-Trichlorophenol **CAS #** 95-95-4 **Purity** 99%	(Lot FHM01)	1,007.6	µg/mL	+/- 6.7350 +/- 11.5211 +/- 19.0038	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	2-Chloronaphthalene **CAS #** 91-58-7 **Purity** 99%	(Lot FIJ01)	1,005.6	µg/mL	+/- 6.7220 +/- 11.4988 +/- 18.9671	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Biphenyl **CAS #** 92-52-4 **Purity** 99%	(Lot 1277976)	1,010.0	µg/mL	+/- 5.9991 +/- 11.1261 +/- 18.7966	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,007.0	µg/mL	+/- 6.7791 +/- 11.5428 +/- 19.0105	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Acenaphthylene **CAS #** 208-96-8 **Purity** 99%	(Lot ER030707-01)	1,000.9	µg/mL	+/- 6.6906 +/- 11.4451 +/- 18.8784	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,004.1	µg/mL	+/- 6.7117 +/- 11.4811 +/- 18.9378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,002.2	µg/mL	+/- 6.6990 +/- 11.4594 +/- 18.9020	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKBP0384V)	1,005.5	µg/mL	+/- 6.7210 +/- 11.4971 +/- 18.9642	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	3-Nitroaniline **CAS #** 99-09-2 **Purity** 97%	(Lot MKBH5131V)	1,004.9	µg/mL	+/- 6.7651 +/- 11.5190 +/- 18.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBD8351V)	1,006.6	µg/mL	+/- 6.7284 +/- 11.5097 +/- 18.9850	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKBH8392V)	1,002.0	µg/mL	+/- 5.9516 +/- 11.0379 +/- 18.6477	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,004.2	µg/mL	+/- 6.7123 +/- 11.4822 +/- 18.9397	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBP6945V)	1,000.0	µg/mL	+/- 6.6846 +/- 11.4348 +/- 18.8614	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot Er100206-01)	1,009.5	µg/mL	+/- 6.7960 +/- 11.5715 +/- 19.0576	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,003.8	µg/mL	+/- 6.7101 +/- 11.4784 +/- 18.9334	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	4-Chlorophenyl phenyl ether		1,002.4	µg/mL	+/- 6.7006	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBS2248V)			+/- 11.4622	µg/mL	Unstressed
	Purity 99%				+/- 18.9067	µg/mL	Stressed
41	Diethylphthalate		1,005.3	µg/mL	+/- 6.7197	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBJ3578V)			+/- 11.4948	µg/mL	Unstressed
	Purity 99%				+/- 18.9605	µg/mL	Stressed
42	4-Nitroaniline		1,007.5	µg/mL	+/- 6.7825	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/- 11.5485	µg/mL	Unstressed
	Purity 99%				+/- 19.0199	µg/mL	Stressed
43	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		1,000.0	µg/mL	+/- 6.6846	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC06195V)			+/- 11.4348	µg/mL	Unstressed
	Purity 99%				+/- 18.8614	µg/mL	Stressed
44	Diphenylamine		1,007.5	µg/mL	+/- 6.7825	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/- 11.5485	µg/mL	Unstressed
	Purity 99%				+/- 19.0199	µg/mL	Stressed
45	4-Bromophenyl phenyl ether		1,001.5	µg/mL	+/- 6.6944	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/- 11.4515	µg/mL	Unstressed
	Purity 98%				+/- 18.8890	µg/mL	Stressed
46	Hexachlorobenzene		1,004.0	µg/mL	+/- 6.7111	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LC04221V)			+/- 11.4801	µg/mL	Unstressed
	Purity 98%				+/- 18.9362	µg/mL	Stressed
47	Pentachlorophenol		1,002.2	µg/mL	+/- 6.6990	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 140626JLM)			+/- 11.4594	µg/mL	Unstressed
	Purity 99%				+/- 18.9020	µg/mL	Stressed
48	Phenanthrene		1,000.3	µg/mL	+/- 6.6865	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKBQ8219V)			+/- 11.4380	µg/mL	Unstressed
	Purity 98%				+/- 18.8668	µg/mL	Stressed
49	Anthracene		1,001.1	µg/mL	+/- 6.6919	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/- 11.4473	µg/mL	Unstressed
	Purity 99%				+/- 18.8822	µg/mL	Stressed
50	Carbazole		1,007.9	µg/mL	+/- 6.7854	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 4017900)			+/- 11.5535	µg/mL	Unstressed
	Purity 98%				+/- 19.0280	µg/mL	Stressed
51	Di-n-butylphthalate		1,002.4	µg/mL	+/- 6.7006	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBL8501V)			+/- 11.4622	µg/mL	Unstressed
	Purity 99%				+/- 18.9067	µg/mL	Stressed
52	Fluoranthene		1,000.2	µg/mL	+/- 6.6858	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot 00828AJ)			+/- 11.4369	µg/mL	Unstressed
	Purity 98%				+/- 18.8650	µg/mL	Stressed
53	Pyrene		1,001.1	µg/mL	+/- 6.6916	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBL6786V)			+/- 11.4468	µg/mL	Unstressed
	Purity 99%				+/- 18.8812	µg/mL	Stressed
54	Benzyl butyl phthalate		1,003.0	µg/mL	+/- 6.7046	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot 0302711V)			+/- 11.4691	µg/mL	Unstressed
	Purity 99%				+/- 18.9180	µg/mL	Stressed
55	Benz(a)anthracene		1,002.9	µg/mL	+/- 6.7040	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/- 11.4679	µg/mL	Unstressed
	Purity 99%				+/- 18.9161	µg/mL	Stressed

56	Chrysene **CAS #** 218-01-9 **Purity** 99%	(Lot PR121912-01)	1,006.2	µg/mL	+/- 6.7260 +/- 11.5057 +/- 18.9784	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	3,3'-Dichlorobenzidine **CAS #** 91-94-1 **Purity** 99%	(Lot 150701JLMA)	1,009.5	µg/mL	+/- 6.7960 +/- 11.5715 +/- 19.0576	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	Bis(2-ethylhexyl)phthalate **CAS #** 117-81-7 **Purity** 99%	(Lot MKBK2695V)	1,002.6	µg/mL	+/- 6.7016 +/- 11.4639 +/- 18.9095	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	Di-n-octyl phthalate **CAS #** 117-84-0 **Purity** 99%	(Lot 3128600)	1,001.2	µg/mL	+/- 6.6923 +/- 11.4479 +/- 18.8831	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	Benzo(b)fluoranthene **CAS #** 205-99-2 **Purity** 99%	(Lot ER022008-02)	1,002.5	µg/mL	+/- 6.7013 +/- 11.4634 +/- 18.9086	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	Benzo(k)fluoranthene **CAS #** 207-08-9 **Purity** 99%	(Lot 012012k)	1,002.7	µg/mL	+/- 6.7023 +/- 11.4651 +/- 18.9114	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	Benzo(a)pyrene **CAS #** 50-32-8 **Purity** 99%	(Lot ER071309-02)	1,002.3	µg/mL	+/- 6.6996 +/- 11.4605 +/- 18.9039	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	Indeno(1,2,3-cd)pyrene **CAS #** 193-39-5 **Purity** 99%	(Lot ER082107-02)	1,005.7	µg/mL	+/- 6.7227 +/- 11.4999 +/- 18.9690	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	Dibenz(a,h)anthracene **CAS #** 53-70-3 **Purity** 99%	(Lot ER032211-01)	1,008.6	µg/mL	+/- 6.7421 +/- 11.5331 +/- 19.0237	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	Benzo(g,h,i)perylene **CAS #** 191-24-2 **Purity** 99%	(Lot ER020708-08)	1,003.0	µg/mL	+/- 6.7046 +/- 11.4691 +/- 18.9180	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

S 5001
/
S 5030

SJ
12/14/15

Catalog No. : 31206 **Lot No.:** A0115444

Description : SV Internal Standard Mix 2mg/ml

SV Internal Standard Mix 2mg/ml 2,000 µg/ml, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2021 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav Conc. (weight/volume)	Expanded Uncertainty (95% C.L. K=2)		
1	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 **Purity** 99% (Lot PR-18488)	2,000.2 µg/mL	+/- 11.6293 +/- 90.0902 +/- 99.9662	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 **Purity** 99% (Lot M-1452)	2,000.3 µg/mL	+/- 11.6299 +/- 90.0947 +/- 99.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 **Purity** 99% (Lot PR-25444)	2,000.3 µg/mL	+/- 11.6299 +/- 90.0947 +/- 99.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 **Purity** 99% (Lot PR-23065)	2,000.2 µg/mL	+/- 11.6293 +/- 90.0902 +/- 99.9662	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 **Purity** 99% (Lot I-19260)	2,000.9 µg/mL	+/- 11.6334 +/- 90.1217 +/- 100.0012	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 **Purity** 99% (Lot PR-24113)	2,000.3 µg/mL	+/- 11.6299 +/- 90.0947 +/- 99.9712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	4-Chloroaniline-d4 **CAS #** 191656-33-4 **Purity** 99%	(Lot C190P48)	2,008.7	µg/mL	+/- 11.7880 +/- 58.6415 +/- 71.1507	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Dimethylphthalate-d6 **CAS #** 85448-30-2 **Purity** 99%	(Lot X477P10)	2,009.3	µg/mL	+/- 11.7919 +/- 58.6610 +/- 71.1743	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acenaphthylene-d8 **CAS #** 93951-97-4 **Purity** 99%	(Lot I-102)	2,007.3	µg/mL	+/- 11.7802 +/- 58.6026 +/- 71.1035	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	4-Nitrophenol-d4 **CAS #** 93951-79-2 **Purity** 99%	(Lot P-141)	2,010.0	µg/mL	+/- 11.7958 +/- 58.6804 +/- 71.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Fluorene-d10 **CAS #** 81103-79-9 **Purity** 98%	(Lot M149P26)	2,005.7	µg/mL	+/- 11.7708 +/- 58.5559 +/- 71.0468	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	4,6-Dinitro-2-methylphenol-d2 **CAS #** 93951-76-9 **Purity** 99%	(Lot AB-322)	2,008.0	µg/mL	+/- 11.7841 +/- 58.6221 +/- 71.1271	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	Anthracene-d10 **CAS #** 1719-06-8 **Purity** 99%	(Lot PR-20576)	2,008.7	µg/mL	+/- 11.7880 +/- 58.6415 +/- 71.1507	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Pyrene-d10 **CAS #** 1718-52-1 **Purity** 98%	(Lot PR-14089)	2,010.3	µg/mL	+/- 11.7976 +/- 58.6894 +/- 71.2088	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Benzo(a)pyrene-d12 **CAS #** 63466-71-7 **Purity** 99%	(Lot PR-25741)	2,008.0	µg/mL	+/- 11.7841 +/- 58.6221 +/- 71.1271	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent:	Methylene Chloride **CAS #** 75-09-2 **Purity** 99%						

RESTEK
110 Banner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1668
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3223.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3223.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

S 5114 – S 5143

UH 04/07/16

Catalog No. : 31810 **Lot No.:** A0115813

Description : OLC03.2 SVOA Deuterated Monitoring Compounds Mix

OLC 03.2 SVOA Deuterated Monitoring Compounds, 1mL/ampul, Methylene Chloride, 2000µg/mL

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2019 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Phenol-d5 **CAS #** 4165-62-2 (Lot X479P8) **Purity** 99%	2,010.7 µg/mL	+/- 11.7997 µg/mL +/- 58.6999 µg/mL +/- 71.2215 µg/mL	Gravimetric Unstressed Stressed
2	bis(2-Chloroethyl) ether-d8 **CAS #** 93952-02-4 (Lot X-485) **Purity** 98%	2,004.4 µg/mL	+/- 11.7631 µg/mL +/- 58.5177 µg/mL +/- 71.0005 µg/mL	Gravimetric Unstressed Stressed
3	2-Chlorophenol-d4 **CAS #** 93951-73-6 (Lot PR-20630) **Purity** 99%	2,011.3 µg/mL	+/- 11.8036 µg/mL +/- 58.7194 µg/mL +/- 71.2452 µg/mL	Gravimetric Unstressed Stressed
4	4-Methylphenol-d8 **CAS #** 190780-66-6 (Lot W519P34) **Purity** 99%	2,012.0 µg/mL	+/- 11.8075 µg/mL +/- 58.7388 µg/mL +/- 71.2688 µg/mL	Gravimetric Unstressed Stressed
5	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-24042) **Purity** 99%	2,008.7 µg/mL	+/- 11.7880 µg/mL +/- 58.6415 µg/mL +/- 71.1507 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitrophenol-d4 **CAS #** 93951-78-1 (Lot H-151) **Purity** 99%	2,012.0 µg/mL	+/- 11.8075 µg/mL +/- 58.7388 µg/mL +/- 71.2688 µg/mL	Gravimetric Unstressed Stressed
7	2,4-Dichlorophenol-d3 **CAS #** 93951-74-7 (Lot AB210P6) **Purity** 99%	2,009.3 µg/mL	+/- 11.7919 µg/mL +/- 58.6610 µg/mL +/- 71.1743 µg/mL	Gravimetric Unstressed Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

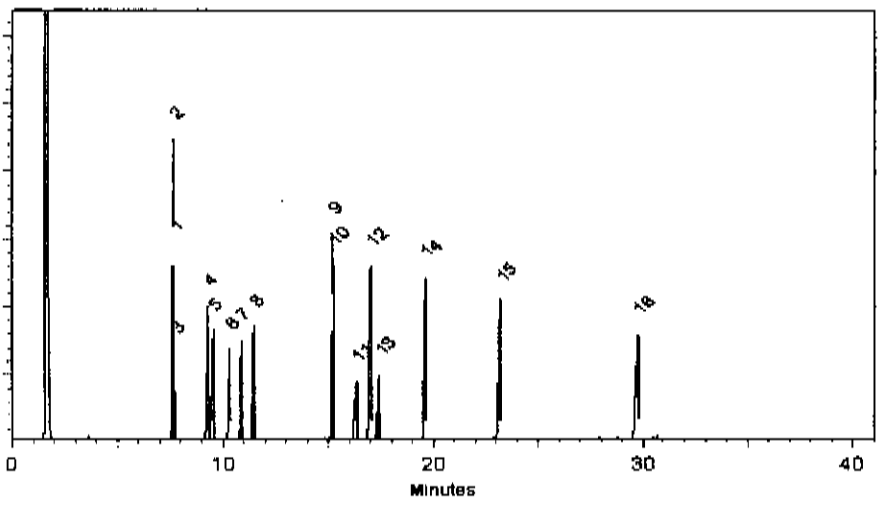
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 07-Dec-2015 **Balance:** B442140311

Jennifer L. Pollino - QC Analyst

Date Passed: 09-Dec-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

PCI SCIENTIFIC SUPPLY, INC.

41 PLYMOUTH STREET
FAIRFIELD, NJ 07004
P# (973) 244-9002
F# (973) 244-9448

CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE ANHYDROUS		
QUALITY :	ACS	FORMULA :	Na_2SO_4
SPECIFICATION NUMBER :	6390	RELEASE DATE:	AGO/25/2014
LOT NUMBER :	433101		

TEST	SPECIFICATIONS	LOT VALUES
Insoluble matter	Max. 0.01%	0.006 %
Loss on ignition	Max. 0.5%	0.3 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.1
Chloride (Cl)	Max. 0.001%	<0.001 %
Nitrogen compounds (como N)	Max. 5 ppm	<5 ppm
Assay (Na_2SO_4)	Min. 99.0%	99.5 %
Iron (Fe)	Max. 0.001%	<0.001 %
Heavy metals (como Pb)	Max. 5 ppm	<5 ppm
Potassium (K)	Max. 0.008%	0.001 %
Calcium (Ca)	Max. 0.01%	0.001 %
Magnesium (Mg)	Max. 0.005%	0.002 %
Phosphate (PO_4)	Max. 0.001%	<0.001 %
Appearance	Crystals	Crystals
Retained on US Standard No. 10 sieve	Max. 1.0%	0.0 %
Retained on US Standard No. 60 sieve	Min. 80.0%	98.3 %
Through US Standard No. 60 sieve	Max. 19.0%	1.5 %
Through US Standard No. 100 sieve	Max. 10.0%	0.2 %

E 2036

Methylene Chloride
ULTRA RESI-ANALYZED
For Organic Residue Analysis
(dichloromethane)

J.T.Baker®

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9266-A4
Batch No.: 0000131014
Manufactured Date: 2015/11/25
Expiration Date: 2017/02/23

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	2
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	>= 99.8 %	100.0
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0000 ppm	0.1000
Titrable Acid (µeq/g)	<= 0.3	< 0.1
Chloride (Cl)	<= 10 ppm	< 5
Water (by KF, coulometric)	<= 0.02 %	< 0.01

For Laboratory, Research or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

E2072

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008
Selangor, Malaysia 9001:2008
Debradun, India. 9001:2008 14001:2004, 13485:2003
Mumbai, India. 9001:2008, 17025:2005
Panoli, India 9001:2008

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600

Avantor ™ Performance Materials Inc.
3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Certificate of Analysis

Date of Release:	2/26/2016
Name:	Dichloromethane OmniSolv®
Item No:	DX0831 all size codes
Lot / Batch No:	56056
Country of Origin:	USA

Characteristic	Requirement		Results	Units
	Min.	Max.		
Assay (GC)	99.9		99.95	%
Capillary ECD responsive substances (as PCNB)		2	0.32	ng/L
Capillary FID responsive substances (as decane)		3	< 0.10	µg/L
Color (APHA)		10	<10	
Filtered through 0.2 µm filter			Passes test	
Fluorescence (as quinine base)		500	78	ppt
Form			Clear liquid	
Free halogens			Passes test	
Identity (IR-spectrum)			Conforms	
Refractive index (n 20/D)			1.4240	
Residue after evaporation		1	<0.5	ppm
Titrable acid		0.2	0.09	µeq/g
UV Abs. at 231 nm		1.00	0.726	AU
UV Abs. at 235 nm		0.40	0.280	AU
UV Abs. at 240 nm		0.20	0.080	AU
UV Abs. at 250 nm		0.01	0.005	AU
UV Abs. at 260 nm		0.005	< 0.001	AU
UV Cut-off		231	229.6	nm
Water (H2O)		0.005	0.0003	%

Gene Desolelle

Quality Control Manager

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E 2087

EMD Millipore is a division of Merck KGaA, Darmstadt, Germany

EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821
U.S.A

Certificate of Analysis

Date of Release: 2/26/2016

Name: Dichloromethane
OmniSolv®

Item No: DX0831 all size codes

Lot / Batch No: 56056

Country of Origin: USA

Characteristic	Requirement		Results	Units
	Min.	Max.		
Assay (GC)	99.9		99.95	%
Capillary ECD responsive substances (as PCNB)		2	0.32	ng/L
Capillary FID responsive substances (as decane)		3	< 0.10	µg/L
Color (APHA)		10	<10	
Filtered through 0.2 µm filter			Passes test	
Fluorescence (as quinine base)		500	78	ppt
Form			Clear liquid	
Free halogens			Passes test	
Identity (IR-spectrum)			Conforms	
Refractive index (n 20/D)			1.4240	
Residue after evaporation		1	<0.5	ppm
Titrable acid		0.2	0.09	µeq/g
UV Abs. at 231 nm		1.00	0.726	AU
UV Abs. at 235 nm		0.40	0.280	AU
UV Abs. at 240 nm		0.20	0.080	AU
UV Abs. at 250 nm		0.01	0.005	AU
UV Abs. at 260 nm		0.005	< 0.001	AU
UV Cut-off		231	229.6	nm
Water (H2O)		0.005	0.0003	%

Gene Desotelle

Quality Control Manager
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EMD Millipore is a division of Merck KGaA,Darmstadt, Germany
EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821
U.S.A

E 2105

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M357 &
Reagan 11/18/15
Exp. 2019/11/02
MB

Part of AVANTOR™ PERFORMANCE MATERIALS

Material No.: 9673-33
Batch No.: 0000095945
Manufactured Date: 2014/11/03
Retest Date: 2019/11/02

Certificate of Analysis

Test	Specification	Result
ACS - Assay (H_2SO_4)	95.0 - 98.0 %	95.9
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	6
ACS - Residue after Ignition	<= 3 ppm	< 1
ACS - Substances Reducing Permanganate (as SO_2)	<= 2 ppm	< 2
Ammonium (NH_4)	<= 1 ppm	< 1
Chloride (Cl)	<= 0.1 ppm	< 0.1
Nitrate (NO_3)	<= 0.2 ppm	< 0.2
Phosphate (PO_4)	<= 0.5 ppm	< 0.5
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	1.3
Arsenic and Antimony (as As)	<= 4 ppb	< 3
Trace Impurities - Barium (Ba)	<= 10.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 10.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 10.0 ppb	< 0.7
Trace Impurities - Cadmium (Cd)	<= 2.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	7.2
Trace Impurities - Chromium (Cr)	<= 6.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 0.5 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	0.2
Trace Impurities - Gallium (Ga)	<= 10.0 ppb	< 0.2
Trace Impurities - Germanium (Ge)	<= 10.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 10.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 500 ppb	< 300

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9673-33
Batch No.: 0000095945

Test	Specification	Result
Trace Impurities - Iron (Fe)	<= 50.0 ppb	29.9
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 10.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	< 0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 3.0
Trace Impurities - Nickel (Ni)	<= 2.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 10.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 500.0 ppb	< 2.0
Trace Impurities - Selenium (Se)	<= 50.0 ppb	< 10.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 0.4
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 500.0 ppb	4.4
Trace Impurities - Strontium (Sr)	<= 5.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 10.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 20.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	0.9
Trace Impurities - Titanium (Ti)	<= 10.0 ppb	1.7
Trace Impurities - Vanadium (V)	<= 10.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	1.1
Trace Impurities - Zirconium (Zr)	<= 10.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008, 17025:2005
Selangor, Malaysia 9001:2008
Dehradun, India 9001:2008, 14001:2004, 13485:2003
Mumbai, India 9001:2008, 17025:2005
Panoli, India 9001:2008

Richard M Siberski
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600

Avantor ™ Performance Materials Inc.
3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 , Fax: 610.573.2610

CHEMTECH **EXTRACTION LOGPAGE**

PB90404

SOP ID: M SOM02.2

Matrix : Water

Clean Up SOP #: N/A

Weigh By: N/A **Extraction By:** MM

Balance check: N/A

Balance ID: Z **Weight 1:** (Z) Z **Weight 2:** (Z) Z

Batch# PB90404

Extraction Date : 05/08/16

Extraction Start Time : 08:21

Extraction End Time : 10:05 (5/9/16)

Review By :

Filter By: MM **Concentration By:** MM

Method of Extraction

☐ Seperatory Funne ☑ Continious Liquid/Liquid ☐ Sonication ☐ Waste Dilution ☐ Soxhlet

Standared Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Surrogate	0.5ML	80+32PPM	SP3682

Chemical Used	ML/SAMPLE USED	Lot Number
Methylene Chloride		E2105
Baked Na2SO4		EP1653
H2SO4 1:1		EP1663

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Extraction Conformance/Non-Conformance Comments:

PH strip lot NO: E2056

Extraction End Time: 10:05 (5/9/16)

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KD Bath Temperature: 60.2 c

Received Date: 05/09/16

Delivered Date: 05/09/16

Delivered Time: 10:10

Envap Temperature: 40 c

Received By: UM

Delivered By:

Analysis Group:

Extraction Group: , RS, SJ, MM, UA, RP, JP, NP, UM

CHEMTECH **EXTRACTION LOGPAGE** **PrepBatch ID** **PB90404**

Analytical Method: 8270D-2 SVOC **Extraction Date:** 05/08/2016-08:21 **Concentration Date:** 05/09/16

Lab Sample ID	Client Sample ID	Test	g /(mL)	PH	Surr/Spike By:		Final Vol.(mL)	Comments	Prep Pos
	2	2			Added By	Verified By			
PB90404BL	SBLK04	SVOC-TCL BNA -20	1000	6	MM	JP	1		
H2943-02	H4105	SVOC-TCL BNA -20	1000	6	↓	↓	↓	Bottle Yellow D Marks	
H2943-03	H4106	SVOC-TCL BNA -20	1000	6	↓	↓	↓	E	
H2943-09	H4137	SVOC-TCL BNA -20	1000	6	↓	↓	↓	D	

PH adjusted for Acid <2

* Extracts relinquished on the same date as received.

5/9

CHEMTECH **EXTRACTION LOGPAGE** **PrepBatch ID : PB90404**

Analytical Method: 2 **Extraction Date:** 05/08/2016-08:21 **Concentration Date:** ___/___/___

Lab Sample ID	Client Sample ID	Test	g / mL	PH	Surr/Spike By:		Final Vol.(mL)	Comments	Prep Pos
	2	2			Added By	Verified By			
PB90404BL	SBLK04	SVOC-TCL BNA -20	1000.0	6	Muteen	Jignesh	1		
H2943-02	H4105	SVOC-TCL BNA -20	1000.0	6	Muteen	Jignesh	1		
H2943-03	H4106	SVOC-TCL BNA -20	1000.0	6	Muteen	Jignesh	1		
H2943-09	H4137	SVOC-TCL BNA -20	1000.0	6	Muteen	Jignesh	1		

PH adjusted for Acid<2

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5/9

* Extracts relinquished on the same date as received.

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050416

Review By	mohammad	Review On	5/5/2016 9:02:17 AM		
SubDirectory	VI050416	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52662
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52669,VP52670
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB32	VI049219.D	4 May 2016 8:57	FY/SY	Ok
2	VSTD0.533	VI049220.D	4 May 2016 11:27	FY/SY	Ok
3	VSTD00134	VI049221.D	4 May 2016 11:58	FY/SY	Ok
4	VSTD00535	VI049222.D	4 May 2016 12:30	FY/SY	Ok
5	VSTD01036	VI049223.D	4 May 2016 13:02	FY/SY	Ok
6	VSTD02037	VI049224.D	4 May 2016 13:33	FY/SY	Ok
7	VSTDCCC005	VI049225.D	4 May 2016 14:05	FY/SY	Ok
8	VI0504WBL01	VI049226.D	4 May 2016 15:13	FY/SY	Ok
9	H2799-02DL2	VI049227.D	4 May 2016 15:45	FY/SY	Ok,M
10	H2743-14	VI049228.D	4 May 2016 16:17	FY/SY	Ok
11	H2743-15	VI049229.D	4 May 2016 16:49	FY/SY	Ok,M
12	H2743-09DL	VI049230.D	4 May 2016 17:20	FY/SY	Ok
13	H2743-10DL	VI049231.D	4 May 2016 17:52	FY/SY	Ok,M
14	H2743-13DL	VI049232.D	4 May 2016 18:23	FY/SY	Ok
15	H2834-04	VI049233.D	4 May 2016 18:55	FY/SY	Ok,M
16	H2834-01	VI049234.D	4 May 2016 19:27	FY/SY	Dilution
17	H2834-02	VI049235.D	4 May 2016 19:58	FY/SY	Not Ok
18	H2834-03	VI049236.D	4 May 2016 20:30	FY/SY	Not Ok
19	H2834-05	VI049237.D	4 May 2016 21:02	FY/SY	Dilution
20	H2834-06	VI049238.D	4 May 2016 21:33	FY/SY	Dilution
21	H2834-07	VI049239.D	4 May 2016 22:05	FY/SY	Dilution
22	H2834-08	VI049240.D	4 May 2016 22:37	FY/SY	ReRun
23	H2834-09	VI049241.D	4 May 2016 23:08	FY/SY	Ok
24	H2834-10	VI049242.D	4 May 2016 23:40	FY/SY	Ok,M
25	VSTDCCC005EC	VI049243.D	5 May 2016 00:11	FY/SY	Ok,M

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050916

Review By	feifei	Review On	5/10/2016 2:19:02 PM		
SubDirectory	VI050916	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52815
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52818,VP52819,VP52833
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB35	VI049290.D	9 May 2016 9:50	FY/SY	Ok
2	VSTDCCC005	VI049291.D	9 May 2016 11:03	FY/SY	Ok,M
3	VI0509WBL01	VI049292.D	9 May 2016 11:52	FY/SY	Ok
4	H2874-21	VI049293.D	9 May 2016 12:58	FY/SY	Ok,M
5	H2874-20	VI049294.D	9 May 2016 13:29	FY/SY	Ok,M
6	H2874-16	VI049295.D	9 May 2016 14:01	FY/SY	Ok
7	H2874-17	VI049296.D	9 May 2016 14:33	FY/SY	Ok,M
8	H2874-18	VI049297.D	9 May 2016 15:04	FY/SY	Ok,M
9	H2874-19	VI049298.D	9 May 2016 15:36	FY/SY	Dilution
10	H2874-22	VI049299.D	9 May 2016 16:08	FY/SY	Ok
11	H2874-23	VI049300.D	9 May 2016 16:39	FY/SY	Dilution
12	H2874-24	VI049301.D	9 May 2016 17:11	FY/SY	ReRun
13	H2874-25	VI049302.D	9 May 2016 17:43	FY/SY	Ok,M
14	VSTDCCC005	VI049303.D	9 May 2016 18:15	FY/SY	Ok
15	VI0509WBL02	VI049304.D	9 May 2016 19:05	FY/SY	Ok
16	H2943-12	VI049305.D	9 May 2016 19:54	FY/SY	Ok
17	H2943-13	VI049306.D	9 May 2016 20:25	FY/SY	Ok
18	H2943-14	VI049307.D	9 May 2016 20:57	FY/SY	Ok,M
19	H2943-15	VI049308.D	9 May 2016 21:28	FY/SY	Ok
20	H2943-16	VI049309.D	9 May 2016 22:00	FY/SY	Ok
21	H2943-17	VI049310.D	9 May 2016 22:32	FY/SY	Ok
22	H2943-18	VI049311.D	9 May 2016 23:03	FY/SY	Ok
23	H2943-19	VI049312.D	9 May 2016 23:35	FY/SY	Dilution
24	H2943-20	VI049313.D	10 May 2016 00:07	FY/SY	Ok
25	H2943-21	VI049314.D	10 May 2016 00:38	FY/SY	Ok
26	H2943-22	VI049315.D	10 May 2016 1:10	FY/SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050916

Review By	feifei	Review On	5/10/2016 2:19:02 PM		
SubDirectory	VI050916	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52815
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52818,VP52819,VP52833
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

27	H2943-23	VI049316.D	10 May 2016 1:41	FY/SY	Ok
28	VSTDCCC005EC	VI049317.D	10 May 2016 2:13	FY/SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI051016

Review By	feifei	Review On	5/11/2016 12:05:53 PM		
SubDirectory	VI051016	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52834
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52843,VP52844,VP52845
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB36	VI049318.D	10 May 2016 10:13	FY/SY	Ok
2	VSTDCCC005	VI049319.D	10 May 2016 11:53	FY/SY	Ok,M
3	VI0510WBL01	VI049320.D	10 May 2016 12:34	FY/SY	Ok
4	H2832-01	VI049321.D	10 May 2016 13:21	FY/SY	Ok
5	H2849-19	VI049322.D	10 May 2016 13:53	FY/SY	Ok,M
6	H2885-06	VI049323.D	10 May 2016 14:25	FY/SY	Ok
7	H2906-07	VI049324.D	10 May 2016 14:56	FY/SY	Ok,M
8	H2832-02	VI049325.D	10 May 2016 15:28	FY/SY	Ok
9	H2943-06	VI049326.D	10 May 2016 16:00	FY/SY	Ok
10	H2943-07MS	VI049327.D	10 May 2016 16:31	FY/SY	Ok,M
11	H2943-08MSD	VI049328.D	10 May 2016 17:03	FY/SY	Ok
12	H2943-02	VI049329.D	10 May 2016 17:34	FY/SY	Ok
13	H2943-03	VI049330.D	10 May 2016 18:06	FY/SY	Ok
14	VSTDCCC005EC	VI049331.D	10 May 2016 18:38	FY/SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI051116

Review By	feifei	Review On	5/12/2016 10:21:44 AM		
SubDirectory	VI051116	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52906
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52906,VP52907
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB37	VI049332.D	11 May 2016 10:00	FY/SY	Ok
2	VSTDCCC005	VI049333.D	11 May 2016 10:42	FY/SY	Ok,M
3	VI0511WBL01	VI049334.D	11 May 2016 11:25	FY/SY	Ok
4	H2874-24RE	VI049335.D	11 May 2016 12:05	FY/SY	Confirms
5	H2943-04	VI049336.D	11 May 2016 12:37	FY/SY	Ok,M
6	H2943-09	VI049337.D	11 May 2016 13:09	FY/SY	Ok,M
7	H2943-10	VI049338.D	11 May 2016 13:41	FY/SY	Ok,M
8	H2943-01DL	VI049339.D	11 May 2016 14:12	FY/SY	Not Ok
9	H2943-19DL	VI049340.D	11 May 2016 14:45	FY/SY	Ok
10	H2943-05DL	VI049341.D	11 May 2016 15:17	FY/SY	Ok,M
11	H2874-23DL	VI049342.D	11 May 2016 15:49	FY/SY	Ok
12	H2874-19DL	VI049343.D	11 May 2016 16:21	FY/SY	Ok,M
13	H2943-05	VI049344.D	11 May 2016 16:53	FY/SY	Dilution
14	VIBLK51	VI049345.D	11 May 2016 17:27	FY/SY	Ok
15	H2943-01	VI049346.D	11 May 2016 17:59	FY/SY	Ok
16	VSTDCCC005EC	VI049347.D	11 May 2016 18:32	FY/SY	Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI051216

Review By	feifei	Review On	5/13/2016 12:28:48 PM		
SubDirectory	VI051216	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52951
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52954,VP52955
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB38	VI049348.D	12 May 2016 9:58	FY/SY	Ok
2	VSTDCCC005	VI049349.D	12 May 2016 12:03	FY/SY	Ok,M
3	VI0512WBL01	VI049350.D	12 May 2016 14:23	FY/SY	Ok,M
4	H2843-06	VI049351.D	12 May 2016 15:14	FY/SY	Ok
5	H2874-15	VI049352.D	12 May 2016 15:46	FY/SY	Ok
6	H2943-11	VI049353.D	12 May 2016 16:18	FY/SY	Ok
7	H3056-01	VI049354.D	12 May 2016 16:51	FY/SY	Ok
8	H3056-02	VI049355.D	12 May 2016 17:22	FY/SY	Dilution
9	H3056-03	VI049356.D	12 May 2016 17:54	FY/SY	Ok
10	H3056-04	VI049357.D	12 May 2016 18:27	FY/SY	Ok,M
11	H3056-05	VI049358.D	12 May 2016 18:58	FY/SY	Ok
12	H3056-06	VI049359.D	12 May 2016 19:31	FY/SY	Ok
13	VSTDCCC005EC	VI049360.D	12 May 2016 20:37	FY/SY	Ok,M

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050416

Review By	mohammad	Review On	5/5/2016 9:02:17 AM		
SubDirectory	VI050416	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52662
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52669,VP52670
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB32	BFB32	VI049219.D		Ok
2	VSTD0.533	VSTD0.533	VI049220.D		Ok
3	VSTD00134	VSTD00134	VI049221.D		Ok
4	VSTD00535	VSTD00535	VI049222.D		Ok
5	VSTD01036	VSTD01036	VI049223.D	(V#6390)	Ok
6	VSTD02037	VSTD02037	VI049224.D		Ok
7	VSTDCCC005	VSTD00538	VI049225.D		Ok
8	VI0504WBL01	VBLK27	VI049226.D		Ok
9	H2799-02DL2	C0H63DL2	VI049227.D	pH#1.0 vial C	Ok,M
10	H2743-14	H4015	VI049228.D	pH#1.0 vial B	Ok
11	H2743-15	H4017	VI049229.D	pH#1.0 vial B	Ok,M
12	H2743-09DL	H4009DL	VI049230.D	pH#1.0 vial B	Ok
13	H2743-10DL	H4011DL	VI049231.D	pH#1.0 vial B	Ok,M
14	H2743-13DL	H4007DL	VI049232.D	pH#1.0 vial B	Ok
15	H2834-04	H4006	VI049233.D	pH#1.0 vial A	Ok,M
16	H2834-01	H4002	VI049234.D	pH#1.0A need 5X	Dilution
17	H2834-02	H4002	VI049235.D	pH#1.0A Need 5x,MS not spike	Not Ok
18	H2834-03	H4002	VI049236.D	pH#1.0A Need 5x,MSD not spike	Not Ok
19	H2834-05	H4094	VI049237.D	pH#1.0A Need 5x	Dilution
20	H2834-06	H4121	VI049238.D	pH#1.0A Need 2x	Dilution
21	H2834-07	H4123	VI049239.D	pH#1.0A Need 5x	Dilution
22	H2834-08	H4124	VI049240.D	pH#1.0A E flag in previous sample	ReRun

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050416

Review By	mohammad	Review On	5/5/2016 9:02:17 AM		
SubDirectory	VI050416	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52662
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52669,VP52670
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

23	H2834-09	H4132	VI049241.D	pH#1.0 vial A	Ok
24	H2834-10	H4133	VI049242.D	pH#1.0 vial A	Ok,M
25	VSTDCCC005EC	VSTD00539	VI049243.D		Ok,M

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050916

Review By	feifei	Review On	5/10/2016 2:19:02 PM		
SubDirectory	VI050916	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52815
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52818,VP52819,VP52833
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB35	BFB35	VI049290.D		Ok
2	VSTDCCC005	VSTD00545	VI049291.D		Ok,M
3	VI0509WBL01	VBLK31	VI049292.D	(V#6390)	Ok
4	H2874-21	H4020	VI049293.D	pH#1.0 vial A	Ok,M
5	H2874-20	H4019	VI049294.D	pH#1.0 vial A	Ok,M
6	H2874-16	H4012	VI049295.D	pH#1.0 vial A	Ok
7	H2874-17	H4013	VI049296.D	pH#1.0 vial A	Ok,M
8	H2874-18	H4016	VI049297.D	pH#1.0 vial A	Ok,M
9	H2874-19	H4018	VI049298.D	pH#1.0 A Need 10x	Dilution
10	H2874-22	H4091	VI049299.D	pH#1.0 vial A	Ok
11	H2874-23	H4096	VI049300.D	pH#1.0 A Need 10x	Dilution
12	H2874-24	H4097	VI049301.D	pH#1.0 A E flag in previous sample	ReRun
13	H2874-25	H4098	VI049302.D	pH#1.0 vial A	Ok,M
14	VSTDCCC005	VSTD00546	VI049303.D		Ok
15	VI0509WBL02	VBLK32	VI049304.D		Ok
16	H2943-12	H4021	VI049305.D	pH#1.0 vial A	Ok
17	H2943-13	H4022	VI049306.D	pH#1.0 vial A	Ok
18	H2943-14	H4108	VI049307.D	pH#1.0 vial A	Ok,M
19	H2943-15	H4110	VI049308.D	pH#1.0 vial A	Ok
20	H2943-16	H4115	VI049309.D	pH#1.0 vial A	Ok
21	H2943-17	H4122	VI049310.D	pH#1.0 vial A	Ok
22	H2943-18	H4127	VI049311.D	pH#1.0 vial A	Ok

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI050916

Review By	feifei	Review On	5/10/2016 2:19:02 PM		
SubDirectory	VI050916	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52815
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52818,VP52819,VP52833
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

23	H2943-19	H4130	VI049312.D	pH#1.0 A Need 5x	Dilution
24	H2943-20	H4131	VI049313.D	pH#1.0 vial A	Ok
25	H2943-21	H4135	VI049314.D	pH#1.0 vial A	Ok
26	H2943-22	H4136	VI049315.D	pH#1.0 vial A	Ok
27	H2943-23	H4139	VI049316.D	pH#1.0 vial A	Ok
28	VSTDCCC005EC	VSTD00547	VI049317.D		Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI051016

Review By	feifei	Review On	5/11/2016 12:05:53 PM		
SubDirectory	VI051016	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52834
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52843,VP52844,VP52845
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB36	BFB36	VI049318.D		Ok
2	VSTDCCC005	VSTD00548	VI049319.D		Ok,M
3	VI0510WBL01	VBLK33	VI049320.D	(V#6390)	Ok
4	H2832-01	C0731	VI049321.D	pH#1.0 vial B	Ok
5	H2849-19	VHBLK02	VI049322.D	pH#1.6A SB	Ok,M
6	H2885-06	VHBLK01	VI049323.D	pH#1.6A SB	Ok
7	H2906-07	VHBLK01	VI049324.D	pH#1.6A SB	Ok,M
8	H2832-02	VHBLK01	VI049325.D	pH#1.6A SB	Ok
9	H2943-06	H4134	VI049326.D	pH#1.0 vial B	Ok
10	H2943-07MS	H4134MS	VI049327.D	pH#1.0 vial B	Ok,M
11	H2943-08MSD	H4134MSD	VI049328.D	pH#1.0 vial B	Ok
12	H2943-02	H4105	VI049329.D	pH#1.0 vial B	Ok
13	H2943-03	H4106	VI049330.D	pH#1.0 vial B	Ok
14	VSTDCCC005EC	VSTD00549	VI049331.D		Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI051116

Review By	feifei	Review On	5/12/2016 10:21:44 AM		
SubDirectory	VI051116	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52906
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52906,VP52907
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB37	BFB37	VI049332.D		Ok
2	VSTDCCC005	VSTD00550	VI049333.D		Ok,M
3	VI0511WBL01	VBLK34	VI049334.D	(V#6390)	Ok
4	H2874-24RE	H4097RE	VI049335.D	pH#1.0 vial B	Confirms
5	H2943-04	H4109	VI049336.D	pH#1.0 vial B	Ok,M
6	H2943-09	H4137	VI049337.D	pH#1.0 vial B	Ok,M
7	H2943-10	H4138	VI049338.D	pH#1.0 vial B	Ok,M
8	H2943-01DL	H4104DL	VI049339.D	Not required	Not Ok
9	H2943-19DL	H4130DL	VI049340.D	pH#1.0 vial B	Ok
10	H2943-05DL	H4125DL	VI049341.D	pH#1.0 vial B	Ok,M
11	H2874-23DL	H4096DL	VI049342.D	pH#1.0 vial B	Ok
12	H2874-19DL	H4018DL	VI049343.D	pH#1.0 vial B	Ok,M
13	H2943-05	H4125	VI049344.D	pH#1.0B Need 10x	Dilution
14	VIBLK51	VIBLK51	VI049345.D		Ok
15	H2943-01	H4104	VI049346.D	pH#1.0 vial B	Ok
16	VSTDCCC005EC	VSTD00526	VI049347.D		Ok

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Instrument ID: MSVOA_I

Daily Analysis Runlog For Sequence/QCBatch ID # VI051216

Review By	feifei	Review On	5/13/2016 12:28:48 PM		
SubDirectory	VI051216	HP Acquire Method	MOONMOON	HP Processing Method	SOMITR050416W.M

STD. NAME	STD REF.#
Tune/Reschk	VP52951
Initial Calibration Stds	VP52664,VP52665,VP52666,VP52667,VP52668
CCC	VP52954,VP52955
Internal Standard/PEM	VP52036,VP52453
ICV/I.BLK	N/A

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	BFB38	BFB38	VI049348.D		Ok
2	VSTDCCC005	VSTD00527	VI049349.D		Ok,M
3	VI0512WBL01	VBLK35	VI049350.D	(V#6390)	Ok,M
4	H2843-06	VHBLK01	VI049351.D	pH#1.6A SB	Ok
5	H2874-15	VHBLK01	VI049352.D	pH#1.6B SB	Ok
6	H2943-11	VHBLK01	VI049353.D	pH#1.6A SB	Ok
7	H3056-01	H4023	VI049354.D	pH#1.0 vial A	Ok
8	H3056-02	H4024	VI049355.D	pH#1.0A Need 5x	Dilution
9	H3056-03	H4092	VI049356.D	pH#1.0 vial A	Ok
10	H3056-04	H4093	VI049357.D	pH#1.0 vial A	Ok,M
11	H3056-05	H4095	VI049358.D	pH#1.0 vial A	Ok
12	H3056-06	H4100	VI049359.D	pH#1.0 vial A	Ok
13	VSTDCCC005EC	VSTD00528	VI049360.D		Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM050516

Review By	sohil	Review On	5/6/2016 7:15:46 PM		
SubDirectory	BM050516	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5017, 1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	DFTPP64	BM005230.D	05 May 2016 10:23	UM/SJ	Ok
2	SSTD00540	BM005231.D	05 May 2016 11:09	UM/SJ	Ok
3	SSTD01041	BM005232.D	05 May 2016 11:45	UM/SJ	Ok
4	SSTD02042	BM005233.D	05 May 2016 12:21	UM/SJ	Ok,M
5	SSTD04043	BM005234.D	05 May 2016 12:57	UM/SJ	Ok,M
6	SSTD08044	BM005235.D	05 May 2016 13:33	UM/SJ	Ok,M
7	SSTD16045	BM005236.D	05 May 2016 15:53	UM/SJ	Ok,M
8	SSTDCCC020	BM005237.D	05 May 2016 16:30	UM/SJ	Ok,M
9	PB90262BL	BM005238.D	05 May 2016 17:06	UM/SJ	Ok,M
10	PB90297BL	BM005239.D	05 May 2016 17:42	UM/SJ	Ok
11	H2729-02ME	BM005240.D	05 May 2016 18:26	UM/SJ	Dilution
12	PB90263BL	BM005241.D	05 May 2016 19:02	UM/SJ	Ok,M
13	PB90285BL	BM005242.D	05 May 2016 19:39	UM/SJ	Ok,M
14	H2813-01	BM005243.D	05 May 2016 20:15	UM/SJ	Dilution
15	H2813-02	BM005244.D	05 May 2016 20:51	UM/SJ	Dilution
16	H2813-03	BM005245.D	05 May 2016 21:28	UM/SJ	Dilution
17	H2813-04	BM005246.D	05 May 2016 22:04	UM/SJ	Dilution
18	H2813-05	BM005247.D	05 May 2016 22:41	UM/SJ	Ok,M
19	H2813-06	BM005248.D	05 May 2016 23:17	UM/SJ	Dilution
20	H2813-07	BM005249.D	05 May 2016 23:53	UM/SJ	Dilution
21	H2813-08	BM005250.D	06 May 2016 00:30	UM/SJ	Ok,M
22	SSTDCCC020	BM005251.D	06 May 2016 01:06	UM/SJ	Ok,M
23	H2813-09	BM005252.D	06 May 2016 01:46	UM/SJ	Dilution
24	H2813-10	BM005253.D	06 May 2016 02:22	UM/SJ	Dilution
25	H2813-11	BM005254.D	06 May 2016 02:58	UM/SJ	Dilution
26	H2813-12	BM005255.D	06 May 2016 03:35	UM/SJ	Dilution

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM050516

Review By	sohil	Review On	5/6/2016 7:15:46 PM		
SubDirectory	BM050516	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5017, 1ul IS/ 100ul sample
ICV/I.BLK	NA

27	H2813-13	BM005256.D	06 May 2016 04:11	UM/SJ	Dilution
28	H2813-14	BM005257.D	06 May 2016 04:47	UM/SJ	Dilution
29	H2813-19	BM005258.D	06 May 2016 05:24	UM/SJ	Ok,M
30	H2813-20	BM005259.D	06 May 2016 06:00	UM/SJ	Ok,M
31	H2813-17	BM005260.D	06 May 2016 08:35	UM/SJ	Ok
32	H2813-18	BM005261.D	06 May 2016 09:11	UM/SJ	Ok
33	H2729-02MEDL	BM005262.D	06 May 2016 09:47	UM/SJ	Ok,M
34	SSTDCCC020	BM005263.D	06 May 2016 10:24	UM/SJ	Ok,M
35	H2813-01DL	BM005264.D	06 May 2016 11:00	UM/SJ	Not Ok
36	H2813-02DL	BM005265.D	06 May 2016 11:36	UM/SJ	Not Ok
37	H2813-03DL	BM005266.D	06 May 2016 12:13	UM/SJ	Ok
38	H2813-04DL	BM005267.D	06 May 2016 12:49	UM/SJ	Ok
39	H2813-06DL	BM005268.D	06 May 2016 14:05	UM/SJ	Ok
40	H2813-07DL	BM005269.D	06 May 2016 14:41	UM/SJ	Ok
41	H2813-09DL	BM005270.D	06 May 2016 15:17	UM/SJ	Ok
42	H2813-10DL	BM005271.D	06 May 2016 15:53	UM/SJ	Ok
43	H2813-11DL	BM005272.D	06 May 2016 16:30	UM/SJ	Ok
44	H2813-12DL	BM005273.D	06 May 2016 17:06	UM/SJ	Ok
45	SSTDCCC020EC	BM005274.D	06 May 2016 17:42	UM/SJ	Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM050516

Review By	sohil	Review On	5/6/2016 7:15:46 PM		
SubDirectory	BM050516	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5017, 1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	DFTPP64	DFTPP64	BM005230.D		Ok
2	SSTD00540	SSTD00540	BM005231.D		Ok
3	SSTD01041	SSTD01041	BM005232.D		Ok
4	SSTD02042	SSTD02042	BM005233.D		Ok,M
5	SSTD04043	SSTD04043	BM005234.D		Ok,M
6	SSTD08044	SSTD08044	BM005235.D		Ok,M
7	SSTD16045	SSTD16045	BM005236.D		Ok,M
8	SSTDCCC020	SSTD02046	BM005237.D		Ok,M
9	PB90262BL	SBLK62	BM005238.D		Ok,M
10	PB90297BL	SBLK97	BM005239.D		Ok
11	H2729-02ME	BD3D0ME	BM005240.D	Need 2X	Dilution
12	PB90263BL	SBLK63	BM005241.D		Ok,M
13	PB90285BL	SBLK85	BM005242.D		Ok,M
14	H2813-01	BC7M6	BM005243.D	Need 20X	Dilution
15	H2813-02	BC7M7	BM005244.D	Need 10X	Dilution
16	H2813-03	BC7P2	BM005245.D	Need 10X	Dilution
17	H2813-04	BC7P3	BM005246.D	Need 10X	Dilution
18	H2813-05	BC7Q4	BM005247.D		Ok,M
19	H2813-06	BC7R8	BM005248.D	Need 10X	Dilution
20	H2813-07	BC7R9	BM005249.D	Need 10X	Dilution
21	H2813-08	BC7S5	BM005250.D		Ok,M
22	SSTDCCC020	SSTD02047	BM005251.D		Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM050516

Review By	sohil	Review On	5/6/2016 7:15:46 PM		
SubDirectory	BM050516	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5017, 1ul IS/ 100ul sample
ICV/I.BLK	NA

23	H2813-09	BC7S7	BM005252.D	Need 10X	Dilution
24	H2813-10	BC7S8	BM005253.D	Need 10X	Dilution
25	H2813-11	BC7T1	BM005254.D	Need 10X	Dilution
26	H2813-12	BC7T2	BM005255.D	Need 10X	Dilution
27	H2813-13	BC7T4	BM005256.D	Need 10X	Dilution
28	H2813-14	BC7T5	BM005257.D	Need 10X	Dilution
29	H2813-19	BC812	BM005258.D		Ok,M
30	H2813-20	BC813	BM005259.D		Ok,M
31	H2813-17	BC810	BM005260.D		Ok
32	H2813-18	BC811	BM005261.D		Ok
33	H2729-02MEDL	BD3D0MEDL	BM005262.D		Ok,M
34	SSTDCCC020	SSTD02048	BM005263.D		Ok,M
35	H2813-01DL	BC7M6DL	BM005264.D	Need further dilution	Not Ok
36	H2813-02DL	BC7M7DL	BM005265.D	wrong dilution	Not Ok
37	H2813-03DL	BC7P2DL	BM005266.D		Ok
38	H2813-04DL	BC7P3DL	BM005267.D		Ok
39	H2813-06DL	BC7R8DL	BM005268.D		Ok
40	H2813-07DL	BC7R9DL	BM005269.D		Ok
41	H2813-09DL	BC7S7DL	BM005270.D		Ok
42	H2813-10DL	BC7S8DL	BM005271.D		Ok
43	H2813-11DL	BC7T1DL	BM005272.D		Ok
44	H2813-12DL	BC7T2DL	BM005273.D		Ok
45	SSTDCCC020EC	SSTD02049	BM005274.D		Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051116

Review By	umangi	Review On	5/12/2016 10:13:53 AM		
SubDirectory	BM051116	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5020, 1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	DFTPP36	BM005379.D	11 May 2016 08:24	UM/SJ	Ok
2	SSTDCCC020	BM005380.D	11 May 2016 09:01	UM/SJ	Ok,M
3	H2888-16	BM005381.D	11 May 2016 09:36	UM/SJ	Ok
4	H2888-17	BM005382.D	11 May 2016 10:13	UM/SJ	Ok
5	H2888-18	BM005383.D	11 May 2016 11:35	UM/SJ	Ok
6	H2888-19MS	BM005384.D	11 May 2016 12:47	UM/SJ	Ok
7	H2888-21	BM005385.D	11 May 2016 14:00	UM/SJ	Ok
8	H2888-20MSD	BM005386.D	11 May 2016 14:36	UM/SJ	Ok
9	H2888-22	BM005387.D	11 May 2016 15:13	UM/SJ	Ok,M
10	PB90332BL	BM005388.D	11 May 2016 15:49	UM/SJ	Ok
11	H2834-13	BM005389.D	11 May 2016 16:25	UM/SJ	Ok,M
12	H2834-14MS	BM005390.D	11 May 2016 17:02	UM/SJ	Not Ok
13	H2834-15MSD	BM005391.D	11 May 2016 17:38	UM/SJ	Not Ok
14	H2834-16	BM005392.D	11 May 2016 18:15	UM/SJ	Ok,M
15	SSTDCCC020	BM005393.D	11 May 2016 18:52	UM/SJ	Ok,M
16	H2918-05	BM005394.D	11 May 2016 19:28	UM/SJ	ReRun
17	H2918-10	BM005395.D	11 May 2016 20:05	UM/SJ	ReRun
18	PB90393BL	BM005396.D	11 May 2016 20:41	UM/SJ	Ok,M
19	H2847-10	BM005397.D	11 May 2016 21:18	UM/SJ	ReRun
20	H2890-19	BM005398.D	11 May 2016 21:54	UM/SJ	ReRun
21	H2890-20MS	BM005399.D	11 May 2016 22:31	UM/SJ	Ok
22	H2890-21MSD	BM005400.D	11 May 2016 23:07	UM/SJ	Ok,M
23	H2890-22	BM005401.D	11 May 2016 23:44	UM/SJ	ReRun
24	H2890-23	BM005402.D	12 May 2016 00:20	UM/SJ	Ok
25	PB90392BL	BM005403.D	12 May 2016 00:56	UM/SJ	Not Ok
26	H2846-01	BM005404.D	12 May 2016 01:33	UM/SJ	Not Ok

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051116

Review By	umangi	Review On	5/12/2016 10:13:53 AM		
SubDirectory	BM051116	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5020, 1ul IS/ 100ul sample
ICV/I.BLK	NA

27	H2846-02	BM005405.D	12 May 2016 02:09	UM/SJ	ReRun
28	PB90404BL	BM005406.D	12 May 2016 02:46	UM/SJ	ReRun
29	H2853-17	BM005407.D	12 May 2016 03:22	UM/SJ	Ok,M
30	H2943-02	BM005408.D	12 May 2016 03:58	UM/SJ	Ok,M
31	SSTDCCC020EC	BM005409.D	12 May 2016 05:11	UM/SJ	Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051116

Review By	umangi	Review On	5/12/2016 10:13:53 AM		
SubDirectory	BM051116	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5020, 1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	DFTPP36	DFTPP36	BM005379.D		Ok
2	SSTDCCC020	SSTD02061	BM005380.D		Ok,M
3	H2888-16	D9WX8	BM005381.D		Ok
4	H2888-17	D9WX9	BM005382.D		Ok
5	H2888-18	D9WY0	BM005383.D		Ok
6	H2888-19MS	D9WY0MS	BM005384.D		Ok
7	H2888-21	D9WY1	BM005385.D		Ok
8	H2888-20MSD	D9WY0MSD	BM005386.D	compound # 49,77 fail for recovery	Ok
9	H2888-22	D9WY3	BM005387.D		Ok,M
10	PB90332BL	SBLK32	BM005388.D		Ok
11	H2834-13	H4061	BM005389.D		Ok,M
12	H2834-14MS	H4061MS	BM005390.D	Internal standard fail	Not Ok
13	H2834-15MSD	H4061MSD	BM005391.D	Internal Standard fail	Not Ok
14	H2834-16	H4076	BM005392.D		Ok,M
15	SSTDCCC020	SSTD02062	BM005393.D		Ok,M
16	H2918-05	SVOC-GPC-BLANK	BM005394.D	Internal standard fail	ReRun
17	H2918-10	SVOC-GPC2-BLANK	BM005395.D	Internal standard fail	ReRun
18	PB90393BL	SBLK93	BM005396.D		Ok,M
19	H2847-10	BD3J6	BM005397.D	Internal standard fail	ReRun
20	H2890-19	D9X06	BM005398.D	Internal standard fail	ReRun
21	H2890-20MS	D9X06MS	BM005399.D	compound # 52,49,15,6 fail for recovery	Ok
22	H2890-21MSD	D9X06MSD	BM005400.D	compound # 52,49,15,6 fail for recovery	Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051116

Review By	umangi	Review On	5/12/2016 10:13:53 AM		
SubDirectory	BM051116	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5020, 1ul IS/ 100ul sample
ICV/I.BLK	NA

23	H2890-22	D9X07	BM005401.D	Surrogate fail	ReRun
24	H2890-23	D9X12	BM005402.D		Ok
25	PB90392BL	SBLK92	BM005403.D	Internal standard fail	Not Ok
26	H2846-01	C0AC7	BM005404.D	Need straight	Not Ok
27	H2846-02	C0AC8	BM005405.D	Internal standard fail	ReRun
28	PB90404BL	SBLK04	BM005406.D	Internal standard fail	ReRun
29	H2853-17	D9X08	BM005407.D		Ok,M
30	H2943-02	H4105	BM005408.D		Ok,M
31	SSTDCCC020EC	SSTD02063	BM005409.D		Ok,M

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Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051216

Review By	umangi	Review On	5/13/2016 12:24:24 PM		
SubDirectory	BM051216	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5019, 1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	DFTPP37	BM005410.D	12 May 2016 07:36	UM/SJ	Ok
2	SSTDCCC020	BM005411.D	12 May 2016 09:36	UM/SJ	Ok
3	H2918-05	BM005412.D	12 May 2016 10:12	UM/SJ	Ok,M
4	H2847-10	BM005413.D	12 May 2016 10:48	UM/SJ	Ok,M
5	H2890-19	BM005414.D	12 May 2016 11:25	UM/SJ	Ok,M
6	PB90392BL	BM005415.D	12 May 2016 12:01	UM/SJ	Ok
7	H2846-02	BM005416.D	12 May 2016 12:37	UM/SJ	Ok
8	H2918-10	BM005417.D	12 May 2016 13:14	UM/SJ	Ok,M
9	PB90404BL	BM005418.D	12 May 2016 13:51	UM/SJ	Ok
10	H2943-03	BM005419.D	12 May 2016 14:27	UM/SJ	Ok
11	H2943-09	BM005420.D	12 May 2016 15:04	UM/SJ	Ok,M
12	H2853-18	BM005421.D	12 May 2016 15:40	UM/SJ	ReRun
13	H2853-19	BM005422.D	12 May 2016 16:23	UM/SJ	ReRun
14	H2853-20	BM005423.D	12 May 2016 16:59	UM/SJ	Ok,M
15	H2853-21	BM005424.D	12 May 2016 17:36	UM/SJ	Ok,M
16	SSTDCCC020EC	BM005425.D	12 May 2016 18:40	UM/SJ	Ok,M

CHEMTECH

Instrument ID: BNA_M

Daily Analysis Runlog For Sequence/QCBatch ID # BM051216

Review By	umangi	Review On	5/13/2016 12:24:24 PM		
SubDirectory	BM051216	HP Acquire Method	BNA_M	HP Processing Method	BM050516

STD. NAME	STD REF.#
Tune/Reschk	SP3592
Initial Calibration Stds	SP3637,SP3638,SP3639,SP3640,SP3641,SP3642,SP3643
CCC	SP3641
Internal Standard/PEM	S5019, 1ul IS/ 100ul sample
ICV/I.BLK	NA

Sr#	SampleId	ClientID	Data File Name	Comment	Status
1	DFTPP37	DFTPP37	BM005410.D		Ok
2	SSTDCCC020	SSTD02064	BM005411.D		Ok
3	H2918-05	SVOC-GPC-BLANK	BM005412.D		Ok,M
4	H2847-10	BD3J6	BM005413.D		Ok,M
5	H2890-19	D9X06	BM005414.D		Ok,M
6	PB90392BL	SBLK92	BM005415.D		Ok
7	H2846-02	C0AC8	BM005416.D		Ok
8	H2918-10	SVOC-GPC2-BLANK	BM005417.D		Ok,M
9	PB90404BL	SBLK04	BM005418.D		Ok
10	H2943-03	H4106	BM005419.D		Ok
11	H2943-09	H4137	BM005420.D		Ok,M
12	H2853-18	D9X09	BM005421.D	Internal standard fail	ReRun
13	H2853-19	D9X11	BM005422.D	Surrogate fail	ReRun
14	H2853-20	D9X13	BM005423.D		Ok,M
15	H2853-21	D9X14	BM005424.D		Ok,M
16	SSTDCCC020EC	SSTD02065	BM005425.D		Ok,M

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Copy
Original Documents are included in CSF H6010

S. M. Todd
Signature

5/6/16
Date

ORIGIN ID:APAA (303) 590-9145
EDWARD LUNDVALL
EA ENGINEERING, SCIENCE & TECH
7995 EAST PRENTICE AVENUE
SUITE 206E
GREENWOOD VILLAGE, CO 80111
UNITED STATES US

SHIP DATE: 05MAY16
ACTWGT: 80.00 LB
CAD: 5873190/INET3730

BILL SENDER

TO **DIVYA MEHTA**
CHEMTECH CONSULTING GROUP
284 SHEFFIELD ST

MOUNTAINSIDE NJ 07092
(908) 789-8900 REF: 6202999.SWFIE
INV:
PO: DEPT:

Chain
5-6-16
12:35
4°C

540J1602072/F

FedEx Express

FRI - 06 MAY 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **7762 6814 0300**

NE CDWA

07092
NJ-US **EWR**

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Copy
Original Documents are included in CSF H9010
S.M. Dodd
Signature
5/6/16
Date

922

ORIGIN ID:APAA (303) 590-9145
EDWARD LUNDVALL
EA ENGINEERING SCIENCE & TECH
7995 EAST PRENTICE AVENUE
SUITE 206E
GREENWOOD VILLAGE, CO 80111
UNITED STATES US

SHIP DATE: 06MAY16
ACTWGT: 80.00 LB
CAD: 5873190/INET3730

BILL SENDER

TO **DIVYA MEHTA**
CHEMTECH CONSULTING GROUP
284 SHEFFIELD ST

MOUNTAINSIDE NJ 07092
(908) 789-8900 REF: 6202899.SSWFIE
INV:
PO: DEPT:

540J1/63237/727F

FedEx Express

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 0201 **7762 7849 0256**

X0 CDWA

07092
NJ-US **EWR**

5/7/16
10:15 5:1

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923

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Login Summary Report

Order ID :	H2943	Order Date :	5/6/2016 12:35:00 PM	Project Mgr :	Mohammad
Client :	USEPA CLP Organics	Project :	46114	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	5/6/2016 12:35:00 PM	EDD Type :	EPA CLP
Date Sign Off :	5/6/2016 6:39:44 PM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
H2943-01	H4104	Water	05/04/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/27/2016	05/27/2016
H2943-02	H4105	Water	05/04/2016						
				SVOC-TCL BNA -20		SOM02.2_SVOC	15	05/27/2016	05/27/2016
				VOC-Low Level -15		SOM02.2_Trace	15	05/27/2016	05/27/2016
H2943-03	H4106	Water	05/04/2016						
				SVOC-TCL BNA -20		SOM02.2_SVOC	15	05/27/2016	05/27/2016
				VOC-Low Level -15		SOM02.2_Trace	15	05/27/2016	05/27/2016
H2943-04	H4109	Water	05/04/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/27/2016	05/27/2016
H2943-05	H4125	Water	05/04/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/27/2016	05/27/2016
H2943-06	H4134	Water	05/04/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/27/2016	05/27/2016
H2943-07	H4134MS	Water	05/04/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/27/2016	05/27/2016
H2943-08	H4134MSD	Water	05/04/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/27/2016	05/27/2016
H2943-09	H4137	Water	05/04/2016						
				SVOC-TCL BNA -20		SOM02.2_SVOC	15	05/27/2016	05/27/2016
				VOC-Low Level -15		SOM02.2_Trace	15	05/27/2016	05/27/2016
H2943-10	H4138	Water	05/04/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/27/2016	05/27/2016
H2943-11	VHBLK01	Water	05/04/2016						
				VOC-Low Level -15		SOM02.2_Trace	15	05/27/2016	05/27/2016

LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H2943 USEP04	**Order Date:**	5/6/2016	**Project Mgr:**	mohammad
Client Name:	USEPA CLP Organics	**Project Name:**	46114	**Report Type:**	USEPA CLP
Client Contact:	Anita Kapadia	**Rec DateTime**	5/6/2016 12:35:00 PM	**EDD:**	EPA CLP
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	
Invoice Contact:	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	5/6/2016 6:39:44 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates
H2943-01	H4104	Water	5/4/2016	9:00	3	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/18/2016	5/18/20
H2943-02	H4105	Water	5/4/2016	11:30	5	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/18/2016	5/18/20
H2943-03	H4106	Water	5/4/2016	13:20	5	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/18/2016	5/18/20
H2943-04	H4109	Water	5/4/2016	8:20	3	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/18/2016	5/18/20
H2943-05	H4125	Water	5/4/2016	9:30	3	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/18/2016	5/18/20
H2943-06	H4134	Water	5/4/2016	14:30	3	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/18/2016	5/18/20
H2943-07	H4134MS	Water	5/4/2016	14:30	3	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/18/2016	5/18/20
H2943-08	H4134MSD	Water	5/4/2016	14:30	3	VOC-Low Level -15		SOM02.2_Trace		15 Bus. 5/18/2016	5/18/20

925

LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H2943 USEP04	**Order Date:**	5/6/2016	**Project Mgr:**	mohammad
Client Name:	USEPA CLP Organics	**Project Name:**	46114	**Report Type:**	USEPA CLP
Client Contact:	Anita Kapadia	**Rec DateTime**	5/6/2016 12:35:00 PM	**EDD:**	EPA CLP
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	
Invoice Contact:	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	5/6/2016 6:39:44 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates
H2943-09	H4137	Water	5/4/2016	8:40	5	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20
H2943-10	H4138	Water	5/4/2016	9:50	9	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20
H2943-11	VHBLK01	Water	5/4/2016	0:00	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20
H2943-12	H4021	Water	5/5/2016	9:10	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20
H2943-13	H4022	Water	5/6/2016	7:45	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20
H2943-14	H4108	Water	5/5/2016	9:10	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20
H2943-15	H4110	Water	5/5/2016	10:30	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20
H2943-16	H4115	Water	5/5/2016	18:00	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20

926

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LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H2943 USEP04	**Order Date:**	5/6/2016	**Project Mgr:**	mohammad
Client Name:	USEPA CLP Organics	**Project Name:**	46114	**Report Type:**	
Client Contact:	Anita Kapadia	**Rec DateTime**	5/7/2016 10:15:00 AM	**EDD:**	
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	
Invoice Contact:	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	5/6/2016 6:39:44 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates
H2943-17	H4122	Water	5/5/2016	11:20	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20
H2943-18	H4127	Water	5/5/2016	18:15	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20
H2943-19	H4130	Water	5/5/2016	17:45	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20
H2943-20	H4131	Water	5/5/2016	11:00	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20
H2943-21	H4135	Water	5/5/2016	10:00	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20
H2943-22	H4136	Water	5/5/2016	17:30	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20
H2943-23	H4139	Water	5/5/2016	10:40	3	VOC-Low Level -15		SOM02.2_Trace	15 Bus.	5/18/2016	5/18/20

927

LOGIN REPORT/SAMPLE TRANSFER

Order ID:	H2943 USEP04	**Order Date:**	5/6/2016	**Project Mgr:**	mohammad
Client Name:	USEPA CLP Organics	**Project Name:**	46114	**Report Type:**	
Client Contact:	Anita Kapadia	**Rec DateTime**	5/7/2016 10:15:00 AM	**EDD:**	
Invoice Name:	USEPA CLP Organics	**Purchase Order:**		**Hard Copy Date:**	
Invoice Contact:	Anita Kapadia	**Login Tech:**	Nikul	**Date Signoff:**	5/6/2016 6:39:44 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	QTY	TEST	TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates

SAMPLE CONDITION RECORD

Are samples submitted with a chain of custody?	Yes
Are the number of samples the same as stated on the chain of custody?	Yes
Are bottle caps tight and securely in place?	Yes
Were all containers intact when received?	Yes
Were samples submitted in an ice chest?	Yes
Were samples received cold?	Yes
Were samples within the holding time for the requested test(s)?	Yes
Is the volume of sample submitted sufficient for the requested test(s)?	Yes
Are all samples for volatile organic analyses free of headspace?	Yes

ORDER COMMENT

CASE:46114, SDG: H4104 NO MA REQUIRED ----------

Relinquished By: CP

Date / Time: 5-6-16 6:45

Received By: [signature]

Date / Time: 5/6/16 645

Storage Area: VOA Refridgerator Room

928

WORKLIST(Hardcopy Internal Chain)

WorkList Name : H2943 SVOC 2.2 W WorkList ID : 86804 Date : 5/8/2016 8:10:23 AM

Due Date	Matrix	Sample	Test	Preservative	Customer	Storage Location	Customer Sample	Collect Date	Method
05/11/2016	Water	H2943-02	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4105	05/04/2016	SOM02.2_SVC
05/11/2016	Water	H2943-03	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4106	05/04/2016	SOM02.2_SVC
05/11/2016	Water	H2943-09	SVOC-TCL BNA -20	Cool 4 deg C	USEP04	R11	H4137	05/04/2016	SOM02.2_SVC

Date/Time 05/08/16
Received by: MM
Relinquished by: JP

Date/Time 05/08/16
Received by: JP
Relinquished by: MM

mildred V. Reyes

From: Vanaman, Alexandra <Alexandra.Vanaman@csra.com>
Sent: Monday, May 09, 2016 11:20 AM
To: epa@chemtech.net
Cc: "Goodrich, Donald"; Moss, Pamela
Subject: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC | FINAL
Attachments: 46114-0507.pdf

Sohil,

Issue: The water samples for this Case are scheduled for 86 TVOA and 17 SVOA analysis; however, the COCs list VOA=TCL VOCs by CLP.

Resolution: Per Region 8, the samples in question shall be analyzed as scheduled for TVOA. The laboratory will note the issue in the SDG Narrative and proceed with analysis of the samples. This resolution may be applied to all COCs received for this Case with this issue.

Please let me know if you have any questions. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2, 7, and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
www.csra.com

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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Monday, May 09, 2016 11:15 AM
To: Vanaman, Alexandra
Cc: Moss, Pamela
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Correct, thanks.
-dgg

Don Goodrich

US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Monday, May 09, 2016 9:14 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Cc: Moss, Pamela <pmoss@eaest.com>
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Hi Don,

Should this resolution be applied to all COCs received for this Case with this issue?

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2, 7, and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
www.csra.com

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From: Goodrich, Donald [mailto:Goodrich.Donald@epa.gov]
Sent: Monday, May 09, 2016 11:12 AM
To: Vanaman, Alexandra
Cc: Moss, Pamela
Subject: RE: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Ali, the samples in question shall be analyzed as scheduled for TVOA.

Thanks,
Don

Don Goodrich
US EPA Region 8
office: 303-312-6687
cell: 303-905-4024

From: Vanaman, Alexandra [mailto:Alexandra.Vanaman@csra.com]
Sent: Monday, May 09, 2016 7:52 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>

Cc: Moss, Pamela <pmoss@eaest.com>
Subject: Region 08 | Case 46114 | Lab CHM | Issue Discrepancies with tags, jars, and/or COC

Good morning,

CHM is reporting the following issue regarding Case 46114. Please advise.

Issue: The water samples for this Case are scheduled for 86 TVOA and 17 SVOA analysis; however, the COCs list VOA=TCL VOCs by CLP.

Thanks,

ALEXANDRA VANAMAN
Environmental Coordinator - Regions 2 and 8
CSC Government Solutions LLC, A CSRA Company
6361 Walker Lane, Alexandria, VA 22310
t: +1.703.461.2134 |Alexandra.Vanaman@csra.com
www.csra.com

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From: Sohil Jodhani [mailto:Sohil@chemtech.net]
Sent: Saturday, May 07, 2016 11:29 AM
To: Vanaman, Alexandra
Cc: DASSsupport; Mohammad@chemtech.net
Subject: Region 08 | Case 46114 | Lab CHM | SDG multiple | Issue Discrepancies with tags, jars, and/or COC

Hi Alexandra,

Samples received today with 05/07 shipment and lab would like to confirm below.

Issue: As per ASR, water samples are scheduled for TVOA analysis but analysis key written on the COC is VOA=TCL VOCs by CLP so lab would like to confirm that Lab is following the ASR and doing analysis for TVOA for water samples, Please advise.

This issue is addressing for all previous shipments also.

Thanks & Regards,

Sohil Jodhani
QC-Analyst
Direct Line: (908)728-3148
General Number: (908)789-8900
Fax: (908)789-8922

CHEMTECH
284 Sheffield Street,
Mountainside, New Jersey 07092
Phone: (908) 789 8900
Fax: (908) 789 8922

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LABORATORY ACCREDITATION BUREAU
ACCREDITED ISO/IEC 17025

DoD ELAP

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